Wasilla Soil & Water Conservation District

Citizen's Environmental Monitoring Program

Water Quality Status Report
July 2002 – June 2003

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Table 1: Data Quality Objectives

Parameter	Method/Range	Units	Sensitivity (a)	Precision	Accuracy	Calibration Method
Temperature	Thermometer -5.0 to +50.0°C	Degrees Celsius (°C)	0.5°C	±1.0°C (b)	±0.5°C (b)	NIST Certified Thermometer
	Hanna Meter 0.0 to 60.0 C	Degrees Celsius (°C)	0.1 C	±0.5 C (c)	±0.3 C (c)	NIST Certified Thermometer
pH	pH Octet Comparator (Wide-Range) 3.0 to 10.0 units	Standard pH units	0.5 units	±0.6 units (b)	±0.4 units (b)	Checked against Hach pH Meter
	pH Octet Comparator (Narrow-Range) 7.2 to 8.6 units	Standard pH units	0.1 units	±0.3 units (b)	±0.2 units (b)	Checked against Hach pH Meter
	Hanna pH Tester 0.0 to 14.0	Standard pH units	0.1 units	±0.2 units (c)	± 0.2 units (c)	Standard Solutions Method
	Hach Model 5005 Electrometric Method -2.00 to 19.99 pH units	Standard pH units	0.01 units	±0.02 units	±0.05 units	Standard Solutions Method
Dissolved Oxygen	Micro Winkler Titration 0 to 20 mg/l	Milligrams per liter (mg/l)	0.1 mg/l	±0.9 mg/l (b)	±0.3 mg/l (b)	Checked against LaMotte DO Meter
	LaMotte Model DO 4000 0 to 19.99 mg/l	Milligrams per liter (mg/l)	0.1 mg/l	±0.05 mg/l	±0.1 mg/l	Saturated air calibration
Salinity	Hydrometer 0 to 42 ppt (1.0000 to 1.0700 SG)	Parts per thousand (ppt)	0.1 ppt (0.0005 specific gravity)	±1.0 ppt (b)	±0.82 ppt (b)	Standard Solutions Methods
Limit of Visibility	Secchi Disk Depth 0 to 30 m	Meters (m)	0.5 m	NA	NA	Line markings checked w/tape
Turbidity	Turbidity 0 to 200 JTU	Jackson Turbidity Units (JTU)	5 JTU	±3 units (c)	±3 units at 0 - 200 JTU (c)	Checked against LaMotte meter
	LaMotte Model 2020 0.00 to 100 NTUs	Nephelometric Turbidity Units	NTU Report to Nearest 0 to 1.0 then 0.05NTU 10 to 40 then 1NTU 40 to 100 then 5NTU 100 to 400 then 10NTU 400 to 1000 then 50NTU over 1000 then 100NTU	±2% for readings below 100 NTUs ±3% above 100 NTUs	±2% for readings below 100 NTUs ±3% above 100 NTUs	Standard Solutions Method
Conductance	Hanna TDS Meter (Total Dissolved Solids) 0 to 1999 microS/cm	Micro-Siemens/cm (µS/cm) (converted to 25 C)	1.0×10^{-3} S	±0.5 units (c)	2% full scale (c)	Standard Solutions Method
Oxidation-Reduction Potential	Hanna ORP Meter -1000 to +1000mV	Millivolts	1.0 mV	±0.5 units (c)	±5.0 mV (c)	Standard Solutions Method
Apparent Color	Compare to color chart 147 standard colors	Color index number	1 to 2 Color Numbers	NA	NA	Checked against Hach Spectrophotometer
	Hach Spectrophotometer Platinum-Cobalt Method 0-500 PC units	Platinum-Cobalt Units	NA	NA	NA	Standard Solutions Method
Nitrate-Nitrogen	Zinc reduction (Colorimetric) 0 to 15 ppm (15.0mg/L)	ppm (mg/L)	1.0 ppm	±0.5 ppm (c)	±0.5 ppm (c)	Standard Solutions Methods
Ortho-Phosphate	Ascorbic acid reduction (Colorimetric) 0 to 4 ppm (0 to 4.0mg/L)	ppm (mg/L)	0.2 ppm	±0.5 ppm (c)	±0.5 ppm (c)	Standard Solutions Methods
Coliforms (Total & E. coli)	Chromogenic agents in medium, detects *E. coli* & total coliform 0 to 60 CFU	Number of colony forming units (CFU) per 100 ml	1 CFU	NA	NA	Send water sample split to EPA/ADEC Certified Lab

NA = not available
(a) Determined by the increments measurable with the stated method reflecting estimation where allowed.
(b) Data taken from the Quality Assurance Project Plan for Friends of Casco Bay, 1995, p. 21; based on data taken from EPA Volunteer Water Monitoring: A Guide for State Managers, 1990, EPA 440/4-90-010, p. 39; and the Quality Assurance Project Plan for the Chesapeake Bay Citizen Monitoring Program, Section 5, p. 2.
(c) Data taken from the manufacturer's instruction manuals.

Affiliation: Mat-Su Valley
Watershed: Little Susitna
River: Meadow Creek
River Mile:
Site Type: Freshwater
Monitoring Team #:
☐ Active Site
Site ID: MSMWC01V **Station ID Number:** MSMWC01v **Lat Decimal Degrees:** **Long Decimal Degrees:**
Site Name: Meadow Creek @ Kenlar Rd. crossing

Date:	Volunteer ID V 1	V 2	V 3	V 4	BCS # 2.5 gal	Color 50 ml	Turbidity JTUs	Water Location	Temp (C)	DO mg/l	DO %Sat	Salinity (ppt)	Hanna Meter Cond µ S/cm	ORP mV	pH	Color pH	Ortho-Phosphate ppm	Nitrate-N ppm	Coliform Count (cfu/100ml) 1 ml E. coli	1 ml Total	3 ml E. coli	3 ml Total	5 ml E. coli	5 ml Total
																7.3	0.00	0.0						
10/29/2000	206				65	64.5	5	Stream	2.0	9.8	70.8%		45	295	7.4	7.0	0.00	0.0	0	0			0	0
11/26/2000	207				92	36	0	Bucket	1.0	11.7	82.6%		35	138	7.7	7.0	0.00	0.0	0	0			0	0
12/31/2000	207	206			36	36	0	Bucket	1.0	7.1	51.3%		41	292	7.2	7.0	0.00	0.0	0	0			0	0
1/29/2001	206				39	36	5	Stream	-2.0	8.1	53.0%		52	279	7.8	7.5	0.00	1.0	0	0			0	0
2/26/2001	206				92	36	5	Stream	2.0				51	281	7.3	7.0	0.00	1.0	0	0			0	0
3/30/2001	206				92	36		Bucket	2.0	10.3	74.4%		30	217	7.3	7.0	0.00		200				100	
5/1/2001	206				38	65	0	Stream	3.0	9.0	66.6%		38	215	7.3	7.2	0.00	0.0	100				80	
5/13/2001	206				38	91	0	Stream	6.0	10.0	80.1%		157	302	7.9	7.5	0.00	0.0	0	0			40	0
5/27/2001	207				36	36	0	Bucket	14.0				55	310	7.1	7.1	0.00	0.0	500	0			240	40
6/10/2001	206				65	64.5		Bucket	12.0	11.1	102.9%			314	7.1	6.9	0.00	0.0	100				120	
8/25/2001	206				65	64.5	0	Bucket	18.0	11.3	120.1%		56	309	6.9	7.2	0.00	0.0	300	0			160	20
9/11/2001	206				65	64.5	0	Bucket	16.0	11.1	112.9%		65	280	6.9	7.1	0.00	0.0	0				40	
10/1/2001	206							Bucket	7.0	12.1	99.4%		67	330	7.1	6.9	0.00	0.0	0				0	
10/28/2001	206				65	64.5		Bucket	0.0	11.8	85.6%					7.1	0.00	0.0	0				0	
11/24/2001	206				65	64.5		Bucket	5.0	11.1	88.9%													
1/2/2002	206																							
1/27/2002	206																							