



RON CHAPMAN, MD, MPH
Director & State Health Officer

State of California—Health and Human Services Agency
California Department of Public Health



EDMUND G. BROWN JR.
Governor

February 22, 2012

Perry Dahlstrom
President of the Board of Directors
Cedarpines Park Mutual Water Company
P.O. Box 9259
Cedarpines Park, CA 92322

Dear Mr. Dahlstrom:

2011 SANITARY SURVEY OF CEDARPINES PARK MWC (SYSTEM NO. 3610011)

On October 12, 2011 Mr. Andrés Aguirre, an engineer with this office, was accompanied by Mr. Sonny Gowan in a sanitary survey of the domestic water supply facilities and operations of the Cedarpines Mutual Water Company (Company). A completed Sanitary Survey Report and deficiency list are enclosed documenting the findings of the inspection.

Overall, the water system is adequately maintained and operated. Areas that need to be addressed are the long term stability of the Sawpit Tank site and records of tank maintenance/inspection. This letter will briefly discuss some of the deficiencies found as well as other findings of the inspection.

Sawpit Tank Site

During the survey the well/meter boxes for the Sawpit Wells were waterlogged and runoff from natural drainage was flowing near tanks and the wells. The Company indicated that it has addressed the drainage in November 2011. Please provide photos of the corrections for our files. The Company needs to ensure that adequate drainage is provided and no standing water is near the wells and tanks as this may be a source of contamination.

As noted in the 2007 Sanitary Survey, the Sawpit Site has shown ground movement. A geotechnical study was completed by Albert A. Webb and Associates where interim and long term recommendations were provided for the stability of the Sawpit Site. Sawpit Tank 1 has been taken offline due to age and Sawpit 2 is currently filled to no more than 10 ft as an interim measure. Please keep the Department informed of the progress on the long term work on the site.

Sources

All well sites were visited and all were found to be in sanitary conditions with some wells needing minor corrections noted in the deficiency list. The area around the Sawpit Wells needs to have improved drainage to prevent standing water. Upper Burnt Mill 7 has seen an increase in nitrate; however, it is still below the maximum contaminant level. It is recommended that the Company review and update the source assessment to note if there have been any changes around the well that may have contributed to an increase in nitrate. It is recommended that the Company develop a nitrate blending plan for Upper Burnt Mill 7 for review.

The Company is in compliance with the source capacity requirements of the Waterworks Standards found in Title 22, California Code of Regulations (CCR), Section 64554. The Company has wells in fractured bedrock and a reliable capacity has not been determined through a well test. Capacity from the Crestline-Lake Arrowhead Water Agency (CLAWA) connection alone cannot meet the maximum day demand (MDD). It is strongly recommended the reliable capacity from the sources be determined.

Title 22, CCR, Section 64454 (d) specifies that where sources vary seasonally, the capacity shall be determined at the time of MDD and if a spring the capacity shall be determined from the lowest anticipated daily yield as specified in Section 64454 (k). Capacities of fractured bedrock wells are to be determined using the methods in Title 22, CCR, Section 64554 (g).

Storage

All reservoirs and collection tanks were inspected but were not climbed or interior inspected. Sawpit Tank 2 (welded steel) has an air vent that is screened on the sides. It is recommended that the vent be higher and shrouded to protect from rain/snow. The roof access hatch lid for Sawpit Tank 2 is made of wood. It is recommended that a steel or non-permeable material be used. The lid should be properly secured and allow access for visual inspection.

Other than these items all tanks were found in sanitary conditions with the exterior in fair to good condition. No water quality problems have been reported from the tanks. The tanks were found in adequately fenced areas with the exception of the Sawpit which does not have complete fencing. It is recommended that fencing be completed around the site.

At the time of the inspection, the Company did not have a formal written reservoir inspection program. The Company reports that annual interior visual inspections are completed for the tanks but records were not maintained. The Department does not have any dive inspection or coating information on file. In November 2011 the Company completed a documented interior visual inspection of all tanks and no problems were found. The Company will need to ensure records for reservoir maintenance and inspections are kept and available for review.

Monitoring and Reporting

The Company is in compliance with all source and distribution water quality monitoring with few exceptions. Upper Burnt Mill 7 is currently past due for general mineral / physical, inorganic, and nitrate monitoring. Upper Burnt Mill 7 is currently offline but will need to be sampled for overdue monitoring before it brought online.

Review of radiological monitoring found that the Company has completed initial gross alpha and radium 228 monitoring for all sources. All wells are waived from radium 228 monitoring and all wells are assigned a gross alpha monitoring frequency of once every nine years except Upper Burnt Mill 19. Upper Burnt Mill 19 is assigned a gross alpha monitoring frequency of once every three years. Upper Burnt Mill 19 is required to sample for uranium once every three years. All other wells are not required to be monitored.

For the distribution system, the Company has not sampled all quarters for total trihalomethane (TTHM) and five haloacetic acid (HAA5) monitoring. The Company will need to ensure that quarterly monitoring is completed. Results for TTHM/HAA5 are not reported electronically but will need to be submitted hard copy to the Department.

On reporting, it was noted that the Company submits the chlorine residual for the entry points (chlorination stations) and the distribution system. For Compliance, the Company is required to submit only chlorine residual taken at the bacteriological sample sites. A form to submit distribution chlorine residual is appended to the sanitary survey report. To simplify reporting, the following should be provided in the monthly reports.

- Monthly summary of distribution system coliform monitoring
- Monthly summary of monitoring for surface water treatment regulations
- Distribution color, odor, and turbidity
- Aeration Treatment summary
- Quarterly report for disinfectant residual compliance for systems using chlorine or chloramines
- TTHM/HAA5 (submitted quarterly)

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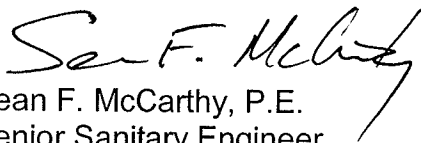
Operations

The Company maintains a good cross connection control program and ensures most backflow devices are tested. In 2010 not all devices were tested. In future Annual Reports please provide information on devices that were not tested (i.e. house vacant). The Company budget was not reviewed during the survey. Please forward a copy for review. From discussion with the Company it was learned that it has a capital improvement plan (CIP) but is currently not funded as there is a financial hold. General maintenance appears to be adequately funded as facilities were found in sanitary conditions during the survey.

Please review the enclosed survey report, data sheets, and attachments and provide changes or comments as needed. A written response to this letter is requested by **March 23, 2012** along with a plan to correct the deficiencies indicated in the deficiency list. Please note the dates, or planned dates, of correction of the deficiencies outlined in the deficiency list and return a copy to the Department along with your reply.

The Department appreciates the assistance of Mr. Robert Haifley and Mr. Sonny Gowan during and after the inspection. If you have any questions regarding this letter or report, please contact Andrés Aguirre at (909) 383-4308 or by e-mail at andres.aguirre@cdph.ca.gov.

Sincerely,



Sean F. McCarthy, P.E.
Senior Sanitary Engineer
San Bernardino District

Enclosure

cc: Robert Haifley, Cedarpines Park MWC

California Department of Public Health
 Division of Drinking Water
 Sanitary Survey Report

Purveyor: Cedarpines Park Mutual Water Company System No. 3610011
 Person(s) Contacted/Position: Sonny Gowan/General Manager (4/2009 – 10/2011), Robert Haifley/General Manager (11/2011 – present)
 Date of Inspection(s): October 12, 2011 Reviewing Engineer: Andrés Aguirre
 Last A. I. Date: October 16, 2007 (Sean McCarthy) District Engineer: Sean McCarthy

A. INTRODUCTION

1. Permit Status (Date Issued/Amendment Purpose)

Full: Permit No. 87-048 issued October 15, 1987

Amendment(s): Two amendments have been issued as summarized below.

Table 1: Cedarpines Park Mutual Water Company Permit Amendments

Amendment	Date Issued	Reason
Amendment 1	July 23, 2002	Add Lower Burn Mill Well 6 and an aeration system for corrosion control treatment.
05-13-06PA-039	December 29, 2006	Add Sawpit Well 5 and update conditions for aeration system.

Are the permit provisions complied with? Yes

Is the permit up to date? Yes

List Data Sheets on file (permit, files, etc.) Wells, reservoirs, booster, and chlorination

2. Changes in System

a) Since last annual inspection:

2007 – Upgrade holding tank for Coon Turn. New pumps at Coon Turn and Well 5. Upgrade pumps at Crestline-Lake Arrowhead Water Agency (CLAWA) and Ferncrest. Add new standby pumps at Ferncrest, Jobs Peak, and CLAWA.

2008 – Unable to locate Annual Report.

2009 – No changes reported. Annual Report notes that sodium hypochlorite for chlorination. Previously, the Company used chlorine generators.

2010 – Implemented new rate structure using a tiered rate to generate conservation.

b) Planned future changes: No planned changes.

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3. **Consumer and Production Data**

No. of service connections: 748 total (2010 Annual Report)

No. with meters: All 748 connections are metered

Approx. population served: 2,418 (2010 Annual Report)

Description of service area: The Cedarpines Park Mutual Water Company (Company) serves water to the community of Cedarpines Park located in an unincorporated area of San Bernardino County. It is located westerly of the community of Crestline in the San Bernardino Mountains. The service area is primarily residential with one small commercial area.

Table 2: Production and Purchased Data for Past Ten Years (2001-2010)

Year	Maximum Day, MG	Maximum Month, MG	Month	Annual Total, MG
2010	0.21	4.7	--	34.3
2009	0.15	3.4	August	32.2
2008	No Annual Report on file			
2007	0.18	4.3	--	33.7
2006	0.15	3.6	August	32.6
2005	0.06*	2.7	---	11.0
2004	0.19	5.5	July	26.7
2003	0.10	3.6	Aug	30.9
2002	Data Missing – No Annual Report			
2001	0.10	4.1	---	35.9

Note: Maximum day demands are estimated from bimonthly customer meter reads. Maximum month is the single highest month of total water usage. The Company did not always report the single highest month but the maximum for produced and purchased. Where separate months were reported, the sum is reported. *Number is inconsistent.

B. SOURCE DATA

Table 3: Cedarpines Park MWC Sources

Sources	Status	Capacity (gpm)	Comments
Groundwater			
Coon Turn 1	Active	3	Horizontal well. Composite Site #1
Coon Turn 3	Active	2	Horizontal well. Composite Site #1
Coon Turn 5	Active	21	Vertical well
Three Pigs	Active	5	Horizontal well. Composite Site #1
Lovers Lane 1	Active	2	Horizontal well. Composite Site #2

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Sources	Status	Capacity (gpm)	Comments
Lovers Lane 2	Active	2	Horizontal well. Composite Site #2
Sawpit 1	Active	5	Horizontal well. Composite Site #5
Sawpit 2	Active	6	Horizontal well. Composite Site #5
Sawpit 3	Active	6	Horizontal well. Composite Site #5
Sawpit 5	Active	5	Horizontal well. Composite Site #5
Lower Burnt Mill 1	Active	7	Horizontal well. Composite Site #3
Lower Burnt Mill 2	Active	2	Horizontal well. Composite Site #3
Lower Burnt Mill 3	Active	4	Horizontal well. Composite Site #3
Lower Burnt Mill 4	Active	4	Horizontal well. Composite Site #4
Lower Burnt Mill 5	Active	3	Horizontal well. Composite Site #4
Lower Burnt Mill 6	Active	6	Horizontal well. Composite Site #4
Upper Burnt Mill 7	Active	11	Vertical well, nitrate 43 mg/L (08/07). Currently offline.
Burnt Mill 19	Active	3	Vertical well
	TOTAL	86 gpm	0.12 MGD. Excludes Upper Burnt Mill 7
Surface Water – NONE			
Connections with other systems			
CLAWA (Purchased)	Active	100 gpm	0.14 MGD. Maximum, as required. Single connection with two boosters.
TOTAL CAPACITY		186 gpm	0.26 MGD. Excludes Upper Burnt Mill 7.

Note: Capacities are potential production based on 2006 actual production as reported in the Company letter dated January 31, 2008.

Discussion and Appraisal: (i.e. Does source capacity comply with Waterworks Standards?)

The Waterworks Standards require in Title 22, California Code of Regulations (CCR), Section 64554 (a) of that all times a public water system shall meet the Maximum Day Demand (MDD) with source capacity alone. The MDD is defined as the highest day demand in the previous ten years and if unavailable, an estimate may be made using the maximum month, as described in Title 22, CCR, Section 64554 (b) (2), or maximum annual usage, as described in Title 22, CCR, Section 64554 (b) (3).

For compliance determination, the sum of source production and purchased water is considered equal to system demand. System demand is the water needed to supply customers and it includes customer demand, system losses, and maintenance activities (i.e. flushing). Available production and purchased water information in the previous ten years is summarized in **Table 2**.

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From available information, the maximum MDD was in 2010 at 0.21 MG. Compared with the total source capacity 0.26 MG it can be seen that the Company adequately meets the MDD. It should be noted that these estimate do not take in to account fire flow.

Please note that average flows were used for the Company's sources. The Company has wells in fractured bedrock and a reliable capacity has not been determined through a well test. Capacity from the CLAWA connection alone cannot meet the MDD. It is strongly recommended the reliable capacity from the sources be determined. Title 22, CCR, Section 64454 (d) specifies that where sources vary seasonally, the capacity shall be determined at the time of MDD and if a spring the capacity shall be determined from the lowest anticipated daily yield as specified in Section 64454 (k). Capacities of fractured bedrock wells are to be determined using the methods in Title 22, CCR, Section 64554 (g).

Drinking Water Source Assessment and Protection (DWSAP)

The California Rural Water Association, with assistance from the Company, completed Drinking Water Source Assessment and Protection (DWSAP) surveys in January 2003 for existing wells. A survey for Lower Burnt Mill Well 6 was completed in December 2003 and for Sawpit Well 6 in September 2006 by the Department with Company assistance.

At the time of the surveys, the Department did not issue a vulnerability summary. A summary of vulnerabilities is shown in the table below with concentrations of contaminants that may be associated with possible contaminating activities (PCA) at the time of the assessment and recent results. In general, the Company sources are vulnerable to septic systems.

Table 4: Summary of Vulnerability to Possible Contaminating Activities (PCA)

Source	Most Vulnerable Activities (PCA)	Chemical Detected as of 2003	Chemical Detected as of 2011
Burnt Mill Well 19 – Vert.	Septic systems - low density	None	None
Coon Turn 1 - Horizontal	Septic systems - low density	None	Nitrate 4.2 mg/L
Coon Turn 3 - Horizontal	Septic systems - low density	None	Nitrate 4.2 mg/L
Coon Turn 5 – Vertical	Septic systems - low density	Nitrate 3.4 mg/L	Nitrate 5 mg/L
Lovers Lane 1 – Horiz.	Septic systems - low density	Nitrate 7 mg/L	Nitrate 3.2 mg/L
Lovers Lane 2 – Horiz.	Septic systems - low density	Nitrate 7 mg/L	Nitrate 3.2 mg/L
Lower Burnt Mill 1 – Horiz.	Septic systems - low density	Nitrate 6.4 mg/L	Nitrate 9.4 mg/L
Lower Burnt Mill 2 – Horiz.	Septic systems - low density	Nitrate 6.4 mg/L	Nitrate 9.4 mg/L
Lower Burnt Mill 3 – Horiz.	Septic systems - low density	Nitrate 6.4 mg/L	Nitrate 9.4 mg/L
Lower Burnt Mill 4 – Horiz.	Septic systems - low density	Nitrate 15 mg/L	Nitrate 21 mg/L
Lower Burnt Mill 5 – Horiz.	Septic systems - low density	Nitrate 15 mg/L	Nitrate 21 mg/L
Lower Burnt Mill 6 – Horiz.	Wells - Water supply	Nitrate 15 mg/L	Nitrate 21 mg/L

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Source	Most Vulnerable Activities (PCA)	Chemical Detected as of 2003	Chemical Detected as of 2011
Sawpit 1 – Horizontal	Septic systems - low density	Nitrate 34 mg/L	Nitrate 35 mg/L
Sawpit 2 – Horizontal	Septic systems - low density	Nitrate 34 mg/L	Nitrate 35 mg/L
Sawpit 3 – Horizontal	Septic systems - low density	Nitrate 34 mg/L	Nitrate 35 mg/L
Sawpit 5 – Horizontal	Drinking water treatment plants Wells - Water supply	Nitrate 34 mg/L	Nitrate 35 mg/L
Three Pigs Well – Horiz.	Septic systems - low density	None	Nitrate 4.2 mg/L
Upper Burnt Mill 7 – Vert.	Septic systems - low density	Nitrate 17 mg/L	Nitrate 36 mg/L

Note: Nitrate is reported as mg/L as NO₃. Several wells are sampled together as a composite. Low density septic systems are where there is less than one septic system per acre.

Nitrate was detected in almost all Company sources at concentrations well below the nitrate (as NO₃) MCL of 45 mg/L. Primary sources of organic nitrates include human sewage and livestock manure, especially from feedlots. The primary inorganic nitrates which may contaminate drinking water are potassium nitrate and ammonium nitrate both of which are widely used as fertilizers.¹ Septic systems are PCA which may be associated with the detection of nitrate. Company sources were found to be vulnerable to activities associated with nitrate.

It is unknown if some wells have sanitary seals or if they are a minimum 50 ft. This is a concern as some horizontal wells are near septic tanks or leach lines. Review of recent nitrate concentrations (as of December 2011) show that concentrations have not changed significantly since the initial survey, with the exception of Upper Burnt Mill 7 Vertical, to indicate an immediate vulnerability. The nitrate concentrations at Upper Burnt Mill 7 vertical, while increased are still below the MCL. It is recommended that the Company review the source assessment for Upper Burnt Mill 7 to note if there have been changes in the area which may have resulted in the increase in concentration. The Company's 1994 engineering report² noted that an upgrade to Burnt Mill 7 is needed to protect from possible shallow groundwater contamination. Nitrate monitoring is currently required quarterly.

It is noted that Upper Burnt Mill can blend with water from Lower and Mid Burnt Mill pump stations in the Upper Burnt Mill collection tank before being pumped to the Sawpit Tanks for distribution. Nitrate concentrations have in the past fluctuated. The well is currently offline however, as a safeguard it is recommended that the Company prepare a blending plan for review.

¹ USEPA, *National Primary Drinking Water Regulations: Contaminant Specific Fact Sheets, Inorganic Chemicals, Consumer Version*. EPA 811-F-95-002-C, October 1995

² John Egan and Associates, Inc., *Preliminary Engineering Report for Farmers Home Administration USDA Assistance for Replacement of Substandard Water Pipeline, Plus Additional Storage, Supply and Pumping Facilities*, December 1994

The Sawpit wells have their meter boxes/wellhead water logged as the area has much natural drainage. The drainage needs to be improved at the Sawpit to prevent standing water near wellheads/meter boxes. All well sites were visited and all were found to be in sanitary conditions with some wells needing minor corrections noted in the deficiency list. From the chemicals monitored and the source assessment, the source wells are not considered immediately vulnerable to contamination. Upper Burnt Mill 7 is currently required to monitor nitrate quarterly.

C. TREATMENT

1. Surface Water Sources

No surface water sources are owned or treated by the Company. The Company purchases treated surface water from CLAWA.

2. Groundwater Sources

Is continuous disinfection provided? The Company provides continuous chlorination at the Coon Turn and Sawpit chlorination stations using 12.5 percent sodium hypochlorite. The Company uses a 0.26 gph diaphragm metering pump at both stations. Previously, the Company used an onsite sodium hypochlorite generator.

If disinfection is not provided, are provisions and connections for emergency chlorination provided per Office of Drinking Water guidelines? N/A

Discussion & Appraisal: The Company checks chlorine equipment and residual daily. The chlorination facilities were found to be adequately housed and in sanitary conditions. It is recommended that spill containment be provided for chlorine tanks.

3. Other Treatment or Blending Facilities

Corrosion Control Treatment

Describe facilities and parameters treated/blended: (i.e. iron and manganese, fluoridation, nitrate, corrosion control, organics, etc): An aeration system manufactured by Lowry Aeration Systems was installed to raise pH levels in the water system to minimize corrosion. The system was permitted for operation on July 23, 2002 by Permit Amendment No. 1 and re-evaluated in Permit Amendment No. 05-13-06PA-039 on December 29, 2006. Permit condition "n" of the 2006 amendment requires weekly pH and manometer readings to be reported in a monthly report to the Department.

Describe Records Maintained of Treatment: A daily production log tracking pH and manometer readings as well as cleaning of air filter. The log is submitted monthly.

Discussion and Appraisal: The permit did not specify a target pH but it did specify that effluent pH shall not exceed 8.5 at any time. Review of the monthly aeration reports show that in 2011 effluent pH varied from 7.3 to 8.6. The one 8.6 reading was on October 7. The Company needs to ensure that operation is within max pH.

The March 5, 1999 operation manual notes that the air filter shall be removed and washed when the manometer reading is 3 to 5 inches that startup value. The air filter is cleaned weekly and the average manometer reading is 1.1. Review of distribution lead and copper monitoring shows that the Company has met the lead and copper action levels indicating that the aeration unit is effective.

4. **Treatment System Classification:** The corrosion treatment system is classified as a T1 facility by Permit Amendment No. 05-13-06PA-039. The classification is still current.

D. STORAGE DATA

Table 5: Cedarpines Park MWC Storage Reservoirs

Reservoir Name	Type	Capacity (gal)	Zones Served	Notes/Comments
Ferncrest No.1	Bolted steel	210,000	Ferncrest / C	Last coating 1971?
Ferncrest No.2	Welded steel	126,000	Ferncrest / C	Last coating 1982?
Sawpit No.1	Bolted steel	84,000	Ferncrest / C	Not in use
Sawpit No.2	Welded steel	84,842	Ferncrest / C	Maintain water level ≤10 ft for site stability. Normally 136,000 gal. Last coating 1979?
Job's Peak	Bolted steel	500,000	Jobs Peak / D	Last coat 1997.
Job's Peak Hydro 1	Hydropneumatic	119*	Jobs Peak Hydro	Installed 2005
Job's Peak Hydro 2	Hydropneumatic	119*	Jobs Peak Hydro	Installed 2005?
Job's Peak Hydro 3	Hydropneumatic	119*	Jobs Peak Hydro	Installed 2005?
Lover's Lane No.1	Bolted steel	500,000	Big Tank / C	Installed/coated 1999
Lover's Lane No.2	Bolted steel	500,000	Big Tank / C	Installed/coated 1999
Coon Turn (above ground)	Welded steel	5,000	--	Collection tank. Installed 1999.
Coon Turn (buried)	Welded steel		--	Collection tank. Has sump pump. Installed 2007?
Upper Burnt Mill	Welded steel	4,200	--	Collection tank. Installed/coated 1995.
Mid Burnt Mill	Welded steel	2,000	--	Collection tank. Installed 1999.
Lower Burnt Mill (above ground)	Welded steel	1,600	--	Collection tank. Installed 1999.
Lower Burnt Mill (buried)	Welded steel		--	Collection tank. Has sump pump. Installed date?

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Reservoir Name	Type	Capacity (gal)	Zones Served	Notes/Comments
Sawpit Collection (buried)	Welded steel	1,000	--	Collection tank. Has sump pump. Installed date?
Sawpit Treated clearwell (buried)	Precast concrete	750	--	Treated clearwell. Has sump pump. Installed 1998.
	Total Storage	1.92 MG		Excludes collection, hydropneumatic, Sawpit No. 1, and clearwell tanks

Notes: Available coating dates or installed dates are noted. Unverified dates are noted with question mark. Please updated as needed. *This is total capacity and not withdrawal/operating capacity.

Does storage capacity comply with Waterworks Standards?

Title 22, CCR, Section 64554 (a)(2), specifies that systems with less than 1,000 service connections shall have storage capacity equal or greater than the MDD. If the system does not have this storage capacity, the system will need to demonstrate that it has an additional source of supply or has an emergency source connection that can meet the MDD requirement.

The maximum MDD was determined to be 0.21 MG (page 4). The total storage capacity of 1.92 MG adequately meets the MDD and is in compliance with the Waterworks Standards. It should be noted that this evaluation does not take into account fire flow requirements.

The Company is considering alternatives for the Sawpit Site stability. Removing Sawpit Tank 2 reduces capacity by 84,842 gallons (0.08 MGD) for a total capacity of 1.84 MGD. 1.84 MGD would still meet the overall system MDD of 0.21. The Company is also required to meet the highest demand within each pressure zone. The Department does not have demand information, or number of connections in each zone, to help review this requirement. Please forward information on demand per zone or number of connections and storage per zone.

Are all data sheets completed and on file? Yes

Are Office of Drinking Water coating procedures adhered to? Yes, new coatings are applied per manufacturer's recommendations.

Discussion and Appraisal: (i.e. condition, coated, cleaned and/or inspected, plans for recoatings?) All reservoirs and collection tanks were inspected but were not climbed. A small leak was observed in Lovers Lane Tank 2 which was repaired by tightening the bolts. Lovers Lane Tank 1 and Upper Burnt Mill Collection Tank had vegetation that has been cleared. Sawpit Tank 2 (welded steel) has an air vent that is screened on the sides. It is recommended that the vent be higher and shrouded to protect from rain/snow. The roof access hatch lid for Sawpit Tank 2 is made of wood. It is recommended that a steel or non-permeable material be used. The lid should be properly secured and allow access for visual inspection.

The Coon Turn Collection Tank (buried) had an access hatch with no locking mechanism during the survey. The Company has since installed a steel locking mechanism.

Other than these items all tanks were found in sanitary conditions with the exterior in fair to good condition. No water quality problems have been reported from the tanks. The tanks were found in adequately fenced areas with the exception of the Sawpit which does not have complete fencing. It is recommended that fencing be completed around the site.

At the time of the inspection the Company did not have a formal written reservoir inspection program. The Company reports that annual interior visual inspections are completed for the tanks but records were not maintained. The Department does not have any dive inspection or coating information on file. In November 2011 the Company completed a documented interior visual inspection of the tanks and found no problems. Available information on last coating or installation date is noted in **Table 5**. Please forward copies of available records.

The 2007 inspection by the Department noted that the Sawpit site had evidence of ground movement. The Sawpit site has two tanks of which one (Sawpit Tank 1) is disconnected from the system due to condition and for site stability. The water level in Sawpit Tank 2 is maintained less than 10 ft as an interim measure for site stability. The Company noted that the site study completed by Albert A. Webb and Associates provided recommendations for a long term solution and an interim measure.

E. TRANSMISSION FACILITIES

Describe transmission facilities: 2-inch polyethylene and galvanized pipelines are used to deliver water from horizontal wells to collection tanks.

Discussion and Appraisal: The Department does not have information on the age or installation date of the transmission lines on file. The Company's 1994 engineering report³ noted that the collection lines from some wells are in areas susceptible to flood damage. The lines are also exposed and therefore susceptible to freezing. No problems have been reported with the transmission lines; however, the Company may wish to consider measures to protect transmission lines from flooding and freezing.

F. DISTRIBUTION SYSTEM

1. Pressure Zones

Describe or tabulate:

³ John Egan and Associates, Inc., *Preliminary Engineering Report for Farmers Home Administration USDA Assistance for Replacement of Substandard Water Pipelines, Plus Additional Storage, Supply, and Pumping Facilities*, December 1994

Table 6: Pressure Zones in Cedarpines Park MWC

Pressure Zone	Pressure Range (psi)	Source Production (wells, pressure sta. etc.)	Storage Capacity (MG)	Number of Connections
Zone A (GREEN) (Portions of Ferncrest, Big Tank, and Water Dr Zones)	115	Boosted from Zone C	0.23	172
Zone B (PURPLE) (Portions of Ferncrest, Burnt Mill PRV Zone 1, Burnt Mill PRV Zone 2, Mozumdar PRV Zone 1, and Mozumdar PRV Zone 2)	60	CLAWA, Upper Burnt Mill 7, Burnt Mill 19, Mid Burnt Mill 4-6, Lower Burnt Mill 1-3, and PRV from Zone A	0.13 0.1	89
Zone C (BLUE) (Portions of Ferncrest and Big Tank Zone)	125	Lovers Lane 1 & 2, Coon Turn 1, 3, & 5; 3 Pigs; and PRV from Zone B	0.88 0.9	211
Zone D (YELLOW) (Portions of Ferncrest, Jobs Peak, and Jobs Peak Hydro Zones)	85	Boosted from Zone B	0.52 0.9	146
Zone E (RED) (Portions of Water Dr and Big Tank Zones)	150		-- 2.5K	177

Notes: Names in parenthesis are former names of pressure zones as of 2004. Pressure zones were redrawn in 2005 and renamed in 2011 and do not have the same boundaries. Average pressures were provided in 1/17/12 e-mail from Robert Haifley. Please update.

- Booster and Reducing Stations** (Describe or tabulate): The Company has eight booster stations with two pumps each except the Jobs Peak station which has a third pump for fire flow. There are seven pressure reducing stations as summarized below. Boosters can run in parallel but are used only one at a time, alternating between uses.

Table 7: Booster Stations in Cedarpines Park MWC

Station	No.	Capacity and power	Status	From Zone	To Zone
CLAWA	A	est. 68 gpm	Active	CLAWA Transmission Line	Ferncrest
	B	12 gpm / 5 hp	Active		

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Station	No.	Capacity and power	Status	From Zone	To Zone
Coon Turn	A	92 gpm / 15 hp	Active	Coon Turn Collection above	Lovers Lane Tanks
	B	80 gpm /	Active		
Ferncrest	A/1	72 gpm / 7.5 hp	Active	Ferncrest Tanks	Jobs Peak Tanks
	B/2	42 gpm / 7.5 hp	Active		
Jobs Peak Hydro	A/1	/ 5 hp	Active	Ferncrest Zone	Jobs Peak Hydro Zone
	B/2	/ 5 hp	Active		
	C/3	/ 5 hp	Fire		
Lower Burnt Mill	A	38 gpm / 3 hp	Active	Lower Burnt Mill Collection above	Mid Burnt Mill Collection
	B	38 gpm / 3 hp	Active		
Mid Burnt Mill	A	59 gpm / 7.5 hp	Active	Mid Burnt Mill Collection	Upper Burnt Mill Collection
	B	58 gpm / 7.5 hp	Active		
Sawpit	A	81 gpm / 10 hp	Active	Sawpit Zone	Ferncrest Zone
	B	80 gpm / 10 hp	Active		
Upper Burnt Mill	A	59 gpm / 3 hp	Active	Upper Burnt Mill Collection	Sawpit Zone
	B	60 gpm / 3 hp	Active		

Notes: Booster capacities from 2007 pump tests.

Table 8: Pressure Reducing Stations

Station Name	Capacity (gpm)	Pressure Zone		Valve Size (in)	Valve Type	Setting (psi)
		Upstream	Downstream			
Big Tank / Water Dr		Big Tank	Water Dr			
Ferncrest / Burnt Mill 1		Ferncrest	Burnt Mill PRV Zone 1			
Ferncrest / Burnt Mill 2		Ferncrest	Burnt Mill PRV Zone 2			
Ferncrest / Mozumdar 1		Ferncrest	Mozumdar PRV Zone 1			
Ferncrest / Mozumdar 2		Ferncrest	Mozumdar PRV Zone 2			
Ferncrest / Sawpit		Ferncrest	Sawpit			
Jobs Peak / Ferncrest		Jobs Peak	Ferncrest			

Please update as needed.

3. **Mains**

Describe or Tabulate:

Table 9: Main Composition

Material	Amount (ft or %)	Size	Class/Gage	Condition
PVC	35,580 ft	8	C-900	
PVC	82,750 ft	6	C-900	
PVC	8,840 ft	3	Sch 40	

Source: 2005 Annual Report to the Department. Please update as needed.

4. **Distribution System Classification:** The distribution system is classified as a D2 system per the May 21, 2001 Department letter. The classification is still current.

5. **Discuss leak history** during past 12 months (mains and connections):
Review of the number of leaks reported since the previous inspection show that the number of main breaks has not changed significantly. In 2010 there were two main breaks. The number of service connections breaks has fluctuated. The Company currently uses polyethylene service lines. The Annual Report for 2007 noted that the service line breaks were caused by extreme cold weather for a long time.

Table 10: Cedarpines Park MWC - Leaks since Previous Inspection

Type	2007	2008	2009	2010
Main Breaks or Leaks	0	NA	0	2
Service Line Breaks or Leaks	26	NA	6	19
Water Outages	0	NA	0	0
Boil Water Orders	0	NA	0	0

Source: Annual Reports submitted to the Department. NA = not available.

6. **Are Distribution facilities** constructed in accordance with Waterworks standards?
The Company uses C-900 PVC class 150 for all new mains which meets the material standards of the Waterworks Standards. The Company does minor repairs with major work contracted out. The Company does not have written specifications or standards drawings but notes that Title 22 Waterworks Standards are followed and work is done per AWWA Standards. Based on 2005 figures (Table 9), the Company has almost 8,840 ft of pipe less than the minimum 4 inch diameter. This will need to be upgraded at the next main replacement to at least 4 inch.

Please note that the Waterworks Standards were revised in 2008 and include requirements on new pipe and installation. Title 22, CCR, Section 64570 (a) requires that PVC pipe 4 inch to 12 inch comply with AWWA Standard C900-97. Installation standards for PVC shall comply with AWWA Standard C605-05.

Other material and installation standards are also noted in Section 64570. Distribution and treatment plant components are required to be ANSI/NSF Standard 61 certified. The revised Waterworks Standards also include new criteria for isolation valve location installation in Title 22, CCR, Section 64577 and Section 64578.

7. Describe water main and sewer line/sewage disposal **separation practices**
There are no sewers in the service area. The Company noted it follows the Waterworks Standards. Separation is noted in plans for mains prior to construction.

Title 22, CCR, Section 64572 (f) requires that any new main be a minimum of 25 ft away from the nearest edge of any cesspool, septic tank, sewage leach fields, and seepage pit.

8. Does the system have **low head lines** and what is their program to eliminate them?
There are no low head lines (less than 5 psi). The pressure range in the Company is 70 psi to 150 psi.

9. Extent of **lead** pipes, joints, and/or lead solder used in distribution system and present policy: None known.

10. **Discussion and Appraisal:** The Company will need to ensure that mains less than 4 inch are replaced to comply with Title 22, CCR, Section 64573. Life expectancy for mains varies depending on material. Age of distribution mains throughout the approximate 24 mile system was not provided. In 1997/1998 over 30,000 ft (5.6 miles) of main were installed/replaced, as noted in the 1998 Annual Report, and in 1999/2000 there was 40,000 ft (7.5 miles) of pipe installed⁴. The remaining is pre-1997 and installed some time since inception of the Company in 1923.

Typical life expectancy for well-maintained mains is estimated at 35 to 40 years.⁵ The Company's engineering report estimated the life of PVC mains at 75 years. The number of main leaks has been few to none indicating that the distribution system may be in adequate condition. However, the system still has a number of small mains and dead ends which affect fire flow. It is recommended that the Company calculate system losses/unaccounted-for-water.

It is noted that the Company uses polyethylene service lines. Studies have shown that polyethylene and poly butylene service lines are prone to permeation by diesel and petroleum products⁶. The Company has not encountered problems with the service lines; however, it should be aware of the potential permeation near fuel stations or soils that may be contaminated.

⁴ Engineering Resources of Southern California, Inc., *Engineers Statement, Subject: Cedarpines Park Mutual Water Company*, July 27, 2004

⁵ USEPA, *Asset Management: A handbook for Small Water Systems* EPA Publication 816-R-03-016 September 2003

⁶ USEPA, "Permeation and Leaching Issue Paper," August 15, 2002

G. WATER QUALITY AND MONITORING

1. **Bacteriological** (Distribution and Sources)

Description of program: The Company samples two sites per week from among eight sites which it rotates per week. For the **Groundwater Rule**, the Company has indicated it will do representative monitoring plan where only the sources serving the area of the distribution coliform positive are sampled. The Company does not routinely sample sources for coliform.

Sampling plan approved and current (do we have a copy): The Company submitted a plan dated November 22, 2011 with representative monitoring for the Groundwater Rule. The plan has been reviewed and is approved.

Population: 2,418 (2010) Connections: 748 (2010)
Samples/Wk? Two samples per month are required based on population and service connections as noted in Title 22, CCR, Section 64423 (a)(1). The Company collects two samples per week (8-10 per month) which meets the minimum requirement.

MCL violations since previous inspection? None.

Compliance and Appraisal: Coliform monitoring and reporting is currently in compliance.

2. **Chemical** (Sources)

Description of Program: The Department letter dated January 28, 2011 provides the minimum Title 22 monitoring frequencies for the Company's sources unless otherwise advised by the Department or through permit. The Company is currently on a non-vulnerable monitoring frequency. As discussed in in the DWSAP section of this report, it is recommended that the Company continue on this frequency.

General mineral, general physical, and inorganic chemical monitoring is required every three years for active groundwater sources. Monitoring for **nitrate** is required annually for all sources. The Company is in compliance with monitoring and results for all general mineral/ physical, inorganic, and nitrate monitoring for all sources except Upper Burnt Mill Well 7. Upper Burnt Mill 7 is currently offline for rehab work. All overdue monitoring will need to be completed before the well is brought online.

Table 11: Cedarpines Park MWC Last Sample Dates for Sources

Source Name	General Min./Phy.	Inorganic Chemicals	Nitrate	Radioactivity	VOC	SOC	EDB & DBCP
Coon Turn 1, 3, and 3 Pigs Composite	9/30/11	9/30/11	9/30/11	GA 4/4/11	10/3/11	11/29/11	11/29/11
Coon Turn 5 vertical	9/30/11	9/30/11	9/30/11	GA 1/21/08	8/20/07	11/29/11	11/29/11
Lovers Lane 1 and 2 Composite	9/30/11	9/30/11	9/30/11	GA 1/21/08	7/23/07	11/29/11	11/29/11
Sawpit Composite 1, 2, 3, and 5	9/30/11	9/30/11	9/30/11	GA 2/16/10	11/19/09	12/6/11	12/6/11
Upper Burnt Mill 7*	12/4/06	12/4/06	10/25/10	GA 8/6/07	6/4/07	3/20/00	6/7/10
Burnt Mill Well 19 - vertical	9/30/11	9/30/11	9/30/11	GA 7/26/11 U 2/2/09	6/4/07	12/6/11	12/6/11
Lower Burnt Mill 1-3 Composite	9/30/11	9/30/11	9/30/11	GA 8/20/07	5/14/07	12/6/11	12/6/11
Mid Burnt Mill 4-6 Composite	9/30/11	9/30/11	9/30/11	GA 7/9/07	7/7/08	12/6/11	12/6/11

Note: Dates in bold indicate deficient monitoring or results not received in our database. See individual chemical monitoring sections for specific information. Please forward results if available. GA = gross alpha and U = uranium. *Upper Burnt Mill 7 is currently offline for rehab work.

3. Volatile Organic Chemicals (VOC)

Description of Program: Monitoring for VOC is required every six years for active sources. The Company is in compliance with VOC monitoring and results for all source wells. Several wells will be due this year.

4. Synthetic Organic Chemicals (SOC)

Description of Program: Monitoring for SOC is required every three years for active sources or a monitoring waiver may be granted for the current compliance period (2011-2013) if all results were non-detect and sampled after 2001. **Waivers will not be given for DBCP and EDB monitoring** and will be required every three years.

The Department approved an SOC monitoring waiver for all wells. The Company is currently in compliance with SOC monitoring frequency and results.

5. Radiological

Description of Program: All Company wells have completed initial gross alpha monitoring and radium 228 monitoring found in Title 22, CCR, Section 64442. For **gross alpha**, Coon Turn 1, 3, and 3 Pigs composite, Coon Turn 5 vertical, Lovers Lane 1 and 2 Composite, Sawpit Composite 1, 2, 3, and 5, Upper Burnt Mill 7 – vertical, Lower Burnt Mill 1-3 composite, and Mid Burnt Mill 4-6 composite are assigned a monitoring frequency of once every nine years as noted in the 2007 Sanitary Survey. Burnt Mill Well 19 – vertical is assigned a gross alpha monitoring frequency of once every three years.

For **radium 228**, all wells were sampled and non-detect and so are waived from future monitoring. For **uranium**, all wells are waived except Burnt Mill Well 19 – vertical which is required to sample once every three years.

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

Description of program: For **Stage 1** of the Disinfectants/Disinfection Byproduct (D/DBP) monitoring rule, a system with a population of 500 – 9,999 that uses approved surface water is required to collect one Total Trihalomethanes (TTHM) and Haloacetic Acids (HAA5) sample per treatment plant per quarter from within the distribution system [Title 22, CCR, Section 64534.2 (a)].

Samples are taken from locations representing the maximum residence times. This frequency may be reduced to one sample per year if after one year of monitoring the source total organic carbon (TOC) is ≤ 4.0 mg/L and TTHM is ≤ 0.040 mg/L (40 $\mu\text{g/L}$) and HAA5 is ≤ 0.030 mg/L (30 $\mu\text{g/L}$). Each groundwater basin is considered one treatment plant. Compliance is based upon a running annual average of quarterly sample results or annual results if on reduced monitoring.

The Company submitted a monitoring plan dated June 28, 2007 where it indicated 22356 Mojave River and 408 Hartman would be sampled for TTHM and HAA5 quarterly. Available results show that the Company has not sampled or submitted results for some quarters. Available results show that TTHM and HAA5 results are below the 80 $\mu\text{g/L}$ TTHM MCL and 60 $\mu\text{g/L}$ HAA5 MCL.

Table 12: Cedarpines Park MWC Stage 1 D/DBP Annual Averages

Sample Date	TTHM, $\mu\text{g/L}$	HAA5, $\mu\text{g/L}$	Comments
2008	28.7	12.6	4 quarters sampled
2009	20.0	8.0	3 quarters sampled. Missing 4 th qtr
2010	11.4	1.4	3 quarters sampled. Missing 3 rd qtr
2011	9.6	1.4	2 quarters sampled. 408 Hartman site missing 2 nd quarter. Missing 3 rd & 4 th qtrs

ND-non detect/below detection limit for reporting. Please forward missing results if available.

For **Stage 2** of the D/DBP monitoring rule, the Company completed standard monitoring and submitted a report dated February 10, 2011. As a schedule 4 system that receives surface water and has a population in the range of 500-3,300, the Company is required to sample a minimum of two distribution sites per quarter.

The Stage 2 report identified 400 Hartman Circle and 22356 Mojave River as the highest TTHM and HAA5 sites out of four sites sampled. 408 Hartman Circle had higher TTHM than 400 Hartman and should be sampled instead. The Company will be required to begin monitoring at these sites quarterly by October 1, 2013.

Systems that chlorinate are required to sample for **maximum residual disinfectant level** at the same point and time total coliform samples are collected or, if the water systems uses surface water, it can use the results it collects for surface water (Title 22, CCR, Section 64534.4). The Company collects two samples per week (8-10 per month). The Company measures chlorine residual at bacti sites but also submits chlorine residual from the entry points (pumphouses) monthly. For compliance purposes, please only send results from the distribution. Review of the running annual averages show that in 2010 the monthly chlorine residual average varied from 0.79 to 0.8 mg/L which is below the maximum residual level of 4 mg/L. Available results for 2011 show chlorine residual varied from 0.81 to 0.87 mg/L. Please continue to submit results quarterly.

7. **Additional Monitoring**

Description of Program: (Physical quality of distribution system, corrosion, lead monitoring, etc.) For **distribution physical quality**, the Company collects color, odor, and turbidity samples from one distribution site every other week.

As the Company receives surface water from CLAWA, it is required to monitoring chlorine residual at the same sites as distribution coliform and have a **detectable chlorine residual**, or a plate count less than 500 CFU/mL, at 95 percent of samples taken [Title 22, CCR, Section 64654 (b)(2) and Section 64656 (c)]. Systems that also use groundwater may request alternate sites [Title 22, CCR, Section 64656 (d)]. Review of monthly reports from 2010 and 2011 show the Company has not submitted the reports. If surface water is not used then a report should still be send noting that surface water was not used. A template is included in the appendix of the report.

Lead and Copper Distribution Monitoring: The Company has aeration treatment for lead and copper action level compliance. The Company has been operating with optimal corrosion control treatment and is in compliance with lead and copper action levels. The Company is currently on reduced triennial monitoring. The next round will be due by either June, July, August, or September 2013.

Table 13: Cedarpines Park MWC Lead and Copper Monitoring

Date of Monitoring	No. of Samples	90th Percentile Lead (mg/L)	90th Percentile Copper (mg/L)	Comments
6/14/2007	20	ND	0.23	
8/13/2010	10	0.013	0.38	
NEXT DUE JUNE-SEPT. 2013				

Notes: ND = Not detected/below detection limit of 0.005 mg/L for lead and 0.050 mg/L for copper. Lead action level is 0.015 mg/L and copper action level is 1.3 mg/L.

8. Is an approved water quality **monitoring plan** on file (i.e. Briefly summarize plan, date, and needed additions): No recent plan on file. It is recommended that the Company develop a monitoring plan for sources, distribution, and treatment.
9. Is monitoring reported and annual **consumer confidence report (CCR)** distributed? Source monitoring is sent by electronic data transfer (EDT) but not all TTHM/HAA5 monitoring is sent hard copy to the Department. CCR has been completed annually.
10. **Discussion and Appraisal:** The Company maintains a good water quality monitoring program as reflected by the few monitoring deficiencies. Please ensure that all monitoring is reported by EDT using the appropriate PS Codes. The Company needs to ensure that Stage 1 TTHM/HAA5 monitoring is completed and that results are forwarded to the Department. Currently, TTHM and HAA5 results are not forwarded electronically by laboratories but must be submitted hard copy. Past due monitoring for Upper Burnt Mill Well 7 will need to be completed when the well is brought online.

H. OPERATION AND MAINTENANCE

1. Personnel and Planning

Are system improvements made in accordance with the Waterworks Standards? Yes
Does the utility have up-to-date distribution system maps? Yes.
Is up-to-date copy of system schematic on file: Most current schematic on file is undated and was provided during the survey (attached). Pressure zone names are different from the distribution map Existing Water System Features revised March 2004.

List or tabulate certified personnel:

Table 14: Certified Operators at Cedarpines Park MWC

Name	Title	Grade Certificate	
		Treatment	Distribution
Robert Haifley	Contract Chief Operator /General Manager	T2 (exp. 2/1/13)	D2 (exp. 4/1/15)
Michael Leyva	Shift Operator	T2 (exp. 7/1/12)	D3 (exp. 4/1/14)
Brenton Frey	Shift Operator	T1 (exp. 7/1/14)	D1 (exp. 8/1/14)

Does the system comply with **Operator Certification** regulations? The highest treatment classification is T1 and the distribution system is D2. The Company has adequately certified operators that meet these requirements. Operators are responsible for maintaining their certifications and completing continuing education.

2. Water System Management

Describe management structure: The Company is a mutual water company run by a board of five directors elected by shareholders. The Board of Directors meets monthly and contracts a system operator who oversees the day-to-day operation of the Company.

Is the system self-supporting? A copy of the Company's approved budget was not reviewed. Please forward a copy for review.

Is there funding to provide the appropriate maintenance and to support the number of personnel to operate the system correctly? From discussion with the Company it was learned that it has a capital improvement plan (CIP) but is currently not funded as there is a financial hold. The Sawpit site needs to be improved for drainage and site stability. The CIP goals also include adding a second CLAWA connection and scheduling tank inspections. Maintenance activities appear to be adequately funded as sites were found in sanitary conditions and operating correctly during the survey.

Minor work is done by the Company and major work is contracted out. System maintenance activities such as valve exercise and system flushing activities have been generally addressed indicating that staff levels are adequate.

3. Cross-Connection Control Program

Name of Cross-connection control inspector(s): Robert Haifley, general manager, oversees program.

Does the utility have a Cross-Connection Control Ordinance on file? Yes, titled *Section 12 Cross Connection Program*, from the Company's Rules and Regulations for Water Service, updated December 16, 2010.

Discussion and Appraisal: The Company administers the cross connection control program for the system. Users are responsible for testing and are provided a list a certified backflow testers. The last cross connection survey completed for the system was in 2007. The Company noted that the biggest concern is fire sprinkler systems. In the 2010 Annual Report it was noted that all backflow devices are on site in lieu of at the meter.

Review of testing history since the 2007 Sanitary Survey shows that nearly all backflow devices were tested. In 2009 and 2010 there were a few devices that were not tested. Information was not provided in the annual reports on why not all devices were tested (i.e. vacant homes, business). The Company needs to ensure that all devices are tested annually to comply with Title 17, CCR, Section 7605 (c). The Company maintains good records of backflow testing.

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Table 15: Cedarpines Park MWC Backflow Testing

	2007	2008	2009	2010
Total Devices	24	NA	26	26
Total Tested	24	NA	23	24

Note: Source is Annual Reports submitted to the Department. NA: not available.

* 2010

The Cross Connection Program Information Form included the December 4, 1997 update to the ordinance. Please verify if the 1997 or 2010 update is used.

Please be aware that revisions to cross connection regulations are currently being drafted and include installation criteria. Please visit our website in the following link for updated information and text of the draft regulations.

<http://www.cdph.ca.gov/certlic/drinkingwater/Pages/Regulations.aspx>

4. Complaints

Describe Complaint Program: Complaints are typically received at the Company's front office and are passed to operators to follow-up. Complaints received generate a work order for operators to follow-up. All work orders are maintained in the Company's records.

Table 16: Number of Complaints Reported Since Previous Inspection

Type	2007	2008	2009	2010
Taste and Odor	4	NA	2	1
Color	0	NA	0	0
Turbidity	1	NA	0	1
Worms & Other Larger Organisms	0	NA	0	0
Pressure (High or Low)	3	NA	0	2
Illnesses (Waterborne)	0	NA	0	0
Other	0	NA	3	4
Calls to Department	0	0	0	1

Notes: Source is Annual Reports submitted to the Department. NA: not available

2009 – There were two complaints on chlorine odor and for "other" two were for buried meter boxes and one was for water volume which was due to line sizing and pipe age.

2010 - Complaint for "taste and odor" was for chlorine smell which was also reported to the Department. The four "other" complaints were for "air complaints."

Discussion and Appraisal: Review of the number of complaints received since the previous inspections show there have been few complaints related to water quality. Complaints for taste and odor were generally for chlorine smell. In 2011 the chlorine entering distribution varied from 0.81 to 0.87 mg/L which is less than the 4 mg/L standard. The 2011 Annual Report is not yet due so a summary of complaints is not included. However, the Department did receive one complaint on water quality testing procedures, flushing operations, and strong chlorine odor. The Company adequately investigated the complaint. The complaint program is adequate.

5. Emergency Response

Is up-to-date emergency notification plan on file? Yes, dated January 17, 2012.

Notification of Office of Drinking Water of significant system problems? Yes

Emergency response plan: No

Discussion and Appraisal: The Company has notifications for boil water on file but does not have an Emergency Response plan. It is recommended that the Company develop an emergency response plan and forward a copy to the Department. A template for small water systems is available at the following link under "Small Water Systems Security Information."

<http://www.cdph.ca.gov/certlic/drinkingwater/Pages/Security.aspx>

The Company has two 45 kVA mobile emergency generators, one for the CLAWA booster station and one for the Jobs Peak boosters which are tested monthly. In the event of an entire system power outage the Company can continue to supply the distribution from remaining gravity storage. The Company's sources do not have backup generators to power the boosters and will need to rely on the CLAWA connection to continue supplying water to the system in the event of an entire system outage. Zone D (formerly Jobs Peak) may not receive CLAWA water in an outage as the Ferncrest boosters do have backup. However, the boosters have connections for mobile generators. The Company maintains a supply of common distribution mains, Hymax clamps, and fittings.

6. Main Disinfection Program

Describe main disinfection program (i.e. method, contact time, chlorine residual, bacti. tests, records) for new and repaired mains: Repairs are done under pressure when possible. For repairs the Company swabs pipe and fittings with chlorine and the area is flushed. New mains are reported to be disinfected per AWWA Standards and noted in work order.

Does the main disinfection program comply with AWWA standards? Yes

Discussion and appraisal: It is recommended that the Company have centralized records for bacteriological testing of mains after disinfection and to have these available for review. Disinfection procedures are in compliance.

7. Valve Maintenance Program

Describe Program: The Company has a goal to exercise all system valves annually. Records are maintained for valve exercise.

Is number and location of valves satisfactory? (i.e. mainline, ARVR, blowoff valves, etc.) In 2007 the Company reported there were 182 valves and in 2010 it reported there were 173. The Company should verify the number of system valves.

¥ 178 VALVES

Table 17: Valve Exercise

	2007	2008	2009	2010
Number of valves	182	NA	173	173
Number exercised	182	NA	NR	80

Notes: NA = not available, NR = not reported

Discussion and appraisal: (i.e. are valves recorded on maps available to field crews? Are all valves located with valve covers raised to grade?) In the 2007 Sanitary Survey it was noted that San Bernardino County had recently resealed roads and that some valve cans were covered. This may account for the change in number of valves. In 2010 the Company did not exercise all system valves.

8. Flushing

Describe flushing program: (i.e. deadends, records, etc.): Flushing is done once or twice annually at dead-ends and all other areas as needed. Records are maintained of flushing.

Approx. No. of dead ends: 35 Number with flushing valves? 35

Discussion and Appraisal: Flushing program is adequate.

10. Recycled or Non-Potable Water Distribution Systems

Are there recycled water projects in the service area? (irrigation, industrial, dual-plumbed, etc.): There is currently no recycled water or non-potable use by the system. There are some private wells within the service area.

Does the District have an approved ordinance for using recycled water? N/A

I. OVERALL SYSTEM APPRAISAL

Overall, the water system is adequately maintained and operated. Areas that need to be addressed are the long term stability of the Sawpit Tank site and records of tank maintenance/inspection. The following is a summary of evaluations for specific system elements.

Sources: With the exception of the Sawpit Wells, all wells were found to be in sanitary conditions during the survey. The Company has indicated that it has addressed the drainage around the sawpit well since the inspection. Upper Burnt Mill 7 has seen an increase in nitrate but is still below the MCL. It is recommended that the source assessment for Upper Burnt Mill 7 be reviewed and updated to note any changes in the area.

The Company currently meets the MDD of 0.21 MGD with source capacity alone and is in compliance with the Waterworks Standards for source capacity. It is recommended that the Company accurately determine the source capacity of its sources.

Treatment: Chlorination facilities were found in sanitary and good working condition. Aeration treatment is effective as reflected by lead and copper monitoring. It is recommended that pH and alkalinity be measured in the distribution system to establish baseline levels.

Distribution System: The number of main leaks/breaks since the previous inspection has not changed significantly to indicate problems with the distribution system. Based on 2005 data, the Company has approximately 8,840 ft of pipe that is less than the minimum 4 inch required in the Waterworks Standards. The Company will need to replace this at the next refurbishment. The Company did not exercise all system valves in 2010 and will need to ensure that all valves are exercised.

Finished Water Storage: All reservoirs and collection tanks were inspected and found in sanitary conditions. The vent and access hatch at Sawpit Tank 2 needs to be improved and tank recoated. Interior inspection information needs to be documented.

Pumps: Well pumps and booster stations were found to be adequately maintained and housed in drained facilities.

Water Quality Monitoring: Monitoring is in compliance with few exceptions. Stage 1 TTHM and HAA5 needs to be completed and reported quarterly. Upper Burnt Mill 7 will need to complete missing monitoring before the well is brought online.

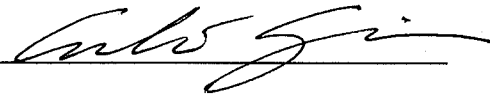
Operations and Management: The Company has adequately certified distribution and treatment operators. Please forward a copy of the Company's budget or other documentation to review funding for maintenance and capital improvement. The Department recommends that the Company develop an Emergency Response Plan.

J. APPENDIX

- Deficiency List
- Cedar Park Pines Mutual Water Company system schematic, received October 12, 2011
- Schematic Profile – Existing Water System, received March 23, 2000
- DGE, Inc. system schematic, dated March 2, 2005
- Chlorination Data Sheets
- Reservoir Data Sheets
- Distribution Data Sheet
- Booster Station Data Sheets
- Quarterly Report for Disinfectant Residuals Compliance form
- Monthly Summary of Monitoring for Surface Water Treatment Regulations

• Cedarpines Park Mutual Water Company
2011 Sanitary Survey Report

Report prepared by: Andrés Aguirre, P.E.

Signature: 

Date: February 22, 2012

**STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC HEALTH
DIVISION OF DRINKING WATER**

DEFICIENCY LIST

System Name: Cedarpines Park Mutual Water Company **System No.:** 3610026
Source of Information: Sanitary Survey
Collected by: Andrés Aguirre **Date:** October 12, 2011


Date Found	DESCRIPTION OF DEFICIENCY	Order of Hazard	Date Corrected - Reported	Date Corrected - Confirmed
	SOURCES:			
10/12/11	Source capacity: It is strongly recommended that the Company determine the reliable source capacity of its wells. Requirements for sources that vary seasonally are in Title 22, CCR, Section 64454 (d), for springs in Section 64454 (k) and for fractured bedrock wells using the methods Section 64554 (g).	N/A		
10/12/11	Lower Burnt Mill Well 1: Repair the lock on the well box. The wellhead is buried and should be cleared out.	D	2/3/12	
10/12/11	Lower Burnt Mill Well 2: The raw water sample tap is threaded. Sample taps should be unthreaded and facing downwards to prevent possible contamination of water sample.	D	2/3/12	
10/12/11	Sawpit Wells: Several well/meter boxes are waterlogged. The drainage needs to be improved at the Sawpit to prevent standing water near wellheads	D	Drainage diversion Nov. 2011	
10/12/11	Sawpit site security: It is recommended that the fencing be completed around entire site to prevent unauthorized access.	N/A		
10/12/11	Lovers Lane 1 Well: The raw water sample tap is threaded. Sample taps should be unthreaded and facing downwards to prevent possible contamination of water sample.	D	2/3/12	
10/12/11	Lovers Lane 2 Well: The raw water sample tap is threaded. Sample taps should be unthreaded and facing downwards to prevent possible contamination of water sample.	D	2/3/12	
10/12/11	Coon Turn 1: The well box needs to be replaced.	D	Nov. 2011	Nov. 2011
10/12/11	Coon Turn 5 vertical: The raw water sample tap is threaded. Sample taps should be unthreaded and facing downwards to prevent possible contamination of water sample.	D	2/3/12	
10/12/11	3 Pigs: The raw water sample tap is threaded. Sample taps should be unthreaded and facing downwards to prevent possible contamination of water sample.	D	2/3/12	

Cedarpines Park Mutual Water Company 2011 Deficiency List

Date Found	DESCRIPTION OF DEFICIENCY	Order of Hazard	Date Corrected - Reported	Date Corrected - Confirmed
10/12/11	Coon Turn 3: The wellhead is buried and should be cleared out.	D	Nov. 2011	Nov. 2011
10/12/11	Upper Burnt Mill Well 7: Recommend that the Company update the source assessment to review if any changes around the well site.	N/A		
	TREATMENT:			
10/12/11	Chlorine Spill Containment: Recommend spill containment be provided at the chlorination facilities.	N/A		
	STORAGE:			
10/12/11	Lovers Lane Tank 1: A tree fell to the side of the tank and should be cleared out.	D	Nov. 2011	Nov. 2011
10/12/11	Lovers Lane Tank 2: The tank appears to have a small leak.	D	Nov. 2011	Nov. 2011
10/12/11	Coon Turn Collection Tank (Buried): There is a security concern for the hatch. There is no locking mechanism and the hatch can be twisted off. Recommend a locking mechanism be installed.	N/A	Dec. 2011	Dec. 2011
10/12/11	Upper Burnt Mill Collection Tank: Vegetation around the tank should be cleared.	D	Nov. 2011	Nov. 2011
10/12/11	Sawpit Tank 2 (welded steel): Recommend vent be replaced with downward facing or mushroom type vent to prevent entrance of surface water/rainwater. The lid to the access hatch is made of wood which is permeable. Non-permeable material is needed.	D	2/3/12	
	PUMPS:			
10/12/11	Jobs Peak Booster Station: Recommend all openings in building are adequately sealed or screened.	D	2/3/12	
	MONITORING:			
10/12/11	Upper Burnt Mill 7: The well is currently offline. Before the well is brought online, all past due monitoring will need to be completed. General mineral/physical, inorganic, and nitrate are currently due.	N/A		
10/12/11	Detectable chlorine residual reporting (surface water): Please begin reporting information on detectable residual when using CLAWA water. If no surface water is being used, indicate on form no surface water used.	N/A		

Cedarpines Park Mutual Water Company 2011 Deficiency List

Date Found	DESCRIPTION OF DEFICIENCY	Order of Hazard	Date Corrected - Reported	Date Corrected - Confirmed
10/12/11	TTHM/HAA5 Monitoring and Reporting: Please continue to sample quarterly at 22356 Mojave River and 408 Hartman. Results must be forwarded to the Department.	D		
	OPERATIONS:			
10/12/11	Emergency Response Plan: It is recommended that the Company develop an emergency response plan.	N/A		
	INFORMATION REQUESTED:			
10/12/11	Main composition: Please provide updated information on main composition. See Distribution Data Sheet.	N/A		
10/12/11	Lower Burnt Mill Well 3: Could not access well box due to poison oak and terrain at time of survey. Please provide a photo of the well box and wellhead.	N/A		
10/12/11	Coon Turn Collection Tank (Buried): Please provide information on the tank (capacity, dimensions, material).	N/A		
10/12/11	System Budget: Please forward a copy of the Company's budget for review.	N/A		

 Shaded areas indicate past deficiencies that have been corrected and verified by the Department

ORDER OF HAZARD

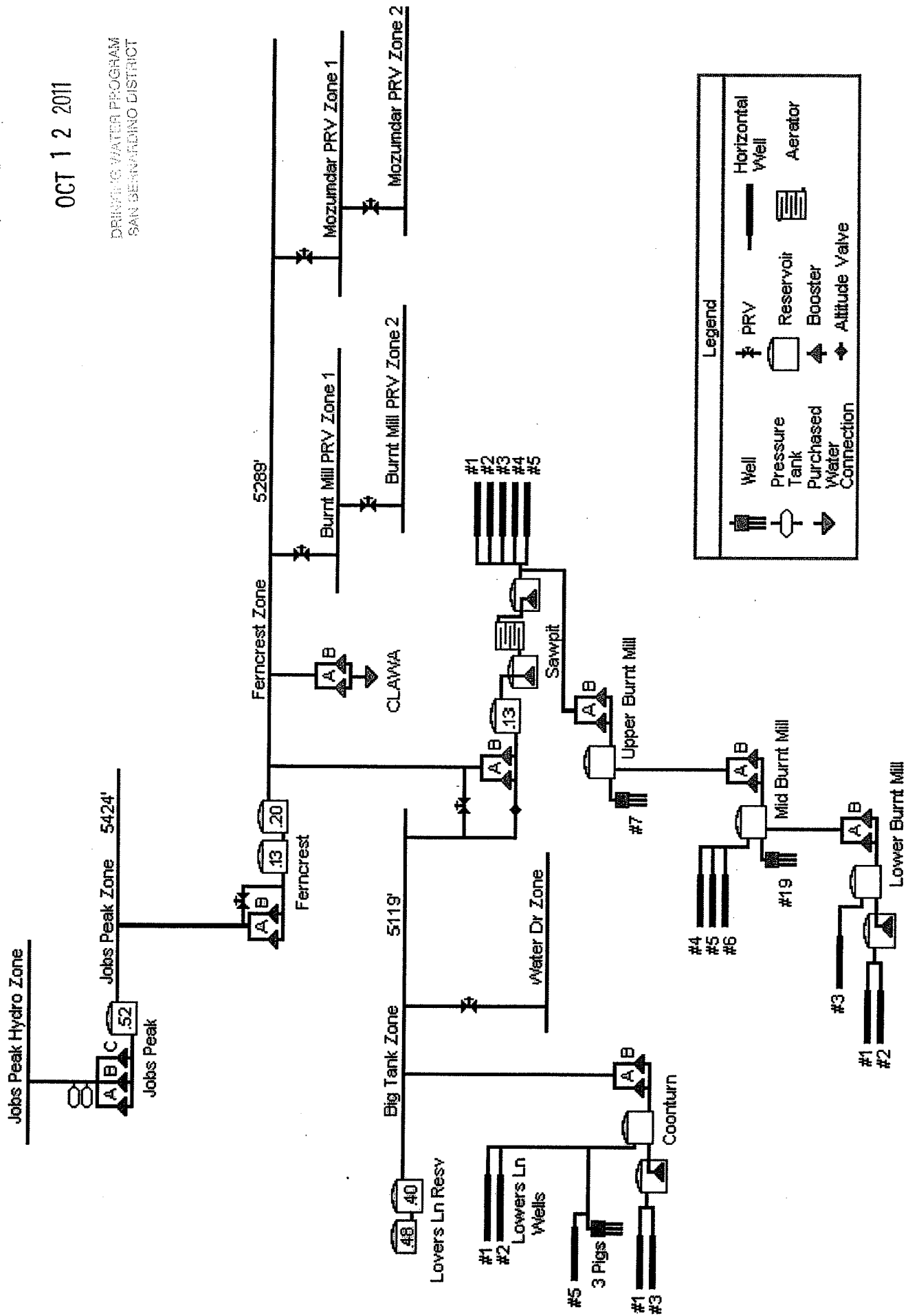
- A. CRITICAL HEALTH HAZARD - CORRECTIVE ACTION MUST BE TAKEN IMMEDIATELY
- B. SERIOUS HEALTH HAZARD - ACTION MUST BE TAKEN AS SOON AS POSSIBLE
- C. POTENTIAL HEALTH HAZARD - MUST BE CORRECTED AS WORK LOAD PERMITS
- D. SYSTEM OR OPERATIONAL DEFECT RESULTING IN POOR WATERWORKS PRACTICE
- N/A. NOT APPLICABLE

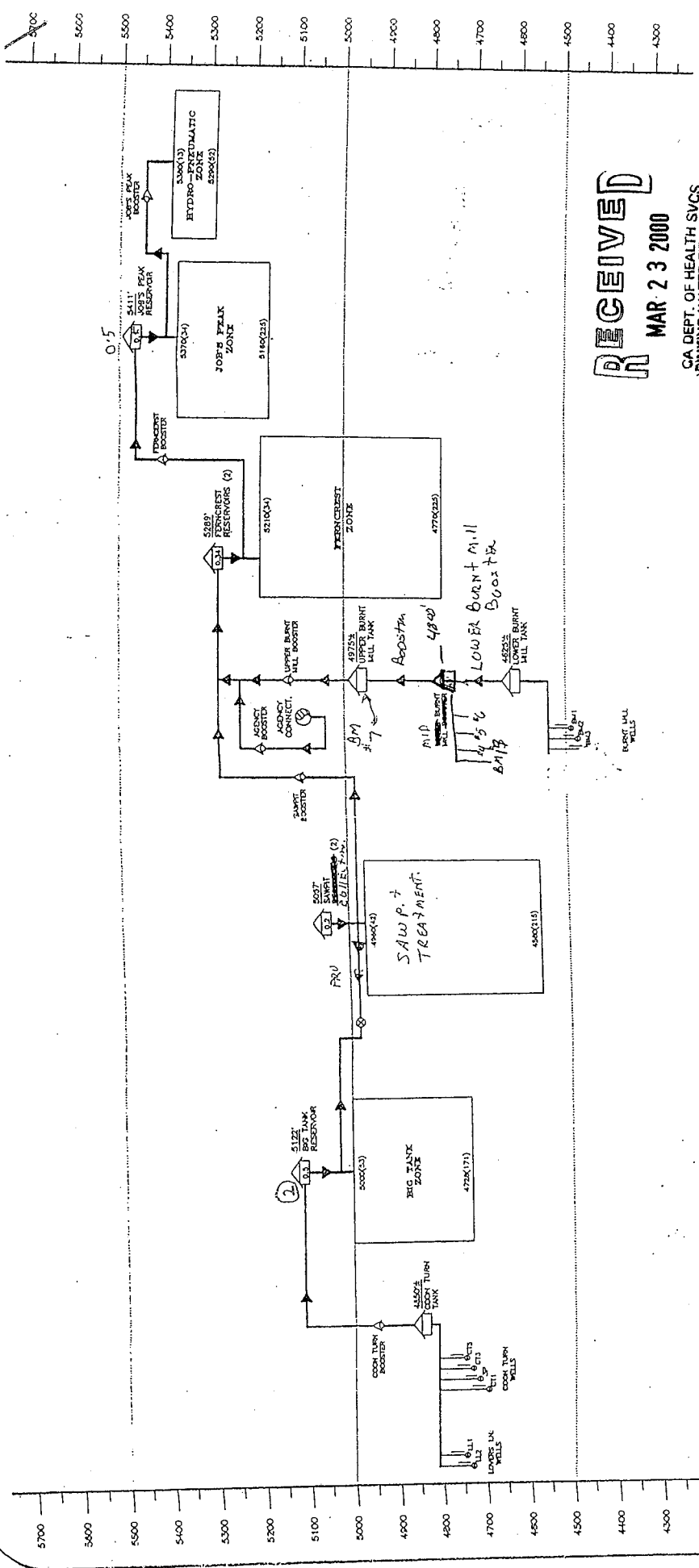
Cedar Park Pines Mutual Water Company

PROPOSED

OCT 12 2011

DRINKING WATER PROGRAM
SAN BERNARDINO DISTRICT





RECEIVED
 MAR 23 2000
 CA DEPT. OF HEALTH SVCS.
 DRINKING WATER FIELD OP. BR

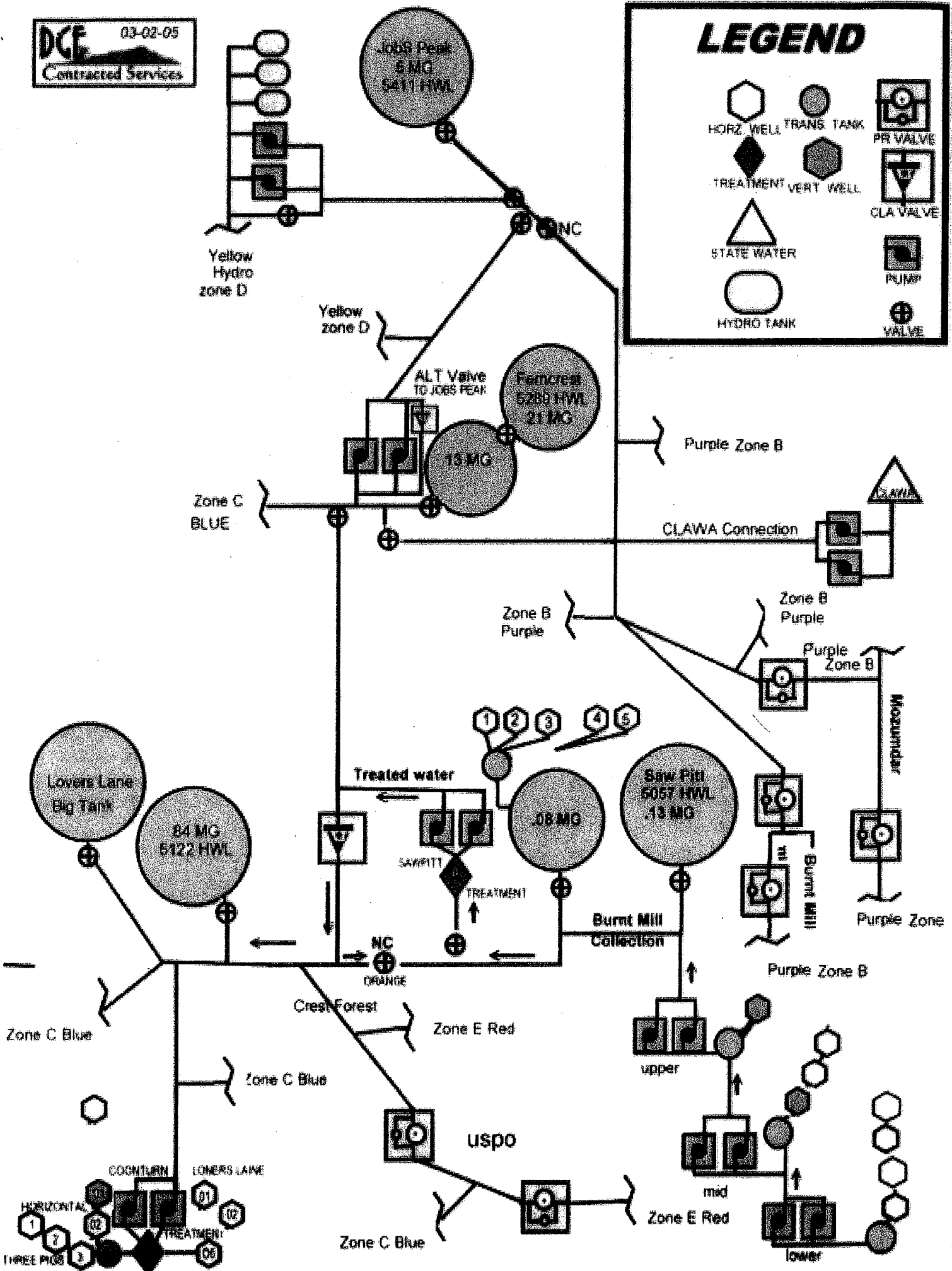
**CEDARPINES PARK MUTUAL WATER COMPANY
 SCHEMATIC PROFILE -- EXISTING WATER SYSTEM**

- LEGEND**
- RESERVOIR (H.W.L.)
 - ALTER PLANT
 - WELL & I.D. NUMBER
 - PUMP STATION
 - STATION
 - PRESSURE REDUCING
 - STATION
 - PRESSURE TONE
 - MAX. ELEV (PRESS)
 - MIN. ELEV (PRESS)
 - FLOW DIRECTION
 - ISOLATION VALVE

JOHN EGAN AND ASSOCIATES, INC.
 - CONSULTING ENGINEERS -
 DECEMBER 1994

LEGEND

	HORZ. WELL		TRANS. TANK		PR. VALVE
	TREATMENT		VERT. WELL		CLA. VALVE
	STATE WATER				PUMP
	HYDRO TANK				VALVE



STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC HEALTH
DIVISION OF DRINKING WATER

CHLORINATION DATA

System Name: Cedarpines Park Mutual Water Company **System No.:** 3610011

Source of Information: Sanitary survey

Collected by: Andrés Aguirre **Date:** 10/12/11

Reason for chlorination (emergency, mandatory or optional):	Optional
Water Source:	Coon Turn Chlorination – 3 Pigs, Lovers Lane 1 and 2, Coon Turn Wells 1, 3, and 5.
Water treated (raw/filtered etc.):	Raw
Chlorine demand character:	Low
Dosage and control method (manual/flow paced):	0.5 mg/L target residual / flow paced
Point of application:	Effluent of Coon Turn Collection
Mixing:	Booster pumps
Contact time before use:	
Contact time for residual test:	
Water Flow: Variation:	0-92 gpm (Coon Turn booster pump)
How measured:	Flow meter
Equipment: Type:	Diaphragm chemical metering pump
Make:	Emec
Model:	Pump VACO 1501
Capacity:	0.26 gph, 217.56 psi
Condition:	Good
Automatic switchover capability?	No
Portable emergency chlorinator available?	Yes
Chlorine residual monitored continuously?	No
Low level residual alarm?	No
At what level of chlorine residual is the alarm activated?	N/A
How often are residual analyses conducted?	Daily
Type of residual measured (free or combined):	Free
Type of residual test used:	DPD
Chemical added: (% available chlorine, form):	12.5 liquid sodium hypochlorite
Cylinder or crock capacity:	150 gal
Stock on hand/days supply:	
Chlorine brand/product name:	HASA Sani-Clor / NSF 61
Housing and Safety Features: Housing:	Concrete block building
Insulation:	No
Heating:	No
Locks:	Yes
Lighting:	Yes
Ventilation:	Yes
Leak detector with alarm:	N/A
Switches outside chlorination room:	N/A
Gas mask:	N/A
Is an emergency plan of action posted?	No
Operation and maintenance: Lapse during changes:	Minimal
Ability to make repairs:	Yes
How often is the equipment inspected?	Daily
Operations records kept:	Yes
Condition of scales(chlorine gas):	N/A

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC HEALTH
DIVISION OF DRINKING WATER

CHLORINATION DATA

System Name: Cedarpines Park Mutual Water Company **System No.:** 3610011

Source of Information: Sanitary survey

Collected by: Andrés Aguirre **Date:** 10/12/11

Reason for chlorination (emergency, mandatory or optional):	Optional
Water Source:	Sawpit Chlorination – Sawpit Wells 1-5, Burnt Mill Wells
Water treated (raw/filtered etc.):	Raw
Chlorine demand character:	Low
Dosage and control method (manual/flow paced):	0.5 mg/L target residual / flow paced
Point of application:	Aeration treatment effluent
Mixing:	Sawpit Tank 2
Contact time before use:	
Contact time for residual test:	
Water Flow: Variation:	25-85 gpm (capacity of aeration treatment)
How measured:	Flow meter
Equipment: Type:	Diaphragm chemical metering pump
Make:	Emec
Model:	Pump VACO 1501
Capacity:	0.26 gph, 217.56 psi
Condition:	Good
Automatic switchover capability?	No
Portable emergency chlorinator available?	Yes
Chlorine residual monitored continuously?	No
Low level residual alarm?	No
At what level of chlorine residual is the alarm activated?	N/A
How often are residual analyses conducted?	Daily
Type of residual measured (free or combined):	Free
Type of residual test used:	DPD
Chemical added: (% available chlorine, form):	12.5 liquid sodium hypochlorite
Cylinder or crock capacity:	35 gal
Stock on hand/days supply:	
Chlorine brand/product name:	HASA Sani-Clor / NSF 61
Housing and Safety Features: Housing:	Concrete block building
Insulation:	No
Heating:	No
Locks:	Yes
Lighting:	Yes
Ventilation:	Yes
Leak detector with alarm:	N/A
Switches outside chlorination room:	N/A
Gas mask:	N/A
Is an emergency plan of action posted?	No
Operation and maintenance: Lapse during changes:	Minimal
Ability to make repairs:	Yes
How often is the equipment inspected?	Daily
Operations records kept:	Yes
Condition of scales(chlorine gas):	N/A

**STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC HEALTH
DIVISION OF DRINKING WATER**

DISTRIBUTION DATA

System Name: Cedarpines Park Mutual Water Company **System No.:** 3610011
Source of Information: CDPH files
Updated By: Andrés Aguirre **Date:** 10/12/11

Mains:

Material	Amount (%)	Size	Class/Gage	Condition
PVC	35,580 ft	8	C-900	
PVC	82,750 ft	6	C-900	
PVC	8,840 ft	3	Sch 40	

Source: 2005 Annual Report. Please update as needed.

Joints (type): Mechanical, O-ring, welded
Amount of pipe less than four inches in diameter: 8,840 ft
Minimum size of new mains installed: .6-inches
Type of pipe used for new and replacement mains: PVC C-900
Minimum depth of cover: New mains 3 ft, old mains >3 ft
Distance from sewers and/or sewage disposal (practice or policy): No sewers in area. New mains are 5 ft from edge of roadway and 10 ft from the nearest individual sewage disposal system.

Infiltration Hazard:

Relationship of water lines to groundwater table: All lines above static water level.
Extent of low head or gravity lines: None less than 5 psi. Lines leading from wells to storage tanks are gravity lines and pressure can drop quickly when too much water is withdrawn from system.

Disinfection (method):

New mains: HTH 24 hour contact time, 50-150 ppm residual, flushing followed by bacteriological samples.
Repaired mains: HTH slug followed by flushing. All repairs done under pressure.

Dead Ends (extent): 35 dead ends.

Flushing: On demand. Dead end flushing once or twice annually.
Characteristics of water flushed: Clean

Valves:

Is number and location of valves satisfactory? No, need to verify
Main line isolation provided: Yes
Air release/vacuum relief valves provided: Yes
Other: _____
Valve exercise program: Goal is to exercise all valves annually
Valve maps maintained? Yes, a system map. The Company does not have an atlas.

Service Connections:

Materials: Galvanized and polyethylene. New service lines are polyethylene.

Defects and Remarks:

**STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC HEALTH
DIVISION OF DRINKING WATER**

RESERVOIR DATA

System Name: Cedarpines Park Mutual Water Company **System No.:** 3610011
Source of Information: Sanitary survey, Department files
Updated by: Andrés Aguirre **Date:** October 12, 2011

Number or Name:	Coon Turn Collection (above grd)	Coon Turn Collection (buried)
Date constructed:	1999	2007?
Purpose (storage, etc.):	Well collection / booster forebay	Well collection
Capacity:	5,100 gallons	
Location (specific):		
Controlled Access:	Yes	No
Distance to: Sewer:	None near	None near
Sewage Disposal	None near	None near
Construction:	Welded Steel	HDPE?
Material:	Steel	HDPE?
Sides:	Steel	HDPE?
Floor:	Steel	HDPE?
Cover or roof:	Steel	HDPE?
Height top of walls above ground:	12 ft	Buried, hatch >18 inches above
Overflow elevation		
Dimensions (diameter, length x width)		
Surface drainage to res. possible?	No	
Ventilation:	No	Yes
Screening:	N/A	Yes
Inlet & Outlet Arrangement:	Separate inlet/outlet	Separate inlet/outlet
<u>Inlet:</u> Location:	North and East side	
Distance above bottom:	12 ft	
<u>Outlet:</u> Distance from inlet:	East side	
Distance above bottom:	4 in	
Drain to where:	No drainage	
Overflow to where:	Creek	
Sewer or other hazardous connection (make sketch):	None	
Estimated maximum residence time	30 mins	
Relation to system:		
Receives from:	Coon Turn Collection-buried, Lovers Lane 1 & 2, Coon Turn 5, and 3 Pigs	Coon Turn 1 and 3
Delivers to:	Lovers Lane Tanks/ Big Tank Zone	Coon Turn Collection-above ground
Date of last tank coating & material:		
Interior: Date/material		
Exterior: Date/material		
Tank Maintenance:		
Date of last comprehensive inspection:		
Date of last cleaning/refurbishment:		
Defects and Remarks: (Include statements on cleaning practices, condition of structure, overflow condition, etc.)		10/12/11 - Access hatch does not having a locking mechanism. This is a security concern.

**STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC HEALTH
DIVISION OF DRINKING WATER**

RESERVOIR DATA

System Name: Cedarpines Park Mutual Water Company **System No.:** 3610011
Source of Information: Sanitary survey, Department files
Updated by: Andrés Aguirre **Date:** October 12, 2011

Number or Name:	Ferncrest #1	Ferncrest #2
Date constructed:	1971	1982
Purpose (storage, etc.):	Storage	Storage
Capacity:	210,000 gal	126,000 gal
Location (specific):		
Controlled Access:	Yes, chain-link fence & barbed wire	Yes, chain-link fence & barbed wire
Distance to: Sewer:	None near	None near
Sewage Disposal	None near	None near
Construction:	Bolted steel	Welded steel
Material:	Steel	Steel
Sides:	Steel	Steel
Floor:	Steel	Steel
Cover or roof:	Steel	Steel
Height top of walls above ground:	24 ft	24 ft
Overflow elevation		
Dimensions (diameter, length x width)		
Surface drainage to res. possible?	No	No
Ventilation:	Yes, on top	Yes, on top
Screening:	Yes, adequate	Yes, adequate
Inlet & Outlet Arrangement:		
<u>Inlet:</u> Location:	South side	South side
Distance above bottom:	3 ft	1 ft
<u>Outlet:</u> Distance from inlet:	Common	Common
Distance above bottom:	3 ft	1 ft
Drain to where:	Ground	South side of tank
Overflow to where:	Top side of tank (air)	South side of tank
Sewer or other hazardous connection (make sketch):	None	None
Estimated maximum residence time		
Relation to system:		
Receives from:	Sawpit Booster, Upper Burnt Mill, CLAWA	Sawpit Booster, Upper Burnt Mill, CLAWA
Delivers to:	Ferncrest Zone	Ferncrest Zone
Date of last tank coating & material:		
Interior: Date/material	/ Coal tar	/ Supertank
Exterior: Date/material		
Tank Maintenance:		
Date of last comprehensive inspection:		
Date of last cleaning/refurbishment:		
Defects and Remarks: (Include statements on cleaning practices, condition of structure, overflow condition, etc.)		

**STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC HEALTH
DIVISION OF DRINKING WATER**

RESERVOIR DATA

System Name: Cedarpines Park Mutual Water Company **System No.:** 3610011
Source of Information: Sanitary survey, Department files
Updated by: Andrés Aguirre **Date:** October 12, 2011

Number or Name:	Job's Peak	Jobs Peak Hydro Tank 1
Date constructed:	1997	2005
Purpose (storage, etc.):	Storage	Pressure
Capacity:	0.5 MG	119 gal
Location (specific):	Job's Peak	
Controlled Access:	Yes, chain-link fence & barbed wire	Yes, locked building
Distance to: Sewer:	None near	None near
Sewage Disposal	None near	None near
Construction:	Bolted steel	Vertical hydro tank - welded steel with butyl/EPDM diaphragm
Material:	Steel	Steel
Sides:	Steel	Steel
Floor:	Steel	Steel
Cover or roof:	Steel	Steel
Height top of walls above ground:	40 ft	Total height 61-7/8 inch
Overflow elevation		N/A
Dimensions (diameter, length x width)		26 inch diameter
Surface drainage to res. possible?	No	No
Ventilation:	Yes, on top	N/A
Screening:	Yes, adequate	N/A
Inlet & Outlet Arrangement:		Common inlet/outlet
Inlet: Location:	North side	Bottom of tank
Distance above bottom:	4 in	~1 ft
Outlet: Distance from inlet:	Common	Bottom of tank
Distance above bottom:	4 in	~1 ft
Drain to where:	Ground	No separate drain, use piping
Overflow to where:	Top side of tank	N/A
Sewer or other hazardous connection (make sketch):	None	None
Estimated maximum residence time		
Relation to system:		
Receives from:	Sawpit Booster through Job's Peak	Jobs Peak Zone
Delivers to:	Job's Peak zone	Jobs Peal Hydro Zone
Date of last tank coating & material:		
Interior: Date/material	1997 / Epoxy	2005 / poly liner
Exterior: Date/material		
Tank Maintenance:		
Date of last comprehensive inspection:		
Date of last cleaning/refurbishment:		
Defects and Remarks: (Include statements on cleaning practices, condition of structure, overflow condition, etc.)		Champion Model CH22050. Max working pressure 100 psi.

**STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC HEALTH
DIVISION OF DRINKING WATER**

RESERVOIR DATA

System Name: Cedarpines Park Mutual Water Company **System No.:** 3610011
Source of Information: Sanitary survey, Department files
Updated by: Andrés Aguirre **Date:** October 12, 2011

Number or Name:	Jobs Peak Hydro Tank 2	Jobs Peak Hydro Tank 3
Date constructed:		
Purpose (storage, etc.):	Pressure	Pressure
Capacity:	119 gal	119 gal
Location (specific):		
Controlled Access:	Yes, locked building	Yes, locked building
Distance to: Sewer:	None near	None near
Sewage Disposal	None near	None near
Construction:	Vertical hydro tank - welded steel with butyl diaphragm	Vertical hydro tank - welded steel with butyl diaphragm
Material:	Steel	Steel
Sides:	Steel	Steel
Floor:	Steel	Steel
Cover or roof:	Steel	Steel
Height top of walls above ground:	62 inch	62 inch
Overflow elevation	N/A	N/A
Dimensions (diameter, length x width)	26 inch diameter	26 inch diameter
Surface drainage to res. possible?	No	No
Ventilation:	N/A	N/A
Screening:	N/A	N/a
Inlet & Outlet Arrangement:	Common inlet/outlet	Common inlet/outlet
<u>Inlet:</u> Location:	Bottom of tank	Bottom of tank
Distance above bottom:	~1 ft	~1 ft
<u>Outlet:</u> Distance from inlet:	Bottom of tank	Bottom of tank
Distance above bottom:	~1 ft	~1 ft
Drain to where:	No separate drain, use piping	No separate drain, use piping
Overflow to where:	N/A	N/A
Sewer or other hazardous connection (make sketch):	None	None
Estimated maximum residence time		
Relation to system:		
Receives from:	Jobs Peak Zone	Jobs Peak Zone
Delivers to:	Jobs Peal Hydro Zone	Jobs Peal Hydro Zone
Date of last tank coating & material:		
Interior: Date/material	/ polypropylene liner	/ polypropylene liner
Exterior: Date/material		
Tank Maintenance:		
Date of last comprehensive inspection:		
Date of last cleaning/refurbishment:		
Defects and Remarks: (Include statements on cleaning practices, condition of structure, overflow condition, etc.)	Well-X-Trol Model WX 350. Max working pressure 125 psi.	Well-X-Trol Model WX 350. Max working pressure 125 psi.

**STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC HEALTH
DIVISION OF DRINKING WATER**

RESERVOIR DATA

System Name: Cedarpines Park Mutual Water Company **System No.:** 3610011
Source of Information: Sanitary survey, Department files
Updated by: Andrés Aguirre **Date:** October 12, 2011

Number or Name:	Lovers Lane 1 (former Big Tank 1)	Lovers Lane 2 (former Big Tank 2)
Date constructed:	1999	1999
Purpose (storage, etc.):	Storage	Storage
Capacity:	0.4 MG	0.48 MG
Location (specific):		
Controlled Access:	Yes, chain-link fence & barbed wire	Yes, chain-link fence & barbed wire
Distance to: Sewer:	None near	None near
Sewage Disposal	None near	None near
Construction:	Bolted steel	Bolted steel
Material:	Steel	Steel
Sides:	Steel	Steel
Floor:	Steel	Steel
Cover or roof:	Steel	Steel
Height top of walls above ground:	32 ft	32 ft
Overflow elevation		
Dimensions (diameter, length x width)	47 ft diameter	60 ft diameter
Surface drainage to res. possible?	No	No
Ventilation:	Yes	Yes
Screening:	Yes	Yes
Inlet & Outlet Arrangement:	Common inlet/outlet	Common inlet/outlet
<u>Inlet:</u> Location:	North west side	West side
Distance above bottom:	2 ft	1 ft
<u>Outlet:</u> Distance from inlet:	Common	Common
Distance above bottom:	2 ft	1 ft
Drain to where:	Field	Rock splash pad 68 ft north east
Overflow to where:	Field	Common with drain
Sewer or other hazardous connection (make sketch):	None	None
Estimated maximum residence time		
Relation to system:		
Receives from:	Big Tank Zone	Big Tank Zone
Delivers to:	Big Tank Zone	Big Tank Zone
Date of last tank coating & material:		
Interior: Date/material	1999 / Epoxy	1999 / Epoxy
Exterior: Date/material		
Tank Maintenance:		
Date of last comprehensive inspection:		
Date of last cleaning/refurbishment:		
Defects and Remarks: (Include statements on cleaning practices, condition of structure, overflow condition, etc.)		

**STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC HEALTH
DIVISION OF DRINKING WATER**

RESERVOIR DATA

System Name: Cedarpines Park Mutual Water Company **System No.:** 3610011
Source of Information: Sanitary survey, Department files
Updated by: Andrés Aguirre **Date:** October 12, 2011

Number or Name:	Lower Burnt Mill Collection (above)	Lower Burnt Mill Collection (buried)
Date constructed:	1999	
Purpose (storage, etc.):	Well water collection/booster forebay	Well water collection
Capacity:	1,600 gal	
Location (specific):		
Controlled Access:	Yes, chain-link fence & barbed wire	Yes, chain-link fence & barbed wire
Distance to: Sewer:	None near	None near
Sewage Disposal	None near	None near
Construction:		
Material:	Steel	Steel
Sides:	Steel	Steel
Floor:	Steel	Steel
Cover or roof:	Steel	Steel
Height top of walls above ground:	6 ft	~2 ft
Overflow elevation	~5.8 ft	N/A, at Lower Burnt Mill above
Dimensions (diameter, length x width)		
Surface drainage to res. possible?	No	No
Ventilation:	No	No
Screening:	N/A	N/A
Inlet & Outlet Arrangement:		
<u>Inlet:</u> Location:	West side	
Distance above bottom:	6 ft	
<u>Outlet:</u> Distance from inlet:	6 ft	
Distance above bottom:	3 in	
Drain to where:	Ground	
Overflow to where:	Ground	
Sewer or other hazardous connection (make sketch):	None	None
Estimated maximum residence time		
Relation to system:		
Receives from:	Lower Burnt Mill Collection buried and Lower Burnt Mill Well 3.	Lower Burnt Mill Wells 1 and 2
Delivers to:	Lower Burnt Mill Booster	Lower Burnt Mill Collection above ground.
Date of last tank coating & material:		
Interior: Date/material		
Exterior: Date/material		
Tank Maintenance:		
Date of last comprehensive inspection:		
Date of last cleaning/refurbishment:		
Defects and Remarks: (Include statements on cleaning practices, condition of structure, overflow condition, etc.)		10/12/11 – Has dent on roof.

**STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC HEALTH
DIVISION OF DRINKING WATER**

RESERVOIR DATA

System Name: Cedarpines Park Mutual Water Company **System No.:** 3610011
Source of Information: Sanitary survey, Department files
Updated by: Andrés Aguirre **Date:** October 12, 2011

Number or Name:	Mid Burnt Mill Collection	Upper Burnt Mill
Date constructed:	1999	1995
Purpose (storage, etc.):	Well water collection	Well water collection
Capacity:	2,000 gal	4,200 gal
Location (specific):		
Controlled Access:		
Distance to: Sewer:	None near	None near
Sewage Disposal	None near	None near
Construction:	Welded steel	Welded steel
Material:	Steel	Steel
Sides:	Steel	Steel
Floor:	Steel	Steel
Cover or roof:	Steel	Steel
Height top of walls above ground:	8 ft	8 ft
Overflow elevation		
Dimensions (diameter, length x width)		
Surface drainage to res. possible?	No	No
Ventilation:	No	No
Screening:	N/A	N/A
Inlet & Outlet Arrangement:		
<u>Inlet:</u> Location:	West side	South side
Distance above bottom:	8 ft	1 in
<u>Outlet:</u> Distance from inlet:	Common	4 ft
Distance above bottom:	8ft	1 in
Drain to where:	Ground	Ground
Overflow to where:	Ground	Ground
Sewer or other hazardous connection (make sketch):	None	None
Estimated maximum residence time		
Relation to system:		
Receives from:	Mid Burnt Mill Wells 4-6, Mid Burnt Mill 19 and Lower Burnt booster	Lower Burnt Mill Booster
Delivers to:		Upper Burnt Mill Booster
Date of last tank coating & material:		
Interior: Date/material		/ Coal tar
Exterior: Date/material		
Tank Maintenance:		
Date of last comprehensive inspection:		
Date of last cleaning/refurbishment:		
Defects and Remarks: (Include statements on cleaning practices, condition of structure, overflow condition, etc.)		

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC HEALTH
DIVISION OF DRINKING WATER

RESERVOIR DATA

System Name: Cedarpines Park Mutual Water Company **System No.:** 3610011
Source of Information: Sanitary survey, Department files
Updated by: Andrés Aguirre **Date:** October 12, 2011

Number or Name:	Sawpit Tank #1	Sawpit Tank #2
Date constructed:	1957	1979
Purpose (storage, etc.):	Storage	Storage and balancing
Capacity:	84,000 gal	136,000 gal
Location (specific):		
Controlled Access:	Fence for most of area	Fence for most of area
Distance to: Sewer:	None near	None near
Sewage Disposal	None near	None near
Construction:		
Material:		
Sides:	Bolted Steel	Welded Steel
Floor:	Steel	Steel
Cover or roof:	Steel	Steel
Height top of walls above ground:	16 ft	16 ft
Overflow elevation		
Dimensions (diameter, length x width)	30 ft diameter	38 ft diameter
Surface drainage to res. possible?	No	No
Ventilation:	Yes, on top	Yes, on top
Screening:	Yes, adequate	Yes, adequate
Inlet & Outlet Arrangement:		
<u>Inlet</u> : Location:	North side	Top
Distance above bottom:	6 in	16 ft
<u>Outlet</u> : Distance from inlet:	South side	Common
Distance above bottom:	16 ft	16 ft
Drain to where:	None	Bottom side of tank
Overflow to where:	None	Middle side of tank
Sewer or other hazardous connection (make sketch):		
Estimated maximum residence time		
Relation to system:		
Receives from:	Sawpit wells	Sawpit wells
Delivers to:	Sawpit Zone	Sawpit Zone
Date of last tank coating & material:		
Interior: Date/material	Coal tar	Coal tar
Exterior: Date/material		
Tank Maintenance:		
Date of last comprehensive inspection:		
Date of last cleaning/refurbishment:		
Defects and Remarks: (Include statements on cleaning practices, condition of structure, overflow condition, etc.)	10/12/11 – Not in use. Physically disconnected from system due to site stability and structural considerations.	10/12/11 – Access hatch is wood. The vent opening should face downward/mushroom type and screened with 24 mesh screen. Maintain ≤10 ft for site stability which gives capacity ~84,842 gal.

**STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC HEALTH
DIVISION OF DRINKING WATER**

RESERVOIR DATA

System Name: Cedarpines Park Mutual Water Company **System No.:** 3610011
Source of Information: Sanitary survey, Department files
Updated by: Andrés Aguirre **Date:** October 12, 2011

Number or Name:	Sawpit Collection Tank buried	Sawpit Treated Water clearwell
Date constructed:		1998
Purpose (storage, etc.):	Well water collection	Clearwell
Capacity:		750 gal
Location (specific):		
Controlled Access:	Fence for most of area	Fence for most of area
Distance to: Sewer:	None near	None near
Sewage Disposal	None near	None near
Construction:	Welded steel buried	Precast concrete buried
Material:	Steel	Concrete
Sides:	Steel	Concrete
Floor:	Steel	Concrete
Cover or roof:	Steel	Concrete
Height top of walls above ground:	3-6 inches	
Overflow elevation		
Dimensions (diameter, length x width)	3 ft diameter	
Surface drainage to res. possible?	Possible, tank is buried low	
Ventilation:	Yes	
Screening:	Yes	
Inlet & Outlet Arrangement:	Common inlet/outlet	Separate inlet/outlet
<u>Inlet:</u> Location:		
Distance above bottom:		
<u>Outlet:</u> Distance from inlet:		
Distance above bottom:		
Drain to where:		
Overflow to where:		
Sewer or other hazardous connection (make sketch):	None near	
Estimated maximum residence time		
Relation to system:		
Receives from:	Sawpit wells	Sawpit aeration
Delivers to:		Sawpit Tank 1
Date of last tank coating & material:		
Interior: Date/material		
Exterior: Date/material		
Tank Maintenance:		
Date of last comprehensive inspection:		
Date of last cleaning/refurbishment:		
Defects and Remarks: (Include statements on cleaning practices, condition of structure, overflow condition, etc.)	10/12/11 – Site drainage needs to be improved. Water pool around tank which is buried near flush to ground. Fencing needs to be improved.	

BOOSTER STATION DATA

System Name: Cedarpines Park Mutual Water Company **System No:** 3610011

Source of Information: Sanitary Survey

Updated by: Andrés Aguirre **Date:** October 12, 2011

Number or Name	CLAWA Boosters		
Date Constructed			
Purpose (system pressure, standby, etc.)	Pressure		
Total Pumping Capacity (gpm)			
Location			
Specific Location (Cross Streets, etc)			
Neighborhood	Mountain residential		
Size of Lot			
Enclosure:	Secure housing		
Type	Wood shed		
Floor	Concrete		
Insulation	No		
Heating	Yes		
Drainage	No		
Flood Alarm	No		
Flood Hazard	Boosters are in pit but are elevated		
Relation to System			
Receives Water From	CLAWA transmission line		
Delivers Water To	Ferncrest Zone/		
Portable Pump Connections Available	No		
Station has Capacity to Reduce Pressure From High Side to Low Side of Booster	No		
Standby Power Available on Site	Yes		
Portable Standby Generator Connection Available	Yes		
Instrumentation and Control	Pressure transducer		
Pumping Units	A	B	
Make	Grundfos	Grundfos	
Model	CR15-05	CR9-14	
Capacity		12 gpm	
Lubrication	Water	Water	
Power	Electric/10 hp	Electric/5 hp	
Date Installed			
Sewer or Other Hazardous Connections(s)	None		
Defects and Remarks:	45 kVa generator available onsite. Capacity for booster "B" is from 2007 pump test. Need recent pump tests.		

BOOSTER STATION DATA

System Name: Cedarpines Park Mutual Water Company **System No:** 3610011

Source of Information: Sanitary Survey

Updated by: Andrés Aguirre **Date:** October 12, 2011

Number or Name	Coon Turn Booster Station		
Date Constructed			
Purpose (system pressure, standby, etc.)	Water transfer		
Total Pumping Capacity (gpm)	80-92 gpm (boosters alternate)		
Location			
Specific Location (Cross Streets, etc)	Nearest cross streets Coon Hollow and Crest Forest Dr.		
Neighborhood	Mountain residential		
Size of Lot			
Enclosure:	Secure housing		
Type	Concrete block with wood roof		
Floor	Concrete		
Insulation	No		
Heating	Yes		
Drainage	Yes		
Flood Alarm	No		
Flood Hazard			
Relation to System			
Receives Water From	Coon Turn Tank		
Delivers Water To	Big Tank Zone / Zone C? / 5119'		
Portable Pump Connections Available	No		
Station has Capacity to Reduce Pressure From High Side to Low Side of Booster	No		
Standby Power Available on Site	No		
Portable Standby Generator Connection Available	Yes		
Instrumentation and Control	Pressure transducer		
Pumping Units (facing wall)	A (Left)	B (Right)	
Make	Grundfos	Goulds e-SV	
Model	CR16	15SV8FD30	
Capacity	92 gpm	80 gpm	
Lubrication	Water	Water	
Power	Electric/15 hp	Electric	
Date Installed		2007	
Sewer or Other Hazardous Connections(s)	None		
Defects and Remarks:	Booster "A" capacity from 2007 pump test. Need recent pump tests.		

BOOSTER STATION DATA

System Name: Cedarpines Park Mutual Water Company **System No:** 3610011

Source of Information: Sanitary Survey

Updated by: Andrés Aguirre **Date:** October 12, 2011

Number or Name	Ferncrest Booster Station		
Date Constructed			
Purpose (system pressure, standby, etc.)	Water transfer		
Total Pumping Capacity (gpm)	42-72 gpm (pumps alternate)		
Location			
Specific Location (Cross Streets, etc)	Nearest cross street Peak Cir and Jobs Peak Rd		
Neighborhood	Mountain residential		
Size of Lot			
Enclosure:	Secure building		
Type	Concrete block with wood roof		
Floor	Concrete		
Insulation	No		
Heating	No		
Drainage	Yes		
Flood Alarm	No		
Flood Hazard			
Relation to System			
Receives Water From	Ferncrest Tanks 1 and 2		
Delivers Water To	Jobs Peak Zone / Zone D?		
Portable Pump Connections Available	No		
Station has Capacity to Reduce Pressure From High Side to Low Side of Booster	Yes		
Standby Power Available on Site	No		
Portable Standby Generator Connection Available	Yes		
Instrumentation and Control	Timer		
Pumping Units	A/1	B/2	
Make	Grundfos	Grundfos	
Model	CR16	CR16	
Capacity	72 gpm	42 gpm	
Lubrication	Water	Water	
Power	Electric/7.5 hp	Electric/7.5 hp	
Date Installed			
Sewer or Other Hazardous Connections(s)	None		
Defects and Remarks:	Capacities are from 2007 pump tests. Need recent pump tests.		

BOOSTER STATION DATA

System Name: Cedarpines Park Mutual Water Company **System No:** 3610011

Source of Information: Sanitary Survey

Updated by: Andrés Aguirre **Date:** October 12, 2011

Number or Name	Jobs Peak Hydro Boosters			
Date Constructed				
Purpose (system pressure, standby, etc.)	System pressure			
Total Pumping Capacity (gpm)				
Location				
Specific Location (Cross Streets, etc)	Nearest cross street Jobs Peak Rd. and Hilltop Ln.			
Neighborhood	Mountain residential			
Size of Lot				
Enclosure:	Secure building			
Type	Concrete block with wood roof			
Floor	Concrete			
Insulation	No			
Heating	No			
Drainage	Yes			
Flood Alarm	No			
Flood Hazard				
Relation to System				
Receives Water From	Jobs Peak Zone / Zone D?			
Delivers Water To	Jobs Peak Hydro Zone and Jobs Peak hydrotanks			
Portable Pump Connections Available	No			
Station has Capacity to Reduce Pressure From High Side to Low Side of Booster	No			
Standby Power Available on Site	Yes			
Portable Standby Generator Connection Available	Yes			
Instrumentation and Control	Pressure transducer			
Pumping Units	A/1	B/2	C/3 – Fire?	
Make	Peerless	Peerless	Peerless	
Model	PE503-3	PE503-3		
Capacity				
Lubrication	Water	Water	Water	
Power	Electric / 5 hp	Electric / 5 hp	Electric /	
Date Installed	2007	2007		
Sewer or Other Hazardous Connections(s)				
Defects and Remarks:	45 kVa generator available onsite. Need recent pump tests.			

BOOSTER STATION DATA

System Name: Cedarpines Park Mutual Water Company **System No:** 3610011

Source of Information: Sanitary Survey

Updated by: Andrés Aguirre **Date:** October 12, 2011

Number or Name	Lower Burnt Mill Boosters		
Date Constructed			
Purpose (system pressure, standby, etc.)	Water transfer		
Total Pumping Capacity (gpm)	38 gpm (boosters alternate)		
Location			
Specific Location (Cross Streets, etc)	Nearest cross street Reservoir Rd. and Bone Dr.		
Neighborhood	Rural mountain		
Size of Lot			
Enclosure:	Secure housing		
Type	Wood shed		
Floor	Concrete		
Insulation	No		
Heating	No		
Drainage	No		
Flood Alarm	No		
Flood Hazard	Yes, located in pit.		
Relation to System			
Receives Water From	Lower Burnt Mill Collection Tank		
Delivers Water To	Mid Burnt Mill Collection Tank		
Portable Pump Connections Available	No		
Station has Capacity to Reduce Pressure From High Side to Low Side of Booster	No		
Standby Power Available on Site	No		
Portable Standby Generator Connection Available	No		
Instrumentation and Control	Pressure transducer		
Pumping Units	A	B	
Make	Grundfos	Grundfos	
Model	CR4	CR4	
Capacity	38 gpm	38 gpm	
Lubrication	Water	Water	
Power	Electric / 3 hp	Electric / 3 hp	
Date Installed			
Sewer or Other Hazardous Connections(s)	None		
Defects and Remarks:	10/12/11 – At next refurbishment, booster pumps should be brought above grade. Capacities from 2007 pump tests. Need recent pump tests.		

BOOSTER STATION DATA

System Name: Cedarpines Park Mutual Water Company **System No:** 3610011

Source of Information: Sanitary Survey

Updated by: Andrés Aguirre **Date:** October 12, 2011

Number or Name	Mid Burnt Mill Boosters		
Date Constructed			
Purpose (system pressure, standby, etc.)	Water transfer		
Total Pumping Capacity (gpm)	58 gpm (boosters alternate)		
Location			
Specific Location (Cross Streets, etc)	Nearest cross street Reservoir Rd. and Bone Dr.		
Neighborhood	Rural mountain		
Size of Lot			
Enclosure:	Secure housing		
Type	Concrete block with wood roof		
Floor	Concrete		
Insulation	No		
Heating	No		
Drainage	Yes		
Flood Alarm	No		
Flood Hazard			
Relation to System			
Receives Water From	Mid Burnt Mill Collection Tank		
Delivers Water To	Upper Burnt Mill Collection Tank		
Portable Pump Connections Available	No		
Station has Capacity to Reduce Pressure From High Side to Low Side of Booster	No		
Standby Power Available on Site	No		
Portable Standby Generator Connection Available	No		
Instrumentation and Control	Pressure transducer		
Pumping Units	A	B	
Make	Grundfos	Grundfos	
Model	CR8	CR8	
Capacity	59 gpm	58 gpm	
Lubrication	Water	Water	
Power	Electric/7.5 hp	Electric/7.5 hp	
Date Installed			
Sewer or Other Hazardous Connections(s)	None		
Defects and Remarks:	Capacities from 2007 pump tests. Need recent pump tests.		

BOOSTER STATION DATA

System Name: Cedarpines Park Mutual Water Company **System No:** 3610011

Source of Information: Sanitary Survey

Updated by: Andrés Aguirre

Date: October 12, 2011

Number or Name	Sawpit Booster Station		
Date Constructed	Upgrades 1998		
Purpose (system pressure, standby, etc.)	Water transfer		
Total Pumping Capacity (gpm)	80 gpm (pumps alternate)		
Location			
Specific Location (Cross Streets, etc)	Nearest Sawpit Canyon Rd. and Burnt Mill Canyon Rd.		
Neighborhood	Mountain residential		
Size of Lot			
Enclosure:	Secure housing		
Type	Concrete block		
Floor	Concrete		
Insulation	No		
Heating	No		
Drainage	Yes		
Flood Alarm	No		
Flood Hazard			
Relation to System			
Receives Water From	Sawpit Tank 1		
Delivers Water To	Ferncrest Zone		
Portable Pump Connections Available	No		
Station has Capacity to Reduce Pressure From High Side to Low Side of Booster	Yes		
Standby Power Available on Site	No		
Portable Standby Generator Connection Available	Yes		
Instrumentation and Control	Pressure transducer		
Pumping Units	A/1	B/2	
Make	Grundfos	Grundfos	
Model	CR16	CR16	
Capacity	81 gpm	80 gpm	
Lubrication	Water	Water	
Power	Electric/10 hp	Electric/10 hp	
Date Installed	1998	1998	
Sewer or Other Hazardous Connections(s)	None		
Defects and Remarks:	Capacities are from 2007 pump tests. Need recent pump tests.		

BOOSTER STATION DATA

System Name: Cedarpines Park Mutual Water Company **System No:** 3610011

Source of Information: Sanitary Survey

Updated by: Andrés Aguirre **Date:** October 12, 2011

Number or Name	Upper Burnt Mill Booster Station		
Date Constructed	Upgrades 1998		
Purpose (system pressure, standby, etc.)	Water transfer		
Total Pumping Capacity (gpm)	59 gpm (boosters alternate)		
Location			
Specific Location (Cross Streets, etc)	Nearest cross street Reservoir Rd. and Burnt Mill Canyon Rd.		
Neighborhood			
Size of Lot			
Enclosure:	Secure housing		
Type	Concrete block with wood roof		
Floor	Concrete		
Insulation	No		
Heating	No		
Drainage	Yes		
Flood Alarm	No		
Flood Hazard			
Relation to System			
Receives Water From	Upper Burnt Mill Collection Tank		
Delivers Water To	Sawpit Collection Tank (buried)		
Portable Pump Connections Available	No		
Station has Capacity to Reduce Pressure From High Side to Low Side of Booster	No		
Standby Power Available on Site	No		
Portable Standby Generator Connection Available	Yes		
Instrumentation and Control	Pressure transducer		
Pumping Units	A	B	
Make	Grundfos	Grundfos	
Model	CR8	CR8	
Capacity	59 gpm	60 gpm	
Lubrication	Water	Water	
Power	Electric/ 3 hp	Electric/ 3 hp	
Date Installed	1998	1998	
Sewer or Other Hazardous Connections(s)	None		
Defects and Remarks:	Capacities from 2007 pump tests. Need recent pump tests.		

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. $RAA \leq MRDL$ 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. $RAA \leq MRDL$ 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		
	July		
	August		
	September		
	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

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. $RAA \leq MRDL$ of 4.0 mg/L as Cl_2)		<input type="checkbox"/> Yes <input type="checkbox"/> No

Comments:

Signature: _____

Date: _____

MONTHLY SUMMARY OF MONITORING FOR SURFACE WATER TREATMENT REGULATIONS

System Name: _____ System No.: _____

Treatment Plant Name: _____ Month: _____ Year: _____

DISINFECTION PROCESS DATA

Disinfectant Residual Type (check one): Free Chlorine Combined Chlorine Other _____

Disinfectant Residual in the Distribution System

No. of Distribution System Residual Samples Collected:	
No. of Distribution System Samples for Only HPC:	
Total No. Residual and/or HPC Samples Collected (A):	
No. of Samples with No Detectable Residual and HPC is Not Measured:	
No. of Samples with No Detectable Residual and HPC is Greater Than 500 CFU/mL:	
No. of Samples for Only HPC and HPC is Greater Than 500 CFU/mL:	
Total No. Samples With No Residual and/or HPC is Greater Than 500 CFU/mL (B):	

Percent of Distribution System Samples with a Detectable Residual = $V = [1 - (B / A)] \times 100$	
Meets Standard (i.e., V is greater than or equal to 95%) (Y/N?):	

SUMMARY OF WATER QUALITY COMPLAINTS AND REPORTS OF GASTROINTESTINAL ILLNESS

Water Quality Complaints:

Type of Complaint	Number	Corrective Actions Taken
Taste/Odor		
Color		
Turbidity		
Suspended Solids		
Other (Describe)		

Gastrointestinal Illness (Attach additional sheets if necessary):

Person Reporting	Date	Corrective Actions Taken

Describe or attach an explanation of the cause of any violation of the performance standards or operating criteria and corrective action taken or planned.

Signature: _____ Date _____