

RUNOFF AND RAIN GARDENS

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INTRODUCTION

- Stormwater runoff often carries pollutants from impervious surfaces, such as roads, buildings, and parking lots, into nearby waterbodies like streams, rivers and lakes
- When initially planning this project, we discussed our concern about the health of a local waterbody and potentially organizing a clean-up event
- After conducting research, we discovered that rain gardens can be an effective, long-term strategy to help reduce local water pollution and improve water quality
- The goals for our project were:
 - Present the importance of rain gardens in managing stormwater runoff to local officials
 - Install a rain garden in the town of Southington to decrease stormwater runoff

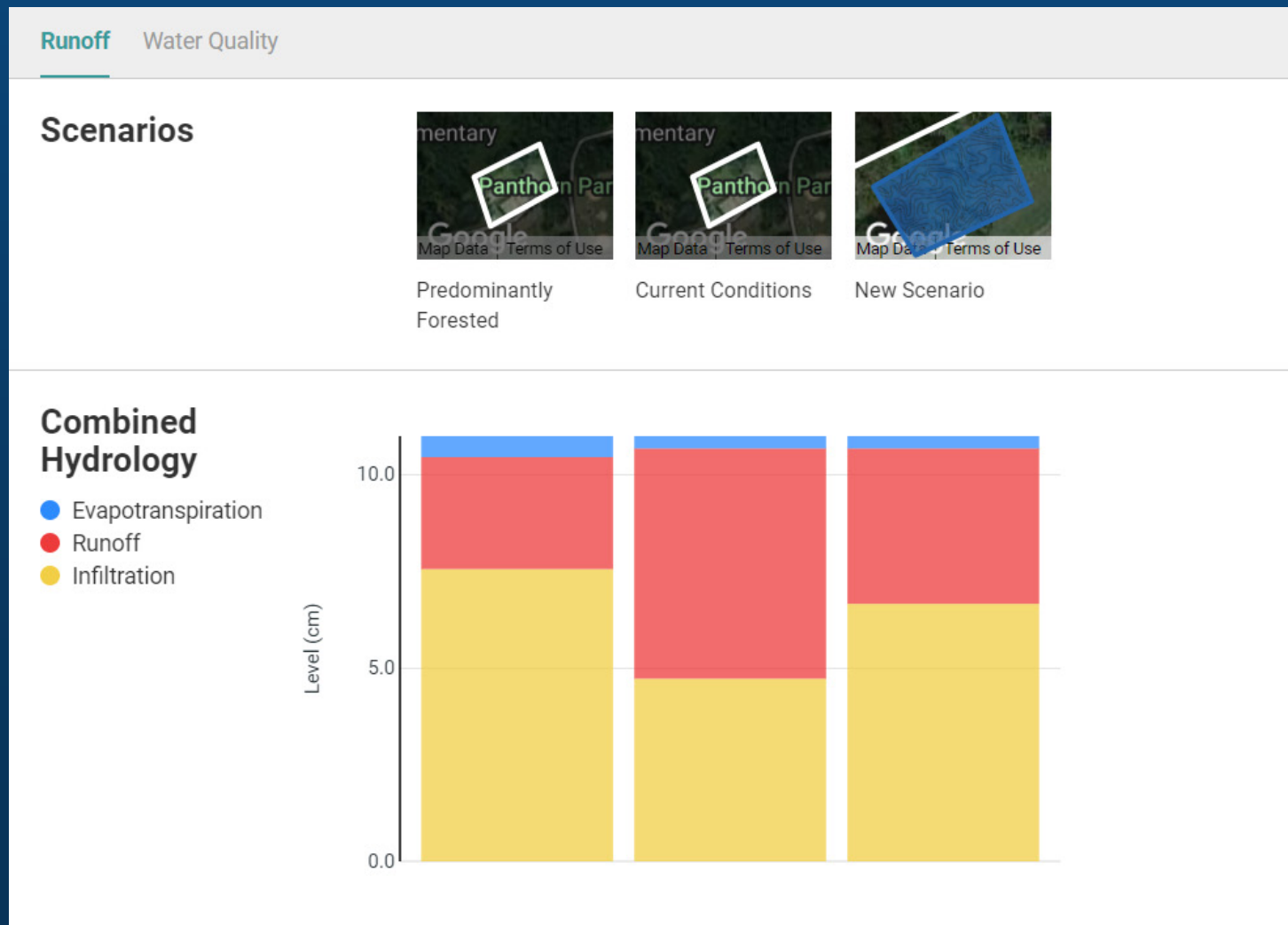


Figure 1

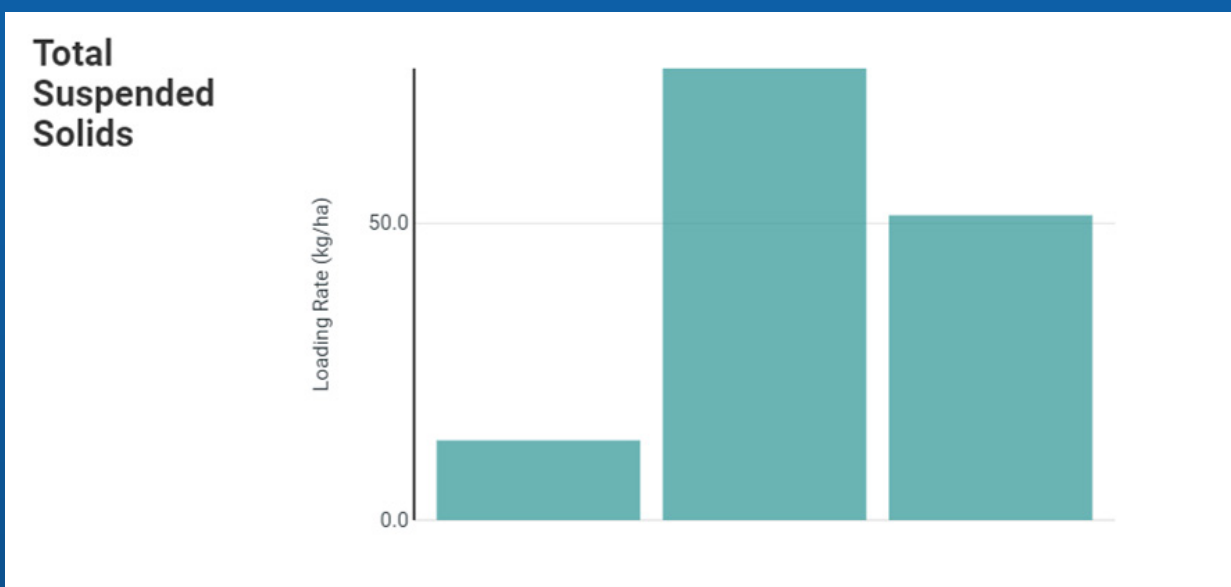


Figure 2

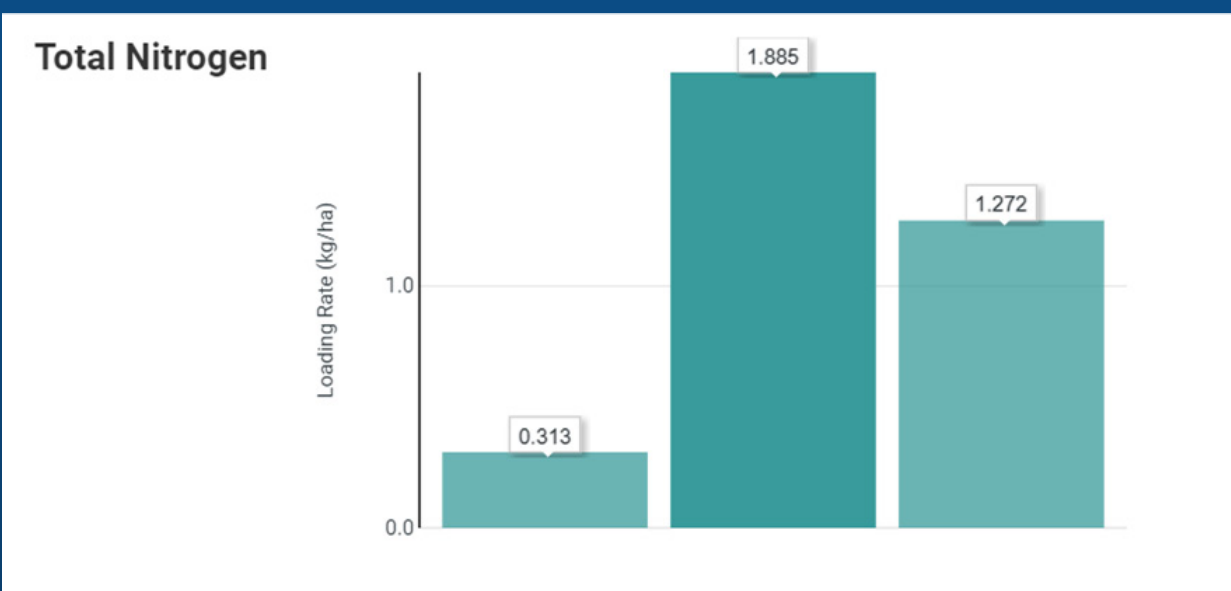


Figure 3

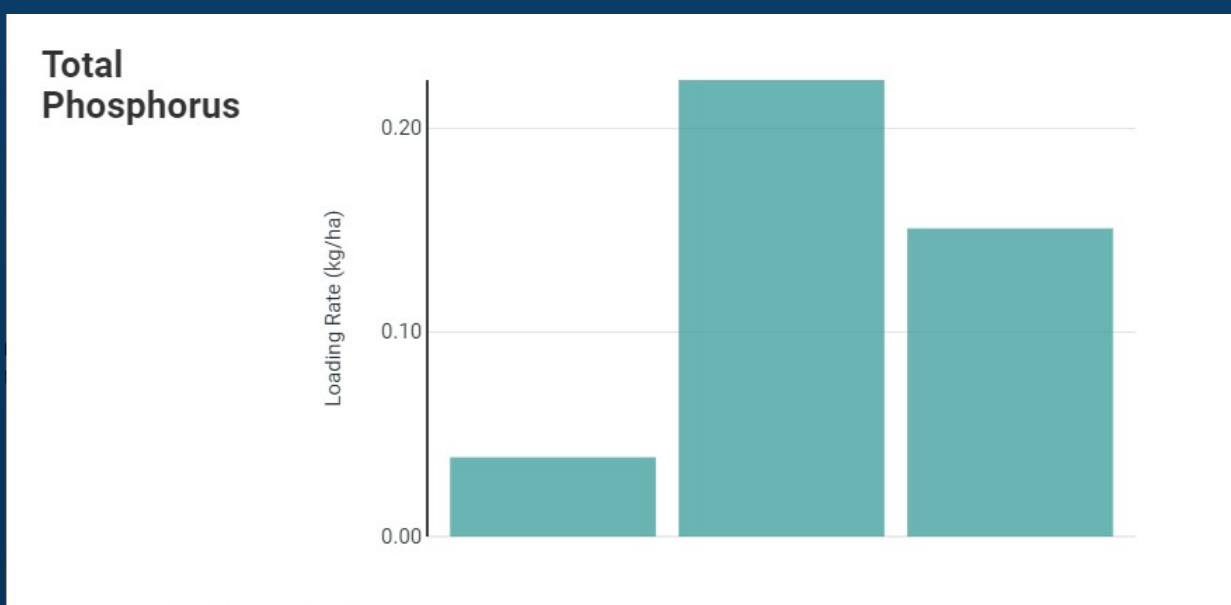
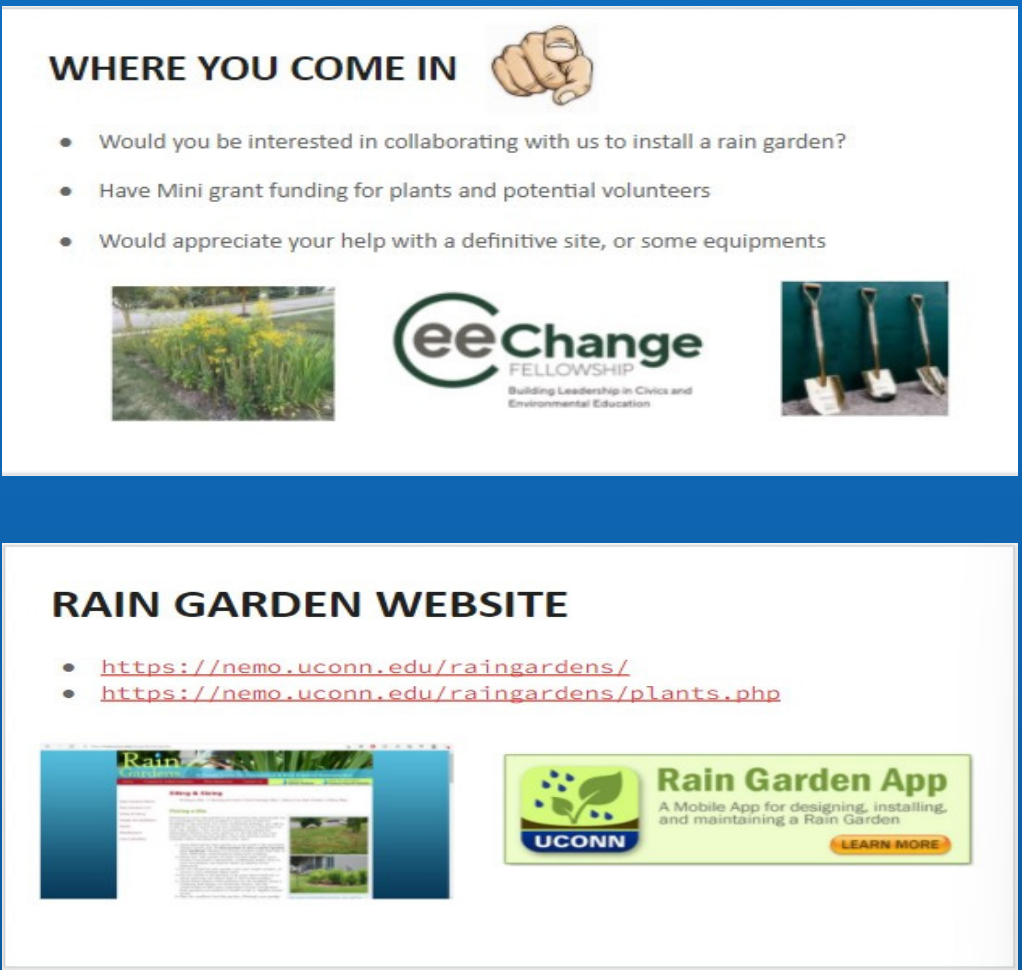


Figure 4

PROJECT STEPS

- Explored how land use and soil determine whether rainfall infiltrates into the soil, runs off into streams or is evaporated and transpired by plants using **WikiWatershed Runoff Simulator** (Fig. 1; [Model My Watershed](#))
- Documented rain garden design and installation process using the UConn Rain Garden website ([UConn Rain Gardens "How To" Guide](#))
- Used WikiWatershed **ModelMyWatershed** tool (Fig. 2-4; [Model My Watershed](#)) to model how the installation of a rain garden in Panthorn Park impacts the quantity and quality of stormwater runoff
- Presented virtually to Mr. Doug Arndt, Superintendent of the Southington Water Department, on February 9, 2022, to propose a rain garden collaboration project



TAKE-AWAYS & FUTURE PLANS

- Rain gardens are a type of **Low Impact Development (LID)** that reduce stormwater runoff and provide habitat for animals like birds, bees, and butterflies
- The amount of rainfall equal to approximately 4.5 Olympic-size swimming pools ends up annually as runoff when analyzing impervious surfaces at Panthorn Park
- In collaborating with community leaders, we learned to be persistent in setting up meetings and developed communication and public speaking skills
- Moving forward, we plan on working with town officials to gain permission to install the rain garden at Panthorn Park by spring 2022

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