

Preliminary Project Update 2017 Water & Sewer Rates Study

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Town of Longmeadow Selectboard



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OVERVIEW

- Terminology
- Key Questions
- FY2018 Water & Sewer Billing Systems
- Alternative Sewer Rate Concepts
- Preliminary Sewer Recommendations
- Questions



Terminology

- **Fee Structures**
 - Fixed Fee = Set cost independent of usage
 - Fixed Rate = Set unit cost based on usage
 - Ascending Rate = unit cost per gallon; rate changes as water consumption increases
 - Base Charge = Minimum amount charged regardless of consumption/usage
 - Maximum Allowance = Amount of water included in base charge
 - Cap = Maximum usage per period



Key Questions

- Is the current sewer rate structure fair and equitable?
- What effect(s) would secondary irrigation meters have on the sewer rate structure?
- What effect would winter averaging have on the sewer rate?
- Is the current annual sewer cap of 220 HCF per residential user appropriate?
- What impact does the infiltration and inflow (I/I) flow component have on sewer rates?



FY2018 Water & Sewer Rates

- **Customers**
 - 5,746 total water and sewer customers
 - 96% residential & 4% commercial
 - Monthly usage data from Aug-15 through Jul-17
- **Water & Sewer Rates**
 - Enterprise Fund
 - Fixed rate system
 - Billed twice per year (metered in February & August)
 - Water = \$3.22 per HCF
 - Sewer = \$2.50 per HCF with 220 HCF annual cap and fixed fee per billing period based on meter size



Benchmarking Water & Sewer Rates

- **Longmeadow – Median**
 - Annual residential water usage = 113 HCF
 - Annual residential sewer cost = \$317
 - Annual residential water cost = \$364
- **State-Wide Median Annual Residential Costs**
 - Annual water cost ~ \$550
 - Annual sewer cost ~ \$775



Alternative Sewer Rate Concepts

- **Several Sewer Rate Alternatives Explored**
 - Current Sewer Rate System
 - Secondary Water Meters Without Cap
 - Winter Averaging: Semi-Annual
 - Winter Averaging: Quarterly
 - Fixed Fee Rate System



Current Sewer Rate System

- **Summary**
 - "No Action" Alternative - Existing Rate System
 - No changes to meter charge per billing period or annual usage cap of 220 HCF
- **Observations**
 - Median annual water consumption of 113 HCF ~ 90 gpcd (based on 2.6 persons per house)
 - 17% of customers exceed the annual cap of 220 HCF
 - 7% of customers exceed the pro-rated sewer cap during the winter period
 - Less than 1% of customers appear to be "snow birds"



Current Sewer Rate System

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Table 1
Number of Residential Customers by Unit Water Consumption (Percentile Rank)
Town of Longmeadow, MA

Percentile (Up to)	Number of Units Consumed ¹	Number of Residential Customers
10%	0-41	552
20%	41-60	553
30%	60-78	552
40%	78-95	552
50%	95-113	552
60%	113-136	552
70%	136-164	553
80%	164-202	553
90%	202-268	552
100%	268-1276	552



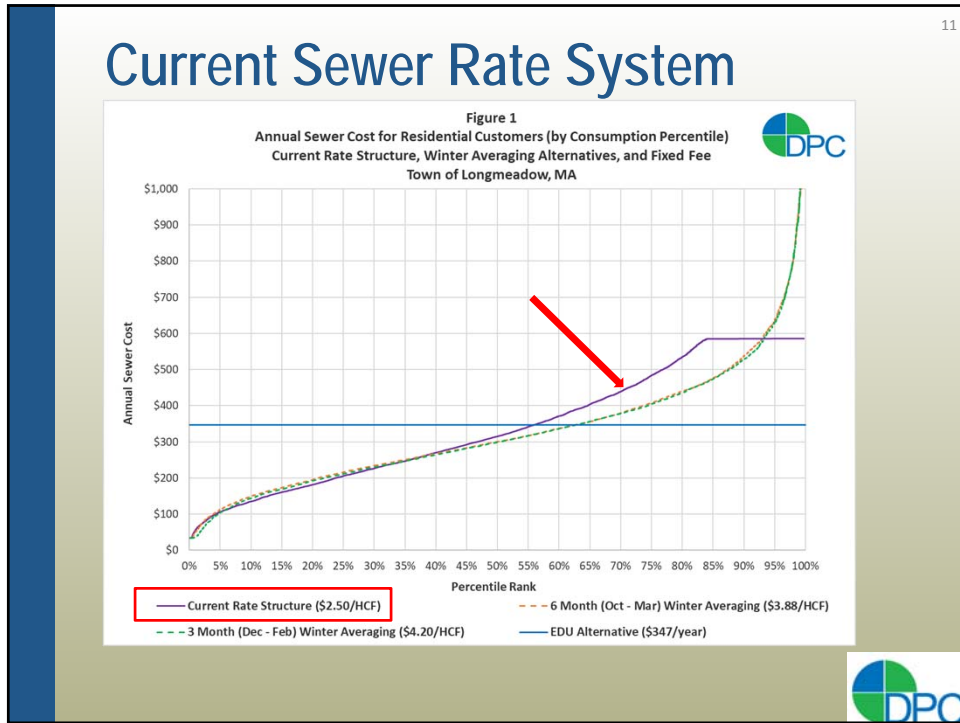
Current Sewer Rate System

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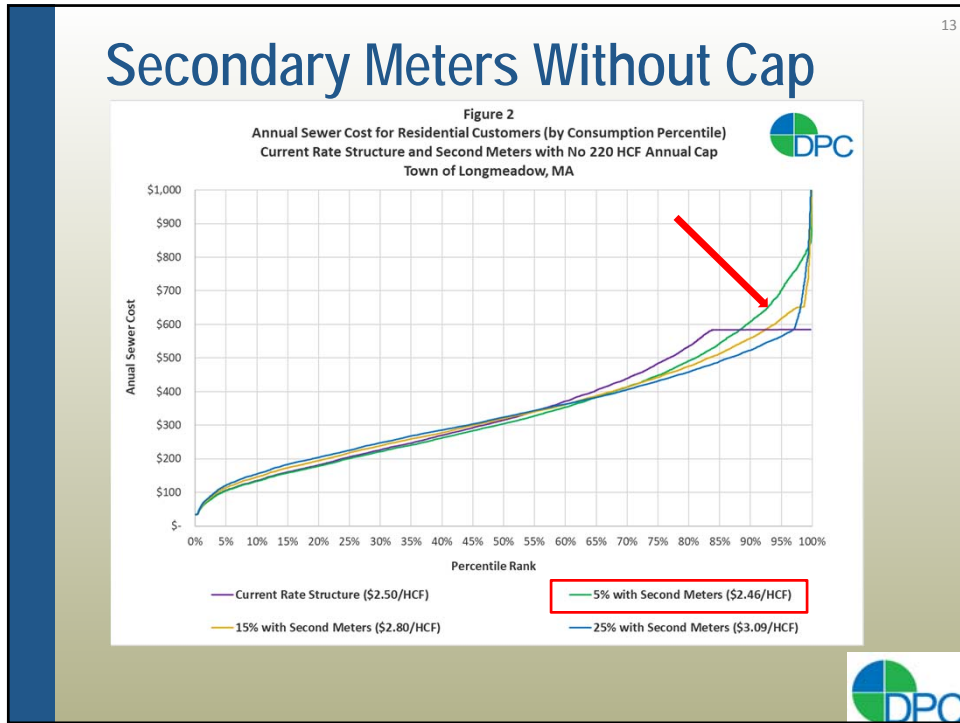
Table 1A
Number of Residential Customers by Unit Water Consumption
Town of Longmeadow, MA

Number of Units Consumed ¹	Number of Residential Customers
0-50	841
51-100	1,578
101-150	1,235
151-200	777
201-220	203
221-250	255
251-300	264
301+	270

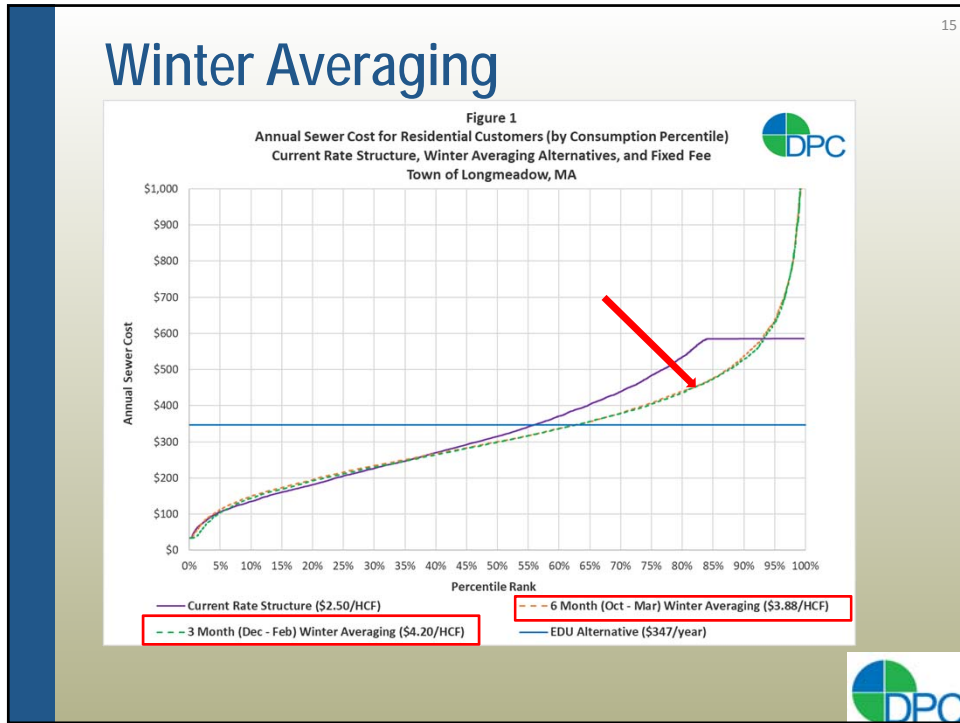




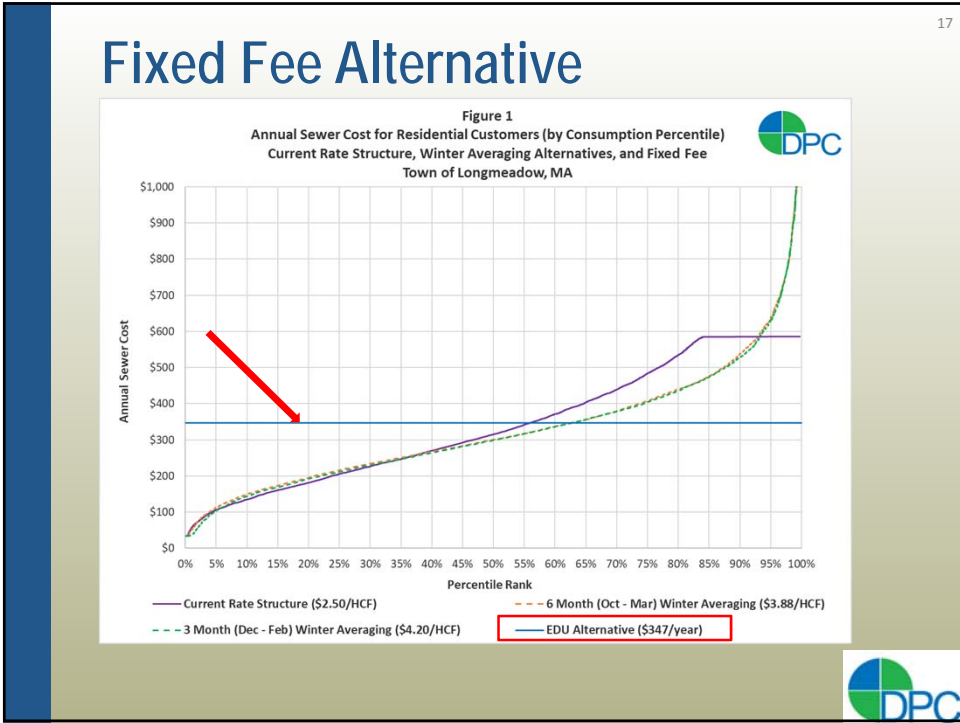
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- ## Secondary Meters Without Cap
- **Summary**
 - Fixed rate system with no sewer cap
 - Customers with second meters billed only for sewer usage (excluding irrigation)
 - Customers without second meters billed for sewer based on all water usage
 - **Observations**
 - High water users most impacted by this alternative
 - Sewer rate could stay at \$2.50 per HCF if top 6% of sewer users installed second meters
- DPC



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- ## Winter Averaging
- **Summary**
 - Fixed rate system based solely on non-peak seasonal water usage
 - Could use 3-month or 6-month averaging period
 - **Observations**
 - Current billing period (August) is in middle of peak season (consider re-aligning billing for Oct-Mar)
 - The 3-month concept would require quarterly billing
 - Distribution of rates similar to current system with different unit rates (high users bills much higher)
- DPC



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- ## Fixed Fee Alternative
- **Summary**
 - All residential customers = 1 EDU
 - Non-residential customers assigned # EDUs
 - Fixed annual sewer rate per customer based on number of EDUs
 - **Observations**
 - All residential customers receive the same annual sewer bill
 - Dramatic increase for low water users
 - Significant decrease for high water users
- DPC



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- ## Options for Consideration
- **Current Rate System**
 - Maintain annual cap of 220 HCF
 - No administrative changes or staff resources needed
 - **Alternative Annual Sewer Cap**
 - Change cap to 110 HCF per billing period instead of 220 HCF per year
 - Capture winter consumption that is not irrigation
 - **Second Meters**
 - Remove the cap and allow second meters
 - As second meters are added (> 6%), adjust unit rate accordingly
- DPC

I/I Impacts on Sewer Rates

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- **What Are Infiltration and Inflow?**
 - Wastewater = sanitary flow + I/I
 - Infiltration sources are from groundwater
 - Inflow sources are from rainfall
 - All sewer systems have I/I
- **Longmeadow I/I Metrics**
 - State uses > 4,000 gpd/idm to define excessive infiltration
 - Standard for brand new plastic pipe is 200-400 gpd/idm
 - Longmeadow I/I (CY2014-16) ~ 700 gpd/idm



I/I Impacts on Sewer Rates

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- **State I/I Requirements**
 - Due by December 2017
 - Longmeadow aggressive pipe replacement program (5% in past 10 years)
 - MassDEP granted alternative approach to State requirements (less costly)
- **Springfield Payments**
 - 30% of Longmeadow's annual sewer costs are payments to Springfield
 - Costs apportioned based on flows



Recap Key Questions

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Questions?

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