

June 1, 2018



SB 555: Water Loss Performance Standards

Public Stakeholder
Workgroup Meeting #2

Water Loss Monitoring Technologies



Descriptors for Technologies



Measures water loss volume



Helps locate leaks



Identifies water loss type



Transmits data



Gathers more data



Acoustic



Conducts analysis



Automates



High cost

Quantifying and Monitoring

Desktop analysis and field records



Water loss audit



Component analysis



Piping Material at location of failure

Age of piping at location of failure

Average Pressure at Failure Location

Suspected cause of failure

Soil condition at location of failure

How was failure repaired?

Nature of failure

Leakage management software



Leak flow calculations



Quantifying and Monitoring

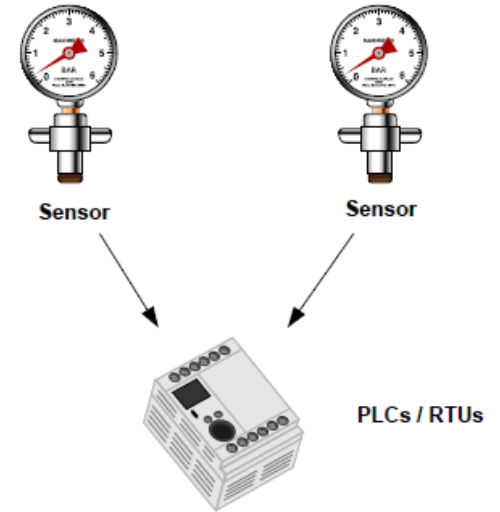
Desktop analysis and field records



Advanced metering infrastructure



Geographic Information Systems



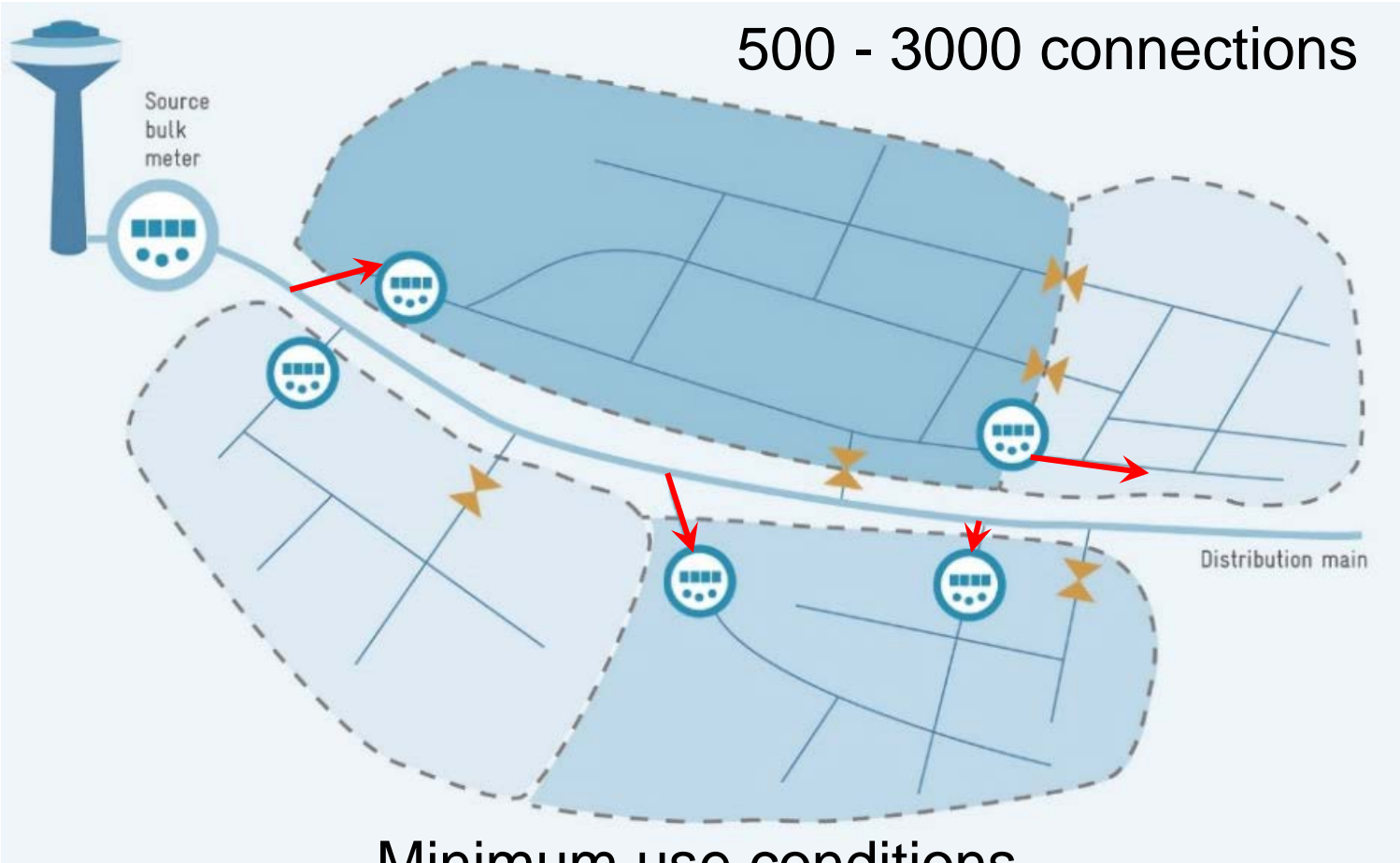
Supervisory Control and Data Acquisition (SCADA)



Quantifying and Monitoring

Field measurements

District Metered Areas



Real Loss Interventions

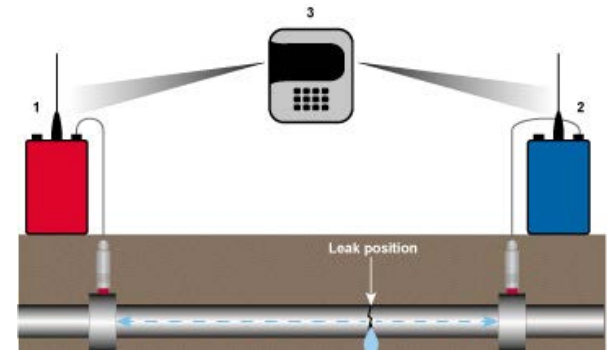
Acoustic leak detection



Ground microphone



Probes



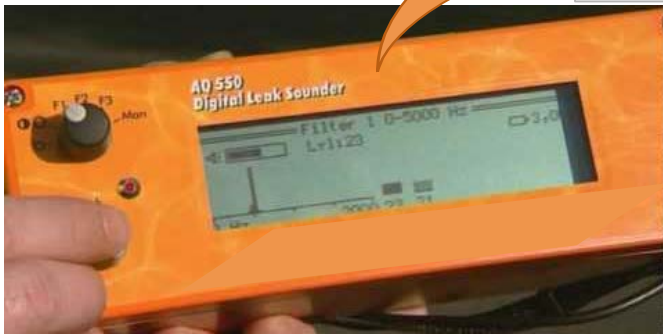
Correlators



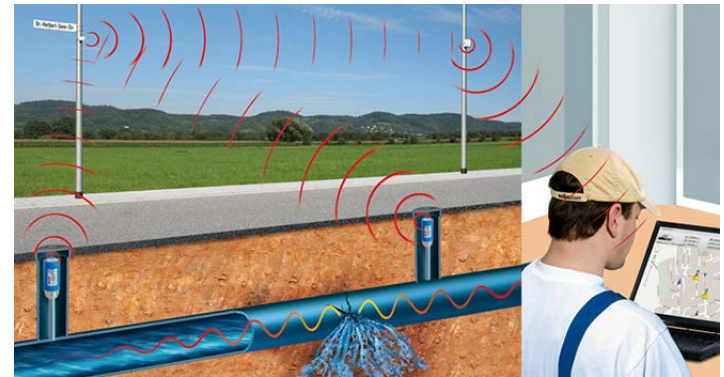
Real Loss Interventions

Acoustic leak detection

Loggers



Transmitters



Inline leak detection



Real Loss Interventions

Surveys



Visual surveys



Hydrant surveys

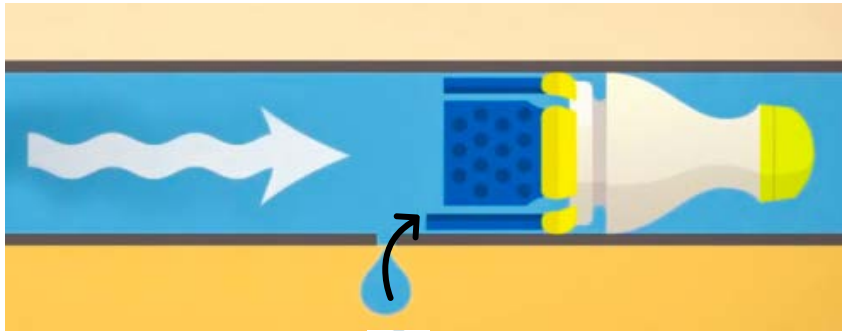


Comprehensive surveys

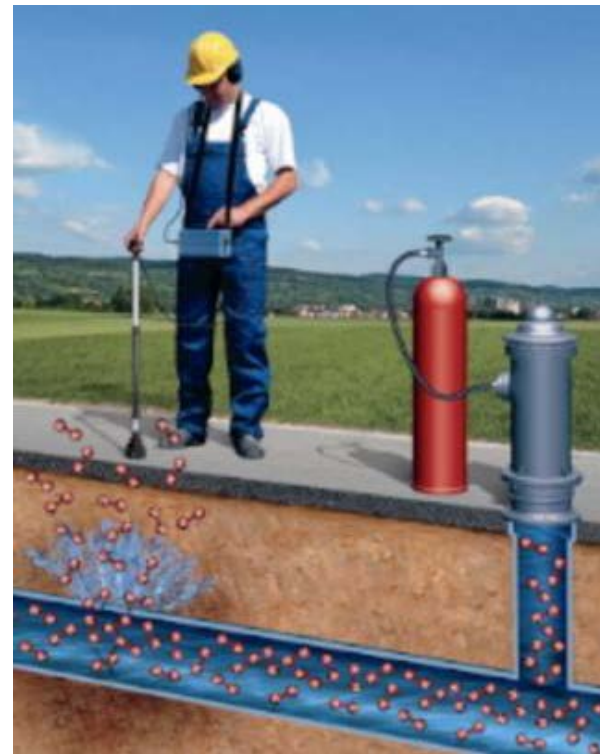
Real Loss Interventions

Pressure-based or Tracer gas

Pressure-based Inline leak detection



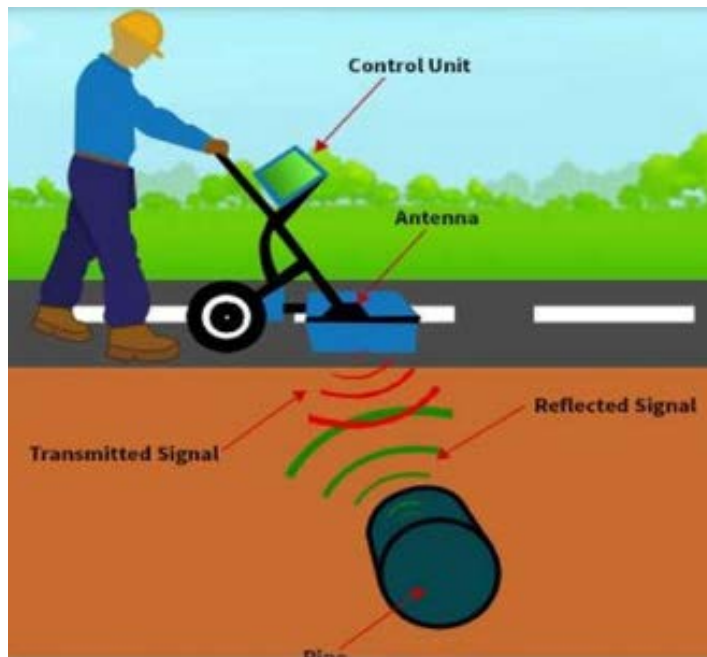
Tracer gas detection



Real Loss Interventions

Imaging/Radar

Ground Penetrating Radar



Inline camera

Real Loss Interventions

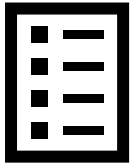
Repairs



Timely response



Coordinate between detection and repair crews



Record type of failure




Estimate volume of leakage

Monitoring

Desktop analysis

Water loss
audit 

Identifying 
high pressure
zones

+ Field records

Component
analysis



Leak flow
calculations



Leakage/Pressure/Transient
management software



Advanced
metering



Geographic Information
Systems

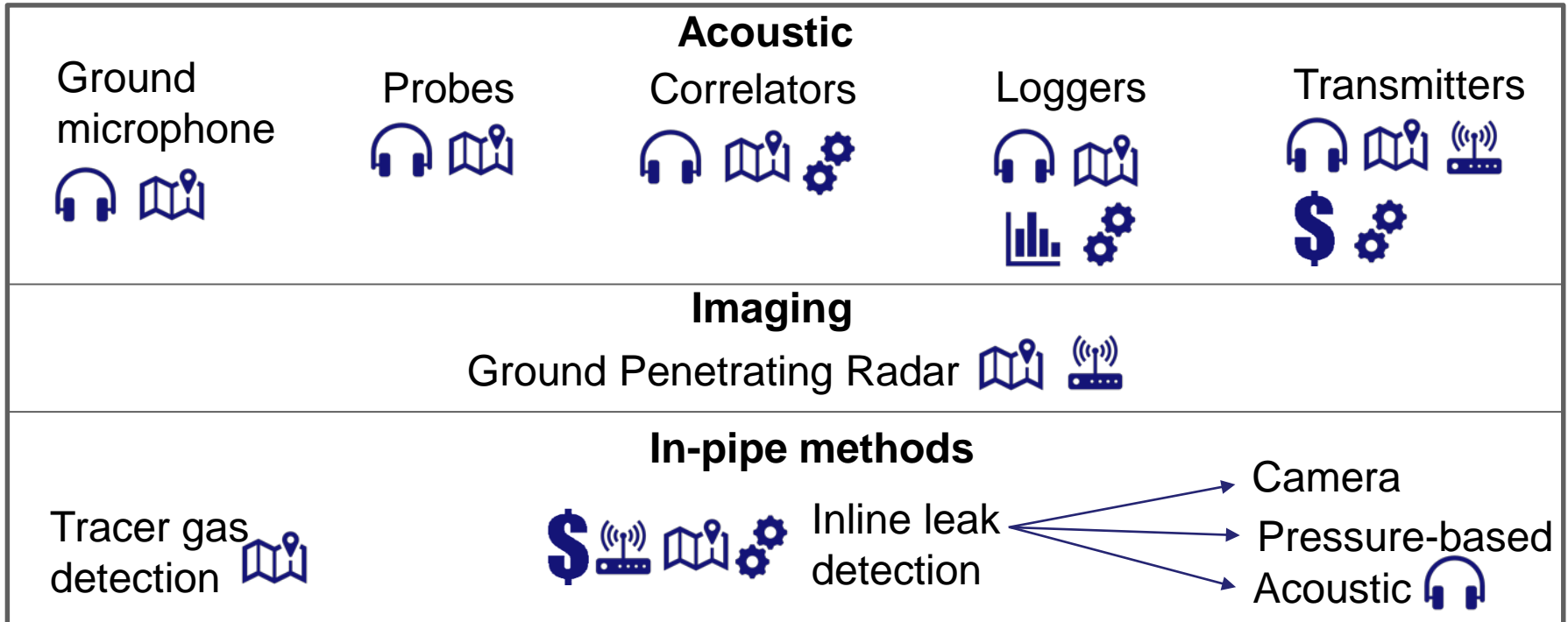


SCADA
(Telemetry)



Real Loss Interventions

Detection



Quick response to repairs and improved recording

Questions for Discussion

- Has your agency identified priorities for your distribution system to address water loss control?
- Has your agency planned or implemented an approach for reducing water loss? If yes, what are the steps involved and technologies used?
- Which distribution system characteristics and operational requirements did your agency need to consider while selecting or implementing these technologies?
- Did your agency need to amend your approach based on lessons learned or new findings?
- Are there technologies and practices that your agency is unable to implement in its water distribution system, and why?