



GSA Public Buildings Service

Client Enrichment Series

Water Quality Management in GSA Facilities - Update

August 6, 2024



Welcome

Water Quality Management in GSA Facilities Update

August 6, 2024

*The presentation will start at
11:00 am EDT*

Note

Phones are automatically muted during the presentation. Submit questions to our presentation team via your Q&A pane and we'll answer as many questions as possible during the presentation.

The slide deck and session recording will be posted on our website:

<http://www.gsa.gov/ces>

Agenda

- 01 Introductions
- 02 Overview
- 03 Why Are We Testing?
- 04 Legionella Basics
- 05 How Are We Testing?
- 06 What If Corrective Action Is Needed?
- 07 Communication Process
- 08 Moving Forward
- 09 Q&A





01 Introductions

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Hello.



Brad Short
Acting Director of Risk Management
General Services Administration



Courtney Springer
Assistant Commissioner
General Services Administration



Dr. Janet Stout
Infectious Disease
Microbiologist
Special Pathogens Laboratory



Courtney Hatchel
Water Quality Management
Program Manager
General Services Administration



Dr. Abraham Cullom
Director of Water Safety and
Management
Special Pathogens Laboratory

02 Overview

Water Quality Management Strategy

Properly **maintaining and testing** a building's water system supports our efforts to reduce the presence of heavy metals, as well as conditions in which *Legionella* and other bacteria can grow. By proactively managing water quality, we can understand where issues affecting quality might occur and how to fix them. This can include checking the temperature and the levels of disinfectants at various places.

A proactive strategy allows us to protect the safety of employees and customers.



Our Preventative Measures



Our goal is to proactively **identify issues** and adjust water management practices to **prevent** any potential areas of concern.

As part of our updated water quality management strategy, we will conduct baseline **sampling and testing**.

Guidance to Maintain or Restore Water Quality

In FY24, an initial drinking water quality testing will be required for all active and occupied federally owned facilities that are over 1,000 SF with drinking water systems.

- Active federally owned facilities must implement the PBS Guidance to Maintain or Restore Water Quality. This requirement applies in a facility that meets the following criteria:
 - Buildings over 50,000 sqft. with one or more water booster pumps (both conditions must apply); *or*
 - Buildings over six stories in height.
- In addition, multiple buildings already have an ASHRAE 188 & 514 water management program implemented for the potable water system.
- Finally, buildings with Child Care Centers, Health Care Units and showers will also get regular flushing by the O&M vendor in those areas.





Drinking Water Testing

Drinking water testing will be used to implement a risk-based National Water Management Strategy



1,300+

Owned
Facilities



6,000+

Leased
Facilities



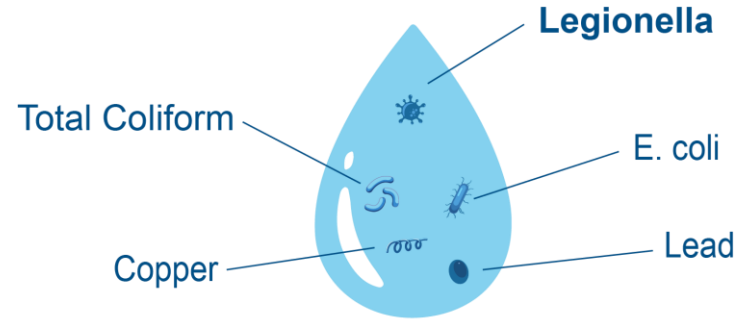
03 Why Are We Testing?

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Establish a Baseline Measurement

Even buildings that do a good job managing their water might detect *Legionella*. Maintaining **good water quality** can help ensure that small levels of *Legionella* - which is naturally present in drinking water - isn't able to grow, spread, or get anyone sick.

Testing will provide us with a **baseline measurement** so that we can better understand where to focus improvement efforts.



At GSA, **maintaining water quality** in our buildings and facilities is **pivotal** for a healthy work environment.

The Goal

Experts tell us that about half of the water samples they take come back positive for Legionella, which is **naturally occurring** in water.



The goal of water management is to ensure that it's **well controlled**.

04 Legionella Basics

The Disease We Want To Prevent

- Legionnaires' disease is pneumonia caused by bacteria in the family *Legionellaceae*.
- It is most often caused by one member of the *Legionella* family: *Legionella pneumophila*.
- Testing will determine if there is a risk. Proactive management will mitigate any perceived risks.

Strongest Risk Factors

- Older individuals (>50)
- Smokers
- Immunocompromised
 - Transplant patients
 - High-dose steroids for lung disease
 - Diabetes
 - Cancer

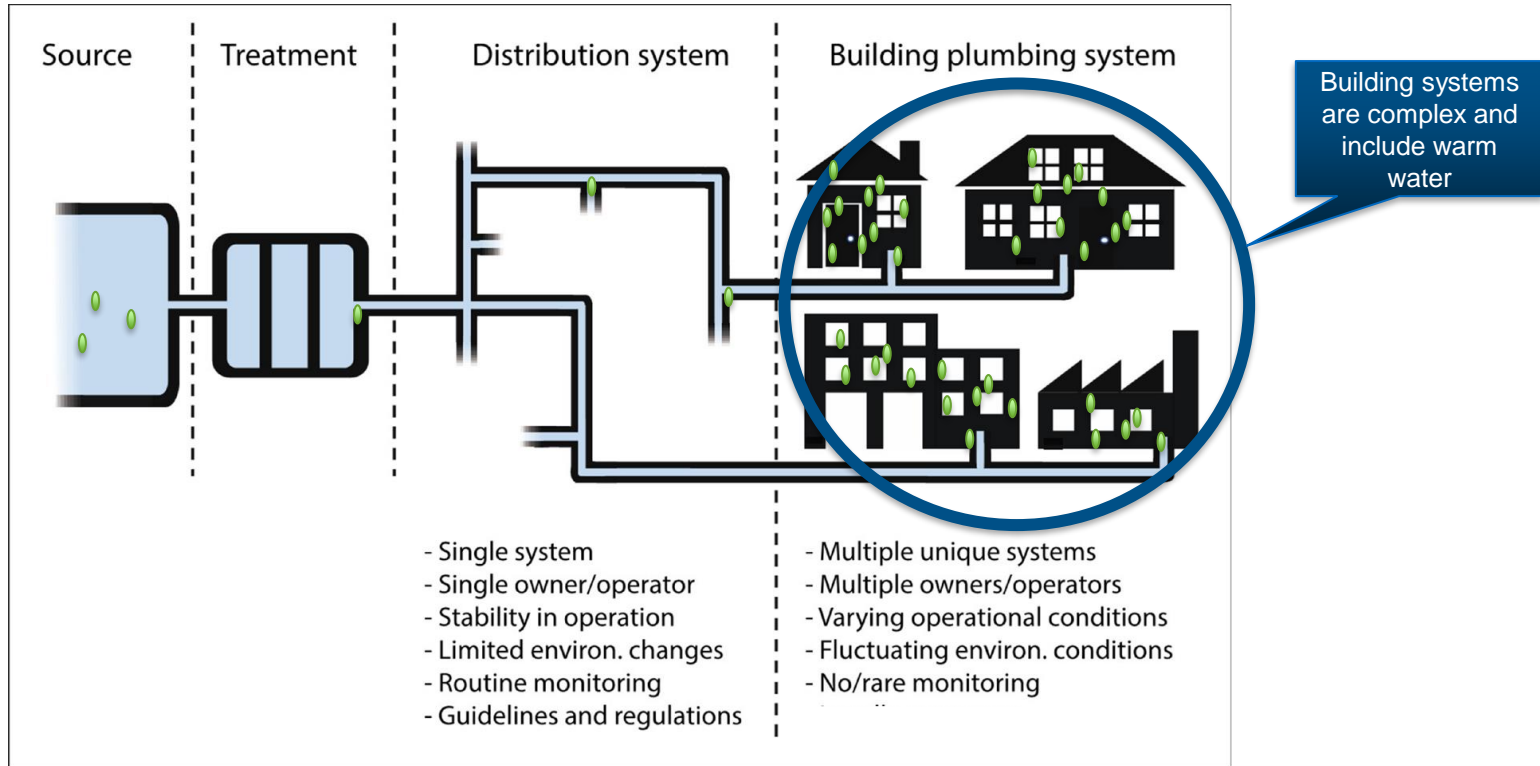
CDC and Prevention Statistics

- 77% >50 years
- 62% male
- Hospitalizations occurred in 98%
 - ICU admission in 39%
 - Death in 10-30%

Contributing Factors for Legionella Infection

Disease-causing Legionella in water + **Entry into the lungs** + **Susceptible individual**

Legionella's Journey Through Our Water Systems



Legionella and Construction

- VA Aspinwall--fixtures had *Legionella* right after installation!
- When there is major construction or renovation, *Legionella* can increase
 - Sediment entry, cross-connections, loss of pressure, loss of disinfectant residual, stagnation, improper commissioning, etc.

LEGIONELLA

MYTH

VERSUS

FACT



Legionella
is found
everywhere.



It colonizes
in water in
12-70% of
buildings.

Legionella is common

- ***Legionella* bacteria are not everywhere**, but found in ~50% of building water systems:
 - 12-70% of hospital water systems
 - Up to 60% of large high-rise buildings
 - 10-40% of residential homes
 - 30-50% of cooling towers colonized with *Legionella*

Conditions for *Legionella* Growth

Warm water
(optimal
near 98.6)

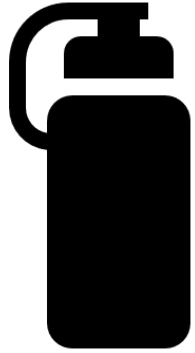
+

**Nutrients
in the water
(soil, organics)**

+

**Other microbes
(bacteria and
Protozoa/
amoebae)**

What We Know Now



**Cold water,
no inhalation**



**Hot water,
aerosols**

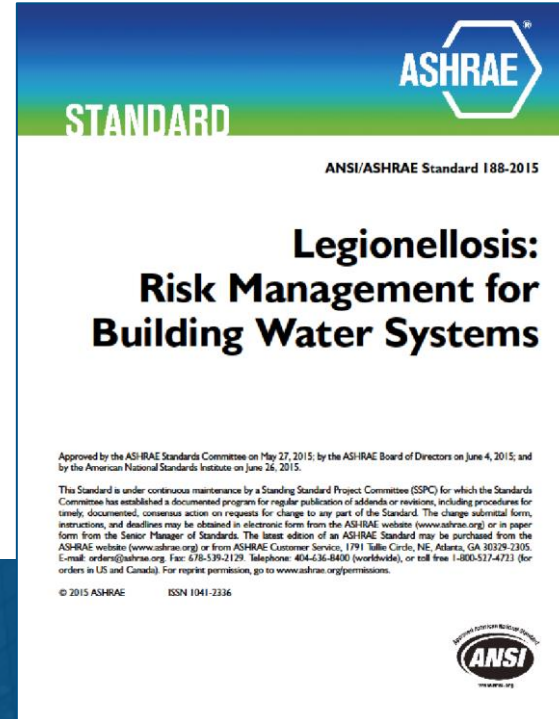


Water Management with GSA

- GSA is implementing industry standard practices
- GSA seeks to minimize risk

GSA uses Industry Standards for Water System Risk Management

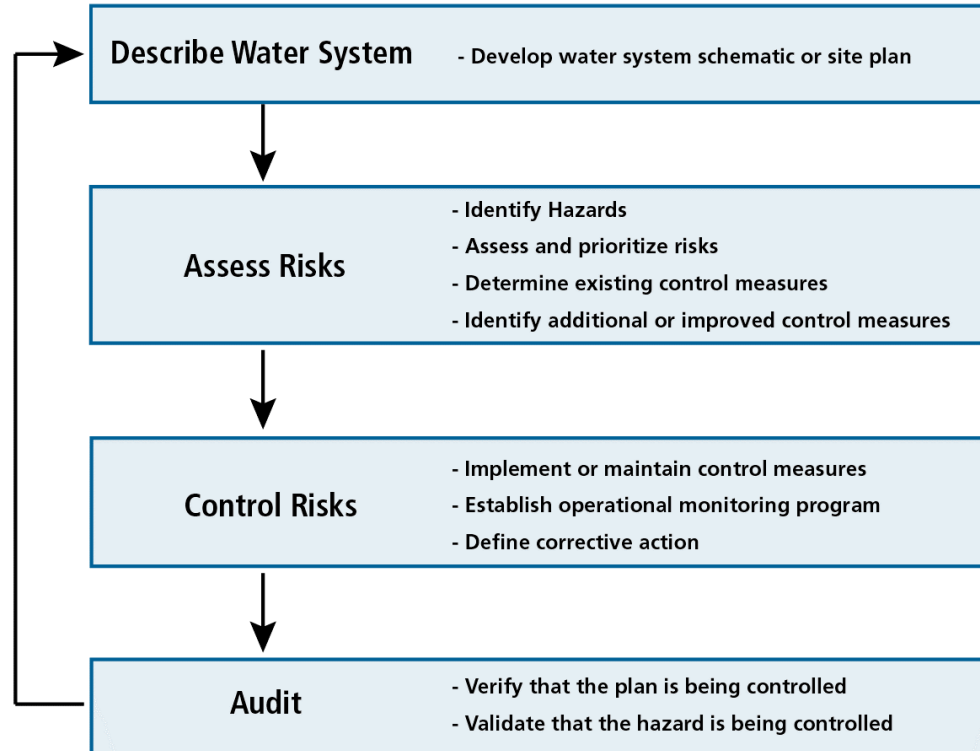
- ASHRAE Standard 188 (2015) was the first *Legionella* standard in the United States
- It provides the **industry standard** for Legionellosis **risk management** requirements for building water systems.



Water Management Monitoring

- Successful monitoring program includes:
 - Identification of Responsible Parties
 - Identification of Water Systems
 - Operating Goals and Control Limits
 - Location, Frequency of Sampling/Monitoring
 - Corrective Actions

Water Safety Plan Implementation



Key Takeaways

- ***Legionella*** is a genus of bacteria that can cause pneumonia in specifically in immunocompromised individuals.
- *Legionella* is **very common** in drinking water in the US & throughout the world.
- **Proactive testing** is the best way to define what needs to be done.

***Legionella* is managed (*not eliminated*) through industry standard water management programs.**



05 How Are We Testing?

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What to Expect Before Testing



Building managers will inform building occupants of the testing date via **email** at least one week before testing.



We can **continue** drinking water and using restrooms.



Signage may be posted in designated testing areas at least 8 hours in advance.

What to Expect During Testing



Contractors will be in our buildings and leased space for **baseline** water testing.

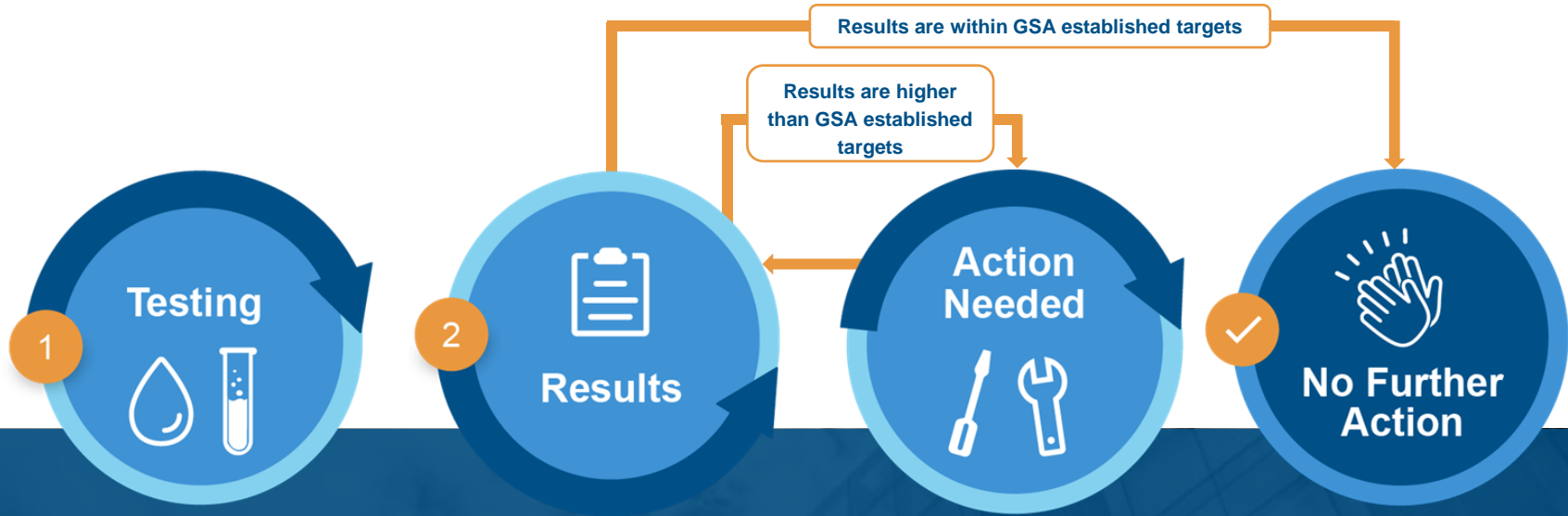


Signage may be posted in testing areas where water fixtures should not be used.



We may **continue** to drink tap water and use restrooms.

What to Expect After Testing

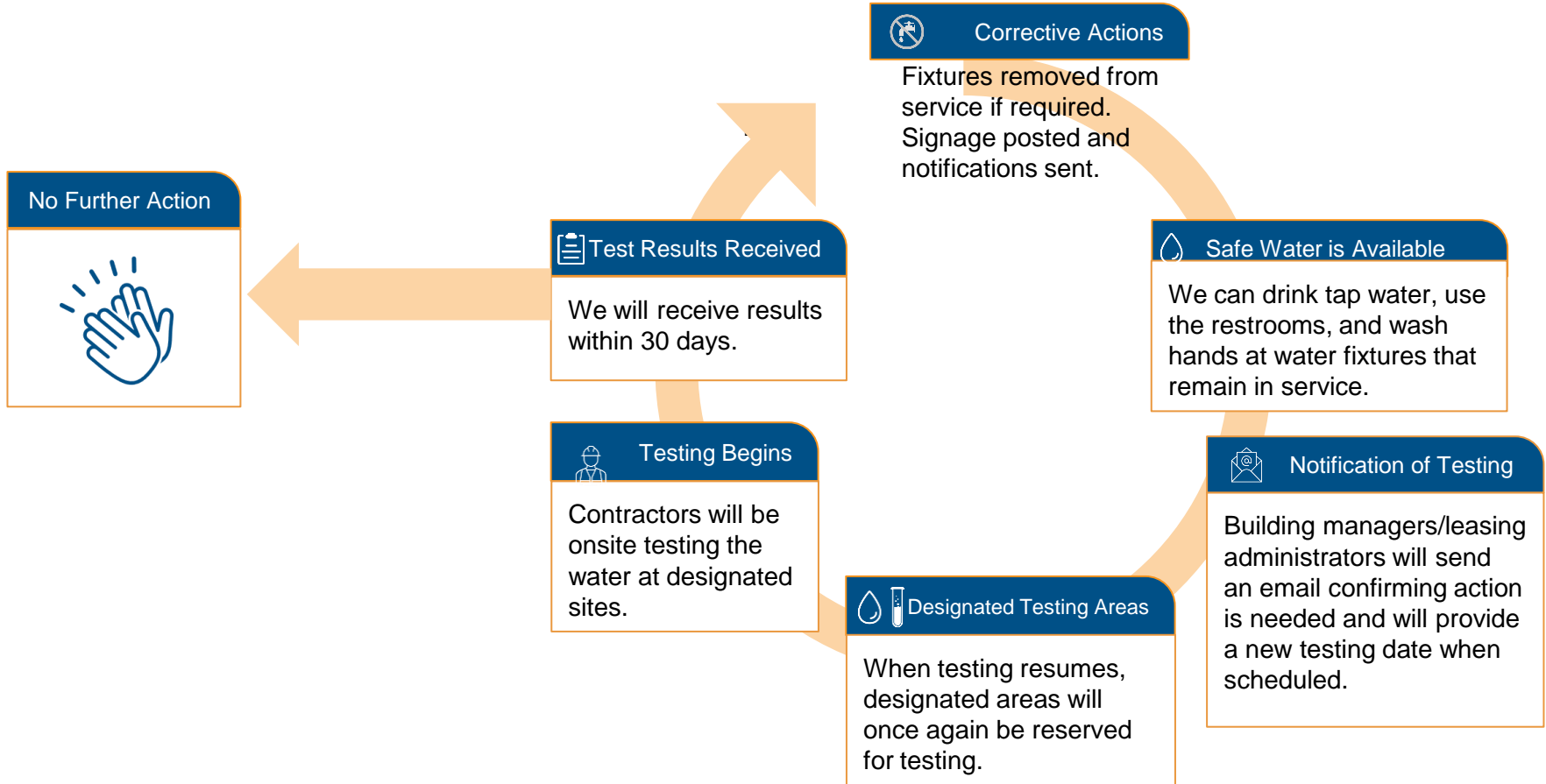


We will receive **results** within 30 days.

Implement corrective actions and repeat testing until results are back to normal.

06 What if Corrective Action is Needed?

Corrective Actions Cycle and Further Testing

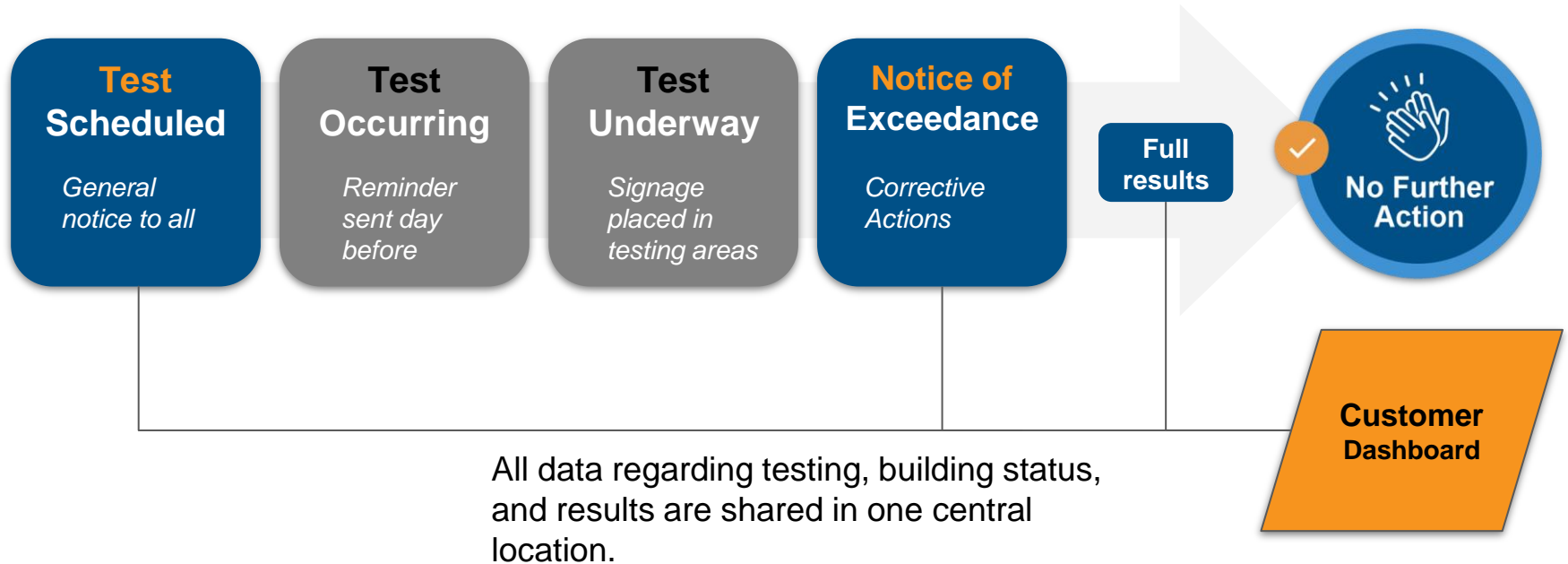




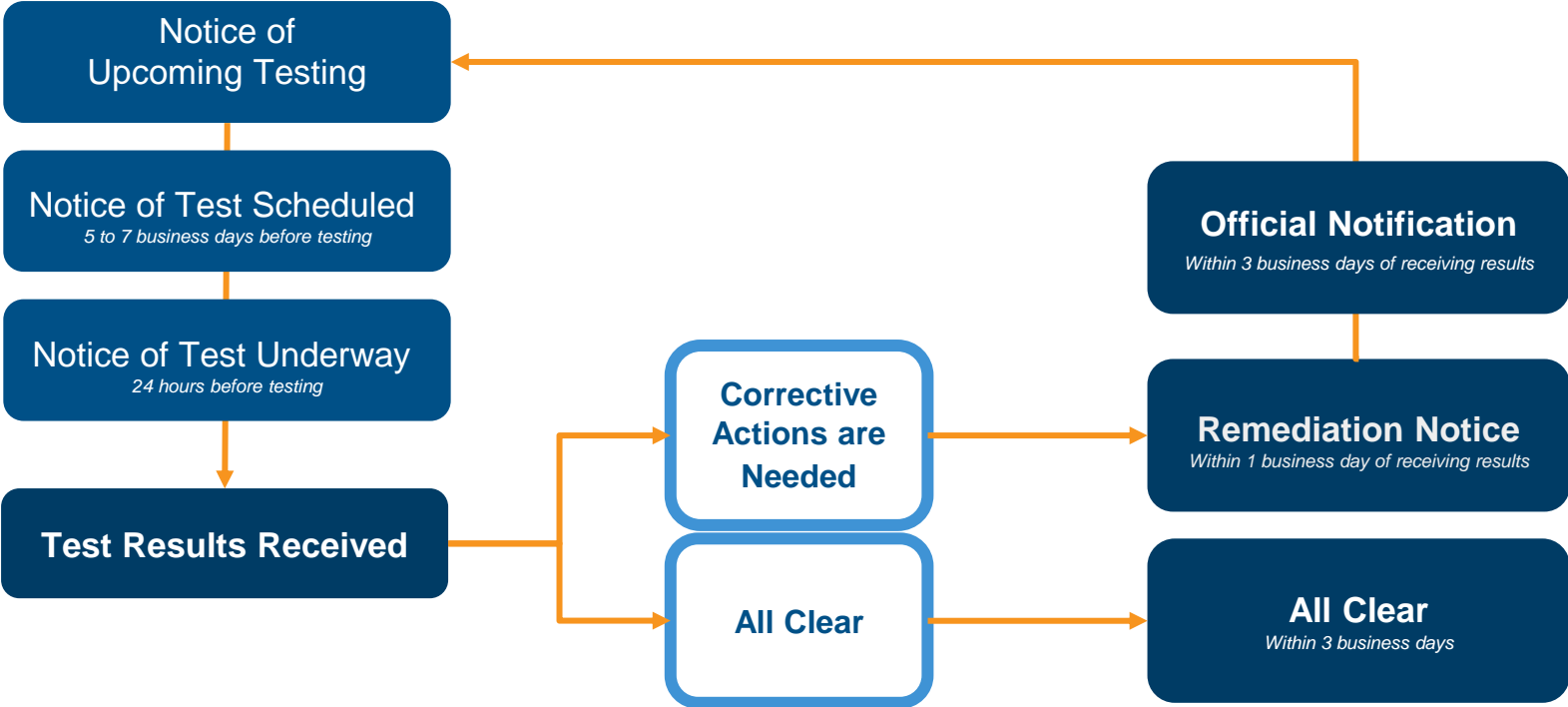
07 Communication Process

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Testing Scheduling and Results Process



Building Tenant Notifications



- **Tenant Level**
 - First property management takes lead
 - Responsibility to notify occupants
- **National Level**
 - National accounts staff are communicating with National level customer contacts
 - Dashboard - Executives and all staff have ability to view the customer dashboard in D2D

D2D Customer Dashboard

D2D.gsa.gov/report/pbs-customer-dashboard

Our dashboard allows you to confirm

- Testing schedules,
- Results, and
- Completed tests

View our [recorded Dashboard session](#) from 7/11/24

The screenshot shows the GSA My Water Quality dashboard. At the top, there are navigation tabs: Welcome and Guidance, Projects, RWAs, Locations, Occupancies, Rent, and Water Quality. Below the navigation is the GSA logo and the title "My Water Quality". There are four filter sections: Agency (dropdown menu), Bureau (text input), City, State (dropdown menu), and Property Type (text input). Below the filters is a "Reset All Filters" button. At the bottom is a summary table with the following data:

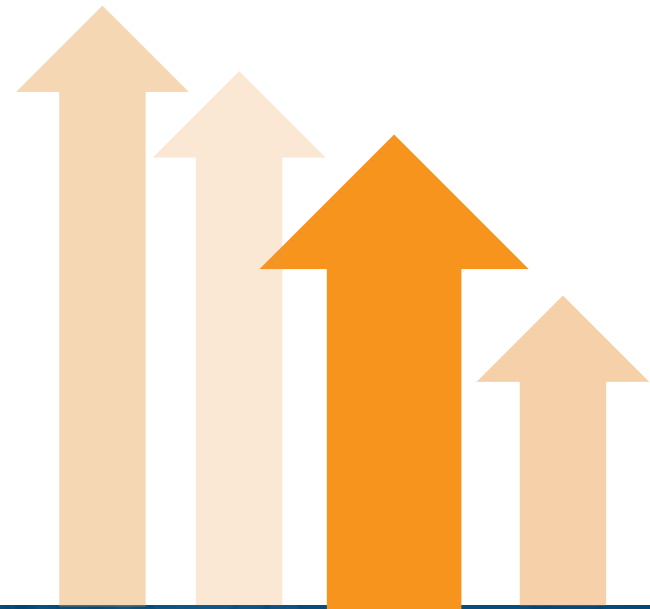
Property Type	Total Required	DW Tests Scheduled	Results Received	Tests Completed
OWNED	1,252	331	65	5.2%
LEASED	6,137	1,859	922	15.0%
TOTAL	7,389	2,190	987	13.4%

08 Moving Forward

A Proactive Approach

A prudent, **proactive** approach is important when it comes to water quality management.

We will continue to be transparent and share information about program updates, testing schedules, results and corrective actions.



Additional Information

Helpful Links:

- [GSA Water Quality Website](#)
- [GSA strengthens water quality efforts in federal buildings](#)
- [GSA PBS Client Enrichment Series - Water Quality Management in GSA Facilities #1 - 2.15.24](#)
- [PBS Customer Dashboard on D2D](#)

09 Q & A



*Thank
You*

Join us for these upcoming
Client Enrichment Series
events...

Workplace Innovation Lab - Insights and Applications

Thursday, August 15th 1pm-2:30pm EDT

[Register Today!](#)

Taming Timelines - Best Practices for Schedule Management

Thursday, August 22th 1pm-2:30pm EDT

[Register Today!](#)

Watch our  YouTube [class recordings](#)
visit www.gsa.gov/ces
email [client enrichment series@gsa.gov](mailto:client_enrichment_series@gsa.gov)

