Long Island Water Quality STEM Challenge

Frequently Asked Questions

What is the Long Island Nitrogen Action Plan (LINAP)?

Nitrogen pollution has been found to be the leading cause of water quality deterioration on Long Island.

LINAP is a multi-year initiative to reduce nitrogen in Long Island's surface and groundwaters through technical, management, regulatory and policy action. There is a broad partnership working together to develop and implement LINAP including the New York State Department of Environmental Conservation, the Long Island Regional Planning Council, Suffolk and Nassau counties, local governments, area scientists, numerous environmental groups, non-governmental organizations and a cadre of consultant services.

How does the Long Island Water Quality Challenge support the Long Island Nitrogen Action Plan Initiative?

The focus of the competition is on the role that low input landscaping and stormwater treatment – on school grounds – can play to better protect and improve the quality of surface and groundwater with a specific focus on reducing or eliminating nitrogen pollution.

Stormwater: Stormwater runoff contains a variety of pollutants including nitrogen. In some areas, runoff is collected in roadway or parking lot catch basins and piped to either recharge basins or the local harbor or bay. Soil bacteria in recharge basins provide some treatment, but none is provided when stormwater is discharged to surface water. Students will identify ways to collect and treat some of the runoff from their school grounds to help reduce pollutants.

'Low Input' Landscaping: Landscape maintenance requires inputs to insure healthy turfgrass, shrubs, and trees. These include water, and sometimes nutrients (fertilizers) and pesticides. Fertilizers and pesticides may seep into groundwater and find their way to surface water if applied in excess or improperly. Excessive watering can increase the flow of nutrients/contaminants into these waters. Students will identify ways to reduce these inputs.

Can the proposals have elements of both STEM Challenge categories?

Yes. Teams are encouraged to choose the category that is best representative of their project, but it is expected that there would be some overlap between the two STEM Challenge categories.

What resources are available to the students?

The project is an applied research project. Students will need to conduct background research on either stormwater or low input landscaping and apply it to Long Island. Students and faculty are encouraged to explore the resources available on the LIRPC website at the following link: https://lirpc.org/water-quality-challenge/

Will grants be awarded to the top proposals in the Challenge?

Yes! Grants up to $2500 will be awarded to the top proposals to be used towards the implementation of the project on school grounds.

What criteria will be used to score the proposals?

Final written project proposals will be evaluated on such things as originality, technical merit, quality of ideas, practicality, and the degree to which the proposal sufficiently addresses the Long Island Nitrogen Action Plan and the impacts of nitrogen pollution.

Click here for the complete scoring rubric to be used by the selection committee.

What is the format in which to submit the final proposal?

The basic project report requirements are the following:

- Identify current practices ((include references, e.g. interview with school grounds maintenance officials)
- Proposed design (include references, e.g. interview with school grounds maintenance officials, reports, websites)
- Estimated budget
- Explain how the project, if implemented/installed, will be used to increase awareness among students and faculty and the broader community.
- Explain annual maintenance requirements following project implementation/installation – just a general description, e.g. a few sentences
- *Optional* - install the solution. (Installation will not influence the selection process)

This link provides the recommended format for the final proposal.

Who is Eligible?

Any state accredited school in Nassau or Suffolk serving students in grades 6, 7 and 8, 9, 10, 11 12. The evaluation criteria will vary by the following grade categories:

- Category 1: Grade 6
- Category 2: Grades 7 and 8
- Category 3: Grades 9 thru 12

Schools may submit up to three teams of any size for each category.

Where Do We Get More Information?

Go to **https://lirpc.org/water-quality-challenge/**, email **info@lirpc.org**, or call 516-571-7613.