

MANCHESTER COASTAL STREAM TEAM
Minutes of June 10, 2019
Seaside One 7:15 p.m.

Members Present: Jessica Lamothe, Chair; Lynn Atkinson; Francie Caudill; Carolyn Kelly; Michele Kulick; Patti Mitchell; Joan Nesbit

Absent: none

Also Present: Barbara Warren; Donna Dowal; Devon Winkler; Jeff Kennedy; Lenny Capello; Bion Pike; Jim Elder

Chair Lamothe opened the meeting.
The minutes of May 13, 2019 were approved.

Current Business

Shellfish Bed Project - Devon Winkler of the Mass. Division of Marine Fisheries gave a summary presentation (please see attached) of the past 15 months' testing of coastal waters in Kettle Cove, Manchester. Stream Team members had collected water from seven locations (pipes, coastal streams and beaches) each month starting February 2018 under her supervision. The DMF lab in Gloucester analyzed the samples for coliform bacteria to see if water quality and temperatures in Kettle Cove might support shellfish harvesting in the future.

Data showed that the water at White Beach met national standards for water quality; the water at Gray Beach met minimum standards; at the Black Beach sampling locations, standards were not met. This is the area most likely to have substantial shellfish populations, particularly soft-shell clams and surf clams.

In the follow up discussion, Devon and DMF director, Jeff Kennedy, answered questions about how our team, with the help of Salem Sound Coastwatch, might address the sources of bacterial contamination. The following points were made:

- B. Warren of SSCW will contact the City of Gloucester to question the sewer system engineers (regarding outfall pipes at east side of Gray Beach).
- The Stream Team will review septic system testing in the area with the Manchester Board of Health to see if there are now additional systems that have not been checked in the past 10 years.
- The Stream Team will do its summer sampling (for SSCW's "Clean Beaches and Streams" program) in streams that flow from the duck ponds across Coolidge Point and into Black Beach area.
- SSCW may use an "optical brightness" tool kit to try to pinpoint failed septic systems.
- We are still waiting for results of the EPA's testing for DNA in Kettle Cove marsh which would reveal whether bacteria is from human or animal sources.
- Manchester's Shellfish Constable could oversee an assessment of populations of shellfish to ascertain what is available to be harvested, such as the resource survey that was done by L. Capello in 1997-1998.

In addition, Mr. Kennedy urged the Stream Team to get the support of the Selectmen, and a commitment to move forward by making an official request to the Mass. Division of Marine Fisheries to continue such water testing in the future. We hope that one day shellfish harvesting may once again be possible in Manchester.

Salem Sound Coastwatch Updates

Lynn, Carolyn, Deb, Joan, Francie and Donna will be collecting samples from four new locations for SSCW "Clean Beaches and Streams" on a bi-weekly basis this summer.

The June monitoring for marine invasive species at White Beach was cancelled. The monitoring dates for this summer are:

- Thursday, July 11 at 12:30 p.m.
- Friday August 9 at 12 noon
- Sept. date/time TBD.

Anyone who would like to participate in this program is welcome.

Other Business

Michele Kulick suggested that we might individually want to support Seth Moulton's H. R. 1568, a bill to protect the North Atlantic Right Whales from extinction. She distributed cards about this House Resolution.

Reminder: Purple loosestrife removal at Dexter Pond: Saturday, August 3 at 9 a.m.

Minutes submitted by Francie Caudill

Summary of Manchester Shellfish Water Quality Survey

Devon Winkler

Marine Fisheries
Commonwealth of Massachusetts



Objectives

- **Collect water samples from historic stations located at Black, Gray, and White Beaches**
- **Test for presence of fecal coliform**
- **Analyze using national program standards**

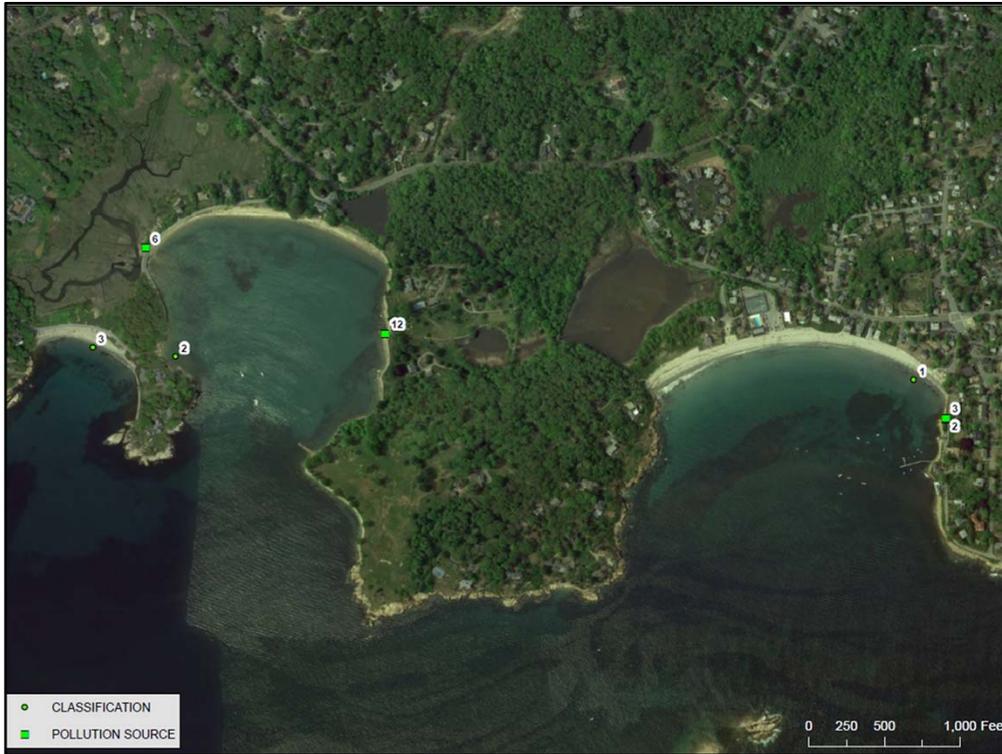


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These beaches were agreed upon during a planning meeting roughly a year and a half ago. The chosen locations were selected based on assumed presence of resource.



From west to east, White Beach, Black Beach, Gray Beach. Station 6 monitors inputs from Wolf Trap Creek. Station 12 monitors inputs from Clark Pond. Pollution source 2 and 3 are for PVC pipes draining a yet to be defined source.

National Standards

$$\frac{\text{GM} \leq 14 \quad \% < 31 \leq 10}{\text{OR}} \quad \frac{\text{GM} \geq 15 \quad \% > 31 > 10}$$



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These are the water quality benchmarks for an area to be classified as approved or conditionally approved as described in the NSSP. Units are in CFUs per 100 mL for the 14 and 31.

As we look at the results of the stations being evaluated, keep in mind that we are looking for geometric means that are equal or less than 14 cfu per 100 mL and percentiles that are equal or less than 10% (GREEN). In comparison, other water standards for amounts of fecal coliform are 0 cfu in drinking water, 200 cfu for swimmable waters, and 1000 cfu for boating.

If either the geometric mean and/or percentile thresholds have been exceeded, that station is in violation of the national standards (RED).

White Beach



Station	n	GM	%>31
c3	15	2	7



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The White Beach station met both geometric mean and percentile standards.

Gray Beach



Station	n	GM	%>31
c1	14	3	0
p2	14	23	35
p3	14	65	64



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The Gray Beach classification station also met both the geometric mean and percentile standards. Both pollution sources failed on both counts. Further monitoring would be necessary to calculate an appropriate closed safety zone around the pipes.

Black Beach



Station	n	GM	%>31	min	max
c2	15	18	40	2	237
p6	15	62	67	2.9	>800
p12	14	65	64	9	>800

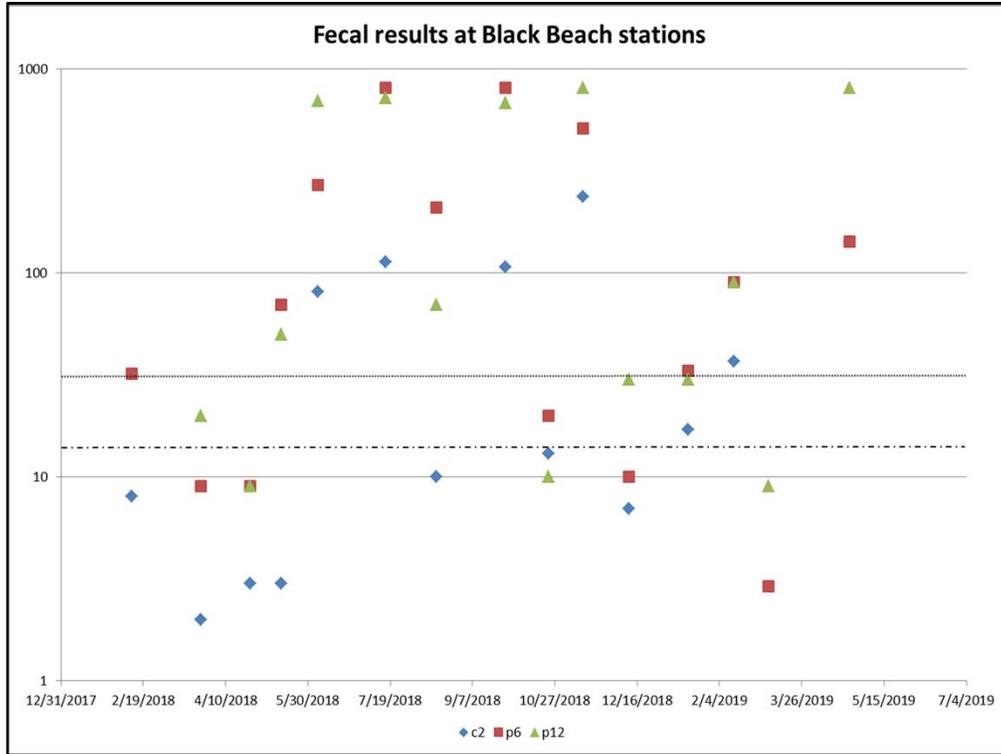


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Black Beach's classification station did not meet either the geometric mean or percentile standards nor did the pollution source stations. Both of the pollution sources maxed out the chosen lab test used. Future tests of samples from these stations would need to be tested using a test with a larger range to find the true upper limit.



This is a chart of all of the collected samples at Black Beach water quality stations. The y axis is in cfu per 100 ml. The legend at the bottom shows the symbols for each of the Black Beach stations. There is a dash and dot line showing where 14 cfu lies and a fine dot line where the value of 31 cfu is, both lines representing the combined national standards. Sample results that were above both of these lines occurred primarily between May and November.

Conclusions

- **White and Gray Beaches met Approved standards during the study period**
- **Black Beach did not meet Approved standards during the study period**
 - **Potential for Approved with defined conditions**
- **Black Beach pollution sources require further investigation to understand their impact to the area**



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