



We work with others to protect the health of the people of Washington State by ensuring safe and reliable drinking water.



LESSONS FROM THE FIELD: DESIGN IMPROVEMENTS FOR INCREASED SANITARY PROTECTION

Overview of Presentation

- Brief background
 - Sanitary Surveys
 - Public health protection
- Vulnerable facilities
- Examples (lots of examples!)

Sanitary Surveys

- Who?

- Primacy agency (State DOH) or designee

- What?

- Review of system to assess capability to supply safe drinking water

- Why?

- Help ensure safe and reliable drinking water

- When?

- Every 3 or 5 years based on system type

Sanitary Surveys (cont)

- Another set of eyes
- Significant deficiencies
- Corrective actions
- Improved Public Health Protection

Public Health Protection

- Multiple barrier approach
- Waterborne disease outbreaks
 - Trend towards more distribution related causes
- Storage tanks, cross connections, undetermined causes
- Preventive risk management

Top 3 Vulnerable Facilities

Storage Tanks

Hatches

Vents

Overflows

Level
indicators

Wells/Sources

Vents

Conduits

Well caps

Pitless
adapters

Well casings

Control valves

Distribution

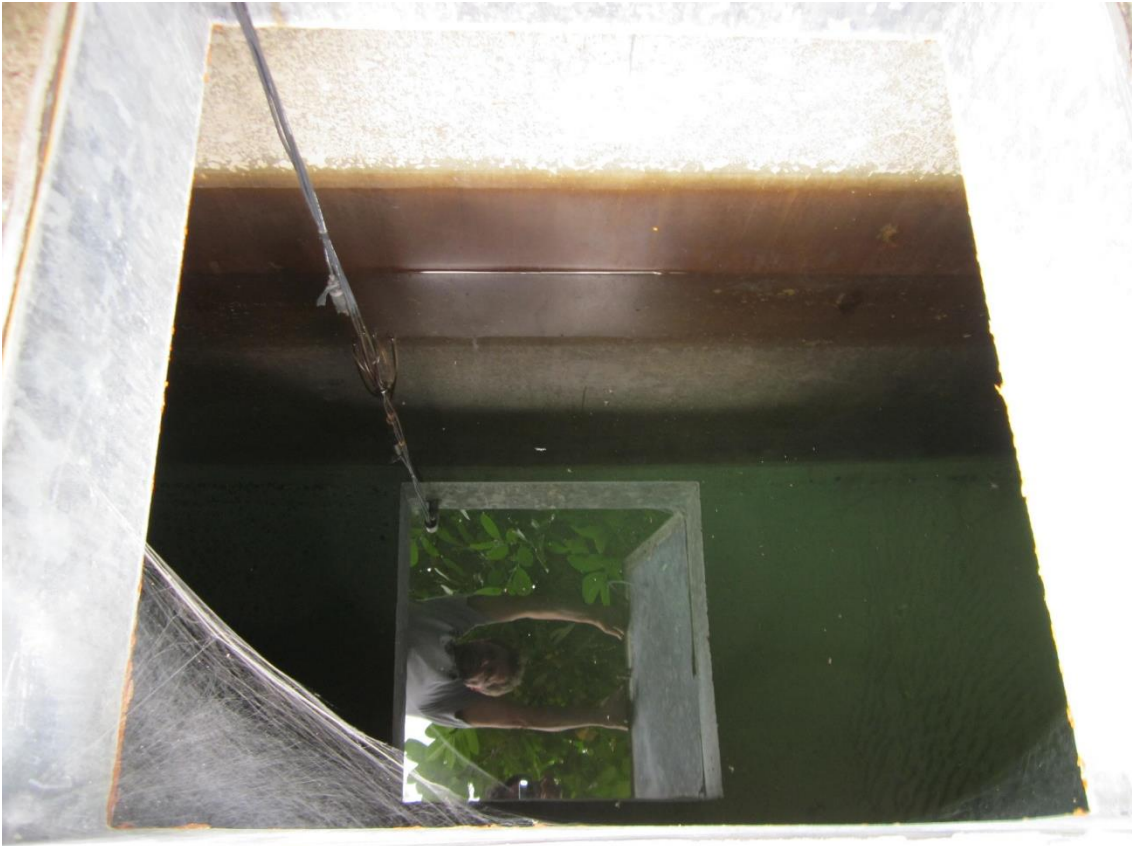
Blow-offs

Air-vac valves

Hydrants

Customer
connections

Access Hatches



Ladybugs



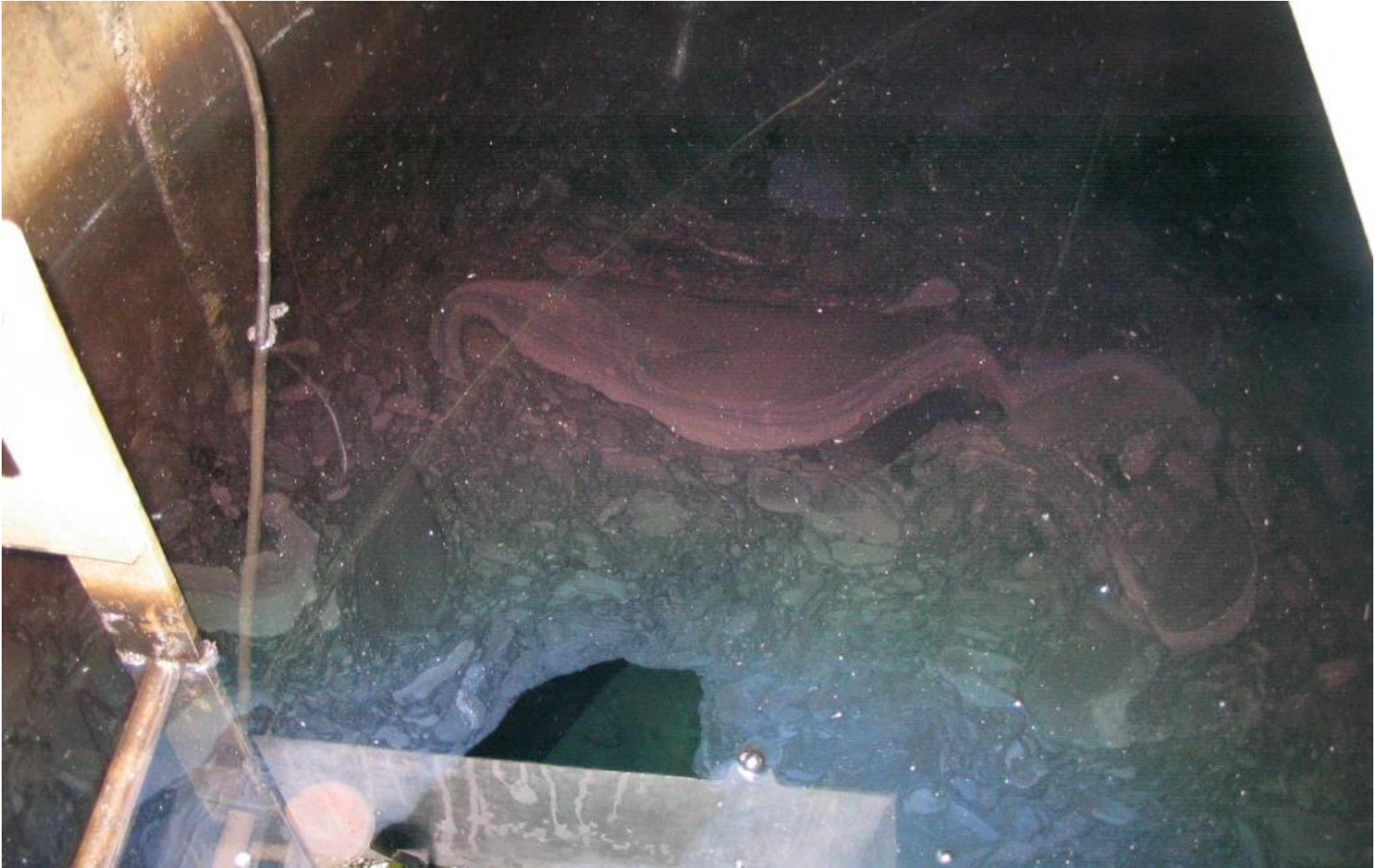
Access Hatches



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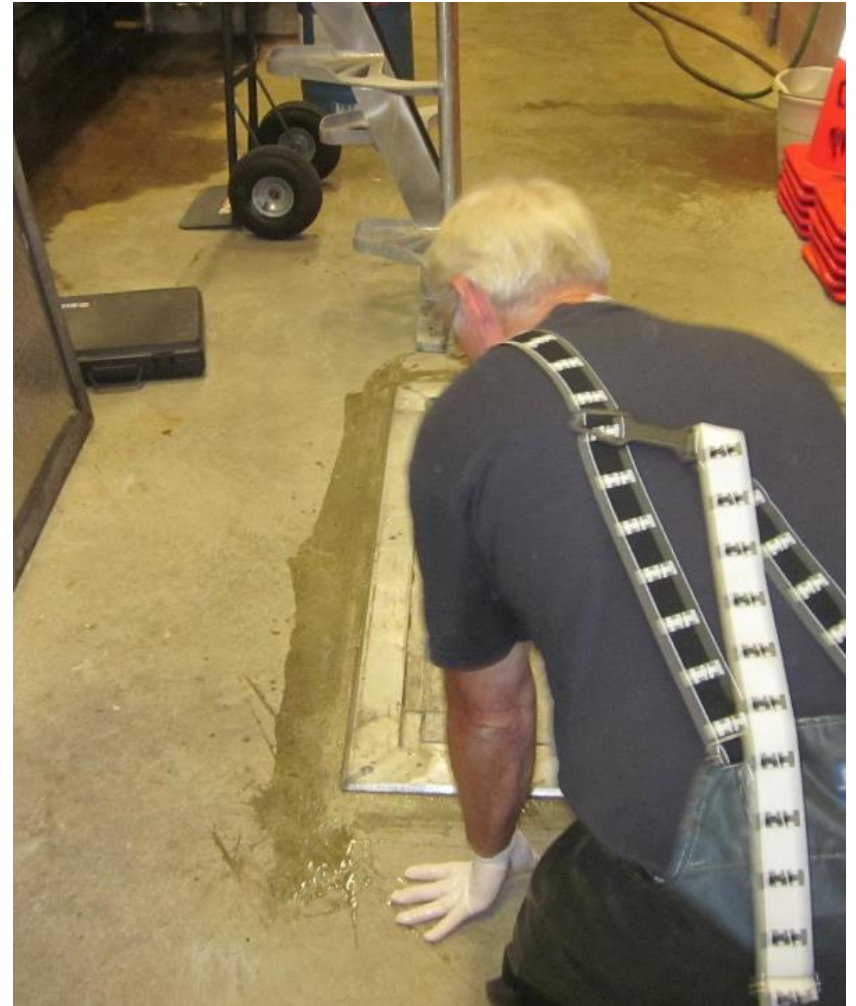
Access Hatches



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Storage Tank Vents



Storage Tank Vents



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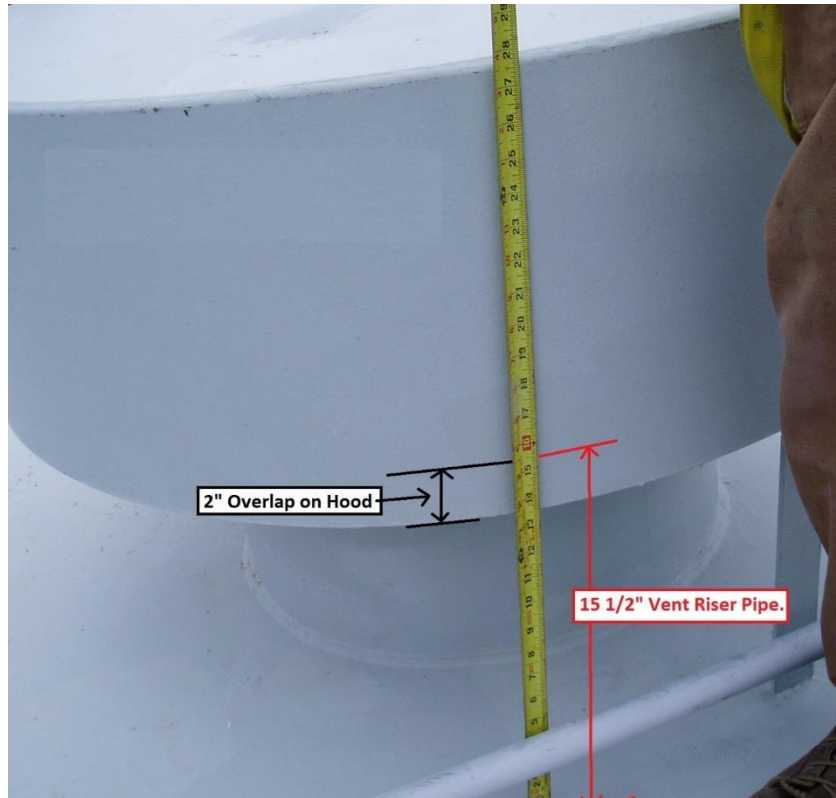
Storage Tank Vents



Storage Tank Vents



Storage Tank Vents



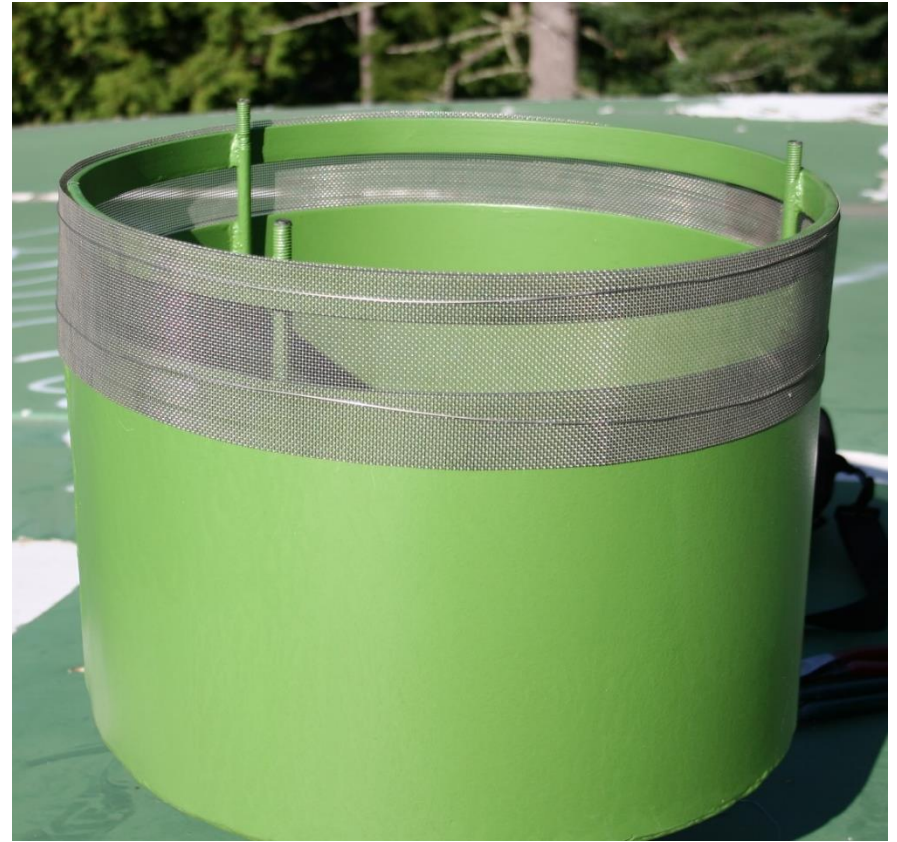
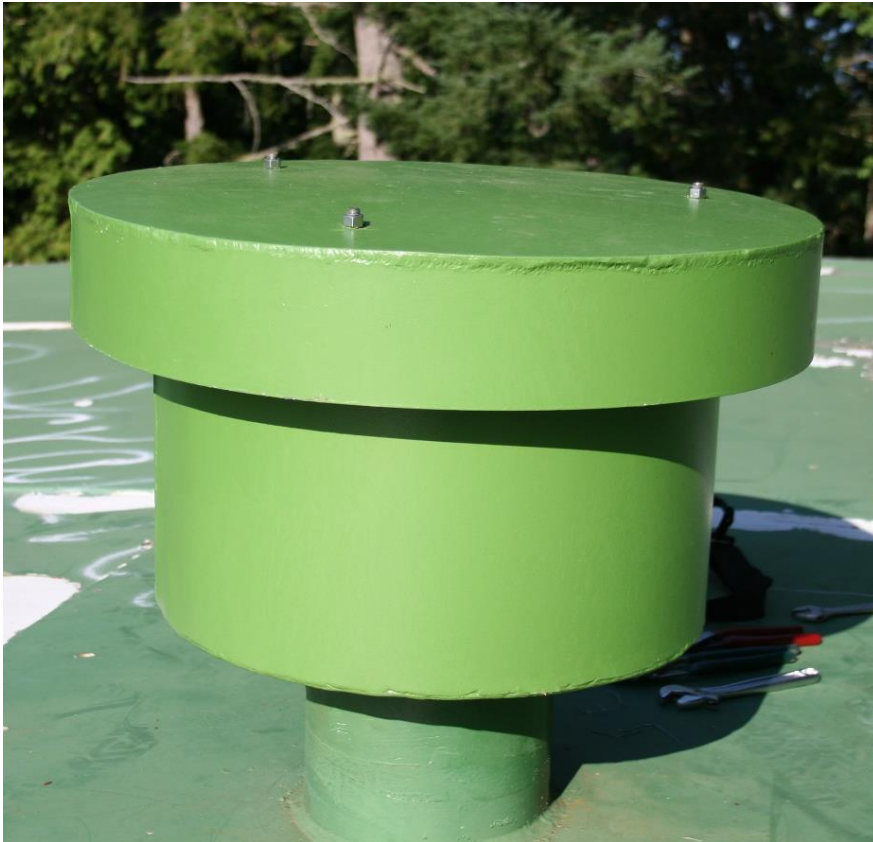
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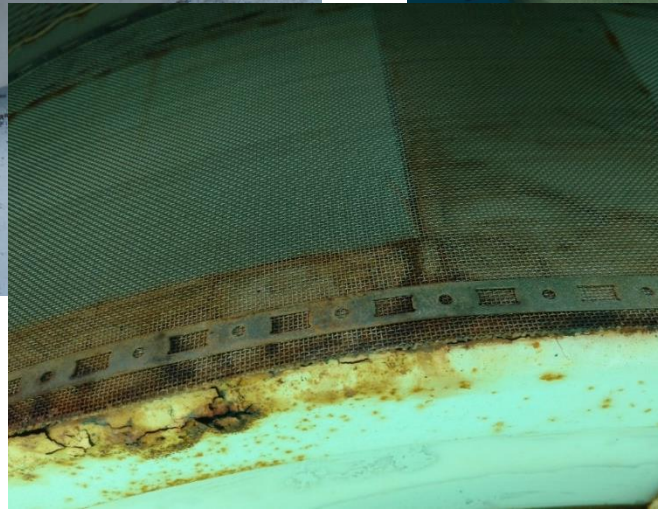
Storage Tank Vents



Storage Tank Vents



Storage Tank Vents



Tank Overflows



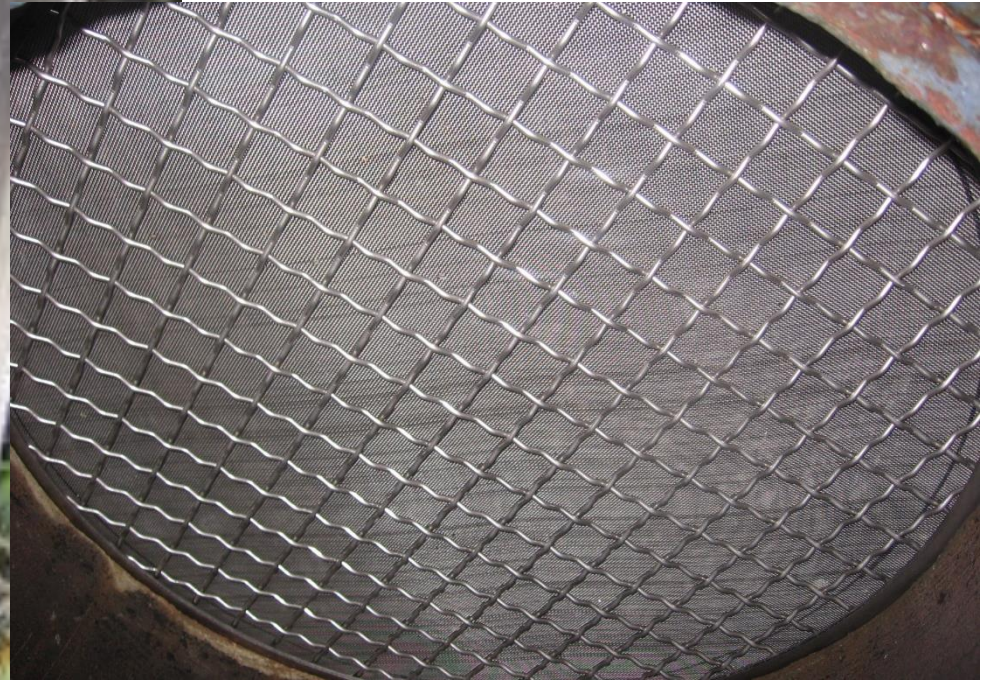
Tank Overflows



Tank Overflows



Tank Overflows



Tank Level Indicator



Well Openings



Screened Vents on Wells



Screened Vents on Wells



Screened Vents on Wells



Air Vacuum Assemblies – No Screens



Air Vacuum Assembly



Air Vacuum Assemblies and Screens



Distribution Valve Vaults



Some basic principles

- Design with better sanitary protection in mind
- Consider ease of inspection and ongoing maintenance
- All openings should either have water-tight seals or have 24-mesh screens/exclusionary devices
- Think like a bug



Questions?



Jolyn Leslie

Regional Engineer

Office of Drinking Water



handle: WADeptHealth

We Value Water

- ◆ Safe, reliable drinking water isn't free.
- ◆ Clean and consistent drinking water requires commitment, hard work, and investment.
- ◆ We want everyone to know how water systems provide safe, reliable drinking water to their customers.
- ◆ Investing in infrastructure today ensures safe and reliable drinking water for our future generations.



We Value Water

- ◆ Safe tap water requires sustainable infrastructure.
- ◆ Sustainable infrastructure depends on your belief in safe tap water.
- ◆ We can't have one without the other.



