



Water-Data Report 2011

**01466900 GREENWOOD BRANCH AT NEW LISBON, NJ**

DELAWARE RIVER BASIN

LOCATION.--Lat 39°57'22", long 74°37'40" referenced to North American Datum of 1983, Pemberton Township, Burlington County, NJ, Hydrologic Unit 02040202, on right bank, 50 ft upstream of bridge on Fourmile Road (County Route 646), 0.1 mi south of New Lisbon, 0.7 mi upstream from mouth, and 3.1 mi east of Pemberton.

DRAINAGE AREA.--77.9 mi<sup>2</sup>.

**SURFACE-WATER RECORDS**

PERIOD OF RECORD.--Occasional miscellaneous discharge measurements, water years 1954, 1973. May 1998 to current year.

REVISED RECORDS.--WDR NJ-03-1: 1998 (M), 2003. WDR NJ-04-1: 2003 (M)

GAGE.--Water-stage and precipitation recorder. Datum of gage is 34.18 ft above NAVD of 1988.

REMARKS.--Records fair, except for estimated daily discharges, which are poor. Water diverted for water supply upstream of gage. Several measurements of water temperature were made during the year. Satellite telemetry at station.

**01466900 GREENWOOD BRANCH AT NEW LISBON, NJ—Continued**

**DISCHARGE, CUBIC FEET PER SECOND**  
**WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011**  
**DAILY MEAN VALUES**  
[e, estimated]

<b>Day</b>	<b>Oct</b>	<b>Nov</b>	<b>Dec</b>	<b>Jan</b>	<b>Feb</b>	<b>Mar</b>	<b>Apr</b>	<b>May</b>	<b>Jun</b>	<b>Jul</b>	<b>Aug</b>	<b>Sep</b>
<b>1</b>	63	44	47	53	75	123	87	104	55	35	34	e435
<b>2</b>	82	47	71	61	81	118	92	95	51	33	31	e315
<b>3</b>	75	44	75	69	99	105	95	91	47	46	30	e235
<b>4</b>	70	48	66	69	108	92	104	95	45	61	48	e195
<b>5</b>	61	69	60	65	107	84	118	116	45	54	48	172
<b>6</b>	57	87	52	61	111	84	125	128	48	47	41	164
<b>7</b>	51	90	48	60	114	124	114	116	45	46	36	169
<b>8</b>	46	76	45	59	117	171	102	105	41	70	37	e280
<b>9</b>	41	62	43	58	117	172	103	107	40	90	36	e315
<b>10</b>	40	56	42	57	112	152	107	96	41	105	44	e250
<b>11</b>	37	51	42	56	102	191	100	96	40	126	38	e200
<b>12</b>	40	49	49	58	93	272	109	88	41	123	34	e205
<b>13</b>	41	46	72	58	88	239	143	74	41	109	31	e200
<b>14</b>	38	44	79	56	86	183	e210	69	39	86	50	173
<b>15</b>	45	43	68	55	88	161	e200	72	42	69	e260	158
<b>16</b>	44	43	58	54	85	139	e175	76	39	55	e355	145
<b>17</b>	41	52	54	54	83	138	e335	87	40	55	e285	129
<b>18</b>	40	52	52	64	85	140	e365	97	40	47	e205	115
<b>19</b>	43	49	51	90	85	133	e315	114	39	41	144	109
<b>20</b>	45	44	51	102	83	128	e250	141	39	40	136	105
<b>21</b>	42	42	49	103	82	119	e205	138	35	37	130	104
<b>22</b>	41	41	48	101	82	117	e175	123	32	e32	126	106
<b>23</b>	40	40	48	93	81	115	143	108	38	e45	120	112
<b>24</b>	37	39	49	85	78	112	136	104	39	e38	109	172
<b>25</b>	36	38	48	79	88	113	133	101	39	e35	94	e230
<b>26</b>	35	40	47	74	110	110	126	86	41	36	85	174
<b>27</b>	38	41	53	79	126	104	115	71	38	34	112	153
<b>28</b>	59	44	55	92	127	98	113	61	37	33	e930	135
<b>29</b>	60	41	54	91	---	94	114	57	41	35	e1,450	128
<b>30</b>	50	39	55	86	---	89	111	56	37	41	e1,000	123
<b>31</b>	44	---	53	80	---	85	---	58	---	38	e630	---
<b>Total</b>	1,482	1,501	1,684	2,222	2,693	4,105	4,620	2,930	1,235	1,742	6,709	5,506
<b>Mean</b>	47.8	50.0	54.3	71.7	96.2	132	154	94.5	41.2	56.2	216	184
<b>Max</b>	82	90	79	103	127	272	365	141	55	126	1,450	435
<b>Min</b>	35	38	42	53	75	84	87	56	32	32	30	104

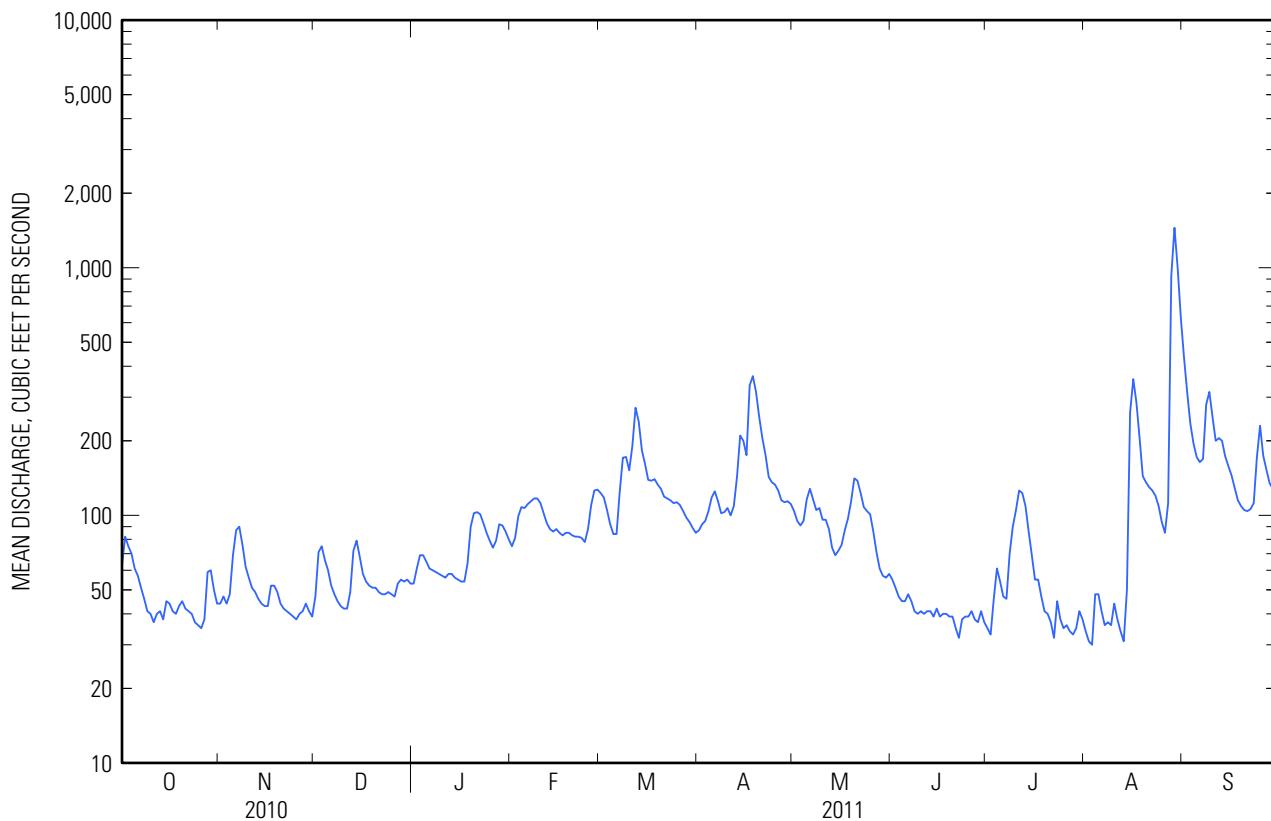
**STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1998 - 2011, BY WATER YEAR (WY)**

	<b>Oct</b>	<b>Nov</b>	<b>Dec</b>	<b>Jan</b>	<b>Feb</b>	<b>Mar</b>	<b>Apr</b>	<b>May</b>	<b>Jun</b>	<b>Jul</b>	<b>Aug</b>	<b>Sep</b>
<b>Mean</b>	66.3	83.9	102	115	118	141	142	89.7	70.6	61.5	65.7	66.6
<b>Max</b>	132	192	219	182	199	387	236	129	162	204	216	184
(WY)	(2006)	(2007)	(2010)	(2006)	(2010)	(2010)	(2010)	(2010)	(2003)	(2004)	(2011)	(2011)
<b>Min</b>	28.5	34.6	29.3	42.4	37.2	48.3	61.8	60.4	39.0	27.6	21.8	25.6
(WY)	(2009)	(1999)	(1999)	(2002)	(2002)	(2002)	(2002)	(2002)	(1999)	(2002)	(2002)	(2010)

**SUMMARY STATISTICS**

	<b>Calendar Year 2010</b>	<b>Water Year 2011</b>		<b>Water Years 1998 - 2011</b>	
<b>Annual total</b>	43,468		36,429		
<b>Annual mean</b>	119		99.8		93.6
<b>Highest annual mean</b>				140	2010
<b>Lowest annual mean</b>				40.7	2002
<b>Highest daily mean</b>	1,020	Mar 15	a1,450Aug 29		a1,450Aug 29, 2011
<b>Lowest daily mean</b>	20	Sep 9	30 Aug 3	17	Aug 4, 1999
<b>Annual seven-day minimum</b>	21	Sep 4	35 Jul 28	18	Aug 15, 2002
<b>Maximum peak flow</b>			a1,800Aug 29		a1,800Aug 29, 2011
<b>Maximum peak stage</b>			9.87 Aug 29	9.87	Aug 29, 2011
<b>Instantaneous low flow</b>			29 Jun 22	15	Aug 16, 2002
<b>10 percent exceeds</b>	239		172		165
<b>50 percent exceeds</b>	63		75		78
<b>90 percent exceeds</b>	27		39		32

<sup>a</sup> Estimated.



**01466900 GREENWOOD BRANCH AT NEW LISBON, NJ—Continued****WATER-QUALITY RECORDS**

PERIOD OF RECORD.--Water year 2001 to current year.

REMARKS.--Cooperative Network Site Descriptor: Undeveloped Land Use Indicator, New Jersey Department of Environmental Protection Watershed Management Area 19.

COOPERATION.--Physical measurements and samples for laboratory analyses were provided by personnel of the NJ Department of Environmental Protection. Determination of concentrations of ammonia in filtered water was performed by the NJ Department of Health and Senior Services, Environmental and Chemical Laboratory (DHSS-ECL) except during the period May 12 through August 25, 2011 when the determination was performed by the National Water-Quality Laboratory. Determination of concentrations of suspended solids in unfiltered water was performed by the DHSS-ECL except during the period June 17 through August 25, 2011 when samples could not be accepted.

**WATER-QUALITY DATA  
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011**

Part 1 of 5

[%; 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; ft<sup>3</sup>/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; <, 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)	Discharge, instantaneous, ft <sup>3</sup> /s (00061)	Dissolved oxygen, water, unfiltered, mg/L (00300)	Dissolved oxygen, water, unfiltered, % saturation (00301)	pH, water, unfiltered, field, standard units (00400)
11-05-2010	0900	747	9.5	.221	.175	67	8.6	78	5.3
03-15-2011	1000	773	3.0	.441	.336	165	10.1	83	4.9
05-26-2011	1000	757	24.0	.588	.463	87	6.8	76	4.9
08-15-2011	1030	752	21.0	.811	.634	--	6.7	76	5.8

**WATER-QUALITY DATA  
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011**

Part 2 of 5

[%; 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; ft<sup>3</sup>/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; <, less than; E, estimated]

Date	Sample start time	Specific conductance, water, unfiltered, µS/cm at 25 °C (00095)	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, water, dried at 180 °C, water, filtered, mg/L (70300)	Dissolved solids, water, sum of constituents, mg/L (70301)	Suspended Hardness, water, mg/L as CaCO <sub>3</sub> (00900)	Suspended Hardness, water, mg/L unfiltered, mg/L (00530)	Calcium, water, filtered, mg/L (00915)
11-05-2010	0900	78	10.5	3.1	59	43	11.1	11	2.56
03-15-2011	1000	76	7.0	2.8	46	< 33	8.70	7	2.03
05-26-2011	1000	61	20.7	5.4	45	< 36	8.56	7	2.06
08-15-2011	1030	77	21.2	8.6	57	37	11.5	--	2.93

**01466900 GREENWOOD BRANCH AT NEW LISBON, NJ—Continued**

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011**

Part 3 of 5

[%, 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; ft<sup>3</sup>/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; <, less than; E, estimated]

Date	Sample start time	Magne-		Potassium,		Sodium,	titration, laboratory, mg/L as CaCO <sub>3</sub>	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)
		sium, water, filtered, mg/L (00925)	Potassium, water, filtered, mg/L (00935)	Sodium, water, filtered, mg/L (00930)	(pH 4.5) plus endpoint	Carbon (inorganic)						
11-05-2010	0900	1.15	1.33	7.30	3.69	.97	12.8	< .04	< .03	.20	.29	
03-15-2011	1000	.882	.86	6.26	< 1.74	.43	10.1	< .04	< .03	.34	.40	
05-26-2011	1000	.827	.96	7.15	< 1.74	1.81	12.9	< .04	< .03	.40	.49	
08-15-2011	1030	1.02	.98	7.91	2.81	1.69	13.7	< .04	< .03	.74	.89	

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011**

Part 4 of 5

[%, 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; ft<sup>3</sup>/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; <, less than; E, estimated]

Date	Sample start time	Ammonia		Nitrate		Particulate nitrogen, suspended in water, mg/L as P (00666)	Phos- phorus, water, filtered, mg/L as P (00665)	Phosphorus, water, unfiltered, mg/L as P (00665)	Total nitrogen, water, filtered, mg/L (00602)	Total nitrogen, water, unfiltered, mg/L (00600)
		Sulfate, water, filtered, mg/L (00945)	plus organic nitrogen, water, filtered, mg/L as N (00623)	Ammonia, water, filtered, mg/L as N (00608)	plus nitrite, water, filtered, mg/L as N (00631)					
11-05-2010	0900	10.5	.16	< .010	.04	.088	.007	.029	.20	.29
03-15-2011	1000	7.84	.27	E. 007	.07	.055	.011	.022	.34	.40
05-26-2011	1000	5.96	.33	.043	.07	.090	.018	.063	.40	.49
08-15-2011	1030	5.28	.70	.022	.04	.149	.046	.084	.74	.89

**01466900 GREENWOOD BRANCH AT NEW LISBON, NJ—Continued**

**WATER-QUALITY DATA  
WATER YEAR OCTOBER 2010 TO SEPTEMBER  
2011**

Part 5 of 5

[%; 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; ft<sup>3</sup>/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; <, less than; E, estimated]

Date	Sample start time	Organic	Organic
		carbon, suspended sediment, total, mg/L (00689)	carbon, water, filtered, mg/L (00681)
11-05-2010	0900	.97	4.95
03-15-2011	1000	.43	9.07
05-26-2011	1000	1.81	11.6
08-15-2011	1030	1.69	17.5