



Long Island Nitrogen Action Plan (LINAP) Newsletter

Long Island Regional Planning Council's Annual Water Quality Challenge

Five Green Infrastructure Proposals Triumph in the 2024 Long Island Water Quality Challenge.



The Long Island Water Quality Challenge promotes project-based learning in Science, Technology, Engineering, and Mathematics (STEM) in Long Island schools and helps students in grades 6-12 develop a greater understanding of how their classroom curriculum can be applied to protecting Long Island's crucial water resources – with a specific focus on reducing nitrogen pollution.

This year, students were tasked with the challenge of devising green infrastructure projects aimed at mitigating nitrogen pollution on their school campuses. This initiative not only educates students about the detrimental effects of nitrogen on Long Island's waterbodies but also encourages them to develop local solutions through green infrastructure. By implementing these projects on school grounds, they offer the potential to improve water quality throughout Long Island.

The winning schools—Island Trees Memorial Middle School, Sewanhaka Central High School, Elmont Memorial High School, West Hempstead Secondary School, and Walt Whitman High School—stand to receive grants of up to \$2,500 each to implement their projects.

A panel of experts from the Department of Environmental Conservation, Nassau County Soil and Water Conservation District, the Peconic Estuary Partnership, and the LIRPC meticulously evaluated a record-breaking number of submissions. Factors such as innovation, feasibility, technical merit, and alignment with the [Long Island Nitrogen Action Plan \(LINAP\)](#) were considered in the selection process.

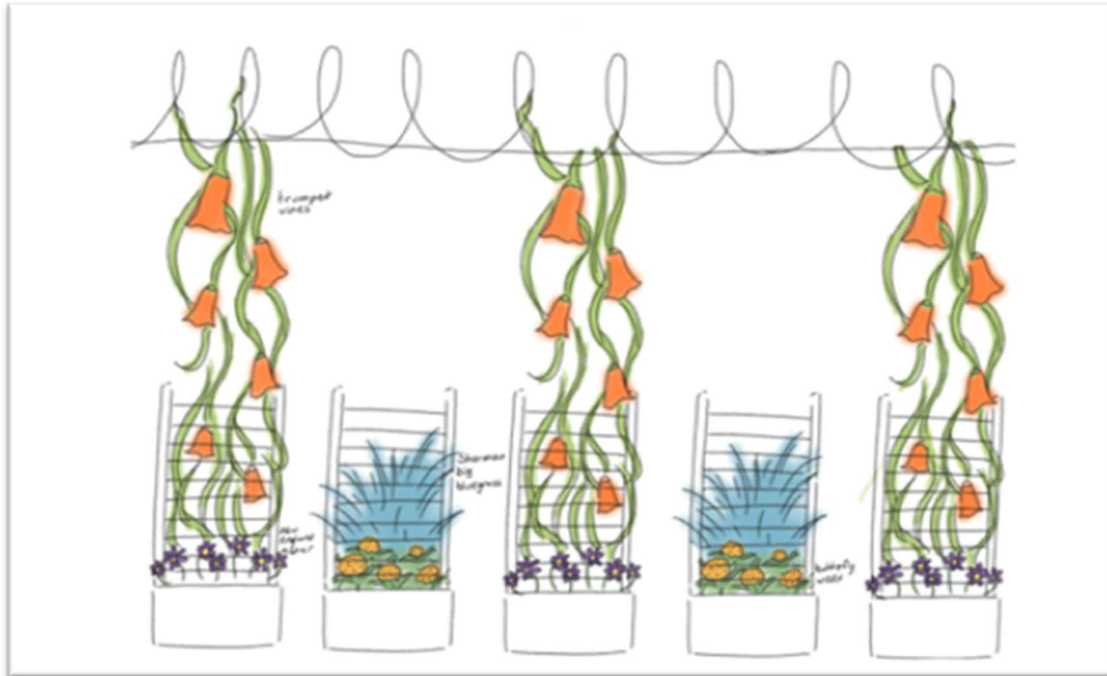
Here's a glimpse into the winning projects and schools:

Island Trees Memorial Middle School: Fifth and sixth grade members of the SEEDS Club (Students Embrace Environmental Decisions and Solutions) proposed planting a rain garden between the downspout from a rooftop and runoff drains.



Island Trees Middle School SEEDS Club breaks ground on a campus rain garden. Photo credit: LIRPC

Elmont Memorial High School: After testing soil across school grounds and noting the highest levels of nitrogen at the softball field, students proposed a series of vertical planter boxes along the field to filter the water.



Schematic for the vertical garden to be implemented at Elmont High School. Photo credit: Elmont High School.

Sewanhaka Central High School: 8th grade student, Isaiah Adeleke, designed plant-based bioretention systems, swales and wetlands to effectively filter and absorb stormwater on school grounds.



Isaiah Adeleke accepts award for his 2024 LIWQC winning proposal. Photo credit: LIRPC.

Walt Whitman High School: Students proposed a mycomediating filter to install in a downspout diverter. This system will channel water through a network of fungal mycelium to remove contaminants directly from the roofs, collecting the filtered water in a storage tank for later reuse.



Walt Witman High School Award Ceremony. Photo Credit: LIRPC.

West Hempstead High School: Students focused on an area of the school property which frequently floods with heavy rain and proposed a rain garden and a tiered drainage system to help filter contaminants.



Site of West Hempstead's rain garden with tiered drainage system. Photo credit: LIRPC.

The 2025 STEM Challenge will be launched in the fall with additional grants to be awarded!
For more information, visit the [LIRPC LIWQC webpage](#).