



WHAT YOU NEED TO KNOW ABOUT LEAD



IS MY WATER SAFE? YES



# CLEVELAND WATER

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## M I S S I O N

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To provide customers with a reliable supply of safe drinking water and great customer service, with a focus on affordability, while embracing principles of environmental stewardship, openness, equity, and accountability.

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## V I S I O N

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To position Cleveland Water as a leader within our industry and community, helping to make Greater Cleveland a better place to live, work, and raise a family.

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## V A L U E S

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- Customer focus
- Transparency
- Inclusiveness
- Affordability
- Accountability



# OUR CUSTOMERS

We provide water to  
80 communities

70

Direct (Retail) Customers

7

Master (Wholesale) Customers

3

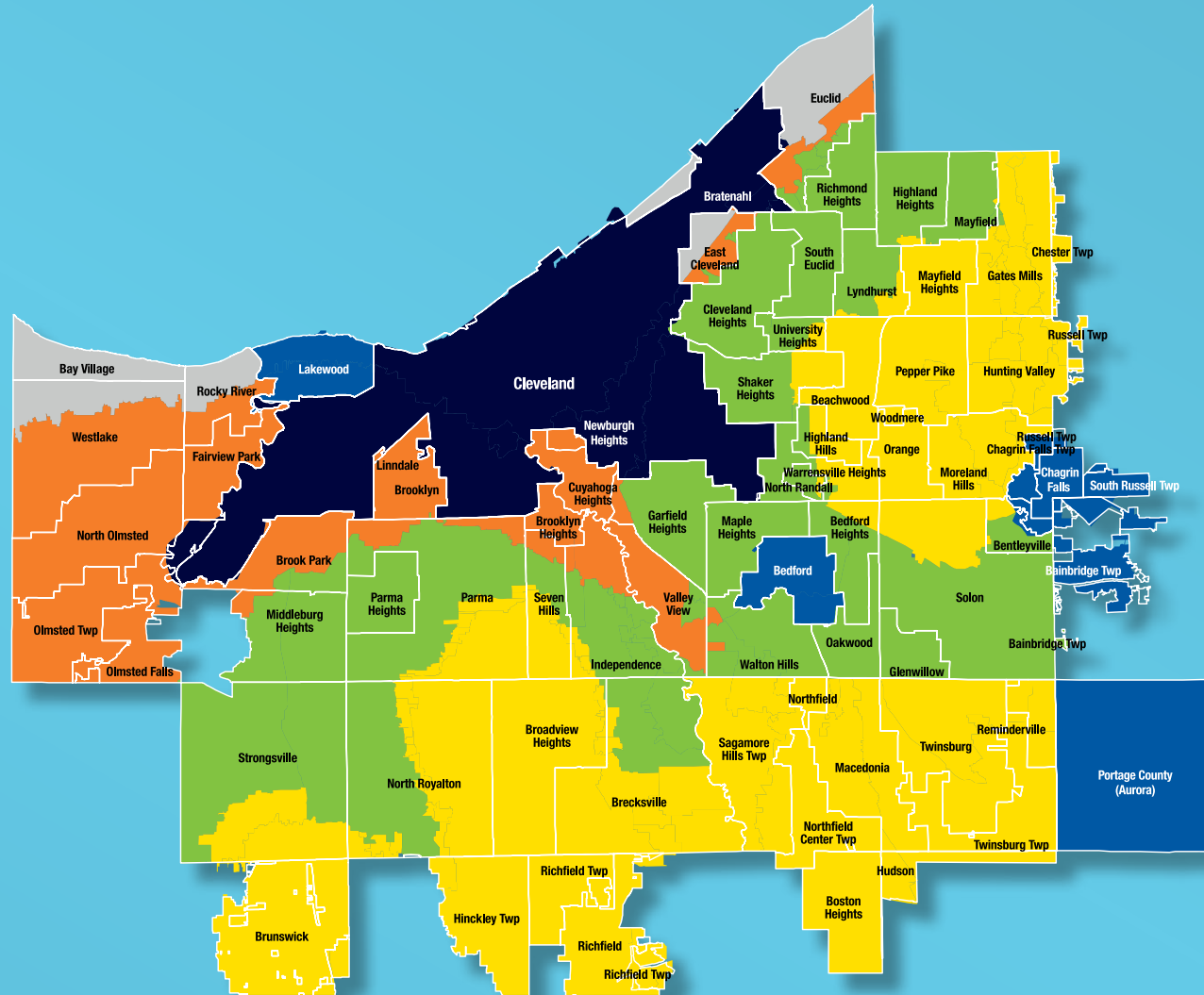
Emergency (Back-up) Customers

1,400,000  
Customers

9<sup>TH</sup>

Largest Water System in the U.S.

446,121  
Accounts



## LEGEND

City & Suburbs

○ Corporation Limits

Service Suburbs

● Low Service

● 1st High

● 2nd High

● 3rd High

● Cleveland

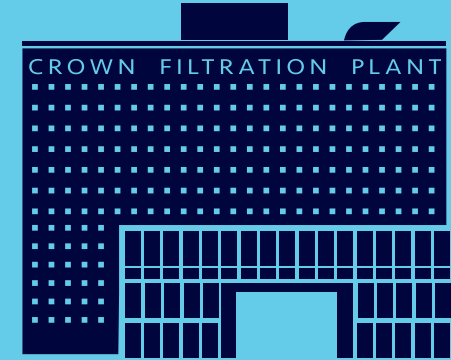
# NOTTINGHAM

WATER TREATMENT PLANT



# CROWN

WATER TREATMENT PLANT



**4**  
Water Plants

**5,300**  
Miles of Mains

**16**  
Pump Stations

**21**  
Tanks & Towers

# MORGAN

WATER TREATMENT PLANT



# BALDWIN

WATER TREATMENT PLANT



# WATER TREATMENT PLANT

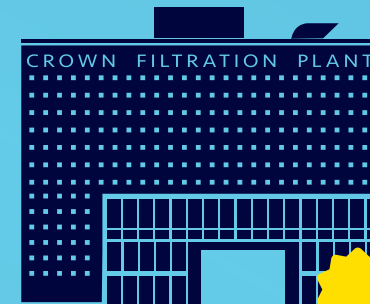
Invested over \$650 million to modernize  
all four water treatment plants



# OUR WATER TREATMENT PLANTS WIN AWARDS

Cleveland Water participates in the Partnership for Safe Drinking Water

- Voluntary program to maintain higher water quality standards than those required by law
- All four of our water treatment plants have achieved Phase III status
- Our Crown Water Treatment Plant also has achieved Phase IV Excellence in Water Treatment Operation – the highest level in the program

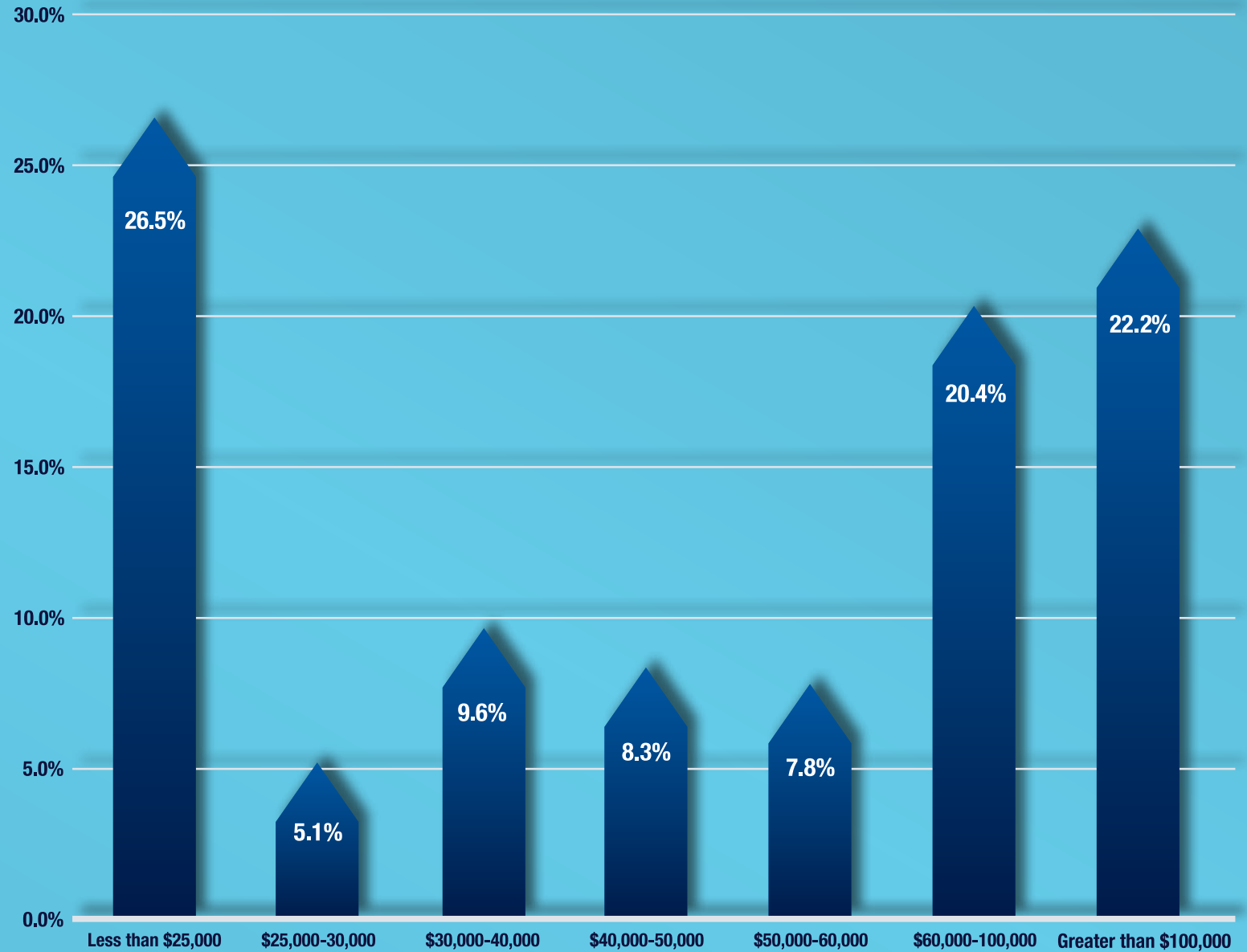


# DIVERSE CUSTOMER BASE

Size of service area means  
we serve an incredibly  
diverse customer base

- Racially diverse
- Varying levels of education
- High level of economic diversity

 **2016 US Census ACS Estimates\***  
Weighted average of all census tracts in  
Cleveland Water Service area





# WATER EQUITY

Water equity occurs when all communities have access to safe, clean, affordable drinking water and wastewater services; are resilient in the face of floods, drought, and other climate risks; have a role in decision-making processes related to water management in their communities; and share in the economic, social, and environmental benefits of water systems.



**DRINK  
CLEAN  
WATER**

# US WATER ALLIANCE: PILLARS OF WATER EQUITY



## PILLAR ONE

Ensure all people have access to clean, safe, affordable water service

## PILLAR TWO

Maximize the community & economic benefits of water infrastructure investment

## PILLAR THREE

Foster community resilience in the face of a changing climate

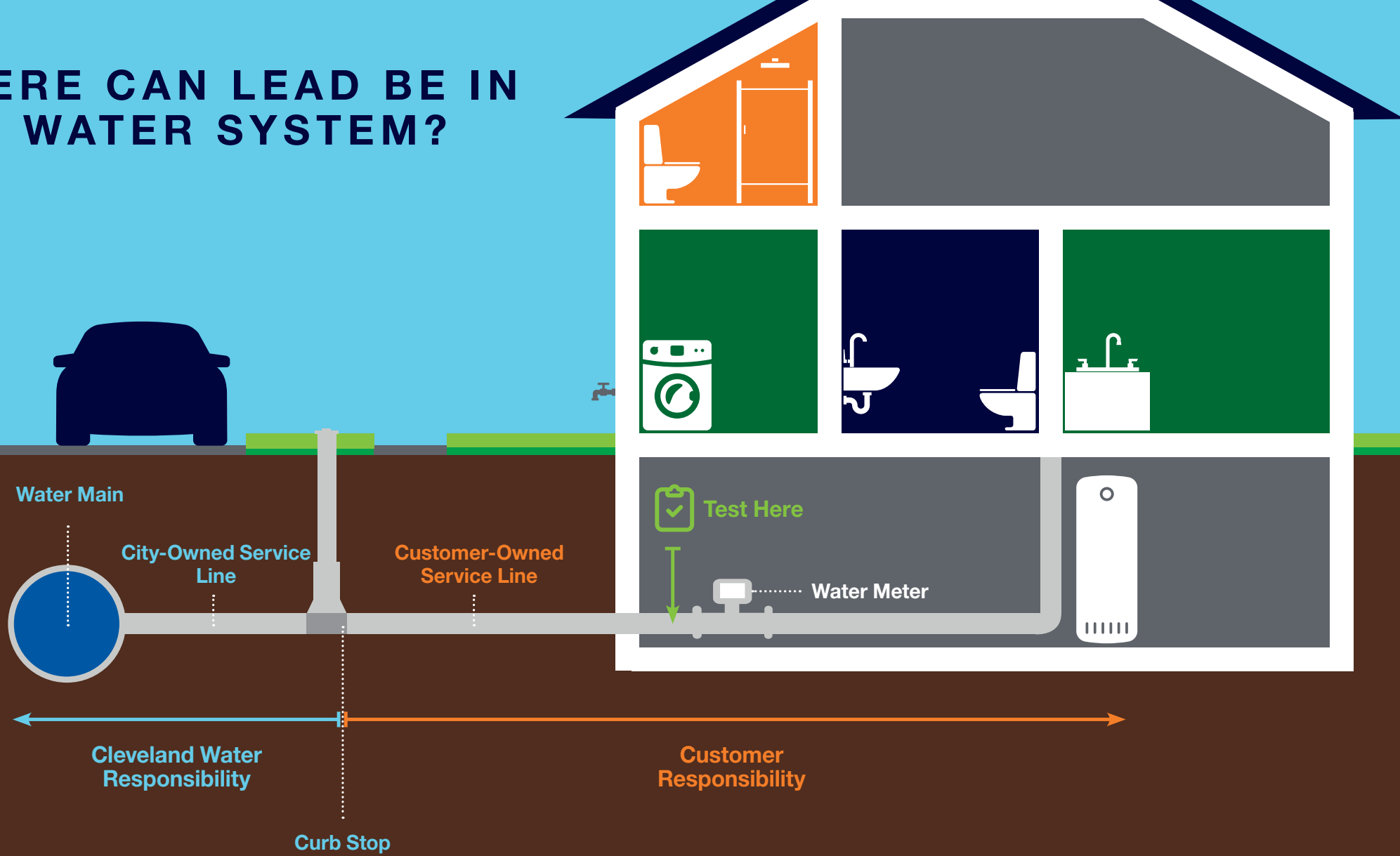
WHERE CAN YOU FIND LEAD?



**THERE IS NO LEAD IN OUR TREATMENT PROCESS, WATER TANKS OR TOWERS, AND OUR WATER MAINS ARE NOT LEAD**



# WHERE CAN LEAD BE IN THE WATER SYSTEM?

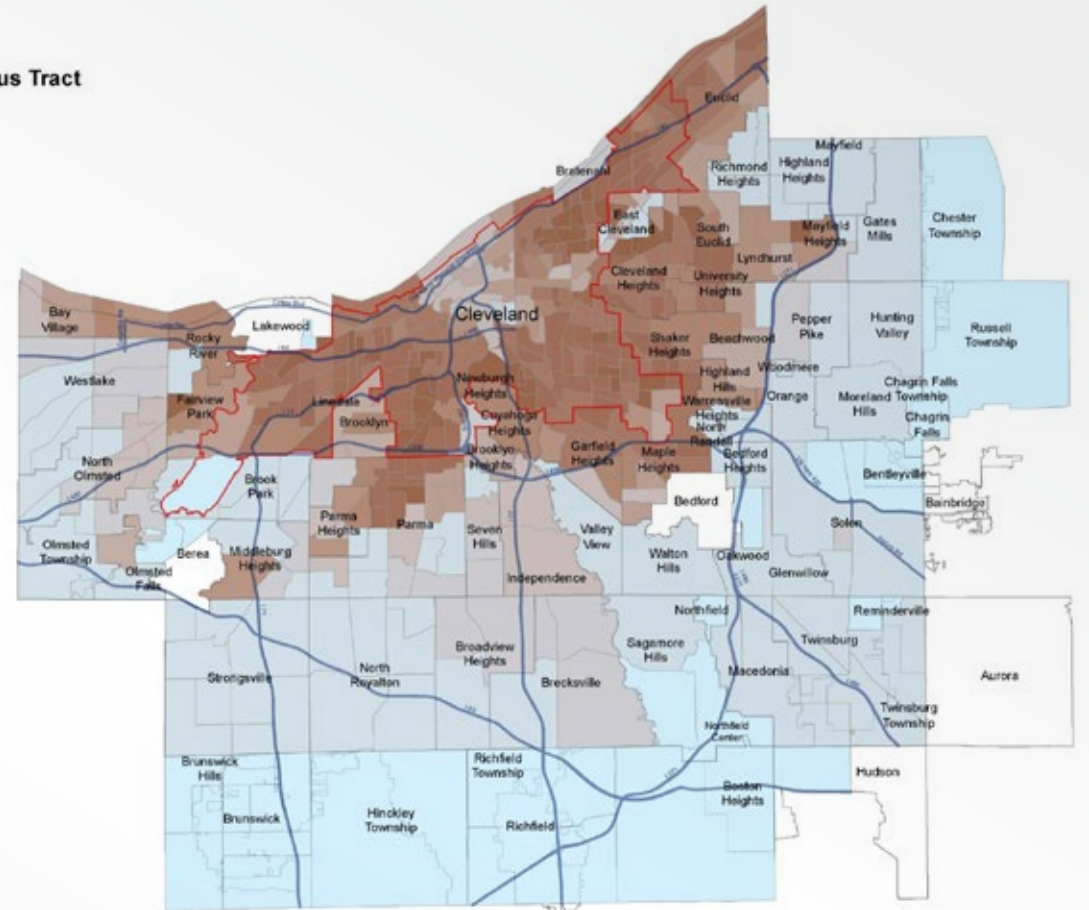
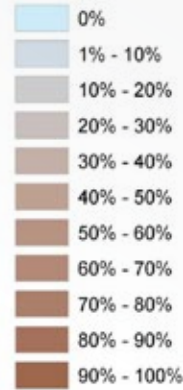


# WHERE ARE LEAD CITYSIDE CONNECTIONS?

## Potential determining factors

- Age of home, 1954 to present = no lead
- Size of service line, >1" = no lead

Percent Lead by Census Tract



# WHAT DO WE DO TO PROTECT RESIDENTS?



# CLEVELAND WATER HAS VERY EFFECTIVE METHODS TO REDUCE THE POTENTIAL OF LEAD IN WATER

Consistent source water

Successful system-wide treatment techniques

Replacement of lead service lines during construction and repairs

Customer education and action steps





# SAFE WATER STARTS WITH MONITORING LAKE ERIE IN REAL-TIME



# LAKE WATER IS MADE SAFE IN OUR TREATMENT PLANTS

Specific to lead:

- Adjust pH if needed
- Add orthophosphate



# ORTHOPHOSPHATE



This pipe  
**IS NOT**  
from Cleveland

**CORROSION CONTROL IS THE MOST IMPORTANT  
PROTECTION AGAINST LEAD IN DRINKING WATER**

# FOR 40 YEARS, CLEVELAND WATER HAS BEEN REMOVING CITY-OWNED LEAD SERVICE LINES DURING MAIN REPLACEMENTS AND EMERGENCY REPAIRS

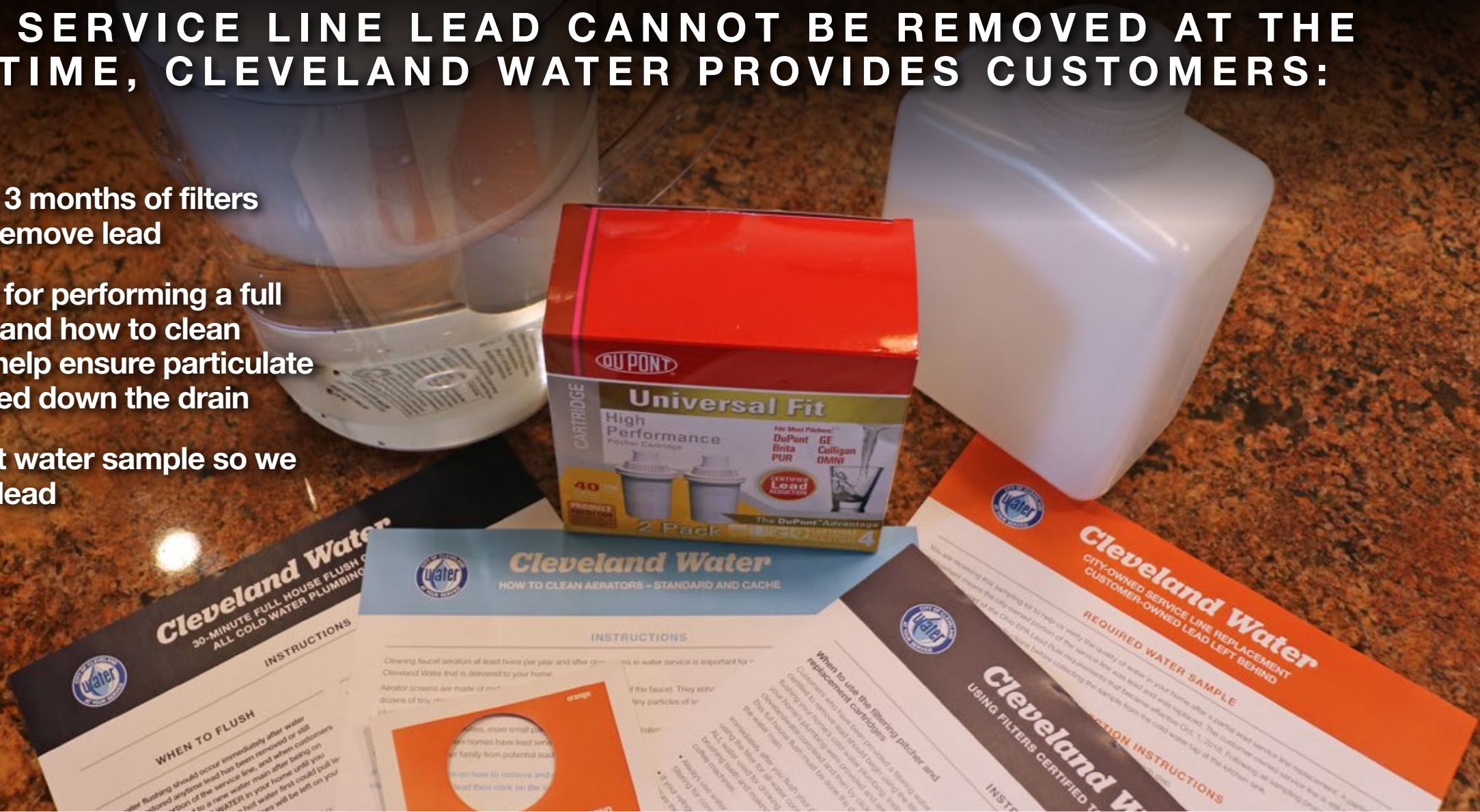


# IF ALL SERVICE LINE LEAD CANNOT BE REMOVED AT THE SAME TIME, CLEVELAND WATER PROVIDES CUSTOMERS:

Pitcher with 3 months of filters certified to remove lead

Instructions for performing a full house flush and how to clean aerators to help ensure particulate lead is flushed down the drain

Kit to collect water sample so we can test for lead



# CLEVELAND WATER LEAD AWARENESS CAMPAIGN HELPS CUSTOMERS UNDERSTAND THEIR RISK AND TAKE APPROPRIATE ACTION

Brochures sent annually

Webpage upgrades  
[clevelandwater.com/lead](http://clevelandwater.com/lead)

Expanded outreach to target audiences

Additional information at  
community events



HOW DO WE KNOW OUR ACTIONS ARE WORKING?



# LEAD COMPLIANCE TESTING IS DESIGNED TO MAXIMIZE THE LIKELIHOOD OF FINDING LEAD IN DRINKING WATER

## At Tier 1 sites

- Single family home that has one of the following:
  - Copper pipes with high lead solder installed between 1982 and 1989
  - Lead plumbing pipes
  - City-owned and/or customer-owned lead service line

## During the summer

After water is stagnant in pipes for 6 hours





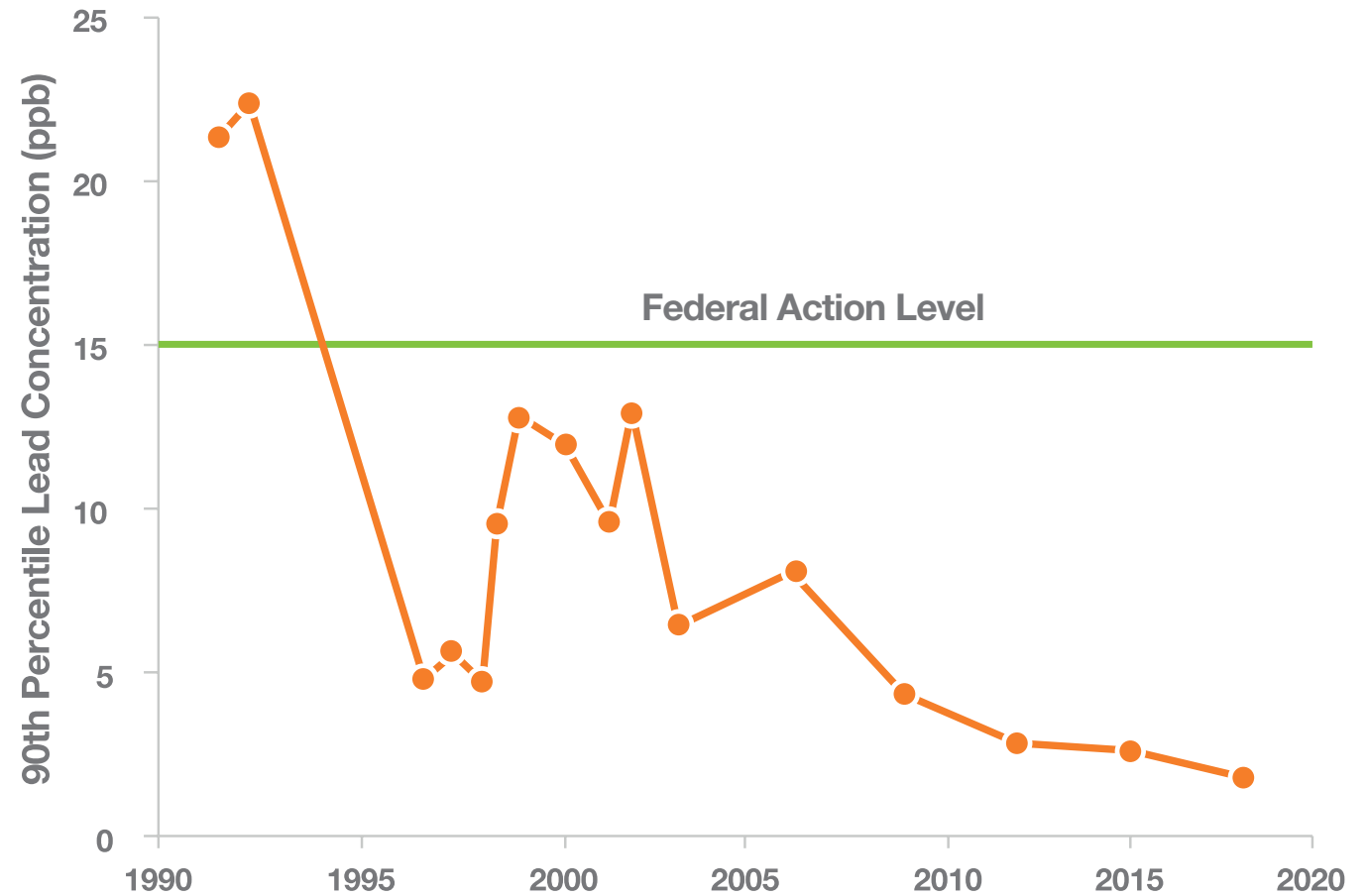
# OUR CORROSION CONTROL IS EXTREMELY EFFECTIVE

Lead levels have been below 15 ppb for 20 years

- Below 5 ppb for last decade

## 2018 Compliance Testing Results

- Average = 0.76 ppb
- 90th Percentile = 1.8 ppb
- Highest Value = 3.3 ppb



## OUR CORROSION CONTROL IS EXTREMELY EFFECTIVE

US EPA is in the process of testing lead service lines Cleveland Water removed to see how we have achieved some of the best corrosion prevention in the country.



WHAT CAN RESIDENTS DO TO PROTECT THEMSELVES?



# CHECK. TEST. DATE. WILL HELP YOU IDENTIFY IF YOUR HOME'S SERVICE LINE AND/OR PLUMBING HAS LEAD



## CHECK

material of city-owned service line online



## TEST

your service line with magnet & penny then report online



## DATE

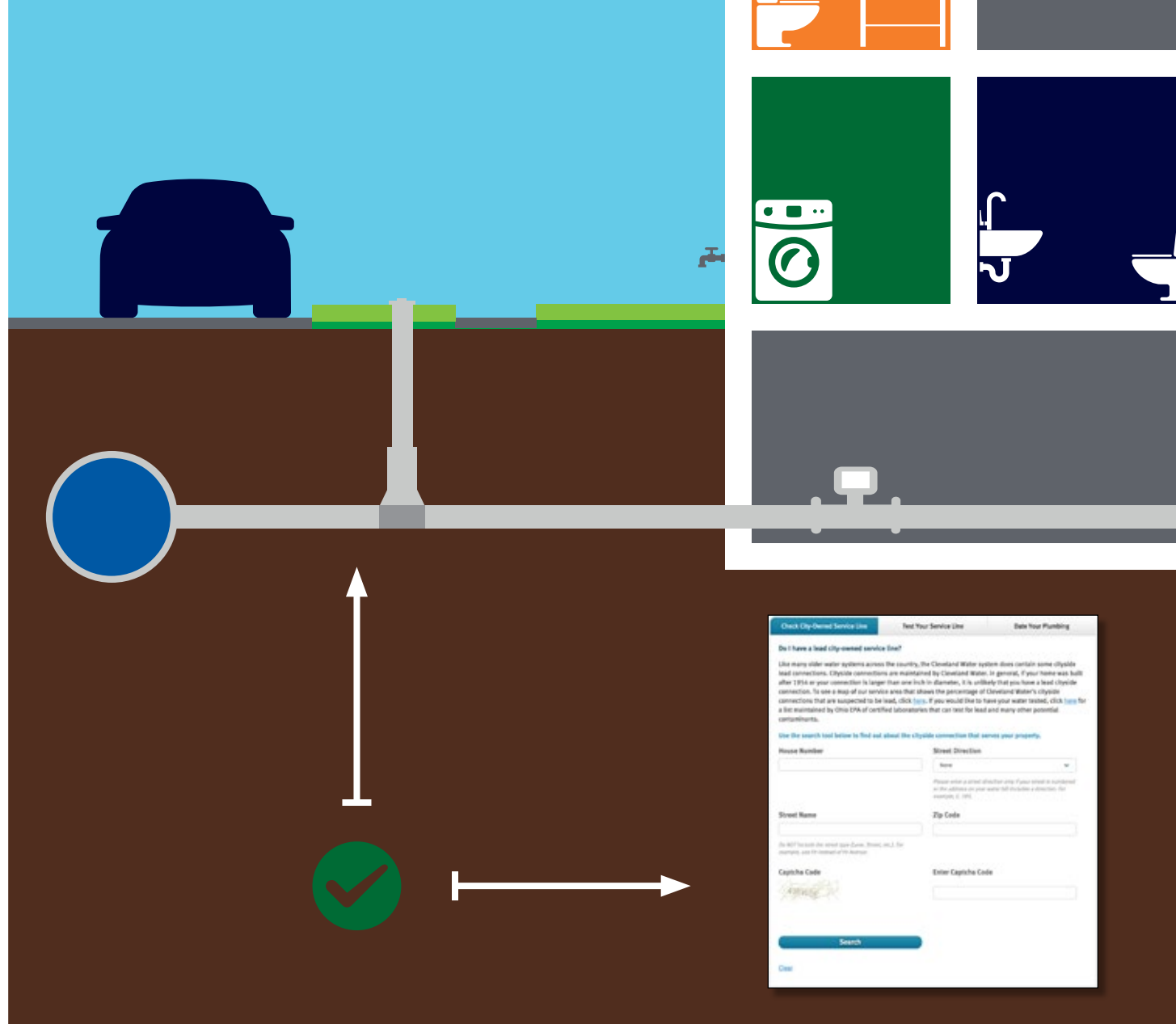
determine the DATE of plumbing & faucets

# CHECK

Check online for your city-owned service line material type.

Service line = pipe between the water main in the street and the curb stop.

Check online at [clevelandwater.com/lead](http://clevelandwater.com/lead) or by calling 216.664.2882





Test your customer-owned service line and report results

Perform magnet and penny test

Record results in our online tool

- Helps us build larger pool of monitoring locations

For more information visit [clevelandwater.com/lead](http://clevelandwater.com/lead) or call 216.664.2882

### Record Your Test Results

Plumbing Material


House Number

Street Direction   
Please enter a street direction only if your street is numbered or the address on your water bill includes a direction. For example, E. 185.

Street Name   
Do NOT include the street type (Lane, Street, etc.). For example, use Fir instead of Fir Avenue.

Zip Code

Account Number

Captcha Code 

Enter Captcha Code

# TEST AREA FOR LEAD PLUMBING

WATER SERVICE TO HOUSE

TYPICAL WATER SERVICE SHOWN  
*(may vary at your location)*

WATER METER

SHUT-OFF VALVE

**TEST HERE**

INCOMING WATER SERVICE

BASEMENT FLOOR

# CLEVELAND WATER MAGNET & PENNY TEST



## Lead Pipe

Lead pipes scratch easily and look silver



## Copper Pipe

Copper pipes shine like a penny when scratched



## Galvanized Steel Pipe

Magnets only stick to steel pipes





Knowing the age of your home, plumbing, faucets and fixtures will let you know the level of potential lead

1954 – Cleveland Water no longer allows lead as a permissible material for service line connections.

1986 – Safe Drinking Water Act amendment defined “Lead Free” as pipe/brass components with <8% lead and solder with <0.2% lead.

1991 – EPA Lead & Copper rule finalized. It set 90th percentile 15 ppb trigger level for lead.

1997 – Cleveland Water implements treatment techniques (pH control and orthophosphate addition) at all four plants.

2014 – EPA redefines “Lead Free” as 0.25% lead by wetted brass alloy (fittings, faucets, meters) for potable water components.

# VOLUNTEER YOUR SINGLE FAMILY HOME FOR OUR COMPLIANCE MONITORING PROGRAM

If you have a lead service line, ask for your home to be added to the list of homes used for our Lead Compliance Monitoring program.

For more information visit [clevelandwater.com/lead](http://clevelandwater.com/lead) or call 216.664.2882


Cleveland Water  
VOLUNTEER MY HOME FOR LEAD AND COPPER COMPLIANCE MONITORING

Cleveland Water is seeking customers to volunteer their home as a water sampling site for the regular Lead and Copper Compliance Monitoring. To volunteer your home, complete the form (other side) and return it to: Cleveland Water, Attn: Lead Compliance Monitoring, 1201 Lakeside Avenue, Cleveland OH 44114.

**Lead in the Water System**  
 Cleveland Water is lead free when it leaves the water treatment plants. Our water mains are not made from lead. Places that may contain lead include the city-owned and customer-owned portions of the service line, and customer's plumbing including copper plumbing joined with high-lead solder, and faucets. Faucets made after 2014 must have less than 0.25% lead. Those made between 1986 and 2014 may have up to 8% lead. Prior to 1986, there were no federal regulations on lead levels in plumbing components.

**Successfully Preventing Lead in Water**  
 Since 1997, Cleveland Water has been implementing treatment techniques to reduce corrosion and the likelihood of lead leaching from service lines and home plumbing into the water. Our system-wide treatment techniques, orthophosphate addition and pH control, are some of the best in the country for preventing lead from getting into the water.

In our most recent Lead and Copper Compliance Monitoring test results, our 90th percentile was 1.8 parts per billion (ppb) and all results were below 3.3 ppb. The federal action level is 15 ppb. To put that in perspective, 1 ppb is like a blade of grass on a football field.

**How to Volunteer Your Home**  
 If you would like to volunteer your home to be called upon as a Lead and Copper Compliance Monitoring water sample site, please complete the form on the opposite side of the paper and return it to Cleveland Water. A few months before the sampling season begins, Cleveland Water staff will contact you to see if you are still willing to collect a "First Flush" cold water sample at your home's kitchen sink and to ensure your home qualifies as an appropriate sample location based on Ohio EPA criteria (Tier 1 Site).


**System-Wide Sampling at Tier 1 Sites**  
 The water samples for the Lead and Copper Compliance Monitoring tests are taken from home's throughout Cleveland Water's 640-square mile service area that are known to have lead. Cleveland Water is required by law to continue collecting samples from as many of the original 1982 Tier 1 sampling sites as possible in perpetuity. However, to assure our customers that our system-wide treatment techniques to control corrosion are as effective as test results show, Cleveland Water is looking to expand the number of Tier 1 sampling sites, especially in neighborhoods that have higher numbers of city-owned lead service lines.

**Tier 1 Sampling Sites**  
 Single family homes that contain at least one of the following:

- Copper pipes with high lead solder installed between 1982 and 1989.
- Lead plumbing pipes.
- City-owned and/or customer-owned lead service line.



VLCM-0102018


Cleveland Water  
VOLUNTEER MY HOME FOR LEAD AND COPPER COMPLIANCE MONITORING

Name: \_\_\_\_\_ Phone: \_\_\_\_\_

Address: \_\_\_\_\_ Email: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Do you own or rent? If rent, please list the name and contact information for your landlord.  
 Own  Rent \_\_\_\_\_

Year the home was built? \_\_\_\_\_

Year the plumbing was installed – Please indicate if any of the home's plumbing was removed or changed since the home was built and the age the construction occurred (if known). \_\_\_\_\_

Age of plumbing in the house.  Copper  Galvanized  Lead  PVC  Other, please list. \_\_\_\_\_  
(Check all that apply)

Customer-owned Service Line Material – This can be determined by following the steps of the magnet and penny test, instructions for which are found online at [clevelandwater.com/lead](http://clevelandwater.com/lead). \_\_\_\_\_

Do you have any treatment devices that cannot be turned off at the kitchen cold water line?  
 Yes  No



\*Yes,\* please provide information about the device (softener, carbon filter, under-counter reverse osmosis unit, what the device is certified to remove, etc.) \_\_\_\_\_

\_\_\_\_\_

By signing below, you indicate your interest in volunteering your home as a water sample collection site for Cleveland Water's Lead and Copper Compliance Monitoring.

Signature : \_\_\_\_\_ Date: \_\_\_\_\_

**For more information about lead in drinking water or volunteering your home, please visit [clevelandwater.com/lead](http://clevelandwater.com/lead) or contact our Lead Inquiries Line at 216.664.2882 from 8 a.m. to 5 p.m. Monday through Friday.**



Cleveland Water  
1201 Lakeside Avenue • Cleveland, Ohio 44114  
 216.664.2882 | [clevelandwater.com/lead](http://clevelandwater.com/lead)  
Ensure the high quality water delivered to your home comes out of your tap.  
f [clevelandwater](https://www.facebook.com/clevelandwater) @clevelandwater

# CUSTOMERS' ACTIONS CAN KEEP THEIR WATER SAFE IN HOMES, APARTMENTS, SCHOOLS AND BUSINESSES



## **FLUSH**

stagnant water out of the  
faucet and service line



## **CLEAN**

faucet aerator screens  
every 6 months



## **CONSUME COLD**

water for all cooking,  
drinking, food prep,  
formula

**If lead exists, these actions further reduce the potential of lead exposure.  
If no lead, these actions help maintain the high quality of water.**



# FLUSH

## WHEN:

Flush your cold water lines before consuming when water has not been used for 6 or more hours.

## HOW:

Run water until you feel a temperature change then run the water for an additional 30 seconds to 2 minutes. The time depends on the length of your service line.

**When in doubt, flush it out.**





**Clean the aerator screen on each faucet at least 2-times a year.**

**Clean water filters on refrigerators, coffee pots, etc. regularly – as recommended in product directions.**

**Clean your hot water tank by draining it to remove Cathodic protection corrosion at least once per year.**





## CONSUME COLD

Always use cold water for cooking, drinking, preparing baby formula and filtering.

Hot water corrodes pipes faster and is more likely to contain lead.

If you need hot water for food or drinks, get water from the cold water tap then heat the water.



# FLUSH. CLEAN. CONSUME COLD. CAN BE IMPLEMENTED TODAY. ADDITIONAL ACTIONS CAN BE ADDED OVER TIME



**SAMPLE**



**FILTER**



**REPLACE LEAD LINES**



**REPLACE PRE-2014 FAUCETS**



**ELIMINATE OTHER LEAD**

**Lead Inquiry Line 216.664.2882**  
**[clevelandwater.com/actions](https://clevelandwater.com/actions)**

WHAT'S NEXT?





# CLEVELAND WATER CONTINUOUSLY LOOKS TO EXPAND EFFORTS TO SUPPORT OUR LEAD PROGRAM

Continue effective treatment for lead

Increase compliance testing in areas  
with high percentage with elevated  
blood lead levels

Targeted outreach into equity-  
vulnerable areas



# CLEVELAND WATER CONTINUOUSLY LOOKS TO EXPAND EFFORTS TO SUPPORT OUR LEAD PROGRAM

Utilize lead replacement in scoring  
capital projects

Explore non-compliance testing for  
residential properties and daycares

Identify alternative capital funding sources  
to reduce burden on residents





***Cleveland Water***

1201 Lakeside Avenue • Cleveland, Ohio 44114  
216.664.2882 | [clevelandwater.com/lead](http://clevelandwater.com/lead)

