



**GROWING AREA EP**

**Henry Point, Jonesport to Sea Wall Point, Roque Bluffs; including Mason Bay,  
Chandler River, Englishman Bay, Englishman River, and Roque Island.**

**Annual Report for 2009**

**Final Report Date: April 16, 2010**

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**APPROVAL**

Division Director:

\_\_\_\_\_ Date: \_\_\_\_\_  
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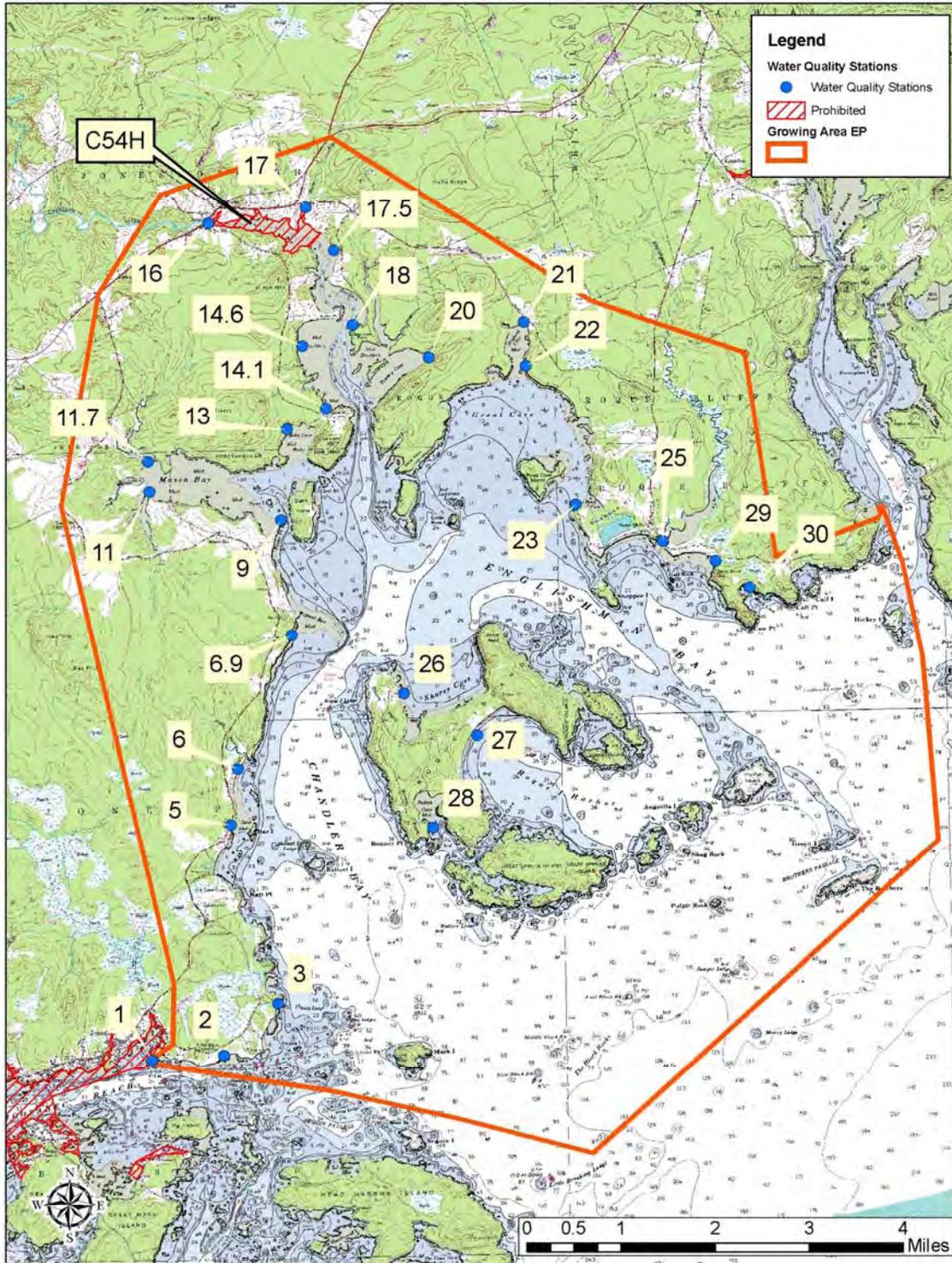
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Figure 1. Growing Area EP, with Active Water Sample Stations





## Executive Summary

This is an annual report for growing area EP written in compliance with the requirements of the 2007 Model Ordinance and the National Shellfish Sanitation Program. The next triennial report is due in 2011; the next sanitary survey report is due in 2020.

As a result of this annual review, a portion of the Chandler River, Jonesboro was downgraded in classification on March 8, 2010, from approved to prohibited, due to water quality exceeding the approved standard at station EP 17.5, and malfunctioning septic systems in the vicinity. Water quality at all other stations support their current NSSP classifications. No upward reclassifications are being proposed as a result of this annual review. There have been no new water quality stations added or any deactivated.

A full shoreline survey of the Chandler River in the vicinity of Jonesboro was conducted by the Maine DEP during the 2008 and 2009 seasons. Final results of the survey are not available as of this report date. However, preliminary information shows over 15 malfunctioning septic systems in the vicinity of stations EP 16, 17, and 17.5

## Growing Area Description

Growing area EP extends from the eastern end of Moosabec Reach at Henry Point, Jonesport to Sea Wall Point on the southwest side of Little Kennebec Bay in Roque Bluffs. This area includes all of Englishman Bay, Roque Island, and numerous small harbors and small streams in the towns of Jonesport, Jonesboro, and Roque Bluffs. Growing area EP is a rural area with sparse population. Land use is predominantly residential with some light commercial use including small boat building and repair shops, blueberry fields, and a golf course. There are no municipal wastewater treatment plants within the boundaries of this growing area. Drive through surveys during water sampling runs show changes being primarily residential growth in the form of new homes built along the waterfront or old camps being replaced by new, larger homes.

## Current Classification(s)

Shellfish growing area EP currently has areas classified as:

### Approved

- Sample stations associated with approved classification; EP 1, 2, 3, 5, 6, 6.9, 9, 11, 11.7, 13, 14.1, 14.6, 17.5, 18, 20, 21, 23, 25, 26, 27, 28, 29, & 30.

### New Stations (less than 30 samples and not evaluated against a NSSP standard)

- EP 22



**Prohibited**

- Area No. 54-H, Chandler River, Jonesboro, prohibited due to water quality exceeding approved standards. Sample stations associated with classification; EP 16 and 17.

Please visit the DMR website to view legal notices:

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

**Activity during Review Period**

There were no changes in classification in 2009.

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

There are no conditional areas in Growing Area EP.

**Water Quality Review and Discussion**

Table 1 lists all active approved, restricted, and prohibited stations in Growing Area EP, with their respective Geomean and P90 calculations for 2009. Please refer to Appendix A for a key to interpreting the headers on the columns of Table 1. The approved and restricted standards for each station are also displayed in Table 1. These standards will fluctuate yearly as a result of the DMR transition from a most probable number (MPN) fecal coliform test method to a membrane filtration (MF) method and are dependent on the number of sample analyzed by MPN versus MF. The total number of data points used in the calculations is displayed in the Count column and includes both MPN and MF values. The number of data points analyzed by MF is displayed in the MFCNT column. This fluctuating standard will cease when all 30 data points have been analyzed by the MF method. A more detailed explanation of this transition can be found in central files.

All approved stations, except station EP 17.5 (highlighted in yellow), met their NSSP classification standard in 2009. Station EP 17.5 must be downgraded in its classification from approved to prohibited due to water quality exceeding approved standards and the presence of malfunctioning septic systems found during a shoreline survey in 2009.

**Table 1. Geomean and P90 Scores, Growing Area EP, 2003-2009**

Station	Class	Count	MFCnt	GeoMean	SDV	MAX	P90	Appd_Std	Restr_Std
EP001.00	A	30	22	2.6	0.22	15	5	35	191
EP002.00	A	30	22	3	0.46	320	11.8	35	191
EP003.00	A	30	22	2.2	0.13	8	3.3	35	191
EP005.00	A	30	22	2.5	0.19	9.1	4.6	35	191
EP006.00	A	30	22	3	0.4	140	9.9	35	191
EP006.90	A	30	22	2.5	0.18	10	4.3	35	191



Station	Class	Count	MFCCount	GeoMean	SDV	MAX	P90	Appd_Std	Restr_Std
EP009.00	A	30	22	3.6	0.47	240	15	35	191
EP011.00	A	30	22	4	0.49	120	17.6	35	191
EP011.70	A	30	21	3.2	0.27	10	7.2	35	195
EP013.00	A	30	21	2.4	0.2	20	4.5	35	195
EP014.10	A	30	21	3.5	0.32	23	9.2	35	195
EP014.60	A	30	21	3.4	0.39	98	10.8	35	195
EP016.00	P	30	22	15	0.66	240	107.2	35	191
EP017.00	P	30	22	16.4	0.65	440	111.8	35	191
EP017.50	A	30	22	6.6	0.6	220	39.2	35	191
EP018.00	A	30	21	3.8	0.44	120	14.1	35	195
EP020.00	A	30	21	3.6	0.43	54	13.1	35	195
EP021.00	A	30	20	4.6	0.47	58	19	36	199
EP022.00	New	19	19	2.4	0.29	29	5.7	30	163
EP023.00	A	30	23	2.4	0.26	50	5.2	34	187
EP025.00	A	30	22	2.8	0.32	88	7.4	35	191
EP026.00	A	30	20	2.5	0.25	40	5.4	36	199
EP027.00	A	30	20	2.1	0.08	2.9	2.8	36	199
EP028.00	A	30	20	2.4	0.16	9	3.8	36	199
EP029.00	A	30	22	4.2	0.47	50	16.9	35	191
EP030.00	A	30	22	3	0.39	82	9.6	35	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 2 and Appendix B). At some stations, additional samples were collected under adverse conditions as noted with an "A" in the Strategy column.

**Table 2. Area EP Samples Collected in 2009 (Strategy: R=Random, A=Adverse; E=Extra)**

Station	Sstrategy	status	Class	Sample Count	COMMENTS
EP001.00	R	O	A	6	
EP002.00	R	O	A	6	
EP003.00	R	O	A	6	
EP005.00	R	O	A	6	
EP006.00	A	C	A	8	Flood samples
	R	O	A	6	
EP006.90	R	O	A	6	
EP009.00	R	O	A	6	
EP011.00	R	O	A	6	
EP011.70	R	O	A	6	
EP013.00	R	O	A	6	
EP014.10	R	O	A	6	
EP014.60	R	O	A	6	
EP016.00	R	C	P	6	
EP017.00	R	C	P	6	
EP017.50	R	O	A	6	



Station	Srategy	status	Class	Sample Count	COMMENTS
EP018.00	A	C	A	13	Flood samples
	R	O	A	6	
EP020.00	R	O	A	6	
EP021.00	A	C	A	10	Flood samples
	R	O	A	6	
EP022.00	A	C	A	3	Flood samples
	R	O	A	6	
EP023.00	R	O	A	6	
EP025.00	R	O	A	6	
EP026.00	R	O	A	6	
EP027.00	R	O	A	6	
EP028.00	R	O	A	6	
EP029.00	R	O	A	6	
EP030.00	R	O	A	6	

Figures 2 and 3 show the P90 trends over the past five years for all active stations in area EP. During the transition from MPN to MF analysis method, the approved and restricted standards 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 standard; any station showing the 2009 column on or above the 100 percent line does not meet the standard for its NSSP classification. Of the approved stations, EP 17.5 has shown a steady increase over the past three years and no longer meets approved classification standards. Point sources of pollution (malfunctioning septic systems) found by a DEP survey in the upper Chandler River may be the cause of this steady increase. Overall, stations EP 5, 6, 14.6, and 21 are showing consistent downward trends (improving water quality) over the past three years. Reasons for these changes are unknown. The remainder of approved stations in growing area EP have either shown little change in scores over the past 3 years, or inconclusive trends.

Figure 3 shows P90 trends for prohibited stations. Stations EP 16 and 17 are embedded in Area No. 54H, in the upper Chandler River. These two stations fluctuate but remain consistently above the approved classification standard. They also fall below the upper cutoff for restricted classification but must remain prohibited due to the close proximity of malfunctioning septic systems.



Figure 2. Area EP P90 Scores for Approved Stations (expressed as the percent of the Approved standard), 2007-2009

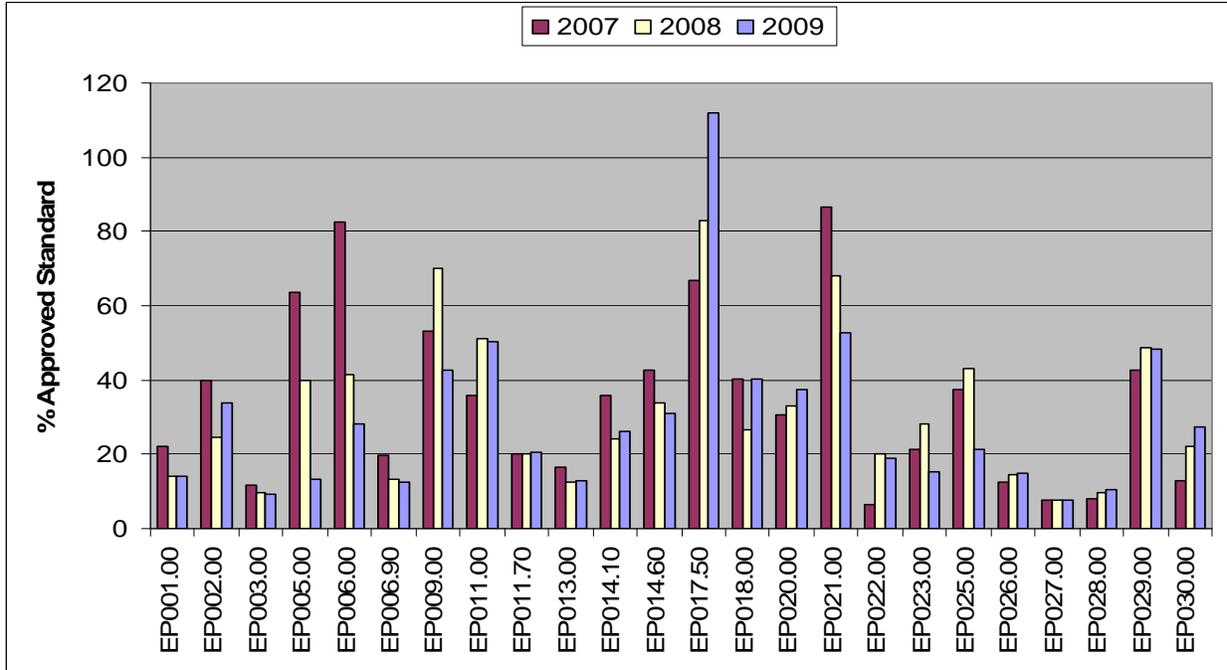
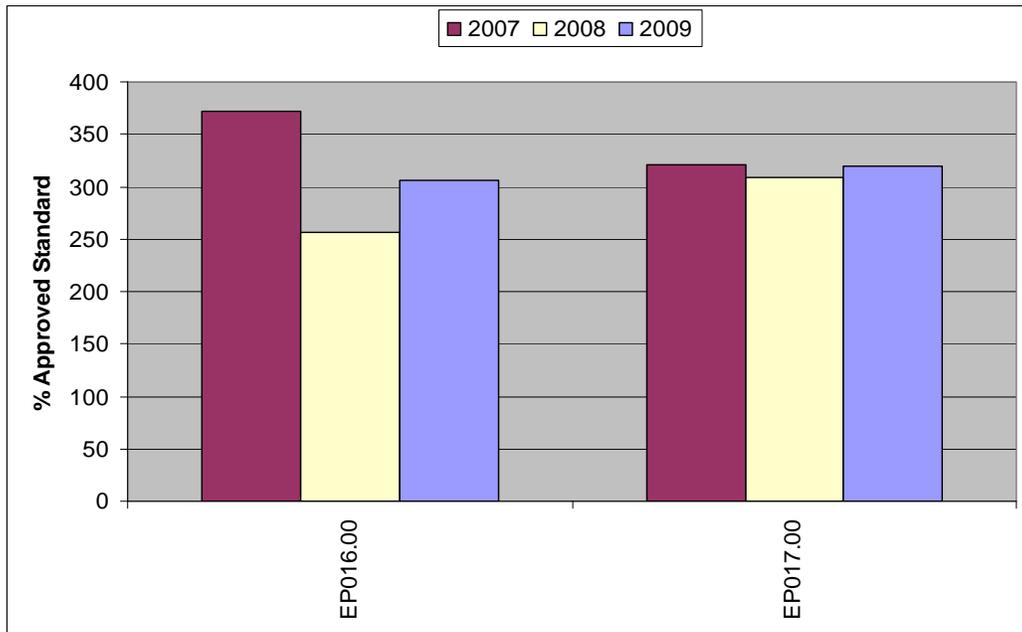


Figure 3. Area EP P90 Scores for Prohibited Stations (expressed as the percent of the Approved standard), 2007-2009





## Recommendations for Upward Classification

There are no recommendations for upward classification at this time.

## Shoreline Survey Activity

A full shoreline survey of the Chandler River in the vicinity of Jonesboro was conducted by the Maine Department of Environmental Protection (DEP) during the 2008 and 2009 seasons. Final results of the survey are not available as of this report date. However, preliminary information shows over 15 malfunctioning septic systems in the vicinity of stations EP 16, 17, and 17.5.

## Aquaculture/Wet Storage Activity

There are no aquaculture lease sites in Growing Area EP.

## Classification Changes

On March 8, 2010, a portion of the Chandler River, Jonesboro was downgraded in classification, from approved to prohibited, due to water quality exceeding the approved standard and malfunctioning septic systems in the vicinity. Station EP 17.5 showed a P90 increase to 39.2 which exceeds the approved standard. The closure line was moved down to station EP 18, which has a geomean of 3.8 FC/100ml and a P90 calculation of 14.1 FC/100ml, this meets approved classification standards. See maps below in Figures 4 and 5.

No upward reclassifications are being proposed as a result of this annual review.



Figure 4. Area No. 54H before reclassification

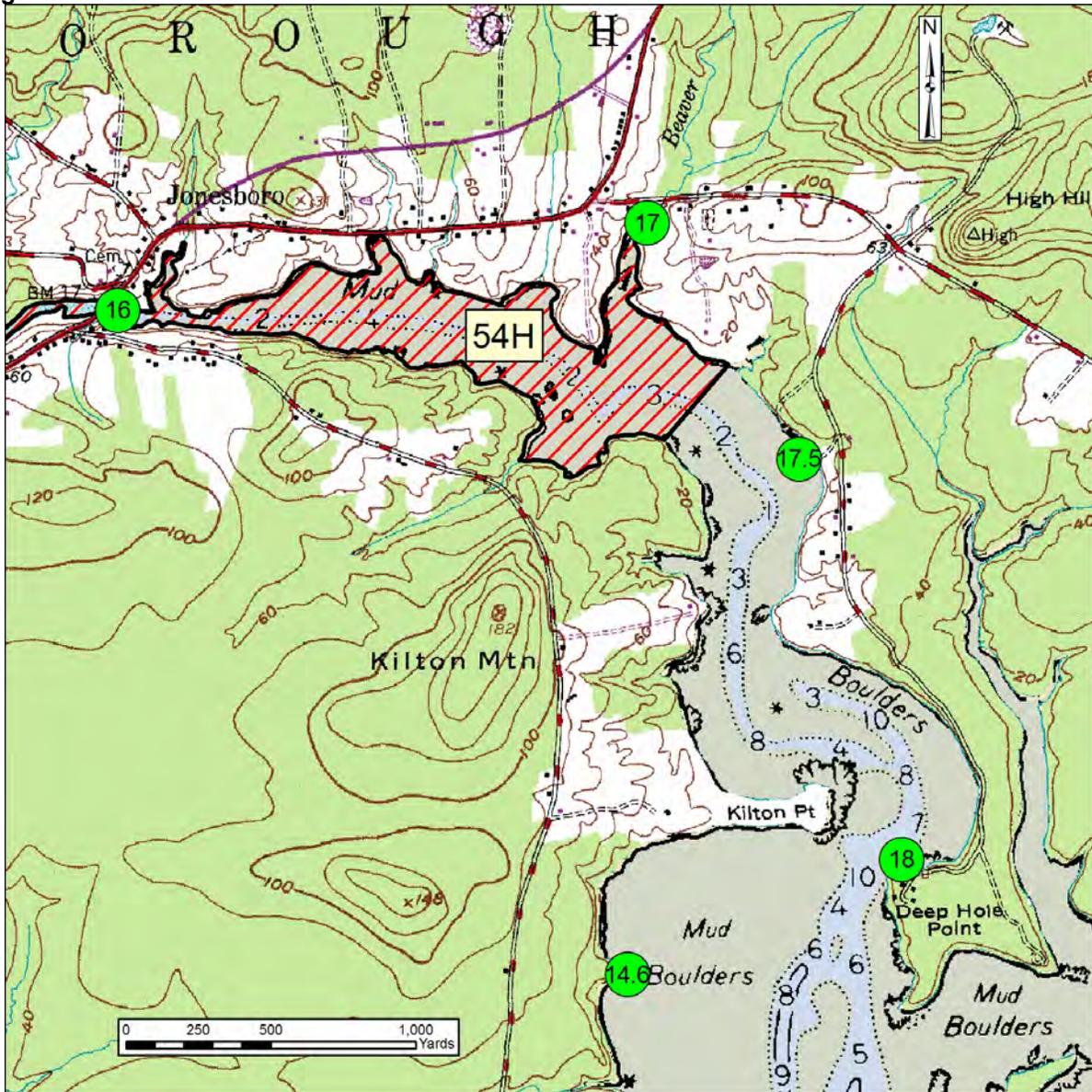
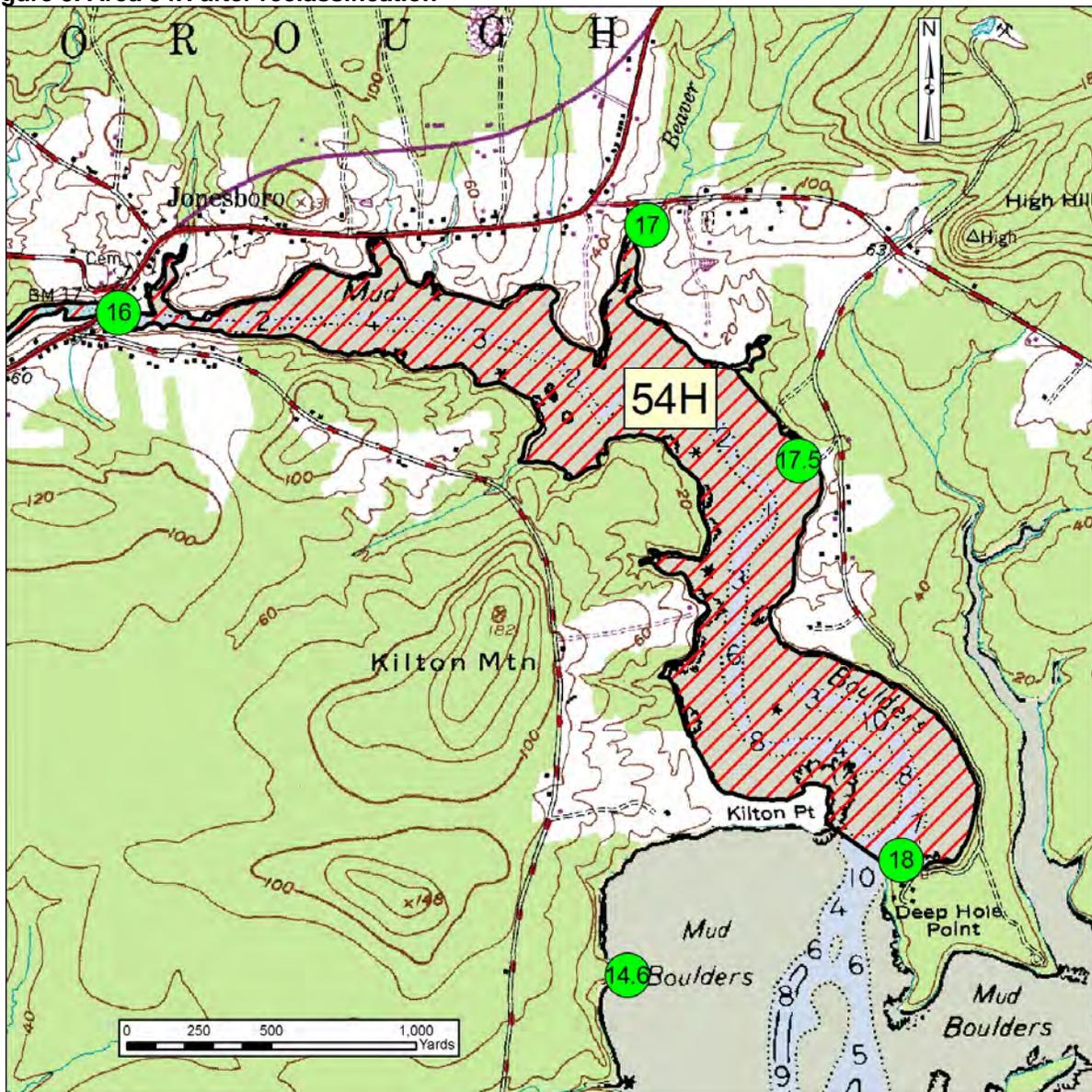




Figure 5. Area 54H after reclassification





## Summary

As a result of this annual review, a portion of the Chandler River, Jonesboro was downgraded in classification on March 8, 2010, from approved to prohibited, due to water quality exceeding the approved standard. This degradation of water quality is the suspected result of several malfunctioning septic systems in the downtown Jonesboro area, which in turn would impact station 17.5. Close work with the local plumbing inspector, DEP, and the the division within Maine Department of Health and Human Services (DHHS) that oversees plumbing inspectors; along with increased stream samples in the problem area in 2010 will monitor the abatement process of these malfunctioning systems. Once corrected, pollution area 54H may be assessed for an upward classification change. No areas in growing area EP are being proposed for an upward classification as a result of this annual review.

Water quality at all other stations supports their current NSSP classifications. Overall, stations 5, 6, 14.6, and 21 are showing consistent downward trends (improving water quality) over the past three years. Reasons for these changes are inconclusive. The remainder of approved stations in growing area EP have either shown little change in scores over the past 3 years, or inconclusive trends.



## Appendix A. Key to Water Quality Table Headers

Station = water quality monitoring station

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

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

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

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

SDV = standard deviation

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

P90 = 90th percentile

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

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



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

Station	Date	Strategy	Open Closed	Class	Adversity	Temp	Salinity	Tide	Wind	Col Score
EP001.00	2/18/2009	R	O	A		2	31	E	CL	2
	4/8/2009	R	O	A	P	4	30	F	N	<2
	6/8/2009	R	O	A		10	32	H	W	<2
	7/14/2009	R	O	A	O	17	30	HF	SW	<2
	8/25/2009	R	O	A	P	17	32	HF	NW	<2
	10/20/2009	R	O	A	O	6	32	E	SW	9.1
EP002.00	2/18/2009	R	O	A		2	31	E	CL	<2
	4/8/2009	R	O	A	P	4	30	F	N	<2
	6/8/2009	R	O	A		10	31	HE	W	4
	7/14/2009	R	O	A	O	15	30	HF	SW	<2
	8/25/2009	R	O	A	P	15	31	HF	NW	320
	10/20/2009	R	O	A	O	6	32	E	W	<2
EP003.00	2/18/2009	R	O	A		2	30	E	CL	<2
	4/8/2009	R	O	A	P	4	30	HF	N	<2
	6/8/2009	R	O	A		10	32	H	W	<2
	7/14/2009	R	O	A	O	15	30	HF	SW	<2
	8/25/2009	R	O	A	P	12	32	F	NW	<2
	10/20/2009	R	O	A	O	6	32	E	W	<2
EP005.00	2/18/2009	R	O	A		3	31	E	CL	<2
	4/8/2009	R	O	A	P	4	30	HF	N	<2
	6/3/2009	R	O	A		7	30	E	SW	<2
	7/14/2009	R	O	A	O	13	30	LF	S	<2
	8/25/2009	R	O	A	P	14	31	F	NW	4
	10/19/2009	R	O	A	P	8	30	HE	N	7.3
EP006.00	2/18/2009	R	O	A		2	30	E	CL	<2
	4/8/2009	R	O	A	P	4	30	HF	N	<2
	6/3/2009	R	O	A		7	30	E	SW	2
	7/14/2009	R	O	A	O	14	30	LF	S	<2
	8/25/2009	R	O	A	P	14	31	F	NW	5.4
	10/19/2009	R	O	A	P	8	30	HE	N	3.6
EP006.90	2/18/2009	R	O	A		2	32	E	CL	<2
	4/8/2009	R	O	A	P	4	29	HF	N	2
	6/3/2009	R	O	A		7	30	E	S	<2
	7/14/2009	R	O	A	O	13	30	LF	SE	<2
	8/25/2009	R	O	A	P	15	31	F	NW	10
	10/19/2009	R	O	A	P	9	28	HE	N	6
EP009.00	3/25/2009	R	O	A		3	29	H	N	<2
	4/8/2009	R	O	A	P	4	24	HF	N	4
	6/3/2009	R	O	A		7	30	E	N	<2
	7/14/2009	R	O	A	O	14	29	F	NE	2
	8/25/2009	R	O	A	P	16	31	F	NW	3.6
	10/19/2009	R	O	A	P	9	28	HE	N	24
EP011.00	3/25/2009	R	O	A		3	30	HE	N	<2
	4/8/2009	R	O	A	P	4	24	HF	N	<2



Station	Date	Strategy	Open Closed	Class	Adversity	Temp	Salinity	Tide	Wind	Col Score
	6/3/2009	R	O	A		9	30	E	N	<2
	7/14/2009	R	O	A	O	13	30	H	CL	<2
	8/25/2009	R	O	A	P	16	28	F	NW	5.4
	10/19/2009	R	O	A	P	9	30	HE	N	<2
EP011.70	3/25/2009	R	O	A		3	30	HE	N	<2
	4/8/2009	R	O	A	P	4	16	HF	N	4
	6/3/2009	R	O	A		10	31	E	N	<2
	7/14/2009	R	O	A	O	14	29	H	CL	<2
	8/25/2009	R	O	A	P	18	30	F	NW	10
	10/19/2009	R	O	A	P	9	30	H	N	4
EP013.00	4/8/2009	R	O	A	P	4	25	H	N	<2
	4/21/2009	R	O	A	P	5	26	E	SE	<2
	6/3/2009	R	O	A		8	30	E	CL	<2
	7/14/2009	R	O	A	O	13	28	H	CL	<2
	8/25/2009	R	O	A	P	17	30	F	CL	4
	10/19/2009	R	O	A	P	9	27	H	N	20
EP014.10	4/8/2009	R	O	A	P	4	25	H	N	<2
	4/21/2009	R	O	A	P	5	26	E	SE	<2
	6/3/2009	R	O	A		9	30	E	SW	<2
	7/14/2009	R	O	A	O	18	28	H	CL	4
	8/25/2009	R	O	A	P	16	27	F	CL	10
	10/19/2009	R	O	A	P	8	27	H	N	13
EP014.60	4/8/2009	R	O	A	P	4	25	H	N	<2
	4/21/2009	R	O	A	P	5	24	E	SE	2
	6/3/2009	R	O	A		10	30	E	SW	<2
	7/14/2009	R	O	A	O	19	28	H	CL	4
	8/25/2009	R	O	A	P	16	29	F	NW	6
	10/19/2009	R	O	A	P	8	27	H	N	<2
EP016.00	4/8/2009	R	C	P	P	3	0	H	N	14
	4/21/2009	R	C	P	P	5	0	E	SE	8
	6/3/2009	R	C	P		12	5	E	N	82
	7/14/2009	R	C	P	O	18	22	HF	CL	33
	8/25/2009	R	C	P	P	16	15	F	NW	122
	10/19/2009	R	C	P	P	8	21	H	N	30
EP017.00	3/18/2009	R	C	P		3	0	LF	S	2
	4/8/2009	R	C	P	P	3	0	H	N	2
	6/3/2009	R	C	P		11	0	E	CL	6
	7/14/2009	R	C	P	O	17	20	HF	CL	40
	8/25/2009	R	C	P	P	18	16	F	CL	76
	10/19/2009	R	C	P	P	8	2	H	N	34
EP017.50	3/11/2009	R	O	A	S	0	29	HF	SE	<2
	4/8/2009	R	O	A	P	3	0	H	N	12
	6/3/2009	R	O	A		12	22	E	NW	4
	7/14/2009	R	O	A	O	16	27	HF	W	6
	8/25/2009	R	O	A	P	19	26	F	NW	220
	10/19/2009	R	O	A	P	8	25	H	N	6



Station	Date	Strategy	Open Closed	Class	Adversity	Temp	Salinity	Tide	Wind	Col Score
EP018.00	3/11/2009	R	O	A	S	0	28	HF	SE	<2
	4/8/2009	R	O	A	P	4	24	H	N	<2
	6/3/2009	R	O	A		10	26	E	W	<2
	7/14/2009	R	O	A	O	15	24	F	SW	4
	8/25/2009	R	O	A	P	16	31	F	NW	9.1
	10/19/2009	R	O	A	P	9	26	H	N	120
EP020.00	4/8/2009	R	O	A	P	3	0	H	N	<2
	4/21/2009	R	O	A	P	5	26	E	SE	<2
	6/10/2009	R	O	A	P	10	30	HE	N	2
	7/14/2009	R	O	A	O	18	26	HF	W	2
	8/25/2009	R	O	A	P	18	27	HF	CL	6
	10/19/2009	R	O	A	P	8	22	HF	N	54
EP021.00	3/11/2009	R	O	A	S	0	12	HF	SE	42
	4/8/2009	R	O	A	P	4	6	H	N	6
	6/10/2009	R	O	A	P	10	31	HE	SE	<2
	7/14/2009	R	O	A	O	20	28	HF	S	13
	8/25/2009	R	O	A	P	21	28	HF	NW	22
	10/19/2009	R	O	A	P	9	30	HF	N	2
EP022.00	2/18/2009	R	O	A		3	31	LE	CL	<2
	4/8/2009	R	O	A	P	4	26	H	N	<2
	6/3/2009	R	O	A		10	30	E	W	<2
	7/14/2009	R	O	A	O	17	30	F	S	<2
	8/25/2009	R	O	A	P	17	31	HF	NW	3.6
	10/19/2009	R	O	A	P	9	30	HF	N	6
EP023.00	2/18/2009	R	O	A		2	31	LE	N	<2
	4/8/2009	R	O	A	P	4	26	HE	N	<2
	6/3/2009	R	O	A		8	30	E	W	<2
	7/14/2009	R	O	A	O	13	30	F	SW	4
	8/25/2009	R	O	A	P	14	32	HF	NW	2
	10/19/2009	R	O	A	P	8	32	HF	N	<2
EP025.00	2/18/2009	R	O	A		3	14	LE	N	<2
	4/8/2009	R	O	A	P	4	25	HE	N	<2
	6/10/2009	R	O	A	P	7	31	HE	SE	<2
	7/14/2009	R	O	A	O	16	28	F	SW	<2
	8/25/2009	R	O	A	P	15	30	HF	NW	8
	10/19/2009	R	O	A	P	8	30	HF	N	2
EP026.00	5/11/2009	R	O	A	P	8	30	HF	CL	<2
	5/26/2009	R	O	A		9	30	HF	S	<2
	7/29/2009	R	O	A	P	12	30	F	S	<2
	8/19/2009	R	O	A	O	16	31	E	S	<2
	9/30/2009	R	O	A	P	13	32	E	SW	<2
	10/19/2009	R	O	A	P	9	32	H	NW	<2
EP027.00	5/11/2009	R	O	A	P	7	31	HF	CL	<2
	5/26/2009	R	O	A		7	31	HF	S	<2
	7/29/2009	R	O	A	P	12	31	LF	S	<2
	8/19/2009	R	O	A	O	14	31	E	S	<2



Station	Date	Strategy	Open Closed	Class	Adversity	Temp	Salinity	Tide	Wind	Col Score
	9/30/2009	R	O	A	P	12	32	LE	SW	<2
	10/19/2009	R	O	A	P	9	32	H	NW	<2
EP028.00	5/11/2009	R	O	A	P	6	31	HF	CL	<2
	5/26/2009	R	O	A		6	32	HF	S	<2
	7/29/2009	R	O	A	P	12	30	LF	SW	<2
	8/19/2009	R	O	A	O	17	30	E	S	6
	9/30/2009	R	O	A	P	15	30	LE	SW	<2
	10/19/2009	R	O	A	P	9	32	H	NW	<2
EP029.00	2/18/2009	R	O	A		3	31	L	N	<2
	4/8/2009	R	O	A	P	4	12	HE	N	2
	6/10/2009	R	O	A	P	7	32	HE	S	<2
	7/14/2009	R	O	A	O	15	30	F	SW	<2
	8/25/2009	R	O	A	P	16	25	HF	NW	50
	10/19/2009	R	O	A	P	8	30	HF	N	29
EP030.00	2/18/2009	R	O	A		3	32	L	N	<2
	4/8/2009	R	O	A	P	4	12	HE	N	<2
	6/3/2009	R	O	A		8	30	LE	SW	<2
	7/14/2009	R	O	A	O	13	30	F	CL	<2
	8/25/2009	R	O	A	P	15	32	HF	NW	20
	10/19/2009	R	O	A	P	8	30	HF	N	18