

MILL POND PROBLEMS AND POTENTIAL FIXES

- The Town recently published the latest results of water sampling around Orleans (data exist for 2001 through 2023). The data show that Mill Pond's water quality is very poor. In some respects, it's worse than the water quality at other saltwater locations in town. There are very high levels of nitrogen in the water and there is NO OXYGEN in the deeper water of the pond. The Town's consultants suspect the lack of oxygen at depth is the result of extremely high levels of nitrogen in the pond's bottom sediments. Without oxygen, finfish and shellfish cannot live below the top water layer. You can view the water sampling data at these links:
https://town.orleans.ma.us/DocumentCenter/View/7874/NausetMarsh_S_MillPond_website_report_092024?bidId= (Mill Pond specifics);
<https://town.orleans.ma.us/1654/NewWater-QualitySummaries-2002-2023> (Other town water bodies)
- Mill Pond's poor water quality is the result of high levels of nitrogen being added to the water over time. The nitrogen comes primarily from septic system effluent that becomes part of groundwater and flows downhill. Runoff from fertilizers and storm water adds more nitrogen, though studies indicate this runoff is a much smaller contributor to the nitrogen problem. Another problem is the northward movement of Nauset Inlet over time and changes in the Nauset Marsh channels that have diminished tidal flushing.
- The watershed for Mill Pond is shown on the attached map. Substantial portions of the Nauset Heights and Grandview neighborhoods are within this watershed, as are neighborhoods off of Brick Hill Road and Mill Pond Road.
- Declining water quality in multiple saltwater locations was a major factor in the Town's decision to install municipal sewers in many neighborhoods and eliminate septic systems wherever sewers are built (sewers also are being installed around several lakes and ponds). The sewer plan calls for construction of these sewers over decades rather than all at once so that the Town does not get into financial trouble. Unfortunately, due to several events that won't be described here, Mill Pond's poor water quality was largely overlooked in the planning for the Town's sewer program. The current sewer plan covers only one neighborhood on the southwest side of the pond and contemplates sewers there several decades from now. The Grandview and Nauset Heights neighborhoods and the areas on the west and northwest sides of the pond are excluded from the Town's sewer plan (see the map).
- Several Town committees and the Select Board discussed the Mill Pond water quality problem during the past five months. They ultimately recommended action, beginning with a study of alternatives for cleaning up Mill Pond in the short term. At the May Town Meeting, voters approved this study. The study will cost \$125,000 and will be completed by the two consulting firms that are currently working on sewer and water quality issues for the Town. The study will be completed by the end of 2025.

- The attachment to this email describes the alternatives for cleaning up Mill Pond that will be included in the study. Withholding judgment on which alternative(s) should be selected is a good idea until the study results are published. It's also worth noting that if the consultants recommend installing sewers all around Mill Pond, the Town does have the ability to revise the existing plan for town sewers to accelerate Mill Pond remediation. Further, various government grant programs can help fund the cost of the cleanup effort.
- Once the study is complete, we should support immediate action to implement its recommendations and clean up Mill Pond. The pond is a valuable, wonderful resource that should be restored. Restoring Mill Pond's waters will bring finfish and shellfish back to the pond and will facilitate our recreational activities in and on the pond (swimming, paddle boarding, kayaking, boating, fishing). Restoration also will help preserve the water quality in the rest of Nauset Marsh.
- This information is now being circulated within several neighborhoods via their neighborhood associations. Please support Mill Pond restoration! Together, we can change Mill Pond's future.