

St. Croix Headwaters Segment

Upper St. Croix lake outlet (source of St. Croix River): Latitude: 46°19'19" Longitude: 91°48'13" (collected: 06/26/2005)

Date	Time Sample Collected	Weather	Turbidity Tube Reading	Habitat Rocky Score	Habitat Soft Score	Biotic Index	Dissolved O ₂	Dissolved O ₂ % Saturation	Water Temp	pH Level	Water Flow	Precipitation	Air Temp
6/26/2005	9:45 AM	Sunny	24	23		2.5	7	86	24	6.5	71.5	0	27
8/6/2005	10:15 AM	Sunny	24				6.5	73	24				27
11/5/2005	2:00 PM	Mostly Cloudy	24				10	87	8.4	7.25		0.1	7.8
6/4/2006	10:45 AM	Sunny	24		47		13	153	22	6.6		0	22

St. Croix River, at Cut Away Dam: Latitude: 46°18'23" Longitude: 91°47'17" (collected: 06/17/2005)

Date	Time Sample Collected	Weather	Turbidity Tube Reading	Habitat Rocky Score	Habitat Soft Score	Biotic Index	Dissolved O ₂	Dissolved O ₂ % Saturation	Water Temp	pH Level	Water Flow	Precipitation	Air Temp
6/27/2005	2:00 PM	Mostly Cloudy	24		33	1.8	7	86	24	6.5	20.6	0	26
8/14/2005	2:30 PM	Sunny	24				8.5	94	22	6.5		0	24
10/15/2005	2:15 PM	Sunny	24				8	76	12	6		0	17
4/30/2006	1:00 PM	Raining				2.4	10.5	89	9	6.6		0.1	15
6/18/2006	2:00 PM	Sunny	24				9.5	114	26	6.5			24
7/22/2006	2:30 PM	Sunny	24				10.5	127	26	8.3			27

Lower Ox Creek at riffles: Latitude: 46°17'44" Longitude: 91°46'3" (collected: 09/14/2005)

Date	Time Sample Collected	Weather	Turbidity Tube Reading	Habitat Rocky Score	Habitat Soft Score	Biotic Index	Dissolved O ₂	Dissolved O ₂ % Saturation	Water Temp	pH Level	Water Flow	Precipitation	Air Temp
6/13/2005	2:30 PM	Raining	23				13	147	20		47.9		26
6/18/2005	11:10 AM	Sunny	23	50			12.5	128	17		32.5	0	28
8/7/2005	10:55 AM	Sunny	24				13	141	18		34.6	0	27
9/14/2005	6:25 PM	Sunny					14	149	17.5		63	2	16

St. Croix River, Fontaine dock across from bog: Latitude: 46°16'22" Longitude: 91°46'34" (collected: 08/21/2005)

Date	Time Sample Collected	Weather	Turbidity Tube Reading	Habitat Rocky Score	Habitat Soft Score	Biotic Index	Dissolved O ₂	Dissolved O ₂ % Saturation	Water Temp	pH Level	Water Flow	Precipitation	Air Temp
8/21/2005	3:15 PM	Mostly Cloudy	24		42	2.4	9.5	102	20				18
10/2/2005	3:30 PM	Mostly Cloudy	24				10.5	106	17			0	24
11/6/2005	2:00 PM	Partly Sunny	24			2.4	10	87	8	6.3		0	9
4/29/2006	12:45 PM	Raining	24			2.5	13	124	12	6.6			12
5/21/2006	2:50 PM	Partly Sunny	15				12.5	122	15.8	9.2			
6/24/2006	3:18 PM	Mostly Cloudy	24				11	134	24	7			23
7/22/2006	3:45 PM	Sunny					11.5	137	25	7.2		0	28

St. Croix River, at cranberry bog discharge: Latitude: 46°16'17" Longitude: 91°46'49" (collected: 07/30/2005)

St. Croix Headwaters Segment

Upper St. Croix lake outl				
Date	Time Sample Collected	Comments	Organisms	Rusty
6/26/2005	9:45 AM	Note: Team members: Peter and Polly Edmunds, Jim Heim, Scott and Susan Peterson. Water flow was estimated due to wide stream and marsh. Main channel about 50 ft and rocky bottom. Marsh area about 75 ft and soft bottom.	Dragonfly, Mussel or Clam, Orb Snail, Scud	
8/6/2005	10:15 AM	These measures were taken upstream from previous measures because the vegetation had closed the channel.		
11/5/2005	2:00 PM	conductivity 140, Barometric Pressure 31.5. Vegetation had died back so we were able to reach the original June site.		
6/4/2006	10:45 AM	Conductivity 130 pH meter 8.54, pH strip 6.6 DO meter 11 mg/L 116% saturation. It should be noted that with the DO meter we could get wildly varying results by moving the meter less than 3ft (in the reeds or outside of the reeds) Water very low. Saw female Great Blue Heron and a Sandhill Crane, plus many yellow iris.		

St. Croix River, at Cut Av				
Date	Time Sample Collected	Comments	Organisms	Rusty
6/27/2005	2:00 PM	Team collecting data: Polly Edmunds and Scott Peterson	Mayfly, Orb Snail, Scud, Leech, Tubifex Worm	
8/14/2005	2:30 PM	Cool the past two days: high mid 70's low mid 50's but previous two weeks have been very hot and dry: highs upper 80's to mid 90's		
10/15/2005	2:15 PM	Conductivity 130 Very high water due to heavy rainfall two weeks ago. Water is actually higher now than it was this spring.		
4/30/2006	1:00 PM	Wind blowing water upstream Staff gauge 60 Conductivity 120 X .75 = 90 TSS BOD - Zero NTUs <10	Mussel or Clam, Mayfly, Non-red Midge, Orb Snail, Scud	
6/18/2006	2:00 PM	Conductivity 190 pH strip 6.5 pH meter 8.2 6/18/06 sunny & hot 6/17/06 Thunder storms		
7/22/2006	2:30 PM	Conductivity 150 pH meter 8.3 pH strip 6.0?? saw two green frogs about 2 8/5/06 - 10 mg/l (14 day BOD = .5)		

Lower Ox Creek at riffles				
Date	Time Sample Collected	Comments	Organisms	Rusty
6/13/2005	2:30 PM	Water high - woods wet- warm and humid with light rain.		
6/18/2005	11:10 AM	Team: Paul Meyer and Betty Ebert		
8/7/2005	10:55 AM	Hot, dry, sunny		
9/14/2005	6:25 PM	High water		

St. Croix River, Fontaine				
Date	Time Sample Collected	Comments	Organisms	Rusty
8/21/2005	3:15 PM	Overcast and Breezy on 8/21/05	Caddisfly, Mussel or Clam, Damsel fly, Riffle Beetle, Orb Snail, Scud, Tubifex Worm	
10/2/2005	3:30 PM	Strong breeze from south pushing surface water upstream		
11/6/2005	2:00 PM	Note: Whirligig beetles and fairy shimp were found but not listed on Biotic Index. 11/5 Cloudy, temps in 40-50 F 11/4 Mostly Cloudy with off & on rain, temps in 40s	Alderfly, Caddisfly, Mussel or Clam, Mayfly, Damsel fly, Orb Snail, Scud, Pouch Snail, Isopod	
4/29/2006	12:45 PM	BOD 3.5 (5/4/06 mg/l 9.5)	Alderfly, Caddisfly, Dragonfly, Mussel or Clam, Mayfly, Damsel fly, Orb Snail, Scud, Pouch Snail, Isopod	
5/21/2006	2:50 PM	Low water level with turbidity due to rain in previous week		
6/24/2006	3:18 PM	Conductivity 120 BOD -1? (6/24/06 11 mg/L - 6/29/06 12 mg/L) pH meter - 8.62 120 cm tube = 109 cm Weather last two days: Partly sunny to cloudy, rain off & on. Water level low to normal.		
7/22/2006	3:45 PM	BOD = 3.5 (11.5-8) pH meter = 8.74 strip = 7.2 121 cm tube clear		

St. Croix River, at cranbe

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Date	Time Sample Collected	Weather	Turbidity Tube Reading	Habitat Rocky Score	Habitat Soft Score	Biotic Index	Dissolved O ₂	Dissolved O ₂ % Saturation	Water Temp	pH Level	Water Flow	Precipitation	Air Temp
6/26/2005	6:30 PM	Sunny	23.5		40	2	8	109	30			0	27
7/30/2005	8:00 PM	Sunny	24				12.5	144	23			0	28
8/21/2005	2:00 PM	Mostly Cloudy	24				9.5	102	20				17
10/8/2005	6:45 PM	Sunny	24				7.5	64	10			0	7
11/6/2005	1:05 PM	Partly Sunny	24			2.4	10.5	87.5	9	6.3		0	9
5/30/2006	7:30 PM	Sunny	37.4			2	9	116	27	8.43			24
6/27/2006	7:13 PM	Partly Sunny	24				11	127	21	7			21
7/26/2006	7:50 PM	Sunny	24				11	140	26	7.5		0	27

Eau Claire River, upstream from confluence with St. Croix River: Latitude: 46°14'56" Longitude: 91°47'54" (collected: 06/17/2005)

Date	Time Sample Collected	Weather	Turbidity Tube Reading	Habitat Rocky Score	Habitat Soft Score	Biotic Index	Dissolved O ₂	Dissolved O ₂ % Saturation	Water Temp	pH Level	Water Flow	Precipitation	Air Temp
6/11/2005	1:00 PM	Raining	24		44	2.3	8	90	19		127	1	30
7/31/2005	2:40 PM	Sunny	24				8.5	105	24		67	0	34
8/13/2005	10:50 AM	Mostly Cloudy	24				8.5	91	20		69.5		20
9/30/2005	1:10 PM	Partly Sunny	24				8.5	85	17.2		74.4	0	16.7
10/22/2005	1:00 PM	Mostly Cloudy	24			3	11	96	8	6.9	135	0	7
5/7/2006	12:15 PM	Sunny	24				10	100	14	6.6	113		28
5/28/2006	10:20 AM	Sunny	24				9	106	22	7.9	128		30
6/17/2006	11:10 AM	Sunny	24				8.5	94	22	7.7			30
7/15/2006	1:40 PM	Sunny	24				8	100	25	7	87.4		31

Eau Claire River, up stream from County Y bridge: Latitude: 46°14'31" Longitude: 91°47'26" (collected: 06/17/2005)

Date	Time Sample Collected	Weather	Turbidity Tube Reading	Habitat Rocky Score	Habitat Soft Score	Biotic Index	Dissolved O ₂	Dissolved O ₂ % Saturation	Water Temp	pH Level	Water Flow	Precipitation	Air Temp
6/11/2005	2:00 PM	Raining	24		32	2.5	9	105	20		116		24

St. Croix River, old Hwy 53 bridge: Latitude: 46°15'7" Longitude: 91°48'1" (collected: 06/17/2005)

Date	Time Sample Collected	Weather	Turbidity Tube Reading	Habitat Rocky Score	Habitat Soft Score	Biotic Index	Dissolved O ₂	Dissolved O ₂ % Saturation	Water Temp	pH Level	Water Flow	Precipitation	Air Temp
6/13/2005	1:30 PM	Raining	24	48		2.6	9	100	20		256		21
8/2/2005	9:30 AM	Sunny	24				8.5	98	24		133	0	28
8/31/2005	9:30 AM	Mostly Cloudy	24				8.5	83	16		170	0	15
9/27/2005	1:30 PM	Sunny	24			2.5	8	73	10		221	0	19.4
6/13/2006	12:00 PM	Mostly Cloudy	24		46	2.4	10	109	18		168		23
7/21/2006	11:00 AM	Sunny	24			2.5	8.5	96	23	6.6	125		27

St. Croix Headwaters Segment

Date	Time Sample Collected	Comments	Organisms	Rusty
6/26/2005	6:30 PM	Unable to get Water Flow - wind blew float up stream. Stream width 20 ft, avg depth 5.6 ft. Cross-Sec Area 1128 ft squared.	Orb Snail	
7/30/2005	8:00 PM	weather 7/28 - scattered showers. 7/29 - sunny		
8/21/2005	2:00 PM			
10/8/2005	6:45 PM	Water level 8 - 10 inches higher than usual due to heavy rainstorms in the past week.		
11/6/2005	1:05 PM	Note: Whirligig beetles and fairy shimp were found but not listed on Biotic Index. 11/5 Cloudy, temps in 40-50 F 11/4 Mostly Cloudy with off & on rain, temps in 40s	Stonefly, Dragonfly, Mussel or Clam, Damselfly, Orb Snail, Scud, Isopod, Tubifex Worm	
5/30/2006	7:30 PM	Conductivity 130 BOD = 0 (6/4/06 mg/1 9) 120 cm tube used 95cm converted to inches for database Note: pH was done with a meter The bottom material had a pervasive black residue with a rather strong odor of rotting vegetation that was almost metallic. Area smelled fetid.	Orb Snail	
6/27/2006	7:13 PM	Conductivity 120 BOD = 1 (6/27/06 11 mg/L - 7/2/06 10 mg/L) pH meter = 8.92 120 cm tube = full tube Weather past 2 days: Hot w/scattered showers. Current steam obs: Clear, normal smell.		
7/26/2006	7:50 PM	BOD 2.5 = 11 - 8.5 pH = 8.95 meter and 7.5 strip 121 cm tube was clear DO meter = 10.72 Weather: Sunny & Hot!!! Water is very clear and calm		

Eau Claire River, upstrea

Date	Time Sample Collected	Comments	Organisms	Rusty
6/11/2005	1:00 PM		Dragonfly, Damselfly, Scud, Tubifex Worm	
7/31/2005	2:40 PM	Sunny, hot, no rain for at least 6 days. Heavy veg.		
8/13/2005	10:50 AM	Aug 8 - .65 inches of Rain 8/13- cool, 70's, low humidity lush vegetation		
9/30/2005	1:10 PM	Colors near peak. Last rain 9/26/05 about 1/4 inch. Days since cloudy with highs in the 60 degrees F		
10/22/2005	1:00 PM	Water is COLD!!! 10/21 Rain in AM High 45 F 10/20 Sunny High 50 F	Dragonfly, Mussel or Clam	
5/7/2006	12:15 PM	NTUs		
5/28/2006	10:20 AM	Conductivity 140 Clear, windy, water low, hot and humid.		
6/17/2006	11:10 AM	Conductivity 140 DO meter 9.54 mg/L 120 cm turbidity tube - full tube. 6/17/06 Hot, humid, small amt of rain a couple of days ago. Lush vegetation, birds, and bugs active water low.		
7/15/2006	1:40 PM	Conductivity 140 pH meter 8.7, pH strip 7.0 Hot, very dry, water level very low.		

Eau Claire River, up stre:

Date	Time Sample Collected	Comments	Organisms	Rusty
6/11/2005	2:00 PM		Dragonfly, Mussel or Clam, Mayfly, Damselfly, Scud, Pouch Snail	

St. Croix River, old Hwy :

Date	Time Sample Collected	Comments	Organisms	Rusty
6/13/2005	1:30 PM	Team taking measures: Lynn Zimek, Fred and Judy Keith Note: Streamside Observations: Sandy w/rocks and some weeds, shoreline grassy.	Stonefly, Caddisfly, Dragonfly, Mussel or Clam, Mayfly, Damselfly, Orb Snail, Isopod, Leech	
8/2/2005	9:30 AM	WAV Team was Lynn Zimek, Fred and Judy Keith. Weather last two days was dry, sunny and temp in the 90s. Note more vegetation than last month.		
8/31/2005	9:30 AM	Lush reeds/grasses. Many more underwater grasses than previous visits. Weather last two days has been partly cloudy with small amount of precip.		
9/27/2005	1:30 PM	Note: windy (blowing upstream)	Caddisfly, Mayfly, Damselfly, Non-red Midge, Orb Snail, Scud	
6/13/2006	12:00 PM	Staff gauge = 1.26 ft Conductivity 130 pH 8.7 meter seems high BOD 1.5 (6/13/06 10 mg/L - 6/18/06 8.5 mg/L) Water level low, green vegetation,	Stonefly, Caddisfly, Crayfish, Mussel or Clam, Mayfly, Damselfly, Orb Snail, Scud, Isopod, Leech, Tubifex Worm	
7/21/2006	11:00 AM	Staff Gauge = 1.4 ft	Alderfly, Caddisfly, Crayfish, Mussel or Clam, Mayfly, Damselfly, Orb Snail, Scud, Pouch Snail, Isopod	