

What Do We Need To Do Sustain The Sewer System



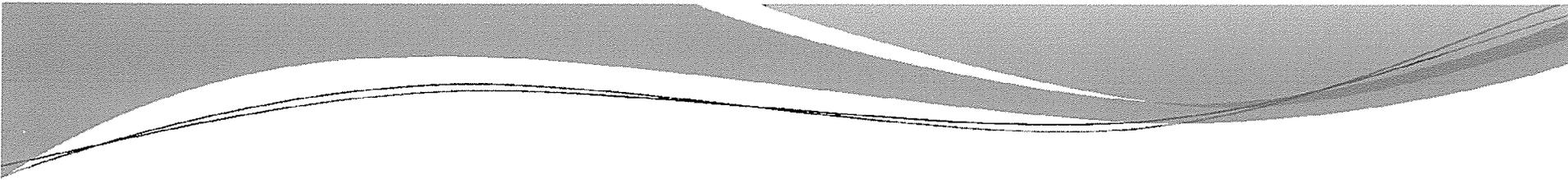
August 5, 2013
Board of Selectmen
Meeting

Doug Halley, Health Director
Steve Barrett, Finance Director
Brian McMullen, Assistant Finance Director



Three Part Series

- What was done?
 - How were sewers constructed
 - How were costs allocated
- What are we doing now?
 - How are sewers operating
 - How are costs being offset
- What do we need to do for the future?
 - How should sewer capacity be used
 - How should costs work towards sustainability



What Actions To Consider?

- Adopt Rules And Regulations
 - Permit Requirements
 - Connection Specifications
 - Allocation of Operating Expenses
 - Service Area Internal and External
 - Use of the Sewer System
- Adopt Policies
 - Use of Unallocated Wastewater flow
 - Utilization of Privilege Fee Revenue
 - Long Term Capital Plan



What Is The Purpose Of A Sewer Regulation?

- Protect Health Safety And Welfare
 - Addressing existing wastewater issues
- Protect Groundwater and Surface Water
 - From nitrogen contamination and surface pollution
- Protect other Sensitive Water Resource Areas
 - Recharge of private drinking water supplies
- Regulate Connections And Extensions
 - Preserve and manage limited treatment capacity



What Is The Authority?

- MGL – Chapter 83

- Sewer Assessment Bylaw D-10
 - Section 7
 - Sewer Commissioners may adopt reasonable rules and regulations with respect to the calculation of
 - Sewer assessments
 - Fees

 - Section 9
 - Sewer Commissioners may establish rules and regulations
 - The use of the public sewer system
 - Prohibiting the deposit of any harmful or deleterious substances into the system
 - Connections to the system
 - Establishing Civil Penalties



What Does The Permit Process Require?

- Permit Application and Connection Plan Review
- Construction and Physical Connection to the Sewers
- Individual Permits Required for Common Connections
- Permit Maintained On-Site
- Notification of Work Start 24 Hours in Advance
- Completion of Work Includes Certification of Work



What Specifications Are Required For Construction?

- Appendix A will provide guidance for
 - Chimney Detail
 - Clean-out Detail
 - Concrete Full Encasement Details
 - Drop Manhole Detail
 - Standard Manhole Invert Detail
 - Typical House Sewer Detail



What Other Conditions for Construction Are Required?

- No Stormwater Connections
- Separate Utility Trench
- Trench Permit Required
- Grease Traps Internal and External Required
- No Back-Fill Before Inspection



How Are The Costs of Operating the Sewer System Allocated?

- All connections billed monthly
 - Based on previous year's winter water readings
- Connections are classified by
 - Commercial or Residential
- Costs Include
 - W & C Contract
 - Billing Manpower and Overhead
 - Future Capital Costs

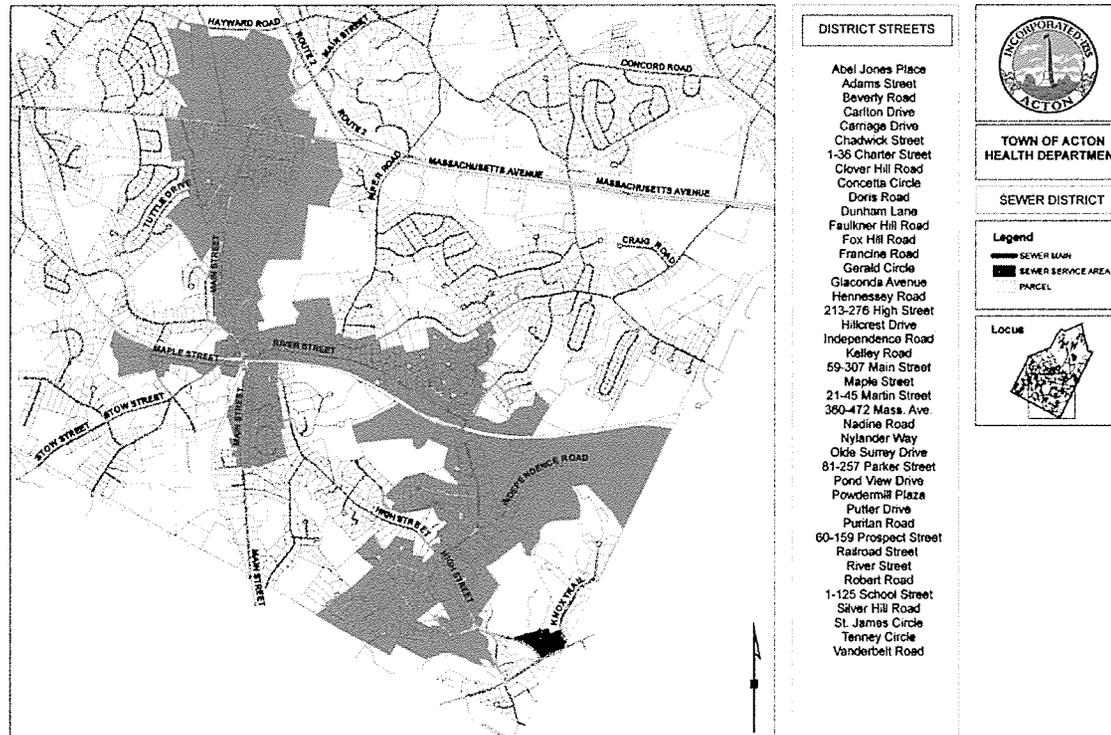


What Other Billing Issues?

- No Water Use History
 - Use of Title 5 Allocations
 - .4 Residential - .5 Commercial
 - Water Use in Another Part Of Town - Transferrable
- Unpaid User Charge
 - Late Payment Penalty
 - Lien Upon Real Estate

What Is The Sewer Service Area?

- 2005 Betterment Area
- Recorded In Middlesex Registry Of Deeds





What Changes Have Been Made In The Sewer Service Area?

- Powder Mill Plaza and Acton Ford
- 4 High Street – Faulkner Mill
- 2 Lilac Court



How Can The Service Area Be Expanded?

- Only Through Petition to the Sewer Commissioners
 - Potential Benefit to the Town
 - Payment of Non-Allocated Debt
 - Environmental Protection
 - Historical Preservation
 - Affordable Housing



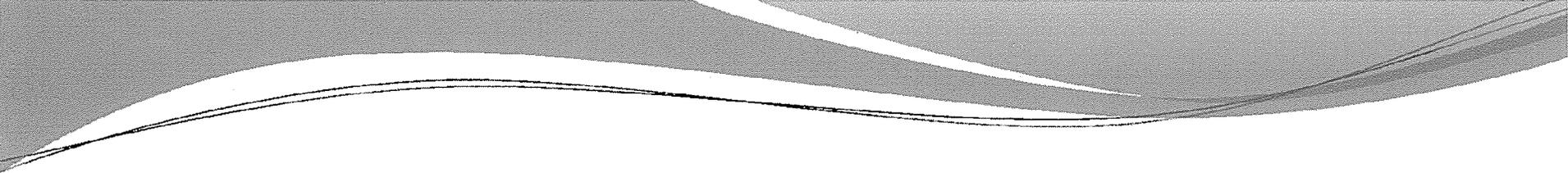
How Can Infill Be Addressed?

- Previously Assessed Property
 - Access By Right
 - Expansion of Flow Tied to Capacity
- Subject to Privilege Payment
 - Right to Betterment Capacity
 - More Capacity Based on Title 5 Wastewater Flow
 - Residential Development Per Lot
 - Commercial Development Per GPD
 - $\text{Proposed GPD} - \text{Betterment GPD} = \text{Privilege Fee GPD}$



What Discharges Are Prohibited To Sewers?

- Flammable or Explosive Liquids, Solids or Gasses
- Toxic or Poisonous Liquids, Solids or Gasses
- pH Lower Than 5.5
- Sizes That May Cause Obstructions
- Harmful Characteristics
 - Temperature Above 150 F
 - Fats, Oils or Grease
 - Radioactive Wastes¹



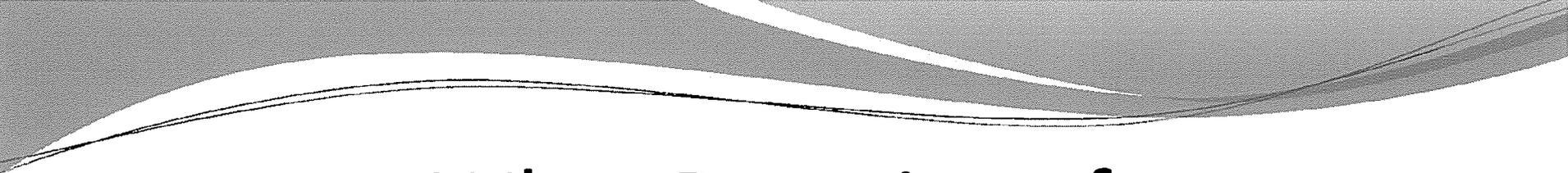
What Additional Measures Are Required For Discharges?

- Installation of Pretreatment or Equalization Facilities
- Maintenance of Pretreatment Facilities
- Control Manholes
- Analyses of Waters and Wastes
- Monitoring Discharges
- Notice of Accidental Discharge



How To Address Capacity Policy?

- 250,000 GPD Permit
 - 73% Properties Connected
 - Anticipated Flow = 182,500 - Actual Flow = 123,000
 - 65% Betterments Connected
 - Anticipated Flow = 162,500 - Actual Flow = 123,000
- Existing Permit Has Excess Capacity
 - 40,000 GPD to 60,000 GPD
 - Water Conservation
 - Conservative Water Estimates



What Remains of Unallocated Capacity?

- WR Grace Settlement (In Service Area)
 - \$1,500,000 or 36,550 gpd
- 2005 Permit Expansion (Outside Service Area)
 - 49,000 gpd
- Under Used Capacity (In Service Area)
 - 40,000 gpd



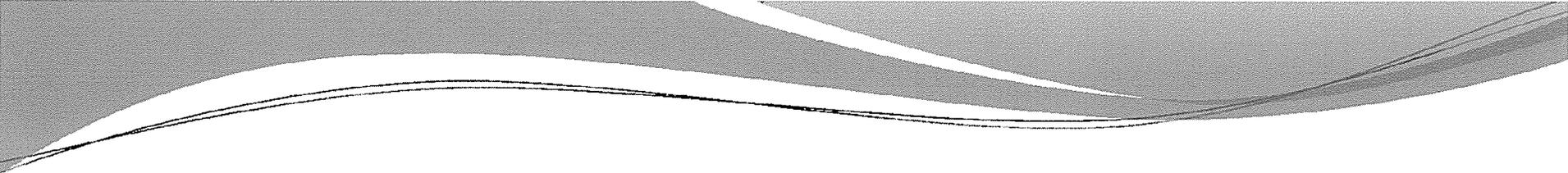
How Much of Unallocated Capacity Has Been Used?

- Within District
 - 17,030 GPD
 - 10 Residential and Commercial Properties
 - Remaining Capacity?
 - $36,550 - 17,030 = 19,520$
- Outside District
 - 13,200 GPD
 - 3 Residential and Commercial Properties
 - Remaining Capacity
 - $49,400 - 13,200 = 36,200$



How Much Is Remaining Of The Unallocated Debt?

- Supersizing
 - $\$1,166,300 - \$1,048,818 = \$117,482$
- WR Grace
 - $\$1,500,000$
- Total Remaining
 - $\$117,482 + \$1,500,000 = \$1,617,482$
 - In GPD $((\$1,617,482/\$12,311.52)*300 \text{ GPD}) = 39,415 \text{ GPD}$



Capacity Policy Recommendation

- Match Unallocated Debt With Unallocated Capacity
- Allow Beneficial External Expansion Until Debt is Met
- Reassess External Expansion When Debt is Met
- Allow Internal Expansion As Required
- Reassess Internal Expansion At Capacity Plateau
 - 200,000 gpd discharge from treatment plant
- Task Water Resources Advisory Committee
 - Identify CWRMP Needs Area Requiring Capacity



How Much Should We Set Aside For Future Capital?

- Sewer System Cost \$25.1 million
- Present Capital Set Aside \$1.4 million
 - RIB Replacement
 - SBR Replacement
 - Pump Station Replacement
- Capital Goal?
 - 15% to 20% Of Original Cost in Hand by 2032?
 - Hard Infrastructure 30 to 50 year life span
 - Mechanical, Electrical 15 to 20 year life span



Next Steps?

- Complete Draft Rules And Regulations
 - Submit to BOS for Comments
 - Submit to Boards, Committees, Staff for Comments
 - Advertise to Public for Comments
 - Public Hearing for Adoption
- Complete Draft Policy
 - Submit to BOS for Comments
 - Adopt at Public Meeting