



Water-Data Report 2010

**01409525 LUCAS BRANCH AT SWEETWATER, NJ**

MULLICA RIVER BASIN

LOCATION.--Lat 39°37'04", long 74°37'47" referenced to North American Datum of 1983, Mullica Township, Atlantic County, NJ, Hydrologic Unit 02040301, at bridge on Pleasant Mills Road (County Route 643), 0.2 mi upstream from mouth, 0.5 mi southeast of Sweetwater, and 2.3 mi northwest of Weekstown.

DRAINAGE AREA.--3.94 mi<sup>2</sup>.

**WATER-QUALITY RECORDS**

PERIOD OF RECORD.--Water years 1977-78, 2009-10.

REMARKS.--Cooperative Network Site Descriptor: Statewide Status, NJ Department of Environmental Protection Watershed Management Area 14.

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, 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)
11-24-2009	1000	771	10.5	.345	.254	6.3	68	4.2	64
02-17-2010	0930	752	1.5	.313	.232	10.3	72	4.4	67
05-20-2010	1000	760	20.5	.574	.432	3.7	35	4.0	56
08-25-2010	0930	758	20.5	.228	.181	7.2	79	4.4	56

## 01409525 LUCAS BRANCH AT SWEETWATER, NJ—Continued

**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 constit- uents, 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)	Magne- sium, water, filtered, mg/L (00925)	Potassium, water, filtered, mg/L (00935)
02-17-2010	1.0	.5	40	< 23	2.82	4	.50	.381	.20
05-20-2010	12.5	.9	39	< 19	2.15	1	.40	.279	.16
08-25-2010	18.7	.8	25	< 31	3.74	2	.51	.601	.51

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

Part 3 of 6

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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)
02-17-2010	2.83	< 1.7	E .07	5.93	< .08	< .06	5.4	6.33	.17	.037
05-20-2010	3.11	< 1.7	.29	5.67	< .08	< .06	5.4	3.26	.31	< .010
08-25-2010	3.35	< 1.7	.24	6.68	< .08	< .06	10.5	7.26	.18	.025

## 01409525 LUCAS BRANCH AT SWEETWATER, NJ—Continued

**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)	Aluminum, water, filtered, μg/L (01106)	Barium, water, unfiltered, recoverable, μg/L (01007)
11-24-2009	< .04	E .007	< .03	< .008	< .008	< .31	< .34	--	--
02-17-2010	< .04	.018	< .03	.010	.014	< .21	< .24	--	12.3
05-20-2010	E .02	--	E .03	< .008	E .005	E .34	E .37	--	--
08-25-2010	.05	--	E .02	< .008	E .007	.22	E .24	308	18.3

**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	Beryllium, water, unfiltered, recoverable, μg/L (01012)	Cadmium, water, unfiltered, μg/L (01027)	Chromium, water, unfiltered, recoverable, μg/L (01034)	Copper, water, unfiltered, recoverable, μg/L (01042)	Iron, water, filtered, μg/L (01046)	Iron, water, unfiltered, recoverable, μg/L (01045)	Lead, water, unfiltered, recoverable, μg/L (01051)	Manganese, water, unfiltered, recoverable, μg/L (01055)	Mercury, water, unfiltered, recoverable, μg/L (71900)	Nickel, water, unfiltered, recoverable, μg/L (01067)
11-24-2009	--	--	--	--	--	--	--	--	--	--
02-17-2010	.05	E .03	.52	< 1.4	--	219	.87	9.4	< .010	.77
05-20-2010	--	--	--	--	--	--	--	--	--	--
08-25-2010	.07	.11	< .42	< 1.4	382	442	.70	7.3	E .008	1.3

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

Part 6 of 6

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Date	Silver, water, unfiltered, recoverable, μg/L (01077)	Zinc, water, unfiltered, recoverable, μg/L (01092)	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)
11-24-2009	--	--	--	--	--	--	< .12	9.0
02-17-2010	< .02	10.4	.31	.33	E 9	E .06	< .12	7.3
05-20-2010	--	--	--	--	--	--	.29	12.8
08-25-2010	< .02	8.1	.23	.35	E 14	E .07	.24	3.8

## 01409525 LUCAS BRANCH AT SWEETWATER, NJ—Continued

**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,	2,6-Diethyl-	2-Chloro-	2-Chloro-4-	2-Ethyl-6-	3,4-	3,5-Di-	4-Chloro-2-	Acetochlor
		water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (49295)	water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82660)	2',6'-diethylacetanilide, water, filtered, recoverable, µg/L (61618)	isopropyl-amino-6-triazine, water, filtered, recoverable, µg/L (04040)	water, filtered, recoverable, µg/L (61620)	Dichloro-aniline, water, filtered, recoverable, µg/L (61625)	chloro-aniline, water, filtered, recoverable, µg/L (61627)	methyl-phenol, water, filtered, recoverable, µg/L (61633)	, water, filtered, recoverable, µg/L (49260)
05-20-2010	1000	< .04	< .006	< .010	E .012	< .010	< .004	< .003	< .003	< .010

**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, recoverable, µg/L (46342)	alpha-Endo-sulfan, water, filtered, recoverable, µg/L (34362)	Atrazine, water, filtered, recoverable, µg/L (39632)	Azinphos-	Azinphos-	Carbaryl,	Carbofuran,	Chlorpyrifos	
				methyl oxygen analog, water, filtered, recoverable, µg/L (61635)	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)	water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82680)	oxygen analog, water, filtered, recoverable, µg/L (61636)	
05-20-2010	< .008	< .006	E .007	< .04	< .120	< .014	< .060	< .060	< .05

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

Part 3 of 9

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

Date	Chlorpyrifos, water, filtered, recoverable, µg/L (38933)	cis-Permethrin, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82687)	cis-Propiconazole, water, filtered, recoverable, µg/L (79846)	Cyanazine, water, filtered, recoverable, µg/L (04041)	Cyfluthrin, water, filtered, recoverable, µg/L (61585)	Cypermethrin, water, filtered, recoverable, µg/L (61586)	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)
		05-20-2010	< .010	< .014	< .006	< .022	< .016	< .020	< .008	< .029

## 01409525 LUCAS BRANCH AT SWEETWATER, NJ—Continued

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

Part 4 of 9

[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)	Dieltin, 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)
05-20-2010	< .02	< .08	< .009	< .006	< .01	< .04	< .014	< .002	< .02	< .008

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

Part 5 of 9

[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)
05-20-2010	< .016	< .053	< .08	< .03	< .013	< .024	< .018	< .004	< .008	< .014

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

Part 6 of 9

[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)
05-20-2010	< .006	< .010	< .080	< .016	< .007	< .006	< .01	< .008	E .007	< .012

## 01409525 LUCAS BRANCH AT SWEETWATER, NJ—Continued

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

Part 7 of 9

[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)
05-20-2010	< .003	< .010	< .010	< .012	< .03	< .020	< .05	< .034	< .01	< .006

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

Part 8 of 9

[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)	Terbutyl- azine, water, filtered, recover- able, µg/L (04022)	Thioben- carb, water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (82681)
05-20-2010	< .010	< .02	< .004	< .006	< .03	< .010	< .04	< .02	< .01	< .016

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

Part 9 of 9

[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)
05-20-2010	< .02	< .018	< .018