



Maine Volunteer River Monitoring Program (VRMP)

Appendix K

Criteria used to Review/Validate Data (VRMP QAPP-Table 6)

Program-Wide SAP Appendix

From:

Maine DEP (Maine Department of Environmental Protection). 2009. Maine Volunteer River Monitoring Program [VRMP] - Quality Assurance Program Plan. Doc #: DEPLW-0984. Portland, ME. <http://www.maine.gov/dep/blwq/docstream/vrmp/publication.htm>



Table 6. Criteria used to review/validate data. Data that exceed these minimum or maximum criteria will be highlighted by the EGAD database and evaluated by VRMP staff for inclusion in the EGAD database based upon best professional judgment and, sometimes, follow-up monitoring. Field and lab duplicates will be used by VRMP staff to help with decision-making. Notes will be added within the database record to detail important facts about any unusual data. The computer validation acts as a secondary check on the data in the unlikely case that VRMP staff miss an error outside of the data validation range.

Parameter	Visual Check By VRMP Staff		Computer Validation Program		Missing data indicator	Notes
	Min. Value	Max. Value	Min. Value	Max. Value		
Dissolved Oxygen (conc.)	2.0 ppm	18.0 ppm	1.0 ppm	20.0 ppm	99.9	
Dissolved Oxygen (% sat.)	10 %	125 %	10 %	130 %	999.9	
Water Temperature	-0.5 °C	30 °C	-0.5 °C	35 °C	99.9	
Bacteria	0 / 100 ml	15,000 / 100 ml	0 / 100 ml	20,000 / 100 ml	9999	Some bacteria procedures, such as the IDEXX method have an upper maximum of TNTC (too numerous to count). These will neither be flagged or deleted.
pH	4.0 *	9.0	3.0 *	11.0	99.9	* can be exceeded during snowmelt events and outliers will be treated with BPJ given methodology used to obtain reading
Specific Conductance	10 μS/cm	1000 μS/cm **	5 μS/cm	1200 μS/cm	9999	** most Maine streams are < 100; > 100 indicates possible salt water influence, intrusion, or urban watershed runoff
Turbidity	2 NTU	1000 NTU	1 NTU	1000 NTU	9999	
Total Dissolved Solids (TDS)	10 mg/L	1000 mg/L	5 mg/L	1000 mg/L	9999	
Suspended Sediment Concentration (SSC)	2 mg/L	200 mg/L	2 mg/L	300 mg/L	999	
Total Suspended Solids (TSS)	2 mg/L	200 mg/L	2 mg/L	300 mg/L	999	
Total Phosphorus	5 ppb	75 ppb	1 ppb	100 ppb	999	
Ortho- Phosphorus	3 ppb	10 ppb	1 ppb	20 ppb	99	
Alkalinity	3 mg/L CaCO3	200 mg/L CaCO3	1 mg/L CaCO3	200 mg/L CaCO3	999	
Hardness	3 mg/L CaCO3	200 mg/L CaCO3	1 mg/L CaCO3	200 mg/L CaCO3	999	



Table 6. cont'd.

Parameter	Visual Check By VRMP Staff		Computer Validation Program		Missing data indicator	Notes
	Min. Value	Max. Value	Min. Value	Max. Value		
Total Kjeldahl Nitrogen (TKN)	50 ppb	2000 ppb	40 ppb	2500 ppb	9999	
Nitrate (NO ₃) + Nitrite (NO ₂)	10 ppb	1000 ppb	5 ppb	1500 ppb	9999	
Chloride	3 mg/L	300 mg/L	2 mg/L	350 mg/L		
Volunteer Monitor Certification	N/A	N/A	N/A	N/A	99-999	Required for 99% of data.
Date	2009 *	current year	2009 *	N/A	N/A	Most dates will reflect data obtained in previous season. * These values may change if historical data is entered into EGAD.