

TPWUC Special Member Meeting

Should we reorganize as a MDWCA?

February 6, 2025

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Introduction

- Board members and positions
 - Two Board members terms will expire at the May Annual Meeting
 - Please consider nominating qualified members
- Special meeting called because as members, we're all in this together, and we want your feedback to help us make some difficult decisions
- The Board is trying to preserve this system, but there are significant challenges ahead.
- The following presentation is long, but it has the information that you need to help us make decisions, so we're going to ask that questions be held until the end.

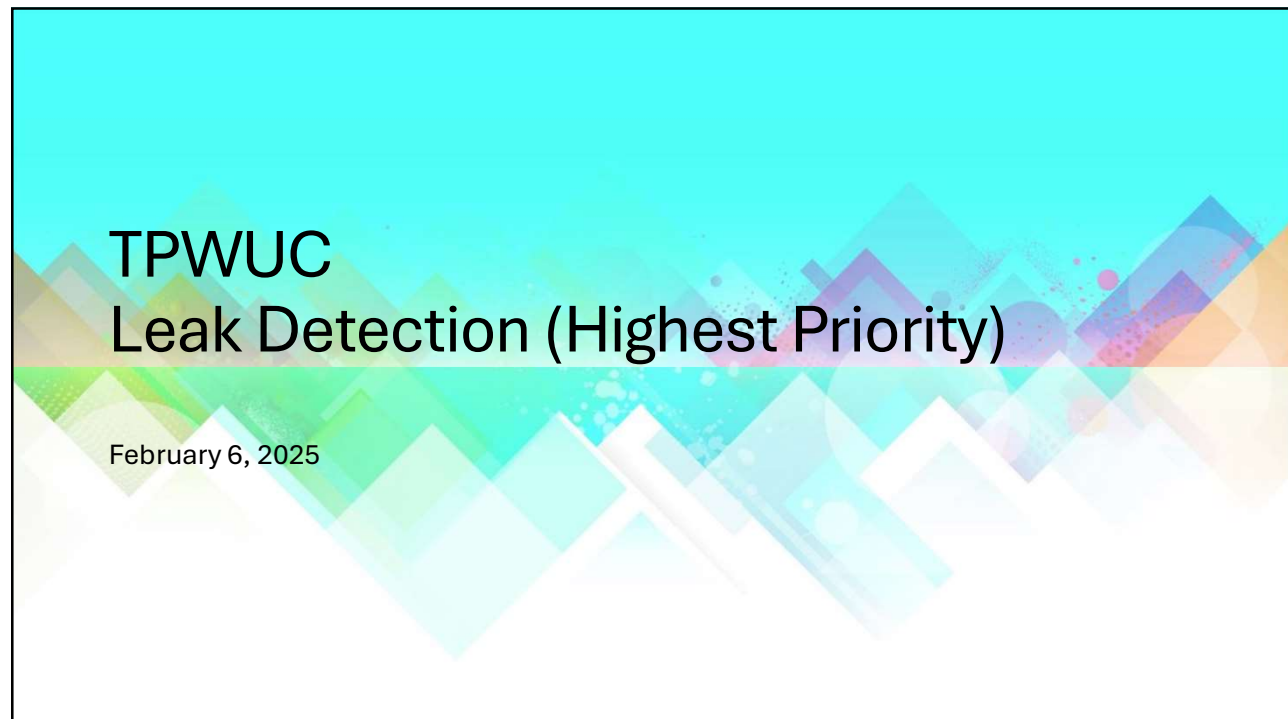
Please hold questions until the end

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Agenda

- Update on leak detection
- Update on water loss rate
- Update on financial status and water hauling costs
 - New business model
- Update on fluoride remediation recommendation from NMED and estimated cost of remediation
- Potential loan and grant sources and their conditions and stipulations
- Pros and cons of becoming a Mutual Domestic Water Consumer Association (MDWCA)
- Member discussion and questions
- Process of becoming an MDWCA
- Poll interest in becoming an MDWCA

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The slide features a vibrant, abstract background with overlapping geometric shapes in shades of cyan, green, and purple. The text is centered and clearly legible against this background.

TPWUC
Leak Detection (Highest Priority)

February 6, 2025

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Leak Detection (review)

- Major leaks began ~Nov. 1, 2023
 - We wouldn't be here tonight otherwise
- Data analysis became crucial, and record keeping became more thorough (Tank levels, pumping rates and times.)
- Acoustically tested every valve, meter, and hydrant Nov-Dec w/NMRW
 - 11 minor leaks found, all repaired or eliminated
 - Minor = no detectable change in water loss (Less than 1gal/min)
- Installed electronic tank level gauge Feb 28, 2024
 - Enabled hourly and detailed data 24/7
 - Thefts discovered, but not significant cause of losses
 - Two hydrant locks seem to have stopped thefts (25 hydrants)
- 23 daytime tests did not prove useful due to uncertainty in water use
- 20 nighttime tests did provide results (next presentation)

Leaks are the root of the problem

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Leak Detection (new)

- Sept. 10 – flew drone w/Hi-res camera over main pipelines
 - Nothing Detected
- Oct. 31 – asked NMED to use their beta Hydro Delta satellite image analysis software on our system
- Nov. 22 – reviewed suspect sites with NMED Hydro Delta team
 - Did follow-up pressure tests. Nothing found.
- January – cold snap causes multiple customer leaks
 - Data analysis alerts to new leaks and all meters read on multiple days
 - Multiple, large customer leaks found and shutdown until repaired
- Jan. 6 – contacted member Dr. Jack Sanders-Reed to help with analysis
 - See next presentation

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Leak Detection (new)

- Jan. 17 - contacted District 5 County Commissioner Eric Olivas
 - Commissioner Olivas engaged ABCWUC to help
 - ABCWUC has covered ~5% of 19-miles of pipeline thus far (1 day/wk, 3 wks)
 - Will take ~60 weeks at this rate
 - Using correlators to locate and acoustics to pinpoint
 - Dug up one potential leak and nothing was found

No significant leaks found yet

- All professionals we've worked with have agreed that we have taken the right approaches to finding leaks

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Leak Detection (new)

- Question for later: Should the TPWUC purchase our own equipment at a cost of \$40,000 to speed up the process?
- Equals \$154/member

Correlators Series

Correlators are essential for efficient pipe measurements

- On-line and off-line operation
- Long processing time may reduce sensor charging
- Ideal for use using traditional or optical pipefitting
- Perfect for automatic and manual use
- Full on-site support without the need to enter pipe parameters

Technical Data	
Dimensions	56 x 185 x 25 mm
Weight	180g
Power supply	3.3 V lithium battery
Operating time	2-12 hrs
Operating temperature	-40°C ... +50°C
Storage temperature	-25°C ... +75°C
IP	IP20, IP66 & IP69
IP	IP68 & IP69

Very easy to use

Over 10 years of experience from Seba's Correlator Technology makes it the most reliable.

Acoustic Series

Hear and see leaks with the HL 7000

- Intuitive operation with clear colour touch screen
- Constantly ready for use thanks to its powerful lithium ion batteries
- Integrated GPS receiver
- Environmental noise reduction
- Frequency analysis
- Option: tracer gas sensor connection

Technical Data		HL 7000
Dimensions	200 x 80 x 250 mm	
Weight (without sensor)		700 g
Power supply		3.6 V lithium battery
Operating time		> 10 hrs
Operating temperature		-20°C ... +50°C
Storage temperature		-25°C ... +75°C

Bluetooth

SmartEAR

Ear to ear for pinpointing leaks

- Full on-site support without the need to enter pipe parameters
- Full on-site support without the need to enter pipe parameters
- Full on-site support without the need to enter pipe parameters
- Full on-site support without the need to enter pipe parameters

Technical Data	
Dimensions	110 x 110 x 110 mm
Weight	110g
Power supply	3.3 V lithium battery
Operating time	2-12 hrs
Operating temperature	-40°C ... +50°C
Storage temperature	-25°C ... +75°C
IP	IP20, IP66 & IP69
IP	IP68 & IP69

Seba pro tip:

For best results, use the Seba pro tip to detect leaks in the pipe.

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TPWUC Water Loss Rate

Dr. Jack Sanders-Reed

February 6, 2025

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Distribution:

Pipeline	Diameters
Yellow	4", 6"
Blue	2"
Red	6"
Green	3"

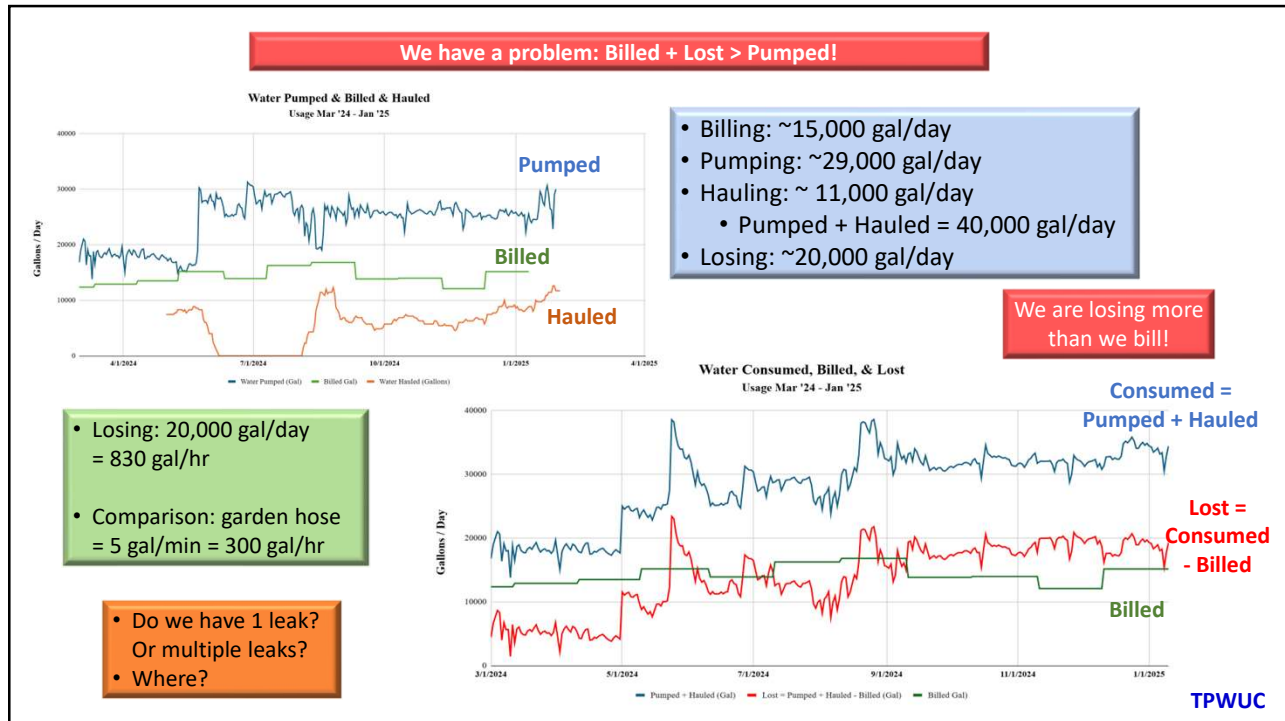
- Billing: ~15,000 gal/day
- Users: 260
 - 58 gal/day/user
 - 625 gal/hr (all users)
- Pumping: ~29,000 gal/day

Water Pumped & Billed
Usage Mar '24 - Jan '25

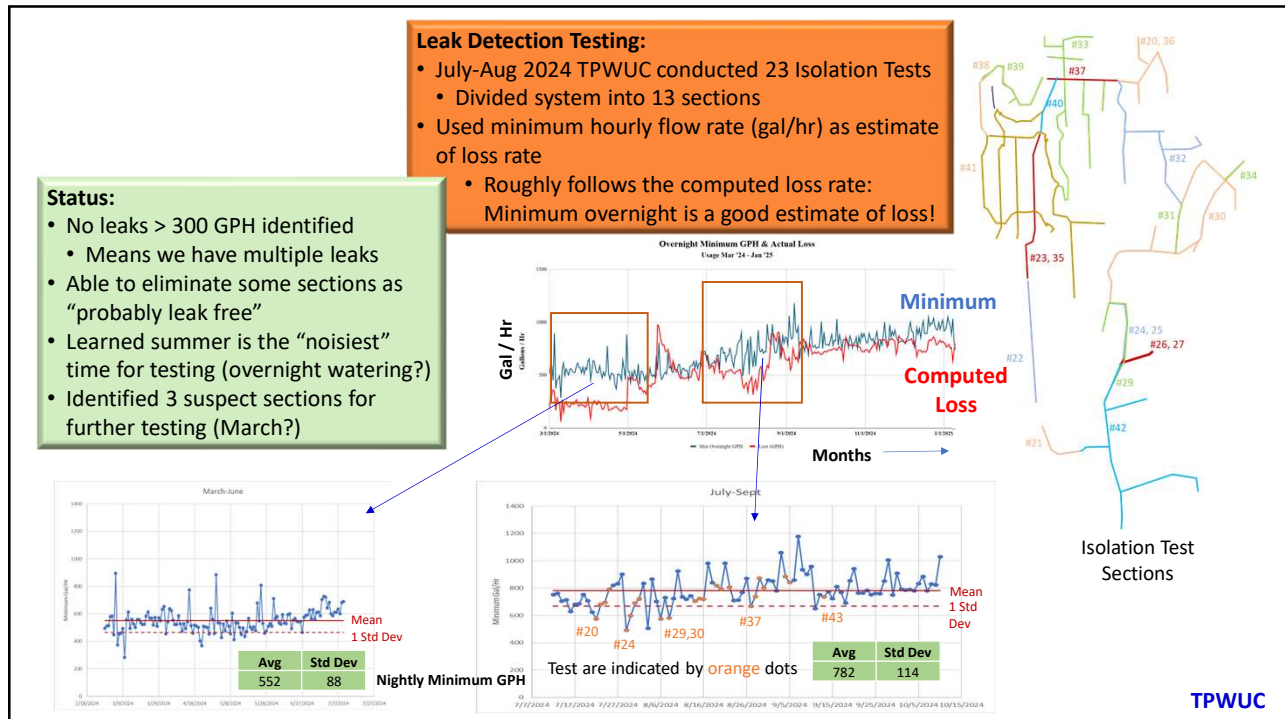
Without losses, Production > Usage, All Good!

TPWUC

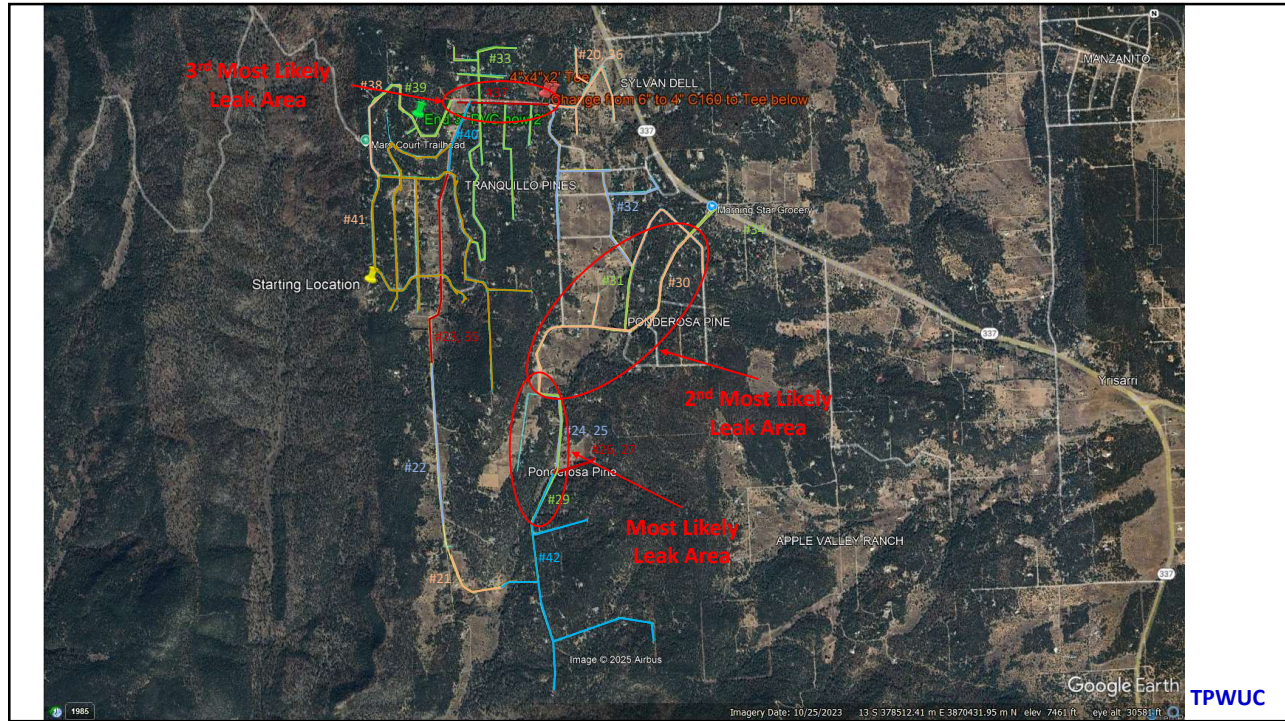
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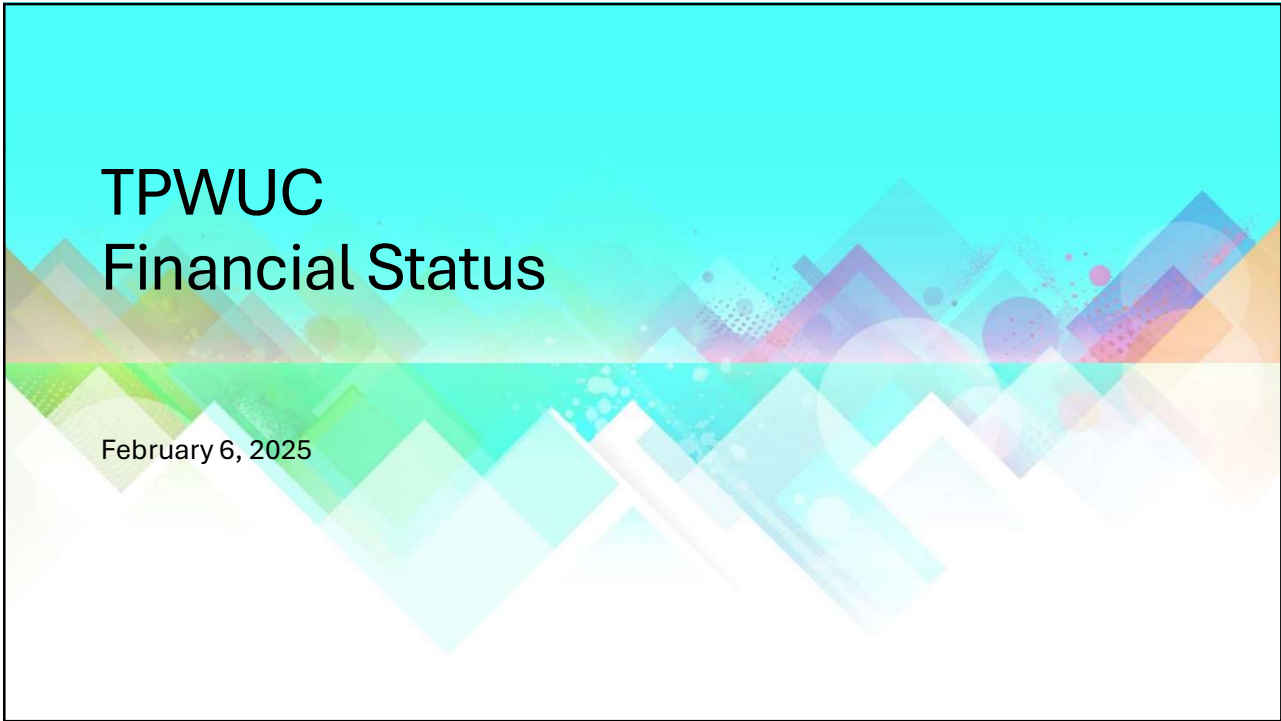


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- **Next Steps**
 - **Repeat Isolation tests on suspect sections**
 - Do it in March, after freezing, before too much watering! (reduce noise)
 - In 2024, "noise" in March was about ± 88 GPH compared to ± 114 GPH in July-Aug
 - Repeat test on suspect sections several times, a few days apart each to improve statistics.
 - Try turning off 2 suspect sections at once to create a larger decrease in minimum flow
 - **Investigate methods to localize a leak within a section**
 - Albuquerque / Bernalillo County Water Authority (ABCWA) has been using Acoustic Correlators & Detection to help localize leak locations.
- Without an ability to pinpoint the leak (within ± 20 ft), all options are expensive
 - **Do nothing: Water hauling costs: \$431/4000 gallons = 0.10775 \$/gal**
 - 1 leak @ 300 gal/hr costs \$32.33/hr, 24 hours/day, 365 days/year = \$283K/year/leak (we have at least 2-3)
 - **Dig up an entire span between valves: Raw cost: \$50 per ft**
 - Better be sure this span does have a leak!
 - Example: Kuhn to Brandy Lane: ~2279 ft would cost \$114K
 - Can reduce cost by installing a valve at the mid-way point
 - Valve installation cost: \$2300
 - Dig length & cost cut in half: \$57K+\$2.3K ~ \$60K

TPWUC

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Financial Status Year End 2024

- Loss rate is increasing which means hauling costs are increasing
- January cold snap increased hauling from 8,000 gpd to 12,000 gpd
 - \$862/day to \$1,293/day
- The current “hauling” assessment is 100% and will probably need to increase to 150% soon
- January leaks have put use in a dire financial position!

The current “hauling” assessment is 100% and will probably need to increase to 150% soon

Tranquillo Pines Water Users Cooperative Financial Summary 2022-2024			
	Dec 31 2022	Dec 31 2023	Dec 31 2024
Bank Related Fees			
Bank Fees	\$ (583.33)	\$ (461.88)	\$ (340.80)
Returned Check Fees	\$ (832.20)	\$ (611.53)	\$ (2,050.59)
Taxes			
Gross Receipts Tax	\$ (9,655.97)	\$ (9,295.35)	\$ (30,480.51)
Tax Preparation	\$ (4,598.92)		\$ (3,348.15)
NM State Taxes (Unemp, Work Comp)			\$ (1,112.13)
Federal Taxes (SS, Medicare)			\$ (7,828.40)
Operative and Maintenance			
Billing Software & Website	\$ (1,449.00)	\$ (4,854.80)	\$ (2,473.00)
Materials and Supplies	\$ (8,956.49)	\$ (2,842.35)	\$ (6,648.46)
Phone and Internet	\$ (2,479.90)	\$ (1,865.09)	\$ (2,568.47)
Insurance	\$ (1,338.00)	\$ (1,838.00)	\$ (4,320.00)
Electric	\$ (16,882.66)	\$ (15,527.03)	\$ (15,769.24)
Service Deposit Refunds	\$ (347.43)	\$ (76.30)	\$ -
Repairs	\$ (42,535.97)	\$ (45,597.89)	\$ (42,344.31)
Tank Maintenance		\$ (9,818.28)	\$ (44,354.72)
System Testing & Repair Labor			\$ (3,300.00)
Management, Rent, Fuel, Materials			
Accountant			\$ (538.13)
Operators License	\$ (6,386.28)	\$ (7,924.62)	\$ (6,974.28)
Monthly Management	\$ (98,688.80)	\$ (105,707.44)	\$ (97,285.93)
Office Rent	\$ (14,400.00)	\$ (14,400.00)	\$ (14,800.00)
Fuel, and Materials	\$ (12,743.83)	\$ (12,069.73)	\$ (14,292.31)
Water Hauling	\$ -	\$ (25,662.24)	\$ (254,556.38)
Water Testing (DODD)		\$ (86.98)	\$ (1,443.33)
Loan Payments			\$ (7,613.50)
Memberships			\$ (319.00)
Loan \$15,000			\$ 15,000.00
Grand Total	\$ (221,978.79)	\$ (269,078.41)	\$ (494,081.66)
Bank Accounts			
Checking Year End	\$ 13,690.33	\$ 838.37	\$ 7,226.80
Savings1 Year End	\$ 32,155.89	\$ 30,229.37	\$ 8,749.45
Savings2 Year End	\$ 80,636.72	\$ 64,276.05	\$ 40.15
Total Year End	\$ 126,482.94	\$ 85,344.19	\$ 16,016.40
Income	\$ 227,185.58	\$ 227,236.44	\$ 438,478.86
Profit/Loss	\$ 5,206.79	\$ (41,781.97)	\$ (75,602.86)
Gallons/year pumped			
	7,653,750	7,665,200	8,209,787
Average gallons/month pumped	637,813	638,850	684,149
Gallons/year hauled		238,072	2,362,287
# of months of hauling		2.5	12.0
Average gallons/month hauled		95,228	196,857
Average Cost Per Gallon Hauled including tax		\$0.11	\$0.11
Number of gallons Pump-Hauled	7,653,750	7,303,972	10,672,073
Average Cost Per Gallon	\$0.03	\$0.04	\$0.09
Gallons/month/household	2.45	2.34	3.42
Gallons/month/hilled	1.73	1.73	1.73

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Financial Status

- Water hauling has depleted our coffers to near zero
 - 2.36M gallons at ~11 cents/gallon = ~\$254k in 2024
- Multiple customers are in arrears to tune of \$21,000
 - Disconnect notices are being sent regularly
 - The Board will remove the meter, cancel the membership for non-payment, and file a lien against the property
- What members can do to help:
 - Pay your bill early instead of the last day
 - Keep watching for theft
 - Keep watching for leaks
 - Insulate your water lines!
 - Call the office if you're leaving your house vacant. We will shutoff your meter.
 - Keep up your conservation efforts

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Financial Status

- Actions the Board has taken to reduce costs
 - The TPWUC became an employer instead of hiring a subcontractor
 - Hired Carl Walker as Manager
 - Carl has agreed to do the job at a much lower rate
 - Hired Guy Hanna as "Water Rider" (Formerly an employee of Lee Sweenhart)
 - Being an employer moves Federal and State employment taxes to the Co-op
 - More transparent and doesn't cost any more
 - Insurance costs are now paid by the Co-op
 - We reduced our office rent from \$1200/month to \$400/month (Thanks Carl!)
 - There were two months of overlap while Carl learned the job, which temporarily increased costs
 - Carl is studying to become a "Water Operator". Once he's certified, he may be able to reduce our costs further.
 - Fuel and materials are paid for directly by the Co-op
 - The Co-op now owns the service truck. Formerly it was owned by the subcontractor
 - This may save a few dollars, but it is nearing end-of-life

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Financial Status

- Can members volunteer, or at least work at a lower rate, to help reduce costs even further?
 - We need a CPA that can do our taxes and audits
 - We occasionally need a lawyer (leases, easements, water law)
 - We need Professional Civil Engineers familiar with water systems
 - We need Professional Electrical Engineers

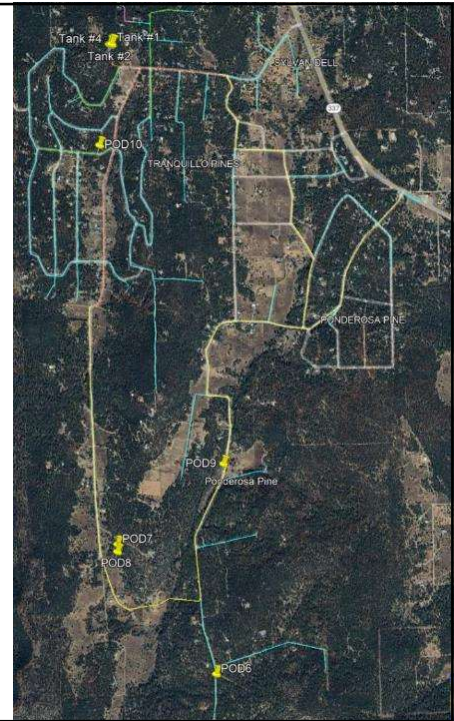
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Fluoride Remediation

- Well #7 is in violation at 4.8 mg/L (4 mg/L maximum)
- NMED recommends drinking and cooking with bottled water, especially children
- The highest concentrations from #7 are southern Skyland
- The Board has been working with NMED on potential solutions
 - All are expensive



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Fluoride Remediation

- The Board has been working with NMED on potential solutions
- All require professional engineering (See PER later)

Not Recommended

- Filter System
- Reverse Osmosis
- Redrilling of #8 to mix

Might Accept

- Hauled water to mix
 - Min 3000gpd = \$323/day forever
 - Results in 3.4 mg/L, acceptable, but high
 - 8,600gpd to get to 2 mg/L = \$927/day
 - Cost of below grade tank, plumbing, pump, electrical

Recommended

- Install separate pump pipeline to tanks
 - ~3 miles of pipeline
 - Mixing occurs in tanks
- Drill in a different area
 - But where?

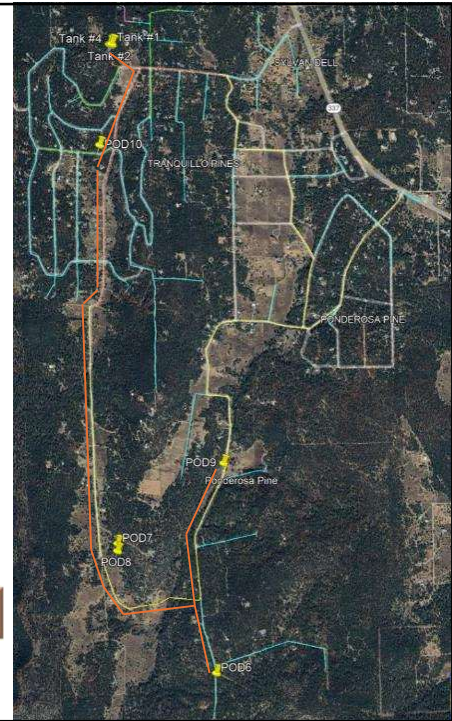
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Fluoride Remediation

- Mixing at tanks recommended by NMED
 - Level reduced to 2.91 mg/L
 - Acceptable but above 2 mg/L
- It appears that deeper wells have more fluoride

	hrs/day pumped	Production gal/min	Production Liters/min	Fluoride Level mg/L	Total mg/min	Total mg/L Need <4	Depth feet
POD6	12	3.75	14.2	2.85	40.5	2.85	450
POD7	24	5.0	18.9	4.70	88.9	4.70	700
POD8				?			620
POD9	24	4.0	15.1	3.96	60.0	3.96	748
POD10	24	5.6	21.2	0.60	12.7	0.60	560
Total		18.4	69.5	12.11	202.07	2.91	

Three of four wells have high fluoride concentrations



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Fluoride Remediation – Mixing at Tanks

- Recommended by NMED as the best solution
- A **very rough** estimate based on excavation pricing from a local contractor
 - \$10/ft is much less than funding for a similar pipeline for a Sandoval County MDWCA that NMED referenced
 - An engineered solution may be much more expensive than this estimate
- If we dug 3 miles of trench, it would make sense to replace the mainlines and all connections while we were at it
 - Those costs have not been estimated yet
 - 4” and 6” mains

	Cost 3-mi
Excavation	\$61,983
3"sch 40 bell	\$17,582
Fittings	\$1,000
Labor pipe	\$5,280
Labor pumps	\$8,000
Tank Retrofit	\$60,000
Total	\$153,845
Cost/ft	\$10

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TPWUC

Potential Loan and Grant Sources

February 6, 2025

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Loan and Grant Sources

- There are many sources of loans and grants
- More sources, more funding, and better rates are available to MDWCA vs Co-op
- Typically consist low interest loans with 20-40 year terms
- Grants awarded as funds are available (no guarantees)
- Preferential rates available to low-income communities
 - We're not eligible
- Representative Stephanie Lord said she could help with funding opportunities if we were an MDWCA
- Preliminary Engineering Report (PER) is required by all funding sources at an estimated cost of \$50-60k
- Asset Management Plan (AMP) is required by all funding sources at an estimated cost of \$50-60k

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Loan and Grant Sources

Drinking Water State Revolving Fund

- Applicants: **Municipal and community water systems**
- Administration: NMED and NMFA
- Applicants: Municipal and community water systems
- Projects: Water System Infrastructure and Equipment
- Amounts: Up to \$150K
- Mutual Domestic Terms: fixed low interest loans (.01%) up to 30 years may be eligible for principal forgiveness
- Private Coop Terms: fixed low interest loans (3%) up to 30 years no principal forgiveness

The Board has applied for this loan to help with leak repair and paying for the PER & AMP

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Loan and Grant Sources

USDA Rural Development Water and Waste Disposal Program

- Applicants: **Private non-profits and state entities**
- Administration: NM office USDA
- Projects: Drinking water storage, treatment, distribution
- Terms: Low interest fixed rate loans, grants
- Notes: year-round applications accepted

The Board may apply for this next

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Loan and Grant Sources

Water Project Fund

- Applicants: Mutual Domestics and other state entities
- Administration: Water Trust Board and NMFA
- Projects: Water Storage and Conveyance
- Terms: Mandatory loan component between 10%-40%
- Notes: Substantial funding opportunity, 12-month lead time for application

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Loan and Grant Sources

Public Project Revolving Fund

- Applicants: Mutual Domestics and other state entities
- Administration: NMFA
- Projects: Infrastructure
- Terms: Low interest fixed rate 30 years
- Notes: Substantial funding opportunity, Monthly application review

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Loan and Grant Sources

Rural Infrastructure Revolving Loan Fund

- Applicants: Mutual Domestics and other state entities
- Administration: NMED Construction Programs Bureau
- Projects: Water system planning, design, construction
- Terms: Low interest fixed rate 30 years
- Notes: Substantial funding opportunity, low interest loans, grants

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TPWUC Pros and Cons of becoming a MDWCA

February 6, 2025

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Opportunities (Pros)

- The key advantage of an MDWCA is that, as a local government, it is eligible for public funding and potentially large grants
- MDWCAs are eligible for a wider range of funding options with access to state and federal dollars, which could help with:
 - Project construction oversight
 - Upgrading aging infrastructure
 - Improving water quality
 - Managing system leaks
 - Streamlining operations, and automation
 - Long term engagement of State and County entities
- Tax rate 5% instead of BernCo rate
- More transparency to the public (not just the membership)

Substantial Funding Opportunities

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Burdens (Cons)

- An MDWCA is a subdivision of the State, or a local government
- Substantial regulatory requirements pertaining to governance and administration
- Stringent Procurement Codes
 - All significant purchases must go through the Request For Proposal process
 - Adds cost and delays
 - Some contractors refuse to work with MDWCAs because of the RFP process, oversight burden, and slow payment
- Board of Directors will need substantially more help
 - Funding Coordinator
 - Accounting services
 - Legal advice
 - Legislature liaison
- Project costs on a per foot basis are orders of magnitude higher than Co-op

Substantial Oversight Increases Costs

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Burdens (Cons)

- Funding vehicles require a Preliminary Engineering Report and Asset Management Plans (\$50-\$100K, and 6 months to generate)
 - Funding tends to be a mix of low interest loans, grants, and a matching component passed on to the membership
 - Ponderosa Pine median household income affects eligibility as disadvantaged system, grant status, and principal forgiveness
- Likely 12-18 months from re-organization to first funding

Reorganizing is a long-term solution, not short-term

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Summary of Options

- Continue as is:
 - Increase rates as needed to pay for hauling and repairs
 - Decrease rates when/if we find and repair the major problems
 - Continue our testing with some changes that Jack has suggested
 - Requires short-term outages
 - Repair leaks as we find them
 - Average leak repair costs \$2k-\$3k
 - System continues to age and will continue to degrade
 - We have applied for a \$150k loan but it can only be used for repairs and the preparation of the PER and AMP
 - Loan terms are unknown at this time. We may not accept them.
 - **Loan cannot be used to pay for hauling water**

Reorganizing is a long-term solution, not short-term

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Summary of Options

- MDWCA
 - Increased operational costs
 - Yet to be determined up front costs (depends on funding made available)
 - PER and AMP are required at ~\$50k each, minimum of 6-months
 - The Board has already gathered most of the information for the PER and AMP
 - Increased grant opportunities and potentially lower interest rate loans
 - Funding is at least 12-24 months out
- Short-term Reality
 - Rates must increase **NOW** by 25% (100% assessment to 150%) just to pay for hauling
 - Rely on the ABCWUA and NMRW to help us find leaks or purchase our own equipment at a cost of \$40k to speed it up?
 - Requires Board members, manager, and volunteers to learn and deploy equipment
 - False positives have been noted
 - We must continue our current test methodology
- **Do nothing – we will run out of money (and water) in less than 2-weeks**
 - **We might be able to do water “brown outs”**
 - **Would lower the pumping rate**

Reorganizing is a long-term solution, not short-term

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Summary

- The Board has put a lot of work into this cooperative
- Throughout the Co-ops history we have operated with a strong manager that provided good advice to the Board and made our decisions easy.
 - As time went by, and the system aged, and the managers weren't as experienced, the Board has had more decisions placed on them.
- For 35-years we did not have a quorum at an Annual Meeting, until we had leaks and had to double our rates to stay solvent.
- We need membership to understand the issues and that we, as members, own this co-op and must pay for it. Becoming an MDWCA will not eliminate this requirement.
- We hope the information presented tonight helps you understand the issues at hand and guide us in determining whether to reorganize.

Reorganizing is a long-term solution, not short-term

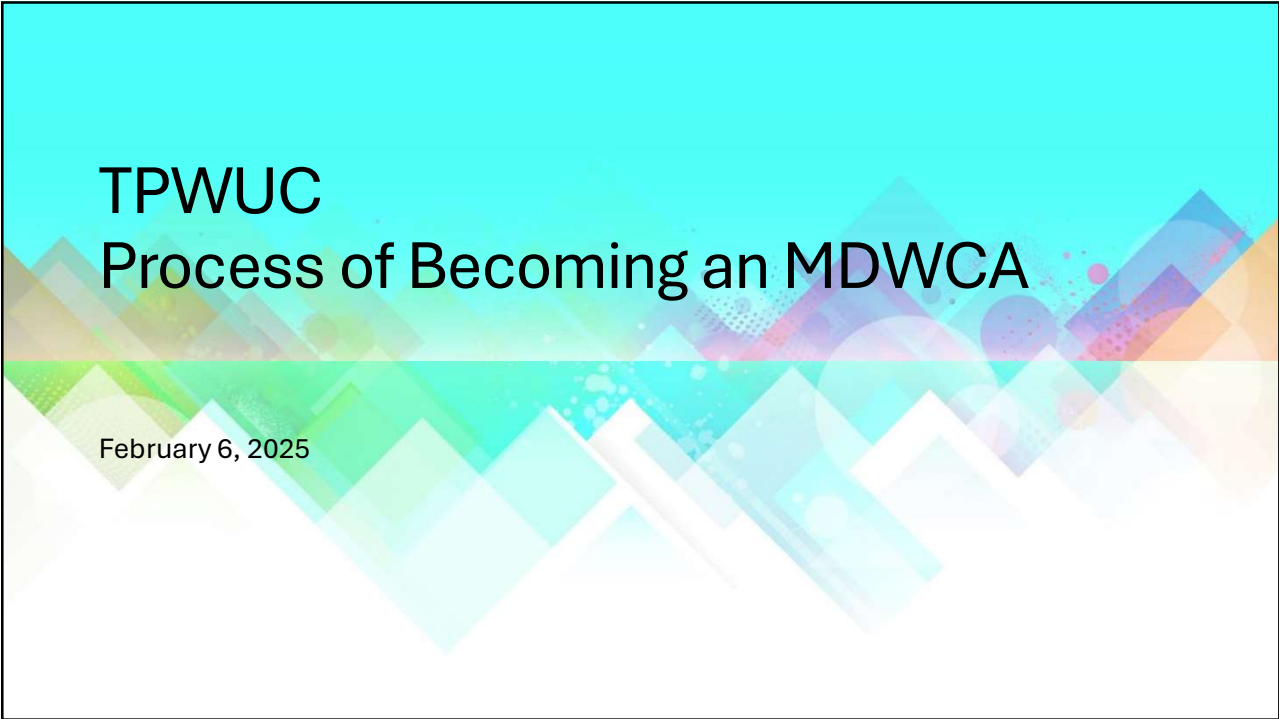
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TPWUC
Questions from Members?
February 6, 2025

The slide features a vibrant background with a cyan top section and a white bottom section. A decorative horizontal band of overlapping, semi-transparent geometric shapes in shades of green, blue, and orange spans across the middle. The text is positioned in the upper left quadrant.

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TPWUC
Process of Becoming an MDWCA
February 6, 2025

The slide features a vibrant background with a cyan top section and a white bottom section. A decorative horizontal band of overlapping, semi-transparent geometric shapes in shades of green, blue, and orange spans across the middle. The text is positioned in the upper left quadrant.

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Process of Becoming and MDWCA

- To reorganize as an MDWCA, the Co-op (i.e. Board of Directors) must create the following documents that comply with Sanitary Projects Act (3-29-20 NMSA 1978).:
 - Certificate of Association
 - Bylaws
 - Rules
- The Certificate of Association must state that it supersedes the Articles of Incorporation of the cooperative association
- Reorganization must be approved by a majority vote of a quorum of the members. (52 members make a quorum)
 - This vote must occur at an open meeting
 - Notice of the meeting and a copy of the proposed Certificate of Association must be sent to each member at their last known address at least 15 days prior to the meeting.
- The Certificate of Association must be filed with the Secretary of State, once filed the system is an MDWCA and must operate as an MDWCA

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Process of Becoming and MDWCA

- Templates for the required documents are available from the State, and they are very similar to our existing Certificate of Association, Bylaws, and Rules
- Poll the members present to find out if they want the Board to pursue becoming a MDWCA?

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