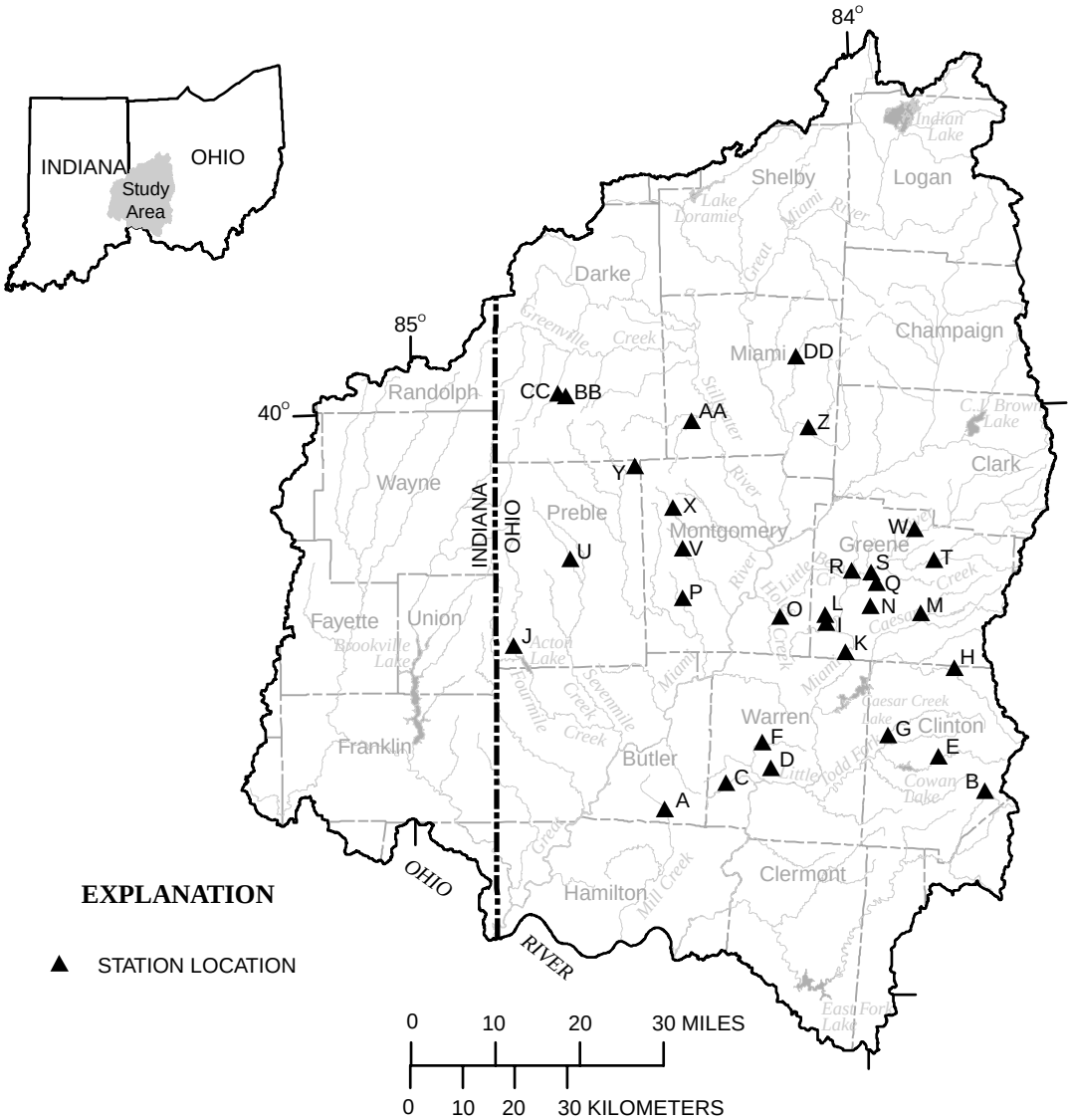
PROJECT DATA

Results from Selected Sites in the Great Miami and Little Miami River Basin (National Water-Quality Assessment Program)

RESULTS FROM THE URBAN-GRADIENT STUDY

Water-quality samples were collected at 30 sites in the Great and Little Miami River Basins as part of the National Water-Quality Assessment Program (NAWQA). The sites were sampled as part of an Urban-Gradient Study designed to assess patterns of biological response and identify physical and chemical factors that control water quality locally and regionally along a gradient of urban land use. Watersheds associated with the streams sampled represent a range of land-use settings from row-crop agriculture to highly urbanized residential and commercial areas.

All samples were collected during low-flow conditions in July 2001. Water samples were collected and processed for analysis of selected physical, biological, and chemical characteristics including major ions, nutrients, and selected pesticides. Stream discharge was also measured during sampling. Multiparameter data sondes were deployed at each site prior to sample collection to assess diurnal variations in temperature, pH, specific conductance, dissolved oxygen concentrations, and at selected sites, qualitative chlorophyll concentrations in the water column. Field measurements of of algal chlorophyll *a*, pheophyton *a*, and biomass were taken from the stream bottom in riffles (periphyton) representing the richest targeted habitats and from the water column (phytoplankton) using the NAWQA algal protocols (Porter and others, 1993). Ash-free and dry weights were analyzed for all periphyton samples. For an estimate of phytoplankton biomass refer to the water-quaity section where data from split samples are reported. To obtain the amount of particulate organic carbon in the water samples (plankton and bacteria) collected, subtract the dissolved organic carbon (DOC) from the total organic carbon (TOC). NAWQA guidelines for collection and processing of water-quality samples are described in Shelton (1994). Guidelines for collection and processing of algae samples are given by Porter and others (1993).



RESULTS FROM THE URBAN-GRADIENT STUDY—CONTINUED

[mi^2, square mile.]

STATION NUMBER	MAP INDEX	STATION NAME	LATITUDE	LONGITUDE	DRAINAGE AREA (mi^2)
391852084253100	A	East Fork Mill Creek at Allen Road	39°18′52″	84°25′31″	8.4
392027083430100	B	East Fork Little Miami River at Thornburg Road	39°20′27″	83°43′01″	5.8
392219084172100	C	Muddy Creek at State Route 741	39°22′19″	84°17′21″	10.0
392306084121300	D	Dry Run at Dry Run Road near Lebanon	39°23′06″	84°12′13″	5.5
392400083494000	E	Cowan Creek at Ireland Road	39°24′00″	83°49′40″	32.4
392553084133100	F	Turtle Creek at Glossar Road	39°25′53″	84°13′31″	22.3
392614083564000	G	Todd Fork at US 22 and US 3 near Sligo	39°26′14″	84°56′40″	56.6
393317083474000	H	Anderson Fork at Port William Road	39°33′17″	84°47′40″	42.6
393450084020300	I	Unnamed tributary at US 42 near Mount Holly	39°34′50″	84°02′03″	4.5
393619084461200	J	Fourmile Creek at Camden College Road	39°36′19″	84°46′12″	50.1
393748084042300	K	Sugar Creek at Waynesville Road	39°37′48″	84°04′23″	19.0
393814084043500	L	Little Sugar Creek at Little Sugar Creek Road	39°38′14″	84°04′35″	2.8
393848083521200	M	Caesar Creek at Gultice Road	39°38′48″	84°52′12″	64.8
393903083582900	N	Glady Run at Hedges Road	39°39′03″	84°58′29″	6.5
393903084110500	O	Holes Creek at McEwen Road	39°39′03″	84°11′05″	14.8
394111084234200	P	Little Twin Creek at Farmersville-W. Carrollton Pike	39°41′11″	84°23′42″	12.5
394212083575200	Q	Shawnee Creek at Hawkins Road	39°42′12″	84°57′52″	11.4
394252084010900	R	Beaver Creek at Dayton-Xenia Road	39°42′52″	84°01′09″	20.8
394253083583300	S	Ludlow Creek at Hilltop Road	39°42′53″	84°58′33″	7.0
394414083501800	T	Massies Creek at Tarbox-Cemetary Road	39°44′14″	84°50′18″	55.6
394510084384100	U	Sevenmile Creek at Eaton Waterworks Park	39°45′10″	84°38′41″	25.2
394549084234400	V	Bear Creek at Clayton Road	39°45′49″	84°23′44″	6.1
394727083523000	W	Yellow Springs Creek at E. Hyde Road	39°47′27″	84°52′30″	10.9
394953084244100	X	Wolf Creek at Westbrook Road	39°49′53″	84°24′41″	7.8
395452084293400	Y	Swamp Creek at Verona Road	39°54′52″	84°29′34″	13.3
395810084063600	Z	Honey Creek at Rudy Road	39°58′10″	84°06′36″	72.9
395912084214000	AA	Brush Creek at Elleman Road	39°59′12″	84°21′40″	22.9
400130084392900	BB	Prairie Outlet at Weavers-Ft. Jefferson Road	40°01′30″	84°39′29″	3.6
400134084400300	CC	Mud Creek near Ft. Jefferson	40°01′34″	84°40′03″	6.7
400439084080000	DD	Lost Creek at Troy-Urbana Road	40°04′39″	84°08′00″	30.4

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(00061), USGS National Water Information System parameter code; mm of Hg, millimeters of mercury; mg/L, milligrams per liter; µS/cm, microsiemens per centimeter; deg C, degrees Celsius.]

STATION NUMBER	DATE	TIME	DIS-CHARGE, INST. (CUBIC FEET PER SECOND) (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	DIS-SOLVED OXYGEN (MG/L)) (00300)	DIS-SOLVED OXYGEN (PER-CENT SATUR-ATION) (00301)	PH WATER FIELD (STAND-ARD UNITS) (00400)	PH WATER LAB (STAND-ARD UNITS) (00403)	SPEC-IFIC CON-DUCT ANCE LAB (US/CM) (90095)	SPEC-IFIC CON-DUCT-ANCE FIELD (US/CM) (00095)	TEMPER-ATURE, AIR (DEG C) (00020)
391852084253100	07/30/01	1400	2.4	745	9.0	110	7.7	8.1	895	902	35.0
392027083430100	07/26/01	1400	4.8	734	7.3	87.4	7.8	7.9	423	425	27.0
392219084172100	07/30/01	1010	2.6	744	5.0	60.2	7.8	8.0	522	523	25.0
392306084121300	07/23/01	0940	1.5	742	7.8	90.2	7.9	8.1	790	791	29.0
392400083494000	07/24/01	1430	1.1	732	7.6	98.0	8.0	8.1	603	602	35.0
392553084133100	07/31/01	0850	9.2	748	7.0	83.0	8.1	8.2	616	621	25.0
392614083564000	07/24/01	0920	4.1	737	5.6	69.2	7.8	8.0	677	686	30.0
393317083474000	07/31/01	1150	1.4	739	7.0	88.9	8.0	8.1	528	534	33.0
393450084020300	07/26/01	0900	1.0	741	7.5	86.1	8.1	8.2	653	658	23.0
393619084461200	07/16/01	1530	13	739	9.1	111	8.2	8.2	647	654	28.0
393748084042300	07/09/01	0940	3.0	736	7.6	87.0	7.8	7.9	731	726	29.0
393814084043500	07/10/01	1330	2.1	735	10.6	134	8.2	8.0	800	849	32.0
393848083521200	07/25/01	1340	2.1	733	7.9	101	7.9	8.2	704	666	32.0
393903083582900	07/25/01	1000	4.7	735	7.2	83.9	7.8	8.0	926	932	33.0
393903084110500	07/10/01	0840	1.4	735	5.8	71.4	7.9	8.0	653	653	26.0
394111084234200	07/17/01	0900	0.30	741	4.4	51.3	7.9	8.1	962	970	25.0
394212083575200	07/11/01	0820	2.9	735	5.3	65.3	7.9	7.9	650	653	19.0
394252084010900	07/09/01	1330	14	736	8.4	100	7.9	7.9	703	697	32.0
394253083583300	07/13/01	0830	3.4	741	8.3	87.5	8.1	8.1	728	754	19.0
394414083501800	07/13/01	1300	14	737	9.2	107	8.5	8.4	760	740	26.0
394510084384100	07/16/01	1030	5.7	735	7.9	87.3	8.1	8.2	736	724	27.5
394549084234400	07/20/01	0830	0.41	737	5.4	62.0	7.8	8.0	682	680	25.0
394727083523000	07/11/01	1430	5.6	735	8.3	94.6	8.1	8.0	767	776	24.0
394953084244100	07/17/01	1240	1.1	734	5.8	68.2	8.0	7.6	693	685	32.0
395452084293400	07/19/01	1420	1.5	735	4.3	51.0	7.6	7.8	723	719	32.0
395810084063600	07/12/01	0930	26	740	7.9	86.4	8.1	8.2	741	746	20.0
395912084214000	07/19/01	1000	3.0	738	7.5	85.0	8.0	8.1	678	675	25.0
400130084392900	07/18/01	1230	2.0	734	6.5	76.8	7.8	7.8	626	628	28.0
400134084400300	07/18/01	1020	5.8	732	6.9	81.8	7.8	7.8	601	600	24.0
400439084080000	07/12/01	1430	5.8	736	9.4	108	8.2	8.2	685	709	27.0

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(00010), USGS National Water Information System parameter code; deg C, degrees Celsius; mg/L, milligrams per liter; <, concentration or value reported is less than that indicated.]

STATION NUMBER	TEMPER-ATURE, WATER (DEG C) (00010)	HARD-NESS, TOTAL (MG/L AS CACO3) (00900)	CALCIUM, DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY, WATER, DIS-SOLVED FIELD (MG/L AS CACO3) (39086)	BICAR-BONATE, WATER, DIS-SOLVED FIELD (MG/L AS HCO3) (00453)	CAR-BONATE WATER DIS-SOLVED FIELD (MG/L AS CO3) (00452)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)
391852084253100	23.9	371	108	25	3.2	45	282	338	3	82	0.3
392027083430100	22.1	167	42	15	5.3	9.8	143	172	<1	21	0.2
392219084172100	22.8	205	58	14	3.0	27	153	185	<1	48	0.3
392306084121300	21.0	294	87	18	3.5	40	235	285	1	72	0.2
392400083494000	26.6	269	64	26	7.0	18	207	249	2	29	0.2
392553084133100	22.9	274	79	19	3.6	21	228	274	2	39	0.2
392614083564000	24.1	332	80	32	2.3	15	263	317	2	34	0.2
393317083474000	25.7	238	45	31	2.1	16	196	235	2	33	0.3
393450084020300	20.8	302	74	28	2.8	17	244	293	2	41	0.2
393619084461200	23.7	332	75	35	1.8	10	248	295	4	29	0.2
393748084042300	20.7	279	70	25	2.4	38	231	278	2	73	0.1
393814084043500	25.2	337	80	33	2.0	43	241	290	2	92	0.1
393848083521200	26.1	309	70	33	2.2	16	238	286	2	40	0.3
393903083582900	20.6	327	84	29	5.8	66	256	310	1	98	0.2
393903084110500	23.8	193	46	19	3.2	52	135	163	1	97	0.2
394111084234200	21.3	363	82	38	4.8	59	278	335	2	104	0.5
394212083575200	23.8	246	61	23	3.1	29	222	267	2	58	0.1
394252084010900	22.7	324	81	30	3.3	18	287	344	3	40	0.2
394253083583300	16.4	375	90	37	5.5	14	290	346	3	33	0.2
394414083501800	20.8	379	86	40	1.6	14	257	305	4	37	0.3
394510084384100	18.3	355	85	34	1.7	16	271	325	2	39	0.3
394549084234400	20.6	290	68	30	2.8	20	238	288	1	45	0.5
394727083523000	19.5	370	85	38	2.0	24	281	336	3	50	0.2
394953084244100	21.3	268	63	27	2.4	32	190	228	1	62	0.4
395452084293400	22.2	311	73	31	2.3	23	255	309	<1	47	0.4
395810084063600	18.1	358	86	35	2.4	20	278	331	3	43	0.3
395912084214000	19.9	302	68	32	2.3	16	231	278	2	40	0.2
400130084392900	21.8	284	63	31	2.5	15	234	283	1	36	0.2
400134084400300	21.6	271	57	31	2.6	13	183	222	<1	33	0.3
400439084080000	20.2	347	83	34	1.9	14	261	311	4	34	0.3

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(00955), USGS National Water Information System parameter code; mg/L, milligrams per liter; <, concentration or value reported is less than that indicated; E, estimated concentration or value.]

STATION NUMBER	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE, DIS-SOLVED (MG/L AS SO4) (00945)	NITRO-GEN, AM-MONIA, DIS-SOLVED (MG/L) (00608)	NITRO-GEN, AM-MONIA + ORGANIC, DIS-SOLVED (MG/L AS N) (00623)	NITRO-GEN, AM-MONIA + ORGANIC, TOTAL (MG/L AS N) (00625)	NITRO-GEN, NO2 + NO3, DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, PARTI-CULATE, WHOLE WATER (MG/L AS N) (49570)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS, TOTAL (MG/L AS P) (00665)
391852084253100	9.5	65	<0.04	0.2	0.3	0.33	<0.006	0.04	0.09	0.07	0.11
392027083430100	7.2	26	E0.022	0.8	0.9	2.6	0.035	0.31	0.28	0.23	0.32
392219084172100	5.6	39	<0.04	0.3	0.4	0.31	E0.004	0.09	0.05	0.03	0.10
392306084121300	7.1	55	E0.024	0.2	0.3	0.17	<0.006	0.03	0.05	0.03	0.06
392400083494000	3.5	58	<0.04	0.3	0.4	0.97	0.011	0.10	0.02	<0.02	0.04
392553084133100	8.4	30	<0.04	0.3	0.4	0.60	E0.003	0.06	0.06	0.04	0.07
392614083564000	5.0	45	<0.04	0.2	0.3	0.92	0.011	0.07	0.02	E0.01	0.04
393317083474000	0.4	27	<0.04	0.6	1.0	0.18	0.017	0.43	0.04	<0.02	0.10
393450084020300	7.3	37	<0.04	0.2	0.3	1.9	0.006	0.14	0.008	<0.02	0.04
393619084461200	3.8	33	<0.04	0.3	0.3	8.1	0.023	0.04	0.01	<0.02	0.02
393748084042300	6.2	29	E0.039	0.2	0.3	0.47	0.007	0.05	0.03	E0.02	0.05
393814084043500	7.8	33	<0.04	0.1	0.2	0.73	<0.006	0.02	0.01	<0.02	0.02
393848083521200	5.1	36	<0.04	0.2	0.3	2.2	0.014	0.10	0.02	E0.01	0.04
393903083582900	10.7	60	<0.04	0.4	0.5	2.4	0.018	0.11	0.16	0.14	0.18
393903084110500	4.0	32	<0.04	0.4	0.5	0.32	E0.004	0.10	0.02	<0.02	0.04
394111084234200	4.7	55	0.042	0.5	0.5	3.7	0.085	0.06	0.22	0.22	0.23
394212083575200	7.3	26	<0.04	0.3	0.4	1.5	0.035	0.08	0.04	0.02	0.06
394252084010900	9.1	30	E0.03	0.3	0.5	1.1	0.026	0.08	0.02	<0.02	0.04
394253083583300	9.1	58	<0.04	0.2	0.2	3.0	0.012	0.06	0.02	<0.02	0.05
394414083501800	5.5	80	<0.04	0.3	0.3	4.1	0.027	0.03	0.07	0.06	0.08
394510084384100	8.9	43	<0.04	0.2	0.8	5.9	0.015	0.04	0.04	0.02	0.06
394549084234400	9.7	47	E0.031	0.4	0.6	1.1	0.011	0.07	0.05	0.04	0.08
394727083523000	9.5	41	<0.04	0.2	0.2	5.0	E0.004	<0.02	0.03	E0.02	0.03
394953084244100	4.1	40	<0.04	0.7	0.7	3.2	0.048	0.10	0.08	0.04	0.11
395452084293400	5.3	40	0.056	0.5	0.5	4.3	0.132	0.05	0.09	0.07	0.11
395810084063600	7.8	39	<0.04	0.3	0.3	4.8	0.014	0.03	0.11	0.08	0.12
395912084214000	6.0	35	<0.04	0.4	0.4	7.7	0.012	<0.02	0.06	0.05	0.07
400130084392900	9.3	41	E0.027	0.4	0.6	1.0	0.022	0.12	0.03	<0.02	0.06
400134084400300	6.0	73	E0.022	0.4	0.4	0.46	0.020	0.11	0.02	<0.02	0.05
400439084080000	7.2	39	<0.04	0.3	0.3	6.3	0.015	<0.02	0.04	E0.02	0.04

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(00694), USGS National Water Information System parameter code; mg/L, milligrams per liter; µg/L, micrograms per liter; <, concentration or value reported is less than that indicated; E, estimated concentration or value; K, value estimated from non-ideal colony county.]

STATION NUMBER	ORGANIC CARBON, PARTI-CUL-ATE (MG/L AS C) (00694)	DIS-SOLVED ORGANIC CARBON (MG/L AS C) (00681)	E.COLI, WATER TOTAL (COL/ 100 ML) (31633)	SOLIDS, RESIDUE AT 180 DEG C DIS-SOLVED (MG/L) (70300)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	2,6-DI-ETHYL ANILINE, WATER, FLTRD (UG/L) (82660)	ACETO-CHLOR, WATER, FLTRD (UG/L) (49260)	ALA-CHLOR, WATER, FLTRD (UG/L) (46342)	ALPHA BHC, WATER, FLTRD (UG/L) (34253)	ATRA-ZINE, WATER, FLTRD (UG/L) (39632)
391852084253100	0.3	2.7	420	538	<10	40	<0.002	<0.004	<0.002	<0.005	0.011
392027083430100	2.2	10.5	K18000	248	33	29	<0.002	0.049	<0.002	<0.005	0.45
392219084172100	0.8	4.4	2500	313	<10	14	<0.002	<0.004	<0.002	<0.005	0.066
392306084121300	0.2	3.2	850	457	<10	10	<0.002	<0.004	<0.002	<0.005	0.18
392400083494000	0.8	3.3	260	333	<10	28	<0.002	0.016	<0.002	<0.005	0.40
392553084133100	0.6	4.0	1300	371	<10	26	<0.002	<0.004	<0.002	<0.005	0.17
392614083564000	0.8	2.4	280	385	<10	26	<0.002	0.015	<0.002	<0.005	0.48
393317083474000	3.0	5.5	240	299	E9.1	46	<0.002	<0.004	<0.002	<0.005	0.38
393450084020300	1.4	3.4	4100	374	<10	7	<0.002	0.012	<0.002	<0.005	0.24
393619084461200	0.3	3.1	150	369	<10	E2.2	<0.002	0.007	<0.002	<0.005	0.30
393748084042300	<0.4	5.5	380	417	E6.0	45	<0.002	0.025	<0.002	<0.005	0.37
393814084043500	<0.3	2.2	250	466	<10	6.6	<0.002	<0.004	<0.002	<0.005	0.059
393848083521200	0.7	2.6	310	398	<10	20	<0.002	0.025	0.008	<0.005	0.70
393903083582900	0.7	3.4	2500	555	19	29	<0.002	<0.004	<0.002	<0.005	0.058
393903084110500	1.0	4.8	370	377	<10	19	<0.002	0.007	<0.002	<0.005	0.33
394111084234200	0.5	4.2	730	564	<10	8.1	<0.002	<0.004	<0.002	<0.005	0.46
394212083575200	0.8	7.0	>2700	396	E8.0	18	<0.002	0.023	<0.002	<0.005	0.40
394252084010900	<0.9	3.4	330	416	<10	34	<0.002	<0.004	<0.002	<0.005	0.038
394253083583300	0.7	5.3	650	453	<10	16	<0.002	<0.004	<0.002	<0.005	0.10
394414083501800	0.3	2.8	930	468	<10	5.6	<0.002	0.017	<0.002	<0.005	0.29
394510084384100	0.4	2.4	690	450	44	4.4	<0.002	0.011	<0.002	<0.005	0.20
394549084234400	1.0	4.3	4800	395	14	8.9	<0.002	E0.003	0.008	<0.005	0.36
394727083523000	0.3	3.1	140	415	<10	3.4	<0.002	<0.004	<0.002	<0.005	0.30
394953084244100	1.0	9.7	K30000	413	20	22	<0.002	<0.004	<0.002	<0.005	0.24
395452084293400	0.4	10	K1900	414	<10	16	<0.002	0.40	0.010	<0.005	0.68
395810084063600	0.3	2.8	550	445	<10	12	<0.002	0.051	<0.002	<0.005	0.42
395912084214000	0.3	5.5	270	387	<10	<3	<0.002	0.010	0.183	<0.005	0.85
400130084392900	1.1	6.9	1300	353	23	25	<0.002	<0.004	<0.002	<0.005	0.19
400134084400300	1.6	5.0	350	352	25	63	<0.002	<0.004	<0.002	<0.005	0.095
400439084080000	0.2	4.7	320	413	<10	E2.2	<0.002	0.019	<0.002	<0.005	0.53

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(82673), USGS National Water Information System parameter code; µg/L, micrograms per liter; <, concentration or value reported is less than that indicated; E, estimated concentration or value.]

STATION NUMBER	BEN-FLUR-ALIN, WATER, FLTRD (UG/L) (82673)	BUTYL-ATE, WATER, FLTRD (UG/L) (04028)	CAR-BARYL, WATER, FLTRD (UG/L) (82680)	CARBO-FURAN, WATER, FLTRD (UG/L) (82674)	CHLOR-PYRIFOS, WATER, FLTRD (UG/L) (38933)	CYANA-ZINE, WATER, FLTRD (UG/L) (04041)	DCPA, WATER, FLTRD (UG/L) (82682)	DEETHYL ATRA-ZINE, WATER, FLTRD (UG/L) (04040)	DI-AZINON, WATER, FLTRD (UG/L) (39572)	DI-ELRIN, WATER, FLTRD (UG/L) (39381)	DISUL-FOTON, WATER, FLTRD (UG/L) (82677)
391852084253100	<0.010	<0.002	<0.041	<0.020	<0.005	<0.018	<0.003	E0.006	0.015	<0.005	<0.021
392027083430100	<0.010	<0.002	<0.041	<0.020	<0.005	<0.018	<0.003	E0.044	<0.005	<0.005	<0.021
392219084172100	<0.010	<0.002	<0.041	<0.020	0.006	<0.018	<0.003	E0.011	0.461	<0.005	<0.021
392306084121300	<0.010	<0.002	E0.011	<0.020	<0.005	<0.018	E0.002	E0.010	0.091	<0.005	<0.021
392400083494000	<0.010	<0.002	<0.041	<0.020	<0.005	<0.018	<0.003	E0.043	<0.005	<0.005	<0.021
392553084133100	<0.010	<0.002	E0.008	<0.020	<0.005	<0.018	<0.003	E0.032	0.038	<0.005	<0.021
392614083564000	<0.010	<0.002	<0.041	<0.020	<0.005	E0.006	<0.003	E0.057	0.010	<0.005	<0.021
393317083474000	<0.010	<0.002	E0.006	<0.020	<0.005	<0.018	<0.003	E0.056	<0.005	<0.005	<0.021
393450084020300	<0.010	<0.002	<0.041	<0.020	<0.005	<0.018	<0.003	E0.098	E0.003	<0.005	<0.021
393619084461200	<0.010	<0.002	<0.041	<0.020	<0.005	<0.018	<0.003	E0.048	<0.005	<0.005	<0.021
393748084042300	<0.010	<0.002	E0.003	<0.020	<0.005	E0.010	<0.003	E0.019	0.220	<0.005	<0.021
393814084043500	<0.010	<0.002	E0.006	<0.020	<0.005	<0.018	<0.003	E0.006	0.038	<0.005	<0.021
393848083521200	<0.010	<0.002	<0.041	<0.020	<0.005	E0.010	<0.003	E0.12	<0.005	<0.005	<0.021
393903083582900	<0.010	<0.002	E0.023	<0.020	E0.005	<0.018	<0.003	E0.016	0.085	<0.005	<0.021
393903084110500	<0.010	<0.002	<0.041	<0.020	<0.005	<0.018	<0.003	E0.042	0.088	<0.005	<0.021
394111084234200	<0.010	<0.002	<0.041	<0.020	0.005	E0.007	<0.003	E0.044	<0.005	<0.005	<0.021
394212083575200	<0.010	<0.002	E0.026	<0.020	<0.005	<0.018	<0.003	<0.020	0.012	<0.005	<0.021
394252084010900	<0.010	<0.002	<0.041	<0.020	<0.005	<0.018	E0.001	E0.006	0.062	<0.005	<0.021
394253083583300	<0.010	<0.002	<0.041	<0.020	<0.005	<0.018	<0.003	E0.019	<0.005	<0.005	<0.021
394414083501800	<0.010	<0.002	E0.001	<0.020	E0.001	<0.018	<0.003	E0.018	<0.005	<0.005	<0.021
394510084384100	<0.010	<0.002	<0.041	<0.020	<0.005	<0.018	<0.003	E0.024	<0.005	<0.005	<0.021
394549084234400	<0.010	<0.002	<0.041	<0.020	<0.005	<0.018	<0.003	E0.027	<0.005	<0.005	<0.021
394727083523000	<0.010	<0.002	<0.041	<0.020	0.005	<0.018	<0.003	E0.029	<0.005	<0.005	<0.021
394953084244100	<0.010	<0.002	E0.019	<0.020	<0.005	<0.018	<0.003	E0.044	0.260	<0.005	<0.021
395452084293400	<0.010	<0.002	E0.007	<0.020	<0.005	0.018	<0.003	E0.036	0.019	<0.005	<0.021
395810084063600	<0.010	<0.002	<0.041	<0.020	<0.005	<0.018	<0.003	E0.070	E0.003	<0.005	<0.021
395912084214000	<0.010	<0.002	<0.041	<0.020	<0.005	E0.014	<0.003	E0.15	<0.005	<0.005	<0.021
400130084392900	<0.010	<0.002	E0.024	<0.020	<0.005	<0.018	<0.003	E0.062	E0.004	<0.005	<0.021
400134084400300	<0.010	<0.002	<0.041	<0.020	<0.005	E0.007	<0.003	E0.030	<0.005	<0.005	<0.021
400439084080000	<0.010	<0.002	<0.041	<0.020	<0.005	<0.018	<0.003	E0.084	<0.005	<0.005	<0.021

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(82668), USGS National Water Information System parameter code; µg/L, micrograms per liter; <, concentration or value reported is less than that indicated; E, estimated concentration or value.]

STATION NUMBER	EPTC, WATER, FLTRD (UG/L) (82668)	ETHAL-FLUR-ALIN, WATER, FLTRD (UG/L) (82663)	ETHO-PROP, WATER, FLTRD (UG/L) (82672)	FONOFOS, WATER, FLTRD (UG/L) (04095)	LINDANE, WATER, FLTRD (UG/L) (39341)	LIN-URON, WATER, FLTRD (UG/L) (82666)	MALA-THION, WATER, FLTRD (UG/L) (39532)	METHYL-AZIN-PHOS, WATER, FLTRD (UG/L) (82686)	METHYL PARA-THION, WATER, FLTRD (UG/L) (82667)	METO-LACHLOR, WATER, FLTRD (UG/L) (39415)	METRI-BUZIN, WATER, FLTRD (UG/L) (82630)
391852084253100	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006	E0.001	<0.006
392027083430100	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006	0.35	<0.008
392219084172100	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006	E0.011	<0.006
392306084121300	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006	0.041	<0.006
392400083494000	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006	0.083	<0.008
392553084133100	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006	E0.012	<0.006
392614083564000	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006	0.049	<0.006
393317083474000	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006	0.13	<0.010
393450084020300	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006	0.16	0.008
393619084461200	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006	0.017	<0.006
393748084042300	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006	0.241	0.020
393814084043500	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006	E0.005	<0.006
393848083521200	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006	0.066	<0.006
393903083582900	<0.002	<0.009	<0.005	<0.003	0.014	<0.035	<0.027	<0.050	<0.006	E0.009	<0.006
393903084110500	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006	0.025	<0.006
394111084234200	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006	0.17	0.009
394212083575200	<0.007	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006	0.028	<0.006
394252084010900	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006	0.015	<0.006
394253083583300	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006	0.025	<0.006
394414083501800	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006	0.086	E0.004
394510084384100	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006	0.041	<0.006
394549084234400	0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006	0.071	0.032
394727083523000	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006	0.054	<0.006
394953084244100	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006	0.094	<0.006
395452084293400	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006	0.082	<0.006
395810084063600	<0.002	<0.009	<0.005	<0.003	E0.001	<0.035	<0.027	<0.050	<0.006	0.077	<0.006
395912084214000	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006	0.29	<0.008
400130084392900	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006	E0.013	<0.006
400134084400300	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	E0.020	<0.006	0.015	<0.006
400439084080000	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006	0.17	<0.006

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(82671), USGS National Water Information System parameter code; µg/L, micrograms per liter; <, concentration or value reported is less than that indicated; E, estimated concentration or value.]

STATION NUMBER	MOL-INATE, WATER, FLTRD (UG/L) (82671)	NAPROP-AMIDE, WATER, FLTRD (UG/L) (82684)	P,P' DDE, WATER, FLTRD (UG/L) (34653)	PARA-THION, WATER, FLTRD (UG/L) (39542)	PEB-ULATE, WATER, FLTRD (UG/L) (82669)	PENDI-METH-ALIN, WATER, FLTRD (UG/L) (82683)	CIS-PER-METHRIN, WATER, FLTRD (UG/L) (82687)	PHORATE, WATER, FLTRD (UG/L) (82664)	PRO-METON, WATER, FLTRD (UG/L) (04037)	PRON-AMIDE, WATER, FLTRD (UG/L) (82676)	PROP-ACHLOR, WATER, FLTRD (UG/L) (04024)
391852084253100	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	0.020	<0.004	<0.010
392027083430100	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	0.059	<0.004	<0.010
392219084172100	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	0.061	<0.004	<0.010
392306084121300	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	E0.012	<0.004	<0.010
392400083494000	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	E0.004	<0.004	<0.010
392553084133100	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	0.035	<0.004	<0.010
392614083564000	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	E0.005	<0.004	<0.010
393317083474000	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	E0.009	<0.004	<0.010
393450084020300	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	E0.006	<0.004	<0.010
393619084461200	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	E0.003	<0.004	<0.010
393748084042300	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	0.127	<0.004	<0.010
393814084043500	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	E0.011	<0.004	<0.010
393848083521200	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	E0.005	<0.004	<0.010
393903083582900	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	0.073	<0.004	<0.010
393903084110500	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	0.26	<0.004	<0.010
394111084234200	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	0.017	<0.004	<0.010
394212083575200	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	0.063	<0.004	<0.010
394252084010900	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	E0.004	<0.004	<0.010
394253083583300	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	E0.004	<0.004	<0.010
394414083501800	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	E0.004	<0.004	<0.010
394510084384100	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	E0.004	<0.004	<0.010
394549084234400	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	E0.005	<0.004	<0.010
394727083523000	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	E0.013	<0.004	<0.010
394953084244100	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	0.049	<0.004	<0.010
395452084293400	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	0.023	<0.004	<0.010
395810084063600	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	E0.006	<0.004	<0.010
395912084214000	<0.002	0.010	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	E0.010	<0.004	<0.010
400130084392900	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	E0.009	<0.004	<0.010
400134084400300	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	0.036	<0.004	<0.010
400439084080000	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	0.016	<0.004	<0.010

PROJECT DATA

Results from Selected Sites in the Great Miami and Little Miami River Basin (National Water-Quality Assessment Program)

RESULTS FROM THE URBAN-GRADIENT STUDY—CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(82679), USGS National Water Information System parameter code; µg/L, micrograms per liter; <, concentration or value reported is less than that indicated; E, estimated concentration or value.]

STATION NUMBER	PRO-PANIL, WATER, FLTRD (UG/L) (82679)	PRO-PARGITE, WATER, FLTRD (UG/L) (82685)	SI-MAZINE, WATER, FLTRD (UG/L) (04035)	TEBU-THI-URON, WATER, FLTRD (UG/L) (82670)	TER-BACIL, WATER, FLTRD (UG/L) (82665)	TER-BUFOS, WATER, FLTRD (UG/L) (82675)	THIO-BENCARB, WATER, FLTRD (UG/L) (82681)	TRIAL-LATE, WATER, FLTRD (UG/L) (82678)	TRI-FLUR-ALIN, WATER, FLTRD (UG/L) (82661)
391852084253100	<0.011	<0.023	<0.011	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009
392027083430100	<0.011	<0.023	0.283	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009
392219084172100	<0.011	<0.023	<0.011	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009
392306084121300	<0.011	<0.023	0.012	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009
392400083494000	<0.011	<0.023	0.040	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009
392553084133100	<0.011	<0.023	E0.009	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009
392614083564000	<0.011	<0.023	0.48	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009
393317083474000	<0.011	<0.023	0.049	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009
393450084020300	<0.011	<0.023	0.062	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009
393619084461200	<0.011	<0.023	E0.007	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009
393748084042300	<0.011	<0.023	0.037	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009
393814084043500	<0.011	<0.023	0.076	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009
393848083521200	<0.011	<0.023	0.15	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009
393903083582900	<0.011	<0.023	0.011	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009
393903084110500	<0.011	<0.023	0.055	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009
394111084234200	<0.011	<0.023	0.050	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009
394212083575200	<0.011	<0.023	0.022	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009
394252084010900	<0.011	<0.023	0.012	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009
394253083583300	<0.011	<0.023	0.024	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009
394414083501800	<0.011	<0.023	0.043	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009
394510084384100	<0.011	<0.023	0.013	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009
394549084234400	<0.011	<0.023	0.10	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009
394727083523000	<0.011	<0.023	0.048	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009
394953084244100	<0.011	<0.023	0.077	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009
395452084293400	<0.011	<0.023	0.018	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009
395810084063600	<0.011	<0.023	0.049	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009
395912084214000	<0.011	<0.023	0.094	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009
400130084392900	<0.011	<0.023	0.084	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009
400134084400300	<0.011	<0.023	<0.011	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009
400439084080000	<0.011	<0.023	0.25	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009

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