

# Wastewater Management Planning Post Office Square Sharon, MA



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Presented by:

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Engineering a Better Environment

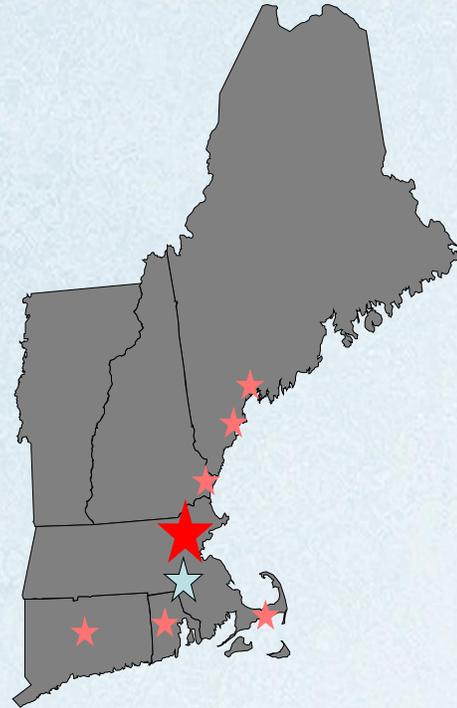
# Wright Pierce

- Project Team
  - Kevin M. Olson, P.E.,  
Project Manager
  - Abigail J. Charest, P.E.,  
Project Engineer
- Support Team
  - Justin Richardson,  
GIS Manager
  - Heather Merriman,  
MA WW Planning
  - Peter Wilson,  
Hydrogeologist



# Wright-Pierce Qualifications

- Full Service New England Firm
  - 60 Years of Experience
  - 150 Employees
  - Offices throughout New England
- Andover Location
- Wastewater Management Planning and Engineering
  - Mainstay of Our Business
  - Similar Projects throughout New England
  - Strategic and Reliable Solutions
  - Innovative Approach
- Track Record for Affordable Solutions



# Wright-Pierce Expertise

- Effective application of planning tools
  - Skilled in using all wastewater planning tools
  - Knowing which tool to use, and when
- Result: Wastewater Management that
  - is focused and streamlined
  - finds affordable solutions
  - is acceptable to the public
  - is readily permitted



# Wright-Pierce Relevant Experience

- Orleans, MA – Comprehensive Wastewater Management Plan
- Lunenburg, MA – Comprehensive Wastewater Management Plan
- Martha's Vineyard Commission – Wastewater Management Planning
- Barnstable County – Wastewater Management Planning
- Pinehills, Plymouth, MA - Wastewater Management Planning - Treatment and Disposal Facilities
- Oak Bluffs, MA – Comprehensive Wastewater Management Planning



# Definition of Success

- Solutions that address wastewater management needs
- Cost-effective solutions (capital and O&M)
- Public support for recommended plan
- Sensitive siting of facilities
- Consistent with Economic Development Plan
- Long-term protection of water resources



# Wastewater Management Planning Scope

- Existing Conditions
  - Needs Assessment
  - Identify Alternatives
- 
- Assessment of Short Listed Alternatives
  - Preliminary Site Investigations
- 
- Final Recommended Plan
  - Preliminary and Final Design
  - Groundwater Discharge Permit



# Existing Conditions and Needs Assessment

- Post Office Square - Existing Conditions
  - Delineation of Wastewater Management Planning Area
    - Pond Street, South Main Street, East Chestnut Street
  - Mapping of Hydrogeological Conditions
  - Review of Existing Wastewater Treatment
    - Title 5 systems
    - High School WWTF
    - Other I/A Facilities
      - Wilber School
  - Identify Land Uses and Wastewater Flows
  - Existing Water Use

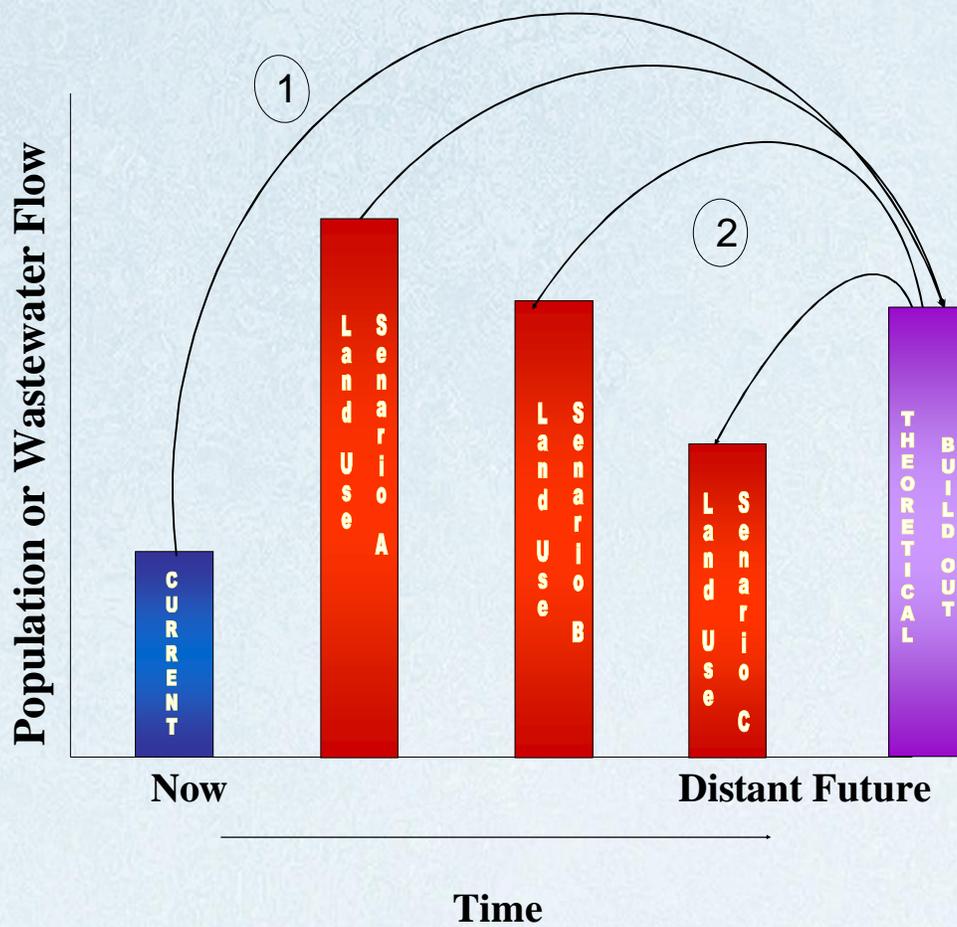


# Existing Conditions and Needs Assessment

- Needs Assessment
  - Future Land Uses
    - Build-out and Planning Horizon
    - Analyze Land Use Scenarios
      - Land Strategies
    - Project future wastewater flows
    - Compare to existing wastewater
      - Flows
      - Loads
      - Nutrient
  - Quantify Nutrient Loading in Beaver Brook Aquifer
    - Estimate number of bedrooms per acre



# Potential Future Wastewater Flows



# Identify Alternatives

- Alternatives - Wastewater Treatment, Collection, Disposal
  - Treatment
    - Individual/Private Systems
    - Shared Systems (<10,000 GPD)
    - Decentralized Systems (>10,000 GPD)
  - Collection
    - Gravity Sewers (Conventional)
    - Low Pressure mains
  - Disposal
    - Surface Water
    - Groundwater Disposal
    - Effluent Reuse



# Evaluation of Short Listed Alternatives

- Review Letter Report 1 with EDC
- Short List
  - Create short list of alternatives identified in Letter Report 1
- Short List by Evaluative Criteria
  - Feasibility
  - Environmental and Health Impacts
  - Costs and Funding
  - Hydrogeological Investigations
  - Water Use Trends/Demands
  - Water Conservation
  - Groundwater Recharge



# Evaluation of Short Listed Alternatives

- Evaluation of Potential Impacts
  - Costs
    - Capital
    - Operations and Maintenance
  - Technical Considerations
    - Growth
    - Pollution
    - Odors
    - Site condition requirements
  - Operational
    - Reliability
    - Performance
    - Staffing
    - Residuals Disposal
  - Permitting/Regulatory Requirements
    - Town Approvals
    - State Permits



# Preliminary Evaluation of Disposal Sites

- Site Investigations
  - Select two sites
  - Assessors Database
  - Soils Map
- Hydrogeological Testing
  - Test Pits
  - Deep Holes
- Results – Preliminary site results to assess viability of short listed alternatives



# Deliverables

- Letter Report – 1
  - Existing Conditions
  - Needs Assessment
  - Identify Alternatives
- Letter Report – 2
  - Evaluations of Short List of Alternatives
  - Preliminary Site Investigations



# Project Schedule

Task	Target Completion Date - 2008
Execute Agreement	May
Project Kickoff	May 28
Existing Conditions and Needs Analysis	July
Identify Alternatives	August
Letter Report	August
Meeting	September
Evaluation of Short List of Alternatives	October
Hydrogeological Investigations	October
Letter Report - Final	November
Meeting	December
Scope & Recommendations for Final Planning	December



# To – Do List

- Wastewater Planning Data needs:
  - Assessor's records
  - Water use records
  - BOH variance records
  - GIS data layers
  - Previous Studies
- Coordination with Land Strategies, LLC.
  - Land Use Scenarios



Questions?

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