



# Subsurface Treatment

*Squeezing into tight places*

## PROJECT OVERVIEW

Many suburban areas across the East of Hudson watershed simply do not have enough open space to implement a green stormwater practice. Open land is a scarce and vital resource in towns across Westchester County, leaving little room for stormwater treatment. This subsurface stormwater treatment is the process of using underground filters, infiltration, and Reis Park in the town of Somers is a highly active and trafficked park with lots of open parkland. The installation of subsurface stormwater treatment at this site resulted in the reduction of 11.1 lbs of Phosphorus and 5,500 lbs of algae annually!

<b>DRAINAGE AREA</b>	<b>PHOSPHORUS REDUCTION</b>	<b>ALGAE REMOVAL</b>
3.21 acres	11.1 lbs/year	5,500 lbs/year



## THE PROBLEM

An asphalt sea in a downtown district is a daunting task when thinking about how to handle and treat stormwater. Increasing real estate prices in urban areas make it difficult to implement stormwater retrofit practices in the places that need it the most. Large and impervious areas typically collect and generate a large amount of Phosphorus. Locations such as commercial districts and parking lots have no extra space to give up, requiring a different approach to stormwater management.

To address this difficult task, we must turn to a modern take on traditional gray infrastructure to bridge the gap to remove Phosphorus in overly developed areas.

## THE SOLUTION

Options for subsurface stormwater treatments comes in all shapes and sizes and vary with location needs. Typical practices are anything that can function underground, whether it be filters, infiltration basins, separators, chambers and more! By rerouting some of the water flow in an area, we can install treatment units underneath or beside highly impervious areas. The porous pavement installation at the Reis Park converted over an acre of impervious parking spaces into an area that allows stormwater to quickly recharge into the ground. The installation of Hydrodynamic Separators (HDS) near the library and the maintenance building help remove additional Phosphorus in areas that could not be easily or cost-effectively treated by other means. Subsurface filtration is best used in drainage areas that could not be treated through other methods. Doing such still allows for stormwater treatment and management.

### Subsurface Treatment Benefits:

- Usable in tight areas with high impervious cover
- Capable of treating for other pollutants
- Minimal impact to properties
- Helps reduce amount of flooding
- Low cost to implement vs. treatment plants

