



Water-Data Report 2010

**01464512 DOCTORS CREEK AT RED VALLEY, NJ**

DELAWARE RIVER BASIN

LOCATION.--Lat 40°09'41", long 74°28'07" referenced to North American Datum of 1983, Upper Freehold Township, Monmouth County, NJ, Hydrologic Unit 02040201, at bridge on County Route 526 in Red Valley, 2.3 mi north of Prospertown, and 2.6 mi upstream from Imlaystown Lake.

DRAINAGE AREA.--3.83 mi<sup>2</sup>.

**SURFACE-WATER RECORDS**

PERIOD OF RECORD.--Miscellaneous measurements, water years 2002-04. Occasional low-flow measurements, water years 2009-10.

GAGE.--Reference point only.

**DISCHARGE MEASUREMENTS  
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010**

<b>Date</b>	<b>Discharge, in ft<sup>3</sup>/s</b>
Oct 2, 2009	1.61
Jun 24, 2010	1.60
Aug 10, 2010	0.56

## 01464512 DOCTORS CREEK AT RED VALLEY, NJ—Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 2009-10.

REMARKS.--Cooperative Network Site Descriptor: Statewide Status, NJ Department of Environmental Protection Watershed Management Area 20.

COOPERATION.--Physical measurements and samples for laboratory analyses were provided by personnel of the NJ Department of Environmental Protection. Determinations of dissolved ammonia, dissolved orthophosphate, and suspended residue were performed by the NJ Department of Health and Senior Services, Environmental and Chemical Laboratory.

## WATER-QUALITY DATA

## WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Part 1 of 6

[%, percent; ANC, acid neutralizing capacity; CaCO<sub>3</sub>, calcium carbonate; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO<sub>2</sub>, silicon dioxide; cm, centimeter; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; μS/cm, microsiemens per centimeter; μg/L, micrograms per liter; <, less than; E, estimated]

Date	Sample start time	Barometric pressure, mm Hg (00025)	Temperature, air, °C (00020)	Absorbance, UV, 254 nm, 1 cm path length, water, filtered, units per centimeter (50624)	Absorbance, UV, organic constituents, 280 nm, 1 cm path length, water, filtered, units per centimeter (61726)	Dissolved oxygen, water, unfiltered, mg/L (00300)	Dissolved oxygen, water, unfiltered, % saturation (00301)	pH, water, unfiltered, field, standard units (00400)	Specific conductance, water, unfiltered, μS/cm at 25 °C (00095)
11-09-2009	1000	770	15.5	.168	.137	8.6	77	7.0	180
02-03-2010	0930	761	-5	.084	.070	12.3	91	6.7	211
05-13-2010	0830	766	11.0	.129	.102	8.8	84	6.9	212
08-26-2010	0930	758	22.0	.153	.121	2.7	30	6.8	256

## WATER-QUALITY DATA

## WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Part 2 of 6

[%, percent; ANC, acid neutralizing capacity; CaCO<sub>3</sub>, calcium carbonate; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO<sub>2</sub>, silicon dioxide; cm, centimeter; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; μS/cm, microsiemens per centimeter; μg/L, micrograms per liter; <, less than; E, estimated]

Date	Temperature, water, °C (00010)	Turbidity, water, unfiltered, broad band light source (400-680 nm), detectors at multiple angles including 90 +/- 30 degrees, ratiometric correction, NTRU (63676)	Dissolved solids dried at 180 °C, water, filtered, mg/L (70300)	Dissolved solids, water, filtered, sum of constituents, milligrams per liter (70301)	Hardness, water, mg/L as CaCO <sub>3</sub> (00900)	Suspended solids, water, unfiltered, mg/L (00530)	Calcium, water, filtered, mg/L (00915)	Magnesium, water, filtered, mg/L (00925)	Potassium, water, filtered, mg/L (00935)
11-09-2009	9.7	8.5	101	91	37.5	2	7.97	4.28	3.85
02-03-2010	3.0	17	117	E 109	31.6	6	6.39	3.81	2.02
05-13-2010	13.1	6.2	117	100	34.3	9	7.25	3.95	2.10
08-26-2010	20.8	11	145	124	44.9	3	10.2	4.73	3.70

## 01464512 DOCTORS CREEK AT RED VALLEY, NJ—Continued

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010**

Part 3 of 6

[%, percent; ANC, acid neutralizing capacity; CaCO<sub>3</sub>, calcium carbonate; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO<sub>2</sub>, silicon dioxide; cm, centimeter; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; μS/cm, microsiemens per centimeter; μg/L, micrograms per liter; <, less than; E, estimated]

Date	Sodium, water, filtered, mg/L (00930)	ANC, water, unfiltered, fixed endpoint (pH 4.5) titration, laboratory, mg/L as CaCO <sub>3</sub> (90410)	Carbon (inorganic plus organic), suspended sediment, total, mg/L (00694)	Chloride, water, filtered, mg/L (00940)	Fluoride, water, filtered, mg/L (00950)	Inorganic carbon, suspended sediment, total, mg/L (00688)	Silica, water, filtered, mg/L as SiO <sub>2</sub> (00955)	Sulfate, water, filtered, mg/L (00945)	Ammonia plus organic nitrogen, water, filtered, mg/L as N (00623)	Ammonia, water, filtered, mg/L as N (00608)
		11-09-2009	16.5	22	.24	33.7	.12	< .06	5.4	4.76
02-03-2010	20.6	11	.41	45.7	E .07	< .06	8.9	7.67	.30	.145
05-13-2010	21.0	19	.65	44.8	.15	E .04	1.7	4.81	.33	.101
08-26-2010	24.5	28	.61	54.1	.17	< .06	7.2	2.11	.72	.289

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010**

Part 4 of 6

[%, percent; ANC, acid neutralizing capacity; CaCO<sub>3</sub>, calcium carbonate; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO<sub>2</sub>, silicon dioxide; cm, centimeter; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; μS/cm, microsiemens per centimeter; μg/L, micrograms per liter; <, less than; E, estimated]

Date	Nitrate plus nitrite, water, filtered, mg/L as N (00631)	Orthophosphate, water, filtered, mg/L as P (00671)	Particulate nitrogen, suspended in water, mg/L (49570)	Phosphorus, water, filtered, mg/L as P (00666)	Phosphorus, water, unfiltered, mg/L as P (00665)	Total nitrogen, water, filtered, mg/L (00602)	Total nitrogen, water, unfiltered, mg/L (00600)	Barium, water, unfiltered, recoverable, μg/L (01007)	Beryllium, water, unfiltered, recoverable, μg/L (01012)
	11-09-2009	.25	< .010	E .03	E .005	.024	.54	E .57	--
02-03-2010	1.46	E .008	.06	E .004	.033	1.8	1.8	20.8	.06
05-13-2010	.74	--	.09	E .005	.026	1.1	1.2	--	--
08-26-2010	.06	--	.07	E .006	.028	.78	.85	27.3	< .04

## 01464512 DOCTORS CREEK AT RED VALLEY, NJ—Continued

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010**

Part 5 of 6

[%, percent; ANC, acid neutralizing capacity; CaCO<sub>3</sub>, calcium carbonate; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO<sub>2</sub>, silicon dioxide; cm, centimeter; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; μS/cm, microsiemens per centimeter; μg/L, micrograms per liter; <, less than; E, estimated]

Date	Cadmium, water, unfiltered, μg/L (01027)	Chromium, water, unfiltered, recover- able, μg/L (01034)	Copper, water, unfiltered, recover- able, μg/L (01042)	Iron, water, unfiltered, recover- able, μg/L (01045)	Lead, water, unfiltered, recover- able, μg/L (01051)	Manga- nese, water, unfiltered, recover- able, μg/L (01055)	Mercury, water, unfiltered, recover- able, μg/L (71900)	Nickel, water, unfiltered, recover- able, μg/L (01067)	Silver, water, unfiltered, recover- able, μg/L (01077)	Zinc, water, unfiltered, recover- able, μg/L (01092)
11-09-2009	--	--	--	--	--	--	--	--	--	--
02-03-2010	.14	1.8	< 1.4	1,820	.57	89.1	< .010	10.1	< .02	72.8
05-13-2010	--	--	--	--	--	--	--	--	--	--
08-26-2010	< .04	< .42	< 1.4	2,250	.19	91.2	< .010	2.2	< .02	E 1.8

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010**

Part 6 of 6

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Date	Arsenic, water, filtered, μg/L (01000)	Arsenic, water, unfiltered, μg/L (01002)	Boron, water, unfiltered, recoverable, micrograms per liter (01022)	Selenium, water, unfiltered, μg/L (01147)	Organic carbon, suspended sediment, total, mg/L (00689)	Organic carbon, water, filtered, mg/L (00681)
11-09-2009	--	--	--	--	.23	4.4
02-03-2010	.41	.72	E 13	E .07	.41	1.6
05-13-2010	--	--	--	--	.61	3.1
08-26-2010	.79	1.4	22	< .10	.60	4.1

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010**

Part 1 of 9

[μg/L, micrograms per liter; &lt;, less than; E, estimated]

Date	Sample start time	1- Naphthol, water, filtered (0.7 micron glass fiber filter), recover- able, μg/L (49295)	2,6- Diethyl- aniline, water, filtered (0.7 micron glass fiber filter), recover- able, μg/L (82660)	2-Chloro- 2',6'- diethyl- acetanil- ide, water, filtered, recover- able, μg/L (61618)	2-Chloro-4- isopropyl- amino-6- amino-s- triazine, water, filtered, recover- able, μg/L (04040)	2-Ethyl-6- methyl- aniline, water, filtered, recover- able, μg/L (61620)	3,4- Dichloro- aniline, water, filtered, recover- able, μg/L (61625)	3,5-Di- chloro- aniline, water, filtered, recover- able, μg/L (61627)	4-Chloro-2- methyl- phenol, water, filtered, recover- able, μg/L (61633)	Acetochlor , water, filtered, recover- able, μg/L (49260)
05-13-2010	0830	< .04	< .006	< .010	E .011	< .010	< .004	< .003	< .003	E .008

## 01464512 DOCTORS CREEK AT RED VALLEY, NJ—Continued

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010**

Part 2 of 9

[µg/L, micrograms per liter; &lt;, less than; E, estimated]

Date	Alachlor, water, filtered, recover- able, µg/L (46342)	alpha- Endo- sulfan, water, filtered, recover- able, µg/L (34362)	Atrazine, water, filtered, recover- able, µg/L (39632)	Azinphos- methyl oxygen analog, water, filtered, recover- able, µg/L (61635)	Azinphos- methyl, water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (82686)	Benfluralin, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82673)	Carbaryl, water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (82680)	Carbofuran, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82674)	Chlorpyrifos oxygen analog, water, filtered, recoverable, µg/L (61636)
	05-13-2010	< .008	< .006	.020	< .04	< .120	< .014	< .060	< .060

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010**

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[µg/L, micrograms per liter; &lt;, less than; E, estimated]

Date	Chlor- pyrifos, water, filtered, recover- able, µg/L (38933)	cis- Permeth- rin, water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (82687)	cis- Propicon- azole, water, filtered, recover- able, µg/L (79846)	Cyanazine, water, filtered, recover- able, µg/L (04041)	Cyfluthrin, water, filtered, recover- able, µg/L (61585)	Cyper- methrin, water, filtered, recover- able, µg/L (61586)	DCPA, water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (82682)	Desulfinyl- fipronil amide, water, filtered, recover- able, µg/L (62169)	Desulfinyl- fipronil, water, filtered, recover- able, µg/L (62170)	Diazinon, water, filtered, recover- able, µg/L (39572)
	05-13-2010	< .010	< .014	< .006	< .022	< .016	< .020	< .008	< .029	< .012

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010**

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[µg/L, micrograms per liter; &lt;, less than; E, estimated]

Date	Dichlorvos , water, filtered, recover- able, µg/L (38775)	Dicro- tophos, water, filtered, recover- able, µg/L (38454)	Dieldrin, water, filtered, recover- able, µg/L (39381)	Dimetho- ate, water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (82662)	Disulfoton sulfone, water, filtered, recover- able, µg/L (61640)	Disulfoton, water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (82677)	Endosulfan sulfate, water, filtered, recover- able, µg/L (61590)	EPTC, water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (82668)	Ethion monoxon, water, filtered, recover- able, µg/L (61644)	Ethion, water, filtered, recover- able, µg/L (82346)
	05-13-2010	< .02	< .08	< .009	< .006	< .01	< .04	< .014	< .002	< .02

## 01464512 DOCTORS CREEK AT RED VALLEY, NJ—Continued

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010**

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[µg/L, micrograms per liter; &lt;, less than; E, estimated]

Date	Ethoprop, water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (82672)	Fenami- phos sulfone, water, filtered, recover- able, µg/L (61645)	Fenami- phos sulfoxide, water, filtered, recover- able, µg/L (61646)	Fenami- phos, water, filtered, recover- able, µg/L (61591)	Fipronil sulfide, water, filtered, recover- able, µg/L (62167)	Fipronil sulfone, water, filtered, recover- able, µg/L (62168)	Fipronil, water, filtered, recover- able, µg/L (62166)	Fonofos, water, filtered, recover- able, µg/L (04095)	Hexa- zinone, water, filtered, recover- able, µg/L (04025)	Iprodione, water, filtered, recover- able, µg/L (61593)
05-13-2010	< .016	< .053	< .08	< .03	< .013	< .024	< .018	< .004	< .008	< .014

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010**

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[µg/L, micrograms per liter; &lt;, less than; E, estimated]

Date	Isofen- phos, water, filtered, recover- able, µg/L (61594)	lambda- Cyhalo- thrin, water, filtered, recover- able, µg/L (61595)	Malaoxon, water, filtered, recover- able, µg/L (61652)	Malathion, water, filtered, recover- able, µg/L (39532)	Metalaxyl, water, filtered, recover- able, µg/L (61596)	Methida- thion, water, filtered, recover- able, µg/L (61598)	Methyl paraoxon, water, filtered, recover- able, µg/L (61664)	Methyl parathion, water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (82667)	Metola- chlor, water, filtered, recover- able, µg/L (39415)	Metribuzin , water, filtered, recover- able, µg/L (82630)
05-13-2010	< .006	< .010	< .080	< .016	.011	< .006	< .01	< .008	.069	< .012

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010**

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[µg/L, micrograms per liter; &lt;, less than; E, estimated]

Date	Molinate, water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (82671)	Myclo- butanil, water, filtered, recover- able, µg/L (61599)	Oxy- fluorfen, water, filtered, recover- able, µg/L (61600)	Pendi- methalin, water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (82683)	Phorate oxygen analog, water, filtered, recover- able, µg/L (61666)	Phorate, water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (82664)	Phosmet oxygen analog, water, filtered, recover- able, µg/L (61668)	Phosmet, water, filtered, recover- able, µg/L (61601)	Prometon, water, filtered, recover- able, µg/L (04037)	Prometryn, water, filtered, recover- able, µg/L (04036)
05-13-2010	< .003	< .010	< .010	< .012	< .03	< .020	< .05	< .034	< .01	< .006

## 01464512 DOCTORS CREEK AT RED VALLEY, NJ—Continued

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010**

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[µg/L, micrograms per liter; &lt;, less than; E, estimated]

Date	Propanil, water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (82679)	Propargite, water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (82685)	Propyz- amide, water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (82676)	Simazine, water, filtered, recover- able, µg/L (04035)	Tebu- thiuron, water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (82670)	Tefluthrin, water, filtered, recover- able, µg/L (61606)	Terbufos oxygen analog sulfone, water, filtered, recover- able, µg/L (61674)	Terbufos, water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (82675)	Terbuthyl- azine, water, filtered, recover- able, µg/L (04022)	Thioben- carb, water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (82681)
05-13-2010	< .010	< .02	< .004	< .006	< .03	< .010	< .04	< .02	< .01	< .016

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2009 TO SEPTEMBER**  
**2010**

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[µg/L, micrograms per liter; &lt;, less than; E, estimated]

Date	trans- Propicon- azole, water, filtered, recover- able, µg/L (79847)	Tribuphos, water, filtered, recover- able, µg/L (61610)	Trifluralin, water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (82661)
05-13-2010	< .02	< .018	< .018