

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 pollutants and other water quality parameters along the Quinnipiac River from Meriden (Hanover Pond) through New Haven.

Total Grant Amount

16,000.00

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 Meriden's Hanover Pond to New Haven throughout the year.

To meet this objective water sampling was conducted at least two times during each quarter of the year (April-June; July-September; October-December; January-March). Thirteen different sampling locations along the Quinnipiac River from Hanover Pond in Meriden to the southern border of North Haven were sampled on each date. Samples were analyzed within 24 hours of collection and samples were not collected within 48 hours of precipitation. Water quality parameters were measured at each location, samples were analyzed for both total and fecal coliform in the laboratory, as

well as assessed via gas chromatography-mass spectrophotometry (GC-MS) for the presence of phthalates, plasticizers, and other known chemicals.

There were no major findings on the GC-MS, however during sampling season two, hydrocarbons were consistently found.

Sampling Season	pH range	Temp range (oC)	Conductivity range (µS)	CFUs/100mL
1	7.44-8.2	18.4-19.3	440-1900	400-7500
2	7.36-8.94	21.6-26.4	350-1588	100-11800
3	7.16-10.37	5.5-16.7	362-2010	1600-24700
4	7.8-10.77	5.8-6.4	315-2103	5300-11200

Some additional observations include:

One location, in sample season 1 was below the EPA's STV recommended threshold for recreational water criteria.

Three locations in sample season 2 was below the EPA's STV recommended threshold for recreational water criteria.

One location, in sample season 3 was below the EPA's STV recommended threshold for recreational water criteria.

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. 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.

- Quinnipiac's public relations team publicized receiving this grant through their social media and mainstream platforms. Results of this study were shared with Quinnipiac students around Earth week 2024 and will be continued to be shared with the QU community and the surrounding communities. These results in combination with previous findings are be used to form the basis for a scientific manuscript and conference presentation for the 2025 Society of Toxicology conference being held in Florida in March 2025.

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 continued to streamline the collection and processing of samples collected. This grant cycle include sampling the QU river throughout the entire year, to determine if there are changes to the water quality results outside the time when the wastewater is disinfected. This seasonal sampling was challenging this year as rainfall was abundant during the sampling period.

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?

Continuously monitor the Quinnipiac River for point source and non-point source pollutants throughout the entire calendar year, provides us with a comprehensive understanding of chemical components in the river. This will afford us the opportunity to work with municipalities or engineers at Quinnipiac to implement best practices to have a positive impact on the Quinnipiac River. Moving forward, we would like to continue the season sampling to better understand and tract the source of the E.coli, add to summer sampling data and have a positive impact on the communities adjacent to 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 2023 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

IMG_0583 4.JPG

Description and Photo Credit

Hanover Pond, Meriden. Photo taken October 11, 2023 by Courtney McGinnis

Picture 2

IMG_1974.JPG

Description and Photo Credit

Hanover Pond, Meriden. Photo take January 25, 2024 by Courtney McGinnis

Picture 3

IMG_0584 3.JPG

Description and Photo Credit

Sampling in Wallingford, Photo taken October 11, 2023 by Courtney McGinnis