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Date: July 9, 2018  
To: Sarah Porter, New Bedford Conservation Agent  
From: James Lacasse, Environmental Scientist  
Re: Buttonwood Pond Post-Management Water Quality Monitoring Data

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As mentioned in our report, SOLitude Lake Management collected water samples in order to test for E. Coli and Fecal Coliform at Buttonwood Park Pond. The following provides follow-up data of the results.

Location of Sampling	E. Coli (MPN/100 ml)	Fecal Coliform (MPN/100 ml)
Site 1	52,000	>1,600
Site 2	8,100	>1,600

The water samples were collected on Friday morning, June 29<sup>th</sup> – about 19 hours after having been notified of the fish kill. The samples were collected from two sites in order to gain a better understanding of the nutrient levels within the entirety of the pond. The sites include: 1) the western shoreline 2) the middle of the pond.

*E. coli (Eschericia coli)* – are the type of fecal coliform associated with fecal material, and some strains cause illness. *E. coli* analysis is used to determine the probability of fecal contamination; it is present in the digestive tract of humans and animals, and therefore is a reliable indicator of fecal inputs. Per EPA regulation, no *E. coli* should be present in drinking water resources. In recreational surface waters (beaches), the EPA set criteria at <126 colonies per 100mL. *Site 1 resulted in 52,000 colonies while Site 2 resulted with 8,100 colonies, extremely far above the concerning threshold.*

Fecal coliforms – are bacteria directly associated with the intestines of warm blooded organisms but can also be naturally found in soil. Typically, the presence of fecal coliforms is indicative of *E. coli (Eschericia coli)* and other waste contamination. *Both sites reached the maximum testing capacity at >1,600 (MPN/100 ml).*

We believe these results have a major contribution with the fish kill that occurred on June 28<sup>th</sup> due to the extremely high bacteria levels. Please do not hesitate to reach out to me via email ([jlacasse@solitudelake.com](mailto:jlacasse@solitudelake.com)) or phone (774-276-6098) if you have any questions or concerns.