GROWING AREA EN

Cape Split, South Addison to Henry Point, Jonesport Including Beals, Great Wass and Head Harbor Islands

Triennial Report for 2007-2009

Report Date: October 26, 2010

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APPROVAL

Division Director:

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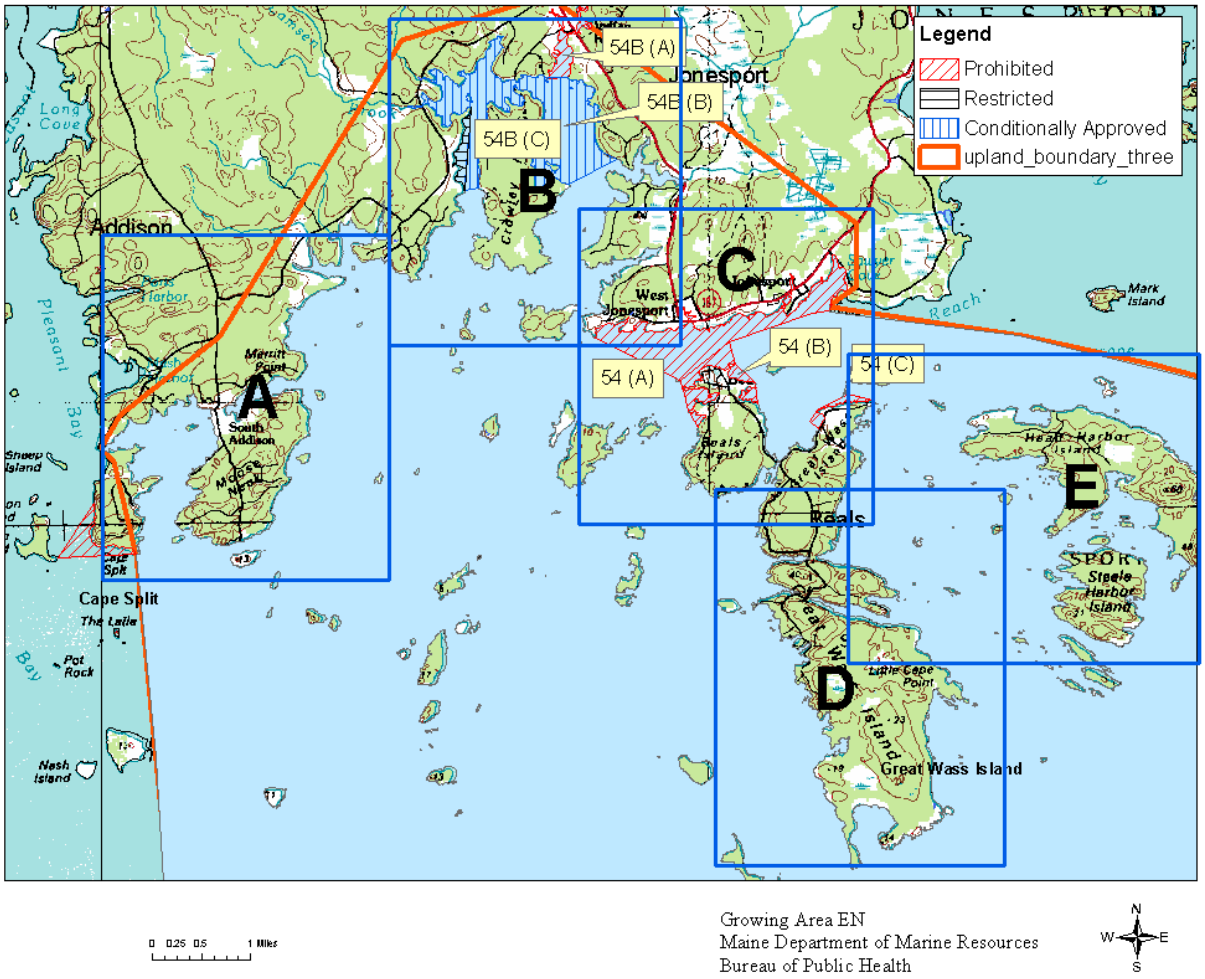

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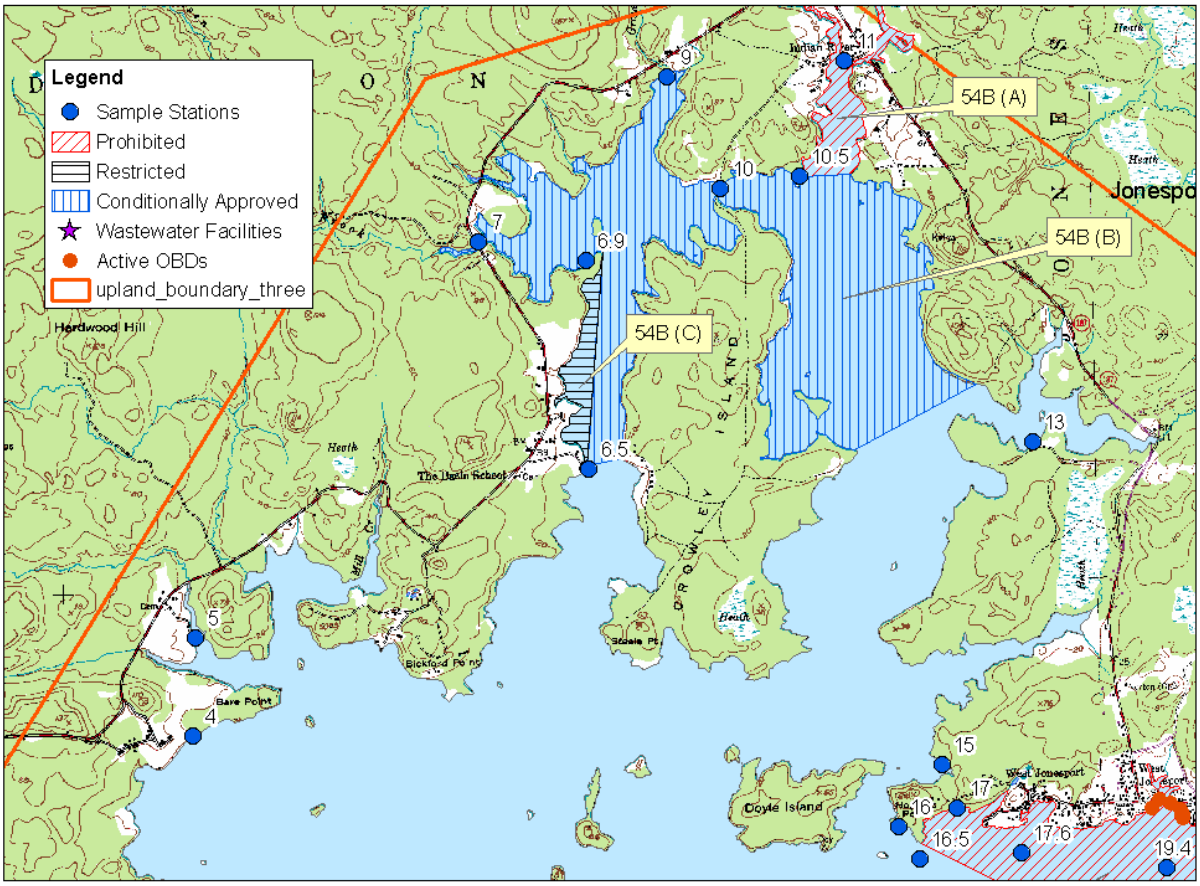

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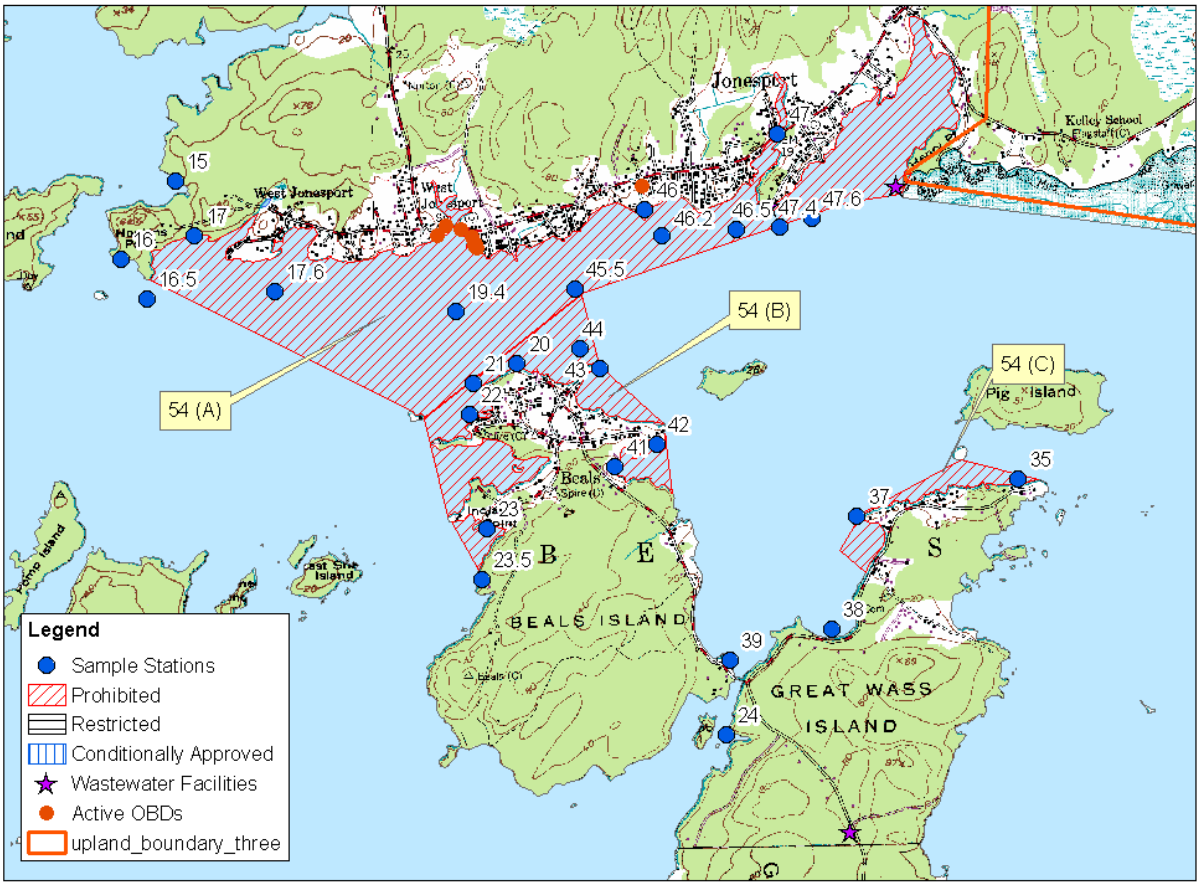

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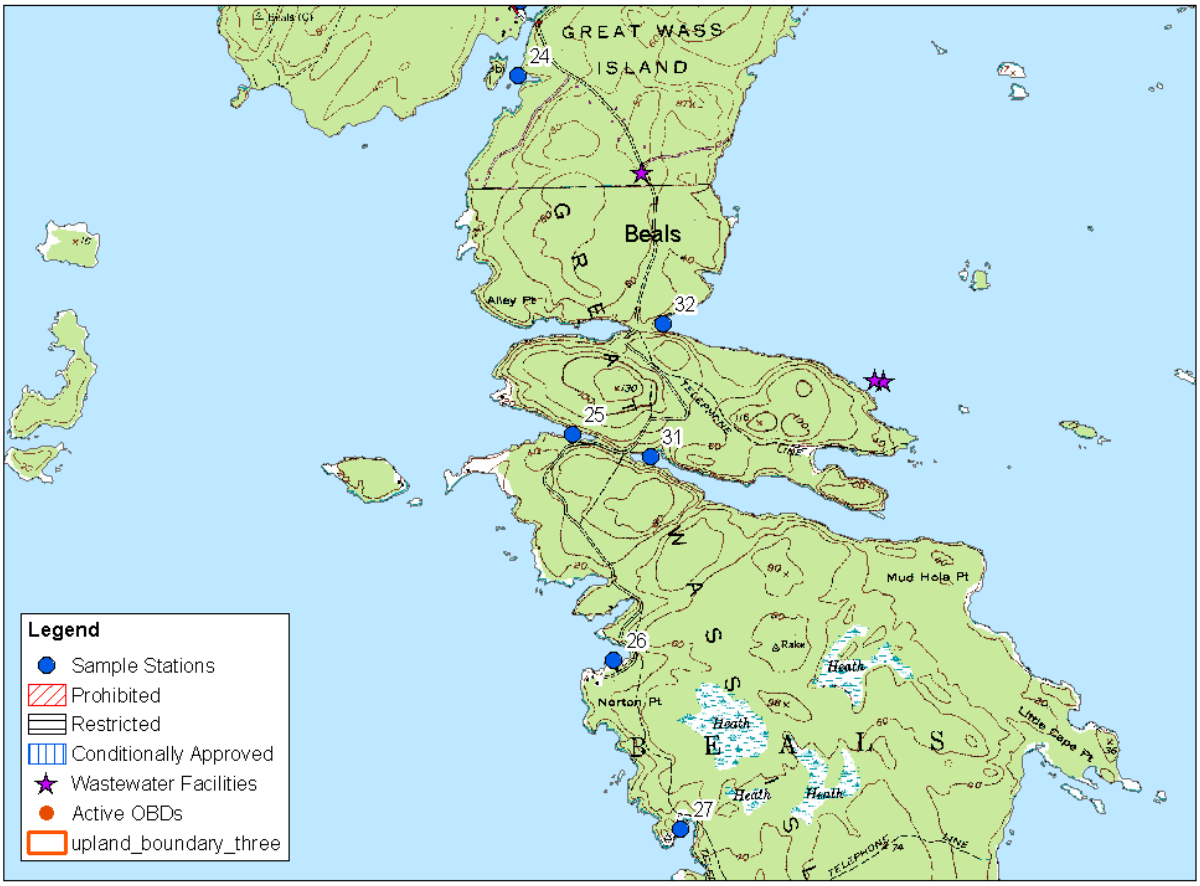

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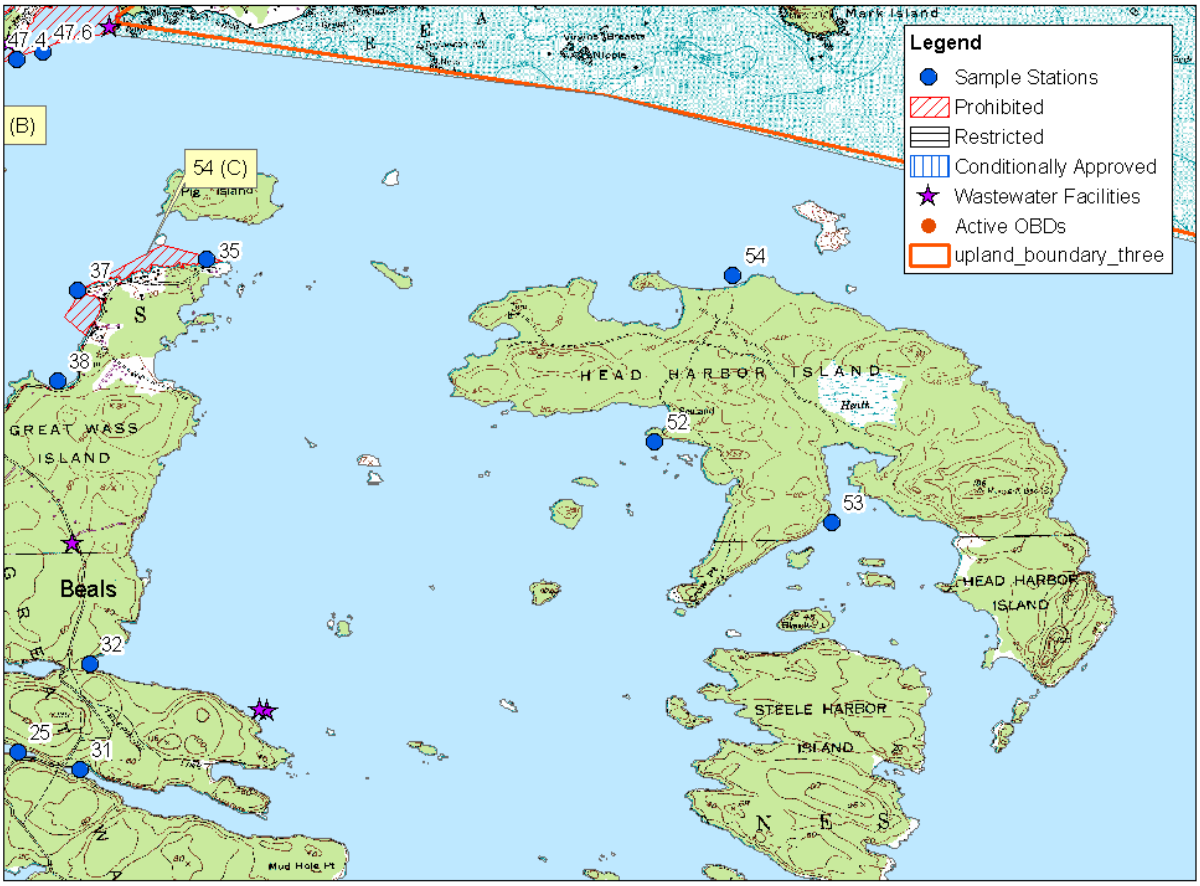


Executive Summary

This is a triennial report for growing area EN written in compliance with the requirements of the 2007 Model Ordinance and the National Shellfish Sanitation Program. The next sanitary survey for growing area EN is due in 2017.

At the end of the 2009 review year, water quality in this growing area supported its classification under the NSSP criteria. There were regulation changes during this triennial period that included (1) combining the closure areas in Moosabec Reach, northern Beals Island and Ally Bay-Pig Island Gut into a single regulation and expanding the size of the Mill Cove closured area; (2) combining the closures in the Indian River and Lamsen Brook into a prohibited area and seasonal conditionally approved area; (3) the conditionally approved area in the West and Indian Rivers was impacted by a non-point pollution source that resulted in the conditional area remaining closed from September 2008 to November 2009; and (4) the Indian-West Rivers conditional area was re-opened and a portion (Ralph Beal Beach, (so called) West River (Addison)) of the seasonal conditionally approved area was reclassified to restricted which reduced the size of the "conditionally approved" area due to intermittent bacterial pollution. At the end of the current review period, the conditional area met its classification standard during the open status and was sampled the required number of times during the shortened six week open status period in 2009. All approved stations were sampled six times. Two new stations (EN 1.6, 23.5) were created; five stations were deactivated because they were embedded in prohibited areas (EN 18, 19.5, 45, 48, 49); three stations were reclassified as boundary stations (EN 37, 43, 44); five stations were reclassified as conditionally approved stations (EN 6.9, 7, 9, 10, 10.5); three stations were re-classified from prohibited to approved (EN 16.5, 17.6, 22); and one station (EN 23) was reclassified from approved to prohibited due to water quality no longer meeting approved standards.

At the end of the review period, there were no sample stations in danger of downward classification. Potential pollution issues indentified during the 2006 shoreline were reviewed in 2009 by DMR staff and their current statuses are discussed in this report. Identified potential problems have been remediated or investigated and no malfunctioning systems were identified. There were two newly identified potential non-point pollution sources that will be reported to town or state officials for remediation. Overall, 2009 water quality was similar to the results of the previous review year. There are no upward classification changes recommended in this report, and no downward classifications are required.

Growing Area Description

Growing area EN is bounded on the west by Cape Split (Addison) and Henry Point (Jonesport) on the east and includes Beals, Great Wass and Head Harbor Islands (Figures 1 – Figure 6). The growing area encompasses 77 square miles. The area is bounded upland by the towns of Addison and Jonesport and includes the island community of Beals. There are prohibited areas surrounding a process water discharge and a cluster of residential licensed overboard discharges in Jonesport; there is a conditionally approved area based on seasonal poor water quality in the Indian River and other areas having non-point pollution without identifiable sources. The Jonesport village shore continues to exhibit poor water quality, potentially due to the presence of older, in-ground septic systems and overboard discharge systems. The town of Jonesport has been working with the Maine Department of Environmental Protection (DEP) to build a non-discharging wastewater treatment plant to service the village area of town. There are no marine pump-out stations in the growing area. Shellfish wet storage rafts are located in Eastern Harbor, Addison and Moosabec Reach, Beals. A mussel aquaculture site is located at the

eastern end of Moosabec Reach. There are finfish aquaculture sites on the eastern side of Beals and Great Wass Islands. The wet storage and aquaculture sites are all located in approved areas. Workboat moorings are in South Addison and along the length of Moosabec Reach, Jonesport. No licensed overboard discharges were removed during this 2007-2009 review period. There is nature conservation area with hiking trails on the southern tip of Great Wass Island. There are no camping or bathroom facilities at the conservation area. Jonesport Campground is a small commercial campground in Sawyers Cove, Jonesport that caters to a limited number of recreational vehicles. Porta-potties are the only septic facilities at the campground.

Current Classifications

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

New Stations (less than 30 samples): (5 stations) EN 1.6, 20, 22, 23.5 and 37

Approved: (28 stations) EN 0.5, 1.0, 3.0, 4.0, 5.0, 6.5, 13, 15, 16, 16.5, 24, 25, 26, 27, 31, 32, 38, 39, 43, 44, 45.5, 46.2, 46.5, 47.4, 47.6, 52, 53 and 54

Conditionally Approved: Area No. 54B, (Part B), Indian and West Rivers (Addison-Jonesport); seasonal variation in water quality, (4 stations) EN 6.9, 7.0, 9.0 and 10

Restricted: Area No. 54B, (Part C), Indian and West Rivers (Addison-Jonesport); due to water quality not meeting approved standard (2 stations) EN 6.5, 6.9 (located on boundary of restricted area).

Prohibited: Area No. 54, (Part A), Moosabec Reach (Jonesport), due to OBDs and water quality not meeting approved standard, (6 stations) EN 17, 17.6, 19.4, 46, 47 and EP 1
Area No. 54, (Part B), North End of Beals Island (Beals), due to water quality not meeting the approved standard, (4 stations) EN 21, 23, 41, 42
Area No. 54, (Part C), Alley Bay-Pig Island Gut (Beals); due to water quality not meeting the approved standard, (1 station) EN 35
Area No. 54B, (Part A), Indian and West Rivers (Addison-Jonesport); due to water quality not meeting the approved standard, (2 stations) EN 10.5, 11

Please visit the DMR website to view legal notices:

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

Activity during Review Period (2007-2009)

May 30, 2007 – Area No. 54, Moosabec Reach (Jonesport), North end of Beals Island and Ally Bay-Pig Island Gut (Beals); Areas 54, 54-A and 54-K were combined into a single regulation and increased the size of the Mill Pond closure from Indian Point to Hannah Lane, Beals due to water quality not meeting approved standards at EN 23.

January 31, 2008- Area No. 54-B, Indian-West Rivers (Addison-Jonesport); Areas 54-M and 54-B were combined into a single regulation. The prohibited area at the mouth of the Indian River remained, Lamsen Brook was reclassified from prohibited to conditionally approved and a seasonal conditionally

approved area was amended in the northern sections of the West and Indian Rivers that was open to harvest from October 1 thru April 30 due to water quality meeting approved standards during the open period.

September, 2008- Area No. 54-B, Indian-West Rivers (Addison-Jonesport); area activity included the on-going investigation of a possible pollution source impacting the conditionally approved area in the West River. Water samples were taken from the suspect area and show elevated fecal coliform results. The conditional area was not opened to shell fishing on its opening date (October 1st). Additional investigative work is still being conducted.

November 16, 2009- Area No. 54B, Indian-West Rivers; the rule amendment re-opened the seasonal conditional area in the Indian and West Rivers (Jonesport and Addison) and reduced the size of the conditionally approved area by reclassifying a portion along Ralph Beal Beach, (so called) West River (Addison) as restricted due to intermittent bacterial pollution.

Current Management Plan for Conditional Areas

There is one conditionally managed area in growing area EN:

Conditionally Approved Area No. 54 (Part B), Indian and West Rivers; based on seasonal variation in water quality with the open status October 1 – April 30; 4 stations (EN 6.9, 7, 9 and 10). The current management plan was last updated in 2008.

A management plan for this conditional area can be found in DMR's central files.

Current Annual Review of Conditional Area Management Plan

Area No. 54 (Part B) is a seasonal conditionally approved area requiring six (6) samples during the open status. Compliance is based on water quality meeting approved criteria during the open status at stations EN 6.9, 7, 9, 10, and 10.5 from October 1 thru April 30. The area was in the closed status from October 2008 until November 16, 2009, due to a suspect pollution source from a small stream intermittently impacting the conditional area along the Ralph Beal beach shore. On November 16, 2009, a portion of the area was re-opened allowing conditional harvesting from October 1 thru April 30; however a restricted area was created along the Ralph Beal beach area because of the risk from the intermittent year-round pollution. Samples were collected once from each of the water quality monitoring stations during the open status (December 2nd). Water quality meets the standard for approved classification during the open status. A more detailed report is in Appendix A.

Documentation of Pollution Sources

The following sections include information on pollution sources which do or may impact water quality in growing area EN. The section includes information on new pollution sources; identified over the past three review years, as well as updated reviews of existing pollution sources in this growing area. Pollution sources that are reviewed in this section include domestic waste, including both private inground systems and over board discharges (OBDs), marinas and mooring fields, stormwater and pollution from non-point sources (streams), farms and other agricultural activities, domestic animals and wildlife areas, and recreational areas.

Evaluation of New Pollution Sources

Two new pollution sources were identified within this review period. An animal pasture with four head of cattle and three pigs (PS1), located at Carrying Place Cove, South Addison, has fencing that rims the head of the cove approximately 75 feet from the shore (Figure 9). Concerns have been raised by the local shellfish committee that the animal waste may be impacting the cove. Sample station EN 3, approximately 300 feet east from the head of the cove, meets the approved standards with a P90 of 3.9 and no elevated score after rainfall or runoff. The area is currently classified approved and no downgrades in classification are recommended at this time. The area will continue to be monitored and any downward classification made if necessary.

A small stream (PS3) (Figure 9) in the West River, Addison, was routinely sampled and found to have elevated fecal coliform scores in 2008. Follow-up sampling showed intermittent high scores (four out of seven samples >1600 FC/100ml) in September and October of 2008 and 2009. Inspections of the property next to the stream showed a small pond and a fowl pen and neither appeared to impact the stream. The buildings have a new in-ground septic system. The shore area was classified conditionally approved but was reclassified to restricted November 2009. The area is monitored by EN 6.5 (approved) and EN 6.9 (conditionally approved) and both stations presently meet the approved standard year round.

Table 1. Growing Area EN New Pollution Sources

Location	Source	Sample Station Impacted	Current Disposition	Area Class
PS1 EN00125.00	A new animal pasture in Carrying Place Cove, South Addison	EN 3	No action taken at this date or identified impact on cove at sample station.	Approved
PS3 EN00202.40	Small stream entering West River, Addison with elevated seasonal fecal coliform scores.	EN 6.5, 6.9	Follow up inspection was negative.	Restricted

Re-Evaluation of Existing Pollution Sources

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); agriculture; and domestic animal and wildlife activity.

Licensed Discharges

There are 13 active licensed overboard discharges (OBDs) in growing area EN (Figure 7 and 8). An overboard discharge (OBD) is the discharge of wastewater from residential, commercial, and publicly owned facilities to Maine's streams, rivers lakes, and the ocean. Commercial and residential discharges of sanitary waste have been regulated since the mid-1970's when most direct discharges of untreated waste were banned. Between 1974 and 1987 most of the "straight pipes" were connected to publicly-owned treatment works or replaced with standard septic systems. Overboard discharge treatment systems were installed for those facilities that were unable to connect to publicly-owned treatment works or unable to install a septic system because of poor soil conditions or small lot sizes.

All overboard discharge systems include a process to clarify the wastewater and disinfect it prior to discharge. There are two general types of treatment systems; mechanical package plants and sand filters. Sand filter systems consist of a septic tank and a sand filter. In such systems, the wastewater is first directed to a holding tank where the wastewater solids are settled out and undergo partial microbial digestion. The partially treated wastewater then flows from the tank into a sand filter, consisting of distribution pipes, layers of stone and filter sand, and collection pipes within a plastic liner. The wastewater is biologically treated as it filters down through the sand, and is then collected and discharged to a disinfection unit. Mechanical package plants consist of a tank, where waste is mechanically broken up, mixed and aerated; mechanical systems require electric power, and must have an operating alarm on a separate electrical circuit that will activate if the treatment unit malfunctions due to a power failure. The aerated treated wastewater is held in a calm condition for a time, allowing for solids to settle and for the waste to be partially digested by naturally occurring bacteria. The clarified water from the tank is then pumped off the top into a disinfection unit. There are two types of disinfection units, UV and chlorinators (most common). In a chlorinator, the treated water contacts chlorine tablets and remains in a tank for at least 20 minutes where bacteria and other pathogens are killed. The treated and disinfected water is discharged from the disinfection unit to below the low water mark of the receiving water body (the ocean, a river, or a stream) via an outfall pipe.

OBDs are licensed and inspected by the Maine Department of Environmental Protection. At each inspection, DEP looks for tags on each treatment unit identifying the service contractor and the last date of service. If an OBD is not properly maintained, or if the OBD malfunctions, it has the potential to directly discharge untreated wastewater to the shore; therefore, preventative closures are implemented surrounding every OBD. The size of each closure is determined based on a dilution, using on the permitted flow rate of the OBD, and the depth of the receiving water (10 feet) that each OBD discharges to; the fecal concentration used for this dilution calculation is $1.4X10^5$ FC/100ml. All closures surrounding in shellfish growing area EN are of adequate size to protect public health. The five commercial discharges are licensed to discharge process or wet storage circulating water only and not bacterial sources of a public health concern.

Figure 7. Licensed Residential Overboard Discharges in Jonesport

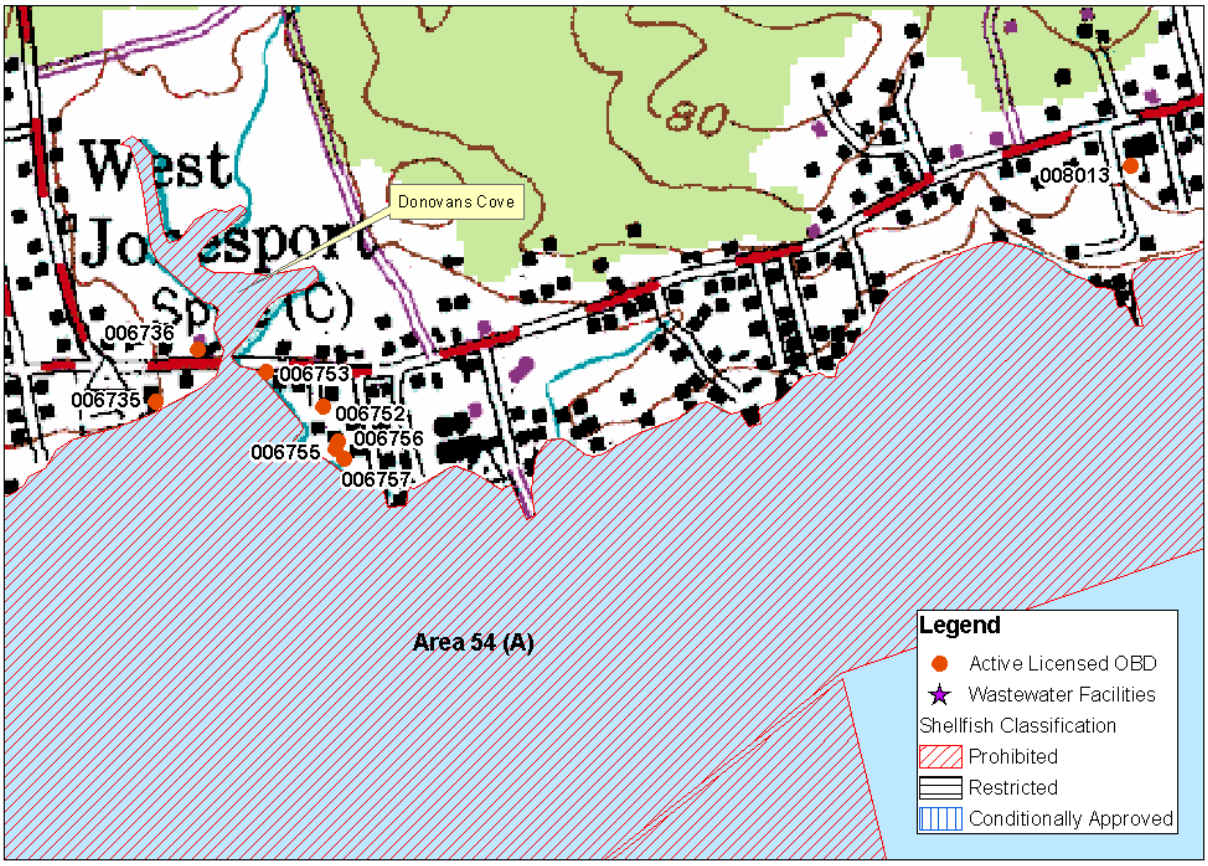


Figure 8. Licensed Commercial Overboard Discharges Jonesport-Beals Island

Table 2. Active Licensed Residential Overboard Discharges

DEP ID	License Expires	GPD Flow	Receiving Water	Acres Required for Dilution
6757	8/15/1995	300	Donovans Cove	0.9
6755	11/4/2014	300	Donovans Cove	0.9

DEP ID	License Expires	GPD Flow	Receiving Water	Acres Required for Dilution
6736	8/15/1995	300	Donovans Cove	0.9
6752	4/28/2014	300	Donovans Cove	0.9
6753	7/8/2014	300	Donovans Cove	0.9
6735	6/29/2014	300	Donovans Cove	0.9
6756	11/10/2009	300	Donovans Cove	0.9
8013	1/30/2008	2000	Moosabec Reach	6.1
			Total Required Area	12.4
Actual Closure Size (Acres)				461

Table 3. Licensed Commercial Overboard Discharges

NPDES Lic	GPD Flow (gpd)	MCD	Comments
ME0110442	10,900	Beals	Shellfish-lobster processing
MEU507888	15,000	Jonesport	Sea cucumber processing
ME0110401		Beals	Finfish aquaculture, Spectacle Island
ME0110361		Beals	Finfish aquaculture
ME0110248	24,500	Jonesport	Shellfish processing

Domestic Waste (in-ground systems)

Actual or potential pollution sources identified during the 2006 shoreline survey are listed in Tables 4 and displayed in Figure 9. The current status of these pollution sources is also listed. Areas PS 11, 14 and 15 pollution sources have been remediated and water quality meets approved standards. These areas will be reviewed for possible upward re-classification. All the other areas listed have potential pollution problems and are properly classified.

Table 4. Pollution Sources from 2006 Survey and Current Status

SLS_ID	2006 Survey	Sample Station	Current Status
PS 4 EN00326.00 Hopkins Pt Jonesport	DEP list 7\95; no septic system identified or confirmed; next to drainage area into cove	EN 17	Potential problem-No identified upgrade of septic system; In proposed WWTP area; Prohibited- no re-classification necessary.
PS 5 EN00336.67 Polk St Jonesport	No septic system identified or confirmed	EN 16.5-19.4	Not problem- New IG back lawn of house right of parking; In proposed WWTP area; Prohibited- no re-classification necessary.
PS 6 EN00336.71 Peabody Lane Jonesport	no septic system identified or confirmed;	EN 16.5-19.4	Potential problem- ? IG left back of house; In proposed WWTP area. Prohibited- no re-classification necessary.

SLS_ID	2006 Survey	Sample Station	Current Status
PS 7 EN00380.00 West Bay Beals	No septic system identified or confirmed	EN 20	Potential problem- Prohibited- no re-classification necessary.
PS 8 EN00380.10 West Bay Beals	No septic system identified or confirmed	EN 21	Potential problem- Prohibited- no re-classification necessary.
PS 9 EN00381.00 West Bay Beals	No septic system identified or confirmed	EN 21, 22	Not problem- IG right back of house. Prohibited- no re-classification necessary.
PS 10 EN00382.00 West Bay Beals	No septic system identified or confirmed	EN 21, 22	Potential problem- ? IG left back lawn. Prohibited- no re-classification necessary.
PS 11 EN00393.00 Mill Pond Cove Beals	No septic system identified or confirmed	EN 22, 23	Not problem- New IG left side lawn. Prohibited- no re-classification necessary. No other problems identified in area and water quality meets approved standards.
PS 12 EN00470.00 Pond (Cape) Cove Wass, Beals	Remote camp reported located in Great Wass conservation area. Not confirmed if camp exist.	No active station	Not problem- confirmed, seasonal camp with outhouse 100 feet from shore. Approved- no re-classification necessary. No other problems identified in area.
PS 13 EN00506.00 Pig Is Gut Beals	No septic system identified or confirmed	EN 37	Not problem- New IG lawn right of house. Prohibited- no re-classification necessary; water quality does not meet approved or restricted standards.
PS 14 EN00506.10 Alley Bay Beals	DEP list 7\95; No septic system identified or confirmed	EN 37	Not problem- New IG front lawn of house. Prohibited- no re-classification necessary. No other problems identified in area and water quality meets approved standards.
PS 15 EN00508.00 Alley Bay Beals	History of gray water OBD, chemical toilet	EN 38	Not problem- OBD removed, new holding tank across Ally Bay Rd. Prohibited- no re-classification necessary. No other problems identified in area and water quality meets approved standards.
PS 16 EN00527.10 Cranberry Cove Beals	No septic system identified or confirmed	EN 41	Potential problem- Prohibited- no re-classification necessary.
PS 17 EN00590.01 Moosabec Reach Jonesport	Several houses have failing septic systems in area identified by MeDEP	EN 16.5-19.4 EN 45.5-47.6	Actual problem- In proposed WWTP area. Prohibited- no re-classification necessary, several identified problems in area; water quality does

SLS_ID	2006 Survey	Sample Station	Current Status
			not meet approved or restricted standards.

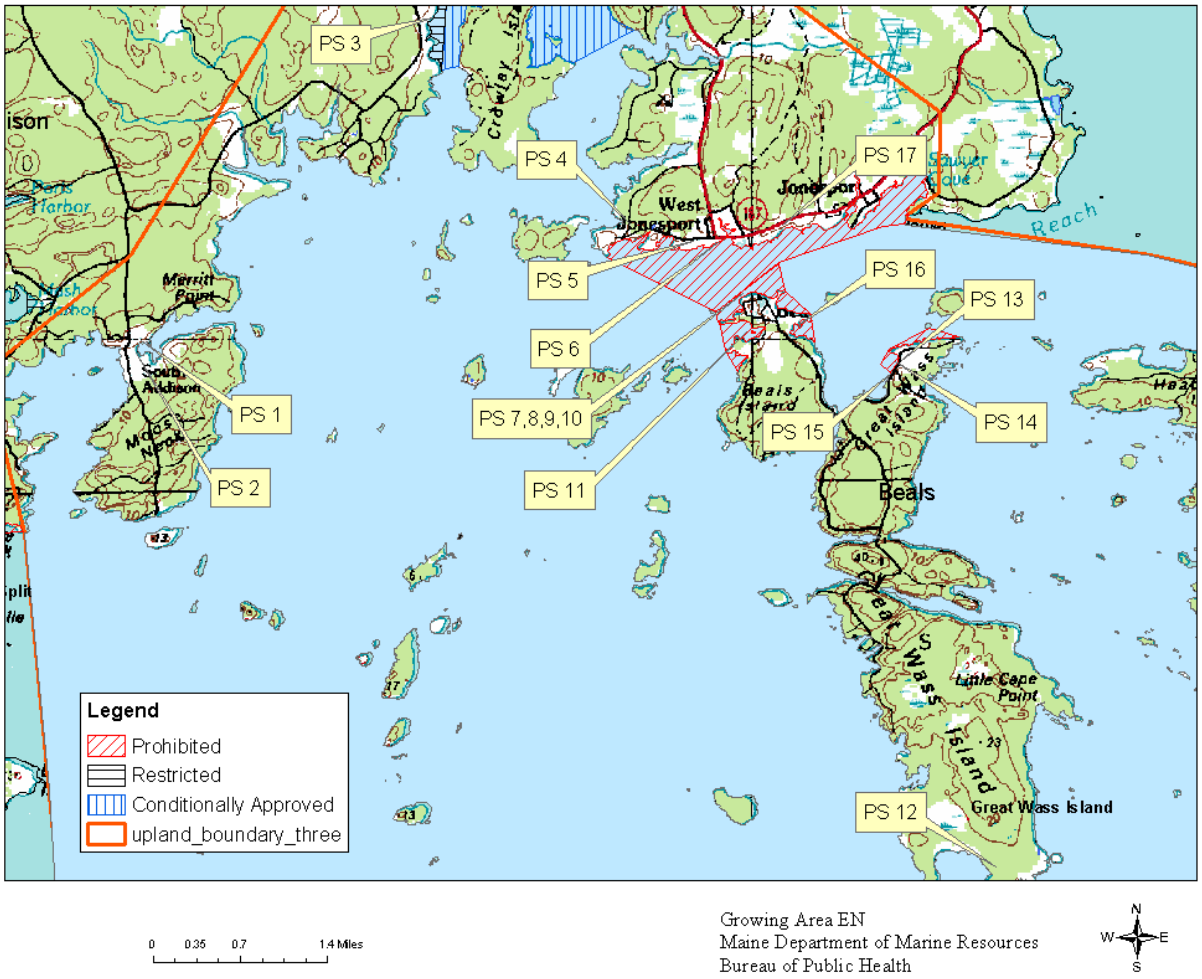
Agricultural Activities

Agricultural operations in the growing area are small commercial or "family farms" with less than 20 animals. Pasture land is buffered by grass or wooded barriers from streams or the shore. Table 5 lists a farm that was identified in 2006; location of the farm is noted in Figure 9. The farm is not considered a risk to shell fish harvesting or impacting the water quality at nearby sample stations EN 1, 1.6 and 3. These stations meet approved standards. A new cattle pasture at the head of Carrying Place Cove, South Addison is discussed in Table 1 under the heading "Evaluation of New Pollution Sources".

Table 5. Agriculture Operations, Growing Area EN

SLS_ID	Source	Sample Station	Current Status
PS1 (EN00125.00)	A new animal pasture in Carrying Place Cove, South Addison	EN 3	No action taken at this date or identified impact on cove at sample station. The area meets approved classification standards
PS 2 (EN00053.00)	sheep, pigs, fowl; <20 animals; 20 feet from shore	EN 1, 1.6, 3	Routine sample stations monitoring area meet approved classification standards

Figure 9. Reviewed Pollution Sources in Growing Area EN



Conservation-Camping Areas

The Great Wass conservation area is on the southern tip of Great Wass Island. Activity is limited to hiking trails. There are no septic facilities or camping sites. Dogs are required to be on leashes and waste pick-up is required. The conservation area is in an approved area. Sample stations EN 26, 27 and 31 are on the northern boundary of the hiking area and the water quality meets approved standards. There are no active sample sites on the southern edge of the conservation area.

Jonesport Campground, is a small seasonal commercial campground on Sawyer Cove, Jonesport with 12 sites and is limited to RV use. There are outhouses for the campers. One side of the point is classified prohibited due to boat moorings and the opposite side is classified approved. The sample stations in the area are EN 47.6 and EP 1 and water quality meets approved standards at both locations.

Marinas and Boat Mooring Areas

There are no marinas located in growing area EN. Several mooring fields (groups of 10 or more moorings) are scattered throughout the growing area with the largest number of boats in Eastern Harbor, South Addison (EN 0.5, 1, 1.6), Moosabec Reach, Jonesport-Beals (EN 16.5-22, 44-47.6) and Pig Island Gut, Beals (EN 35, 37). These mooring fields are almost exclusively work boats (lobster boats, trawling vessels). Mooring areas along Moosabec Reach and Pig Island Gut are classified prohibited but failing sample stations in these areas are most likely impacted by shore-side issues as opposed to the boats. Eastern Harbor is an approved area and stations EN 0.5, 1.0 and 1.6 meet approved standards.

Streams

Streams sampled in area EN during this review period are listed in Table 6 and Figure 10. Historically, most of these streams have had fecal coliform concentrations below 100 FC/100ml, when sampled under normal runoff conditions. The Basin Road culvert (EN 202.40), Snare Creek (EN 296.00), Donovan Cove (EN 350.00), Cross Creek (EN 600.00) and Beaver Dam Brook (EN 637.10) are exceptions. Snare Brook is the only one of the group that flows into an approved area; however sample station EN 13 is at the mouth of the stream and it meets approved classification criteria supporting little impact from Snare Brook on the estuary. Also, based on twelve available samples, analysis of EN 13 scores after at least one inch of rain in the previous 72 hours before sampling had a P90 of 19.2. Rainfall totals for September 27, 28 and 29th was 2.5 inches after a 27 day dry period. Review of the September 29, 2009 sample data and rainfall amounts for the previous 3-days before the sampling vs. fecal coliform scores showed marked elevated scores (300 to >1600 FC/100ml) for eight of the streams (Hicks, Mill, Basin culvert, Gray, Indian, Snare, Donovan, Cross). Five of these streams are in restricted or prohibited areas (Basin culvert, Gray, Indian, Donovan, Cross) and the Hicks Creek is monitored by station EN 5, which still meets approved classification when analysis of rain data of 0.5-2.0” in previous 3-days is done.

Table 6. Streams Sampled During the Triennial Review Period

SLS_ID	Area	Description	FC/ 100ml	Flow gpm	Sample Date
EN00067.50	Eastern Hbr	Stream flowing under Mooseneck Rd into Eastern Hbr near wet lobster pound; large beaver pond with animal activity; no sample station, approved	18	200	10/1/08
			120	337	9/29/09
EN00143.20	Hicks Creek	Tidal creek; EN 5, approved	320	1203	9/29/09
EN00147.10	Long Creek	Tidal creek; no sample station, approved	280	2693	9/29/09
EN00152.00	Mill Cr	"Granite Rd", Mill Creek drains large area (7 lots); no sample station, approved	340	8980	9/29/09
EN00202.40	West River	Small stream under Basin Rd just N of Addison Town Landing on Basin Rd; history of high fecals; EN 6.5, 6.9; restricted	>1600	250	9/29/09
			>1600	200	10/10/08
			420	200	12/29/08
			2	200	10/22/08
			14	449	10/2/08
			>1600	224	7/7/09

SLS_ID	Area	Description	FC/ 100ml	Flow gpm	Sample Date
			>1600	224	10/13/09
EN00210.10	Lamsen Brook	Moderate size brook; EN 7; conditionally approved	126	67325	9/29/09
EN00219.00	Lath Mill Brk	Small brook just north of Lamsen Brook; no sample station; conditionally approved	70	3142	9/29/09
EN00227.10	Crowley Is	Grays Brook, Small brook entering upper West River; EN 9; conditionally approved	320	2710	9/29/09
EN00242.00	Wass Creek	Wass Creek and pond; EN 11; prohibited	158	4580	9/29/09
EN00247.00	Indian River	Indian River, medium size river; EN 11; prohibited	540	448830	9/29/09
EN00296.00	Snare Cr	EN 13; approved	1140	1481	9/29/09
EN00307.00	Hay Cr	Hay Creek, drains large wetland; no sample station; approved	13	tidal	9/29/09
EN00350.00	Donovan Cove	Cove and wetland, drains under Main Street, Jonesport; EN 19.4; prohibited	1380	5050	9/29/09
EN00600.00	Cross Cove	Moderate stream that drains under Main Street, Jonesport; several houses border the upper shores of stream, several houses upstream have questionable septic systems identified by the MeDEP survey 2005; EN 47; prohibited	1280	1200	9/29/09
EN00637.10	Sawyer Cv	"Beaver Dam Brook", drains peat bogs and wetlands; no sample station; prohibited	100	2244	9/29/09

Figure 10. EN Streams

Water Quality Review and Discussion

Table 7 lists all active approved, restricted and prohibited stations in Growing Area EN, with their respective geomean and P90 scores for 2009. Please refer to Appendix B for a key to interpreting the headers on the columns of Table 7. The approved and restricted standards for each station are also displayed in Table 7. 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 scores. 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 the central files.

All approved and restricted stations met their NSSP classification standard in 2009. Station EN 19.4 is a prohibited station that has P90 scores that meet the approved standard but must remain closed due to point source pollution (licensed overboard discharges). Prohibited stations EN 17, 21, 23, 35, 41 and 42 are meeting approved standards but will remain prohibited due to the high variability of the water quality.

Their P90 scores will be reviewed at the end of the year and any classification changes considered at that time.

Table 7. Geomean and P90 Scores, Growing Area EN

Station	Class	Count	MFCount	GM	SDV	MAX	P90	Appd_Std	Restr_Std
EN000.50	A	30	20	2.5	0.2	13	4.7	36	199
EN001.00	A	30	20	2.7	0.24	15	5.5	36	199
EN001.60	new	6	6	1.9	0	1.9	1.9	31	163
EN003.00	A	30	20	2.4	0.15	7.3	3.9	36	199
EN004.00	A	30	20	3.3	0.37	64	10.1	36	199
EN005.00	A	30	20	2.9	0.32	43	7.5	36	199
EN006.50	A-boundary	30	30	2.6	0.34	31	7.2	31	163
EN011.00	P	30	21	22.8	0.76	1100	216.6	35	195
EN013.00	A-boundary	30	30	2.7	0.34	27	7.5	31	163
EN015.00	A	30	20	3.1	0.49	240	13.5	36	199
EN016.00	A	30	20	2.7	0.36	108	8	36	199
EN016.50	A-boundary	30	21	2.2	0.09	4	2.9	35	195
EN017.00	P	30	20	3.4	0.55	1100	17.7	36	199
EN017.60	A	30	20	2.3	0.11	4	3.2	36	199
EN019.40	P	30	20	2.3	0.19	20	4.2	36	199
EN020.00	new	21	21	2.3	0.27	32.7	5.3	31	163
EN021.00	P	30	20	2.4	0.15	8	3.8	36	199
EN022.00	new	23	18	2.2	0.14	8	3.4	34	186
EN023.00	P	30	21	3.7	0.44	93	13.9	35	195
EN023.50	New-boundary	18	18	2.3	0.18	8	4.1	31	163
EN024.00	A	30	20	2.7	0.28	23	6.2	36	199
EN025.00	A	30	20	4.1	0.5	240	18.3	36	199
EN026.00	A	30	20	3.1	0.42	70	10.9	36	199
EN027.00	A	30	20	4.4	0.63	1100	28.9	36	199
EN031.00	A	30	21	3.1	0.33	26	8.5	35	195
EN032.00	A	30	20	2.2	0.11	4	3.2	36	199
EN035.00	P	30	20	4.4	0.64	1200	29.2	36	199
EN037.00	New-boundary	13	13	3.5	0.48	33	15.1	31	163
EN038.00	A	30	20	3.4	0.56	1700	18.1	36	199
EN039.00	A	30	21	2.6	0.26	24	5.8	35	195
EN041.00	P	30	21	3.1	0.36	22	9.2	35	195
EN042.00	P	30	20	3.1	0.51	460	14.2	36	199
EN043.00	A-boundary	30	20	3.1	0.34	43	8.7	36	199
EN044.00	A-boundary	30	20	2.2	0.08	2.9	2.8	36	199
EN045.50	A-boundary	30	20	2.1	0.08	2.9	2.8	36	199
EN046.00	P	30	23	10.9	0.86	1500	139.9	34	187
EN046.20	A-boundary	30	20	2.1	0.08	2.9	2.8	36	199
EN046.50	A-boundary	30	20	2.3	0.1	4	3.1	36	199
EN047.00	P	30	22	18.4	0.78	660	183.5	35	191
EN047.40	A-boundary	30	20	2.5	0.16	6	4.1	36	199

Station	Class	Count	MFCount	GM	SDV	MAX	P90	Appd_Std	Restr_Std
EN047.60	A-boundary	30	20	2.5	0.18	8	4.2	36	199
EN052.00	A	30	20	2.1	0.08	2.9	2.8	36	199
EN053.00	A	30	20	2.3	0.17	14	3.8	36	199
EN054.00	A	30	20	2.2	0.09	4	3	36	199

Table 8 lists all conditionally approved stations in the Indian River-West Rivers seasonal conditional area with their respective geomean and P90 scores for 2009. Data for conditionally approved stations reflects only the open status. All conditionally approved stations met their NSSP classification standard in 2009. The Indian-West Rivers conditionally approved stations EN 6.9, 7, 9, 10 and 10.5 were sampled in the open status 3 times in 2008 and once in 2009. The conditional area remained in the closed status from October 10, 2008 until November 16, 2009 at which time it was re-opened to conditional harvesting. A restricted area was created along the Ralph Beal beach area because of the risk from the intermittent year-round pollution.

Table 8. Indian-West Rivers Seasonal Conditional Area, Open Status 2009 , October 1 to April 30

Station	Class	Count	MFCount	GM	SDV	MAX	P90	Appd_Std	Restr_Std
EN006.90	New-boundary	25	20	3.7	0.48	88	15.5	33	184
EN007.00	CA	30	20	3.6	0.35	43	10.5	36	199
EN009.00	CA	30	19	3.2	0.31	33	8.2	36	203
EN010.00	CA	30	20	3.5	0.36	38	10.4	36	199
EN010.50	New-boundary	23	17	3.3	0.39	43	10.9	34	191

All approved and prohibited stations that were active at the beginning of 2009 were sampled at least 6 times following the systematic random sampling (SRS) schedule (Table 9 and Appendix C). Additional samples were collected under adverse conditions at stations EN 5, 6.5 and 13 for flood re-opening. New stations created as monitoring and boundary stations were EN 1.6 and EN 23.5 respectively; stations EN 18, 19.5, 45, 48 and 49 were deactivated in 2009 because they were embedded in prohibited areas; stations EN 6.9, 7, 9, 10, 10.5 were reclassified from approved to conditionally approved due to seasonal water quality not meeting approved standards; station EN 23 was re-classed from approved to prohibited due to water quality not meeting approved standards; and stations EN 37, 43 and 44 were reclassified from prohibited to approved after a closure was amended and the stations became boundary stations after meeting approved standards.

Table 9. EN Samples Collected in 2009

		Adverse	Random			
Station	Class	Closed	Closed	Open	Grand Total	Comments
EN000.50	A			6	6	
EN001.00	A	3		6	9	Flood samples
EN001.60	A			6	6	New station 3-09
EN003.00	A			7	7	
EN004.00	A			6	6	
EN005.00	A	7		6	13	Flood samples
EN006.50	A	6	1	11	18	Flood samples
EN006.90	CA		11	1	12	

		Adverse	Random			
Station	**Class**	**Closed**	**Closed**	**Open**	**Grand Total**	**Comments**
EN007.00	CA	4	10	1	15	Flood samples and closed status samples
EN009.00	CA	4	10	1	15	Flood samples and closed status samples
EN010.00	CA	10	10	1	21	Flood samples and closed status samples
EN010.50	CA		11	1	12	
EN011.00	P		6		6	
EN013.00	A	1	1	10	12	Flood samples
EN015.00	A			6	6	
EN016.00	A			6	6	
EN016.50	A			6	6	Reclass P to A 2-09
EN017.00	P		6		6	
EN017.60	A			6	6	Reclass P to A 2-09
EN018.00	P		2		2	De-activated; embedded in prohibited area; 4-09
EN019.40	P		6		6	
EN019.50	P		2		2	De-activated; embedded in prohibited area; 4-09
EN020.00	P		6		6	
EN021.00	P		6		6	
EN022.00	A			6	6	Reclass P to A 2-09
EN023.00	P		6		6	
EN023.50	A			6	6	
EN024.00	A			6	6	
EN025.00	A			6	6	
EN026.00	A			6	6	
EN027.00	A			6	6	
EN031.00	A			6	6	
EN032.00	A			6	6	
EN035.00	P		6		6	
EN037.00	A			5	6	Reclass P to A 2-09
	P		1			
EN038.00	A			6	6	
EN039.00	A			6	6	
EN041.00	P		6		6	
EN042.00	P		6		6	
EN043.00	A			5	6	Reclass P to A 2-09
	P		1			
EN044.00	A			6	6	Reclass P to A 2-09
EN045.00	P		2		2	De-activated; embedded in prohibited area; 4-09
EN045.50	A			6	6	
EN046.00	P		6		6	
EN046.20	A			6	6	
EN046.50	A			6	6	

		Adverse	Random			
Station	Class	Closed	Closed	Open	Grand Total	Comments
EN047.00	P		6		6	
EN047.40	A			6	6	
EN047.60	A			6	6	
EN048.00	P		2		2	De-activated; embedded in prohibited area; 4-09
EN049.00	P		2		2	De-activated; embedded in prohibited area; 4-09
EN052.00	A			6	6	
EN053.00	A			6	6	
EN054.00	A			6	6	

Figures 11, 12, and 13 are P90 trend graphs of the approved and conditionally approved sample stations in the growing area. Station P90 scores are expressed as a percentage of the approved standard. Approved or conditionally approved sample stations that have met or exceeded 90% of the approved standard are at risk of being reclassified to a more restrictive classification. Presently there are no stations at risk. Overall, 2009 water quality has remained level compared with 2007-2008 percentages.

Figure 11. Area EN P90 Scores for Approved Stations (expressed as the percent of the Approved standard), 2007-2009

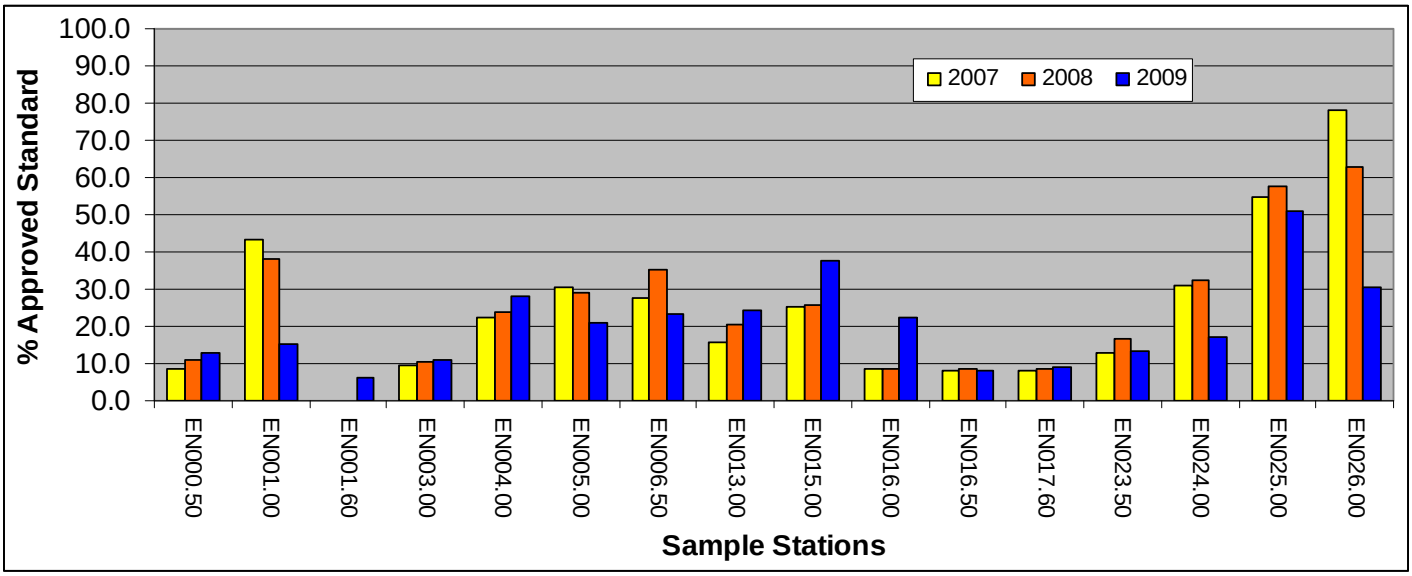


Figure 12. Area EN P90 Scores for Approved Stations (expressed as the percent of the Approved standard), 2007-2009

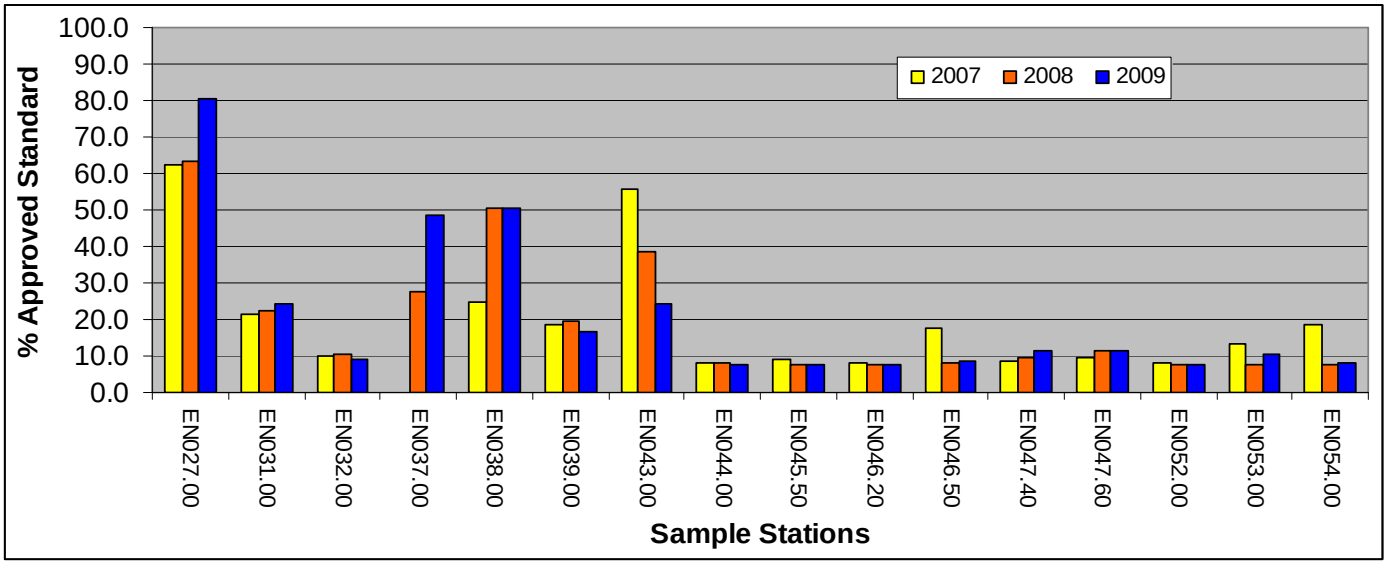
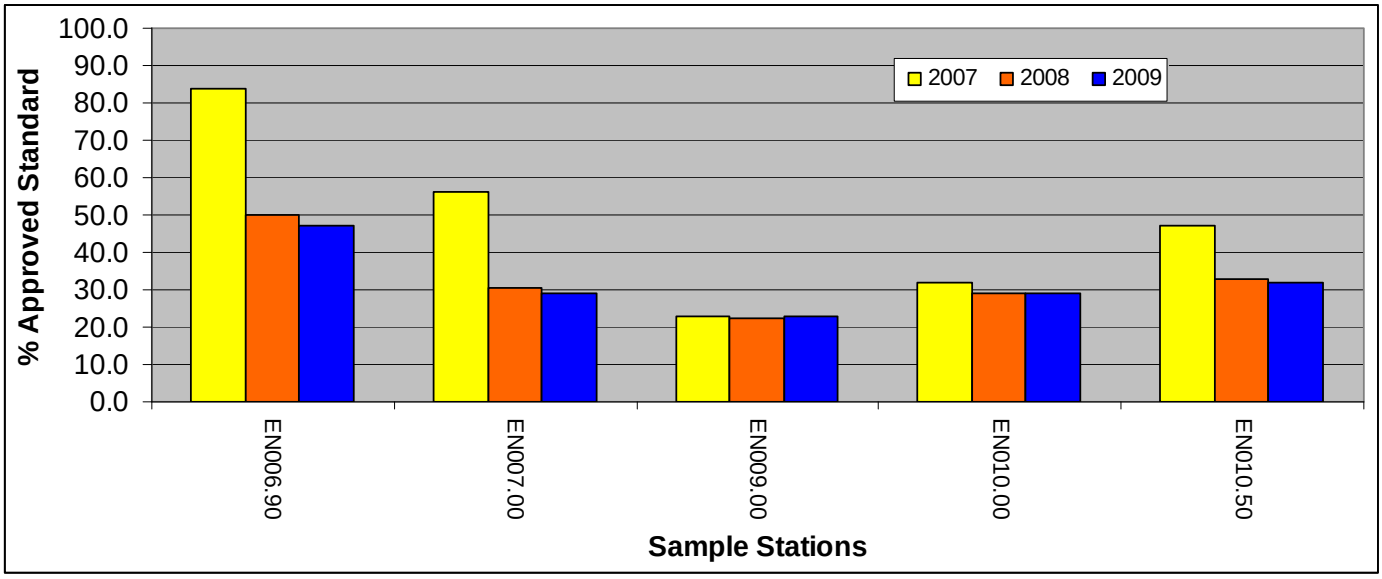


Figure 13. Area EN P90 Scores for Conditionally Approved Stations (expressed as the percent of the Approved standard), 2007-2009



Recommendations for Upward Classification

There are no recommendations for upward classification changes.

Shoreline Survey Activity during Review Period

2007

Shoreline activity was limited to drive through observations during random water sampling runs. Streams were not sampled during the 2007 review period. Changes in pollution sources during this review year included a removal of a licensed overboard discharge (#7795, Nash, MaineDEP letter, October 30, 2007) in Alley Bay was removed in 2007. Residential licensed overboard discharges are still present in Donovan Cove and Moosabec Reach, Jonesport. Current DEP records confirmed the presence of these licensed overboard discharges. DEP Citrex records confirmed the licensed overboard discharges met their license criteria in 2007.

There are no wastewater treatment facilities within the boundary of the growing area. The town of Jonesport has been working with the Maine DEP since 2005 to build a non-discharging wastewater treatment plant to service the village area of town. The last information was that it was questionable if the project would go ahead.

2008

Shoreline activity was limited to drive through observations during random water sampling runs. Streams in the growing area were sampled during October 2008. There has been no licensed overboard discharges removed in 2008. DEP Citrex records confirmed the licensed overboard discharges met their license criteria in 2008.

March 2008 - Slate Cove, Beals Island- An individual violated provisions of Maine's Natural Resources Protection Act by constructing a permanent structure and removing soil material and vegetation in a coastal wetland without first obtaining a permit from the Department. Specifically, a rock wall was constructed and another wall was enlarged using rocks from the intertidal zone and vegetation and soil was removed from the intertidal zone. To resolve the violation, the violator agreed to remove the rock walls, randomly place the rocks in the area from where the rocks had been cleared, and paid $1,300.00 as a civil monetary penalty.

September 16, 2008- An illness was reported involving shellfish stored in a wet storage raft in Eastern Harbor, South Addison. Review of the sampling and survey of the location were negative for pollution that may have impacted the raft. The investigation is currently ongoing.

2009

Shoreline activity was limited to drive through observations during random water sampling runs. Streams in the growing area were sampled during September 2009. There has been no licensed overboard discharges removed in 2009. DEP Citrex records confirmed the licensed overboard discharges met their license criteria in 2008.

Aquaculture/Wet Storage Activity

The wet storage sites in this growing area are anchored rafts, one re-circulating system and one flow through water system used to purge mud from mussels, quahogs or clams. Raft wet storage sites are located in approved areas in the towns of Eastern Harbor, South Addison and near French House Island, Beals. Two land-based wet storage sites are on the Jonesport waterfront and inland on Great Wass Island, Beals respectively. These sites pump water from areas meeting approved classification directly or

truck water from the approved areas to the processing facility. Applications are submitted annually from the site owners and review and approval of the site location is required by the DMR. Aquaculture sites are rafts with mussels or finfish pens and licensed for a specific period of time by the DMR. Wet storage and aquaculture sites are listed in Table 10 with their licensed species, locations, area classification and permit expiration date. More details on the aquaculture sites can be found at:

http://www.maine.gov/dmr/aquaculture/leaseinventory/jonesport.htm

Table 10. Wet Storage and Aquaculture Sites in Area EN

Site	Location	Licensed Species	Area Class	Permit Expiration Date
CNW Shellfish	Eastern Hbr, S. Addison	Wet storage rafts - Quahogs	Approved	2011
Atlantic Shellfish	East of French House Island, Beals	Wet storage rafts- Quahogs	Approved	2011
Beals Lobster, Inc	North of French House Island, Beals	Wet storage rafts- Quahogs	Approved	2011
Moosabec Mussel, Inc	Old House Point, Jonesport	Wet storage- Mussels in shore side tanks with water pumped into the facility from offshore approved waters.	Approved	2011
Carver Shellfish	Great Wass Island, Beals	Wet storage- Clams in shore side tanks with water trucked into the facility from offshore approved waters.	Approved	2011
EASTW MR	Northeast of French House Island, Beals	Aquaculture rafts- Scallops, mussels	Approved	5-25-2010
EASTW SI	Eastern Bay, Beals	Aquaculture finfish pens - Salmon	Approved	4-30-2012
EASTW SCN	Eastern Bay, Beals	Aquaculture finfish pens- Salmon, halibut, cod, haddock	Approved	7-22-2017

Classification Changes

No changes are required or recommended at this time.

Summary

Water quality in the growing area supports its current classification under the NSSP. The newly identified pollution sources will be reported to town or state officials for remediation and the remainder of the potential pollution sources will be re-surveyed. Overall, 2009 water quality has remained constant. All conditionally approved sampling stations have p90 scores that meet their classification standards during their open status. All random stations were sampled 6 times and conditional stations met the required

number of samples for their classification while in the open status. There are no classification changes recommended. No sample stations are at risk of downward classification at this time.

Recommendation for Future Work

1. Increased sampling of EN 3, 6.9, 7, 9, 10, 10.5 after rainfall to increase the database under rainfall conditions.
2. Follow up on un-identified or un-confirmed septic systems listed.
3. Collect samples near the pasture run off at Carrying Place Cove, South Addison
4. Continue to collect stream samples under different conditions.

References

Maine Department of Environmental Protection Licensed Overboard Discharge data base.

Appendix A. Annual Review of Conditional Area Management Plan Area No. 54-B (Part B)- Indian and West Rivers (Addison-Jonesport)

Scope

Area No. 54-B (part B), Indian and West Rivers, is a seasonal conditionally approved area based on water quality meeting approved standards from October 1 thru April 30. The area requires six (6) samples during the open status. A more detailed description and map of the area is discussed in the management plan.

Compliance with management plan

The area was in the closed status from October 2008 until November 16, 2009, due to a suspect pollution source impacting the conditional area. The area was re-opened allowing conditional harvesting from October 1 thru April 30 on November 16, 2009. A restricted area was created along the Ralph Beal beach area because of the risk from the intermittent year-round pollution. Samples were collected once from each of the water quality monitoring stations during the open status (December 2nd). Water quality meets the standard for approved classification during the open status.

Adequacy of reporting and cooperation of involved persons

The management plan for this conditional area does not require reporting by non DMR staff, but does require a data analysis prior to the reopening of the seasonal conditional area. Data analysis on October 31, 2009 showed all the conditionally approved sample stations meeting approved criteria (Table 1); therefore supporting the re-opening of the conditional area on November 16, 2009.

Table 1. Indian and West Rivers Re-opening Data

Station	Class	Count	MFCount	GM	SDV	MAX	P90	Appd_Std	Restr_Std
EN006.90	CA	new	18	3.8	0.49	88	16.7	34	186
EN007.00	CA	30	18	3.7	0.35	43	10.6	37	208
EN009.00	CA	30	17	3.3	0.3	33	8.3	37	212
EN010.00	CA	30	18	3.5	0.36	38	10.3	37	208
EN010.50	CA	new	15	3.2	0.38	43	10.2	35	194

Compliance with conditionally approved growing area criteria

The sample stations (EN 6.9, 7, 9, 10, 10.5) met the approved standard when in the open status of the conditionally approved classification. An historical water sampling review supports the present classification. Table 1 lists the latest 30 sample P90 scores of all the samples, including the period when the area was in the closed status, between the dates of October 1 thru April 30.

Table 2. Indian and West Rivers During the Conditionally Approved OPEN Status

Station	Class	Count	MFCount	GM	SDV	MAX	P90	Appd_Std	Restr_Std
EN006.90	new	25	20	3.7	0.48	88	15.5	33	184
EN007.00	CA	30	20	3.6	0.35	43	10.5	36	199
EN009.00	CA	30	19	3.2	0.31	33	8.2	36	203
EN010.00	CA	30	20	3.5	0.36	38	10.4	36	199
EN010.50	new	23	17	3.3	0.39	43	10.9	34	191

Field inspection of critical pollution sources

The potential for pollution in the Indian-West Rivers area comes from poor water quality from May 1 to September 30.

Water sampling compliance history

Due to the conditional management plan being based on the absence of seasonal pollution for certain times of the year, the NSSP does not require monthly water samples when the growing area is in the open status of its conditional classification provided that at least six of the water samples collected to satisfy the bacteriological standard for the open status are collected when the growing area is in the open status. The conditional area had remained in the closed status from October 10, 2008 until November 16, 2009 after a suspect bacterial source was found within the boundaries of the conditional area (Table 1 ~~2~~). The Indian-West Rivers conditionally approved stations EN 6.9, 7, 9, 10 and 10.5 were sampled in the open status once in 2009. The conditional sample stations were sampled seven times in the closed status which included five samples at each station during the traditional open status period.

Table 2. Stations EN 6.9, 7, 9, 10 and 10.5 2009 Data

Station	Date	Tide	Wind	Temp	Salinity	Strategy	Adversity	Open/ Closed	Class	Col Score
EN006.90	12/2/2009	H	NW	6	31	R	O	O	CA	2
EN007.00	12/2/2009	H	W	3	0	R	O	O	CA	2
EN009.00	12/2/2009	HE	SW	5	29	R	O	O	CA	<2
EN010.00	12/2/2009	HE	W	6	30	R	O	O	CA	<2
EN010.50	12/2/2009	HE	W	6	29	R	O	O	CA	<2

Analysis-recommendations

It is DMR policy to review water quality prior to reopening a seasonal area to ensure compliance with approved standards. The area will continue to be sampled on a monthly basis to increase the number of data points. An historical water sampling review supports the present classification. Water quality meets the standard for approved classification during the open status of October 1 to April 30. No changes are recommended at this time.

Appendix B. 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 C. EN 2009 Data

Station	Date	Strategy	Open/ Closed	Class	Adversity	Temp	Salinity	Tide	Wind	Col Score
EN000.50	2/24/2009	R	O	A		0	32	E	N	<2
	4/14/2009	R	O	A		4	29	LF	NW	<2
	6/8/2009	R	O	A		13	30	F	SW	<2
	7/15/2009	R	O	A		15	31	F	W	<2
	8/26/2009	R	O	A	P	15	31	LE	SW	13
	10/20/2009	R	O	A	P	6	32	F	SW	<2
EN001.00	2/24/2009	R	O	A		0	32	E	N	<2
	4/14/2009	R	O	A		7	30	LF	NW	<2
	6/8/2009	R	O	A		13	30	F	SW	<2
	7/15/2009	R	O	A		19	30	F	W	2
	8/26/2009	R	O	A	P	15	31	LE	SW	6
	10/20/2009	R	O	A	P	6	32	F	SW	<2
	10/28/2009	A	C	A	F	4	31	E	E	4
	10/29/2009	A	C	A	F	5	32	E	NE	<2
	10/30/2009	A	C	A	F	4	31	E	W	<2
EN001.60	5/11/2009	R	O	A	P	7	30	HF	CL	<2
	6/3/2009	R	O	A		9	30	HE	CL	<2
	6/8/2009	R	O	A		13	30	F	SW	<2
	7/15/2009	R	O	A		16	30	F	W	<2
	8/26/2009	R	O	A	P	15	31	L	SW	<2
	10/20/2009	R	O	A	P	6	32	F	SW	<2
EN003.00	3/25/2009	R	O	A		3	30	H	N	<2
	4/14/2009	R	O	A		7	30	LF	NW	2
	6/8/2009	R	O	A		15	30	F	NW	<2
	7/15/2009	R	O	A		16	30	F	W	<2
	8/26/2009	R	O	A	P			L	SW	
	10/20/2009	R	O	A	P	7	32	F	SW	<2
	11/23/2009	R	O	A		3	32	HF	SE	<2
EN004.00	2/24/2009	R	O	A		0	32	E	N	<2
	4/14/2009	R	O	A		3	30	LF	NW	<2
	6/8/2009	R	O	A		13	30	F	NW	<2
	7/15/2009	R	O	A		15	30	F	W	<2
	8/26/2009	R	O	A	P	15	31	L	SW	14
	10/20/2009	R	O	A	P	7	31	F	SW	<2
EN005.00	3/25/2009	R	O	A		3	31	H	N	<2
	4/14/2009	R	O	A		3	30	LF	NW	<2
	4/26/2009	A	C	A	F	5	28	H	NW	<2
	4/27/2009	A	C	A	F	5	29	H	SE	<2
	6/8/2009	R	O	A		13	30	F	NW	<2
	6/23/2009	A	C	A	F	7	27	H	NE	18
	6/24/2009	A	C	A	F	10	25	H	CL	4
	6/25/2009	A	C	A	F	9	28	F	SE	10
	7/15/2009	R	O	A		17	30	F	NW	<2
	9/1/2009	A	C	A	F	12	28	E	NW	3.6
	9/2/2009	A	C	A	F	12	18	E	SW	27
	9/15/2009	R	O	A	P	15	32	H	NW	6

Station	Date	Strategy	Open/ Closed	Class	Adversity	Temp	Salinity	Tide	Wind	Col Score
	10/20/2009	R	O	A	P	7	28	F	SW	2
EN006.50	1/6/2009	R	O	A		1	30	LE	NW	<2
	2/24/2009	R	O	A		-1	30	E	NW	<2
	3/3/2009	R	O	A		0	25	LF	N	2
	4/7/2009	R	O	A	P	4	28	HE	SE	2
	5/5/2009	R	O	A		9	31	HE	E	<2
	6/2/2009	R	O	A		10	30	E	CL	<2
	6/25/2009	A	C	A	F	7	28	F	SE	2
	7/7/2009	R	O	A	P	11	29	HE	SE	<2
	8/4/2009	R	O	A		19	30	HE	SW	<2
	9/1/2009	A	C	A	F	13	29	E	NW	18
	9/2/2009	A	C	A	F	11	30	E	SW	3.6
	10/6/2009	R	O	A	P	11	30	F	NW	2
	10/20/2009	R	O	A	P	6	30	F	SW	2
	10/28/2009	A	C	A	F	3	28	E	N	6
	10/29/2009	A	C	A	F	5	30	E	NE	<2
	10/30/2009	A	C	A	F	5	30	E	CL	2
	11/3/2009	R	C	A		5	30	H	NW	6
	12/2/2009	R	O	A		6	30	H	NW	<2
EN006.90	2/24/2009	R	C	CA		-1	30	E	NW	<2
	3/3/2009	R	C	CA		0	25	LF	N	<2
	4/7/2009	R	C	CA	P	4	18	HE	SE	34
	4/21/2009	R	C	CA	P	5	30	E	SE	<2
	5/5/2009	R	C	CA		9	30	HE	E	2
	6/2/2009	R	C	CA		10	30	E	CL	<2
	8/4/2009	R	C	CA		19	30	HE	SW	8
	9/15/2009	R	C	CA	P	16	32	HE	NW	4
	9/21/2009	R	C	CA		13	32	H	NW	4
	10/6/2009	R	C	CA	P	11	30	F	NW	4
	11/3/2009	R	C	CA		5	30	H	NW	4
	12/2/2009	R	O	CA		6	31	H	NW	2
EN007.00	3/25/2009	R	C	CA		2	0	H	N	<2
	4/7/2009	R	C	CA	P	4	0	HE	SE	4
	4/21/2009	R	C	CA	P	5	9	E	SE	16
	4/26/2009	A	C	CA	F	9	0	H	NW	13
	4/27/2009	A	C	CA	F	8	0	H	CL	10
	5/5/2009	R	C	CA		10	12	HE	E	42
	6/2/2009	R	C	CA		11	8	E	CL	33
	6/23/2009	A	C	CA	F	7	5	HE	NE	100
	6/24/2009	A	C	CA	F	10	8	HE	CL	44
	8/4/2009	R	C	CA		20	1	HE	SW	7.3
	9/15/2009	R	C	CA	P	16	26	HE	NW	28
	10/6/2009	R	C	CA	P	11	0	F	NW	8
	10/20/2009	R	C	CA	P	6	0	F	SW	6
	11/3/2009	R	C	CA		6	6	H	NW	<2
	12/2/2009	R	O	CA		3	0	H	W	2
EN009.00	3/25/2009	R	C	CA		2	0	H	N	<2
	4/7/2009	R	C	CA	P	4	0	HE	SE	18

Station	Date	Strategy	Open/ Closed	Class	Adversity	Temp	Salinity	Tide	Wind	Col Score
	4/21/2009	R	C	CA	P	5	30	E	SE	<2
	4/26/2009	A	C	CA	F	4	28	H	NW	<2
	4/27/2009	A	C	CA	F	7	14	H	S	<2
	5/5/2009	R	C	CA		9	30	HE	E	<2
	6/2/2009	R	C	CA		11	29	E	CL	<2
	6/23/2009	A	C	CA	F	7	28	HE	NE	8
	6/24/2009	A	C	CA	F	9	27	HE	E	8
	8/4/2009	R	C	CA		18	10	HE	SW	46
	9/15/2009	R	C	CA	P	16	32	HE	NW	8
	10/6/2009	R	C	CA	P	10	30	F	NW	4
	10/20/2009	R	C	CA	P	6	0	F	SW	2
	11/3/2009	R	C	CA		5	30	H	NW	2
	12/2/2009	R	O	CA		5	29	HE	SW	<2
EN010.00	3/25/2009	R	C	CA		3	28	H	N	<2
	4/7/2009	R	C	CA	P	4	2	HE	SE	10
	4/21/2009	R	C	CA	P	5	28	E	SE	<2
	4/26/2009	A	C	CA	F	4	28	H	NW	<2
	4/27/2009	A	C	CA	F	6	26	H	E	<2
	5/5/2009	R	C	CA		9	28	E	E	<2
	6/2/2009	R	C	CA		11	23	E	N	6
	6/23/2009	A	C	CA	F	7	19	HE	NE	42
	6/24/2009	A	C	CA	F	10	11	HE	E	46
	6/25/2009	A	C	CA	F	10	22	F	SE	20
	7/14/2009	R	C	CA		18	27	F	SW	24
	8/4/2009	R	C	CA		18	11	HE	SW	54
	9/1/2009	A	C	CA	F	14	27	E	NW	25
	9/2/2009	A	C	CA	F	13	16	E	SW	14
	10/6/2009	R	C	CA	P	11	25	F	NW	8
	10/20/2009	R	C	CA		5	28	HF	SW	<2
	10/28/2009	A	C	CA	F	3	26	E	E	6
	10/29/2009	A	C	CA	F	4	27	E	E	4
	10/30/2009	A	C	CA	F	4	28	E	CL	<2
	11/3/2009	R	C	CA		6	28	H	NW	4
	12/2/2009	R	O	CA		6	30	HE	W	<2
EN010.50	3/25/2009	R	C	CA		3	28	H	N	<2
	4/7/2009	R	C	CA	P	4	4	HE	SE	6
	4/21/2009	R	C	CA	P	5	18	E	SE	<2
	5/5/2009	R	C	CA		9	28	E	E	<2
	5/18/2009	R	C	CA	P	10	26	E	N	20
	6/2/2009	R	C	CA		11	25	E	N	4
	8/4/2009	R	C	CA		18	10	HE	SW	46
	9/21/2009	R	C	CA		15	31	HF	NW	<2
	10/6/2009	R	C	CA	P	11	25	F	NW	4
	10/20/2009	R	C	CA		5	28	HF	SW	<2
	11/3/2009	R	C	CA		6	28	H	NW	14
	12/2/2009	R	O	CA		6	29	HE	W	<2
EN011.00	2/24/2009	R	C	P		-1	2	H	NW	9.1
	4/13/2009	R	C	P		2	0	LF	NW	3.6

Station	Date	Strategy	Open/ Closed	Class	Adversity	Temp	Salinity	Tide	Wind	Col Score
	6/8/2009	R	C	P		11	18	F	W	118
	7/14/2009	R	C	P		16	2	F	SW	114
	8/25/2009	R	C	P	P	17	15	HF	NW	68
	10/20/2009	R	C	P		5	8	HF	S	9.1
EN013.00	2/24/2009	R	O	A		-1	26	H	NW	2
	4/7/2009	R	O	A	P	4	18	HE	SE	16
	5/5/2009	R	O	A		9	30	E	E	<2
	6/2/2009	R	O	A		11	26	E	N	<2
	6/25/2009	A	C	A	F	8	28	F	SE	2
	7/7/2009	R	O	A	P	11	29	HE	SE	2
	8/4/2009	R	O	A		18	28	HE	SW	7.3
	9/21/2009	R	O	A		14	32	HF	NW	<2
	10/6/2009	R	O	A	P	11	25	F	NW	6
	10/20/2009	R	O	A		5	30	HF	NW	<2
	11/3/2009	R	C	A			31	H	NW	<2
	12/2/2009	R	O	A		5	30	HE	NW	<2
EN015.00	2/24/2009	R	O	A		0	31	HE	NW	<2
	4/13/2009	R	O	A		3	30	F	NW	<2
	6/8/2009	R	O	A		10	32	F	W	<2
	7/14/2009	R	O	A		18	30	F	SW	<2
	8/25/2009	R	O	A	P	16	30	HF	NW	110
	10/20/2009	R	O	A		6	32	HF	SW	<2
EN016.00	2/24/2009	R	O	A		0	30	HE	NW	<2
	4/13/2009	R	O	A		2	30	LF	NW	<2
	6/8/2009	R	O	A		10	32	F	W	2
	7/14/2009	R	O	A		16	30	F	SW	<2
	8/25/2009	R	O	A	P	15	32	HF	NW	108
	10/20/2009	R	O	A		6	32	HF	SW	22
EN016.50	5/11/2009	R	O	A	P	7	31	F	CL	<2
	5/26/2009	R	O	A		8	30	E	S	<2
	7/29/2009	R	O	A	P	13	30	L	CL	<2
	8/19/2009	R	O	A		16	32	LE	S	<2
	9/30/2009	R	O	A	P	13	32	L	S	<2
	10/19/2009	R	O	A	P	8	32	HF	N	<2
EN017.00	2/24/2009	R	C	P		0	30	HE	NW	<2
	4/13/2009	R	C	P		3	30	LF	NW	<2
	6/8/2009	R	C	P		9	31	F	W	<2
	7/14/2009	R	C	P		18	30	F	SW	<2
	8/25/2009	R	C	P	P	15	33	HF	NW	12
	10/20/2009	R	C	P		6	32	HF	SW	1100
EN017.60	5/11/2009	R	O	A	P	7	30	F	CL	<2
	5/26/2009	R	O	A		8	30	E	S	<2
	7/29/2009	R	O	A	P	13	30	L	CL	<2
	8/19/2009	R	O	A		15	30	LE	S	4
	9/30/2009	R	O	A	P	13	32	L	S	<2
	10/19/2009	R	O	A	P	8	32	HF	N	2
EN018.00	2/24/2009	R	C	P	W	0	31	HE	NW	<2
	4/13/2009	R	C	P		3	30	F	NW	<2

Station	Date	Strategy	Open/ Closed	Class	Adversity	Temp	Salinity	Tide	Wind	Col Score
EN019.40	5/11/2009	R	C	P	P	7	30	F	CL	<2
	5/26/2009	R	C	P		8	30	E	S	<2
	7/29/2009	R	C	P	P	13	30	L	CL	<2
	8/19/2009	R	C	P		15	30	LE	S	<2
	9/30/2009	R	C	P	P	13	32	L	S	<2
	10/19/2009	R	C	P	P	9	32	HF	NW	2
EN019.50	2/24/2009	R	C	P		-1	31	HE	NW	<2
	4/13/2009	R	C	P		3	29	F	NW	2
EN020.00	5/11/2009	R	C	P	P	7	31	F	CL	<2
	5/26/2009	R	C	P		8	30	E	S	<2
	7/29/2009	R	C	P	P	13	30	L	SW	<2
	8/19/2009	R	C	P		15	32	LE	CL	<2
	9/30/2009	R	C	P	P	13	32	L	SW	<2
	10/19/2009	R	C	P	P	8	32	HF	N	<2
EN021.00	5/11/2009	R	C	P	P	7	31	F	CL	<2
	5/26/2009	R	C	P		8	30	E	S	<2
	7/29/2009	R	C	P	P	13	30	L	SW	<2
	8/19/2009	R	C	P		15	30	LE	CL	2
	9/30/2009	R	C	P	P	13	32	L	SW	<2
	10/19/2009	R	C	P	P	8	32	HF	N	<2
EN022.00	4/13/2009	R	O	A		3	30	F	NW	<2
	4/21/2009	R	O	A	P	4	30	E	SE	<2
	6/8/2009	R	O	A		10	32	F	NW	<2
	7/14/2009	R	O	A		16	31	F	SW	<2
	8/25/2009	R	O	A	P	15	32	F	NW	<2
	10/20/2009	R	O	A		6	32	H	SW	2
EN023.00	4/13/2009	R	C	P		3	28	F	NW	<2
	4/21/2009	R	C	P	P	4	30	E	SE	<2
	6/8/2009	R	C	P		11	32	F	NW	<2
	7/14/2009	R	C	P		18	30	F	SW	11
	8/25/2009	R	C	P	P	15	31	F	NW	6
	10/20/2009	R	C	P		6	32	H	SW	<2
EN023.50	2/24/2009	R	O	A		-1	32	E	NW	<2
	4/13/2009	R	O	A		3	30	F	NW	<2
	6/8/2009	R	O	A		11	32	F	NW	<2
	7/14/2009	R	O	A		16	30	F	SW	2
	8/25/2009	R	O	A	P	14	30	F	NW	<2
	10/20/2009	R	O	A		6	32	H	SW	<2
EN024.00	4/13/2009	R	O	A		4	30	F	NW	<2
	4/21/2009	R	O	A	P	4	28	E	SE	<2
	6/8/2009	R	O	A		11	32	F	NW	<2
	7/14/2009	R	O	A		15	30	F	SW	4
	8/25/2009	R	O	A	P	15	31	F	NW	<2
	10/20/2009	R	O	A		6	32	H	SW	2
EN025.00	2/24/2009	R	O	A		-2	30	E	NW	<2
	4/13/2009	R	O	A		4	30	F	NW	6
	6/8/2009	R	O	A		11	32	HF	NW	<2
	7/14/2009	R	O	A		18	30	F	SW	<2

Station	Date	Strategy	Open/ Closed	Class	Adversity	Temp	Salinity	Tide	Wind	Col Score
	8/25/2009	R	O	A	P	16	30	F	NW	<2
	10/20/2009	R	O	A		6	32	H	SW	<2
	2/24/2009	R	O	A		-1	28	E	NW	<2
	4/13/2009	R	O	A		3	25	F	NW	<2
EN026.00	6/8/2009	R	O	A		12	32	HF	NW	<2
	7/14/2009	R	O	A		16	30	HF	SW	<2
	8/25/2009	R	O	A	P	14	32	F	NW	4
	10/20/2009	R	O	A		6	32	H	W	<2
	2/24/2009	R	O	A		-1	31	E	NW	2
	4/13/2009	R	O	A		4	28	F	NW	<2
EN027.00	6/8/2009	R	O	A		11	32	HF	NW	<2
	7/14/2009	R	O	A		16	30	F	SW	<2
	8/25/2009	R	O	A	P	15	30	F	NW	60
	10/20/2009	R	O	A		6	32	HE	W	<2
	2/24/2009	R	O	A		-1	31	E	NW	<2
	4/13/2009	R	O	A		4	26	F	NW	<2
EN031.00	6/8/2009	R	O	A		11	32	HF	NW	<2
	7/14/2009	R	O	A		18	30	F	SW	<2
	8/25/2009	R	O	A	P	17	31	F	NW	10
	10/20/2009	R	O	A		6	32	HE	CL	<2
	2/24/2009	R	O	A		0	31	E	NW	<2
	4/13/2009	R	O	A		3	30	F	NW	<2
EN032.00	6/8/2009	R	O	A		9	32	HF	NW	<2
	7/14/2009	R	O	A		15	31	F	SW	<2
	8/25/2009	R	O	A	P	13	32	F	NW	2
	10/20/2009	R	O	A		6	32	HE	CL	<2
	2/24/2009	R	C	P		-1	32	E	NW	<2
	4/13/2009	R	C	P		3	30	F	NW	<2
EN035.00	6/8/2009	R	C	P		10	32	HF	NW	<2
	7/14/2009	R	C	P		15	31	F	SW	<2
	8/25/2009	R	C	P	P	15	31	F	NW	4
	10/20/2009	R	C	P		6	32	HE	W	<2
	2/24/2009	R	C	P		-1	32	E	NW	<2
	4/13/2009	R	O	A		3	30	F	NW	<2
EN037.00	6/8/2009	R	O	A		10	32	HF	NW	2
	7/14/2009	R	O	A		15	31	F	SW	24
	8/25/2009	R	O	A	P	13	32	F	NW	33
	10/20/2009	R	O	A		6	32	HE	W	2
	2/24/2009	R	O	A		-1	31	E	NW	<2
	4/13/2009	R	O	A		3	30	F	NW	<2
EN038.00	6/8/2009	R	O	A		10	32	HF	NW	2
	7/14/2009	R	O	A		18	30	F	SW	2
	8/25/2009	R	O	A	P	16	32	F	NW	2
	10/20/2009	R	O	A		6	32	HE	W	<2
EN039.00	2/24/2009	R	O	A		0	31	E	NW	<2
	4/13/2009	R	O	A		4	30	F	NW	<2
	6/8/2009	R	O	A		13	32	H	NW	<2
	7/14/2009	R	O	A		18	31	F	SW	<2

Station	Date	Strategy	Open/ Closed	Class	Adversity	Temp	Salinity	Tide	Wind	Col Score
	8/25/2009	R	O	A	P	16	31	F	NW	<2
	10/20/2009	R	O	A		6	32	HE	W	2
EN041.00	2/24/2009	R	C	P		0	31	E	NW	<2
	4/13/2009	R	C	P		3	30	F	NW	<2
	6/8/2009	R	C	P		10	32	H	NW	<2
	7/14/2009	R	C	P		20	31	F	SW	<2
	8/25/2009	R	C	P	P	17	32	F	NW	<2
	10/20/2009	R	C	P		6	32	HE	W	<2
EN042.00	2/24/2009	R	C	P	W	0	31	E	NW	<2
	4/13/2009	R	C	P	W	4	30	F	NW	2
	6/8/2009	R	C	P		10	32	H	NW	2
	7/14/2009	R	C	P		16	31	F	SW	<2
	8/25/2009	R	C	P	P	16	32	F	W	2
	10/20/2009	R	C	P		6	32	E	W	<2
EN043.00	2/24/2009	R	C	P		-1	32	E	NW	<2
	4/13/2009	R	O	A		3	30	F	NW	<2
	6/8/2009	R	O	A		9	32	H	NW	6
	7/14/2009	R	O	A		14	31	F	SW	3.6
	8/25/2009	R	O	A	P	13	32	F	W	10
	10/20/2009	R	O	A		6	32	E	NW	<2
EN044.00	5/11/2009	R	O	A	P	7	31	F	CL	<2
	5/26/2009	R	O	A		8	30	E	S	2
	7/29/2009	R	O	A	P	13	30	L	SW	<2
	8/19/2009	R	O	A		15	31	LE	CL	2
	9/30/2009	R	O	A	P	13	32	L	SW	<2
	10/19/2009	R	O	A	P	8	32	HF	NW	<2
EN045.00	2/18/2009	R	C	P		0	30	E	CL	18
	4/8/2009	R	C	P	P	4	20	F	N	66
EN045.50	5/11/2009	R	O	A	P	7	31	F	CL	<2
	5/26/2009	R	O	A		8	30	E	S	<2
	7/29/2009	R	O	A	P	12	31	L	S	<2
	8/19/2009	R	O	A		15	30	LE	S	<2
	9/30/2009	R	O	A	P	13	32	L	S	<2
	10/19/2009	R	O	A	P	8	31	HF	NW	<2
EN046.00	2/18/2009	R	C	P		2	32	E	CL	148
	4/8/2009	R	C	P	P	4	28	F	N	20
	6/8/2009	R	C	P		8	32	H	W	<2
	7/14/2009	R	C	P		14	30	HF	SW	<2
	8/25/2009	R	C	P	P	12	30	F	SW	13
	10/20/2009	R	C	P		6	32	E	W	4
EN046.20	5/11/2009	R	O	A	P	7	32	F	CL	2
	5/26/2009	R	O	A		8	30	E	S	<2
	7/29/2009	R	O	A	P	13	30	L	S	<2
	8/19/2009	R	O	A		15	31	LE	CL	<2
	9/30/2009	R	O	A	P	13	32	L	S	<2
	10/19/2009	R	O	A	P	8	32	HF	NW	<2
EN046.50	5/11/2009	R	O	A	P	7	31	F	CL	<2
	5/26/2009	R	O	A		8	30	E	S	<2

Station	Date	Strategy	Open/ Closed	Class	Adversity	Temp	Salinity	Tide	Wind	Col Score
	7/29/2009	R	O	A	P	12	31	L	S	<2
	8/19/2009	R	O	A		15	31	LE	CL	4
	9/30/2009	R	O	A	P	13	32	L	S	2
	10/19/2009	R	O	A	P	8	32	HF	NW	<2
EN047.00	3/25/2009	R	C	P		2	28	H	N	<2
	4/8/2009	R	C	P	P	3	14	F	N	660
	6/8/2009	R	C	P		12	29	H	W	<2
	7/14/2009	R	C	P		16	30	HF	SW	8
	8/25/2009	R	C	P	P	14	31	HF	NW	4
	10/20/2009	R	C	P		6	32	E	SW	4
EN047.40	5/11/2009	R	O	A	P	7	31	F	CL	2
	5/26/2009	R	O	A		8	30	E	S	<2
	7/29/2009	R	O	A	P	13	31	L	S	6
	8/19/2009	R	O	A		15	30	LE	CL	5.4
	9/30/2009	R	O	A	P	13	32	L	S	<2
	10/19/2009	R	O	A	P	8	32	HF	NW	<2
EN047.60	5/11/2009	R	O	A	P	7	32	F	CL	<2
	5/26/2009	R	O	A		8	30	E	S	<2
	7/29/2009	R	O	A	P	13	31	L	S	<2
	8/19/2009	R	O	A		15	30	LE	CL	2
	9/30/2009	R	O	A	P	13	32	L	S	<2
	10/19/2009	R	O	A	P	8	32	HF	NW	2
EN048.00	2/18/2009	R	C	P		2	30	E	CL	<2
	4/8/2009	R	C	P	P	4	30	F	N	<2
EN049.00	2/18/2009	R	C	P		2	32	E	CL	<2
	4/8/2009	R	C	P	P	4	30	F	N	<2
EN052.00	5/11/2009	R	O	A	P	8	30	F	CL	<2
	5/26/2009	R	O	A		8	31	F	S	<2
	7/29/2009	R	O	A	P	15	30	LF	SW	<2
	8/19/2009	R	O	A		19	31	E	S	2
	9/30/2009	R	O	A	P	13	32	L	S	<2
	10/19/2009	R	O	A	P	8	32	HF	NW	<2
EN053.00	5/11/2009	R	O	A	P	6	31	HF	CL	<2
	5/26/2009	R	O	A		7	31	F	S	<2
	7/29/2009	R	O	A	P	12	31	LF	SW	<2
	8/19/2009	R	O	A		14	31	E	S	<2
	9/30/2009	R	O	A	P	14	30	LE	S	14
	10/19/2009	R	O	A	P	9	32	HF	NW	<2
EN054.00	5/11/2009	R	O	A	P	7	30	HF	CL	<2
	5/26/2009	R	O	A		8	30	F	S	4
	7/29/2009	R	O	A	P	12	31	LF	SW	<2
	8/19/2009	R	O	A		14	31	E	S	<2
	9/30/2009	R	O	A	P	13	32	LE	SW	<2
	10/19/2009	R	O	A	P	9	32	H	NW	<2