



# The Willow School, Gladstone, NJ



constructed wetland (wastewater treatment)



sunflowers growing in the dosing field (wastewater treatment)



The Willow School, (LEED Platinum) is located on a beautiful 34-acre site in the New Jersey countryside, near the Gladstone town center, at the corner of Highway 206 and Pottersville Road. The Willow School sees sustainability as a key element in the relationship with the natural world as much as with the social world. Children learn to share intellectual resources with peers to sustain a community. They also learn to share, respect, and conserve nature's resources. The design of both a sustainable treatment systems and stormwater collection falls right in line with these founding philosophies.

According to Mark Biedron, "The Willow School is committed to fostering academic excellence, a passion for learning, and the development of an ethical approach to all relationships, including humanity's relationship to the natural world. We approach our relationship with the natural world not only from the perspective of using less energy to heat and cool the buildings, less potable water to flush our waste, and less materials that contain toxins, but also as an opportunity to improve the health of both human systems and natural systems. Our buildings, landscape, and curriculum, through their programmatic advancements, will help create a new generation of ecologically literate citizens who will understand the benefits of living in alignment with our planet's ecological systems,".

The Willow School utilized water treatment processes in ways that helped this project achieve the first zoning variance granted in Bedminster, NJ in 10 years. This demonstrates that responsible design translates in economic savings from a "time-to-market" perspective, not to mention reduced operating costs and the benefits of more environmentally responsible design.

Instead of merely reducing the impact of storm water run-off, NSI designed a system of vegetated swales to replace the more expensive concrete pipes and catch basins. This, in combination with reduced paving, increased natural ground covers to recreate the original sponge-like character of the site, and a detention pond with wetlands planting saved money and improved the environmental performance of the site significantly beyond that required by the environmental ordinance of the town. In addition, all human waste is treated on site with a system that includes a constructed wetlands.

The treatment cycle is so effective that treated effluent can be reused on site for irrigation. The system has also become an important educational tool and amenity for students.