



**SHELLFISH GROWING AREA WT  
Towns of Friendship and Cushing**

**Annual Report for 2007**

**Report Date: 10/09/08**

**Fran Pierce**

**APPROVAL**

Division Director:

\_\_\_\_\_ Date: \_\_\_\_\_  
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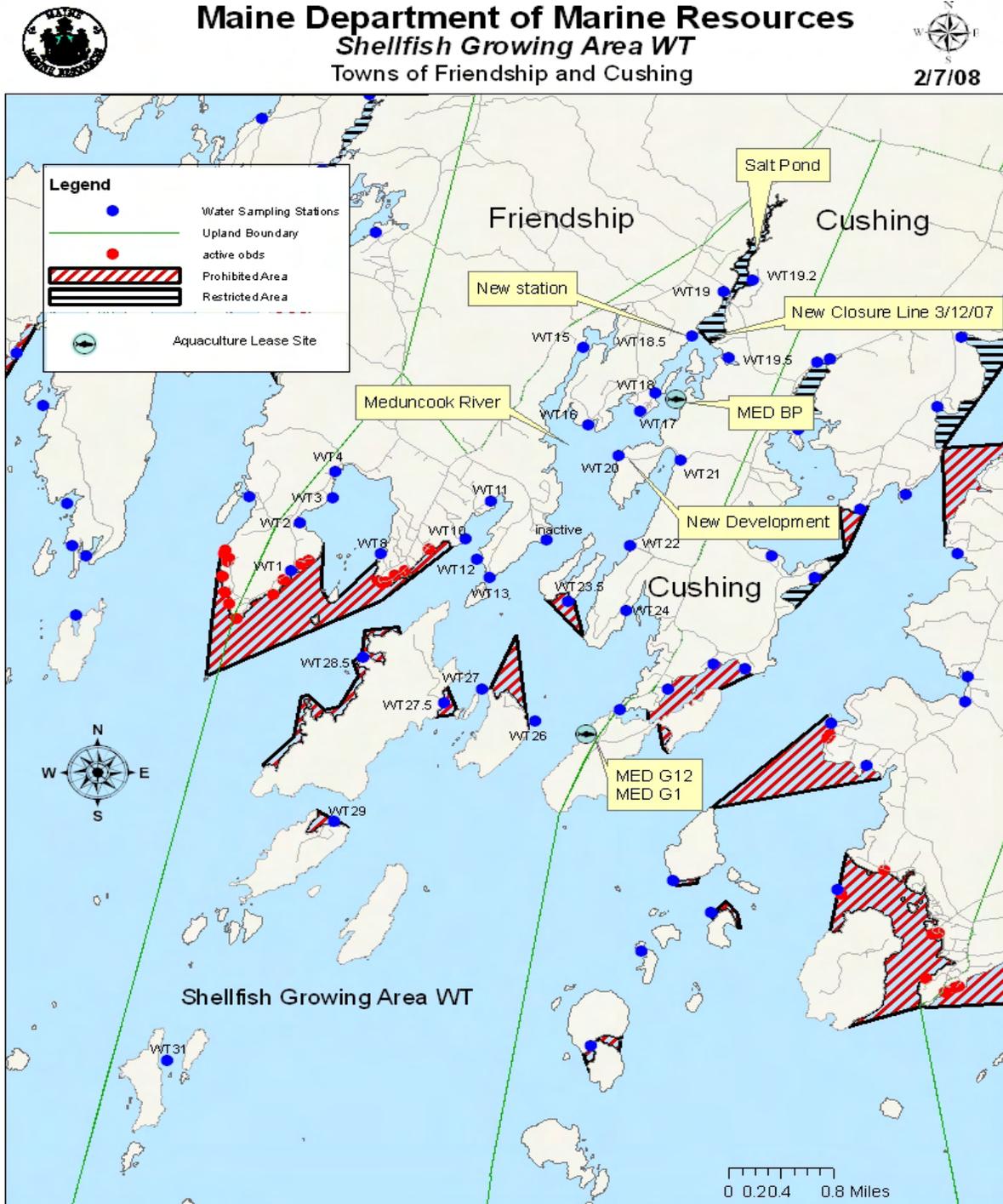
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Figure 1 Growing Area WT, with Active Stations





## Executive Summary

This is an annual report for growing area WT, written in compliance with the 2005 NSSP Model Ordinance.

Growing area WT is located in the towns of Friendship and Cushing. The entire region is very rural. There are no industries or large businesses along the shore. There are no municipal treatment facilities, marinas or industries in or near shellfish growing area WT. The dwellings in this area utilize private in-ground septic systems or licensed overboard discharge systems; several outhouses can still be found in this growing area. One new sampling station, WT18.5, was established at the site of a new closure line in the Meduncook River, on June 20, 2007.

During a drive through survey, a new housing development was observed. The Meduncook Bay Colony is being developed along the Cushing shore of the Meduncook River. This is a very large development that covers an area of approximately 180 acres. The Meduncook Bay Colony development is divided into three communities; Hornbarn Hill, Meduncook Plantation, and Gaunt Neck. All of the sites will utilize private in ground septic systems. At the time of the drive-through survey, many of the sites had already been developed. At the present time there are two sampling sites (WT 20 and 21) along the shore of this area. In the future and as more lots become developed, it may become necessary to add additional sample stations to this area.

The next triennial report for growing area WT is due in 2009; the next sanitary survey is due in 2010.

## Current Classifications

Shellfish growing Area WT currently has shellfish areas classified as:

Approved (20 stations)

Restricted (3 stations)

Prohibited (6 stations): one station is prohibited due to a licensed OBD (WT1), and five stations are prohibited due to point sources of pollution (WT 23.5, 26, 27.5, 28.5 and 29).

Please visit the DMR website to view legal notices for growing area WT:

Area No. 26B Friendship Harbor

Area No. 26K The Upper Meduncook River and Crotch Island Friendship and Cushing

Area No. 26O Friendship Long Island – Harbor Island

[http://www.maine.gov/dmr/rm/public\\_health/closures/closedarea.htm#T](http://www.maine.gov/dmr/rm/public_health/closures/closedarea.htm#T)



## Water Quality Review and Discussion

Table 1 lists all active approved, restricted and prohibited stations in Growing Area WS, with their respective Geomean and P90 calculations for 2007. Please refer to Appendix A for a key to interpreting the headers on the columns of Table 1. The approved and restricted standards for each station are also displayed in Table 1. These standards will fluctuate yearly as a result of the DMR transition from a most probable number (MPN) fecal coliform test method to a membrane filtration (MF) method and are dependent on the number of sample analyzed by MPN 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 Appendix B. All approved and restricted stations, met their NSSP classification standards.

All of the stations in area WT, with the exception of station WT 19.2, that were active at the beginning of 2007 were sampled six times over the course of the sampling season, following a systematic random sampling schedule (Table 2 and Appendix C). Station 19.2 was sampled a total of five times, and was not sampled during the last scheduled run in December, because the area was frozen. The newly established station WT 18.5, was sampled three times in 2007.

**Table 1. Geomean and P90 Scores Growing Area WT, 2003-2007**

STATION	CLASS	CNT	MFCNT	GM	SDV	MAX	P90	APPD_STD	RESTR_STD
WT001.00	P	30	8	4.6	0.44	43	16.9	43	255
WT002.00	A	30	8	4.7	0.52	240	21.6	43	255
WT003.00	A	30	8	3.9	0.40	93	12.9	43	255
WT004.00	A	30	8	5.6	0.55	460	28.2	43	255
WT008.00	A	30	8	4.1	0.60	1100	24.2	43	255
WT010.00	A	30	8	6.2	0.53	156	29.2	43	255
WT011.00	A	30	8	4.6	0.52	460	21.0	43	255
WT012.00	A	30	8	5.3	0.50	240	22.8	43	255
WT013.00	A	30	8	4.2	0.40	58	13.8	43	255
WT014.00	A	30	8	3.5	0.29	43	8.2	43	255
WT015.00	A	30	8	4.8	0.60	1100	28.0	43	255
WT016.00	A	30	8	4.1	0.32	23	10.5	43	255
WT017.00	A	30	8	4.1	0.39	93	12.9	43	255
WT018.00	A	30	8	4.0	0.50	1100	17.5	43	255
WT018.50	new	3	3	3.9	0.31	8	10.1		
WT019.00	R	30	8	8.8	0.62	240	54.8	43	255
WT019.20	R	30	7	9.0	0.70	460	71.3	44	260
WT019.50	A	30	8	5.6	0.52	290	25.8	43	255
WT020.00	A	30	8	4.2	0.47	240	16.7	43	255
WT021.00	A	30	8	6.0	0.56	150	31.6	43	255
WT022.00	A	30	8	3.4	0.37	240	10.1	43	255
WT023.50	P	30	9	2.6	0.10	3.6	3.5	43	250
WT024.00	A	30	8	5.3	0.60	711	31.4	43	255
WT026.00	P	30	9	2.8	0.19	23	4.9	43	250
WT027.00	A	30	9	2.6	0.10	3.6	3.6	43	250



STATION	CLASS	CNT	MFCNT	GM	SDV	MAX	P90	APPD_STD	RESTR_STD
WT027.50	P	30	9	2.9	0.24	43	5.9	43	250
WT028.50	P	30	9	2.8	0.15	9.1	4.3	43	250
WT029.00	P	30	9	2.9	0.19	9.1	5.1	43	250
WT031.00	A	30	9	2.9	0.18	9.1	5.0	43	250

**Table 2. Sample Station Counts, Area WT, 2007**

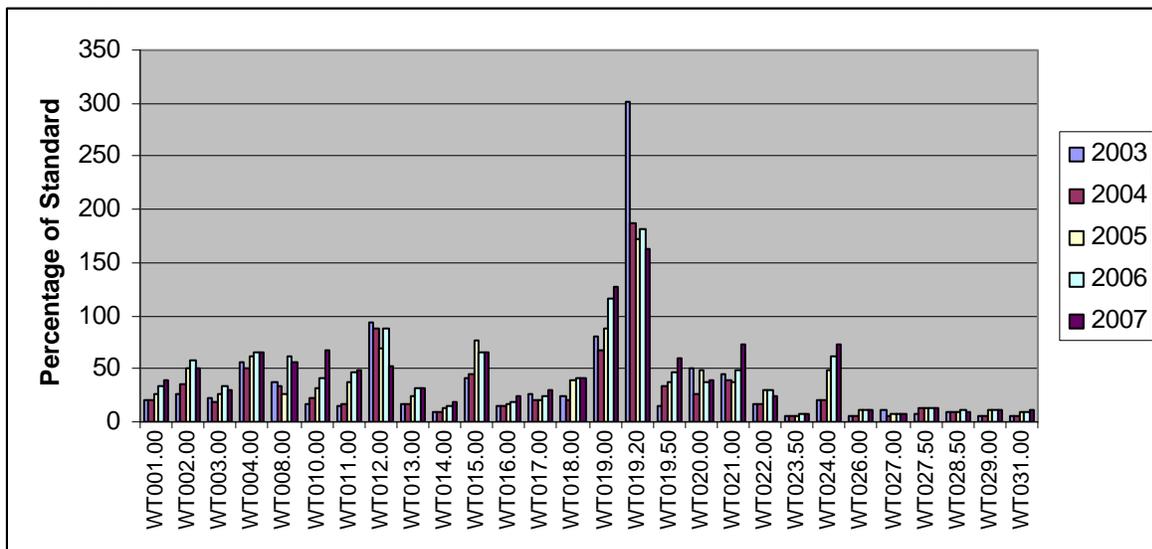
STATION	Class	Closed	Open	Comments
WT001.00	P	6		
WT002.00	A		6	
WT003.00	A		6	
WT004.00	A		6	
WT008.00	A		6	
WT010.00	A		6	
WT011.00	A		6	
WT012.00	A		6	
WT013.00	A		6	
WT014.00	A		6	
WT015.00	A		6	
WT016.00	A		6	
WT017.00	A		6	
WT018.00	A		6	
WT018.50	R		3	New station
WT019.00	R		6	
WT019.20	R		5	Sample site was frozen – salt pond
WT019.50	A		6	
WT020.00	A		6	
WT021.00	A		6	
WT022.00	A		6	
WT023.50	P	6		
WT024.00	A		6	
WT026.00	P	6		
WT027.00	A		6	
WT027.50	P	6		
WT028.50	P	6		
WT029.00	P	6		
WT031.00	A		6	
Grand Total	P	36	134	

Figure 2 shows the P90 scores as a percentage of the approved standard for each year's data set. During the transition from MPN to MF data points, each year the approved standard will be lower than the previous year until all samples have been analyzed by the MF method. In order to show the trend of the P90 value over the years, the calculated P90s are expressed as a percentage of the approved standard. The P90 trends for the past five years show that scores at stations WT 1, WT10, WT19.5, WT21, and WT24 have increased substantially, but continue to meet approved standards. Stations WT19.5, WT21, and WT24 all have streams located nearby that flow continuously throughout the year. A small animal farm consisting of two horses borders on the stream at station WT 19.5. This stream has been sampled in the past and has



received slightly elevated scores. This stream will be sampled in 2008 for the triennial review of the growing area. The stream at station WT 21 flows through a wooded area that currently contains no dwellings. Pollution impact from this stream is most likely due to wildlife. Station WT10 is located nearby a small camp that has been used as a daytime picnic and beach house, it has no running water or toilet facilities. There are no other dwellings in the immediate area. Dog waste has not been observed in the area and the boating activity consists mainly of lobster boats.

**Figure 2.** Water Quality Trends in Area WT. Stations with scores above 100 percent do not meet approved standard.



### Shoreline Survey Activity

Area WT was last surveyed in 1998, and the next shoreline survey will be due in 2010. In 2007, drive-through surveys were conducted as part of the scheduled sample collection runs. During a drive-through survey, a new housing development was observed. The Meduncook Bay Colony is being developed along the Cushing shore of the Meduncook River. This is a very large development that covers an area of approximately 180 acres. The Meduncook Bay Colony development is divided into three communities; Hornbarn Hill, Meduncook Plantation, and Gaunt Neck. All of the sites will utilize private in ground septic systems. At the time of the drive-through survey, many of the sites had already been developed. At the present time there are two sampling sites (WT 20 and 21) along the shore of this area. In the future and as more lots become developed, it may become necessary to add additional sample stations to this area.

### Shellfish Aquaculture and/or Wet Storage Activities

There are currently three aquaculture lease sites in this growing area. The lease site information for each of the lease holders is shown below. Please visit the DMR website for more information on these aquaculture leases. There is no wet storage in shellfish growing area WT.



**MED BP**

**Original Date:** 2/6/2006 **Effective Date:** 2/6/2006 **Expiration Date:** 2/5/2016

**NOAA Chart:** 13301

**Description:** North of Bradford Point Meduncook River Cushing Knox County

**Acreage:** 0.12

**Conditions:**

**Transfer/Renewal History:**

**Species Cultivated:** oyster eastern / american (*Crassostrea virginica*)

**Cultivation Technique(s):** Suspended

**Gay Island Oysters Inc.**

Robert Lynde

P.O. Box 140

Cushing, ME 04563

207-691-4506 Fax:

Navigation, lobster fishing and recreational boating and fishing shall be allowed on the open areas of the lease; and the lease area shall be marked in accordance with U.S. Coast Guard and Department of Marine

Resources regulations Chapter 2.80.

Chart and lease boundaries not to be used for legal purposes.

**MED GI2**

**Original Date:** 3/27/2006 **Effective Date:** 3/27/2006 **Expiration Date:** 3/26/2009

**NOAA Chart:** 13301

**Description:** West of Gay Island Meduncook River Cushing Knox County

**Acreage:** 0.275

**Conditions:**

**Transfer/Renewal History:**

**Species Cultivated:** oyster eastern / american (*Crassostrea virginica*)

**Cultivation Technique(s):** Suspended

**Farmer, Paul**

Paul Farmer

217 River Road

Cushing, ME 04563

207-354-0684 Fax:

Navigation, lobster fishing and recreational boating and fishing shall be allowed on the open areas of the lease; and the lease area shall be marked in accordance with U.S. Coast Guard and Department of Marine

Resources regulations Chapter 2.80.

Chart and lease boundaries not to be used for legal purposes.

**MED GI**

**Original Date:** 8/26/2004 **Effective Date:** 8/26/2004 **Expiration Date:** 8/25/2014

**NOAA Chart:** 13301

**Description:** West side of Gay Island Meduncook River Cushing Knox County

**Acreage:** 1.728

**Conditions:**

**Transfer/Renewal History:**

**Species Cultivated:** oyster eastern / american (*Crassostrea virginica*)



**Cultivation Technique(s):** Suspended

**Gay Island Oysters Inc.**

Robert Lynde  
P.O. Box 140  
Cushing, ME 04563  
207-691-4506 Fax:

Navigation, lobster fishing and recreational boating and fishing shall be allowed on the open areas of the lease; the lease area shall be marked in accordance with U.S. Coast Guard and Department of Marine Resources regulations Chapter 2.80; and all structures placed on the bottom of the lease site, such as overwintering

cages, shall be placed in the deeper water near the northwest corner of the lease site.

Formerly experimental lease LYND MR.

Chart and lease boundaries not to be used for legal purposes.

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

## Classification Changes

No classification changes are required at this time.

## Summary

Shellfish growing area WT continues to maintain good water quality scores. The entire region is very rural and there are no industries or large businesses along the shore. The most likely threats to the water quality from human sources in this area are private septic systems that border on the shore. Shoreline surveys of the area have shown that these systems are well maintained and are not contributing to the degradation of the water quality at this time.

Additional threats to water quality may include fecal pollution from wildlife and farm animals, as well as non-point source pollution transported to the shore by streams. At the present time, all of the stations are appropriately classified. Streams nearby approved stations WT19.5, WT21, and WT24 should all be sampled in 2008, to identify any potential impact on water quality scores from fresh water sources.



## Appendix A. Key to water quality table headers

Station = water quality monitoring station

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

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

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

Geo\_Mean = means the antilog (base 10) of the arithmetic mean of the sample result logarithm (base 10).

SDV = standard deviation

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

P90 = 90th percentile

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

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



## Appendix B. 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 90<sup>th</sup> 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 90<sup>th</sup> 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 90<sup>th</sup> percentile standard that the sample site is compared to will change over time. Once all 30 data points are analyzed using MF, the 90<sup>th</sup> 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 90<sup>th</sup> percentiles will show the number of data points derived from MF analysis and will show the appropriate 90<sup>th</sup> 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 90<sup>th</sup> 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 C. Data for Stations in Area WT, 2007**

Station	Date	Collector	Tide	Temp	Sal	Strat	ADV	Stat	CL	MFCOL	WIND
WT001.00	02/20/07	LL	F	-2	32	R	W	C	P	4	CL
WT001.00	05/14/07	FP	H	8	28	R	-	C	P	<2.0	S
WT001.00	06/11/07	MHE	E	14	30	R	-	C	P	<2.0	NE
WT001.00	08/01/07	MHE	F	20	32	R	-	C	P	<2.0	CL
WT001.00	09/26/07	MHE	HF	14	32	R	-	C	P	12	SE
WT001.00	12/06/07	LL	E	3	32	R	-	C	P	<2.0	CL
WT002.00	05/14/07	FP	H	9	28	R	-	O	A	<2.0	S
WT002.00	06/11/07	MHE	E	15	30	R	-	O	A	<2.0	NE
WT002.00	06/27/07	LL	H	17	32	R	-	O	A	<2.0	CL
WT002.00	08/01/07	MHE	F	20	32	R	-	O	A	12	CL
WT002.00	09/26/07	MHE	HF	15	32	R	-	O	A	<2.0	SE
WT002.00	12/06/07	LL	E	3	32	R	-	O	A	<2.0	CL
WT003.00	02/20/07	LL	F	-2	32	R	-	O	A	<2.0	CL
WT003.00	05/14/07	FP	H	8	30	R	-	O	A	2	S
WT003.00	06/11/07	MHE	E	14	30	R	-	O	A	<2.0	NE
WT003.00	08/01/07	MHE	F	19	32	R	-	O	A	9.1	CL
WT003.00	09/26/07	MHE	HF	15	32	R	-	O	A	<2.0	S
WT003.00	12/06/07	LL	HE	4	32	R	-	O	A	<2.0	CL
WT004.00	05/14/07	FP	H	8	29	R	-	O	A	2	S
WT004.00	06/11/07	MHE	E	14	30	R	-	O	A	<2.0	NE
WT004.00	06/27/07	LL	H	17	32	R	-	O	A	<2.0	CL
WT004.00	08/01/07	MHE	F	22	32	R	-	O	A	10	CL
WT004.00	09/26/07	MHE	HF	16	32	R	-	O	A	2	CL
WT004.00	12/06/07	LL	HE	3	32	R	-	O	A	<2.0	CL
WT008.00	05/14/07	FP	H	9	30	R	-	O	A	<2.0	S
WT008.00	06/11/07	MHE	E	15	30	R	-	O	A	<2.0	NE
WT008.00	06/27/07	LL	H	16	32	R	-	O	A	<2.0	CL
WT008.00	08/01/07	MHE	F	23	32	R	-	O	A	<2.0	CL
WT008.00	09/26/07	MHE	HF	15	33	R	-	O	A	<2.0	SW
WT008.00	12/06/07	LL	E	-3	30	R	-	O	A	<2.0	NW
WT010.00	02/20/07	LL	F	-2	32	R	-	O	A	<2.0	CL
WT010.00	05/14/07	FP	H	9	29	R	-	O	A	156	S
WT010.00	06/11/07	MHE	E	13	30	R	W	O	A	15	NE
WT010.00	08/01/07	MHE	F	21	32	R	-	O	A	3.6	CL
WT010.00	09/26/07	MHE	HF	16	33	R	-	O	A	27	S
WT010.00	12/06/07	LL	E	3	32	R	-	O	A	<2.0	CL



Station	Date	Collector	Tide	Temp	Sal	Strat	ADV	Stat	CL	MFCOL	WIND
WT011.00	05/14/07	FP	H	9	30	R	-	O	A	<2.0	S
WT011.00	06/11/07	MHE	E	14	30	R	-	O	A	<2.0	NE
WT011.00	06/27/07	LL	H	17	32	R	-	O	A	<2.0	CL
WT011.00	08/01/07	MHE	F	20	32	R	-	O	A	4	CL
WT011.00	09/26/07	MHE	H	16	32	R	-	O	A	24	S
WT011.00	12/06/07	LL	E	3	32	R	-	O	A	<2.0	CL
WT012.00	02/20/07	LL	F	-2	32	R	-	O	A	<2.0	CL
WT012.00	05/14/07	FP	HE	8	30	R	-	O	A	<2.0	S
WT012.00	06/11/07	MHE	E	13	30	R	-	O	A	<2.0	CL
WT012.00	08/01/07	MHE	F	20	32	R	-	O	A	2	CL
WT012.00	09/26/07	MHE	H	17	32	R	-	O	A	8	SW
WT012.00	12/06/07	LL	E	3	32	R	-	O	A	<2.0	CL
WT013.00	02/20/07	LL	F	-2	32	R	-	O	A	<2.0	CL
WT013.00	05/14/07	FP	HE	9	29	R	-	O	A	<2.0	S
WT013.00	06/11/07	MHE	E	12	30	R	-	O	A	<2.0	CL
WT013.00	08/01/07	MHE	F	20	32	R	-	O	A	<2.0	CL
WT013.00	09/26/07	MHE	H	17	32	R	-	O	A	7.3	S
WT013.00	12/06/07	LL	E	3	32	R	-	O	A	<2.0	CL
WT014.00	05/14/07	FP	HE	10	29	R	-	O	A	<2.0	S
WT014.00	06/11/07	MHE	E	13	30	R	-	O	A	2	NE
WT014.00	06/27/07	LL	H	15	32	R	-	O	A	<2.0	CL
WT014.00	08/01/07	MHE	F	22	32	R	-	O	A	<2.0	CL
WT014.00	09/26/07	MHE	H	17	32	R	-	O	A	16	SW
WT014.00	12/11/07	FP	HF	3	2	R	-	O	A	<2.0	CL
WT015.00	05/14/07	FP	HE	10	28	R	-	O	A	<2.0	S
WT015.00	06/11/07	MHE	E	15	30	R	-	O	A	2	NE
WT015.00	06/27/07	LL	H	17	32	R	-	O	A	2	CL
WT015.00	08/01/07	MHE	F	20	32	R	-	O	A	<2.0	CL
WT015.00	09/26/07	MHE	H	16	33	R	-	O	A	2	SW
WT015.00	12/06/07	LL	E	2	30	R	-	O	A	<2.0	CL
WT016.00	05/14/07	FP	HE	11	28	R	-	O	A	6	S
WT016.00	06/11/07	MHE	E	13	31	R	-	O	A	<2.0	CL
WT016.00	06/27/07	LL	H	18	32	R	-	O	A	<2.0	CL
WT016.00	08/01/07	MHE	F	23	32	R	-	O	A	10	CL
WT016.00	09/26/07	MHE	HE	15	32	R	-	O	A	18	SW
WT016.00	12/06/07	LL	E	3	30	R	-	O	A	<2.0	CL
WT017.00	05/14/07	FP	HE	10	28	R	-	O	A	<2.0	S
WT017.00	06/11/07	MHE	E	14	30	R	-	O	A	<2.0	CL
WT017.00	06/27/07	LL	H	19	32	R	-	O	A	<2.0	CL
WT017.00	08/01/07	MHE	F	21	32	R	-	O	A	<2.0	CL



Station	Date	Collector	Tide	Temp	Sal	Strat	ADV	Stat	CL	MFCOL	WIND
WT017.00	09/26/07	MHE	HE	16	32	R	-	O	A	24	SW
WT017.00	12/06/07	LL	E	2	30	R	-	O	A	<2.0	CL
WT018.00	02/20/07	LL	HF	-2	32	R	-	O	A	<2.0	CL
WT018.00	05/14/07	FP	HE	10	28	R	-	O	A	<2.0	S
WT018.00	06/11/07	MHE	E	15	30	R	-	O	A	7.3	NE
WT018.00	08/01/07	MHE	F	22	32	R	-	O	A	4	CL
WT018.00	09/26/07	MHE	HE	15	32	R	-	O	A	4	S
WT018.00	12/06/07	LL	E	2	30	R	-	O	A	<2.0	CL
WT018.50	08/01/07	MHE	HF	21	32	R	-	O	R	4	CL
WT018.50	09/26/07	MHE	HE	16	32	R	-	O	R	8	S
WT018.50	12/06/07	LL	E	1	30	R	-	O	R	<2.0	CL
WT019.00	02/20/07	LL	HF	-2	26	R	-	O	A	<2.0	CL
WT019.00	05/14/07	FP	HE	14	14	R	-	O	R	<2.0	S
WT019.00	06/11/07	MHE	E	15	25	R	-	O	R	12	CL
WT019.00	08/01/07	MHE	HF	25	29	R	-	O	R	10	CL
WT019.00	09/26/07	MHE	HE	17	30	R	-	O	R	9.1	S
WT019.00	12/11/07	FP	HF	0	30	R	-	O	R	13	CL
WT019.20	05/14/07	FP	HE	16	8	R	-	O	R	<2.0	S
WT019.20	06/11/07	MHE	E	19	6	R	-	O	R	6	NE
WT019.20	08/01/07	MHE	HF	25	25	R	-	O	R	24	CL
WT019.20	08/28/07	LL	F	22	26	R	-	O	R	<2.0	CL
WT019.20	09/26/07	MHE	HE	16	28	R	-	O	R	380	CL
WT019.50	05/14/07	FP	E	13	26	R	-	O	A	16	CL
WT019.50	06/11/07	MHE	E	17	21	R	-	O	A	33	CL
WT019.50	06/27/07	LL	HE	19	32	R	-	O	A	2	CL
WT019.50	08/01/07	MHE	HF	23	31	R	-	O	A	2	CL
WT019.50	09/26/07	MHE	HE	15	32	R	-	O	A	<2.0	CL
WT019.50	12/11/07	FP	HF	0	18	R	-	O	A	<2.0	CL
WT020.00	05/14/07	FP	E	10	29	R	-	O	A	<2.0	S
WT020.00	06/11/07	MHE	E	14	30	R	-	O	A	<2.0	NE
WT020.00	06/27/07	LL	HE	16	32	R	-	O	A	<2.0	CL
WT020.00	08/01/07	MHE	HF	23	32	R	-	O	A	2	NE
WT020.00	09/26/07	MHE	E	15	32	R	-	O	A	4	SW
WT020.00	12/11/07	FP	H	1	29	R	-	O	A	<2.0	CL
WT021.00	05/14/07	FP	E	10	28	R	-	O	A	56	CL
WT021.00	06/11/07	MHE	E	14	30	R	-	O	A	<2.0	CL
WT021.00	06/27/07	LL	HE	18	32	R	-	O	A	4	CL
WT021.00	08/01/07	MHE	H	20	32	R	-	O	A	2	CL
WT021.00	09/26/07	MHE	E	15	32	R	-	O	A	140	SW



Station	Date	Collector	Tide	Temp	Sal	Strat	ADV	Stat	CL	MFCOL	WIND
WT021.00	12/11/07	FP	H	1	30	R	-	O	A	<2.0	CL
WT022.00	02/20/07	LL	HF	-2	32	R	-	O	A	<2.0	CL
WT022.00	05/14/07	FP	E	9	30	R	-	O	A	8	S
WT022.00	06/11/07	MHE	E	12	30	R	-	O	A	<2.0	NE
WT022.00	08/01/07	MHE	H	16	31	R	-	O	A	<2.0	CL
WT022.00	09/26/07	MHE	E	14	33	R	-	O	A	<2.0	SW
WT022.00	12/06/07	LL	E	0	30	R	-	O	A	<2.0	NW
WT023.50	05/07/07	FP	HF	2	28	R	-	C	P	<2.0	SW
WT023.50	06/11/07	FP	L	15	28	R	-	C	P	<2.0	NE
WT023.50	06/27/07	JB	LE		32	R	-	C	P	<2.0	SW
WT023.50	07/30/07	EXT	HE	18	31	R	-	C	P	<2.0	SW
WT023.50	08/15/07	JB	E	14	31	R	-	C	P	<2.0	SW
WT023.50	09/24/07	AJS	LF	14	30	R	-	C	P	<2.0	W
WT024.00	02/20/07	LL	H	-2	32	R	-	O	A	<2.0	CL
WT024.00	05/14/07	FP	E	10	30	R	-	O	A	<2.0	S
WT024.00	06/11/07	MHE	E	12	30	R	-	O	A	<2.0	-
WT024.00	08/01/07	MHE	H	21	32	R	-	O	A	<2.0	CL
WT024.00	09/26/07	MHE	E	14	33	R	-	O	A	25	SW
WT024.00	12/06/07	LL	E	4	32	R	-	O	A	<2.0	CL
WT026.00	05/07/07	FP	HF		28	R	-	C	P	<2.0	SW
WT026.00	06/11/07	FP	L	15	30	R	-	C	P	<2.0	NE
WT026.00	06/27/07	JB	LE		31	R	-	C	P	<2.0	SW
WT026.00	07/30/07	EXT	HE	18	30	R	-	C	P	2	SW
WT026.00	08/15/07	JB	E	14	31	R	-	C	P	2	SW
WT026.00	09/24/07	AJS	LF	13	31	R	-	C	P	<2.0	SW
WT027.00	05/07/07	FP	HF	3	28	R	-	O	A	<2.0	SW
WT027.00	06/11/07	FP	L	15	29	R	-	O	A	<2.0	NE
WT027.00	06/27/07	JB	LE		31	R	-	O	A	<2.0	SW
WT027.00	07/30/07	EXT	HE	18	31	R	-	O	A	<2.0	SW
WT027.00	08/15/07	JB	E	14	31	R	-	O	A	<2.0	SW
WT027.00	09/24/07	AJS	LF	15	30	R	-	O	A	<2.0	W
WT027.50	05/07/07	FP	HF	3	28	R	-	C	P	<2.0	SW
WT027.50	06/11/07	FP	LE	15	28	R	-	C	P	<2.0	NE
WT027.50	06/27/07	JB	LE		30	R	-	C	P	<2.0	SW
WT027.50	07/30/07	EXT	HE	18	32	R	-	C	P	4	SW
WT027.50	08/15/07	JB	E	14	31	R	-	C	P	<2.0	SW
WT027.50	09/24/07	AJS	LF	14	30	R	-	C	P	<2.0	SW
WT028.50	05/07/07	FP	HF	3	28	R	-	C	P	<2.0	SW
WT028.50	06/11/07	FP	LE	15	29	R	-	C	P	<2.0	NE



Station	Date	Collector	Tide	Temp	Sal	Strat	ADV	Stat	CL	MFCOL	WIND
WT028.50	06/27/07	JB	LE		31	R	-	C	P	<2.0	SW
WT028.50	07/30/07	EXT	HE	21	31	R	-	C	P	<2.0	CL
WT028.50	08/15/07	JB	E	15	31	R	-	C	P	<2.0	SW
WT028.50	09/24/07	AJS	L	15	31	R	-	C	P	<2.0	W
WT029.00	05/07/07	FP	F	2	28	R	-	C	P	<2.0	SW
WT029.00	06/11/07	FP	E	15	29	R	-	C	P	<2.0	NE
WT029.00	06/27/07	JB	LE		32	R	-	C	P	<2.0	CL
WT029.00	07/30/07	EXT	HE	18	31	R	-	C	P	<2.0	SW
WT029.00	08/15/07	JB	E	14	31	R	-	C	P	<2.0	CL
WT029.00	09/24/07	AJS	LF	14	30	R	-	C	P	<2.0	W
WT031.00	05/07/07	FP	F	2	28	R	-	O	A	<2.0	SW
WT031.00	06/11/07	FP	E	15	29	R	-	O	A	<2.0	NE
WT031.00	06/27/07	JB	E		30	R	B	O	A	<2.0	SW
WT031.00	07/30/07	EXT	HF	17	31	R	-	O	A	<2.0	CL
WT031.00	08/15/07	JB	E	13	31	R	B	O	A	7.3	CL
WT031.00	09/24/07	AJS	E	14	31	R	-	O	A	<2.0	CL