

SALEM SOUND COASTWATCH

2025 Tributaries and Water Quality Monitoring

Location: Danvers, MA

Water Body: Frost Fish Brook

Precipitation: All testing days were WET

Samples Collected by Salem Sound Coastwatch staff and volunteers: Susan Marsh, Katy Serth, and Chris Bresnahan

Summary of Findings:

Site 400, where the Frost Fish Brook meets the Porter River, was deemed a hot spot again in this summer's Clean Beaches and Streams Program. After meeting with Danvers officials in September 2025, SSCW tested upstream along Frost Fish Brook in the Donegal lane and Colgate Street area as part of its Tributaries and Water Quality Program to pinpoint the location of the bacterial source(s). Site 1540 upstream from 400 is also a hot spot. The bacterial levels drop significantly at site 469, just beyond where the culvert that runs parallel to Colgate Street enters the brook. Last Fall samples tested at Cornell Brook had low levels of bacteria. This Fall SSCW investigated the sites between Massachusetts Ave (470A) and Cabot Road (473) between Colgate and Bowdoin Streets. Site 470A had high levels of bacteria, but the bacterial levels at 473 were considerably lower. The low dissolved oxygen levels are also a concern for aquatic life.

Date	Site ID	Time	48 hour rainfall in inches	Enterococcus /100mL	Ammonia ppm	Surfactants mg/L	Chlorine mg/L	Temperature °C	Salinity ppt	Conductivity	pH	Dissolved Oxygen mg/L	Water Body	Field Notes
8/26/2025	400	10:00	0.35	>24,196	0	-	0.21	18.63	1.0	1.720	6.2	4	Porter	Rain last night
8/26/2025	1540	10:30	0.35	>24,196	0.25	-	0.19	18.1	0.2	0.418	6.36	5	Frost Fish	
8/26/2025	469	12:15	0.35	8,164	0	-	0.25	19.7	0.2	0.4428	6.32	6	Frost Fish	
8/26/2025	470A	11:34	0.35	>24,196	0	-	0.05	18.4	0.1	0.4302	6.21	5		
8/26/2025	470A	11:34	0.35	19,863	0	-	0.05	18.4	0.1	0.4302	6.21	5		Field Duplicate
8/26/2025	472A	11:00	0.35	-	-	-	-	-	-	-	-	-		Underground drainage system
8/26/2025	473	11:15	0.35	-	-	-	-	-	-	-	-	-		Gate locked; could not access
10/16/2025	400	10:40	1.02	1935	0	-	0.03	12.9	25.1	31.75*	6.03	6	Porter	Outgoing tide
10/16/2025	1540	10:10	1.02	309	0	-	0.04	10.4	0.4	0.55	6.25	6	Frost Fish	
10/16/2025	469	10:55	1.02	243	0	-	0.01	10.5	0.3	0.3764	5.56	7	Frost Fish	
10/16/2025	470A	10:32	1.02	1032	0	-	0.02	11	0.3	0.4656	6.25	6		
10/16/2025	473	11:16	1.02	134	0	-	0.02	11.9	0.3	0.499	6.03	5		



Wet Day > 0.2" rainfall in 24 hours



> 104 CFU/100

> 0.5mg/l

> 0.25 mg/L

> 4 mg/L

>22°C

> 1.0 ppt

> 1.5 mS/cm

6.5 - 8.5

<=6.0

Salinity elevates surfactants

Salinity elevates conductivity



Google Map of all 2025 CB&S Site Locations:

https://www.google.com/maps/@42.5230148,-70.917919,2507m/data=!3m1!1e3!4m2!6m1!1s1XweSQeqgdG4znx4fmnASwqj09kjj1c?authuser=0&entry=tту&g_ep=EgoyMDI1MDEyMC4wKXMDSoASAFQAw%3D%3D