



# TANBARK CREEK WATER QUALITY IMPROVEMENT PERMEABLE REACTIVE BARRIER PROJECT



Town of East Hampton  
Suffolk County, New York

Water quality impairments are evident in many local waterbodies in the Town of East Hampton. High pathogen and nitrogen loads to tidal creeks are problematic and directly harm water quality and can present a public health risk. The Town has received a grant through New York State DEC and dedicated CPF Water Quality funding to complete a demonstration of an innovative method to treat nitrogen in groundwater through an injection Permeable Reactive Barrier (PRB).

**Where?** The study area includes the Town-owned properties along the shoreline of Tanbark Creek. To gain access to the study area, and to stage/store equipment, the Town has approved temporary access through the Town-owned CPF property located at 11 Gardiner Cove Road.

**Why?** Scientists from Cornell Cooperative Extension have collected monitoring data in this area indicating very high nitrogen in groundwater, which likely originates primarily from conventional septic systems upgradient of the Creek. The injection of vegetable oil below ground acts as a carbon source for microbes and creates a PRB which can treat and de-nitrify up to 100% of the intercepted groundwater.



**For How Long?** The Town and its consultants, Cornell Cooperative Extension and CDM-Smith will begin the project in September 2022. The installation of groundwater wells and the pilot injection PRB will require access through 11 Gardiner Cove Road for approximately 4 to 6 weeks. Once this is completed, the staged equipment will be removed. Cornell Cooperative Extension will continue to access the area to complete quarterly groundwater monitoring for 6 months following the injection to monitor effectiveness in treatment.

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