

# This presentation premiered at WaterSmart Innovations

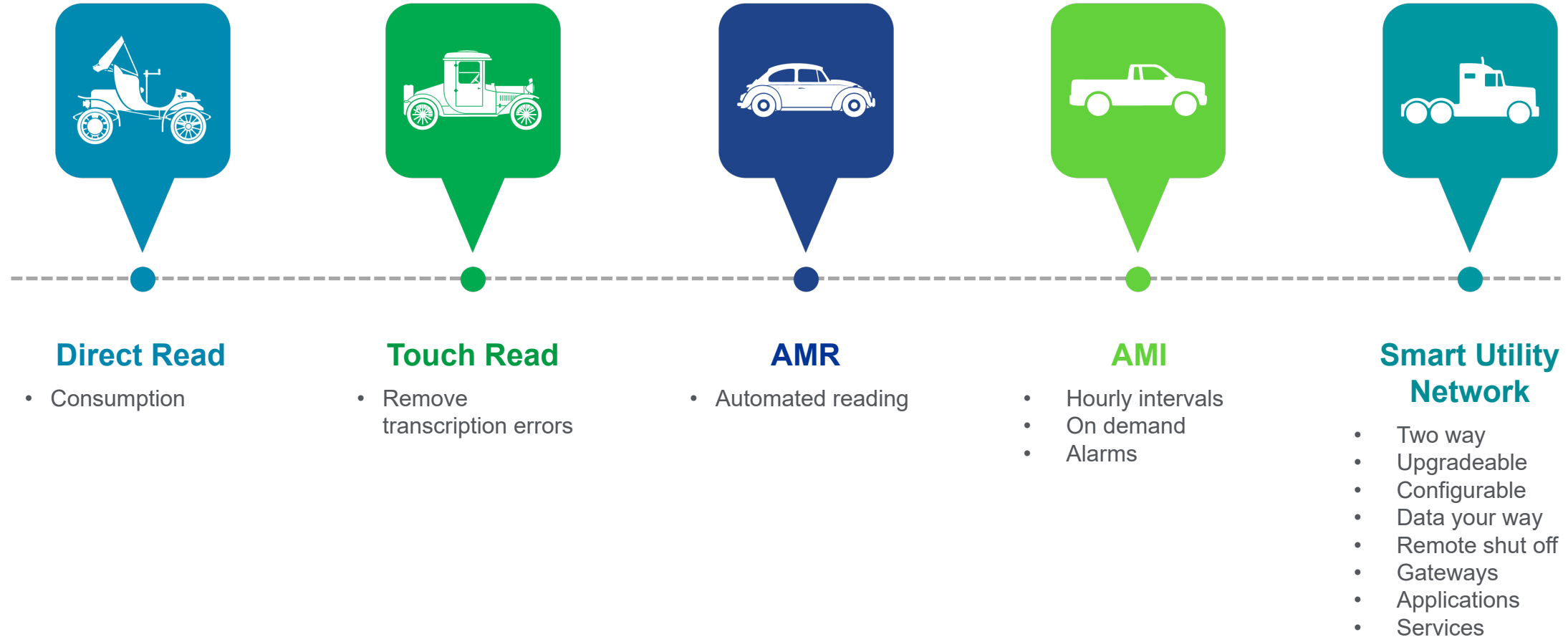
[watersmartinnovations.com](http://watersmartinnovations.com)



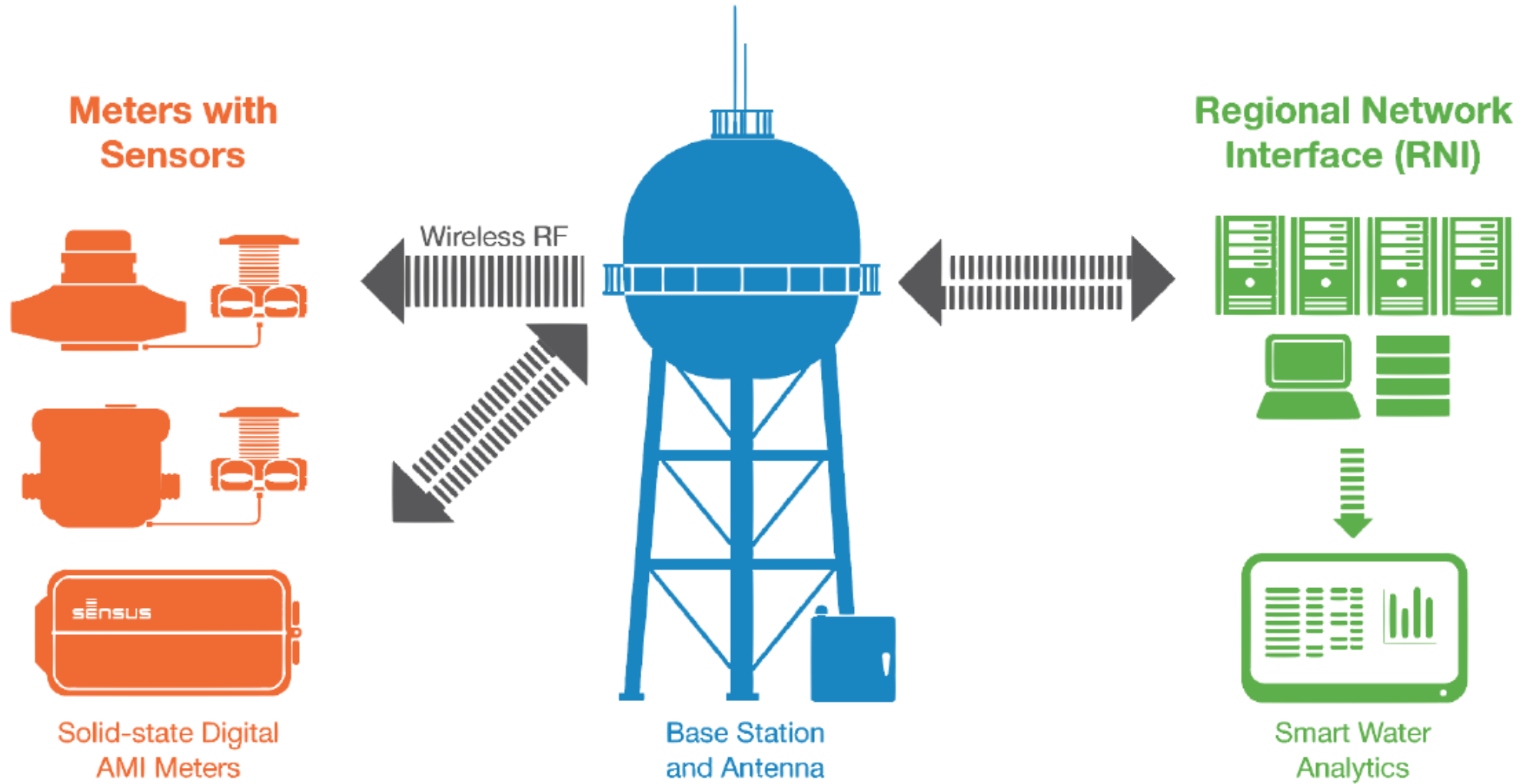
# How metering best practices can promote conservation before and after the meter

JAMES SMITH, DIRECTOR OF C&I METROLOGY

# Meter reading evolution



# Smart Utility Network components



# Customer conservation: behavioral feedback



Customer portals promote active customer management.

# Customer conservation success: Seal Rock

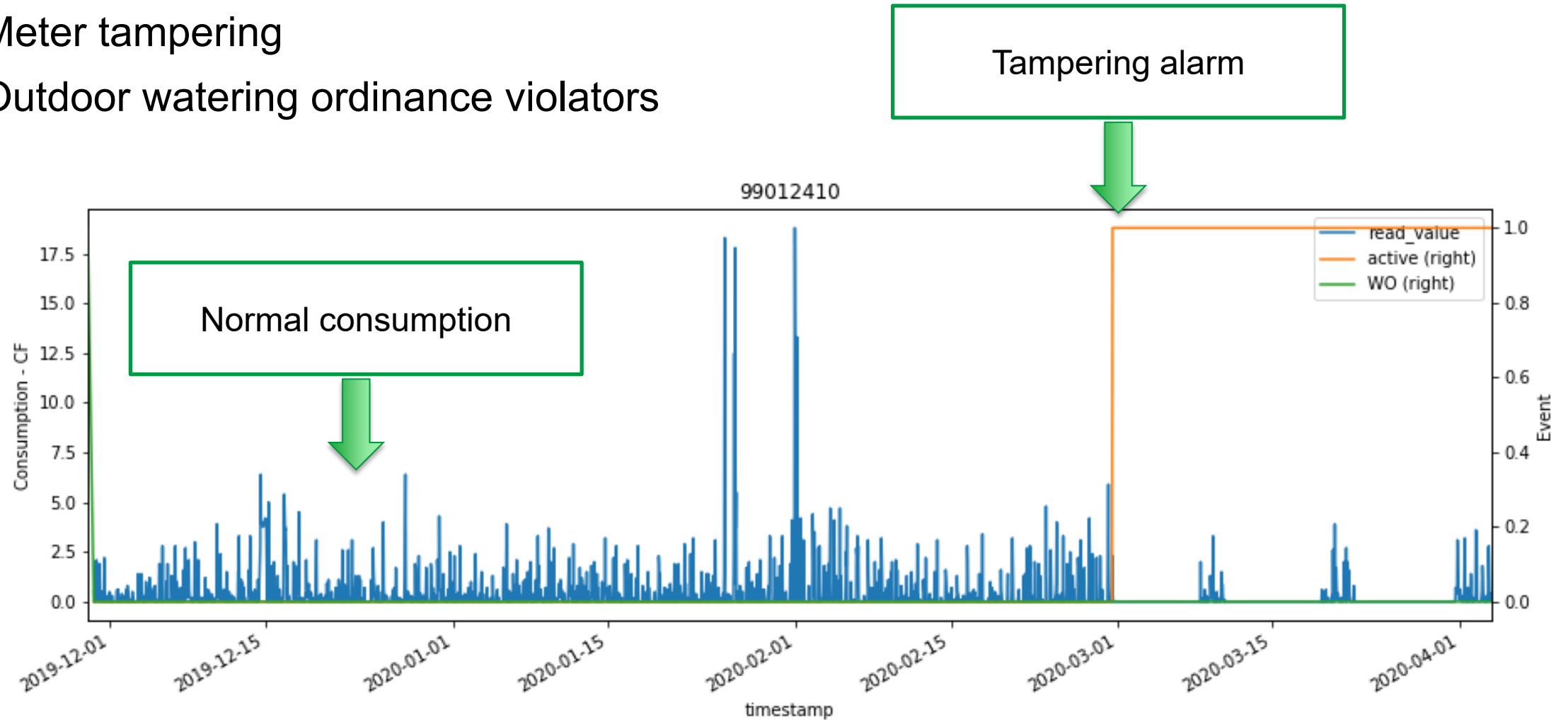


Photo credit: Pete Eckert

- FlexNet Smart Utility Network
- Monitors for leaks by flagging continuous flows facilitates resolving customer leaks within hours
- The Customer Portal bolsters water conservation efforts and empowers residents to set up alerts and monitor their own usage.

# Customer conservation: violators

- Meter tampering
- Outdoor watering ordinance violators





# Metering fundamentals: large meter testing

- Mechanical meters “slow” overtime
- AWWA M6 Manual: *The largest 10% of meters measure 40-60% of consumption\**
- Meter testing can be in place or at the shop
- Regular testing ensures revenue capture, fewer customer surprises, and costs are spread equitably\*\*



## Florida's Largest Public Utility Recovers One Billion Gallons of Unaccounted for Water

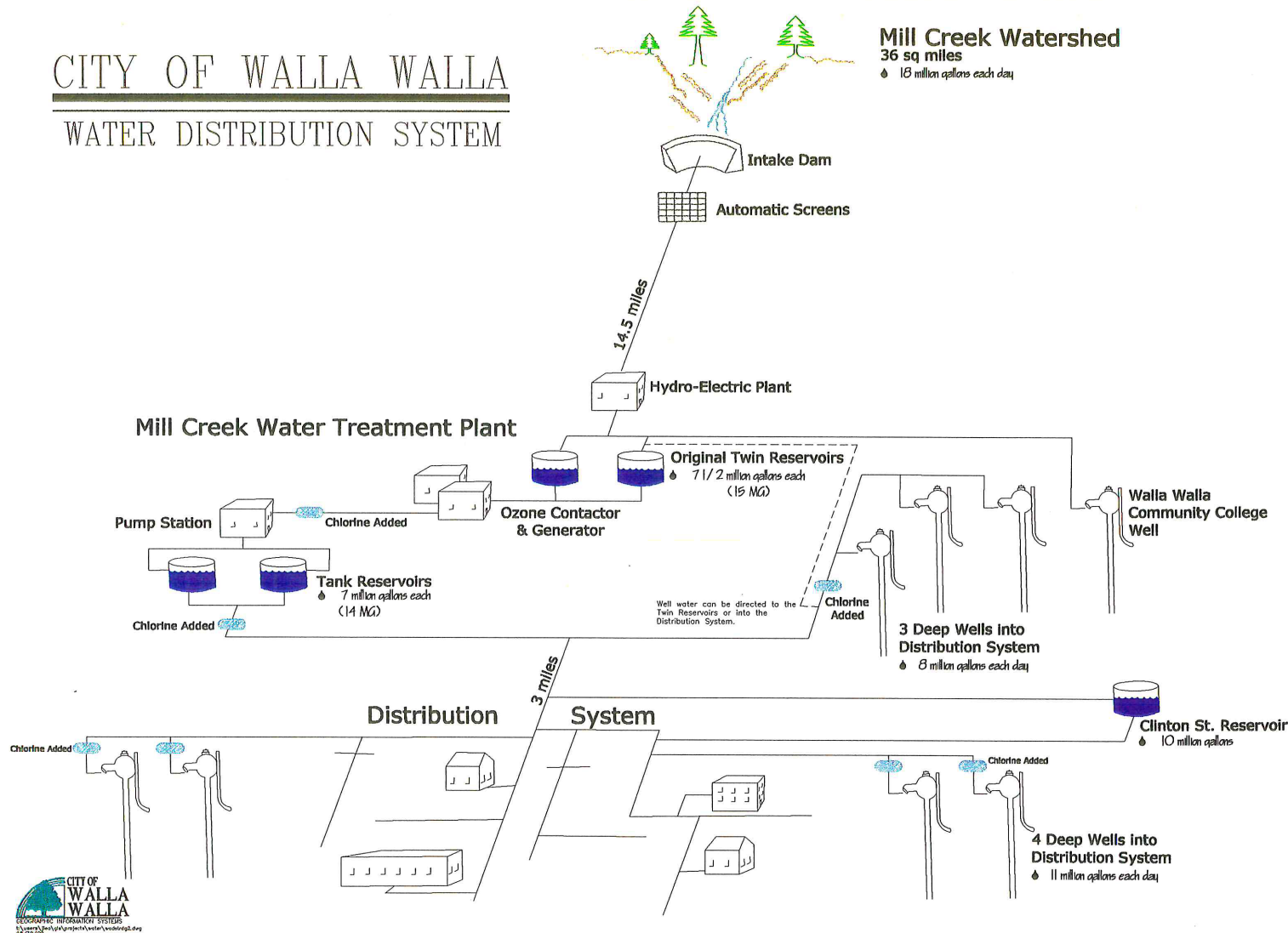
*Sensus OMNI meters, a rigorous testing program and infrastructure upgrades save JEA time and money*

\*AWWA M6 Manual of Water Supply Practices, ch 5, p 80

\*\*AWWA M6 Manual of Water Supply Practices, ch 5, p 59



# Metering fundamentals: tighten up the control boundary

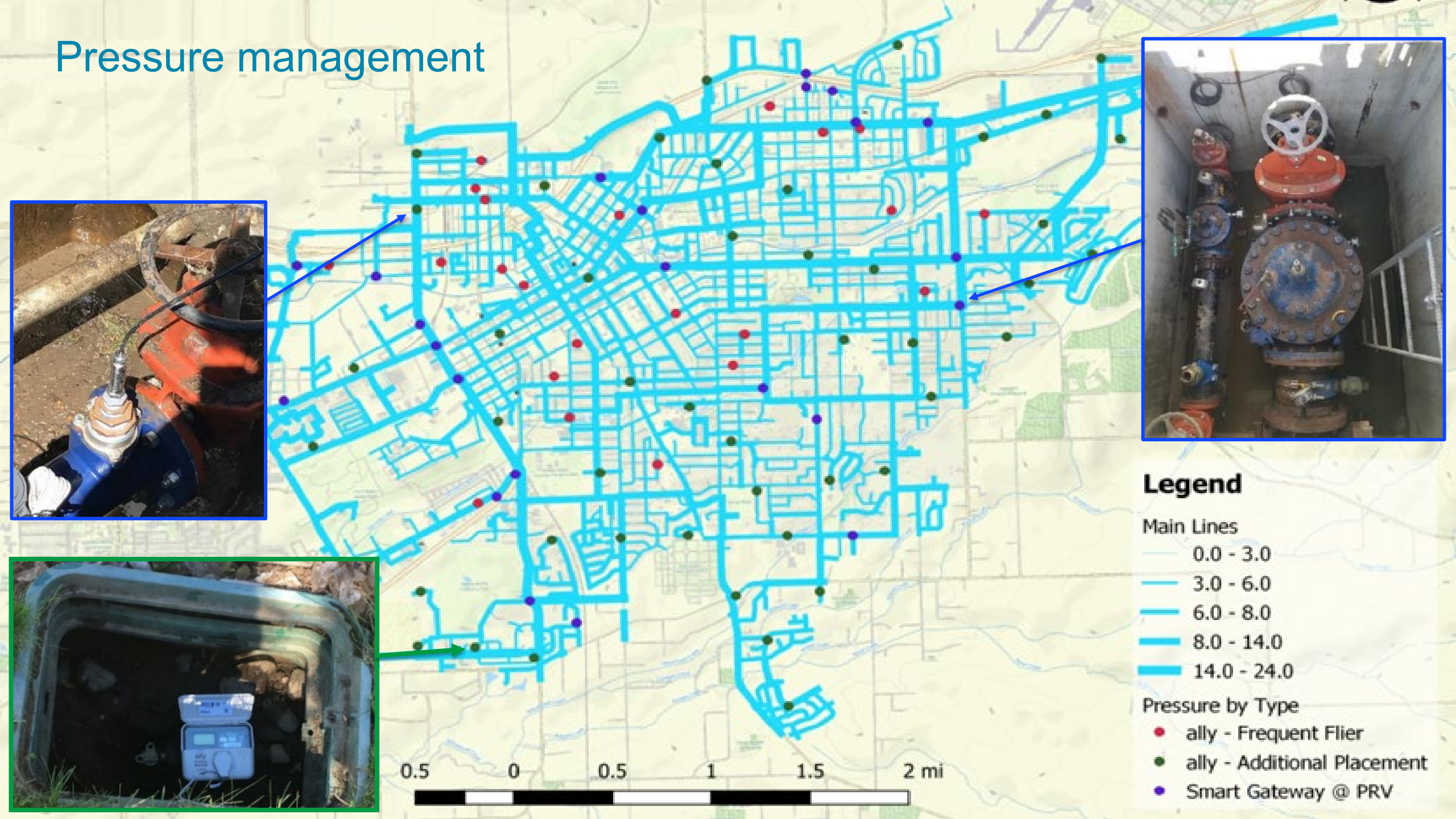


## Meter all inputs

Meter all outputs,  
including those that are  
not billed!

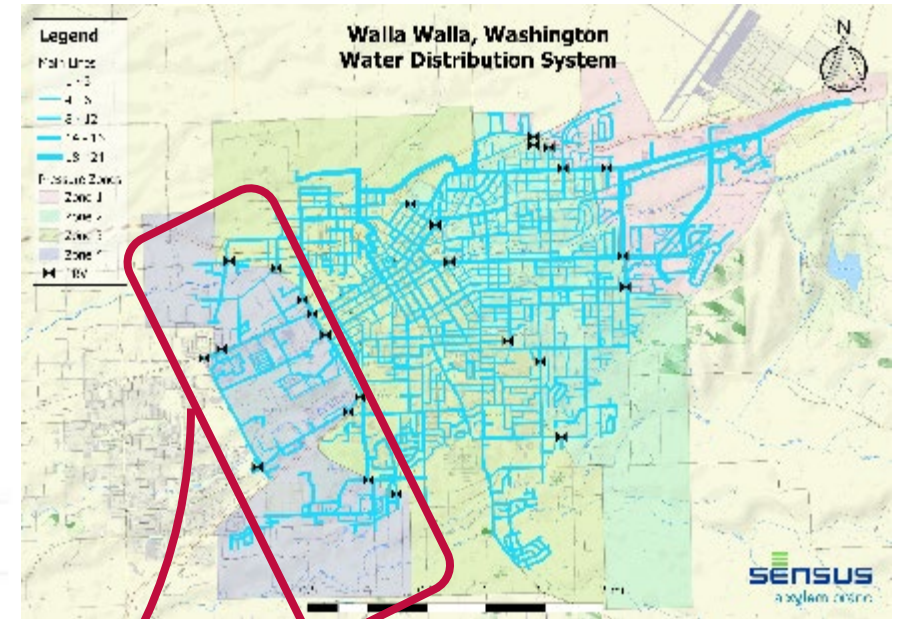
- Municipal & utility uses
- Flushing
- etc

# Pressure management



# Pressure management

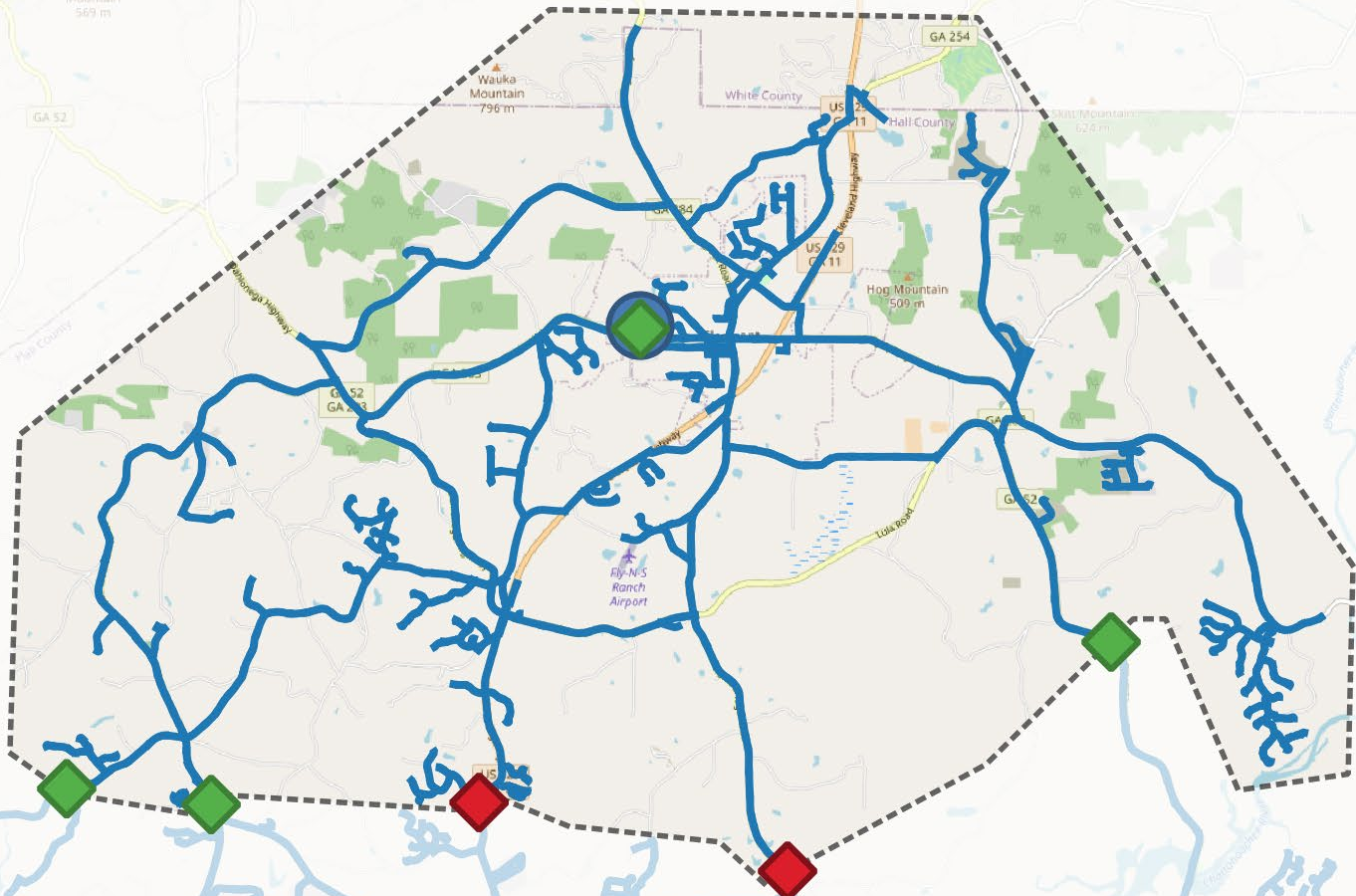
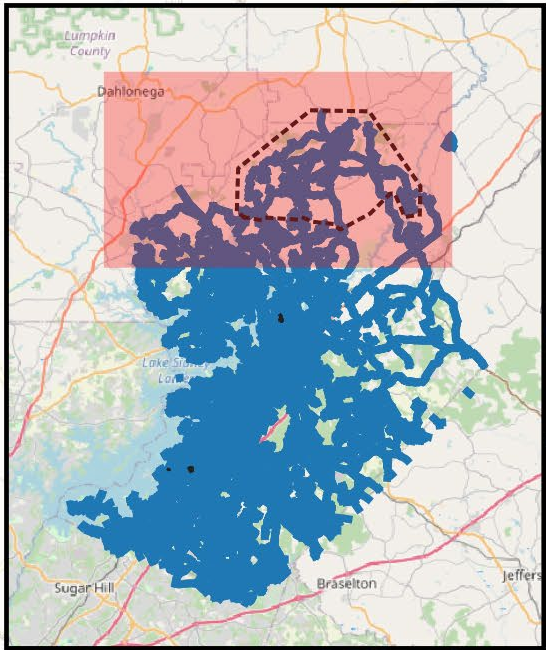
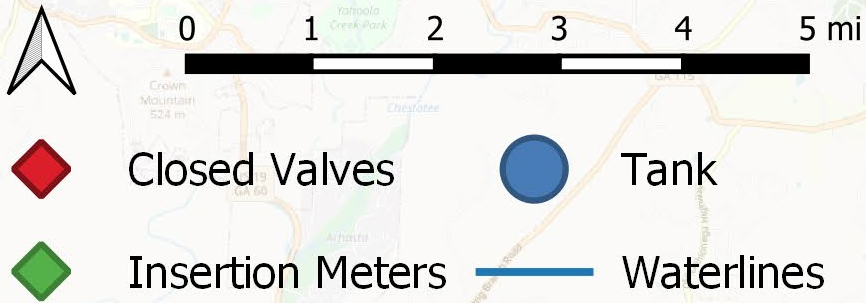
Reducing and stabilizing pressures reduces background leakage and stress on pipes.



- ✓ Stabilize pressure
- ✓ Reduce pressure
- ✓ Validation

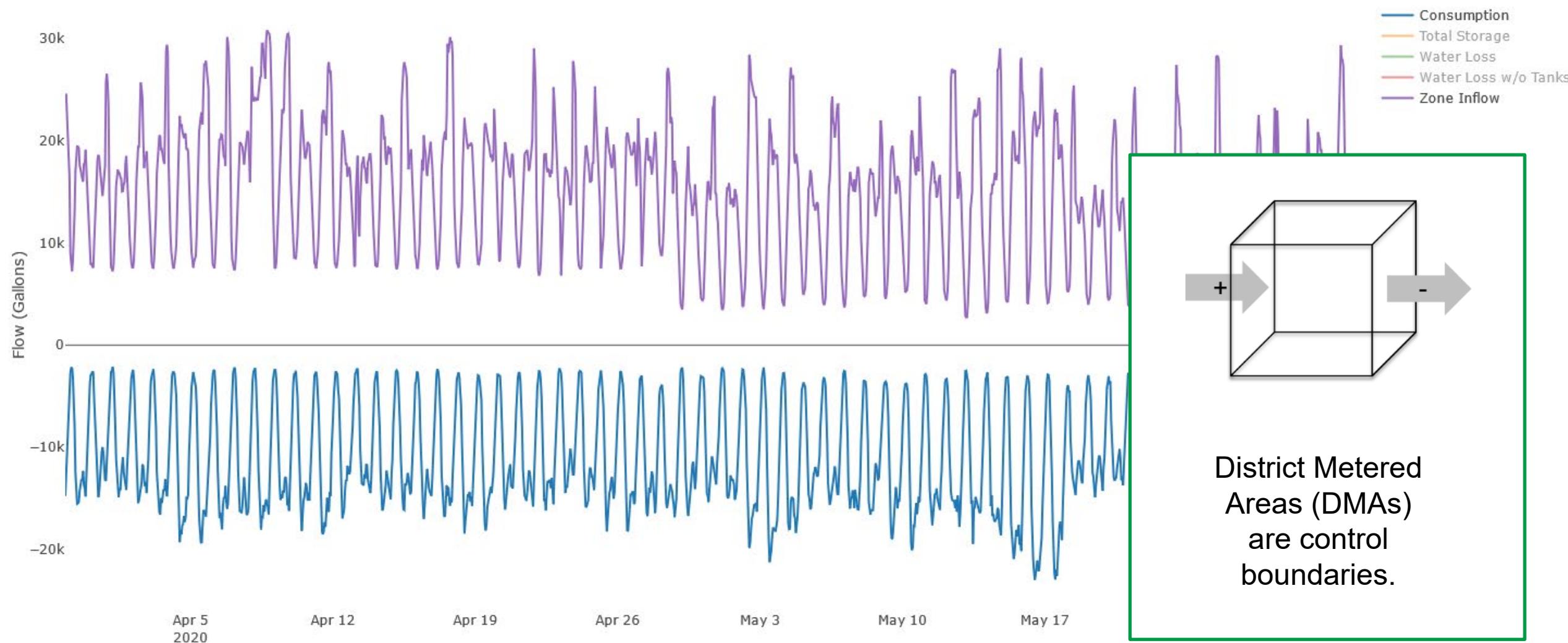


# District Metered Areas



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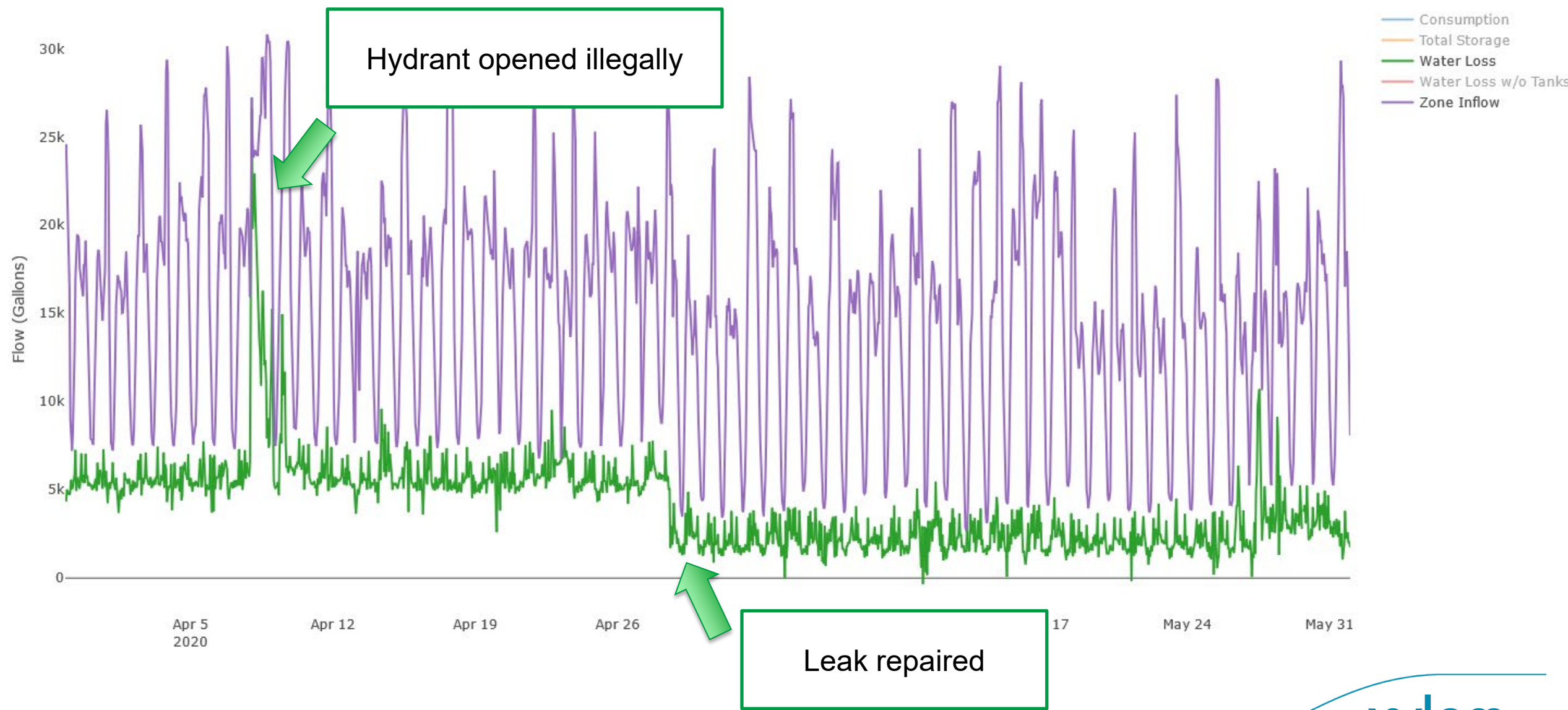
Hourly Water Balance





# District Metered Areas

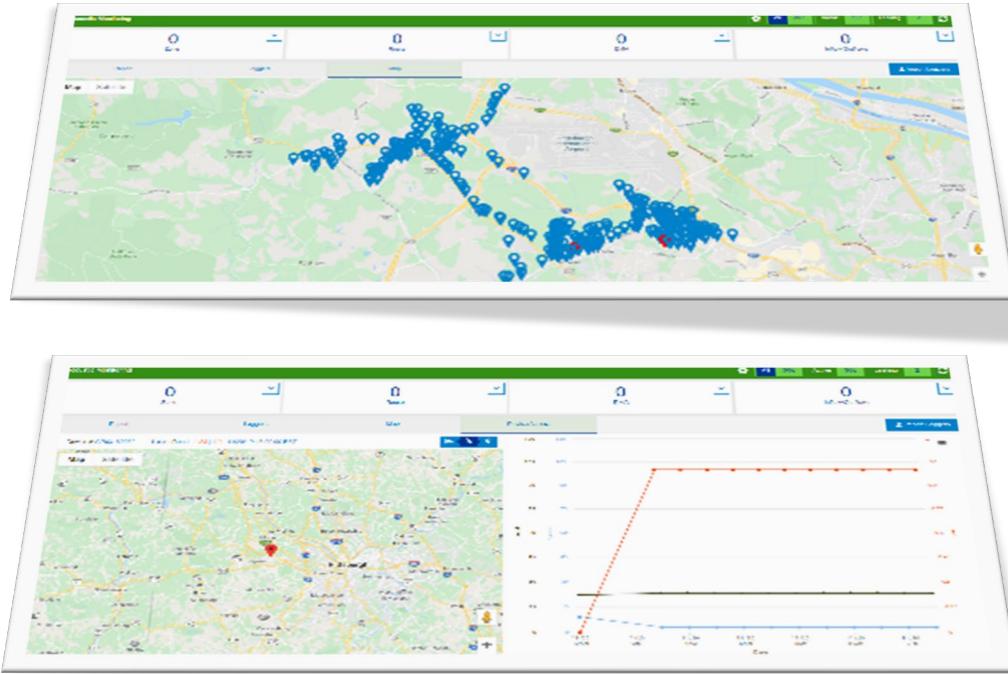
Hourly Water Balance





# Acoustic monitoring

Acoustic monitoring identifies leaks by the vibration they create.

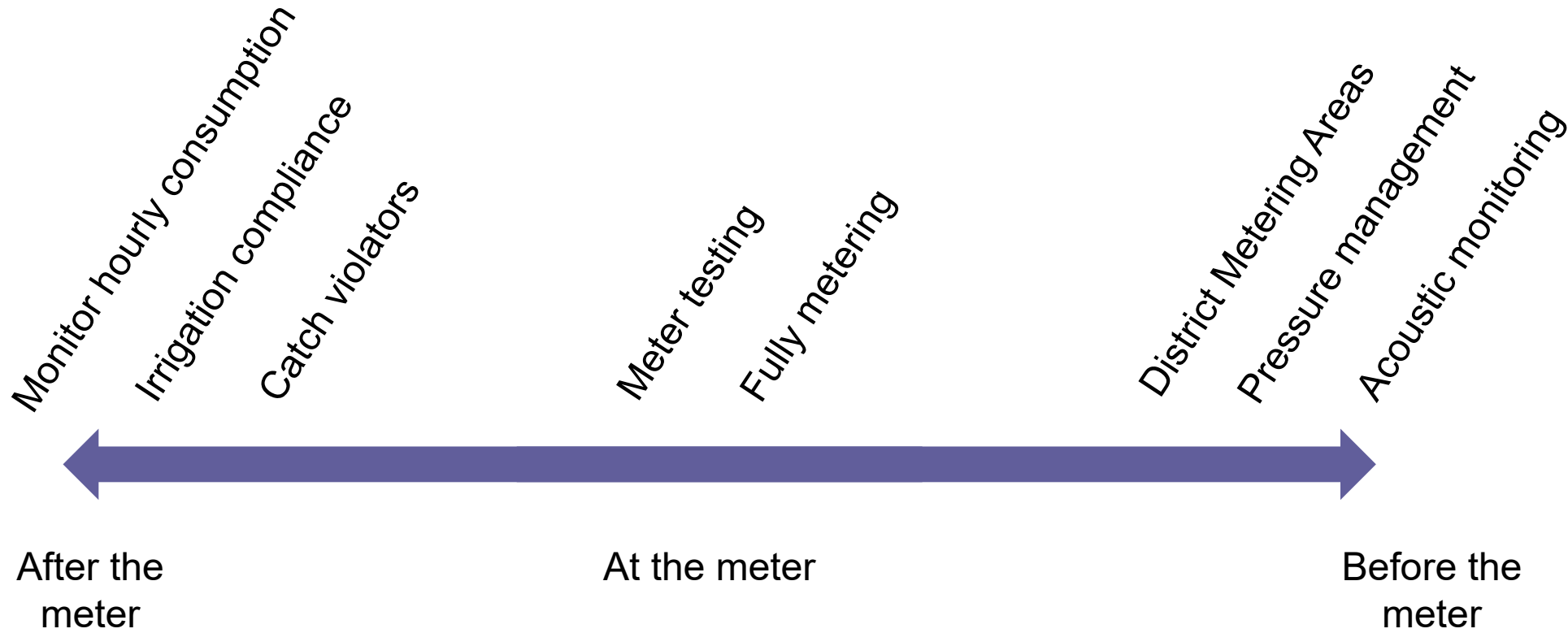


Permalog acoustic devices connect to Sensus pit-mount SmartPoint

Magnetic coupling to system valves

Acoustic monitoring application contextualizes acoustic data to identify leaks

# Conclusion: a Smart Utility Network can support many conservation goals



# Questions?

JAMES SMITH, DIRECTOR OF C&I METROLOGY