



GROWING AREA WU
Towns of Cushing, Warren, Thomaston, South Thomaston and St George
ANNUAL REVIEW for 2008

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APPROVAL

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TABLE OF CONTENTS

Executive Summary	7
Growing Area Description.....	7
Current Classification(s)	8
Activity during Review Period	8
Current Management Plan(s) for Conditional Area(s)	9
Current Annual Review of Management Plan(s).....	10
Water Quality Review and Discussion	10
Recommendations for Upward Classification	20
Shoreline Survey Activity.....	21
Aquaculture/Wet Storage Activity	21
Classification Changes Required and Requested.....	22
Summary.....	22
Appendix A. Annual Review of Conditional Area Management Plan.....	24
Appendix B. Annual Review of Conditional Area Management Plan.....	26
Appendix C. Key to water quality table headers.	28
Appendix D. Growing Area WU 2008 Data	29

LIST OF TABLES

Table 1. 2008 Classification and Station Changes.....	9
Table 2. Water Quality Geomean and P90 Scores, Approved, Restricted and Prohibited Stations, 2003-2008	11
Table 3. Water Quality Data, Stations Conditional on Rainfall, Open Status Only.....	13
Table 4. Water Quality Data, Stations Conditional on Sewage Treatment Facilities.....	13
Table 5. Water Quality Data, Broad Cove Seasonal Conditional Area	13
Table 6. 2008 Sampling Effort	14

LIST OF FIGURES

Figure 1. Growing Area WU Northern Section, with Active Water Stations	4
Figure 2. Growing Area WU Southern Section, with Active Water Stations.....	5
Figure 3. Growing Area WU Active Water Stations, Islands.....	6
Figure 4. Area WU P90 scores stations WU 1 - WU 18, 2006-2008	16
Figure 5. Area WU P90 scores for restricted stations WU5, WU12, and WU13, 2006-2008	17
Figure 6. P90 scores, Rainfall Conditionally Approved Stations, Open Status Only.....	17
Figure 7. P90 Scores, Station WU 20, Random Open Status Data.....	18
Figure 8. Prohibited (stations WU 28-30) and Restricted Stations (WU 32-34.5)	19
Figure 9. P90 Scores, Stations WU 39 to 61	20



Figure 1. Growing Area WU Northern Section, with Active Water Stations

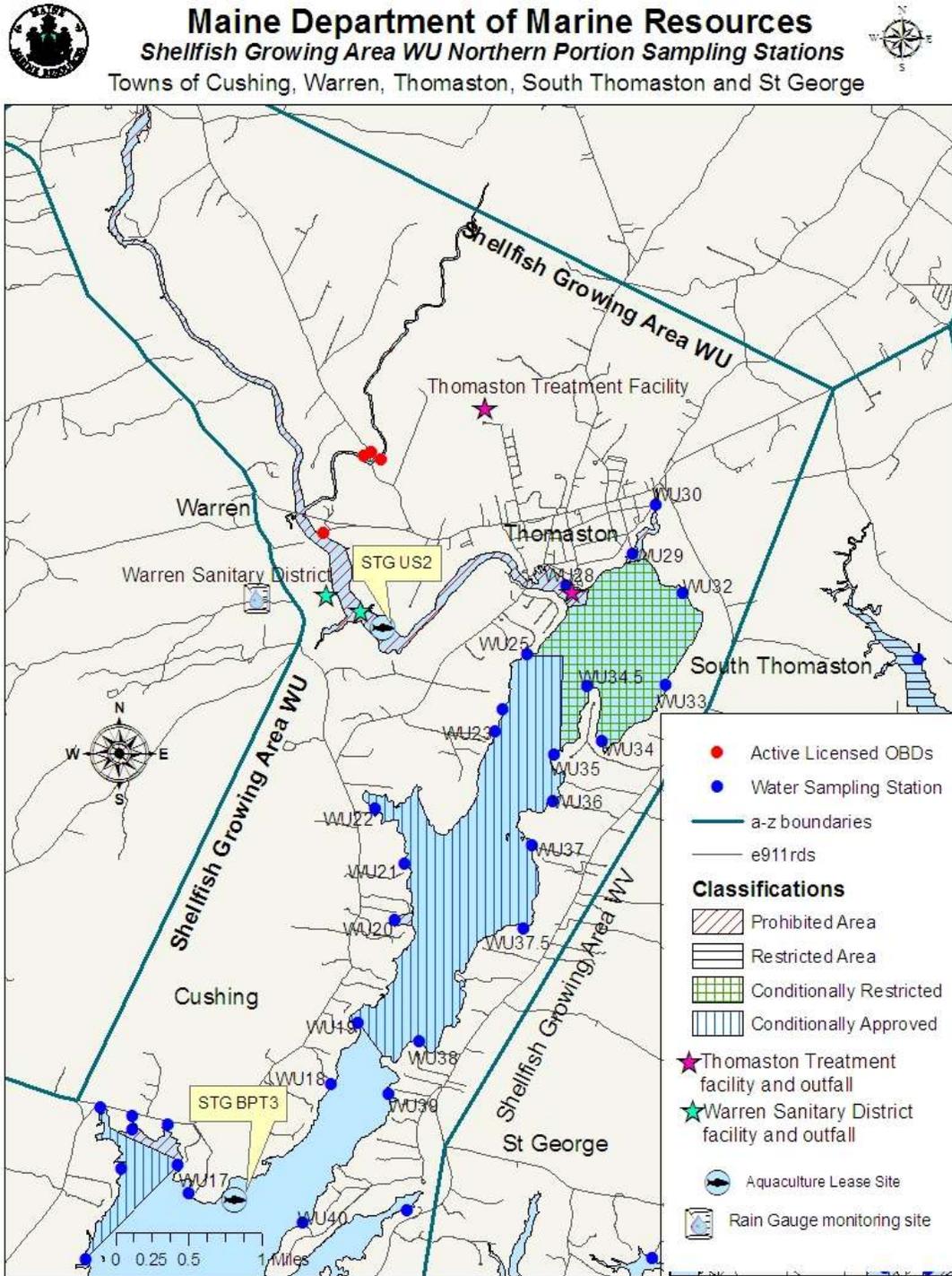




Figure 2. Growing Area WU Southern Section, with Active Water Stations

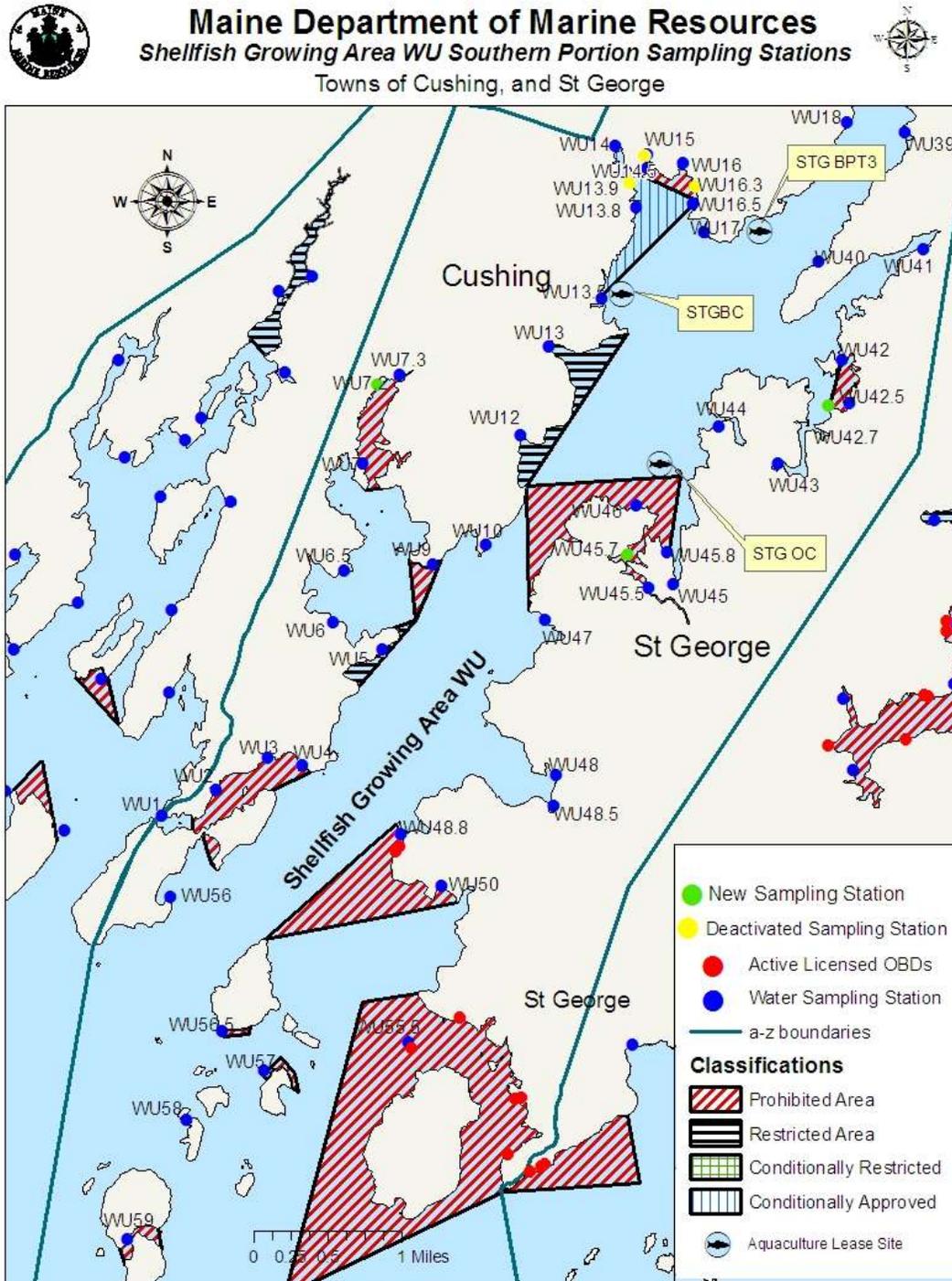
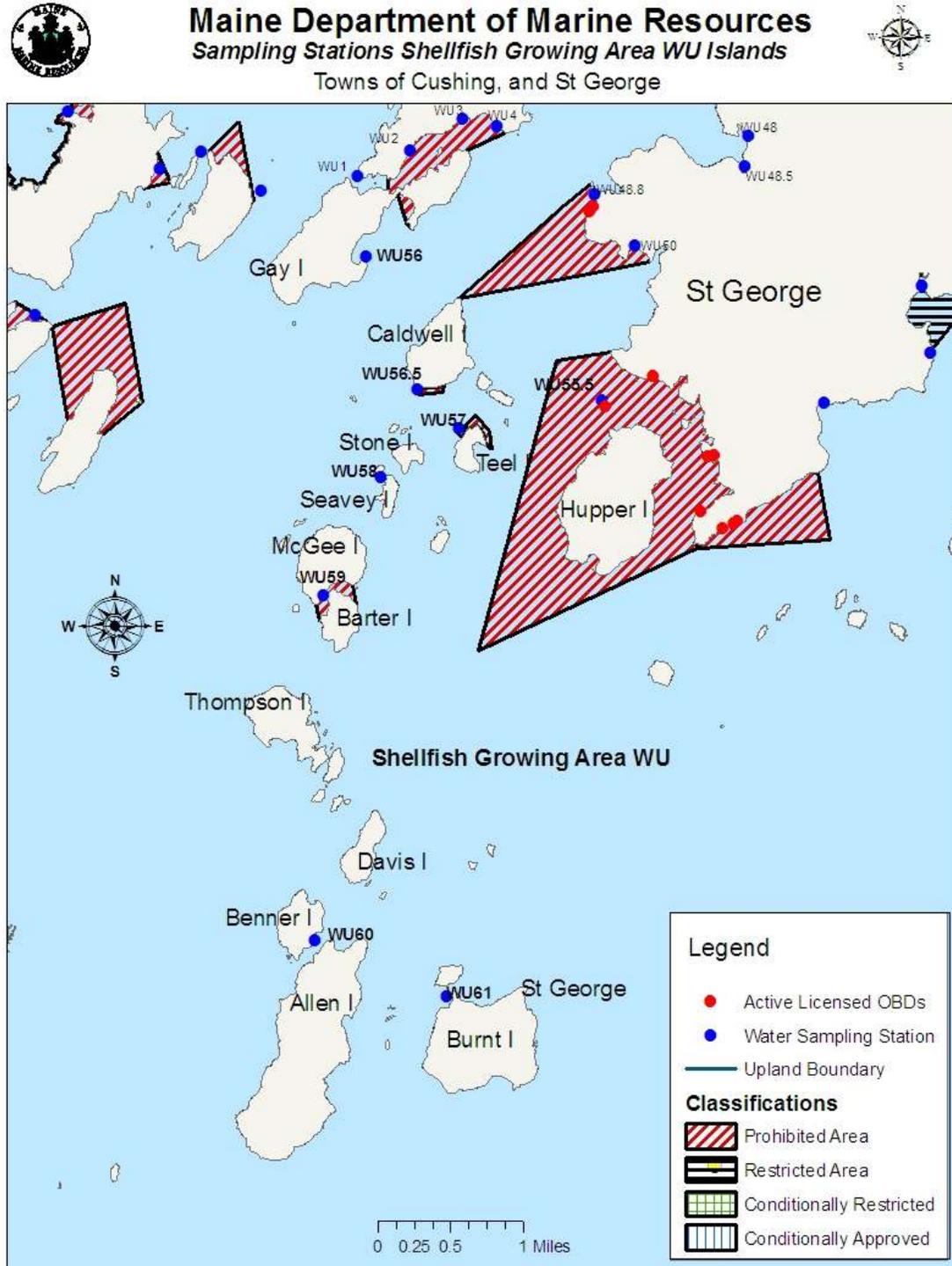




Figure 3. Growing Area WU Active Water Stations, Islands





Executive Summary

This is an annual report for growing area WU 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; the next sanitary survey report is due in 2019.

Shellfish Growing Area WU covers the shores and waters of the St George River in the towns of Cushing, Warren, Thomaston, South Thomaston and St George. In 2008, the following classification changes were implemented: in May, a portion of the restricted area in Broad Cove, Cushing, was reclassified from restricted to prohibited, due to the water quality scores no longer meeting the restricted standard at one station. A further data review of all monitoring stations in the Broad Cove area showed that a portion of the cove had a seasonal component to the data, the area was reclassified to conditionally approved based on season in November, 2008.

Two closures were made (October 10, 2008) due to the presence of malfunctioning septic systems. Both of these systems were identified during the 2008 sampling season. A closure was made in the cove south of Montgomery Point, Cushing. Although the dwelling is >500 feet from the shore, it is likely that during rainfall events fecal matter could be transported to the shore by run-off. A closure was also made in Maple Juice Cove, near sampling station WU 7. A dwelling at this site was enlarged and the old septic system could not handle the increased volume. Due to these closures, sampling stations WU 7 and WU 20 were both reclassified as prohibited. Additionally, the closure around Hupper Island, St George was enlarged on December 31, 2008, due to an expired survey. The area will remain closed until the survey work is completed.

In 2008, following the re-classification of Broad Cove, three stations were deactivated, including stations WU 13.9, 15 and 16.3. Two stations were created to monitor new classification boundaries, and an additional station was created to better monitor water quality in the northern portion of Maple Juice Cove, Cushing.

Growing Area Description

Shellfish Growing Area WU covers the area from the southeastern tip of Gay Island, Cushing to the western tip of Marshall Point, Port Clyde (Figures 1, 2 and 3). There are also numerous islands in the mouth of the St George River that are included in this growing area. The boundary description of shellfish growing area WU can be found in the growing area WU files. The towns of Cushing, Warren, Thomaston, South Thomaston, and St George all have shore frontage in this growing area. The towns of Warren and Thomaston are the only towns in this growing area that have municipal treatment facilities. The Thomaston Treatment Facility and the Warren Sanitary District are both located at the head of the St George River, near a significant shellfish resource area. There are no major industries along the shore in Shellfish Growing Area WU; Dragon Cement is located nearby the St George River, approximately 0.5 miles away. There are several marine-related businesses along the waterfront in Thomaston. All of these businesses are located along the immediate waterfront which is inside the closure zone for



Thomaston Treatment Facility's outfall. The majority of the remaining shore frontage in this growing area is residential.

The resources in Shellfish Growing Area WU are managed by a five town management group which includes diggers from the towns of Cushing, Warren, Thomaston, South Thomaston and St George. The entire harvestable shore frontage in each of these towns is available to each of the licensed diggers from any of the five towns.

Current Classification(s)

The shores of shellfish growing area WU are classified as approved, conditionally approved, restricted, conditionally restricted and prohibited. There are 70 active water sampling stations monitoring the water quality in shellfish growing area WU.

The station classification break-down is as follows:

- **Approved:** Twenty-two (22) stations
- **Conditionally Approved:** Fifteen (15) stations
Area No. 27: 10 stations are conditional on ≥ 1.5 inches of rainfall in 24 hour period; WU 19, 21, 22, 23, 25, 35, 36, 37, 37.5, and 38.
Area No. 27 B: 5 stations are conditional on season, area closed June 1 – Sept. 30; WU 13.5, 13.8, 14, 14.5 and 16.
- **Restricted:** Area No. 27 B: Three (3) stations due to non-point pollution; WU 5, 12, 13.
- **Conditionally Restricted:** Area No. 27: Four (4) stations, conditional on operations at Warren and Thomaston Waste Water Treatment Facilities; WU 32, 33, 34, and 34.5.
- **Prohibited** Twenty-two (22) stations
Area No. 27: 2 stations; WU29 and 30, due to non-point pollution
Area No. 27: 1 station - WU28 due to the presence of waste water treatment plant outfall
Area No. 27: 1 station - WU20 due to point source pollution
Area No. 27 B: 18 stations: four stations, WU2, 7, 48.8 and 55.5 due to point source pollution; 13 stations, WU 3, 7.2, 7.3, 9, 16, 42.5, 42.7, 45.5, 45.7, 46, 56.5, 57, and 59 due to non-point pollution; and WU 50 due to the of potential septic overflow.

Please visit the DMR website to view legal notices:

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

Activity during Review Period

The following classification and station status changes occurred in 2008 (Table 1).



Table 1. 2008 Classification and Station Changes

Station ID	Activity	Old Class	New Class	Date	Reason
WU14.5	class change	R	P	5/30	poor water quality at station WU 16
WU15	class change	R	P	5/30	poor water quality at station WU 16
WU16	class change	R	P	5/30	poor water quality at station WU 16
WU16.3	class change	R	P	5/30	poor water quality at station WU 16
WU16.5	class change	A	R	5/30	poor water quality at station WU 16
WU20	class change	CA	P	10/10	malfunctioning septic system
WU7	class change	A	P	10/10	malfunctioning septic system
WU13.5	class change	A	CA	11/3	conditional on season
WU13.8	class change	R	CA	11/3	conditional on season
WU13.9	Station deactivated	R		11/3	no longer needed
WU14	class change	R	CA	11/3	conditional on season
WU14.5	class change	R	CA	11/3	conditional on season
WU15	Station deactivated	P		11/3	no longer needed
WU16.3	Station deactivated	P		11/3	no longer needed
WU16.5	class change	R	CA	11/3	conditional on season
Hupper Is.	Closure enlarged	P and A	P	12/31	Expired survey

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

There are three conditional areas in shellfish growing area WU:

- 1) Upper River Conditionally Restricted Area, Area 27: this area is conditional on the operations at Thomaston Treatment Facility and the Warren Sanitary District. The conditionally restricted area is required to be closed during Thomaston Treatment Facility's discharge period, from January 1 through March 31. Sampling stations that monitor this conditional area include WU32, WU33, WU34, and WU34.5.
- 2) Upper River Conditionally Approved Area, Area 27: this area is conditional on rainfall events of $\geq 1.5'$ in a 24 hour period. Sampling stations that monitor this area include WU 19, 22, 23, 25, 35, 36, 37, 37.5, and 38.
- 3) Broad Cove Seasonal Conditionally Approved Area, Area 27B: this area is conditional on season, and is closed from June 1 to September 30. Sampling stations that monitor this area include WU 13.5, 13.8, 14, 14.5 and 16.5.



Management plans for WU conditional areas can be found in DMR's central files. The Broad Cove seasonal management plan was written in 2008.

Current Annual Review of Management Plan(s)

Upper River Conditionally Restricted Area, Area 27

There have been no malfunctions at the Thomaston Treatment Facility since 1997 when the facility was located at its old location on the Thomaston waterfront. There have also been no malfunctions at the Warren Sanitary District treatment facility. The annual review of the rainfall conditional area management plan is located in Appendix A.

Upper River Conditionally Approved Area, Area 27

The rainfall conditional area was closed four times in 2008, due to rainfall of ≥ 1.5 " in a 24 hour period. The annual review of the rainfall conditional area management plan and a summary of all of the rainfall closures that occurred in 2008 are located in Appendix B.

Broad Cove Seasonal Conditionally Approved Area, Area 27B

A new management plan was written (December 23, 2008) for the seasonal conditional area in Broad Cove, Cushing. Broad Cove was reclassified as a conditionally approved area after the 2008 sampling season had ended. Data collected from 2001 through 2008 sampling seasons were used to determine that the area qualified as a seasonal area. The data assessment used in making this determination is presented in Appendix E.

All of the conditional areas on the St George River were managed appropriately in 2008.

Water Quality Review and Discussion

Table 3 lists all active approved, restricted and prohibited stations in Growing Area WU, with their respective Geomean and P90 calculations for 2008. Please refer to Appendix C for a key to interpreting the headers on the columns of Table 3. 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 samples analyzed by MPN versus 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 of the stations in Table 2 are meeting their NSSP standards. The stations hi-lighted in magenta meet the approved standard but are classified as prohibited. An explanation for each of these station's classifications is shown below:

- 1) Station WU 2: This station has been proposed for reclassification (in 2007 Sanitary Survey Report);
- 2) Station WU 5: This station has shown variability in recent years and will remain prohibited until more data can be collected and analyzed
- 3) Station WU 7: This station was recently classified as prohibited due to a known pollution source
- 4) Station WU 12: This station has shown variability in recent years and will remain prohibited until more data can be collected and analyzed
- 5) Station WU 20: This station was classified as prohibited (October 10, 2008) due to a known pollution source. The LPI from the town of Cushing has required that this dwelling be either unoccupied until the system is fixed or (if occupied) have the system pumped weekly. The dwelling has been unoccupied all winter and has recently received funding from the Maine Small Community Grant Program for a new replacement system. This site is being proposed for reclassification.
- 6) Station WU 42.5: This station has been proposed for reclassification (in 2007 Sanitary Survey Report)
- 7) Station WU 46: This station will remain prohibited until new station WU 45.7 has enough data points to determine if it can be reclassified.
- 8) Station WU 55.5: This station is prohibited due to proximity to a licensed overboard discharge.
- 9) Station WU 56.5: This station is prohibited due to its proximity to a potential pollution source
- 10) Station WU 57: This station has been proposed for reclassification (in 2007 Sanitary Survey Report)
- 11) Station WU 59: This station is prohibited due to its proximity to an inadequate septic system

Table 2. Water Quality Geomean and P90 Scores, Approved, Restricted and Prohibited Stations, 2003-2008

STATION	CLASS	CNT	MFCNT	GM	SDV	MAX	P90	APPD_STD	RESTR_STD
WU001.00	A	30	15	4.2	0.41	31	13.9	39	221
WU002.00	P	30	15	4.8	0.57	460	26.1	39	221
WU003.00	P	30	15	6.6	0.75	540	60.5	39	221
WU004.00	A	30	15	4.3	0.51	93	19.6	39	221
WU005.00	R	30	15	5.0	0.69	1200	37.8	39	221
WU006.00	A	30	15	5.6	0.53	93	27.2	39	221
WU006.50	A	30	15	4.9	0.51	240	22.0	39	221
WU007.00	P	30	15	5.0	0.53	150	23.5	39	221
WU007.20	NEW	10	10	5.5	0.63	50	36.8		
WU007.30	P	30	15	13.9	0.72	1100	114.7	39	221
WU009.00	P	30	15	6.7	0.74	1100	58.7	39	221



STATION	CLASS	CNT	MFCNT	GM	SDV	MAX	P90	APPD_STD	RESTR_STD
WU010.00	A	29	15	5.0	0.50	93	21.7	39	219
WU012.00	R	30	15	7.4	0.55	93	37.5	39	221
WU013.00	R	30	15	8.7	0.87	1200	115.0	39	221
WU016.00	P	30	15	20.3	0.84	1700	239.5	39	221
WU017.00	A	30	15	4.5	0.45	93	16.7	39	221
WU018.00	A	30	17	5.1	0.46	56	19.7	38	212
WU020.00	P	30	16	3.2	0.20	16	6.5	38	217
WU028.00	P	30	22	6.4	0.67	1200	45.8	35	192
WU029.00	P	30	21	12.9	0.59	460	74.2	36	196
WU030.00	P	30	21	23.2	0.68	1100	172.4	36	196
WU039.00	A	30	15	3.4	0.31	26	8.5	39	221
WU040.00	A	30	15	3.5	0.33	27	9.5	39	221
WU041.00	A	30	15	5.0	0.45	156	18.6	39	221
WU042.00	A	30	15	3.2	0.23	15	6.3	39	221
WU042.50	P	30	15	4.6	0.48	106	18.8	39	221
WU042.70	NEW	11	11	3.3	0.35	16	9.2		
WU043.00	A	30	15	4.0	0.37	43	11.9	39	221
WU044.00	A	29	14	5.1	0.48	93	21.0	39	223
WU045.00	A	30	15	4.3	0.47	93	17.2	39	221
WU045.50	P	30	15	7.1	0.63	240	45.6	39	221
WU045.70	NEW	10	10	3.1	0.36	16	9.1		
WU045.80	A	30	15	3.7	0.35	33	10.4	39	221
WU046.00	P	30	15	3.3	0.29	43	7.8	39	221
WU047.00	A	30	15	3.2	0.29	33	7.7	39	221
WU048.00	A	30	15	5.8	0.52	240	26.7	39	221
WU048.50	A	29	14	5.5	0.58	240	30.6	39	223
WU048.80	NEW	24	15	2.8	0.25	14	5.9	37	205
WU050.00	P	30	15	6.6	0.69	1100	50.2	39	221
WU055.50	P	23	14	2.4	0.16	9.1	3.8	37	207
WU056.00	A	30	15	2.4	0.11	3.6	3.3	39	221
WU056.50	P	30	15	2.4	0.11	3.6	3.3	39	221
WU057.00	P	30	15	3.0	0.32	43	7.8	39	221
WU058.00	A	30	15	2.7	0.27	58	5.9	39	221
WU059.00	P	30	15	2.5	0.11	3.6	3.4	39	221
WU060.00	A	30	15	2.6	0.18	9.1	4.4	39	221
WU061.00	A	30	15	2.5	0.15	9.1	3.8	39	221

Table 3 shows all conditionally approved stations in the rainfall conditional area with their respective Geomean and P90 calculations for 2008. Data for conditionally approved stations reflects only the open status. All stations met the approved standard during open status. Station WU 20 was classified as prohibited on October 10, 2008.



Table 3. Water Quality Data, Stations Conditional on Rainfall, Open Status Only

STATION	CLASS	CNT	MFCNT	GM	SDV	MAX	P90	APPD_STD	RESTR_STD
WU019.00	CA	30	15	2.9	0.21	15	5.3	39	221
WU020.00	P	30	14	3.4	0.24	16	7.0	40	226
WU021.00	CA	30	15	4.6	0.40	52	15.1	39	221
WU022.00	CA	30	16	5.4	0.43	52	19.0	38	217
WU023.00	CA	30	15	3.7	0.30	26	9.0	39	221
WU025.00	CA	30	15	5.3	0.41	43	17.7	39	221
WU035.00	CA	30	16	3.9	0.32	24	10.1	38	217
WU036.00	CA	30	15	4.1	0.28	23	9.4	39	221
WU037.00	CA	30	15	4.5	0.55	1100	23.1	39	221
WU037.50	CA	30	15	4.0	0.35	50	11.3	39	221
WU038.00	CA	30	15	3.8	0.54	1380	18.8	39	221

Table 4 shows sewage treatment plant conditionally restricted station in area WU with their respective Geomean and P90 calculations for 2008. Data for conditionally restricted stations reflects only the open status. All stations met the restricted standard during open status.

Table 4. Water Quality Data, Stations Conditional on Sewage Treatment Facilities, Open Status Only

STATION	CLASS	CNT	MFCNT	GM	SDV	MAX	P90	APPD_STD	RESTR_STD
WU032.00	CR	30	24	6.0	0.50	78	26.7	34	184
WU033.00	CR	30	24	6.9	0.58	460	37.8	34	184
WU034.00	CR	30	24	7.8	0.53	93	37.5	34	184
WU034.50	CR	30	24	8.4	0.78	1700	83.0	34	184

Table 5 shows the water quality data for the seasonally conditional stations in Broad Cove during the open season from October 1 to May 31. This area was reclassified as a seasonal conditional area on November 3, 2008. An assessment of the data determined that water quality deteriorates during the months of June, July, August and September.

Table 5. Water Quality Data, Broad Cove Seasonal Conditional Area

STATION	CLASS	CNT	MFCNT	GM	SDV	MAX	P90	APPD_STD	RESTR_STD
WU013.50	CA	26	6	3.7	0.29	35	8.9	44	261
WU013.80	CA	27	6	3.4	0.24	18	6.9	44	262
WU014.00	CA	28	5	3.9	0.30	31	9.6	45	269
WU014.50	CA	28	6	3.9	0.32	40	9.9	44	263
WU016.50	CA	26	6	3.7	0.34	93	10.0	44	261

All of the stations that were active at the beginning of 2008 were sampled at least 6 times following the systematic random sampling (SRS) schedule (Table 6 and Appendix D). At several stations, additional samples were collected under adverse conditions, such as flood condition or samples collected to determine if the rainfall conditional area could reopen. The conditionally approved stations (WU 19-25 and WU35-38 conditional on rainfall) were sampled 6 times in the open status. The Broad Cove conditionally approved stations (WU13.5-16.5) did



not become conditional on season until November 3, 2008. By the end of October, all of the required random samples for these stations had already been collected.

Table 6. 2008 Sampling Effort

Station	Class	Adverse		Extra		Random		Total	Comments
		Open	Closed	Closed	Open	Closed	Open		
WU001.00	A						6	6	
WU002.00	P					6		6	
WU003.00	P					6		6	
WU004.00	A						6	6	
WU005.00	R						6	6	
WU006.00	A						6	6	
WU006.50	A						6	6	
WU007.00	A		13				5	18	Flood station, Became prohibited 10/10/08 due to point source
	P		2			1		3	
WU007.20	P					6		6	
WU007.30	P					6		6	
WU009.00	P					6		6	
WU010.00	A						6	6	
WU012.00	R						6	6	
WU013.00	P					3		3	Became restricted 8/20/07 due to no known point sources in area
	R						3	3	
WU013.10	CA				6			6	inactive, mid-channel site
WU013.50	A						6	6	
WU013.80	R						6	6	
WU013.90	R						6	6	
WU014.00	R						6	6	
WU014.10	CA				6			6	inactive, mid-channel site
WU014.50	P					3		3	Became prohibited 5/30/08 due to poor water quality at station WU16
	R						3	3	
WU015.00	P					3		3	Became prohibited 5/30/08 due to poor water quality at station WU16
	R						3	3	
WU015.10	CA				6			6	inactive, mid-channel site
WU016.00	P					3		3	Became prohibited 5/30/08 due to poor water quality
	R						3	3	
WU016.10	CR				6			6	inactive, mid-channel site
WU016.30	P					3		3	Became prohibited 5/30/08 due to poor water quality at station WU16
	R						3	3	
WU016.50	A						3	3	Became restricted 5/30/08 station monitors end of closure line
	R						3	3	
WU017.00	A		7				6	13	Flood station



Station	Class	Adverse		Extra		Random		Total	Comments
		Open	Closed	Closed	Open	Closed	Open		
WU018.00	A		9				6	15	Flood station
WU019.00	CA		12				6	18	Former flood station, also sampled to reopen conditional area
WU019.10	P			3				3	inactive, mid-channel site
WU020.00	CA						5	5	Became prohibited 10/10/08 due to point source pollution
	P					1		1	
WU021.00	CA		6				6	12	sampled to reopen conditional area
WU022.00	CA						6	6	
WU023.00	CA		6				6	12	sampled to reopen conditional area
WU025.00	CA		6				6	12	sampled to reopen conditional area
WU028.00	P			1		10		11	Sampled at same time as conditionally restricted area to check potential impact on CR area
WU029.00	P			1		10		11	
WU030.00	P			1		10		11	
WU032.00	CR			3	1		10	14	Extra rainfall samples
WU033.00	CR			3	1		10	14	
WU034.00	CR			3	1		10	14	
WU034.50	CR			3	1		10	14	
WU035.00	CA		6				6	12	Station sampled to reopen conditional area
WU036.00	CA						6	6	
WU037.00	CA		6				6	12	Station sampled to reopen conditional area
WU037.50	CA						6	6	
WU038.00	CA		6				6	12	Station sampled to reopen conditional area
WU039.00	A						6	6	
WU040.00	A		15				6	21	Flood station
WU041.00	A						6	6	
WU042.00	A						6	6	
WU042.50	P					6		6	
WU042.70	P					6		6	
WU043.00	A						6	6	
WU044.00	A						6	6	
WU045.00	A						6	6	
WU045.50	P					6		6	
WU045.70	P					6		6	
WU045.80	A						6	6	
WU046.00	P					6		6	
WU047.00	A		6				6	12	Former flood station
WU048.00	A						6	6	



Station	Class	Adverse		Extra		Random		Total	Comments
		Open	Closed	Closed	Open	Closed	Open		
WU048.50	A						6	6	
WU048.80	P					6		6	
WU050.00	P					6		6	
WU055.50	P					6		6	
WU056.00	A						6	6	
WU056.50	P					6		6	
WU057.00	P					6		6	
WU058.00	A						6	6	
WU059.00	P					6		6	
WU060.00	A						6	6	
WU061.00	A						6	6	

Figure 4 shows the P90 scores, expressed as a percentage of the approved standard, for stations WU 1 to WU 18. Station WU2 is currently classified as prohibited but is being proposed for reclassification. The current P90 score at this station is 26.1, with an approved standard of 39. All stations in Figure 4 have continued to meet the approved standard over the past three years. The stations in Broad Cove (WU13.5 – WU16.5) are not illustrated in this P90 trend table. These stations were reclassified on November 3, 2008 as a seasonal conditional area. The P90 trends for these stations will be illustrated at the end of the 2009 sampling season. Figure 5 shows the restricted stations, as percent of the restricted standard. All three restricted stations have shown consistent water quality scores over the past three years.

Figure 4. Area WU P90 scores stations WU 1 - WU 18 (expressed as percent of approved standard), 2006-2008

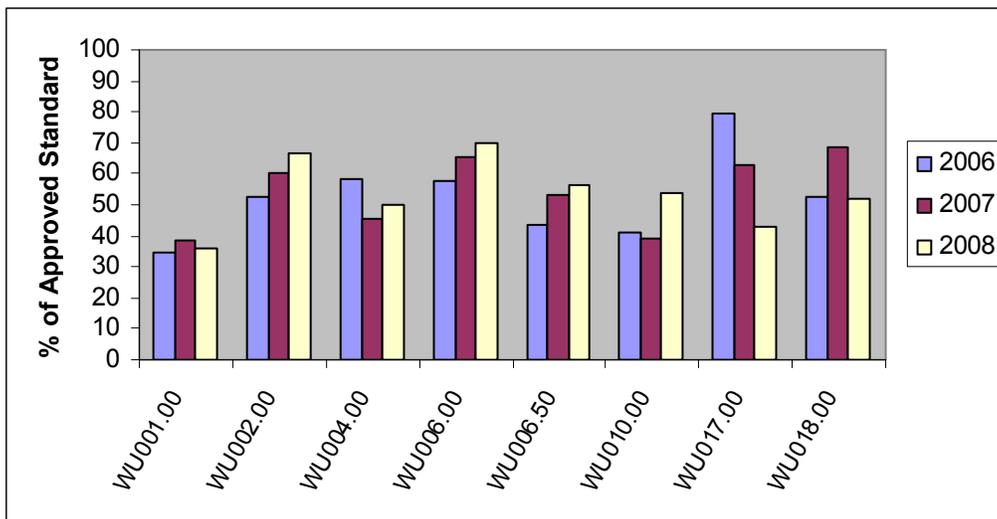




Figure 5. Area WU P90 scores for restricted stations WU5, WU12, and WU13 (expressed as percentage of restricted standard) 2006-2008

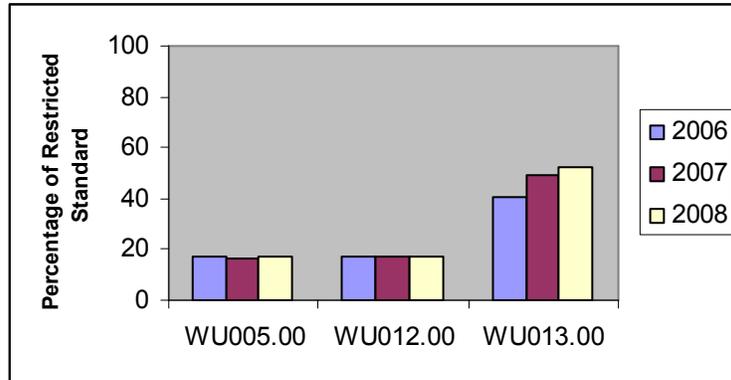
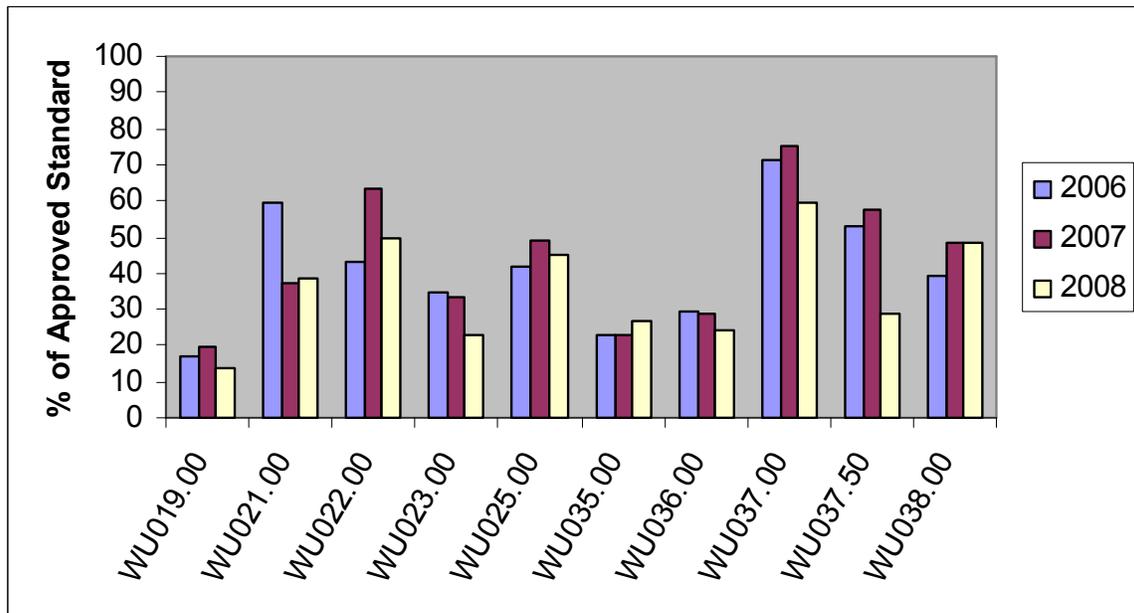


Figure 6 shows the P90 scores of stations conditional on rainfall; scores in this grouping are shown only in the open status. All of the stations in this grouping have continued to meet the approved standard and several stations showed a downward (improving) trend from the previous year's data.

Figure 6. P90 scores, Rainfall Conditionally Approved Stations, Open Status Only





Station WU 20 is shown in Figure 7, with only open status data included in the P90 calculations. This site was reclassified from conditionally approved to prohibited on October 10, 2008, due to a known pollution point source in the vicinity of the station. This station was sampled only once in the closed status, following the reclassification (October 22, 008 score of 5.5 CFU/100ml). The current P90 score for this station is 7.0, with an approved standard of 40.

Figure 7. P90 Scores, Station WU 20, Random Open Status Data

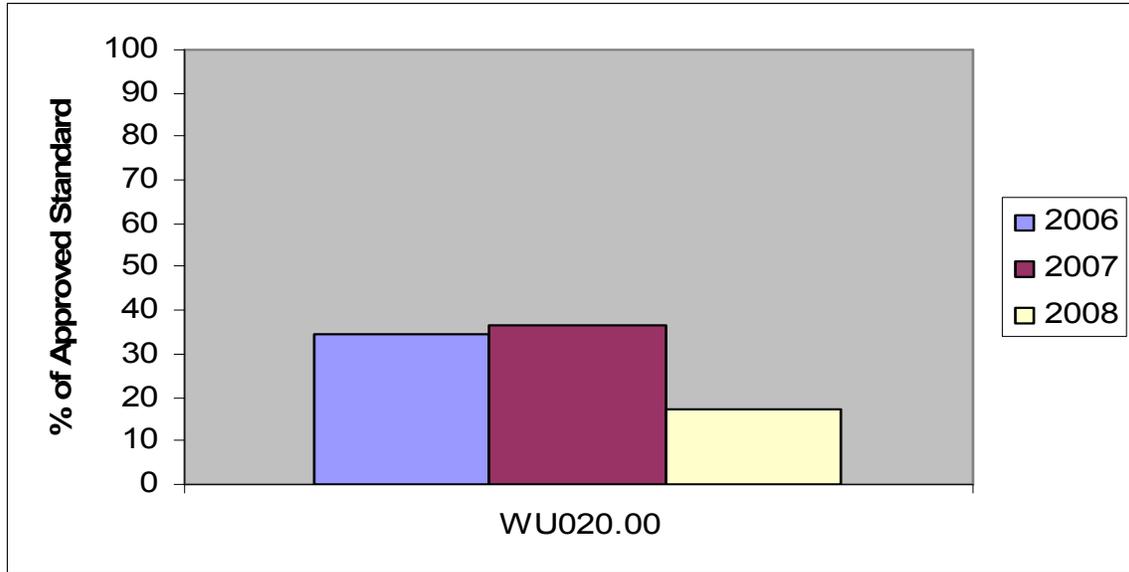


Figure 8 shows the P90 scores for the prohibited and conditionally restricted stations in the upper portion of the river. The scores are expressed as a percentage of the restricted standard. At the end of the 2008 sampling season, the restricted standard was 173 for all stations classified as restricted (WU 32-34.5). All of the stations in this grouping meet the NSSP standard for restricted classification. Station WU 28 is required to be classified as prohibited due to the station's close proximity to the Thomaston Treatment Facility outfall. Stations WU 29 and WU 30 are located in the Mill River drainage. Both of these stations are classified as prohibited. Stations WU 32 to 34.5 have continued to receive water quality scores that meet the restricted standards. Station WU 34.5 has been on an upward trend for the past two years. There are no identified point sources of pollution in this area, however sea birds and occasionally seals are frequently observed near the rocks in the area where this sample is collected, and may be affecting water quality.



Figure 8. Prohibited (stations WU 28-30) and Restricted Stations (WU 32-34.5)

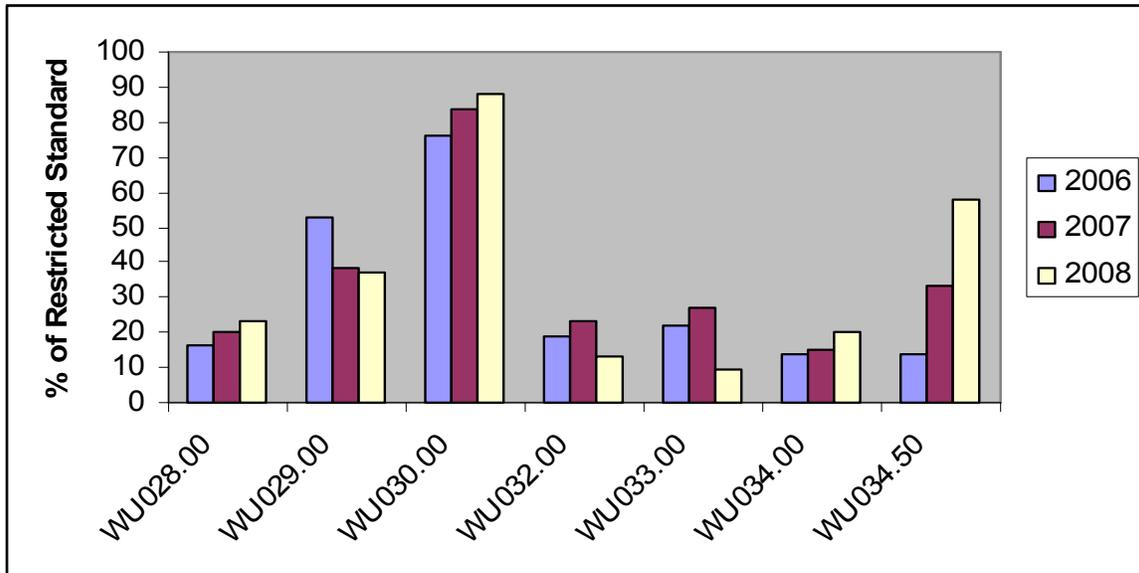
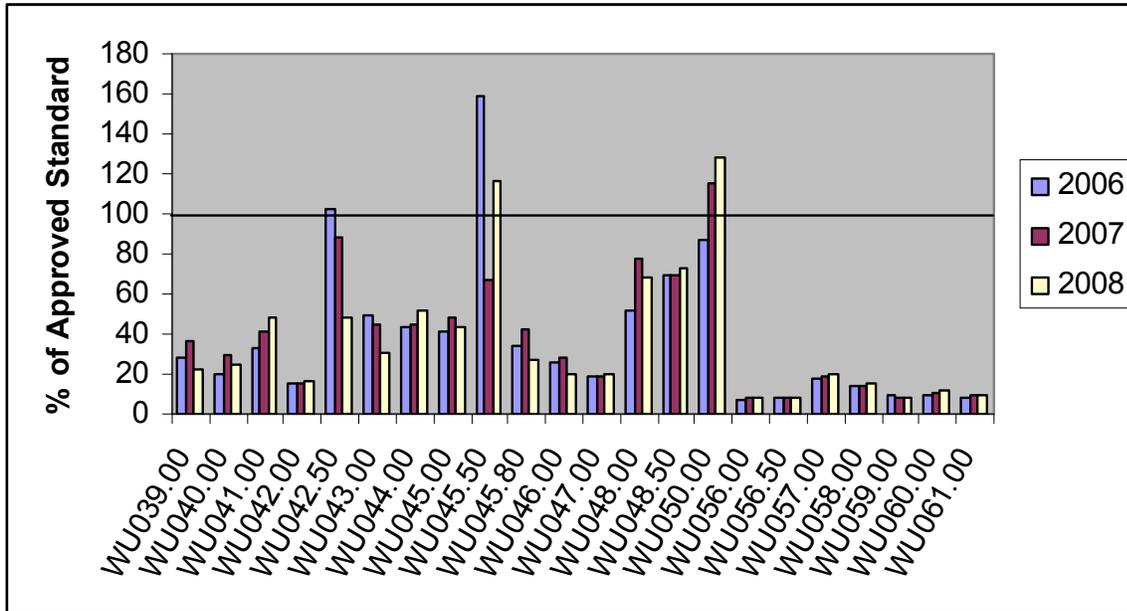


Figure 9 shows the stations located south of the conditionally approved area on the east side of the river. The majority of these stations have had consistent water quality results for the past three years. Currently, only stations WU 45.5 and 50 have water quality scores that do not meet approved standards. Both of these stations are classified as prohibited. Station WU 45.5 is located in a large stream/drainage. At low tide, this site is a stream that is approximately three feet deep at its deepest point; at high tide, stream water mixes with seawater. There are no farms located in the immediate area of the stream; however it extends into a large remote wetland that is frequented by wildlife. A new sample site (WU 45.7) was added (May 2007) beyond the site of a small dam which is located where the stream meets the seawater (approximately 350 feet from station WU45.5). The new sample site will more accurately assess the water quality in the shellfish resource area. Station WU 50 is also located at the mouth of a stream. The only noted potential pollution source in this area is a possible septic overflow from a large septic holding tank at a nearby dwelling. The tank is so large the LPI felt that the septic overflow would never be used. A closure remains at this site to protect public health. At station WU 42.5, the water quality has been showing an improving trend. A large manure pile was identified on a slope nearby this site; ¾ of this manure pile has been removed from the site and the property owner has agreed to use best farm practices to better manage the manure in the future. This area is being recommended for an upward reclassification.



Figure 9. P90 Scores, Stations WU 39 to 61



Recommendations for Upward Classification

Pleasant Point Gut, Cushing, Area No. 27B

Sampling station WU 2 currently has a P90 score of 25.8 with an approved standard of 43. This site has been classified as prohibited for shellfish harvest due to two known pollution sources in the area. The first was a dwelling that had a grey water discharge directly to the harbor. The second pollution source was an outhouse that was built on the edge of the shore of Gay Island. When the outhouse was inspected, fecal matter could be seen exiting the back side of the outhouse directly to the shore. Both of these systems were reported to the LPI for the town of Cushing, and both of these systems have been remediated. A new septic system was installed at the first property, and the illegal grey water discharge was connected to the new system. The outhouse was relocated away from the shore.

Watts Cove, St George, Area No. 27B

Sampling station WU 42.5 currently has a P90 score of 18.8 with an approved standard of 43. This site was initially reclassified as prohibited when the data was checked in the middle of the sampling season (2006) the P90 score exceeded the approved standard. At the end of the sampling season, after all of the data for that year was included in the P90 calculation, the P90 score once again met approved standards. It was decided that the area should remain prohibited until the shoreline survey of the area was completed. The only actual pollution source noted in the immediate area at the completion of the survey was a large manure pile, which is located across the road (300 feet) from the sample site. Three quarters of the manure pile was



removed and plans have been made for future removal from the property. A stream sample collected (May 11, 2009) below the manure pile received a score of 2.9 CFU/100ml. The P90 trend for this station has shown an improving trend for the last three years.

Teel Island, St George, Area No. 28A

Sampling station WU 57, located on Teel Island, currently has a P90 score of 7.8 with an approved standard of 39. This site had been classified as prohibited due to a malfunctioning septic system that was noted breaking out along the shore. This system has been replaced with a new in ground system. The water quality has continued to meet the approved standard. This site can be reclassified as approved.

Un-named cove south of Montgomery Point, Area No. 27B

This site was classified as prohibited (October 10, 2008) due to a malfunctioning septic system that was flowing to the surface of the ground > 500 feet from the shore. The LPI from the town of Cushing has required that this dwelling either be unoccupied until the system is fixed or (if occupied) have the system pumped weekly. The dwelling has been unoccupied all winter and has recently received funding from the Maine Small Community Grant Program for a new replacement system. The current P90 score at this site is 6.5 with an approved standard of 38. This site can be reclassified as conditionally approved based on ≥ 1.5 " of rainfall in a twenty-four hour period (classification held prior to closure October 10, 2008).

Shoreline Survey Activity

Shoreline survey activity in 2008 consisted of revisiting pollution sources noted in the 2005-2007 shoreline survey of the growing area. All of the actual and potential pollution sources noted in the shoreline survey were reported to each respective town's plumbing inspector. The plumbing inspectors were contacted over the course of the review year to track remediation progress. As of November 14, 2008 discussions with the local plumbing inspector (St George) and on site inspections had revealed that five systems had new designs for replacement systems and three systems were replaced with new in ground systems. Nine sites are still listed as having potential pollution sources. In the town of Cushing two new malfunctions were identified. Precautionary closures were made around the cove at station WU20 and WU7. The owner of the property above station WU20 has been told that the dwelling must either remain vacant or have the tank pumped regularly. They have chosen to keep the property vacant until the system is fixed. A property with a grey water discharge in Pleasant Point Gut has fixed their system by connecting the grey water to the septic system. A malfunctioning system on the River Road in Cushing was replaced with a new system.

Aquaculture/Wet Storage Activity

There are four aquaculture lease sites in shellfish growing area WU. Three of the lease sites are located in areas open for shellfish harvest. One site is located inside the prohibited area in the



upper most portion of the St George River. This site grows product to seed size only. The locations of these lease sites are illustrated on the maps in Figures 1 and 2. There are no wet storage facilities in this growing area.

Please visit the aquaculture website for more information on specific lease sites:

<http://www.maine.gov/dmr/aquaculture/leaseinventory2006/muscongusbay.htm>

Classification Changes Required and Requested

Based on the current Annual review of growing area WU, the following classification changes are recommended:

Pleasant Point Gut, Cushing, Area No. 27B (Sampling station WU2)

The pollution sources in this area have been remediated. This area has a current P90 score of 25.8 with an approved standard of 43. This area may be reclassified as approved.

Watts Cove, St George, Area No. 27B (Sampling station WU42.5)

The water quality in this area has shown an improving trend for the last three years. The area will be visited annually to evaluate potential manure impact. Sampling station WU 42.5 currently has a P90 score of 18.8 with an approved standard of 43. This area may be reclassified as approved.

Teel Island, St George, Area No. 28A (Sampling station WU57)

A malfunctioning septic system was replaced with a new in ground system. The current P90 score at this site is 7.8 with an approved standard of 39. This area may be reclassified as approved.

Un-named cove south of Montgomery Point, Area No. 27B

The dwelling that necessitated the October 10, 2008 closure in this area is now unoccupied and will remain unoccupied until a new septic system has been installed. This area has a current P90 score of 7.0 with an approved standard of 40. This area may be reclassified as conditionally approved based on ≥ 1.5 inches of rainfall (classification held prior to closure on October 10, 2008).

Summary

Water quality in shellfish growing area WU has remained consistent for the last three years. The towns on both sides of the river realize the importance of the shellfish resources to members of the five town shellfish management group, and the local plumbing inspectors have been very



cooperative in working with both DMR and DEP staff to assist in remediating pollution sources in a timely fashion. The shellfish industry has also shown greater interest in reporting potential pollution sources observed along the river. The Georges River Shellfish management group applied to do a Special Study to determine rainfall impact in the current conditionally restricted area (north of Hospital Point). The study was approved by the DMR shellfish advisory group. The Shellfish Management Group is still in the planning stages of this study and has not yet determined if it is financially feasible.



Appendix A. Annual Review of Conditional Area Management Plan

St George River Treatment Facility Conditional Area, C 27, Growing Area WU

Scope

A portion of Growing Area WU is conditionally restricted, based on the operations at the Thomaston Treatment Facility and the Warren Sanitary District. This area is closed during Thomaston Treatment Facility's discharge period, from January 1 to March 31. This area is also required to be closed when a malfunction is reported by either of these facilities. Water quality in the upper St George conditionally restricted area is monitored by stations WU 32, 33, 34, 34.5 and 35. All conditionally restricted stations must be sampled each month the conditionally restricted area is in the open status.

Compliance with management plan

In 2008, there were no malfunctions reported by either facility in growing area WU.

Adequacy of reporting and cooperation of involved persons

In the event that the conditional area closure must be implemented due to a malfunction, the management plan for this conditional area requires reporting by the manager (or the alternate on call) of each facility. The last malfunction reported to DMR on the St George River was reported in 1997. At that time, the cooperation between all involved parties was good 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 restricted standards in the open status. The closure line between the conditionally restricted and conditionally approved area was moved on December 31, 2008 because station WU 34.5 no longer met approved standards. The station located on the closure line which divides two classifications must meet the more restrictive classification as per NSSP guidelines. The closure line was moved to station WU35 on the east side of the river. The end of the closure line on the opposite side of the river was also moved so that the west end of the line could be monitored by sampling station WU 25.

Table 1. Geomean and P90 Calculations for Conditional Stations, Open Status

STATION	CLASS	CNT	MFCNT	GM	SDV	MAX	P90	APPD_STD	RESTR_STD
WU025.00	CA	30	15	5.3	0.41	43	17.7	39	221
WU032.00	CR	30	27	5.1	0.50	78	22.6	32	173
WU033.00	CR	30	27	4.8	0.40	54	15.8	32	173
WU034.00	CR	30	27	7.3	0.53	93	34.8	32	173
WU034.50	CR	30	27	9.4	0.80	1700	100.0	32	173
WU035.00	CA	30	16	3.9	0.32	24	10.1	38	217



Water sampling compliance history

All of the conditionally restricted and conditionally approved (boundary) stations were sampled each month the area was in the open status in 2008.

Table 2. 2008 Sampling Effort for Stations Monitoring the Conditionally Restricted Area

Station	Class	Adverse		Extra		Random		Total	Comments
		Open	Closed	Closed	Open	Closed	Open		
WU025.00	CA		6				6	12	Sampled to reopen CA area
WU032.00	CR			3	1		10	14	Extra samples collected to see if these stations responded similarly to the rainfall conditional stations when they were sampled to reopen CA area
WU033.00	CR			3	1		10	14	
WU034.00	CR			3	1		10	14	
WU034.50	CR			3	1		10	14	
WU035.00	CA		6				6	12	Sampled to reopen CA area

Analysis and Recommendations

The conditionally restricted area was properly managed in 2008. No management changes are required or recommended at this time.



Appendix B. Annual Review of Conditional Area Management Plan

St George River Rainfall Conditional Area, C 27, Growing Area WU

Scope

A portion of Growing Area WU is conditionally approved, based on rainfall. This area closes when rainfall meets or exceeds 1.5 inches in a 24 hour period. Water quality the upper St George rainfall conditional area is monitored by stations WU 19, 21, 22, 23, 25, 35, 36, 37, 37.5, and 38. All conditionally approved stations must be sampled 6 times per year, in the open status. If the annual cumulative time in the open status is 5 months or less, the areas are required to be sampled 5 times.

Compliance with management plan

In 2008, the rainfall conditional area in growing area WU was closed four times. The closure noted on September 27, 2008 was a flood closure. On this date the rainfall monitoring site did not receive ≥ 1.5 inches of rain in a 24 hour period. When the flood closure was lifted the rainfall conditional area was reopened at the same time. Per management plan, Maine DMR was notified when rainfall met or exceeded 1.5 inches and the appropriate closures were made (Table 1).

Table 1. Rainfall closure/re-opening activity for 2008

Date Closed Flood=F Rain>1.5=R	Additional rainfall events ≥ 1.5 inches in 24 hours	Date area sampled: P=Pass	# Days closed	Date Opened	Open from (date-date)	# days open	Comments
					1/1/08-2/14/08	44	
2/14/08 F 2.79"		2/25/08 P	14	2/28/08			
4/29/08 R&F 1.5"R (10:45) 2.5"F (1400)		5/11/08 P	14	5/13/08	2/28-4/28	60	
9/7/08 F 4.57"		9/17/08, 9/21/08 P 9/23/08	16	9/23/08	5/13-9/6	116	
9/27/08F		see comments		see comments	9/23-9/27	3	9/27 flood closure CA area not closed Flood closure lifted 10/3
12/15/08 1.5'R on 12/12		12/29/08 P	19	12/31/08	10/3-12/15	72	weekend closure, legal notice not processed until Monday 12/15/08
					12/31-		



Adequacy of reporting and cooperation of involved persons

In the event that the conditional area closure must be implemented due to rainfall, the management plan for this conditional area requires reporting by Neil Pollis, shellfish warden for the St George River. In 2008, the cooperation between all involved parties was good and all necessary notifications were received at appropriate times. The shellfish warden called DMR staff at home on weekends to be sure they were notified in a timely manner.

Compliance with approved growing area criteria

All active stations in this conditional area met approved standards in the open status (Table 2). Station WU20 was reclassified from conditionally approved to prohibited on October 10, 2008 due to a malfunctioning septic system in the area. This station was sampled five times in the open status and once after it had been reclassified as prohibited.

Table 2. Geomean and P90 Calculations for Conditional Stations, Open status

STATION	CLASS	COUNT	MFCNT	GM	SDV	MAX	P90	APPD_STD	RESTR_STD
WU019.00	CA	30	15	2.9	0.21	15	5.3	39	221
WU020.00	P	30	14	3.4	0.24	16	7.0	40	226
WU021.00	CA	30	15	4.6	0.40	52	15.1	39	221
WU022.00	CA	30	16	5.4	0.43	52	19.0	38	217
WU023.00	CA	30	15	3.7	0.30	26	9.0	39	221
WU025.00	CA	30	15	5.3	0.41	43	17.7	39	221
WU035.00	CA	30	16	3.9	0.32	24	10.1	38	217
WU036.00	CA	30	15	4.1	0.28	23	9.4	39	221
WU037.00	CA	30	15	4.5	0.55	1100	23.1	39	221
WU037.50	CA	30	15	4.0	0.35	50	11.3	39	221
WU038.00	CA	30	15	3.8	0.54	1380	18.8	39	221

Water sampling compliance history

All of the conditionally approved stations were sampled 6 times in the open status in 2008.

Analysis-Recommendations

During the 2008 season there were at least two occasions when rainfall reporting stations from the surrounding area had reported > 1.5 inches of rainfall, but the reporting station for the St George River had not received as much rain. There is concern that the current rain gauge site may be impacted by wind which could impact the ability for rainfall to enter the gauge. Although communication between DMR and the shellfish warden was good, it is strongly recommended that either an automated rain gauge be placed in the upper St George River nearby the rainfall conditional area or a manual gauge be placed at a new location. DMR staff are currently looking into alternative options.



Appendix C. 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 D. Growing Area WU 2008 Data

Station	Date	Collect	Tide	Temp	Sal	Strat	ADV	Stat	CL	BGCOL	WIND
WU001.00	01/15/08	FP	L	-1	30	R	-	O	A	<2.0	N
WU001.00	03/11/08	LL	H	1	30	R	P	O	A	<2.0	CL
WU001.00	05/13/08	EXT	E	9	28	R	-	O	A	<2.0	NE
WU001.00	07/08/08	FP	F	19	31	R	-	O	A	<2.0	SW
WU001.00	08/26/08	EXT	LE	16	30	R	-	O	A	<2.0	NW
WU001.00	10/21/08	FP	F	9	32	R	-	O	A	<2.0	CL
WU002.00	01/15/08	FP	L	0	30	R	-	C	P	<2.0	CL
WU002.00	03/11/08	LL	HF	1	28	R	P	C	P	<2.0	CL
WU002.00	05/13/08	EXT	E	8	28	R	-	C	P	<2.0	NE
WU002.00	07/08/08	FP	F	16	31	R	-	C	P	<2.0	S
WU002.00	08/26/08	EXT	LE	15	30	R	-	C	P	8	CL
WU002.00	10/21/08	FP	F	9	32	R	-	C	P	<2.0	E
WU003.00	01/15/08	FP	LF	0	29	R	-	C	P	<2.0	NW
WU003.00	03/11/08	LL	HF	1	23	R	P	C	P	<2.0	CL
WU003.00	05/13/08	EXT	E	9	28	R	-	C	P	<2.0	CL
WU003.00	07/08/08	FP	F	20	31	R	-	C	P	2	S
WU003.00	08/26/08	EXT	LE	16	30	R	-	C	P	<2.0	N
WU003.00	10/21/08	FP	F	9	32	R	W	C	P	<2.0	E
WU004.00	01/15/08	FP	LF	-1	30	R	-	O	A	<2.0	N
WU004.00	03/11/08	LL	HF	1	28	R	P	O	A	<2.0	CL
WU004.00	05/13/08	EXT	E	9	28	R	-	O	A	<2.0	NE
WU004.00	07/08/08	FP	F	19	31	R	-	O	A	6	S
WU004.00	08/26/08	EXT	LE	17	30	R	-	O	A	<2.0	NW
WU004.00	10/21/08	FP	F	10	32	R	-	O	A	<2.0	E
WU005.00	01/15/08	FP	LF	-1	28	R	-	O	R	<2.0	N
WU005.00	03/11/08	LL	HF	2	26	R	P	O	R	<2.0	CL
WU005.00	05/13/08	EXT	E	9	28	R	-	O	R	<2.0	NE
WU005.00	07/08/08	FP	F	20	31	R	-	O	R	4	SW
WU005.00	08/26/08	EXT	E	17	30	R	-	O	R	6	N
WU005.00	10/21/08	FP	F	10	30	R	-	O	R	<2.0	E
WU006.00	01/15/08	FP	LF	-2	26	R	-	O	A	<2.0	N
WU006.00	03/11/08	LL	HF	-1	22	R	P	O	A	<2.0	CL
WU006.00	05/13/08	EXT	E	11	28	R	-	O	A	<2.0	NE
WU006.00	07/08/08	FP	F	20	31	R	-	O	A	<2.0	CL
WU006.00	08/26/08	EXT	E	17	30	R	-	O	A	<2.0	N
WU006.00	10/21/08	FP	F	9	30	R	-	O	A	<2.0	E
WU006.50	01/15/08	FP	F	0	29	R	-	O	A	<2.0	CL
WU006.50	03/11/08	LL	HF	2	24	R	P	O	A	<2.0	CL
WU006.50	05/13/08	EXT	E	11	28	R	-	O	A	<2.0	NE



Station	Date	Collect	Tide	Temp	Sal	Strat	ADV	Stat	CL	BGCOL	WIND
WU006.50	07/08/08	FP	F	26	31	R	-	O	A	2	SW
WU006.50	08/26/08	EXT	E	17	30	R	-	O	A	2	CL
WU006.50	10/21/08	FP	F	10	30	R	-	O	A	<2.0	CL
WU007.00	01/15/08	FP	F	-1	26	R	-	O	A	2	CL
WU007.00	02/18/08	FP	H	5	26	A	FP	C	A	2	S
WU007.00	02/19/08	FP	HF	0	24	A	FP	C	A	3.6	SW
WU007.00	02/20/08	FP	HF	-1	21	A	F	C	A	2	CL
WU007.00	03/11/08	LL	H	2	27	R	P	O	A	<2.0	CL
WU007.00	05/02/08	FP	HE	7	8	A	F	C	A	8	CL
WU007.00	05/03/08	FP	HE	7	11	A	F	C	A	2	CL
WU007.00	05/04/08	FP	HE	7	18	A	FP	C	A	6	E
WU007.00	05/13/08	EXT	E	11	28	R	-	O	A	<2.0	NE
WU007.00	07/08/08	FP	F	22	31	R	-	O	A	<2.0	SW
WU007.00	08/26/08	EXT	E	16	30	R	-	O	A	4	N
WU007.00	09/09/08	FP	E	15	16	A	F	C	A	200	S
WU007.00	09/10/08	FP	HE	13	18	A	F	C	A	42	CL
WU007.00	09/11/08	FP	HE	12	27	A	F	C	A	10	CL
WU007.00	09/12/08	FP	H	13	28	A	F	C	A	4	SW
WU007.00	09/15/08	AB	H	19	28	A	F	C	A	14	W
WU007.00	09/16/08	AB	H	18	28	A	F	C	A	2	CL
WU007.00	09/17/08	FP	HF	14	28	A	F	C	A	2	S
WU007.00	10/01/08	FP	H	11	24	A	F	C	P	10	CL
WU007.00	10/02/08	EXT	HE	12	28	A	FP	C	P	20	W
WU007.00	10/21/08	FP	F	9	30	R	-	C	P	<2.0	E
WU007.20	01/15/08	FP	F	0	10	R	-	C	P	<2.0	CL
WU007.20	03/11/08	LL	F	0	16	R	P	C	P	<2.0	CL
WU007.20	05/13/08	EXT	E	10	25	R	-	C	P	<2.0	CL
WU007.20	07/08/08	FP	F	27	31	R	-	C	P	<2.0	SW
WU007.20	08/26/08	EXT	E	17	30	R	-	C	P	2	CL
WU007.20	10/21/08	FP	F	9	28	R	-	C	P	2	E
WU007.30	01/15/08	FP	F	-1	8	R	-	C	P	<2.0	CL
WU007.30	03/11/08	LL	F	-1	8	R	P	C	P	<2.0	CL
WU007.30	05/13/08	EXT	E	11	24	R	-	C	P	6	CL
WU007.30	07/08/08	FP	F	28	26	R	-	C	P	11	SW
WU007.30	08/26/08	EXT	E	15	28	R	-	C	P	9.1	CL
WU007.30	10/21/08	FP	F	10	26	R	-	C	P	<2.0	CL
WU009.00	01/15/08	FP	F	0	28	R	-	C	P	<2.0	CL
WU009.00	03/11/08	LL	F	2	30	R	P	C	P	<2.0	CL
WU009.00	05/13/08	EXT	E	8	28	R	-	C	P	2	E
WU009.00	07/08/08	FP	F	17	31	R	-	C	P	2	SW
WU009.00	08/26/08	EXT	E	15	30	R	-	C	P	82	CL
WU009.00	10/21/08	FP	F	9	30	R	-	C	P	<2.0	E
WU010.00	01/15/08	FP	F	0	26	R	-	O	A	<2.0	CL



Station	Date	Collect	Tide	Temp	Sal	Strat	ADV	Stat	CL	BGCOL	WIND
WU010.00	03/11/08	LL	F	0	21	R	P	O	A	<2.0	CL
WU010.00	05/13/08	EXT	E	8	28	R	-	O	A	<2.0	E
WU010.00	07/08/08	FP	F	20	31	R	-	O	A	58	S
WU010.00	08/26/08	EXT	E	15	30	R	-	O	A	<2.0	CL
WU010.00	10/21/08	FP	F	9	31	R	-	O	A	2	E
WU012.00	01/15/08	FP	F	0	26	R	-	O	R	<2.0	CL
WU012.00	03/11/08	LL	F	0	22	R	P	O	R	<2.0	CL
WU012.00	05/13/08	EXT	E	8	28	R	-	O	R	<2.0	CL
WU012.00	07/08/08	FP	F	27	30	R	-	O	R	27	S
WU012.00	08/26/08	EXT	E	16	30	R	-	O	R	<2.0	CL
WU012.00	10/21/08	FP	F	10	24	R	-	O	R	4	E
WU013.00	01/15/08	FP	F	-1	26	R	-	C	P	<2.0	N
WU013.00	03/11/08	LL	H	2	26	R	P	C	P	<2.0	CL
WU013.00	05/13/08	EXT	E	9	28	R	-	C	P	<2.0	E
WU013.00	07/08/08	FP	F	28	31	R	-	O	R	10	S
WU013.00	08/26/08	EXT	E	15	30	R	-	O	R	<2.0	N
WU013.00	10/21/08	FP	F	10	30	R	-	O	R	<2.0	E
WU013.50	01/15/08	FP	F	0	27	R	-	O	A	<2.0	N
WU013.50	03/11/08	LL	F	-1	15	R	P	O	A	<2.0	CL
WU013.50	05/13/08	EXT	E	8	28	R	-	O	A	<2.0	E
WU013.50	07/08/08	FP	HF	20	31	R	-	O	A	<2.0	SW
WU013.50	08/26/08	EXT	E	16	30	R	-	O	A	4	N
WU013.50	10/21/08	FP	F	10	30	R	-	O	A	<2.0	E
WU013.80	01/15/08	FP	F	0	28	R	-	O	R	<2.0	N
WU013.80	03/11/08	LL	F	0	21	R	P	O	R	<2.0	CL
WU013.80	05/13/08	EXT	E	8	30	R	-	O	R	<2.0	E
WU013.80	07/08/08	FP	HF	19	31	R	-	O	R	8	S
WU013.80	08/26/08	EXT	E	15	30	R	-	O	R	20	N
WU013.80	10/21/08	FP	F	9	31	R	-	O	R	2	E
WU014.00	01/15/08	FP	F	0	26	R	-	O	R	<2.0	CL
WU014.00	03/11/08	LL	H	2	19	R	P	O	R	<2.0	CL
WU014.00	05/13/08	EXT	HE	8	27	R	-	O	R	<2.0	CL
WU014.00	07/08/08	FP	HF	30	31	R	-	O	R	<2.0	CL
WU014.00	08/26/08	EXT	HE	14	30	R	-	O	R	2	CL
WU014.00	10/21/08	FP	HF	9	28	R	-	O	R	2	CL
WU014.50	01/15/08	FP	F	1	30	R	-	O	R	<2.0	CL
WU014.50	03/11/08	LL	H	2	21	R	P	O	R	<2.0	SE
WU014.50	05/13/08	EXT	HE	8	27	R	-	O	R	<2.0	E
WU014.50	07/08/08	FP	HF	26	31	R	W	C	P	<2.0	S
WU014.50	08/26/08	EXT	HE	15	30	R	-	C	P	6	N
WU014.50	10/21/08	FP	HF	8	30	R	W	C	P	<2.0	CL



Station	Date	Collect	Tide	Temp	Sal	Strat	ADV	Stat	CL	BGCOL	WIND
WU016.00	01/15/08	FP	F	0	20	R	-	O	R	8	N
WU016.00	03/11/08	LL	H	1	8	R	P	O	R	3.4	SE
WU016.00	05/13/08	EXT	HE	9	26	R	-	O	R	<2.0	E
WU016.00	07/08/08	FP	H	30	31	R	-	C	P	4	CL
WU016.00	08/26/08	EXT	HE	14	25	R	-	C	P	52	N
WU016.00	10/21/08	FP	HF	8	30	R	-	C	P	<2.0	CL
WU016.50	01/15/08	FP	F	-1	25	R	-	O	A	<2.0	N
WU016.50	03/19/08	FP	F	2	25	R	-	O	A	<2.0	CL
WU016.50	05/13/08	EXT	HE	8	27	R	-	O	A	<2.0	E
WU016.50	07/08/08	FP	H	21	31	R	-	O	R	<2.0	CL
WU016.50	08/26/08	EXT	E	15	30	R	-	O	R	<2.0	N
WU016.50	10/21/08	FP	HF	9	30	R	-	O	R	<2.0	CL
WU017.00	01/15/08	FP	F	0	28	R	-	O	A	<2.0	N
WU017.00	04/23/08	EXT	H	12	25	R	-	O	A	<2.0	CL
WU017.00	05/13/08	EXT	HE	8	28	R	-	O	A	<2.0	E
WU017.00	07/08/08	FP	H	21	31	R	-	O	A	<2.0	S
WU017.00	08/26/08	EXT	E	14	30	R	-	O	A	4	N
WU017.00	09/09/08	FP	E	15	20	A	F	C	A	80	S
WU017.00	09/10/08	FP	HE	13	22	A	F	C	A	54	N
WU017.00	09/11/08	FP	HE	13	22	A	F	C	A	62	CL
WU017.00	09/12/08	FP	H	13	24	A	F	C	A	7.3	SW
WU017.00	09/15/08	AB	H	18	26	A	F	C	A	4	SW
WU017.00	09/16/08	AB	H	18	26	A	F	C	A	2	SW
WU017.00	09/17/08	FP	HF	13	27	A	F	C	A	13	S
WU017.00	10/21/08	FP	HF	9	30	R	-	O	A	<2.0	CL
WU018.00	03/11/08	LL	F	2	6	R	P	O	A	<2.0	CL
WU018.00	04/07/08	FP	F	4	19	R	-	O	A	<2.0	NE
WU018.00	05/13/08	EXT	HE	8	25	R	-	O	A	<2.0	E
WU018.00	07/08/08	FP	H	18	31	R	-	O	A	<2.0	S
WU018.00	08/26/08	EXT	H	16	30	R	-	O	A	4	CL
WU018.00	09/09/08	FP	E	15	20	A	F	C	A	380	S
WU018.00	09/10/08	FP	HE	14	17	A	F	C	A	90	N
WU018.00	09/11/08	FP	HE	14	22	A	F	C	A	70	CL
WU018.00	09/12/08	FP	H	13	23	A	F	C	A	36	S
WU018.00	09/15/08	AB	H	19	26	A	F	C	A	16	SW
WU018.00	09/16/08	AB	H	18	24	A	F	C	A	4	CL
WU018.00	09/17/08	FP	HF	13	26	A	F	C	A	4	S
WU018.00	10/01/08	FP	H	11	25	A	F	C	A	18	S
WU018.00	10/02/08	EXT	H	12	25	A	FP	C	A	44	W
WU018.00	10/21/08	FP	HF	8	29	R	-	O	A	<2.0	E
WU019.00	01/15/08	LL	L	1	22	R	-	O	CA	<2.0	CL
WU019.00	02/18/08	FP	H	3	16	A	FP	C	CA	2	S
WU019.00	02/19/08	FP	HF	-1	12	A	FP	C	CA	18	W
WU019.00	02/20/08	FP	HF	-2	12	A	F	C	CA	4	CL



Station	Date	Collect	Tide	Temp	Sal	Strat	ADV	Stat	CL	BGCOL	WIND
WU019.00	02/25/08	FP	F	0	22	A	-	C	CA	<2.0	CL
WU019.00	03/19/08	FP	F	2	24	R	-	O	CA	<2.0	CL
WU019.00	05/02/08	FP	HE	7	14	A	F	C	CA	10	CL
WU019.00	05/03/08	FP	HE	7	10	A	F	C	CA	3.6	CL
WU019.00	05/04/08	FP	HE	6	13	A	F	C	CA	6	E
WU019.00	05/11/08	FP	F	10	22	A	-	C	CA	<2.0	NE
WU019.00	05/20/08	EXT	F	12	24	R	-	O	CA	2	SE
WU019.00	07/09/08	EXT	F	23	29	R	-	O	CA	2	SW
WU019.00	08/27/08	FP	H	13	28	R	W	O	CA	<2.0	NW
WU019.00	09/17/08	FP	HF	14	27	A	P	C	CA	36	S
WU019.00	09/21/08	FP	H	13	28	A	-	C	CA	<2.0	NE
WU019.00	09/23/08	FP	HE	9	28	A	-	C	CA	2	CL
WU019.00	10/22/08	MLP	F	8	30	R	P	O	CA	<2.0	NE
WU019.00	12/29/08	EXT	F	2	22	A	-	C	CA	<2.0	N
WU020.00	01/23/08	LL	HF	-2	21	R	-	O	CA	2	CL
WU020.00	03/19/08	FP	F	3	24	R	-	O	CA	<2.0	CL
WU020.00	05/20/08	EXT	F	13	23	R	-	O	CA	<2.0	CL
WU020.00	07/09/08	EXT	F	25	30	R	-	O	CA	2	SW
WU020.00	08/27/08	FP	H	12	28	R	-	O	CA	<2.0	NW
WU020.00	10/22/08	MLP	HF	8	29	R	P	C	P	5.5	NE
WU021.00	01/23/08	LL	HF	0	20	R	-	O	CA	2	CL
WU021.00	02/25/08	FP	F	0	10	A	W	C	CA	<2.0	CL
WU021.00	03/19/08	FP	HF	2	16	R	W	O	CA	2	CL
WU021.00	05/11/08	FP	F	13	12	A	-	C	CA	2	NE
WU021.00	05/20/08	EXT	F	12	23	R	-	O	CA	<2.0	SE
WU021.00	07/09/08	EXT	F	22	30	R	-	O	CA	4	SW
WU021.00	08/27/08	FP	H	13	28	R	-	O	CA	2	NW
WU021.00	09/17/08	FP	HF	13	26	A	P	C	CA	24	S
WU021.00	09/21/08	FP	H	13	27	A	-	C	CA	4	NE
WU021.00	09/23/08	FP	E	9	27	A	-	C	CA	4	CL
WU021.00	10/22/08	MLP	HF	7	30	R	P	O	CA	27	NE
WU021.00	12/29/08	EXT	HF	2	18	A	-	C	CA	<2.0	CL
WU022.00	01/23/08	LL	HF	-1	16	R	-	O	CA	<2.0	CL
WU022.00	03/19/08	FP	HF	3	15	R	-	O	CA	<2.0	CL
WU022.00	05/20/08	EXT	F	13	22	R	-	O	CA	<2.0	CL
WU022.00	07/09/08	EXT	F	27	30	R	-	O	CA	<2.0	CL
WU022.00	08/27/08	FP	H	13	28	R	-	O	CA	2	NW
WU022.00	10/22/08	MLP	HF	8	28	R	P	O	CA	4	NE
WU023.00	01/15/08	LL	F	1	8	R	-	O	CA	4	NW
WU023.00	02/25/08	FP	F	0	8	A	-	C	CA	<2.0	CL
WU023.00	03/19/08	FP	HF	2	18	R	W	O	CA	2	CL
WU023.00	05/11/08	FP	F	13	11	A	-	C	CA	<2.0	NE
WU023.00	05/20/08	EXT	F	12	24	R	-	O	CA	<2.0	SE
WU023.00	07/09/08	EXT	F	21	30	R	-	O	CA	4	SW
WU023.00	08/27/08	FP	HE	13	28	R	-	O	CA	4	NW



Station	Date	Collect	Tide	Temp	Sal	Strat	ADV	Stat	CL	BGCOL	WIND
WU023.00	09/17/08	FP	H	14	23	A	P	C	CA	<2.0	S
WU023.00	09/21/08	FP	H	13	22	A	-	C	CA	2	NE
WU023.00	09/23/08	FP	E	10	24	A	-	C	CA	6	N
WU023.00	10/22/08	MLP	F	9	24	R	P	O	CA	<2.0	NE
WU023.00	12/29/08	EXT	HF	1	12	A	-	C	CA	6	CL
WU025.00	01/23/08	LL	HF	-1	22	R	-	O	CA	<2.0	CL
WU025.00	02/25/08	FP	HF	2	2	A	-	C	CA	<2.0	E
WU025.00	03/19/08	FP	HF	2	12	R	-	O	CA	<2.0	SW
WU025.00	05/11/08	FP	HF	8	22	A	O	C	CA	<2.0	NE
WU025.00	05/20/08	EXT	F	12	23	R	-	O	CA	2	SE
WU025.00	07/09/08	EXT	F	24	28	R	-	O	CA	2	SW
WU025.00	08/27/08	FP	HE	14	28	R	-	O	CA	<2.0	CL
WU025.00	09/17/08	FP	H	14	16	A	P	C	CA	11	S
WU025.00	09/21/08	FP	HF	13	26	A	-	C	CA	4	NE
WU025.00	09/23/08	FP	E	9	23	A	-	C	CA	8	N
WU025.00	10/22/08	MLP	F	9	22	R	P	O	CA	4	NE
WU025.00	12/29/08	EXT	HF	2	14	A	-	C	CA	<2.0	NW
WU028.00	01/15/08	LL	LF	0	4	R	-	C	P	12	CL
WU028.00	02/25/08	FP	HF	1	4	E	-	C	P	<2.0	CL
WU028.00	03/19/08	FP	HF	2	12	R	-	C	P	<2.0	CL
WU028.00	04/02/08	EXT	H	3	22	R	-	C	P	<2.0	W
WU028.00	05/20/08	EXT	F	11	24	R	-	C	P	<2.0	W
WU028.00	06/04/08	EXT	F	12	28	R	-	C	P	<2.0	SE
WU028.00	07/09/08	EXT	F	21	29	R	-	C	P	<2.0	SW
WU028.00	08/27/08	FP	HE	13	29	R	-	C	P	<2.0	CL
WU028.00	10/22/08	MLP	F	9	16	R	P	C	P	2	NE
WU028.00	11/12/08	FP	H	6	25	R	-	C	P	7.3	CL
WU028.00	12/01/08	FP	F	5	12	R	P	C	P	56	CL
WU029.00	01/23/08	LL	H	-1	2	R	-	C	P	10	CL
WU029.00	02/25/08	FP	HF	0	1	E	-	C	P	<2.0	CL
WU029.00	03/19/08	FP	HF	2	12	R	-	C	P	2	SW
WU029.00	04/02/08	EXT	H	3	2	R	-	C	P	27	W
WU029.00	05/20/08	EXT	F	14	10	R	-	C	P	6	W
WU029.00	06/04/08	EXT	F	13	28	R	-	C	P	5.5	CL
WU029.00	07/09/08	EXT	F	26	26	R	-	C	P	6	SW
WU029.00	08/27/08	FP	HE	14	26	R	-	C	P	2	NW
WU029.00	10/22/08	MLP	F	8	25	R	P	C	P	4	N
WU029.00	11/12/08	FP	H	5	22	R	-	C	P	13	CL
WU029.00	12/01/08	FP	F	5	5	R	P	C	P	56	CL
WU030.00	01/23/08	LL	H	-1	0	R	-	C	P	7.3	CL
WU030.00	02/25/08	FP	HF	-2	0	E	-	C	P	4	CL
WU030.00	03/19/08	FP	H	2	0	R	-	C	P	<2.0	SW
WU030.00	04/02/08	EXT	H	2	0	R	-	C	P	20	W
WU030.00	05/20/08	EXT	F	14	0	R	-	C	P	14	W



Station	Date	Collect	Tide	Temp	Sal	Strat	ADV	Stat	CL	BGCOL	WIND
WU030.00	06/04/08	EXT	F	15	0	R	-	C	P	44	CL
WU030.00	07/09/08	EXT	F	26	17	R	-	C	P	4	SW
WU030.00	08/27/08	FP	HE	13	23	R	-	C	P	24	CL
WU030.00	10/22/08	MLP	F	8	17	R	P	C	P	7.3	N
WU030.00	11/12/08	FP	HE	4	8	R	-	C	P	11	CL
WU030.00	12/01/08	FP	F	4	0	R	P	C	P	112	CL
WU032.00	01/23/08	LL	H	-1	2	E	-	C	CR	4	CL
WU032.00	02/25/08	FP	HF	0	15	E	-	C	CR	<2.0	SE
WU032.00	03/19/08	FP	H	2	20	E	-	C	CR	<2.0	S
WU032.00	04/02/08	EXT	HE	2	8	R	-	O	CR	<2.0	W
WU032.00	05/11/08	FP	HF	5	28	E	-	O	CR	<2.0	CL
WU032.00	05/20/08	EXT	HF	14	10	R	-	O	CR	2	SW
WU032.00	06/04/08	EXT	F	13	28	R	-	O	CR	<2.0	CL
WU032.00	07/09/08	EXT	F	27	28	R	-	O	CR	2	SW
WU032.00	08/27/08	FP	HE	14	28	R	-	O	CR	<2.0	CL
WU032.00	09/17/08	FP	H	14	15	E	P	O	CR	2	S
WU032.00	09/21/08	FP	HF	14	28	E	-	O	CR	<2.0	CL
WU032.00	10/22/08	MLP	F	9	29	R	P	O	CR	4	N
WU032.00	11/12/08	FP	HE	4	16	R	W	O	CR	6	CL
WU032.00	12/01/08	FP	F	5	4	R	PW	O	CR	78	CL
WU033.00	01/23/08	LL	H	-1	4	E	-	C	CR	2	CL
WU033.00	02/25/08	FP	HF	-1	8	E	-	C	CR	<2.0	CL
WU033.00	03/19/08	FP	H	2	16	E	-	C	CR	<2.0	S
WU033.00	04/02/08	EXT	HE	2	3	R	-	O	CR	12	W
WU033.00	05/11/08	FP	HF	10	18	E	-	O	CR	<2.0	CL
WU033.00	05/20/08	EXT	HF	14	14	R	-	O	CR	2	SW
WU033.00	06/04/08	EXT	HF	13	28	R	-	O	CR	<2.0	CL
WU033.00	07/09/08	EXT	F	27	29	R	-	O	CR	2	SW
WU033.00	08/27/08	FP	HE	10	22	R	-	O	CR	6	NW
WU033.00	09/17/08	FP	HE	15	20	E	P	O	CR	6	S
WU033.00	09/21/08	FP	HF	13	27	E	-	O	CR	<2.0	CL
WU033.00	10/22/08	MLP	F	8	23	R	P	O	CR	8	N
WU033.00	11/12/08	FP	HE	4	16	R	-	O	CR	12	CL
WU033.00	12/01/08	FP	F	5	10	R	PW	O	CR	54	CL
WU034.00	01/23/08	LL	H	-1	6	E	-	C	CR	4	CL
WU034.00	02/25/08	FP	H	0	18	E	-	C	CR	<2.0	S
WU034.00	03/19/08	FP	H	3	25	E	-	C	CR	2	S
WU034.00	04/02/08	EXT	HE	2	2	R	-	O	CR	4	W
WU034.00	05/11/08	FP	HF	15	10	E	W	O	CR	2	NE
WU034.00	05/20/08	EXT	HF	12	18	R	-	O	CR	2	CL
WU034.00	06/04/08	EXT	HF	14	24	R	-	O	CR	9	CL
WU034.00	07/09/08	EXT	HF	27	31	R	-	O	CR	84	CL
WU034.00	08/27/08	FP	E	13	22	R	-	O	CR	16	NW
WU034.00	09/17/08	FP	HE	13	25	E	P	O	CR	16	S
WU034.00	09/21/08	FP	F	16	18	E	-	O	CR	2	NE



Station	Date	Collect	Tide	Temp	Sal	Strat	ADV	Stat	CL	BGCOL	WIND
WU034.00	10/22/08	MLP	F	8	20	R	P	O	CR	48	N
WU034.00	11/12/08	FP	E	5	25	R	W	O	CR	9	CL
WU034.00	12/01/08	FP	HF	5	6	R	PW	O	CR	50	CL
WU034.50	01/23/08	LL	H	0	20	E	-	C	CR	<2.0	CL
WU034.50	02/25/08	FP	H	1	8	E	-	C	CR	<2.0	S
WU034.50	03/19/08	FP	H	3	25	E	-	C	CR	2	S
WU034.50	04/02/08	EXT	HE	3	10	R	-	O	CR	4	W
WU034.50	05/11/08	FP	H	8	22	E	-	O	CR	4	NE
WU034.50	05/20/08	EXT	HF	12	24	R	-	O	CR	<2.0	SW
WU034.50	06/04/08	EXT	HF	14	26	R	-	O	CR	8	NE
WU034.50	07/09/08	EXT	HF	22	30	R	-	O	CR	34	SW
WU034.50	08/27/08	FP	E	13	26	R	W	O	CR	340	NW
WU034.50	09/17/08	FP	HE	13	24	E	P	O	CR	24	SW
WU034.50	09/21/08	FP	HF	14	23	E	W	O	CR	96	NE
WU034.50	10/22/08	MLP	F	7	23	R	PW	O	CR	44	N
WU034.50	11/12/08	FP	E	6	28	R	W	O	CR	<2.0	CL
WU034.50	12/01/08	FP	HF	5	12	R	PW	O	CR	5.5	CL
WU035.00	01/23/08	LL	HE	0	10	R	-	O	CA	<2.0	CL
WU035.00	02/25/08	FP	H	1	16	A	-	C	CA	2	S
WU035.00	03/19/08	FP	H	2	22	R	-	O	CA	<2.0	CL
WU035.00	05/11/08	FP	H	9	24	A	O	C	CA	<2.0	N
WU035.00	05/20/08	EXT	HF	13	23	R	-	O	CA	<2.0	SW
WU035.00	07/09/08	EXT	HF	23	30	R	-	O	CA	2	SW
WU035.00	08/27/08	FP	E	12	26	R	-	O	CA	24	NW
WU035.00	09/17/08	FP	HE	14	25	A	P	C	CA	16	SW
WU035.00	09/21/08	FP	HF	13	26	A	-	C	CA	8	NE
WU035.00	09/23/08	FP	E	10	28	A	-	C	CA	10	CL
WU035.00	10/22/08	MLP	F	8	23	R	P	O	CA	8	N
WU035.00	12/29/08	EXT	H	0	6	A	-	C	CA	4	N
WU036.00	01/23/08	LL	HE	-2	8	R	-	O	CA	5.5	CL
WU036.00	03/19/08	FP	HE	3	23	R	-	O	CA	<2.0	CL
WU036.00	05/20/08	EXT	H	12	22	R	-	O	CA	2	SW
WU036.00	07/09/08	EXT	HF	22	30	R	-	O	CA	<2.0	SW
WU036.00	08/27/08	FP	E	13	26	R	-	O	CA	4	NW
WU036.00	10/22/08	MLP	F	8	24	R	P	O	CA	4	N
WU037.00	01/23/08	LL	HE	-1	12	R	-	O	CA	<2.0	SW
WU037.00	02/25/08	FP	H	0	18	A	-	C	CA	<2.0	CL
WU037.00	03/19/08	FP	HE	2	24	R	-	O	CA	<2.0	CL
WU037.00	05/11/08	FP	H	9	22	A	-	C	CA	<2.0	-
WU037.00	05/20/08	EXT	H	12	22	R	-	O	CA	<2.0	SW
WU037.00	07/09/08	EXT	HF	25	30	R	-	O	CA	9.1	SW
WU037.00	08/27/08	FP	E	13	28	R	-	O	CA	2	NW
WU037.00	09/17/08	FP	HE	14	26	A	P	C	CA	22	SW
WU037.00	09/21/08	FP	F	14	28	A	F	C	CA	<2.0	CL



Station	Date	Collect	Tide	Temp	Sal	Strat	ADV	Stat	CL	BGCOL	WIND
WU037.00	09/23/08	FP	E	10	30	A	-	C	CA	<2.0	CL
WU037.00	10/22/08	MLP	F	8	26	R	P	O	CA	16	N
WU037.00	12/29/08	EXT	H	1	12	A	-	C	CA	7.3	NW
WU037.50	01/23/08	LL	HE	0	14	R	-	O	CA	<2.0	CL
WU037.50	03/19/08	FP	HE	2	25	R	-	O	CA	<2.0	CL
WU037.50	05/20/08	EXT	H	13	22	R	-	O	CA	<2.0	CL
WU037.50	07/09/08	EXT	HF	26	30	R	-	O	CA	4	CL
WU037.50	08/27/08	FP	E	13	28	R	-	O	CA	14	NW
WU037.50	10/22/08	MLP	F	8	26	R	P	O	CA	6	N
WU038.00	01/23/08	LL	E	0	20	R	-	O	CA	<2.0	CL
WU038.00	02/25/08	FP	H	0	26	A	-	C	CA	<2.0	CL
WU038.00	03/19/08	FP	HE	2	27	R	-	O	CA	<2.0	CL
WU038.00	05/11/08	FP	H	7	19	A	-	C	CA	<2.0	-
WU038.00	05/20/08	EXT	H	13	25	R	-	O	CA	<2.0	SW
WU038.00	07/09/08	EXT	H	20	30	R	-	O	CA	<2.0	CL
WU038.00	08/27/08	FP	E	14	28	R	-	O	CA	2	NW
WU038.00	09/17/08	FP	E	13	26	A	P	C	CA	4	SW
WU038.00	09/21/08	FP	F	13	28	A	-	C	CA	2	NE
WU038.00	09/23/08	FP	E	10	29	A	-	C	CA	<2.0	CL
WU038.00	10/22/08	MLP	F	7	27	R	P	O	CA	6	N
WU038.00	12/29/08	EXT	H	1	12	A	-	C	CA	6	NW
WU039.00	01/16/08	FP	LE	-1	24	R	-	O	A	<2.0	N
WU039.00	03/12/08	LL	F	0	12	R	PT	O	A	<2.0	SW
WU039.00	05/13/08	FP	H	6	26	R	-	O	A	<2.0	N
WU039.00	07/08/08	EXT	F	22	31	R	-	O	A	<2.0	SW
WU039.00	08/25/08	FP	E	14	29	R	-	O	A	2	CL
WU039.00	10/21/08	AB	F	11	29	R	-	O	A	<2.0	CL
WU040.00	01/16/08	FP	LE	-3	23	R	-	O	A	<2.0	N
WU040.00	02/18/08	FP	H	1	20	A	FP	C	A	<2.0	S
WU040.00	02/19/08	FP	H	-2	12	A	FP	C	A	32	W
WU040.00	02/20/08	FP	HF	-4	10	A	F	C	A	4	NW
WU040.00	03/12/08	LL	F	0	15	R	PT	O	A	2	SW
WU040.00	05/02/08	FP	E	7	18	A	F	C	A	<2.0	CL
WU040.00	05/03/08	FP	E	7	16	A	F	C	A	4	CL
WU040.00	05/04/08	FP	HE	6	20	A	F	C	A	<2.0	CL
WU040.00	05/13/08	FP	H	6	27	R	-	O	A	<2.0	N
WU040.00	07/08/08	EXT	F	21	31	R	-	O	A	<2.0	SW
WU040.00	08/25/08	FP	LE	14	28	R	-	O	A	2	CL
WU040.00	09/09/08	FP	E	15	20	A	F	C	A	220	S
WU040.00	09/10/08	FP	E	14	18	A	F	C	A	82	NE
WU040.00	09/11/08	FP	E	14	22	A	F	C	A	25	SW
WU040.00	09/12/08	FP	E	13	26	A	F	C	A	6	SW
WU040.00	09/15/08	AB	HE	19	26	A	F	C	A	22	SW
WU040.00	09/16/08	AB	HE	18	24	A	F	C	A	13	CL



Station	Date	Collect	Tide	Temp	Sal	Strat	ADV	Stat	CL	BGCOL	WIND
WU040.00	09/17/08	FP	E	13	26	A	F	C	A	134	SW
WU040.00	10/01/08	FP	HF	10	26	A	F	C	A	10	CL
WU040.00	10/02/08	EXT	HF	12	26	A	FP	C	A	48	W
WU040.00	10/21/08	AB	F	11	29	R	-	O	A	<2.0	E
WU041.00	03/12/08	LL	HF	0	20	R	PT	O	A	<2.0	CL
WU041.00	04/23/08	EXT	H	14	26	R	W	O	A	<2.0	CL
WU041.00	05/13/08	FP	H	6	27	R	-	O	A	<2.0	CL
WU041.00	07/09/08	FP	F	30	30	R	-	O	A	<2.0	SW
WU041.00	08/25/08	FP	E	14	28	R	-	O	A	156	CL
WU041.00	10/21/08	AB	H	12	30	R	-	O	A	20	CL
WU042.00	03/12/08	LL	HF	0	20	R	PT	O	A	<2.0	CL
WU042.00	04/23/08	EXT	HE	16	25	R	-	O	A	<2.0	CL
WU042.00	05/13/08	FP	H	5	28	R	-	O	A	<2.0	N
WU042.00	07/08/08	EXT	F	20	31	R	-	O	A	<2.0	CL
WU042.00	08/25/08	FP	E	13	28	R	-	O	A	4	CL
WU042.00	10/21/08	AB	HF	12	31	R	-	O	A	<2.0	CL
WU042.50	03/12/08	LL	HF	0	20	R	PT	C	P	<2.0	CL
WU042.50	04/23/08	EXT	HE	12	26	R	-	C	P	2	CL
WU042.50	05/13/08	FP	HE	5	27	R	-	C	P	<2.0	NE
WU042.50	07/08/08	EXT	F	23	31	R	-	C	P	<2.0	CL
WU042.50	08/25/08	FP	E	13	28	R	-	C	P	4	CL
WU042.50	10/21/08	AB	HF	12	31	R	-	C	P	2	NE
WU042.70	03/12/08	LL	F	1	20	R	PT	C	P	<2.0	CL
WU042.70	04/23/08	EXT	HE	12	25	R	-	C	P	<2.0	CL
WU042.70	05/13/08	FP	HE	6	28	R	-	C	P	<2.0	NE
WU042.70	07/08/08	EXT	F	19	31	R	-	C	P	<2.0	CL
WU042.70	08/25/08	FP	E	13	29	R	-	C	P	6	CL
WU042.70	10/21/08	AB	HF	12	30	R	-	C	P	<2.0	N
WU043.00	03/12/08	LL	F	1	18	R	PT	O	A	2	CL
WU043.00	04/23/08	EXT	HE	13	25	R	-	O	A	<2.0	CL
WU043.00	05/13/08	FP	HE	6	27	R	-	O	A	<2.0	NE
WU043.00	07/08/08	EXT	F	23	31	R	-	O	A	<2.0	SW
WU043.00	08/25/08	FP	E	14	28	R	-	O	A	6	CL
WU043.00	10/21/08	AB	HF	12	30	R	-	O	A	<2.0	CL
WU044.00	01/16/08	FP	L	-3	25	R	-	O	A	<2.0	N
WU044.00	03/12/08	LL	F	0	20	R	PT	O	A	<2.0	SW
WU044.00	05/13/08	FP	HE	5	28	R	-	O	A	28	CL
WU044.00	07/08/08	EXT	F	23	31	R	-	O	A	7.3	SW
WU044.00	08/25/08	FP	E	15	29	R	-	O	A	4	CL
WU044.00	10/21/08	AB	F	11	31	R	-	O	A	<2.0	CL
WU045.00	03/12/08	LL	F	1	22	R	PT	O	A	<2.0	CL



Station	Date	Collect	Tide	Temp	Sal	Strat	ADV	Stat	CL	BGCOL	WIND
WU045.00	04/23/08	EXT	HE	12	25	R	-	O	A	<2.0	CL
WU045.00	05/13/08	FP	HE	6	27	R	-	O	A	<2.0	N
WU045.00	07/08/08	EXT	H	19	31	R	-	O	A	2	CL
WU045.00	08/25/08	FP	E	14	28	R	-	O	A	<2.0	CL
WU045.00	10/21/08	AB	HF	12	30	R	-	O	A	<2.0	N
WU045.50	03/12/08	LL	F	0	0	R	PT	C	P	<2.0	CL
WU045.50	04/23/08	EXT	E	12	16	R	-	C	P	<2.0	CL
WU045.50	05/13/08	FP	HE	6	24	R	-	C	P	<2.0	CL
WU045.50	07/08/08	EXT	F	29	28	R	-	C	P	2	CL
WU045.50	08/25/08	FP	E	14	22	R	-	C	P	44	CL
WU045.50	10/21/08	AB	F	11	15	R	-	C	P	<2.0	CL
WU045.70	03/12/08	LL	F	1	20	R	PT	C	P	<2.0	CL
WU045.70	04/23/08	EXT	E	19	22	R	-	C	P	<2.0	CL
WU045.70	05/13/08	FP	E	8	28	R	-	C	P	<2.0	CL
WU045.70	07/08/08	EXT	HF	18	32	R	-	C	P	<2.0	SW
WU045.70	08/25/08	FP	E	14	28	R	-	C	P	<2.0	CL
WU045.70	10/21/08	AB	F	11	30	R	-	C	P	<2.0	CL
WU045.80	03/19/08	FP	E	3	29	R	-	O	A	<2.0	CL
WU045.80	04/23/08	EXT	E	12	26	R	-	O	A	<2.0	CL
WU045.80	05/13/08	FP	HE	6	27	R	-	O	A	8	N
WU045.80	07/08/08	EXT	H	19	31	R	-	O	A	2	SW
WU045.80	08/25/08	FP	E	14	29	R	-	O	A	<2.0	CL
WU045.80	10/21/08	AB	HF	12	30	R	-	O	A	4	N
WU046.00	01/16/08	FP	L	-2	27	R	-	C	P	<2.0	N
WU046.00	03/12/08	LL	F	1	22	R	PT	C	P	<2.0	CL
WU046.00	05/13/08	FP	E	7	27	R	-	C	P	<2.0	N
WU046.00	07/08/08	EXT	HF	20	31	R	-	C	P	<2.0	SW
WU046.00	08/25/08	FP	E	13	29	R	-	C	P	<2.0	SW
WU046.00	10/21/08	AB	F	12	31	R	-	C	P	<2.0	NE
WU047.00	01/16/08	FP	L	-1	29	R	-	O	A	2	N
WU047.00	02/18/08	FP	HE	4	28	A	FP	C	A	5.5	S
WU047.00	02/19/08	FP	HE	-1	18	A	FP	C	A	2	SW
WU047.00	02/20/08	FP	H	-3	17	A	F	C	A	<2.0	NW
WU047.00	03/12/08	LL	F	0	22	R	PT	O	A	<2.0	SW
WU047.00	05/02/08	FP	E	8	21	A	F	C	A	2	CL
WU047.00	05/03/08	FP	E	7	21	A	F	C	A	<2.0	CL
WU047.00	05/04/08	FP	E	6	22	A	F	C	A	<2.0	CL
WU047.00	05/13/08	FP	E	6	28	R	-	O	A	<2.0	CL
WU047.00	07/08/08	EXT	HF	19	32	R	-	O	A	10	SW
WU047.00	08/25/08	FP	E	14	30	R	-	O	A	<2.0	SW
WU047.00	10/21/08	AB	F	12	31	R	-	O	A	<2.0	SE
WU048.00	03/12/08	LL	F	0	24	R	PT	O	A	<2.0	SW



Station	Date	Collect	Tide	Temp	Sal	Strat	ADV	Stat	CL	BGCOL	WIND
WU048.00	04/23/08	EXT	E	14	28	R	-	O	A	<2.0	CL
WU048.00	05/13/08	FP	E	7	28	R	-	O	A	<2.0	N
WU048.00	07/08/08	EXT	HF	26	31	R	-	O	A	12	SW
WU048.00	08/25/08	FP	E	14	30	R	-	O	A	6	CL
WU048.00	10/21/08	AB	F	11	30	R	-	O	A	4	SE
WU048.50	03/12/08	LL	F	0	20	R	PT	O	A	2	CL
WU048.50	04/23/08	EXT	E	12	28	R	-	O	A	<2.0	CL
WU048.50	05/13/08	FP	E	5	14	R	-	O	A	<2.0	N
WU048.50	07/08/08	EXT	HF	21	31	R	-	O	A	2	SW
WU048.50	10/21/08	AB	F	12	30	R	-	O	A	<2.0	NE
WU048.50	11/05/08	MLP	H	9	30	R	-	O	A	2	CL
WU048.80	01/16/08	FP	LF	0	31	R	-	C	P	<2.0	N
WU048.80	03/12/08	LL	F	1	26	R	PT	C	P	<2.0	SW
WU048.80	05/13/08	FP	E	7	28	R	-	C	P	<2.0	N
WU048.80	07/08/08	EXT	HF	18	32	R	-	C	P	<2.0	SW
WU048.80	08/25/08	FP	E	14	30	R	-	C	P	<2.0	S
WU048.80	10/21/08	AB	F	12	31	R	-	C	P	<2.0	CL
WU050.00	01/16/08	FP	LF	0	30	R	-	C	P	<2.0	N
WU050.00	03/12/08	LL	F	1	22	R	PT	C	P	<2.0	CL
WU050.00	05/13/08	FP	E	7	29	R	-	C	P	<2.0	N
WU050.00	07/08/08	EXT	H	23	31	R	-	C	P	2	SW
WU050.00	08/25/08	FP	LE	14	30	R	-	C	P	9.1	SW
WU050.00	10/21/08	AB	F	12	31	R	-	C	P	2	SE
WU055.50	04/07/08	FP	HF	4	31	R	-	C	P	<2.0	NE
WU055.50	08/11/08	MLP	E	15	30	R	-	C	P	<2.0	E
WU055.50	08/26/08	MLP	E	10	30	R	-	C	P	<2.0	NW
WU055.50	10/06/08	FP	L	10	28	R	-	C	P	2	NW
WU055.50	10/20/08	FP	L	6	32	R	-	C	P	<2.0	N
WU055.50	11/03/08	FP	F	5	31	R	-	C	P	<2.0	W
WU056.00	04/07/08	FP	E	4	30	R	-	O	A	<2.0	NE
WU056.00	08/11/08	MLP	LF	14	30	R	-	O	A	<2.0	S
WU056.00	08/26/08	MLP	L	13	30	R	-	O	A	<2.0	NW
WU056.00	10/06/08	FP	F	10	28	R	-	O	A	2	N
WU056.00	10/20/08	FP	F	6	32	R	-	O	A	<2.0	N
WU056.00	11/03/08	FP	H	5	31	R	-	O	A	<2.0	SW
WU056.50	04/07/08	FP	HF	4	32	R	-	C	P	<2.0	NE
WU056.50	08/11/08	MLP	E	15	30	R	-	C	P	<2.0	E
WU056.50	08/26/08	MLP	E	10	30	R	-	C	P	<2.0	NW
WU056.50	10/06/08	FP	LF	9	30	R	-	C	P	<2.0	N
WU056.50	10/20/08	FP	LF	6	32	R	-	C	P	<2.0	N
WU056.50	11/03/08	FP	F	5	31	R	-	C	P	<2.0	SW
WU057.00	04/07/08	FP	HF	4	31	R	-	C	P	<2.0	NE



Station	Date	Collect	Tide	Temp	Sal	Strat	ADV	Stat	CL	BGCOL	WIND
WU057.00	08/11/08	MLP	E	15	30	R	W	C	P	<2.0	E
WU057.00	08/26/08	MLP	E	11	30	R	-	C	P	<2.0	NW
WU057.00	10/06/08	FP	L	9	27	R	-	C	P	<2.0	N
WU057.00	10/20/08	FP	L	7	32	R	-	C	P	<2.0	N
WU057.00	11/03/08	FP	F	5	31	R	-	C	P	<2.0	SW
WU058.00	04/07/08	FP	HF	4	30	R	-	O	A	<2.0	NE
WU058.00	08/11/08	MLP	E	15	29	R	-	O	A	2	E
WU058.00	08/26/08	MLP	E	10	30	R	-	O	A	<2.0	NW
WU058.00	10/06/08	FP	LF	9	30	R	-	O	A	<2.0	N
WU058.00	10/20/08	FP	LF	6	32	R	-	O	A	<2.0	N
WU058.00	11/03/08	FP	F	5	32	R	-	O	A	<2.0	SW
WU059.00	04/07/08	FP	HF	4	31	R	-	C	P	<2.0	NE
WU059.00	08/11/08	MLP	LE	15	30	R	-	C	P	<2.0	CL
WU059.00	08/26/08	MLP	E	11	30	R	-	C	P	<2.0	CL
WU059.00	10/06/08	FP	LF	9	30	R	-	C	P	<2.0	N
WU059.00	10/20/08	FP	LF	5	32	R	-	C	P	<2.0	N
WU059.00	11/03/08	FP	F	5	31	R	-	C	P	<2.0	SW
WU060.00	04/07/08	FP	HF	4	32	R	-	O	A	<2.0	NE
WU060.00	08/11/08	MLP	LE	13	29	R	-	O	A	<2.0	E
WU060.00	08/26/08	MLP	E	11	31	R	-	O	A	<2.0	NW
WU060.00	10/06/08	FP	LF	10	30	R	-	O	A	<2.0	N
WU060.00	10/20/08	FP	LF	6	32	R	-	O	A	<2.0	N
WU060.00	11/03/08	FP	F	5	32	R	-	O	A	<2.0	W
WU061.00	04/07/08	FP	HF	4	32	R	-	O	A	<2.0	NE
WU061.00	08/11/08	MLP	LE	13	30	R	-	O	A	<2.0	E
WU061.00	08/26/08	MLP	E	10	30	R	-	O	A	<2.0	NW
WU061.00	10/06/08	FP	LF	9	30	R	-	O	A	<2.0	N
WU061.00	10/20/08	FP	LF	6	32	R	-	O	A	<2.0	N
WU061.00	11/03/08	FP	F	5	31	R	-	O	A	<2.0	W



Appendix E. Broad Cove Seasonal Data Analysis

In tables 1 – 6, the months of the new Broad Cove closed period are hi-lighted in yellow; all scores that exceeded the variability standard have been hi-lighted in each table.

Table 1 Station WU 13.5, Broad Cove Seasonal and Rainfall Data, 2001-2008

Rain Range	Rain 72 Hours + Date of Sample	Date Sampled	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
0	0	2/21/2001		<3										
0	0	4/24/2001				<3								
0	0	5/24/2001					<3							
0	0	7/25/2001							<3					
0	0	5/7/2002					<3							
0	0	7/31/2003							9.1					
0	0	8/7/2006								3.6				
0	0	10/25/2006										4		
0	0	11/13/2006											35	
0	0	5/13/2008					<2							
0	0	7/8/2008							<2					
0	0	8/26/2008								4				
0	0	10/21/2008										<2		
.01-.50	0.01	8/28/2007								<2				
.01-.50	0.03	3/16/2005			<3									
.01-.50	0.04	8/28/2003								<3				
.01-.50	0.05	6/5/2002						<3						
.01-.50	0.06	1/13/2003	<3											
.01-.50	0.08	1/24/2001	<3											
.01-.50	0.13	1/24/2007	<2											
.01-.50	0.16	7/10/2002							3.6					
.01-.50	0.16	8/19/2004								23				
.01-.50	0.231	5/19/2005					<3							
.01-.50	0.24	3/9/2004			<3									
.01-.50	0.29	3/28/2007			<2									
.01-.50	0.3	6/26/2001						9.1						
.01-.50	0.33	2/10/2003		<3										
.01-.50	0.34	8/5/2002								21				
.01-.50	0.37	3/13/2006			<3									
.01-.50	0.4	7/28/2004							93					
.01-.50	0.4	5/14/2007					<2							
.01-.50	0.46	1/5/2004	9.1											
.01-.50	0.49	9/23/2003									<3			
.51-1.0	0.6	7/27/2005							43					
.51-1.0	0.68	7/10/2007							18					



Rain Range	Rain 72 Hours + Date of Sample	Date Sampled	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
.51-1.0	0.83	2/4/2002		<3										
.51-1.0	0.84	1/15/2008	<2											
.51-1.0	0.94	2/23/2004		<3										
.51-1.0	0.95	10/29/2007										15		
.51-1.0	0.97	9/6/2006									2			
1.01-1.50	1	1/8/2002	<3											
1.01-1.50	1.02	8/16/2005								3.6				
1.01-1.50	1.14	5/6/2004					<3							
1.51-2.00	1.27	3/3/2003			<3									
1.51-2.00	1.6	6/15/2005						>1100						
1.51-2.00	1.68	3/11/2008			<2									
2.00-2.50	2.08	9/15/2005									<3			
2.51-3.00	2.6	7/11/2006								9.1				

Table 2. Station WU 13.8, Broad Cove Seasonal and Rainfall Data, 2001-2008

Rain Range	Rain 72 Hours + Date of Sample	Date Sampled	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
0	0	2/21/2001		<3										
0	0	4/24/2001				3.6								
0	0	5/24/2001					<3							
0	0	7/25/2001						<3						
0	0	1/2/2002	<3											
0	0	5/7/2002					<3							
0	0	7/31/2003							3.6					
0	0	8/7/2006								43				
0	0	10/25/2006										2		
0	0	11/13/2006											16	
0	0	5/13/2008					<2							
0	0	7/8/2008							8					
.01-.50	0.01	8/28/2007								12				
.01-.50	0.03	3/16/2005			<3									
.01-.50	0.04	8/28/2003								<3				
.01-.50	0.05	6/5/2002						<3						
.01-.50	0.06	1/13/2003	<3											
.01-.50	0.08	1/24/2001	<3											
.01-.50	0.13	1/24/2007	<2											
.01-.50	0.16	7/10/2002							3.6					
.01-.50	0.16	8/19/2004								9.1				
.01-.50	0.231	5/19/2005					<3							



Rain Range	Rain 72 Hours + Date of Sample	Date Sampled	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
.01-.50	0.24	3/9/2004			<3									
.01-.50	0.29	3/28/2007			<2									
.01-.50	0.3	6/26/2001						9.1						
.01-.50	0.33	2/10/2003		<3										
.01-.50	0.34	8/5/2002								<3				
.01-.50	0.37	3/13/2006			<3									
.01-.50	0.4	7/28/2004							93					
.01-.50	0.4	5/14/2007					18							
.01-.50	0.46	1/5/2004	<3											
.01-.50	0.49	9/23/2003									43			
.51-1.0	0.6	7/27/2005							3.6					
.51-1.0	0.68	7/10/2007							48					
.51-1.0	0.83	2/4/2002		<3										
.51-1.0	0.84	1/15/2008	<2											
.51-1.0	0.94	2/23/2004		<3										
.51-1.0	0.95	10/29/2007										12		
.51-1.0	0.97	9/6/2006									100			
.51-1.0	1	1/8/2002	<3											
1.01-1.50	1.02	8/16/2005								9.1				
1.01-1.50	1.14	5/6/2004					3.6							
1.01-1.50	1.27	3/3/2003			<3									
1.51-2.00	1.6	6/15/2005						1100						
1.51-2.00	1.68	3/11/2008			<2									
2.00-2.50	2.08	9/15/2005									3.6			
2.51-3.00	2.6	7/11/2006							3.6					

Table 3. Station WU 14, Broad Cove Seasonal and Rainfall Data, 2001-2008

Rain Range	Rain 72 Hours + Date of Sample	Date Sampled	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
0	0	2/21/2001		<3										
0	0	4/24/2001				<3								
0	0	5/24/2001					<3							
0	0	7/25/2001							3.6					
0	0	1/2/2002	<3											
0	0	5/7/2002					<3							
0	0	7/31/2003							43					
0	0	8/7/2006								23				
0	0	10/25/2006										2		
0	0	11/13/2006											31	



Rain Range	Rain 72 Hours + Date of Sample	Date Sampled	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
0	0	5/13/2008					<2							
0	0	7/8/2008							<2					
.01-.50	0.01	8/28/2007								18				
.01-.50	0.03	3/16/2005			<3									
.01-.50	0.04	8/28/2003								3				
.01-.50	0.05	6/5/2002						3						
.01-.50	0.05	6/12/2007						3.6						
.01-.50	0.06	1/13/2003	<3											
.01-.50	0.08	1/24/2001	<3											
.01-.50	0.16	7/10/2002							15					
.01-.50	0.16	8/19/2004								93				
.01-.50	0.231	5/19/2005					9.1							
.01-.50	0.24	3/9/2004			3.6									
.01-.50	0.29	3/28/2007			<2									
.01-.50	0.3	6/26/2001						9.1						
.01-.50	0.33	2/10/2003		3.6										
.01-.50	0.34	3/11/2002			3.6									
.01-.50	0.34	8/5/2002								23				
.01-.50	0.37	3/13/2006			<3									
.01-.50	0.39	11/16/2005											9.1	
.01-.50	0.4	7/28/2004							15					
.01-.50	0.4	5/14/2007					2							
.01-.50	0.46	1/5/2004	3.6											
.01-.50	0.49	9/23/2003									43			
.51-1.0	0.59	8/4/2003								15				
.51-1.0	0.6	7/27/2005							<3					
.51-1.0	0.68	7/11/2007							16					
.51-1.0	0.83	2/4/2002		<3										
.51-1.0	0.84	1/15/2008	<2											
.51-1.0	0.94	2/23/2004		<3										
.51-1.0	0.95	10/29/2007										29		
.51-1.0	0.97	9/6/2006									16			
.51-1.0	1	1/8/2002	3.6											
1.01-1.50	1.02	8/16/2005								93				
1.01-1.50	1.14	5/6/2004					3.6							
1.01-1.50	1.27	3/3/2003			<3									
1.50-2.00	1.68	3/11/2008			<2									
2.00-2.50	2.08	9/15/2005									23			
2.51-3.00	2.6	7/11/2006							23					



Table 4. Station WU 14.5, Broad Cove Seasonal and Rainfall Data, 2001-2008

Rain Range	Rain 72 Hours + Date of Sample	Date Sampled	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
0	0	2/21/2001		<3										
0	0	4/24/2001				<3								
0	0	5/24/2001					<3							
0	0	7/25/2001							<3					
0	0	1/2/2002	<3											
0	0	5/7/2002					<3							
0	0	7/31/2003							93					
0	0	8/7/2006								460				
0	0	10/25/2006										4		
0	0	11/13/2006											40	
0	0	5/13/2008					<2							
0	0	7/8/2008							<2					
.01-.50	0.01	8/28/2007								27				
.01-.50	0.03	3/16/2005			<3									
.01-.50	0.04	8/28/2003								23				
.01-.50	0.05	6/5/2002						<3						
.01-.50	0.05	6/12/2007						<2						
.01-.50	0.06	1/13/2003	<3											
.01-.50	0.08	1/24/2001	<3											
.01-.50	0.13	1/24/2007	<2											
.01-.50	0.16	7/10/2002							3.6					
.01-.50	0.16	8/19/2004								460				
.01-.50	0.231	5/19/2005					<3							
.01-.50	0.24	3/9/2004			<3									
.01-.50	0.29	3/28/2007			2									
.01-.50	0.3	6/26/2001						240						
.01-.50	0.33	2/10/2003		7.2										
.01-.50	0.34	3/11/2002			<3									
.01-.50	0.34	8/5/2002								460				
.01-.50	0.37	3/13/2006			<3									
.01-.50	0.4	7/28/2004							3.6					
.01-.50	0.4	5/14/2007					13							
.01-.50	0.46	1/5/2004	<3											
.01-.50	0.49	9/23/2003									9.1			
.51-1.0	0.59	8/4/2003								<3				
.51-1.0	0.6	7/27/2005							<3					
.51-1.0	0.68	7/10/2007							12					
.51-1.0	0.83	2/4/2002		<3										
.51-1.0	0.84	1/15/2008	<2											



Rain Range	Rain 72 Hours + Date of Sample	Date Sampled	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
.51-1.0	0.94	2/23/2004		<3										
.51-1.0	0.95	10/29/2007										27		
.51-1.0	0.97	9/6/2006									25			
.51-1.0	1	1/8/2002	<3											
1.01-1.50	1.02	8/16/2005								43				
1.01-1.50	1.14	5/6/2004					<3							
1.01-1.50	1.27	3/3/2003			3.6									
1.51-2.00	1.6	6/15/2005						75						
1.51-2.00	1.68	3/11/2008			<2									
2.01-2.50	2.08	9/15/2005									7.3			
2.51-3.00	2.6	7/11/2006							93					

Table 5. Station WU 16.5, Broad Cove Seasonal and Rainfall Data, 2001-2008

Rain Range	Rain 72 Hours + Date of Sample	Date Sampled	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
0	0	2/21/2001		<3										
0	0	4/24/2001				<3								
0	0	5/24/2001					<3							
0	0	7/25/2001							<3					
0	0	1/2/2002	<3											
0	0	5/7/2002					<3							
0	0	7/31/2003							3.6					
0	0	8/7/2006								21				
0	0	10/25/2006										10		
0	0	11/13/2006											<2	
0	0	5/13/2008					<2							
0	0	7/8/2008							<2					
.01-.50	0.01	8/28/2007								44				
.01-.50	0.04	8/28/2003								93				
.01-.50	0.05	6/5/2002						<3						
.01-.50	0.05	6/12/2007						2						
.01-.50	0.08	1/24/2001	<3											
.01-.50	0.13	1/24/2007	<2											
.01-.50	0.16	7/10/2002							23					
.01-.50	0.16	8/19/2004								7.3				
.01-.50	0.2	3/19/2008			<2									
.01-.50	0.231	5/19/2005					<3							
.01-.50	0.24	3/9/2004			<3									
.01-.50	0.29	3/28/2007			4									



Rain Range	Rain 72 Hours + Date of Sample	Date Sampled	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
.01-.50	0.3	6/26/2001						<3						
.01-.50	0.34	8/5/2002								3.6				
.01-.50	0.37	3/13/2006			<3									
.01-.50	0.39	11/16/2005											3.6	
.01-.50	0.4	7/28/2004							93					
.01-.50	0.4	5/14/2007					<2							
.01-.50	0.46	1/5/2004	<3											
.01-.50	0.49	9/23/2003									3.6			
.51-1.0	0.59	8/4/2003								<3				
.51-1.0	0.6	7/27/2005							<3					
.51-1.0	0.68	7/10/2007							8					
.51-1.0	0.83	2/4/2002		<3										
.51-1.0	0.84	1/15/2008	<2											
.51-1.0	0.94	2/23/2004		<3										
.51-1.0	0.95	10/29/2007										13		
.51-1.0	0.97	9/6/2006									18			
.51-1.0	1	1/8/2002	<3											
1.01-1.50	1.02	8/16/2005								3				
1.01-1.50	1.14	5/6/2004					3.6							
1.01-1.50	1.39	11/23/2003											3.6	
1.51-2.0	1.6	6/15/2005						240						
1.51-2.0	1.811	12/17/2003												3.6
2.01-2.50	2.08	9/15/2005									7.3			
2.51-3.0	2.6	7/11/2006							<3					