Water-Data Report 2007

08054500 Grapevine Lake near Grapevine, TX

Upper Trinity Basin
Denton Subbasin

LOCATION.--Lat 32°58′21″, long 97°03′22″ referenced to North American Datum of 1927, Tarrant County, TX, Hydrologic Unit 12030104, in intake structure of Grapevine Dam on Denton Creek, 2.7 mi northeast of Grapevine, 4.3 mi upstream from bridge on State Highway 121, and 11.7 mi upstream from mouth.

DRAINAGE AREA.--695 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--July 1952 to Sept. 2000 (U.S. Army Corps of Engineers furnished contents), Oct. 2000 to Sept. 2002 (contents), Oct. 2002 to current year. Prior to Oct. 1970, published as "Grapevine Reservoir". Precipitation records: Oct. 2001 to Sept. 2002. Water-quality records: Chemical data: Oct. 1969 to Aug. 1986, Oct. 1997 to Sept. 2003. Biochemical data: Oct. 1969 to Aug. 1986, Oct. 1997 to Sept. 2003. Pesticide data: Sept. 1999 to Sept. 2003.

REVISED RECORDS.--WSP 1922: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929. Prior to May 16, 1953, nonrecording gage at site 1,000 ft upstream at present datum. Satellite telemeter at station.

REMARKS.--Records fair. The lake is formed by a rolled earthfill dam 12,850 ft long, including a 500-ft uncontrolled off-channel concrete-gravity spillway with an ogee weir section. The dam was completed in June 1952, and deliberate impoundment began July 3, 1952. The controlled outlet works consist of a 13.0 ft diameter concrete conduit that is controlled by two 6.5 by 13.0 ft broome-type gates and two 30 in steel pipes with service valves. The lake was built for flood control, navigation, and water conservation. The dam is owned by the U.S. Army Corps of Engineers. The city of Dallas uses part of this water for their municipal supply. An unknown amount of water is diverted for industrial and municipal uses. Inflow is affected at times by discharge from the flood-detention pools of 87 floodwater-retarding structures with a combined detention capacity of 57,850 acre-ft. These structures control runoff from 217 mi^2 in the Denton Creek watershed. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam	588.0
Crest of spillway	560.0
Lowest intake to wet wells (invert)	500.5
Invert of two broome-type gates	475.0

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 471,200 acre-ft, Nov. 1, 1981, elevation, 563.29 ft; minimum since lake first filled in 1957, 94,480 acre-ft, Feb. 26, 1979, elevation, 520.67 ft.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 554.74 ft, July 16,17; minimum elevation, 521.71 ft, Dec. 20.

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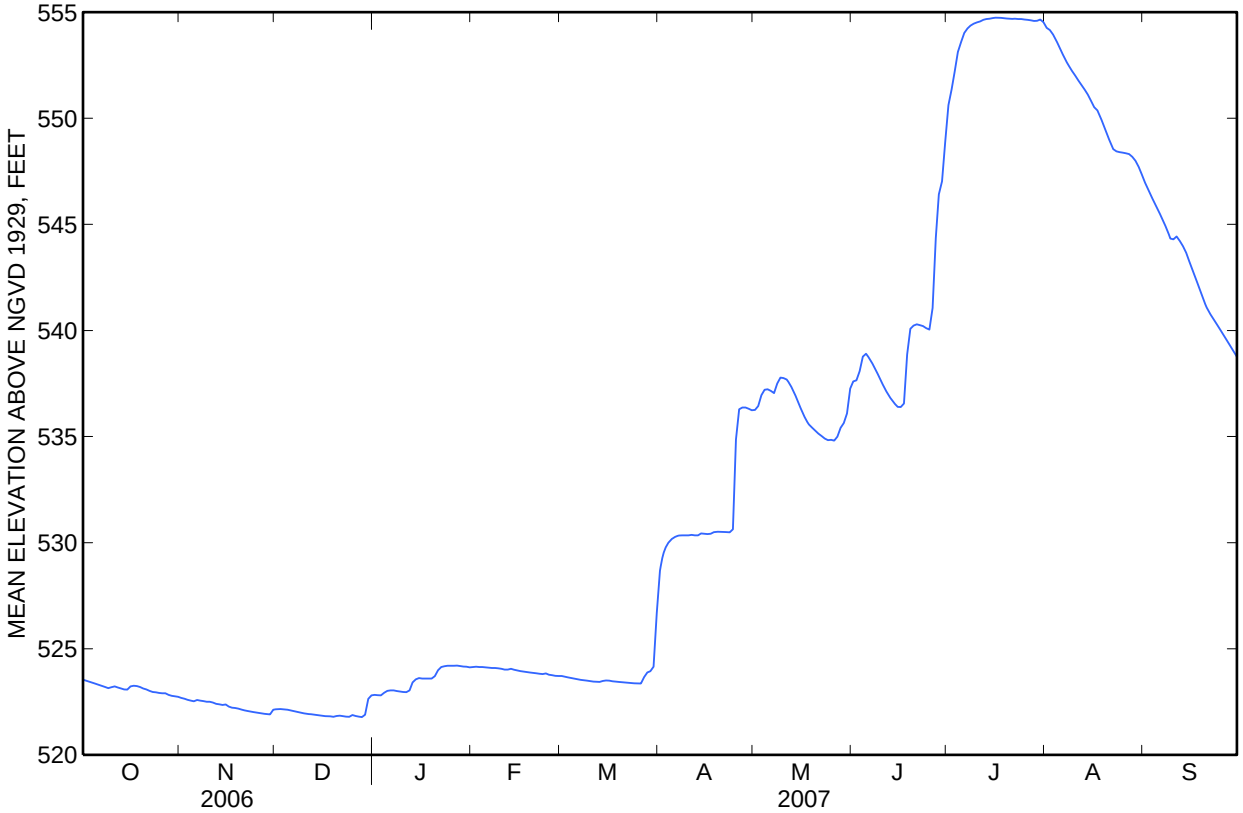
ELEVATION ABOVE NGVD 1929, FEET
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	523.55	522.69	522.16	522.83	524.14	523.72	528.68	536.26	537.60	550.62	554.26	546.99
2	523.50	522.65	522.16	522.82	524.16	523.68	529.44	536.44	537.65	551.36	554.15	546.65
3	523.45	522.60	522.17	522.81	524.14	523.66	529.82	536.95	538.08	552.19	553.94	546.32
4	523.40	522.56	522.14	522.93	524.14	523.62	530.06	537.21	538.77	553.12	553.66	546.00
5	523.36	522.53	522.11	523.02	524.13	523.59	530.20	537.23	538.90	553.59	553.35	545.72
6	523.31	522.59	522.08	523.04	524.11	523.57	530.29	537.15	538.71	554.02	553.04	545.43
7	523.25	522.56	522.06	523.04	524.10	523.54	530.34	537.05	538.44	554.23	552.72	545.09
8	523.20	522.54	522.02	523.01	524.10	523.52	530.35	537.50	538.16	554.36	552.46	544.70
9	523.15	522.51	521.98	522.99	524.08	523.50	530.35	537.78	537.86	554.45	552.23	544.33
10	523.19	522.51	521.95	522.97	524.06	523.48	530.35	537.76	537.55	554.51	552.01	544.29
11	523.23	522.47	521.94	522.96	524.02	523.46	530.37	537.69	537.23	554.56	551.78	544.43
12	523.18	522.41	521.92	523.04	524.02	523.45	530.35	537.48	537.00	554.63	551.56	544.22
13	523.13	522.39	521.90	523.42	524.06	523.44	530.35	537.16	536.77	554.67	551.34	543.97
14	523.09	522.36	521.88	523.56	524.01	523.49	530.44	536.83	536.54	554.69	551.11	543.66
15	523.08	522.38	521.85	523.62	523.99	523.51	530.42	536.49	536.40	554.72	550.82	543.26
16	523.23	522.28	521.84	523.60	523.94	523.50	530.41	536.14	536.39	554.74	550.52	542.86
17	523.26	522.23	521.83	523.60	523.94	523.47	530.42	535.81	536.56	554.73	550.37	542.46
18	523.25	522.21	521.82	523.60	523.90	523.45	530.50	535.57	538.87	554.72	550.02	542.05
19	523.20	522.18	521.80	523.60	523.88	523.44	530.51	535.42	540.08	554.70	549.66	541.64
20	523.13	522.14	521.84	523.71	523.87	523.43	530.51	535.28	540.23	554.69	549.28	541.24
21	523.09	522.10	521.85	523.99	523.85	523.42	530.51	535.14	540.29	554.69	548.89	540.93
22	523.02	522.07	521.83	524.14	523.83	523.40	530.50	535.03	540.25	554.69	548.54	540.69
23	522.97	522.04	521.81	524.18	523.81	523.39	530.49	534.91	540.21	554.67	548.44	540.45
24	522.95	522.02	521.80	524.20	523.84	523.38	530.63	534.83	540.11	554.67	548.40	540.21
25	522.92	521.99	521.88	524.20	523.78	523.36	534.86	534.85	540.04	554.65	548.38	539.97
26	522.91	521.97	521.84	524.20	523.76	523.37	536.29	534.81	541.06	554.63	548.35	539.74
27	522.91	521.94	521.81	524.21	523.73	523.67	536.37	535.00	544.36	554.61	548.31	539.50
28	522.83	521.93	521.78	524.19	523.72	523.89	536.37	535.41	546.41	554.58	548.18	539.26
29	522.79	521.91	521.90	524.17	---	523.95	536.31	535.64	547.03	554.59	547.99	539.00
30	522.76	522.13	522.64	524.16	---	524.16	536.24	536.09	548.90	554.65	547.71	538.76
31	522.74	---	522.81	524.13	---	526.68	---	537.26	---	554.52	547.36	---
Mean	523.13	522.30	521.98	523.55	523.97	523.65	531.42	536.26	539.55	554.20	550.61	542.79
Max	523.55	522.69	522.81	524.21	524.16	526.68	536.37	537.78	548.90	554.74	554.26	546.99
Min	522.74	521.91	521.78	522.81	523.72	523.36	528.68	534.81	536.39	550.62	547.36	538.76

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