

Appendix G
Handout - Level of Service
Public Informational Meeting

Wastewater Collection System Asset Management Program

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October 8, 2019 at 7:00 PM
Public Meeting
Town of Enfield, NH



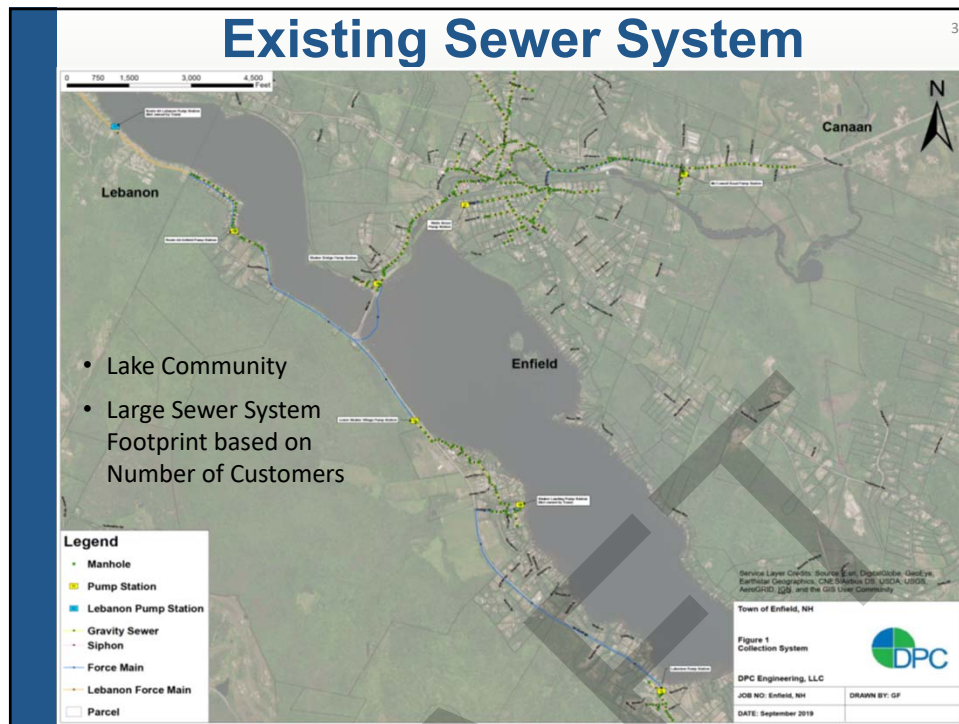
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TONIGHT'S TOPICS

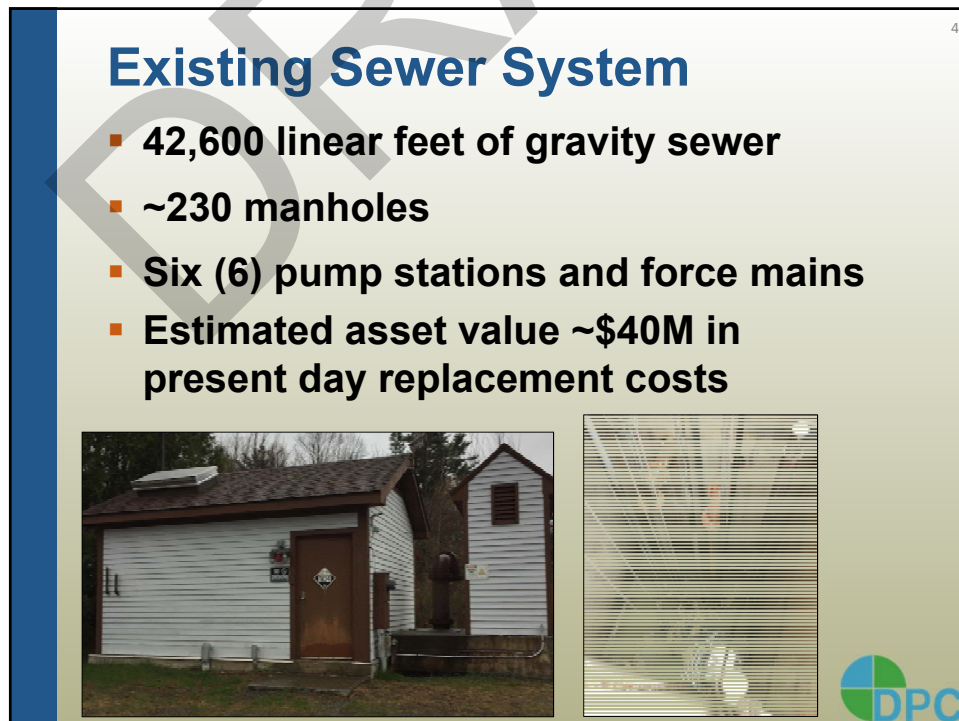
- Existing Sewer System
- CMOM Requirements
- Asset Management Plan
 - Level of Service (LOS) Goals
- Next Steps
- Discussion & Questions



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NH Sewer Rate Comparisons

Community	Average Annual Sewer Bill ¹	% of MHI
Statewide	\$679	1.13%
Enfield	\$1,651²	2.00%
Lebanon	\$953	1.48%
Wolfeboro	\$1,113	2.18%
Holderness (Plymouth Village W&S District)	\$926	1.38%
Conway (Conway Village Fire District)	\$1,277	2.14%

¹Based on usage of 200 gal/day (6,000 gal/month; 72,000 gal/year)

²Excludes temporary deficit charge of \$6/1,000 gal (\$2,083 incl. deficit charge)

Source: 2018 New Hampshire Water & Wastewater Rates Report



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CMOM Requirements

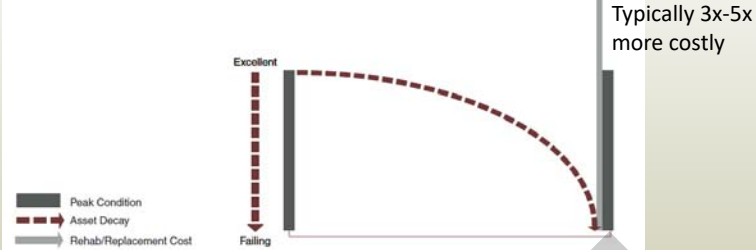
- **Capacity**
 - Prevent overflows and backups
- **Management**
 - Preventative maintenance
 - Emergency response planning
 - Asset Management – *Focus of this Project*
- **Operation & Maintenance**
 - Operate the system efficiently
 - Maintain system to prevent problems
- **Permit Requirement as Extension of Lebanon System**



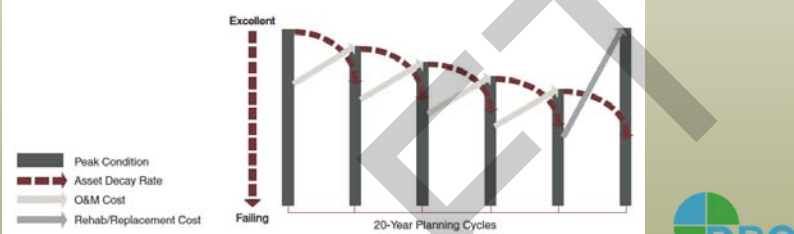
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What is Asset Management?

Run-to-Failure Model



★ Asset Management Model



Source: US EPA

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Asset Management Goals

- 20-Year Planning Roadmap
- Prolong Asset Life
- Cost-Effective Decision Making
- Long-Term Financial Stability
- Allocate Time and Resources Effectively
- Provide a Sustainable High-Level of Service to Customers



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Asset Management Process

1. Inventory of Critical Assets
2. Evaluate Condition and Performance of Critical Assets
3. Determine a Sustainable Level of Service (Tonight's Focus)
4. Develop Capital Improvements Program
5. Develop Implementation Plan



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Field Work Completed

- Pump Station Evaluations
- Continuous Flow Monitoring of Sewers
- Manhole Inspections
- Sonar Testing of Sewers

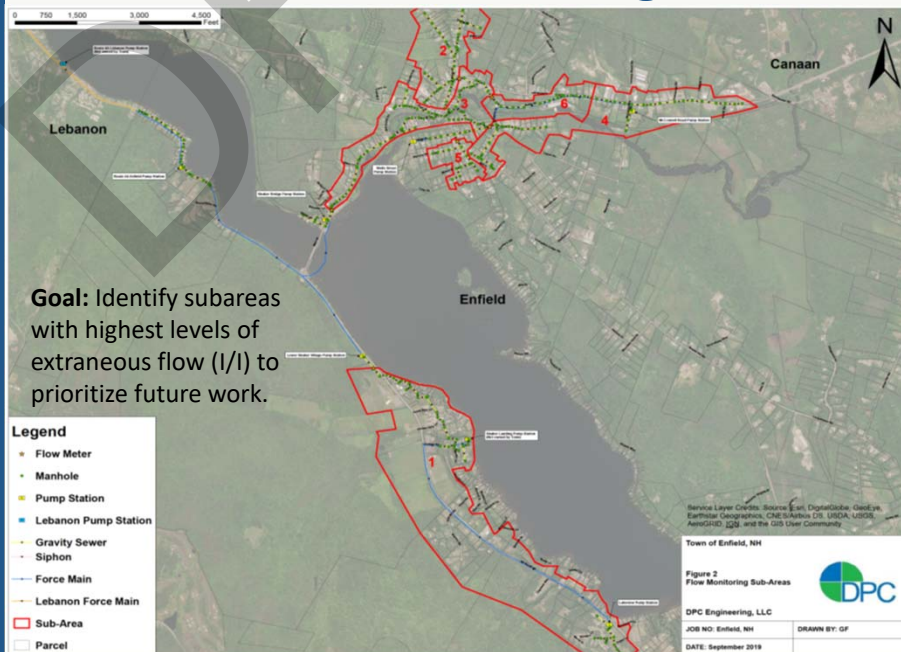


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Flow Monitoring

Goal: Identify subareas with highest levels of extraneous flow (I/I) to prioritize future work.

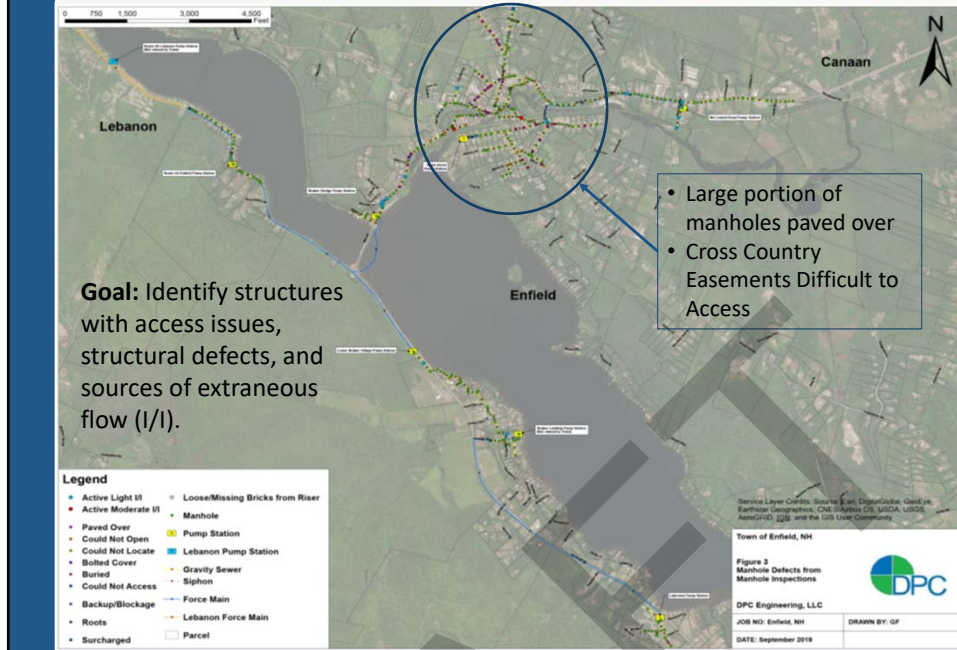
- Legend**
- Flow Meter
 - Manhole
 - Pump Station
 - Lebanon Pump Station
 - Gravity Sewer
 - Siphon
 - Force Main
 - Lebanon Force Main
 - ▭ Sub-Area
 - ▭ Parcel



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Manhole Inspections

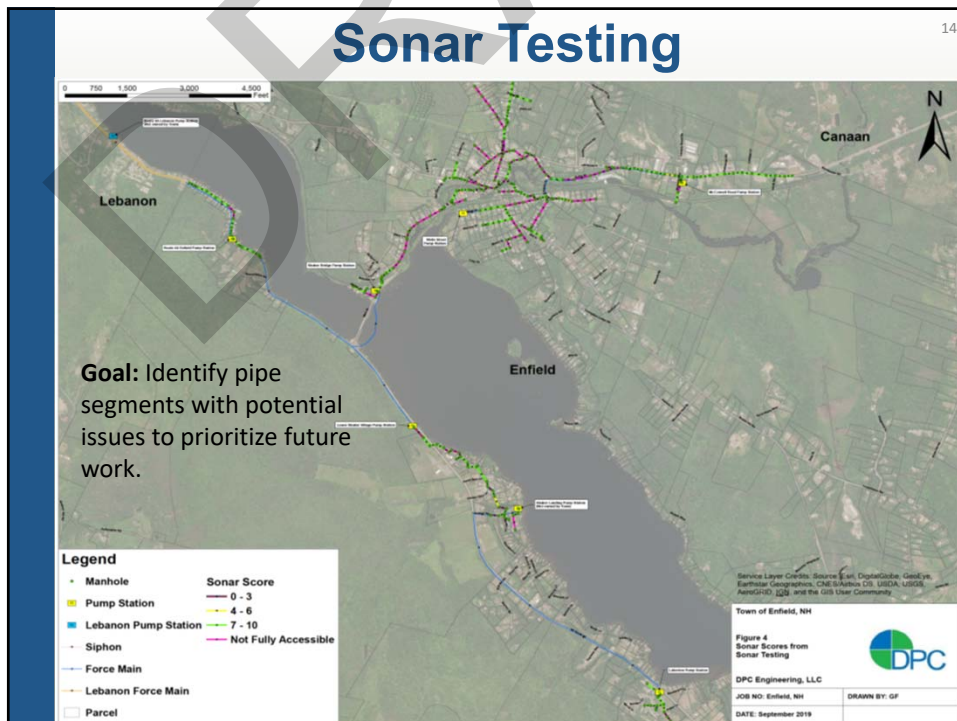
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Sonar Testing

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Rank/Sort Assets – Sewer

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Pipe Criteria	Minimum Score	Maximum Score
Pipe Type (VC, AC, PVC)	1	10
Sonar Score (1 - 10)	1	5
I/I Ranking (Flow Monitoring)	1	5
Asset Criticality & Scoring Range =	3	20

Manhole Criteria	Minimum Score	Maximum Score
Wall Type (Brick, Block, Precast)	1	5
Wall Condition (Poor, Fair, Good)	1	5
Observed Manhole Wall I/I (Light, Moderate, High)	1	5
I/I Ranking (Flow Monitoring)	1	5
Asset Criticality & Scoring Range =	4	20



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Rank/Sort Assets – Pump Stations

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Criteria	Minimum Score	Maximum Score
Age	1	5
Energy Efficiency / Return on Investment	1	5
Function / Impact on Downstream Sewers	1	10
Operations & Maintenance	1	5
Access	1	5
Safety	1	5
Percent of System Served	1	10
Asset Criticality & Scoring Range =	7	45



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Tonight's Focus – Level of Service

- Foundation of Asset Management Plan
- Establishes Customer Expectations
- Allows Recovery of Full Cost of Doing Business
- Establishes SMART Goals
- Outlines the Commitments of the Town



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Proposed LOS Goals – SMART Criteria

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- 1. Maintain adequate system capacity for all current and future sewer customers.**
 - A. No surcharging due to hydraulic capacity.
 - B. Institute annual proactive/preventative maintenance program.
- 2. Minimize system bottlenecks due to pipe blockages.**
 - A. Sonar test 20% of system annually – clean and CCTV-inspect based on results.



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Proposed LOS Goals – SMART Criteria (continued)

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- 3. Reduce non-sanitary flows to Lebanon.**
 - A. Reduce extraneous flows (I/I) by 10% over a 5-year period.
 - B. Explore a flow offset program (i.e. reduction of I/I to facilitate new sewer connections).
 - C. Evaluate composition of flows (sanitary vs. I/I) to Lebanon on an annual basis to evaluate effectiveness of I/I removal efforts.
- 4. Maintain system access to facilitate service response.**
 - A. Clear easements within the next five-year period.
 - B. Uncover buried manholes within the next five-year period.
 - C. Institute annual program to maintain access.



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Proposed LOS Goals – SMART Criteria (continued)

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5. Develop integrated funding, finance and revenue model.

- A. Establish 5-year capital plan and rate projections and update annually.
- B. Continue to seek grant and low-interest loan opportunities.
- C. Recover full cost of doing business.
- D. Balance standard of care, system needs, and rate impacts to customers.

6. Grow sewer customer base by 10% over a 10-year period.

- A. Prioritize infilling of new customers adjacent to existing sewer system to increase revenue.



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Next Steps

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- Update Level of Service Goals
- Prioritize Improvements
- Develop Financial Strategies for Implementation
- Complete Capital Improvements Plan
- Finalize the Asset Management Plan
- Evaluate Local and Regional Wastewater Management Alternatives



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Discussion & Questions

Town of Enfield's Vision Statement for Asset Management

Meet the standard of care for current sewer customers, facilitate opportunities for additional sewer customers, and balance annual program needs with sustainable customer costs.

