

Sewer & Water Liability



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Sewer & Water Liability



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Goals

Increase your awareness of the various sources of sewer & water liability.

Provide practical tips and tools to reduce your liability.

Water and Wastewater Systems

- \$232B - \$402B needed for investment in drinking water systems (CBO)
- \$331B - \$450B needed to replace and build new wastewater infrastructure (EPA)
- Increased regulatory pressure

Negligence



Standard Of Care

CONSIDER . . .

- MOST CITIES REQUIRE CONNECTION TO SEWER / WATER SYSTEMS
- MOST CITIES DETERMINE HOW BOTH PUBLIC AND PRIVATE PORTIONS OF THE SYSTEM WILL BE CONSTRUCTED

Standard Of Care

- **THE STANDARD OF CARE IS "NEGLIGENCE"**
- "A city is not an insurer of the condition of its sewers; to charge it with damage caused by an obstruction in the sewers, negligence must be proved."

Kempton v. City of Soap Lake, 132 Wn.App. 155 (2006)

Elements Of Negligence

- NEGLIGENCE IS THE FAILURE TO EXERCISE **REASONABLE CARE**
- TWO PRINCIPLE FACTORS:
 - ◆ KNOW OR SHOULD HAVE KNOWN
 - ◆ REASONABLE OPPORTUNITY TO CORRECT

Elements Of Negligence

AFFECT: THE LAW PLACES A HIGH DEGREE OF RESPONSIBILITY ON THE GOVERNMENT TO PREVENT DAMAGE.

Liability Prevention

1. Inspection – Electronic / Visual
2. System mapping
3. Programed preventive maintenance
 - Asset Management
4. Documentation

Current State Of My System's Assets?

1. Preparing an asset inventory and system map.
2. Developing a condition assessment and rating system.
3. Assessing remaining useful life by consulting projected-useful-life tables or decay curves.
4. Determining asset values and replacement costs.

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Sewers / Water Design, Construction



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Asset Management

1. How can assets fail?
2. How do assets fail?
3. What are the likelihoods (probabilities) and consequences of asset failure?
4. What does it cost to repair the asset?
5. What are the other costs (social, environmental, etc.) that are associated with failure?

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Asset Management Benefits

1. Moving from reactive maintenance to predictive maintenance.
2. Knowing the costs and benefits of rehabilitation versus replacement.
3. Looking at lifecycle costs, especially for critical assets.
4. Deploying resources based on asset conditions.
5. Analyzing the causes of asset failure to develop specific response plans.

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Sewers / Water Liability

ACTIONS THAT CAUSE LIABILITY

- DESIGN
- CONSTRUCTION
- MAINTENANCE AND REPAIR
- RESPONSE TO CHANGING CIRCUMSTANCES

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Design Liability



Sewer 4102 Sept 21 1913 GARRIS No. 5 - South of Board St.

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Design Liability

- SYSTEM INADEQUATELY DESIGNED
- SYSTEM DESIGNED ADEQUATELY BUT WITHOUT CAPACITY TO MEET ACTUAL DEMAND
- SYSTEM DESIGNED TO MEET TYPICAL BUT NOT FORESEEABLE DEMAND
- PERMANENTLY RETAIN ALL SPECIFICATIONS, CONTRACTS, DESIGN DOCUMENTS, AS-BUILTS

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Liability Reduction

Maintain proper capacity

- Know your capacity
- Know your load
- Limit load (moratoria) or increase capacity (construction)
- Utilize proper growth planning

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Liability Reduction



- \$353m
- Increased Sewer Capacity
- Repair & Replace aging infrastructure
- New Technologies

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Inspection & Maintenance



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Maintenance Liability

- Failure to inspect to discover problems
- Failure to respond to known problems
- Failure to document

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Sewers / Storm Drains



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Liability Reduction

Regular inspection and maintenance

- MAINTENANCE SCHEDULE (the when")
- MAINTENANCE CHECKLIST (the "what")
 - Retain maintenance records
 - Don't **limit** maintenance to a schedule

Testing

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Changed Circumstances

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Changed Circumstances

“A city is liable for flooding to property required to be connected to its sewers, which though sufficient when constructed, have become insufficient to carry off the sewage and drainage conducted into them.”

Boyer v. Tacoma, 156 Wn. 280 (1930)

Extraordinary Events

Neighbors hit by flash flooding

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Extraordinary Events

THE RULE: “Whatever the rule may be as to ordinary surface water or rainfalls, it is settled that a municipal corporation is not liable for damages caused by an overflow of its sewers occasioned by extraordinary rains or floods. . . .”

Tombari v. City of Spokane, 197 Wn. 207 (1938)

EXTRAORDINARY EVENTS And MAINTENANCE LIABILITY

THE EXCEPTION:

“However, although the rain doing the damage be of an extraordinary character, yet if the negligence of the city in failing to keep the sewers open concurred and contributed to the damage, then the city has been held liable. And if drains are so inadequate that they cannot take care of the water in case of an ordinary storm, the municipality is not relieved from responsibility because the rainfall was extraordinary.”

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Water Mains

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Water Mains

- Most water main breaks occur on cast iron pipes, and cast iron pipes from 1950-1964 have a higher break frequency than older pre-1950 cast iron pipes.

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Water Mains

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Water Mains

Seattle 8-inch – 50 yrs old

LADWP 4 inch – 80 yrs old

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Water Main Inspection

- The selection of the inspection method is mainly driven by the pipe's size and material.
- Eddy currents (EC), electromagnetic testing (EMT), and ultrasonic testing (UT) are used in metal pipes.
- Acoustic emission (AE), impact-echo (IE), sonar, and visual inspection are used in concrete pipes.

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Utility Locates

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Utility Locates

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Utility Locates

The owner of underground facilities, is required under **RCW 19.122.030(3)** to locate and mark their utility lines. Failure to properly locate or provide an excavator with the best available information on the location of your facilities and the location of all known service laterals may expose the municipality to a liability claim for damages from any subsequent property damage and/or financial losses associated with the failure to or improper locate.

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Utility Locates

Once notified of a request, you have a **duty** to provide the excavator with **reasonably accurate** information regarding locatable underground facilities by surface-marking the location of the facilities.

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Utility Locates

- If there are **identified but non locatable** underground facilities, provide **the best available information** as to their locations.
- Once marked, the excavator is responsible for maintaining the markings.



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Documentation

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Asset Management Advantages

1. Prolonging asset life and aiding in rehabilitate/repair/replacement
2. Decisions through efficient and focused operations and maintenance.
3. Meeting consumer demands with a focus on system sustainability.
4. Setting rates based on sound operational and financial planning.

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Long-term Funding Strategy

1. Revising the rate structure.
2. Funding a dedicated reserve from current revenues (i.e., creating an asset annuity).
3. Financing asset rehabilitation, repair, and replacement through borrowing or other financial assistance.

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Check Up Program for Small Systems (CUPSS)

- CUPSS is a free, easy-to-use, asset management tool for small drinking water and wastewater utilities. CUPSS provides a simple, comprehensive approach based on EPA's highly successful Simple Tools for Effective Performance (STEP) Guide series. Use CUPSS to help you develop:
 - A record of your assets;
 - A schedule of required tasks;
 - An understanding of your financial situation;
 - A tailored asset management plan.

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