

Now Required – Get to Know Your Leakage

An Introduction to Leakage Component Analysis

W S O

March 14, 2019

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Agenda

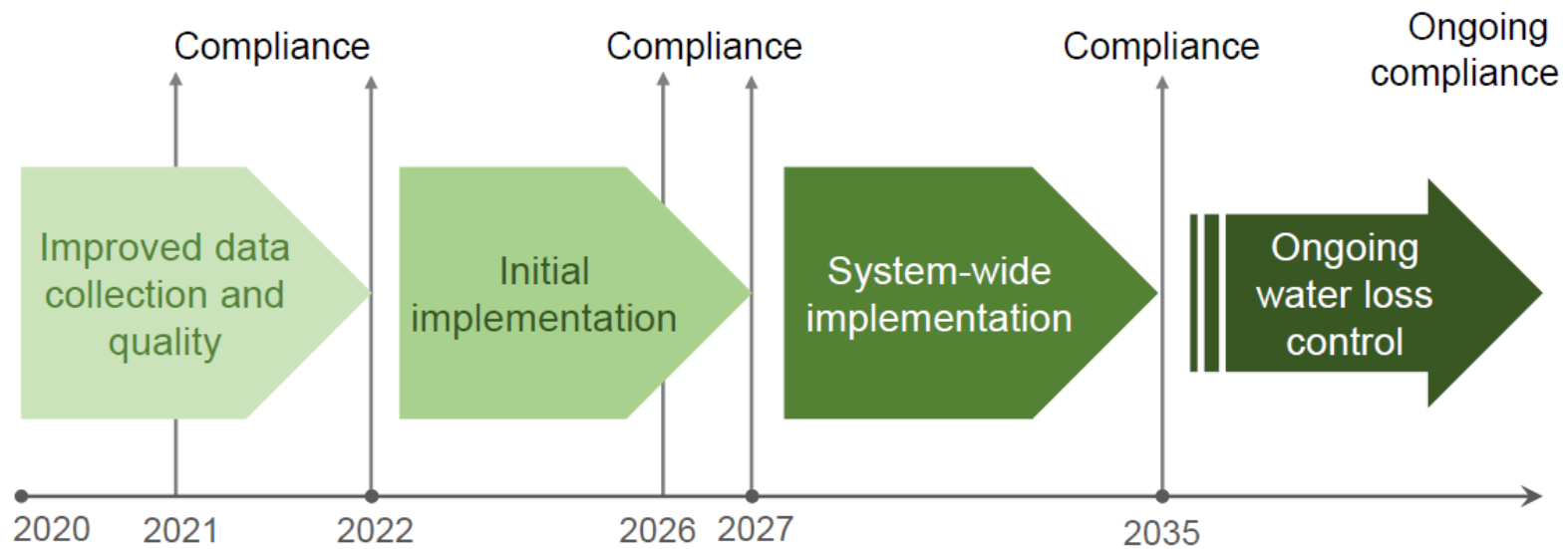
- Hello!
- Context: SB555 Performance Standards Draft
- Method: Leakage Component Analysis
- Q&A

Regulation – Possibilities and Planning

Proposed Regulation

Proposed Regulation Timeline

*SWRCB recently previewed their performance target framework**



★ *Customized water loss target designated for each agency*

- *Phased approach*
- *Emphasis on component analysis*
- *Aligned timing with Conservation EO*

* https://www.waterboards.ca.gov/water_issues/programs/conservation_portal/water_loss_control.html

4 Phases of Compliance

Phase I	Phase II	Phase III	Phase IV
<i>Improved data collection & quality</i>	<i>Piloting implementation</i>	<i>System-wide implementation</i>	<i>Ongoing water loss control</i>
2020 – 2022	2023 – 2027	2028 – 2035	2036+
<p>Increase the reliability of real loss estimates and provide the basis for determining the available and appropriate water loss control strategies</p>	<p>Conduct pilot studies and observe efficiencies on a small scale before full-scale implementation.</p>	<p>Implement feasible technologies on a system-wide scale to achieve economic water loss reduction.</p>	<p>Maintain an appropriately low level of leakage to meet final water loss target.</p>
<ul style="list-style-type: none"> • Pressure DVG of 4+ • Submit RLCA #1 	<ul style="list-style-type: none"> • Submit RLCA #2 and #3 • Comply with initial allowable water loss volume 	<ul style="list-style-type: none"> • Comply with adjusted allowable water loss volume 	<ul style="list-style-type: none"> • Comply with final allowable water loss volume

Leakage Component Analysis – an Intro

Basic methodology and outcomes of a Component Analysis of Real Losses

Leakage Component Analysis

1

Different types of leakage, different solutions

2

Modeling volumes > assumptions

3

Outcome: informed interventions

Leakage Component Analysis



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**Water
Research**
FOUNDATION

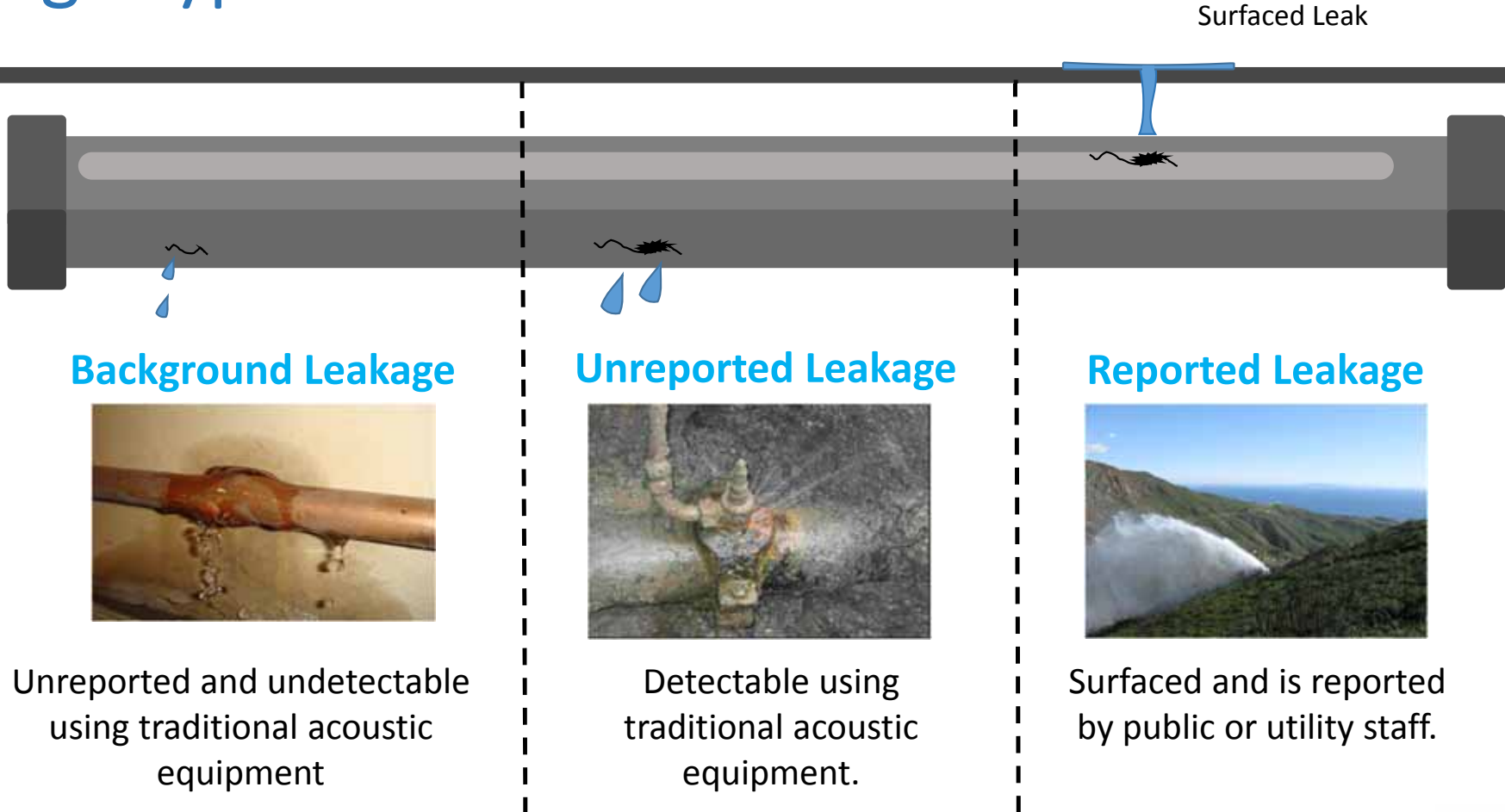
Project 4372A:

[Real Loss Component Analysis – A Tool for Economic Water Loss Control](#)

available for free on the WRF website

1. Complete a water audit (as required by SB555).
2. Collect all leakage repair data available.
3. Complete the component analysis model.
4. Inform development of leakage recovery program.

Leakage Types



Unreported and undetectable using traditional acoustic equipment

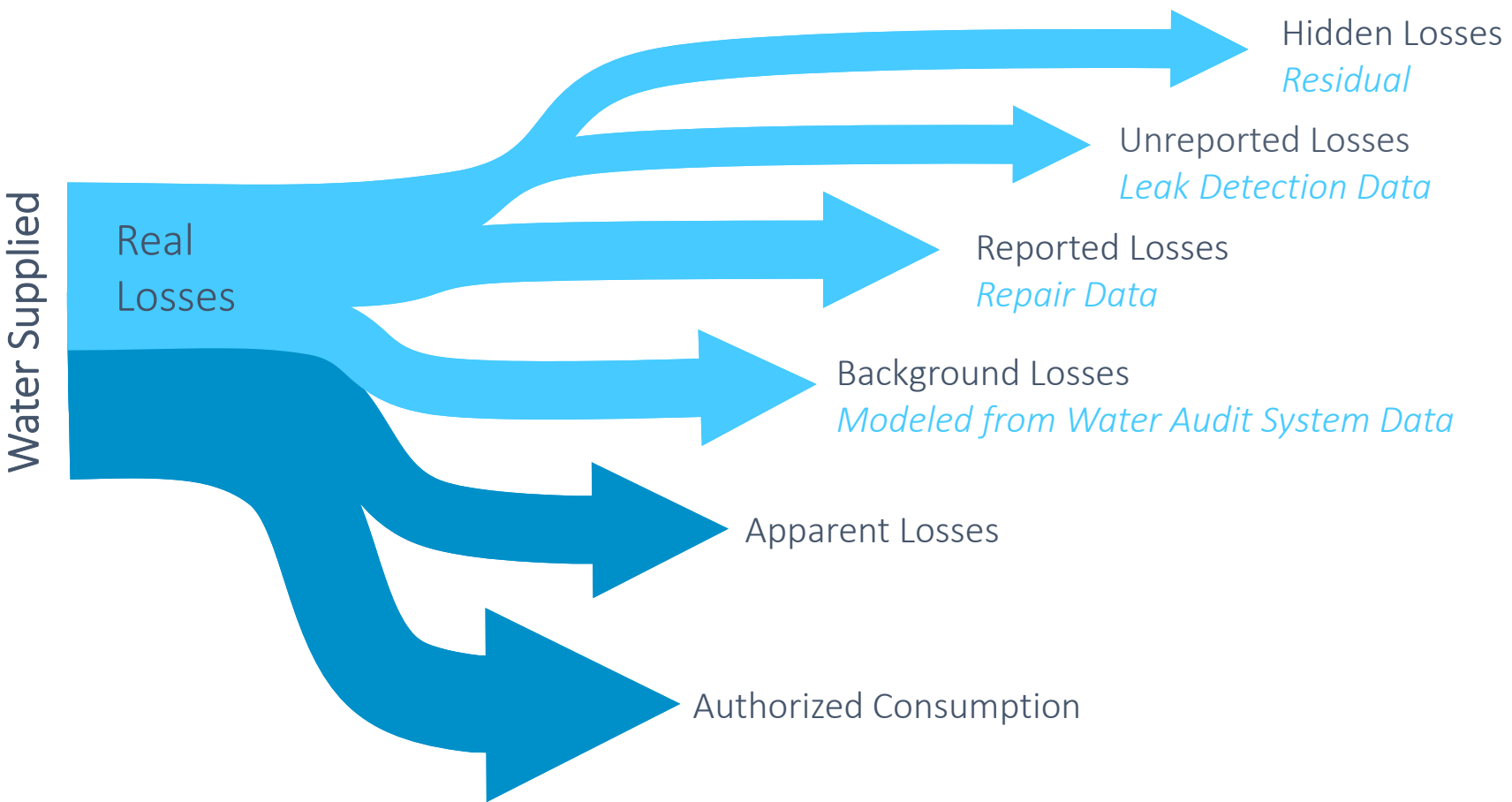


Detectable using traditional acoustic equipment.



Surfaced and is reported by public or utility staff.

Leakage Component Analysis



Reported and Unreported Leakage

of leaks x *average flow rate* x *average run time*

Infrastructure	Diameter	Count of Leaks	Flow Rate (gpm)	Average Run Time (hours)	Annual Leakage (MG)
main	8"	6	46	8.25	3.3



failure repair records

estimated based on pipe size, orifice size, or infrastructure type using BABE methodology

awareness time estimation + failure repair records for location and repair time

Considerations for What's Next

- **Who** or what department is responsible for reporting and storing repair data?
- **How** do you currently track repair data (white board, work order system, spreadsheet?)
- **What** fields do you track in your repair data?

Thank You!

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