



State Water Resources Control Board Division of Drinking Water

December 19, 2024

Daniel Smith, General Manager
Apple Valley Foothill CWD
22545 Del Oro Road
Apple Valley, CA 92308
danavfcwd@gmail.com

Dear Daniel Smith,

2024 SANITARY SURVEY OF APPLE VALLEY FOOTHILL COMMUNITY WATER DISTRICT (SYSTEM NO. 3600008)

The State Water Resource Control Board, Division of Drinking Water (Division) conducted a sanitary survey of the Apple Valley Foothill Community Water District (District) on November 07, 2024. A deficiency list is enclosed documenting the deficiencies found during the inspection. The findings of the inspection are further detailed in the permit's engineering report.

The Division greatly appreciates Daniel Smith's assistance during and after the sanitary survey. If you have any questions, please contact Luis Ortiz at (909) 383-4313 or by email at Luis.Ortiz@waterboards.ca.gov.

Sincerely,

Wei H. Chang, P.E.
District Engineer
San Bernardino District
Southern California Field Operations Branch

Enclosure:

1. 2024 Sanitary Survey Deficiency List
2. 2024 Sanitary Survey Report

E. JOAQUIN ESQUIVEL, CHAIR | ERIC OPPENHEIMER, EXECUTIVE DIRECTOR

464 W. 4th Street, #437, San Bernardino, CA 92401 | www.waterboards.ca.gov

Sanitary Survey Deficiency List

Date Found	Description of Deficiency	Correction Due Date	Date Corrected Confirmed
SIGNIFICANT DEFICIENCIES IDENTIFIED			
STORAGE TANK			
11/07/2024	Booster Tank 1: Top of hatch has a small hole; plug or seal the small hole.	12/07/2024	
POTENTIAL HEALTH HAZARD DEFICIENCIES IDENTIFIED			
WATER SOURCES			
11/07/2024	Chlorinating Tablets: Please send information of First Choice Chlorinating 3” Tablets being NSF 60 approved. If not able to confirm it is NSF 60, discontinue using and replace with NSF 60 approved tablets. Or connect the chlorination injector line and begin using NSF 60 certified liquid disinfectant. If using liquid disinfectant, please complete the chlorination data sheet.	12/07/2024	
MINOR DEFICIENCIES IDENTIFIED			
WATER SOURCES			
11/07/2024	Well 01 & 02 – Pedestal Height: The pedestal height should be at least 24 inches above grade or the 100-year flood level, whichever is greater. The height should be increased at the next well rehab.	N/A	
11/07/2024	<p>Well 01 – Sampling Tap: The raw water sampling tap should be prior to the check valve. Install a sampling tap (unthreaded) prior to the check valve.</p> <p>Here are regulations concerning three types of sample taps:</p> <ul style="list-style-type: none"> > Well sample taps must be unthreaded [22 CCR 64560(c)(3)(E)(2)]. > For distribution tanks, the tap type is not specified [22 CCR 64585(a)(3)]. > Distribution coliform sampling site taps are not specified, only that they be approved [22 CCR 64422]. 	03/07/2025	
11/07/2024	Well 01 & 02 – Chlorination Location: The District must collect at least one quarterly samples from the wells to evaluate the bacteriological quality of raw water produce. The District has been collecting raw water samples every month from the wells but the samples are not valid because chlorination occurs before the check valve. The District must move the chlorination point after the check valve to be in compliance.	11/07/2025	
11/07/2024	Well 01 – Foundation: Clear and clean all debris/vegetation in and around the foundation. Repair the foundation and seal any openings.	03/07/2025	

11/07/2024	Well 01 – Casing Vent: Current mesh is ripped. Install a new screen mesh.	03/07/2025	
11/07/2024	Well 02 – Casing Vent: Casing vent must be inverted U, mesh screened, 3-feet above the grade, and 3-inch diameter.	03/07/2025	
11/07/2024	Well 02 – Bladder Tank: Disconnect the bladder surge arrestor tank from the well and cap/flange off the pipe.	03/07/2025	
STORAGE TANK			
11/07/2024	Thompson Family East & West Tanks - Hatch: The access hatch does not have a gasket. EPA has guidance on gasket. The gasket does not need to be NSF 61 but is recommended.	03/07/2025	
11/07/2024	Thompson Family East & West Tanks – Flush to Waste: Install a mesh screen/duck bill/flap gate on the end of the flush to waste pipe.	03/07/2025	
11/07/2024	Booster Tank 1 – Air Release Pipe: Downturn pipe near the top of the tank is missing a mesh screen. Install a mesh screen.	03/07/2025	
MONITORING AND REPORTING			
11/07/2024	Record Retention: Record retention must be improved. Records must be created and maintained for items specified in Appendix A. The District should start maintaining records for main, reservoir, and well disinfection; main flushing; reservoir inspection and cleaning per Title 22, California Code of Regulations, Section 64604. (Operational records to document the operations and maintenance of water system facilities. Source production, site visits, and conditions of water system facilities must be documented on a routine basis (daily, weekly, monthly, etc.)	Start immediately	
11/07/2024	Complaint Program: A complaint tracking program must be developed in order to track customer complaints related to water quality and how they were addressed. The complaint log must be maintained for a minimum of five years. If no complaints, notate on the log no complaints for that month/season/etc.	Start immediately	
11/07/2024	Backflow Device Tests Form: Submit the past three years of certified tests forms.	03/07/2025	
11/07/2024	Maximum Residual Disinfectant Levels (MRDL): Complete and submit the MRDL report quarterly. See Appendix B.	Start immediately	
BOOSTER STATION			
11/07/2024	Booster Pumps: Complete and submit the booster data sheet. See Appendix C.	03/07/2024	
RECOMMENDATIONS			
BOOSTER STATION			
11/07/2024	Booster Station – Valve: The end of the pipe has a valve. If no longer in use disconnect and cap/flange off the pipe end. If it is in use cap off or screen.	-	
TREATMENT			
11/07/2024	Emergency Disinfection Plan (EDP): It is recommended to complete the EDP and keep on it on file.	-	

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STATE WATER RESOURCE CONTROL BOARD
DIVISION OF DRINKING WATER
2024 SANITARY SURVEY REPORT

WATER SYSTEM GENERAL INFORMATION

Water System Details	
Water System Number:	CA3600008
Water System Name:	Apple Valley Foothill CWD
Water System Address:	22545 Del Oro Road, Apple Valley, CA 92308
System Contact:	Daniel Smith, General Manager
System Contact's Number:	(760) 881-9843
System Classification:	Community (CWS)
County:	San Bernardino
Date of Sanitary Survey:	11/07/2024
Reviewing Engineer:	Luis Ortiz
Previous Sanitary Survey:	05/16/2019
District Engineer:	Wei H. Chang, P.E.
District Office:	San Bernardino District - 13

Operator Certification	
Name of chief distribution operator:	Daniel Smith
Name of chief treatment operator:	Daniel Smith
Contract or employee operator?	Employee
Treatment certification level:	2
Treatment certification expiration:	07/01/2026
Distribution certification level:	2
Distribution certification expiration:	07/01/2025
Water system treatment certification needed:	N/A
Water system distribution certification needed:	D1

System Information	
Service Connections:	235
Population:	776
Current Permit No.:	05-13-09P-001
Current Permit Date:	02/09/2009
Is the original permit more than 10 years old?	Yes
Are there more than 15 permit amendments to the original permit?	No
No. of Permit Amendments:	One. Permit amendment No. 05-13-21PA-010: To add two bolted steel water reservoirs.
Enforcement history:	No citations have been made in the past 12 months.

INTRODUCTION

On November 07, 2024, the State Water Resource Control Board, Division of Drinking Water (Division) conducted a sanitary survey of the Apple Valley Foothill Community Water District (District). During the sanitary survey photos were taken and can be found in Appendix D. The purpose of this engineering report is to document the inspection of the water system, describe the facilities and operational practices as they exist today, and describe any deficiencies needing corrective action. The District was last inspected by Division staff on May 16, 2019, as a routine sanitary survey.

SOURCES		
Source water type:	Groundwater	Two wells
Are there abandoned wells?	No	There are no known abandoned wells nearby.
Is a Drinking Water Source Assessment (DWSAP) on file for all sources?	Yes	
Is each DWSAP accurate?	Yes	There have been no major changes to the area since the last sanitary survey or DWSAP.
<i>Purchased Water</i>		
Does the system buy water?	No	
If yes, explain (system, connection type, etc.):	N/A	
<i>Sold Water</i>		
Does the system buy water?	No	
If yes, explain (system, connection type, etc.):	N/A	
<i>Source Capacity</i>		
Total # of groundwater sources:	2	
Total # of surface water sources:	N/A	
Total # of GUDI sources:	N/A	
Total number of active sources:	2	
Site Security:	Yes	Adequate security fencing surrounding both wells.
Are the most recent pump tests on file?	Yes	
Total capacity (sum of active sources):	720,000 gallons per day, gpd	Capacity of both wells was confirmed with operator.
Maximum day demand (MDD):	220,602 gpd	
Does the total capacity meet the MDD?	Yes	All water systems must be able to meet maximum day demand (MDD) using only sources (Title 22, CCR, §64554(a)).
MDD is met in the system with the highest-capacity source offline (for systems with only groundwater)	No	With only Well 01 (150 gallons per minute, gpm) online. It can only produce 216,000 gpd < 220,602 gpd (MDD).

Table 1: List of Active Sources

Source Name	Source Class	PS-Code	Type	Capacity (gpm)	Most vulnerable activities (PCAs)?	Assessment date
Well 01	GWNV	CA3600008_001_001	Well	150	Low density septic system	March 2001
Well 02	GWNV	CA3600008_002_002	Well	350	Low density septic system	April 2001

<i>Using the 4,412,028 gallons produced in June 2021...</i>		
Maximum monthly production	4,412,028	gallons
Number of days in June	30	days
Approximate average flow (gallons per day)	147,068	gpd
Maximum day demand (MDD), approximate average flow in gpd times peaking factor of 1.5 (per California Code of Regulations, Title 22, Section 64554, subdivision (b)(2))	220,602	gpd
Last know well pump capacity (Well 01: 150 gpm & Well 02: 350 gpm)	500	gpm
Well pump capacity in gpd	720,000	gpd

Table 2: Water Production and Maximum Day Demand Data*

Year	Maximum Day (gal)	Maximum Month (gal)	Month	Annual Produced (gal)
2023	N/A	4,203,478	July	32,663,150
2022	N/A	3,952,578	June	29,652,480
2021	N/A	4,412,028	June	30,858,130
2020	N/A	3,802,686	September	29,391,799
2019	N/A	4,167,640	July	31,737,929
2018	N/A	3,258,514	July	30,955,886
2017	N/A	3,258,514	June	26,719,817
2016	N/A	3,258,514	June	26,393,966
2015	N/A	2,932,663	June	26,719,817
2014	22,216	3,910,217	June	32,910,994

*Source of information: Available electric annual reports (2014-2022). Safer Clearinghouse Annual Report (2023). If not, daily production values are available, approximations may be made from the monthly or annual production data.

Starting 2024, each public water system is required to submit the annual supply and demand data to the State Water Board’s SAFER Clearinghouse Portal <https://drought.waterboards.ca.gov>. This is a new reporting platform replacing the annual electronic annual report. Each public water system is also required to read and record water production and demand data no less than a monthly frequency and report the data no less than a quarterly frequency to the SAFER Clearinghouse Portal as the requirement of the 2024 Technical Reporting Order which can be found through the following link: <https://www.waterboards.ca.gov/drought/resources-for-drinking-watersystems/docs/ddw-technical-order.pdf>.

Source Evaluation

Well 01	During the sanitary survey some minor deficiencies were noted. The pedestal height should be at least 24 inches above the grade or the 100-year flood level, whichever is greater. The height should be increased at the next well rehab. Both the well's foundation and casing vent must be repaired. The sampling tap must be placed prior to the check valve. Well sample taps must be unthreaded pursuant to Title 22, section 64560 (c)(3)(E)(2)].
Well 02	During the sanitary survey some minor deficiencies were noted. The pedestal height should be at least 24 inches above the grade or the 100-year flood level, whichever is greater. The height should be increased at the next well rehab. The well's casing vent must be inverted U, mesh screened, 3-feet above the grade, and 3-inch in diameter. The bladder tank next to the well no longer in use. Disconnect the bladder surge arrestor tank from the well and cap off the pipe.
From the District's full permit, at least one sample from the wells needs to be collected quarterly to evaluate the bacteriological quality of raw water produce. The District has been collecting raw water samples every month from the wells but the samples are not valid because chlorination occurs before the check valve. The District must move the chlorination point after the check valve to be in compliance.	

TREATMENT

Treatment is provided for:	Groundwater	Current chlorine tablets unknown if NSF 60 certified. Replace the non-approved chlorine tablets with NSF 60 certified chlorine tablets. If unable to replace, connect the chemical feed pump to both well's chlorine injection point with NSF 60 certified disinfectant. Chlorination data sheet will need to be completed if the chemical feed pump is used.
Approved water treatment process:	Disinfection	
Explain if multiple or other:	The District provides continuous tablet disinfection due to Well 01 not having an adequate 50-foot sanitary seal.	
List of water treatment facilities:	Chlorine tablet dispenser and chemical feed pump.	
What is the highest treatment operator requirement:	N/A	
Is the PWS in compliance with treatment operator permit requirements?	N/A	
Have all treatment classifications been updated?	N/A	

Disinfection Review

Disinfection Treatment:	Calcium Hypochlorite (Tablet chlorinator)	
What is the type and manufacturer?	Accu-Tab model 3015 chlorinator	
What is the dosage?	Varies	Depending on the wells' usage. Tablets are replaced every couple of days to once a week.
Is the dosage continuous or emergency?	Continuous	
Is it ANSI/NSF 60 certified?	Unknown	Operator will submit proof of tablets are NSF 60. If not able to send proof, replace with NSF 60 approved tablets.
Is it ANSI/NSF 61 certified?	Yes	
Is the chemical field equipment calibrated per manufacturer's recommendations?	N/A	
Is there an emergency chlorination plan on file?	No	There is no Emergency Disinfection Plan (EDP) available for review. It is recommended the District complete and have a EDP on file.
Is the PWS free of MCL exceedances for Maximum Residual Disinfection Levels (MRDL) (for systems that chlorinate, pursuant to Title 22, CCR, Section 64533.5)?	Unknown	Systems that chlorinate continuously are required to monitor their disinfectant residual in the distribution in order to track the MRDL. Complete and submit the MRDL reports quarterly, see Appendix B.
Is the PWS in compliance with monitoring and reporting requirements for MRDLs (pursuant to Title 22, CCR, Section 64535.4 and 64537.4)?	No	
Is there an operation and maintenance (O+M) manual on file and is it up to date?	Yes	
Is the PWS in compliance with permit requirements for disinfection?	No	Disinfection needs to take place after the check valve.
Is the PWS in compliance with disinfection requirements?		

Treatment Evaluation

The only approved sources for the District are Well 01 & Well 02. Both sources have continuous tablet chlorination. The District has continuous chlorination because Well 01 does not have an adequate 50-foot sanitary seal. The District is unable to confirm chlorination tablets, First Choice Chlorinating 3" Tablets, are NSF 60 approved. The District has until December 07, 2024 to send proof, if not able to send proof, the District will need to discontinue using the tablets, connect the chlorination injector line and begin using it with NSF 60 certified disinfectant.

DISTRIBUTION SYSTEM

Service connections metered?	Yes	
Does the system have an up-to-date distribution map?	Yes	
<i>Leaks</i>		
Discuss leak history since the last sanitary survey?	Yes	Around 2 – 3 leaks occur every year. See table below.
Is the distribution system free of low-head lines (<5 psi)?	Yes	
Is there a leak detection program?	Yes	

Table 3: Leaks Since Last Sanitary Survey

Type	2020	2021	2022	2023
Service Connection Breaks/Leaks	3	2	2	3
Main Breaks/Leaks	0	0	0	0

Water Works Standards

Are water main and sewer separation practices meeting Title 22, CCR, Section 64572?	Unknown	
Is the distribution system free of all known lead pipes or lead solder joints in the distribution system?	Yes	
What are the known materials of water lines?	Asbestos and poly vinyl chloride (PVC)	The District is not up-to-date with asbestos monitoring. The District must sample a tap that is served by asbestos cement pipe at least once every nine years. Please draft an asbestos monitoring plan for the distribution system for the Division to review and approve. (Title 22, CCR, 64432.2)
Is the water main inventory table complete and attached?	Yes	See table below.
Are the materials standards for water in compliance with Title 22, CCR, Section 64570?	No	Asbestos Cement is no longer an accepted material for distribution pipeline and it is over 50 years old; the District should develop a plan to remove and replace the asbestos pipe.

For community system, are mains at least four inches in diameter? (Title 22, CCR, Section 64573)	Yes	In the District's distribution system, no main lines are smaller than 4-inches; all lines are between 4-inches to 8-inches.
Are all direct additives NSF/ANSI 60? (Title 22, CCR, Section 64590)	No	Unknown if the chlorination tablets, First Choice Chlorinating 3" tablets, are NSF 60 approved.
Are all indirect additives NSF/ANSI 61? (Title 22, CCR, Section 64591)	Yes	

Table 4: Water Main Inventory Table

Material	Amount	ft or %	Average age in years
Asbestos Cement	95	%	71
PVC	5	%	16

FINISHED WATER STORAGE		
Total number of storage tanks	3	See table below.
Total Capacity (sum of finished storage)	497,000 gallons	
Maximum Day Demand (MDD)	220,602 gallons	
Storage capacity at all times \geq the maximum day demand (MDD) (for systems with less than 1,000 service connections). Does the District's storage meet the requirement? (Capacity \geq Demand)	Yes	
Required storage capacity to be in compliance?	None	
Were the tanks free of physical deficiencies?	No	See deficiencies list.
<i>Tank Inspection and Cleaning</i>		
Were reservoirs internally inspected?	No, Booster Tank #1 was not internally inspected.	The tank was not inspected because the lock key was not found. Operator will be sending pictures.
Were reservoirs externally inspected?	Yes	
Does the public water system have comprehensive evaluations performed on the tanks? (i.e. dive, tank draining)	Yes	
Explain comprehensive evaluation:	The tanks are visited daily or weekly and inspected externally. The tanks are climbed and inspected internally quarterly. The tanks turnover rate for all tanks, is about every three days. All tanks are able to be isolated.	

Table 5: Water Storage Tanks

Tank	Capacity	Units	Type/Material	Receives from...	Delivers to...	Date last coated
Booster Tank #1	75,000	Gallons	Welded steel	Source	System	Unknown
Thompson Family (East) Tank #1	211,000		Bolted steel			2019/2020
Thompson Family (West) Tank #2	211,000					

The District has two hydropneumatic tanks. The two hydropneumatic tanks do not count towards the storage capacity of the system. Both tanks were in reasonably good condition.

Table 6: Hydropneumatic Tanks

Tank	Capacity	Unit
Hydropneumatic Tank #1	119	Gallons
Hydropneumatic Tank #2	1000	

Finished Water Storage Evaluation

During the survey, all the tanks appeared to be in good condition. The access ladders were secured against climbing, and tank access hatch cover was locked against unauthorized entry. The Booster tank hatch was not able to be opened, due to not finding lock key. Operator will take photos of the hatch, the interior of the tank and water and send photos to the Division.

PRESSURE ZONES & PUMPS

List all pressure zones	Zone 1 & Zone 2	Only has two zone
Range of pressure (psi)?	40-75	
Describe pressure zone interactions?	The new tanks (Thompson Family East & West) tanks will gravity feed one pressure zone in the distribution system that has 75% of the District's customers. The existing booster tank will gravity feed the other pressure zone which accounts for 25% of the District's customers. Both the hydropneumatic tanks provide additional pressure to the zone and maintains at least 40 psi.	
Are there booster pumps?	Yes	Total of two booster pumps. Complete the booster data sheet.
Are there spare parts and tools readily available for pumps?	No	Recommended to have a spare pump.
Are all booster pump locations in adequate, sanitary conditions?	Yes	

MONITORING, REPORTING AND DATA VERIFICATION		
<i>Bacteriological Monitoring</i>		
Total number of monthly samples taken per approved Bacteriological Sample Siting Plan (BSSP)?	One	One sample per month, rotating four sample sites three times a year.
What is the Total Coliform Rule required minimum samples per week/month? (Title 22, CCR, Table 64423-A)	1 per month	
Is the BSSP up to date and representative of the Groundwater Rule (if applicable)?	Yes	
Any MCL exceedances since last sanitary survey?	No	
Any monitoring and reporting (M&R) violations since last sanitary survey?	No	
Has the system had any level 1 or level 2 assessments since the last sanitary survey?	No	
Is the system in compliance with the level 1 and level assessment(s) that were completed?	Yes	

Table 7: Summary of Bacteriological Sample Siting Plan Monitoring

2024										
	January	February	March	April	May	June	July	August	September	October
Samples Collected	1	1	1	1	1	1	1	1	1	1
T.C. (+)	0	0	0	0	0	0	0	0	0	0

<i>Source Chemical Monitoring</i>		
If any waivers have been issued, have the letters been attached to this report? (i.e. SOC, VOC)	Yes	
Review of the waiver?	Yes	Waiver was approved 06/09/2023.
Is there an approved Sampling Monitoring Plan on file? (Title 22, CCR, Section 64416)	N/A	
Is the public water system using modified Drinking Water Watch (mDWW) for monitoring and reporting?	Yes	

Is all source chemical monitoring and reporting in compliance?	Yes	
Explain any increased or reduced monitoring updates:	VOC monitoring has been updated to the schedule of every 6 years. SOC monitoring has been updated to the schedule of every 9 years.	
Free of any primary and/or secondary MCL exceedances?	Yes	
Explain if not:	N/A	
Free of any source monitoring and reporting (M&R) violations?	Yes	
Explain if not:	N/A	
<i>General Physical Monitoring (Distribution)</i>		
Has the system sampled for color, odor and turbidity?	N/A	
If yes, how many and at what frequency?	N/A	The District does not routinely monitor general physical characteristics in the distribution.
Is color, odor and turbidity monitoring required? (Tile 22, CCR, Section 64449.5)	N/A	

Table 8: Inorganic Chemical Monitoring Summary

Source	Frequency	Waiver	Last Monitoring	Exceedance (MCL)	Next Monitoring
Well 01	Triennial	None	06/20/2023	None	06/2026
Well 02			05/21/2024		05/2027

Table 9: Perchlorate Monitoring Summary

Source	Frequency	Waiver	Last Monitoring	Exceedance (MCL)	Next Monitoring
Well 01	Triennial	None	06/20/2023	None	06/2026
Well 02			05/21/2024		05/2027

Table 10: Secondary Standards Monitoring Summary

Source	Frequency	Waiver	Last Monitoring	Exceedance (MCL)	Next Monitoring
Well 01	Triennial	None	06/20/2023	None	06/2026
Well 02			05/21/2024		05/2027

Table 11: Nitrates & Nitrites Monitoring Summary

Nitrates					
Source	Frequency	Waiver	Last Monitoring	Exceedance (MCL)	Next Monitoring
Well 01	Annually	None	06/13/2024	None	06/2025
Well 02			05/21/2024		05/2025
Nitrites					
Source	Frequency	Waiver	Last Monitoring	Exceedance (MCL)	Next Monitoring
Well 01	Triennial	None	06/20/2023	None	06/2026
Well 02			05/21/2024		05/2027

Table 12: Volatile Organic Chemicals (VOC)

Source	Frequency	Waiver	Last Monitoring	Exceedance (MCL)	Next Monitoring
Well 01	6 years	Yes	12/02/2021	None	12/2027
Well 02			09/12/2022		09/2028

Table 13: Synthetic Organic Chemical (SOC)

Source	Frequency	Waiver	Last Monitoring	Exceedance (MCL)	Next Monitoring
Well 01	9 years	Yes	05/11/2020	None	05/2029
Well 02					

Table 14: Gross Alpha Monitoring Summary

Source	Frequency	Waiver	Last Monitoring	Exceedance (MCL)	Next Monitoring
Well 01	Triennial	None	12/02/2021	None	12/2027
Well 02			05/16/2022		05/2025

Disinfectant / Disinfection Byproduct (D/DBP) Monitoring (Distribution)

When is the PWS required to monitor for D/DBPS?	Annually	Samples are taken every July.
Is there an approved D/DBP plan on file (is it up to date)?	No	A D/DBP monitoring plan should be complete and save in the District's file.
What are the required number of samples?	Two dual sample sets. The two sets are based on the highest TTHM and HAA5 levels during July.	
Free of OEL exceedances?	Yes	
Free of MCL exceedances?	Yes	
Free of M&R violations?	No	The District missed DBP monitoring at site #2 (10614 Tujunga) in 2021.

Table 15: Disinfectant / Disinfection Byproduct (D/DBP) Monitoring (Distribution)

Site	Frequency	Sample Date	TTHM (µg/L)	MCL	HAAS (µg/L)	MCL	Next Due Date
23227 Laurel	Annually	07/08/24	3.7	80 µg/L	0	60 µg/L	July 2025
10614 Tujunga			0		0		

Lead and Copper Monitoring (Distribution)

Is Corrosion Control Treatment Provided?	No
Is the PWS in compliance with corrosion control requirements of the Lead and Copper Rule (LCR)? (if applicable; Title 22, CCR, Sections 64682 and 64684)	N/A
Are the corrosion control treatment parameters met?	N/A
Are corrosion control treatment monitoring and reporting requirements met?	N/A
What is the PWS' required frequency for monitoring?	Triennially
How many sites are required to be sampled?	10
When are the next samples due by?	June 1 st – September 30 th 2025
Is the PWS free of lead and copper action level exceedance?	Yes
Is monitoring and reporting (M&R) for lead and copper in compliance?	Yes

Table 16: Lead and Copper Monitoring Review

Date of Monitoring	Number of Samples Taken	No. of Samples Required	90 th Percentile Lead (mg/L)	90 th Percentile Copper (mg/L)
July 2022	10	10	0	0.069
July 2019	10	10	0	0.059

Additional Reporting

Has DDW received all electronic Annual Reports (eARs) since the last sanitary survey?	Yes
Were all eARs complete?	Yes

Has DDW received all Consumer Confidence Reports (CCRs) since the last sanitary survey?	Yes	
Were all CCRs complete according to Title 22, CCR, Section 64480/	Yes	
Has DDW received all CCR certification forms?	Yes	
Was enforcement reported in the CCR and was public notification included (if applicable)?	N/A	

SYSTEM MANAGEMENT AND OPERATION

Management

Is record retention in compliance?	No	Customer complaints, main disinfection, backflow device tests form, and well disinfection are not recorded.
Does the public water system have an Urban Water Management Plan? (CA Water Code, Statute 10620; required for systems \geq 3,000 customers)	N/A	
Are all backflow devices tested annually to comply with Title 17, CCR, Section 7605(c)?	No	No backflow test results were shown during the sanitary survey.
Does the utility have a Cross-Connection Control Ordinance? (Title 17, CCR, Section 7584)	No	The Division adopted the new Cross-Connection Control Policy Handbook (CCCPH) on December 19, 2023, which goes into effect on July 1, 2024. The CCCPH will supersede the current cross-connection control regulations for public water systems in the California Code of Regulations, Title 17. The CCCPH has some new requirements that will necessitate reevaluating and expanding your cross-connection control program. Specifically, it requires the submittal of a written Cross Connection Control Plan no later than 12 months after the CCCPH's effective date, i.e. the Plan is due no later than July 1, 2025. The District should get an early start on developing the Plan. Here is a link to the Final CCCPH and the Plan elements can be found in Section 3.1.4.: Cross-Connection Control Policy Handbook . Meanwhile, the Division is working on a Plan template for community water

		systems serving 200-999 connections. The template is expected to be available by 1 st quarter 2025.
Was the public water system free of cross connections during the survey?	Yes	
Does the public water system have a customer complaint program?	No	There is no formal complaint log. Any complaints from the customer will go to the operator. Operator will now start logging in any water related complaints.
Is the Complaint Program adequate?	No	
<i>Financial Capacity</i>		
Is there a budget?	Yes	
Is the budget audited?	Yes	
Do revenues exceed expenditures?	Yes	
Is there a capital improvement plan/	Yes	
Is there a main replacement program?	No	
<i>Emergency Response</i>		
Is there an up-to-date emergency notification plan on file with the Division?	Yes	
Is there an emergency response plan?	Yes	
<i>Auxiliary Power</i>		
Is there auxiliary power on-site?	Yes	
Is there auxiliary power routinely tested?	Yes	
Is the auxiliary power (or standby storage) able to supply and pressurize the entire distribution system for a minimum of 8 hours for normal operation?	Yes	
<i>Main Disinfection Program</i>		
Does the main disinfection program comply with AWWA Standards?	Yes	Operator follows the AWWA standards but does not file or log the main disinfection.
<i>Valve Maintenance Program</i>		
Does the utility have a map of all system valves?	Yes	
Does the utility have a formal valve maintenance program?	Yes	
Number of valves exercised last year	91	District has a list of all the valves on a spreadsheet with coordinates.

<i>Flushing Program</i>		
Does the public water system annually flush all dead ends?	Yes	
<i>Recycled or Non-Potable Water Distribution Program</i>		
Are there recycled water projects in the service area?	N/A	
Does the system have an approved ordinance for using recycled water?	N/A	
Are mains, hydrants, and appurtenances easily identified (purple)?	N/A	
Are annual survey tests completed (dual plumbed)?	N/A	
Are shut down tests completed? (every 4 years)	N/A	
<i>Operators</i>		
Public water system minimum operator requirement:	D1	The District's distribution system classification can be found in Appendix E.
Is the public water system in compliance with Distribution Operator requirements?	Yes	
Public water system minimum treatment operator requirement:	N/A	
Is the public water system in compliance with Treatment Operator requirements?	Yes	
Is there an operations and maintenance (O+M) manual on file and is it up to date? (Title 22, CCR, Section 64600)	No	
Does the public water system utilize a SCADA system?	Yes	

Table 17: Operator Review

Distribution Operators					
Name	Operator Number	Chief or Shift	Classification	Expiration Date	Meets requirement?
Daniel Smith	37806	Chief	D2	07/01/2025	Yes
Treatment Operators					
Daniel Smith	34155	Chief	D2	07/01/2026	Yes

RESILIENCY AND PREPAREDNESS	
<i>Extreme Weather Vulnerabilities</i>	
What extreme weather conditions is the system susceptible to?	Apple Valley, CA is susceptible to extreme heat, wildfires and high winds. Temperatures can reach above triple digits.
Regarding fire – Is there a defensible space of 100 feet (California Public Resource Code, 4291) maintained around all sources and structure managed by the water system?	No
Regarding flooding – Are there any drinking water facilities vulnerable to flooding?	No
Regarding backup power – Is backup power available through portable to permanent power generators?	Yes
<i>Other Identified Vulnerabilities</i>	
Explain other identified vulnerabilities:	The District also can be vulnerable to earthquakes.
<i>Preparedness</i>	
Explain the public water system's measures for preparedness:	It is recommended for the water system to have a mutual aid agreement with local public water systems.

The effects of climate change on community water system (CWS) facilities and operations are a concern and priority of the State Water Resources Control Board (SWRCB), which is documented by the SWRCB in its Comprehensive Climate Change Resolution adopted in March 2017. The Division is reviewing each water system's preparedness for climate change with the goal of increasing awareness and familiarization with the effects of climate change on facilities and operations, encouraging the use of the Environmental Protection Agency's (EPA) Climate Resilience Evaluation and Awareness Tool ([CREAT](#)) to equivalent, and to document the Water System's efforts related to current threats that may also provide mitigation to climate change impacts.

The SWRCB strongly encourages utilities to evaluate climate change vulnerabilities using tools such as CREAT and engaging in a conversation both within your water system organization and with customers on how to plan and prepare for being resilient to provide clean and safe water reliably and adequately under all current and future conditions.

Appendix A: Record Retention

General Record Retention Table

Record Type	Requirement
Backflow device tests and maintenance (17 CCR 7605 (f))	≥3 years
Distribution bacteriological analysis (22 CCR 64423.1 (d))	5 years
Source microbiological and turbidity analysis (22 CCR 64470 (b)(1))	5 years
Source chemical analysis (22 CCR 64470 (b)(1))	10 years
Water system complaints (22 CCR 64470 (a))	5 years
Sanitary survey reports /summaries /communication (22 CCR 64470 (b)(3))	10 years
Consumer confidence report (22 CCR 64483 (g))	≥3 years
Source Monitoring Plans (22 CCR 64470 (b)(6))	10 years
Distribution Bacteriological Monitoring Plan (22 CCR 64470 (b)(6))	10 years
Distribution TTHM / HAA5/ MRDL Results and Monitoring Plans 22 CCR 64470 (b)(6);22 CCR 64537 (e)	10 years
Main/Reservoir/Well Disinfection, Main Flushing, Reservoir Inspection and Cleaning (22 CCR 64604 (c))	≥3 years
Treatment Plant Records (22 CCR 64662 (b))	≥3 years
Distribution Lead and Copper analysis and records (22 CCR 64690.80)	2 Compliance Cycles (18 Years)

Appendix B: Disinfectant Residual Monitoring

**Quarterly Report for Disinfectant Residuals Compliance
For Systems Using Chlorine or Chloramines
*For the First Year of Monitoring Only****

System Name: _____ System No.: _____

Calendar Year*: _____ Quarter: _____

1st Quarter		
Month	Number of Samples Taken	Monthly Ave. Chlorine Level (mg/L)
January		
February		
March		
Average of 1st Quarter's Results:		
Meets standard? (i.e. average \leq 4xMRDL of 4.0 mg/L as Cl ₂)		<input type="checkbox"/> Yes <input type="checkbox"/> No

2nd Quarter		
Month	Number of Samples Taken	Monthly Ave. Chlorine Level (mg/L)
January		
February		
March		
April		
May		
June		
Average of 1st & 2nd Quarter's Results:		
Meets standard? (i.e. average \leq 2xMRDL of 4.0 mg/L as Cl ₂)		<input type="checkbox"/> Yes <input type="checkbox"/> No

3rd Quarter		
Month	Number of Samples Taken	Monthly Ave. Chlorine Level (mg/L)
January		
February		
March		
April		
May		
June		
July		
August		
September		
Average of 1st, 2nd, & 3rd Quarter's Results:		
Meets standard? (i.e. average \leq 1.33xMRDL of 4.0 mg/L as Cl ₂)		<input type="checkbox"/> Yes <input type="checkbox"/> No

4th Quarter		
Month	Number of Samples Taken	Monthly Ave. Chlorine Level (mg/L)
January		
February		
March		
April		
May		
June		
July		
August		
September		
October		
November		
December		
Running Annual Average (RAA)*:		
Meets standard? (i.e. RAA \leq MRDL of 4.0 mg/L as Cl ₂)		<input type="checkbox"/> Yes <input type="checkbox"/> No

Comments: _____

Signature: _____ Date: _____

*This form should be used for the first year of monitoring only. A standard reporting form has been developed for use after the first year of monitoring has been completed. After 12 months of monitoring have been completed, compliance is based on a running annual average (RAA), computed quarterly, of monthly averages.

Quarterly Report for Disinfectant Residuals Compliance For Systems Using Chlorine or Chloramines

System Name: _____ System No.: _____

Calendar Year: _____ Quarter: _____

1st Quarter				
	Month	Number of Samples Taken	Monthly Ave. Chlorine Level (mg/L)	
Previous Year	April			
	May			
	June			
	July			
	August			
	September			
	October			
	November			
	December			
	Current Year		January	
			February	
			March	
Running Annual Average (RAA):				
Meets standard? (i.e. RAA ≤ MRDL of 4.0 mg/L as Cl ₂)		<input type="checkbox"/> Yes <input type="checkbox"/> No		

2nd Quarter			
	Month	Number of Samples Taken	Monthly Ave. Chlorine Level (mg/L)
Previous Year	July		
	August		
	September		
	October		
	November		
	December		
Current Year	January		
	February		
	March		
	April		
	May		
	June		
Running Annual Average (RAA):			
Meets standard? (i.e. RAA ≤ MRDL of 4.0 mg/L as Cl ₂)		<input type="checkbox"/> Yes <input type="checkbox"/> No	

3rd Quarter			
	Month	Number of Samples Taken	Monthly Ave. Chlorine Level (mg/L)
Previous Yr	October		
	November		
	December		
Current Year	January		
	February		
	March		
	April		
	May		
	June		
Current Year	July		
	August		
	September		
Running Annual Average (RAA):			
Meets standard? (i.e. RAA ≤ MRDL of 4.0 mg/L as Cl ₂)		<input type="checkbox"/> Yes <input type="checkbox"/> No	

4th Quarter			
	Month	Number of Samples Taken	Monthly Ave. Chlorine Level (mg/L)
Current Year	January		
	February		
	March		
	April		
	May		
	June		
	July		
	August		
	September		
	October		
	November		
	December		
Running Annual Average (RAA):			
Meets standard? (i.e. RAA ≤ MRDL of 4.0 mg/L as Cl ₂)		<input type="checkbox"/> Yes <input type="checkbox"/> No	

Comments:

Signature: _____

Date: _____

Appendix C: Booster Pump Data Sheet

BOOSTER STATION DATA

System Name: _____ **System No:** _____

Source of Information: _____

Collected By: _____ **Date:** _____

Number or Name				
Date Constructed				
Purpose (system pressure, standby, etc.)				
Total Pumping Capacity (gpm)				
Location				
Specific Location (Cross Streets, etc)				
Neighborhood				
Size of Lot				
Enclosure:				
Type				
Floor				
Insulation				
Heating				
Drainage				
Flood Alarm				
Flood Hazard				
Relation to System				
Receives Water From				
Delivers Water To				
Portable Pump Connections Available				
Station has Capacity to Reduce Pressure From High Side to Low Side of Booster				
Standby Power Available on Site				
Portable Standby Generator Connection Available				
Instrumentation and Control				
Pumping Units				
Make				
Capacity				
Lubrication				
Power				
Date Installed				
Sewer or Other Hazardous Connections(s)				
Defects and Remarks:				

Appendix D: Inspection Photos



Figure 01: Well 01



Figure 02: Current mesh is ripped.
Install a new screen mesh.



Figure 03: Sample tap after the check valve



Figure 09: Bladder Surge container Arrestor Tank



Figure 10: Fence around both wells and storage



Figure 11: Thompson Family East & West Tanks



Figure 12: Top of both East & West tanks



Figure 13: Vent on East tank



Figure 14: Both tank hatches missing gasket



Figure 15: Booster Tank #1



Figure 16: Tank hatch has a small hole



Figure 17: Booster pumps



Figure 18: Hydro-pneumatic tanks

Appendix E: Distribution System Classification

DISTRIBUTION CLASSIFICATION

System Name: Apple Valley Foothill CWD
System No: CA3600008
Reviewing Engineer: Luis Ortiz
Date of Inspection: 11/7/2024

Section 64413.3. Distribution System Classification
 Table 64413.3-A

Population	Class
1,000 or less	D1
1,001 through 10,000	D2
10,001 through 50,000	D3
50,001 through 5 million	D4
Greater than 5 million	D5

Population: 776
Distribution Class
 (based on population only): D1

System Characteristics Total: 13
Final Distribution Class: D1

Chief Operator Class: D1
Shift Operator Grade: D1

Section 64413.3 (b)

The class determined above shall be upgraded by one level if the sum of all points (1) through (6) below exceeds 20.

System Characteristics	Point Value	Calculation
(1) Pressure Zones = 1 to 3	0	0
Pressure Zones = 4 to 10	4	0
Pressure Zones= greater than 10	6	0
(2) Single Disinfectant Added	5	5
Multiple Disinfectants	8	0
(3) Pump Station(s) up to 50 HP	4	4
Pump Station(s) greater than 50 HP	6	0
(4) Distribution Reservoirs = 1 to 5	4	4
Distribution Reservoirs greater than 5	6	0
(5) One or More Uncovered Reservoirs	10	0
(6) Customers Served Non-Potable Water	6	0
System Characteristics Total =		13

Overall Distribution Class (based on system characteristic total): D1