Water-Data Report 2012

07325800 COBB CREEK NEAR EAKLY, OK

Washita Basin
Upper Washita Subbasin

LOCATION.--Lat 35°17′26″, long 98°35′38″ referenced to North American Datum of 1927, in NW ¼ NE ¼ sec.5, T.9 N., R.13 W., Caddo County, OK, Hydrologic Unit 11130302, near left downstream abutment of bridge, on State Highway 152, 0.5 mi downstream from Fivemile Creek, 2.4 mi southwest of Eakly, 3.0 mi upstream from Fort Cobb Reservoir, and at mile 22.9.

DRAINAGE AREA.--132 mi^2, revised. From automated delineation using 10-meter National Elevation Dataset digital elevation model data dated 10/01/2006 and Watershed Boundary Dataset dated 10/01/2006, using Albers Equal-Area Projection, North American Datum 1983.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--October 1968 to current year.

REVISED RECORDS.--WDR 2012: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,369.70 ft above NGVD of 1929. Oct. 29, 1980, to Aug. 11, 1982, gage at site 0.5 mi downstream at same datum.

REMARKS.--Records fair, except for estimated periods which are poor. Flow regulated since 1957 by numerous floodwater retarding structures. U.S. Army Corps of Engineers' satellite telemeter at station.

07325800 COBB CREEK NEAR EAKLY, OK—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	e4.1	7.1	10	11	14	16	15	17	9.1	e4.9	1.7	2.1
2	e4.1	7.0	10	11	14	15	14	15	8.8	e4.8	1.5	2.5
3	e4.0	6.8	15	11	15	15	18	16	8.5	4.7	1.4	2.3
4	4.0	7.0	15	11	e15	15	19	13	8.3	4.1	1.6	1.7
5	4.0	7.3	13	11	e14	15	16	12	8.6	3.9	1.5	1.8
6	4.8	7.3	12	11	e14	15	15	11	10	3.7	1.4	4.4
7	4.6	59	e10	11	e14	15	15	11	268	3.8	1.4	3.2
8	6.2	572	e11	11	14	19	14	11	116	3.9	1.4	2.6
9	16	37	11	11	14	22	14	11	49	3.8	1.4	2.0
10	9.3	22	11	11	16	17	14	11	29	57	1.3	2.1
11	6.6	17	11	11	e14	19	14	14	19	44	1.3	2.2
12	6.4	14	12	e11	e13	20	14	19	16	20	1.9	2.6
13	6.2	13	12	e10	e14	19	14	17	14	12	1.9	2.5
14	5.7	12	14	e10	e16	18	79	15	12	8.0	1.5	4.3
15	5.5	11	15	11	e19	18	46	14	11	6.2	1.8	4.6
16	5.4	10	12	12	e18	17	35	13	9.7	4.9	1.5	4.3
17	5.4	10	12	12	17	17	27	12	14	4.7	1.6	3.9
18	5.3	10	12	13	18	17	23	11	15	4.1	2.0	4.1
19	5.4	10	17	12	18	29	21	9.7	11	3.4	2.5	3.9
20	5.9	10	27	13	18	40	19	15	9.3	2.8	2.5	3.7
21	6.1	62	17	13	17	40	18	14	9.5	3.1	2.2	3.1
22	6.3	56	14	13	16	51	17	13	13	3.0	2.3	3.3
23	6.2	16	13	14	16	33	16	13	10	2.3	2.5	3.3
24	6.1	14	12	13	15	25	16	11	8.8	2.3	2.6	2.8
25	5.9	12	12	29	14	22	15	12	7.7	1.9	2.7	3.0
26	6.0	13	12	22	14	19	15	11	7.1	1.9	3.8	5.8
27	9.3	12	12	18	14	18	15	10	6.4	2.0	3.5	169
28	10	11	12	16	15	16	14	9.5	5.7	2.6	3.1	27
29	7.5	11	12	15	15	16	20	8.3	5.2	2.5	2.8	19
30	7.2	11	12	14	---	15	19	e8.0	5.0	2.2	2.2	14
31	7.1	---	11	15	---	15	---	9.6	---	1.7	2.1	---
Total	196.6	1,067.5	401	407	445	648	611	387.1	724.7	230.2	62.9	311.1
Mean	6.34	35.6	12.9	13.1	15.3	20.9	20.4	12.5	24.2	7.43	2.03	10.4
Max	16	572	27	29	19	51	79	19	268	57	3.8	169
Min	4.0	6.8	10	10	13	15	14	8.0	5.0	1.7	1.3	1.7
Ac-ft	390	2,120	795	807	883	1,290	1,210	768	1,440	457	125	617

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 2012, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	28.0	26.1	23.8	21.1	22.5	34.8	29.5	55.5	54.5	16.6	22.4	19.7
Max	317	104	84.9	50.2	55.1	138	140	303	292	85.1	205	161
(WY)	(1987)	(1993)	(1993)	(1993)	(1997)	(1998)	(1997)	(1993)	(2007)	(1975)	(2007)	(1986)
Min	4.34	6.11	4.88	8.78	8.99	8.38	5.27	2.79	5.44	1.01	0.90	2.15
(WY)	(1973)	(1979)	(1979)	(1981)	(1981)	(1971)	(1971)	(1971)	(2011)	(1974)	(1972)	(1972)

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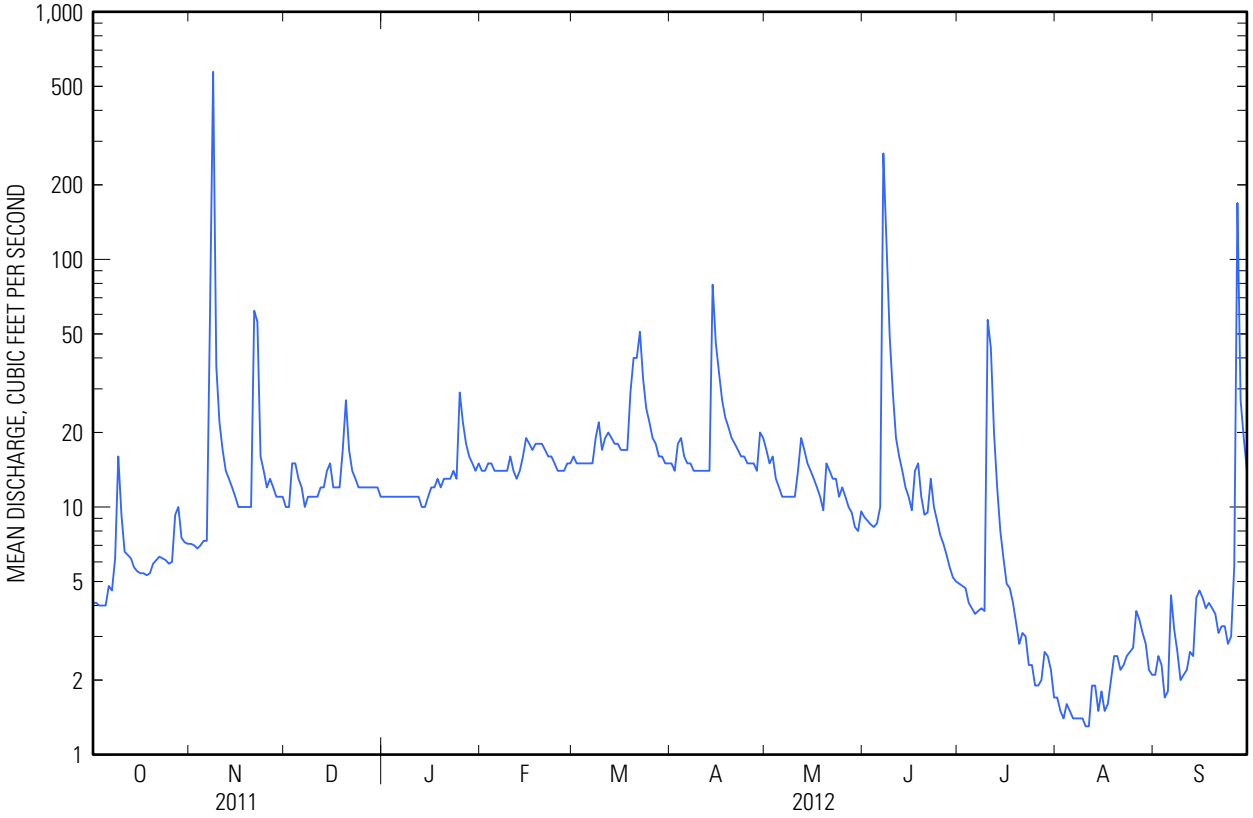
SUMMARY STATISTICS

	Calendar Year 2011		Water Year 2012		Water Years 1969 - 2012	
Annual total	5,019.1		5,492.1			
Annual mean	13.8		15.0		29.6	
Highest annual mean					91.0	1987
Lowest annual mean					10.1	1979
Highest daily mean	572	Nov 8	572	Nov 8	3,750	Sep 29, 1986
Lowest daily mean	1.6	Aug 2	1.3	Aug 10[a]	0.00	Aug 18, 1970[b]
Annual seven-day minimum	1.8	Aug 2	1.4	Aug 5	0.04	May 24, 1971
Maximum peak flow			2,140	Nov 8	12,000	Jun 4, 1995
Maximum peak stage			15.58	Nov 8	24.38	Sep 29, 1986
Annual runoff (ac-ft)	9,960		10,890		21,410	
10 percent exceeds	21		19		37	
50 percent exceeds	10		11		16	
90 percent exceeds	2.5		2.4		5.2	

[a] Also Aug. 11.
[b] Also Aug. 19, 1970, and may 26-30,1971.



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WATER-QUALITY RECORDS

PERIOD OF RECORD.--1987-1990, June 2003 to September 2012, discontinued.

REMARKS.--Samples were collected periodically and specific conductance, pH, water temperature, alkalinity and dissolved oxygen were determined in the field.

WATER-QUALITY DATA
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

Part 1 of 5

[%, percent; $CaCO_3$, calcium carbonate; N, nitrogen; P, phosphorus; ft^3/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; mm, millimeters; °C, degrees Celsius; µS/cm, microsiemens per centimeter; <, less than]

Date	Sample start time	Barometric pressure, mm Hg (00025)	Temperature, air, °C (00020)	Discharge, instantaneous, ft^3/s (00061)	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)	Temperature, water, °C (00010)	Alkalinity, water, filtered, inflection-point, incremental titration method, field, mg/L as $CaCO_3$ (39086)
10-10-2011	**1700**	730	23.9	7.9	8.7	97	7.9	800	18.7	211
11-08-2011	**1230**	722	9.0	194	10.0	99	7.8	242	12.2	51
03-19-2012	**1630**	717	19.0	31	8.1	87	8.0	726	16.1	212
08-28-2012	**1230**	726	35.2	3.2	10.0	126	8.1	722	24.7	140
09-05-2012	**1300**	721	39.2	1.9	8.1	108	8.2	725	27.2	135
09-12-2012	**1230**	724	33.3	2.8	9.5	113	8.0	746	21.3	219
09-27-2012	**1130**	725	20.0	77	7.2	78	7.5	450	16.8	64

WATER-QUALITY DATA
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

Part 2 of 5

[%, percent; $CaCO_3$, calcium carbonate; N, nitrogen; P, phosphorus; ft^3/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; mm, millimeters; °C, degrees Celsius; µS/cm, microsiemens per centimeter; <, less than]

Date	Sample start time	Bicarbonate, water, filtered, inflection-point, incremental titration method, field, mg/L (00453)	Carbon dioxide, water, unfiltered, mg/L (00405)	Carbonate, water, filtered, inflection-point incremental titration method, field, mg/L (00452)	Ammonia plus organic nitrogen, water, unfiltered, mg/L as N (00625)	Ammonia, water, filtered, mg/L as NH4 (71846)	Ammonia, water, filtered, mg/L as N (00608)	Nitrate plus nitrite, water, filtered, mg/L as N (00631)	Nitrate, water, filtered, mg/L (71851)
10-10-2011	**1700**	253	5.7	2.0	.64	.059	.046	1.24	5.39
11-08-2011	**1230**	62	1.6	.0	3.9	< .013	< .010	.56	2.39
03-19-2012	**1630**	257	4.5	< 1	1.3	.202	.157	.92	3.79
08-28-2012	**1230**	167	2.1	2	.43	.085	.066	1.10	4.76
09-05-2012	**1300**	160	1.6	2	--	--	--	--	--
09-12-2012	**1230**	261	4.2	3	.28	.029	.023	1.14	5.01
09-27-2012	**1130**	77	3.9	< 1	5.7	.364	.282	1.23	5.27

07325800 COBB CREEK NEAR EAKLY, OK—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012
Part 3 of 5
[%, percent; $CaCO_3$, calcium carbonate; N, nitrogen; P, phosphorus; ft^3/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; mm, millimeters; °C, degrees Celsius; µS/cm, microsiemens per centimeter; <, less than]

Date	Sample start time	Nitrate, water, filtered, mg/L as N (00618)	Nitrite, water, filtered, mg/L (71856)	Nitrite, water, filtered, mg/L as N (00613)	Organic nitrogen, water, unfiltered, mg/L (00605)	Orthophosphate, water, filtered, mg/L (00660)	Orthophosphate, water, filtered, mg/L as P (00671)	Phosphorus, water, filtered, mg/L as P (00666)	Phosphorus, water, unfiltered, mg/L as P (00665)
10-10-2011	**1700**	1.22	.067	.020	.60	.243	.079	.08	.11
11-08-2011	**1230**	.540	.069	.021	< 3.9	.205	.067	.126	1.05
03-19-2012	**1630**	.856	.209	.064	1.1	.233	.076	.094	.293
08-28-2012	**1230**	1.08	.078	.024	.37	.215	.070	.085	.105
09-05-2012	**1300**	--	--	--	--	--	--	--	--
09-12-2012	**1230**	1.13	.037	.011	.25	.171	.056	.060	.066
09-27-2012	**1130**	1.19	.132	.040	5.4	.251	.082	.114	1.44

WATER-QUALITY DATA
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012
Part 4 of 5
[%, percent; $CaCO_3$, calcium carbonate; N, nitrogen; P, phosphorus; ft^3/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; mm, millimeters; °C, degrees Celsius; µS/cm, microsiemens per centimeter; <, less than]

Date	Sample start time	Total nitrogen, water, unfiltered, mg/L (00600)	Suspended sediment, fall diameter (deionized water), percent smaller than 0.002 mm (70337)	Suspended sediment, fall diameter (deionized water), percent smaller than 0.004 mm (70338)	Suspended sediment, fall diameter (deionized water), percent smaller than 0.016 mm (70340)	Suspended sediment, fall diameter (deionized water), percent smaller than 0.0625 mm (70342)	Suspended sediment, fall diameter (deionized water), percent smaller than 0.125 mm (70343)	Suspended sediment, fall diameter (deionized water), percent smaller than 0.25 mm (70344)	Suspended sediment, fall diameter (deionized water), percent smaller than 0.5 mm (70345)	Suspended sediment concentration, mg/L (80154)
10-10-2011	**1700**	1.9	--	--	--	--	--	--	--	--
11-08-2011	**1230**	4.5	--	--	--	84	98	100	--	1,440
03-19-2012	**1630**	2.2	--	--	--	77	96	99	100	266
08-28-2012	**1230**	1.5	--	--	--	85	89	100	--	75
09-05-2012	**1300**	--	--	--	--	--	--	--	--	--
09-12-2012	**1230**	1.4	--	--	--	67	91	100	--	51
09-27-2012	**1130**	6.9	65	75	87	100	--	--	--	1,540

07325800 COBB CREEK NEAR EAKLY, OK—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

Part 5 of 5

[%, percent; $CaCO_3$, calcium carbonate; N, nitrogen; P, phosphorus; ft^3/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; mm, millimeters; °C, degrees Celsius; µS/cm, microsiemens per centimeter; <, less than]

Date	Sample start time	Suspended sediment discharge, tons per day (80155)
10-10-2011	**1700**	--
11-08-2011	**1230**	754
03-19-2012	**1630**	22
08-28-2012	**1230**	.65
09-05-2012	**1300**	--
09-12-2012	**1230**	.39
09-27-2012	**1130**	320