

Section 5-5

Mousam River (Mousam and Kennebunk Rivers Alliance)

Refer to Chapter 4 of this document for information about sampling methods, sampling sites, and quality assurance.

Overview

The Mousam and Kennebunk Rivers Alliance began in 2009 with assistance from the Wells National Estuarine Research Reserve (NERR) and Maine Rivers, for the purpose of monitoring the Kennebunk and Mousam rivers. The Mousam River is located in York County and originates at Square Pond in Shapleigh and Acton, Maine. The river is 23 miles long, flows from Mousam Lake in Shapleigh, and enters the Gulf of Maine in Kennebunk. Water quality in the Mousam River was impacted historically by industrial and commercial use related to mills in the towns of Sanford and Kennebunk (Baker, 1999). Today, water quality impacts are caused in large part by stormwater runoff associated with increasing development of the watershed and high levels of impervious surfaces in the town centers of Sanford and Kennebunk. Water quality is also impacted by several point source discharges to the main stem. In addition, the industrial legacy of the ten dams on the main stem of the river may also contribute to degraded water quality. According to Maine's statutory Water Classification System, the Mousam River Basin has designations listed below.¹ Below head of tide, the river is Class SB.

A. Mousam River, main stem.

- (1) From the outlet of Mousam Lake to a point located 0.5 miles above Mill Street in Springvale – Class B.
- (2) From a point located 0.5 mile above Mill Street in Springvale to its confluence with Estes Lake – Class C.
- (3) From the outlet of Estes Lake to tidewater – Class B.

B. Mousam River, tributaries – Class B.

The 2001 TMDL report identified a 3.7 mile segment of the Mousam River, located from the Route 4 bridge to Estes Lake, as not attaining Class C standards due to dissolved oxygen concentration. This segment is included on Maine's 303(d) list for both point and non-point sources. Listing essentially means that the segment has been identified as needing, and is targeted for, remediation.

The overall purpose of monitoring is to assess water quality data to determine whether the river is meeting water quality classification standards. The Mousam River Sampling and Analysis Plan states that the objectives of monitoring are to: (1) develop baseline data for expanded long-term water quality monitoring efforts; (2) provide information on current watershed conditions; and (3) identify areas with degraded water quality to focus best management practices. Two sites were added in 2010 to bracket upstream and downstream of the sewage outfall in Sanford and two additional sites in Sanford were added in 2012.

¹ <http://www.mainelegislature.org/legis/statutes/38/title38sec467.html>

Methods

The volunteers monitored the Mousam River in 2012 at twelve stations on the main stem, from the headwaters to the estuary (Table 5-5-1 and Figures 5-5-1 through 5-5-5). This includes two new stations that were added this year [MOUR-11 and MOUR-12]. Three of the stations [MOUR-06, MOUR-07 and MOUR-08] are below head of tide. There are also three tributary sites on the Middle Branch of the Mousam River and Littlefield River. All but one of the Mousam River sites are VRMP approved sites- the one non approved site is MOUR-04.

Table 5-5-1: Mousam and Kennebunk Rivers Alliance sampling sites on the Mousam River.

| VRMP Site ID | Organization Site Code | Sample Location | Class |
|---|------------------------|----------------------|-------|
| Mousam River-SMU290-VRMP | MOUR-01 | Headwaters | B |
| Mousam River-SMU280-VRMP | MOUR-02 | S Curve Road | B |
| Mousam River-SMU144-VRMP | MOUR-03 | Whicher's Hill Road | B |
| Mousam River-SMU80-KMA | MOUR-04 | Mill Street | B |
| Mousam River-SMU39-VRMP | MOUR-05 | Berry Ct. | B |
| Mousam River-SMU35-VRMP | MOUR-06 | Roger's Pond | SB |
| Mousam River-SMU04-VRMP | MOUR-07 | Route 9 Bridge | SB |
| Back Creek-SMUBC02-VRMP | MOUR-08 | Above Parson's Beach | SB |
| Mousam River-SMU163-VRMP | MOUR-09 | Route 4 | C |
| Mousam River-SMU204-VRMP | MOUR-10 | New Dam Road | C |
| Mousam River-SMU250-VRMP | MOUR-11 | Behind YMCA | C |
| Mousam River-SMU232-VRMP | MOUR-12 | High Street | C |
| Littlefield River-SMUMBLR18-VRMP | LR-01 | Back Road | B |
| Middle Branch Mousam River-SMUMB58-VRMP | MOUSMB-01 | Mast Road | B |
| Middle Branch Mousam River-SMUMB33-VRMP | MOUSMB-02 | Swett's Bridge | B |

Monitoring was conducted from June through September 1-2 times per month. At each site, the monitors made direct measurements of water temperature and dissolved oxygen using a handheld YSI 550A meter. Conductivity was directly measured at the freshwater sites using an Oakton EC 11+ Testr conductivity pen. Samples were collected for *E. coli* bacteria at all the freshwater sites, except for the two headwater sites. Samples for Enterococcus bacteria were collected at two of the sites below head of tide. Bacteria samples were transported to Nelson Labs for analysis.

2012 Mousam River Sampling Sites, Upper Mousam Mousam and Kennebunk Rivers Alliance

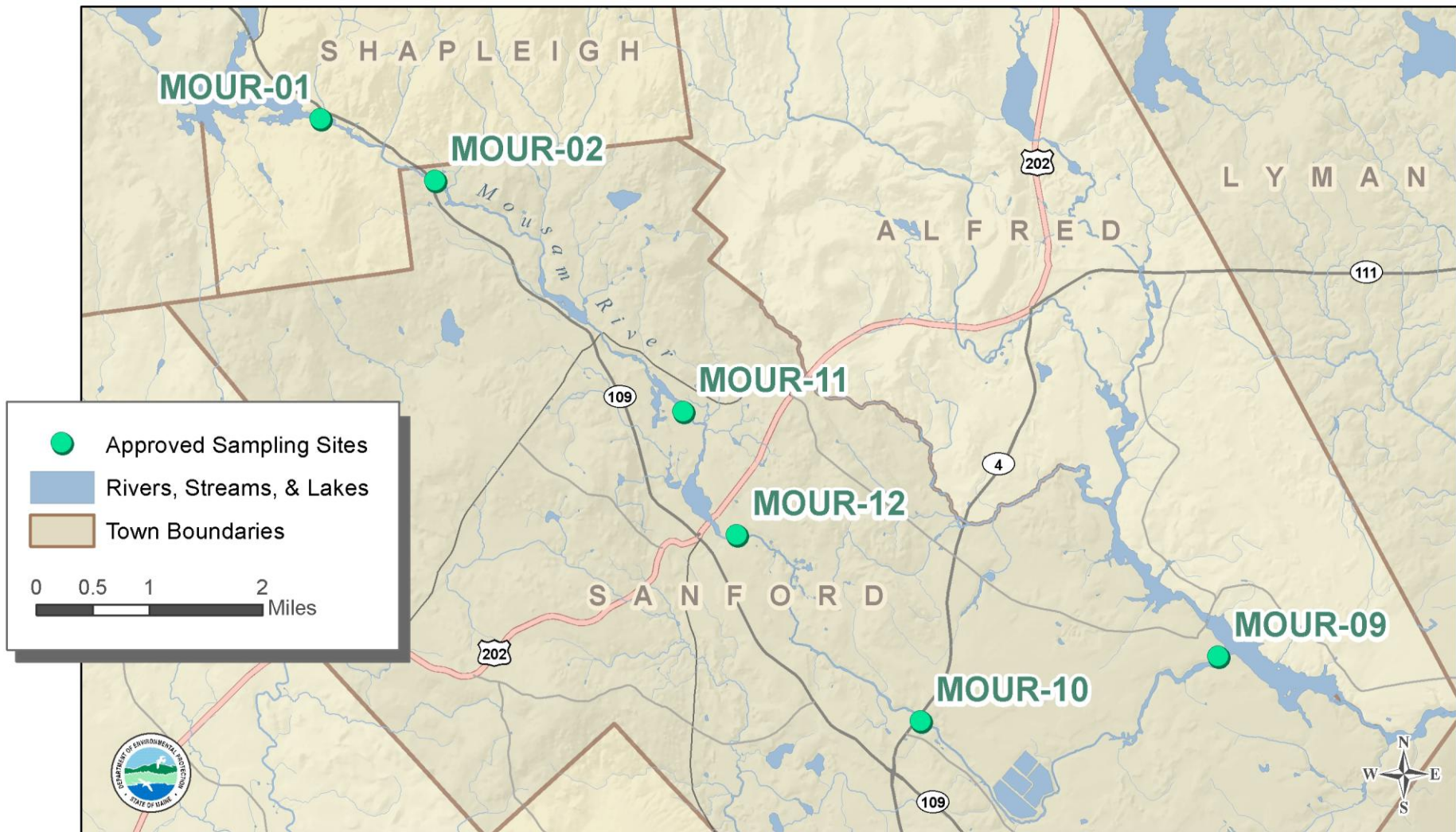


Figure 5-5-1: Map of Mousam and Kennebunk Rivers Alliance sampling sites on the upper Mousam River.

2012 Mousam River Sampling Sites, Upper Branch Mousam and Kennebunk Rivers Alliance

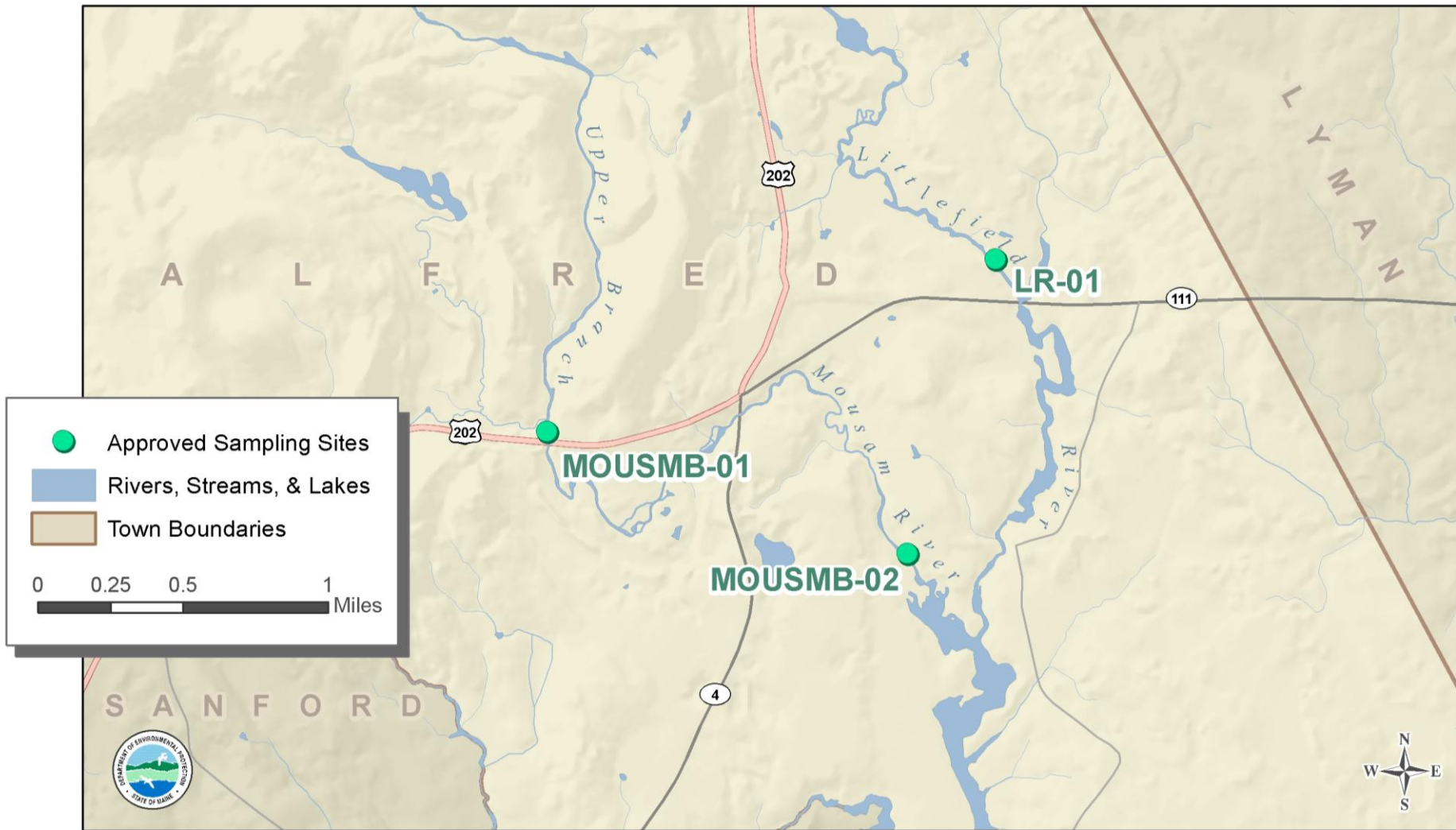


Figure 5-5-2: Map of Mousam and Kennebunk Rivers Alliance sampling sites in the upper branch of the Mousam River.

2012 Mousam River Sampling Sites, Mid-Section Mousam and Kennebunk Rivers Alliance

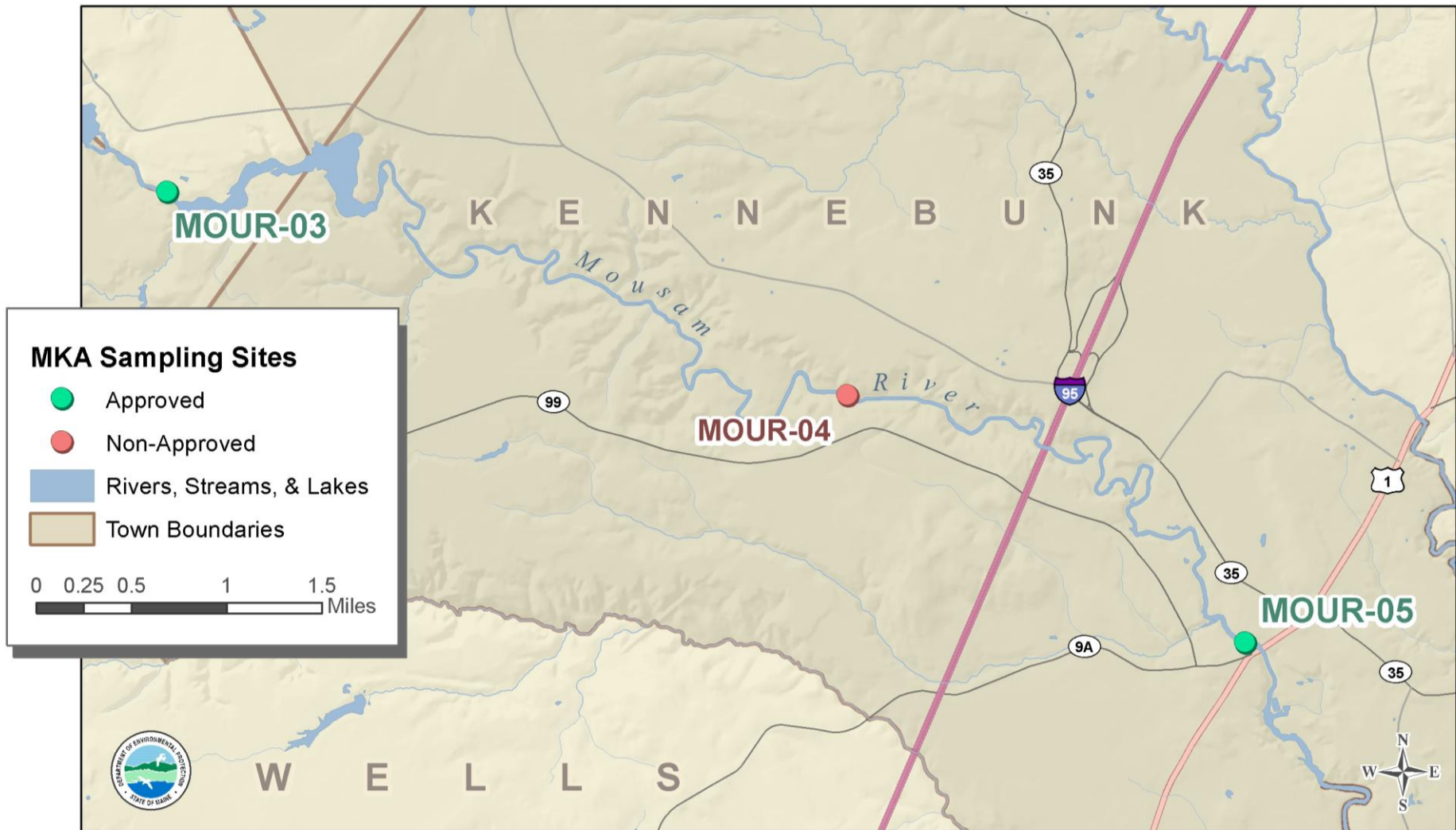


Figure 5-5-3: Map of Mousam and Kennebunk Rivers Alliance sampling sites in the mid-section of the Mousam River.

2012 Mousam River Sampling Sites, Tidal Mousam and Kennebunk Rivers Alliance

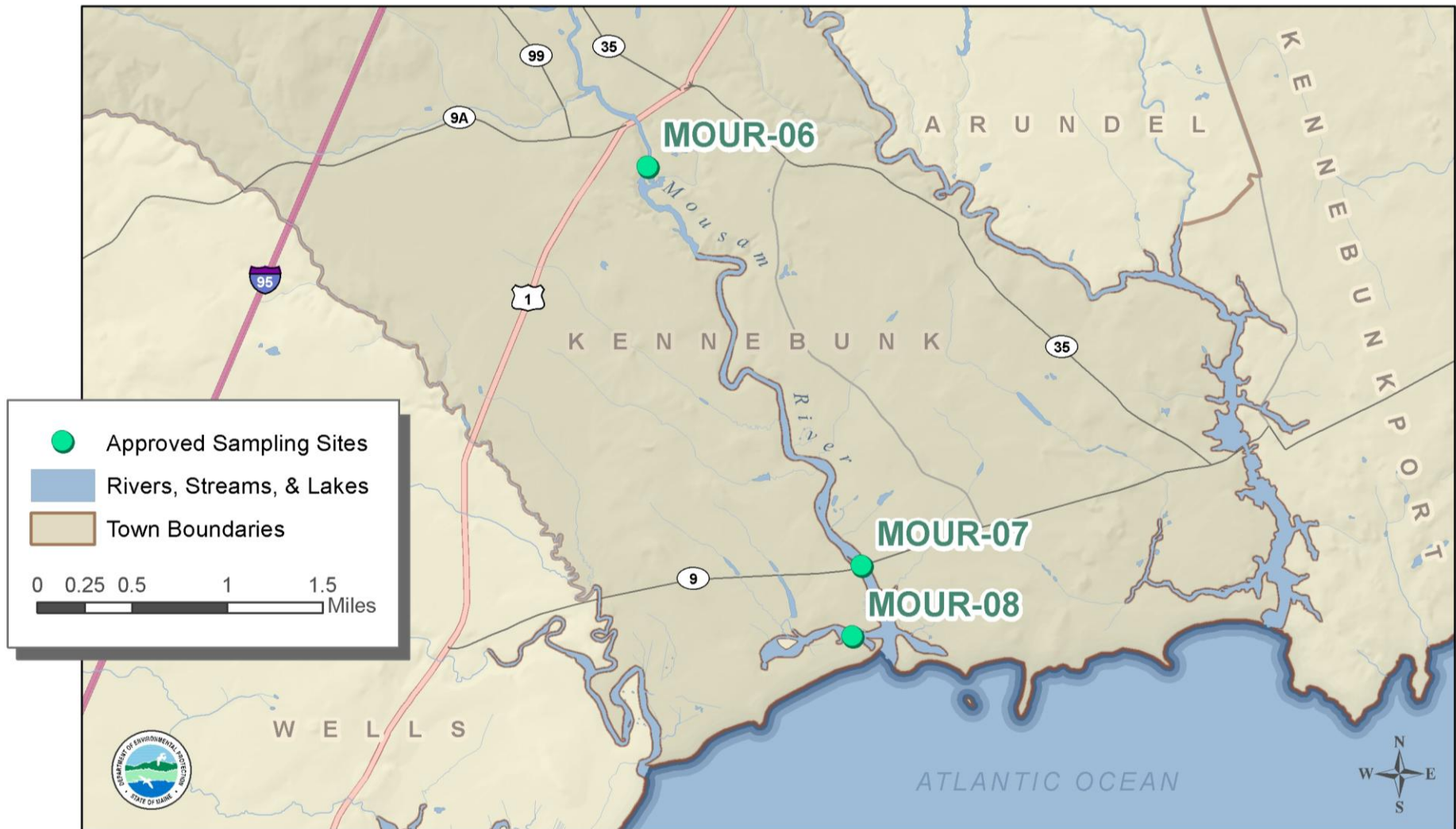


Figure 5-5-4: Map of Mousam and Kennebunk Rivers Alliance tidal sampling sites on the Mousam River.

Results

For the purpose of discussion, the sampling stations were divided into upper (MOUR-01, MOUR-02, MOUR-09, MOUR-10, MOUR-11, MOUR-12), middle (MOUR-03, MOUR-04, MOUR-05), tidal (MOUR-06, MOUR-07, MOUR-08) and upper branches (MOUSMB-01, MOUSMB-02, LR-01). Refer to appendices A-1 and A-2 in discussion of individual site data and trends, as well as graphed data (Figures 5-5-7 through 5-5-26) and data graphed by river mile (Figures 5-6-27 through 5-5-28), at the end of this section of the report.

Precipitation

Figure 5-5-6 provides a graph of rainfall and sampling dates for the monitoring period. Rainfall data was obtained from Weather Underground (<http://www.wunderground.com>). Weather station choice was based on proximity and station with most complete records. If there was an airport station close by, this was chosen. This information provides an overview of rainfall events and can be useful in interpreting monitoring results for some parameters.

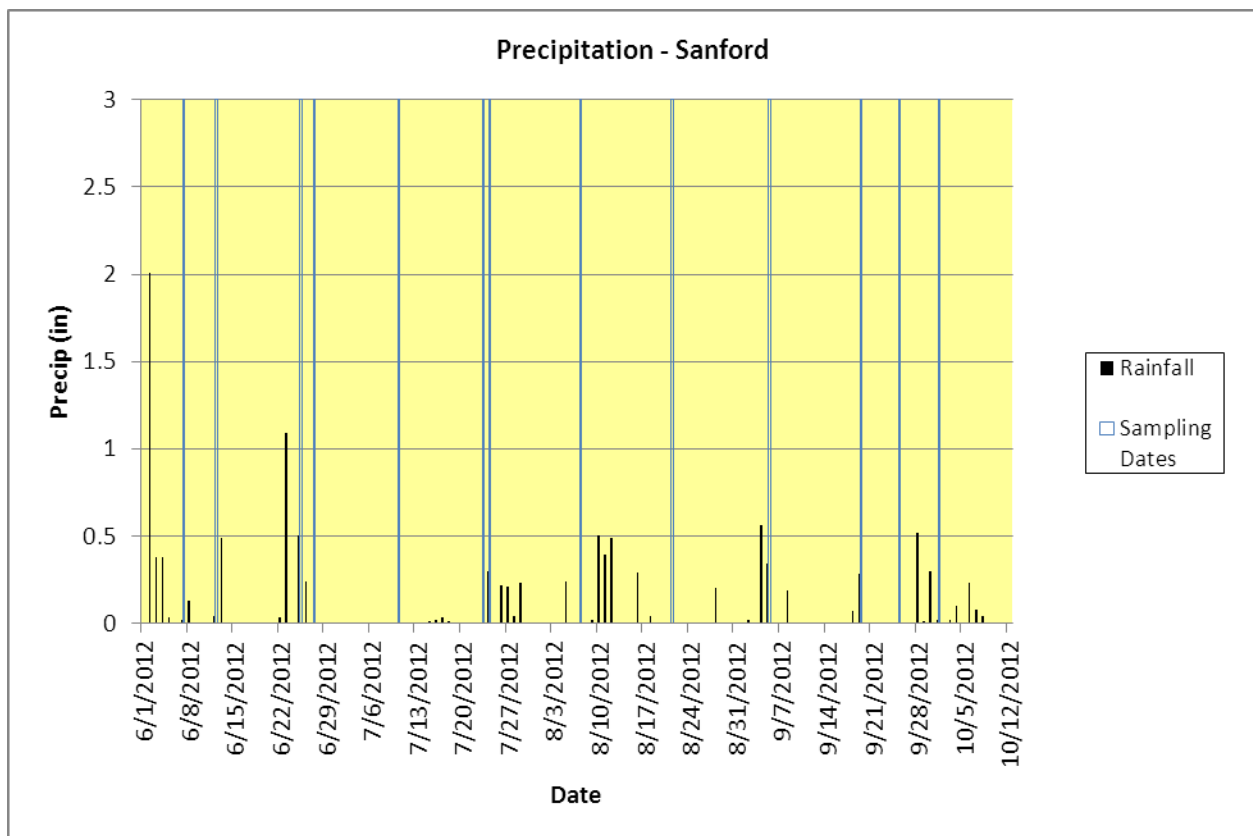


Figure 5-5-5: Seasonal precipitation measured at Sanford Airport.

Dissolved Oxygen

Dissolved oxygen (DO) was measured 2-8 times at each of the thirteen sampling sites (Table 5-5-2 and Table 5-5-3). Monitoring occurred from June through September. Class B criteria for dissolved oxygen are a minimum of 7 mg/l (milligrams/liter) or 75% saturation. Class C criteria for dissolved oxygen are a minimum of 5 mg/l or 60 % saturation. To meet water quality criteria, both concentration and saturation standards must be met. The Class SB standard is 85% saturation.

Table 5-5-2: A summary of minimum, maximum, and average dissolved oxygen concentration (mg/l) values for Mousam and Kennebunk Rivers Alliance monitoring sites on the Mousam River.

| Site | Approved Site | # of Samples | Minimum Value | Maximum Value | Average Value |
|-----------|---------------|--------------|---------------|---------------|---------------|
| MOUR-01 | Y | 8 | 7.3 | 8.9 | 8.0 |
| MOUR-02 | Y | 8 | 7.2 | 8.7 | 7.8 |
| MOUR-03 | Y | 8 | 7.4 | 9.9 | 8.2 |
| MOUR-04 | N | 6 | 6.4 | 8.6 | 7.5 |
| MOUR-05 | Y | 6 | 7.0 | 8.9 | 8.0 |
| MOUR-06 | Y | 6 | 8.5 | 10.1 | 8.9 |
| MOUR-07 | Y | 5 | 7.6 | 9.3 | 8.6 |
| MOUR-08 | Y | 6 | 6.7 | 10.3 | 8.4 |
| MOUR-09 | Y | 8 | 6.7 | 8.8 | 7.3 |
| MOUR-10 | Y | 8 | 6.9 | 8.3 | 7.4 |
| MOUR-11 | Y | 8 | 7.8 | 9.4 | 8.6 |
| MOUR-12 | Y | 8 | 7.7 | 9.6 | 8.6 |
| LR-01 | Y | 8 | 3.1 | 5.7 | 4.4 |
| MOUSMB-01 | Y | 8 | 7.1 | 10.1 | 8.0 |
| MOUSMB-02 | Y | 8 | 6.7 | 10.1 | 7.5 |

Table 5-5-3: A summary of minimum, maximum, and average dissolved oxygen saturation (%) values for Mousam and Kennebunk Rivers Alliance monitoring sites on the Mousam River.

| Site | Approved Site | # of Samples | Minimum Value | Maximum Value | Average Value |
|-----------|---------------|--------------|---------------|---------------|---------------|
| MOUR-01 | Y | 8 | 88.8 | 95.9 | 92.6 |
| MOUR-02 | Y | 8 | 85.2 | 97.2 | 90.0 |
| MOUR-03 | Y | 8 | 86.6 | 97.5 | 92.2 |
| MOUR-04 | N | 6 | 74.9 | 97.5 | 85.2 |
| MOUR-05 | Y | 6 | 82.1 | 92.7 | 88.0 |
| MOUR-06 | Y | 6 | 95.0 | 103.1 | 98.8 |
| MOUR-07 | Y | 5 | 86.4 | 103.3 | 95.4 |
| MOUR-08 | Y | 6 | 72.5 | 104.3 | 89.9 |
| MOUR-09 | Y | 8 | 76.6 | 86.5 | 80.3 |
| MOUR-10 | Y | 8 | 79.6 | 92.1 | 83.8 |
| MOUR-11 | Y | 8 | 93.3 | 104.6 | 96.7 |
| MOUR-12 | Y | 8 | 93.1 | 105.16 | 96.6 |
| LR-01 | Y | 8 | 35 | 57.9 | 48.2 |
| MOUSMB-01 | Y | 8 | 76.8 | 93.2 | 83.5 |
| MOUSMB-02 | Y | 8 | 66.3 | 93.5 | 77.1 |

In the upper part of the Mousam River main stem (Sites MOUR-01, MOUR-02, MOUR-09, MOUR-10, MOUR-11, MOUR-12), dissolved oxygen concentrations ranged from 6.7-9.6 mg/l. Most of these sites were similar with lowest values occurring between mid-July and early August. Dissolved oxygen never dropped below the corresponding Class B/Class C standard of 7.0/5.0 mg/l. Site MOUR-10 was the only site where DO values rose somewhat during the period of mid-July to early August. MOUR-09 had the widest range of values, but did not drop below the Class C standard. Dissolved oxygen percent saturation ranged from 76.6-105.2%. It did not go below the Class B or C standard for any of these sites.

In the middle part of the Mousam River main stem (Sites MOUR-03, MOUR-04, MOUR-05), DO ranged from 6.4-9.9 mg/l. Site MOUR-04 had the lowest value which occurred in early July. Sites MOUR-03 and MOUR-05 were similar in that values went up and down throughout the season. Dissolved oxygen dropped below the Class B standard on two dates at site MOUR-04, but all results for MOUR-03 and MOUR-05 were above the 7.0 mg/l standard. Dissolved oxygen percent saturation ranged from 74.9 - 97.5%. It dropped below the Class B standard at site MOUR-04 on just one occasion in early July.

For the tidal sites (MOUR-06, MOUR-07, MOUR-08), dissolved oxygen ranged from 6.7 – 10.3 mg/l. Lowest values for all three sites occurred in early August. Dissolved oxygen dropped below below the

Class SB standard of 85% saturation just once at site MOUR-08. All other results for these sites met the standard.

For the upper branch (Sites MOUSMB-01, MOUSMB-02, LR-01), dissolved oxygen ranged from 7.1 mg/l -10.1 mg/l. Lowest values occurred in late June to early August. Dissolved oxygen never dropped below the Class B standard at MOUSMB-01, but dropped below the standard at MOUSMB-02 twice. Site LR-01 was consistently below the Class B standard with values ranging as low as 3.1. Dissolved oxygen saturation for these sites ranged from 35.0-93.5%.

The monitors did a decent job of getting out to sites earlier in the day (before 8:00 am) and should continue to try and do so. Afternoon is the time of day when plant photosynthesis peaks, and DO is at the highest level during any 24-hour period. Early morning monitoring may have provided even lower readings at some of the sites. Additionally, it is difficult to compare early morning readings to readings collected mid-to-late morning because they do not represent the same critical condition. Dissolved oxygen is also affected by flow conditions. During high flow conditions, more oxygen is added to the river from the atmosphere, as the water is moving faster and there is more opportunity for mixing. If flow during the summer months is higher or lower than generally normal, then this will affect the dissolved oxygen.

Water Temperature

Temperature was measured 6-8 times at each of the fifteen sampling sites (Table 5-5-4). Monitoring occurred from June through September. Maine's Regulations Relating to Temperature (06-096 CMR Chapter 582) require that discharge of pollutants not raise the temperature of any river and stream above the EPA criteria for indigenous species (23°C maximum and 19°C weekly average) or 0.3°C (0.5°F) above the temperature that would naturally occur outside a mixing zone established by the Board of Environmental Protection. Pollutant is defined in statute as many things including dirt and heat. For tidal waters, discharge of pollutants may not raise the temperature more than 4°F (2.2°C) or more than 1.5°F (0.8°C) from June 1 to September 1, and may not cause the temperature of any tidal waters to exceed 85°F (29°C) at any point outside a mixing zone established by the Board of Environmental Protection.

Table 5-5-4: A summary of minimum, maximum, and average water temperature (°C) values for Mousam and Kennebunk Rivers Alliance monitoring sites on the Mousam River.

| Site | Approved Site | # of Samples | Minimum Value | Maximum Value | Average Value |
|---------|---------------|--------------|---------------|---------------|---------------|
| MOUR-01 | Y | 8 | 19 | 26 | 23.3 |
| MOUR-02 | Y | 7 | 18.8 | 24.6 | 22.6 |
| MOUR-03 | Y | 8 | 14.4 | 24.7 | 21.3 |
| MOUR-04 | N | 6 | 15.6 | 25.5 | 21.4 |
| MOUR-05 | Y | 6 | 15 | 24.7 | 21.1 |
| MOUR-06 | Y | 6 | 15.1 | 25.1 | 21.1 |

Table 5-5-4 (Continued): A summary of minimum, maximum, and average water temperature (°C) values for Mousam and Kennebunk Rivers Alliance monitoring sites on the Mousam River.

| Site | Approved Site | # of Samples | Minimum Value | Maximum Value | Average Value |
|-----------|---------------|--------------|---------------|---------------|---------------|
| MOUR-07 | Y | 5 | 16.9 | 18.6 | 17.8 |
| MOUR-08 | Y | 6 | 14.8 | 17.9 | 16.1 |
| MOUR-09 | Y | 8 | 14.7 | 23.7 | 20.2 |
| MOUR-10 | Y | 8 | 14.5 | 25.4 | 21.6 |
| MOUR-11 | Y | 8 | 18.9 | 24.8 | 22.0 |
| MOUR-12 | Y | 8 | 18.8 | 25 | 22.1 |
| LR-01 | Y | 8 | 13.4 | 24 | 20.2 |
| MOUSMB-01 | Y | 8 | 19 | 26 | 23.2 |
| MOUSMB-02 | Y | 8 | 18.8 | 24.6 | 22.6 |

In the upper part of the Mousam River main stem (Sites MOUR-01, MOUR-02, MOUR-09, MOUR-10, MOUR-11, MOUR-12), temperatures ranged from 14.5° to 26.0°C (Celsius). All these sites exhibited a typical seasonal pattern of cooler temperatures during the early and late parts of the field season. All sites peaked in early August.

In the middle part of the Mousam River main stem (Sites MOUR-03, MOUR-04, MOUR-05), temperatures ranged from 14.4-25.5°C. All these sites exhibited a typical seasonal pattern of cooler temperatures during the early and late parts of the field season. All sites peaked in late July or early August.

For the tidal sites (MOUR-06, MOUR-07, MOUR-08), temperatures ranged from 14.8-25.1°C. Site MOUR-06 had the highest temperatures because it is least affected by incoming tidal water. Sites MOUR-07 and MOUR-08 had generally lower temperatures as a result of the predominant tidal influence.

For the upper branch (Sites MOUSMB-01, MOUSMB-02, LR-01), temperatures ranged from 13.4-26.0°C. Each site exhibited typical seasonal temperature patterns.

No particular concerns are noted.

Specific Conductance

Specific conductance was measured 5-8 times at thirteen freshwater sampling sites (Table 5-5-5). Monitoring occurred from June through September. Specific conductance is related to the amount of dissolved materials in the water. While there are no numerical standards, a relationship exists between conductivity and chloride which has numerical criteria. In general, streams located in urban areas tend to have higher specific conductance due to polluted urban stormwater runoff. This may also in large part be due to salt buildup in surface and groundwater from road maintenance practices.

Specific conductance at all the sites was relatively low. Values below 100 $\mu\text{S}/\text{cm}$ are considered to be low. In the upper part of the Mousam River main stem (Sites MOUR-01, MOUR-02, MOUR-09, MOUR-10, MOUR-11, MOUR-12), the highest values occurred at sites MOUR-09 and MOUR-10 with values ranging from 70.0-151.0 $\mu\text{S}/\text{cm}$. The middle part of the Mousam River main stem (Sites MOUR-03, MOUR-04, MOUR-05) sites were all similar with highest values occurring at MOUR-03. For the upper branch (Sites MOUSMB-01, MOUSMB-02, LR-01), the highest values occurred at Site MOUSMB-02.

No particular concerns are noted.

Table 5-5-5: A summary of minimum, maximum, and average specific conductance ($\mu\text{S}/\text{cm}$) values for Mousam and Kennebunk Rivers Alliance monitoring sites on the Mousam River.

| Site | Approved Site | # of Samples | Minimum Value | Maximum Value | Average Value |
|-----------|---------------|--------------|---------------|---------------|---------------|
| MOUR-01 | Y | 8 | 54 | 70 | 65.8 |
| MOUR-02 | Y | 8 | 64 | 69 | 67 |
| MOUR-03 | Y | 8 | 55 | 125 | 101.4 |
| MOUR-04 | N | 5 | 60 | 97 | 74.2 |
| MOUR-05 | Y | 6 | 61 | 99 | 80.5 |
| MOUR-06 | Y | 5 | 54 | 115 | 88.6 |
| MOUR-07 | Y | | | | NA-Tidal |
| MOUR-08 | Y | | | | NA-Tidal |
| MOUR-09 | Y | 8 | 70 | 127 | 105.4 |
| MOUR-10 | Y | 8 | 74 | 151 | 124.9 |
| MOUR-11 | Y | 8 | 54 | 85 | 75 |
| MOUR-12 | Y | 8 | 76 | 95 | 83.4 |
| LR-01 | Y | 8 | 46 | 103 | 90.5 |
| MOUSMB-01 | Y | 8 | 54 | 70 | 65.8 |
| MOUSMB-02 | Y | 8 | 64 | 69 | 67 |

Bacteria

Escherichia coli bacteria were sampled 4-8 times at seven of the freshwater sites (Table 5-5-6). Enterococcus bacteria were sampled 5- 6 times at two of the tidal sites (Table 5-5-6). Monitoring occurred from June through September. Enterococcus bacteria are used as the indicator organism for marine waters and *E. coli* bacteria are used for freshwaters. While these types of bacteria are not pathogens, their presence in the water may indicate the presence of other organisms including bacteria and viruses that can cause gastrointestinal illnesses.

Class B criteria for bacteria are as follows: “Between May 15th and September 30th, the number of Escherichia Coli of human and domestic origin shall not exceed a geometric mean of 64/100 ml (milliliters) or an instantaneous level of 236/100 ml.” Class C criteria are: “Between May 15th and September 30th, the number of Escherichia Coli of human and domestic origin shall not exceed a geometric mean of 126/100 ml (milliliters) or an instantaneous level of 236/100 ml.” “Class SB criteria are as follows: “Between May 15th and September 30th, the numbers of enterococcus bacteria of human and domestic animal origin in these waters may not exceed a geometric mean of 8 per 100 milliliters or an instantaneous level of 54 per 100 milliliters.” Geometric means are calculated instead of averages because measures like bacteria often have a few very large values that strongly influence the mean and make it a poor predictor.

Table 5-5-6: A summary of minimum, maximum, and geometric means for bacteria (MPN/100 mL) values for Mousam and Kennebunk Rivers Alliance monitoring sites on the Mousam River.

| Site | Bacteria Type | # of Samples | Minimum Value | Maximum Value | Geometric Mean |
|-----------|---------------------|--------------|---------------|---------------|----------------|
| MOUR-01 | <i>E. coli</i> | | | | Not sampled |
| MOUR-02 | <i>E. coli</i> | | | | Not sampled |
| MOUR-03 | <i>E. coli</i> | 8 | 1 | 261 | 11 |
| MOUR-04 | <i>E. coli</i> | 4 | 8 | 28 | 10 |
| MOUR-05 | <i>E. coli</i> | 6 | 23 | 158 | 42 |
| MOUR-06 | <i>Enterococcus</i> | 6 | 10 | 97 | 42 |
| MOUR-07 | <i>Enterococcus</i> | | | | Not sampled |
| MOUR-08 | <i>Enterococcus</i> | 5 | <10 | 20 | 13 |
| MOUR-09 | <i>E. coli</i> | 8 | 20 | 147 | 56 |
| MOUR-10 | <i>E. coli</i> | 8 | 3 | 153 | 20 |
| MOUR-11 | <i>E. coli</i> | | | | Not sampled |
| MOUR-12 | <i>E. coli</i> | | | | Not sampled |
| LR-01 | <i>E. coli</i> | 8 | 29 | 461 | 56 |
| MOUSMB-01 | <i>E. coli</i> | | | | Not sampled |
| MOUSMB-02 | <i>E. coli</i> | 8 | 69 | 201 | 127 |

In the upper part of the Mousam River main stem (Sites MOUR-01, MOUR-02, MOUR-09, MOUR-10), only sites MOUR-09 and MOUR-10 were sampled. Both sites met Class C standards for all sampling events. In the middle part of the Mousam River main stem (Sites MOUR-03, MOUR-04, MOUR-05) only site MOUR-03 violated the Class B instantaneous criteria. The geometric mean was higher at Site MOUR-05 compared to the other two sites, but still below the criterion. For the tidal sites (MOUR-06, MOUR-07, MOUR-08), only sites MOUR-06 and MOUR-08 were sampled. Site MOUR-06 violated the instantaneous criterion on three sampling dates. Both sites violated geometric mean criteria. For the upper branch (Sites MOUSMB-01, MOUSMB-02, LR-01) only MOUSMB-02 and LR-01 were sampled for bacteria. Site LR-01 violated the instantaneous criterion, but did not violate the geometric mean criterion. Site MOUSMB-02 met the instantaneous criterion, but violated the geometric mean criterion. Typically, observed high bacterial levels are often associated with stormwater runoff and/or combined sewer overflows.

Discussion and Recommendations

There are numerous sources of pollution and other stresses to the Mousam River and tributary sites monitored by the Mousam and Kennebunk Rivers Alliance that could potentially have an impact on water quality. Some of those sources of pollution and stress may include:

- Non-point source pollution (e.g., septic systems, eroded soil, fertilizers, pesticides, heavy metals, petroleum residues, road salt, wildlife and pet feces) and polluted stormwater originating from urban impervious surfaces (e.g. streets, parking lots, driveways, rooftops) (even though urban development and roads are fairly sparse in the watershed), agriculture, and forestry.
- Point source pollution (pollution originating from a direct discharge including wastewater treatment plant discharge, combined sewer overflows and overboard discharges).
- Ponds and impoundments (which often create more pond-like aquatic habitat conditions that may have higher water temperatures and lower dissolved oxygen concentrations than free-flowing waters)
- Natural effects of wetlands (such as contributing waters to a stream/river that have low dissolved oxygen levels due to the decomposition of larger amounts of organic matter, respiration of abundant plant matter, and low re-aeration rates that is characteristic of many wetlands).

The following are recommendations for future monitoring:

- Dissolved oxygen was low at some of the sites. Site LR-01 should be monitored throughout the season and further investigation made as to whether this is natural. Factors contributing to low dissolved oxygen may include low flow and the site being below extensive wetlands. Occasional mid to late afternoon sampling would help to discriminate whether this is potentially naturally low dissolved oxygen.
- Monitoring should continue to focus on early morning (before 8:00 am) sampling to best document potential dissolved oxygen problems. Over a 24 hour period, the lowest readings occur in the early morning and highest readings in mid to late afternoon. This occurs because oxygen is

used up during the night due to plant respiration and during the day, plant life is photosynthesizing. This is particularly important during the summer months of July through early September when temperatures are warmest and dissolved oxygen tends to be at the lowest levels. Ideally, all DO monitoring should be conducted before 8:00 am. Later day monitoring is not likely to represent critical conditions, which makes it difficult to assess the overall river condition.

- Temperature was relatively high in the upper and middle main-stem sites. In the future, we might consider placing temperature loggers at some of these sites to document daily temperature values throughout the season.
- Bacteria sampling showed exceedances at both fresh water and tidal sites. The tidal sites had bacteria violations of both instantaneous criterion and geometric mean criterion. These sites should continue to be monitored and perhaps further investigation made as to the bacteria sources.
- Continue monitoring at all stations to develop a long term trend database.

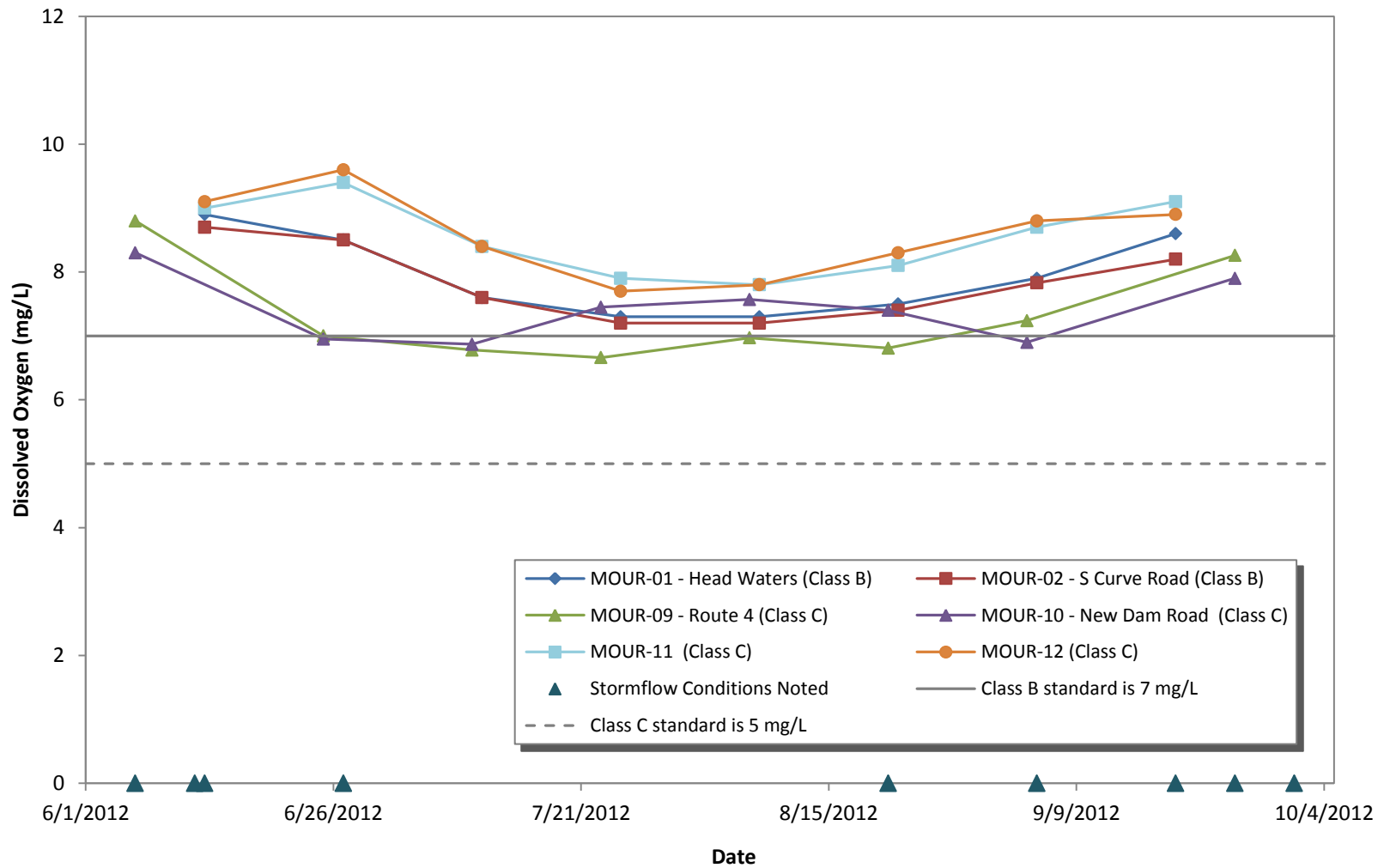


Figure 5-5-6. Dissolved oxygen concentrations at Mousam & Kennebunk Rivers Alliance approved monitoring sites on the upper Mousam River for 2012

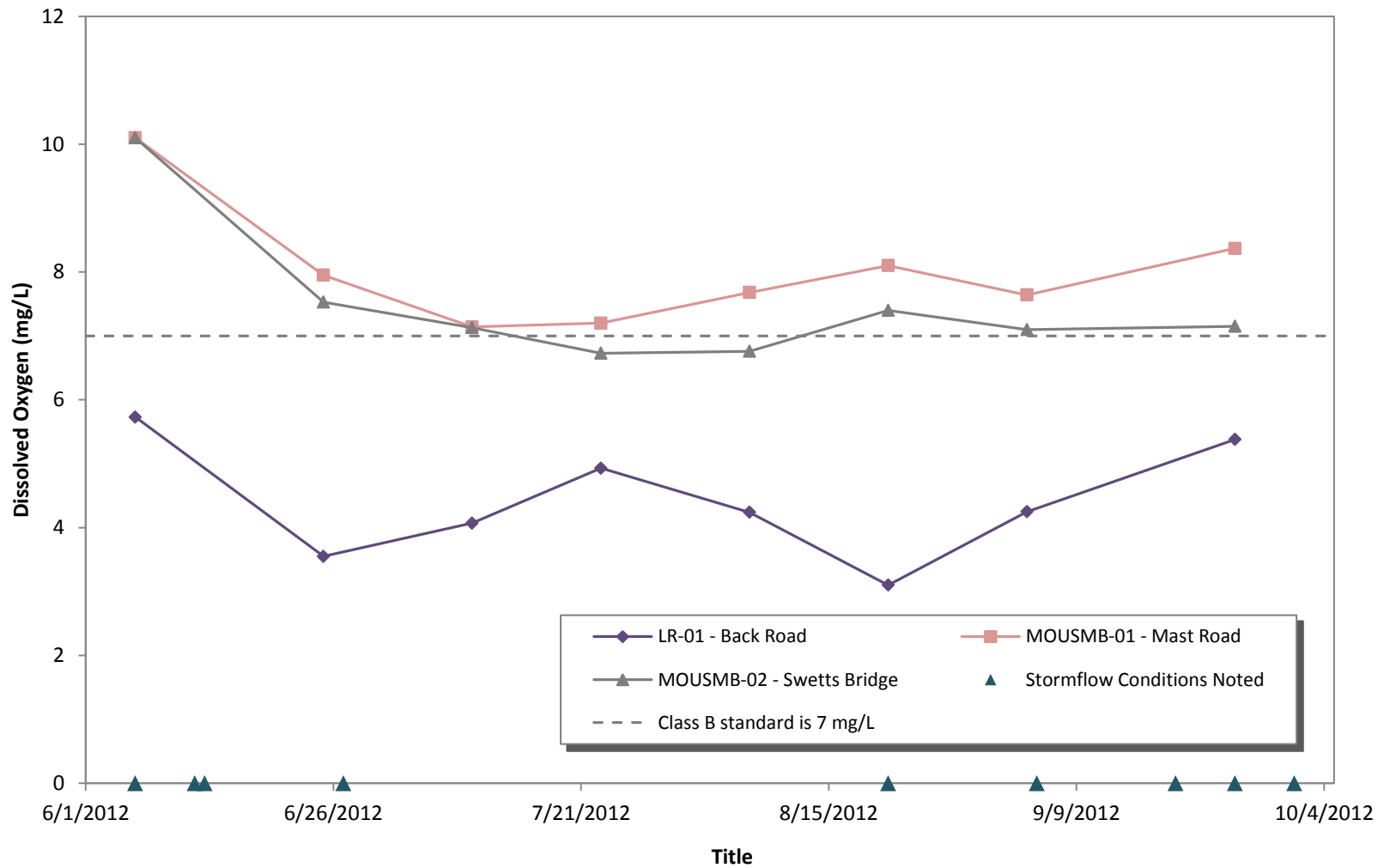


Figure 5-5-7. Dissolved oxygen concentrations at Mousam & Kennebunk Rivers Alliance approved monitoring sites on the upper branch of the Mousam River for 2012

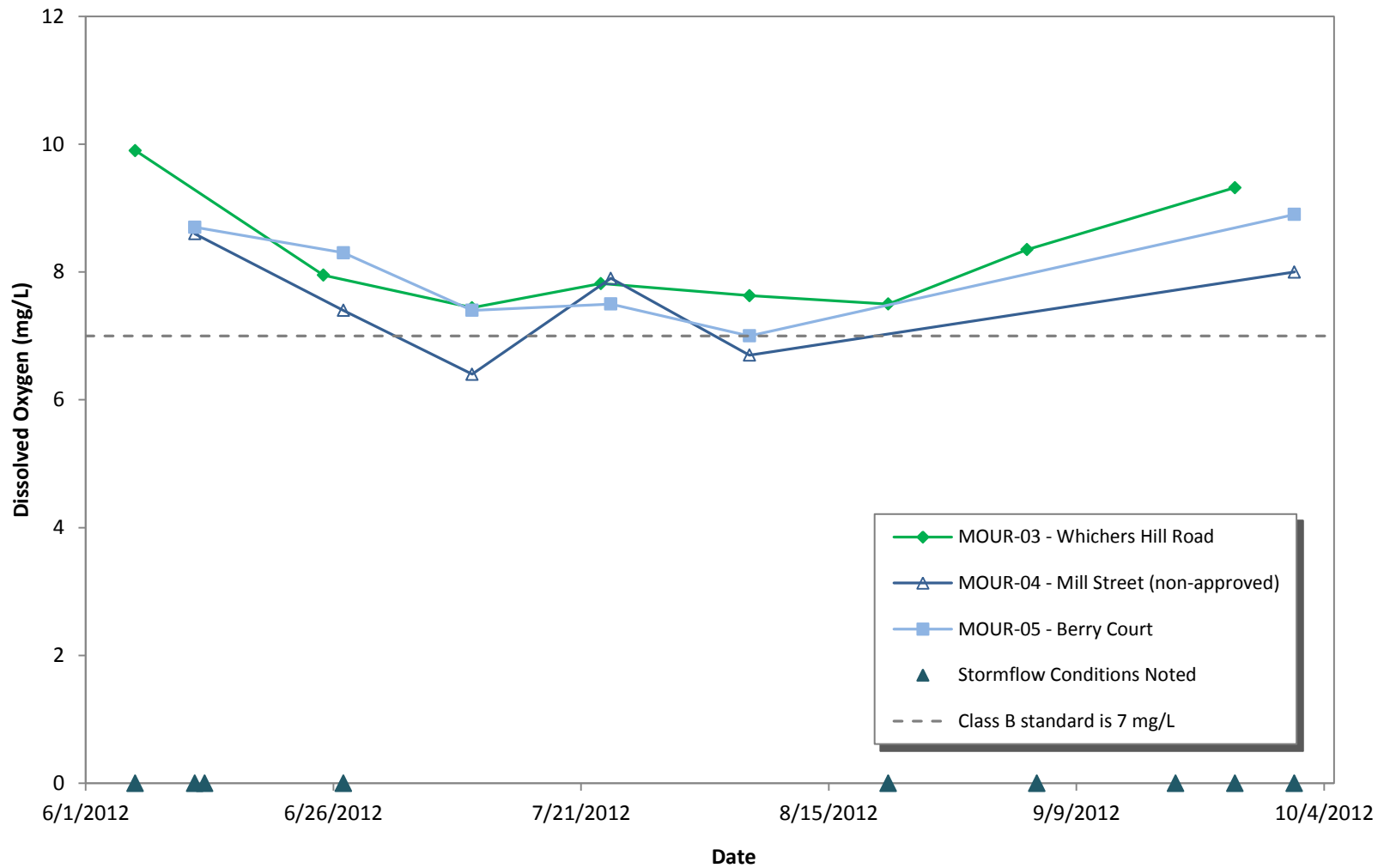


Figure 5-5-8. Dissolved oxygen concentrations at Mousam & Kennebunk Rivers Alliance monitoring sites on the mid-section of the Mousam River for 2012

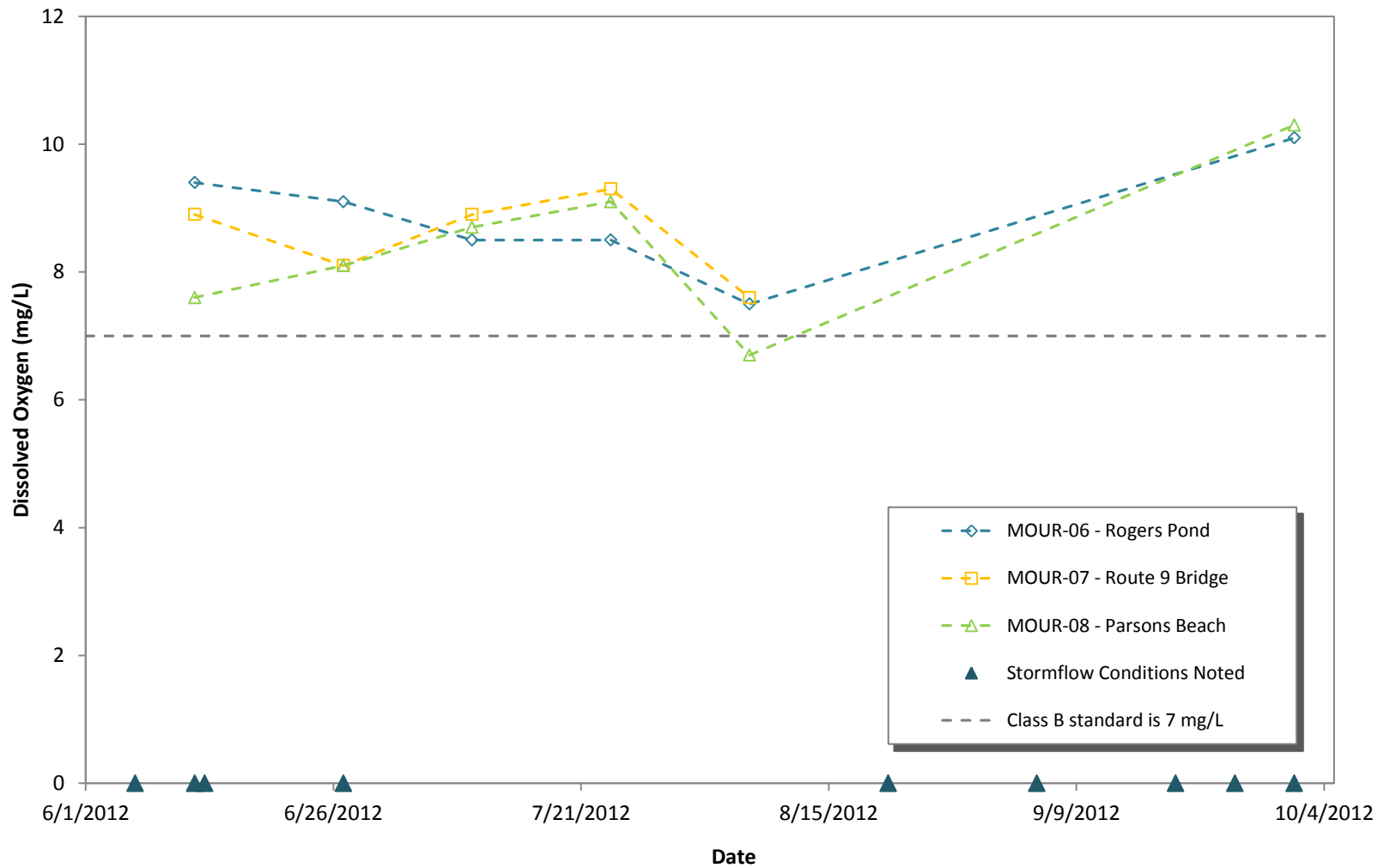


Figure 5-5-9. Dissolved oxygen concentrations at Mousam & Kennebunk Rivers Alliance approved tidal monitoring sites on the Mousam River for 2012

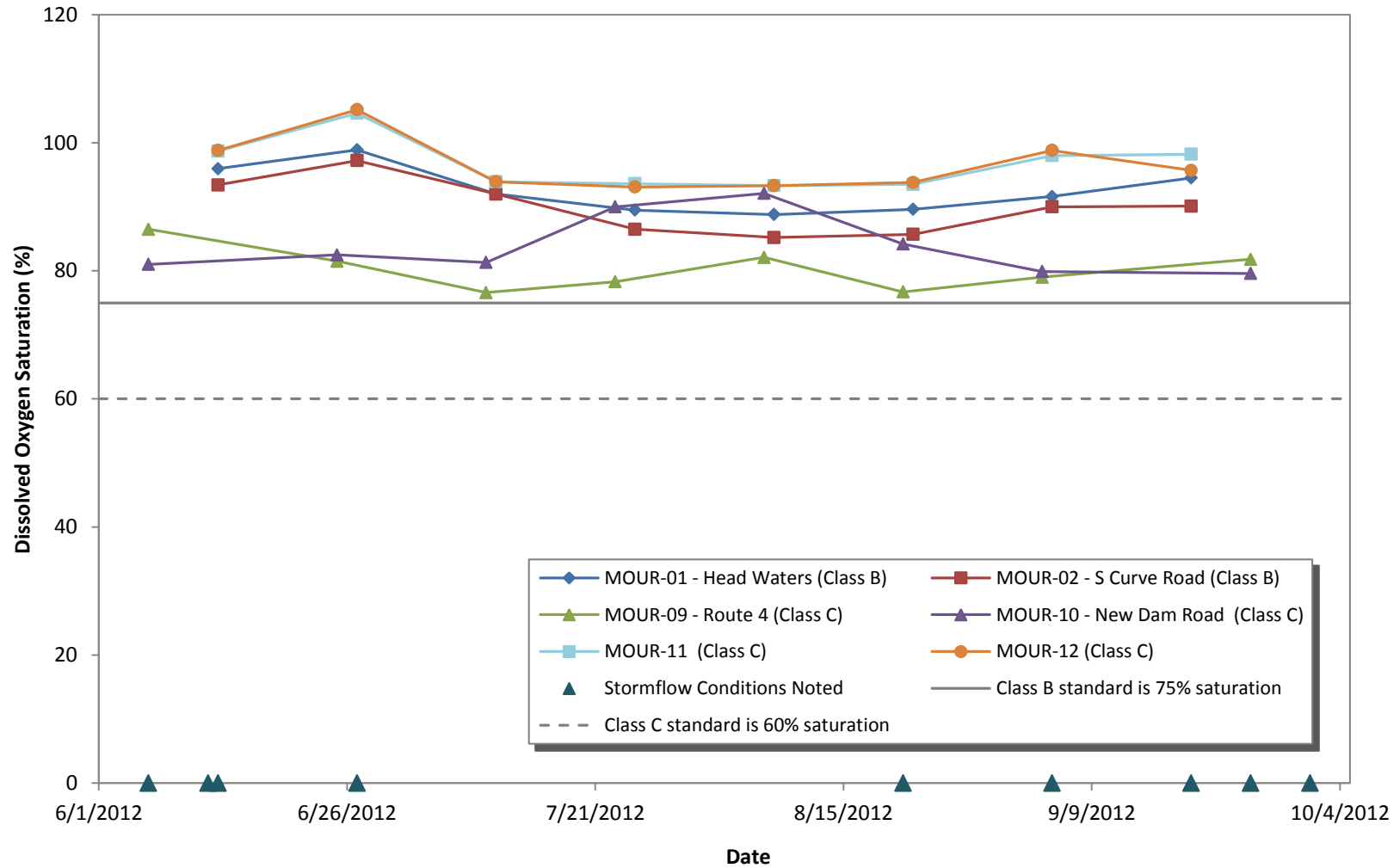


Figure 5-5-10. Dissolved oxygen % saturation of Mousam & Kennebunk Rivers Alliance approved monitoring sites on the upper Mousam River for 2012

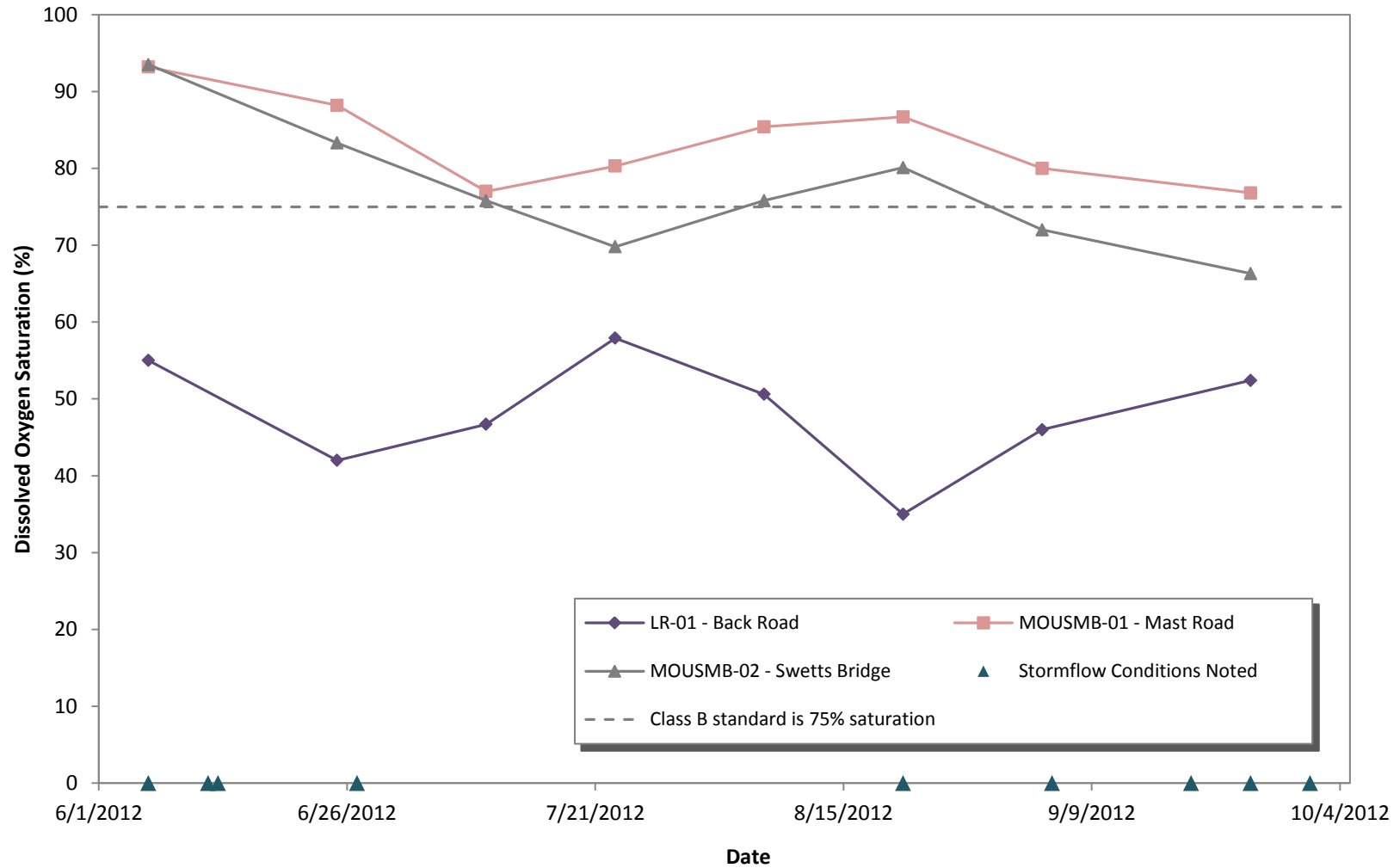


Figure 5-5-11. Dissolved oxygen % saturation of Mousam & Kennebunk Rivers Alliance approved monitoring sites on the upper branch of the Mousam River for 2012

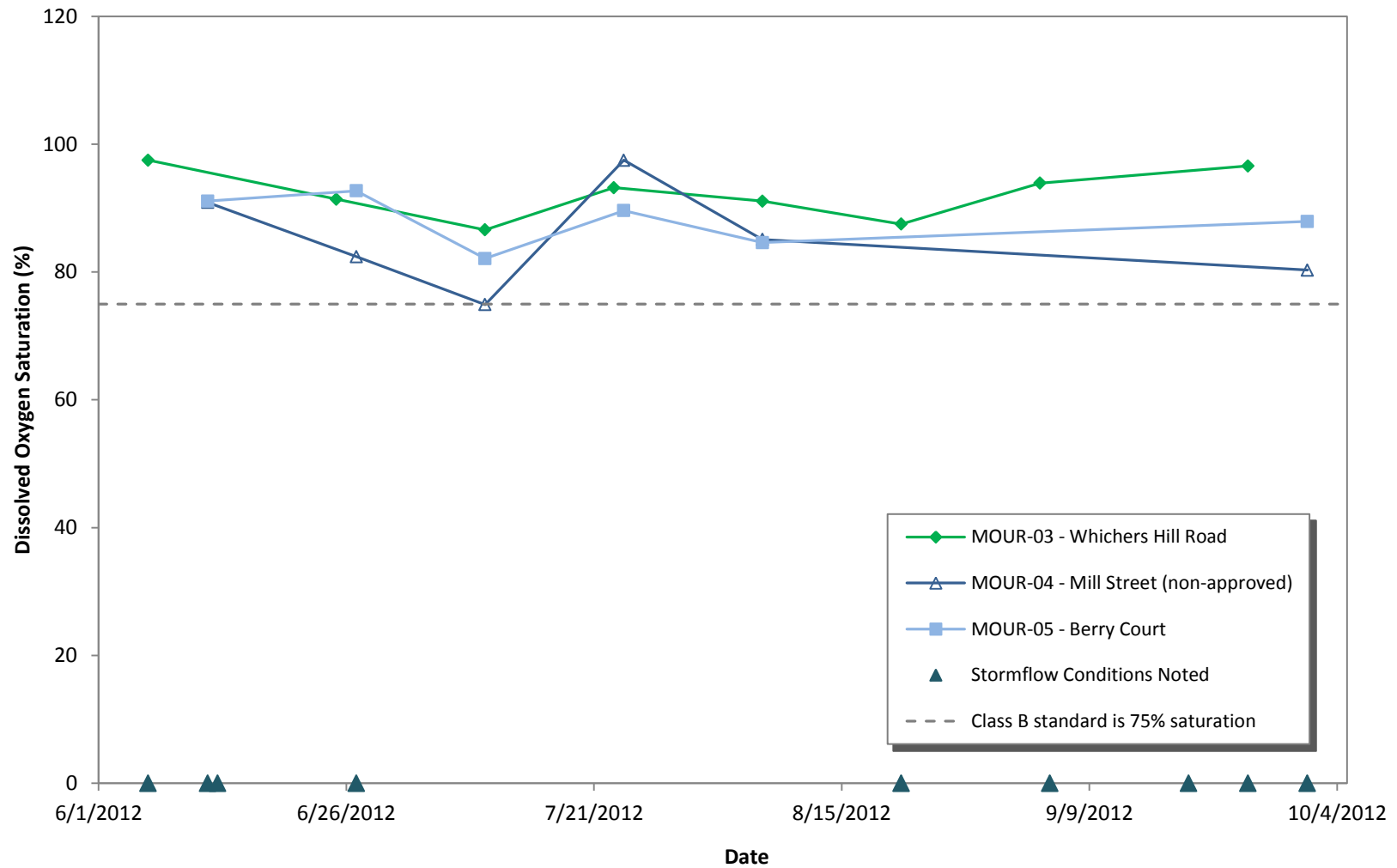


Figure 5-5-12. Dissolved oxygen % saturation of Mousam & Kennebunk Rivers Alliance monitoring sites on the mid-section of the Mousam River for 2012

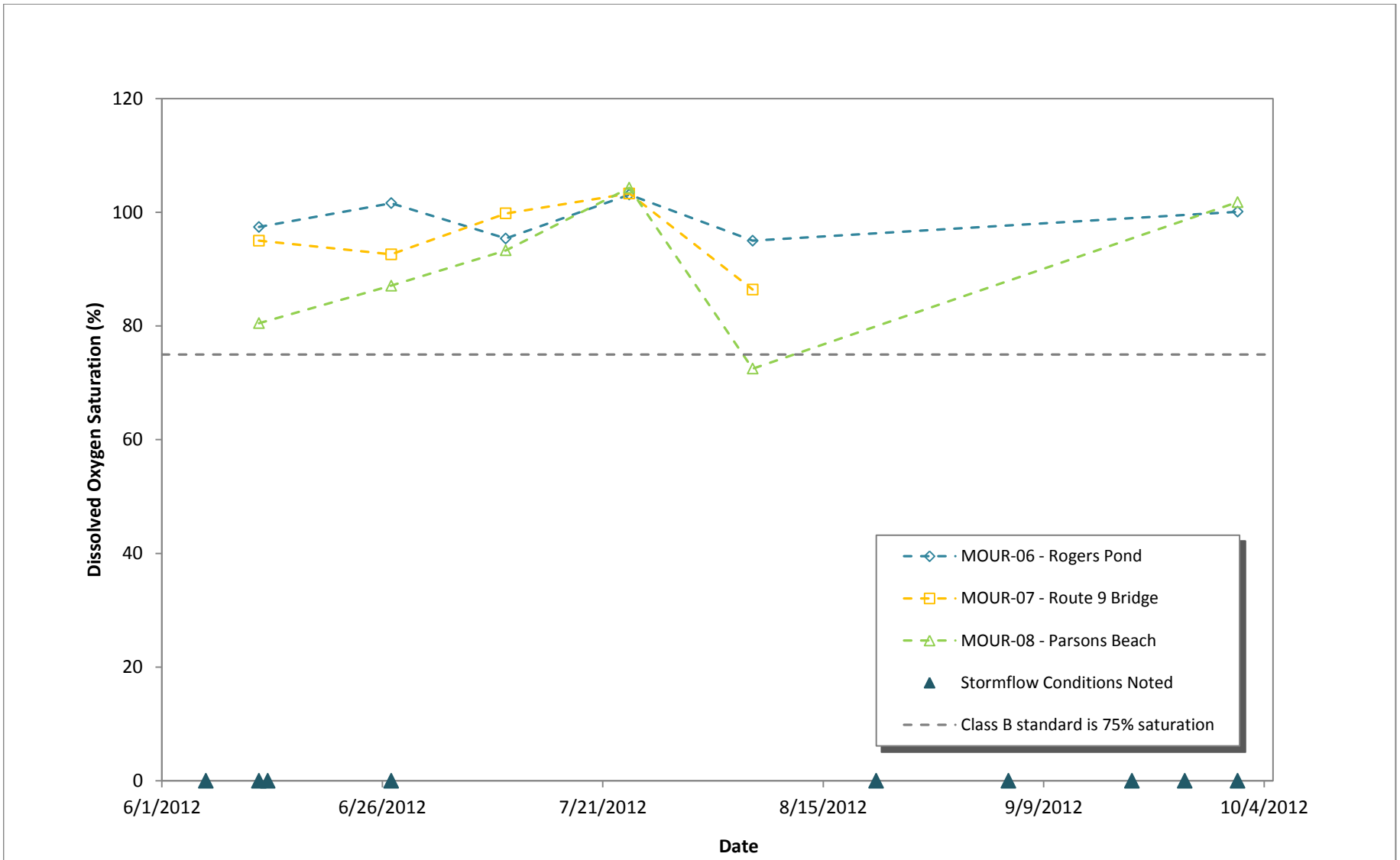


Figure 5-5-13. Dissolved oxygen % saturation of Mousam & Kennebunk Rivers Alliance approved tidal monitoring sites on the Mousam River for 2012

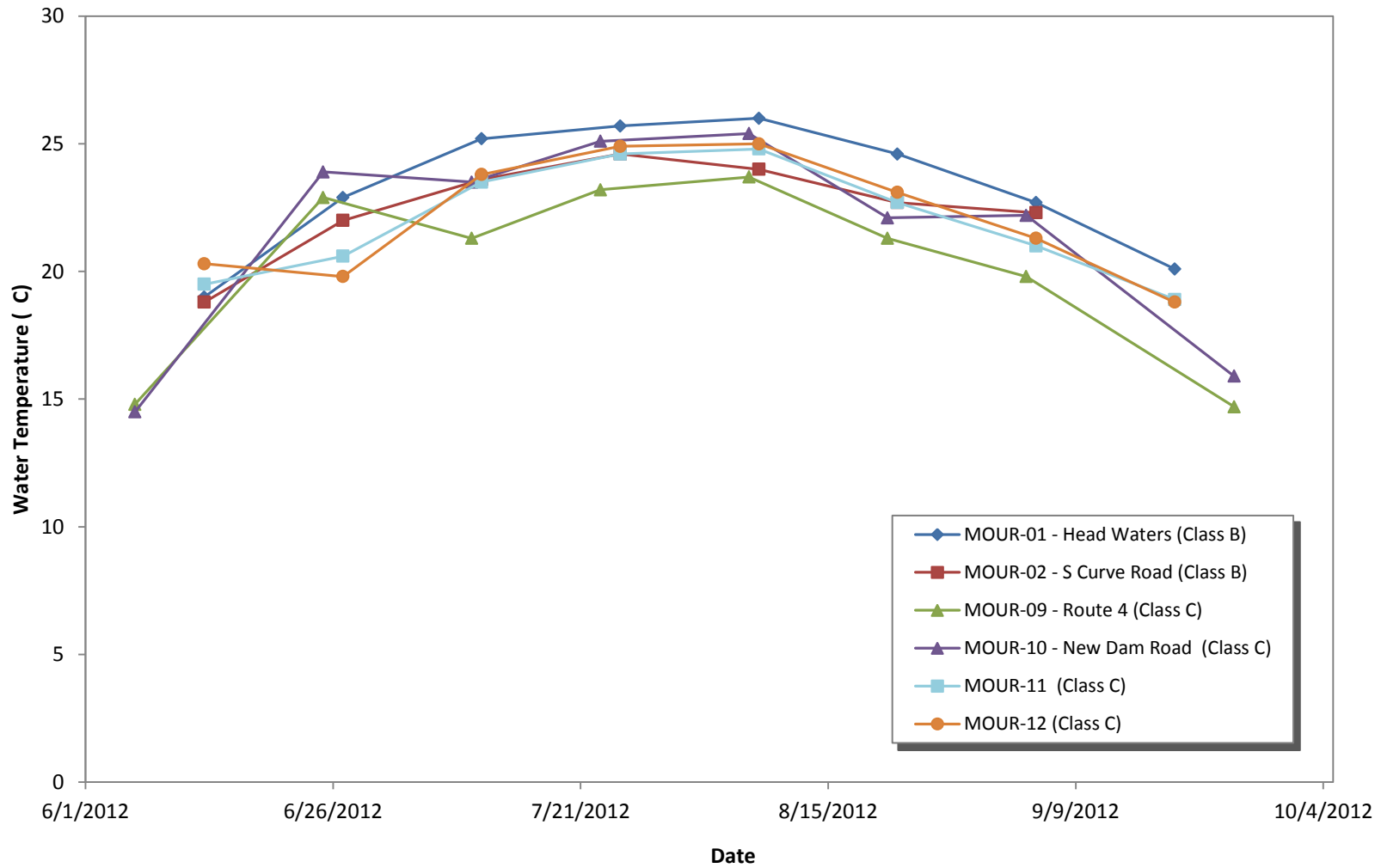


Figure 5-5-14. Water temperatures of Mousam & Kennebunk Rivers Alliance approved monitoring sites on the upper Mousam River for 2012

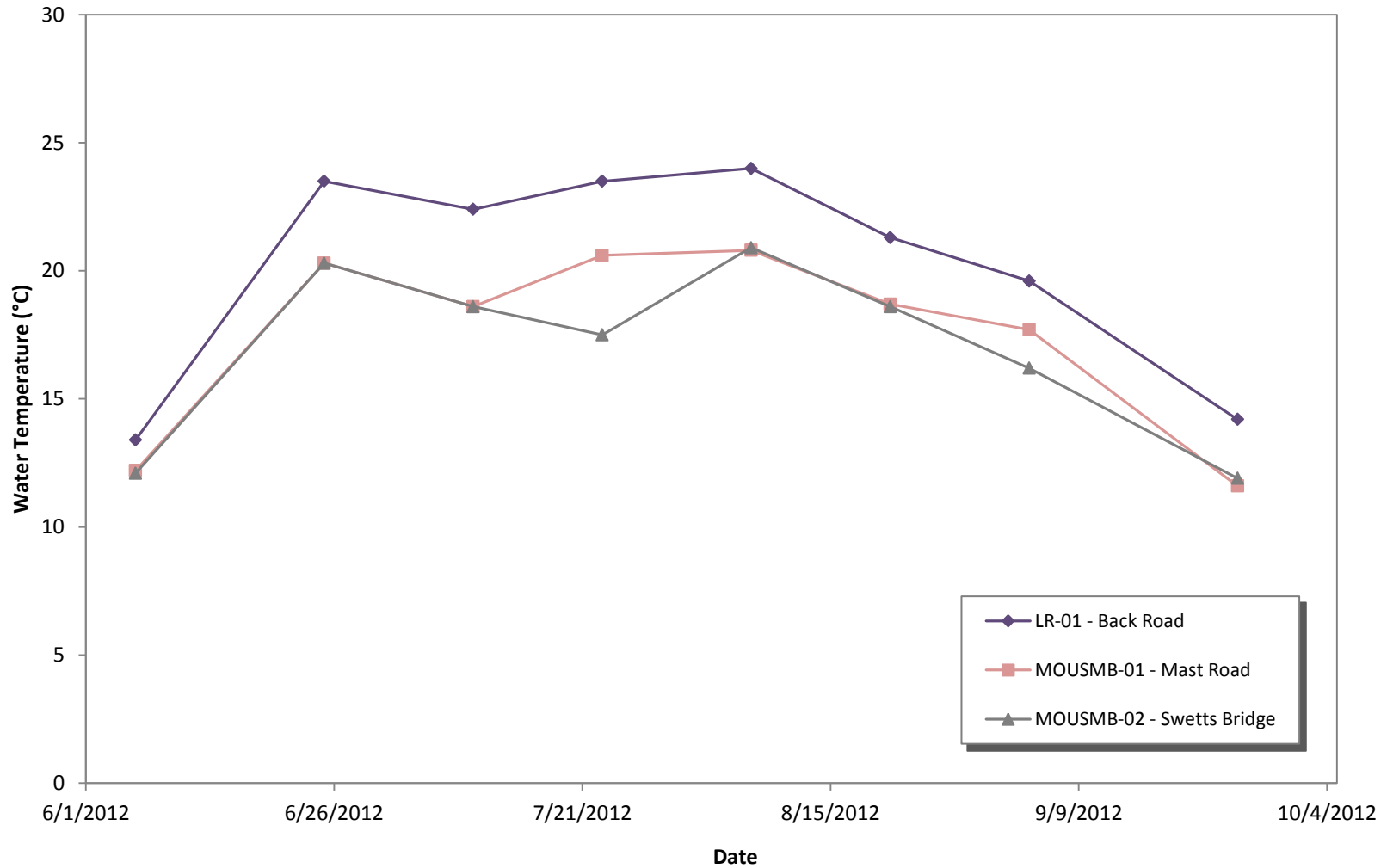


Figure 5-5-15. Water temperatures of Mousam & Kennebunk Rivers Alliance approved monitoring sites on the upper branch of the Mousam River for 2012

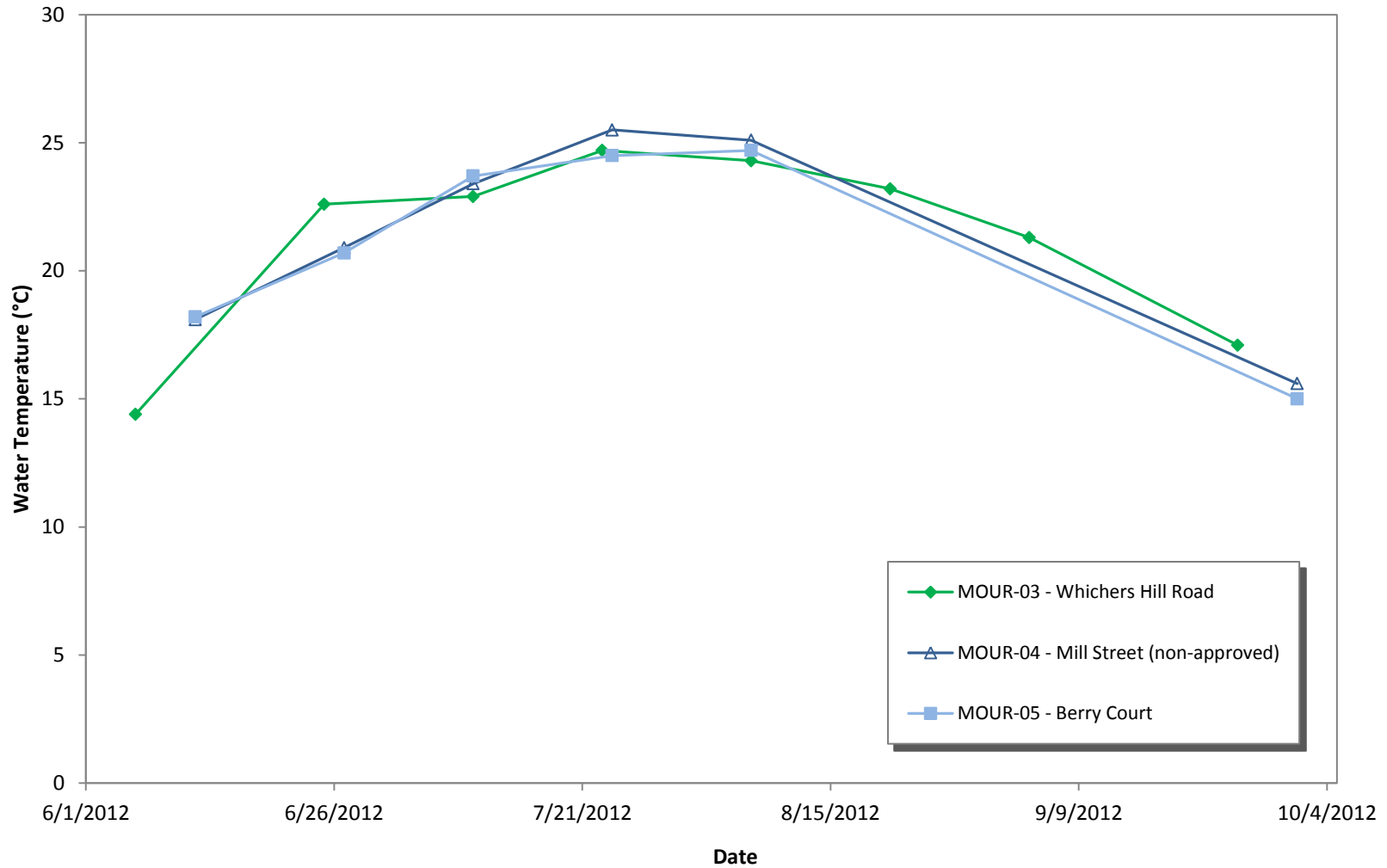


Figure 5-5-16. Water temperatures of Mousam & Kennebunk Rivers Alliance monitoring sites on the mid-section of the Mousam River for 2012

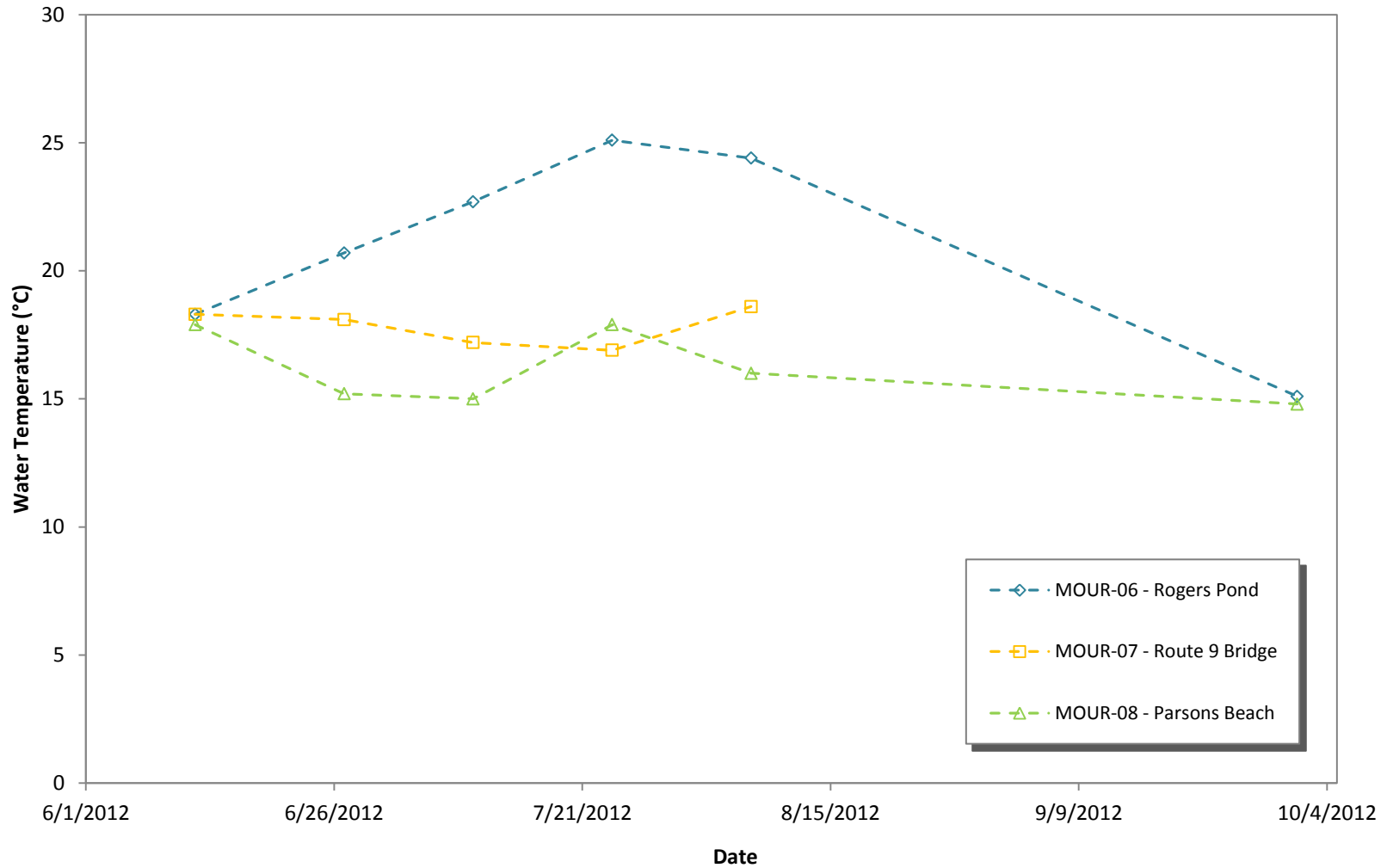


Figure 5-5-17. Water temperatures of Mousam & Kennebunk Rivers Alliance approved tidal monitoring sites on the Mousam River for 2012

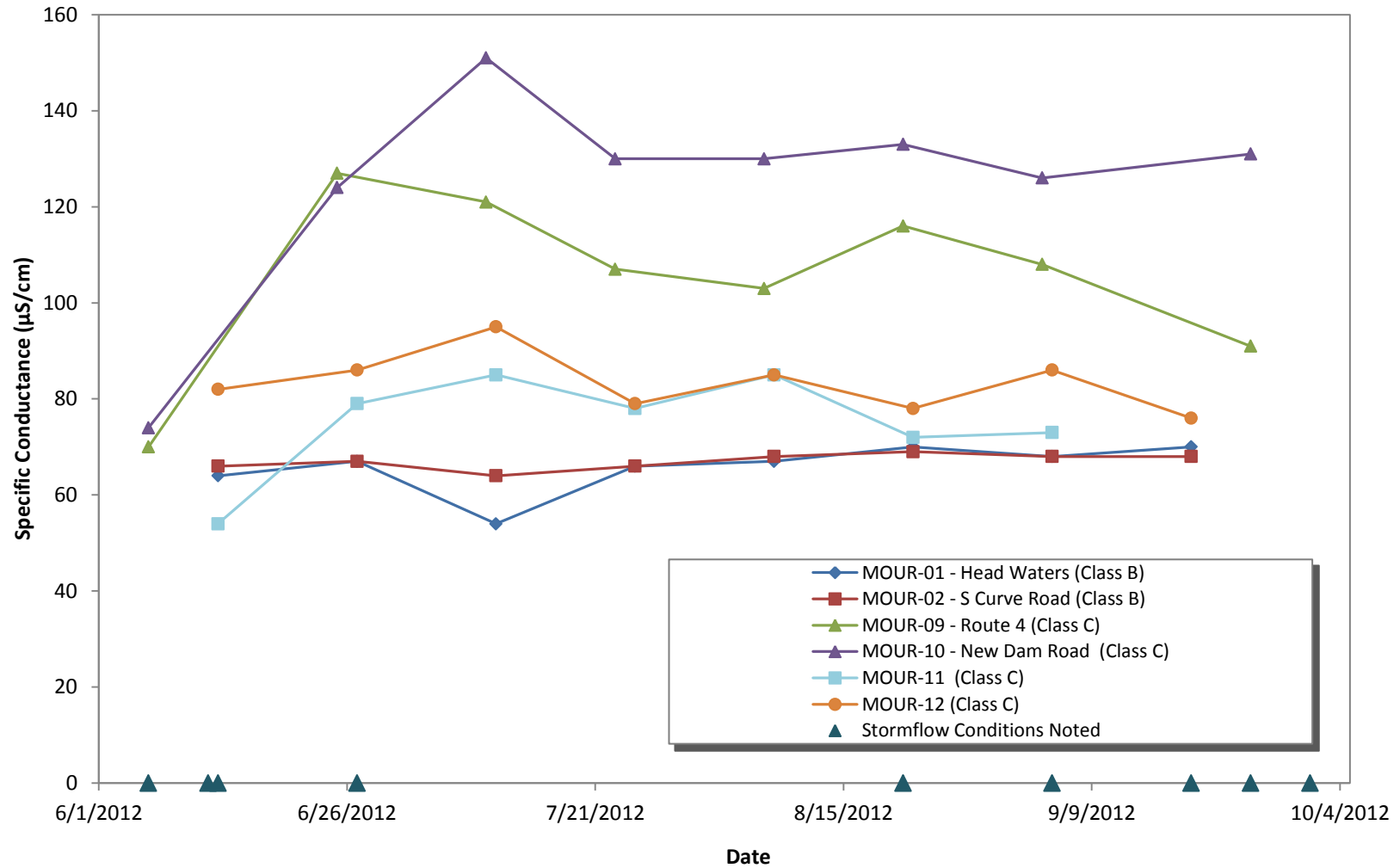


Figure 5-5-18. Specific Conductance at Mousam & Kennebunk Rivers Alliance approved monitoring sites on the upper Mousam River for 2012

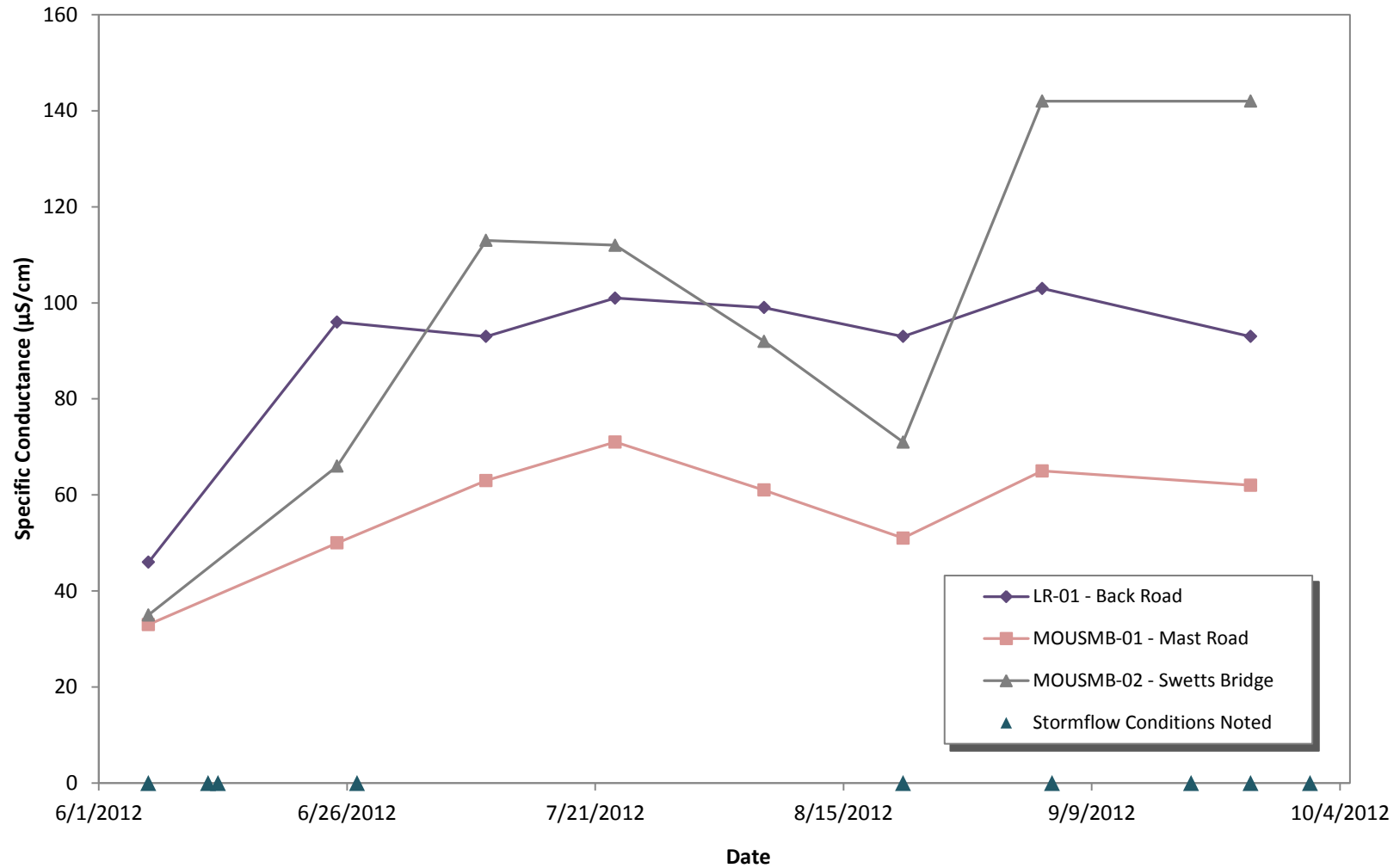


Figure 5-5-19. Specific Conductance at Mousam & Kennebunk Rivers Alliance approved monitoring sites on the upper branch of the Mousam River for 2012

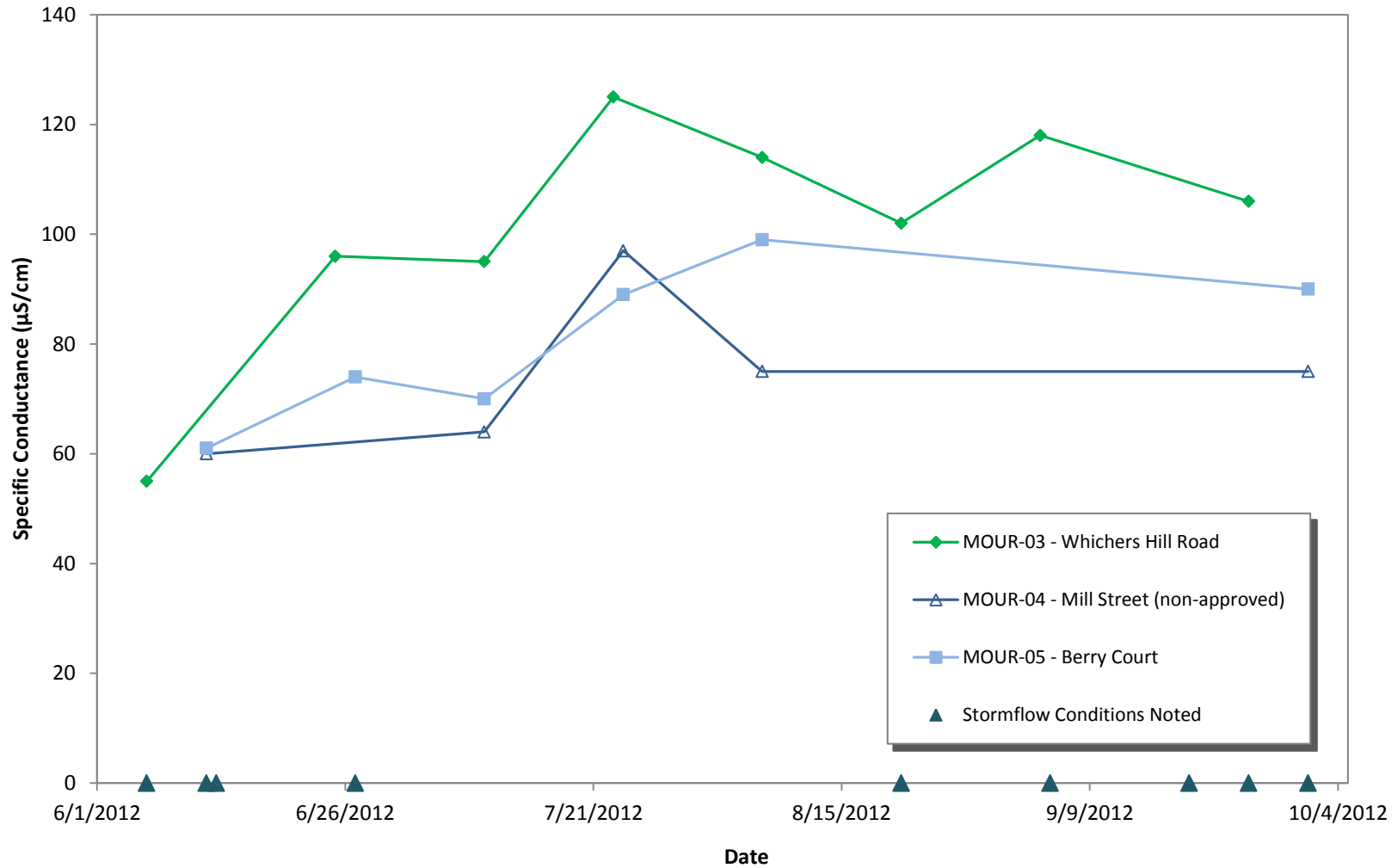


Figure 5-5-20. Specific Conductance at Mousam & Kennebunk Rivers Alliance monitoring sites on the mid-section of the Mousam River for 2012

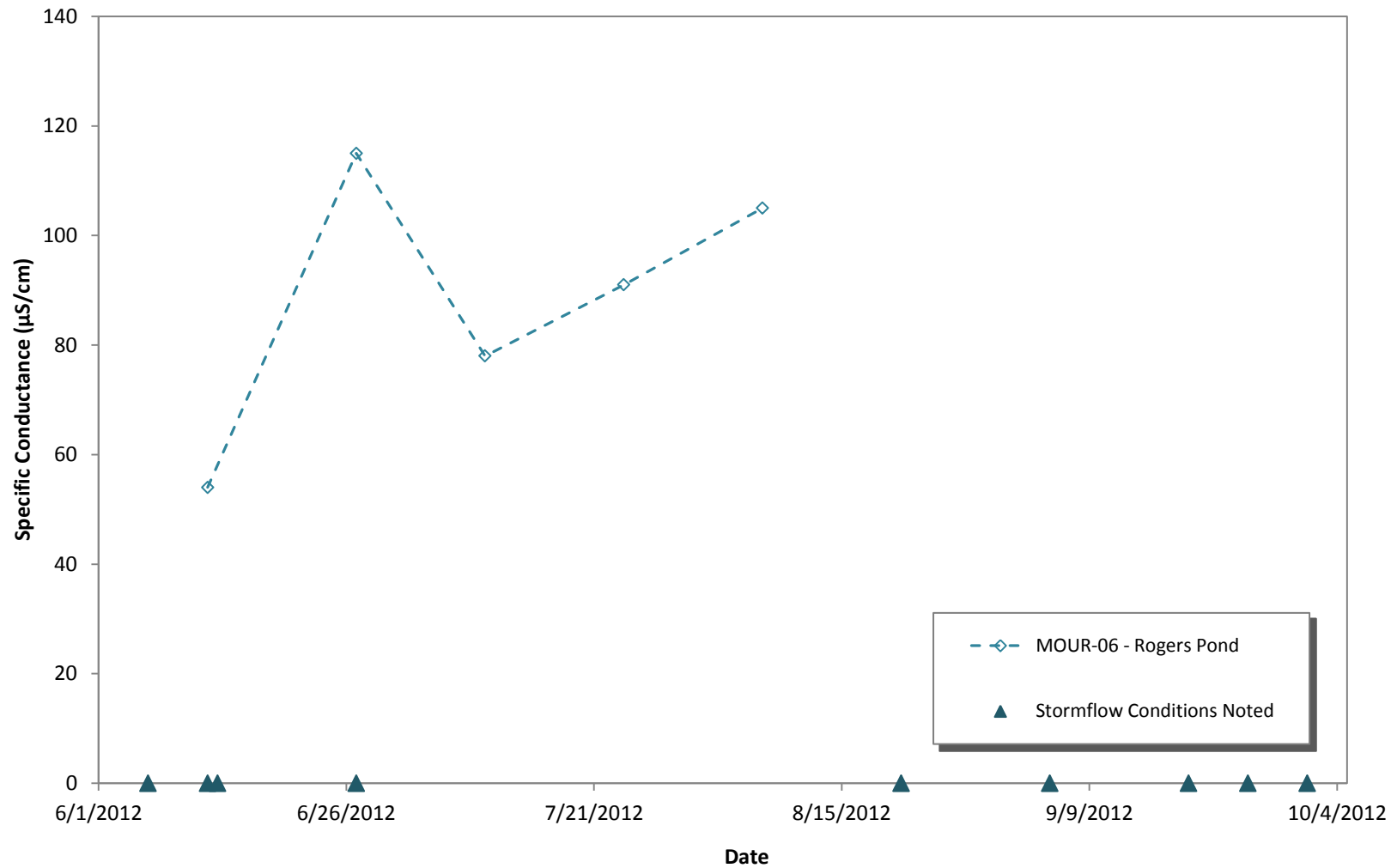


Figure 5-5-21. Specific Conductance at Mousam & Kennebunk Rivers Alliance approved tidal monitoring sites on the Mousam River for 2012

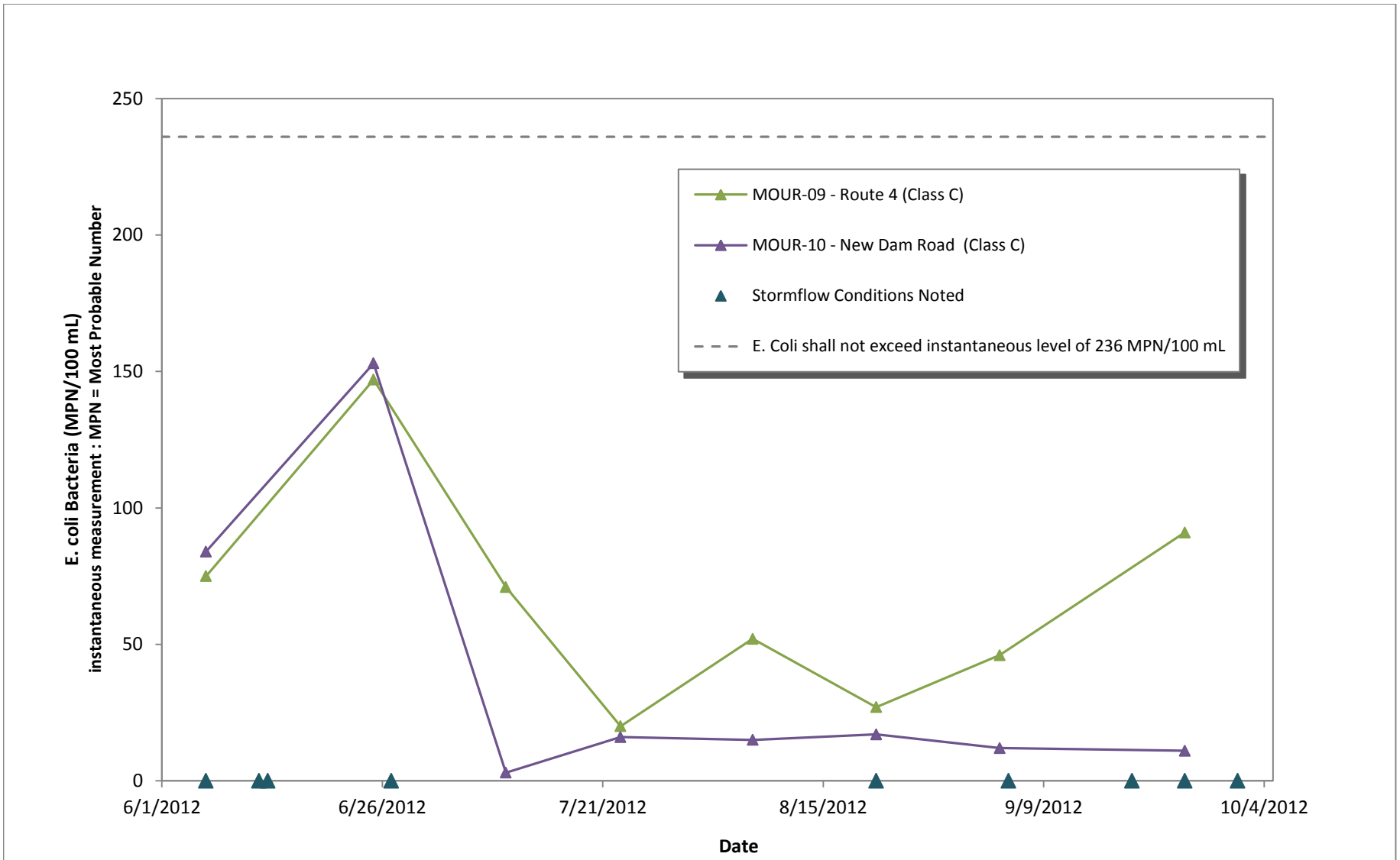


Figure 5-5-22. E. Coli at Mousam & Kennebunk Rivers Alliance approved monitoring sites on the upper Mousam River for 2012

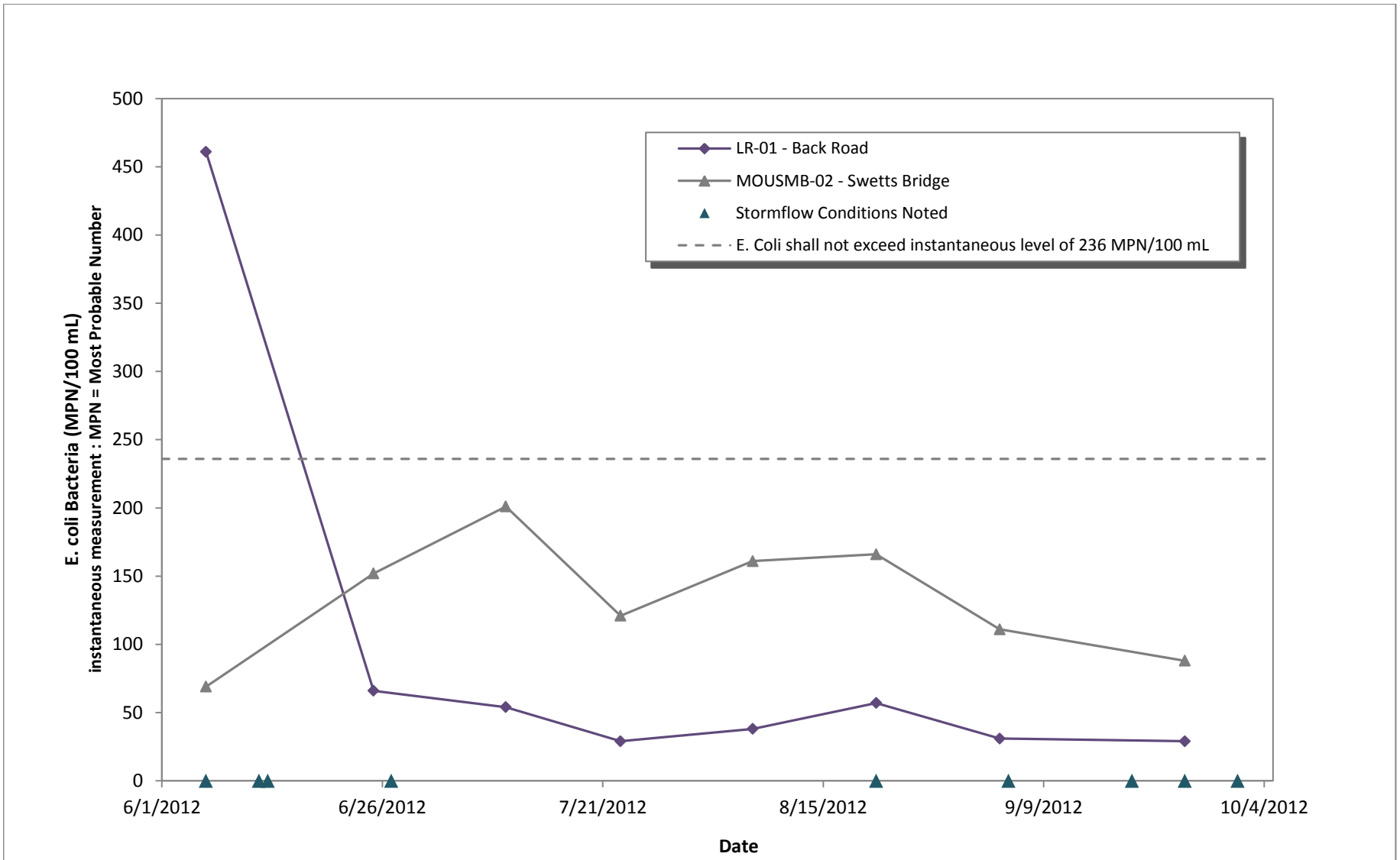


Figure 5-5-23. *E. Coli* at Mousam & Kennebunk Rivers Alliance approved monitoring sites on the upper branch of the Mousam River for 2012

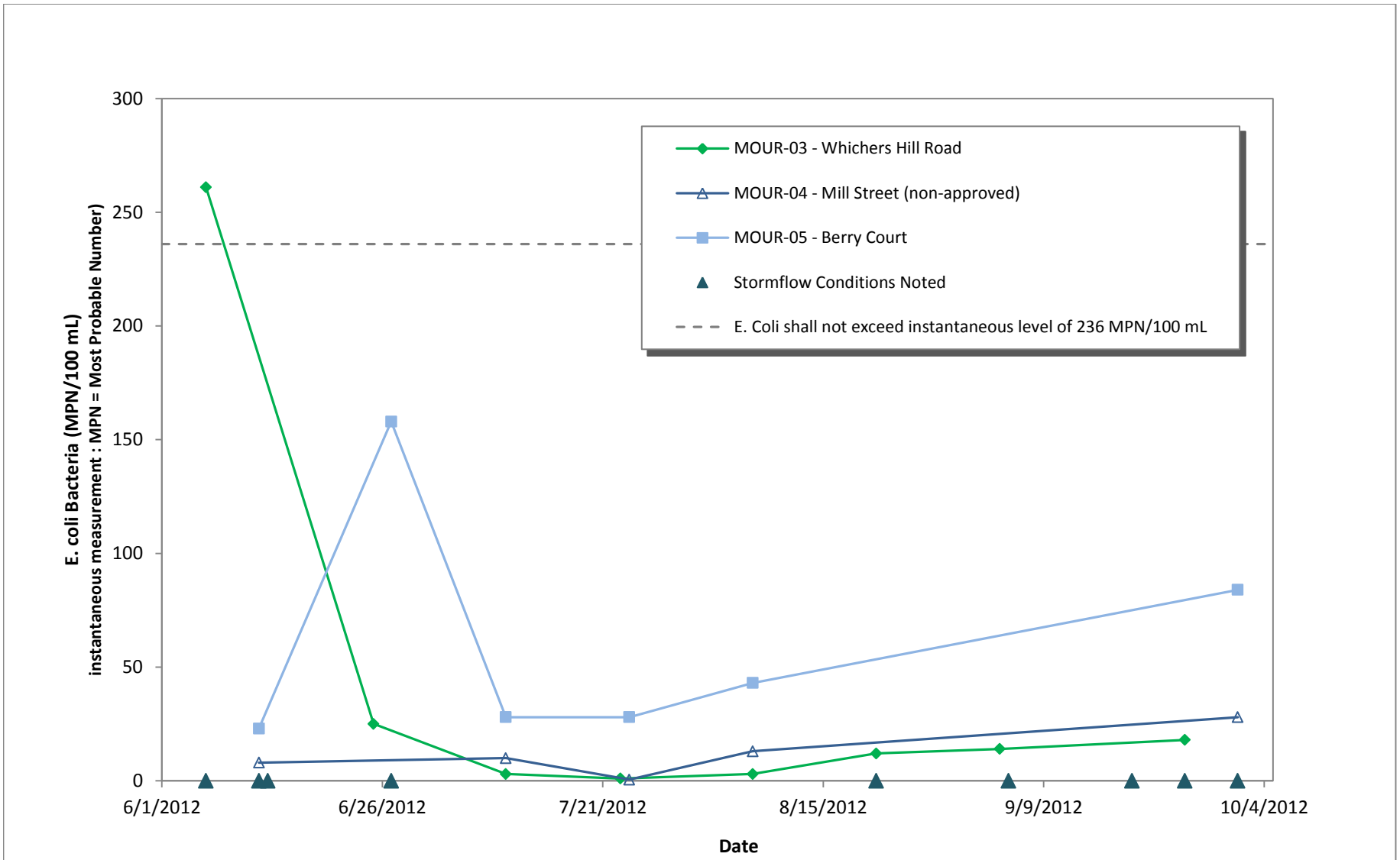


Figure 5-5-24. *E. coli* at Mousam & Kennebunk Rivers Alliance monitoring sites on the mid-section of the Mousam River for 2012

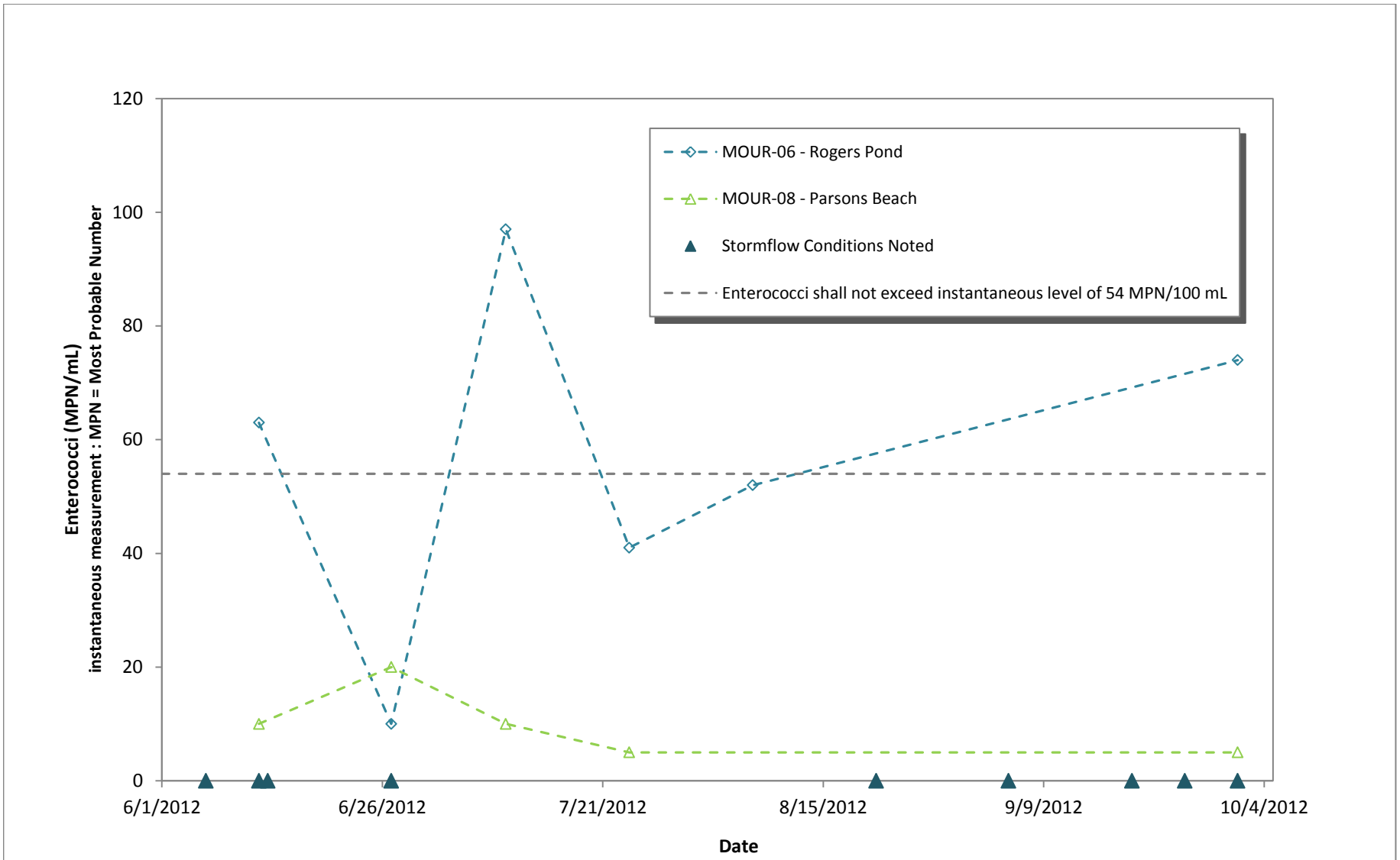


Figure 5-5-25. Enterococci at Mousam & Kennebunk Rivers Alliance approved tidal monitoring sites on the Mousam River for 2012

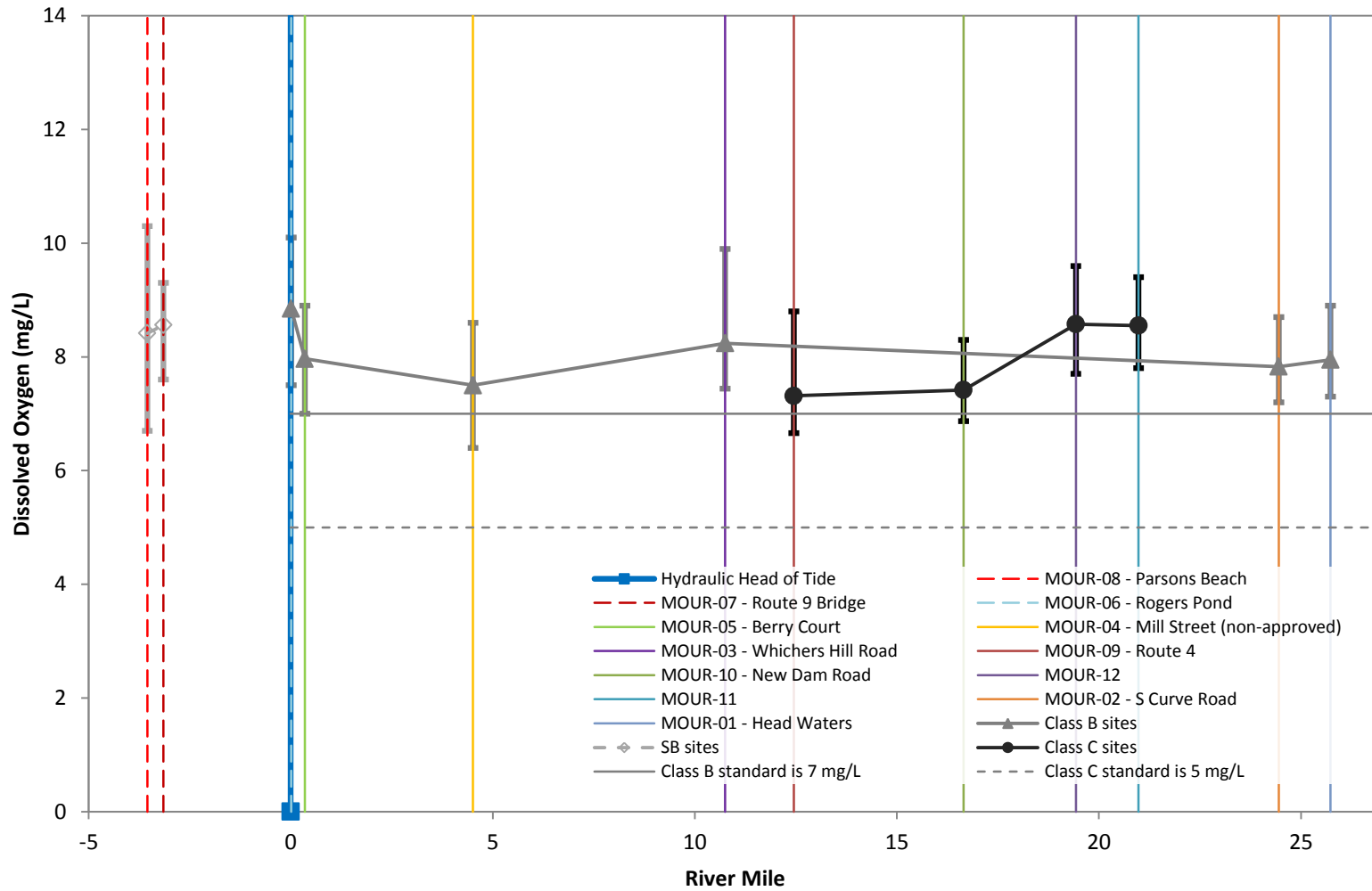


Figure 5-5-26. Dissolved oxygen concentrations, tracked by river mile along the Mousam River in 2012.
Points represent mean values, and error bars represent a range of values.

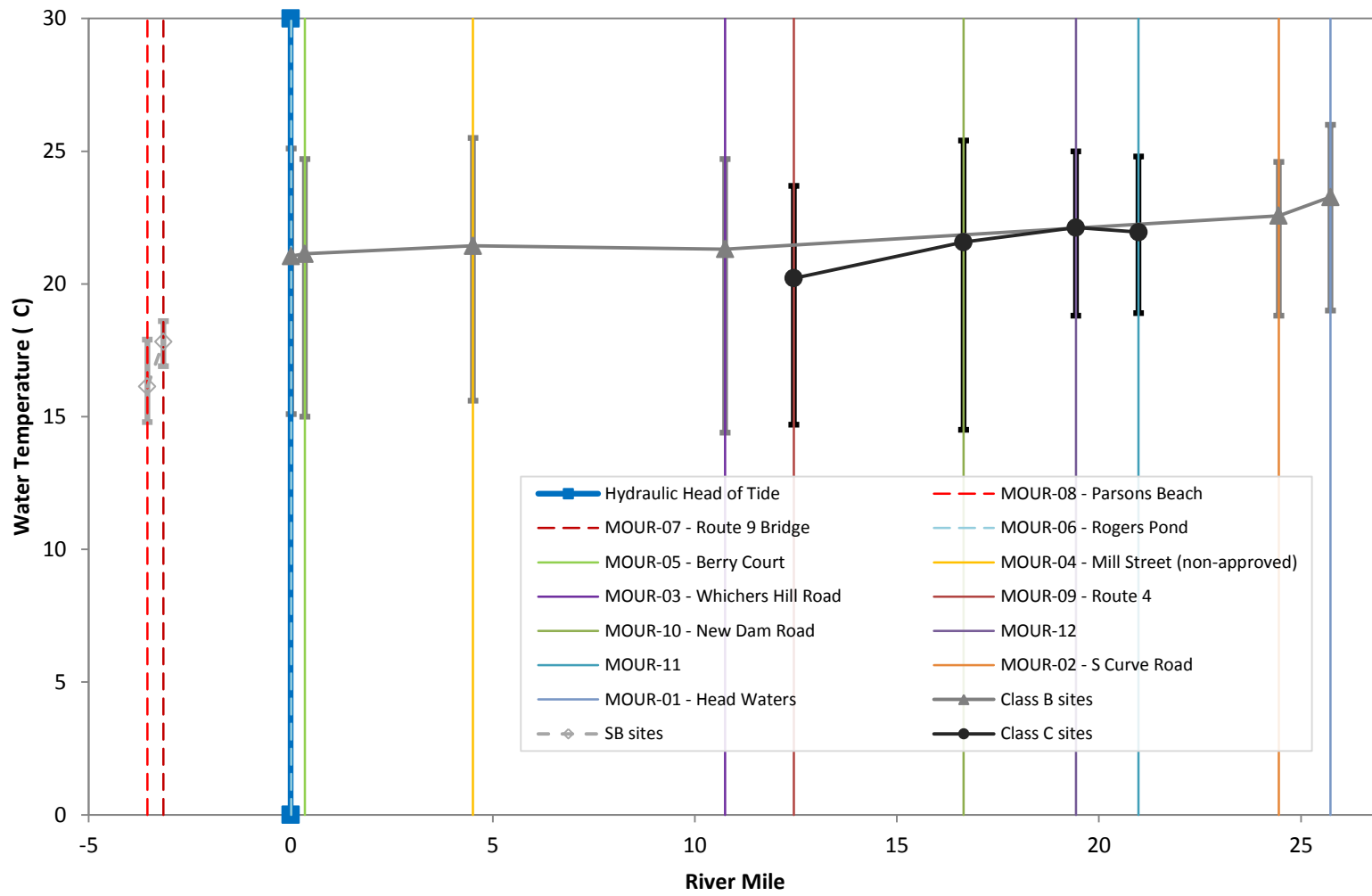


Figure 5-5-27. Water temperature changes per river mile at Mousam & Kennebunk Rivers Alliance monitoring sites on the Mousam River in 2012. Points represent mean values. Error bars represent range of values.

Appendix A-1. 2012 water quality data for "Approved" and "Non-Approved" sites. Non-Approved sites do not yet meet official VRMP sample location criteria and/or require further inspection and review.

* Sampling depths are only reported for Tier 1 VRMP sites.

** "N" = normal environmental sample ; "D" = field duplicate; "L" = lab duplicate; "D.O." = dissolved oxygen; "Spec. Cond" = specific conductance; "Turb" = turbidity; "TSS" = total suspended solids"

Refer to Appendix A-2 for observational data and quality assurance/quality control (QA/QC) notes.

| Organization Site Code | VRMP Site ID | Date | Time | ** Sample Type Qualifier | * Sample Depth | Depth Unit | Water Temp (DEG C) | ** D.O. Sat. (%) | ** D.O. (MG/L) | ** Spec. Cond. (US/CM) | Salinity (PPTH) | Turbidity (NTU) | Optical Brighteners (ug/l) | E Coli Bacteria (MPN/100ML) | Enterococci (MPN/100ML) |
|------------------------|--------------|------|------|--------------------------|----------------|------------|--------------------|------------------|----------------|------------------------|-----------------|-----------------|----------------------------|-----------------------------|-------------------------|
|------------------------|--------------|------|------|--------------------------|----------------|------------|--------------------|------------------|----------------|------------------------|-----------------|-----------------|----------------------------|-----------------------------|-------------------------|

Mousam River, Mousam & Kennebunk Rivers Alliance - Approved Sites

| | | | | | | | | | | | | | | | |
|------------------------|--------------------------------------|-----------|---------|---|--|--|------|-------|------|-----|--|--|------|-----|--|
| LR-01 - BACK ROAD | LITTLEFIELD RIVER - SMUMBLR18 - VRMP | 6/6/2012 | 8:24 AM | N | | | 13.4 | 55 | 5.73 | 46 | | | | | |
| LR-01 | LITTLEFIELD RIVER - SMUMBLR18 - VRMP | 6/6/2012 | 8:35 AM | N | | | | | | | | | 113 | 461 | |
| LR-01 | LITTLEFIELD RIVER - SMUMBLR18 - VRMP | 6/25/2012 | 8:12 AM | N | | | 23.5 | 42 | 3.55 | 96 | | | 92.8 | 66 | |
| LR-01 | LITTLEFIELD RIVER - SMUMBLR18 - VRMP | 7/10/2012 | 7:55 AM | N | | | 22.4 | 46.7 | 4.07 | 93 | | | | | |
| LR-01 | LITTLEFIELD RIVER - SMUMBLR18 - VRMP | 7/10/2012 | 8:03 AM | N | | | | | | | | | 93.3 | 54 | |
| LR-01 | LITTLEFIELD RIVER - SMUMBLR18 - VRMP | 7/23/2012 | 7:50 AM | N | | | 23.5 | 57.9 | 4.93 | 101 | | | | | |
| LR-01 | LITTLEFIELD RIVER - SMUMBLR18 - VRMP | 7/23/2012 | 7:55 AM | N | | | | | | | | | | 29 | |
| LR-01 | LITTLEFIELD RIVER - SMUMBLR18 - VRMP | 8/7/2012 | 9:15 AM | N | | | 24 | 50.6 | 4.24 | 99 | | | | 38 | |
| LR-01 | LITTLEFIELD RIVER - SMUMBLR18 - VRMP | 8/21/2012 | 7:45 AM | N | | | 21.3 | 35 | 3.1 | 93 | | | | 57 | |
| LR-01 | LITTLEFIELD RIVER - SMUMBLR18 - VRMP | 9/4/2012 | 7:50 AM | N | | | 19.6 | 46 | 4.25 | 103 | | | | 31 | |
| LR-01 | LITTLEFIELD RIVER - SMUMBLR18 - VRMP | 9/25/2012 | 7:50 AM | N | | | 14.2 | 52.4 | 5.38 | 93 | | | | | |
| LR-01 | LITTLEFIELD RIVER - SMUMBLR18 - VRMP | 9/25/2012 | 7:55 AM | N | | | | | | | | | | 29 | |
| MOUR-01 - HEAD WATERS | MOUSAM RIVER - SMU290 - VRMP | 6/13/2012 | 7:45 AM | N | | | 19 | 95.94 | 8.9 | 64 | | | | | |
| MOUR-01 | MOUSAM RIVER - SMU290 - VRMP | 6/27/2012 | 8:00 AM | N | | | 22.9 | 98.9 | 8.5 | 67 | | | | | |
| MOUR-01 | MOUSAM RIVER - SMU290 - VRMP | 7/11/2012 | 8:00 AM | N | | | 25.2 | 92 | 7.6 | 54 | | | | | |
| MOUR-01 | MOUSAM RIVER - SMU290 - VRMP | 7/11/2012 | 8:00 AM | D | | | 25.2 | 92 | 7.6 | 57 | | | | | |
| MOUR-01 | MOUSAM RIVER - SMU290 - VRMP | 7/25/2012 | 8:00 AM | N | | | 25.7 | 89.48 | 7.3 | 66 | | | | | |
| MOUR-01 | MOUSAM RIVER - SMU290 - VRMP | 8/8/2012 | 7:57 AM | N | | | 26 | 88.8 | 7.3 | 67 | | | | | |
| MOUR-01 | MOUSAM RIVER - SMU290 - VRMP | 8/22/2012 | 7:55 AM | N | | | 24.6 | 89.6 | 7.5 | 70 | | | | | |
| MOUR-01 | MOUSAM RIVER - SMU290 - VRMP | 9/5/2012 | 7:55 AM | N | | | 22.7 | 91.6 | 7.9 | 68 | | | | | |
| MOUR-01 | MOUSAM RIVER - SMU290 - VRMP | 9/19/2012 | 7:00 AM | N | | | 20.1 | 94.5 | 8.6 | 70 | | | | | |
| MOUR-02 - S CURVE ROAD | MOUSAM RIVER - SMU280 - VRMP | 6/13/2012 | 7:55 AM | N | | | 18.8 | 93.41 | 8.7 | 66 | | | | | |
| MOUR-02 | MOUSAM RIVER - SMU280 - VRMP | 6/27/2012 | 7:50 AM | N | | | 22 | 97.21 | 8.5 | 67 | | | | | |
| MOUR-02 | MOUSAM RIVER - SMU280 - VRMP | 7/11/2012 | 7:50 AM | N | | | 23.6 | 92 | 7.6 | 64 | | | | | |
| MOUR-02 | MOUSAM RIVER - SMU280 - VRMP | 7/25/2012 | 7:50 AM | N | | | 24.6 | 86.49 | 7.2 | 66 | | | | | |
| MOUR-02 | MOUSAM RIVER - SMU280 - VRMP | 8/8/2012 | 7:43 AM | N | | | 24 | 85.2 | 7.2 | 68 | | | | | |
| MOUR-02 | MOUSAM RIVER - SMU280 - VRMP | 8/22/2012 | 7:40 AM | N | | | 22.7 | 85.7 | 7.4 | 69 | | | | | |
| MOUR-02 | MOUSAM RIVER - SMU280 - VRMP | 8/22/2012 | 7:40 AM | D | | | 22.7 | 86.2 | 7.5 | 69 | | | | | |
| MOUR-02 | MOUSAM RIVER - SMU280 - VRMP | 9/5/2012 | 7:45 AM | N | | | 22.3 | 90 | 7.83 | 68 | | | | | |

| Organization Site Code | VRMP Site ID | Date | Time | ** Sample Type Qualifier | * Sample Depth | Depth Unit | Water Temp (DEG C) | ** D.O. Sat. (%) | ** D.O. (MG/L) | ** Spec. Cond. (US/CM) | Salinity (PPTH) | Turbidity (NTU) | Optical Brighteners (ug/l) | E Coli Bacteria (MPN/100ML) | Enterococci (MPN/100ML) |
|----------------------------|------------------------------|-----------|----------|--------------------------|----------------|------------|--------------------|------------------|----------------|------------------------|-----------------|-----------------|----------------------------|-----------------------------|-------------------------|
| MOUR-02 | MOUSAM RIVER - SMU280 - VRMP | 9/19/2012 | 7:00 AM | N | | | | 90.1 | 8.2 | 68 | | | | | |
| MOUR-03 - WHICHERS HILL RD | MOUSAM RIVER - SMU144 - VRMP | 6/6/2012 | 10:06 AM | N | | | 14.4 | 97.5 | 9.9 | 55 | | | | | |
| MOUR-03 | MOUSAM RIVER - SMU144 - VRMP | 6/6/2012 | 10:08 AM | N | | | | | | | | | 105 | 261 | |
| MOUR-03 | MOUSAM RIVER - SMU144 - VRMP | 6/25/2012 | 9:13 AM | N | | | | | | | | | 81.6 | 25 | |
| MOUR-03 | MOUSAM RIVER - SMU144 - VRMP | 6/25/2012 | 9:50 AM | N | | | 22.6 | 91.4 | 7.95 | 96 | | | | | |
| MOUR-03 | MOUSAM RIVER - SMU144 - VRMP | 7/10/2012 | 9:15 AM | N | | | 22.9 | 86.6 | 7.44 | 95 | | | | | |
| MOUR-03 | MOUSAM RIVER - SMU144 - VRMP | 7/10/2012 | 9:18 AM | N | | | | | | | | | 84 | 3 | |
| MOUR-03 | MOUSAM RIVER - SMU144 - VRMP | 7/23/2012 | 9:10 AM | N | | | 24.7 | 93.2 | 7.82 | 125 | | | | 1 | |
| MOUR-03 | MOUSAM RIVER - SMU144 - VRMP | 7/23/2012 | 9:10 AM | D | | | 24.7 | 94.8 | 7.8 | 121 | | | | | |
| MOUR-03 | MOUSAM RIVER - SMU144 - VRMP | 8/7/2012 | 10:30 AM | N | | | 24.3 | 91.1 | 7.63 | 114 | | | | 3 | |
| MOUR-03 | MOUSAM RIVER - SMU144 - VRMP | 8/21/2012 | 9:15 AM | N | | | 23.2 | 87.5 | 7.5 | 102 | | | | | |
| MOUR-03 | MOUSAM RIVER - SMU144 - VRMP | 8/21/2012 | 9:20 AM | N | | | | | | | | | | 12 | |
| MOUR-03 | MOUSAM RIVER - SMU144 - VRMP | 9/4/2012 | 9:13 AM | N | | | 21.3 | 93.9 | 8.35 | 118 | | | | 14 | |
| MOUR-03 | MOUSAM RIVER - SMU144 - VRMP | 9/25/2012 | 9:20 AM | N | | | 17.1 | 96.6 | 9.32 | 106 | | | | 18 | |
| MOUR-05 - BERRY CT | MOUSAM RIVER - SMU39 - VRMP | 6/12/2012 | 9:00 AM | N | | | 18.2 | 91.1 | 8.7 | 61 | | | | | |
| MOUR-05 | MOUSAM RIVER - SMU39 - VRMP | 6/12/2012 | 9:10 AM | N | | | | | | | | | 87.7 | 23 | |
| MOUR-05 | MOUSAM RIVER - SMU39 - VRMP | 6/27/2012 | 7:50 AM | N | | | | | | | | | 82.3 | 158 | |
| MOUR-05 | MOUSAM RIVER - SMU39 - VRMP | 6/27/2012 | 8:35 AM | N | | | 20.7 | 92.7 | 8.3 | 74 | | | | | |
| MOUR-05 | MOUSAM RIVER - SMU39 - VRMP | 7/10/2012 | 8:55 AM | N | | | | | | | | | | 28 | |
| MOUR-05 | MOUSAM RIVER - SMU39 - VRMP | 7/10/2012 | 9:00 AM | N | | | | | | | | | 78.6 | | |
| MOUR-05 | MOUSAM RIVER - SMU39 - VRMP | 7/10/2012 | 9:05 AM | N | | | 23.7 | 82.1 | 7.4 | 70 | | | | | |
| MOUR-05 | MOUSAM RIVER - SMU39 - VRMP | 7/24/2012 | 11:25 AM | N | | | 24.5 | 89.6 | 7.5 | 89 | | | | | |
| MOUR-05 | MOUSAM RIVER - SMU39 - VRMP | 7/24/2012 | 11:45 AM | N | | | | | | | | | | 28 | |
| MOUR-05 | MOUSAM RIVER - SMU39 - VRMP | 8/7/2012 | 8:10 AM | N | | | 24.7 | 84.6 | 7 | 99 | | | | 43 | |
| MOUR-05 | MOUSAM RIVER - SMU39 - VRMP | 10/1/2012 | 11:10 AM | N | | | 15 | 87.9 | 8.9 | 90 | | | | 84 | |
| MOUR-06 - ROGERS POND | MOUSAM RIVER - SMU35 - VRMP | 6/12/2012 | 10:00 AM | N | | | 18.3 | 97.4 | 9.4 | 54 | | | | | |
| MOUR-06 | MOUSAM RIVER - SMU35 - VRMP | 6/12/2012 | 10:05 AM | N | | | | | | | | | 89.1 | 63 | |
| MOUR-06 | MOUSAM RIVER - SMU35 - VRMP | 6/27/2012 | 8:20 AM | N | | | 20.7 | 101.6 | 9.1 | 115 | | | 84.6 | 10 | |
| MOUR-06 | MOUSAM RIVER - SMU35 - VRMP | 7/10/2012 | 8:45 AM | N | | | 22.7 | 95.4 | 8.5 | 78 | | | 77.9 | 97 | |
| MOUR-06 | MOUSAM RIVER - SMU35 - VRMP | 7/10/2012 | 8:45 AM | L | | | | | | | | | 78.9 | 52 | |
| MOUR-06 | MOUSAM RIVER - SMU35 - VRMP | 7/10/2012 | 8:45 AM | D | | | | | | 79 | | | | 31 | |
| MOUR-06 | MOUSAM RIVER - SMU35 - VRMP | 7/24/2012 | 11:55 AM | N | | | 25.1 | 103.1 | 8.5 | 91 | | | | | |
| MOUR-06 | MOUSAM RIVER - SMU35 - VRMP | 7/24/2012 | 12:05 PM | N | | | | | | | | | | 41 | |
| MOUR-06 | MOUSAM RIVER - SMU35 - VRMP | 7/24/2012 | 12:05 PM | L | | | | | | | | | | 10 | |
| MOUR-06 | MOUSAM RIVER - SMU35 - VRMP | 8/7/2012 | 7:45 AM | N | | | | | | | | | | 52 | |
| MOUR-06 | MOUSAM RIVER - SMU35 - VRMP | 8/7/2012 | 8:00 AM | N | | | 24.4 | 95 | 7.5 | 105 | | | | | |
| MOUR-06 | MOUSAM RIVER - SMU35 - VRMP | 8/7/2012 | 7:45 AM | L | | | | | | | | | | | 122 |
| MOUR-06 | MOUSAM RIVER - SMU35 - VRMP | 8/7/2012 | 8:00 AM | D | | | 24.5 | 96.3 | 7.4 | | | | | | |
| MOUR-06 | MOUSAM RIVER - SMU35 - VRMP | 10/1/2012 | 11:20 AM | N | | | 15.1 | 100.1 | 10.1 | | | | | | |

| Organization Site Code | VRMP Site ID | Date | Time | ** Sample Type Qualifier | * Sample Depth | Depth Unit | Water Temp (DEG C) | ** D.O. Sat. (%) | ** D.O. (MG/L) | ** Spec. Cond. (US/CM) | Salinity (PPTH) | Turbidity (NTU) | Optical Brighteners (ug/l) | E Coli Bacteria (MPN/100ML) | Enterococci (MPN/100ML) |
|-------------------------|------------------------------|-----------|----------|--------------------------|----------------|------------|--------------------|------------------|----------------|------------------------|-----------------|-----------------|----------------------------|-----------------------------|-------------------------|
| MOUR-06 | MOUSAM RIVER - SMU35 - VRMP | 10/1/2012 | 11:30 AM | N | | | | | | | | | | | 74 |
| MOUR-07 - RTE 9 BRIDGE | MOUSAM RIVER - SMU04 - VRMP | 6/12/2012 | 10:45 AM | N | | | 18.3 | 95 | 8.9 | | | | | | |
| MOUR-07 | MOUSAM RIVER - SMU04 - VRMP | 6/27/2012 | 8:00 AM | N | | | 18.1 | 92.6 | 8.1 | | | | | | |
| MOUR-07 | MOUSAM RIVER - SMU04 - VRMP | 7/10/2012 | 8:25 AM | N | | | 17.2 | 99.8 | 8.9 | | | | | | |
| MOUR-07 | MOUSAM RIVER - SMU04 - VRMP | 7/24/2012 | 12:25 PM | N | | | 16.9 | 103.3 | 9.3 | | | | | | |
| MOUR-07 | MOUSAM RIVER - SMU04 - VRMP | 8/7/2012 | 7:40 AM | N | | | 18.6 | 86.4 | 7.6 | | | | | | |
| MOUR-08 - PARSONS BEACH | BACK CREEK - SMUBC02 - VRMP | 6/12/2012 | 10:25 AM | N | | | 17.9 | 80.5 | 7.6 | | | | | | |
| MOUR-08 | BACK CREEK - SMUBC02 - VRMP | 6/12/2012 | 10:30 AM | N | | | | | | | | | 82.1 | | 10 |
| MOUR-08 | BACK CREEK - SMUBC02 - VRMP | 6/27/2012 | 7:55 AM | N | | | 15.2 | 87.1 | 8.1 | | | | | | |
| MOUR-08 | BACK CREEK - SMUBC02 - VRMP | 6/27/2012 | 8:35 AM | N | | | | | | | | | | | 20 |
| MOUR-08 | BACK CREEK - SMUBC02 - VRMP | 7/10/2012 | 8:10 AM | N | | | | | | | | | 24.4 | | |
| MOUR-08 | BACK CREEK - SMUBC02 - VRMP | 7/10/2012 | 8:15 AM | N | | | 15 | 93.3 | 8.7 | | | | | | 10 |
| MOUR-08 | BACK CREEK - SMUBC02 - VRMP | 7/10/2012 | 8:15 AM | D | | | 14.9 | 93.1 | 8.7 | | | | | | |
| MOUR-08 | BACK CREEK - SMUBC02 - VRMP | 7/24/2012 | 12:45 AM | N | | | 17.9 | 104.3 | 9.1 | | | | | | |
| MOUR-08 | BACK CREEK - SMUBC02 - VRMP | 7/24/2012 | 12:45 PM | N | | | | | | | | | | | U<10 |
| MOUR-08 | BACK CREEK - SMUBC02 - VRMP | 8/7/2012 | 7:30 AM | N | | | 16 | 72.5 | 6.7 | | | | | | |
| MOUR-08 | BACK CREEK - SMUBC02 - VRMP | 10/1/2012 | 11:40 AM | N | | | 14.8 | 101.8 | 10.3 | | | | | | |
| MOUR-08 | BACK CREEK - SMUBC02 - VRMP | 10/1/2012 | 11:45 AM | N | | | | | | | | | | | U<10 |
| MOUR-09 - RTE 4 | MOUSAM RIVER - SMU163 - VRMP | 6/6/2012 | 9:29 AM | N | | | 14.8 | 86.5 | 8.8 | 70 | | | | | |
| MOUR-09 | MOUSAM RIVER - SMU163 - VRMP | 6/6/2012 | 9:30 AM | N | | | | | | | | | 69.8 | 75 | |
| MOUR-09 | MOUSAM RIVER - SMU163 - VRMP | 6/25/2012 | 9:13 AM | N | | | 22.9 | 81.5 | 7 | 127 | | | | | |
| MOUR-09 | MOUSAM RIVER - SMU163 - VRMP | 6/25/2012 | 9:29 AM | N | | | | | | | | | 58.1 | 147 | |
| MOUR-09 | MOUSAM RIVER - SMU163 - VRMP | 6/25/2012 | 9:13 AM | D | | | 22.9 | 81.7 | 7.04 | 126 | | | | | |
| MOUR-09 | MOUSAM RIVER - SMU163 - VRMP | 7/10/2012 | 8:47 AM | N | | | 21.3 | 76.6 | 6.78 | 121 | | | | | |
| MOUR-09 | MOUSAM RIVER - SMU163 - VRMP | 7/10/2012 | 8:50 AM | N | | | | | | | | | 47.7 | 71 | |
| MOUR-09 | MOUSAM RIVER - SMU163 - VRMP | 7/23/2012 | 8:37 AM | N | | | 23.2 | 78.3 | 6.66 | 107 | | | | | |
| MOUR-09 | MOUSAM RIVER - SMU163 - VRMP | 7/23/2012 | 8:42 AM | N | | | | | | | | | | | 20 |
| MOUR-09 | MOUSAM RIVER - SMU163 - VRMP | 8/7/2012 | 10:00 AM | N | | | 23.7 | 82.1 | 6.97 | 103 | | | | | 52 |
| MOUR-09 | MOUSAM RIVER - SMU163 - VRMP | 8/21/2012 | 8:45 AM | N | | | 21.3 | 76.7 | 6.81 | 116 | | | | | 27 |
| MOUR-09 | MOUSAM RIVER - SMU163 - VRMP | 9/4/2012 | 8:44 AM | N | | | 19.8 | 79 | 7.24 | 108 | | | | | 46 |
| MOUR-09 | MOUSAM RIVER - SMU163 - VRMP | 9/25/2012 | 8:40 AM | N | | | 14.7 | 81.8 | 8.26 | 91 | | | | | 91 |
| MOUR-10 - NEW DAM RD | MOUSAM RIVER - SMU204 - VRMP | 6/6/2012 | 9:45 AM | N | | | 14.5 | 81 | 8.3 | 74 | | | | | |
| MOUR-10 | MOUSAM RIVER - SMU204 - VRMP | 6/6/2012 | 9:50 AM | N | | | | | | | | | 77.4 | 84 | |
| MOUR-10 | MOUSAM RIVER - SMU204 - VRMP | 6/25/2012 | 9:29 AM | N | | | 23.9 | 82.5 | 6.95 | 124 | | | | | |
| MOUR-10 | MOUSAM RIVER - SMU204 - VRMP | 6/25/2012 | 9:50 AM | N | | | | | | | | | 74.6 | 153 | |
| MOUR-10 | MOUSAM RIVER - SMU204 - VRMP | 6/25/2012 | 9:50 AM | L | | | | | | | | | | | 118 |
| MOUR-10 | MOUSAM RIVER - SMU204 - VRMP | 7/10/2012 | 9:01 AM | N | | | 23.5 | 81.3 | 6.87 | 151 | | | | | |

| Organization Site Code | VRMP Site ID | Date | Time | ** Sample Type Qualifier | * Sample Depth | Depth Unit | Water Temp (DEG C) | ** D.O. Sat. (%) | ** D.O. (MG/L) | ** Spec. Cond. (US/CM) | Salinity (PPTH) | Turbidity (NTU) | Optical Brighteners (ug/l) | E Coli Bacteria (MPN/100ML) | Enterococci (MPN/100ML) |
|------------------------|---|-----------|----------|--------------------------|----------------|------------|--------------------|------------------|----------------|------------------------|-----------------|-----------------|----------------------------|-----------------------------|-------------------------|
| MOUR-10 | MOUSAM RIVER - SMU204 - VRMP | 7/10/2012 | 9:04 AM | N | | | | | | | | | 54.3 | 3 | |
| MOUR-10 | MOUSAM RIVER - SMU204 - VRMP | 7/23/2012 | 8:55 AM | N | | | 25.1 | 90 | 7.45 | 130 | | | | | |
| MOUR-10 | MOUSAM RIVER - SMU204 - VRMP | 7/23/2012 | 8:57 AM | N | | | | | | | | | | 16 | |
| MOUR-10 | MOUSAM RIVER - SMU204 - VRMP | 7/23/2012 | 8:57 AM | L | | | | | | | | | | 11 | |
| MOUR-10 | MOUSAM RIVER - SMU204 - VRMP | 8/7/2012 | 10:15 AM | N | | | 25.4 | 92.1 | 7.57 | 130 | | | | | |
| MOUR-10 | MOUSAM RIVER - SMU204 - VRMP | 8/7/2012 | 10:20 AM | N | | | | | | | | | | 15 | |
| MOUR-10 | MOUSAM RIVER - SMU204 - VRMP | 8/7/2012 | 10:20 AM | L | | | | | | | | | | 8 | |
| MOUR-10 | MOUSAM RIVER - SMU204 - VRMP | 8/21/2012 | 9:00 AM | N | | | 22.1 | 84.2 | 7.4 | 133 | | | | 17 | |
| MOUR-10 | MOUSAM RIVER - SMU204 - VRMP | 9/4/2012 | 8:58 AM | N | | | 22.2 | 79.9 | 6.9 | 126 | | | | 12 | |
| MOUR-10 | MOUSAM RIVER - SMU204 - VRMP | 9/4/2012 | 8:58 AM | L | | | | | | | | | | 16 | |
| MOUR-10 | MOUSAM RIVER - SMU204 - VRMP | 9/25/2012 | 9:10 AM | N | | | 15.9 | 79.6 | 7.9 | 131 | | | | 11 | |
| MOUR-10 | MOUSAM RIVER - SMU204 - VRMP | 9/25/2012 | 9:10 AM | L | | | | | | | | | | 11 | |
| MOUR-11 | MOUSAM RIVER - SMU250 - VRMP | 6/13/2012 | 7:30 AM | N | | | 19.5 | 98.7 | 9 | 74 | | | | | |
| MOUR-11 | MOUSAM RIVER - SMU250 - VRMP | 6/27/2012 | 7:40 AM | N | | | 20.6 | 104.6 | 9.4 | 54 | | | | | |
| MOUR-11 | MOUSAM RIVER - SMU250 - VRMP | 7/11/2012 | 7:30 AM | N | | | 23.5 | 93.9 | 8.4 | 79 | | | | | |
| MOUR-11 | MOUSAM RIVER - SMU250 - VRMP | 7/11/2012 | 7:30 AM | D | | | 23.7 | 93.8 | 8.3 | 80 | | | | | |
| MOUR-11 | MOUSAM RIVER - SMU250 - VRMP | 7/25/2012 | 7:35 AM | N | | | 24.6 | 93.6 | 7.9 | 85 | | | | | |
| MOUR-11 | MOUSAM RIVER - SMU250 - VRMP | 8/8/2012 | 7:15 AM | N | | | 24.8 | 93.3 | 7.8 | 78 | | | | | |
| MOUR-11 | MOUSAM RIVER - SMU250 - VRMP | 8/22/2012 | 7:20 AM | N | | | 22.7 | 93.5 | 8.1 | 85 | | | | | |
| MOUR-11 | MOUSAM RIVER - SMU250 - VRMP | 9/5/2012 | 7:25 AM | N | | | 21 | 98 | 8.7 | 72 | | | | | |
| MOUR-11 | MOUSAM RIVER - SMU250 - VRMP | 9/19/2012 | 7:22 AM | N | | | 18.9 | 98.2 | 9.1 | 73 | | | | | |
| MOUR-12 | MOUSAM RIVER - SMU232 - VRMP | 6/13/2012 | 7:35 AM | N | | | 20.3 | 98.8 | 9.1 | 82 | | | | | |
| MOUR-12 | MOUSAM RIVER - SMU232 - VRMP | 6/27/2012 | 7:30 AM | N | | | 19.8 | 105.2 | 9.6 | 86 | | | | | |
| MOUR-12 | MOUSAM RIVER - SMU232 - VRMP | 7/11/2012 | 7:11 AM | N | | | 23.8 | 93.9 | 8.4 | 95 | | | | | |
| MOUR-12 | MOUSAM RIVER - SMU232 - VRMP | 7/25/2012 | 7:20 AM | N | | | 24.9 | 93.1 | 7.7 | 79 | | | | | |
| MOUR-12 | MOUSAM RIVER - SMU232 - VRMP | 8/8/2012 | 7:30 AM | N | | | 25 | 93.3 | 7.8 | 85 | | | | | |
| MOUR-12 | MOUSAM RIVER - SMU232 - VRMP | 8/22/2012 | 7:00 AM | N | | | 23.1 | 93.8 | 8.3 | 78 | | | | | |
| MOUR-12 | MOUSAM RIVER - SMU232 - VRMP | 9/5/2012 | 7:15 AM | N | | | 21.3 | 98.8 | 8.8 | 86 | | | | | |
| MOUR-12 | MOUSAM RIVER - SMU232 - VRMP | 9/19/2012 | 7:28 AM | N | | | 18.8 | 95.7 | 8.9 | 76 | | | | | |
| MOUR-12 | MOUSAM RIVER - SMU232 - VRMP | 9/19/2012 | 7:28 AM | D | | | 18.9 | 98.2 | 9.1 | 77 | | | | | |
| MOUSMB-01 | MIDDLE BRANCH MOUSAM RIVER - SMUMB58 - VRMP | 6/6/2012 | 8:53 AM | N | | | 12.2 | 93.2 | 10.1 | 33 | | | | | |
| MOUSMB-01 | MIDDLE BRANCH MOUSAM RIVER - SMUMB58 - VRMP | 6/25/2012 | 8:40 AM | N | | | 20.3 | 88.2 | 7.95 | 50 | | | | | |
| MOUSMB-01 | MIDDLE BRANCH MOUSAM RIVER - SMUMB58 - VRMP | 7/10/2012 | 8:18 AM | N | | | 18.6 | 77 | 7.14 | 63 | | | | | |
| MOUSMB-01 | MIDDLE BRANCH MOUSAM RIVER - SMUMB58 - VRMP | 7/23/2012 | 8:05 AM | N | | | 20.6 | 80.3 | 7.2 | 71 | | | | | |
| MOUSMB-01 | MIDDLE BRANCH MOUSAM RIVER - SMUMB58 - VRMP | 8/7/2012 | 9:30 AM | N | | | 20.8 | 85.4 | 7.68 | 61 | | | | | |
| MOUSMB-01 | MIDDLE BRANCH MOUSAM RIVER - SMUMB58 - VRMP | 8/21/2012 | 8:15 AM | N | | | 18.7 | 86.7 | 8.1 | 51 | | | | | |
| MOUSMB-01 | MIDDLE BRANCH MOUSAM RIVER - SMUMB58 - VRMP | 9/4/2012 | 8:14 AM | N | | | 17.7 | 80 | 7.64 | 65 | | | | | |

| Organization Site Code | VRMP Site ID | Date | Time | ** Sample Type Qualifier | * Sample Depth | Depth Unit | Water Temp (DEG C) | ** D.O. Sat. (%) | ** D.O. (MG/L) | ** Spec. Cond. (US/CM) | Salinity (PPTH) | Turbidity (NTU) | Optical Brighteners (ug/l) | E Coli Bacteria (MPN/100ML) | Enterococci (MPN/100ML) |
|---------------------------|---|-----------|---------|--------------------------|----------------|------------|--------------------|------------------|----------------|------------------------|-----------------|-----------------|----------------------------|-----------------------------|-------------------------|
| MOUSMB-01 | MIDDLE BRANCH MOUSAM RIVER - SMUMB58 - VRMP | 9/25/2012 | 8:05 AM | N | | | 11.6 | 76.8 | 8.37 | 62 | | | | | |
| MOUSMB-02 - SWETTS BRIDGE | MIDDLE BRANCH MOUSAM RIVER - SMUMB33 - VRMP | 6/6/2012 | 9:10 AM | N | | | 12.1 | 93.5 | 10.1 | 35 | | | 97.8 | 69 | |
| MOUSMB-02 | MIDDLE BRANCH MOUSAM RIVER - SMUMB33 - VRMP | 6/25/2012 | 8:51 AM | N | | | 20.3 | 83.3 | 7.53 | 66 | | | 101 | 152 | |
| MOUSMB-02 | MIDDLE BRANCH MOUSAM RIVER - SMUMB33 - VRMP | 7/10/2012 | 8:32 AM | N | | | 18.6 | 75.8 | 7.13 | 113 | | | | | |
| MOUSMB-02 | MIDDLE BRANCH MOUSAM RIVER - SMUMB33 - VRMP | 7/10/2012 | 8:35 AM | N | | | | | | | | | 87 | 201 | |
| MOUSMB-02 | MIDDLE BRANCH MOUSAM RIVER - SMUMB33 - VRMP | 7/23/2012 | 8:15 AM | N | | | 17.5 | 69.8 | 6.73 | 112 | | | | | |
| MOUSMB-02 | MIDDLE BRANCH MOUSAM RIVER - SMUMB33 - VRMP | 7/23/2012 | 8:20 AM | N | | | | | | | | | | 121 | |
| MOUSMB-02 | MIDDLE BRANCH MOUSAM RIVER - SMUMB33 - VRMP | 8/7/2012 | 9:45 AM | N | | | 20.9 | 75.8 | 6.76 | 92 | | | | 161 | |
| MOUSMB-02 | MIDDLE BRANCH MOUSAM RIVER - SMUMB33 - VRMP | 8/21/2012 | 8:30 AM | N | | | 18.6 | 80.1 | 7.4 | 71 | | | | 166 | |
| MOUSMB-02 | MIDDLE BRANCH MOUSAM RIVER - SMUMB33 - VRMP | 9/4/2012 | 8:25 AM | N | | | 16.2 | 72 | 7.1 | 142 | | | | 111 | |
| MOUSMB-02 | MIDDLE BRANCH MOUSAM RIVER - SMUMB33 - VRMP | 9/4/2012 | 8:25 AM | D | | | 16.1 | 72.5 | 7.2 | 142 | | | | | |
| MOUSMB-02 | MIDDLE BRANCH MOUSAM RIVER - SMUMB33 - VRMP | 9/25/2012 | 8:20 AM | N | | | 11.9 | 66.3 | 7.15 | 142 | | | | 88 | |
| MOUSMB-02 | MIDDLE BRANCH MOUSAM RIVER - SMUMB33 - VRMP | 9/25/2012 | 8:20 AM | D | | | 11.8 | 66.2 | 7.15 | 141 | | | | | |

Mousam River, Mousam & Kennebunk Rivers Alliance - Non-Approved Sites

| | | | | | | | | | | | | | | | |
|-----------------------|----------------------------|-----------|----------|---|--|--|------|------|-----|----|--|--|------|-----|--|
| MOUR-04 - MILL STREET | MOUSAM RIVER - SMU80 - KMA | 6/12/2012 | 8:40 AM | N | | | 18.1 | 90.9 | 8.6 | 60 | | | | | |
| MOUR-04 | MOUSAM RIVER - SMU80 - KMA | 6/12/2012 | 8:45 AM | N | | | | | | | | | 90.8 | 8 | |
| MOUR-04 | MOUSAM RIVER - SMU80 - KMA | 6/27/2012 | 8:50 AM | N | | | 20.9 | 82.4 | 7.4 | | | | | | |
| MOUR-04 | MOUSAM RIVER - SMU80 - KMA | 7/10/2012 | 9:25 AM | N | | | 23.4 | 74.9 | 6.4 | 64 | | | 78.8 | 10 | |
| MOUR-04 | MOUSAM RIVER - SMU80 - KMA | 7/24/2012 | 11:15 AM | N | | | 25.5 | 97.5 | 7.9 | 97 | | | | | |
| MOUR-04 | MOUSAM RIVER - SMU80 - KMA | 7/24/2012 | 11:35 AM | N | | | | | | | | | | U<1 | |
| MOUR-04 | MOUSAM RIVER - SMU80 - KMA | 8/7/2012 | 8:40 AM | N | | | 25.1 | 85.1 | 6.7 | 75 | | | | | |
| MOUR-04 | MOUSAM RIVER - SMU80 - KMA | 8/7/2012 | 8:45 AM | N | | | | | | | | | | 13 | |
| MOUR-04 | MOUSAM RIVER - SMU80 - KMA | 10/1/2012 | 10:45 AM | N | | | 15.6 | 80.3 | 8 | 75 | | | | 28 | |
| MOUR-04 | MOUSAM RIVER - SMU80 - KMA | 8/7/2012 | 8:45 AM | L | | | | | | | | | | 10 | |

Appendix A-2. 2012 observational data and quality assurance/quality control (QA/QC) notes for "approved" and "non-approved" sites.

** "N" = normal environmental sample; "D" = field duplicate; "L" = lab duplicate; "D.O." = dissolved oxygen; "Spec. Cond" = specific conductance; "Turb" = turbidity
Refer to Appendix A-1 for water quality data

| Organization Site Code | VRMP Site ID | Date | Time | ** Sample Type Qualifier | Flow | Stage | Air Temp (°C) | Sample Location | Current Weather | Air Condition | Past 24HR Weather | Habitat | Tide Stage | Water Appearance | Comments |
|------------------------|--------------|------|------|--------------------------|------|-------|---------------|-----------------|-----------------|---------------|-------------------|---------|------------|------------------|----------|
|------------------------|--------------|------|------|--------------------------|------|-------|---------------|-----------------|-----------------|---------------|-------------------|---------|------------|------------------|----------|

Mousam River, Mousam & Kennebunk Rivers Alliance - Approved Sites

| | | | | | | | | | | | | | | | |
|-----------------------|--------------------------------------|-----------|---------|---|------------|------|-------|--------|------------------------|--------|--|--------|--|-------------|---|
| LR-01 - BACK ROAD | LITTLEFIELD RIVER - SMUMBLR18 - VRMP | 6/6/2012 | 8:24 AM | N | STORM FLOW | LOW | 10.56 | BRIDGE | MOSTLY CLOUDY | CALM | MOSTLY CLOUDY, SHOWERS | RUN | | MED STAINED | NO TIDE AT THIS SITE NON-WADEABLE/MID-DEPTH DID NOT RECORD LAB PARAMETERS TO BE SAMPLED PORTION OF VRMP FIELD DATA SHEETS. |
| LR-01 | LITTLEFIELD RIVER - SMUMBLR18 - VRMP | 6/25/2012 | 8:12 AM | N | BASE FLOW | MED | 18.22 | BRIDGE | MOSTLY CLOUDY | CALM | CLEAR | RUN | | MED STAINED | NO TIDE AT THIS SITE NON-WADEABLE/MID-DEPTH DID NOT RECORD TIME OF CALIBRATION. DID NOT COMPLETE LAB PARAMETERS TO BE SAMPLED PORTION OF VRMP FIELD SHEET. |
| LR-01 | LITTLEFIELD RIVER - SMUMBLR18 - VRMP | 7/10/2012 | 7:55 AM | N | BASE FLOW | LOW | 14.44 | BRIDGE | CLEAR | CALM | CLEAR | RUN | | MED STAINED | NO TIDE AT THIS SITE NON-WADEABLE/MID-DEPTH DID NOT COMPLETE CHAIN OF CUSTODY FOR DATASHEET. DID NOT COMPLETE LAB PARAMETERS TO BE SAMPLED PORTION OF VRMP DATA SHEET. |
| LR-01 | LITTLEFIELD RIVER - SMUMBLR18 - VRMP | 7/23/2012 | 7:50 AM | N | BASE FLOW | LOW | 21.11 | BRIDGE | PARTLY CLOUDY, SHOWERS | CALM | CLEAR | RUN | | MED STAINED | NO TIDE AT THIS SITE NON-WADEABLE/MID-DEPTH DID NOT COMPLETE LAB PARAMETERS TO BE SAMPLED PORTION OF VRMP FIELD DATASHEET. |
| LR-01 | LITTLEFIELD RIVER - SMUMBLR18 - VRMP | 8/7/2012 | 9:15 AM | N | BASE FLOW | LOW | 18.89 | BRIDGE | CLEAR | | CLEAR | RUN | | MED STAINED | NON-WADEABLE/MID-DEPTH DID NOT COMPLETE CHAIN OF CUSTODY FOR DATASHEET. DID NOT COMPLETE LAB PARAMETERS TO BE SAMPLED PORTION OF VRMP FIELD DATASHEET. |
| LR-01 | LITTLEFIELD RIVER - SMUMBLR18 - VRMP | 8/21/2012 | 7:45 AM | N | STORM FLOW | MED | 16.11 | BRIDGE | CLOUDY, SHOWERS | CALM | PARTLY CLOUDY | RUN | | MED STAINED | NO TIDE AT THIS SITE NON-WADEABLE/MID-DEPTH DID NOT COMPLETE CHAIN OF CUSTODY FOR DATASHEET. DID NOT COMPLETE LAB PARAMETERS TO BE SAMPLED PORTION OF VRMP FIELD DATASHEET. |
| LR-01 | LITTLEFIELD RIVER - SMUMBLR18 - VRMP | 9/4/2012 | 7:50 AM | N | BASE FLOW | LOW | 16.67 | BRIDGE | PARTLY CLOUDY, SHOWERS | | PARTLY CLOUDY | RUN | | MED STAINED | NO TIDE AT THIS SITE NON-WADEABLE/MID-DEPTH DID NOT COMPLETE CHAIN OF CUSTODY FOR DATASHEET. DID NOT COMPLETE LAB PARAMETERS TO BE SAMPLED PORTION OF VRMP FIELD DATASHEET. |
| LR-01 | LITTLEFIELD RIVER - SMUMBLR18 - VRMP | 9/25/2012 | 7:50 AM | N | STORM FLOW | LOW | 6.111 | BRIDGE | CLEAR | CALM | PARTLY CLOUDY | RUN | | MED STAINED | NO TIDE AT THIS SITE NON-WADEABLE/MID-DEPTH D.O. METER- DID NOT RECORD TIME OF CALIBRATION. DID NOT COMPLETE CHAIN OF CUSTODY FOR DATASHEET. DID NOT COMPLETE LAB PARAMETERS TO BE SAMPLED PORTION OF VRMP FIELD DATASHEET. |
| MOUR-01 - HEAD WATERS | MOUSAM RIVER - SMU290 - VRMP | 6/13/2012 | 7:45 AM | N | STORM FLOW | HIGH | 17.22 | BANK | CLOUDY, HEAVY RAIN | BREEZE | CLEAR, MOSTLY CLOUDY | RIFFLE | | MED STAINED | NON-WADEABLE/MID-DEPTH NO VALUE FOR D.O. IN % SATURATION. |
| MOUR-01 | MOUSAM RIVER - SMU290 - VRMP | 6/27/2012 | 8:00 AM | N | STORM FLOW | HIGH | 16.11 | BANK | CLOUDY, LIGHT RAIN | BREEZE | HEAVY RAIN, LIGHT RAIN, MOSTLY CLOUDY, SHOWERS | RUN | | MED STAINED | NON-WADEABLE/MID-DEPTH NO VALUE FOR D.O. IN % SATURATION. |
| MOUR-01 | MOUSAM RIVER - SMU290 - VRMP | 7/11/2012 | 8:00 AM | N | BASE FLOW | MED | 12.78 | BANK | CLEAR | CALM | CLEAR, PARTLY CLOUDY | RUN | | MED STAINED | NON-WADEABLE/MID-DEPTH |
| MOUR-01 | MOUSAM RIVER - SMU290 - VRMP | 7/11/2012 | 8:00 AM | D | | | | BANK | | | | | | | NON-WADEABLE/MID-DEPTH |
| MOUR-01 | MOUSAM RIVER - SMU290 - VRMP | 7/25/2012 | 8:00 AM | N | BASE FLOW | MED | 16.11 | BANK | CLEAR | CALM | MOSTLY CLOUDY, SHOWERS | RUN | | MED STAINED | NON-WADEABLE/3 FT BELOW SURFACE NO VALUE FOR D.O. IN % SATURATION. |
| MOUR-01 | MOUSAM RIVER - SMU290 - VRMP | 8/8/2012 | 7:57 AM | N | BASE FLOW | MED | 12.78 | WADING | CLEAR | CALM | CLEAR | RUN | | MED STAINED | WADEABLE/MID-DEPTH |
| MOUR-01 | MOUSAM RIVER - SMU290 - VRMP | 8/22/2012 | 7:55 AM | N | BASE FLOW | MED | 14.44 | BANK | CLEAR | CALM | CLEAR, PARTLY CLOUDY | RUN | | MED STAINED | NON-WADEABLE/MID-DEPTH |
| MOUR-01 | MOUSAM RIVER - SMU290 - VRMP | 9/5/2012 | 7:55 AM | N | STORM FLOW | HIGH | 22.22 | BANK | HEAVY RAIN, LIGHT RAIN | | CLOUDY, HEAVY RAIN, LIGHT RAIN, SHOWERS | RUN | | MED STAINED | NON-WADEABLE/MID-DEPTH |

| Organization Site Code | VRMP Site ID | Date | Time | ** Sample Type Qualifier | Flow | Stage | Air Temp (°C) | Sample Location | Current Weather | Air Condition | Past 24HR Weather | Habitat | Tide Stage | Water Appearance | Comments |
|----------------------------|------------------------------|-----------|----------|--------------------------|------------|-------|---------------|-----------------|------------------------|---------------|---|---------|------------|------------------|---|
| MOUR-01 | MOUSAM RIVER - SMU290 - VRMP | 9/19/2012 | 7:00 AM | N | STORM FLOW | HIGH | 16.11 | BANK | MOSTLY CLOUDY, SHOWERS | BREEZE | HEAVY RAIN, MOSTLY CLOUDY, PARTLY CLOUDY, SHOWERS | RUN | | MED STAINED | NON-WADEABLE/MID-DEPTH |
| MOUR-02 - S CURVE ROAD | MOUSAM RIVER - SMU280 - VRMP | 6/13/2012 | 7:55 AM | N | STORM FLOW | HIGH | 17.22 | WADING | CLOUDY, HEAVY RAIN | BREEZE | CLEAR, MOSTLY CLOUDY | RIFFLE | | MED STAINED | WADEABLE/MID-DEPTH NO VALUE FOR D.O. IN % SATURATION. |
| MOUR-02 | MOUSAM RIVER - SMU280 - VRMP | 6/27/2012 | 7:50 AM | N | STORM FLOW | HIGH | 16.11 | WADING | CLOUDY, LIGHT RAIN | BREEZE | HEAVY RAIN, LIGHT RAIN, MOSTLY CLOUDY, SHOWERS | RUN | | MED STAINED | WADEABLE/MID-DEPTH NO VALUE FOR D.O. IN % SATURATION. |
| MOUR-02 | MOUSAM RIVER - SMU280 - VRMP | 7/11/2012 | 7:50 AM | N | BASE FLOW | MED | 12.78 | WADING | CLEAR | CALM | CLEAR, PARTLY CLOUDY | RUN | | MED STAINED | WADEABLE/MID-DEPTH |
| MOUR-02 | MOUSAM RIVER - SMU280 - VRMP | 7/25/2012 | 7:50 AM | N | BASE FLOW | MED | 16.11 | WADING | CLEAR | CALM | MOSTLY CLOUDY, SHOWERS | RUN | | MED STAINED | WADEABLE/MID-DEPTH |
| MOUR-02 | MOUSAM RIVER - SMU280 - VRMP | 8/8/2012 | 7:43 AM | N | BASE FLOW | MED | 12.78 | WADING | CLEAR | CALM | CLEAR | RUN | | MED STAINED | WADEABLE/MID-DEPTH |
| MOUR-02 | MOUSAM RIVER - SMU280 - VRMP | 8/22/2012 | 7:40 AM | N | BASE FLOW | MED | 14.44 | WADING | CLEAR | | CLEAR, PARTLY CLOUDY | RUN | | MED STAINED | WADEABLE/MID-DEPTH |
| MOUR-02 | MOUSAM RIVER - SMU280 - VRMP | 8/22/2012 | 7:40 AM | D | | | | WADING | | | | | | | WADEABLE/MID-DEPTH |
| MOUR-02 | MOUSAM RIVER - SMU280 - VRMP | 9/5/2012 | 7:45 AM | N | STORM FLOW | HIGH | 22.22 | WADING | HEAVY RAIN, LIGHT RAIN | | CLOUDY, HEAVY RAIN, LIGHT RAIN, SHOWERS | RUN | | MED STAINED | WADEABLE/MID-DEPTH |
| MOUR-02 | MOUSAM RIVER - SMU280 - VRMP | 9/19/2012 | 7:00 AM | N | STORM FLOW | HIGH | 16.11 | WADING | MOSTLY CLOUDY, SHOWERS | BREEZE | HEAVY RAIN, MOSTLY CLOUDY, PARTLY CLOUDY, SHOWERS | RUN | | MED STAINED | WADEABLE/MID-DEPTH NO VALUE FOR WATER TEMPERATURE. |
| MOUR-03 - WHICHERS HILL RD | MOUSAM RIVER - SMU144 - VRMP | 6/6/2012 | 10:06 AM | N | STORM FLOW | HIGH | 10.56 | BANK | MOSTLY CLOUDY | CALM | MOSTLY CLOUDY, SHOWERS | RUN | | MED STAINED | NO TIDE AT THIS SITE NON-WADEABLE/3 FT BELOW SURFACE SAMPLE LOCATION FROM BANK AND NOT "CENTER OF FLOW". SHOULD BE BY WADING, EXTENSION POLE OR OTHER METHOD. DID NOT RECORD LAB PARAMETERS TO BE SAMPLED PORTION OF VRMP FIELD DATA SHEET. |
| MOUR-03 | MOUSAM RIVER - SMU144 - VRMP | 6/25/2012 | 9:50 AM | N | BASE FLOW | MED | 18.22 | BRIDGE | MOSTLY CLOUDY | CALM | CLEAR | RUN | | MED STAINED | NO TIDE AT THIS SITE NON-WADEABLE/MID-DEPTH DID NOT RECORD TIME OF CALIBRATION. DID NOT COMPLETE LAB PARAMETERS TO BE SAMPLED PORTION OF VRMP FIELD SHEET. |
| MOUR-03 | MOUSAM RIVER - SMU144 - VRMP | 7/10/2012 | 9:15 AM | N | BASE FLOW | MED | 14.44 | WADING | CLEAR | CALM | CLEAR | RUN | | MED STAINED | NO TIDE AT THIS SITE WADEABLE/MID-DEPTH DID NOT COMPLETE CHAIN OF CUSTODY FOR DATASHEET. DID NOT COMPLETE PARAMETERS TO BE SAMPLED PORTION OF VRMP DATASHEET. |
| MOUR-03 | MOUSAM RIVER - SMU144 - VRMP | 7/23/2012 | 9:10 AM | N | BASE FLOW | MED | 21.11 | WADING | PARTLY CLOUDY, SHOWERS | CALM | CLEAR | RUN | | MED STAINED | NO TIDE AT THIS SITE WADEABLE/MID-DEPTH DID NOT COMPLETE LAB PARAMETERS TO BE SAMPLED PORTION OF VRMP FIELD DATASHEET. |
| MOUR-03 | MOUSAM RIVER - SMU144 - VRMP | 7/23/2012 | 9:10 AM | D | | | | WADING | | | | | | | NO TIDE AT THIS SITE WADEABLE/MID-DEPTH DID NOT COMPLETE LAB PARAMETERS TO BE SAMPLED PORTION OF VRMP FIELD DATASHEET. |
| MOUR-03 | MOUSAM RIVER - SMU144 - VRMP | 8/7/2012 | 10:30 AM | N | | | 18.89 | WADING | CLEAR | | CLEAR | | | | NO TIDE AT THIS SITE WADEABLE/MID-DEPTH DID NOT COMPLETE CHAIN OF CUSTODY FOR DATASHEET. DID NOT COMPLETE LAB PARAMETERS TO BE SAMPLED PORTION OF VRMP FIELD DATASHEET. |

| Organization Site Code | VRMP Site ID | Date | Time | ** Sample Type Qualifier | Flow | Stage | Air Temp (°C) | Sample Location | Current Weather | Air Condition | Past 24HR Weather | Habitat | Tide Stage | Water Appearance | Comments |
|------------------------|------------------------------|-----------|----------|--------------------------|------------|-------|---------------|-----------------|------------------------|---------------|---------------------------------------|---------|------------|------------------|---|
| MOUR-03 | MOUSAM RIVER - SMU144 - VRMP | 8/21/2012 | 9:15 AM | N | BASE FLOW | MED | 16.11 | WADING | CLOUDY, SHOWERS | CALM | PARTLY CLOUDY | RUN | | MED STAINED | NO TIDE AT THIS SITE WADEABLE/MID-DEPTH DID NOT COMPLETE CHAIN OF CUSTODY FOR DATASHEET. DID NOT COMPLETE LAB PARAMETERS TO BE SAMPLED PORTION OF VRMP FIELD DATASHEET. |
| MOUR-03 | MOUSAM RIVER - SMU144 - VRMP | 9/4/2012 | 9:13 AM | N | BASE FLOW | MED | 16.67 | WADING | PARTLY CLOUDY, SHOWERS | | PARTLY CLOUDY | RUN | | MED STAINED | NO TIDE AT THIS SITE WADEABLE/MID-DEPTH DID NOT COMPLETE CHAIN OF CUSTODY FOR DATASHEET. DID NOT COMPLETE LAB PARAMETERS TO BE SAMPLED PORTION OF VRMP FIELD DATASHEET. |
| MOUR-03 | MOUSAM RIVER - SMU144 - VRMP | 9/25/2012 | 9:20 AM | N | BASE FLOW | MED | 6.111 | WADING | CLEAR | CALM | PARTLY CLOUDY | RUN | | MED STAINED | NO TIDE AT THIS SITE WADEABLE/MID-DEPTH D.O. METER- DID NOT RECORD TIME OF CALIBRATION. DID NOT COMPLETE CHAIN OF CUSTODY FOR DATASHEET. DID NOT COMPLETE LAB PARAMETERS TO BE SAMPLED PORTION OF VRMP FIELD DATASHEET. |
| MOUR-05 - BERRY CT | MOUSAM RIVER - SMU39 - VRMP | 6/12/2012 | 9:00 AM | N | STORM FLOW | HIGH | 17.22 | WADING | PARTLY CLOUDY | BREEZE | MOSTLY CLOUDY | RUN | | DARKLY STAINED | NON-WADEABLE/3 FT BELOW SURFACE |
| MOUR-05 | MOUSAM RIVER - SMU39 - VRMP | 6/27/2012 | 8:35 AM | N | STORM FLOW | HIGH | 17.22 | WADING | MOSTLY CLOUDY | BREEZE | HEAVY RAIN, LIGHT RAIN, MOSTLY CLOUDY | RUN | | DARKLY STAINED | ITS BEEN RAINING A LOT W/ DOWNPOURS OVER LAST FEW DAYS. NON-WADEABLE/MID-DEPTH |
| MOUR-05 | MOUSAM RIVER - SMU39 - VRMP | 7/10/2012 | 9:05 AM | N | BASE FLOW | MED | 17.22 | WADING | CLEAR | CALM | CLEAR | RUN | | OPAQUE | WADEABLE/MID-DEPTH D.O. METER- DID NOT RECORD TIME OF CALIBRATION. |
| MOUR-05 | MOUSAM RIVER - SMU39 - VRMP | 7/24/2012 | 11:25 AM | N | BASE FLOW | MED | 29.44 | WADING | PARTLY CLOUDY | STRONG WIND | CLEAR, FOGGY, PARTLY CLOUDY | RUN | | MED STAINED | NON-WADEABLE/3 FT BELOW SURFACE |
| MOUR-05 | MOUSAM RIVER - SMU39 - VRMP | 8/7/2012 | 8:10 AM | N | BASE FLOW | MED | 15.56 | WADING | CLEAR | CALM | PARTLY CLOUDY | RUN | | TURBID | OIL SLICK ON RIVER NEAR TESTING SITE. NON-WADEABLE/MID-DEPTH |
| MOUR-05 | MOUSAM RIVER - SMU39 - VRMP | 10/1/2012 | 11:10 AM | N | STORM FLOW | HIGH | | WADING | MOSTLY CLOUDY | STRONG WIND | CLOUDY, HEAVY RAIN, SHOWERS | RUN | | CLEAR | BERRY COURT (MOUR-05) WAS CLEAREST WE HAVE EVER SEEN. LOTS OF RAIN OVER PAST 3 DAYS. NON-WADEABLE/3 FT BELOW SURFACE |
| MOUR-06 - ROGERS POND | MOUSAM RIVER - SMU35 - VRMP | 6/12/2012 | 10:00 AM | N | STORM FLOW | HIGH | 17.22 | BANK | PARTLY CLOUDY | BREEZE | MOSTLY CLOUDY | RIFFLE | | DARKLY STAINED | WADEABLE/MID-DEPTH |
| MOUR-06 | MOUSAM RIVER - SMU35 - VRMP | 6/27/2012 | 8:20 AM | N | STORM FLOW | HIGH | 17.22 | WADING | MOSTLY CLOUDY | BREEZE | HEAVY RAIN, LIGHT RAIN, MOSTLY CLOUDY | RIFFLE | | DARKLY STAINED | ITS BEEN RAINING A LOT W/ DOWNPOURS OVER LAST FEW DAYS. WADEABLE/1.5 FT BELOW SURFACE |
| MOUR-06 | MOUSAM RIVER - SMU35 - VRMP | 7/10/2012 | 8:45 AM | N | BASE FLOW | MED | 17.22 | WADING | CLEAR | CALM | CLEAR | RIFFLE | | CLEAR | WADEABLE/MID-DEPTH D.O. METER- DID NOT RECORD TIME OF CALIBRATION. |
| MOUR-06 | MOUSAM RIVER - SMU35 - VRMP | 7/10/2012 | 8:45 AM | D | | | | WADING | | | | | | | WADEABLE/MID-DEPTH D.O. METER- DID NOT RECORD TIME OF CALIBRATION. |
| MOUR-06 | MOUSAM RIVER - SMU35 - VRMP | 7/24/2012 | 11:55 AM | N | BASE FLOW | MED | 29.44 | WADING | PARTLY CLOUDY | STRONG WIND | CLEAR, FOGGY, PARTLY CLOUDY | CASCADE | | CLEAR | WADEABLE/MID-DEPTH |
| MOUR-06 | MOUSAM RIVER - SMU35 - VRMP | 8/7/2012 | 8:00 AM | N | BASE FLOW | MED | 15.56 | WADING | CLEAR | CALM | PARTLY CLOUDY | RIFFLE | | CLEAR | WADEABLE/1.5 FT BELOW SURFACE |
| MOUR-06 | MOUSAM RIVER - SMU35 - VRMP | 8/7/2012 | 8:00 AM | D | | | | WADING | | | | | | | WADEABLE/1.5 FT BELOW SURFACE |
| MOUR-06 | MOUSAM RIVER - SMU35 - VRMP | 10/1/2012 | 11:20 AM | N | STORM FLOW | HIGH | | WADING | MOSTLY CLOUDY | STRONG WIND | CLOUDY, HEAVY RAIN, SHOWERS | RIFFLE | | CLEAR | SPC. CND. METER READ OV. WHEN TURNED ON. LOTS OF RAIN OVER PAST THREE DAYS. WADEABLE/MID-DEPTH |
| MOUR-07 - RTE 9 BRIDGE | MOUSAM RIVER - SMU04 - VRMP | 6/12/2012 | 10:45 AM | N | BASE FLOW | LOW | 17.22 | BRIDGE | PARTLY CLOUDY | BREEZE | MOSTLY CLOUDY | RUN | LOW EBB | DARKLY STAINED | NON-WADEABLE/3 FT BELOW SURFACE |
| MOUR-07 | MOUSAM RIVER - SMU04 - VRMP | 6/27/2012 | 8:00 AM | N | | HIGH | 17.22 | BRIDGE | MOSTLY CLOUDY | BREEZE | HEAVY RAIN, LIGHT RAIN, MOSTLY CLOUDY | RUN | EBB | DARKLY STAINED | ITS BEEN RAINING A LOT WITH DOWNPOURS LAST FEW DAYS. NON-WADEABLE/3 FT BELOW SURFACE |
| MOUR-07 | MOUSAM RIVER - SMU04 - VRMP | 7/10/2012 | 8:25 AM | N | BASE FLOW | LOW | 17.22 | BRIDGE | CLEAR | CALM | CLEAR | RUN | EBB | CLEAR | NON-WADEABLE/3 FT BELOW SURFACE D.O. METER- DID NOT RECORD TIME OF CALIBRATION. |

| Organization Site Code | VRMP Site ID | Date | Time | ** Sample Type Qualifier | Flow | Stage | Air Temp (°C) | Sample Location | Current Weather | Air Condition | Past 24HR Weather | Habitat | Tide Stage | Water Appearance | Comments |
|-------------------------|------------------------------|-----------|----------|--------------------------|------------|-------|---------------|-----------------|------------------------|---------------|---------------------------------------|---------|------------|-----------------------------|---|
| MOUR-07 | MOUSAM RIVER - SMU04 - VRMP | 7/24/2012 | 12:25 PM | N | BASE FLOW | MED | 29.44 | BRIDGE | PARTLY CLOUDY | STRONG WIND | CLEAR, FOGGY, PARTLY CLOUDY | RUN | FLOOD | GREEN - PHYTOPLANKTON BLOOM | NON-WADEABLE/3 FT BELOW SURFACE |
| MOUR-07 | MOUSAM RIVER - SMU04 - VRMP | 8/7/2012 | 7:40 AM | N | BASE FLOW | LOW | 15.56 | BRIDGE | CLEAR | CALM | PARTLY CLOUDY | RUN | LOW EBB | TURBID | NON-WADEABLE/MID-DEPTH |
| MOUR-08 - PARSONS BEACH | BACK CREEK - SMUBC02 - VRMP | 6/12/2012 | 10:25 AM | N | BASE FLOW | LOW | 17.22 | BRIDGE | PARTLY CLOUDY | BREEZE | MOSTLY CLOUDY | RUN | LOW EBB | DARKLY STAINED | RAINED A LOT LAST WEEK, BUT NORAIN IN 3 DAYS; LOW TIDE RUNNING OUT FROM MARSH AT MOURO8, IT'S POSSIBLE THAT THE PROBE LAY ON THE SURFACE UNDER THE BRIDGE. NON-WADEABLE/3 FT BELOW SURFACE |
| MOUR-08 | BACK CREEK - SMUBC02 - VRMP | 6/27/2012 | 7:55 AM | N | | HIGH | 17.22 | BRIDGE | MOSTLY CLOUDY | BREEZE | HEAVY RAIN, LIGHT RAIN, MOSTLY CLOUDY | RUN | EBB | DARKLY STAINED | ITS BEEN RAINING AL LOT WITH DOWNPOURS OVER LAST FEW DAYS. NON-WADEABLE/3 FT BELOW SURFACE |
| MOUR-08 | BACK CREEK - SMUBC02 - VRMP | 7/10/2012 | 8:15 AM | N | BASE FLOW | LOW | 17.22 | BRIDGE | CLEAR | CALM | CLEAR | RUN | EBB | CLEAR | WADEABLE/1.5 FT BELOW SURFACE D.O. METER- DID NOT RECORD TIME OF CALIBRATION. |
| MOUR-08 | BACK CREEK - SMUBC02 - VRMP | 7/10/2012 | 8:15 AM | D | | | | BRIDGE | | | | | | | WADEABLE/1.5 FT BELOW SURFACE D.O. METER- DID NOT RECORD TIME OF CALIBRATION. |
| MOUR-08 | BACK CREEK - SMUBC02 - VRMP | 7/24/2012 | 12:45 AM | N | BASE FLOW | MED | 29.44 | BRIDGE | PARTLY CLOUDY | STRONG WIND | CLEAR, FOGGY, PARTLY CLOUDY | RUN | FLOOD | GREEN - PHYTOPLANKTON BLOOM | NON-WADEABLE/3 FT BELOW SURFACE |
| MOUR-08 | BACK CREEK - SMUBC02 - VRMP | 8/7/2012 | 7:30 AM | N | BASE FLOW | LOW | 15.56 | BRIDGE | CLEAR | CALM | PARTLY CLOUDY | RUN | LOW EBB | MED STAINED | NO BACTERIAL SAMPLE TAKEN AT MOUR-08 BECAUSE WATER LEVEL WAS TOO LOW. WADEABLE/MID-DEPTH |
| MOUR-08 | BACK CREEK - SMUBC02 - VRMP | 10/1/2012 | 11:40 AM | N | | HIGH | | BRIDGE | MOSTLY CLOUDY | STRONG WIND | CLOUDY, HEAVY RAIN, SHOWERS | RUN | HIGH FLOOD | CLEAR | NON-WADEABLE/3 FT BELOW SURFACE |
| MOUR-09 - RTE 4 | MOUSAM RIVER - SMU163 - VRMP | 6/6/2012 | 9:29 AM | N | STORM FLOW | HIGH | 10.56 | WADING | MOSTLY CLOUDY | CALM | MOSTLY CLOUDY, SHOWERS | RUN | | MED STAINED | NO TIDE AT THIS SITE WADEABLE/MID-DEPTH DID NOT RECORD LAB PARAMETERS TO BE SAMPLED PORTION OF VRMP FIELD DATA SHEET. |
| MOUR-09 | MOUSAM RIVER - SMU163 - VRMP | 6/25/2012 | 9:13 AM | N | BASE FLOW | MED | 18.22 | WADING | MOSTLY CLOUDY | CALM | CLEAR | RUN | | MED STAINED | NO TIDE AT THIS SITE WADEABLE/MID-DEPTH DID NOT RECORD TIME OF CALIBRATION. DID NOT COMPLETED LAB PARAMETERS TO BE SAMPLED PORTION OF VRMP FIELD SHEET. |
| MOUR-09 | MOUSAM RIVER - SMU163 - VRMP | 6/25/2012 | 9:13 AM | D | | | | WADING | | | | | | | NO TIDE AT THIS SITE WADEABLE/MID-DEPTH DID NOT RECORD TIME OF CALIBRATION. DID NOT COMPLETED LAB PARAMETERS TO BE SAMPLED PORTION OF VRMP FIELD SHEET. |
| MOUR-09 | MOUSAM RIVER - SMU163 - VRMP | 7/10/2012 | 8:47 AM | N | BASE FLOW | MED | 14.44 | BRIDGE | CLEAR | CALM | CLEAR | RUN | | CLEAR | NO TIDE AT THIS SITE NON-WADEABLE/MID-DEPTH DID NOT COMPLETE CHAIN OF CUSTODY FOR DATASHEET. DID NOT COMPLETE LAB PARAMETERS TO BE SAMPLED PORTION OF VRMP DATASHEET. |
| MOUR-09 | MOUSAM RIVER - SMU163 - VRMP | 7/23/2012 | 8:37 AM | N | BASE FLOW | LOW | 21.11 | WADING | PARTLY CLOUDY, SHOWERS | CALM | CLEAR | RUN | | MED STAINED | NO TIDE AT THIS SITE WADEABLE/MID-DEPTH DID NOT COMPLETE LAB PARAMETERS TO BE SAMPLED PORTION OF VRMP FIELD DATASHEET. |
| MOUR-09 | MOUSAM RIVER - SMU163 - VRMP | 8/7/2012 | 10:00 AM | N | BASE FLOW | LOW | 18.89 | WADING | CLEAR | | CLEAR | RUN | | MED STAINED | NO TIDE AT THIS SITE WADEABLE/MID-DEPTH DID NOT COMPLETE CHAIN OF CUSTODY FOR DATASHEET. DID NOT COMPLETE LAB PARAMETERS TO BE SAMPLED PORTION OF VRMP DATASHEET. |
| MOUR-09 | MOUSAM RIVER - SMU163 - VRMP | 8/21/2012 | 8:45 AM | N | BASE FLOW | MED | 16.11 | WADING | CLOUDY, SHOWERS | CALM | PARTLY CLOUDY | RUN | | MED STAINED | NO TIDE AT THIS SITE WADEABLE/MID-DEPTH DID NOT COMPLETE CHAIN OF CUSTODY FOR DATASHEET. DID NOT COMPLETE LAB PARAMETERS TO BE SAMPLED PORTION OF VRMP FIELD DATASHEET. |
| MOUR-09 | MOUSAM RIVER - SMU163 - VRMP | 9/4/2012 | 8:44 AM | N | BASE FLOW | MED | 16.67 | WADING | PARTLY CLOUDY, SHOWERS | | PARTLY CLOUDY | RUN | | CLEAR | NO TIDE AT THIS SITE WADEABLE/MID-DEPTH DID NOT COMPLETE CHAIN OF CUSTODY FOR DATASHEET. DID NOT COMPLETE LAB PARAMETERS TO BE SAMPLED PORTION OF VRMP FIELD DATASHEET. |
| MOUR-09 | MOUSAM RIVER - SMU163 - VRMP | 9/25/2012 | 8:40 AM | N | BASE FLOW | MED | 6.111 | WADING | CLEAR | CALM | PARTLY CLOUDY | RUN | | CLEAR | NO TIDE AT THIS SITE WADEABLE/MID-DEPTH D.O. METER- DID NOT RECORD TIME OF CALIBRATION. DID NOT COMPLETE CHAIN OF CUSTODY FOR DATASHEET. DID NOT COMPLETE LAB PARAMETERS TO BE SAMPLED PORTION OF VRMP FIELD DATASHEET. |
| MOUR-10 - NEW DAM RD | MOUSAM RIVER - SMU204 - VRMP | 6/6/2012 | 9:45 AM | N | STORM FLOW | HIGH | 10.56 | BRIDGE | MOSTLY CLOUDY | CALM | MOSTLY CLOUDY, SHOWERS | RUN | | MED STAINED | NO TIDE AT THIS SITE NON-WADEABLE/3 FT BELOW SURFACE DID NOT RECORD LAB PARAMETERS TO BE SAMPLED PORTION OF VRMP FIELD DATA SHEET. |
| MOUR-10 | MOUSAM RIVER - SMU204 - VRMP | 6/25/2012 | 9:29 AM | N | BASE FLOW | MED | 18.22 | BRIDGE | MOSTLY CLOUDY | CALM | CLEAR | RUN | | MED STAINED | NO TIDE AT THIS SITE NON-WADEABLE/MID-DEPTH DID NOT RECORD TIME OF CALIBRATION. DID NOT COMPLETE LAB PARAMETERS TO BE SAMPLED PORTION OF VRMP FIELD SHEET. |
| MOUR-10 | MOUSAM RIVER - SMU204 - VRMP | 7/10/2012 | 9:01 AM | N | BASE FLOW | MED | 14.44 | BRIDGE | CLEAR | CALM | CLEAR | RUN | | MED STAINED | NO TIDE AT THIS SITE NON-WADEABLE/MID-DEPTH DID NOT COMPLETE CHAIN OF CUSTODY FOR DATASHEET. DID NOT COMPLETE LAB PARAMETERS TO BE SAMPLED PORTION OF VRMP DATASHEET. |

| Organization Site Code | VRMP Site ID | Date | Time | ** Sample Type Qualifier | Flow | Stage | Air Temp (°C) | Sample Location | Current Weather | Air Condition | Past 24HR Weather | Habitat | Tide Stage | Water Appearance | Comments |
|------------------------|------------------------------|-----------|----------|--------------------------|------------|-------|---------------|-----------------|---------------------------|---------------|--|---------|------------|------------------|---|
| MOUR-10 | MOUSAM RIVER - SMU204 - VRMP | 7/23/2012 | 8:55 AM | N | BASE FLOW | MED | 21.11 | BRIDGE | PARTLY CLOUDY, SHOWERS | CALM | CLEAR | RUN | | MED STAINED | NO TIDE AT THIS SITE NON-WADEABLE/MID-DEPTH DID NOT COMPLETE LAB PARAMETERS TO BE SAMPLED PORTION OF VRMP FIELD DATASHEET. |
| MOUR-10 | MOUSAM RIVER - SMU204 - VRMP | 8/7/2012 | 10:15 AM | N | BASE FLOW | MED | 18.89 | BRIDGE | CLEAR | | CLEAR | RUN | | MED STAINED | NO TIDE AT THIS SITE NON-WADEABLE/MID-DEPTH DID NOT COMPLETE CHAIN OF CUSTODY FOR DATASHEET. DID NOT COMPLETE LAB PARAMETERS TO BE SAMPLED PORTION OF VRMP FIELD DATASHEET. |
| MOUR-10 | MOUSAM RIVER - SMU204 - VRMP | 8/21/2012 | 9:00 AM | N | BASE FLOW | MED | 16.11 | BRIDGE | CLOUDY, SHOWERS | CALM | PARTLY CLOUDY | RUN | | MED STAINED | NO TIDE AT THIS SITE NON-WADEABLE/MID-DEPTH DID NOT COMPLETE CHAIN OF CUSTODY FOR DATASHEET. DID NOT COMPLETE LAB PARAMETERS TO BE SAMPLED PORTION OF VRMP FIELD DATASHEET. |
| MOUR-10 | MOUSAM RIVER - SMU204 - VRMP | 9/4/2012 | 8:58 AM | N | BASE FLOW | MED | 16.67 | BRIDGE | PARTLY CLOUDY, SHOWERS | | PARTLY CLOUDY | RUN | | MED STAINED | NO TIDE AT THIS SITE NON-WADEABLE/3 FT BELOW SURFACE DID NOT COMPLETE CHAIN OF CUSTODY FOR DATASHEET. DID NOT COMPLETE LAB PARAMETERS TO BE SAMPLED PORTION OF VRMP FIELD DATASHEET. |
| MOUR-10 | MOUSAM RIVER - SMU204 - VRMP | 9/25/2012 | 9:10 AM | N | BASE FLOW | MED | 6.111 | BRIDGE | CLEAR | CALM | PARTLY CLOUDY | RUN | | CLEAR | NO TIDE AT THIS SITE NON-WADEABLE/MID-DEPTH D.O. METER- DID NOT RECORD TIME OF CALIBRATION. DID NOT COMPLETE CHAIN OF CUSTODY FOR DATASHEET. DID NOT COMPLETE LAB PARAMETERS TO BE SAMPLED PORTION OF VRMP FIELD DATASHEET. |
| MOUR-11 | MOUSAM RIVER - SMU250 - VRMP | 6/13/2012 | 7:30 AM | N | STORM FLOW | HIGH | 17.22 | WADING | CLOUDY, HEAVY RAIN | BREEZE | CLEAR, MOSTLY CLOUDY | RIFFLE | | MED STAINED | NON-WADEABLE/MID-DEPTH |
| MOUR-11 | MOUSAM RIVER - SMU250 - VRMP | 6/27/2012 | 7:40 AM | N | STORM FLOW | HIGH | 16.11 | WADING | CLOUDY, LIGHT RAIN | BREEZE | HEAVY RAIN, LIGHT RAIN, MOSTLY CLOUDY, SHOWERS | RIFFLE | | MED STAINED | WADEABLE/MID-DEPTH NO VALUE FOR D.O. IN % SATURATION. |
| MOUR-11 | MOUSAM RIVER - SMU250 - VRMP | 7/11/2012 | 7:30 AM | N | BASE FLOW | MED | 12.78 | WADING | CLEAR | CALM | CLEAR, PARTLY CLOUDY | RUN | | MED STAINED | WADEABLE/MID-DEPTH |
| MOUR-11 | MOUSAM RIVER - SMU250 - VRMP | 7/11/2012 | 7:30 AM | D | | | | WADING | | | | | | | WADEABLE/MID-DEPTH |
| MOUR-11 | MOUSAM RIVER - SMU250 - VRMP | 7/25/2012 | 7:35 AM | N | BASE FLOW | MED | 16.11 | WADING | CLEAR | CALM | MOSTLY CLOUDY, SHOWERS | RUN | | MED STAINED | WADEABLE/MID-DEPTH |
| MOUR-11 | MOUSAM RIVER - SMU250 - VRMP | 8/8/2012 | 7:15 AM | N | BASE FLOW | MED | 12.78 | WADING | CLEAR | CALM | CLEAR | RUN | | MED STAINED | WADEABLE/MID-DEPTH |
| MOUR-11 | MOUSAM RIVER - SMU250 - VRMP | 8/22/2012 | 7:20 AM | N | BASE FLOW | MED | 14.44 | WADING | CLEAR | CALM | CLEAR, CLOUDY | RUN | | MED STAINED | WADEABLE/MID-DEPTH |
| MOUR-11 | MOUSAM RIVER - SMU250 - VRMP | 9/5/2012 | 7:25 AM | N | STORM FLOW | HIGH | 22.22 | WADING | HEAVY RAIN, LIGHT RAIN | | CLOUDY, HEAVY RAIN, LIGHT RAIN, SHOWERS | RUN | | MED STAINED | WADEABLE/MID-DEPTH |
| MOUR-11 | MOUSAM RIVER - SMU250 - VRMP | 9/19/2012 | 7:22 AM | N | STORM FLOW | HIGH | 16.11 | WADING | HEAVY RAIN, MOSTLY CLOUDY | CALM | HEAVY RAIN, MOSTLY CLOUDY, SHOWERS | RUN | | MED STAINED | WADEABLE/MID-DEPTH |
| MOUR-12 | MOUSAM RIVER - SMU232 - VRMP | 6/13/2012 | 7:35 AM | N | STORM FLOW | HIGH | 17.22 | WADING | CLOUDY, HEAVY RAIN | BREEZE | CLEAR, MOSTLY CLOUDY | RIFFLE | | MED STAINED | NON-WADEABLE/MID-DEPTH |
| MOUR-12 | MOUSAM RIVER - SMU232 - VRMP | 6/27/2012 | 7:30 AM | N | STORM FLOW | HIGH | 16.11 | WADING | CLOUDY, LIGHT RAIN | BREEZE | HEAVY RAIN, LIGHT RAIN, MOSTLY CLOUDY, SHOWERS | RIFFLE | | MED STAINED | WADEABLE/MID-DEPTH NO VALUE FOR D.O. IN % SATURATION. |
| MOUR-12 | MOUSAM RIVER - SMU232 - VRMP | 7/11/2012 | 7:11 AM | N | BASE FLOW | MED | 12.78 | WADING | CLEAR | CALM | CLEAR, PARTLY CLOUDY | RUN | | MED STAINED | WADEABLE/MID-DEPTH |
| MOUR-12 | MOUSAM RIVER - SMU232 - VRMP | 7/25/2012 | 7:20 AM | N | BASE FLOW | MED | 16.11 | WADING | CLEAR | CALM | CLOUDY, SHOWERS | RUN | | MED STAINED | WADEABLE/MID-DEPTH |
| MOUR-12 | MOUSAM RIVER - SMU232 - VRMP | 8/8/2012 | 7:30 AM | N | BASE FLOW | MED | 12.78 | WADING | CLEAR | CALM | CLEAR | RUN | | MED STAINED | WADEABLE/MID-DEPTH |

| Organization Site Code | VRMP Site ID | Date | Time | ** Sample Type Qualifier | Flow | Stage | Air Temp (°C) | Sample Location | Current Weather | Air Condition | Past 24HR Weather | Habitat | Tide Stage | Water Appearance | Comments |
|---------------------------|---|-----------|---------|--------------------------|------------|-------|---------------|-----------------|---------------------------|---------------|--|---------|------------|------------------|---|
| MOUR-12 | MOUSAM RIVER - SMU232 - VRMP | 8/22/2012 | 7:00 AM | N | BASE FLOW | MED | 14.44 | WADING | CLEAR | | CLEAR, CLOUDY | RUN | | MED STAINED | WADEABLE/MID-DEPTH |
| MOUR-12 | MOUSAM RIVER - SMU232 - VRMP | 9/5/2012 | 7:15 AM | N | STORM FLOW | HIGH | 22.22 | WADING | HEAVY RAIN, LIGHT RAIN | | CLOUDY, HEAVY RAIN, LIGHT RAIN, SHOWERS | RUN | | MED STAINED | WADEABLE/MID-DEPTH |
| MOUR-12 | MOUSAM RIVER - SMU232 - VRMP | 9/19/2012 | 7:28 AM | N | STORM FLOW | HIGH | 16.11 | WADING | HEAVY RAIN, MOSTLY CLOUDY | CALM | CLOUDY, HEAVY RAIN, MOSTLY CLOUDY, SHOWERS | RUN | | MED STAINED | WADEABLE/MID-DEPTH |
| MOUR-12 | MOUSAM RIVER - SMU232 - VRMP | 9/19/2012 | 7:28 AM | D | | | | WADING | | | | | | | WADEABLE/MID-DEPTH |
| MOUSMB-01 - MAST RD | MIDDLE BRANCH MOUSAM RIVER - SMUMB58 - VRMP | 6/6/2012 | 8:53 AM | N | STORM FLOW | HIGH | 10.56 | WADING | MOSTLY CLOUDY | CALM | MOSTLY CLOUDY, SHOWERS | RUN | | MED STAINED | NO TIDE AT THIS SITE WADEABLE/MID-DEPTH DID NOT RECORD LAB PARAMETERS TO BE SAMPLED PORTION OF VRMP FIELD DATA SHEET. |
| MOUSMB-01 | MIDDLE BRANCH MOUSAM RIVER - SMUMB58 - VRMP | 6/25/2012 | 8:40 AM | N | BASE FLOW | MED | 18.22 | WADING | MOSTLY CLOUDY | CALM | CLEAR | RUN | | MED STAINED | NO TIDE AT THIS SITE WADEABLE/MID-DEPTH DID NOT RECORD TIME OF CALIBRATION. DID NOT COMPLETE LAB PARAMETERS TO BE SAMPLED PORTION OF VRMP FIELD SHEET. |
| MOUSMB-01 | MIDDLE BRANCH MOUSAM RIVER - SMUMB58 - VRMP | 7/10/2012 | 8:18 AM | N | BASE FLOW | MED | 14.44 | WADING | CLEAR | CALM | CLEAR | RUN | | MED STAINED | NO TIDE AT THIS SITE WADEABLE/MID-DEPTH DID NOT COMPLETE CHAIN OF CUSTODY FOR DATASHEET. DID NOT COMPLETE LAB PARAMETERS TO BE SAMPLED PORTION OF VRMP DATA SHEET. |
| MOUSMB-01 | MIDDLE BRANCH MOUSAM RIVER - SMUMB58 - VRMP | 7/23/2012 | 8:05 AM | N | BASE FLOW | LOW | 21.11 | WADING | PARTLY CLOUDY, SHOWERS | CALM | CLEAR | RUN | | MED STAINED | NO TIDE AT THIS SITE WADEABLE/MID-DEPTH DID NOT COMPLETE LAB PARAMETERS TO BE SAMPLED PORTION OF VRMP FIELD DATASHEET. |
| MOUSMB-01 | MIDDLE BRANCH MOUSAM RIVER - SMUMB58 - VRMP | 8/7/2012 | 9:30 AM | N | BASE FLOW | LOW | 18.89 | WADING | CLEAR | | CLEAR | RUN | | MED STAINED | NO TIDE AT THIS SITE WADEABLE/MID-DEPTH DID NOT COMPLETE CHAIN OF CUSTODY FOR DATASHEET. DID NOT COMPLETE LAB PARAMETERS TO BE SAMPLED PORTION OF VRMP FIELD DATASHEET. |
| MOUSMB-01 | MIDDLE BRANCH MOUSAM RIVER - SMUMB58 - VRMP | 8/21/2012 | 8:15 AM | N | BASE FLOW | MED | 16.11 | WADING | CLOUDY, SHOWERS | CALM | PARTLY CLOUDY | RUN | | MED STAINED | NO TIDE AT THIS SITE WADEABLE/MID-DEPTH DID NOT COMPLETE CHAIN OF CUSTODY FOR DATASHEET. DID NOT COMPLETE LAB PARAMETERS TO BE SAMPLED PORTION OF VRMP FIELD DATASHEET. |
| MOUSMB-01 | MIDDLE BRANCH MOUSAM RIVER - SMUMB58 - VRMP | 9/4/2012 | 8:14 AM | N | BASE FLOW | LOW | 16.67 | WADING | PARTLY CLOUDY, SHOWERS | | PARTLY CLOUDY | RUN | | MED STAINED | NO TIDE AT THIS SITE WADEABLE/MID-DEPTH DID NOT COMPLETE CHAIN OF CUSTODY FOR DATASHEET. DID NOT COMPLETE LAB PARAMETERS TO BE SAMPLED PORTION OF VRMP FIELD DATASHEET. |
| MOUSMB-01 | MIDDLE BRANCH MOUSAM RIVER - SMUMB58 - VRMP | 9/25/2012 | 8:05 AM | N | BASE FLOW | LOW | 6.111 | WADING | CLEAR | CALM | PARTLY CLOUDY | RUN | | MED STAINED | NO TIDE AT THIS SITE WADEABLE/MID-DEPTH D.O. METER- DID NOT RECORD TIME OF CALIBRATION. DID NOT COMPLETE CHAIN OF CUSTODY FOR DATASHEET. DID NOT COMPLETE LAB PARAMETERS TO BE SAMPLED PORTION OF VRMP FIELD DATASHEET. |
| MOUSMB-02 - SWETTS BRIDGE | MIDDLE BRANCH MOUSAM RIVER - SMUMB33 - VRMP | 6/6/2012 | 9:10 AM | N | STORM FLOW | HIGH | 10.56 | BRIDGE | MOSTLY CLOUDY | CALM | MOSTLY CLOUDY, SHOWERS | RUN | | MED STAINED | NO TIDE AT THIS SITE NON-WADEABLE/MID-DEPTH DID NOT RECORD LAB PARAMETERS TO BE SAMPLED PORTION OF VRMP FIELD DATA SHEET. |
| MOUSMB-02 | MIDDLE BRANCH MOUSAM RIVER - SMUMB33 - VRMP | 6/25/2012 | 8:51 AM | N | | MED | 18.22 | BRIDGE | MOSTLY CLOUDY | CALM | CLEAR | RUN | | MED STAINED | NO TIDE AT THIS SITE NON-WADEABLE/MID-DEPTH DID NOT RECORD TIME OF CALIBRATION. DID NOT COMPLETE LAB PARAMETERS TO BE SAMPLED PORTION OF VRMP FIELD SHEET. |
| MOUSMB-02 | MIDDLE BRANCH MOUSAM RIVER - SMUMB33 - VRMP | 7/10/2012 | 8:32 AM | N | BASE FLOW | MED | 14.44 | BRIDGE | CLEAR | CALM | CLEAR | RUN | | MED STAINED | NO TIDE AT THIS SITE NON-WADEABLE/MID-DEPTH DID NOT COMPLETE CHAIN OF CUSTODY FOR DATASHEET. DID NOT COMPLETE LAB PARAMETERS TO BE SAMPLED PORTION OF VRMP DATA SHEET. |
| MOUSMB-02 | MIDDLE BRANCH MOUSAM RIVER - SMUMB33 - VRMP | 7/23/2012 | 8:15 AM | N | BASE FLOW | LOW | 21.11 | BRIDGE | PARTLY CLOUDY, SHOWERS | CALM | CLEAR | RUN | | MED STAINED | NO TIDE AT THIS SITE NON-WADEABLE/MID-DEPTH DID NOT COMPLETE LAB PARAMETERS TO BE SAMPLED PORTION OF VRMP FIELD DATASHEET. |
| MOUSMB-02 | MIDDLE BRANCH MOUSAM RIVER - SMUMB33 - VRMP | 8/7/2012 | 9:45 AM | N | BASE FLOW | MED | 18.89 | BRIDGE | CLEAR | | CLEAR | RUN | | MED STAINED | NO TIDE AT THIS SITE NON-WADEABLE/MID-DEPTH DID NOT COMPLETE CHAIN OF CUSTODY FOR DATASHEET. DID NOT COMPLETE LAB PARAMETES TO BE SAMPLED PORTION OF VRMP FIELD DATASHEET. |
| MOUSMB-02 | MIDDLE BRANCH MOUSAM RIVER - SMUMB33 - VRMP | 8/21/2012 | 8:30 AM | N | BASE FLOW | MED | 16.11 | BRIDGE | CLOUDY, SHOWERS | CALM | PARTLY CLOUDY | RUN | | MED STAINED | NO TIDE AT THIS SITE NON-WADEABLE/MID-DEPTH DID NOT COMPLETE CHAIN OF CUSTODY FOR DATASHEET. DID NOT COMPLETE LAB PARAMETERS TO BE SAMPLED PORTION OF VRMP FIELD DATASHEET. |
| MOUSMB-02 | MIDDLE BRANCH MOUSAM RIVER - SMUMB33 - VRMP | 9/4/2012 | 8:25 AM | N | BASE FLOW | MED | 16.67 | BRIDGE | PARTLY CLOUDY, SHOWERS | | PARTLY CLOUDY | RUN | | MED STAINED | NO TIDE AT THIS SITE NON-WADEABLE/MID-DEPTH DID NOT COMPLETE CHAIN OF CUSTODY FOR DATASHEET. DID NOT COMPLETE LAB PARAMETERS TO BE SAMPLED PORTION OF VRMP FIELD DATASHEET. |
| MOUSMB-02 | MIDDLE BRANCH MOUSAM RIVER - SMUMB33 - VRMP | 9/4/2012 | 8:25 AM | D | | | | BRIDGE | | | | | | | NO TIDE AT THIS SITE NON-WADEABLE/MID-DEPTH DID NOT COMPLETE CHAIN OF CUSTODY FOR DATASHEET. DID NOT COMPLETE LAB PARAMETERS TO BE SAMPLED PORTION OF VRMP FIELD DATASHEET. |

| Organization Site Code | VRMP Site ID | Date | Time | ** Sample Type Qualifier | Flow | Stage | Air Temp (°C) | Sample Location | Current Weather | Air Condition | Past 24HR Weather | Habitat | Tide Stage | Water Appearance | Comments |
|------------------------|---|-----------|---------|--------------------------|-----------|-------|---------------|-----------------|-----------------|---------------|-------------------|---------|------------|------------------|--|
| MOUSMB-02 | MIDDLE BRANCH MOUSAM RIVER - SMUMB33 - VRMP | 9/25/2012 | 8:20 AM | N | BASE FLOW | MED | 6.111 | BRIDGE | CLEAR | CALM | PARTLY CLOUDY | RUN | | MED STAINED | NO TIDE AT THIS SITE NON-WADEABLE/MID-DEPTH D.O. METER - DID NOT RECORD TIME OF CALIBRATION. DID NOT COMPLETE CHAIN OF CUSTODY FOR DATASHEET. DID NOT COMPLETE LAB PARAMETERS TO BE SAMPLED PORTION OF VRMP FIELD DATASHEET. |
| MOUSMB-02 | MIDDLE BRANCH MOUSAM RIVER - SMUMB33 - VRMP | 9/25/2012 | 8:20 AM | D | | | | BRIDGE | | | | | | | NO TIDE AT THIS SITE NON-WADEABLE/MID-DEPTH D.O. METER - DID NOT RECORD TIME OF CALIBRATION. DID NOT COMPLETE CHAIN OF CUSTODY FOR DATASHEET. DID NOT COMPLETE LAB PARAMETERS TO BE SAMPLED PORTION OF VRMP FIELD DATASHEET. |

Mousam River, Mousam & Kennebunk Rivers Alliance - Non-approved Sites

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| MOUR-04 - MILL STREET | MOUSAM RIVER - SMU80 - KMA | 6/12/2012 | 8:40 AM | N | STORM FLOW | HIGH | 17.22 | WADING | PARTLY CLOUDY | BREEZE | MOSTLY CLOUDY | RUN | | DARKLY STAINED | RAINED A LOT LAST WEEK-BUT NO RAIN IN 3 DAYS. NON-WADEABLE/3 FT BELOW SURFACE |
| MOUR-04 | MOUSAM RIVER - SMU80 - KMA | 6/27/2012 | 8:50 AM | N | STORM FLOW | HIGH | 17.22 | BRIDGE | MOSTLY CLOUDY | BREEZE | HEAVY RAIN, LIGHT RAIN, MOSTLY CLOUDY | RUN | | DARKLY STAINED | MOUR4 EXTREMELY HIGH. TOOK DO FROM BRIDGE, BUT POSSIBLY DIDN'T GET DOWN 3 FT. DIDN'T DO SPEC. COND. B/C COULDN'T GET ANYWHERE NEAR CENTER 3RD. DIDN'T GET BACTERIA SAMPLE. WATER EXTREMELY HIGH-NOT SURE IF GOT DOWN 3 FEET DOWN FOR VERTICAL DEPTH. |
| MOUR-04 | MOUSAM RIVER - SMU80 - KMA | 7/10/2012 | 9:25 AM | N | BASE FLOW | MED | 17.22 | WADING | CLEAR | CALM | CLEAR | RUN | | OPAQUE | NON-WADEABLE/3 FT BELOW SURFACE D.O. METER - DID NOT RECORD TIME OF CALIBRATION. |
| MOUR-04 | MOUSAM RIVER - SMU80 - KMA | 7/24/2012 | 11:15 AM | N | BASE FLOW | MED | 29.44 | WADING | PARTLY CLOUDY | STRONG WIND | CLEAR, FOGGY, PARTLY CLOUDY | RUN | | MED STAINED | NON-WADEABLE/3 FT BELOW SURFACE |
| MOUR-04 | MOUSAM RIVER - SMU80 - KMA | 8/7/2012 | 8:40 AM | N | BASE FLOW | MED | 15.56 | WADING | CLEAR | CALM | PARTLY CLOUDY | RUN | | TURBID | OLI SLICK ON RIVER NEAR TESTING SITE. NON-WADEABLE/MID-DEPTH |
| MOUR-04 | MOUSAM RIVER - SMU80 - KMA | 10/1/2012 | 10:45 AM | N | STORM FLOW | HIGH | | WADING | MOSTLY CLOUDY | STRONG WIND | CLOUDY, HEAVY RAIN, SHOWERS | RUN | | OPAQUE | LOT'S F RAIN OVER PAST THREE DAYS. NON-WADEABLE/3 FT BELOW SURFACE |