MISCELLANEOUS PROJECT DATA

WATER-QUALITY CHARACTERISTICS AND MERCURY CONCENTRATIONS IN WATER SAMPLES FROM STREAM-MONITORING NETWORK IN INDIANA, SEPTEMBER 2005 THROUGH SEPTEMBER 2006

The following table lists total mercury and methylmercury concentrations in five rounds of water samples collected from a statewide stream-monitoring network of 25 stations in Indiana. Samples were collected on a seasonal schedule, using trace-metals protocols, with equipment and techniques for obtaining representative samples, consistent with the USGS National Field Manaual for the Collection of Water-Quality Data (Wilde and Radtke, eds., 1998). Samples were analyzed for total mercury and methylmercury by the USGS Wisconsin Mercury Laboratory using low-level methods (Olson and DeWild, 1997 and DeWild, Olson, and Olund, 2002). Stations in the stream-monitoring network are located near active and inactive USGS streamflow gages. Instantaneous streamflow values in the following table were obtained from, or estimated with data from the USGS streamflow gages. Water-quality characteristics and mercury concentrations in water samples from this network in Indiana, August 2004 through June 2005, are in the Indiana Water-Data Report IN-05-1 (Morlock, Nguyen, and Majors, 2006).

[map no., identification number for location of station on figure **XX**; ft^3/s, cubic feet per second; E, streamflow estimated with stage data and historical rating; ^oC, degree centigrade; µS/cm, microsiemen per centimeter; mg/L, milligram per liter; ng/L, nanogram per liter; <, less than reporting limit listed; ---, no data]

					Water-quality characteristics[1]				Mercury concentrations[2]			
Map No.	Station number	Station name	Sample date	Instantaneous streamflow (ft^3/s)	Water temperature (^{o} C)	pH (standard units)	Specific conductance (µS/cm)	Dissolved oxygen (mg/L)	Unfiltered total mercury (ng/L)	Filtered total mercury (ng/L)	Unfiltered methylmercury (ng/L)	Filtered methylmercury (ng/L)
1	03351500	Fall Creek near Fortville	09/15/2005	36	21.0	7.8	775	6.4	0.86	0.59	0.10	0.05
			12/16/2005	108	1.4	7.8	832	13.0	0.39	0.22	0.04	<0.04
			03/10/2006	1,660	8.3	7.4	368	9.8	21.2	4.17	0.29	0.05
			05/15/2006	688	11.7	7.8	518	9.5	6.00	2.11	0.14	<0.04
			09/05/2006	49	17.5	8.1	829	8.1	1.66	0.26	0.07	< 0.04
2	03328500	Eel River near Adamsboro	09/13/2005	115	21.6	7.9	684	7.9	0.67	0.33	0.12	0.06
			12/13/2005	214	-0.2	7.5	804	12.8	0.28	0.18	<0.04	<0.04
			03/07/2006	392	2.3	8.2	708	14.1	0.74	0.39	0.04	<0.04
			05/17/2006	2,690	13.6	7.8	510	9.3	7.92	3.02	0.17	0.06
			09/07/2006	264	20.6	8.3	697	10.9	0.94	0.54	0.06	0.06
3	03331753	Tippecanoe River at Winimac	09/13/2005	172	22.6	8.00	657	7.9	0.83	0.28	0.05	<0.04
			12/13/2005	515	---	---	---	---	0.66	0.23	<0.04	<0.04
			03/07/2006	593	3.8	8.2	637	14.1	0.59	0.27	<0.04	<0.04
			05/25/2006	1,430	17.3	8.0	608	9.3	3.66	0.68	0.13	0.04
			08/31/2006	1,240	19.8	7.7	518	6.9	7.42	1.23	0.13	0.04

4	03335000	Wildcat Creek near Lafayette	09/12/2005	61		22.6	7.9	762	8.2	0.68	0.28	0.10	0.06
			12/12/2005	128		-0.3	7.6	866	12.8	0.34	0.26	<0.04	<0.04
			03/06/2006	365		3.6	8.3	730	13.3	0.66	0.33	<0.04	<0.04
			05/17/2006	2,470		12.8	8.1	608	9.6	7.35	1.04	0.14	<0.04
			09/07/2006	228		18.7	8.2	695	8.0	1.39	0.48	0.08	0.04
5	03341500	Wabash River at Terre Haute	09/06/2005	2,190		28.8	8.0	649	5.5	2.54	0.3	0.11	0.05
			11/28/2005	4,900		9.8	8.1	632	11.2	3.22	0.78	0.08	<0.04
			02/27/2006	8,170		5.6	8.0	663	13.8	4.32	1.24	0.06	<0.04
			05/08/2006	9,630		19.3	8.4	654	11.1	4.99	0.56	0.12	<0.04
			08/21/2006	3,210		30.7	8.7	548	---	2.14	0.37	0.16	< 0.04
6	03359000	Mills Creek at Cagles Mill Dam	09/02/2005	608	E	25.1	7.4	296	7.3	---	---	0.57	0.42
			12/02/2005	386	E	6.3	7.1	319	12.3	1.39	0.74	<0.04	<0.04
			03/03/2006	100	E	4.9	7.8	445	14.5	1.67	0.90	<0.04	<0.04
			05/08/2006	228	E	14.0	7.3	396	10.1	1.94	0.94	0.06	<0.04
			08/21/2006	5	E	24.8	7.9	310	6.8	1.56	0.31	0.23	0.05
7	03354000	West Fork White River at Centerton	09/14/2005	570		24.2	7.9	1,162	8.7	5.66	0.77	0.25	0.10
			12/14/2005	1,250		4.1	7.4	1,000	11.7	3.29	0.54	0.08	<0.04
			03/08/2006	1,550		8.4	7.8	962	11.3	2.90	0.85	0.07	<0.04
			05/16/2006	6,060		13.2	7.8	561	9.7	17.8	1.53	0.26	0.04
			09/06/2005	679		20.3	7.8	999	7.5	5.56	0.61	0.12	0.05
8	03351000	West Fork White River at Nora	09/15/2005	265		23.4	7.7	905	6.7	2.07	0.49	0.11	0.06
			12/16/2005	645		1.3	7.8	857	13.8	0.88	0.06	0.09	0.06
			03/10/2006	3,790		7.8	8.0	652	10.7	11.3	1.44	0.09	<0.04
			05/15/2006	5,040		12.0	7.8	472	9.2	9.51	2.35	0.26	0.05
			09/05/2006	351		20.4	8.1	865	7.6	3.08	0.41	0.09	0.07
9	03361650	Sugar Creek near New Palestine	09/14/2005	11		22.5	7.9	621	9.6	0.75	0.41	0.07	0.06
			12/14/2005	40		0.6	7.7	728	14.0	0.43	0.18	<0.04	<0.04
			03/08/2006	61		5.4	8.2	631	13.5	1.34	0.57	<0.04	<0.04
			05/16/2006	302		12.5	7.8	508	9.6	4.76	1.95	0.12	0.04
			09/06/2006	19		18.3	8.2	668	8.8	0.70	0.34	0.05	< 0.04
10	03276000	East Fork Whitewater River near Brookville	09/16/2005	60	E	17.7	7.6	473	10.0	0.32	0.22	<0.04	<0.04
			12/19/2005	182	E	5.3	7.8	485	13.4	0.24	0.17	<0.04	<0.04
			03/17/2006	1,690	E	5.8	8.3	503	13.8	1.21	0.65	<0.04	<0.04

			05/18/2006	2,010	E	9.5	8.0	492	12.5	0.64	0.44	<0.04	<0.04
			09/08/2006	67	E	21.4	7.8	472	7.7	0.26	0.22	0.04	< 0.04
11	03369500	Vernon Fork Muscatatuck River at Vernon	09/19/2005	6		20.5	8.1	432	9.1	---	---	0.07	0.07
			12/15/2005	58		1.8	7.8	508	13.9	1.82	0.92	0.06	0.06
			03/09/2006	2,040		6.8	7.4	180	11.1	16.2	6.14	0.19	0.06
			05/12/2006	413		14.3	7.8	261	8.9	7.59	4.80	0.20	0.13
			08/24/2006	9		25.3	8.1	308	8.8	1.34	0.96	0.08	0.09
12	03365500	East Fork White River at Seymour	09/19/2005	565		22.8	8.1	708	9.4	---	---	0.10	0.04
			12/15/2005	2,260		3.2	7.9	708	13.3	0.73	0.23	0.05	<0.04
			03/09/2006	7,020		6.7	7.7	334	10.4	20.1	4.45	0.25	0.06
			05/11/2006	6,710		16.2	7.8	422	7.5	17.9	2.20	0.44	0.08
			08/24/2006	738		25.3	8.2	665	8.7	1.36	0.29	0.06	< 0.04
13	03302800	Blue River at Fredericksburg	09/09/2005	14		20.7	7.5	435	6.5	1.98	0.64	0.08	0.05
			12/01/2005	244		5.8	7.7	332	13.2	2.61	1.62	0.05	<0.04
			03/02/2006	144		10.1	7.9	378	11.7	0.93	0.48	<0.04	<0.04
			05/11/2006	466		15.8	7.8	381	8.2	2.42	0.68	0.13	0.04
			08/24/2006	28		20.8	7.7	465	6.2	2.03	0.48	0.08	< 0.04
14	03376300	Patoka River at Winslow	09/08/2005	76		22.6	7.2	436	6.1	2.79	0.95	0.07	0.06
			11/30/2005	614		8.0	7.1	398	8.8	10.3	4.4	0.19	0.06
			03/01/2006	265		6.4	7.3	353	12.7	1.78	0.52	0.07	<0.04
			05/10/2006	528		17.1	7.2	275	7.5	8.74	0.78	0.32	0.14
			08/23/2006	314		24.1	7.2	235	5.2	4.60	1.10	0.07	< 0.04
15	03374000	White River at Petersburg	09/08/2005	4,650		27.3	8.2	502	8.8	7.02	0.96	0.20	0.07
			11/30/2005	7,650		7.7	7.8	590	11.5	5.63	0.97	0.09	<0.04
			03/01/2006	9,260		7.9	8.0	614	13.1	3.42	0.46	0.06	<0.04
			05/10/2006	13,900		19.1	7.9	485	8.4	6.41	0.65	0.17	<0.04
			08/23/2006	3,970		28.7	8.2	545	9.1	4.40	0.61	0.41	0.05
16	03342500	Busseron Creek near Carlisle	09/07/2005	15		21.6	7.5	1,208	6.4	---	---	0.12	<0.04
			11/29/2005	182		8.8	7.4	720	9.3	6.24	2.19	0.12	0.05
			02/28/2006	84		4.7	8.0	852	12.2	1.38	0.32	0.08	<0.04
			05/09/2006	79.2		17.0	7.7	945	7.4	1.55	0.49	0.10	0.05
			08/22/2006	14		23.4	7.8	1,273	5.7	2.49	0.42	0.13	< 0.04
17	03327000	Mississinewa River near Peoria	08/29/2005	89	E	24.5	7.9	469	5.7	1.19	0.38	0.12	<0.04

			12/05/2005	570	E	3.4	7.4	545	13.2	3.25	2.16	0.05	<0.04
			03/13/2006	2,023	E	6.5	8.0	511	12.6	3.39	1.76	0.06	0.05
			05/22/2006	673	E	14.0	7.9	458	10.4	3.33	2.09	0.06	<0.04
			08/28/2006	141	E	22.8	7.5	481	4.5	1.38	0.69	0.09	< 0.04
18	03323500	Wabash River near Huntington	08/29/2005	25	E	28.1	8.0	591	9.4	2.67	0.46	0.04	<0.04
			12/05/2005	273	E	0.6	7.5	625	13.5	7.14	3.79	0.05	<0.04
			03/13/2006	2,289	E	10.7	7.7	478	10.7	15.0	5.85	0.14	0.05
			05/22/2006	1,280	E	15.7	7.9	531	10.1	4.37	2.46	0.12	<0.04
			08/28/2006	100	E	26.0	7.9	580	7.5	2.10	0.47	0.05	< 0.04
19	04183000	Maumee River at New Haven	08/30/2005	145		24.5	7.4	905	4.4	9.28	0.50	0.43	0.07
			12/06/2005	1,300		-0.1	7.5	580	11.9	7.85	5.14	0.07	<0.04
			03/14/2006	8,140		9.3	7.7	384	10.4	26.9	5.97	0.32	<0.04
			05/23/2006	2,460		14.5	7.8	548	9.3	23.6	1.89	0.23	0.06
			08/29/2006	1,340		22.6	7.6	525	5.4	12.50	1.00	0.27	0.05
20	04177810	Fish Creek near Artic	08/30/2005	6		20.4	8.0	692	7.7	0.98	0.43	0.08	<0.04
			12/06/2005	59		-0.2	7.0	661	11.5	0.76	0.51	0.06	<0.04
			03/14/2006	592		6.7	7.8	373	10.2	8.66	4.79	0.09	0.06
			05/23/2006	71		14.0	8.0	533	8.8	2.20	0.77	0.18	0.06
			08/29/2006	157		19.0	7.6	391	6.6	8.62	2.29	0.21	< 0.04
21	04101000	St. Joseph River at Elkhart	08/31/2005	1,060		23.0	8.1	596	8.4	0.96	0.30	0.12	no data
			12/07/2005	1,630		0.0	7.4	668	13.3	0.39	0.25	<0.04	<0.04
			03/15/2006	6,070		6.9	8.1	496	11.4	9.05	2.28	0.10	<0.04
			05/24/2006	4,170		16.1	8.1	584	9.7	2.34	0.62	0.08	0.04
			08/30/2006	2,210		20.6	7.9	565	7.1	3.27	0.48	0.07	0.06
22	04095380	Trail Creek at Michigan City	08/31/2005	-283		21.7	8.2	774	9.4	0.79	0.25	<0.04	<0.04
			12/07/2005	-30		2.1	7.5	854	13.7	0.82	0.33	<0.04	<0.04
			03/15/2006	49		7.6	7.9	702	11.2	5.94	2.14	0.08	0.05
			05/24/2006	-23		14.0	7.9	795	9.4	1.86	0.40	0.09	0.04
			08/30/2006	36		19.0	7.6	610	7.5	7.15	3.31	0.39	0.23
23	04093000	Deep River at Lake George at Hobart	09/01/2005	25		24.0	8.1	644	6.0	1.43	0.64	0.05	<0.04
			12/08/2005	23		1.5	7.3	882	11.7	1.88	0.85	0.05	<0.04
			03/16/2006	503		6.9	7.7	640	10.0	6.89	3.17	0.05	0.08
			05/25/2006	66		18.4	8.5	817	11.3	1.38	0.55	0.05	<0.04

			08/31/2006	479		20.8	7.5	520	6.5	3.02	1.52	0.15	0.11
24	05518000	Kankakee River at Shelby	09/01/2005	604		21.6	7.9	739	7.5	---	---	---	---
			12/08/2005	1,360		-0.3	7.7	766	12.7	0.75	0.35	<0.04	<0.04
			03/16/2006	3,390		7.4	7.8	522	9.3	12.2	3.49	0.11	0.04
			05/25/2006	1,900		16.7	7.9	679	8.7	3.73	0.46	0.07	<0.04
			08/31/2006	1,730		18.9	7.8	635	7.4	3.23	0.52	0.07	< 0.04
25	03343000	Wabash River at Vincennes	09/07/2005	2,390	E	27.1	8.3	570	11.6	2.44	0.29	0.27	0.07
			11/29/2005	6,120	E	7.7	7.9	624	11.0	4.11	0.92	0.09	<0.04
			02/28/2006	9,555	E	6.3	8.5	605	13.0	5.64	1.24	0.09	<0.04
			05/09/2006	11,300	E	19.4	8.2	629	10.0	6.45	0.53	0.15	<0.04
			08/22/2006	4,147	E	28.0	8.6	539	13.6	3.86	0.38	0.21	0.04

[1]Water-quality characteristcs measured at multiple verticals across stream and mean value listed for water temperature, specific conductance, and dissolved oxygen; median value listed for pH.

[2]Filtered concentration determined from water sample processed with 0.45 micrometer filter.

MISCELLANEOUS PROJECT DATA

MERCURY CONCENTRATIONS IN QUALITY-CONTROL SAMPLES FROM STREAM-MONITORING NETWORK IN INDIANA, SEPTEMBER 2005 THROUGH SEPTEMBER 2006

[map no., identification number for location of station on figure **XX**; map no. not assigned to field blanks; ng/L, nanogram per liter; <, less than reporting limit listed; n.a., not analyzed]

					Mercury concentrations[1]			
Type of quality-control sample	Station number	Map no.	Station name or description of field blank	Sample date	Unfiltered total mercury (ng/L)	Filtered total mercury (ng/L)	Unfiltered methyl-mercury (ng/L)	Filtered methyl-mercury (ng/L)
split duplicate	03351500	1	Fall Creek near Fortville	09/15/2005	0.95	0.53	0.08	0.05
split duplicate	03328500	2	Eel River near Logansport	09/13/2005	0.79	0.43	0.12	0.08
split duplicate	03374000	15	White River at Petersburg	09/08/2005	6.77	0.85	0.17	0.06
split duplicate	03327000	17	Mississinewa River near Peoria	09/08/2005	1.26	0.34	0.10	0.06
field blank	03327000		Sampling and processing equipment	08/29/2005	n.a.	<0.04	n.a.	n.a.
field blank	03374000		Sampling and processing equipment	09/08/2005	n.a.	<0.04	n.a.	n.a.
field blank	03354000		Sampling and processing equipment	09/14/2005	n.a.	0.01	n.a.	n.a.
field blank	03365500		Sampling and processing equipment	09/19/2005	n.a.	0.02	n.a.	n.a.
field blank	03327000		Blank water, sample bottle, preservative	08/29/2005	0.06	n.a.	n.a.	n.a.
field blank	03365500		Blank water, sample bottle, preservative	09/19/2005	<0.04	n.a.	n.a.	n.a.
concurrent duplicate	03331753	3	Wildcat Creek near Lafayette	12/12/2005	0.38	0.31	<.04	<.04
concurrent duplicate	03351000	8	West Fork White River at Nora	12/16/2005	0.90	0.08	0.08	<.04
concurrent duplicate	03376300	14	Patoka River at Winslow	11/30/2005	10.8	3.51	0.15	0.06
concurrent duplicate	05518000	24	Kankakee River at Shelby	12/08/2005	0.68	0.36	<.04	<.04
field blank	03341500		Sampling and processing equipment	11/28/2005	n.a.	<0.04	n.a.	n.a.
field blank	03323500		Sampling and processing equipment	12/06/2005	n.a.	<0.04	n.a.	n.a.
field blank	03276000		Sampling and processing equipment	12/19/2005	n.a.	<0.04	n.a.	n.a.
field blank	03351500		Sampling and processing equipment	12/16/2005	n.a.	<0.04	n.a.	n.a.
field blank	03341500		Blank water, sample bottle, preservative	11/28/2005	<0.04	n.a.	n.a.	n.a.
field blank	03351500		Blank water, sample bottle, preservative	12/16/2005	<0.04	n.a.	n.a.	n.a.
concurrent duplicate	03351500	1	Fall Creek near Fortville	03/10/2006	22.00	4.18	0.29	0.06
concurrent duplicate	03361650	9	Sugar Creek at New Palestine	03/08/2006	1.20	0.72	<0.04	<0.04

concurrent duplicate	03323500	18	Wabash River at Huntington	03/13/2006	15.00	4.88	0.13	0.05
concurrent duplicate	04093000	23	Deep River at Lake George	03/16/2006	6.66	3.38	0.06	0.06
field blank	03341500		Sampling and processing equipment	02/27/2006	n.a.	<0.04	n.a.	n.a.
field blank	03328500		Sampling and processing equipment	03/07/2006	n.a.	<0.04	n.a.	n.a.
field blank	03327000		Sampling and processing equipment	03/13/2006	n.a.	<0.04	n.a.	n.a.
field blank	03276000		Sampling and processing equipment	03/17/2006	n.a.	<0.04	n.a.	n.a.
field blank	03341500		Blank water, sample bottle, preservative	02/27/2006	<0.04	n.a.	n.a.	n.a.
field blank	03276000		Blank water, sample bottle, preservative	03/17/2006	<0.04	n.a.	n.a.	n.a.
concurrent duplicate	03354000	7	West Fork White River at Centerton	05/16/2006	16.20	1.40	0.24	<0.04
concurrent duplicate	03369500	11	Vernon Fork Muscatatuck River at Vernon	05/12/2006	7.64	4.57	0.19	0.11
concurrent duplicate	03365500	12	East Fork White River at Seymour	05/11/2006	18.10	2.24	0.46	0.08
concurrent duplicate	04183000	19	Maumee River at New Haven	05/23/2006	21.17	1.91	0.23	0.07
field blank	03359000		Sampling and processing equipment	05/08/2006	n.a.	<0.04	n.a.	n.a.
field blank	03369500		Sampling and processing equipment	05/12/2006	n.a.	<0.04	n.a.	n.a.
field blank	03276000		Sampling and processing equipment	05/18/2006	n.a.	<0.04	n.a.	n.a.
field blank	03331753		Sampling and processing equipment	05/25/2006	n.a.	<0.04	n.a.	n.a.
field blank	03359000		Blank water, sample bottle, preservative	05/08/2006	<0.04	n.a.	n.a.	n.a.
field blank	03331753		Blank water, sample bottle, preservative	05/25/2006	0.04	n.a.	n.a.	n.a.
concurrent duplicate	03328500	2	Eel River near Adamsboro	09/07/2006	1.16	0.52	0.07	0.06
concurrent duplicate	03341500	5	Wabash River at Terre Haute	08/21/2006	2.40	0.37	0.14	< 0.04
concurrent duplicate	03302800	13	Blue River at Fredericksburg	08/24/2006	1.97	0.49	0.06	< 0.04
concurrent duplicate	04101000	21	St. Joseph River at Elkhart	08/30/2006	2.69	0.46	0.06	0.05
field blank	03341500		Sampling and processing equipment	08/21/2006	n.a.	<0.04	n.a.	n.a.
field blank	04177810		Sampling and processing equipment	08/29/2006	n.a.	<0.04	n.a.	n.a.
field blank	03351000		Sampling and processing equipment	09/05/2006	n.a.	0.05	n.a.	n.a.
field blank	03276000		Sampling and processing equipment	09/08/2006	n.a.	0.05	n.a.	n.a.
field blank	03341500		Blank water, sample bottle, preservative	08/21/2006	<0.04	n.a.	n.a.	n.a.
field blank	03276000		Blank water, sample bottle, preservative	09/08/2006	<0.04	n.a.	n.a.	n.a.

[1]Filtered concentration determined from water sample processed with 0.45 micrometer filter.