GROWING AREA ET

Mowry Point, Lubec to Shackford Head, Eastport

ANNUAL REVIEW for 2009

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APPROVAL

Division Director:

_____ _____ Date: _____
Print name signature

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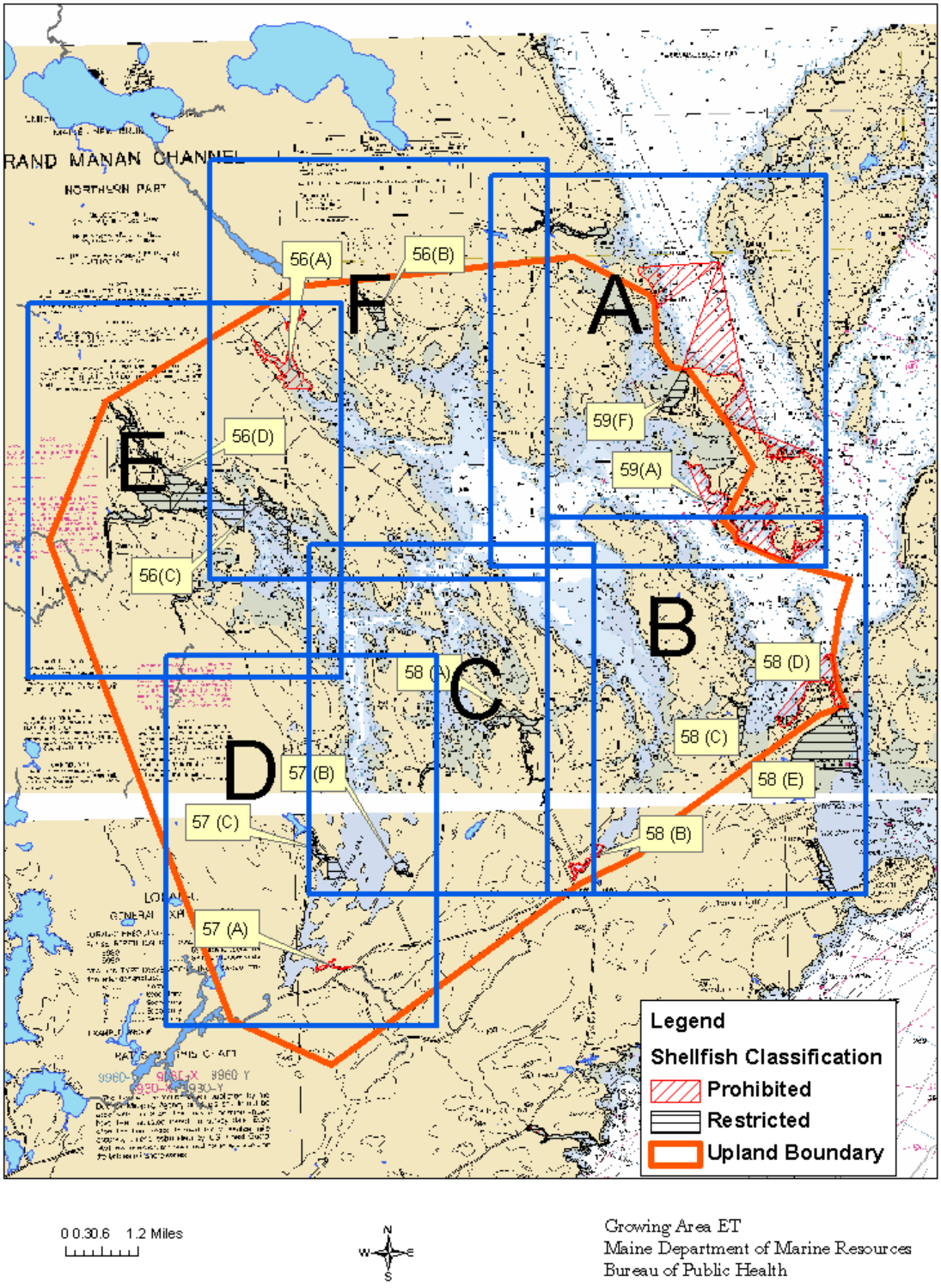
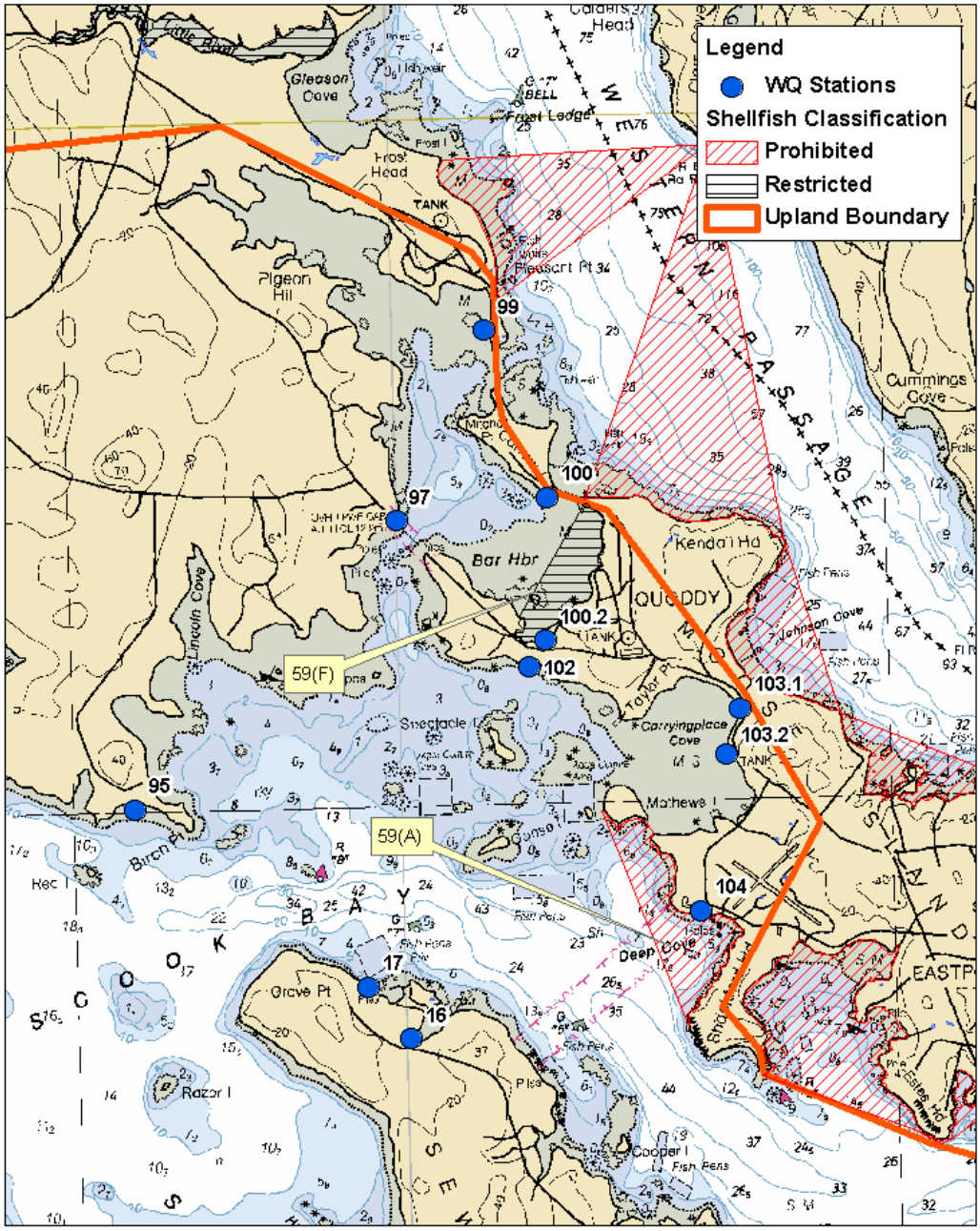


Figure 2. Growing Area ET Northeast, with Active Water Stations (A)



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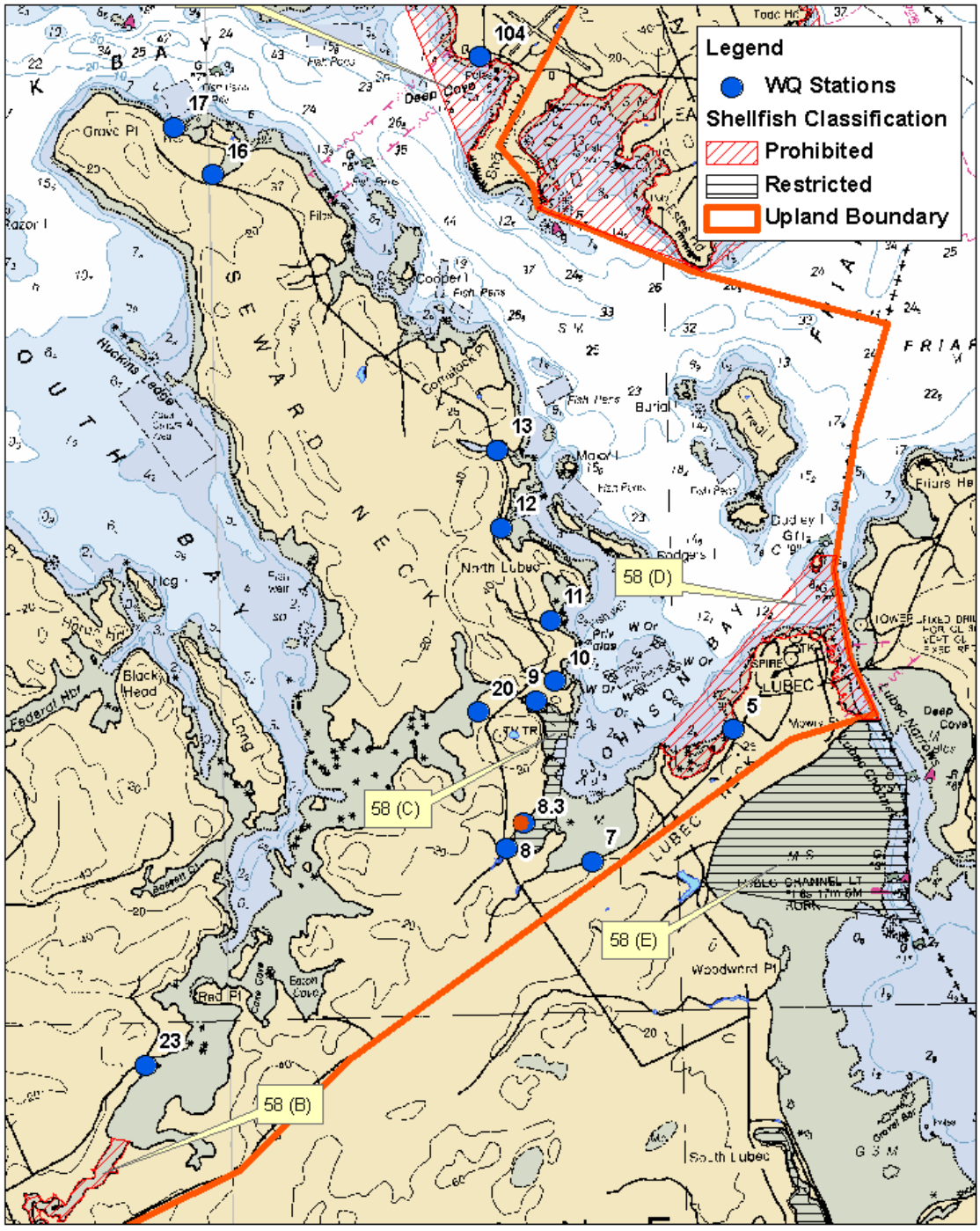

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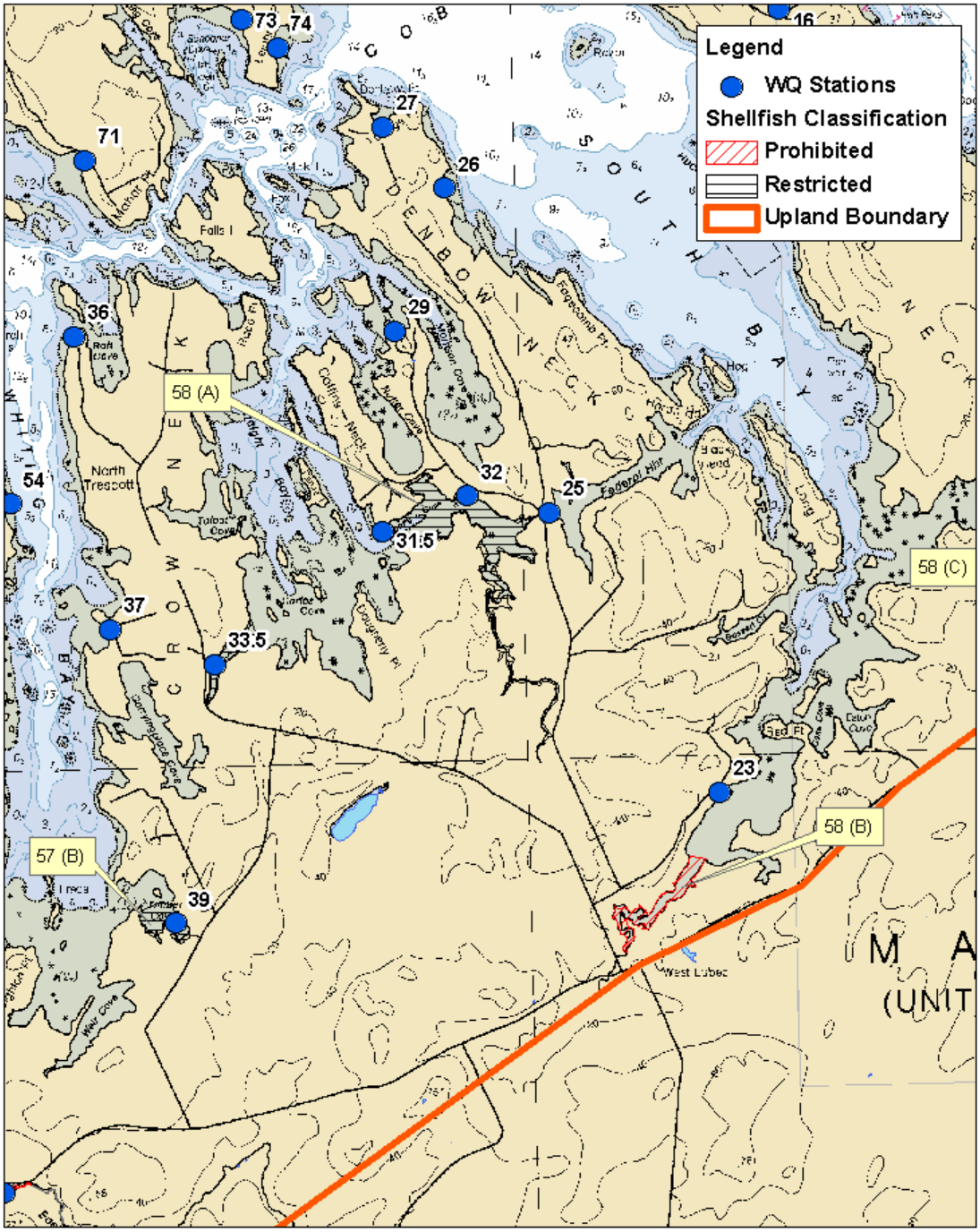

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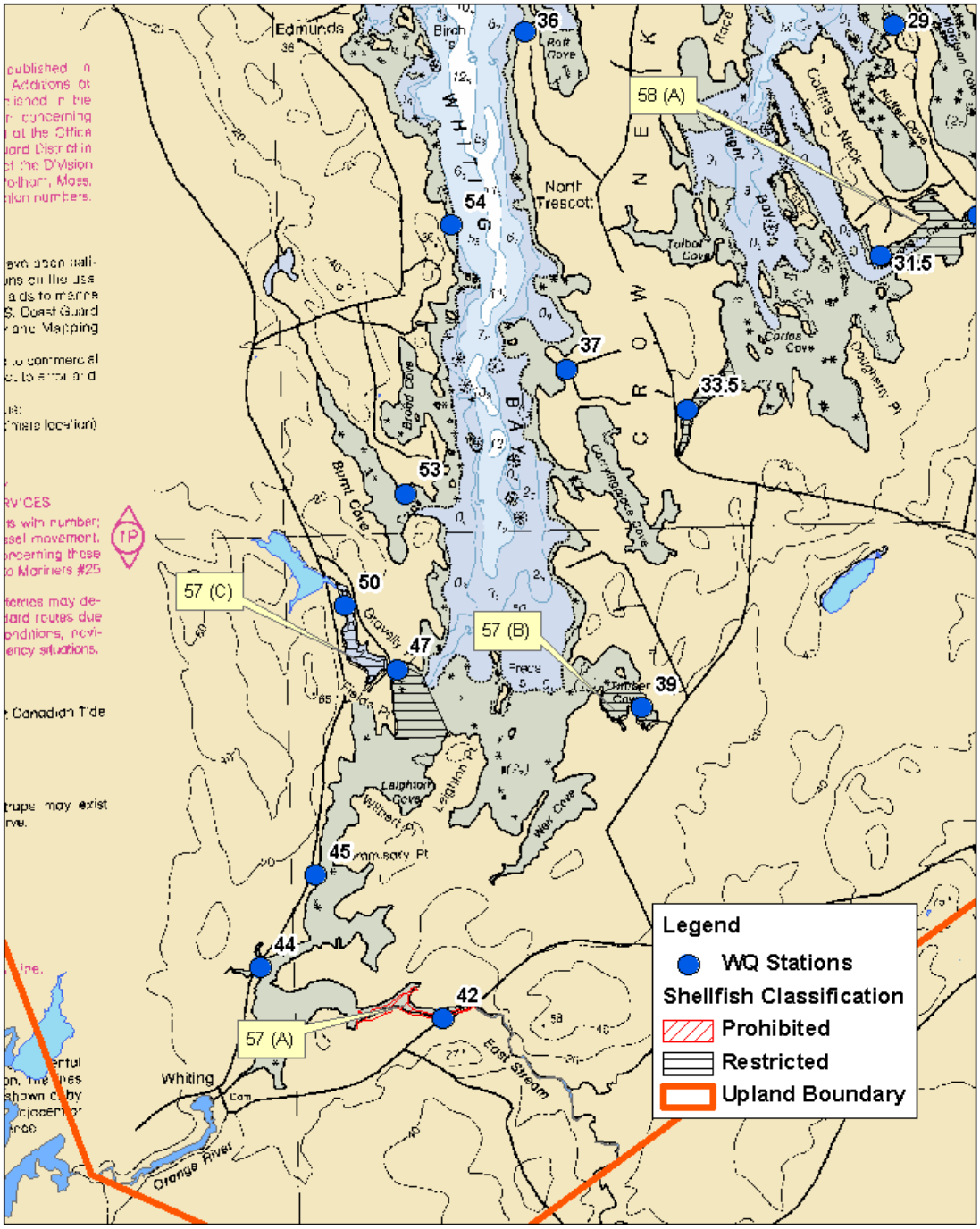

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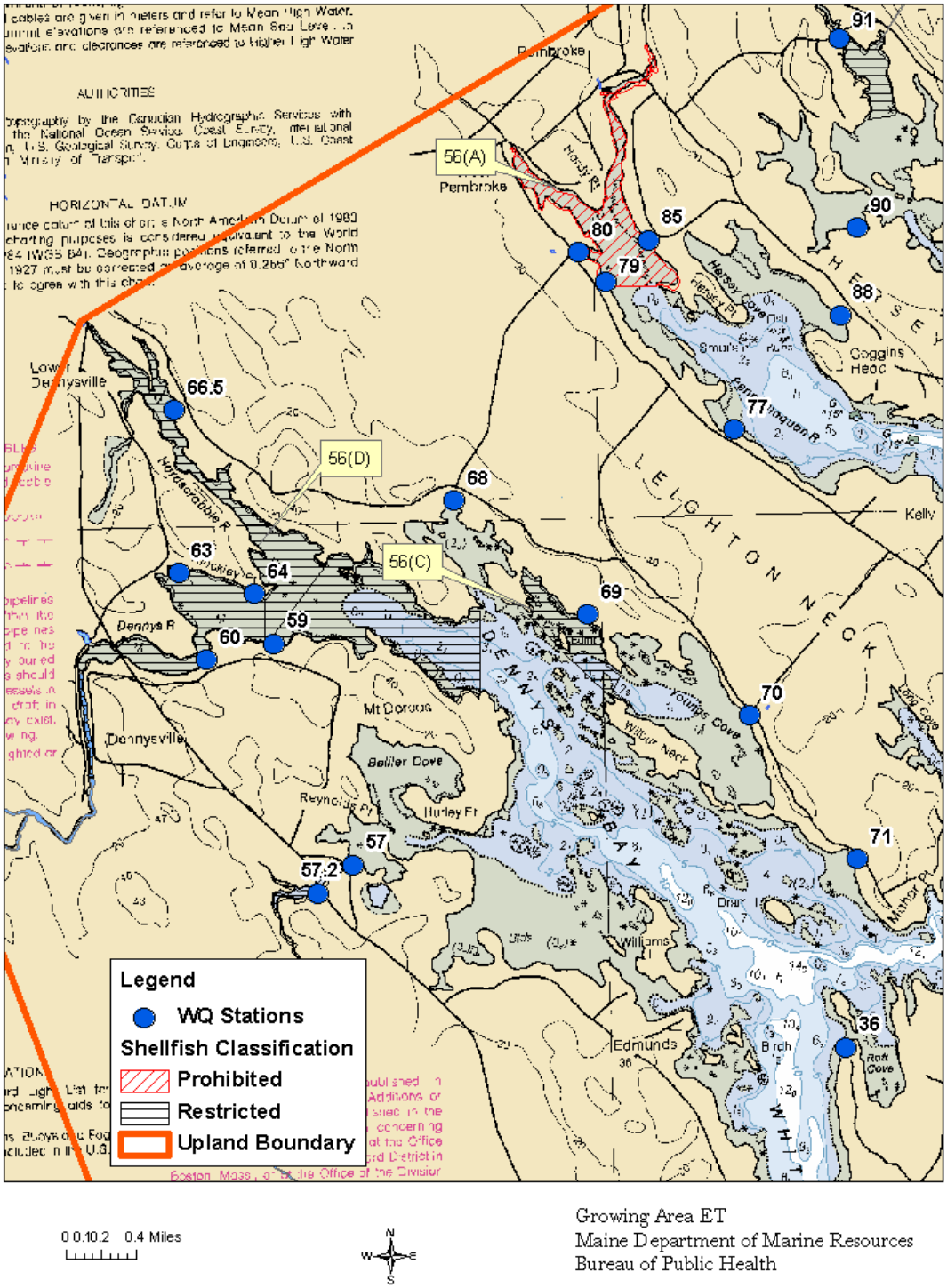
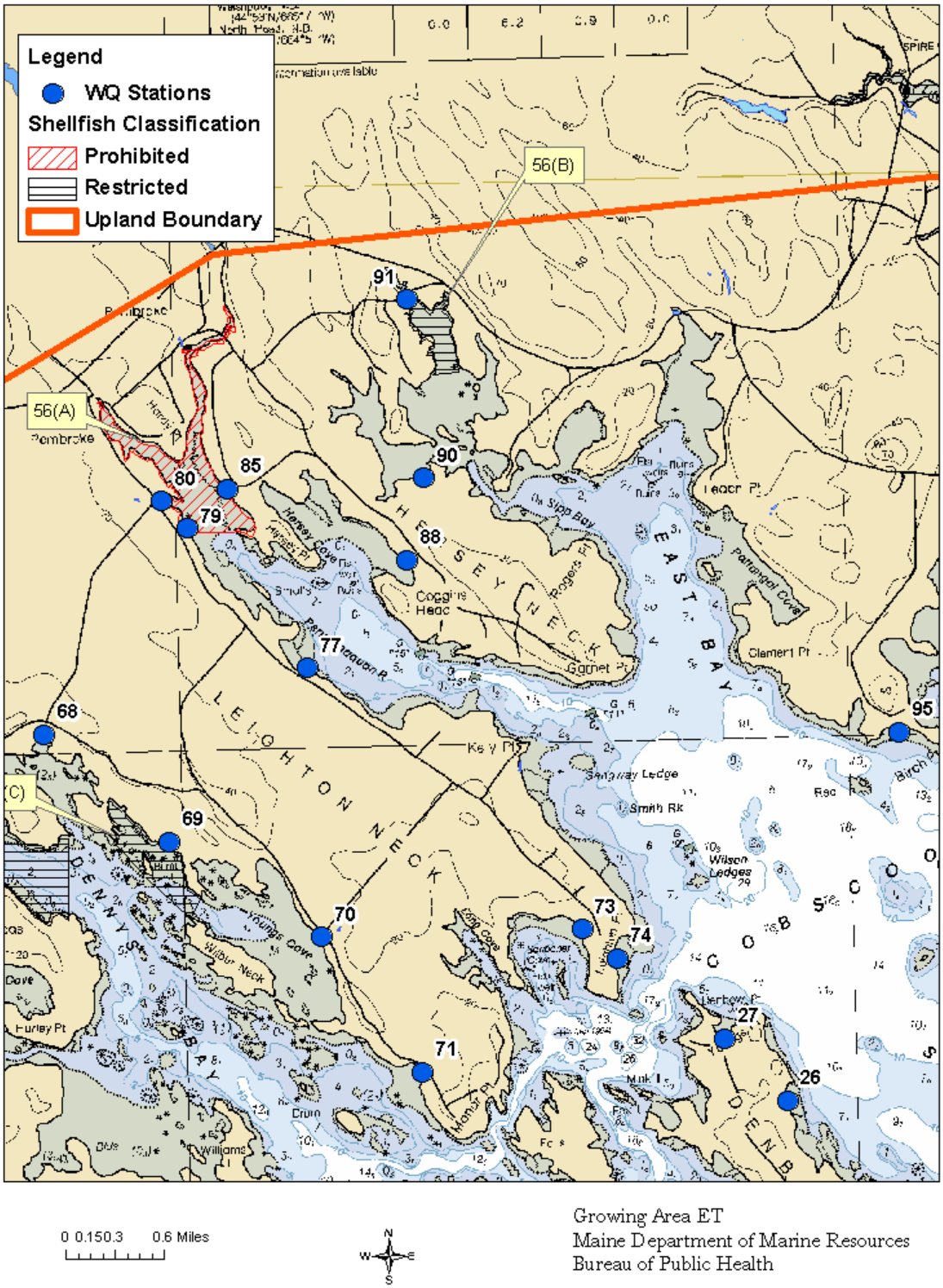


Figure 7. Growing Area ET Northwest, with Active Water Stations (F)



Executive Summary

This is an annual report for growing area ET written in compliance with the requirements of the 2007 Model Ordinance and the National Shellfish Sanitation Program. The next triennial report is due in 2011 and the next sanitary survey report is due in 2019.

Area ET has six (6) prohibited areas and eleven (11) restricted areas. No new pollution sources were identified during this review period. Overall, 2009 water quality has declined in the 2009 review period. Forty-three (43) of the 60 stations had an increase in the P90 for 2009. Exceptions have been improving water quality at ET 5, 12, 16, 36, 60 and 100. All active stations were sampled six times following the systematic random sampling (SRS) schedule. Six (6) sample stations were deactivated (ET 1, 66, 81, 87, 100.1 and 101) due to being embedded in prohibited areas. Three (3) stations had downward classification changes (ET 32, 64 and 66.5) due to water quality not meeting approved standards. Two (2) stations (ET 79, 68) were reclassified upward due to improved water quality. Five sample stations were sampled to reopen after coastal flood events. In the Lubec area three separate regulations were amended and redefined and combined into a six part single regulation. One of these rule amendments included a new restricted area in Morong Cove (Lubec) due to water quality not meeting approved standards and a new sample station, ET 31.5, was established at the margin of the closure. Due to improved water quality, Ox Cove (Pembroke) was reclassified from restricted to approved, reducing the size of the restricted area to around Burnt Island. The restricted areas in the Dennys and Hardscrabble Rivers were combined into a single regulation and the restricted area boundary line was moved further downriver to the next approved sample station (ET 68) due to water quality not meeting approved criteria at the present boundary station (ET 59). There are four (4) downward classification changes (Dennys River, Carlos Creek, Hobart Stream, Crane Mill Brook) required (February 24, 2010).

Growing Area Description

Growing Area ET is located in eastern Maine (Figure 1 – Figure 7). The shoreline described in this report includes all of Cobscook Bay stretching from Mowry Point, Lubec to Shackford Head, Eastport. The area encompasses 117 square miles, and includes the near sub-tidal waters, inter-tidal flats and a zone of shore property that extends inland to a defined upland boundary that follows the major roadways surrounding the bays. Closures are based on wastewater treatment facilities outfalls in Lubec, Quoddy Village and Eastport and sample stations affected by non-point pollution without identifiable sources. There are no residential licensed overboard discharges in the growing area. The Dennys River drainage has a federal super fund site in Meddybemps. There are fifteen agricultural operations in the area. All but one are small family farms with less than 6 animals (horses, dogs). The larger farm is a small commercial farm operation that has approximately 30 head of cattle. The area around this farm is classified restricted. Prohibited areas enclose seasonal boat moorings located in Lubec and Eastport. There is no heavy industry in the growing area. Thirteen shellfish and finfish aquaculture operations are sited in Lubec, Perry and Eastport. Portions of the growing area continue to exhibit poor water quality or remain potential pollution threats due to the presence of older, in-ground septic systems.

The upland land cover is predominately evergreen, deciduous and wetland forest with minimal development. The villages of Lubec (population 1,523), Whiting (population 456), Dennysville (population 302), Pembroke (population 875) and Eastport (population 1,582) have the largest

population concentrations (2007-2008 Maine Municipal Directory). Development along the remaining shores is spotty with clusters of homes separated by undeveloped land. Cobscook Bay State Park, Moosehorn National Wildlife Refuge and several land conservation areas are enclosed within the area's borders. Significant rivers draining into this area include the Orange, Dennys and Pennamaquan Rivers. Other fresh water influences along these shores is predominately from numerous small streams. There are many shellfish resource areas around the boundary of the bay for intertidal and sub-tidal species.

Current Classifications

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

Approved

(56 stations) ET 7, 10, 11, 12, 13, 16, 17, 20, 23, 25, 26, 27, 29, 33.5, 36, 37, 44, 45, 47, 53, 54, 57, 57.2, 59, 68, 70, 71, 73, 74, 77, 79, 88, 90, 95, 97, 99, 100, 102, and 103.2

Restricted

Area No. 56, Northwest Cobscook Bay (Edmunds, Dennysville, Pembroke, Perry) (April 3, 2009)
- B- Sipp Bay; water quality does not meet approved standards; (2 stations) ET 90, 91
- C- Burnt Island; water quality does not meet approved standards; (1 station) ET 69
- D- Dennys River and Hardscrabble River; water quality does not meet approved standards; (3 stations) ET 59, 60, 66.5
- B- Timber Cove; water quality does not meet approved standards; (1 station) ET 39
- C- Crane Mill Brook; water quality does not meet approved standards; (2 stations) ET 47, 50

Area No. 58, Lubec (April 3, 2009)
- A- Morong Cove, water quality does not meet approved standards; (1 stations) ET 32
- C- Pirates Creek; water quality does not meet approved standards; (3 stations) ET 8, 8.3, 9
- E- Lubec Channel; water quality does not meet approved standards; (3 stations) ES 26, 27, 28
- F- South Lubec; water quality does not meet approved standards; (2 stations) ES 21.5, 22

Area No. 59, Outer Cobscook Bay (Eastport, Perry); (February 6, 2007)
- E- Little River; water quality does not meet approved standards; (2 stations) EU 15, 16
- F- Half Moon Cove; water quality does not meet approved standards; (2 stations) ET 100, 100.2

Prohibited

Area No. 56, Northwest Cobscook Bay (Edmunds, Dennysville, Pembroke, Perry) (April 3, 2009)
- A- Pennamaquan River; water quality does not meet approved standards; (2 stations) ET 80, 85

Area No. 57, Whiting Bay (Edmunds, Trescott); (February 6, 2007)
- A- East Stream; water quality does not meet approved standards; (2 stations) ET 42, 44

Area No. 58, Lubec (April 3, 2009)
- B- The Haul-up, South Bay; water quality does not meet approved standards; (1 station) ET 23
- D- Johnson Bay and Lubec Narrows; Lubec Wastewater Treatment Plant; (2 stations) ET 5, 7

Area No. 59, Outer Cobscook Bay (Eastport, Perry); (February 6, 2007)
- A- Deep Cove; water quality does not meet approved standards; (1 station) ET 104
- B- Eastport; Eastport Wastewater Treatment Plant; (3 stations) EU 2.5, 7, 8
- C- Kendall Head; Quoddy Wastewater Treatment Plant; (2 stations) EU 9, 10

D- Sipayik, Pleasant Point; Sipayik Wastewater Treatment Plant; (2 stations) EU 11, 16

There are four new stations in growing area ET (ET 31.5, 63, 64, and 103.1). These stations have less than 30 data points and were not evaluated against a classification standard.

Please visit the DMR website to view legal notices:

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

Activity during Review Period

Area No. 56, Northwest Cobscook Bay (Edmunds, Dennysville, Pembroke, Perry) (April 3, 2009); Ox Cove was reclassified from restricted to approved due to water meeting approved classification criteria, reducing the size of the restricted area to around Burnt Island. The restricted area in the Dennys and Hardscrabble Rivers were combined and the restricted area boundary line was moved further downriver to the next approved sample station (ET 59) due to water quality not meeting approved classification criteria at the previous boundary station.

Area No. 58, Lubec (April 3, 2009); Three separate rules (Area 58C, Pirates Creek; Area 58F, The Haul-up; Area 58, Lubec and South Lubec) were combined into a single closure. Also, a new restricted area was promulgated in Morong Cove, due to water quality not meeting approved classification criteria and this closure was included in the combined regulation. A new boundary sample station, ET 31.5, was established at the Morong Cove closure margin.

Current Management Plans for Conditional Areas

There are no conditionally managed areas in this growing area.

Water Quality Review and Discussion

Table 1 lists all active approved, restricted and prohibited stations in growing area ET, with their respective Geomean and P90 calculations. Please refer to Appendix A for a key to interpreting the headers on the columns of Table 1. The approved and restricted standards for each station are also displayed in Table 1. 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 scores. 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 DMR central files.

All stations, with the exception of stations highlighted bold in Table 1, met their NSSP classification standard in 2009. Four stations are new and do not have 30 data points in their dataset; therefore their P90 scores are not evaluated against the P90 standard. Downward classification changes for stations not meeting the approved standard were completed on February 24, 2010.

Table 1. Geomean and P90 Scores, Growing Area ET

Station	Class	Count	MFCount	GM	SDV	MAX	P90	Appd_Std	Restr_Std
ET005.00	P	30	20	2.8	0.25	17	6	35	196
ET007.00	A-boundary	30	20	4.1	0.6	560	24.4	35	196
ET008.00	R	30	21	9.2	0.71	360	76.7	35	195
ET008.30	R	30	21	4.8	0.53	260	23.8	35	195
ET009.00	R-boundary	30	20	4	0.43	56	14.9	36	199
ET010.00	A	30	20	3.6	0.39	64	11.8	36	199
ET011.00	A	30	20	3.6	0.41	36	12.5	36	199
ET012.00	A	30	20	2.8	0.27	35	6.3	36	199
ET013.00	A	30	20	3.9	0.44	75	14.6	36	199
ET016.00	A	30	20	4.8	0.58	200	26.9	36	199
ET017.00	A	30	20	3.3	0.44	260	12.5	36	199
ET020.00	A	30	21	3.9	0.47	93	16.1	35	195
ET023.00	A-boundary	30	20	3.8	0.41	93	13	36	199
ET025.00	A	30	20	3.9	0.48	43	16.4	36	199
ET026.00	A	30	20	2.9	0.36	114	8.5	36	199
ET027.00	A	30	20	3.1	0.42	78	10.9	36	199
ET029.00	A	30	20	2.3	0.19	15	4.2	36	199
ET031.50	New-boundary	7	7	1.9	0	1.9	1.9	31	163
ET032.00	R	30	20	4.2	0.65	460	29	36	199
ET033.50	A	30	20	6.7	0.64	580	**45.1**	36	199
ET036.00	A	30	20	3.1	0.41	75	10.7	36	199
ET037.00	A	30	20	4.1	0.62	460	25.9	36	199
ET039.00	R	30	20	5.2	0.66	1100	37.2	36	199
ET042.00	P	30	20	16	0.55	440	82	36	199
ET044.00	A	30	20	4	0.47	93	16.6	36	199
ET045.00	A	30	20	3.3	0.43	100	11.9	36	199
ET047.00	A-boundary	30	20	5.4	0.72	1700	**46.5**	36	199
ET050.00	R	30	20	6.8	0.71	600	55.8	36	199
ET053.00	A	30	20	2.8	0.34	78	7.7	36	199
ET054.00	A	30	21	3	0.47	124	12.4	35	195
ET057.00	A	30	21	6.7	0.52	94	31.7	35	195
ET057.20	A	30	20	9.3	0.61	180	**57.8**	36	199
ET059.00	A-boundary	30	20	6.7	0.57	118	**37**	36	199
ET060.00	R	30	20	9.6	0.6	160	57.4	36	199
ET063.00	Reactivated	24	20	15.6	0.55	114	82.1	33	180
ET064.00	Reactivated	24	20	14.6	0.64	210	98.1	33	180
ET066.50	R	30	20	8.7	0.67	240	63.8	36	199
ET068.00	A-boundary	30	20	6.2	0.52	52	28.8	36	199
ET069.00	R	30	20	6.3	0.55	93	32.2	36	199
ET070.00	A	30	20	5.2	0.55	240	26.5	36	199
ET071.00	A	30	20	4.3	0.5	93	19.2	36	199
ET073.00	A	30	20	3.8	0.51	122	17.9	36	199
ET074.00	A	30	21	2.9	0.45	100	11.2	35	195

Station	Class	Count	MFCount	GM	SDV	MAX	P90	Appd_Std	Restr_Std
ET077.00	A	30	21	4.2	0.44	93	15.4	35	195
ET079.00	A-boundary	30	20	5.9	0.54	520	30.1	36	199
ET080.00	P	30	20	7	0.7	860	56.1	36	199
ET085.00	P	30	20	8.8	0.63	120	58	36	199
ET088.00	A	30	20	3.9	0.55	240	20.2	36	199
ET090.00	A	30	20	3.3	0.53	1100	16.2	36	199
ET091.00	R	30	20	6.4	0.64	220	43.3	36	199
ET095.00	A	30	21	2.7	0.38	180	8.5	35	195
ET097.00	A	30	21	3.1	0.44	260	11.6	35	195
ET099.00	A	30	22	3	0.38	43	9.6	35	191
ET100.00	A-boundary	30	21	2.5	0.22	9.1	5	35	195
ET100.20	R	30	21	6.1	0.73	1580	52.7	35	195
ET102.00	A	30	21	3.6	0.53	240	17.7	35	195
ET103.10	Reactivated	29	21	3.7	0.49	150	16	35	192
ET103.20	A	30	21	4.2	0.5	93	18.9	35	195
ET104.00	P	30	21	3.7	0.68	1700	28.7	35	195

All approved and prohibited stations that were active at the beginning of 2009 were sampled at least 6 times following the systematic random sampling (SRS) schedule (Table 2 and Appendix B). At some stations, additional samples were collected under adverse conditions. Because of a mistake in data entry, ET 47 was collected but not entered. An extra sample was collected in August as a makeup; this station was sampled 7 times in 2009. ET 74 was collected twice in May. It was misidentified as a missed station and collected as a makeup. Stations ET 7, 23, 33.5, 54 and 59 were sampled as flood reopening sample stations. Six (6) sample stations were deactivated (ET 1, 66, 81, 87, 100.1 and 101) due to being embedded in prohibited areas. Two (2) stations had classification changes (ET039.00, ET085.00) due to water quality not meeting approved standards. Five sample stations were sampled to reopen after coastal flood events.

Table 2. ET Samples Collected in 2009

		Adverse	Extra	Random			
Station	Class	Closed	Open	Closed	Open	Grant Total	Comments
ET001.00	P			2		2	De-activated; embedded in prohibited area; 4-09
ET005.00	P			6		6	
ET007.00	A	12			6	18	Flood sample site
ET008.00	R				6	6	
ET008.30	R				6	6	
ET009.00	R				6	6	
ET010.00	A				6	6	
ET011.00	A				6	6	
ET012.00	A				6	6	
ET013.00	A				6	6	
ET016.00	A				6	6	
ET017.00	A				6	6	
ET020.00	A				6	6	
ET023.00	A	8			6	14	Flood sample site

		Adverse	Extra	Random			
Station	Class	Closed	Open	Closed	Open	Grant Total	Comments
ET025.00	A				6	6	
ET026.00	A				6	6	
ET027.00	A				6	6	
ET029.00	A				6	6	
ET031.50	A		1		6	7	New station 4-3-09; extra sampling
ET032.00	A				2	6	Reclass- A to R 4-3-09
	R				4		
ET033.50	A	3			6	9	Flood sample site
ET036.00	A				6	6	
ET037.00	A				6	6	
ET039.00	R				6	6	
ET042.00	P			6		6	
ET044.00	A				6	6	
ET045.00	A				6	6	
ET047.00	A				7	7	2 samples taken in August
ET050.00	R				6	6	
ET053.00	A				6	6	
ET054.00	A	10			6	16	Flood sample site
ET057.00	A				6	6	
ET057.20	A				6	6	
ET059.00	A	7			6	13	Flood sample site
ET060.00	R				6	6	
ET063.00	R				6	6	
ET064.00	A				2	6	Reclass- A to R 4-3-09
	R				4		
ET066.00	R				2	2	De-activated; embedded in prohibited area; 4-09
ET066.50	A				1	6	Reclass- A to R 4-3-09
	R				5		
ET068.00	A				5	6	Reclass- R to A 4-3-09
	R				1		
ET069.00	R				6	6	
ET070.00	A				6	6	
ET071.00	A				6	6	
ET073.00	A				6	6	
ET074.00	A				7	7	2 samples taken in May
ET077.00	A				6	6	
ET079.00	A				5	6	Reclass P to A 2-09
	P			1			
ET080.00	P			6		6	
ET081.00	P			2		2	De-activated; embedded in prohibited area; 4-09
ET085.00	P			6		6	
ET087.00	A				1	1	De-activated 4-09; another

		Adverse	Extra	Random			
Station	Class	Closed	Open	Closed	Open	Grant Total	Comments
							station within 300'
ET088.00	A				6	6	
ET090.00	A				6	6	
ET091.00	R				6	6	
ET095.00	A				6	6	
ET097.00	A				6	6	
ET099.00	A				6	6	
ET100.00	A				6	6	
ET100.10	R				2	2	De-activated; embedded in prohibited area; 4-09
ET100.20	R				6	6	
ET101.00	A				2	2	De-activated 4-09; another station within 300'
ET102.00	A				6	6	
ET103.10	A				6	6	
ET103.20	A				6	6	
ET104.00	P			6		6	

Figures 8, 9, 10 and 11 are trend graphs of the approved, prohibited and restricted sample stations in the growing area. Station P90 scores are expressed as percents of the approved standard. The restricted stations are being compared to the approved standard to graphically demonstrate that they do or do not meet the approved standard. Approved or conditionally approved sample stations that have met or exceeded 90% of the approved standard are at risk of being reclassified to a more restrictive classification.

Overall, 2009 water quality has declined compared with 2008. Forty-three (43) of the 60 stations had an increase in the P90 for 2009. Exceptions have been improving water quality at ET 5, 12, 16, 36, 60 and 100. In the Lubec area three separate regulations were amended and redefined and combined into a six part single regulation. One of these rule amendments included a new restricted area in Morong Cove (Lubec) due to water quality not meeting approved standards and a new sample station, ET 31.5, was established at the margin of the closure. Due to improved water quality, Ox Cove (Pembroke) was reclassified from restricted to approved, reducing the size of the restricted area to around Burnt Island. The restricted areas in the Dennys and Hardscrabble Rivers were combined into a single regulation and the restricted area boundary line was moved further downriver to the next approved sample station due to water quality not meeting approved criteria at the present boundary station. Sample stations ET 1, 5 meet approved water quality standards but are classified prohibited due to being located in the Lubec Wastewater Treatment Facility dilution zone. Sample station ET 104 also meets approved standards but is classified prohibited due to the risk of toxic metals contamination.

At the end of 2009, restricted sample station ET 39, slightly exceeded 100% of the approved standard limit, indicating a decline in water quality; this station met the approved standard in 2007 and 2008 (Figure 11). Timber Cove Stream enters the head of the cove and has an average flow of 264,000 gallons per day (GPD) under low flow conditions and has a geometric mean of the stream bacterial testing scores of 13.6 FC/100ml. The receiving water calculated dilution area, based on an average depth of six feet, is 0.1 acres. Sample station ET 39 is embedded in a 24.6 acre

restricted area adequate in size to dilute the stream bacterial loading to approved criteria at the boundary of the area. The trending of the water quality will continue to be monitored.

Station ET 47 is located at the boundary between a restricted area and approved area (Area 57, part C) adjacent to farm pastures. Sample station ET 50, a station within the restricted area, showed an increase in the percent of the approved standard from approximately 100% in 2007-2008 to 155% in 2009 (Figure 11). ET 47 has shown a similar rapid rise from 50% to 129% (Figure 9) during the same time period. It is likely that that the pasture is impacting both stations. It is necessary to increase the size of the restricted area. The water exchange in the mill pond is predominately tidal. The volume of the water in the mill pond is $7.2x10^6$ ft^3 based on an average mid-tide depth of 4 feet. The P90 value for Sample station ET 50 is located within the pond and has a p90 value of 55.8. That would be a probable loading of $4.6x10^{10}$ FC/day. To empty the pond in a 6 hour window of time, the flow out of the pond would need to be 150,000 gallons/minute. The receiving water has an average mid-tide depth of 6 feet. The proposed closure has a dilution capacity of $5.5x10^{10}$ FC/day, enough to adequately dilute the pollution loading. The new restricted area boundary station will be ET 46, a presently inactive station that will need to be reactivated for future monitoring of the restricted area boundary line.

Station ET 33.5 had no identified pollution sources either during the initial survey or during the drive through survey. The cove is remote without identified houses. No access to the mouth of the cove has been identified. There is a small stream that feeds from a wooded area into the head of the cove approximately 500 feet from ET 33.5. No bacterial samples or flow data has been collected at the stream. There is no other nearby sample stations. The geomean and P90 met approved classification until the last sampling of 2009 (October 7th, 580 FC/100 ml). Station ET 33.5 is sampled as a flood station and identified as impacted by rain. The P90 spiked from a 27.9 to 45.1 (approved standard = 36). It is necessary to reclassify the area from approved to restricted with a boundary across the mouth of the western end of Carlos Cove (Carlos Creek). Stream samples and flow data will be collected to defend the closure line based on a dilution calculation.

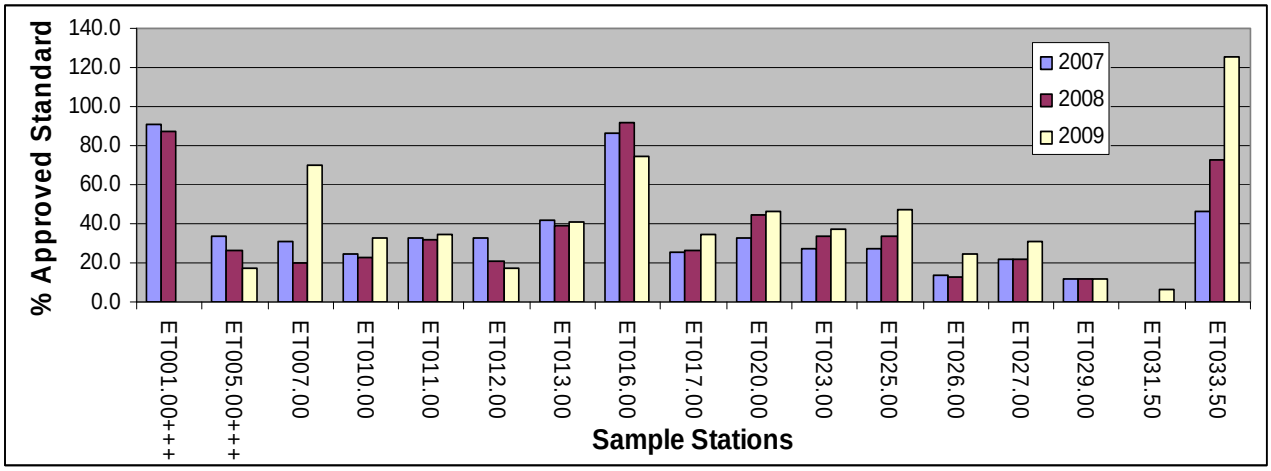
Station ET 57.2 had no identified pollution sources either during survey or during the drive through survey. The sample station is a tidal stream site (Hobart Stream) next to a road turnout adjacent to US Route 1. Land adjacent to the area includes hay fields and wooded areas. Both stations ET 57 and 57.2 have shown rapid percentage rises (decreasing water quality) since 2006 (Figure 9). It is necessary to reclassify the area from approved to restricted with a boundary at approved station ET 57. Station ET 57 is presently at 88% of the approved standard and at risk of a downward classification if additional sampling shows declining water quality. Further review of the area is necessary to identify the source of the rapid declining water quality at stations ET 57 and 57.2.

Station ET 59 is the boundary station of Area No. 56, part D. Percents of the approved standard were approximately 60% in 2007-2008, but had spiked to 102% at the end of 2009 (Figure 9). Individual data points list rain events on May 19, 2009 and September 30, 2009 with high fecal coliform scores (42 FC/100ml, 118 FC/100 respectively). Both sample collections were completed after approximately 2.6 inches of rain in the previous 5 days before sampling with the greatest single daily rain total being 1.5" three days before each sample date. It is necessary to reclassify the area from approved to restricted with a boundary at approved station ET 68, Ox Cove.

Area No. 59, Outer Cobscook Bay (Eastport, Perry), part A, Deep Cove is a prohibited area that meets approved standards at ET 104 but can not be reclassified approved because of the risk of toxic chemicals from a boat building school in the cove. Area No. 58, Lubec, part D, Johnson Bay and Lubec Narrows is a prohibited area that meets approved standards at ET 5 but can not be

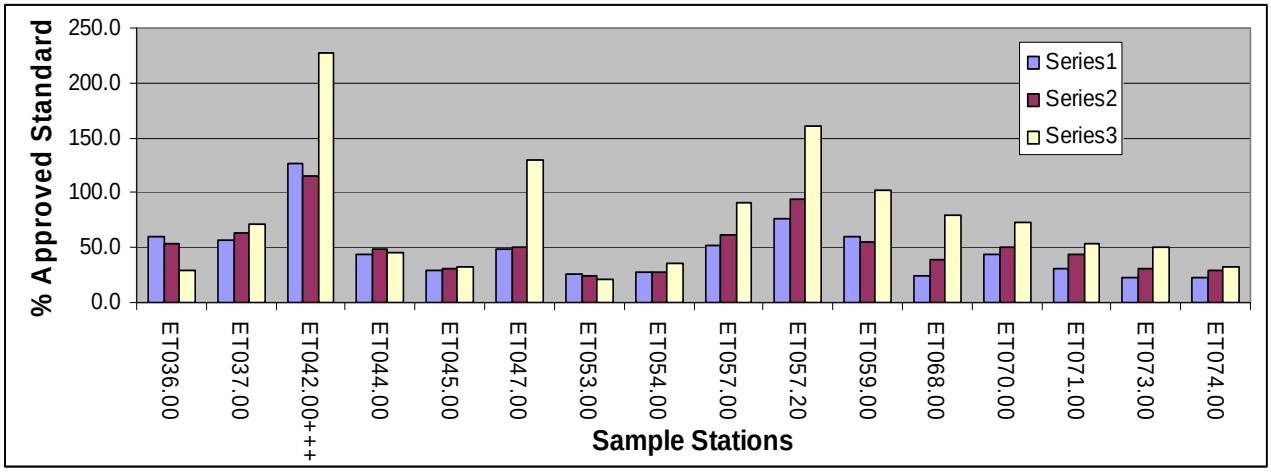
reclassified approved because it is within the closure for the Lubec Wastewater Treatment Plant outfall. Sample stations ET 32 and 69 are classified restricted but now meet approved classification. Both stations continue to show high variability and will remain classified restricted until percentages show a continued downward trending. Restricted stations ET 8, 39, 50, 60, 63, 64, 66.5, 91 and 100.2 all have P90 scores greater than 100% of the approved standard but less than their restricted classification standards. They will remain classified restricted.

Figure 8. Area ET P90 Scores for Approved and Prohibited Stations (expressed as the percent of the Approved standard), 2007-2009



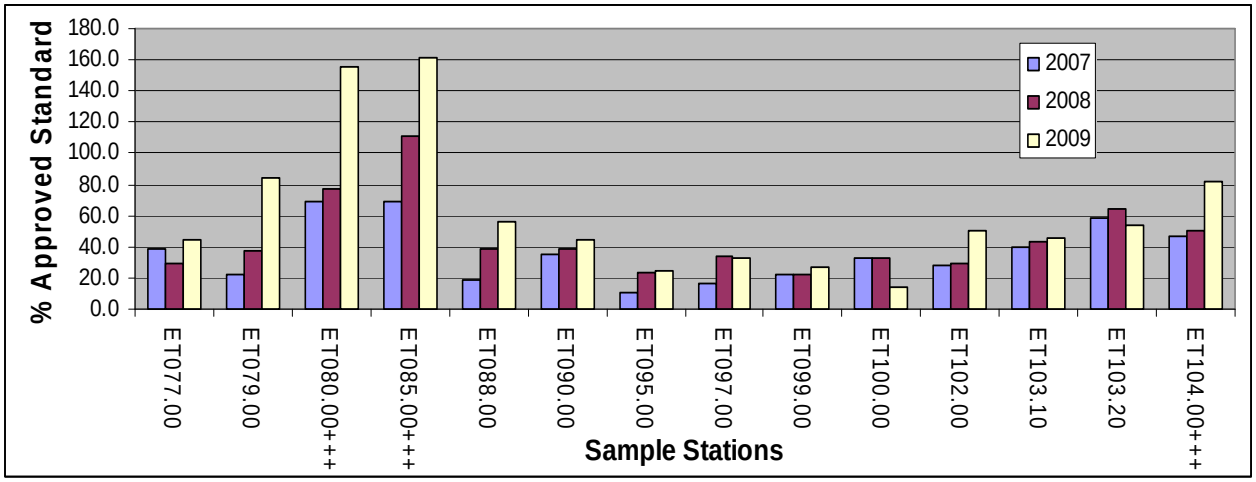
+++ = prohibited stations

Figure 9. Area ET P90 Scores for Approved and Prohibited Stations (expressed as the percent of the Approved standard), 2007-2009



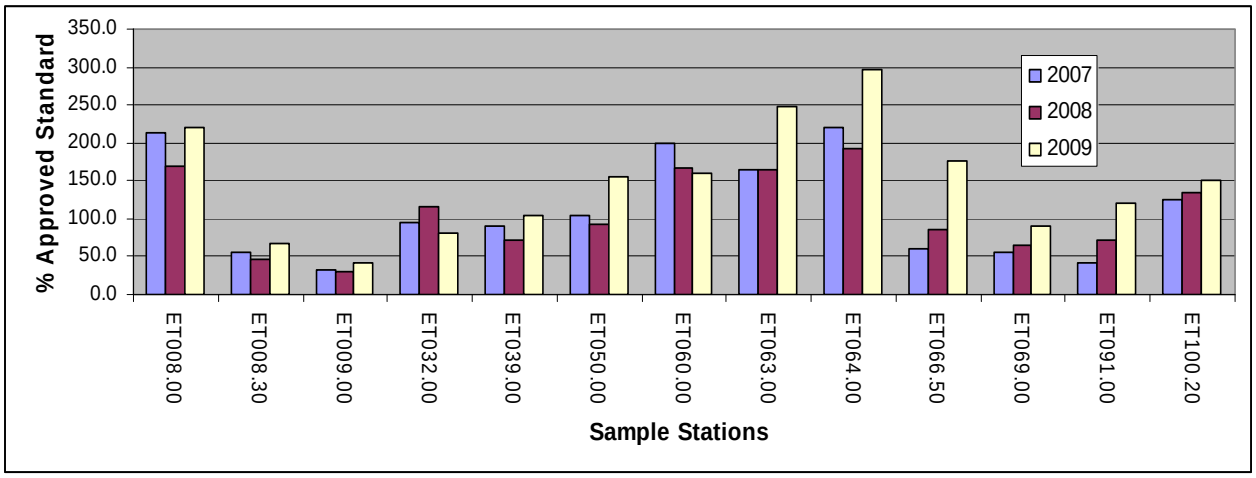
+++ = prohibited stations

Figure 10. Area ET P90 Scores for Approved and Prohibited Stations (expressed as the percent of the Approved standard), 2007-2009



+++ = prohibited stations

Figure 11. Area ET P90 Scores for Restricted 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

Drives through surveys of the area were done during routine water sampling runs.

October 7, 2009; a review survey of the Pirates Creek area was conducted to verify current survey information surrounding the restricted Area No 58 (part C).

Aquaculture/Wet Storage Activity

Aquaculture sites in Area ET are predominately finfish sites with other species on the site license. Shellfish species include blue mussels, soft shell clams and scallops. At the date of this review, none of the sites are growing or wet storing shellfish. (Licensee confirmation Jan. 2009) These sites are now owned by Cook Aquaculture (spring 2009). More detail about the sites can be found at the web site: http://www.maine.gov/dmr/aquaculture/index.htm

Classification Changes

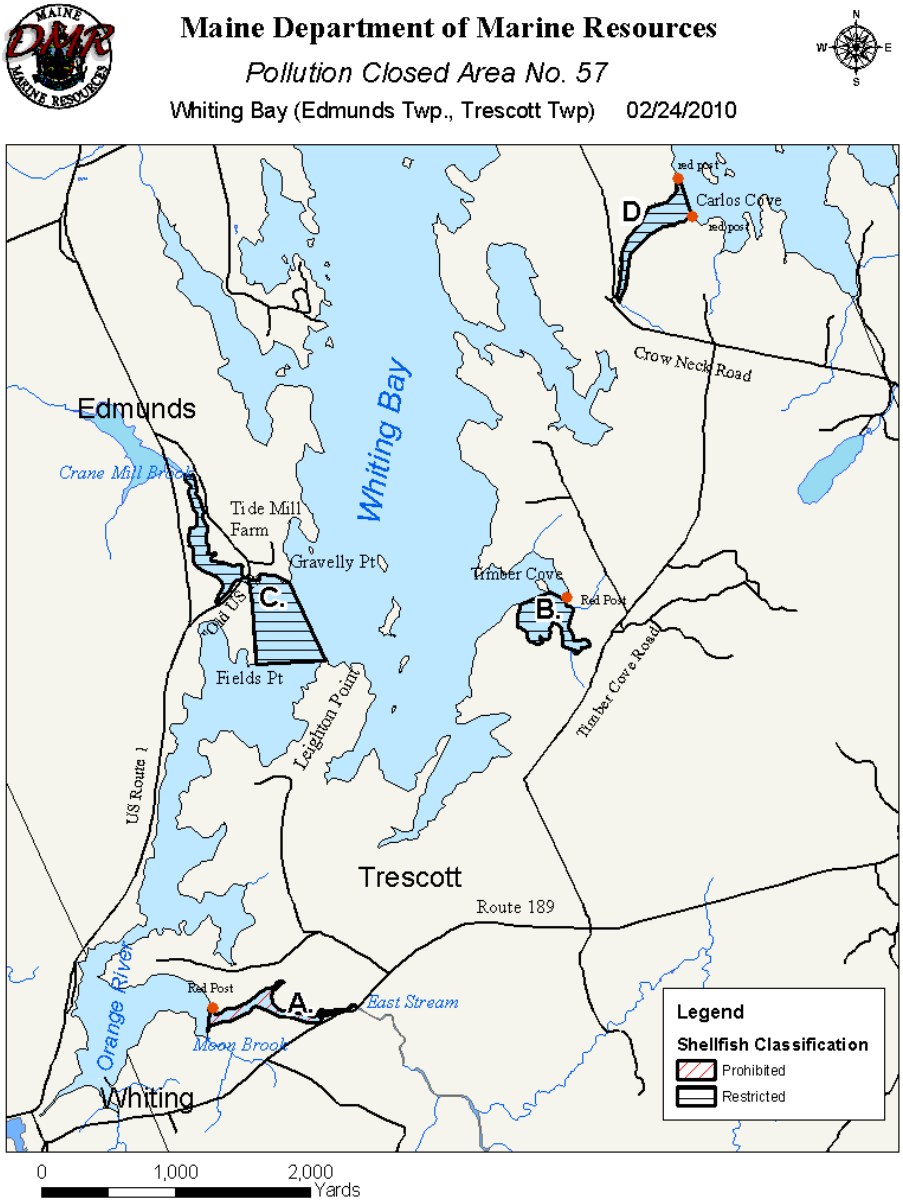
Area No. 57

Whiting Bay, part C, Crane Mill Brook (Edmunds): The boundary station (ET 47) located between a restricted area and an approved area at the mouth of Crane Mill Brook no longer meets approved classification standards. It is necessary to increase the size of the restricted area and the enlarged area will be based on a dilution calculation. Inactive station ET 46 will be reactivated and serve as a new boundary station. The area was reclassified from approved to restricted on February 24, 2010.

Carlos Cove (Trescott Twp): Station ET 33.5 in Carlos Cove no longer meets approved classification standards. It is necessary to promulgate a restricted area with a boundary across the mouth of the cove and establish a new boundary sample station, if possible. The area was reclassified from approved to restricted on February 24, 2010 and is part of Area No. 57.

New classification lines are presented in Figure 12.

Figure 12. Area 57 Classification Changes



Area No. 56

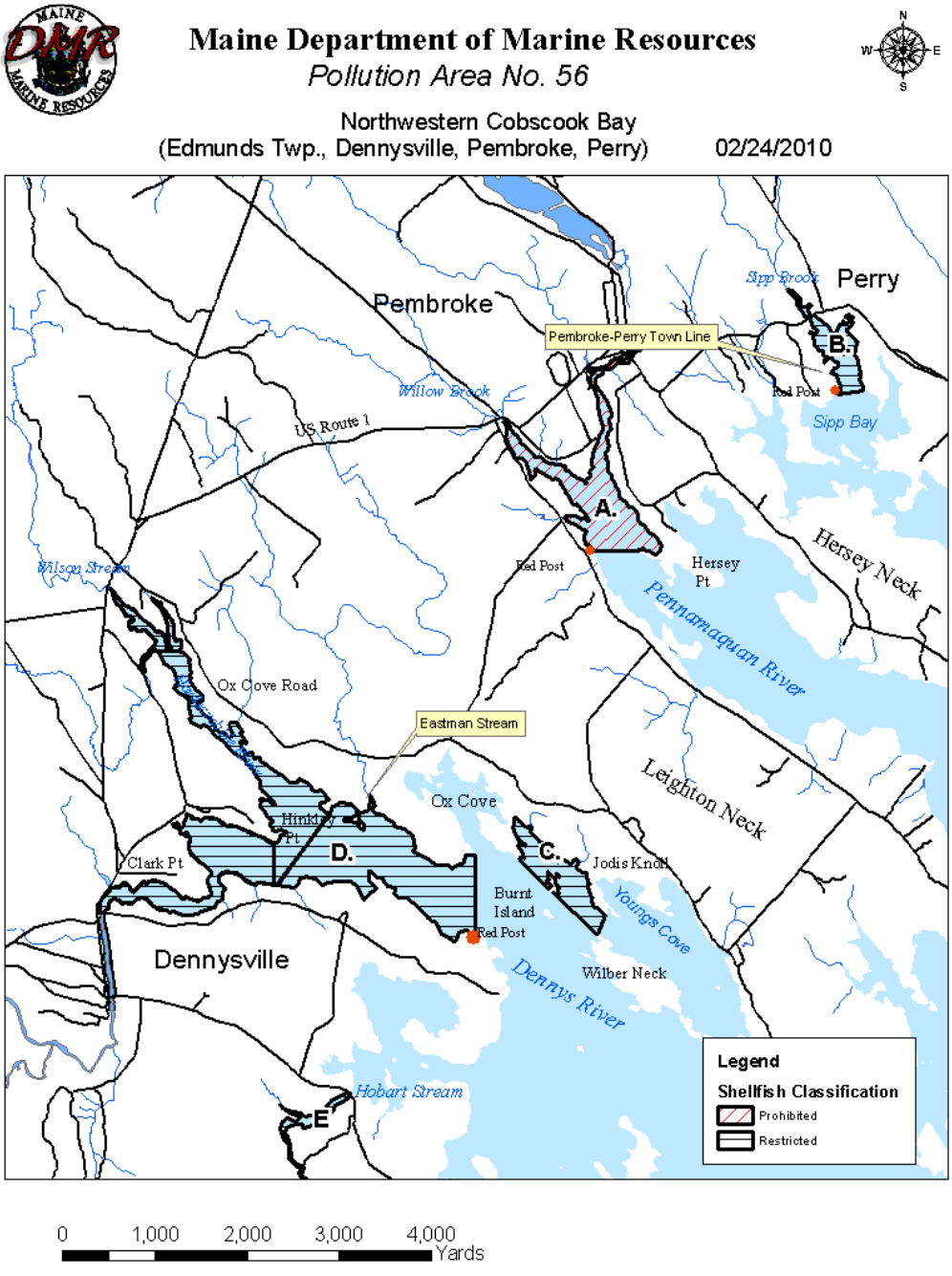
Northwestern Cobscook Bay, part D, Dennys River and Hardscrabble (Dennysville)

Station ET 59 has exceeded the approved standard (P90 of 102% of approved standard). The area must be reclassified from approved to restricted. The new restricted area boundary line will be at the next station meeting the approved standard, ET 68, Ox Cove. The area in the Dennys River (Dennysville) was reclassified from approved to restricted on February 24, 2010.

Hobart Stream (Edmunds Twp): Station ET 57.2, near the mouth of Hobart Stream, no longer meets approved classification standards. The are must be reclassified from approved to restricted with a boundary at the next approved station, ET 57. The Hobart Stream area was reclassified from approved to restricted on February 24, 2010 and is part of Area No. 56.

New classification lines are presented in Figure 13.

Figure 13. Area 56 Classification Changes



Summary

Overall, 2009 water quality has declined compared with water quality in the previous review year. During the current review year, no new pollution sources were identified. Water quality in the growing area supports the current classification under the NSSP criteria with the exception of stations ET 33.5, 47, 57.2 and 59 which all exceed approved criteria and require new or enlargement of existing restricted areas in the Dennys River, Carlos Creek, Hobart Stream and Crane Mill Brook. Sample station ET 57, classified as approved, is at 88% of the approved standard and its P90 score will be reviewed at year end. The systematic random sampling schedule will remain the same for the growing area in 2010. Streams in the area will be sampled and known or new pollution sources will be evaluated for the 2011 triennial report.

Recommendation for Future Work

1. Sample streams for 2011 triennial report.
2. Survey and sample the Hobart Stream area to try to determine the clause of the declining water quality at ET 57 and 57.2.
3. Sample and determine flow rate of the stream at the head of Carlos Cove.

References

Maine Department of Environmental Protection Licensed Overboard Discharge data base.

Appendix 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.

Appendix B. Growing Area ET 2009 Data

Station	Date	Strategy	Open Closed	Class	Adversity	Temp	Salinity	Tide	Wind	Col Score
ET001.00	2/11/2009	R	C	P		1	31	HF	SE	6
	3/31/2009	R	C	P	S	2	30	F	N	<2
ET005.00	2/11/2009	R	C	P		1	30	HF	SE	<2
	3/31/2009	R	C	P	S	2	31	F	N	<2
	5/26/2009	R	C	P		13	30	F	SW	9.1
	7/28/2009	R	C	P	P	18	30	F	SW	<2
	8/19/2009	R	C	P		15	30	H	SW	4
	10/13/2009	R	C	P	P	10	30	LE	E	<2
ET007.00	2/11/2009	R	O	A		1	30	HF	SE	<2
	3/31/2009	R	O	A	S	2	10	F	N	2
	4/26/2009	A	C	A	F	8	28	F	S	<2
	4/27/2009	A	C	A	F	10	30	F	S	<2
	5/26/2009	R	O	A		13	30	F	SW	7.3
	6/23/2009	A	C	A	F	12	20	F	NE	720
	6/24/2009	A	C	A	F	13	25	F	N	34
	7/7/2009	A	C	A	F	8	30	H	E	6
	7/8/2009	A	C	A	F	10	30	HF	E	<2
	7/9/2009	A	C	A	F	11	30	HF	E	<2
	7/28/2009	R	O	A	P	18	30	F	SW	560
	8/19/2009	R	O	A		15	30	H	SW	4
	9/1/2009	A	C	A	F	11	31	HF	NW	6
	9/2/2009	A	C	A	F	13	32	HF	SW	<2
	10/14/2009	R	O	A	P	10	28	HE	NW	6
	10/28/2009	A	C	A	F	7	30	H	NE	2
	10/29/2009	A	C	A	F	6	29	HE	N	4
	10/30/2009	A	C	A	F	7	30	H	SW	<2
ET008.00	2/11/2009	R	O	R		1	30	H	SE	<2
	3/31/2009	R	O	R	S	3	0	F	N	2
	5/26/2009	R	O	R		13	30	F	SW	<2
	7/28/2009	R	O	R	P	20	30	F	SW	2
	8/19/2009	R	O	R		17	30	H	SW	360
	10/14/2009	R	O	R	P	10	27	HE	NW	10
ET008.30	2/11/2009	R	O	R		1	30	H	SE	<2
	3/31/2009	R	O	R	S	3	9	F	N	4
	5/26/2009	R	O	R		13	30	HF	SW	<2
	7/28/2009	R	O	R	P	20	30	F	SW	2
	8/19/2009	R	O	R		16	30	H	SW	260
	10/14/2009	R	O	R	P	10	28	HE	NW	11
ET009.00	2/10/2009	R	O	R		0	32	F	NW	<2
	3/30/2009	R	O	R	P	2	28	F	NE	8
	5/19/2009	R	O	R	P	8	30	LF	S	<2
	8/4/2009	R	O	R		16	31	HF	SW	2
	8/18/2009	R	O	R		14	30	H	SE	2
	10/7/2009	R	O	R	P	7	30	F	E	56

Station	Date	Strategy	Open Closed	Class	Adversity	Temp	Salinity	Tide	Wind	Col Score
ET010.00	2/10/2009	R	O	A		0	31	F	NW	<2
	3/30/2009	R	O	A	P	1	15	F	NE	64
	5/19/2009	R	O	A	P	6	30	L	S	<2
	7/13/2009	R	O	A		13	30	LF	CL	<2
	8/18/2009	R	O	A		15	30	H	CL	<2
	10/7/2009	R	O	A	P	7	32	F	E	6
ET011.00	2/10/2009	R	O	A		0	31	F	NW	<2
	3/30/2009	R	O	A	T	1	12	F	NE	31
	5/19/2009	R	O	A	P	9	30	L	S	<2
	7/13/2009	R	O	A		11	31	LF	CL	2
	8/18/2009	R	O	A		15	30	H	SE	2
	10/7/2009	R	O	A	P	8	30	F	E	6
ET012.00	2/10/2009	R	O	A		0	30	F	NW	<2
	3/30/2009	R	O	A	P	1	25	F	NE	4
	5/27/2009	R	O	A		12	30	F	SE	<2
	7/13/2009	R	O	A		13	30	LF	CL	<2
	8/18/2009	R	O	A		16	30	H	E	4
	10/7/2009	R	O	A	P	8	30	F	E	8
ET013.00	2/10/2009	R	O	A		0	31	F	NW	<2
	3/30/2009	R	O	A	P	0	10	F	NE	14
	5/27/2009	R	O	A		12	30	F	SE	<2
	8/4/2009	R	O	A		16	30	F	SW	4
	8/18/2009	R	O	A		12	30	H	E	5.4
	10/7/2009	R	O	A	P	8	31	F	E	34
ET016.00	2/10/2009	R	O	A		-1	13	F	NW	<2
	3/30/2009	R	O	A	P	1	30	F	NE	<2
	5/27/2009	R	O	A		12	29	F	SE	<2
	7/13/2009	R	O	A		15	31	LF	CL	<2
	8/18/2009	R	O	A		13	30	HE	N	88
	10/7/2009	R	O	A	P	8	31	F	E	<2
ET017.00	3/30/2009	R	O	A	P	1	28	F	NE	<2
	4/8/2009	R	O	A	P	4	29	HE	N	<2
	5/19/2009	R	O	A	P	8	30	L	S	<2
	7/13/2009	R	O	A		12	31	F	NW	<2
	8/18/2009	R	O	A		13	30	HE	N	36
	10/7/2009	R	O	A	P	8	31	F	E	2
ET020.00	3/30/2009	R	O	A	P	1	30	F	NE	<2
	4/8/2009	R	O	A	P	4	28	HE	N	<2
	5/27/2009	R	O	A		14	27	F	SE	<2
	8/4/2009	R	O	A		16	28	F	SW	18
	8/18/2009	R	O	A		16	30	HE	SE	<2
	10/7/2009	R	O	A	P	7	30	F	E	14
ET023.00	2/10/2009	R	O	A		0	30	F	NW	<2
	3/30/2009	R	O	A	P	1	14	F	NE	14
	5/27/2009	R	O	A		14	28	F	SE	<2
	6/27/2009	A	C	A	F	10	28	HE	CL	14
	6/28/2009	A	C	A	F	11	30	HE	E	4

Station	Date	Strategy	Open Closed	Class	Adversity	Temp	Salinity	Tide	Wind	Col Score
	7/7/2009	A	C	A	F	8	29	H	SE	4
	7/8/2009	A	C	A	F	10	30	H	CL	<2
	7/9/2009	A	C	A	F	13	29	H	CL	<2
	8/4/2009	R	O	A		16	28	F	SW	12
	8/18/2009	R	O	A		20	30	HE	SW	<2
	10/7/2009	R	O	A	P	7	28	HF	CL	10
	10/28/2009	A	C	A	F	7	28	H	NE	<2
	10/29/2009	A	C	A	F	7	29	HE	N	<2
	10/30/2009	A	C	A	F	7	30	HE	SW	<2
ET025.00	2/10/2009	R	O	A		0	30	HF	NW	<2
	3/30/2009	R	O	A	P	0	3	F	NE	20
	5/27/2009	R	O	A		13	30	F	SE	<2
	7/13/2009	R	O	A	P	14	30	F	NW	<2
	8/18/2009	R	O	A		17	30	HE	W	<2
	10/7/2009	R	O	A	P	7	28	HF	CL	25
ET026.00	2/10/2009	R	O	A		0	30	HF	NW	<2
	4/15/2009	R	O	A		6	28	LF	W	<2
	5/19/2009	R	O	A	P	8	30	LE	SE	<2
	7/13/2009	R	O	A		14	30	F	NW	<2
	8/18/2009	R	O	A		13	30	E	CL	<2
	10/7/2009	R	O	A	P	7	28	H	E	114
ET027.00	2/10/2009	R	O	A		0	31	HF	NW	<2
	3/30/2009	R	O	A	P	1	28	F	NE	8
	5/19/2009	R	O	A	P	8	29	LE	E	<2
	7/13/2009	R	O	A		13	30	F	NW	<2
	8/18/2009	R	O	A		13	30	E	NW	<2
	10/7/2009	R	O	A	P	7	15	H	E	78
ET029.00	4/15/2009	R	O	A		6	28	L	W	<2
	5/13/2009	R	O	A		12	30	LF	SW	<2
	5/19/2009	R	O	A	P	8	30	LE	CL	<2
	8/4/2009	R	O	A		15	31	F	SW	<2
	8/18/2009	R	O	A		14	31	E	CL	<2
	10/7/2009	R	O	A	P	8	29	HF	E	<2
ET031.50	5/13/2009	R	O	A		12	30	LF	SW	<2
	5/19/2009	R	O	A	P	9	26	LE	SW	<2
	5/27/2009	R	O	A		12	30	F	SE	<2
	7/13/2009	R	O	A		13	30	F	NW	<2
	8/18/2009	R	O	A		15	30	E	W	<2
	9/8/2009	E	O	A		15	30	HF	SW	<2
	10/7/2009	R	O	A	P	7	25	HF	E	<2
ET032.00	2/10/2009	R	O	A		0	30	HF	NW	<2
	3/30/2009	R	O	A	P	1	28	F	NE	<2
	5/19/2009	R	O	R	P	10	28	E	SW	<2
	8/4/2009	R	O	R		16	29	F	SW	10
	8/18/2009	R	O	R		17	30	E	W	<2
	10/7/2009	R	O	R	P	7	30	HF	E	2
ET033.50	2/10/2009	R	O	A		-1	30	H	NW	<2

Station	Date	Strategy	Open Closed	Class	Adversity	Temp	Salinity	Tide	Wind	Col Score
	3/30/2009	R	O	A	P	2	10	HF	NE	10
	5/19/2009	R	O	A	P	10	28	E	SW	<2
	7/13/2009	R	O	A		15	30	F	NW	<2
	9/8/2009	R	O	A		16	22	F	SW	20
	10/7/2009	R	O	A	P	7	26	H	CL	580
	10/28/2009	A	C	A	F	7	6	H	NE	2
	10/29/2009	A	C	A	F	7	2	HE	N	2
	10/30/2009	A	C	A	F	6	8	HE	SW	8
ET036.00	2/10/2009	R	O	A		0	30	H	NW	<2
	3/30/2009	R	O	A	P		27	HF	NE	<2
	5/19/2009	R	O	A	P	8	28	E	SW	<2
	7/13/2009	R	O	A		15	30	F	NW	<2
	8/18/2009	R	O	A		18	30	E	S	26
	10/7/2009	R	O	A	P	8	28	H	E	4
ET037.00	4/15/2009	R	O	A		5	22	L	W	<2
	5/13/2009	R	O	A		13	28	LF	SW	<2
	5/19/2009	R	O	A	P	10	28	E	SW	2
	7/13/2009	R	O	A		13	29	F	NW	<2
	8/18/2009	R	O	A		23	30	E	NW	10
	10/7/2009	R	O	A	P	8	25	H	CL	60
ET039.00	3/30/2009	R	O	R	P	0	2	HF	W	14
	4/15/2009	R	O	R		5	0	LE	W	<2
	5/19/2009	R	O	R	P	8	24	E	SW	2
	7/13/2009	R	O	R		16	27	F	NW	58
	9/8/2009	R	O	R		16	22	F	SW	8
	10/7/2009	R	O	R	P	8	27	H	CL	25
ET042.00	3/30/2009	R	C	P	P	-1	0	HF	W	20
	4/15/2009	R	C	P		5	0	LE	W	12
	5/19/2009	R	C	P	P	11	0	LF	SW	58
	7/13/2009	R	C	P		14	0	F	NW	58
	8/18/2009	R	C	P		23	0	E	CL	90
	10/7/2009	R	C	P	P	8	2	HE	CL	440
ET044.00	2/10/2009	R	O	A		-1	30	H	NW	<2
	3/30/2009	R	O	A	P	1	22	H	NE	6
	5/19/2009	R	O	A	P	14	15	LF	S	<2
	7/13/2009	R	O	A		13	25	F	NW	2
	8/18/2009	R	O	A		19	28	E	S	4
	10/7/2009	R	O	A	P	8	24	HE	E	26
ET045.00	2/10/2009	R	O	A		0	30	HE	NW	<2
	3/30/2009	R	O	A	P	2	25	H	NE	2
	5/19/2009	R	O	A	P	13	16	LF	S	<2
	7/13/2009	R	O	A		13	27	F	NW	<2
	8/18/2009	R	O	A		19	30	E	S	8
	10/7/2009	R	O	A	P	8	26	HE	E	100
ET047.00	2/10/2009	R	O	A		0	30	HE	NW	<2
	3/30/2009	R	O	A	P	1	28	H	NE	2
	5/27/2009	R	O	A		12	26	F	SE	2

Station	Date	Strategy	Open Closed	Class	Adversity	Temp	Salinity	Tide	Wind	Col Score
	7/13/2009	R	O	A		14	28	F	NW	30
	8/4/2009	R	O	A		15	28	F	SW	<2
	8/18/2009	R	O	A		19	30	E	CL	7.3
	10/7/2009	R	O	A	P	8	20	HE	E	>1600
	3/30/2009	R	O	R	P	0	2	H	NE	24
	4/13/2009	R	O	R	S	2	0	F	NW	<2
ET050.00	5/27/2009	R	O	R		14	0	F	SE	24
	7/13/2009	R	O	R		15	1	F	NW	18
	9/21/2009	R	O	R		13	30	F	NW	<2
	10/7/2009	R	O	R	P	8	6	HE	E	600
	5/13/2009	R	O	A		12	20	L	SW	<2
	5/27/2009	R	O	A		13	29	F	SE	<2
ET053.00	7/13/2009	R	O	A		14	28	HF	NW	<2
	8/4/2009	R	O	A		15	29	F	SW	<2
	8/18/2009	R	O	A		20	30	E	W	<2
	10/7/2009	R	O	A	P	8	29	HE	E	12
	2/10/2009	R	O	A		0	30	HE	NW	<2
	3/30/2009	R	O	A	P	1	30	H	NE	<2
	5/27/2009	R	O	A		13	29	F	SE	<2
	6/26/2009	A	C	A	F	15	28	L	S	80
	6/27/2009	A	C	A	F	9	30	HE	CL	<2
	6/28/2009	A	C	A	F	9	30	HE	CL	2
	6/29/2009	A	C	A	F	11	30	E	SE	52
ET054.00	7/7/2009	A	C	A	F	7	29	H	SE	<2
	7/8/2009	A	C	A	F	10	30	H	CL	<2
	7/9/2009	A	C	A	F	12	29	H	S	<2
	7/13/2009	R	O	A		14	30	HF	NW	<2
	8/18/2009	R	O	A		15	30	E	S	<2
	10/7/2009	R	O	A	P	8	10	HE	E	124
	10/28/2009	A	C	A	F	7	23	H	NE	2
	10/29/2009	A	C	A	F	7	28	E	N	2
	10/30/2009	A	C	A	F	6	28	HE	SW	2
	2/9/2009	R	O	A		0	29	F	NW	<2
	4/1/2009	R	O	A	P	5	0	F	CL	<2
ET057.00	5/19/2009	R	O	A	P	10	12	HE	SW	16
	7/27/2009	R	O	A	P	15	18	LE	SE	13
	8/18/2009	R	O	A		17	26	HF	SW	22
	9/30/2009	R	O	A	P	13	20	HF	NW	94
	2/9/2009	R	O	A		0	1	HF	NW	2
	3/30/2009	R	O	A	P	2	0	LF	NE	6
ET057.20	5/19/2009	R	O	A	P	10	12	HE	SW	18
	7/27/2009	R	O	A	P	15	18	LE	SE	22
	8/18/2009	R	O	A		18	0	HF	SW	12
	9/30/2009	R	O	A	P	13	0	HF	NW	180
ET059.00	3/23/2009	R	O	A		1	27	HF	NW	<2
	4/1/2009	R	O	A	P	5	0	F	CL	2
	5/19/2009	R	O	A	P	10	6	E	SW	42

Station	Date	Strategy	Open Closed	Class	Adversity	Temp	Salinity	Tide	Wind	Col Score
	6/26/2009	A	C	A	F	15	15	L	S	82
	6/27/2009	A	C	A	F	13	12	HE	CL	14
	6/28/2009	A	C	A	F	13	13	E	CL	9.1
	6/29/2009	A	C	A	F	11	30	E	SE	24
	7/7/2009	A	C	A	F	10	14	H	E	16
	7/8/2009	A	C	A	F	10	22	HE	CL	4
	7/9/2009	A	C	A	F	15	22	H	NE	5.5
	7/27/2009	R	O	A	P	15	13	LE	SE	22
	8/18/2009	R	O	A		17	29	HF	SW	8
	9/30/2009	R	O	A	P	13	18	HF	NW	118
ET060.00	3/23/2009	R	O	R		1	26	HF	NW	<2
	4/1/2009	R	O	R	P	5	0	F	CL	<2
	5/19/2009	R	O	R	P	10	9	E	SW	29
	7/27/2009	R	O	R	P	15	14	LE	SE	36
	8/18/2009	R	O	R		17	27	HF	SW	11
	9/30/2009	R	O	R	P	14	0	HF	NW	160
ET063.00	3/23/2009	R	O	R		2	26	HF	NW	4
	3/30/2009	R	O	R	P	3	0	F	NE	74
	5/19/2009	R	O	R	P	10	7	E	SW	46
	7/27/2009	R	O	R	P	15	7	LE	SE	72
	8/18/2009	R	O	R		17	28	H	SW	20
	9/30/2009	R	O	R	P	13	14	HF	NW	114
ET064.00	3/23/2009	R	O	A		2	27	HF	NW	<2
	3/30/2009	R	O	A	P	3	0	F	NE	108
	5/19/2009	R	O	R	P	10	6	E	SW	44
	7/27/2009	R	O	R	P	15	5	LE	SE	94
	8/18/2009	R	O	R		16	29	H	SW	9.1
	9/30/2009	R	O	R	P	13	15	H	NW	120
ET066.00	3/30/2009	R	O	R	P	1	0	LF	NE	30
	4/13/2009	R	O	R	S	2	0	F	NW	<2
ET066.50	3/30/2009	R	O	A	P	3	1	F	NE	48
	4/13/2009	R	O	R	S	3	16	F	NW	<2
	5/19/2009	R	O	R	P	10	6	E	SW	33
	7/27/2009	R	O	R	P	15	5	LE	SE	74
	8/18/2009	R	O	R		17	30	H	SW	<2
	9/30/2009	R	O	R	P	13	18	H	NW	116
ET068.00	3/30/2009	R	O	R	P	3	2	F	NE	52
	4/13/2009	R	O	A	S	3	16	F	NW	<2
	5/19/2009	R	O	A	P	11	24	E	SW	12
	7/27/2009	R	O	A	P	15	4	LE	SE	48
	8/18/2009	R	O	A		16	30	H	SW	8
	9/30/2009	R	O	A	P	13	3	H	NW	40
ET069.00	2/9/2009	R	O	R		-1	28	H	NW	<2
	3/30/2009	R	O	R	P	2	0	F	NE	12
	5/19/2009	R	O	R	P	10	22	E	SW	4
	7/27/2009	R	O	R	P	15	10	L	SE	62
	8/18/2009	R	O	R		17	30	H	SW	6

Station	Date	Strategy	Open Closed	Class	Adversity	Temp	Salinity	Tide	Wind	Col Score
	10/21/2009	R	O	R		7	27	F	NW	<2
ET070.00	2/9/2009	R	O	A		0	30	H	NW	<2
	3/30/2009	R	O	A	P	2	30	F	NE	2
	5/19/2009	R	O	A	P	10	22	E	SW	4
	7/27/2009	R	O	A	P	15	22	L	SE	22
	8/18/2009	R	O	A		17	32	H	SW	2
	9/30/2009	R	O	A	P	14	20	H	NW	68
ET071.00	2/9/2009	R	O	A		-1	28	H	NW	<2
	3/30/2009	R	O	A	P	2	29	F	NE	<2
	5/19/2009	R	O	A	P	10	4	E	SW	2
	7/27/2009	R	O	A	P	15	29	L	SE	4
	8/18/2009	R	O	A		18	30	H	SW	<2
	9/30/2009	R	O	A	P	14	23	H	NW	16
ET073.00	2/9/2009	R	O	A		0	30	H	NW	<2
	3/30/2009	R	O	A	P	2	29	F	NE	2
	5/19/2009	R	O	A	P	11	28	E	SW	2
	7/27/2009	R	O	A	P	15	30	L	SE	<2
	8/18/2009	R	O	A		18	30	HE	SW	6
	9/30/2009	R	O	A	P	14	24	HE	NW	122
ET074.00	2/9/2009	R	O	A		0	30	H	NW	<2
	3/30/2009	R	O	A	P	2	29	F	NE	<2
	5/19/2009	R	O	A	P	11	29	E	SW	<2
	5/27/2009	R	O	A		15	30	F	SE	<2
	7/27/2009	R	O	A	P	14	30	L	SE	<2
	8/18/2009	R	O	A		17	32	HE	SW	<2
	9/30/2009	R	O	A	P	13	29	HE	NW	18
ET077.00	2/9/2009	R	O	A		-1	26	H	NW	<2
	3/30/2009	R	O	A	P	2	3	F	NE	46
	5/19/2009	R	O	A	P	10	8	E	SW	12
	7/27/2009	R	O	A	P	15	28	L	SE	4
	8/18/2009	R	O	A		17	32	HE	SW	<2
	9/30/2009	R	O	A	P	13	30	HE	NW	3.6
ET079.00	2/9/2009	R	C	P		0	28	HF	NW	2
	3/30/2009	R	O	A	P	2	3	F	NE	42
	5/19/2009	R	O	A	P	10	14	E	SW	4
	7/27/2009	R	O	A	P	15	28	L	SE	<2
	8/18/2009	R	O	A		17	31	HE	SW	4
	9/30/2009	R	O	A	P	14	14	HE	NW	520
ET080.00	2/9/2009	R	C	P		-1	28	HF	NW	2
	3/30/2009	R	C	P	P	2	4	F	NE	36
	5/19/2009	R	C	P	P	10	12	E	SW	2
	8/10/2009	R	C	P		12	30	LF	S	2
	8/18/2009	R	C	P		18	30	HE	SW	2
	9/30/2009	R	C	P	P	14	5	HE	NW	860
ET081.00	3/23/2009	R	C	P		1	0	E	NW	8
	3/30/2009	R	C	P	P	1	0	F	NE	114
ET085.00	3/23/2009	R	C	P		2	30	E	NW	<2

Station	Date	Strategy	Open Closed	Class	Adversity	Temp	Salinity	Tide	Wind	Col Score
	3/30/2009	R	C	P	P	2	12	F	NE	54
	5/19/2009	R	C	P	P	11	26	E	SW	2
	8/10/2009	R	C	P		12	10	LF	S	10
	8/18/2009	R	C	P		18	10	HE	SW	16
	9/30/2009	R	C	P	P	14	0	HE	NW	76
ET087.00	5/19/2009	R	O	A	P	11	22	E	SW	<2
	3/23/2009	R	O	A		2	28	E	NW	<2
	3/30/2009	R	O	A	P	2	21	F	NE	<2
ET088.00	5/27/2009	R	O	A		15	28	F	SE	<2
	8/10/2009	R	O	A		12	10	LF	S	8
	8/18/2009	R	O	A		17	30	HE	SW	2
	9/30/2009	R	O	A	P	13	11	HE	NW	240
	3/23/2009	R	O	A		2	28	E	NW	<2
	3/30/2009	R	O	A	P	1	22	F	NE	<2
ET090.00	5/19/2009	R	O	A	P	11	28	E	SW	<2
	8/10/2009	R	O	A		14	27	LF	S	<2
	8/18/2009	R	O	A		17	31	HE	SW	<2
	9/30/2009	R	O	A	P	13	28	HE	NW	14
	2/9/2009	R	O	R		0	30	HE	NW	<2
	3/30/2009	R	O	R	P	1	28	F	NE	<2
ET091.00	5/19/2009	R	O	R	P	11	5	E	SW	100
	8/10/2009	R	O	R		14	28	F	S	2
	8/18/2009	R	O	R		18	31	HE	SW	<2
	9/30/2009	R	O	R	P	14	18	HE	NW	62
	2/9/2009	R	O	A		0	30	HE	NW	<2
	3/30/2009	R	O	A	P	2	28	F	NE	<2
ET095.00	5/19/2009	R	O	A	P	10	28	E	SW	<2
	7/27/2009	R	O	A	P	14	30	LF	SE	<2
	8/18/2009	R	O	A		16	32	E	SW	<2
	9/30/2009	R	O	A	P	13	17	E	NW	4
	2/9/2009	R	O	A		0	30	HE	NW	<2
	3/30/2009	R	O	A	P	2	28	F	NE	8
ET097.00	5/19/2009	R	O	A	P	10	29	E	SW	<2
	7/27/2009	R	O	A	P	14	30	LF	SE	<2
	8/18/2009	R	O	A		16	31	E	SW	6
	9/30/2009	R	O	A	P	13	31	E	NW	<2
	3/16/2009	R	O	A		4	30	LF	N	<2
	4/1/2009	R	O	A	P	4	16	E	CL	<2
ET099.00	5/20/2009	R	O	A		8	30	HE	SE	<2
	7/15/2009	R	O	A		14	30	F	CL	<2
	8/17/2009	R	O	A		15	30	HF	SW	2
	9/29/2009	R	O	A	P	13	26	H	SE	33
ET100.00	3/16/2009	R	O	A		4	30	LF	N	<2
	4/1/2009	R	O	A	P	4	30	LE	CL	<2
	5/20/2009	R	O	A		8	30	HE	SE	<2
	7/15/2009	R	O	A		13	30	F	CL	<2
	8/17/2009	R	O	A		15	31	HF	SW	<2

Station	Date	Strategy	Open Closed	Class	Adversity	Temp	Salinity	Tide	Wind	Col Score
	9/29/2009	R	O	A	P	13	32	H	SE	3.6
ET100.10	3/23/2009	R	O	R		-1	26	H	NW	2
	4/13/2009	R	O	R	S	3	28	F	NW	<2
	3/23/2009	R	O	R		-1	26	H	NW	4
	4/13/2009	R	O	R	S	3	28	F	NW	<2
ET100.20	5/20/2009	R	O	R		9	23	HE	SE	2
	7/15/2009	R	O	R		18	30	F	NW	<2
	8/17/2009	R	O	R		15	30	HF	SW	4
	9/29/2009	R	O	R	P	13	20	H	SE	1580
ET101.00	3/16/2009	R	O	A		3	30	LF	N	<2
	4/1/2009	R	O	A	P	4	30	LE	CL	<2
	3/16/2009	R	O	A		4	30	F	N	<2
	4/1/2009	R	O	A	P	4	30	LE	CL	<2
ET102.00	5/20/2009	R	O	A		9	30	HE	SE	<2
	7/15/2009	R	O	A		12	30	F	SW	<2
	8/17/2009	R	O	A		15	30	HF	SW	4
	9/29/2009	R	O	A	P	13	26	H	SE	240
	3/23/2009	R	O	A		2	31	H	NW	<2
	4/13/2009	R	O	A	S	3	26	F	NW	4
ET103.10	5/20/2009	R	O	A		9	30	HE	SE	<2
	7/15/2009	R	O	A		19	31	F	NW	2
	8/17/2009	R	O	A		14	30	HF	SW	2
	9/29/2009	R	O	A	P	13	29	H	SE	12
	3/23/2009	R	O	A		2	32	H	NW	<2
	4/13/2009	R	O	A	S	3	26	F	NW	4
ET103.20	5/20/2009	R	O	A		9	30	HE	SE	<2
	7/15/2009	R	O	A		18	30	F	NW	<2
	8/17/2009	R	O	A		15	30	HF	SW	2
	9/29/2009	R	O	A	P	13	29	H	SE	6
	3/16/2009	R	C	P		4	30	F	N	<2
	4/1/2009	R	C	P	P	5	30	LE	CL	<2
ET104.00	5/20/2009	R	C	P		9	30	E	SE	<2
	7/15/2009	R	C	P		12	30	F	SW	<2
	8/17/2009	R	C	P		15	31	HF	SW	<2
	9/29/2009	R	C	P	P	12	27	H	SE	>1600

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