

SLPPOA Water Long Term Goals and Funding Discussion

**Feb 24, 2024
10am – 12pm
LCVFD Station 2**

WELCOME to the Sierra Los Pinos Property Owners Association (SLPPOA) discussion of the water system needs, goals, and funding. We are all part of this as we provide the funding to supply water to our homes and we all have a stake in ensuring reliable delivery of clean potable water.

To that end, there are several of decisions that need to be made for the water system and its financing. The SLPPOA Board of Directors needs input from the membership to guide decisions and future infrastructure maintenance and improvement.

This package contains information on the SLPPOA Water Infrastructure, financial status, and a set of questions for the SLPPOA Membership.

No official SLPPOA votes will be taken at the meeting.

HOW DO YOU WANT THE SYSTEM MANAGED AND FUNDED?

Meeting Format

1. Brief overview of the water system
How it works and cost structure.
2. Brief overview of short-term and long-term funding options
 - Annual assessments
 - Special assessments
 - Financial Reserves
 - Water billing
3. Current and long-term technical needs in the system
4. A series of questions/decisions for the member to weigh in on.

OVERVIEW OF THE SLPPOA WATER SYSTEM

Robert Bootzin developed the Sierra Los Pinos subdivision beginning in the early 1970s through the 1980s. There are 10 Units in the Sierra Los Pinos subdivision and 185 lots. Thirty lots, many still owned by the developer, are not included in the Association, do not pay dues and are not connected to the SLPPOA water system.

The water infrastructure was developed in stages and has been maintained and capital improvements implemented over the years.

Water Rights – 60.12 Acre Feet; 19,593,108 gallons.

SLP water rights belong to the Association and are not allocated or owned by individual lots.

According to OSE 60.12 or 62.3 (adding up inventory sheet)
(1 acre foot = 325,900 gallons)

Wells - three producing wells with a total production capacity of 58 gpm

Well	Production	Drilled/ReWorked
Aspen Grove	24.55 gpm	May 1990
Forest Rd 10	23.6 gpm	July 2002
Hovenweep	9.8 gpm	Original System Well - Rehab 2010

Storage Tanks – 5 tanks with a total storage capacity of 52,000 gallons, approximately a 1+ day supply.

Distribution Line – 26,007.89 ft (just under 5 miles) to service 155 lots.

The SLPPOA system has 2 main sub-systems:

System 1 – developed first, services Units 1, 2, 3 and part of 10 and was completed in the late 1970s/early 1980s.

System 2 – services Units 4-8 and was developed starting in 1988.

Unit 9 is owned and managed by the developer and is not connected to the SLPPOA water infrastructure.

The two systems have a cross-connect which is used to address emergency supply situations on either system.

Imbedded in the systems are well meters, well pumps, a booster pump, chlorinators, tank level controllers, and approximately 40 isolation and blowdown valves.

Over the years several sections of the original distribution system have been replaced, especially the oldest sections in Units 1 & 2.

2023 Water production

Aspen Well	3,443,680 gal
Hovenweep Well	2,227,373 gal
FR 10 Well	<u>2,075,580 gal</u>
	7,746,633 gal

FYI in 2001 SLPPOA pumped 16,137,750 gallons.
(From 2002 Long-term plan draft)

Leak Rate

Historically, System 1 has had a leak rate as high as 45% - 50%. At times the Hovenweep well production of 10 gpm was just enough to cover the leaks (10 gpm = 432,000 gallons per month).

Isolation testing in July 2022 estimated a System 1 leak rate at 4.1 gpm. This translates to 177,120 gallons per month or roughly the usage of 60 SLPPOA households (3,000 gallons per month). Since that testing the Meadow Line was replaced late Fall 2023.

Total System 1 production 2023	5,671,053
4.1 gpm Leak (est 2022)	2,154.960 (38% leak rate)

System 2 leak rate in 2018 was ~ 61% (193,000 gal./month or 4.4 gpm). Some major leaks were found and repaired, and the current line leak estimates are insignificant.

Water Use

Average of Aug 2023 anonymous usage values is observed at ~3,000 gal when light and heavy users are excluded. The average rises to ~5,000 gal/month if all moderate to heavy users are averaged and light users are excluded from the average.

In August 2023, the following use was observed:

Gallons of Water	Number of Households
0 - 100	23
101 - 3000	61
3000 - 6000	26
6000 - 10,000	20
10,000 - 20,000	12
20,000 - 30,000	4
224,265	1
Number of meters read	147

Note: 17 meters had leak flags (more than 1 gallon per hour for each of hour in a 24 hour period)

Association Website You can find stats on your water usage at www.slppoa.org

If you don't know your "endpoint" meter number you can contact our water chair, Daniel Wirth at water1@slppoa.org.

Sierra Los Pinos Water Systems

There are two independent water systems in Sierra Los Pinos

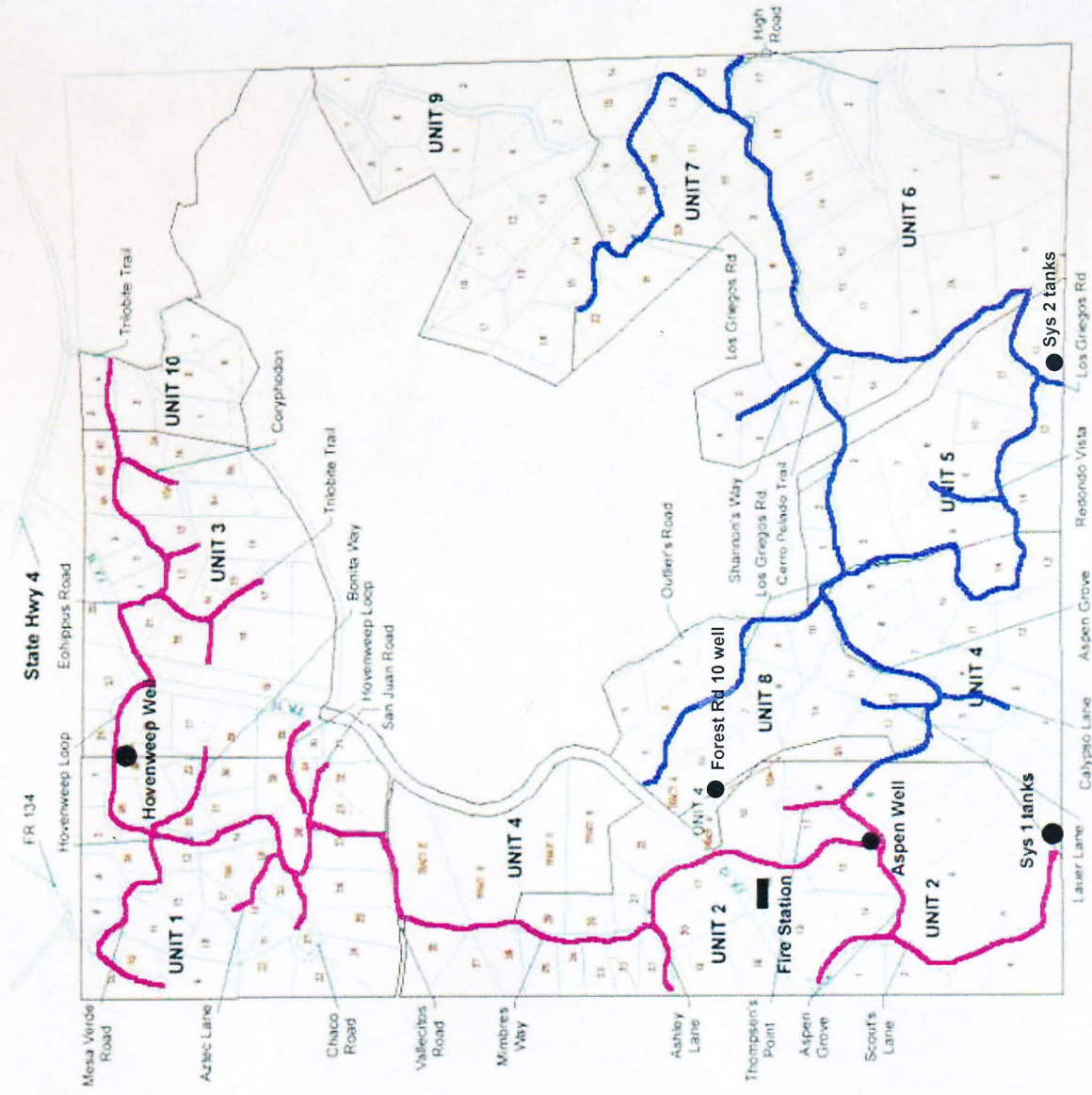
- Five miles of 4" water lines
- Three wells and
- Five potable water storage tanks

System 1 (**red line**) was built in late 1970s/early 1980s.

- Units 1, 2, 3 and 10
- Approximately 3 miles of main lines
- Three 10,000 gallon tanks
- Two wells service system 1 (Aspen & Hovenweep)
- 90 residential meter connections

System 2 (**blue line**) was built starting in 1988.

- Units 4-8
- Approximately 2 miles of main lines.
- Requires a booster station to move the water to the upper lots in the association.
- One 10,000 gallon tank, one 11,000 gallon steel tank
- Forest Rd 10 well services system 2
- 62 residential meter connections



Budget Summary from 2024 Approved Budget

Approved Water Budget			Portion of Member's Annual Assessment
Service Fees (line locate, fines, subscriptions, and training)	\$3,000		
Conservation Fee	\$500		
Electric Utility	\$8,500		
System Reports (meter testing/calibration, water audit, Engineering)	\$7,000		
Sampling and Analysis	\$4,500		
System Repairs and Maintenance (leaks, hardware, controllers, pumps)	\$62,485		
Water Operator	\$20,000		
Water Total		\$105,985	\$682
Roads and Plowing		\$47,000	\$302
Parks		\$200	\$1
Financial Reserve		\$8,224	\$53
Administration		\$26,355	\$171
Total		\$187,764	\$1,208

Members pay \$682 per year for the water system or \$57 per month.

NM 2023 Water and Sewer Rate Survey (December 2022 Rates)

https://www.env.nm.gov/drinking_water/rates/

6000 gallons per month	SLPPOA Water & Admin	Private System 50 – 200 Connections	Public System 50 – 200 Connections
# Systems		13	51
Average Monthly Rate	\$57	\$60.46	\$46.52
Minimum Rate		\$31	\$15.14
Maximum		\$109	\$119.38

Most of the costs in the SLPPOA water system are fixed. Essentially only the electricity and chlorination expenses vary by the amount water pumped and distributed. When these fixed costs are distributed across a small number of users (155) the expenses are large relative to a system that has more users. For example:

SLPPOA has a housing density of approximately 32 houses per mile
 Todd Loop in White Rock - Housing density of 108 per mile (51 houses on .47 miles of street).

SHORT AND LONG-TERM WATER SYSTEM FUNDING

Under the current SLPPOA By-Laws, there are three mechanisms for funding the operation, maintenance, and improvement of the water system:

Annual Assessments

The Bylaws provide for Annual Assessments, typically set once per year. The Assessment can be used for any Association purpose. The SLPPOA Board of Directors is authorized to develop budgets and increase the Assessment up to 10% per year. Membership can vote to increase the Assessments by more than 10%.

The Bylaws also allow for Interim Assessments, which are implemented in addition to the regular Annual Assessment. A total increase of Interim Assessment and Annual Assessment cannot be more than 10%, unless voted and authorized by the Membership.

Special Assessments

The Membership can vote to implement a Special Assessment “for the purpose of defraying, in whole or in part, the cost of any construction, reconstruction, repair, or replacement of a capital improvement or for the purpose of retiring a debt incurred by the Association in furtherance of the aforesaid purposes”. Special Assessments cannot be used to fund regular operations or the Financial Reserves.

This process has been used in the past for large projects, such as installing the water storage tanks and water metering systems and can be spread over more than one year.

Financial Reserves

Financial Reserves are funds owned by the Association that are not used for ordinary operations. They represent a “Savings Account” that is expected to be used for

1. unexpected large expenses, such as a well failure that requires drilling a new well,
2. long-term periodic capital expenditures (tank rehab or replacement, meter replacements, etc.), or
3. unexpected catastrophic losses such fire damage from a forest fire, flooding, or earthquake that damages infrastructure or roadways.

The last Reserve Study by Criterium Building Inspection Engineers from 2017 recommended a 2024 balance of \$156,958 with a 2030 balance of 200,000. At the end of 2023 Reserves were \$67,681 with \$8,224 budgeted to be added in 2024 for an anticipated year-end balance of \$75,905 or be less than half of the recommended amount. The Board elected to add funds to the Reserve and have a new Reserve study performed when the Reserves were in an improved range.

In addition, the Reserve Study recommended added \$18,720 per year to the reserves to maintain sufficient funds. In 2024 SLPPOA budgeted \$8,224 (\$53 per lot). Setting aside sufficient funds every year would allow for leveling out of expenses and SLPPOA to address large capital expenditures without a Special Assessment for every project. Budgeting \$100 per lot would add \$15,500 to the expected Reserves and \$130 per lot would add \$20,000.

Water Billing

Currently, SLPPOA does not bill for water based on usage and is not structured to do so. Implementation of water billing requires a vote by the Membership to change the Bylaws. One such proposal was voted on in October 2023, and was not adopted due to a lack of a quorum for the vote.

A future proposal for water billing is possible but would have to be developed, reintroduced, and approved by Members.

Near-Term Water System Needs

Year	Project	Status
2023	Calypso Lane Rebury – Freeze Problem	Complete
	Aztec Lane Rebury – Freeze Problem	Partial Complete
	Meadow Line Replacement - Leaks	Complete
	Exposed System 2 Line to Booster	Complete
	Aspen Well Leak	Complete

Year	Project	Est Cost
2024	FR 10 Well – Replace PVC Return Line	\$3,000
	Ashley Lane Main Line Replacement (partial)	\$25,000
	Aztec Main line Replacement	\$13,000
2026	Hovenweep to Vallecitos Main Line Replace	\$16,000 - \$20,000
2025 -2028	Recoat/rehab/replace Sys 2 steel tank	\$25,000 - \$50,000
2026 – 2027	Meters, Reader hardware/software replacement	\$72,000
	Est Total	\$154,000 - \$224,000

Note: New Mexico Legislative Finance Committee report to the NM Legislature noted that non-housing construction costs in NM increased 50% between 2019 and 2023.

FR10 Well (Meadow Well)

\$3,000

Time Frame – Immediate (summer of 2024).

Risk – the well PVC may fracture due to torque from the pump and drop the pump and/or collapse into the well. The well may be damaged, and/or the pump damaged or lost incurring significant expense.

The water pump return line (which brings water up from the pump into the system) is 1 1/4” PVC. The pump is attached to this pipe. Inspection in 2023 identified that the PVC is cracking and needs to be replaced.

Ashley Lane Main Line replacement

\$25,000

640 feet @ \$40 per ft leak detected from isolation test.

1 gpm = ~43,000 gallons per month which equals about 7 – 8 average SLPPOA households

Data collected and analyzed during system isolation tests conducted in 2019 and 2022.

Sections with higher leak rates have been addressed and Ashley Lane is the next leakiest section identified.

Aztec – Hovenweep Line

\$13,000

315 feet @\$40 per foot.

Time Frame - Immediate 1year

Risk – Continued line freezes to households on Aztec

This line is less than 2 feet deep and has frozen in the past, cutting off water to one of the residences. Partial remediation was completed in 2023, but the remainder of the line and services to other households on this section remain at risk. This project completes installing a new branch distribution line deeper, so that it does not freeze. Cost estimates are for approximately \$20 per foot for the correct 2” or 3” PVC pipe and \$20 per foot for installation, which requires equipment sufficient to dig the needed trench.

Hovenweep to Vallecitos Rd –

\$16,000 - \$20,000

400 feet at \$40 - \$50 per foot.

This part of the system traverses a ravine with rocks and a major telephone cable to maneuver around so costs may be on the higher end, as opposed to line that is located in or beside a road.

This replacement completes the Hovenweep main water line through Unit 1. The line is approximately 50 years old and the expected life of the PVC originally used was approximately 30 – 50 years.

Steel Tank (12,000 gallons) –

Recoat/Rehab \$25,000

Replace - \$50,000- attempting to get a better estimate.

Time Frame - Immediate/Short Term 1-4 years

Risk – Tank deterioration causes corrosion products in the water supply degrading the water quality. Corrosion can also cause the steel tank to eventually leak.

The 12,000 gallon buried steel tank was installed in 1979 and at 45 years old needs to be recoated inside or replaced. The tank was inspected in Spring 2023 by CW Divers and the recoating was noted as necessary, as corrosion is developing. CW Divers estimated the recoating at \$25,000. A “really good” recoating might be expected to last 15 – 20 years (Bill Donahue CWDivers). The tank was last recoated circa 2005, for a life of the coating of about 20 years. A second option is to replace the tank. This would cost more but leave the storage in an upgraded condition with a new non-steel tank with a likely life of 40 – 50 years. It may also allow for reconfiguration of the tank placement which could facilitate additional storage later.

Household meter and Reader Hardware and Software Replacement – \$71,200

Time Frame – Short Term 2 - 3 years

Risk –Lack of information on leaks on property and main line leaks and accurate water usage.

The meters were installed in 2012 -2014 and are nearing the end of life, a few meters have failed and batteries are potted into the endpoint of the meters and so are not replaceable and not expected to last much longer. The Badger CE meters, Trimble radio reader and ReadCenter software are no longer supported by the vendor.

Why did we do meters in the first place?

1. Without household meters we had no idea where the water was going. We knew what was pumped but did not have any information on how much was being used by households and how much was main line leaking. Household meters allow us to answer the question and determine where to look for leaks.
2. Meters are used to identify leaks on the house side of the meter, which are very difficult to detect without meters.
 - a. With meters, checking for leaks on the household side of the meter takes only a couple of hours. Outages of 2-3 days were experienced without meters as checking each residence by hand was consuming and difficult. Water operators had to go each residence and listen for running water, often at night with a stethoscope.
 - b. Meters provide a flag for leaks on the household side, such as leaking toilets or frost-free stands. Notifications are sent to households for owners to facilitate repair.
3. Meters are used to balance the systems monthly – water pumped vs water delivered through meters. Significant deviations from normal are used to begin leak detection, instead of waiting until tanks are empty and there is no water.

There are several options for replacing/rehabilitating the meters which need to be investigated prior to a specific decision or recommendation.

LONG-TERM WATER SYSTEM NEEDS

SLPPOA has worked with various water system engineers to assess the infrastructure and provide input on system needs and improvements. With a system age between 35 and 50 years there are several improvements that have been identified, many of which are very expensive. The latest by Sierra Engineering Solutions in 2020 identified the following with an estimate from short-term improvements of \$250,000 to long-term upgrades estimated at \$3 - \$5 million.

Improvements to System 2 supply, pumping and storage

Additional storage for System 1

Replacement of older water distribution pipelines

Installation of in-line metering facilities

Improved cross-connection between System 1 and System 2.

Several improvements identified by Sierra Engineering Solutions have been implemented, including leak repairs and installation of additional isolation valves.

ROADS

As part of maintaining and upgrading the SLPPOA infrastructure, we can allocate funding for road repairs and upgrades when large water projects are done (not regular leak repairs). These activities could include fill, gravel, culverts, drainage repairs, etc, as needed for that section of road.

ARCHITECTURE

Currently the Restrictive Covenants limit dwellings to one per lot.

HB 435 “Additional Housing Dwelling Units”, was introduced but did not pass, in the 2023 Legislative Session, and would have invalidated the SLP Covenant Restrictions. If a NM law invalidates the SLP Covenant Restrictions, SLPPOA would face several questions, such as size, location, and exterior materials of an Accessory Dwelling Unit, as well as increased demand on the water and roads infrastructure. SLPPOA could develop an Architectural policy to address many of the issues.

Questions for Membership:

1. Do you want a 3-year plan with funding specified to address the listed water projects outlined on page 8 or specific projects one year at a time?
2. Do you want to budget for road repairs and upgrades as part of large water infrastructure projects (not regular leak repairs)?
3. Do you want SLPPOA to budget regular allocations to the Financial Reserves to address unexpected expenses, catastrophic losses, and long-term capital expenditure? What amount?
4. Are you interested in the Association using loans to fund the more expensive water system projects?
5. Are you interested in a revised proposal for a future Water Billing program?
6. Are you interested in a revised proposal for excessive water use, with fees defined for excess use?
7. Do you want SLPPOA to develop an Architecture Policy to address Accessory Dwelling Units (casitas), if the State of NM invalidates the one dwelling per lot Covenant Restriction?
8. Do you think a lot with an Accessory Dwelling Unit should pay more in Association dues to address its increased use of water and roads?