



Water-Data Report 2011

**01382170 PEQUANNOCK RIVER AT STATE ROUTE 23, NEAR OAK RIDGE, NJ**

PASSAIC RIVER BASIN

LOCATION.--Lat 41°04'40", long 74°29'23" referenced to North American Datum of 1983, West Milford Township, Passaic County, NJ, Hydrologic Unit 02030103, on upstream right abutment of southbound bridge on State Route 23, 0.6 mi upstream of Oak Ridge Reservoir, and 2.2 mi north of Oak Ridge.

DRAINAGE AREA.--19.3 mi<sup>2</sup>.

**SURFACE-WATER RECORDS**

PERIOD OF RECORD.--Miscellaneous measurements, water years 2001-02, 2005. Continuous-record gaging station, May 2008 to current year.

REVISED RECORDS.--WDR US-2010: 2009(M).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 880 ft NAVD 88 (from topographic map).

REMARKS.--Records fair, except for estimated daily discharges, which are poor. Flow regulated by Canistear Reservoir (see 01382100) and other small upstream lakes and ponds. Several measurements of water temperature were made during the water year. Satellite telemetry at station.

## 01382170 PEQUANNOCK RIVER AT STATE ROUTE 23, NEAR OAK RIDGE, 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>	203	9.5	118	24	e18	159	55	54	33	24	5.0	132
<b>2</b>	105	8.8	199	39	e29	125	62	47	27	22	4.0	96
<b>3</b>	28	7.2	74	e42	e32	102	47	45	20	34	3.6	76
<b>4</b>	18	17	49	e34	e31	84	45	65	16	43	8.7	65
<b>5</b>	28	36	40	e31	e22	87	54	68	16	27	7.4	80
<b>6</b>	23	22	50	e30	28	249	59	47	16	21	5.5	342
<b>7</b>	17	15	48	e31	24	813	68	40	15	16	26	560
<b>8</b>	13	14	41	e34	e27	400	57	37	13	15	67	e789
<b>9</b>	11	15	e28	e26	e32	224	47	32	13	23	33	e618
<b>10</b>	9.1	13	e26	e24	e25	278	41	28	18	24	20	296
<b>11</b>	12	11	30	e21	e31	1,080	38	26	21	16	12	191
<b>12</b>	13	9.5	85	e21	e20	586	45	23	19	12	7.6	141
<b>13</b>	12	8.7	154	e23	e19	306	114	22	21	9.2	5.2	113
<b>14</b>	10	8.4	98	e26	e19	205	88	21	17	8.1	44	87
<b>15</b>	22	9.2	e63	e25	e24	156	60	34	20	7.3	135	78
<b>16</b>	18	9.3	e47	e18	e23	154	102	101	14	5.3	364	70
<b>17</b>	13	40	e43	e17	23	138	548	128	128	4.6	156	53
<b>18</b>	11	27	e41	e26	39	104	334	222	144	4.2	69	45
<b>19</b>	9.7	19	e39	49	63	84	176	452	52	5.3	50	39
<b>20</b>	9.2	16	e33	36	e60	69	142	243	29	5.8	94	36
<b>21</b>	10	15	e30	e34	e53	72	111	153	20	4.6	55	37
<b>22</b>	8.9	14	e29	e39	e51	83	86	113	19	3.7	62	52
<b>23</b>	8.1	14	e29	e30	e45	76	111	100	171	3.2	39	79
<b>24</b>	7.9	13	e27	e34	e40	79	114	106	306	3.1	27	195
<b>25</b>	8.1	11	e25	e35	104	65	86	81	148	4.3	28	110
<b>26</b>	8.6	12	e24	e26	133	56	66	63	84	8.2	39	71
<b>27</b>	8.9	13	e46	e31	100	50	67	73	59	17	33	54
<b>28</b>	11	11	e35	e26	124	45	95	53	47	8.1	e1,330	98
<b>29</b>	9.7	9.7	e28	e23	---	41	99	41	39	6.3	e808	202
<b>30</b>	8.7	10	e23	e19	---	39	64	50	31	9.0	339	296
<b>31</b>	10	---	e23	e18	---	41	---	46	---	6.8	192	---
<b>Total</b>	684.9	438.3	1,625	892	1,239	6,050	3,081	2,614	1,576	401.1	4,069.0	5,101
<b>Mean</b>	22.1	14.6	52.4	28.8	44.2	195	103	84.3	52.5	12.9	131	170
<b>Max</b>	203	40	199	49	133	1,080	548	452	306	43	1,330	789
<b>Min</b>	7.9	7.2	23	17	18	39	38	21	13	3.1	3.6	36

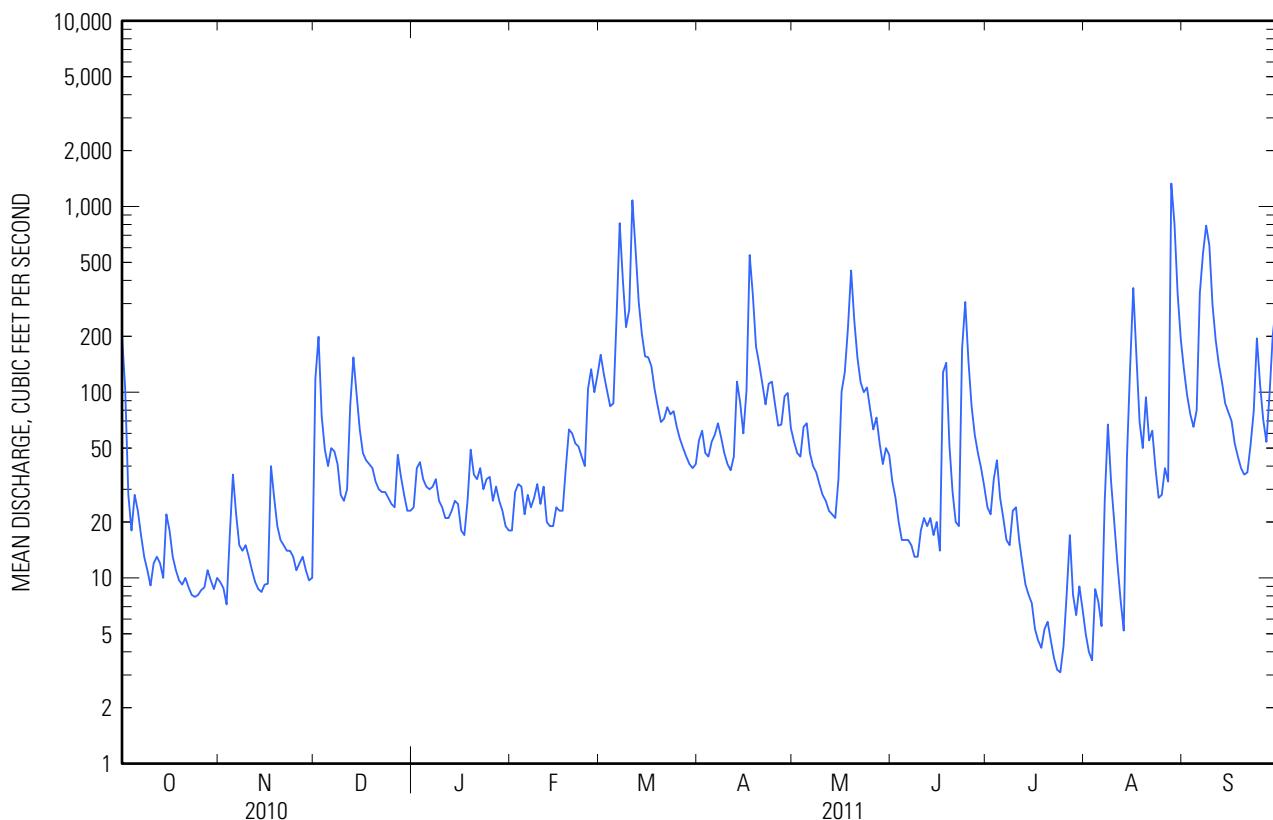
**STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2008 - 2011, BY WATER YEAR (WY)**

	<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>	22.8	27.5	75.9	43.1	35.6	153	70.0	46.5	30.5	16.7	45.0	50.1
<b>Max</b>	27.9	42.0	94.9	63.9	44.2	236	103	84.3	52.5	29.3	131	170
(WY) (2009)	(2009)	(2009)	(2010)	(2011)	(2010)	(2011)	(2011)	(2011)	(2011)	(2010)	(2011)	(2011)
<b>Min</b>	18.4	14.6	52.4	28.8	29.7	28.6	36.4	29.5	8.63	4.14	9.69	1.90
(WY)	(2010)	(2011)	(2011)	(2011)	(2009)	(2009)	(2009)	(2010)	(2010)	(2008)	(2008)	(2010)

**01382170 PEQUANNOCK RIVER AT STATE ROUTE 23, NEAR OAK RIDGE, NJ—Continued****SUMMARY STATISTICS**

	<b>Calendar Year 2010</b>	<b>Water Year 2011</b>		<b>Water Years 2008 - 2011</b>	
<b>Annual total</b>	17,697.38		27,771.3		
<b>Annual mean</b>	48.5		76.1		54.5
<b>Highest annual mean</b>				76.1	2011
<b>Lowest annual mean</b>				36.0	2009
<b>Highest daily mean</b>	1,540	Mar 14	a1,330 Aug 28		a1,540 Mar 14, 2010
<b>Lowest daily mean</b>	0.51	Sep 11	3.1	Jul 24	0.51 Sep 11, 2010
<b>Annual seven-day minimum</b>	0.66	Sep 6	4.3	Jul 18	0.66 Sep 6, 2010
<b>Maximum peak flow</b>			2,410	Aug 28	2,410 Aug 28, 2011
<b>Maximum peak stage</b>			9.47	Aug 28	9.47 Aug 28, 2011
<b>Instantaneous low flow</b>			2.9	Jul 23, 24	0.47 Aug 21, 2010
<b>10 percent exceeds</b>	97		155		105
<b>50 percent exceeds</b>	25		34		28
<b>90 percent exceeds</b>	1.7		9.1		6.3

<sup>a</sup> Estimated.



**01382170 PEQUANNOCK RIVER AT STATE ROUTE 23, NEAR OAK RIDGE, NJ—Continued**

**WATER-QUALITY RECORDS**

PERIOD OF RECORD.--Water years 2009 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: July 2009 to current year.

INSTRUMENTATION.--Electronic data logger with integral water temperature probe since July, 2009. Water temperature measurements, in degrees Celsius, recorded at 15-minute intervals.

REMARKS.--The accuracy of continuous water-quality data is routinely verified through inspections for fouling and calibration drift. The New Jersey Water Science Center requires that either constant or prorated adjustments be made to the continuous water-quality record when the difference between a sensor's response and a known value exceeds the following criteria: Water Temperature, 0.2 degrees Celsius (+ or -). If the difference between a sensor's response and a known value is within specified criteria, the data are considered to be reliable and are not adjusted. Data from the following periods were adjusted - none.

COOPERATION.--Continuous records collected in cooperation with the City of Newark.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 28.5°C, Jul 7, 2010; minimum, -0.1°C, on many days during winter.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 28.4°C, July 22; minimum, -0.1°C, on many days during winter.

**01382170 PEQUANNOCK RIVER AT STATE ROUTE 23, NEAR OAK RIDGE, NJ—Continued**
**TEMPERATURE, WATER, DEGREES CELSIUS**  
**WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011**

<b>Day</b>	<b>Max</b>	<b>Min</b>	<b>Mean</b>	<b>Max</b>	<b>Min</b>	<b>Mean</b>	<b>Max</b>	<b>Min</b>	<b>Mean</b>	<b>Max</b>	<b>Min</b>	<b>Mean</b>	
<b>October</b>				<b>November</b>				<b>December</b>				<b>January</b>	
<b>1</b>	19.2	15.8	17.1	7.6	5.4	6.4	9.5	5.6	7.9	0.7	0.1	0.3	
<b>2</b>	15.8	14.0	14.9	6.7	4.0	5.3	7.7	4.5	5.7	0.5	0.1	0.3	
<b>3</b>	14.3	12.3	13.3	6.5	3.4	4.9	4.5	3.0	3.6	0.3	-0.1	0.0	
<b>4</b>	13.6	12.1	12.7	6.9	5.2	6.3	3.0	2.0	2.3	0.5	-0.1	0.1	
<b>5</b>	12.5	11.9	12.2	7.6	6.6	6.9	2.1	1.2	1.6	0.6	-0.1	0.2	
<b>6</b>	13.7	12.5	13.0	6.6	5.1	6.0	1.5	0.9	1.1	0.1	-0.1	-0.1	
<b>7</b>	14.1	12.4	13.3	5.8	4.5	5.2	1.6	0.7	1.1	0.2	-0.1	0.0	
<b>8</b>	13.7	11.6	12.9	4.6	4.0	4.2	0.8	-0.1	0.4	-0.1	-0.1	-0.1	
<b>9</b>	14.1	12.2	13.1	6.0	3.8	5.0	0.1	-0.1	-0.1	0.0	-0.1	-0.1	
<b>10</b>	12.2	9.8	11.5	7.8	5.9	6.6	0.3	-0.1	0.0	-0.1	-0.1	-0.1	
<b>11</b>	13.7	11.1	12.5	6.5	4.9	5.7	1.3	0.0	0.6	0.0	-0.1	-0.1	
<b>12</b>	14.5	12.8	13.7	6.0	3.7	4.9	2.2	0.7	1.6	0.0	-0.1	-0.1	
<b>13</b>	12.8	10.4	11.7	6.0	3.4	4.7	2.5	0.8	2.0	-0.1	-0.1	-0.1	
<b>14</b>	11.1	9.0	10.4	5.9	3.5	4.8	0.8	-0.1	0.1	-0.1	-0.1	-0.1	
<b>15</b>	10.9	9.9	10.4	7.6	5.7	6.6	0.0	-0.1	-0.1	-0.1	-0.1	-0.1	
<b>16</b>	10.4	9.3	9.8	9.0	7.0	7.7	0.1	-0.1	0.0	0.1	-0.1	-0.1	
<b>17</b>	10.7	7.9	9.5	9.9	8.5	9.4	0.1	-0.1	0.0	0.1	-0.1	0.0	
<b>18</b>	10.9	8.7	9.8	8.5	7.1	7.7	0.3	-0.1	0.0	0.0	-0.1	-0.1	
<b>19</b>	11.1	9.2	10.1	7.3	4.6	6.0	0.5	-0.1	0.1	0.1	0.0	0.0	
<b>20</b>	10.3	7.9	9.2	5.7	3.9	4.8	0.2	-0.1	0.0	0.2	-0.1	0.0	
<b>21</b>	10.6	8.4	9.2	5.2	3.7	4.6	0.3	-0.1	0.0	0.0	-0.1	-0.1	
<b>22</b>	8.7	7.0	8.0	7.2	4.8	6.1	0.6	-0.1	0.2	-0.1	-0.1	-0.1	
<b>23</b>	9.7	6.4	8.1	8.2	6.3	7.3	0.6	-0.1	0.2	-0.1	-0.1	-0.1	
<b>24</b>	12.0	8.8	10.4	7.1	4.8	5.7	0.5	-0.1	0.1	-0.1	-0.1	-0.1	
<b>25</b>	13.5	10.0	11.7	4.8	4.1	4.5	0.6	-0.1	0.2	-0.1	-0.1	-0.1	
<b>26</b>	15.4	12.6	14.0	6.0	4.2	5.2	0.2	-0.1	0.0	-0.1	-0.1	-0.1	
<b>27</b>	16.6	14.4	15.6	4.2	3.0	3.5	0.0	-0.1	-0.1	0.0	-0.1	-0.1	
<b>28</b>	15.4	12.8	14.0	3.4	1.9	2.6	0.0	-0.1	-0.1	0.0	-0.1	0.0	
<b>29</b>	12.8	9.2	11.3	2.6	0.7	1.8	0.0	-0.1	-0.1	0.0	-0.1	0.0	
<b>30</b>	10.1	7.8	8.9	5.6	2.1	3.6	0.0	-0.1	-0.1	0.1	-0.1	0.0	
<b>31</b>	9.9	7.6	8.6	---	---	---	0.2	0.0	0.1	0.0	-0.1	-0.1	
<b>Month</b>	19.2	6.4	11.6	9.9	0.7	5.5	9.5	-0.1	0.9	0.7	-0.1	0.0	

**01382170 PEQUANNOCK RIVER AT STATE ROUTE 23, NEAR OAK RIDGE, NJ—Continued**
**TEMPERATURE, WATER, DEGREES CELSIUS  
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011**

<b>Day</b>	<b>Max</b>	<b>Min</b>	<b>Mean</b>	<b>Max</b>	<b>Min</b>	<b>Mean</b>	<b>Max</b>	<b>Min</b>	<b>Mean</b>	<b>Max</b>	<b>Min</b>	<b>Mean</b>
<b>February</b>				<b>March</b>				<b>April</b>				<b>May</b>
<b>1</b>	0.0	-0.1	-0.1	2.2	0.2	1.1	4.9	3.6	4.0	15.9	11.4	13.8
<b>2</b>	0.0	-0.1	-0.1	3.0	0.4	1.4	7.0	2.7	4.8	14.5	12.6	13.5
<b>3</b>	0.0	-0.1	-0.1	1.5	-0.1	0.6	8.6	4.2	6.4	17.9	13.1	15.4
<b>4</b>	0.0	-0.1	-0.1	2.3	-0.1	1.1	7.9	6.4	7.3	17.2	11.9	14.4
<b>5</b>	0.1	-0.1	0.0	4.6	1.8	3.1	8.4	6.4	7.9	14.8	10.8	12.7
<b>6</b>	0.4	0.0	0.1	3.9	2.5	3.4	7.8	4.4	6.3	14.8	10.2	12.7
<b>7</b>	0.6	0.0	0.2	3.7	1.5	2.5	7.2	5.6	6.4	14.9	12.5	13.9
<b>8</b>	0.5	-0.1	0.2	4.3	1.1	2.6	6.3	4.7	5.6	15.7	11.3	13.8
<b>9</b>	-0.1	-0.1	-0.1	3.4	1.4	2.5	10.5	5.0	7.6	16.6	13.1	15.0
<b>10</b>	0.1	-0.1	-0.1	4.5	2.4	3.1	9.6	8.1	8.9	17.0	12.9	15.2
<b>11</b>	-0.1	-0.1	-0.1	5.3	4.5	4.8	15.1	8.7	11.7	17.0	13.3	15.3
<b>12</b>	0.2	-0.1	0.0	5.6	3.3	4.4	14.9	9.9	12.3	18.1	13.9	16.1
<b>13</b>	0.6	-0.1	0.2	5.0	3.7	4.4	9.9	8.1	8.7	16.4	14.7	15.3
<b>14</b>	1.4	0.1	0.6	4.7	3.3	3.9	13.5	8.0	10.5	15.0	14.3	14.6
<b>15</b>	0.5	-0.1	0.0	5.9	1.8	3.9	12.2	9.1	10.5	15.0	13.8	14.4
<b>16</b>	0.9	-0.1	0.3	7.0	4.0	5.4	10.1	7.2	8.0	15.0	14.4	14.6
<b>17</b>	1.6	0.4	0.7	9.1	5.0	6.9	11.2	7.9	9.3	14.6	13.9	14.3
<b>18</b>	1.5	0.4	0.8	10.7	6.2	8.3	10.9	7.8	9.4	15.0	13.9	14.5
<b>19</b>	0.7	-0.1	0.3	9.5	5.3	7.1	9.9	8.2	8.7	17.2	14.7	15.8
<b>20</b>	0.3	-0.1	0.0	7.2	3.2	5.2	11.2	8.0	9.2	16.9	15.2	16.0
<b>21</b>	0.3	-0.1	0.1	6.3	3.3	4.3	12.4	8.7	10.4	18.0	14.5	16.2
<b>22</b>	0.9	-0.1	0.2	5.8	3.7	4.6	9.8	6.9	8.1	17.1	14.8	15.8
<b>23</b>	0.7	-0.1	0.1	5.2	2.4	3.4	9.6	7.2	8.2	14.9	14.0	14.4
<b>24</b>	0.8	-0.1	0.2	4.5	1.7	3.0	14.0	9.6	11.7	17.6	14.6	15.9
<b>25</b>	0.8	0.0	0.3	4.8	1.4	3.2	15.4	11.7	13.4	19.8	15.6	17.6
<b>26</b>	1.0	-0.1	0.4	4.7	1.1	3.0	19.0	13.8	16.3	21.0	17.3	19.2
<b>27</b>	2.1	0.6	1.3	5.2	1.4	3.3	17.8	15.5	16.7	21.4	18.0	19.7
<b>28</b>	1.7	0.7	1.3	5.0	1.1	3.2	17.6	16.0	16.8	21.8	19.1	20.5
<b>29</b>	---	---	---	5.8	1.8	3.9	16.0	13.0	14.6	22.0	19.6	20.8
<b>30</b>	---	---	---	7.0	2.9	5.1	15.5	11.4	13.5	22.8	19.6	21.2
<b>31</b>	---	---	---	6.6	4.9	5.6	---	---	---	23.6	19.9	21.9
<b>Month</b>	2.1	-0.1	0.2	10.7	-0.1	3.8	19.0	2.7	9.8	23.6	10.2	16.0

**01382170 PEQUANNOCK RIVER AT STATE ROUTE 23, NEAR OAK RIDGE, NJ—Continued**
**TEMPERATURE, WATER, DEGREES CELSIUS  
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011**

<b>Day</b>	<b>Max</b>	<b>Min</b>	<b>Mean</b>	<b>Max</b>	<b>Min</b>	<b>Mean</b>	<b>Max</b>	<b>Min</b>	<b>Mean</b>	<b>Max</b>	<b>Min</b>	<b>Mean</b>
				<b>June</b>			<b>July</b>			<b>August</b>		
<b>1</b>	23.6	21.1	22.6	20.7	17.4	19.3	25.0	20.8	23.0	20.3	18.5	19.5
<b>2</b>	22.6	19.0	20.7	21.1	18.0	19.7	24.9	21.2	22.8	19.7	18.1	19.0
<b>3</b>	19.0	16.5	17.9	20.3	19.0	19.4	23.2	19.7	21.3	20.4	18.0	19.2
<b>4</b>	17.0	15.3	16.0	22.4	19.2	20.6	22.6	20.3	21.3	21.1	19.6	20.4
<b>5</b>	16.4	14.7	15.7	22.1	19.0	20.8	22.8	19.6	21.4	21.0	19.4	20.3
<b>6</b>	19.4	15.1	17.3	22.8	19.3	21.2	22.8	20.7	21.6	19.4	17.6	18.4
<b>7</b>	20.8	16.8	18.9	23.7	20.9	22.4	24.0	21.1	22.5	17.9	17.2	17.5
<b>8</b>	22.9	18.5	20.8	23.2	21.1	22.1	24.9	22.5	23.7	18.7	17.1	17.8
<b>9</b>	24.4	20.6	22.3	23.6	20.4	22.0	24.2	22.2	22.9	19.8	18.4	19.0
<b>10</b>	23.3	20.5	22.0	23.0	19.8	21.6	23.5	21.5	22.6	20.4	18.4	19.4
<b>11</b>	22.2	19.0	20.5	23.9	20.6	22.4	22.3	20.2	21.4	19.7	18.5	18.9
<b>12</b>	19.0	18.0	18.5	25.1	22.5	23.8	21.5	17.9	19.9	20.1	18.2	19.1
<b>13</b>	18.5	17.1	18.0	23.4	21.2	22.3	21.2	17.8	19.6	20.1	17.4	18.8
<b>14</b>	17.9	15.7	16.8	22.6	19.0	20.9	19.9	19.2	19.4	20.5	18.4	19.5
<b>15</b>	19.1	15.2	17.2	22.5	18.7	20.7	20.8	19.7	20.1	19.9	16.3	18.4
<b>16</b>	19.5	16.6	18.2	23.2	18.6	20.9	21.4	20.0	20.6	16.3	14.2	15.2
<b>17</b>	18.7	17.1	18.0	24.1	18.8	21.5	22.3	19.6	21.0	15.1	13.4	14.2
<b>18</b>	21.4	17.7	19.5	24.7	20.6	22.5	22.3	19.9	21.1	14.8	12.4	13.7
<b>19</b>	22.0	18.8	20.4	25.4	21.3	23.3	22.4	20.6	21.5	14.6	12.4	13.7
<b>20</b>	21.6	18.8	20.3	25.6	21.4	23.7	22.6	19.6	21.1	15.3	14.1	14.6
<b>21</b>	21.6	19.5	20.5	27.0	22.6	24.8	22.7	20.8	21.8	16.8	14.6	15.7
<b>22</b>	21.1	20.1	20.6	28.4	23.9	25.9	21.6	20.2	20.9	18.9	16.7	17.7
<b>23</b>	20.6	18.3	19.4	25.9	23.5	24.6	20.4	18.1	19.4	18.5	17.7	17.9
<b>24</b>	19.9	19.4	19.6	24.6	22.8	23.6	20.5	17.7	19.2	19.2	18.2	18.6
<b>25</b>	21.6	19.1	20.2	23.2	21.0	22.1	20.4	19.7	20.0	20.0	18.2	19.0
<b>26</b>	20.6	18.6	19.6	24.5	20.8	22.4	21.6	19.6	20.6	19.8	18.2	19.0
<b>27</b>	20.9	17.9	19.5	23.0	20.8	21.9	21.3	20.8	21.1	19.8	18.2	19.0
<b>28</b>	20.9	19.0	20.1	23.4	20.2	21.8	20.8	19.9	20.3	19.6	18.9	19.1
<b>29</b>	21.1	19.4	20.3	23.4	21.1	22.1	19.9	18.7	19.2	19.3	17.6	18.7
<b>30</b>	21.2	18.5	19.9	24.6	21.2	23.0	19.9	17.8	18.9	18.2	16.3	17.3
<b>31</b>	---	---	---	24.3	20.5	22.6	20.3	17.9	19.2	---	---	---
<b>Month</b>	24.4	14.7	19.4	28.4	17.4	22.1	25.0	17.7	20.9	21.1	12.4	18.0

	<b>Max</b>	<b>Min</b>	<b>Mean</b>
<b>Year</b>	28.4	-0.1	10.7

**01382170 PEQUANNOCK RIVER AT STATE ROUTE 23, NEAR OAK RIDGE, NJ—Continued**

