Water-Data Report 2013

08158920 Williamson Creek at Oak Hill, TX

Middle Colorado-Llano Basin
Austin-Travis Lakes Subbasin

LOCATION.--Lat 30°14′06″, long 97°51′36″ referenced to North American Datum of 1927, Travis County, TX, Hydrologic Unit 12090205, at downstream side of bridge on U.S. Highway 290 and State Highway 71 at intersection with McCarty Lane, and 7.7 mi southwest of the State Capitol Building in Austin.

DRAINAGE AREA.--6.30 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.-- Jan. 1974 to Feb. 1977 (periodic discharge measurements only), Jan. 1978 to Mar. 1993, Mar. 2003 to current year.

GAGE.--Water-stage recorder. Datum of gage is 798.68 ft above NGVD of 1929 (City of Austin benchmark). Prior to Mar. 2003, at present site at 2.0 ft lower datum. Satellite telemeter at station.

REMARKS.--Records fair except for estimated daily discharges and discharges less than 1.0 ft^3/s, which are poor. No known regulation or diversion. No flow at times. Some records listed in the "Period of Record" for surface water and water quality may not be available electronically.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 330 ft^3/s and (or) maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)
Apr 2	1755	638	7.30
Sep 20	1445	*806	*7.61
Sep 29	0115	353	6.61

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	39	0.00	0.15	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	14	0.00	0.08	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	2.2	0.00	0.07	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.88	0.00	0.11	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.34	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	7.2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.56	0.00	0.00	0.08	0.00	1.5	0.09	12	0.00	0.00	0.00	0.00
11	0.07	0.00	0.00	0.00	0.00	0.00	0.03	4.8	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.35	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.01	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.70	0.00
16	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.1	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.35	0.06	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	91
21	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.2
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14	0.00	0.00	0.00	0.01
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.4	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.0	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.7	0.00	0.60	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.86	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	---	0.00	0.00	0.34	0.00	0.00	0.00	32
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.13	0.00	0.00	0.00	1.6
31	0.00	---	0.00	0.00	---	0.00	---	0.09	---	0.00	0.00	---
Total	0.64	0.00	0.00	7.28	0.00	1.50	56.69	48.68	0.84	3.82	0.87	129.88
Mean	0.02	0.00	0.00	0.23	0.00	0.05	1.89	1.57	0.03	0.12	0.03	4.33
Max	0.56	0.00	0.00	7.2	0.00	1.5	39	14	0.35	3.1	0.70	91
Min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ac-ft	1.3	0.00	0.00	14	0.00	3.0	112	97	1.7	7.6	1.7	258
Cfsm	0.00	0.00	0.00	0.04	0.00	0.01	0.30	0.25	0.00	0.02	0.00	0.69
In.	0.00	0.00	0.00	0.04	0.00	0.01	0.33	0.29	0.00	0.02	0.01	0.77

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 2013[h], BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	2.13	3.30	4.48	3.33	4.00	3.86	2.91	7.56	8.17	1.86	0.46	1.82
Max	21.9	32.4	57.2	15.5	26.6	13.8	20.1	29.0	88.7	17.1	3.89	19.4
(WY)	(1987)	(1986)	(1992)	(1991)	(1992)	(1992)	(1979)	(1992)	(1981)	(2007)	(1991)	(2010)
Min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00
(WY)	(1979)	(1980)	(1990)	(1990)	(2013)	(2011)	(2011)	(2011)	(2008)	(1980)	(1980)	(1984)

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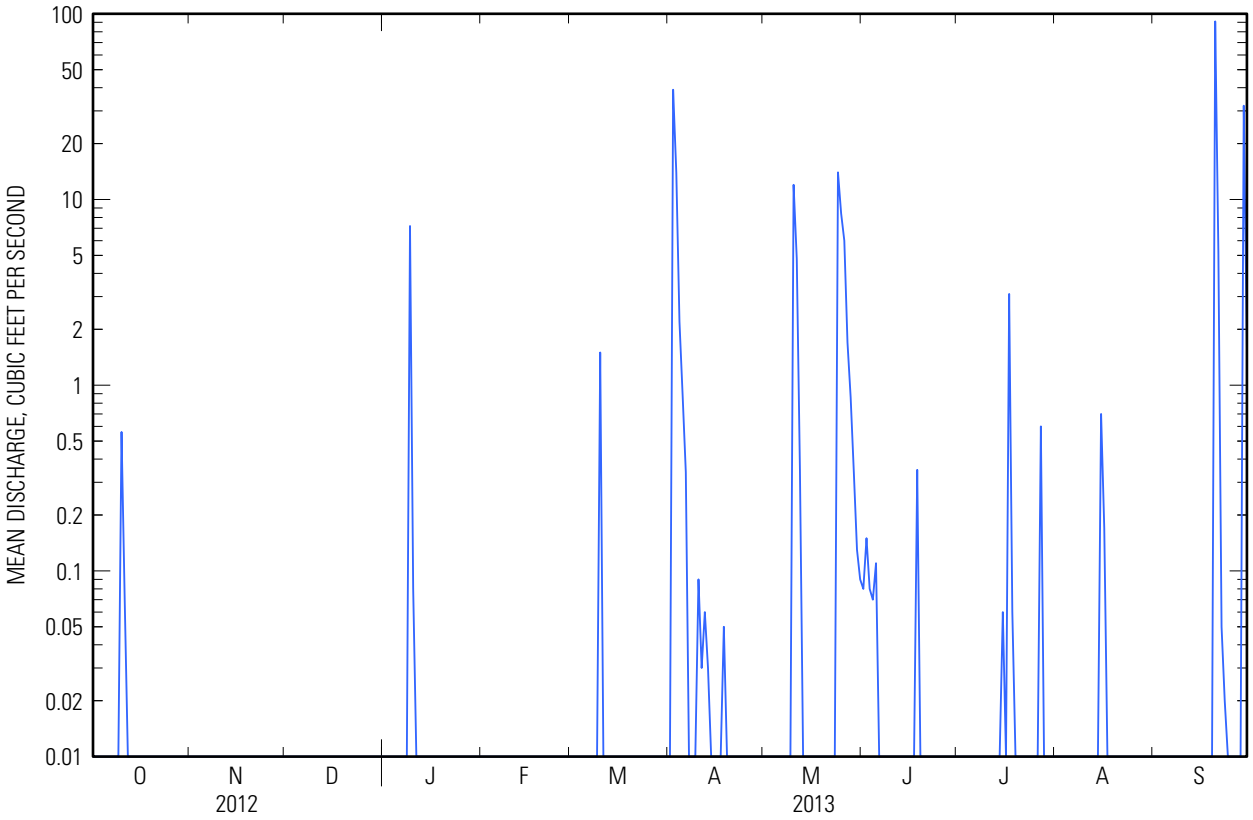
SUMMARY STATISTICS

	Calendar Year 2012		Water Year 2013		Water Years 1979 - 2013[h]	
Annual total	1,013.02		250.20			
Annual mean	2.77		0.69		3.76	
Highest annual mean					12.8	1992
Lowest annual mean					0.07	2011
Highest daily mean	159	Jul 15	91	Sep 20	977	Jun 11, 1981
Lowest daily mean	0.00	Jan 1	0.00	Oct 1	0.00	Oct 1, 1978
Annual seven-day minimum	0.00	Jan 1	0.00	Oct 1	0.00	Oct 1, 1978
Maximum peak flow			806	Sep 20	[i]4,750	May 18, 1992
Maximum peak stage			7.61	Sep 20	[g]9.97	May 18, 1992
Annual runoff (ac-ft)	2,010		496		2,720	
Annual runoff (cfsm)	0.439		0.109		0.596	
Annual runoff (inches)	5.98		1.48		8.10	
10 percent exceeds	5.3		0.06		7.0	
50 percent exceeds	0.00		0.00		0.06	
90 percent exceeds	0.00		0.00		0.00	

[g] At datum then in use.
[i] From indirect measurement of peak flow.
[h] See Period of Record paragraph.



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WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: Jan. 1974 to Mar. 1993, July 2004 to Mar. 2005, Jan. 2007 to current year.
BIOCHEMICAL DATA: Jan. 1974 to Mar. 1993, July 2004 to Mar. 2005, Jan. 2007 to current year.
BIOLOGICAL DATA: Apr. 1978 to Mar. 1993, July 2007, Mar. 2009 to Mar 2010.
RADIOCHEMICAL DATA: Apr. 1980, June 1981.
STABLE ISOTOPES DATA: Mar. 2009 to Mar. 2010.
PESTICIDE DATA: Jun. 1978 to Feb. 1985, July 2004 to Mar. 2005, July 2007 to Feb. 2010.
ORGANICS, OTHER DATA: Mar. 2009 to Feb. 2010.
SEDIMENT DATA: Nov. 2004, Jan. 2007 to Mar. 2010.

INSTRUMENTATION.--Stage-activated automatic sampler.

WATER-QUALITY DATA
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013

Part 1 of 4

[$CaCO_3$, calcium carbonate; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; mg/L, milligrams per liter; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated]

Date	Sample start time	Medium name	Sample type	Color, water, filtered, platinum cobalt units (00080)	Discharge, mean for storm event, cubic feet per second (72123)	pH, water, unfiltered, field, standard units (00400)	Specific conductance, water, unfiltered, laboratory, µS/cm at 25°C (90095)	Specific conductance, water, unfiltered, µS/cm at 25°C (00095)
05-10-2013	**1950**	Surface water	Composite (time)	35	43	7.7	160	155
05-24-2013	**1455**	Surface water	Composite (time)	40	36	7.5	169	169
07-17-2013	**1625**	Surface water	Composite (time)	35	11	7.5	139	127
08-15-2013	**2150**	Surface water	Composite (time)	35	3	7.2	190	185

WATER-QUALITY DATA
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013

Part 2 of 4

[$CaCO_3$, calcium carbonate; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; mg/L, milligrams per liter; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated]

Date	Sample start time	Turbidity, water, unfiltered, broad band light source (400-680 nm), detectors at multiple angles including 90 +/- 30 degrees, ratiometric correction, NTRU (63676)	Suspended solids, water, unfiltered, mg/L (00530)	Alkalinity, water, filtered, inflection-point, incremental titration method, field, mg/L as $CaCO_3$ (39086)	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, unfiltered, milligrams per liter as NH4 (71845)
05-10-2013	**1950**	71	115	55.0	E 66.8	2.3	< 1.0	0.51	0.267
05-24-2013	**1455**	48	59	58.1	E 70.7	3.3	< 1.0	1.1	.189
07-17-2013	**1625**	68	113	41.5	E 50.5	2.4	< 1.0	.93	.072
08-15-2013	**2150**	22	< 30	59.9	E 73.0	6.7	< 1.0	1.1	.124

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WATER-QUALITY DATA
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013
Part 3 of 4
[$CaCO_3$, calcium carbonate; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; mg/L, milligrams per liter; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated]

Date	Sample start time	Ammonia, water, unfiltered, mg/L as N (00610)	Nitrate plus nitrite, water, filtered, mg/L as N (00631)	Nitrate, water, filtered, mg/L (71851)	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)	Orthophos-phate, water, filtered, mg/L (00660)	Orthophos-phate, water, filtered, mg/L as P (00671)
05-10-2013	**1950**	0.21	0.42	1.80	0.407	0.042	0.013	0.30	0.184	0.060
05-24-2013	**1455**	.15	.37	1.56	.353	.043	.013	.90	.151	.049
07-17-2013	**1625**	.06	.35	1.52	.343	.027	.008	.88	.129	.042
08-15-2013	**2150**	.10	.71	3.01	.680	.088	.027	1.0	.139	.045

WATER-QUALITY DATA
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013
Part 4 of 4
[$CaCO_3$, calcium carbonate; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; mg/L, milligrams per liter; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated]

Date	Sample start time	Phos-phorus, water, filtered, mg/L as P (00666)	Phosphorus, water, unfiltered, mg/L as P (00665)	Total nitrogen, water, unfiltered, mg/L (00600)	Copper, water, unfiltered, recover-able, µg/L (01042)	Lead, water, unfiltered, recover-able, µg/L (01051)	Zinc, water, unfiltered, recover-able, µg/L (01092)	Organic carbon, water, unfiltered, mg/L (00680)
05-10-2013	**1950**	0.08	0.08	0.93	5.8	6.11	29.5	19.2
05-24-2013	**1455**	.06	.15	1.4	3.9	3.33	16.3	10.0
07-17-2013	**1625**	.05	.16	1.3	9.0	7.37	37.4	12.2
08-15-2013	**2150**	.11	.19	1.8	5.1	2.64	16.1	13.1