



Project Proposal 9th – 12th Grade Requirements Long Island Water Quality Challenge (LIWQC)

The Long Island Regional Planning Council (LIRPC) asks that participating teams include the following requirements in their LIWQC final Project Proposals. The requirements serve three purposes: 1) assists the team in writing and organizing their project proposal, 2) increases the team's chance of success if all requirements are met, and 3) assists the selection committee with conducting a prompt and expeditious review.

A Resource Library is available which includes key concepts, scientific source citation formatting, regionally relevant sources to use, and more.

- **Cover Page/Title**
 - Title of Project
 - Each team member name and grade level
 - Name and email of advisor/teacher
 - School name and address

- **Summary** (also called the Abstract) should be a paragraph that includes a brief statement of the problem or issue, followed by a description of the research and design, the major findings, and conclusions reached. If read alone, this paragraph serves as a “snapshot” of the entire paper.
Tip: Often this section is written last to ensure it accurately reflects the contents of the paper.

- **Introduction**
 - Describe the nitrogen problem on Long Island as it relates to water quality. Include sources of nitrogen, how nitrogen pollution affects water quality, and how the [Long Island Nitrogen Action Plan](#) (LINAP) seeks to address the issue.
 - Identify and describe both traditional stormwater infrastructures (such as drains, pipes and gutters) and Green Infrastructure practices (rain barrels, permeable pavement) currently on school grounds.
 - Identify if stormwater is currently collected and/or treated. Include any current practices that the school uses to address nitrogen pollution and other contaminants.
 - A description of where stormwater on school grounds currently goes. Does it travel off school property, flood certain areas of the school grounds or parking lots?
 - Utilize figures, maps, drawings, images, etc., to support the information in this section.
Tip: School maintenance personnel may be able to assist with this.

- **Materials and Research** (also called Materials and Methods) – a description of background research, materials used for any experiments or prototypes developed. *Experiments and prototypes are not mandatory.*
- **Results** – Based on background research and if experiments were performed, introduce the Green Infrastructure innovation. In addition to the project description, include the following information in this section:
 - Explanation of how the idea supports the goals of LINAP.
 - The specific area(s) of the school grounds to be targeted/the area that the proposed project would be located.
 - Explanation of how the project reduces nitrogen pollution on school grounds and any way to measure the results, if possible.
 - Explanation of how the project improves how stormwater is collected and treated on school grounds.
 - Utilize figures, maps, drawings, images, etc., to support the results and findings of the project.
- **Conclusion** – Include in the conclusion why your research and idea should matter to the reader after they have finished reviewing the paper. For example, explain how the project would benefit the school, environment, and community. Also explain how it would be useful in educating others about nitrogen pollution and stormwater runoff.
- **Art** – Incorporating Art in STEM projects encourages creative thinking using visual tools or imagery to deepen the understanding of science, math and technology. Include graphics that were helpful in developing your project proposal. Also include any visual tools that may help the reader better understand the concepts and innovation being presented. Art can take the form of illustrations, hand drawn maps, sketches of the innovation being proposed, posters, etc.
- **Acknowledgements** – this is an opportunity to thank anyone that helped with the project.
- **References** - Use proper scientific format included in the LIWQC Resource Library.