Lead and Your Water Quality Community Forum

Tualatin Valley Water District
Washington County Health & Human Services
Beaverton School District
Willamette Water Supply Program
Tonight’s Speakers

• **Joel Cary**, Water Quality Program Lead, TVWD
• **Bill Richmond**, Water Quality Analyst, TVWD
• **Dr. Christine Baumann**, Deputy Health Officer, Washington County
• **Nathan Potter**, Maintenance Services Administrator, Beaverton School District
• **Dave Kraska**, Program Director, Willamette Water Supply Program
Brief History of Lead

What is Lead?

• Heavy metal found in the earth’s crust
• “Plumbum”
• “The father of all metals” – condiments to dishware
• Neurotoxin

When was the lead law created?

A. 1696 ✭
B. 6500 B.C.
C. 1923
D. 1976

Lead concerns are not new...
Brief History of Lead

The Environmental Protection Agency (EPA) estimates drinking water can contribute up to 20% of a person’s total exposure.

Most vulnerable:
- Pregnant women
- Infants
- Young children
What is the Lead and Copper Rule (LCR)?

1991: EPA requires monitoring at customer taps

Focus:
- High risk homes (Tier 1)
- Worst-case scenario
- Action Level = 90th percentile (15 parts per billion)
What is the Lead and Copper Rule (LCR)?

• 1992: Initial sampling
• 1993 – 97: Parameter testing/rule development
• 1998: Joint Monitoring Program
• 2000 & 2007: Rule revisions
The 90\textsuperscript{th} Percentile Explained...

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The 90th percentile result is used to determine if the water system will be required to implement additional actions:

42 (samples) x 0.9 = 37.8
90th % = 6 parts per billion (ppb)

*113 ppb!
The Differences Between Us and Flint, MI

**Flint, Michigan**
- 1,000s of lead service lines
- Flint River is highly corrosive
- Flint River completely replaced the Detroit supply
- Recommended improvements were not completed
- Ineffective communication with health agencies

**TVWD**
- No lead service lines
- Supplies are not corrosive
- Willamette Supply being integrated with existing
- Recommended improvements implemented as part of the WWSP
- Coordination with health agencies, and outside expert oversight
What Has TVWD Been Doing?

- TVWD remains in compliance
- Offering free lead testing to all residential customers
  - Since 2006, over 1300 TVWD customers had their homes tested for lead
- 2009 Large Meter Replacement Program
What has TVWD Been Doing?

• Providing public outreach and education
• Lead Task Force
• Offering expertise and guidance to businesses and schools regarding lead testing
How do we know this?
- System operations
- Age of system
- Testing

What else do we do?
- Always improving operations
- Flushing program
Sources of Lead

1. Lead-based Paint: Homes built before 1978 may have lead-based paint.
2. Home Plumbing: Water pipes, faucets, and other plumbing fixtures.
3. Contaminated Soil and Dust.
4. Some Imported Goods: Such as toys, jewelry, pottery, candy, folk medicines, and cosmetics.
5. Work and Hobby: Stained glass, fishing weights, remodeling, automotive, guns, and firing ranges.
6. Industrial Exposures.
Steps You Can Take (Water)

1. Use only cold water for drinking, cooking and preparing baby formula.

2. Flush your tap for 30 seconds to 2 minutes (until noticeably colder).

3. Don’t boil your water to remove lead.

4. Remove your aerator periodically and clean it out, lead can accumulate there.

5. Get your water tested.
Prevent Lead Exposure

1) If your home was built before 1978, it may contain lead paint
   - Renovate safely
   - Remove, repair, or seal in lead paint
   - Wet clean lead paint dust frequently
   - Lead paint dust may contaminate surrounding soil; cover bare soil or remove it

2) Avoid of other sources of lead exposure
   - Other countries may produce products that contain lead including:
     Candy, toys, pottery, leaded crystal, folk medicine, and cosmetics
   - Industrial sources

3) Follow safe handling and clean-up practices for jobs/hobbies that use lead-containing products

4) Give children healthy food rich in calcium, iron and vitamin C

5) Wash hands frequently
The Future of Lead and Water Quality Monitoring

• Partnering with regional water suppliers and Washington County Health
  – Testing and outreach program
• TVWD will leave Joint Monitoring Program in 2017
  – TVWD only LCR Program = Improved data
• More outreach on this topic, continued customer education and technical guidance to community
• Revisions to LCR and State initiatives
Beaverton School District

• March 2016 Highland Park complaint about water color
• Tested five locations and discovered lead in the activity room (21.2 ppb) and Corridor 2 (16.9 ppb) drinking fountains. Bottled water provided immediately.
  – Serviced fountains and retested: activity room drinking fountain is at 18.6 ppb at the first draw and 9.7 ppb at the flush draw. Corridor 2 drinking fountain is at 5.74 ppb at the first draw and 1.84 ppb at the flush draw
• Highland Park is scheduled to receive a full domestic water system replacement in 2017 funded from the 2014 Bond
• Based upon the age of plumbing systems, as a precaution, bottled water has also been provided to 5 other schools.
Beaverton School District

• PBS Environmental & Engineering contracted in June for $190,800 to conduct 6,300 first draw and flush draw samples at all 52 schools and 8 support facilities.
• All samples are being tested for lead. Copper distribution systems are being tested for copper.
• The entire district has been fully sampled and we are currently waiting for results, which will be published to the BSD website below.
• Approximately $6.5 million has been identified in the 2014 Capital Improvement Bond for domestic water system upgrades and fixture replacement at 5 schools. Plumbing replaced at 14 schools in 2006 Bond program.
Beaverton School District

- BSD has a **Water Quality Information** webpage under the **Facilities** department at:

  https://www.beaverton.k12.or.us/depts/facilities/Pages/Water-Quality-Information.aspx
The Next Source

- New 65 million gallons/day water treatment plant
- Two 15 million gallon reservoirs
- 30+ miles of large diameter pipeline (48” to 66”)
- Tualatin Valley Water District: 60%
  City of Hillsboro: 40%
- Scheduled completion: 2026
The Program has a multi-pronged approach to producing and delivering high water quality

• **Water Treatment** that is state-of-the-art

• **Operations Strategy** for preserving the water quality from the treatment plant to the distribution systems

• **System Integration** planning to identify and address physical and/or chemical issues prior to startup
New Water Supply Online in 2026

- 2012-2013: Supply Studies
- 2014-2016: Preliminary Planning
- 2017-2025: Design, Permitting and Construction
- 2026-Ongoing: Additional Water Supply Online System Operations
Questions?