US Army Corps
of Engineers ®

Fort Worth District

LAKE GEORGETOWN AND NORTH SAN GABRIEL DAM
NORTH SAN GABRIEL RIVER
BRAZOS RIVER BASIN, TEXAS

WATER CONTROL MANUAL
APPENDIX 7
MASTER RESERVOIR REGULATION MANUAL

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
FORT WORTH DISTRICT

JANUARY 2017

ORIGINAL FEBRUARY 1989

LAKE GEORGETOWN AND NORTH SAN GABRIEL DAM

NOTICE TO USERS OF THIS MANUAL

Regulations specify that this Water Control Manual be used in loose-leaf form, and only those sections or parts thereof requiring changes will be revised and printed. Therefore, this copy should be preserved in good condition so that inserts can be made to keep the manual current. All elevations referred to in this Water Control Manual, unless noted otherwise, are in feet, National Geodetic Vertical Datum of 1929 (NGVD29). The datum conversion from NGVD29 to NAVD88 is: NGVD29 + 0.3 feet = NAVD88 for Lake Georgetown and North San Gabriel Dam.

EMERGENCY REGULATION ASSISTANCE PROCEDURES

Assistance with the flood control regulations of Lake Georgetown and North San Gabriel Dam will be provided during duty hours by the Fort Worth District Water Management Branch 817-886-1551. During non-duty hours, assistance can be obtained by contacting the Primary Regulator (817) 791-0973 cell number and in the order listed, one of the following persons:

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Manager, Lake Georgetown Scott Blank	512-887-0256
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LAKE GEORGETOWN AND NORTH SAN GABRIEL DAM
NORTH SAN GABRIEL RIVER BASIN, TEXAS

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Pertinent Data – Lake Georgetown and North San Gabriel Dam

(See Exhibit A for Supplementary Pertinent Data)

LOCATION: In Williamson County, R.M. 4.3 on the North Fork of the San Gabriel River, Brazos River Basin, 3.5 miles west of Georgetown, Texas.

DRAINAGE AREA:

246 square miles	
One inch of runoff	13,120 acre-feet

DAM:

Type:	Rock fill, impervious core
Length (including spillway):	6,700 feet
Maximum Height:	164 feet
Top Width:	30 feet

SPILLWAY:

Crest Elev.:	834.0 feet NGVD29
Length:	1,000 feet at crest
Type:	Broad-crested
Control:	None

POWER FEATURES: None

INFLOW:

Spillway Design Flood peak, cfs (1973 Study)	395,800
Spillway Design Flood volume, ac-ft (1973 Study)	336,800
Spillway Design Flood runoff, inches (1973 Study)	26.61
Probable Maximum Flood peak, cfs (1983 Study)	398,443
Probable Maximum Flood volume, ac-ft (1983 Study)	461,316
Probable Maximum Flood runoff, inches (1983 Study)	34.70

OUTFLOW:

Total routed peak outflow, cfs (1973 Study)	284,000
Probable Maximum Flood total, cfs (1983 Study)	331,329

OUTLET WORKS:

Type:	One conduit with gate controlled
Dimensions:	11 feet diameter
Invert Elev.:	720.0 feet NGVD29
Control:	2 hydraulic operated slide gates, 5 feet x 11 feet

Feature	Elev Feet* (NGVD 29)	Reservoir Capacity: Reser-voir Area (acres)	Reservoir Capacity: Accumu-lative (ac-ft)	Reservoir Capacity: Runoff (inches)	Total Spillway Capacity (cfs)	Outlet Works Capacity (cfs)
Top of Dam	861.0					
PMF Design Water Surface (1983 Study)	858.6	5,330	233,680	18.57	331,329	0
Max. Design Water Surface (1973 Study)	856.2	5,090	221,100	17.57	284,000	4,500***
Top of Flood Control Pool and Spillway Crest	834.0	3,220	130,800	9.97		4,800***
Top of Conservation Pool (2005 Survey)	791.0	1,287	36,904	2.83		3,800***
Sediment Reserve**						
Maximum Tailwater (1983 Study)	750.5					
Streambed (1983 Study)	699.0					

*The elevations listed on the pertinent data sheet is based on the datum of NGVD29. The datum conversion from NGVD29 to NAVD88 is: NGVD29 + 0.3 feet = NAVD88.

**14,000 ac-ft of storage was reserved for an estimated 100 years of sediment storage distributed as follows: 7,900 ac-ft below elev. 791.0 feet NGVD29; 6,100 ac-ft between elev. 791.0 and 834.0 feet NGVD29.

***Based on 1973 Study, the capacity of outlet works is 4,500 cfs at the maximum water surface elev. 856.2 feet NGVD29, 4,800 cfs at spillway crest elev. 834.0 feet NGVD29, and 3,800 cfs at top of conservation pool elev. 791.0 feet NGVD29.

AUTHORIZATION: Flood Control Act of1962, approved 23 Oct 62 (PL 87-874) (HD 591/87/2).

FINAL PROJECT COST (OCT 80):

Federal:	$38,800,000.00
Non-Federal	None*
Total:	$38,800,000.00

ANNUAL O&M COST (FY 14):

Federal:	$2,054,500
Non-Federal	0
Total:	$2,054,500

COST ALLOCATION METHOD: Separable costs – remaining benefits

LOCAL AGENCY: Brazos River Authority

LAND ACQUISITION:

	: Guide Contour (NGVD29)	: Area (Acres)
Fee Simple	839.0	5,317.26
Easement		512.93
Total		5,830.19

FLOOD DATA:

Date	Peak Discharge** (cfs)
Sep 1921	160,000
Apr 1957	155,000
Oct 1959	71,500
Jun 1944	37,500
Sep 1981	75,000

** Gaging Station: San Gabriel River at Georgetown gage

LOW FLOW OUTLETS:

Type:	Four 2 feet by 4 feet intake gates
Control:	Manually operated slide gate at each intake, 3 feet x 4 feet

Intake invert elevations:

Highest level:	777.00 feet
Upper intermediate level:	764.17 feet
Lower intermediate level:	751.33 feet
Lower level:	738.50 feet

STATUS OF PROJECT: Construction was initiated in FY 68 and completed in FY 82. Deliberate impoundment began 3 Mar 80. Project is fully operational.

*NON-FEDERAL PARTICIPATION AND LOCAL COOPERATION:
A contract with the Brazos River Authority was approved 24 Apr 81 for 100 percent (29,200 ac-ft) of the conservation storage between elevations 698.99 and 791.0 feet NGVD29. BRA will pay an estimated $6,311,000 exclusive of interest, in addition to their share of the annual O&M cost, for this water supply storage space.

REMARKS:
Lake Georgetown was completed in October 1980 and Granger Dam was completed in February 1980. However, South Fork Dam was de-authorized in June 2003.

Dependable yield***: 16 cfs or 10.3 MGD

***Based on a critical dry period from 1947-1967 and 100 years of sedimentation.

Annual Visitation (10-year average, 2004-2014): 479,372

Shoreline at top of conservation pool (elevation 791.0): 25 miles

LAKE GEORGETOWN AND NORTH SAN GABRIEL DAM NORTH SAN GABRIEL RIVER, TEXAS WATER CONTROL MANUAL

CHAPTER I – INTRODUCTION

1-01. Authorization. This manual is submitted as required by ER 1110-2-240, Water Control Management, dated 30 May 2016, and is prepared in accordance with ER 1110-2-8156, Engineering and Design, Preparation of Water Control Manuals, dated 31 August 1995.

1-02. Purpose and Scope. The purpose of this manual is to document the Lake Georgetown and North San Gabriel Dam Regulation plan. This manual also provides a concise reference source for higher authority personnel who will be concerned with or responsible for reservoir regulations during the life of the project. This manual also includes the regulation plan for Lake Georgetown and North San Gabriel Dam and the background material necessary to understand the purpose and application of the plan. Lake Georgetown and North San Gabriel Dam were originally identified as "North Fork Reservoir".

1-03. Related Manuals and Reports. This manual is Appendix 7 to the Brazos River Basin Master Reservoir Regulation Manual. On 23 October 1962, Lake Georgetown and North San Gabriel Dam was authorized by the Flood Control Act of 1962 (Public Law 874, 87th Congress, 2nd Session). Authority to initiate advance planning on the San Gabriel River Reservoirs is contained in Public Works Appropriation Act of 1965, approved 30 August 1964 (Public Law 88-511) and in Advice of Allotment C-124 dated 9 September 1964. In February 1989, the Fort Worth District (SWF) of the United States Army Corps of Engineers (USACE) published a reservoir regulation manual for Lake Georgetown and North San Gabriel Dam. The manual contains plans and procedures for regulation of the reservoir during both normal and flood conditions.

The reports and design memorandums important to the regulation of Lake Georgetown and North San Gabriel Dam are listed in Table 1-1.

1-04. Project Owner. USACE - SWF owns and operates Lake Georgetown and North San Gabriel Dam.

TABLE 1-1

Related Manuals and Reports for Lake Georgetown and North San Gabriel Dam

Title	Date
1. Interim Report on Brazos River	December 1945
2. Report on Survey of Brazos River and Tributaries, Texas, - Oyster Creek, Texas, and Jones Creek, Texas	August 1947
3. Design Memorandum No. 1	
- Part A – General	July 1965
- Supplement No. 1 – General	August 1966
- Part B – Laneport	September 1966
- Supplement No. 1 – Laneport	September 1968
- Supplement No. 2 – Laneport	August 1973
- Part C – North Fork	August 1966
- Supplement No. 1 – North Fork	July 1973
- Part D – South Fork	December 1966
4. Design Memorandum No. 2 - General (North Fork)	December 1966
5. Design Memorandum No. 3 - Availability of Materials	January 1968
6. Design Memorandum No. 4	
- General (Laneport)	January 1967
- Supplement No. 1 – Laneport	May 1967
- Supplement No. 2 – Laneport	January 1968
- Supplement No. 3 – Laneport	July 1969
- Supplement No. 4 – Laneport	January 1971
7. Design Memorandum No. 5 - General (South Fork)	March 1967
8. Design Memorandum No. 6 - Reservoir-Mgt-Prelim Master Plan (North Fork)	February 1967
9. Design Memorandum No. 7 - Reservoir-Mgt-Prelim Master Plan (Laneport)	March 1967
10. Design Memorandum No. 8 - Real Estate - Lane for Const. and Reservoir Areas (Laneport)	April 1967
11. Design Memorandum No. 9 - Project Buildings and Access Road (North Fork) (Revised)	November 1967
12. Design Memorandum No. 10 - Project Buildings and Access Road (Laneport) (Revised)	January 1972
13. Design Memorandum No. 11 - Relocations - Dam Construction Area	August 1967
14. Design Memorandum No. 12 - Sedimentation and Degradation Ranges (Laneport)	December1967
15. Design Memorandum No. 13 - Sedimentation and Degradation Ranges (North Fork)	October 1967

TABLE 1-1 (CONTINUED)

Related Manuals and Reports for Lake Georgetown and North San Gabriel Dam

Title	Date
16. Design Memorandum No. 14 - County Road Relocation - Part 2 (North Fork)	February1972
17. Design Memorandum No. 15 - Electric Transmission Lines Relocation (Laneport)	March 1973
18. Design Memorandum No. 16 - Master Plan (North Fork)	
19. Design Memorandum No. 17 - Outlet Works (North Fork)	December 1968
20. Design Memorandum No. 18 - Reservoir Mgt Master Plan (Laneport)	October 1973
21. Design Memorandum No. 19 - FM 971 Relocation (Laneport)	April 1972
22. Design Memorandum No. 20 - Country Road Relocation (Laneport)	November 1971
23. Design Memorandum No. 21 - Spillway, Embankment, and Outlet Work (Laneport)	1976
24. Design Memorandum No. 22 - Reservoir Clearing (North Fork)	December 1972
25. Design Memorandum No. 23 - Spillway, Embankment, and Outlet Work (North Fork)	July 1972
26. Design Memorandum No. 24 - Pedernales Electric Co-op Relocation (North Fork)	1973
27. Design Memorandum No. 25 - Reservoir Clearing (Laneport)	June 1973
28. Design Memorandum No. 26 - S.W. Bell and General Telephone Company Telephone Lines (Laneport)	March 1973
29. Design Memorandum No. 27 - Granger - Relocation	1977
30. Design Memorandum No. 28 - Reservoir Filling Plan- Granger	1980
31. Design Memorandum No. 29 - Reservoir Filling Plan- North Fork	1980
32. Spillway Design Flood Study, Lake Georgetown - Hydrology	January 1983
33. Lake Georgetown Water Control Manual, Brazos River Basin, Texas	February 1989
34. Periodic Inspection Report No. 11	May 2012

1-05. Operating Agency. USACE-SWF is the operating agency for Lake Georgetown and North San Gabriel Dam. The Lake Manager at Lake Georgetown and North San Gabriel Dam has the responsibility for its operations and management of the lake. The District Engineer, through the Water Resources Branch of the Engineering and Construction Division, directs water control activities.

The project is staffed during normal working hours throughout the year. The Lake Manager at Lake Georgetown and North San Gabriel Dam has the responsibility for its operations. Lake Rangers are also available on holidays and weekends to provide assistance with the lake operations.

The Lake Manager will have a current list of the Water Resources Branch personnel including home telephone numbers to contact when necessary. The Lake Manager will furnish the Water Resources Branch a list of project personnel, giving their office and home telephone numbers. The Lake Manager resides as close to the project as is considered prudent to carry out his official duties.

1-06. Regulating Agencies. USACE-SWF is the regulatory agency for Lake Georgetown and North San Gabriel Dam. The regulation of the dam is the responsibility of the Water Resources Branch of the Engineering and Construction Division, Fort Worth District.

CHAPTER II – DESCRIPTION OF PROJECT

2-01. Location. Lake Georgetown and North San Gabriel Dam are located on the North Fork of the San Gabriel River at river mile 4.3 about 3.5 miles west of Georgetown, Texas. The lake is in Williamson County. The total drainage area above North San Gabriel Dam is 246 square miles. The location of the dam and lake are shown on Plates 2-1a and 2-1b, respectively.

2-02. Purpose. Lake Georgetown and North San Gabriel Dam is a multi-purpose project used for flood control, water supply, fish and wildlife, and recreation. The project is a unit of the Brazos River Basin System, which consists of nine USACE dams and lakes and various channel improvements and levees operated to provide flood protection along the Brazos River. Lake Georgetown and North San Gabriel Dam is operated in conjunction with four other USACE dams (Proctor Dam, Belton Dam, Granger Dam, and Stillhouse Hollow Dam) on the Little River and San Gabriel River Systems to provide flood control to the Little River at Cameron, Texas. This project, along with the other eight projects in the Brazos River System, also provides flood protection to urban and agricultural areas and downstream of each respective dam. An aerial view of the North San Gabriel Dam is shown in Figure 2-1.

Figure 2-1. Aerial View of North San Gabriel Dam

2-03. Physical Components. North San Gabriel Dam consists of rock and earth fill embankment, an uncontrolled broad crested spillway, outlet works, and a stilling basin. The total length of the dam is 6,700 feet, including the spillway. The general plan of the embankment and spillway is shown on Plate 2-2. Additional information on Lake Georgetown and North San

Gabriel Dam is provided in Exhibit A, Supplementary Pertinent Data.

a. Embankment. The embankment consists of a 6,700 feet long (including the spillway) rock and earthfill type structure with an impervious core. The maximum height of the embankment is about 164 feet and the top of embankment is at elevation 861.0 feet. The upstream slopes of the embankment above elevation 783.0 feet is protected with riprap and the downstream slope has been mulched and seeded. A double bituminous surfaced roadway is located along the top of embankment. The width at the top of the embankment is 30 feet along the roadway. Embankment plan and profile are shown on Plate 2-3 and sections are shown on Plate 2-4. The upstream view of embankment is shown in Figure 2-2.

Figure 2-2. Upstream View of Embankment

Figure 2-3. Crest of Spillway

b. Spillway. The spillway is a 1,000 feet wide uncontrolled broad crested weir. The spillway has a clear opening of 1,000 feet with a crest elevation of 834.0 feet. The spillway has a central concrete sill 2.5 feet wide and 6 feet high, eighteen 50-foot long sections with an additional 50-foot long flat section on each end. The discharge capacity of the spillway is 284,000 cubic feet per second (cfs) when the water surface elevation is at 856.2 feet as shown on Plate 8-3. The spillway plan and profile are shown on Plate 2-5. The crest of spillway is shown in Figure 2-3.

Figure 2-4. Intake Tower

Figure 2-5. Outlet Conduit

c. Outlet Works. The outlet works are located 2,000 feet north of the spillway portion of the dam. The outlet works consist of an intake tower, one 11-foot diameter conduit controlled by two 5-foot by 11-foot hydraulically operated slide gates with invert elevations of 720.0 feet. The conduit is provided with service and emergency gates. Gate operation controls are located in the outlet works structure. The outlet works gates are not suited for continuous operation between half open and fully open. Multilevel inlet gates, at elevations 777.0, 764.17, 751.33 and 738.5 feet, are provided at the gatewell for water quality purposes. The different level of intake gates will allow the mixing of water to control the temperature downstream. A plan and section view of the outlet works is shown on Plate 2-6. A detailed section of the outlet works is shown on Plate 2-7. The intake tower is shown in Figure 2-4. The outlet conduit and discharge channel are shown in Figures 2-5 and 2-6, respectively.

d. Stilling Basin. The outlet works stilling basin is 106 feet long and 33 feet wide. The floor of the stilling basin is at elevation of 682.0 feet. The basin has two rows of baffle blocks and an end sill to assist in the dissipation of kinetic energy and reduce erosion velocities in the existing downstream channel. The downstream view of the stilling basin is shown in Figure 2-7.

e. Hydropower Facilities. There are no power facilities at North San Gabriel Dam.

f. Water Supply Facilities. The outlet gates are operated for water supply and water quality purposes. The water is released through the gates as requested by the Brazos River Authority (BRA). The Brazos River Authority operates the Stillhouse Hollow Pump Station to convey water approximately 28 miles to Lake Georgetown via the Williamson County Regional Raw Water Line.[1] The pipeline is 48 inches in diameter and has a pumping capacity of 44mgd. BRA began pumping through the pipeline in November 2001.

[1] http://brazosgwater.org/IPP-2016/Volume-II/7-1-BeltonStillhousePipeline.pdf

Figure 2-6. Discharge Channel

Figure 2-7. Downstream View of Stilling Basin

2-04. Related Control Facilities. Lake Georgetown and North San Gabriel Dam is part of the USACE plan for flood control on the Brazos River and its tributaries. The plan presently consists of nine USACE dam and lake projects. Lake Georgetown and North San Gabriel Dam operates with four other dams, Proctor Dam, Belton Dam, Granger Dam, and Stillhouse Hollow Dam on the Little River System and San Gabriel River to control floods at the Little River Gage at Cameron, Texas. Discharges from Lake Georgetown pass through control points at Georgetown and Laneport on the San Gabriel River and Cameron on the Little River. The stream capacity at Cameron gage is shared with four other projects in the Little River basin. All five of these dams provide for flood damage reduction in the Little River System. The nine USACE dam projects in the Brazos River system control 36,830 square miles of drainage area of which 8,950 square miles are non-contributing.

2-05. Real Estate Acquisition. The guide taking line for land acquisition of Lake Georgetown and North San Gabriel Dam was based on the policy set forth in EM 405-2-150. A total of 5,317.26 acres for fee simple and 512.93 acres for flood flowage easement were acquired for the construction of the North San Gabriel Dam. Both taking lines are based on a guide contour elevation of 839.0 feet, with a minimum of 300 horizontal feet from the top of flood control storage at elevation 834.0 feet. This will provide five feet of freeboard above both the top of flood control pool and the maximum water surface obtained by routing the hypothetical 50-year flood. If the adopted five feet of freeboard does not provide a minimum of 300 feet horizontally from the top of flood control storage, the guide taking line has been increased to that extent. The enveloping curve of backwater effect indicates that the upper guide contour elevation of 839.0 feet established for the flat pool area of the main part of the lake would be applicable throughout the entire area.

2-06. Public Facilities. Four recreation areas around the lake are operated by USACE for public use. The areas are listed in Table 2-1 and shown on Plate 2-8. Facilities provided at these

parks consist of roads, parking areas, boat ramps, camping and picnicking facilities, walkways, sanitation facilities, potable water, and swimming areas. Outgrants for recreational and commercial activities have been issued in five areas and are listed in Table 2-2.

TABLE 2-1

Recreation Areas at Lake Georgetown

1. Cedar Breaks Park
2. Jim Hogg Park
3. Russell Park
4. Tejas Camp

TABLE 2-2

Outgrants for Recreational and Commercial Facilities at Lake Georgetown

Type	Issued To	Activity or Purpose	Expiration Date
Lease DACW6317600428	City of Georgetown	Water Treatment Plant	25 August 2017
Easement DACW6327600428	City of Georgetown	Water Treatment Plant	25 August 2017
Lease DACW6318100676	Mayor of Round Rock	Water Pipeline	31 August 2030
Easement DACW6328100676	Mayor of Round Rock	Water Pipeline	10 September 2010
Easement DACW632780631	County of Williamson	County Road	Indefinite

CHAPTER III – HISTORY OF PROJECT

3-01. Authorization. Congressional authority for the construction of Lake Georgetown and North San Gabriel Dam (North Fork Reservoir)) and South Fork Reservoir on the North Fork San Gabriel River was authorized by the Flood Control Act approved October 23, 1962 (Public Law 874, 87th Congress, 2nd Session) in accordance with the plan outlined in House Document No. 591 (87th Congress, 2nd Session). Authority to initiate advance planning on the San Gabriel River is contained in Public Works Appropriation Act of 1965, approved 30 August 1964 (Public Law 88-511) and in Advice of Allotment C-124 dated 9 September 1964.

On 22 December 1980, North Fork Reservoir was officially renamed Lake Georgetown (Public Law 96-575). The name, Lake Georgetown is derived from the lake's close proximity to the community of Georgetown in Williamson County. South Fork Reservoir was not built and was deauthorized in June 2003.

3-02. Planning and Design. Public hearings were held at Hamilton, Texas on 25 August 1937, and at Belton, Texas on 19 November 1945, to ascertain the desires of local interests with respect to improvements for flood control, water supply, fish and wildlife, and recreation purposes on the Brazos River and tributaries. A public hearing was also held in Waco, Texas on 16 November 1937, for the purpose of affording all interested parties an opportunity to present their views concerning improvement of the Brazos River and its tributaries in connection with the preliminary examination and review of reports on the Brazos River, Texas. It was at this public hearing that the Brazos River Conservation and Reclamation District, a state authorized agency which is now known as the Brazos River Authority (BRA), requested improvements for flood control and water conservation on the Brazos River and its tributaries.

In 1945, USACE gave the BRA funds to plan the dam system in the San Gabriel River basin, including North and South Fork Dams. Early plans put forth by the Bureau of Reclamation called for a dam on the western edge of the Williamson County, above Georgetown, in order to protect and irrigate prime farmland in the central and eastern half of the county. However, USACE surveys determined that a dam on the eastern side of the county, at Laneport, would control flooding more cost efficiently than the dams on the North or South Forks upstream. Disagreements about the location of the dam delayed the planning until a local meeting was held in Taylor, Texas on 23 November 1948, where the USACE presented its plan to build a dam at the Laneport site. This Laneport dam site is currently where Granger Dam was built.

A report on preliminary examination of the Brazos River and tributaries was submitted to the Chief of Engineers by the District Engineer, Galveston District and subsequently printed as House Document No. 535 (81st Congress, 2nd Session) in 1951. In this document, the District Engineer recommended the construction of Laneport Reservoir (Granger Dam and Lake) for the purposes of flood control and conservation on the watershed. In a later report on survey of the Brazos River and tributaries dated 29 July 1955, the District Engineer gave further consideration to the proposed location of Granger Dam. A modification in the plan was recommended which added North and South Fork Reservoirs in the western part of the county to Granger Dam and

Lake in the east, in order to protect against flooding further upstream in the basin. This modification was embodied in the 1962 Flood Control Act in accordance with the plan outlined in House Document No. 591. The dams recommended for construction were as follows:

a. Laneport Reservoir (Granger Dam and Lake)
b. North Fork Reservoir (Georgetown Dam and Lake)
c. South Fork Reservoir (not constructed, deauthorized in June 2003)

South Fork Reservoir, which was to be located on the South Fork San Gabriel River, was deferred on the basis of economic studies and finally it was de-authorized in June 2003.

3-03. <u>Construction</u>. The construction of Lake Georgetown and North San Gabriel Dam began in October 1972 and was completed in October 1980 with an initial conservation pool elevation of 791.0. Deliberate impoundment began in March 1980. The construction cost of the dam was $38,800,000. Table 3-1 outlines the important dates in the construction of Lake Georgetown and North San Gabriel Dam. Figures 3-1 through 3-6 show some of the construction phases.

Figure 3-1. Embankment Fill Operations, 4 August 1976

Figure 3-2. Embankment Fill Operations

Figure 3-3. Excavation Operations

Figure 3-4. North Fork Lake Looking Upstream at Tower, 1 October 1975

Figure 3-5. Intake Tower Construction

Figure 3-6. Spillway Construction, November 1978

TABLE 3-1

Resume of Construction Activities

Activity	Date
Construction began	October 1972
Dedication of dam	5 October 1979
Deliberate impoundment began	3 March 1980
Construction completed	24 October 1980
Conservation pool filled to elevation 791.0	25 May 1980

3-04. Related Projects. The Lake Georgetown and North San Gabriel Dam Project is an integral part of USACE plan for flood control on the Lower Brazos River and its tributaries. The plan presently consists of nine USACE flood control projects, known as Whitney Dam, Aquilla Dam, Waco Dam, Proctor Dam, Belton Dam, Stillhouse Hollow Dam, Georgetown Dam (Lake Georgetown and North San Gabriel Dam), Granger Dam, and Somerville Dam. BRA also owns and operates three other dams in the Brazos River basin for purposes of water conservation: Morris Sheppard Dam (Possum Kingdom Lake), DeCordova Bend Dam (Lake Granbury), and Sterling C. Robertson Dam (Lake Limestone). Georgetown Dam operates with four other USACE Dams: Proctor Dam, Belton Dam, Granger Dam, and Stillhouse Hollow Dam on the Little River System and San Gabriel River; to control floods at the Little River Gage at Cameron, Texas. The nine USACE dam projects in the Brazos River system control 36,830 square miles of

drainage area of which 8,950 square miles are non-contributing area.[2] North San Gabriel Dam controls 246 square miles of this drainage area. The Brazos River Master Reservoir Regulation Manual presents the proposed plan and individual projects in more detail. The dam and lake projects of Brazos River basin are listed in Table 3-2.

TABLE 3-2

Brazos River Basin Projects

Project	Stream	Year of Completion
Morris Sheppard Dam, BRA Project - Possum Kingdom Lake	Brazos River	1941
DeCordova Bend Dam, BRA Project - Lake Granbury	Brazos River	1969
Whitney Dam	Brazos River	1951
Aquilla Dam	Brazos River	1983
Waco Dam	Bosque River	1965
Sterling C. Robertson Dam, BRA Project - Lake Limestone	Navasota River	1978
Proctor Dam	Leon River	1963
Belton Dam	Leon River	1954
Stillhouse Hollow Dam	Lampasas River	1968
Georgetown Dam	San Gabriel River	1980
Granger Dam	San Gabriel River	1980
Somerville Dam	Yegua Creek	1967

3-05. Modification to Regulations. The name of the reservoir was officially changed from North Fork Reservoir to Lake Georgetown in 1980, in accordance with Public Law 96-575.

3-06. Principal Regulation Problems. There have been no known regulation problems.

[2] "Reservoir Regulation Manual, Whitney Lake, Brazos River Basin, Texas", USACE, Feb. 1975.

CHAPTER IV – WATERSHED CHARACTERISTICS

4-01. General Characteristics. The San Gabriel River originates in Burnet County approximately 12 miles north of Burnet, Texas, and flows in an easterly direction for approximately 120 miles to join the Little River at river mile 44.3, which then flows northeasterly to join the Brazos River at river mile 315.8. The watershed lies in the central portion of Texas, between north latitudes 30°20' and 30°00' and west longitudes 97°00' and 98°20'. The watershed of the San Gabriel River has a total drainage area of 1,355 square miles of which 246 are controlled by North San Gabriel Dam.

North San Gabriel Dam is located on the North Fork of the San Gabriel River at river mile 4.3. Lake Georgetown is formed by flows from the North Fork of the San Gabriel River. The slope of the San Gabriel River in the vicinity of North San Gabriel Dam is about 17 feet per mile.

The San Gabriel River has five principal tributaries that flow into its river system. North Fork and South Fork, the principal tributaries of the San Gabriel River, flow in an easterly to southeasterly direction for distances of approximately 46 and 39 miles, respectively, to their confluence with the San Gabriel River at Georgetown, Texas. The drainage areas of North Fork and South Fork are 270 and 128 square miles, respectively. Berry Creek and Willis Creek enter the San Gabriel River above Granger Dam. Berry Creek enters the San Gabriel River at river mile 57.8 and has a drainage area of 83 square miles. Willis Creek enters San Gabriel River at river mile 29.7, and has a drainage area of 57.8 square miles. Brushy Creek, the last major tributary of the San Gabriel River, has drainage area of 510 square miles and enters the San Gabriel River at river mile 5.2. The Georgetown Lake watershed and the location of the dam are shown on Plate 4-1.

The San Gabriel River is crossed by a network of highways and railroads, and includes the urban area of Georgetown. The majority of the San Gabriel River watershed lies within the Cross Timbers and Edwards Plateau ecoregions to the west, and the Texas Blackland Prairie ecoregion to the east.[3] About two-thirds of the watershed is either in pasture or rangeland, with a considerable number of concentrated animal feeding operations. Agricultural cropland comprises about 20% of the watershed and developed land comprises about 5%. Manufacturing, trade, healthcare, and education are the major industries in the area. The population of the basin was approximately 90,000 in 2010.

4-02. Topography. The San Gabriel River rises west of the Balcones Fault, a plateaued and timbered area of generally rugged topography containing steeply eroded hills, spurs, knobs, and escarpments, classified as the Edwards Plateau ecoregion. The watershed east of the Balcones Fault (Escarpment) is a rolling hilly terrain with little or no timber, classified as the Blackland Prairie ecoregion. The general land elevations in this area vary from about 750 feet near the

[3] archive.epa.gov/wed/ecoregions/web/html/tx_eco.html

escarpment line to an elevation of about 300 feet near the confluence of the San Gabriel River and Little River. The topography of the reservoir area is characterized by a dissected plateau, in late youth or early maturity. Just east of the dam site, the plateau gives way to the moderate or rolling relief of the Gulf Coastal Plain. Plate 4-2 and Plate 4-3 present the natural profiles of the San Gabriel River and its tributaries.

4-03. Geology and Soils. The Lake Georgetown site is underlain by Early Cretaceous strata of the Edwards and Comanche Peak Limestones. The Edwards Limestone is composed of aphanitic to fine grained limestone, dolomite, and chert, approximately 60-350 feet thick. The Comanche Peak limestone is fine to very fine grained and extensively burrowed, approximately 80 feet thick. The oldest formation, the Glen Rose of the Trinity Group, is exposed in the upper reservoir area, and successively younger strata of the Walnut, Comanche Peak, and Edwards formation of the Fredericksburg Group are exposed downstream toward the dam site. The Edwards limestone forms a resistant cap over the underlying Comanchean Strata. In the region of the project, the area is covered with a thin mantle of material consisting of calcareous clays, inorganic material, rock fragments (limestone and chert), and occasional limestone boulders. [4]

The San Gabriel River watershed lies at the intersection of three principal physiographic ecoregions: the Edwards Plateau, Cross Timbers, and Blackland Prairie ecoregions. The majority of the North and South Forks watersheds lie within the Balcones Canyonlands subregion of the Edwards Plateau, while the northern part of the basin, including the majority of Berry Creek, lies in the Limestone Cut Plain subregion of the Cross Timbers ecoregion. Lake Georgetown and North San Gabriel Dam are contained in the Limestone Cut Plain subregion. East of Lake Georgetown the soils are called the Northern Blackland Prairie subregion of the Blackland Prairie ecoregion.

The Edwards Plateau is largely a dissected limestone plateau with shallow gravelly or alkaline clay soils containing a sparse network of perennial streams, due to its Karst geology. In the Blackland Prairie, both upland and bottomland soils are deep, dark-gray to black alkaline clays. Some soils in the western part of the watershed are shallow to moderately deep overlaying a chalk foundation. Blackland soils are known as "cracking clays" because of the large, deep cracks that form in dry weather. This high shrink-swell property can cause serious damage to foundations, highways, and other structures and is a safety hazard in pits and trenches. The Cross Timbers ecoregion is underlain by Lower Cretaceous limestones, with mostly stony or dark-gray alkaline clay soil.[5]

4-04. Sediment. A system of 18 sedimentation ranges and 5 degradation ranges were established and surveyed with monuments placed within the reservoir area and below the dam during the design of the dam. The annual rate of sediment production for the watershed of the San Gabriel River above Granger, Georgetown, and South Fork (deauthorized in June 2003) Lakes was determined by use of data and methodology set forth in Bulletin 5912 "Inventory and

[4] mrdata.usgs.gov/sgmc/tx.html

[5] archive.epa.gov/wed/ecoregions/web/html/tx_eco.html

Use of Sedimentation Data in Texas", published by the Texas Board of Water Engineers (subsequently the Texas Commission of Water Quality) in January 1959. Taking into consideration the major land resource areas of the San Gabriel watershed above these lakes, and an estimated trap efficiency of 99.8 percent, the computed sediment deposition for the 100-year period representing the economic life of Lake Georgetown was 14,000 acre-feet. The sediment control in the San Gabriel River watershed assumed concurrent development of both Granger Lake and Lake Georgetown and does not reflect any effect by the proposed South Fork Lake (de-authorized in 2003). A schedule prepared in the Office of the Division Engineer, SWD indicates that resurveys were planned for about 5-year intervals. However, currently sediment surveys are done periodically depending on need and available funding. The locations of the ranges are shown on Plate 4-4.

In 1991, the Texas Legislature authorized the Texas Water Development Board (TWDB) to develop a non-profit, self-supporting, reservoir volumetric survey program, which is named the Hydrographic Survey Program. The program includes a standard volumetric survey and a sedimentation survey. Since 1992, TWDB's Hydrographic Survey Program has completed 147 hydrographic surveys on 104 unique reservoirs. This includes 81 of the 109 water supply reservoirs monitored for inclusion in TWDB's monthly Water Conditions Report. The TWDB web site is: (https://www.twdb.state.tx.us/surfacewater/conditions/report/index.asp).

The TWDB last performed a standard volumetric survey for Lake Georgetown in 2005.[6] Results from the survey indicate Lake Georgetown encompasses 1,287 surface acres and contains a total volume of 36,904 acre-feet at conservation pool elevation 791.0 feet.

Original design information was based on a 1978 USACE survey. Records indicate that Lake Georgetown had a total surface area of 1,310 acres and a volume of 37,100 acre-feet of water at the top of conservation pool elevation 791.0 feet. In 1995 and 2005, TWDB performed volumetric surveys for Lake Georgetown. The results of those surveys show that the total volume at the conservation pool elevation has decreased to 36,123 acre-feet in 1995 and slightly increased to 36,904 acre-feet in 2005, respectively. The surface area of Lake Georgetown has decreased to 1,287 acres in both 1995 and 2005. Between the 1978 USACE survey and the 2005 TWDB volumetric survey, Lake Georgetown lost 196 acre-feet of water or 0.53 percent in conservation storage. The difference in storage indicated the presence of a sediment sill during the fiscal years from 1978 to 2005. Comparisons between the historical USACE 1978 original design, the 1995 TWDB volumetric survey, and the 2005 TWDB volumetric survey are presented in Table 4-1.

[6] www.twdb.texas.gov/hydro_survey/georgetown/2005-05/LakeGeorgetown2005_FinalReport.pdf

TABLE 4-1

Area and Capacity Comparisons of Lake Georgetown

Feature	USACE Original Design	TWDB Survey	TWDB Latest Survey
Year	1978	1995	2005
Surface Area at Conservation Pool Elevation 791.0 feet NGVD29 (acres)	1,310	1,287	1,287
Volume at Conservation Pool Elevation 791.0 feet NGVD29 (acre-feet)	37,100	36,123	36,904

NOTE: Data is obtained from "Volumetric Survey of Lake Georgetown, TWDB May 2005".

4-05. Climate. The San Gabriel River watershed is in the central part of the state of Texas. The climate over the entire basin is sub-humid resulting in persistent hot weather from late May through September. In summer, the days are hot and the nights moderately warm. The winter temperatures are generally mild and dry, but occasional cold periods of short duration are experienced. Freezing temperatures are experienced occasionally but subzero temperatures are rare. Snowfall is light and has little effect on the runoff characteristics of the watershed.

a. Temperature. The mean annual temperature over the basin is about 66 degrees Fahrenheit. January, the coldest month, has an average minimum daily temperature of about 36 degrees. August, the warmest month, has an average maximum daily temperature of about 95 degrees. Temperatures in and near the watershed have ranged from a maximum of 112 degrees recorded at multiple stations to a minimum 12 degrees recorded at Lampasas.[7] The average length of the growing season between killing frosts in the watershed is about 264 days at Temple just north of the basin and 291 days at Austin, just south of the basin.[8] Table 4-2 gives temperature data for several National Weather Service (NWS) stations in or near the San Gabriel River basin.

[7] www.ncdc.noaa.gov/cdo-web/datasets

[8] texasalmanac.com/sites/default/files/images/almanac-feature/countyweatherA.pdf

TABLE 4-2

Temperatures in/near the San Gabriel River Basin

Station	Period of Record	Temperatures (°F)				
		Mean Annual	Average January Minimum	Average August Maximum	Minimum Recorded	Maximum Recorded
Burnet	1897-2014	66.6	35.3	96.0	-4	114
Cameron	1908-2009*	67.9	38.2	96.7	-7	114
Georgetown Lake	1981-2014	66.9	36.1	96.6	-2	111
Georgetown	1896-1982*	67.1	36.4	96.4	1	113
Granger Dam	1980-2014	67.1	35.8	95.2	-4	112
Killeen	1957-2014	66.4	38.5	93.1	-2	112
Lampasas	1897-2012*	65.2	32.6	96.5	-12	112
Taylor	1929-2001	67.1	36.3	96.9	-5	112
Temple	1893-2003*	66.6	36.0	96.2	-4	112

NOTE: *Period of available NOAA data ends in year indicated.

b. Precipitation. The normal annual precipitation of the North San Gabriel River watershed varies from about 30 inches in the western portion of the watershed to about 35 inches in the eastern portion of the watershed.[9] The normal distribution of rainfall over the area is generally favorable for agricultural purposes, with the heaviest rainfall occurring during the period April through June. The monthly distribution of the average annual precipitation at the eight National Weather Service stations in the watershed area is shown in Table 4-3.

[9] www.ncdc.noaa.gov/cdo-web/datasets

TABLE 4-3

Average Monthly and Annual Rainfall in/near the San Gabriel River Basin

Month	Precipitation (Inches)							
	Georgetown Lake 1982-2015*	Georgetown 1898-1982	Lampasas 1897-2015*	Burnet 1893-2015*	Temple 1893-2015*	Taylor 1929-2001*	Granger Dam 1980-2015*	Cameron 1908-2008
January	2.24	1.86	1.67	1.73	2.17	2.38	2.33	2.67
February	2.45	2.14	2.04	2.02	2.39	2.64	2.08	2.65
March	2.94	1.87	2.21	2.21	2.51	2.43	2.70	2.50
April	2.51	3.91	2.99	2.84	3.46	3.01	1.75	3.38
May	4.26	4.32	4.09	4.07	4.62	4.50	5.00	4.49
June	3.95	2.85	2.92	3.31	3.13	3.50	4.00	2.94
July	2.15	2.20	1.96	2.04	2.05	1.63	1.94	1.82
August	2.07	1.95	2.01	1.96	2.09	2.19	1.89	1.94
September	3.71	3.84	2.90	3.09	3.40	3.66	3.05	3.26
October	4.09	3.48	2.96	3.14	3.18	3.33	3.48	3.09
November	3.16	2.75	2.25	2.27	2.95	2.78	2.65	2.90
December	2.51	2.50	2.09	1.88	2.66	2.73	2.75	2.99
Total	36.04	33.67	30.09	30.56	34.61	34.78	33.62	34.63
Precipitation Minimum Yearly	15.36 (2011)	13.25 (1917)	14.80 (1954)	13.00 (1954)	13.89 (1954)	14.60 (1954)	18.51 (1988)	15.64 (1954)
Precipitation Maximum Yearly	54.22 (1992)	60.04 (1919)	51.82 (2004)	56.61 (1919)	56.54 (1902)	54.48 (1957)	51.70 (1991)	58.25 (2004)

NOTES: 1. The total annual precipitation is computed by summation of the monthly averages.
2. Data reflect "Climatological Data" from the NWS. *Data as of 2015.

c. Snowfall. Minor accumulations of snowfall occur periodically during the winter months; however, snowfall does not contribute significantly to area precipitation or runoff.

d. Evaporation. The evaporation loss at Lake Georgetown was determined by using records at NWS "Class A" evaporation pan. Records are available from 1981 to present. The evaporation pan dimensions at Lake Georgetown are 16 inches deep and 4-foot in diameter. From measurements collected between June 1981 and December 2015, the estimated average annual evaporation from the lake is about 49 inches. The average monthly and annual evaporation from Lake Georgetown are given in Table 4-4A. The highest recorded annual evaporation was 77.24 inches in 2011, while the lowest was 50.09 in 2007. The highest evaporation during a single month was 11.44 inches in July 1986. The evaporation pan heats up much faster than the lake, thus the pan evaporation is much higher than actual evaporation, therefore a coefficient must be used to estimate actual lake evaporation.

A longer period of record, however, is desirable for estimating average evaporation rates. The State of Texas maintained a Bureau of Plant Industry sunken-type evaporation station at the Agricultural Experiment Station at Temple, about 46 miles northeast of Lake Georgetown and North San Gabriel Dam. Table 4-4B lists the Temple Experiment Station average monthly and average annual evaporation derived from 1915 to 1969.

The TWDB has also collected lake evaporation data from 1954 through 2014 from the National Oceanic and Atmospheric Administration (NOAA) and the National Climatic Data Center (NCDC).[10] The average monthly and annual evaporation from TWDB data are given in Table 4-4C. The evaporation rates for the San Gabriel River watershed are computed using the pan coefficients in the ThEvap program for quadrangle 710.

Figures 4-1 through 4-4 show the weather station instruments and equipment at Lake Georgetown.

[10] www.twdb.texas.gov/surfacewater/conditions/evaporation/

Figure 4-1. Overview of Weather Station at Lake Georgetown

Figure 4-2. Air Temperature and Relative Humidity Sensor

Figure 4-3. Rain Gauge

Figure 4-4. Evaporation Pan

TABLE 4-4A

Lake Georgetown Average Monthly and Annual Evaporation (Jun 1981 – Dec 2015)

Month	Reservoir Evaporation (Inches)		
	Measured Pan Evaporation	Monthly Pan Coefficient	Calculated Reservoir Evaporation
January	2.30	0.77	1.77
February	2.71	0.67	1.81
March	4.21	0.64	2.70
April	5.71	0.64	3.65
May	6.87	0.68	4.67
June	7.91	0.73	5.78
July	8.97	0.79	7.09
August	8.88	0.84	7.46
September	6.32	0.88	5.56
October	4.31	0.91	3.93
November	2.78	0.92	2.56
December	2.19	0.89	1.95
Annual	63.16	0.78	49.26

NOTE: The Pan coefficients were developed by the USACE.

TABLE 4-4B

The State of Texas – Bureau of Plant Industry, Temple, Texas

Average Monthly Evaporation Data, 1915-1969

Pan coefficient = 0.94

Month	Observed pan evaporation (inches)	Evaporation from reservoir surface (inches)	Observed precipitation (inches)
January	2.29	2.15	2.45
February	2.69	2.53	2.42
March	4.21	3.96	2.09
April	4.94	4.64	3.93
May	5.71	5.37	4.40
June	7.08	6.66	2.93
July	8.26	7.76	1.80
August	8.16	7.67	2.04
September	6.15	5.78	3.21
October	4.95	4.65	2.90
November	3.32	3.12	2.67
December	2.42	2.28	2.61
Annual	60.18	56.57	33.45

NOTES: 1. Corresponding to period for which evaporation records are available.
2. Based on data provided from the Whitney Lake Reservoir Regulation Manual dated January 1974.

TABLE 4-4C

TWDB Average Monthly and Annual Evaporation Lake Georgetown, 1954-2014

Month	Quadrangular pan Evaporation rate (inches)	Monthly Pan Coefficients for quadrangle 710 of ThEvap Program
January	2.11	0.73
February	2.43	0.70
March	3.69	0.69
April	4.38	0.67
May	4.62	0.60
June	6.14	0.67
July	7.14	0.69
August	6.95	0.70
September	5.36	0.73
October	4.33	0.77
November	2.98	0.80
December	2.20	0.77
Annual	52.33	0.71

e. Wind. The prevailing winds over the watershed are from the south. However, during the winter months, the influence of high-pressure systems moving from the northwest causes the wind to shift from the north. Severe winds have been experienced near Lake Georgetown. The fastest recorded velocity in the vicinity of the watershed was an 85 mile per hour gust, recorded in Spicewood, Texas on 8 March 1995.[11] (Data provided by NOAA NCDC for the period 1950–2015.)

From the "Lake Georgetown, North Fork, San Gabriel River, Texas, Brazos River Basin, Dam Safety Assurance Study, Hydrology and Hydraulics, January 1983" report, the design wind speed is 56 mph, the fetch for wind setup is 2.60 miles and the computed required freeboard is 3.40 feet. This freeboard was computed for a Probable Maximum Flood (PMF) elevation of 858.6 feet. For this PMF elevation, the provided freeboard is inadequate. The average annual wind movement at Austin, Texas, 30 miles south of the lake, is 78,840 miles, which is an average wind speed of 9 miles per hour for entire year.[12] Tornadoes are a somewhat rare occurrence in the

[11] www.ncdc.noaa.gov/stormevents/eventdetails.jsp?id=10352932

[12] www.ncdc.noaa.gov/sites/default/files/attachments/wind1996.pdf

watershed, but the northern portion does reach into what is considered "Tornado Alley". In 1953 a series of tornados reaching the F5 level left 114 people dead in and around Waco, Texas, 75 miles northeast of Lake Georgetown.[13] Also in May 1997, a massive tornado reaching the F5 level left 27 dead in the town of Jarrell, Texas, which is approximately 20 miles east of Lake Georgetown.

4-06. Storms and Floods. The San Gabriel River watershed is subject to three general types of flood-producing rainfall: thunderstorms, frontal rainfall, and tropical cyclones. Generally, the highest 24-hour and monthly precipitation periods have occurred during major thunderstorms. However, there are some instances of heavy precipitation resulting from local thunder storms. The maximum 24-hour rainfall reported in or adjacent to the basin was 38.21 inches, which occurred at Thrall, Texas on 9-10 September 1921.[14] The maximum monthly rainfall reported was 39.7 inches, which occurred at Thrall, Texas in September 1921. The major storms experienced over the watershed for which rainfall data are available, together with the average rainfall depths produced on the watershed above the dam, are listed in Table 4-5.

Table 4-6 lists the pertinent data for major lakes, dams, and gages in the San Gabriel River basin. Table 4-7 gives stages and discharges for top 12 major floods recorded at gages on the San Gabriel River and Willis Creek.

[13] www.srh.noaa.gov/fwd/?n=wacotormay1953

[14] www.srh.noaa.gov/images/ewx/wxevent/100.pdf

TABLE 4-5

Major Storms on the San Gabriel River Watershed, 1913-2015

Storm Date	Precipitation in Inches					
	Georgetown Lake	Georgetown Gage	Granger Dam Gage	Burnet Gage	Lampasas Gage	Temple Gage
1913, Nov 28-Dec 6	—	14.38	—	—	11.30	11.47
1921, Sep 9-10	—	13.70	—	8.70	1.13	9.35
1922, Apr 25-May 4	—	10.38	—	—	9.01	10.34
1929, May 13-28	—	—	—	6.35	2.75	13.51
1936, Sep 15-28	—	—	—	14.04	14.51	7.43
1940, Nov 21-25	—	—	—	5.69	8.59	6.58
1944, May 21-27	—	—	—	6.39	6.23	3.14
1953, May 11-17	—	—	—	3.69	7.55	7.44
1957, April 19-29	—	—	—	12.37	8.07	8.27
1957, May 13-18	—	—	—	3.40	8.53	1.29
1959, Sep 29-Oct 5	—	4.77	—	10.55	8.98	8.81
1965, May 11-20	—	5.43	—	7.79	7.30	7.94
1974, Aug 25-31	—	3.75	—	11.65	—	—
1975, May 5-12	—	1.90	—	6.59	2.97	1.27
1981, Jun 11-17	—	5.74	11.11	4.92	3.87	8.73
1987, May 29-Jun 4	7.20	—	7.25	6.10	3.00	4.21
1991, Dec 18-27	8.70	—	11.93	7.89	9.08	7.30
2002, Jun 27-Jul 3	6.18	—	3.70	9.75	8.41	2.20
2004, Nov 16-24	4.94	—	5.87	7.27	4.88	—
2007, May 25-29	3.86	—	7.70	1.27	2.80	—
2009, Oct 22-28	5.43	—	4.26	7.59	2.30	5.04
2010, Sep 1-9	17.64	—	3.45	7.03	—	5.05
2015, May 10-29	13.63	7.13	10.98	8.75	9.79	11.91

NOTE: The rainfall data were tabulated from published precipitation records from the NWS.

TABLE 4-6

Pertinent Data for Major Lakes and Dams and Gages in the San Gabriel River Basin

Station	Stream	Period of Record	Miles Above Mouth	Datum (ft)	Drainage Area (Sq. Mi.)	Maximum Floods of Record		
						Date	Gage Height (ft)	Peak Discharge (cfs)
near Georgetown	North Fork	1968-2015	3.4	689.06	248.0	Sep 1921	39.50	—
						Apr 1957	34.50	—
						Sep 1974	26.20	35,000
at Georgetown	San Gabriel	1934-1973	—	643.24	399.0	Sep 1921	36.10	160,000
						Apr 1957	34.10	155,000
						4 Oct 1959	26.25	71,500
at Georgetown	South Fork	1957-2015	2.4	687.72	133.0	27 Jun 2007	31.65	57,500
						15 Nov 2001	27.06	41,000
						3 Sep 1981	24.60	33,400
near Laneport	San Gabriel	1921-2015	26.2	412.60	738.0	31 Oct 1974	30.80	31,200
						21 Jan 1968	30.45	28,700
						24 Apr 1966	29.86	25,300
at Airport Road near Georgetown	Berry Creek	2003-2015	4.6	665.00	71.4	8 Sep 2010	28.72	24,700
						27 Jun 2007	23.05	12,400
						17 Nov 2004	22.38	11,000

TABLE 4-6 (CONTINUED)

Pertinent Data for Major Lakes and Dam and Gages in the San Gabriel River Basin

Lake	Stream	Period of Record	Miles Above Mouth	Datum (ft)	Drainage Area (Sq. Mi.)	Maximum Lake Elevation		
						Date	Elev. (ft)	Volume (ac-ft)
Granger Lake	San Gabriel	1980-2015	31.9	—	709	5 Mar 1992	530.11	268,200
Lake Georgetown	North Fork	1980-2015	4.3	—	246	4 Mar 1992	835.86	136,900

NOTE: The information is derived from the United States Geological Survey (USGS) Annual Water-Data Reports.

TABLE 4-7

Top 13 Major Recorded Floods in the San Gabriel River Watershed, 1921-2015

Date	North Fork San Gabriel River near Georgetown*		South Fork San Gabriel River at Georgetown		San Gabriel River at Georgetown		San Gabriel River at Laneport**	
	Gage Height (ft)	Peak Discharge (cfs)	Gage Height (ft)	Peak Discharge (cfs)	Gage Height (ft)	Peak Discharge (cfs)	Gage Height (ft)	Peak Discharge (cfs)
1921, Sep	39.50	—	—	—	36.10	160,000	39.60	—
1944, Jun	—	—	—	—	—	37,500	—	—
1957, Apr	34.50	—	41.05	—	34.10	155,000	34.60	—
1959, Oct	—	—	—	—	26.25	71,500	33.80	—
1969, Apr	14.84	11,700	11.15	7,520	—	—	28.65	19,600
1974, Sep	26.20	35,000	16.61	20,200	—	—	30.80	31,200
1977, Apr	8.24	2,560	12.83	10,600	—	—	28.22	18,000
1992, Feb-Mar	13.05	6,070	12.91	11,200	—	—	21.86	7,540
2007, Jun-Jul	10.19	2,450	31.65	57,500	—	—	20.19	6,390
2009, Sep	8.90	1,360	10.40	5,050	—	—	5.83	115
2010, Sep	14.15	7,330	21.98	24,500	—	—	15.84	4,000
2013, Sep-Nov	4.86	17	6.53	1,560	—	—	5.46	61
2015, May-Jun	7.99	492	17.12	14,700	—	—	15.52	3,720

NOTES: 1. Data retrieved from USGS Peak Streamflow for Texas database.

2. The Top 13 floods were generally basin-wide flood events at most of the gages; however certain gages may not have experienced a Top 12 Flood during the same event. For more details on all major floods, refer to Table 4-8 (pg. 4.8-1).

3.*Deliberate impoundment at Lake Georgetown began on 03 March 1980. Therefore, peak flood flows at this gage after this impoundment date are captured by North San Gabriel Dam.

4. **Deliberate impoundment at Granger Lake began on 21 January 1980. Therefore, peak flood flows at this gage after this impoundment date are captured by Granger Dam**.**

Historical descriptions of the major floods that have been experienced in the San Gabriel River watershed are as follows:[15,16]

a. Storm of September 1921. The flood of September 1921 is considered to be one of the worst rainstorms ever in the State of Texas. The storm produced a Texas record of 38.21 inches of rainfall at Thrall in Williamson County and 10-15 inches over the remainder of the drainage area. The flood reached record stages of 39.6 feet at San Gabriel River at Laneport Gage and 39.5 feet at North Fork San Gabriel River near Georgetown Gage site. The peak discharge was estimated to be 160,000 cfs at San Gabriel River at Georgetown Gage. More than 90 people drowned in Williamson County as a result of the flooding. On 10 September, the peak discharge at Little River at Cameron Gage reached the maximum historical value of 647,000 cfs.

b. Storm of September 1936. The storm of September 1936 produced rainfall of 8.1 inches at Lampasas and 10.4 inches at Burnet. The flood resulting from this storm reached a peak discharge of 32,400 cubic feet per second at Gabriel River at Georgetown Gage. The nearby Colorado River reached a peak stage of 70 feet, 17 feet higher than ever previously recorded.

c. Storm of June 1940. The storm of June 1940 produced rainfall of 5.7 inches at Lampasas, 6.7 inches at Burnet, and 5.4 inches at Temple. The flood resulting from this storm reached a peak discharge of 34,500 cfs at San Gabriel River at Georgetown Gage.

d. Storm of June 1944. The storm of June 1944 produced a rainfall of 8.0 inches at Temple, and 6.4 inches at Burnet. The flood resulting from this storm reached a peak discharge of 37,500 cfs at San Gabriel River at Georgetown Gage.

e. Storm of April 1957. All of north-central Texas and much of Oklahoma, Arkansas, and Louisiana received 20-36 inches of rain during the period April-June 1957. The storm of April 1957 produced 6-10 inches of precipitation at stations in the basin, with the storm center at Waco receiving just over 12 inches. The flood resulting from this storm reached stages of 34.5 feet at North Fork San Gabriel River near Georgetown Gage site, 41.05 feet at South Fork San Gabriel River at Georgetown Gage, and 34.6 feet at San Gabriel River at Laneport Gage. The peak discharge was measured to be 155,000 cfs at San Gabriel River at Georgetown Gage.

f. Storm of October 1959. The storm of October 1959 produced an average rainfall of 5-8 inches at stations in the basin, with the storm center near Burnet receiving 10.6 inches. The flood resulting from this storm reached a peak stage of 33.80 feet at San Gabriel River at Laneport Gage, and a peak discharge of 71,500 cfs at San Gabriel River at Georgetown Gage.

g. Storm of April 1969. The storm of April 1969 produced an average rainfall of 4-5 inches at stations in the basin. The flood produced by this storm reached stages of 14.84 feet at

[15] pubs.usgs.gov/of/2003/ofr03-193/cd_files/USGS_Storms/patton.htm

[16] www.srh.noaa.gov/images/ewx/wxevent/100.pdf

North Fork San Gabriel River near Georgetown Gage, 11.15 feet at South Fork San Gabriel River at Georgetown Gage, and 28.65 feet at San Gabriel River at Laneport Gage. The discharges recorded during this flood at North Fork San Gabriel River near Georgetown Gage, South Fork San Gabriel River at Georgetown Gage, and San Gabriel River at Laneport Gage were 11,700, 7,520, and 19,600 cfs, respectively.

h. Storm of October 1974. Heavy rains of 8-12 inches in September persisted into October of 1974 and a storm in late October dropped 4-6 inches at stations in the basin. The flood produced by this storm reached stages of 24.1 feet at North Fork San Gabriel River near Georgetown Gage, 30.8 feet at San Gabriel River at Laneport Gage, and 16.61 feet at South Fork San Gabriel River at Georgetown Gage. Peak discharges at North Fork San Gabriel River near Georgetown Gage, South Fork San Gabriel River at Georgetown Gage, and San Gabriel River at Laneport Gage were 30,100, 20,200, and 31,200 cfs, respectively.

i. Storm of April 1977. Precipitation of 5.3 inches at Georgetown, 5.6 inches at Burnet, and 6.4 inches at Waco led to flooding in mid-April 1977. The flood resulting from this storm produced stages of 8.24 feet at North Fork San Gabriel River near Georgetown Gage, 12.83 feet at South Fork San Gabriel River at Georgetown Gage, and 28.22 feet at San Gabriel River at Laneport Gage. The peak discharges for this flood at North Fork San Gabriel River near Georgetown Gage, South Fork San Gabriel River at Georgetown Gage, and San Gabriel River at Laneport Gage were 2,560, 10,600, and 18,000 cfs, respectively.

j. Storm of February-March 1992. Heavy precipitation in February, followed by a storm in March 1992 produced rainfall of 4-6 inches at stations in the basin. The flood resulting from this storm produced stages of 13.05 feet at North Fork San Gabriel River near Georgetown Gage, 12.91 feet at South Fork San Gabriel River at Georgetown Gage, and 21.86 feet at San Gabriel River at Laneport Gage. The peak discharges for this flood at North Fork San Gabriel River near Georgetown Gage, South Fork San Gabriel River at Georgetown Gage, and San Gabriel River at Laneport Gage were 6,070, 11,200, and 7,540 cfs, respectively.

k. Storm of June-July 2007. Heavy rain in June and a storm in July 2007 produced 10.9 inches of precipitation near Georgetown Lake, 8.1 inches near Burnet, and 8.2 inches near Granger Dam. The flood resulting from this storm produced stages of 10.19 feet at North Fork San Gabriel River near Georgetown Gage, 31.65 feet at South Fork San Gabriel River at Georgetown Gage, and 20.19 feet at San Gabriel River at Laneport Gage. The peak discharges for this flood at North Fork San Gabriel River near Georgetown Gage, South Fork San Gabriel River at Georgetown Gage, and San Gabriel River at Laneport Gage were 2,450, 57,500, and 6,390 cfs, respectively. Figures 4-5 through 4-8 show the inundation of the USACE property at Lake Georgetown during the 2007 flood.

l. Storm of September 2009. A storm in September 2009 produced rainfall over the basin of 8.6 inches at Georgetown, 6.27 inches at Temple, and 8.02 inches at Granger. The flood resulting from this storm produced stages of 8.9 feet at North Fork San Gabriel River near Georgetown Gage, 10.4 feet at South Fork San Gabriel River at Georgetown Gage, 5.83 feet at

San Gabriel River at Laneport Gage, and 22.2 feet at Willis Creek near Granger Gage. The peak discharges for this flood at North Fork San Gabriel River near Georgetown Gage, South Fork San Gabriel River at Georgetown Gage, San Gabriel River at Laneport Gage, and Willis Creek near Granger Gage were 1,360, 5,050, 115, and 8,870 cfs, respectively.

m. Storm of September 2010. Heavy rains centered near Georgetown Lake produced as much as 17.64 inches of precipitation. The flood resulting from this storm produced stages of 14.15 feet at North Fork San Gabriel River near Georgetown Gage, 21.98 feet at South Fork San Gabriel River at Georgetown Gage, 15.84 feet at San Gabriel River at Laneport Gage, and 23.16 feet at Willis Creek near Granger Gage. The peak discharges for this flood at North Fork San Gabriel River near Georgetown Gage, South Fork San Gabriel River at Georgetown Gage, San Gabriel River at Laneport Gage, and Willis Creek near Granger Gage were 7,330, 24,500, 4,000, and 10,000 cfs, respectively. Figures 4-9 and 4-19 show the view of lake and the inundation of the USACE property at Lake Georgetown during the 2010 flood.

n. Storm of September- November 2013. The storms during September to November produced rainfall over the basin of 4.78 inches at Georgetown, 6.3 inches at Temple, 3.81 inches at Burnet, and 4.92 inches at Granger. The flood resulting from this storm produced stages of 4.86 feet at North Fork San Gabriel River near Georgetown Gage, 6.53 feet at South Fork San Gabriel River at Georgetown Gage, 5.46 feet at San Gabriel River at Laneport Gage, and 22.57 feet at Willis Creek near Granger Gage. The peak discharges for this flood at North Fork San Gabriel River near Georgetown Gage, South Fork San Gabriel River at Georgetown Gage, San Gabriel River at Laneport Gage, and Willis Creek near Granger Gage were 17, 1,560, 61, and 9,200 cfs, respectively.

o. Storm of June 2015. Consistent rain in Central Texas during one of the wettest months on record led to widespread flooding in the Dallas-Fort Worth and Houston areas, killing a total 31 people in Texas and Oklahoma, and ending a four year-long drought. The May statewide average monthly rainfall was a record 8.81 inches, and multiple local rainfall records were also set during the month. Georgetown Lake, Temple, and Granger Dam received 14.2, 14.1, and 11.0 inches of precipitation in a 3-week period of late May. Flood resulting from this storm reached gage heights of 7.99 feet at North Fork San Gabriel River near Georgetown Gage, 17.12 feet at South Fork San Gabriel River at Georgetown Gage, 23.24 feet at Willis Creek near Granger Gage and 15.53 feet at San Gabriel River at Laneport Gage. The peak discharges for this flood at North Fork San Gabriel River near Georgetown Gage, South Fork San Gabriel River at Georgetown Gage, Willis Creek near Granger Gage and San Gabriel River at Laneport Gage were 492, 14,700, 9,840 and 3,720 cfs, respectively. Figures 4-11 through 4-16 show the inundation of the USACE property at Lake Georgetown during the 2015 flood.

The USGS historical information of all major floods in the San Gabriel River watershed is listed in Table 4-8 (pg. T4.8-1). The data shown in the table covers the period 1921 to 2015.

Figures 4-5 through 4-16 are the scenes of the May to June 2007 flood, 2010 and 2015 floods at Lake Georgetown.

Figure 4-5. 2007 Flood - Lake Elevation near Embankment

Figure 4-6. 2007 Flood - High Water Level

Figure 4-7. 2007 Flood - Jim Hogg Park

Figure 4-8. 2007 Flood - Park Pavilion

Figure 4-9. 2010 Flood - San Gabriel River

Figure 4-10. 2010 Flood - Mobile Homes

Figure 4-11. 2015 Flood- Spillway

Figure 4-12. 2015 Flood - High Water Level

Figure 4-13. 2015 Flood - Access Road

Figure 4-14. 2015 Flood - Park Crossing Road

Figure 4-15. 2015 Flood - Park Crossing Road

Figure 4-16. 2015 Flood - Cedar Breaks Park

4-07. Runoff Characteristics. Floods may occur at almost any time of year in the San Gabriel River watershed. The topography of the San Gabriel River watershed, soil characteristics, and the nature of the rainfall in the area are conducive to rapid runoff and sharp crested flood hydrographs. Runoff factors and infiltration indices were computed for the San Gabriel watershed above the North Fork near Georgetown Gage and Circleville Gage (since discontinued) following a method described in EM 1110-2-1405, "Flood-Hydrograph Analysis and Computations". Initial losses on the watershed have ranged from a minimum of 0.90 inches to a maximum of 1.25 inches. Infiltration indices ranged from 0.10 to 0.30 inches per hour, and runoff coefficients varied from 24.9 to 54.2 percent. In estimating the rainfall excess for the spillway design storm for Lake Georgetown, an initial loss of 1.0 inch and a uniform infiltration rate of 0.10 inch per hour were assumed.

The computed monthly and annual inflow volumes, based on change in lake storage, are shown in Table 4-9 (pg. T4.9-1). The monthly inflow volume exceedence frequency curves, based on data from 1924 to 2015 are shown in Plates 4-5 through 4-16. Table 4-10 shows the monthly inflow volume frequency for the 5-, 10-, 25-, and 50-year events.

TABLE 4-10

Lake Georgetown Monthly Inflow Volume Frequency

	Inflow Volume in Acre-Feet Frequency of Occurrence in Years			
MONTH	5	10	25	50
January	9,213	14,355	21,153	26,295
February	7,225	14,292	32,891	55,219
March	12,046	18,192	26,315	32,461
April	6,492	12,147	26,939	44,346
May	14,629	21,712	31,076	38,159
June	10,412	22,436	49,933	72,020
July	3,848	8,671	21,750	38,914
August	842	1,465	3,181	5,537
September	2,746	6,529	16,279	27,191
October	4,037	8,804	21,171	35,325
November	3,958	8,760	21,407	36,633
December	6,075	12,506	28,390	43,496

NOTE: Based on computed inflows for period February 1924 to 1963 and period January 1980 to December 2015.

4-08. <u>Water Quality</u>. Texas Commission on Environmental Quality (TCEQ) publishes the assessment reports for the quality of surface waters for Brazos River basin in the biennial Integrated Report (formerly called the "Texas Water Quality Inventory and 303(d) List") that evaluates the quality of all surface waters in Texas. The Integrated Report is prepared according to Clean Water Act Sections 305(b) and 303(d). In the report, the TCEQ classifies water bodies based on the body's ability to support its designated uses. In other words it's "Level of Support"[17].

In the 2012 Integrated Report, the Commission sampled water quality at two locations on Lake Georgetown, and reported measurements and classifications of various water quality parameters in the basin. The available data indicate that there are no water quality concerns in Lake Georgetown. Lake Georgetown (Segment ID 1249) is classified by the TCEQ as unimpaired and the designated water uses are Recreation, Aquatic Life Use, Fish Consumption, and Public Water Supply, all of which are supported by the water quality. For Lake Georgetown, all monitored parameters were classified as either "Fully Supporting" their designated uses, "No Concern", or "Not Assessed". The results of the 2012 report are reproduced in Tables 4-11A and 4-11B.

Among surface water segments adjacent to the reservoir, the North Fork San Gabriel River (ID 1248), Berry Creek (ID 1248A), and South Fork San Gabriel River (ID 1250) segments, the designated uses have no impairments with the exception of an impaired macrobenthic community on the South Fork San Gabriel River. Further downstream, Lake Granger has consistently had problems with elevated nutrient levels and turbidity due to the nature of the surrounding soils and land use.

The USGS sampled three sites on Lake Georgetown on three occasions in 1989 (3 January 1989, 18 April 1989, and 10 August 1989) for various biological and chemical parameters.[18] The mean concentrations of the various parameters for the three sampling stations are shown in Table 4-11C. The sampling results indicate that the levels of the various biological and chemical constituents monitored are generally within the criteria set by the Texas Department of Water Resources. Samples taken during the summer months, when the lake becomes thermally stratified, were found to have levels of some parameters that were outside the normal standards.

[17] www.tceq.state.tx.us/waterquality/assessment/12twqi/twqi12

[18] waterdata.usgs.gov/nwis/inventory?huc2_cd=12070205&format=station_list&sort_key=site_no&group_key=county&list_of_search_criteria=huc2_cd

TABLE 4-11A

TCEQ Integrated Assessment Report General Use, Water Supply Use, and Recreation Use, 2012

Major Constituents	Mean Concentration	LOS
Dissolved Oxygen Screening Level	—	NC
E. coli	2.2	FS
Total Dissolved Solids	244.6	FS
pH (Standard Units)	—	FS
Temperature, F	—	FS
Ammonia Nitrogen (mg/l as N)	0.2	NC
Nitrate (NO4)	0.3	FS
Chloride (CL)	18.9	FS
Sulfate (SO4)	16.8	FS
Orthophosphorus	—	NC
Phosphorus	0.2	NC
Lead	0.2	NA
Zinc	2.5	NA
Nickel	5.0	NA
Arsenic	2.5	NA
Cadmium	0.2	NA
Copper	—	NA

LOS: Level of Support
NC: No Concern
FS: Fully Supporting
NA: Not Assessed

TABLE 4-11B

TCEQ Integrated Assessment Report Aquatic Life Use and Fish Consumption Use, 2012

Major Constituents	Mean Concentration	LOS
Barium	30.2	NA
Pentachlorobenzene	0.1	NA
Bromoform	0.5	NA
1,1,1-Trichloroethane	0.5	NA
1,1,2-Trichloroethane	0.5	NA
Vinyl Chloride	0.1	NA
Chloroform	3.5	NA
Cresols	0.4	NA
N-Nitroso-di-n-butylamine	0.1	NA
Nitrobenzene	0.1	NA
Pyridine	1.0	NA
m-Dichlorobenzene	0.1	NA
o-Dichlorobenzene	0.1	NA
1,1,2,2-Tetrachloroethane	0.5	NA
Methyl ethyl ketone	7.5	NA
Tetrachloroethene	0.5	NC
Chrysene	0.1	NA
Hexachloroethane	0.1	NA
Trichloroethene	0.5	NA
2,4,5-Trichlorophenol	0.1	NA
Benzene	0.5	NA
Chlorobenzene	4.4	NC
1,2-Dichloroethane	0.5	NA
1,2-Dichloropropane	0.5	NA
1,3-Dichloropropene	0.5	NA
Carbon tetrachloride	0.5	NA
Hexachlorobutadiene (HCBD)	0.4	NA

TABLE 4-11B (CONTINUED)

TCEQ Integrated Assessment Report Aquatic Life Use and Fish Consumption Use, 2012

Major Constituents	Mean Concentration	LOS
Ethylbenzene	0.5	NA
Toleune	0.6	NC
Bis(2-ethylhexyl)phthalate	1.5	NA
Trihalomethane	25.0	NC
Hexachlorocyclopentadiene	1.5	NA
1,3-Dichlorobenzene	0.1	NA
Anthracene	0.1	NA
MTBE	0.5	NC

LOS: Level of Support
NC: No Concern
FS: Fully Supporting
NA: Not Assessed

TABLE 4-11C

USGS Water Quality Sampling, 1989

	Mean Concentrations (1)		
Major Constituents	Station AC	Station BC	Station CC
Dissolved Oxygen @ 1.0 ft depth	7.3	8.0	7.3
Dissolved Oxygen @ 10.0 ft depth	7.2	7.9	7.4
Specific Conductance, mho/cm	356.3	356.7	362.3
Total Dissolved Solids	197.0	199.3	200.7
pH (Standard Units)	8.2	8.3	8.1
Temperature, F	67.7	68.3	69.8
Hardness, non-carbonate (mg/L as CaCO3)	169.3	172.3	172.0
Transparency (M)	2.6	1.6	0.8
Ammonia Nitrogen (mg/l as N)	0.1	0.5	0.4
Nitrate + Nitrite Nitrogen (NO2 + NO3) (mg/l as N)	0.1	0.1	0.1
Sodium (dissolved) mg/l as Na	8.5	8.6	8.4
Potassium (dissolved) K	2.5	—	2.5
Chloride (CL)	11.0	11.0	11.0
Sulfate (SO4)	14.3	15.0	14.3
Calcium (Ca)	45.3	46.3	46.3
Magnesium (Mg)	13.7	13.7	13.7
Silica (SiO2)	8.3	8.3	8.3
Fluoride (F)	0.3	—	—
Manganese (Mn) (µg/L)	2.3	1.0	1.0
Fecal Coliform (2)	(colony count/100 ml)		
Winter	1	1	2
Spring	1	1	11
Summer	1	1	4

(1) Measurements are in mg/L unless otherwise stated. Mean averages are taken at a 1.0-foot depth unless otherwise stated.

NOTE: The water quality sampling for all parameters was conducted on the following dates: Winter: 3 Jan 89; Spring: 18 Apr 89; and Summer: 10 Aug 89.

4-09. <u>Channel and Floodway Characteristics</u>. The North Fork of San Gabriel River from North San Gabriel Dam (Lake Georgetown) to the confluence with the South Fork of San Gabriel River has a channel capacity of 6000 cfs, from the confluence of North Fork and South Fork of San Gabriel River to Granger Dam has a channel capacity of 20,000 cfs, from Granger Dam to the river mile 17 on the San Gabriel River has a channel capacity of 8,000 cfs, and from San Gabriel River mile 17 to the confluence with the Little River has a channel capacity of 6,000 cfs. In this section of the river, the channel is narrow with steep sides, winding through rough hilly terrain. The Little River from the mouth of the Leon River to the confluence of the Brazos River has a capacity of 10,000 cfs. In this section, the channel is wide and winding with high banks. The Brazos River from river mile 315.8 (where the Little River joins the Brazos River) to Gulf of Mexico has a capacity of 60,000 cfs. The floodplain in this reach is very wide, resulting in frequent overtopping, flattened peak discharge, and prolonged flood periods. The existing channel capacities on San Gabriel River, Little River, and Brazos River are shown in Table 4-12.

The estimated travel time for flood flows from Lake Georgetown to Little River at Cameron gage (river mile 33.2) is about 48 hours, to Brazos River at Valley Junction gage (discontinued) is about 72-80 hours, to Brazos River at SH 21 near Bryan gage is about 82-94 hours, to Brazos River at Hempstead gage (river mile 193.8) is about 108-130 hours, and to Brazos River at Richmond gage (river mile 92.0) is about 150-178 hours.

The locations of the USGS stream gages in the Brazos and San Gabriel River basins are shown on Plates 5-1a and 5-1b, respectively. Discharge rating curves for the key control points are shown on Plates 4-17 through 4-22. These curves are only valid for rough use. The rating curves used by the Water Resources Branch are adjusted by the USGS for changing conditions and reflect the current stage-flow relationships at the gages.

TABLE 4-12

Channel Capacities on the San Gabriel River, Little River, and Brazos River

Reach	Channel Capacity (cfs)
The North Fork of San Gabriel River from North San Gabriel Dam (Lake Georgetown) to the confluence with the South Fork of San Gabriel River	6,000
The confluence of North Fork and South Fork of San Gabriel River to Granger Dam	20,000
Granger Dam to the river mile 17 on the San Gabriel River	8,000
San Gabriel River mile 17 to the confluence with the Little River	6,000
Little River to the confluence with Brazos River	10,000
Brazos River at the confluence with little River to Gulf of Mexico	60,000

Table 4-13 and Plate 4-23 show flood peak travel times between upstream gages and Lake Georgetown and between Lake Georgetown and downstream gages on the San Gabriel River and Brazos River.

TABLE 4-13

Flood Peak Travel Times between Morris Shepherd Dam (Possum Kingdom Lake)

and the Gage at Richmond on the Brazos River

Stream Gaging Station and Stream	Travel Time in Hours From: Morris Sheppard Dam (Possum Kingdom Lake)	Whitney Dam	Waco Dam	Belton Dam	Stillhouse Hollow Dam	Cameron Gage	George-town Dam	Granger Dam	Somerville Dam	Bryan Gage Navasota River
Brazos River:										
Lake Granbury	18 to 30*	—	—	—	—	—	—	—	—	—
Lake Whitney	24 to 48*	—	—	—	—	—	—	—	—	—
Aquilla	—	3 to 6	—	—	—	—	—	—	—	—
Waco	—	12 to 18	3 to 5	—	—	—	—	—	—	—
Highbank	—	32 to 42	23 to 35	—	—	—	—	—	—	—
Lake Granger	—	—	—	—	—	—	24**	—	—	—
Cameron Gage	—	—	—	43 to 59	43 to 59	—	48**	24**	—	—
Valley Junction (Discontinued)	—	38 to 50	35 to 45	67 to 89	67 to 89	24 to 32	72 to 80	48 to 56	—	—
Bryan	—	54 to 72	43 to 67	77 to 105	77 to 105	34 to 46	82 to 94	58 to 70	—	—
Hempstead	—	79 to 130	67 to 112	104 to 155	104 to 155	61 to 96	109 to 144	85 to 120	43 to 75	30 to 42
Richmond	—	122 to 156	94 to 165	—	—	85 to 144	133 to 192	109 to 168	67 to 123	54 to 90

NOTES: 1. Based on "Whitney Lake Reservoir Regulation Manual", January 1974. *Revised in February 1975.
2. ** Retrieved from "Granger Lake Water Control Manual", revised February 1991.

4-10. Upstream Structures. There are presently no structures upstream of Lake Georgetown on the North Fork San Gabriel River.

4-11. Downstream Structures. Lake Georgetown and North San Gabriel Dam are part of the Brazos River basin system, which is comprised of nine USACE flood control projects: Whitney Dam, Aquilla Dam, Waco Dam, Proctor Dam, Belton Dam, Stillhouse Hollow Dam, North San Gabriel Dam, Granger Dam, and Somerville Dam. Granger Lake is directly downstream of Lake Georgetown on the San Gabriel River. Of the nine USACE flood control projects in the Brazos River System, only Whitney Dam is on the main stem of the Brazos River and the other eight projects are on tributaries of the Brazos River.

4-12. Economic Data. The San Gabriel River watershed is semi-rural, with an economy based on agriculture, trade, manufacturing and commercial services. The watershed drainage area comprises parts of six counties in south central Texas. The Lake Georgetown drainage area contributing to Lake Georgetown covers two counties: Burnet and Williamson.

Based on the information published by U.S. Census Bureau, the population within the San Gabriel River basin has continually increased over the last 50 years. Population projections indicate that growth is anticipated to continue. County Business Patterns (CBP), a database published by the U.S. Census Bureau provides valuable information on the number of industrial and business establishments within a particular county. [19] Sectors that are typically heavy consumers of water include: agriculture and livestock, steam-electric, mining, manufacturing, professional, scientific and technical services, health care and social assistance, accommodation and food services, and military installations. For some of the major counties in the basin, CBP data was reviewed for 2012. Water use in the basin is approximately 40 percent municipal, 20 percent agricultural, and 40 percent mining, manufacturing and steam-electric.[20] The most concentrated water uses in the area are municipal and industrial uses in Williamson County.

The following sections provide information on population, agricultural production, and industries in the counties within the San Gabriel River basin and surrounding areas.

a. Population. Lake Georgetown lies within Williamson County. Based on the 2013 U.S. Census Bureau data, Williamson County has a population of 422,679, of which 11 percent, or 47,400 people, are in Georgetown, the county seat. The population of Williamson County has increased more than tenfold since 1960, and is forecasted to continue growing. The watershed basin sits on the northern edge of the densely populated Austin-Round Rock area in Travis County and on the southern edge of the populated Temple-Killeen area in Bell County.

The population growth of the 5 counties within San Gabriel River basin over the past 50 years is shown in Table 4-14. Although varying proportions of the total population of the counties listed below lie within the watershed boundaries, the entire population of each county is provided.

[19] www.census.gov/econ/cbp/

[20] www.twdb.texas.gov/waterplanning/rwp/regions/g/

TABLE 4-14

Population Growth of Counties within the San Gabriel River Basin

County	1960	1970	1980	1990	2000	2010
Bell	94,097	124,483	157,889	191,088	237,974	310,235
Burnet	9,265	11,420	17,803	22,677	34,147	43,823
Milam	22,263	20,028	22,732	22,946	24,238	24,757
Travis	212,136	295,516	419,573	576,407	812,280	1,024,266
Williamson	35,044	37,305	76,521	139,551	249,967	422,679

NOTE: Source: Census.gov

b. Agriculture. Agriculture is an important economic driver in the San Gabriel River region, with almost one-third of the land area classified as Cropland, Pasture or Hayland. Another 57 percent of the land is classified as Rangeland.[21] According to the 2011 Brazos G Regional Water Plan, irrigation and livestock comprises about 35 percent of the region's water use and is projected to hold constant in coming decades.[22] Table 4-15 lists the acreage of cropland planted in each major crop, the total agricultural acreage, the quantity of livestock, and the agricultural income for each county during the year 2012.

[21] www.tsswcb.texas.gov/files/docs/nps-319/projects/Lake_Granger_and_San_Gabriel_River_WPP.pdf
[22] www.twdb.texas.gov/waterplanning/rwp/regions/g/

TABLE 4-15

Agricultural Production for Major Counties in San Gabriel River Basin, 2012

Product	Bastrop County	Bell County	Burnet County	Milam County	Travis County	Williamson County
Corn (acres)	129	50,730	—	26,443	10,781	77,643
Cotton (acres)	585	7,318	—	6,285	2,167	17,942
Oats (acres)	—	926	—	806	1,750	2,845
Sorghum (acres)	1,179	21,938	—	13,411	14,211	23,464
Wheat (acres)	283	27,133	32	14,156	2,803	17,939
Cropland planted (acres)	60,293	170,451	44,659	143,011	61,205	211,581
Land in Farms and Ranches (acres)	387,586	421,362	485,277	527,871	252,686	558,622
Cattle (1000 head)	53	35	22	65	18	70
Crop Market Value*	11,901	58,592	3,729	38,485	34,155	74,987
Livestock Market Value*	23,417	26,287	10,985	106,243	7,513	54,661
All Agriculture Market Value*	35,318	84,880	14,714	144,728	41,668	129,648

NOTES: 1. Data from 2012 Census of Agriculture, prepared by National Agricultural Statistics Service, U.S. Department of Agriculture.
2. *Quantity given in $1,000s.

c. Industry. Although the predominant land use in the basin is agricultural, significant industrial and manufacturing development is present in the basin, particularly concentrated in the urban and metropolitan areas around Georgetown. According to the 2011 Brazos G Regional Water Plan, municipal and industrial use comprises about 40% of the region's total water use,

and is projected to increase by 50% by 2060.[23] Table 4-16 gives the estimated number of people employed in various industries in each county, as compiled by the 2012 United States Census.

[23] www.twdb.texas.gov/waterplanning/rwp/regions/g/

TABLE 4-16

Employment in Counties within the San Gabriel River Basin, 2012

Industry	Number Employed					
	Bastrop County	Bell County	Burnet County	Milam County	Travis County	Williamson County
Agriculture, Forestry, Fishing & Hunting	23	7	10	35	19	10
Construction, Mining, Oil & Gas	1,288	3,583	1,090	625	26,143	9,459
Manufacturing	959	5,666	702	349	24,211	7,424
Trade, Transportation & Utilities	3,327	19,118	2,574	1,049	95,828	33,537
Finance, Insurance, & Real Estate	475	4,073	758	216	36,140	8,497
Professional, Scientific & Business Services	409	4,312	288	185	74,981	14,565
Education & Healthcare	2,152	23,174	1,385	784	70,341	17,883
Arts, Leisure & Hospitality	2,358	12,437	1,791	387	67,062	18,080
Communication & Information	39	2,962	196	143	23,096	3,645
Public Administration	178	3,300	645	173	48,426	7,094
Other Services	622	4,537	501	246	24,348	7,164
Total	11,830	83,169	9,940	4,192	490,595	127,358

NOTE: Data from the United States Census, 2012.

d. Flood Damages. The flood damages prevented in the San Gabriel River basin by Lake Georgetown and North San Gabriel Dam during fiscal year 2015 was estimated to be $2,000,600. The cumulative damages prevented since the completion of the project in 1980 through 2015 are $13,876,734, and the average is $0.39 million per year. Table 4-17 and Table 4-18 show discharge versus damages incurred for agricultural and non-agricultural on the San Gabriel River at both Georgetown and Laneport.

TABLE 4-17

Discharge versus Damages on North Fork San Gabriel River near Georgetown, 2014

Discharge (cfs)	Damages (X$1,000)						
	Crops (1)	Crops (2)	Crops (3)	Crops (4)	Crops (C)	Other ag.	Non-ag.
17,500	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
20,000	$4.6	$3.7	$2.0	$1.1	$3.4	$3.6	$7.0
40,000	$40.7	$33.0	$17.8	$9.5	$30.0	$36.3	$12.5
60,000	$153.8	$124.9	$67.3	$36.0	$113.5	$8.3	$70.2
80,000	$257.8	$209.5	$112.8	$60.4	$190.3	$145.7	$144.6
120,000	$361.9	$294.0	$158.3	$84.8	$267.2	$273.3	$529.4
160,000	$411.7	$334.5	$180.1	$96.5	$303.9	$397.2	$1,101.3
207,100	$452.4	$367.5	$197.9	$106.0	$334.0	$542.4	$2,115.3
300,000	$500.6	$406.6	$219.0	$117.2	$369.6	$714.2	$3,315.3

Crops (1) = May, Jun, Jul
Crops (2) = Apr, Aug, Sep
Crops (3) = Mar, Oct, Nov
Crops (4) = Jan, Feb, Dec

NOTES: 1. This table is estimated on roughly available data
2. Price levels are for September 2014. To convert the prices to a different year, average annual cost indexes must be applied.

TABLE 4-18

Discharge versus Damages on San Gabriel River at Laneport, 2014

Discharge (cfs)	Damages (X$1,000)						
	Crops (1)	Crops (2)	Crops (3)	Crops (4)	Crops (C)	Other ag.	Non-ag.
20,000	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
30,000	$450.0	$350.0	$190.0	$95.0	$310.0	$90.0	$1.5
60,000	$807.0	$650.0	$320.0	$165.0	$572.0	$180.0	$13.0
80,000	$885.0	$715.0	$350.0	$180.0	$630.0	$213.0	$21.0
120,000	$980.0	$790.0	$387.0	$200.0	$695.0	$279.0	$38.5
162,000	$1,040.0	$840.0	$410.0	$212.0	$740.0	$345.0	$56.0
200,000	$1,075.0	$865.0	$425.0	$220.0	$763.0	$405.0	$72.0
250,000	$1,105.0	$895.0	$440.0	$225.0	$784.0	$480.0	$93.0
300,000	$1,123.0	$913.0	$449.0	$228.0	$796.6	$525.0	$105.6

Crops (1) = May, Jun, Jul
Crops (2) = Apr, Aug, Sep
Crops (3) = Mar, Oct, Nov
Crops (4) = Jan, Feb, Dec

NOTES: 1. This table is estimated on roughly available data.
2. Price levels are for September 2014. To convert the prices to a different year, average annual cost indexes must be applied.

CHAPTER V - DATA COLLECTION AND COMMUNICATION NETWORKS

5-01. Hydrometeorological Stations.

a. Facilities. The Water Resources Branch of the USACE, Fort Worth District, the NWS, and the USGS cooperate to collect hydrometeorological data and maintain a reliable communication network. Plate 5-1a shows the locations of the USGS stream gages in the Brazos River basin. Commercial television weather services provide current radar and forecasted weather conditions to assist the Water Resource Branch in monitoring storm events.

1. Precipitation Gages. The NWS and USGS maintain a network of rain gages and observers throughout the San Gabriel River basin. The NWS precipitation gages used to forecast runoff in the San Gabriel River watershed are listed in Table 5-1 and are shown on Plate 5-3, respectively.

TABLE 5-1

Upstream NWS Precipitation Gages

Name of Station	Description
Austin 33 NW	Discontinued
Andice 2 SW	Recording
Briggs	Discontinued
Burnet	Recording
Cameron	Discontinued
Florence	Recording
Georgetown	Discontinued
Georgetown Lake	Recording
Granger	Discontinued
Granger Dam	Recording
Jarrell	Recording
Killeen	Discontinued
Lampasas	Discontinued
Spicewood	Recording
Taylor 1NW	Recording

TABLE 5-1 (CONTINUED)

Upstream NWS Precipitation Gages

Name of Station	Description
Temple	Discontinued
Watson	Recording
Marble Falls 0.7 NW	Recording
Highland Haven 1.3 SW	Recording
Granite Shoals 0.9 S	Recording
Meadowlakes 0.4 NNE	Recording
Georgetown 1.2 W	Recording
Pflugerville 4.7 NNE	Non-Recording
Cedar Park 2.7 SSW	Recording
Liberty Hill 0.6 NNW	Recording
Bertram 6.4 ESE	Recording
Jollyville 1.2 WNW	Recording
Thrall 10.5 SSE	Recording
Brushy Creek 1.9 WNW	Non-Recording
Leander 2.5 ESE	Discontinued
Anderson Mill 1.4 NW	Discontinued
Hutto 0.8 NNE	Non-Recording
Round Rock 3.4 E	Recording
Bartlett 5.0 W	Recording

2. Weather Radar Sites. The NWS maintains 12 Doppler radar sites across Texas for surveillance of immediate weather conditions. The NWS also cooperates with the Department of Defense to obtain radar information from four military sites in Texas.

3. Stream Gages. The USGS maintains twelve stream gages in the San Gabriel River basin. The gages are listed in Table 5-2A. The stream gages designated as key stations for forecasting and regulating North San Gabriel Dam are listed in Table 5-2B. A hydrologic gage network was established for use in connection with the operation of the North San Gabriel Dam. The hydrologic gage network for the San Gabriel River basin is shown on Plate 5-1b. The travel

times for flows from North San Gabriel Dam to Granger Dam, and from Morris Sheppard Dam near Graford gage to Brazos River near Highbank gage are shown on Plate 5-2.

TABLE 5-2A

USGS Stream Gages in the San Gabriel River Basin

(Upstream and downstream of North San Gabriel Dam)

Station Number	Name of Station	Description
0810464660	North Fork San Gabriel River at Reagan Blvd near Leander	Recording
08104650	Lake Georgetown near Georgetown	Recording
08104700	North Fork San Gabriel River near Georgetown	Recording
08104900	South Fork San Gabriel River at Georgetown	Recording
08105095	Berry Creek at Airport Rd near Georgetown	Recording
08105505	Willis Creek near Granger	Recording
08105600	Granger Lake near Granger	Recording
08105700	San Gabriel River at Laneport	Recording
08105872	Brushy Creek at Cedar Park	Recording
08105883	Brushy Creek at IH 35, Round Rock	Recording
08105886	Lake Creek at Lake Creek Pkwy near Austin	Recording
0810588650	Lake Creek at O'Connor Dr near Round Rock	Recording
08105888	Brushy Creek at Kenney Fort Blvd at Round Rock	Recording
08105897	Brushy Creek at FM 973 near Coupland	Recording
08106500	Little River near Cameron	Recording
08108250	Big Elm Creek at SH 77 near Cameron	Recording
08108500	Brazos River at Valley Junction	Discontinued
08108700	Brazos River at SH 21 near Bryan	Recording
08111500	Brazos River near Hempstead	Recording
08111850	Brazos River at San Felipe	Recording
08114000	Brazos River at Richmond	Recording

TABLE 5-2B

Key Regulating Stations for North San Gabriel Dam

Station Number	USGS Gage Station	Method of Reporting
08104700	North Fork San Gabriel River near Georgetown	Satellite Telemeter
08105700	San Gabriel River at Laneport	Satellite Telemeter
08106500	Little River near Cameron	Satellite Telemeter
08111500	Brazos River near Hempstead	Satellite Telemeter
08114000	Brazos River at Richmond	Satellite Telemeter

b. Reporting. Data Collection Platforms (DCPs) have been installed at all USACE Fort Worth District lakes, and at numerous stream gages and precipitation stations. The DCPs transmit hydrometeorological data using the Geostationary Operational Environmental Satellite (GOES) to the NOAA Center in Wallops Island, Virginia. The data are then decoded and re-transmitted using Domestic Satellites (DOMSATs), making the data available for nationwide reception. The Water Management Office captures, processes, and stores the data in the Fort Worth District's Water Control Data System (WCDS).

The Water Management Office collects and stores the majority of hydrometeorological data in the WCDS. Thus, hourly lake elevations and stream gage stages are stored in the WCDS network. Some meteorological and hydropower data are collected by telephone. Project personnel collect precipitation, evaporation, and, maximum and minimum air temperature data from weather stations. The information is reported to the Water Management Office by e-mail or sometimes by facsimile and telephone.

The Water Management Office personnel use the data in the WCDS to operate the 27 lakes that the Fort Worth District manages. All the data entered into the WCDS is stored in a database and used for water management decisions, to generate reports, and to conduct hydrologic studies. The Water Management Office also serves as a source of hydrologic data for state and local government agencies and the general public.

c. Maintenance. Maintenance costs are shared among the USGS, NWS, USACE, TWDB, and various river authorities. Maintenance and repair of the weather station instrumentation are the responsibilities of the NWS. Maintenance and repair of stream gaging stations are the responsibility of the USGS. Assistance in gage repair can be obtained by contacting the USGS in Fort Worth, Texas, at (817) 263-9545.

5-02. Water Quality Stations. The USGS collected data and monitored the water quality in Lake Georgetown at three stations near the dam until funds were no longer available. In addition, TCEQ and BRA monitor water quality using 124 active monitoring stations through the Brazos River basin.[24]

a. Facilities. The three designated sites where USGS water quality samples were taken for Lake Georgetown are Stations AC, BC, and CC. The chemical, biological, and field parameters were measured in these three sites. Table 4-11C shows the most recent data for constituents sampled on Lake Georgetown.

The Brazos River basin is divided into 124 segmented water bodies by TCEQ to report water quality information. The Segment 1249, "Lake Georgetown", is designated to provide the water quality data for the reservoir.

b. Reporting. The USGS summarizes and publishes its collected water quality data annually in the "Water Resources Data: Texas" book for its current sampling locations. However, Lake Georgetown is not sampled yearly and only years for which it was sampled are published in the yearly data book.

The "Texas Integrated Report of Surface Water Quality," formerly called the "Texas Water Quality Inventory and 303(d) List," evaluates the quality of surface waters in Texas, and provides resource managers with a tool for making informed decisions when directing agency programs. The TCEQ publishes the report every 2 years (in even-numbered years). The water quality assessment results for Lake Georgetown are included in the report.

c. Maintenance. Maintenance and calibration of the equipment related to water quality are conducted or monitored by USGS and TCEQ.

5-03. Sedimentation and Degradation Ranges.

a. Facilities. The sedimentation ranges, which are needed to determine the rate of sedimentation and the location of sediment deposits, were established as directed in Engineer Regulation (ER) 1100-2-240 and Engineer Manual (EM) 1100-2-4000.

1. Sedimentation Ranges. There are 18 sedimentation ranges in the Lake Georgetown area (Plate 4-4). The ranges cross the lake normal to the original stream flow as practical. The elevations and locations of the monuments are referenced to appropriate datum systems established by other Federal agencies. Monuments are used at multiple locations for future survey at common reference points. Sedimentation ranges have not been utilized at Lake Georgetown since the 1978 survey. The TWDB uses bathymetric survey independent of the USACE established sedimentation ranges.

[24] https://www.tceq.texas.gov/waterquality/assessment/02twqi/basins/brazos.html

2. Degradation Ranges. There are five degradation ranges below Lake Georgetown and North San Gabriel Dam (Plate 4-4). Each range consists of two or more permanent monuments placed at selected locations along the discharge channel downstream of the dam.

b. Reporting. The frequency of sedimentation surveys will depend on funding, hydrologic conditions and the need for determining sediment deposition and storage depletion. Normally, a period of no more than 20 years would elapse between sedimentation surveys. However, sedimentation surveys are currently done periodically depending on need and funding availability. Complete or partial surveys will be made of degradation ranges, as found necessary on the basis of reconnaissance.

For Lake Georgetown, three surveys have been performed since 1978, including the historical 1978 USACE original design, the 1995 TWDB volumetric survey, and the 2005 TWDB volumetric survey. The 2005 TWDB survey results indicated that the surface area had been reduced from 1,310 acres in the original design to 1,287 acres and the volume reduced from 37,100 acre-feet of water in the original design to 36,904 acre-feet of water at top of the conservation pool elevation 791.0 feet.

c. Maintenance. Project personnel will inspect the survey monuments to determine their respective conditions. A report will be forwarded to the Water Management Office following the inspection that describes the condition of the monuments not found, destroyed, or otherwise disturbed. Monuments and witness points that have been damaged or are missing will be replaced and reset. Completion of monument surveys is dependent on funds and personnel availability.

5-04. Recording Hydrologic Data. Hydrologic information is recorded as the Water Management Office receives it. The recording procedures for each type of data are as follows:

a. Stages and Lake Elevations. Stream stage and lake stage data are recorded every 15 minutes and transmitted every hour by the DCPs through a GOES Satellite to Wallops Island, VA, then retransmitted to a DOMSAT. The District's WCDS accesses the data by a downlink. The recorded data and monthly data summaries are kept in the reservoir logbooks and in other Water Management Office files. Additional data sets from non-Corps reservoirs are received from the Internet, by facsimile, and/or by telephone.

b. Precipitation. Hourly precipitation data from numerous DCPs across the state are transmitted to the Water Management Office in the manner described in paragraph 5-04.a. The Water Management Office also receives precipitation data from the NWS and other precipitation observers through the Automated Field Observations and Services (AFOS) system and stores the data in the WCDS. The NWS daily state precipitation summary is filed and retained for approximately one year. The Water Management Office receives daily rainfall and weather reports from 22 of the 25 District lakes, including Lake Georgetown.

c. Temperature Data. The lake personnel record the daily maximum and minimum air temperatures at the lake.

d. Radar Reports. The Water Management Office receives radar images and weather information from commercial weather services by cable TV. This information is used primarily for short-term decision making. The weather reports are updated throughout the day by the NWS.

5-05. Communication Network. Lake Georgetown is served by telephone, facsimile, email, and cell phone. The telephone number for the Lake Georgetown project office is (512) 930-5253.

The National Telecommunications and Information Administration (NTIA), Department of Commerce, assigned radio frequencies exclusively to the USACE. The assigned VHF FM frequencies are 163.5125 and 163.4375 MHz. Both of the VHF FM frequencies are maintained at most project offices and in some vehicles assigned to the Fort Worth District. The radio equipment using the VHF FM frequencies will only transmit about 20 miles. Therefore, radio communications cannot be made between the Lake Georgetown project office and the Fort Worth District Office, or between the other district lakes.

If necessary, the Fort Worth District Emergency Operation Center (EOC) can contact other districts in the SWD by HF side-band radio during an emergency. This radio frequency is good for communications between the EOCs in Fort Worth, Texas, Galveston, Texas, Little Rock, Arkansas, and Tulsa, Oklahoma.

5-06. Communication with the Project.

a. Water Resources Branch with Project Office. The primary mode of communication between the Lake Georgetown project office and the Water Resources Branch is by telephone. In addition, the project is served by facsimile, email, and cell phone as backups to the primary mode of telephone. Should communication between the project and the District be disrupted, the Lake Manager would direct regulation of the lake on his or her own initiative in accordance with the Emergency Rules and Regulations listed in Section 7-05 and Exhibit C of this manual.

b. Between Project Office and Others. The Lake Manager will maintain a current list of the residents and/or property endangered or inconvenienced by large and/or prolonged releases in order to give adequate warning before such releases. Warning of possible flood conditions can be conveyed by telephone, radio, television, citizens-band radio, use of law enforcement personnel, and civil defense agencies and their communications systems. National Guard, Reserve Military Units, and citizen volunteers may also be needed to convey warning messages. Plate 5-4 shows a schematic of the lines of communication for use in routine communications and in case of an emergency.

5-07. Project Reporting Instructions. Both daily lake operation information and emergency lake operation information will be submitted to the Water Management Office of the Fort Worth District.

a. Daily Operations. Daily reservoir data will be submitted to the Water Management Office on regular working days by facsimile or electronic mailing between 0800 and 0845 hours each morning for transmission of hydrologic data. For electronic mailing, the Internet Web site is: (http://www.swf-wc.usace.army.mil). Project personnel will confirm gate changes and promptly report all scheduled or unscheduled equipment outages affecting water control by telephone at (817) 886-1551 or by facsimile at (817) 886-6472 or by email at CESWF-OD-L@usace.army.mil. The Water Resources Branch may request additional information as needed.

Daily data reported to the District Office include the following: (1) As of 0800 hours – Reservoir elevation: number of gates open and increments of opening, precipitation and evaporation for the preceding 24 hours, weather conditions and maximum and minimum temperatures, if required. (2) Each gate operation – All changes in gate operation, including time of gate operation, increments of opening, and reservoir elevation at time of each gate operation for the preceding 24 hours. (3) Stage report – During flood periods, besides the regular 0800-hour reading from the reservoir and reporting gages (Georgetown, Laneport, Little River, Cameron, and Lake Georgetown); include the 0000-hour (midnight) reading, which may be read from the recorder charts.

b. Emergency Operations. In the event of an emergency or flood situation, the Lake Manager will notify key personnel in the Fort Worth District Water Management Office. A list of these names will be posted on the project bulletin board. These names are shown on page iii, Notice to Users of This Manual. If unusual conditions arise during non-working hours, one of the persons listed on page iii should be contacted.

5-08. Warnings. Before any major increase in discharge due to operation of the gates, warning of such operation shall be given to parties in the immediate area downstream of the dam. A warning horn will be sounded for 10 seconds to alert anyone downstream at least 2 minutes before any appreciable increase or decrease in the release rate from the dam. After the horn sounds, the operator will observe the downstream area to ensure that no one remains there. Signs in the discharge area shall state the meaning of the warning signal. A warning horn will be sounded from the dam only during the initial releases. The law enforcement agencies shown in Table 5-3 may also be contacted to assist in warning the public and evacuating downstream areas.

TABLE 5-3

Law Enforcement and Key Georgetown Project Telephone Numbers

Agency	Telephone Number
Texas Department of Public Safety, Temple, Texas	(254) 770-6734
City of Georgetown Police Dispatch	(512) 930-3510
Lake Georgetown Manager	(512) 887-0256
Lake Georgetown Rangers	(512) 930-5253
BRA Office Dispatch	(254) 939-2461
Sheriff, Williamson County	(512) 943-1300

CHAPTER VI – HYDROLOGIC FORECASTS

6-01. General. Hydrologic forecasts of stream flow amounts are made daily to maintain the current status of the San Gabriel River basin for flood control and water supply.

a. Role of Corps of Engineers. Hydrologic forecasts are made by the Water Management Office for use in the regulation of lakes to maximize flood control, water supply, and other authorized purposes. The forecasts are furnished to project personnel and other UASCE personnel with a need for this information. Planned changes in the release rates are furnished to the National Weather Service-River Forecast Center (NWS-RFC) in Fort Worth, Texas. The Public Affairs Office, which is kept informed of the lake conditions, makes news releases.

b. Role of Other Agencies. The NWS-RFC provides information about river flow and flood forecasts to USACE and the general public. The NWS Weather Wire circuit disseminates this information to subscribing government agencies and news media. The National Weather Service-Weather Service Forecast Offices (NWS-WSFO) issues routine reports containing the following information:

1. Weather forecasts (daily forecasts, severe weather forecasts, and 5-day extended forecasts).

2. Quantitative precipitation forecasts: Four successive 6-hour precipitation forecasts are updated every 12 hours. Three successive 24-hour precipitation forecasts are updated every 12 hours.

3. Three-day river stage forecasts, when conditions warrant, from the NWS-RFC.

4. Urgent priority messages such as severe weather warnings, severe weather watches and statements, and instructions from civil defense centers during emergency situations.

5. Other information reports, on a periodic basis:

(a). Winter weather and road conditions

(b). River and flood warning bulletins

(c). Damage reports

(d). Thirty-day weather forecasts

6-02. Flood Control Forecasts.

a. Requirements. Flood forecasts are required whenever substantial rainfall has fallen above or below North San Gabriel Dam or during the evacuation of the flood pool from Lake Georgetown.

b. Methods. Water Managers continually monitor and adjust water releases at USACE projects based on ever-changing hydrometeorological conditions. The Corps Water Management System (CWMS) is the automated decision support tool developed for USACE Water Managers. CWMS tracks the hydrologic cycle and performs scenario-based forecasts that can include stage and flow forecasts, project release scheduling and release review, emergency activation alerts, inundation mapping and economic damage reporting. The CWMS Automated Information System was developed by the USACE Hydrologic Engineering Center (HEC) under funding from the Water Management Community of Practice and has been implemented to varying degrees at various USACE Water Management Offices. A CWMS forecasting model has been developed for the San Gabriel River basin by the Fort Worth District, HEC, and the USACE MMC (Modeling, Mapping, and Consequences) Production Center. The USACE makes the following forecasts with assistance from the NWS.

1. Predicting Inflow into Georgetown Lake. A rainfall-runoff HEC-HMS model was developed within CWMS by the Fort Worth District for the San Gabriel River basin above the Georgetown gage. This model is used to predict the inflow into Lake Georgetown. The inflow forecasting model consists of HEC-METVUE and HEC-HMS models that are linked to real-time data with CWMS. Both models use a 1-hour time interval.

Precipitation estimates are available from two main sources: precipitation gages and radar. The NWS uses the data from these sources to produce a suite of hydrologic forecasts. Weather Surveillance Radar-1988 Doppler (WSR-88D), also known as Next Generation Weather Radar (NEXRAD), observes the presence of severe weather and calculates the speed and direction of the weather. The WSR-88D also provides estimated quantitative area precipitation amounts.

The NWS adds to the accuracy of the WSR-88D quantitative precipitation estimates (QPE) through a procedure for improving the radar estimates of rainfall that is referred to as "ground truthing." The precipitation data set produced from the ground truthing is known as the Multi-sensor Precipitation Estimate (MPE). The NWS and other agencies may poll some automated gages on a 4-hour basis, and the poll results may also be used for ground truthing.

Hourly NWS gridded rainfall data is downloaded from the NWS West Gulf Forecasting Center in real-time and processed into HEC-DSS format using HEC-METVUE. The HEC-HMS model is then used to compute runoff from the gridded precipitation. Initial and uniform losses are adjusted to real-time basin conditions within CWMS. These losses are subtracted from the precipitation hyetograph at each subbasin grid cell to obtain the rainfall runoff hyetograph. Each grid cell hyetograph is then routed and combined by the HEC-HMS model to obtain the total inflow hydrograph for Lake Georgetown. The San Gabriel River Model subbasins are shown on

Plate 4-1.

There is a DCP at Lake Georgetown which records the lake elevation. An inflow hydrograph can be computed using observed lake elevations, an elevation-capacity table, and hourly lake releases.

The HEC-HMS model is executed with forecast time and an initial estimate of loss rates as determined by the user. The computed hydrographs at Lake Georgetown are compared with observed runoff volume, shape, and time of peak. If the comparison is not favorable, then subbasin loss rates are adjusted accordingly and the HEC-HMS model is re-executed. This calibration process is repeated until the comparisons are favorable. This process ultimately results in a forecasted inflow into Lake Georgetown.

2. Predicting Lake Levels. The forecasted inflows as computed by the HEC-HMS model are routed into Lake Georgetown. The model will add the routed inflows to the storage in the lake and subtract the releases to forecast the lake elevations.

3. Predicting Flow at Downstream Control Points. The flood forecasting system is used to predict flows in the Little River above the Cameron Gage. The predicted flows for the control points located downstream of the project are computed by combining the estimated local flow in the river channel and the potential routed releases from Lake Georgetown. If the predicted flows exceed the downstream channel capacity no releases will be made.

(a). Estimating Local Flow. Local flow forecasts can be obtained from two sources: the NWS-RFC's river forecast model or the San Gabriel River HEC-HMS model. If the latter method is used, the subbasin hydrographs for the uncontrolled areas below Lake Georgetown are computed using the same procedure discussed in paragraph 6-02.b.(1)

(b). Routing Reservoir Releases to Downstream Control Points. The HEC-HMS model is used to route releases from Lake Georgetown to downstream points by using the Modified Puls and Muskingum flow routing methods. The releases are determined based on the predicted available channel capacity at the downstream control points. The determined releases are then incorporated into the HEC-HMS model. The observed flows at the downstream control points on the San Gabriel River are provided by stream gages. The downstream control points are located on the Little River near Cameron gage and at the Little River near Little River gage. Plate 4-23 shows flood crest travel times between key points along the San Gabriel, Little and Brazos Rivers.

(c). Regulated Flow. The releases from Lake Georgetown combine with uncontrolled flows from the San Gabriel River and are measured by the gage on the Little River near Cameron. This downstream gage is also utilized to regulate outflows from Stillhouse Hollow and Belton Lakes on the Little River.

6-03. Conservation Purpose Forecast. The BRA has contracted for conservation storage in Lake Georgetown. The conservation water is used for water supply, irrigation, fish and wildlife, and general recreation. Conservation storage forecasts are made when needed based on forecasted inflow, historical average evaporation, and estimated demand. The maximum authorized rate of withdrawal from Lake Georgetown by the BRA and their customers is, when combined with local runoff below the dam, designed not to exceed 6,000 cfs at the San Gabriel River near the Georgetown gage and 10,000 cfs at the Little River at Cameron gage, respectively. Releases from the reservoir for conservation purposes will be made on receipt of written daily requests from the BRA. In the event that the BRA finds it necessary to modify its schedules for releases because of varied demands during any period, then its designated representative will contact the Water Management Office and indicate the revised demands, a confirmation of which will be furnished in writing to the Water Management Office.

6-04. Long-Range Forecast. Long-range weather forecasts are made by the NWS Climate Prediction Center, and available at the "Outlooks Index" in the website http://www.cpc.ncep.noaa.gov/products/OUTLOOKS_index.shtml. The outlooks website contains both temperature and precipitation forecast for "Monthly to Seasonal" and "Extended Range" categories. Special products, such as current UV index forecast and soil moisture outlooks are also available on this website.

6-05. Drought Forecast. Appendix X, Drought Contingency Plan, for the Brazos River Basin Master Manual provides information on historical droughts in the basin and methods to determine the severity of a drought. In general, the three factors used to determine the severity of a drought are the lake content, lake inflow, and the Palmer Drought Severity Index (PDSI). The PDSI reflects the cumulative excess or deficiency in moisture relative to seasonal norms and typically ranges from +4 to -4 but may exceed these values. A PDSI of -4 indicates that abnormally dry conditions have prevailed. The NWS publishes the PDSI about once a week. Drought conditions can be accessed at this website: http://www.cpc.ncep.noaa.gov/products/monitoring_and_data/drought.shtml

CHAPTER VII – WATER CONTROL PLAN

7-01. General Objectives. Lake Georgetown and North San Gabriel Dam were authorized for flood control and water conservation storage for water supply on the North San Gabriel, San Gabriel and Little Rivers. Incidental purposes are protection and enhancement of fish and wildlife habitat, and general recreation. Flood control releases from North San Gabriel Dam are coordinated with releases from the other flood control projects within the Brazos River Basin to optimize basin wide flood damage reduction benefits. Emergency regulations must be coordinated with the Fort Worth District Water Management Office as discussed in paragraph 7-04.

7-02. Project Constraints. The top of conservation pool is at elevation 791.0. The top of flood control pool is at elevation 834.0. The maximum release for the PMF (1983 Study) is approximately 331,329 cfs over the spillway at elevation 858.6. At the maximum design water surface elevation of 856.2, (Spillway Design, 1973 Study), approximately 284,000 cfs can be released. ***All elevations referred to in this Chapter, unless noted otherwise, are in feet, National Geodetic Vertical Datum of 1929 (NGVD29). The datum conversion from NGVD29 to NAVD88 is: NGVD29 + 0.3 feet = NAVD88 for Lake Georgetown and North San Gabriel Dam.***

a. Outlet Works. The outlet works consists of an upstream intake structure with two 5.0' x 11.0' hydraulic slide gates enclosed in two adjacent bays, an 11.0-foot diameter concrete-lined main conduit, and a stilling basin. The intake structure has an inlet invert elevation of 720.0 feet. The main conduit is 1200 feet long with upstream and downstream invert elevations of 720.0 and 710.0, respectively. Outlet works gate rating curves for partial and fully open flood control gates are shown on Plate 7-5.

b. Low-Flow System. The low-flow outlets are designed for making conservation releases. The low-flow wet well may be fed by any of the four 3.0' x 4.0' selector slide gates positioned at various elevations on the upstream face of the control tower. The selector gate invert elevations are shown in Table 7-1. The invert elevation of the selector gate #1 is also the pool elevation threshold for gravity flow to the wet well. Low flow releases from the wet well are made via a single 2.0' x 4.0' hydraulic slide gate with an invert elevation of 735.31 feet, which feeds a 2.0' x 4.0' chute that discharges through the ceiling into the transition section between the service gate and the main conduit. The operation of the low flow system should be constrained so that the increase in release during a single operation does not exceed the equivalent release made with a 0.5 foot incremental change on one service gate (~125 cfs). When the lake is at the top of the conservation pool a maximum release of 340 cfs can be made through the system with the low flow gate fully open. The Low Flow Outlet Rating Curves are shown on Plate 7-3.

TABLE 7-1

Low Flow System Selector Gate Inverts

Selector Gate #	Invert Elevation (ft)
1	738.50*
2	751.33
3	764.17
4	777.00

*Pool elevation threshold for gravity flow to the low flow wet well.

c. Maximum Available Discharge Rates. These rates reflect the upper physical limit of the rate at which water can be discharged through the outlet works, and do not take into account other discharge constraints such as downstream control points. The top of conservation pool is at elevation 791.0. At this elevation, a maximum release rate of 3,800 cfs can be made through the flood control gates with both gates fully open. With both gates open 5.5 feet, which is the maximum gate opening for a gate controlled release, the discharge is about 2,700 cfs. The top of the flood control pool is at elevation 834.0, which is also the emergency spillway crest elevation. At this elevation, a maximum release of 4,800 cfs can be made through the flood control gates with both gates fully open. With both gates open to 5.5 feet (the maximum usable setting less than full open) the controlled release rate is about 3,450 cfs. For pool elevations greater than 840.0 feet, high flow over the spillway will create high tailwater and submerge the downstream end of the outlet works conduit, a condition which may cause significant damage to the stilling basin if the outlet works are operated at these pool elevations. See Section 7-05.b. (4) for operating instructions for pool elevations greater than the spillway crest where high tailwater is not a problem.

7-03. Overall Plan for Water Control. There are nine multi-purpose projects operated by the Fort Worth District Water Management Office within the Brazos River basin. These nine projects are: Whitney, Aquilla, Waco, Proctor, Belton, Stillhouse Hollow, Georgetown, Granger, and Somerville Lakes. North San Gabriel Dam is an integral part of the USACE plan for flood control on the Lower Brazos River and its tributaries. The North San Gabriel Dam also operates in conjunction with Proctor, Belton, Stillhouse Hollow, and Granger Dams for flood control on the Little River. All five of the projects compete for channel capacity at the Little River near Cameron gage (River Mile 33.2) a key downstream control point. These five projects also regulate flows in the Lower Brazos River in conjunction with the other flood control projects located in the Brazos River basin. The Little River joins the Brazos River upstream from the Brazos gage near Bryan. Refer to Table 7-2,"Downstream Control Points", for details on downstream channel capacities pertinent to the operation of North San Gabriel Dam.

7-04. Standing Instructions to Project Personnel. The Fort Worth District Water Management Office will issue instructions to project personnel for making gate changes from North San Gabriel Dam. During flood periods, the lake will be regulated in accordance with the normal flood control regulations related in subparagraph 7-05.b of this chapter.

Should an emergency situation occur, such as a power outage, inoperable gates, or a drowning, the Fort Worth District Water Management Office will be notified immediately. In the event communications with the Fort Worth District Water Management Office are disrupted, the lake regulation will become the responsibility of the Lake Manager, in accordance with Exhibit C, "Standing Instructions to Lake Manager", of the water control manual. The Lake Manager will make every effort to re-establish communications with the Fort Worth District Water Management Office.

7-05. Flood Control.

a. General. Flood control releases from North San Gabriel Dam are coordinated with releases from Whitney, Waco, Aquilla, Proctor, Belton, Stillhouse Hollow, and Somerville Lakes within the Brazos River system for optimization of flood damage reduction benefits. Flood control release decisions will be made by the Fort Worth District Water Management Office and prioritized based on available flood storage in each lake and available downstream channel capacity. The lake levels will be lowered to their respective conservation pools at the earliest practical date, using "Brazos River System Balancing", in order to provide flood protection against potential subsequent storms.

Releases from Lake Georgetown will generally be made at rates so that when combined with the runoff from downstream areas and releases from other reservoirs, the flow will not exceed the channel capacities at the gage locations shown in Table 7-2, "Downstream Control Points". Channel capacities will not be modified for minor stage shifts, however, channel capacities will be reassessed for significant stage changes that impact structures and/or property. The Lake Manager will be responsible to contact all affected property owners downstream before making flood control releases. The average travel time between stations is shown in Table 7-3 and Brazos River system travel times are shown on Plate 4-23.

The normal rates of change in release may be exceeded at the discretion of the Chief, Water Management Office. Additionally, the Fort Worth District Water Management Office, or the Lake Manager, at their discretion, may exceed the normal rates of change in release in the event of drowning, accidents, failure of operational facilities, severe weather, or other emergencies deemed to require a more rapid rate of increase or decrease in the rate of release. Should the Fort Worth District Water Management Office need to deviate from the reservoir regulation release plan, then the Southwestern Division Water Management Office will need to be contacted for a deviation approval. Refer to Section 7-15 (Deviation from Normal Regulation) for more details regarding deviations.

TABLE 7-2

Downstream Control Points

River Channel and USGS Gaging Station	Channel Capacity (cfs)
North Fork San Gabriel River near Georgetown, TX	6,000
San Gabriel River at Laneport, TX	6,000
Little River near Cameron, TX	10,000
Brazos River at SH 21 near Bryan, TX	60,000
Brazos River near Hempstead, TX	60,000
Brazos River at Richmond, TX	60,000

TABLE 7-3

Travel Times

River Channel and USGS Gaging Station	Estimate Travel Time	Distance below Dam (river miles)
North Fork San Gabriel River near Georgetown	30 minutes	0.5
San Gabriel River at Laneport, TX	2-4 hours	5.7
Granger Lake near Granger, TX	12 hours	35.0
Little River near Cameron, TX	1 day	43.0
Brazos River at SH 21 near Bryan, TX	2-3 days	102.0
Brazos River near Hempstead, TX	3-4 days	194.0
Brazos River at Richmond, TX	4.5-5.5 days	220.0

b. Conservation Regulation.

Lake elevation at or below 791.0. No flood control releases will be made. Releases from the conservation storage will be made at the request of the Brazos River Authority, as long as they do not contribute to exceeding the control point channel capacity discharges shown in Table 7-2.

c. Normal Regulation for Flood Control. Lake Georgetown will be regulated to reduce flooding on the North Fork San Gabriel, San Gabriel, Little and Brazos Rivers downstream from the dam. Controlled releases, which would contribute to rates of flow at any downstream control point in excess of the channel capacity flows shown in Table 7-2, will not normally be made. An exception to this rule may be warranted, when the pool is forecast to rise into surcharge and pre-emptive releases resulting in the exceedance of downstream control point channel capacity limits may be expected, to minimize peak downstream river stages. The normal water control plan of regulation is described below and is shown on Plate 7-1.

1. **Lake elevation between 791.0 and 797.5 (10% flood pool)**. Controlled releases will normally be limited to a maximum of 1,500 cfs and should not contribute to rates of flow at any downstream control point in excess of the channel capacity flows shown in Table 7-2. For water quality purposes, when the lake level is between 791.0 and 795.0 feet, releases will normally be made through the low flow outlets. When the pool is in recession and approaching elevation 794.5 (~5% of flood pool) under a condition of relatively low inflow, make release decisions based on prevailing hydrologic conditions in conjunction with Table 7-4, "Low Flood Pool Release Guidance".

TABLE 7-4

Low Flood Pool Release Guidance

Pool Elevation Range (ft)	Flood Pool Range (%)	Release Rates* (cfs)
791.0 – 791.5	0.0 – 0.7	10 – 50
791.5 – 792.5	0.7 – 2.1	50 – 100
792.5 – 793.5	2.1 – 3.6	100 – 200
793.5 – 794.5	3.6 – 5.1	200 – 300

*Desired rate of release will vary with prevailing rates of inflow, lake evaporation, and water supply withdrawals. General objective is to evacuate from 5% to 2% of the flood pool in about one week, from 2% to 1% the following week, then from 1% to top of conservation pool (791.0) over an additional two to three week period.

2. **Lake elevation between 797.5 (10% flood pool) and 834.0 (Rising, Standing, or Falling)**. Controlled releases will normally be limited to a maximum of 3,000 cfs and should not contribute to rates of flow at any point downstream control point in excess of the channel capacity flows shown in Table 7-2.

3. **Lake elevation between 834.0 and 836.0 (Rising, Standing, or Falling)**. Controlled releases may be made in combination with spillway discharges if downstream channel capacity is available. Controlled releases should be adjusted as required so total project discharge does not exceed 6,000 cfs and does not contribute to rates of flow at any downstream control point in excess of the channel capacity flows shown in Table 7-2. All controlled outlets should be fully closed when the spillway discharge is at or above 6,000 cfs (pool elevation at or above 836.0).

When gated releases are being made in combination with spillway discharge it is important to have on site personnel closely monitor the stilling basin for surging and other irregularities. Submergence of the main conduit outlet, due to unusually high tailwater caused by spillway discharge, could result in irregular flow regimes in the stilling basin, leading to significant damage to the stilling basin and/or side slopes. If irregularities are observed, the flood gates should be immediately and completely closed.

d. Emergency Regulation. If communications between the Fort Worth District Water Management Office and the North San Gabriel Dam and Lake Georgetown Project Office are disrupted, the Lake Manager, on his own initiative, will direct regulation of the reservoir as described in Exhibit C - "Standing Instructions to Lake Manager" until communication is restored.
The conduit outlet and stilling basin must be visually monitored very closely during all high releases and during high tailwater events. If unusual conditions occur (such as riprap displacement, surging, submerged outlet, or the hydraulic jump moving out of the stilling basin), close all conduit gates immediately and continue efforts to re-establish communications with the Fort Worth District Water Management Office. The Emergency Regulation Plan is shown on Plate 7-2.

e. Brazos River System Balancing.

1. Unbalanced System. In general, the Brazos River projects will be operated to approximately balance the percent flood pool utilized at each project. Somerville will be given priority for releases when flows downstream of Bryan are near channel capacity, followed in priority by the Little River system of reservoirs. This is due to the low channel capacity on the Yegua Creek below Somerville and the resulting minor effect of Somerville releases on the Brazos River system; followed by the relative low channel capacity of the Little River (as compared to the Brazos River main stem channel capacity) and the resulting lesser effects of the San Gabriel River controlled releases on the Brazos River main stem stages as compared to the effect of the combined controlled releases from Whitney, Aquilla, Waco, Stillhouse, and Belton

dams. During the time that Brazos River projects are not balanced, priority of releases will be given to the project with the least amount of storage capacity left in percent of storage space. Next priority goes to the project having the second least amount of capacity in percent of storage space and so forth, until all lakes are balanced or all channel capacity in the Brazos River is used. For tandem projects or projects which have significantly greater flood storage capacity, additional weighting may be given. These releases when combined with flows downstream will not exceed discharge as shown in Table 7-2.

2. Balanced System. Lakes in the system will be regulated insofar as practical, to maintain approximately the same available storage space in their flood control pools as measured in terms of percent flood storage occupied.

f. Upstream Constraints. Flood control releases from North San Gabriel Dam and Lake Georgetown are coordinated with releases from upstream projects such as Whitney, Aquilla, Waco, Proctor, Belton and Stillhouse Hollow Dams along the Brazos River System.

g. Downstream Constraints. Flood control releases from North San Gabriel Dam and Lake Georgetown are coordinated with releases from downstream projects such as Granger and Somerville Dams along the Brazos River System.

h. Tapered Release System. In an effort to prevent unnecessary erosion and bank sloughing in the North San Gabriel, San Gabriel, and Little Rivers, a tapered release schedule will be implemented for Lake Georgetown, as directed from the Fort Worth District Water Management Office.

The Fort Worth District Water Management Office can modify the tapered release schedule in the event of drowning, accidents, failure of operation facilities, severe weather, and emergencies.

7-06. Recreation.

a. Upstream Recreation. All recreation area access roads for both USACE-managed and out-granted areas are constructed above the top of conservation pool elevation 791.0. Access roads may be inundated as the lake level rises into the flood control pool above elevation 791.0. This may cause parks and recreation facilities to be closed or partially closed.

b. Downstream Recreation. Requests for releases while lake is in the flood pool will be considered as a deviation in accordance with Section 7-15.d. The project office receives periodic inquiries concerning projected downstream flows by recreational users, but to date no requests have been made to adjust flows to accommodate recreation activities at this project

7-07. Water Quality. Small flood control releases and water supply releases will be made through the low flow system (Refer to Plate 7-3, Low Flow Rating Curve) with the multilevel inlets to provide the best quality water available. Factors considered include the best temperature and dissolved oxygen available.

Although water quality is not be an authorized project purpose, compliance with Public Law 92-500 requires that all federal facilities be managed, operated, and maintained to protect and enhance the quality of water and land resources through conformance with applicable federal, state, interstate, and local substantive standards. In addition the project's multiple level low flow outlet works were designed in accordance with ER 1110-2-1402, dated 15 September 1978 to provide the ability to affect the water quality of releases made through the system.

7-08. Fish and Wildlife. Flood releases will be tapered down as Georgetown Lake approaches the conservation pool in order to prevent the unnecessary death of fish within the stilling basin. Fish and wildlife resources are managed by the State of Texas Parks and Wildlife Department. USACE support activities with regard to fish and wildlife include active management of invasive aquatic vegetation in cooperation with Texas Parks and Wildlife. USACE also is responsible as the primary manager for all fee lands (including leases, licenses and easements), and provides timber management/oversight for timber stand improvement and salvage harvests, as well as the fire management program, both of which enhance the wildlife value of federal lands.

7-09. Water Supply. Of the original 37,100 acre-feet of storage below elevation 791.0 feet, the Brazos River Authority has contracted with USACE for 29,200 acre-feet of storage between elevation 699.0 and 791.0 feet for water supply. This water will be withdrawn directly from the lake or released through the outlet works as requested by the Brazos River Authority. The remaining 7,900 acre-feet of storage below the conservation pool is reserved for sediment deposition. For water supply contract, see Exhibit B.

The Brazos River Authority operates the Stillhouse Hollow Pump Station to convey water approximately 28 miles to Lake Georgetown via the Williamson County Regional Raw Water Line. The pipeline is 48 inches in diameter and has a pumping capacity of 44mgd. BRA began pumping through the pipeline in November 2001.

7-10. Hydroelectric Power. Hydropower is not a project purpose.

7-11. Navigation. Navigation is not a project purpose.

7-12. Drought Contingency Plans. When the drainage basin is in a drought condition and the lake levels are lower than normal, refer to the Drought Contingency Plan for the Brazos River Basin, Appendix X of the Brazos Master Manual. The plan presents a broad outline of actions necessary to manage the water resources in the Brazos River Basin during a drought.

7-13. Emergency Action Plans. The Emergency Plan (EAP) contains detailed instructions and procedures to be followed by USACE personnel at the Lake Georgetown Project Office to properly handle any event at the project that could develop into an emergency condition. The most current edition of the EAP is located in the Geotechnical Office - Fort Worth District is dated September 2015. Hard copies are also available in the Fort Worth District Water Management Office and at the Lake Georgetown Project Office. The term "emergency regulation" applies to any time when personnel at the dam have lost communication with the

District Office Personnel who normally direct regulation procedures. In the event of a communication failure during imminent failure of the dam due to any of the possible failure modes as described in Chapter 12 of the "North San Gabriel Dam Operation and Maintenance Manual", the Project Manager may open or close the outlet works gates as deemed necessary in an attempt to prevent a dam failure.

7-14. Other. There are no other issues associated with this project.

7-15. Deviation from Normal Regulation. There are occasions when it is necessary or desirable to deviate from the water control plan for short periods of time. Prior approval for a deviation is obtained from the Southwestern Division Water Management Office (CESWD-RBT-W). The requirement for prior approval of action from CESWD may be suspended in extreme emergencies. All deviations will be recorded and will be stored in electronic format. Analysis of the expected impacts of a proposed deviation will include consideration of its effect on dam safety. Deviation requests usually fall into the following categories:

a. Emergencies. Emergencies that can occur are drowning(s), failure of the operation facilities, and flushing of pollutants. Under emergency conditions necessary action is taken immediately by the Lake Manager unless such an action creates an equal or worse condition. For emergencies, the Fort Worth District Water Management Office will be informed as soon as practicable as to the nature of the emergency and the subsequent response to the emergency by telephone, email, or fax. A follow-up written documentation explaining the deviation will be furnished to the Southwestern Division Water Management Office as soon as practical.

b. Unplanned Minor Deviations. There are unplanned instances that create a temporary need for minor deviations from the normal regulation of the lake. These unplanned instances are not considered emergencies and require prior approval for deviations. Construction accounts for the majority of unplanned deviations. Possible reasons for unplanned deviations include stream crossings of pipelines, bridge work, embankment repair, utility placement, and other major construction contracts. Requests for changing release rates can vary from a few hours to a few days.

Each request is analyzed on its own merit. Consideration is given to upstream and downstream watershed conditions, potential flood threats, conditions of the lake, and possible alternative measures. In the interest of maintaining good public relations, the requests for deviation are usually approved, provided that there are no adverse effects on the overall operation of the project, or other projects. Approval of these minor deviations will be obtained from the Southwestern Division Water Management Office.

c. Unplanned Major Deviations. There are unplanned instances that may be considered for major deviations from the normal regulation plan, but are not emergencies. Requests for changes in release rates generally involve short time periods ranging from a few hours to a few days in an effort to minimize damages or optimize benefits. Flood control releases account for

the major portion of these incidents and typical examples include project pre-releases or flows exceeding downstream channel capacity.

Each request is analyzed on its own merit. In evaluating the proposed deviation, consideration must be given to the upstream and downstream watershed conditions, potential flood threats, condition of the lakes, and possible alternative measures that can be taken. Approval of these major deviations will be obtained from the Southwestern Division Water Management Office.

d. Planned Deviations. Each planned deviation is analyzed on its own merit. Sufficient data on flood potential, lake and watershed conditions, possible alternate measures, benefits to be expected and possible effects on other authorized and useful purposes will be presented with each deviation. Each recommended deviation is submitted in writing to the Southwestern Division Water Management Office for review and approval. An example of a planned deviation is a need to maintain or inspect an aspect of the project. Approval of such deviations will only be granted when the evaluations have been fully reviewed and verified to be necessary. Any concerns with "Dam Safety" will be taken into consideration as well with deviation approval.

7-16. Rate of Release Change. When practical, the change in opening height of the flood gates will be limited to no more than 0.5 feet each half hour until half open. Once a gate is half open and it is necessary to open it further, open the gate as quickly as possible to full open. The gates should be operated either fully open or at one-half or less of their full opening. All gate operations should be as symmetrical as practicable with an allowable difference in gate openings not to exceed one foot. Decreasing changes in release rates shall be accomplished in a manner that minimizes damage to the downstream channel, in accordance with section 7-05.g. Gates may be closed much more rapidly in the event of downstream rainfall, flooding or other emergencies.

7-17. Operation Curves and Tables. The Low Flow Outlet Rating Curve is shown on Plate 7-3. The Spillway Rating Curve is shown on Plate 7-4. The Outlet Rating Curves are shown on Plate 7-5. The Evaporation Curves are shown on Plate 7-6. Tailwater Rating Curves at Spillway Stilling Basin are shown on Plate 7-7. Tailwater Rating Curves Outlet Works Stilling Basin are shown on Plate 7-8. The Area Capacity Curves are shown on Plate 7-9. The tabulated values of the area Capacity are shown on pages T7-69 thru T7-107 of the existing water control manual.

CHAPTER VIII – EFFECT OF WATER CONTROL PLAN

8-01. General. Lake Georgetown and North San Gabriel Dam is a multiple-purpose project that is designed and operated in conjunction with four other USACE dams (Proctor Dam, Belton Dam, Stillhouse Hollow Dam, and Granger Dam) on the Little River and San Gabriel River systems, to provide flood control at the Cameron, Texas gage and supply water to the BRA, Fort Hood, and the Temple, Texas areas. The lake is also used for conservation storage and recreation and wildlife management.

8-02. Flood Control.

a. Spillway Design Flood. A Spillway Design Flood study was performed for North San Gabriel Dam at the time it was initially designed. A Design Memorandum, entitled "Design Memorandum No. 1 on Laneport, North Fork, and South Fork Reservoirs" including seven subject reports, were prepared by USACE, Fort Worth District from July 1965 to July 1973. The spillway design flood hydrographs for Lake Georgetown and North San Gabriel Dam were discussed in Part A Supplement No. 1(General) and Part C Supplement No.1 (North Fork) of the Design Memorandum. The final recommended spillway design flood hydrographs for Lake Georgetown and North San Gabriel Dam (North Fork Lake) were discussed in the Part C Supplement No.1, subject "Design Memorandum No. 1, Part C on North Fork Lake, San Gabriel River, Texas, Hydrology, Supplement No. 1", dated July 1973. In this report, the supplemental and revised hydrologic data as a result of additional studies of basic design memorandum were presented. These revisions were primarily due to increasing the length of the spillway from 750 feet as presented in the basic hydrology memorandum to 1,000 feet.

1. Spillway Design Storm. The selection of the Spillway Design Storm was computed following a method described in Hydrometeorological Report No. 33, dated April 1956, titled "Seasonal Variations of the Probable Maximum Precipitation East of the 105th Meridian for Area from 10 to 1000 Square Miles and Durations of 6, 12, 24, and 48 hours". In accordance with paragraph (c) of letter ENGCM-EY from OCE dated 10 April 1964, titled: "Hop Brook Dam and Reservoir, Hop Brook, Housatonic River Basin, Connecticut, Design Memorandum No. 1, Hydrology", basin shape reduction factors of 10, 11, and 13 percent were applied to the maximum probable rainfall over the Granger Dam, North San Gabriel Dam and South Fork Dam sites, respectively. Based on this analysis, a total rainfall of 31.66 inches was adopted as the Spillway Design Storm rainfall used in the development of natural flow at dam site hydrographs for an area of 246 square miles above the North San Gabriel Dam site.

2. Minimum Infiltration Rates. The computed infiltration rates for the San Gabriel River basin above the principal gaging stations vary from a minimum of 0.10 to a maximum of 0.30 inch per hour. In estimating the run-off from the Spillway Design Storm, a uniform infiltration rate of 0.10 inch per hour has been assumed. The assumption gave an estimated runoff of 26.61 inches or 84 percent of the rainfall for the Spillway Design Storm. The rainfall-excess for the Spillway Design Flood is shown on Plate 8-1.

3. Unit Hydrographs. A study was made for selected storms for which hydrographs were available at the Georgetown and Circleville gages on the San Gabriel River basin in order to determine unit hydrographs. These studies, made in accordance with EM-1110-2-1405, were submitted to the Office, Chief of Engineers, with letter SWFGP, subject "Unit Hydrograph Compilation", dated 29 June 1960. The watershed was considered in three parts each of which has different runoff characteristics, watershed constants and areas as follows:

(a). Reservoir Area. The runoff from the 5 square miles of reservoir area was not included in the unit hydrograph for flow into full reservoir, but runoff rates for the reservoir area were assumed equal to the rainfall rates and added directly to the computed spillway design flood hydrograph.

(b). The area adjacent to the reservoir composed of numerous small areas with no well-defined drainage divides. One unit hydrograph was constructed for the 21 square miles of this area.

(c). Two unnamed draws and North Fork San Gabriel River above head of reservoir. One unit hydrograph was constructed for these two areas.

A C_t coefficient of 0.80 and C_p640 value of 530 were adopted for use in Snyder's equations for the derivation of synthetic 6-hours unit hydrographs for all above areas. The unit hydrograph for the entire area above North San Gabriel Dam site (exclusive of the reservoir area) was obtained by plotting the unit hydrographs discussed above and adding the ordinates graphically.

4. Spillway Design Flood Hydrographs. In order to determine the critical conditions of Spillway Design Flood at the North San Gabriel Dam site, the Spillway Design Storm was distributed uniformly over the watershed above Granger Dam and two flood hydrographs were computed. The first hydrograph was determined for natural flow at the dam site based on the synthetic unit hydrograph discussed in Section 8-02, a.3. The second hydrograph representing flow into full reservoir was computed using the unit hydrograph derived for flow into full reservoir plus the run off from the 5 square miles reservoir surface at a rate equal to the rate of rainfall. The computed hydrograph with a peak inflow of 395,800 cfs and volume of 336,800 acre-feet was adopted as the Spillway Design Flood for Lake Georgetown.

Routing the Spillway Design Flood resulted in a maximum elevation of 856.2 feet NGVD29 and the peak outflow was 284,000 cfs. Plate 8-1 shows the lake elevation and Spillway Design Flood hydrographs in the 1973 study.

b. Standard Project Flood. In January 1983, a Spillway Design Flood study for Lake Georgetown was prepared under the Dam Safety Assurance Program outlined in Draft ER 1130-2-417. The purpose of the study was to review the adequacy of North San Gabriel Dam with respect to the hydrologic criteria provided in Hydrometeorological Report No. 51 (HMR-51), June 1978, subject: "Probable Maximum Precipitation Estimates, United States East of the 105th Meridian". The study consisted of hydrologic analysis for North San Gabriel Dam

Probable Maximum Flood (PMF) and Standard Project Flood (SPF), as discussed in the following sections. For the SPF study, it was assumed that a Standard Project Storm would occur 5 days prior to the Probable Maximum Storm (discussed in Section 8-02, c.1). The antecedent Standard Project Storm was assumed to have a total rainfall amount equal to 50 percent of the full Probable Maximum Storm rainfall amount. The Standard Project Storm rainfall was 22.44 inches or 50 percent of the full Probable Maximum Storm rainfall of 44.88 inches. The total depth of rainfall is the " Probable Maximum Storm rainfall x Hop Brook reduction factor = (44.88 inches x 0.95) = 42.63 inches. The Hop Brook reduction factor includes both a reduction due to basin shape and a reduction due to target effect. Therefore, when using a pattern storm to measure areal distribution (such as the hypothetical elliptical pattern in the Quik II and the watershed runoff models) only half of the Hop Brook reduction should be used. The use of the pattern storm accounts for basin shape. It was assumed the Standard Project Storm was centered in the same location as the Probable Maximum Storm and possessed the same ellipse characteristics as the Probable Maximum Storm (Plate 8-2). The details of Probable Maximum Storm are discussed in Section 8-02, c.1.

The SPF hydrograph representing flow into full pool was computed using the same parameters as in the PMF analysis discussed in Section 8-02, c.4 except rainfall was one-half of the Probable Maximum Storm rainfall distributed according to the SWD distribution. The computed SPF hydrograph has a peak inflow of 202,110 cfs and a volume of 213,100 acre-feet. The SPF was routed through Lake Georgetown through a series of flood control outlets. The reservoir level of Lake Georgetown continued to rise during passage of the SPF and had reached elevation 848.44 feet by the beginning of the Probable Maximum Storm.

c. Probable Maximum Flood. The following paragraphs describe the details of PMF analysis in the 1983 study.

1. Probable Maximum Storm. The Probable Maximum Storm rainfall above the North San Gabriel Dam Site was determined in accordance with the method described in HMR-51. A hypothetic elliptical transposition of the PMF was used in the study. The resulting average over the area for a 96 hour rainfall total is based on critical centering of the hypothetical elliptical Probable Maximum Precipitation (PMP) at a location of latitude 30°46' and longitude 98°10'. The storm pattern is shown on Plate 8-2.

2. Minimum Infiltration Rates. The adopted infiltration rates were taken from "Design Memorandum No. 1 on North San Gabriel Reservoir, Brazos River, Texas, Hydrology," dated July 1966. The adopted rates include an initial loss of 1.0 inch and a uniform loss rate of 0.10 inch per hour. Application of these assumed losses to the Spillway Design Storm rainfall produced an estimated runoff of 34.70 inches, or 81 percent of the total rainfall for the Spillway Design Storm. The 1983 PMF study rainfall, losses and rainfall excess are shown on Plate 8-3.

3. Unit Hydrographs. Unit hydrograph determinations were made for 246 square miles drainage area in the San Gabriel River basin above North San Gabriel Dam. The synthetic unit hydrographs used for this study were developed from Synder's equations. A C_p640 value of

530 and a C_t coefficient of 0.8 were used in the unit hydrographs for all sub-basins.

4. Unit Hydrograph for Flow into Full Lake. The total drainage area of 246 square miles above the North San Gabriel Dam site was divided into 16 sub-basins, as follows:

(a). One subarea next to the north shore of the reservoir
(b). Reservoir area
(c). One subarea next to the south shore of the reservoir, and
(d). Area above the west end of the reservoir on the San Gabriel River.

The sub-basins layout is shown on Plate 8-2. For the reservoir area the runoff rates were assumed to equal the rainfall rates and were added directly to the computed spillway design flood hydrograph. Unit hydrographs for the sub-areas were determined using the method mentioned in Section 8-02, c.3.

5. Routing Reach Parameters. One routing reach was used in the development of the North San Gabriel Dam hydrologic model. Reach routings were performed using a modified puls method based upon storage-discharge relationships for each reach. The storage-discharge relationships were developed using a typical valley cross section for each reach and applying Manning's equation. Routing of the hydrographs empting directly into the lake was assumed to be instantaneous, i.e., the hydrographs were translated to the next control point with no attenuation of the flood.

6. Probable Maximum Flood Hydrographs. The PMF hydrographs representing flow into full pool were computed using the unit hydrograph developed for each sub-area, the routing reach parameters discussed above, the rainfall from HMR-51 distributed according to the SWD distribution, the infiltration rates discussed above, and the runoff equal to the rate of rainfall from the lake surfaces. The routing computations for flow into a full reservoir indicated that the lake would rise to a maximum level of 858.6 feet and the peak inflow would be 398,443 cfs with a volume 461,316 acre-feet. Plate 8-3 shows the PMF inflow-outflow hydrographs and the reservoir surface elevations.

d. Other Floods. A major rainfall event in December 1991 followed by both a wet winter and spring resulted in a record pool elevation of 836.16 feet on 4 March 1992. Additional information on historical floods can be found in Section 4-06 of this manual.

8-03. Recreation. Facilities such as public boat ramps, docks, restrooms, picnic shelters, fishing piers, and campsites have been provided. Public use of USACE-SWF lakes is governed by Title 36 of the Code of Federal Regulations. The 10-year average annual visitation to Lake Georgetown is 479,372.

A rise or fall in the pool elevation at Lake Georgetown has some effect on the lands surrounding the lake, recreational facilities, and project visitation. A rise above elevation 834.3 temporarily restricts the use of many recreational facilities due to inundation or loss of access. Other effects

associated with high water levels include the accumulation of driftwood, the degradation of surrounding vegetation, and increased shoreline erosion.

A substantial lowering of the pool elevation, due to water supply requirements or drought, exposes aesthetically unpleasing banks and mud flats, and creates a boating hazard due to increased shallow areas. Boat ramps and beaches may also become unusable during drawdown periods. Although fluctuation of the pool level is unavoidable, the effects on recreational opportunities can be reduced by placing roads, utilities, and recreational facilities in locations less prone to flooding.

8-04. Water Quality. Water quality is not an authorized purpose at Lake Georgetown. However, available data indicates that generally good water quality conditions exist. In an effort to maintain good water quality in the North Fork of the San Gabriel River, multi-level intakes for low flow releases have been constructed in the outlet works. See the Pertinent Data sheet, page xvi for more details on intake elevations. Additional water quality data can be found in Section 4-08.

8-05. Fish and Wildlife. The management of fish and wildlife resources is conducted in cooperation with the Texas Parks and Wildlife Department and U.S. Fish and Wildlife. The species of fish that the Texas Parks and Wildlife Department has stocked the lake with are: largemouth bass, smallmouth bass, catfish, crappie, white bass, hybrid striped bass, and sunfish. There are a number of small wildlife management areas surrounding the lake, within which hunting dove, waterfowl, quail, rabbit, and squirrel are permitted. Other species of wildlife found in the area include white-tailed deer, gray and red foxes, coyotes, fox squirrels, armadillos, wild turkeys, owls, and more than a hundred bird species.

8-06. Water Supply. The BRA, an agency of the State of Texas, is authorized to use 100 percent (29,200 acre-feet) of the conservation storage space between elevations 699.0 and 791.0 feet. BRA is paying $6,311,000, in addition to their share of annual operations and maintenance O&M cost, for this water supply storage space. The BRA operates the Stillhouse Hollow Pump Station to convey water approximately 28 miles to Lake Georgetown via the Williamson County Regional Raw Water Line. The pipeline is 48 inches in diameter and has a pumping capacity of 44 mgd. BRA began pumping through the pipeline in November 2001.

8-07. Hydroelectric Power. Hydroelectric power is not a project purpose.

8-08. Navigation. Navigation is not a project purpose.

8-09. Drought Contingency Plans. The purpose of the Drought Contingency Plan for the Brazos River Basin, Appendix X of the Brazos River master Manual, is to provide a basic reference for water management decisions and responses to a water shortage in the San Gabriel River basin due to a drought. The Drought Contingency Plan provides a plan for implementing actions necessary for conservation of water supply depending on the severity of the drought and the reservoir level. This plan enables the Water Resources Branch to effectively coordinate with

the public and other district elements during drought conditions. The latest Drought Contingency Plan for Lake Georgetown is dated August 1991.

8-10. Flood Emergency Action Plan. The FEP contains detailed instructions and procedures to be followed by USACE personnel at the North San Gabriel Dam Project Office to properly handle any event at the project that could develop into an emergency condition. The most current edition of the FEP is located at the Geotechnical Office – Fort Worth District and is dated December 1985 and updated in November 2010. Copies of this FEP are also available in the Fort Worth District Water Management Office and at the Lake Georgetown Project Office.

8-11. Frequencies. Lake Georgetown water surface levels for the period of record, since deliberate impoundment began on 3 March 1980, are displayed on Plate 8-4.

a. Annual Peak Elevation Frequency. The annual peak lake levels for the period 1981 through 2014 were tabulated. The annual peak elevations were arranged in descending order and assigned median plotting positions. The elevation probability was derived from studies based on methods discussed in "Statistical Methods in Hydrology," by Leo R. Beard, dated January 1962. The annual peak elevation frequency curve is shown on Plate 8-5. Data from this analysis indicated the 50-year and the 100-year flood frequency pool level to be 829.0 feet and 835.5 feet, respectively.

b. Lake Elevation Duration. The pool-elevation-duration curve shown on Plate 8-6 is based on the midnight lake elevations for the period 24 May 1981 to 30 June 2014. Lake Georgetown reached the top of the conservation pool for the first time on 24 May 1981. The pool-elevation-duration curve shows the percent of time that the lake level equals or exceeds a given elevation.

c. Key Control Points. Key control points are located on San Gabriel River at Laneport, Little River near Cameron, Brazos River near Hempstead, and Brazos River near Richmond. Rating curves for the key control points are shown on Plate 4-17 through Plate 4-21, respectively.

8-12. Other Studies. The vision for the CWMS National Implementation Effort is to have all USACE watersheds fully modeled within CWMS. These models will be operated daily to provide decision support to local Water Managers and to have results automatically consolidated into standardized briefing tools within a CorpsMap for executive and public use. The CorpsMap viewer supports visualization and analysis of USACE infrastructure, and real-time display of atmospheric, coastal, critical infrastructure, and watershed data.

The CWMS Automated Information System was developed by the HEC under funding from the Water Management Community of Practice and has been implemented to varying degrees at USACE Water Management Offices. USACE offices apply CWMS data flow elements (data acquisition, verification, validation, transformation, storage, visualization, dissemination elements). For this effort, USACE Leadership, the Critical Infrastructure Protection and Resilience (CIPR) Program, and the Dam Safety Program have recognized the value of these

watershed models to the Nation and have committed funding for watershed model development to support the needs of multiple programs.

CHAPTER IX - WATER CONTROL MANAGEMENT

9-01. Responsibilities and Organizations.

a. Corps of Engineers. Lake Georgetown is owned by the USACE. As the owner of the project, the Corps of Engineers is responsible for the overall operation and maintenance of the lake. The Lake Manager, operating through the Lake Georgetown Office, Georgetown, Texas, and the Engineering and Construction Division, is directly responsible for the Lake's maintenance and operation. Project reporting instructions are presented in Chapter V, and project operating instructions are presented in Chapter VII of this manual.

1. Responsibilities and Duties During Normal Operations. The Water Resources Branch, Engineering and Construction Division, Fort Worth District is charged with the following responsibilities and duties under the general supervision of the SWD Office in Dallas, Texas.

(a). Regulation of lakes and dissemination of data.

(b). Investigations and refinement of regulation procedures, including the following:

(1). Analysis of past floods.

(2). Reconnaissance to determine channel capacities.

(3). Improvement of forecasting techniques.

(4). Plan and coordinate the hydrometeorologic reporting network with the NWS and the USGS.

(c). Train personnel in flood control duties, including the following:

(1). Periodic visits to projects by the branch personnel to familiarize themselves with regulation facilities and become acquainted with the operating personnel.

(2). Instruct personnel of other branches in flood control procedures to supplement the Water Resources Branch during flood emergencies, when necessary.

(d). Prepare reports on lake regulation.

(1). Recurring reports.

(2). Water Control Manuals.

(3). Post Flood reports.

2. Responsibilities and Duties During Flood Emergencies. During flood emergency, the Water Resources Branch is responsible for the following:

(a). Evaluation of current meteorologic, hydrologic, and hydraulic data.

(b). Provide analysis of the storm and effects of the flooding to the District Engineer and other District personnel.

(c). When necessary, furnish personnel to assist lake personnel in flood regulations.

(d). Regulation of lakes in accordance with flood control schedules.

(e). Furnish information to higher authority, which will include:

(1). Initial reports to the SWD and Office of the Chief of Engineers by telephone or E-mail.

(2). Provide information for situation reports.

3. Assignment of Personnel. During non-flood periods, personnel of the Water Resources Branch issue instructions for the routine regulation of the lake. However, during flood periods, assistance from other personnel may be required to maintain effective regulation of the lakes. The area and magnitude of the flood will determine the number of people engaged in each particular activity. Plate 9-1 shows the organization during flood control regulation.

4. Provision for 24-Hour Alert. The NWS and Lake Manager have been provided with a list of names and telephone numbers of key personnel of the Engineering and Construction Division with instruction to provide warning if unusual conditions occur. Responsible personnel are on duty at the Fort Worth District Office 24 hours a day during flood emergencies and/or whenever project conditions warrant. Responsible personnel will be on duty or on call at the lake at all times.

5. Role of the Lake Manager. The Lake Manager will regulate the lake according to instructions issued by personnel of the Water Resources Branch. The instructions will follow the "Normal Regulations for Flood Control" and "Emergency Regulations for Flood Control" contained in Chapter VII and Exhibit C of this manual. If the Lake Manager loses communication with the District Office, he will immediately make every effort to reestablish communication while initiating emergency regulations for flood control. The Lake Manager will

make daily observations at the lake project's weather station and report those observations as directed in paragraph 5-07.

b. Other Federal Agencies. The NWS is officially responsible for issuing flood warnings to the public. The NWS provides weather and river forecast information, which is used to make real time operation decisions for Lake Georgetown. The USGS develops and maintains stage versus discharge curves for each stream gage. The USGS also collects and maintains reservoir storage and water quality data for the USACE lakes in the Fort Worth District.

9-02. Interagency Coordination. The USACE, NWS, and the USGS cooperate to accumulate rainfall and streamflow data used in forecasting river stages, stream flows and lake levels. The Fort Worth District's Supplement A to ER 500-1-1 gives a list of Federal Agencies with which the District will coordinate in emergencies.

a. Local Press and Corps Bulletins. USACE, through their Public Affairs Office, makes press releases to the news media of flood situations in the area of concern. The Water Resources Branch may supplement this information with observed conditions and technical advice to enable local interests to obtain optimum flood protection and to perform rescue and relief functions. USACE further assists in flood fighting, through the office of the Emergency Operations, who furnishes sandbags and other necessary equipment based on equipment on hand and need.

b. National Weather Service. The NWS and USACE exchange hydrometeorologic data and reports in obtaining and disseminating data. This exchange of data is discussed in great detail in Chapter VI of this manual.

c. United States Geological Survey. The USGS and USACE cooperate in a program for the operation and maintenance of stream gages throughout the Fort Worth District. During floods, the USGS and USACE coordinate field activities to maximize the number of stream discharge measurements.

d. Other Federal, State, or Local Agencies. The Fort Worth District exchanges information with State government officials, Texas Department of Public Safety (TxDPS) Highway Patrol Division, and others during flood emergencies. The Fort Worth District also coordinates with State agencies concerning fish and wildlife throughout normal operation.

Releases from Lake Georgetown are coordinated with the releases from other reservoirs in the San Gabriel River basin system. These reservoirs are listed in Table 3-2.

9-03. Interagency Agreements. The BRA, an agency of the State of Texas, has contracted with USACE for 100 percent (29,200 acre-feet) of the conservation storage space between elevations 699.0 and 791.0 feet. In return, the BRA paid $6,311,000, in addition to their share of annual O&M costs for this water supply storage space.

9-04. Commissions, River Authority, Compacts, and Committees. The TCEQ issues and regulates permits for water use in the State of Texas. The BRA is informed of the lake regulations at Lake Georgetown.

9-05. Non-Federal Hydropower. There are no non-federal hydropower facilities at Lake Georgetown.

9-06. Reports. Table 9-1 lists reports prepared by the Water Resources Branch. The tabulation also describes when each report is required and the regulation requiring the report.

TABLE 9-1

Tabulation of Reports

Name of Report	When Required	Regulation Requiring Report
Daily Report	Daily	—
Monthly Reservoir Report	Monthly	ER 1110-2-240
Flood Situation Reports	During Floods	ER 500-1-1
Post Flood Reports	Following a Flood Causing Major Damage	ER 500-1-1
Annual Reports	Annually	ER 1110-2-240

a. Daily Report. The daily report is prepared by the Water Resources Branch. It contains water control information on most of the major lakes in the Fort Worth District. An example of a daily report is shown on Plate 9-2. Copies of the report are sent to all subscribing offices and agencies. The daily report is also posted on the Internet at the following URL address: http://www.swf-wc.usace.army.mil/.

b. Monthly Reports. The Water Resources Branch prepares monthly reservoir reports in accordance with ER 1110-2-240. The monthly report, shown on Plate 9-3, is a tabular record of lake operations. It is prepared for all lakes under the supervision or of direct interest to the Fort Worth District.

c. Flood Situation Reports. The Water Resources Branch supplies the Emergency Operations Center (EOC) in the Fort Worth District with information in accordance with ER 500-1-1. This report contains hydrometeorological conditions for the area, the name of the lake, pertinent lake data, lake elevation, predicted maximum elevation and anticipated data, inflow and outflow rates in cfs, percent of flood control storage utilized to date, and any other data relevant to the flood situation. The EOC then provides the information to the appropriate government officials and community organizations concerned or effected by the flooding.

d. Post Flood Reports. The post flood reports are prepared in accordance with ER 500-1-1, when a flood has resulted in major damage. The report describes flood emergency operations performed by the USACE. Included are available hydrologic information, damage estimates, and other engineering data considered essential for flood control and flood plain studies performed to review possible damage claims against the United States. The report is prepared using information compiled by the Water Resources Branch and when completed, includes a paragraph on the final damage costs from the flood event, including damages to USACE Property, Parks, and other structures.

e. Annual Report. The Water Resources Branch prepares an annual report for the SWD Reservoir Control Center. The report summarizes general river basin conditions and the activities and accomplishments of the Water Resources Branch during the preceding year.

EXHIBIT A

SUPPLEMENTARY PERTINENT DATA

LAKE GEORGETOWN AND NORTH SAN GABRIEL DAM

EXHIBIT A

SUPPLEMENTARY PERTINENT DATA

LAKE GEORGETOWN AND NORTH SAN GABRIEL DAM

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1. GENERAL INFORMATION

Item	Description
Other Name for Project	Originally identified as "North Fork Reservoir", changed to "Lake Georgetown" in December 1980
Location	North Fork of the San Gabriel River, Brazos River Basin, Texas at river mile 4.3
Type of Project	Dam and Lake
Objective of Regulations	Multipurpose project for Flood Control, Water Supply, Fish and Wildlife, and Recreation
Project Owner	USACE
Operating Agency	USACE The working hours of operation for weekdays are 0800 to 1645; Working hours for weekends and holiday vary. During flood emergency conditions 24-hour per day duty is the general procedure.
Regulating Agency	USACE
Water Supply Contracts	The BRA has contracted with USACE on 24 April 1981 for drawing from the lake 100 percent (29,200 ac-ft) of the conservation storage below elevation 791.0 feet NGVD29. The BRA will pay an estimated $6,311,000, excluding interest, in addition to their share of annual O&M cost for this water supply storage space (Contract No. DACW63-79-C-0084 dated 24 April 1981).
Project Cost	$38,800,000
Deliberate Impoundment Date	3 March 1980
Federal Power Marketing Administration	None

2. LAKE INFORMATION

Feature	Elevation (Feet NGVD29)	Lake Area (Acres)	Storage (Acre-Feet)	Runoff (Inches)
Top of Dam	861.0	–	–	–
PMF Design Water Surface Elevation (1983 Study)	858.6	5,330	233,680	18.57
Maximum Design Water Surface Elevation (1973 Study)	856.2	5,090	221,100	17.57
Top of Flood Control Pool and Spillway Crest (1983 Study)	834.0	3,220	138,504	9.97
Top of Conservation Pool (2005 Survey)	791.0	1,287	36,904	2.83
Sediment Reserve Total Storage	—	—	14,000	—
Maximum Tailwater (1983 Study)	750.5	—	—	—
Streambed (1983 Study)	699.0	—	—	—

Item	Description
Real Estate (Fee Title)	Upper guide contour of elevation 839.0 feet. Fee simple title includes 5,317.26 acres.
Real Estate (Flowage Easement)	Upper guide contour of elevation 839.0 feet. Flowage easement includes 512.93 acres.
Range of Clearing	Below elevation 791.0 feet

2. LAKE INFORMATION (CONTINUED)

Item	Description
Lake length at top of conservation pool	8 miles from the dam to the most upstream shoreline
Shoreline length at top of conservation pool	25 miles
Safety aspects	A warning horn will sound for 10 seconds to alert those downstream at least 2 minutes before significant changes in discharge. Access roads where practicable are constructed above elevation 839.0 feet.
Datum	All elevations referred to in Exhibit A, unless noted otherwise, are in feet, National Geodetic Vertical Datum of 1929 (NGVD29). The datum conversion from NGVD29 to NAVD88 is: NGVD29 + 0.3 feet = NAVD88 for Lake Georgetown and North San Gabriel Dam Lake.

3. HYDROLOGY

Item	Description
Drainage Area	246 square miles
Volume from One-Inch Runoff	13,120 ac-ft
Spillway Design Flood (1973 Study)	
Design water surface elev.	856.2 feet
Duration of Storm	48 hours
Average Infiltration Rate	0.10 inches/hour
Total Volume of Rainfall	31.66 inches
Total Volume of Runoff	26.61 inches
Peak Inflow	395,800 cfs
Peak Outflow	284,000 cfs
Storm Type	Spillway Design Storm
Probable Maximum Flood (1983 Study)	
Maximum Water Design Surface elev.	858.6 feet
Duration of Storm	96 hours
Average Infiltration Rate	0.10 inches/hour
Total Volume of Rainfall	42.63 inches
Total Volume of Runoff	34.70 inches
Volume into full pool	461,316 ac-ft
Peak Inflow to full pool	398,443 cfs
Storm Type	Probable Maximum Storm determined from HMR-51 guidelines
Standard Project Flood (1983 Study)	
Maximum Design Water Surface elev.	848.44 feet
Duration of Storm	96 hours
Total Volume of Rainfall	22.44 inches
Peak Inflow	202,110 cfs
Total Volume	213,100 ac-ft
Climate	Moderate, with hot summers, and cool winters

3. HYDROLOGY (CONTINUED)

Item	Description
Average Precipitation (Gages listed in Table 4-3)	33.5 inches per year (1893-2015)
Average Evaporation from lake (Data listed in Table 4-4A)	49.3 inches per year (1981-2015)
Storm Type	Primarily local thunderstorms, frontal storms, and tropical cyclones
Flood Seasons	Primarily November through June, but floods can occur at any time of year
Low Flood Seasons	July through October
Minimum Monthly Inflow and Date of Occurrence	0 ac-ft Multiple months
Minimum Annual Inflow and Date of Occurrence	2,950 ac-ft (in CY 1954)
Mean Annual Inflow	47,379 ac-ft (Feb 1924-Dec 2015 records)
Maximum Annual Inflow and Date of Occurrence	230,001 ac-ft (CY 1992)
Maximum Monthly Inflow and Date of Occurrence	72,648 ac-ft (June 1981)
Maximum Average Daily Inflow and Date of Occurrence	18,715 cfs (27 June 2007)
Maximum Instantaneous Inflow and Date of Occurrence	42,000 cfs (June 2007)
Maximum Flood Volume and Date of Occurrence	193,000 ac-ft (Dec 1991 to March 1992)

3. HYDROLOGY (CONTINUED)

Item	Description
Names and Locations of Key Stream Flow Stations	Upstream North Fork San Gabriel River at Reagan Blvd near Leander Downstream North Fork San Gabriel River near Georgetown South Fork San Gabriel River near Georgetown San Gabriel River at Laneport Little River near Cameron Brazos River at SH 21 near Bryan Brazos River near Hempstead Brazos River at Richmond
Type of Hydrometeorologic Data Recorded at Dam site	Automatic water stage recorders to furnish continuous records of lake levels and river stage below the dam. Tile staff gages provide lake level and tailwater elevations. NWS station at the dam consists of: a rain gage, recording rain gage, Type A evaporation pan, anemometer and maximum-minimum thermometer.
Precipitation Stations Used in Hydrologic Forecasting (NWS)	Austin 33 NW - Discontinued gage Andice 2 SW - Recording gage Briggs - Discontinued gage Burnet - Recording gage Cameron- Discontinued gage Florence - Recording gage Georgetown - Discontinued gage Georgetown Lake - Recording gage Granger - Discontinued gage Granger Dam - Recording gage Jarrell - Recording gage Killeen - Discontinued gage Lampasas - Discontinued gage Spicewood - Recording gage Taylor 1 NW - Recording gage

3. HYDROLOGY (CONTINUED)

Item	Description
Precipitation Stations Used in Hydrologic Forecasting (NWS)	Temple - Discontinued gage Watson - Recording gage Marble Falls 0.7 NW - Recording gage Highland Haven 1.3 SW - Recording gage Granite Shoals 0.9 S - Recording gage Meadowlakes 0.4 NNE - Recording gage Georgetown 1.2 W - Recording gage Pflugerville 4.7 NNE - Non-Recording gage Cedar Park 2.7 SSW - Recording gage Liberty Hill - Recording gage Bertram - Recording gage Jollyville 1.2 WNW- Recording gage Thrall 10.5 SSE - Recording gage Brushy Creek 1.9 WNW - Non-Recording gage Leander 2.5 ESE - Discontinued gage Anderson Mill 1.4 NW- Discontinued gage Hutto 0.8 NNE- Non-Recording gage Round Rock 3.4 E- Recording gage Bartlett 5.0 W- Recording gage
Number of Sediment Ranges	18 (Periodic Surveys)
Number of Degradation Ranges	5 (Periodic Surveys)

4. EMBANKMENTS

Item	Description
Location	North Fork of the San Gabriel River, Brazos River basin, Texas at river mile 4.3
Purpose	Impoundment
Type	Rock fill with impervious core
Type of Fill	Rolled fill
Slope Protection	Rock riprap upstream and seeded downstream
Height	164 feet above streambed
Length	6,700 feet excluding spillway
Top Elevation	861.0 feet
Freeboard for 1983 PMF	2.4 feet
Used for Roadway	Yes
Elevation of Streambed	699.0 feet
Closure date	3 March 1980

5. SPILLWAY

Item	Description
Location	Right abutment of the dam
Uncontrolled Spillway	
Crest Elevation	834.0 feet
Length	1,000 feet
Type	Uncontrolled broad-crested trapezoidal weir
Maximum outflow (1973 Study, Lake elev. 856.2 feet)	284,000 cfs
Total Routed Capacity (1973 Study, Lake elev. 856.2 feet)	284,000 cfs
Total Maximum PMF Outflow (1983 Study, Lake elev. 858.6 feet)	331,329 cfs
Type of Energy Dissipator	Stilling basin with baffle blocks

6. OUTLET FACILITIES

Item	Description
A. Control Gates	
Location	At the base of outlet structure, which is in the lake Outflow is via a conduit through the dam
Purpose	Regulation of outflow
Type	One 11-foot diameter conduit with hydraulically operated slide gates
Number and Size of Gates	Two 5 feet by 11 feet hydraulically operated slide gates
Entrance Invert Elevation	720.0 feet
B. Low Flow Outlet Works	
Location	At the gatewell in outlet structure
Purpose	Regulation of outflow into flood control conduit
Type	Slide gates
Type and Size of Outlets	Four 2 feet by 4 feet intakes
Number and Size of Gates	Four 3 feet by 4 feet slide gates
Invert Elevation	Highest Level: 777.0 feet Upper intermediate Level: 764.17 feet Lower intermediate Level: 751.33 feet Lower Level: 738.5 feet

7. CONTROL POINTS

Item	Description
A. North Fork San Gabriel River near Georgetown Gage, Gage No. 08104700	
Location	River mile 1.9 of the North Fork of the San Gabriel River downstream of Lake Georgetown
Purpose of control	To indicate the total flow at the gage, including releases from upstream reservoirs and local flow
Channel description	The channel capacity in the reach below Georgetown Gage varies from 6,000 cfs to 20,000 cfs. The average slope is 6 feet per mile.
Drainage area	248 square miles
Treatment of uncontrolled runoff	Contributes to target flow at gage
Target Flow Rate	6,000 cfs at Georgetown Gage
Time of Water Travel from Lake Georgetown	30 minutes to the North Fork San Gabriel River near Georgetown Gage
Monitoring provisions	Recording river gage with DCP
Safety Aspects Possibility	Rising water may inundate country road crossing downstream
Dikes or levees downstream	Hefley Improvement District of Milan. R.L. Batte Levee

7. CONTROL POINTS (CONTINUED)

Item	Description
B. San Gabriel River at Laneport Gage, Gage No. 08105700	
Location	River mile 26.2 of the San Gabriel River downstream of Granger Lake
Purpose of control	To indicate the total flow at the gage, including releases from upstream reservoirs and local flow
Channel description	The channel capacity in the reach below Laneport Gage varies from 6,000 cfs to 8,000 cfs. The average slope is 6 feet per mile
Drainage area	729 square miles
Treatment of uncontrolled runoff	Contributes to target flow at gage
Target Flow Rate	6,000 cfs at Laneport Gage
Time of Water Travel from Lake Georgetown	24 hours to the San Gabriel River at Laneport Gage
Monitoring provisions	Recording river gage with Data Collection Platform
Safety Aspects Possibility	Rising water may inundate country road crossing downstream
Dikes or levees downstream	Hefley Improvement District of Milam. R.L. Batte Levee

7. CONTROL POINTS (CONTINUED)

Item	Description
C. Little River near Cameron Gage, Gage No. 08106500	
Location	River mile 33.2 of the Little River downstream of Lake Granger
Purpose of control	To indicate the total flow at the gage, including releases from upstream reservoirs and local flow
Channel description	The channel is characterized by steep slope and a rocky stream bed and follows a tortuous course. The channel meanders within the valley and contains many sharp bend and loops. The channel shifts badly.
Drainage area	7,065 square miles
Treatment of uncontrolled runoff	Contributes to target flow at gage
Target Flow Rate	10,000 cfs at Cameron Gage
Time of Water Travel from Lake Georgetown	48 hours to the Little River near Cameron Gage
Monitoring provisions	Recording river gage with DCP
Dikes or levees downstream	None

7. CONTROL POINTS (CONTINUED)

Item	Description
D. Brazos River at SH 21 near Bryan Gage, No. 08108700	
Location	River mile 285.9 of the Brazos River
Purpose of control	To indicate the total flow at the gage, including releases from upstream reservoirs and local flow
Channel description	The channel is characterized by steep slope and a rocky stream bed and follows a tortuous course. The channel meanders within the valley and contains many sharp bend and loops. The channel shifts badly.
Drainage area	39,049 square miles
Treatment of uncontrolled runoff	Contributes to target flow at gage
Target Flow Rate	60,000 cfs
Time of Water Travel From Lake Georgetown	82-94 hours to the Brazos River at SH 21 near Bryan Gage
Monitoring provisions	Recording river gage with DCP
Dikes or levees downstream	None

7. CONTROL POINTS (CONTINUED)

Item	Description
E. Brazos River near Hempstead Gage, Gage No. 08111500	
Location	River mile 193.8 of the Brazos River
Purpose of control	To indicate the total flow at the gage, including releases from upstream reservoirs and local flow
Channel description	Coastal plains channel with tree-lined, steep banks and a very flat gradient. Bedding is sandy, with frequent sandbars. Overbank is predominantly farmland.
Drainage area	43,880 square miles
Treatment of uncontrolled runoff	Contributes to target flow at gage
Target Flow Rate	60,000 cfs at Hempstead Gage
Time of Water Travel from Lake Georgetown	108-130 hours to the Brazos River near Hempstead Gage
Monitoring provisions	Recording river gage with DCP
Dikes or levees downstream	Fort Bend County levees

7. CONTROL POINTS (CONTINUED)

Item	Description
F. Brazos River at Richmond Gage, Gage No. 08114000	
Location	River mile 92.0 of the Brazos River
Purpose of control	To indicate the total flow at the gage, including releases from upstream reservoirs and local flow
Channel description	Coastal plains channel with tree-lined, steep banks and a very flat gradient. Bedding is sandy, with frequent sandbars. Overbank is predominantly farmland. Closer to Houston the channel is controlled by levees.
Drainage area	45,107 square miles
Treatment of uncontrolled runoff.	Contributes to target flow at gage
Target Flow Rate	60,000 cfs at Richmond Gage
Time of Water Travel from Lake Georgetown	150 to 178 hours to the Brazos River at Richmond Gage
Monitoring provisions	Recording river gage with DCP
Dikes or levees downstream	Fort Bend County levees

8. DOWNSTREAM CONTROL STRUCTURES

Item	Description
A. Granger Lake	
Location	San Gabriel River, Brazos River Basin, Texas at river mile 31.9
Purpose	Flood control, water supply and recreation
Features	Rolled earth fill embankment dam
Length of Dam	16,320 feet long (including spillway)
Spillway	950 feet long
Top of Dam	555.0 feet
Top of Spillway Crest	528.0 feet
Top of Conservation Pool	504.0 feet
Low Flow Conduit	Four 3 feet by 4 feet gate controlled conduits with invert elevation at 457.0 feet Two 8 feet by 18 feet hydraulically operated slide gates
Controlled Drainage Area	709 square miles
Regulation Agency	USACE
Operation	USACE

8. DOWNSTREAM CONTROL STRUCTURES (CONTINUED)

Item	Description
B. Somerville Lake	
Location	Yegua Creek, Brazos River Basin, Texas Yegua Creek, at river mile 20.0
Purpose	Flood control, water supply and recreation
Features	Rolled earth fill embankment dam
Length of Dam	20,210 feet long (including spillway) plus 4,715 foot dike
Spillway	1,250 feet net length at crest
Top of Dam	280.0 feet
Top of Spillway Crest	258.0 feet
Top of Conservation Pool	238.0 feet
Low Flow Conduit	One conduit with gate controlled 10-foot diameter with invert elevation at 206.3 feet Two 5 feet by 10 feet tractor type gates
Controlled Drainage Area	1,012 square miles
Regulation Agency	USACE
Operation	USACE
Levee Districts	Hefley Levee District of Milam County Holland Levee District

EXHIBIT B

CONTRACT BETWEEN BRAZOS RIVER AUTHORITY OF TEXAS AND

THE UNITED STATES OF AMERICA

FOR

WATER STORAGE SPACE IN LAKE GEORGETOWN, TEXAS

DUPLICATE ORIGINAL

Contract No. DACW63-79-C-0084

CONTRACT BETWEEN THE UNITED STATES OF AMERICA
AND
THE BRAZOS RIVER AUTHORITY OF TEXAS
FOR
WATER STORAGE SPACE IN NORTH FORK LAKE, TEXAS

THIS CONTRACT, entered into this 22nd day of January 1980, by and between the United States of America (hereinafter called the Government), represented by the Contracting Officer executing this contract, and the Brazos River Authority of Texas (hereinafter called the Authority), an agency of the State of Texas, WITNESSETH THAT:

WHEREAS, the Flood Control Act of 1962 (Public Law 874, 87th Congress) authorized the construction, operation, and maintenance of North Fork Lake (hereinafter called the Project) on the San Gabriel River in the State of Texas; and

WHEREAS, the Authority furnished assurances to the Government by its resolution of 16 October 1967 that it would contract for the use of the storage included in the Project for its future municipal and industrial water supply needs; and

WHEREAS, the Authority desires to contract with the Government for the use of storage included in the Project for municipal and industrial water supply, and for payment of the cost thereof in accordance with the provisions of the Water Supply Act of 1958, as amended (43 U.S.C. 390b); and

WHEREAS, the Authority is empowered so to contract with the Government and is vested with all the necessary powers for accomplishment of the purposes of this contract, including those required by Section 221 of the Flood Control Act of 1970 (42 U.S.C. 1962d-5b);

NOW, THEREFORE, the Government and the Authority agree as follows:

ARTICLE 1. Water storage space.

a. Project construction. The Government, subject to the directions of Federal law and any limitations imposed thereby, has designed and constructed the Project so as to include therein space for the storage of water by the Authority.

b. Rights of the Authority.

(1) The Authority shall have the right to utilize an undivided 100 percent of the total storage space in the Project between elevations 699.0 feet above mean sea level and 791.0 feet above mean sea level, which total storage space is estimated to contain 29,200 acre-feet after adjustment for sediment deposits. This storage space is to be used to impound water for anticipated future demands or needs for municipal and industrial water supply,

(2) The Authority shall have the right to withdraw water from the lake, and to order releases to be made by the Government through the outlet works in the dam, subject to the provisions of Article 1c and to the extent the aforesaid storage space will provide; and shall have the right to construct all such works, plants, pipelines, and appliances as may be necessary and convenient for the purpose of diversions or withdrawals, subject to the approval of the Contracting Officer as to design and location. The grant of an easement for right-of-way across, in, and upon land of the Government at the Project shall be by a separate instrument in a form satisfactory to the Secretary of the Army, without additional cost to the Authority, under the authority of and in accordance with the provisions of 10 U.S.C. 2669. Subject to the conditions of such easement, the Authority shall have the right to use so much of the Project land as may reasonably be required in the exercise of the rights and privileges herein granted.

c. Rights reserved. The Government reserves the right to lower the water in the Project to elevation 791.0 feet above mean sea level during such periods of time as is deemed necessary, in its sole discretion, for flood control purposes. The Government further reserves the right to take such measures as may be necessary in the operation of the Project to preserve life or property, including the right not to make downstream releases during such periods of time as deemed necessary, in its sole discretion, to inspect, maintain, and repair the Project.

d. Quality or availability of water. The Authority recognizes that this contract provides storage space for raw water only. The Government makes no representations with respect to the quality or availability of water and assumes no responsibility therefor or for the treatment of water.

ARTICLE 2. Regulation of and right to use of water. The regulation of the use of water withdrawn or released from the aforesaid storage space shall be the sole responsibility of the Authority. The Authority has the full responsibility to acquire in accordance with State laws and regulations, and if necessary to establish or defend, any and all water rights needed for utilization of the storage provided under this contract. The Government shall not be responsible for diversions by others, nor will it become a party to any controversies involving the use of the storage space by the Authority except as such controversies may affect the operations of the Government.

ARTICLE 3. Operation and maintenance. The Government shall operate and maintain the Project and the Authority shall pay to the Government a share of the costs of such operation and maintenance as provided in Article 5c. The Authority shall be responsible for operation and maintenance of all installations and facilities which it may construct for the diversion or withdrawal of water from the lake and shall bear all costs of construction, operation, and maintenance of such installations and facilities.

ARTICLE 4. Measurement of withdrawals and releases. The Authority agrees to furnish and install, without cost to the Government, suitable meters or measuring devices satisfactory to the Contracting Officer for the

measurement of water which is withdrawn from the Project by any means other than through the Project outlet works. The Authority shall furnish to the Government monthly statements of all such withdrawals. Releases from the water supply storage space through the Project outlet works shall be made under arrangements approved by the Contracting Officer and shall be subject to Article 1c. The measure of all such releases shall be by means of a rating curve of the outlet works, or by such other suitable means as may be agreed upon prior to use of the water supply storage space.

ARTICLE 5. Payments. In consideration of the right to utilize the aforesaid storage space in the Project for municipal and industrial water supply purposes, the Authority shall pay the following sums to the Government:

a. Project investment costs.

(1) The Authority shall repay to the Government, at the times and with interest on the unpaid balance as hereinafter specified, the amounts stated below which, as shown in Exhibit A of this contract, constitute the entire estimated amount of the construction costs, including interest during construction, allocated to the water storage right acquired by the Authority under this contract. The interest rate to be used for purposes of computing interest during construction and interest on the unpaid balance will be determined by the Secretary of the Treasury as of the beginning of the Government fiscal year in which construction of the Project is initiated on the basis set forth in the Water Supply Act of 1958, as amended. For the Project, this interest rate is 3.253 percent (fiscal year 1968). The Authority shall repay:

21.414 percent of the total Project joint use construction cost, estimated at	$5,527,300
Interest during construction, estimated at	486,400
Total estimated amount of Project investment cost allocated to water supply	$6,013,700

(2) The Project investment cost allocated to the storage space indicated in Article 1b(1) as being provided for future use is currently estimated at $6,013,700 on the basis of the costs presented in Exhibit A. No principal or interest payment with respect to this storage for future water supply is required to be made during the first 10 years following the date the Project is operational for water supply purposes unless all or a portion of such storage is used during this period. The amount to be paid for any portion of such storage which is used shall be determined by multiplying the percentage of the total storage for future water supply which is placed in use by the total amount of the Project investment cost allocated to future water supply. Interest at the rate provided above will be charged on the Project investment costs allocated to the storage for future water supply which is not being used from the tenth (10th) year following the date the Project is operational for water supply purposes until the time when such storage is first used. The Authority may at its

option pay the interest as it becomes due or allow the interest to accumulate until the storage is used. If this latter option is exercised, the interest will be compounded annually and added to the principal amount. When any portion of the storage for future water supply is used, the amount of the Project investment cost allocated thereto plus interest applicable to such portion as provided above will be due and payable on the date of first use of water from such portion. The said amount due shall be paid within the life of the Project in not to exceed 50 consecutive annual payments, the first of which shall be due and payable within 30 days after the date of first use of water from such portion. Annual payments thereafter for said portion will be due and payable on the anniversary date of said first use of water. Except for the first payment, which will be applied solely to the retirement of the said amount due, all payments shall include accrued interest on the unpaid balance at the rate provided above. The last annual payment shall be adjusted upward or downward when due to assure repayment of all the investment cost allocated to such portion within the repayment period. Payment schedules for the storage provided for future water supply demands will be furnished by the Contracting Officer when use of such storage is started, and if based on estimated costs will be subject to revision, as provided in Article 6, until actual costs are known.

(3) The Authority shall have the right at any time it so elects to prepay the indebtedness under this Article 5a, in whole or in part, with accrued interest thereon to the date of such prepayment.

b. Major capital replacement cost. The Authority will be required to pay to the Government the cost for any major capital replacement of specific water supply facilities. In addition, the Authority shall pay to the Government the share of the costs of joint use major capital replacement items allocated to the water supply storage being used. As the storage provided for future water supply demands is used, the share of the joint use major capital replacement items costs, which the Authority will be required to pay in addition to the major capital replacement costs of the specific water supply facilities, will be increased commensurate with the percentage of the total water supply storage being used up to a total of 21.414 percent of such costs. Payment shall be made either in lump sum on demand at the time such costs are incurred or annually with interest on the unpaid balance. If paid annually, the Authority's share shall be paid within the life of the Project in not to exceed 25 consecutive annual payments beginning on the next anniversary date established in accordance with the provisions of Article 5a(2) above following the date demand is made for payment of said major capital replacement costs. Annual payments thereafter will be due and payable on said anniversary date. All payments shall include accrued interest on the unpaid balance at the rate determined by the Secretary of the Treasury on the basis of the Water Supply Act of 1958, as amended, for use in the Government fiscal year in which the major capital replacement is initiated. The last annual payment shall be adjusted upward or downward when due to assure repayment of all the incurred costs within the repayment period.

c. Annual operation and maintenance expense.

(1) The Authority will be required to pay to the Government the annual experienced operation and maintenance expense of specific water supply facilities. In addition, the Authority shall pay to the Government the share of the annual experienced joint use operation and maintenance expense of the Project allocated to the water supply storage being used. As the storage provided for future water supply demands is used, the share of the annual experienced joint use operation and maintenance expense, which the Authority will be required to pay in addition to the operation and maintenance expense of the specific water supply facilities, will be increased commensurate with the percentage of the total water supply storage being used up to a total of 37.798 percent of such expense. The first payment for operation and maintenance expense will be due and payable in advance within 30 days after first use of the water supply storage space, will be for the period beginning on the date of said first use and ending on 30 September following, and will amount to the sum of the first payment, P_s, for specific water supply facilities expense and the first payment, P_j, for joint use expense computed as shown in parts B and C, respectively, of section IV of Exhibit A, Annual payments thereafter for the first portion of the water supply storage placed in use, for each Government fiscal year ending 30 September, will be due and payable in advance on 2 January following the close of the prior Government fiscal year and will be the sum of payments P_s and P_j computed consecutively as shown in parts B and C, respectively, of section IV of Exhibit A. When each and any additional portion of the future water supply storage is placed in use, the first payment of the additional amount of the joint use operation and maintenance expense required to be paid for such storage use will be due and payable in advance within 30 days after first use of such storage, will be for the period beginning on the date of said first use and ending on 30 September following, and will amount to the first payment, P_j, computed as shown in part C of section IV of Exhibit A. Annual payments thereafter, for each Government fiscal year ending 30 September, will be due and payable in advance on 2 January following the close of the prior Government fiscal year and will amount to payments P_j computed consecutively as shown in part C of section IV of Exhibit A.

(2) For the purposes of this contract and repayment requirements by the Brazos River Authority, costs associated with sedimentation resurveys and surveys and monumentation shall be considered as operation and maintenance expense, and those construction costs that are capitalized and funded with Government O&M general funds shall be considered as project investment costs and shall be subject to repayment percentages as set forth in Article 5a. The last annual payment shall be adjusted upward or downward when due to assure repayment of all the incurred expense within the repayment period.

d. Charges for delinquent payments. If the Authority shall fail to make any of the aforesaid payments when due, then the overdue payments shall bear interest compounded annually until paid. The interest rate to be used

for overdue payments due under the provisions of Articles 5a, 5b, and 5c above shall be that determined by the Secretary of the Treasury on the basis of the Water Supply Act of 1958, as amended, for use in the Government fiscal year in which each period of delinquency occurs. The amount charged on payments overdue for a period of less than one year shall be figured on a monthly basis. For example, if the payment is made within the first month after being overdue (31 to 60 days after the anniversary date), one month's interest shall be charged. This provision shall not be construed as giving the Authority a choice of either making payments when due or paying interest, nor shall it be construed as waiving any other rights of the Government, at law or in equity, which might result from any default by the Authority.

ARTICLE 6. Construction cost adjustments. All construction cost dollar amounts in this contract, including those in the Exhibits, are tentative only, based on the Government's best estimates. They will be adjusted upward or downward by the Contracting Officer when final construction costs become known, and the contract will be modified to reflect the adjustments.

ARTICLE 7. Duration of contract. This contract shall be effective when approved by the Secretary of the Army and shall continue in full force and effect for the life of the Project.

ARTICLE 8. Permanent rights to storage. Upon completion of payments by the Authority as provided in Article 5a herein, the Authority shall have a permanent right, under the provisions of the Act of 16 October 1963 (Public Law 88-140, 43 U.S.C. 390e), to the use of the water supply storage space in the Project as provided in Article 1, subject to the following:

a. The Authority shall continue payment, as provided in Article 5c, of the annual operation and maintenance costs allocated to water supply.

b. The Authority shall bear the costs allocated to water supply of any necessary reconstruction, rehabilitation, or replacement of Project features which may be required to continue satisfactory operation of the Project. Such costs will be established by the Contracting Officer, and repayment arrangements shall be in writing in accordance with the terms and conditions set forth in Article 5b for major replacement costs and will be made a part of this contract.

c. Upon completion of payments by the Authority as provided in Article 5a herein, the Contracting Officer shall redetermine the storage space for municipal and industrial water supply, taking into account such equitable reallocation of lake storage capacities among the purposes served by the Project as may be necessary due to sedimentation. Such findings, and the storage space allocated to municipal and industrial water supply, shall be defined and described in an exhibit which will be made a part of this contract. Following the same principle, such reallocation of lake storage capacity may be further adjusted from time to time as the result of sedimentation resurveys to reflect actual rates of sedimentation and the

exhibit revised to show the revised storage space allocated to municipal and industrial water supply,

d. The permanent rights of the Authority under this contract shall be continued so long as the Government continues to operate the Project. In the event the Government no longer operates the Project, such rights may be continued subject to the execution of a separate contract, or supplemental agreement, providing for:

(1) continued operation by the Authority of such part of the facility as is necessary for utilization of the water supply storage space allocated to it;

(2) terms which will protect the public interest; and

(3) effective absolvement of the Government by the Authority from all liability in connection with such continued operation.

ARTICLE 9. Release of claims. The Authority shall hold and save the Government, including its officers, agents, and employees harmless from liability of any nature or kind for or on account of any claim for damages which may be filed or asserted as a result of the storage in the Project, or withdrawal or release of water from the Project, made or ordered by the Authority or as a result of the construction, operation, or maintenance of the features or appurtenances owned and operated by the Authority, provided, that this shall not be construed as obligating the Authority to hold and save the Government harmless from damages or liability resulting from the sole negligence of the Government or its officers, agents, or employees and not involving negligence on the part of the Authority or its officers, agents or employees.

ARTICLE 10. Assignment. The Authority shall not transfer or assign this contract or any rights acquired hereunder, nor sub-allot said water supply storage space or any part thereof, nor grant any interest, privilege, or license whatsoever in connection with this contract, without the approval of the Secretary of the Army, provided, that unless contrary to the public interest, this restriction shall not be construed to apply to any water that may be obtained from the water supply storage space by the Authority and furnished to any third party or parties, nor any method of allocation thereof,

ARTICLE 11. Officials not to benefit. No member of or delegate to Congress, or Resident Commissioner, shall be admitted to any share or part of this contract, or to any benefit that may arise herefrom; but this provision shall not be construed to extend to this contract if made with a corporation for its general benefit.

ARTICLE 12. Covenant against contingent fees. The Authority warrants that no person or selling agency has been employed or retained to solicit or secure this contract upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee excepting bona fide employees or bona fide established commercial or selling agencies maintained by the Authority

for the purpose of securing business. For breach or violation of this warranty, the Government shall have the right to annul this contract without liability or in its discretion to add to the contract price or consideration or otherwise recover the full amount of such commission, percentage, brokerage, or contingent fee.

ARTICLE 13. Environmental quality. During any construction, operation, and maintenance by the Authority of any facilities, specific action will be taken to control environmental pollution which could result from such activity and to comply with applicable Federal, State, and local laws and regulations concerning environmental pollution. Particular attention should be given to (1) reduction of air pollution by control of burning, minimization of dust, containment of chemical vapors, and control of engine exhaust gases and smoke from temporary heaters; (2) reduction of water pollution by control of sanitary facilities, storage of fuels and other contaminants, and control of turbidity and siltation from erosion; (3) minimization of noise levels; (4) onsite and offsite disposal of waste and spoil; and (5) prevention of landscape defacement and damage.

ARTICLE 14. Federal and State laws.

a. In acting under its rights and obligations hereunder, the Authority agrees to comply with all applicable Federal and State laws and regulations, including but not limited to the provisions of the Davis-Bacon Act (40 U.S.C. 276a et seq.); the Contract Work Hours and Safety Standards Act (40 U.S.C. 327-333); and Title 29, Code of Federal Regulations, Part 3.

b. The Authority furnishes as part of this contract an assurance (Exhibit C) that it will comply with Title VI of the Civil Rights Act of 1964 (78 Stat. 241, 42 U.S.C. 2000d, et seq.) and Department of Defense Directive 5500.11 issued pursuant thereto and published in Part 300 of Title 32, Code of Federal Regulations.

ARTICLE 15. Definitions.

a. Joint use costs. The costs of features used for any two or more Project purposes.

b. Project investment costs. The initial cost of the Project, including: land acquisition; construction; interest during construction on the value of land, labor, and materials used for planning and construction of the Project.

c. Specific costs. The costs of Project features normally serving only one particular Project purpose.

d. Interest during construction. An amount of interest which accrues on expenditures for the establishment of Project services during the period between the actual outlay and the time the Project is first made available to the Authority for water storage.

ARTICLE 16. Approval. This contract is subject to the written approval of the Secretary of the Army, and it shall not be binding until so approved.

IN WITNESS WHEREOF, the parties have executed this contract as of the day and year first above written.

APPROVED:

John O. Marsh, Jr.

Secretary of the Army

Date 24 April 1981

THE UNITED STATES OF AMERICA

By Donald J. Palladino

Donald J. Palladino
Colonel, CE
Contracting Officer

Date 22 January 1980

BRAZOS RIVER AUTHORITY OF TEXAS

By

Glynn A. Williams
President

I, Hugh W. Dobbs, certify that I am the Secretary of the Brazos River Authority of Texas, named as Authority herein; that Glynn A. Williams who signed this contract on behalf of the Authority was then President of the Brazos River Authority of Texas; that said contract was duly signed for and on behalf of the Brazos River Authority of Texas by authority of its governing body and is within the scope of its legal powers.

IN WITNESS WHEREOF, I have hereunto affixed my hand and the seal of said Brazos River Authority of Texas, this 21st day of January, 1980.

Hugh W. Dobbs
Secretary, Brazos River Authority
of Texas

CORPORATE SEAL

NORTH FORK LAKE

EXHIBIT A

I - PROJECT STORAGES

Feature	Elevation (feet msl)	Gross storage (acre-feet)	Usable storage (acre-feet)	Percent of usable storage
Flood control	791.0-834.0	93,700(1)	87,600	75.0
Water supply	699.0-791.0	37,100(2)	29,200	25.0
		130,800	116,800	100.0

(1) Includes 6,100 acre-feet sediment reserve.
(2) Includes 7,900 acre-feet sediment reserve.

II - PROJECT CONSTRUCTION COST

Estimated Federal construction cost	$31,400,000
Estimated nonreimbursable costs (unallocable) (1)	802,400
Estimated project cost to be allocated	$30,597,600
Estimated interest during construction on allocable cost	2,510,400
Estimated project investment to be allocated	$33,108,000

(1) Relocation of roads above replacement-in-kind standards and cultural resource preservation.
(2) Interest rate - 3.125%. Interest rate for reimbursable amounts - 3.253%.

III - ALLOCATION OF ESTIMATED CONSTRUCTION INVESTMENT
(Separable costs - remaining benefits method)

	Flood control	Water supply	Recreation	Totals
1. Specific facilities cost			$4,786,400	$ 4,786,400
2. Joint use facilities cost	$15,972,500	$5,527,300	4,311,400	25,811,200
Subtotals - cost	$15,972,500	$5,527,300	$9,097,800	$30,597,600
3. Interest during construction	1,405,600	486,400	618,400	2,510,400 (1)
4. Total allocation	$17,378,100	$6,013,700(2)	$9,716,200	$33,108,000

(1) Interest rate - 3.125%. Interest rate for reimbursable amounts - 3.253%.
(2) Investment cost for water supply to be repaid by the Authority.

IV - ALLOCATION OF ESTIMATED OPERATION AND MAINTENANCE COST

A. Allocation of estimated total annual costs:

	Flood control	Water supply	Recreation	Totals
1. Specific cost			$160,400	$160,400
2. Distribution of joint use cost (percent)	46.015	37.798	16.187	100.000
3. Allocated joint use cost	$112,000	$92,000	39,400	243,400
4. Total allocation	$112,000	$92,000	$199,800	$403,800

To be paid by the Authority:
37.798% of project joint use cost = $92,000

B. Determination of payments by the Authority for operation and maintenance costs of specific water supply facilities;

S = Total experienced specific water supply facilities costs for the preceding Government fiscal year.
R = Total experienced specific water supply facilities costs for the next preceding Government fiscal year,
P_s = Payment to be made by the Authority for specific water supply facilities costs.

1st payment, $P_s = \frac{\text{No. months in 1st period}}{12}$

2nd payment, $P_s = \left(S \times \frac{12}{\text{No. months in 1st period}} + S\right) - \text{1st payment}$

3rd payment, $P_s = (2S - A)$, where $A = S \times \frac{12}{\text{No. months in 1st payment}}$ from the 2nd payment

Subsequent payments, $P_s = (2S - R)$

No Good!! Chris said we had no specific w/s office to bill BCA for ... this is not applicable. PHW 1/28/84

C. Determination of payments by the Authority for incremental amounts of joint use operation and maintenance costs allocated to future use water supply:

J = Total experienced joint use costs for the preceding Government fiscal year.
I = Total experienced joint use costs for the next preceding Government fiscal year.
P_j = Payment to be made by the Authority for joint use costs allocated to water supply storage.

1st payment,

$$P_j = \frac{\text{Percent of future w/s storage placed in use}}{100} \times 0.37798 \times J \times \frac{\text{No. months in 1st period}}{12}$$

2nd payment,

$$P_j = \frac{\text{Percent of future w/s storage placed in use}}{100} \times 0.37798\left(J \times \frac{\text{No. months in 1st period}}{12} + J\right) - \text{1st payment}$$

Subsequent payments, $P_j = \frac{\text{Percent of future w/s storage placed in use}}{100} \times 0.37798(2J - I)$

NOTE: The computations above in part C are based on J in the first payment being the costs for a full Government fiscal year of Project operation. In the event the first use of future water supply storage should be made prior to completion of a full Government fiscal year of Project operation, make one of the following adjustments:

(1) If the preceding Government fiscal year was a partial year of Project operation, substitute $J \times \frac{12}{\text{No. months Project in operation}}$ for J in computing the 1st payment. All remaining payments will be computed as shown.

(2) If first use of future water supply storage occurs in the first year of Project operation, use the estimate of $243,400 for J in computing the first payment, use $J \times \frac{12}{\text{No. months Project in operation}}$ for J in computing the 2nd payment, and use $J \times \frac{12}{\text{No. months Project in operation}}$ from the 2nd payment for I in computing the 3rd payment. All remaining payments will be computed as shown.

LAKE GEORGETOWN
AMORTIZATION SCHEDULE FOR THIRD SEGMENT
5.340% OF TOTAL STORAGE (1559 ACRE-FEET)

PRINCIPAL - $ 321131.58
NUMBER OF PAYMENTS - 50
INTEREST RATE - 3.2530 %

PMT. NO.	TOTAL PAYMENT	PAYMENT TO INTEREST	PAYMENT TO PRINCIPAL	BALANCE DUE
1	12674.73	0.00	12674.73	308456.85
2	12674.73	10034.10	2640.63	305816.22
3	12674.73	9948.20	2726.53	303089.69
4	12674.73	9859.51	2815.22	300274.47
5	12674.73	9767.93	2906.80	297367.67
6	12674.73	9673.37	3001.36	294366.31
7	12674.73	9575.74	3098.99	291267.32
8	12674.73	9474.93	3199.80	288067.52
9	12674.73	9370.84	3303.89	284763.63
10	12674.73	9263.36	3411.37	281352.26
11	12674.73	9152.39	3522.34	277829.92
12	12674.73	9037.81	3636.92	274193.00
13	12674.73	8919.50	3755.23	270437.77
14	12674.73	8797.34	3877.39	266560.38
15	12674.73	8671.21	4003.52	262556.86
16	12674.73	8540.97	4133.76	258423.10
17	12674.73	8406.50	4268.23	254154.87
18	12674.73	8267.66	4407.07	249747.80
19	12674.73	8124.30	4550.43	245197.37
20	12674.73	7976.27	4698.46	240498.91
21	12674.73	7823.43	4851.30	235647.61
22	12674.73	7665.62	5009.11	230638.50
23	12674.73	7502.67	5172.06	225466.44
24	12674.73	7334.42	5340.31	220126.13
25	12674.73	7160.70	5514.03	214612.10
26	12674.73	6981.33	5693.40	208918.70
27	12674.73	6796.13	5878.60	203040.10
28	12674.73	6604.89	6069.84	196970.26
29	12674.73	6407.44	6267.29	190702.97
30	12674.73	6203.57	6471.16	184231.81
31	12674.73	5993.06	6681.67	177550.14
32	12674.73	5775.71	6899.02	170651.12
33	12674.73	5551.28	7123.45	163527.67
34	12674.73	5319.56	7355.17	156172.50
35	12674.73	5080.29	7594.44	148578.06
36	12674.73	4833.24	7841.49	140736.57
37	12674.73	4578.16	8096.57	132640.00
38	12674.73	4314.78	8359.95	124280.05
39	12674.73	4042.83	8631.90	115648.15
40	12674.73	3762.03	8912.70	106735.45
41	12674.73	3472.10	9202.63	97532.82
42	12674.73	3172.74	9501.99	88030.83
43	12674.73	2863.64	9811.09	78219.74
44	12674.73	2544.49	10130.24	68089.50
45	12674.73	2214.95	10459.78	57629.72
46	12674.73	1874.69	10800.04	46829.68
47	12674.73	1523.37	11151.36	35678.32
48	12674.73	1160.62	11514.11	24164.21
49	12674.73	786.06	11888.67	12275.54
50	12674.86	399.32	12275.54	.00

LAKE GEORGETOWN Contract No. DACW63-79-C-008

AMORTIZATION SCHEDULE FOR SECOND SEGMENT

1.596% OF TOTAL STORAGE (466 ACRE-FEET)

PRINCIPAL - $ 95978.65
NUMBER OF PAYMENTS - 50
INTEREST RATE - 3.2530 %

PMT. NO.	TOTAL PAYMENT	PAYMENT TO INTEREST	PAYMENT TO PRINCIPAL	BALANCE DUE
1	3788.18	0.00	3788.18	92190.47
2	3788.18	2998.96	789.22	91401.25
3	3788.18	2973.28	814.90	90586.35
4	3788.18	2946.77	841.41	89744.94
5	3788.18	2919.40	868.78	88876.16
6	3788.18	2891.14	897.04	87979.12
7	3788.18	2861.96	926.22	87052.90
8	3788.18	2831.83	956.35	86096.55
9	3788.18	2800.72	987.46	85109.09
10	3788.18	2768.60	1019.58	84089.51
11	3788.18	2735.43	1052.75	83036.76
12	3788.18	2701.19	1086.99	81949.77
13	3788.18	2665.83	1122.35	80827.42
14	3788.18	2629.32	1158.86	79668.56
15	3788.18	2591.62	1196.56	78472.00
16	3788.18	2552.69	1235.49	77236.51
17	3788.18	2512.50	1275.68	75960.83
18	3788.18	2471.01	1317.17	74643.66
19	3788.18	2428.16	1360.02	73283.64
20	3788.18	2383.92	1404.26	71879.38
21	3788.18	2338.24	1449.94	70429.44
22	3788.18	2291.07	1497.11	68932.33
23	3788.18	2242.37	1545.81	67386.52
24	3788.18	2192.08	1596.10	65790.42
25	3788.18	2140.16	1648.02	64142.40
26	3788.18	2086.55	1701.63	62440.77
27	3788.18	2031.20	1756.98	60683.79
28	3788.18	1974.04	1814.14	58869.65
29	3788.18	1915.03	1873.15	56996.50
30	3788.18	1854.10	1934.08	55062.42
31	3788.18	1791.18	1997.00	53065.42
32	3788.18	1726.22	2061.96	51003.46
33	3788.18	1659.14	2129.04	48874.42
34	3788.18	1589.88	2198.30	46676.12
35	3788.18	1518.37	2269.81	44406.31
36	3788.18	1444.54	2343.64	42062.67
37	3788.18	1368.30	2419.88	39642.79
38	3788.18	1289.58	2498.60	37144.19
39	3788.18	1208.30	2579.88	34564.31
40	3788.18	1124.38	2663.80	31900.51
41	3788.18	1037.72	2750.46	29150.05
42	3788.18	948.25	2839.93	26310.12
43	3788.18	855.87	2932.31	23377.81
44	3788.18	760.48	3027.70	20350.11
45	3788.18	661.99	3126.19	17223.92
46	3788.18	560.29	3227.89	13996.03
47	3788.18	455.29	3332.89	10663.14
48	3788.18	346.87	3441.31	7221.83
49	3788.18	234.93	3553.25	3668.58
50	3787.92	119.34	3668.58	.00

LAKE GEORGETOWN CONTRACT No. DACW63-79-C-0084

AMORTIZATION SCHEDULE FOR FIRST SEGMENT

0.346% OF TOTAL STORAGE (101 ACRE-FEET) (Revised 5 Jan 84)

PRINCIPAL - $ 20807.40
NUMBER OF PAYMENTS - 50
INTEREST RATE - 3.2530 %

PMT. NO.	TOTAL PAYMENT	PAYMENT TO INTEREST	PAYMENT TO PRINCIPAL	BALANCE DUE
1	821.25	0.00	821.25	19986.15
2	821.25	650.15	171.10	19815.05
3	821.25	644.58	176.67	19638.38
4	821.25	638.84	182.41	19455.97
5	821.25	632.90	188.35	19267.62
6	821.25	626.78	194.47	19073.15
7	821.25	620.45	200.80	18872.35
8	821.25	613.92	207.33	18665.02
9	821.25	607.17	214.08	18450.94
10	821.25	600.21	221.04	18229.90
11	821.25	593.02	228.23	18001.67
12	821.25	585.59	235.66	17766.01
13	821.25	577.93	243.32	17522.69
14	821.25	570.01	251.24	17271.45
15	821.25	561.84	259.41	17012.04
16	821.25	553.40	267.85	16744.19
17	821.25	544.69	276.56	16467.63
18	821.25	535.69	285.56	16182.07
19	821.25	526.40	294.85	15887.22
20	821.25	516.81	304.44	15582.78
21	821.25	506.91	314.34	15268.44
22	821.25	496.68	324.57	14943.87
23	821.25	486.12	335.13	14608.74
24	821.25	475.22	346.03	14262.71
25	821.25	463.97	357.28	13905.43
26	821.25	452.34	368.91	13536.52
27	821.25	440.34	380.91	13155.61
28	821.25	427.95	393.30	12762.31
29	821.25	415.16	406.09	12356.22
30	821.25	401.95	419.30	11936.92
31	821.25	388.31	432.94	11503.98
32	821.25	374.22	447.03	11056.95
33	821.25	359.68	461.57	10595.38
34	821.25	344.67	476.58	10118.80
35	821.25	329.16	492.09	9626.71
36	821.25	313.16	508.09	9118.62
37	821.25	296.63	524.62	8594.00
38	821.25	279.56	541.69	8052.31
39	821.25	261.94	559.31	7493.00
40	821.25	243.75	577.50	6915.50
41	821.25	224.96	596.29	6319.21
42	821.25	205.56	615.69	5703.52
43	821.25	185.54	635.71	5067.81
44	821.25	164.86	656.39	4411.42
45	821.25	143.50	677.75	3733.67
46	821.25	121.46	699.79	3033.88
47	821.25	98.69	722.56	2311.32
48	821.25	75.19	746.06	1565.26
49	821.25	50.92	770.33	794.93
50	820.79	25.86	794.93	.00

[illegible]
BRAZOS RIVER AUTHORITY
AMORTIZATION SCHEDULE
DATE OF USE: 15 SEPTEMBER 198[illegible]

Trnsf to SWFOD-O DF dtd 24 Sep 82

PRINCIPAL - $ 20807.40
NUMBER OF PAYMENTS - 50
INTEREST RATE - 3.2530 %

PMT. NO.	TOTAL PAYMENT	PAYMENT TO INTEREST	PAYMENT TO PRINCIPAL	BALANCE DUE
1	821.25	0.00	821.25	19986.15
2	821.25	650.15	171.11	19815.05
3	821.25	644.59	176.67	19638.38
4	821.25	638.84	182.42	19455.97
5	821.25	632.91	188.35	19267.62
6	821.25	626.78	194.48	19073.15
7	821.25	620.45	200.91	18872.34
8	821.25	613.92	207.34	18665.01
9	821.25	607.19	214.08	18450.93
10	821.25	600.21	221.05	18229.89
11	821.25	593.02	228.24	18001.65
12	821.25	585.60	235.66	17766.00
13	821.25	577.93	243.33	17522.67
14	821.25	570.02	251.24	17271.44
15	821.25	561.84	259.42	17012.02
16	821.25	553.41	267.85	16744.18
17	821.25	544.69	276.57	16467.61
18	821.25	535.70	285.56	16182.06
19	821.25	526.41	294.85	15887.21
20	821.25	516.82	304.44	15582.78
21	821.25	506.91	314.35	15268.43
22	821.25	496.69	324.57	14943.87
23	821.25	486.13	335.13	14608.74
24	821.25	475.23	346.03	14262.72
25	821.25	463.97	357.29	13905.43
26	821.25	452.35	368.91	13536.53
27	821.25	440.35	380.91	13155.62
28	821.25	427.96	393.30	12762.33
29	821.25	415.16	406.10	12356.23
30	821.25	401.95	419.31	11936.93
31	821.25	388.31	432.95	11503.98
32	821.25	374.23	447.03	11056.96
33	821.25	359.69	461.57	10595.39
34	821.25	344.67	476.59	10118.81
35	821.25	329.17	492.09	9626.72
36	821.25	313.16	508.10	9118.63
37	821.25	296.63	524.63	8594.00
38	821.25	279.57	541.69	8052.32
39	821.25	261.95	559.31	7493.01
40	821.25	243.75	577.51	6915.50
41	821.25	224.97	596.29	6319.22
42	821.25	205.57	615.69	5703.54
43	821.25	185.54	635.72	5067.82
44	821.25	164.86	656.40	4411.42
45	821.25	143.51	677.75	3733.68
46	821.25	121.45	699.80	3033.88
47	821.25	98.[illegible]	722.56	2311.32
48	821.25	75.[illegible]	746.07	1565.26
49	821.25	50.91	770.34	794.94
50	820.79	25.85	794.93	.00

NORTH FORK LAKE

EXHIBIT B

(RESERVED FOR AMORTIZATION SCHEDULE)

Contract No. DACW63-79-C-0084

NORTH FORK LAKE

EXHIBIT C

ASSURANCE OF COMPLIANCE WITH THE
DEPARTMENT OF DEFENSE DIRECTIVE UNDER
TITLE VI OF THE CIVIL RIGHTS ACT OF 1964

The Brazos River Authority of Texas (hereinafter called "Applicant-Recipient") HEREBY AGREES THAT it will comply with title VI of the Civil Rights Act of 1964 (Public Law 88-352) and all requirements imposed by or pursuant to the Directive of the Department of Defense (32 CFR Part 300, issued as Department of Defense Directive 5500.11, December 28, 1964) issued pursuant to that title, to the end that, in accordance with title VI of that Act and the Directive, no person in the United States shall, on the ground of race, color, or national origin be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity for which the Applicant-Recipient receives Federal financial assistance from the U. S. Army Corps of Engineers and HEREBY GIVES ASSURANCE THAT it will immediately take any measures necessary to effectuate this agreement.

If any real property or structure thereon is provided or improved with the aid of Federal financial assistance extended to the Applicant-Recipient by the U. S. Army Corps of Engineers, assurance shall obligate the Applicant-Recipient, or in the case of any transfer of such property, any transferee, for the period during which the real property or structure is used for a purpose for which Federal financial assistance is extended or for another purpose involving the provision of similar services or benefits. If any personal property is so provided, this assurance shall obligate the Applicant-Recipient for the period during which it retains ownership or possession of the property. In all other cases, this assurance shall obligate the Applicant-Recipient for the period during which the Federal financial assistance is extended to it by the U. S. Army Corps of Engineers.

THIS ASSURANCE is given in consideration of and for the purpose of obtaining any and all Federal grants, loans, contracts, property, discounts or other Federal financial assistance extended after the date hereof to the Applicant-Recipient by the Department, including installment payments after such date on account of arrangements for Federal financial assistance which were approved before such date.

The Applicant-Recipient recognizes and agrees that such Federal assistance will be extended in reliance on the representations and agreements made in this assurance, and that the United States shall have the right to seek

judicial enforcement of this assurance. This assurance is binding on the Applicant-Recipient, its successors, transferees and assignees, and the person or persons whose signatures appear below are authorized to sign this assurance on behalf of the Applicant-Recipient.

BRAZOS RIVER AUTHORITY OF TEXAS

Dated January 21, 1980

By _____
Glynn A. Williams
President

P.O. Box 7555

Waco, Texas 76710
(Mailing address)

ATTEST:

_____
Hugh W. Dobbs
Secretary, Brazos River Authority of Texas

RESOLUTION

BE IT RESOLVED by the Board of Directors of Brazos River Authority that the President be, and he is hereby, authorized to execute the Contract (No. DACW63-79-C-0084) Between the United States of America and the Brazos River Authority of Texas for Water Storage Space in North Fork Lake, Texas, in the form attached hereto as exhibit.

* * * * * * *

I certify that the above resolution was adopted by the Board of Directors of Brazos River Authority at its regular Board meeting, in Waco, Texas, on January 21, 1980.

WALTER J. WELLS
Assistant Secretary

RESOLUTION

BE IT RESOLVED by the Board of Directors of Brazos River Authority that the President be, and he is hereby, authorized to execute the Contract (No. DACW63-79-C-0084) Between the United States of America and the Brazos River Authority of Texas for Water Storage Space in North Fork Lake, Texas, in the form attached hereto as exhibit.

* * * * * * *

I certify that the above resolution was adopted by the Board of Directors of Brazos River Authority at its regular Board meeting, in Waco, Texas, on January 21, 1980.

WALTER J. WELLS
Assistant Secretary

Contract No. DACW63-79-C-0084

NORTH FORK LAKE

EXHIBIT D

OPINION OF COUNSEL

I have reviewed and approved contract number DACW63-79-C-0084 between the United States of America and the Brazos River Authority of Texas. Particularly I have considered the effect of Section 221 of Public Law 91-611 (42 U.S.C. 1962d-5b) and am of the opinion that the Brazos River Authority of Texas has the requisite legal authority to enter into and comply with this agreement as required by the aforementioned statute.

January 21, 1980
(date)

David Kultgen
General Counsel
Brazos River Authority of Texas

EXHIBIT C

STANDING INSTRUCTIONS TO LAKE MANAGER

LAKE GEORGETOWN AND NORTH SAN GABRIEL DAM

EXHIBIT C

STANDING INSTRUCTIONS TO LAKE MANAGER

LAKE GEORGETOWN AND NORTH SAN GABRIEL DAM

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STANDING INSTRUCTIONS TO LAKE MANAGER
LAKE GEORGETOWN AND NORTH SAN GABRIEL DAM

I. GENERAL

1. Instructions. Detailed instructions to the project personnel at Lake Georgetown and North San Gabriel Dam are presented below.

a. Regulation. The Fort Worth District Water Management Office will normally issue instructions for the storage and discharge of water. In the event communications with the Fort Worth District Water Management Office are disrupted, the Lake Manager will direct regulation in accordance with the Emergency Regulation guidance provided in Section II of this exhibit.

b. Data Reporting. The Water Management Office is staffed from 0700 hours to 1600 hours daily, and 0700 hours to 1100 hours on weekends and holidays (except Christmas Day). During these hours reservoir regulators may be reached via telephone at 817-886-1551, via e-mail at ceswf-od-l@usace.army.mil, or (as a backup) via FAX at 817-886-6472. Outside of these hours the Water Management Office Duty Regulator may be reached via mobile telephone at 817-791-0973, or, as a backup, via the above e-mail address.

(1). Daily Report. Each day lake and hydrometeorological data will be submitted to the Fort Worth District Water Management Office between 0800 and 0830 hours. The primary means of submission will be the Internet at http://www.swf-wc.usace.army.mil. The secondary means of submission will be via telephone, and FAX may be used as a backup. The following data should be included in the daily report.

(a). Weather. For the 24-hour period preceding 0800 hours each day, report cumulative precipitation and evaporation values, in inches, and the maximum and minimum experienced temperature readings.

(b). Gate Settings. Gate number of each open gate, with the height of opening in feet as of 0800 hours on the date of report.

(c). Spillway Discharge. In the event discharge occurs over the uncontrolled spillway, report the respective dates and times discharge begins and ends.

(2). Reporting Severe Weather. During normal project duty hours, including weekends as applicable, severe weather will be reported as it develops, to include information and data that may be requested by the Water Management Office. Severe weather conditions outside of normal project duty hours will be reported when and as requested by the Water Management Office.

(3). Reporting Gate Operations. Upon completion of any change in gate settings, details of the gate operations will be reported to the Water Management Office via telephone, e-mail, or FAX (as backup). The report shall include the gate settings prior to change, the date and time of beginning of change, the date and time of completion of change, and the gate settings upon completion of change.

c. Reporting Unusual Events. Events or conditions not normally encountered in the routine operation of the dam and lake that might endanger the integrity of the dam or necessitate temporary or permanent revision of the operating procedures shall be promptly reported to the Operations Division and the Water Management Office. Settlement, movement, or cracking of the earth embankment or abutments, unusual change in seepage rates or development of new seepage areas, landslides, rockslides, displacement of riprap, or indication of an impending movement should be reported to the Dam Safety Program Manager in the Geotechnical Office. Any changes to the outlet works or spillway including structural settlement or movement, cracking, or vibrations, mechanical malfunction or failure shall be reported immediately to the Water Management Office and the Dam Safety Coordinator. Reference the North San Gabriel Dam **Flood Emergency Plan** should an event occur indicating any degree of jeopardy to the safety of the dam or to the safety of the public. The stilling basin and protected/armored downstream areas must be visually monitored closely during all high releases. Outside of normal duty hours one of the persons listed on the Fort Worth District Notification List for Lake Georgetown Lake will be notified, and the Duty Regulator of the Water Management Office will be notified via mobile phone 817-791-0973.

d. Warnings. It is the responsibility of the Lake Manager to maintain a list in current status of residents, and/or property, which would be endangered or inconvenienced by large and/or prolonged releases, and to give adequate warning of such impending releases. Notification will be made by whatever means are available, in accordance with current Fort Worth District emergency notifications protocol. In every case, before an increase in release rate is made, a warning horn shall be sounded and the area immediately below the stilling basin visually checked for person(s) in a dangerous area.

e. Gate Changes. Gate changes will normally be directed by the Water Management Office. In the event communications with the Fort Worth District Office are disrupted, the Lake Manager will direct gate changes. During flood periods, gate changes may be required as often as every half hour. Only under unusual circumstances will gate changes be required more frequently than every half hour. Examples of such unusual circumstances include unexpectedly high rates of change in inflow to the reservoir, or a required response to a dam safety issue. The gates will be operated in a manner prescribed by the manufacturer. A complete log of all gate operations will be kept for each gate.

II. REGULATION PROCEDURES

1. Normal Regulation. Normally, instructions for storage and release of water for conservation and flood control purposes will be issued by the Water Management Office in accordance with the plan of regulation prescribed in Chapter 7 of this water control manual.

2. <u>Emergency Regulation</u>. In the event of disruption of communications with the Fort Worth District Water Management Office, the Lake Manager will, on his own initiative, direct operation of the reservoir in accordance with the rules outlined below:

a. Make conservation releases in accordance with the current request by the BRA as last related by the Water Management Office prior to loss of communications.

b. Take immediate steps to re-establish communication with the Fort Worth District Water Management Office.

c. Until communications are restored, regulate the reservoir in accordance with Chapter 7, Plate 7-2, and Emergency Regulation Plan for Flood Control for North San Gabriel Dam and Georgetown Lake.

3. <u>Temporary Deviations</u>. During the course of normal or emergency regulation of the reservoir, the Lake Manager may temporarily deviate from the current release rates in the event an immediate short-term departure is deemed necessary to protect the safety of the dam, or to avoid serious hazards to life. As soon as practicable, the Fort Worth District Water Management Office will be informed via telephone, e-mail, or FAX, as to the nature of the emergency and the subsequent response. If the deviation is conducted in the interest of dam safety, the Dam Safety Coordinator will also be notified as soon as practicable. Such actions shall be confirmed in writing, as soon as practicable, to the Fort Worth District Water Management Office and the Southwest Division Water Management Office, and shall include justification for the action.

EXHIBIT D

URS-FNI-HZ TEAM

QUALITY MANAGEMENT SYSTEM (QMS) FORMS

EXHIBIT D

URS-FNI-HZ TEAM

QUALITY MANAGEMENT SYSTEM (QMS) FORMS

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QMS Form 3-4 (MM)
Rev. 2013 QMS
Date: 28 Feb 2013

IE QMS - Americas

Detail Check

Project Name	Update Water Control Manual for Lake Georgetown and North San Gabriel dam	**Client**	USACE Fort Worth District
Project Location	Williamson, Texas	**PM**	Jinwei Qiu, PE
Project Number	25336792	**PIC**	Thandav Murphy, PE

Identifying Information

(This section is to be completed by the Project Manager or the PM's Designee.)

Assigned Checker: Janis Murphy, PE — Comments Required by: May 1, 2015

Work Product Originator: Jinwei Qiu, Preston Kutney, Melissa Perette

Work Product to be Checked: Lake Georgetown and North San Gabriel Dam Water Control Manual Chapters 1 to 3

☒ This Detail Check is a check for correctness, completeness and technical accuracy.

☐ This Detail Check is only a technical edit for format, spelling, grammar, pagination and readability.

Specific Instructions: Enter specific instructions for the work product

Submitted by: Jinwei Qiu — Project Manager Signature — 04/29/2015 — Date

Comments

(This Section is to be completed by the Checker.)

Select:

A. ☐ Checker has no comments.

or

B. ☑ Comments have been provided on:

- ☑ Marked directly on work product
- ☐ Comment and Disposition Form 3-5
- ☐ Other; Specify: Click here to enter text.

Janis C. Murphy — Checker Signature — 5/1/15 — Date

Verification

(This section is to be completed by the Checker after verification of comment incorporation, if box B is checked off above.)

Select:

C. ☐ Verification of comment incorporation has been performed by Checker. There are no outstanding issues.

or

D. ☒ Verification of comment incorporation has been performed by Checker. Unresolved issues have been submitted to the Project Manager or Designee for final resolution.

and

E. ☒ Checker asserts that the work product review is complete.

Janis C. Murphy — Checker Signature — 6/3/16 — Date

APPROVAL and DISTRIBUTION

☒ Detail Check is complete.

Jinwei Qiu — Project Manager or Designee Signature — Click here to enter a date. 6/3/2016 — Date

Distribution:

Project Central File – Quality File Folder

Other – Specify: Enter names here.

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QMS Form 3-6 (MM)
Rev. 2013 QMS
Date: 28 Feb 2013

IE QMS - Americas

Independent Technical Review

Project Name	Update Water Control Manual for Lake Georgetown and North San Gabriel Dam	**Client**	USACE Fort Worth District
Project Location	Williamson, Texas	**PM**	Jinwei Qiu, PE
Project Number	25336792	**PIC**	Thandav Murphy, PE

Identifying Information

(This section is to be completed by the Project Manager or the PM's Designee.)

Assigned Reviewer: Anand Prakash, PE Comments Required by: May 1, 2015

Work Product Originator: Jinwei Qiu, Preston Kutney, Melissa Perette

Work Product to be Reviewed: Lake Georgetown and North San Gabriel Dam Water Control Manual Chapters 1 to 3

Review Scope: Review for correctness, completeness and technical accuracy

Specific Instructions: Enter specific instructions for the work product.

Submitted by: Jinwei Qiu — 04/29/2015
Project Manager Signature — Date

Comments

(This Section is to be completed by the Reviewer.)

Select:

A. ☒ Reviewer has no comments.

or

B. ☐ Comments have been provided on:

- ☐ Marked directly on work product
- ☐ Comment and Disposition Form 3-5
- ☐ Other; Specify: Click to enter text.

Anand Prakash — 07/06/2016
Reviewer Signature — Date

Verification

(This section is to be completed by the Reviewer after verification of comment incorporation, if box B is checked off above.)

Select:

C. ☒ Verification of comment incorporation has been performed by Reviewer. There are no outstanding issues.

or

D. ☐ Verification of comment incorporation has been performed by Reviewer. Unresolved issues have been submitted to the Project Manager or Designee for resolution.

and

E. ☒ Reviewer asserts that the work product ITR is complete.

Anand Prakash — 07/06/2016
Reviewer Signature — Date

APPROVAL and DISTRIBUTION

☒ ITR is complete.

Jinwei Qiu — Click here to enter a date. 07/11/2016
Project Manager or Designee Signature — Date

Distribution:

Project Central File – Quality File Folder

Other – Specify: Enter names here.

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QMS Form 3-4 (MM)
Rev. 2013 QMS
Date: 28 Feb 2013

IE QMS - Americas

Detail Check

Project Name	Update Water Control Manual for Lake Georgetown and North San Gabriel dam	**Client**	USACE Fort Worth District
Project Location	Williamson, Texas	**PM**	Jinwei Qiu, PE
Project Number	25336792	**PIC**	Juan Vargas, PE

Identifying Information

(This section is to be completed by the Project Manager or the PM's Designee.)

Assigned Checker: Janis Murphy, PE Comments Required by: August 19, 2015

Work Product Originator: Jinwei Qiu, Preston Kutney, Melissa Perette

Work Product to be Checked: Lake Georgetown and North San Gabriel Dam Water Control Manual 60%

☒ This Detail Check is a check for correctness, completeness and technical accuracy.

☐ This Detail Check is only a technical edit for format, spelling, grammar, pagination and readability.

Specific Instructions: Enter specific instructions for the work product

Submitted by: Jinwei Qiu — Project Manager Signature — 04/16/2015 — Date

Comments

(This Section is to be completed by the Checker.)

Select:

A. ☐ Checker has no comments.

or

B. ☒ Comments have been provided on:

- ☒ Marked directly on work product
- ☐ Comment and Disposition Form 3-5
- ☐ Other; Specify: Click here to enter text

Janis C. Murphy — Checker Signature — 8/20/15 — Date

Verification

(This section is to be completed by the Checker after verification of comment incorporation, if box B is checked off above.)

Select:

C. ☐ Verification of comment incorporation has been performed by Checker. There are no outstanding issues.

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and

E. ☒ Checker asserts that the work product review is complete.

Janis C. Murphy — Checker Signature — 6/3/16 — Date

APPROVAL and DISTRIBUTION

☒ Detail Check is complete.

Jinwei Qiu — Project Manager or Designee Signature — Click here to enter a date. 07/07/2016 — Date

Distribution:

Project Central File – Quality File Folder

Other – Specify: Enter names here

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QMS Form 3-6 (MM)
Rev. 2013 QMS
Date: 28 Feb 2013

IE QMS - Americas

Independent Technical Review

Project Name	Update Water Control Manual for Lake Georgetown and North San Gabriel Dam	**Client**	USACE Fort Worth District
Project Location	Williamson, Texas	**PM**	Jinwei Qiu, PE
Project Number	25336792	**PIC**	Juan Vargas, PE

Identifying Information

(This section is to be completed by the Project Manager or the PM's Designee.)

Assigned Reviewer: Anand Prakash, PE — Comments Required by: August 19, 2015

Work Product Originator: Jinwei Qiu, Preston Kutney, Melissa Perette

Work Product to be Reviewed: Lake Georgetown and North San Gabriel Dam Water Control Manual 60%

Review Scope: Review for correctness, completeness and technical accuracy

Specific Instructions: Enter specific instructions for the work product.

Submitted by: Jinwei Qiu — 08/16/2015
Project Manager Signature — Date

Comments

(This Section is to be completed by the Reviewer.)

Select:

A. ☒ Reviewer has no comments.

or

B. ☐ Comments have been provided on:

- ☐ Marked directly on work product
- ☐ Comment and Disposition Form 3-5
- ☐ Other; Specify: Click to enter text.

Anand Prakash — 07/06/2016
Reviewer Signature — Date

Verification

(This section is to be completed by the Reviewer after verification of comment incorporation, if box B is checked off above.)

Select:

C. ☒ Verification of comment incorporation has been performed by Reviewer. There are no outstanding issues.

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D. ☐ Verification of comment incorporation has been performed by Reviewer. Unresolved issues have been submitted to the Project Manager or Designee for resolution.

and

E. ☒ Reviewer asserts that the work product ITR is complete.

Anand Prakash — 07/06/2016
Reviewer Signature — Date

APPROVAL and DISTRIBUTION

☒ ITR is complete.

Jinwei Qiu — 07/11/2016
Project Manager or Designee Signature — Date

Distribution:

Project Central File – Quality File Folder

Other – Specify: Enter names here.

URS Quality - It's Good Business	QMS Form 3-4 (MM)
	Rev. 2013 QMS Date: 28 Feb 2013

IE QMS - Americas	Detail Check

Project Name	Update Water Control Manual for Lake Georgetown and North San Gabriel dam	**Client**	USACE Fort Worth District
Project Location	Williamson, Texas	**PM**	Jinwei Qiu, PE
Project Number	25336792	**PIC**	Juan Vargas, PE

Identifying Information

(This section is to be completed by the Project Manager or the PM's Designee.)

Assigned Checker: Janis Murphy, PE Comments Required by: March 17, 2016

Work Product Originator: Jinwei Qiu, Preston Kutney, Rifat Alam

Work Product to be Checked: Lake Georgetown and North San Gabriel Dam Water Control Manual 90%

☒ This Detail Check is a check for correctness, completeness and technical accuracy.

☐ This Detail Check is only a technical edit for format, spelling, grammar, pagination and readability.

Specific Instructions: Enter specific instructions for the work product.

Submitted by: _____ 03/15/2016
Project Manager Signature Date

Comments

(This Section is to be completed by the Checker.)

Select:

A. ☐ Checker has no comments.

or

B. ☒ Comments have been provided on:

- ☒ Marked directly on work product
- ☐ Comment and Disposition Form 3-5
- ☐ Other; Specify: Click here to enter text.

Janis C. Murphy 3/17/16
Checker Signature Date

Verification

(This section is to be completed by the Checker after verification of comment incorporation, if box B is checked off above.)

Select:

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or

D. ☒ Verification of comment incorporation has been performed by Checker. Unresolved issues have been submitted to the Project Manager or Designee for final resolution.

and

E. ☒ Checker asserts that the work product review is complete.

Janis C Murphy 6/3/16
Checker Signature Date

APPROVAL and DISTRIBUTION

☒ Detail Check is complete.

_____ Click here to enter a date. 07/01/2016
Project Manager or Designee Signature Date

Distribution:

Project Central File – Quality File Folder

Other – Specify: Enter names here.

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QMS Form 3-6 (MM)
Rev. 2013 QMS
Date: 28 Feb 2013

IE QMS - Americas

Independent Technical Review

Project Name	Update Water Control Manual for Lake Georgetown and North San Gabriel Dam	**Client**	USACE Fort Worth District
Project Location	Williamson, Texas	**PM**	Jinwei Qiu, PE
Project Number	25336792	**PIC**	Juan Vargas, PE

Identifying Information

(This section is to be completed by the Project Manager or the PM's Designee.)

Assigned Reviewer: Anand Prakash, PE — Comments Required by: March 17, 2016

Work Product Originator: Jinwei Qiu, Preston Kutney, Rifat Alam

Work Product to be Reviewed: Lake Georgetown and North San Gabriel Dam Water Control Manual 90%

Review Scope: Review for correctness, completeness and technical accuracy

Specific Instructions: Enter specific instructions for the work product.

Submitted by: Jinwei Qiu — 03/15/2016

Project Manager Signature — Date

Comments

(This Section is to be completed by the Reviewer.)

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or

B. ☐ Comments have been provided on:

- ☐ Marked directly on work product
- ☐ Comment and Disposition Form 3-5
- ☐ Other; Specify: Click to enter text.

Anand Prakash — 07/06/2016

Reviewer Signature — Date

Verification

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and

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Anand Prakash — 07/06/2016

Reviewer Signature — Date

APPROVAL and DISTRIBUTION

☒ ITR is complete.

Jinwei Qiu — 07/11/2016

Project Manager or Designee Signature — Date

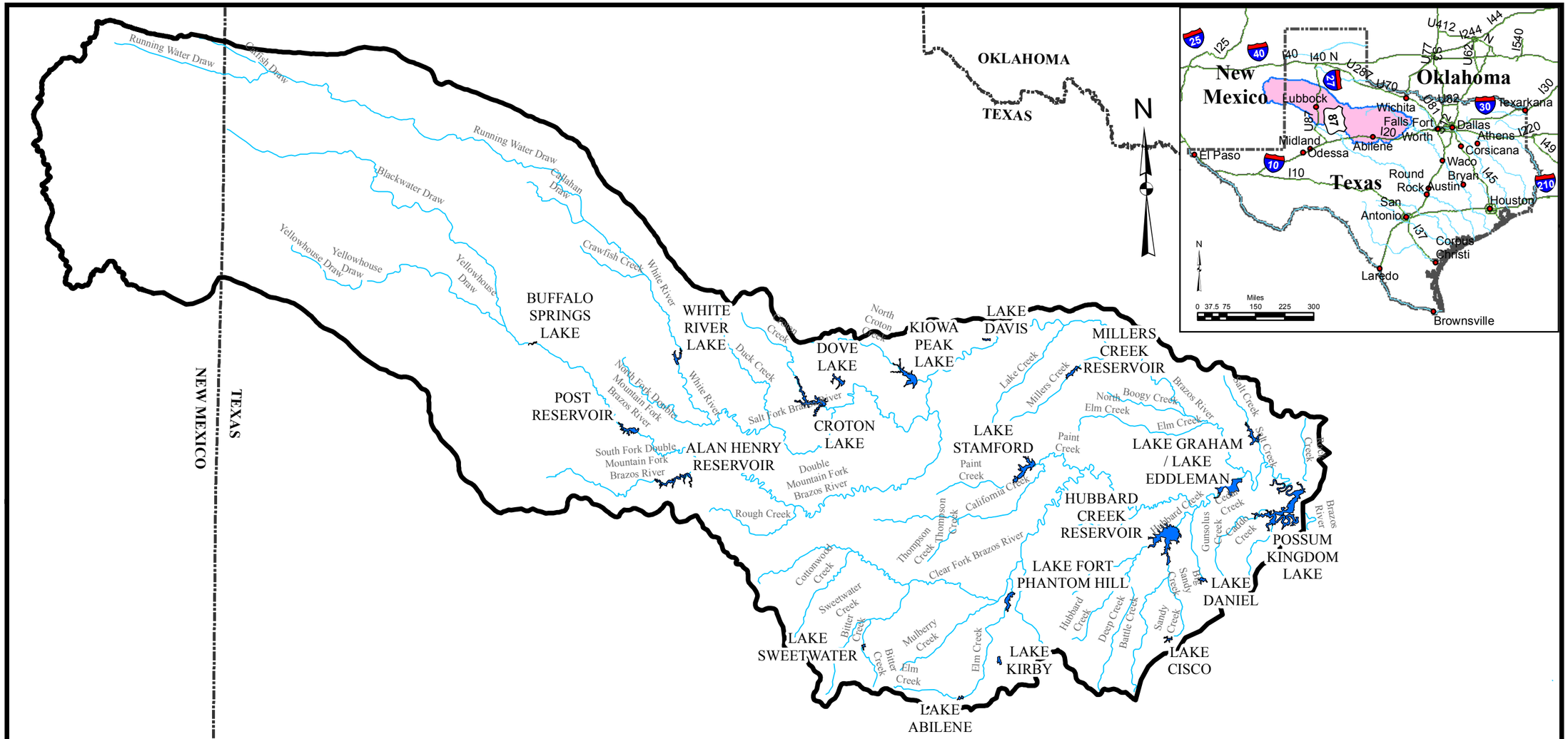
Distribution:

Project Central File – Quality File Folder

Other – Specify: Enter names here.

CORPS OF ENGINEERS

U.S. ARMY



BRAZOS RIVER BASIN, TEXAS

LAKE GEORGETOWN AND NORTH SAN GABRIEL DAM

NORTH SAN GABRIEL RIVER, TEXAS

WATERSHED MAP UPPER-BRAZOS RIVER BASIN

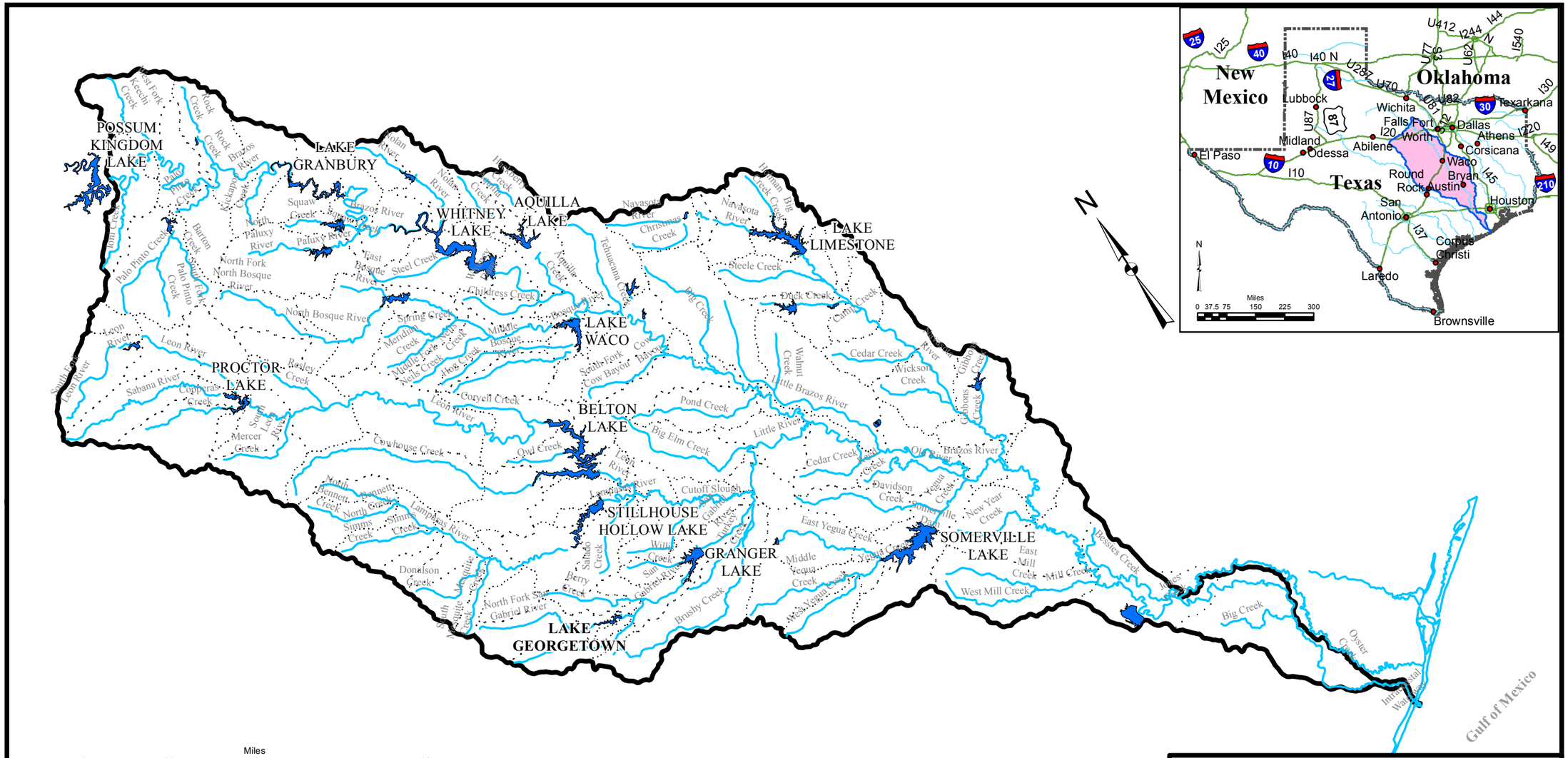
U.S. ARMY ENGINEER DISTRICT, FORT WORTH

January 2017

PLATE 2 - 1a

CORPS OF ENGINEERS

U.S. ARMY



BRAZOS RIVER BASIN, TEXAS

LAKE GEORGETOWN AND NORTH SAN GABRIEL DAM

NORTH SAN GABRIEL RIVER, TEXAS

WATERSHED MAP MID- AND LOWER-BRAZOS RIVER BASIN

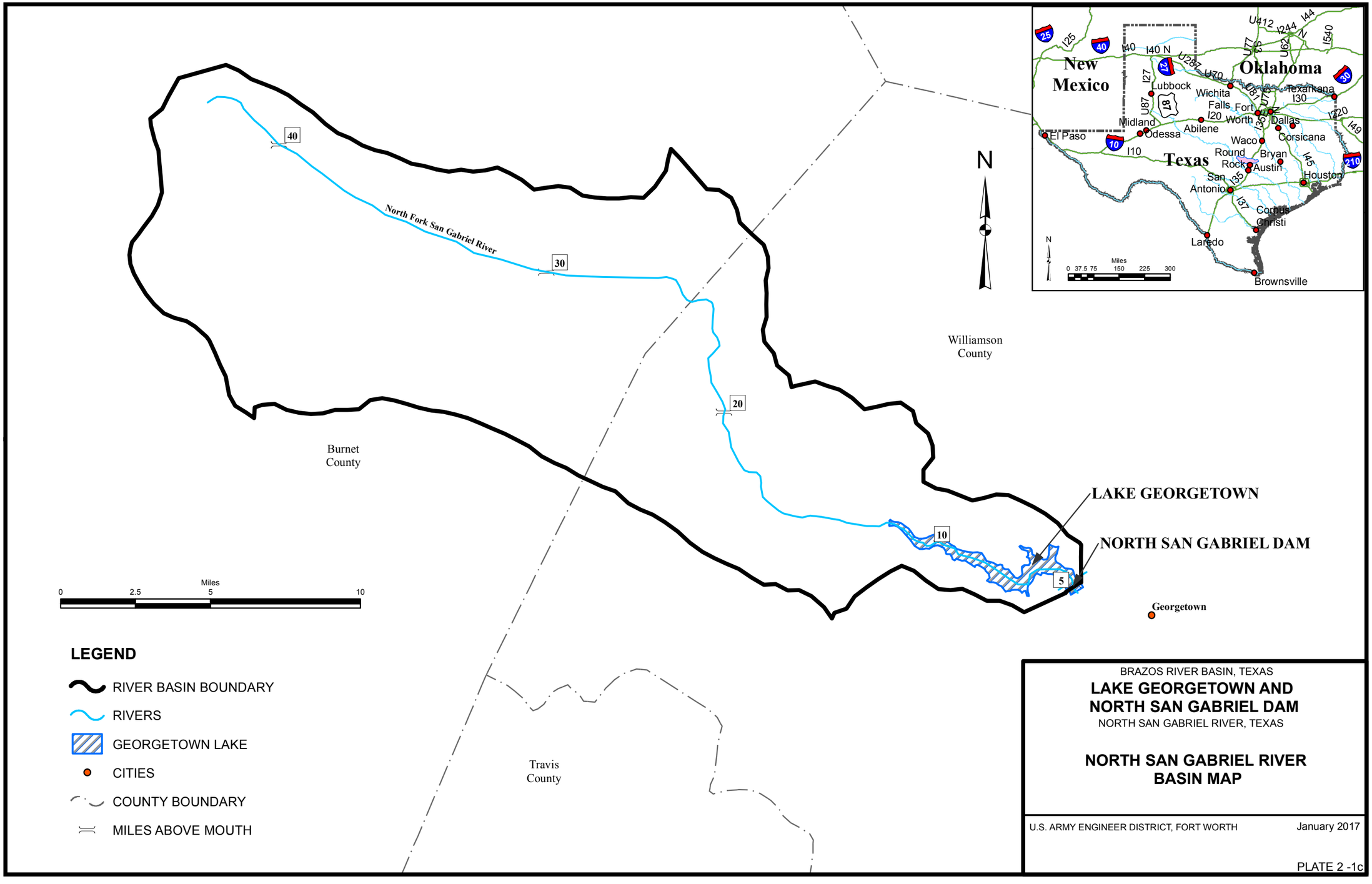
U.S. ARMY ENGINEER DISTRICT, FORT WORTH

January 2017

PLATE 2 - 1b

CORPS OF ENGINEERS

U.S. ARMY



BRAZOS RIVER BASIN, TEXAS

LAKE GEORGETOWN AND NORTH SAN GABRIEL DAM

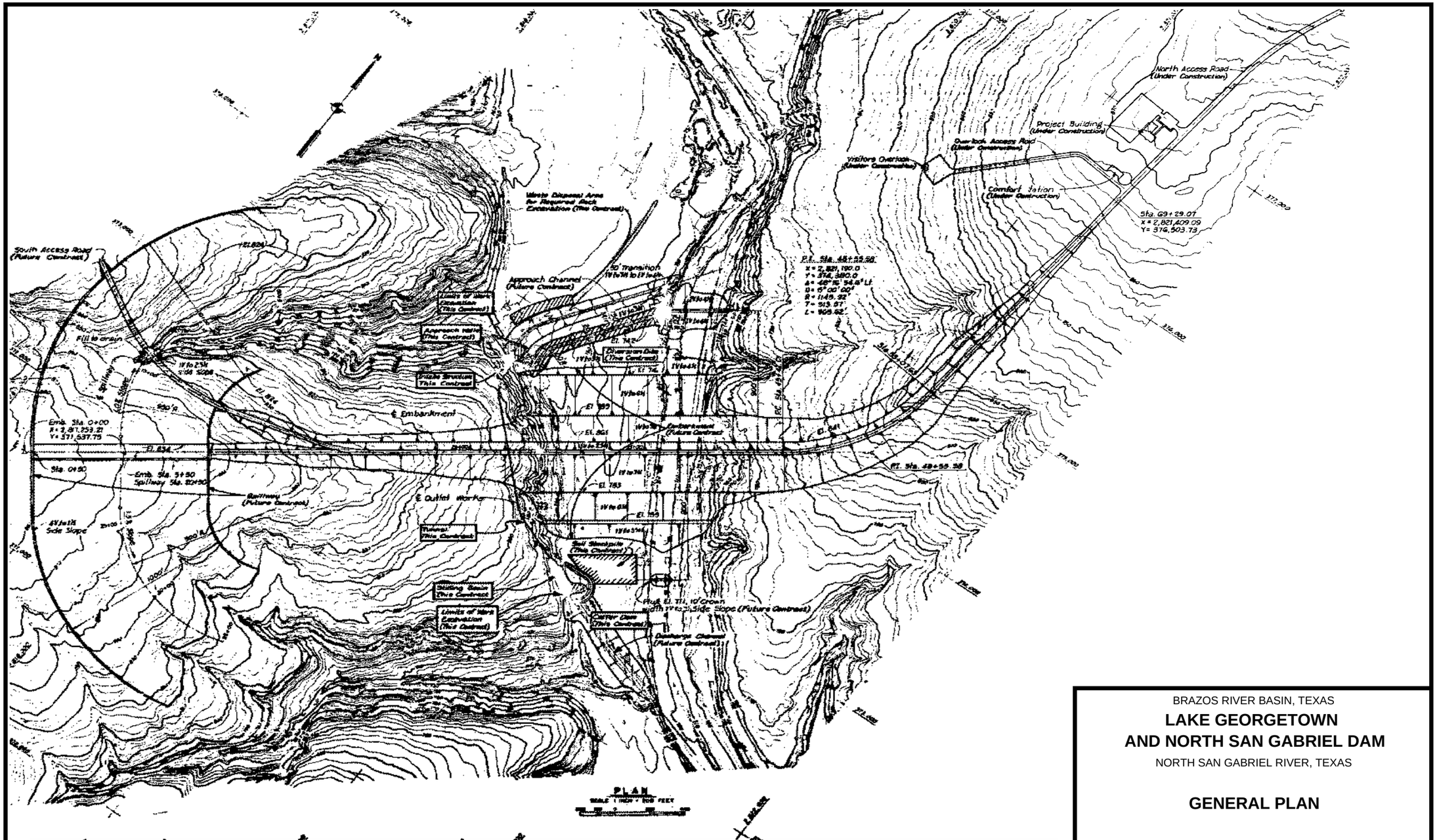
NORTH SAN GABRIEL RIVER, TEXAS

NORTH SAN GABRIEL RIVER BASIN MAP

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

January 2017

PLATE 2 -1c



ALL ELEVATIONS REFERRED TO ON THIS PLATE, UNLESS NOTED OTHERWISE, ARE IN FEET, NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD29).
THE DATUM CONVERSION FROM NGVD29 TO NAVD88 IS: NGVD29 + 0.3 FEET = NAVD88 FOR LAKE GEORGETOWN AND NORTH SAN GABRIEL DAM.

BRAZOS RIVER BASIN, TEXAS

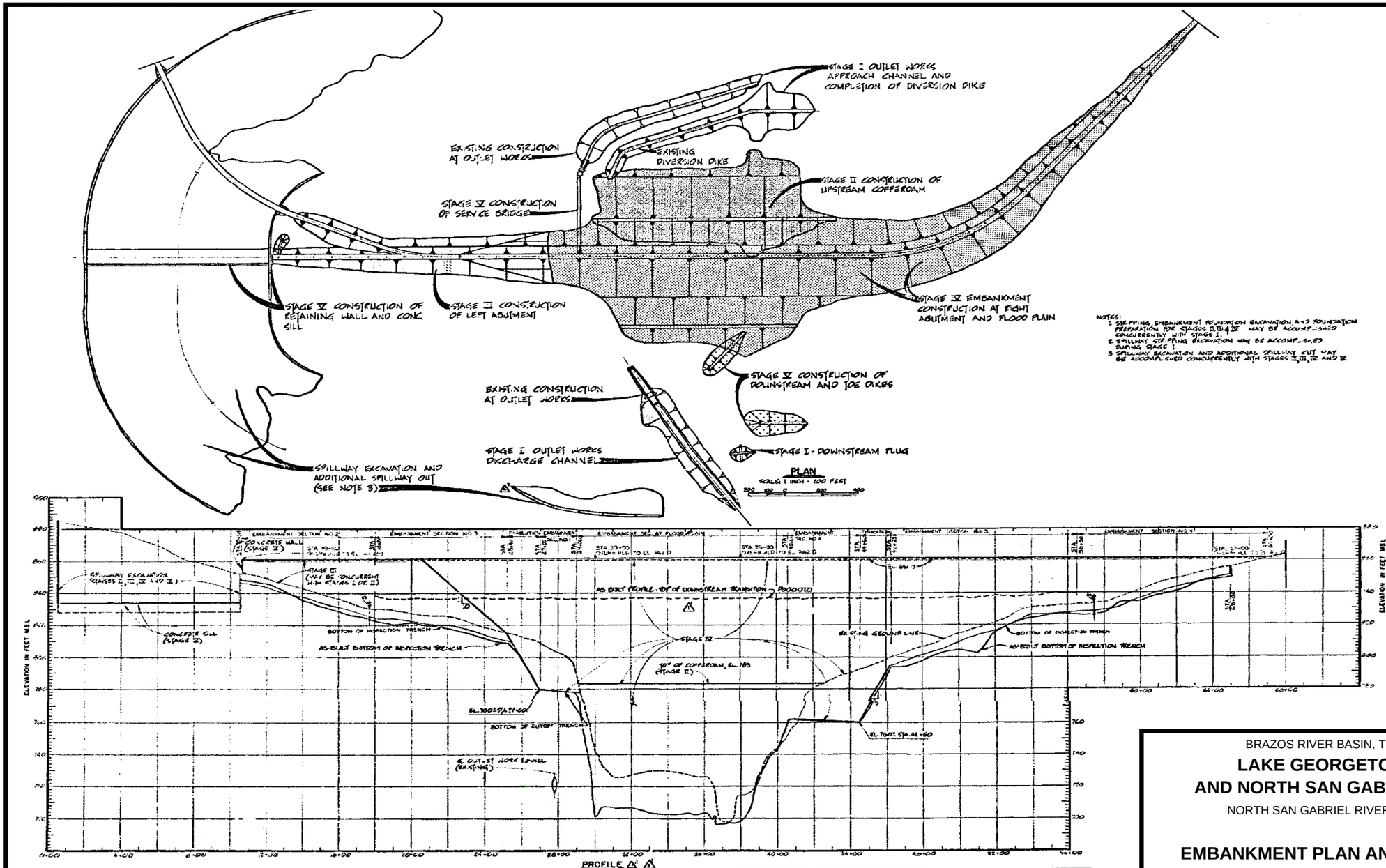
LAKE GEORGETOWN AND NORTH SAN GABRIEL DAM

NORTH SAN GABRIEL RIVER, TEXAS

GENERAL PLAN

U.S. ARMY ENGINEER DISTRICT, FORT WORTH — January 2017

PLATE 2 - 2



ALL ELEVATIONS REFERRED TO ON THIS PLATE, UNLESS NOTED OTHERWISE, ARE IN FEET, NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD29). THE DATUM CONVERSION FROM NGVD29 TO NAVD88 IS: NGVD29 + 0.3 FEET = NAVD88 FOR LAKE GEORGETOWN AND NORTH SAN GABRIEL DAM.

BRAZOS RIVER BASIN, TEXAS

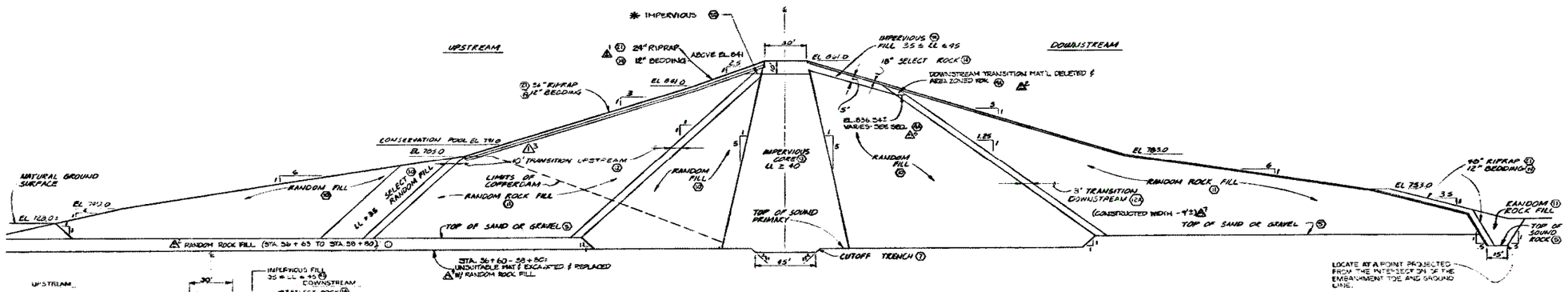
LAKE GEORGETOWN AND NORTH SAN GABRIEL DAM

NORTH SAN GABRIEL RIVER, TEXAS

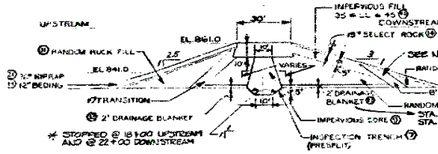
EMBANKMENT PLAN AND PROFILE

U.S. ARMY ENGINEER DISTRICT, FORT WORTH — January 2017

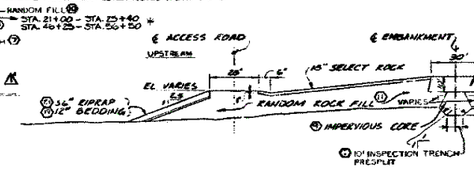
PLATE 2 - 3



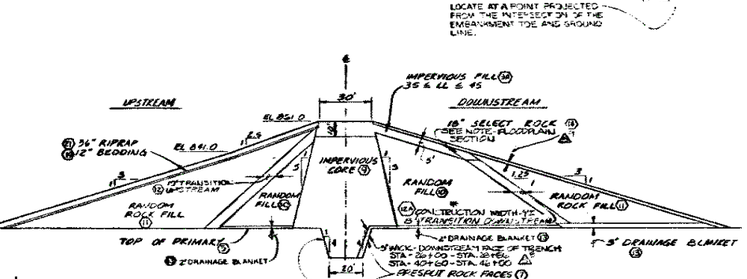
TYPICAL EMBANKMENT SECTION AT FLOOD PLAIN



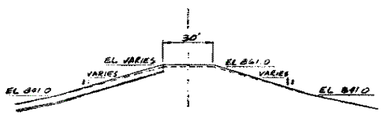
TYPICAL EMBANKMENT SECTION
SECTION NO. 3
STA 18+00 TO STA 25+40 AND
STA 46+25 TO STA 56+50



TYPICAL EMBANKMENT SECTION
SECTION NO. 2
STA 10+50 TO STA. 18+60



TYPICAL EMBANKMENT SECTION
SECTION NO.1
STA. 27+00 TO STA. 29+00 AND
STA. 40+60 TO STA. 44+60

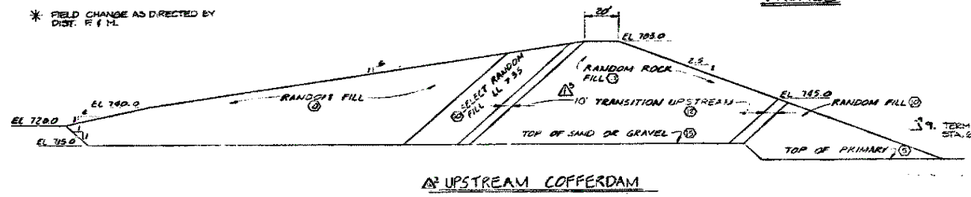


TYPICAL SECTION
(EMBANKMENT OVERBUILD)
NOT TO SCALE

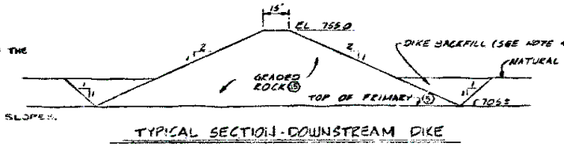
NOTES:
1. THE EMBANKMENT SECTION SHALL BE OVERBUILT FOR SETTLEMENT ACCORDING TO THE FOLLOWING STATIONS AND ELEVATIONS, SEE SEQ. FOR EMBANKMENT PROFILE.

STATIONS	ELEVATION
10+25	861.30
30+00	866.0
38+22	866.0
67+50	861.0

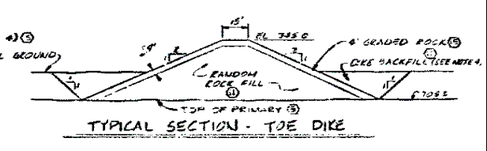
2. EMBANKMENT OVERBUILD SHALL BE LIMITED TO THE CROWN AND THE UPPER SLOPES.



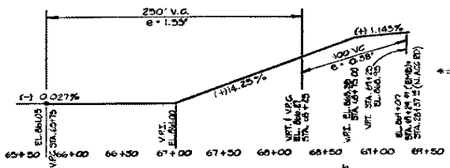
UPSTREAM COFFERDAM



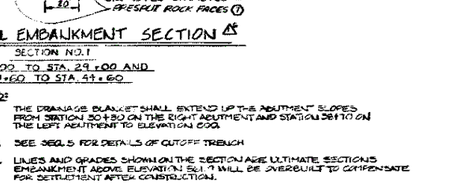
TYPICAL SECTION - DOWNSTREAM DIKE



TYPICAL SECTION - TOE DIKE



PROFILE



NOTES:
1. THE DRAINAGE BLANKET SHALL EXTEND UP THE ABUTMENT SLOPES FROM STATION 30+30 ON THE RIGHT ABUTMENT AND STATION 38+70 ON THE LEFT ABUTMENT TO ELEVATION 890.
2. SEE SEQ. 5 FOR DETAILS OF CUTOFF TRENCH
3. LINES AND GRADES SHOWN ON THE SECTION ARE ULTIMATE SECTIONS EMBANKMENT ABOVE ELEVATION 861.7 WILL BE OVERBUILT TO COMPENSATE FOR SETTLEMENT AFTER CONSTRUCTION.
4. DIKE BACKFILL SHALL CONSIST OF OVERBURDEN EXCAVATED FOR DIKES. BACKFILL SHALL BE IN PLACE BEFORE THE DIKE FILL ELEVATION 5 FEET ABOVE NATURAL GROUND ELEVATION.
5. SEE SEQ. 11 FOR DRAINAGE BLANKET DETAILS.
6. SEE SEQ. 42 FOR DETAILS OF RIPRAP BEDDING AND SELECT ROCK TO BE PLACED AT THE CROWN OF THE EMBANKMENT.
7. SEE SEQ. 4A FOR LOCATIONS OF SECTIONS
8. SECTION NO. 3 TRANSITIONS [illegible] FROM STA. 15+50 TO STA. 21+00 AND FROM STA. 49+25 TO STA. 44+60

4			REVISED TO REFLECT AS-BUILT CHANGES
3	113371	CWO0009	JUL 79	ADDED SECTION NOTES
2	106740	WCF00012	DEC 78	ADDED PROFILE DETAILS
1	105012	WCF00010	DEC 78	ADDED NOTE FLOODPLAIN SECTION
0	104113	CWO0003	FEB 80	REVISED EMBANKMENT SECTION & ADDED NOTES
		SWF0004	8 MAY 80	REVISED DRAWING NO
		SWF0004	8 MAY 80	REVISED SECTIONS NOTES

BRAZOS RIVER BASIN, TEXAS

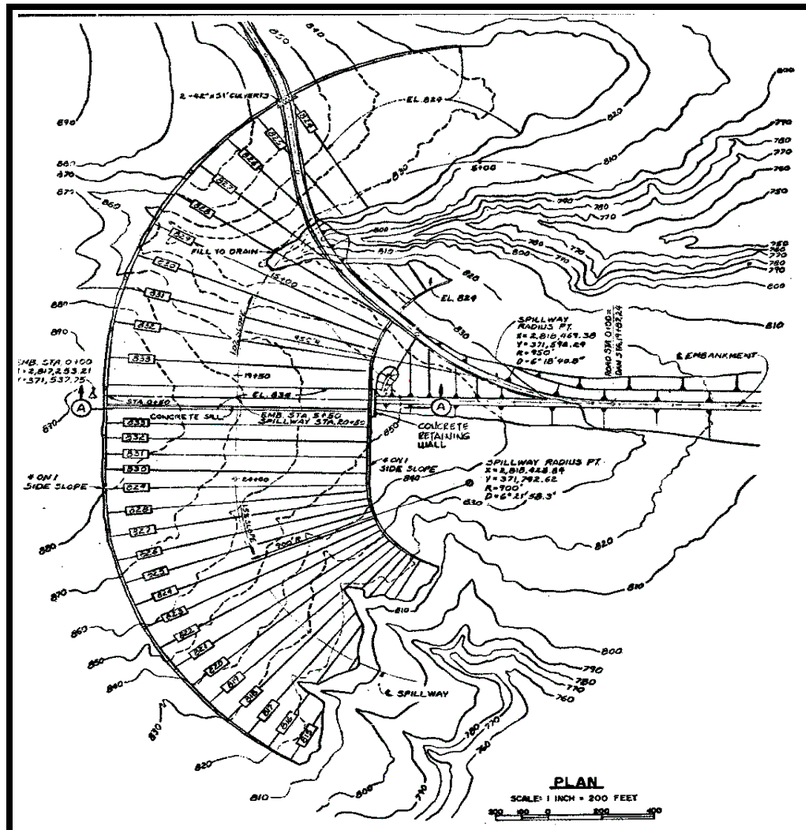
LAKE GEORGETOWN AND NORTH SAN GABRIEL DAM

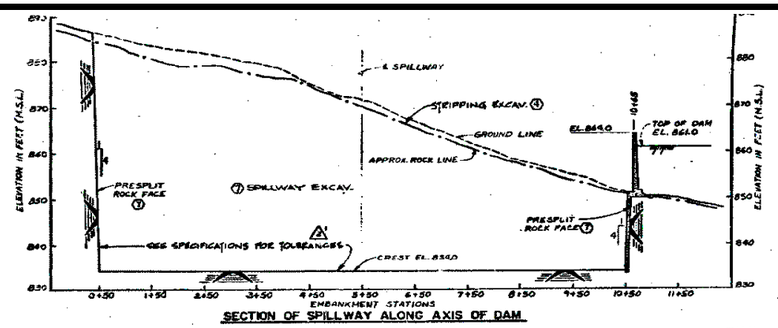
NORTH SAN GABRIEL RIVER, TEXAS

EMBANKMENT SECTIONS

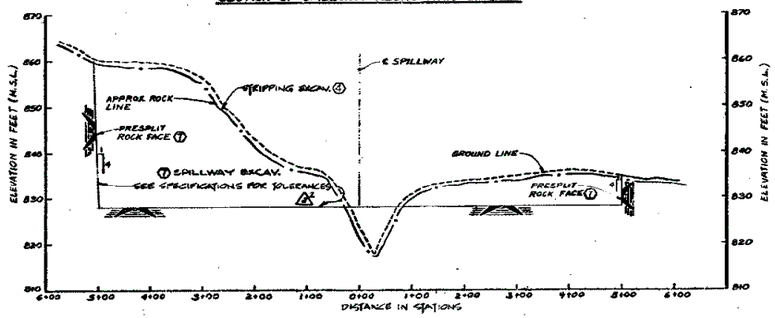
ALL ELEVATIONS REFERRED TO ON THIS PLATE, UNLESS NOTED OTHERWISE, ARE IN FEET, NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD29). THE DATUM CONVERSION FROM NGVD29 TO NAVD88 IS: NGVD29 + 0.3 FEET = NAVD88 FOR LAKE GEORGETOWN AND NORTH SAN GABRIEL DAM.

U.S. ARMY ENGINEER DISTRICT, FORT WORTH January 2017

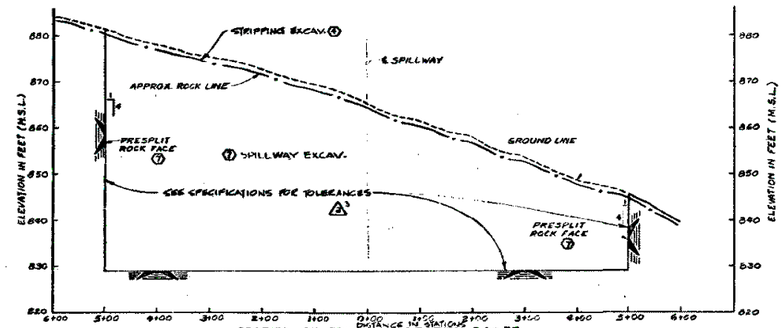




SECTION OF SPILLWAY ALONG AXIS OF DAM

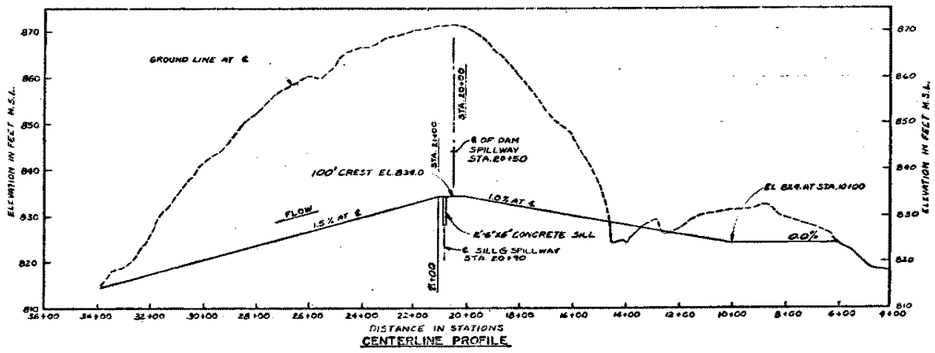


SECTION OF SPILLWAY - STATION 14+00

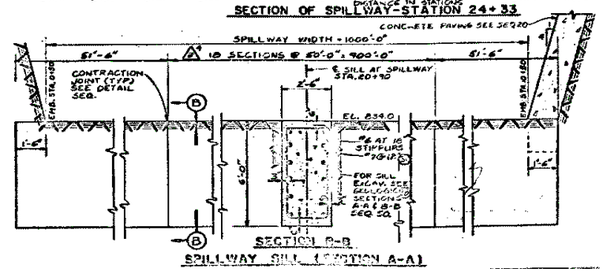


SECTION OF SPILLWAY - STATION 24+33

NOTE:
FOR GENERAL NOTES SEE SEQ 20



CENTERLINE PROFILE



ALL ELEVATIONS REFERRED TO ON THIS PLATE, UNLESS NOTED OTHERWISE, ARE IN FEET, NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD29). THE DATUM CONVERSION FROM NGVD29 TO NAVD88 IS: NGVD29 + 0.3 FEET = NAVD88 FOR LAKE GEORGETOWN AND NORTH SAN GABRIEL DAM.

BRAZOS RIVER BASIN, TEXAS

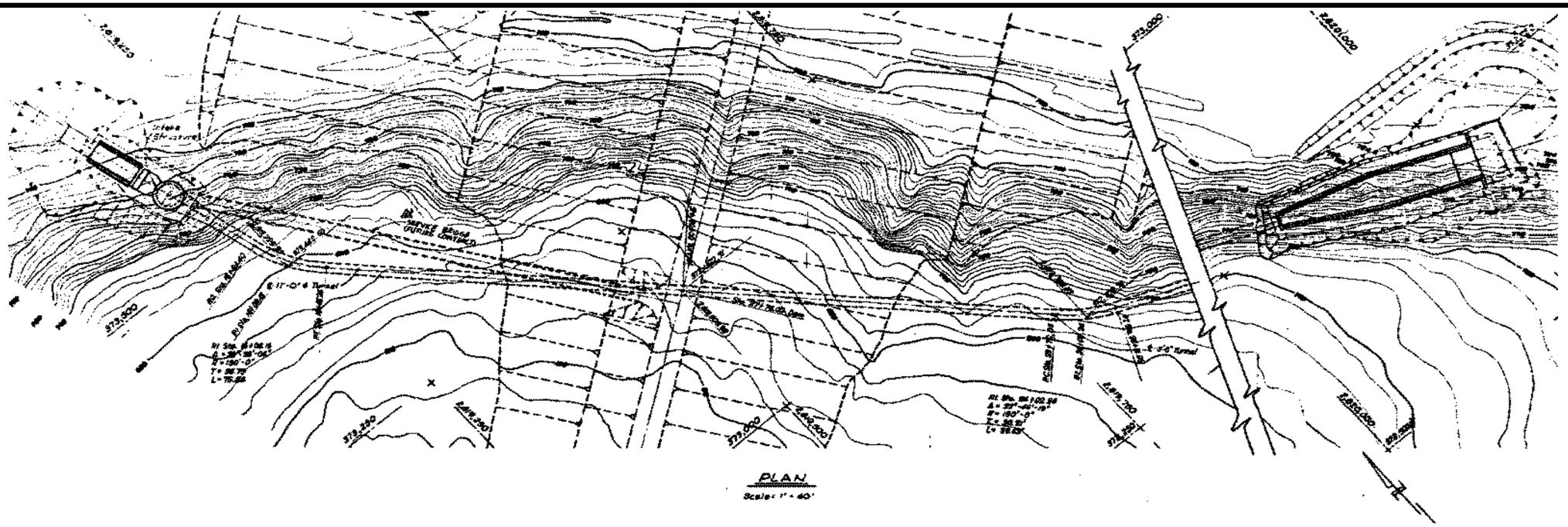
LAKE GEORGETOWN AND NORTH SAN GABRIEL DAM

NORTH SAN GABRIEL RIVER, TEXAS

SPILLWAY

PLAN AND PROFILE

U.S. ARMY ENGINEER DISTRICT, FORT WORTH — January 2017



PLAN
Scale: 1" = 40'

℄ PROFILE
Scale: 1" = 40'

ALL ELEVATIONS REFERRED TO ON THIS PLATE, UNLESS NOTED OTHERWISE, ARE IN FEET, NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD29). THE DATUM CONVERSION FROM NGVD29 TO NAVD88 IS: NGVD29 + 0.3 FEET = NAVD88 FOR LAKE GEORGETOWN AND NORTH SAN GABRIEL DAM.

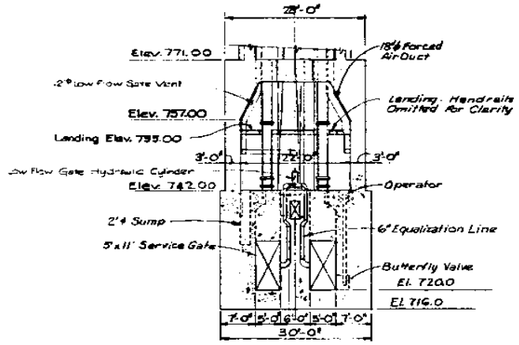
BRAZOS RIVER BASIN, TEXAS

LAKE GEORGETOWN AND NORTH SAN GABRIEL DAM

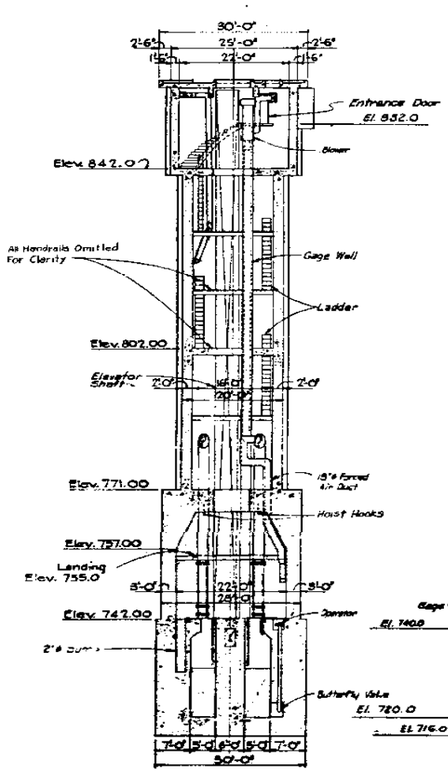
NORTH SAN GABRIEL RIVER, TEXAS

OUTLET WORKS PLAN AND PROFILE

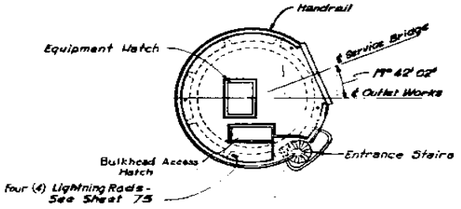
U.S. ARMY ENGINEER DISTRICT, FORT WORTH — January 2017



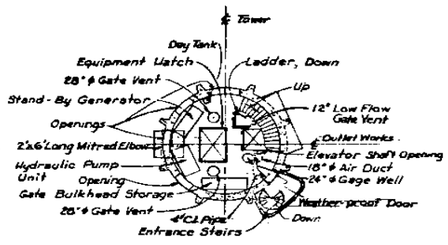
VIEW G-G



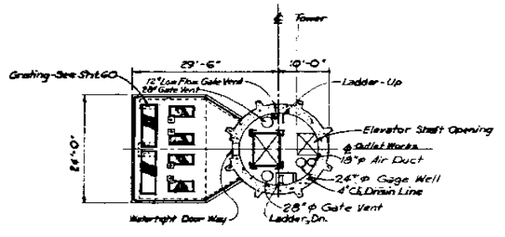
TRANSVERSE SECTION



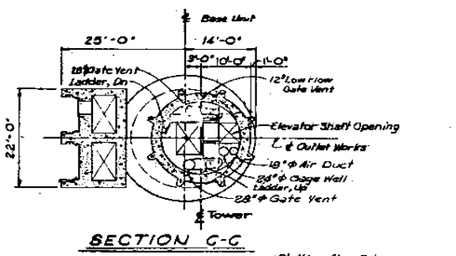
PLAN - SERVICE DECK



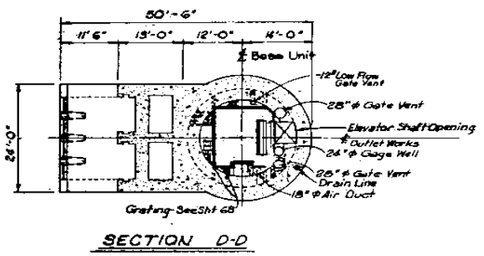
SECTION A-A
For Details See Sheet 22



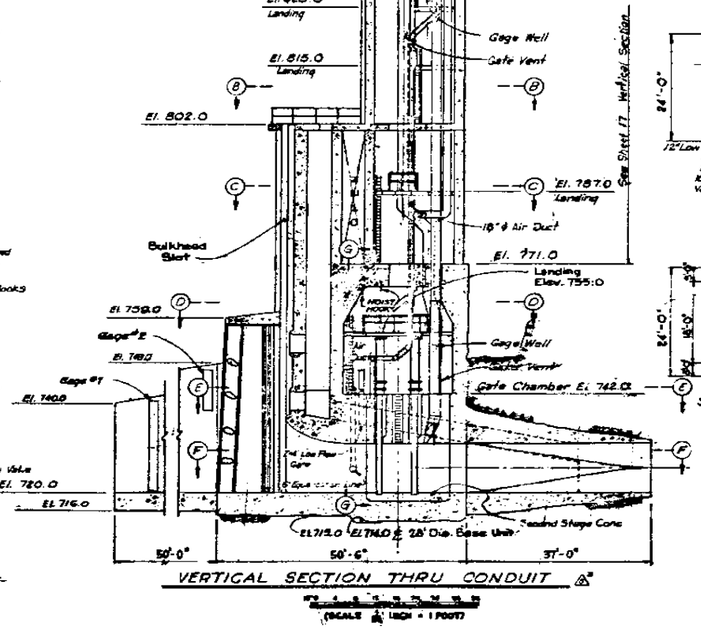
SECTION B-B
For Details See Sheet 9 & 17



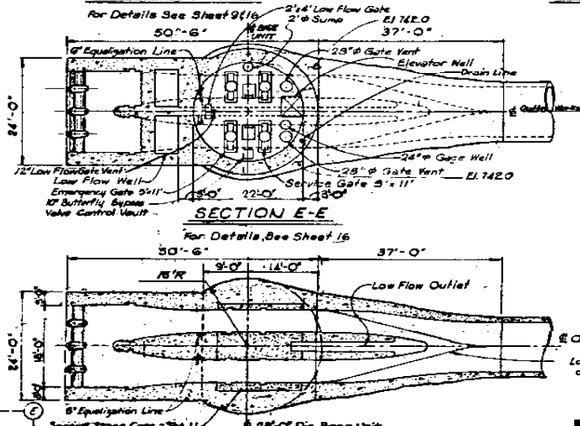
SECTION C-C
For Details See Sheet 9 & 16



SECTION D-D



VERTICAL SECTION THRU CONDUIT



SECTION E-E
For Details See Sheet 16

SECTION F-F
For Details See Sheet 14

NOTES:
1. For General Notes, See Sheet 6.
2. For Symbol Legend, See Sheet 5.
3. For Landing Details See Sheet 68.
4. For Hoist Hook Details See Sheet 15.

ALL ELEVATIONS REFERRED TO ON THIS PLATE, UNLESS NOTED OTHERWISE, ARE IN FEET, NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD29). THE DATUM CONVERSION FROM NGVD29 TO NAVD88 IS: NGVD29 + 0.3 FEET = NAVD88 FOR LAKE GEORGETOWN AND NORTH SAN GABRIEL DAM.

BRAZOS RIVER BASIN, TEXAS

LAKE GEORGETOWN AND NORTH SAN GABRIEL DAM

NORTH SAN GABRIEL RIVER, TEXAS

OUTLET WORKS SECTIONS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH — January 2017

PLATE 2 - 7

	PICNIC AREA	CAMPING AREA	TRAILER AREA	RESTROOMS	SHOWERS	DRINKING WATER	ELECTRIC HOOKUP	TRAILER DUMP STATION	GROUP PICNIC SHELTER	SWIMMING AREA	BOAT RAMP	HIKING TRAIL
JIM HOGG		■	■	■	■	■	■	■			■	■
CEDAR BREAKS	■	■	■	■	■	■	■	■	■	■	■	■
RUSSELL	■			■	■	■			■	■	■	■
TEJAS		■		■		■	■				■	

WHEN WINDS OF 25 M.P.H. OR MORE ARE FORECAST OR BLOWING, BOATS ARE CAUTIONED TO STAY OUT OF OPEN WATER. FORECASTS AND WEATHER INFORMATION ARE ISSUED BY U.S. WEATHER BUREAU THROUGH LOCAL RADIO STATIONS.

FOR YOUR OWN SAFETY'S SAKE, HEED THE WARNING!

www.swf-wc.usace.army.mil/georgetown/

NOTE:

FACILITIES SUCH AS PUBLIC ACCESS, PICNIC AND CAMPGROUNDS ARE FOR YOUR ENJOYMENT. USE THEM THOUGHTFULLY.

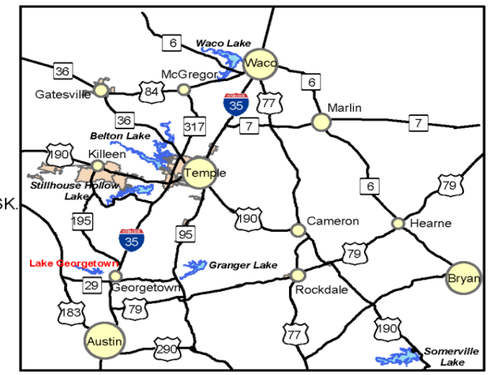
DISTURBANCE OR REMOVAL OF ANY ARCHEOLOGICAL RESOURCE IS PROHIBITED.

SWIMMING AREAS ARE UNSUPERVISED AND DO NOT HAVE LIFEGUARDS. BOATING, SKIING, SWIMMING AND FISHING WILL BE DONE AT YOUR OWN RISK.

HUNTERS MUST OBTAIN HUNTING INFORMATION AT THE LAKE HEADQUARTERS.

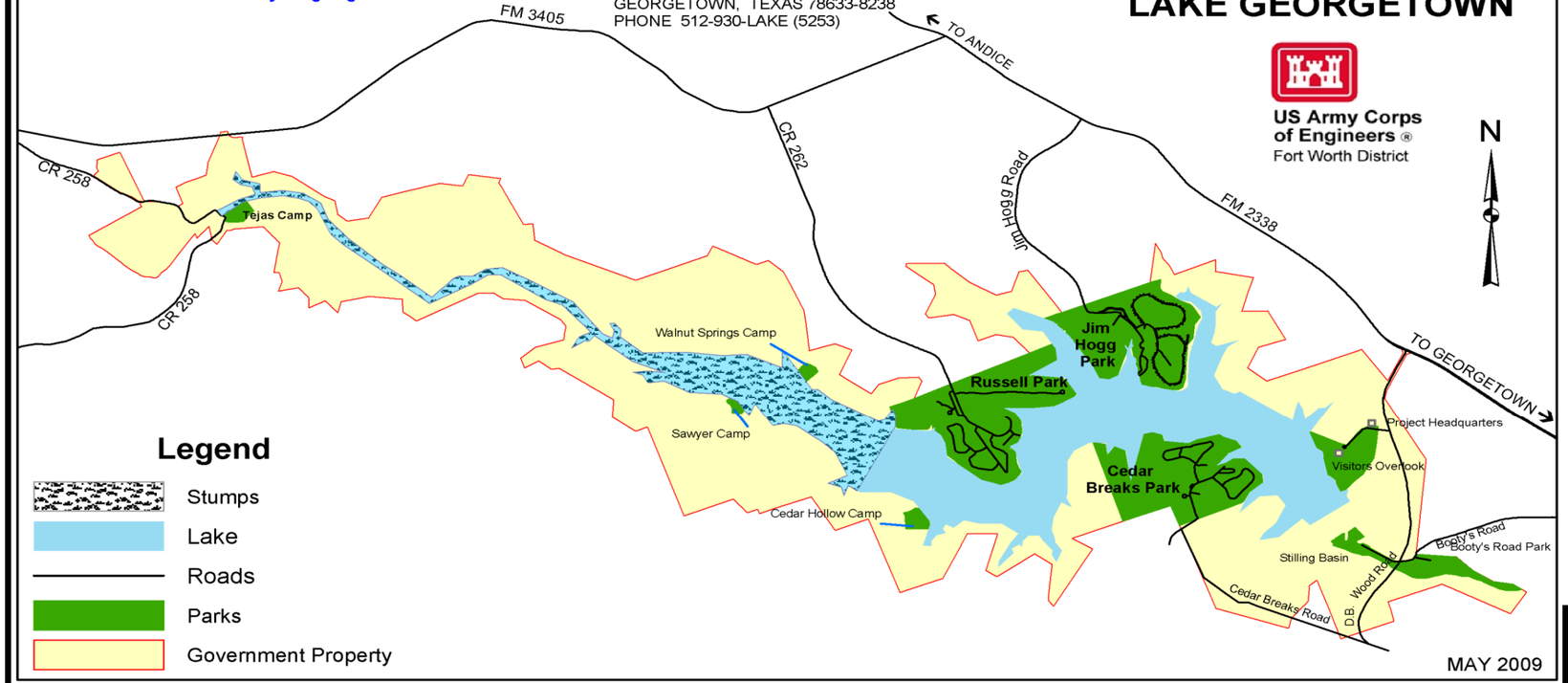
THIS MAP IS FURNISHED AS GENERAL INFORMATION ONLY AND IS NOT TO BE USED FOR LOCATING PROPERTY LINES.

GEORGETOWN LAKE OFFICE
500 LAKE OVERLOOK DRIVE
GEORGETOWN, TEXAS 78633-8238
PHONE 512-930-LAKE (5253)



LAKE GEORGETOWN

US Army Corps of Engineers ®
Fort Worth District



1. OVERLOOK PARK
2. CEDAR BREAKS PARK
3. JIM HOGG PARK
4. RUSSELL PARK
5. TEJAS CAMP

NOTE: ALL PARKS ARE OPERATED BY USACE.

BRAZOS RIVER BASIN, TEXAS

LAKE GEORGETOWN AND NORTH SAN GABRIEL DAM

NORTH SAN GABRIEL RIVER, TEXAS

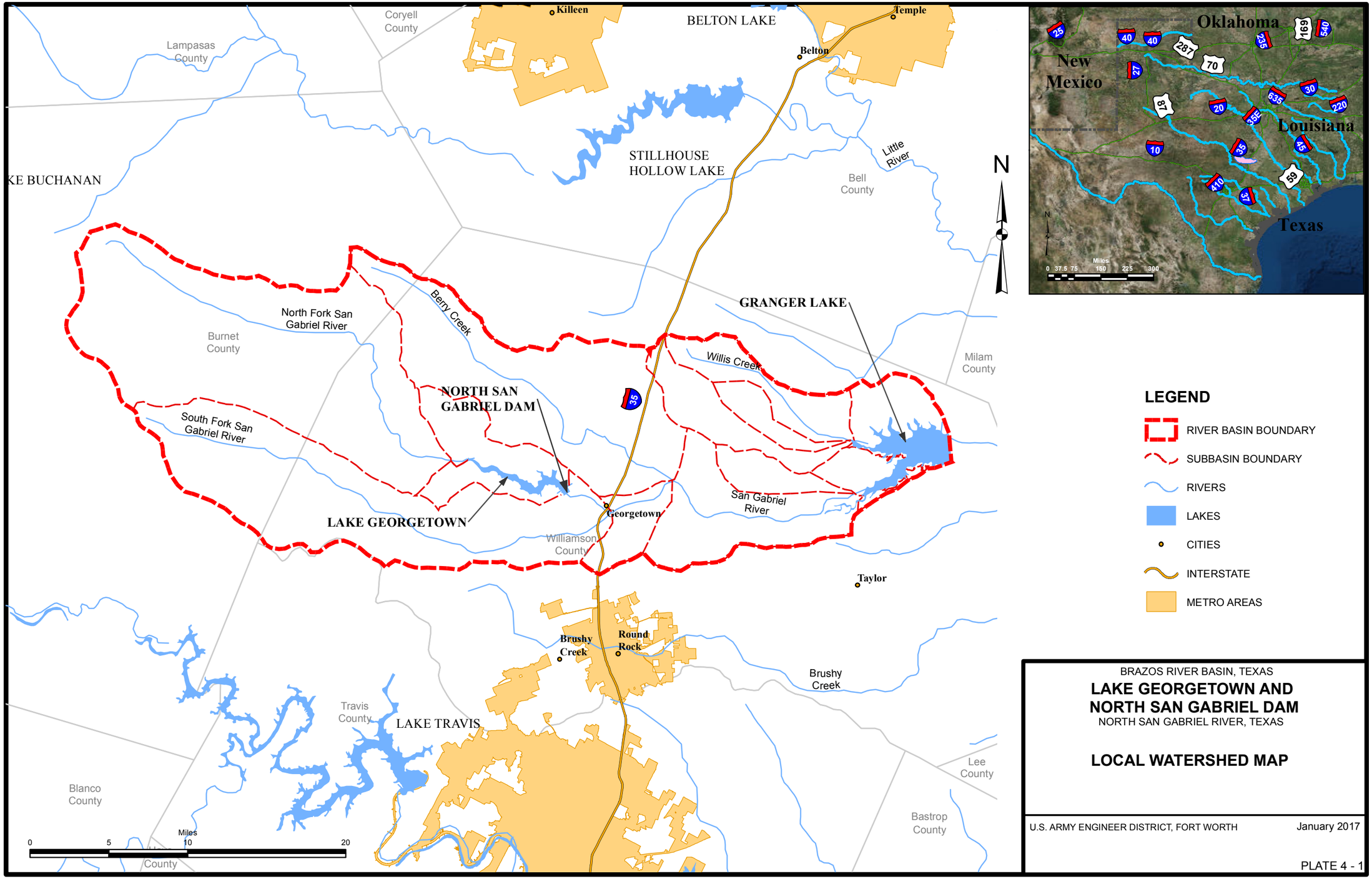
PUBLIC USE AREAS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH — January 2017

PLATE 2 - 8

CORPS OF ENGINEERS

U.S. ARMY



LEGEND

- RIVER BASIN BOUNDARY
- SUBBASIN BOUNDARY
- RIVERS
- LAKES
- CITIES
- INTERSTATE
- METRO AREAS

BRAZOS RIVER BASIN, TEXAS

LAKE GEORGETOWN AND NORTH SAN GABRIEL DAM

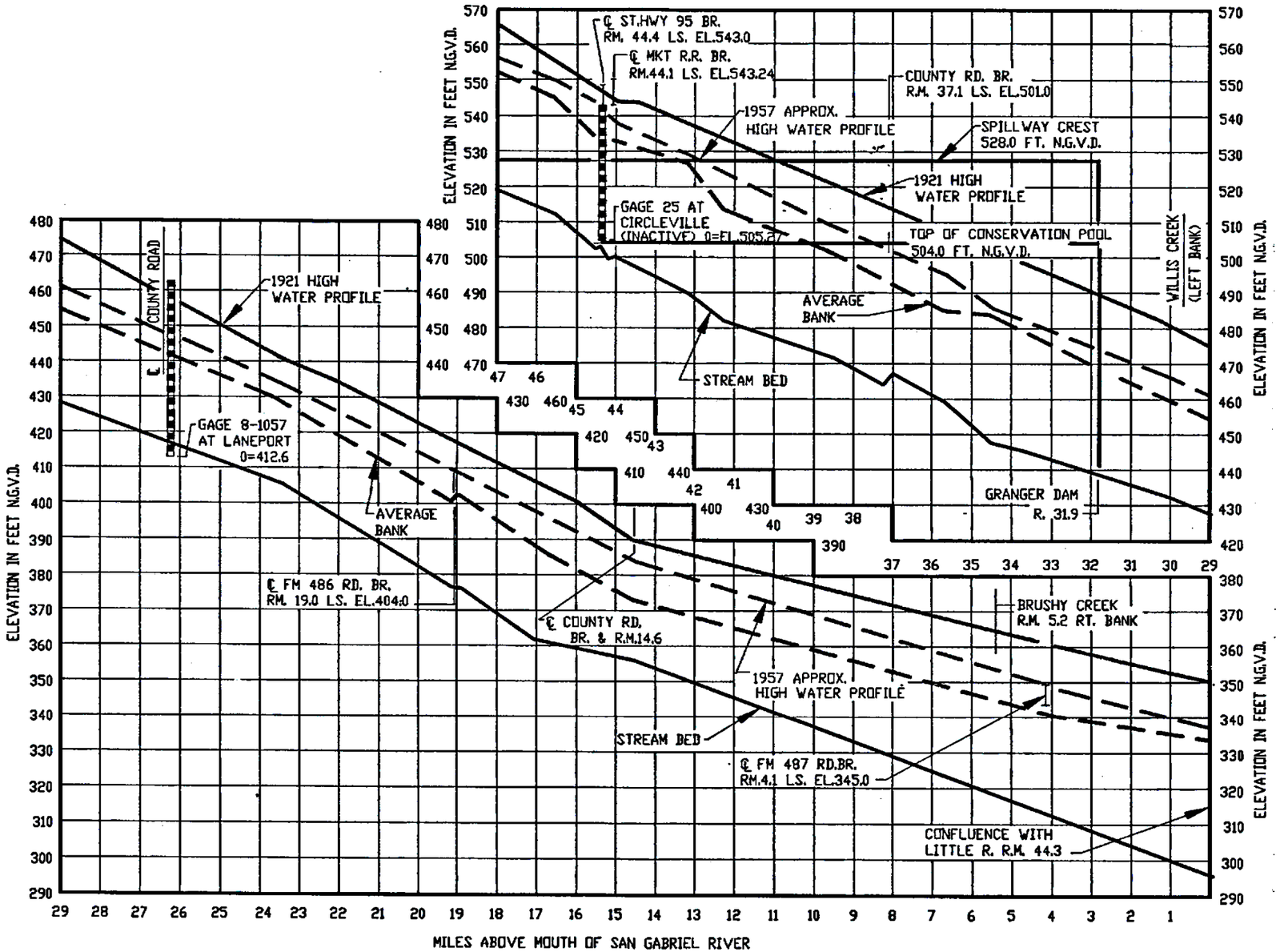
NORTH SAN GABRIEL RIVER, TEXAS

LOCAL WATERSHED MAP

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

January 2017

PLATE 4 - 1



NOTE: REFERENCE "BRAZOS RIVER BASIN DM NO. 1 ON LANEPORT, NORTH FORK, AND SOUTH FORK RESERVOIR, JULY 1965".

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BRAZOS RIVER BASIN, TEXAS

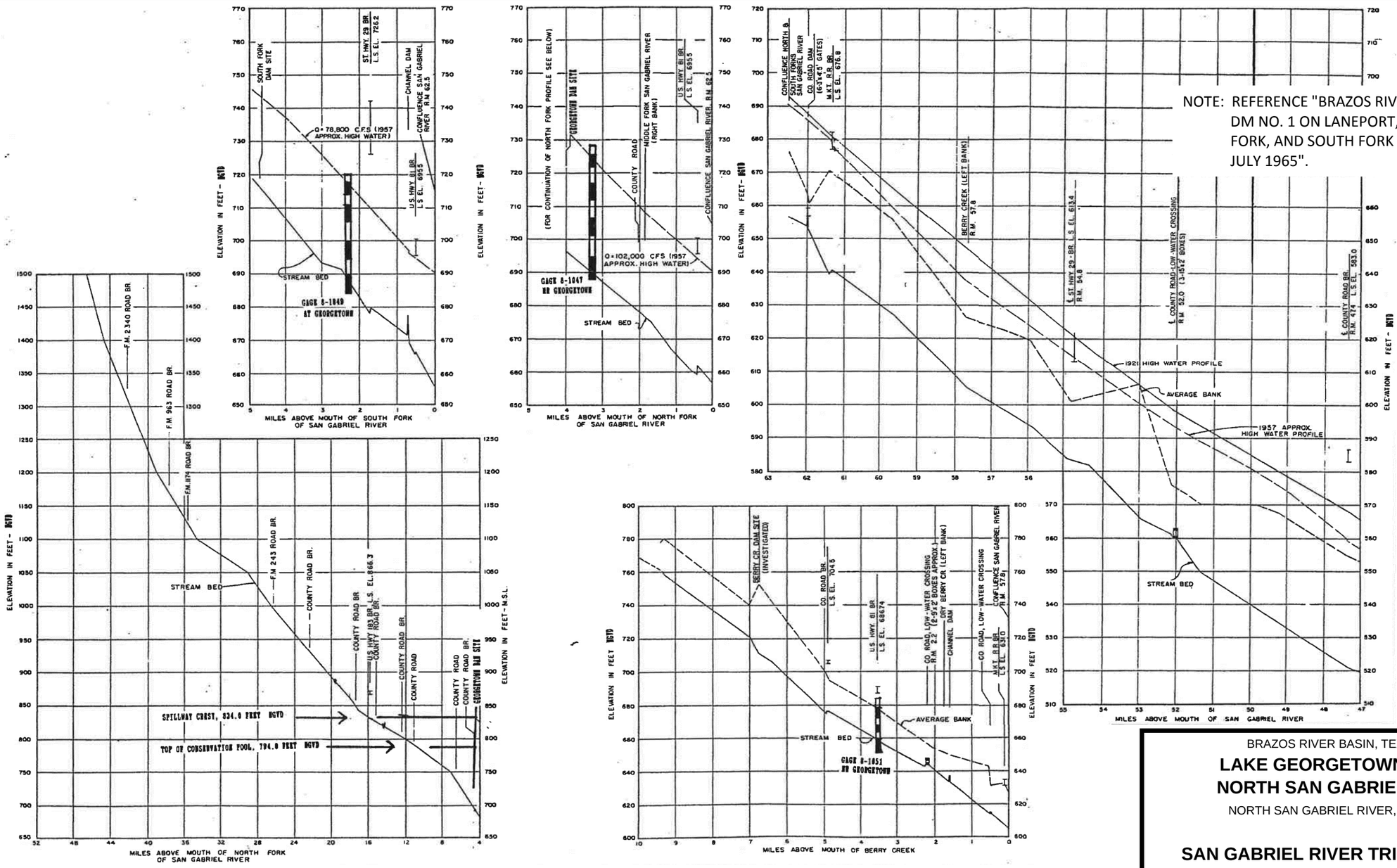
LAKE GEORGETOWN AND NORTH SAN GABRIEL DAM

NORTH SAN GABRIEL RIVER, TEXAS

SAN GABRIEL RIVER NATURAL PROFILES

U.S. ARMY ENGINEER DISTRICT, FORT WORTH January 2017

PLATE 4 - 2



NOTE: REFERENCE "BRAZOS RIVER BASIN DM NO. 1 ON LANEPORT, NORTH FORK, AND SOUTH FORK RESERVOIR, JULY 1965".

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BRAZOS RIVER BASIN, TEXAS

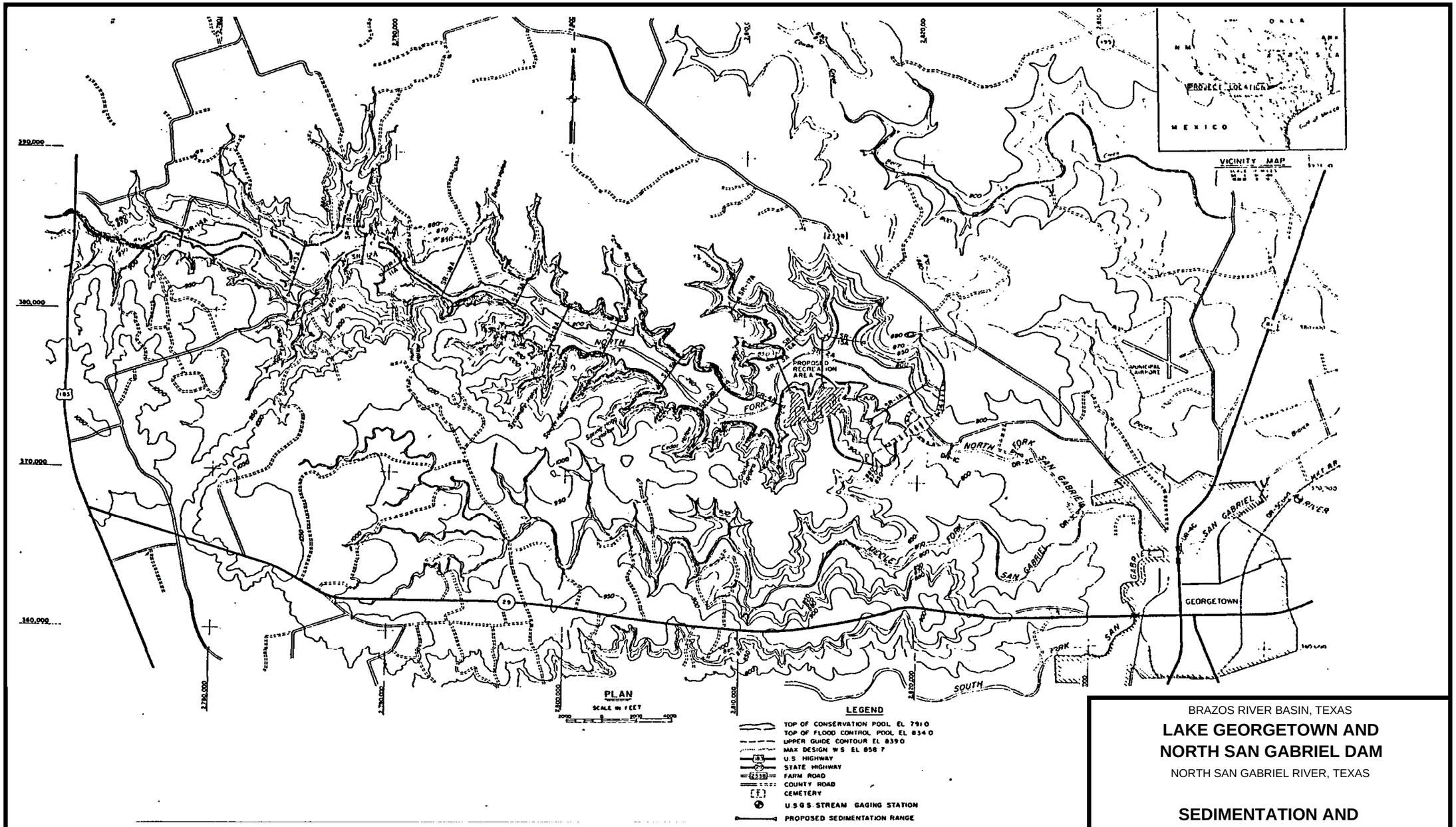
LAKE GEORGETOWN AND NORTH SAN GABRIEL DAM

NORTH SAN GABRIEL RIVER, TEXAS

SAN GABRIEL RIVER TRIBUTARIES NATURAL PROFILES

U.S. ARMY ENGINEER DISTRICT, FORT WORTH — January 2017

PLATE 4 - 3



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BRAZOS RIVER BASIN, TEXAS

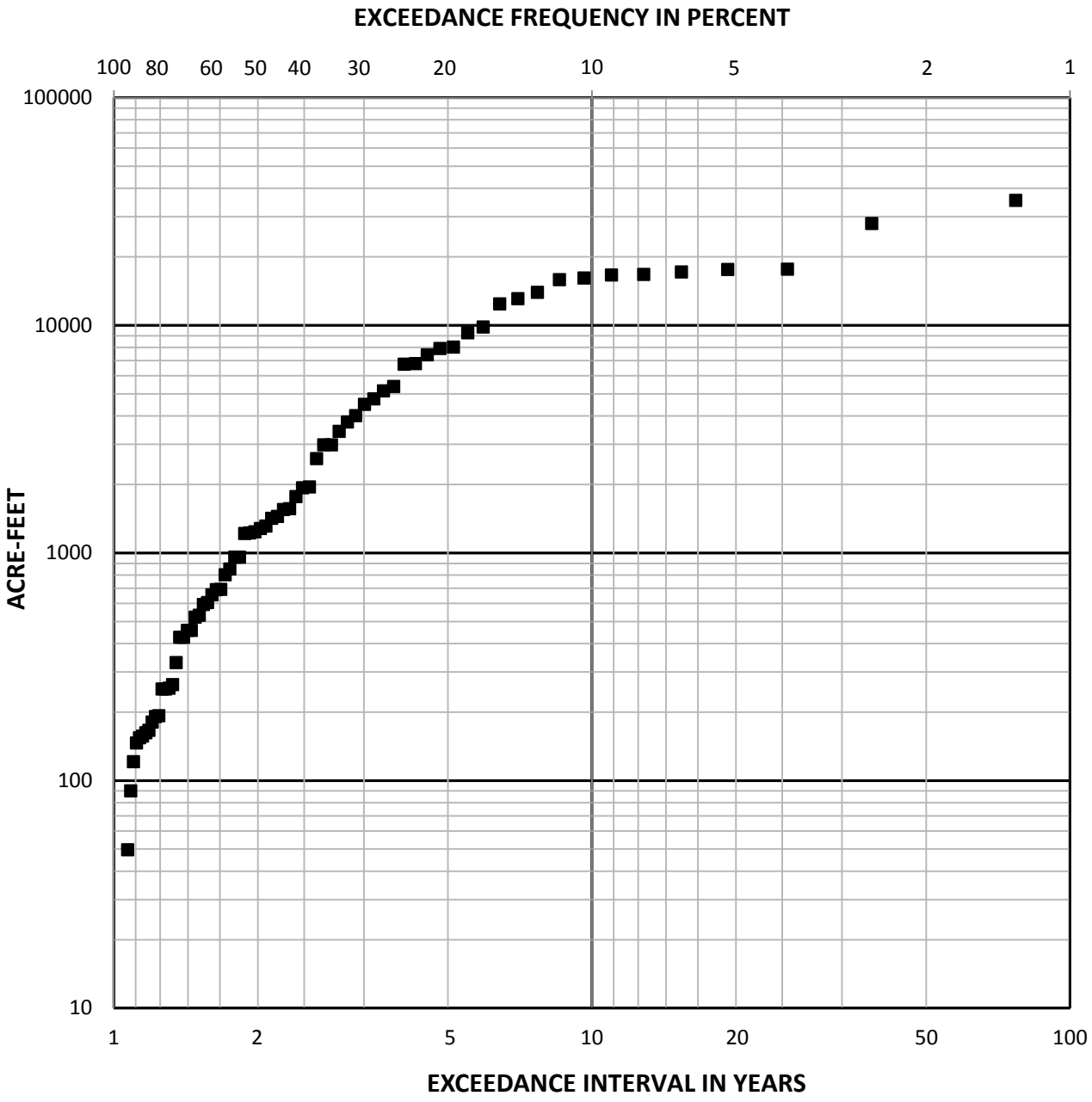
LAKE GEORGETOWN AND NORTH SAN GABRIEL DAM

NORTH SAN GABRIEL RIVER, TEXAS

SEDIMENTATION AND DEGRADATION RANGES

U.S. ARMY ENGINEER DISTRICT, FORT WORTH — January 2017

PLATE 4 - 4



BRAZOS RIVER BASIN, TEXAS

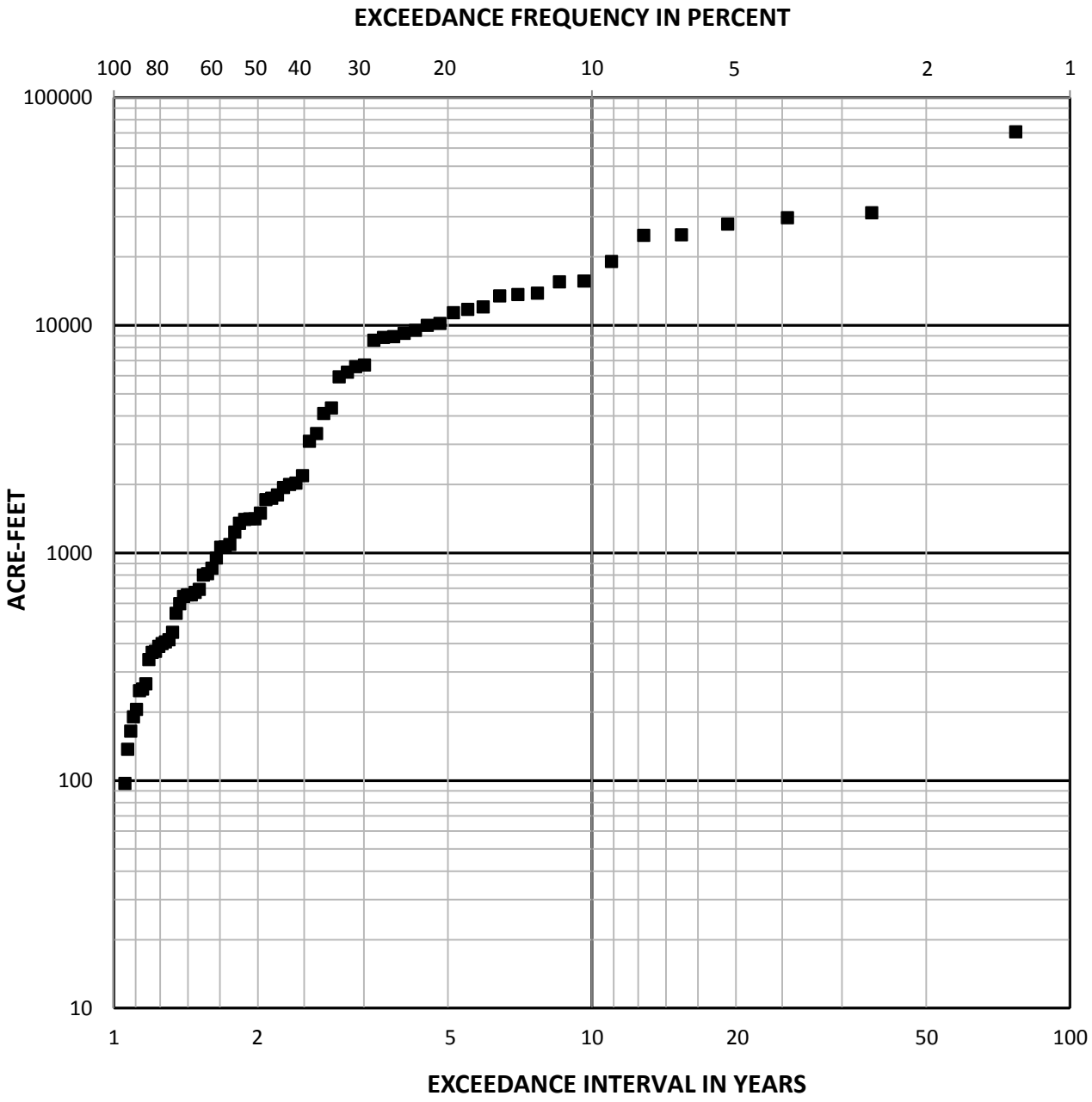
LAKE GEORGETOWN AND NORTH SAN GABRIEL DAM

NORTH SAN GABRIEL RIVER, TEXAS

JANUARY INFLOW FREQUENCY 1924-2015

U.S. ARMY ENGINEER DISTRICT, FORT WORTH January 2017

PLATE 4 - 5



BRAZOS RIVER BASIN, TEXAS

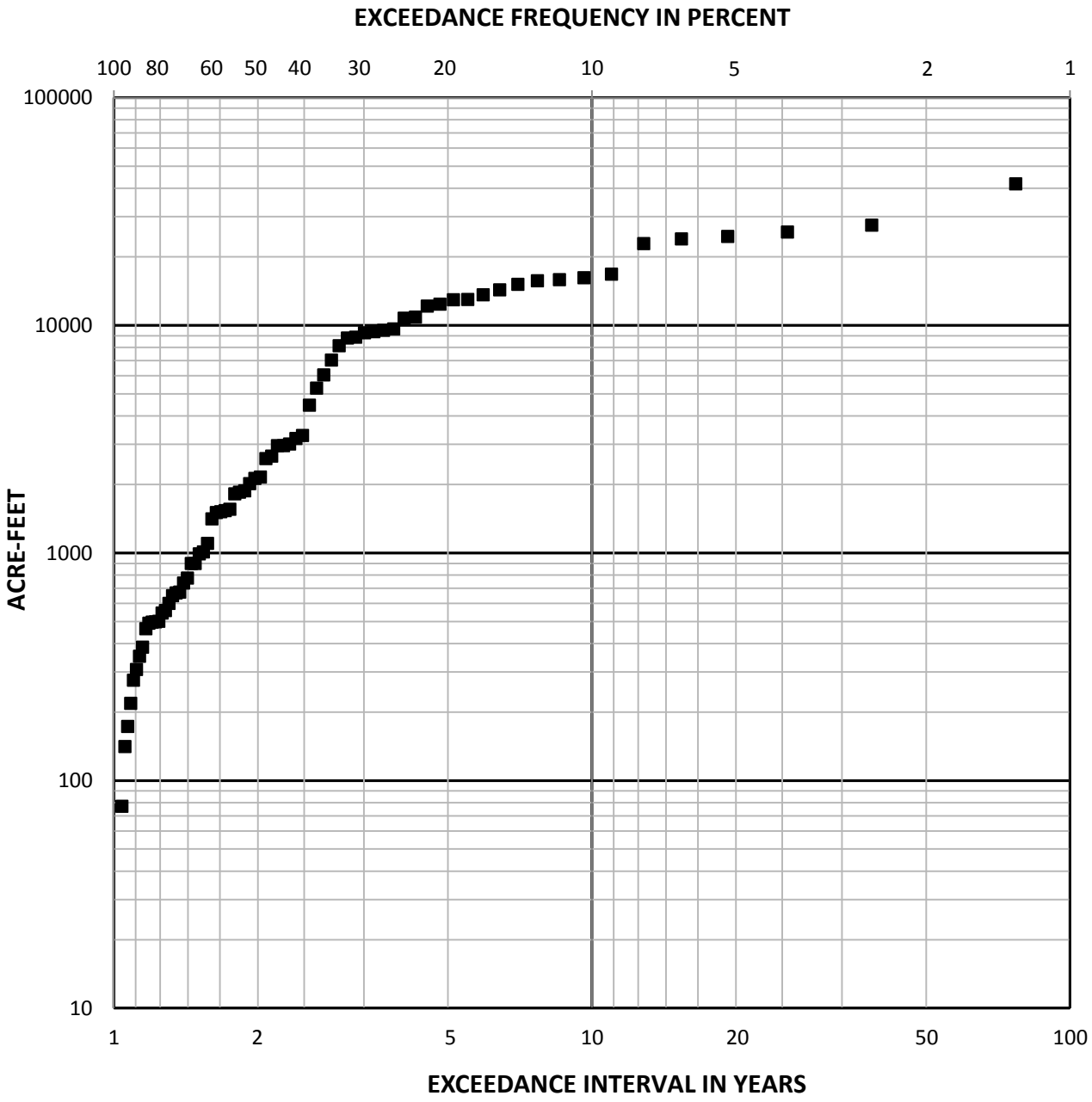
LAKE GEORGETOWN AND NORTH SAN GABRIEL DAM

NORTH SAN GABRIEL RIVER, TEXAS

FEBRUARY INFLOW FREQUENCY 1924-2015

U.S. ARMY ENGINEER DISTRICT, FORT WORTH January 2017

PLATE 4 - 6



BRAZOS RIVER BASIN, TEXAS

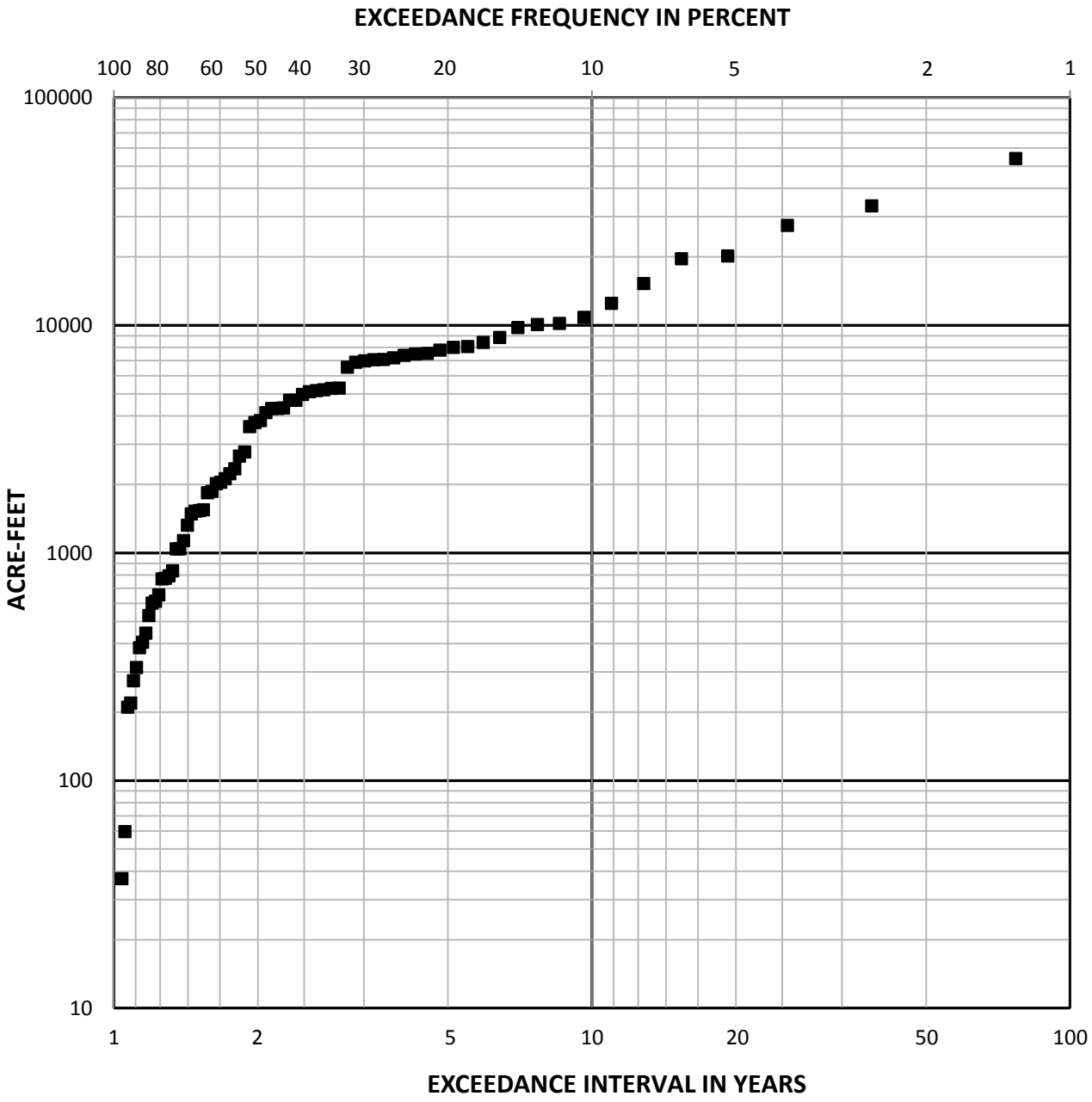
LAKE GEORGETOWN AND NORTH SAN GABRIEL DAM

NORTH SAN GABRIEL RIVER, TEXAS

MARCH INFLOW FREQUENCY 1924-2015

U.S. ARMY ENGINEER DISTRICT, FORT WORTH January 2017

PLATE 4 - 7



BRAZOS RIVER BASIN, TEXAS

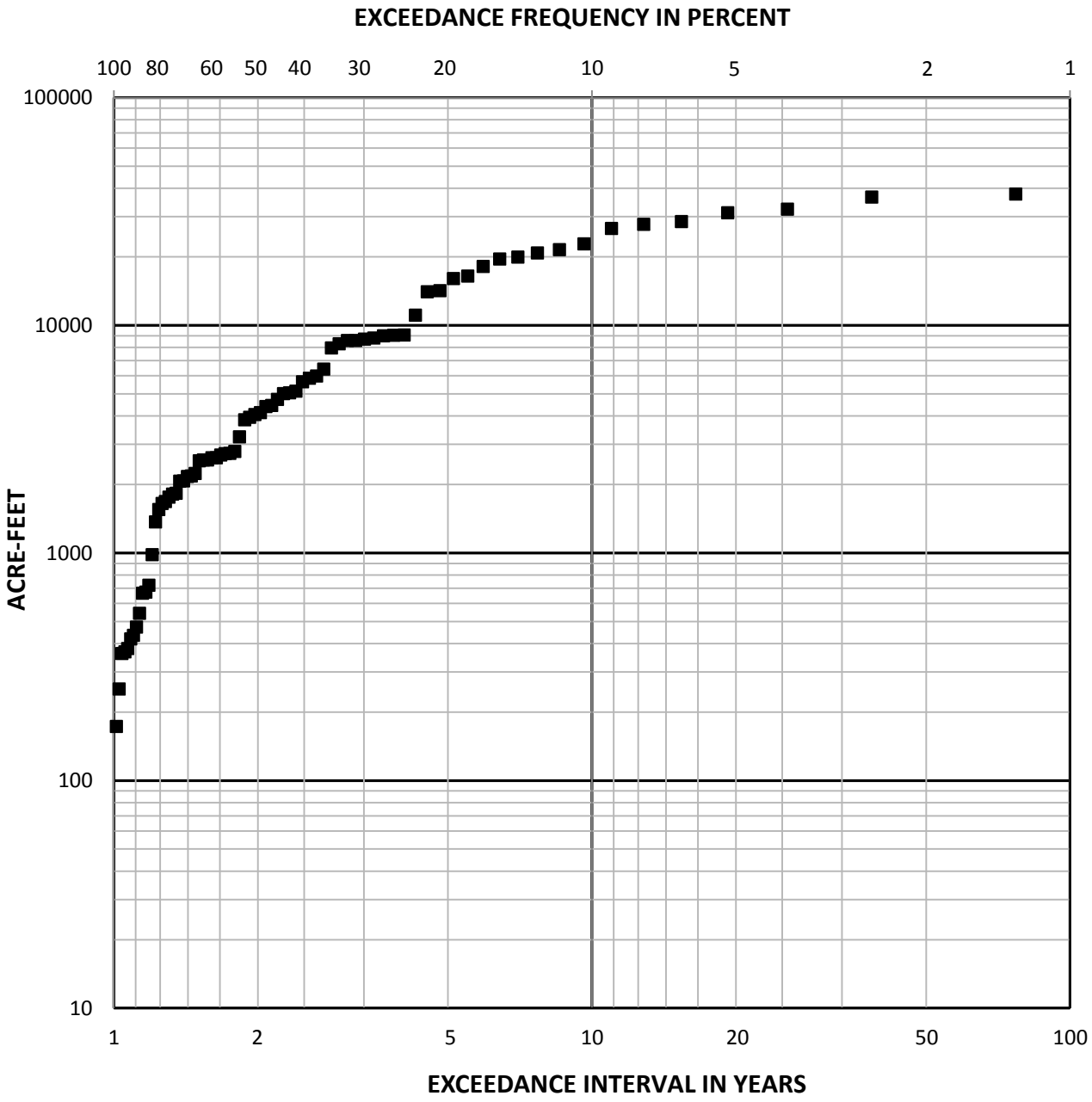
LAKE GEORGETOWN AND NORTH SAN GABRIEL DAM

NORTH SAN GABRIEL RIVER, TEXAS

APRIL INFLOW FREQUENCY 1924-2015

U.S. ARMY ENGINEER DISTRICT, FORT WORTH January 2017

PLATE 4 - 8



BRAZOS RIVER BASIN, TEXAS

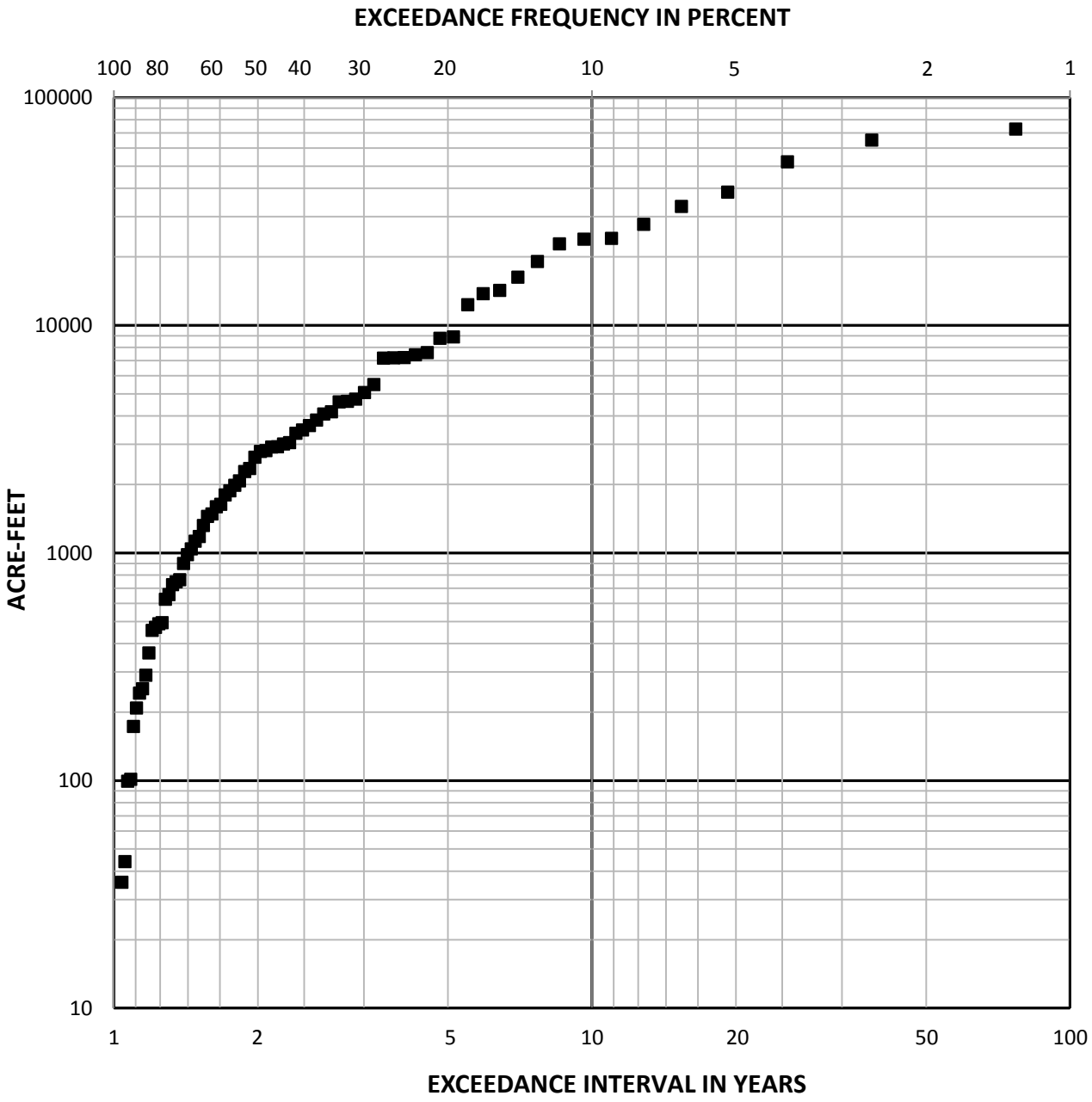
LAKE GEORGETOWN AND NORTH SAN GABRIEL DAM

NORTH SAN GABRIEL RIVER, TEXAS

MAY INFLOW FREQUENCY 1924-2015

U.S. ARMY ENGINEER DISTRICT, FORT WORTH January 2017

PLATE 4 - 9



BRAZOS RIVER BASIN, TEXAS

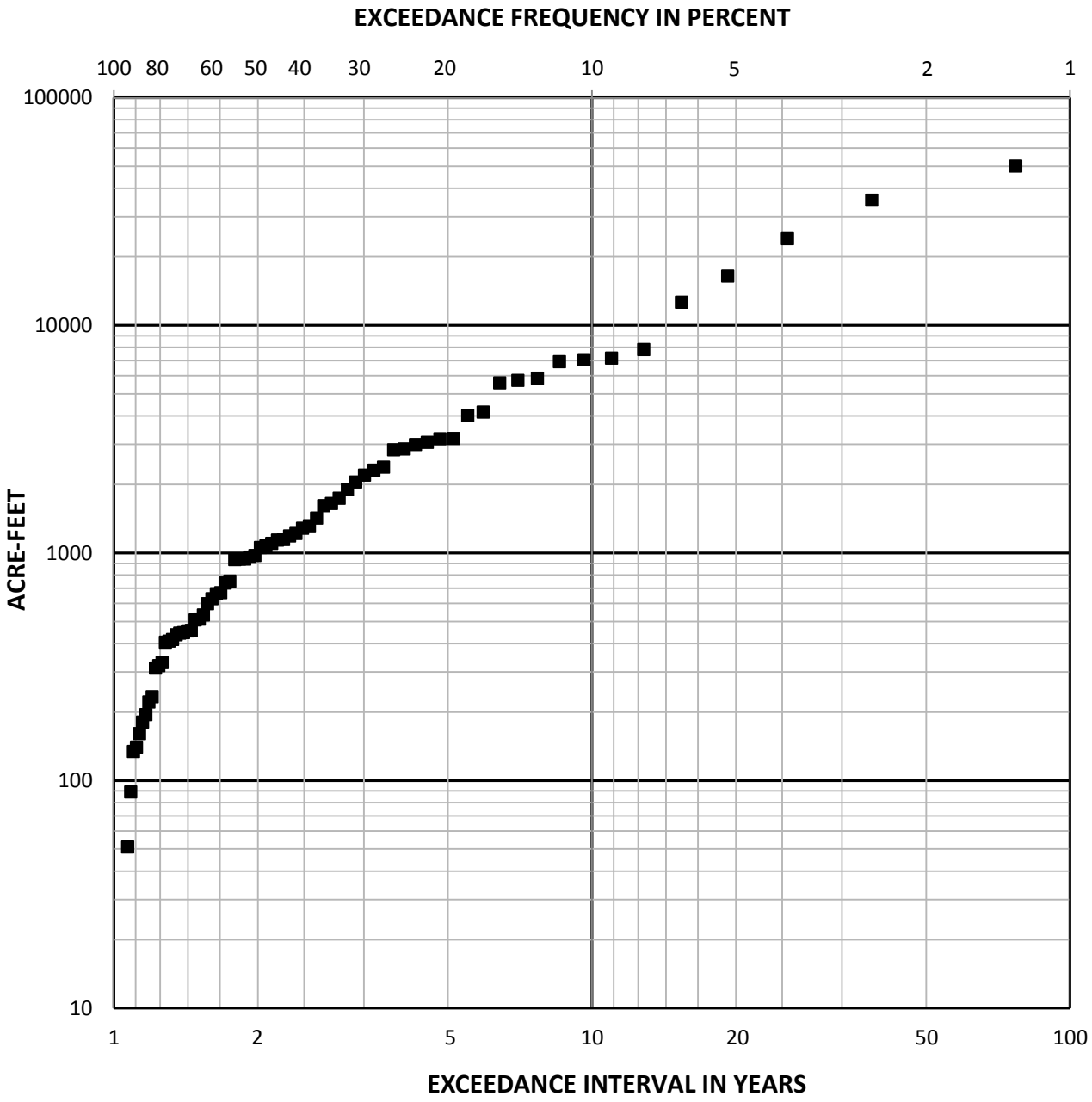
LAKE GEORGETOWN AND NORTH SAN GABRIEL DAM

NORTH SAN GABRIEL RIVER, TEXAS

JUNE INFLOW FREQUENCY 1924-2015

U.S. ARMY ENGINEER DISTRICT, FORT WORTH January 2017

PLATE 4 - 10



BRAZOS RIVER BASIN, TEXAS

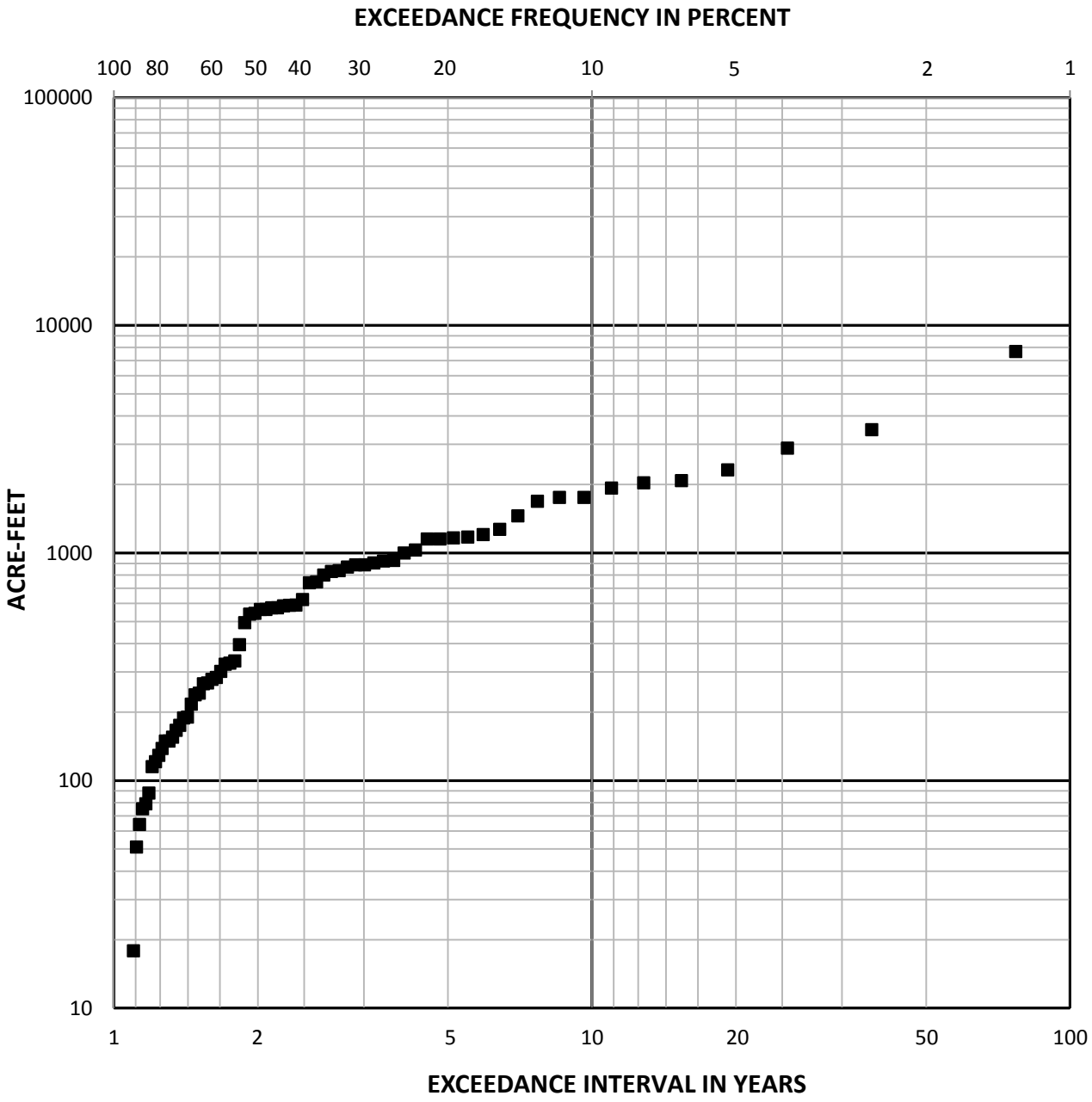
LAKE GEORGETOWN AND NORTH SAN GABRIEL DAM

NORTH SAN GABRIEL RIVER, TEXAS

JULY INFLOW FREQUENCY 1924-2015

U.S. ARMY ENGINEER DISTRICT, FORT WORTH January 2017

PLATE 4 - 11



BRAZOS RIVER BASIN, TEXAS

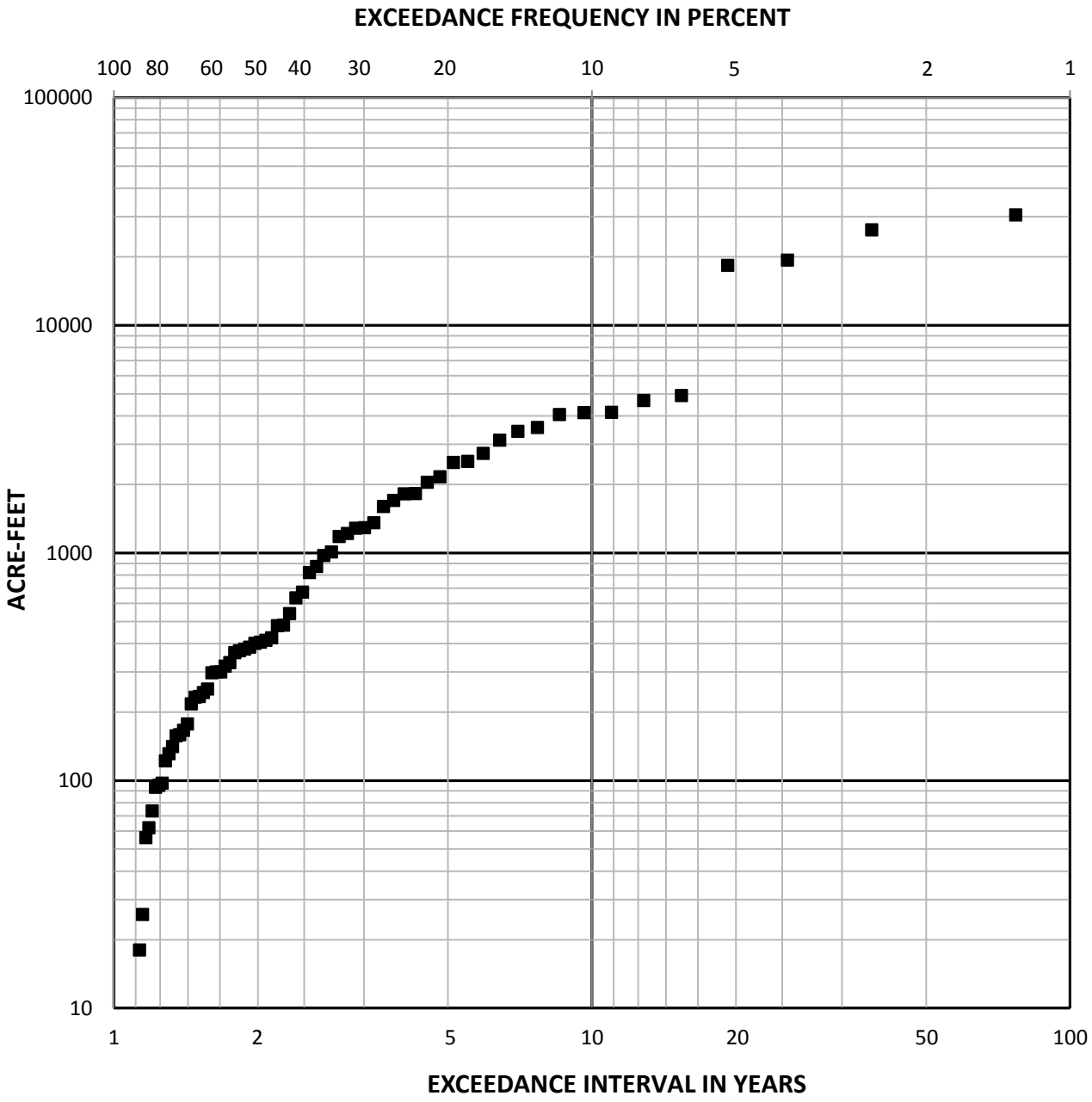
LAKE GEORGETOWN AND NORTH SAN GABRIEL DAM

NORTH SAN GABRIEL RIVER, TEXAS

AUGUST INFLOW FREQUENCY 1924-2015

U.S. ARMY ENGINEER DISTRICT, FORT WORTH January 2017

PLATE 4 - 12



BRAZOS RIVER BASIN, TEXAS

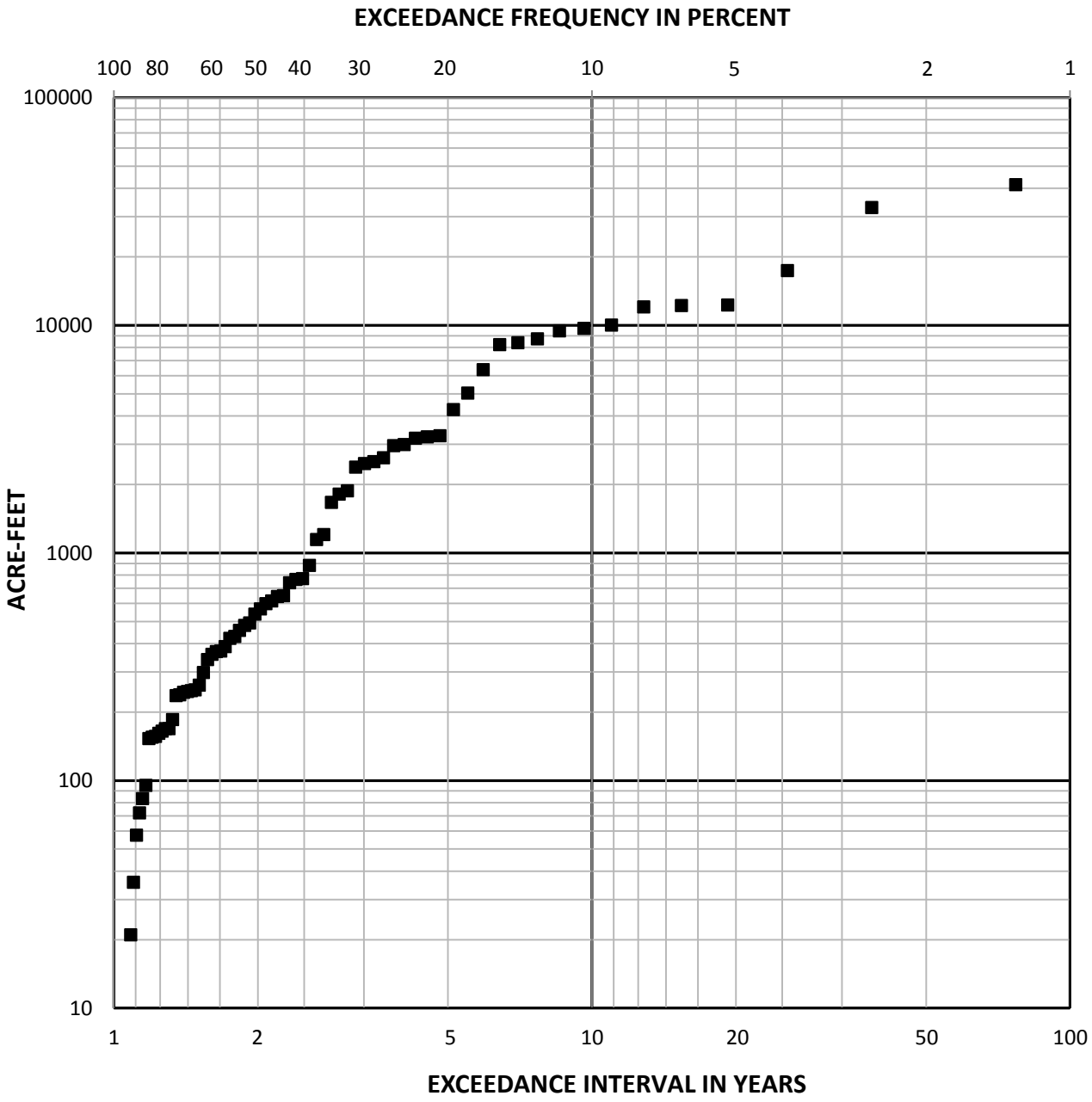
LAKE GEORGETOWN AND NORTH SAN GABRIEL DAM

NORTH SAN GABRIEL RIVER, TEXAS

SEPTEMBER INFLOW FREQUENCY 1924-2015

U.S. ARMY ENGINEER DISTRICT, FORT WORTH January 2017

PLATE 4 - 13



BRAZOS RIVER BASIN, TEXAS

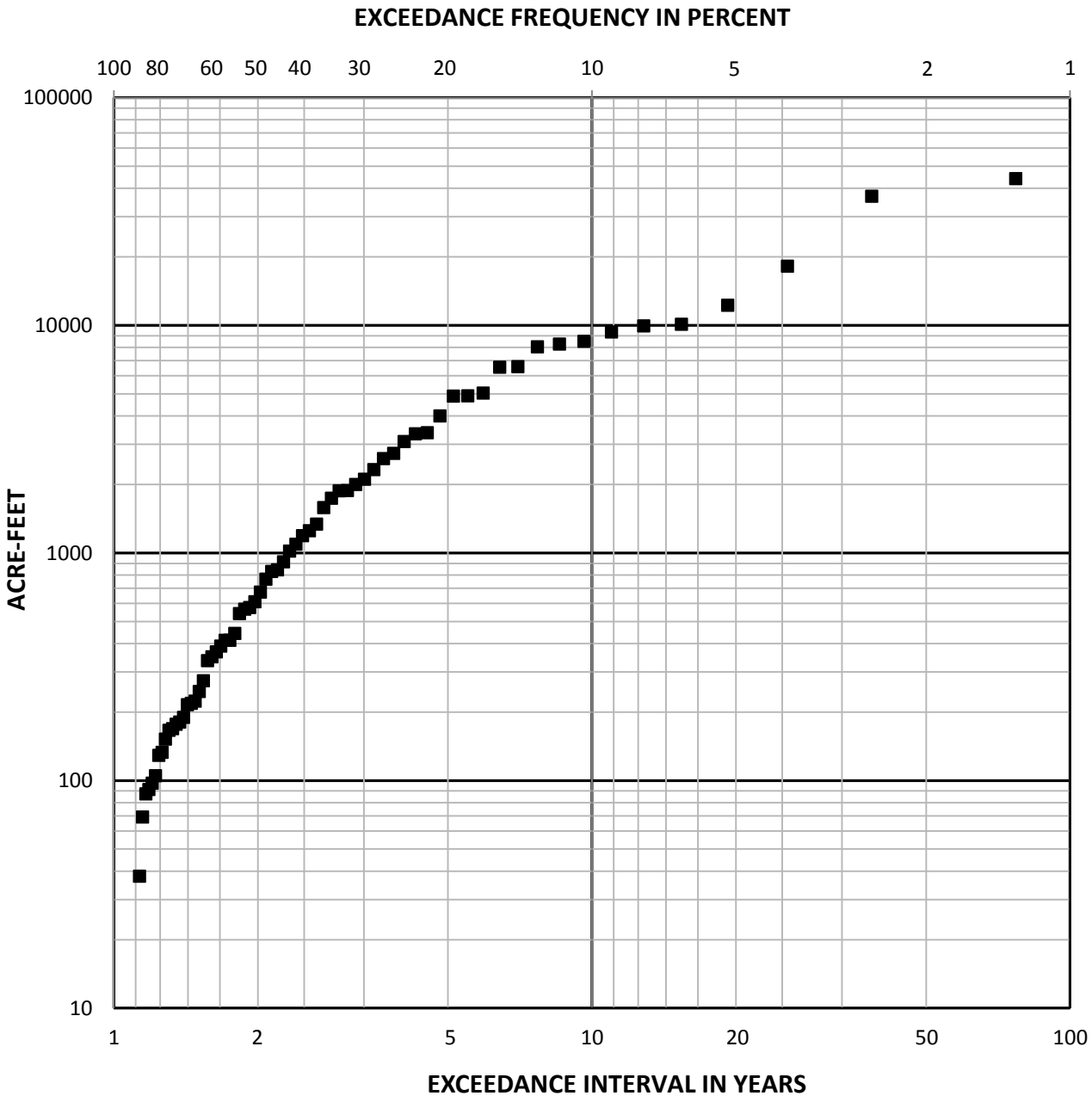
LAKE GEORGETOWN AND NORTH SAN GABRIEL DAM

NORTH SAN GABRIEL RIVER, TEXAS

OCTOBER INFLOW FREQUENCY 1924-2015

U.S. ARMY ENGINEER DISTRICT, FORT WORTH January 2017

PLATE 4 - 14



BRAZOS RIVER BASIN, TEXAS

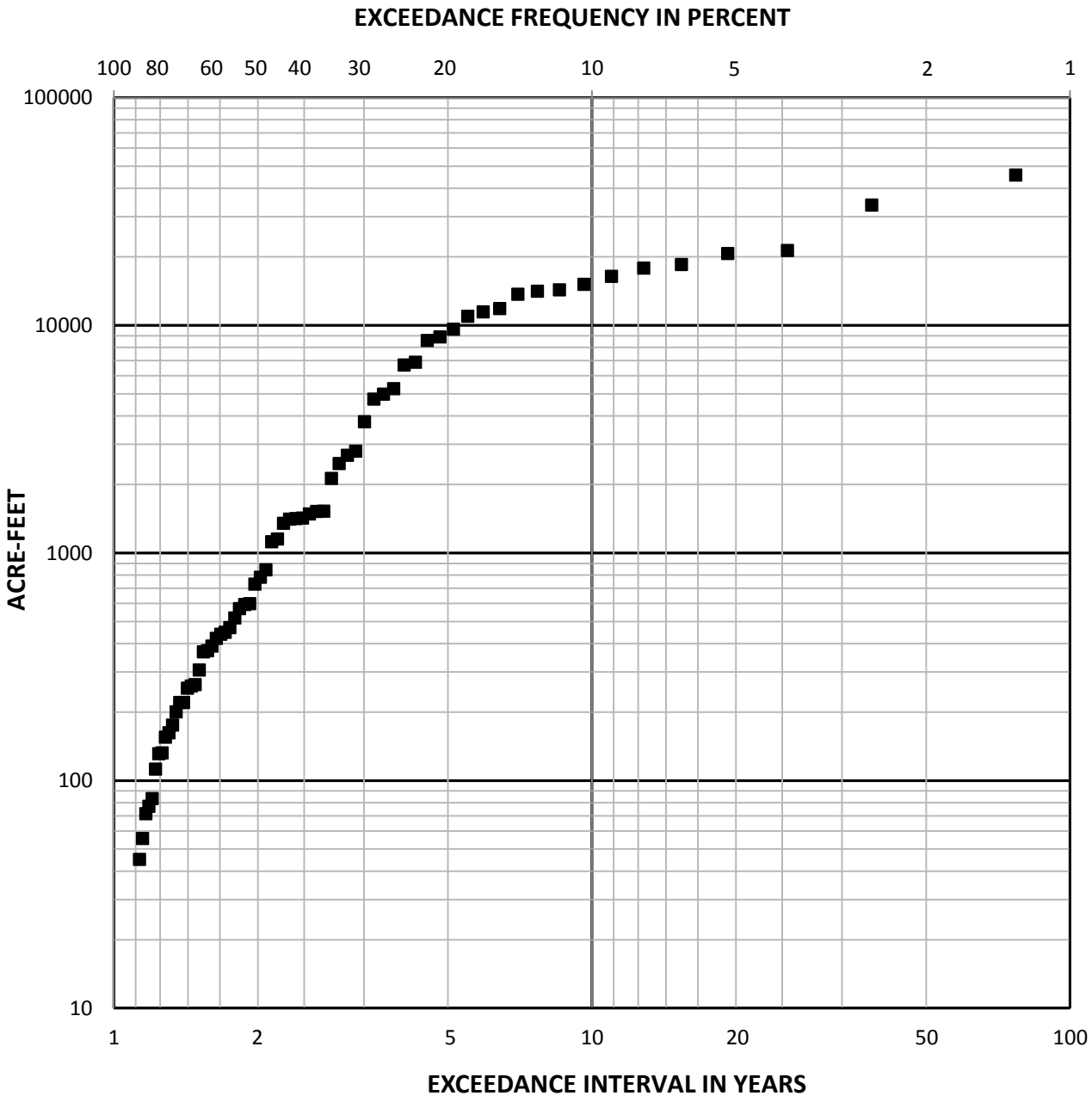
LAKE GEORGETOWN AND NORTH SAN GABRIEL DAM

NORTH SAN GABRIEL RIVER, TEXAS

NOVEMBER INFLOW FREQUENCY 1924-2015

U.S. ARMY ENGINEER DISTRICT, FORT WORTH January 2017

PLATE 4 - 15



BRAZOS RIVER BASIN, TEXAS

LAKE GEORGETOWN AND NORTH SAN GABRIEL DAM

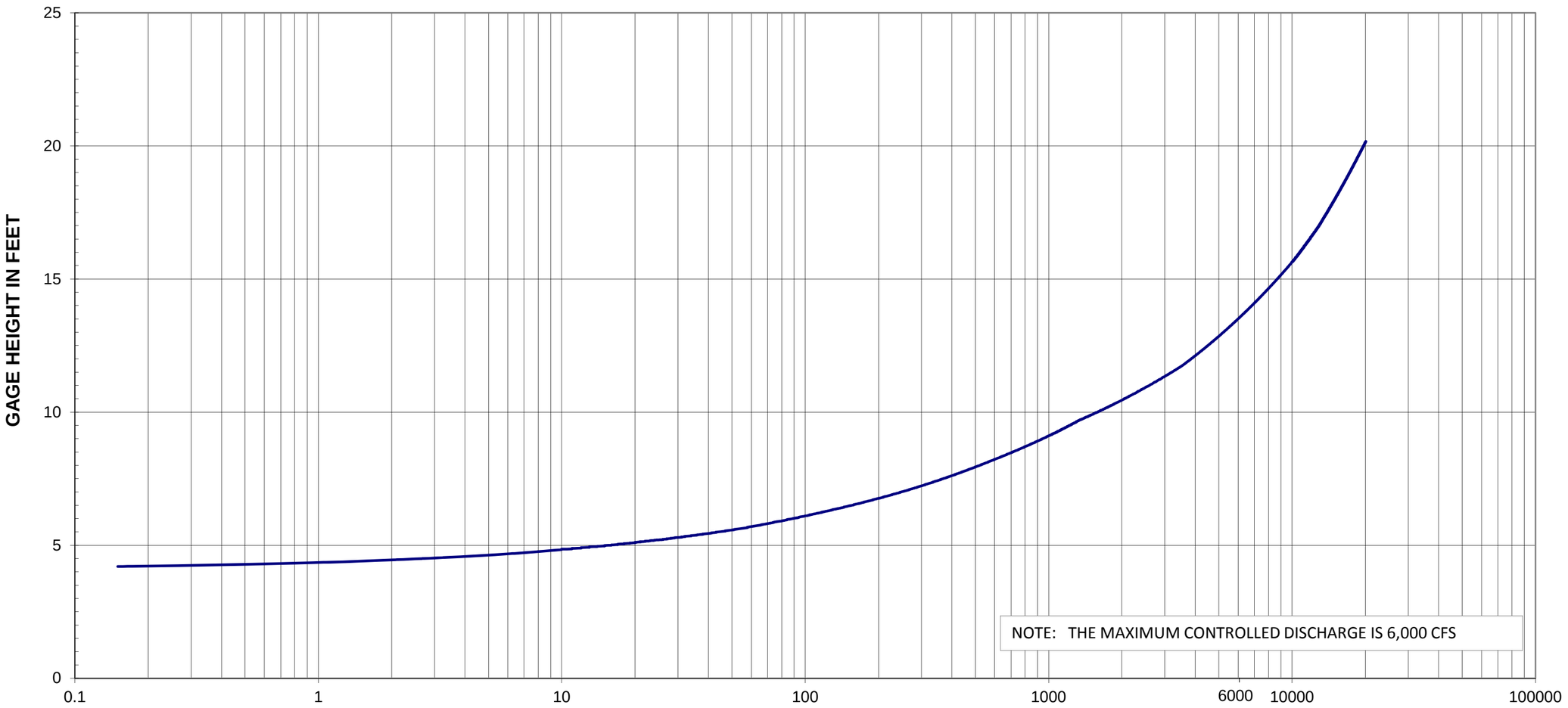
NORTH SAN GABRIEL RIVER, TEXAS

DECEMBER INFLOW FREQUENCY 1924-2015

U.S. ARMY ENGINEER DISTRICT, FORT WORTH January 2017

PLATE 4 - 16

CORPS OF ENGINEERS U.S. ARMY



DISCHARGE IN CUBIC FEET PER SECOND

ALL ELEVATIONS REFERRED TO ON THIS PLATE, UNLESS NOTED OTHERWISE, ARE IN FEET, NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD29). THE DATUM CONVERSION FROM NGVD29 TO NAVD88 IS: NGVD29 + 0.3 FEET = NAVD88 FOR LAKE GEORGETOWN AND NORTH SAN GABRIEL DAM.

BRAZOS RIVER BASIN, TEXAS

LAKE GEORGETOWN AND NORTH SAN GABRIEL DAM

NORTH SAN GABRIEL RIVER, TEXAS

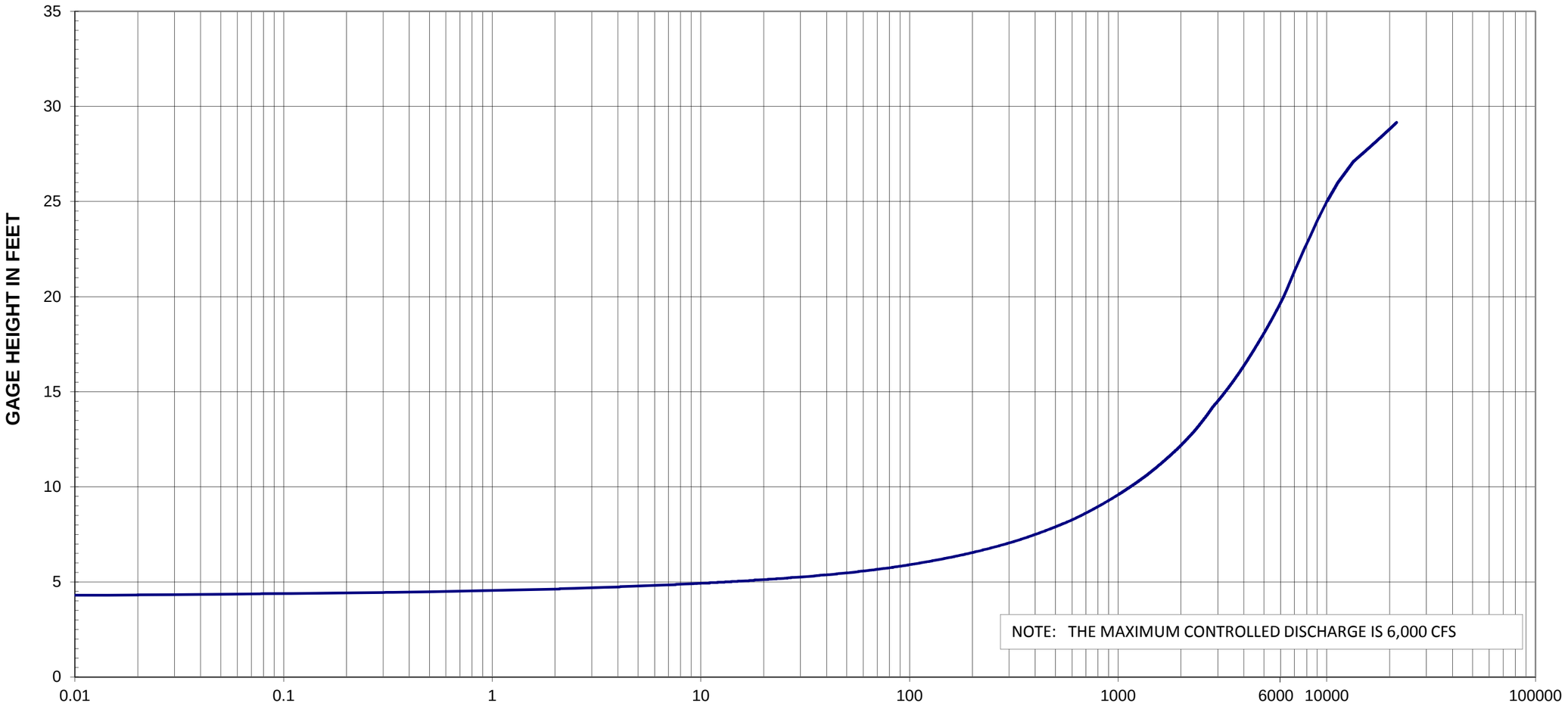
RATING CURVE

N FK SAN GABRIEL RIVER NR GEORGETOWN

USGS GAGE NO. 08104700

U.S. ARMY ENGINEER DISTRICT, FORT WORTH — January 2017

PLATE 4 - 17



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THE DATUM CONVERSION FROM NGVD29 TO NAVD88 IS: NGVD29 + 0.3 FEET = NAVD88 FOR LAKE GEORGETOWN AND NORTH SAN GABRIEL DAM.

BRAZOS RIVER BASIN, TEXAS

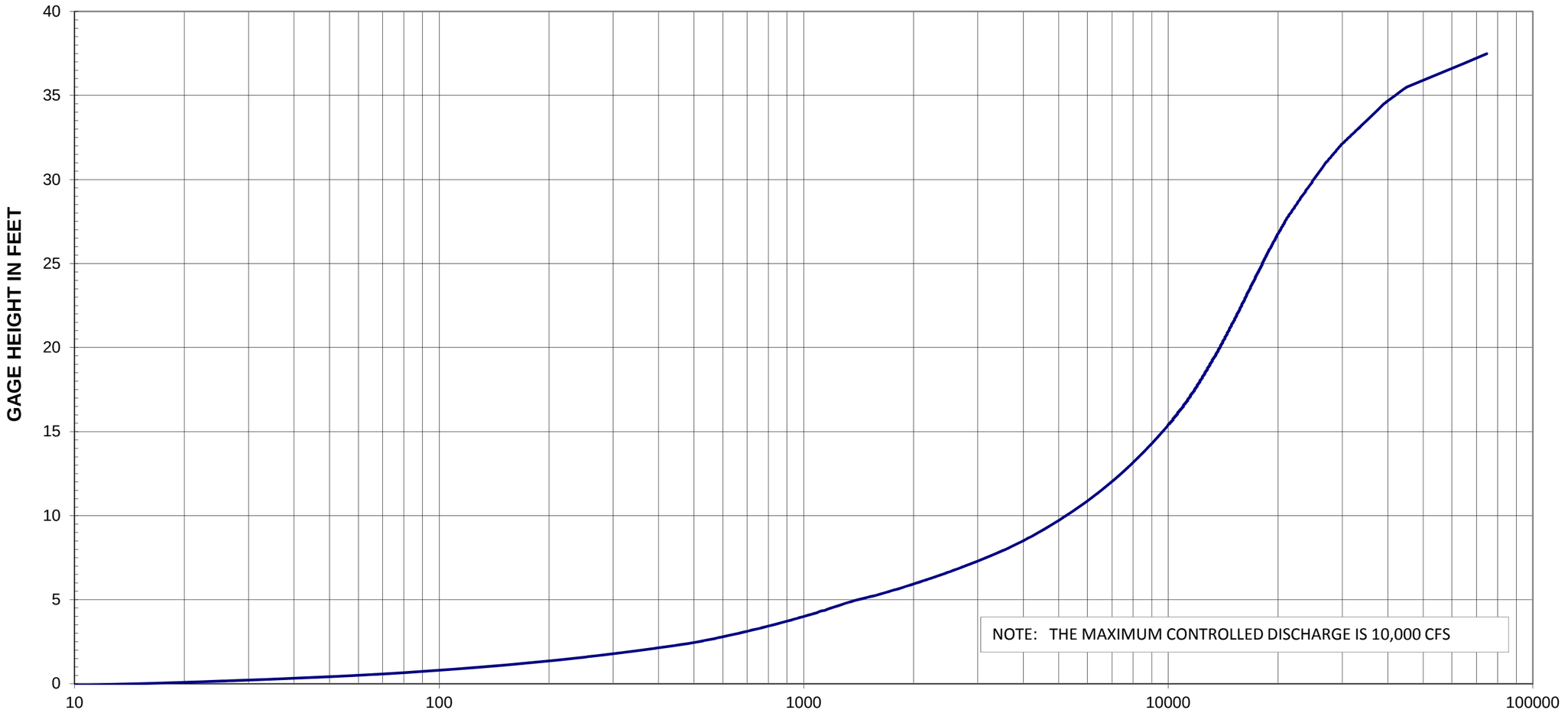
LAKE GEORGETOWN AND
NORTH SAN GABRIEL DAM

NORTH SAN GABRIEL RIVER, TEXAS

RATING CURVE
SAN GABRIEL RIVER AT LANEPORT
USGS GAGE NO. 08105700

U.S. ARMY ENGINEER DISTRICT, FORT WORTH January 2017

CORPS OF ENGINEERS U.S. ARMY



DISCHARGE IN CUBIC FEET PER SECOND

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THE DATUM CONVERSION FROM NGVD29 TO NAVD88 IS: NGVD29 + 0.3 FEET = NAVD88 FOR LAKE GEORGETOWN AND NORTH SAN GABRIEL DAM.

BRAZOS RIVER BASIN, TEXAS

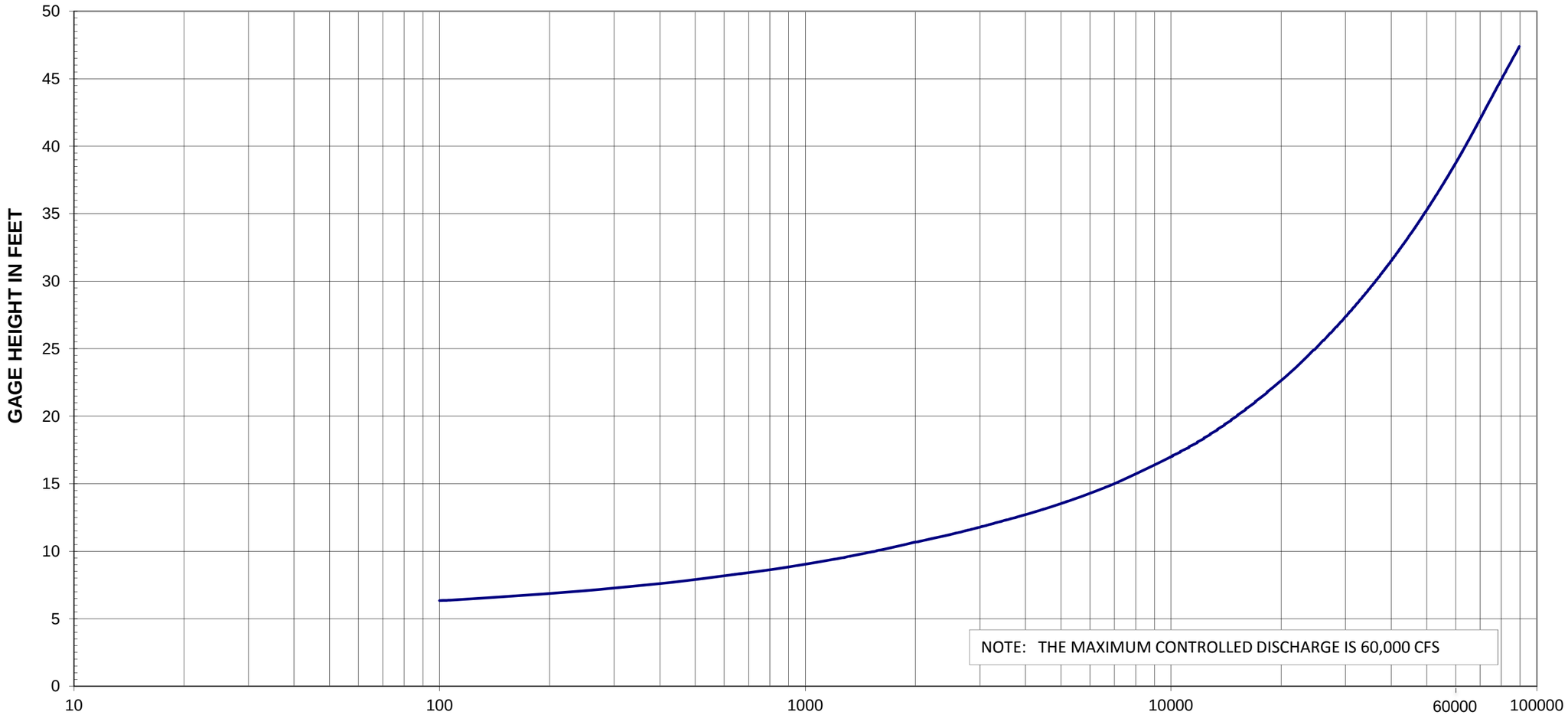
LAKE GEORGETOWN AND NORTH SAN GABRIEL DAM

NORTH SAN GABRIEL RIVER, TEXAS

RATING CURVE
LITTLE RIVER NEAR CAMERON
USGS GAGE NO. 08106500

U.S. ARMY ENGINEER DISTRICT, FORT WORTH January 2017

CORPS OF ENGINEERS U.S. ARMY



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BRAZOS RIVER BASIN, TEXAS

LAKE GEORGETOWN AND NORTH SAN GABRIEL DAM

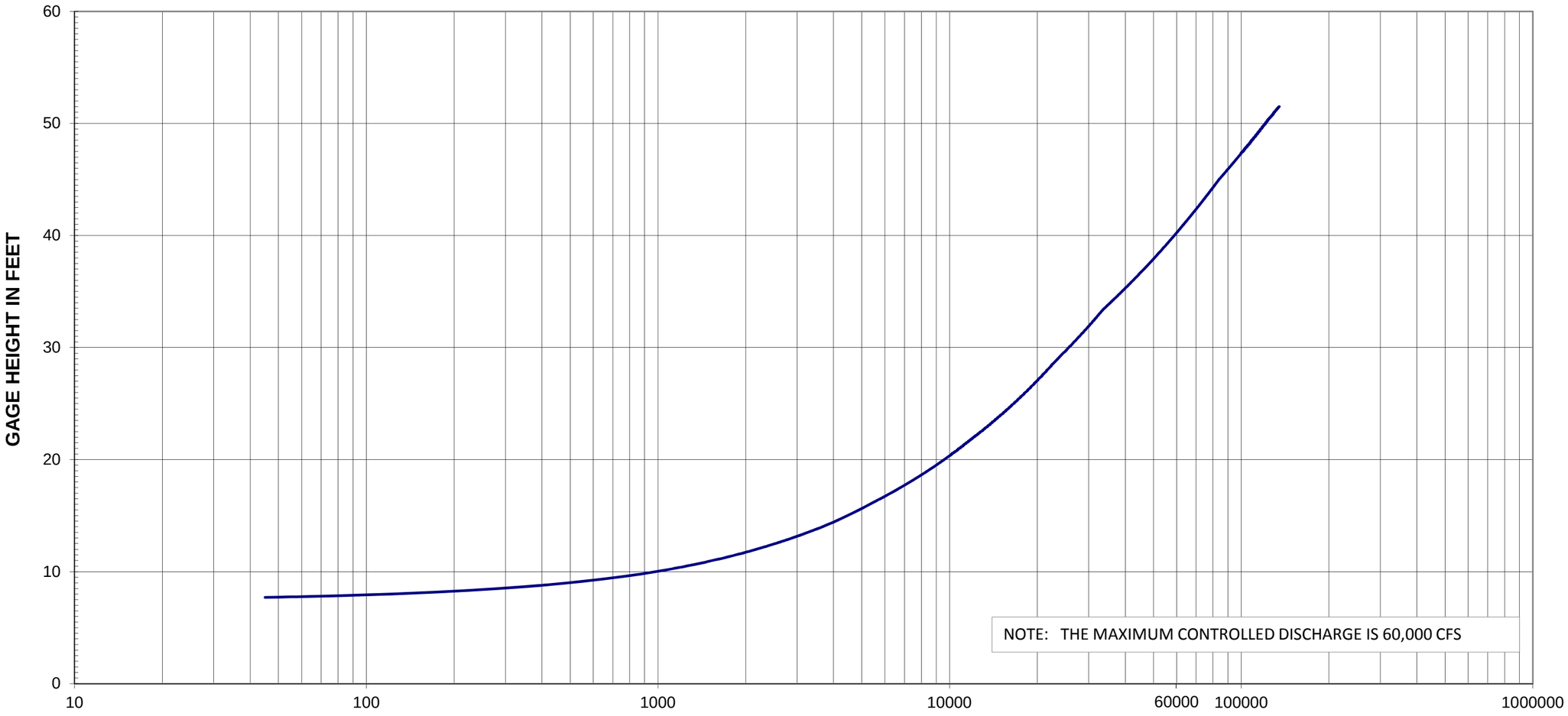
NORTH SAN GABRIEL RIVER, TEXAS

RATING CURVE

BRAZOS RIVER AT SH21 NEAR BRYAN

USGS GAGE NO. 08108700

U.S. ARMY ENGINEER DISTRICT, FORT WORTH January 2017



DISCHARGE IN CUBIC FEET PER SECOND

ALL ELEVATIONS REFERRED TO ON THIS PLATE, UNLESS NOTED OTHERWISE, ARE IN FEET, NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD29).
THE DATUM CONVERSION FROM NGVD29 TO NAVD88 IS: NGVD29 + 0.3 FEET = NAVD88 FOR LAKE GEORGETOWN AND NORTH SAN GABRIEL DAM.

BRAZOS RIVER BASIN, TEXAS

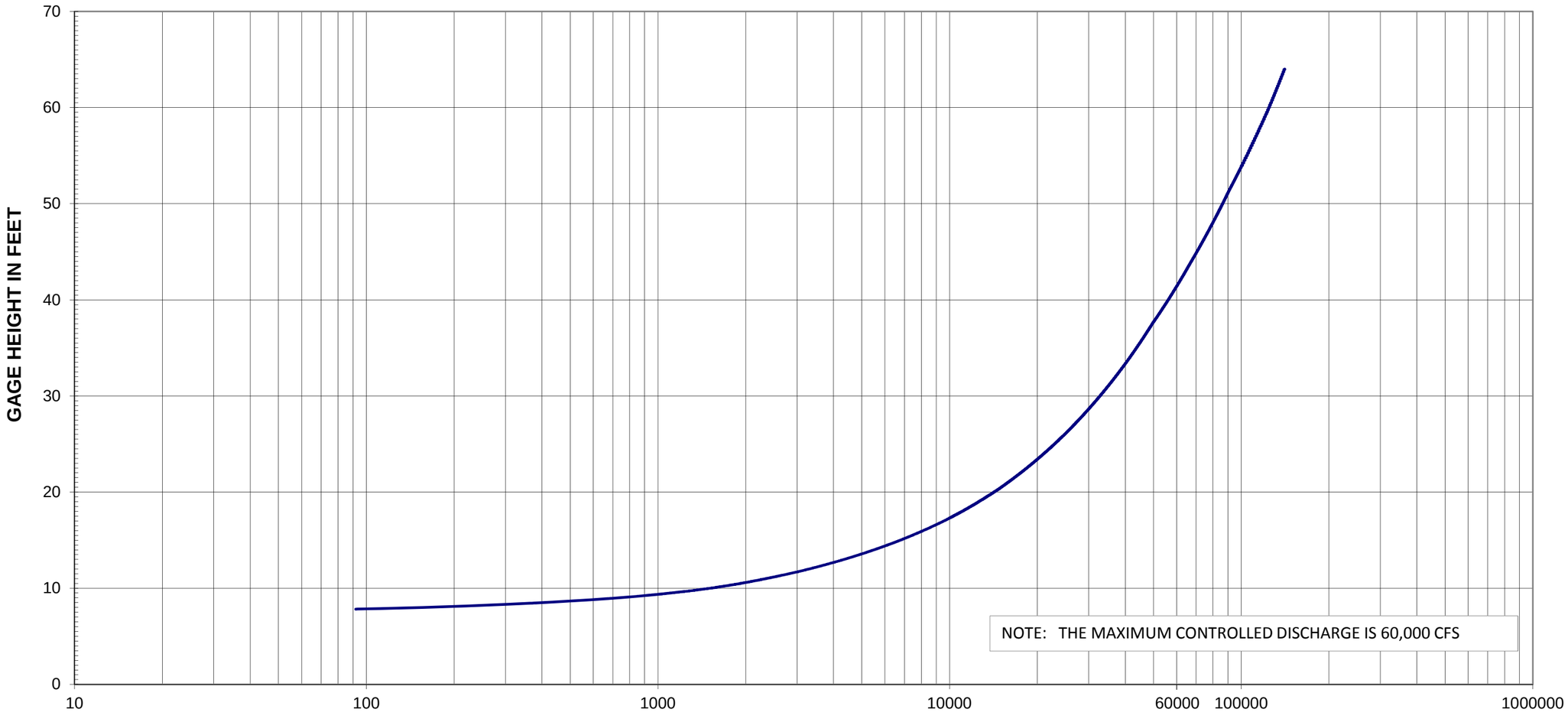
LAKE GEORGETOWN AND NORTH SAN GABRIEL DAM

NORTH SAN GABRIEL RIVER, TEXAS

RATING CURVE
BRAZOS RIVER NEAR HEMPSTEAD
USGS GAGE NO. 08111500

U.S. ARMY ENGINEER DISTRICT, FORT WORTH — January 2017

CORPS OF ENGINEERS U.S. ARMY



ALL ELEVATIONS REFERRED TO ON THIS PLATE, UNLESS NOTED OTHERWISE, ARE IN FEET, NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD29).
THE DATUM CONVERSION FROM NGVD29 TO NAVD88 IS: NGVD29 + 0.3 FEET = NAVD88 FOR LAKE GEORGETOWN AND NORTH SAN GABRIEL DAM.

BRAZOS RIVER BASIN, TEXAS

LAKE GEORGETOWN AND NORTH SAN GABRIEL DAM

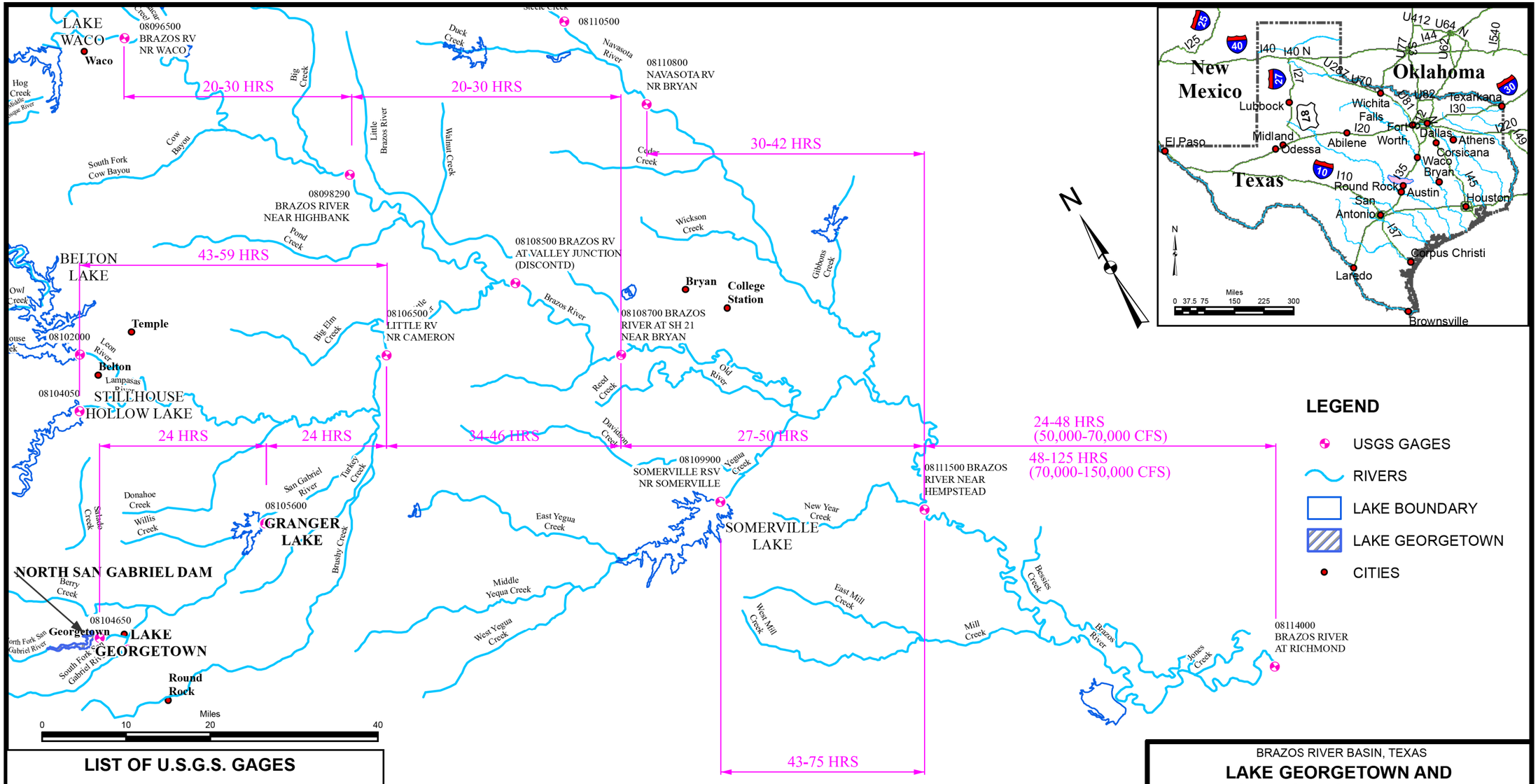
NORTH SAN GABRIEL RIVER, TEXAS

RATING CURVE
BRAZOS RIVER AT RICHMOND
USGS GAGE NO. 08114000

U.S. ARMY ENGINEER DISTRICT, FORT WORTH January 2017

CORPS OF ENGINEERS

U.S. ARMY



LIST OF U.S.G.S. GAGES

GAGE ID:	LOCATION:
08096500	BRAZOS RIVER NEAR WACO
08098290	BRAZOS RIVER NEAR HIGHBANK
08104050	STILLHOUSE HOLLOW LAKE NEAR BELTON
08104650	LAKE GEORGETOWN NEAR GEORGETOWN
08105600	LAKE GRANGER NEAR GRANGER
08106500	LITTLE RIVER NEAR CAMERON
08108500	BRAZOS RIVER AT VALLEY JUNCTION (DISCONTINUED)
08108700	BRAZOS RIVER AT SH 21 NEAR BRYAN
08109900	SOMERVILLE RESERVOIR NEAR SOMERVILLE
08110800	NAVASOTA RIVER NEAR BRYAN
08111500	BRAZOS RIVER NEAR HEMPSTEAD
08114000	BRAZOS RIVER AT RICHMOND

BRAZOS RIVER BASIN, TEXAS

LAKE GEORGETOWN AND NORTH SAN GABRIEL DAM

NORTH SAN GABRIEL RIVER, TEXAS

TRAVEL TIMES FROM LAKE GEORGETOWN TO THE BRAZOS RIVER AT RICHMOND GAGE

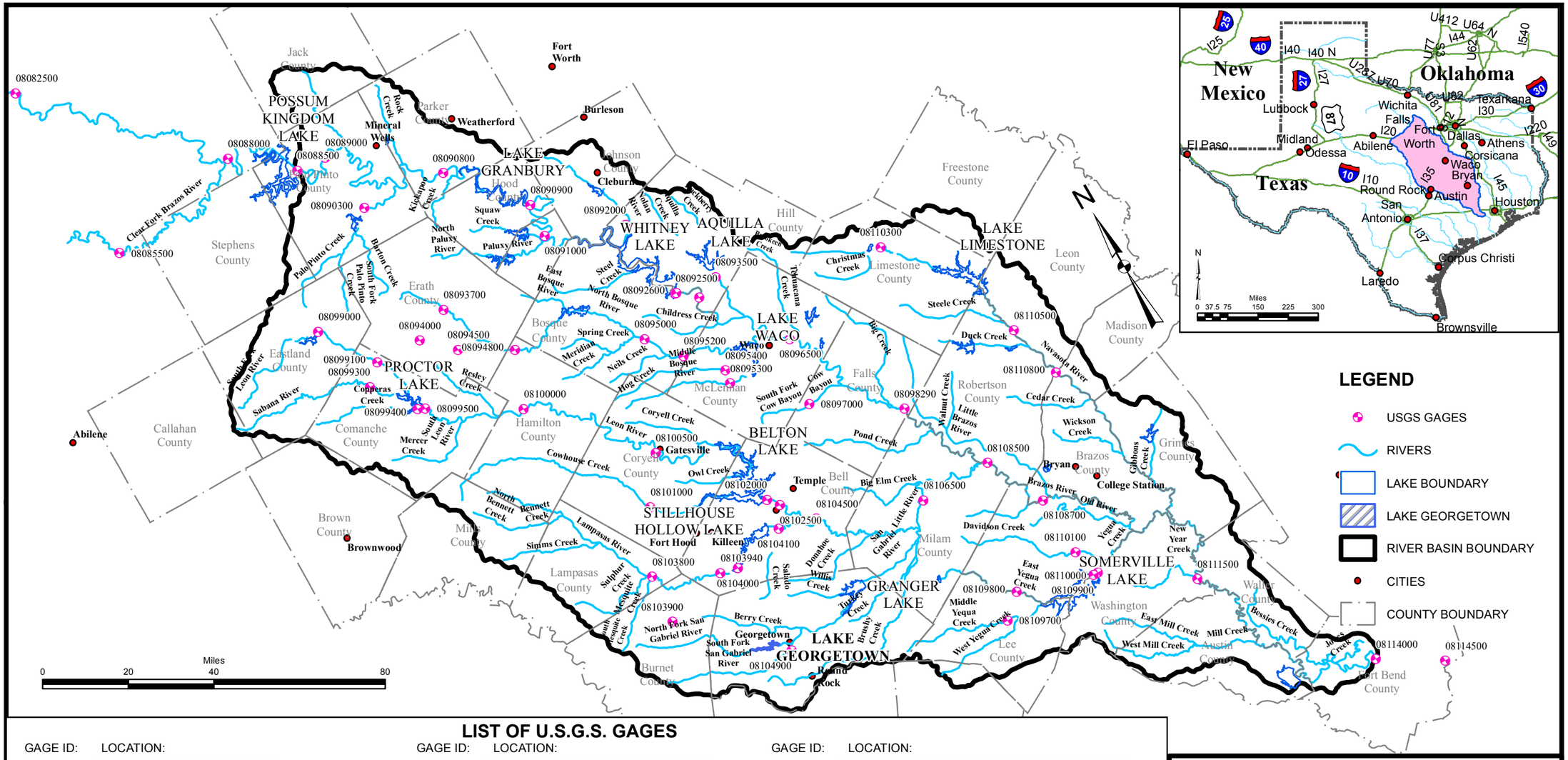
U.S. ARMY ENGINEER DISTRICT, FORT WORTH

January 2017

PLATE 4 - 23

CORPS OF ENGINEERS

U.S. ARMY



LEGEND

- USGS GAGES
- RIVERS
- LAKE BOUNDARY
- LAKE GEORGETOWN
- RIVER BASIN BOUNDARY
- CITIES
- COUNTY BOUNDARY

LIST OF U.S.G.S. GAGES

GAGE ID:	LOCATION:
08082500	BRAZOS RIVER NEAR SEYMOUR, TX
08085500	CLEAR FORK BRAZOS RIVER AT FORT GRIFFIN, TX
08088000	BRAZOS RIVER NEAR SOUTH BEND, TX
08088500	POSSUM KINGDOM RESERVOIR NEAR GRAFORD, TX
08089000	BRAZOS RIVER NEAR PALO PINTO, TX
08090300	LAKE PALO PINTO CREEK NEAR SANTO, TX
08090800	BRAZOS RIVER NEAR DENNIS, TX
08090900	LAKE GRANBURY NEAR GRANBURY, TX
08091000	BRAZOS RIVER NEAR GLEN ROSE, TX
08092000	NOLAN RIVER AT BLUM, TX
08092500	WHITNEY LAKE NEAR WHITNEY, TX
08092600	BRAZOS RIVER AT WHITNEY DAM NEAR WHITNEY, TX
08093100	BRAZOS RIVER NEAR AQUILLA, TX
08093500	AQUILLA CREEK NEAR AQUILLA, TX
08093700	NORTH BOSQUE RIVER AT STEPHENVILLE, TX
08094000	GREEN CREEK SUBWATERSHED NEAR DUBLIN, TX
08094500	GREEN CREEK NEAR ALEXANDER, TX
08094800	NORTH BOSQUE RIVER AT HICO, TX
08095000	NORTH BOSQUE RIVER NEAR CLIFTON, TX
08095200	NORTH BOSQUE RIVER AT VALLEY MILLS, TX
08095300	MIDDLE BOSQUE RIVER NEAR MCGREGOR, TX
08095400	HOG CREEK NEAR CRAWFORD, TX
08096500	BRAZOS RIVER NEAR WACO, TX
08097000	COW BAYOU AT MOOREVILLE, TX
08098290	BRAZOS RIVER NEAR HIGHBANK, TX
08099000	LEON RESERVOIR NEAR RANGER, TX
08099100	LEON RIVER NEAR DE LEON, TX
08099300	SABANA RIVER NEAR DE LEON, TX
08099400	PROCTOR LAKE NEAR PROCTOR, TX
08099500	LEON RIVER NEAR HASSE, TX
08100000	LEON RIVER NEAR HAMILTON, TX
08100500	LEON RIVER AT GATESVILLE, TX
08101000	COWHOUSE CREEK AT PIDCOKE, TX
08102000	BELTON LAKE NEAR BELTON, TX
08102500	LEON RIVER NEAR BELTON, TX
08103800	LAMPASAS RIVER NEAR KEMPNER, TX
08103900	S FK ROCKY CK NEAR BRIGGS, TX
08103940	LAMPASAS RIVER AT DING DONG, TX
08104000	LAMPASAS RIVER AT YOUNGSPORT, TX (DISCONTINUED)
08104100	LAMPASAS RIVER NEAR BELTON, TX
08104500	LITTLE RIVER NEAR LITTLE RIVER, TX
08104900	S FORK SAN GABRIEL RIVER AT GEORGETOWN, TX
08106500	LITTLE RIVER NEAR CAMERON, TX
08108500	BRAZOS RIVER AT VALLEY JUNCTION, TX (DISCONTINUED)
08108700	BRAZOS RIVER AT SH 21 NEAR BRYAN, TX
08109700	MIDDLE YEGUA CREEK NEAR DIME BOX, TX
08109800	EAST YEGUA CREEK NEAR DIME BOX, TX
08109900	SOMERVILLE RESERVOIR NEAR SOMERVILLE, TX
08110000	YEGUA CREEK NEAR SOMERVILLE, TX
08110100	DAVIDSON CREEK NEAR LYONS, TX
08110300	LAKE MEXIA NEAR MEXIA, TX
08110500	NAVASOTA RIVER NEAR EASTERLY, TX
08110800	NAVASOTA RIVER NEAR BRYAN, TX
08111500	BRAZOS RIVER NEAR HEMPSTEAD, TX
08114000	BRAZOS RIVER AT RICHMOND, TX
08114500	BRAZOS RIVER NEAR JULIFF, TX (DISCONTINUED)

BRAZOS RIVER BASIN, TEXAS

LAKE GEORGETOWN AND NORTH SAN GABRIEL DAM

BRAZOS RIVER, TEXAS

HYDROLOGIC NETWORK LOWER-BRAZOS RIVER BASIN

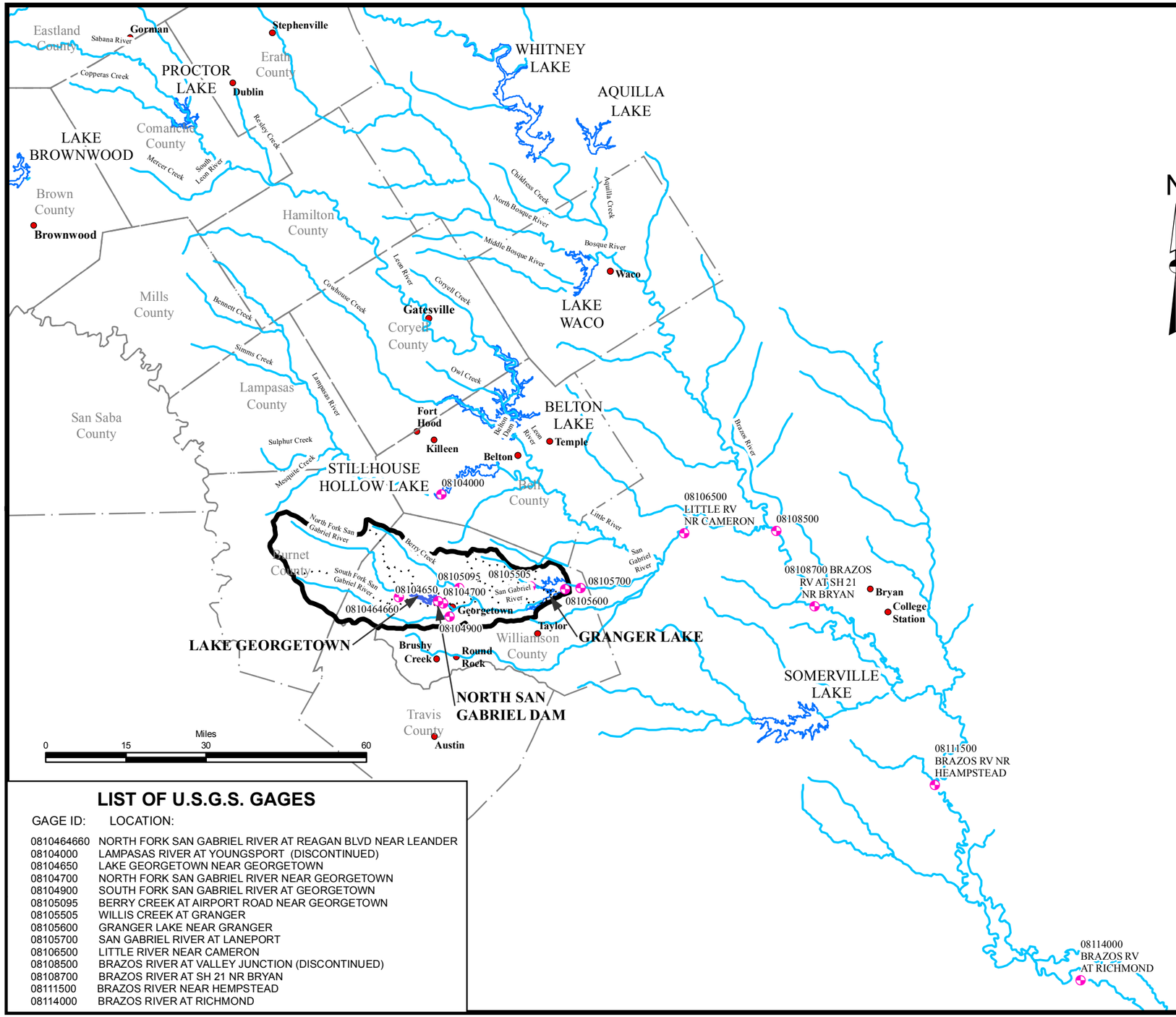
U.S. ARMY ENGINEER DISTRICT, FORT WORTH

January 2017

PLATE 5 - 1a

CORPS OF ENGINEERS

U.S. ARMY



LEGEND

- USGS GAGES
- RIVER BASIN BOUNDARY
- SUBBASIN BOUNDARY
- RIVERS
- LAKE BOUNDARY
- LAKE GEORGETOWN
- CITIES
- COUNTY BOUNDARY

LIST OF U.S.G.S. GAGES

GAGE ID:	LOCATION:
0810464660	NORTH FORK SAN GABRIEL RIVER AT REAGAN BLVD NEAR LEANDER
08104000	LAMPASAS RIVER AT YOUNGSPORT (DISCONTINUED)
08104650	LAKE GEORGETOWN NEAR GEORGETOWN
08104700	NORTH FORK SAN GABRIEL RIVER NEAR GEORGETOWN
08104900	SOUTH FORK SAN GABRIEL RIVER AT GEORGETOWN
08105095	BERRY CREEK AT AIRPORT ROAD NEAR GEORGETOWN
08105505	WILLIS CREEK AT GRANGER
08105600	GRANGER LAKE NEAR GRANGER
08105700	SAN GABRIEL RIVER AT LANEPORT
08106500	LITTLE RIVER NEAR CAMERON
08108500	BRAZOS RIVER AT VALLEY JUNCTION (DISCONTINUED)
08108700	BRAZOS RIVER AT SH 21 NR BRYAN
08111500	BRAZOS RIVER NEAR HEMPSTEAD
08114000	BRAZOS RIVER AT RICHMOND

BRAZOS RIVER BASIN, TEXAS

LAKE GEORGETOWN AND NORTH SAN GABRIEL DAM

NORTH SAN GABRIEL RIVER, TEXAS

HYDROLOGIC NETWORK SAN GABRIEL RIVER BASIN

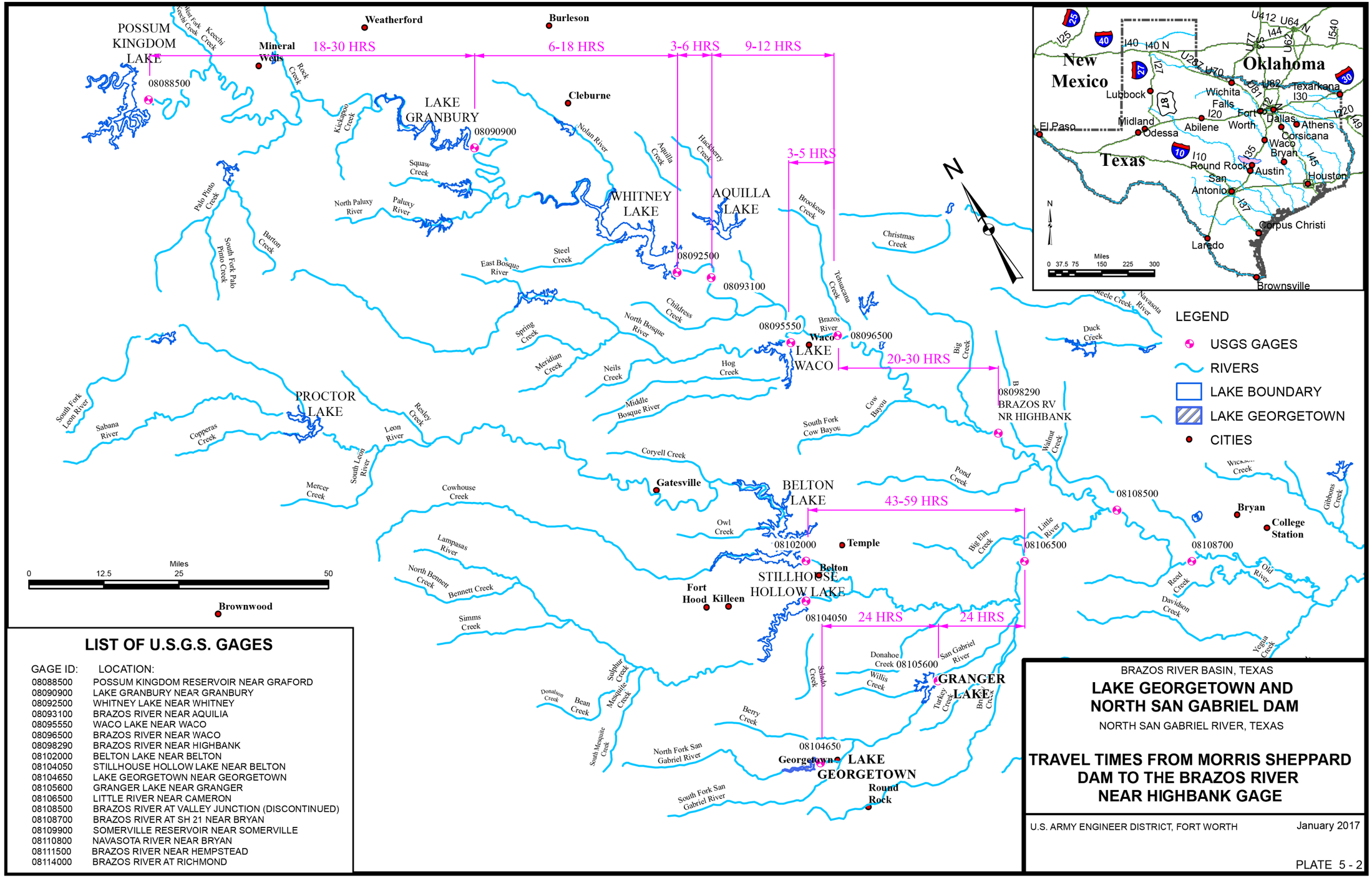
U.S. ARMY ENGINEER DISTRICT, FORT WORTH

January 2017

PLATE 5 - 1b

CORPS OF ENGINEERS

U.S. ARMY



LIST OF U.S.G.S. GAGES

GAGE ID:	LOCATION:
08088500	POSSUM KINGDOM RESERVOIR NEAR GRAFORD
08090900	LAKE GRANBURY NEAR GRANBURY
08092500	WHITNEY LAKE NEAR WHITNEY
08093100	BRAZOS RIVER NEAR AQUILIA
08095550	WACO LAKE NEAR WACO
08096500	BRAZOS RIVER NEAR WACO
08098290	BRAZOS RIVER NEAR HIGHBANK
08102000	BELTON LAKE NEAR BELTON
08104050	STILLHOUSE HOLLOW LAKE NEAR BELTON
08104650	LAKE GEORGETOWN NEAR GEORGETOWN
08105600	GRANGER LAKE NEAR GRANGER
08106500	LITTLE RIVER NEAR CAMERON
08108500	BRAZOS RIVER AT VALLEY JUNCTION (DISCONTINUED)
08108700	BRAZOS RIVER AT SH 21 NEAR BRYAN
08109900	SOMERVILLE RESERVOIR NEAR SOMERVILLE
08110800	NAVASOTA RIVER NEAR BRYAN
08111500	BRAZOS RIVER NEAR HEMPSTEAD
08114000	BRAZOS RIVER AT RICHMOND

BRAZOS RIVER BASIN, TEXAS

LAKE GEORGETOWN AND NORTH SAN GABRIEL DAM

NORTH SAN GABRIEL RIVER, TEXAS

TRAVEL TIMES FROM MORRIS SHEPPARD DAM TO THE BRAZOS RIVER NEAR HIGHBANK GAGE

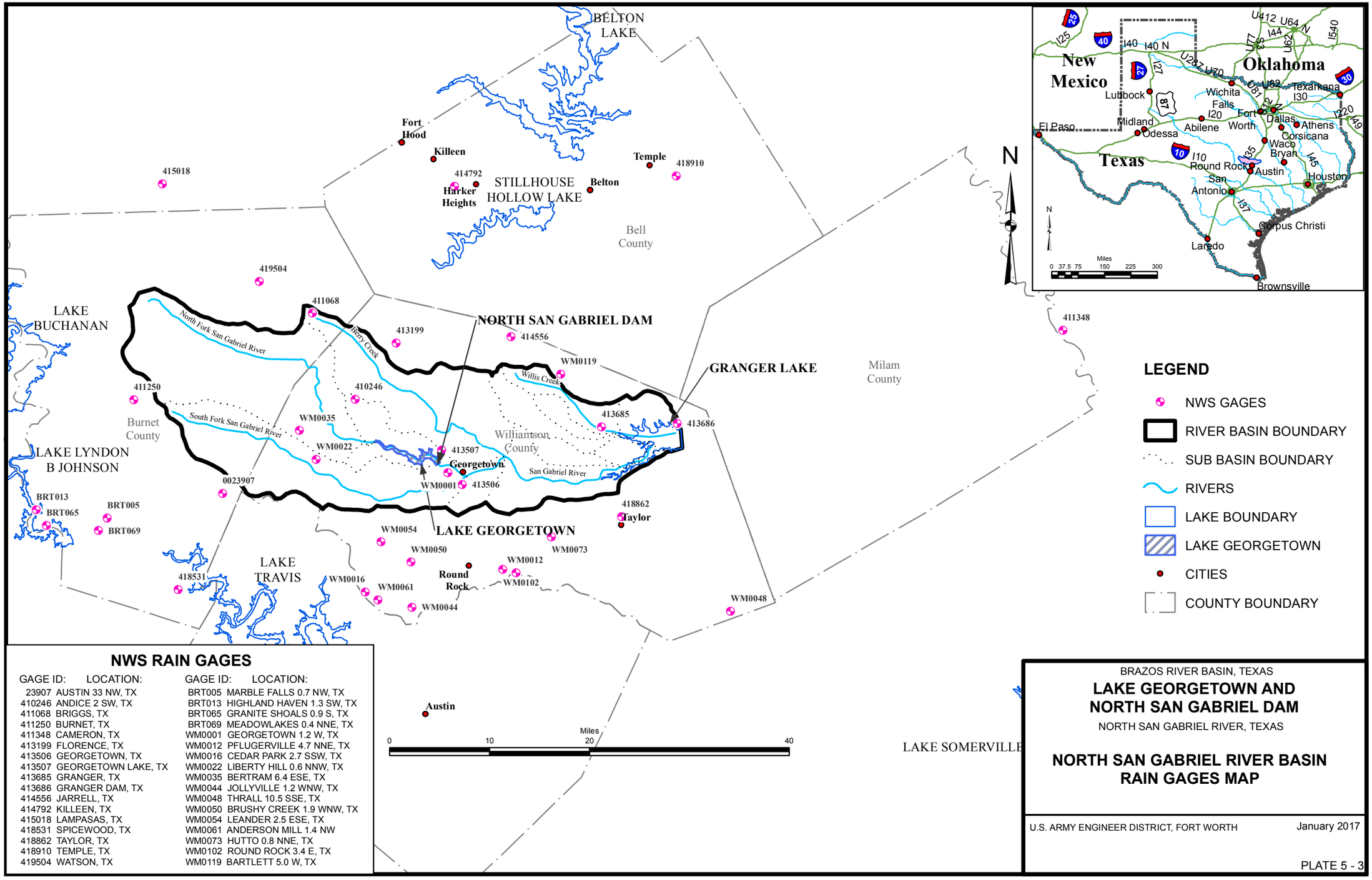
U.S. ARMY ENGINEER DISTRICT, FORT WORTH

January 2017

PLATE 5 - 2

CORPS OF ENGINEERS

U.S. ARMY



NWS RAIN GAGES

GAGE ID:	LOCATION:	GAGE ID:	LOCATION:
23907	AUSTIN 33 NW, TX	BRT005	MARBLE FALLS 0.7 NW, TX
410246	ANDICE 2 SW, TX	BRT013	HIGHLAND HAVEN 1.3 SW, TX
411068	BRIGGS, TX	BRT065	GRANITE SHOALS 0.9 S, TX
411250	BURNET, TX	BRT069	MEADOWLAKES 0.4 NNE, TX
411348	CAMERON, TX	WM0001	GEORGETOWN 1.2 W, TX
413199	FLORENCE, TX	WM0012	PFLUGERVILLE 4.7 NNE, TX
413506	GEORGETOWN, TX	WM0016	CEDAR PARK 2.7 SSW, TX
413507	GEORGETOWN LAKE, TX	WM0022	LIBERTY HILL 0.6 NNW, TX
413685	GRANGER, TX	WM0035	BERTRAM 6.4 ESE, TX
413686	GRANGER DAM, TX	WM0044	JOLLYVILLE 1.2 WNW, TX
414556	JARRELL, TX	WM0048	THRALL 10.5 SSE, TX
414792	KILLEEN, TX	WM0050	BRUSHY CREEK 1.9 WNW, TX
415018	LAMPASAS, TX	WM0054	LEANDER 2.5 ESE, TX
418531	SPICEWOOD, TX	WM0061	ANDERSON MILL 1.4 NW
418862	TAYLOR, TX	WM0073	HUTTO 0.8 NNE, TX
418910	TEMPLE, TX	WM0102	ROUND ROCK 3.4 E, TX
419504	WATSON, TX	WM0119	BARTLETT 5.0 W, TX

BRAZOS RIVER BASIN, TEXAS

LAKE GEORGETOWN AND NORTH SAN GABRIEL DAM

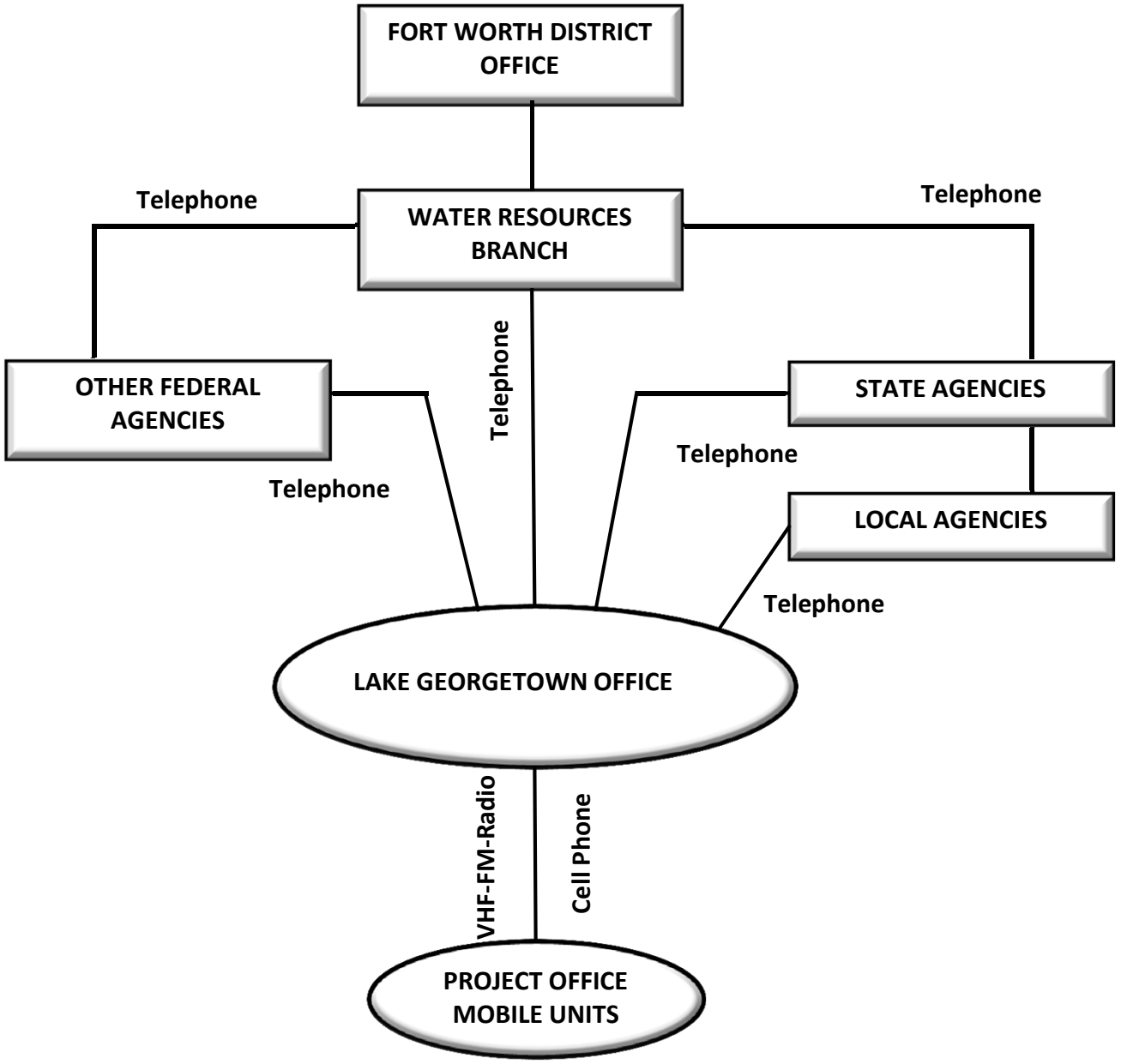
NORTH SAN GABRIEL RIVER, TEXAS

NORTH SAN GABRIEL RIVER BASIN RAIN GAGES MAP

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

January 2017

PLATE 5 - 3



BRAZOS RIVER BASIN, TEXAS

LAKE GEORGETOWN AND NORTH SAN GABRIEL DAM

NORTH SAN GABRIEL RIVER, TEXAS

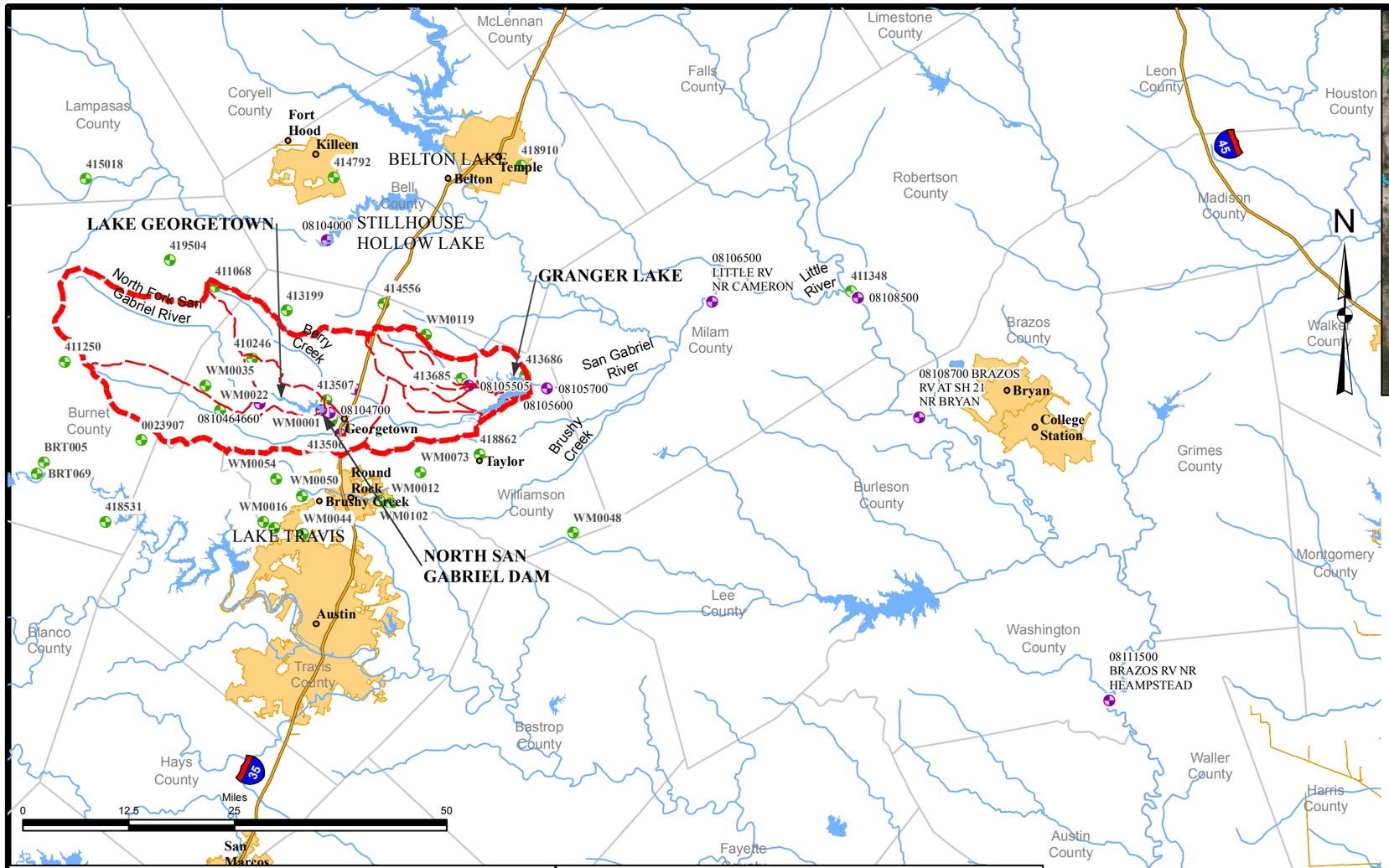
LINES OF COMMUNICATION

U.S. ARMY ENGINEER DISTRICT, FORT WORTH January 2017

PLATE 5 -4

CORPS OF ENGINEERS

U.S. ARMY



LEGEND

- RIVER BASIN BOUNDARY
- SUBBASIN BOUNDARY
- RIVERS
- LAKES
- CITIES
- NWS GAGES
- USGS GAGES
- INTERSTATE
- METRO AREAS

LIST OF U.S.G.S. GAGES

GAGE ID:	LOCATION:
0810464660	NORTH FORK SAN GABRIEL RIVER AT REAGAN BLVD NEAR LEANDER
08104000	LAMPASAS RIVER AT YOUNGSPORT (DISCONTINUED)
08104650	LAKE GEORGETOWN NEAR GEORGETOWN
08104700	NORTH FORK SAN GABRIEL RIVER NEAR GEORGETOWN
08104900	SOUTH FORK SAN GABRIEL RIVER AT GEORGETOWN
08105095	BERRY CREEK AT AIRPORT ROAD NEAR GEORGETOWN
08105505	WILLIS CREEK AT GRANGER
08105600	GRANGER LAKE NEAR GRANGER
08105700	SAN GABRIEL RIVER AT LANEPORT
08106500	LITTLE RIVER NEAR CAMERON
08108500	BRAZOS RIVER AT VALLEY JUNCTION (DISCONTINUED)
08111500	BRAZOS RIVER NEAR HEMPSTEAD
08114000	BRAZOS RIVER AT RICHMOND

NWS RAIN GAGES

GAGE ID:	LOCATION:	GAGE ID:	LOCATION:
23907	AUSTIN 33 NW, TX	BRT005	MARBLE FALLS 0.7 NW, TX
410246	ANDICE 2 SW, TX	BRT013	HIGHLAND HAVEN 1.3 SW, TX
411068	BRIGGS, TX	BRT065	GRANITE SHOALS 0.9 S, TX
411250	BURNET, TX	BRT069	MEADOWLAKES 0.4 NNE, TX
411348	CAMERON, TX	WM0001	GEORGETOWN 1.2 W, TX
413199	FLORENCE, TX	WM0012	PFLUGERVILLE 4.7 NNE, TX
413506	GEORGETOWN, TX	WM0016	CEDAR PARK 2.7 SSW, TX
413507	GEORGETOWN LAKE, TX	WM0022	LIBERTY HILL 0.6 NNW, TX
413685	GRANGER, TX	WM0035	BERTRAM 6.4 ESE, TX
413686	GRANGER DAM, TX	WM0044	JOLLYVILLE 1.2 WNW, TX
414556	JARRELL, TX	WM0048	THRALL 10.5 SSE, TX
414792	KILLEEN, TX	WM0050	BRUSHY CREEK 1.9 WNW, TX
415018	LAMPASAS, TX	WM0054	LEANDER 2.5 ESE, TX
418531	SPICEWOOD, TX	WM0061	ANDERSON MILL 1.4 NW
418862	TAYLOR, TX	WM0073	HUTTO 0.8 NNE, TX
418910	TEMPLE, TX	WM0102	ROUND ROCK 3.4 E, TX
419504	WATSON, TX	WM0119	BARTLETT 5.0 W, TX

BRAZOS RIVER BASIN, TEXAS

LAKE GEORGETOWN AND NORTH SAN GABRIEL DAM

NORTH SAN GABRIEL RIVER, TEXAS

REAL TIME WATER CONTROL BASE MAP

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

January 2017

PLATE 6 - 1

LAKE GEORGETOWN AND NORTH SAN GABRIEL DAM NORMAL SCHEDULE FOR LAKE REGULATION

REGULATION	LAKE STATUS	CONDITIONS	OPERATION
A. Conservation	Rising, standing, or falling	I. Lake elevation at or below 791.0	Releases from conservation storage will be made at the request of the Brazos River Authority (BRA). Releases should not contribute to rates of flow at any downstream control point in excess of the channel capacity flows shown in Table 7-2.
B. Flood control	Rising, standing, or falling	I. Lake elevation between 791.0 and 797.5	Controlled releases will normally be limited to a maximum of 1,500 cfs and should not contribute to rates of flow at any downstream control point in excess of the channel capacity flows shown in Table 7-2. For water quality purposes, when the lake level is between 791.0 and 795.0 feet, releases will normally be made through the low flow outlets. When the pool is in recession and approaching elevation 794.5 (~5% of flood pool) under a condition of relatively low inflow, make release decisions based on prevailing hydrologic conditions in conjunction with Chapter 7, Table 7-4, “Low Flood Pool Release Guidance”.
	Rising, standing, or falling	II. Lake elevation between 797.5 and 834.0	Controlled releases will normally be limited to a maximum of 3,000 cfs and should not contribute to rates of flow at any downstream control point in excess of the channel capacity flows shown in Table 7-2.
	Rising, standing, or falling	III. Lake elevation between 834.0 and 836.0	Controlled releases may be made in combination with spillway discharges if downstream channel capacity is available. Controlled releases should be adjusted as required so total project discharge does not exceed 6,000 cfs and does not contribute to rates of flow at any downstream control point in excess of the channel capacity flows shown in Table 7-2. All controlled outlets should be fully closed when the spillway discharge is at or above 6,000 cfs (pool elevation at or above 836.0). Refer to Chapter 7, paragraph 7-05.c.3 for information regarding monitoring of stilling basin conditions when making controlled releases in combination with spillway discharges.

TABLE 7-2 (from Chapter 7)
Key Downstream Control Points

River Channel and USGS Gaging Station	Channel Capacity (cfs)
North Fork San Gabriel River near Georgetown, TX	6,000
San Gabriel River at Laneport, TX	6,000
Little River near Cameron, TX	10,000
Brazos River at SH 21 near Bryan, TX	60,000
Brazos River near Hempstead, TX	60,000
Brazos River at Richmond, TX	60,000

TABLE 7-4 (from Chapter 7)
Low Flood Pool Release Guidance

Pool Elev Range [ft]	% of Flood Pool [%]	Release Rate* [cfs]
791.0 - 791.5	0 - 0.7	10 - 50
791.5 - 792.5	0.7 - 2.1	50 - 100
792.5 - 793.5	2.1 - 3.6	100 - 200
793..5 - 794.5	3.6 - 5.1	200 - 300

*Desired rate of release will vary with prevailing rates of inflow, lake evaporation, and water supply withdrawals. General objective is to evacuate from 5% to 2% of flood pool in about one week, from 2% to 1% the following week, then from 1% to TOC over an additional two to three week period.

BRAZOS RIVER BASIN, TEXAS
LAKE GEORGETOWN AND NORTH SAN GABRIEL DAM
NORTH SAN GABRIEL RIVER

NORMAL REGULATION PLAN FOR CONSERVATION RELEASES AND FLOOD CONTROL

U.S. ARMY ENGINEER DISTRICT, FORT WORTH January 2017

PLATE 7-1

LAKE GEORGETOWN AND NORTH SAN GABRIEL DAM

SCHEDULE FOR EMERGENCY REGULATION

EMERGENCY INSTRUCTIONS TO LAKE MANAGER FOR USE WHEN ALL COMMUNICATIONS FAIL

LAKE STATUS	CONDITION	OPERATION
A. Rising, standing, or falling	I. Lake elevation at or below 791.0	No flood control releases will be made when the lake level is at or below the top of conservation pool (elevation 791.0). Releases from the conservation storage will be made as instructed from the Fort Worth District Water Management Office at the request of the Brazos River Authority.
B. Rising, standing, or falling	II. Lake elevation above elevation 791.0 but below elevation 834.0	If flood control releases are in progress when communications with the Fort Worth District Water Management Office fails, close the gates, as soon as one of the following conditions occurs: (1) One or more inches of rain is experienced at or below the dam in six hours or less, or (2) there is knowledge of downstream flooding. Leave gates closed until communications are restored. When stopping flood releases, close the gate only at rates noted below and no faster. If no flood releases are in progress, continue conservation releases but do not start any flood releases. Under any condition, do not reduce releases below amount required by Condition A.I for conservation purpose.
C. Rising, standing, or falling	III. Lake elevation at or above elevation 834.0	Close the gates and leave closed until communications have been restored with the Fort Worth District Water Management office.

GATE OPERATION INSTRUCTIONS

1. The flood control gates will be operated in a manner prescribed by the manufacturer.
2. A complete log of all gate operations will be maintained at each gate.
3. Continuous releases through the flood control gates will be made as follows:
   a. The gates will be fully open, or
   b. The gates will be operated at half or less their full opening (5.0 feet or less). No continuous releases will be made with the gates open between one-half and full opening, and the gates will be open between half open and full only while changing opening.
4. Do not open or close flood control gates at rates faster than 0.5 foot every 30 minute period, per gate, unless there is downstream flooding or an emergency situation. For such emergency situations, close the gates as rapidly as may be necessary.
5. When going from half open to fully open, gates will be opened as quickly as possible.

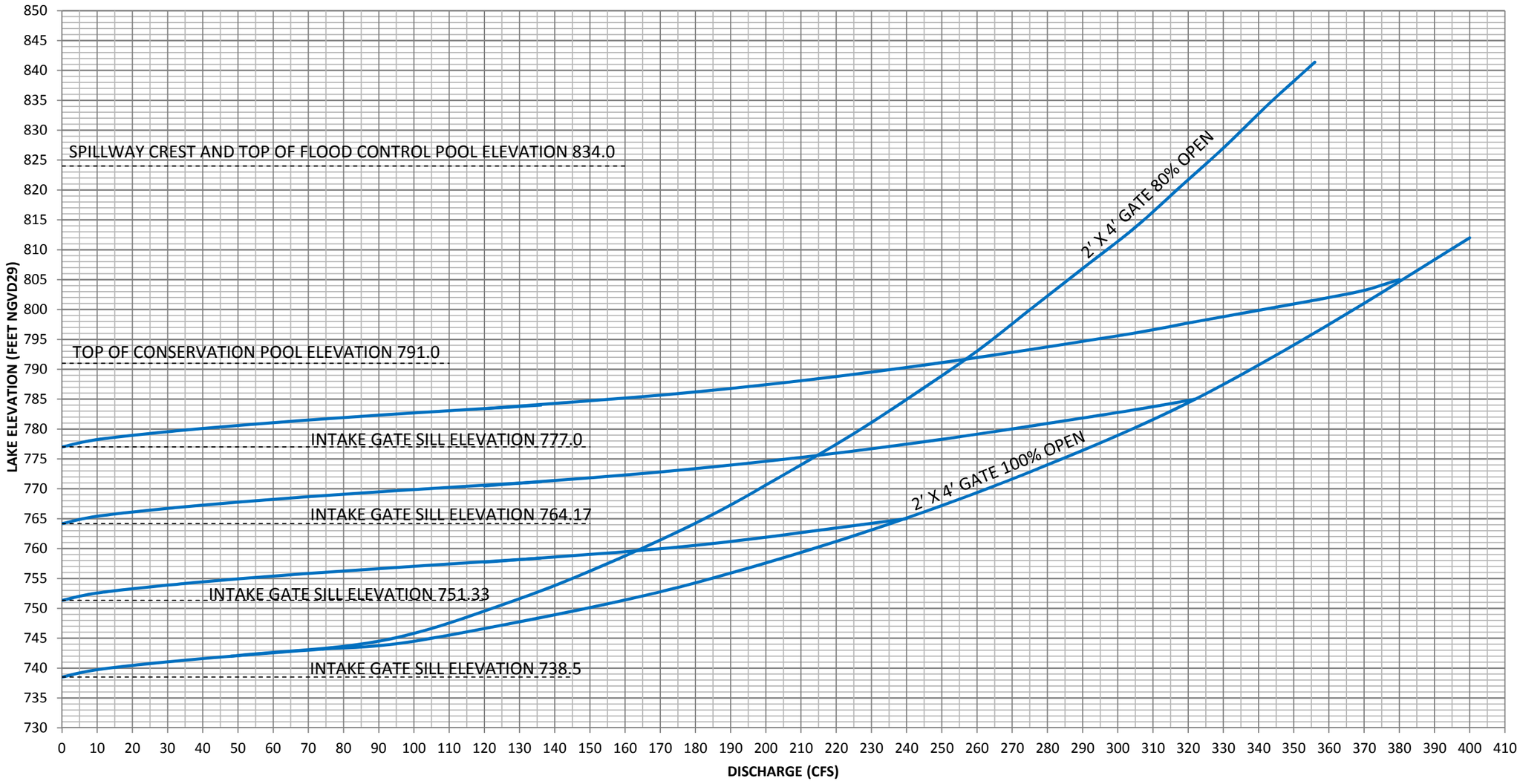
BRAZOS RIVER BASIN, TEXAS
LAKE GEORGETOWN
AND NORTH SAN GABRIEL DAM
NORTH SAN GABRIEL RIVER

EMERGENCY REGULATION PLAN

U.S. ARMY ENGINEER DISTRICT, FORT WORTH January 2017

PLATE 7-2

CORPS OF ENGINEERS U.S. ARMY



THE LOW FLOW OUTLETS CONSIST OF FOUR 3′ X 4′ SELECTOR GATES THAT TAKE WATER FROM THE LAKE TO A WET WELL, AND A 2′ X 4′ LOW FLOW CONDUIT CONTROLLED BY A SINGLE 2′ X 4′ SERVICE GATE THAT DISCHARGES WATER FROM THE WET WELL INTO THE UPSTREAM END OF THE FLOOD CONTROL CONDUIT.

A 10″ VALVE IS PROVIDED FOR RELEASES FROM LAKE POOL LEVELS BELOW ELEVATION 738.5.

THE DATUM CONVERSION FROM NGVD29 TO NAVD88 IS: NGVD29 + 0.3 FEET = NAVD88 FOR NORTH SAN GABRIEL DAM AND GEORGETOWN LAKE.

BRAZOS RIVER BASIN, TEXAS

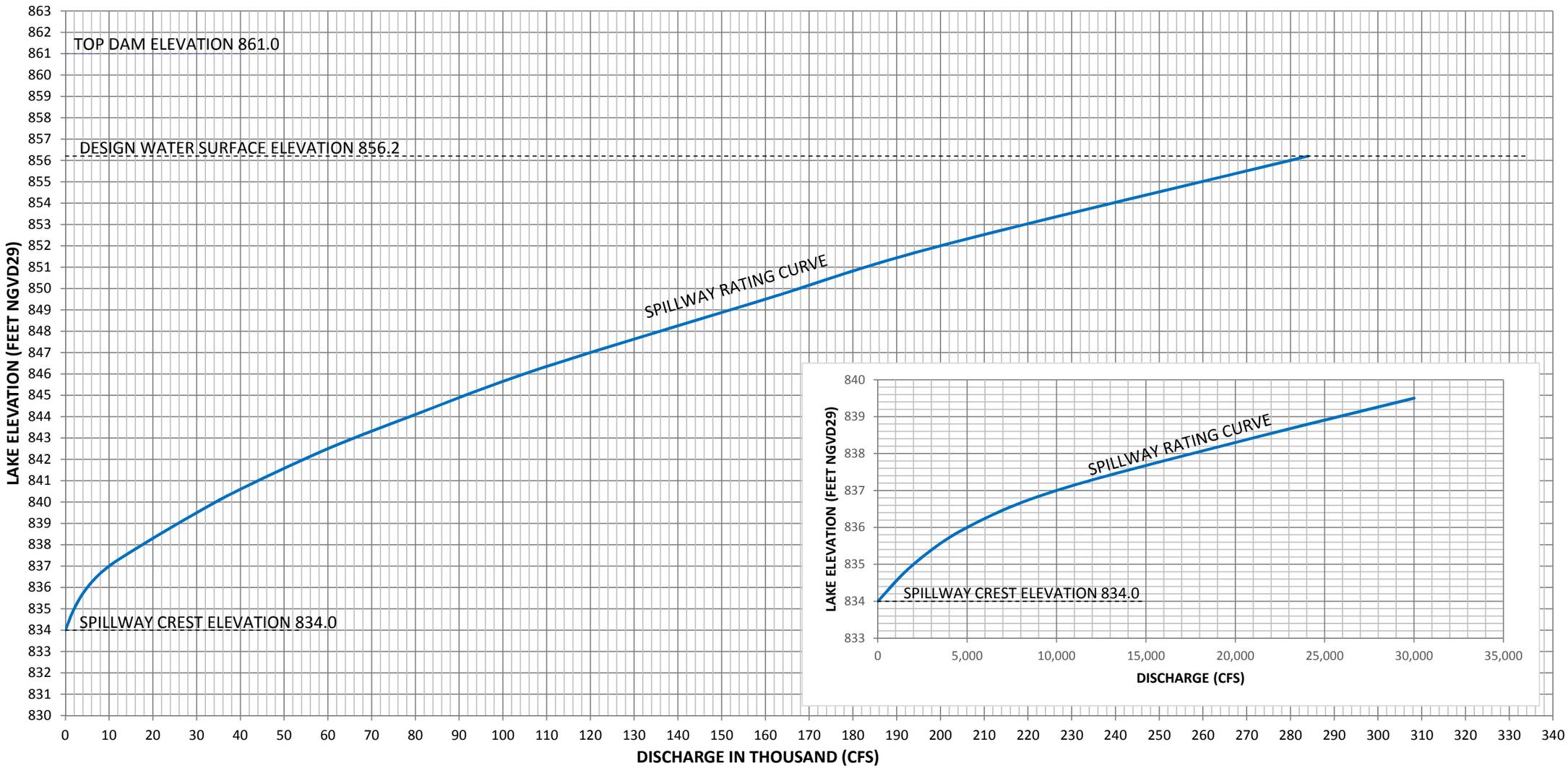
LAKE GEORGETOWN AND NORTH SAN GABRIEL DAM

NORTH SAN GABRIEL RIVER, TEXAS

LOW FLOW OUTLETS RATING CURVES

U.S. ARMY ENGINEER DISTRICT, FORT WORTH January 2017

PLATE 7-3



THE SPILLWAY IS A 1,00 FEET LONG, UNCONTROLLED BROAD-CRESTED WEIR.

THE DATUM CONVERSION FROM NGVD29 TO NAVD88 IS: NGVD29 + 0.3 FEET = NAVD88 FOR NORTH SAN GABRIEL DAM AND GEORGETOWN LAKE.

BRAZOS RIVER BASIN, TEXAS

LAKE GEORGETOWN
AND NORTH SAN GABRIEL DAM

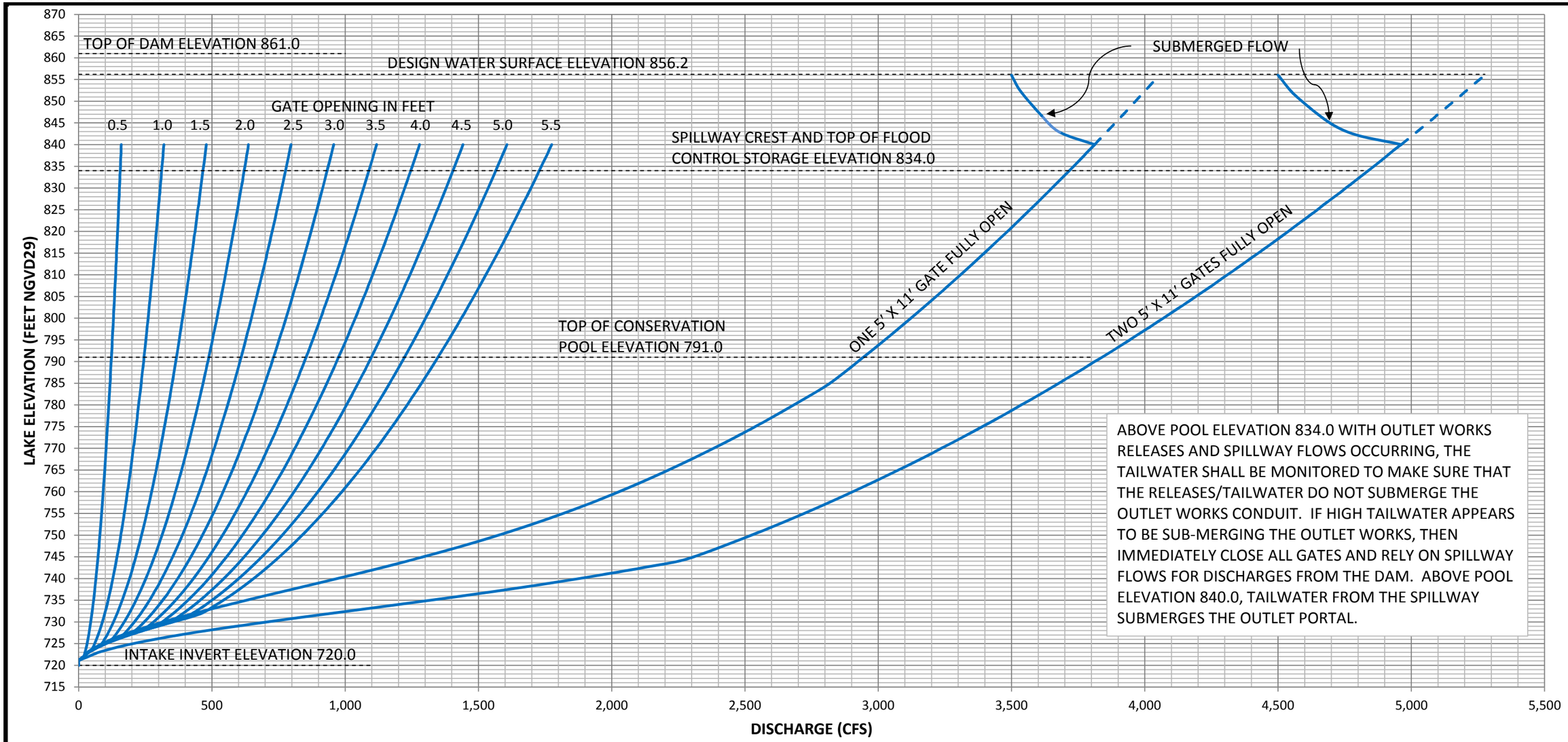
NORTH SAN GABRIEL RIVER, TEXAS

SPILLWAY RATING CURVE

U.S. ARMY ENGINEER DISTRICT, FORT WORTH January 2017

PLATE 7-4

CORPS OF ENGINEERS U.S. ARMY



ABOVE POOL ELEVATION 834.0 WITH OUTLET WORKS RELEASES AND SPILLWAY FLOWS OCCURRING, THE TAILWATER SHALL BE MONITORED TO MAKE SURE THAT THE RELEASES/TAILWATER DO NOT SUBMERGE THE OUTLET WORKS CONDUIT. IF HIGH TAILWATER APPEARS TO BE SUB-MERGING THE OUTLET WORKS, THEN IMMEDIATELY CLOSE ALL GATES AND RELY ON SPILLWAY FLOWS FOR DISCHARGES FROM THE DAM. ABOVE POOL ELEVATION 840.0, TAILWATER FROM THE SPILLWAY SUBMERGES THE OUTLET PORTAL.

OUTLET WORKS CONSISTS OF ONE 11′ DIAMETER CONDUIT CONTROLLED BY TWO 5′ X 11′ HYDRAULIC OPERATED SLIDE GATES.

CONDUIT LENGTH = 1200 FEET.

THE DATUM CONVERSION FROM NGVD29 TO NAVD88 IS: NGVD29 + 0.3 FEET = NAVD88 FOR NORTH SAN GABRIEL DAM AND GEORGETOWN LAKE.

BRAZOS RIVER BASIN, TEXAS

LAKE GEORGETOWN AND NORTH SAN GABRIEL DAM

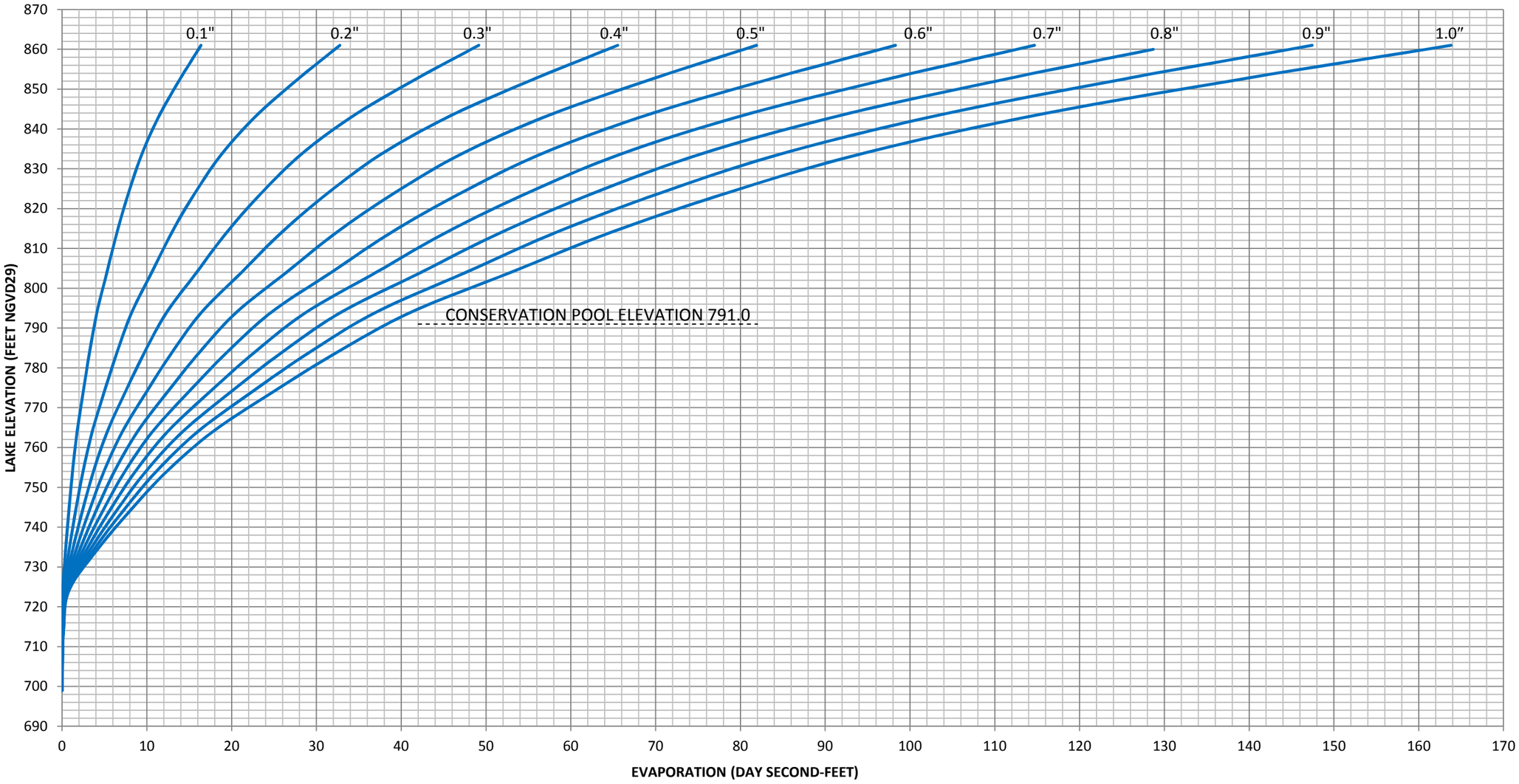
NORTH SAN GABRIEL RIVER

OUTLET WORKS RATING CURVES

U.S. ARMY ENGINEER DISTRICT, FORT WORTH January 2017

PLATE 7-5

CORPS OF ENGINEERS U.S. ARMY



ONE DAY SECOND-FEET IS EQUAL TO 1.9835 ACRE-FEET.

THE CURVES REPRESENT PAN EVAPORATION AMOUNTS FROM 0.1-INCH TO 1.0-INCH.

THE DATUM CONVERSION FROM NGVD29 TO NAVD88 IS: NGVD29 + 0.3 FEET = NAVD88 FOR NORTH SAN GABRIEL DAM AND GEORGETOWN LAKE.

BRAZOS RIVER BASIN, TEXAS

LAKE GEORGETOWN AND NORTH SAN GABRIEL DAM

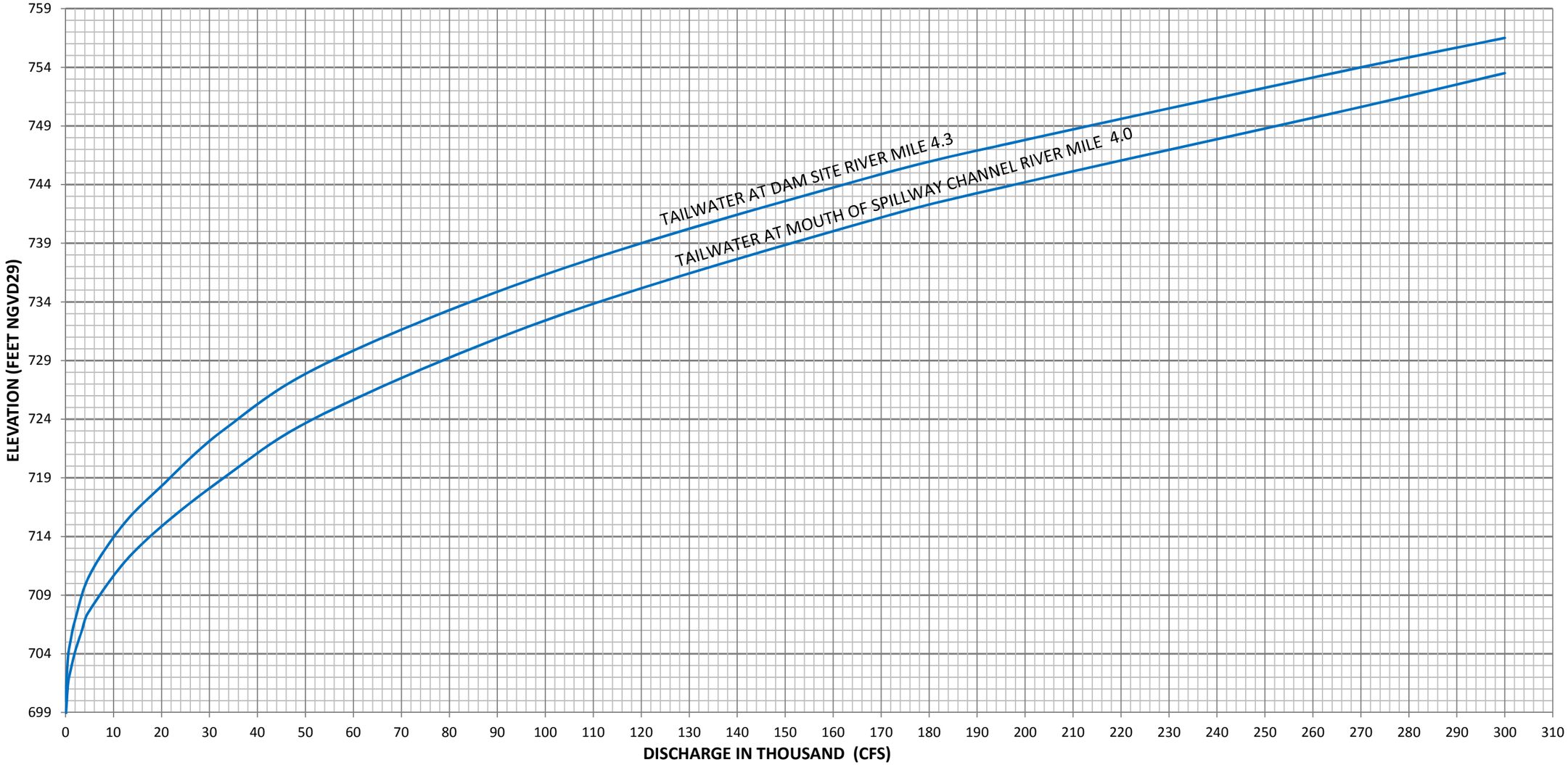
NORTH SAN GABRIEL RIVER

LAKE EVAPORATION CURVES

U.S. ARMY ENGINEER DISTRICT, FORT WORTH January 2017

PLATE 7-6

CORPS OF ENGINEERS U.S. ARMY



THE DATUM CONVERSION FROM NGVD29 TO NAVD88 IS: NGVD29 + 0.3 FEET = NAVD88 FOR NORTH SAN GABRIEL DAM AND GEORGETOWN LAKE.

BRAZOS RIVER BASIN, TEXAS

LAKE GEORGETOWN AND NORTH SAN GABRIEL DAM

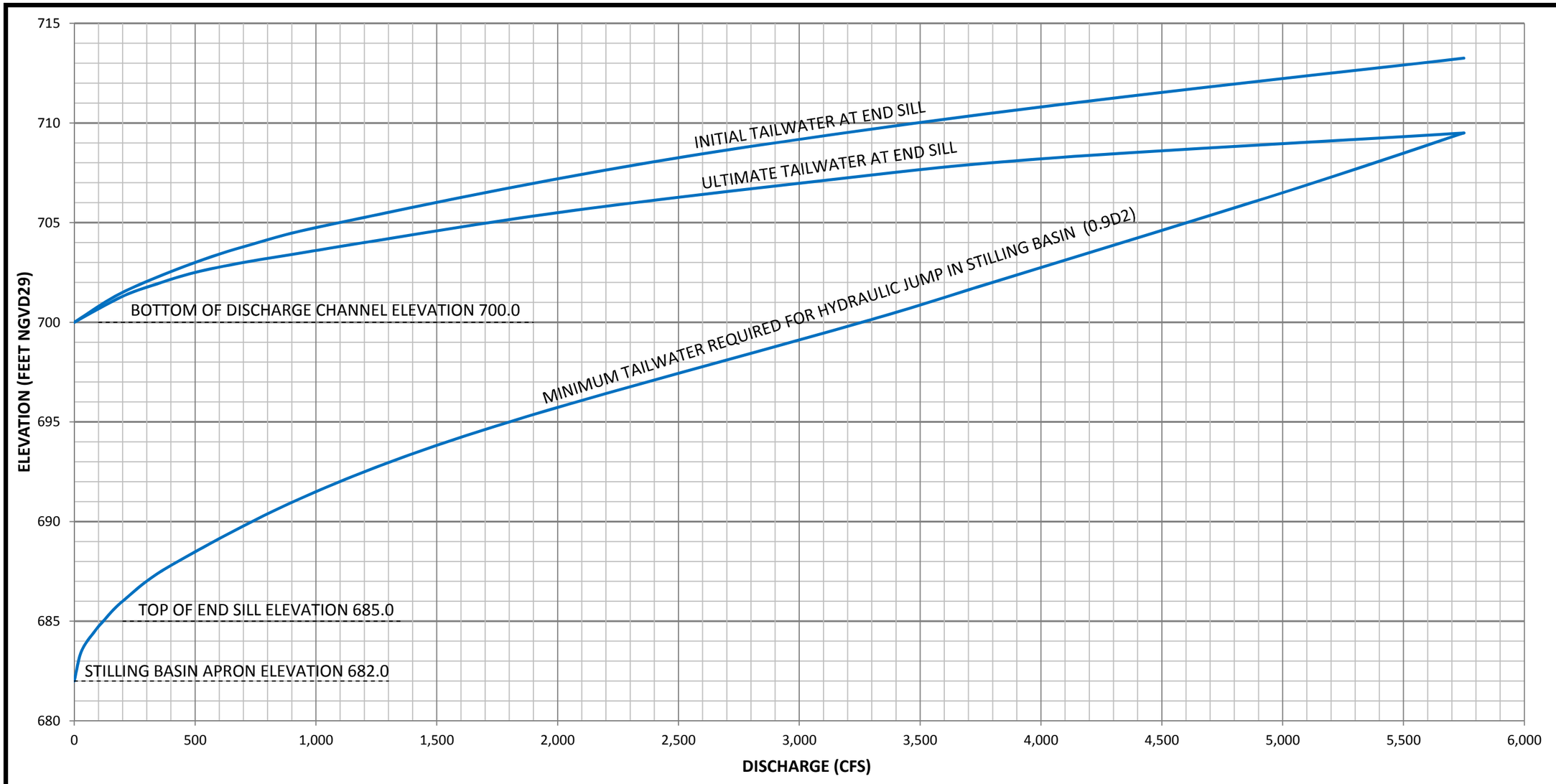
NORTH SAN GABRIEL RIVER

TAILWATER RATING CURVES AT SPILLWAY STILLING BASIN

U.S. ARMY ENGINEER DISTRICT, FORT WORTH January 2017

PLATE 7-7

CORPS OF ENGINEERS U.S. ARMY



THE DATUM CONVERSION FROM NGVD29 TO NAVD88 IS: NGVD29 + 0.3 FEET = NAVD88 FOR NORTH SAN GABRIEL DAM AND GEORGETOWN LAKE.

BRAZOS RIVER BASIN, TEXAS

LAKE GEORGETOWN
AND NORTH SAN GABRIEL DAM

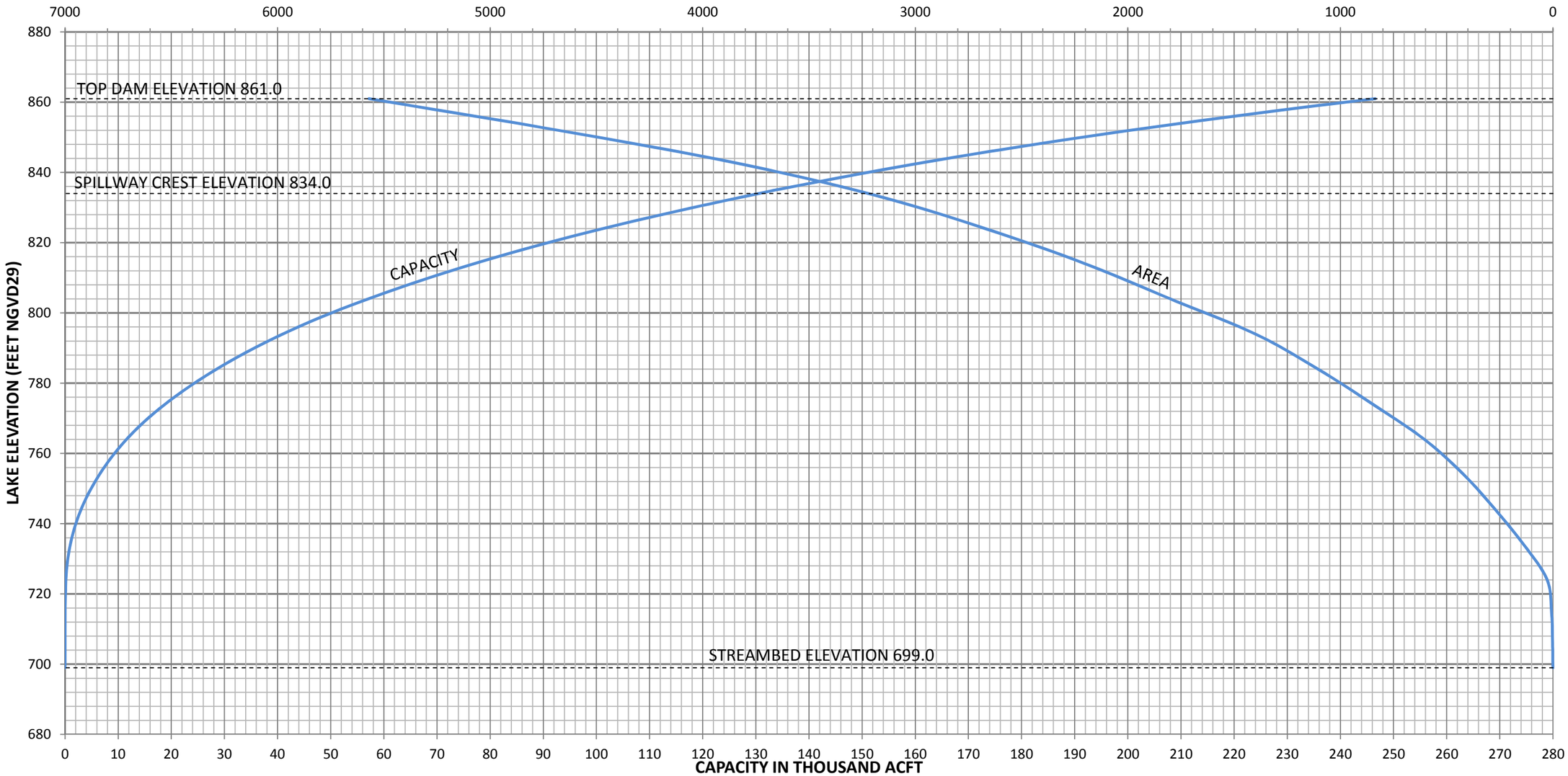
NORTH SAN GABRIEL RIVER, TEXAS

TAILWATER RATING CURVES
OUTLET WORKS STILLING BASIN

U.S. ARMY ENGINEER DISTRICT, FORT WORTH January 2017

PLATE 7-8

CORPS OF ENGINEERS U.S. ARMY



THE DATUM CONVERSION FROM NGVD29 TO NAVD88 IS: NGVD29 + 0.3 FEET = NAVD88 FOR NORTH SAN GABRIEL DAM AND GEORGETOWN LAKE.

BRAZOS RIVER BASIN, TEXAS

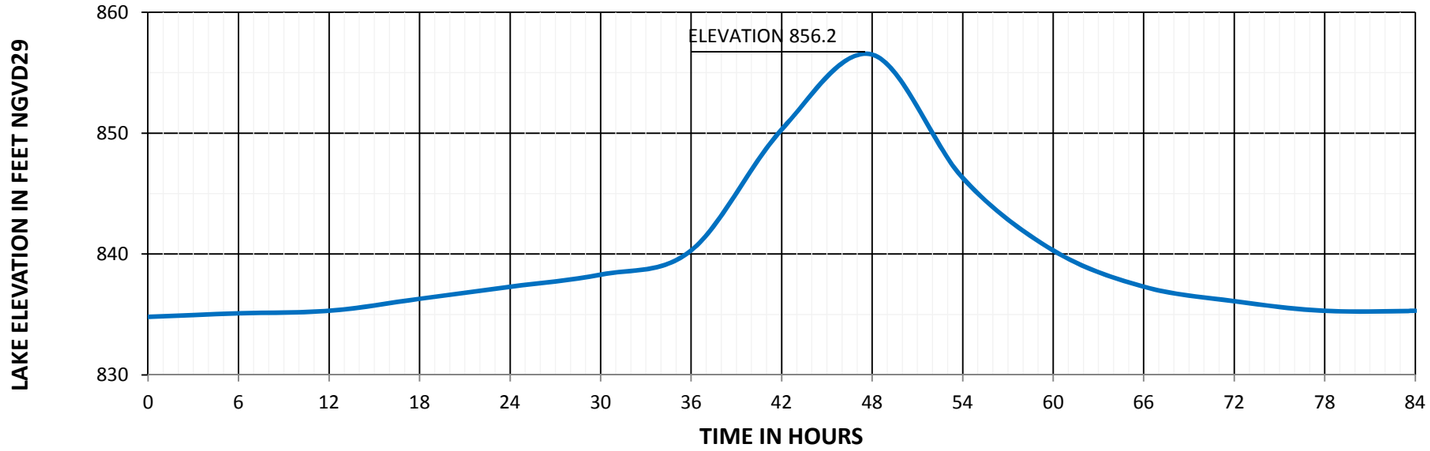
LAKE GEORGETOWN
AND NORTH SAN GABRIEL DAM

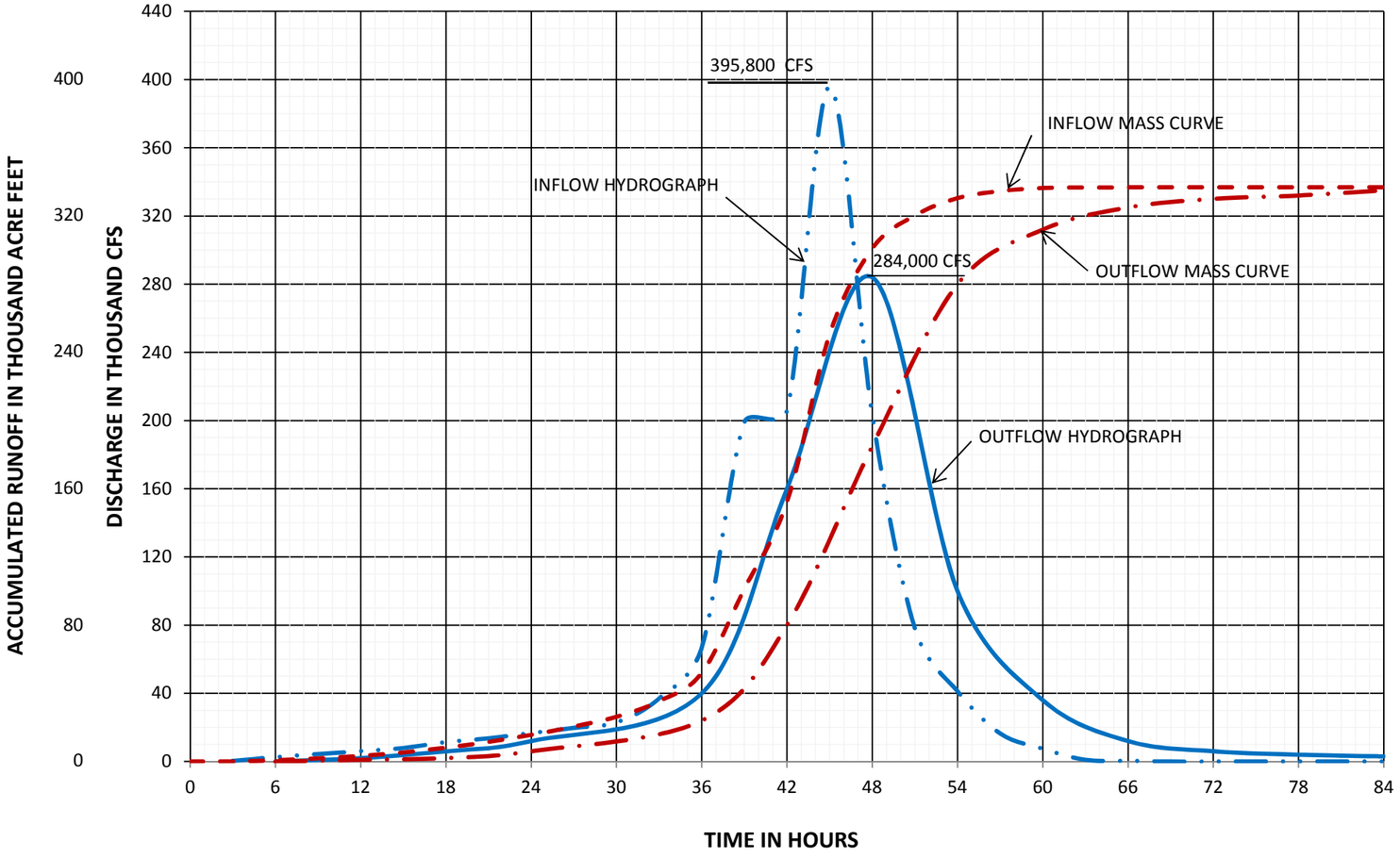
NORTH SAN GABRIEL RIVER, TEXAS

AREA AND CAPACITY CURVES

U.S. ARMY ENGINEER DISTRICT, FORT WORTH — January 2017

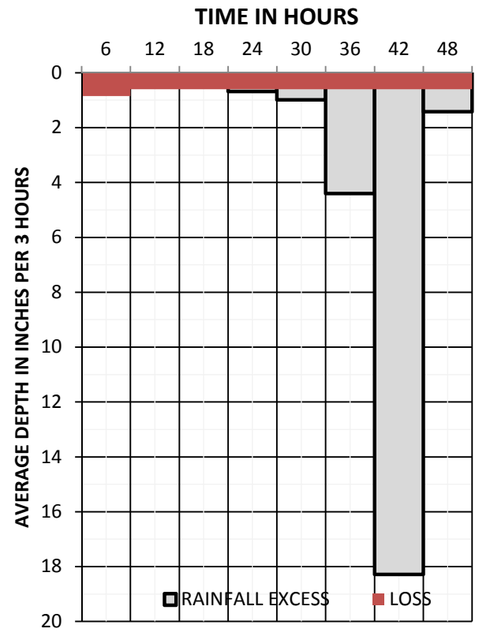
PLATE 7-9





HYETOGRAPH (INCHES)

RAINFALL TOTAL	31.66
LOSS TOTAL	5.05
RAINFALL - EXCESS TOTAL	26.61
INITIAL LOSS	1.00
INFILTRATION INDEX (F. A. V. G)	0.10



NOTE: DATA IS OBTAINED "DESIGN MEMORANDUM NO. 1, PART C, HYDROLOGY, SUPPLEMENT NO.1 , ON NORTH FORK LAKE" DATED JULY 1973.

BRAZOS RIVER BASIN, TEXAS

LAKE GEORGETOWN AND NORTH SAN GABRIEL DAM

NORTH SAN GABRIEL RIVER, TEXAS

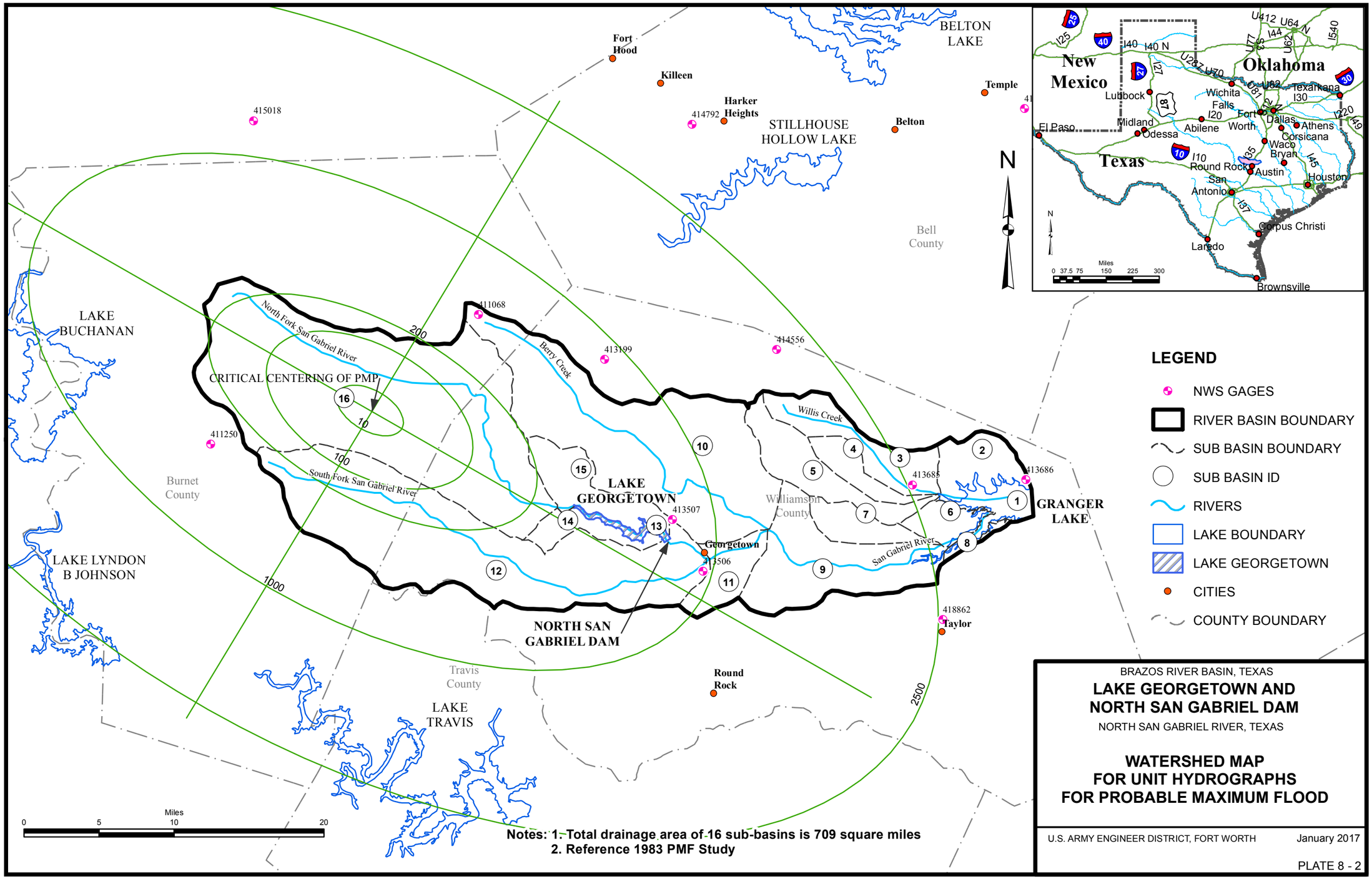
SPILLWAY DESIGN FLOOD

U.S. ARMY ENGINEER DISTRICT, FORT WORTH — January 2017

PLATE 8 - 1

CORPS OF ENGINEERS

U.S. ARMY



BRAZOS RIVER BASIN, TEXAS

LAKE GEORGETOWN AND NORTH SAN GABRIEL DAM

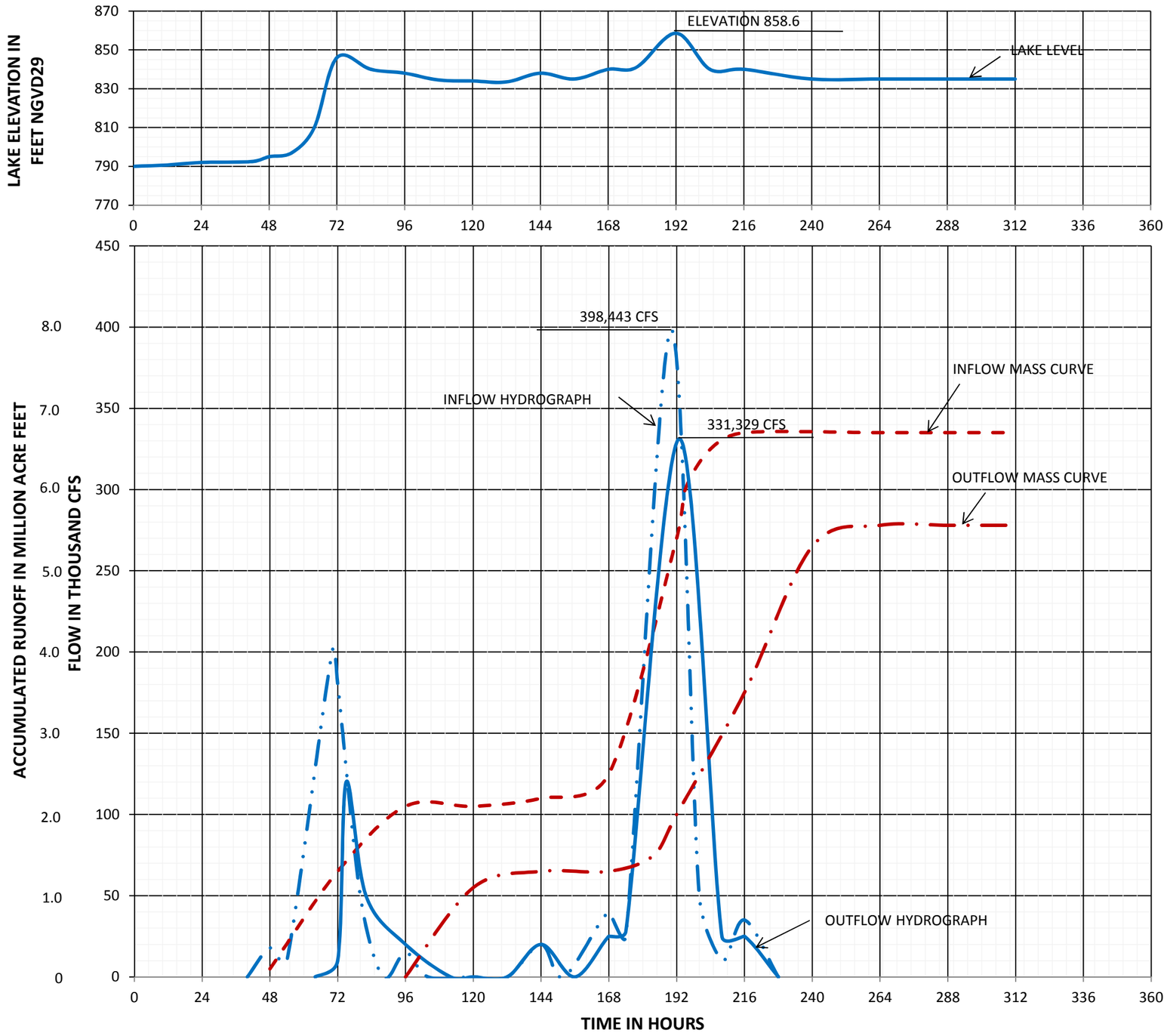
NORTH SAN GABRIEL RIVER, TEXAS

WATERSHED MAP FOR UNIT HYDROGRAPHS FOR PROBABLE MAXIMUM FLOOD

U.S. ARMY ENGINEER DISTRICT, FORT WORTH

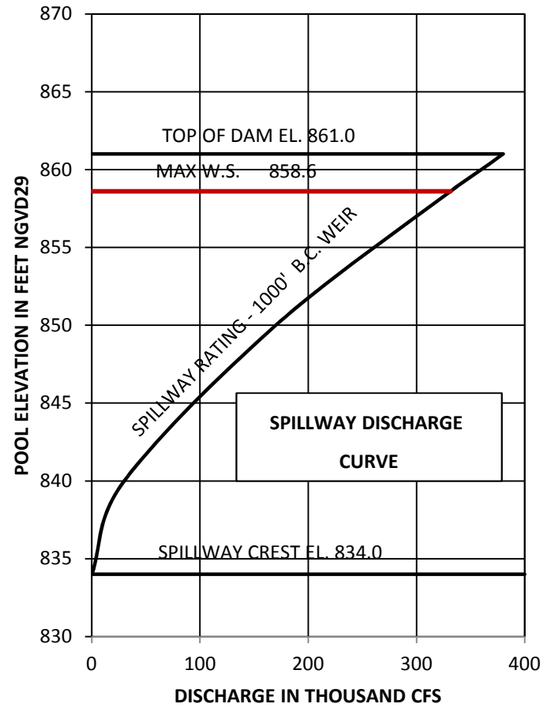
January 2017

PLATE 8 - 2



HYETOGRAPH (INCHES)

RAINFALL	42.63
LOSS	7.93
RAINFALL - EXCESS	34.70
INITIAL LOSS	1.00
INFILTRATION INDEX (F. A. V. G)	0.10



NOTE: DATA IS OBTAINED FROM LAKE GEORGETOWN 1983 HYDROLOGY STUDY.

BRAZOS RIVER BASIN, TEXAS

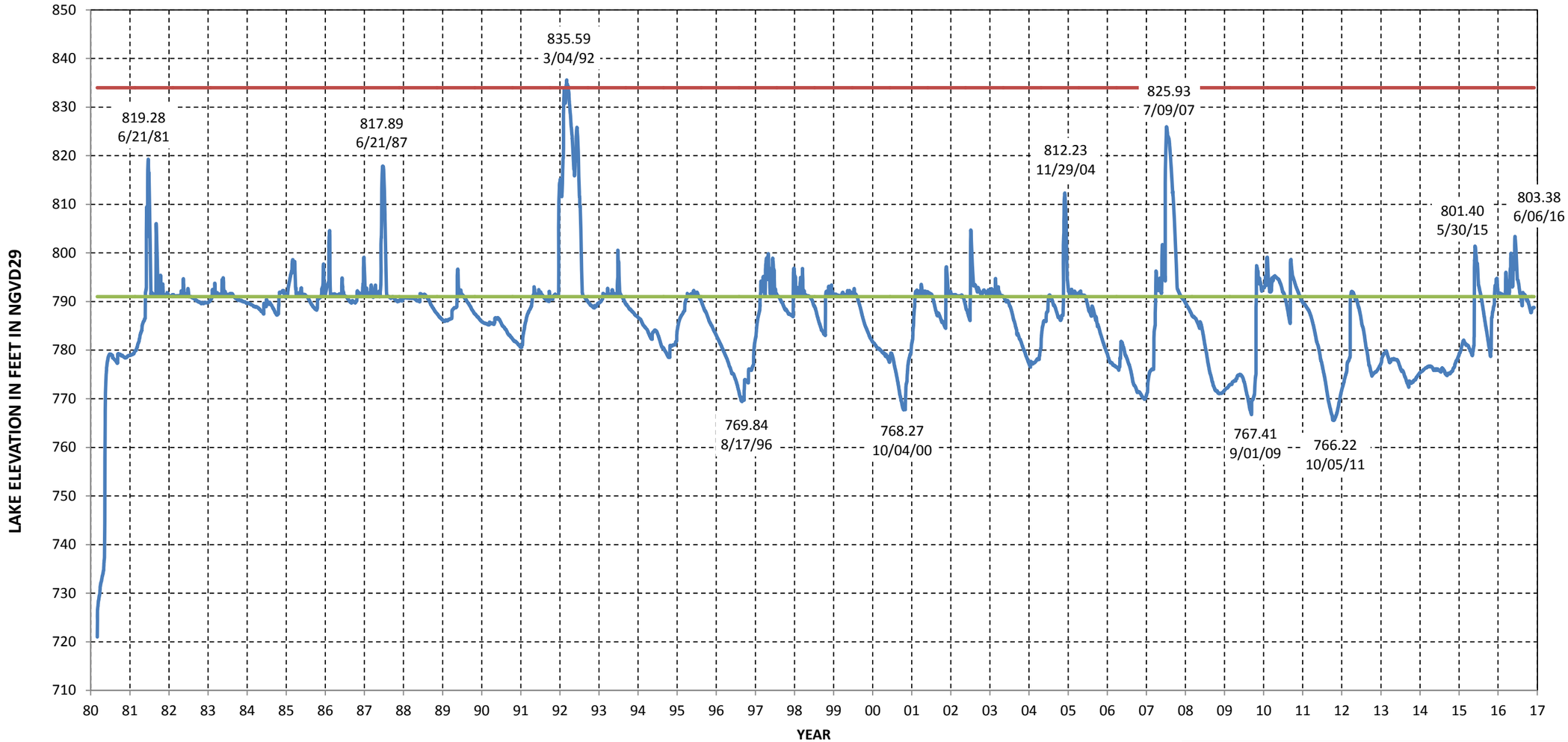
LAKE GEORGETOWN AND NORTH SAN GABRIEL DAM

NORTH SAN GABRIEL RIVER, TEXAS

PROBABLE MAXIMUM FLOOD INFLOW-OUTFLOW HYDROGRAPHS

U.S. ARMY ENGINEER DISTRICT, FORT WORTH — January 2017

PLATE 8 - 3



LAKE ELEVATION

SPILLWAY CREST ELEVATION 834.0

CONSERATION POOL ELEVATION 791.0

DELIBERATE IMPOUNDMENT BEGAN: 03/03/1980

RECORD LAKE ELEVATION AND DATE: 835.59 NGVD29, 03/04/1992

ALL ELEVATIONS REFERRED TO ON THIS PLATE, UNLESS NOTED OTHERWISE, ARE IN FEET, NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD29).
THE DATUM CONVERSION FROM NGVD29 TO NAVD88 IS: NGVD29 + 0.3 FEET = NAVD88 FOR LAKE GEORGETOWN AND NORTH SAN GABRIEL DAM.

BRAZOS RIVER BASIN, TEXAS

LAKE GEORGETOWN AND NORTH SAN GABRIEL DAM

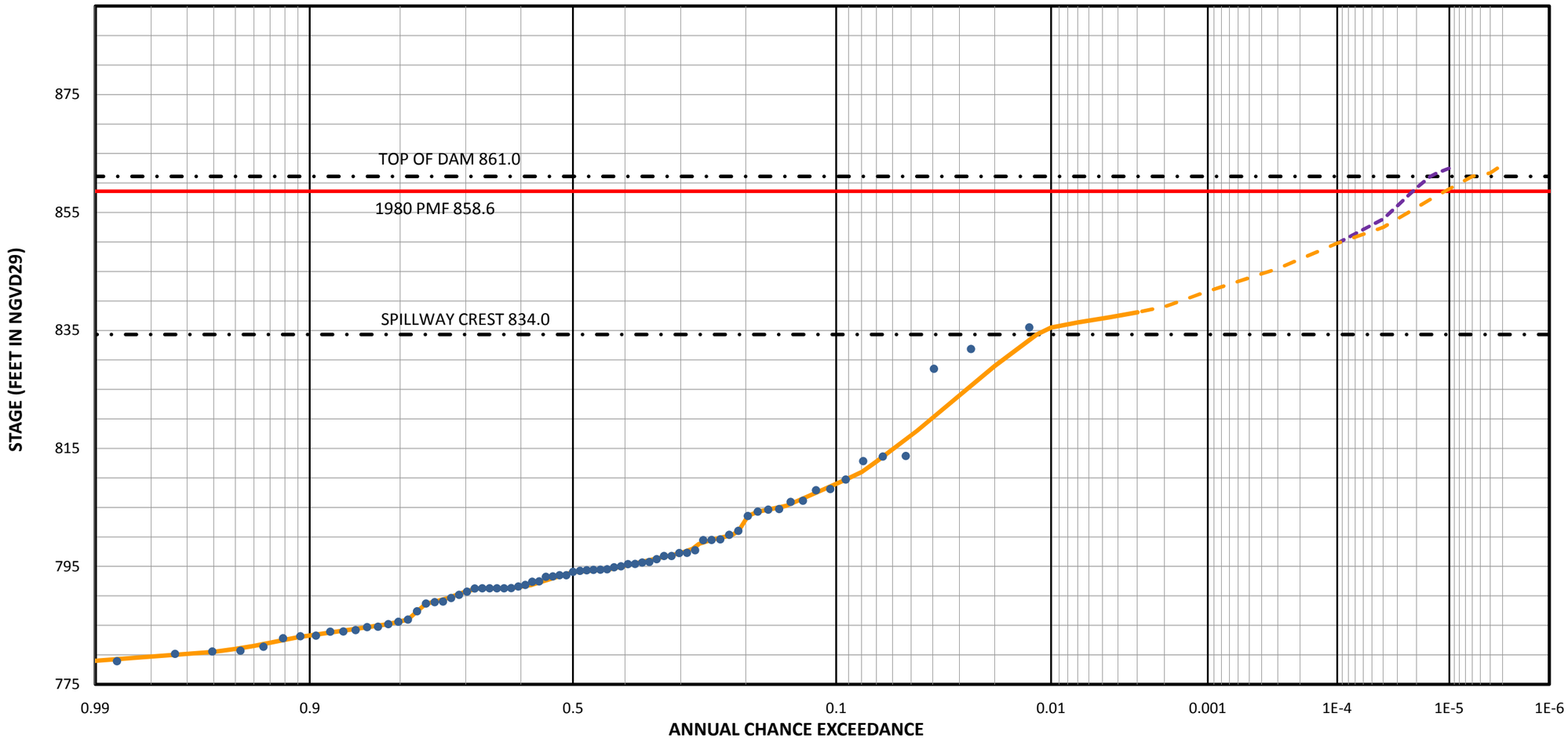
NORTH SAN GABRIEL RIVER, TEXAS

PERIOD OF RECORD LAKE LEVEL

U.S. ARMY ENGINEER DISTRICT, FORT WORTH — January 2017

PLATE 8 - 4

NORTH SAN GABRIEL DAM STAGE FREQUENCY



ALL ELEVATIONS REFERRED TO ON THIS PLATE, UNLESS NOTED OTHERWISE, ARE IN FEET, NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD29).
THE DATUM CONVERSION FROM NGVD29 TO NAVD88 IS: NGVD29 + 0.3 FEET = NAVD88 FOR LAKE GEORGETOWN AND NORTH SAN GABRIEL DAM.

BRAZOS RIVER BASIN, TEXAS

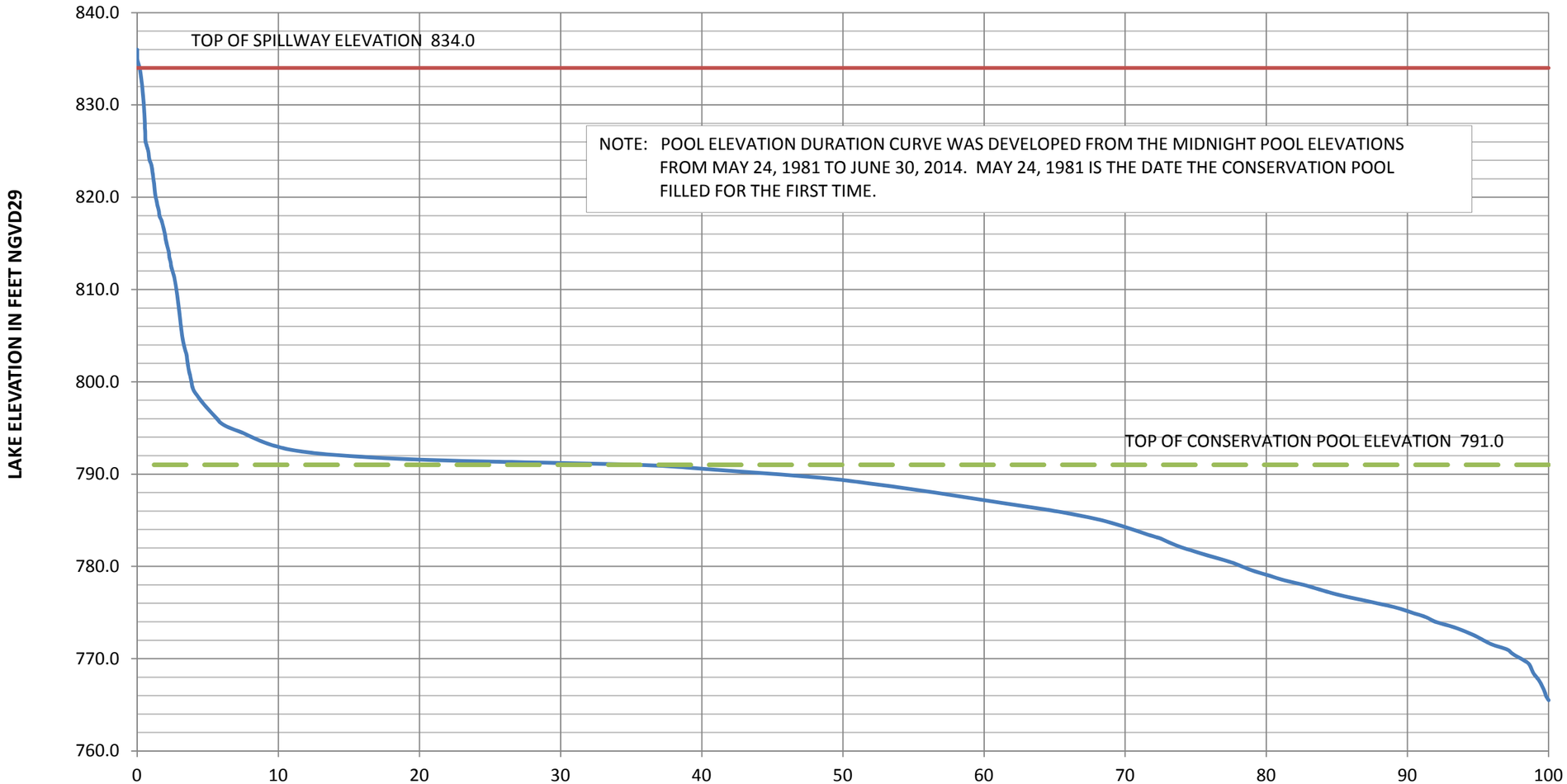
LAKE GEORGETOWN
AND NORTH SAN GABRIEL DAM

NORTH SAN GABRIEL RIVER, TEXAS

ANNUAL PEAK
ELEVATION FREQUENCY

U.S. ARMY ENGINEER DISTRICT, FORT WORTH — January 2017

LAKE GEORGETOWN



ALL ELEVATIONS REFERRED TO ON THIS PLATE, UNLESS NOTED OTHERWISE, ARE IN FEET, NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD29). THE DATUM CONVERSION FROM NGVD29 TO NAVD88 IS: NGVD29 + 0.3 FEET = NAVD88 FOR LAKE GEORGETOWN AND NORTH SAN GABRIEL DAM.

BRAZOS RIVER BASIN, TEXAS

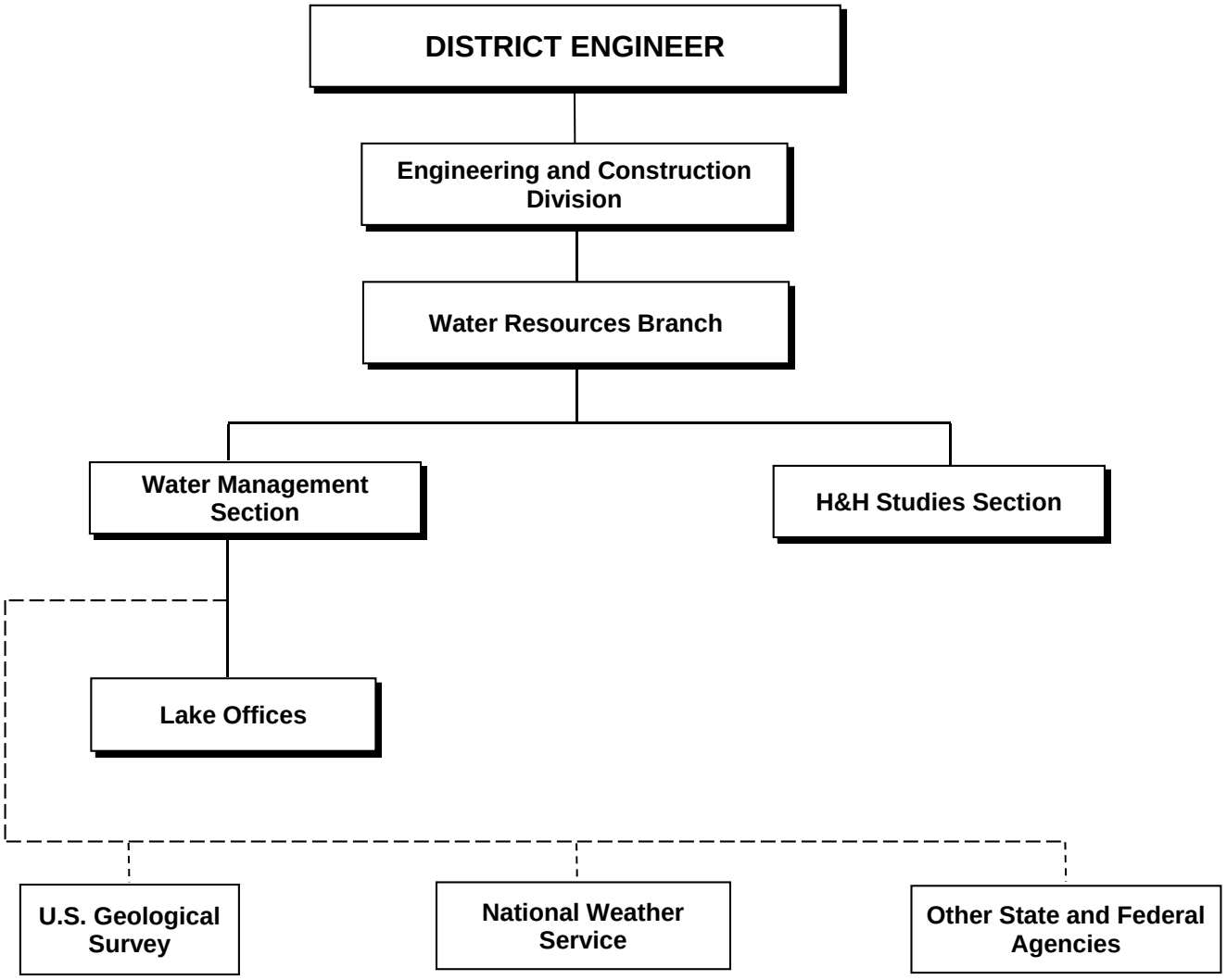
LAKE GEORGETOWN
AND NORTH SAN GABRIEL DAM

NORTH SAN GABRIEL RIVER, TEXAS

LAKE ELEVATION DURATION

U.S. ARMY ENGINEER DISTRICT, FORT WORTH — January 2017

FORT WORTH DISTRICT
ORGANIZATION FOR LAKE REGULATION



LINES OF COMMAND AUTHORITY

LINES OF DIRECT COMMUNICATION

BRAZOS RIVER BASIN, TEXAS

LAKE GEORGETOWN AND NORTH SAN GABRIEL DAM

NORTH SAN GABRIEL RIVER, TEXAS

ORGANIZATION FOR FLOOD CONTROL REGULATION

U.S. ARMY ENGINEER DISTRICT, FORT WORTH January 2017

PLATE 9 - 1

FORT WORTH DISTRICT CORPS OF ENGINEERS
RESERVOIR REPORT FOR SATURDAY 01AUG2015

RESERVOIR	ELEVATION 0800 FT-NGVD	TOP CONS POOL	MEAN INFLOW DSF	MEAN TURBINE DSF	DAILY RELEASES PUMP MGD	OTHER DSF	RAIN INCHES	EVAP	0800 RELEASE CFS	POOL OCCUPIED %		A-F
RED RIVER BASIN												
Cooper	439.78	440.0	-162	--	18.618	5	0.00	.31	5	98	C	256411
Wright Patm	235.53	226.3	9205	--	49.706	9907	0.00	.16	10352	16	F	367034
Bob Sandlin	337.08	337.5	-239	--	--	0	--	--	0	98	C	198196
Lake O Pine	230.81	230.0	-221	--	--	301	0.00	--	301	3	F	16271
Caddo	169.30	168.5	1962	--	--	3141	0.00	--	2918	8	S	22059
NECHES RIVER BASIN												
Sam Rayburn	166.72	164.4	3597	1671	--	9487	0.00	.23	12744	25	F	251677
B.A. Steinh	82.06	83.0	9841	872	--	10477	0.32	.49	10886	86	C	57375
TRINITY RIVER BASIN												
Bridgeport	835.67	836.0	-494	--	--	0	0.02	--	0	99	C	356972
Eagle Mount	648.96	649.0	168	--	61.781	169	0.00	--	169	100	C	181265
Lake Worth	593.14	594.0	106	--	82.316	0	0.00	--	0	92	C	33791
Benbrook	695.18	694.0	-21	--	167.659	0	0.00	.64	0	6	F	4443
Joe Pool	532.15	522.0	23	--	9.236	358	0.00	.34	358	69	F	87158
Mountain Ck	458.14	457.0	307	--	--	0	--	--	794	--	S	3312
Ray Roberts	637.82	632.5	-273	--	11.629	1939	--	--	1938	64	F	169234
Lewisville	528.47	522.0	2092	0	76.759	4844	0.00	--	4839	61	F	207643
Grapevine	553.33	535.0	-927	--	--	1898	0.00	.37	1894	68	F	164553
Lavon	492.66	492.0	-123	--	410.157	394	0.00	.25	393	5	F	13893
Ray Hubbard	435.45	435.5	153	--	212.700	0	0.00	--	0	100	C	488563
Cedar Creek	321.39	322.0	50	--	28.040	0	0.00	--	0	97	C	648093
Navarro Mil	429.39	424.5	-294	--	9.420	1484	0.00	.52	1464	19	F	28189
Bardwell	421.51	421.0	-4	--	6.470	173	0.00	.40	91	2	F	1674
Richland Cr	315.32	315.0	2191	--	63.240	1870	0.00	--	1864	--	S	13463
BRAZOS RIVER BASIN												
Possum King	999.34	999.0	422	--	--	201	0.00	.29	201	--	C	5522
Granbury	692.64	692.7	-161	--	72.250	2	0.00	.34	2	100	C	126327
Whitney	532.96	533.0	277	846	--	25	0.00	.34	25	100	P	232827
Aquilla	537.22	537.5	-14	--	--	1	--	--	1	97	C	30412
Waco	461.92	462.0	81	--	46.791	60	0.00	.30	60	100	C	180188
Proctor	1168.98	1162.0	111	--	3.176	1456	0.00	.41	1410	12	F	37753
Belton	594.92	594.0	1089	--	58.305	1293	--	--	1031	2	F	11271
Stillhouse	622.11	622.0	-19	--	0.000	1	0.00	.41	1	0	F	714
Georgetown	790.27	791.0	6	--	51.045	0	0.00	.27	0	97	C	35900
Granger	504.48	504.0	56	--	4.408	121	0.00	.47	91	1	F	2054
Somerville	247.68	238.0	122	--	4.377	2166	0.00	.34	2159	39	F	136049
Limestone	362.08	363.0	-137	--	--	29	0.00	.05	28	94	C	192490
COLORADO RIVER BASIN												
Twin Buttes	1900.36	1940.2	-9	--	--	0	0.00	--	0	9	C	15073
O.C. Fisher	1873.74	1908.0	-9	--	0.000	0	0.00	.45	0	39	D	14239
O.H. Ivie	1510.48	1551.5	--	--	--	--	--	--	--	16	C	90730
Hords Creek	1886.20	1900.0	1	--	0.000	1	0.00	.44	1	27	C	1820
Buchanan	1007.43	1020.5	--	--	--	--	--	--	--	68	C	571665
Marshall Fo	670.40	681.0	-216	202	--	0	0.00	.34	0	83	C	927623
GUADALUPE RIVER BASIN												
Canyon	909.27	909.0	176	260	--	0	0.17	.17	256	1	F	2246

Pumpage below dam (MGD): Grapevine 7.515, and Belton 24.453.
Total outflow includes this and pumpage tabulated.
Preliminary data--Inflow not adjusted for wind effect, etc.

D = Sediment Pool
C = Conservation Pool
P = Power Pool
F = Flood Pool
S = Surcharge Pool
nr = Not reported today

BRAZOS RIVER BASIN, TEXAS

LAKE GEORGETOWN AND NORTH SAN GABRIEL DAM

NORTH SAN GABRIEL RIVER, TEXAS

DAILY REPORT

U.S. ARMY ENGINEER DISTRICT, FORT WORTH January 2017

Georgetown
Monthly Report
SEP2013

DAY:	ELEVATIONS 0800	ELEVATIONS 2400	STORAGE: 2400	EVAP:	PUMP:	RELEASES TURBINE	RELEASES OTHER	ADJ. INFLOW:	RAIN
	FEET-NGVD		A-F	DSF:	DSF:	DSF	DSF	DSF	INCH
1	773.37	773.40	18294	10	33.2	0	0	1	0.00
2	773.29	773.32	18227	9	30.3	0	0	0	0.00
3	773.24	773.27	18186	3	16.7	0	0	0	0.19
4	773.22	773.21	18136	6	23.8	0	0	5	0.29
5	773.19	773.21	18136	14	17.7	0	0	32	0.33
6	773.14	773.17	18103	7	15.4	0	0	6	0.00
7	773.09	773.12	18062	3	14.4	0	0	0	0.00
8	773.01	773.04	17996	10	25.6	0	0	0	0.00
9	772.95	772.97	17938	6	25.4	0	0	0	0.00
10	772.92	772.94	17914	4	4.7	0	0	9	0.15
11	772.87	772.89	17873	4	14.3	0	0	2	0.02
12	772.80	772.83	17824	5	20.8	0	0	2	0.00
13	772.74	772.77	17774	7	21.1	0	0	0	0.00
14	772.67	772.70	17709	5	23.7	0	0	0	0.00
15	772.59	772.62	17652	5	28.4	0	0	0	0.00
16	772.52	772.54	17587	5	28.6	0	0	0	0.00
17	772.48	772.51	17563	7	10.0	0	0	6	0.01
18	772.42	772.45	17514	5	19.7	0	0	1	0.00
19	772.34	772.37	17449	6	24.7	0	0	0	0.00
20	772.44	772.43	17498	1	16.9	0	0	43	1.29
21	773.53	773.19	18120	3	-1.2	0	0	315	1.57
22	773.65	773.64	18494	0	-0.2	0	0	189	0.00
23	773.66	773.66	18511	9	4.3	0	0	23	0.00
24	773.65	773.67	18519	2	-2.6	0	0	0	0.00
25	773.62	773.64	18494	8	4.2	0	0	0	0.00
26	773.59	773.60	18461	6	11.3	0	0	0	0.00
27	773.54	773.56	18427	7	9.8	0	0	0	0.00
28	773.53	773.55	18419	4	8.9	0	0	9	0.12
29	773.55	773.54	18411	2	4.7	0	0	3	0.00
30	773.55	773.55	18419	2	-2.0	0	0	0	0.00
MONTHLY TOTAL	(DSF)			180	452	0.	0.	648.	3.97
	(A-F)		42	357	897	0	0	1285	

BRAZOS RIVER BASIN, TEXAS

LAKE GEORGETOWN AND NORTH SAN GABRIEL DAM

NORTH SAN GABRIEL RIVER, TEXAS

MONTHLY RESERVOIR REPORT

U.S. ARMY ENGINEER DISTRICT, FORT WORTH January 2017

TABLE 4-8

All Recorded Major Floods in the San Gabriel River Watershed, 1921-2015

Table 4-8 All Recorded Major Floods in the San Gabriel River Watershed, 1921-2015

Date	North Fork San Gabriel River near Georgetown (1921-2015)		South Fork San Gabriel at Georgetown (1957-2015)		San Gabriel River at Laneport (1921-2015)	
	Gage Height (ft)	Peak Discharge (cfs)	Gage Height (ft)	Peak Discharge (cfs)	Gage Height (ft)	Peak Discharge (cfs)
1921, Sep	39.50	—	—	—	39.60	—
1936, Sep	—	—	—	—	—	—
1940, Jun	—	—	—	—	—	—
1940, Nov	—	—	—	—	—	—
1944, Jun	—	—	—	—	—	—
1957, April	34.50	—	41.05	—	34.60	—
1959, Oct	—	—	—	—	33.80	—
1965, Sep 22	—	—	—	—	27.16	14,600
1966, Apr 24	—	—	—	—	29.86	25,300
1967, May 01	—	—	—	—	26.82	13,900
1968, Jan 21	—	—	—	—	30.45	28,700
1968, Jun 02	—	—	15.15	17,400	—	—
1969, Apr 12-13	14.84	11,700	11.15	7,520	28.65	19,600
1970, May 23-28	11.69	7,160	9.28	4,710	23.40	8,520
1971, Jul 30-31	11.15	6,460	8.93	4,190	18.55	5,430
1972, May 02	—	—	8.38	3,600	—	—
1972, Jun 16	—	—	—	—	23.24	8,360
1972, Oct 22	—	—	—	—	26.63	13,600
1973, Jul 15	14.02	10,400	10.75	6,850	—	—
1974, May 10	—	—	15.79	17,800	29.69	24,400
1974, Sep	26.20	35,000	—	—	—	—
1974, Oct 31	24.10	30,100	16.61	20,200	30.80	31,200
1976, Apr 29-31	11.50	6,850	12.87	10,700	26.42	13,000
1977, Apr 15-16	8.24	2,560	12.83	10,600	28.22	18,000
1981, Sep 3	—	—	24.60	33,400	—	—
1981, Oct 13-15	7.07	814	11.65	8,360	—	—
1983, May 11-25	7.23	1,000	15.63	16,500	12.60	2,330

Table 4-8 All Recorded Major Floods in the San Gabriel River Watershed, 1921-2015 (Continued)

Date	North Fork San Gabriel River near Georgetown (1921-2015)		South Fork San Gabriel at Georgetown (1957-2015)		San Gabriel River at Laneport (1921-2015)	
	Gage Height (ft)	Peak Discharge (cfs)	Gage Height (ft)	Peak Discharge (cfs)	Gage Height (ft)	Peak Discharge (cfs)
1986, Feb 3-13	10.16	3,260	19.94	25,300	13.23	2,600
1987, Jun 4-24	—	—	14.75	13,100	13.85	2,890
1989, May 17-28	7.27	667	13.19	10,500	10.21	1,360
1992, Feb 4	—	—	12.91	11,200	—	—
1992, Mar 4-5	13.05	6,070	—	—	21.86	7,540
1993, Jun 21-29	8.52	1,530	17.00	19,200	—	—
1994, Mar 15	4.93	38	17.00	19,200	—	—
1994, May 13-17	—	—	11.51	8,310	8.64	915
1994, Oct 25	—	—	11.01	7,360	—	—
1996, Sep 18-21	7.35	712	9.18	4,730	10.17	1,660
1997, Apr 4	—	—	12.38	9,260	—	—
1998, Mar 16-17	9.24	1,860	10.85	5,600	—	—
1998, Oct 17	—	—	16.64	15,200	—	—
2001, Nov 15-19	—	—	27.06	41,000	11.28	1,810
2004, Nov 17	—	—	15.52	12,900	—	—
2007, Jun 27	—	—	31.65	57,500	—	—
2007, Jul 7-14	10.19	2,450	—	—	20.19	6,390
2009, Sep 12-13	8.90	1,360	10.40	5,050	5.83	115
2010, Sep 8-14	14.15	7,330	21.98	24,500	15.84	4,000
2012, Mar 20-23	5.07	29	10.06	4,690	9.24	1,010
2013, Sep 20	—	—	6.53	1,560	5.46	61
2015, May 24-25	—	—	17.12	14,700	15.52	3,720
2015, Jun 24	7.96	478	—	—	—	—

Table 4-8 All Recorded Major Floods in the San Gabriel River Watershed, 1921-2015 (Continued)

Date	Willis Creek near Granger (2009-2013) Gage Height (ft)	Peak Discharge (cfs)
2009, Sep 11	22.20	8,870
2010, Sep 8	23.16	10,000
2011, Jan 16	7.40	36
2012, Mar 20	17.28	4,190
2013, Jan 9	8.63	271
2013, Oct 31	22.57	9,200
2015, May 24	23.24	9,840

Date	San Gabriel River at Georgetown (1921-1973) Gage Height (ft)	Peak Discharge (cfs)
1921, Sep 10	36.10	160,000
1935, May 18	15.45	25,100
1936, Sep 16	17.70	32,400
1937, Jul 10	11.96	16,300
1938, Jan 23	15.15	24,800
1939, Jun 06	3.97	903
1940, Jun 30	18.46	34,500
1940, Nov 23	16.95	30,000
1942, Jun 10	12.93	18,600
1942, Oct 18	8.32	7,800
1944, Jun 06	19.49	37,500
1945, Jan 18	9.54	10,300
1946, Sep 26	8.42	8,000
1946, Dec 11	13.80	21,000
1948, May 11	11.07	14,000
1949, Apr 28	7.70	6,600
1950, May 11	6.87	5,080

Table 4-8 All Recorded Major Floods in the San Gabriel River Watershed, 1921-2015 (Continued)

Date	San Gabriel River at Georgetown (1921-1973)	
	Gage Height (ft)	Peak Discharge (cfs)
1951, Sep 13	7.03	5,350
1952, May 28	9.85	11,000
1952, Dec 19	11.24	14,300
1953, Oct 23	15.25	24,200
1955, May 18	11.48	12,400
1956, May 2	7.18	5,660
1957, Apr 24	34.10	155,000
1958, Feb 22	14.07	21,800
1959, Aug 31	5.66	3,080
1959, Oct 04	26.25	71,500
1961, Feb 16	—	—
1962, Jun 03	—	—
1962, Oct 29	—	—
1963, Oct 24	—	—
1965, May 18	—	—
1966, Apr 24	—	—
1967, May 1	—	—
1968, Jan 21	—	—
1969, Apr 12	13.72	20,700
1970, Mar 7	—	—
1971, Jul 30	—	—
1971, Oct 20	—	—
1973, Jul 15	—	—

TABLE 4-9

Lake Georgetown and North San Gabriel Dam Monthly and Annual Inflow Volumes in Acre-feet

TABLE 4-9

Lake Georgetown and North San Gabriel Dam Monthly and Annual Inflow Volumes in Acre-Feet

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1924		5,930	12,381	10,057	16,027	7,212	2,196	886	818	429	541	569	57,046
1925	605	388	385	601	4,127	101	89	926	1,699	8,214	6,571	1,150	24,856
1926	9,256	4,327	10,858	19,593	19,914	4,728	4,007	1,202	633	2,512	829	1,482	79,341
1927	1,563	11,339	9,256	12,461	3,842	7,172	1,054	283	217	17,349	1,338	841	66,715
1928	801	3,342	3,277	1,547	1,679	2,276	533	190	166	156	246	421	14,634
1929	425	369	990	3,578	32,295	4,608	1,735	585	300	298	609	597	46,389
1930	593	857	1,534	833	37,704	2,813	737	278	364	8,374	1,879	2,685	58,651
1931	9,817	13,823	9,496	5,289	3,230	1,318	1,074	335	243	185	274	469	45,553
1932	1,551	1,402	6,050	2,224	6,411	1,482	661	1,150	3,554	421	336	517	25,759
1933	1,947	1,495	2,152	1,130	1,366	208	2,833	328	300	236	189	220	12,404
1934	1,238	6,211	3,005	5,209	1,755	493	221	64	481	161	3,988	260	23,086
1935	254	1,089	351	1,864	19,528	23,860	3,165	835	18,293	4,254	2,323	16,375	92,191
1936	5,374	3,092	2,595	1,320	36,574	8,877	4,157	1,150	30,517	9,446	8,260	17,815	129,177
1937	15,830	8,895	12,115	5,107	2,070	1,180	7,038	564	378	567	5,029	14,099	72,872
1938	27,945	11,715	7,026	15,255	14,027	5,059	2,856	1,174	540	387	413	439	86,836
1939	654	447	557	444	434	762	140	138	122	2,614	218	175	6,705
1940	166	1,410	496	4,302	5,004	24,084	16,447	1,452	672	1,809	36,870	33,682	126,394
1941	17,143	24,798	22,807	27,449	26,620	19,062	5,573	1,682	974	2,959	1,017	1,119	151,203
1942	956	799	648	10,808	5,125	13,742	1,138	623	4,902	9,997	3,371	2,796	54,905
1943	2,590	1,737	1,815	1,525	1,809	456	507	166	371	368	223	112	11,679
1944	5,150	12,042	15,679	7,195	28,526	16,266	1,900	799	3,413	738	2,735	10,953	105,396
1945	16,599	15,606	13,609	20,151	9,035	12,314	3,177	1,749	1,815	1,664	2,596	1,519	99,834
1946	3,419	8,593	9,361	7,050	8,556	3,467	932	744	4,666	3,268	9,936	14,305	74,297
1947	17,567	9,488	8,859	7,068	3,939	1,634	750	738	423	358	389	448	51,661
1948	426	542	497	6,880	7,951	471	629	1,029	177	370	215	200	19,387
1949	252	406	1,555	8,048	2,064	2,784	938	266	252	250	166	371	17,352
1950	329	1,410	666	1,483	2,790	1,797	446	155	405	169	152	162	9,964
1951	146	205	307	405	380	242	51	51	1,180	169	133	132	3,401
1952	154	340	600	5,277	8,672	1,446	409	88	95	95	105	6,687	23,968
1953	1,930	1,797	1,870	8,387	8,563	980	233	542	2,160	9,688	1,579	1,422	39,151
1954	956	654	464	219	367	44	4	6	18	72	69	77	2,950
1955	191	654	672	210	5,634	3,008	1,610	1,924	157	21	38	45	14,164
1956	90	97	77	37	1,828	1	0	79	62	598	1,870	1,404	6,143
1957	162	399	1,101	53,965	21,482	27,697	2,306	829	1,356	12,181	10,100	8,877	140,455
1958	7,897	27,788	16,175	6,541	8,278	3,619	1,422	884	3,122	1,870	1,737	1,525	80,858
1959	1,222	1,936	2,015	3,812	2,560	3,050	1,144	2,312	1,598	41,445	8,036	21,270	90,400
1960	16,719	13,639	8,133	4,684	2,554	1,041	1,186	538	400	8,708	6,529	18,493	82,624
1961	17,621	31,200	10,717	4,309	2,233	2,070	7,159	2,027	2,523	2,378	1,997	2,124	86,358
1962	1,767	1,712	1,410	2,118	2,614	3,352	1,646	324	871	1,144	672	781	18,411
1963	690	690	775	654	542	253	134	75	56	-	-	-	3,869
1980	-	-	897	530	20,745	2,628	180	0	2,039	155	180	593	27,948
1981	532	1,057	2,656	3,735	9,059	72,648	7,801	2,075	26,214	12,040	4,895	2,464	145,174
1982	1,311	809	736	2,341	11,074	5,478	1,313	216	2	83	575	305	24,244
1983	1,277	9,983	14,283	4,965	16,413	8,747	2,380	1,269	26	262	129	0	59,735
1984	456	266	490	313	252	4,629	512	129	4	6,379	843	5,254	19,528
1985	7,406	10,183	27,531	7,763	5,986	1,593	444	149	385	3,184	3,082	13,654	81,361
1986	3,751	24,968	5,292	2,771	2,733	14,214	1,216	268	1,008	5,028	4,883	20,662	86,794
1987	13,079	6,676	8,773	4,128	4,054	52,228	24,026	1,753	1,287	480	1,250	1,349	119,083
1988	1,216	950	1,008	772	720	2,912	1,283	395	8	538	0	56	9,856
1989	688	643	2,959	1,531	14,182	3,830	417	175	0	58	0	0	24,482
1990	252	365	897	791	2,162	36	194	301	329	248	413	71	6,060
1991	4,489	4,096	2,955	4,679	8,981	7,186	2,985	238	4,124	1,204	2,103	45,605	88,645
1992	35,382	70,621	41,769	9,751	18,101	38,391	12,627	865	73	244	766	1,412	230,001
1993	1,418	6,577	9,614	7,990	8,785	22,771	6,918	573	317	0	0	155	65,118
1994	50	0	0	60	2,537	897	0	573	141	2,989	1,091	3,767	12,103
1995	4,007	2,021	4,451	6,972	4,389	4,163	974	115	97	0	0	0	27,190
1996	0	0	0	0	472	625	311	920	4,046	3,235	1,190	6,881	17,681
1997	6,772	15,481	25,643	33,394	22,739	33,251	5,843	998	413	492	565	15,112	160,703
1998	13,946	19,018	24,556	7,462	2,174	655	454	18	0	12,278	8,485	11,449	100,494
1999	4,743	1,995	3,182	2,011	5,849	2,344	5,724	587	0	36	0	131	26,603
2000	264	670	543	768	980	2,924	319	902	93	770	9,330	4,979	22,542
2001	12,417	8,819	15,092	8,840	5,044	1,978	956	0	1,819	881	18,159	4,735	78,739
2002	2,983	2,180	1,849	1,837	664	4,066	35,392	2,884	2,737	2,465	3,332	8,553	68,942
2003	8,017	13,438	12,921	4,326	1,646	1,874	597	563	234	649	367	220	44,853
2004	1,446	1,232	2,120	7,363	4,715	7,569	3,059	1,164	0	153	44,063	11,816	84,699
2005	6,738	9,217	12,982	5,153	2,692	746	938	3,469	478	764	97	0	43,274
2006	0	252	173	2,660	4,439	0	0	0	232	456	91	264	8,567

TABLE 4-9 (CONTINUED)

Lake Georgetown and North San Gabriel Dam Monthly and Annual Inflow Volumes in Acre-Feet

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
2007	2,983	1,061	23,907	10,177	27,767	64,966	50,101	7,652	4,144	615	912	728	195,014
2008	522	415	1,513	1,039	2,618	363	436	494	298	238	87	83	8,107
2009	121	190	276	613	173	99	161	242	2,495	32,839	12,246	9,602	59,057
2010	16,126	29,633	15,830	7,510	2,729	1,125	1,101	121	19,305	643	442	367	94,932
2011	849	597	500	383	361	290	329	149	131	339	177	389	4,493
2012	157	1,349	16,741	2,041	1,551	724	405	589	1,216	165	0	0	24,937
2013	180	137	141	0	419	173	456	188	1,283	246	169	254	3,646
2014	192	165	218	274	672	488	668	0	159	0	349	0	3,186
2015	456	248	1,503	1,039	31,131	7,414	2,047	676	399	8,840	9,898	13,000	76,652
TOTAL	346,220	477,976	486,336	435,069	617,120	589,052	254,807	59,883	165,829	254,915	253,749	370,526	
AVG	4,923	6,379	6,319	5,667	8,120	7,751	3,353	788	2,182	3,399	3,383	4,940	47,379

NOTES: 1. Data for period from Feb. 1924 through Sep. 1963 was retrieved from Lake Georgetown Water Control Manual, February 1989.
2. Data for period from Mar. 1980 through Dec. 2015 was obtained from the USACE hydrologic data.

TABLE 7-5

Area and Capacity Curves

TABLE 7-5

Area and Capacity Curves

LAKE GEORGETOWN- ELEVATION vs. AREA

AREA (IN THOUSAND ACRES)

ELEV	0	1	2	3	4	5	6	7	8	9
710				0.000	0.006	0.007	0.009	0.010	0.013	0.014
720	0.016	0.018	0.021	0.024	0.027	0.035	0.048	0.057	0.067	0.082
730	0.096	0.106	0.117	0.127	0.137	0.147	0.159	0.171	0.185	0.201
740	0.215	0.230	0.244	0.258	0.271	0.287	0.304	0.319	0.334	0.349
750	0.364	0.380	0.395	0.407	0.420	0.434	0.450	0.468	0.487	0.505
760	0.525	0.545	0.564	0.585	0.605	0.628	0.651	0.675	0.700	0.725
770	0.751	0.776	0.801	0.822	0.847	0.870	0.893	0.917	0.942	0.967
780	0.993	1.021	1.047	1.075	1.105	1.135	1.163	1.190	1.216	1.240
790	1.261	1.287	1.340	1.370	1.400	1.450	1.490	1.530	1.570	1.610
800	1.650	1.690	1.730	1.770	1.800	1.840	1.870	1.900	1.950	1.980
810	2.020	2.070	2.100	2.150	2.200	2.240	2.290	2.330	2.370	2.420
820	2.460	2.520	2.560	2.620	2.670	2.720	2.780	2.830	2.890	2.950
830	3.000	3.050	3.110	3.170	3.220	3.280	3.340	3.400	3.460	3.520
840	3.600	3.680	3.770	3.850	3.950	4.030	4.120	4.200	4.290	4.380
850	4.470	4.570	4.670	4.770	4.870	4.970	5.070	5.170	5.270	5.370
860	5.470	5.570	5.680	5.760	5.880	5.980	6.080	6.190	6.290	6.390
870	6.500	6.600	6.710	6.810	6.920	7.030	7.140	7.260	7.360	7.470
ELEV	0	1	2	3	4	5	6	7	8	9

ELEVATIONS IN FEET-NGVD

LAKE GEORGETOWN - ELEVATION vs. CAPACITY

CAPACITY (IN THOUSAND ACRE-FEET)

ELEV	0	1	2	3	4	5	6	7	8	9
710				0.000	0.003	0.010	0.018	0.027	0.038	0.052
720	0.067	0.084	0.104	0.126	0.152	0.182	0.224	0.276	0.338	0.413
730	0.502	0.603	0.714	0.836	0.968	1.110	1.264	1.428	1.606	1.800
740	2.008	2.230	2.467	2.718	2.982	3.262	3.557	3.868	4.195	4.536
750	4.893	5.265	5.652	6.054	6.467	6.894	7.336	7.795	8.272	8.768
760	9.284	9.818	10.373	10.948	11.542	12.159	12.798	13.462	14.149	14.862
770	15.600	16.363	17.152	17.963	18.798	19.656	20.538	21.442	22.372	23.326
780	24.306	25.314	26.348	27.408	28.498	29.618	30.768	31.944	33.147	34.375
790	35.626	36.900	38.213	39.568	40.953	42.378	43.848	45.358	46.908	48.498
800	50.128	51.798	53.508	55.258	57.043	58.863	60.718	62.603	64.528	66.493
810	68.493	70.538	72.623	74.748	76.923	79.143	81.408	83.718	86.068	88.463
820	90.903	93.393	95.933	98.523	101.168	103.863	106.613	109.418	112.278	115.198
830	118.173	121.198	124.278	127.418	130.613	133.863	137.173	140.543	143.973	147.463
840	151.023	154.663	158.388	162.198	166.098	170.088	174.163	178.323	182.568	186.903
850	191.328	195.848	200.468	205.188	210.008	214.928	219.948	225.068	230.288	235.608
860	241.028	246.548	252.173	257.893	263.713	269.643	275.673	281.808	288.048	294.388
870	300.833	307.383	314.038	320.798	327.663	334.638	341.723	348.923	356.233	363.648

ELEV	0	1	2	3	4	5	6	7	8	9

ELEVATIONS IN FEET-NGVD

TABLE 7-5

LAKE GEORGETOWN- ELEVATION CAPACITY

ELEVATIONS IN FEET-NGVD, CAPACITIES IN THOUSAND ACRE-FEET

ELEV	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
713.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
713.1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
713.2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
713.3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
713.4	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
713.5	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
713.6	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
713.7	0.001	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002
713.8	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002
713.9	0.002	0.002	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003
714.0	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.004
714.1	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004
714.2	0.004	0.004	0.004	0.004	0.004	0.005	0.005	0.005	0.005	0.005
714.3	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
714.4	0.005	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006
714.5	0.006	0.006	0.006	0.006	0.006	0.006	0.007	0.007	0.007	0.007
714.6	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007
714.7	0.007	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008
714.8	0.008	0.008	0.008	0.008	0.008	0.008	0.009	0.009	0.009	0.009
714.9	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0.009
715.0	0.009	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010
715.1	0.010	0.010	0.010	0.010	0.010	0.011	0.011	0.011	0.011	0.011
715.2	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.012	0.012
715.3	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.012
715.4	0.012	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013
715.5	0.013	0.013	0.013	0.013	0.014	0.014	0.014	0.014	0.014	0.014
715.6	0.014	0.014	0.014	0.014	0.014	0.014	0.015	0.015	0.015	0.015
715.7	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.016	0.016
715.8	0.016	0.016	0.016	0.016	0.016	0.016	0.016	0.016	0.016	0.017
715.9	0.017	0.017	0.017	0.017	0.017	0.017	0.017	0.017	0.017	0.017
716.0	0.018	0.018	0.018	0.018	0.018	0.018	0.018	0.018	0.018	0.018
716.1	0.018	0.018	0.019	0.019	0.019	0.019	0.019	0.019	0.019	0.019
716.2	0.019	0.019	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020
716.3	0.020	0.020	0.020	0.021	0.021	0.021	0.021	0.021	0.021	0.021
716.4	0.021	0.021	0.021	0.021	0.022	0.022	0.022	0.022	0.022	0.022
716.5	0.022	0.022	0.022	0.022	0.023	0.023	0.023	0.023	0.023	0.023
716.6	0.023	0.023	0.023	0.023	0.023	0.024	0.024	0.024	0.024	0.024
716.7	0.024	0.024	0.024	0.024	0.024	0.025	0.025	0.025	0.025	0.025
716.8	0.025	0.025	0.025	0.025	0.025	0.026	0.026	0.026	0.026	0.026
716.9	0.026	0.026	0.026	0.026	0.026	0.027	0.027	0.027	0.027	0.027
717.0	0.027	0.027	0.027	0.027	0.027	0.028	0.028	0.028	0.028	0.028
717.1	0.028	0.028	0.028	0.028	0.028	0.029	0.029	0.029	0.029	0.029
717.2	0.029	0.029	0.029	0.029	0.029	0.030	0.030	0.030	0.030	0.030
717.3	0.030	0.030	0.030	0.030	0.031	0.031	0.031	0.031	0.031	0.031
717.4	0.031	0.031	0.031	0.032	0.032	0.032	0.032	0.032	0.032	0.032
717.5	0.032	0.032	0.033	0.033	0.033	0.033	0.033	0.033	0.033	0.033
717.6	0.034	0.034	0.034	0.034	0.034	0.034	0.034	0.034	0.034	0.035
717.7	0.035	0.035	0.035	0.035	0.035	0.035	0.035	0.036	0.036	0.036
717.8	0.036	0.036	0.036	0.036	0.036	0.037	0.037	0.037	0.037	0.037
717.9	0.037	0.037	0.037	0.038	0.038	0.038	0.038	0.038	0.038	0.038
ELEV	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09

TABLE 7-5 (Continued)

LAKE GEORGETOWN - ELEVATION CAPACITY TABLE

ELEVATIONS IN FEET-NGVD, CAPACITIES IN THOUSAND ACRE-FEET

ELEV	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
718.0	0.038	0.039	0.039	0.039	0.039	0.039	0.039	0.039	0.040	0.040
718.1	0.040	0.040	0.040	0.040	0.040	0.040	0.041	0.041	0.041	0.041
718.2	0.041	0.041	0.041	0.042	0.042	0.042	0.042	0.042	0.042	0.042
718.3	0.042	0.043	0.043	0.043	0.043	0.043	0.043	0.043	0.044	0.044
718.4	0.044	0.044	0.044	0.044	0.044	0.044	0.045	0.045	0.045	0.045
718.5	0.045	0.045	0.045	0.046	0.046	0.046	0.046	0.046	0.046	0.046
718.6	0.046	0.047	0.047	0.047	0.047	0.047	0.047	0.047	0.048	0.048
718.7	0.048	0.048	0.048	0.048	0.048	0.049	0.049	0.049	0.049	0.049
718.8	0.049	0.049	0.049	0.050	0.050	0.050	0.050	0.050	0.050	0.050
718.9	0.051	0.051	0.051	0.051	0.051	0.051	0.051	0.052	0.052	0.052
719.0	0.052	0.052	0.052	0.052	0.053	0.053	0.053	0.053	0.053	0.053
719.1	0.053	0.054	0.054	0.054	0.054	0.054	0.054	0.054	0.055	0.055
719.2	0.055	0.055	0.055	0.055	0.055	0.056	0.056	0.056	0.056	0.056
719.3	0.056	0.056	0.057	0.057	0.057	0.057	0.057	0.057	0.057	0.058
719.4	0.058	0.058	0.058	0.058	0.058	0.059	0.059	0.059	0.059	0.059
719.5	0.059	0.059	0.060	0.060	0.060	0.060	0.060	0.060	0.060	0.061
719.6	0.061	0.061	0.061	0.061	0.061	0.062	0.062	0.062	0.062	0.062
719.7	0.062	0.062	0.063	0.063	0.063	0.063	0.063	0.063	0.064	0.064
719.8	0.064	0.064	0.064	0.064	0.064	0.065	0.065	0.065	0.065	0.065
719.9	0.065	0.066	0.066	0.066	0.066	0.066	0.066	0.067	0.067	0.067
720.0	0.067	0.067	0.067	0.067	0.068	0.068	0.068	0.068	0.068	0.068
720.1	0.069	0.069	0.069	0.069	0.069	0.069	0.070	0.070	0.070	0.070
720.2	0.070	0.070	0.071	0.071	0.071	0.071	0.071	0.071	0.072	0.072
720.3	0.072	0.072	0.072	0.072	0.073	0.073	0.073	0.073	0.073	0.073
720.4	0.074	0.074	0.074	0.074	0.074	0.074	0.075	0.075	0.075	0.075
720.5	0.075	0.075	0.076	0.076	0.076	0.076	0.076	0.076	0.077	0.077
720.6	0.077	0.077	0.077	0.077	0.078	0.078	0.078	0.078	0.078	0.079
720.7	0.079	0.079	0.079	0.079	0.079	0.080	0.080	0.080	0.080	0.080
720.8	0.080	0.081	0.081	0.081	0.081	0.081	0.081	0.082	0.082	0.082
720.9	0.082	0.082	0.083	0.083	0.083	0.083	0.083	0.083	0.084	0.084
721.0	0.084	0.084	0.084	0.085	0.085	0.085	0.085	0.085	0.085	0.086
721.1	0.086	0.086	0.086	0.086	0.087	0.087	0.087	0.087	0.087	0.087
721.2	0.088	0.088	0.088	0.088	0.088	0.089	0.089	0.089	0.089	0.089
721.3	0.090	0.090	0.090	0.090	0.090	0.090	0.091	0.091	0.091	0.091
721.4	0.091	0.092	0.092	0.092	0.092	0.092	0.093	0.093	0.093	0.093
721.5	0.093	0.094	0.094	0.094	0.094	0.094	0.095	0.095	0.095	0.095
721.6	0.095	0.096	0.096	0.096	0.096	0.096	0.097	0.097	0.097	0.097
721.7	0.097	0.098	0.098	0.098	0.098	0.098	0.099	0.099	0.099	0.099
721.8	0.099	0.100	0.100	0.100	0.100	0.100	0.101	0.101	0.101	0.101
721.9	0.101	0.102	0.102	0.102	0.102	0.102	0.103	0.103	0.103	0.103
722.0	0.104	0.104	0.104	0.104	0.104	0.105	0.105	0.105	0.105	0.105
722.1	0.106	0.106	0.106	0.106	0.106	0.107	0.107	0.107	0.107	0.108
722.2	0.108	0.108	0.108	0.108	0.109	0.109	0.109	0.109	0.109	0.110
722.3	0.110	0.110	0.110	0.111	0.111	0.111	0.111	0.111	0.112	0.112
722.4	0.112	0.112	0.113	0.113	0.113	0.113	0.113	0.114	0.114	0.114
722.5	0.114	0.115	0.115	0.115	0.115	0.116	0.116	0.116	0.116	0.116
722.6	0.117	0.117	0.117	0.117	0.118	0.118	0.118	0.118	0.118	0.119
722.7	0.119	0.119	0.119	0.120	0.120	0.120	0.120	0.121	0.121	0.121
722.8	0.121	0.121	0.122	0.122	0.122	0.122	0.123	0.123	0.123	0.123
722.9	0.124	0.124	0.124	0.124	0.125	0.125	0.125	0.125	0.126	0.126
ELEV	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09

TABLE 7-5 (Continued)

LAKE GEORGETOWN - ELEVATION CAPACITY TABLE

ELEVATIONS IN FEET-NGVD, CAPACITIES IN THOUSAND ACRE-FEET

ELEV	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
723.0	0.126	0.126	0.126	0.127	0.127	0.127	0.127	0.128	0.128	0.128
723.1	0.128	0.129	0.129	0.129	0.129	0.130	0.130	0.130	0.130	0.131
723.2	0.131	0.131	0.131	0.132	0.132	0.132	0.132	0.133	0.133	0.133
723.3	0.133	0.134	0.134	0.134	0.134	0.135	0.135	0.135	0.135	0.136
723.4	0.136	0.136	0.136	0.137	0.137	0.137	0.137	0.138	0.138	0.138
723.5	0.138	0.139	0.139	0.139	0.139	0.140	0.140	0.140	0.140	0.141
723.6	0.141	0.141	0.141	0.142	0.142	0.142	0.142	0.143	0.143	0.143
723.7	0.144	0.144	0.144	0.144	0.145	0.145	0.145	0.145	0.146	0.146
723.8	0.146	0.146	0.147	0.147	0.147	0.147	0.148	0.148	0.148	0.149
723.9	0.149	0.149	0.149	0.150	0.150	0.150	0.150	0.151	0.151	0.151
724.0	0.152	0.152	0.152	0.152	0.153	0.153	0.153	0.153	0.154	0.154
724.1	0.154	0.155	0.155	0.155	0.155	0.156	0.156	0.156	0.156	0.157
724.2	0.157	0.157	0.158	0.158	0.158	0.159	0.159	0.159	0.159	0.160
724.3	0.160	0.160	0.161	0.161	0.161	0.161	0.162	0.162	0.162	0.163
724.4	0.163	0.163	0.164	0.164	0.164	0.164	0.165	0.165	0.165	0.166
724.5	0.166	0.166	0.167	0.167	0.167	0.168	0.168	0.168	0.169	0.169
724.6	0.169	0.169	0.170	0.170	0.170	0.171	0.171	0.171	0.172	0.172
724.7	0.172	0.173	0.173	0.173	0.174	0.174	0.174	0.175	0.175	0.175
724.8	0.176	0.176	0.176	0.177	0.177	0.177	0.178	0.178	0.178	0.179
724.9	0.179	0.179	0.180	0.180	0.180	0.181	0.181	0.181	0.182	0.182
725.0	0.183	0.183	0.183	0.184	0.184	0.184	0.185	0.185	0.185	0.186
725.1	0.186	0.186	0.187	0.187	0.188	0.188	0.188	0.189	0.189	0.189
725.2	0.190	0.190	0.191	0.191	0.191	0.192	0.192	0.192	0.193	0.193
725.3	0.194	0.194	0.194	0.195	0.195	0.196	0.196	0.196	0.197	0.197
725.4	0.198	0.198	0.198	0.199	0.199	0.200	0.200	0.200	0.201	0.201
725.5	0.202	0.202	0.202	0.203	0.203	0.204	0.204	0.205	0.205	0.205
725.6	0.206	0.206	0.207	0.207	0.208	0.208	0.208	0.209	0.209	0.210
725.7	0.210	0.211	0.211	0.212	0.212	0.212	0.213	0.213	0.214	0.214
725.8	0.215	0.215	0.216	0.216	0.216	0.217	0.217	0.218	0.218	0.219
725.9	0.219	0.220	0.220	0.221	0.221	0.222	0.222	0.223	0.223	0.224
726.0	0.224	0.224	0.225	0.225	0.226	0.226	0.227	0.227	0.228	0.228
726.1	0.229	0.229	0.230	0.230	0.231	0.231	0.232	0.232	0.233	0.233
726.2	0.234	0.234	0.235	0.235	0.236	0.236	0.237	0.237	0.238	0.238
726.3	0.239	0.239	0.240	0.240	0.241	0.241	0.242	0.242	0.243	0.243
726.4	0.244	0.244	0.245	0.245	0.246	0.247	0.247	0.248	0.248	0.249
726.5	0.249	0.250	0.250	0.251	0.251	0.252	0.252	0.253	0.253	0.254
726.6	0.254	0.255	0.255	0.256	0.257	0.257	0.258	0.258	0.259	0.259
726.7	0.260	0.260	0.261	0.261	0.262	0.263	0.263	0.264	0.264	0.265
726.8	0.265	0.266	0.266	0.267	0.267	0.268	0.269	0.269	0.270	0.270
726.9	0.271	0.271	0.272	0.273	0.273	0.274	0.274	0.275	0.275	0.276
727.0	0.276	0.277	0.278	0.278	0.279	0.279	0.280	0.281	0.281	0.282
727.1	0.282	0.283	0.283	0.284	0.285	0.285	0.286	0.286	0.287	0.288
727.2	0.288	0.289	0.289	0.290	0.290	0.291	0.292	0.292	0.293	0.293
727.3	0.294	0.295	0.295	0.296	0.296	0.297	0.298	0.298	0.299	0.299
727.4	0.300	0.301	0.301	0.302	0.303	0.303	0.304	0.304	0.305	0.306
727.5	0.306	0.307	0.307	0.308	0.309	0.309	0.310	0.311	0.311	0.312
727.6	0.312	0.313	0.314	0.314	0.315	0.316	0.316	0.317	0.318	0.318
727.7	0.319	0.319	0.320	0.321	0.321	0.322	0.323	0.323	0.324	0.325
727.8	0.325	0.326	0.327	0.327	0.328	0.329	0.329	0.330	0.331	0.331
727.9	0.332	0.333	0.333	0.334	0.334	0.335	0.336	0.336	0.337	0.338
ELEV	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09

TABLE 7-5 (Continued)

LAKE GEORGETOWN - ELEVATION CAPACITY TABLE

ELEVATIONS IN FEET-NGVD, CAPACITIES IN THOUSAND ACRE-FEET

ELEV	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
728.0	0.338	0.339	0.340	0.341	0.341	0.342	0.343	0.343	0.344	0.345
728.1	0.345	0.346	0.347	0.347	0.348	0.349	0.349	0.350	0.351	0.352
728.2	0.352	0.353	0.354	0.354	0.355	0.356	0.356	0.357	0.358	0.359
728.3	0.359	0.360	0.361	0.361	0.362	0.363	0.364	0.364	0.365	0.366
728.4	0.366	0.367	0.368	0.369	0.369	0.370	0.371	0.372	0.372	0.373
728.5	0.374	0.375	0.375	0.376	0.377	0.378	0.378	0.379	0.380	0.381
728.6	0.381	0.382	0.383	0.384	0.384	0.385	0.386	0.387	0.388	0.388
728.7	0.389	0.390	0.391	0.391	0.392	0.393	0.394	0.395	0.395	0.396
728.8	0.397	0.398	0.398	0.399	0.400	0.401	0.402	0.402	0.403	0.404
728.9	0.405	0.406	0.406	0.407	0.408	0.409	0.410	0.411	0.411	0.412
729.0	0.413	0.414	0.415	0.415	0.416	0.417	0.418	0.419	0.420	0.420
729.1	0.421	0.422	0.423	0.424	0.425	0.425	0.426	0.427	0.428	0.429
729.2	0.430	0.431	0.431	0.432	0.433	0.434	0.435	0.436	0.437	0.437
729.3	0.438	0.439	0.440	0.441	0.442	0.443	0.443	0.444	0.445	0.446
729.4	0.447	0.448	0.449	0.450	0.450	0.451	0.452	0.453	0.454	0.455
729.5	0.456	0.457	0.458	0.458	0.459	0.460	0.461	0.462	0.463	0.464
729.6	0.465	0.466	0.467	0.467	0.468	0.469	0.470	0.471	0.472	0.473
729.7	0.474	0.475	0.476	0.477	0.478	0.478	0.479	0.480	0.481	0.482
729.8	0.483	0.484	0.485	0.486	0.487	0.488	0.489	0.490	0.491	0.492
729.9	0.492	0.493	0.494	0.495	0.496	0.497	0.498	0.499	0.500	0.501
730.0	0.502	0.503	0.504	0.505	0.506	0.507	0.508	0.509	0.510	0.511
730.1	0.512	0.513	0.514	0.515	0.516	0.517	0.517	0.518	0.519	0.520
730.2	0.521	0.522	0.523	0.524	0.525	0.526	0.527	0.528	0.529	0.530
730.3	0.531	0.532	0.533	0.534	0.535	0.536	0.537	0.538	0.539	0.540
730.4	0.541	0.542	0.543	0.544	0.545	0.546	0.547	0.548	0.549	0.550
730.5	0.551	0.552	0.553	0.554	0.555	0.556	0.557	0.558	0.559	0.560
730.6	0.561	0.562	0.563	0.564	0.565	0.567	0.568	0.569	0.570	0.571
730.7	0.572	0.573	0.574	0.575	0.576	0.577	0.578	0.579	0.580	0.581
730.8	0.582	0.583	0.584	0.585	0.586	0.587	0.588	0.589	0.590	0.591
730.9	0.592	0.594	0.595	0.596	0.597	0.598	0.599	0.600	0.601	0.602
731.0	0.603	0.604	0.605	0.606	0.607	0.608	0.609	0.610	0.612	0.613
731.1	0.614	0.615	0.616	0.617	0.618	0.619	0.620	0.621	0.622	0.623
731.2	0.624	0.626	0.627	0.628	0.629	0.630	0.631	0.632	0.633	0.634
731.3	0.635	0.636	0.637	0.639	0.640	0.641	0.642	0.643	0.644	0.645
731.4	0.646	0.647	0.648	0.650	0.651	0.652	0.653	0.654	0.655	0.656
731.5	0.657	0.658	0.660	0.661	0.662	0.663	0.664	0.665	0.666	0.667
731.6	0.669	0.670	0.671	0.672	0.673	0.674	0.675	0.676	0.678	0.679
731.7	0.680	0.681	0.682	0.683	0.684	0.686	0.687	0.688	0.689	0.690
731.8	0.691	0.692	0.694	0.695	0.696	0.697	0.698	0.699	0.701	0.702
731.9	0.703	0.704	0.705	0.706	0.707	0.709	0.710	0.711	0.712	0.713
732.0	0.715	0.716	0.717	0.718	0.719	0.720	0.722	0.723	0.724	0.725
732.1	0.726	0.727	0.729	0.730	0.731	0.732	0.733	0.735	0.736	0.737
732.2	0.738	0.739	0.740	0.742	0.743	0.744	0.745	0.746	0.748	0.749
732.3	0.750	0.751	0.752	0.754	0.755	0.756	0.757	0.758	0.760	0.761
732.4	0.762	0.763	0.765	0.766	0.767	0.768	0.769	0.771	0.772	0.773
732.5	0.774	0.775	0.777	0.778	0.779	0.780	0.782	0.783	0.784	0.785
732.6	0.786	0.788	0.789	0.790	0.791	0.793	0.794	0.795	0.796	0.798
732.7	0.799	0.800	0.801	0.803	0.804	0.805	0.806	0.808	0.809	0.810
732.8	0.811	0.813	0.814	0.815	0.816	0.818	0.819	0.820	0.821	0.823
732.9	0.824	0.825	0.826	0.828	0.829	0.830	0.831	0.833	0.834	0.835
ELEV	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09

TABLE 7-5 (Continued)

LAKE GEORGETOWN - ELEVATION CAPACITY TABLE

ELEVATIONS IN FEET-NGVD, CAPACITIES IN THOUSAND ACRE-FEET

ELEV	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
733.0	0.836	0.838	0.839	0.840	0.842	0.843	0.844	0.845	0.847	0.848
733.1	0.849	0.851	0.852	0.853	0.854	0.856	0.857	0.858	0.860	0.861
733.2	0.862	0.863	0.865	0.866	0.867	0.869	0.870	0.871	0.872	0.874
733.3	0.875	0.876	0.878	0.879	0.880	0.882	0.883	0.884	0.885	0.887
733.4	0.888	0.889	0.891	0.892	0.893	0.895	0.896	0.897	0.899	0.900
733.5	0.901	0.903	0.904	0.905	0.907	0.908	0.909	0.911	0.912	0.913
733.6	0.914	0.916	0.917	0.918	0.920	0.921	0.922	0.924	0.925	0.927
733.7	0.928	0.929	0.931	0.932	0.933	0.935	0.936	0.937	0.939	0.940
733.8	0.941	0.943	0.944	0.945	0.947	0.948	0.949	0.951	0.952	0.953
733.9	0.955	0.956	0.958	0.959	0.960	0.962	0.963	0.964	0.966	0.967
734.0	0.969	0.970	0.971	0.973	0.974	0.975	0.977	0.978	0.979	0.981
734.1	0.982	0.984	0.985	0.986	0.988	0.989	0.991	0.992	0.993	0.995
734.2	0.996	0.997	0.999	1.000	1.002	1.003	1.004	1.006	1.007	1.009
734.3	1.010	1.011	1.013	1.014	1.016	1.017	1.018	1.020	1.021	1.023
734.4	1.024	1.026	1.027	1.028	1.030	1.031	1.033	1.034	1.035	1.037
734.5	1.038	1.040	1.041	1.043	1.044	1.045	1.047	1.048	1.050	1.051
734.6	1.053	1.054	1.055	1.057	1.058	1.060	1.061	1.063	1.064	1.065
734.7	1.067	1.068	1.070	1.071	1.073	1.074	1.076	1.077	1.078	1.080
734.8	1.081	1.083	1.084	1.086	1.087	1.089	1.090	1.091	1.093	1.094
734.9	1.096	1.097	1.099	1.100	1.102	1.103	1.105	1.106	1.108	1.109
735.0	1.110	1.112	1.113	1.115	1.116	1.118	1.119	1.121	1.122	1.124
735.1	1.125	1.127	1.128	1.130	1.131	1.133	1.134	1.136	1.137	1.139
735.2	1.140	1.142	1.143	1.145	1.146	1.148	1.149	1.151	1.152	1.154
735.3	1.155	1.157	1.158	1.160	1.161	1.163	1.164	1.166	1.167	1.169
735.4	1.170	1.172	1.173	1.175	1.176	1.178	1.179	1.181	1.182	1.184
735.5	1.186	1.187	1.189	1.190	1.192	1.193	1.195	1.196	1.198	1.199
735.6	1.201	1.202	1.204	1.205	1.207	1.209	1.210	1.212	1.213	1.215
735.7	1.216	1.218	1.219	1.221	1.223	1.224	1.226	1.227	1.229	1.230
735.8	1.232	1.234	1.235	1.237	1.238	1.240	1.241	1.243	1.245	1.246
735.9	1.248	1.249	1.251	1.252	1.254	1.256	1.257	1.259	1.260	1.262
736.0	1.263	1.265	1.267	1.268	1.270	1.271	1.273	1.275	1.276	1.278
736.1	1.279	1.281	1.283	1.284	1.286	1.287	1.289	1.291	1.292	1.294
736.2	1.296	1.297	1.299	1.300	1.302	1.304	1.305	1.307	1.308	1.310
736.3	1.312	1.313	1.315	1.317	1.318	1.320	1.322	1.323	1.325	1.326
736.4	1.328	1.330	1.331	1.333	1.335	1.336	1.338	1.340	1.341	1.343
736.5	1.344	1.346	1.348	1.349	1.351	1.353	1.354	1.356	1.358	1.359
736.6	1.361	1.363	1.364	1.366	1.368	1.369	1.371	1.373	1.374	1.376
736.7	1.378	1.379	1.381	1.383	1.384	1.386	1.388	1.389	1.391	1.393
736.8	1.395	1.396	1.398	1.400	1.401	1.403	1.405	1.406	1.408	1.410
736.9	1.411	1.413	1.415	1.417	1.418	1.420	1.422	1.423	1.425	1.427
737.0	1.429	1.430	1.432	1.434	1.435	1.437	1.439	1.441	1.442	1.444
737.1	1.446	1.447	1.449	1.451	1.453	1.454	1.456	1.458	1.460	1.461
737.2	1.463	1.465	1.466	1.468	1.470	1.472	1.473	1.475	1.477	1.479
737.3	1.480	1.482	1.484	1.486	1.487	1.489	1.491	1.493	1.494	1.496
737.4	1.498	1.500	1.502	1.503	1.505	1.507	1.509	1.510	1.512	1.514
737.5	1.516	1.518	1.519	1.521	1.523	1.525	1.526	1.528	1.530	1.532
737.6	1.534	1.535	1.537	1.539	1.541	1.543	1.544	1.546	1.548	1.550
737.7	1.552	1.553	1.555	1.557	1.559	1.561	1.563	1.564	1.566	1.568
737.8	1.570	1.572	1.573	1.575	1.577	1.579	1.581	1.583	1.584	1.586
737.9	1.588	1.590	1.592	1.594	1.595	1.597	1.599	1.601	1.603	1.605
ELEV	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09

TABLE 7-5 (Continued)

LAKE GEORGETOWN - ELEVATION CAPACITY TABLE

ELEVATIONS IN FEET-NGVD, CAPACITIES IN THOUSAND ACRE-FEET

ELEV	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
738.0	1.607	1.608	1.610	1.612	1.614	1.616	1.618	1.619	1.621	1.623
738.1	1.625	1.627	1.629	1.631	1.633	1.634	1.636	1.638	1.640	1.642
738.2	1.644	1.646	1.648	1.649	1.651	1.653	1.655	1.657	1.659	1.661
738.3	1.663	1.665	1.667	1.668	1.670	1.672	1.674	1.676	1.678	1.680
738.4	1.682	1.684	1.686	1.688	1.689	1.691	1.693	1.695	1.697	1.699
738.5	1.701	1.703	1.705	1.707	1.709	1.711	1.713	1.715	1.716	1.718
738.6	1.720	1.722	1.724	1.726	1.728	1.730	1.732	1.734	1.736	1.738
738.7	1.740	1.742	1.744	1.746	1.748	1.750	1.752	1.754	1.756	1.758
738.8	1.760	1.762	1.764	1.766	1.768	1.770	1.772	1.774	1.775	1.777
738.9	1.779	1.781	1.783	1.785	1.787	1.789	1.791	1.793	1.795	1.797
739.0	1.799	1.802	1.804	1.806	1.808	1.810	1.812	1.814	1.816	1.818
739.1	1.820	1.822	1.824	1.826	1.828	1.830	1.832	1.834	1.836	1.838
739.2	1.840	1.842	1.844	1.846	1.848	1.850	1.852	1.854	1.856	1.858
739.3	1.860	1.862	1.865	1.867	1.869	1.871	1.873	1.875	1.877	1.879
739.4	1.881	1.883	1.885	1.887	1.889	1.891	1.893	1.896	1.898	1.900
739.5	1.902	1.904	1.906	1.908	1.910	1.912	1.914	1.916	1.918	1.921
739.6	1.923	1.925	1.927	1.929	1.931	1.933	1.935	1.937	1.939	1.942
739.7	1.944	1.946	1.948	1.950	1.952	1.954	1.956	1.958	1.961	1.963
739.8	1.965	1.967	1.969	1.971	1.973	1.975	1.978	1.980	1.982	1.984
739.9	1.986	1.988	1.990	1.992	1.995	1.997	1.999	2.001	2.003	2.005
740.0	2.007	2.010	2.012	2.014	2.016	2.018	2.020	2.023	2.025	2.027
740.1	2.029	2.031	2.033	2.036	2.038	2.040	2.042	2.044	2.046	2.049
740.2	2.051	2.053	2.055	2.057	2.060	2.062	2.064	2.066	2.068	2.070
740.3	2.073	2.075	2.077	2.079	2.081	2.084	2.086	2.088	2.090	2.092
740.4	2.095	2.097	2.099	2.101	2.104	2.106	2.108	2.110	2.112	2.115
740.5	2.117	2.119	2.121	2.124	2.126	2.128	2.130	2.132	2.135	2.137
740.6	2.139	2.141	2.144	2.146	2.148	2.150	2.153	2.155	2.157	2.159
740.7	2.162	2.164	2.166	2.168	2.171	2.173	2.175	2.177	2.180	2.182
740.8	2.184	2.187	2.189	2.191	2.193	2.196	2.198	2.200	2.203	2.205
740.9	2.207	2.209	2.212	2.214	2.216	2.219	2.221	2.223	2.225	2.228
741.0	2.230	2.232	2.235	2.237	2.239	2.242	2.244	2.246	2.248	2.251
741.1	2.253	2.255	2.258	2.260	2.262	2.265	2.267	2.269	2.272	2.274
741.2	2.276	2.279	2.281	2.283	2.286	2.288	2.290	2.293	2.295	2.297
741.3	2.300	2.302	2.304	2.307	2.309	2.311	2.314	2.316	2.318	2.321
741.4	2.323	2.325	2.328	2.330	2.333	2.335	2.337	2.340	2.342	2.344
741.5	2.347	2.349	2.351	2.354	2.356	2.359	2.361	2.363	2.366	2.368
741.6	2.371	2.373	2.375	2.378	2.380	2.382	2.385	2.387	2.390	2.392
741.7	2.394	2.397	2.399	2.402	2.404	2.406	2.409	2.411	2.414	2.416
741.8	2.418	2.421	2.423	2.426	2.428	2.431	2.433	2.435	2.438	2.440
741.9	2.443	2.445	2.448	2.450	2.452	2.455	2.457	2.460	2.462	2.465
742.0	2.467	2.469	2.472	2.474	2.477	2.479	2.482	2.484	2.487	2.489
742.1	2.491	2.494	2.496	2.499	2.501	2.504	2.506	2.509	2.511	2.514
742.2	2.516	2.519	2.521	2.523	2.526	2.528	2.531	2.533	2.536	2.538
742.3	2.541	2.543	2.546	2.548	2.551	2.553	2.556	2.558	2.561	2.563
742.4	2.566	2.568	2.571	2.573	2.576	2.578	2.581	2.583	2.586	2.588
742.5	2.591	2.593	2.596	2.598	2.601	2.603	2.606	2.608	2.611	2.613
742.6	2.616	2.618	2.621	2.623	2.626	2.629	2.631	2.634	2.636	2.639
742.7	2.641	2.644	2.646	2.649	2.651	2.654	2.656	2.659	2.662	2.664
742.8	2.667	2.669	2.672	2.674	2.677	2.679	2.682	2.685	2.687	2.690
742.9	2.692	2.695	2.697	2.700	2.703	2.705	2.708	2.710	2.713	2.715
ELEV	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09

TABLE 7-5 (Continued)

LAKE GEORGETOWN - ELEVATION CAPACITY TABLE

ELEVATIONS IN FEET-NGVD, CAPACITIES IN THOUSAND ACRE-FEET

ELEV	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
743.0	2.718	2.721	2.723	2.726	2.728	2.731	2.734	2.736	2.739	2.741
743.1	2.744	2.746	2.749	2.752	2.754	2.757	2.759	2.762	2.765	2.767
743.2	2.770	2.772	2.775	2.778	2.780	2.783	2.786	2.788	2.791	2.793
743.3	2.796	2.799	2.801	2.804	2.806	2.809	2.812	2.814	2.817	2.820
743.4	2.822	2.825	2.828	2.830	2.833	2.835	2.838	2.841	2.843	2.846
743.5	2.849	2.851	2.854	2.857	2.859	2.862	2.865	2.867	2.870	2.872
743.6	2.875	2.878	2.880	2.883	2.886	2.888	2.891	2.894	2.896	2.899
743.7	2.902	2.904	2.907	2.910	2.912	2.915	2.918	2.921	2.923	2.926
743.8	2.929	2.931	2.934	2.937	2.939	2.942	2.945	2.947	2.950	2.953
743.9	2.955	2.958	2.961	2.964	2.966	2.969	2.972	2.974	2.977	2.980
744.0	2.983	2.985	2.988	2.991	2.993	2.996	2.999	3.002	3.004	3.007
744.1	3.010	3.012	3.015	3.018	3.021	3.023	3.026	3.029	3.032	3.034
744.2	3.037	3.040	3.043	3.045	3.048	3.051	3.054	3.056	3.059	3.062
744.3	3.065	3.067	3.070	3.073	3.076	3.078	3.081	3.084	3.087	3.089
744.4	3.092	3.095	3.098	3.101	3.103	3.106	3.109	3.112	3.114	3.117
744.5	3.120	3.123	3.126	3.128	3.131	3.134	3.137	3.140	3.142	3.145
744.6	3.148	3.151	3.154	3.156	3.159	3.162	3.165	3.168	3.170	3.173
744.7	3.176	3.179	3.182	3.185	3.187	3.190	3.193	3.196	3.199	3.202
744.8	3.204	3.207	3.210	3.213	3.216	3.219	3.221	3.224	3.227	3.230
744.9	3.233	3.236	3.239	3.241	3.244	3.247	3.250	3.253	3.256	3.259
745.0	3.261	3.264	3.267	3.270	3.273	3.276	3.279	3.282	3.285	3.287
745.1	3.290	3.293	3.296	3.299	3.302	3.305	3.308	3.311	3.313	3.316
745.2	3.319	3.322	3.325	3.328	3.331	3.334	3.337	3.340	3.343	3.345
745.3	3.348	3.351	3.354	3.357	3.360	3.363	3.366	3.369	3.372	3.375
745.4	3.378	3.381	3.384	3.386	3.389	3.392	3.395	3.398	3.401	3.404
745.5	3.407	3.410	3.413	3.416	3.419	3.422	3.425	3.428	3.431	3.434
745.6	3.437	3.440	3.443	3.446	3.449	3.452	3.455	3.458	3.461	3.464
745.7	3.467	3.470	3.473	3.476	3.479	3.482	3.485	3.488	3.491	3.494
745.8	3.497	3.500	3.503	3.506	3.509	3.512	3.515	3.518	3.521	3.524
745.9	3.527	3.530	3.533	3.536	3.539	3.542	3.545	3.548	3.551	3.554
746.0	3.557	3.560	3.563	3.566	3.569	3.572	3.575	3.578	3.581	3.584
746.1	3.587	3.591	3.594	3.597	3.600	3.603	3.606	3.609	3.612	3.615
746.2	3.618	3.621	3.624	3.627	3.630	3.633	3.637	3.640	3.643	3.646
746.3	3.649	3.652	3.655	3.658	3.661	3.664	3.667	3.671	3.674	3.677
746.4	3.680	3.683	3.686	3.689	3.692	3.695	3.698	3.702	3.705	3.708
746.5	3.711	3.714	3.717	3.720	3.723	3.726	3.730	3.733	3.736	3.739
746.6	3.742	3.745	3.748	3.751	3.755	3.758	3.761	3.764	3.767	3.770
746.7	3.773	3.777	3.780	3.783	3.786	3.789	3.792	3.796	3.799	3.802
746.8	3.805	3.808	3.811	3.814	3.818	3.821	3.824	3.827	3.830	3.834
746.9	3.837	3.840	3.843	3.846	3.849	3.853	3.856	3.859	3.862	3.865
747.0	3.868	3.872	3.875	3.878	3.881	3.884	3.888	3.891	3.894	3.897
747.1	3.900	3.904	3.907	3.910	3.913	3.917	3.920	3.923	3.926	3.929
747.2	3.933	3.936	3.939	3.942	3.945	3.949	3.952	3.955	3.958	3.962
747.3	3.965	3.968	3.971	3.975	3.978	3.981	3.984	3.988	3.991	3.994
747.4	3.997	4.001	4.004	4.007	4.010	4.014	4.017	4.020	4.023	4.027
747.5	4.030	4.033	4.036	4.040	4.043	4.046	4.049	4.053	4.056	4.059
747.6	4.063	4.066	4.069	4.072	4.076	4.079	4.082	4.086	4.089	4.092
747.7	4.095	4.099	4.102	4.105	4.109	4.112	4.115	4.119	4.122	4.125
747.8	4.128	4.132	4.135	4.138	4.142	4.145	4.148	4.152	4.155	4.158
747.9	4.162	4.165	4.168	4.172	4.175	4.178	4.182	4.185	4.188	4.192
ELEV	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09

TABLE 7-5 (Continued)

LAKE GEORGETOWN - ELEVATION CAPACITY TABLE

ELEVATIONS IN FEET-NGVD, CAPACITIES IN THOUSAND ACRE-FEET

ELEV	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
748.0	4.195	4.198	4.202	4.205	4.208	4.212	4.215	4.218	4.222	4.225
748.1	4.228	4.232	4.235	4.239	4.242	4.245	4.249	4.252	4.255	4.259
748.2	4.262	4.265	4.269	4.272	4.276	4.279	4.282	4.286	4.289	4.292
748.3	4.296	4.299	4.303	4.306	4.309	4.313	4.316	4.320	4.323	4.326
748.4	4.330	4.333	4.337	4.340	4.343	4.347	4.350	4.354	4.357	4.360
748.5	4.364	4.367	4.371	4.374	4.378	4.381	4.384	4.388	4.391	4.395
748.6	4.398	4.402	4.405	4.408	4.412	4.415	4.419	4.422	4.426	4.429
748.7	4.432	4.436	4.439	4.443	4.446	4.450	4.453	4.457	4.460	4.464
748.8	4.467	4.470	4.474	4.477	4.481	4.484	4.488	4.491	4.495	4.498
748.9	4.502	4.505	4.509	4.512	4.516	4.519	4.523	4.526	4.530	4.533
749.0	4.536	4.540	4.543	4.547	4.550	4.554	4.557	4.561	4.564	4.568
749.1	4.571	4.575	4.578	4.582	4.586	4.589	4.593	4.596	4.600	4.603
749.2	4.607	4.610	4.614	4.617	4.621	4.624	4.628	4.631	4.635	4.638
749.3	4.642	4.645	4.649	4.652	4.656	4.660	4.663	4.667	4.670	4.674
749.4	4.677	4.681	4.684	4.688	4.692	4.695	4.699	4.702	4.706	4.709
749.5	4.713	4.716	4.720	4.724	4.727	4.731	4.734	4.738	4.741	4.745
749.6	4.749	4.752	4.756	4.759	4.763	4.767	4.770	4.774	4.777	4.781
749.7	4.784	4.788	4.792	4.795	4.799	4.802	4.806	4.810	4.813	4.817
749.8	4.820	4.824	4.828	4.831	4.835	4.839	4.842	4.846	4.849	4.853
749.9	4.857	4.860	4.864	4.868	4.871	4.875	4.878	4.882	4.886	4.889
750.0	4.893	4.897	4.900	4.904	4.908	4.911	4.915	4.919	4.922	4.926
750.1	4.929	4.933	4.937	4.940	4.944	4.948	4.951	4.955	4.959	4.962
750.2	4.966	4.970	4.973	4.977	4.981	4.984	4.988	4.992	4.996	4.999
750.3	5.003	5.007	5.010	5.014	5.018	5.021	5.025	5.029	5.032	5.036
750.4	5.040	5.044	5.047	5.051	5.055	5.058	5.062	5.066	5.070	5.073
750.5	5.077	5.081	5.084	5.088	5.092	5.096	5.099	5.103	5.107	5.111
750.6	5.114	5.118	5.122	5.125	5.129	5.133	5.137	5.140	5.144	5.148
750.7	5.152	5.155	5.159	5.163	5.167	5.170	5.174	5.178	5.182	5.186
750.8	5.189	5.193	5.197	5.201	5.204	5.208	5.212	5.216	5.220	5.223
750.9	5.227	5.231	5.235	5.238	5.242	5.246	5.250	5.254	5.257	5.261
751.0	5.265	5.269	5.273	5.276	5.280	5.284	5.288	5.292	5.295	5.299
751.1	5.303	5.307	5.311	5.315	5.318	5.322	5.326	5.330	5.334	5.337
751.2	5.341	5.345	5.349	5.353	5.357	5.360	5.364	5.368	5.372	5.376
751.3	5.380	5.384	5.387	5.391	5.395	5.399	5.403	5.407	5.410	5.414
751.4	5.418	5.422	5.426	5.430	5.434	5.438	5.441	5.445	5.449	5.453
751.5	5.457	5.461	5.465	5.469	5.472	5.476	5.480	5.484	5.488	5.492
751.6	5.496	5.500	5.503	5.507	5.511	5.515	5.519	5.523	5.527	5.531
751.7	5.535	5.539	5.542	5.546	5.550	5.554	5.558	5.562	5.566	5.570
751.8	5.574	5.578	5.582	5.586	5.589	5.593	5.597	5.601	5.605	5.609
751.9	5.613	5.617	5.621	5.625	5.629	5.633	5.637	5.641	5.645	5.649
752.0	5.653	5.656	5.660	5.664	5.668	5.672	5.676	5.680	5.684	5.688
752.1	5.692	5.696	5.700	5.704	5.708	5.712	5.716	5.720	5.724	5.728
752.2	5.732	5.736	5.740	5.744	5.748	5.752	5.756	5.760	5.764	5.768
752.3	5.772	5.776	5.780	5.784	5.787	5.791	5.795	5.799	5.803	5.807
752.4	5.811	5.815	5.819	5.823	5.827	5.831	5.835	5.839	5.843	5.847
752.5	5.852	5.856	5.860	5.864	5.868	5.872	5.876	5.880	5.884	5.888
752.6	5.892	5.896	5.900	5.904	5.908	5.912	5.916	5.920	5.924	5.928
752.7	5.932	5.936	5.940	5.944	5.948	5.952	5.956	5.960	5.964	5.968
752.8	5.972	5.976	5.980	5.984	5.989	5.993	5.997	6.001	6.005	6.009
752.9	6.013	6.017	6.021	6.025	6.029	6.033	6.037	6.041	6.045	6.049
ELEV	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09

TABLE 7-5 (Continued)

LAKE GEORGETOWN - ELEVATION CAPACITY TABLE

ELEVATIONS IN FEET-NGVD, CAPACITIES IN THOUSAND ACRE-FEET

ELEV	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
753.0	6.054	6.058	6.062	6.066	6.070	6.074	6.078	6.082	6.086	6.090
753.1	6.094	6.098	6.102	6.107	6.111	6.115	6.119	6.123	6.127	6.131
753.2	6.135	6.139	6.143	6.147	6.152	6.156	6.160	6.164	6.168	6.172
753.3	6.176	6.180	6.184	6.189	6.193	6.197	6.201	6.205	6.209	6.213
753.4	6.217	6.221	6.226	6.230	6.234	6.238	6.242	6.246	6.250	6.254
753.5	6.259	6.263	6.267	6.271	6.275	6.279	6.283	6.288	6.292	6.296
753.6	6.300	6.304	6.308	6.312	6.317	6.321	6.325	6.329	6.333	6.337
753.7	6.342	6.346	6.350	6.354	6.358	6.362	6.367	6.371	6.375	6.379
753.8	6.383	6.387	6.392	6.396	6.400	6.404	6.408	6.413	6.417	6.421
753.9	6.425	6.429	6.433	6.438	6.442	6.446	6.450	6.454	6.459	6.463
754.0	6.467	6.471	6.475	6.480	6.484	6.488	6.492	6.496	6.501	6.505
754.1	6.509	6.513	6.518	6.522	6.526	6.530	6.534	6.539	6.543	6.547
754.2	6.551	6.556	6.560	6.564	6.568	6.572	6.577	6.581	6.585	6.589
754.3	6.594	6.598	6.602	6.606	6.611	6.615	6.619	6.623	6.628	6.632
754.4	6.636	6.640	6.645	6.649	6.653	6.657	6.662	6.666	6.670	6.674
754.5	6.679	6.683	6.687	6.692	6.696	6.700	6.704	6.709	6.713	6.717
754.6	6.722	6.726	6.730	6.734	6.739	6.743	6.747	6.752	6.756	6.760
754.7	6.764	6.769	6.773	6.777	6.782	6.786	6.790	6.795	6.799	6.803
754.8	6.807	6.812	6.816	6.820	6.825	6.829	6.833	6.838	6.842	6.846
754.9	6.851	6.855	6.859	6.864	6.868	6.872	6.877	6.881	6.885	6.890
755.0	6.894	6.898	6.903	6.907	6.911	6.916	6.920	6.924	6.929	6.933
755.1	6.937	6.942	6.946	6.951	6.955	6.959	6.964	6.968	6.972	6.977
755.2	6.981	6.985	6.990	6.994	6.999	7.003	7.007	7.012	7.016	7.021
755.3	7.025	7.029	7.034	7.038	7.042	7.047	7.051	7.056	7.060	7.064
755.4	7.069	7.073	7.078	7.082	7.087	7.091	7.095	7.100	7.104	7.109
755.5	7.113	7.117	7.122	7.126	7.131	7.135	7.140	7.144	7.148	7.153
755.6	7.157	7.162	7.166	7.171	7.175	7.179	7.184	7.188	7.193	7.197
755.7	7.202	7.206	7.211	7.215	7.220	7.224	7.228	7.233	7.237	7.242
755.8	7.246	7.251	7.255	7.260	7.264	7.269	7.273	7.278	7.282	7.287
755.9	7.291	7.296	7.300	7.305	7.309	7.314	7.318	7.323	7.327	7.332
756.0	7.336	7.341	7.345	7.350	7.354	7.359	7.363	7.368	7.372	7.377
756.1	7.381	7.386	7.390	7.395	7.399	7.404	7.408	7.413	7.417	7.422
756.2	7.426	7.431	7.435	7.440	7.445	7.449	7.454	7.458	7.463	7.467
756.3	7.472	7.476	7.481	7.485	7.490	7.495	7.499	7.504	7.508	7.513
756.4	7.517	7.522	7.527	7.531	7.536	7.540	7.545	7.549	7.554	7.559
756.5	7.563	7.568	7.572	7.577	7.582	7.586	7.591	7.595	7.600	7.605
756.6	7.609	7.614	7.618	7.623	7.628	7.632	7.637	7.642	7.646	7.651
756.7	7.655	7.660	7.665	7.669	7.674	7.679	7.683	7.688	7.692	7.697
756.8	7.702	7.706	7.711	7.716	7.720	7.725	7.730	7.734	7.739	7.744
756.9	7.748	7.753	7.758	7.762	7.767	7.772	7.776	7.781	7.786	7.790
757.0	7.795	7.800	7.804	7.809	7.814	7.818	7.823	7.828	7.833	7.837
757.1	7.842	7.847	7.851	7.856	7.861	7.865	7.870	7.875	7.880	7.884
757.2	7.889	7.894	7.898	7.903	7.908	7.913	7.917	7.922	7.927	7.932
757.3	7.936	7.941	7.946	7.950	7.955	7.960	7.965	7.969	7.974	7.979
757.4	7.984	7.988	7.993	7.998	8.003	8.008	8.012	8.017	8.022	8.027
757.5	8.031	8.036	8.041	8.046	8.050	8.055	8.060	8.065	8.070	8.074
757.6	8.079	8.084	8.089	8.094	8.098	8.103	8.108	8.113	8.118	8.122
757.7	8.127	8.132	8.137	8.142	8.147	8.151	8.156	8.161	8.166	8.171
757.8	8.175	8.180	8.185	8.190	8.195	8.200	8.205	8.209	8.214	8.219
757.9	8.224	8.229	8.234	8.238	8.243	8.248	8.253	8.258	8.263	8.268
ELEV	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09

TABLE 7-5 (Continued)

LAKE GEORGETOWN - ELEVATION CAPACITY TABLE

ELEVATIONS IN FEET-NGVD, CAPACITIES IN THOUSAND ACRE-FEET

ELEV	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
758.0	8.273	8.277	8.282	8.287	8.292	8.297	8.302	8.307	8.312	8.316
758.1	8.321	8.326	8.331	8.336	8.341	8.346	8.351	8.356	8.360	8.365
758.2	8.370	8.375	8.380	8.385	8.390	8.395	8.400	8.405	8.410	8.414
758.3	8.419	8.424	8.429	8.434	8.439	8.444	8.449	8.454	8.459	8.464
758.4	8.469	8.474	8.479	8.484	8.489	8.493	8.498	8.503	8.508	8.513
758.5	8.518	8.523	8.528	8.533	8.538	8.543	8.548	8.553	8.558	8.563
758.6	8.568	8.573	8.578	8.583	8.588	8.593	8.598	8.603	8.608	8.613
758.7	8.618	8.623	8.628	8.633	8.638	8.643	8.648	8.653	8.658	8.663
758.8	8.668	8.673	8.678	8.683	8.688	8.693	8.698	8.703	8.708	8.713
758.9	8.718	8.723	8.728	8.733	8.738	8.743	8.748	8.753	8.758	8.763
759.0	8.769	8.774	8.779	8.784	8.789	8.794	8.799	8.804	8.809	8.814
759.1	8.819	8.824	8.829	8.834	8.839	8.844	8.850	8.855	8.860	8.865
759.2	8.870	8.875	8.880	8.885	8.890	8.895	8.900	8.906	8.911	8.916
759.3	8.921	8.926	8.931	8.936	8.941	8.946	8.952	8.957	8.962	8.967
759.4	8.972	8.977	8.982	8.987	8.993	8.998	9.003	9.008	9.013	9.018
759.5	9.024	9.029	9.034	9.039	9.044	9.049	9.054	9.060	9.065	9.070
759.6	9.075	9.080	9.085	9.091	9.096	9.101	9.106	9.111	9.117	9.122
759.7	9.127	9.132	9.137	9.142	9.148	9.153	9.158	9.163	9.168	9.174
759.8	9.179	9.184	9.189	9.195	9.200	9.205	9.210	9.215	9.221	9.226
759.9	9.231	9.236	9.242	9.247	9.252	9.257	9.263	9.268	9.273	9.278
760.0	9.283	9.289	9.294	9.299	9.305	9.310	9.315	9.320	9.326	9.331
760.1	9.336	9.341	9.347	9.352	9.357	9.362	9.368	9.373	9.378	9.384
760.2	9.389	9.394	9.399	9.405	9.410	9.415	9.421	9.426	9.431	9.437
760.3	9.442	9.447	9.453	9.458	9.463	9.468	9.474	9.479	9.484	9.490
760.4	9.495	9.500	9.506	9.511	9.516	9.522	9.527	9.532	9.538	9.543
760.5	9.549	9.554	9.559	9.565	9.570	9.575	9.581	9.586	9.591	9.597
760.6	9.602	9.607	9.613	9.618	9.624	9.629	9.634	9.640	9.645	9.651
760.7	9.656	9.661	9.667	9.672	9.677	9.683	9.688	9.694	9.699	9.704
760.8	9.710	9.715	9.721	9.726	9.732	9.737	9.742	9.748	9.753	9.759
760.9	9.764	9.770	9.775	9.780	9.786	9.791	9.797	9.802	9.808	9.813
761.0	9.818	9.824	9.829	9.835	9.840	9.846	9.851	9.857	9.862	9.868
761.1	9.873	9.879	9.884	9.890	9.895	9.900	9.906	9.911	9.917	9.922
761.2	9.928	9.933	9.939	9.944	9.950	9.955	9.961	9.966	9.972	9.977
761.3	9.983	9.988	9.994	9.999	10.005	10.010	10.016	10.021	10.027	10.032
761.4	10.038	10.044	10.049	10.055	10.060	10.066	10.071	10.077	10.082	10.088
761.5	10.093	10.099	10.104	10.110	10.116	10.121	10.127	10.132	10.138	10.143
761.6	10.149	10.154	10.160	10.166	10.171	10.177	10.182	10.188	10.193	10.199
761.7	10.205	10.210	10.216	10.221	10.227	10.233	10.238	10.244	10.249	10.255
761.8	10.261	10.266	10.272	10.277	10.283	10.289	10.294	10.300	10.305	10.311
761.9	10.317	10.322	10.328	10.334	10.339	10.345	10.350	10.356	10.362	10.367
762.0	10.373	10.379	10.384	10.390	10.396	10.401	10.407	10.413	10.418	10.424
762.1	10.430	10.435	10.441	10.446	10.452	10.458	10.464	10.469	10.475	10.481
762.2	10.486	10.492	10.498	10.503	10.509	10.515	10.520	10.526	10.532	10.537
762.3	10.543	10.549	10.555	10.560	10.566	10.572	10.577	10.583	10.589	10.595
762.4	10.600	10.606	10.612	10.617	10.623	10.629	10.635	10.640	10.646	10.652
762.5	10.658	10.663	10.669	10.675	10.681	10.686	10.692	10.698	10.704	10.709
762.6	10.715	10.721	10.727	10.732	10.738	10.744	10.750	10.756	10.761	10.767
762.7	10.773	10.779	10.785	10.790	10.796	10.802	10.808	10.814	10.819	10.825
762.8	10.831	10.837	10.843	10.848	10.854	10.860	10.866	10.872	10.877	10.883
762.9	10.889	10.895	10.901	10.907	10.912	10.918	10.924	10.930	10.936	10.942
ELEV	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09

TABLE 7-5 (Continued)

LAKE GEORGETOWN - ELEVATION CAPACITY TABLE

ELEVATIONS IN FEET-NGVD, CAPACITIES IN THOUSAND ACRE-FEET

ELEV	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
763.0	10.948	10.953	10.959	10.965	10.971	10.977	10.983	10.988	10.994	11.000
763.1	11.006	11.012	11.018	11.024	11.030	11.035	11.041	11.047	11.053	11.059
763.2	11.065	11.071	11.077	11.083	11.088	11.094	11.100	11.106	11.112	11.118
763.3	11.124	11.130	11.136	11.142	11.148	11.153	11.159	11.165	11.171	11.177
763.4	11.183	11.189	11.195	11.201	11.207	11.213	11.219	11.225	11.231	11.237
763.5	11.243	11.248	11.254	11.260	11.266	11.272	11.278	11.284	11.290	11.296
763.6	11.302	11.308	11.314	11.320	11.326	11.332	11.338	11.344	11.350	11.356
763.7	11.362	11.368	11.374	11.380	11.386	11.392	11.398	11.404	11.410	11.416
763.8	11.422	11.428	11.434	11.440	11.446	11.452	11.458	11.464	11.470	11.476
763.9	11.482	11.488	11.494	11.500	11.506	11.512	11.518	11.524	11.530	11.536
764.0	11.542	11.549	11.555	11.561	11.567	11.573	11.579	11.585	11.591	11.597
764.1	11.603	11.609	11.615	11.621	11.627	11.634	11.640	11.646	11.652	11.658
764.2	11.664	11.670	11.676	11.682	11.688	11.694	11.701	11.707	11.713	11.719
764.3	11.725	11.731	11.737	11.743	11.750	11.756	11.762	11.768	11.774	11.780
764.4	11.786	11.792	11.799	11.805	11.811	11.817	11.823	11.829	11.836	11.842
764.5	11.848	11.854	11.860	11.866	11.873	11.879	11.885	11.891	11.897	11.903
764.6	11.910	11.916	11.922	11.928	11.934	11.941	11.947	11.953	11.959	11.965
764.7	11.972	11.978	11.984	11.990	11.996	12.003	12.009	12.015	12.021	12.028
764.8	12.034	12.040	12.046	12.053	12.059	12.065	12.071	12.078	12.084	12.090
764.9	12.096	12.103	12.109	12.115	12.121	12.128	12.134	12.140	12.146	12.153
765.0	12.159	12.165	12.172	12.178	12.184	12.190	12.197	12.203	12.209	12.216
765.1	12.222	12.228	12.235	12.241	12.247	12.253	12.260	12.266	12.272	12.279
765.2	12.285	12.291	12.298	12.304	12.310	12.317	12.323	12.329	12.336	12.342
765.3	12.348	12.355	12.361	12.367	12.374	12.380	12.387	12.393	12.399	12.406
765.4	12.412	12.418	12.425	12.431	12.438	12.444	12.450	12.457	12.463	12.469
765.5	12.476	12.482	12.489	12.495	12.501	12.508	12.514	12.521	12.527	12.534
765.6	12.540	12.546	12.553	12.559	12.566	12.572	12.578	12.585	12.591	12.598
765.7	12.604	12.611	12.617	12.624	12.630	12.636	12.643	12.649	12.656	12.662
765.8	12.669	12.675	12.682	12.688	12.695	12.701	12.708	12.714	12.721	12.727
765.9	12.734	12.740	12.746	12.753	12.759	12.766	12.772	12.779	12.785	12.792
766.0	12.799	12.805	12.812	12.818	12.825	12.831	12.838	12.844	12.851	12.857
766.1	12.864	12.870	12.877	12.883	12.890	12.896	12.903	12.910	12.916	12.923
766.2	12.929	12.936	12.942	12.949	12.955	12.962	12.969	12.975	12.982	12.988
766.3	12.995	13.001	13.008	13.015	13.021	13.028	13.034	13.041	13.048	13.054
766.4	13.061	13.067	13.074	13.081	13.087	13.094	13.100	13.107	13.114	13.120
766.5	13.127	13.134	13.140	13.147	13.154	13.160	13.167	13.173	13.180	13.187
766.6	13.193	13.200	13.207	13.213	13.220	13.227	13.233	13.240	13.247	13.253
766.7	13.260	13.267	13.273	13.280	13.287	13.293	13.300	13.307	13.314	13.320
766.8	13.327	13.334	13.340	13.347	13.354	13.361	13.367	13.374	13.381	13.387
766.9	13.394	13.401	13.408	13.414	13.421	13.428	13.435	13.441	13.448	13.455
767.0	13.462	13.468	13.475	13.482	13.489	13.495	13.502	13.509	13.516	13.522
767.1	13.529	13.536	13.543	13.549	13.556	13.563	13.570	13.577	13.583	13.590
767.2	13.597	13.604	13.611	13.617	13.624	13.631	13.638	13.645	13.651	13.658
767.3	13.665	13.672	13.679	13.686	13.692	13.699	13.706	13.713	13.720	13.727
767.4	13.733	13.740	13.747	13.754	13.761	13.768	13.775	13.782	13.788	13.795
767.5	13.802	13.809	13.816	13.823	13.830	13.837	13.843	13.850	13.857	13.864
767.6	13.871	13.878	13.885	13.892	13.899	13.906	13.912	13.919	13.926	13.933
767.7	13.940	13.947	13.954	13.961	13.968	13.975	13.982	13.989	13.996	14.003
767.8	14.009	14.016	14.023	14.030	14.037	14.044	14.051	14.058	14.065	14.072
767.9	14.079	14.086	14.093	14.100	14.107	14.114	14.121	14.128	14.135	14.142
ELEV	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09

TABLE 7-5 (Continued)

LAKE GEORGETOWN - ELEVATION CAPACITY TABLE

ELEVATIONS IN FEET-NGVD, CAPACITIES IN THOUSAND ACRE-FEET

ELEV	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
768.0	14.149	14.156	14.163	14.170	14.177	14.184	14.191	14.198	14.205	14.212
768.1	14.219	14.226	14.233	14.240	14.247	14.254	14.261	14.268	14.275	14.282
768.2	14.290	14.297	14.304	14.311	14.318	14.325	14.332	14.339	14.346	14.353
768.3	14.360	14.367	14.374	14.381	14.388	14.396	14.403	14.410	14.417	14.424
768.4	14.431	14.438	14.445	14.452	14.459	14.467	14.474	14.481	14.488	14.495
768.5	14.502	14.509	14.516	14.524	14.531	14.538	14.545	14.552	14.559	14.566
768.6	14.573	14.581	14.588	14.595	14.602	14.609	14.616	14.624	14.631	14.638
768.7	14.645	14.652	14.659	14.667	14.674	14.681	14.688	14.695	14.703	14.710
768.8	14.717	14.724	14.731	14.739	14.746	14.753	14.760	14.767	14.775	14.782
768.9	14.789	14.796	14.804	14.811	14.818	14.825	14.833	14.840	14.847	14.854
769.0	14.861	14.869	14.876	14.883	14.891	14.898	14.905	14.912	14.920	14.927
769.1	14.934	14.941	14.949	14.956	14.963	14.971	14.978	14.985	14.992	15.000
769.2	15.007	15.014	15.022	15.029	15.036	15.044	15.051	15.058	15.066	15.073
769.3	15.080	15.087	15.095	15.102	15.110	15.117	15.124	15.132	15.139	15.146
769.4	15.154	15.161	15.168	15.176	15.183	15.190	15.198	15.205	15.212	15.220
769.5	15.227	15.235	15.242	15.249	15.257	15.264	15.272	15.279	15.286	15.294
769.6	15.301	15.309	15.316	15.323	15.331	15.338	15.346	15.353	15.361	15.368
769.7	15.375	15.383	15.390	15.398	15.405	15.413	15.420	15.427	15.435	15.442
769.8	15.450	15.457	15.465	15.472	15.480	15.487	15.495	15.502	15.510	15.517
769.9	15.525	15.532	15.540	15.547	15.554	15.562	15.569	15.577	15.584	15.592
770.0	15.599	15.607	15.615	15.622	15.630	15.637	15.645	15.652	15.660	15.667
770.1	15.675	15.682	15.690	15.697	15.705	15.712	15.720	15.728	15.735	15.743
770.2	15.750	15.758	15.765	15.773	15.780	15.788	15.796	15.803	15.811	15.818
770.3	15.826	15.834	15.841	15.849	15.856	15.864	15.871	15.879	15.887	15.894
770.4	15.902	15.910	15.917	15.925	15.932	15.940	15.948	15.955	15.963	15.970
770.5	15.978	15.986	15.993	16.001	16.009	16.016	16.024	16.032	16.039	16.047
770.6	16.055	16.062	16.070	16.078	16.085	16.093	16.101	16.108	16.116	16.124
770.7	16.131	16.139	16.147	16.154	16.162	16.170	16.177	16.185	16.193	16.201
770.8	16.208	16.216	16.224	16.231	16.239	16.247	16.255	16.262	16.270	16.278
770.9	16.286	16.293	16.301	16.309	16.316	16.324	16.332	16.340	16.347	16.355
771.0	16.363	16.371	16.379	16.386	16.394	16.402	16.410	16.417	16.425	16.433
771.1	16.441	16.449	16.456	16.464	16.472	16.480	16.487	16.495	16.503	16.511
771.2	16.519	16.527	16.534	16.542	16.550	16.558	16.566	16.573	16.581	16.589
771.3	16.597	16.605	16.613	16.620	16.628	16.636	16.644	16.652	16.660	16.668
771.4	16.675	16.683	16.691	16.699	16.707	16.715	16.723	16.730	16.738	16.746
771.5	16.754	16.762	16.770	16.778	16.786	16.794	16.801	16.809	16.817	16.825
771.6	16.833	16.841	16.849	16.857	16.865	16.873	16.881	16.889	16.896	16.904
771.7	16.912	16.920	16.928	16.936	16.944	16.952	16.960	16.968	16.976	16.984
771.8	16.992	17.000	17.008	17.016	17.024	17.032	17.040	17.048	17.056	17.064
771.9	17.072	17.080	17.087	17.095	17.103	17.111	17.119	17.127	17.135	17.143
772.0	17.152	17.160	17.168	17.176	17.184	17.192	17.200	17.208	17.216	17.224
772.1	17.232	17.240	17.248	17.256	17.264	17.272	17.280	17.288	17.296	17.304
772.2	17.312	17.320	17.328	17.336	17.344	17.352	17.360	17.369	17.377	17.385
772.3	17.393	17.401	17.409	17.417	17.425	17.433	17.441	17.449	17.457	17.465
772.4	17.474	17.482	17.490	17.498	17.506	17.514	17.522	17.530	17.538	17.547
772.5	17.555	17.563	17.571	17.579	17.587	17.595	17.603	17.611	17.620	17.628
772.6	17.636	17.644	17.652	17.660	17.668	17.677	17.685	17.693	17.701	17.709
772.7	17.717	17.726	17.734	17.742	17.750	17.758	17.766	17.774	17.783	17.791
772.8	17.799	17.807	17.815	17.824	17.832	17.840	17.848	17.856	17.865	17.873
772.9	17.881	17.889	17.897	17.906	17.914	17.922	17.930	17.938	17.947	17.955
ELEV	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09

TABLE 7-5 (Continued)

LAKE GEORGETOWN - ELEVATION CAPACITY TABLE

ELEVATIONS IN FEET-NGVD, CAPACITIES IN THOUSAND ACRE-FEET

ELEV	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
773.0	17.963	17.971	17.979	17.988	17.996	18.004	18.012	18.021	18.029	18.037
773.1	18.045	18.054	18.062	18.070	18.078	18.087	18.095	18.103	18.111	18.120
773.2	18.128	18.136	18.144	18.153	18.161	18.169	18.178	18.186	18.194	18.202
773.3	18.211	18.219	18.227	18.236	18.244	18.252	18.261	18.269	18.277	18.285
773.4	18.294	18.302	18.310	18.319	18.327	18.335	18.344	18.352	18.360	18.369
773.5	18.377	18.385	18.394	18.402	18.411	18.419	18.427	18.436	18.444	18.452
773.6	18.461	18.469	18.477	18.486	18.494	18.503	18.511	18.519	18.528	18.536
773.7	18.545	18.553	18.561	18.570	18.578	18.587	18.595	18.603	18.612	18.620
773.8	18.629	18.637	18.645	18.654	18.662	18.671	18.679	18.688	18.696	18.704
773.9	18.713	18.721	18.730	18.738	18.747	18.755	18.764	18.772	18.781	18.789
774.0	18.798	18.806	18.814	18.823	18.831	18.840	18.848	18.857	18.865	18.874
774.1	18.882	18.891	18.899	18.908	18.916	18.925	18.933	18.942	18.950	18.959
774.2	18.967	18.976	18.984	18.993	19.001	19.010	19.018	19.027	19.036	19.044
774.3	19.053	19.061	19.070	19.078	19.087	19.095	19.104	19.112	19.121	19.130
774.4	19.138	19.147	19.155	19.164	19.172	19.181	19.190	19.198	19.207	19.215
774.5	19.224	19.232	19.241	19.250	19.258	19.267	19.275	19.284	19.293	19.301
774.6	19.310	19.318	19.327	19.336	19.344	19.353	19.362	19.370	19.379	19.387
774.7	19.396	19.405	19.413	19.422	19.431	19.439	19.448	19.457	19.465	19.474
774.8	19.482	19.491	19.500	19.508	19.517	19.526	19.534	19.543	19.552	19.560
774.9	19.569	19.578	19.586	19.595	19.604	19.613	19.621	19.630	19.639	19.647
775.0	19.656	19.665	19.673	19.682	19.691	19.700	19.708	19.717	19.726	19.734
775.1	19.743	19.752	19.761	19.769	19.778	19.787	19.795	19.804	19.813	19.822
775.2	19.830	19.839	19.848	19.857	19.865	19.874	19.883	19.892	19.901	19.909
775.3	19.918	19.927	19.936	19.944	19.953	19.962	19.971	19.979	19.988	19.997
775.4	20.006	20.015	20.023	20.032	20.041	20.050	20.059	20.067	20.076	20.085
775.5	20.094	20.103	20.112	20.120	20.129	20.138	20.147	20.156	20.164	20.173
775.6	20.182	20.191	20.200	20.209	20.218	20.226	20.235	20.244	20.253	20.262
775.7	20.271	20.279	20.288	20.297	20.306	20.315	20.324	20.333	20.342	20.350
775.8	20.359	20.368	20.377	20.386	20.395	20.404	20.413	20.422	20.431	20.439
775.9	20.448	20.457	20.466	20.475	20.484	20.493	20.502	20.511	20.520	20.529
776.0	20.538	20.546	20.555	20.564	20.573	20.582	20.591	20.600	20.609	20.618
776.1	20.627	20.636	20.645	20.654	20.663	20.672	20.681	20.690	20.699	20.708
776.2	20.717	20.726	20.735	20.744	20.753	20.761	20.770	20.779	20.788	20.797
776.3	20.806	20.815	20.824	20.833	20.843	20.852	20.861	20.870	20.879	20.888
776.4	20.897	20.906	20.915	20.924	20.933	20.942	20.951	20.960	20.969	20.978
776.5	20.987	20.996	21.005	21.014	21.023	21.032	21.041	21.050	21.059	21.069
776.6	21.078	21.087	21.096	21.105	21.114	21.123	21.132	21.141	21.150	21.159
776.7	21.168	21.178	21.187	21.196	21.205	21.214	21.223	21.232	21.241	21.250
776.8	21.260	21.269	21.278	21.287	21.296	21.305	21.314	21.323	21.333	21.342
776.9	21.351	21.360	21.369	21.378	21.388	21.397	21.406	21.415	21.424	21.433
777.0	21.442	21.452	21.461	21.470	21.479	21.488	21.498	21.507	21.516	21.525
777.1	21.534	21.544	21.553	21.562	21.571	21.580	21.590	21.599	21.608	21.617
777.2	21.626	21.636	21.645	21.654	21.663	21.673	21.682	21.691	21.700	21.709
777.3	21.719	21.728	21.737	21.746	21.756	21.765	21.774	21.784	21.793	21.802
777.4	21.811	21.821	21.830	21.839	21.848	21.858	21.867	21.876	21.886	21.895
777.5	21.904	21.913	21.923	21.932	21.941	21.951	21.960	21.969	21.979	21.988
777.6	21.997	22.007	22.016	22.025	22.035	22.044	22.053	22.062	22.072	22.081
777.7	22.091	22.100	22.109	22.119	22.128	22.137	22.147	22.156	22.165	22.175
777.8	22.184	22.193	22.203	22.212	22.222	22.231	22.240	22.250	22.259	22.269
777.9	22.278	22.287	22.297	22.306	22.316	22.325	22.334	22.344	22.353	22.363
ELEV	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09

TABLE 7-5 (Continued)

LAKE GEORGETOWN - ELEVATION CAPACITY TABLE

ELEVATIONS IN FEET-NGVD, CAPACITIES IN THOUSAND ACRE-FEET

ELEV	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
778.0	22.372	22.381	22.391	22.400	22.410	22.419	22.429	22.438	22.447	22.457
778.1	22.466	22.476	22.485	22.495	22.504	22.514	22.523	22.533	22.542	22.551
778.2	22.561	22.570	22.580	22.589	22.599	22.608	22.618	22.627	22.637	22.646
778.3	22.656	22.665	22.675	22.684	22.694	22.703	22.713	22.722	22.732	22.741
778.4	22.751	22.760	22.770	22.779	22.789	22.798	22.808	22.818	22.827	22.837
778.5	22.846	22.856	22.865	22.875	22.884	22.894	22.903	22.913	22.923	22.932
778.6	22.942	22.951	22.961	22.970	22.980	22.990	22.999	23.009	23.018	23.028
778.7	23.038	23.047	23.057	23.066	23.076	23.086	23.095	23.105	23.114	23.124
778.8	23.134	23.143	23.153	23.162	23.172	23.182	23.191	23.201	23.211	23.220
778.9	23.230	23.240	23.249	23.259	23.269	23.278	23.288	23.298	23.307	23.317
779.0	23.326	23.336	23.346	23.356	23.365	23.375	23.385	23.394	23.404	23.414
779.1	23.423	23.433	23.443	23.452	23.462	23.472	23.482	23.491	23.501	23.511
779.2	23.520	23.530	23.540	23.550	23.559	23.569	23.579	23.589	23.598	23.608
779.3	23.618	23.628	23.637	23.647	23.657	23.667	23.676	23.686	23.696	23.706
779.4	23.715	23.725	23.735	23.745	23.754	23.764	23.774	23.784	23.794	23.803
779.5	23.813	23.823	23.833	23.843	23.852	23.862	23.872	23.882	23.892	23.902
779.6	23.911	23.921	23.931	23.941	23.951	23.961	23.970	23.980	23.990	24.000
779.7	24.010	24.020	24.029	24.039	24.049	24.059	24.069	24.079	24.089	24.099
779.8	24.108	24.118	24.128	24.138	24.148	24.158	24.168	24.178	24.188	24.197
779.9	24.207	24.217	24.227	24.237	24.247	24.257	24.267	24.277	24.287	24.297
780.0	24.306	24.316	24.326	24.336	24.346	24.356	24.366	24.376	24.386	24.396
780.1	24.406	24.416	24.426	24.436	24.446	24.456	24.466	24.476	24.486	24.496
780.2	24.506	24.516	24.526	24.536	24.546	24.556	24.566	24.576	24.586	24.596
780.3	24.606	24.616	24.626	24.636	24.646	24.656	24.666	24.676	24.686	24.696
780.4	24.706	24.716	24.726	24.736	24.746	24.756	24.766	24.776	24.786	24.796
780.5	24.806	24.817	24.827	24.837	24.847	24.857	24.867	24.877	24.887	24.897
780.6	24.907	24.917	24.928	24.938	24.948	24.958	24.968	24.978	24.988	24.998
780.7	25.008	25.019	25.029	25.039	25.049	25.059	25.069	25.079	25.090	25.100
780.8	25.110	25.120	25.130	25.140	25.150	25.161	25.171	25.181	25.191	25.201
780.9	25.212	25.222	25.232	25.242	25.252	25.262	25.273	25.283	25.293	25.303
781.0	25.313	25.324	25.334	25.344	25.354	25.365	25.375	25.385	25.395	25.405
781.1	25.416	25.426	25.436	25.446	25.457	25.467	25.477	25.487	25.498	25.508
781.2	25.518	25.528	25.539	25.549	25.559	25.570	25.580	25.590	25.600	25.611
781.3	25.621	25.631	25.642	25.652	25.662	25.672	25.683	25.693	25.703	25.714
781.4	25.724	25.734	25.745	25.755	25.765	25.776	25.786	25.796	25.807	25.817
781.5	25.827	25.838	25.848	25.858	25.869	25.879	25.889	25.900	25.910	25.920
781.6	25.931	25.941	25.952	25.962	25.972	25.983	25.993	26.003	26.014	26.024
781.7	26.035	26.045	26.055	26.066	26.076	26.087	26.097	26.107	26.118	26.128
781.8	26.139	26.149	26.159	26.170	26.180	26.191	26.201	26.212	26.222	26.232
781.9	26.243	26.253	26.264	26.274	26.285	26.295	26.306	26.316	26.327	26.337
782.0	26.347	26.358	26.368	26.379	26.389	26.400	26.410	26.421	26.431	26.442
782.1	26.452	26.463	26.473	26.484	26.494	26.505	26.515	26.526	26.536	26.547
782.2	26.557	26.568	26.579	26.589	26.600	26.610	26.621	26.631	26.642	26.652
782.3	26.663	26.673	26.684	26.695	26.705	26.716	26.726	26.737	26.747	26.758
782.4	26.769	26.779	26.790	26.800	26.811	26.821	26.832	26.843	26.853	26.864
782.5	26.875	26.885	26.896	26.906	26.917	26.928	26.938	26.949	26.959	26.970
782.6	26.981	26.991	27.002	27.013	27.023	27.034	27.045	27.055	27.066	27.077
782.7	27.087	27.098	27.109	27.119	27.130	27.141	27.151	27.162	27.173	27.183
782.8	27.194	27.205	27.215	27.226	27.237	27.248	27.258	27.269	27.280	27.290
782.9	27.301	27.312	27.323	27.333	27.344	27.355	27.366	27.376	27.387	27.398
ELEV	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09

TABLE 7-5 (Continued)

LAKE GEORGETOWN - ELEVATION CAPACITY TABLE

ELEVATIONS IN FEET-NGVD, CAPACITIES IN THOUSAND ACRE-FEET

ELEV	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
783.0	27.409	27.419	27.430	27.441	27.452	27.462	27.473	27.484	27.495	27.505
783.1	27.516	27.527	27.538	27.549	27.559	27.570	27.581	27.592	27.602	27.613
783.2	27.624	27.635	27.646	27.657	27.667	27.678	27.689	27.700	27.711	27.722
783.3	27.732	27.743	27.754	27.765	27.776	27.787	27.797	27.808	27.819	27.830
783.4	27.841	27.852	27.863	27.874	27.884	27.895	27.906	27.917	27.928	27.939
783.5	27.950	27.961	27.972	27.982	27.993	28.004	28.015	28.026	28.037	28.048
783.6	28.059	28.070	28.081	28.092	28.103	28.114	28.125	28.135	28.146	28.157
783.7	28.168	28.179	28.190	28.201	28.212	28.223	28.234	28.245	28.256	28.267
783.8	28.278	28.289	28.300	28.311	28.322	28.333	28.344	28.355	28.366	28.377
783.9	28.388	28.399	28.410	28.421	28.432	28.443	28.454	28.465	28.476	28.487
784.0	28.499	28.510	28.521	28.532	28.543	28.554	28.565	28.576	28.587	28.598
784.1	28.609	28.620	28.631	28.642	28.653	28.665	28.676	28.687	28.698	28.709
784.2	28.720	28.731	28.742	28.753	28.765	28.776	28.787	28.798	28.809	28.820
784.3	28.831	28.842	28.854	28.865	28.876	28.887	28.898	28.909	28.921	28.932
784.4	28.943	28.954	28.965	28.976	28.988	28.999	29.010	29.021	29.032	29.044
784.5	29.055	29.066	29.077	29.088	29.100	29.111	29.122	29.133	29.144	29.156
784.6	29.167	29.178	29.189	29.201	29.212	29.223	29.234	29.246	29.257	29.268
784.7	29.279	29.291	29.302	29.313	29.324	29.336	29.347	29.358	29.370	29.381
784.8	29.392	29.403	29.415	29.426	29.437	29.449	29.460	29.471	29.483	29.494
784.9	29.505	29.516	29.528	29.539	29.550	29.562	29.573	29.584	29.596	29.607
785.0	29.618	29.630	29.641	29.653	29.664	29.675	29.687	29.698	29.709	29.721
785.1	29.732	29.744	29.755	29.766	29.778	29.789	29.800	29.812	29.823	29.835
785.2	29.846	29.857	29.869	29.880	29.892	29.903	29.915	29.926	29.937	29.949
785.3	29.960	29.972	29.983	29.995	30.006	30.017	30.029	30.040	30.052	30.063
785.4	30.075	30.086	30.098	30.109	30.121	30.132	30.144	30.155	30.167	30.178
785.5	30.190	30.201	30.212	30.224	30.235	30.247	30.258	30.270	30.282	30.293
785.6	30.305	30.316	30.328	30.339	30.351	30.362	30.374	30.385	30.397	30.408
785.7	30.420	30.431	30.443	30.455	30.466	30.478	30.489	30.501	30.512	30.524
785.8	30.535	30.547	30.559	30.570	30.582	30.593	30.605	30.617	30.628	30.640
785.9	30.651	30.663	30.675	30.686	30.698	30.709	30.721	30.733	30.744	30.756
786.0	30.767	30.779	30.791	30.802	30.814	30.826	30.837	30.849	30.861	30.872
786.1	30.884	30.896	30.907	30.919	30.931	30.942	30.954	30.966	30.977	30.989
786.2	31.001	31.012	31.024	31.036	31.047	31.059	31.071	31.082	31.094	31.106
786.3	31.118	31.129	31.141	31.153	31.164	31.176	31.188	31.200	31.211	31.223
786.4	31.235	31.247	31.258	31.270	31.282	31.294	31.305	31.317	31.329	31.341
786.5	31.352	31.364	31.376	31.388	31.399	31.411	31.423	31.435	31.447	31.458
786.6	31.470	31.482	31.494	31.506	31.517	31.529	31.541	31.553	31.565	31.576
786.7	31.588	31.600	31.612	31.624	31.636	31.647	31.659	31.671	31.683	31.695
786.8	31.707	31.718	31.730	31.742	31.754	31.766	31.778	31.790	31.801	31.813
786.9	31.825	31.837	31.849	31.861	31.873	31.885	31.896	31.908	31.920	31.932
787.0	31.944	31.956	31.968	31.980	31.992	32.004	32.015	32.027	32.039	32.051
787.1	32.063	32.075	32.087	32.099	32.111	32.123	32.135	32.147	32.159	32.171
787.2	32.183	32.194	32.206	32.218	32.230	32.242	32.254	32.266	32.278	32.290
787.3	32.302	32.314	32.326	32.338	32.350	32.362	32.374	32.386	32.398	32.410
787.4	32.422	32.434	32.446	32.458	32.470	32.482	32.494	32.506	32.518	32.530
787.5	32.542	32.554	32.566	32.578	32.590	32.602	32.614	32.627	32.639	32.651
787.6	32.663	32.675	32.687	32.699	32.711	32.723	32.735	32.747	32.759	32.771
787.7	32.783	32.795	32.808	32.820	32.832	32.844	32.856	32.868	32.880	32.892
787.8	32.904	32.916	32.929	32.941	32.953	32.965	32.977	32.989	33.001	33.013
787.9	33.026	33.038	33.050	33.062	33.074	33.086	33.098	33.111	33.123	33.135
ELEV	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09

TABLE 7-5 (Continued)

LAKE GEORGETOWN - ELEVATION CAPACITY TABLE

ELEVATIONS IN FEET-NGVD, CAPACITIES IN THOUSAND ACRE-FEET

ELEV	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
788.0	33.147	33.159	33.171	33.183	33.196	33.208	33.220	33.232	33.244	33.257
788.1	33.269	33.281	33.293	33.305	33.317	33.330	33.342	33.354	33.366	33.378
788.2	33.391	33.403	33.415	33.427	33.440	33.452	33.464	33.476	33.488	33.501
788.3	33.513	33.525	33.537	33.550	33.562	33.574	33.586	33.599	33.611	33.623
788.4	33.635	33.648	33.660	33.672	33.684	33.697	33.709	33.721	33.733	33.746
788.5	33.758	33.770	33.783	33.795	33.807	33.819	33.832	33.844	33.856	33.869
788.6	33.881	33.893	33.906	33.918	33.930	33.942	33.955	33.967	33.979	33.992
788.7	34.004	34.016	34.029	34.041	34.053	34.066	34.078	34.090	34.103	34.115
788.8	34.127	34.140	34.152	34.165	34.177	34.189	34.202	34.214	34.226	34.239
788.9	34.251	34.263	34.276	34.288	34.301	34.313	34.325	34.338	34.350	34.363
789.0	34.375	34.387	34.400	34.412	34.425	34.437	34.449	34.462	34.474	34.487
789.1	34.499	34.512	34.524	34.536	34.549	34.561	34.574	34.586	34.599	34.611
789.2	34.623	34.636	34.648	34.661	34.673	34.686	34.698	34.711	34.723	34.735
789.3	34.748	34.760	34.773	34.785	34.798	34.810	34.823	34.835	34.848	34.860
789.4	34.873	34.885	34.898	34.910	34.923	34.935	34.948	34.960	34.973	34.985
789.5	34.998	35.010	35.023	35.035	35.048	35.060	35.073	35.085	35.098	35.110
789.6	35.123	35.135	35.148	35.160	35.173	35.185	35.198	35.211	35.223	35.236
789.7	35.248	35.261	35.273	35.286	35.298	35.311	35.323	35.336	35.349	35.361
789.8	35.374	35.386	35.399	35.411	35.424	35.437	35.449	35.462	35.474	35.487
789.9	35.500	35.512	35.525	35.537	35.550	35.562	35.575	35.588	35.600	35.613
790.0	35.625	35.638	35.651	35.663	35.676	35.689	35.701	35.714	35.726	35.739
790.1	35.752	35.764	35.777	35.790	35.802	35.815	35.828	35.840	35.853	35.866
790.2	35.878	35.891	35.904	35.916	35.929	35.942	35.954	35.967	35.980	35.992
790.3	36.005	36.018	36.030	36.043	36.056	36.068	36.081	36.094	36.107	36.119
790.4	36.132	36.145	36.157	36.170	36.183	36.196	36.208	36.221	36.234	36.247
790.5	36.259	36.272	36.285	36.297	36.310	36.323	36.336	36.348	36.361	36.374
790.6	36.387	36.400	36.412	36.425	36.438	36.451	36.463	36.476	36.489	36.502
790.7	36.515	36.527	36.540	36.553	36.566	36.579	36.591	36.604	36.617	36.630
790.8	36.643	36.655	36.668	36.681	36.694	36.707	36.720	36.732	36.745	36.758
790.9	36.771	36.784	36.797	36.809	36.822	36.835	36.848	36.861	36.874	36.887
791.0	36.900	36.912	36.925	36.938	36.951	36.964	36.977	36.990	37.003	37.016
791.1	37.028	37.041	37.054	37.067	37.080	37.093	37.106	37.119	37.132	37.145
791.2	37.158	37.171	37.184	37.197	37.210	37.223	37.236	37.249	37.262	37.275
791.3	37.288	37.301	37.314	37.327	37.340	37.353	37.366	37.379	37.392	37.405
791.4	37.419	37.432	37.445	37.458	37.471	37.484	37.497	37.510	37.523	37.536
791.5	37.550	37.563	37.576	37.589	37.602	37.615	37.629	37.642	37.655	37.668
791.6	37.681	37.694	37.708	37.721	37.734	37.747	37.760	37.774	37.787	37.800
791.7	37.813	37.827	37.840	37.853	37.866	37.880	37.893	37.906	37.919	37.933
791.8	37.946	37.959	37.973	37.986	37.999	38.013	38.026	38.039	38.053	38.066
791.9	38.079	38.093	38.106	38.119	38.133	38.146	38.159	38.173	38.186	38.200
792.0	38.213	38.226	38.240	38.253	38.267	38.280	38.293	38.307	38.320	38.334
792.1	38.347	38.361	38.374	38.387	38.401	38.414	38.428	38.441	38.455	38.468
792.2	38.482	38.495	38.509	38.522	38.535	38.549	38.562	38.576	38.589	38.603
792.3	38.616	38.630	38.643	38.657	38.670	38.684	38.697	38.711	38.724	38.738
792.4	38.751	38.765	38.778	38.792	38.806	38.819	38.833	38.846	38.860	38.873
792.5	38.887	38.900	38.914	38.927	38.941	38.955	38.968	38.982	38.995	39.009
792.6	39.022	39.036	39.050	39.063	39.077	39.090	39.104	39.118	39.131	39.145
792.7	39.158	39.172	39.186	39.199	39.213	39.226	39.240	39.254	39.267	39.281
792.8	39.295	39.308	39.322	39.336	39.349	39.363	39.376	39.390	39.404	39.417
792.9	39.431	39.445	39.458	39.472	39.486	39.500	39.513	39.527	39.541	39.554
ELEV	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09

TABLE 7-5 (Continued)

LAKE GEORGETOWN - ELEVATION CAPACITY TABLE

ELEVATIONS IN FEET-NGVD, CAPACITIES IN THOUSAND ACRE-FEET

ELEV	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
793.0	39.568	39.582	39.595	39.609	39.623	39.637	39.650	39.664	39.678	39.691
793.1	39.705	39.719	39.733	39.746	39.760	39.774	39.788	39.801	39.815	39.829
793.2	39.843	39.856	39.870	39.884	39.898	39.911	39.925	39.939	39.953	39.967
793.3	39.980	39.994	40.008	40.022	40.036	40.049	40.063	40.077	40.091	40.105
793.4	40.118	40.132	40.146	40.160	40.174	40.188	40.201	40.215	40.229	40.243
793.5	40.257	40.271	40.284	40.298	40.312	40.326	40.340	40.354	40.368	40.382
793.6	40.395	40.409	40.423	40.437	40.451	40.465	40.479	40.493	40.507	40.520
793.7	40.534	40.548	40.562	40.576	40.590	40.604	40.618	40.632	40.646	40.660
793.8	40.674	40.688	40.701	40.715	40.729	40.743	40.757	40.771	40.785	40.799
793.9	40.813	40.827	40.841	40.855	40.869	40.883	40.897	40.911	40.925	40.939
794.0	40.953	40.967	40.981	40.995	41.009	41.023	41.037	41.051	41.065	41.079
794.1	41.093	41.107	41.121	41.135	41.149	41.164	41.178	41.192	41.206	41.220
794.2	41.234	41.248	41.262	41.276	41.290	41.305	41.319	41.333	41.347	41.361
794.3	41.375	41.389	41.404	41.418	41.432	41.446	41.460	41.474	41.489	41.503
794.4	41.517	41.531	41.545	41.560	41.574	41.588	41.602	41.617	41.631	41.645
794.5	41.659	41.674	41.688	41.702	41.716	41.731	41.745	41.759	41.773	41.788
794.6	41.802	41.816	41.831	41.845	41.859	41.874	41.888	41.902	41.917	41.931
794.7	41.945	41.960	41.974	41.988	42.003	42.017	42.031	42.046	42.060	42.075
794.8	42.089	42.103	42.118	42.132	42.147	42.161	42.175	42.190	42.204	42.219
794.9	42.233	42.248	42.262	42.277	42.291	42.306	42.320	42.335	42.349	42.363
795.0	42.378	42.393	42.407	42.422	42.436	42.451	42.465	42.480	42.494	42.509
795.1	42.523	42.538	42.552	42.567	42.581	42.596	42.611	42.625	42.640	42.654
795.2	42.669	42.683	42.698	42.713	42.727	42.742	42.756	42.771	42.786	42.800
795.3	42.815	42.829	42.844	42.859	42.873	42.888	42.903	42.917	42.932	42.947
795.4	42.961	42.976	42.991	43.005	43.020	43.035	43.049	43.064	43.079	43.093
795.5	43.108	43.123	43.137	43.152	43.167	43.182	43.196	43.211	43.226	43.240
795.6	43.255	43.270	43.285	43.299	43.314	43.329	43.344	43.358	43.373	43.388
795.7	43.403	43.418	43.432	43.447	43.462	43.477	43.492	43.506	43.521	43.536
795.8	43.551	43.566	43.580	43.595	43.610	43.625	43.640	43.655	43.669	43.684
795.9	43.699	43.714	43.729	43.744	43.759	43.774	43.788	43.803	43.818	43.833
796.0	43.848	43.863	43.878	43.893	43.908	43.923	43.937	43.952	43.967	43.982
796.1	43.997	44.012	44.027	44.042	44.057	44.072	44.087	44.102	44.117	44.132
796.2	44.147	44.162	44.177	44.192	44.207	44.222	44.237	44.252	44.267	44.282
796.3	44.297	44.312	44.327	44.342	44.357	44.372	44.387	44.402	44.417	44.432
796.4	44.447	44.462	44.477	44.492	44.507	44.523	44.538	44.553	44.568	44.583
796.5	44.598	44.613	44.628	44.643	44.658	44.674	44.689	44.704	44.719	44.734
796.6	44.749	44.764	44.779	44.795	44.810	44.825	44.840	44.855	44.870	44.886
796.7	44.901	44.916	44.931	44.946	44.962	44.977	44.992	45.007	45.022	45.038
796.8	45.053	45.068	45.083	45.098	45.114	45.129	45.144	45.159	45.175	45.190
796.9	45.205	45.220	45.236	45.251	45.266	45.282	45.297	45.312	45.327	45.343
797.0	45.358	45.373	45.389	45.404	45.419	45.435	45.450	45.465	45.481	45.496
797.1	45.511	45.527	45.542	45.557	45.573	45.588	45.603	45.619	45.634	45.649
797.2	45.665	45.680	45.696	45.711	45.726	45.742	45.757	45.773	45.788	45.803
797.3	45.819	45.834	45.850	45.865	45.881	45.896	45.911	45.927	45.942	45.958
797.4	45.973	45.989	46.004	46.020	46.035	46.051	46.066	46.082	46.097	46.112
797.5	46.128	46.144	46.159	46.175	46.190	46.206	46.221	46.237	46.252	46.268
797.6	46.283	46.299	46.314	46.330	46.345	46.361	46.377	46.392	46.408	46.423
797.7	46.439	46.454	46.470	46.486	46.501	46.517	46.532	46.548	46.564	46.579
797.8	46.595	46.610	46.626	46.642	46.657	46.673	46.689	46.704	46.720	46.736
797.9	46.751	46.767	46.783	46.798	46.814	46.830	46.845	46.861	46.877	46.892
ELEV	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09

TABLE 7-5 (Continued)

LAKE GEORGETOWN - ELEVATION CAPACITY TABLE

ELEVATIONS IN FEET-NGVD, CAPACITIES IN THOUSAND ACRE-FEET

ELEV	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
798.0	46.908	46.924	46.939	46.955	46.971	46.987	47.002	47.018	47.034	47.049
798.1	47.065	47.081	47.097	47.112	47.128	47.144	47.160	47.175	47.191	47.207
798.2	47.223	47.239	47.254	47.270	47.286	47.302	47.318	47.333	47.349	47.365
798.3	47.381	47.397	47.412	47.428	47.444	47.460	47.476	47.492	47.507	47.523
798.4	47.539	47.555	47.571	47.587	47.603	47.619	47.634	47.650	47.666	47.682
798.5	47.698	47.714	47.730	47.746	47.762	47.778	47.793	47.809	47.825	47.841
798.6	47.857	47.873	47.889	47.905	47.921	47.937	47.953	47.969	47.985	48.001
798.7	48.017	48.033	48.049	48.065	48.081	48.097	48.113	48.129	48.145	48.161
798.8	48.177	48.193	48.209	48.225	48.241	48.257	48.273	48.289	48.305	48.321
798.9	48.337	48.353	48.369	48.385	48.401	48.418	48.434	48.450	48.466	48.482
799.0	48.498	48.514	48.530	48.546	48.562	48.579	48.595	48.611	48.627	48.643
799.1	48.659	48.675	48.691	48.708	48.724	48.740	48.756	48.772	48.788	48.805
799.2	48.821	48.837	48.853	48.869	48.886	48.902	48.918	48.934	48.950	48.967
799.3	48.983	48.999	49.015	49.031	49.048	49.064	49.080	49.096	49.113	49.129
799.4	49.145	49.161	49.178	49.194	49.210	49.227	49.243	49.259	49.275	49.292
799.5	49.308	49.324	49.341	49.357	49.373	49.390	49.406	49.422	49.439	49.455
799.6	49.471	49.488	49.504	49.520	49.537	49.553	49.569	49.586	49.602	49.618
799.7	49.635	49.651	49.668	49.684	49.700	49.717	49.733	49.750	49.766	49.782
799.8	49.799	49.815	49.832	49.848	49.865	49.881	49.897	49.914	49.930	49.947
799.9	49.963	49.980	49.996	50.013	50.029	50.046	50.062	50.079	50.095	50.111
800.0	50.128	50.145	50.161	50.178	50.194	50.211	50.227	50.244	50.260	50.277
800.1	50.293	50.310	50.326	50.343	50.359	50.376	50.393	50.409	50.426	50.442
800.2	50.459	50.475	50.492	50.509	50.525	50.542	50.558	50.575	50.592	50.608
800.3	50.625	50.641	50.658	50.675	50.691	50.708	50.725	50.741	50.758	50.775
800.4	50.791	50.808	50.825	50.841	50.858	50.875	50.891	50.908	50.925	50.941
800.5	50.958	50.975	50.991	51.008	51.025	51.042	51.058	51.075	51.092	51.108
800.6	51.125	51.142	51.159	51.175	51.192	51.209	51.226	51.242	51.259	51.276
800.7	51.293	51.310	51.326	51.343	51.360	51.377	51.394	51.410	51.427	51.444
800.8	51.461	51.478	51.494	51.511	51.528	51.545	51.562	51.579	51.595	51.612
800.9	51.629	51.646	51.663	51.680	51.697	51.714	51.730	51.747	51.764	51.781
801.0	51.798	51.815	51.832	51.849	51.866	51.883	51.899	51.916	51.933	51.950
801.1	51.967	51.984	52.001	52.018	52.035	52.052	52.069	52.086	52.103	52.120
801.2	52.137	52.154	52.171	52.188	52.205	52.222	52.239	52.256	52.273	52.290
801.3	52.307	52.324	52.341	52.358	52.375	52.392	52.409	52.426	52.443	52.460
801.4	52.477	52.494	52.511	52.528	52.545	52.563	52.580	52.597	52.614	52.631
801.5	52.648	52.665	52.682	52.699	52.716	52.734	52.751	52.768	52.785	52.802
801.6	52.819	52.836	52.853	52.871	52.888	52.905	52.922	52.939	52.956	52.974
801.7	52.991	53.008	53.025	53.042	53.060	53.077	53.094	53.111	53.128	53.146
801.8	53.163	53.180	53.197	53.214	53.232	53.249	53.266	53.283	53.301	53.318
801.9	53.335	53.352	53.370	53.387	53.404	53.422	53.439	53.456	53.473	53.491
802.0	53.508	53.525	53.543	53.560	53.577	53.595	53.612	53.629	53.647	53.664
802.1	53.681	53.699	53.716	53.733	53.751	53.768	53.785	53.803	53.820	53.837
802.2	53.855	53.872	53.890	53.907	53.924	53.942	53.959	53.977	53.994	54.011
802.3	54.029	54.046	54.064	54.081	54.099	54.116	54.133	54.151	54.168	54.186
802.4	54.203	54.221	54.238	54.256	54.273	54.291	54.308	54.326	54.343	54.361
802.5	54.378	54.396	54.413	54.431	54.448	54.466	54.483	54.501	54.518	54.536
802.6	54.553	54.571	54.588	54.606	54.623	54.641	54.659	54.676	54.694	54.711
802.7	54.729	54.746	54.764	54.782	54.799	54.817	54.834	54.852	54.870	54.887
802.8	54.905	54.922	54.940	54.958	54.975	54.993	55.011	55.028	55.046	55.064
802.9	55.081	55.099	55.117	55.134	55.152	55.170	55.187	55.205	55.223	55.240
ELEV	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09

TABLE 7-5 (Continued)

LAKE GEORGETOWN - ELEVATION CAPACITY TABLE

ELEVATIONS IN FEET-NGVD, CAPACITIES IN THOUSAND ACRE-FEET

ELEV	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
803.0	55.258	55.276	55.293	55.311	55.329	55.347	55.364	55.382	55.400	55.417
803.1	55.435	55.453	55.471	55.488	55.506	55.524	55.542	55.559	55.577	55.595
803.2	55.613	55.630	55.648	55.666	55.684	55.701	55.719	55.737	55.755	55.773
803.3	55.790	55.808	55.826	55.844	55.862	55.879	55.897	55.915	55.933	55.951
803.4	55.968	55.986	56.004	56.022	56.040	56.058	56.075	56.093	56.111	56.129
803.5	56.147	56.165	56.182	56.200	56.218	56.236	56.254	56.272	56.290	56.308
803.6	56.325	56.343	56.361	56.379	56.397	56.415	56.433	56.451	56.469	56.486
803.7	56.504	56.522	56.540	56.558	56.576	56.594	56.612	56.630	56.648	56.666
803.8	56.684	56.702	56.719	56.737	56.755	56.773	56.791	56.809	56.827	56.845
803.9	56.863	56.881	56.899	56.917	56.935	56.953	56.971	56.989	57.007	57.025
804.0	57.043	57.061	57.079	57.097	57.115	57.133	57.151	57.169	57.187	57.205
804.1	57.223	57.241	57.259	57.277	57.295	57.313	57.332	57.350	57.368	57.386
804.2	57.404	57.422	57.440	57.458	57.476	57.494	57.512	57.530	57.549	57.567
804.3	57.585	57.603	57.621	57.639	57.657	57.675	57.694	57.712	57.730	57.748
804.4	57.766	57.784	57.803	57.821	57.839	57.857	57.875	57.893	57.912	57.930
804.5	57.948	57.966	57.984	58.003	58.021	58.039	58.057	58.075	58.094	58.112
804.6	58.130	58.148	58.167	58.185	58.203	58.221	58.240	58.258	58.276	58.295
804.7	58.313	58.331	58.349	58.368	58.386	58.404	58.423	58.441	58.459	58.477
804.8	58.496	58.514	58.532	58.551	58.569	58.587	58.606	58.624	58.642	58.661
804.9	58.679	58.698	58.716	58.734	58.753	58.771	58.789	58.808	58.826	58.845
805.0	58.863	58.881	58.900	58.918	58.937	58.955	58.973	58.992	59.010	59.029
805.1	59.047	59.066	59.084	59.102	59.121	59.139	59.158	59.176	59.195	59.213
805.2	59.232	59.250	59.269	59.287	59.305	59.324	59.342	59.361	59.379	59.398
805.3	59.416	59.435	59.453	59.472	59.490	59.509	59.527	59.546	59.564	59.583
805.4	59.601	59.620	59.638	59.657	59.676	59.694	59.713	59.731	59.750	59.768
805.5	59.787	59.805	59.824	59.842	59.861	59.880	59.898	59.917	59.935	59.954
805.6	59.972	59.991	60.010	60.028	60.047	60.065	60.084	60.103	60.121	60.140
805.7	60.158	60.177	60.196	60.214	60.233	60.251	60.270	60.289	60.307	60.326
805.8	60.345	60.363	60.382	60.401	60.419	60.438	60.456	60.475	60.494	60.512
805.9	60.531	60.550	60.568	60.587	60.606	60.625	60.643	60.662	60.681	60.699
806.0	60.718	60.737	60.755	60.774	60.793	60.812	60.830	60.849	60.868	60.886
806.1	60.905	60.924	60.943	60.961	60.980	60.999	61.018	61.036	61.055	61.074
806.2	61.093	61.111	61.130	61.149	61.168	61.186	61.205	61.224	61.243	61.262
806.3	61.280	61.299	61.318	61.337	61.356	61.374	61.393	61.412	61.431	61.450
806.4	61.468	61.487	61.506	61.525	61.544	61.563	61.581	61.600	61.619	61.638
806.5	61.657	61.676	61.694	61.713	61.732	61.751	61.770	61.789	61.808	61.827
806.6	61.845	61.864	61.883	61.902	61.921	61.940	61.959	61.978	61.997	62.015
806.7	62.034	62.053	62.072	62.091	62.110	62.129	62.148	62.167	62.186	62.205
806.8	62.224	62.243	62.261	62.280	62.299	62.318	62.337	62.356	62.375	62.394
806.9	62.413	62.432	62.451	62.470	62.489	62.508	62.527	62.546	62.565	62.584
807.0	62.603	62.622	62.641	62.660	62.679	62.698	62.717	62.736	62.755	62.774
807.1	62.793	62.812	62.831	62.850	62.869	62.889	62.908	62.927	62.946	62.965
807.2	62.984	63.003	63.022	63.041	63.060	63.080	63.099	63.118	63.137	63.156
807.3	63.175	63.194	63.214	63.233	63.252	63.271	63.290	63.309	63.329	63.348
807.4	63.367	63.386	63.405	63.425	63.444	63.463	63.482	63.502	63.521	63.540
807.5	63.559	63.579	63.598	63.617	63.636	63.656	63.675	63.694	63.713	63.733
807.6	63.752	63.771	63.791	63.810	63.829	63.849	63.868	63.887	63.907	63.926
807.7	63.945	63.965	63.984	64.003	64.023	64.042	64.061	64.081	64.100	64.120
807.8	64.139	64.158	64.178	64.197	64.217	64.236	64.255	64.275	64.294	64.314
807.9	64.333	64.353	64.372	64.392	64.411	64.431	64.450	64.470	64.489	64.508
ELEV	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09

TABLE 7-5 (Continued)

LAKE GEORGETOWN - ELEVATION CAPACITY TABLE

ELEVATIONS IN FEET-NGVD, CAPACITIES IN THOUSAND ACRE-FEET

ELEV	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
808.0	64.528	64.548	64.567	64.587	64.606	64.626	64.645	64.665	64.684	64.704
808.1	64.723	64.743	64.762	64.782	64.801	64.821	64.840	64.860	64.879	64.899
808.2	64.919	64.938	64.958	64.977	64.997	65.016	65.036	65.056	65.075	65.095
808.3	65.114	65.134	65.154	65.173	65.193	65.212	65.232	65.252	65.271	65.291
808.4	65.310	65.330	65.350	65.369	65.389	65.409	65.428	65.448	65.467	65.487
808.5	65.507	65.526	65.546	65.566	65.585	65.605	65.625	65.644	65.664	65.684
808.6	65.703	65.723	65.743	65.762	65.782	65.802	65.822	65.841	65.861	65.881
808.7	65.900	65.920	65.940	65.959	65.979	65.999	66.019	66.038	66.058	66.078
808.8	66.098	66.117	66.137	66.157	66.177	66.196	66.216	66.236	66.256	66.275
808.9	66.295	66.315	66.335	66.354	66.374	66.394	66.414	66.434	66.453	66.473
809.0	66.493	66.513	66.533	66.552	66.572	66.592	66.612	66.632	66.652	66.671
809.1	66.691	66.711	66.731	66.751	66.771	66.790	66.810	66.830	66.850	66.870
809.2	66.890	66.910	66.930	66.949	66.969	66.989	67.009	67.029	67.049	67.069
809.3	67.089	67.109	67.129	67.149	67.169	67.188	67.208	67.228	67.248	67.268
809.4	67.288	67.308	67.328	67.348	67.368	67.388	67.408	67.428	67.448	67.468
809.5	67.488	67.508	67.528	67.548	67.568	67.588	67.608	67.628	67.648	67.668
809.6	67.688	67.708	67.728	67.748	67.768	67.788	67.809	67.829	67.849	67.869
809.7	67.889	67.909	67.929	67.949	67.969	67.989	68.009	68.029	68.050	68.070
809.8	68.090	68.110	68.130	68.150	68.170	68.190	68.211	68.231	68.251	68.271
809.9	68.291	68.311	68.332	68.352	68.372	68.392	68.412	68.432	68.453	68.473
810.0	68.493	68.513	68.533	68.554	68.574	68.594	68.614	68.635	68.655	68.675
810.1	68.695	68.715	68.736	68.756	68.776	68.797	68.817	68.837	68.857	68.878
810.2	68.898	68.918	68.939	68.959	68.979	69.000	69.020	69.040	69.061	69.081
810.3	69.101	69.122	69.142	69.162	69.183	69.203	69.223	69.244	69.264	69.285
810.4	69.305	69.325	69.346	69.366	69.387	69.407	69.427	69.448	69.468	69.489
810.5	69.509	69.530	69.550	69.571	69.591	69.612	69.632	69.653	69.673	69.693
810.6	69.714	69.734	69.755	69.776	69.796	69.817	69.837	69.858	69.878	69.899
810.7	69.919	69.940	69.960	69.981	70.001	70.022	70.043	70.063	70.084	70.104
810.8	70.125	70.146	70.166	70.187	70.207	70.228	70.249	70.269	70.290	70.311
810.9	70.331	70.352	70.373	70.393	70.414	70.435	70.455	70.476	70.497	70.517
811.0	70.538	70.559	70.579	70.600	70.621	70.642	70.662	70.683	70.704	70.724
811.1	70.745	70.766	70.787	70.807	70.828	70.849	70.870	70.890	70.911	70.932
811.2	70.953	70.973	70.994	71.015	71.036	71.056	71.077	71.098	71.119	71.140
811.3	71.160	71.181	71.202	71.223	71.244	71.264	71.285	71.306	71.327	71.348
811.4	71.368	71.389	71.410	71.431	71.452	71.473	71.493	71.514	71.535	71.556
811.5	71.577	71.598	71.618	71.639	71.660	71.681	71.702	71.723	71.744	71.765
811.6	71.785	71.806	71.827	71.848	71.869	71.890	71.911	71.932	71.953	71.973
811.7	71.994	72.015	72.036	72.057	72.078	72.099	72.120	72.141	72.162	72.183
811.8	72.204	72.225	72.245	72.266	72.287	72.308	72.329	72.350	72.371	72.392
811.9	72.413	72.434	72.455	72.476	72.497	72.518	72.539	72.560	72.581	72.602
812.0	72.623	72.644	72.665	72.686	72.707	72.728	72.749	72.770	72.791	72.812
812.1	72.833	72.854	72.875	72.896	72.917	72.939	72.960	72.981	73.002	73.023
812.2	73.044	73.065	73.086	73.107	73.128	73.150	73.171	73.192	73.213	73.234
812.3	73.255	73.276	73.298	73.319	73.340	73.361	73.382	73.403	73.425	73.446
812.4	73.467	73.488	73.509	73.531	73.552	73.573	73.594	73.616	73.637	73.658
812.5	73.679	73.701	73.722	73.743	73.764	73.786	73.807	73.828	73.849	73.871
812.6	73.892	73.913	73.935	73.956	73.977	73.999	74.020	74.041	74.063	74.084
812.7	74.105	74.127	74.148	74.169	74.191	74.212	74.233	74.255	74.276	74.298
812.8	74.319	74.340	74.362	74.383	74.405	74.426	74.447	74.469	74.490	74.512
812.9	74.533	74.555	74.576	74.598	74.619	74.641	74.662	74.684	74.705	74.727
ELEV	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09

TABLE 7-5 (Continued)

LAKE GEORGETOWN - ELEVATION CAPACITY TABLE

ELEVATIONS IN FEET-NGVD, CAPACITIES IN THOUSAND ACRE-FEET

ELEV	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
813.0	74.748	74.770	74.791	74.813	74.834	74.856	74.877	74.899	74.920	74.942
813.1	74.963	74.985	75.006	75.028	75.049	75.071	75.093	75.114	75.136	75.157
813.2	75.179	75.201	75.222	75.244	75.265	75.287	75.309	75.330	75.352	75.374
813.3	75.395	75.417	75.439	75.460	75.482	75.504	75.525	75.547	75.569	75.590
813.4	75.612	75.634	75.655	75.677	75.699	75.721	75.742	75.764	75.786	75.808
813.5	75.829	75.851	75.873	75.895	75.916	75.938	75.960	75.982	76.003	76.025
813.6	76.047	76.069	76.091	76.112	76.134	76.156	76.178	76.200	76.222	76.243
813.7	76.265	76.287	76.309	76.331	76.353	76.375	76.396	76.418	76.440	76.462
813.8	76.484	76.506	76.528	76.550	76.572	76.594	76.615	76.637	76.659	76.681
813.9	76.703	76.725	76.747	76.769	76.791	76.813	76.835	76.857	76.879	76.901
814.0	76.923	76.945	76.967	76.989	77.011	77.033	77.055	77.077	77.099	77.121
814.1	77.143	77.165	77.187	77.209	77.231	77.253	77.276	77.298	77.320	77.342
814.2	77.364	77.386	77.408	77.430	77.452	77.474	77.496	77.518	77.541	77.563
814.3	77.585	77.607	77.629	77.651	77.673	77.695	77.718	77.740	77.762	77.784
814.4	77.806	77.828	77.851	77.873	77.895	77.917	77.939	77.961	77.984	78.006
814.5	78.028	78.050	78.072	78.095	78.117	78.139	78.161	78.184	78.206	78.228
814.6	78.250	78.272	78.295	78.317	78.339	78.361	78.384	78.406	78.428	78.451
814.7	78.473	78.495	78.517	78.540	78.562	78.584	78.607	78.629	78.651	78.673
814.8	78.696	78.718	78.740	78.763	78.785	78.807	78.830	78.852	78.874	78.897
814.9	78.919	78.942	78.964	78.986	79.009	79.031	79.053	79.076	79.098	79.121
815.0	79.143	79.165	79.188	79.210	79.233	79.255	79.277	79.300	79.322	79.345
815.1	79.367	79.390	79.412	79.435	79.457	79.480	79.502	79.525	79.547	79.570
815.2	79.592	79.615	79.637	79.660	79.682	79.705	79.727	79.750	79.772	79.795
815.3	79.817	79.840	79.862	79.885	79.907	79.930	79.953	79.975	79.998	80.020
815.4	80.043	80.066	80.088	80.111	80.133	80.156	80.179	80.201	80.224	80.247
815.5	80.269	80.292	80.315	80.337	80.360	80.383	80.405	80.428	80.451	80.473
815.6	80.496	80.519	80.541	80.564	80.587	80.610	80.632	80.655	80.678	80.701
815.7	80.723	80.746	80.769	80.792	80.814	80.837	80.860	80.883	80.905	80.928
815.8	80.951	80.974	80.997	81.019	81.042	81.065	81.088	81.111	81.134	81.156
815.9	81.179	81.202	81.225	81.248	81.271	81.294	81.316	81.339	81.362	81.385
816.0	81.408	81.431	81.454	81.477	81.500	81.523	81.545	81.568	81.591	81.614
816.1	81.637	81.660	81.683	81.706	81.729	81.752	81.775	81.798	81.821	81.844
816.2	81.867	81.890	81.913	81.936	81.959	81.982	82.005	82.028	82.051	82.074
816.3	82.097	82.120	82.143	82.166	82.189	82.212	82.235	82.258	82.281	82.304
816.4	82.327	82.350	82.373	82.396	82.419	82.443	82.466	82.489	82.512	82.535
816.5	82.558	82.581	82.604	82.627	82.650	82.674	82.697	82.720	82.743	82.766
816.6	82.789	82.812	82.835	82.859	82.882	82.905	82.928	82.951	82.974	82.998
816.7	83.021	83.044	83.067	83.090	83.114	83.137	83.160	83.183	83.206	83.230
816.8	83.253	83.276	83.299	83.322	83.346	83.369	83.392	83.415	83.439	83.462
816.9	83.485	83.508	83.532	83.555	83.578	83.602	83.625	83.648	83.671	83.695
817.0	83.718	83.741	83.765	83.788	83.811	83.835	83.858	83.881	83.905	83.928
817.1	83.951	83.975	83.998	84.021	84.045	84.068	84.091	84.115	84.138	84.161
817.2	84.185	84.208	84.232	84.255	84.278	84.302	84.325	84.349	84.372	84.395
817.3	84.419	84.442	84.466	84.489	84.513	84.536	84.559	84.583	84.606	84.630
817.4	84.653	84.677	84.700	84.724	84.747	84.771	84.794	84.818	84.841	84.865
817.5	84.888	84.911	84.935	84.959	84.982	85.006	85.029	85.053	85.076	85.100
817.6	85.123	85.147	85.170	85.194	85.217	85.241	85.265	85.288	85.312	85.335
817.7	85.359	85.382	85.406	85.430	85.453	85.477	85.500	85.524	85.548	85.571
817.8	85.595	85.618	85.642	85.666	85.689	85.713	85.737	85.760	85.784	85.808
817.9	85.831	85.855	85.879	85.902	85.926	85.950	85.973	85.997	86.021	86.044
ELEV	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09

TABLE 7-5 (Continued)

LAKE GEORGETOWN - ELEVATION CAPACITY TABLE

ELEVATIONS IN FEET-NGVD, CAPACITIES IN THOUSAND ACRE-FEET

ELEV	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
818.0	86.068	86.092	86.115	86.139	86.163	86.187	86.210	86.234	86.258	86.282
818.1	86.305	86.329	86.353	86.377	86.400	86.424	86.448	86.472	86.495	86.519
818.2	86.543	86.567	86.591	86.614	86.638	86.662	86.686	86.710	86.734	86.757
818.3	86.781	86.805	86.829	86.853	86.877	86.901	86.924	86.948	86.972	86.996
818.4	87.020	87.044	87.068	87.092	87.116	87.140	87.163	87.187	87.211	87.235
818.5	87.259	87.283	87.307	87.331	87.355	87.379	87.403	87.427	87.451	87.475
818.6	87.499	87.523	87.547	87.571	87.595	87.619	87.643	87.667	87.691	87.715
818.7	87.739	87.763	87.787	87.811	87.835	87.860	87.884	87.908	87.932	87.956
818.8	87.980	88.004	88.028	88.052	88.076	88.101	88.125	88.149	88.173	88.197
818.9	88.221	88.245	88.270	88.294	88.318	88.342	88.366	88.390	88.415	88.439
819.0	88.463	88.487	88.511	88.536	88.560	88.584	88.608	88.632	88.657	88.681
819.1	88.705	88.729	88.754	88.778	88.802	88.826	88.851	88.875	88.899	88.924
819.2	88.948	88.972	88.996	89.021	89.045	89.069	89.094	89.118	89.142	89.166
819.3	89.191	89.215	89.239	89.264	89.288	89.312	89.337	89.361	89.385	89.410
819.4	89.434	89.459	89.483	89.507	89.532	89.556	89.580	89.605	89.629	89.654
819.5	89.678	89.702	89.727	89.751	89.776	89.800	89.824	89.849	89.873	89.898
819.6	89.922	89.947	89.971	89.996	90.020	90.044	90.069	90.093	90.118	90.142
819.7	90.167	90.191	90.216	90.240	90.265	90.289	90.314	90.338	90.363	90.387
819.8	90.412	90.436	90.461	90.485	90.510	90.534	90.559	90.584	90.608	90.633
819.9	90.657	90.682	90.706	90.731	90.755	90.780	90.805	90.829	90.854	90.878
820.0	90.903	90.928	90.952	90.977	91.001	91.026	91.051	91.075	91.100	91.125
820.1	91.149	91.174	91.199	91.223	91.248	91.273	91.297	91.322	91.347	91.371
820.2	91.396	91.421	91.446	91.470	91.495	91.520	91.545	91.569	91.594	91.619
820.3	91.644	91.668	91.693	91.718	91.743	91.768	91.792	91.817	91.842	91.867
820.4	91.892	91.917	91.941	91.966	91.991	92.016	92.041	92.066	92.091	92.116
820.5	92.141	92.165	92.190	92.215	92.240	92.265	92.290	92.315	92.340	92.365
820.6	92.390	92.415	92.440	92.465	92.490	92.515	92.540	92.565	92.590	92.615
820.7	92.640	92.665	92.690	92.715	92.740	92.765	92.790	92.815	92.840	92.865
820.8	92.890	92.915	92.940	92.965	92.991	93.016	93.041	93.066	93.091	93.116
820.9	93.141	93.166	93.192	93.217	93.242	93.267	93.292	93.317	93.343	93.368
821.0	93.393	93.418	93.443	93.469	93.494	93.519	93.544	93.570	93.595	93.620
821.1	93.645	93.670	93.696	93.721	93.746	93.771	93.797	93.822	93.847	93.873
821.2	93.898	93.923	93.948	93.974	93.999	94.024	94.050	94.075	94.100	94.125
821.3	94.151	94.176	94.201	94.227	94.252	94.277	94.303	94.328	94.353	94.379
821.4	94.404	94.430	94.455	94.480	94.506	94.531	94.556	94.582	94.607	94.633
821.5	94.658	94.683	94.709	94.734	94.760	94.785	94.810	94.836	94.861	94.887
821.6	94.912	94.938	94.963	94.989	95.014	95.039	95.065	95.090	95.116	95.141
821.7	95.167	95.192	95.218	95.243	95.269	95.294	95.320	95.345	95.371	95.396
821.8	95.422	95.447	95.473	95.498	95.524	95.549	95.575	95.601	95.626	95.652
821.9	95.677	95.703	95.728	95.754	95.779	95.805	95.831	95.856	95.882	95.907
822.0	95.933	95.959	95.984	96.010	96.035	96.061	96.087	96.112	96.138	96.164
822.1	96.189	96.215	96.241	96.266	96.292	96.318	96.343	96.369	96.395	96.420
822.2	96.446	96.472	96.498	96.523	96.549	96.575	96.601	96.626	96.652	96.678
822.3	96.704	96.729	96.755	96.781	96.807	96.833	96.858	96.884	96.910	96.936
822.4	96.962	96.988	97.013	97.039	97.065	97.091	97.117	97.143	97.169	97.195
822.5	97.220	97.246	97.272	97.298	97.324	97.350	97.376	97.402	97.428	97.454
822.6	97.480	97.506	97.532	97.558	97.584	97.610	97.636	97.662	97.688	97.714
822.7	97.740	97.766	97.792	97.818	97.844	97.870	97.896	97.922	97.948	97.974
822.8	98.000	98.026	98.052	98.078	98.105	98.131	98.157	98.183	98.209	98.235
822.9	98.261	98.287	98.314	98.340	98.366	98.392	98.418	98.444	98.471	98.497
ELEV	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09

TABLE 7-5 (Continued)

LAKE GEORGETOWN - ELEVATION CAPACITY TABLE

ELEVATIONS IN FEET-NGVD, CAPACITIES IN THOUSAND ACRE-FEET

ELEV	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
823.0	98.523	98.549	98.575	98.602	98.628	98.654	98.680	98.707	98.733	98.759
823.1	98.785	98.812	98.838	98.864	98.890	98.917	98.943	98.969	98.995	99.022
823.2	99.048	99.074	99.101	99.127	99.153	99.180	99.206	99.232	99.259	99.285
823.3	99.311	99.338	99.364	99.390	99.417	99.443	99.469	99.496	99.522	99.549
823.4	99.575	99.601	99.628	99.654	99.681	99.707	99.733	99.760	99.786	99.813
823.5	99.839	99.866	99.892	99.919	99.945	99.972	99.998	100.025	100.051	100.077
823.6	100.104	100.131	100.157	100.184	100.210	100.237	100.263	100.290	100.316	100.343
823.7	100.369	100.396	100.422	100.449	100.475	100.502	100.529	100.555	100.582	100.608
823.8	100.635	100.662	100.688	100.715	100.741	100.768	100.795	100.821	100.848	100.875
823.9	100.901	100.928	100.955	100.981	101.008	101.035	101.061	101.088	101.115	101.141
824.0	101.168	101.195	101.221	101.248	101.275	101.302	101.328	101.355	101.382	101.409
824.1	101.435	101.462	101.489	101.516	101.542	101.569	101.596	101.623	101.649	101.676
824.2	101.703	101.730	101.757	101.783	101.810	101.837	101.864	101.891	101.918	101.944
824.3	101.971	101.998	102.025	102.052	102.079	102.106	102.132	102.159	102.186	102.213
824.4	102.240	102.267	102.294	102.321	102.348	102.375	102.401	102.428	102.455	102.482
824.5	102.509	102.536	102.563	102.590	102.617	102.644	102.671	102.698	102.725	102.752
824.6	102.779	102.806	102.833	102.860	102.887	102.914	102.941	102.968	102.995	103.022
824.7	103.049	103.076	103.103	103.130	103.157	103.185	103.212	103.239	103.266	103.293
824.8	103.320	103.347	103.374	103.401	103.428	103.456	103.483	103.510	103.537	103.564
824.9	103.591	103.618	103.646	103.673	103.700	103.727	103.754	103.781	103.809	103.836
825.0	103.863	103.890	103.917	103.945	103.972	103.999	104.026	104.054	104.081	104.108
825.1	104.135	104.163	104.190	104.217	104.244	104.272	104.299	104.326	104.354	104.381
825.2	104.408	104.436	104.463	104.490	104.518	104.545	104.572	104.600	104.627	104.654
825.3	104.682	104.709	104.736	104.764	104.791	104.819	104.846	104.874	104.901	104.928
825.4	104.956	104.983	105.011	105.038	105.066	105.093	105.121	105.148	105.176	105.203
825.5	105.230	105.258	105.286	105.313	105.341	105.368	105.396	105.423	105.451	105.478
825.6	105.506	105.533	105.561	105.589	105.616	105.644	105.671	105.699	105.726	105.754
825.7	105.782	105.809	105.837	105.865	105.892	105.920	105.948	105.975	106.003	106.031
825.8	106.058	106.086	106.114	106.141	106.169	106.197	106.224	106.252	106.280	106.308
825.9	106.335	106.363	106.391	106.419	106.446	106.474	106.502	106.530	106.557	106.585
826.0	106.613	106.641	106.669	106.696	106.724	106.752	106.780	106.808	106.836	106.863
826.1	106.891	106.919	106.947	106.975	107.003	107.031	107.058	107.086	107.114	107.142
826.2	107.170	107.198	107.226	107.254	107.282	107.310	107.337	107.365	107.393	107.421
826.3	107.449	107.477	107.505	107.533	107.561	107.589	107.617	107.645	107.673	107.701
826.4	107.729	107.757	107.785	107.813	107.841	107.869	107.897	107.925	107.953	107.981
826.5	108.009	108.037	108.065	108.093	108.121	108.150	108.178	108.206	108.234	108.262
826.6	108.290	108.318	108.346	108.374	108.402	108.431	108.459	108.487	108.515	108.543
826.7	108.571	108.599	108.628	108.656	108.684	108.712	108.740	108.768	108.797	108.825
826.8	108.853	108.881	108.909	108.938	108.966	108.994	109.022	109.051	109.079	109.107
826.9	109.135	109.163	109.192	109.220	109.248	109.277	109.305	109.333	109.361	109.390
827.0	109.418	109.446	109.475	109.503	109.531	109.560	109.588	109.616	109.645	109.673
827.1	109.701	109.730	109.758	109.786	109.815	109.843	109.872	109.900	109.928	109.957
827.2	109.985	110.014	110.042	110.070	110.099	110.127	110.156	110.184	110.213	110.241
827.3	110.270	110.298	110.327	110.355	110.384	110.412	110.441	110.469	110.498	110.526
827.4	110.555	110.583	110.612	110.640	110.669	110.698	110.726	110.755	110.783	110.812
827.5	110.840	110.869	110.898	110.926	110.955	110.984	111.012	111.041	111.069	111.098
827.6	111.127	111.155	111.184	111.213	111.241	111.270	111.299	111.328	111.356	111.385
827.7	111.414	111.442	111.471	111.500	111.529	111.557	111.586	111.615	111.644	111.672
827.8	111.701	111.730	111.759	111.788	111.816	111.845	111.874	111.903	111.932	111.960
827.9	111.989	112.018	112.047	112.076	112.105	112.134	112.162	112.191	112.220	112.249
ELEV	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09

TABLE 7-5 (Continued)

LAKE GEORGETOWN - ELEVATION CAPACITY TABLE

ELEVATIONS IN FEET-NGVD, CAPACITIES IN THOUSAND ACRE-FEET

ELEV	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
828.0	112.278	112.307	112.336	112.365	112.394	112.423	112.452	112.480	112.509	112.538
828.1	112.567	112.596	112.625	112.654	112.683	112.712	112.741	112.770	112.799	112.828
828.2	112.857	112.886	112.915	112.944	112.973	113.002	113.031	113.060	113.090	113.119
828.3	113.148	113.177	113.206	113.235	113.264	113.293	113.322	113.351	113.381	113.410
828.4	113.439	113.468	113.497	113.526	113.555	113.585	113.614	113.643	113.672	113.701
828.5	113.730	113.760	113.789	113.818	113.847	113.877	113.906	113.935	113.964	113.994
828.6	114.023	114.052	114.081	114.111	114.140	114.169	114.198	114.228	114.257	114.286
828.7	114.316	114.345	114.374	114.404	114.433	114.462	114.492	114.521	114.550	114.580
828.8	114.609	114.639	114.668	114.697	114.727	114.756	114.786	114.815	114.844	114.874
828.9	114.903	114.933	114.962	114.992	115.021	115.051	115.080	115.110	115.139	115.169
829.0	115.198	115.228	115.257	115.287	115.316	115.346	115.375	115.405	115.434	115.464
829.1	115.493	115.523	115.552	115.582	115.611	115.641	115.671	115.700	115.730	115.759
829.2	115.789	115.819	115.848	115.878	115.907	115.937	115.967	115.996	116.026	116.056
829.3	116.085	116.115	116.145	116.174	116.204	116.234	116.263	116.293	116.323	116.352
829.4	116.382	116.412	116.441	116.471	116.501	116.531	116.560	116.590	116.620	116.649
829.5	116.679	116.709	116.739	116.769	116.798	116.828	116.858	116.888	116.917	116.947
829.6	116.977	117.007	117.037	117.066	117.096	117.126	117.156	117.186	117.216	117.245
829.7	117.275	117.305	117.335	117.365	117.395	117.425	117.454	117.484	117.514	117.544
829.8	117.574	117.604	117.634	117.664	117.694	117.724	117.753	117.783	117.813	117.843
829.9	117.873	117.903	117.933	117.963	117.993	118.023	118.053	118.083	118.113	118.143
830.0	118.173	118.203	118.233	118.263	118.293	118.323	118.353	118.383	118.413	118.443
830.1	118.473	118.503	118.533	118.563	118.593	118.624	118.654	118.684	118.714	118.744
830.2	118.774	118.804	118.834	118.864	118.894	118.925	118.955	118.985	119.015	119.045
830.3	119.075	119.105	119.136	119.166	119.196	119.226	119.256	119.286	119.317	119.347
830.4	119.377	119.407	119.437	119.468	119.498	119.528	119.558	119.589	119.619	119.649
830.5	119.679	119.710	119.740	119.770	119.800	119.831	119.861	119.891	119.921	119.952
830.6	119.982	120.012	120.043	120.073	120.103	120.134	120.164	120.194	120.225	120.255
830.7	120.285	120.316	120.346	120.376	120.407	120.437	120.467	120.498	120.528	120.559
830.8	120.589	120.619	120.650	120.680	120.711	120.741	120.771	120.802	120.832	120.863
830.9	120.893	120.924	120.954	120.985	121.015	121.046	121.076	121.107	121.137	121.168
831.0	121.198	121.229	121.259	121.290	121.320	121.351	121.381	121.412	121.442	121.473
831.1	121.503	121.534	121.564	121.595	121.626	121.656	121.687	121.717	121.748	121.779
831.2	121.809	121.840	121.870	121.901	121.932	121.962	121.993	122.024	122.054	122.085
831.3	122.116	122.146	122.177	122.208	122.238	122.269	122.300	122.331	122.361	122.392
831.4	122.423	122.454	122.484	122.515	122.546	122.577	122.607	122.638	122.669	122.700
831.5	122.730	122.761	122.792	122.823	122.854	122.885	122.915	122.946	122.977	123.008
831.6	123.039	123.070	123.101	123.131	123.162	123.193	123.224	123.255	123.286	123.317
831.7	123.348	123.379	123.410	123.440	123.471	123.502	123.533	123.564	123.595	123.626
831.8	123.657	123.688	123.719	123.750	123.781	123.812	123.843	123.874	123.905	123.936
831.9	123.967	123.998	124.029	124.060	124.092	124.123	124.154	124.185	124.216	124.247
832.0	124.278	124.309	124.340	124.371	124.402	124.434	124.465	124.496	124.527	124.558
832.1	124.589	124.620	124.652	124.683	124.714	124.745	124.776	124.808	124.839	124.870
832.2	124.901	124.932	124.964	124.995	125.026	125.057	125.089	125.120	125.151	125.182
832.3	125.214	125.245	125.276	125.308	125.339	125.370	125.401	125.433	125.464	125.495
832.4	125.527	125.558	125.589	125.621	125.652	125.684	125.715	125.746	125.778	125.809
832.5	125.840	125.872	125.903	125.935	125.966	125.998	126.029	126.060	126.092	126.123
832.6	126.155	126.186	126.218	126.249	126.281	126.312	126.344	126.375	126.407	126.438
832.7	126.470	126.501	126.533	126.564	126.596	126.627	126.659	126.690	126.722	126.754
832.8	126.785	126.817	126.848	126.880	126.912	126.943	126.975	127.006	127.038	127.070
832.9	127.101	127.133	127.165	127.196	127.228	127.260	127.291	127.323	127.355	127.386
ELEV	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09

TABLE 7-5 (Continued)

LAKE GEORGETOWN - ELEVATION CAPACITY TABLE

ELEVATIONS IN FEET-NGVD, CAPACITIES IN THOUSAND ACRE-FEET

ELEV	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
833.0	127.418	127.450	127.481	127.513	127.545	127.577	127.608	127.640	127.672	127.703
833.1	127.735	127.767	127.799	127.831	127.862	127.894	127.926	127.958	127.989	128.021
833.2	128.053	128.085	128.117	128.148	128.180	128.212	128.244	128.276	128.308	128.339
833.3	128.371	128.403	128.435	128.467	128.499	128.531	128.562	128.594	128.626	128.658
833.4	128.690	128.722	128.754	128.786	128.818	128.850	128.881	128.913	128.945	128.977
833.5	129.009	129.041	129.073	129.105	129.137	129.169	129.201	129.233	129.265	129.297
833.6	129.329	129.361	129.393	129.425	129.457	129.489	129.521	129.553	129.585	129.617
833.7	129.649	129.681	129.713	129.745	129.777	129.810	129.842	129.874	129.906	129.938
833.8	129.970	130.002	130.034	130.066	130.098	130.131	130.163	130.195	130.227	130.259
833.9	130.291	130.323	130.356	130.388	130.420	130.452	130.484	130.516	130.549	130.581
834.0	130.613	130.645	130.677	130.710	130.742	130.774	130.806	130.839	130.871	130.903
834.1	130.935	130.968	131.000	131.032	131.064	131.097	131.129	131.161	131.194	131.226
834.2	131.258	131.291	131.323	131.355	131.388	131.420	131.452	131.485	131.517	131.549
834.3	131.582	131.614	131.646	131.679	131.711	131.744	131.776	131.809	131.841	131.873
834.4	131.906	131.938	131.971	132.003	132.036	132.068	132.101	132.133	132.166	132.198
834.5	132.230	132.263	132.296	132.328	132.361	132.393	132.426	132.458	132.491	132.523
834.6	132.556	132.588	132.621	132.654	132.686	132.719	132.751	132.784	132.816	132.849
834.7	132.882	132.914	132.947	132.980	133.012	133.045	133.078	133.110	133.143	133.176
834.8	133.208	133.241	133.274	133.306	133.339	133.372	133.404	133.437	133.470	133.503
834.9	133.535	133.568	133.601	133.634	133.666	133.699	133.732	133.765	133.797	133.830
835.0	133.863	133.896	133.929	133.961	133.994	134.027	134.060	134.093	134.126	134.158
835.1	134.191	134.224	134.257	134.290	134.323	134.356	134.389	134.421	134.454	134.487
835.2	134.520	134.553	134.586	134.619	134.652	134.685	134.718	134.751	134.784	134.817
835.3	134.850	134.883	134.916	134.949	134.982	135.015	135.048	135.081	135.114	135.147
835.4	135.180	135.213	135.246	135.279	135.312	135.345	135.378	135.411	135.444	135.477
835.5	135.510	135.544	135.577	135.610	135.643	135.676	135.709	135.742	135.775	135.809
835.6	135.842	135.875	135.908	135.941	135.974	136.008	136.041	136.074	136.107	136.140
835.7	136.174	136.207	136.240	136.273	136.307	136.340	136.373	136.406	136.440	136.473
835.8	136.506	136.539	136.573	136.606	136.639	136.673	136.706	136.739	136.773	136.806
835.9	136.839	136.873	136.906	136.939	136.973	137.006	137.039	137.073	137.106	137.140
836.0	137.173	137.206	137.240	137.273	137.307	137.340	137.374	137.407	137.440	137.474
836.1	137.507	137.541	137.574	137.608	137.641	137.675	137.708	137.742	137.775	137.809
836.2	137.842	137.876	137.909	137.943	137.976	138.010	138.043	138.077	138.111	138.144
836.3	138.178	138.211	138.245	138.278	138.312	138.346	138.379	138.413	138.447	138.480
836.4	138.514	138.547	138.581	138.615	138.648	138.682	138.716	138.749	138.783	138.817
836.5	138.850	138.884	138.918	138.952	138.985	139.019	139.053	139.087	139.120	139.154
836.6	139.188	139.222	139.255	139.289	139.323	139.357	139.390	139.424	139.458	139.492
836.7	139.526	139.560	139.593	139.627	139.661	139.695	139.729	139.763	139.796	139.830
836.8	139.864	139.898	139.932	139.966	140.000	140.034	140.068	140.102	140.135	140.169
836.9	140.203	140.237	140.271	140.305	140.339	140.373	140.407	140.441	140.475	140.509
837.0	140.543	140.577	140.611	140.645	140.679	140.713	140.747	140.781	140.815	140.849
837.1	140.883	140.917	140.951	140.986	141.020	141.054	141.088	141.122	141.156	141.190
837.2	141.224	141.258	141.292	141.327	141.361	141.395	141.429	141.463	141.497	141.532
837.3	141.566	141.600	141.634	141.668	141.702	141.737	141.771	141.805	141.839	141.874
837.4	141.908	141.942	141.976	142.011	142.045	142.079	142.113	142.148	142.182	142.216
837.5	142.251	142.285	142.319	142.353	142.388	142.422	142.456	142.491	142.525	142.559
837.6	142.594	142.628	142.663	142.697	142.731	142.766	142.800	142.834	142.869	142.903
837.7	142.938	142.972	143.007	143.041	143.075	143.110	143.144	143.179	143.213	143.248
837.8	143.282	143.317	143.351	143.386	143.420	143.455	143.489	143.524	143.558	143.593
837.9	143.627	143.662	143.696	143.731	143.766	143.800	143.835	143.869	143.904	143.938
ELEV	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09

TABLE 7-5 (Continued)

LAKE GEORGETOWN - ELEVATION CAPACITY TABLE

ELEVATIONS IN FEET-NGVD, CAPACITIES IN THOUSAND ACRE-FEET

ELEV	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
838.0	143.973	144.008	144.042	144.077	144.111	144.146	144.181	144.215	144.250	144.285
838.1	144.319	144.354	144.389	144.423	144.458	144.493	144.527	144.562	144.597	144.631
838.2	144.666	144.701	144.736	144.770	144.805	144.840	144.875	144.909	144.944	144.979
838.3	145.014	145.048	145.083	145.118	145.153	145.188	145.222	145.257	145.292	145.327
838.4	145.362	145.397	145.431	145.466	145.501	145.536	145.571	145.606	145.641	145.676
838.5	145.710	145.745	145.780	145.815	145.850	145.885	145.920	145.955	145.990	146.025
838.6	146.060	146.095	146.130	146.165	146.200	146.235	146.270	146.305	146.340	146.375
838.7	146.410	146.445	146.480	146.515	146.550	146.585	146.620	146.655	146.690	146.725
838.8	146.760	146.795	146.830	146.865	146.901	146.936	146.971	147.006	147.041	147.076
838.9	147.111	147.146	147.182	147.217	147.252	147.287	147.322	147.357	147.393	147.428
839.0	147.463	147.498	147.533	147.569	147.604	147.639	147.674	147.710	147.745	147.780
839.1	147.815	147.851	147.886	147.921	147.957	147.992	148.027	148.063	148.098	148.133
839.2	148.169	148.204	148.239	148.275	148.310	148.346	148.381	148.416	148.452	148.487
839.3	148.523	148.558	148.594	148.629	148.664	148.700	148.735	148.771	148.806	148.842
839.4	148.877	148.913	148.948	148.984	149.020	149.055	149.091	149.126	149.162	149.197
839.5	149.233	149.269	149.304	149.340	149.375	149.411	149.447	149.482	149.518	149.554
839.6	149.589	149.625	149.661	149.696	149.732	149.768	149.804	149.839	149.875	149.911
839.7	149.947	149.982	150.018	150.054	150.090	150.126	150.161	150.197	150.233	150.269
839.8	150.305	150.340	150.376	150.412	150.448	150.484	150.520	150.556	150.592	150.627
839.9	150.663	150.699	150.735	150.771	150.807	150.843	150.879	150.915	150.951	150.987
840.0	151.023	151.059	151.095	151.131	151.167	151.203	151.239	151.275	151.311	151.347
840.1	151.383	151.419	151.456	151.492	151.528	151.564	151.600	151.636	151.672	151.708
840.2	151.745	151.781	151.817	151.853	151.889	151.926	151.962	151.998	152.034	152.070
840.3	152.107	152.143	152.179	152.215	152.252	152.288	152.324	152.360	152.397	152.433
840.4	152.469	152.506	152.542	152.578	152.615	152.651	152.687	152.724	152.760	152.797
840.5	152.833	152.869	152.906	152.942	152.979	153.015	153.052	153.088	153.124	153.161
840.6	153.197	153.234	153.270	153.307	153.343	153.380	153.416	153.453	153.490	153.526
840.7	153.563	153.599	153.636	153.672	153.709	153.745	153.782	153.819	153.855	153.892
840.8	153.929	153.965	154.002	154.039	154.075	154.112	154.149	154.185	154.222	154.259
840.9	154.295	154.332	154.369	154.406	154.442	154.479	154.516	154.553	154.589	154.626
841.0	154.663	154.700	154.737	154.773	154.810	154.847	154.884	154.921	154.958	154.995
841.1	155.031	155.068	155.105	155.142	155.179	155.216	155.253	155.290	155.327	155.364
841.2	155.401	155.438	155.475	155.512	155.549	155.586	155.623	155.660	155.697	155.734
841.3	155.771	155.808	155.845	155.882	155.919	155.957	155.994	156.031	156.068	156.105
841.4	156.142	156.179	156.217	156.254	156.291	156.328	156.365	156.403	156.440	156.477
841.5	156.514	156.551	156.589	156.626	156.663	156.701	156.738	156.775	156.813	156.850
841.6	156.887	156.925	156.962	156.999	157.037	157.074	157.111	157.149	157.186	157.224
841.7	157.261	157.298	157.336	157.373	157.411	157.448	157.486	157.523	157.561	157.598
841.8	157.636	157.673	157.711	157.748	157.786	157.824	157.861	157.899	157.936	157.974
841.9	158.011	158.049	158.087	158.124	158.162	158.200	158.237	158.275	158.313	158.350
842.0	158.388	158.426	158.463	158.501	158.539	158.577	158.614	158.652	158.690	158.728
842.1	158.765	158.803	158.841	158.879	158.917	158.954	158.992	159.030	159.068	159.106
842.2	159.144	159.181	159.219	159.257	159.295	159.333	159.371	159.409	159.447	159.485
842.3	159.523	159.561	159.598	159.636	159.674	159.712	159.750	159.788	159.826	159.864
842.4	159.902	159.940	159.978	160.016	160.055	160.093	160.131	160.169	160.207	160.245
842.5	160.283	160.321	160.359	160.397	160.435	160.474	160.512	160.550	160.588	160.626
842.6	160.664	160.703	160.741	160.779	160.817	160.855	160.894	160.932	160.970	161.008
842.7	161.047	161.085	161.123	161.161	161.200	161.238	161.276	161.315	161.353	161.391
842.8	161.430	161.468	161.506	161.545	161.583	161.621	161.660	161.698	161.737	161.775
842.9	161.813	161.852	161.890	161.929	161.967	162.006	162.044	162.083	162.121	162.160
ELEV	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09

TABLE 7-5 (Continued)

LAKE GEORGETOWN - ELEVATION CAPACITY TABLE

ELEVATIONS IN FEET-NGVD, CAPACITIES IN THOUSAND ACRE-FEET

ELEV	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
843.0	162.198	162.236	162.275	162.314	162.352	162.391	162.429	162.468	162.506	162.545
843.1	162.583	162.622	162.661	162.699	162.738	162.777	162.815	162.854	162.893	162.931
843.2	162.970	163.009	163.047	163.086	163.125	163.164	163.202	163.241	163.280	163.319
843.3	163.357	163.396	163.435	163.474	163.513	163.552	163.590	163.629	163.668	163.707
843.4	163.746	163.785	163.824	163.863	163.902	163.941	163.980	164.019	164.058	164.096
843.5	164.135	164.174	164.214	164.253	164.292	164.331	164.370	164.409	164.448	164.487
843.6	164.526	164.565	164.604	164.643	164.682	164.722	164.761	164.800	164.839	164.878
843.7	164.917	164.957	164.996	165.035	165.074	165.114	165.153	165.192	165.231	165.271
843.8	165.310	165.349	165.389	165.428	165.467	165.507	165.546	165.585	165.625	165.664
843.9	165.704	165.743	165.782	165.822	165.861	165.901	165.940	165.980	166.019	166.059
844.0	166.098	166.137	166.177	166.217	166.256	166.296	166.335	166.375	166.414	166.454
844.1	166.493	166.533	166.573	166.612	166.652	166.691	166.731	166.771	166.810	166.850
844.2	166.890	166.929	166.969	167.009	167.048	167.088	167.128	167.167	167.207	167.247
844.3	167.287	167.326	167.366	167.406	167.446	167.485	167.525	167.565	167.605	167.645
844.4	167.684	167.724	167.764	167.804	167.844	167.884	167.923	167.963	168.003	168.043
844.5	168.083	168.123	168.163	168.203	168.243	168.283	168.323	168.363	168.402	168.442
844.6	168.482	168.522	168.562	168.602	168.642	168.682	168.722	168.762	168.803	168.843
844.7	168.883	168.923	168.963	169.003	169.043	169.083	169.123	169.163	169.203	169.243
844.8	169.284	169.324	169.364	169.404	169.444	169.484	169.525	169.565	169.605	169.645
844.9	169.685	169.726	169.766	169.806	169.846	169.887	169.927	169.967	170.007	170.048
845.0	170.088	170.128	170.169	170.209	170.249	170.290	170.330	170.370	170.411	170.451
845.1	170.491	170.532	170.572	170.613	170.653	170.694	170.734	170.774	170.815	170.855
845.2	170.896	170.936	170.977	171.017	171.058	171.098	171.139	171.179	171.220	171.260
845.3	171.301	171.342	171.382	171.423	171.463	171.504	171.545	171.585	171.626	171.667
845.4	171.707	171.748	171.789	171.829	171.870	171.911	171.951	171.992	172.033	172.074
845.5	172.114	172.155	172.196	172.237	172.277	172.318	172.359	172.400	172.441	172.481
845.6	172.522	172.563	172.604	172.645	172.686	172.727	172.767	172.808	172.849	172.890
845.7	172.931	172.972	173.013	173.054	173.095	173.136	173.177	173.218	173.259	173.300
845.8	173.341	173.382	173.423	173.464	173.505	173.546	173.587	173.628	173.669	173.710
845.9	173.751	173.793	173.834	173.875	173.916	173.957	173.998	174.039	174.081	174.122
846.0	174.163	174.204	174.245	174.287	174.328	174.369	174.410	174.452	174.493	174.534
846.1	174.575	174.617	174.658	174.699	174.741	174.782	174.823	174.865	174.906	174.947
846.2	174.989	175.030	175.071	175.113	175.154	175.195	175.237	175.278	175.320	175.361
846.3	175.403	175.444	175.486	175.527	175.568	175.610	175.651	175.693	175.734	175.776
846.4	175.817	175.859	175.900	175.942	175.984	176.025	176.067	176.108	176.150	176.191
846.5	176.233	176.275	176.316	176.358	176.399	176.441	176.483	176.524	176.566	176.608
846.6	176.649	176.691	176.733	176.774	176.816	176.858	176.900	176.941	176.983	177.025
846.7	177.067	177.108	177.150	177.192	177.234	177.275	177.317	177.359	177.401	177.443
846.8	177.485	177.526	177.568	177.610	177.652	177.694	177.736	177.778	177.820	177.861
846.9	177.903	177.945	177.987	178.029	178.071	178.113	178.155	178.197	178.239	178.281
847.0	178.323	178.365	178.407	178.449	178.491	178.533	178.575	178.617	178.659	178.701
847.1	178.743	178.786	178.828	178.870	178.912	178.954	178.996	179.038	179.080	179.123
847.2	179.165	179.207	179.249	179.291	179.334	179.376	179.418	179.460	179.503	179.545
847.3	179.587	179.629	179.672	179.714	179.756	179.799	179.841	179.883	179.926	179.968
847.4	180.010	180.053	180.095	180.137	180.180	180.222	180.265	180.307	180.349	180.392
847.5	180.434	180.477	180.519	180.562	180.604	180.647	180.689	180.732	180.774	180.817
847.6	180.859	180.902	180.944	180.987	181.029	181.072	181.115	181.157	181.200	181.242
847.7	181.285	181.328	181.370	181.413	181.456	181.498	181.541	181.584	181.626	181.669
847.8	181.712	181.755	181.797	181.840	181.883	181.926	181.968	182.011	182.054	182.097
847.9	182.139	182.182	182.225	182.268	182.311	182.354	182.396	182.439	182.482	182.525
ELEV	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09

TABLE 7-5 (Continued)

LAKE GEORGETOWN - ELEVATION CAPACITY TABLE

ELEVATIONS IN FEET-NGVD, CAPACITIES IN THOUSAND ACRE-FEET

ELEV	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
848.0	182.568	182.611	182.654	182.697	182.740	182.783	182.826	182.869	182.911	182.954
848.1	182.997	183.040	183.083	183.126	183.169	183.213	183.256	183.299	183.342	183.385
848.2	183.428	183.471	183.514	183.557	183.600	183.643	183.686	183.730	183.773	183.816
848.3	183.859	183.902	183.945	183.989	184.032	184.075	184.118	184.161	184.205	184.248
848.4	184.291	184.334	184.378	184.421	184.464	184.508	184.551	184.594	184.638	184.681
848.5	184.724	184.768	184.811	184.854	184.898	184.941	184.985	185.028	185.071	185.115
848.6	185.158	185.202	185.245	185.289	185.332	185.376	185.419	185.462	185.506	185.550
848.7	185.593	185.637	185.680	185.724	185.767	185.811	185.854	185.898	185.942	185.985
848.8	186.029	186.072	186.116	186.160	186.203	186.247	186.291	186.334	186.378	186.422
848.9	186.465	186.509	186.553	186.597	186.640	186.684	186.728	186.772	186.815	186.859
849.0	186.903	186.947	186.991	187.034	187.078	187.122	187.166	187.210	187.254	187.298
849.1	187.341	187.385	187.429	187.473	187.517	187.561	187.605	187.649	187.693	187.737
849.2	187.781	187.825	187.869	187.913	187.957	188.001	188.045	188.089	188.133	188.177
849.3	188.221	188.265	188.309	188.353	188.397	188.442	188.486	188.530	188.574	188.618
849.4	188.662	188.706	188.751	188.795	188.839	188.883	188.927	188.972	189.016	189.060
849.5	189.104	189.148	189.193	189.237	189.281	189.326	189.370	189.414	189.459	189.503
849.6	189.547	189.592	189.636	189.680	189.725	189.769	189.813	189.858	189.902	189.947
849.7	189.991	190.035	190.080	190.124	190.169	190.213	190.258	190.302	190.347	190.391
849.8	190.436	190.480	190.525	190.569	190.614	190.659	190.703	190.748	190.792	190.837
849.9	190.881	190.926	190.971	191.015	191.060	191.105	191.149	191.194	191.239	191.283
850.0	191.328	191.373	191.417	191.462	191.507	191.552	191.596	191.641	191.686	191.731
850.1	191.775	191.820	191.865	191.910	191.955	192.000	192.044	192.089	192.134	192.179
850.2	192.224	192.269	192.314	192.359	192.404	192.449	192.494	192.539	192.584	192.628
850.3	192.673	192.719	192.764	192.809	192.854	192.899	192.944	192.989	193.034	193.079
850.4	193.124	193.169	193.214	193.259	193.304	193.350	193.395	193.440	193.485	193.530
850.5	193.576	193.621	193.666	193.711	193.756	193.802	193.847	193.892	193.937	193.983
850.6	194.028	194.073	194.119	194.164	194.209	194.255	194.300	194.345	194.391	194.436
850.7	194.482	194.527	194.572	194.618	194.663	194.709	194.754	194.800	194.845	194.891
850.8	194.936	194.982	195.027	195.073	195.118	195.164	195.209	195.255	195.300	195.346
850.9	195.391	195.437	195.483	195.528	195.574	195.620	195.665	195.711	195.757	195.802
851.0	195.848	195.894	195.939	195.985	196.031	196.077	196.122	196.168	196.214	196.260
851.1	196.305	196.351	196.397	196.443	196.489	196.535	196.580	196.626	196.672	196.718
851.2	196.764	196.810	196.856	196.902	196.948	196.994	197.040	197.086	197.132	197.178
851.3	197.223	197.270	197.316	197.362	197.408	197.454	197.500	197.546	197.592	197.638
851.4	197.684	197.730	197.776	197.822	197.868	197.915	197.961	198.007	198.053	198.099
851.5	198.145	198.192	198.238	198.284	198.330	198.377	198.423	198.469	198.515	198.562
851.6	198.608	198.654	198.701	198.747	198.793	198.840	198.886	198.932	198.979	199.025
851.7	199.072	199.118	199.164	199.211	199.257	199.304	199.350	199.397	199.443	199.490
851.8	199.536	199.583	199.629	199.676	199.722	199.769	199.815	199.862	199.908	199.955
851.9	200.001	200.048	200.095	200.141	200.188	200.235	200.281	200.328	200.375	200.421
852.0	200.468	200.515	200.561	200.608	200.655	200.702	200.748	200.795	200.842	200.889
852.1	200.936	200.982	201.029	201.076	201.123	201.170	201.216	201.263	201.310	201.357
852.2	201.404	201.451	201.498	201.545	201.592	201.639	201.686	201.733	201.780	201.827
852.3	201.874	201.921	201.968	202.015	202.062	202.109	202.156	202.203	202.250	202.297
852.4	202.344	202.391	202.438	202.485	202.532	202.580	202.627	202.674	202.721	202.768
852.5	202.816	202.863	202.910	202.957	203.004	203.052	203.099	203.146	203.193	203.241
852.6	203.288	203.335	203.383	203.430	203.477	203.525	203.572	203.619	203.667	203.714
852.7	203.762	203.809	203.856	203.904	203.951	203.999	204.046	204.094	204.141	204.189
852.8	204.236	204.283	204.331	204.379	204.426	204.474	204.521	204.569	204.616	204.664
852.9	204.712	204.759	204.807	204.854	204.902	204.950	204.997	205.045	205.093	205.140
ELEV	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09

TABLE 7-5 (Continued)

LAKE GEORGETOWN - ELEVATION CAPACITY TABLE

ELEVATIONS IN FEET-NGVD, CAPACITIES IN THOUSAND ACRE-FEET

ELEV	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
853.0	205.188	205.236	205.283	205.331	205.379	205.427	205.474	205.522	205.570	205.618
853.1	205.665	205.713	205.761	205.809	205.857	205.905	205.952	206.000	206.048	206.096
853.2	206.144	206.192	206.240	206.288	206.336	206.384	206.432	206.480	206.528	206.576
853.3	206.624	206.671	206.720	206.768	206.816	206.864	206.912	206.960	207.008	207.056
853.4	207.104	207.152	207.200	207.248	207.296	207.345	207.393	207.441	207.489	207.537
853.5	207.585	207.634	207.682	207.730	207.778	207.827	207.875	207.923	207.971	208.020
853.6	208.068	208.116	208.165	208.213	208.261	208.310	208.358	208.406	208.455	208.503
853.7	208.551	208.600	208.648	208.697	208.745	208.794	208.842	208.891	208.939	208.988
853.8	209.036	209.085	209.133	209.182	209.230	209.279	209.327	209.376	209.424	209.473
853.9	209.521	209.570	209.619	209.667	209.716	209.765	209.813	209.862	209.911	209.959
854.0	210.008	210.057	210.105	210.154	210.203	210.252	210.300	210.349	210.398	210.447
854.1	210.495	210.544	210.593	210.642	210.691	210.740	210.788	210.837	210.886	210.935
854.2	210.984	211.033	211.082	211.131	211.180	211.229	211.278	211.327	211.376	211.424
854.3	211.473	211.523	211.572	211.621	211.670	211.719	211.768	211.817	211.866	211.915
854.4	211.964	212.013	212.062	212.111	212.160	212.210	212.259	212.308	212.357	212.406
854.5	212.456	212.505	212.554	212.603	212.652	212.702	212.751	212.800	212.849	212.899
854.6	212.948	212.997	213.047	213.096	213.145	213.195	213.244	213.293	213.343	213.392
854.7	213.441	213.491	213.540	213.590	213.639	213.689	213.738	213.788	213.837	213.887
854.8	213.936	213.986	214.035	214.085	214.134	214.184	214.233	214.283	214.332	214.382
854.9	214.432	214.481	214.531	214.580	214.630	214.680	214.729	214.779	214.829	214.878
855.0	214.928	214.978	215.027	215.077	215.127	215.177	215.226	215.276	215.326	215.376
855.1	215.426	215.475	215.525	215.575	215.625	215.675	215.724	215.774	215.824	215.874
855.2	215.924	215.974	216.024	216.074	216.124	216.174	216.224	216.274	216.324	216.374
855.3	216.423	216.473	216.524	216.574	216.624	216.674	216.724	216.774	216.824	216.874
855.4	216.924	216.974	217.024	217.074	217.124	217.175	217.225	217.275	217.325	217.375
855.5	217.426	217.476	217.526	217.576	217.626	217.677	217.727	217.777	217.827	217.878
855.6	217.928	217.978	218.029	218.079	218.129	218.180	218.230	218.280	218.331	218.381
855.7	218.432	218.482	218.532	218.583	218.633	218.684	218.734	218.785	218.835	218.885
855.8	218.936	218.986	219.037	219.088	219.138	219.189	219.239	219.290	219.340	219.391
855.9	219.441	219.492	219.543	219.593	219.644	219.695	219.745	219.796	219.847	219.897
856.0	219.948	219.999	220.049	220.100	220.151	220.202	220.252	220.303	220.354	220.405
856.1	220.456	220.506	220.557	220.608	220.659	220.710	220.760	220.811	220.862	220.913
856.2	220.964	221.015	221.066	221.117	221.168	221.219	221.270	221.321	221.372	221.423
856.3	221.473	221.525	221.576	221.627	221.678	221.729	221.780	221.831	221.882	221.933
856.4	221.984	222.035	222.086	222.137	222.188	222.240	222.291	222.342	222.393	222.444
856.5	222.495	222.547	222.598	222.649	222.700	222.752	222.803	222.854	222.905	222.957
856.6	223.008	223.059	223.111	223.162	223.213	223.265	223.316	223.367	223.419	223.470
856.7	223.521	223.573	223.624	223.676	223.727	223.779	223.830	223.882	223.933	223.984
856.8	224.036	224.087	224.139	224.191	224.242	224.294	224.345	224.397	224.448	224.500
856.9	224.551	224.603	224.655	224.706	224.758	224.810	224.861	224.913	224.965	225.016
857.0	225.068	225.120	225.171	225.223	225.275	225.327	225.378	225.430	225.482	225.534
857.1	225.585	225.637	225.689	225.741	225.793	225.845	225.896	225.948	226.000	226.052
857.2	226.104	226.156	226.208	226.260	226.312	226.364	226.416	226.468	226.520	226.572
857.3	226.624	226.676	226.728	226.780	226.832	226.884	226.936	226.988	227.040	227.092
857.4	227.144	227.196	227.248	227.300	227.352	227.405	227.457	227.509	227.561	227.613
857.5	227.665	227.718	227.770	227.822	227.874	227.927	227.979	228.031	228.083	228.136
857.6	228.188	228.240	228.293	228.345	228.397	228.450	228.502	228.554	228.607	228.659
857.7	228.712	228.764	228.816	228.869	228.921	228.974	229.026	229.079	229.131	229.184
857.8	229.236	229.288	229.341	229.394	229.446	229.499	229.551	229.604	229.656	229.709
857.9	229.762	229.814	229.867	229.919	229.972	230.025	230.077	230.130	230.183	230.235
ELEV	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09

TABLE 7-5 (Continued)

LAKE GEORGETOWN - ELEVATION CAPACITY TABLE

ELEVATIONS IN FEET-NGVD, CAPACITIES IN THOUSAND ACRE-FEET

ELEV	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
858.0	230.288	230.341	230.393	230.446	230.499	230.552	230.604	230.657	230.710	230.763
858.1	230.816	230.868	230.921	230.974	231.027	231.080	231.132	231.185	231.238	231.291
858.2	231.344	231.397	231.450	231.503	231.556	231.609	231.662	231.715	231.768	231.820
858.3	231.874	231.926	231.980	232.033	232.086	232.139	232.192	232.245	232.298	232.351
858.4	232.404	232.457	232.510	232.563	232.616	232.670	232.723	232.776	232.829	232.882
858.5	232.936	232.989	233.042	233.095	233.148	233.202	233.255	233.308	233.361	233.415
858.6	233.468	233.521	233.575	233.628	233.681	233.735	233.788	233.841	233.895	233.948
858.7	234.001	234.055	234.108	234.162	234.215	234.269	234.322	234.376	234.429	234.482
858.8	234.536	234.589	234.643	234.697	234.750	234.804	234.857	234.911	234.964	235.018
858.9	235.072	235.125	235.179	235.232	235.286	235.340	235.393	235.447	235.501	235.554
859.0	235.608	235.662	235.715	235.769	235.823	235.877	235.930	235.984	236.038	236.092
859.1	236.145	236.199	236.253	236.307	236.361	236.415	236.468	236.522	236.576	236.630
859.2	236.684	236.738	236.792	236.846	236.900	236.954	237.008	237.062	237.116	237.169
859.3	237.223	237.277	237.332	237.386	237.440	237.494	237.548	237.602	237.656	237.710
859.4	237.764	237.818	237.872	237.926	237.980	238.035	238.089	238.143	238.197	238.251
859.5	238.305	238.360	238.414	238.468	238.522	238.577	238.631	238.685	238.739	238.794
859.6	238.848	238.902	238.957	239.011	239.065	239.120	239.174	239.228	239.283	239.337
859.7	239.391	239.446	239.500	239.555	239.609	239.664	239.718	239.773	239.827	239.882
859.8	239.936	239.990	240.045	240.100	240.154	240.209	240.263	240.318	240.372	240.427
859.9	240.482	240.536	240.591	240.645	240.700	240.755	240.809	240.864	240.919	240.973
860.0	241.028	241.083	241.137	241.192	241.247	241.302	241.356	241.411	241.466	241.521
860.1	241.576	241.630	241.685	241.740	241.795	241.850	241.904	241.959	242.014	242.069
860.2	242.124	242.179	242.234	242.289	242.344	242.399	242.454	242.509	242.564	242.618
860.3	242.673	242.729	242.784	242.839	242.894	242.949	243.004	243.059	243.114	243.169
860.4	243.224	243.279	243.334	243.389	243.444	243.500	243.555	243.610	243.665	243.720
860.5	243.775	243.831	243.886	243.941	243.996	244.052	244.107	244.162	244.217	244.273
860.6	244.328	244.383	244.439	244.494	244.549	244.605	244.660	244.715	244.771	244.826
860.7	244.882	244.937	244.992	245.048	245.103	245.159	245.214	245.270	245.325	245.380
860.8	245.436	245.492	245.547	245.603	245.658	245.714	245.769	245.825	245.880	245.936
860.9	245.992	246.047	246.103	246.158	246.214	246.270	246.325	246.381	246.437	246.492
861.0	246.548	246.604	246.659	246.715	246.771	246.827	246.882	246.938	246.994	247.050
861.1	247.106	247.161	247.217	247.273	247.329	247.385	247.441	247.496	247.552	247.608
861.2	247.664	247.720	247.776	247.832	247.888	247.944	248.000	248.056	248.112	248.168
861.3	248.224	248.280	248.336	248.392	248.448	248.504	248.560	248.616	248.673	248.729
861.4	248.785	248.841	248.897	248.953	249.009	249.066	249.122	249.178	249.234	249.290
861.5	249.347	249.403	249.459	249.516	249.572	249.628	249.684	249.741	249.797	249.853
861.6	249.910	249.966	250.023	250.079	250.135	250.192	250.248	250.305	250.361	250.417
861.7	250.474	250.530	250.587	250.643	250.700	250.756	250.813	250.870	250.926	250.983
861.8	251.039	251.096	251.152	251.209	251.266	251.322	251.379	251.436	251.492	251.549
861.9	251.606	251.662	251.719	251.776	251.832	251.889	251.946	252.003	252.059	252.116
862.0	252.173	252.230	252.287	252.343	252.400	252.457	252.514	252.571	252.628	252.685
862.1	252.741	252.798	252.855	252.912	252.969	253.026	253.083	253.140	253.197	253.254
862.2	253.311	253.368	253.425	253.482	253.538	253.596	253.652	253.710	253.767	253.824
862.3	253.881	253.938	253.995	254.052	254.109	254.166	254.223	254.280	254.337	254.394
862.4	254.451	254.509	254.566	254.623	254.680	254.737	254.794	254.851	254.909	254.966
862.5	255.023	255.080	255.137	255.195	255.252	255.309	255.366	255.424	255.481	255.538
862.6	255.595	255.653	255.710	255.767	255.825	255.882	255.939	255.997	256.054	256.111
862.7	256.169	256.226	256.283	256.341	256.398	256.456	256.513	256.570	256.628	256.685
862.8	256.743	256.800	256.858	256.915	256.972	257.030	257.087	257.145	257.202	257.260
862.9	257.317	257.375	257.432	257.490	257.548	257.605	257.663	257.720	257.778	257.835
ELEV	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09

TABLE 7-5 (Continued)

LAKE GEORGETOWN - ELEVATION CAPACITY TABLE

ELEVATIONS IN FEET-NGVD, CAPACITIES IN THOUSAND ACRE-FEET

ELEV	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
863.0	257.893	257.951	258.008	258.066	258.124	258.181	258.239	258.297	258.354	258.412
863.1	258.470	258.527	258.585	258.643	258.701	258.758	258.816	258.874	258.932	258.990
863.2	259.047	259.105	259.163	259.221	259.279	259.337	259.395	259.453	259.510	259.568
863.3	259.626	259.684	259.742	259.800	259.858	259.916	259.974	260.032	260.090	260.149
863.4	260.207	260.265	260.323	260.381	260.439	260.497	260.555	260.613	260.672	260.730
863.5	260.788	260.846	260.904	260.963	261.021	261.079	261.137	261.196	261.254	261.312
863.6	261.371	261.429	261.487	261.546	261.604	261.662	261.721	261.779	261.838	261.896
863.7	261.954	262.013	262.071	262.130	262.188	262.247	262.305	262.364	262.422	262.481
863.8	262.539	262.598	262.657	262.715	262.774	262.832	262.891	262.950	263.008	263.067
863.9	263.126	263.184	263.243	263.302	263.360	263.419	263.478	263.537	263.595	263.654
864.0	263.713	263.772	263.831	263.889	263.948	264.007	264.066	264.125	264.184	264.243
864.1	264.302	264.360	264.419	264.478	264.537	264.596	264.655	264.714	264.773	264.832
864.2	264.891	264.950	265.009	265.068	265.127	265.186	265.245	265.304	265.363	265.422
864.3	265.482	265.541	265.600	265.659	265.718	265.777	265.836	265.895	265.955	266.014
864.4	266.073	266.132	266.191	266.251	266.310	266.369	266.428	266.488	266.547	266.606
864.5	266.665	266.725	266.784	266.843	266.903	266.962	267.021	267.081	267.140	267.200
864.6	267.259	267.318	267.378	267.437	267.497	267.556	267.616	267.675	267.735	267.794
864.7	267.853	267.913	267.973	268.032	268.092	268.151	268.211	268.270	268.330	268.389
864.8	268.449	268.509	268.568	268.628	268.687	268.747	268.807	268.866	268.926	268.986
864.9	269.046	269.105	269.165	269.225	269.284	269.344	269.404	269.464	269.523	269.583
865.0	269.643	269.703	269.763	269.822	269.882	269.942	270.002	270.062	270.122	270.182
865.1	270.241	270.301	270.361	270.421	270.481	270.541	270.601	270.661	270.721	270.781
865.2	270.841	270.901	270.961	271.021	271.081	271.141	271.201	271.261	271.321	271.381
865.3	271.441	271.502	271.562	271.622	271.682	271.742	271.802	271.862	271.923	271.983
865.4	272.043	272.103	272.163	272.224	272.284	272.344	272.404	272.465	272.525	272.585
865.5	272.646	272.706	272.766	272.826	272.887	272.947	273.007	273.068	273.128	273.189
865.6	273.249	273.309	273.370	273.430	273.491	273.551	273.612	273.672	273.733	273.793
865.7	273.853	273.914	273.975	274.035	274.096	274.156	274.217	274.277	274.338	274.398
865.8	274.459	274.520	274.580	274.641	274.701	274.762	274.823	274.883	274.944	275.005
865.9	275.065	275.126	275.187	275.248	275.308	275.369	275.430	275.491	275.551	275.612
866.0	275.673	275.734	275.795	275.855	275.916	275.977	276.038	276.099	276.160	276.221
866.1	276.282	276.342	276.403	276.464	276.525	276.586	276.647	276.708	276.769	276.830
866.2	276.891	276.952	277.013	277.074	277.135	277.196	277.258	277.319	277.380	277.441
866.3	277.502	277.563	277.624	277.685	277.747	277.808	277.869	277.930	277.991	278.053
866.4	278.114	278.175	278.236	278.298	278.359	278.420	278.481	278.543	278.604	278.665
866.5	278.727	278.788	278.849	278.911	278.972	279.034	279.095	279.156	279.218	279.279
866.6	279.341	279.402	279.464	279.525	279.587	279.648	279.710	279.771	279.833	279.894
866.7	279.956	280.018	280.079	280.141	280.202	280.264	280.326	280.387	280.449	280.511
866.8	280.572	280.634	280.696	280.757	280.819	280.881	280.942	281.004	281.066	281.128
866.9	281.190	281.251	281.313	281.375	281.437	281.499	281.560	281.622	281.684	281.746
867.0	281.808	281.870	281.932	281.994	282.056	282.118	282.180	282.242	282.304	282.366
867.1	282.427	282.490	282.552	282.614	282.676	282.738	282.800	282.862	282.924	282.986
867.2	283.048	283.110	283.172	283.234	283.296	283.359	283.421	283.483	283.545	283.607
867.3	283.669	283.732	283.794	283.856	283.918	283.981	284.043	284.105	284.167	284.230
867.4	284.292	284.354	284.417	284.479	284.541	284.604	284.666	284.728	284.791	284.853
867.5	284.915	284.978	285.040	285.103	285.165	285.228	285.290	285.353	285.415	285.478
867.6	285.540	285.603	285.665	285.728	285.790	285.853	285.915	285.978	286.040	286.103
867.7	286.165	286.228	286.291	286.353	286.416	286.479	286.541	286.604	286.667	286.729
867.8	286.792	286.855	286.917	286.980	287.043	287.106	287.168	287.231	287.294	287.357
867.9	287.419	287.482	287.545	287.608	287.671	287.734	287.796	287.859	287.922	287.985
ELEV	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09

TABLE 7-5 (Continued)

LAKE GEORGETOWN - ELEVATION CAPACITY TABLE

ELEVATIONS IN FEET-NGVD, CAPACITIES IN THOUSAND ACRE-FEET

ELEV	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
868.0	288.048	288.111	288.174	288.237	288.300	288.363	288.426	288.489	288.552	288.615
868.1	288.677	288.741	288.804	288.867	288.930	288.993	289.056	289.119	289.182	289.245
868.2	289.308	289.371	289.434	289.497	289.560	289.624	289.687	289.750	289.813	289.876
868.3	289.940	290.003	290.066	290.129	290.192	290.256	290.319	290.382	290.445	290.509
868.4	290.572	290.635	290.699	290.762	290.825	290.889	290.952	291.015	291.079	291.142
868.5	291.206	291.269	291.332	291.396	291.459	291.523	291.586	291.650	291.713	291.776
868.6	291.840	291.904	291.967	292.031	292.094	292.158	292.221	292.285	292.348	292.412
868.7	292.475	292.539	292.603	292.666	292.730	292.794	292.857	292.921	292.985	293.048
868.8	293.112	293.176	293.239	293.303	293.367	293.431	293.494	293.558	293.622	293.686
868.9	293.750	293.813	293.877	293.941	294.005	294.069	294.132	294.196	294.260	294.324
869.0	294.388	294.452	294.516	294.580	294.644	294.708	294.772	294.836	294.900	294.964
869.1	295.028	295.092	295.156	295.220	295.284	295.348	295.412	295.476	295.540	295.604
869.2	295.668	295.732	295.796	295.861	295.925	295.989	296.053	296.117	296.181	296.246
869.3	296.310	296.374	296.438	296.503	296.567	296.631	296.696	296.760	296.824	296.888
869.4	296.953	297.017	297.082	297.146	297.210	297.275	297.339	297.403	297.468	297.532
869.5	297.597	297.661	297.726	297.790	297.855	297.919	297.984	298.048	298.113	298.177
869.6	298.242	298.306	298.371	298.436	298.500	298.565	298.629	298.694	298.759	298.823
869.7	298.888	298.953	299.017	299.082	299.147	299.211	299.276	299.341	299.406	299.470
869.8	299.535	299.600	299.665	299.730	299.794	299.859	299.924	299.989	300.054	300.119
869.9	300.184	300.248	300.313	300.378	300.443	300.508	300.573	300.638	300.703	300.768
870.0	300.833	300.898	300.963	301.028	301.093	301.158	301.223	301.288	301.353	301.418
870.1	301.483	301.549	301.614	301.679	301.744	301.809	301.874	301.939	302.005	302.070
870.2	302.135	302.200	302.265	302.331	302.396	302.461	302.526	302.592	302.657	302.722
870.3	302.788	302.853	302.918	302.983	303.049	303.114	303.179	303.245	303.310	303.376
870.4	303.441	303.506	303.572	303.637	303.703	303.768	303.834	303.899	303.965	304.030
870.5	304.095	304.161	304.227	304.292	304.358	304.423	304.489	304.554	304.620	304.685
870.6	304.751	304.817	304.882	304.948	305.013	305.079	305.145	305.210	305.276	305.342
870.7	305.408	305.473	305.539	305.605	305.670	305.736	305.802	305.868	305.933	305.999
870.8	306.065	306.131	306.197	306.262	306.328	306.394	306.460	306.526	306.592	306.658
870.9	306.724	306.789	306.855	306.921	306.987	307.053	307.119	307.185	307.251	307.317
871.0	307.383	307.449	307.515	307.581	307.647	307.713	307.779	307.845	307.911	307.977
871.1	308.044	308.110	308.176	308.242	308.308	308.374	308.440	308.507	308.573	308.639
871.2	308.705	308.771	308.838	308.904	308.970	309.036	309.103	309.169	309.235	309.302
871.3	309.368	309.434	309.501	309.567	309.633	309.700	309.766	309.833	309.899	309.965
871.4	310.032	310.098	310.165	310.231	310.298	310.364	310.431	310.497	310.564	310.630
871.5	310.697	310.763	310.830	310.896	310.963	311.030	311.096	311.163	311.229	311.296
871.6	311.363	311.429	311.496	311.563	311.630	311.696	311.763	311.830	311.896	311.963
871.7	312.030	312.097	312.164	312.230	312.297	312.364	312.431	312.498	312.564	312.631
871.8	312.698	312.765	312.832	312.899	312.966	313.033	313.100	313.167	313.234	313.301
871.9	313.368	313.435	313.502	313.569	313.636	313.703	313.770	313.837	313.904	313.971
872.0	314.038	314.105	314.172	314.239	314.306	314.374	314.441	314.508	314.575	314.642
872.1	314.710	314.777	314.844	314.911	314.978	315.046	315.113	315.180	315.247	315.315
872.2	315.382	315.449	315.517	315.584	315.651	315.719	315.786	315.853	315.921	315.988
872.3	316.056	316.123	316.190	316.258	316.325	316.393	316.460	316.528	316.595	316.663
872.4	316.730	316.797	316.865	316.933	317.000	317.068	317.135	317.203	317.270	317.338
872.5	317.405	317.473	317.541	317.608	317.676	317.744	317.811	317.879	317.947	318.014
872.6	318.082	318.150	318.217	318.285	318.353	318.421	318.488	318.556	318.624	318.692
872.7	318.759	318.827	318.895	318.963	319.031	319.099	319.166	319.234	319.302	319.370
872.8	319.438	319.506	319.574	319.642	319.710	319.778	319.846	319.914	319.982	320.049
872.9	320.117	320.185	320.254	320.322	320.390	320.458	320.526	320.594	320.662	320.730
ELEV	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09

TABLE 7-5 (Continued)

LAKE GEORGETOWN - ELEVATION CAPACITY TABLE

ELEVATIONS IN FEET-NGVD, CAPACITIES IN THOUSAND ACRE-FEET

ELEV	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
873.0	320.798	320.866	320.934	321.002	321.070	321.139	321.207	321.275	321.343	321.411
873.1	321.480	321.548	321.616	321.684	321.752	321.821	321.889	321.957	322.026	322.094
873.2	322.162	322.231	322.299	322.367	322.436	322.504	322.572	322.641	322.709	322.778
873.3	322.846	322.914	322.983	323.051	323.120	323.188	323.257	323.325	323.394	323.462
873.4	323.531	323.599	323.668	323.736	323.805	323.874	323.942	324.011	324.079	324.148
873.5	324.217	324.285	324.354	324.423	324.491	324.560	324.629	324.698	324.766	324.835
873.6	324.904	324.973	325.041	325.110	325.179	325.248	325.317	325.385	325.454	325.523
873.7	325.592	325.661	325.730	325.799	325.867	325.936	326.005	326.074	326.143	326.212
873.8	326.281	326.350	326.419	326.488	326.557	326.626	326.695	326.764	326.833	326.902
873.9	326.972	327.041	327.110	327.179	327.248	327.317	327.386	327.455	327.525	327.594
874.0	327.663	327.732	327.801	327.871	327.940	328.009	328.078	328.148	328.217	328.286
874.1	328.356	328.425	328.494	328.564	328.633	328.702	328.772	328.841	328.910	328.980
874.2	329.049	329.119	329.188	329.258	329.327	329.396	329.466	329.535	329.605	329.674
874.3	329.744	329.814	329.883	329.953	330.022	330.092	330.161	330.231	330.301	330.370
874.4	330.440	330.509	330.579	330.649	330.718	330.788	330.858	330.928	330.997	331.067
874.5	331.137	331.207	331.276	331.346	331.416	331.486	331.555	331.625	331.695	331.765
874.6	331.835	331.905	331.975	332.044	332.114	332.184	332.254	332.324	332.394	332.464
874.7	332.534	332.604	332.674	332.744	332.814	332.884	332.954	333.024	333.094	333.164
874.8	333.234	333.304	333.374	333.444	333.515	333.585	333.655	333.725	333.795	333.865
874.9	333.936	334.006	334.076	334.146	334.216	334.287	334.357	334.427	334.497	334.568
875.0	334.638	334.708	334.779	334.849	334.919	334.990	335.060	335.130	335.201	335.271
875.1	335.342	335.412	335.482	335.553	335.623	335.694	335.764	335.835	335.905	335.976
875.2	336.046	336.117	336.187	336.258	336.328	336.399	336.470	336.540	336.611	336.681
875.3	336.752	336.823	336.893	336.964	337.035	337.105	337.176	337.247	337.317	337.388
875.4	337.459	337.530	337.600	337.671	337.742	337.813	337.883	337.954	338.025	338.096
875.5	338.167	338.238	338.308	338.379	338.450	338.521	338.592	338.663	338.734	338.805
875.6	338.876	338.947	339.018	339.089	339.160	339.231	339.302	339.373	339.444	339.515
875.7	339.586	339.657	339.728	339.799	339.870	339.941	340.013	340.084	340.155	340.226
875.8	340.297	340.368	340.440	340.511	340.582	340.653	340.724	340.796	340.867	340.938
875.9	341.010	341.081	341.152	341.223	341.295	341.366	341.437	341.509	341.580	341.652
876.0	341.723	341.794	341.866	341.937	342.009	342.080	342.152	342.223	342.295	342.366
876.1	342.438	342.509	342.581	342.652	342.724	342.795	342.867	342.939	343.010	343.082
876.2	343.153	343.225	343.297	343.368	343.440	343.512	343.583	343.655	343.727	343.799
876.3	343.870	343.942	344.014	344.086	344.158	344.229	344.301	344.373	344.445	344.517
876.4	344.589	344.660	344.732	344.804	344.876	344.948	345.020	345.092	345.164	345.236
876.5	345.308	345.380	345.452	345.524	345.596	345.668	345.740	345.812	345.884	345.956
876.6	346.029	346.101	346.173	346.245	346.317	346.389	346.462	346.534	346.606	346.678
876.7	346.750	346.823	346.895	346.967	347.039	347.112	347.184	347.256	347.329	347.401
876.8	347.473	347.546	347.618	347.691	347.763	347.835	347.908	347.980	348.053	348.125
876.9	348.198	348.270	348.343	348.415	348.488	348.560	348.633	348.705	348.778	348.850
877.0	348.923	348.996	349.068	349.141	349.213	349.286	349.359	349.431	349.504	349.577
877.1	349.650	349.722	349.795	349.868	349.940	350.013	350.086	350.159	350.231	350.304
877.2	350.377	350.450	350.523	350.595	350.668	350.741	350.814	350.887	350.960	351.033
877.3	351.105	351.178	351.251	351.324	351.397	351.470	351.543	351.616	351.689	351.762
877.4	351.835	351.908	351.981	352.054	352.127	352.200	352.273	352.346	352.419	352.492
877.5	352.565	352.639	352.712	352.785	352.858	352.931	353.004	353.077	353.151	353.224
877.6	353.297	353.370	353.443	353.517	353.590	353.663	353.736	353.810	353.883	353.956
877.7	354.030	354.103	354.176	354.249	354.323	354.396	354.469	354.543	354.616	354.690
877.8	354.763	354.836	354.910	354.983	355.057	355.130	355.204	355.277	355.351	355.424
877.9	355.497	355.571	355.645	355.718	355.792	355.865	355.939	356.012	356.086	356.159
ELEV	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09

TABLE 7-5 (Continued)

LAKE GEORGETOWN - ELEVATION CAPACITY TABLE

ELEVATIONS IN FEET-NGVD, CAPACITIES IN THOUSAND ACRE-FEET

ELEV	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
878.0	356.233	356.307	356.380	356.454	356.527	356.601	356.675	356.748	356.822	356.896
878.1	356.970	357.043	357.117	357.191	357.264	357.338	357.412	357.486	357.560	357.633
878.2	357.707	357.781	357.855	357.929	358.003	358.076	358.150	358.224	358.298	358.372
878.3	358.446	358.520	358.594	358.668	358.742	358.816	358.890	358.964	359.038	359.112
878.4	359.186	359.260	359.334	359.408	359.482	359.556	359.630	359.704	359.778	359.853
878.5	359.927	360.001	360.075	360.149	360.223	360.298	360.372	360.446	360.520	360.595
878.6	360.669	360.743	360.817	360.892	360.966	361.040	361.115	361.189	361.263	361.338
878.7	361.412	361.486	361.561	361.635	361.710	361.784	361.858	361.933	362.007	362.082
878.8	362.156	362.231	362.305	362.380	362.454	362.529	362.603	362.678	362.752	362.827
878.9	362.902	362.976	363.051	363.125	363.200	363.275	363.349	363.424	363.499	363.573
ELEV	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09