



Friends of Green Hill Pond

To Preserve and Protect Green Hill Pond

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2021 Update on Bacteria Levels in Green Hill Pond

Recently, the RI Department of Environmental Management (DEM) shared with Friends of Green Hill Pond its 2021 update on bacteria levels in Green Hill Pond (GHP). Overall, the bacteria situation remains largely unchanged from last year with the exception of higher peak readings. Reducing stormwater remains the biggest opportunity for improvement.

There are two federal (National Shellfish Sanitation Program, NSSP) standards for bacteria levels that DEM uses in assessing the safe growing of shellfish: 1. The mean (or AVERAGE) reading should not exceed 14 CFU/100ml. 2. The 90th percentile (or PEAK) reading should not exceed 31 CFU/100ml. Both the Average and Peak standards have to be met consistently over at least five years for a shellfish growing area to be considered safe. DEM has 11 bacteria monitoring stations in GHP.

Based on our discussions with DEM and our own experience, we would like to share three observations from reviewing the 2021 data:

1. The AVERAGE bacteria level in Green Hill Pond largely meets federal water quality standards. Nine of eleven DEM stations have bacteria levels that meet the federal NSSP mean water quality standard today. This was the same situation last year and continues to be good news. Green Hill Pond does not have high bacteria levels at all times. It has a very specific bacteria problem related to stormwater that can be improved.
2. The PEAK bacteria levels in all areas of Green Hill Pond do not meet federal NSSP water quality standards. All 11 DEM stations had peak readings higher than the standard. This is a deterioration in the bacteria assessment from last year when 2 stations did meet both standards. This change was driven by higher 2021 readings replacing lower readings from 2016 which rolled out of the five years of data. We should **not** conclude therefore that Green Hill Pond is getting worse. High results are generally associated with recent rain events. In 2016, the average time between rain events and readings was 6 days. In 2021, the average time was 4.6 days. So, given that bacteria levels tend to dissipate with time after a rain event, it is not surprising that the longer timeframe for taking readings in 2016 may have resulted in lower numbers than 2021—all other things being equal.
3. Stormwater runoff remains the biggest opportunity. As was the case last year, the highest levels of bacteria are found on the northern/northeast side of the Pond, near where two freshwater tributaries empty into the Pond. In 2006, DEM found very high bacteria levels in these two tributaries. Further highlighting the importance of stormwater control and treatment is the fact that all the stations in Green Hill Pond fail the peak shellfishing water quality standard. We can also draw lessons from RI's beach monitoring program regarding the value of stormwater control and treatment in Upper Narragansett Bay. As RI Department of Health concluded: "Historically, beach closures in RI have been closely tied to precipitation . . . , (but) that appears to be changing since 2009, when Phase 1 of (a major stormwater project) came online."

It is clear to us that the high bacteria levels in Green Hill Pond will not be reduced without significant investment in stormwater control and treatment. As mentioned previously, we are currently providing significant financial and staff support to a major stormwater project that is led by the Town of South Kingstown. Soon, we will share a progress report on that critical project.

Thank you again for your interest and support.

For the Pond,

Dennis Bowman
President