



**GROWING AREA WQ
Damariscotta River
Boothbay, Edgecomb, Newcastle and Damariscotta**

ANNUAL REVIEW for 2007

Report Date: 06-12-2008

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APPROVAL

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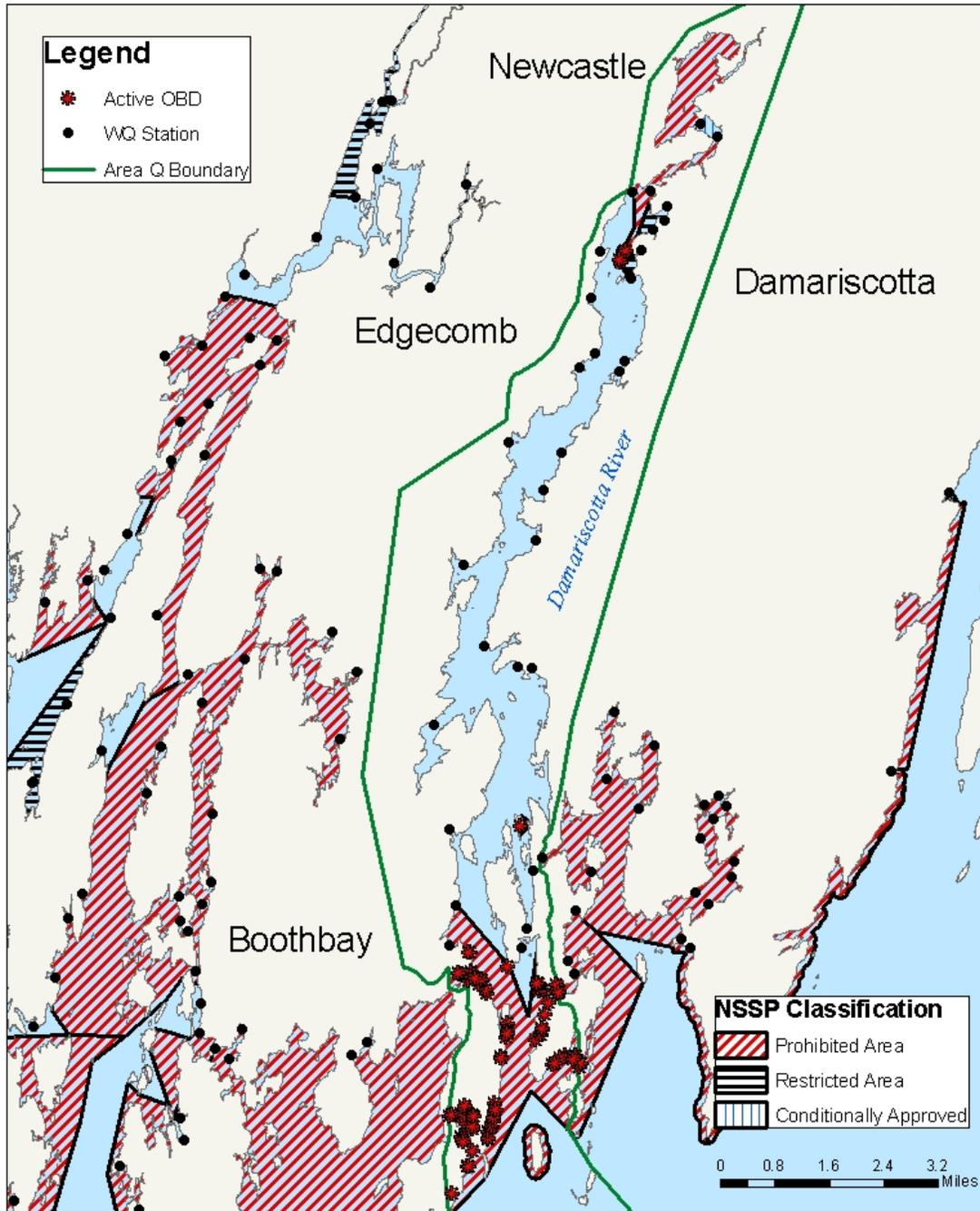
Figure 1. Growing Area WQ



Maine Department of Marine Resources Growing Area WQ - Damariscotta River



05/12/08





Executive Summary

Growing Area WQ is the Damariscotta River estuary, located in Lincoln County along the midcoast region of Maine. The growing area boundary begins at Linnekin Neck, East Boothbay; includes the Gut, South Bristol and ends at the southeast tip of Rutherford Island, South Bristol (including Turnip and Thrumcap Islands). A description of the upland boundary can be found in the central files of the Department of Marine Resources in West Boothbay Harbor. The river flows through the following towns: Nobleboro, Damariscotta, Newcastle, South Bristol, Edgecomb, Bristol and Boothbay. The growing area's head of tide is located below the outlet of Damariscotta Lake on the town line between Newcastle and Nobleboro and the river empties into the Atlantic Ocean 15 miles south of the two towns. A comprehensive map of the growing area can be found on page 5, detailed maps of the upper, middle and lower river can be found on pages 12-14.

Growing Area WQ had no significant changes in pollution sources during the review period. Existing pollution sources include two municipal waste water treatment plants, two marinas, six boatyards, and multiple public-access conservation land parcels. In 2007, there were 87 active over board discharges (OBDs) in area WQ; no OBDs were removed during the review period.

In 2007, no sampling stations were added or removed in growing area WQ. In 2007, two reclassifications occurred: 1) station 12.5 was reclassified from approved to prohibited in order to better monitor a classification boundary for a prohibited area; and 2) station 32.0 was reclassified from conditionally restricted to conditionally approved due to improved water quality scores. Overall, there has been no notable change in the water quality in area WQ during the review period, and no classification changes are required at this time.

The next triennial report for growing area WQ is due in 2008; the next sanitary survey report is due in 2014.

Current Classifications

Shellfish growing area WQ currently has areas classified as:

Approved:

- Middle Damariscotta River; 20 sample stations

Conditionally Approved

- Maine DMR Area 23-A , Area between the Narrows and US Route 1 (Newcastle, Damariscotta), due to any malfunction at the Great Salt Bay Sewage Treatment Plant (Mills facility); 1 sample station

Restricted

- Area 23-A, Days Cove, (Damariscotta); 3 sample stations
- Area 23-A, Huston Cove, (Damariscotta); 3 sample stations



Prohibited

- Area 23-A, Great Salt Bay, (Newcastle, Nobleboro, Damariscotta), due to Great Salt Bay Sewage treatment plant (STP); 1 sample station
- Area 23-A, Damariscotta River south of Route 1 bridge (Newcastle, Damariscotta); 2 sample stations
- Area 23-C, Farmers Island, (South Bristol), due to OBD; no sample stations associated
- Area 23-C, Lower Damariscotta River (Boothbay and South Bristol); due to OBDs and excessive boat activity; 2 sample stations

For a complete list of Legal Notices, please visit Maine DMR website:

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

Activity During Review Period

Based on the recommendation made in the 2006 Triennial report for area WQ, the closure boundary line in Pollution Area 23-C (formerly 24-A) was moved in order to monitor the extent of the restricted water quality impact in an area which is currently classified as prohibited due to a presence of over board discharges (OBDs), marinas and boatyards. As a result of this boundary line move, station WQ 12.50 was reclassified from approved to prohibited on March 3, 2007.

Based on a recommendation made in the 2006 triennial report for area WQ, the conditionally restricted area, located in Pollution Area 23-A (formerly 24-A), has been reclassified to conditionally approved based on the proper function of the Great Salt Bay Mills Facility. The reason for this reclassification was based on improved water quality scores at sample stations WQ31.5 and WQ32.0. Due to this change, sample station WQ 32.0 has been reclassified from conditionally restricted to conditionally approved. The text of the rule was amended on March 1, 2007.

On April 6, 2007, the upper portion of the Damariscotta River, Pollution Area 23-A (formerly 24-A) was closed due to a sewage spill from a pump station for the Great Salt Bay Sewage Treatment Plant (STP), which occurred on April 6, 2007. The closure included approved, conditionally approved and restricted areas in the Upper portion of the river. Water samples were collected from this area on 4/29/07, fecal coliform scores from all stations met their current classification standard, and the closure was repealed on May 2, 2007.

On July 5, 2007, the restricted and conditionally approved areas in Pollution Area 23-A (formerly 24-A) were closed due to an oil spill, which occurred on July 2, 2007 in Damariscotta. Clam meats were collected and analyzed using sensory analysis ("sniff test"). The closure for the approved and restricted areas was repealed on July 7, 2007; the closure for the conditionally approved area was repealed in July 13, 2007.



Current Management Plan for Conditional Area

There is one conditional area located in growing area WQ.

Pollution Area 23-A: Damariscotta River Conditional Area; due to Great Salt Bay Sewage Treatment Plant.

A copy of the management plan for this conditional area can be found in DMR central files.

Current Annual Review of Management Plan for Conditional Area

On April 6, 2007, the conditionally approved area (Pollution Area 23A) closed due to an overflow at a pump station. A re-opening sample was collected on April 30, 2007. The sample met approved criteria (as did the shellfish sample) and the rule was amended on May 2, 2007.

For a complete review, please see appendix D.

Water Quality Review and Discussion

Table 1 lists all active stations in Growing Area WQ, with their respective Geomean and P90 calculations for 2007. Data for conditionally approved station WQ 32 reflects only the open status. Please refer to Appendix E 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 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 Appendix F.

Table 1. Growing Area WQ Geomean and P90 Calculations

Station	Class	Count	MFCNT	Geo_Mean	SDV	MAX	P90	APPD_STD	RESTR_STD
WQ012.00	P	30	10	9.5	0.83	1200	108.0	42	245
WQ012.50	P	30	9	4.0	0.50	460	17.1	43	250
WQ013.00	A	30	9	5.7	0.51	460	25.8	43	250
WQ015.00	A	30	9	6.3	0.61	460	38.4	43	250
WQ017.00	A	30	9	5.2	0.60	460	30.6	43	250
WQ018.00	A	30	10	3.0	0.27	43	6.6	42	245
WQ020.00	A	30	10	2.9	0.16	9.1	4.6	42	245
WQ021.00	A	30	10	2.9	0.19	9.1	5.2	42	245
WQ022.00	A	30	10	3.9	0.30	23	9.5	42	245
WQ023.00	A	30	10	4.3	0.35	23	12.3	42	245
WQ024.00	A	30	10	4.9	0.43	43	17.4	42	245
WQ031.50	P	30	14	4.1	0.36	23	11.9	40	226
WQ032.00	CA	30	14	6.4	0.47	93	25.4	40	226
WQ034.00	P	30	9	12.9	0.64	460	84.3	43	250



Station	Class	Count	MFCNT	Geo_Mean	SDV	MAX	P90	APPD_STD	RESTR_STD
WQ035.00	R	30	10	8.9	0.57	140	48.4	42	245
WQ036.00	R	30	10	9.4	0.73	1200	79.2	42	245
WQ037.00	R	30	10	8.0	0.72	1100	66.5	42	245
WQ039.00	P	30	9	4.2	0.30	23	10.0	43	250
WQ040.00	R	30	11	6.6	0.64	1200	43.7	41	240
WQ041.00	R	30	10	5.4	0.38	43	16.7	42	245
WQ042.00	R	30	9	3.7	0.42	240	12.7	43	250
WQ043.00	A	30	9	3.0	0.26	43	6.3	43	250
WQ044.00	A	30	9	3.7	0.28	43	8.4	43	250
WQ045.00	A	30	9	2.9	0.20	23	5.1	43	250
WQ046.50	A	30	9	3.0	0.27	68	6.6	43	250
WQ047.00	A	30	9	3.2	0.28	36	7.3	43	250
WQ048.00	A	30	9	2.9	0.15	12	4.5	43	250
WQ049.00	A	30	9	2.8	0.16	9.1	4.5	43	250
WQ051.00	A	30	9	2.6	0.10	3.6	3.5	43	250
WQ052.00	A	30	9	5.3	0.52	150	24.2	43	250
WQ054.00	A	30	9	2.9	0.14	9.1	4.3	43	250
WQ055.00	A	30	9	3.3	0.40	240	10.9	43	250
WQ057.00	A	30	9	2.7	0.11	5.5	3.8	43	250
WQ058.00	P	30	9	2.8	0.15	9.1	4.3	43	250

All active stations in approved and restricted areas were sampled 6 times in 2007, following the systematic random sampling standard. All stations classified as prohibited were sampled at least 6 times throughout the review year. Additional samples were collected for selected flood stations under adverse pollution conditions, and the fecal coliform scores obtained under these conditions were not used for calculating the station's P90 scores. Station WQ 32.00, located in the conditionally approved area, was sampled 8 times in the open status (see Conditional Area Management Plan Review section for more details). Table 2 shows the number of samples taken during the 2007 sampling year; appendix G shows all data collected in 2007 for all active stations during both open and closed status.

Table 2. Sample Collection Counts for 2007 Review Year for Growing Area WQ

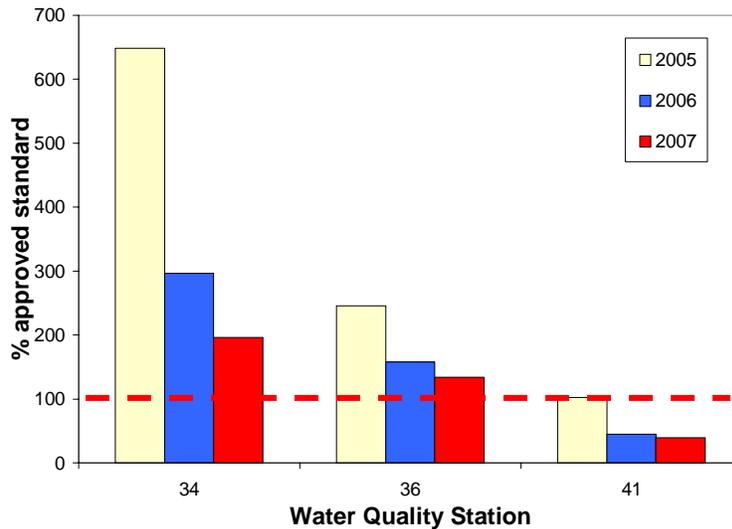
Station	Area Classification	Status		Total	Comments
		Open	Closed		
WQ012.00	P		6	6	
WQ012.50	P	4	2	6	Reclassified from A to P on 3/17/07
WQ013.00	A	6		6	
WQ015.00	A	6		6	
WQ017.00	A	6		6	
WQ018.00	A	6	7	13	Flood station
WQ020.00	A	6		6	
WQ021.00	A	6		6	
WQ022.00	A	6	9	15	Flood station
WQ023.00	A	6	2	8	2 Adverse condition samples
WQ024.00	A	6	2	8	2 Adverse condition samples
WQ031.50	P		10	10	
WQ032.00	CA	9	1	10	Reclassified from CR to CA on 3/1/07



Station	Area Classification	Status		Total	Comments
		Open	Closed		
WQ034.00	P		14	14	Flood station
WQ035.00	R	5	1	6	Sampled once during closed status
WQ036.00	R	5	1	6	Sampled once during closed status
WQ037.00	R	5	1	6	Sampled once during closed status
WQ039.00	P		6	6	
WQ040.00	R	5	1	6	Sampled once during closed status
WQ041.00	R	5	1	6	Sampled once during closed status
WQ042.00	R	4	2	6	
WQ043.00	A	6	2	8	2 Adverse Samples
WQ044.00	A	6		6	
WQ045.00	A	6	2	8	2 Adverse Samples
WQ046.50	A	6		6	
WQ047.00	A	6		6	
WQ048.00	A	6		6	
WQ049.00	A	6	8	14	Flood Station
WQ051.00	A	6		6	
WQ052.00	A	6		6	
WQ054.00	A	6		6	
WQ055.00	A	6		6	
WQ057.00	A	6		6	
WQ058.00	P		6	6	

In 2007, all active stations continued to meet the NSSP classification criteria currently assigned to them. Over the past three years, there has been no notable change in water quality at all stations, except WQ 34, 36, and 41, where water quality has improved (Figure 2 and Appendix H). No classification changes are required at this time.

Figure 2. Water quality trends at stations with improving water quality scores. Stations with scores above 100 percent do not meet approved standard.





Shoreline Survey Activity

Growing Area WQ has had no significant changes in pollution sources during the review period. Field observations were made during regularly scheduled random sampling runs, as well as during volunteer site certifications, new staff training runs, and flood sampling. A drive through survey was conducted by DMR on May 7, 2008 and the following items of interest were noted:

A new 5 lot subdivision off River Road, Newcastle is called Dodge Cove Landing. The site plan includes a waterfront common area on the Damariscotta River with a 250' dock with floats and moorings. This is a deep water (4.5' at low tide) mooring area. There are 3 lots which have direct water frontage. The maximum number of households that will go in this subdivision is eight. There are no houses in the subdivision at this time. The drainage for half of the property at the Y in the road flows towards the Damariscotta River to an approved area and it is a steep slope. There is a perennial stream that flows down the hill to the water south of the dock. The groundwater runoff has been channeled to the water via culverts.

A second new 4 lot subdivision, called River Run, is going in River Run Road, Edgecomb. The road leading to the construction site was accessible, but there were no signs to give more information regarding the subdivision.

Currently there are no sample stations that monitor the new subdivisions. Since the stormwater and groundwater has been channeled into culverts to the shore, we will evaluate the need to add new stations once the construction of houses begins to take place.

Aquaculture/Wet Storage Activity

Currently, there are 30 active aquaculture lease sites on the Damariscotta River: 22 are shellfish leases, and 8 are limited purpose leases (Appendix I). One experimental lease expired on 6/15/2007.

There are 6 wet storage sites on the Damariscotta River. A list of current permit holders can be accessed on the DMR website:

http://www.maine.gov/dmr/rm/public_health/wetstorage_bulktagging_permits.htm.

Classification Changes Required

No classification change is required.



Summary

Water quality in growing area WQ continues to support the current classification under the NSSP. At most stations, P90 scores have remained steady over the past three review years. No evident upward trends in fecal coliform scores have occurred, while at three stations, improving water quality has been observed over the past three review years. As a result of water quality review in this report, no classification changes are necessary at this time.



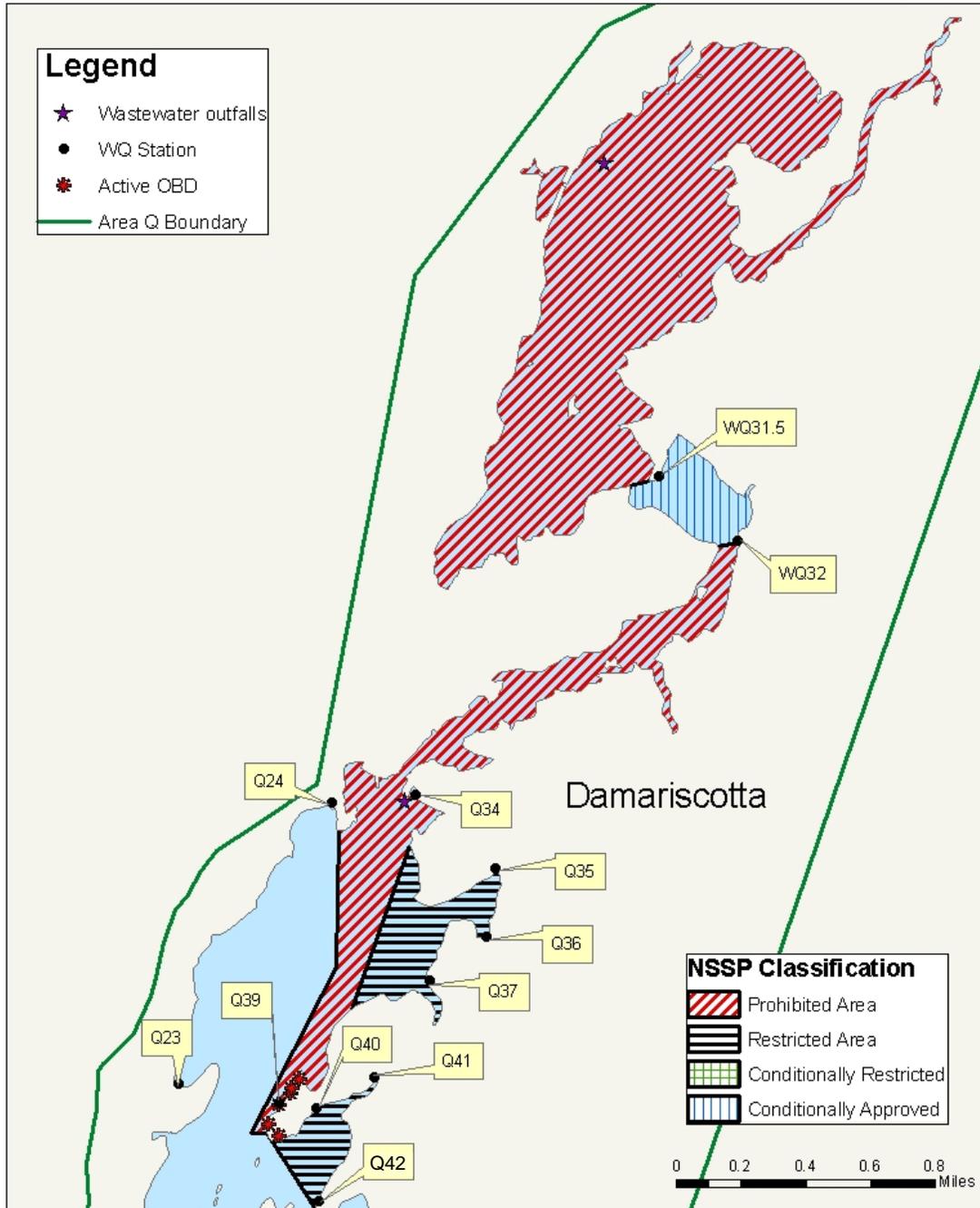
Appendix A. Upper Damariscotta River



Maine Department of Marine Resources Upper Damariscotta River



05/20/08





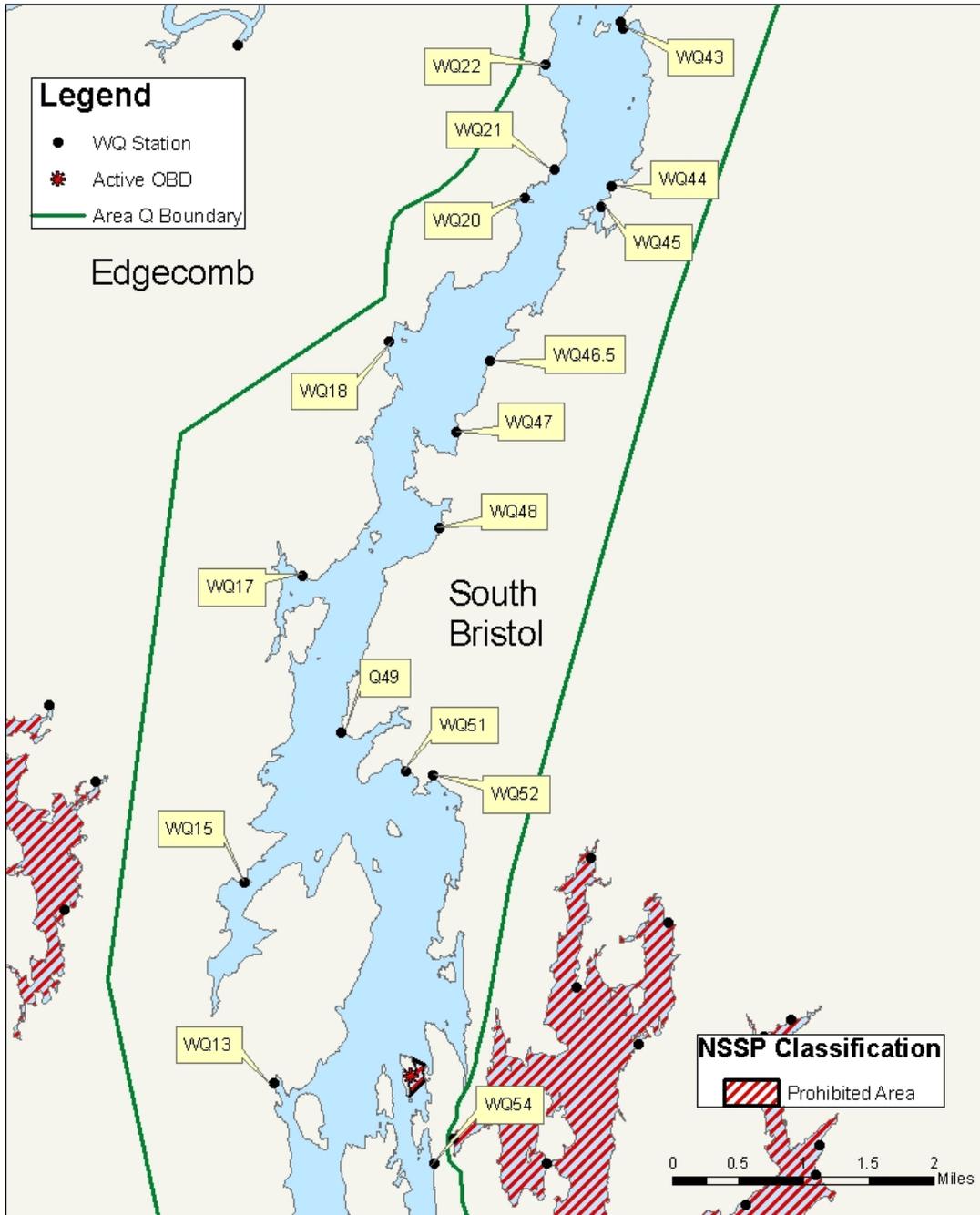
Appendix B. Middle Damariscotta River



Maine Department of Marine Resources Middle Damariscotta River



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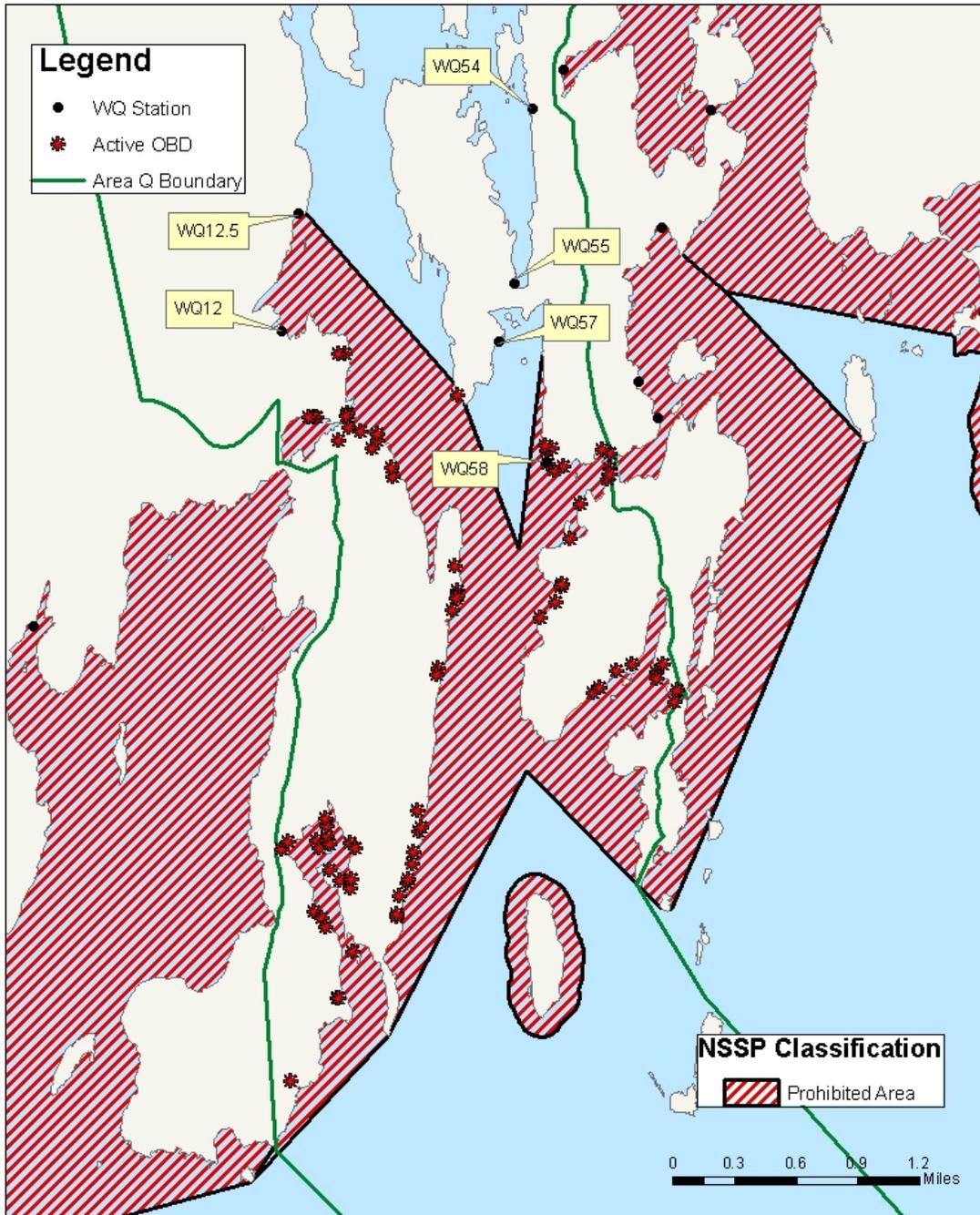
Appendix C. Lower Damariscotta River



Maine Department of Marine Resources Lower Damariscotta River



05/20/08





Appendix D. Annual Review of Conditional Area Management Plan

Damariscotta River Conditional Area C23-A Growing Area WQ

Scope

A portion of Growing Area WQ is conditionally approved, based on the proper functioning of the Great Salt Bay STP. The area shall be closed during any failure event at the Great Salt Bay STP (Mills Facility). Water quality at this conditional area is currently monitored by stations, WQ 31.5 and 32, and must be sampled monthly throughout its open status. Based on improved water quality scores, the area was reclassified from conditionally restricted to conditionally approved on March 1, 2007.

Compliance with management plan

On April 6, 2007, DMR was notified of a sewage spill at a pump station the conditionally approved area (Pollution Area 23A) closed due to an overflow at a pump station. A re-opening sample was collected on April 30, 2007. The sample met approved criteria (as did the shellfish sample) and the rule was amended on May 2, 2007. No sample was collected in May 2007; monthly samples were collected June through December. DMR has noted this issue and will monitor the conditional area monthly, while in the open status, in 2008.

Adequacy of reporting and cooperation of involved persons

In the event that a conditional area closure must be implemented, the management plan for this conditional area requires immediate reporting by the Great Salt Bay Sanitary District treatment plant. In 2007, the cooperation between all involved parties was excellent and all necessary notifications were received at appropriate times.

Compliance with approved growing area criteria

The annual review of the water quality for all active stations in this conditional area met approved standards in the open status.

Water sampling compliance history

After the reclassification from conditionally restricted to conditionally approved on March 1, 2007, station WQ32.0 was sampled seven times in the open status. The station was not sampled during the month of May. DMR has noted this issue and will sample the conditional area stations monthly, while in the open status, in 2008.

Analysis-Recommendations

No recommendations for changes to the current management plan or conditional area classification status are needed at this time.



Appendix E. 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 F. Transitioning to Membrane Filtration for Seawater and Pollution Source Samples

The Maine Department of Marine Resources has switched to a Membrane Filtration (MF) method 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.

During this transition, the P90 standard for approved and restricted classification will migrate from the MPN standard to the MF standard. 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 or "other" which 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 no data recorded in any of the columns except the time which 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.



Appendix G. Data collected for all active water quality sample station in 2007

Station	Date	Collector	Tide	Water Temp	Sample Strategy	ADV	Status	Class	FECOL	A1COL
WQ012.00	1/22/2007	LL	F	2	R	-	C	P	-	<2.0
WQ012.00	3/26/2007	LL	E	3	R	-	C	P	-	<2.0
WQ012.00	5/8/2007	JB	LF	6	R	-	C	P	-	<2.0
WQ012.00	7/10/2007	EXT	E	11	R	-	C	P	-	104
WQ012.00	8/27/2007	EXT	E	18	R	-	C	P	-	110
WQ012.00	10/22/2007	RMO	L	13	R	-	C	P	-	<2.0
WQ012.50	1/22/2007	LL	F	2	R	-	O	A	-	<2.0
WQ012.50	3/26/2007	LL	E	3	R	-	O	A	-	<2.0
WQ012.50	5/8/2007	JB	F	10	R	-	O	A	-	<2.0
WQ012.50	7/10/2007	EXT	E	11	R	-	O	A	-	6
WQ012.50	8/27/2007	EXT	E	12	R	-	C	P	-	2
WQ012.50	10/22/2007	RMO	L	10	R	-	C	P	-	<2.0
WQ013.00	1/22/2007	LL	F	2	R	-	O	A	-	<2.0
WQ013.00	3/26/2007	LL	E	3	R	-	O	A	-	28
WQ013.00	5/8/2007	JB	F	10	R	-	O	A	-	<2.0
WQ013.00	7/10/2007	EXT	E	12	R	-	O	A	-	8
WQ013.00	8/27/2007	EXT	E	16	R	-	O	A	-	14
WQ013.00	10/22/2007	RMO	LE	13	R	-	O	A	-	2
WQ015.00	1/22/2007	LL	F	-1	R	-	O	A	-	<2.0
WQ015.00	5/8/2007	JB	F	13	R	-	O	A	-	<2.0
WQ015.00	5/30/2007	JB	F	11	R	-	O	A	-	<2.0
WQ015.00	7/10/2007	EXT	E	14	R	-	O	A	-	9.1
WQ015.00	8/27/2007	EXT	E	17	R	-	O	A	-	2
WQ015.00	10/22/2007	RMO	LE	16	R	-	O	A	-	2
WQ017.00	1/22/2007	LL	F	0	R	-	O	A	-	2
WQ017.00	5/8/2007	JB	F	12	R	-	O	A	-	<2.0
WQ017.00	5/30/2007	JB	F	11	R	-	O	A	-	<2.0
WQ017.00	7/10/2007	EXT	E	14	R	-	O	A	-	8
WQ017.00	8/27/2007	EXT	E	18	R	-	O	A	-	<2.0
WQ017.00	10/23/2007	MHE	H	12	R	-	O	A	-	8
WQ018.00	1/22/2007	LL	F	-2	R	N	O	A	-	<2.0
WQ018.00	3/19/2007	EXT	E	-2	A	F	C	A	-	<2.0
WQ018.00	3/20/2007	EXT	F	-2	A	FW	C	A	-	5.5
WQ018.00	3/21/2007	EXT	F	0	A	FN	C	A	-	<2.0
WQ018.00	3/26/2007	LL	E	3	R	-	O	A	-	<2.0
WQ018.00	4/19/2007	EXT	F	1	A	F	C	A	-	2
WQ018.00	4/20/2007	EXT	F	7	A	F	C	A	-	<2.0
WQ018.00	5/7/2007	APO	LE	9	R	-	O	A	-	<2.0
WQ018.00	7/9/2007	DBA	E	15	R	P	O	A	-	<2.0
WQ018.00	8/27/2007	EXT	E	19	R	-	O	A	-	<2.0
WQ018.00	10/15/2007	EXT	L	10	A	F	C	A	-	<2.0



Station	Date	Collector	Tide	Water Temp	Sample Strategy	ADV	Status	Class	FECOL	A1COL
WQ018.00	10/16/2007	EXT	L	9	A	F	C	A	-	<2.0
WQ018.00	10/22/2007	APO	HE	12	R	-	O	A	-	2
WQ020.00	1/22/2007	LL	F	-1	R	-	O	A	-	2.7
WQ020.00	3/26/2007	LL	E	3	R	-	O	A	-	<2.0
WQ020.00	5/8/2007	JB	F	20	R	-	O	A	-	<2.0
WQ020.00	7/9/2007	DBA	E	15	R	P	O	A	-	2
WQ020.00	8/27/2007	EXT	E	18	R	-	O	A	-	9.1
WQ020.00	10/22/2007	APO	HE	12	R	-	O	A	-	<2.0
WQ021.00	1/22/2007	LL	F	-1	R	-	O	A	-	2
WQ021.00	3/26/2007	LL	E	3	R	W	O	A	-	<2.0
WQ021.00	5/7/2007	APO	LE	9	R	-	O	A	-	<2.0
WQ021.00	7/9/2007	DBA	E	15	R	P	O	A	-	<2.0
WQ021.00	8/27/2007	EXT	E	19	R	-	O	A	-	2
WQ021.00	10/22/2007	APO	H	12	R	-	O	A	-	<2.0
WQ022.00	3/19/2007	EXT	E	-3	A	FN	C	A	-	<2.0
WQ022.00	3/20/2007	EXT	F	0	A	FN	C	A	-	<2.0
WQ022.00	3/21/2007	EXT	F	-1	A	FNW	C	A	-	<2.0
WQ022.00	4/19/2007	EXT	F	1	A	F	C	A	-	<2.0
WQ022.00	4/20/2007	EXT	F	6	A	FN	C	A	-	2
WQ022.00	4/24/2007	JB	E	7	A	N	C	A	-	<2.0
WQ022.00	4/30/2007	JB	E	6	A	P	C	A	-	2
WQ022.00	5/7/2007	APO	LE	11	R	-	O	A	-	<2.0
WQ022.00	5/30/2007	JB	F	13	R	-	O	A	-	<2.0
WQ022.00	7/9/2007	DBA	E	15	R	P	O	A	-	<2.0
WQ022.00	7/25/2007	EXT	HE	20	R	-	O	A	-	<2.0
WQ022.00	8/27/2007	EXT	E	21	R	-	O	A	-	11
WQ022.00	10/15/2007	EXT	H	10	A	F	C	A	-	<2.0
WQ022.00	10/16/2007	EXT	HF		A	F	C	A	-	<2.0
WQ022.00	10/22/2007	APO	H	12	R	-	O	A	-	<2.0
WQ023.00	4/24/2007	JB	E	7	A	N	C	A	-	4
WQ023.00	4/30/2007	JB	E	6	A	P	C	A	-	<2.0
WQ023.00	5/8/2007	JB	F	15	R	-	O	A	-	2
WQ023.00	5/30/2007	JB	F	15	R	-	O	A	-	2
WQ023.00	7/9/2007	DBA	E	17	R	P	O	A	-	<2.0
WQ023.00	7/25/2007	EXT	HE	20	R	-	O	A	-	<2.0
WQ023.00	8/27/2007	EXT	HE	21	R	-	O	A	-	<2.0
WQ023.00	10/22/2007	APO	H	12	R	-	O	A	-	2
WQ024.00	1/22/2007	LL	HF	-1	R	W	O	A	-	<2.0
WQ024.00	3/26/2007	LL	LE	3	R	W	O	A	-	2
WQ024.00	4/24/2007	JB	E	8	A	-	C	A	-	<2.0
WQ024.00	4/30/2007	JB	E	6	A	PW	C	A	-	4
WQ024.00	5/7/2007	APO	LE	8	R	-	O	A	-	<2.0
WQ024.00	7/9/2007	DBA	E	17	R	P	O	A	-	<2.0
WQ024.00	8/27/2007	EXT	HE	21	R	-	O	A	-	12
WQ024.00	10/22/2007	APO	H	12	R	-	O	A	-	2



Station	Date	Collector	Tide	Water Temp	Sample Strategy	ADV	Status	Class	FECOL	A1COL
WQ031.50	1/9/2007	EXT	L	3	R	-	C	P	-	6
WQ031.50	4/10/2007	EXT	LF	1	R	-	C	P	-	<2.0
WQ031.50	4/30/2007	EXT	H	6	R	P	C	P	-	<2.0
WQ031.50	6/5/2007	JB	F	15	R	P	C	P	-	4
WQ031.50	7/31/2007	LL	F	28	R	-	C	P	-	<2.0
WQ031.50	8/27/2007	FP	HF	21	R	-	C	P	-	2
WQ031.50	9/18/2007	EXT	L	16	R	-	C	P	-	<2.0
WQ031.50	10/22/2007	EXT	L	11	R	-	C	P	-	2
WQ031.50	11/5/2007	EXT	E	7	R	P	C	P	-	12
WQ031.50	12/6/2007	EXT	F	0	R	W	C	P	-	<2.0
WQ032.00	1/9/2007	EXT	L	3	R	-	O	CR	-	18
WQ032.00	4/10/2007	EXT	F	1	R	-	C	CA	-	<2.0
WQ032.00	4/30/2007	EXT	H	6	R	P	C	CA	-	4
WQ032.00	6/5/2007	JB	F	15	R	P	O	CA	-	38
WQ032.00	7/31/2007	LL	F	25	R	-	O	CA	-	11
WQ032.00	8/27/2007	FP	H	21	R	-	O	CA	-	5.7
WQ032.00	9/18/2007	EXT	LE	15	R	-	O	CA	-	4
WQ032.00	10/22/2007	EXT	L	14	R	-	O	CA	-	<2.0
WQ032.00	11/5/2007	EXT	E	7	R	P	O	CA	-	22
WQ032.00	12/6/2007	EXT	HF	-1	R	-	O	CA	-	2
WQ034.00	3/19/2007	EXT	F	-3	A	F	C	P	-	4
WQ034.00	3/20/2007	EXT	F	-3	A	F	C	P	-	14
WQ034.00	3/21/2007	EXT	F	-4	A	F	C	P	-	<2.0
WQ034.00	4/10/2007	EXT	LF	0	R	-	C	P	-	<2.0
WQ034.00	4/19/2007	EXT	F	0	A	F	C	P	-	<2.0
WQ034.00	4/20/2007	EXT	L	0	A	F	C	P	-	<2.0
WQ034.00	4/30/2007	EXT	H	6	R	P	C	P	-	6
WQ034.00	6/5/2007	JB	F	13	R	P	C	P	-	16
WQ034.00	7/31/2007	LL	HE	25	R	-	C	P	-	12
WQ034.00	9/18/2007	EXT	L	15	R	-	C	P	-	6
WQ034.00	10/15/2007	EXT	LF	10	A	F	C	P	-	<2.0
WQ034.00	10/16/2007	EXT	L	10	A	F	C	P	-	2
WQ034.00	10/17/2007	MHE	L	10	A	F	C	P	-	<2.0
WQ034.00	12/6/2007	EXT	HE	-1	R	-	C	P	-	6
WQ035.00	4/10/2007	EXT	F	5	R	N	C	R	-	2
WQ035.00	4/30/2007	EXT	H	6	R	P	O	R	-	35
WQ035.00	6/5/2007	JB	F	18	R	P	O	R	-	140
WQ035.00	7/31/2007	LL	H	26	R	-	O	R	-	12
WQ035.00	9/18/2007	EXT	F	18	R	-	O	R	-	2
WQ035.00	12/6/2007	EXT	HE	-1	R	-	O	R	-	<2.0
WQ036.00	4/10/2007	EXT	F	2	R	N	C	R	-	380
WQ036.00	4/30/2007	EXT	H	7	R	P	O	R	-	15
WQ036.00	6/5/2007	JB	F	16	R	P	O	R	-	5.5
WQ036.00	7/31/2007	LL	H	27	R	-	O	R	-	<2.0
WQ036.00	9/18/2007	EXT	F	18	R	-	O	R	-	<2.0
WQ036.00	12/6/2007	EXT	HE	-2	R	-	O	R	-	8



Station	Date	Collector	Tide	Water Temp	Sample Strategy	ADV	Status	Class	FECOL	A1COL
WQ037.00	4/10/2007	EXT	LF	3	R	-	C	R	-	<2.0
WQ037.00	4/30/2007	EXT	H	7	R	P	O	R	-	2
WQ037.00	6/5/2007	JB	F	13	R	P	O	R	-	16
WQ037.00	7/31/2007	LL	H	26	R	-	O	R	-	50
WQ037.00	9/18/2007	EXT	F	17	R	-	O	R	-	<2.0
WQ037.00	12/6/2007	EXT	HE	-2	R	-	O	R	-	<2.0
WQ039.00	4/10/2007	EXT	F	1	R	-	C	P	-	<2.0
WQ039.00	4/30/2007	EXT	HE	6	R	P	C	P	-	6
WQ039.00	6/5/2007	JB	F	13	R	P	C	P	-	13
WQ039.00	7/31/2007	LL	HE	23	R	-	C	P	-	10
WQ039.00	9/18/2007	EXT	F	16	R	-	C	P	-	2
WQ039.00	12/6/2007	EXT	HE	-2	R	-	C	P	-	<2.0
WQ040.00	4/10/2007	EXT	F	4	R	-	C	R	-	<2.0
WQ040.00	4/30/2007	EXT	HE	6	R	P	O	R	-	<2.0
WQ040.00	6/5/2007	JB	F	15	R	P	O	R	-	10
WQ040.00	7/31/2007	LL	HE	24	R	-	O	R	-	4
WQ040.00	9/18/2007	EXT	F	22	R	-	O	R	-	4
WQ040.00	12/6/2007	EXT	HE	-2	R	-	O	R	-	<2.0
WQ041.00	4/30/2007	EXT	H	6	R	P	O	R	-	7.3
WQ041.00	6/5/2007	JB	F	18	R	P	O	R	-	15
WQ041.00	6/25/2007	LL	HE	16	R	-	O	R	-	2
WQ041.00	7/31/2007	LL	HE	28	R	-	O	R	-	2
WQ041.00	9/18/2007	EXT	F	23	R	-	O	R	-	8
WQ041.00	12/6/2007	EXT	HE	-2	R	-	O	R	-	<2.0
WQ042.00	4/10/2007	EXT	F	1	R	-	C	R	-	<2.0
WQ042.00	4/30/2007	EXT	HE	6	R	P	O	R	-	9.1
WQ042.00	6/5/2007	JB	HF	13	R	P	O	R	-	10
WQ042.00	7/31/2007	LL	H	23	R	-	O	R	-	<2.0
WQ042.00	9/18/2007	EXT	LF	15	R	-	O	R	-	<2.0
WQ042.00	12/6/2007	EXT	E	0	R	-	O	R	-	<2.0
WQ043.00	1/22/2007	LL	H		R	-	O	A	-	<2.0
WQ043.00	3/26/2007	LL	LF	3	R	-	O	A	-	<2.0
WQ043.00	4/24/2007	JB	E	7	A	-	C	A	-	<2.0
WQ043.00	4/30/2007	JB	E	5	A	P	C	A	-	<2.0
WQ043.00	5/8/2007	JB	F	13	R	-	O	A	-	<2.0
WQ043.00	7/9/2007	DBA	E	15	R	P	O	A	-	<2.0
WQ043.00	8/27/2007	EXT	HE	18	R	-	O	A	-	2
WQ043.00	10/22/2007	APO	E	12	R	-	O	A	-	<2.0
WQ044.00	5/7/2007	APO	L	9	R	-	O	A	-	<2.0
WQ044.00	5/30/2007	JB	E	13	R	-	O	A	-	<2.0
WQ044.00	7/9/2007	DBA	E	15	R	P	O	A	-	2
WQ044.00	7/25/2007	EXT	HE	18	R	-	O	A	-	<2.0
WQ044.00	8/27/2007	EXT	HE	18	R	-	O	A	-	2
WQ044.00	10/22/2007	APO	HE	11	R	-	O	A	-	<2.0



Station	Date	Collector	Tide	Water Temp	Sample Strategy	ADV	Status	Class	FECOL	A1COL
WQ045.00	3/26/2007	LL	LE	3	R	-	O	A	-	<2.0
WQ045.00	4/24/2007	JB	E	7	A	N	C	A	-	34
WQ045.00	4/30/2007	JB	E	5	A	P	C	A	-	4
WQ045.00	5/7/2007	APO	L	9	R	-	O	A	-	<2.0
WQ045.00	5/30/2007	JB	E	13	R	-	O	A	-	<2.0
WQ045.00	7/9/2007	DBA	E	15	R	P	O	A	-	2
WQ045.00	8/27/2007	EXT	H	17	R	-	O	A	-	2
WQ045.00	10/22/2007	APO	HE	11	R	-	O	A	-	<2.0
WQ046.50	1/22/2007	LL	H	-1	R	-	O	A	-	<2.0
WQ046.50	3/26/2007	LL	L	3	R	-	O	A	-	68
WQ046.50	5/7/2007	APO	L	9	R	-	O	A	-	<2.0
WQ046.50	7/9/2007	DBA	E	15	R	P	O	A	-	<2.0
WQ046.50	8/27/2007	EXT	H	16	R	-	O	A	-	<2.0
WQ046.50	10/22/2007	APO	HE	11	R	-	O	A	-	<2.0
WQ047.00	1/22/2007	LL	H	0	R	-	O	A	-	<2.0
WQ047.00	5/7/2007	APO	L	9	R	-	O	A	-	<2.0
WQ047.00	5/30/2007	JB	E	15	R	-	O	A	-	<2.0
WQ047.00	7/9/2007	DBA	E	15	R	P	O	A	-	<2.0
WQ047.00	8/27/2007	EXT	H	16	R	-	O	A	-	36
WQ047.00	10/22/2007	APO	HE	12	R	-	O	A	-	<2.0
WQ048.00	3/26/2007	LL	L	3	R	-	O	A	-	<2.0
WQ048.00	5/7/2007	RMO	LF	7	R	-	O	A	-	<2.0
WQ048.00	5/30/2007	JB	E	11	R	-	O	A	-	<2.0
WQ048.00	7/9/2007	MFI	E	14	R	-	O	A	-	<2.0
WQ048.00	8/27/2007	EXT	H	16	R	-	O	A	-	12
WQ048.00	10/22/2007	RMO	LE	13	R	-	O	A	-	<2.0
WQ049.00	1/22/2007	LL	H	2	R	-	O	A	-	<2.0
WQ049.00	3/19/2007	EXT	HF	-3	A	F	C	A	-	<2.0
WQ049.00	3/20/2007	EXT	F	-3	A	F	C	A	-	<2.0
WQ049.00	3/21/2007	EXT	F	-4	A	F	C	A	-	98
WQ049.00	3/26/2007	LL	LF	3	R	-	O	A	-	<2.0
WQ049.00	4/19/2007	EXT	F	0	A	F	C	A	-	<2.0
WQ049.00	4/20/2007	EXT	LF	1	A	F	C	A	-	<2.0
WQ049.00	5/7/2007	RMO	LF	7	R	-	O	A	-	<2.0
WQ049.00	7/9/2007	MFI	E	13	R	-	O	A	-	<2.0
WQ049.00	8/27/2007	EXT	F	16	R	-	O	A	-	<2.0
WQ049.00	10/15/2007	EXT	LF	10	A	F	C	A	-	<2.0
WQ049.00	10/16/2007	EXT	LF	10	A	F	C	A	-	4
WQ049.00	10/17/2007	MHE	LF	10	A	F	C	A	-	<2.0
WQ049.00	10/22/2007	RMO	E	14	R	-	O	A	-	<2.0
WQ051.00	1/22/2007	LL	HE	2	R	-	O	A	-	<2.0
WQ051.00	3/26/2007	LL	LF	3	R	-	O	A	-	2
WQ051.00	5/7/2007	RMO	LF	7	R	-	O	A	-	<2.0
WQ051.00	7/9/2007	MFI	E	13	R	-	O	A	-	<2.0
WQ051.00	8/27/2007	EXT	HF	14	R	-	O	A	-	<2.0
WQ051.00	10/22/2007	RMO	E	14	R	-	O	A	-	2



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Station	Date	Collector	Tide	Water Temp	Sample Strategy	ADV	Status	Class	FECOL	A1COL
WQ052.00	1/22/2007	LL	HE	0	R	N	O	A	-	<2.0
WQ052.00	5/7/2007	RMO	LF	7	R	N	O	A	-	<2.0
WQ052.00	5/30/2007	JB	E	15	R	-	O	A	-	2
WQ052.00	7/9/2007	MFI	E	14	R	N	O	A	-	22
WQ052.00	8/27/2007	EXT	HF	15	R	-	O	A	-	9.1
WQ052.00	10/22/2007	RMO	E	14	R	-	O	A	-	<2.0
WQ054.00	1/22/2007	LL	HE	0	R	-	O	A	-	<2.0
WQ054.00	3/26/2007	LL	LF	3	R	W	O	A	-	<2.0
WQ054.00	5/7/2007	RMO	F	8	R	-	O	A	-	<2.0
WQ054.00	7/9/2007	MFI	E	12	R	-	O	A	-	2
WQ054.00	8/27/2007	EXT	HF	14	R	-	O	A	-	4
WQ054.00	10/22/2007	RMO	E	13	R	-	O	A	-	<2.0
WQ055.00	5/7/2007	RMO	F	9	R	-	O	A	-	<2.0
WQ055.00	5/30/2007	JB	HE	15	R	-	O	A	-	<2.0
WQ055.00	7/9/2007	MFI	E	13	R	-	O	A	-	<2.0
WQ055.00	7/25/2007	EXT	HE	16	R	-	O	A	-	<2.0
WQ055.00	8/27/2007	EXT	HF	17	R	-	O	A	-	25
WQ055.00	10/23/2007	MHE	E	11	R	-	O	A	-	<2.0
WQ057.00	1/22/2007	LL	HE	1	R	-	O	A	-	<2.0
WQ057.00	3/26/2007	LL	LF	3	R	W	O	A	-	<2.0
WQ057.00	5/7/2007	RMO	F	7	R	-	O	A	-	<2.0
WQ057.00	7/9/2007	MFI	E	11	R	-	O	A	-	<2.0
WQ057.00	8/27/2007	EXT	HF	13	R	-	O	A	-	2
WQ057.00	10/22/2007	RMO	E	13	R	W	O	A	-	<2.0
WQ058.00	1/22/2007	LL	HE	1	R	-	C	P	-	<2.0
WQ058.00	3/26/2007	LL	F	3	R	-	C	P	-	<2.0
WQ058.00	5/7/2007	RMO	F	6	R	-	C	P	-	<2.0
WQ058.00	7/9/2007	MFI	E	11	R	-	C	P	-	<2.0
WQ058.00	8/27/2007	EXT	H	16	R	-	C	P	-	6
WQ058.00	10/22/2007	RMO	E	11	R	-	C	P	-	<2.0



Appendix H. Water quality P90 scores (expressed as percent of approved standard) for all active stations in growing area WQ, 2005-2007. Any station with water quality scores over 100 percent is not meeting approved standards.

STATION	CLASS	2005	2006	2007
WQ012.00	P	231.02	250.65	257.14
WQ012.50	P	46.12	42.98	39.77
WQ013.00	A	57.55	54.47	60.00
WQ015.00	A	58.78	97.66	89.30
WQ017.00	A	60.61	62.77	71.16
WQ018.00	A	13.47	18.48	15.71
WQ020.00	A	8.37	9.13	10.95
WQ021.00	A	14.90	13.70	12.38
WQ022.00	A	41.43	19.13	22.62
WQ023.00	A	32.65	30.22	29.29
WQ024.00	A	35.10	37.17	41.43
WQ031.50	P	81.63	58.44	29.75
WQ032.00	CA	92.45	40.00	63.50
WQ034.00	P	648.57	296.38	196.05
WQ035.00	R	91.25	84.35	114.76
WQ036.00	R	245.42	158.04	133.57
WQ037.00	R	189.58	162.17	158.33
WQ039.00	P	22.45	20.85	23.26
WQ040.00	R	113.54	114.44	106.59
WQ041.00	R	102.29	44.57	39.76
WQ042.00	R	39.59	29.57	29.77
WQ043.00	A	16.12	17.02	14.65
WQ044.00	A	22.65	21.06	19.53
WQ045.00	A	10.41	14.26	11.86
WQ046.50	A	9.80	9.15	15.35
WQ047.00	A	10.61	11.49	16.98
WQ048.00	A	6.73	7.66	10.47
WQ049.00	A	9.39	10.85	10.47
WQ051.00	A	6.53	7.45	8.14
WQ052.00	A	48.98	64.68	56.28
WQ054.00	A	8.37	8.94	10.00
WQ055.00	A	26.53	21.49	25.35
WQ057.00	A	6.94	8.09	8.84
WQ058.00	P	8.16	10.00	10.00



Appendix I. Active Aquaculture Lease Sites in the Damariscotta River



Maine Department of Marine Resources Aquaculture Lease Sites



05/20/08

