



SCV
WATER

Santa Clarita Valley Water Agency

Risk Assessment

**Regular Board Meeting
November 15, 2022**

What risks does SCV Water face?

“There are known knowns; there are things we know we know. We also know there are known unknowns; that is to say we know there are some things we do not know. But there are also unknown unknowns - the ones we don’t know we don’t know.”

- Donald Rumsfeld



Known Risks

- Property rights
- Cyber/Malware - recycled/modified threats
- Aging infrastructure
- Regulatory violations
- Worker safety
- Public safety
- Natural disasters

Known Unknown Risks

- Facilities without easements
- Cyber/Malware - new threats (Zero-day)
- Location and severity of pipeline breaks
- Regulatory violations
- Accidents/Injuries
- Natural disasters

Unknown Unknown Risks

???????



Examples of Known Knowns & Known Unknowns

- **Property Rights Issues**
 - Potential litigation
 - Easements
 - Acquisitions
- **Infrastructure Failures**
 - Major pipeline breaks
 - Solar panel wind damage
 - Import water supply
- **Water Quality Contamination and Compliance**
 - Known contaminants (PFAS, perchlorate, etc)
 - Unknown contaminants (UCMR)
 - Surface Water Treatment
- **Technology Issues**
 - Cyber attacks
 - Vulnerabilities
 - Widespread outages



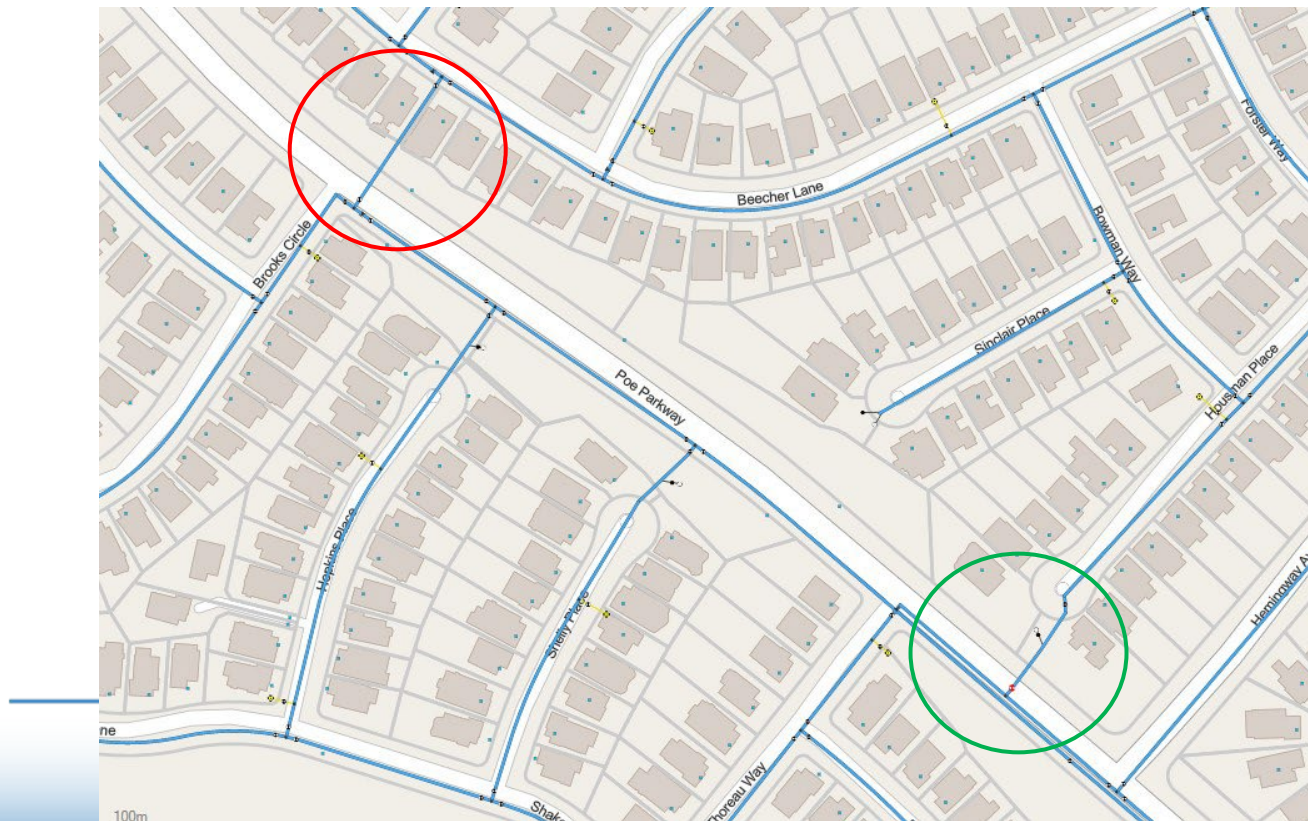
Examples of Known Knowns & Known Unknowns

- **Disasters**
 - Public Safety Power Shutoff
 - Fires
 - Earthquakes
- **Regulatory Violations**
 - NPDES
 - RMP/CUPA
 - CARB/AQMD
 - OSHA
- **Financial & Human Capital Issues**
 - Staffing
 - Loss of Revenue
 - Claims



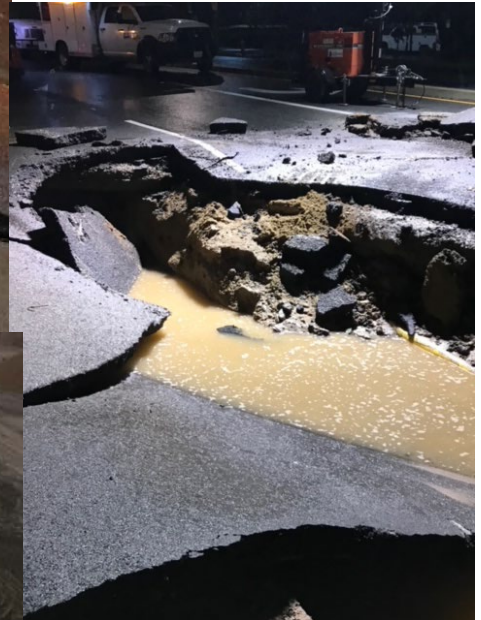
Property Rights Example

- Easements
 - Leak on a pipe between two homes
 - Isolated leak
 - Identified lack of easement
 - Pipeline to be abandoned
 - New pipeline connection to maintain adequate flow



Infrastructure Example

- Major Pipeline Breaks
 - Leaks are inevitable, but predicting the location of a leak is not an exact science
 - The following is used to help identify potential failure points and focus on strategic replacement plans
 - Material type
 - Material age
 - Leak frequency
 - Leak Location
 - Master Plan
 - Hydraulic modeling
 - Asset management



Infrastructure Example

- Sewer System
 - Pipeline Leaks
 - Manhole Failures
 - Lift Station Overflows



Import Water Supply Examples

- Potential risks
 - Climate change
 - Subsidence
 - Seismic
 - Water Quality
 - Aging Infrastructure
- Various stakeholders
 - DWR
 - MWD
 - Other SWP Contractors
 - Local Communities
 - Regulatory Agencies



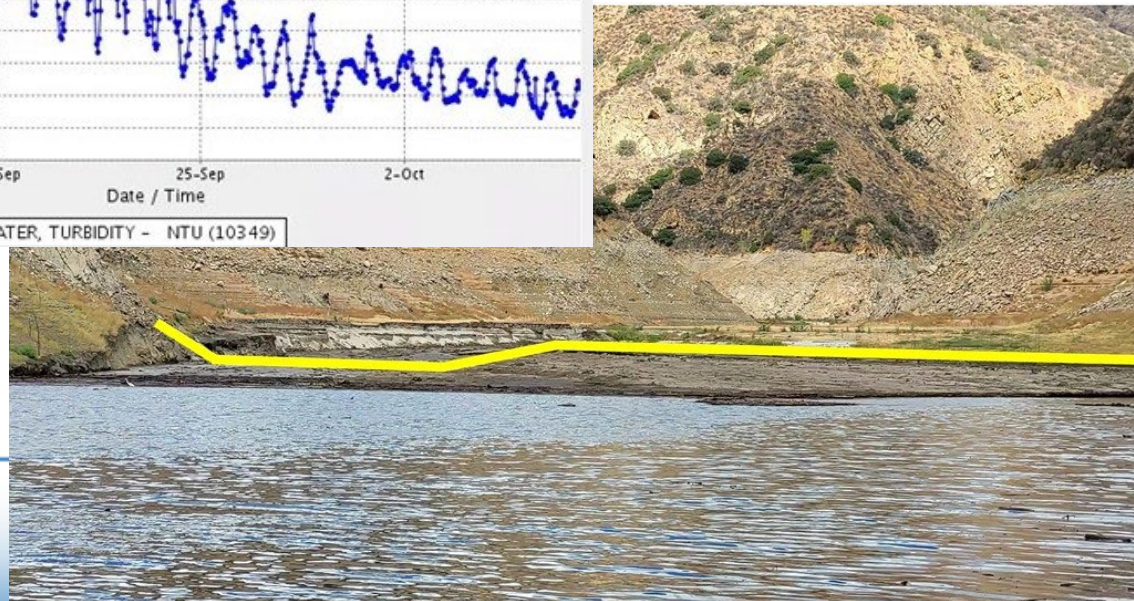
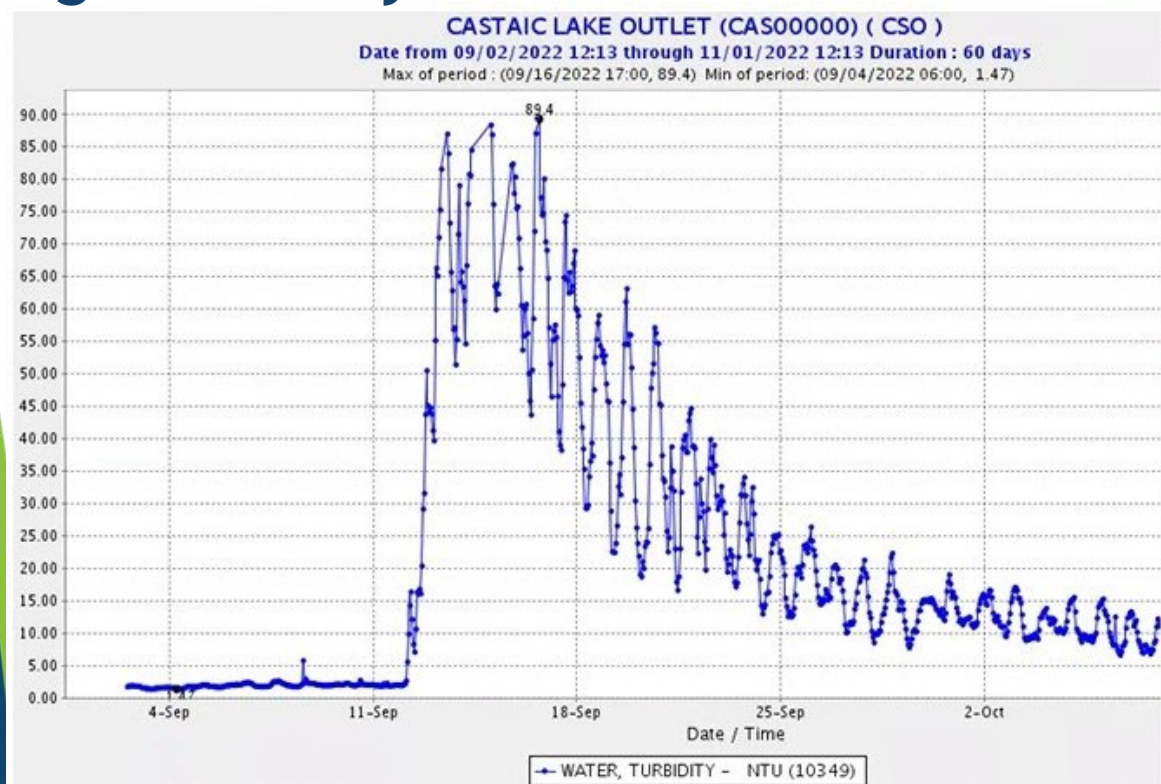
Water Quality Compliance Examples

- Changing State and Federal Drinking Water Regulations
 - Unregulated Contaminant Monitoring Rule
 - Emerging contaminants
- Drinking Water Compliance
 - Violations



Water Quality Compliance Examples

High Turbidity in Castaic Lake



Technology Examples

- External Threats
 - Phishing - 61% increase overall compared to 2021
 - Data/Operational hacks
 - 3rd party breaches (Solarwinds, Microsoft, etc)
- Internal Threats
 - Personal accounts (gmail, facebook, twitter)
 - Human error
- Other Threats
 - Power outages
 - Hardware failures



Other Regulatory Compliance Examples

- National Pollutant Discharge Elimination System Compliance
- Chemical Compliance (Chlorine & Ammonia)
- OSHA Compliance
- CARB/AQMD Compliance



Financial and Human Capital Examples

- Reduced Revenue
 - Does more conservation = less revenue
 - Limited revenue during a catastrophic event
- Staffing
 - Loss of legacy knowledge
 - Constricted/competitive labor market
- Claims - Insurance - Litigation
- Supply Chain Constraints



What is staff doing to mitigate risk?

- **Property Rights**
 - Hired staff to research and investigate
 - Tracking new facilities
 - Monthly meetings
- **Infrastructure**
 - Master Plan
 - Hydraulic model
 - Facility inventory
 - Proposed capital improvement projects
 - Asset management
 - Pipeline Inspection/Replacement
 - Monthly meetings with ESS, TDOMS and GIS
 - Leak tracking
 - Pipeline priority identification
 - CCTV of sewer



What is staff doing to mitigate risk?

- **Water Quality**
 - Regulatory Agency engagement
 - Participation and collaboration with various organizations and agencies (AWWA, ACWA, OCWD, BWP)
- **Technology**
 - Hiring security staff
 - Dual authentication
 - Staff training
 - Security network groups (FBI, CISA, WaterISAC)
- **Safety Culture**
 - Training
 - Inspections, audits, consultants
- **Policies and Procedures**
 - JPIA audits and assistance
 - Compliance standards
 - Audits



Are there more Unknown Unknowns?

YES!