

THE WILLOW SCHOOL

Sustainable Wastewater & Stormwater Treatment Systems

Gladstone, New Jersey



*top: Constructed wetland for wastewater treatment;
bottom: Sunflowers growing in wastewater treatment dosing field*

The Willow School, located on 34 beautiful acres in the New Jersey countryside, hosts approximately 250 students in daily classes for Kindergarten through sixth grade.

The Willow School is committed to fostering academic excellence, passion for learning, and an ethical approach to all relationships, including humanity's relationship to the natural world. Its buildings,

landscape, and curriculum foster the development of a new generation of ecologically literate citizens who understand the benefits of living in alignment with ecological systems. The design of green infrastructure, such as Willow School's sustainable treatment systems for wastewater and stormwater, complements these founding philosophies.

The Willow School's use of green infrastructure helped it achieve the first zoning variance granted in Bedminster, New Jersey in ten years. The project demonstrates how responsible design translates to economic savings from a "time-to-market" perspective, and also reduces operating costs. Stormwater systems include a network of vegetated swales and a naturalized detention pond with wetland plants for treatment and increased infiltration. Rainwater is harvested off building roofs and reused for toilet flushing. All of the

school's wastewater is treated on site in a natural treatment system utilizing constructed wetlands and sand filters.

Biohabitats worked with team members for each phase of design and construction over the last decade to ensure consistency of infrastructure integration. Through thoughtful monitoring of the water infrastructure system, Biohabitats helped uncover and correct construction oversights. For example, basement sumps were accidentally plumbed into the onsite wastewater system.

Biohabitats staff has worked with the school's local operator to troubleshoot the wastewater system as operating conditions have changed through the phased build out. Together we have fine tuned the operation of the onsite wastewater system to minimize energy use and maximize performance, with little operational oversight.

*conservation planning
ecological restoration
regenerative design*



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