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 first 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 Blue Ridge and Triassic Lowlands orchard area 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 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 during: 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. Declining water level, rising water level due to spring/summer flush, and rising water level due to winter recharge samples from the Delaware River Basin, are included in this report. Samples are identified by network in the third heading within the table: Annual Baseline = AB, Baseline Trends = BT, and Hot-Spot Trends = HST. Well locations are shown in Figure 11 and Figure 12. The following analytical methods were used to determine results for the samples listed: USGS National Water Quality Laboratory (Analyzing Agency Code 80020), pesticides - (SH2001) C-18 solid-phase extraction and capillary-column gas chromatography/mass spectrometry with selected-ion monitoring, nitrate/nitrite - colorimetry (cadmium reduction), total coliform and E. coli bacteria - Colilert Quantitray; PA Department of Environmental Protection Laboratory (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 by analyzing agency in the table which follows study area maps. Other data for the project can be found in the annual Water Data Report PA-03-2. For additional information, contact Connie Loper at the U.S. Geological Survey, 215 Limekiln Road, New Cumberland, PA 17070; 717-730-6976 (email caloper@usgs.gov).

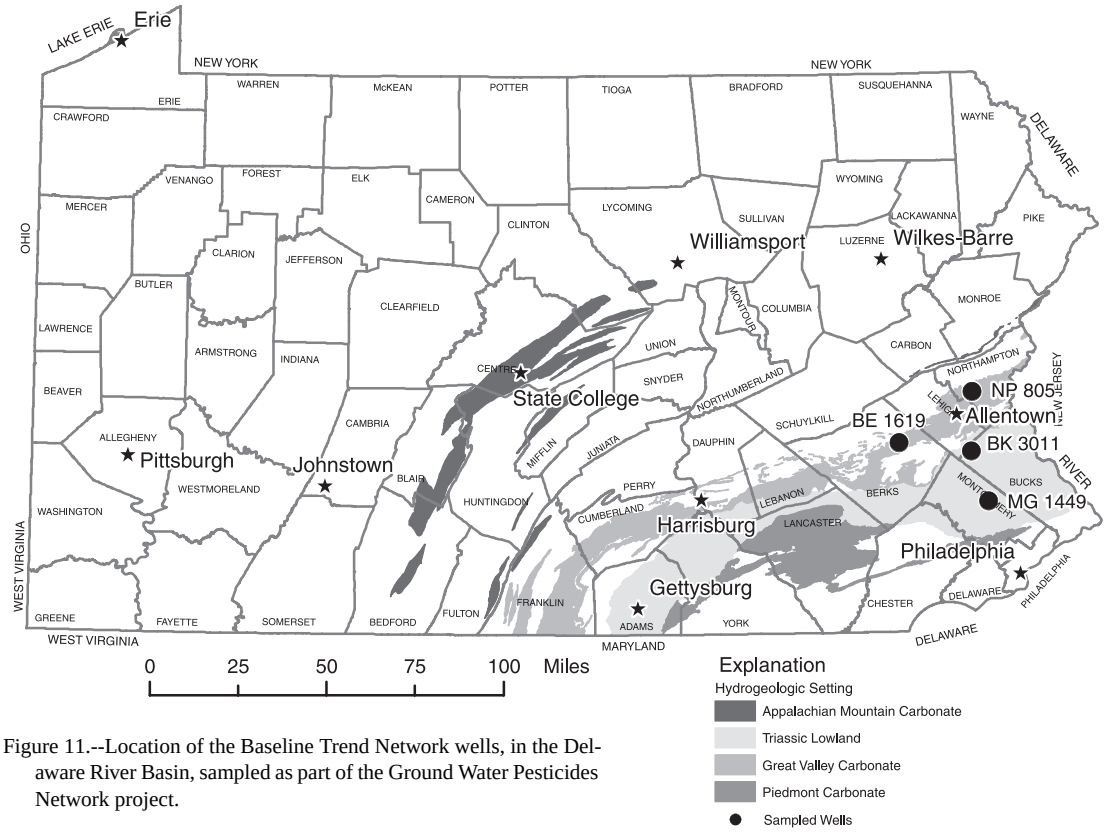

Figure 11.--Location of the Baseline Trend Network wells, in the Delaware River Basin, sampled as part of the Ground Water Pesticides Network project.

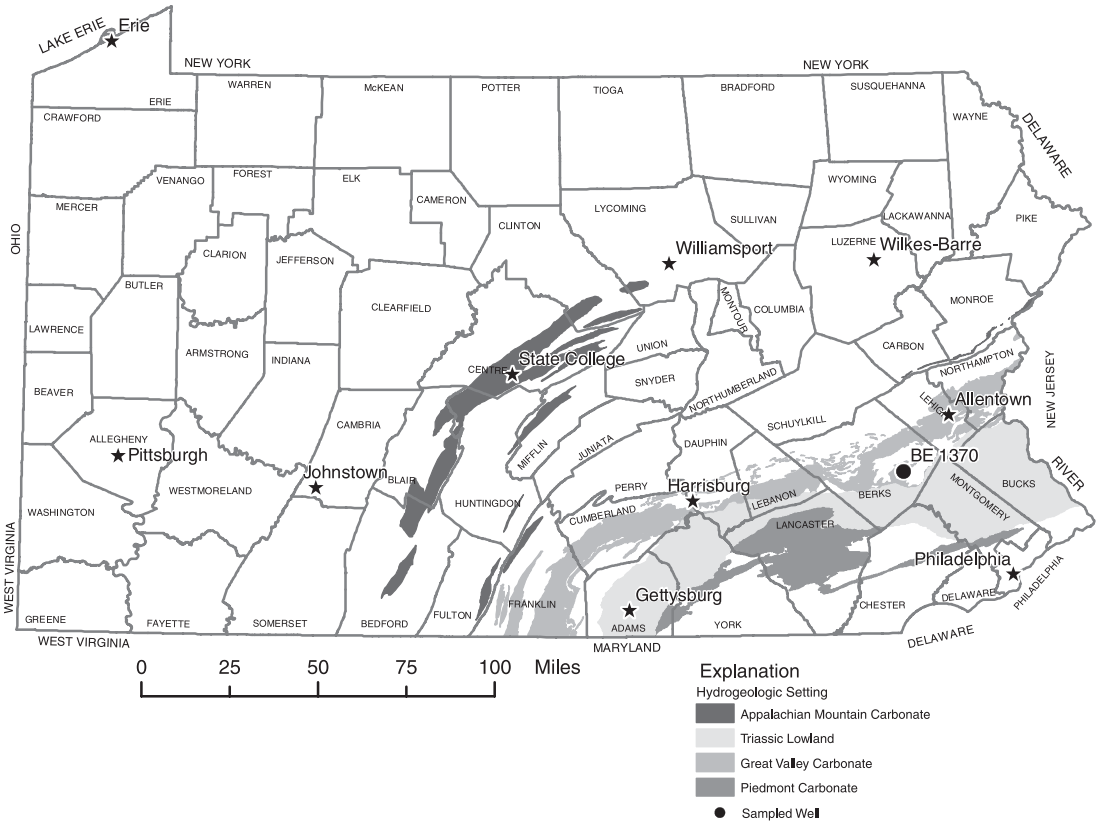

Figure 12.--Location of the Hot-Spot Trend Network well, in the Delaware River Basin, sampled as part of the Ground Water Pesticides Network project.

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

Compounds analyzed at the USGS National Water-Quality Laboratory and the Pennsylvania Department of Environmental Protection Laboratory for the Ground Water Pesticides Network Project

USGS National Water Quality Laboratory Pesticide Schedule (SH2001)			Pennsylvania Department of Environmental Protection Laboratory Pesticide Schedule used for Baseline Trends and Hot-Spot Trends Networks (SAC USGS2)	
Analyte	Parameter Code		Analyte	Parameter Code
Alpha-HC	34253		Acetochlor	49260
Acetochlor	49260		Alachlor	46342
Alachlor	46342		Atrazine	39632
2,6 -Diethylaniline	82660		Chlorothalonil	49306
Atrazine	39632		Chlorpyriphos (Dursban)	38933
Desethyl atrazine (CIAT)	04040		Hexachlorocyclopentadiene	34386
Azinphos-methyl	82686		Metolahlor	39415
Benfluralin	82673		Metribuzin	82630
Butylate	04028		Pendimethalin	82683
Carbaryl	82680		Simazine	04035
Carbofuran	82674			
Chlorpyrifos	38933			
cis-Permethrin	82687			
Cyanazine	04041			
Dacthal (DCPA)	82682			
Diazanon	39572			
Diazinon-d10(surrogate)	91063			
Dieldrin	39381			
Disulfoton	82677			
EPTC	82668			
Ethalfluralin	82663			
Ethoprophos	82672			
Desulfinylfipronil amide	62169			
Fipronil sulfide	62167			
Fipronil sulfone	62168			
Desulfinylfipronil	62170			
Fipronil	62166			
Fonofos	04095			
alpha-HCH-d6(surrogate)	91065			
Lindane	39341			
Linuron	82666			
Malathion	39532			
Parathion-methyl	82667			
Metolachlor	39415			
Metribuzin	82630			
Molinate	82671			
Napropamide	82684			
p,p'-DDE	34653			
Parathion	39542			
Pebulate	82669			
Pendimethalin	82683			
Phorate	82664			
Prometon	04037			
Propyzamide	82676			
Propachlor	04024			
Propanil	82679			
Propargite	82685			
Simazine	04035			
Tebuthiuron	82670			
Terbacil	82665			
Terbufos	82675			
Thiobencarb	82681			
Triallate	82678			
Trifluralin	82661			

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

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; Sampling method code 4040 = submersible pump; Sampling condition code 8 = pumping; Agency analyzing sample code 80020 = USGS National Water Quality Lab in Denver, CO or 9813 = PA Department of Environmental Protection Lab in Harrisburg, PA; µS/cm: microsiemens per centimeter at 25 degrees Celsius; deg C: degrees Celsius; µg/L: micrograms per liter (parts per billion); mg/L = milligrams per liter (parts per million); "<" = less than; "E" = estimated; CIAT = desethyl atrazine; DCPA = dacthal; MPN = Most Probable Number; GF = Glass fiber filter; Type of sample related QA data code 10 = blank or 100 = More than one type of QA sample; Network Identifier HST = Hot-Spot Trends, or BT = Baseline Trends.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

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)
BERKS COUNTY												
402238075443401	BE 1370	HST	03-26-03	1535	1028	80020	110	--	330	35	4040	--
402238075443401	BE 1370	HST	05-15-03	1145	1028	80020	110	--	330	45	4040	.0
402238075443401	BE 1370	HST	08-13-03	0955	1028	9813	110	--	330	45	4040	.1
402934075481801	BE 1619	BT	04-01-03	1135	1028	80020	150	27.02	400.	35	4040	--
BUCKS COUNTY												
402704075245701	BK 3011	BT	04-15-03	1130	1028	80020	100	--	550	30	4040	--
MONTGOMERY COUNTY												
401446075193701	MG 1449	BT	04-23-03	1205	1028	80020	114.5	11.08	265	50	4040	--
NORTHAMPTON COUNTY												
404144075241501	NP 805	BT	04-01-03	1510	1028	80020	140	66.30	400	40	4040	--

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, wat unf µS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	E coli, Colilert Quantry water, MPN/ 100 mL (50468)	Total coliform, Colert Quantry MPN/ 100 mL (50569)	2,6-Diethylaniline water fltrd 0.7µ GF µg/L (82660)	CIAT, water, fltrd, µg/L (04040)
BERKS COUNTY													
03-26-03	746	--	--	7.3	698	15.4	12.4	21.5	<.008	<1	<1	<.006	E.318
05-15-03	755	9.2	89	7.2	742	16.4	13.2	23.5	<.008	<1	<1	E.001	E.234
08-13-03	760	8.2	80	7.2	740	--	14.2	23.1	<.010	2	110	--	--
04-01-03	753	7.2	66	7.5	542	4.8	10.9	9.81	<.008	<1	2	<.006	E.226
BUCKS COUNTY													
04-15-03	751	.1	.0	8.0	275	20.1	11.5	<.06	<.008	<1	<1	<.006	<.006
MONTGOMERY COUNTY													
04-23-03	751	1.3	13	8.1	403	11.1	13.9	2.63	<.008	<1	<1	<.006	E.006
NORTHAMPTON COUNTY													
04-01-03	749	6.7	62	7.4	662	8.5	10.8	12.8	<.008	<1	<1	<.006	E.218

Date	Acetochlor, water, fltrd, µg/L (49260)	Alachlor, water, fltrd, µg/L (46342)	alpha-HCH, water, fltrd, µg/L (34253)	alpha-HCH-d6, surrog, wat flt 0.7µ GF percent recovry (91065)	Atrazine, water, fltrd, µg/L (39632)	Azinphos-methyl, water, fltrd 0.7µ GF µg/L (82686)	Benfluralin, water, fltrd 0.7µ GF µg/L (82673)	Butylate, water, fltrd, µg/L (04028)	Carbaryl, water, fltrd 0.7µ GF µg/L (82680)	Carbofuran, water, fltrd 0.7µ GF µg/L (82674)	Chlorothalonil, water, fltrd 0.7µ GF µg/L (49306)	Chlorpyrifos water, fltrd, µg/L (38933)	cis-Permethrin water fltrd 0.7µ GF µg/L (82687)
BERKS COUNTY													
03-26-03	<.006	.396	<.005	90.2	.164	<.050	<.010	<.002	<.041	<.020	--	<.005	<.006
05-15-03	<.006	.260	<.005	84.7	.154	<.050	<.010	<.002	<.041	<.020	--	<.005	<.006
08-13-03	<.100	.15	--	--	.10	--	--	--	--	--	<.10	<.10	--
04-01-03	<.006	<.004	<.005	88.1	.200	<.050	<.010	<.002	<.041	<.020	--	<.005	<.006
BUCKS COUNTY													
04-15-03	<.006	<.004	<.005	95.4	<.007	<.050	<.010	<.002	<.041	<.020	--	<.005	<.006
MONTGOMERY COUNTY													
04-23-03	<.006	<.007	<.005	100	<.007	<.050	<.010	<.002	<.041	<.020	--	<.005	<.006
NORTHAMPTON COUNTY													
04-01-03	<.006	E.004	<.005	93.4	.127	<.050	<.010	<.002	<.041	<.020	--	<.005	<.006

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Cyanazine, water, fltrd, µg/L (04041)	DCPA, water fltrd 0.7µ GF µg/L (82682)	Desulfinyl fipronil, water, fltrd, µg/L (62170)	Diazinon, water, fltrd, µg/L (39572)	Diazinon-d10 surrog. wat flt 0.7µ GF percent recovry (91063)	Dieldrin, water, fltrd, µg/L (39381)	Disulfoton, water, fltrd 0.7µ GF µg/L (82677)	EPTC, water, fltrd 0.7µ GF µg/L (82668)	Ethalfluralin, water, fltrd 0.7µ GF µg/L (82663)	Ethoprop, water, fltrd 0.7µ GF µg/L (82672)	Desulfinyl fipronil amide, wat flt µg/L (62169)	Fipronil sulfide water, fltrd, µg/L (62167)	Fipronil sulfone water, fltrd, µg/L (62168)
BERKS COUNTY													
03-26-03	<.018	<.003	<.004	<.005	110	<.005	<.02	<.002	<.009	<.005	<.009	<.005	<.005
05-15-03	<.018	<.003	<.004	<.005	92.0	<.015	<.02	<.002	<.009	<.005	<.009	<.005	<.005
08-13-03	--	--	--	--	--	--	--	--	--	--	--	--	--
04-01-03	<.018	<.003	<.004	<.005	110	<.005	<.02	<.002	<.009	<.005	<.009	<.005	<.005
BUCKS COUNTY													
04-15-03	<.018	<.003	<.004	<.005	101	<.005	<.02	<.002	<.009	<.005	<.009	<.005	<.005
MONTGOMERY COUNTY													
04-23-03	<.018	<.003	<.004	<.005	109	<.005	<.02	<.002	<.009	<.005	<.009	<.005	<.005
NORTHAMPTON COUNTY													
04-01-03	<.018	<.003	<.004	<.005	110	<.005	<.02	<.002	<.009	<.005	<.009	<.005	<.005

Date	Fipronil, water, fltrd, µg/L (62166)	Fonofos water, fltrd, µg/L (04095)	Hexachlorocyclopentadiene, wat unf µg/L (34386)	Lindane water, fltrd, µg/L (39341)	Linuron water fltrd 0.7µ GF µg/L (82666)	Malathion, water, fltrd, µg/L (39532)	Methyl parathion, water, fltrd 0.7µ GF µg/L (82667)	Metolachlor, water, fltrd, µg/L (39415)	Metribuzin, water, fltrd, µg/L (82630)	Molinate, water, fltrd 0.7µ GF µg/L (82671)	Napropamide, water, fltrd 0.7µ GF µg/L (82684)	p,p'-DDE, water, fltrd, µg/L (34653)	Parathion, water, fltrd, µg/L (39542)
BERKS COUNTY													
03-26-03	<.007	<.003	--	<.004	<.035	<.027	<.006	1.06	<.006	<.002	<.007	<.003	<.010
05-15-03	<.007	<.003	--	<.004	<.035	<.027	<.006	.461	<.006	<.002	<.007	<.003	<.010
08-13-03	--	--	<.1	--	--	--	--	.37	<.10	--	--	--	--
04-01-03	<.007	<.003	--	<.004	<.035	<.027	<.006	E.013	<.006	<.003	<.007	<.003	<.010
BUCKS COUNTY													
04-15-03	<.007	<.003	--	<.004	<.035	<.027	<.006	<.013	<.006	<.002	<.007	<.003	<.010
MONTGOMERY COUNTY													
04-23-03	<.007	<.003	--	<.004	<.035	<.027	<.006	<.013	<.006	<.002	<.007	<.003	<.010
NORTHAMPTON COUNTY													
04-01-03	<.007	<.003	--	<.004	<.035	<.027	<.006	<.013	<.006	<.003	<.007	<.003	<.010

Date	Pebulate, water, fltrd 0.7µ GF µg/L (82669)	Pendimethalin, water, fltrd 0.7µ GF µg/L (82683)	Phorate water fltrd 0.7µ GF µg/L (82664)	Prometon, water, fltrd, µg/L (04037)	Pronamide, water, fltrd 0.7µ GF µg/L (82676)	Propachlor, water, fltrd, µg/L (04024)	Propanil, water, fltrd 0.7µ GF µg/L (82679)	Propargite, water, fltrd 0.7µ GF µg/L (82685)	Simazine, water, fltrd, µg/L (04035)	Tebuthiuron water fltrd 0.7µ GF µg/L (82670)	Terbacil, water, fltrd 0.7µ GF µg/L (82665)	Terbufos, water, fltrd 0.7µ GF µg/L (82675)	Thiobencarb water fltrd 0.7µ GF µg/L (82681)
BERKS COUNTY													
03-26-03	<.004	<.022	<.011	<.01	<.004	<.010	<.011	<.02	<.005	<.02	<.034	<.02	<.005
05-15-03	<.004	<.022	<.011	E.01	<.004	<.010	<.011	<.02	.006	<.02	<.034	<.02	<.005
08-13-03	--	<.100	--	--	--	--	--	--	<.10	--	--	--	--
04-01-03	<.004	<.022	<.011	<.01	<.004	<.010	<.011	<.02	.009	<.02	<.034	<.02	<.005
BUCKS COUNTY													
04-15-03	<.004	<.022	<.011	<.01	<.004	<.010	<.011	<.02	<.005	<.02	<.034	<.02	<.005
MONTGOMERY COUNTY													
04-23-03	<.004	<.022	<.011	<.01	<.004	<.010	<.011	<.02	<.005	<.02	<.034	<.02	<.005
NORTHAMPTON COUNTY													
04-01-03	<.004	<.022	<.011	<.01	<.004	<.010	<.011	<.02	.044	<.02	<.034	<.02	<.005

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Tri-allate, water, fltrd 0.7µ GF µg/L (82678)	Tri-flur-alin, water, fltrd 0.7µ GF µg/L (82661)	Purpose site visit, code (50280)	Sample purpose code (71999)	Sample volume, Sched-ule 2001, mL (99856)	Sam-pling condi-tion, code (72006)	Type of sample related QA data, code (99111)
			BERKS COUNTY				
03-26-03	<.002	E.006	2001	50.00	949	8.00	--
05-15-03	<.002	E.003	2001	50.00	934	8.00	10
08-13-03	--	--	2001	50.00	--	8.00	--
04-01-03	<.002	<.009	2001	50.00	943	8.00	--
			BUCKS COUNTY				
04-15-03	<.002	<.009	2001	50.00	915	8.00	100
			MONTGOMERY COUNTY				
04-23-03	<.002	<.009	2001	50.00	961	8.00	--
			NORTHAMPTON COUNTY				
04-01-03	<.002	<.009	2001	50.00	936	8.00	--

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

REMARKS.--The following are quality-control samples (blanks) processed during the 2003 water year. "Blanks" are defined in the explanation of records section entitled, "Water Quality-Control Data"; "<" = less than; µg/L: micrograms per liter (parts per billion); mg/L = milligrams per liter (parts per million); GF = Glass fiber filter; MPN = Most Probable Number; DCPA = dacthal; Network Identifier BT = Baseline Trends or HST = Hot-spot Trends.

QUALITY CONTROL DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Station	number	Local Well ID	Network Identi-fier	Date	Time	Agency col-lecting sample, code (00027)	Agency ana-lyzing sample, code (00028)	Depth of well, feet below LSD (72008)	Alti-tude of land surface feet (72000)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	E coli, Coli-lert Quantry water, MPN/ 100 mL (50468)	Total coli-form, Colert Quantry MPN/ 100 mL (50569)
401435076540910		Lemoyne Station	--	04-15-03	1115	1028	80020	--	--	--	--	--	--
402704075245701		BK 3011	BT	04-15-03	1129	1028	80020	100	550	<.06	<.008	--	--
402238075443401		BK 1370	HST	05-15-03	1144	1028	80020	110	330	--	--	<1	<1

Date	2,6-Di-ethyl-aniline water fltrd 0.7µ GF µg/L (82660)	CIAT, water, fltrd, µg/L (04040)	Aceto-chlor, water, fltrd, µg/L (49260)	Ala-chlor, water, fltrd, µg/L (46342)	alpha-HCH, water, fltrd, µg/L (34253)	alpha-HCH-d6, surrog, wat flt 0.7µ GF percent recovry (91065)	Atra-zine, water, fltrd, µg/L (39632)	Azin-phos-methyl, water, fltrd 0.7µ GF µg/L (82686)	Ben-flur-alin, water, fltrd 0.7µ GF µg/L (82673)	Butyl-ate, water, fltrd, µg/L (04028)	Car-baryl, water, fltrd 0.7µ GF µg/L (82680)	Carbo-furan, water, fltrd 0.7µ GF µg/L (82674)	Chlor-pyrifos water, fltrd, µg/L (38933)
04-15-03	<.006	<.006	<.006	<.004	<.005	91.9	<.007	<.050	<.010	<.002	<.041	<.020	<.005
04-15-03	--	--	--	--	--	--	--	--	--	--	--	--	--
05-15-03	--	--	--	--	--	--	--	--	--	--	--	--	--

Date	cis-Per-methrin water fltrd 0.7µ GF µg/L (82687)	Cyana-zine, water, fltrd, µg/L (04041)	DCPA, water fltrd 0.7µ GF µg/L (82682)	Desulf-inyl fipro-nil, water, fltrd, µg/L (62170)	Diazi-non, water, fltrd, µg/L (39572)	Diazi-non-d10 surrog. wat flt 0.7µ GF percent recovry (91063)	Diel-drin, water, fltrd, µg/L (39381)	Disul-foton, water, fltrd 0.7µ GF µg/L (82677)	EPTC, water, fltrd 0.7µ GF µg/L (82668)	Ethal-flur-alin, water, fltrd 0.7µ GF µg/L (82663)	Etho-prop, water, fltrd 0.7µ GF µg/L (82672)	Desulf-inyl-fipro-nil amide, wat flt µg/L (62169)	Fipro-nil sulfide water, fltrd, µg/L (62167)
04-15-03	<.006	<.018	<.003	<.004	<.005	94.6	<.005	<.02	<.002	<.009	<.005	<.009	<.005
04-15-03	--	--	--	--	--	--	--	--	--	--	--	--	--
05-15-03	--	--	--	--	--	--	--	--	--	--	--	--	--

Date	Fipro-nil sulfone water, fltrd, µg/L (62168)	Fipro-nil, water, fltrd, µg/L (62166)	Fonofos water, fltrd, µg/L (04095)	Lindane water, fltrd, µg/L (39341)	Linuron water fltrd 0.7µ GF µg/L (82666)	Mala-thion, water, fltrd, µg/L (39532)	Methyl para-thion, water, fltrd 0.7µ GF µg/L (82667)	Metola-chlor, water, fltrd, µg/L (39415)	Metri-buzin, water, fltrd, µg/L (82630)	Moli-nate, water, fltrd 0.7µ GF µg/L (82671)	Naprop-amide, water, fltrd 0.7µ GF µg/L (82684)	p,p'-DDE, water, fltrd, µg/L (34653)	Para-thion, water, fltrd, µg/L (39542)
04-15-03	<.005	<.007	<.003	<.004	<.035	<.027	<.006	<.013	<.006	<.002	<.007	<.003	<.010
04-15-03	--	--	--	--	--	--	--	--	--	--	--	--	--
05-15-03	--	--	--	--	--	--	--	--	--	--	--	--	--

Date	Peb-ulate, water, fltrd 0.7µ GF µg/L (82669)	Pendi-meth-alin, water, fltrd 0.7µ GF µg/L (82683)	Phorate water fltrd 0.7µ GF µg/L (82664)	Prome-ton, water, fltrd, µg/L (04037)	Pron-amide, water, fltrd 0.7µ GF µg/L (82676)	Propa-chlor, water, fltrd, µg/L (04024)	Pro-panil, water, fltrd 0.7µ GF µg/L (82679)	Propar-gite, water, fltrd 0.7µ GF µg/L (82685)	Sima-zine, water, fltrd, µg/L (04035)	Tebu-thiuron water fltrd 0.7µ GF µg/L (82670)	Terba-cil, water fltrd 0.7µ GF µg/L (82665)	Terbu-fos, water fltrd 0.7µ GF µg/L (82675)	Thio-bencarb water fltrd 0.7µ GF µg/L (82681)
04-15-03	<.004	<.022	<.011	<.01	<.004	<.010	<.011	<.02	<.005	<.02	<.034	<.02	<.005
04-15-03	--	--	--	--	--	--	--	--	--	--	--	--	--
05-15-03	--	--	--	--	--	--	--	--	--	--	--	--	--

Date	Tri-allate, water, fltrd 0.7µ GF µg/L (82678)	Tri-flur-alin, water, fltrd 0.7µ GF µg/L (82661)	Purpose site visit, code (50280)	Sample purpose code (71999)	Sample volume, Sched-ule 2001, mL (99856)	Source of blank solu-tion, code (99101)	Refer-ence mater-ial or spike lot number (99104)	Type of blank sample, code (99102)	Type of blank solu-tion, code (99100)
04-15-03	<.002	<.009	2098	50.00	904	10.00	80201	150.00	40.00
04-15-03	--	--	2098	50.00	--	80.00	2330	100.00	10.00
05-15-03	--	--	2098	50.00	--	80.00	--	100.00	200.00

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 approximately 3 liters of organic-free blank water April 15, 2003 to create three 1-L triplicate quality-assurance samples which were submitted to the U.S. Geological Survey National Water Quality Laboratory. These samples are used to determine both precision and accuracy. 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; E = estimated value; "<" = less than.

QUALITY-CONTROL DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003--Continued

		Concentration, in micrograms per liter			
		Laboratory results			
Parameter code	Constituent	Blank (04/15/03 @ 1115) A	Spiked Blank (04/15/03 @ 1120) B	[a] Calculated concentration in spiked blank C	Recovery in percent [(B-A)/C] x 100
49260	Acetochlor	<0.006	0.533	.40	133
46342	Alachlor	<0.004	0.522	.40	130
34253	Alpha BHC	<0.005	0.460	.40	115
39632	Atrazine	<0.007	0.581	.40	145
82673	Benfluralin	<0.010	0.385	.40	96
04028	Butylate	<0.002	0.456	.40	114
82680	Carbaryl	<0.041	E0.515	.40	129
82674	Carbofuran	<0.020	E0.534	.40	134
38933	Chlorpyrifos	<0.005	0.436	.40	109
04041	Cyanazine	<0.018	0.601	.40	150
82682	DCPA (Dacthal)	<0.003	0.532	.40	133
04040	CIAT (Desethyl Atrazine)	<0.006	E0.325	.40	81
39572	Diazinon	<0.005	0.456	.40	114
39381	Dieldrin	<0.005	0.437	.40	109
82660	2,6-Diethyl Aniline	<0.006	0.448	.40	112
82677	Disulfoton	<0.02	0.202	.40	50
82668	EPTC	<0.002	0.436	.40	109
82663	Ethalfluralin	<0.009	0.404	.40	101
82672	Ethoprop	<0.005	0.441	.40	110
04095	Fonofos	<0.003	0.455	.40	114
39341	Lindane	<0.004	0.512	.40	128
82666	Linuron	<0.035	0.687	.40	172
39532	Malathion	<0.027	0.434	.40	108
82686	Methyl Azinphos	<0.050	E0.541	.40	135
82667	Methyl Parathion	<0.006	E0.557	.40	139
39415	Metolachlor	<0.013	0.524	.40	131
82630	Metribuzin	<0.006	0.489	.40	122
82671	Molinate	<0.002	0.468	.40	117
82684	Napropamide	<0.007	0.432	.40	108
34653	P, P' DDE	<0.003	0.284	.40	71
39542	Parathion	<0.010	E0.592	.40	148
82669	Pebulate	<0.004	0.455	.40	114
82683	Pendimethalin	<0.022	0.454	.40	114
82687	Permethrin, cis	<0.006	0.247	.40	62
82664	Phorate	<0.011	0.298	.40	74
04037	Prometon	<0.01	0.518	.40	130
82676	Pronamide	<0.004	0.518	.40	130
04024	Propachlor	<0.010	0.521	.40	130
82679	Propanil	<0.011	0.591	.40	148
82685	Propargite	<0.02	0.336	.40	84
04035	Simazine	<0.005	0.602	.40	150
82670	Tebuthiuron	<0.02	E0.528	.40	132
82665	Terbacil	<0.034	E0.481	.40	120
82675	Terbufos	<0.02	0.340	.40	88
82681	Thiobencarb	<0.005	0.523	.40	131
82678	Triallate	<0.002	0.453	.40	113
82661	Trifluralin	<0.009	0.386	.40	96
				Mean recovery	117
				Standard deviation	25
				Median recovery	115

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 and USGS-certified mixture of pesticides and herbicides was spiked into approximately 3 liters of organic-free blank water April 15, 2003 to create three 1-L triplicate quality-assurance samples which were submitted to the U.S. Geological Survey National Water Quality Laboratory. These samples are used to determine both precision and accuracy. 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; E = estimated value; "<" = less than.

QUALITY-CONTROL DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003--Continued

		Concentration, in micrograms per liter			
		Laboratory results			
Parameter code	Constituent	Blank (04/15/03 @ 1115) A	Spiked Blank (04/15/03 @ 1121) B	[a] Calculated concentration in spiked blank C	Recovery in percent [(B-A)/C] x 100
49260	Acetochlor	<0.006	0.551	.40	138
46342	Alachlor	<0.004	0.540	.40	135
34253	Alpha BHC	<0.005	0.531	.40	133
39632	Atrazine	<0.007	0.582	.40	146
82673	Benfluralin	<0.010	0.427	.40	107
04028	Butylate	<0.002	0.496	.40	124
82680	Carbaryl	<0.041	E0.290	.40	72
82674	Carbofuran	<0.020	E0.473	.40	118
38933	Chlorpyrifos	<0.005	0.520	.40	130
04041	Cyanazine	<0.018	0.603	.40	151
82682	DCPA (Dacthal)	<0.003	0.546	.40	136
04040	CIAT (Desethyl Atrazine)	<0.006	E0.324	.40	81
39572	Diazinon	<0.005	0.499	.40	125
39381	Dieldrin	<0.005	0.483	.40	121
82660	2,6-Diethyl Aniline	<0.006	0.498	.40	124
82677	Disulfoton	<0.02	0.227	.40	57
82668	EPTC	<0.002	0.485	.40	121
82663	Ethalfluralin	<0.009	0.455	.40	114
82672	Ethoprop	<0.005	0.501	.40	125
04095	Fonofos	<0.003	0.529	.40	132
39341	Lindane	<0.004	0.546	.40	136
82666	Linuron	<0.035	0.757	.40	189
39532	Malathion	<0.027	0.263	.40	66
82686	Methyl Azinphos	<0.050	E0.590	.40	148
82667	Methyl Parathion	<0.006	0.584	.40	146
39415	Metolachlor	<0.013	0.535	.40	134
82630	Metribuzin	<0.006	0.518	.40	130
82671	Molinate	<0.002	0.479	.40	120
82684	Napropamide	<0.007	0.466	.40	116
34653	P, P' DDE	<0.003	0.325	.40	81
39542	Parathion	<0.010	0.595	.40	149
82669	Pebulate	<0.004	0.476	.40	119
82683	Pendimethalin	<0.022	0.500	.40	125
82687	Permethrin, cis	<0.006	0.265	.40	66
82664	Phorate	<0.011	0.401	.40	100
04037	Prometon	<0.01	0.530	.40	132
82676	Pronamide	<0.004	0.527	.40	132
04024	Propachlor	<0.010	0.504	.40	126
82679	Propanil	<0.011	0.592	.40	148
82685	Propargite	<0.02	0.302	.40	76
04035	Simazine	<0.005	0.603	.40	151
82670	Tebuthiuron	<0.02	0.450	.40	112
82665	Terbacil	<0.034	E0.496	.40	124
82675	Terbufos	<0.02	0.422	.40	106
82681	Thiobencarb	<0.005	0.535	.40	134
82678	Triallate	<0.002	0.489	.40	122
82661	Trifluralin	<0.009	0.428	.40	107
				Mean recovery	121
				Standard deviation	26
				Median recovery	125

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 and USGS-certified mixture of pesticides and herbicides was spiked into approximately 3 liters of organic-free blank water April 15, 2003 to create three 1-L triplicate quality assurance samples which were submitted to the U.S. Geological Survey National Water Quality Laboratory. These samples are used to determine both precision and accuracy. 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; E = estimated value; "<" = less than.

QUALITY-CONTROL DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003--Continued

		Concentration, in micrograms per liter			
		Laboratory results			
Parameter code	Constituent	Blank (4/15/03 @ 1115) A	Spiked Blank (04/15/03 @ 1122) B	[a] Calculated concentration in spiked blank C	Recovery in percent [(B-A)/C] x 100
49260	Acetochlor	<0.006	0.547	.40	137
46342	Alachlor	<0.004	0.540	.40	135
34253	Alpha BHC	<0.005	0.486	.40	122
39632	Atrazine	<0.007	0.600	.40	150
82673	Benfluralin	<0.010	0.410	.40	102
04028	Butylate	<0.002	0.476	.40	119
82680	Carbaryl	<0.041	E0.197	.40	49
82674	Carbofuran	<0.020	E0.415	.40	104
38933	Chlorpyrifos	<0.005	0.509	.40	127
04041	Cyanazine	<0.018	0.622	.40	156
82682	DCPA (Dacthal)	<0.003	0.561	.40	140
04040	CIAT (Desethyl Atrazine)	<0.006	E0.274	.40	68
39572	Diazinon	<0.005	0.489	.40	122
39381	Dieldrin	<0.005	0.455	.40	114
82660	2,6-Diethyl Aniline	<0.006	0.473	.40	118
82677	Disulfoton	<0.02	0.219	.40	55
82668	EPTC	<0.002	0.453	.40	113
82663	Ethalfluralin	<0.009	0.421	.40	105
82672	Ethoprop	<0.005	0.465	.40	116
04095	Fonofos	<0.003	0.506	.40	126
39341	Lindane	<0.004	0.525	.40	131
82666	Linuron	<0.035	0.721	.40	180
39532	Malathion	<0.027	0.184	.40	46
82686	Methyl Azinphos	<0.050	E0.542	.40	136
82667	Methyl Parathion	<0.006	E0.578	.40	144
39415	Metolachlor	<0.013	0.540	.40	135
82630	Metribuzin	<0.006	0.477	.40	119
82671	Molinate	<0.002	0.486	.40	122
82684	Napropamide	<0.007	0.443	.40	111
34653	P, P' DDE	<0.003	0.307	.40	77
39542	Parathion	<0.010	E0.597	.40	149
82669	Pebulate	<0.004	E0.467	.40	117
82683	Pendimethalin	<0.022	0.468	.40	117
82687	Permethrin, cis	<0.006	0.260	.40	65
82664	Phorate	<0.011	0.351	.40	88
04037	Prometon	<0.01	0.532	.40	133
82676	Pronamide	<0.004	0.541	.40	135
04024	Propachlor	<0.010	0.546	.40	136
82679	Propanil	<0.011	0.549	.40	137
82685	Propargite	<0.02	0.249	.40	62
04035	Simazine	<0.005	0.617	.40	154
82670	Tebuthiuron	<0.02	E0.523	.40	131
82665	Terbacil	<0.034	E0.443	.40	111
82675	Terbufos	<0.02	0.391	.40	98
82681	Thiobencarb	<0.005	0.549	.40	137
82678	Triallate	<0.002	0.472	.40	118
82661	Trifluralin	<0.009	0.407	.40	102
				Mean recovery	116
				Standard deviation	29
				Median recovery	119

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.