



Figure 12.--Locations of stations in stream-monitoring network for mercury in Indiana.

## MISCELLANEOUS PROJECT DATA

**WATER-QUALITY CHARACTERISTICS AND MERCURY CONCENTRATIONS IN WATER SAMPLES FROM STREAM-MONITORING NETWORK  
IN INDIANA, AUGUST 2004 THROUGH JUNE 2005**

The following table lists total mercury and methylmercury concentrations in four 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 Manual 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.

[map no., identification number for location of station on figure 12; ft<sup>3</sup>/s, cubic feet per second; E, streamflow estimated with stage data and historical rating; °C, degree centigrade; ∞S/cm, microsiemen per centimeter; mg/L, milligram per liter; ng/L, nanogram per liter; <, less than reporting limit listed]

Map No.	Station number	Station name	Sample date	Instantaneous streamflow (ft <sup>3</sup> /s)	Water-quality characteristics <sup>1</sup>				Mercury concentrations <sup>2</sup>			
					Water temperature (°C)	pH (standard units)	Specific conductance (∞S/cm)	Dissolved oxygen (mg/L)	Unfiltered total mercury (ng/L)	Dissolved total mercury (ng/L)	Unfiltered methylmercury (ng/L)	Dissolved methylmercury (ng/L)
1	03351500	Fall Creek near Fortville	08/23/2004	52	19.3	7.8	726	7.0	1.28	0.23	0.07	<0.04
			10/12/2004	25	11.9	8.0	810	8.4	0.58	0.44	<0.04	<0.04
			02/22/2005	345	5.8	7.9	653	11.2	1.16	0.35	<0.04	<0.04
			06/27/2005	84	23.3	7.8	746	6.4	2.35	0.43	0.11	0.06
2	03328500	Eel River near Adamsboro	08/30/2004	3,730	20.6	7.6	365	7.8	14.70	3.99	0.27	0.09
			10/19/2004	244	9.4	8.2	688	11.2	0.79	0.55	<0.04	<0.04
			03/17/2005	764	5.3	8.0	647	11.7	0.88	0.49	0.04	0.04
			06/14/2005	675	22.6	7.7	650	6.5	2.21	0.94	0.25	0.11
3	03331753	Tippecanoe River at Winimac	09/02/2004	2,430	20.0	7.5	511	8.3	3.81	1.35	0.16	0.08
			10/19/2004	361	8.8	8.1	643	10.1	0.61	0.34	<0.04	<0.04
			03/17/2005	1,420	5.2	7.9	577	12.0	1.21	0.49	0.06	<0.04
			06/14/2005	492	23.8	8.0	604	7.5	2.63	0.42	0.19	0.05
4	03335000	Wildcat Creek near Lafayette	08/30/2004	768	20.5	8.0	607	8.3	8.33	1.11	0.21	0.05
			10/21/2004	409	12.1	8.3	640	11.2	1.55	1.02	0.05	<0.04
			03/16/2005	468	3.9	7.9	681	13.1	0.57	0.44	<0.04	<0.04
			06/13/2005	447	22.8	7.9	679	7.8	2.78	0.90	0.33	0.13

MISCELLANEOUS PROJECT DATA

WATER-QUALITY CHARACTERISTICS AND MERCURY CONCENTRATIONS IN WATER SAMPLES FROM STREAM-MONITORING NETWORK  
IN INDIANA, AUGUST 2004 THROUGH JUNE 2005--Continued

Map No.	Station number	Station name	Sample date	Instan- taneous streamflow (ft <sup>3</sup> /s)	Water-quality characteristics <sup>1</sup>				Mercury concentrations <sup>2</sup>			
					Water temp- erature (° C)	pH (standard units)	Specific conduc- tance (≈S/cm)	Dissolved oxygen (mg/L)	Unfiltered total mercury (ng/L)	Dissolved total mercury (ng/L)	Unfiltered methyl- mercury (ng/L)	Dissolved methyl- mercury (ng/L)
5	03341500	Wabash River at Terre Haute	09/10/2004	7,230	24.1	8.1	535	7.0	5.13	1.06	0.19	0.05
			11/03/2004	9,380	15.7	8.0	597	7.7	11.60	0.86	0.26	0.05
			02/28/2005	26,900	5.3	7.8	508	12.1	4.52	1.86	0.06	<0.04
			06/07/2005	4,380	27.8	8.0	572	12.0	2.38	0.42	0.52	0.05
6	03359000	Mills Creek at Cagles Mill Dam	08/31/2004	24	24.0	7.5	289	7.2	1.36	0.37	0.32	0.06
			10/13/2004	19	18.6	7.2	302	8.1	1.17	0.32	0.12	<0.04
			03/04/2005	39 E	4.5	7.4	287	12.2	3.26	2.45	<0.04	<0.04
			06/06/2005	81 E	16.4	7.5	377	9.1	2.18	0.96	0.14	0.06
7	03354000	West Fork White River at Centerton	08/24/2004	969	23.6	7.6	998	7.2	9.10	0.64	0.29	0.12
			10/14/2004	914	17.9	7.7	1277	7.6	10.10	1.47	0.24	0.12
			02/23/2005	4,070	5.7	7.7	731	11.5	6.34	0.92	0.09	0.08
			06/28/2005	822	26.4	8.2	1071	10.2	6.47	0.80	0.07	0.07
8	03351000	West Fork White River at Nora	08/23/2004	511	23.1	7.7	878	7.3	2.55	0.44	0.11	0.07
			10/12/2004	228	14.8	8.2	969	9.4	1.36	0.53	0.07	0.06
			02/22/2005	2,420	4.6	8.0	577	11.9	2.64	0.75	<0.04	<0.04
			06/27/2005	400	26.9	7.8	865	6.6	2.54	0.55	0.12	0.07
9	03361650	Sugar Creek near New Palestine	08/24/2004	11	22.0	7.9	635	9.3	0.76	0.31	<0.04	<0.04
			10/14/2004	17	12.9	7.9	657	7.1	1.36	0.99	0.04	0.09
			02/23/2005	129	5.2	7.9	604	12.3	1.10	0.40	<0.04	<0.04
			06/28/2005	21	25.7	8.1	632	8.1	1.31	0.58	0.10	0.06
10	03276000	East Fork Whitewater River near Brookville	09/03/2004	50 E	21.8	7.7	457	8.3	0.54	0.40	<0.04	<0.04
			10/22/2004	468 E	16.2	7.8	446	9.5	1.02	0.41	<0.04	<0.04
			02/25/2005	307 E	3.9	7.8	418	12.5	1.85	1.21	<0.04	<0.04
			06/30/2005	384 E	13.4	7.8	464	10.2	0.34	0.23	<0.04	<0.04

MISCELLANEOUS PROJECT DATA

WATER-QUALITY CHARACTERISTICS AND MERCURY CONCENTRATIONS IN WATER SAMPLES FROM STREAM-MONITORING NETWORK IN INDIANA, AUGUST 2004 THROUGH JUNE 2005--Continued

Map No.	Station number	Station name	Sample date	Instan- taneous streamflow (ft <sup>3</sup> /s)	Water-quality characteristics <sup>1</sup>				Mercury concentrations <sup>2</sup>				
					Water temp- erature (° C)	pH (standard units)	Specific conduc- tance (≈S/cm)	Dissolved oxygen (mg/L)	Unfiltered total mercury (ng/L)	Dissolved total mercury (ng/L)	Unfiltered methyl- mercury (ng/L)	Dissolved methyl- mercury (ng/L)	
11	03369500	Vernon Fork Muscatatuck River at Vernon	08/25/2004	26	23.0	7.6	348	6.5	2.80	1.11	0.11	0.07	
			10/15/2004	137	13.4	7.9	729	7.4	1.08	0.90	<0.04	<0.04	
			02/24/2005	140	4.4	8.0	385	12.4	1.50	1.25	0.08	0.05	
			06/29/2005	21	26.7	8.4	412	7.5	2.32	1.21	0.13	0.09	
12	03365500	East Fork White River at Seymour	08/25/2004	590	24.8	7.9	640	8.3	1.23	0.16	0.12	0.06	
			10/15/2004	366	13.7	8.1	709	9.2	0.96	0.34	0.05	<0.04	
			02/24/2005	3,440	5.9	7.8	622	11.4	1.82	0.52	0.05	<.04	
			06/29/2005	1,050	27.5	8.3	615	11.0	1.67	0.35	0.12	0.04	
13	03302800	Blue River at Fredericksburg	09/09/2004	69	20.5	7.9	454	8.2	1.74	0.89	0.09	0.09	
			10/18/2004	53	E	10.5	7.8	520	8.6	2.96	1.90	0.10	<0.04
			03/03/2005	193		3.4	7.4	347	12.8	0.83	0.43	<0.04	<0.04
			06/10/2005	35		24.3	7.7	469	7.1	1.85	0.67	0.20	0.13
14	03376300	Patoka River at Winslow	09/01/2004	182	23.4	7.3	350	6.7	3.97	1.22	0.05	<0.04	
			10/28/2004	1,230	16.0	7.2	303	5.3	16.00	4.30	0.06	0.06	
			03/02/2005	1,160	4.4	7.4	269	11.0	2.63	0.63	0.08	<0.04	
			06/09/2005	66	25.9	7.5	626	9.4	2.70	0.30	0.13	<0.04	
15	03374000	White River at Petersburg	10/07/2004	1,790	18.6	8.1	831	9.9	4.05	0.79	0.40	0.10	
			10/28/2004	10,000	16.6	7.6	460	6.9	12.00	2.58	0.20	0.07	
			03/02/2005	16,300	5.5	7.7	503	10.9	3.60	0.80	0.06	<0.04	
			06/09/2005	5,630	27.8	8.1	578	14.5	6.15	1.48	0.28	<0.04	
16	03342500	Busseron Creek near Carlisle	08/31/2004	55	E	23.0	7.5	863	7.3	4.02	0.56	0.18	0.08
			10/29/2004	244		16.3	7.2	603	7.2	3.81	1.73	0.17	0.13
			03/01/2005	135		3.2	7.7	857	12.0	1.37	0.35	0.05	0.05
			06/08/2005	26		24.1	7.6	1283	5.4	2.47	2.44	0.12	0.07

MISCELLANEOUS PROJECT DATA

WATER-QUALITY CHARACTERISTICS AND MERCURY CONCENTRATIONS IN WATER SAMPLES FROM STREAM-MONITORING NETWORK  
IN INDIANA, AUGUST 2004 THROUGH JUNE 2005--Continued

Map No.	Station number	Station name	Sample date	Instan- taneous streamflow (ft <sup>3</sup> /s)	Water-quality characteristics <sup>1</sup>					Mercury concentrations <sup>2</sup>			
					Water temp- erature (° C)	pH (standard units)	Specific conduc- tance (≈S/cm)	Dissolved oxygen (mg/L)	Unfiltered total mercury (ng/L)	Dissolved total mercury (ng/L)	Unfiltered methyl- mercury (ng/L)	Dissolved methyl- mercury (ng/L)	
17	03327000	Mississinewa River near Peoria	08/26/2004	192	E	22.5	7.6	532	7.5	2.38	0.99	0.16	<0.04
			10/25/2004	194	E	12.8	7.7	575	9.7	2.31	0.32	0.05	<0.04
			03/07/2005	574	E	4.2	8.0	562	12.8	1.74	1.01	0.05	0.04
			06/20/2005	248	E	20.2	7.8	478	9.0	1.12	0.68	0.18	0.10
18	03323500	Wabash River near Huntington	08/26/2004	92	E	23.8	7.7	599	7.9	1.48	0.40	0.13	0.05
			10/25/2004	133	E	13.1	8.2	708	11.4	1.24	0.35	0.08	<0.04
			03/07/2005	1,730	E	6.0	7.9	539	12.4	7.66	3.62	0.13	<0.04
			06/20/2005	104	E	25.8	8.1	600	8.7	2.59	1.68	0.40	0.17
19	04183000	Maumee River at New Haven	08/27/2004	424		23.2	7.8	660	7.4	8.39	0.50	0.22	0.05
			10/26/2004	674		12.8	7.7	795	8.6	4.72	0.80	0.19	0.06
			03/08/2005	3,900		4.6	7.4	493	12.5	9.64	3.81	0.07	0.06
			06/21/2005	106		22.0	7.8	813	9.3	3.45	0.46	0.24	0.09
20	04177800	Fish Creek near Artic	09/07/2004	15		20.9	8.2	619	7.0	2.48	1.13	0.16	0.07
			10/26/2004	19		12.1	7.9	669	8.5	1.00	0.62	0.08	0.07
			03/08/2005	336		2.3	7.7	392	12.3	4.05	2.09	0.09	0.05
			06/21/2005	10		18.9	8.0	671	8.3	1.46	0.63	0.15	0.10
21	04101000	St. Joseph River at Elkhart	09/07/2004	1,680		23.5	8.2	594	8.6	1.80	0.74	0.10	0.10
			10/27/2004	1,450		13.0	7.9	618	9.9	1.30	0.36	<0.04	<0.04
			03/09/2005	5,910		2.3	7.9	535	12.8	1.74	0.59	0.08	0.05
			06/22/2005	1,780		22.3	7.8	586	8.6	1.77	0.38	0.08	0.06
22	04095380	Trail Creek at Michigan City	09/08/2004	234		18.0	7.8	756	8.0	1.16	0.48	0.06	0.05
			10/20/2004	583		12.3	7.8	757	11.4	0.55	0.17	<0.04	<0.04
			03/09/2005	236		4.4	7.6	756	12.9	1.42	0.83	0.09	0.08
			06/22/2005	228		21.0	7.9	772	9.3	1.43	0.30	0.08	0.05

## MISCELLANEOUS PROJECT DATA

WATER-QUALITY CHARACTERISTICS AND MERCURY CONCENTRATIONS IN WATER SAMPLES FROM STREAM-MONITORING NETWORK  
IN INDIANA, AUGUST 2004 THROUGH JUNE 2005--Continued

Map No.	Station number	Station name	Sample date	Instan- taneous streamflow (ft <sup>3</sup> /s)	Water-quality characteristics <sup>1</sup>				Mercury concentrations <sup>2</sup>			
					Water temp- erature (° C)	pH (standard units)	Specific conduc- tance (µS/cm)	Dissolved oxygen (mg/L)	Unfiltered total mercury (ng/L)	Dissolved total mercury (ng/L)	Unfiltered methyl- mercury (ng/L)	Dissolved methyl- mercury (ng/L)
23	04093000	Deep River at Lake George at Hobart	090/8/2004	37	22.7	7.9	666	8.1	2.16	0.88	<0.04	<0.04
			10/20/2004	26	9.9	8.0	662	9.9	1.85	0.59	<0.04	<0.04
			03/10/2005	66	4.0	7.9	939	12.2	1.37	0.80	0.08	<.04
			06/23/2005	26	24.0	8.4	713	9.4	1.43	0.62	0.09	<.04
24	05518000	Kankakee River at Shelby	09/08/2004	2,400	20.2	7.7	597	7.4	7.33	1.05	0.13	0.06
			10/21/2004	831	10.6	8.0	662	9.7	0.80	0.19	<0.04	<0.04
			03/10/2005	3,400	3.4	7.8	602	11.6	2.40	0.99	0.10	0.06
			06/23/2005	661	22.9	7.9	687	7.9	5.28	0.31	0.04	0.04
25	03343000	Wabash River at Vincennes	10/07/2004	3,395 E	18.8	8.5	597	14.5	1.95	0.16	0.22	<0.04
			11/04/2004	15,700 E	15.1	7.6	506	7.7	9.73	1.69	0.16	0.08
			03/01/2005	35,600 E	4.4	7.6	487	11.8	4.12	2.00	0.09	<0.04
			06/08/2005	5,639 E	27.5	8.0	609	8.3	2.54	0.34	0.42	0.08

<sup>1</sup>Water-quality characteristics measured at multiple verticals across stream and mean value listed for water temperature, specific conductance, and dissolved oxygen; median value listed for pH.

<sup>2</sup>Dissolved 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, AUGUST 2004 THROUGH JUNE 2005

[map no., identification number for location of station on figure 12; map no. not assigned to field blanks; ng/L, nanogram per liter;  
<, less than reporting limit listed; n.a., not analyzed]

Type of quality-control sample	Station number	Map no.	Station name or description of field blank	Sample date	Mercury concentrations <sup>1</sup>			
					Unfiltered total mercury (ng/L)	Dissolved total mercury (ng/L)	Unfiltered methyl-mercury (ng/L)	Dissolved methyl-mercury (ng/L)
Split duplicate	03376300	14	Patoka River at Winslow	09/01/2004	4.21	1.09	0.05	0.04
Split duplicate	03342500	16	Busseron Creek near Carlisle	08/31/2004	3.80	0.62	0.16	0.07
Split duplicate	04183000	19	Maumee River at New Haven	08/27/2004	7.79	0.60	0.23	0.06
Field blank	03351500		Sampling and processing equipment	08/23/2004	n.a.	<0.04	n.a.	n.a.
Field blank	03335000		Sampling and processing equipment	08/30/2004	n.a.	<0.02	n.a.	n.a.
Field blank	03376300		Sampling and processing equipment	09/01/2004	n.a.	<0.03	n.a.	n.a.
Field blank	03302800		Sampling and processing equipment	09/14/2004	n.a.	<0.04	n.a.	n.a.
Field blank	03351000		Blank water, sample bottle, preservative	08/23/2004	<0.04	n.a.	n.a.	n.a.
Field blank	03302800		Blank water, sample bottle, preservative	09/14/2004	<0.04	n.a.	n.a.	n.a.
Split duplicate	03359000	6	Mills Creek at Cagles Mill Dam	10/13/2004	1.13	0.29	0.10	<0.04
Split duplicate	03276000	10	East Fork Whitewater River near Brookville	10/22/2004	0.94	0.38	<0.04	<0.04
Split duplicate	03302800	13	Blue River at Fredericksburg	10/18/2004	3.18	1.78	0.09	<0.04
Split duplicate	04101000	21	St. Joseph River at Elkhart	10/27/2004	1.08	0.30	0.05	<0.04
Field blank	03351500		Sampling and processing equipment	10/12/2004	n.a.	<0.01	n.a.	n.a.
Field blank	03343000		Sampling and processing equipment	11/04/2004	n.a.	<0.04	n.a.	n.a.
Field blank	03276000		Sampling and processing equipment	10/22/2004	n.a.	<0.04	n.a.	n.a.
Field blank	03302800		Sampling and processing equipment	10/18/2004	n.a.	<0.04	n.a.	n.a.
Field blank	03351000		Blank water, sample bottle, preservative	10/12/2004	<0.04	n.a.	n.a.	n.a.
Field blank	03343000		Blank water, sample bottle, preservative	11/04/2004	<0.04	n.a.	n.a.	n.a.
Split duplicate	03331753	3	Tippecanoe River at Winimac	03/17/2005	1.08	0.52	0.07	<.04
Split duplicate	03341500	5	Wabash River at Terre Haute	02/28/2005	4.26	1.82	0.08	0.05
Split duplicate	03361650	9	Sugar Creek at New Palestine	02/23/2005	1.39	0.51	0.06	<.04
Split duplicate	04177800	20	Fish Creek near Artic	03/08/2005	4.60	2.54	0.11	0.06
Field blank	03351500		Sampling and processing equipment	02/22/2005	n.a.	<0.04	n.a.	n.a.

MISCELLANEOUS PROJECT DATA

MERCURY CONCENTRATIONS IN QUALITY-CONTROL SAMPLES FROM STREAM-MONITORING NETWORK  
IN INDIANA, AUGUST 2004 THROUGH JUNE 2005--Continued

[map no., identification number for location of station on figure 12; map no. not assigned to field blanks; ng/L, nanogram per liter;  
<, less than reporting limit listed; n.a., not analyzed

Type of quality-control sample	Station number	Map no.	Station name or description of field blank	Sample date	Mercury concentrations <sup>1</sup>			
					Unfiltered total mercury (ng/L)	Dissolved total mercury (ng/L)	Unfiltered methylmercury (ng/L)	Dissolved methylmercury (ng/L)
Field blank	03342500		Sampling and processing equipment	03/01/2005	n.a.	<0.04	n.a.	n.a.
Field blank	03327000		Sampling and processing equipment	03/07/2005	n.a.	<0.04	n.a.	n.a.
Field blank	03328500		Sampling and processing equipment	03/17/2005	n.a.	<0.04	n.a.	n.a.
Field blank	03351500		Blank water, sample bottle, preservative	02/22/2005	<0.04	n.a.	n.a.	n.a.
Field blank	03328500		Blank water, sample bottle, preservative	03/17/2005	<0.04	n.a.	n.a.	n.a.
Split duplicate	03335000	4	Wildcat Creek near Lafayette	06/13/2005	2.38	0.65	0.32	0.16
Split duplicate	03354000	7	West Fork White River at Centerton	06/28/2005	7.28	0.61	0.06	0.06
Split duplicate	04095380	22	Trail Creek at Michigan City	06/22/2005	1.23	0.33	0.07	0.05
Split duplicate	03343000	25	Wabash River at Vincennes	06/08/2005	2.41	0.34	0.35	0.08
Field blank	03341500		Sampling and processing equipment	06/07/2005	n.a.	0.09	n.a.	n.a.
Field blank	03331753		Sampling and processing equipment	06/14/2005	n.a.	<0.04	n.a.	n.a.
Field blank	04093000		Sampling and processing equipment	06/23/2005	n.a.	<0.04	n.a.	n.a.
Field blank	03276000		Sampling and processing equipment	06/30/2005	n.a.	<0.04	n.a.	n.a.
Field blank	03341500		Blank water, sample bottle, preservative	06/07/2005	<0.04	n.a.	n.a.	n.a.
Field blank	03276000		Blank water, sample bottle, preservative	06/30/2005	<0.04	n.a.	n.a.	n.a.

<sup>1</sup>Dissolved concentration determined from water sample processed with 0.45 micrometer filter.