

*Water System*

*Advisory Committee*

*Distribution System overview  
& strategic planning effort*

*June 20, 2012*



# What is the Water Distribution System?

- Direct Service Area infrastructure including
  - Pipes
  - Pump Stations
  - Storage Facilities
  - Appurtenances
    - Fire Hydrants
    - Services (pipes that connect SPU's pipe to the customer's pipe)
    - Meters
    - Valves
- Operations Control Center & SCADA

# Pipe Inventory

Figure 1. Distribution Main Inventory (by installation decade)

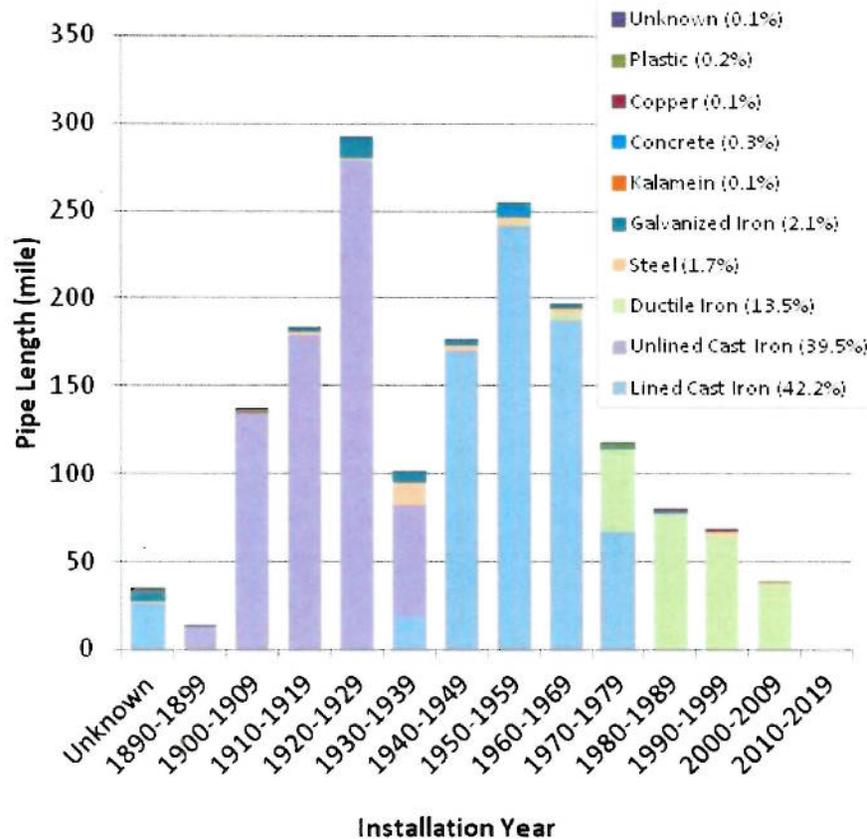
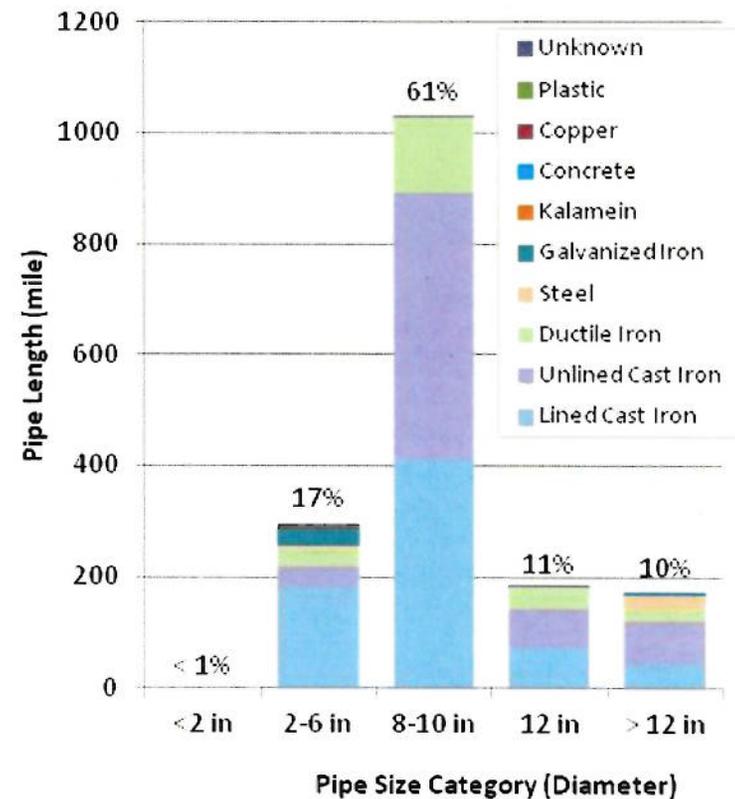


Figure 2. Distribution Main Inventory (by size category)





# Why is the Distribution System Important?

- Complex system of aging infrastructure
- Impacts every resident and business – but is mostly invisible
- Large investment is planned
- Maintain service levels to customers over the long term:
  - Pressure
  - Fire Flow
  - Water Outages
  - Water Quality Aesthetics

# What is SPU's current focus?

- An SPU priority in 2012/2013 is the water distribution system strategic plan. “ Maintain momentum on developing a multi-pronged strategic plan for drinking water distribution assets.”
  - Analysis & briefings underway as part of Asset Management decision-making – workplan on the wall
  - Including WSAC perspective on several key items will help utility make investment decisions and affect customers service
  - Projected investment through 2040 is over \$730 million



# What are some of the challenges?

- The Distribution System is like a quilt that has been pieced together over a century – originally Seattle and 40 annexations
- Drinking Water service delivery has changed in the last century.
- The next century will bring more change
  - Redevelopment
  - Regulations
  - Technology
  - Demand
- Appropriate level of reinvestment based on the infrastructure we have, current needs, customer perspective, and anticipated change



# Strategic planning is a 3-Tiered Approach

- Short Term
  - Day to Day reinvestment and optimization of SPU's efforts
- Intermediate Term
  - Evaluate and prioritize system replacement
    - ❖ Water Main Criticality
    - ❖ Shutdown Blocks
- Long Term – How should the Distribution System be reconfigured based on demand and future change and redevelopment?
  - Optimize Service Delivery and Reliability
  - Minimize Risk
  - Establish Backbone (seismic upgrades, etc.)
  - Tolt/Cedar Transfer



Specifically, we need the Committee's help defining --

- Who are “critical customers”?
- What is the value to a customer if there is a water outage at their home or business?
- How many customers should be included in a shut-down block?
- How does SPU handle a boil water advisory?

These issues would be a significant portion of WSAC's workplan for 2012-13.

# Questions?



*Kids playing in water from a fire hydrant in 1930s*