

**GROUND-WATER DATA COLLECTED AT SPECIAL-STUDY SITES
GROUND WATER PESTICIDES NETWORK PROJECT**

The following tables contain water-quality data from wells sampled in Pennsylvania during the second year of the Ground Water Pesticides Network project. The 5-year study is being conducted by the U.S. Geological Survey in cooperation with the Pennsylvania Department of Agriculture. Sites were selected to meet project objectives in the Annual Baseline Network, the Baseline Trends Network, and Hot-Spot Trends Networks. Twenty Annual Baseline Network sites were selected in the Eastern Lake hydrogeologic setting in Erie County to fill an existing data gap in ground-water quality; sites in this network are only sampled one time as part of an occurrence survey. Sixteen Baseline Trend Network sites were selected in four hydrogeologic settings (4 sites per setting) of predominantly carbonate bedrock where wells had previous detections of pesticides. The wells in this network are sampled yearly to evaluate trends. The three Hot-Spot Trend Network sites have well water with recorded pesticide concentrations at or above the Pennsylvania Pesticides and Ground Water Strategy action levels. These wells are sampled four times per year at: 1) declining water levels; 2) stable water levels; 3) rising water levels due to spring/summer flush; and 4) rising water levels due to winter recharge. Samples are identified by network in the third column heading within the table: Baseline Trends = BT, Hot-Spot Trends Quality Assurance = HST-QA, and Hot-Spot Trends = HST. Well locations are shown in figures 11 and 12. The following analytical methods were used to determine results for the samples listed: PA Department of Environmental Protection Laboratory (PADEP)(Analyzing Agency Code 9813), pesticides - SAC USGS2 (EPA 525.2) solid phase extraction gas chromatography/mass spectrometry; nitrate/nitrite - colorimetry (cadmium reduction), total coliform and E. coli bacteria - Colilert Quantitray. Pesticides analyzed for this study are identified in the table which follows quality-control data. Other data for this project can be found in the annual Water Data Report PA-04-1 (Delaware River Basin) and PA-04-3 (Ohio and St. Lawrence River Basins). For additional information, contact Connie Loper at the USGS Pennsylvania Water Science Center, 215 Limekiln Road, New Cumberland, PA 17070; 717-730-6976 (email caloper@usgs.gov).

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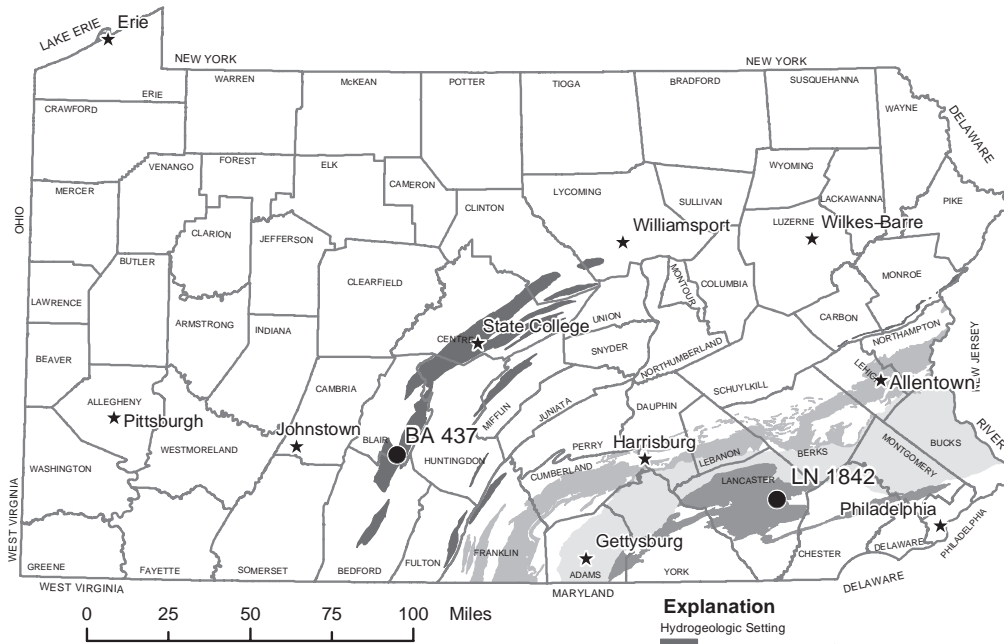


Figure 11.--Location of the Hot-Spot Trend Network wells, in the Susquehanna River Basin, sampled as part of the Ground Water Pesticides Network project

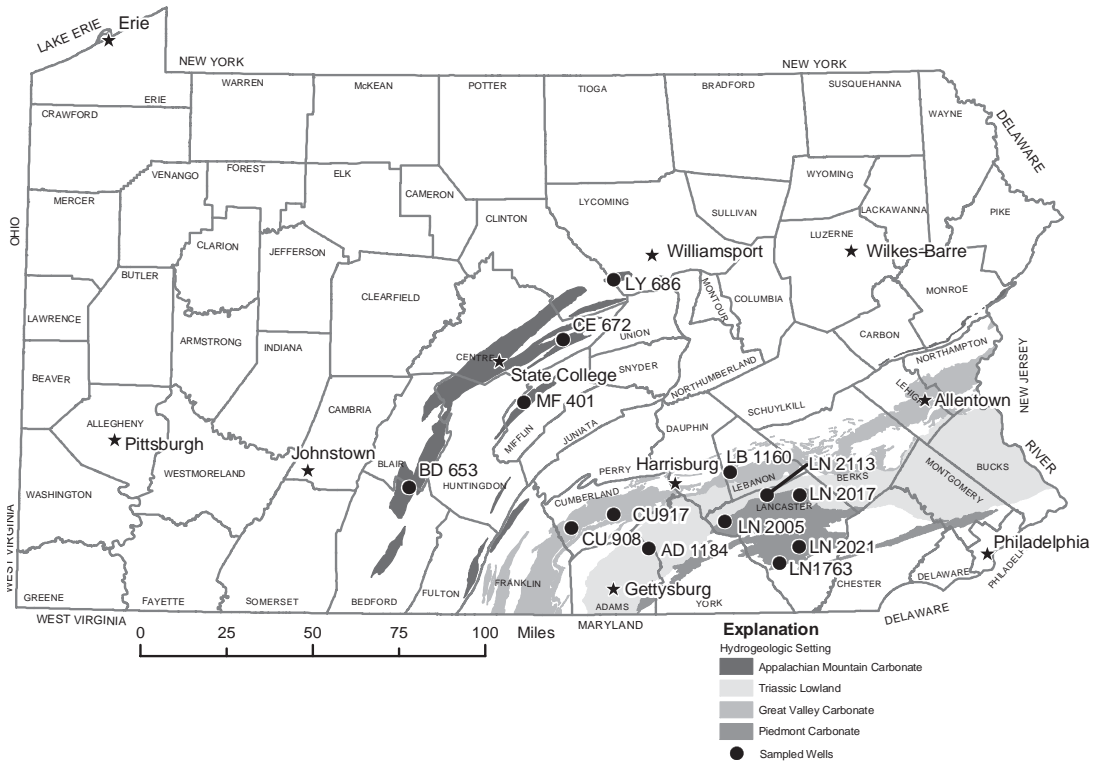


Figure 12.--Location of the Baseline Trend Network wells, in the Susquehanna River Basin, sampled as part of the Ground Water Pesticides Network project.

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REMARKS.--Explanation of column headings--Station number: 15-digit unique identifier based on site latitude (first six digits), longitude (digits seven through thirteen), and a 2-digit sequence number suffix; Altitude of land surface: land-surface at well site in feet above sea level; $\mu\text{S}/\text{cm}$: microsiemens per centimeter at 25 degrees Celsius; deg C: degrees Celsius; $\mu\text{g}/\text{L}$: micrograms per liter (parts per billion); mg/L = milligrams per liter (parts per million); "<" = less than; ">" = more than; "E" = estimated; Network Identifier Baseline Trends = BT, Hot-Spot Trends = HST, or Hot-Spot Trends Quality Assurance = HST-QA. Quality-control data for replicate samples are shown for Local Well ID BA 437 (bacteria) on April 20, 2004 at 0911 and 0913.

WATER-QUALITY DATA, WATER YEARS OCTOBER 2003 TO SEPTEMBER 2004

Station number	Local Well ID	Network Identifier	Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Depth of well, feet below LSD (72008)	Depth to water level, feet below LSD (72019)	Altitude of land surface feet (72000)	Pump or flow period prior to sampling, minutes (72004)	Sampling method, code (82398)	Turbidity, water, unfltrd field, NTU (61028)
ADAMS COUNTY												
395955077020801	AD 1184	BT	04-08-04	1310	1028	9813	180	11.60	500	65	4040	4.0
BEDFORD COUNTY												
401525078213801	BD 653	BT	04-26-04	0940	1028	9813	170	47.42	1370	45	4040	.5
BLAIR COUNTY												
401724078195801	BA 437	HST	10-07-03	1155	1028	9813	105	20.65	1435.00	70	4040	.4
	BA 437	HST	12-02-03	1045	1028	9813	105	19.24	1435.00	80	4040	--
	BA 437	HST	04-20-04	0910	1028	9813	105	15.12	1435.00	60	4040	.5
	BA 437	HST-QA	04-20-04	0911	1028	9813	105	--	1435.00	60	--	--
	BA 437	HST-QA	04-20-04	0913	1028	9813	105	--	1435.00	60	--	--
	BA 437	HST	07-20-04	0950	1028	9813	105	25.90	1435.00	65	4040	--
CENTRE COUNTY												
405253077301501	CE 672	BT	04-29-04	1215	1028	9813	200	96.45	1190	50	4040	6.8
CUMBERLAND COUNTY												
400514077274501	CU 908	BT	04-15-04	0900	1028	9813	182	28.12	650	55	4040	.3
400835077134401	CU 917	BT	04-28-04	0950	1028	9813	200	35.25	585	55	4040	.5
LANCASTER COUNTY												
395542076185301	LN 1763	BT	03-31-04	0955	1028	9813	250	36.00	435	45	4040	.2
400456076065701	LN 1842	HST	10-06-03	1005	1028	9813	65	33.08	440	50	4040	.0
	LN 1842	HST	12-03-03	1435	1028	9813	65	31.10	440	50	4040	--
	LN 1842	HST	04-21-04	0940	1028	9813	65	34.48	440	40	4040	1.6
	LN 1842	HST	07-21-04	1340	1028	9813	65	35.20	440	40	4040	--
400629076365201	LN 2005	BT	03-31-04	1430	1028	9813	100	9.10	390	45	4040	4.0
401254076114701	LN 2017	BT	04-01-04	1105	1028	9813	160	47.80	410	55	4040	.0
395951076122301	LN 2021	BT	03-30-04	1105	1028	9813	150	23.75	370	55	4040	1.4
401307076224301	LN 2113	BT	04-06-04	1000	1028	9813	200	36.50	500	45	4040	.0
LEBANON COUNTY												
401856076345101	LB 1160	BT	04-12-04	0945	1028	9813	180	--	440	50	4040	.5
LYCOMING COUNTY												
410805077131401	LY 686	BT	04-27-04	1100	1028	9813	175	82.20	765	40	4040	1.4

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Date	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unf µS/cm 25 degC (00095)	Temper- ature, air, deg C (00020)	Temper- ature, water, deg C (00010)	Nitrate water, fltrd, mg/L (71851)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L (71856)	Nitrite water, fltrd, mg/L as N (00613)	E coli, Defined Substr. Tech., water, MPN/ 100 mL (50468)
ADAMS COUNTY													
04-08-04	744	.6	5	7.5	497	12.1	11.0	--	--	.370	--	<.010	<1
BEDFORD COUNTY													
04-26-04	725	9.2	87	7.2	752	15.2	10.7	--	--	16.6	--	<.010	<1
BLAIR COUNTY													
10-07-03	727	.6	6	6.9	2170	13.1	12.3	329	74.4	74.4	.066	.020	5
12-02-03	728	1.2	12	7.0	2090	14.7	12.0	--	--	65.7	--	<.010	2
04-20-04	728	1.6	15	7.0	1920	16.7	11.5	--	--	56.6	--	<.010	<1
04-20-04	--	--	--	--	--	--	--	--	--	--	--	--	<1
04-20-04	--	--	--	--	--	--	--	--	--	--	--	--	<1
07-20-04	726	.3	3	6.9	1800	21.1	12.3	--	--	55.0	--	<.010	2
CENTRE COUNTY													
04-29-04	739	7.7	72	7.0	611	20.1	10.8	28.3	6.40	6.42	.066	.020	3
CUMBERLAND COUNTY													
04-15-04	749	9.2	85	7.2	619	6.1	11.1	--	--	10.0	--	<.010	170
04-28-04	753	9.8	91	7.4	548	7.9	11.5	--	--	9.32	--	<.010	<1
LANCASTER COUNTY													
03-31-04	750	8.6	82	7.2	679	9.6	12.5	--	--	11.1	--	<.010	<1
10-06-03	754	7.2	70	7.1	1120	11.2	13.5	--	--	39.9	--	<.010	<1
12-03-03	762	7.1	67	7.1	1050	9.7	12.4	--	--	41.5	--	<.010	<1
04-21-04	754	7.4	72	7.2	1040	15.9	13.5	--	--	32.5	--	<.010	<1
07-21-04	753	6.3	62	7.1	992	26.8	14.3	--	--	31.1	--	<.010	<1
03-31-04	750	2.4	22	7.2	654	14.5	11.0	--	--	21.6	--	<.010	10
04-01-04	740	7.6	73	7.3	672	9.2	12.1	--	--	11.1	--	<.010	<1
03-30-04	758	7.9	75	7.1	818	9.4	12.8	--	--	7.26	--	<.010	<1
04-06-04	749	3.2	31	7.2	571	2.0	12.7	--	--	11.4	--	<.010	<1
LEBANON COUNTY													
04-12-04	757	6.0	58	7.3	660	10.5	13.1	--	--	5.29	--	<.010	<1
LYCOMING COUNTY													
04-27-04	736	9.6	89	7.4	641	12.6	10.4	--	--	9.00	--	<.010	<1

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WATER-QUALITY DATA, WATER YEARS OCTOBER 2003 TO SEPTEMBER 2004

Date	Total coli-form, Defined Tech., MPN/100 mL (50569)	Aceto-chlor, water, fltrd, µg/L (49260)	Ala-chlor, water, fltrd, µg/L (46342)	Atra-zine, water, fltrd, µg/L (39632)	Chloro-thaloni, water, fltrd, 0.7µ GF µg/L (49306)	Chlor-pyrifos, water, fltrd, µg/L (38933)	Dichlo-benil, water, fltrd, µg/L (63009)	Fen-propa-thrin, water, fltrd, µg/L (64044)	Hexa-chloro-cyclo-penta-diene, wat unf µg/L (34386)	Metola-chlor, water, fltrd, µg/L (39415)	Metri-buzin, water, fltrd, µg/L (82630)	Pendi-meth-alin, water, fltrd, 0.7µ GF µg/L (82683)	Phosmet, water, fltrd, µg/L (61601)
ADAMS COUNTY													
04-08-04	<1	<.100	<.10	<.10	<.10	<.10	--	--	<.10	<.10	<.10	<.100	--
BEDFORD COUNTY													
04-26-04	<1	<.100	<.10	<.10	<.10	<.10	--	--	<.10	<.10	<.10	<.100	--
BLAIR COUNTY													
10-07-03	41	<.110	.25	<.10	<.11	<.11	--	--	<.11	46.0	<.10	<.110	--
12-02-03	34	<.110	.20	<.11	<.11	<.11	--	--	<.11	47.1	<.11	<.110	--
04-20-04	1	<.100	.15	<.10	<.10	<.10	--	--	<.10	E19.6	<.10	<.100	--
04-20-04	2	--	--	--	--	--	--	--	--	--	--	--	--
04-20-04	<1	--	--	--	--	--	--	--	--	--	--	--	--
07-20-04	45	<.100	.21	.74	<.10	<.10	<.10	<.10	<.10	E39.7	<.10	<.100	<.100
CENTRE COUNTY													
04-29-04	27	<.100	<.10	<.10	<.10	<.10	--	--	<.10	<.10	<.10	<.100	--
CUMBERLAND COUNTY													
04-15-04	>200	<.100	<.10	<.10	<.10	<.10	--	--	<.10	<.10	<.10	<.100	--
04-28-04	10	<.100	<.10	<.10	<.10	<.10	--	--	<.10	<.10	<.10	<.100	--
LANCASTER COUNTY													
03-31-04	1	<.250	<.25	<.25	<.25	<.25	--	--	<.25	<.25	<.25	<.250	--
10-06-03	<1	.440	1.40	<.10	<.10	<.10	--	--	<.10	160	<.10	<.100	--
12-03-03	<1	.530	1.76	<.10	<.10	<.10	--	--	<.10	159	<.10	<.100	--
04-21-04	<1	.220	.91	<.10	<.10	<.10	--	--	<.10	E53.5	<.10	<.100	--
07-21-04	1	.290	1.05	.25	<.10	<.10	<.10	<.10	<.10	E72.3	<.10	<.100	<.100
03-31-04	78	<.250	<.25	.30	<.25	<.25	--	--	<.25	E.24	<.25	<.250	--
04-01-04	<1	<.250	<.25	<.25	<.25	<.25	--	--	<.25	<.25	<.25	<.250	--
03-30-04	<1	<.250	<.25	<.25	<.25	<.25	--	--	<.25	<.25	<.25	<.250	--
04-06-04	<1	<.250	E.19	<.25	<.25	<.25	--	--	<.25	<.25	<.25	<.250	--
LEBANON COUNTY													
04-12-04	59	<.100	<.10	<.10	<.10	<.10	--	--	<.10	<.10	<.10	<.100	--
LYCOMING COUNTY													
04-27-04	4	<.100	<.10	<.10	<.10	<.10	--	--	<.10	<.10	<.10	<.100	--

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WATER-QUALITY DATA, WATER YEARS OCTOBER 2003 TO SEPTEMBER 2004

Date	Sima- zine, water, fltrd, µg/L (04035)	Purpose site visit, code (50280)	Sample purpose code (71999)	Sam- pling condi- tion, code (72006)	Type of sample related QA data, code (99111)	Type of repli- cate, code (99105)	County	Data base number	Medium code
ADAMS COUNTY									
04-08-04	<.10	2001	50.00	8.00	1	--	001	01	6
BEDFORD COUNTY									
04-26-04	<.10	2001	50.00	8.00	1	--	009	01	6
BLAIR COUNTY									
10-07-03	<.10	2001	50.00	8.00	1	--	013	01	6
12-02-03	<.11	2001	50.00	8.00	1	--	013	01	6
04-20-04	<.10	2001	50.00	8.00	30	--	013	01	6
04-20-04	--	2098	50.00	8.00	--	20.00	013	02	S
04-20-04	--	2098	50.00	8.00	--	20.00	013	02	S
07-20-04	<.10	2001	50.00	8.00	1	--	013	01	6
CENTRE COUNTY									
04-29-04	<.10	2001	50.00	8.00	1	--	027	01	6
CUMBERLAND COUNTY									
04-15-04	<.10	2001	50.00	8.00	1	--	041	01	6
04-28-04	<.10	2001	50.00	8.00	1	--	041	01	6
LANCASTER COUNTY									
03-31-04	<.25	2001	50.00	8.00	1	--	071	01	6
10-06-03	<.10	2001	50.00	8.00	1	--	071	01	6
12-03-03	<.10	2001	50.00	8.00	1	--	071	01	6
04-21-04	<.10	2001	50.00	8.00	100	--	071	01	6
07-21-04	<.10	2001	50.00	8.00	40	--	071	01	6
03-31-04	<.25	2001	50.00	8.00	1	--	071	01	6
04-01-04	<.25	2001	50.00	8.00	1	--	071	01	6
03-30-04	<.25	2001	50.00	8.00	100	--	071	01	6
04-06-04	<.25	2001	50.00	8.00	1	--	071	01	6
LEBANON COUNTY									
04-12-04	<.10	2001	50.00	8.00	1	--	075	01	6
LYCOMING COUNTY									
04-27-04	<.10	2001	50.00	8.00	1	--	081	01	6

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WATER-QUALITY DATA, WATER YEARS OCTOBER 2003 TO SEPTEMBER 2004

Station number	Local Well ID	Network Identifier	Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Depth of well, feet below LSD (72008)	Depth to water level, feet below LSD (72019)	Altitude of land surface feet (72000)	Pump or flow period prior to sampling, minutes (72004)	Sampling method, code (82398)	Turbidity, water, unfltrd field, NTU (61028)
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MIFFLIN COUNTY

403706077432801	MF401	BT	04-13-04	0925	1028	9813	120	12.25	870	50	4040	1.0
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Date	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, μ S/cm wat unfltrd (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Nitrate water, fltrd, mg/L (71851)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L (71856)	Nitrite water, fltrd, mg/L as N (00613)	E coli, Defined Substr. Tech., water, MPN/100 mL (50468)
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MIFFLIN COUNTY

04-13-04	738	3.1	30	7.0	918	6.5	11.6	66.3	15.0	15.1	.329	.100	88
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Date	Total coliform, Defined Tech., MPN/100 mL (50569)	Acetochlor, water, fltrd, μ g/L (49260)	Alachlor, water, fltrd, μ g/L (46342)	Atrazine, water, fltrd, μ g/L (39632)	Chlorothalonil, water, fltrd, 0.7 μ GF μ g/L (49306)	Chlorpyrifos, water, fltrd, μ g/L (38933)	Hexachlorocyclopentadiene, water, unfltrd, μ g/L (34386)	Metolachlor, water, fltrd, μ g/L (39415)	Metribuzin, water, fltrd, μ g/L (82630)	Pendimethalin, water, fltrd, 0.7 μ GF μ g/L (82683)	Simazine, water, fltrd, μ g/L (04035)	Purpose site visit, code (50280)	Sample purpose code (71999)
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MIFFLIN COUNTY

04-13-04	200	<.100	<.10	<.10	<.10	<.10	<.10	<.10	<.10	<.100	<.10	2001	50.00
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Date	Sampling condition, code (72006)	Type of sample related QA data, code (99111)	County	Data base number	Medium code
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MIFFLIN COUNTY

04-13-04	8.00	1	087	01	6
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QUALITY-CONTROL DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Methyl para- thion, water, fltrd 0.7µ GF (82667) µg/L	Metola- chlor, water, fltrd, µg/L (39415)	Metri- buzin, water, fltrd, µg/L (82630)	Oxamyl, water, fltrd 0.7µ GF (38866) µg/L	Pendi- meth- alin, water, fltrd 0.7µ GF (82683) µg/L	Phosmet water, fltrd, µg/L (61601)	Phos- pham- idon, water, fltrd, µg/L (63736)	Sima- zine, water, fltrd, µg/L (04035)	Terba- cil, water, fltrd 0.7µ GF (82665) µg/L	Tri- flur- alin, water, fltrd, µg/L (04023)	Purpose site visit, code (50280)	Sample purpose code (71999)	Source of blank solu- tion, code (99101)
03-02-04	--	--	--	--	--	--	--	--	--	--	2098	50.00	80.00
03-02-04	--	--	--	--	--	--	--	--	--	--	2098	50.00	80.00
03-02-04	--	<.10	<.10	--	<.100	--	--	<.10	--	--	2098	50.00	10.00
03-30-04	--	--	--	--	--	--	--	--	--	--	2098	50.00	80.00
03-30-04	--	--	--	--	--	--	--	--	--	--	2098	50.00	80.00
05-10-04	--	--	--	--	--	--	--	--	--	--	2098	15.00	80.00
06-23-04	--	--	--	--	--	--	--	--	--	--	2098	50.00	80.00
07-29-04	<.100	<.10	<.10	<2.00	<.100	<.100	<.25	<.10	<.100	<.10	2098	50.00	10.00
08-04-04	<.100	<.10	<.10	<2.00	<.100	<.100	<.25	<.10	<.100	<.10	2098	50.00	10.00
08-05-04	--	--	--	--	--	--	--	--	--	--	2098	50.00	--
08-18-04	--	--	--	--	--	--	--	--	--	--	2098	50.00	80.00

Date	Refer- ence mater- ial or spike lot number (99104)	Type of blank sample, code (99102)	Type of blank solu- tion, code (99100)
03-02-04	--	200.00	200.00
03-02-04	3267	200.00	10.00
03-02-04	80201	200.00	40.00
03-30-04	--	100.00	200.00
03-30-04	2330	100.00	10.00
05-10-04	3267	200.00	10.00
06-23-04	3267	100.00	10.00
07-29-04	80301	100.00	40.00
08-04-04	80301	100.00	40.00
08-05-04	--	100.00	200.00
08-18-04	3267	100.00	10.00

**GROUND-WATER DATA COLLECTED AT SPECIAL-STUDY SITES
GROUND WATER PESTICIDES NETWORK PROJECT**

401435076540910 - QUALITY-ASSURANCE RESULTS

REMARKS.--A commercially-available and USGS-certified mixture of pesticides and herbicides was spiked into two 3-liter bottles of organic-free blank water April 21, 2004 at 09:00, 09:05, and 09:10 to create triplicate quality-assurance samples (2 1-liter bottles for EPA 525.2 per sample). All samples were analyzed at the Pennsylvania Department of Environmental Protection Bureau of Laboratories. Triplicate spiked samples are used to determine both precision and accuracy. Concentrations of analytes in blank water were assumed to be less than the reporting limits for purposes of calculations. Concentrations of pesticides and herbicides (in µg/L) and calculated recoveries (in percent) are shown in the table below for estimation of accuracy. Less-than values were set equal to zero for calculations; "<" = less than.

QUALITY-CONTROL DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Parameter code	Constituent	Concentration, in micrograms per liter			Recovery in percent [(B-A)/C] x 100
		Assumed concentration of blank A	Laboratory results for spiked sample (04/21/04 at 0900) B	Calculated ^a concentration in spiked sample C	
49260	Acetochlor	<0.10	0.29	.40	72
46342	Alachlor	<0.10	0.30	.40	75
39632	Atrazine	<0.10	0.34	.40	85
49306	Chlorothalonil	<0.10	0.25	.40	62
38933	Chlorpyrifos (Dursban)	<0.10	0.32	.40	80
34386	Hexachlorocyclopentadiene	<0.10	0.10	.40	25
39415	Metolachlor	<0.10	0.34	.40	85
82630	Metribuzin	<0.10	0.31	.40	78
82683	Pendimethalin	<0.10	0.28	.40	70
04035	Simazine	<0.10	0.31	.40	78

Parameter code	Constituent	Concentration, in micrograms per liter			Recovery in percent [(B-A)/C] x 100
		Assumed concentration of blank A	Laboratory results for spiked sample (04/21/04 at 0905) B	Calculated ^a concentration in spiked sample C	
49260	Acetochlor	<0.10	0.35	.40	88
46342	Alachlor	<0.10	0.34	.40	85
39632	Atrazine	<0.10	0.30	.40	75
49306	Chlorothalonil	<0.10	0.27	.40	68
38933	Chlorpyrifos (Dursban)	<0.10	0.33	.40	82
34386	Hexachlorocyclopentadiene	<0.10	0.11	.40	28
39415	Metolachlor	<0.10	0.36	.40	90
82630	Metribuzin	<0.10	0.32	.40	80
82683	Pendimethalin	<0.10	0.28	.40	70
04035	Simazine	<0.10	0.32	.40	80

Parameter code	Constituent	Concentration, in micrograms per liter			Recovery in percent [(B-A)/C] x 100
		Assumed concentration of blank A	Laboratory results for spiked sample (04/21/04 at 0910) B	Calculated ^a concentration in spiked sample C	
49260	Acetochlor	<0.10	0.33	.40	82
46342	Alachlor	<0.10	0.31	.40	78
39632	Atrazine	<0.10	0.34	.40	85
49306	Chlorothalonil	<0.10	0.25	.40	62
38933	Chlorpyrifos (Dursban)	<0.10	0.30	.40	75
34386	Hexachlorocyclopentadiene	<0.10	0.10	.40	25
39415	Metolachlor	<0.10	0.33	.40	82
82630	Metribuzin	<0.10	0.29	.40	72
82683	Pendimethalin	<0.10	0.26	.40	65
04035	Simazine	<0.10	0.29	.40	72

^a Calculated concentration of spike in sample equals the concentration of the spike solution, in micrograms per milliliter x amount of spike added, in milliliters, divided by the spiked sample volume, in liters.

**GROUND-WATER DATA COLLECTED AT SPECIAL-STUDY SITES
GROUND WATER PESTICIDES NETWORK PROJECT**

401435076540910 - QUALITY-ASSURANCE RESULTS

REMARKS.--A commercially-available anion solution (including nitrate-N and nitrite-N) of known concentration was spiked into 1-L of inorganic blank water on April 7, 2004 at 1130, 1131, and 1132, and three triplicate spiked samples were submitted for analysis for estimates of precision and accuracy. Concentrations of analytes in blank water were assumed to be less than the reporting limits for purposes of calculations. Concentrations of nitrate-N and nitrite-N (in mg/L) and calculated recoveries (in percent) are shown in the table below for estimations of accuracy. Less-than values were set equal to zero for calculations; "<" = less than. All samples were analyzed at the Pennsylvania Department of Environmental Protection Laboratory.

QUALITY-CONTROL DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004--Continued

Sample Time	Concentration, in milligrams per liter								
	Assumed concentration of blank		Laboratory results for spiked sample			Calculated ^a concentration in spiked sample		Recovery in percent	
	Nitrate + Nitrite-N	Nitrite	Nitrate + Nitrite-N	Nitrate-N	Nitrite-N	Nitrate-N	Nitrite-N	Nitrate-N	Nitrite-N
	A	A	B	B	C	C	[(B-A)/C] x 100		
1130	<0.06	<0.008	8.20	7.42	0.78	7.50	0.75	99	104
1131	<0.06	<0.008	7.90	7.12	0.78	7.50	0.75	95	104
1132	<0.06	<0.008	7.81	7.03	0.78	7.50	0.75	94	104

a Calculated concentration of spike in sample equals the concentration of the spike solution, in micrograms per milliliter x amount of spike added, in milliliters, divided by the spiked sample volume, in liters

Using the results from these spiked triplicate samples, the Relative Standard Deviation (RSD), otherwise known as the coefficient of variation, was calculated as a measure of precision using the following formula:

RSD = standard deviation of triplicate results divided by the mean concentration of the triplicate results

RSD Nitrate-N = 0.03 mg/L
RSD Nitrite-N = 0.0 mg/L

Compounds analyzed at the Pennsylvania Department of Environmental Protection Laboratory

Pesticide Schedule Used for Baseline Trends and Hot-Spot Trends Networks (SAC USGS2)	
Analyte	NWIS Parameter Code
EPA 525.2	
Acetochlor	49260
Alachlor	46342
Atrazine	39632
Chlorothalonil	49306
Chlorpyrifos (Dursban)	38933
Dichlobenil (added after April 2004)	63009
Fenpropathrin (added after April 2004)	64044
Hexachlorocyclopentadiene	34386
Metolachlor	39415
Metribuzin	82630
Pendimethalin	82683
Phosmet (added after April 2004)	61601
Simazine	04035