

LOCATION: R.M. 20.0 on Yegua Creek, Brazos River Basin, 2 miles south of Somerville, Texas

DRAINAGE AREA:

1,006 square miles
One inch of runoff 53,653 acre-feet

DAM:

Type: Rolled earth fill
Length: 20,210' (plus 4,715' dike)
Maximum Height: 80'
Top Width: 20' (dike 34')

SPILLWAY:

Crest Elev: 258.0' msl
Length: 1,250' net at crest
Type: Ogee
Control: None

INFLOW:

Spillway design flood peak, cfs 415,700
Spillway design flood volume, ac-ft 1,374,800
Spillway design flood runoff, inches 25.62

OUTFLOW:

Total routed peak outflow, cfs 288,700
Spillway, cfs 286,000
Outlet works, cfs 2,700

OUTLET WORKS:

Type: 1 gate controlled conduit
Dimension: 10' diameter
Invert Elev: 206.0' msl
Control: 2-5'x10' tractor type gates

POWER FEATURES:

None -

Feature	Elev : (msl)	Reser- voir : Area : (acres)	Reservoir Capacity			Spillway : Capacity : (cfs)	Outlet Works : Capacity : (cfs)
			Accumu- lative : (ac-ft)	Runoff : (inches)	Incre- mental : (ac-ft)		
Top of Dam	280.0						
Max Design Water Surface	274.5	39,800	1,028,800	19.18		286,000	2,700
Top of Flood Control Pool and Spillway Crest	258.0	24,400	507,500	9.46	337,700		3,300
Top of Conservation Pool	238.0	11,460	160,100	2.98	143,900		2,500
Sediment Reserve					25,900*		
Total Storage					507,500		
Maximum Tailwater	243.8						
Streambed	200.0						

*Estimated 50 years of sediment storage reserve distributed as follows: 9,700 ac-ft between elev 258.0 and 238.0' msl
16,200 ac-ft below elev 238.0' msl

(Sheet 1 of 2)

SOMERVILLE LAKE

AUTHORIZATION: Flood Control Act of 3 Sep 54
(PL 83-780) (HD 535/81/2)

FINAL PROJECT COST (APR 73):

Federal:	\$24,274,893.19
Non-Federal:	None*
Total:	\$24,274,893.19

ANNUAL O&M COST (FY 81):

Federal:	\$ 943,700
Non-Federal:	28,500
Total:	\$ 972,200

COST ALLOCATION METHOD:

Use of facilities (pro rata)

LOCAL AGENCY: Brazos River Authority

LAND ACQUISITION:

	: Guide Contour ('msl)	: Area (Acres)
Fee simple	263.0	30,114
Easement		3,480
Total		33,594

FLOOD DATA:

Date	Peak Discharge (cfs)
Dec 13 (Est)	82,000
Jul 40	56,800 (1)
Jun 68	55,000
Apr 69	60,000
Jun 79	47,000

(Somerville gage)

Minimum bankfull capacity below dam: 500 cfs (2)

(1) Maximum of record

(2) Channel improvement proposal to increase this to 2,500 cfs are being considered in connection with the comprehensive survey report on the Brazos River Basin.

STATUS OF PROJECT: Construction was initiated 4 Jun 62 and last item of major construction was completed in Dec 67. Deliberate impoundment began 3 Jan 67. The project is complete and operational.

*NON-FEDERAL PARTICIPATION AND LOCAL COOPERATION:

A contract with the Brazos River Authority was approved on 10 May 62 for 100 percent (143,900 ac-ft) of the conservation storage below elevation 238.0 ft msl. A supplemental agreement to this contract was approved on 28 Jun 74 divided the total conservation storage between elevations 238.0 and 200.0 ft msl into 5 percent (7,200 ac-ft) for present water supply and 95 percent (136,700 ac-ft) for future water supply storage. BRA will pay \$7,197,452.19, in addition to their share of the annual O&M cost, for this total water supply storage space.

REMARKS:

Dependable yield**: 56 cfs or 36.2 MGD

**Based on critical dry period from Jan 54-Feb 57 and 50 years of sedimentation.

Visitation (1981): 3,170,970

Shoreline at top of conservation pool: 85 miles