

Washington Department of Health

Restoring Infrastructure, Restoring Trust

October 19, 2016
IACC Conference

PUBLIC HEALTH
DRINKING WATER FOR A SAFER AND HEALTHIER COMMUNITY



Office of Drinking Water's Mission

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



What We'll Talk About Today

- How do people view water systems?
- What do water systems sell?
- Asset management
- Water system planning
- Rate setting and financing
- Restoring trust

Drinking Water in the Public Eye

What changed?

Learning From Flint

- People care about this.
- People have some fear.
- Flint was a human-made disaster.
–This is good news!
- Your decisions make a difference.

The Underlying Issue

- The public is not used to thinking about their water service.
- At the same time, we have substantial infrastructure replacement issues.
- We need to shift the way we interact with our customers and constituents.

Questions?

What changed?

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What Do Water Systems Sell?

It's not what your customers think

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Pro Tip #1a

- Remember that water is free
(as far as your customers are concerned)

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What Do Water Systems Sell?

~~Water System~~
Pizza
delivery

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Pizza System Components

- Pizza for delivery
 - The actual product being delivered
- Delivery support system
 - Infrastructure needed to deliver the product
- System management
 - The functions needed to keep the system running

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Water system components

- Drinking water for delivery
 - The actual product being delivered
- Delivery support system
 - Infrastructure needed to deliver the product
- System management
 - The functions needed to keep the system running

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Buried No Longer

- The American Water Works Association calculated the total replacement value of America's drinking water pipes is \$2.35 trillion.
 - That's about \$7,800 per person
 - Half must be replaced in the next 25 years
 - That figure only counts the pipes!

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Pro Tip #1b

- Stop selling water!
- Recognize that your system is a network of assets that need to be managed to work correctly—and help others recognize it, too.

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Questions?

Stop selling water!

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Asset Management

Connecting the technical to the financial

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Pro Tip #2

- ✓ Use asset management to determine the lowest reasonable cost for your water system

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Asset Management Framework



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Pro Tip #3

✓ Have City staff and consultants complete a full inventory of your water system's assets.

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Current State of Assets

- Operators and engineers generate this
- Each asset is assessed for condition and remaining useful life
- If asset condition is unknown, use the standard expected useful life

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EPA's Estimated Useful Life

Asset	Expected Useful Life (years)	Asset	Expected Useful Life (years)
Intake Structures	35-45	Distribution Pipes	35-40
Wells and Springs	25-35	Valves	35-40
Galleries and Tunnels	30-40	Meters	10-15
Chlorination Equipment	10-15	Service Lines	30-50
Other Treatment	10-15	Hydrants	40-60
Storage Tanks	30-60	Lab/Monitoring Equip.	5-7
Pumps	10-15	Tools and Shop Equip.	10-15
Buildings	30-60	Office Furniture	10
Electrical Systems	7-10	Computers	5
Transmission Mains	35-40	Transportation Equipment	10

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Set Your Level of Service

- These are policy decisions!
 - Technical
 - Managerial
 - Financial

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Pro Tip #4

✓ Set your level of service to meet the reasonable expectations of your community.

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Level of Service – Technical

- Outage frequency and length
- Water pressure standards
- Cross-connection control

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Level of Service – Managerial

- How quickly do you respond to complaints?
- What documents do you generate and retain?
- How are decisions made?
- How do you involve the public?

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Level of Service – Financial

- Debt service coverage
 - You may need to maintain a minimum balance
- Operational reserve
 - AWWA recommends 90-day operational reserve
- Capital improvement reserve
 - Sufficient to fund capital improvements
- Emergency reserve
 - Enough to replace most expensive critical asset

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Pro Tip #5

- ✓ Name your reserves! It's more difficult to nickel and dime accounts that have a specific purpose.

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Critical Assets

- Assets are critical when:
 - They have a high chance of failure, or
 - Failure would cause major consequences
- Every system is different.

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Minimum Life Cycle Cost

- Reactive maintenance becomes scheduled maintenance.
- Knowledge of life cycle costs leads to knowledge of annualized costs over the long term.

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Long-Term Funding Plan

- If ...
- Know your minimum life cycle cost
 - Timing of major projects
- Then ...
- Policy makers can adopt financial plans
 - Customers experience reduced costs and don't experience price spikes.

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Pro Tip #6

✓ Soon, asset management plans can make you eligible for DWSRF loans.

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Questions?

Connecting the technical to the financial

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Water System Planning

Preparing for threats...and opportunities

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Pro Tip #7

✓ Your water system plan is a policy document.

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Plans as Policy Documents

Chapter	Policy Questions
Water System Description	Who makes the decisions? What are our goals?
Basic Planning	Where will growth occur? How much?
System Analysis	What level of redundancy? What is our pressure LOS?
Water Use Efficiency and Water Resources	How do help our customers make wise water choices?
Source Water Protection	How do we protect our wells, springs, and intakes?

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Plans as Policy Documents

Chapter	Policy Questions
Operations and Maintenance	How have we prepared for emergencies? How do we prevent them?
Construction Standards	What are our design requirements?
Capital Improvement Plan	What are our priorities?
Financial Plan	How will we pay for it? How do we allocate costs? How much debt is OK?

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Effect of Adoption – WSP

- Water System Plans (WSPs) are adopted by the town or city council.
- Water System Plans are the official policy of the town or city.
- Water System Plans should be amended when conditions change. The council and DOH must approve amendments.

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Effect of Adoption – SWSMP

- Small Water System Management Programs (SWSMP) are not adopted by the town or city council.
- However, all water system policies adopted by the council must be included in the SWSMP.
- SWSMPs may be changed any time without DOH approval and must be updated as necessary when council policy changes.

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Questions?

Your plans are for achieving your goals

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Rate Setting

What is the question you're trying to answer?

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A Common Mistake

- Starting by setting rates is a common mistake.
- Bad methods:
 - Rate setting by inertia
 - Rate setting by comparison
 - Rate setting by fear

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Potential Rate Setting Priorities

- Safety and reliability
- Operations, emergencies, and replacement
- Lowest reasonable rate
- Don't rile up the customers (e.g. keep rate increases steady)
- Let your policies set your rates!

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Pro Tip #8

- When you're about to set the rates, always ask yourself:
"Does this rate cover the full cost to maintain the water system indefinitely?"

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Pro Tip #9

- Work with the Infrastructure Assistance Coordinating Council
infracfunding.wa.gov

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Questions?

Let your level of service set your revenue requirement

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Restoring Trust

The critical role of public participation

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Pro Tip #10

- ✓ Don't do this alone!
Engage your community.

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Consumer Participation

- Asset management committees:
 - Share the workload
 - Maintain corporate knowledge
 - Increase credibility
 - Gain committed advocates
 - Foster trust

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Show Your Work!

- Early, continuous public engagement
- Make the water system real
- Make water a policy process
- Financial transparency
- Show availability of assistance
- Predictable rates

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Office of Drinking Water Regions



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Regional Planners

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Questions?

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Thank you

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