

Las Acequias de Placitas

Presentation to the Community by the Emergency Infrastructure Team
as approved by the LAdP Board of Directors on January 27, 2020

Improvements to the Domestic Water System

January 31, 2020

Purpose of the Presentation is to
Inform the Community of Current Progress and Plans

Outline of Presentation

1. The Overall Domestic System Issues
2. Status of Previous Plans
3. Domestic Water Distribution Network
4. Customer and Isolation Metering
5. Water Supply and Control System
6. Wrap Up

1. The Overall Issues

- The Problems:
 - Source Water Availability Depends on Snowpack
 - The System Is ANCIENT or at Best OLD
 - Water Losses Can't Be MEASURED or ACCOUNTED FOR
 - Climate Warming Will REDUCE ANNUAL SNOWPACK
- The 2018 Impacts:
 - Over 2000 Hours of CUSTOMER WATER SHUTOFFS
 - RECURRING WATER BOIL ADVISORIES
 - CUSTOMER STRESS - Especially on the Young and Elderly
 - DAMAGE to Distribution HARDWARE
- Three Coupled Solution Areas:
 - DISTRIBUTION SYSTEM – UPGRADE to AVOID Emergencies
 - METERING – FIND OUT WHERE the Water Goes
 - WATER CONTROL SYSTEM – FIX Short Term Supply

2. Status of Previous Plans

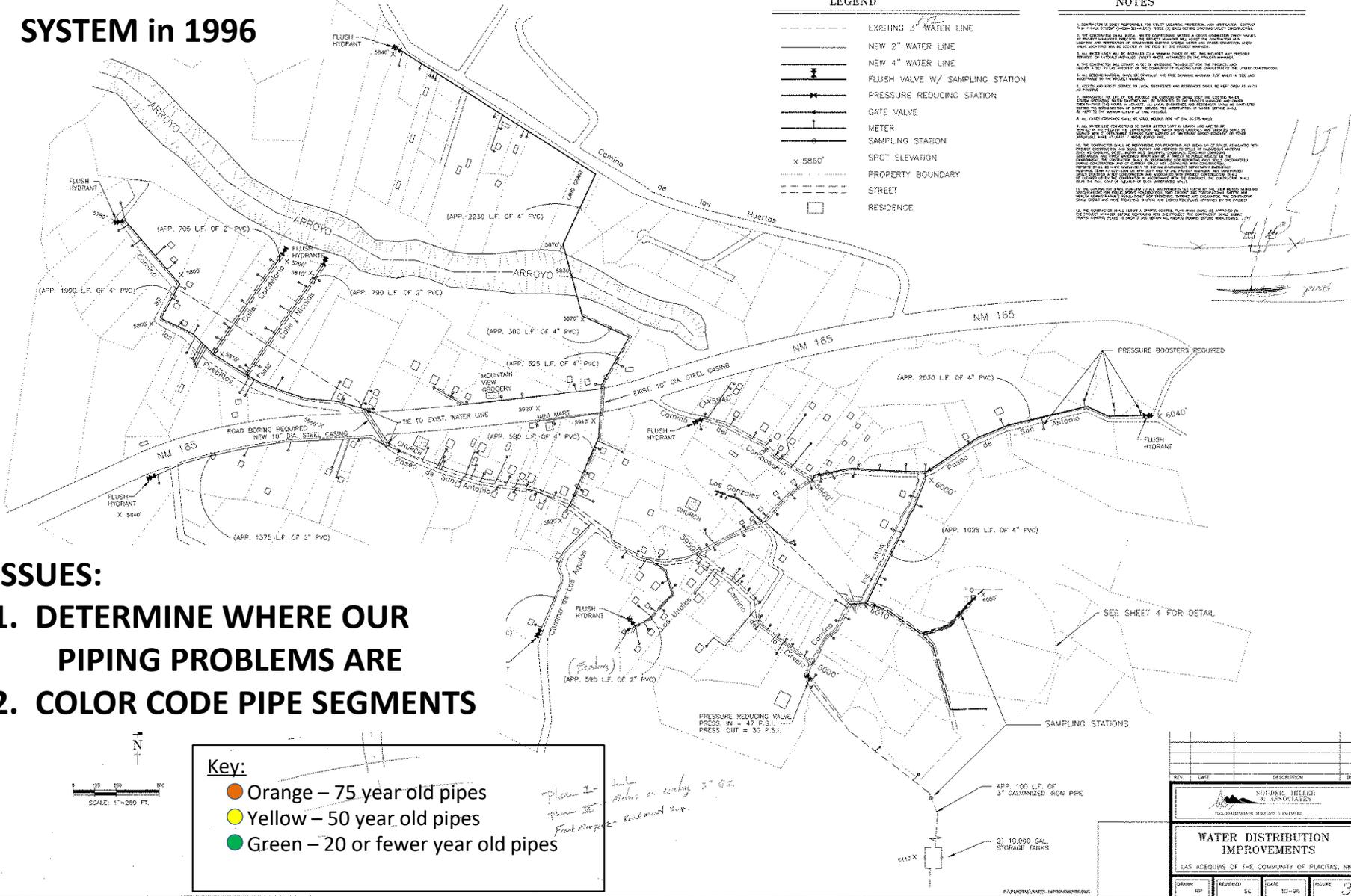
- Previous Funding – Capital Outlay
 - \$100,000 for FIXING Supply
 - Long Term Hydrology/Engineering – NEW WELL (~\$25K)
 - Short Term Emergency Infrastructure – (~\$75K left)
 - \$125,000 for Miscellaneous Improvements
 - FENCING at CIRUELA (~40K)
 - TANK REPLACEMENT at CIRUELA (~\$50K)
 - METERING of Customer Hookups (~\$35K left)
- Progress in Some Areas; Delays in Other Areas
 - FENCING Improvements – DONE ✓
 - TANK Improvements – DONE ✓
 - ADDITIONAL FUNDING Acquisition – WORKING ON IT 
 - WATER SUPPLY FIXES – DELAYED
 - METERING on Customer Domestic System – DELAYED

3. Domestic Water Distribution Network

- RECOMMENDED SYSTEM DESIGN (Engineer Report – 1996)
- CURRENTLY “AS BUILT” – Pipes Ages - 75 to 20 or less years
- Proposed Pipe ADDITIONS and ABANDONMENTS
- “TAG” System Pipe Segments for CONSISTENCY
- PROVIDE DETAIL DESCRIPTION of System Pipe Segments

3. Domestic Water Distribution Network

RECOMMENDED SYSTEM in 1996



ISSUES:

1. DETERMINE WHERE OUR PIPING PROBLEMS ARE
2. COLOR CODE PIPE SEGMENTS

Key:

- Orange – 75 year old pipes
- Yellow – 50 year old pipes
- Green – 20 or fewer year old pipes

Plan 1 - Inlet meters on every 2" G.I. Fire Meters - Found around 300'

REV.	DATE	DESCRIPTION	BY

SHIRLEY MILLER & ASSOCIATES
REGISTERED PROFESSIONAL ENGINEERS & PLUMBERS

WATER DISTRIBUTION IMPROVEMENTS

LANS ACADEMIA OF THE COMMUNITY OF PLACITAS, NM

DRAWING	REVISIONS	DATE	PROJECT

4. Customer and Isolation Metering

- CUSTOMER METERS - DETECT LEAKS on customer side and IDENTIFY where CONSERVATION ADVISORIES are needed
- ISOLATION METERS - LOCATED IN WATER MAINS to IDENTIFY leaking sections of pipe and to DETERMINE HOW MUCH (for prioritizing pipe repairs)
- LAdP NEEDS TO KNOW WHERE THE PROBLEMS ARE to DETERMINE extent of LEAKAGE and EXCESS USAGE!
- CURRENT STATUS: 100 Customer Meters are installed, 80 more are needed (40 are still in boxes)

Customer Meter Installation Plans and Issues

- Goal is to have meters at ALL CUSTOMER CONNECTIONS by DECEMBER 31, 2020
- Intent is to CONTRACT to BUY AND INSTALL METERS; with IN-HOUSE INSTALLATION reserved ONLY for special or complex issues
- “PIGGY-BACKED” CUSTOMER CONNECTIONS must be SEPARATED BY CUSTOMERS to provide ONE METER PER DWELLING (may be after meter is on master connection)

Isolation Meter Plans

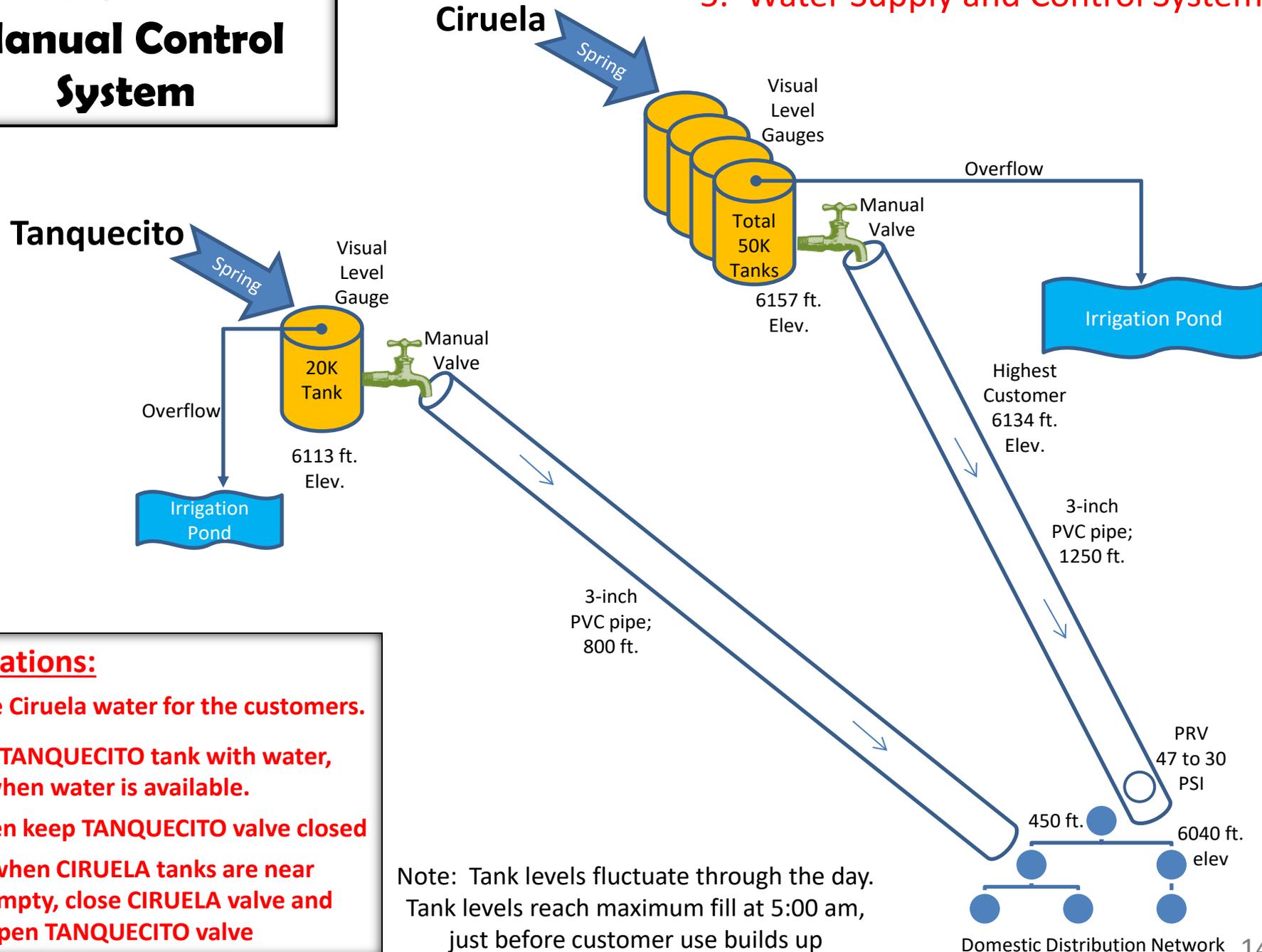
- We need to LOCALIZE LEAKS using CAPITAL OUTLAY FUNDS
- ISOLATION METERS must be installed at strategic points in the distribution network
- METER REGIONS or BOUNDED PIPE SEGMENTS need to be established
- PIPE SEGMENT IN-FLOWS and OUT-FLOWS need to be COMPARED so that REMEDIAL WORK can be PRIORITIZED and NEW LEAKS can be DETECTED

5. Water Supply and Control System

- The LONG TERM FIX includes a NEW WELL located at a NEW SITE (TBD)
- We have an APPROACH for IMPROVING domestic WATER RESOURCES and OPERATION METHODS to PREVENT PERIODIC WATER SHUTDOWNS in case of NEAR TERM DROUGHT
- We'll describe the APPROACH, including the EQUIPMENT NEEDS, the OPERATIONAL APPROACH, and the estimated CAPITAL COSTS
- Use some of our current \$100K CAPITAL OUTLAY FUNDS now to IMPLEMENT the APPROACH

The Current Manual Control System

5. Water Supply and Control System



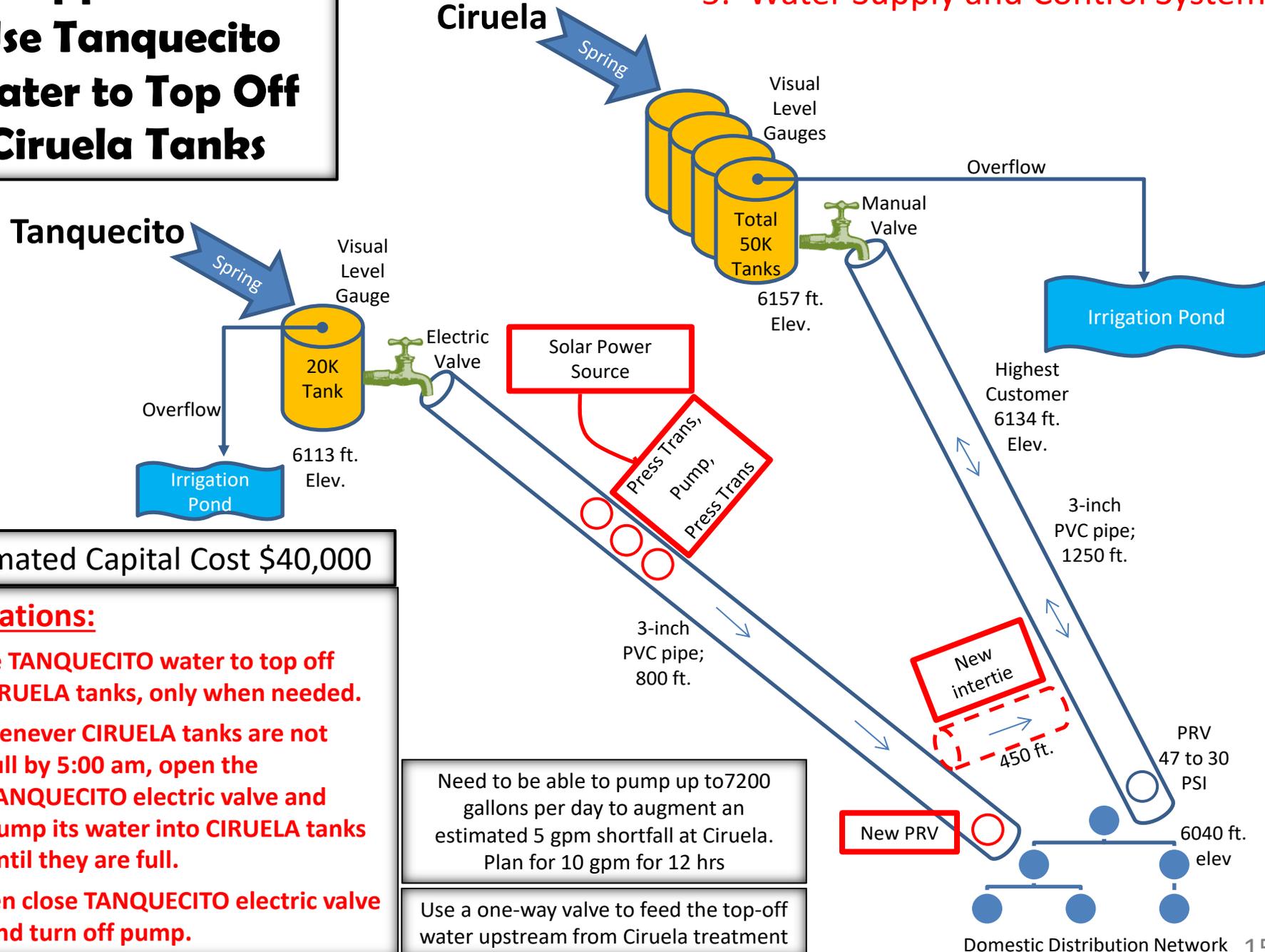
Operations:

1. Use Ciruela water for the customers.
2. Fill TANQUECITO tank with water, when water is available.
3. Then keep TANQUECITO valve closed
4. If/when CIRUELA tanks are near empty, close CIRUELA valve and open TANQUECITO valve

Note: Tank levels fluctuate through the day. Tank levels reach maximum fill at 5:00 am, just before customer use builds up

Approach: Use Tanquecito Water to Top Off Ciruela Tanks

5. Water Supply and Control System



A REVIEW of the APPROACH

- Use Tanquecito water to TOP-OFF CIRUELA, ONLY WHEN NEEDED in drought emergencies, for the SHORT TERM while the LONG TERM FIX is in the works.
- Attributes:
 - Meaningful initial cost: \$ ~40,000
 - Reduced ongoing labor costs
 - Cost includes design and installation
 - Can be implemented quickly
 - Uses part of our \$100K capital outlay funds
 - Allows using part of balance to design the long term fix (new well)

6. Wrap Up

- CONCLUSIONS
- RECOMMENDATIONS
- QUESTIONS AND COMMENTS

CONCLUSIONS

- The DOMESTIC WATER SYSTEM needs work URGENTLY, to protect against a REPEAT of the 2018 SHUTDOWNS.
- Partial CAPITAL OUTLAY improvements have been completed; METERING and WATER SUPPLY IMPROVEMENTS have been DELAYED.
- The water distribution pipes require MAJOR UPGRADE; the HIGHER PRIORITY SEGMENTS have been identified.
- Both CUSTOMER and ISOLATION METERING is URGENTLY needed to PROMPTLY DETECT and DIAGNOSE PROBLEMS.
- The SOURCE WATER CONTROL SYSTEM requires IMPROVEMENT URGENTLY of BOTH the ON-SITE EQUIPMENT and the OPERATIONAL PROTOCOLS

BOARD ACTIONS TAKEN

**The LAdP BoD has directed that the following
ACTIONS to be taken ASAP:**

- Authorized CONTRACTING for CUSTOMER WATER METER installations
- Identified a CUSTOMER COSTING APPROACH for these installations
- Authorized proceeding with ENGINEERING for new distribution piping
- Chose to acquire/install ISOLATION METERS (subject to new funds)
- Determined to PROCEED with the CONTROL SYSTEM improvements
- Is pursuing 2020 CAPITAL OUTLAY FUNDING SOURCES VIGOROUSLY
- Established a PERMANENT CAPITAL IMPROVEMENT COMMITTEE



QUESTIONS AND COMMENTS

