Water-Data Report 2012

08031400 Lake Palestine near Frankston, TX

Neches Basin
Upper Neches Subbasin

LOCATION.--Lat 32°03′12″, long 95°26′12″ referenced to North American Datum of 1927, Anderson County, TX, Hydrologic Unit 12020001, in outlet tower near right bank, 140 ft upstream from Blackburn Crossing Dam on Neches River, 5.0 mi east of Frankston, 21 mi upstream from Neches River near Neches (station 08032000), and at mile 354.0.

DRAINAGE AREA.--839 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--Feb. 1962 to June 1995 (Nov. 1989 to May 1990-miscellaneous discharge measurements), May 1999 to Sept. 2002 (contents). Oct. 2002 to current year (reservoir elevation).

PERIOD OF RECORD, Water-Quality.--
CHEMICAL DATA: Oct. 1976 to Sept. 1984.
RADIOCHEMICAL DATA: Jan. 1981.

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929. Prior to Sept. 20, 1962, nonrecording gage read once daily. Satellite telemeter at station.

REMARKS.--Records good. The lake is formed by a rolled earthfill dam with a 500-foot-wide uncontrolled spillway near left end of dam. Deliberate impoundment began May 1, 1962. Enlargement of the lake began Sept. 26, 1969, and was completed on Mar. 3, 1971. The outlet works consist of two 5- x 7-foot gates located in concrete tower near center of dam and connected to an 8.5-foot-diameter concrete conduit through the dam. The low-flow outlet consists of two 3-foot iron pipes connected to the tower structure for low-flow releases. The dam is owned by the Upper Neches River Municipal Water Authority. The water is used for municipal and industrial purposes in the Palestine area. The diversion point is downstream from gage (station 08032000). There are no large diversions above station. Some records listed in the "Period of Record" for surface water and water quality may not be available electronically. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam	364.0
Design flood	355.3
Crest of spillway	345.0
Lowest gated outlet (invert)	298.0

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 531,100 acre-ft, May 19, 1989, elevation, 349.31 ft; minimum since first appreciable storage, 11,450 acre-ft Nov. 28, 1970, elevation 310.00 ft.

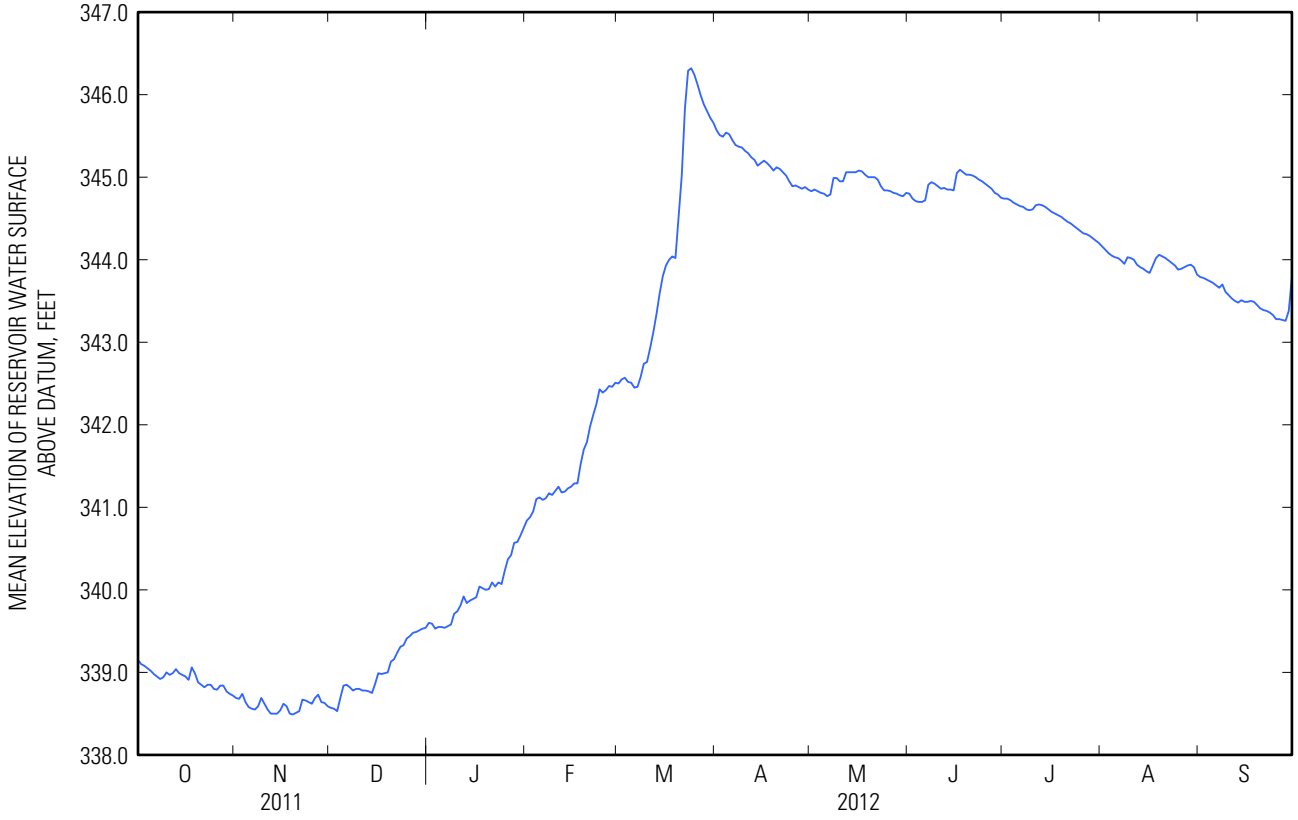
EXTREMES FOR CURRENT YEAR.--Maximum elevation, 346.35 ft, Mar. 23-24; minimum elevation, 338.37 ft, Nov. 21.

Suggested citation: U.S. Geological Survey, 2013, Water-resources data for the United States, Water Year 2012: U.S. Geological Survey Water-Data Report WDR-US-2012, site 08031400, accessed at http://wdr.water.usgs.gov/wy2012/pdfs/08031400.2012.pdf

08031400 Lake Palestine near Frankston, TX—Continued

ELEVATION OF RESERVOIR WATER SURFACE ABOVE DATUM, FEET
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	339.15	338.69	338.57	339.60	340.84	342.50	345.57	344.83	344.80	344.74	344.16	343.79
2	339.10	338.68	338.56	339.59	340.88	342.55	345.51	344.85	344.74	344.74	344.12	343.78
3	339.08	338.74	338.53	339.53	340.95	342.57	345.49	344.83	344.71	344.72	344.08	343.76
4	339.05	338.64	338.69	339.55	341.10	342.52	345.54	344.81	344.70	344.69	344.05	343.74
5	339.02	338.58	338.84	339.55	341.12	342.51	345.52	344.80	344.70	344.67	344.03	343.72
6	338.98	338.56	338.85	339.54	341.09	342.45	345.45	344.77	344.72	344.65	344.02	343.69
7	338.95	338.55	338.82	339.56	341.11	342.46	345.39	344.79	344.91	344.64	343.99	343.66
8	338.92	338.59	338.78	339.58	341.17	342.58	345.37	344.99	344.94	344.61	343.95	343.70
9	338.94	338.69	338.80	339.71	341.15	342.74	345.36	344.99	344.92	344.60	344.03	343.61
10	339.00	338.62	338.80	339.74	341.20	342.76	345.32	344.95	344.89	344.61	344.02	343.57
11	338.97	338.55	338.78	339.81	341.25	342.93	345.29	344.95	344.86	344.66	344.00	343.53
12	338.99	338.50	338.78	339.92	341.18	343.12	345.24	345.06	344.87	344.67	343.94	343.50
13	339.04	338.50	338.77	339.84	341.19	343.34	345.21	345.06	344.85	344.66	343.91	343.48
14	338.99	338.50	338.75	339.87	341.23	343.59	345.14	345.06	344.85	344.64	343.89	343.51
15	338.97	338.54	338.86	339.89	341.25	343.80	345.17	345.06	344.84	344.61	343.86	343.49
16	338.95	338.62	338.99	339.91	341.29	343.93	345.20	345.08	345.05	344.58	343.84	343.49
17	338.91	338.59	338.98	340.04	341.29	344.00	345.17	345.07	345.09	344.56	343.93	343.50
18	339.06	338.50	338.99	340.02	341.52	344.04	345.13	345.03	345.06	344.54	344.02	343.49
19	338.99	338.49	339.00	340.00	341.70	344.02	345.08	345.00	345.03	344.52	344.06	343.45
20	338.88	338.51	339.13	340.01	341.79	344.52	345.12	345.00	345.03	344.49	344.04	343.41
21	338.85	338.53	339.16	340.09	341.98	345.02	345.10	345.00	345.02	344.46	344.02	343.39
22	338.82	338.67	339.24	340.04	342.12	345.83	345.06	344.97	345.00	344.44	343.99	343.38
23	338.85	338.66	339.31	340.09	342.25	346.29	345.02	344.89	344.97	344.41	343.96	343.36
24	338.85	338.64	339.33	340.07	342.43	346.32	344.95	344.84	344.95	344.38	343.93	343.33
25	338.80	338.62	339.41	340.23	342.39	346.24	344.89	344.84	344.92	344.35	343.88	343.28
26	338.79	338.69	339.44	340.37	342.42	346.12	344.90	344.83	344.89	344.32	343.89	343.28
27	338.84	338.73	339.48	340.42	342.47	345.99	344.88	344.81	344.86	344.31	343.91	343.27
28	338.84	338.64	339.49	340.57	342.46	345.88	344.86	344.80	344.81	344.29	343.93	343.26
29	338.77	338.63	339.51	340.58	342.51	345.80	344.88	344.78	344.79	344.26	343.94	343.38
30	338.74	338.59	339.53	340.66	---	345.72	344.85	344.77	344.75	344.23	343.91	343.79
31	338.72	---	339.54	340.75	---	345.66	---	344.81	---	344.20	343.82	---
Mean	338.93	338.60	339.02	339.97	341.56	344.12	345.19	344.91	344.88	344.52	343.97	343.52
Max	339.15	338.74	339.54	340.75	342.51	346.32	345.57	345.08	345.09	344.74	344.16	343.79
Min	338.72	338.49	338.53	339.53	340.84	342.45	344.85	344.77	344.70	344.20	343.82	343.26

	Calendar Year 2011	Water Year 2012
Mean	341.43	342.43
Max	343.81	346.32
Min	338.49	338.49

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