Menemsha Pond
2019

M.V.C. SAMPLING SUMMARY

Nature of the Pond

Menemsha Pond is a complex estuary system located within the Towns of Chilmark and Aquinnah and shared by Wampanoag Tribe of Aquinnah. Menemsha Pond is connected to Squibnocket pond via a herring run located under State Road. Menemsha pond is open to the Vineyard Sound and Menemsha Bight via the Menemsha Channel. The pond accommodates a limited bay scallop fishery and commercial oyster aquaculture is developing. It is also used for recreational swimming, boating, fin and shell fishing and is a cultural resource to the Tribe.

Summary for 2019

Water quality in the main basin of Menemsha Pond is very good and this was apparent during the sampling season. Water clarity and dissolved oxygen were high, which is notable as they indicate high quality habitat. Total nitrogen levels and total pigment concentrations at most stations were relatively low except for the sites which also indicates high quality habitat. MEN-6 and MEN-7 both have reduced flushing which may lower habitat quality. Additionally, MEN-7 may be of concern as it is near a mooring field and is adjacent to the smaller more impacted Stonewall Pond. These sites should continue to be consistently monitored to ensure good water quality remains in Menemsha Pond.

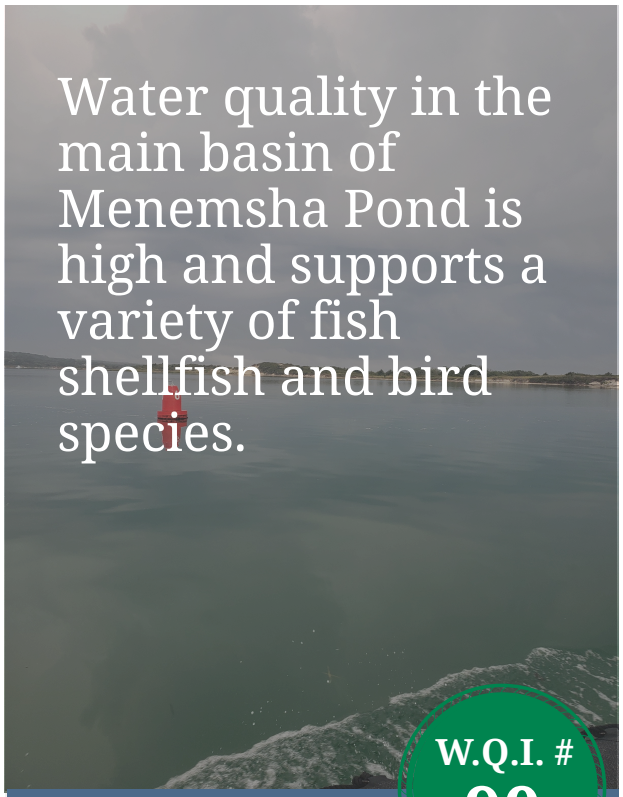
2019 Sampling Dates

June 24
July 2, 11, 18, 25
August 1, 14
September 5, 12

Fun Fact

You can see to the bottom at almost all sample stations on the pond!

Please forward questions to:
Sheri Caseau
Water Resource Planner
Martha's Vineyard Commission
33 New York Avenue
Oak Bluffs, MA 02557
(508) 693-3453



Water Quality Index

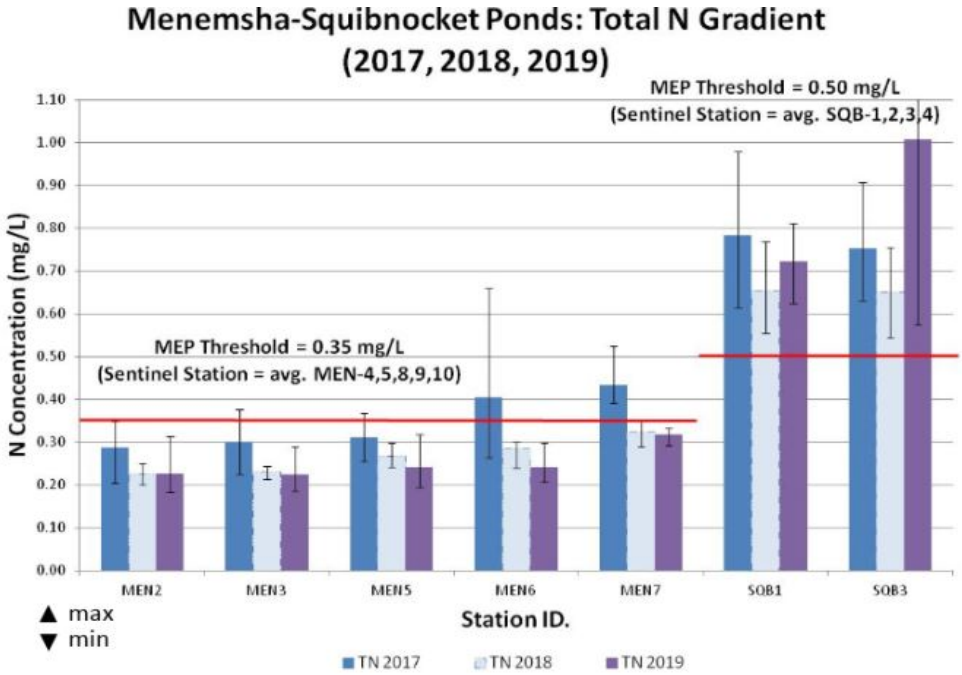
W.Q.I. # 90

The water quality index score can range from 0 to 100 (low to high), and is based on parameters that are consistently monitored in Menemsha Pond. Water quality in the Menemsha is of high quality.

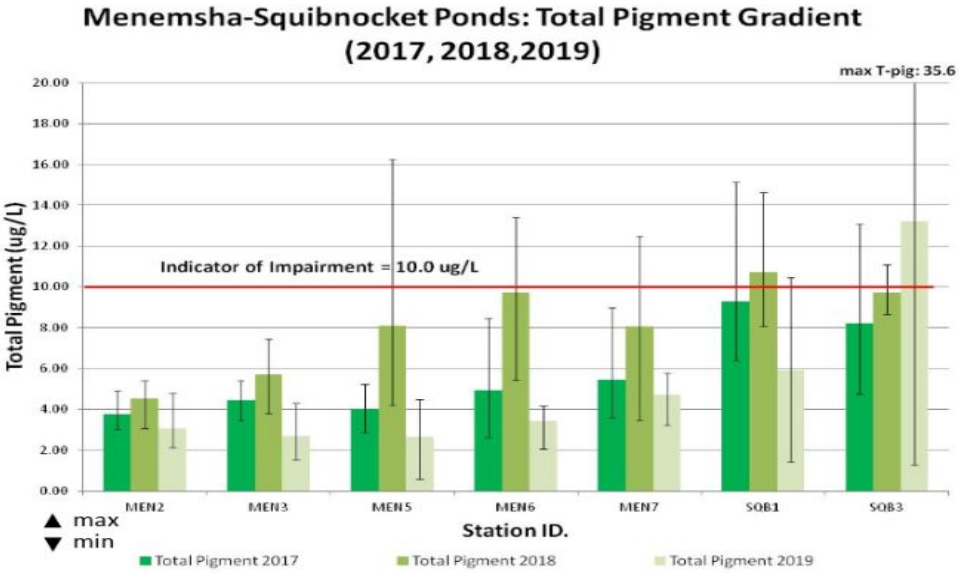
Regardless of the final index, it is important to consider each station individually and to monitor the harbor and the ponds tributaries to ensure it remains in good quality.

Why Sampling is Important

Field measurements and water samples are collected during the summer months in order to determine water quality of the pond. MVC staff collects water samples as well as a number of indicators of pond health including temperature, oxygen levels, salinity, conductivity, pH, and the time, depth and weather conditions of our sampling. Our sampling protocol is consistent with the Massachusetts Estuaries Project (MEP) which was used to develop the nitrogen threshold. Water samples are tested for several nutrients that in excess can be detrimental to the quality of the water and the systems it supports. Water samples are sent for analysis to the University of Massachusetts at Dartmouth, School of Marine Science and Technology.

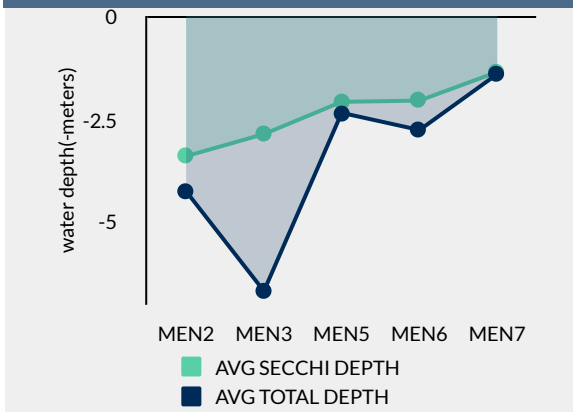


Nitrogen is a limiting nutrient and is necessary for plant, phytoplankton, and algae growth but in excess can be harmful. Menemsha Pond does not appear to be impacted by nutrient pollution, and the total nitrogen levels are relatively low compared to other coastal ponds.

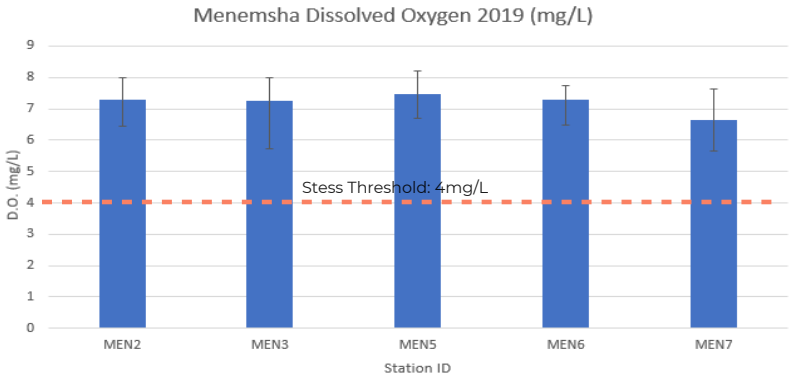


Total Pigment indicates the level of microscopic plant life in the water, which can be influenced by nitrogen levels. The concentrations of pigment are relatively low, except at MEN-5, but this does not seem to be affecting dissolved oxygen levels, water clarity, or water quality in general.

Water Clarity



Water clarity indicates good flushing at most stations. MEN-3 is quite a deep point on the pond which explains its relatively low water clarity. MEN-5 and MEN-7 are very shallow areas of the pond, which explains their near 100 % water clarity.



Dissolved Oxygen

Dissolved Oxygen (DO) levels are well above the extreme stress threshold of 4 mg/L. Levels above 6 mg/L indicate excellent water quality and a thriving benthic community in the pond. DO concentrations shown here are a snapshot of conditions at the time the sample was taken. DO levels can widely fluctuate with photosynthesis and respiration of plants throughout the day and night.

This research was made possible via grants from District Local Technical Assistance Program.. The Martha's Vineyard Commission is a regulatory agency tasked with monitoring the environmental health of all towns on Martha's Vineyard. We'd like to extend a special thanks to all staff at the Aquinnah Wampanoag Natural Resources Department for all of their help and knowledge. For more information on water quality on The Vineyard please visit http://www.mvcommission.org/.