

Water-Data Report 2011

04011140 TROUT LAKE TRIBUTARY, NORTHWEST SIDE, NEAR COVILL, MN

Northwestern Lake Superior Basin
Baptism-Brule Subbasin

LOCATION.--Lat 47°52'27", long 90°11'00" referenced to North American Datum of 1983, Cook County, MN, Hydrologic Unit 04010101.

WATER-QUALITY RECORDS

REMARKS.--This site is part of the Sentinel Lakes project, a joint project with the Minnesota DNR and PCA to examine potential linkages between climate change, lake morphology, and fish habitat in the form of temperature and dissolved oxygen distributions. Sampling of physical, chemical, and biological parameters and subsequent data analysis effort will be used to calibrate bio-physical lake models that will be used to forecast future water quality conditions in deep lakes with cold-water fish populations.

**WATER-QUALITY DATA
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011**

Part 1 of 5

[CaCO₃, calcium carbonate; N, nitrogen; P, phosphorus; SiO₂, silicon dioxide; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; °C, degrees Celsius; μS/cm, microsiemens per centimeter; μg/L, micrograms per liter; <, less than; E, estimated]

Date	Sample start time	Medium name	Barometric pressure, mm Hg (00025)	Discharge, instantaneous, ft ³ /s (00061)	Dissolved oxygen, unfiltered, mg/L (00300)	pH, water, unfiltered, field, standard units (00400)	pH, water, unfiltered, laboratory, standard units (00403)	Specific conductance, unfiltered, laboratory, μS/cm at 25 °C (90095)	Specific conductance, unfiltered, water, μS/cm at 25 °C (00095)
10-20-2010	1645	Surface water	710	.02	8.4	6.5	E 7.6	E 56	56
05-19-2011	0845	Surface water	722	1.0	8.0	6.3	E 6.8	E 41	39

**WATER-QUALITY DATA
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011**

Part 2 of 5

[CaCO₃, calcium carbonate; N, nitrogen; P, phosphorus; SiO₂, silicon dioxide; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; °C, degrees Celsius; μS/cm, microsiemens per centimeter; μg/L, micrograms per liter; <, less than; E, estimated]

Date	Sample start time	Temperature, water, °C (00010)	Sampler type (84164)	Dissolved solids dried at 180 °C, water, filtered, mg/L (70300)	Loss on ignition of suspended solids, unfiltered, mg/L (00535)	Suspended solids, unfiltered, mg/L (00530)	Calcium, water, filtered, mg/L (00915)	Magnesium, water, filtered, mg/L (00925)	Potassium, water, filtered, mg/L (00935)	Sodium, water, filtered, mg/L (00930)
10-20-2010	1645	5.4	Grab sample	63	< 10	< 15	6.88	2.15	.30	1.56
05-19-2011	0845	8.6	Grab sample	45	--	--	4.47	1.50	.21	1.40

04011140 TROUT LAKE TRIBUTARY, NORTHWEST SIDE, NEAR COVILL, MN—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

Part 3 of 5

[CaCO₃, calcium carbonate; N, nitrogen; P, phosphorus; SiO₂, silicon dioxide; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated]

Date	Sample start time	Alkalinity, water, filtered, inflection-point, incremental titration method, field, mg/L as CaCO ₃ (39086)	Bicarbonate, water, filtered, inflection-point, incremental titration method, field, mg/L (00453)	Carbon (inorganic plus organic), suspended sediment, total, mg/L (00694)	Chloride, water, filtered, mg/L (00940)	Fluoride, water, filtered, mg/L (00950)	Inorganic carbon, suspended sediment, total, mg/L (00688)	Silica, water, filtered, mg/L as SiO ₂ (00955)	Sulfate, water, filtered, mg/L (00945)
10-20-2010	1645	45.5	55.5	.15	.28	.10	< .03	14.1	1.55
05-19-2011	0845	11.3	13.8	.10	.15	.04	< .03	13.3	3.11

WATER-QUALITY DATA
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

Part 4 of 5

[CaCO₃, calcium carbonate; N, nitrogen; P, phosphorus; SiO₂, silicon dioxide; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated]

Date	Sample start time	Ammonia plus organic nitrogen, water, filtered, mg/L as N (00623)	Ammonia plus organic nitrogen, water, unfiltered, mg/L as N (00625)	Ammonia, water, filtered, mg/L as N (00608)	Nitrate plus nitrite, water, filtered, mg/L as N (00631)	Nitrite, water, filtered, mg/L as N (00613)	Orthophosphate, water, filtered, mg/L as P (00671)	Particulate nitrogen, suspended in water, mg/L (49570)	Phosphorus, water, filtered, mg/L as P (00666)
10-20-2010	1645	.32	.27	< .010	.050	.001	.009	< .02	.006
05-19-2011	0845	.18	.26	< .010	.011	< .001	< .004	< .02	.003

WATER-QUALITY DATA
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

Part 5 of 5

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Date	Sample start time	Phosphorus, water, unfiltered, mg/L as P (00665)	Iron, water, filtered, µg/L (01046)	Manganese, water, filtered, µg/L (01056)	Organic carbon, suspended sediment, total, mg/L (00689)
10-20-2010	1645	.010	191	15.7	.15
05-19-2011	0845	.008	102	3.2	< .12