



**GROWING AREA WM - Kennebec River
Phippsburg, Arrowsic and Georgetown**

Triennial Report for 2005-2007

Report Date: 12/03/08

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APPROVAL

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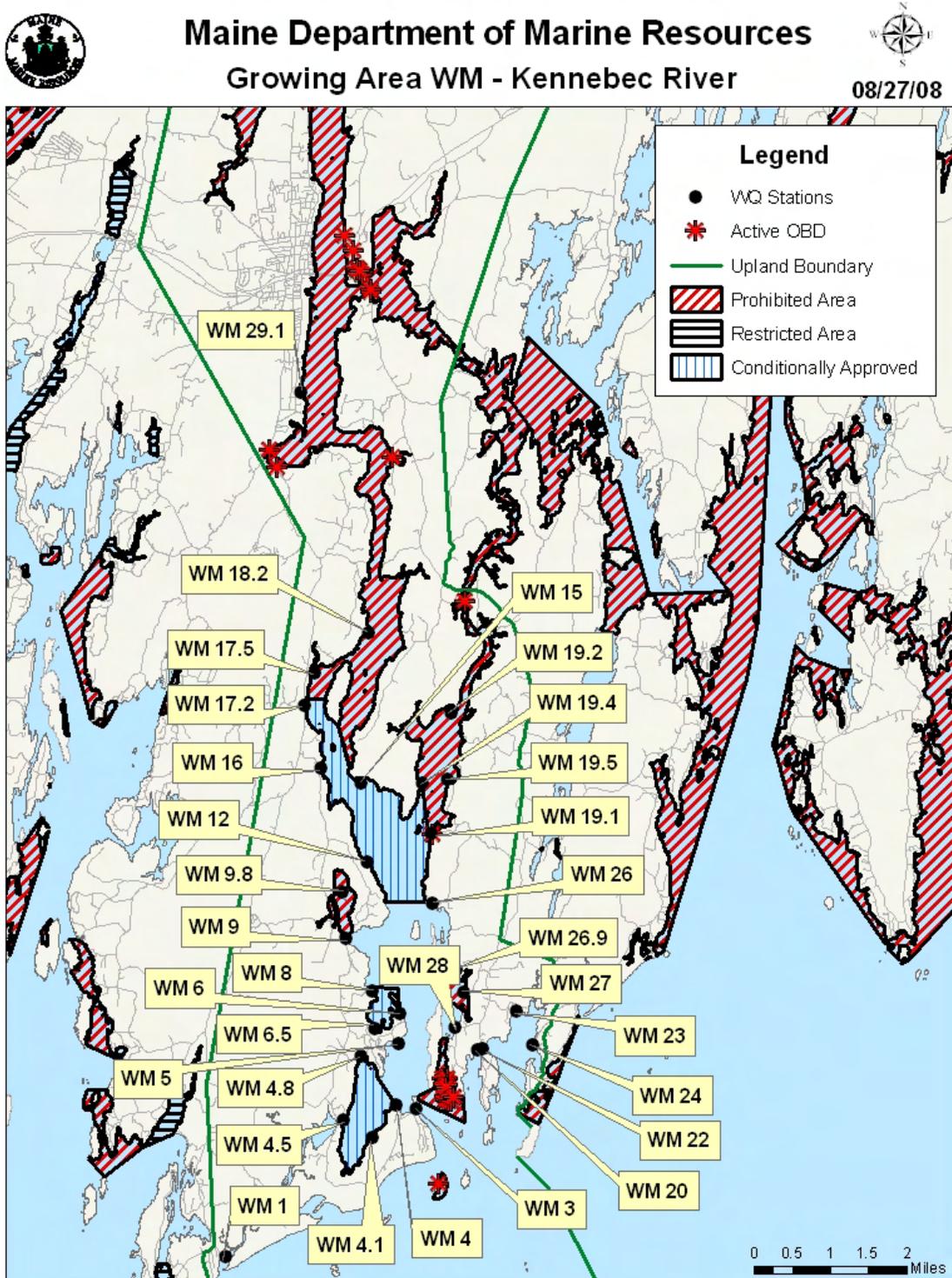
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Figure 1. Growing Area WM, with Active Water Stations





Executive Summary

This is a triennial report for growing area WM- lower Kennebec River, written in compliance with the requirements of the 2005 Model Ordinance and the National Shellfish Sanitation Program.

In 2007, seven stations were deactivated and no new stations were added. A new seasonal conditional area was created in the lower Kennebec River, and the open status for the Parker Head/Squirrel point seasonal conditional area was expanded from May 15th through September 30th, to January 1st through September 30th. One OBD was removed, located on Whiskeag Creek, Bath (DEP 2008). The western shore of the Kennebec was surveyed in 1997, 2000 and 2002; Back River and West Georgetown were surveyed in 1998 and 2004; Todd Bay, Heal Eddy in 2007; Sagadahoc Bay in 2007. Parker Head pond area in Phippsburg was surveyed in 2007. As a result of this report, one seasonally conditional area, located in Todd Bay, is being proposed. No other classification changes are required based on the 2007 review.

The next triennial report is due in 2010; the next sanitary survey for growing area WM is due in 2013.

Growing Area Description

Growing area WM is the lower Kennebec River, and includes that portion of the river which passes through the towns of Phippsburg, Bath, Woolwich, Arrowsic, and Georgetown (Figure 1). This portion of the river begins at the mouth of Merrymeeting Bay, located between West Chops Pt., North Bath and Chops Pt., Woolwich. The distance from the Chops downstream to the nearest open shellfish growing beds is approximately 12 miles, and 17 miles to the mouth of the river at Popham Beach, Phippsburg.

The Kennebec River is the second largest river in the state of Maine. The Androscoggin River, the third largest river, drains into the Kennebec River, and the two rivers come together in Merrymeeting Bay. Together, these two rivers have a drainage area of 8,600 squares miles, which is more than 1/5 of the total state acreage.

There are ten sewage treatment plants (STP) located in the Kennebec River watershed, with some located as far as Waterville on the Kennebec River, and Lewiston on the Androscoggin River. The Bath STP is the only facility located below the "Chops" – the mouth of Merrymeeting Bay, which marks the confluence of the Kennebec and Androscoggin Rivers. This location is approximately seven miles north of the closest shellfish growing beds which are open for shellfish harvesting. The towns adjacent to approved shellfish growing beds in area WM are Phippsburg, Woolwich, Arrowsic, and Georgetown; these towns have no municipal sewage treatment facilities. All disposal systems located in those towns are private inground systems, licensed overboard discharges, outhouses or composting toilet systems. There are no marinas south of the Bath Bridge. There are only two working piers which provide support to local lobstering and fishing activities. These are located in at the mouth of Atkins Bay and at the mouth of Back River.



Current Classification(s)

Shellfish growing Area WM currently has shellfish areas classified as:

Approved (10 stations)

Prohibited (11 stations):

20A.1. Kennebec River, Georgetown, Woolwich, Phippsburg, Arrowsic and West Georgetown (8 stations: WM 17.2, 17.5, 18.2, 19.1, 19.2, 19.4, 19.5 and 29.1)

20A.2. Mill Pond, Phippsburg (2 stations: WM 9 and 9.8)

20A.3. Todd Bay, Georgetown (WM 27)

20A.4. Lower Kennebec River, Georgetown and Phippsburg (no stations, closed due to the presence of OBDs)

20A.5. Wood Island (no stations, closed due to presence of OBD)

Conditionally Approved (10 stations):

20B Lower Kennebec, Seasonal Conditional Areas; Phippsburg, Arrowsic and West Georgetown (6 stations: WM 6, 6.5, 8, 12, 15, and 16)

20C. Atkins Bay, Seasonal/Rainfall Conditional Area; Phippsburg (4 stations: WM 4, 4.1, 4.5, and 4.8)

Please visit the Maine DMR website to view DMR Regulation 95.07F, Closed Area No. 20, Kennebec River and Tributaries:

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

Activity during Review Period

Activity in 2005:

March 30, 2005: regulation closes the Atkins Bay rainfall conditional area.

April 21, 2005: regulation reopens the Atkins Bay rainfall conditional area.

October 17, 2005: regulation closes the Atkins Bay rainfall conditional area.

October 25, 2005: stations WM 1, 4.3, 18, 18.5, 29.5, 29.6, and 29.8 are deactivated; station WM 6.5 is created.

Activity in 2006:

February 23, 2006: regulation reopens the rainfall conditional area of Atkins Bay.

April 5, 2006: new regulation describes the closure of Atkins Bay due to 1.5" of rain in 24 hours, and closes this rainfall conditional area.

April 24, 2006: regulation reopens the rainfall conditional area of Atkins Bay.

August 17, 2006 (four changes): 1) an administrative change, to include the conditional area described in closure 20-G, into Closure No. 20; 2) a new regulation, removes Brookings Bay,



Woolwich from the closure, and administratively changes current closure lines in Hockomock Bay, and includes the areas previously defined in closures 20-G and 20-H into closure No. 20; 3) an administrative change, to include area 20-H in Lower Kennebec River (Phippsburg, Georgetown, and Arrowsic) into Closure No. 21; 4) an administrative change, in include area described in Closed Area No 20-E into closed area 20.

August 23, 2006: new rule to administratively correct the seasonal classification for a portion of the lower Kennebec River.

October 12, 2006: rule closes the Atkins Bay rainfall conditional area.

December 14, 2006: rule reopens the Atkin's Bay rainfall conditional area.

Activity in 2007:

April 23, 2007: Stations WM 19.3, 29, 29.35, 29.7, 29.8, 29.3, and 30 are deactivated, as all of these stations were located in large closed areas.

April 17, 2007: rule closes the Atkin's Bay rainfall conditional area.

May 11, 2007: rule reopens the Conditionally Approved area in Atkins Bay and delays the opening of the seasonal Conditionally Approved area in the Kennebec River until water quality meets approved standards.

June 5, 2007: rule reopens the seasonal Conditionally Approved area in the Kennebec River, as water quality in the area has returned to approved standards.

October 22, 2007: rule closes the Atkin's Bay rainfall conditional area.

October 26, 2007: rule enlarges the size of the lower Kennebec River seasonal conditional area and changes the open season.

October 30, 2007: This new rule reopens the rainfall conditional area in Atkins Bay.

Current Management Plan for Conditional Areas

There currently are three conditionally managed areas in Growing Area WM:

Seasonal rainfall area in Atkins Bay, Phippsburg (closes on $\geq 1.5''/24$ hours from 10/1-5/14)
Seasonal area at Squirrel Point-Parker Head Flats (5/15 – 9/30) – this area was expanded and open season modified on October 26, 2007. The current open season for the two conditional areas located in the lower Kennebec River is January 1 through September 30.

Management plans for both conditional areas can be found in DMR's central files. Atkins Bay rainfall management plan requires reporting by the Town of Phippsburg; this plan was last updated on October 9, 2008.



Current Annual Review of Management Plan

In 2007, the Atkins Bay seasonal/rainfall conditional area had 2 rainfall closures. Per the management plan, Maine DMR was notified that rainfall had exceeded 1.5 inches in 24 hours and the appropriate closures were made. Water samples were taken prior to reopening of this conditional area.

In 2007, the opening of the seasonal conditional area in the lower Kennebec River was delayed until water quality met the approved standard. The area reopened on June 5th, instead of May 15th. On October 26, 2007, the seasonal conditional area was expanded and the open period was modified.

The complete reviews of the management plants for the two conditional areas in shellfish growing area WM are located in Appendices A and B.

Documentation of Pollution Sources

Growing Area WM shoreline survey work was conducted by the DMR, DEP, the Towns of Georgetown and Phippsburg from 1997 through 2007. Parcel-based tax maps from the towns of Georgetown and Phippsburg were used to assign a unique identifier to each lot in the survey area. Basic information on each property (land use, ownership, address, seasonality, etc.) was documented from town information. Vacant lots were recorded for entry into the database in case of future development. In accordance with the DMR Growing Area Standard Operating Procedure (SOP) all properties within 500 feet of the shore or other water conduits were surveyed. Each shoreline property underwent an on-site inspection, including an evaluation of shore-side development, steady or intermittent streams, and any other issues that might be of concern. Owners, if present, were asked to provide information about their septic system including age, routine maintenance details and description of any problems they had experienced. Information was recorded in the inspector's notes, and entered into the DMR shoreline survey database.

A map of all actual and potential pollution sources identified in growing area WM can be found in Figure 2; a list of all actual and potential pollution sources can be found in Table 1. Drive through activities routinely occurred during random sample runs for the past 3 years. Documentation of the identified actual and potential problems found by ME DEP and ME DMR have been submitted to the individual towns codes enforcement officers for follow up. The Town of Phippsburg is the only town that has provided updates on the deficiencies noted in letters from the DMR. On October 19, 2007, the Phippsburg codes enforcement officer reported to the DMR that a property with a grey water discharge pipe (PHI PS 5) has been plumbed into the leach field removing the straight pipe discharge. Another property with a straight pipe sewage discharge (PHI PS 19) has not been used as a dwelling in the last 2 years. A notice was sent to the property owner by the Town of Phippsburg that the dwelling may not be used until the straight pipe discharge is removed and an appropriate method of waste water treatment is installed.



Figure 2. Growing Area WM Pollution Sources

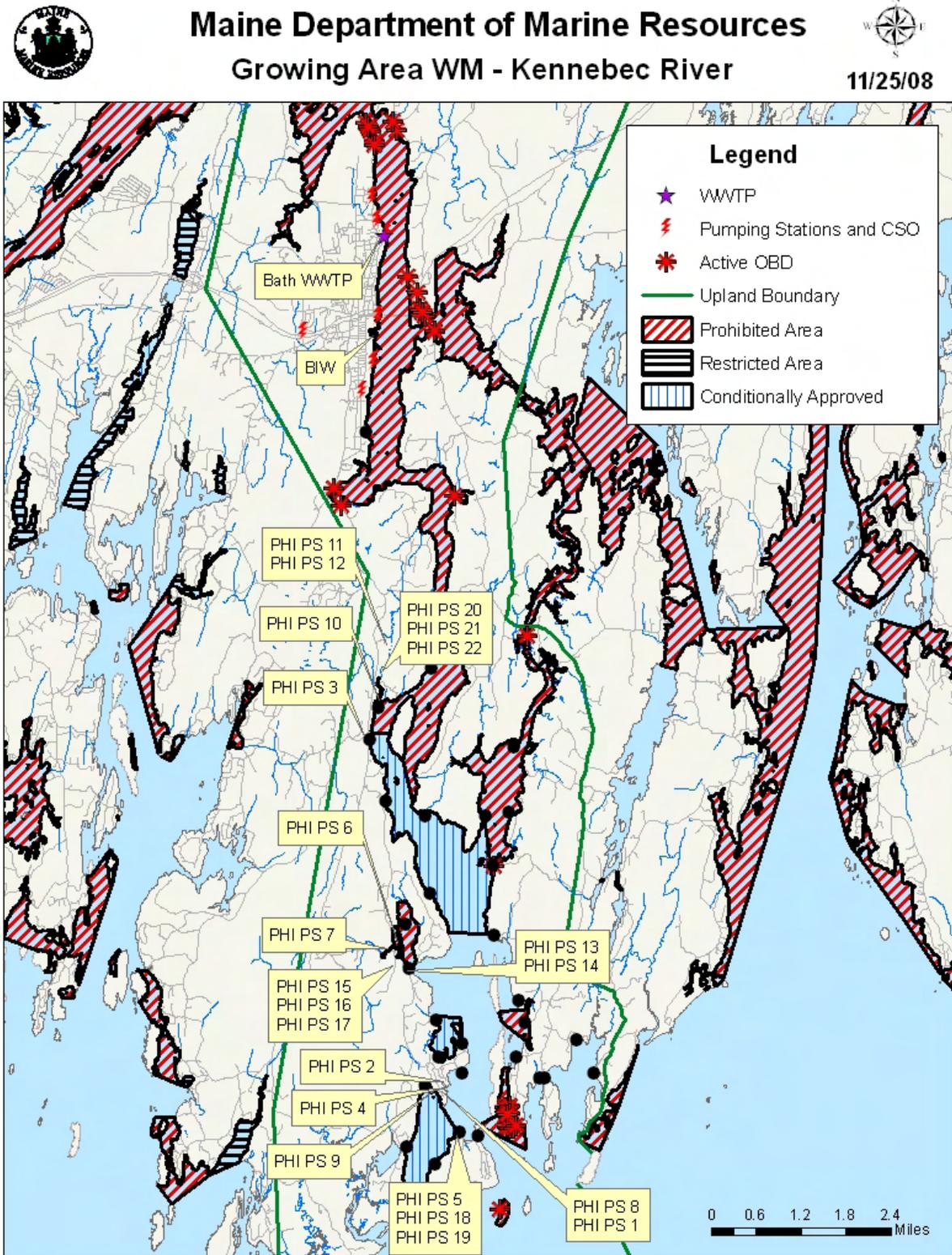




Table 1. Actual and Potential Pollution Sources in Growing Area WM

Pollution Source Number	Pollution Description
Bath WWTP (A/D)	Bath Sewage Treatment Plant outfall
BIW (A/D)	Bath Iron Works Permitted Outfall
3440	OBD, Upper Kennebec River
1846	OBD, Upper Kennebec River
1850	OBD, Upper Kennebec River
1851	OBD, Upper Kennebec River
1987	OBD, Upper Kennebec River
2095	OBD, Upper Kennebec River
2464	OBD, Upper Kennebec River
2552	OBD, Upper Kennebec River
1682	OBD, Winnegance Creek
3137	OBD, Upper Kennebec River
3837	OBD, Upper Kennebec River
4196	OBD, Upper Kennebec River
4172	OBD, Upper Kennebec River
2456	OBD, Upper Kennebec River
1284	OBD, Upper Kennebec River
5108	OBD, Back River
3379	OBD, Back River
4711	OBD, Upper Kennebec River
1085	OBD, Upper Kennebec River
2798	OBD, Upper Kennebec River
4009	OBD, Upper Kennebec River
2184	OBD, Upper Kennebec River
3693	OBD, Upper Kennebec River
4390	OBD, Upper Kennebec River
4689	OBD, Upper Kennebec River
6033	OBD, Upper Kennebec River
7186	OBD, Hanson Bay
3154	OBD, Sasanoa River
2152	OBD, Sasanoa River
951	OBD, Kennebec River
1588	OBD, Kennebec River
1908	OBD, Kennebec River
2329	OBD, Kennebec River
2339	OBD, Kennebec River
2855	OBD, Kennebec River
2909	OBD, Kennebec River
3441	OBD, Kennebec River
7003	OBD, Kennebec River
7150	OBD, Kennebec River
7246	OBD, Kennebec River
7724	OBD, Kennebec River
7829	OBD, Kennebec River
8136	OBD, Kennebec River
7530	OBD, Long Island Narrows
2275	OBD, Long Island Narrows
3738	OBD, Long Island Narrows
6849	OBD, Long Island Narrows



Pollution Source Number	Pollution Description
1643	OBD, Long Island Narrows
6970	OBD, Long Island Narrows
2955	OBD, Todd Bay
8045	OBD, Kennebec River
6764	OBD, Kennebec River
PHI PS 1	Grey water discharge (Atkins Bay, Phippsburg)
PHI PS 2	Grey water discharge (Kennebec River, Phippsburg)
PHI PS 3	Grey water discharge (Drummore Bay, Phippsburg)
PHI PS 4	Grey water discharge (Kennebec River, Phippsburg)
PHI PS 5	Grey water discharge (Kennebec River, Phippsburg)
PHI PS 6	Holding tank 10' from Parker Head Pond, no alarm, no pumping records (Parker Head Pond, Phippsburg)
PHI PS 7	Animal farm (2 horses and chickens), horses fenced to water on steep bank, (pond opposite road that drains to Parker Head Mill Pond, Phippsburg)
PHI PS 8	Malfunctioning septic system (Atkins Bay, Phippsburg)
PHI PS 9	Malfunctioning septic system (Atkins Bay, Phippsburg)
PHI PS 10	Malfunctioning septic system (Drummore Bay, Phippsburg)
PHI PS 11	Malfunctioning septic system (Drummore Bay, Phippsburg)
PHI PS 12	Malfunctioning septic system (Drummore Bay, Phippsburg)
PHI PS 13	Laundry discharge (Parker Head Pond, Phippsburg)
PHI PS 14	Cellar drain with odor of fuel oil (Parker Head Pond, Phippsburg)
PHI PS 15	Malfunctioning septic system 100' from stream which drains to Parker Head Pond (Parker Head Pond, Phippsburg)
PHI PS 16	Either a malfunctioning septic or laundry drain (blackish, foul smelling water that smells like a discharge at stream) to stream which drains to Parker Head Pond (Parker Head Pond, Phippsburg)
PHI PS 17	Laundry discharge 10' from stream (Parker Head Pond, Phippsburg)
PHI PS 18	Cesspool with potential to overflow after heavy rainfall or prolonged rainfall (Atkins Bay, Phippsburg)
PHI PS 19	Malfunctioning septic system, (Kennebec River, Phippsburg)
PHI PS 20	Pastured Horses- Drummore Bay
PHI PS 21	Pastured Horses- Drummore Bay
PHI PS 22	Pastured Horses- Drummore Bay

Evaluation of New Pollution Sources

A new housing development (Tidewatch Subdivision) consisting of 5 lots is available for sale on the Parker Head Mill Pond in Phippsburg. Lot #5 has a septic setback variance granted by the Phippsburg Board of Appeals which allows the septic system to be located 129 feet from the high water mark of the Mill Pond. The total acreage of the subdivision is approximately 21 acres. There is one common lot and with permission from the town, a ramp, float and access stairs may be built. A 50 foot wide pathway easement, for pedestrian traffic only, runs across



the Common Area in a general easterly direction to the low water mark of the Mill Pond. The easement allows the path to be maintained and conveys the right to launch and/or pull small watercraft from the termination point of the pathway as well as the right to store no more than one watercraft above high water mark adjacent to the pathway. The covenant for the properties specifies that no commercial agricultural use shall be made of any lot, no horses, cows, swine, goats, sheep, poultry, other fowl, or other animals not customarily a household pet be allowed. Water quality is monitored in the area by station WM 9.8.

A new residential community, Popham Woods, is currently being developed 2 miles from Popham Beach, Phippsburg. This residential community is located on 183 acres off Popham Road (Rt. 209) and is expected to include 69 single family, as well as a community center, tennis courts, playgrounds, and 130 acres of conserved land, with walking and hiking trails. Storm water drainage ponds have been constructed on promises to manage storm run-off. Currently, there is no water quality monitoring station in the vicinity of this development. While this residential community is located greater than 500 ft from shore, new construction activity will be monitored and the need for additional monitoring stations will be evaluated as part of the 2008 end of the year water quality review.

Re-Evaluation of Existing Pollution Sources

Existing pollution sources were re-evaluated as part of this triennial report. The following existing pollution sources were re-evaluated: domestic waste, including private, in-ground septic systems that were identified as problematic during shoreline survey work that has occurred over the past three years, any properties identified as lacking adequate waste-water disposal systems, and licensed and active over board discharges (ODB's); municipal waste water treatment facilities; industrial pollution sources and stormwater discharges; agriculture; and domestic animal and wildlife activity.

Domestic Waste

Individual, in-ground septic systems are the principal form of residential wastewater treatment in Arrowsic, Georgetown and Phippsburg, and parts of Bath that are not sewered. Many of the systems were installed before the plumbing code was updated in 1974; some of these older systems provide little or no treatment. In addition to in-ground septic systems, some residences utilize over board discharge (OBDs) systems or outhouses for domestic waste disposal.

Malfunctioning septic systems may cause sewage to back up in the home, break out at the surface, run off in surface water, or seep undetected into groundwater or cracks in the bedrock. Septic systems malfunction due to inadequate maintenance, overloading or poor design and construction (e.g. septic systems installed before the plumbing code revision may meet current public health standards because they are sited in areas with poor soil conditions and shallow depth to bedrock). Malfunctioning septic systems pose can cause a significant decline in water quality, and thus pose a direct threat to public health in areas where shellfish are harvested. In addition to malfunctioning septic systems, gray water discharges (washing machine, sink and dishwasher drains, outdoor showers, etc.) can contribute to poor water quality, and thus are also considered as actual pollution problems. As a result of the most recent sanitary survey



inspections, 18 new actual or potential pollution sources were identified (Table 2). All potential and actual pollution sources have been reported to the codes enforcement officers of the respective towns.

Table 2. Actual or Potential Domestic Waste Pollution, Graywater Discharge and Inground Systems, Growing Area WM

Pollution ID	Actual or Potential Direct or Indirect	Pollution Description	Fixed (Y or N)?
PHI PS 1	A/D	Grey water discharge (Atkins Bay, Phippsburg)	
PHI PS 2	A/D	Grey water discharge (Kennebec River, Phippsburg)	
PHI PS 3	A/D	Grey water discharge (Drummore Bay, Phippsburg)	
PHI PS 4	A/D	Grey water discharge (Kennebec River, Phippsburg)	
PHI PS 5	A/D	Grey water discharge (Kennebec River, Phippsburg)	Y
PHI PS 6	A/D	Holding tank 10' from Parker Head Pond, no alarm, no pumping records (Parker Head Pond, Phippsburg)	
PHI PS 8	A/I	Malfunctioning septic system (Atkins Bay, Phippsburg)	
PHI PS 9	A/I	Malfunctioning septic system (Atkins Bay, Phippsburg)	
PHI PS 10	A/I	Malfunctioning septic system (Drummore Bay, Phippsburg)	
PHI PS 11	A/I	Malfunctioning septic system (Drummore Bay, Phippsburg)	
PHI PS 12	A/I	Malfunctioning septic system (Drummore Bay, Phippsburg)	
PHI PS 13	A/I	Laundry discharge (Parker Head Pond, Phippsburg)	
PHI PS 14	A/I	Cellar drain with odor of fuel oil (Parker Head Pond, Phippsburg)	
PHI PS 15	A/I	Malfunctioning septic system 100' from stream which drains to Parker Head Pond (Parker Head Pond, Phippsburg)	
PHI PS 16	A/I	Either a malfunctioning septic or laundry drain (blackish, foul smelling water that smells like a discharge at stream) to stream which drains to Parker Head Pond (Parker Head Pond, Phippsburg)	
PHI PS 17	A/I	Laundry discharge 10' from stream (Parker Head Pond, Phippsburg)	
PHI PS 18	P/D	Cesspool with potential to overflow after heavy rainfall or prolonged rainfall (Atkins Bay, Phippsburg)	
PHI PS 19	A/I	Malfunctioning septic system (Kennebec	Property



Pollution ID	Actual or Potential Direct or Indirect	Pollution Description	Fixed (Y or N)?
		River, Phippsburg)	Condemned

Since the 2001 shoreline survey in Phippsburg, the codes enforcement officer has reported back to the department that a grey water pipe (PHI PS 5) had been plumbed back into the existing waste disposal system and a malfunctioning septic system (PHI PS 20) had been condemned. The property owner may not occupy the property again until the straight pipe discharge is removed and an appropriate method of waste water treatment is installed.

There are 52 active overboard discharges (OBDs) located in growing area WM (Table 3). There are 29 OBDs located in the Upper Kennebec River (area north of the mouth of Back River, Georgetown), in a large, prohibited area based on the presence of the treatment plant (greater than 2,100 acres). 22 OBDs are located in the Lower Kennebec River, just west of Bay Point, Georgetown. Based on a dilution calculation (assuming a fecal load of 10,000 fc/100 ml), 4.26 acres of water are needed to dilute the fecal concentration to levels below the approved standard; the current closures surrounding these OBDs is 130 acres. One OBD is located on Woods Island, Phippsburg; this OBD requires a 0.15 acre closure and currently has a 17 acre closure.

Table 3. Over Board Discharges, Growing Area WM

OBD ID	Location	Receiving Waterbody	Flow (gpd)	Acres Needed for Closure	Acres Closed
Upper Kennebec River and Back River					
3440	ARROWSIC	KENNEBEC RIVER	300	0.15	
1846	BATH	KENNEBEC RIVER	300	0.19	
1850	BATH	KENNEBEC RIVER	315	0.20	
1851	BATH	KENNEBEC RIVER	450	0.29	
1987	BATH	KENNEBEC RIVER	300	0.19	
2095	BATH	KENNEBEC RIVER	900	0.58	
2464	BATH	KENNEBEC RIVER	300	0.19	
2552	BATH	KENNEBEC RIVER	300	0.19	
1682	BATH	WINNEGAN CREEK	600	0.39	
3137	BOWDOINHAM	KENNEBEC RIVER	300	0.33	
3837	BOWDOINHAM	KENNEBEC RIVER	300	0.33	
4196	BOWDOINHAM	KENNEBEC RIVER	300	0.33	
4172	CHELSEA	KENNEBEC RIVER	490	0.54	
2456	DRESDEN	KENNEBEC RIVER	300	0.33	
1284	FAIRFIELD	KENNEBEC RIVER	20000	21.92	
5108	GEORGETOWN	BACK RIVER	300	0.15	
3379	GEORGETOWN	BACK RIVER	300	0.15	
4711		KENNEBEC RIVER	315	0.35	
1085	PHIPPSBURG	KENNEBEC RIVER	300	0.15	
2798	PHIPPSBURG	KENNEBEC RIVER	250	0.13	
4009	RICHMOND	KENNEBEC RIVER	300	0.33	
2184	WOOLWICH	KENNEBEC RIVER	500	0.32	



OBD ID	Location	Receiving Waterbody	Flow (gpd)	Acres Needed for Closure	Acres Closed
3693	WOOLWICH	KENNEBEC RIVER	450	0.29	
4390	WOOLWICH	KENNEBEC RIVER	600	0.39	
4689	WOOLWICH	KENNEBEC RIVER	300	0.19	
6033	WOOLWICH	KENNEBEC RIVER	315	0.20	
7186	WOOLWICH	HANSON BAY	300	0.19	
3154	WOOLWICH	SASANOVA RIVER	300	0.19	
2152	WOOLWICH	SASANOVA RIVER	300	0.19	
TOTAL AREA				29.40	
Lower Kennebec River					
951	GEORGETOWN	KENNEBEC RIVER	300	0.15	
1588	GEORGETOWN	KENNEBEC RIVER	300	0.15	
1908	GEORGETOWN	KENNEBEC RIVER	360	0.18	
2329	GEORGETOWN	KENNEBEC RIVER	300	0.15	
2339	GEORGETOWN	KENNEBEC RIVER	500	0.25	
2855	GEORGETOWN	KENNEBEC RIVER	360	0.18	
2909	GEORGETOWN	KENNEBEC RIVER	900	0.46	
3441	GEORGETOWN	KENNEBEC RIVER	360	0.18	
7003	GEORGETOWN	KENNEBEC RIVER	600	0.31	
7150	GEORGETOWN	KENNEBEC RIVER	300	0.15	
7246	GEORGETOWN	KENNEBEC RIVER	300	0.15	
7724	GEORGETOWN	KENNEBEC RIVER	300	0.15	
7829	GEORGETOWN	KENNEBEC RIVER	300	0.15	
8136	GEORGETOWN	KENNEBEC RIVER	300	0.15	
7530	GEORGETOWN	LONG ISLAND NARROWS	300	0.15	
2275	GEORGETOWN	LONG ISLAND NARROWS	450	0.23	
3738	GEORGETOWN	LONG ISLAND NARROWS	300	0.15	
6849	GEORGETOWN	LONG ISLAND NARROWS	500	0.25	
1643	GEORGETOWN	LONG ISLAND NARROWS	360	0.18	
6970	GEORGETOWN	LONG ISLAND NARROWS	300	0.15	
2955	GEORGETOWN	TODD BAY	300	0.15	
8045	GEORGETOWN	KENNEBEC RIVER	360	0.18	
TOTAL AREA				4.26	130
Wood Island					
6764	PHIPPSBURG	KENNEBEC RIVER	300	0.15	17



Wastewater Treatment Plants

The City of Bath Wastewater Treatment Plant (WWTP) is located at the town landing, with the plant's outfall in the waters of Kennebec River, 300 ft from the plant. The construction of the plant was completed in 2008 and currently, it serves approximately 8,500 residents. This plant intake system is a combined collection system, with five combined sewer overflow (CSO) points. The max wet weather flow of this plant is 6 to 7 million gallons a day (MGD). The amount of rainfall causing overflow is undetermined.

The plant has conventional activated sludge treatment, with a design flow of 3.5 MGD; there is no bypass capability at this plant and the plant is not subject to flooding during wet weather or high tides. No holding ponds are present, but half of the aeration basins are used for wet weather storage (approximately 432,000 gallon capacity). The actual average daily flow rate is 2.1 MGD. There are 13 pump stations; two of the pumps have emergency bypasses. All pump stations are located in a large prohibited area (>2,100 acres).

The Bath wastewater treatment plan is located in a large prohibited area. All of the Kennebec river north of the treatment plan is classified as prohibited. In calculating the necessary closure around the Bath WWTP, only the area downstream (South) of the plan was considered. Since the Bath WWTP has a combined collection system that includes storm water, two dilution calculations were completed: 1) using the average daily flow of 2.1 MGD and a fecal concentration of 1.4×10^5 fc/100ml; and 2) using max wet weather flow of 7 MGD and a fecal concentration of 1.4×10^4 fc/100 ml. The average depth of receiving waters at mid-tide was estimated at 40 ft. The necessary closure sizes based on the two dilution calculations were 1,611 (average flow) and 537 acres (wet weather flow). The current closure size downstream of the treatment plant is greater than 2,100 acres.

In addition to the Bath WWTP, the flowing treatment facilities are also located in the upper portion of the Kennebec River watershed, north of the city of Bath and discharge into the river: Anson-Madison, Augusta, Gardiner, Richmond, Skowhegan and Waterville. Additionally, there are four major WWTPs located on the Androscoggin River: Lewiston-Auburn, Brunswick, Norway and Rumford-Mexico. Prior to draining into the Atlantic Ocean, the Androscoggin river joins the Kennebec river at Merrymeeting Bay, approximately 20 miles inland. These wastewater treatment plants are north of the upland boundary of growing area WM, and therefore are not reviewed in this report. All areas of the Kennebec north of the city of Bath are classified as prohibited.

Industrial Pollution

Bath Iron Works Corporation (BIW) is a ship building facility located in Bath, ME on the Kennebec River. BIW has a NPEDES permit (# ME0001732) to discharge 0.84 MGD non-contact cooling water, miscellaneous dry dock and ship discharges, and snow dump discharge to tidewater; toxic testing is required on the cooling water effluent. There are no noted non-compliant issues with BIW's permit during the review period 2005-2007. Wastewater sources are detailed in Table 4. All of BIW's outfalls are located in a large prohibited area (see Bath WWTP review for closure details).



Table 4. Bath Iron Works (BIW) Permitted Discharges

Outfall No.	Description	Volume
#005A	Noncontact cooling (municipal) water from building #0045 XLE compressors and breath air compressor.	650,000 gpd maximum 132,000 gpd average
#006A	Treated ship ballast (river/sea) water discharged at 500 gallons per minute maximum rate, occurring before and after dry docking ships.	800,000 gpd maximum per ship
#007A	Noncontact cooling (municipal) water from air compressors at paint and blast facility (humidity, slave cooler, trim cooler).	45,000 gpd average

Stormwater and Combines Sewer Overflows (CSO's)

The City of Bath has a snow dump discharge permit to tidewater. The location of these snow dumps are located in a large prohibited area (>2,100 acres). There have been no violations of the permit noted during the review period.

Combined Sewer Overflows (CSOs) are discharges of untreated wastewater from municipal sewerage systems that carry mixtures of sanitary sewage, stormwater, and sometimes industrial wastes. They occur mostly during and after rain events or snowmelt. Flows within the combined sewer system during these wet weather events can be a high as fifty (50) times the normal dry weather flows. Large volumes of water entering the combined sewer system (CSS) through catch basins, old and leaky pipes, roof drains, cellar drains, sump pumps, and other sources cause the capacity of the system to be exceeded.

The City of Bath has 4 CSOs which discharge to the Kennebec River. During this review period there were 33, 32 and 25 discharge events from 2005-2007, respectively. Annual discharge volumes for these events during the review period were 60.3, 36.1 and 20.8 million gallons, for the three years, respectively.

Agriculture

There are no major agricultural activities within 500 ft from shore or near streams that drain into the Kennebec River.

Wildlife and Domestic Animals

There are three properties at the head of Drummore Bay, Phippsburg that have up to 5 horses each (PHI PS 22, 23 and 24 on Figure 2). Water quality at nearby monitoring station WM17.5 shows elevated fecal coliform levels and does not meet the approved standard. Samples collected at the stream which originates behind these properties show elevated fecal coliform levels (>1,600CFU/100ml). These elevated stream score(s) indicate that run-off from the horse pastures may have a significant negative impact on water quality. The area surrounding the horse pastures is currently classified as prohibited.



Two horses are pastured on a property located on Young's Lane, Phippsburg (PHI PS 7 on Figure 2). The fencing in the northeast side of the property is steeply sloped down to the fresh water stream/pond, which drains to Parker Head Mill Pond (Figure 3). There are no buffer plantings and the fence is less than 10 feet from the water. A stream sample collected at the outfall of the fresh water stream/pond on October 23, 2006 resulted in a fecal coliform score of 1,040 CFU/100ml. Two stations, WK 9 and WK 9.8, monitor water quality in Mill Pond and the entire pond is currently classified as prohibited.

Figure 3. Young's Lane Pasture, Phippsburg



Photo courtesy of A. Fitzpatrick 10.10.06

Water Quality Review and Discussion

Table 5 lists all active approved, restricted and prohibited stations in Growing Area WM, with their respective Geomean and P90 calculations for 2007. Please refer to Appendix C for a key to interpreting the headers on the columns of Table 5. The approved and restricted standards for each station are also displayed in Table 5. These standards will fluctuate yearly as a result of the DMR transition from a most probable number (MPN) fecal coliform test method to a membrane filtration (MF) method and are dependent on the number of sample analyzed by MPN verses MF. The total number of data points used in the calculations is displayed in the Count column and includes both MPN and MF values. The number of data points analyzed by MF is displayed in the MFCNT column. This fluctuating standard will cease when all 30 data points have been analyzed by the MF method. A more detailed explanation of this transition can be found in Appendix D. All approved stations, except station WM 26.9 (highlighted in yellow), met their NSSP classification standard in 2007. Station WM 26.9 must be downgraded in classification. Station WM 27, which is classified as prohibited now meets the approved standard. An analysis for an upward classification for this station is presented later in this report.



Table 5. Geomean and P90 Scores, Growing Area WM, 2002-2007

STATION	CLASS	COUNT	MFCNT	GEO_MEAN	SDV	MAX	P90	APPD_STD	RESTR_STD
WM001.00	A	30	9	5.4	0.48	240	22.1	43	250
WM003.00	A	30	11	4.6	0.37	43	13.8	41	240
WM005.00	A	30	11	6	0.5	93	26.6	41	240
WM009.00	P	30	11	10.6	0.48	93	43.6	41	240
WM009.80	P	30	10	13.5	0.48	93	55.6	42	245
WM017.20	P	30	10	11	0.49	93	46.1	42	245
WM017.50	P	30	10	15	0.69	240	114.3	42	245
WM018.20	P	30	10	14.7	0.56	149	77	42	245
WM019.10	P	30	9	10.5	0.54	240	51.1	43	250
WM019.20	P	30	13	9.7	0.55	104	49.7	40	230
WM019.40	P	30	13	9.4	0.55	240	46.7	40	230
WM019.50	P	30	9	8.3	0.57	240	45.1	43	250
WM020.00	A	30	10	7.3	0.51	160	32.9	42	245
WM022.00	A	30	11	5.5	0.45	43	20.7	41	240
WM023.00	A	30	10	6.3	0.53	93	29.8	42	245
WM024.00	A	30	10	5.9	0.56	460	30.9	42	245
WM026.00	A	30	10	7.3	0.54	93	35.6	42	245
WM026.90	A	30	9	6.7	0.66	460	46.1	43	250
WM027.00	P	30	10	6.9	0.55	460	35.2	42	245
WM028.00	A	30	9	7.2	0.55	240	35.9	43	250
WM029.10	P	30	9	17.7	0.57	460	95.2	45	250

Table 6 lists all conditionally approved stations in Atkins Bay seasonal/rainfall conditional area with their respective Geomean and P90 calculations for 2007. Data for conditionally approved stations reflects only the open status. All stations met the approved standard during open status.

Table 6. Atkins Bay Seasonal/Rainfall Conditional Area, Open Status, 2003-2007

STATION	CLASS	COUNT	MFCNT	GEO_MEAN	SDV	MAX	P90	APPD_STD	RESTR_STD
WM004.00	CA	30	9	5.6	0.5	93	24.4	43	250
WM004.10	CA	30	9	6.8	0.54	93	33.6	43	250
WM004.50	CA	30	9	5.5	0.49	240	23.1	43	250
WM004.80	CA	30	9	6	0.54	93	29.2	43	250

Table 7 list all conditionally approved stations in the lower Kennebec conditional areas with their respective Geomean and P90 calculations for 2007. Data for conditionally approved stations reflects only the open status, from January 1st through September 30th. Table 7 also shows the P90 scores of stations that fall on the boundary lines of the Squirrel Point/Parker Head conditional area (stations WM 17.2, 19.1, 19.4 and 26). All conditionally approved stations met the approved standard during open status.

Table 7. Seasonal Conditional, Lower Kennebec River, Open Status- October 1- December 31, 2003-2007

STATION	CLASS	COUNT	MFCNT	GEO_MEAN	SDV	MAX	P90	APPD_STD	RESTR_STD
WM006.00	CA	30	7	6.1	0.44	93	22.4	44	260
WM006.50	new	8	7	3.9	0.47	42	16.2	33	176



STATION	CLASS	COUNT	MFCNT	GEO_MEAN	SDV	MAX	P90	APPD_STD	RESTR_STD
WM008.00	CA	30	6	6.3	0.44	93	23.4	45	266
WM012.00	CA	30	10	6.6	0.51	106	29.7	42	245
WM015.00	CA	30	10	7	0.6	240	40.8	42	245
WM016.00	CA	30	10	7.4	0.47	82	29.8	42	245
WM017.20	P	30	6	7.5	0.38	93	22.8	45	266
WM019.10	P	30	5	8.4	0.54	240	40.7	45	271
WM019.40	P	30	9	7.3	0.49	240	31.1	43	250
WM026.00	A	30	6	5.8	0.47	93	22.8	45	266

All approved and prohibited stations that were active at the beginning of 2007 were sampled at least 6 times following the systematic random sampling (SRS) schedule (Table 8) and Appendix E). At some stations, additional samples were collected under adverse conditions. Atkins Bay conditionally approved stations were sampled 7 times in the open status. Conditionally approved stations WM 12, 15 and 16, were sampled 4 times in the open status; in 2007 the seasonal opening for this area was delayed and as a consequence, this seasonal conditional area was open for less than four months. The stations were scheduled to be sampled 5 times in the open status, but due to the delayed opening were sampled only 4 times in the open status. Additionally, the open status dates for this area were modified on October 26, 2007, with the opening date being extended from May 15th to January 1st. Stations WM 6.0, 6.50 and 8.0 are new conditional stations, reclassified from approved to conditionally approved on October 26th; these stations were only sampled 5 times in the open status in 2007, and will be scheduled to be sampled 6 times in the open status in 2008.

Table 8. WM Samples Collected in 2007

Station	Class	Adverse	Random		Grand Total	Notes
		Closed	Closed	Open		
WM001.00	A			6	6	
WM003.00	A	9		8	17	Flood station
WM004.00	CA	1	2	7	10	
WM004.10	CA	1	2	7	10	
WM004.50	CA	1	2	7	10	
WM004.80	CA	1	2	7	10	
WM005.00	A			7	7	
WM006.00	A			7	7	Reclassified from A to CA on 10/26/07
	CA		1		1	
WM006.50	A			6	6	Reclassified from A to CA on 10/26/07
	CA		1		1	
WM008.00	A			6	6	Reclassified from A to CA on 10/26/07
	CA		1		1	
WM009.00	P		8		8	
WM009.80	P		7		7	
WM012.00	CA	1	7	4	12	Open status modified 10/26/08
WM015.00	CA	1	7	4	12	Open status modified 10/26/08



Station	Class	Adverse	Random		Grand Total	Notes
		Closed	Closed	Open		
WM016.00	CA	1	7	4	12	Open status modified 10/26/08
WM017.20	P		7		7	
WM017.50	P		7		7	
WM018.20	P		7		7	
WM019.10	P		7		7	
WM019.20	P		10		10	
WM019.40	P		10		10	
WM019.50	P		6		6	
WM020.00	A		1	6	7	
WM022.00	A		1	6	7	
WM023.00	A		1	6	7	
WM024.00	A		1	6	7	
WM026.00	A	9	1	6	16	Flood station
WM026.90	A		1	6	7	
WM027.00	P		7		7	
WM028.00	A		1	6	7	
WM029.10	P	9	7		16	Flood station

Figure 4 shows the P90 trends over the past three years, for all WM stations classified as approved at the end of 2007. 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 2007 column on or above the 100 percent line does not meet the standard for approved classification. Over the past 3 years. Currently, all stations, except WM 26.9, are below the approved standard, however, four stations (WM 5, 20 23 and 24) have shown upward trends over the past three years. Additional survey work will be required to further investigate into the cause of this upward trend. Station WM 26.9 needs to be downgraded from approved classification.



Figure 4. P90 Scores (as percent of approved standard) for Approved Stations in WM, 2005-2007

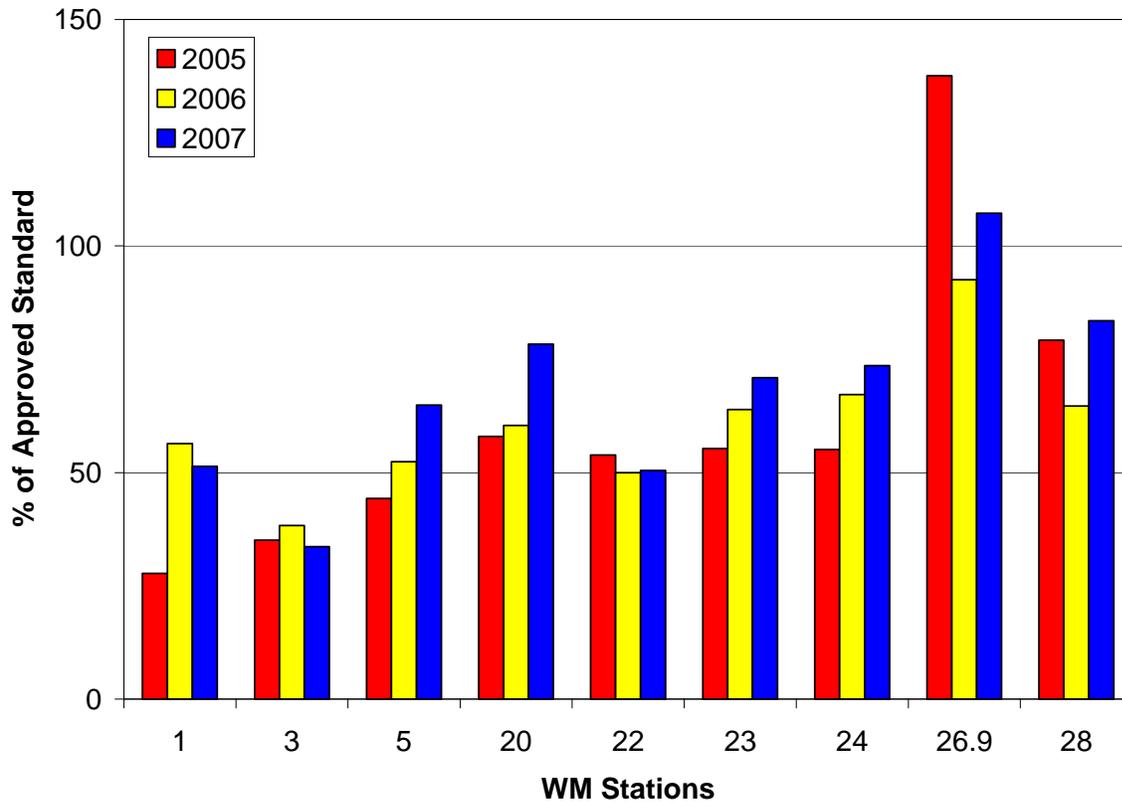


Figure 5 show the P90 trends over the past three years, for Atkins Bay seasonal/rainfall conditionally approved stations in the open status. Over the past three years, all four stations have shown upward trends, however, all stations are still well below the P90 standard. If this upward trend persists in the 2008 review year, additional survey work in the area will be recommended. Figure 6 shows P90 scores for the lower Kennebec seasonal conditional stations WM 12, 15 and 16, as well as the area’s boundary stations WM 17.2, 19.1, 19.4 and 26. The open status for this conditional area was modified in October 2007, and the figure reflects data from this updated open status (January 1st -September 30th). With the exception of station WM 19.1 and 26, the remaining stations did not show consistent upward or downward trends over the past three years; with the exception of WM 15, these stations remain well under the 100 percent limit at the end of 2007 review year. Station WM 19.1 has shown a significant improvement in water quality over the past three years, and station 26 has shown a slight decrease in P90 scores over the past three years. Station WM 15 showed a slight decrease in its scores between 2005 and 2006, however, the station showed a 30 percent increase in its P90 score between 2006 and 2007, and at the end of the current review year was at 97 percent of the approved standard. The cause for such increase is currently unknown and further survey work is needed in this area.



Figure 5. P90 Scores (as percent of approved standard) for Conditionally Approved Stations in Atkins Bay, Open Status, 2005-2007

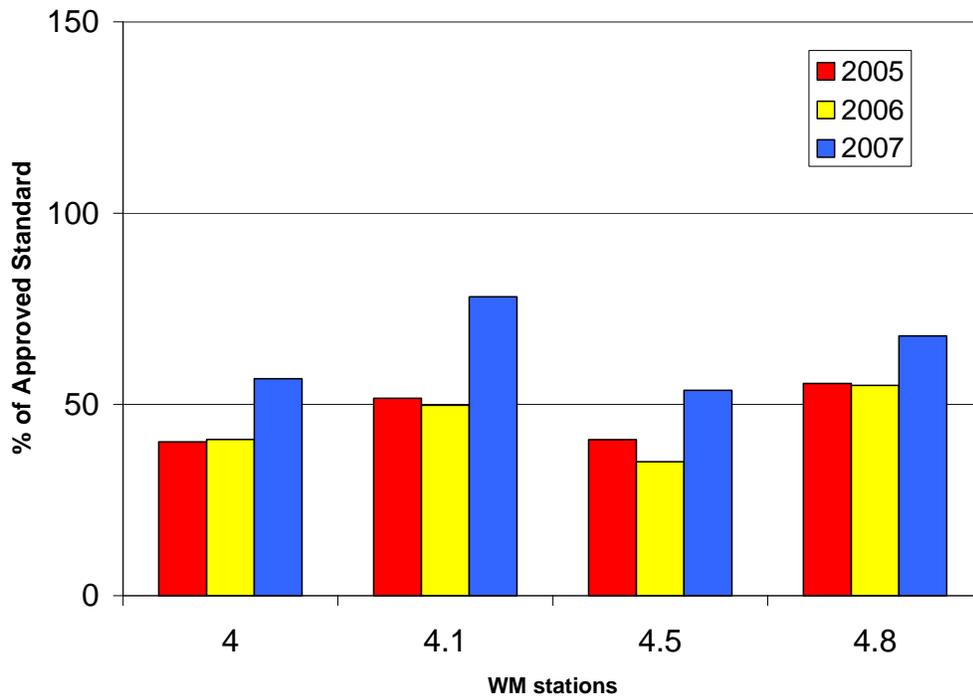
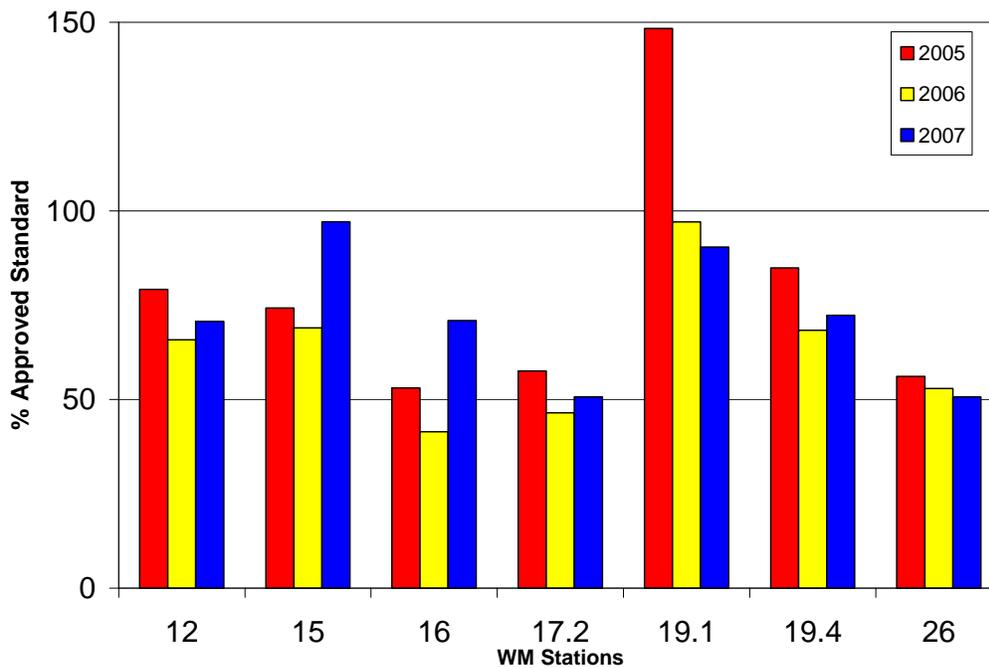


Figure 6. P90 Scores (as percent of approved standard) for Stations in the Lower Kennebec Seasonal Conditional Area, Open Status, 2005-2007





Station WM26.9 did not meet the approved standard in 2007. The water quality data at this station was analyzed for rainfall within 72 hours of sample collection and seasonality (Table 9). Station WM 27, which is currently classified as prohibited, but is meeting the approved standard year round, was also analyzed for rainfall and seasonality (Table 10). At both stations, elevated fecal scores occurred at a variety of precipitation amounts, indicating that rainfall alone does not impact water quality. Seasonality showed a more consistent pattern, with station WM 26.9 having 4 of the 5 high scores occurring between the months of September and November. Based on this pattern, a conditionally approved classification based on season is proposed for stations WM 26.9 and 27, with the proposed open season from January 1st through August 31st.



Table 9. Rainfall and Seasonal Assessment for WM 26.9; Adversities at the time of collection are noted in ()

Rain Range	Rain 72 hour	Collect	Sal %	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0	0	5/2/04	28					<3							
	0	9/26/04	29									<3			
	0	2/1/05	21		23										
	0	6/26/05	30					7.3							
	0	11/25/07	20											56	
0.001-0.25	0.04	5/18/03	18					7.3							
	0.15	7/6/03	20							3					
	0.172	3/21/04	23			<3(T)									
	0.001	6/13/04	30						<3						
	0.02	10/24/04	26										3.6		
	0.001	11/14/04	30											<3	
	0.11	7/21/05	18							21					
	0.001	8/21/05	30									93			
	0.001	3/22/06	22			<3									
	0.06	6/25/07	20						<2						
	0.01	7/29/07	30							2					
	0.04	12/9/07	26												<2
0.25-0.5	0.49	11/6/05	10											93	
	0.49	12/10/06	24												2
0.51-0.75	0.541	2/22/04	24		<3(W)										
	0.6	9/16/07	25												
0.76-1.0	0.8	5/22/05	21					<3(P)							
	0.76	6/25/06	25						3.6			<2			



Rain Range	Rain 72 hour	Collect	Sal %	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	0.98	9/6/06	25									<2			
1.01-1.5	1.04	3/23/03	20			3.6									
	1.44	4/27/03	20				<3(P)								
	1.36	12/7/03	30												3.6(P)
	1.06	5/21/06	15					9.1							
	1.46	6/3/07	24						5.5						
1.51-2.0	1.97	9/28/03	22									93(P)			
	1.65	10/15/06	24										<2		
2.01-4.0	3.351	8/22/04	12								23(P)				
	2.24	9/18/05	28									460			

Table 10. Rainfall and Seasonal Assessment for WM 27; Adversities at the time of collection are noted in ()

Rain Range	Rain 72 Hours	Collect	Salinity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
0	0	5/2/04	28					7.3							
	0	9/26/04	28									<3			
	0	2/1/05	20		23										
	0	6/26/05	27					<3							
	0	11/25/07	26											7.3	
0.001-0.25	0.001	6/13/04	30						<3						
	0.001	11/14/04	31											<3	
	0.001	8/21/05	29								9.1				
	0.01	7/29/07	26							<2					
	0.02	10/24/04	30										3.6		
	0.04	5/18/03	8					<3							
	0.04	12/9/07	26												2
	0.11	7/21/05	18							15(N)					
0.172	3/21/04	21			<3(T)										
0.26-0.5	0.261	7/18/04	22							<3					



WM Triennial 2007
Effective Date 12/03/08

Rain Range	Rain 72 Hours	Collect	Salinity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
	0.31	10/26/03	18										43(P)		
	0.34	9/11/06	18									10			
	0.49	11/6/05	10											23	
	0.49	12/10/06	24												4
0.51-0.75	0.541	2/22/04	24		3.6(W)										
	0.6	9/16/07	28									<2			
0.76-1.0	0.76	6/25/06	24						9.1						
	0.8	5/22/05	21					3.6(P)							
	0.98	9/6/06	25									2			
1.01-1.50	1.06	5/21/06	6					11							
	1.44	4/27/03	25				9.1(P)								
	1.46	6/3/07	23						<2						
1.51-2.00	1.65	10/15/06	20										6		
	1.97	9/28/03	22									14(P)			
2.01-3.00	2.24	9/18/05	28									460			
	2.62	4/27/05	0				93(P N)								
	2.68	3/18/07	14			9.1(P)									
3.01-4.00	3.351	8/22/04	20								15(P)				



Shoreline Survey Activity during Review Years, 2005-2007

The Parker Head Mill Pond watershed in Phippsburg was surveyed in October 2006. In Georgetown, Sagadahoc Bay, Heal Eddy and Todd Bay (up to Marrtown) were surveyed in 2007. Georgetown's, Long Island and Perkins Island were surveyed in 2006. Popham Beach State Park, Spirit Pond, Sprague River and Morse River, Phippsburg were surveyed in 2008.

Aquaculture/Wet Storage Activity

There are no aquaculture sites or wet storage activity in growing area WM.

Classification Changes Required

Based on the 2007 Triennial Review, station WM 26.9, did not meet approved standard and a downward classification was required. Prohibited station WM 27 met the approved standard based on year round data at the end of the year. Both stations are located in Todd Bay, which was surveyed in 2007; no problems were identified at the time of the survey. A conditionally approved classification based on season was proposed, and implemented on February 28, 2008. The open status for this conditional area is from January 1 through August 31. Station WM 26 will monitor the northern boundary of this conditional station. Please see Appendix F for map with the updated classification changes. No other classification changes are required at this time.

Summary

With the exception of one approved station, growing area WM continued to meet its NSSP classification in 2007. While the remaining approved stations were below the NSSP standard, several stations showed gradual upward trends over the past three years. In addition to follow up survey field work, the fecal scores of from these stations should be evaluated for any potential effect of rainfall in the next review period. Additionally, since the area of the Kennebec River watershed is exceptionally large, and meteorological events that occur north of the upper reaches of the growing area boundary may have significant effects on transport of pollutants from the central and western Maine to the lower reaches of the river, any correlations between river stage and elevated fecal score should be assessed.

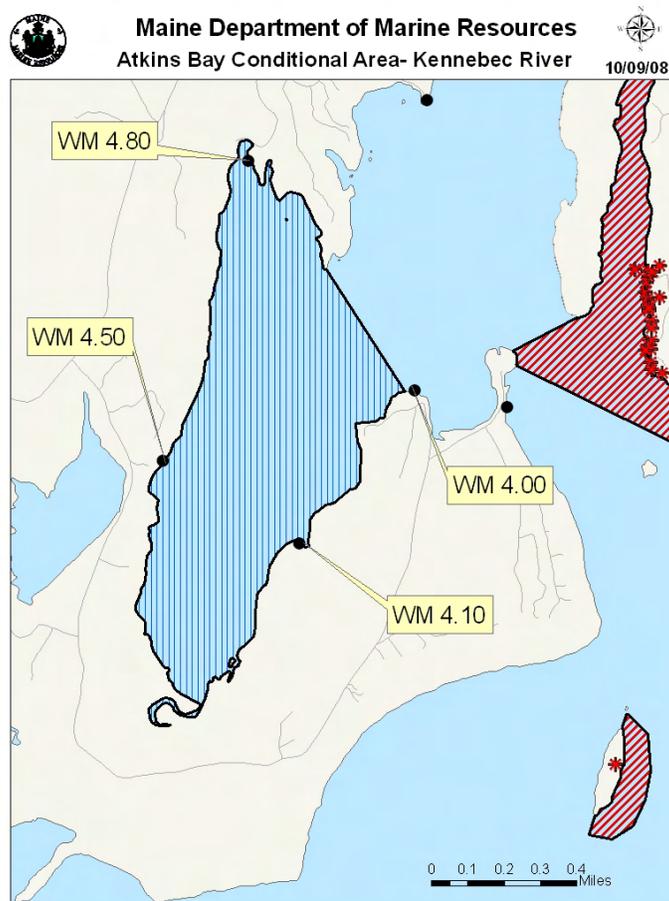
All potential and actual problems noted in the most recent survey have been reported to the codes enforcement officers of each town. DMR will continue to work with the towns in documenting any future upgrades or improvements to private waste disposal systems. In the coming review years, DMR will also identify streams which have the potential to impact harvesting areas, and will set up a schedule for stream sample collections. The stream data will be presented in the next triennial and sanitary survey reports. The review of the waste water treatment plant will be completed annually, with the closure size confirmed at the time of each review.



Appendix A. Review of Management Plan for Atkins Bay, 2007

Scope

A portion of growing area WM is classified as conditionally approved based on rainfall and season. Atkins Bay, located in Phippsburg, shall be closed when rainfall meets or exceeds 1.5 inches in a 24 hour period, between the period of October 1st and May 14th. Water quality in this conditional area is monitored by 4 stations: WM 4, 4.1, 4.5 and 4.8. All conditionally approved station in Atkins Bay are sampled 6 times in the open status, following a systematic random sampling schedule.



Compliance with management plan

In 2007, there were 2 rainfall closures: the first occurred on April 17th, with a reopening on May 11th; the second closure occurred on October 12 (occurred as flood closure), with a reopening on October 30th. Per management plan, Maine DMR was notified by phone by the town of Phippsburg. Water samples were collected and analyzed prior to reopening of the areas.



Adequacy of reporting and cooperation of involved persons

In the event that a conditional area closure must be implemented due to rainfall, the management plan for this conditional area requires reporting by the Town of Phippsburg. In 2007, the cooperation between all involved parties was excellent and all necessary notifications were received at appropriate times.

Compliance with approved growing area criteria

The annual review of water quality data for all active station in this conditional area shows that all stations met approved standards in the open status (Table 1).

Table 1. Atkins Bay Seasonal/Rainfall Conditional Area, Open Status, 2003-2007

STATION	CLASS	COUNT	MFCNT	GEO_MEAN	SDV	MAX	P90	APPD_STD	RESTR_STD
WM004.00	CA	30	9	5.6	0.5	93	24.4	43	250
WM004.10	CA	30	9	6.8	0.54	93	33.6	43	250
WM004.50	CA	30	9	5.5	0.49	240	23.1	43	250
WM004.80	CA	30	9	6	0.54	93	29.2	43	250

Water sampling compliance history

In 2007, conditionally approved stations in Atkins Bay were sampled 7 times in the open status and met the sampling frequency requirements set by the NSSP Model ordinance.

Analysis-recommendations

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



Appendix B. Review of Management Plan for Lower Kennebec River, 2007

Scope

A portion of growing area WM is classified as conditionally approved based on season. The Parker Head and Squirrel Pt flats conditional area is based on season. For several years the area has maintained approved water quality from 5/15 – through 9/30. However, more recent data seems to indicate that the area is able to be classified in the open status for a considerably longer, but different time frame, from 1/1 – 9/30. This modification to the open status occurred on October 26, 2007. A new seasonal conditional area, located off Cox Head, Phippsburg, was established in October 26, 2007. This new conditional area has the same open period as the Parker Head/Squirrel Pt conditional area.

Compliance with management plan

In 2007, the opening of the seasonal conditional area in the lower Kennebec River was delayed until water quality met the approved standard. The area reopened on June 5th, instead of May 15th, after water quality samples yielded scores at acceptable fecal coliform levels. On October 26, 2007, the seasonal conditional area was expanded and the open period was modified.

Adequacy of reporting and cooperation of involved persons

The management plan for this conditional area does not require reporting.

Compliance with approved growing area criteria

The annual review of water quality data for all active conditionally approved stations, as well as boundary stations, in the Lower Kennebec River, show that all stations met the approved standards in the open status (Table 1). Station WM 15 meets the approved standard, however is within 3 percent of the approved standard, and recent scores for this station should be evaluated based on rainfall in the 2008 report. Follow-up survey work around the location of this station is also recommended.

Table 1. Lower Kennebec Seasonal Conditional Area, Open Status, 2003-2007

STATION	CLASS	COUNT	MFCNT	GEO_MEAN	SDV	MAX	P90	APPD_STD	RESTR_STD
WM006.00	CA	30	7	6.1	0.44	93	22.4	44	260
WM006.50	new	8	7	3.9	0.47	42	16.2	33	176
WM008.00	CA	30	6	6.3	0.44	93	23.4	45	266
WM012.00	CA	30	10	6.6	0.51	106	29.7	42	245
WM015.00	CA	30	10	7	0.6	240	40.8	42	245
WM016.00	CA	30	10	7.4	0.47	82	29.8	42	245
WM017.20	P	30	6	7.5	0.38	93	22.8	45	266
WM019.10	P	30	5	8.4	0.54	240	40.7	45	271
WM019.40	P	30	9	7.3	0.49	240	31.1	43	250
WM026.00	A	30	6	5.8	0.47	93	22.8	45	266



Water sampling compliance history

Conditionally approved stations WM 12, 15 and 16, were sampled 4 times in the open status; in 2007, the seasonal opening for this area was delayed and as a consequence, this seasonal conditional area was open for less than four months. The stations were scheduled to be sampled 5 times in the open status, but due to the delayed opening were sampled only 4 times in the open status. Additionally, the open status dates for this area were modified on October 26, 2007, with the opening date being extended from May 15th to January 1st. Stations WM 6.0, 6.50 and 8.0 are new conditional stations, reclassified from approved to conditionally approved on October 26th; these stations were only sampled 5 times in the open status in 2007, and will be scheduled to be sampled 6 times in the open status in 2008.

Analysis-recommendations

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



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. Transitioning to Membrane Filtration for Seawater and Pollution Source Samples

The Maine Department of Marine Resources has switched to a Membrane Filtration (MF) method for Fecal Coliforms using mTEC agar with a two hour resuscitation step. The geometric mean and the 90th percentile are calculated on 30 data points extending over a five year period. During the transition from MPN to MF, we will be accumulating MF data points. The statistical calculations will be a combination of MPN and MF data points.

During the transition the P90 standard for approved and restricted classification will migrate from the MPN to MF standards. The FDA has determined that the best way to handle the data is to perform the calculations as always for the data set, but to compare the data set to a hybrid weighted 90th percentile. This hybrid standard is calculated by weighting the relative contributions of each method to the database. This will mean that as the number of MPN data points reduce and the number of MF data points increase the 90th percentile standard that the sample site is compared to will change over time. Once all 30 data points are analyzed using MF, the 90th percentile for approved classification will be 31 and for restricted (for depuration) will be 163. The geomean approved standard of 14 fecal coliforms per 100 ml and geomean restricted standard of 88 fecal coliforms per 100 ml will remain the same for both methods.

Reports that display 90th percentiles will show the number of data points derived from MF analysis and will show the appropriate 90th percentile standard for that MPN/MF combination for approved and restricted classifications. It must be remembered that this weighted standard is only used for data sets encompassing data from the two different test methods, MF and MPN (3 tube/3 dilution). If decisions are to be made on a single test result analyzed by the MF method or a multiple number of test results all exclusively analyzed by the MF method, the 90th percentile standard is 31 fecal coliforms per 100 ml.

This was the second 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 E. Growing Area WM 2007 data

Station	Date	Collector	Tide	Temp	Sal	Strat	ADV	Stat	CL	MF	WIND
WM001.00	2/13/2007	LL	E	-2	32	R	-	O	A	<2.0	NW
WM001.00	6/4/2007	FP	F	11	28	R	P	O	A	4	NE
WM001.00	6/25/2007	FP	E	15	29	R	-	O	A	2.8	CL
WM001.00	7/23/2007	JB	F	17	26	R	P	O	A	3.6	NE
WM001.00	9/17/2007	MHE	F	13	28	R	-	O	A	<2.0	SW
WM001.00	11/27/2007	LLB	H	8	30	R	P	O	A	<2.0	CL
WM003.00	1/17/2007	JB	E	-2	26	R	-	O	A	<2.0	NW
WM003.00	2/21/2007	RL	LF	-0.5	23	R	W	O	A	7.3	CL
WM003.00	3/13/2007	RL	HE	-1	30	R	-	O	A	<2.0	-
WM003.00	5/7/2007	RL	E	3	14	R	-	O	A	22	CL
WM003.00	6/26/2007	RL	F	9	26	R	N	O	A	4	SW
WM003.00	8/21/2007	RL	F	-	22	R	N	O	A	<2.0	SE
WM003.00	10/24/2007	RL	HF	10	32	R	-	O	A	2	NW
WM003.00	11/13/2007	RL	F	7	22	R	-	O	A	33	NW
WM004.00	1/17/2007	JB	E	-2	17	R	-	O	CA	<2.0	NW
WM004.00	3/13/2007	RL	HE	-2	20	R	-	O	CA	2	-
WM004.00	5/7/2007	RL	E	3	5	R	W	C	CA	48	CL
WM004.00	6/26/2007	RL	F	10	25	R	NW	O	CA	8	SW
WM004.00	8/21/2007	RL	F	-	22	R	N	O	CA	<2.0	SE
WM004.00	9/4/2007	RL	E	15	25	R	N	O	CA	2	NW
WM004.00	10/24/2007	RL	HF	10	20	R	-	C	CA	<2.0	NW
WM004.00	11/13/2007	RL	F	7	18	R	-	O	CA	46	NW
WM004.00	12/11/2007	RL	F	2	26	R	N	O	CA	6	CL
WM004.10	3/13/2007	RL	HE	-2	20	R	-	O	CA	4	-
WM004.10	5/7/2007	RL	E	3	6	R	-	C	CA	86	CL
WM004.10	6/6/2007	RL	H	12	10	R	P	O	CA	38	NE
WM004.10	6/26/2007	RL	F	10	22	R	N	O	CA	<2.0	SW
WM004.10	8/21/2007	RL	F	-	21	R	N	O	CA	<2.0	SE
WM004.10	9/4/2007	RL	E	15	25	R	N	O	CA	<2.0	NW
WM004.10	10/24/2007	RL	HF	10	20	R	-	C	CA	4	NW
WM004.10	11/13/2007	RL	F	6	18	R	-	O	CA	52	NW
WM004.10	12/11/2007	RL	F	2	16	R	N	O	CA	10	CL
WM004.50	3/13/2007	RL	HE	-1	20	R	-	O	CA	2	-
WM004.50	5/7/2007	RL	E	4	6	R	-	C	CA	62	CL
WM004.50	6/6/2007	RL	H	13	10	R	P	O	CA	44	NE
WM004.50	6/26/2007	RL	F	10	22	R	N	O	CA	6	SW
WM004.50	8/21/2007	RL	F	-	22	R	N	O	CA	<2.0	SE
WM004.50	9/4/2007	RL	E	14	24	R	N	O	CA	2	NW
WM004.50	10/24/2007	RL	HF	10	21	R	-	C	CA	11	NW



Station	Date	Collector	Tide	Temp	Sal	Strat	ADV	Stat	CL	MF	WIND
WM004.50	11/13/2007	RL	F	7	18	R	-	O	CA	27	NW
WM004.50	12/11/2007	RL	F	2	15	R	N	O	CA	2	CL
WM004.80	2/21/2007	JB	F	-1	24	R	N	O	CA	<2.0	NW
WM004.80	3/13/2007	RL	HE	-2.5	24	R	-	O	CA	<2.0	-
WM004.80	5/7/2007	RL	E	5	6	R	-	C	CA	22	CL
WM004.80	6/26/2007	RL	F	11	21	R	N	O	CA	8	SW
WM004.80	8/21/2007	RL	F	-	24	R	N	O	CA	<2.0	SE
WM004.80	9/4/2007	RL	E	14	28	R	N	O	CA	<2.0	NW
WM004.80	10/24/2007	RL	HF	11	18	R	-	C	CA	4	NW
WM004.80	11/13/2007	RL	F	7	18	R	-	O	CA	20	NW
WM004.80	12/11/2007	RL	F	2	16	R	N	O	CA	8	CL
WM005.00	2/21/2007	RL	LF	-2	22	R	-	O	A	16	CL
WM005.00	3/13/2007	RL	HE	-1.5	30	R	-	O	A	2	-
WM005.00	5/7/2007	RL	E	5	14	R	-	O	A	44	CL
WM005.00	6/26/2007	RL	HF	11	20	R	N	O	A	2	SW
WM005.00	8/21/2007	RL	F	-	20	R	N	O	A	<2.0	SE
WM005.00	10/24/2007	RL	HF	10	30	R	-	O	A	6	NW
WM005.00	11/13/2007	RL	F	8	18	R	-	O	A	28	NW
WM006.00	1/17/2007	JB	E	-5	16	R	-	O	A	13	NW
WM006.00	2/21/2007	RL	LF	-1	20	R	-	O	A	12	CL
WM006.00	3/13/2007	RL	HE	-2	16	R	-	O	A	12	-
WM006.00	5/7/2007	RL	E	4	6	R	-	O	A	13	CL
WM006.00	6/26/2007	RL	HF	11	20	R	N	O	A	<2.0	SW
WM006.00	8/21/2007	RL	F	-	24	R	N	O	A	<2.0	SE
WM006.00	10/24/2007	RL	HF	12	18	R	-	O	A	6	NW
WM006.00	11/13/2007	RL	F	7	15	R	-	C	CA	48	NW
WM006.50	3/13/2007	RL	HE	-2.5	18	R	-	O	A	8	-
WM006.50	5/7/2007	RL	E	4	6	R	-	O	A	4	CL
WM006.50	6/6/2007	RL	H	13	5	R	P	O	A	42	NE
WM006.50	6/26/2007	RL	HF	12	18	R	N	O	A	<2.0	SW
WM006.50	8/21/2007	RL	F	-	18	R	N	O	A	<2.0	SE
WM006.50	10/24/2007	RL	HF	13	15	R	-	O	A	10	NW
WM006.50	11/13/2007	RL	F	7	13	R	-	C	CA	36	NW
WM008.00	3/13/2007	RL	HE	-2.5	18	R	-	O	A	9.1	-
WM008.00	5/7/2007	RL	E	4	8	R	-	O	A	31	CL
WM008.00	6/6/2007	RL	H	14	6	R	P	O	A	50	NE
WM008.00	6/26/2007	RL	HF	11	22	R	N	O	A	2	SW
WM008.00	8/21/2007	RL	F	-	18	R	N	O	A	<2.0	SE
WM008.00	10/24/2007	RL	H	11	25	R	-	O	A	2	NW
WM008.00	11/13/2007	RL	F	7	14	R	-	C	CA	50	NW



Station	Date	Collector	Tide	Temp	Sal	Strat	ADV	Stat	CL	MF	WIND
WM009.00	1/17/2007	JB	E	-3	15	R	N	C	P	6	NW
WM009.00	2/21/2007	RL	LF	-2.5	21	R	-	C	P	4	CL
WM009.00	3/13/2007	RL	HE	-1	20	R	-	C	P	5.5	-
WM009.00	5/7/2007	RL	E	4	6	R	W	C	P	42	CL
WM009.00	6/26/2007	RL	HF	12	17	R	N	C	P	4	SW
WM009.00	8/21/2007	RL	F	-	18	R	N	C	P	<2.0	SE
WM009.00	10/24/2007	RL	H	12	20	R	-	C	P	6	NW
WM009.00	11/13/2007	RL	F	7	12	R	-	C	P	44	NW
WM009.80	3/13/2007	RL	E	-1.5	16	R	-	C	P	4	-
WM009.80	5/7/2007	RL	E	5	2	R	-	C	P	44	CL
WM009.80	6/6/2007	RL	H	13	6	R	P	C	P	29	NE
WM009.80	6/26/2007	RL	HF	13	20	R	N	C	P	8	SW
WM009.80	8/21/2007	RL	F	-	20	R	N	C	P	<2.0	SE
WM009.80	10/24/2007	RL	H	13	15	R	-	C	P	9.1	NW
WM009.80	11/13/2007	RL	F	7	14	R	-	C	P	54	NW
WM012.00	2/21/2007	RL	LF	-2	14	R	-	C	CA	6	CL
WM012.00	3/13/2007	RL	E	-2.5	18	R	-	C	CA	8	-
WM012.00	5/7/2007	RL	E	4	8	R	-	C	CA	52	CL
WM012.00	6/6/2007	RL	HE	12	5	R	P	C	CA	106	NE
WM012.00	6/26/2007	RL	HF	13	18	R	N	O	CA	4	SW
WM012.00	7/11/2007	RL	F	10	26	R	N	O	CA	4	SE
WM012.00	8/21/2007	RL	F	-	22	R	N	O	CA	<2.0	SE
WM012.00	9/4/2007	RL	E	15	24	R	N	O	CA	<2.0	NW
WM012.00	10/24/2007	RL	H	12	13	R	-	C	CA	7.3	NW
WM012.00	11/13/2007	RL	HF	8	12	R	-	C	CA	31	NW
WM012.00	12/11/2007	RL	F	0	14	R	N	C	CA	16	CL
WM015.00	2/21/2007	RL	F	-3	11	R	-	C	CA	24	CL
WM015.00	3/13/2007	RL	E	-2	22	R	-	C	CA	8	-
WM015.00	5/7/2007	RL	E	4	8	R	-	C	CA	70	W
WM015.00	6/6/2007	RL	HE	12	6	R	P	C	CA	90	NE
WM015.00	6/26/2007	RL	HF	13	15	R	N	O	CA	4	SW
WM015.00	7/11/2007	RL	HF	12	22	R	N	O	CA	2	SE
WM015.00	8/21/2007	RL	F	-	14	R	N	O	CA	<2.0	SE
WM015.00	9/4/2007	RL	E	14	26	R	N	O	CA	<2.0	NW
WM015.00	10/24/2007	RL	H	12	23	R	-	C	CA	3.6	NW
WM015.00	11/13/2007	RL	HF	8	10	R	-	C	CA	46	NW
WM015.00	12/11/2007	RL	HF	2	10	R	N	C	CA	8	CL
WM016.00	2/21/2007	RL	F	-2.5	10	R	N	C	CA	29	CL
WM016.00	3/13/2007	RL	E	-2	18	R	-	C	CA	4	-
WM016.00	5/7/2007	RL	E	4	5	R	-	C	CA	26	CL
WM016.00	6/6/2007	RL	HE	11	10	R	P	C	CA	82	NE
WM016.00	6/26/2007	RL	HF	12	16	R	N	O	CA	8	SW



Station	Date	Collector	Tide	Temp	Sal	Strat	ADV	Stat	CL	MF	WIND
WM016.00	7/11/2007	RL	HF	12	24	R	N	O	CA	8	SE
WM016.00	8/21/2007	RL	F	-	16	R	N	O	CA	<2.0	SE
WM016.00	9/4/2007	RL	E	14	24	R	N	O	CA	<2.0	NW
WM016.00	10/24/2007	RL	H	11	26	R	-	C	CA	<2.0	NW
WM016.00	11/13/2007	RL	HF	7	10	R	-	C	CA	56	NW
WM016.00	12/11/2007	RL	HF	1	10	R	N	C	CA	6	CL
WM017.20	2/21/2007	JB	F	0	10	R	NW	C	P	6	NW
WM017.20	3/13/2007	RL	E	-2	15	R	-	C	P	6	-
WM017.20	5/7/2007	RL	E	5	4	R	-	C	P	24	SW
WM017.20	6/26/2007	RL	HF	13	15	R	N	C	P	6	SW
WM017.20	8/21/2007	RL	F	-	14	R	N	C	P	<2.0	SE
WM017.20	10/24/2007	RL	H	12	17	R	-	C	P	6	NW
WM017.20	11/13/2007	RL	HF	7	10	R	-	C	P	42	NW
WM017.50	3/13/2007	RL	E	-3	16	R	-	C	P	12	-
WM017.50	5/7/2007	RL	E	5	2	R	-	C	P	66	SW
WM017.50	6/6/2007	RL	HE	13	2	R	P	C	P	180	NE
WM017.50	6/26/2007	RL	H	15	13	R	N	C	P	<2.0	SW
WM017.50	8/21/2007	RL	F	-	12	R	N	C	P	<2.0	SE
WM017.50	10/24/2007	RL	H	12	10	R	-	C	P	9.1	NW
WM017.50	11/13/2007	RL	HF	7	8	R	-	C	P	66	NW
WM018.20	2/21/2007	RL	F	-3.5	6	R	-	C	P	31	CL
WM018.20	3/13/2007	RL	E	-2	12	R	-	C	P	18	-
WM018.20	5/7/2007	RL	E	5	5	R	-	C	P	22	SW
WM018.20	6/26/2007	RL	H	15	10	R	N	C	P	<2.0	SW
WM018.20	8/21/2007	RL	F	-	10	R	N	C	P	6	SE
WM018.20	10/24/2007	RL	H	12	9	R	-	C	P	11	NW
WM018.20	11/13/2007	RL	HF	7	6	R	-	C	P	92	NW
WM019.10	3/18/2007	AJS	F	0	8	R	P	C	P	62	NE
WM019.10	6/3/2007	CCA	LF	11	22	R	-	C	P	27	-
WM019.10	7/29/2007	CCA	F	18	27	R	-	C	P	44	-
WM019.10	9/16/2007	CCA	LE	16	22	R	-	C	P	2	-
WM019.10	11/25/2007	CCA	F	2	15	R	-	C	P	46	-
WM019.10	12/9/2007	CCA	F	2	16	R	-	C	P	6	-
WM019.20	3/13/2007	RL	E	-2	15	R	-	C	P	10	-
WM019.20	5/7/2007	RL	E	4	4	R	-	C	P	54	W
WM019.20	6/6/2007	RL	H	13	4	R	P	C	P	104	NE
WM019.20	6/26/2007	RL	HF	14	16	R	N	C	P	2	SW
WM019.20	7/11/2007	RL	F	14	15	R	N	C	P	12	SE
WM019.20	8/21/2007	RL	F	-	16	R	N	C	P	2	SE
WM019.20	9/4/2007	RL	E	17	20	R	N	C	P	4	NW
WM019.20	10/24/2007	RL	H	13	15	R	-	C	P	4	NW



Station	Date	Collector	Tide	Temp	Sal	Strat	ADV	Stat	CL	MF	WIND
WM019.20	11/13/2007	RL	F	8	12	R	-	C	P	56	NW
WM019.20	12/11/2007	RL	F	2	10	R	N	C	P	15	CL
WM019.40	3/13/2007	RL	E	-1.5	15	R	-	C	P	9.1	-
WM019.40	5/7/2007	RL	E	4	3	R	-	C	P	33	CL
WM019.40	6/6/2007	RL	H	12	4	R	P	C	P	64	NE
WM019.40	6/26/2007	RL	HF	13	16	R	N	C	P	2	SW
WM019.40	7/11/2007	RL	F	14	18	R	N	C	P	4	SE
WM019.40	8/21/2007	RL	F	-	18	R	N	C	P	<2.0	SE
WM019.40	9/4/2007	RL	E	16	20	R	N	C	P	6	NW
WM019.40	10/24/2007	RL	H	13	14	R	-	C	P	4	NW
WM019.40	11/13/2007	RL	HF	7	12	R	-	C	P	48	NW
WM019.40	12/11/2007	RL	F	1	10	R	N	C	P	16	CL
WM019.50	6/3/2007	CCA	L	11	22	R	-	C	P	22	-
WM019.50	6/25/2007	JB	E	14	16	R	-	C	P	<2.0	NE
WM019.50	7/29/2007	CCA	F	18	27	R	-	C	P	46	-
WM019.50	8/27/2007	LL	HF	18	18	R	-	C	P	6	CL
WM019.50	9/16/2007	CCA	LE	16	22	R	-	C	P	<2.0	-
WM019.50	11/25/2007	CCA	F	2	15	R	-	C	P	48	-
WM020.00	3/18/2007	AJS	F	-2	20	R	P	O	A	24	CL
WM020.00	6/3/2007	CCA	HF	10	23	R	-	O	A	<2.0	-
WM020.00	7/29/2007	CCA	F	17	25	R	-	O	A	6	-
WM020.00	9/16/2007	CCA	F	15	24	R	-	O	A	<2.0	-
WM020.00	11/25/2007	CCA	F	3	15	R	-	O	A	36	-
WM020.00	12/9/2007	CCA	F	1	28	R	-	O	A	<2.0	-
WM022.00	3/18/2007	AJS	F	0	26	R	P	O	A	<2.0	CL
WM022.00	6/3/2007	CCA	HF	10	24	R	-	O	A	2	-
WM022.00	7/29/2007	CCA	F	18	25	R	-	O	A	2	-
WM022.00	9/16/2007	CCA	F	16	28	R	-	O	A	2	-
WM022.00	11/25/2007	CCA	F	3	20	R	-	O	A	22	-
WM022.00	12/9/2007	CCA	F	2	26	R	-	O	A	<2.0	-
WM023.00	3/18/2007	AJS	F	0	26	R	P	O	A	2	CL
WM023.00	6/3/2007	CCA	HF	10	23	R	-	O	A	<2.0	-
WM023.00	7/29/2007	CCA	F	18	28	R	-	O	A	<2.0	-
WM023.00	9/16/2007	CCA	HF	15	25	R	-	O	A	<2.0	-
WM023.00	11/25/2007	CCA	F	3	15	R	-	O	A	44	-
WM023.00	12/9/2007	CCA	F	2	28	R	-	O	A	4	-
WM024.00	3/18/2007	AJS	HF	0	25	R	P	O	A	4	CL
WM024.00	6/3/2007	CCA	H	10	23	R	-	O	A	4	-
WM024.00	7/29/2007	CCA	F	18	25	R	-	O	A	2	-
WM024.00	9/16/2007	CCA	HF	16	28	R	-	O	A	<2.0	-



Station	Date	Collector	Tide	Temp	Sal	Strat	ADV	Stat	CL	MF	WIND
WM024.00	11/25/2007	CCA	HF	2	15	R	-	O	A	42	-
WM024.00	12/9/2007	CCA	HF	2	28	R	-	O	A	2	-
WM026.00	3/18/2007	AJS	F	-2	8	R	P	O	A	50	NE
WM026.00	6/3/2007	CCA	H	10	24	R	-	O	A	<2.0	-
WM026.00	7/29/2007	CCA	F	18	28	R	-	O	A	<2.0	-
WM026.00	9/16/2007	CCA	HF	16	28	R	-	O	A	<2.0	-
WM026.00	11/25/2007	CCA	F	2	15	R	-	O	A	38	-
WM026.00	12/9/2007	CCA	F	1	16	R	-	O	A	11	-
WM026.90	6/3/2007	CCA	HF	11	24	R	-	O	A	5.5	-
WM026.90	6/25/2007	JB	E	13	20	R	-	O	A	<2.0	W
WM026.90	7/29/2007	CCA	F	17	30	R	-	O	A	2	-
WM026.90	9/16/2007	CCA	HF	16	25	R	-	O	A	<2.0	-
WM026.90	11/25/2007	CCA	F	2	20	R	-	O	A	56	-
WM026.90	12/9/2007	CCA	F	1	26	R	-	O	A	<2.0	-
WM027.00	3/18/2007	AJS	HF	0	14	R	P	C	P	9.1	CL
WM027.00	6/3/2007	CCA	HF	11	23	R	-	C	P	<2.0	-
WM027.00	7/29/2007	CCA	F	18	26	R	-	C	P	<2.0	-
WM027.00	9/16/2007	CCA	HF	16	28	R	-	C	P	<2.0	-
WM027.00	11/25/2007	CCA	F	2	26	R	-	C	P	7.3	-
WM027.00	12/9/2007	CCA	F	2	26	R	-	C	P	2	-
WM028.00	3/18/2007	AJS	F	-1	18	R	P	O	A	20	CL
WM028.00	6/3/2007	CCA	HF	10	24	R	-	O	A	34	-
WM028.00	7/29/2007	CCA	F	18	26	R	-	O	A	10	-
WM028.00	9/16/2007	CCA	F	16	24	R	-	O	A	<2.0	-
WM028.00	11/25/2007	CCA	F	2	15	R	-	O	A	32	-
WM028.00	12/9/2007	CCA	F	2	30	R	-	O	A	2	-
WM029.10	3/13/2007	RL	E	-2	8	R	-	C	P	18	-
WM029.10	5/7/2007	RL	E	5	0	R	-	C	P	46	CL
WM029.10	6/26/2007	RL	HF	15	11	R	N	C	P	<2.0	SW
WM029.10	9/4/2007	RL	E	17	15	R	N	C	P	6	NW
WM029.10	10/24/2007	RL	H	14	9	R	-	C	P	16	NW
WM029.10	11/13/2007	RL	HF	7	6	R	-	C	P	76	NW
WM029.10	12/11/2007	RL	F	O		R	N	C	P	20	CL



Appendix F. Classification Changes Based on the 2007 Triennial Review



Maine Department of Marine Resources Growing Area WM - Kennebec River



12/03/08

