

Villa Del Monte Mutual Water Company

P.O. Box 862
Los Gatos, CA 95031-0862

Water treatment and water storage issues

Update March 25, 2018

Water Treatment issues

1. Our system

- a. VDM's primary source water is from Laurel Creek using our own water treatment plant which uses chlorine disinfection treatment methods. Additionally, supplemental water is provided by SJWC distributed through the Montevina pipeline. This has worked well for more than 20 years.

2. What changed?

- a. Last year SJWC notified us they would be changing from **chlorine**-based disinfection to **chloramine**-based disinfection later in the year. (Chloramine is a blend of chlorine and ammonia, specifically mono-chloramine)

3. Why the change?

- a. When Chlorine is used for disinfection, by products form that can be harmful to humans at certain levels. They are Trihalomethanes and Haloacetic acids (THMs and HAAs)
- b. By carefully administering the chlorine dosage, these byproducts are kept below the health risk levels.
- c. Chloramine disinfection is just as effective as chlorine disinfection and produce substantially lower concentrations of disinfection byproducts in the distribution system. So many believe this is a healthier approach.

4. The issue

- a. The new chloramine-based disinfection treatment method is not compatible with our chlorine-based treatment method. When the two waters blend together, the disinfection properties are reduced.
- b. Additionally, the effectiveness of the chloraminated water does not last as long in are large storage tank.
- c. As our water system cannot produce 100% of our water, we had to shut down our treatment plant switching solely to SJW purchased water.

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Water Storage Issue

1. The center support post of our 300,000-gallon water storage tank has failed.
2. We contracted Preferred Tank and Inspection company to come out and perform a complete tank inspection. In their report, they concluded the tank is beyond repair.



Temporary Storage

1. We have completed a temporary storage tank farm utilizing (6) 5,000-gallon poly storage tanks placed up by the reservoir. The plan was reviewed and approved by the county and is now in operation.
2. This allows us to utilize the SJWC water without concerns about disinfection deterioration.
3. The temporary tanks will also allow us to replace the existing tank without interruption of service.
4. The cost was covered by the VDM reserve funds in our bank account.

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Water treatment and storage solutions

1. Our Board has concluded that we need to resolve both the water treatment issue and the water storage issue at the same time.
2. We hired Pacific Crest Engineering to perform a geotechnical report.
 - a. The report shows we can utilize the existing site for a replacement storage tank in the same location as the existing tank.
 - b. This was funded from our existing reserves.
3. We have hired MNS Engineers to design a treatment system upgrade and compatible new water storage tank.
 - a. They have prepared their initial design for review.
 - b. They have prepared a preliminary budget associated with their design.
 - i. See the attached budget summary spread sheet
 - c. They have presented different tank construction options for our review.
 - d. This was funded from our existing reserves.

Table 1: Tank Material Alternative Comparison Color Alternative Review Table

Legend	Good			Poor	
Tank Type	Tank Features				
	Tank Construction Cost	Anticipated Useful Tank Life	Required Maintenance	Maintenance Cost	Other Issues
Corrugated Steel	\$90,000	10-20	Complete Replacement	\$90,000 every 10-20 years	Not designed in accordance with AWWA requirements
Bolted Steel w/ Epoxy Coating	\$125,000	30-40	Minor Repair as Needed	N/A	Potential for leaks at seals
Bolted Steel w/ Glass Coating	\$250,000	50+	Minor Repair as Needed	N/A	Potential for leaks at seals
Welded Steel	\$365,000	100	Interior and Exterior Recoating on 30-year cycle	\$150,000 every 30 years	High cost of long-term maintenance, and changing regulations for recoating materials and application

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4. Our next steps
 - a. Review the engineering recommendations and agree on approach.
 - b. Authorize the next engineering phase to create permit drawings
 - c. Get financing in place in order to fund construction

Regardless of option selected, we are faced with the daunting question of how to pay for it. Options are member assessments, private loans, or possibly a State Revolving Fund (SRF) loan.

Additionally, if you would like to be included in the planning process, please let me know. Feel free to email me at atsunset2@verizon.net

The following members have asked to participate:

Lawrence Gordon
Don Navarini
Peter Van Cleef
Alejandro Arnaiz

Sincerely,

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