GROWING AREA EH

Seawall to Otter Cove, including Southwest and Northeast Harbors, Somes Sound, Somes Harbor, and the Cranberry Islands

ANNUAL REVIEW for 2009

Report Date: December 21, 2010

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APPROVAL

Division Director:

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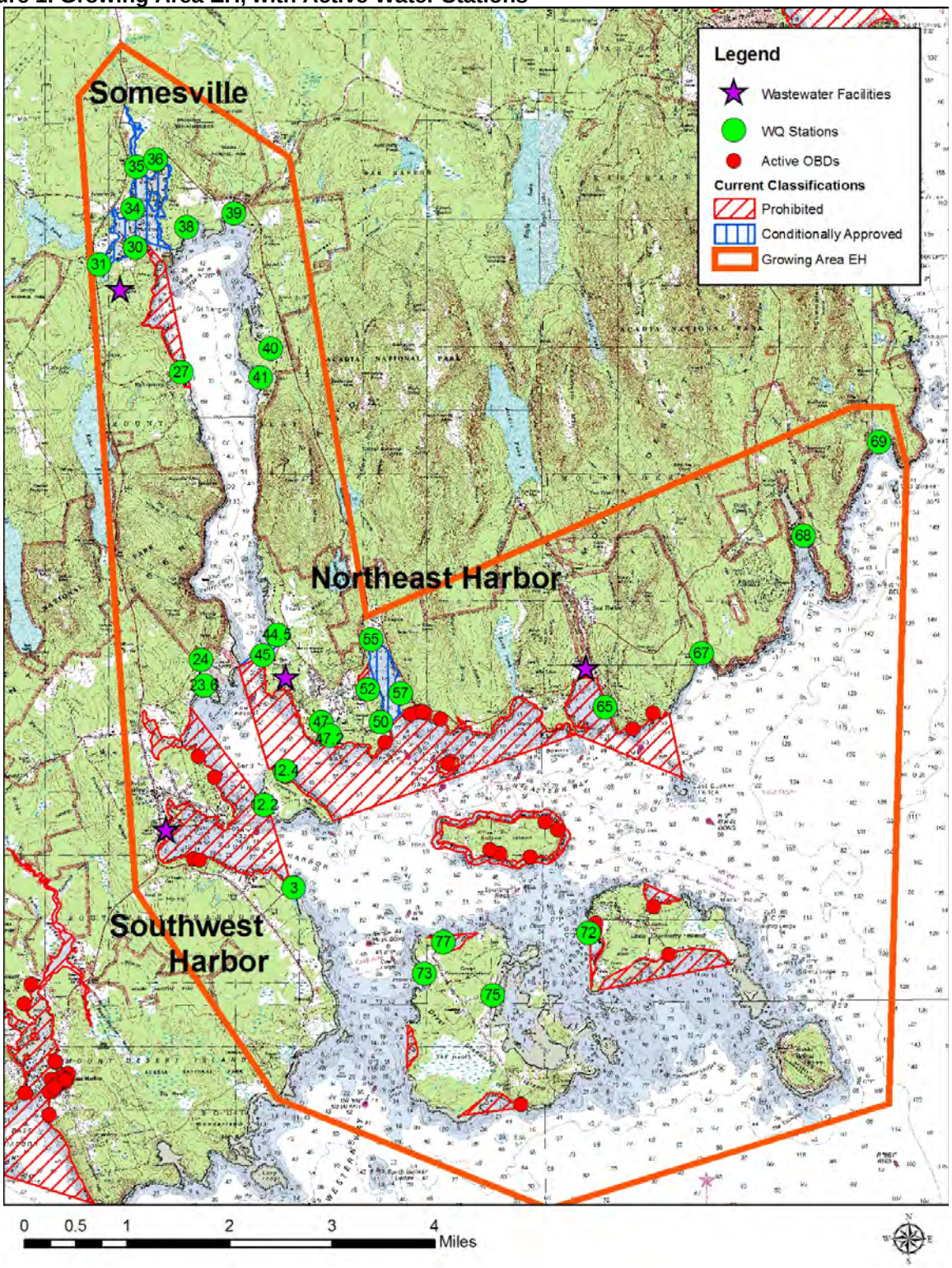


Executive Summary

This is an annual report for growing area EH written in compliance with the requirements of the 2007 Model Ordinance and the National Shellfish Sanitation Program (NSSP). The next triennial report is due in 2011. The next sanitary survey report is due in 2012.

Classifications in area EH are described in one legal notice (Area No. 44) with fourteen parts, made up of eleven prohibited areas, two conditionally approved areas based on marina operations and one conditionally approved area based on seasonality (Figure 2.). On March 18th, Area No. 44 was amended to create a conditionally approved area in Northeast Harbor based on marina operating dates. At the end of the review year, all approved water quality sampling stations had P90 calculations that met their NSSP standard. All conditionally approved sampling stations had P90 calculations that met their NSSP standards and management plan criteria during their open status. All active stations were sampled six times following the systematic random sampling (SRS) schedule and conditional stations were sampled the required number of times while in the open status. Eight water sample stations were deactivated during this review period because they were located in areas with consistently low scores, proven clean with a dilution calculation of the point source they were meant to monitor, or imbedded in an area permanently classified as prohibited due to a pollution source such as a municipal wastewater treatment plant (WWTP). Three stations were reclassified from prohibited to conditionally approved. Overall, 2009 water quality has improved or remained constant with 2008 levels.

At the end of the review year, water quality at all stations supported the current NSSP classifications assigned to them and no downward reclassifications were required. There are no recommendations for upward classification at this time.

Growing Area Description

Growing area EH encompasses the shoreline on the southern shore of Mount Desert Island between Wonderland, in the Town of Southwest Harbor, and the Eastern shore of Newport Cove in the Town of Bar Harbor, including the islands which lie off the mouth of Somes Sound. The growing area lies within the bounds of Hancock County, Maine (Figure 1). The Somes Sound portion of this growing area is the only natural fjard on the east coast of the United States. Growing Area EH is primarily a rural area of Maine with low population density. It is an island community that is mostly residential with tourism being the main industry. There are 23 licensed overboard discharges (OBDs), all encompassed by prohibited areas, and four municipal waste water treatment plants (WWTP) that continue to operate within their license limits.

Current Classification(s)

At the end of the 2009 review year, shellfish growing area EH had areas classified as:

Approved

- Sample stations associated with approved classification; EH 3, 12.2, 12.6, 23.6, 24, 26, 38, 39, 40, 41, 67, 68, 69, 73, & 75.

Conditionally Approved

- Area No. 44 Part B, Somes Harbor, conditionally approved due to Somesville Municipal marina area. Closed status from May 1 through Sept. 30. Sample stations associated with classification; EH 30, 31, 34, 35, & 36.
- Area No. 44 Part C, Gary Moore Cove, conditionally approved due to seasonal variations. Closed status from May 1 through Nov. 14. Sample stations associated with classification; EH 44.5 & 45.
- Area No. 44 Part D, Northeast Harbor, conditionally approved due to Northeast Harbor Municipal marina area. Closed status from May 1 through Oct. 31. Sample stations associated with classification; EH 50, 55, & 57.

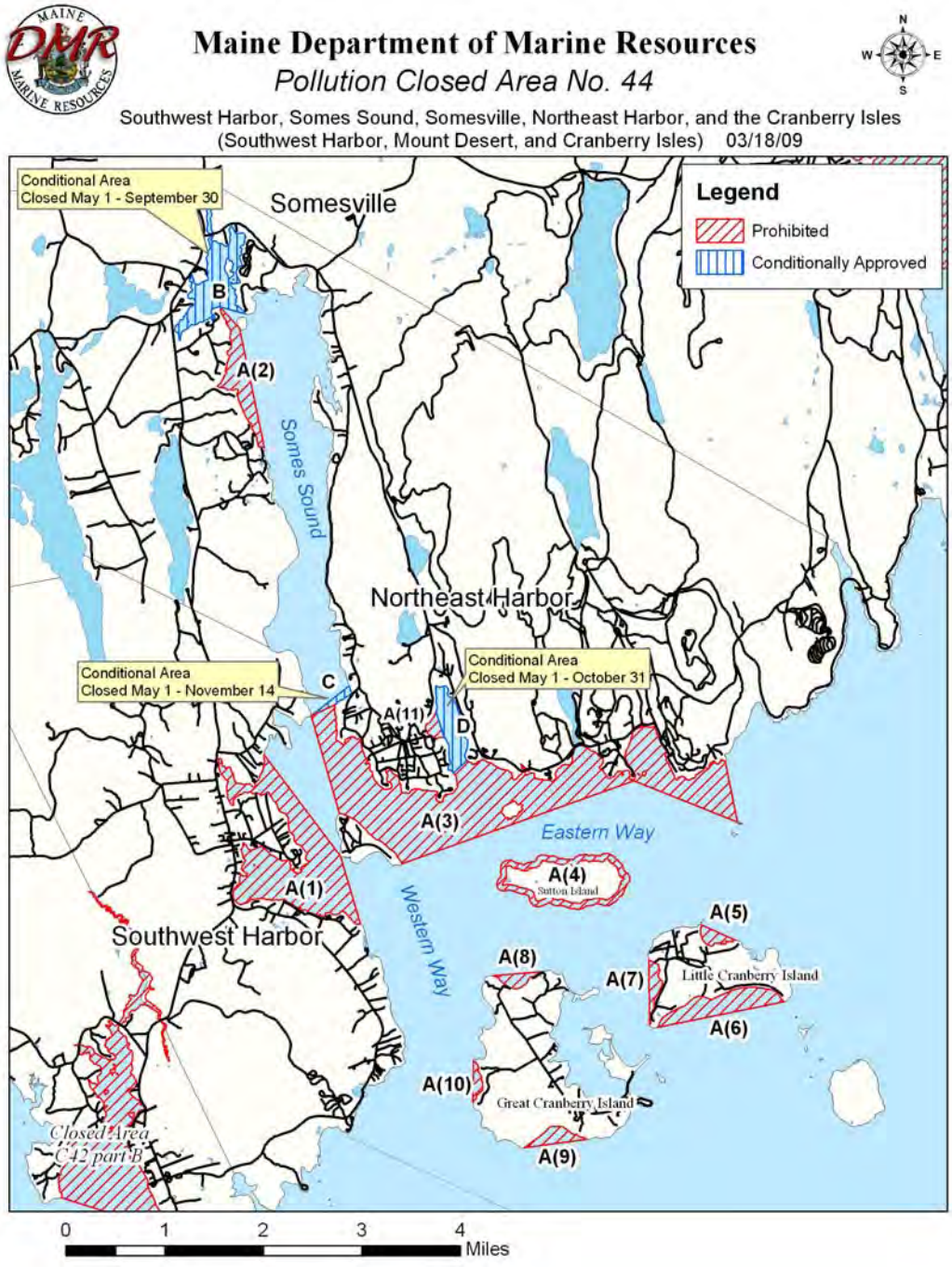
Prohibited

- Area No. 44 Part A (1), Southwest Harbor and Norwood Cove , prohibited due to licensed OBDs, Southwest Harbor WWTP, and seasonal marina traffic. Sample stations associated with classification; EH 3, 12.2, & 23.6.
- Area No. 44 Part A (2), Broad Cove , prohibited due to Somesville WWTP. Sample stations associated with classification; EH 27 & 30.
- Area No. 44 Part A (3), Northeast Harbor, Bracy Cove, and Seal Harbor , prohibited due to licensed OBDs, Northeast Harbor and Seal Cove WWTPs, storm drain contamination, and failing water scores. Sample stations associated with classification; EH 12.4, 45, 47, 47.2, 50, & 65.
- Area No. 44 Part A (4), Sutton Island , prohibited due to licensed OBDs. Zone of impact is based on a dilution calculation.
- Area No. 44 Part A (5), Little Cranberry Island(northern part), prohibited due to licensed OBD. Zone of impact is based on a dilution calculation.
- Area No. 44 Part A (6), Little Cranberry Island(southern part), prohibited due to licensed OBD. Zone of impact is based on a dilution calculation.
- Area No. 44 Part A (7), Little Cranberry Island(western part), prohibited due to licensed OBD. Sample stations associated with classification; EH 72.
- Area No. 44 Part A (8), Spurling Cove, Great Cranberry Island, prohibited due to former failing water quality. Sample stations associated with classification; EH 77.
- Area No. 44 Part A (9), Bunker Head, Great Cranberry Island, prohibited due to licensed OBD. Zone of impact is based on a dilution calculation.
- Area No. 44 Part A (10), Great Head, Great Cranberry Island, prohibited due to licensed OBD. Zone of impact is based on a dilution calculation.
- Area No. 44 Part A (11), Northeast Harbor, prohibited due to year round marina activity. Sample stations associated with classification; EH 52.

Please visit the DMR website to view legal notices:

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

Figure 2. Growing Area EH, with Classifications



Activity during Review Period

On March 18, 2009 Pollution Area No. 44 was amended. The amendment created a conditionally approved area in Northeast Harbor after it was evaluated with the intention of reclassification from prohibited to a combination of prohibited and conditionally approved based on marina operation dates. The evaluation was completed in the 2008 EH Triennial Report, which can be found in DMR's central files.

Current Management Plan(s) for Conditional Area(s)

- Area No. 44 Part B, Somes Harbor, conditionally approved due to Somesville Municipal marina area with a closed status from May 1 through Sept. 30. Sample stations associated with classification; EH 30, 31, 34, 35, & 36. The management plan was updated January 2009.
- Area No. 44 Part C, Gary Moore Cove, conditionally approved due to seasonal variations with a closed status from May 1 through Nov. 14. Sample stations associated with classification; EH 44.5 & 45.
- Area No. 44 Part D, Northeast Harbor, conditionally approved due to Northeast Harbor Municipal marina area with a closed status from May 1 through Oct. 31. Sample stations associated with classification; EH 50, 55, & 57. The new management plan was written in March 2009.

All three management plans can be found in DMR's central files.

Current Annual Review of Management Plans

Area No. 44 Part B, Somes Harbor, is conditionally approved based on marina activity. This marina area continues to meet the conditionally approved classification criteria based on boating activity. The open period start date of October 1st and closure date of May 1st continue to be valid based on inspections conducted on April 21, 2009 and September 15, 2009 to confirm the closed and open dates were appropriate based on the number of boats present at the time of inspection. The conditional area encompasses the calculated dilution zone for the moored boats. No recommendations for changes to the current management plan or conditional area classification open status are needed at this time. The complete Management Plan review is provided in Appendix A of this report.

Area No. 44 Part C, Gary Moore Cove, is conditionally approved based on seasonality. This seasonal area continues to meet the conditionally approved classification criteria based on water quality scores during the open status. The open status start date of November 15th and closure date of May 1st continue to be valid. No recommendations for changes to the current management plan or conditional area classification open status are needed at this time. The complete Management Plan review is provided in Appendix B of this report.

Area No. 44 Part D, Northeast Harbor, is conditionally approved based on marina activity. This marina area continues to meet the conditionally approved classification criteria based on boating activity. The open period start date of November 1st and closure date of May 1st continue to be valid based on inspections conducted on April 21, 2009 and October 14, 2009 to confirm the closed and open dates were appropriate based on the number of boats present at the time of inspection. The conditional area encompasses the calculated dilution zone for the moored boats. No recommendations for changes to the current management plan or conditional area classification open status are needed at this time. The complete Management Plan review is provided in Appendix C of this report.

Water Quality Review and Discussion

Table 1 lists all active approved and prohibited stations in Growing Area EH, with their respective Geomean and P90 calculations for 2009. Please refer to Appendix D for a key to interpreting the headers on the columns of Table 1. Table 2 lists all conditionally approved stations in growing area EH with their respective Geomean and P90 calculations for 2009; data reflect open status only. The approved and restricted standards for each station are also displayed in Tables 1 and 2. These standards will fluctuate yearly as a result of the DMR transition from a most probable number (MPN) fecal coliform test method to a membrane filtration (MF) method and are dependent on the number of sample analyzed by MPN verses MF. The total number of data points used in the calculations is displayed in the Count column and includes both MPN and MF values. The number of data points analyzed by MF is displayed in the MFCNT column. This fluctuating standard will cease when all 30 data points have been analyzed by the MF method. A more detailed explanation of this transition can be found in central files.

All approved stations, and all conditionally approved stations in their open status, met their NSSP classification during the 2009 review year. Eight water sample stations were deactivated during this review period because they were located in remote areas with consistently low scores, proven clean with a dilution calculation of the point source they were meant to monitor, or imbedded in an area permanently classified as Prohibited due to a pollution source such as a municipal WWTP. Those stations and their justifications are as follows:

Station EH 5.5 was deactivated on July 30, 2009 because it was located in an area permanently prohibited due to the zone of impact from the Southwest Harbor WWTP. There is no chance of reclassification for this area.

Station EH 12.6 was deactivated on April 2, 2009 because it was located near the south shore of Greening Island. Consistently low P90 scores and shoreline survey of the area confirm there is little chance of contamination in this area due to sparse population, satisfactory shoreline survey findings, and the open shoreline configuration of the island which exposes it to continuous deep water flushing.

Station EH 21 was deactivated on April 2, 2009 because it was located in an area permanently prohibited due to the zone of impact from the Southwest Harbor WWTP. There is no chance of reclassification for this area.

Station EH 26 was deactivated on July 30, 2009 because it was located on the west shore of a deep fjard, where there is no resource and sparse population.

Station EH 28 was deactivated on July 30, 2009 because it was located in an area permanently prohibited due to the zone of impact from the Somesville WWTP. There is no chance of reclassification for this area.

Stations EH 60, 61, & 62 were deactivated on April 2, 2009 because they were located in an area permanently prohibited due to the zone of impact from the Seal Harbor WWTP and other nearby OBD's.

Stations EH 50, 55, & 57 were upwardly reclassified from prohibited to conditionally approved on March 18, 2009 after an evaluation of Northeast Harbor and it's marina activity showed the area to be safe for harvest during the winter months.

Station EH 12.4 meets the approved standard but remains classified as prohibited because of its close proximity to OBD number 1533, within pollution Area No. 44 Part A(3). Station EH 27 meets the approved standard but remains classified as prohibited because of its close proximity to the Somesville WWTP, within pollution Area No. 44 Part A (2). Station EH 52 meets the approved standard but remains classified as prohibited because of its close proximity to year round marina activity in Northeast Harbor, within pollution Area No. 44 Part A (11). Station EH 65 meets the approved standard but remains classified as prohibited because of its close proximity to the Seal Harbor WWTP, within pollution Area No. 44 Part A(3). Station EH 12.4 meets the approved standard but remains classified as prohibited because of its close proximity to OBD number 2186, within pollution Area No. 44 Part A(7). Station EH 77 meets the approved standard but remains classified as prohibited because the area needs an updated survey since water quality improved, this station is within pollution Area No. 44 Part A(8).

Table 1. Geomean and P90 Scores, Growing Area EH

Station	Class	Count	MFCount	GeoMean	SDV	MAX	P90	Appd_Std	Restr_Std
EH003.00	A	29	21	2.8	0.29	22	6.8	35	192
EH012.20	A	30	20	2.5	0.23	30	5.1	36	199
EH012.40	P	30	20	2.3	0.13	7.3	3.4	36	199
EH023.60	A	29	21	4.4	0.59	240	25.7	35	192
EH024.00	A	30	20	4	0.49	300	17.3	36	199
EH027.00	P	30	20	2.4	0.23	23	4.9	36	199
EH038.00	A	30	20	3	0.39	93	10	36	199
EH039.00	A	30	20	4.1	0.5	240	18.6	36	199
EH040.00	A	30	21	3.2	0.34	42	9.1	35	195
EH041.00	A	30	20	3.1	0.38	90	9.8	36	199
EH047.00	P	30	29	8	0.99	1700	151	31	166
EH047.20	P	30	29	4.7	0.65	152	33	31	166
EH052.00	P	30	26	3.5	0.59	1140	20.8	32	176
EH065.00	P	30	20	2.8	0.32	68	7.3	36	199
EH067.00	A	30	20	2.8	0.3	48	7	36	199

Station	Class	Count	MFCount	GeoMean	SDV	MAX	P90	Appd_Std	Restr_Std
EH068.00	A	30	20	3.7	0.49	240	15.9	36	199
EH069.00	A	29	20	3.2	0.47	420	12.9	35	196
EH072.00	P	30	20	2.9	0.5	240	12.9	36	199
EH073.00	A	30	20	2.2	0.13	8	3.4	36	199
EH075.00	A	30	20	2.2	0.09	3.6	2.9	36	199
EH077.00	P	30	20	2.4	0.21	23	4.6	36	199

Table 2. Geomean and P90 Scores for Conditionally Approved Stations in the Open Status

Station	Class	Count	MFCount	GeoMean	SDV	MAX	P90	Appd_Std	Restr_Std
Somes Harbor open 10/1 – 4/30									
EH030.00	CA	30	24	3.1	0.36	48	9.2	33	184
EH031.00	CA	30	24	3.6	0.48	93	15.3	33	184
EH034.00	CA	30	24	2.9	0.4	114	9.6	33	184
EH035.00	CA	30	25	2.9	0.32	54	7.5	33	180
EH036.00	CA	30	23	2.8	0.3	33	7.1	34	187
Gary Moore Cove open 11/15 – 4/30									
EH044.50	CA	30	16	2.6	0.16	9.1	4.2	38	216
EH045.00	CA	17	15	2.2	0.14	6	3.4	32	175
Northeast Harbor open 11/1 – 4/30									
EH050.00	CA	30	11	2.5	0.09	3.6	3.4	41	239
EH055.00	CA	21	7	2.9	0.23	23	5.9	42	244
EH057.00	CA	30	11	2.6	0.1	4	3.5	41	239

All approved and prohibited stations that were active at the end of 2009 were sampled at least 6 times following the systematic random sampling (SRS) schedule (Table 3 and Appendix E). Some stations had additional samples collected under adverse conditions as noted with an “A” in the Strategy column. Conditionally Approved stations based on seasonality were sampled a minimum of 6 times during the OPEN status, and stations based on marina closures were sampled a minimum of 3 times during the OPEN status.

Table 3. EH Samples Collected in 2009

Station	Class at time of collection	Adverse	Random		Grand Total	Notes
		Closed	Closed	Open		
EH003.00	A			6	6	
EH012.20	A			6	6	
EH012.40	P		6		6	
EH023.60	A	3		6	9	Flood samples
EH024.00	A			6	6	
EH027.00	P		6		6	
EH030.00	CA	3	5	7	15	Flood samples
EH031.00	CA	12	5	7	24	Flood samples
EH034.00	CA		5	7	12	

Station	Class at time of collection	Adverse	Random		Grand Total	Notes
		Closed	Closed	Open		
EH035.00	CA		5	8	13	
EH036.00	CA		6	6	12	
EH038.00	A			6	6	
EH039.00	A	16		6	22	Flood samples
EH040.00	A	17		6	23	Flood samples
EH041.00	A			6	6	
EH044.50	CA	13	6	6	25	Flood samples
EH045.00	CA		6	6	12	
EH047.00	P		6		6	
EH047.20	P		6		6	
EH050.00	P		1		12	Reclassed from P to CA on 3/18/09
	CA		7	4		
EH052.00	P		12		12	
EH055.00	P		1		12	Reclassed from P to CA on 3/18/09
	CA		7	4		
EH057.00	P		1		12	Reclassed from P to CA on 3/18/09
	CA		7	4		
EH065.00	P		6		6	
EH067.00	A			6	6	
EH068.00	A	3		6	9	Flood samples
EH069.00	A			6	6	
EH072.00	P		6		6	
EH073.00	A			6	6	
EH075.00	A			6	6	
EH077.00	P		6		6	

Figures 3 and 4 show the P90 trends over the past three years for all active stations in area EH. During the transition from MPN to MF analysis method, the approved and restricted standards will decrease every year, until all samples have been analyzed by the MF method. In order to show the trend of the P90 value over the years, the calculated P90 scores are expressed as a percentage of the standard; any station showing the 2009 column on or above the 100 percent line does not meet the standard for its NSSP classification. All 13 stations classified as approved continue to meet approved standards. Most approved stations showed little change in water quality during this annual review period. Notable changes were observed at station EH 24, which showed an increase in scores from 2008 to 2009. However, it is still below 50% of its approved standard and does not require any reclassification. Additional shoreline survey activity may be necessary to further investigate the cause of the declining water quality at this site if this trend continues. There were no significant decrease in scores (improvement in water quality) during this annual review period. Figure 4 shows the P90 trends (open status only) over the past three years for the conditionally approved stations in area EH. There were no significant

changes in scores during this annual review period. Stations EH 50, 55, and 57 were newly reclassified from prohibited to conditionally approved in March of 2009.

Figure 3. Area EH P90 Scores for Approved Stations (expressed as the percent of the Approved standard), 2007-2009

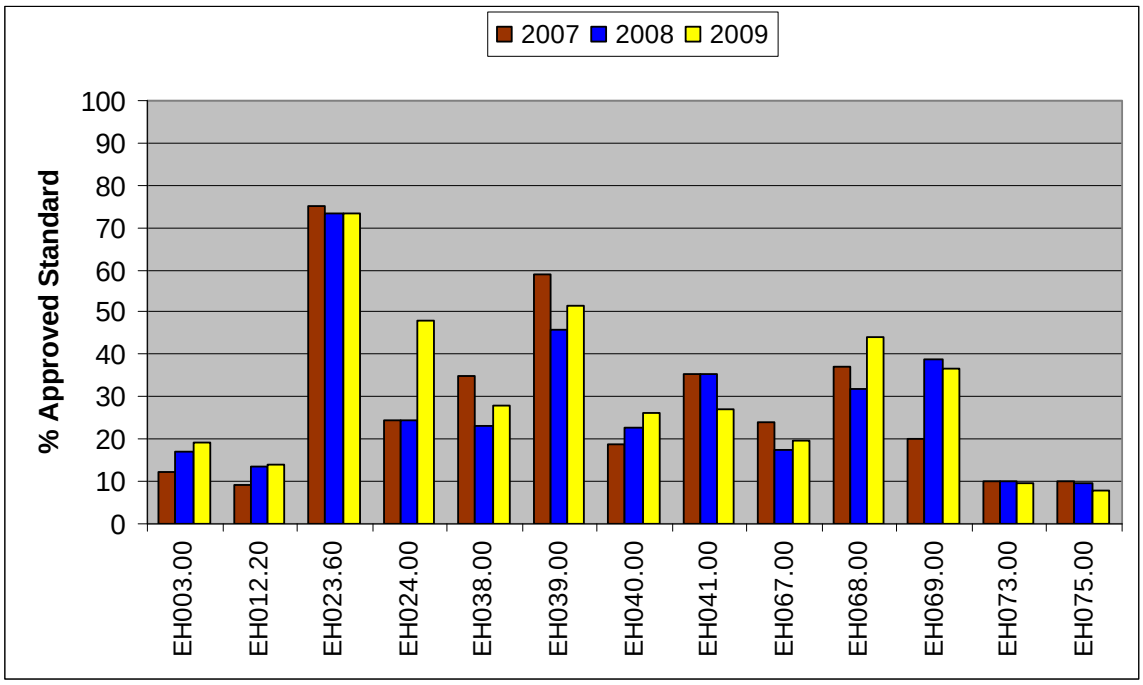
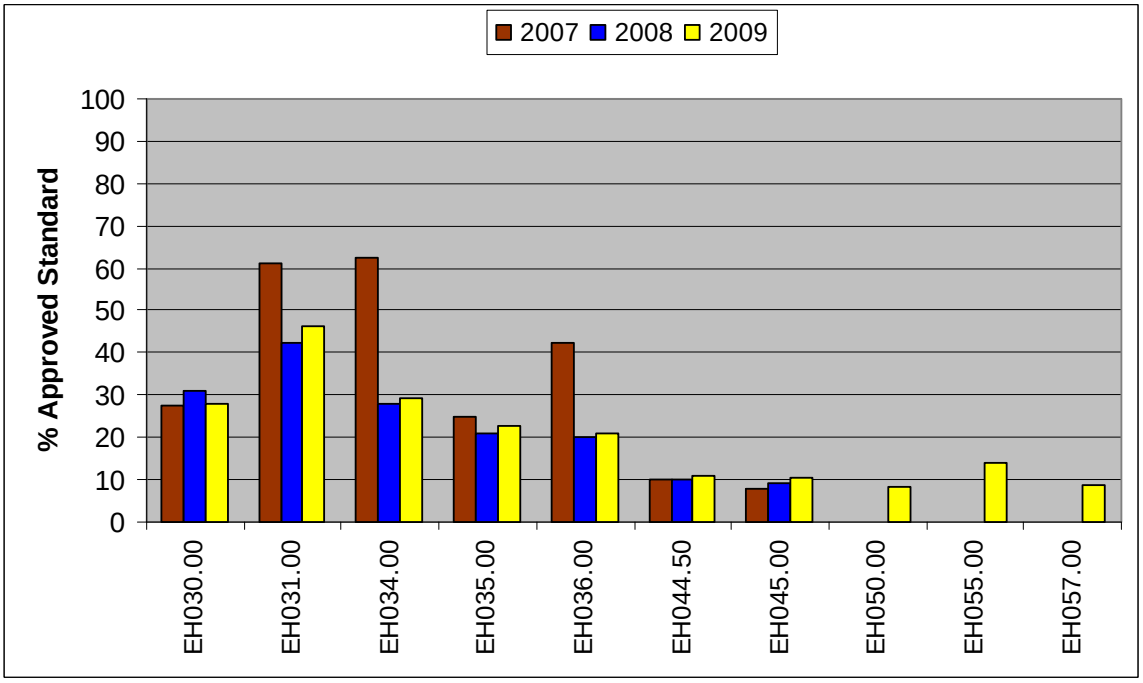


Figure 4. Area EH P90 Score Trends for Conditionally Approved Stations (expressed as the percent of the approved standard), 2007-2009



Recommendations for Upward Classification

There are no recommendations for upward classification at this time.

Shoreline Survey Activity

Drive through surveys were completed on the same dates as random water sampling runs through the growing area. In 2009, these surveys were completed on the following dates: March 17, May 6, June 29, July 28, September 15, and November 4. No changes in pollution sources were noted on these dates.

Aquaculture/Wet Storage Activity

There are no aquaculture leases or wet storage sites in growing area EH.

Classification Changes

No changes in classifications are required or recommended at this time.

Summary

Water quality in the growing area supports the current classification under the NSSP criteria. All approved water quality sampling stations have P90 calculations less than their classification standard. All conditionally approved stations had P90 calculations that met their NSSP standards and management plan criteria during their open status. All active stations were sampled 6 times following the systematic random sampling (SRS) schedule and conditional stations were sampled the required number of times while in the open status. The sampling schedule will remain the same in 2010. Overall, 2009 water quality has improved or remained consistent with 2008 percentages thereby warranting no changes in classifications as a result of this annual review.

Appendix A. Annual Review of Conditional Area Management Plan, Somes Harbor, Mount Desert, Area No. 44 (Part B)

Scope

A portion of Growing Area EH, Somes Harbor, is conditionally approved based on the presence or absence of 10 or more boats with heads, which may discharge into Somes Harbor; open status for this area is from October 1 through April 30. The area is monitored by stations EH 30, 31, 34, 35, and 36. The area was classified conditionally approved in November 7, 2000. DMR evaluated the data, made observations of the moorings, interviewed the harbormaster in regard to usage in month/year, and made the assessment that fewer than 10 boats are in the harbor from mid September through mid May. Annually, the mooring area has a peak occupancy period from Memorial Day thru Labor Day. The harbor master confirmed the lack of live-aboards with the exception of transient boaters using moorings overnight in the peak cruising months. In 2009, water quality met approved standards from October 1 through April 30.

Compliance with management plan

The marina area of Somes Harbor is operational only during the months of May through September. The conditional area was placed in the closed status on May 1st. A field inspection on April 21, 2009 confirmed that no live aboard type boats were in the marina area on that date. The area was reopened on October 1, after field review on September 15, 2009 confirmed the removal of all live aboard type boats. This conditional closure is enforced by DMR Marine Patrol.

Adequacy of reporting and cooperation of involved persons

On-going cooperation between marine patrol enforcement activity (Division II, Lamoine) and seasonal checks on boating activity (Water Quality Laboratory, Lamoine) have provided an adequate system of monitoring and prohibition of harvesting during the closed status.

Compliance with approved growing area criteria

All stations within the conditional area meet approved standards during the open status based on geomean and P90 values and lack of boating activity or other pollution threats (Table 1).

Table 1. Conditional Area Stations during the Open Status

STATION	CLASS	COUNT	MFCNT	GEO_MEAN	SDV	MAX	P90	APPD_STD	RESTR_STD
EH030.00	CA	30	24	3.1	0.36	48	9.2	33	184
EH031.00	CA	30	24	3.6	0.48	93	15.3	33	184
EH034.00	CA	30	24	2.9	0.4	114	9.6	33	184
EH035.00	CA	30	25	2.9	0.32	54	7.5	33	180
EH036.00	CA	30	23	2.8	0.3	33	7.1	34	187

Field inspection of critical pollution sources

No point source pollution problems were identified during a 2000 sanitary survey. Problems are thought to be seasonal boating traffic. There have been no live aboard type boats observed moored in the area during the open status period. Conditional area sampling and routing drive-bys confirmed the lack of pollution sources during open periods. Interview with harbor master indicates no changes in usage of existing moorings or the number of moorings.

Water sampling compliance history

This management plan calls for the sampling of this area once a month during the Open status. Sample dates for 2009 were as follows: January 5th, February 18th, March 3rd, March 16th (make up for earlier March where coves were still frozen), April 6th, October 6th, November 3rd, and December 2nd.

Analysis-recommendations

This marina area continues to meet the conditionally approved classification criteria based on boating activity. The open period start date of October 1st and closure date of May 1st continue to be valid. The conditional area encompasses the calculated dilution zone for the moored boats. No recommendations for changes to the current management plan or conditional area classification open status are needed at this time.

Appendix B. Annual Review of Conditional Area Management Plan, Gary Moore Cove, Mount Desert Area No. 44 (Part C)

Scope

The Gary Moore Cove portion of Growing Area EH is conditionally approved based on seasonality. This area was upwardly reclassified from prohibited to conditionally approved on March 8, 2007 after the seasonal analysis of the 2006 data showed that it met approved standards in the winter. Water quality in this area met approved standards while in the open status, from November 15, 2008 through April 30, 2009.

Compliance with management plan

The Gary Moore Cove area was sampled monthly while in the open status. Geomean and P90 calculations meet the approved area standards during the open period. The conditional closure is enforced by DMR Marine Patrol.

Adequacy of reporting and cooperation of involved persons

On-going cooperation between marine patrol enforcement activity (Division II, Lamoine) and water testing (Water Quality Laboratory, Lamoine) has provided an adequate system of monitoring and prohibition of harvesting during the restricted time period. No reporting is required by non-DMR staff.

Compliance with approved growing area criteria

In 2009, all stations within the conditional area meet approved standards during the open status based on geomean and P90 values and lack of other pollution threats (Table 1).

Table 1. Geometric mean and P90 scores, Open Status

STATION	CLASS	COUNT	MFCNT	GEO_MEAN	SDV	MAX	P90	APPD_STD	RESTR_STD
EH044.50	CA	30	16	2.6	0.16	9.1	4.2	38	216
EH045.00	CA	17	15	2.2	0.14	6	3.4	32	175

Field inspection of critical pollution sources

Analysis of the winter samples from the Gary Moore Cove (EH 44.5 & 45) shows geomean and P90 scores that meet approved standards. A complete shoreline survey of the Gary Moore Cove area indicates no other point sources of pollution. The reason for summer increase in

water quality scores is unknown, but is likely due to the increase in seasonal population of the area.

Water sampling compliance history

This management plan calls for the sampling of this area once a month during the Open status. Sample dates for 2009 were as follows: January 5th, February 3rd, March 3rd, April 6th, and December 2nd.

Analysis-recommendations

The seasonal area continues to meet the conditionally approved classification criteria based on water quality scores listed above. The open period start date of November 15th and closure date of May 1st continue to be valid. No recommendations for changes to the current management plan or conditional area classification open status are needed at this time.

Appendix C. Annual Review of Conditional Area Management Plan, Northeast Harbor, Mount Desert, Area No. 44 (Part D)

Scope

A portion of Growing Area EH, Northeast Harbor, is conditionally approved based on the presence or absence of 10 or more boats with heads, which may discharge into Northeast Harbor. The area is monitored by stations EH 50, 55, and 57. The area was classified conditionally approved on March 18, 2009. DMR evaluated the data, made observations of the moorings, interviewed the harbormaster in regard to usage in month/year, and made the assessment that fewer than 10 boats are in the harbor from mid October through mid May. Annually, the mooring area has a peak occupancy period from Memorial Day thru Labor Day. The harbor master confirmed the lack of live-aboards with the exception of transient boaters using moorings overnight in the peak cruising months. The water quality met approved standards from November 1 through April 30.

Compliance with management plan

The inner marina area of Northeast Harbor is operational year round, only for during the months of May through September. The conditional area was placed in the closed status on April 30. A field inspection on April 21, 2009 confirmed that no live aboard type boats were in the marina area on that date. The area was reopened on November 1, after field review on October 14, 2009 confirmed the removal of all live aboard type boats. This conditional closure is enforced by DMR Marine Patrol.

Adequacy of reporting and cooperation of involved persons

On-going cooperation between marine patrol enforcement activity (Division II, Lamoine) and seasonal checks on boating activity (Water Quality Laboratory, Lamoine) have provided an adequate system of monitoring and prohibition of harvesting during the closed status.

Compliance with Approved growing area criteria

In 2009, all stations within this conditional area met approved standards during the open status based on geomean and P90 values and lack of boating activity or other pollution threats (Table 1).

Table 1. Conditional Area Stations During the Open Status

STATION	CLASS	COUNT	MFCNT	GEO_MEAN	SDV	MAX	P90	APPD_STD	RESTR_STD
EH050.00	CA	30	11	2.5	0.09	3.6	3.4	41	239
EH055.00	CA	21	7	2.9	0.23	23	5.9	42	244

STATION	CLASS	COUNT	MFCNT	GEO_MEAN	SDV	MAX	P90	APPD_STD	RESTR_STD
EH057.00	CA	30	11	2.6	0.1	4	3.5	41	239

Field inspection of critical pollution sources

No point source pollution problems were identified during a 2008 sanitary survey. Problems are thought to be seasonal boating traffic. There have been no live aboard type boats observed moored in the area during the open status. Conditional area sampling and routine drive through surveys confirmed the lack of pollution sources during open periods. An interview with harbor master indicates no changes in usage of existing moorings or the number of moorings.

Water sampling compliance history

This management plan calls for the sampling of this area once a month during the Open status. Sample dates for 2009 were as follows: April 6th, November 3rd, and December 2nd.

Analysis-recommendations

The marina area continues to meet the conditionally approved classification criteria based on boating activity. The open period start date of November 1st and closure date of May 1st continue to be valid. The conditional area encompasses the calculated dilution zone for the moored boats. No recommendations for changes to the current management plan or conditional area classification open status are needed at this time.

Appendix D. 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.

Appendix E. Growing Area EH 2009 Data

Station	Date	Strategy	Open/Closed	Class	Adversity	Temp	Salinity	Tide	Wind	Col Score
EH003.00	3/17/2009	R	O	A	X	4	29	LF	N	<2
	5/6/2009	R	O	A	P	5	30	E	NE	<2
	6/29/2009	R	O	A	P	8	28	F	SE	10
	7/28/2009	R	O	A	X	12	30	LF	SE	<2
	9/15/2009	R	O	A	P	14	31	LE	S	<2
	11/4/2009	R	O	A	O	4	32	H	NW	<2
EH012.20	4/29/2009	R	O	A	X	6	30	HE	NW	<2
	5/18/2009	R	O	A	P	8	30	F	N	<2
	7/13/2009	R	O	A	O	14	30	HE	SW	<2
	8/10/2009	R	O	A	O	16	31	E	CL	<2
	9/14/2009	R	O	A	O	15	31	F	NW	<2
	10/14/2009	R	O	A	P	10	30	LF	NW	2
EH012.40	4/29/2009	R	C	P	X	6	30	HE	NW	<2
	5/18/2009	R	C	P	P	9	30	F	N	<2
	7/13/2009	R	C	P	O	14	30	HE	SW	<2
	8/10/2009	R	C	P	O	15	31	E	CL	<2
	9/14/2009	R	C	P	O	15	31	F	NW	<2
	10/14/2009	R	C	P	P	10	31	LF	NW	<2
EH023.60	3/17/2009	R	O	A	T	-2	31	LF	E	<2
	5/6/2009	R	O	A	P	5	30	E	NE	<2
	6/29/2009	R	O	A	P	8	28	F	NE	6
	7/28/2009	R	O	A	X	16	30	LF	SE	<2
	9/15/2009	R	O	A	P		31	L	SE	<2
	11/4/2009	R	O	A	O	4	32	H	NW	<2
EH024.00	3/17/2009	R	O	A	T	-1	20	HF	SE	<2
	5/6/2009	R	O	A	P	6	30	E	NE	<2
	6/29/2009	R	O	A	P	10	25	F	SE	300
	7/28/2009	R	O	A	X	17	30	HF	S	6
	10/21/2009	R	O	A	O	8	32	HE	NW	<2
	11/4/2009	R	O	A	O	4	32	H	NW	<2
EH027.00	3/17/2009	R	C	P	T	-2	30	LF	SE	<2
	5/6/2009	R	C	P	P	5	28	E	NE	<2
	6/29/2009	R	C	P	P	8	28	F	S	<2
	7/28/2009	R	C	P	X	16	26	L	CL	<2
	9/15/2009	R	C	P	P		30	L	N	<2
	11/4/2009	R	C	P	O	4	30	HE	NW	<2
EH030.00	2/18/2009	R	O	CA	X	0	5	LE	CL	<2
	3/3/2009	R	O	CA	X	-2	19	F	NW	<2
	3/16/2009	R	O	CA	T	-4	22	H	CL	<2
	4/6/2009	R	O	CA	P	2	13	HE	CL	<2
	5/5/2009	R	C	CA	X	7	25	HE	N	<2
	6/2/2009	R	C	CA	X	9	26	E	CL	2

Station	Date	Strategy	Open/Closed	Class	Adversity	Temp	Salinity	Tide	Wind	Col Score
	7/8/2009	R	C	CA	O	14	17	HF	CL	18
	8/4/2009	R	C	CA	O	17	29	E	CL	2
	9/8/2009	R	C	CA	O	14	26	F	CL	2
	10/6/2009	R	O	CA	P	10	24	E	W	14
	11/3/2009	R	O	CA	O	6	27	HE	CL	<2
	12/2/2009	R	O	CA	O	1	25	HE	SW	2
EH031.00	3/16/2009	R	O	CA	T	-3	5	H	CL	2
	4/6/2009	R	O	CA	P	3	5	HE	CL	<2
	4/21/2009	R	O	CA	P	2	26	HE	E	<2
	5/5/2009	R	C	CA	X	7	22	HE	NE	<2
	6/2/2009	R	C	CA	X	10	24	E	CL	2
	7/8/2009	R	C	CA	O	15	8	HF	CL	33
	8/4/2009	R	C	CA	O	22	22	E	S	6
	9/8/2009	R	C	CA	O	16	26	HF	CL	<2
	10/6/2009	R	O	CA	P	10	28	E	CL	4
	10/21/2009	R	O	CA	O	7	26	E	CL	2
	11/3/2009	R	O	CA	O	6	29	HE	CL	2
	12/2/2009	R	O	CA	O	4	26	HE	CL	<2
EH034.00	2/18/2009	R	O	CA	X	1	2	LE	CL	<2
	3/16/2009	R	O	CA	T	-1	18	H	NW	<2
	4/6/2009	R	O	CA	P	2	18	HE	CL	<2
	4/21/2009	R	O	CA	P	2	25	HE	E	<2
	5/5/2009	R	C	CA	X	7	28	HE	NE	<2
	6/2/2009	R	C	CA	X	10	25	E	CL	<2
	7/8/2009	R	C	CA	O	13	17	H	CL	46
	8/4/2009	R	C	CA	O	22	22	E	S	2
	9/8/2009	R	C	CA	O	14	30	HF	SW	<2
	10/6/2009	R	O	CA	P	11	31	E	NW	<2
	11/3/2009	R	O	CA	O	6	31	HE	CL	<2
	12/2/2009	R	O	CA	O	4	30	HE	SW	<2
EH035.00	1/5/2009	R	O	CA	X	0	10	F	NW	<2
	2/18/2009	R	O	CA	X	0	24	E	CL	<2
	3/3/2009	R	O	CA	X	0	30	F	CL	<2
	3/16/2009	R	O	CA	T	-1	29	H	CL	<2
	4/6/2009	R	O	CA	P	2	18	E	CL	<2
	5/5/2009	R	C	CA	X	6	27	HE	NE	2
	6/2/2009	R	C	CA	X	10	23	E	CL	4
	7/8/2009	R	C	CA	O	14	25	H	CL	10
	8/4/2009	R	C	CA	O	20	26	E	S	4
	9/8/2009	R	C	CA	O	14	30	HF	SW	<2
	10/6/2009	R	O	CA	P	11	29	E	CL	10
	11/3/2009	R	O	CA	O	7	32	HE	CL	2
	12/2/2009	R	O	CA	O	5	28	E	SW	<2
EH036.00	3/16/2009	R	O	CA	T	0	27	HE	CL	<2

Station	Date	Strategy	Open/Closed	Class	Adversity	Temp	Salinity	Tide	Wind	Col Score
	4/6/2009	R	O	CA	P	3	16	E	CL	<2
	4/21/2009	R	O	CA	P	2	20	HE	E	<2
	5/5/2009	R	C	CA	X	7	28	HE	E	<2
	5/20/2009	R	C	CA	X	10	28	E	N	<2
	6/2/2009	R	C	CA	X	10	28	E	CL	7.3
	7/8/2009	R	C	CA	O	14	25	H	CL	8
	8/4/2009	R	C	CA	O	20	26	E	S	8
	9/8/2009	R	C	CA	O	14	28	HF	SW	<2
	10/6/2009	R	O	CA	P	10	30	E	N	2
	11/3/2009	R	O	CA	O	6	30	HE	CL	2
	12/2/2009	R	O	CA	O	5	29	E	SW	<2
EH038.00	3/17/2009	R	O	A	T	-1	28	F	CL	<2
	5/5/2009	R	O	A	X	7	30	E	E	6
	6/29/2009	R	O	A	P	12	24	L	SE	7.3
	7/27/2009	R	O	A	P	15	24	L	S	4
	9/15/2009	R	O	A	P	12	31	E	CL	2
	11/2/2009	R	O	A	O	7	30	HF	NE	<2
EH039.00	3/17/2009	R	O	A	T	-1	30	HF	S	<2
	5/5/2009	R	O	A	X	7	30	E	E	<2
	6/29/2009	R	O	A	P	11	19	F	S	20
	7/27/2009	R	O	A	P	17	19	L	S	7.3
	9/15/2009	R	O	A	P	12	31	E	CL	6
	11/2/2009	R	O	A	O	7	30	HF	NE	<2
EH040.00	3/17/2009	R	O	A	T	-2	31	F	CL	<2
	5/5/2009	R	O	A	X	7	30	E	E	<2
	6/29/2009	R	O	A	P	13	26	F	CL	<2
	7/27/2009	R	O	A	P	14	28	F	CL	2
	9/15/2009	R	O	A	P	12	30	E	CL	4
	11/2/2009	R	O	A	O	6	30	HF	CL	6
EH041.00	3/17/2009	R	O	A	T	-2	30	F	S	<2
	5/5/2009	R	O	A	X	7	30	E	E	<2
	6/29/2009	R	O	A	P	11	27	L	SE	2
	7/27/2009	R	O	A	P	14	30	LF	S	4
	9/15/2009	R	O	A	P	12	32	E	CL	6
	11/2/2009	R	O	A	O	6	30	HF	NE	<2
EH044.50	1/5/2009	R	O	CA	X	0	30	F	NW	4
	2/3/2009	R	O	CA	X	-1	30	F	N	6
	3/3/2009	R	O	CA	X	0	32	F	NW	2
	4/6/2009	R	O	CA	P	3	28	E	CL	<2
	5/5/2009	R	C	CA	P	4	30	L	E	<2
	6/2/2009	R	C	CA	X	7	30	LE	NW	<2
	7/8/2009	R	C	CA	O	12	25	H	CL	14
	8/4/2009	R	C	CA	O	15	30	LE	S	2
	9/8/2009	R	C	CA	O	13	30	HF	CL	<2

Station	Date	Strategy	Open/Closed	Class	Adversity	Temp	Salinity	Tide	Wind	Col Score
	10/6/2009	R	C	CA	P	10	32	E	NW	<2
	11/3/2009	R	C	CA	O	7	32	E	NW	4
	12/2/2009	R	O	CA	O	3	15	E	SW	<2
EH045.00	1/5/2009	R	O	CA	X	1	32	F	NW	<2
	2/3/2009	R	O	CA	W	-1	30	F	N	6
	3/3/2009	R	O	CA	X	0	31	F	NW	<2
	4/6/2009	R	O	CA	P	2	28	E	CL	<2
	5/5/2009	R	C	CA	P	4	30	L	E	<2
	6/2/2009	R	C	CA	X	7	30	E	NW	<2
	7/8/2009	R	C	CA	O	12	30	H	CL	4
	8/4/2009	R	C	CA	O	12	31	LE	S	2
	9/8/2009	R	C	CA	O	14	32	HF	SW	<2
	10/6/2009	R	C	CA	P	10	29	E	NW	22
	11/3/2009	R	C	CA	O	7	32	E	NW	8
	12/2/2009	R	O	CA	O	4	30	E	SW	<2
EH047.00	3/17/2009	R	C	P	T	0	30	F	S	<2
	5/5/2009	R	C	P	P	4	31	LF	E	<2
	6/29/2009	R	C	P	P	11	29	F	S	8
	7/27/2009	R	C	P	P	12	28	HF	CL	>1600
	9/15/2009	R	C	P	P	11	32	E	CL	<2
	11/2/2009	R	C	P	O	7	30	H	NE	<2
EH047.20	3/17/2009	R	C	P	T	-2	30	F	S	<2
	5/5/2009	R	C	P	P	4	31	L	E	<2
	6/29/2009	R	C	P	P	11	25	L	CL	80
	7/27/2009	R	C	P	P	12	30	HF	S	12
	9/15/2009	R	C	P	P	11	31	E	CL	152
	11/2/2009	R	C	P	O	7	30	H	NE	2
EH050.00	3/17/2009	R	C	P	T	-2	32	F	SE	<2
	4/6/2009	R	O	CA	P	2	30	E	SE	<2
	4/21/2009	R	O	CA	P	1	30	E	E	2
	5/5/2009	R	C	CA	P	4	31	L	E	<2
	5/20/2009	R	C	CA	X	7	30	E	N	<2
	6/2/2009	R	C	CA	X	6	30	E	CL	<2
	7/8/2009	R	C	CA	O	14	28	H	CL	18
	8/4/2009	R	C	CA	O	15	31	E	SE	<2
	9/8/2009	R	C	CA	O	13	31	HF	CL	<2
	10/6/2009	R	C	CA	P	9	32	HE	N	<2
	11/3/2009	R	O	CA	O	7	32	E	CL	<2
	12/2/2009	R	O	CA	O	5	31	E	SW	2
EH052.00	3/17/2009	R	C	P	T	-2	30	F	E	<2
	4/6/2009	R	C	P	P	2	30	E	SE	<2
	4/21/2009	R	C	P	P	1	30	E	E	<2
	5/5/2009	R	C	P	P	4	31	LE	E	<2
	5/20/2009	R	C	P	X	7	30	E	N	<2

Station	Date	Strategy	Open/Closed	Class	Adversity	Temp	Salinity	Tide	Wind	Col Score
	6/2/2009	R	C	P	X	7	30	E	CL	<2
	7/8/2009	R	C	P	O	14	26	HE	SE	60
	8/4/2009	R	C	P	O	14	30	E	SE	<2
	9/8/2009	R	C	P	O	12	30	HF	SW	18
	10/6/2009	R	C	P	P	9	32	HE	NW	<2
	11/3/2009	R	C	P	O	7	32	E	CL	<2
	12/2/2009	R	C	P	O	5	31	E	SW	<2
EH055.00	3/17/2009	R	C	P	T	-1	32	F	CL	<2
	4/6/2009	R	O	CA	P	2	10	E	SE	<2
	4/21/2009	R	O	CA	P	1	30	E	E	6
	5/5/2009	R	C	CA	X	4	31	LE	E	<2
	5/20/2009	R	C	CA	X	7	30	E	N	<2
	6/2/2009	R	C	CA	X	7	30	E	CL	<2
	7/8/2009	R	C	CA	O	13	27	HE	SE	27
	8/4/2009	R	C	CA	O	23	30	E	S	2
	9/8/2009	R	C	CA	O	13	30	H	CL	<2
	10/6/2009	R	C	CA	P	10	32	HE	CL	<2
	11/3/2009	R	O	CA	O	7	32	E	CL	<2
	12/2/2009	R	O	CA	O	4	28	E	SW	<2
EH057.00	3/17/2009	R	C	P	T	-2	32	F	CL	<2
	4/6/2009	R	O	CA	P	3	30	E	SE	<2
	4/21/2009	R	O	CA	P	1	29	E	E	4
	5/5/2009	R	C	CA	X	4	31	LE	E	<2
	5/20/2009	R	C	CA	X	7	30	E	N	<2
	6/2/2009	R	C	CA	X	7	30	E	NW	<2
	7/8/2009	R	C	CA	O	13	30	HE	SE	6
	8/4/2009	R	C	CA	O	14	31	E	S	<2
	9/8/2009	R	C	CA	O	14	30	H	SW	<2
	10/6/2009	R	C	CA	P	10	32	HE	NW	<2
	11/3/2009	R	O	CA	O	7	32	E	SW	<2
	12/2/2009	R	O	CA	O	3	30	E	SW	<2
EH065.00	3/17/2009	R	C	P	T	-2	32	F	S	<2
	5/5/2009	R	C	P	X	3	31	LE	E	<2
	6/29/2009	R	C	P	P	11	30	L	CL	2
	7/27/2009	R	C	P	P	14	30	LF	S	<2
	9/15/2009	R	C	P	P	11	32	E	S	68
	11/2/2009	R	C	P	O	7	30	H	NE	<2
EH067.00	3/17/2009	R	O	A	T	-2	32	F	S	<2
	5/5/2009	R	O	A	X	3	30	E	E	<2
	6/29/2009	R	O	A	P	12	14	LF	SE	8
	7/27/2009	R	O	A	P	12	6	LF	S	2
	9/15/2009	R	O	A	P	11	30	E	S	<2
	11/2/2009	R	O	A	O	6	32	H	NE	<2
EH068.00	3/16/2009	R	O	A	T	-1	30	F	N	<2

Station	Date	Strategy	Open/Closed	Class	Adversity	Temp	Salinity	Tide	Wind	Col Score
	5/5/2009	R	O	A	X	3	30	E	E	<2
	6/29/2009	R	O	A	P	11	16	F	CL	54
	7/27/2009	R	O	A	P	13	24	F	S	4
	9/15/2009	R	O	A	P	11	32	E	S	2
	11/2/2009	R	O	A	O	7	32	HE	NE	<2
EH069.00	3/31/2009	R	O	A	T	-1	32	F	N	<2
	5/5/2009	R	O	A	X	3	32	E	E	<2
	6/29/2009	R	O	A	P	12	30	LF	SE	4
	7/27/2009	R	O	A	P	12	29	F	S	8
	9/15/2009	R	O	A	P	11	32	E	S	<2
	11/2/2009	R	O	A	O	6	32	HE	NE	<2
EH072.00	4/29/2009	R	C	P	X	6	30	H	NW	<2
	5/18/2009	R	C	P	P	7	30	F	N	<2
	7/13/2009	R	C	P	O	14	31	HE	SW	<2
	8/10/2009	R	C	P	O	15	32	E	SW	<2
	9/14/2009	R	C	P	O	14	32	F	NW	<2
	10/14/2009	R	C	P	P	9	32	LF	NW	<2
EH073.00	4/29/2009	R	O	A	X	8	30	H	NW	<2
	5/18/2009	R	O	A	P	8	30	F	N	<2
	7/13/2009	R	O	A	O	14	30	F	SW	<2
	8/10/2009	R	O	A	R	15	31	E	CL	<2
	9/14/2009	R	O	A	O	16	31	F	NW	8
	10/14/2009	R	O	A	P	10	32	LF	NW	<2
EH075.00	4/29/2009	R	O	A	X	8	31	H	NW	<2
	5/18/2009	R	O	A	P	8	30	F	N	<2
	7/13/2009	R	O	A	O	14	30	H	SW	<2
	8/10/2009	R	O	A	O	15	32	E	SW	<2
	9/14/2009	R	O	A	O	17	32	F	NW	<2
	10/14/2009	R	O	A	P	9	32	LF	NW	<2
EH077.00	4/29/2009	R	C	P	X	7	30	H	NW	<2
	5/18/2009	R	C	P	P	8	30	F	N	<2
	7/13/2009	R	C	P	O	14	30	H	SW	<2
	8/10/2009	R	C	P	O	15	31	E	CL	<2
	9/14/2009	R	C	P	O	15	32	F	NW	<2
	10/14/2009	R	C	P	P	10	32	LF	NW	<2