Water-Data Report 2008

# 08017400 Lake Tawakoni near Wills Point, TX

Sabine Basin
Upper Sabine Subbasin

LOCATION.--Lat 32°48′31″, long 95°55′10″ referenced to North American Datum of 1927, Rains County, TX, Hydrologic Unit 12010001, in stairwell at left end of spillway of Iron Bridge Dam on Sabine River, 750 ft upstream from bridge on Farm Road 47, 3.8 mi upstream from McBee Creek, 9.0 mi northeast of Wills Point, and at mile 514.5.

DRAINAGE AREA.--756 $mi^2$.

## SURFACE-WATER RECORDS

PERIOD OF RECORD.--Oct. 1960 to current year. Water-quality records: Chemical data: Dec. 1961 to Apr. 1984. Radiochemical data: May 1981.

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

COOPERATION.--Capacity table No. 1, based on a 1984 survey was prepared by Forrest and Cotton, Inc., Consulting Engineers, for Sabine River Authority. Table No. 1 was replaced with Table No. 2, provided by the Texas Water Development Board from a survey conducted in Apr. 1997, and put into use Oct. 1, 2000.

REMARKS.--Records good except those for estimated daily mean contents, which are poor. The lake is formed by a rolled earthfill dam 29,500 ft long, including a 480-foot uncontrolled concrete ogee spillway. Outlet works consist of two 4- by 6-foot sluice gates and two 20-inch steel pipes controlled by service valves. Closure of earthen dam began July 1, 1960, and deliberate impoundment of water began Oct. 7, 1960. Diversions are made for municipal use by the city of Dallas and various other users in the Sabine River basin. The dam is owned by the Sabine River Authority. The lake was built for water conservation. Conservation pool storage is 888,130 acre-ft. Data regarding the dam are given in the following table:

| | Elevation (feet) |
|---|---|
| Top of dam | 454.0 |
| Design flood | 446.2 |
| Crest of spillway | 437.5 |
| Lowest intake to wet well (invert) | 416.5 |
| Lowest gated outlet (invert) | 378.0 |

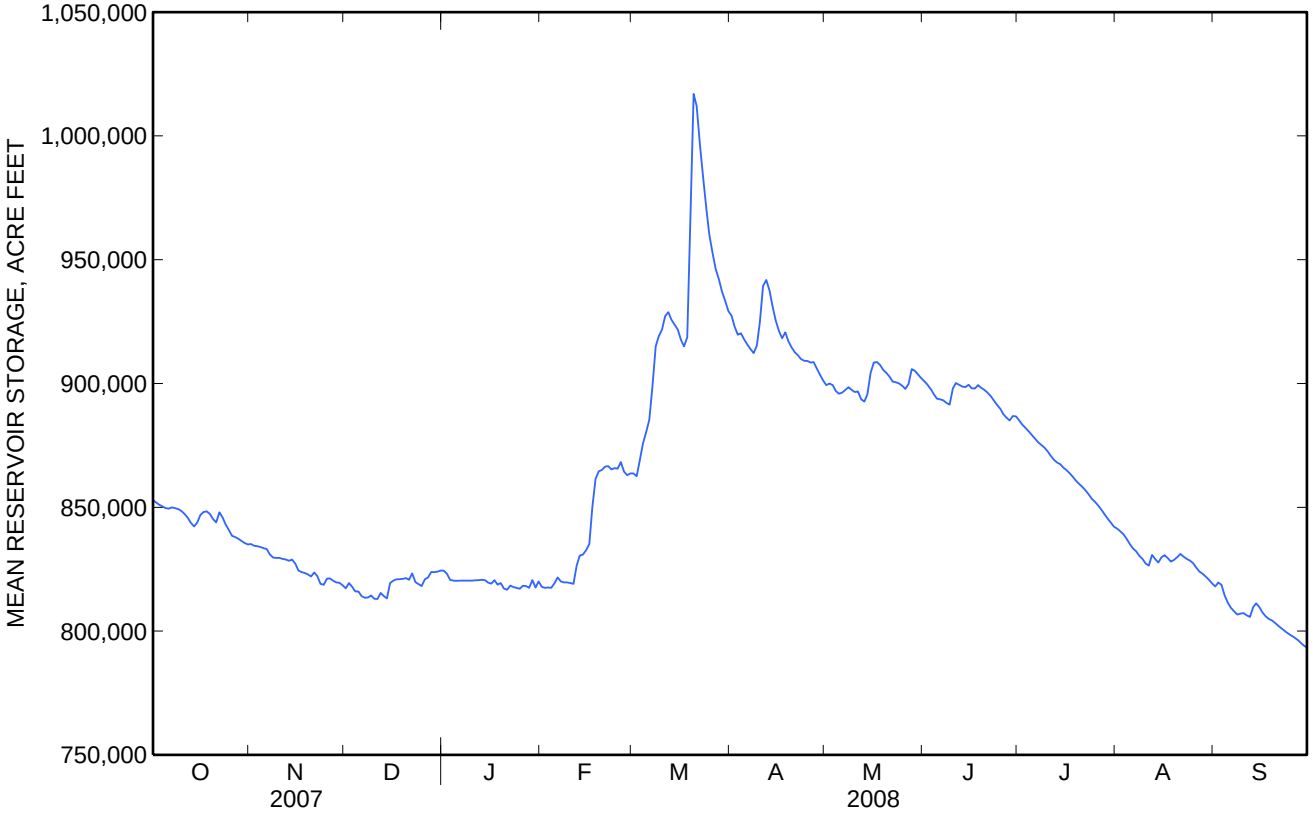
EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,130,400 acre-ft, May 1, 1966, elevation, 442.58 ft; minimum contents since lake first filled in May 1965, 489,500 acre-ft, Dec. 28,29, 2006, elevation, 424.88 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 1,020,000 acre-ft, Mar. 20, elevation, 440.78 ft; minimum contents, 792,500 acre-ft, Sept. 30, elevation, 434.91 ft.

**08017400 Lake Tawakoni near Wills Point, TX—Continued**

**RESERVOIR STORAGE, ACRE FEET**
**WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008**
**DAILY MEAN VALUES**
[e, estimated]

| Day | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 852,900 | 835,200 | 817,300 | 824,400 | e817,900 | 863,700 | 927,400 | 899,400 | 900,900 | 885,100 | 841,400 | 818,100 |
| 2 | 851,900 | 834,500 | 819,400 | 823,200 | 817,500 | 862,500 | 923,000 | 900,000 | 899,600 | 883,400 | 840,300 | 819,600 |
| 3 | 851,000 | 834,300 | 817,900 | e820,700 | 817,600 | 869,200 | 919,700 | 899,400 | 897,700 | 882,100 | 839,100 | 818,700 |
| 4 | 850,400 | 834,000 | 816,100 | e820,400 | 817,500 | 875,700 | 920,300 | 897,000 | 895,700 | 880,700 | 837,300 | 814,400 |
| 5 | 849,700 | 833,500 | 816,000 | e820,300 | 819,300 | 880,300 | 917,800 | 895,900 | 893,900 | 879,200 | 835,200 | 811,400 |
| 6 | 849,500 | 833,100 | 814,100 | e820,400 | 821,700 | 885,400 | 915,700 | 896,300 | 893,600 | 877,800 | 833,400 | 809,400 |
| 7 | 850,000 | 830,900 | 813,500 | e820,400 | 820,100 | 899,200 | 914,000 | 897,400 | 893,200 | 876,300 | 832,200 | 808,000 |
| 8 | 849,700 | 829,700 | 813,600 | e820,400 | 819,700 | 915,100 | 912,300 | 898,500 | 892,200 | 875,200 | 830,500 | 806,700 |
| 9 | 849,300 | 829,600 | 814,400 | e820,400 | 819,700 | 919,100 | 915,300 | 897,500 | 891,500 | 874,100 | 829,200 | 807,100 |
| 10 | 848,500 | 829,600 | 813,100 | e820,400 | 819,400 | 921,700 | 924,900 | 896,600 | 898,000 | 872,700 | 827,300 | 807,300 |
| 11 | 847,300 | 829,200 | 813,000 | e820,500 | 819,100 | 927,200 | 939,400 | 896,800 | 900,200 | 870,800 | 826,500 | 806,400 |
| 12 | 845,800 | 828,900 | 815,400 | e820,600 | 826,500 | 928,800 | 941,800 | 893,700 | 899,500 | 869,200 | 830,800 | 805,700 |
| 13 | 843,700 | 828,400 | 814,200 | e820,700 | 830,500 | 925,800 | 937,600 | 892,700 | 898,800 | 868,100 | 829,200 | 809,700 |
| 14 | 842,300 | 828,900 | 813,200 | e820,600 | 830,900 | 923,800 | 931,000 | 895,700 | 898,600 | 867,400 | 827,700 | 811,200 |
| 15 | 843,900 | 827,300 | 819,400 | 819,600 | 832,700 | 921,800 | 925,500 | 904,300 | 899,500 | 866,000 | 829,800 | 809,700 |
| 16 | 846,900 | 824,500 | 820,400 | 819,200 | 835,200 | 917,600 | 921,300 | 908,500 | 898,100 | 865,000 | 830,700 | 807,500 |
| 17 | 848,100 | 823,800 | 820,900 | 820,600 | 850,100 | 915,000 | 918,300 | 908,700 | 898,000 | 863,700 | 829,500 | 805,900 |
| 18 | 848,400 | 823,500 | 821,000 | 818,800 | 861,500 | 918,700 | 920,700 | 907,500 | 899,400 | 862,300 | 828,100 | 804,900 |
| 19 | 847,300 | 822,900 | 821,100 | 819,400 | 864,500 | 967,400 | 917,100 | 905,500 | 898,200 | 860,700 | 828,800 | 804,300 |
| 20 | 845,300 | 822,100 | 821,400 | 817,200 | 865,100 | 1,017,000 | 914,600 | 904,300 | 897,400 | 859,400 | 829,900 | 803,300 |
| 21 | 843,900 | 823,700 | 820,700 | 816,700 | 866,400 | 1,012,000 | 912,700 | 902,700 | 896,300 | 858,200 | 831,200 | 802,100 |
| 22 | 848,000 | 822,200 | 823,300 | 818,400 | 866,700 | 996,700 | 911,400 | 900,800 | 894,900 | 856,800 | 830,100 | 801,100 |
| 23 | 845,900 | 819,100 | e819,800 | 817,800 | 865,300 | 983,500 | 909,900 | 900,500 | 893,100 | 855,200 | 829,200 | 800,100 |
| 24 | 843,100 | 818,700 | 819,000 | 817,500 | 865,800 | 970,900 | 909,200 | 900,000 | 891,400 | 853,400 | 828,500 | 799,100 |
| 25 | 840,900 | 821,200 | 818,200 | 817,100 | 865,600 | 960,100 | 909,100 | 899,100 | 889,900 | 852,200 | 827,500 | 798,300 |
| 26 | 838,500 | 821,300 | 820,900 | 818,300 | 868,300 | 952,800 | 908,500 | 897,800 | 887,600 | 850,700 | 825,700 | 797,500 |
| 27 | 838,000 | 820,300 | 821,700 | 818,200 | 864,400 | 946,200 | 908,700 | 899,800 | 886,200 | 849,100 | 824,100 | 796,500 |
| 28 | 837,300 | 819,700 | 823,900 | 817,500 | 863,000 | 942,100 | 906,000 | 905,800 | 885,100 | 847,200 | 823,200 | 795,400 |
| 29 | 836,400 | 819,500 | 823,800 | 820,600 | 863,700 | 937,200 | 903,500 | 905,100 | 886,900 | 845,400 | 822,100 | 794,200 |
| 30 | 835,600 | 818,500 | 824,000 | 817,600 | --- | 933,400 | 901,200 | 903,600 | 886,700 | 843,800 | 820,800 | 793,300 |
| 31 | 835,000 | --- | 824,500 | 820,100 | --- | 929,300 | --- | 902,300 | --- | 842,200 | 819,300 | --- |
| Mean | 845,300 | 826,300 | 818,600 | 819,600 | 841,200 | 929,700 | 917,900 | 900,400 | 894,700 | 864,300 | 829,600 | 805,600 |
| Max | 852,900 | 835,200 | 824,500 | 824,400 | 868,300 | 1,017,000 | 941,800 | 908,700 | 900,900 | 885,100 | 841,400 | 819,600 |
| Min | 835,000 | 818,500 | 813,000 | 816,700 | 817,500 | 862,500 | 901,200 | 892,700 | 885,100 | 842,200 | 819,300 | 793,300 |

| | Calendar Year 2007 | Water Year 2008 |
|---|---|---|
| Mean | 761,100 | 857,800 |
| Max | 996,900 | 1,017,000 |
| Min | 521,000 | 793,300 |

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