



Water-Data Report TX-2005

07233550 Palo Duro Reservoir near Spearman, TX

Arkansas River Basin

LOCATION.--Lat 36°21'42", long 101°09'48" referenced to North American Datum of 1927, Hansford County, Hydrologic Unit 11100104, on intake tower south of dam on Palo Duro Creek, 11 mi north of Spearman.

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

WATER-STAGE RECORDS

PERIOD OF RECORD.--June 1999 to Sept. 2002 (daily mean contents), Oct. 2002 to current year (daily mean elevation).

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 the periods of Oct. 13 to Dec. 2, and June 9 to 29, which are fair. 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, July 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, 2,853.88 July 2, 2004; minimum elevation, 2,840.55 ft, May 6, June 19, 2004.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 2,848.58 Jan. 8; minimum elevation, 2,840.88, Sept. 28, 30.

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ELEVATION ABOVE NGVD 1929, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	2,848.52	2,847.49	2,848.26	2,847.51	2,848.00	2,847.41	2,846.63	2,845.81	2,845.01	2,844.26	2,842.92	2,842.00
2	2,848.47	2,847.50	2,848.23	2,847.45	2,847.99	2,847.39	2,846.61	2,845.85	2,844.99	2,844.30	2,842.88	2,841.97
3	2,848.42	2,847.46	2,848.14	2,847.45	2,847.97	2,847.37	2,846.59	2,845.84	2,844.96	2,844.27	2,842.83	2,841.92
4	2,848.39	2,847.42	2,848.09	2,847.47	2,847.94	2,847.35	2,846.58	2,845.83	2,844.95	2,844.21	2,842.78	2,841.89
5	2,848.36	2,847.41	2,848.12	2,848.01	2,847.92	2,847.32	2,846.56	2,845.83	2,844.91	2,844.17	2,842.75	2,841.84
6	2,848.36	2,847.37	2,848.10	2,848.40	2,847.93	2,847.30	2,846.55	2,845.82	2,844.89	2,844.14	2,842.72	2,841.80
7	2,848.33	2,847.34	2,848.08	2,848.49	2,847.91	2,847.28	2,846.48	2,845.79	---	2,844.10	2,842.69	2,841.78
8	2,848.29	2,847.31	2,848.07	2,848.53	2,847.89	2,847.23	2,846.48	2,845.76	---	2,844.05	2,842.65	2,841.74
9	2,848.27	2,847.30	2,848.04	2,848.55	2,847.86	2,847.20	2,846.45	2,845.72	2,844.70	2,844.02	2,842.62	2,841.70
10	2,848.24	2,847.30	2,848.01	2,848.53	2,847.85	2,847.17	2,846.41	2,845.72	2,844.67	2,843.97	2,842.58	2,841.66
11	2,848.22	2,847.23	2,847.98	2,848.50	2,847.83	2,847.14	2,846.36	2,845.69	2,844.64	2,843.92	2,842.55	2,841.62
12	2,848.21	2,847.19	2,847.96	2,848.51	2,847.83	2,847.12	2,846.30	2,845.61	2,844.75	2,843.88	2,842.51	2,841.59
13	2,848.17	2,847.16	2,847.91	2,848.45	2,847.82	2,847.06	2,846.26	2,845.59	2,844.85	2,843.83	2,842.46	2,841.54
14	2,848.11	2,847.16	2,847.88	2,848.39	2,847.78	2,847.02	2,846.25	2,845.56	2,844.82	2,843.80	2,842.42	2,841.49
15	2,848.08	2,847.16	2,847.87	2,848.34	2,847.76	2,847.02	2,846.21	2,845.51	2,844.80	2,843.76	2,842.40	2,841.46
16	2,848.04	2,847.15	2,847.84	2,848.32	2,847.71	2,847.01	2,846.21	2,845.49	2,844.77	2,843.71	2,842.38	2,841.43
17	2,848.03	2,847.17	2,847.81	2,848.30	2,847.69	2,847.00	2,846.20	2,845.48	2,844.72	2,843.67	2,842.36	2,841.38
18	2,848.00	2,847.15	2,847.79	2,848.29	2,847.66	2,846.98	2,846.24	2,845.42	2,844.69	2,843.62	2,842.33	2,841.35
19	2,847.95	2,847.12	2,847.77	2,848.28	2,847.68	2,846.95	2,846.26	2,845.39	2,844.63	2,843.57	2,842.29	2,841.31
20	2,847.92	2,847.09	2,847.76	2,848.26	2,847.65	2,846.94	2,846.23	2,845.36	2,844.55	2,843.51	2,842.25	2,841.28
21	2,847.89	2,847.09	2,847.72	2,848.24	2,847.62	2,846.91	2,846.20	2,845.33	2,844.51	2,843.45	2,842.22	2,841.25
22	2,847.86	2,847.09	2,847.68	2,848.19	2,847.59	2,846.87	2,846.14	2,845.28	2,844.49	2,843.40	2,842.20	2,841.20
23	2,847.80	2,847.14	2,847.63	2,848.16	2,847.56	2,846.85	2,846.08	2,845.26	2,844.46	2,843.36	2,842.30	2,841.17
24	2,847.76	2,847.41	2,847.59	2,848.14	2,847.54	2,846.83	2,846.06	2,845.22	2,844.38	2,843.30	2,842.28	2,841.14
25	2,847.71	2,847.81	2,847.61	2,848.13	2,847.52	2,846.79	2,846.02	2,845.16	2,844.32	2,843.24	2,842.25	2,841.10
26	2,847.70	2,848.20	2,847.60	2,848.09	2,847.51	2,846.76	2,845.99	2,845.11	2,844.28	2,843.17	2,842.23	2,841.06
27	2,847.68	2,848.37	2,847.59	2,848.06	2,847.47	2,846.76	2,845.97	2,845.08	2,844.29	2,843.12	2,842.19	2,841.02
28	2,847.66	2,848.40	2,847.57	2,848.06	2,847.45	2,846.76	2,845.93	2,845.06	2,844.31	2,843.11	2,842.15	2,840.98
29	2,847.62	2,848.33	2,847.55	2,848.05	---	2,846.75	2,845.87	2,845.06	2,844.31	2,843.06	2,842.12	2,840.94
30	2,847.56	2,848.29	2,847.55	2,848.04	---	2,846.71	2,845.85	2,845.01	2,844.27	2,843.00	2,842.08	2,840.92
31	2,847.52	---	2,847.51	2,848.03	---	2,846.66	---	2,845.00	---	2,842.96	2,842.03	---
Mean	2,848.04	2,847.45	2,847.85	2,848.17	2,847.75	2,847.03	2,846.27	2,845.47	---	2,843.68	2,842.43	2,841.45
Max	2,848.52	2,848.40	2,848.26	2,848.55	2,848.00	2,847.41	2,846.63	2,845.85	---	2,844.30	2,842.92	2,842.00
Min	2,847.52	2,847.09	2,847.51	2,847.45	2,847.45	2,846.66	2,845.85	2,845.00	---	2,842.96	2,842.03	2,840.92

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