The San Lorenzo Valley Water District is seeking comments on an addendum for the 2010 Urban Water Management Plan.
Public Comment Period is open from February 4, 2015 through April 7th, 2016.
A scheduled public hearing by the SLVWD Board of Directors to adopt the addendum will be held at the Regular Board Meeting on April 7, 2016 at 7:00PM at the San Lorenzo Valley Water District 13067 Highway 9, Boulder Creek, CA 95006.

A paper copy is also available at:
San Lorenzo Valley Water District
13060 Highway 9
Boulder Creek, CA 95006

Please submit comments to:
BOD@SLVWD.COM

OR

San Lorenzo Valley Water District
RE: UWMP Comments
13060 Hwy 9
Boulder Creek, CA 95006

ADOPTED

San Lorenzo Valley Water District 2010 Urban Water Management Plan

Addendum

Prepared by

San Lorenzo Valley Water District
Boulder Creek, California

February 2016

San Lorenzo Valley Water District

2010 Urban Water Management Plan

Addendum

February 2016

The San Lorenzo Valley Water District (SLVWD) has prepared this addendum to its 2010 Urban Water Management Plan (UWMP) in response to comments received from the California Department of Water Resources (CDWR)[1] regarding the UWMP adopted by the SLVWD Board of Directors in August 2015.

Section 3, Water Demand

Subsection 3.4.1, Recent Water Demand by Sector

Revised:

Table 3-14, SLVWD Water Demand by Sector, 2005-2010 and Projected for 2015-2035 (attached)

Revised for clarity. Legend text for shaded cells revised.

Section 4, Water Supply

Subsection 4.7, Potential Additional Water Sources

Added:

Section 4.7.4, Desalination

Desalination has been considered a potential supplemental water supply along the Santa Cruz County coast, most actively by the City of Santa Cruz. The San Lorenzo Valley Water District (SLVWD or District) is unlikely to undertake desalination given that it is separated from the coast by more than five miles of rugged terrain. In the event that the City of Santa Cruz constructs a regional desalination facility, SLVWD may have the opportunity to obtain supplemental water at times via existing system interties, perhaps as part of a regional conjunctive use program. No such project is currently planned, however, and desalination is not considered further in this plan.

Added:

Section 4.7.5, Recycled Water

SLVWD's South Service Area is sewered by the City of Scotts Valley. This wastewater is recycled by the Scotts Valley Water District, which delivered approximately 200 acre-feet of recycled water in 2013 (http://svwd.org/about-district/district-information).

SLVWD's North and Felton Service Areas rely on on-site wastewater disposal (i.e., septic tanks and leachfields), which effectively recycles water within the watershed. Planning studies conducted in the 1980s determined that sewering these areas would result in unacceptable environmental impacts.

Because of these conditions, SLVWD is not considering the use of recycled water at this time.

[1] Email sent to J. Michelsen/SLVWD December 22, 2015 from G. Huff, Gwen.Huff@water.ca.gov.

Section 5, Water Supply Reliability and Water Shortage Contingency Planning

The minimum water supply available by source for the next three years may be summarized as follows based on information provided in Section 5.2.3 of the Board Adopted UWMP for a multiple dry year period:

North System			South System	Felton System	
Stream Diversions	Ground-water	Total*	Pasatiempo & Mañana Woods Wells	Stream and Spring Diversions	SLVWD Total
(acre-feet/year)					
525	635	1,540	330	425	2,300

These estimates are based on the 1987-1994 drought and 2035 projected demand.

Based on information provided in in Sections 5.2.2 and 5.2.3 in the Board Approved UWMP, a water supply and demand comparison for single dry and multi-dry years is as follows for five year increments from 2015 through 2035:

	Supply						Demand			
	North System			South System	Felton System					
Dry-Year Period	Stream Diver-sions	Ground-water	Total	Pasatiempo & Mañana Woods Wells	Stream and Spring Diver-sions	SLVWD Total	North System	South System	Felton System	Total
	(acre-feet/year)									
2015-2020										
Single	400	1140	1,540	330	425	2,300	1,540	330	425	2,300
Multiple	525	635	1,540	330	425	2,300	1,540	330	425	2,300
2020-2025										
Single	525	635	1,540	330	425	2,300	1,540	330	425	2,300
Multiple	525	635	1,540	330	425	2,300	1,540	330	425	2,300
2025-2030										
Single	525	635	1,540	330	425	2,300	1,540	330	425	2,300
Multiple	525	635	1,540	330	425	2,300	1,540	330	425	2,300
2030-2035										
Single	525	635	1,540	330	425	2,300	1,540	330	425	2,300
Multiple	525	635	1,540	330	425	2,300	1,540	330	425	2,300

Section 6, Demand Management Measures

Subsection 6.1, SLVWD Water Demand Management Measures

Water demand management measures (DMM) are specific actions a water supplier takes to support its water conservation efforts. The UWMP Act identifies 14 DMMs (CWC 10631(f)) that should be evaluated in each UWMP. These are summarized in Table 6-1 (attached), which has been revised to include the letter code assigned by CDWR to each DMM in addition to the DMM numbering used in this UWMP.

The following three DMMs were omitted in the Board Adopted version of the 2010 Urban Water Management Plan and are described further below:

- DMM 9 (A)[2] - Programmatic Residential Water Survey programs for single-family residential and multifamily residential customers.
- DMM 14 (E) Large landscape conservation programs and incentives
- DMM 13 (I): Conservation programs for commercial, industrial, and institutional accounts

DMM 9 (A) - Programmatic Residential Water Survey programs for single-family residential and multifamily residential customers.

CDWR requires that water purveyors provide water survey programs to residential customers that provide advice on indoor and outdoor water conservation measures. Alternatively, a water purveyor may conduct a cost-benefit analysis of the cost of a water survey program versus the benefit of water saved in terms of reduced customer charges.

SLVWD currently provides on-site leak detection assistance in the form of information and guidance for self-performance of leak detection and repair.

In order for SLVWD to implement a "water-wise house call" program targeting the top 10 percent of single family and multi-family water users, it would require the additional staffing necessary to conduct approximately 576 water audits for these customers. Assuming these audits would require 77 percent of a full time employee, the cost to the District would be approximately $112,000. Assuming these customers would achieve a 20 percent annual water savings as a result of these audits, the total amount of water saved would be approximately 22.6 million gallons per year. At a cost of $5.58 per unit of water (i.e., 100 cubic feet), this would represent a total savings of approximately $198,522 among these customers.

Based on this approximate cost-benefit analysis, and in light of the District's existing programs for assisting its customers with water conservation, SLVWD does not plan to initiate a more extensive water survey program at this time.

DMM 14 (E) Large landscape conservation programs and incentives

SLVWD contracted with Ecology Action of Santa Cruz in 2015 to provide support for conducting indoor water conservation consultations and irrigation efficiency audits.

These water audit services include:

a. Water conservation and irrigation efficiency audits of the 10 to 15 highest water using properties in the District. Depending on the size of the facility, each audit and associated report is estimated to require 8 to 12 hours.

b. Efficiency audits of each irrigation zone in order to identify which zones need repairs to prevent water waste and run-off. A weather-based irrigation schedule compliant with the District's current watering schedule is programmed into the irrigation controller with the property manager's consent.

c. Submit each audit report to the customer and District. The following items are documented in the audit reports:

[2] DMM numbering as used in this UWMP, with CDWR letter assignment given parenthetically.

i. Existing indoor fixture use rates and recommended fixture conversions.

ii. Existing irrigation hardware, locations of observed leaks and run-off, and recommendations for irrigation efficiency upgrades.

iii. A list of priority zones for irrigation upgrades based on the greatest potential to reduce water use and waste.

iv. Existing irrigation zone schedule and recommended weather-based irrigation schedule.

v. An irrigation water budget based on the County of Santa Cruz Model Water Efficient Landscape Ordinance (MWELO) landscape coefficient of 0.7, and 2014 landscape water use compared to the MWELO irrigation water budget.

vi. If the customer does not have an irrigation system map for the purposes of conducting an irrigation audit, Ecology Action will create an irrigation zone map to be permanently posted at the irrigation controller so that future audits and system maintenance can be completed efficiently.

d. Follow-up with customers one month after report submission to answer questions and document implementation of recommended measures.

DMM 13 (I): Conservation programs for commercial, industrial, and institutional accounts

In May 2014 SLVWD declared a Stage 2 Water Shortage Emergency and passed Ordinance No. 105 (see UWMP Appendix B). This ordinance regulates the use of District-provided water as follows:

During a Stage 2 Water Shortage it shall be unlawful for any person, firm, partnership, association, corporation, political body or other District customer:

1. To water or irrigate lawn, landscape, or other vegetated areas between the hours of 10:00 a.m. and 5:00 p.m., except when performed with a bucket or watering can, or by use of a drip irrigation system or similar low volume, nonspray 4 irrigation equipment, or for very short periods of time for the express purpose of allowing landscape contractors to adjust or repair an irrigation system.
2. To use a hose that is not equipped with a shutoff nozzle.
3. To use potable water to wash down hard or paved surfaces, including but not limited to sidewalks, walkways, driveways, parking lots, tennis courts, patios, or other paved surfaces, except when it is necessary to alleviate safety or sanitation hazards or to prepare paved surfaces for sealing.
4. To initially fill or to drain and refill residential swimming pools.
5. To serve water in a restaurant or other commercial food service establishment except upon the request of a patron.
6. To operate a hotel, motel or other commercial lodging establishment without offering patrons the option to forego the daily laundering of towels, sheets and linens.
7. To water or irrigate lawn, landscape, or other vegetated areas on days of the week other than the days of the week authorized and noticed by the District Manager, except when performed with a bucket or watering can, or by use of a drip irrigation system or similar low volume, nonspray irrigation equipment, or for very short periods of time for the express purpose of allowing landscape contractors to adjust or repair an irrigation system. Hourly restrictions set forth in subsection 1 continue to apply on authorized watering days. This provision shall not

apply to commercial growers/nurseries or to residential vegetable gardens/edible plantings watered with a hose equipped with a shutoff nozzle.

8. To water or irrigate lawn, landscape, or other vegetated area using an automatic irrigation system for more than fifteen minutes per watering station per assigned day. This provision shall not apply to automatic irrigation systems exclusively using low output sprinkler equipment, including rotors, stream rotors, or microspray systems.
9. To wash the exterior of dwellings, buildings or structures (with the exception of window washing and preparation of property for painting or for sale).

Calendar Year	SLVWD All Service Areas																																				
	Residential																						Commercial															
	Single Residential			Multi Residential			Landscape			Private Mutuals			Fire Service			Vacant			Total			Commercial			Institutional/Govt			Other/Surplus			Total			SLVWD Total		
	Serv. Connections	Delivered	Use per Connection	Serv. Connections	Delivered	Use per Connection	Serv. Connections	Delivered	Use per Connection	Serv. Connections	Delivered	Use per Connection	Serv. Connections	Delivered	Use per Connection	Serv. Connections	Delivered	Use per Connection	Serv. Connections	Delivered	Use per Connection	Serv. Connections	Delivered	Use per Connection	Serv. Connections	Delivered	Use per Connection	Serv. Connections	Delivered	Use per Connection	Serv. Connections	Delivered	Use per Connection	Serv. Connections	Delivered[a]	Use per Connection
		AFY			AFY			AFY			AFY			AFY			AFY			AFY			AFY			AFY			AFY			AFY			AFY	
2005	5,671	1,302	0.23	c	254	-	11	17	1.55	c	23	-	c	0	-	c	0	-	5,682	1,596	0.28	105	58	0.55	31	56	1.81	6	6	0.99	142	120	0.84	5,824	1,716	0.29
2006[b]	5,796	1,313	0.23	c	243	-	11	19	1.69	c	23	-	c	0	-	c	1	-	5,807	1,598	0.28	105	56	0.53	31	63	2.04	6	3	0.53	142	122	0.86	5,949	1,721	0.29
2007	5,802	1,335	0.23	c	251	-	11	20	1.82	c	20	-	c	0	-	c	0	-	5,813	1,625	0.28	105	53	0.50	33	62	1.88	7	2	0.27	145	116	0.80	5,958	1,743	0.29
2008[b]	6,980	1,345	0.19	c	244	-	11	19	1.75	c	20	-	c	0	-	c	0	-	6,991	1,628	0.23	247	79	0.32	51	77	1.50	7	2	0.25	305	158	0.52	7,296	1,871	0.26
2009	6,472	1,403	0.22	412	241	0.58	11	14	1.27	6	26	4.33	36	0	-	63	0	-	7,000	1,684	0.24	245	120	0.49	52	92	1.77	8	4	0.44	305	216	0.71	7,305	1,904	0.26
2010	6,464	1,089	-	418	190	-	12	5	-	5	12	-	41	0	-	60	0	-	7,000	1,296	-	245	85	-	55	75	-	8	1	-	308	161	-	7,308	1,781	0.24
2015	6,511	1,566	0.24	417	265	0.63	10	16	1.56	5	29	5.80	38	0	-	63	0	-	7,045	1,875	0.27	246	136	0.55	52	96	1.83	5	5	0.94	304	237	0.78	7,349	2,112	0.29
2020	6,545	1,530	0.23	420	254	0.61	10	15	1.52	5	24	4.86	37	1	-	62	1	-	7,078	1,826	0.26	248	133	0.54	55	100	1.84	6	4	0.59	309	237	0.77	7,387	2,061	0.28
2025	6,560	1,532	0.23	421	254	0.60	13	16	1.29	5	28	5.68	38	0	-	60	0	-	7,096	1,831	0.26	248	131	0.53	55	100	1.84	5	4	0.76	308	235	0.76	7,404	2,066	0.28
2030	6,582	1,536	0.23	422	260	0.62	13	15	1.21	5	28	5.69	38	0	-	58	0	-	7,118	1,839	0.26	249	131	0.53	56	101	1.80	6	4	0.60	311	236	0.76	7,429	2,072	0.28
2035	6,589	1,540	0.23	422	260	0.61	13	11	0.90	5	29	5.71	38	1	-	62	0	-	7,129	1,840	0.26	249	132	0.53	53	101	1.91	5	4	0.73	308	237	0.77	7,437	2,077	0.28
		MGY	GPD[d]		MGY	GPD[d]		MGY	GPD[d]		MGY	GPD[d]		MGY	GPD[d]		MGY	GPD[d]		MGY	GPD[d]		MGY	GPD[d]		MGY	GPD[d]		MGY	GPD[d]		MGY	GPD[d]		MGY	GPD[d]
2005	5,671	424	205	c	83	-	11	6	1,380	c	7	-	c	0	-	c	0	-	5,682	520	251	105	19	493	31	18	1,613	6	2	888	142	39	754	5,824	559	263
2006	5,796	428	202	c	79	-	11	6	1,508	c	7	-	c	0	-	c	0.2	-	5,807	521	246	105	18	476	31	21	1,821	6	1	477	142	40	769	5,949	561	258
2007	5,802	435	205	c	82	-	11	7	1,622	c	6	-	c	0	-	c	0	-	5,813	530	250	105	17	447	33	20	1,675	7	1	242	145	38	716	5,958	568	261
2008	6,980	438	172	c	79	-	11	6	1,559	c	6	-	c	0	-	c	0	-	6,991	530	208	247	26	287	51	25	1,340	7	1	226	305	51	462	7,296	610	229
2009	6,472	457	194	412	79	522	11	5	1,136	6	8	3,868	36	0	-	63	0	-	7,000	549	215	245	39	437	52	30	1,579	8	1	391	305	70	631	7,305	620	233
2010	6,464	355	-	418	62	-	12	2	-	5	4	-	41	0	-	60	0	-	7,000	422	-	245	28	-	55	24	-	8	0	-	308	52	-	7,308	580	218
2015	6,144	510	215	412	86	567	11	5	1,395	6	9	5,181	36	0	-	63	0	-	6,672	611	238	161	44	492	40	31	1,633	7	2	843	208	77	695	6,880	688	257
2020	6,511	498	209	417	83	541	10	5	1,361	5	8	4,341	38	0.3	-	63	0.3	-	7,045	595	230	246	43	478	52	33	1,639	5	1	524	304	77	684	7,349	671	249
2025	6,545	499	208	420	83	539	10	5	1,155	5	9	5,068	37	0	-	62	0	-	7,078	596	230	248	43	471	55	33	1,639	6	1	676	309	77	682	7,387	673	249
2030	6,560	500	208	421	85	550	13	5	1,083	5	9	5,082	38	0	-	60	0	-	7,096	599	231	248	43	471	55	33	1,609	5	1	536	308	77	676	7,404	675	249
2035	6,582	502	209	422	85	548	13	4	803	5	9	5,095	38	0.3	-	58	0	-	7,118	600	230	249	43	471	56	33	1,703	6	1	654	311	77	686	7,429	677	249

Source: Historical water use by sector and service connections from SLVWD file "USAGECAL.xls," May 2011.

Sector data unavailable for August and October, 2010; thus, sum of 2010 sector values does not equal SLVWD 2010 total.

[a] Total Delivered is from WTUSE1.xls file provided by SLVWD in May 2011 and may differ from sum of the deliveries shown in this table.

[b] SLVWD annexed Mañana Woods in September 2006 and Felton in July 2008.

[c] No. of service connections are included under single residential category.

[d] gallons per day per connection.

Table 3-14
SLVWD Water Demand by Sector, 2005-2010 and Projected for 2015-2035
Revised February 2016

This UWMP No.	DWR DMM No.	DMM Category	Demand Management Measure Name	DMM Description	Implementation Status	SLVWD Implementation Notes
1	L	Operations Practices	Water conservation coordinator	designate a person responsible for the District's conservation program	current	The SLVWD Administrative Environmental Analysist is responsible for organizing, coordinating, and supervision of the District's water conservation activities.
2	D		Metering with commodity rates for all new connections and retrofit of existing meter connections	meter all new connections, retrofit existing unmetered connections, read meters and bill customers by volume used, and have a meter tracking program	current	There are no unmetered accounts.
3	K		Conservation pricing	provide economic incentives to customers to use water efficiently	current	SLVWD has tiered pricing so that as waster use increases, the per unit charge of water escallates. Current pricing can be found at: www.slvwd.com/account_billing.htm
4	C		System water audit, leak detection, and leak repair	conduct approved water audits and loss control programs	current	The District quantifys water losses monthly. When the Drought Contingency Plan is in effect, District operations put greater effort into leak detection and repairs.
5	M		Water waste prohibition	enact, enforce or support requirements that prohibit water waste and water shortage measures	past and current	SLVWD provides news releases to update customers on water shortages, use restrictions, and contacts for reporting leaks. It has joined other water agencies in the county to coordinate efforts. A sample press release: http://www.slvwd.com/press/SLVWDPressRelease5-21-07.pdf. Policy is laid out in the Drought Contingency Management Plan.
6	J		Wholesale agency assistance program	not applicable- SLVWD is a retail water supplier	not applicable	SLVWD is not a wholesale water supplier nor does it purchase water from a wholesale supplier.
7	G	Education Programs	Public information program	implement a public information program to promote water conservation and it's benefits	current	SLVWD, and in parnership with a county-wide group of water agencies, have a variety of water conservation campaigns and information materials.
8	H		School education program	implement school education program to enforce the need for water conservation	current	SLVWD offers free activity booklets to teachers and provides water education grants to teachers and organizatons. Information can be found at www.slvwd.com/education.htm and class materials at www.watersavingtips.org
9	A	Residential Programs	Water survey programs for single-family residential and multifamily residential customers	provide site-specific leak detection assistance and water efficiency survey and suggestions	current	District provides on-site leak detection assistance in the form of suggestions and information on how to self-perform.
10	B		Residential plumbing retrofit	provide showerheads and faucet aerators that meet current water efficiency standards	not implemented	The District disseminates technical information on indoor retrofit opportunities.
11	F		High-efficiency washing machine rebate programs	provide incentives for puchasing high-efficiency clothes washing machines	current	Starting 9/09 the District offered credits for purchase and installation of a high efficiency clothes washer. A total of 26 washers were installed with an estimated savings of 5,100 gal/yr per washer.
12	N		Residential ultra-low-flush toilet replacement programs	provide incentives for replacing existing toilets with ultra low flush toilets	past	District has provided credits for replacing high volume toilets with High Efficiency Toilets. In 2011-12, 77 toilets were replaced with 1.28 gpf or less toilets, resulting in savings of approximately 770 gal/day (Table 6-2).
13	I	Com-mercial/ Govt.	Conservation programs for commercial and institutional accounts	implement measures to achieve water savings goal of 10% of the baseline 2008 year use over a 10-yr. period	not implemented	Only 4% of connections are commercial or institutional and account for approximately 10% of water deliveries.
14	E	Land-scape	Large landscape conservation program and incentives	provide support and incentives to non-residential customers to improve landscape water use efficiency	not applicable or not implementd	Non-residential large landscape customer accounts include schools and parks.

Table 6-1
SLVWD Demand Management Measures
Revised February 2016