

Lead & Copper Rule Revisions

Southeast Florida Utility Council
January 10, 2022



Agenda

- Lead & Copper Rule Revisions
- Key Compliance Requirements
- Lead & Copper Rule Improvements
- LCR Funding Opportunities
- BV Solutions

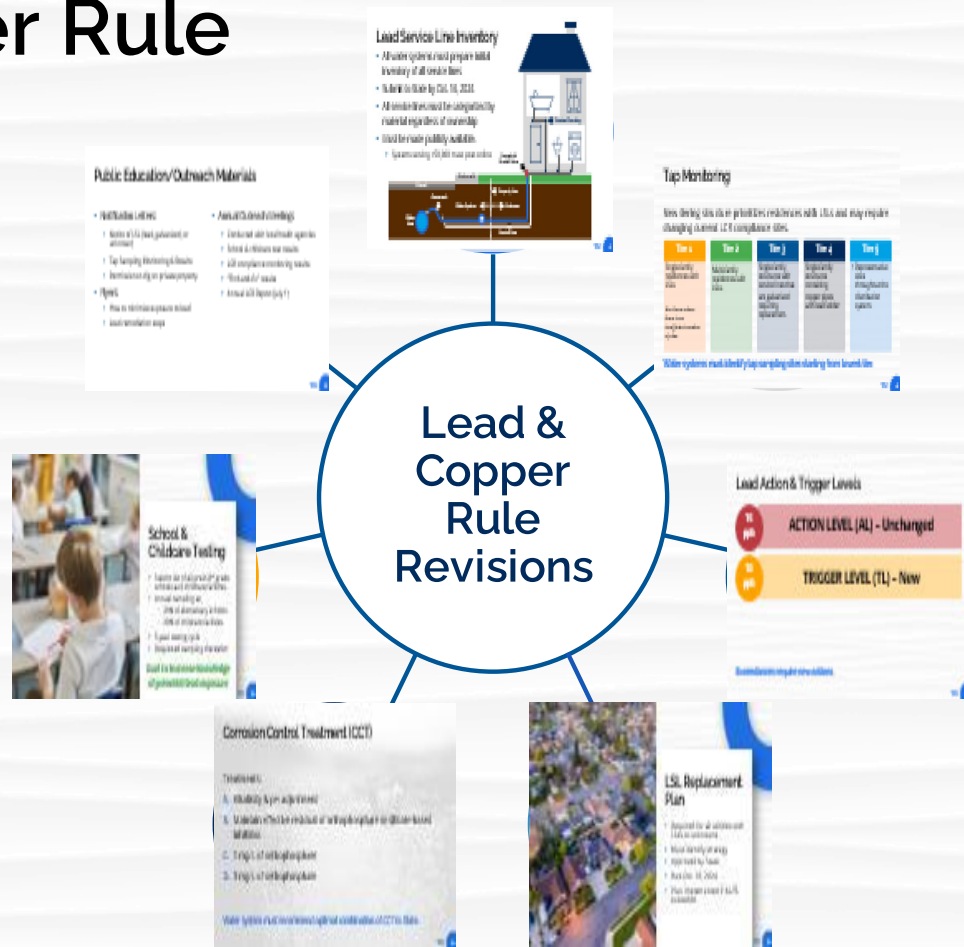
Lead & Copper Rule Revisions (LCRR)

Revised Lead & Copper Rule

Enacted:
Dec. 16, 2021

Compliance Date:
Oct. 16, 2024

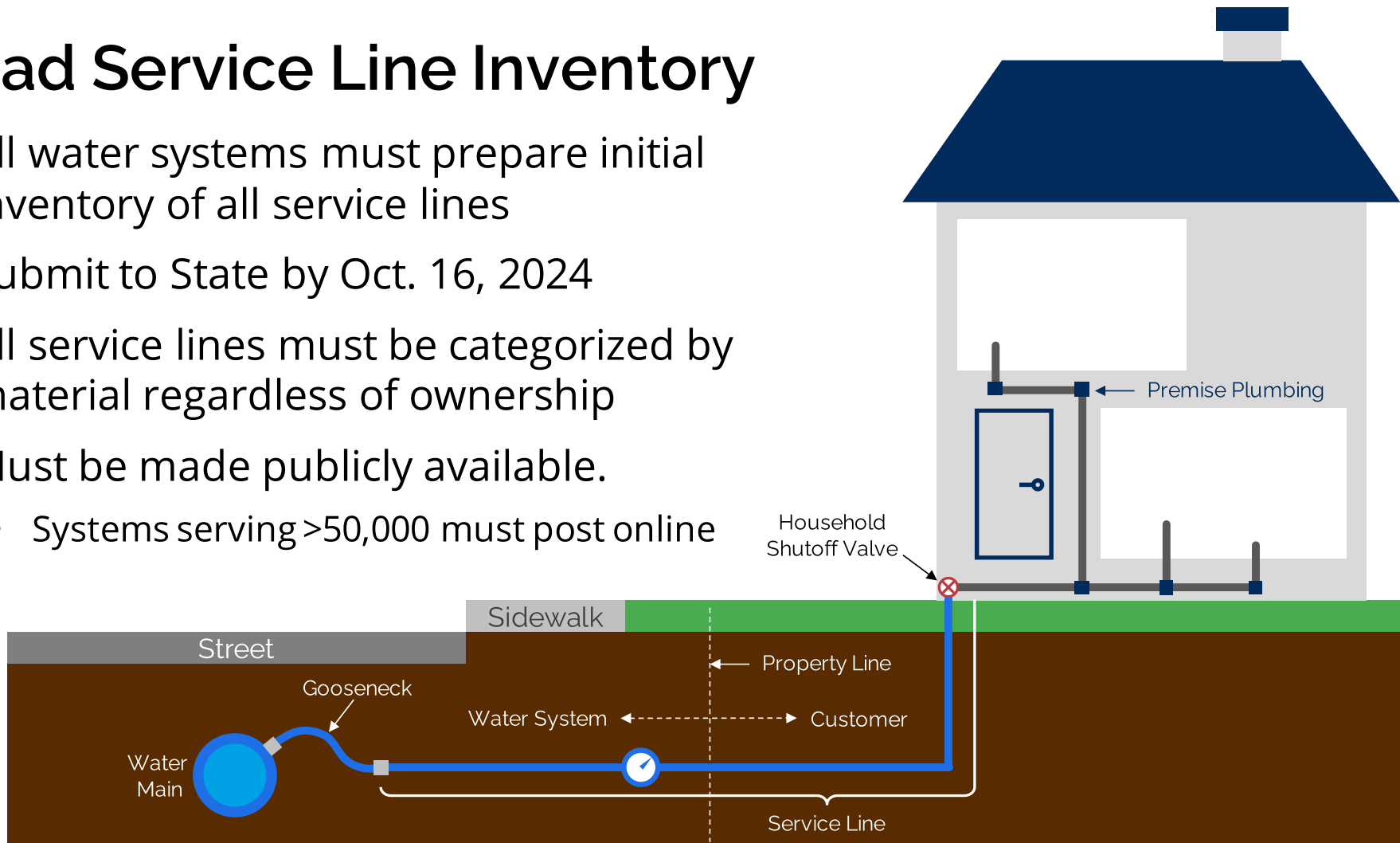
Rule:
40 CFR 141.80-93 (Subpart I)





Lead Service Line Inventory

- All water systems must prepare initial inventory of all service lines
- Submit to State by Oct. 16, 2024
- All service lines must be categorized by material regardless of ownership
- Must be made publicly available.
 - Systems serving >50,000 must post online



Service Line Material Categories

Each service line, or portion of the service line where ownership splits, must be categorized in the following manner:

Lead

Service line is made of lead.

Galvanized Requiring Replacement

Galvanized materials downstream of lead materials or unknown materials.

Lead Status Unknown

No documented evidence supporting material classification.

Non-Lead

Materials demonstrated to be neither "lead" nor "galvanized requiring replacement."

Identifying Materials

Construction Records

Building & Plumbing Codes

Permits

Other documentation identifying service line materials

Water System Records

Distribution System Maps & Drawings

Service Connection Records

Historical CIPs & Master Plans

Standard Operating Procedures

Inspection Records

All inspection records of the distribution system that indicate service line materials for each connection.

Other Sources

Any resource, information, or identification method provided or required by the State to assess service line materials.

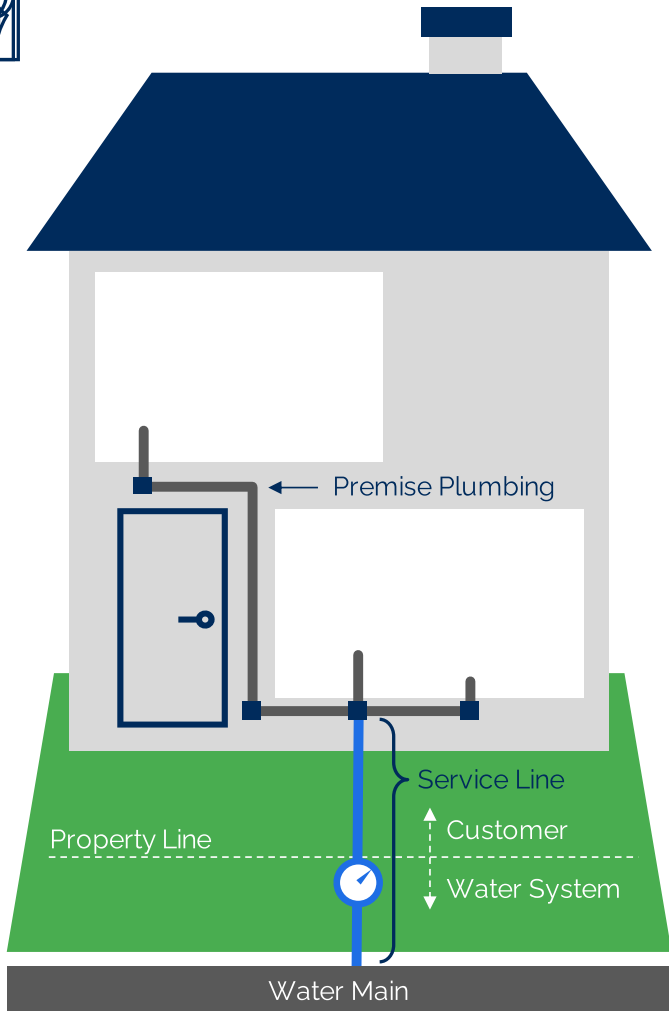
These criteria can be established as KPIs in existing asset management systems.

Tap Monitoring

New tiering structure prioritizes residences with LSLs and may require changing current LCR compliance sites.

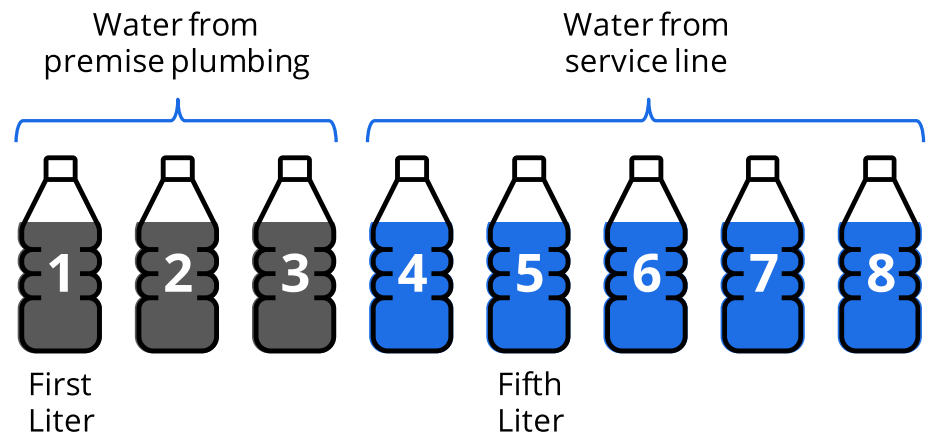
Tier 1	Tier 2	Tier 3	Tier 4	Tier 5
Single-family residences with LSLs. <i>Use these unless there is an insufficient number of sites.</i>	Multi-family residences with LSLs.	Single-family structures with service lines that are galvanized requiring replacement.	Single-family structures containing copper pipes with lead solder.	<ul style="list-style-type: none">• Representative sites throughout the distribution system.

Water systems must identify tap sampling sites starting from lowest tier.



5TH Liter Sampling

For homes with lead service lines, the 5th liter of water must be tested for lead.



Samples collected after stagnation for 6 hours.

Lead Action & Trigger Levels

15
ppb

ACTION LEVEL (AL) – Unchanged

10
ppb

TRIGGER LEVEL (TL) – New

Exceedances require new actions.

Lead Action & Trigger Levels

**>15
ppb**

- Compliance site exceedance: “Find-and-fix”
- System wide exceedance: Tier 1 Notification
 - Mandatory LSL replacement at 3% annually.
 - Start pipe-loop testing within 1 year.
 - Conduct “standard monitoring” every 6 months.

ACTION LEVEL (AL)

**10-15
ppb**

- Goal-based LSL replacement at State-approved annual rate.
- Optimize/re-optimize corrosion control treatment.
- Conduct “reduced monitoring” on annual basis
 - Following 2 consecutive standard monitoring periods where 90th percentile lead levels do not exceed AL.

TRIGGER LEVEL (TL)

**0-10
ppb**

- Voluntary replacement of LSLs.
- Maintain defined optimal water quality control parameters (OWQCPs) reflecting OCCT.
- Conduct “reduced monitoring” on 1 to 3 year basis, per State approval.
 - Following 2 consecutive standard monitoring periods where 90th percentile lead levels do not exceed TL.



LSL Replacement Plan

- Required for all utilities with LSLs or unknowns
- Must identify strategy
- Approved by State
- Due Oct. 16, 2024
- Plan implemented if AL/TL exceeded.



Service Line Replacement

- Involves:
 - Customer notification/education
 - Construction/training
 - Whole house flushing
 - Provide pitcher filter
 - Follow-up sampling

Includes public and private side

Corrosion Control Treatment (CCT)

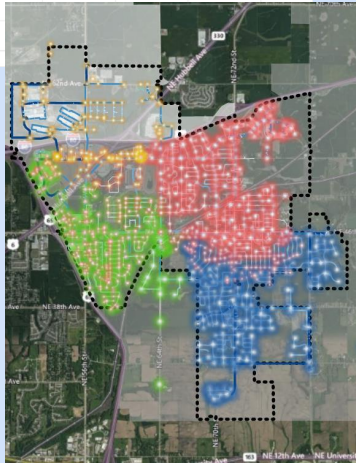
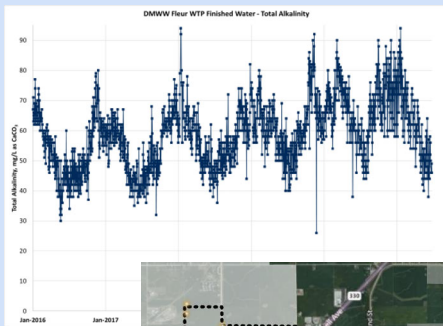
Treatments:

- A. Alkalinity & pH adjustment
- B. Maintain effective residual of orthophosphate or silicate-based inhibitor.
- C. 1 mg/L of orthophosphate
- D. 3 mg/L of orthophosphate

Water system must recommend optimal combination of CCT to State.

CCT Evaluation Tools

Desktop Modeling



Bench-Scale Testing



Pipe-Loop Testing





School & Childcare Testing

- Submit list of all pre-K-8th grade schools and childcare facilities
- Annual sampling at:
 - 20% of elementary schools
 - 20% of childcare facilities
- 5-year testing cycle
- Requested sampling thereafter

Goal to increase knowledge of potential lead exposure

Public Education/Outreach Materials

- Notification Letters:
 - Notice of LSL (lead, galvanized, or unknown)
 - Tap Sampling Monitoring & Results
 - Permission to dig on private property
- Flyers:
 - How to minimize exposure to lead
 - Lead remediation steps
- Annual Outreach Meetings
 - Conducted with local health agencies
 - School & childcare test results
 - LCR compliance monitoring results
 - “Find-and-fix” results
 - Annual LCR Report (July 1)

Key LCRR Compliance Requirements

LCRR Compliance Requirements **BY** Oct. 16, 2024

- Deliverables to submit to Primacy Agency for Approval:
 1. Public facing service line inventory (public and private sides included)
 2. Service Line Replacement Plan
 3. Updated LCR Compliance Monitoring Plan (sampling at selected homes)
 4. School and Childcare List and Sampling Plan
- Public education and outreach materials prepared

Required for every utility – even if they don't have lead service lines

LCRR Compliance Requirements **AFTER** Oct. 16, 2024

- Publish public facing service line inventory
- Notify customers with lead/unknown/“galv. req. replacement” service lines
- Begin sampling at schools & childcare sites
- Standard public education and outreach
- Begin sampling for LCR compliance
 - If 90th percentile lead level exceeds new trigger (10 µg/L)
 - Begin replacing service lines
 - Conduct corrosion control study
 - Additional public education and outreach

Lead & Copper Rule Improvements (LCRI)

LCR Improvements

- Replacement of all LSLs within 10 years.
- Strengthen tap sampling/testing methods.
 - LSL vs leaded plumbing materials
- Revisit lead trigger and action levels.
- Prioritize historically underserved communities.

EPA intends to finalize rule prior to October 16, 2024



Funding Opportunities

Funding Opportunities

- Infrastructure Investment and Jobs Act
 - Commits **\$11.7 billion** to DWSRF General Fund
 - Can be used for LSLs
 - **\$70.7 million** allotted to Florida annually for 2022-2026
 - Commits **\$15 billion** to DWSRF designated for LSLs
 - **\$111.3 million** allotted to Florida annually for 2022-2026
 - \$59.5 million annually through Water Infrastructure Finance and Innovation Act (WIFIA) loans

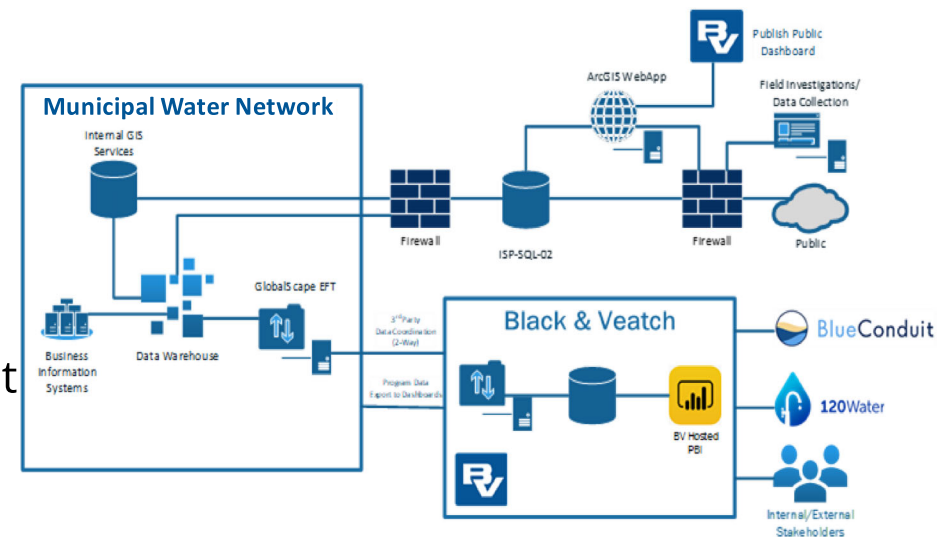


Black & Veatch Solutions

DATA MANAGEMENT FOR LCRR

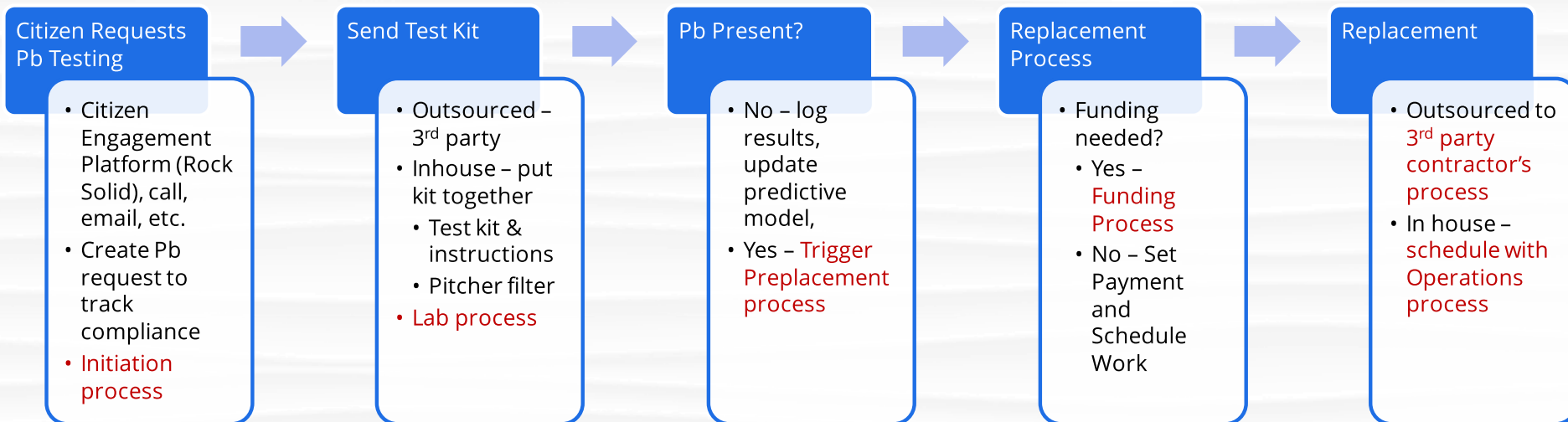
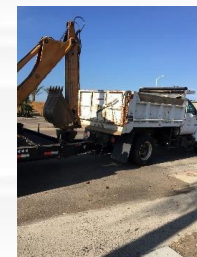
- **Sharing data from multiple systems across multiple departments**
 - Utilities – Management, Operations, Lab testing, Utility Billing, IT, Contractors
 - Exec. Mgmt., Community Outreach, IT, Legal, Finance
 - Public
- **Transparency & Data Reliability**
 - Compliance documentation
 - Need for reliable & defensible data
 - Predictive modeling – calibration & refinement
 - Integration to other municipal functions

Key systems	
• CMMS	• GIS
• Customer Service	• Billing
• Addressing	• Laboratory
• Dashboarding/BI	• Permitting
• Municipal Website	• Project Mgmt.





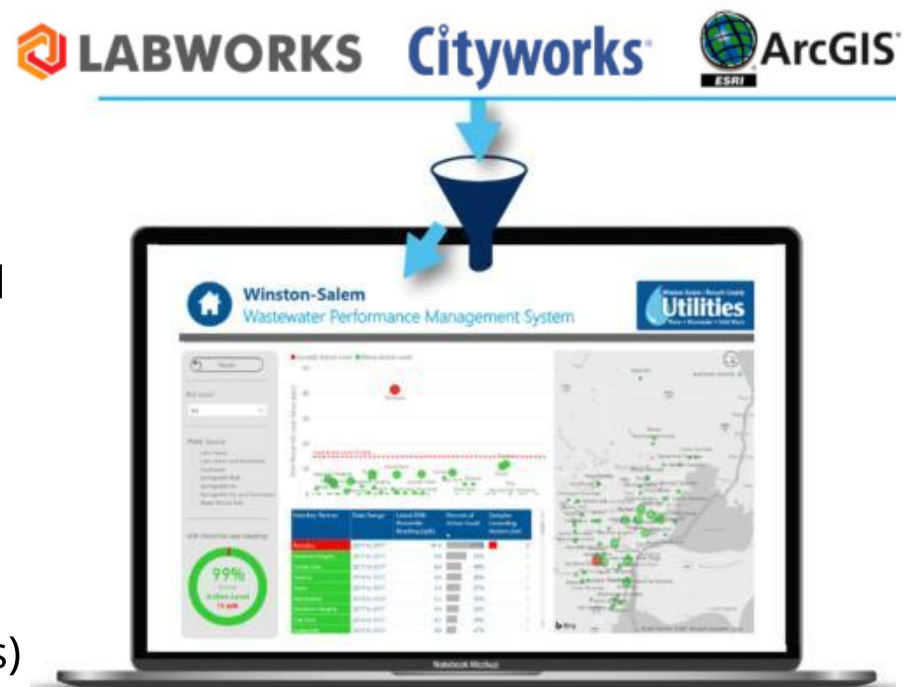
PORTION OF A SAMPLE WORKFLOW



Each process & **sub-process** has defensible data and KPI for dashboard reporting

How BV Simplifies the LCRR

- Complete compliance deliverables
- **Additional Opportunities**
 - Data integration for streamlining going forward
 - Dashboards for tracking and next steps
 - Funding/Financing evaluation
 - Manage subcontracts
 - Service line predictive modeling
 - Field investigations (potholes/replacements)
 - Laboratory services and notification
 - Public relations



Questions?



Contact Us

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