



GROWING AREA WE
Towns of Kennebunkport and Biddeford
ANNUAL REVIEW for 2009

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Date



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Figure 1. Growing Area WE, with Active Water Stations

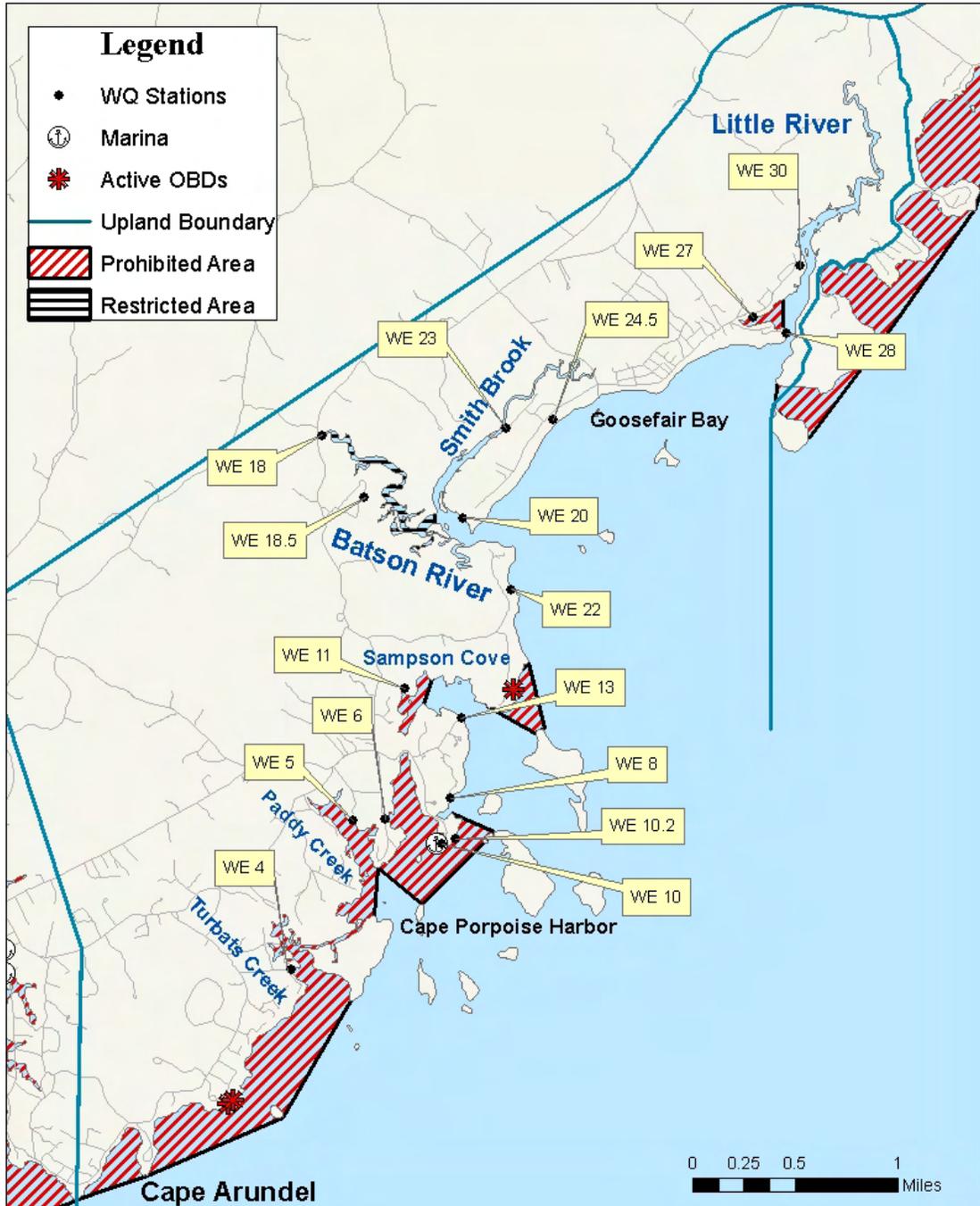


Maine Department of Marine Resources

Growing Area WE



12/15/09





Executive Summary

This is an annual report for growing area WE written in compliance with the requirements of the 2007 Model Ordinance and the National Shellfish Sanitation Program. The next triennial report is due in 2010; the next sanitary survey report is due in 2014.

Growing area WE is located between Cape Arundel, Kennebunkport and Timber Point, Biddeford. Existing pollution sources include three licensed residential overboard discharges (OBD) and two malfunctioning in-ground septic systems documented during a shoreline survey in October 2009. Both malfunctions are in a prohibited area and did not require a closure area. Non-point pollution from streams and increased seasonal shore usage are also of concern in this growing area.

The upland boundary between growing area WE and WF was adjusted on August 4, 2009, so that the eastern boundary line did not go through the middle of Little River (Kennebunkport, Biddeford). No sample stations or shoreline survey database entries had to be changed as a result of the update.

Growing Area Description

Growing Area WE is located between Cape Arundel, Kennebunkport and Timber Point, Biddeford (Figure 1). The growing area includes several coves (Turbats Creek, Paddy Creek, and Sampson Cove), Cape Porpoise Harbor, Goosefare Bay, and two small rivers (Batson River and Little River). A complete boundary description can be found in DMR central files.

There are no municipal wastewater treatment plants within the boundaries of growing area WE. The Kennebunkport Waste Water Treatment Plant sewer collection system serves most of Cape Porpoise Harbor and extends along Marshall Point and Goosefare Bay. The plant discharges to the Kennebunk River in Growing Area WD. There are pump stations in growing area WE: two near Little River, three on Goosefare Bay, one near Sampson Cove, one near Paddy Creek, two near Turbats Creek, two inland and five on the Kennebunk River in growing area WD. All of the pump stations have dual pumps, alarms and no overflow pipes per the review of the plant on January 14, 2008.

There is a farm which grazes 20-50 sheep and a pond that has wild and domestic geese on the shore of Batson Brook. There are no marinas in the area but the Cape Porpoise Town Pier which has 76 moorings: 48 for fishing boats and 28 for recreational boats. Only two of the recreational boats have heads and the peak season for usage is Memorial Day to Labor Day. There is one limited purpose aquaculture license (WHI 05) for soft-shelled clams which is comprised of a shellfish raft/overwintering cage in Cape Porpoise Harbor. The Rachel Carson Preserve that owns a predominant amount of the shoreline at Sampson Cove, Smith Brook, Batson River and Little River. The preserve is home for deer, fox, raccoons and various



waterfowl. There are also beaver in Beaver Pond, and the drainage from the pond impacts water quality at station WE 27, which is classified prohibited.

Current Classification(s)

At the end of 2009, shellfish growing area WE currently had areas classified as:

Approved (total of 8 stations)

- Cape Porpoise Harbor (WE 8 and 13)
- Smith Brook (WE 20 and 23)
- Goosefare Bay (WE 22 and 24.5)
- Little River (WE 28 and 30 stations)

Restricted (total of 2 stations)

- Batson River (WE due to poor water quality and run-off from farm)

Prohibited (total of 5 stations)

- Turbats Creek (WE 4, due to poor water quality and lack of shoreline survey)
- Patty Creek (WE 5, due to poor water quality and lack of shoreline survey)
- Cape Porpoise Harbor (WE 10, due to lack of shoreline survey and poor water quality)
- Sampson Cove (WE 11, due to lack of shoreline survey)
- Nessler Point (no stations, due to an overboard discharge)
- Little River (WE 27, due to poor water quality)

There are two stations with less than 30 data points in their datasets; these stations are considered new and have no classification assigned to them.

Please visit the DMR website to view legal notices:

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

Activity during Review Period

May 27, 2009: Area No. 8, Kennebunk River to Cape Porpoise (Kennebunk and Kennebunkport): amendment changes the title; places the Kennebunk River into Area No. 7; and places the region around Sampson Cove into Area No. 9. This amendment reclassifies the Turbats Creek area from restricted to prohibited, due to lack of a recent shoreline survey. This amendment reclassifies the prohibited area at Goat Island to approved due to the removal of a licensed overboard discharge.

May 27, 2009: Area No. 9, Batson River to Fortunes Rocks (Kennebunkport and Biddeford): amendment changes the title of the rule, and moves the Sampson Cove vicinity from Area No. 8 to Area No. 9. Amendment also reclassifies Little River and Goosefare Bay from conditionally



approved to prohibited due to lack of a recent shoreline survey, and the presence of a licensed overboard discharge at Timber Point (Biddeford). This amendment reclassifies Smith Brook and Batson River from restricted to prohibited, due to lack of a recent shoreline survey.

August 14, 2009: Area No. 9, Sampson Cove to Fortunes Rocks (Kennebunkport and Biddeford), amended on May 27, 2009: amendment reclassifies Little River (Biddeford and Kennebunkport), Goosefare Bay (Kennebunkport) and Smith Brook (Kennebunkport) from prohibited to approved, due to a review of the findings of the most recent shoreline survey and water quality meeting the approved standard; this amendment also reclassifies Batson River from prohibited to restricted, due to a review of the findings of the most recent shoreline survey and water quality meeting the restricted standard.

Table 1 lists the previous and current classifications for area WE stations that took place during the 2009 year.

Table 1. Classification Changes for Stations in Growing Area WE in 2009

Station	Original Class	Reclassification on 5/27/09	Reclassification on 8/14/09
WE004.00	R	P	
WE013.00	P		A
WE018.00	R	P	R
WE018.50	R	P	R
WE020.00	R	P	A
WE022.00	P		A
WE023.00	R	P	A
WE024.50	CA	P	A
WE028.00	CA	P	A
WE030.00	CA	P	A

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

There are currently no conditional areas in area WE.

Water Quality Review and Discussion

Table 2 lists all active approved, restricted and prohibited stations in Growing Area WE, with their respective Geomean and P90 calculations for 2009. Please refer to Appendix C 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 central files.

Based on the current review of water quality data all approved and restricted stations met their NSSP classification standard in 2009. Station WE 10.2 is located in a prohibited area, but is currently meeting the approved NSSP standard. However this station is a new station and has been sampled only 15 times. This station will remain prohibited until it is sampled a minimum of 30 times and water quality is reevaluated to determine if this station qualifies for an upward reclassification. Station WE 11 is classified as prohibited, but meets the approved standard; the area surrounding this station will be re-surveyed in 2010, and an upward classification change will be proposed if no pollution sources are found.

Table 2. Geomean and P90 Scores, Growing Area WE, 2004-2009

Station	Class	Count	MFCnt	GM	SDV	MAX	P90	Appd Std	Restr Std	Min Date
WE004.00	P	30	25	7.9	0.64	500	53.1	33	180	12/14/2005
WE005.00	P	30	29	5.2	0.55	132	27.2	31	166	5/10/2006
WE006.00	New	14	14	4	0.36	18	12	31	163	8/13/2007
WE008.00	A	30	21	4.6	0.53	152	22	35	195	2/9/2005
WE010.00	P	30	17	11.9	0.79	740	125.8	37	212	5/27/2004
WE010.20	New	15	15	3.1	0.36	22	9.3	31	163	8/13/2007
WE011.00	P	30	21	4.1	0.55	144	20.9	35	195	2/9/2005
WE013.00	A	30	21	2.8	0.32	78	7.4	35	195	2/9/2005
WE018.00	R	30	22	32.1	0.53	460	155.5	35	191	4/20/2005
WE018.50	R	30	21	4.8	0.54	129	23.9	35	195	9/2/2004
WE020.00	A	30	28	2.9	0.39	82	9.4	31	169	2/14/2006
WE022.00	A	30	20	3.1	0.35	72	9.1	36	199	3/22/2005
WE023.00	A	30	21	3.8	0.42	68	13.5	35	195	2/9/2005
WE024.50	A	30	29	3.3	0.63	1700	22.1	31	166	5/10/2006
WE027.00	P	30	28	14.9	0.63	340	96.2	31	169	4/18/2006
WE028.00	A	30	29	3.1	0.34	42	8.7	31	166	5/10/2006
WE030.00	A	30	29	3.5	0.39	52	11.1	31	166	5/10/2006

All approved stations that were active at the beginning of the year were sampled at least 6 times in 2009, following the systematic random sampling (SRS) schedule. Station WE 6 was sampled 5 times, however this is a prohibited station and does not require to be sampled 6 times a year. Table 3 shows the number of random samples taken during the 2009 sampling year; Appendix C shows random data collected in 2009 for all active stations in growing area WE.

Table 3. WE Samples Collected in 2009

Station	Class	Adverse	Random		Total	Comments
		Closed	Closed	Open		
WE004.00	P		4		6	Reclassified from R to P on May 27
	R			2		

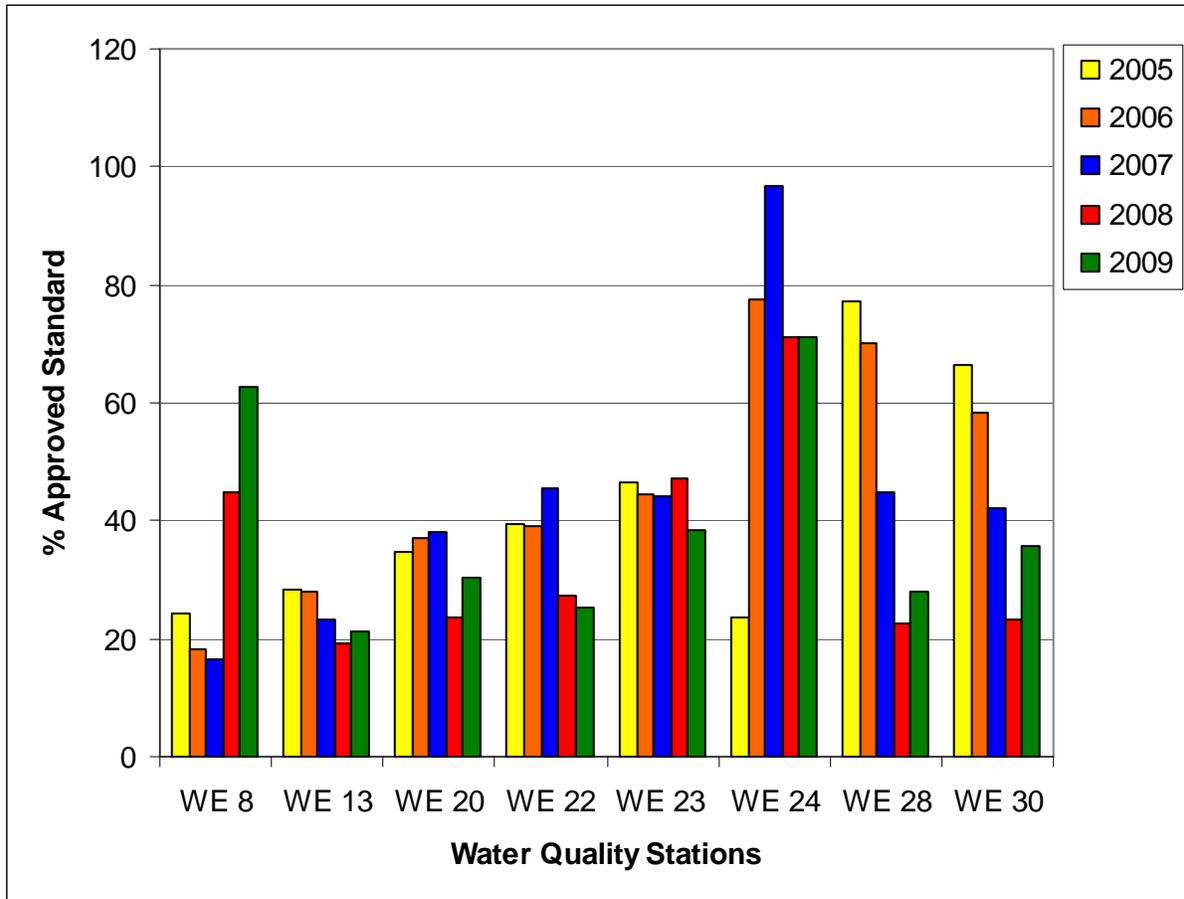


Station	Class	Adverse	Random		Total	Comments
		Closed	Closed	Open		
WE005.00	P		6		6	
WE006.00	New		6		6	
WE008.00	A			6	6	
WE010.00	P		6		6	
WE010.20	New		6		6	
WE011.00	P		6		6	
WE013.00	A	14		6	20	Flood station
WE018.00	P		2		6	Reclassified from R to P on May 27 due to expired shoreline survey
	R			4		
WE018.50	P		2		6	Reclassified from R to P on May 27 due to expired shoreline survey
	R			4		
WE020.00	A			2	8	Reclassified from R to P on May 27. Reclass from P to A on Aug 14.
	P		2			
	R			4		
WE022.00	A		1	4	6	Reclassified from A to P on May 27
	P		1			
WE023.00	A			2	6	Reclassified from R to P on May 27. Reclass from P to A on Aug 14
	P		2			
	R			2		
WE024.50	A			2	8	Reclassified from CA to P on May 27. Reclass from P to A on Aug 14
	CA			4		
	P		2			
WE027.00	P		8		8	
WE028.00	A			2	8	Reclassified from CA to P on May 27. Reclass from P to A on Aug 14
	CA			4		
	P		2			
WE030.00	A	3		2	11	Reclassified from CA to P on May 27. Reclass from P to A on Aug 14
	CA			4		
	P		2			

Figures 2 show the P90 trends over the past five years for all active approved stations in area WE. During the transition from MPN to MF analysis method, the approved standard will decrease every year, until all samples have been analyzed by the MF method. In order to show the trend of the P90 value over the years, the calculated P90 scores are expressed as a percentage of the approved standard; any station showing the 2009 column on or above the 100 percent line does not meet the standard for approved classification. At the end of 2009, all stations met the approved NSSP standard. Station WE 8 has shown an upward trend over the past 3 years; the cause for this upward trend is currently unknown. Further survey work is recommended around this station in 2010. Water quality at the remaining approved stations has shown an improvement or no notable or consistent trends. With the exception of two stations (WE 8 and 24), all approved station were under 50 percent of the approved standard limit at the end of 2009 review year.



Figure 2. Area WE P90 Scores for Approved Stations (expressed as the percent of the approved standard), 2005-2009



Recommendations for Upward Classification

Based on the 2009 annual review, there are currently no upward classification recommendations for area WE.

Shoreline Survey Activity

On October 16, 2009 a sanitary survey for Kennebunkport was conducted by DMR. A total of 95 properties were surveyed around the Paddy Creek and Turbats Creek area. Most of the properties located on Ward Road, Wildes District Rd, Rose Leith Lane, Turbats Creek Rd, and Nehoc Lane are connected to the town sewer. None of the properties down Lands End Road, McKenney Lane, Bufflehead Lane, or Fieldpoint Rd are connected to the town sewer lines. Prior to conducting the survey, the codes enforcement officer brought to the surveyors attention



a known malfunction located on Wildes District Road. At the time of the survey, the property had been vacant for 4-5 months. There was an issue with fixing the system and /or connecting the property into the sewer line that runs down Wildes District Rd, due to the proximity of this property to two cemeteries. This property is located in a prohibited area. An additional potential malfunction, located on McKenny Lane was documented on the same day. The property has been brought to the attention of the codes enforcement officer for follow up. This property drains into a prohibited area. There are also sheep (7) located at a property on Wildes District Road that are fenced down behind the house in a low wet area that runs along Bufflehead Lane. The fencing crosses over the stream along the culvert that goes under Bufflehead Lane. The stream empties into Turbats Creek which is a prohibited area and is monitored by station WE 4.

On October 15, 2009 a sanitary survey for Kennebunkport was conducted by DMR staff members. A total of 95 properties were surveyed around Cape Porpoise Harbor starting at the end of Fishers Lane (east of harbor) and ending on Wood Road off of Langsford Road (west of harbor). All of Pier Rd, Bickford Island, Langsford Rd, and Wood Rd are connected to the town sewer, with the exception of 6 properties that were surveyed and in-ground septic systems were documented. None of the properties at the end of Fishers Lane down to the end of Agamenticus Ave are on town sewer. There were no potential or actual problems noted.

A drive through survey of growing area WE was conducted on June 7 and July 30, 2009.

Aquaculture/Wet Storage Activity

There are no aquaculture leases or wet storage activities in growing area WE.

Summary

At the end of the 2009 review year, all stations in growing area WE were meeting their NSSP classification standards, and no downward classification changes were required. No upward classification changes are proposed at this time.

A triennial review of growing area WE will be completed at the end of 2010. As part of this review, all potential and actual pollution sources will be re-evaluated. Streams that drain into areas that are open for shellfish harvesting should be collected and assessed as part of this review. Pastured farm animals, located in areas that drain to open shellfish harvesting areas will also be evaluated.



Appendix A. Key to Water Quality Table Headers

Station = water quality monitoring station

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

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

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

Geo_Mean = means the antilog (base 10) of the arithmetic mean of the sample result logarithm (base 10).

SDV = standard deviation

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

P90 = 90th percentile

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

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



Appendix B. Growing Area WE 2009 Data

Station	Date	Tide	Wind	Temp	Salin	Strat	Adv	Status	Class	MFCOL
WE004.00	3/11/2009	H	S	2	30	R	P	O	R	<2
	4/22/2009	HF	S	6	30	R	X	O	R	8
	6/17/2009	E	S	16	30	R	X	C	P	9.1
	8/12/2009	F	E	25	28	R	X	C	P	6
	9/29/2009	H	S	16	32	R	S	C	P	42
	11/30/2009	H	W	10	30	R	W	C	P	28
WE005.00	3/11/2009	H	S	2	26	R	P	C	P	2
	4/22/2009	HF	S	7	18	R	H	C	P	56
	6/17/2009	E	S	17	30	R	X	C	P	<2
	8/12/2009	F	CL	24	30	R	X	C	P	<2
	9/29/2009	H	SW	17	30	R	X	C	P	132
	11/30/2009	H	W	10	30	R	X	C	P	<2
WE006.00	3/11/2009	H	S	2	30	R	P	C	P	2
	4/22/2009	H	S	6	28	R	H	C	P	<2
	6/17/2009	E	S	17	28	R	X	C	P	6
	9/29/2009	H	SW	17	30	R	X	C	P	18
	11/30/2009	H	W	10	30	R	X	C	P	<2
WE008.00	3/11/2009	HE	SW	2	30	R	P	O	A	<2
	4/22/2009	H	S	6	28	R	H	O	A	4
	6/17/2009	E	CL	15	28	R	X	O	A	8
	8/12/2009	F	CL	25	26	R	X	O	A	12
	9/29/2009	H	S	16	30	R	X	O	A	50
	11/30/2009	HE	W	9	30	R	P	O	A	<2
WE010.00	3/11/2009	H	SW	2	31	R	P	C	P	<2
	4/22/2009	H	S	5	30	R	X	C	P	<2
	6/17/2009	E	S	16	28	R	X	C	P	36
	8/12/2009	LF	E	19	30	R	X	C	P	<2
	9/29/2009	H	S	16	32	R	X	C	P	78
	11/30/2009	HE	W	10	32	R	X	C	P	108
WE010.20	3/11/2009	H	SW	2	30	R	P	C	P	<2
	4/22/2009	H	S	5	30	R	X	C	P	<2
	6/17/2009	E	S	16	28	R	X	C	P	2
	8/12/2009	LF	E	19	30	R	X	C	P	2
	9/29/2009	H	S	15	32	R	S	C	P	22
	11/30/2009	HE	W	10	31	R	P	C	P	20
WE011.00	3/11/2009	HE	CL	2	28	R	P	C	P	<2
	4/22/2009	H	S	6	27	R	X	C	P	22
	6/17/2009	E	CL	15	28	R	X	C	P	4
	8/12/2009	HF	CL	22	26	R	X	C	P	<2
	9/29/2009	HE	S	16	30	R	X	C	P	144



Station	Date	Tide	Wind	Temp	Salin	Strat	Adv	Status	Class	MFCOL
	11/30/2009	HE	W	9	30	R	X	C	P	<2
WE013.00	3/11/2009	HE	SW	2	31	R	P	O	A	<2
	4/22/2009	H	S	6	30	R	H	O	A	4
	6/17/2009	E	S	16	28	R	X	O	A	78
	8/12/2009	F	E	22	26	R	X	O	A	<2
	9/29/2009	HE	S	15	32	R	S	O	A	7.3
	11/30/2009	HE	W	9	30	R	P	O	A	<2
WE018.00	3/11/2009	HE	CL	2	9	R	P	O	R	84
	4/22/2009	E	CL	9	0	R	P	O	R	140
	6/16/2009	F	CL	15	1	R	X	C	P	160
	8/11/2009	F	CL	20	4	R	X	C	P	460
	9/28/2009	E	CL	15	25	R	X	O	R	14
	11/4/2009	F	CL	10	16	R	X	O	R	6
WE018.50	3/11/2009	HE	S	3	24	R	P	O	R	<2
	4/22/2009	E	SW	9	7	R	P	O	R	129
	6/16/2009	F	CL	16	26	R	X	C	P	2
	8/11/2009	F	SW	18	28	R	X	C	P	2
	9/28/2009	E	NW	16	30	R	X	O	R	<2
	11/4/2009	F	NW	10	32	R	X	O	R	<2
WE020.00	1/12/2009	F	N	0	31	R	X	O	R	<2
	2/10/2009	H	CL	2	31	R	X	O	R	<2
	3/11/2009	E	SW	4	30	R	P	O	R	<2
	4/22/2009	E	CL	8	12	R	P	O	R	82
	6/16/2009	HF	CL	16	22	R	X	C	P	2.8
	8/11/2009	F	CL	20	28	R	X	C	P	<2
	9/28/2009	E	W	15	30	R	X	O	A	12
	11/4/2009	F	NW	10	31	R	X	O	A	<2
WE022.00	3/11/2009	HE	SW	2	31	R	P	O	A	<2
	4/22/2009	HE	S	5	30	R	X	O	A	<2
	6/17/2009	E	S	15	30	R	W	C	P	<2
	8/12/2009	F	E	23	23	R	X	C	A	72
	9/29/2009	HE	S	15	32	R	S	O	A	<2
	11/30/2009	HE	W	10	30	R	X	O	A	2
WE023.00	3/11/2009	E	S	4	29	R	P	O	R	<2
	4/22/2009	E	SW	9	16	R	P	O	R	68
	6/16/2009	HF	CL	18	27	R	X	C	P	2
	8/11/2009	F	CL	20	29	R	W	C	P	4
	9/28/2009	E	SW	15	31	R	X	O	A	2
	11/4/2009	F	NW	11	31	R	X	O	A	2
WE024.50	1/12/2009	F	N	1	31	R	X	O	CA	<2
	2/10/2009	H	CL	2	30	R	X	O	CA	<2
	3/11/2009	E	SW	4	32	R	P	O	CA	<2



Station	Date	Tide	Wind	Temp	Salin	Strat	Adv	Status	Class	MFCOL
	4/22/2009	E	SW	7	30	R	P	O	CA	<2
	6/16/2009	HF	S	20	27	R	X	C	P	<2
	8/11/2009	HF	SW	20	30	R	X	C	P	<2
	9/28/2009	HE	CL	15	32	R	X	O	A	<2
	11/4/2009	F	NW	10	32	R	X	O	A	6
WE027.00	1/12/2009	HF	CL	0	28	R	X	C	P	2
	2/10/2009	HE	CL	2	31	R	X	C	P	<2
	3/11/2009	HE	S	3	18	R	P	C	P	36
	4/22/2009	E	CL	8	8	R	P	C	P	72
	6/16/2009	HF	S	20	24	R	X	C	P	20
	8/11/2009	HF	SW	21	26	R	X	C	P	340
	9/28/2009	HE	CL	15	30	R	X	C	P	6
11/4/2009	HF	NW	11	28	R	X	C	P	4	
WE028.00	1/12/2009	HF	N	0	31	R	X	O	CA	<2
	2/10/2009	H	CL	2	30	R	X	O	CA	<2
	3/11/2009	E	S	4	28	R	P	O	CA	2
	4/22/2009	E	SW	9	20	R	P	O	CA	42
	6/16/2009	HF	S	16	26	R	X	C	P	<2
	8/11/2009	HF	SW	17	28	R	X	C	P	<2
	9/28/2009	HE	CL	15	32	R	X	O	A	6
	11/4/2009	HF	NW	11	32	R	X	O	A	2
WE030.00	1/12/2009	HF	N	-1	31	R	X	O	CA	<2
	2/10/2009	HE	CL	2	30	R	X	O	CA	<2
	3/11/2009	E	S	4	28	R	P	O	CA	2
	4/22/2009	E	SW	8	18	R	P	O	CA	52
	6/16/2009	H	S	17	26	R	X	C	P	5.5
	8/11/2009	HF	SW	19	30	R	X	C	P	6
	9/28/2009	HE	CL	15	31	R	X	O	A	<2
	11/4/2009	HF	NW	10	32	R	X	O	A	<2