

# What Public Officials Need to Know about Tap Water

Catherine Howells, Ph.D.

Portland State University

PNWS Conference - Spokane

May 10, 2013

# It's the Pipes

Out of Sight

Out of Mind



# Source to Tap









SWND  
194  
655950  
2419-J  
  
D.I.  
250NB  
  
NET 250  
194

12/11/11

# Corroded Galvanized 2" Main

**Multiple Repair  
Clamps**

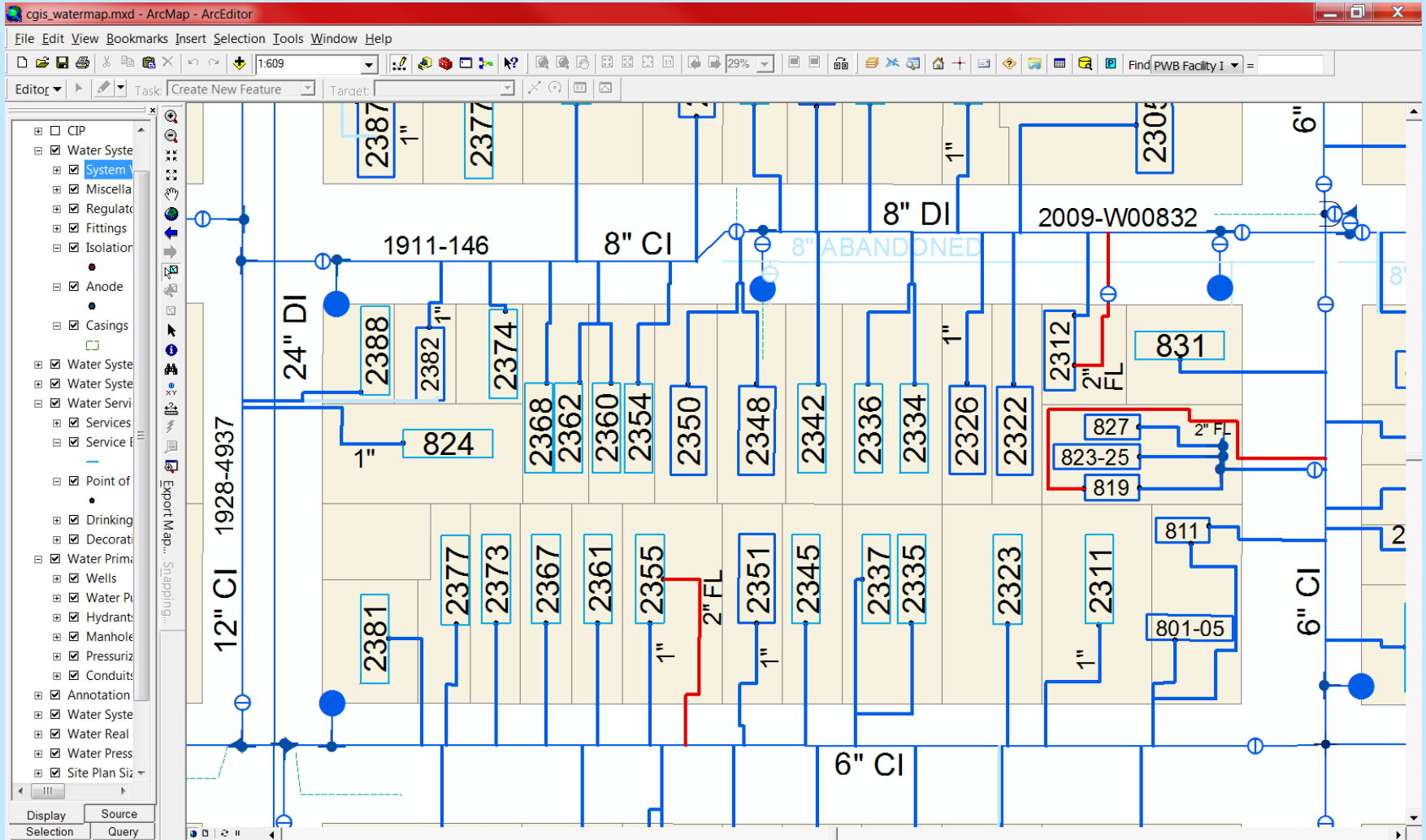


**Excessive  
Corrosion**

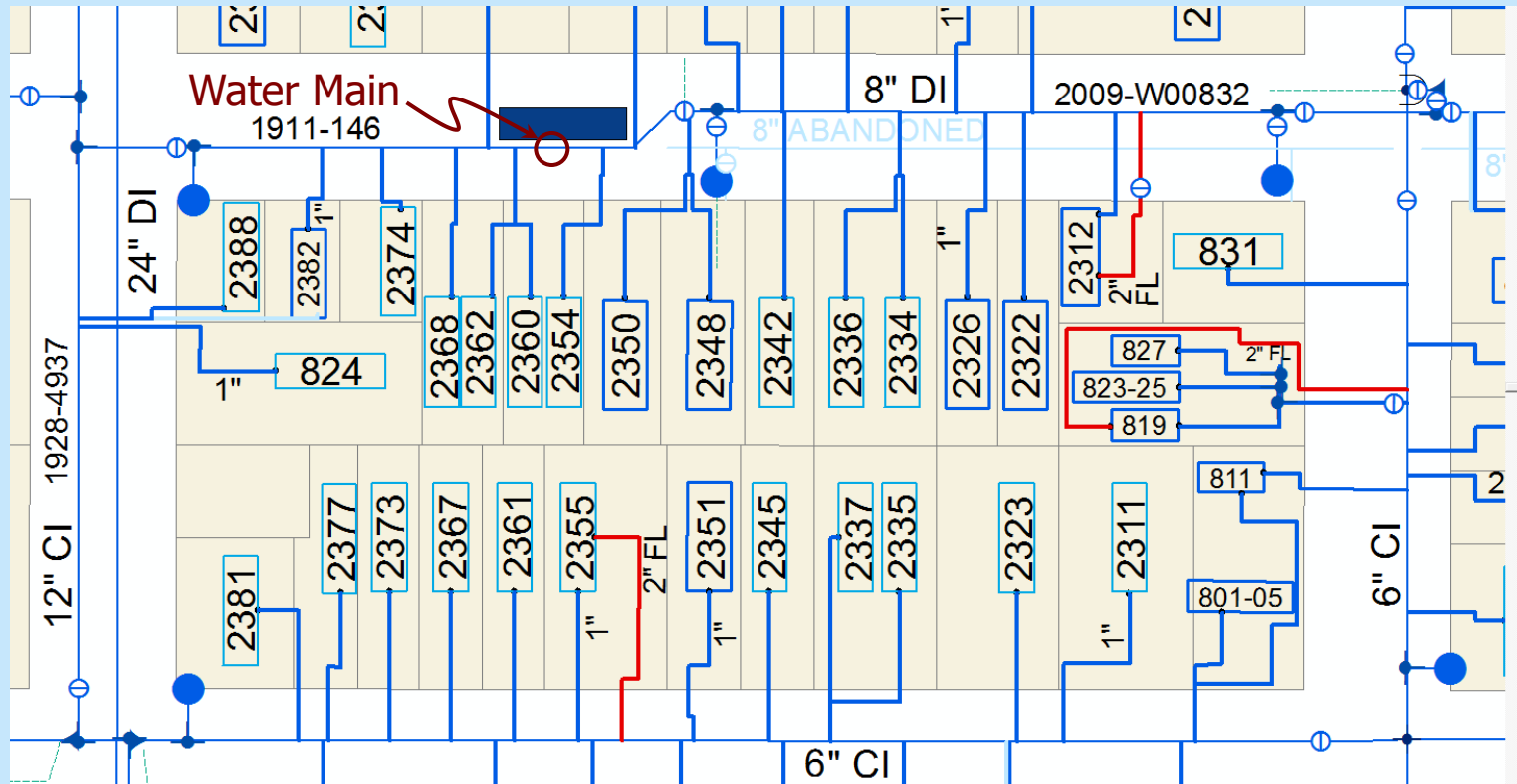




# The Water System



# The Water System



1,722 ft of 6" & 8" DI Water Main  
Costs \$190,000 to Install\*

# The Business District Block Water System

1,722 ft of 6" & 8" DI Water Main  
Costs \$195,000 to Install

4 Fire Hydrants @ \$4,539 = \$18,156

34 1" Services @ \$2,428/ea. = \$82,552

Water Infrastructure for 1 City Block =  
\$291,000.\*

\*Does Not Include Permits, SDC, Engineering, Dump and Fill Costs, Paving, Overhead, et al

# The Residential Block Water System

1,722 ft of 6" & 8" DI Water Main  
Costs \$195,000 to Install

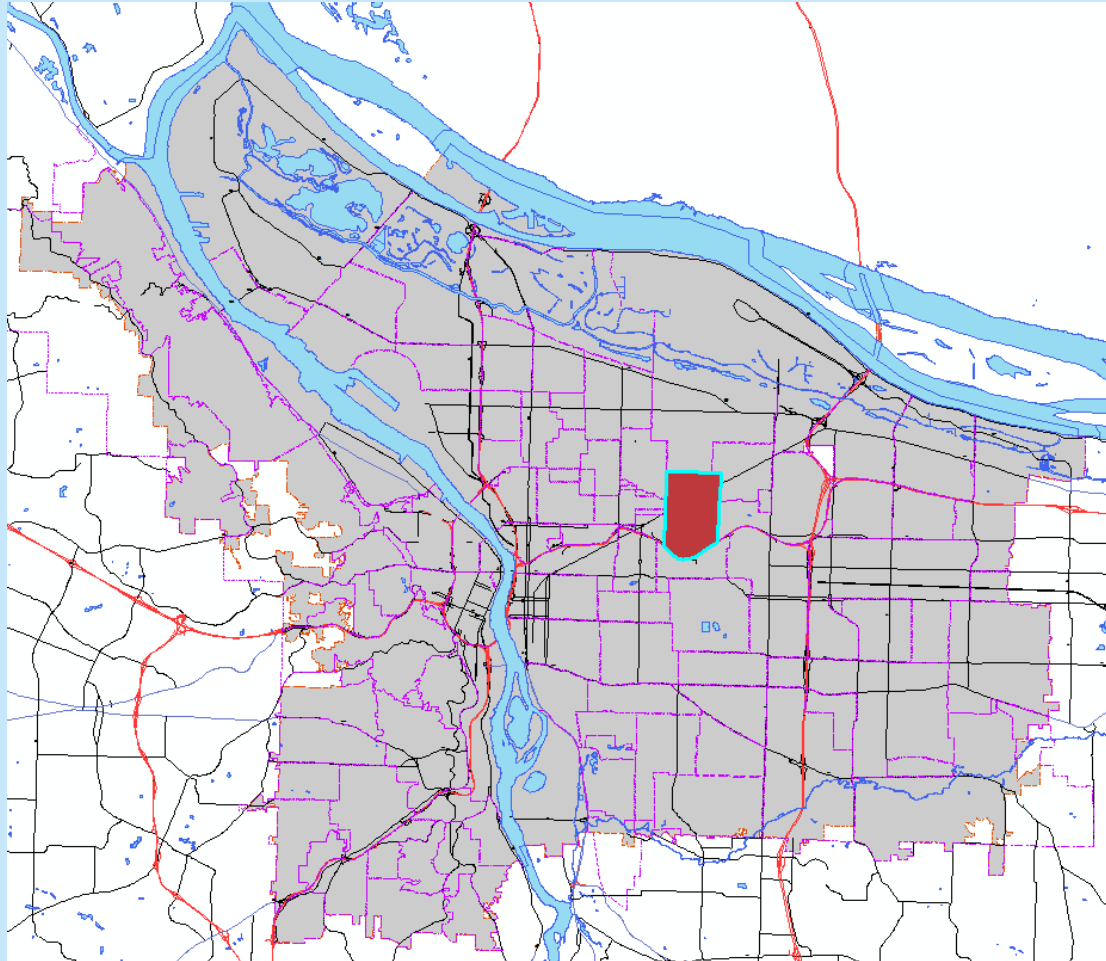
1 Fire Hydrant @ \$4,539 Cost = \$4,539

20 1" Services @ \$2,428/ea. = \$48,560

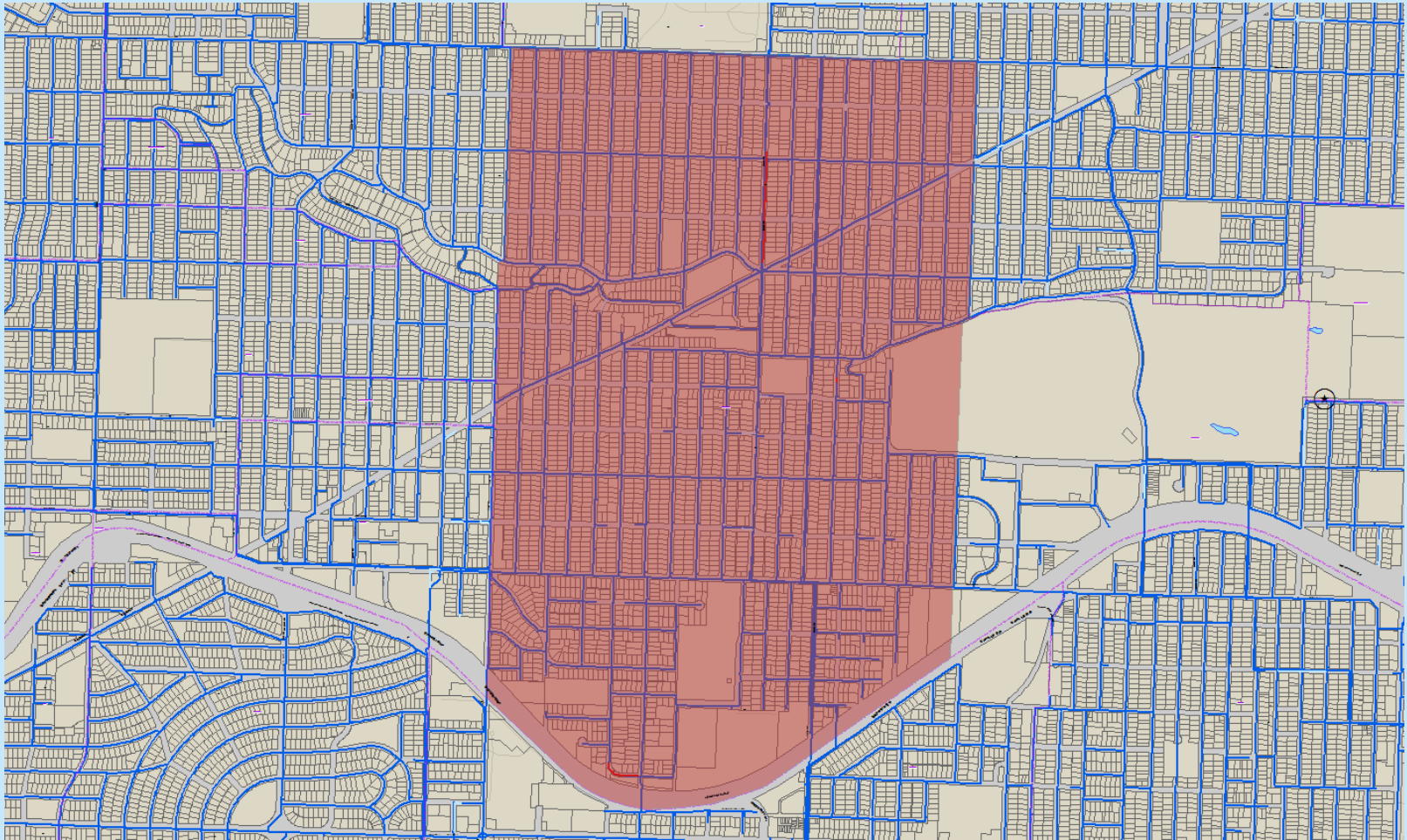
Water Infrastructure for 1 City Block =  
\$243,099.\*

\*Does Not Include Permits, SDC, Engineering, Dump and Fill Costs, Paving, Overhead, et al

# The Rose City Park Neighborhood



# The Rose City Park Neighborhood



Approx 234 blocks, 3,600 Parcels

# The Rose City Park Neighborhood Water System

178,473 ft of 6" & 8" DI Water Main  
Costs \$20,246,000 to Install

221 Fire Hydrants @ \$4,539 = \$1,003,119

3,756 1" Services @ \$2,428/ea. = \$9,119,568

Water Infrastructure for Neighborhood  
= \$30,369,000.\*

\*Does Not Include Water Supply & Transport, Tanks, Pump Stations, et al





# 6" Line Valve



# Examples of Obsolete Hydrants









Remove cover and slide clamp to cover exposed leak...



# Secure repair clamp...





# Completed vertical main break repair...



# Source to Tap



# Questions/Contact

Catherine Howells

[chowells@pdx.edu](mailto:chowells@pdx.edu)

503 929 5539