

Sagamore Avenue Low Pressure Sewer Extension Portsmouth, NH

- Sagamore Avenue Sewer Project
- Inland Wetland Buffer Impacts
- Tidal Wetland Buffer Impacts
- 75' Saltmarsh Buffer



Background
Portsmouth's Sagamore Avenue area had been identified for failed septic systems, holding tanks, poor soil conditions, and/or lack of space to address wastewater flows with on-site systems located in Great Bay Watershed. Nutrient control issues were found in the adjacent water body and a consent decree was issued to add over 10,000 feet of low-pressure sewers to resolve the issue.

Enhanced Public Impact
The project required extensive public outreach, including approximately 20 public meetings. This does not include working directly with the individual properties for the design of their grinder pump systems. Working directly with the residents was impactful and an opportunity to provide education on the City wastewater system.

Uniqueness
Design and construction took place on public and private property. Low pressure sewer was selected due to the unique project landscape with significant ledge and hilly terrain. Small grinder pump stations were required at each property, 80+ in total, to connect to the sewer and had to be designed with only a site walk to establish existing conditions. This was especially challenging for estimating subsurface conditions when developing cost estimates for each property.

Social/Economic Impact
A state-wide study identified that septic systems were a significant contributor of the nitrogen issues in the Great Bay watershed. This project removed 10 failed septic systems to date, many of which were located adjacent to Sagamore Creek, a water body with known nitrogen impacts in the watershed.



Title Sagamore Avenue Low Pressure Sewer Extension in Portsmouth
Owner & Location City of Portsmouth- Portsmouth, NH
Design Engineer Wright-Pierce - Portsmouth, NH