

# WELCOME

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## Maintaining the Water Flow

How SJW ensures 99% water delivery reliability

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# AGENDA

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- Welcome
- What is the Distribution System Department?
- Distribution System Overview
- Leak Repairs
- Preventative Maintenance Activities
- Capital Improvement Initiatives
- Q & A

# What is the Distribution System Department?

- Responsible for installing water service and maintaining 99% water delivery reliability to your home and work
- Largest department within San Jose Water (76 employees)
  - 67 field staff (workers, drivers, crew leaders)
  - 6 administrative
  - 3 clerical staff
- Major responsibilities
  - New service installations
  - Leak repairs
  - System preventative maintenance
  - System Capital Improvement programs



# Distribution System Department Through History

- SJW is over 150 years old
  - Founded in 1866, served about 400 customers in the Santa Clara and San Jose area
- Some currently functioning parts of our distribution system are more than a century old
  - Oldest active pipeline is from 1879
- As the area expanded with population growth and economic booms, the SJW system increased to meet the needs of the growing community



Alum Rock Pipeline, 1927



Workers in Pipeline Trench, 1950



Workers with pipe, 1934



Crew truck with tow-behind compressor circa 1960's



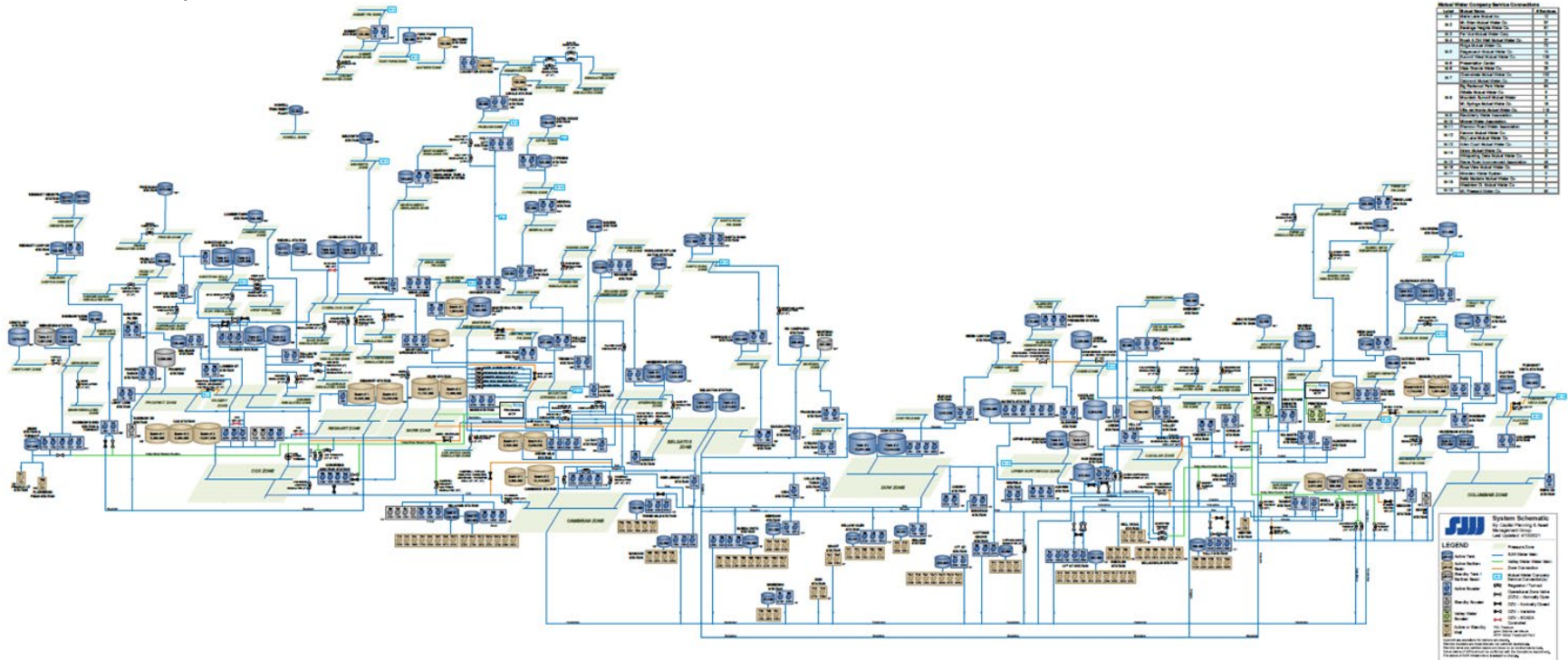
Field crew using a truck-mounted compressor 1930s



Crew truck circa 1917

# Today's Distribution System Department by the Numbers

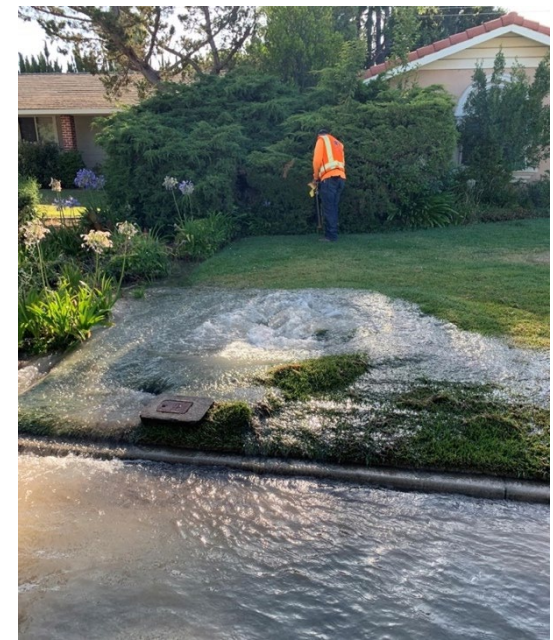
- 226,800 service connections
- 2,405 miles of pipe
- 35,416 main line valves
- 20,147 hydrants
- 3,948 air valves
- Fix 900+ leaks a year (main breaks + services)



# Leak Repairs

# Common Leaks

- 900+ total leaks identified per year
- Most leaks are identified by customers
- Approximately 200 main leaks/year
- Residential + Commercial system



# When a Main Breaks....



Leak on a 42-in Steel Pipe



Leak at joint



Leak causes flooding on street



Sinkhole erupts on street

# Inventory on Crew Trucks

- Full circle clamps in all ranges to repair up to 6" mains
- PE pipe in ½" – 1" for service repairs and installations
- Assorted sizes of PVC pipe and fittings
- Brass repair fittings
- Miscellaneous hydrant parts
- Skinner clamps
- Tapping Saddles



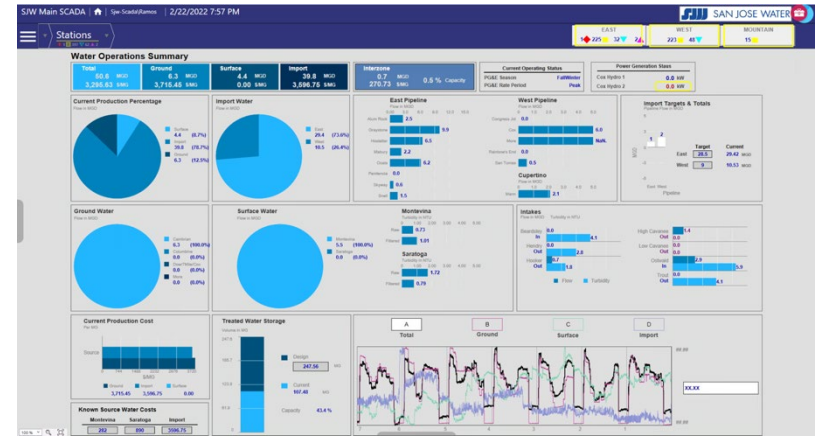
# What happens When You Contact SJW about a Leak?

- Customer contacts Customer Service
- Field Service investigates
- Referred to Distribution System Department
- Priority code assigned (1, 2 or 3)
- Contingency operations



# Work Order Management System

- Manages workflow
- Supplies data to support engineering for future replacements
- Tracks system pipe replacements through Service Information Orders



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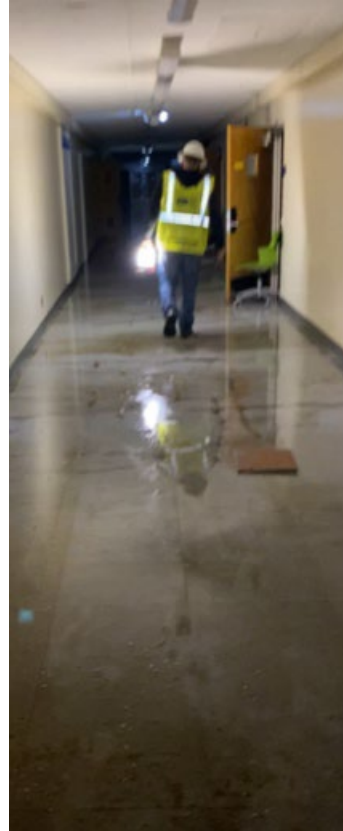
# What Happens During a Leak Repair?

- Breaking ground
- Excavation
- Disinfection processes
- Repair methods
- Backfill
- Compaction
- Cleanup
- Sample testing



# Resolving Leak Repair Issues

- Property insurance claims
  - Restoration
  - Flood damage



# Resolving Leak Repair Issues



# Underground Service Alert Locating

## CA GOV Code 4216

- USA one call center
- Call 811 before you dig
- Ticket information
- Utilities, mark facilities
- Damage prevention
- Safety



**UNDERGROUND  
SERVICE ALERT**  
—► NORTHERN CALIFORNIA & NEVADA ◄—



# Leak Detection Programs

- Internal leak detection team with 2 full-time leak detection technicians
- Leak detection programs
- Advanced leak detection technologies enable SJW to prioritize replacement for highest probability of failures to the system



# Preventative Maintenance

# Hydrant and Valve Inspections

- Proactively identify hydrants & valves for replacement
- Valve exercising



# Hydrant Painting

- SJW-sponsored summer internship program
- Paint 2,400 hydrants yearly
- Look for obvious issues
- Clear vegetation
- Every hydrant has unique identifier and is tracked in GIS
- New paint helps emergency and SJW service personnel locate hydrants



# Capital Improvements

# Capital Improvement Initiatives

## Hydrant Replacement Program

- Replace outdated legacy hydrants
- 100/year

## Valve Replacement Program

- 30/year

## Air Valve Replacement Program

## Service Replacement

- 800 service replacements/year
- Replace lines and meters

## Sampling Stations

- 35/year

## Main Installation

- 500 – 1,000 FT pipe replacements



# New Installations

- Main installations
- Service installations
- Hydrant installations



# Additional Responsibilities

- Safety and Environmental Compliance
- Customer Service
- Support other departments
- Serve the community



Questions?

# Thank You!

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