



WG Annual Review
Effective Date: 7/2/07
Revision No. 5

GROWING AREA WG – Saco Bay

Towns of Biddeford, Saco, Old Orchard Beach and Scarborough

ANNUAL REVIEW for 2006

Final Report Date: July 2, 2007

LAURA LIVINGSTON

APPROVAL

Division Director:

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.....

The attached draft is for your evaluation and comment. Suggested changes should be concise and reasons specific. Return to sender.

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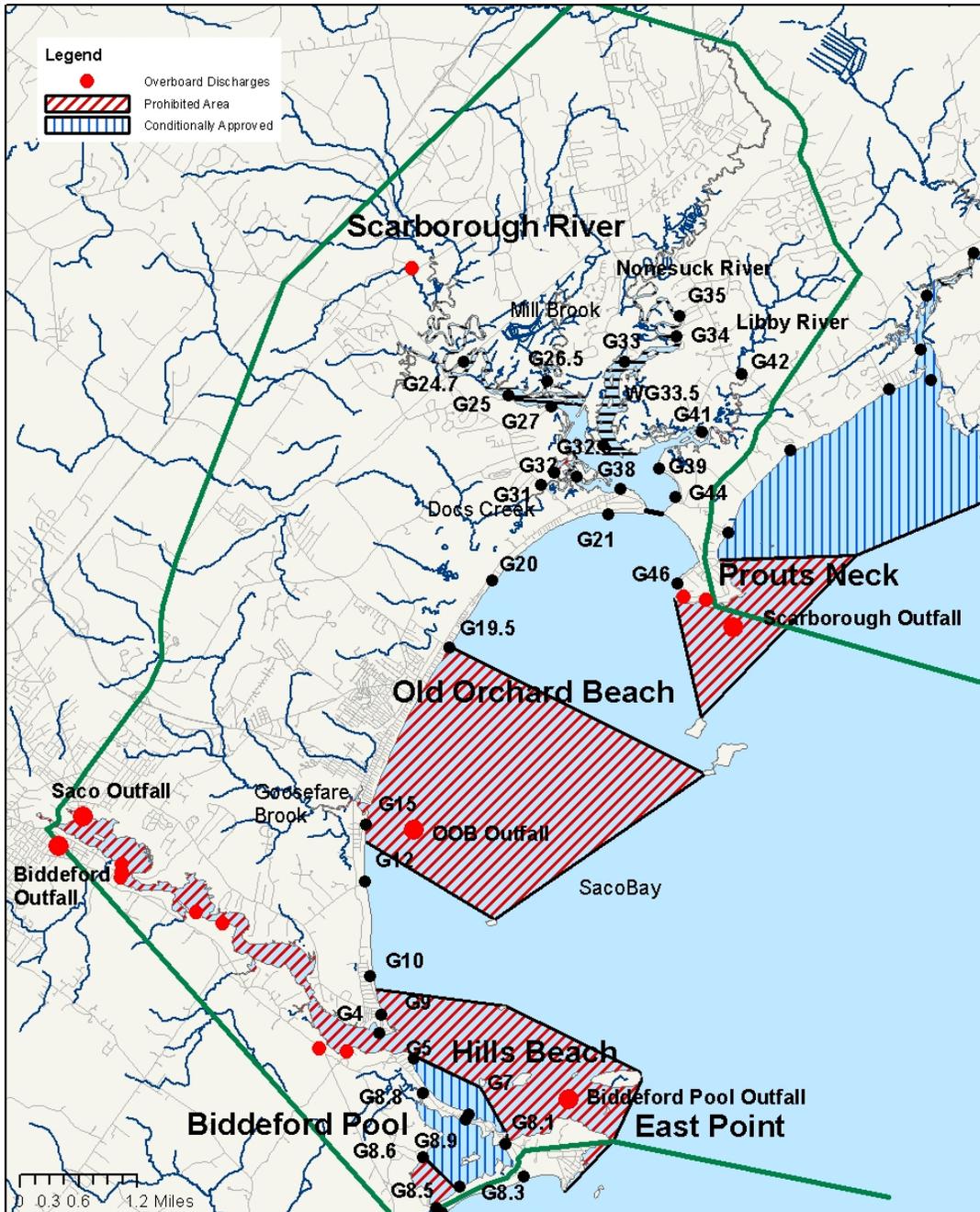


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Maine Department of Marine Resources

Growing Area WG





Executive Summary

Growing Area WG is the area between East Point, Biddeford and Prouts Neck, Scarborough. A complete boundary description can be found below. No overboard discharges were removed 2006, and only one new sampling station was created: WG 24.7. Classification changes are recommended at Hills Beach, Mill Brook, Nonesuch River, Libby River and Doc's Creek. See Classification Changes Required section for details.

Boundary Description

Growing area WG lies inside a line from East Point, extending due east offshore, and also, extending west to the intersection of Mile Stretch Road and Lester B. Orcutt Boulevard, then west on Mile Stretch Road, which becomes Fortunes Rocks Road, to Thorndike Avenue, then northwest to the intersection of Pool Street and Maddox Pond Road, then northwest to the intersection of Hill Street and Main Street, then north on Main Street, which becomes Portland Road to Spring Hill Road, then north to the intersection of Broadturn Road and I-5, then northeast to the intersection of Gorham Road and Spring Street, then east to the intersection of Route 1 and Pleasant Hill Road, then southeast down Pleasant Hill Road to Indian Woods Road, then southwest to the intersection of Spurwink Road and Black Point Road, then south down Black Point Road to Beach Road, then south to the middle of Prouts Neck south shore, then southeast offshore.

Current Classification(s)

Shellfish growing area WG currently has areas classified as:

Approved

- Ferry Beach (2 Stations)
- Pine Point (3 Stations)
- Scarborough River (7 Stations)
- Western Beach (2 Stations)

Conditionally Approved

- Biddeford Pool (4 Stations)
- Hills Beach (2 Stations)

Prohibited

- Biddeford Pool
- Saco River (2 Stations)
- Old Orchard Beach (1 Station)
- Scarborough River (7 Stations)



Legal Notices

Visit the DMR website to view Legal Notices.

MDMR Regulation 95.10 S, Closed Area No. 10, Saco River and Saco Bay (Biddeford, Saco, Old Orchard Beach)

MDMR Regulation 95.03 A, Closed Area No. 11, Scarborough River

MDMR Regulation 95.03 H, Closed Area No. 12, Spurwink River, Prouts Neck, Cape Elizabeth (Saco, Scarborough, Cape Elizabeth).

http://www.maine.gov/dmr/rm/public_health/closures/closedarea.htm

Activity During Review Period

During the summer of 2006, two failing septic systems were found in Biddeford Pool (Stations WG 8.1-8.9) and the seasonal conditional area was reclassified as prohibited. These systems were replaced at the end of December.

On November 14, 2006, Hills Beach (Stations WG 5 and 7), which was restricted, was reclassified as conditionally approved for an open season of shellfish harvesting from November 1 through May 31. This upward reclassification took place because the substandard septic systems on Basket Island, just offshore of Hills Beach, were replaced with appropriate systems and water quality met approved standards from November thru May. There is a complete addendum report in the central files.

On October 24, 2006, the Nonesuch River (Stations WG 33-35) was reclassified as prohibited due to a sewer break and elevated P90s at the sampling stations. The sewer break was repaired the next day.

Station WG 24.7 was created to monitor water quality upstream of the current boundary line at Station WG 25 with the idea of being able to move the boundary line further north if water quality met approved standards.

Current Management Plan(s)

There are management plans for two conditional areas in WG: Biddeford Pool Seasonal Area and Hills Beach Seasonal Area. Biddeford Pool seasonal conditionally approved area is closed to harvesting June 1 through September 30 per the management plan following satisfactory water quality samples. Hills Beach seasonal conditionally approved area is closed June 1 through October 31 per the management plan following satisfactory water quality samples. Copies can be found in the central files.



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Current Annual Review of Management Plan(s)

As of October 24, 2006, before a seasonal area can reopen, water samples must be collected and the samples must meet Conditional Area Re-opening Criteria as defined in the MDMR Shellfish Growing Area Classification SOP, Fecal Coliform Levels for Re-opening. The Biddeford Pool seasonal area was reclassified as restricted before the reopening date in 2006. The Hills Beach seasonal area opened on November 14, 2006, as part of an addendum reclassification. The complete Annual Reviews can be found in Appendices 1 and 2.

Review of Water Quality

Transitioning to Membrane Filtration for Seawater and Pollution Source Samples

The Maine Department of Marine Resources has chosen to switch to a fecal coliform method that was approved for use in the National Shellfish Sanitation Program (NSSP) at the Interstate Shellfish Sanitation Conference in 2003. This method is the Membrane Filtration (MF) for Fecal Coliforms using mTEC agar with a two hour resuscitation step. The geometric mean and the 90th percentile are calculated on 30 data points extending over a five year period.

During the transition from MPN to MF, we will be accumulating MF data points. The statistical calculations will be a combination of MPN and MF data points. The FDA has determined that the best way to handle the data is to perform the calculations as always for the data set, but to compare the data set to a hybrid weighted 90th percentile. This hybrid standard is calculated by weighting the relative contributions of each method to the database. This will mean that as the number of MPN data points reduce and the number of MF data points increase the 90th percentile standard that the sample site is compared to will change over time.

Once all 30 data points are analyzed using MF, the 90th percentile for approved classification will be 31 and for restricted (for depuration) will be 163. The geomean approved standard of 14 fecal coliforms per 100 ml and geomean restricted standard of 88 fecal coliforms per 100 ml will remain the same for both methods.

Reports that display 90th percentiles will show the number of data points derived from MF analysis and will show the appropriate 90th percentile standard for that MPN/MF combination for approved and restricted classifications. It must be remembered that this weighted standard is only used for data sets encompassing data from the two different test methods, MF and MPN (3 tube/3 dilution). If decisions are to be made on a single test result analyzed by the MF method or a multiple number of test results all exclusively analyzed by the MF method, the 90th percentile standard is 31 fecal coliforms per 100 ml.

This was the first year the water quality program documented in the database the inability to collect a sample based on the following parameters: if the tide stage was too low to collect the sample, there was a safety issue with collecting the sample, the location was inaccessible and "other" which usually was accompanied by a comment on the data sheet. Stations that were unable to be sampled due to any of these parameters show 999 in the salinity column and have



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no data recorded in any of the columns but the time is recorded so the actual tide stage can be computed. Stations that were missed due to the above parameters were required to be made up to assure that each station would receive the required six samples during the sampling season.

Table 1 displays the geomeans and P90s for all the active stations in growing area WG. The data represents the evaluation of the 30 most recent data points collected between 2001 and 2006 throughout the year. A key to the water quality table headers can be found in Attachment A at the end of this document. New stations created in 2005 and 2006, WG 19.5, 24.7, 26.5, 32.5, 35 and 42, have less than 30 samples for evaluation. Approved stations WG 10, 12, 20, 21, 25, 27, 38, 39, 41, 44 and 46 met approved standards. New stations WG 24.7 and 32.5 also met approved standards. New stations WG 19.5, 26.5, 35 and 42 did not meet approved standards. Stations WG 35 and 42 are already classified prohibited. Station WG 26.5 will be reclassified as restricted. Station WG 19.5 only has 10 samples and will be monitored closely in 2007. See Discussion and Summary section for more information on water quality at WG 19.5 and the closure at WG 26.5.

Table 1 Geomean and P90-Year Round

MAINE DEPARTMENT OF MARINE RESOURCES						As of: June 29, 2007			
Fecal Coliform Geometric Mean and Percent Variability									
For the Years 2001 Through 2006 - (01/01 - 12/31)									
Strategy = Random Only									
Excludes Flood Data									
Samples Limited to Latest 30									
Salinity >= 0 ‰									
STATION	CLASS	CNT	MFCNT	GM	SDV	MAX	P90	APPD_STD	RESTR_STD
WG004.00	P	30	2	11.6	0.58	240	65.1	48	288
*WG005.00	CA	30	2	11.2	0.55	240	55.7	48	288
*WG007.00	CA	30	2	9.2	0.59	240	51.8	48	288
**WG008.10	CA	30	2	6.1	0.52	460	27.7	48	288
**WG008.50	P	30	2	8.3	0.69	240	62.7	48	288
**WG008.80	CA	30	2	8.0	0.59	460	45.6	48	288
**WG008.90	CA	30	2	6.0	0.52	240	28.0	48	288
WG009.00	P	30	2	5.3	0.41	93	18.0	48	288
WG010.00	A	30	2	5.5	0.47	240	21.9	48	288
WG012.00	A	30	2	5.0	0.44	93	18.6	48	288
WG015.00	P	30	2	6.5	0.57	460	34.5	48	288
WG019.50	A	10	2	6.5	0.73	460	58.3	45	266
WG020.00	A	30	2	6.5	0.52	240	29.5	48	288
WG021.00	A	30	2	8.3	0.58	240	46.2	48	288
WG024.70	P	4	1	4.1	0.18	7.3	6.9	44	258
WG025.00	A	30	3	9.2	0.52	460	41.8	47	282
WG026.50	A	7	6	7.3	0.67	82	54.2	33	178
WG027.00	A	30	3	7.4	0.53	460	35.3	47	282
WG031.00	P	30	3	20.3	0.69	1200	155.8	47	282
WG032.00	P	30	6	8.5	0.55	150	42.6	45	266
WG032.50	A	8	6	3.6	0.36	24	10.7	35	190
WG033.00	P	30	4	8.3	0.62	460	51.8	46	277
WG034.00	P	30	3	10.7	0.68	1100	79.7	47	282
WG035.00	P	14	4	17.5	0.49	142	74.7	43	252
WG037.00	R	6	0	5.8	0.59	93	34.5	49	300
WG038.00	A	30	5	6.0	0.52	600	27.9	45	271



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WG039.00	A	30	3	6.6	0.63	1200	41.5	47	282
WG041.00	A	30	6	5.0	0.51	1100	22.1	45	266
WG042.00	P	14	2	33.5	0.82	460	386.3	46	275
WG044.00	A	30	3	6.0	0.62	620	37.1	47	282
WG046.00	A	30	3	4.9	0.49	240	20.8	47	282

- * see Table 2 below for Hills Beach conditional area data during the open season
- ** see Table 3 below for Biddeford Pool conditional area data during the open season (prohibited from October to the end of 2006)

Hills Beach conditionally approved stations met approved standards during the open season.

Table 2 Hills Beach Conditional Area Geomean and P90-Open Status

MAINE DEPARTMENT OF MARINE RESOURCES									
As of: December 29, 2006									
Fecal Coliform Geometric Mean and Percent Variability For the Years 2001 Through 2006 - (01/01 - 05/31) (11/01 - 12/31) Status = Open and Closed Stations Strategy = Random Only Excludes Flood Data Samples Limited to Latest 30 Salinity >= 0 %									
STATION	CLASS	CNT	MFCNT	GM	SDV	MAX	P90	APPD_STD	RESTR_STD
WG005.00	CA	30	1	8.6	0.54	240	41.6	48	294
WG007.00	CA	29	1	6.8	0.55	240	34.5	48	294

Biddeford Pool conditionally approved stations were reclassified as prohibited in October due to two failing septic systems identified during the 2006 shoreline survey. WG 8.5 no longer meets approved standards; a failing septic system discovered in the creek above the station may have been impacting this station.

Table 3 Biddeford Pool Conditional Area Geomean and P90-Open Status

MAINE DEPARTMENT OF MARINE RESOURCES									
As of: December 29, 2006									
Fecal Coliform Geometric Mean and Percent Variability For the Years 2001 Through 2006 - (01/01 - 05/31) (10/01 - 12/31) Status = Open and Closed Stations Strategy = Random Only Excludes Flood Data Samples Limited to Latest 30 Salinity >= 0 %									
STATION	CLASS	CNT	MFCNT	GM	SDV	MAX	P90	APPD_STD	RESTR_STD
WG008.10	P	30	1	6.0	0.50	460	26.0	48	294
WG008.50	P	30	1	8.4	0.68	240	63.5	48	294
WG008.80	P	30	1	7.2	0.59	460	41.1	48	294
WG008.90	P	30	1	6.8	0.56	240	35.6	48	294



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Stations that were active at the beginning of the year were sampled six times in 2006, as displayed in Table 4, with the following exceptions:

- Conditionally approved stations at Hills Beach, WG 5 and 7, were only sampled once during the open season, because they were just reclassified conditionally approved November 14, 2006.
- Conditionally approved stations at Biddeford Pool, WG 8.1-8.9, were only sampled four times during the open season, because the area was closed prior to the fall reopening due to two failing septic systems.
- For part of the year, Station WG 42 was mistakenly being collected at Station 41 by a new shellfish warden, so that Station 42 was only sampled 3 times in 2006. Station 42 is classified prohibited.

Table 4 Sample Collections Results for 2006

MAINE DEPARTMENT OF MARINE RESOURCES														As of: December 29, 2006	
Tabulated Station Data for Area(s): WG - WG For the Years 2006 Through 2006 - (01/01 - 12/31) Status = Open and Closed Stations Strategy = Random Only Excludes Flood Data = Y Excludes Inactive Stations															
Station	Date	Collector	Tide	Temp	Weather	Sal	Strat	ADV	Stat	CL	FECOL	A1COL	MFCOL	WIND	
WG004.00	01/04/06	FP	F	2	-	0	R	-	C	P		<3.0	-	NW	
	02/14/06	LL	HF	0	C	0	R	-	C	P		<3.0	-	W	
	04/18/06	JB	F	9	C	4	R	-	C	P		43	-	E	
	08/01/06	SXR	H	24	C	5	R	PB	C	P		23	-	SW	
	09/26/06	JXK	F	17	C	14	R	-	C	P		-	120	W	
	12/04/06	LL	HE	6	S	10	R	-	C	P		-	15	N	
WG005.00	01/04/06	FP	F		-	16	R	-	O	R		9.1	-	NW	
	02/14/06	LL	H	2	C	30	R	-	O	R		3.6	-	W	
	04/18/06	JB	F	10	C	11	R	-	O	R		9.1	-	N	
	08/01/06	SXR	F	25	C	26	R	P	O	R		23	-	S	
	09/26/06	JXK	F	17	C	28	R	-	O	R		-	3.6	SW	
	12/04/06	LL	HE	6	S	28	R	-	O	CA		-	8	N	
WG007.00	01/04/06	FP	F	2	-	17	R	-	O	R		3.6	-	NW	
	02/14/06	LL	H	2	C	28	R	-	O	R		<3.0	-	W	
	04/18/06	JB	F	9	C	28	R	-	O	R		3	-	N	
	08/01/06	SXR	F	24	C	30	R	P	O	R		9.1	-	S	
	09/26/06	JXK	F	18	C	30	R	-	O	R		-	18	SW	
	12/04/06	LL	HE	6	S	25	R	-	O	CA		-	6	N	
WG008.10	01/04/06	FP	F	2	-	18	R	-	C	P		3.6	-	NW	
	02/14/06	LL	H	0	C	28	R	-	C	P		<3.0	-	W	
	03/07/06	KEM	LF	3	C	28	R	-	C	P		<3.0	-	CL	
	04/18/06	JB	F	6	C	22	R	-	C	P		3.6	-	N	
	08/01/06	SXR	F	23	C	28	R	P	C	CA		23	-	S	
	09/26/06	JXK	F	15	C	30	R	-	C	CA		-	2	SW	
	12/04/06	LL	H	6	S	26	R	-	C	CA		-	4	N	
WG008.50	01/04/06	FP	F	1	-	13	R	-	O	CA		9.1	-	NW	
	02/14/06	LL	H	0	C	28	R	-	O	CA		<3.0	-	W	
	03/07/06	KEM	L	7	C	22	R	N	O	CA		<3.0	-	CL	
	04/18/06	JB	F	8	C	20	R	N	O	CA		3.6	-	N	
	08/01/06	SXR	F	28	C	30	R	P	C	CA		<3.0	-	S	
	09/26/06	JXK	HE	17	C	30	R	-	C	CA		-	6	W	
	12/04/06	LL	H	6	S	28	R	-	C	P		-	118	N	
WG008.80	01/04/06	FP	F	2	-	18	R	-	O	CA		3.6	-	NW	



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	02/14/06	LL	H	0	C	28	R	-	O	CA		3.6	-	W
	03/07/06	KEM	L	7	C	30	R	-	O	CA		<3.0	-	NE
	04/18/06	JB	F	11	C	24	R	-	O	CA		3.6	-	N
	08/01/06	SXR	F	24	C	28	R	P	C	CA		15	-	S
	09/26/06	JXK	F	18	C	22	R	-	C	CA		-	18	SW
	12/04/06	LL	HE	6	S	28	R	-	C	P		-	6	N
WG008.90	01/04/06	FP	F	1	-	20	R	-	O	CA		7.3	-	NW
	02/14/06	LL	H	0	C	26	R	-	O	CA		<3.0	-	W
	03/07/06	KEM	L	10	C	30	R	-	O	CA		<3.0	-	NE
	04/18/06	JB	F	10	C	25	R	W	O	CA		<3.0	-	N
	08/01/06	SXR	F	28	C	20	R	P	C	CA		<3.0	-	S
	09/26/06	JXK	F	19	C	28	R	-	C	CA		-	7.3	SW
	12/04/06	LL	HE	6	S	28	R	-	C	P		-	106	N
WG009.00	01/04/06	FP	F	4	-	24	R	-	C	P		93	-	NW
	02/14/06	LL	HF	2	C	30	R	-	C	P		<3.0	-	W
	04/18/06	JB	F	6	C	30	R	-	C	P		<3.0	-	NE
	08/01/06	SXR	H	21	C	30	R	P	C	P		<3.0	-	S
	09/26/06	JXK	F	15	C	30	R	-	C	P		-	30	W
	12/04/06	LL	E	6	S	30	R	-	C	P		-	2	N
WG010.00	01/04/06	FP	F	4	-	29	R	-	O	A		23	-	NW
	02/14/06	LL	HF	2	C	30	R	-	O	A		23	-	W
	04/18/06	JB	F	6	C	30	R	-	O	A		<3.0	-	NE
	08/01/06	SXR	HE	24	C	30	R	P	O	A		23	-	S
	09/26/06	JXK	F	15	C	30	R	-	O	A		-	<2.0	W
	12/04/06	LL	E	6	S	30	R	-	O	A		-	<2.0	N
WG012.00	01/04/06	FP	F	4	-	30	R	W	O	A		93	-	NW
	02/14/06	LL	HF	2	C	30	R	-	O	A		3.6	-	W
	04/18/06	JB	F	8	C	32	R	-	O	A		<3.0	-	NE
	08/01/06	SXR	HE	23	C	30	R	P	O	A		93	-	S
	09/26/06	JXK	F	15	C	30	R	-	O	A		-	<2.0	W
	12/04/06	LL	E	6	S	31	R	-	O	A		-	<2.0	N
WG015.00	01/04/06	FP	F	3	-	27	R	-	C	P		21	-	NW
	02/14/06	LL	HF	2	C	30	R	-	C	P		<3.0	-	W
	04/18/06	JB	HF		C	31	R	-	C	P		<3.0	-	NE
	08/01/06	SXR	HE	25	C	30	R	P	C	P		23	-	S
	09/26/06	JXK	F	15	C	31	R	-	C	P		-	4	W
	12/04/06	LL	E	6	S	30	R	-	C	P		-	<2.0	N
WG019.50	01/04/06	FP	LF	5	-	30	R	-	O	A		3.6	-	NW
	02/14/06	LL	HF	2	C	30	R	-	O	A		3.6	-	W
	04/18/06	JB	HF	7	C	31	R	-	O	A		<3.0	-	N
	08/01/06	SXR	HE	24	C	30	R	P	O	A		460	-	S
	09/26/06	JXK	F	15	C	30	R	-	O	A		-	<2.0	W
	12/04/06	LL	E	6	S	31	R	-	O	A		-	<2.0	N
WG020.00	01/04/06	FP	LF	5	-	30	R	-	O	A		3.6	-	NW
	02/14/06	LL	HF	2	C	30	R	-	O	A		<3.0	-	W
	04/18/06	JB	HF	8.5	C	31	R	-	O	A		23	-	N
	08/01/06	SXR	HE	27	C	30	R	P	O	A		43	-	S
	09/26/06	JXK	F	15	C	31	R	-	O	A		-	4	W
	12/04/06	LL	E	6	S	30	R	-	O	A		-	18	N
WG021.00	01/04/06	FP	LF	4	-	30	R	-	O	A		3.6	-	NW
	02/14/06	LL	HF	2	C	30	R	-	O	A		9.1	-	W
	04/18/06	JB	HF	7	C	32	R	-	O	A		3.3	-	NE
	08/01/06	SXR	HE	28	C	30	R	P	O	A		23	-	S
	09/26/06	JXK	HF	14	C	31	R	-	O	A		-	2	W
	12/04/06	LL	E	6	S	30	R	-	O	A		-	25	N
WG024.70	01/04/06	LL	F	1	O	14	R	-	C	P		3.6	-	-
	02/14/06	JB	HE		O	30	R	W	C	P		<3.0	-	NW
	04/18/06	LL	F	10	C	18	R	-	C	P		3.6	-	N
	10/11/06	DEC	F	12	P	30	R	-	C	P		-	7.3	N
WG025.00	01/04/06	LL	F	1	O	27	R	-	O	A		3.6	-	-
	02/14/06	JB	HE		O	30	R	-	O	A		3.6	-	NW



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	04/18/06	LL	F	10	C	20	R	-	O	A		<3.0	-	N
	08/01/06	DAH	E	23	-	24	R	-	O	A		3.6	-	-
	09/26/06	DEC	F	15	-	25	R	-	O	A		-	8	-
	12/04/06	DAH	HE	6	S	32	R	-	O	A		-	2	N
	12/26/06	DAH	F	1	R	10	R	P	O	A		-	90	SW
WG026.50	08/01/06	DAH	E	24	-	20	R	-	O	A		3.6	-	-
	09/26/06	DEC	F	15	-	22	R	-	O	A		-	33	-
	10/11/06	DEC	F	12	P	32	R	-	O	A		-	2	N
	11/07/06	DAH	HF	6	O	31	R	W	O	A		-	14	-
	11/27/06	DEC	F	8	C	28	R	W	O	A		-	2	-
	12/11/06	DEC	F		R	28	R	W	O	A		-	2	-
	12/26/06	DAH	F	1	R	5	R	P	O	A		-	82	SW
WG027.00	01/04/06	LL	F	1	O	30	R	-	O	A		<3.0	-	-
	02/14/06	JB	H		O	30	R	-	O	A		<3.0	-	NW
	04/18/06	LL	F	10	C	22	R	-	O	A		9.1	-	N
	08/01/06	DAH	E	20	-	26	R	-	O	A		<3.0	-	-
	09/26/06	DEC	F	15	-	26	R	-	O	A		-	8	-
	12/04/06	DAH	HE	6	S	32	R	-	O	A		-	<2.0	N
	12/26/06	DAH	F	3	R	16	R	P	O	A		-	56	SW
WG031.00	01/04/06	LL	F	1	O	26	R	-	C	P		3.6	-	-
	02/14/06	JB	H		O	25	R	-	C	P		9.1	-	NW
	04/18/06	LL	F	9	C	6	R	-	C	P		9.1	-	N
	08/01/06	DAH	LE	24	-	2	R	-	C	P		43	-	-
	09/26/06	DEC	F	16	-	3	R	-	C	P		-	51	-
	12/04/06	DAH	HE	6	S	29	R	-	C	P		-	14	N
	12/26/06	DAH	F	5	R	0	R	P	C	P		-	92	SW
WG032.00	02/14/06	JB	HF	0	O	22	R	-	C	P		3.6	-	SW
	08/01/06	DAH	E	20	-	25	R	-	C	P		43	-	-
	09/26/06	DEC	F	14	-	30	R	-	C	P		-	4	-
	10/11/06	DEC	F	12	P	31	R	-	C	P		-	4	N
	11/07/06	DAH	HF	5	O	31	R	W	C	P		-	4	-
	11/27/06	DEC	F	8	C	28	R	W	C	P		-	<2.0	-
	12/11/06	DEC	F		R	28	R	W	C	P		-	<2.0	-
	12/26/06	DAH	F	3	R	26	R	P	C	P		-	13	SW
WG032.50	02/14/06	JB	HF	0	O	28	R	-	O	A		<3.0	-	SW
	08/01/06	DAH	E	20	-	28	R	-	O	A		3.6	-	-
	09/26/06	DEC	F	14	-	32	R	-	O	A		-	<2.0	-
	10/11/06	DEC	F	12	P	32	R	-	O	A		-	4	N
	11/07/06	DAH	HF	5	O	31	R	W	O	A		-	<2.0	-
	11/27/06	DEC	F	8	C	27	R	W	O	A		-	4	-
	12/11/06	DEC	F		R	28	R	W	O	A		-	2	-
	12/26/06	DAH	F	3	R	26	R	P	O	A		-	24	SW
WG033.00	01/04/06	LL	F	1	O	12	R	-	O	A		23	-	-
	02/14/06	JB	HE		O	28	R	-	O	A		<3.0	-	NW
	04/18/06	LL	F	8	C	5	R	-	O	A		3.6	-	N
	08/01/06	DAH	E	24	-	18	R	-	O	A		3.6	-	-
	09/26/06	DEC	F	15	-	14	R	-	O	A		-	45	-
	11/27/06	DEC	F	9	C	28	R	W	C	P		-	<2.0	-
	12/04/06	DAH	HE	7	S	32	R	B	C	P		-	11	N
	12/26/06	DAH	HF	7	R	30	R	P	C	P		-	4	SW
WG034.00	01/04/06	LL	F	1	O	0	R	-	O	A		9.1	-	-
	02/14/06	JB	E		O	16	R	W	O	A		<3.0	-	W
	04/18/06	LL	F	8	C	2	R	-	O	A		23	-	N
	08/01/06	DAH	E	24	-	12	R	-	O	A		9.1	-	-
	09/26/06	DEC	F	15	-	5	R	-	O	A		-	80	-
	11/27/06	DEC	HF	9	C	26	R	W	C	P		-	<2.0	-
	12/04/06	DAH	E	8	S	31	R	B	C	P		-	14	N
WG035.00	01/04/06	LL	F	1	O	0	R	-	O	A		43	-	-
	02/14/06	JB	E		O	8	R	-	O	A		3.6	-	W
	04/18/06	LL	F	8	C	2	R	-	O	A		43	-	N
	08/01/06	DAH	E	24	-	8	R	-	O	A		15	-	-



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	09/26/06	DEC	F	15	-	2	R	-	O	A		-	142	-
	11/27/06	DEC	F	9	C	26	R	W	C	P		-	4	-
	12/04/06	DAH	E	7	S	27	R	-	C	P		-	33	N
	12/26/06	DAH	F	7	R	24	R	P	C	P		-	24	SW
WG038.00	02/14/06	JB	H		O	30	R	-	O	A		<3.0	-	NW
	04/18/06	LL	F	8	C	24	R	-	O	A		23	-	N
	08/01/06	DAH	LE	21	-	26	R	-	O	A		<3.0	-	-
	09/26/06	DEC	F	14	-	31	R	-	O	A		-	2	-
	10/11/06	DEC	F	13	P	31	R	-	O	A		-	4	N
	11/07/06	DAH	HF	5	O	31	R	W	O	A		-	6	-
	12/04/06	DAH	H	6	S	32	R	-	O	A		-	600	N
	12/26/06	DAH	F	7	R	28	R	P	O	A		-	18	SW
WG039.00	01/04/06	LL	F	1	O	25	R	-	O	A		9.1	-	-
	02/14/06	JB	E		O	28	R	-	O	A		<3.0	-	W
	04/18/06	LL	F	8	C	26	R	-	O	A		<3.0	-	N
	08/01/06	DAH	LE	21	-	26	R	-	O	A		3.6	-	-
	09/26/06	DEC	LF	14	-	29	R	-	O	A		-	15	-
	12/04/06	DAH	E	8	S	32	R	W	O	A		-	18	N
	12/26/06	DAH	F	4	R	32	R	P	O	A		-	<2.0	SW
WG041.00	02/14/06	JB	HF	0	O	28	R	-	O	A		<3.0	-	SW
	10/11/06	DEC	F	12	P	32	R	-	O	A		-	2	N
	11/07/06	DAH	HF	5	O	31	R	W	O	A		-	5.5	-
	11/27/06	DEC	F	9	C	28	R	W	O	A		-	<2.0	-
	12/11/06	DEC	F		R	28	R	W	O	A		-	2	-
	12/18/06	DEC	E		P	32	R	W	O	A		-	7.3	-
	12/26/06	DAH	F	5	R	22	R	P	O	A		-	15	SW
WG042.00	08/01/06	DAH	L	24	-	2	R	-	C	P		460	-	-
	09/26/06	DEC	LF	14	-	5	R	-	C	P		-	120	-
	12/26/06	DAH	F	5	R	22	R	P	C	P		-	54	SW
WG044.00	01/04/06	LL	F	1	O	25	R	-	O	A		3	-	-
	02/14/06	JB	E		O	30	R	-	O	A		<3.0	-	W
	04/18/06	LL	F	7	C	26	R	-	O	A		15	-	N
	08/01/06	DAH	LE	21	-	28	R	-	O	A		9.1	-	-
	09/26/06	DEC	F	14	-	29	R	-	O	A		-	2	-
	12/04/06	DAH	E	7	S	32	R	-	O	A		-	620	N
	12/26/06	DAH	F	5	R	32	R	P	O	A		-	<2.0	SW
WG046.00	01/04/06	LL	F	1	O	30	R	-	O	A		<3.0	-	-
	02/14/06	JB	E		O	30	R	-	O	A		<3.0	-	W
	04/18/06	LL	F	7	C	30	R	W	O	A		<3.0	-	N
	08/01/06	DAH	LE	20	-	30	R	-	O	A		3.2	-	-
	09/26/06	DEC	F	14	-	30	R	-	O	A		-	4	-
	12/04/06	DAH	E	6	S	32	R	-	O	A		-	<2.0	N
	12/26/06	DAH	F	4	R	32	R	P	O	A		-	2	SW

Shoreline Survey Activity

The Hills Beach area of Biddeford was surveyed in 2005. In 2006, the inappropriate septic systems found on Basket Island at Hills Beach were replaced with approved systems.

Biddeford Pool was surveyed in 2006 and two failing septic systems were identified, which lead to the area being reclassified as prohibited. Both systems were replaced at the end of December 2006.

Saco and Old Orchard beaches were surveyed in 2002 and 2003, and the Scarborough River was surveyed in 2003. Drive through surveys of growing area WG were done during random



sampling runs. In 2006, the construction of a large condominium at the Old Orchard Beach pier began. This building is connected to the town sewer system. Also in 2006, the deer farm located upstream on Doc's Creek, stations WG 31 and 32 reduced its herd from 400 head to about 40 head and many of the fields were reseeded in an effort to clean up deer waste from the property. Water quality at Station WG 32 has improved to meet approved standards.

Aquaculture/Wet Storage Activity

There currently are no active aquaculture lease sites in shellfish growing area WG.

Classification Changes Required

The northern half of Biddeford Pool (Stations WG 8.8 and 8.9) should be reclassified as conditionally approved since the failing septic system on this shore was replaced and water quality meets approved standards for the open season of October 1 through May 31, as seen in Table 3 above.

Hills Beach conditional area season should be changed from November 1 through May 31 to October 1 through May 31, since water quality meets approved standards from October 1 through May 31, as seen in Table 5 below.

Table 5 Hills Beach Seasonal Data Analysis

MAINE DEPARTMENT OF MARINE RESOURCES							As of: June 20, 2007		
Fecal Coliform Geometric Mean and Percent Variability									
For the Years 2001 Through 2006 - (01/01 - 05/31) (10/01 - 12/31)									
Status = Open and Closed Stations									
Strategy = Random Only									
Excludes Flood Data									
Samples Limited to Latest 30									
Salinity >= 0 ‰									
STATION	CLASS	CNT	MFCNT	GM	SDV	MAX	P90	APPD_STD	RESTR_STD
WG005.00	CA	30	1	8.0	0.48	240	32.5	48	294
WG007.00	CA	30	1	6.7	0.53	240	31.6	48	294

The Hills Beach and Biddeford Pools areas should be under one management plan.

The Nonesuch River (Stations WG 33-35) should be reclassified as restricted, down to the main body of the Scarborough River, which meets approved standards; Mill Brook (Station WG 26.5) should be reclassified as restricted, down to the main body of the Scarborough River; and the small prohibited area at the head of Libby River (Station WG 42), should be extended down to the middle of the river to Station WG 41, which meets approved standards.

The prohibited area at Doc's Creek (Stations WG 31-32.5) should be reclassified from prohibited to restricted, since there are no known point sources of pollution and it meets restricted standards.



Discussion & Summary

Intensive shoreline survey work at Hills Beach (Stations WG 5 and 7) and Biddeford Pool (Stations WG 8.1-8.9) lead to the replacement of several inappropriate septic situations on Basket Island. Hills Beach was reclassified from restricted to conditionally approved from November 1 through May 31. Water quality at Hills Beach meets approved standards from October 1 through May 31 and this report recommends expanding the open season by changing the opening date from November 1 to October 1. This would allow Hills Beach and Biddeford Pool to merge into one conditionally managed area with one management plan.

In 2006, two failing septic systems along Biddeford Pool were also replaced with approved inground systems. Water quality on the northern shore of the Pool was never impacted by the failing septic system in that area, but water quality on the southern shore, by Station WG 8.5, had deteriorated and may have been negatively impacted by the failing septic system. The northern half of the Pool should be reclassified as conditionally approved from October 1 through May 31. Additional samples should be collected at station WG 8.5 to determine if water quality has improved with the replacement of the failing septic system in that area.

Water quality has degraded in the Nonesuch River (Stations WG 33-35), Mill Brook (Station WG 26.5), and at the head of the Libby River (Stations WG 42), tributaries of the Scarborough River. The sources of pollution are unknown. The Nonesuch River was reclassified prohibited in 2006 due to a sewer break and failing water quality. Since the sewer break has been repaired and is no longer a pollution problem, and the water quality meets restricted standards, this report recommends reclassifying the Nonesuch River (Stations WG 33-35) as restricted. The sample station at Mill Brook exceeds approved, but meets restricted standards, so it should be reclassified from approved to restricted. The boundary line separating the prohibited and approved areas on the Libby River does not have a sample station, so the closure line must be moved to the next clean station, WG 41. The prohibited area at Docs Creek (Stations WG31-32.5) can be reclassified from prohibited to restricted, because it meets restricted standards.

New station WG 26.5 has only been sampled 8 times and water quality does not meet approved standards. The closure, which was upstream of this station, will be extended downstream to the mouth of Mill Brook and reclassified as restricted. Normally the closure would be extended to the next approved station, which is WG 27, located on the other side of the Scarborough River. However, since there are only 8 samples from WG 26.5, the closure will only go to the mouth of Mill Brook and the station will be monitored closely in 2007.

New station WG 19.5 has only been sampled 10 times and water quality does not meet approved standards, because one of the 10 samples had a score of 460. The tabulated data report in Table 6 below lists a "P" in the adversity column indicating that it was raining when the sample was collected. Table 7 below shows that there was 0.1 inches of rain on 8/1/06, when samples were collected at the Saco Bay stations, and all of the stations had elevated fecals.



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There is very little rainfall data in the past two years to review. Station WG 19.5 should be monitored closely in 2007 and additional rainfall samples should be collected in Saco Bay.

Table 6 Tabulated Data at Station WG 19.5

MAINE DEPARTMENT OF MARINE RESOURCES														As of: June 20, 2007	
Tabulated Station Data for Area(s): WG For the Years 2005 Through 2006 - (01/01 - 12/31) Status = Open and Closed Stations Strategy = Random Only															
Station	Date	Collector	Tide	Temp	Weather	Sal	Strat	ADV	Stat	CL	FECOL	A1COL	MFCOL	WIND	
WG019.50	10/05/05	LL	H	14	O	30	R	-	O	CA		23	-	E	
WG019.50	11/15/05	LL	HE	8	R	28	R	-	O	CA		<3.0	-	SE	
WG019.50	11/28/05	LL	LE	6	O	30	R	P	O	A		9.1	-	CL	
WG019.50	12/13/05	LL	E	3	C	32	R	-	O	A		3.6	-	N	
WG019.50	01/04/06	FP	LF	5	-	30	R	-	O	A		3.6	-	NW	
WG019.50	02/14/06	LL	HF	2	C	30	R	-	O	A		3.6	-	W	
WG019.50	04/18/06	JB	HF	7	C	31	R	-	O	A		<3.0	-	N	
WG019.50	08/01/06	SXR	HE	24	C	30	R	P	O	A		460	-	S	
WG019.50	09/26/06	JXK	F	15	C	30	R	-	O	A		-	<2.0	W	
WG019.50	12/04/06	LL	E	6	S	31	R	-	O	A		-	<2.0	N	

Table 7 Tabulated Data Associated with Rainfall for Stations WG10-20

Rainfall / Tide / Fecal Coliform Analysis														As of: June 20, 2007	
For the Years 2005 through 2006 - (01/01 - 12/31) Strategy = Random & Adverse Flood Data Included															

STATION	COLLECT_DATE	STRAT	TIDE	ADV	SAL%	WIND	COLIFORM	METH	RAIN-1	RAIN-2	RAIN-3	RAIN-4
WG010.00	01/25/05	R	E	-	30	-	<3	A	.001	.001	.63	.15
WG010.00	02/16/05	R	LE	-	30	S	<3	A	.34	1.08	.18	0
WG010.00	03/02/05	R	F	-	30	NW	<3	A	.08	.43	0	0
WG010.00	05/04/05	R	LE	P	26	SE	5.7	A	0	.001	.06	.07
WG010.00	10/05/05	R	H	-	30	E	3.6	A	.001	0	0	0
WG010.00	11/15/05	R	HE	-	21	SE	9.1	A	.4	0	0	0
WG010.00	01/04/06	R	F	-	29	NW	23	A	0	0	0	.01
WG010.00	02/14/06	R	HF	-	30	W	23	A	0	0	.33	0
WG010.00	04/18/06	R	F	-	30	NE	<3	A	0	.001	.001	.06
WG010.00	08/01/06	R	HE	P	30	S	23	A	.1	.02	0	0
WG010.00	09/26/06	R	F	-	30	W	<2	M	0	0	.29	.24
WG010.00	12/04/06	R	E	-	30	N	<2	M	.08	0	0	.71

STATION_WG010.00	COUNT	MFCNT	GEO_MEAN	STD	P90	APPD_STD	RSTD_STD
ALL_SAMPLES	12	2	5.37	.42	19.10	45	271
FLOOD_TIDES	4	1	4.38	.49	19.10	44	258
HIGH_TIDES	4	0	11.47	.39	36.70	49	300
EBB_TIDES	2	1	2.35	.13	3.50	39	221
LOW_TIDES	2	0	4.07	.21	7.60	49	300
72-HR_RAINFALL_>=0.5,<1.0	2	0	2.90	0	2.90	49	300
72-HR_RAINFALL_>=1.0,<1.5	0	0					
72-HR_RAINFALL_>=1.5	1	0	2.90	0	2.90		

STATION	COLLECT_DATE	STRAT	TIDE	ADV	SAL%	WIND	COLIFORM	METH	RAIN-1	RAIN-2	RAIN-3	RAIN-4
WG012.00	01/25/05	R	E	-	30	-	<3	A	.001	.001	.63	.15
WG012.00	02/16/05	R	LE	-	30	S	3.6	A	.34	1.08	.18	0
WG012.00	03/02/05	R	F	-	31	NW	<3	A	.08	.43	0	0
WG012.00	10/05/05	R	H	-	30	E	43	A	.001	0	0	0
WG012.00	10/11/05	A	F	F	26	CL	93	A	.1	.75	1.74	4.43
WG012.00	10/17/05	A	H	F	31	W	15	A	.001	.01	2.87	.79



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WG012.00	10/18/05	A	E	F	30	SE	1100	A	.001	.001	.01	2.87
WG012.00	10/31/05	A	E	F	26	SE	<3	A	0	0	.01	0
WG012.00	11/01/05	A	HE	F	28	SE	3.6	A	.01	0	0	.01
WG012.00	11/02/05	A	E	F	30	W	<3	A	0	.01	0	0
WG012.00	11/15/05	R	HE	-	27	SE	9.1	A	.4	0	0	0
WG012.00	12/19/05	R	F	-	32	-	9.1	A	.001	0	0	1.96
WG012.00	01/04/06	R	F	W	30	NW	93	A	0	0	0	.01
WG012.00	02/14/06	R	HF	-	30	W	3.6	A	0	0	.33	0
WG012.00	04/18/06	R	F	-	32	NE	<3	A	0	.001	.001	.06
WG012.00	05/08/06	A	E	F	29	CL	<3	A	0	0	0	.01
WG012.00	05/15/06	A	HF	F	9	E	460	A	1.06	.16	2.77	.93
WG012.00	05/16/06	A	F	FP	8	NW	460	A	.94	1.06	.16	2.77
WG012.00	05/17/06	A	HF	FP	30	SW	<3	A	.03	.94	1.06	.16
WG012.00	05/18/06	A	F	F	22	S	23	A	.02	.03	.94	1.06
WG012.00	06/11/06	A	HE	FP	28	NW	9.1	A	0	.57	.72	.99
WG012.00	06/12/06	A	E	F	26	NW	<3	A	.001	0	.57	.72
WG012.00	08/01/06	R	HE	P	30	S	93	A	.1	.02	0	0
WG012.00	09/26/06	R	F	-	30	W	<2	M	0	0	.29	.24
WG012.00	10/30/06	A	F	F	32	SW	8	M	0	.001	2.27	0
WG012.00	10/31/06	A	F	F	31	E	66	M	.001	0	.001	2.27
WG012.00	11/01/06	A	E	F	30	CL	6	M	.02	.001	0	.001
WG012.00	12/04/06	R	E	-	31	N	<2	M	.08	0	0	.71

STATION_WG012.00	COUNT	MFCNT	GEO_MEAN	STD	P90	APPD_STD	RSTD_STD
ALL_SAMPLES	28	5	12.53	.8	134.30	45	269
FLOOD_TIDES	10	3	19.26	.8	214.30	43	250
HIGH_TIDES	9	0	16.40	.74	153.80	49	300
EBB_TIDES	8	2	6.33	.92	100.10	44	258
LOW_TIDES	1	0	3.60	0	3.60		
72-HR_RAINFALL_>=0.5,<1.0	4	0	4.87	.45	18.89	49	300
72-HR_RAINFALL_>=1.0,<1.5	1	0	9.10	0	9.10		
72-HR_RAINFALL_>=1.5	7	1	30.52	.94	526.73	46	275

STATION	COLLECT_DATE	STRAT	TIDE	ADV	SAL%	WIND	COLIFORM	METH	RAIN-1	RAIN-2	RAIN-3	RAIN-4
WG015.00	01/25/05	R	E	-	30	-	9.1	A	.001	.001	.63	.15
WG015.00	02/16/05	R	E	-	21	S	23	A	.34	1.08	.18	0
WG015.00	03/02/05	R	F	-	30	NW	3.6	A	.08	.43	0	0
WG015.00	10/05/05	R	H	-	30	E	<3	A	.001	0	0	0
WG015.00	11/15/05	R	HE	-	30	SE	3.6	A	.4	0	0	0
WG015.00	11/28/05	R	LE	P	28	CL	15	A	.04	0	.001	0
WG015.00	01/04/06	R	F	-	27	NW	21	A	0	0	0	.01
WG015.00	02/14/06	R	HF	-	30	W	<3	A	0	0	.33	0
WG015.00	04/18/06	R	HF	-	31	NE	<3	A	0	.001	.001	.06
WG015.00	08/01/06	R	HE	P	30	S	23	A	.1	.02	0	0
WG015.00	09/26/06	R	F	-	31	W	4	M	0	0	.29	.24
WG015.00	12/04/06	R	E	-	30	N	<2	M	.08	0	0	.71

STATION_WG015.00	COUNT	MFCNT	GEO_MEAN	STD	P90	APPD_STD	RSTD_STD
ALL_SAMPLES	12	2	6.26	.41	21.30	45	271
FLOOD_TIDES	3	1	6.71	.43	24.50	42	245
HIGH_TIDES	5	0	4.58	.39	15.00	49	300
EBB_TIDES	3	1	7.35	.55	38.30	42	245
LOW_TIDES	1	0	15.00	0	15.00		
72-HR_RAINFALL_>=0.5,<1.0	2	0	5.72	.28	13.51	49	300
72-HR_RAINFALL_>=1.0,<1.5	0	0					
72-HR_RAINFALL_>=1.5	1	0	23.00	0	23.00		

STATION	COLLECT_DATE	STRAT	TIDE	ADV	SAL%	WIND	COLIFORM	METH	RAIN-1	RAIN-2	RAIN-3	RAIN-4
WG019.50	10/05/05	R	H	-	30	E	23	A	.001	0	0	0
WG019.50	11/15/05	R	HE	-	28	SE	<3	A	.4	0	0	0
WG019.50	11/28/05	R	LE	P	30	CL	9.1	A	.04	0	.001	0



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WG019.50	12/13/05	R	E	-	32	N	3.6	A	.001	.001	0	0
WG019.50	01/04/06	R	LF	-	30	NW	3.6	A	0	0	0	.01
WG019.50	02/14/06	R	HF	-	30	W	3.6	A	0	0	.33	0
WG019.50	04/18/06	R	HF	-	31	N	<3	A	0	.001	.001	.06
WG019.50	08/01/06	R	HE	P	30	S	460	A	.1	.02	0	0
WG019.50	09/26/06	R	F	-	30	W	<2	M	0	0	.29	.24
WG019.50	12/04/06	R	E	-	31	N	<2	M	.08	0	0	.71

STATION_WG019.50	COUNT	MFCNT	GEO_MEAN	STD	P90	APPD_STD	RSTD_STD
ALL_SAMPLES	10	2	6.51	.73	58.30	45	266
FLOOD_TIDES	1	1	1.90	0	1.90		
HIGH_TIDES	5	0	12.62	.95	222.50	49	300
EBB_TIDES	2	1	2.62	.2	4.70	39	221
LOW_TIDES	2	0	5.72	.28	13.50	49	300
72-HR_RAINFALL_>=0.5,<1.0	0	0					
72-HR_RAINFALL_>=1.0,<1.5	0	0					
72-HR_RAINFALL_>=1.5	0	0					

STATION	COLLECT_DATE	STRAT	TIDE	ADV	SAL%	WIND	COLIFORM	METH	RAIN-1	RAIN-2	RAIN-3	RAIN-4
WG020.00	01/25/05	R	E	-	30	-	<3	A	.001	.001	.63	.15
WG020.00	02/02/05	R	F	-	32	-	7.4	A	0	0	0	0
WG020.00	03/02/05	R	F	-	32	NW	240	A	.08	.43	0	0
WG020.00	10/05/05	R	H	-	30	E	43	A	.001	0	0	0
WG020.00	11/15/05	R	HE	-	30	SE	3.6	A	.4	0	0	0
WG020.00	11/28/05	R	LE	P	30	CL	9.1	A	.04	0	.001	0
WG020.00	01/04/06	R	LF	-	30	NW	3.6	A	0	0	0	.01
WG020.00	02/14/06	R	HF	-	30	W	<3	A	0	0	.33	0
WG020.00	04/18/06	R	HF	-	31	N	23	A	0	.001	.001	.06
WG020.00	08/01/06	R	HE	P	30	S	43	A	.1	.02	0	0
WG020.00	09/26/06	R	F	-	31	W	4	M	0	0	.29	.24
WG020.00	12/04/06	R	E	-	30	N	18	M	.08	0	0	.71

STATION_WG020.00	COUNT	MFCNT	GEO_MEAN	STD	P90	APPD_STD	RSTD_STD
ALL_SAMPLES	12	2	11.51	.6	70.10	45	271
FLOOD_TIDES	3	1	19.22	.96	346.70	42	245
HIGH_TIDES	5	0	13.47	.58	77.00	49	300
EBB_TIDES	2	1	7.22	.56	39.20	39	221
LOW_TIDES	2	0	5.72	.28	13.50	49	300
72-HR_RAINFALL_>=0.5,<1.0	2	0	26.38	1.36	1576.86	49	300
72-HR_RAINFALL_>=1.0,<1.5	0	0					
72-HR_RAINFALL_>=1.5	0	0					



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Legal Notice Changes Completed

As of 4/23/07, the upper Scarborough River, which was classified prohibited, was reclassified as restricted. All of the Nonesuch River, which was classified prohibited and approved, was reclassified as restricted, and all of Mill Brook, which was classified prohibited and approved, was reclassified restricted.

As of 3/6/07, the northern half of Biddeford Pool, which was classified prohibited, was reclassified conditionally approved from October 1 through May 31.

Changes Still Pending Approval as of 6/12/07

Doc's Creek (Stations WG 31-32.5) from prohibited to restricted.

Hills Beach Seasonal Conditional Area (Stations WG 5 and 7) from 11/1-5/31 to 10/1-5/31.



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Attachment A. Key to water quality table headers.

Station = water quality monitoring station

Class = classification assigned to the station; prohibited (P), restricted (R), conditionally restricted (CR), conditionally approved (CA) and approved (A).

Count = the number of samples evaluated for classification, must be a minimum of 30.

MFCNT = the number of samples evaluated with the MTec method (included in the total Count column)

Geo_Mean = means the antilog (base 10) of the arithmetic mean of the sample result logarithm (base 10).

SDV = standard deviation

Max = maximum score of the 30 data points in the count column

P90 = 90th percentile

APPD_STD = the 90th percentile, at or below which the station would meet approved criteria in the absence of pollution sources or poisonous and deleterious substances.

RESTR_STD = the 90th percentile, at or below which the station would meet restricted criteria.



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Appendix 1. Annual Review of Management Plan-Biddeford Pool

2006 Annual Review Biddeford Pool Conditional Area C10 Growing Area WG

Scope

Biddeford Pool is a conditionally approved area due to seasonal variation in water quality, possibly due to an increase in shore usage. Biddeford Pool, monitored by stations WG 8.1 – 8.9, was classified conditionally approved based on seasonal variation in water quality in 2000. MDMR evaluated the Biddeford Pool data in December 1999, and made the assessment that there is greater variation in water quality during the summer months. Many of the homes along this shore are occupied year round, but many others are seasonal cottages. There are designated parking areas for summer residents, and there is an increase in shore usage during June, July, and August. The area met approved standards from October through May at that time.

Compliance with management plan

In 2006, the conditional area closed on June 1 and did not reopen on October 1 due to the identification of two failing septic systems during the shoreline survey.

Adequacy of reporting and cooperation of involved persons

This management plan does not require reporting

Compliance with approved growing area criteria

The annual review seasonal data analysis, as seen in Table 1 below, shows that the conditionally approved stations in Biddeford Pool met approved standards during the open season, except at Station WG 8.5, which may have been impacted by one of the failing septic systems.



Table 1 Geomean and P90 During Open Status

MAINE DEPARTMENT OF MARINE RESOURCES							As of: December 29, 2006			
Fecal Coliform Geometric Mean and Percent Variability For the Years 2001 Through 2006 - (01/01 - 05/31) (10/01 - 12/31) Status = Open and Closed Stations Strategy = Random Only Excludes Flood Data Samples Limited to Latest 30 Salinity >= 0 ‰										
STATION	CLASS	CNT	MFCNT	GM	SDV	MAX	P90	APPD_STD	RESTR_STD	
WG008.10	P	30	1	6.0	0.50	460	26.0	48	294	
WG008.50	P	30	1	8.4	0.68	240	63.5	48	294	
WG008.80	P	30	1	7.2	0.59	460	41.1	48	294	
WG008.90	P	30	1	6.8	0.56	240	35.6	48	294	

Field inspection of critical pollution sources

The potential for pollution in Biddeford Pool comes from increased shore usage (swimming, walking pets, etc.) and the influx of summer residents to their seasonal homes. Visual observations are made throughout the year during the course of random sampling and shoreline surveying.

Water sampling compliance history

All stations were collected only 4 times when in the open status, because the conditional area did not reopen in October. However, they were all collected 6 times in 2006. The results of all sampling can be found in the 2006 Annual Review for Growing Area WG.

Analysis-Recommendations

It is MDMR policy to sample two weeks before opening a seasonal area to ensure compliance with approved standards. This policy was established at the end of October 2006 and will be put into effect for any conditional area reopening of Biddeford Pool in 2007.



Appendix 2. Annual Review of Management Plan-Hills Beach

2006 Annual Review Hills Beach Conditional Area C10 Growing Area WG

Scope

Hills Beach is a conditionally approved area due to seasonal variation in water quality, possibly due to an increase in shore usage. Hills Beach, monitored by stations WG 5 and 7, was classified conditionally approved based on seasonal variation in water quality in 2006. MDMR evaluated the Hills Beach data in December 2005, and following the replacement of inappropriate septic systems on Basket Island, made the assessment that there is greater variation in water quality during the summer months. Many of the homes long this shore are occupied year round, but many others are seasonal cottages. There are designated parking areas for summer residents, and there is an increase in shore usage during June, July, and August. The area met approved standards from October through May at that time.

Compliance with management plan

In 2006, the conditional area opened for the first time on November 14.

Adequacy of reporting and cooperation of involved persons

This management plan does not require reporting

Compliance with approved growing area criteria

The annual review seasonal data analysis, as seen in Table 1 below, shows that the conditionally approved stations in Hills Beach met approved standards during the open season.

Table 1 Geomean and P90 During Open Status

MAINE DEPARTMENT OF MARINE RESOURCES							As of: December 29, 2006			
Fecal Coliform Geometric Mean and Percent Variability For the Years 2001 Through 2006 - (01/01 - 05/31) (11/01 - 12/31) Status = Open and Closed Stations Strategy = Random Only Excludes Flood Data Samples Limited to Latest 30 Salinity >= 0 ‰										
STATION	CLASS	CNT	MFCNT	GM	SDV	MAX	P90	APPD_STD	RESTR_STD	
WG005.00	CA	30	1	8.6	0.54	240	41.6	48	294	
WG007.00	CA	29	1	6.8	0.55	240	34.5	48	294	



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Field inspection of critical pollution sources

The potential for pollution at Hills Beach comes from increased shore usage (swimming, walking pets, etc.) and the influx of summer residents to their seasonal homes. Visual observations are made throughout the year during the course of random sampling and shoreline surveying.

Water sampling compliance history

All stations were collected only once when in the open conditionally approved status, because the conditional area just opened on November 14, 2006. However, they were all collected 6 times in 2006. The results of all sampling can be found in the 2006 Annual Review for Growing Area WG.

Analysis-Recommendations

It is MDMR policy to sample two weeks before opening a seasonal area to ensure compliance with approved standards. This policy was established at the end of October 2006 and will be put into effect for the conditional area reopening of Hills Beach in 2007.