



Water-Data Report 2013

07233550 Palo Duro Reservoir near Spearman, TX

Beaver Basin
Palo Duro Subbasin

LOCATION.--Lat 36°21'41.19", long 101°09'50.46" referenced to North American Datum of 1983, Hansford County, TX, Hydrologic Unit 11100104, near the center of the dam on the access road on the upstream side of the dam approximately 70' below the top of the dam/FM 3214 and approximately 25 river miles downstream from the Palo Duro Creek nr. Spearman, TX stream gage.

DRAINAGE AREA.--1,415 mi² of which 520 mi² probably is noncontributing.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--June 1999 to Sept. 2002 (daily mean contents), Oct. 2002 to current year (daily mean elevation). Due to water level decline in the reservoir causing the gage orifice to be isolated from the main body of water, from Oct. 15, 2005 to Jun. 15, 2010, published daily values are once-daily observer readings.

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929. Satellite telemeter at station.

COOPERATION.--Area-capacity curves developed by Freese and Nichols, Inc. and provided by the Palo Duro River Authority.

REMARKS.--Records good except those for Oct. 1-20, which are poor. The lake is formed by a rolled earthfill dam 3,800 ft long. The dam was completed Feb. 11, 1991, and storage began May 22, 1991. The dam and lake are owned by the Palo Duro River Authority. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam.....	2,943.0
Design flood (2-foot freeboard).....	2,919.0
Crest of spillway.....	2,915.0
Lowest gated outlet	2,892.0

EXTREMES FOR PERIOD OF RECORD.--(period of daily mean contents) Maximum contents, 32,910 acre-ft, Jul. 1, 1999, elevation, 2,877.89 ft; minimum contents, 4,000 acre-ft, Sept. 30, 2002, elevation, 2,846.23 ft; (period of daily mean elevation) maximum elevation, 2,879.75 ft, Jun. 15, 2010; minimum elevation, 2,829.96 ft, Apr. 14, 2010.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 2,848.58 ft, Aug. 17; minimum elevation, 2,834.49 ft, June 7.

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ELEVATION OF RESERVOIR WATER SURFACE ABOVE DATUM, FEET
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	---	2,838.86	2,838.18	2,837.63	2,837.18	2,836.94	2,836.33	2,835.64	2,834.70	2,840.67	2,840.12	2,846.80
2	---	2,838.84	2,838.17	2,837.63	2,837.17	2,836.93	2,836.30	2,835.61	2,834.68	2,840.61	2,840.07	2,846.70
3	2,839.63	2,838.81	2,838.14	2,837.61	2,837.17	2,836.92	2,836.29	2,835.59	2,834.65	2,840.55	2,840.01	2,846.61
4	---	2,838.79	2,838.12	2,837.59	2,837.14	2,836.91	2,836.29	2,835.57	2,834.60	2,840.49	2,839.96	2,846.53
5	2,839.58	2,838.77	2,838.11	2,837.58	2,837.12	2,836.88	2,836.29	2,835.54	2,834.56	2,840.43	2,839.91	2,846.44
6	---	2,838.74	2,838.08	2,837.56	2,837.11	2,836.87	2,836.24	2,835.53	2,834.53	2,840.36	2,839.86	2,846.35
7	---	2,838.73	2,838.06	2,837.55	2,837.08	2,836.85	2,836.23	2,835.51	2,834.52	2,840.29	2,839.84	2,846.27
8	2,839.48	2,838.70	2,838.05	2,837.54	2,837.07	2,836.83	2,836.22	2,835.48	2,837.09	2,840.23	2,840.42	2,846.20
9	2,839.46	2,838.69	2,838.02	2,837.53	2,837.06	2,836.82	2,836.19	2,835.45	2,841.96	2,840.17	2,842.91	2,846.11
10	2,839.44	2,838.67	---	2,837.56	2,837.02	2,836.75	2,836.14	2,835.45	2,842.05	2,840.12	2,845.34	2,846.03
11	2,839.41	2,838.62	2,837.95	2,837.58	2,836.99	2,836.73	2,836.13	2,835.43	2,841.92	2,840.14	2,846.15	2,845.95
12	2,839.39	2,838.59	2,837.95	2,837.53	2,837.00	2,836.72	2,836.11	2,835.41	2,841.79	2,840.09	2,846.05	2,845.89
13	---	2,838.57	2,837.93	2,837.50	2,837.00	2,836.70	2,836.11	2,835.38	2,841.68	2,840.04	2,845.89	2,845.84
14	---	2,838.53	2,837.93	2,837.49	2,836.99	2,836.68	2,836.08	2,835.34	2,841.59	2,839.98	2,845.76	2,845.88
15	2,839.36	2,838.51	2,837.92	2,837.47	2,836.97	2,836.67	2,836.04	2,835.31	2,841.49	2,839.93	2,845.93	2,845.82
16	2,839.32	2,838.49	2,837.90	2,837.46	2,836.95	2,836.64	2,836.00	2,835.28	2,841.46	2,839.92	2,847.91	2,845.80
17	2,839.28	2,838.48	2,837.88	2,837.45	2,836.93	2,836.62	2,835.98	2,835.25	2,841.42	2,839.90	2,848.55	2,845.76
18	2,839.24	2,838.45	2,837.87	2,837.44	2,836.91	2,836.60	2,835.95	2,835.22	2,841.35	2,839.90	2,848.45	2,845.69
19	2,839.20	2,838.43	2,837.84	2,837.42	2,836.88	2,836.58	2,835.93	2,835.17	2,841.31	2,839.86	2,848.28	2,845.64
20	2,839.15	2,838.41	2,837.82	2,837.40	2,836.89	2,836.56	2,835.92	2,835.14	2,841.29	2,839.80	2,848.13	2,845.68
21	2,839.14	2,838.41	2,837.80	2,837.38	2,836.91	2,836.54	2,835.89	2,835.11	2,841.39	2,839.77	2,847.99	2,845.65
22	2,839.12	2,838.37	2,837.79	2,837.37	2,836.91	2,836.51	2,835.86	2,835.06	2,841.33	2,840.11	2,847.85	2,845.58
23	2,839.10	2,838.35	2,837.77	2,837.35	2,836.90	2,836.49	2,835.82	2,835.03	2,841.24	2,840.56	2,847.73	2,845.51
24	2,839.07	2,838.33	2,837.75	2,837.34	2,836.89	2,836.48	2,835.80	2,835.01	2,841.17	2,840.51	2,847.61	2,845.45
25	2,839.03	2,838.30	2,837.71	2,837.32	2,836.95	2,836.47	2,835.80	2,834.99	2,841.08	2,840.48	2,847.49	2,845.40
26	2,839.00	2,838.28	---	2,837.32	2,836.97	2,836.45	2,835.77	2,834.95	2,841.00	2,840.42	2,847.39	2,845.34
27	2,838.97	2,838.24	2,837.69	2,837.31	2,836.97	2,836.43	2,835.77	2,834.91	2,840.94	2,840.37	2,847.27	2,845.28
28	2,838.95	2,838.22	2,837.67	2,837.30	2,836.95	2,836.41	2,835.75	2,834.86	2,840.87	2,840.31	2,847.17	2,845.28
29	2,838.93	2,838.21	2,837.64	2,837.26	---	2,836.39	2,835.73	2,834.84	2,840.80	2,840.25	2,847.07	2,845.22
30	2,838.91	2,838.20	2,837.65	2,837.24	---	2,836.37	2,835.71	2,834.79	2,840.74	2,840.21	2,846.98	2,845.17
31	2,838.89	---	2,837.66	2,837.21	---	2,836.36	---	2,834.75	---	2,840.16	2,846.89	---
Mean	---	2,838.52	---	2,837.45	2,837.00	2,836.65	2,836.02	2,835.24	2,839.64	2,840.21	2,845.19	2,845.86
Max	---	2,838.86	---	2,837.63	2,837.18	2,836.94	2,836.33	2,835.64	2,842.05	2,840.67	2,848.55	2,846.80
Min	---	2,838.20	---	2,837.21	2,836.88	2,836.36	2,835.71	2,834.75	2,834.52	2,839.77	2,839.84	2,845.17

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