

Instructions

QUINNIPIAC RIVER FUND GRANT AWARD - FINAL REPORT QUESTIONS

This form is to be completed by all nonprofit organizations that received a grant through the Quinnipiac River Fund.

Grant Details

Grant Details

Organization Name

Quinnipiac University

Grant Description

to support the study of the presence and spatial distribution of industrial pollutants and other water quality parameters along the Quinnipiac River.

Total Grant Amount

13,000.00

Report Questions

1. List the specific objectives/outcomes of the project and tell how they were met during the grant period. Also, provide an update on any special conditions of the grant (if applicable).

Objective 1: Collect and analyze water samples for chemical pollutants and water quality parameters from established sampling locations along the Quinnipiac River from Wallingford to North Haven.

Water samples were collected on nine separate dates, spanning May through August at twelve (12) different sampling locations. Samples were then analyzed subsequently by GC-MS using both a manual method and compared to an automated method. The purpose of the sampling is to monitor the health of the river and understand how the chemicals that are dumped (accidentally or intentionally) into the river effect the health of aquatic organisms and individuals who utilize the river for recreational activities such as fishing. The two methods had similar finds and the major findings are summarized below. Bisphenol A (BPA), a known plasticizer was found at the Sacket Point Rd., DEEP Boat Launch and at our sample location on State Street during the collection window. BPA is a known endocrine disrupting chemical used to make hard plastics, containers, and toys. Phthalates were also detected at our Sacket Point Rd. and our upper Wallingford locations. Phthalates are also classified as plasticizers and are used to make plastics more flexible and durable. They are found in products like plastic bags and plastic plumbing pipes. Lastly, we found hydrocarbons throughout each of the twelve sampling sites. These hydrocarbons range from six carbon chains to fourteen chain hydrocarbons. Unfortunately, due to constraints from COVID-19 we were unable

to assess the additional water quality parameters described in the proposal, at the same time as the chemical analysis due to supply chain shortages. Some of the necessary instrumentation and consumables have now been received and analysis of water quality parameters and E. coli will be assessed with a supplemental report.

Objective 2: Communicate findings to the community-at-large. Our results will be disseminated by the

Public Relations Department at Quinnipiac University to local newspapers like the New Haven Independent, and local municipalities. We will also partner with one local environmental group e.g. Save the Sound or the Quinnipiac River Watershed Association to host a public talk e.g. at a local library, to present the findings. Additionally, in the past we have presented our findings at several professional scientific venues at both the regional and national levels and will continue to do so as appropriate.

Our results will be disseminated by the Public Relations Department at Quinnipiac University to local newspapers like the New Haven Independent, and local municipalities. Fewer communications were disseminated as our public relations team was working tirelessly communicating on COVID-19.

2. Please share your successes, challenges and any lessons learned through the implementation of your project. Were there any unintended consequences or lessons learned that may affect how you operate your program moving forward?

During this grant period, the laboratory developed and validated two sampling methods on the new GC-MS. In addition, the sampling and membrane filtering processing technique for chloroform was streamlined in the laboratory. However, since samples must be processed within eight hours of collection the laboratory could not conduct the analysis on the same samples that were analyzed by GC-MS. Moving forward this will be possible now that the instruments and consumables have been received. In addition to supply chain delays, prices of consumables increased, and these were not accounted in the grant proposal (for example the Hach instruments increased by 12%). Lastly, COVID-19 did force us to add additional safety measures into our process and all sampling was conducted wearing masks (except for the 2 week period of time in July at Quinnipiac lifted the mask mandate) and gloves.

3. What are the opportunities and needs of your organization as it continues to move forward with its work to positively impact the Quinnipiac River?

We need to be able to continuously monitor the river for point source and non-point source pollutants. This will provide us with a comprehensive understanding of chemical components in the river will allow us to work with municipalities or engineers at Quinnipiac to implement best practices to have a positive impact on the Quinnipiac River.

Attachments

Financial information (required): Please provide a detailed accounting of how the specific grant dollars were spent based on the budget submitted in the grant application.

Detailed Accounting

Quinnipiac University Quinnipiac River Fund 2021 final financial report.xlsx

Pictures (optional): Please attach one to three pictures in JPEG format, in the highest resolution possible, of activities that have occurred throughout the grant period as a result of grant funding. By

providing pictures, your organization is consenting to unlimited use of the pictures by The Community Foundation for Greater New Haven and/or the Valley Community Foundation in publications in print and online (including www.thequinnipiacriver.com). Please include a description of each photo and, when known, the photographer to be credited.

Picture 1

393F597A-0D16-4160-BBAE-BEF040F80B14.JPG

Description and Photo Credit

Summer research student, Stephen Porobija collects water sample in the Quinnipiac River, following a heavy rain fall.

Picture 2

B1925DEB-CC0D-44CE-BA71-59F227C80CE2.JPG

Description and Photo Credit

Summer research students, Sophia Davis and Stephen Porobija collecting samples in the Quinnipiac River.

Picture 3

546CB7A4-8943-4482-9C5A-871D1B7FB1F0.JPG

Description and Photo Credit

A view of the Quinnipiac River in North Haven