GOING MOBILE

COLUMBIA WATER COMPANY

GIS Helps Improve Its Efficiency and Customer Service
Who We Are

- Incorporated in 1823
- Providing public water service for over 190 years
- Over 10,000 customers
- Distribution system
  - 110 miles of water mains
  - 9 finished water storage tanks
  - 6 pumping stations
  - 4 wells
  - 11 pressure zones
Operations

- 18 full-time employees
- Installation/replacement
  - Meters
  - Water mains
  - Service lines
- PA One Calls
- Non-payment duties
Maintenance

- Valve exercising
- Hydrant flushing

- Hydrant flow tests
- Pressure studies
- Valve box cleaning
- Leak detection
System Information
Previous Storage Process

- Used flat files, desk drawers, and desktop computers to store:
  - Hand sketches of service lines
  - Development drawings
  - Main extension drawings
  - Utility relocation drawings

- Some information never made it from field to drawer
- Finding a specific drawing/sketch was difficult
Why GIS?

▶ The old way was not sustainable
  ▪ Information was always back at the office or shop
  ▪ Emergency One Calls were costly and time-consuming

▶ Initially looking for a GIS to:
  ▪ Provide accurate facility locations
  ▪ Link to key sketches and drawings
Planning for the Future
Initial Functionality

- Accurate water main, service line, valve, and hydrant location information
- Editing Capabilities
- Record/design drawing accessibility
- Attaching forms and pictures
- Aiding One-Call efforts
- Access to key record drawings
- Respond more promptly to customer calls
Benefits
Data at your fingertips!

- Improved field staff efficiencies
- Improved responsiveness
- Improved reporting and planning
Improved Field Staff Efficiencies

- Ability to spend more time in the field and less time in the office
  - Make sketches or take photos of repairs, issues, and other findings in the field
  - Upload directly to GIS from your mobile device
  - Eliminate follow-up “paperwork” back at the office

- Ability to capture long-term employees’ institutional knowledge
Improved Responsiveness

› Respond immediately to emergencies in the field
  ▪ Access to all information on your mobile device

› Eliminate wasted travel and time responding to One Calls and other requests
  ▪ No back-and-forth trips
  ▪ No searching for drawings
  ▪ No copying plans
Field Sketches
Main Break

Date: December 28, 2016
Date Repaired: December 28, 2016
Address: 232 new st mountville

Note: Crack around pipe at storm inlet in front of 232 new st. Repaired with a ford 0x7 leak clamp. Ductile iron 6" main is 3.6 ft deep

Attachments:
- Photo3.jpg
- Photo2.jpg
- Photo1.jpg
- Zoom to
Improved Reporting and Planning

Information is just a few clicks away

- Length, type, and age of water mains
- Main breaks
- Customer data
- Pressure zones
- Service areas
- Maintenance activities and dates
Improved Reporting and Planning

- How much of our system is over 100 years old?
- We had 7 breaks on the Centerville road main since 2012; its time for a replacement.
- Which customers will be affected if the tank volume drops below 50 percent?
- When was the last time we exercised that valve?

### Water Mains:

- Length of water mains 1880 and older: 5,145'
- Length of water mains 1881 through 1900: 6,892'
- Length of water mains 1901 through 1920: 16,865'
- Length of water mains 1921 through 1940: 10,199'
- Length of water mains 1941 through 1960: 38,556'
- Length of water mains 1961 through 1980: 102,108'
- Length of water mains 1981 through 2000: 285,068'
- Length of water mains 2001 through 2020: 199,682'

### Hydrants:

- American Darling Hydrants: 396
- East Jordan Iron Works Hydrants: 125
- James Jones Co. Hydrants: 15
- Mueller Co. Hydrants: 22
Cost Savings

- More efficient daily tasks
- Better-informed maintenance planning
- Quicker response
- Increased quality
- Improved customer service