Table A1. Site characteristics for basic fixed stream sampling sites

[Minn., Minnesota; mi^2, square mile; Wis., Wisconsin]

Map identifier	Site identifier	Site name	Latitude	Longitude	County	Dominant surficial geology	Dominant glacial deposit composition	Land use (percent[1])						Drainage area (mi^2)
								Urban	Agriculture	Forest	Water	Wetland	Other	
15	05267000	Mississippi River near Royalton, Minn.	45°51’40”	094°21’30”	Morrison	Outwash-Alluvium	Calcareous	0.6	25	49	8.6	16	0.9	11600
21	05276005	North Fork Crow River above Paynesville, Minn.	45°22’38”	094°47’00”	Kandiyohi	Outwash-Alluvium	Calcareous	0.3	90	2.1	1.7	5.6	0.1	232
29	05286290	Cedar Creek near Coopers Corner, Minn.	45°23’31”	093°12’44”	Anoka	Outwash-Alluvium	Calcareous	0.1	69	7.8	0	23	0	27.3
33	05288500	Mississippi River near Anoka, Minn.	45°07’36”	093°17’48”	Hennepin	Outwash-Alluvium	Calcareous	1.1	45	34	7.6	12	0.7	19200
40	05288705	Shingle Creek at Queen Ave. in Minneapolis, Minn.	45°03’00”	093°18’36”	Hennepin	Outwash-Alluvium	Calcareous	71	20	0.9	4.0	0.7	3.5	28.2
64	05320270	Little Cobb River near Beauford, Minn.	43°59’48”	093°54’30”	Blue Earth	Till plain-Moraine	Calcareous	0.2	94	0.5	0.6	4.0	0	130
69	05330000	Minnesota River near Jordan, Minn.	44°41’35”	093°38’30”	Carver	Till plain-Moraine	Calcareous	0.9	94	1.7	2.2	1.1	0.2	16200
73	05330902	Nine Mile Creek near James Circle at Bloomington, Minn.	44°48’26”	093°18’05”	Hennepin	Till plain-Moraine	Calcareous	87	5.7	2.2	3.7	1.7	0	44.6
77	05331580	Mississippi River below Lock & Dam #2 at Hastings, Minn.	44°44’48”	092°51’08”	Dakota	Till plain-Moraine	Calcareous	2.5	66	18	5.2	7.1	0.4	37000
79	05331833	Namekagon River at Leonards, Wis.	46°10’18”	091°19’50”	Bayfield	Outwash-Alluvium	Siliceous	0.7	1.8	78	6.3	12	1.0	128
82	05333500	St. Croix River near Danbury, Wis.	46°04’28”	092°14’50”	Burnett	Outwash-Alluvium	Siliceous	0.3	4.9	79	4.0	12	0.3	1510
95	05340500	St. Croix River at St. Croix Falls, Wis.	45°24’25”	092°38’49”	Polk	Till plain-Moraine	Siliceous	0.4	26	56	2.8	14	0.2	6149
108	05355250	Mississippi River at Red Wing, Minn.	44°36’36”	092°36’36”	Goodhue	Till plain-Moraine	Calcareous	2.3	62	23	4.8	7.8	0.4	46800

[1]Percentages associated with each site may not total 100 percent because of rounding.

Table A2. Types of samples collected and analyzed at all stream sites

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			Water								Streambed sediment					Fish Tissue		Biological Communties			Field Measurements				
Map identifier	Site identifier	Site name	Chlorophyll *a* (B2)	Fecal coliform bacteria	Major ions and inorganic constituents (B3)	Nutrients (B4)	Organic carbon (B5)	Pesticides (B7-B10)	Volatile organic compounds (B6)	Suspended sediment (B11)	Trace elements and other constituents (B12)	Organic carbon (B13)	Organochlorine and PCB compounds (B14)	BNA extractable and SVOCs (B15)	Streambed sediment size (B11)	Trace elements (B16)	Organochlorine and PCB compounds (B17)	Fish	Invertebrates	Algae	Physical and chemical properties (B1)	Continuous streamflow monitoring	Continuous water temperature monitoring (B1)	Continuous specific conductance (B1)	Habitat surveys
1	05200020	Mississippi River at Hwy 200 near Lake Itasca, Minn.	x	--	x	x	x	x	--	x	--	--	--	--	--	--	--	x	x	--	x	--	--	--	x
2	05200510	Mississippi River near Bemidji, Minn.	x	--	x	x	x	x	--	x	--	--	--	--	--	--	--	--	--	--	x	--	--	--	--
3	05200940	Mississippi River near Pennington, Minn.	x	--	x	x	x	x	--	x	--	--	--	--	--	--	--	x	x	--	x	--	--	--	x
4	05201550	Mississippi River at Hwy 2 near Ball Club, Minn.	x	--	x	x	x	x	--	x	--	--	--	--	--	--	--	--	--	--	x	--	--	--	--
5	05210000	Mississippi River at Days High Landing near Deer River, Minn.	x	--	x	x	x	x	--	x	--	--	--	--	--	--	--	--	--	--	x	--	--	--	--
6	05211000	Mississippi River at Grand Rapids, Minn.	x	--	x	x	x	x	--	x	x	x	x	x	x	x	x	x	x	--	x	--	--	--	x
7	05213500	Mississippi River near Blackberry, Minn.	x	--	x	x	x	x	--	x	--	--	--	--	--	--	--	x	x	--	x	--	--	--	x
8	05217600	Mississippi River at Jacobson, Minn.	x	--	x	x	x	x	--	x	--	--	--	--	--	--	--	--	--	--	x	--	--	--	--
9	05220600	Mississippi River at Palisade, Minn.	x	--	x	x	x	x	--	x	--	--	--	--	--	--	--	x	x	--	x	--	--	--	x
10	05221060	Mississippi River at Hwy 169 near Hassman, Minn.	x	--	x	x	x	x	--	x	--	--	--	--	--	--	--	--	--	--	x	--	--	--	--
11	05227500	Mississippi River at Aitkin, Minn.	x	--	x	x	x	x	--	x	--	--	--	--	--	--	--	x	x	--	x	--	--	--	x
12	05242300	Mississippi River at Brainerd, Minn.	x	--	x	x	x	x	--	x	--	--	--	--	--	--	--	x	x	--	x	--	--	--	x
13	05261000	Mississippi River near Fort Ripley, Minn.	x	--	x	x	x	x	--	x	--	--	--	--	--	--	--	x	x	--	x	--	--	--	x
14	05263500	Mississippi River below Little Falls, Minn.	x	--	x	x	x	x	--	x	x	x	x	x	x	x	x	--	--	--	x	--	--	--	--
15	05267000	Mississippi River near Royalton, Minn.	X	--	X	X	X	x	--	X	--	--	--	--	--	--	--	X	X	X	X	X	X	--	x
16	05268000	Platte River at Royalton, Minn.	--	--	--	x	--	--	--	x	--	--	--	--	--	--	--	--	--	--	x	--	--	--	--

Table A2. Types of samples collected and analyzed at all stream sites--Continued

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			Water								Streambed sediment					Fish Tissue		Biological Communities			Field Measurements				
Map identifier	Site identifier	Site name	Chlorophyll *a* (B2)	Fecal coliform bacteria	Major ions and inorganic constituents (B3)	Nutrients (B4)	Organic carbon (B5)	Pesticides (B7-B10)	Volatile organic compounds (B6)	Suspended sediment (B11)	Trace elements and other constituents (B12)	Organic carbon (B13)	Organochlorine and PCB compounds (B14)	BNA extractable and SVOCs (B15)	Streambed sediment size (B11)	Trace elements (B16)	Organochlorine and PCB compounds (B17)	Fish	Invertebrates	Algae	Physical and chemical properties (B1)	Continuous streamflow monitoring	Continuous water temperature monitoring (B1)	Continuous specific conductance (B1)	Habitat surveys
17	05270380	Sauk River at Richmond, Minn.	--	--	--	--	--	--	--	--	x	x	x	x	x	x	x	--	--	--	x	--	--	--	--
18	05270500	Sauk River near St. Cloud, Minn.	--	--	--	x	--	--	--	x	--	--	--	--	--	--	--	--	--	--	x	--	--	--	--
19	05270700	Mississippi River at St. Cloud, Minn.	x	--	x	x	x	x	--	x	--	--	--	--	--	--	--	x	x	--	x	--	--	--	x
20	05275000	Elk River near Big Lake, Minn.	--	--	--	x	--	--	--	x	--	--	--	--	--	--	--	--	--	--	x	--	--	--	--
21	05276005	North Fork Crow River above Paynesville, Minn.	X	--	X	X	X	x	--	X	x	x	x	x	x	x	x	X	X	X	X	X	X	X	x
22	05278400	North Fork Crow River near Rockford, Minn.	--	--	--	x	--	--	--	x	--	--	--	--	--	--	--	--	--	--	x	--	--	--	--
23	05278590	South Fork Crow River at Biscay, Minn.	--	--	--	x	--	--	--	x	--	--	--	--	--	--	--	--	--	--	x	--	--	--	--
24	05278930	Buffalo Creek near Glencoe, Minn.	--	--	--	x	--	--	--	x	--	--	--	--	--	--	--	--	--	--	x	--	--	--	--
25	05280000	Crow River at Rockford, Minn.	--	--	--	x	--	--	--	x	--	--	--	--	--	--	--	--	--	--	x	--	--	--	--
26	05280400	Crow River below State Highway 101 at Dayton, Minn.	--	--	--	--	--	--	--	--	x	x	x	x	x	x	x	--	--	--	x	--	--	--	--
27	05283500	Mississippi River at Anoka, Minn.	x	--	x	x	x	x	--	x	--	--	--	--	--	--	--	--	--	--	x	--	--	--	x
28	05286000	Rum River near St. Francis, Minn.	--	--	--	x	--	--	--	x	--	--	--	--	--	--	--	--	--	--	x	--	--	--	--
29	05286290	Cedar Creek near Coopers Corner, Minn.	X	--	X	X	X	x	--	X	x	x	x	x	x	x	x	x	x	x	X	X	X	X	x
30	05286798	Ford Brook at Green Valley Road in Ramsey, Minn.	x	x	x	x	x	x	--	x	--	--	--	--	--	--	--	x	x	x	x	--	--	--	x
31	05287000	Rum River at Anoka, Minn.	--	--	--	--	--	--	--	--	x	x	x	x	x	x	x	--	--	--	x	--	--	--	--
32	05287890	Elm Creek near Champlin, Minn.	x	x	x	x	x	x	--	x	--	--	--	--	--	--	--	--	--	--	x	--	--	--	x
33	05288500	Mississippi River near Anoka, Minn.	X	--	X	X	X	x	--	X	x	x	x	x	x	x	x	x	x	x	X	X	X	X	x
34	05288475	Coon Creek at 131st Street in Coon Rapids, Minn.	x	x	x	x	x	x	--	x	--	--	--	--	--	--	--	--	x	x	x	--	--	--	x

Table A2. Types of samples collected and analyzed at all stream sites--Continued

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			Water								Streambed sediment					Fish Tissue		Biological Communities			Field Measurements				
Map identifier	Site identifier	Site name	Chlorophyll *a* (B2)	Fecal coliform bacteria	Major ions and inorganic constituents (B3)	Nutrients (B4)	Organic carbon (B5)	Pesticides (B7-B10)	Volatile organic compounds (B6)	Suspended sediment (B11)	Trace elements and other constituents (B12)	Organic carbon (B13)	Organochlorine and PCB compounds (B14)	BNA extractable and SVOCs (B15)	Streambed sediment size (B11)	Trace elements (B16)	Organochlorine and PCB compounds (B17)	Fish	Invertebrates	Algae	Physical and chemical properties (B1)	Continuous streamflow monitoring	Continuous water temperature monitoring (B1)	Continuous specific conductance (B1)	Habitat surveys
35	05288487	Sand Creek at Xeon Street in Coon Rapids, Minn.	x	x	x	x	x	x	--	x	--	--	--	--	--	--	--	x	x	x	x	--	--	--	x
36	05288598	Rice Creek at Central Ave. in Fridley, Minn.	x	x	x	x	x	x	--	x	--	--	--	--	--	--	--	x	x	x	x	--	--	--	x
37	05288695	Shingle Creek at Zane Ave. at Brooklyn Park, Minn.	--	--	--	--	--	--	--	--	x	x	x	x	x	x	x	--	--	--	x	--	--	--	--
38	05288700	Shingle Creek at Brooklyn Center, Minn.	--	--	x	x	x	--	--	x	--	--	--	--	--	--	--	--	--	--	x	--	--	--	--
39	450401-093183401	Parking Lot Outflow at Public Library at Brooklyn Center, Minn.	--	--	--	--	x	--	x	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
40	05288705	Shingle Creek at Queen Ave in Minneapolis, Minn.	X	x	X	X	X	X	X	X	x	x	x	x	x	x	x	X	X	X	X	X	X	X	x
41	05288710	Shingle Creek at 46th Street in Minneapolis, Minn.	--	--	--	--	--	--	--	--	x	x	x	x	x	x	x	--	--	--	x	--	--	--	--
42	05288730	Mississippi River at 28th Ave. in Minneapolis, Minn.	--	--	--	--	--	--	--	--	x	x	x	x	x	x	x	--	--	--	x	--	--	--	--
43	05288839	Bassett Creek at Dresden Lane in Golden Valley, Minn.	x	x	x	x	x	x	--	x	--	--	--	--	--	--	--	x	x	x	x	--	--	--	x
44	05289600	Minnehaha Creek at Nicollet Ave. in Minneapolis, Minn.	x	x	x	x	x	x	--	x	--	--	--	--	--	--	--	x	x	x	x	--	--	--	x
45	05303900	Shakopee Creek near Louriston, Minn.	x	x	x	x	x	x	--	x	--	--	--	--	--	--	--	--	x	x	x	--	--	--	x
46	05304795	Dry Weather Creek near Watson, Minn.	x	--	--	x	x	x	--	x	--	--	--	--	--	--	--	x	x	x	x	--	--	--	x
47	05312000	Spring Creek near Spring Creek, Minn.	x	--	--	x	x	x	--	x	--	--	--	--	--	--	--	x	x	x	x	--	--	--	x
48	05314500	Hawk Creek near Maynard, Minn.	x	--	--	x	x	x	--	x	--	--	--	--	--	--	--	x	x	x	x	--	--	--	x
49	05314510	Chetomba Creek near Renville, Minn.	x	--	--	x	x	x	--	x	--	--	--	--	--	--	--	x	x	x	x	--	--	--	x
50	05316985	Sleepy Eye Creek near Springfield, Minn.	x	--	--	x	x	x	--	x	--	--	--	--	--	--	--	x	x	x	x	--	--	--	x
51	05317170	Little Cottonwood River near Searles, Minn.	x	--	--	x	x	x	--	x	--	--	--	--	--	--	--	x	x	x	x	--	--	--	x
52	05317800	West Branch Blue Earth River above Elmore, Minn.	x	--	--	x	x	x	--	x	--	--	--	--	--	--	--	x	x	x	x	--	--	--	x

Table A2. Types of samples collected and analyzed at all stream sites--Continued

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Map identifier	Site identifier	Site name	Chlorophyll *a* (B2)	Fecal coliform bacteria	Major ions and inorganic constituents (B3)	Nutrients (B4)	Organic carbon (B5)	Pesticides (B7-B10)	Volatile organic compounds (B6)	Suspended sediment (B11)	Trace elements and other constituents (B12)	Organic carbon (B13)	Organochlorine and PCB compounds (B14)	BNA extractable and SVOCs (B15)	Streambed sediment size (B11)	Trace elements (B16)	Organochlorine and PCB compounds (B17)	Fish	Invertebrates	Algae	Physical and chemical properties (B1)	Continuous streamflow monitoring	Continuous water temperature monitoring (B1)	Continuous specific conductance (B1)	Habitat surveys
53	05317828	Coon Creek at U.S. Hwy. 169 near Blue Earth, Minn.	x	--	--	x	x	x	--	x	--	--	--	--	--	--	--	x	x	x	x	--	--	--	x
54	05318050	East Branch Blue Earth River below Bricelyn, Minn.	x	--	--	x	x	x	--	x	--	--	--	--	--	--	--	--	x	x	x	--	--	--	x
55	05318138	South Creek near Huntley, Minn.	x	--	--	x	x	x	--	x	--	--	--	--	--	--	--	x	x	x	x	--	--	--	x
56	05318178	Center Creek at Huntley, Minn.	x	--	--	x	x	x	--	x	--	--	--	--	--	--	--	x	x	x	x	--	--	--	x
57	05318240	Elm Creek near Northrop, Minn.	x	--	--	x	x	x	--	x	--	--	--	--	--	--	--	x	x	x	x	--	--	--	x
58	05318630	Watonwan River near St. James, Minn.	x	--	--	x	x	x	--	x	--	--	--	--	--	--	--	x	x	x	x	--	--	--	x
59	05318800	St. James Creek near La Salle, Minn.	x	--	--	x	x	x	--	x	--	--	--	--	--	--	--	--	x	x	x	--	--	--	x
60	05319050	South Fork Watonwan River near St. James, Minn.	x	--	--	x	x	x	--	x	--	--	--	--	--	--	--	x	x	x	x	--	--	--	x
61	05319360	Perch Creek below Vernon Center, Minn.	x	--	--	x	x	x	--	x	--	--	--	--	--	--	--	x	x	x	x	--	--	--	x
62	05320080	Le Sueur River near Wilton, Minn.	x	--	--	x	x	x	--	x	--	--	--	--	--	--	--	x	x	x	x	--	--	--	x
63	05320230	Cobb River near Mapleton, Minn.	x	--	--	x	x	x	--	x	--	--	--	--	--	--	--	x	x	x	x	--	--	--	x
64	05320270	Little Cobb River near Beauford, Minn.	X	--	X	X	X	X	--	X	x	x	x	x	x	x	x	X	X	X	X	X	X	X	x
65	05320450	Maple River near Sterling Center, Minn.	x	--	--	x	x	x	--	x	--	--	--	--	--	--	--	--	x	x	x	--	--	--	x
66	05326150	Rush River near New Rome, Minn.	x	--	--	x	x	x	--	x	--	--	--	--	--	--	--	x	x	x	x	--	--	--	x
67	05326250	South Branch Rush River near Rush River, Minn.	x	--	--	x	x	x	--	x	--	--	--	--	--	--	--	x	x	x	x	--	--	--	x
68	05326700	High Island Creek near Arlington, Minn.	x	--	--	x	x	x	--	x	--	--	--	--	--	--	--	x	x	x	x	--	--	--	x
69	05330000	Minnesota River near Jordan, Minn.	X	--	X	X	X	X	x	X	x	x	x	x	x	x	x	X	X	X	X	X	X	X	x
70	05330702	Minnesota River tributary at Beech St. in Chaska, Minn.	x	x	x	x	x	x	--	x	--	--	--	--	--	--	--	x	x	x	x	--	--	--	x

Table A2. Types of samples collected and analyzed at all stream sites--Continued

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71	05330750	Riley Creek at Eden Prairie, Minn.	x	x	x	x	x	x	--	x	--	--	--	--	--	--	--	x	x	x	x	--	--	--	x
72	05330801	Purgatory Creek at Pioneer Tr. in Eden Prairie, Minn.	x	x	x	x	x	x	--	x	--	--	--	--	--	--	--	x	x	x	x	--	--	--	x
73	05330902	Nine Mile Creek near James Circle at Bloomington, Minn.	X	x	X	X	X	X	X	X	x	x	x	x	x	x	x	X	X	X	X	X	X	X	x
74	05331045	Battle Creek at Meadow Lane in Woodbury, Minn.	--	x	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
75	05331050	Battle Creek below McKnight Road in St. Paul, Minn.	x	x	x	x	x	x	--	x	--	--	--	--	--	--	--	x	x	x	x	--	--	--	x
76	05331570	Mississippi River at Nininger, Minn.	--	--	--	--	--	--	--	--	x	x	x	x	x	x	x	--	--	--	x	--	--	--	--
77	05331580	Mississippi River below Lock & Dam #2 at Hastings, Minn.	X	--	X	X	X	X	x	X	--	--	--	--	--	--	--	X	X	X	X	X	X	X	x
78	05331775	St. Croix River near Woodland Corner, Wis.	--	--	x	x	--	--	--	x	--	--	--	--	--	--	--	--	--	--	x	--	--	--	--
79	05331833	Namekagon River at Leonards, Wis.	X	--	X	X	X	x	--	X	x	x	x	x	x	x	x	X	X	X	X	X	X	X	x
80	05331873	Namekagon River above Spring Lake Creek near Hayward, Wis.	--	--	--	--	--	--	--	--	x	x	x	x	x	x	x	--	--	--	x	--	--	--	--
81	05333400	Namekagon River near Woodland Corner, Wis.	--	--	x	x	--	--	--	x	--	--	--	--	--	--	--	--	--	--	x	--	--	--	--
82	05333500	St. Croix River near Danbury, Wis.	X	--	X	X	X	x	--	X	x	x	x	x	x	x	x	X	X	X	X	X	X	X	x
83	053350006	Yellow River near Danbury, Wis.	--	--	--	x	--	--	--	x	--	--	--	--	--	--	--	--	--	--	x	--	--	--	--
84	05335170	Crooked Creek near Hinckley, Minn.	--	--	--	x	--	--	--	x	--	--	--	--	--	--	--	--	--	--	x	--	--	--	--
85	05335326	Clam River near Siren, Wis.	--	--	x	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	x	--	--	--	--
86	05335500	Clam River near Webster, Wis.	--	--	--	x	--	--	--	x	--	--	--	--	--	--	--	--	--	--	x	--	--	--	--
87	05336180	Kettle River near Kettle River, Minn.	--	--	--	--	--	--	--	--	x	x	x	x	x	x	x	--	--	--	x	--	--	--	--

Table A2. Types of samples collected and analyzed at all stream sites--Continued

[X, sampled or analyzed routinely; x, sampled or analyzed once or occasionally; --, not sampled or analyzed; PCB, polychlorinated biphenyl; BNA, base-neutral-acid extractable; SVOC, semivolatile organic compound; codes in parentheses of column headings refer to tables describing methods in Appendix B]

			Water								Streambed sediment					Fish Tissue		Biological Communities			Field Measurements				
Map identifier	Site identifier	Site name	Chlorophyll *a* (B2)	Fecal coliform bacteria	Major ions and inorganic constituents (B3)	Nutrients (B4)	Organic carbon (B5)	Pesticides (B7-B10)	Volatile organic compounds (B6)	Suspended sediment (B11)	Trace elements and other constituents (B12)	Organic carbon (B13)	Organochlorine and PCB compounds (B14)	BNA extractable and SVOCs (B15)	Streambed sediment size (B11)	Trace elements (B16)	Organochlorine and PCB compounds (B17)	Fish	Invertebrates	Algae	Physical and chemical properties (B1)	Continuous streamflow monitoring	Continuous water temperature monitoring (B1)	Continuous specific conductance (B1)	Habitat surveys
88	05336700	Kettle River below Sandstone, Minn.	--	--	--	x	--	--	--	x	--	--	--	--	--	--	--	--	--	--	x	--	--	--	--
89	460041-092502001	Kettle River near Hinckley, Minn	--	--	x	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	x	--	--	--	--
90	05338500	Snake River near Pine City, Minn.	--	--	--	x	--	--	--	x	--	--	--	--	--	--	--	--	--	--	x	--	--	--	--
91	05338975	Wood River at State Highway 70 near Grantsburg, Wis.	--	--	--	x	--	--	--	x	--	--	--	--	--	--	--	--	--	--	x	--	--	--	--
92	05339770	St. Croix River near Sunrise, Minn.	--	--	--	--	--	--	--	--	x	x	x	x	x	x	x	--	--	--	x	--	--	--	--
93	453049-092512101	Sunrise River at Sunrise, Minn.	--	--	--	x	--	--	--	x	--	--	--	--	--	--	--	--	--	--	x	--	--	--	--
94	05340370	Trade River near Trade River, Wis.	--	--	--	x	--	--	--	x	--	--	--	--	--	--	--	--	--	--	x	--	--	--	--
95	05340500	St. Croix River at St. Croix Falls, Wis.	X	--	X	X	X	X	--	X	--	--	--	--	--	--	--	X	X	X	X	X	X	X	x
96	053405524	St. Croix River tributary near Osceola, Wis.	--	--	--	x	--	--	--	x	--	--	--	--	--	--	--	--	--	--	x	--	--	--	--
97	05341125	Apple River near Range, Wis.	--	--	--	x	--	--	--	x	--	--	--	--	--	--	--	--	--	--	x	--	--	--	--
98	05341500	Apple River near Somerset, Wis.	--	--	--	x	--	--	--	x	--	--	--	--	--	--	--	--	--	--	x	--	--	--	--
99	05341540	Browns Creek at Stillwater, Minn.	--	--	--	x	--	--	--	x	--	--	--	--	--	--	--	--	--	--	x	--	--	--	--
100	05341552	St. Croix River at Hudson, Wis.	--	--	--	--	--	--	--	--	x	x	x	x	x	x	x	--	--	--	x	--	--	--	--
101	05341740	Willow River at Burkhardt, Wis.	--	--	--	x	--	--	--	x	--	--	--	--	--	--	--	--	--	--	x	--	--	--	--
102	05342000	Kinnickinnic River near River Falls, Wis.	--	--	--	x	--	--	--	x	--	--	--	--	--	--	--	--	--	--	x	--	--	--	--
103	05344490	St. Croix River at Prescott, Wis.	--	--	--	x	--	--	--	x	--	--	--	--	--	--	--	--	--	--	x	--	--	--	--
104	05345000	Vermillion River near Empire, Minn.	--	--	--	x	--	--	--	x	x	x	x	x	x	x	x	--	--	--	x	--	--	--	--

Table A2. Types of samples collected and analyzed at all stream sites--Continued

[X, sampled or analyzed routinely; x, sampled or analyzed once or occasionally; --, not sampled or analyzed; PCB, polychlorinated biphenyl; BNA, base-neutral-acid extractable; SVOC, semivolatile organic compound; codes in parentheses of column headings refer to tables describing methods in Appendix B]

			Water								Streambed sediment					Fish Tissue		Biological Communities			Field Measurements				
Map identifier	Site identifier	Site name	Chlorophyll *a* (B2)	Fecal coliform bacteria	Major ions and inorganic constituents (B3)	Nutrients (B4)	Organic carbon (B5)	Pesticides (B7-B10)	Volatile organic compounds (B6)	Suspended sediment (B11)	Trace elements and other constituents (B12)	Organic carbon (B13)	Organochlorine and PCB compounds (B14)	BNA extractable and SVOCs (B15)	Streambed sediment size (B11)	Trace elements (B16)	Organochlorine and PCB compounds (B17)	Fish	Invertebrates	Algae	Physical and chemical properties (B1)	Continuous streamflow monitoring	Continuous water temperature monitoring (B1)	Continuous specific conductance (B1)	Habitat surveys
105	05353800	Straight River near Faribault, Minn.	--	--	--	x	--	--	--	x	--	--	--	--	--	--	--	--	--	--	x	--	--	--	--
106	05355090	Cannon River at Lake Byllesby near Cannon Falls, Minn.	--	--	--	--	--	--	--	--	x	x	x	x	x	x	x	--	--	--	x	--	--	--	--
107	05355200	Cannon River at Welch, Minn.	--	--	--	x	--	--	--	x	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
108	05355250	Mississippi River at Red Wing, Minn.	X	--	X	X	X	x	x	X	--	--	--	--	--	--	--	X	X	X	X	X	X	X	x
109	05355330	Rush River near Maiden Rock, Wis.	--	--	--	x	--	--	--	x	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
110	443334-092205201	Mississippi River in Lake Pepin near Frontenac, Minn.	--	--	--	--	--	--	--	--	x	x	x	x	x	--	--	--	--	--	x	--	--	--	--
111	442912-092174201	Mississippi River in Lake Pepin near Central Point, Minn.	--	--	--	--	--	--	--	--	x	x	x	x	x	x	x	--	--	--	x	--	--	--	--
112	442633-092130801	Mississippi River in Lake Pepin near Lake City, Minn.	--	--	--	--	--	--	--	--	x	x	x	x	x	--	--	--	--	--	x	--	--	--	--

Table A3. Site characteristics for streambed sediment and tissue sampling sites

[mi^2, square mile; Minn., Minnesota; Wis., Wisconsin]

Map identifier	Site identifier	Site name	Latitude	Longitude	County	Dominant surficial geology	Dominant glacial deposit composition	Land use (percent[1])						Drainage area (mi^2)
								Urban	Agriculture	Forest	Water	Wetland	Other	
6	05211000	Mississippi River at Grand Rapids, Minn.	47°13’56”	093°31’48”	Itasca	Till plain-Moraine	Calcareous	0.4	8.8	60	16	14	0.8	3320
14	05263500	Mississippi River below Little Falls, Minn.	45°56’22”	094°23’20”	Morrison	Till plain-Moraine	Calcareous	0.6	24	49	8.7	16	0.9	11300
17	05270380	Sauk River at Richmond, Minn.	45°26’56”	094°31’30”	Stearns	Till plain-Moraine	Calcareous	0.9	84	8.1	4.2	3.0	0.1	818
21	05276005	North Fork Crow River above Paynesville, Minn.	45°22’38”	094°47’00”	Kandiyohi	Outwash-Alluvium	Calcareous	0.3	90	2.1	1.7	5.6	0.1	232
26	05280400	Crow River below State Highway 101 at Dayton, Minn.	45°13’20”	093°31’12”	Hennepin	Till plain-Moraine	Calcareous	1.4	87	3.8	4.9	2.8	0.2	2770
29	05286290	Cedar Creek near Coopers Corner, Minn.	45°23’31”	093°12’44”	Anoka	Outwash-Alluvium	Calcareous	0.1	69	7.8	0	23	0	27.3
31	05287000	Rum River at Anoka, Minn.	45°12’41”	093°23’11”	Anoka	Till plain-Moraine	Calcareous	0.7	49	21	15	14	0.6	1560
33	05288500	Mississippi River near Anoka, Minn.	45°07’36”	093°17’48”	Hennepin	Outwash-Alluvium	Calcareous	1.1	45	34	7.6	12	0.7	19200
37	05288695	Shingle Creek at Zane Ave. at Brooklyn Park, Minn.	45°05’32”	093°21’22”	Hennepin	Outwash-Alluvium	Calcareous	57	30	1.3	5.9	1	5.1	19.2
40	05288705	Shingle Creek at Queen Ave. in Minneapolis, Minn.	45°03’00”	093°18’36”	Hennepin	Outwash-Alluvium	Calcareous	71	20	0.9	4.0	0.7	3.5	28.2
41	05288710	Shingle Creek at 46th Street in Minneapolis, Minn.	45°02’17”	093°17’30”	Hennepin	Outwash-Alluvium	Calcareous	79	14	0.6	3.9	0.5	2.4	40.8
42	05288730	Mississippi River at 28th Ave. in Minneapolis, Minn.	45°01’12”	093°16’31”	Hennepin	Till plain-Moraine	Calcareous	1.7	44	33	7.6	12	0.7	19600
64	05320270	Little Cobb River near Beauford, Minn.	43°59’48”	093°54’30”	Blue Earth	Till plain-Moraine	Calcareous	0.2	94	0.5	0.6	4.0	0	130
69	05330000	Minnesota River near Jordan, Minn.	44°41’35”	093°38’30”	Carver	Till plain-Moraine	Calcareous	0.9	94	1.7	2.2	1.1	0.2	16200
73	05330902	Nine Mile Creek near James Circle at Bloomington, Minn.	44°48’26”	093°18’05”	Hennepin	Till plain-Moraine	Calcareous	87	5.7	2.2	3.7	1.7	0	44.6

Table A3. Site characteristics for streambed sediment and tissue sampling sites--Continued

[mi^2, square mile; Minn., Minnesota; Wis., Wisconsin]

Map identifier	Site identifier	Site name	Latitude	Longitude	County	Dominant surficial geology	Dominant glacial deposit composition	Land use (percent[1])						Drainage area (mi^2)
								Urban	Agriculture	Forest	Water	Wetland	Other	
76	05331570	Mississippi River at Nininger, Minn.	44°46’22”	092°54’07”	Dakota	Till plain-Moraine	Calcareous	2.5	66	19	5.2	7.1	0.4	37000
79	05331833	Namekagon River at Leonards, Wis.	46°10’18”	091°19’50”	Bayfield	Outwash-Alluvium	Siliceous	0.7	1.8	78	6.3	12	1.0	128
80	05331873	Namekagon River above Spring Lake Creek near Hayward, Wis.	45°59’22”	091°30’33”	Sawyer	Outwash-Alluvium	Siliceous	1.4	5.5	78	4.7	9.6	0.7	208
82	05333500	St. Croix River near Danbury, Wis.	46°04’28”	092°14’50”	Burnett	Outwash-Alluvium	Siliceous	0.3	4.9	79	4.0	12	0.3	1510
87	05336180	Kettle River near Kettle River, Minn.	46°29’03”	092°53’19”	Carlton	Till plain-Moraine	Siliceous	0.0	23.4	43.4	0.7	32.5	0.0	157.2
92	05339770	St. Croix River near Sunrise, Minn.	45°34’14”	092°52’30”	Chisago	Outwash-Alluvium	Siliceous	0.4	24	59	2.8	15	0.2	5510
100	05341552	St. Croix River at Hudson, Wis.	44°58’57”	092°46’07”	St. Croix	Till plain-Moraine	Siliceous	0.7	34	49	3.2	13	0.2	7340
104	05345000	Vermillion River near Empire, Minn.	44°40’00”	093°03’17”	Dakota	Outwash-Alluvium	Calcareous	16	76	3.9	1.7	0.5	1.2	129
106	05355090	Cannon River at Lake Byllesby near Cannon Falls, Minn.	44°30’35”	092°57’00”	Goodhue	Till plain-Moraine	Calcareous	3.1	89	2.6	3.1	2.3	0.2	1150
110	443334-092205201	Mississippi River in Lake Pepin near Frontenac, Minn.	44°33’34”	092°20’52”	Goodhue	Till plain-Moraine	Calcareous	2.3	62	22	4.8	7.7	0.4	47300
111	442912-092174201	Mississippi River in Lake Pepin near Central Point, Minn.	44°29’12”	092°17’42”	Goodhue	Till plain-Moraine	Calcareous	2.3	62	22	4.8	7.7	0.4	47300
112	442633-092130801	Mississippi River in Lake Pepin near Lake City, Minn.	44°26’33”	092°13’08”	Wabasha	Till plain-Moraine	Calcareous	2.3	62	22	4.8	7.7	0.4	47300

[1]Percentages associated with each site may not total 100 percent because of rounding

Table A4. Site characteristics for streams sampled during the snowmelt synoptic study

[mi^2, square mile; Minn., Minnesota; Wis., Wisconsin]

Map identifier	Site identifier	Site name	Latitude	Longitude	County	Dominant surficial geology	Dominant glacial deposit composition	Land use (percent[1])						Drainage area (mi^2)
								Urban	Agriculture	Forest	Water	Wetland	Other	
15	05267000	Mississippi River near Royalton, Minn.	45°51’40”	094°21’30”	Morrison	Outwash-Alluvium	Calcareous	0.6	25	49	8.6	16	0.9	11600
16	05268000	Platte River at Royalton, Minn.	45°50’43”	094°17’40”	Morrison	Outwash-Alluvium	Calcareous	0.4	64	23	1.9	10	0.1	424
18	05270500	Sauk River near St. Cloud, Minn.	45°33’35”	094°14’00”	Stearns	Outwash-Alluvium	Calcareous	1.1	83	8.4	4.3	2.7	0.1	1030
20	05275000	Elk River near Big Lake, Minn.	45°20’02”	093°40’00”	Sherburne	Outwash-Alluvium	Calcareous	0.8	75	10	1.3	13	0	549
21	05276005	North Fork Crow River above Paynesville, Minn.	45°22’38”	094°47’00”	Kandiyohi	Outwash-Alluvium	Calcareous	0.3	90	2.1	1.7	5.6	0.1	232
22	05278400	North Fork Crow River near Rockford, Minn.	45°05’44”	093°47’18”	Wright	Till plain-Moraine	Calcareous	1.2	83	6.3	6.0	3.5	0.1	1350
23	05278590	South Fork Crow River at Biscay, Minn.	44°50’11”	094°17’16”	McLeod	Till plain-Moraine	Calcareous	2.3	89	0.6	6.0	2.2	0.1	477
24	05278930	Buffalo Creek near Glencoe, Minn.	44°45’50”	094°05’27”	McLeod	Till plain-Moraine	Calcareous	0.7	96	0	1.7	0.9	0.1	373
25	05280000	Crow River at Rockford, Minn.	45°05’12”	093°44’02”	Wright	Till plain-Moraine	Calcareous	1.4	87	3.7	4.8	2.7	0.1	2640
28	05286000	Rum River near St. Francis, Minn.	45°19’40”	093°22’20”	Anoka	Outwash-Alluvium	Calcareous	0.5	47	22	16	14	0.5	1380
33	05288500	Mississippi River near Anoka, Minn.	45°07’36”	093°17’48”	Hennepin	Outwash-Alluvium	Calcareous	1.1	45	34	7.6	12	0.7	19200
40	05288705	Shingle Creek at Queen Ave in Minneapolis, Minn.	45°03’00”	093°18’36”	Hennepin	Outwash-Alluvium	Calcareous	71	20	0.9	4.0	0.7	3.5	28.2
64	05320270	Little Cobb River near Beauford, Minn.	43°59’48”	093°54’30”	Blue Earth	Till plain-Moraine	Calcareous	0.2	94	0.5	0.6	4.0	0	130
69	05330000	Minnesota River near Jordan, Minn.	44°41’35”	093°38’30”	Scott	Till plain-Moraine	Calcareous	0.9	94	1.7	2.2	1.1	0.2	16200

Table A4. Site characteristics for streams sampled during the snowmelt synoptic study--Continued

[mi^2, square mile; Minn., Minnesota; Wis., Wisconsin]

Map identifier	Site identifier	Site name	Latitude	Longitude	County	Dominant surficial geology	Dominant glacial deposit composition	Land use (percent[1])						Drainage area (mi^2)
								Urban	Agriculture	Forest	Water	Wetland	Other	
73	05330902	Nine Mile Creek near James Circle at Bloomington, Minn.	44°48’26”	093°18’05”	Hennepin	Till plain-Moraine	Calcareous	87	5.7	2.2	3.7	1.7	0	44.6
77	05331580	Mississippi River below Lock & Dam #2 at Hastings, Minn.	44°44’48”	092°51’08”	Dakota	Till plain-Moraine	Calcareous	2.5	66	18	5.2	7.1	0.4	37000
78	05331775	St. Croix River near Woodland Corner, Wis.	46°07’00”	092°07’53”	Burnett	Outwash-Alluvium	Siliceous	0.2	1.0	86	3.4	9.6	0.2	433
79	05331833	Namekagon River at Leonards, Wis.	46°10’18”	091°19’50”	Bayfield	Outwash-Alluvium	Siliceous	0.7	1.8	78	6.3	12	1.0	128
81	05333400	Namekagon River near Woodland Corner, Wis.	46°05’02”	092°06’47”	Burnett	Outwash-Alluvium	Siliceous	0.4	6.0	76	4.4	13	0.3	1020
82	05333500	St. Croix River near Danbury, Wis.	46°04’28”	092°14’50”	Burnett	Outwash-Alluvium	Siliceous	0.3	4.9	79	4.0	12	0.3	1510
83	053350006	Yellow River near Danbury, Wis.	45°58’59”	092°23’05”	Burnett	Outwash-Alluvium	Siliceous	0.8	23	56	9.0	11	0.6	312
84	05335170	Crooked Creek near Hinckley, Minn.	46°00’42”	092°31’45”	Pine	Outwash-Alluvium	Siliceous	0	18	69	1.4	12	0	94.4
86	05335500	Clam River near Webster, Wis.	45°52’52”	092°29’16”	Burnett	Outwash-Alluvium	Siliceous	0.3	32	55	3.1	9.9	0	358
88	05336700	Kettle River below Sandstone, Minn.	46°06’20”	092°51’50”	Pine	Outwash-Alluvium	Siliceous	0.5	27	53	1.7	18	0.1	868
90	05338500	Snake River near Pine City, Minn.	45°50’30”	092°56’00”	Pine	Till plain-Moraine	Calcareous	0.4	40	42	1.2	16	0	975
91	05338975	Wood River at State Highway 70 near Grantsburg, Wis.	45°46’22”	092°42’29”	Burnett	Outwash-Alluvium	Siliceous	0.6	44	27	5.0	24	0	160
93	453049-092512101	Sunrise River at Sunrise, Minn.	45°30’49”	092°51’21”	Chisago	Outwash-Alluvium	Calcareous	2.9	58	8.3	5.3	26	0.1	170
94	05340370	Trade River near Trade River, Wis.	45°35’58”	092°46’02”	Polk	Outwash-Alluvium	Siliceous	0.5	47	38	2.6	12	0	133
95	05340500	St. Croix River at St. Croix Falls, Wis.	45°24’25”	092°38’49”	Polk	Till plain-Moraine	Siliceous	0.4	26	56	2.8	14	0.2	6149

Table A4. Site characteristics for streams sampled during the snowmelt synoptic study--Continued

[mi^2, square mile; Minn., Minnesota; Wis., Wisconsin]

Map identifier	Site identifier	Site name	Latitude	Longitude	County	Dominant surficial geology	Dominant glacial deposit composition	Land use (percent[1])						Drainage area (mi^2)
								Urban	Agriculture	Forest	Water	Wetland	Other	
96	053405524	St. Croix River tributary near Osceola, Wis.	45°20’52”	092°40’55”	Polk	Till plain-Moraine	Siliceous	4.4	65	29	0.4	0	0.7	10
97	05341125	Apple River near Range, Wis.	45°23’45”	092°21’50”	Polk	Outwash-Alluvium	Siliceous	0	44	40	5.5	10	0	167
98	05341500	Apple River near Somerset, Wis.	45°09’27”	092°42’59”	St. Croix	Till plain-Moraine	Siliceous	0.5	63	24	5.1	7.1	0.1	551
99	05341540	Browns Creek at Stillwater, Minn.	45°04’35”	092°48’21”	Washington	Till plain-Moraine	Calcareous	6.7	80	5.8	4.3	2.9	0.5	34.1
101	05341740	Willow River at Burkhardt, Wis.	45°01’30”	092°39’23”	St. Croix	Outwash-Alluvium	Siliceous	1.1	89	7.8	0.6	1.1	0	254
102	05342000	Kinnickinnic River near River Falls, Wis.	44°49’50”	092°44’00”	Pierce	Driftless	Calcareous	3.6	92	4.6	0.2	0	0	173
103	05344490	St. Croix River at Prescott, Wis.	44°44’57”	092°48’16”	Pierce	Till plain-Moraine	Siliceous	0.9	36.7	46.8	3.2	12.2	0.2	7691.5
104	05345000	Vermillion River near Empire, Minn.	44°40’00”	093°03’17”	Dakota	Outwash-Alluvium	Calcareous	16	76	3.9	1.7	0.5	1.2	129
105	05353800	Straight River near Faribault, Minn.	44°15’29”	093°13’51”	Rice	Till plain-Moraine	Calcareous	3.5	92	1.5	0.8	2.1	0.2	436
107	05355200	Cannon River at Welch, Minn.	44°33’50”	092°43’55”	Goodhue	Till plain-Moraine	Calcareous	2.8	88	4.0	2.7	2.0	0.2	1340
108	05355250	Mississippi River at Red Wing, Minn.	44°36’36”	092°36’36”	Goodhue	Till plain-Moraine	Calcareous	2.3	62	22	4.8	7.8	0.4	46800
109	05355330	Rush River near Maiden Rock, Wis.	44°34’15”	092°19’44”	Pierce	Driftless	Calcareous	0.5	88	11	0.1	0	0	225

[1]Percentages associated with each site may not total 100 percent because of rounding.

Table A5. Site characteristics for streams sampled during the agricultural synoptic study

[mi^2, square mile; Minn., Minnesota; Hwy., Highway]

Map identifier	Site identifier	Site name	Latitude	Longitude	County	Dominant surficial geology	Dominant glacial deposit composition	Land use (percent[1])						Drainage area (mi^2)
								Urban	Agriculture	Forest	Water	Wetland	Other	
45	05303900	Shakopee Creek near Louriston, Minn.	45°08’16”	095°28’12”	Chippewa	Till plain-Moraine	Calcareous	0.2	87	3.8	8.0	0.7	0	149
46	05304795	Dry Weather Creek near Watson, Minn.	45°02’33”	095°45’33”	Chippewa	Till plain-Moraine	Calcareous	0.1	98	0.3	0.0	1.4	0	105
47	05312000	Spring Creek near Spring Creek, Minn.	44°42’38”	095°47’16”	Yellow-Medicine	Till plain-Moraine	Calcareous	0.1	99	0	0.2	0.5	0.1	112
48	05314500	Hawk Creek near Maynard, Minn.	44°52’11”	095°28’59”	Renville	Till plain-Moraine	Calcareous	1.6	94	0.4	3.1	0.6	0.1	317
49	05314510	Chetomba Creek near Renville, Minn.	44°50’24”	095°14’20”	Renville	Till plain-Moraine	Calcareous	0.6	99	0	0.2	0.1	0.1	120
50	05316985	Sleepy Eye Creek near Springfield, Minn.	44°16’33”	094°54’22”	Brown	Till plain-Moraine	Calcareous	0.2	99	0	0.1	0.1	0	250
51	05317170	Little Cottonwood River near Searles, Minn.	44°14’19”	094°26’05”	Brown	Till plain-Moraine	Calcareous	0.3	98	0.2	0.3	0.7	0.1	162
52	05317800	West Branch Blue Earth River above Elmore, Minn.	43°30’56”	094°07’41”	Faribault	Till plain-Moraine	Calcareous	0.3	98	0	0.5	0.7	0	150
53	05317828	Coon Creek at U.S. Hwy. 169 near Blue Earth, Minn.	43°36’38”	094°05’14”	Faribault	Till plain-Moraine	Calcareous	0.2	99	0.7	0	0	0	99.1
54	05318050	East Branch Blue Earth River below Bricelyn, Minn.	43°35’09”	093°50’52”	Faribault	Till plain-Moraine	Calcareous	1.2	95	0.5	1.1	2.4	0.1	186
55	05318138	South Creek near Huntley, Minn.	43°41’39”	094°14’52”	Martin	Till plain-Moraine	Calcareous	0.5	94	0.1	3.4	2.1	0.2	104
56	05318178	Center Creek at Huntley, Minn.	43°43’28”	094°13’20”	Faribault	Till plain-Moraine	Calcareous	6.1	88	0.1	4.2	0.9	0.7	111
57	05318240	Elm Creek near Northrop, Minn.	43°46’01”	094°22’57”	Martin	Till plain-Moraine	Calcareous	0.3	96	0.4	1.9	0.8	0.1	232
58	05318630	Watonwan River near St. James, Minn.	44°03’03”	094°39’56”	Watonwan	Till plain-Moraine	Calcareous	1.0	97	1.1	1.0	0	0	99.9

Table A5. Site characteristics for streams sampled during the agricultural synoptic study--Continued

[mi^2, square mile; Minn., Minnesota; Hwy., Highway]

Map identifier	Site identifier	Site name	Latitude	Longitude	County	Dominant surficial geology	Dominant glacial deposit composition	Land use (percent[1])						Drainage area (mi^2)
								Urban	Agriculture	Forest	Water	Wetland	Other	
59	05318800	St. James Creek near La Salle, Minn.	44°03’04”	094°33’27”	Watonwan	Till plain-Moraine	Calcareous	3.8	93	0	2.4	0.9	0.2	60
60	05319050	South Fork Watonwan River near St. James, Minn.	43°58’45”	094°30’49”	Watonwan	Till plain-Moraine	Calcareous	0.5	97	0.7	1.4	0.2	0	192
61	05319360	Perch Creek below Vernon Center, Minn.	43°59’46”	094°16’38”	Blue Earth	Till plain-Moraine	Calcareous	0.7	98	0.4	0.3	1.1	0	150
62	05320080	Le Sueur River near Wilton, Minn.	44°01’38”	093°32’47”	Waseca	Till plain-Moraine	Calcareous	0.5	96	2.2	0.1	1.0	0.2	181
63	05320230	Cobb River near Mapleton, Minn.	43°53’56”	093°52’14”	Blue Earth	Till plain-Moraine	Calcareous	0.4	93	1.4	2.9	2.0	0	112
64	05320270	Little Cobb River near Beauford, Minn.	43°59’48”	093°54’30”	Blue Earth	Till plain-Moraine	Calcareous	0.2	94	0.5	0.6	4.0	0	130
65	05320450	Maple River near Sterling Center, Minn.	43°56’06”	094°04’15”	Blue Earth	Till plain-Moraine	Calcareous	0.9	95	0.8	1.9	1.2	1.7	317
66	05326150	Rush River near New Rome, Minn.	44°30’54”	094°02’59”	Sibley	Till plain-Moraine	Calcareous	0.7	97	0.2	1.1	0.5	1.4	190
67	05326250	South Branch Rush River near Rush River, Minn.	44°29’08”	094°02’10”	Sibley	Till plain-Moraine	Calcareous	0.3	99	0.2	0.7	0.1	0	180
68	05326700	High Island Creek near Arlington, Minn.	44°37’22”	094°05’29”	Sibley	Till plain-Moraine	Calcareous	0.3	96	0.4	2.3	1.4	0	163

[1]Percentages associated with each site may not total 100 percent because of rounding.

Table A6. Site characteristics for streams sampled during the urban synoptic study

[mi^2, square mile; Minn., Minnesota]

Map identifier	Site identifier	Site name	Latitude	Longitude	County	Dominant surficial geology	Dominant glacial deposit composition	Land use (percent[1])						Drainage area (mi^2)
								Urban	Agriculture	Forest	Water	Wetland	Other	
30	05286798	Ford Brook at Green Valley Road in Ramsey, Minn.	45°17’28”	093°25’22”	Hennepin	Outwash-Alluvium	Calcareous	0.1	80	1.7	4.3	13	1.0	28.8
32	05287890	Elm Creek near Champlin, Minn.	45°09’48”	093°26’11”	Hennepin	Till plain-Moraine	Calcareous	8.7	84	1.6	2.1	2.8	0.2	85.8
34	05288475	Coon Creek at 131st Street in Coon Rapids, Minn.	45°12’30”	093°20’02”	Anoka	Outwash-Alluvium	Calcareous	5.9	51	6.4	4.6	31	0.6	79.8
35	05288487	Sand Creek at Xeon Street in Coon Rapids, Minn.	45°11’02”	093°17’48”	Anoka	Outwash-Alluvium	Calcareous	48	40	2.1	0	10	0	15.4
36	05288598	Rice Creek at Central Ave. in Fridley, Minn.	45°05’37”	093°14’40”	Anoka	Outwash-Alluvium	Calcareous	29	48	2.2	6.2	15	0.2	152
40	05288705	Shingle Creek at Queen Ave in Minneapolis, Minn.	45°03’00”	093°18’36”	Hennepin	Outwash-Alluvium	Calcareous	71	20	0.9	4.0	0.7	3.5	28.2
43	05288839	Bassett Creek at Dresden Lane in Golden Valley, Minn.	45°00’14”	093°19’51”	Hennepin	Till plain-Moraine	Calcareous	82	11	0.3	5.4	0.5	1.1	32.9
44	05289600	Minnehaha Creek at Nicollet Ave. in Minneapolis, Minn.	44°54’27”	093°16’41”	Hennepin	Till plain-Moraine	Calcareous	37	38	3.6	18	3.5	0.1	149
70	05330702	Minnesota River tributary at Beech St. in Chaska, Minn.	44°47’21”	093°35’38”	Carver	Till plain-Moraine	Calcareous	30	62	3.4	4.3	0	0	11.9
71	05330750	Riley Creek at Eden Prairie, Minn.	44°48’23”	093°28’49”	Hennepin	Till plain-Moraine	Calcareous	8.0	78	5.7	8	0	0	9.90
72	05330801	Purgatory Creek at Pioneer Tr. in Eden Prairie, Minn.	44°49’39”	093°25’20”	Hennepin	Till plain-Moraine	Calcareous	83	12	0.2	4.0	0	0	27.0
73	05330902	Nine Mile Creek near James Circle at Bloomington, Minn.	44°48’26”	093°18’05”	Hennepin	Till plain-Moraine	Calcareous	87	5.7	2.2	3.7	1.7	0	44.6
75	05331050	Battle Creek below McKnight Road in St. Paul, Minn.	44°56’40”	093°00’35”	Ramsey	Till plain-Moraine	Siliceous	83	13	1.1	2.8	0	0	10.2

[1]Percentages associated with each site may not total 100 percent because of rounding.

Table A7. Site characteristics for streams sampled during the Mississippi River mainstem synoptic study

[mi^2, square mile; Hwy, Highway; Minn., Minnesota]

Map identifier	Site identifier	Site name	Latitude	Longitude	County	Dominant surficial geology	Dominant glacial deposit composition	Land use (percent[1])						Drainage area (mi^2)
								Urban	Agriculture	Forest	Water	Wetland	Other	
1	05200020	Mississippi River at Hwy 200 near Lake Itasca, Minn.	47°15’12”	095°13’35”	Clearwater	Outwash-Alluvium	Calcareous	0.1	0	87	10	2.4	0	31.6
2	05200510	Mississippi River near Bemidji, Minn.	47°29’00”	094°43’40”	Beltrami	Outwash-Alluvium	Calcareous	1.1	17	67	5.9	8.8	0.2	664
3	05200940	Mississippi River near Pennington, Minn.	47°26’39”	094°25’31”	Beltrami	Outwash-Alluvium	Calcareous	0.8	14	65	11	9.1	0.6	1130
4	05201550	Mississippi River at Hwy 2 near Ball Club, Minn.	47°19’30”	093°57’35”	Cass	Till plain-Moraine	Calcareous	0.6	10	62	14	11	0.8	1540
5	05210000	Mississippi River at Days High Landing near Deer River, Minn.	47°15’10”	093°48’00”	Cass	Till plain-Moraine	Calcareous	0.4	8.7	61	17	12	0.8	2880
6	05211000	Mississippi River at Grand Rapids, Minn.	47°13’56”	093°31’48”	Itasca	Till plain-Moraine	Calcareous	0.4	8.8	60	16	14	0.8	3320
7	05213500	Mississippi River near Blackberry, Minn.	47°10’24”	093°24’47”	Itasca	Till plain-Moraine	Calcareous	0.5	8.3	61	15	14	1.0	3860
8	05217600	Mississippi River at Jacobson, Minn.	47°00’05”	093°16’06”	Aitkin	Till plain-Moraine	Calcareous	0.5	8.2	60	14	15	2.1	4270
9	05220600	Mississippi River at Palisade, Minn.	46°34’04”	093°28’03”	Aitkin	Till plain-Moraine	Calcareous	0.5	8.8	58	13	18	1.9	4840
10	05221060	Mississippi River at Hwy 169 near Hassman, Minn.	46°39’04”	093°36’45”	Aitkin	Till plain-Moraine	Calcareous	0.4	8.6	57	12	21	1.7	5384
11	05227500	Mississippi River at Aitkin, Minn.	46°32’26”	093°42’26”	Aitkin	Till plain-Moraine	Calcareous	0.4	9.6	56	11	21	1.6	5880
12	05242300	Mississippi River at Brainerd, Minn.	46°22’40”	094°10’59”	Crow Wing	Till plain-Moraine	Calcareous	0.4	10	57	11	20	1.4	7090
13	05261000	Mississippi River near Fort Ripley, Minn.	46°10’50”	094°21’56”	Crow Wing	Till plain-Moraine	Calcareous	0.5	23	50	9.0	17	1.0	10900
15	05267000	Mississippi River near Royalton, Minn.	45°51’40”	094°21’30”	Morrison	Till plain-Moraine	Calcareous	0.6	25	49	8.6	16	0.9	11600
19	05270700	Mississippi River at St. Cloud, Minn.	45°32’50”	094°08’44”	Stearns	Till plain-Moraine	Calcareous	0.7	33	44	7.8	14	0.8	13600
27	05283500	Mississippi River at Anoka, Minn.	45°11’30”	093°23’40”	Anoka	Till plain-Moraine	Calcareous	1.0	44	35	7.1	12	0.7	17500

Table A7. Site characteristics for streams sampled during the Mississippi River mainstem synoptic study--Continued

[mi^2, square mile; Hwy, Highway; Minn., Minnesota]

Map identifier	Site identifier	Site name	Latitude	Longitude	County	Dominant surficial geology	Dominant glacial deposit composition	Land use (percent[1])						Drainage area (mi^2)
								Urban	Agriculture	Forest	Water	Wetland	Other	
33	05288500	Mississippi River near Anoka, Minn.	45°07’36”	093°17’48”	Hennepin	Till plain-Moraine	Calcareous	1.1	44	34	7.6	12	0.7	19200
77	05331580	Mississippi River below Lock & Dam #2 at Hastings, Minn.	44°44’48”	092°51’08”	Dakota	Till plain-Moraine	Calcareous	2.5	66	18	5.2	7.1	0.4	37000
108	05355250	Mississippi River at Red Wing, Minn.	44°36’36”	092°36’36”	Goodhue	Till plain-Moraine	Calcareous	2.3	62	22	4.8	7.8	0.4	46800

[1]Percentages associated with each site may not total 100 percent because of rounding.

Table A8. Site characteristics for miscellaneous stream sampling

[Minn., Minnesota; Wis., Wisconsin]

Map identifier	Site identifier	Site name	Latitude	Longitude	County	Comments
38	05288700	Shingle Creek at Brooklyn Center, Minn.	45°04’45”	093°18’55”	Hennepin	Sampled twice in conjunction with urban flow-path study
39	450401093183401	Parking Lot Outflow at Public Library at Brooklyn Center, Minn.	45°04’01”	093°18’34”	Hennepin	Sampled once as part of VOC mass balance study
74	05331045	Battle Creek at Meadow Lane in Woodbury, Minn.	44°56’34”	092°58’35”	Washington	Sample once as follow up to urban synoptic study
85	05335326	Clam River near Siren, Wis.	45°42’43”	092°19’46”	Burnett	Sampled once for calcium for the National Park Service
89	460041092502001	Kettle River near Hinckley, Minn	46°00’41”	092°50’20”	Pine	Sampled once for calcium for the National Park Service

Table A9. Site characteristics for wells sampled during the Prairie du Chien-Jordan aquifer subunit surveys in Minnesota

[Local identifier indicates whether wells are located in the unconfined or confined portion of the aquifer—for example, PDCJ-U01 is a well in the unconfined portion and PDCJ-C01 is a well in the confined portion]

Site identifier	Local identifier	MN unique well number	County	Latitude	Longitude	Altitude of land surface (feet)	Date of construction	Well depth (feet)	Depth to bottom of casing (feet)	Water level (feet below land surface)	Date measured
442612093110201	PDCJ-U01	162682	Washington	442612	0931102	950	07/29/77	340	259	17.37	08/13/96
443328093184701	PDCJ-U02	212377	Scott	443328	0931847	1140	08/26/73	235	207	179	08/26/73
443808093012801	PDCJ-U03	198261	Dakota	443808	0930128	875	09/08/83	220	195	18.4	09/03/96
444331093080801	PDCJ-U04	136548	Dakota	444331	0930808	941	05/01/78	200	170	48.44	04/28/84
450810092583501	PDCJ-U05	182149	Washington	450810	0925835	938	04/28/84	118	85	14.36	09/06/96
445117093042701	PDCJ-U06	427141	Dakota	445117	0930427	968	11/22/86	335	295	218.05	09/05/96
443934092565601	PDCJ-U07	412478	Dakota	443934	0925656	905	07/06/85	270	250	70	07/06/85
443119093050101	PDCJ-U08	443920	Dakota	443119	0930501	905	06/22/88	137	105	13.4	08/08/96
443042092570401	PDCJ-U09	145903	Dakota	443042	0925704	862	10/07/77	320	279	40	10/07/77
444211092544601	PDCJ-U10	457211	Dakota	444211	0925446	820	06/28/89	320	284	120	06/28/89
445245092545501	PDCJ-U11	427865	Washington	445245	0925455	920	11/11/86	143	139	103	11/11/86
451602092515601	PDCJ-U12	138286	Washington	451602	0925156	943	09/26/77	87	86	24.89	09/06/96
450603092500201	PDCJ-U13	162901	Washington	450603	0925002	904	08/31/79	110	108	40	08/31/79
445919092500101	PDCJ-U14	199550	Washington	445919	0925001	930	01/04/84	143	126	90.34	09/06/96
444214092490401	PDCJ-U15	185962	Dakota	444214	0924904	842	06/07/82	245	220	110	06/07/82
443112092513901	PDCJ-U16	162685	Goodhue	443112	0925139	883	10/09/78	339	301	68.23	08/29/96
441450093265701	PDCJ-C01	451200	Rice	441450	0932657	1090	11/23/88	290	271	82.47	09/05/96
443505093255201	PDCJ-C02	427107	Scott	443505	0932552	974	08/29/86	124	119	37	08/29/86
444059093260901	PDCJ-C03	127106	Scott	444059	0932609	975	12/18/76	231	231	110	12/18/76
445018093290901	PDCJ-C04	118808	Hennepin	445018	0932909	910	09/25/75	265	247	144.9	09/10/96
450516093281001	PDCJ-C05	104843	Hennepin	450516	0932810	915	08/09/76	157	152	17.79	08/27/96
444854093242501	PDCJ-C06	413372	Hennepin	444854	0932425	845	08/16/85	342	323	106.95	09/10/96
444202093225901	PDCJ-C07	207461	Scott	444202	0932259	950	11/11/1900	130	112	61	11/11/1900
443232093230901	PDCJ-C08	436444	Rice	443232	0932309	1091	10/07/87	260	192	90.3	09/05/96
441944093194601	PDCJ-C09	416242	Rice	441944	0931946	1055	10/15/85	200	175	65	10/15/85
442816093125901	PDCJ-C10	509102	Rice	442816	0931259	989	09/18/89	355	355	39.8	08/27/96

Table A9. Site characteristics for wells sampled during the Prairie du Chien-Jordan aquifer subunit surveys in Minnesota--Continued

[Local identifier indicates whether wells are located in the unconfined or confined portion of the aquifer—for example, PDCJ-U01 is a well in the unconfined portion and PDCJ-C01 is a well in the confined portion]

Site identifier	Local identifier	MN unique well number	County	Latitude	Longitude	Altitude of land surface (feet)	Date of construction	Well depth (feet)	Depth to bottom of casing (feet)	Water level (feet below land surface)	Date measured
443641093110701	PDCJ-C11	119678	Dakota	443641	0931107	932	06/01/77	110	90	13.38	09/06/96
445108093054801	PDCJ-C12	127189	Dakota	445108	0930548	933	06/06/80	271	259	146.19	09/05/96
450758093061501	PDCJ-C13	170633	Anoka	450758	0930615	902	11/12/80	125	105	30.78	08/26/96
450825092524801	PDCJ-C14	195648	Washington	450825	0925248	995	08/23/83	130	120	45	08/23/83
450520092543401	PDCJ-C15	413597	Washington	450520	0925434	1001	10/25/87	175	162	59.17	09/06/96
445321092590101	PDCJ-C16	415681	Washington	445321	0925901	982	08/16/85	284	270	239	08/16/86
443645092525501	PDCJ-C17	443901	Dakota	443645	0925255	1022	09/17/88	400	360	160	09/17/88
442733092532401	PDCJ-C18	100029	Goodhue	442733	0925324	1138	08/24/76	335	290	235	08/24/76
442140092521101	PDCJ-C19	140992	Goodhue	442140	0925211	1180	05/22/78	380	340	214.2	08/27/96

Table A10. Site characteristics for wells sampled during the Prairie du Chien-Jordan aquifer subunit surveys in Wisconsin

[Local identifier indicates whether wells are located in the unconfined or confined portion of the aquifer—for example, PDCT-U01 is a well in the unconfined portion and PDCT-C01 is a well in the confined portion; NA, not available]

Site identifier	Local identifier	WI unique well number	County	Latitude	Longitude	Altitude of land surface (feet)	Date of construction	Well depth (feet)	Depth to bottom of casing (feet)	Water level (feet below land surface)	Date measured
445010092422201	PDCT-U01	NA	Pierce	445010	0924222	920	07/25/86	230	40	180	07/25/86
450635092302201	PDCT-U02	FK 344	St. Croix	450635	0923022	1000	07/06/93	77	57	37.09	09/09/96
451242092433201	PDCT-U03	DD 945	Polk	451242	0924332	1000	09/06/90	278	248	211	09/06/90
452102092212201	PDCT-U04	HQ 473	Polk	452102	0922122	1100	08/21/95	120	103	20.09	08/06/96
445933092222301	PDCT-U05	AR 809	St. Croix	445933	0922223	1160	05/22/90	104	84	65	05/02/90
443703092261301	PDCT-U06	NA	Pierce	443703	0922613	740	02/17/81	140	120	84.8	08/12/96
443502092212301	PDCT-U07	HB 354	Pierce	443502	0922123	710	10/25/95	66	56	15.62	08/05/96
451027092142901	PDCT-U08	AJ 266	St. Croix	451027	0921429	1160	09/26/88	180	121	75.46	08/08/96
452709092141101	PDCT-U09	HS 369	Polk	452709	0921411	1190	11/02/94	94	90	31.07	09/09/96
454942092310701	PDCT-C01	HO 173	Pierce	444942	0923107	1020	10/28/94	190	68	130.23	09/09/96
455630092323801	PDCT-C02	IC 379	St. Croix	445630	0923238	1020	06/05/95	175	168	86.34	09/09/96
451351092345901	PDCT-C03	NA	Polk	451351	0923459	940	12/19/86	105	84	41.2	09/09/96
451104092212501	PDCT-C04	EO 124	St. Croix	451104	0922125	1070	08/21/92	105	100	24.28	08/05/96
450444092275001	PDCT-C05	NA	St. Croix	450444	0922750	1085	03/10/80	115	80	83.51	08/19/96
444452092251401	PDCT-C06	FS 067	Pierce	444452	0922514	1020	07/20/94	210	189	98.35	08/07/96

Table A11. Site characteristics for wells sampled during the urban land-use study, Anoka and Hennepin Counties, Minnesota

Site indentifier	Local indenti-fier	MN unique well number	County	Latitude	Longitude	Altitude of land surface (feet)	Date of construction	Well depth (feet)	Depth to bot-tom of casing (feet)	Water level (feet below land sur-face)	Date measured
451315093202501	CR-A	560381	Anoka	451314	0932025	881.52	06/10/96	20.8	15.8	15.28	06/17/96
451222093185001	CR-B	560396	Anoka	451222	0931851	895.67	05/20/96	24.5	19.5	17.76	06/20/96
451150093162601	CR-C	560397	Anoka	451152	0931626	896.71	06/10/96	13.5	8.5	5.01	06/17/96
451100093181401	CR-D	560399	Anoka	451102	0931822	856.88	05/15/96	18	13	6.17	06/18/96
451009093181701	CR-E	560398	Anoka	451004	0931815	861.98	05/16/96	19	14	13.15	06/20/96
451013093185101	CR-F	560400	Anoka	451012	0931852	860.02	05/15/96	23	18	6.44	06/18/96
451104093212801	CR-G	560401	Anoka	451102	0932130	854.66	05/17/96	14	9	6.6	06/19/96
451236093202001	CR-H	560405	Anoka	451238	0932021	877.4	05/17/96	20	15	12.86	06/19/96
451116093183101	CR-I	560406	Anoka	451117	0931829	867.9	05/16/96	13	8	5.42	06/24/96
450704093210401	HN-A	560407	Hennepin	450704	0932105	868.1	05/21/96	24.3	19.3	13.23	06/25/96
450702093185101	HN-B	560408	Hennepin	450706	0931857	858.37	05/21/96	24	19	9.5	06/24/96
450624093220501	HN-C	560409	Hennepin	450619	0932204	875.23	05/21/96	29	24	15.99	06/25/96
450557093201801	HN-D	560410	Hennepin	450556	0932022	866.61	06/07/96	22.5	17.5	16.8	06/25/96
450516093195901	HN-E	560411	Hennepin	450515	0932005	863.27	06/03/96	23	18	14.13	06/26/96
450611093183101	HN-F	560412	Hennepin	450612	0931830	867.89	05/22/96	13.5	8.5	6.84	06/26/96
450518093172501	HN-G	560413	Hennepin	450518	0931725	850.44	05/22/96	33.5	28.5	23.14	06/26/96
450524093223201	HN-H	560414	Hennepin	450523	0932229	876.18	05/23/96	18	13	9.85	07/10/96
450448093205301	HN-I	560415	Hennepin	450450	0932049	866.22	05/24/96	18	13	10.54	06/27/96
450542093182301	HN-J	560416	Hennepin	450530	0931819	849.61	06/04/96	15	10	8.64	06/27/96
450430093220801	HN-K	560417	Hennepin	450428	0932206	881.79	06/03/96	22.5	17.5	16.49	07/02/96
450333093201701	HN-L	560418	Hennepin	450333	0932016	857.91	05/24/96	9	4	4.99	07/02/96
450456093193201	HN-M	560419	Hennepin	450500	0931931	849.06	06/06/96	9	4	4.3	07/02/96
450326093175201	HN-N	560420	Hennepin	450325	0931752	848.67	06/06/96	18	13	11.24	07/03/96
450305093172501	HN-O	560421	Hennepin	450305	0931724	849.81	06/05/96	28	23	10.75	07/09/96
450328093232001	HN-P	560422	Hennepin	450329	0932141	872.77	06/05/96	18	13	10.92	07/03/96
450226093203901	HN-Q	560423	Hennepin	450225	0932035	875.25	06/04/96	29	24	21.73	07/08/96
450327093193501	HN-R	560424	Hennepin	450328	0931936	851	06/06/96	10	5	2.39	07/08/96

Table A11. Site characteristics for wells sampled during the urban land-use study, Anoka and Hennepin Counties, Minnesota--Continued

Site indentifier	Local indenti-fier	MN unique well number	County	Latitude	Longitude	Altitude of land surface (feet)	Date of construction	Well depth (feet)	Depth to bot-tom of casing (feet)	Water level (feet below land sur-face)	Date measured
450236093175801	HN-S	560425	Hennepin	450236	0931759	844.11	06/11/96	17	12	9.85	07/08/96
450122093193801	HN-T	560426	Hennepin	450118	0931936	857.71	06/11/96	19	14	11.7	06/13/96
450126093180901	HN-U	571162	Hennepin	450125	0931805	910.81	06/07/96	28.5	24	17.49	07/09/96

Table A12. Site characteristics for wells sampled during the agricultural land-use study, Sherburne and Wright Counties, Minnesota

[NA, not available]

Site identifier	Local identifier	MN unique well number	County	Latitude	Longitude	Altitude of land surface (feet)	Date of construction	Well depth (feet)	Depth to bottom of casing (feet)	Water level (feet below land surface)	Date measured
452408093553001	ALUS-01	582131	Sherburne	452408	0935530	975	09/16/97	31.5	26.5	27.9	05/13/98
452428093591601	ALUS-02	582132	Sherburne	452428	0935916	960	09/17/97	20.5	15.5	14.7	05/13/98
452545093571002	ALUS-03	371006	Sherburne	452545	0935710	985	10/21/76	36.2	34.2	22	05/15/98
452610093553001	ALUS-04	582133	Sherburne	452610	0935530	975	09/18/97	11.5	6.5	6.4	05/11/98
452720093552202	ALUS-05	NA	Sherburne	452720	0935522	970	10/11/83	25	23	12.4	05/11/98
452711093565501	ALUS-06	582134	Sherburne	452711	0935655	975	09/18/97	14.5	9.5	9.4	05/11/98
452609093553001	ALUS-07	582135	Sherburne	452632	0935518	975	09/18/97	15.5	10.5	10.6	05/12/98
452543093544801	ALUS-08	482926	Sherburne	452543	0935448	980	04/21/92	57	53	NA	NA
452408093552901	ALUS-09	NA	Sherburne	452443	0935408	975	NA	28	NA	NA	NA
452324093541601	ALUS-10	517548	Sherburne	452324	0935416	971	04/01/93	34	24	26.3	05/21/98
452229093525801	ALUS-11	NA	Sherburne	452229	0935258	963	08/26/81	60	40	35	05/21/98
451953093484901	ALUS-12	582149	Sherburne	451953	0934849	950	09/11/97	43	38	37.7	05/18/98
452030093511403	ALUS-13	612777	Sherburne	452030	0935114	929	07/10/98	22.5	17.5	18.9	08/11/98
452111093523401	ALUS-14	582051	Sherburne	452111	0935234	950	09/17/97	34	24	32.0	05/19/98
452210093523701	ALUS-15	493038	Sherburne	452210	0935237	960	09/06/91	37	27	36.5	05/21/98
452335093504301	ALUS-16	NA	Sherburne	452400	0935107	955	1978	23	NA	NA	NA
452335093504501	ALUS-17	582136	Sherburne	452335	0935045	960	09/15/97	18	13	14.1	05/14/98
452215093481001	ALUS-18	582137	Sherburne	452215	0934810	955	09/16/97	26	21	20.7	05/14/98
452040093463101	ALUS-19	582138	Sherburne	452040	0934631	940	09/12/97	24.2	19.2	20	05/19/98
451957093483201	ALUS-20	582139	Sherburne	451957	0934832	940	09/12/97	49	44	37.4	05/18/98
451924093474601	ALUS-21	582140	Sherburne	451924	0934746	945	09/11/97	35	30	29.7	08/18/98
451811093445601	ALUS-22	582141	Sherburne	451811	0934456	930	09/10/97	19	14	13.8	05/19/98
451755093433901	ALUS-23	582142	Wright	451755	0934339	920	09/10/97	25	15	12.5	05/27/98
451835093400401	ALUS-24	582143	Sherburne	451835	0934004	920	09/08/97	11.8	6.8	6.8	05/27/98
451822093413201	ALUS-25	582144	Sherburne	451822	0934108	920	09/08/97	30	25	25.2	05/27/98
451915093463901	ALUS-26	475151	Sherburne	451915	0934639	944	05/16/91	28.2	18.2	18.2	05/26/98

Table A12. Site characteristics for wells sampled during the agricultural land-use study, Sherburne and Wright Counties, Minnesota--Continued

[NA, not available]

Site identifier	Local identifier	MN unique well number	County	Latitude	Longitude	Altitude of land surface (feet)	Date of construction	Well depth (feet)	Depth to bottom of casing (feet)	Water level (feet below land surface)	Date measured
451921093445101	ALUS-27	582145	Sherburne	451921	0934451	930	09/10/97	8	3	3.3	05/26/98
452007093413001	ALUS-28	582146	Sherburne	452007	0934130	930	09/09/97	16	11	11.7	05/20/98
451730093423001	ALUS-29	582147	Sherburne	452010	0934230	930	09/09/97	15	10	10.8	05/20/98
452036093423701	ALUS-30	582148	Sherburne	452036	0934237	930	09/09/97	9	4	4.9	05/20/98

Table A13. Site characteristics for wells sampled during the forested land-use study, Beltrami, Cass, and Clearwater Counties, Minnesota

[NA, not available]

Site identifier	Local identifier	MN unique well number	County	Latitude	Longitude	Altitude of land surface (feet)	Date of construction	Well depth (feet)	Depth to bottom of casing (feet)	Water level (feet below land surface)	Date measured
471546094331700	FLUS-01	NA	Cass	471546	0943317	1310	NA	17	15	7.8	06/23/98
472201094320401	FLUS-02	612751	Cass	472201	0943204	1320	06/22/98	19	14	10.4	06/22/98
472300094231800	FLUS-03	243228	Cass	472300	0942318	1325	09/09/86	25.5	18.5	15.5	06/18/98
472533094284500	FLUS-04	243242	Beltrami	472533	0942845	1312	08/06/86	13	11	3.9	06/18/98
472537094261700	FLUS-05	243241	Beltrami	472537	0942617	1317	08/06/86	13	11.3	10.3	06/23/98
472553094384500	FLUS-06	243304	Beltrami	472553	0943845	1313	08/06/86	14	11	5	06/17/98
472724095055200	FLUS-07	243315	Beltrami	472724	0950552	1375	06/11/86	26.5	23	6.3	06/16/98
472813095160200	FLUS-08	243219	Clearwater	472813	0951602	1525	08/26/86	36	33	29.3	06/15/98
473140095041201	FLUS-09	243296	Beltrami	473140	0950412	1410	07/31/86	16.5	11.5	7.5	06/22/98
473150095210500	FLUS-10	243201	Clearwater	473150	0952105	1470	08/15/86	29	26	0.7	06/15/98
473236094505400	FLUS-11	243347	Beltrami	473236	0945054	1400	07/28/86	21.5	18.4	8.7	06/16/98
473306094480000	FLUS-12	243334	Beltrami	473306	0944800	1370	05/08/86	15	13	5.1	06/16/98
473410095073000	FLUS-13	243297	Beltrami	473410	0950730	1400	07/30/86	14	12	4.9	06/17/98
472200094394001	FLUS-14	243225	Cass	472200	0943940	1344	09/08/86	29	26	23.2	06/17/98
473418095051701	FLUS-15	NA	Beltrami	473418	0950517	1397	NA	21.4	NA	6.7	06/17/98

Table A14. Site characteristics for wells sampled during the flow-path study, Hennepin County, Minnesota

Site identifier	Local identifier	MN unique well number	County	Latitude	Longitude	Altitude of land surface (feet)	Date of construction	Well depth (feet)	Depth to bottom of casing (feet)	Water level (feet below land surface)	Date measured
450430093220801	HN-K	560417	Hennepin	450428	0932206	881.79	06/03/96	22.5	17.5	17.32	07/15/97
450424093210501	UFP-1 PORT A	582101	Hennepin	450424	0932105	870.08	06/16/97	9.5	9	dry	07/15/97
450424093210502	UFP-1 PORT B	582101	Hennepin	450424	0932105	870.08	06/16/97	11.5	11	8.32	07/15/97
450424093210504	UFP-1 PORT C	582101	Hennepin	450424	0932105	870.08	06/16/97	17.5	17	8.90	07/14/97
450424093210505	UFP-1 PORT D	582101	Hennepin	450424	0932105	870.08	06/16/97	21.5	21	8.90	07/14/97
450425093195301	UFP-2 PORT A	582123	Hennepin	450425	0931953	862.14	05/18/97	10.5	10	dry	07/10/97
450425093195302	UFP-2 PORT B	582123	Hennepin	450425	0931953	862.14	05/18/97	13.5	13	11.93	07/10/97
450425093195303	UFP-2 PORT C	582123	Hennepin	450425	0931953	862.14	05/18/97	19.5	19	11.96	07/10/97
450425093195304	UFP-2 PORT D	582123	Hennepin	450425	0931953	862.14	05/18/97	27.5	27	11.96	07/10/97
450423093194301	UFP-3 PORT A	582124	Hennepin	450423	0931943	858.68	05/20/97	11.5	11	8.80	07/09/97
450423093194303	UFP-3 PORT B	582124	Hennepin	450423	0931943	858.68	05/20/97	21.5	21	8.95	07/09/97
450423093194304	UFP-3 PORT C	582124	Hennepin	450423	0931943	858.68	05/20/97	29.5	29	9.00	07/09/97
450423093194305	UFP-3 PORT D	582124	Hennepin	450423	0931943	858.68	05/20/97	37.5	37	9.01	07/09/97
450415093184800	UFP-4 PORT A	582125	Hennepin	450415	0931848	847.05	05/22/97	4	3.5	dry	07/07/97
450415093184801	UFP-4 PORT B	582125	Hennepin	450415	0931848	847.05	05/22/97	7.5	7	5.37	07/07/97
450415093184802	UFP-4 PORT C	582125	Hennepin	450415	0931848	847.05	05/22/97	10.5	10	5.37	07/07/97
450415093184803	UFP-4 PORT D	582125	Hennepin	450415	0931848	847.05	05/22/97	14.5	14	5.38	07/07/97
450414093184301	UFP-5 PORT A	582122	Hennepin	450414	0931843	842.08	05/21/97	5.5	5	-0.27	07/24/97
450414093184303	UFP-5 PORT B	582122	Hennepin	450414	0931843	842.08	05/21/97	27.5	27	-0.19	07/08/97
450414093184304	UFP-5 PORT C	582122	Hennepin	450414	0931843	842.08	05/21/97	31.5	31	0.37	07/08/97
450414093184305	UFP-5 PORT D	582122	Hennepin	450414	0931843	842.08	05/21/97	33.5	33	0.37	07/08/97
450406093170201	UFP-6 PORT A	571163	Hennepin	450406	0931702	821.98	05/20/97	6.5	6	dry	07/09/97
450406093170202	UFP-6 PORT B	571163	Hennepin	450406	0931702	821.98	05/20/97	9.5	9	dry	07/09/97
450406093170204	UFP-6 PORT C	571163	Hennepin	450406	0931702	821.98	05/20/97	15.5	15	10.60	07/09/97
450406093170205	UFP-6 PORT D	571163	Hennepin	450406	0931702	821.98	05/20/97	21.5	21	11.50	07/09/97