



Water-Data Report 2013

01576003 SUSQUEHANNA RIVER AT COLUMBIA, PA

Lower Susquehanna Basin
Lower Susquehanna Subbasin

LOCATION.--Lat 40°01'42", long 76°31'05" referenced to North American Datum of 1927, Lancaster County, PA, Hydrologic Unit 02050306.

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 2002. March 2013 to current year.

REMARKS.--Analyses for pH, water temperature, specific conductance, and dissolved oxygen were performed on site. All other sample analyses were performed at the Pennsylvania Department of Environmental Protection laboratory in Harrisburg, Pa. Occasionally, values for filtered parameters may exceed values for the corresponding unfiltered parameter. These results are within the limits of analytical precision and methods.

COOPERATION.--Water-quality samples were collected as part of the Pennsylvania Department of Environmental Protection Water-Quality Network (WQN) with cooperation from the Pennsylvania Department of Environmental Protection.

**WATER-QUALITY DATA
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013**

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[ft³/s, cubic feet per second; mg/L, milligrams per liter; mm, millimeters; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; --, no data; <, less than; E, estimated]

Date	Sample start time	Discharge, instantaneous, ft ³ /s (00061)	Dissolved oxygen, water, unfiltered, mg/L (00300)	pH, water, unfiltered, standard units (00400)	Specific conductance, water, unfiltered, µS/cm at 25°C (00095)	Temperature, water, °C (00010)	alpha-HCH-d6, surrogate, water, filtered (0.7 micron glass fiber filter), percent recovery (91065)	Diazinon-d10, surrogate, water, filtered (0.7 micron glass fiber filter), percent recovery (91063)	2,6-Diethyl-aniline, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82660)	2-Chloro-4-isopropyl-amino-6-amino-s-triazine, water, filtered, recoverable, µg/L (04040)
03-13-2013	1200	35,200	11.2	8.2	252	7.7	85.6	69.5	< .0060	E .005
03-14-2013	1400	69,800	13.0	8.6	264	6.1	89.0	77.0	< .0060	E .013
04-15-2013	1300	98,600	10.6	7.5	166	11.3	82.7	72.2	< .0060	E .007
05-14-2013	1200	48,300	10.4	7.7	195	15.0	102	86.4	< .0060	E .038
06-15-2013	0630	40,800	8.2	7.7	229	22.0	92.2	87.4	< .0060	E .102
06-19-2013	1000	45,800	8.4	7.5	181	21.7	90.1	86.1	< .0060	E .037
07-16-2013	1000	26,000	7.9	7.8	223	29.1	108	83.0	< .0060	E .026
08-19-2013	1530	17,400	8.0	8.0	229	23.4	97.5	83.2	< .0060	E .024

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[ft³/s, cubic feet per second; mg/L, milligrams per liter; mm, millimeters; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; --, no data; <, less than; E, estimated]

Date	Sample start time	Acetochlor, water, filtered, recoverable, µg/L (49260)	Alachlor, water, filtered, recoverable, µg/L (46342)	alpha-HCH, water, filtered, recoverable, µg/L (34253)	Atrazine, water, filtered, recoverable, µg/L (39632)	Azinphos-methyl, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82686)	Benfluralin, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82673)	Butylate, water, filtered, recoverable, µg/L (04028)	Carbaryl, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82680)
03-13-2013	1200	0.008	< .008	< .0040	0.012	< .120	< .014	< .0040	< .060
03-14-2013	1400	< .010	< .008	< .0040	.009	< .120	< .014	< .0040	< .060
04-15-2013	1300	< .010	< .008	< .0040	.008	< .120	< .014	< .0040	< .060
05-14-2013	1200	.012	< .008	< .0040	.395	< .120	< .014	< .0040	< .060
06-15-2013	0630	.015	< .008	< .0040	.476	< .120	< .014	< .0040	E .005
06-19-2013	1000	< .010	< .008	< .0040	.127	< .120	< .014	< .0040	< .060
07-16-2013	1000	.006	< .008	< .0040	.061	< .120	< .014	< .0040	< .060
08-19-2013	1530	< .010	< .008	< .0040	.025	< .120	< .014	< .0040	< .060

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[ft³/s, cubic feet per second; mg/L, milligrams per liter; mm, millimeters; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; --, no data; <, less than; E, estimated]

Date	Sample start time	Carbofuran, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82674)	Chlorpyrifos, water, filtered, recoverable, µg/L (38933)	cis-Permethrin, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82687)	Cyanazine, water, filtered, recoverable, µg/L (04041)	DCPA, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82682)	Desulfinyl-fipronil amide, water, filtered, recoverable, µg/L (62169)	Desulfinyl-fipronil, water, filtered, recoverable, µg/L (62170)	Diazinon, water, filtered, recoverable, µg/L (39572)	Dieldrin, water, filtered, recoverable, µg/L (39381)
03-13-2013	1200	< .060	< .0100	< .010	< .022	< .0076	< .029	< .012	< .0060	< .008
03-14-2013	1400	< .060	< .0100	< .010	< .022	< .0076	< .029	< .012	< .0060	< .008
04-15-2013	1300	< .060	< .0100	< .010	< .022	< .0076	< .029	< .012	< .0060	< .008
05-14-2013	1200	< .060	< .0100	< .010	< .022	< .0076	< .029	< .012	< .0060	< .008
06-15-2013	0630	< .060	< .0100	< .010	< .022	< .0076	< .029	< .012	< .0060	< .008
06-19-2013	1000	< .060	< .0100	< .010	< .022	< .0076	< .029	< .012	< .0060	< .008
07-16-2013	1000	< .060	< .0100	< .010	< .022	< .0076	< .029	.003	< .0060	< .008
08-19-2013	1530	< .060	< .0100	< .010	< .022	< .0076	< .029	.003	< .0060	< .008

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[ft³/s, cubic feet per second; mg/L, milligrams per liter; mm, millimeters; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; --, no data; <, less than; E, estimated]

Date	Sample start time	Disulfoton,	EPTC,	Ethal-	Ethoprop,	Fipronil sulfide, water, filtered, recoverable, µg/L (62167)	Fipronil sulfone, water, filtered, recoverable, µg/L (62168)	Fipronil, water, filtered, recoverable, µg/L (62166)	Fonofos, water, filtered, recoverable, µg/L (04095)	Lindane, water, filtered, recoverable, µg/L (39341)
		water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82677)	water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82668)	fluralin, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82663)	water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82672)					
03-13-2013	1200	< .040	< .0056	< .006	< .016	< .016	< .024	< .018	< .0048	< .0040
03-14-2013	1400	< .040	< .0056	< .006	< .016	< .016	< .024	< .018	< .0048	< .0040
04-15-2013	1300	< .040	< .0056	< .006	< .016	< .016	< .024	< .018	< .0048	< .0040
05-14-2013	1200	< .040	< .0056	< .006	< .016	< .016	< .024	< .018	< .0048	< .0040
06-15-2013	0630	< .040	< .0056	< .006	< .016	< .016	< .024	< .018	< .0048	< .0040
06-19-2013	1000	--	< .0056	< .006	< .016	< .016	< .024	< .018	< .0048	< .0040
07-16-2013	1000	< .040	< .0056	< .006	< .016	< .016	< .024	< .018	< .0048	< .0040
08-19-2013	1530	< .040	< .0056	< .006	< .016	< .016	< .024	E .001	< .0048	< .0040

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Date	Sample start time	Linuron,	Malathion,	Methyl parathion,	Metolachlor,	Metribuzin,	Molinate,	Napropamide,	p,p'-DDE,	Parathion,
		water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82666)	water, filtered, recoverable, µg/L (39532)	water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82667)	water, filtered, recoverable, µg/L (39415)	water, filtered, recoverable, µg/L (82630)	water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82671)	water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82684)	water, filtered, recoverable, µg/L (34653)	water, filtered, recoverable, µg/L (39542)
03-13-2013	1200	< .060	< .016	< .008	0.010	< .012	< .0080	< .010	< .005	< .020
03-14-2013	1400	< .060	< .016	< .008	.009	< .012	< .0080	< .010	< .005	< .020
04-15-2013	1300	< .060	< .016	< .008	.006	< .012	< .0080	< .010	< .005	< .020
05-14-2013	1200	< .060	< .016	< .008	.209	.012	< .0080	< .010	< .005	< .020
06-15-2013	0630	< .060	< .016	< .008	.289	< .012	< .0080	< .010	< .005	< .020
06-19-2013	1000	< .060	< .016	< .008	.084	< .012	< .0080	< .010	< .005	< .020
07-16-2013	1000	< .060	< .016	< .008	.045	< .012	< .0080	< .010	< .005	< .020
08-19-2013	1530	< .060	< .016	< .008	.016	< .012	< .0080	< .010	.001	< .020

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Date	Sample start time	Pebulate,	Pendi-	Phorate,	Prometon,	Propanil,	Propargite,	Propyz-	Simazine,
		water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (82669)	methalin, water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (82683)	water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (82664)		water, filtered, recover- able, µg/L (04037)	water, filtered, recover- able, µg/L (04024)	water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (82679)	
03-13-2013	1200	< .0160	< .012	< .020	0.003	< .006	< .010	< .0080	0.004
03-14-2013	1400	< .0160	< .012	< .020	< .012	< .006	< .010	< .0080	.004
04-15-2013	1300	< .0160	< .012	< .020	< .012	< .006	< .010	< .0080	.003
05-14-2013	1200	< .0160	< .012	< .020	.006	< .006	< .010	< .0080	.035
06-15-2013	0630	< .0160	< .012	< .020	.013	< .006	< .010	< .0080	.047
06-19-2013	1000	< .0160	< .012	< .020	.004	< .006	.005	< .0080	.010
07-16-2013	1000	< .0160	< .012	< .020	.005	< .006	< .010	< .0080	.007
08-19-2013	1530	< .0160	< .012	< .020	.004	< .006	< .010	< .0080	.008

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Date	Sample start time	Tebu-	Terbacil,	Terbufos,	Thioben-	Triallate,	Trifluralin,	Suspended	Suspended
		thiuron, water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (82670)	water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (82665)	water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (82675)	carb, water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (82681)	water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (82678)	water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (82661)	sediment, sieve diameter, percent smaller than 0.0625 mm (70331)	
03-13-2013	1200	< .028	< .024	< .018	< .016	< .0046	< .018	--	--
03-14-2013	1400	< .028	< .024	< .018	< .016	< .0046	< .018	--	28
04-15-2013	1300	< .028	< .024	< .018	< .016	< .0046	< .018	92	63
05-14-2013	1200	< .028	< .024	< .018	< .016	< .0046	< .018	--	--
06-15-2013	0630	< .028	< .024	< .018	< .016	< .0046	< .018	--	30
06-19-2013	1000	< .028	< .024	< .018	< .016	< .0046	< .018	--	--
07-16-2013	1000	< .028	< .024	< .018	< .016	< .0046	< .018	--	--
08-19-2013	1530	< .028	< .024	< .018	< .016	< .0046	< .018	--	--

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[<, less than; E, estimated; M, presence verified but not quantified]

Date	Sample start time	1,4-Dichlorobenzene, Atrazine, Bromacil, Camphor, Carbazole, Chlorpyrifos								
		Bisphenol A-d3, surrogate, Schedule WCS, percent recovery (90735)	Decafluoro biphenyl, surrogate, Schedule WCS, percent recovery (90737)	Fluoranthene-d10, surrogate, Schedule WCS, percent recovery (90738)	solids, recoverable, dry weight, micro-grams per kilogram (63163)	solids, recoverable, dry weight, micro-grams per kilogram (63182)	solids, recoverable, dry weight, micro-grams per kilogram (63189)	solids, recoverable, dry weight, micro-grams per kilogram (63192)	solids, recoverable, dry weight, micro-grams per kilogram (63194)	solids, recoverable, dry weight, micro-grams per kilogram (63195)
05-22-2013	0930	39	22	60	< 46	< 90	< 460	< 50	20	< 50
05-22-2013	1145	35	19	59	E 32	< 90	< 470	< 50	10	< 50
08-06-2013	1230	39	16	.0	M	< 110	< 560	< 60	30	< 60

WATER-QUALITY DATA
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[<, less than; E, estimated; M, presence verified but not quantified]

Date	Sample start time	N,N-Diethyl-m-toluamide, Diazinon, Metolachlor, p-Cresol, Prometon, 1-Methylnaphthalene, 2,6-Dimethylnaphthalene, 2-Methylnaphthalene, 3-beta-Coprostanol								
		solids, recoverable, dry weight, micro-grams per kilogram (63198)	solids, recoverable, dry weight, micro-grams per kilogram (63218)	(DEET), solids, recoverable, dry weight, micro-grams per kilogram (63219)	solids, recoverable, dry weight, micro-grams per kilogram (63222)	solids, recoverable, dry weight, micro-grams per kilogram (63226)	solids, recoverable, dry weight, micro-grams per kilogram (63165)	solids, recoverable, dry weight, micro-grams per kilogram (63167)	solids, recoverable, dry weight, micro-grams per kilogram (63168)	solids, recoverable, dry weight, micro-grams per kilogram (63170)
05-22-2013	0930	< 50	< 50	< 90	130	< 50	10	E 20	20	E 370
05-22-2013	1145	< 50	< 50	< 90	170	< 50	40	40	140	E 460
08-06-2013	1230	< 60	< 60	< 110	60	< 60	30	E 30	60	< 560

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[<, less than; E, estimated; M, presence verified but not quantified]

Date	Sample start time	3-Methyl-1H-indole, solids, recoverable, dry weight, micro-grams per kilogram (63171)	3-tert-Butyl-4-hydroxy-anisole, solids, recoverable, dry weight, micro-grams per kilogram (63172)	4-Cumylphenol, solids, recoverable, dry weight, micro-grams per kilogram (63173)	4-n-Octylphenol, solids, recoverable, dry weight, micro-grams per kilogram (63174)	4-Nonyl-phenol (sum of all isomers), solids, recoverable, dry weight, micro-grams per kilogram (63175)	4-Nonyl-phenol diethoxylate (sum of all isomers), solids, recoverable, dry weight, micro-grams per kilogram (63200)	4-Nonylphenol monoethoxylate (sum of all isomers), solids, recoverable, dry weight, micro-grams per kilogram (63221)	4-tert-Octylphenol diethoxylate, solids, recoverable, dry weight, micro-grams per kilogram (63201)	4-tert-Octylphenol monoethoxylate, solids, recoverable, dry weight, micro-grams per kilogram (63206)
								grams per kilogram		
05-22-2013	0930	M	< 140	< 50	< 50	< 680	< 910	< 460	< 50	< 230
05-22-2013	1145	M	< 140	< 50	< 50	< 700	< 940	< 470	< 50	< 240
08-06-2013	1230	20	< 170	< 60	< 60	< 850	< 1,100	< 560	< 60	< 280

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[<, less than; E, estimated; M, presence verified but not quantified]

Date	Sample start time	4-tert-Octylphenol, solids, recoverable, dry weight, micro-grams per kilogram (63176)	9,10-Anthraquinone, solids, recoverable, dry weight, micro-grams per kilogram (63181)	Acetophenone, solids, recoverable, dry weight, micro-grams per kilogram (63178)	Acetyl hexamethyl tetrahydro naphthalene, solids, recoverable, dry weight, micro-grams per kilogram (63179)	Anthracene, solids, recoverable, dry weight, micro-grams per kilogram (63180)	BDE congener 47, solids, recoverable, dry weight, micro-grams per kilogram (63166)	Benzo[a]pyrene, solids, recoverable, dry weight, micro-grams per kilogram (63183)	Benzo-phenone, solids, recoverable, dry weight, micro-grams per kilogram (63184)	beta-Sitosterol, solids, recoverable, dry weight, micro-grams per kilogram (63185)
										grams per kilogram
05-22-2013	0930	< 50	55	< 140	< 50	40	< 45.5	140	< 50	E 3,900
05-22-2013	1145	< 50	94	< 140	< 50	30	< 47.0	80	< 50	E 2,300
08-06-2013	1230	< 60	92	< 170	< 60	60	< 56.5	170	< 60	E 3,200

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[<, less than; E, estimated; M, presence verified but not quantified]

Date	Sample start time	beta-Stigmastanol, solids, recoverable, dry weight, micro-grams per kilogram (63186)	Bis(2-ethylhexyl) phthalate, solids, recoverable, dry weight, micro-grams per kilogram (63187)	Bisphenol A, solids, recoverable, dry weight, micro-grams per kilogram (63188)	Cholesterol, solids, recoverable, dry weight, micro-grams per kilogram (63196)	Diethyl phthalate, solids, recoverable, dry weight, micro-grams per kilogram (63202)	D-Limonene, solids, recoverable, dry weight, micro-grams per kilogram (63203)	Fluoranthene, solids, recoverable, dry weight, micro-grams per kilogram (63208)	Hexahydro hexa-methyl cyclopenta benzo-pyran, solids, recoverable, dry weight, micro-grams per kilogram (63209)	Indole, solids, recoverable, dry weight, micro-grams per kilogram (63210)
									grams per kilogram (63209)	
05-22-2013	0930	E 740	< 230	M	E 1,400	< 90	< 50	270	< 50	170
05-22-2013	1145	E 230	< 240	M	E 1,400	< 90	< 50	210	< 50	120
08-06-2013	1230	E 390	< 280	< 60	E 1,500	< 110	< 60	370	M	270

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[<, less than; E, estimated; M, presence verified but not quantified]

Date	Sample start time	Iso-phorone, solids, recoverable, dry weight, micro-grams per kilogram (63212)	Isopropyl-benzene, solids, recoverable, dry weight, micro-grams per kilogram (63213)	Iso-quinoline, solids, recoverable, dry weight, micro-grams per kilogram (63214)	Menthol, solids, recoverable, dry weight, micro-grams per kilogram (63215)	Naphthalene, solids, recoverable, dry weight, micro-grams per kilogram (63220)	Phenanthrene, solids, recoverable, dry weight, micro-grams per kilogram (63224)	Phenol, solids, recoverable, dry weight, micro-grams per kilogram (63225)	Pyrene, solids, recoverable, dry weight, micro-grams per kilogram (63227)	Tributyl phosphate, solids, recoverable, dry weight, micro-grams per kilogram (63231)
										grams per kilogram (63231)
05-22-2013	0930	< 50	< 90	< 90	< 50	30	100	< 60	220	< 50
05-22-2013	1145	< 50	< 90	< 90	< 50	300	200	< 60	190	< 50
08-06-2013	1230	M	< 110	< 110	< 60	90	230	< 60	320	< 60

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[<, less than; E, estimated; M, presence verified but not quantified]

Date	Sample start time	Triclosan,	Triphenyl	Tris(2-	Tris(2-	Tris(dichlo
		solids,	phosphate,	butoxy-	chloro-	roiso-
		recover-	solids,	ethyl)	ethyl)	propyl)
		able, dry	recover-	solids,	solids,	solids,
		weight,	able, dry	recover-	recover-	recover-
		micro-	weight,	able, dry	able, dry	able, dry
		micro-	micro-	weight,	weight,	weight,
		grams per	grams per	micro-	micro-	micro-
		kilogram	kilogram	grams per	grams per	grams per
		(63232)	(63234)	kilogram	kilogram	kilogram
				(63229)	(63230)	(63235)
05-22-2013	0930	< 45.5	< 50	< 140	< 90	< 90
05-22-2013	1145	< 47.0	< 50	< 140	< 90	< 90
08-06-2013	1230	< 56.5	< 60	< 170	< 110	< 110