

## OIL CREEK BASIN

03020500 OIL CREEK AT ROUSEVILLE, PA  
(Pennsylvania Water-Quality Network Station)

**LOCATION.**--Lat 41°28'54", long 79°41'44", Venango County, Hydrologic Unit 05010003, on right bank 100 ft downstream from bridge on State Highway 8, about 300 ft upstream from Cherrytree Run, and 1 mi north of Rouseville. Records include flow of Cherrytree Run.

**DRAINAGE AREA.**--300 mi<sup>2</sup>, including that of Cherrytree Run.

## WATER-DISCHARGE RECORDS

**PERIOD OF RECORD.**--June 1932 to current year.

**REVISED RECORDS.**--WSP 743: Drainage area. WSP 1053: 1936-37(M), 1943(M).

**GAGE.**--Water-stage recorder. Datum of gage is 1,028.32 ft above National Geodetic Vertical Datum of 1929. Prior to June 9, 1941, nonrecording gage at same site and datum.

**REMARKS.**--Records good except those for estimated daily discharges, which are poor. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemetry at station.

**PEAK DISCHARGES FOR CURRENT YEAR.**--Peak discharges greater than a base discharge of 5,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge ft <sup>3</sup> /s	Gage Height (ft)	Date	Time	Discharge ft <sup>3</sup> /s	Gage Height (ft)
Apr. 5	1100	5,950	7.65	July 22	0130	*19,600	*11.78

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	70	111	e180	2520	e187	e365	570	237	833	130	313	254
2	59	124	e170	2260	e239	e399	749	290	512	121	285	1160
3	55	141	e165	1160	e329	e453	650	329	361	118	273	582
4	53	145	e160	837	e539	e475	632	263	338	113	265	383
5	53	151	e155	e600	e774	e420	4680	264	318	171	319	312
6	52	224	e150	e370	e524	e355	2490	492	312	167	672	243
7	48	249	e148	e340	e400	e340	1310	584	295	154	472	204
8	46	196	e146	e330	e359	e567	1200	585	293	146	323	181
9	44	157	e144	e310	e323	e828	1220	619	385	130	522	165
10	42	155	e170	e330	e309	e651	1060	661	338	230	1040	156
11	43	820	e200	e340	e294	e550	858	600	331	472	884	138
12	42	624	e375	e357	e280	e488	723	670	627	239	537	127
13	45	337	e634	e425	e279	e500	614	1500	2120	166	387	119
14	47	248	e1230	e250	e280	e587	520	2000	1490	131	303	115
15	45	199	e2050	e215	e280	e740	451	995	759	113	256	132
16	64	203	1140	e215	e272	e1480	407	731	514	191	247	171
17	123	436	761	e215	e273	e2520	375	580	398	284	234	153
18	94	724	553	e215	e267	3430	336	475	438	163	204	121
19	101	554	484	e215	e255	2600	309	403	421	539	180	195
20	177	537	2620	e215	e250	1840	291	385	402	214	164	384
21	134	415	2160	e215	e220	1390	442	785	320	3660	153	239
22	96	376	1030	e227	e276	1410	713	541	305	13300	153	201
23	79	452	771	e203	e682	1030	532	422	260	5760	153	1100
24	69	359	582	e203	e1010	807	415	653	219	2870	134	614
25	67	322	513	e215	e776	687	356	640	191	1330	124	375
26	186	303	e424	e227	e548	889	327	446	172	786	173	292
27	197	e240	e370	e215	e444	852	302	366	160	699	283	428
28	142	e214	e360	e191	e350	633	277	338	152	867	171	1170
29	114	e200	e338	e191	---	587	257	316	142	610	226	568
30	99	e190	e317	e180	---	853	240	283	140	423	359	475
31	106	---	e884	e172	---	618	---	444	---	355	211	---
TOTAL	2592	9406	19384	13958	11019	29344	23306	17897	13546	34652	10020	10757
MEAN	83.6	314	625	450	394	947	777	577	452	1118	323	359
MAX	197	820	2620	2520	1010	3430	4680	2000	2120	13300	1040	1170
MIN	42	111	144	172	187	340	240	237	140	113	124	115
CFSM	0.28	1.05	2.08	1.50	1.31	3.16	2.59	1.92	1.51	3.73	1.08	1.20
IN.	0.32	1.17	2.40	1.73	1.37	3.64	2.89	2.22	1.68	4.30	1.24	1.33

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1933 - 2003, BY WATER YEAR (WY)

MEAN	251	502	677	676	732	1083	929	592	384	234	172	198
MAX	1260	1560	1784	2385	2124	2574	1958	1706	1491	1118	786	1304
(WY)	1991	1986	1978	1937	1976	1936	1940	1953	1989	2003	1980	1990
MIN	34.5	65.0	80.9	108	158	400	266	129	75.2	38.3	38.8	34.5
(WY)	1964	1992	1961	1984	1987	2000	1935	1934	1934	1934	1934	1934

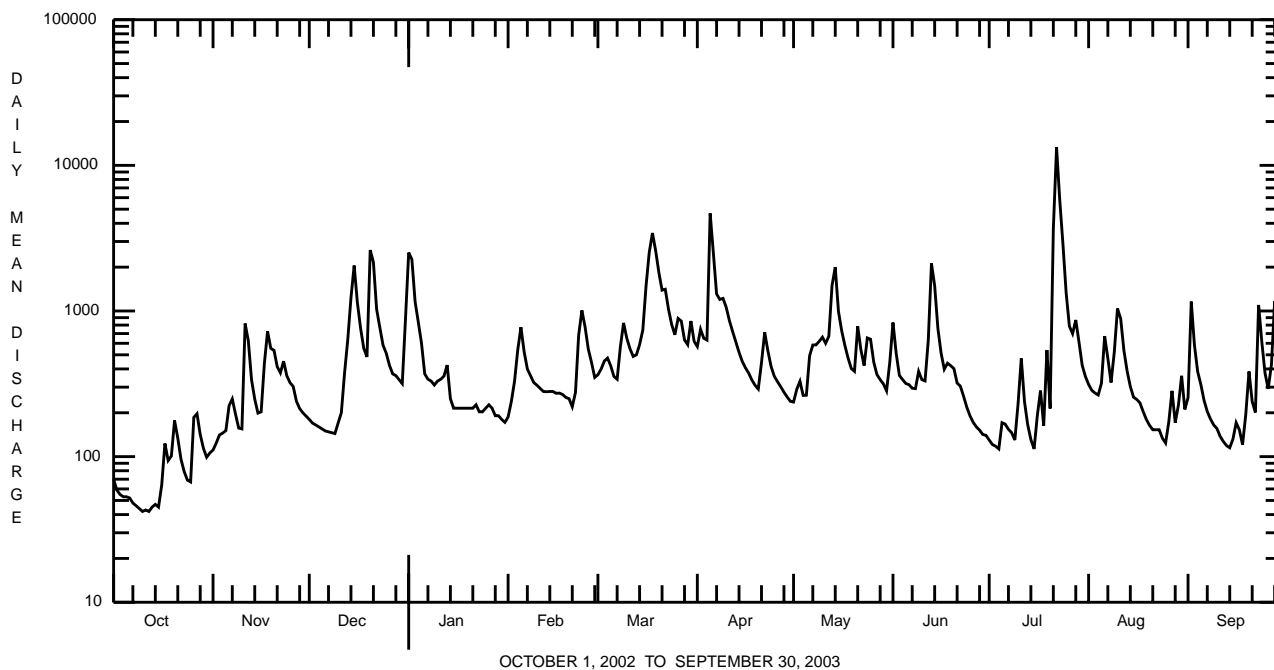
e Estimated.

OIL CREEK BASIN

03020500 OIL CREEK AT ROUSEVILLE, PA--Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1933 - 2003	
ANNUAL TOTAL	167233		195881			
ANNUAL MEAN	458		537		535	
HIGHEST ANNUAL MEAN					746	1956
LOWEST ANNUAL MEAN					303	1962
HIGHEST DAILY MEAN	5520	May 14	13300	Jul 22	16300	Jan 22 1959
LOWEST DAILY MEAN	28	Sep 13	42	Oct 10,12	23	Jul 26 1934
ANNUAL SEVEN-DAY MINIMUM	31	Sep 8	44	Oct 9	24	Sep 2 1934
MAXIMUM PEAK FLOW			a19600	Jul 22	a21000	Jan 22 1959
MAXIMUM PEAK STAGE			11.78	Jul 22	11.97	Jan 22 1959
INSTANTANEOUS LOW FLOW			41	Oct 10-13	b16	Oct 12 1993
ANNUAL RUNOFF (CFSM)	1.53		1.79		1.78	
ANNUAL RUNOFF (INCHES)	20.74		24.29		24.21	
10 PERCENT EXCEEDS	1010		1020		1210	
50 PERCENT EXCEEDS	269		323		291	
90 PERCENT EXCEEDS	51		126		62	

a From rating curve extended above 15,000 ft<sup>3</sup>/s.  
 b Result of abnormal diversion.



## OIL CREEK BASIN

03020500 OIL CREEK AT ROUSEVILLE, PA--Continued  
(Pennsylvania Water-Quality Network Station)

## WATER-QUALITY RECORDS

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

REMARKS.--Other data for the Water-Quality Network can be found on pages 242-289.

COOPERATION.--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 2002 TO SEPTEMBER 2003

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Instantaneous discharge, cfs (00061)	Sampling method, code (82398)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd 25 degC (00095)	Temperature, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, unfltrd recover -able, mg/L (00916)	Magnesium, water, unfltrd recover -able, mg/L (00927)	ANC, wat unfltrd fixed end pt, lab, mg/L as CaCO3 (00417)
NOV 2002 20...	0915	1028	9813	555	40	11.7	7.8	139	3.3	56	16.5	3.5	38
JAN 2003 15...	0945	1028	9813	E215	40	14.3	8.1	175	.0	62	18.2	4.0	42
MAR 19...	0930	1028	9813	2770	40	17.6	7.5	85	4.4	30	8.7	2.0	16
JUN 09...	1145	1028	9813	414	40	12.2	8.5	167	17.0	64	19.3	3.9	54
JUL 16...	1030	1028	9813	132	40	9.4	8.0	220	--	80	24.0	4.9	71
SEP 16...	1020	1028	9813	178	40	11.1	8.1	222	18.0	86	26.7	4.7	70

Date	Fluoride, water, unfltrd mg/L (00951)	Sulfate, water, fltrd, mg/L (00945)	Residue on evap. at 105degC, wat flt mg/L (00515)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia water, unfltrd mg/L as N (00610)	Nitrate water, unfltrd mg/L as N (00620)	Nitrite water, unfltrd mg/L as N (00615)	Orthophosphate, water, unfltrd mg/L as P (70507)	Phosphorus, water, unfltrd mg/L (00665)	Total nitrogen, water, unfltrd mg/L (00600)	Organic carbon, water, unfltrd mg/L (00680)	Aluminum, water, unfltrd recover -able, mg/L (01105)	Copper, water, unfltrd recover -able, mg/L (01042)
NOV 2002 20...	<.2	14.1	104	10	<.020	.48	<.040	.01	.012	.99	4.0	<200	<10
JAN 2003 15...	<.2	13.6	130	6	<.020	.69	<.040	<.01	.012	.75	1.8	<200	<10
MAR 19...	<.2	9.8	156	52	<.020	.66	<.040	.04	.039	.92	3.3	1400	<10
JUN 09...	<.2	10.6	130	8	<.020	.16	<.040	.01	.027	.45	2.9	<200	<10
JUL 16...	<.2	11.0	146	8	<.020	.11	<.040	.02	.020	.35	3.7	<200	<10
SEP 16...	<.2	11.1	154	6	<.020	.27	<.040	.02	.021	.47	2.9	<200	<10

Date	Cyanide amenable to chlorination, wat unfltrd mg/L (00722)	Iron, water, unfltrd recover -able, mg/L (01045)	Lead, water, unfltrd recover -able, mg/L (01051)	Manganese, water, unfltrd recover -able, mg/L (01055)	Nickel, water, unfltrd recover -able, mg/L (01067)	Zinc, water, unfltrd recover -able, mg/L (01092)	Phenolic compounds, water, unfltrd mg/L (32730)
NOV 2002 20...	<1.00	350	<1.0	20	<50	<10	<5
JAN 2003 15...	--	240	<1.0	20	<50	<10	<5
MAR 19...	<1.00	2090	3.1	100	<50	20	<5
JUN 09...	<1.00	470	<1.0	30	<50	140	<5
JUL 16...	<1.00	400	<1.0	40	<50	<10	<5
SEP 16...	<1.00	240	<1.0	20	<50	<10	<5

## OIL CREEK BASIN

## 03020500 OIL CREEK AT ROUSEVILLE, PA--Continued

BIOLOGICAL DATA  
BENTHIC MACROINVERTEBRATES

REMARKS.--Samples were collected using rapid bioassessment protocols for benthic macroinvertebrates using a D-Frame net with a mesh size of 500 µm. Samples represent counts per 100 (approximate) subsamples.

Date	9/24/02
Benthic Macroinvertebrate	Count
Platyhelminthes	
Turbellaria (FLATWORMS)	
Tricladida	
Planariidae	1
Annelida	
Oligochaeta (AQUATIC EARTHWORMS)	
Lumbricina	1
Arthropoda	
Acariformes	
Hydrachnidia (WATER MITES)	2
Insecta	
Ephemeroptera (MAYFLIES)	
Baetidae	
<u>Baetis</u> sp	3
<u>Plauditus</u> sp	1
Caenidae	
<u>Caenis</u> sp	1
Ephemerellidae	
<u>Serratella</u> sp	17
Heptageniidae	
<u>Stenonema</u> sp	13
Isonychiidae	
<u>Isonychia</u> sp	16
Odonata (DRAGONFLIES AND DAMSELFLIES)	
Coenagrionidae	
<u>Argia</u> sp	3
Plecoptera (STONEFLIES)	
Perlidae	
<u>Paragnetina</u> sp	1
Trichoptera (CADDISFLIES)	
Brachycentridae	
<u>Brachycentrus</u> sp	6
Glossosomatidae	
<u>Protoptila</u> sp	1
Hydropsychidae	
<u>Cheumatopsyche</u> sp	25
<u>Hydropsyche</u> sp	11
Leptoceridae	
<u>Ceraclea</u> sp	2
Coleoptera (BEETLES)	
Elmidae (RIFFLE BEETLES)	
<u>Optioservus</u> sp	39
<u>Stenelmis</u> sp	6
Psephenidae (WATER PENNIES)	
<u>Psephenus</u> sp	13
Diptera (TRUE FLIES)	
Chironomidae (MIDGES)	
Empididae (DANCE FLIES)	
<u>Hemerodromia</u> sp	2
Tipulidae (CRANE FLIES)	
<u>Antocha</u> sp	1
Total Organisms	
	204