



Water-Data Report 2010

03535400 BEAVER CREEK AT SOLWAY, TN

Upper Tennessee Basin
Lower Clinch Subbasin

LOCATION.--Lat 35°57'53.77", long 84°10'43.48" referenced to North American Datum of 1927, Knox County, TN, Hydrologic Unit 06010207, at bridge on Solway Road, 1.1 mi southwest of Solway and 5.9 mi southeast of intersection of State Highways 95 and 62 in Oak Ridge.

DRAINAGE AREA.--86.8 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--August 1961 to September 1964, low-flow partial-record site, August 1998 to April 1999, flood crest-stage partial-record site, April 1999 to current year.

GAGE.--Data collection platform.

REMARKS.--Records good, except for high stages which are poor due to suspected draw down.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2310 ft³/s, Jan. 24 and 26, gage height 11.33 ft; minimum discharge, 23 ft³/s, Sept. 6.

03535400 BEAVER CREEK AT SOLWAY, TN—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	138	117	110	168	309	114	170	84	74	40	96	31
2	119	111	142	150	352	111	151	107	78	37	93	30
3	106	96	195	133	452	113	138	929	66	37	65	29
4	97	91	158	125	438	107	128	1,070	63	35	52	28
5	114	87	137	118	809	100	120	686	62	32	50	28
6	110	77	128	112	1,290	95	115	265	58	30	48	26
7	103	79	117	107	1,090	92	109	208	66	33	45	27
8	96	78	128	103	604	90	129	177	62	33	42	32
9	92	72	1,490	98	441	88	170	149	67	33	40	42
10	128	78	1,620	95	369	87	126	132	115	41	36	37
11	117	206	781	94	296	85	106	122	84	43	34	136
12	100	235	334	95	250	141	101	114	67	41	38	391
13	101	179	353	92	225	264	96	106	60	61	35	123
14	172	139	434	90	206	276	91	100	57	91	36	74
15	395	126	409	88	200	189	87	100	57	53	43	61
16	472	118	254	86	197	160	83	163	57	41	40	52
17	418	110	211	150	177	139	80	208	53	39	53	62
18	221	127	376	242	157	129	77	144	49	37	40	61
19	178	127	720	202	144	121	74	113	48	66	69	49
20	149	114	796	180	136	113	75	99	48	86	72	44
21	134	105	473	338	128	108	79	91	47	71	54	39
22	122	100	286	746	191	143	79	88	44	181	88	38
23	118	99	237	687	217	150	69	83	43	119	90	34
24	118	96	214	1,130	174	120	80	79	42	73	57	34
25	106	92	324	2,040	145	112	269	75	44	52	47	41
26	95	88	356	1,760	134	167	193	78	44	45	43	40
27	96	81	251	725	126	164	114	71	40	44	40	42
28	137	76	204	449	120	174	124	68	39	43	37	78
29	122	74	186	305	---	298	105	71	50	42	35	79
30	100	90	167	323	---	262	90	69	49	61	33	56
31	95	---	166	392	---	194	---	66	---	67	32	---
Total	4,669	3,268	11,757	11,423	9,377	4,506	3,428	5,915	1,733	1,707	1,583	1,844
Mean	151	109	379	368	335	145	114	191	57.8	55.1	51.1	61.5
Max	472	235	1,620	2,040	1,290	298	269	1,070	115	181	96	391
Min	92	72	110	86	120	85	69	66	39	30	32	26
Cfsm	1.74	1.25	4.37	4.25	3.86	1.67	1.32	2.20	0.67	0.63	0.59	0.71
In.	2.00	1.40	5.04	4.90	4.02	1.93	1.47	2.54	0.74	0.73	0.68	0.79

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1998 - 2010, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	57.1	98.9	174	195	250	188	195	143	84.8	89.1	54.3	75.2
Max	151	246	471	387	786	417	390	344	204	227	131	155
(WY)	(2010)	(2005)	(2005)	(2002)	(2003)	(2002)	(2003)	(2003)	(2009)	(1999)	(2003)	(2009)
Min	20.6	24.5	34.9	98.1	65.7	113	84.4	43.5	35.6	35.0	26.2	22.2
(WY)	(2001)	(2002)	(2000)	(2000)	(2007)	(2001)	(2001)	(2001)	(2007)	(2007)	(2007)	(2008)

03535400 BEAVER CREEK AT SOLWAY, TN—Continued

SUMMARY STATISTICS

	Calendar Year 2009		Water Year 2010		Water Years 1998 - 2010	
Annual total	70,952		61,210			
Annual mean	194		168		133	
Highest annual mean					235	2003
Lowest annual mean					72.5	2008
Highest daily mean	1,620	Dec 10	2,040	Jan 25	3,580	Feb 17, 2003
Lowest daily mean	55	Sep 10	26	Sep 6	17	Oct 20, 2000
Annual seven-day minimum	61	Sep 4	28	Sep 1	18	Sep 24, 2008
Maximum peak flow			^a 2,310	Jan 24	4,520	Feb 17, 2003
Maximum peak stage			11.33	Jan 24	15.79	Feb 17, 2003
Instantaneous low flow			23	Sep 6	^b 16	Sep 16, 2000
Annual runoff (cfsm)	2.24		1.93		1.53	
Annual runoff (inches)	30.41		26.23		20.74	
10 percent exceeds	361		336		256	
50 percent exceeds	143		100		78	
90 percent exceeds	81		40		27	

^a Also occurred on Jan. 26, but was determined to be on the same rise.

^b Also occurred Oct. 18, 19, 2000 and Sept. 24, 28, 2008.

