

Stormwater Pathogens – Find it and Fix it



Dave McLaughlin, Clean Ocean Access

Project Description

Overall objective:

The goal of the program is to protect human health and reduce beach closures. The objectives are to identify sources of pathogens (during dry-weather and wet-weather events) causing water quality degradation at Easton's Beach, Newport RI to facilitate the development of pathogen remediation plans, and improvements in stormwater conveyance systems.

Project Importance:

Easton's Beach is a main tourist attraction in the City of Newport and used by residents year-round for swimming and fishing. Further research into water and sediment bacteria levels during dry-weather and wet-weather will allow for developing plans to achieve permanent year-round clean water from healthy watersheds to marine ecosystems.

Approach/methods used:

The methodology for the project will consist of collecting water and sediment samples, analyzing the data using statistical measures, and temporal and spatial pattern assessments. The results will be shared with the public via meetings to bring about awareness to reduce stormwater runoff, and promote residential green infrastructure and low-impact development.

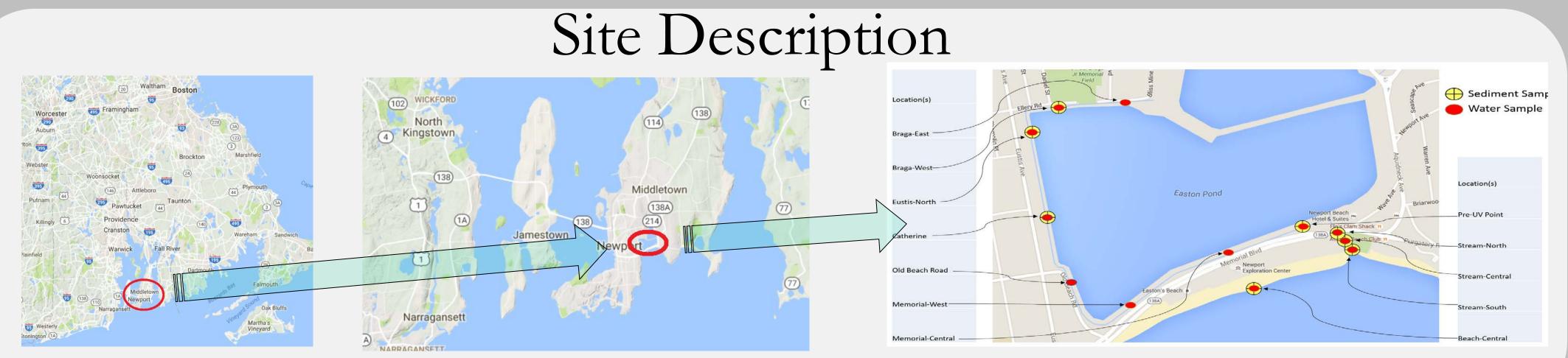


Figure 1. Located at Easton's Beach around Easton's Pond in Newport, Aquidneck Island, Narragansett Bay, Rhode Island.

Results/Conclusions

Results

• 50% completed (June thru December) with collecting sediment and water samples testing for *Enterococci*. Now organizing Fall public meetings, and assembling existing literature and previous reports and studies.

Connection between data and objectives

 Sediment sampling around the moat, combined with water samples will provide excellent information to understand the potential source of bacteria during dry and wet weather.

Transferability

• Citizen science efforts integrated with municipal partnerships and state agencies provides multifaceted data that is valid, recognized and integrated with "standard" data available for scientists, residents, and stakeholders.

How future work could build off the project

• Outreach via public meetings will energize Green Infrastructure Coalition efforts. Proposed remediation plans and conveyance improvements will be inputs to "Island Waters."

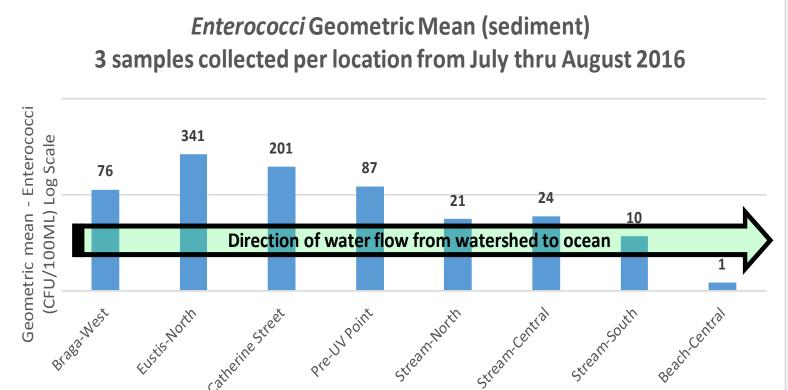


Figure 2. Preliminary sediment results

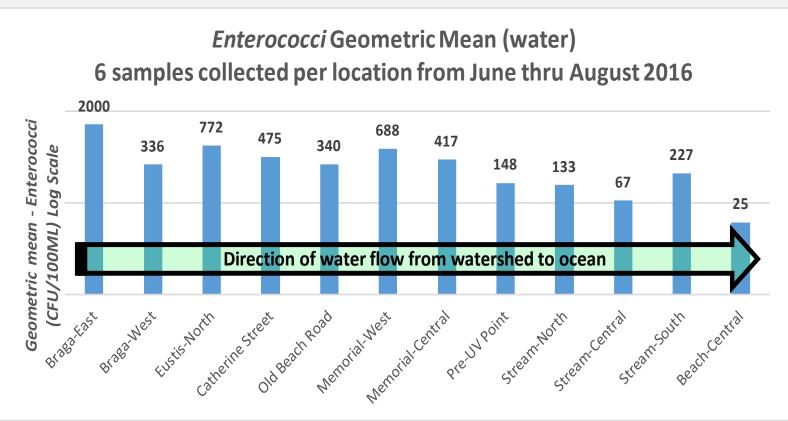


Figure 3. Preliminary water results

Acknowledgments & References

The project team would like to thank our project partners...

- Citizen Scientist Volunteers
- City of Newport & Town of Middletown
- Rhode Island Department of Health
- Aquidneck Land Trust & Aquidneck Island Planning Commission

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