

## Beach Committee Budget 2025 Activities and Notes

\*NH Environmental Services – Beginning in 2022, the Beach Committee partnered with the NH Chapter of the Surfrider Foundation to support beach water sample collection and testing during the Shoulder Season (Sept.-Dec) @Sawyers. Surfrider was already collecting samples at several beaches on the NH Seacoast. The Committee asked Surfrider if Sawyers could be included. The Committee chose Sawyers, because we received the most complaints concerning the runoff from Eel Pond. While this has not been a problem over the last two summers, there has been a significant increase in surfers and beachgoers using Sawyers throughout the year. Extensive marine debris and general trash are an ongoing problem. The Beach Committee has continued to support testing at Sawyers during the Fall and Winter/Spring Shoulder Seasons.

Summary of testing and costs:

2022- The Committee spent **\$240. 8 tests during the Fall Shoulder Season**

2023- The Committee spent **\$570. 19 tests during both Shoulder Seasons**

2023- The Committee voted to continue testing at Sawyers during the 2024 Shoulder Seasons.

The Committee also voted to **add Pirate's/Wallis as a trial for 3 months during the Fall Shoulder Season**. DES posted several beach contamination warnings during the summers of 2023 and 2024. The Beach Committee also received several complaints about this issue. As a result, several Beach Committee Members trained with Surfrider in the proper method to collect water samples. At this time, Surfrider does not collect samples at Pirate's/Wallis. The water samples at Pirate's/Wallis are collected by volunteers from the Beach Committee and transported to Jenness State Beach to hand over to a volunteer from NH Surfrider.

2024- The Committee spent **\$300. 10 tests @Sawyers** (Jan.-May).

The Committee will spend **\$240. 8 tests @Sawyers** (Sept.-Dec.)

The Committee will spend \$180. 6 tests @Pirate's/Wallis (Sept.-Nov.)

**Total 2024 Testing=\$720. (Budget in 2024=\$850.)**

The Beach Committee **proposes to increase the budget by \$70 to \$920.** for Environmental Services to support Winter/Spring Shoulder Season collections and **add** testing at Pirate's/Wallis during the month of May, before NHDES begins summer water sample testing. **However, we have a proposal to include genetic sequencing from water samples at Pirate's/Wallis within the proposed 2025 budget. Please see next page.**

\*\*Office Supplies – **\$400.** is sufficient at this time. This line item supports the Grade 4 Beach Poster Project. It also supports groups that the Beach Committee partners with for activities that protect our beaches and ocean. In the past, we provided \$100. to the Blue Ocean Society for Marine Conservation for their help and supplies with several beach cleanups, especially in 2023 for Rye400. In 2024, we voted to provide NH Surfrider with \$75- \$100. for supplies to support water sampling and fall beach cleanups.

### Consideration for the Beach Committee: Genetic Sequencing

The current water sampling process involves volunteers from Surfrider collecting the samples and transporting them to the Jackson Estuarine Lab at UNH. Microbiologist and seasoned water quality expert, Stephen Jones, PhD, conducts the testing and sends the results to Surfrider. Results have always been posted on the Surfrider website and noted in Rye's Newsletters. Current results will be posted on the Town's Website and FB.

According to the Jackson Lab, "The samples are tested for a bacteria, *Enterococcus* (fecal contamination). This bacteria is a subgroup of the fecal streptococcus group of bacteria. It can survive in saltwater and comes from various sources such as water fowl and other wildlife and runoff from leaking septic systems and failing wastewater system infrastructure (ex. piping)."

The Committee understands that the Town is engaged in another major study for the Parsons Creek Watershed. This is of great interest to the Beach Committee, as the freshwater stream carries the water through a tidal estuary to Wallis. The Beach Committee is interested in looking at Genetic Sequencing in the Pirate's/Wallis area.

If there is support, Beach Committee Members will volunteer to take water samples from that area and take the results to the UNH Estuarine Lab. We suggest using funds from the May 2025 or the September 2025 water sample allotment and, along with a \$70 increase in the budget, the cost would be covered. **Genetic Sequencing Total Cost=\$320.**

#### Process:

"We can filter a set volume of the water and freeze the filter to enable ensuing analysis for source(s) of contamination, including humans (also dog, cow, horse, bird-general, Canada goose, seagull, ruminants (incl deer)). Any combo of sources can be chosen, and we can go back to saved samples for further analysis. Water samples can be contaminated with a combo of sources, or just one." (Steve Jones, UNH)

#### 1. Presence/Absence PCR

Cost	Detection targets
\$125	Mammal, or target of choice
\$15/target goose	Human, Dog, Ruminant, Bird, Gull, Horse, Cow, Canada

#### 2. Quantitative qPCR

Cost	Detection targets: \$25 each
\$140*	Mammal, or target of choice
\$25 each	Human, Bird

Total for one sample with all analyses:  $125 + (8 \cdot 15) + 75 = \$32$  Fecal indicator costs: fecal coliform (FC), E. coli (Ec) & Enterococci (Ent) = \$40/sample; FC only = \$23/sample

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