

# Salem Sound Coastwatch *Clean Beaches and Streams*

## Water Monitoring Results

SUMMER 2014

6/17/2014

Samples Collected by Salem Sound Coastwatch staff and volunteers: **Barbara Warren (SS-BW), Susan Yochelson (SS-SY)**

Gary Moore (SS-GM), Susan Stratton (SS-SS), Hannah Sinclair (SS-HS)

MCST: Lynn Atkinson, Carolyn Kelly, Francie Caudill, Susan Purser, Joan Nesbit, Kate Culhane, Michele Kulick and Patti Mitchell

**Weather Rating: DRY**

**Low Tide: 9:10 AM**

*Salem Sound Coastwatch's Clean Beaches and Streams Program is an ongoing water quality monitoring program that collects data at low tide from prioritized, potential pollution sources/sites along Salem Sound's coastline, including outfall pipes, culverts, and small streams. Sites may change throughout the season. For more information, contact Barbara Warren at 978-741-7900.*

*Testing conducted specifically for water quality at bathing beaches is performed by each city/town Board of Health.*

Salem Sound Coastwatch Sampling Sites by Community	Site Number	Time of Sampling (am)	Flow	Salinity	Sample Collected	Enterococci per 100 mL	Lab
<b>Manchester</b>							
Wolf Trap Estuary- Downstream of Ocean St. at Black Beach	161	7:55	Flow	28	MCST	<b>219</b>	Bio
Wolf Trap Estuary - East side from wooden bridge in marsh	161E	8:02	Flow	24	MCST	<b>743</b>	Bio
Wolf Trap Brook - Downstream of Rt. 127	160D	8:15	Trickle	0	MCST	<b>108</b>	Bio
Inlet into Tuck's Point, West Manchester	168	7:24	Flow	29	MCST	<b>548</b>	Bio
Manchester Inner Harbor - off boat ramp	169	7:38	Flow	13	MCST	<b>620</b>	Bio
<b>Beverly</b>							
Patch Beach - Brackenbury Lane	213	7:50	Flow	15	SS-BW	<b>1,080</b>	Bio
Rice Beach - Stream outlet on beach	214	7:30	Flow	0	SS-BW	<b>2,380</b>	Bio
Dane St. Beach - Lawrence Street brook at beach	321	7:10	Flow	0	SS-BW	<b>809</b>	Bio
<b>Salem</b>							
North River - Upstream of Rt. 114 overpass, Commercial Way	537				SS-GM	NS	Bio
North River - Commercial Way near foot bridge	559				SS-GM	NS	Bio
Juniper Beach - Storm drain on beach	620	8:15	Flow	12	SS-SM	<b>8,660</b>	Bio
South River - off floating dock at Congress Street	643	8:00	Flow	20	SS-BW	<b>231</b>	Bio
Palmer Cove - Storm drain below Palmer Cove Playground	631	7:50	Flow	25	SS-BW	<b>882</b>	Bio
Lafayette Street - Forest River	601	7:45	Flow	28	SS-BW	<b>241</b>	Bio
<b>Marblehead</b>							
Dolliber Cove Creek - Grace Oliver Beach	700	7:00	Flow	0	SS-SS	<b>355</b>	Bio
Stramski Beach - Stream before entering the beach	722	7:05	Flow	0	SS-SS	<b>323</b>	Bio
Village Road	721	7:20	Flow	0	SS-SS	<b>683</b>	Bio
<b>Peabody</b>							
North River - Howley Street	500				SS-GM	NS	Bio
<b>Quality Assurance/Quality Control</b>							
Duplicate Sample collected							

Times with \*\* indicates samples were taken outside of the 2 hour window of sampling at low tide.

**\*Numbers in bold exceed Class A, B and C standards as specified by the EPA (EPA-823-R-03-008): Enterococci > 104 CFU/100mL**

**Notes:** NS = no sample collected ND = no detect (<4 CFU/100mL) NA = parameter not analyzed

**Weather ratings:**

Dry - Less than 0.2" the day of sampling or less than 0.5" within three days preceding sampling

Wet - More than 0.2" the day of sampling or more than 0.5" within three days preceding sampling

**Lab abbreviation: Bio = Biomarine Inc.**

**Flow ratings:**

N = no water

S = some water which is stagnant

T = trickling flow

F = steady, continuous flow

16 East Main Street, Gloucester, Massachusetts 01930 - Phone: 978-281-0222

[www.biomarinelab.com](http://www.biomarinelab.com)

2009

<b><u>Manchester</u></b>		Volunteer collector	
Wolf Trap Brook	160	MCST	
Wolf Trap Brook	160D	MCST	
Wolf Trap Estuary	161	MCST	
Wolf Trap Estuary - east side	161E	MCST	
Wolf Trap Estuary- west side	161W	MCST	
Coolidge Point - Black Beach	151	NS	
<b><u>Beverly</u></b>			
Brackenbury Beach - stream from 4' x 4' Culvert	213	Christine Downs	
Brackenbury Beach - concrete culvert to the east (18" dia.)	213A	NS	
South of Hale Street	213E	Christine Downs	N 42 33.226
Centerville Brook at Tall Tree Dr	213F	NS	N 42 33.753
East drainage to 213A - Endicott College	213AU	NS	
Dane St. Beach - Lawrence Street brook at beach	321	Marilyn McCory	
Dane St. Beach - easterly storm drain at beach	322	Marilyn McCory	
Rice Beach	214	Christine Downs	
<b><u>Danvers</u></b>			
Porter River at Rt. 62 and Holten-Richmond School	400	NS	
Frost Fish Brook		DEP	
<b><u>Peabody</u></b>			
North River - downstream of Howley Street Bridge	500	Bob Solda	
<b><u>Salem</u></b>			
North River - upstream of Rt. 114 overpass, Commercial Way	537	Gary Moore	
North River - Commercial Way near foot bridge	559	Gary Moore	
Forest River Park - Pioneer Village	634	NS	
Juniper Beach - storm drain on beach	620	Susan Marsh	
Derby Wharf - storm drain	630	Gary Moore	
Palmer Cove - storm drain below Palmer Cove Playground	631	Dave Pelletier	
Willow Ave. Beach	642	Dave Pelletier	
South River from Congress St. dock	673	Dave Pelletier	
<b><u>Marblehead</u></b>			
Dolliber Cove Creek - Grace Oliver Beach	700	Kathy Martin	
Stramski Beach-Stream draining across beach	722	NS	
Stramski Way-Dodge Road drainage	722A	NS	
Stramski Way-Pitman Street drainage	722B	NS	
Outfall Bradlee Rd/3 Anchorage Lane	731	Emily Gardiner	
<b><u>Quality Assurance/Quality Control</u></b>			
Duplicate Sample collected			

**Not Sampled in 2009**

Stramski Beach - Stream draining across beach	722		
Stramski Beach - Wooden bridge	722A-1		

<b><u>Danvers</u></b>			
Holton-Richmond School/Rt 62	400		

9 Magnolia Ave - Lampkin's driveway downstream side  
 Downstream at intersection of Magnolia Rd and Rt. 127  
 Downstream of Ocean St. at Black Beach as it exits the estuary  
 Off Ocean St. in salt marsh from the wooden bridge  
 Private Driveway off Ocean St. downstream of pond and driveway

W 70 50.994  
 W 70 50.895

Refractometers	Pole
MCST	MCST
Bob Solda	
Dave Pellitier	
Christine Downs	

	SS-EG		Bio
	SS-EG		Bio
			Bio

2009

	Date	Monitoring Times	Low Tide AM	# of sites	Cost	available
Thursday	6/11	6:45 - 8:45am	8:20			\$18.00 \$1,828.50
Thursday	6/25	6:45 - 8:45am	7:44			
Thursday	7/9	6:45 - 8:45am	7:15			
Thursday	7/23	6:30 - 8:30am	6:33			
Thursday	8/6	6:00 - 8:00am	6:10			
Thursday	8/20	5:30 - 7:20am	5:20			

102 samples

attridgw@marblehead.org  
bburke@beverlyma.GOV  
new name@Salem.com  
pmirandi@mail.danvers-ma.org  
lufkine@manchester.ma.us

Salem Sound Clean Beaches & Streams Program

	<b>Volunteers</b>	<b>Town</b>
1	Joan nesbit	Manchester
2	Patti Michael	Manchester
3	Francie Caudill	Manchester
4	Kate Newhall	Manchester
5	Carolyn Kelly	Manchester
6	Marilyn McCory	Beverly
7	Christine Downs	Beverly
8	Gary Moore	Salem
9	Susan Marsh	Salem
10	David Pelletier	Salem
11	Kathy Martin	Marblehead
12	Emily Gardiner	Swampscott
13	Bob Solda	Peabody
	<b>Staff</b>	
	Susan Yochelson	
	Barbara Warren	

**Summer Interns**

Connor Hilfinger

Zoemma Warshafsky

Vanessa Zendejas

Anna Saco

June - August 2009

2009 Trained

Sites	
160, 160D. 161, 161E, 161W	6/8/2009
160, 160D. 161, 161E, 161W	6/8/2009
160, 160D. 161, 161E, 161W	6/8/2009
160, 160D. 161, 161E, 161W	6/8/2009
160, 160D. 161, 161E, 161W	6/8/2009
322, 321	6/4/2009
213, 213E, 214	6/4/2009
537, 559, 630	
620	6/4/2009
631, 642, 673	6/4/2009
700	6/4/2009
731?	6/4/2009
500	6/4/2009
	6/4/2009

Connor\_Hilfinger@student.uml.edu

9785009799 home  
9789220436 cell

All

zwarshaf@student.umass.edu

zendejas@oxy.edu  
103 Hale Street, Beverly, MA 01915

(510) 414-9847

CB&S - MI  
spanish, E

sacoa@greenmtn.edu

978)-526-4754  
978)-290-7345 cell

NResources Management E S minor Geology  
senior at Green Mountain College



3  
J, policy

Site (s)	11-Apr	In Field training		

#322, #321			Marilyn	McCroy
#620			<b>Susan</b>	<b>Marsh</b>
#630, #559, #537			<b>Gary</b>	<b>Moore</b>

			<b>Christine</b>	<b>Downs</b>
--	--	--	------------------	--------------

#149, Black Beach			<b>Frances</b>	<b>Caudill</b>
#700 Dolliber Cove creek, Grace Oliver	X		<b>Kathy</b>	<b>Martin</b>

2006, 2007 Volunteers

#222, #213, #213A	X		<b>Eric</b>	<b>Hacker</b>
#631, #642	X		<b>Mary</b>	<b>Katz</b>
	X		<b>Frank</b>	<b>Saunders</b>
			<b>Mary &amp; Nick</b>	<b>Whitney</b>

			Carl	Soeder
Brackenbury (3)			Linda	Price-Sned
			Bill	Fusco
#642, #631	X		<b>Kelly</b>	<b>Story</b>
			<b>Lauren</b>	<b>Montano</b>
#722, a, b	X		<b>Joan</b>	<b>McIntyre</b>
	X		<b>Fiona</b>	<b>Lubbock</b>
Beverly (3) Danvers River			Tony	Wilbur

#701	X		Richard	Sides
------	---	--	---------	-------

			Paul	Kelly
--	--	--	------	-------

#629 Shetland Park				
#527 Collins @ rain,				


	Beverly		978-927-2903 c: 978-204	Marilyn.Mccrory@state
125 Columbus Ave.	Salem	01970	978-741-3071	<a href="mailto:spangmarsh@comcast">spangmarsh@comcast</a>
13 Sylvan St.	Salem	01970	978-729-8386, 978-745-	<a href="mailto:sylvanqmm@cove.com">sylvanqmm@cove.com</a>

1 Hawthorne Blvd #3F	Salem	01970	978-273-5774	<a href="mailto:moonshoes212001@y">moonshoes212001@y</a>
----------------------	-------	-------	--------------	--

16 Magnolia Ave.	Manchester	01944	978-526-7459	frances.caudill@gmail.
Tedesco St	Marblehead	01945	781 639 6161	sparkmart@yahoo.com

23 Judson St.	Beverly	01915	978-921-5278	hacker@gnomeknoll.c
17 Messervy St	Salem	01970	978-740-8926	<a href="mailto:mkatz111@aol.com">mkatz111@aol.com</a>
12 Coolidge Point	Manchester	01944	978-526-1918	<a href="mailto:suessydo1@aol.com">suessydo1@aol.com</a>
Essex Street	Salem	01970		

1 Curtis Point	Beverly	01915	(978) 922-4457	c.soeder@comcast.net
38 Washington Sq S	Salem	01970	978-825-1712	<a href="mailto:linda@pricesneddon.c">linda@pricesneddon.c</a>
	Manchester		978-526-7050	<a href="mailto:wfusco@adelphia.net">wfusco@adelphia.net</a>
7 Elm Ave	Salem	01970	978-741-4014	<a href="mailto:kelly.story@gordon.ed">kelly.story@gordon.ed</a>
293 Lafayette St #2 fr	Salem	01970	413-454-2879	<a href="mailto:cuttie2615@aol.com">cuttie2615@aol.com</a>
27 Elm St.	Marblehead	01945	781-631-0187	<a href="mailto:joanm@shore.net">joanm@shore.net</a>
				<a href="mailto:fionalubbock@verizon">fionalubbock@verizon</a>
	Beverly			tony.wilbur@state.ma.i

	Marblehead	01945	781-631-7014	<a href="mailto:rstgsides@comcast.net">rstgsides@comcast.net</a>
--	------------	-------	--------------	--

17 Messervy St	Salem	01970	978-740-8926	
----------------	-------	-------	--------------	--


MCST  
joan.nesbit@nemoves.com  
pattikm1695@yahoo.com  
kate.newhall@verizon.net  
frances.caudill@gmail.com

[yahoo.com](#)

com  
1

om

t  
[om](#)

[u](#) carolyn@covefarm.net

[.net](#)  
JS

t

Table 2.0 Salem Sound Coastwatch--Water Quality Monitoring Results 2006 from Outfall Pipes and Streams in S

	SITE	DRY	DRY	WET
<b>Manchester</b>		<b>4/19</b>	<b>5/3</b>	<b>5/17</b>
Wolf Trap Brook - 9 Magnolia Ave	160	<10	<10	<b>210</b>
Wolf Trap Brook - Downstream of Rt. 127	160D	<10	10	60
Wolf Trap Estuary- Downstream of Ocean St. at Black Beach	161	20	10	<b>470</b>
Wolf Trap Estuary - east side from wooden bridge in marsh	161E	<10	<10	<b>480</b>
Wolf Trap Estuary- west side at private driveway off Ocean St	161W	60	<10	<b>170</b>
<b>Beverly</b>				
Brackenbury Beach - stream from 4' x 4' Culvert	213	<b>120</b>	80	<b>550</b>
Brackenbury Beach - concrete culvert to the east (18" dia.)	213A	40	<10	<b>250</b>
South of Hale Street	213E	<b>420</b>	<b>140</b>	<b>640</b>
Centerville Brook at Tall Tree Dr	213F	NS	50	<b>430</b>
Centerville Brook at Common Street	213-G	NS	NS	NS
East Drainage to 213A - Endicott College	213AU	NS	NS	NS
Rice Beach - streamfall onto beach	214	NS	30	<b>640</b>
Dane St. Beach - Lawrence Street brook at beach	321	NS	<b>800</b>	<b>660</b>
Dane St. Beach - easterly storm drain at beach	322	NS	<10	<b>160</b>
Kernwood Bridge - 8" outfall	352	NS	NS	NS
<b>Danvers</b>				
Porter River Sandy Beach	430	NS	NS	NS
Porter River Rt. 35 - boat ramp at Bunky's Marina	401	NS	NS	NS
Porter River at Rt. 62 and Holten-Richmond School	400	NS	NS	NS
Frost Fish Brook - Hemlock St.	458H	NS	NS	NS
Tributary to Frost Fish Brook - Short Rd	464A	NS	NS	NS
Frost Fish Brook - Coolidge Rd	465	NS	NS	NS
Frost Fish Brook - between Colgate and Bowdoin Streets	471U	NS	NS	NS
Donegal Brook Tributary to Frost Fish Brook	471	NS	NS	NS
Frost Fish Brook - Cabot Rd	473	NS	NS	NS
Frost Fish Brook - end of Princeton St.	474S	NS	NS	NS
Frost Fish Brook - Dartmouth St.	478	NS	NS	NS
Frost Fish Brook - Dartmouth St. side culvert	478A	NS	NS	NS
Frost Fish Brook - Perkins St. (north side)	479	NS	NS	NS
<b>Salem</b>				
North River - upstream of Rt. 114 overpass, Commercial Way	537	<b>820</b>	<b>1,200</b>	<b>630</b>
North River - Commercial Way near foot bridge	559	<b>510</b>	<b>300</b>	<b>1,000</b>
Juniper Beach - storm drain on beach	620	40	<10	<10
Derby Wharf - storm drain	630	<b>8,200</b>	<b>970</b>	<b>150</b>
Brookhouse - corner of Derby and Orange	BH			<10
Palmer Cove - storm drain below Palmer Cove Playground	631	10	80	<10
Forest River Park - Pioneer Village	634	NS	NS	NS
Willow Ave. Beach	642	50	30	<b>180</b>
<b>Marblehead</b>				
Dolliber Cove Creek - Grace Oliver Beach	700	<b>270</b>	<b>450</b>	<b>1,800</b>
Riverhead Beach Culvert - facing on left	701A	90	<b>4,500</b>	<b>380</b>
Stramski Beach-Stream draining across beach	722	<10	80	<b>430</b>
Stramski Way-Dodge Road drainage	722A	10	<b>130</b>	<b>120</b>
Stramski Way-Pitman Street drainage	722B	10	90	<b>430</b>
Goldthwait marsh - east outlet	740	<b>160</b>	20	<b>280</b>
Goldthwait marsh - northwest fresh water inlet	741	80	20	<b>130</b>



**Numbers in bold exceed standards specified by the EPA (EPA-823-R-03-008):**

NS = not sampled / ND = not detected

**Enterococci > 104 CFU/100mL**

**Biomarine, I**

alem Sound Watershed

DRY	DRY	DRY	DRY
5/31	6/11	6/14	6/28
10	NS	50	<b>130</b>
40	NS	70	<b>500</b>
<b>410</b>	NS	<b>2,800</b>	<b>1,700</b>
<b>170</b>	NS	<b>480</b>	<b>2,700</b>
50	NS	10	<b>250</b>
<b>380</b>	NS	<b>1,000</b>	<b>6,400</b>
<b>1,700</b>	NS	<b>490</b>	<b>520</b>
<b>1,800</b>	NS	<b>1,200</b>	<b>1,800</b>
70	NS	<b>170</b>	<b>270</b>
NS	NS	60	NS
NS	NS	<b>410</b>	NS
20	NS	<b>840</b>	DRY
<b>800</b>	NS	<b>600</b>	<b>280</b>
80	NS	<b>200</b>	<b>60</b>
NS	NS	NS	<b>360</b>
NS	<b>210</b>	NS	NS
NS	<10	NS	NS
NS	<b>1,200</b>	NS	<b>13,000</b>
NS	<b>1,700</b>	<b>2,900</b>	NS
NS	<b>1,300</b>	NS	NS
NS	<b>1,300</b>	NS	NS
NS	<b>1,100</b>	<b>1,000</b>	NS
NS	<b>900</b>	NS	NS
NS	NS	<b>110</b>	NS
NS	<b>1,000</b>	NS	NS
NS	<b>530</b>	NS	NS
NS	40	NS	NS
NS	<b>550</b>	NS	NS
<b>500</b>	NS	<b>3,300</b>	<b>2,400</b>
70	NS	<b>120</b>	<b>500</b>
NS	NS	<b>3,600</b>	20
<b>680</b>	NS	<b>820</b>	<b>3,300</b>
<10	NS	NS	NS
<10	NS	10	<10
<b>170</b>	NS	NS	NS
<b>210</b>	NS	<b>290</b>	DRY
<b>480</b>	NS	<b>610</b>	<b>830</b>
<b>1,500</b>	NS	<b>280</b>	<b>470</b>
<b>180</b>	NS	<b>740</b>	<b>1,900</b>
80	NS	<b>160</b>	<b>3,600</b>
<b>250</b>	NS	<b>230</b>	<b>1,100</b>
<b>230</b>	NS	<b>320</b>	<b>450</b>
<b>170</b>	NS	<b>210</b>	<b>230</b>

ac, Gloucester