

LOCATION: R.M. 44.5 on Sulphur River of the Red River,
River Basin about 9 miles Southwest of Texarkana, TX.

DRAINAGE AREA:

3,400 square miles
One inch of runoff 181,333 acre-feet

DAM:

Type: Rolled earth fill
Length: 18,500' (including spillway)
Maximum Height: 106.0'
Top Width: 30'

SPILLWAY:

Crest Elev: 259.5' msl
Length: 200.0'
Type: Ogee
Control: None

INFLOW:

Spillway design flood peak, cfs 451,000
Spillway design flood volume, ac-ft 3,645,000
Spillway design flood runoff, inches 20.1

OUTFLOW:

Total routed peak outflow, cfs 478,600
Spillway, cfs 451,000
Outlet works, cfs 27,600

OUTLET WORKS:

Type: 2 gate controlled conduits
Dimension: 20' diameter
Invert Elev: 200.0' msl
Control: 4-10'x20' hydraulically operated
slide gates

POWER FEATURES:

None

Feature	: *n.g.v.d.:	: Reser- : Elev : Feet	: : Area : (acres)	: : Accum- : tative : (ac-ft)	: : Reservoir Capacity : Runoff : (inches)	: : Incre- : mental : (ac-ft)	: : Spillway : Capacity : (cfs)	: : Outlet Works : Capacity : (cfs)
Top of Dam	286.0	234,100	5,730,500					
Max Design Water Surface	278.9	200,600	3,076,500	17.0	31.6	451,000		
Top of Flood Control Pool	259.5	119,700	2,509,000	13.8	14.6	2,363,700	2,496,000	27,600
Top of Conservation Pool	220.0**	20,300	145,300	0.8	0.9	77,300	90,000	8,250
Sediment Reserve	220.6		68,000			68,000		
Total Storage			2,654,000	158,000		2,509,000		
Streambed	180.0							

*The term n.g.v.d. refers to "National Geodetic Vertical Datum"

**Operating rule curve uses 220.6 n.g.v.d. as top of conservation pool from beginning of November to end of March. From the beginning of April to the end of May the rule curve rises to 227.5 n.g.v.d., after which it falls back to 220.6 n.g.v.d. at the end of October.

(Sheet 1 of 3)

WRIGHT PATMAN LAKE

AUTHORIZATION: Flood Control Act approved 24 Jul 46
(PL 79-526) (HD 602/79/2)

FINAL PROJECT COST (OCT 68):

Federal:	\$37,083,000
Non-Federal:	None*
Total:	\$37,083,000

ANNUAL O&M COST (FY 81):

Federal:	\$ 1,405,400
Non-Federal:	9,900
Total:	\$ 1,415,300

COST ALLOCATION METHOD: Use of facilities (pro rata)

LOCAL AGENCY: City of Texarkana

LAND ACQUISITION: NOT PROVIDED

FLOOD DATA:

Date	Peak Discharge (cfs)
Feb 38	92,900
Apr 45	157,000
May 58	106,500
Apr 66	109,700
May 66	126,500
Dec 71	131,000

NON-FEDERAL PARTICIPATION AND LOCAL COOPERATION:

*A contract with the city of Texarkana was approved 16 Feb 54 for an operating rule curve maintained at a minimum conservation pool elevation of 220.0' msl in order to provide adequate storage to meet a water supply demand of 13 MGD. The city will pay \$7,000.00 annually, which includes capitalized O&M costs, for this water supply operating rule curve. Another contract with the city was approved 11 Jul 68 for an operating rule curve maintained at the same minimum elevation which would become effective upon conversion of 120,000 ac-ft in Wright Patman Lake after Cooper Lake has been impounded (see Remarks). The city will pay an estimated \$14,825,304 (Aug 80), which includes their share of the existing water supply storage investment, the total real estate and relocation costs at Wright Patman Lake incurred as a result of the storage conversion, and their share of the total annual O&M cost, for this total water supply storage operating rule curve. During the meantime, an interim contract with the city was approved 17 Dec 68 which provided a lower operating rule curve at the same minimum elevation with adequate storage to satisfy an 87 MGD water supply demand. The city will pay \$55,300.00 annually, which includes capitalized O&M cost, for this water supply storage operating rule curve.

STATUS OF PROJECT: Land acquisition began in FY 47 and the first construction contract was awarded 20 Aug 48. Deliberate impoundment began 27 Jun 56. The project is complete and operational.

Visitation (1981): 4,497,648

Shoreline at the top of the interim operating rule curve (227.5' msl): NOT PROVIDED

REMARKS: The final EIS on Cooper Lake and Channels (Apr 77) and the supplemental EIS (Mar 81) notes that completion of Cooper Lake makes possible the conversion of storage at Wright Patman. The conversion is not mandated by the authorization for Cooper Lake; it is, however, permitted by that legislation. A separate investigation will be necessary to determine the cost effectiveness of this storage conversion at Wright Patman Lake.

Dependable yield (Interim)**: 160 cfs or 103.5 MGD
Dependable yield (Ultimate)**: 251 cfs or 162.5 MGD

**Based on critical period NOT PROVIDED and 50 years of sedimentation.