



**GROWING AREA WF**  
**Town of Biddeford**  
**ANNUAL REVIEW for 2009**  
  
**Report Date: February 1, 2010**  
  
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**APPROVAL**

Bureau Director:

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Figure 1. Growing Area WF, with Active Water Stations





## Executive Summary

This is an annual report for growing area WF written in compliance with the requirements of the 2007 Model Ordinance and the National Shellfish Sanitation Program. Growing area WF is located in the city of Biddeford, and includes the area between Timber Island and East Point (Figure 1). No sample stations were added or deactivated in 2009. No licensed overboard discharges (OBDs) were removed in 2009.

There was one classification change in 2009; the OBD at Timber Point was evaluated and a closure was put around the outfall on May 27, 2009. 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.

The next triennial report is due in 2010 and the next sanitary survey is due in 2013.

## Growing Area Description

Growing area WF is located in the city of Biddeford, and includes the area between Timber Island and East Point (Figure 1). A complete boundary description for this area can be found in the central files. The area consists of four coves and two public beaches; New Barn, Curtis, Horseshoe and Fortunes Rocks Coves and Fortunes Rocks (0.8 miles) and Middle (1.2 miles) Beaches. The only major pollution sources in the growing area are licensed overboard discharges in the coves. Along the beach, there is a pond outlet, which spills over through a culvert pipe during wet weather.

## Current Classification(s)

Shellfish growing area WF currently has areas classified as:

### Approved

- Fortune's Rocks Beach (3 stations, WF 4.5, 6.0 and 6.1)

### Prohibited (due to the presence of licensed overboard discharges)

Fortunes Rocks Cove (1 Station); WF 4.0  
Horseshoe Cove (1 Station); WF 3.0  
New Barn Cove (1 Station); WF 2.0  
Curtis Cove (1 Station); WF 1.0

Please visit the DMR website to view legal notices:



DMR Regulation 95.10 Z, Area No. 9, Sampson Cove to Fortunes Rocks  
(Kennebunkport and Biddeford)

DMR Regulation 95.10 S, Area No. 10, Saco River and Saco Bay (Biddeford, Saco, Old  
Orchard Beach)

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

## Activity during Review Period

On August 4, 2009, the upland boundary between growing area WE and WF was adjusted 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.

On May 27, 2009, Area No. 9, Batson River to Fortunes Rocks (Kennebunkport and Biddeford) was amended to change the title of the rule, and to create a prohibited area around the outfall of an OBD at Timber Point (Biddeford).

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

There are no conditional areas in growing area WF.

## Water Quality Review and Discussion

Table 1 lists all active approved and prohibited stations in Growing Area WF, with their respective Geomean and P90 calculations for 2009. 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 central files. All approved stations met their NSSP classification standard in 2009. Stations that are classified prohibited but meet the approved standard will remain prohibited due to the presence of OBDs.



**Table 1. Geomean and P90 Scores, Growing Area WF**

Station	Class	Count	MFCCount	GM	SDV	MAX	P90	Appd_Std	Restr_Std
WF 1.0	P	30	20	4.5	0.47	93	18.4	36	199
WF 2.0	P	30	20	2.6	0.24	25	5.4	36	199
WF 3.0	P	30	20	2.7	0.33	43	7.4	36	199
WF 4.0	P	30	20	2.6	0.25	36	5.5	36	199
WF 4.5	A	30	20	3.2	0.36	36	9.6	36	199
WF 6.0	A	30	20	2.5	0.26	50	5.5	36	199
WF 6.1	A	30	20	2.3	0.16	9.1	3.8	36	199

All approved and prohibited stations that were active at the beginning of 2009 were sampled 6 times following the systematic random sampling (SRS) schedule (Table 2 and Appendix B).

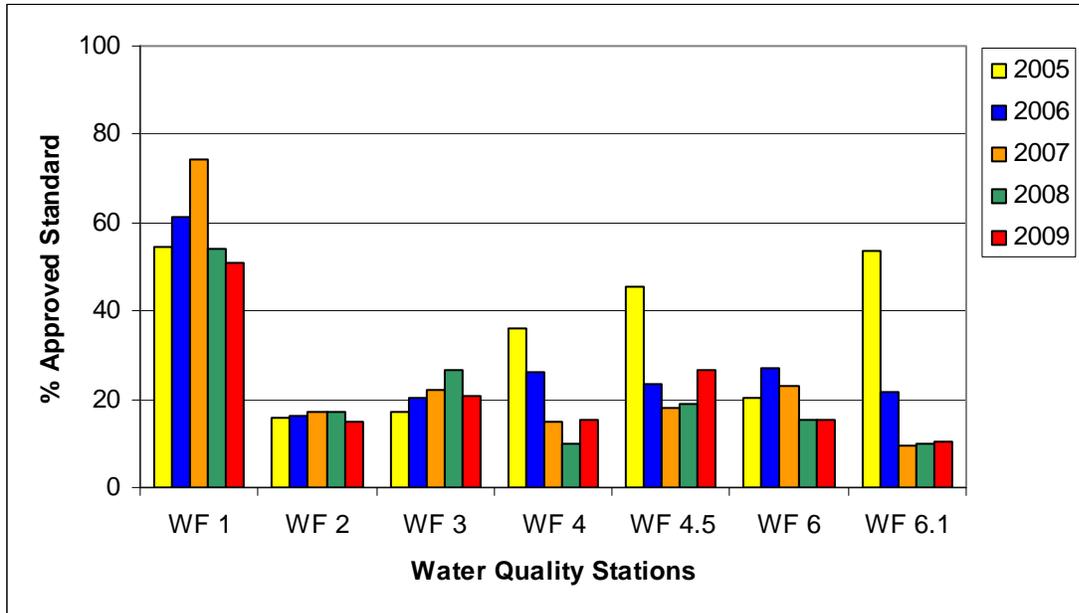
**Table 2. WF Samples Collected in 2009**

Station	Class	Adverse	Random		Grand Total
		Closed	Closed	Open	
<b>WF001.00</b>	P		6		6
<b>WF002.00</b>	P		6		6
<b>WF003.00</b>	P		6		6
<b>WF004.00</b>	P		6		6
<b>WF004.50</b>	A			6	6
<b>WF006.00</b>	A			6	6
<b>WF006.10</b>	A			6	6

Figure 2 shows the P90 trends over the past five years, for all stations in growing area WF (approved and prohibited). 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 100 percent does not meet the standard for its classification. Generally, the three approved stations (WF 4.5, 6 and 6.1) have shown steady water quality over the past three years.



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



### Shoreline Survey Activity

A drive through survey of area WF was conducted on July 30, 2009. The survey started at the boundary of WE/WF at Little River (Kennebunkport/Biddeford) and continued to the boundary of WF/WG. There is a new 3 story house going in on Bayberry Road, Biddeford on the west side of the street; Bayberry Road is on the southwestern shore of New Barn Cove. The survey continued down Fortune’s Rocks Road, Old King’s Highway, Seal Lane, Neptune Lane, Fortune’s Rocks Road out to Mile Stretch Road in Biddeford Pool. No other changes in pollution sources were noted at the time of this drive through survey.

On January 25, 2010, DMR conducted a telephone interview with the Biddeford Municipal Shellfish Warden regarding shellfish resources and accessibility in Curtis Cove, New Barn Cove, Horseshoe Cove and Fortunes Rocks Cove. The Shellfish Warden reported that there is very little, if any resource in the coves and that there was no public access to the coves.<sup>1</sup>

### Aquaculture/Wet Storage Activity

There is no aquaculture or wet storage activities in growing area WF.



## **Classification Changes Required and Requested**

There are no changes in classification required or requested at this time.

## **Summary**

Growing area WF continues to maintain good water quality in areas currently classified as approved. At the end of the 2009 review year, all approved stations were meeting their respective NSSP classification standard. Several areas are currently classified as prohibited, but are meeting the approved standards; these areas will remain classified as prohibited due to the presence of licensed overboard discharges. Due to the lack of public access to, and shellfish resources in, Curtis Cove, New Barn Cove, Horseshoe Cove and Fortunes Rocks Cove, it is recommended that sample stations WF1, 2, 3 and 4 be deactivated. All stations are located in an area that is currently classified as prohibited.

## **Reference**

<sup>1</sup> Morissette, David. Telephone Interview. 25 Jan. 2010.



## 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 = 90<sup>th</sup> percentile

APPD\_STD = the 90<sup>th</sup> 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 90<sup>th</sup> percentile, at or below which the station would meet restricted criteria.



**Appendix B. Growing Area WF 2009 Data**

Station	Date	Collector	Tide	Wind	Temp	Salin	Strat	Adv	Status	Class	Col
WF001.00	11-Mar-09	AB	HE	S	4	31	R	P	C	P	14
	22-Apr-09	MLP	E	CL	7	30	R	PW	C	P	10
	16-Jun-09	LSM	F	S	18	24	R	X	C	P	<2
	11-Aug-09	LSM	H	SW	20	26	R	X	C	P	<2
	28-Sep-09	MLP	HE	CL	15	32	R	X	C	P	2
	04-Nov-09	LSM	HF	NW	10	32	R	X	C	P	16
WF002.00	11-Mar-09	AB	HE	S	4	32	R	P	C	P	<2
	22-Apr-09	MLP	E	SW	6	31	R	P	C	P	<2
	16-Jun-09	LSM	F	SE	20	25	R	X	C	P	2
	11-Aug-09	LSM	H	SW	20	26	R	X	C	P	<2
	28-Sep-09	MLP	HE	CL	16	32	R	X	C	P	<2
	04-Nov-09	LSM	HF	NW	10	32	R	X	C	P	2
WF003.00	11-Mar-09	AB	H	SE	4	32	R	P	C	P	<2
	22-Apr-09	MLP	E	SW	6	30	R	P	C	P	<2
	16-Jun-09	LSM	F	SE	20	25	R	X	C	P	<2
	11-Aug-09	LSM	H	SW	20	25	R	X	C	P	<2
	28-Sep-09	MLP	HE	CL	15	32	R	X	C	P	<2
	04-Nov-09	LSM	HF	NW	10	32	R	X	C	P	<2
WF004.00	11-Mar-09	AB	H	SE	4	32	R	P	C	P	36
	22-Apr-09	MLP	E	SW	6	30	R	P	C	P	<2
	16-Jun-09	LSM	F	SE	20	26	R	X	C	P	2
	11-Aug-09	LSM	H	SW	20	26	R	X	C	P	2
	28-Sep-09	MLP	HE	CL	15	32	R	X	C	P	4
	04-Nov-09	LSM	H	NW	11	31	R	X	C	P	2
WF004.50	11-Mar-09	AB	H	SE	4	32	R	P	O	A	<2
	22-Apr-09	MLP	E	SW	6	30	R	P	O	A	<2
	16-Jun-09	LSM	F	SE	19	25	R	X	O	A	<2
	11-Aug-09	LSM	H	SW	20	24	R	X	O	A	25
	28-Sep-09	MLP	HE	W	15	32	R	X	O	A	4



Station	Date	Collector	Tide	Wind	Temp	Salin	Strat	Adv	Status	Class	Col
	04-Nov-09	LSM	H	NW	10	32	R	X	O	A	36
<b>WF006.00</b>	11-Mar-09	AB	H	SE	4	32	R	P	O	A	<2
	22-Apr-09	MLP	HE	SW	7	30	R	P	O	A	<2
	16-Jun-09	LSM	F	S	16	25	R	X	O	A	<2
	11-Aug-09	LSM	H	SW	20	24	R	X	O	A	<2
	28-Sep-09	MLP	H	W	15	32	R	X	O	A	<2
	04-Nov-09	LSM	H	NW	10	32	R	X	O	A	<2
	<b>WF006.10</b>	11-Mar-09	AB	H	SE	4	32	R	P	O	A
22-Apr-09		MLP	HE	SW	6	30	R	P	O	A	2
16-Jun-09		LSM	F	SE	16	25	R	X	O	A	<2
11-Aug-09		LSM	HE	SW	20	25	R	X	O	A	<2
28-Sep-09		MLP	H	W	15	32	R	X	O	A	5.5
04-Nov-09		LSM	H	NW	10	32	R	X	O	A	<2