

## Section 5-1

# Androscoggin River (Androscoggin River Watershed Council)

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

## Overview

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The upper Androscoggin River and tributaries are monitored by the Androscoggin River Watershed Council (ARWC). The ARWC focuses on the upper part of the Androscoggin River and began participating in the New Hampshire Volunteer River Assessment Program (VRAP) in 2007. ARWC joined the Maine Volunteer River Monitoring Program (VRMP) in 2012 thus extending sampling locations into the Androscoggin River in Maine.

The Androscoggin River is the third largest river in the state. It has a length of 177 miles and drainage area of 3,450 square miles (2,730 sq. mi. in Maine). The headwaters are Umbagog Lake in Maine/New Hampshire. From there it flows into New Hampshire and then back into Maine through the towns of Gilead and Bethel. It continues flowing through the towns and cities of Rumford, Mexico, Dixfield, Jay, Livermore Falls, Lewiston, Auburn, Lisbon, Lisbon Falls, Durham, Brunswick, and Topsham where it joins the Kennebec River at Merrymeeting Bay.

The Androscoggin River is assigned Class B from the Maine/New Hampshire boundary to its confluence with the Ellis River. It is assigned Class C from the confluence with the Ellis River to Merrymeeting Bay. Unless otherwise assigned, tributaries of the Androscoggin from the Maine-New Hampshire state border in Gilead to and including the Ellis River are Class A. The Sunday River is assigned Class A.

The “DEP 2012 Integrated Water Quality Monitoring and Assessment Report” lists segments of the river in 6 categories:

- **Category 2:** Rivers and Streams Attaining Some Designated Uses: Insufficient Information for Other Uses
  - Several rivers (Ellis, Swift, Dead, Webb, Nezinscot, Sabattus, Little Androscoggin segments) and minor tributaries.
- **Category 3:** Rivers and Streams with Insufficient Data or Information to Determine if Designated Uses are Attained (One or More Uses may be Impaired)
  - Rangeley segment, Sunday River, Nezinscot River segments and several small streams
- **Category 4-A:** Rivers and streams Impaired Use other than Mercury, TMDL Completed
  - Main stem, upstream of Gulf Island Dam (cause is algae blooms, BOD, DO, phosphorus, TSS)
  - Androscoggin River-Lewiston-Auburn, CSO affected (cause is *E. coli*)
  - Little Androscoggin River-Mechanic Falls, CSO affected (cause is *E. coli*)
  - Minor tributaries (various reasons)

- **Category 4-B:** Rivers and Streams Impaired by Pollutants-Pollution Control Requirements Reasonably Expected to Result in Attainment
  - Androscoggin River various segments (Cause is dioxin)
- **Category 5-A:** Rivers and streams Impaired by pollutants other than those listed in 5-B through 5-D (TMDL required)
  - Sabattus River segments and numerous small streams
- **Category 5-D:** Rivers and Streams Impaired by Legacy Pollutants
  - Androscoggin River segments (Cause is PCBs)

The Androscoggin River has a long history of industrial and municipal use over the last 200 years.<sup>1</sup> Beginning in the early 1800s, many dams were constructed for mills, primarily in the lower part of the river. By the late 1800s, many textile and lumber mills were in operation, mostly from Lewiston to Brunswick. Pulp and paper mills that are still in operation today were established in the late 1800s in New Hampshire, Rumford, and Jay. Beginning in the late 1920s, Central Maine Power built hydroelectric dams that impounded much of the river from Lewiston to Livermore Falls. Some of these uses continue today. “Along its course to the sea, the river is repeatedly dammed. It receives discharges from industrial and municipal sources, as well as polluted runoff from a variety of sources.”<sup>2</sup> Specific problems include mill discharges, combined sewer overflows (CSOs), dam impacts (28 dams exist), and historical sediment toxics.

The goals of Androscoggin River Watershed Council’s participation in the VRMP are to provide information on current watershed conditions and develop baseline data for long term water quality monitoring efforts. In addition, ARWC may identify specific existing or emerging water quality problems in which to focus best management practices. In 2013, volunteers monitored three sites on the Androscoggin mainstem and one site on Sunday River. It is anticipated that over time, additional monitoring sites on the river and tributaries will be added.

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<sup>1</sup> Maine Rivers Website- Androscoggin River Profile

<sup>2</sup> Androscoggin River Alliance Website-Androscoggin River slideshow

## Methods

The volunteers monitored the Androscoggin River in 2013 at three sites (one approved [AR-1] and two non-approved stations [AR-2] and [ML-1]; and the Sunday River at one approved station [SR-1]). (Table 5-1-1 and Figure 5-1-1).

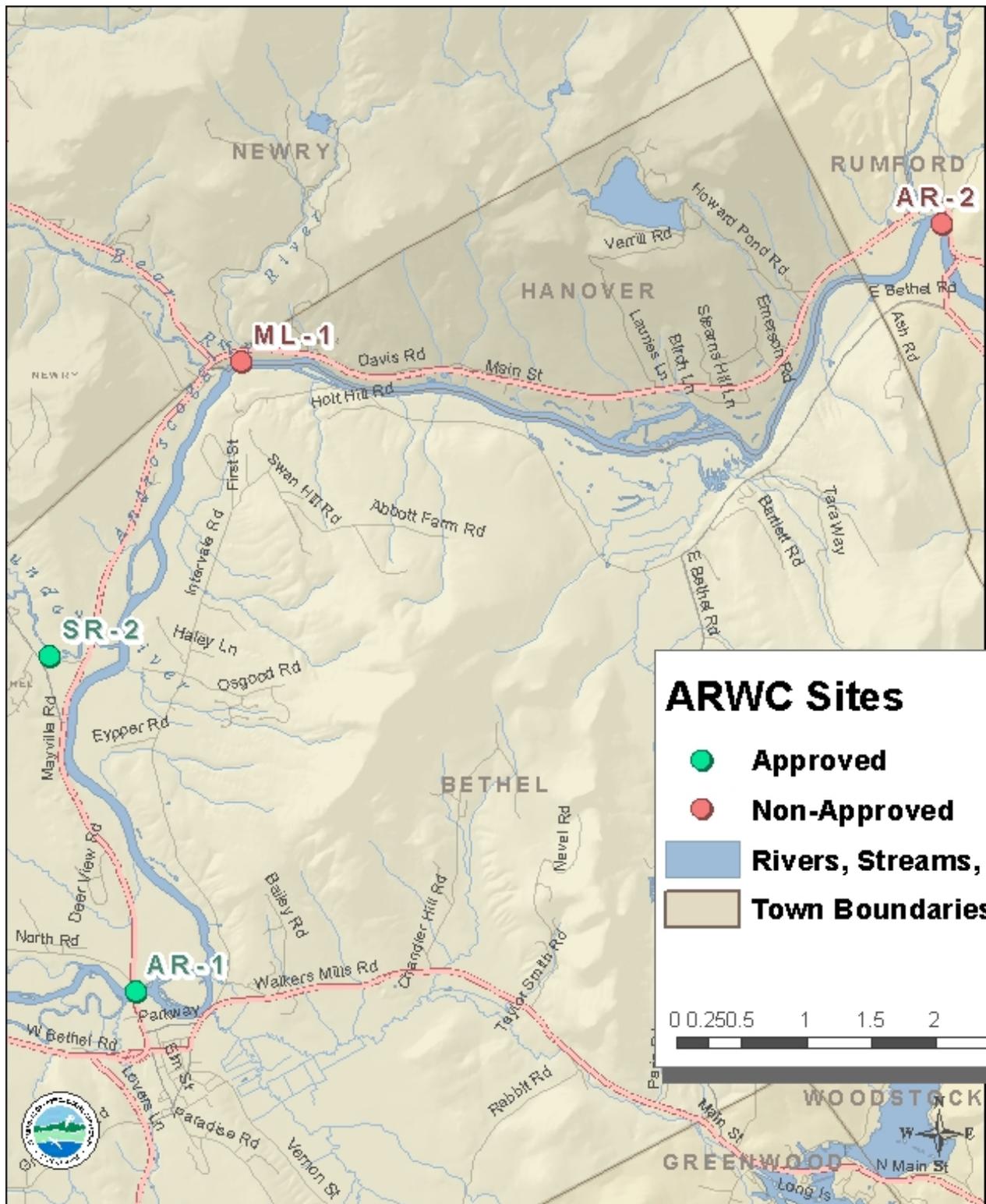
**Table 5-1-1:** Androscoggin River Watershed Council Sampling Sites

VRMP Site ID	Organization Site Code	Sample Location	Class
Androscoggin River-1150-VRMP	AR-1; BB-1	Route 2-Bethel Outdoor Adventure	B
Androscoggin River-A1087-ARWC	ML-1	Moran's Landing	B
Androscoggin River-A1018-ARWC	AR-2	Rumford Point	C
Sunday River-ASY08-VRMP	SR-2	Off Martin Lane	A

Monitoring was conducted 1-3x/month from June/early July to August/September. At each site, the monitors made direct measurements of water temperature and dissolved oxygen using a handheld YSI 550A or YSI ProODO Optical meter. Specific conductance was measured using an Oakton ECTestr 11/11+ pen. Water samples were collected for turbidity at two site and analyzed using a New Hampshire Volunteer River Assessment Program turbidity meter. Measurements were made by wading at all sites, except for Site AR-1 which was sampled from a bridge using a Van Dorn sampler (see Appendix A-2 Observations for notes about sampling).

# 2013 Androscoggin River Sampling Sites

## Androscoggin River Watershed Council



**Figure 5-1-1:** Map of all Androscoggin River Watershed Council sampling sites.

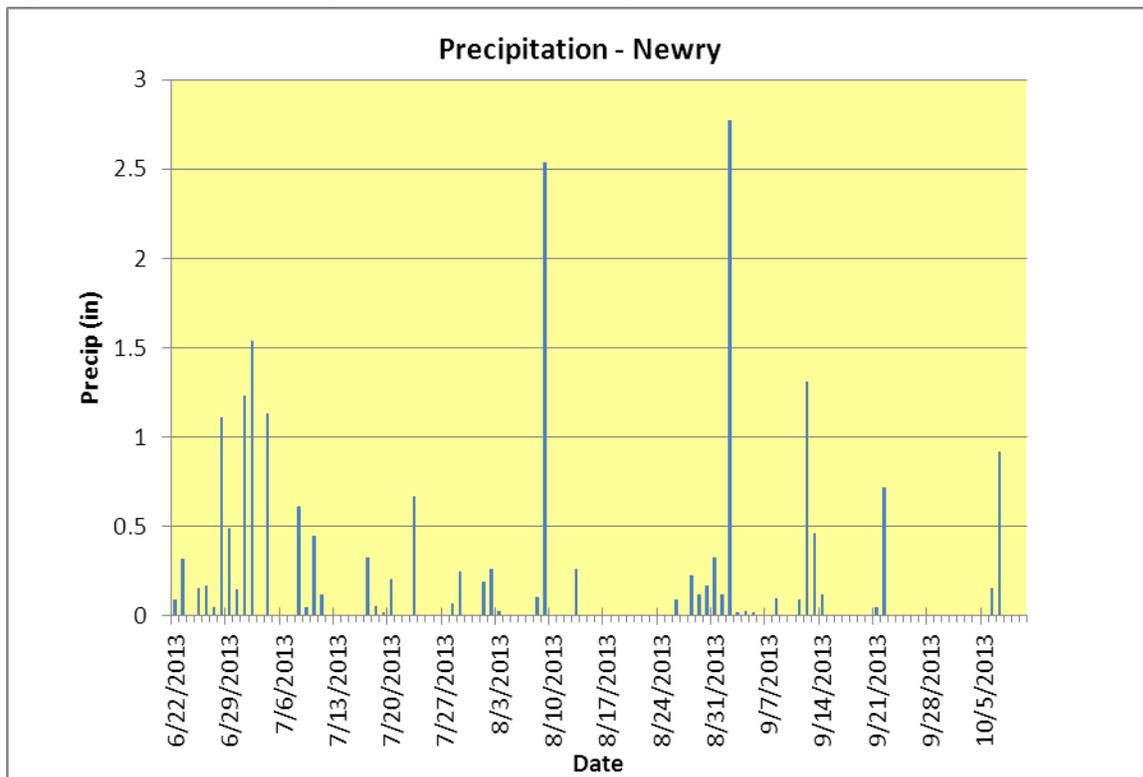
## Results

Refer to Appendices A-1 and A-2 in discussion of individual site data and trends at the end of this report.

### Precipitation

Figure 5-1-2 provides a graph of rainfall for the monitoring period. Rainfall data was obtained from Weather Underground (<http://www.wunderground.com>). Weather station [Mahoosuc Glen Newry (KMENEWR5)] 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. Summer/fall 2013 was wet with significant rain events in late June/early July, August and early September.

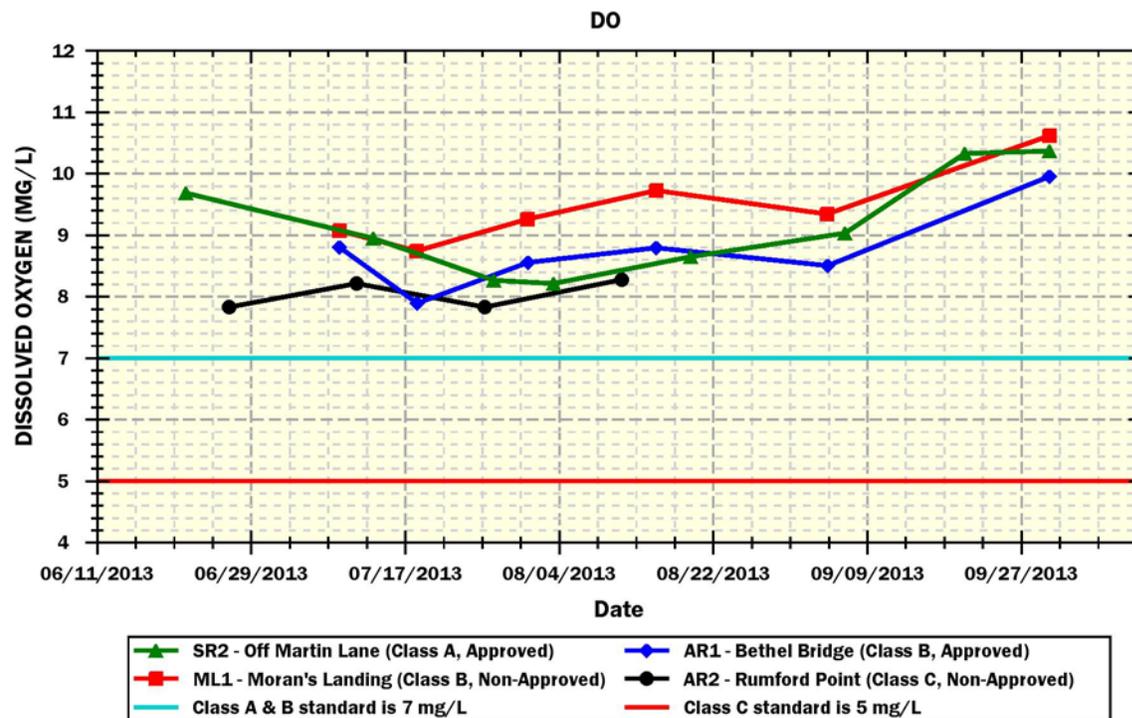
**Figure 5-1-2:** Seasonal Precipitation Measured at Newry



### Dissolved Oxygen

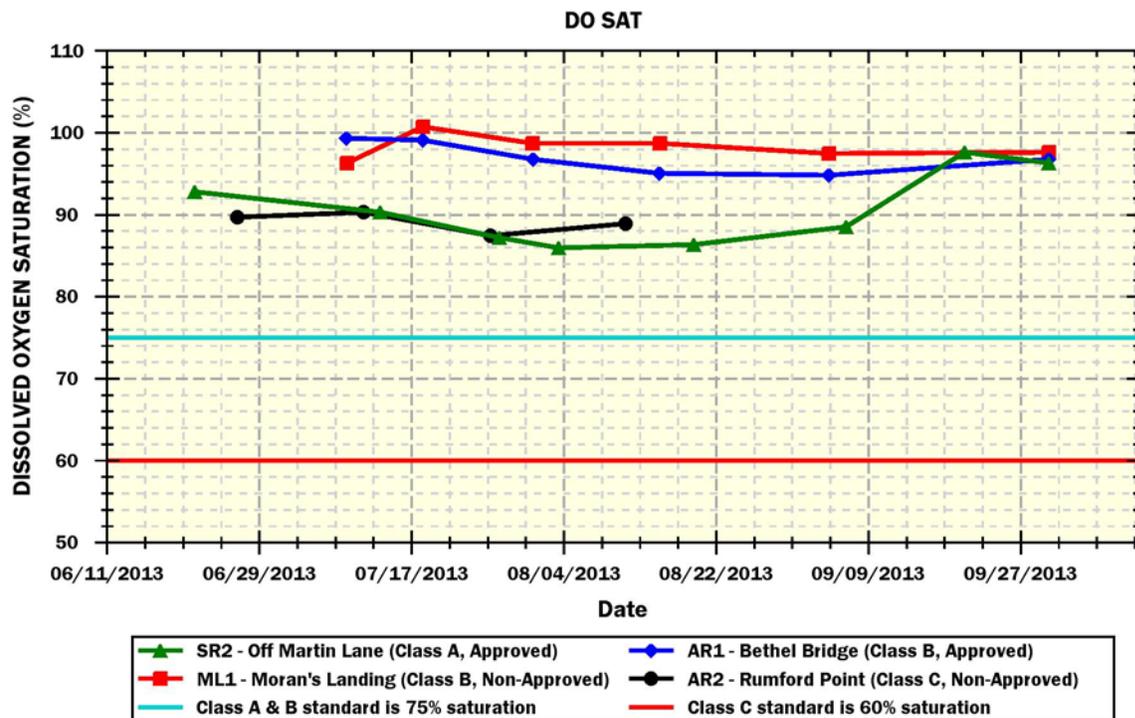
Dissolved oxygen (DO) was measured 4-8 times at the four sampling sites (Figure 5-1-3 and Figure 5-1-4; Table 5-1-2 and Table 5-1-3). Monitoring occurred from June/early July to August/September. Class A and Class B criteria for DO are a minimum of 7.0 mg/l (milligrams/liter) or 75% saturation, whichever is higher. Class C criteria for DO are a minimum of 5.0 mg/l or 60% saturation, whichever is higher. To meet water quality criteria, both concentration and saturation standards must be met.

**Figure 5-1-3:** Graph of dissolved oxygen concentrations.



**Table 5-1-2:** A summary of minimum, maximum, and average dissolved oxygen concentration values (mg/l) at Androscoggin River Watershed Council monitoring sites.

Site	Approved Site	# of Sampling Events	Minimum Value	Maximum Value	Average Value
AR-1	Y	6	7.9	10.0	8.7
ML-1	N	6	8.7	10.4	9.2
AR-2	N	4	7.8	8.3	8.0
SR-2	Y	8	8.2	10.4	9.2

**Figure 5-1-4:** Graph of dissolved oxygen saturation**Table 5-1-3:** A summary of minimum, maximum, and average dissolved oxygen saturation (%) values at Androscoggin River Watershed Council monitoring sites.

Site	Approved Site	# of Sampling Events	Minimum Value	Maximum Value	Average Value
AR-1	Y	6	94.8	99.3	96.9
ML-1	N	6	96.3	100.7	98.2
AR-2	N	4	87.4	90.3	89.1
SR-2	Y	8	85.9	97.6	90.6

Dissolved oxygen concentrations measured at the four sites ranged from 7.8 mg/l to 10.4 mg/l. All of the measurements were above the Class B standard of 7.0 mg/l. Dissolved oxygen concentration for Site AR-2 was lowest overall for the period this site was sampled. Site AR-1 was highest and the other sites similar. Dissolved oxygen saturation was highest at sites AR-1 and ML-1 with values ranging from 94.8 to 100.7%. Sites AR-2 and SR-2 were lower with values ranging from 85.9 to 97.6%. All the sites were above the Class B standard of 75% saturation. Overall, DO at all of the sites was high and well above standards.

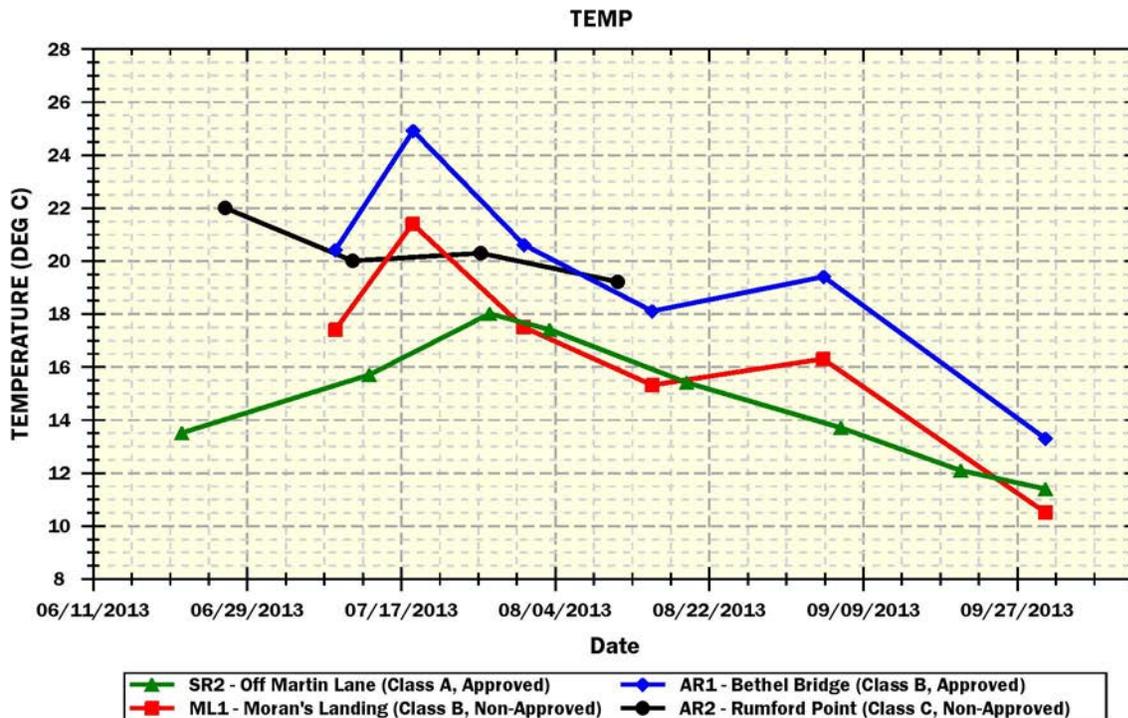
Androscoggin River Watershed Council volunteers do a good job of getting out early in the morning to sample. Early morning (before 8:00 am) measurements were made at least half of the time for 3 sites [Sites AR-1, AR-2 and ML-1] and once at Site SR-2. Early morning is the recommended time to sample

because DO is lowest at this time of day. Dissolved oxygen is also affected by flow conditions and temperature. During high flow conditions, more oxygen enters the river from the atmosphere as the water is more turbulent and there is more opportunity for re-aeration. Cooler water holds more oxygen.

### Water Temperature

Temperature was also measured 4-8 times at the four sampling sites (Figure 5-1-5 and Table 5-1-4). Monitoring occurred from June/early July through August/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.

**Figure 5-1-5:** Graph of water temperature



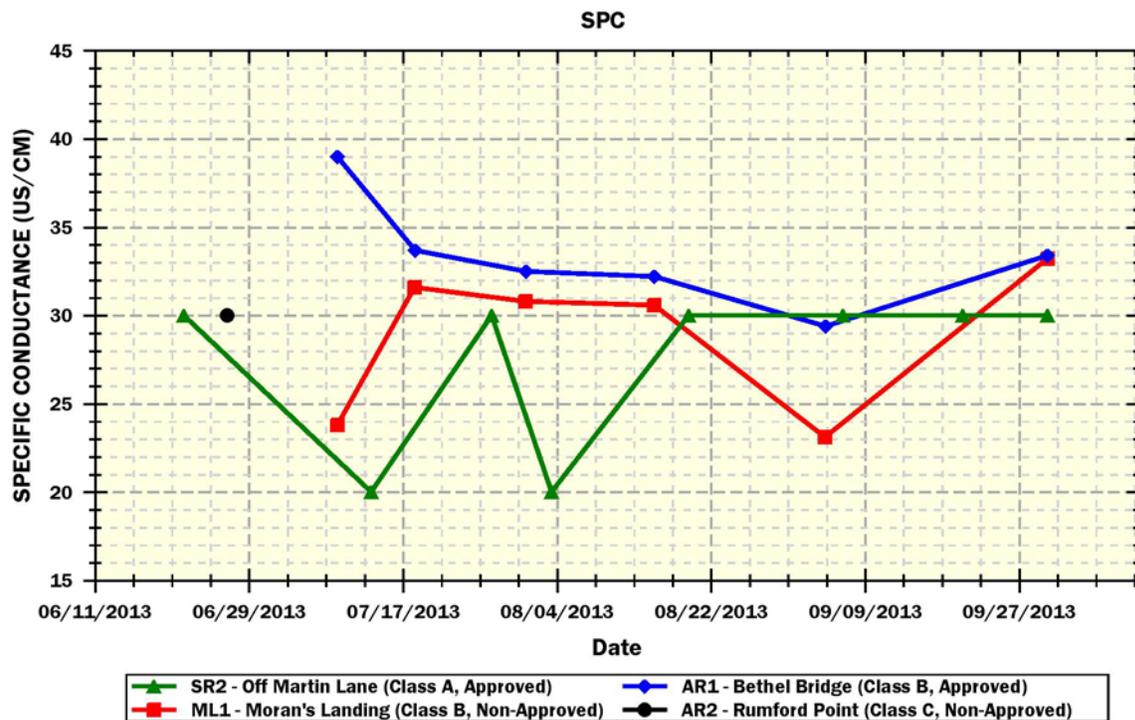
**Table 5-1-4:** A summary of minimum, maximum, and average water temperature (°C) values at Androscoggin River Watershed Council monitoring sites.

Site	Approved Site	# of Sampling Events	Minimum Value	Maximum Value	Average Value
AR-1	Y	6	13.3	24.9	19.5
ML-1	N	6	10.5	21.4	16.4
AR-2	N	4	19.2	22.0	20.4
SR-2	Y	8	11.4	18.0	14.7

Temperature was lowest overall at site SR-2 with the highest temperature reaching 18.0°C in late July. Site ML-1 was the second lowest and similar to site SR-2 with highest temperature reaching 21.4°C in mid-July. Site AR-2 was sampled from late June to mid-August-temperature was overall higher with temperature ranging from 19.2°C to 22.0°C. Site AR-1 was high with temperatures ranging from 20.4°C to 24.9°C in July.

### *Specific Conductance*

Specific conductance was measured 1-8 times at the two sampling sites as well (Table 5-1-5). 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 high 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. Also, discharges from pulp and paper mills upstream can increase the conductivity of the river.

**Figure 5-1-6:** Graph of specific conductance**Table 5-1-5:** A summary of minimum, maximum, and average specific conductance values (micro-ohms/cm,  $\mu\text{S}/\text{cm}$ ) at Androscoggin River Watershed Council monitoring sites.

Site	Approved Site	# of Samples	Minimum Value	Maximum Value	Average Value
AR-1	Y	6	29	39	33
ML-1	N	6	23	33	29
AR-2	N	1	30	30	30
SR-2	Y	8	20	30	28

Specific conductance at all the sites ranged from 20-39  $\mu\text{S}/\text{cm}$ . These are all low values.

### *Turbidity*

Turbidity was measured 6 times at Sites AR-1 and ML-1. Monitoring occurred from July to September. The State of Maine does not have turbidity standards. Turbidity is a measure of the amount of suspended materials in the water; including soil particles, algae, plankton, and decaying vegetation. During precipitation events that are great enough to cause runoff, land use activities (e.g. construction, agriculture, logging) may contribute to increased turbidity.

**Table 5-1-6:** A summary of minimum, maximum, and average turbidity values (NTU) for at Androscoggin River Watershed Council monitoring sites.

Site	Approved Site	# of Samples	Minimum Value	Maximum Value	Average Value
AR-1	N	6	1.22	3.39	1.8
ML-1	N	6	0.39	1.44	0.7

Turbidity values ranged 0.39 to 3.39 NTU. All of the values are very low to low.

## Discussion and Recommendations

There are numerous sources of pollution and other stresses to the Androscoggin River sites monitored by the Androscoggin River Watershed Council that could potentially have an impact on water quality. Some of those sources of pollution and stress may include:

- Point source pollution (pollution originating from a direct discharge including wastewater treatment plant discharge, combined sewer overflows and overboard discharges).
- Non-point source pollution (e.g., eroded soil, fertilizers, pesticides, heavy metals, petroleum residues, road salt, septic systems, wildlife and pet feces) and polluted stormwater originating from urban impervious surfaces (e.g., streets, parking lots, driveways, rooftops), agriculture, and forestry.
- 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 large amounts of organic matter, respiration of abundant plant matter, and low re-aeration rates that are characteristic of many wetlands).

The following are recommendations for future monitoring:

- Continue monitoring at existing monitoring sites to develop a long term trend database.
- Continue to obtain at least some measurements early in the morning (before 8:00 am), especially during the summer months of July and August.
- Expand the number of monitoring sites.

Appendix A-1. 2013 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; "D.O." = dissolved oxygen; "Spec. Cond" = specific conductance; "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)	Total Diss. Solids (MG/L)	** TSS (MG/L)	E Coli Bacteria (MPN/100ML)	Enterococci (MPN/100ML)
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**Androscoggin River, Androscoggin River Watershed Council - Approved Sites:**

AR-1	ANDROSCOGGIN RIVER-A1150-VRMP	7/9/2013	7:30 AM	N			20.4	99.3	8.8	39		3.39				
AR-1	ANDROSCOGGIN RIVER-A1150-VRMP	7/18/2013	9:03 AM	N			24.9	99.1	7.89	33.7		1.73				
AR-1	ANDROSCOGGIN RIVER-A1150-VRMP	7/31/2013	8:28 AM	N			20.6	96.7	8.55	32.5		1.42				
AR-1	ANDROSCOGGIN RIVER-A1150-VRMP	7/31/2013	8:28 AM	D			20.7	96	8.42	32.1		1.22				
AR-1	ANDROSCOGGIN RIVER-A1150-VRMP	8/15/2013	7:40 AM	N			18.1	95	8.79	32.2		1.22				
AR-1	ANDROSCOGGIN RIVER-A1150-VRMP	9/4/2013	8:19 AM	N			19.4	94.8	8.5	29.4		1.51				
AR-1	ANDROSCOGGIN RIVER-A1150-VRMP	9/30/2013	7:20 AM	N			13.3	96.7	9.95	33.4		1.58				
SR-2	SUNDAY RIVER - ASY08 - VRMP	6/21/2013	9:00 AM	N			13.5	92.8	9.68	30						
SR-2	SUNDAY RIVER - ASY08 - VRMP	7/13/2013	7:15 AM	N			15.7	90.3	8.95	20						
SR-2	SUNDAY RIVER - ASY08 - VRMP	7/27/2013	9:00 AM	N			18	87.2	8.26	30						
SR-2	SUNDAY RIVER - ASY08 - VRMP	8/3/2013	8:55 AM	N			17.4	85.9	8.21	20						
SR-2	SUNDAY RIVER - ASY08 - VRMP	8/3/2013	8:55 AM	D			17.4	85.6	8.2	20						
SR-2	SUNDAY RIVER - ASY08 - VRMP	8/19/2013	8:30 AM	N			15.4	86.3	8.65	30						
SR-2	SUNDAY RIVER - ASY08 - VRMP	9/6/2013	9:45 AM	N			13.7	88.5	9.03	30						
SR-2	SUNDAY RIVER - ASY08 - VRMP	9/20/2013	8:45 AM	N			12.1	97.6	10.32	30						
SR-2	SUNDAY RIVER - ASY08 - VRMP	9/30/2013	8:00 AM	N			11.4	96.3	10.37	30						

**Androscoggin River, Androscoggin River Watershed Council - Non-Approved Sites:**

AR-2	ANDROSCOGGIN RIVER - A1018 - ARWC	6/26/2013	10:10 AM	N			22	89.7	7.83	30						
AR-2	ANDROSCOGGIN RIVER - A1018 - ARWC	7/11/2013	8:00 AM	N			20	90.3	8.21							
AR-2	ANDROSCOGGIN RIVER - A1018 - ARWC	7/26/2013	7:30 AM	N			20.3	87.4	7.83							
AR-2	ANDROSCOGGIN RIVER - A1018 - ARWC	8/11/2013	7:30 AM	N			19.2	88.9	8.27							
AR-2	ANDROSCOGGIN RIVER - A1018 - ARWC	8/11/2013	7:30 AM	D			18.6	88.9	8.27							
ML-1	ANDROSCOGGIN RIVER-A1087-ARWC	7/9/2013	8:15 AM	N			17.4	96.3	9.07	23.8		1.44				
ML-1	ANDROSCOGGIN RIVER-A1087-ARWC	7/18/2013	8:10 AM	N			21.4	100.7	8.74	31.6		0.63				

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)	Total Diss. Solids (MG/L)	** TSS (MG/L)	E Coli Bacteria (MPN/100ML)	Enterococci (MPN/100ML)
ML-1	ANDROSCOGGIN RIVER-A1087-ARWC	7/31/2013	7:39 AM	N			17.5	98.7	9.26	30.8		0.58				
ML-1	ANDROSCOGGIN RIVER-A1087-ARWC	7/31/2013	7:39 AM	D			17.3	98.8	9.3	31		0.56				
ML-1	ANDROSCOGGIN RIVER-A1087-ARWC	8/15/2013	8:24 AM	N			15.3	98.7	9.72	30.6		0.49				
ML-1	ANDROSCOGGIN RIVER-A1087-ARWC	9/4/2013	7:40 AM	N			16.3	97.4	9.34	23.1		0.47				
ML-1	ANDROSCOGGIN RIVER-A1087-ARWC	9/30/2013	8:05 AM	N			10.5	97.6	10.61	33.2		0.39				
ML-1	ANDROSCOGGIN RIVER-A1087-ARWC	9/30/2013	8:05 AM	D								0.46				

Appendix A-2. 2013 observational data and quality assurance/quality control (QA/QC) notes for "approved" and "non-approved" sites.

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
Androscoggin River, Androscoggin River Watershed Council - Approved Sites:															
AR-1	ANDROSCOGGIN RIVER-A1150-VRMP	7/9/2013	7:30 AM	N	STORMF LOW	HIGH	18.33	BRIDGE	FOGGY, MOSTLY CLOUDY	CALM	FOGGY, HEAVY RAIN, LIGHT RAIN, MOSTLY CLOUDY	RUN		TURBID	DUE TO STRONG CURRENTS, THE VAN DORN SAMPLER ONLY WENT DOWN ABOUT 6" BELOW SURFACE. YSI 30 USED FOR SC, AND HACH 2100P USED FOR TURBIDITY NON-WADEABLE/3 FT BELOW SURFACE SAMPLE TAKEN ABOUT 6" BELOW SURFACE DUE TO STRONG CURRENTS.
AR-1	ANDROSCOGGIN RIVER-A1150-VRMP	7/18/2013	9:03 AM	N	STORMF LOW	MED	25.56	BRIDGE	CLEAR	CALM	HEAVY RAIN	RUN		CLEAR	DUE TO STRONG CURRENT, THE VAN DORN SAMPLER ONLY WENT ABOUT 6" BELOW SURFACE. YSI 30 USED FOR SC, HACH 2100 USED FOR TURBIDITY. NON-WADEABLE/3 FT BELOW SURFACE SAMPLER NOT HEAVY ENOUGH TO GO DOWN 3'. STRONG CURRENT.
AR-1	ANDROSCOGGIN RIVER-A1150-VRMP	7/31/2013	8:28 AM	N	BASE FLOW	MED	17.22	BRIDGE	CLEAR	CALM	CLEAR	RUN		CLEAR	WAS ABLE TO GET VAN DORN 6" TO 18" BELOW WATER LEVEL. YSI 30 USED FOR SC, AND HACH 2100P USED FOR TURBIDITY NON-WADEABLE/3 FT BELOW SURFACE WAS ABLE TO GET VAN DORN 6" TO 18" BELOW WATER LEVEL.
AR-1	ANDROSCOGGIN RIVER-A1150-VRMP	7/31/2013	8:28 AM	D				BRIDGE							WAS ABLE TO GET VAN DORN 6" TO 18" BELOW WATER LEVEL. YSI 30 USED FOR SC, AND HACH 2100P USED FOR TURBIDITY NON-WADEABLE/3 FT BELOW SURFACE WAS ABLE TO GET VAN DORN 6" TO 18" BELOW WATER LEVEL.
AR-1	ANDROSCOGGIN RIVER-A1150-VRMP	8/15/2013	7:40 AM	N	BASE FLOW	MED	11.67	BRIDGE	CLEAR	CALM	CLEAR	RUN		MEDIUM STAINED	WAS ABLE TO GET VAN DORN 6" TO 18" BELOW WATER LEVEL. YSI 30 USED FOR SC, AND HACH 2100P USED FOR TURBIDITY NON-WADEABLE/3 FT BELOW SURFACE WAS ABLE TO GET VAN DORN 6" TO 18" BELOW WATER LEVEL. ZERO DISSOLVED OXYGEN CHECK=0.19 MG/L
AR-1	ANDROSCOGGIN RIVER-A1150-VRMP	9/4/2013	8:19 AM	N	BASE FLOW	LOW	18.33	BRIDGE	CLEAR	BREEZE	LIGHT RAIN, PARTLY CLOUDY	RUN		CLEAR	WAS UNABLE TO GET VAN DORN 6" BELOW WATER LEVEL. YSI 30 USED FOR SC, AND HACH 2100P USED FOR TURBIDITY NON-WADEABLE/3 FT BELOW SURFACE UNABLE TO GET VAN DORN 6" BELOW WATER LEVEL.
AR-1	ANDROSCOGGIN RIVER-A1150-VRMP	9/30/2013	7:20 AM	N	BASE FLOW	LOW	7.22	BRIDGE	FOGGY	CALM	CLEAR, FOGGY, PARTLY CLOUDY	RUN		CLEAR	WAS ABLE TO GET VAN DORN 6" TO 18" BELOW SURFACE. YSI 30 USED FOR SC, AND HACH 2100P USED FOR TURBIDITY NON-WADEABLE/3 FT BELOW SURFACE WAS ABLE TO GET VAN DORN 6" TO 18" BELOW SURFACE.
SR-2	SUNDAY RIVER - ASY08 - VRMP	6/21/2013	9:00 AM	N	BASE FLOW	MED	15.56	WADING	MOSTLY CLOUDY	CALM	CLEAR	RUN		CLEAR	WADEABLE/MID-DEPTH
SR-2	SUNDAY RIVER - ASY08 - VRMP	7/13/2013	7:15 AM	N	BASE FLOW	MED	15.56	WADING	CLEAR, FOGGY	CALM	CLEAR, PARTLY CLOUDY	RUN		CLEAR	WADEABLE/MID-DEPTH
SR-2	SUNDAY RIVER - ASY08 - VRMP	7/27/2013	9:00 AM	N	BASE FLOW	MED	18.89	WADING	MOSTLY CLOUDY	CALM	CLEAR, PARTLY CLOUDY	RUN		CLEAR	WADEABLE/MID-DEPTH
SR-2	SUNDAY RIVER - ASY08 - VRMP	8/3/2013	8:55 AM	N	BASE FLOW	MED	17.22	WADING	MOSTLY CLOUDY	CALM	PARTLY CLOUDY, SHOWERS	RUN		CLEAR	WADEABLE/MID-DEPTH
SR-2	SUNDAY RIVER - ASY08 - VRMP	8/3/2013	8:55 AM	D				WADING							WADEABLE/MID-DEPTH
SR-2	SUNDAY RIVER - ASY08 - VRMP	8/19/2013	8:30 AM	N	BASE FLOW	MED	11.11	WADING	PARTLY CLOUDY	CALM	MOSTLY CLOUDY, PARTLY CLOUDY	RUN		CLEAR	WATER LEVEL SOMEWHAT LOWER THAN PRIOR WEEKS, BUT NOT EXTREMELY LOW WADEABLE/MID-DEPTH ZERO DISSOLVED OXYGEN CHECK=0.3 MG/L
SR-2	SUNDAY RIVER - ASY08 - VRMP	9/6/2013	9:45 AM	N	BASE FLOW	MED	12.78	WADING	CLOUDY	CALM	CLEAR, CLOUDY, MOSTLY CLOUDY	RUN		CLEAR	WADEABLE/MID-DEPTH
SR-2	SUNDAY RIVER - ASY08 - VRMP	9/20/2013	8:45 AM	N	BASE FLOW	MED	12.22	WADING	CLEAR	CALM	CLEAR	RUN		CLEAR	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
SR-2	SUNDAY RIVER - ASY08 - VRMP	9/30/2013	8:00 AM	N	BASE FLOW	LOW	3.33	WADING	CLEAR	CALM	CLEAR, FOGGY	RUN		CLEAR	WADEABLE/MID-DEPTH

**Androscoggin River, Androscoggin River Watershed Council - Non-Approved Sites:**

AR-2	ANDROSCOGGIN RIVER - A1018 - ARWC	6/26/2013	10:10 AM	N	BASE FLOW	MED	23.33	WADING	FOGGY, MOSTLY CLOUDY	CALM	CLOUDY, LIGHT RAIN	RUN		OPAQUE	WADEABLE/MID-DEPTH
AR-2	ANDROSCOGGIN RIVER - A1018 - ARWC	7/11/2013	8:00 AM	N	STORMF LOW	HIGH	19.44	WADING	MOSTLY CLOUDY, SHOWERS	BREEZE	MOSTLY CLOUDY, SHOWERS	RUN		CLEAR	WADEABLE/MID-DEPTH TIME SAMPLED NOT WRITTEN DOWN, SO ESTIMATE WAS DERIVED BY LOOKING AT THE D.O METER CALIBRATION TIME.
AR-2	ANDROSCOGGIN RIVER - A1018 - ARWC	7/26/2013	7:30 AM	N		MED	10.56	WADING	CLEAR		PARTLY CLOUDY	RUN		CLEAR	WADEABLE/MID-DEPTH
AR-2	ANDROSCOGGIN RIVER - A1018 - ARWC	8/11/2013	7:30 AM	N		MED		WADING	CLEAR		CLEAR	RUN		CLEAR	WADEABLE/MID-DEPTH TIME SAMPLED WAS NOT WRITTEN DOWN, SO ESTIMATE WAS DERIVED BY LOOKING AT THE D.O. METER CALIBRATION TIME.
AR-2	ANDROSCOGGIN RIVER - A1018 - ARWC	8/11/2013	7:30 AM	D				WADING							WADEABLE/MID-DEPTH TIME SAMPLED WAS NOT WRITTEN DOWN, SO ESTIMATE WAS DERIVED BY LOOKING AT THE D.O. METER CALIBRATION TIME.
ML-1	ANDROSCOGGIN RIVER-A1087-ARWC	7/9/2013	8:15 AM	N	STORMF LOW	HIGH	18.33	WADING	LIGHT RAIN, MOSTLY CLOUDY	CALM	CLOUDY, HEAVY RAIN, MOSTLY CLOUDY, SHOWERS	RUN		CLEAR	PRO ODO METER USED FOR DO, YSI 30 USED FOR SC, AND HACH 2100P USED FOR TURBIDITY WADEABLE/MID-DEPTH
ML-1	ANDROSCOGGIN RIVER-A1087-ARWC	7/18/2013	8:10 AM	N	STORMF LOW	MED	23.89	WADING	CLEAR	CALM	CLEAR, HEAVY RAIN	RUN		CLEAR	PRO ODO METER USED FOR DO, YSI 30 USED FOR SC, AND HACH 2100P USED FOR TURBIDITY WADEABLE/MID-DEPTH
ML-1	ANDROSCOGGIN RIVER-A1087-ARWC	7/31/2013	7:39 AM	N	BASE FLOW	MED	13.89	WADING	CLEAR	CALM	CLEAR	RUN		CLEAR	PRO ODO METER USED FOR DO, YSI 30 USED FOR SC, AND HACH 2100P USED FOR TURBIDITY WADEABLE/MID-DEPTH DID NOT COMPLETE CHAIN OF CUSTODY FOR DATASHEET.
ML-1	ANDROSCOGGIN RIVER-A1087-ARWC	7/31/2013	7:39 AM	D				WADING							PRO ODO METER USED FOR DO, YSI 30 USED FOR SC, AND HACH 2100P USED FOR TURBIDITY WADEABLE/MID-DEPTH DID NOT COMPLETE CHAIN OF CUSTODY FOR DATASHEET.
ML-1	ANDROSCOGGIN RIVER-A1087-ARWC	8/15/2013	8:24 AM	N	BASE FLOW	MED	15.56	WADING	CLEAR	BREEZE	CLEAR	RUN		CLEAR	PRO ODO METER USED FOR DO, YSI USED FOR SC, AND HACH 2100P USED FOR TURBIDITY WADEABLE/MID-DEPTH DID NOT COMPLETE CHAIN OF CUSTODY FOR DATASHEET.
ML-1	ANDROSCOGGIN RIVER-A1087-ARWC	9/4/2013	7:40 AM	N	STORMF LOW	HIGH	16.11	WADING	CLEAR	CALM	LIGHT RAIN, PARTLY CLOUDY	RUN		FOAMY	PRO ODO METER USED FOR DO, YSI 30 USED FOR SC, AND HACH 2100P USED FOR TURBIDITY WADEABLE/MID-DEPTH DID NOT COMPLETE CHAIN OF CUSTODY FOR DATASHEET.
ML-1	ANDROSCOGGIN RIVER-A1087-ARWC	9/30/2013	8:05 AM	N	BASE FLOW	LOW	6.11	WADING	FOGGY	CALM	CLEAR, FOGGY, PARTLY CLOUDY	RUN		CLEAR	PRO ODO METER USED FOR DO, YSI 30 USED FOR SC, AND HACH 2100P USED FOR TURBIDITY WADEABLE/MID-DEPTH
ML-1	ANDROSCOGGIN RIVER-A1087-ARWC	9/30/2013	8:05 AM	D				WADING							PRO ODO METER USED FOR DO, YSI 30 USED FOR SC, AND HACH 2100P USED FOR TURBIDITY WADEABLE/MID-DEPTH