



Smart Management for
Small Water Systems

Jeff's Tips for Asset Management

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American Water Works
Association

This program is made possible under a
cooperative agreement with EPA.



When it comes to asset management, the best thing to do is to do something

When the AWWA Asset Management Committee was asked what to do, they picked these five:

- Set service levels and monitor
- Manage risks of asset failure
- Assess the condition of assets
- Make good investment decisions – consider all costs and benefits
- Estimate the remaining life of assets



Set service level goals

Make them

- Simple
- Measurable
- Meaningful

Portland Water Bureau

Directional symbols & colors represent FY12-13 to FY13-14 trend.

Key Performance Measure	FY12-13 Actual	FY13-14 Actual
 Number of unplanned events leading to customers out of water for more than 8 hours		1.00
 Average time that customers are on hold before speaking to a customer service representative, minutes	1.50	1.52
 Maintain Water Revenue bond credit rating	100%	100%
 Number of violations of state and federal drinking water quality regulations	1	1
 Number of violations of state and federal environmental regulations	0	2
 Percent of identified high risk assets addressed	95%	96%



An outage service level

Measurable and understandable...

- No more than 5% of customers are out of water for more than 8 hours a year
- No more than 2 unplanned events in a year where customers are out of water for more than 8 hours

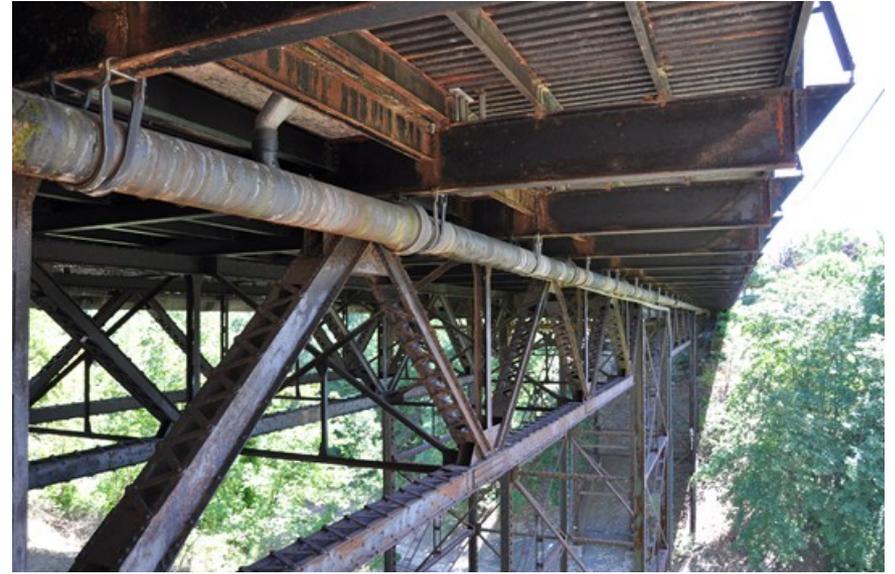


Know (and document) your risks of asset failure

- It may surprise you
- Or it may confirm what you already knew but didn't document



Which is the high risk?





Which is the high risk?



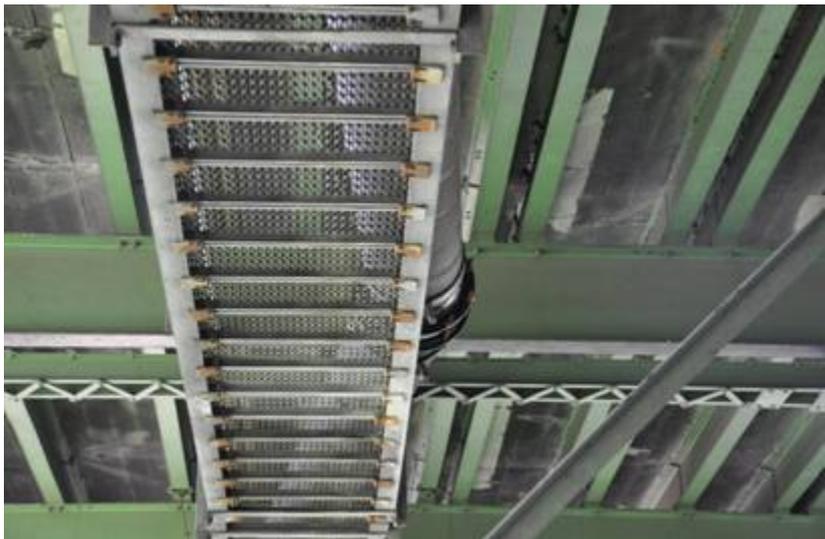


Fall hazards are high risk...for someone





If you don't look, you won't know ... until it fails ...
and sometimes it is not that hard to look





Collect data that you can use. We track the failure mode for our pipes at Portland Water

Pipe Material & Size Grouping	Seal failure	Vertical break	Horizontal break	Pinhole leaks	Other	Total
Cast Iron 8-inch or less	2%	74%	6%	5%	13%	491
Cast Iron 10- to 12-inch	21%	24%	17%	7%	31%	29
Cast Iron 14-inch or greater	33%	7%	13%	0%	47%	15
Ductile Iron 8-inch or less	7%	72%		3%	17%	29
Ductile Iron 10- to 12-inch	50%				50%	2
Ductile Iron 14-inch or greater					100%	1
Steel 8-inch or less		29%	6%	56%	9%	133
Steel 10- to 12-inch		100%				1
Steel 14-inch or greater				100%		3



Don't think you can't make a good decision without a lot of data

Cost and Benefits of Overhauls

