



**GROWING AREA EG**

**Newbury Neck, Surry to Wonderland, Southwest Harbor  
Hancock County, Maine**

**ANNUAL REVIEW for 2009**

**Report Date: May 6, 2010**

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**APPROVAL**

Division Director:

\_\_\_\_\_ Date: \_\_\_\_\_  
Print name signature



**Table of Contents**

Executive Summary .....5  
Growing Area Description .....5  
Current Classification(s).....5  
Current Management Plan(s) for Conditional Area(s).....6  
Current Annual Review of Management Plan(s).....6  
Water Quality Review and Discussion .....8  
Recommendations for Upward Classification .....13  
Shoreline Survey Activity .....13  
Aquaculture/Wet Storage Activity .....13  
Classification Changes .....14  
Summary.....14  
Recommendation for Future Work.....14  
Appendix A. Annual Review of Conditional Area Management Plan C40 .....15  
Appendix B. Key to Water Quality Table Headers .....20  
Appendix C. Transition to Membrane Filtration.....21  
Appendix D. Growing Area EG 2009 Data.....22

**List of Tables**

Table 1. Pollution Area 40, Days Closed in 2009 .....6  
Table 2. Conditionally Approved Stations Sample Count for 2009 .....7  
Table 3. Geomean and P90 Scores, Growing Area EG, 2005-2009 .....8  
Table 4. Union River WWTP Conditional Area, Open Status, 2005-2009 .....9  
Table 5. EG Samples Collected in 2009 .....10

**List of Figures**

Figure 1. Growing Area EG part 1, with Active Water Stations.....3  
Figure 2. Growing Area EG part 2, with Active Water Stations.....4  
Figure 3. Area EG P90 Scores for Approved Stations (expressed as the percent of the approved standard), 2005-2009.....12  
Figure 4. Area EG P90 Scores for Restricted Stations (expressed as the percent of the restricted standard), 2005-2009.....12  
Figure 5. Area EG P90 Scores for CA Stations in open period (expressed as the percent of the approved standard), 2005-2009.....13



Figure 1. Growing Area EG part 1, with Active Water Stations

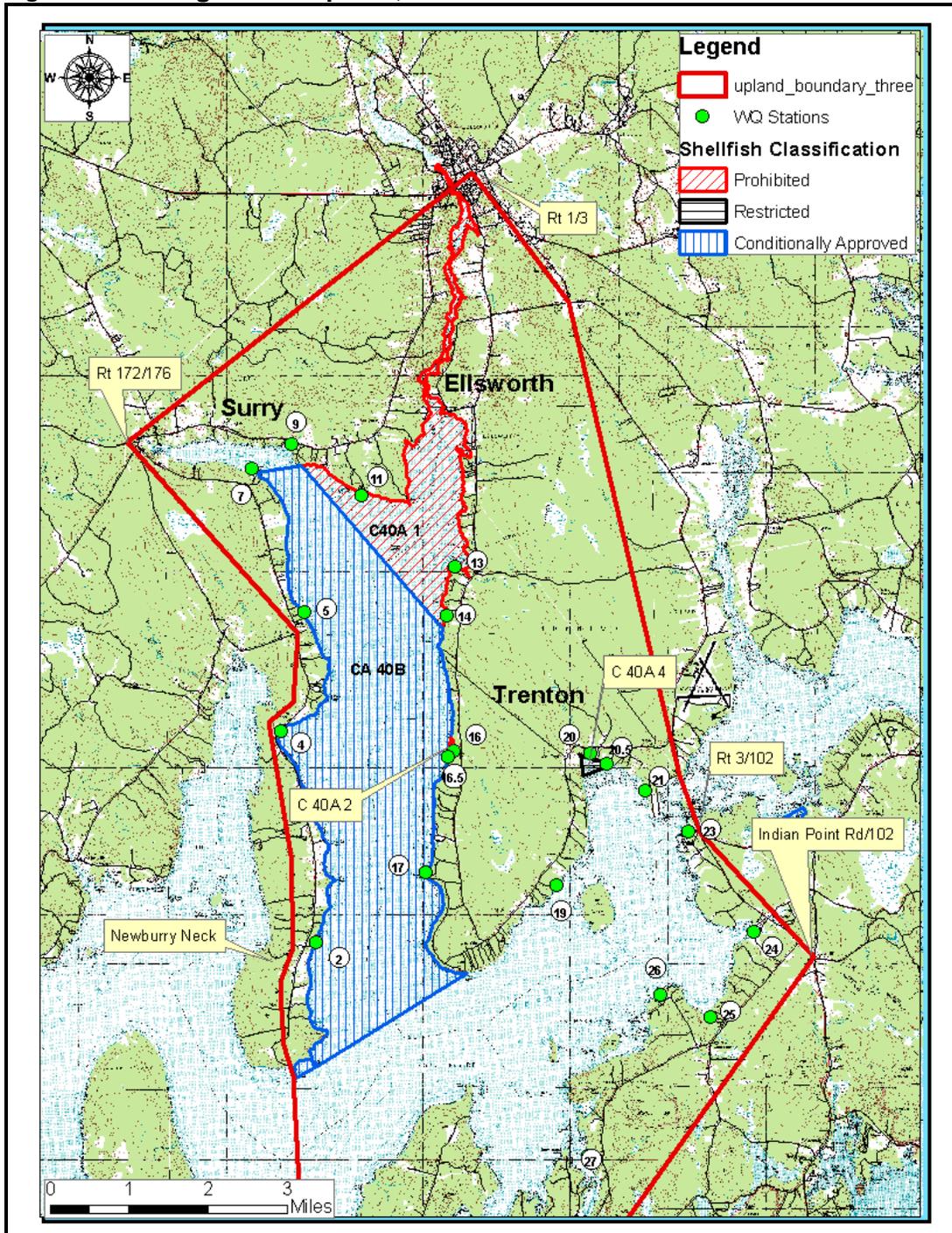
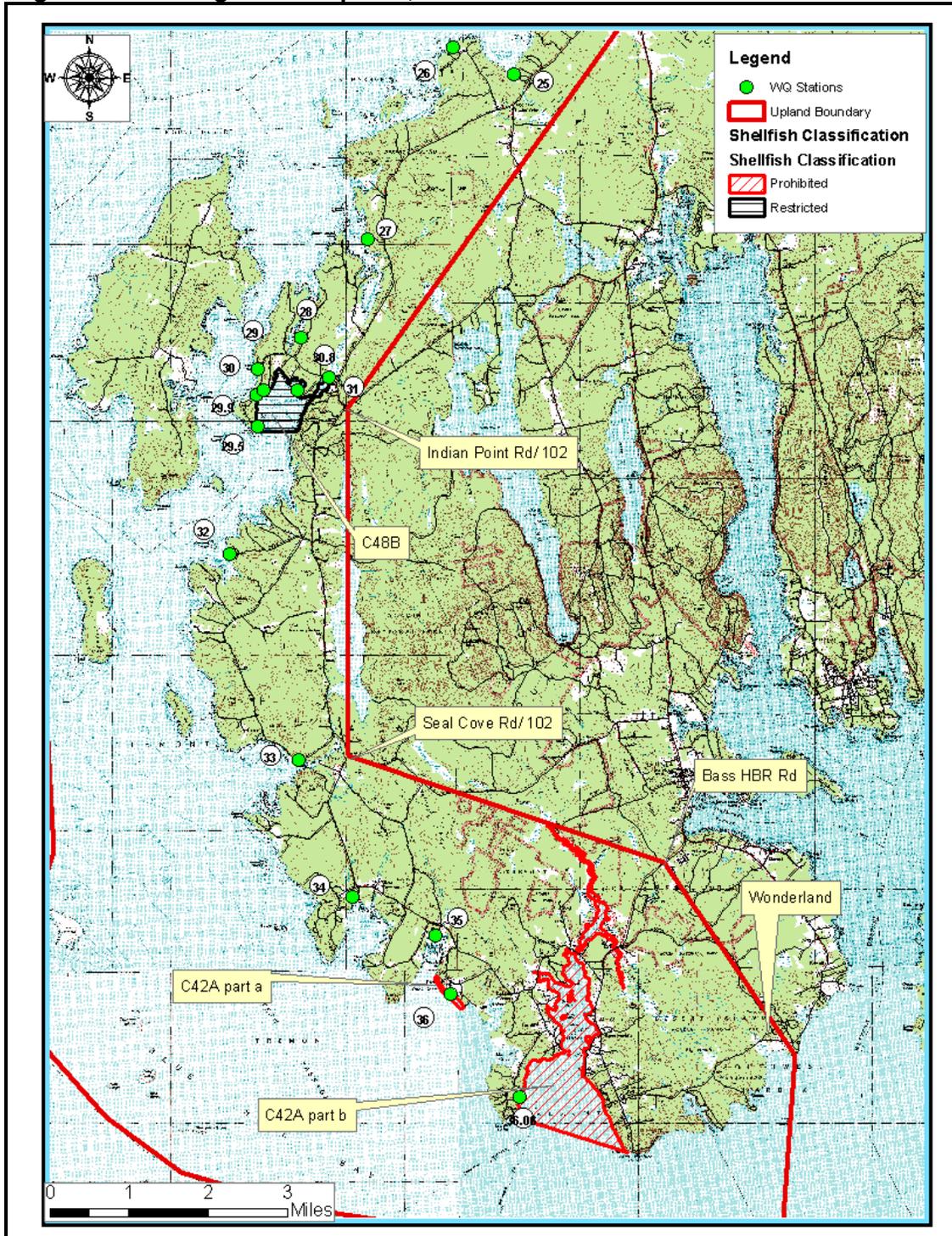




Figure 2. Growing Area EG part 2, with Active Water Stations





## Executive Summary

This is an annual report for growing area EG written in compliance with the requirements of the 2007 Model Ordinance and the National Shellfish Sanitation Program. The next triennial for this area is due in 2010 and the next sanitary survey is due in 2019.

During the 2009 review year, two stations were deactivated based on the fact they are embedded in current prohibited zones. These stations, EG 8 and 37 were located in areas currently classified as prohibited due to licensed overboard discharges (OBD's). Two new wet storage sites were added; one at Bartlett Island and the other at the Trenton Bridge Lobster Pound.

## Growing Area Description

Growing area EG falls within Hancock County. It extends from the southern tip of Newbury Neck in the town of Surry to Wonderland in Southwest Harbor on Mount Desert Island. This area includes numerous small harbors and small streams in the towns of Surry, Ellsworth, Trenton, Bar Harbor, Mount Desert, Tremont and Southwest Harbor (Figure 1).

Known pollution sources for this area consist of one municipal wastewater treatment plant (WWTP) in Ellsworth, 30 licensed OBD's, several areas showing non-point runoff issues, one seasonal campground and two small agricultural farms. There are 5 aquaculture lease sites in this growing area. Three are suspended culture for blue mussels located near Hardwood Island and Tinker Island, one is a limited purpose site for the over-wintering of American and European oysters located in the Mill Pond in the town of Mt Desert and the other is a bottom culture site for hard shell clams located in Goose Cove, Trenton. There are three wet storage sites; two for blue mussels located in Bartlett Narrows and one for softshell clams located in Western Bay near the Trenton Bridge.

## Current Classification(s)

Shellfish growing area EG currently has areas classified as:

**Approved:** 16 sample sites EG 19, 20.5, 21, 23, 24, 25, 26, 27, 28, 29, 29.5, 32, 33, 34, 35 and 36.06.

**Conditionally Approved:** Pollution Area 40 B; Performance of Ellsworth WWTP; 7 sample sites EG 2, 4, 5, 7, 14, 16.5, and 17.

**Restricted:** Pollution area 40 A (4): Due to non point runoff; 1 sample site: EG 20.  
Pollution Area 48 B: non point runoff; 3 sample sites 29.9, 30, 30.8 and 31.

**Prohibited:** Pollution Area 40 A (1): Due to proximity to Ellsworth's WWTP outfall and 3 OBD's; 5 sample sites; EG 7, 9, 11, 13 and 14.  
Pollution Area 40 A: (2) failing water quality unknown cause; one sample site EG 16.



Pollution Area 42 A: Due to OBD; one sample site EG 36.

Pollution Area 42 B: Due to OBD; no sample sites in area on boundary; sample site EG 36.06.

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

**Activity during Review Period**

- **Classification Changes:** none
- **Conditional Area Closures:** The WWTP CA Area No. 40 was closed 3 times on the following dates: April 7, 2009, June 18, 2009, and October 26, 2009
- **OBD's Removed:** None
- **Aquaculture/Wet Storage:** Three new wet storage permits were issued in 2009

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

There is one conditionally managed area in growing area EG:

Pollution Area 40 B; Conditional on Performance of WWTP; 7 sample sites: EG 2, 4, 5, 7, 14, 16.5 and 17

Management plans for EG conditional areas can be found in DMR's central files. The management plan was last updated in February of 2010.

**Current Annual Review of Management Plan(s)**

During the 2009 review period the WWTP CA Area No. 40 was closed 3 times. The following chart shows the dates closed and opened along with a total of all days closed for the year.

**Table 1. Pollution Area 40, Days Closed in 2009**

| Closed             | Opened     | Days Closed |
|--------------------|------------|-------------|
| 4/7/2009           | 5/6/2009   | 22          |
| 6/18/2009          | 7/29/2009  | 41          |
| 10/26/2009         | 12/29/2009 | 47          |
| <b>Grand Total</b> |            | <b>110</b>  |

All CA sample stations with the exception of 16.5 were collected 9 times during the open status in 2009. EG 16.5 was not added to the CA sampling run until September of 2009.

A review of this conditional area indicates that it meets the conditions set forth in its management plan. For the complete annual review see Appendix A.



**Table 2. Conditionally Approved Stations Sample Count for 2009**

| Station  | Date      | Strategy | Status | Col | Total Samples |
|----------|-----------|----------|--------|-----|---------------|
| EG002.00 | 05-Jan-09 | R        | O      | 1.9 | 9             |
|          | 03-Feb-09 | R        | O      | 1.9 |               |
|          | 03-Mar-09 | R        | O      | 1.9 |               |
|          | 06-Apr-09 | R        | O      | 1.9 |               |
|          | 03-May-09 | R        | O      | 1.9 |               |
|          | 02-Jun-09 | R        | O      | 1.9 |               |
|          | 04-Aug-09 | R        | O      | 6   |               |
|          | 09-Sep-09 | R        | O      | 1.9 |               |
|          | 06-Oct-09 | R        | O      | 2   |               |
| EG004.00 | 05-Jan-09 | R        | O      | 1.9 | 9             |
|          | 03-Feb-09 | R        | O      | 2   |               |
|          | 03-Mar-09 | R        | O      | 1.9 |               |
|          | 06-Apr-09 | R        | O      | 1.9 |               |
|          | 03-May-09 | R        | O      | 1.9 |               |
|          | 02-Jun-09 | R        | O      | 1.9 |               |
|          | 04-Aug-09 | R        | O      | 2   |               |
|          | 09-Sep-09 | R        | O      | 1.9 |               |
|          | 06-Oct-09 | R        | O      | 6   |               |
| EG005.00 | 05-Jan-09 | R        | O      | 1.9 | 9             |
|          | 03-Feb-09 | R        | O      | 1.9 |               |
|          | 03-Mar-09 | R        | O      | 1.9 |               |
|          | 06-Apr-09 | R        | O      | 1.9 |               |
|          | 03-May-09 | R        | O      | 1.9 |               |
|          | 02-Jun-09 | R        | O      | 1.9 |               |
|          | 04-Aug-09 | R        | O      | 12  |               |
|          | 09-Sep-09 | R        | O      | 16  |               |
|          | 06-Oct-09 | R        | O      | 2   |               |
| EG007.00 | 05-Jan-09 | R        | O      | 1.9 | 9             |
|          | 18-Feb-09 | R        | O      | 1.9 |               |
|          | 03-Mar-09 | R        | O      | 1.9 |               |
|          | 06-Apr-09 | R        | O      | 1.9 |               |
|          | 03-May-09 | R        | O      | 1.9 |               |
|          | 02-Jun-09 | R        | O      | 1.9 |               |
|          | 04-Aug-09 | R        | O      | 1.9 |               |
|          | 09-Sep-09 | R        | O      | 1.9 |               |
|          | 06-Oct-09 | R        | O      | 2   |               |
| EG014.00 | 05-Jan-09 | R        | O      | 1.9 | 9             |
|          | 18-Feb-09 | R        | O      | 1.9 |               |
|          | 03-Mar-09 | R        | O      | 2   |               |



| Station  | Date      | Strategy | Status | Col | Total Samples |
|----------|-----------|----------|--------|-----|---------------|
|          | 06-Apr-09 | R        | O      | 1.9 |               |
|          | 03-May-09 | R        | O      | 1.9 |               |
|          | 02-Jun-09 | R        | O      | 1.9 |               |
|          | 04-Aug-09 | R        | O      | 2   |               |
|          | 09-Sep-09 | R        | O      | 2   |               |
|          | 06-Oct-09 | R        | O      | 66  |               |
| EG016.50 | 09-Sep-09 | R        | O      | 1.9 | 2             |
|          | 21-Oct-09 | R        | O      | 1.9 |               |
| EG017.00 | 05-Jan-09 | R        | O      | 1.9 | 9             |
|          | 03-Feb-09 | R        | O      | 1.9 |               |
|          | 03-Mar-09 | R        | O      | 1.9 |               |
|          | 06-Apr-09 | R        | O      | 1.9 |               |
|          | 03-May-09 | R        | O      | 1.9 |               |
|          | 02-Jun-09 | R        | O      | 1.9 |               |
|          | 04-Aug-09 | R        | O      | 2   |               |
|          | 09-Sep-09 | R        | O      | 1.9 |               |
|          | 06-Oct-09 | R        | O      | 4   |               |

### Water Quality Review and Discussion

Table 1 lists all active approved, restricted and prohibited stations in Growing Area EG, with their respective Geomean and P90 calculations for 2009. Please refer to Appendix B 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 and Appendix C of this report.

All approved stations met their NSSP classification standard in 2009. EG 30 currently meets the standard for approved classification but due to an identified issue with feces in a rack line, this station will remain classified as restricted. Station EG 29.9 and 30.8 are new stations that were activated on either side of EG 30 in 2008 to defend a possible line change. These two stations now have 15 samples.

**Table 3. Geomean and P90 Scores, Growing Area EG, 2005-2009**

| Station  | Class | Count | MFCnt | GM  | SDV  | MAX | P90  | Appd_Std | Restr_Std |
|----------|-------|-------|-------|-----|------|-----|------|----------|-----------|
| EG009.00 | P     | 30    | 20    | 5.8 | 0.6  | 136 | 34.8 | 36       | 199       |
| EG011.00 | A     | 30    | 20    | 4   | 0.41 | 43  | 13.8 | 36       | 199       |
| EG013.00 | P     | 30    | 20    | 4.1 | 0.43 | 52  | 14.5 | 35       | 196       |



| Station  | Class | Count | MFCOUNT | GM  | SDV  | MAX  | P90  | Appd_Std | Restr_Std |
|----------|-------|-------|---------|-----|------|------|------|----------|-----------|
| EG016.00 | P     | 30    | 21      | 6.3 | 0.56 | 112  | 33.6 | 35       | 195       |
| EG019.00 | A     | 30    | 20      | 2.9 | 0.41 | 144  | 10.2 | 36       | 199       |
| EG020.00 | R     | 30    | 20      | 6.4 | 0.59 | 240  | 36.7 | 36       | 199       |
| EG020.50 | A     | 30    | 20      | 4.2 | 0.48 | 93   | 17.9 | 36       | 199       |
| EG021.00 | A     | 30    | 20      | 3.3 | 0.32 | 23   | 8.5  | 36       | 199       |
| EG023.00 | A     | 30    | 20      | 3.3 | 0.38 | 56   | 10.3 | 36       | 199       |
| EG024.00 | A     | 30    | 20      | 4.4 | 0.51 | 94   | 20.2 | 36       | 199       |
| EG025.00 | A     | 30    | 20      | 4.2 | 0.62 | 1340 | 26.8 | 36       | 199       |
| EG026.00 | A     | 30    | 20      | 2.3 | 0.12 | 6    | 3.4  | 36       | 199       |
| EG027.00 | A     | 30    | 20      | 3.3 | 0.41 | 43   | 11.2 | 36       | 199       |
| EG028.00 | A     | 30    | 20      | 3.6 | 0.64 | 1240 | 24.7 | 36       | 199       |
| EG029.00 | A     | 30    | 20      | 3   | 0.39 | 82   | 9.7  | 36       | 199       |
| EG029.50 | A     | 30    | 20      | 3.2 | 0.42 | 122  | 11.5 | 36       | 199       |
| EG029.90 | new   | 15    | 15      | 2.5 | 0.4  | 72   | 8.7  | 31       | 163       |
| EG030.00 | R     | 30    | 20      | 4.1 | 0.58 | 340  | 22.8 | 36       | 199       |
| EG030.80 | new   | 15    | 15      | 3.1 | 0.37 | 20   | 9.6  | 31       | 163       |
| EG031.00 | R     | 30    | 20      | 4.3 | 0.53 | 300  | 21   | 36       | 199       |
| EG032.00 | A     | 30    | 20      | 2.9 | 0.27 | 20   | 6.6  | 36       | 199       |
| EG033.00 | A     | 30    | 20      | 5   | 0.59 | 204  | 29.2 | 36       | 199       |
| EG034.00 | A     | 30    | 20      | 4.7 | 0.54 | 138  | 23.7 | 36       | 199       |
| EG035.00 | A     | 30    | 20      | 4   | 0.39 | 34   | 13   | 36       | 199       |
| EG036.00 | A     | 30    | 20      | 3.2 | 0.57 | 1700 | 18   | 36       | 199       |
| EG036.06 | A     | 30    | 20      | 2.7 | 0.28 | 46   | 6.2  | 36       | 199       |
| EG043.00 | A     | 30    | 26      | 2   | 0.06 | 3.2  | 2.4  | 32       | 176       |

Table 3 lists all conditionally approved stations in the Union River WWTP conditional area with their respective Geomean and P90 calculations for 2009. Data for conditionally approved stations reflects only the open status. All stations met the approved standard during open status. Station EG 16.5 only has three samples because it was activated in September of 2009.

**Table 4. Union River WWTP Conditional Area, Open Status, 2005-2009**

| Station  | Class | Count | MFCOUNT | GM  | SDV  | MAX  | P90  | Appd_Std |
|----------|-------|-------|---------|-----|------|------|------|----------|
| EG002.00 | CA    | 30    | 28      | 2.7 | 0.3  | 17.9 | 6.5  | 31       |
| EG004.00 | CA    | 30    | 30      | 2.9 | 0.4  | 140  | 9.5  | 31       |
| EG005.00 | CA    | 30    | 27      | 3.2 | 0.39 | 24   | 10.4 | 31       |
| EG007.00 | CA    | 30    | 28      | 3.1 | 0.34 | 20   | 8.7  | 31       |
| EG014.00 | CA    | 30    | 29      | 3.6 | 0.53 | 260  | 17.6 | 31       |
| EG016.50 | New   | 3     | 3       | 1.9 | 0.01 | 2    |      |          |
| EG017.00 | CA    | 30    | 29      | 2.8 | 0.33 | 18.2 | 7.5  | 31       |

All stations that were active at the beginning of 2009 were sampled the required number of times under the 2007 NSSP guidelines (Table 4 and Appendix D). At some stations, additional samples were collected under adverse flood conditions.



**Table 5. EG Samples Collected in 2009**

| Station  | Class | Status | Adverse | Random | Total Of Sample Count | COMMENTS  |
|----------|-------|--------|---------|--------|-----------------------|---|
| EG002.00 | CA    | C      | 2       |        | 18                    |   |
|          | CA    | C      |         | 3      |                       |   |
|          | CA    | O      | 2       |        |                       |   |
|          | CA    | O      |         | 11     |                       |   |
| EG004.00 | CA    | C      | 13      |        | 27                    | 13 flood samples                                |
|          | CA    | C      |         | 3      |                       |   |
|          | CA    | O      | 1       |        |                       |   |
|          | CA    | O      |         | 10     |                       |   |
| EG005.00 | CA    | C      | 2       |        | 18                    |   |
|          | CA    | C      |         | 3      |                       |   |
|          | CA    | O      | 2       |        |                       |   |
|          | CA    | O      |         | 11     |                       |   |
| EG007.00 | CA    | C      | 2       |        | 15                    |   |
|          | CA    | C      |         | 2      |                       |   |
|          | CA    | O      | 1       |        |                       |   |
|          | CA    | O      |         | 10     |                       |   |
| EG008.00 | P     | C      |         | 1      | 1                     | De-activated; embedded in prohibited area; 4-09 |
| EG009.00 | P     | C      |         | 6      | 6                     |   |
| EG011.00 | A     | O      |         | 6      | 6                     |   |
| EG013.00 | P     | C      |         | 6      | 6                     |   |
| EG014.00 | CA    | C      | 1       |        | 16                    |   |
|          | CA    | C      |         | 2      |                       |   |
|          | CA    | O      | 2       |        |                       |   |
|          | CA    | O      |         | 11     |                       |   |
| EG016.00 | P     | C      |         | 6      | 6                     |   |
| EG016.50 | CA    | C      | 1       |        | 11                    |   |
|          | CA    | C      |         | 2      |                       |   |
|          | CA    | O      | 1       |        |                       |   |
|          | CA    | O      |         | 7      |                       |   |
| EG017.00 | CA    | C      | 1       |        | 14                    |   |
|          | CA    | C      |         | 2      |                       |   |
|          | CA    | O      | 1       |        |                       |   |
|          | CA    | O      |         | 10     |                       |   |
| EG019.00 | A     | C      | 3       |        | 9                     | 3 Flood samples                                 |
|          | A     | O      |         | 6      |                       |   |
| EG020.00 | R     | O      |         | 6      | 6                     |   |
| EG020.50 | A     | O      |         | 6      | 6                     |   |
| EG021.00 | A     | O      |         | 6      | 6                     |   |
| EG023.00 | A     | O      |         | 6      | 6                     |   |
| EG024.00 | A     | C      | 3       |        | 9                     | 3 Flood samples                                 |
|          | A     | O      |         | 6      |                       |   |

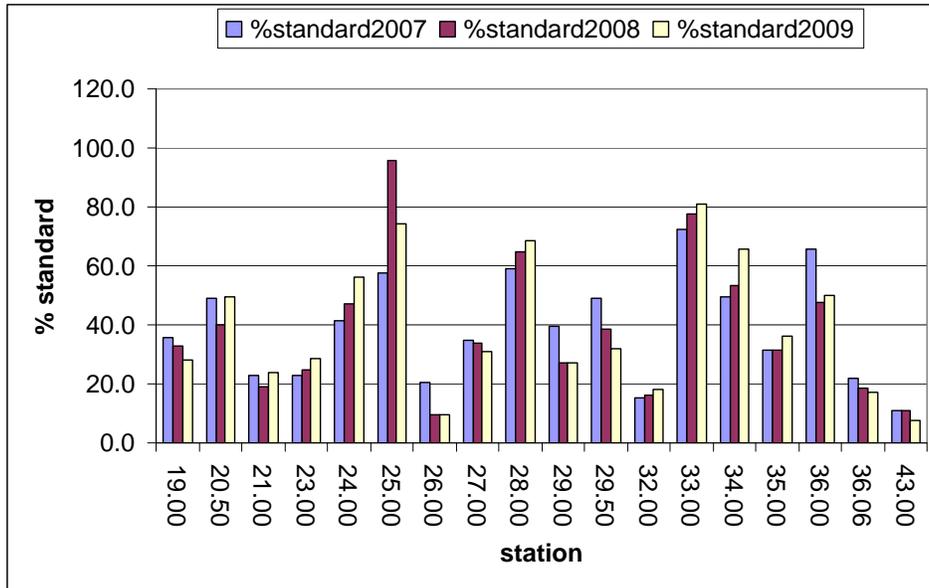


| Station  | Class | Status | Adverse | Random | Total Of Sample Count | COMMENTS  |
|----------|-------|--------|---------|--------|-----------------------|---|
| EG025.00 | A     | O      |         | 6      | 6                     |   |
| EG026.00 | A     | O      |         | 6      | 6                     |   |
| EG027.00 | A     | O      |         | 6      | 6                     |   |
| EG028.00 | A     | C      | 15      |        | 21                    | 15 Flood samples                                |
|          | A     | O      |         | 6      |                       |   |
| EG029.00 | A     | O      |         | 6      | 6                     |   |
| EG029.50 | A     | O      |         | 6      | 6                     |   |
| EG029.90 | R     | O      |         | 6      | 6                     |   |
| EG030.00 | R     | O      |         | 6      | 6                     |   |
| EG030.80 | R     | O      |         | 6      | 6                     |   |
| EG031.00 | R     | O      |         | 6      | 6                     |   |
| EG032.00 | A     | O      |         | 6      | 6                     |   |
| EG033.00 | A     | C      | 3       |        | 3                     | 3 Flood samples                                 |
| EG033.00 | A     | O      |         | 6      | 6                     |   |
| EG034.00 | A     | C      | 10      |        | 16                    | 10 Flood samples                                |
|          | A     | O      |         | 6      |                       |   |
| EG035.00 | A     | O      |         | 6      | 6                     |   |
| EG036.00 | A     | C      | 3       |        | 9                     | 3 Flood samples                                 |
|          | A     | O      |         | 6      |                       |   |
| EG036.06 | A     | O      |         | 6      | 6                     |   |
| EG037.00 | P     | C      |         | 1      | 1                     | De-activated; embedded in prohibited area; 4-09 |
| EG043.00 | A     | O      |         | 6      | 6                     |   |

Figures 3 and 4 show the P90 trends, expressed as percents of approved and restricted standards, for the past three review years. All approved stations for this growing area are within the standard for approved harvest. Station EG 33 has reached 81% of the standard and will be re-evaluated quarterly during the 2010 season to ensure it does not exceed the standard for approved classification. Figure 4 shows that all the restricted stations for area EG are well within the limits for the restricted classification.



**Figure 3. Area EG P90 Scores for Approved Stations (expressed as the percent of the approved standard), 2005-2009**



**Figure 4. Area EG P90 Scores for Restricted Stations (expressed as the percent of the restricted standard), 2005-2009**

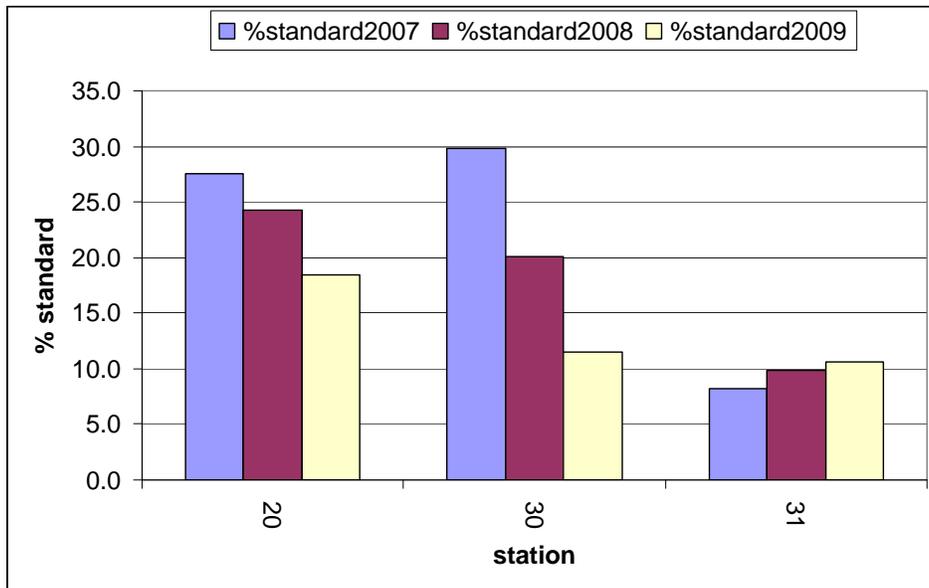
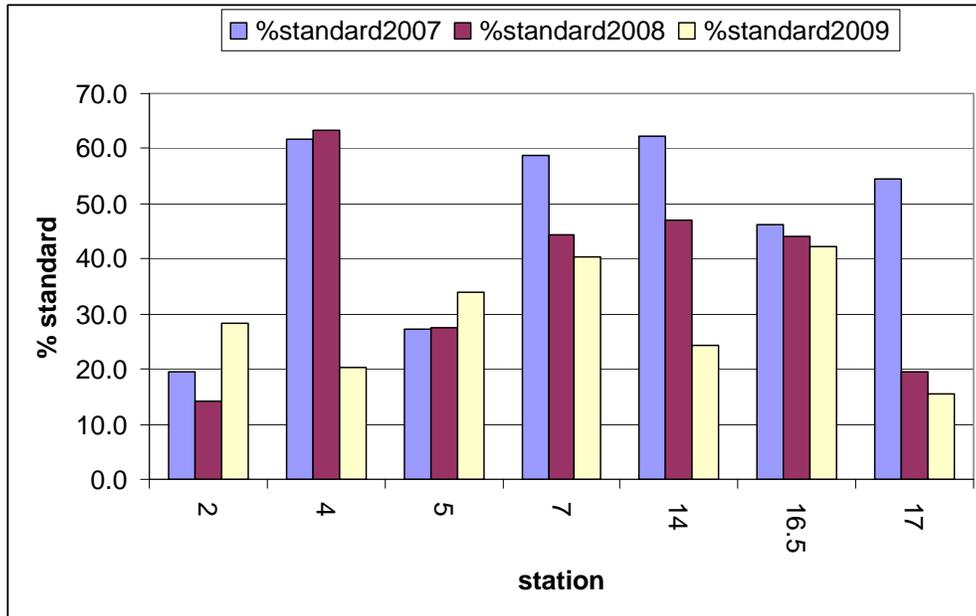


Figure 5 shows the trend for the conditionally approved stations in area EG. These trends are based on only samples collected during the open status and are based on the approved standard. All stations are well within the standard for approved classification.



Figure 5. Area EG P90 Scores for CA Stations in open period (expressed as the percent of the approved standard), 2005-2009



### Recommendations for Upward Classification

No upward changes are being requested at this time.

### Shoreline Survey Activity

There was no door-to-door survey work done during the 2009 sampling season. A drive through survey of this entire growing area was conducted during the routine SRS runs, scheduled on May 6, 2009 and July 29, 2009. No changes in pollution sources were noted.

### Aquaculture/Wet Storage Activity

**EML08:** This is a limited purpose lease for the over-wintering of both American and European oysters. The lease is .01 acres and is located in the Mill Pond; Mt Desert, ME. This lease sight is located in an approved area.

[Maine Aquaculture Leases](#)

**BHB H1:** This is a suspended culture lease sight of 2.3 acres located just east of Hardwood Island, Tremont, ME. The only species cultivated are *Mytilus edulis*. This lease sight is located in an approved area.

[Maine Aquaculture Lease Sites](#)



**BHB H2:** This is a suspended culture lease sight of 15 acres located just east of Hardwood Island, Tremont, ME. The only species cultivated are *Mytilus edulis*. This lease sight is located in an approved area.

[Maine Aquaculture Lease Sites](#)

**BHB TI:** This is a suspended culture lease sight of 54 acres located just east of Tinker Island, Tremont, ME. The only species cultivated are *Mytilus edulis*. This lease sight is located in an approved area.

[Maine Aquaculture Lease Sites](#)

**BHB GC 1, 2 and 3:** This is an experimental lease site for hard shell clams. The three lease sites are bottom culture sites and contain 1.99 acres each. This lease site is located in an approved area of Goose Cove, Trenton, Maine.

[Maine Aquaculture Lease Sites](#)

### Classification Changes

There are no downward or upward classification changes needed at this time.

### Summary

As shown by the current annual review of growing area EG, water quality for this growing area supports its current classification under the NSSP guidelines. Over the past three years water quality has remained consistent or has trended downward indicating an improvement in water quality. There were no new pollution sources found in this growing area during the 2009 sampling season. No changes are needed at this time.

### Recommendation for Future Work

Sample stations EG 29.9 and 30.8 should continue to be put on an accelerated sampling plan. As soon as 30 samples have been collected this area should be re-evaluated to see if the size of the current restricted area 48B can be reduced.



## Appendix A. Annual Review of Conditional Area Management Plan C40

### Scope

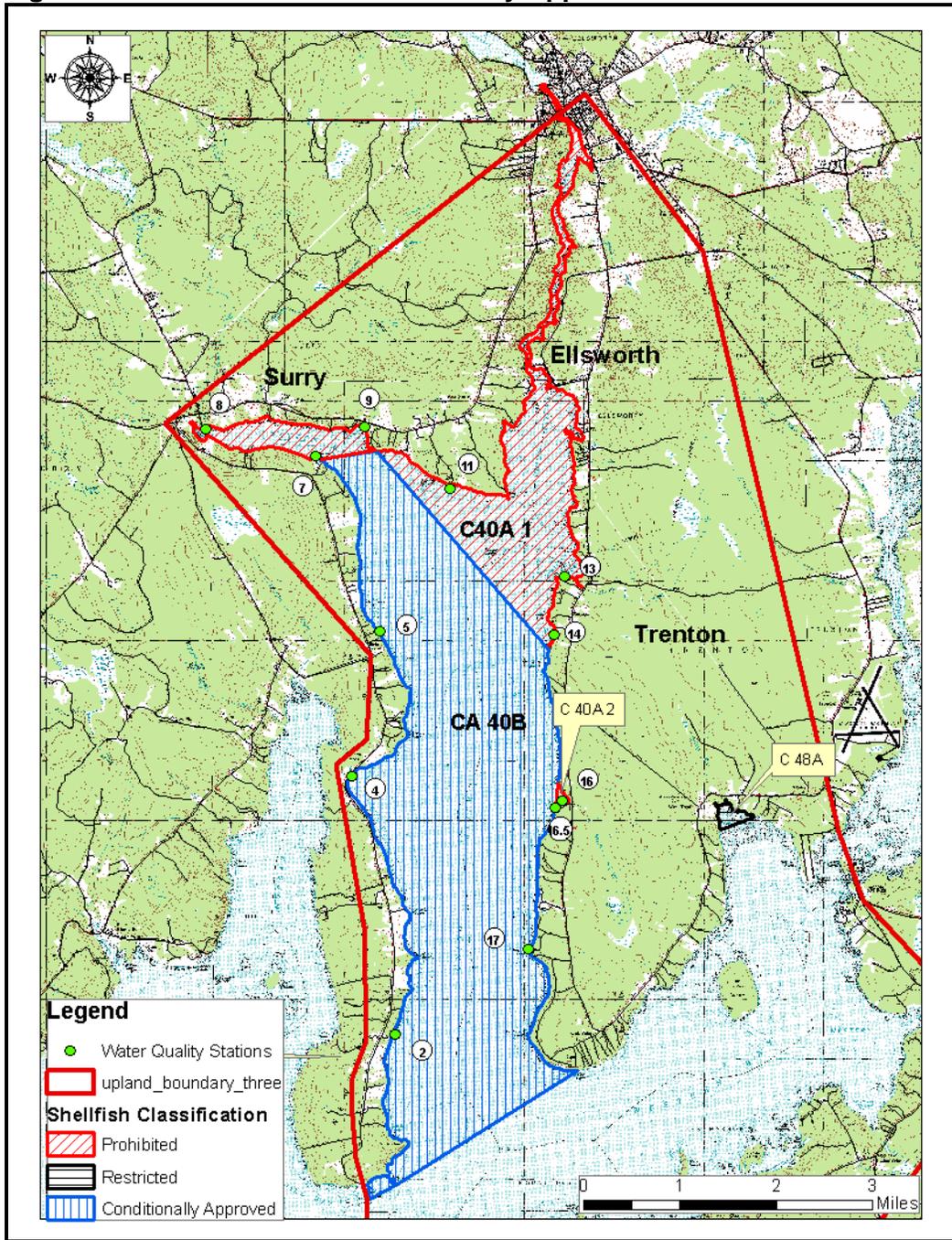
There is only one conditional area for this growing area. This area is conditionally approved based on the performance of the Ellsworth Wastewater Treatment Facility which discharges treated, year-round chlorinated effluent into the Union River. The conditional area includes a portion of the Union River Bay and Patten Bay, upstream (northerly) of a line beginning at the southeast tip of Burnt Point on Newbury Neck, Surry and running northeasterly to a red painted post at the south prominence of Oak Point, Trenton; AND west of a line beginning at a red painted post located on the south shore of Heath cove (approximately 350 yards west of where State Route 230 crosses Heath Brook), then extending north to a red painted post on the north shore of the mouth of Heath cove (approximately 450 yards northwest of where State Route 230 crosses Heath Brook); AND south of a line beginning at a red painted post located 500 yards south of Bluff Point, Trenton, extending northwest to a red painted post on the most southern prominence of the east side of Contention Cove, Surry, then west to the boat landing at the mouth of Patten Stream then south 150 yards to the nearest point on the south shore of Patten Bay (Figure 1). A closure of the conditional area is enacted in the event of a deliberate or accidental release into the Union River of untreated, partially treated or non-chlorinated sewage from the wastewater treatment facility, collection system or pump stations due to meteorological/climatic conditions, operator error, mechanical/design failure or routine maintenance.

### Compliance with Management Plan

The wastewater treatment facility met compliance criteria that included peak effluent flow, fecal coliform levels, physical and chemical effluent quality, lack of mechanical failures and effective sewage treatment during conditionally open and approved periods. Reporting of noncompliance events was in accordance with the management plan with closures enacted immediately upon DMR notification.



Figure 1. Ellsworth WWTP Conditionally Approved Area





**Adequacy of reporting and cooperation of involved persons**

Review of WWTP and DMR records show management plan violations have been reported by the municipal treatment plant staff to the Department of Marine Resources public health laboratory staff within acceptable time limits and with adequate detail to initiate action. The effectiveness of this management plan is excellent due to the close working relationship between the treatment plant staff, local law enforcement agencies and the Maine Department of Marine Resources Water Quality Laboratory, Lamoine. The timetable of events, details of noncompliance issues, estimates of repair intervals and update of plant's treatment effectiveness reporting fall within management plan compliance limits. Maine Marine Patrol officers have alerted local shellfish harvesters to any regulation changes. Legal closure of the area is automatically enacted immediately at the time of notification, with written regulation amendment dependent on administrative staffing and violation event timing (regular work hours, nighttime hours, weekends, and holidays). No anecdotal evidence (failing water testing criteria, shoreline survey, and reported illness) suggests that a public health risk exists when the treatment plant is operating correctly.

**Compliance with approved growing area criteria**

This conditionally approved area is monitored by 7 sample sites; EG 2, 4, 5, 7, 14, 16.5 and 17. In the event of a plant bypass an additional 6672 acres closes. The conditionally approved samples meet the standard for approved harvest during its open status (Table 1).

**Table 1. CA P90 Scores, Open Status**

| Station  | Class | Count | MFCCount | GM  | SDV  | MAX  | P90  | Appd_Std |
|----------|-------|-------|----------|-----|------|------|------|----------|
| EG002.00 | CA    | 30    | 28       | 2.7 | 0.3  | 17.9 | 6.5  | 31       |
| EG004.00 | CA    | 30    | 30       | 2.9 | 0.4  | 140  | 9.5  | 31       |
| EG005.00 | CA    | 30    | 27       | 3.2 | 0.39 | 24   | 10.4 | 31       |
| EG007.00 | CA    | 30    | 28       | 3.1 | 0.34 | 20   | 8.7  | 31       |
| EG014.00 | CA    | 30    | 29       | 3.6 | 0.53 | 260  | 17.6 | 31       |
| EG016.50 | New   | 3     | 3        | 1.9 | 0.01 | 2    |      |          |
| EG017.00 | CA    | 30    | 29       | 2.8 | 0.33 | 18.2 | 7.5  | 31       |

**Water sampling compliance history**

All CA sample stations with the exception of 16.5 were collected 9 times during the open status in 2009. EG 16.5 was not added to the CA sampling run until September of 2009.

**Table 2. 2009 CA sample count open status**

| Station  | Date      | Strategy | Status | Col | Total Samples |
|----------|-----------|----------|--------|-----|---------------|
| EG002.00 | 05-Jan-09 | R        | O      | 1.9 | 9             |
|          | 03-Feb-09 | R        | O      | 1.9 |               |
|          | 03-Mar-09 | R        | O      | 1.9 |               |
|          | 06-Apr-09 | R        | O      | 1.9 |               |



| Station  | Date      | Strategy | Status | Col | Total Samples |
|----------|-----------|----------|--------|-----|---------------|
|          | 03-May-09 | R        | O      | 1.9 |               |
|          | 02-Jun-09 | R        | O      | 1.9 |               |
|          | 04-Aug-09 | R        | O      | 6   |               |
|          | 09-Sep-09 | R        | O      | 1.9 |               |
|          | 06-Oct-09 | R        | O      | 2   |               |
| EG004.00 | 05-Jan-09 | R        | O      | 1.9 | 9             |
|          | 03-Feb-09 | R        | O      | 2   |               |
|          | 03-Mar-09 | R        | O      | 1.9 |               |
|          | 06-Apr-09 | R        | O      | 1.9 |               |
|          | 03-May-09 | R        | O      | 1.9 |               |
|          | 02-Jun-09 | R        | O      | 1.9 |               |
|          | 04-Aug-09 | R        | O      | 2   |               |
|          | 09-Sep-09 | R        | O      | 1.9 |               |
|          | 06-Oct-09 | R        | O      | 6   |               |
| EG005.00 | 05-Jan-09 | R        | O      | 1.9 | 9             |
|          | 03-Feb-09 | R        | O      | 1.9 |               |
|          | 03-Mar-09 | R        | O      | 1.9 |               |
|          | 06-Apr-09 | R        | O      | 1.9 |               |
|          | 03-May-09 | R        | O      | 1.9 |               |
|          | 02-Jun-09 | R        | O      | 1.9 |               |
|          | 04-Aug-09 | R        | O      | 12  |               |
|          | 09-Sep-09 | R        | O      | 16  |               |
|          | 06-Oct-09 | R        | O      | 2   |               |
| EG007.00 | 05-Jan-09 | R        | O      | 1.9 | 9             |
|          | 18-Feb-09 | R        | O      | 1.9 |               |
|          | 03-Mar-09 | R        | O      | 1.9 |               |
|          | 06-Apr-09 | R        | O      | 1.9 |               |
|          | 03-May-09 | R        | O      | 1.9 |               |
|          | 02-Jun-09 | R        | O      | 1.9 |               |
|          | 04-Aug-09 | R        | O      | 1.9 |               |
|          | 09-Sep-09 | R        | O      | 1.9 |               |
|          | 06-Oct-09 | R        | O      | 2   |               |
| EG014.00 | 05-Jan-09 | R        | O      | 1.9 | 9             |
|          | 18-Feb-09 | R        | O      | 1.9 |               |
|          | 03-Mar-09 | R        | O      | 2   |               |
|          | 06-Apr-09 | R        | O      | 1.9 |               |
|          | 03-May-09 | R        | O      | 1.9 |               |
|          | 02-Jun-09 | R        | O      | 1.9 |               |
|          | 04-Aug-09 | R        | O      | 2   |               |
|          | 09-Sep-09 | R        | O      | 2   |               |
|          | 06-Oct-09 | R        | O      | 66  |               |
| EG016.50 | 09-Sep-09 | R        | O      | 1.9 | 2             |
|          | 21-Oct-09 | R        | O      | 1.9 |               |



| Station  | Date      | Strategy | Status | Col | Total Samples |
|----------|-----------|----------|--------|-----|---------------|
| EG017.00 | 05-Jan-09 | R        | O      | 1.9 | 9             |
|          | 03-Feb-09 | R        | O      | 1.9 |               |
|          | 03-Mar-09 | R        | O      | 1.9 |               |
|          | 06-Apr-09 | R        | O      | 1.9 |               |
|          | 03-May-09 | R        | O      | 1.9 |               |
|          | 02-Jun-09 | R        | O      | 1.9 |               |
|          | 04-Aug-09 | R        | O      | 2   |               |
|          | 09-Sep-09 | R        | O      | 1.9 |               |
|          | 06-Oct-09 | R        | O      | 4   |               |

### Analysis-Recommendations

A re-evaluation of this conditional area should be completed when the new Ellsworth WWTP comes on line until that time no changes or recommendations are needed 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 = 90<sup>th</sup> percentile

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

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



### Appendix C. Transition to Membrane Filtration

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 90<sup>th</sup> 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 standard to 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 90<sup>th</sup> 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 90<sup>th</sup> percentile standard that the sample site is compared to will change over time. Once all 30 data points are analyzed using MF, the 90<sup>th</sup> 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.



**Appendix D. Growing Area EG 2009 Data**

| Station    | Date       | Strategy | Open Closed | Class | Adversity | Temp | Salinity | Tide | Wind | Col Score |
|------------|------------|----------|-------------|-------|-----------|------|----------|------|------|-----------|
| EG002.00   | 1/5/2009   | R        | O           | CA    |           | 1    | 30       | LF   | NW   | <2        |
|            | 2/3/2009   | R        | O           | CA    |           | -2   | 14       | L    | NE   | <2        |
|            | 3/3/2009   | R        | O           | CA    |           | 0    | 32       | LF   | CL   | <2        |
|            | 4/6/2009   | R        | O           | CA    | P         | 3    | 26       | H    | CL   | <2        |
|            | 5/3/2009   | R        | O           | CA    |           | 9    | 18       | E    | SE   | 17        |
|            | 5/3/2009   | R        | O           | CA    |           | 9    | 18       | E    | SE   | <2        |
|            | 6/2/2009   | R        | O           | CA    |           | 10   | 28       | LF   | NW   | <2        |
|            | 7/21/2009  | A        | O           | CA    | P         |      |          | E    |      | <18       |
|            | 7/21/2009  | R        | C           | CA    | P         | 16   | 23       | E    | CL   | <2        |
|            | 8/4/2009   | R        | O           | CA    | O         | 19   | 19       | HF   | CL   | 6         |
|            | 9/9/2009   | R        | O           | CA    | O         | 14   | 29       | HF   | NW   | <2        |
|            | 10/6/2009  | R        | O           | CA    | P         | 11   | 30       | F    | CL   | 2         |
|            | 10/28/2009 | A        | O           | CA    | P         | 3    | 22       | E    | SE   | 12        |
|            | 11/30/2009 | R        | C           | CA    | P         | 5    | 20       | E    | SW   | <2        |
|            | 11/30/2009 | R        | C           | CA    | P         |      |          | E    | SW   | 20        |
| 12/2/2009  | R          | O        | CA          | O     | 4         | 30   | HF       | SW   | <2   |           |
| 12/21/2009 | A          | C        | CA          | S     | 2         | 29   | F        | NW   | 2    |           |
| 12/21/2009 | A          | C        | CA          | S     |           |      | F        |      | 45   |           |
| EG004.00   | 1/5/2009   | R        | O           | CA    |           | 1    | 27       | LF   | NW   | <2        |
|            | 2/3/2009   | R        | O           | CA    |           | -2   | 15       | L    | NE   | 2         |
|            | 3/3/2009   | R        | O           | CA    |           | 0    | 31       | LF   | NW   | <2        |
|            | 4/6/2009   | R        | O           | CA    | P         | 3    | 10       | H    | CL   | <2        |
|            | 4/26/2009  | A        | C           | CA    | F         | 7    | 16       | HF   | CL   | <2        |
|            | 4/27/2009  | A        | C           | CA    | F         | 5    | 22       | H    | SW   | 4         |
|            | 5/3/2009   | R        | O           | CA    |           | 10   | 19       | E    | SE   | <2        |
|            | 6/2/2009   | R        | O           | CA    |           | 10   | 28       | LF   | NW   | <2        |
|            | 6/15/2009  | A        | C           | CA    | F         |      | 15       | L    | CL   | 54        |
|            | 6/16/2009  | A        | C           | CA    | F         | 15   | 18       | L    | SW   | 2         |
|            | 6/17/2009  | A        | C           | CA    | F         | 15   | 18       | LE   | SW   | 2         |
|            | 6/23/2009  | A        | C           | CA    | F         | 9    | 25       | HE   | NE   | 6         |
|            | 6/24/2009  | A        | C           | CA    | F         | 11   | 15       | H    | NE   | 2         |
|            | 6/25/2009  | A        | C           | CA    | F         | 16   | 6        | HF   | SE   | 10        |
|            | 7/21/2009  | R        | C           | CA    | P         | 15   | 19       | E    | CL   | 4         |
|            | 8/4/2009   | R        | O           | CA    | O         | 20   | 20       | HF   | CL   | 2         |
|            | 8/27/2009  | A        | C           | CA    | F         | 15   | 28       | LE   | NW   | <2        |
|            | 8/28/2009  | A        | C           | CA    | F         | 12   | 25       | E    | CL   | 2         |
|            | 8/29/2009  | A        | C           | CA    | F         | 10   | 23       | HF   | SE   | 6         |
|            | 9/1/2009   | A        | C           | CA    | F         | 11   | 21       | H    | CL   | 18        |
| 9/2/2009   | A          | C        | CA          | F     | 14        | 24   | H        | CL   | 2    |           |
| 9/9/2009   | R          | O        | CA          | O     | 15        | 28   | HF       | NW   | <2   |           |
| 10/6/2009  | R          | O        | CA          | P     | 11        | 31   | F        | SW   | 6    |           |
| 10/28/2009 | A          | O        | CA          | P     | 3         | 26   | E        | SE   | 4    |           |
| 11/30/2009 | R          | C        | CA          | P     | 6         | 20   | E        | SW   | 2    |           |
| 12/2/2009  | R          | O        | CA          | O     | 4         | 30   | HF       | CL   | <2   |           |
| 12/21/2009 | A          | C        | CA          | S     | 3         | 30   | F        | NW   | 6    |           |
| EG005.00   | 1/5/2009   | R        | O           | CA    |           | 1    | 23       | LF   | NW   | <2        |
|            | 2/3/2009   | R        | O           | CA    |           | -2   | 14       | L    | NE   | <2        |
|            | 3/3/2009   | R        | O           | CA    |           | 0    | 30       | F    | NW   | <2        |
|            | 4/6/2009   | R        | O           | CA    | P         | 3    | 14       | H    | CL   | <2        |



**EG Annual Review**  
**Effective Date 05/06/10**

| Station  | Date       | Strategy | Open Closed | Class | Adversity | Temp | Salinity | Tide | Wind | Col Score |
|----------|------------|----------|-------------|-------|-----------|------|----------|------|------|-----------|
|          | 5/3/2009   | R        | O           | CA    |           | 10   | 20       | E    | SE   | 20        |
|          | 5/3/2009   | R        | O           | CA    |           | 10   | 20       | E    | SE   | <2        |
|          | 6/2/2009   | R        | O           | CA    |           | 11   | 26       | LF   | NW   | <2        |
|          | 7/21/2009  | A        | O           | CA    | P         |      |          | E    |      | 45        |
|          | 7/21/2009  | R        | C           | CA    | P         | 16   | 19       | E    | SW   | <2        |
|          | 8/4/2009   | R        | O           | CA    | O         | 19   | 20       | H    | SE   | 12        |
|          | 9/9/2009   | R        | O           | CA    | O         | 14   | 28       | F    | NW   | 16        |
|          | 10/6/2009  | R        | O           | CA    | P         | 11   | 29       | F    | SW   | 2         |
|          | 10/28/2009 | A        | O           | CA    | P         | 3    | 26       | E    | SE   | 8         |
|          | 11/30/2009 | R        | C           | CA    | P         | 5    | 16       | E    | SW   | 6         |
|          | 11/30/2009 | R        | C           | CA    | P         |      |          | E    | SW   | <18       |
|          | 12/2/2009  | R        | O           | CA    | O         | 2    | 27       | HF   | SW   | <2        |
|          | 12/21/2009 | A        | C           | CA    | S         | 3    | 30       | F    | NW   | 4         |
|          | 12/21/2009 | A        | C           | CA    | S         |      |          | F    |      | <18       |
| EG007.00 | 1/5/2009   | R        | O           | CA    |           | 0    | 29       | F    | NW   | <2        |
|          | 2/18/2009  | R        | O           | CA    |           | 0    | 30       | L    | SE   | <2        |
|          | 3/3/2009   | R        | O           | CA    |           | 0    | 31       | F    | NW   | <2        |
|          | 4/6/2009   | R        | O           | CA    | P         | 3    | 20       | HF   | CL   | <2        |
|          | 5/3/2009   | R        | O           | CA    |           | 10   | 24       | E    | SE   | <2        |
|          | 6/2/2009   | R        | O           | CA    |           | 12   | 26       | LF   | NW   | <2        |
|          | 7/21/2009  | R        | C           | CA    | P         | 16   | 22       | E    | SW   | 14        |
|          | 8/4/2009   | R        | O           | CA    | O         | 18   | 22       | H    | E    | <2        |
|          | 9/9/2009   | R        | O           | CA    | O         | 14   | 29       | F    | W    | <2        |
|          | 10/6/2009  | R        | O           | CA    | P         | 11   | 29       | F    | CL   | 2         |
|          | 10/28/2009 | A        | O           | CA    | P         | 4    | 23       | E    | SE   | 7.3       |
|          | 11/30/2009 | R        | C           | CA    | P         | 5    | 27       | E    | SW   | 6         |
|          | 12/2/2009  | R        | O           | CA    | O         | 2    | 26       | HF   | CL   | 2         |
|          | 12/21/2009 | A        | C           | CA    | S         | 2    | 29       | F    | NW   | 36        |
|          | 12/21/2009 | A        | C           | CA    | S         |      |          | F    |      | 45        |
| EG008.00 | 3/18/2009  | R        | C           | P     | T         | 0    | 0        | LF   | SW   | 24        |
| EG009.00 | 3/18/2009  | R        | C           | P     | T         | 0    | 8        | LF   | SW   | <2        |
|          | 5/6/2009   | R        | C           | P     | P         | 8    | 19       | HE   | E    | 2         |
|          | 6/30/2009  | R        | C           | P     | P         | 15   | 5        | E    | CL   | 92        |
|          | 7/29/2009  | R        | C           | P     | P         | 25   | 2        | F    | SE   | 29        |
|          | 9/21/2009  | R        | C           | P     | O         | 11   | 29       | F    | CL   | 2         |
|          | 11/16/2009 | R        | C           | P     | P         | 6    | 12       | HF   | NW   | 86        |
| EG011.00 | 3/18/2009  | R        | O           | A     | T         | 0    | 16       | LF   | SW   | 2         |
|          | 5/6/2009   | R        | O           | A     | P         | 8    | 25       | HE   | E    | 2         |
|          | 6/30/2009  | R        | O           | A     | P         | 15   | 15       | E    | CL   | 10        |
|          | 7/29/2009  | R        | O           | A     | P         | 23   | 2        | F    | SE   | 34        |
|          | 9/21/2009  | R        | O           | A     | O         | 10   | 29       | F    | CL   | <2        |
|          | 11/16/2009 | R        | O           | A     | P         | 7    | 28       | HF   | NW   | 25        |
| EG013.00 | 3/18/2009  | R        | C           | P     | T         | 1    | 21       | L    | SW   | <2        |
|          | 5/6/2009   | R        | C           | P     | P         | 9    | 14       | HE   | E    | 4         |
|          | 6/30/2009  | R        | C           | P     | P         | 14   | 15       | LE   | S    | 16        |
|          | 7/29/2009  | R        | C           | P     | P         | 20   | 12       | F    | SE   | 8         |
|          | 9/21/2009  | R        | C           | P     | O         | 11   | 30       | F    | CL   | <2        |
|          | 11/16/2009 | R        | C           | P     | P         | 6    | 16       | H    | NW   | 52        |
| EG014.00 | 1/5/2009   | R        | O           | CA    |           | -1   | 12       | F    | NW   | <2        |
|          | 2/18/2009  | R        | O           | CA    |           | 0    | 25       | L    | SE   | <2        |
|          | 3/3/2009   | R        | O           | CA    |           | -1   | 24       | F    | NW   | 2         |
|          | 4/6/2009   | R        | O           | CA    | P         | 4    | 20       | E    | CL   | <2        |



| Station  | Date       | Strategy | Open Closed | Class | Adversity | Temp | Salinity | Tide | Wind | Col Score |
|----------|------------|----------|-------------|-------|-----------|------|----------|------|------|-----------|
|          | 5/3/2009   | R        | O           | CA    |           | 9    | 22       | E    | CL   | 17        |
|          | 5/3/2009   | R        | O           | CA    |           | 9    | 22       | E    | CL   | <2        |
|          | 6/2/2009   | R        | O           | CA    |           | 13   | 22       | L    | NW   | <2        |
|          | 7/21/2009  | A        | O           | CA    | P         |      |          | E    |      | 20        |
|          | 7/21/2009  | R        | C           | CA    | P         | 15   | 22       | E    | CL   | <2        |
|          | 8/4/2009   | R        | O           | CA    | O         | 20   | 23       | HE   | SW   | 2         |
|          | 9/9/2009   | R        | O           | CA    | O         | 13   | 30       | F    | W    | 2         |
|          | 10/6/2009  | R        | O           | CA    | P         | 10   | 27       | HF   | NW   | 66        |
|          | 10/28/2009 | A        | O           | CA    | P         | 3    | 22       | E    | SE   | 14        |
|          | 11/30/2009 | R        | C           | CA    | P         | 6    | 15       | E    | SW   | <2        |
|          | 12/2/2009  | R        | O           | CA    | O         | 4    | 23       | H    | SW   | 2         |
|          | 12/21/2009 | A        | C           | CA    | S         | 3    | 25       | F    | NW   | <2        |
| EG016.00 | 3/18/2009  | R        | C           | P     | T         | 1    | 26       | L    | SW   | <2        |
|          | 5/6/2009   | R        | C           | P     | P         | 9    | 24       | H    | E    | 22        |
|          | 7/29/2009  | R        | C           | P     | P         | 20   | 22       | F    | SE   | <2        |
|          | 8/4/2009   | R        | C           | P     | O         | 18   | 24       | HE   | SW   | 20        |
|          | 9/21/2009  | R        | C           | P     | W         | 10   | 30       | F    | CL   | 3.6       |
|          | 11/16/2009 | R        | C           | P     | P         | 6    | 2        | H    | NW   | 60        |
| EG016.50 | 3/18/2009  | R        | O           | CA    | T         | 1    | 28       | L    | SW   | <2        |
|          | 5/6/2009   | R        | O           | CA    | P         | 8    | 28       | H    | E    | 20        |
|          | 6/30/2009  | R        | O           | CA    | P         | 14   | 24       | LE   | CL   | 9.1       |
|          | 7/29/2009  | R        | O           | CA    | P         | 20   | 22       | F    | SE   | <2        |
|          | 9/9/2009   | R        | O           | CA    | O         | 13   | 30       | F    | W    | <2        |
|          | 10/21/2009 | R        | O           | CA    | O         | 6    | 18       | H    | NW   | <2        |
|          | 10/28/2009 | A        | O           | CA    | P         | 3    | 22       | E    | SE   | 14        |
|          | 11/30/2009 | R        | C           | CA    | P         | 5    | 20       | E    | SW   | 2         |
|          | 11/30/2009 | R        | C           | CA    | P         |      |          | E    | SW   | 45        |
|          | 12/2/2009  | R        | O           | CA    | O         | 5    | 12       | H    | SW   | 2         |
|          | 12/21/2009 | A        | C           | CA    | S         | 3    | 25       | F    | NW   | 6         |
| EG017.00 | 1/5/2009   | R        | O           | CA    |           | -2   | 18       | F    | NW   | <2        |
|          | 2/3/2009   | R        | O           | CA    |           | -2   | 13       | LF   | N    | <2        |
|          | 3/3/2009   | R        | O           | CA    |           | -1   | 30       | F    | NW   | <2        |
|          | 4/6/2009   | R        | O           | CA    | P         | 4    | 20       | E    | CL   | <2        |
|          | 5/3/2009   | R        | O           | CA    |           | 9    | 22       | E    | SE   | <2        |
|          | 6/2/2009   | R        | O           | CA    |           | 9    | 28       | L    | SW   | <2        |
|          | 7/21/2009  | R        | C           | CA    | P         | 15   | 27       | E    | CL   | <2        |
|          | 8/4/2009   | R        | O           | CA    | O         | 19   | 25       | HE   | SW   | 2         |
|          | 9/9/2009   | R        | O           | CA    | O         | 15   | 30       | F    | SW   | <2        |
|          | 10/6/2009  | R        | O           | CA    | P         | 10   | 26       | HF   | NW   | 4         |
|          | 10/28/2009 | A        | O           | CA    | P         | 3    | 20       | E    | SE   | 16        |
|          | 11/30/2009 | R        | C           | CA    | P         | 5    | 19       | E    | SW   | 6         |
|          | 12/2/2009  | R        | O           | CA    | O         | 2    | 28       | H    | SW   | <2        |
|          | 12/21/2009 | A        | C           | CA    | S         | 3    | 24       | F    | NW   | <2        |
| EG019.00 | 3/18/2009  | R        | O           | A     | T         | 1    | 30       | L    | SW   | <2        |
|          | 5/6/2009   | R        | O           | A     | P         | 9    | 28       | H    | E    | <2        |
|          | 6/30/2009  | R        | O           | A     | P         | 13   | 28       | LE   | SE   | <2        |
|          | 7/29/2009  | R        | O           | A     | P         | 20   | 25       | F    | SE   | 2         |
|          | 9/21/2009  | R        | O           | A     | O         | 10   | 30       | F    | CL   | <2        |
|          | 10/28/2009 | A        | C           | A     | F         | 5    | 30       | E    | NE   | <2        |
|          | 10/29/2009 | A        | C           | A     | F         | 5    | 30       | E    | NE   | <2        |
|          | 10/30/2009 | A        | C           | A     | F         | 7    | 31       | E    | CL   | <2        |
|          | 11/16/2009 | R        | O           | A     | P         | 6    | 30       | H    | NW   | <2        |
| EG020.00 | 3/31/2009  | R        | O           | R     | T         | 2    | 26       | H    | NW   | <2        |
|          | 5/6/2009   | R        | O           | R     | P         | 9    | 28       | H    | E    | 4         |



**EG Annual Review**  
**Effective Date 05/06/10**

| Station    | Date       | Strategy  | Open Closed | Class | Adversity | Temp | Salinity | Tide | Wind | Col Score |
|------------|------------|-----------|-------------|-------|-----------|------|----------|------|------|-----------|
|            | 7/29/2009  | R         | O           | R     | P         | 21   | 2        | F    | SE   | 54        |
|            | 8/4/2009   | R         | O           | R     | O         | 22   | 25       | HE   | SW   | 6         |
|            | 9/21/2009  | R         | O           | R     | O         | 12   | 30       | F    | CL   | 4         |
|            | 11/16/2009 | R         | O           | R     | P         | 7    | 30       | H    | NW   | 3.6       |
| EG020.50   | 3/31/2009  | R         | O           | A     | T         | 1    | 32       | H    | NW   | <2        |
|            | 5/6/2009   | R         | O           | A     | P         | 9    | 28       | H    | E    | 14        |
|            | 7/29/2009  | R         | O           | A     | P         | 21   | 0        | F    | SE   | 45        |
|            | 8/4/2009   | R         | O           | A     | O         | 21   | 26       | E    | SW   | <2        |
|            | 9/21/2009  | R         | O           | A     | O         | 12   | 30       | F    | CL   | 2         |
|            | 11/16/2009 | R         | O           | A     | P         | 7    | 30       | H    | NW   | 10        |
|            | EG021.00   | 3/18/2009 | R           | O     | A         | T    | 1        | 30   | LE   | SW        |
| 5/6/2009   | R          | O         | A           | P     | 7         | 30   | H        | E    | <2   |           |
| 6/30/2009  | R          | O         | A           | P     | 12        | 30   | L        | SE   | <2   |           |
| 7/29/2009  | R          | O         | A           | P     | 21        | 25   | F        | SE   | 6    |           |
| 9/21/2009  | R          | O         | A           | O     | 12        | 31   | F        | CL   | <2   |           |
| 11/16/2009 | R          | O         | A           | P     | 7         | 29   | H        | NW   | 12   |           |
| EG023.00   | 3/17/2009  | R         | O           | A     |           | 2    | 30       | E    | N    | <2        |
|            | 5/6/2009   | R         | O           | A     | P         | 6    | 30       | H    | CL   | <2        |
|            | 6/29/2009  | R         | O           | A     | P         | 7    | 29       | LE   | NE   | 10        |
|            | 7/28/2009  | R         | O           | A     |           | 17   | 28       | F    | CL   | <2        |
|            | 9/15/2009  | R         | O           | A     | P         | 13   | 31       | E    | CL   | 2         |
|            | 11/4/2009  | R         | O           | A     | O         | 3    | 26       | F    | NW   | <2        |
| EG024.00   | 3/31/2009  | R         | O           | A     | T         | 2    | 30       | HF   | CL   | <2        |
|            | 5/6/2009   | R         | O           | A     | P         | 6    | 27       | H    | CL   | <2        |
|            | 6/29/2009  | R         | O           | A     | P         | 5    | 30       | LE   | NE   | <2        |
|            | 7/28/2009  | R         | O           | A     |           | 25   | 24       | F    | NW   | 18        |
|            | 9/15/2009  | R         | O           | A     | P         | 13   | 30       | E    | NW   | 4         |
|            | 10/28/2009 | A         | C           | A     | F         | 5    | 30       | HE   | CL   | <2        |
|            | 10/29/2009 | A         | C           | A     | F         | 7    | 30       | E    | NE   | <2        |
|            | 10/30/2009 | A         | C           | A     | F         | 6    | 29       | HE   | CL   | 2         |
| 11/4/2009  | R          | O         | A           | O     | 3         | 26   | F        | NW   | <2   |           |
| EG025.00   | 3/31/2009  | R         | O           | A     | T         | 0    | 2        | HF   | NW   | 20        |
|            | 5/6/2009   | R         | O           | A     | P         | 5    | 32       | H    | CL   | <2        |
|            | 6/29/2009  | R         | O           | A     | P         | 6    | 30       | LE   | CL   | <2        |
|            | 7/28/2009  | R         | O           | A     |           | 18   | 28       | F    | SW   | 2         |
|            | 9/15/2009  | R         | O           | A     | P         | 14   | 30       | E    | NW   | <2        |
|            | 11/4/2009  | R         | O           | A     | O         | 3    | 26       | F    | NW   | 2         |
| EG026.00   | 3/17/2009  | R         | O           | A     |           | 2    | 27       | LE   | N    | <2        |
|            | 5/6/2009   | R         | O           | A     | P         | 5    | 30       | H    | CL   | <2        |
|            | 6/29/2009  | R         | O           | A     | P         | 6    | 30       | L    | CL   | <2        |
|            | 7/28/2009  | R         | O           | A     |           | 18   | 28       | F    | SW   | <2        |
|            | 9/15/2009  | R         | O           | A     | P         | 14   | 30       | E    | CL   | <2        |
|            | 11/4/2009  | R         | O           | A     | O         | 3    | 30       | F    | NW   | <2        |
| EG027.00   | 3/17/2009  | R         | O           | A     |           | 2    | 30       | LE   | N    | <2        |
|            | 5/6/2009   | R         | O           | A     | P         | 7    | 28       | H    | CL   | <2        |
|            | 6/29/2009  | R         | O           | A     | P         | 7    | 29       | L    | SW   | 2         |
|            | 7/28/2009  | R         | O           | A     |           | 16   | 28       | F    | SW   | 2         |
|            | 9/15/2009  | R         | O           | A     | P         | 14   | 30       | E    | CL   | <2        |
|            | 11/4/2009  | R         | O           | A     | O         | 3    | 30       | HF   | NW   | <2        |
| EG028.00   | 3/31/2009  | R         | O           | A     | T         | -4   | 2        | HF   | N    | <2        |
|            | 4/26/2009  | A         | C           | A     | F         | 9    | 28       | HF   | N    | <2        |
|            | 4/27/2009  | A         | C           | A     | F         | 6    | 29       | HF   | SW   | <2        |
|            | 5/6/2009   | R         | O           | A     | P         | 6    | 26       | HE   | CL   | 2         |
|            | 6/15/2009  | A         | C           | A     | F         | 15   | 25       | F    | S    | <2        |
|            | 6/16/2009  | A         | C           | A     | F         | 17   | 25       | LF   | SW   | <2        |



| Station  | Date       | Strategy | Open Closed | Class | Adversity | Temp | Salinity | Tide | Wind | Col Score |
|----------|------------|----------|-------------|-------|-----------|------|----------|------|------|-----------|
|          | 6/17/2009  | A        | C           | A     | F         | 16   | 27       | LE   | SW   | <2        |
|          | 6/23/2009  | A        | C           | A     | F         | 8    | 29       | HF   | NW   | 14        |
|          | 6/24/2009  | A        | C           | A     | F         | 10   | 22       | F    | N    | 52        |
|          | 6/25/2009  | A        | C           | A     | F         | 11   | 27       | F    | SW   | 27        |
|          | 6/29/2009  | R        | O           | A     | P         | 8    | 28       | L    | S    | <2        |
|          | 7/28/2009  | R        | O           | A     |           | 15   | 30       | F    | S    | <2        |
|          | 8/28/2009  | A        | C           | A     | F         | 13   | 30       | HE   | CL   | <2        |
|          | 8/29/2009  | A        | C           | A     | F         | 12   | 30       | E    | E    | <2        |
|          | 9/1/2009   | A        | C           | A     | F         | 14   | 25       | H    | CL   | 2         |
|          | 9/2/2009   | A        | C           | A     | F         | 16   | 25       | HE   | CL   | 14        |
|          | 9/15/2009  | R        | O           | A     | P         | 15   | 30       | E    | NW   | 2         |
|          | 10/28/2009 | A        | C           | A     | F         | 5    | 20       | HE   | CL   | <2        |
|          | 10/29/2009 | A        | C           | A     | F         | 5    | 24       | E    | NE   | <2        |
|          | 10/30/2009 | A        | C           | A     | F         | 7    | 25       | HE   | CL   | <2        |
|          | 11/4/2009  | R        | O           | A     | O         | 4    | 28       | HF   | NW   | <2        |
| EG029.00 | 3/17/2009  | R        | O           | A     |           | 2    | 32       | LE   | N    | <2        |
|          | 5/6/2009   | R        | O           | A     | P         | 5    | 30       | HE   | NE   | <2        |
|          | 6/29/2009  | R        | O           | A     | P         | 6    | 30       | LF   | SE   | <2        |
|          | 7/28/2009  | R        | O           | A     |           | 13   | 30       | F    | SW   | <2        |
|          | 9/15/2009  | R        | O           | A     | P         | 12   | 30       | E    | CL   | 2         |
|          | 11/4/2009  | R        | O           | A     | O         | 3    | 28       | HF   | NW   | <2        |
| EG029.50 | 4/8/2009   | R        | O           | A     | P         | 1    | 29       | E    | SW   | <2        |
|          | 5/6/2009   | R        | O           | A     | P         | 5    | 30       | HE   | NE   | 2         |
|          | 6/29/2009  | R        | O           | A     | P         | 7    | 30       | LF   | SE   | 2         |
|          | 7/28/2009  | R        | O           | A     |           | 14   | 30       | F    | S    | 2         |
|          | 9/15/2009  | R        | O           | A     | P         | 14   | 30       | E    | CL   | <2        |
|          | 11/4/2009  | R        | O           | A     | O         | 3    | 32       | HF   | NW   | <2        |
| EG029.90 | 3/17/2009  | R        | O           | R     |           | 3    | 30       | LE   | N    | <2        |
|          | 5/6/2009   | R        | O           | R     | P         | 5    | 30       | HE   | NE   | <2        |
|          | 6/29/2009  | R        | O           | R     | P         | 9    | 28       | LF   | E    | 72        |
|          | 7/28/2009  | R        | O           | R     |           | 14   | 30       | F    | S    | <2        |
|          | 9/15/2009  | R        | O           | R     | P         | 14   | 30       | E    | CL   | <2        |
|          | 11/4/2009  | R        | O           | R     | O         | 3    | 32       | HF   | NW   | <2        |
| EG030.00 | 3/17/2009  | R        | O           | R     |           | 3    | 30       | LE   | N    | 2         |
|          | 5/6/2009   | R        | O           | R     | P         | 5    | 30       | HE   | NE   | <2        |
|          | 6/29/2009  | R        | O           | R     | P         | 8    | 30       | LF   | E    | 2         |
|          | 7/28/2009  | R        | O           | R     |           | 20   | 29       | F    | S    | <2        |
|          | 9/15/2009  | R        | O           | R     | P         | 16   | 30       | E    | CL   | <2        |
|          | 11/4/2009  | R        | O           | R     | O         | 4    | 32       | HF   | NW   | <2        |
| EG030.80 | 3/17/2009  | R        | O           | R     |           | 3    | 31       | LE   | N    | <2        |
|          | 5/6/2009   | R        | O           | R     | P         | 6    | 29       | HE   | NE   | 2         |
|          | 6/29/2009  | R        | O           | R     | P         | 6    | 30       | LF   | E    | 2         |
|          | 7/28/2009  | R        | O           | R     |           | 19   | 28       | F    | CL   | <2        |
|          | 9/15/2009  | R        | O           | R     | P         | 16   | 30       | E    | CL   | <2        |
|          | 11/4/2009  | R        | O           | R     | O         | 3    | 30       | HF   | NW   | 11        |
| EG031.00 | 3/17/2009  | R        | O           | R     |           | 3    | 19       | L    | N    | <2        |
|          | 5/6/2009   | R        | O           | R     | P         | 7    | 30       | HE   | NE   | <2        |
|          | 6/29/2009  | R        | O           | R     | P         | 10   | 29       | F    | CL   | 8         |
|          | 7/28/2009  | R        | O           | R     |           | 26   | 24       | F    | SW   | 2         |
|          | 9/15/2009  | R        | O           | R     | P         | 14   | 30       | E    | CL   | 2         |
|          | 11/4/2009  | R        | O           | R     | O         | 4    | 30       | HF   | NW   | 3.6       |
| EG032.00 | 3/17/2009  | R        | O           | A     |           | 3    | 30       | L    | N    | <2        |
|          | 5/6/2009   | R        | O           | A     | P         | 5    | 30       | HE   | NE   | <2        |



**EG Annual Review**  
**Effective Date 05/06/10**

| Station    | Date       | Strategy  | Open Closed | Class | Adversity | Temp | Salinity | Tide | Wind | Col Score |
|------------|------------|-----------|-------------|-------|-----------|------|----------|------|------|-----------|
|            | 6/29/2009  | R         | O           | A     | P         | 6    | 29       | LF   | E    | 2         |
|            | 7/28/2009  | R         | O           | A     |           | 15   | 30       | F    | SW   | <2        |
|            | 9/15/2009  | R         | O           | A     | P         | 14   | 30       | E    | CL   | <2        |
|            | 11/4/2009  | R         | O           | A     | O         | 4    | 31       | HF   | NW   | 7.3       |
| EG033.00   | 3/17/2009  | R         | O           | A     |           | 2    | 8        | L    | N    | <2        |
|            | 5/6/2009   | R         | O           | A     | P         | 6    | 29       | HE   | NE   | 4         |
|            | 6/29/2009  | R         | O           | A     | P         | 7    | 28       | F    | E    | 14        |
|            | 7/28/2009  | R         | O           | A     |           | 17   | 25       | F    | SW   | <2        |
|            | 9/15/2009  | R         | O           | A     | P         | 14   | 23       | E    | NW   | 6         |
|            | 10/28/2009 | A         | C           | A     | F         | 5    | 28       | E    | CL   | 2         |
|            | 10/29/2009 | A         | C           | A     | F         | 6    | 24       | E    | NE   | <2        |
|            | 10/30/2009 | A         | C           | A     | F         | 6    | 30       | HE   | CL   | <2        |
|            | 11/4/2009  | R         | O           | A     | O         | 3    | 32       | HF   | NW   | <2        |
|            | EG034.00   | 3/31/2009 | R           | O     | A         | T    | 4        | 31   | HF   | E         |
| 4/26/2009  |            | A         | C           | A     | F         | 8    | 30       | H    | N    | <2        |
| 4/27/2009  |            | A         | C           | A     | F         | 6    | 26       | HF   | SW   | 6         |
| 5/6/2009   |            | R         | O           | A     | P         | 5    | 28       | HE   | NE   | <2        |
| 6/15/2009  |            | A         | C           | A     | F         | 12   | 26       | F    | S    | 6         |
| 6/23/2009  |            | A         | C           | A     | F         | 7    | 30       | HF   | NE   | <2        |
| 6/24/2009  |            | A         | C           | A     | F         | 8    | 30       | F    | E    | <2        |
| 6/25/2009  |            | A         | C           | A     | F         | 8    | 30       | F    | SE   | <2        |
| 6/29/2009  |            | R         | O           | A     | P         | 9    | 21       | F    | E    | 138       |
| 7/28/2009  |            | R         | O           | A     |           | 16   | 28       | F    | SW   | 2         |
| 8/28/2009  |            | A         | C           | A     | F         | 12   | 30       | HE   | CL   | 6         |
| 8/29/2009  |            | A         | C           | A     | F         | 12   | 27       | E    | E    | 18        |
| 9/1/2009   |            | A         | C           | A     | F         | 13   | 32       | HE   | NW   | <2        |
| 9/2/2009   |            | A         | C           | A     | F         | 15   | 30       | HE   | W    | <2        |
| 10/21/2009 |            | R         | O           | A     | O         | 7    | 32       | HE   | NW   | <2        |
| 11/4/2009  |            | R         | O           | A     | O         | 4    | 31       | HF   | NW   | <2        |
| EG035.00   |            | 3/31/2009 | R           | O     | A         | T    | 0        | 31   | F    | E         |
|            | 5/6/2009   | R         | O           | A     | P         | 6    | 30       | E    | NE   | 2         |
|            | 6/30/2009  | R         | O           | A     | P         | 8    | 30       | E    | CL   | <2        |
|            | 7/28/2009  | R         | O           | A     |           | 22   | 30       | HF   | W    | 8         |
|            | 10/21/2009 | R         | O           | A     | O         | 7    | 32       | HE   | NW   | <2        |
|            | 11/4/2009  | R         | O           | A     | O         | 4    | 32       | H    | NW   | 3.6       |
| EG036.00   | 3/17/2009  | R         | O           | A     |           | 3    | 30       | L    | N    | <2        |
|            | 5/6/2009   | R         | O           | A     | P         | 5    | 30       | E    | NE   | <2        |
|            | 6/29/2009  | R         | O           | A     | P         | 6    | 30       | F    | S    | 2         |
|            | 7/28/2009  | R         | O           | A     |           | 13   | 30       | F    | CL   | <2        |
|            | 9/15/2009  | R         | O           | A     | P         | 14   | 30       | LE   | NW   | <2        |
|            | 10/28/2009 | A         | C           | A     | F         | 5    | 32       | E    | NE   | <2        |
|            | 10/29/2009 | A         | C           | A     | F         | 6    | 32       | E    | NE   | <2        |
|            | 10/30/2009 | A         | C           | A     | F         | 6    | 31       | HE   | CL   | <2        |
| EG036.06   | 11/4/2009  | R         | O           | A     | O         | 3    | 32       | H    | NW   | <2        |
|            | 3/17/2009  | R         | O           | A     |           | 3    | 30       | L    | N    | <2        |
|            | 5/6/2009   | R         | O           | A     | P         | 5    | 30       | E    | NE   | <2        |
|            | 6/29/2009  | R         | O           | A     | P         | 7    | 29       | F    | E    | 5.4       |
|            | 7/28/2009  | R         | O           | A     |           | 15   | 29       | LF   | S    | <2        |
|            | 9/15/2009  | R         | O           | A     | P         | 15   | 32       | LE   | NW   | <2        |
| EG037.00   | 11/4/2009  | R         | O           | A     | O         | 3    | 32       | H    | NW   | <2        |
|            | 3/17/2009  | R         | C           | P     |           | 4    | 31       | LF   | N    | 2         |
| EG043.00   | 4/29/2009  | R         | O           | A     |           | 5    | 31       | F    | NW   | <2        |
|            | 5/18/2009  | R         | O           | A     | P         | 7    | 31       | F    | N    | <2        |
|            | 7/13/2009  | R         | O           | A     | O         | 13   | 30       | F    | SW   | <2        |



**EG Annual Review**  
**Effective Date 05/06/10**

| Station | Date       | Strategy | Open Closed | Class | Adversity | Temp | Salinity | Tide | Wind | Col Score |
|---------|------------|----------|-------------|-------|-----------|------|----------|------|------|-----------|
|         | 8/10/2009  | R        | O           | A     | O         | 15   | 31       | HE   | SW   | <2        |
|         | 9/14/2009  | R        | O           | A     | O         | 14   | 31       | F    | NW   | <2        |
|         | 10/14/2009 | R        | O           | A     | P         | 11   | 31       | E    | NW   | <2        |