

Salem Sound Coastwatch *Clean Beaches and Streams*

Water Monitoring Results

SUMMER 2014

7/1/2014

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: 8:34 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
Manchester							
Wolf Trap Estuary- Downstream of Ocean St. at Black Beach	161	7:50	Flow	28	MCST	323	Bio
Wolf Trap Estuary - East side from wooden bridge in marsh	161E	7:58	Flow	25	MCST	823	Bio
Wolf Trap Brook - Downstream of Rt. 127	160D	8:04	Flow	0	MCST	145	Bio
Inlet into Tuck's Point, West Manchester	168	7:18	Flow	30	MCST	185	Bio
Manchester Inner Harbor - off boat ramp	169	7:35	Flow	26	MCST	110	Bio
Beverly							
Patch Beach - Brackenbury Lane	213	7:45	Flow	5	SS-HS	780	Bio
Rice Beach - Stream outlet on beach	214	7:25	T	0	SS-HS	1,010	Bio
Dane St. Beach - Lawrence Street brook at beach	321	7:05	Flow		SS-HS	798	Bio
Salem							
North River - Upstream of Rt. 114 overpass, Commercial Way	537	7:11	T		SS-GM	395	Bio
North River - Commercial Way near foot bridge	559	7:06	S		SS-GM	368	Bio
Juniper Beach - Storm drain on beach	620	8:20	T	7	SS-BW	>24,000	Bio
South River - off floating dock at Congress Street	643	7:22	Flow		SS-GM	250	Bio
Palmer Cove - Storm drain below Palmer Cove Playground	631	8:10	Flow	20	SS-BW	1,550	Bio
Lafayette Street - Forest River	601	7:45	Flow	27	SS-BW	97	Bio
Marblehead							
Dolliber Cove Creek - Grace Oliver Beach	700	7:15	Flow	0	SS-BW	573	Bio
Stramski Beach - Stream before entering the beach	722	7:30	T	0	SS-BW	1,350	Bio
Village Street	721	7:35	T	0	SS-BW	41	Bio
Peabody							
North River - Howley Street	500	7:00	T		SS-GM	451	Bio
Quality Assurance/Quality Control							
Duplicate Sample collected							
<p>Times with ** indicates samples were taken outside of the 2 hour window of sampling at low tide.</p> <p>*Numbers in bold exceed Class A, B and C standards as specified by the EPA (EPA-823-R-03-008): Enterococci > 104 CFU/100mL</p> <p>Notes: NS = no sample collected ND = no detect (<4 CFU/100mL) NA = parameter not analyzed</p> <p>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</p> <p>Lab abbreviation: Bio = Biomarine Inc.</p>							
					<p>Flow ratings: N = no water S = some water which is stagnant T = trickling flow F = steady, continuous flow</p>		
16 East Main Street, Gloucester, Massachusetts 01930 - Phone: 978-281-0222				www.biomarinelab.com			

2009

<u>Manchester</u>		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	
<u>Beverly</u>			
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	
<u>Danvers</u>			
Porter River at Rt. 62 and Holten-Richmond School	400	NS	
Frost Fish Brook		DEP	
<u>Peabody</u>			
North River - downstream of Howley Street Bridge	500	Bob Solda	
<u>Salem</u>			
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	
<u>Marblehead</u>			
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	
<u>Quality Assurance/Quality Control</u>			
Duplicate Sample collected			

Not Sampled in 2009

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

<u>Danvers</u>			
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

	Volunteers	Town
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
	Staff	
	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

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978)-290-7345 cell

NResources Management E S minor Geology
senior at Green Mountain College

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J, policy

Site (s)	11-Apr	In Field training		

#322, #321			Marilyn	McCrory
#620			Susan	Marsh
#630, #559, #537			Gary	Moore

			Christine	Downs
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#149, Black Beach			Frances	Caudill
#700 Dolliber Cove creek, Grace Oliver	X		Kathy	Martin

2006, 2007 Volunteers

#222, #213, #213A	X		Eric	Hacker
#631, #642	X		Mary	Katz
	X		Frank	Saunders
			Mary & Nick	Whitney

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

#701	X		Richard	Sides
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			Paul	Kelly
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#629 Shetland Park				
#527 Collins @ rain,				

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

1 Hawthorne Blvd #3F	Salem	01970	978-273-5774	moonshoes212001@y
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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	mkatz111@aol.com
12 Coolidge Point	Manchester	01944	978-526-1918	suessydo1@aol.com
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	linda@pricesneddon.c
	Manchester		978-526-7050	wfusco@adelphia.net
7 Elm Ave	Salem	01970	978-741-4014	kelly.story@gordon.ed
293 Lafayette St #2 fr	Salem	01970	413-454-2879	cuttie2615@aol.com
27 Elm St.	Marblehead	01945	781-631-0187	joanm@shore.net
				fionalubbock@verizon
	Beverly			tony.wilbur@state.ma.i

	Marblehead	01945	781-631-7014	rstgsides@comcast.net
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17 Messervy St	Salem	01970	978-740-8926	
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MCST

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

	SITE	DRY	DRY	WET
Manchester		4/19	5/3	5/17
Wolf Trap Brook - 9 Magnolia Ave	160	<10	<10	210
Wolf Trap Brook - Downstream of Rt. 127	160D	<10	10	60
Wolf Trap Estuary- Downstream of Ocean St. at Black Beach	161	20	10	470
Wolf Trap Estuary - east side from wooden bridge in marsh	161E	<10	<10	480
Wolf Trap Estuary- west side at private driveway off Ocean St	161W	60	<10	170
Beverly				
Brackenbury Beach - stream from 4' x 4' Culvert	213	120	80	550
Brackenbury Beach - concrete culvert to the east (18" dia.)	213A	40	<10	250
South of Hale Street	213E	420	140	640
Centerville Brook at Tall Tree Dr	213F	NS	50	430
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	640
Dane St. Beach - Lawrence Street brook at beach	321	NS	800	660
Dane St. Beach - easterly storm drain at beach	322	NS	<10	160
Kernwood Bridge - 8" outfall	352	NS	NS	NS
Danvers				
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
Salem				
North River - upstream of Rt. 114 overpass, Commercial Way	537	820	1,200	630
North River - Commercial Way near foot bridge	559	510	300	1,000
Juniper Beach - storm drain on beach	620	40	<10	<10
Derby Wharf - storm drain	630	8,200	970	150
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	180
Marblehead				
Dolliber Cove Creek - Grace Oliver Beach	700	270	450	1,800
Riverhead Beach Culvert - facing on left	701A	90	4,500	380
Stramski Beach-Stream draining across beach	722	<10	80	430
Stramski Way-Dodge Road drainage	722A	10	130	120
Stramski Way-Pitman Street drainage	722B	10	90	430
Goldthwait marsh - east outlet	740	160	20	280
Goldthwait marsh - northwest fresh water inlet	741	80	20	130

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

ac, Gloucester