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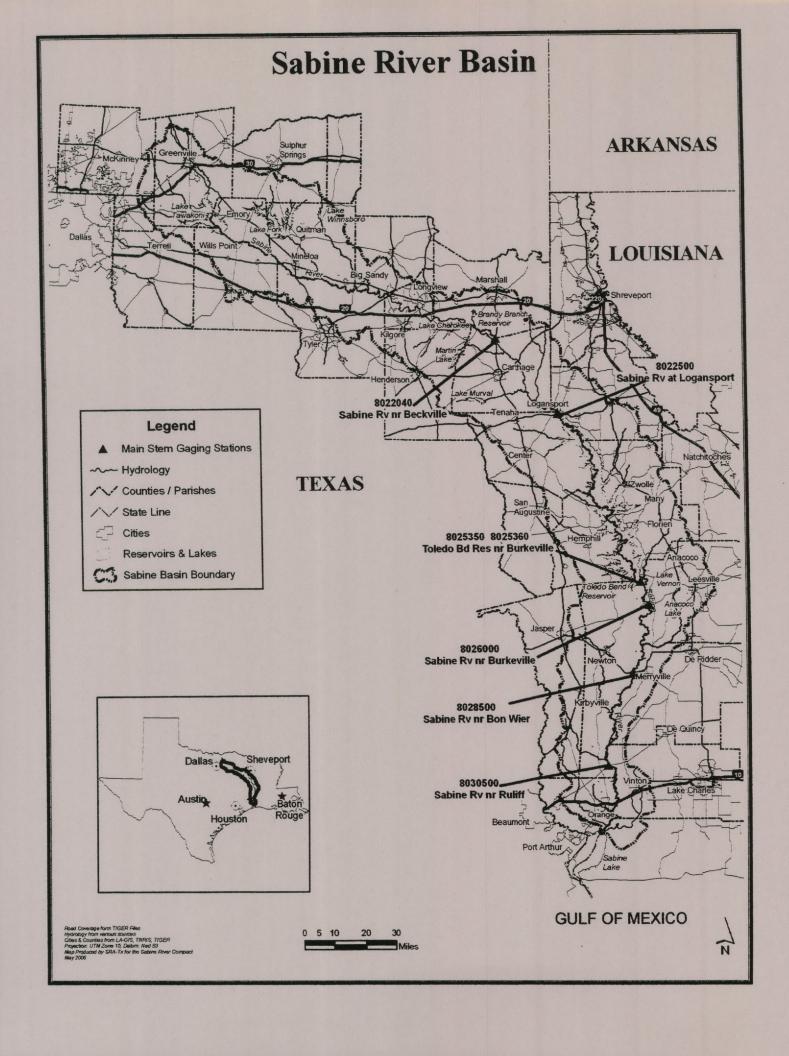
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2005

# FIFTY-FIRST ANNUAL REPORT

SABINE RIVER COMPACT ADMINISTRATION LOUISIANA AND TEXAS



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# SABINE RIVER COMPACT ADMINISTRATION

FOR THE YEAR 2005

To the President of the United States

and

The Governors of Louisiana and Texas



The Administration
Vernon B. Sauer
Federal Representative and Chairman

George D. Brandon, DVM, William B. Lewis, and Bobby E. Williams for Louisiana

Gary E. Gagnon, Wayne Reeh, and Robert "Bob" Reeves for Texas

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#### **Annual Report of**

# SABINE RIVER COMPACT ADMINISTRATION 2005

Report Year: October 1, 2004 to September 30, 2005

TO: The President of the United States

Governors of the States of Louisiana and Texas

Pursuant to Article VII of the Sabine River Compact, the Administration created by the terms of this Compact makes the following report for the year ending September 30, 2005.

#### 1. Members of the Administration

Members of the Administration appointed in accordance with provisions of the Sabine River Compact as amended by Public Law 102-575, October 30, 1992 are:

**United States Representative:** 

Vernon B. Sauer

Louisiana Representatives:

George D. Brandon

William B. Lewis (through 6/3/05)

Bobby E. Williams (from 6/3/05)

**Texas Representatives:** 

Gary E. Gagnon

Wayne Reeh (through 6/3/05)

Robert "Bob" Reeves (from 6/3/05)

#### 2. Officers of the Administration

Chairman:

Vernon B. Sauer, Hartwell, GA 30643

Vice-Chairman:

George D. Brandon, Leesville, LA 71446

Treasurer:

Wayne Reeh, Orange, TX 77630 (through 6/3/05)

Robert "Bob" Reeves, Center, TX 75935 (from 6/3/05)

Secretary:

Kellie Ferguson, 15091 TX Hwy., Many, LA 71449

#### 3. Standing Committees

**Budget Committee:** 

USGS LA Representative - George Arcement, Chairman, Baton Rouge, Louisiana

USGS TX Representative - Joe Broadus, Houston, Texas

LA Department of Transportation and Development Representative -

Ed Preau, Baton Rouge, Louisiana

TX Commission on Environmental Quality Representative -

Grant Gibson, Austin, Texas

#### **Engineering Committee:**

Jerry Clark, Chairman, Orange, TX

Mike Rankin, Vice-Chairman, Many, LA

George Arcement, Baton Rouge, Louisiana

Joe Broadus, Houston, Texas

David M. Cochran, Austin, Texas

**Bob Corby, Fort Worth, Texas** 

David Daigle, Lake Charles, Louisiana

Kellie Ferguson, Many, Louisiana

Max Forbes, Baton Rouge, Louisiana

Donnie Henson, Orange, Texas

Bill Hughes, Orange, Texas

Jayne May, Austin, Texas

Ben McGee, Ruston, Louisiana

David Montagne, Orange, Texas

James W. Pratt, Many, Louisiana

Ed Preau, Baton Rouge, Louisiana

Barton Rumsey, Many, Louisiana

Herman Settemever, Austin, Texas

Deborah Stagner, Orange, Texas

Jack Tatum, Orange, Texas

R. W. Vincent, Baton Rouge, Louisiana

Chief, State Programs Section; USEPA, Dallas, Texas

Meteorologist in Charge, NWS, Lake Charles, Louisiana

#### **Engineering Sub-Committees:**

Diversion:

**Jack Tatum** 

Mike Rankin

Gaging:

Mike Rankin

George Arcement

Joe Broadus

Jack Tatum

Water Quality:

**David Daigle** 

Herman Settemeyer

Jack Tatum

**Legal Committee:** 

Jim I. Graves, Chairman, Orange, Texas

Jane Atwood, Austin, Texas

Gary C. Ethridge, Baton Rouge, Louisiana

The Chairman, Representative of the United States, is ex-officio member of all standing committees.

#### 4. Meetings

#### 4. Meetings

Meetings were held during the report year as follows: October 1, 2004 – Fredericksburg Inn & Suites, Fredericksburg, Texas June 3, 2005 – Church Street Inn, Natchitoches, Louisiana

#### 5. Fiscal

- (a) In accordance with Article VII:K of the Compact, the expenses incident to the administration of the Compact are paid equally by the States of Louisiana and Texas. A summary of receipts and disbursements for fiscal year ending August 31, 2005 is included in Appendix A.
- (b) On June 3, 2005, the Administration approved a budget for the 2005 fiscal year in accordance with provisions of the By-Laws of the Administration (Article VII:3) as follows:

Stream Gaging Program	\$100,900.00
Quality of Water Program	14,702.00
Administrative Expenses	
Secretary's Office	4,440.00
Treasurer's Office	940.00
Auditing Fee	3,000.00
Treasurer's Bond	50.00
Meeting Expenses	<u>1,500.00</u>
Total Budget	\$125,532.00

Note: USGS to contribute \$56,652 toward the Gaging and Water Program; Compact to contribute \$58,950 toward the Gaging and Water Program and 100% of Administrative Expenses (\$9,930) with each state being responsible for one-half of the Compact contributions (\$34,440).

(c) Pursuant to provisions of the Compact (Article VII:K) and of the By-Laws of the Administration (Article VII:4), the receipts and disbursements of the Administration have been audited for the period September 1, 2004 through August 31, 2005. The report of this audit is attached as Appendix A.

#### 6. General Activities

The Administration continued its cooperative program with State and Federal agencies to collect streamflow and quality-of-water data, and to report diversions as provided by Article VII:G of the Compact.

For the fiscal year ending August 31, 2005, the Administration and the Water Resources Division, U.S. Geological Survey provided a total of \$120,404.00 for the cost of operation. The basic-records part of the program, supported by these funds, consisted of the full support for nine continuous-record discharge stations [one with Data Collection Platform (DCP)]; one reservoir contents station; one stage station (with DCP); one crest-stage station, and water quality analyses for two sites. The discharge station on the Sabine River near Beckville is used for the determination of Stateline flow as defined by Article VII:G of the Compact. Funds for the operation of this station are provided by the Texas Commission on Environmental Quality and the U.S. Geological Survey. This Article also requires findings as to the diversions made in the Stateline reach. Tabulated below is a summary of the diversions for the reporting year, October 1, 2004 - September 30, 2005.

#### **DIVERSIONS IN ACRE-FEET**

Purpose	State	Sabine River Below Toledo Bend Dam	Tributaries Below Toledo Bend Dam	Toledo Bend Reservoir	flowing into Toledo Bend Reser. Below State Line
- -	т	2 210 47	0	Δ.	0
Irrigation	Louisiana	2,218.47	. 0	0	Ŏ
¥,	Texas	112.62	U	25 712 20	48.82
Industrial	Louisiana	58,366.95	0	25,713.29	
	Texas	51,084.62	• 0	3,297.74	0
Municipal	Louisiana	461.82	0	3,706.92	0
<b>-</b>	Texas	106.96	0	1,236.04	712.57
Total	Louisiana	61,047.24	0	29,420.21	48.82
	Texas	51,304.20	0	4,533.78	712.57
			Total Diversion		
			For Louisiana		90,516.27
	•	*	<b>Total Diversion</b>		
			For Texas		56,550.55
			Grand Total		147,066.82

The industrial diversion for Texas did not utilize any brackish cooling water from Adams Bayou.

The gaging stations designated by the Administration are listed in Section 9 and data relative to these stations, as well as other stations partially funded by the Administration, is in Appendix B.

#### 7. Hydrologic Conditions

For purposes of this report, the following rainfall stations are used to represent typical rainfall in the upper, middle, and lower basin: Sulphur Springs, Wills Point, and Greenville in the upper part of the Basin; Longview, Center, Logansport, and Leesville in the middle part of basin; and Lake Charles, Orange, and DeRidder in the lower part of the basin.

Rainfall over the basin for the reporting year October 2004 through September 2005 averaged 74% of normal for the three stations in the upper part of the basin; 99% of normal for the four stations in the middle part of the basin; and 90% of normal for the three stations in the lower part of the basin. These percentages compare respectively to 23% below normal in the upper basin, 24% above normal in the middle basin, and 9% above normal in the lower basin for the previous reporting year.

The average rainfall for the reporting year for the three stations in the upper part of the basin (Sulphur Springs, Wills Point, and Greenville) was 33.16 inches, 11.86 inches (26.00%) below the long-term average rainfall of 45.02 inches; for the four stations in the middle part of the basin (Longview, Center, Logansport, and Leesville) an average of 51.19 inches, 0.35 inches (1%) below the long-term average rainfall of 51.46 inches; and for the three stations in the lower part of the basin (Lake Charles, Orange, and DeRidder) an average of 50.98 inches, 6.12 inches (12%) below the long-term average of 57.10 inches. For comparison, the last reporting year's departures from the long-term average rainfall for these areas were respectively, 10.87 inches below, 13.36 inches above and 5.70 inches above the long-term average rainfall.

The maximum total rainfall for the reporting year, 60.17 inches, occurred at Center which total is 7.16 inches above the long term average of 53.01 inches, which is also the maximum total departure for the reporting year. The minimum total rainfall for the reporting year, 28.01 inches, occurred at Greenville which total is 15.69 inches below the long term average of 43.70 inches which is also the maximum total departure for the reporting year.

Noteworthy rainfall totals on the high side recorded at Center was 14.43 inches in November and 10.80 inches in September, 12.09 inches at Logansport in November, 18.50 inches at Leesville in November, 11.74 inches at Orange in November and 10.30 inches in September, 16.25 inches at DeRidder in November.

Of the three stations in the upper basin, 9 of 36 monthly totals were above normal, with Wills Point having 4 monthly totals above the long term average; of the four stations in the middle part of the basin, 16 of 46 monthly totals were above normal, with Longview having 5 monthly totals above the long term average; and of the three stations in the lower basin, 11 of 34 monthly totals were above normal, with Orange having 5 monthly totals above the long term average.

On the low side, 15 of 116 (13%) monthly totals are less than 1 inch. Of the three stations in the upper basin, 27 of 36 monthly totals were below normal, with the greatest being Greenville with 10 deficient monthly totals; of the four stations in the middle area of the basin, 30 of the 46 monthly totals reported were below normal, with Leesville having 9 monthly totals below normal; and of the three stations in the lower basin, 23 of the 34 monthly totals were below normal, with DeRidder having 10 deficient monthly totals. For all ten stations combined, there were 80 of 116 (69%) monthly totals below the long term average and 36 of 116 (31%) monthly totals above the long term average. Four stations were above normal ranging from 0.52 inches at Logansport to

7.16 inches at Center and six stations were below normal, ranging from 7.85 inches below normal at Wills Point to 15.69 inches below normal at Greenville.

Runoff for the basin was 0.63 percent above average (WY 1961-2005) as measured at the Ruliff gaging station. Tributary gaging stations near Newton, TX and Rosepine, LA had annual runoffs of 33 percent above average and 12 percent above average, respectively, of total annual runoff. The peak discharge for various stations was 7,110 cubic feet per second (CFS) on February 9 at Beckville; 22,700 CFS on November 24 at Burkeville; 14,100 CFS on November 25 at Bayou Anacoco near Rosepine, LA; 33,300 CFS on November 25 at Bon Wier; 3,190 CFS on November 25 at Big Cow Creek near Newton, TX; and 33,100 CFS at Ruliff on November 28.

Due to reservoir levels being below 172.50 msl the entire year, it was not necessary to release any water through the spillway gates.

The lawsuits filed against Sabine River Authority, State of Louisiana (SRALA) by downstream residents alleging damages from the March, 2001 spillway releases and the wrongful death suit for the death of a father and his son during the same time period is still pending. Neither of these cases have been heard in Court to date.

Records of the daily readings obtained at 0630 hours by the Toledo Bend Project Joint Operation reflect a maximum reservoir elevation of 171.07 feet on April 16 and the minimum elevation of 162.90 feet on September 23. Releases from the Reservoir for the water year totaled 4,251,460 acre feet. A monthly summary of contents and key elevations of the Reservoir as reflected by U.S. Geological Survey records is shown in Appendix B. The lowest daily mean flow at Beckville was 102 CFS on September 12, with the lowest seven-day minimum being 114 CFS on September 10, therefore, the discharge of the Sabine River at Stateline was above the required 36 CFS during the year.

The following information is taken from a Tropical Cyclone Report on Hurricane Rita by Richard D. Knabb, Daniel P. Brown, and Jamie R. Rhome with the National Hurricane Center.

Hurricane Rita, an intense Category 5 hurricane over the central Gulf of Mexico with the fourth-lowest central pressure on record in the Atlantic Basin, weakened prior to making landfall as a Category 3 hurricane near the Texas-Louisiana border. Rita provided a significant storm surge that devastated coastal communities in southwestern Louisiana and its winds, rain, and tornados, caused fatalities in a wide swath of damage from eastern Texas to Alabama. Additionally, Rita caused floods due to storm surge in portions of the Florida Keys.

The "best track" chart of the tropical cyclones path is given in figure 1. Landfall of the center occurred at 0740 UTC on September 24 with an estimated intensity of 100 kt in extreme southwestern Louisiana just west of Johnson's Bayou and just east of Sabine Pass.

Rita weakened after making rainfall, remaining a hurricane until only about 1200 UTC on September 24 when it was centered about 35 n miles north of Beaumont, Texas. As a steadily weakening tropical storm, Rita proceeded northward, with its center moving roughly along the

Texas-Louisiana border during the remainder of that day. Rita weakened to a tropical depression by 0600 UTC on September 25 while centered over southwestern Arkansas and then turned northeastward ahead of an approaching frontal system.

Meteorological statistics from various sources indicated maximum winds of about 146 kt at 1912 UTC September 21, however, due to lack of data during the most intense period, the maximum intensity is set to 155 kt at 0300 UTC and 0600 UTC on September 22. Additionally, since the maximum surface wind at landfall was likely not sampled by aircraft or radar it is set to 100 kt. All available data suggest that many areas in extreme southeastern Texas and extreme southwestern Louisiana experienced Category 1 hurricane conditions, a few areas experienced Category 2 hurricane conditions, and Category 3 hurricane conditions were confined to a very small area east of the eye along the immediate coast of extreme southwestern Louisiana.

Despite having weakened at landfall, Rita still produced a very significant storm surge in southwestern Louisiana. A general sense of the magnitude of the storm surge from unofficial visual observations of high water marks and debris lines in Cameron, Louisiana, suggests that the surge in portions of that area probably reached about 15 feet and perhaps slightly higher. Water was pushed into Calcasieu Lake, propagated up the Calcasieu River and flooded portions of the Lake Charles area. Floodwaters in downtown Lake Charles were as deep as about six feet in some places.

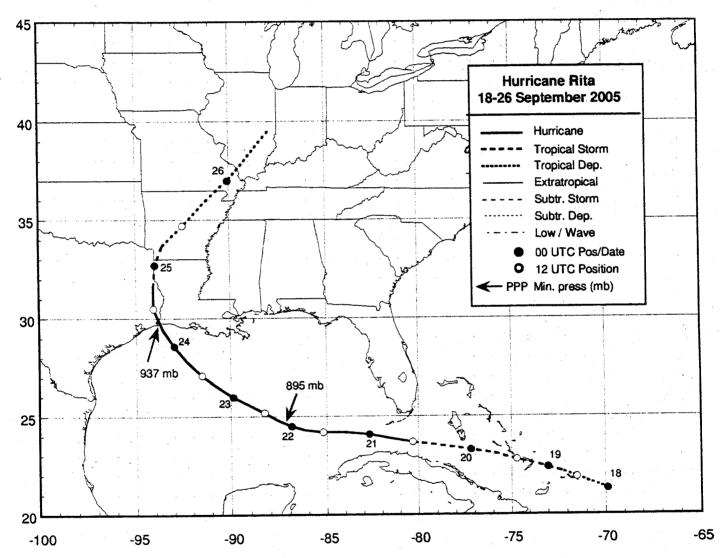
Storm total rainfall amounts of 5-9 inches were common in many portions of Louisiana and extreme eastern Texas with some isolated maxima of 10-15 inches.

A copy of the full report is on file in the Secretary's office and a copy will be provided upon request. Also, this report may be viewed, downloaded, and copied from the National Hurricane Center's website at <a href="https://www.nhc.noaa.gov/pdf/TCR-AL182005">www.nhc.noaa.gov/pdf/TCR-AL182005</a> Rita.pdf.

Rainfall associated with Rita as measured on the 16 Toledo Bend rainfall gages surrounding the reservoir reflect that a majority of the stations received 4-5 inches with a minimum of 1.15 inches at Neuville and a maximum of 8.23 inches at Keatchie. The reservoir elevation increased from 162.90 msl at 0630 on September 23 to 163.70 msl at 0630 on October 1, which is an approximate 10 inch rise.

Records for the official gaging stations, as well as other stations partially funded by the Administration, are summarized in Appendix B. More complete records for these stations are published in reports of the U.S., Geological Survey.

Figure 1



Best track positions for Hurricane Rita, 18-26 September 2005.

#### 8. Hydrologic Stations

Quantity and quality-of-water data are collected at many sites in and immediately adjacent to the basin by State and Federal agencies. The information aids in the development and utilization of the water resources of the Basin. The type of data collected is not the same for all agencies and it is impractical to publish the data in this report. However, to assist a user, the sites, the type of data collected, and the address of the collecting agency are shown below. The agency will furnish the information on request.

At gaging stations, a continuous gage-height record and daily discharge are available; at reservoir stations, records of elevation and contents are available; and, at rainfall stations, daily and hourly precipitation data are available. At quality-of-water stations, chemical, biological, and physical characteristics of water are determined at different intervals and for different constituents.

- I. Gaging stations operated by the U.S. Geological Survey, 3535 S. Sherwood Forest Blvd., Suite 120, Baton Rouge, Louisiana 70816.
  - 1. Bayou Castor near Funston, LA
  - 2. Bayou Grand Cane near Stanley, LA
  - 3. Bayou San Patricio near Benson, LA
  - 4. Bayou Toro near Toro, LA
  - 5. Bayou Anacoco near Rosepine, LA
- II. Gaging stations operated by the U.S. Geological Survey, 8027 Exchange Drive, Austin, Texas 78754. All active stations are DCP equipped.
  - 1. Cowleech Fork Sabine River at Greenville, TX
  - 2. South Fork Sabine River near Quinlan, TX
  - 3. Sabine River near Wills Point, TX
  - 4. Sabine River near Mineola, TX
  - 5. Burke Creek near Yantis, TX (1979-1989)
  - 6. Lake Fork Creek near Quitman, TX
  - 7. Big Sandy Creek near Big Sandy, TX
  - 8. Sabine River near Gladewater, TX
  - 9. Sabine River near Beckville, TX
  - 10. Martin Creek near Tatum, TX (1974 1996)
  - 11. Murvaul Bayou near Gary, TX (1958 1983)
  - 12. Sabine River at Toledo Bend near Burkeville, TX
  - 13. Sabine River near Burkeville, TX
  - 14. Sabine River near Bon Wier, TX
  - 15. Big Cow Creek near Newton, TX
  - 16. Cypress Creek near Buna, TX (1952 1983)
  - 17. Sabine River near Ruliff, TX
  - 18. Cow Bayou near Mauriceville, TX (1952 1986)

- III. Gage-height station operated by the U.S. Geological Survey, 3535 S. Sherwood Forest Blvd., Suite 120, Baton Rouge, Louisiana 70816.
  - 1. Bayou Toro near Toledo Bend near Toro, LA.
- IV. Reservoir stations operated by the U.S. Geological Survey, 8027 Exchange Drive, Austin, Texas 78754. All active stations are DCP equipped.
  - 1. Lake Tawakoni near Wills Point, TX
  - 2. Lake Winnsboro near Winnsboro, TX (1962 1986)
  - 3. Lake Fork Reservoir near Quitman, TX
  - 4. Lake Cherokee near Longview, TX (1951 1983)
  - 5. Martin Lake near Tatum, TX
  - 6. Sabine River at Logansport, LA
  - 7. Toledo Bend Reservoir near Burkeville, LA
- V. Quality-of-water stations operated by the Louisiana Department of Environmental Quality (LDEQ), P.O. Box 82215, Baton Rouge, LA 70884-2215; the Sabine River Authority of Texas (SRA-TX), P. O. Box 579, Orange, TX 77630-0579; Stream Monitoring Unit, Texas Natural Resource Conservation Commission (TNRCC), P. O. Box 13087, Austin, TX 78711; the U.S. Geological Survey in Louisiana (USGS-LA); and the U.S. Geological Survey in Texas (USGS-TX), addresses shown above:
  - 1. Lake Tawakoni headwaters, Cowleech Fork of Sabine River at U.S. 69 northwest of Lone Oak, TX, (SRA-TX)
  - 2. Lake Tawakoni in upper lake, Cowleech Arm, near Wind Point Park, TX (SRA-TX)
  - 3. Lake Tawakoni headwaters, Caddo Creek near Quinlan, TX at TX 34 (SRA-TX)
  - 4. Lake Tawakoni in Caddo Inlet near Caddo Jake Reach (SRA-TX)
  - 5. Lake Tawakoni at midlake at FM 35 near Quinlan, TX (SRA-TX)
  - 6. South Fork of Sabine River at TX 34 (SRA-TX)
  - 7. Lake Tawakoni in Kitsee Inlet near Quinlan, TX (SRA-TX)
  - 8. Bull Creek at confluence with Oak Cove of Lake Tawakoni (SRA-TX)
  - 9. Lake Tawakoni near Wills Point, TX (SRA-TX)
  - 10. Sabine River near Wills Point, TX (SRA-TX)
  - 11. Sabine River near Mineola, TX (USGS-TX, SRA-TX) (1968 1972, 1973 1996)
  - 12. Lake Fork Creek at TX 19 near Emory, TX (SRA-TX)
  - 13. Burke Creek at FM 514 near Yantis, TX (SRA-TX)
  - 14. Lake Fork Reservoir at FM 515 near Alba, TX (SRA-TX)
  - 15. Lake Fork Reservoir near Dallas Water Intake (SRA-TX)
  - 16. Lake Fork Reservoir, Little Caney Arm at pipeline crossing (SRA-TX)
  - 17. Caney Creek at FM 515 near Yantis, TX (SRA-TX)
  - 18. Lake Fork Reservoir near Quitman, TX (SRA-TX, USGS-TX) (1961 1986)
  - 19. Lake Fork Creek just below spillway at TX 182 (SRA-TX)
  - 20. Lake Fork Creek near Mineola, TX (SRA-TX)
  - 21. Sabine River near Hawkins, TX (SRA-TX)
  - 22. Big Sandy Creek near Holly Lake Ranch at FM 2896 (SRA-TX)
  - 23. Big Sandy Creek north of Hawkins at FM 1795 (SRA-TX)

- 24. Big Sandy Creek near Big Sandy, TX (USGS-TX, SRA-TX) (1985 1986)
- 25. Lake Cherokee near Longview, TX (USGS-TX) (1969 1983)
- 26. Sabine River near Beckville, TX (USGS-TX) (1962 1998)
- 27. Martin Lake near Tatum, TX (USGS-TX) (1939 1945)
- 28. Sabine River near Deadwood, TX (SRA-TX)
- 29. Sabine River near Logansport, LA (LDEQ, TNRCC, USGS, SRA-TX) (1939 1945)
- 30. Bayou Castor near Logansport, LA (USGS-LA)
- 31. Bayou Grand Cane near Stanley, LA (USGS-LA)
- 32. Tenaha Creek south of Campti, TX (TNRCC)
- 33. Toledo Bend Reservoir, Tenaha arm near Center, TX (SRA-TX)
- 34. Bayou San Patricio near Benson, LA (USGS-LA)
- 35. Toledo Bend Reservoir near Milam, TX (SRA-TX)
- 36. Toledo Bend Reservoir near Huxley Water Plant Intake (SRA-TX)
- 37. Toledo Bend Reservoir, Sunshine Bay near Milam, TX (SRA-TX)
- 38. Toledo Bend in Six Mile Boat Lane at US 87 Bridge (SRA-TX)
- 39. Toledo Bend Reservoir at Toledo Bend Dam, TX (SRA-TX)
- 40. Sabine River below spillway of Toledo Bend Reservoir, TX (SRA-TX)
- 41. Sabine River at Toledo Bend Dam near Burkeville, TX (USGS-TX) (1967 1986)
- 42. Sabine River near Burkeville, TX (SRA-TX, USGS-TX) (1968 1972)
- 43. Bayou Anacoco near Knight, LA (USGS-LA)
- 44. Sabine River near Bon Weir, TX (LDEQ, TNRCC, USGS-TX, SRA-TX) (1969 1985)
- 45. Sabine River near Ruliff, TX (USGS-TX, SRA-TX) (1945, 1947 1998)
- 46. Sabine River at IH-10 at Orange, TX (LDEQ, TNRCC)
- 47. Adams Bayou at FM 1006 near Orange, TX (TNRCC)
- 48. Adams Bayou at IH-10 at Orange, TX (TNRCC)
- 49. Sabine River at Channel Marker 3 below Cow Bayou, TX (TNRCC)
- 50. Cow Bayou at FM 1442 east of Bridge City, TX (TNRCC)
- VI. Rainfall stations operated by the National Oceanic and Atmospheric Administration National Weather Service. Request data from nearby Weather Service Office or from National Climatic Center, Asheville, N.C. 28801.

Bon Wier, TX	Greenville, TX	Logansport, LA	Orange, TX
Canton, TX	Harleton, TX	Longview, TX	Terrell, TX
Carthage, TX	Hawkins, TX	Many, LA	Tyler, TX
Center,TX	Hemphill, TX	Marshall, TX	Wills Point, TX
DeRidder, LA	Lake Charles, LA	McKinney, TX	Winnsboro, TX
Emory, TX	Leesville, LA	Mineola, TX	Wolfe City, TX
Gilmer, Tx			

Daily forecasts are made by the National Weather Service at 9 sites on the Sabine River and at 3 reservoir sites; flood forecasts are made at 4 additional points. The information is available from newspapers in the area.

#### 9. Official Gaging Stations

The Administration has designated official gaging stations needed to perform its duties as stated by Article VII:G of the Compact. These stations are continuous record gaging stations and are operated by the U.S. Geological Survey. The Administration, the Geological Survey, and other agencies finance the operating costs.

#### Continuous-record stations (main stem):

Sabine River near Beckville, TX (DCP equipped)
Sabine River near Logansport, LA (gage height only; DCP equipped)
Toledo Bend Reservoir near Burkeville, TX (elevation at two sites and contents)
Sabine River near Bon Wier, TX
Sabine River near Ruliff, TX

#### **Tributaries:**

Bayou Anacoco near Rosepine, LA Big Cow Creek near Newton, TX

Records for these stations are given in Appendix B.

Respectfully submitted,

SABINE RIVER COMPACT ADMINISTRATION

Vernon B. Sauer, Chairman

Representative of the United States

George D. Brandon

Commissioner for Louisiana

**Bobby E. Williams** 

Commissioner for Louisiana

**Gary Gagnon** 

**Commissioner for Texas** 

Robert Reeves

**Commissioner for Texas** 

#### APPENDIX A - AUDIT REPORT

# SABINE RIVER COMPACT ADMINISTRATION FINANCIAL REPORT AUGUST 31, 2005

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Eugene C. Gilder, CPA\* 2004

INDEPENDENT AUDITORS' REPORT

To the Board of Commissioners Sabine River Compact Administration States of Texas and Louisiana

We have audited the accompanying basic financial statements of the Sabine River Compact Administration, a component unit of the State of Texas and State of Louisiana, as of and for the years ended August 31, 2005 and 2004. These financial statements are the responsibility of the Administration's management. Our responsibility is to express an opinion on these financial statements based on our audit.

We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in Government Auditing Standards, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatements. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

In our opinion, the basic financial statements referred to above present fairly, in all material respects, the financial position of Sabine River Compact Administration as of August 31, 2005 and 2004, and the results of its operations for the years then ended in conformity with accounting principles generally accepted in the United States of America.

Management's discussion and analysis on pages 3 and 4 are not a required part of the basic financial statements but are supplementary information required by the Governmental Accounting Standards Board. We have applied certain limited procedures, which consisted principally of inquiries of management regarding the methods of measurement and presentation of the required supplementary information. However, we did not audit the information and express no opinion on it.

Members of American Institute of Certified Public Accountants Society of Louisiana Certified Public Accountants In accordance with <u>Government Auditing Standards</u>, we have also issued our report dated September 21, 2005, on our consideration of the Sabine River Compact Administration's internal control over financial reporting and our tests of its compliance with certain provisions of laws, regulations, contracts and grants. That report is an integral part of an audit performed in accordance with <u>Government Auditing Standards</u> and should be read in conjunction with this report in considering the results of our audit.

Proussand, Poche, Lewis & Breaux LEP

Lafayette, Louisiana September 21, 2005

#### MANAGEMENT'S DISCUSSION AND ANALYSIS

This section of the Sabine River Compact Administration (SRCA) annual financial report presents a discussion and analysis of SRCA's financial performance during the fiscal year that ended August 31, 2005. Please read this section in conjunction with SRCA's financial statements, which follow this section.

#### FINANCIAL HIGHLIGHTS

SRCA's net assets overall increased from \$31,996 to \$33,888 or 6% from August 31, 2004 to August 31, 2005. The main reason for this change was excess revenue and transfers over expenditures during the year.

SRCA's intergovernmental transfers remained unchanged at \$62,458 between August 31, 2004 and August 31, 2005. General governmental expenses decreased to \$60,930 from \$61,083 for the year ended August 31, 2005.

#### OVERVIEW OF THE FINANCIAL STATEMENTS

The financial report consists of three parts: Management's Discussion and Analysis (this section), the basic financial statements, and the notes to the financial statements.

The basic financial statements present information for SRCA as a whole, in a format designed to make the statements easier for the reader to understand. The statements in this section include the Statement of Net Assets and the Statement of Activities.

The Statement of Net Assets presents the assets and liabilities. The difference between total assets and total liabilities is net assets and may provide a useful indicator of whether the financial position of SRCA is improving or deteriorating.

The Statement of Activities presents information showing how SRCA's assets changed as a result of current year operations. Regardless of when cash is affected, all changes in net assets are reported when the underlying transactions occur. As a result, transactions are recorded that will not affect cash until future periods.

The financial statements provide information about SRCA's overall financial status. The financial statements also include notes that explain some of the information in the financial statements and provide more detailed data.

SRCA's financial statements are prepared on an accrual basis in conformity with accounting principles generally accepted in the United States of America (GAAP) as applied to government units. Under this basis of accounting, revenues are recognized in the period in which they are earned and expenses are recognized in the period in which they are incurred. All assets and liabilities associated with the operation of SRCA are included in the Statement of Net Assets.

#### FINANCIAL ANALYSIS

#### Net Assets

SRCA's total net assets at August 31, 2005 changed by \$1,892, a 6% increase from August 31, 2004. Total assets increased 21% to \$53,731 and total liabilities increased 61% to \$19,843.

#### Changes in Net Assets

The change in net assets at August 31, 2005 is \$1,892 or 6% more than at August 31, 2004. SRCA's total revenues and transfers remained unchanged and total general government expenses decreased .2% to \$60,930. The general government expenses are detailed below.

#### SRCA'S GENERAL GOVERNMENT EXPENSES

	2005	2004
General government expense:		
Secretary	\$ 3,450	\$ 3,450
Treasurer	800	800
Water resources investigation	53,282	53,358
Audit fees	3,000	2,000
Other	398	1,475
Total	<u>\$ 60,930</u>	<u>\$ 61,083</u>

#### CURRENTLY KNOWN FACTS, DECISIONS, OR CONDITIONS

There are currently no known facts, decisions or conditions that are expected to have a significant effect on financial position or results of operations.

#### CONTACTING SRCA'S FINANCIAL MANAGEMENT

This financial report is designed to provide our legislatures, state officials, the Louisiana Legislative Auditor's Office, patrons and other interested parties with a general overview of SRCA's finances and to demonstrate SRCA's accountability for the money it receives. If you have any questions about this report or need additional financial information, contact Debra Stagner at 409-746-2192.

# STATEMENTS OF NET ASSETS August 31, 2005 and 2004

ASSETS	2005	2004
Cash	\$ 53,731	\$ 44,328
Total assets	\$ 53,731	\$ 44,328
LIABILITIES		
Accounts payable	\$ 19,843	\$ 12,332
Total liabilities	19,843	12,332
NET ASSETS		
Unrestricted	33,888	31,996
Total net assets	33,888	31,996
Total liabilities and net assets	<u>\$ 53,731</u>	\$ 44,328

# STATEMENTS OF ACTIVITIES Years Ended August 31, 2005 and 2004

EXPENSES:	2005	2004
Governmental activities - General government	\$(60,930)	\$(61,083)
Total governmental activities	(60,930)	(61,083)
GENERAL REVENUES AND TRANSFERS: Intergovernmental transfers	62,458	62 459
Interest	364	62,458 <u>353</u>
Total general revenues and transfers	62,822	62,811
Change in net assets	1,892	1,728
Net assets, at beginning	31,996	30,268
Net assets, at ending	\$ 33,888	<u>\$ 31,996</u>

#### BALANCE SHEETS - GOVERNMENTAL FUND August 31, 2005 and 2004

ASSETS	•	2005	2004
Cash		\$ 53,731	\$ 44,328
Total assets	, .	\$ 53,731	\$ 44,328
LIABILITIES AND FUND EQUITY			
Accounts payable Fund balance - undesignated	*	\$ 19,843 33,888	\$ 12,332 31,996
Total liabilities and fun	d equity	\$ 53,731	\$ 44,328

# STATEMENTS OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCE - GOVERNMENTAL FUND Years Ended August 31, 2005 and 2004

		2005	2004
Revenues: Intergovernmental Interest		\$ 62,458 <u>364</u>	\$ 62,458 <u>353</u>
Total revenues	*.	62,822	62,811
Expenditures: General government	•	60,930	61,083
Net change in fund balance		1,892	1,728
Fund balance, beginning		31,996	30,268
Fund balance, ending		\$ 33,888	<u>\$ 31,996</u>

## BUDGETARY COMPARISON SCHEDULE GENERAL FUND

For the Year Ended August 31, 2005 With Comparative Actual Amounts for Year Ended August 31, 2004

	2005						
			Variance With Final				
	Original	Section 1	Budget -				
	and Final		Positive	2004			
	Budget Actual		(Negative)	Actual			
Revenues:			(Incades ve)	Accuar			
Intergovernmental -				4			
Contributions:							
State of Texas	\$ 32,376	\$ 31,229	\$ (1,147)	\$ 31,229			
State of Louisiana	32,376	31,229	(1,147)	31,229			
Interest income	-	364	3.64	353			
Total revenues	64,752	62,822	(1,930)	62,811			
Expenditures:							
General government -							
Maintenance - office of:							
Secretary	4,300	3,450	850	3,450			
Treasurer	800	800	-	800			
Water resources							
investigation	55,652	53,282	2,370	53,358			
Audit fees	3,000	3,000		2,000			
Other	1,000	398	602	1,475			
Total expenditures	64,752	60,930	3,822	61,083			
Net change in fund balance	-0-	1,892	1,892	1,728			
Fund balance, beginning	31,996	31,996		30,268			
Fund balance, ending	\$ 31,996	<u>\$ 33,888</u>	<u>\$ 1,892</u>	<u>\$ 31,996</u>			

#### NOTES TO FINANCIAL STATEMENTS

#### Note 1. Summary of Significant Accounting Policies

Basis of presentation:

The accompanying financial statements have been prepared in accordance with accounting principles (GAAP) generally accepted in the United States of America as applied to government units. The Governmental Accounting Standards Board (GASB) is the accepted standard-setting body for establishing governmental accounting principles and financial reporting standards.

This financial report has been prepared in conformity with GASB Statement No. 34, "Basic Financial Statements and Management's Discussion and Analysis for State and Local Government," issued in June 1999.

#### Reporting entity:

The Sabine River Compact Administration, a component unit of the State of Texas and State of Louisiana, is an entity formed by a compact entered into by the State of Texas and the State of Louisiana on January 26, 1953, under authority granted by an Act of the Congress of the United States approved November 1, 1951, (Public Law No. 252, 82nd Congress, First Session). The Act was amended on October 30, 1992 (Public Law No. 102-575 of the 102 The objective of the Compact is to provide equitable Congress). apportionment of the waters of the Sabine River and its tributaries between the two states. The operation is administered by an Inter-State Administrative Agency composed of two members appointed by the Governor of Texas and two members appointed by the Governor of Louisiana; and one member, as representative of the United States appointed by the President of the United States, which member shall be ex-officio chairman of the Administration without vote and shall not be a domiciliary of or resident in either state.

Measurement focus/basis of accounting:

Government-wide financial statements (GWFS):

The Statement of Net Assets and the Statement of Activities display information about the reporting government as a whole. These statements include all the financial activities of the Administration.

#### NOTES TO FINANCIAL STATEMENTS

The GWFS were prepared using the economic resources measurement focus and the accrual basis of accounting. Revenues, expenses, gains, losses, assets and liabilities resulting from exchange or exchange-like transactions are recognized when the exchange occurs (regardless of when cash is received or disbursed). Revenues, expenses, gains, losses, assets and liabilities resulting from nonexchange transactions are recognized in accordance with the requirements of GASB Statement No. 33, "Accounting and Financial Reporting for Nonexchange Transactions."

#### Fund financial statements:

Governmental funds are accounted for using a current financial resources measurement focus. With this measurement focus, only current assets and current liabilities are generally included on the statement of net assets. The statement of activities reports on the sources (i.e., revenues and other financing sources) and uses (i.e., expenditures and other financing uses) of current financial resources. This approach differs from the manner in which the governmental activities of the GWFS are prepared; however, there are no differences between the GWFS and the fund financial statements as of and for the year ended August 31, 2005.

Fund financial statements report detailed information about the Administration. The focus of governmental fund financial statements is on major funds rather than reporting funds by type. The Administration has only one fund, the General Fund, which by definition is always a major fund.

Governmental funds use the modified accrual basis of accounting. Under the modified accrual basis of accounting, revenues are recognized when susceptible to accrual (i.e., when they become both measurable and available). Measurable means the amount of the transaction can be determined and available means collectible within the current period or soon enough thereafter to pay liabilities of the current period. Expenditures are recorded when the related fund liability is incurred.

The two major sources of revenues are intergovernmental and interest. Both of these are susceptible to accrual.

#### Budgets:

Budgets are adopted on a basis consistent with accounting principles generally accepted in the United States of America. An annual appropriated budget is adopted for the General Fund. The budget is prepared by the Sabine River Compact Administration management for formal approval by the Board of Commissioners. Any amendments to the original budget are approved by the Board of Commissioners. Budgeted amounts presented are as originally adopted and as amended. Because the Administration did not amend its budget during the fiscal year, the amounts presented as original and final are the same.

#### NOTES TO FINANCIAL STATEMENTS

Cash:

Cash consists of amounts in interest bearing deposit accounts.

#### Note 2. Deposits

The carrying amount of deposits was \$53,731 and \$44,328 and the bank balance was \$60,469 and \$44,328 at August 31, 2005 and 2004, respectively. The entire bank balance was covered by federal depository insurance.



#### BROUSSARD, POCHÉ, LEWIS & BREAUX, L.L.P.

CERTIFIED PUBLIC ACCOUNTANTS

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OVER FINANCIAL REPORTING BASED ON AN AUDIT
OF FINANCIAL STATEMENTS PERFORMED IN
ACCORDANCE WITH GOVERNMENT AUDITING STANDARDS

REPORT ON COMPLIANCE AND ON INTERNAL CONTROL

To the Board of Commissioners, Sabine River Compact Administration States of Texas and Louisiana

We have audited the basic financial statements of the Sabine River Compact Administration, a component unit of the State of Texas and State of Louisiana, as of and for the year ended August 31, 2005, and have issued our report thereon dated September 21, 2005. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in Government Auditing Standards, issued by the Comptroller General of the United States.

#### Compliance

As part of obtaining reasonable assurance about whether the Administration's financial statements are free of material misstatement, we performed tests of its compliance with certain provisions of laws, regulations and contracts noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit and, accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance that are required to be reported under Government Auditing Standards.

#### Internal Control Over Financial Reporting

In planning and performing our audit, we considered the Administration's internal control over financial reporting in order to determine our auditing procedures for the purpose of expressing our opinion on the financial statements and not to provide assurance on the internal control over financial reporting. Our consideration of the internal control over financial reporting would not necessarily disclose all matters in the internal control over financial reporting that might be material weaknesses. A material weakness is a condition in which the design or operation of one or more of the internal control components does not reduce to a relatively low level the risk that misstatements in amounts

that would be material in relation to the financial statements being audited may occur and not be detected within a timely period by employees in the normal course of performing their assigned functions. We noted no matters involving the internal control over financial reporting and its operation that we consider to be material weaknesses.

This report is intended for the information of management. However, this report is a matter of public record and its distribution is not limited.

Prossal , Poche! Lewis & Breaux LLP

Lafayette, Louisiana September 21, 2005

#### SCHEDULE OF FINDINGS AND QUESTIONED COSTS Year Ended August 31, 2005

We have audited the basic financial statements of Sabine River Compact Administration as of and for the year ended August 31, 2005, and have issued our report thereon dated September 21, 2005. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in <u>Government Auditing Standards</u>, issued by the Comptroller General of the United States. Our audit of the basic financial statements as of August 31, 2005 resulted in an unqualified opinion.

Section I - Summary of Auditors' Reports

No matters were reported.

A.	Report on Internal Control and Comp	pliance	Material	to the	Financial	Statements
	Internal Control  Material Weaknesses Yes  Reportable Conditions Yes	X No	e Reporte	đ		
	Compliance Compliance Material to Financial	. Statem	ents	_ Yes	X No	
Sec	ction II - Financial Statement Findi	.ngs		•		

#### SCHEDULE OF PRIOR FINDINGS For the Year Ended August 31, 2005

- Section I. Internal Control and Compliance Material to the Financial Statements

  None reported.
- Section II. Internal Control and Compliance Material to Federal Awards

  Not applicable.
- Section III. Management Letter

The prior year's report did not include a management letter.

## APPENDIX B

## GAGING STATION RECORDS

The data herein presented for discharge gaging stations consists of a description of the station; a summary of the average and extreme flow conditions for the period of record; daily discharges; current and historical monthly summaries; summary statistics for calendar year, water year, and historical periods; and a graph of current water year data. Only daily gage heights (in data and in graph form) are shown for Sabine River at Logansport since it is affected by the backwater in Toledo Bend Reservoir and only daily reservoir storage (in data and graph form) is shown for Toledo Bend Reservoir near Burkeville, Texas.

The gaging-station description shows the present location of the gage, the drainage flow area, the period of record, the type of gage, general remarks affecting flow, the average discharge, and the extremes. The location of the gaging station and the drainage area are obtained from the most accurate maps available. Under "Gage" is given the type of gage currently in use and the datum of this gage. Information pertaining to conditions affecting natural flow at the gaging station is given under "Remarks". Under "Average Discharge" is shown the mean flow for the years indicated. The maximum discharge and gage height, and minimum discharge for key periods are shown under "Extremes".

The data herein presented for water quality stations consists of a description of the station, a summary of certain daily values for the period of record, and water quality data for various sampling intervals. The water quality stations description shows the present location of the gage, the drainage flow area, the period of record, the period of daily record, general remarks affecting flow, extremes for the period of daily record, and extremes outside the period of daily record.

Information concerning revisions to past records; changes in the type, location, and datum of the gages; changes in regulation and diversion; and the methods for determining the extremes are contained in the report. Records for previous water years, for stations or tributary streams, and for quality-of-water data can also be found in the annual series of U.S. Geological Survey reports. These reports can be obtained from the District Chief in the State responsible for the records. Records for the main stem of the Sabine River and the tributary streams in Texas are available from the District Chief, U.S. Geological Survey, 8027 Exchange Drive, Austin, Texas 78754; records for the tributary streams in Louisiana are available from the District Chief, U.S. Geological Survey, 3535 S. Sherwood Forest Boulevard, Suite 120, Baton Rouge, Louisiana 70816.

Data included herein was furnished by the U.S. Geological Survey in accordance with a cooperative agreement with the Sabine River Compact Administration.



## 08022040 Sabine River near Beckville, TX

Sabine River Basin

LOCATION.—Lat 32°19'38", long 94°21'12" referenced to North American Datum of 1927, Panola County, Hydrologic Unit 12010002, on downstream side of highway embankment near right end of downstream bridge on U.S. Highway 59, 0.9 mi upstream from Eightmile Creek, 6.0 mi upstream from Farm Road 1794, 8.4 mi northeast of Beckville, 12.4 mi downstream from State Highway 43 and at mile 327.0.

DRAINAGE AREA, -- 3,589 mi2.

## **WATER-DISCHARGE RECORDS**

- PERIOD OF RECORD.—Oct. 1938 to current year. Prior to Oct. 1978, published as "near Tatum" (station 08022000). Water-quality records: Chemical data: Feb. 1952 to Mar. 1999. Biochemical data: Jan. 1968 to Mar. 1999. Pesticide data: Mar. 1968 to June 1981. Specific conductance: Feb. 1952 to Sept. 1998. Water temperature: Feb. 1952 to Sept. 1998.
- GAGE.--Water-stage recorder. Datum of gage is 190.00 ft above NGVD of 1929. Prior to Oct. 1, 1978, at site 12.4 mi upstream at datum 14.18 ft higher. Prior to Sept. 21, 1945, nonrecording gage. Satellite telemeter at station.
- REMARKS.—No estimated daily discharges. Records good. Since water year 1961, at least 10% of contributing drainage area has been regulated. There are several diversions above this station and below Lake Tawakoni for municipal, industrial and oil field operations. Low flows are sustained by wastewater effluents that are returned to the river above the station. Flow may also be slightly affected at times by discharge from floodwater retarding structures controlling runoff from 9.70 mi<sup>2</sup> in the Mill Creek drainage basin.
- AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION. --22 years (water years 1939-1960) prior to regulation by Lake Tawakoni, 2,663 ft<sup>3</sup>/s (1,929,000 acre-ft/yr).
- EXTREMES OUTSIDE PERIOD OF RECORD.—Flood in May 1884 reached a stage of about 2 ft lower than flood of Apr. 4, 1945. These dates and gage heights are based on information for Sabine River near Tatum (station 08022000) and Sabine River at Logansport, LA. (station 08022500).
- EXTREMES FOR PERIOD PRIOR TO REGULATION.--WATER YEARS 1939-1960: Maximum discharge, 123,000 ft³/s, Apr. 4, 1945, from rating curve extended above 66,000 ft³/s on basis of partly estimated discharge measurement of 88,900 ft³/s, gage height, 33.80 ft, from graph based on gage readings; minimum observed, 2.4 ft³/s, Aug. 11, 1964.

## 08022040 Sabine River near Beckville, TX—Continued

# DISCHARGE, CUBIC FEET PER SECOND WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005 DAILY MEAN VALUES

					DMIL	Y MEAN V	MLUES					
Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	259	647	5,320	1,030	2,020	3,860	2,070	435	313	110	143	230
2	236	1,210	5,260	996	2,540	3,900	2,490	366	341	131	145	223
3	241	1,210	4,030	971	3,100	3,880	2,290	.327	292	225	153	200
4	272	1,170	3,000	983	2,720	3,370	1,910	336	249	272	141	194
5	579	1,110	2,290	1,030	2,400	2,500	1,610	403	239	208	137	175
6	749	1,070	2,040	1,160	2,270	1,900	1,420	332	229	174	148	155
7	545	978	2,830	1,640	2,900	1,610	1,350	335	207	159	139	169
8	627	890	3,840	3,310	6,120	1,440	1,170	344	200	170	258	173
9	1,060	828	3,280	3,730	7,030	1,330	1,000	330	219	178	383	180
10	970	706	2,470	3,380	6,830	1,220	920	351	. 205	160	242	135
11	996	597	2,240	3,320	5,540	1,140	1,670	333	191	156	204	106
12	915	508	2,080	3,370	3,680	1,120	3,750	355	179	141	171	102
13	817	437	1,860	4,090	2,670	1,090	3,870	349	176	158	157	118
14	752	404	1,700	4,860	2,250	1,030	2,720	· 313	167	193	158	113
15	845	382	1,520	4,560	2,020	993	1,940	294	183	209	155	112
16	768	346	1,400	4,040	1,780	915	1,810	277	198	296	210	109
17	672	358	1,310	3,960	1,580	873	1,780	247	203	328	177	135
18	601	2,070	1,240	3,880	1,450	860	1,540	238	191	353	145	224
19	530	3,370	1,210	3,780	1,350	881	1,310	235	. 167	458	147	165
20	420	2,380	1,160	3,830	1,270	891	1,060	231	160	382	145	138
21	362	2,880	1,110	3,770	1,250	945	830	208	155	298	150	137
22	342	4,980	1,060	3,390	1,230	1,090	690	190	140	269	139	121
23	322	4,980	1,770	2,800	1,290	1,180	<b>623</b> .		129	230	175	138
24	319	4,250	1,890	2,300	2,760	1,070	556	185	121	243	168	170
25	403	3,320	1,520	1,970	3,630	981	471	189	115	186	160	615
26	435	2,630	1,390	1,730	3,670	906	444	176	111	166	167	927
27	412	2,560	1,370	1,570	3,660	894	429	187	115	166	171	426
28	381	2,630	1,420	1,580	3,730	1,110	380	216	118	135	200	218
29	368	2,720	1,380	1,630		1,250	364	291	. 117	182	356	175
30	380	3,640	1,260	1,470		1,330	412	527	121	191	290	178
31	398		1,130	1,540		1,600		382		165	243	
otal	16,976	55,261	65,380	81,670	82,740	47,159	42,879	9,179	5,551	6,692	5,777	6,261
Mean	548	1,842	2,109	2,635	2,955	1,521	1,429	296	185	216	186	209
Max	1,060	4,980	5,320	4,860	7,030	3,900	3,870	527	341	458	383	927
Ain	236	346	1,060	971	1,230	860	364	176	111	110	137	102
\c-ft	33,670	109,600	129,700	162,000	164,100	93,540	85,050	18,210	11,010	13,270	11,460	12,420

# STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 – 2005', BY WATER YEAR (WY)

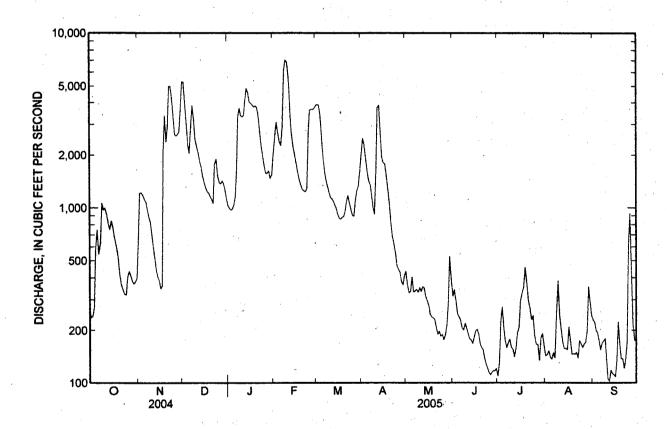
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	673	1,617	3,356	3,568	4,179	4,778	3,929	4,357	2,675	975	307	436
Max	4,325	8,221	12,270	10,960	11,930	21,620	11,330	21,010	11,580	4,552	1,725	3,434
(WY)	(1974)	(1975)	(2002)	(1992)	(1975)	(2001)	(1990)	(1966)	(1989)	(2000)	(1979)	(1974)
Mia	42.5	82.1	144	239	322	317	355	296	77.5	32.1	36.7	33.8
(WY)	(1964)	(1964)	(1966)	(1964)	(1996)	(1996)	(1971)	(2005)	(1971)	(1964)	(1969)	(1985)

## 08022040 Sabine River near Beckville, TX—Continued

## **SUMMARY STATISTICS**

*		Calendar Y	ear 2004	Water Year	2005	Water Years 1961 – 2005		
Annual total		480,668		425,525			•	
Annual mean	4	1,313		1,166		2,563		
Highest annual mean	•					5,103	2001	
Lowest annual mean						311	1964	
Highest daily mean	•	10,200	May 3	7,030	Feb 9	48,100	May 2, 1966	
Lowest daily mean		100	May 29	102	Sep 12	2.4	Aug 11, 1964	
Annual seven-day minimum		119	Sep 10	114	Sep 10	3.8	Aug 7, 1964	
Maximum peak flow				7,110	Feb 9	49,400	May 2, 1966	
Maximum peak stage				18.97	Feb 9	38.87	Mar 30, 1989	
Annual runoff (ac-ft)	•	953,400		844,000		1,857,000		
10 percent exceeds		3,320		3,370		7,580		
50 percent exceeds		730		579	•	884		
90 percent exceeds		170	e la	152		102	•	

Period of regulated streamflow.





## 08022500 Sabine River at Logansport, LA

Sabine River Basin

LOCATION.—Lat 31°58′20″, long 94°00′22″ referenced to North American Datum of 1927, Shelby County, Hydrologic Unit 12010004, on left bank just upstream from bridge on U.S. Highway 84, 3.0 mi upstream from Bayou Castor, 111 mi upstream from Toledo Bend Dam and at mile 267.1.

DRAINAGE AREA.-4,842 mi<sup>2</sup> of which 3 mi<sup>2</sup> probably is noncontributing.

#### **WATER-STAGE RECORDS**

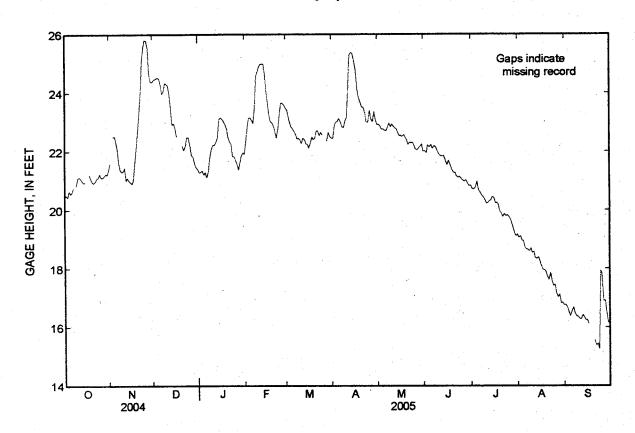
- PERIOD OF RECORD.--July 1903 to Feb. 1968 (daily mean discharge), Mar. 1968 to current year (daily maximum gage height). Water-quality records: Specific conductance: 1939 to 1945. Water temperature: 1939 to 1945.
- REVISED RECORDS.--WSP 1312: 1903-06 (monthly and annual means). WSP 1732: 1929(M), 1933(M).
- GAGE.—Water-stage recorder. Datum of gage is 147.72 ft above NGVD of 1929. July 1, 1903, to Sept. 30, 1956, nonrecording gages located in the vicinity of present gage. Oct. 1, 1956, to Jan. 16, 1964, water-stage recorder 4,600 ft upstream. Jan. 16, 1964, to Dec. 10, 1968, water-stage recorder 4,700 ft upstream. All gages to present datum except prior to Dec. 31, 1906 when datum was 2.00 ft lower. Satellite telemeter at station.
- REMARKS.—Records good. Station discontinued as a daily streamflow station on Mar. 1, 1968, due to backwater from storage in Toledo Bend Reservoir. Since water year 1961, at least 10% of contributing drainage area has been regulated. Flow may also be slightly affected at times by discharge from one floodwater-retarding structure. This structure controls runoff from 9.70 mi² in the Mill Creek drainage basin. Numerous diversions above station for oil field operations, municipal and industrial uses.
- AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--57 years (water years 1904-1960), 3,325 ft3/s (2,407,000 acre-ft/yr),
- AVERAGE DISCHARGE FOR PERIOD OF RECORD.-7 years (water years 1961-1967), 2,252 ft3/s (1,632,000 acre-ft/yr).
- EXTREMES FOR PERIOD OF RECORD.--WATER YEARS, 1961-1967: Maximum gage height, 34.78 ft Apr. 16. 1991; minimum since initial filling of Toledo Bend Reservoir in June 1968, 16.85 ft, Nov. 9, 1987. Maximum discharge, 46,800 ft<sup>3</sup>/s May 6, 1966, gage height, 38.46 ft; minimum, 25 ft<sup>3</sup>/s, Aug. 13, 1964.
- EXTREMES OUTSIDE PERIOD OF RECORD.—Flood in May 1884 reached a stage of 39.4 ft at present site and datum. Stage determined from high-water mark.
- EXTREMES FOR PERIOD PRIOR TO REGULATION.—WATER YEARS, 1904-1960: Maximum discharge, 92,000 ft³/s Apr. 8, 1945, gage height, 44.07 ft, from floodmark; minimum, 16 ft³/s, Sept. 26-28, Oct. 3, 4, 1939.
- EXTREMES FOR CURRENT YEAR.—Maximum gage height, 25.81 ft, Nov. 25, minimum gage height, 14.43 ft, Sep. 24.

## 08022500 Sabine River at Logansport, LA-Continued

# GAGE HEIGHT, FEET WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005 DAILY MAXIMUM VALUES

			•		DAILY !	MUMIXAN	VALUES					
Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	20.45	21.61	24.44	21.29	22.36	23.43	22.45	22.94	22.04	20.73	19.07	16.78
2	20.52	****	24.48	21.30	22.86	23.25	22.90	22.90	21.96	20.72	19.13	16.71
3	20.44	22.51	24.51	21.36	23.16	22.98	23.00	22.78	22.23	20.80	18.97	16.54
4	20.66	22.53	24.53	21.21	23.17	22.86	23.04	22.79	22.16	20.99	18.97	16.39
5	20.56	22.36	24.49	21.31	23.08	22.79	23.15	22.74	22.25	20.72	18.74	16.56
6	20.62	22.08	24.27	21.12	22.97	22.70	23.04	22.72	22.11	20.62	18.69	16.69
7	20.77	21.68	23.97	21.36	23.51	22.59	22.85	22.85	22.20	20.52	18.66	16.50
8		21.40	24.07	21.82	24.59	22.44	22.83	22.98	22.16	20.47	18.61	16.39
9	20.84	21.31	24.35	22.10	24.70	22.46	23.06	22.85	22.04	20.37	18.72	16.3
10	21.10	21.35	24.33	22.23	24.89	22.42	23.18	22.95	21.92	20.24	18.55	16.3
11	21.14	21.46	24.26	22.22	25.00	22.28	24.05	22.87	21.87	20.24	18.58	16.2
12	21.08	21.01	23.95	22.33	24.99	22.48	25.30	22.81	21.85	20.32	18.39	16.4
13	21.00	21.11	23.52	22.49	25.01	22.42	25.39	22.79	21.87	20.33	18.35	16.3
14	20.94	21.01	22.93	23.10	24.67	22.28	25.34	22.65	21.70	20.46	18.41	16.2
15	20.96	20.97	22.96	23.18	24.11	22.26	25.08	22.54	21.56	20.43	18.28	16.2
16		20.91	22.84	23.13	23.67	22.13	24.77	22.55	21.71	20.24	18.09	16.1
17		21.03	22.52	23.05	23.25	22.30	24.16	22.52	21.58	20.27	17.97	
18	21.21	21.55		22.94	23.05	22.52	23.85	22.59	21.41	20.20	17.97	
19	21.07	22.19	<u></u>	22.80	22.98	22.42	23.70	22.51	21.30	19.97	17.90	
20	20.96	22.67		22.51	22.87	22.47	23.54	22.41	21.29	19.92	17.74	15.5
21	20.94	23.35	22.21	22.36	22.72	22.72	23.52	22.25	21.17	19.78	17.63	15.3
22	20.98	23.98	22.05	22.25	22.48	22.72	23.33	22.32	21.13	19.89	17.87	15.4
23	21.10	25.08	22.21	21.85	22.81	22.55	23.03	22.30	21.16	19.80	17.56	15.2
24	21.12	25.57	22.50	21,84	23.24	22.68	23.00	22.33	21.08	19.85	17.42	17.9
25	21.24	25.81	22.49	21.73	23.66	22.58	23.42	22.24	21.02	19.80	17.46	17.
26	21.13	25.80	22.22	21.60	23.68		23.15	22.09	20.99	19.71	17.19	16.9
<b>27</b>	21.13	25.54	21.90	21.39	23.62		23.03	22.06	21.04	19.59	17.03	16.9
28	21.17	24.70	21.83	21.66	23.51	22.37	23.39	22.13	20.93	19.38	17.14	16.
29	21.25	24.40	21.59	21.87		22.67	23.11	22.18	20.84	19.24	16.83	16.
30	21.21	24.38	21.48	21.98		22.54	22.93	22.27	20.85	19.12	16.86	16.
31	21.37		21.41	21.92		22.48		22.02		19.19	16.76	
Aax		10,000		23.18	25.01		25.39	22.98	22.25	20.99	19.13	
							-					

# 08022500 Sabine River at Logansport, LA-Continued





## 08025350 Toledo Bend Reservoir near Burkeville, TX

#### Sabine River Basin

LOCATION.—Lat 31°10′25″, long 93°33′57″ referenced to North American Datum of 1927, Newton County, Hydrologic Unit 12010004, in powerhouse at right end of Toledo Bend Dam on Sabine River, 15 mi northeast of Burkeville and at mile 156.5.

DRAINAGE AREA.-7,178 mi2.

#### WATER-STAGE RECORDS

PERIOD OF RECORD .-- Oct. 1966 to current year.

GAGE.—Water-stage recorder. Datum of gage is NGVD of 1929 (levels by Sabine River Authority). Prior to July 20, 1967, nonrecording gage at same site and datum. July 20, 1967, to June 30, 1973, recording gage at right end of spillway 1.6 mi north of present site and at same datum. Satellite telemeter at station

REMARKS.--No estimated daily contents. Records good. The reservoir is formed by a rolled earthfill dam. Closure of embankment completed and deliberate impoundment began Oct. 3, 1966. The reservoir is operated for hydro-electric power generation and water conservation. Releases during high inflow periods are controlled by eleven 40 x 28-foot tainter gates. An 8.33 x 12-foot gated conduit through the dam is used for low-flow releases. Two additional 20-inch-diameter conduits, that bypass the larger conduit, may also be used for low-flow releases. Water for turbines is admitted through four 16.75 x 29-foot penstocks and controlled by vertically operated caterpillar-type gates. The dam is owned by the Sabine River Authority. The capacity table is based on U.S. Geological Survey topographic maps. There are many diversions above station for oil field operations and municipal supply. Conservation pool storage is 4,472,900 acre-ft. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam	185.0
Design flood	175.3
Top of gates	173.0
Top of power drawdown storage (top of conservation	
pool)	172.0
Top of power head storage	162.2
Crest of spillway (controlled)	145.0
Lowest gated outlet (invert)	100.0

COOPERATION.—Capacity table furnished by the Sabine River Authority.

EXTREMES FOR PERIOD OF RECORD.—Maximum contents, 4,840,000 acre-ft, May 18, 1989, elevation, 173.95 ft; minimum since initial filling of reservoir in June 1968, 2,980,000 acre-ft, Sep. 24, 2005, elevation, 162.61 ft.

EXTREMES FOR CURRENT YEAR.—Maximum contents, 4,336,000 acre-ft, Apr. 30, gage height, 171.22 ft; minimum contents, 2,980,000 acre-ft, Sep. 24, gage height, 162.61 ft.

U.S. Department of the Interior U.S. Geological Survey

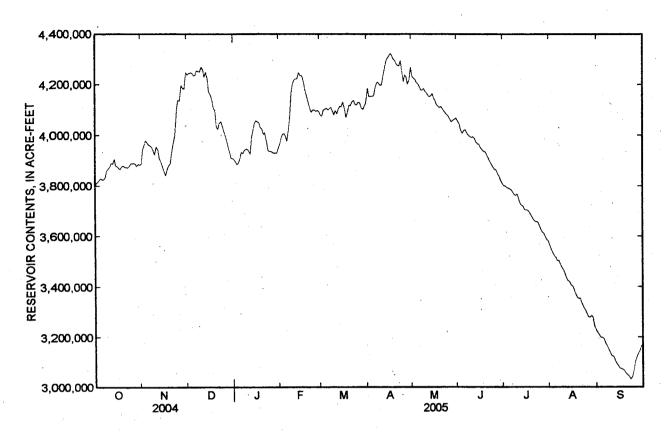
# 08025350 Toledo Bend Reservoir near Burkeville, TX-Continued

# RESERVOIR STORAGE, ACRE FEET WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005 DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	3,801,000	3,888,000	4,238,000	3,904,000	3,966,000	4,082,000	4,186,000	4,233,000	4,057,000	3,802,000	3,565,000	3,218,000
2	3.812.000	3.946.000	4.245,000	3,896,000	3,993,000	4,074,000	4,154,000	4,226,000	4,046,000	3,801,000	3,548,000	3,209,000
3	3.816.000	3.964.000	4.246,000	3,885,000	4,005,000	4,101,000	4,153,000	4,221,000	4,023,000	3,795,000	3,536,000	3,200,000
4	3.824.000	3,980,000	4.245,000	3,892,000	4,008,000	4,102,000	4,154,000	4,211,000	4,008,000	3,791,000	3,525,000	3,200,000
5	3,831,000	3,973,000	4,236,000	3,908,000	3,996,000	4,107,000	4,155,000	4,204,000	4,020,000	3,788,000	3,518,000	3,194,000
6	3,825,000	3,962,000	4,237,000	3,935,000	3,976,000	4,100,000	4,189,000	4,194,000	4,024,000	3,785,000	3,506,000	3,175,000
7	3,826,000	3,959,000	4,254,000	3,929,000	4,021,000	4,104,000	4,207,000	4,179,000	4,011,000	3,775,000	3,505,000	3,166,000
8	3,836,000	3,953,000	4,252,000	3,942,000	4,083,000	4,111,000	4,209,000	4,178,000	4,001,000	3,766,000	3,490,000	3,151,000
9	3.860,000	3.937.000	4.251,000	3.946,000	4,166,000	4,097,000	4,198,000	4,185,000	3,997,000	3,762,000	3,479,000	3,139,000
10	3,868,000	3,924,000	4,269,000	3,947,000	4,204,000	4,081,000	4,198,000	4,175,000	3,991,000	3,769,000	3,468,000	3,127,000
11	3,877,000	3,956,000	4,260,000	3,940,000	4,219,000	4,097,000	4,225,000	4,167,000	3,995,000	3,750,000	3,454,000	3,124,000
12	3,890,000	3,944,000	4,230,000	3,927,000	4,222,000	4,084,000	4,258,000	4,158,000	3,989,000	3,732,000	3,439,000	3,107,000
13	3.888.000	3.911.000	4.249,000	3.997.000	4,223,000	4,102,000	4,288,000	4,152,000	3,973,000	3,722,000	3,426,000	3,096,000
14	3.907.000	3.895.000	4,221,000	4,020,000	4,248,000	4,115,000	4,303,000	4,156,000	3,968,000	3,721,000	3,421,000	3,087,000
15	3,881,000	3,876,000	4,170,000	4,049,000	4,236,000	4,112,000	4,313,000	4,165,000	3,964,000	3,706,000	3,411,000	3,076,000
16	3.878.000	3,859,000	4,160,000	4,059,000	4,236,000	4,132,000	4,324,000	4,149,000	3,950,000	3,706,000	3,403,000	3,075,000
17	3,870,000	3.842.000	4,140,000	4,054,000	4,227,000	4,106,000	4,316,000	4,136,000	3,944,000	3,705,000	3,391,000	3,070,000
18	3.866.000	3.868.000	4.110.000	4,051,000	4,198,000	4,072,000	4,302,000	4,120,000	3,937,000	3,697,000	3,374,000	3,066,000
19	3.877.000	3.880.000	4.098.000	4.032.000	4,166,000	4,091,000	4,297,000	4,116,000	3,935,000	3,688,000	3,360,000	3,056,000
20	3,880,000	3,889,000	4,032,000	4,026,000	4,143,000	4,118,000	4,286,000	4,110,000	3,924,000	3,675,000	3,354,000	3,050,00
21	3.875,000	3,940,000	4,023,000	4,004,000	4,123,000	4,116,000	4,277,000	4,113,000	3,912,000	3,668,000	3,356,000	3,042,00
22	3.873.000	3.968.000	4.049.000	4.012.000	4,103,000	4,131,000	4,275,000	4,105,000	3,899,000	3,660,000	3,335,000	3,032,000
23	3.872.000	4.001.000	4,055,000	3,980,000	4,090,000	4,138,000	4,296,000	4,096,000	3,886,000	3,659,000	3,322,000	3,043,000
24	3.878.000	4.100.000	4.040.000	3,943,000	4,101,000	4,122,000	4,252,000	4,087,000	3,874,000	3,655,000	3,311,000	3,065,000
25	3,889,000	4,137,000	4,017,000	3,937,000	4,099,000	4,120,000	4,211,000	4,082,000	3,866,000	3,641,000	3,297,000	3,103,000
26	3.889.000	4.135.000	4,000,000	3,938,000	4,094,000	4,130,000	4,239,000	4,075,000	3,866,000	3,627,000	3,282,000	3,123,00
27	3.890.000	4.199.000	3,982,000	3.934.000	4.098.000	4,130,000	4,230,000	4,063,000	3,850,000	3,616,000	3,279,000	3,139,00
28	3.888.000	4.186.000	3,954,000	3.930.000	4.092.000	4,110,000	4,202,000	4,053,000	3,839,000	3,613,000	3,287,000	3,148,00
29			0 3,932,000			- 4,101,000	4,216,000	4,059,000	3,826,00	3,597,000	3,282,000	3,169,00
30			0 3,911,00				4,269,000					
31	3,883,00		- 3,909,000			- 4,129,000		- 4,068,000			3,230,000	
Mean	3.865.00	0.3.983.00	0 4,130,00	0 3.962.00	0 4.119.00	4,107,000	4,239,00	0 4,139,000	3,946,00	3,705,000	3,400,00	3,120,00
Max	3 907 00	0 4 248 00	0 4,269,00	0 4.059.00	0 4.248.00	4.138,000	4.324.00	0 4,233,000	4,057,00	3,802,00	3,565,00	3,218,00
Min	2 901 00	0 <del>7,270,00</del>	0 3,909,00	0 3 885 00	0.3.966.00	0 4 072 000	4 153 00	0 4 053 000	3.811.00	0 3.582.00	3.230.00	3.032.00

	Calendar Year 2004	Water Year 2005
Mean	4,189,000	3,892,000
Max	4,625,000	4,324,000
Min	3,701,000	3,032,000

## 08025350 Toledo Bend Reservoir near Burkeville, TX---Continued





# 08025360 Sabine River at Toledo Bend Reservoir near Burkeville, TX

Sabine River Basin

LOCATION.--Lat 31°10'25", long 93°33'57" referenced to North American Datum of 1927, Newton County, Hydrologic Unit 12010005, in powerhouse at right end of Toledo Bend Dam, 10 mi upstream from Sabine River near Burkeville gage and at mile 156.5.

DRAINAGE AREA .-- 7,178 mi<sup>2</sup>.

#### **WATER-DISCHARGE RECORDS**

PERIOD OF RECORD.--Oct. 1971 to current year. Water-quality records: Chemical data: Oct. 1967 to Sept. 1986. Biochemical data: Oct. 1967 to Sept. 1986. GAGE.--Water-stage recorders. Datum of gage is NGVD of 1929 (levels by Sabine River Authority). Satellite telemeter at station.

REMARKS.--Records fair. Daily discharges are a combination of releases from various outlets at the dam. Discharges for releases through the turbines are computed using scroll case differential relations and operation logs. Tainter gate releases, low-flow sluiceway releases, bypass gate releases, and turbine leakages are based on discharge measurements and operation logs. Since installation of gage in Oct. 1971, at least 10% of contributing drainage area has been regulated.

## 08025360 Sabine River at Toledo Bend Reservoir near Burkeville, TX—Continued

## DISCHARGE, CUBIC FEET PER SECOND WATER YEAR OCTOBER 2004 TO SEPTEMBER 2006 DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	207	610	14,500	7,450	7,380	15,200	207	207	3,620	5,080	5,670	4,600
2	207	4,400	14,500	7,450	7,400	11,300	207	3,210	3,670	3,160	5,640	4,570
3	207	7,150	14,500	7,450	7,370	7,110	207	3,100	3,740	207	5,660	3,250
4	822	6,980	14,600	2,630	11,400	7,110	207	3,070	2,540	207	5,660	201
5	151	7,040	14,600	207	15,100	7,090	207	3,050	207	4,930	5,590	20
6	816	7,120	14,600	207	15,100	7,080	614	3,080	3,690	5,050	3,830	4,700
7	151	7,150	14,600	207	5,240	7,070	207	1,800	3,770	5,040	207	4,610
8	967	7,100	14,700	207	11,000	7,110	880	207	4,250	5,110	5,720	4,70
9	176	7,190	14,700	207	15,200	7,210	207	3,190	3,690	3,330	5,660	4,59
10	176	3,500	14,600	4,830	15,100	7,240	207	3,200	3,710	207	5,680	3,09
11	751	176	14,600	7,970	14,900	3,120	2,950	3,220	1,260	5,080	5,620	20
12	171	4,890	14,700	7,580	14,900	207	6,950	3,160	156	5,160	5,670	3,40
13	816	7,400	14,600	7,630	14,900	207	6,960	3,050	4,380	5,110	3,920	3,39
14	176	7,450	14,700	3,990	15,000	207	7,010	2,100	4,340	5,000	207	3,34
15	1,070	7,480	14,800	1,640	15,000	207	7,030	207	2,970	5,260	5,730	3,26
16	176	7,500	14,800	7,500	15,000	207	7,000	3,070	4,350	3,190	5,750	3,51
17	176	7,530	14,800	7,490	15,000	4,880	7,020	3,090	4,380	207	5,820	2,68
18	716	7,550	14,800	10,600	15,000	4,280	7,070	3,700	3,300	5,110	5,820	20
19	176	5,340	14,900	13,100	15,000	207	7,060	3,070	207	5,160	5,840	3,33
20	1,580	7,430	15,000	12,200	15,100	207	7,050	3,130	4,290	5,150	3,920	3,36
21	1,650	7,380	15,000	15,200	15,200	4,850	7,070	2,020	4,390	5,140	207	3,21
22	176	12,800	15,000	15,200	15,200	7,170	7,080	207	4,410	5,230	5,810	3,30
23	176	15,000	15,100	15,200	15,200	7,090	7,030	3,080	4,350	3,210	5,820	20
24	176	15,100	15,200	10,400	15,200	7,120	7,060	3,120	4,400	161	5,750	20
25	811	14,800	15,100	7,420	15,300	7,080	7,080	3,150	3,060	5,280	5,760	20
26	176	14,700	15,100	7,360	15,200	7,080	2,660	3,110	207	5,100	5,850	20
27	756	14,600	15,100	7,680	15,200	6,890	207	3,120	4,450	5,190	4,080	20
28	176	14,700	15,000	7,400	15,100	3,380	207	1,910	4,410	5,460	207	20
29	1,070	14,700	15,000	7,430		207	207	207	4,370	5,140	5,730	20
30	176	14,600	11,200	7,390		207	207	207	4,360	3,240	5,820	20
31	176		7,460	7,380		207		3,140	_	207	5,790	
otal	15,207	259,366	447,860	218,605	381,690	148,530	108,058	75,182	100,927	120,106	148,438	69,3
Aean	491	8,646	14,450	7,052	13,630	4,791	3,602	2,425	3,364	3,874	4,788	2,3
fax	1,650	15,100	15,200	15,200	15,300	15,200	7,080	3,700	4,450	5,460	5,850	4,70
Min	151	176	7,460	207	5,240	207	207	207	156	161	207	26
Ac-ft	30,160	514,500	888,300	433,600	757,100	294,600	214,300	149,100	200,200	238,200	294,400	137,60

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 2005, BY WATER YEAR (WY)

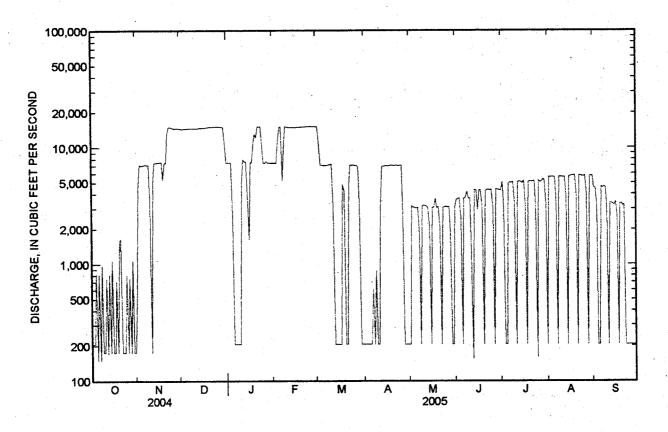
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	1.268	2,341	5,669	9,165	10,180	11,390	7,942	7,117	5,418	4,630	3,826	3,244
Max	6,809	13,340	17,720	27,680	23,850	44,240	19,270	22,170	24,960	18,790	6,732	11,770
(WY)	(1992)	(1995)	(1975)	(1974)	(1999)	(2001)	(1991)	(1991)	(1989)	(1989)	(1976)	(2001)
Mia	59.0	50.7	74.5	90.0	339	231	247	311	508	493	470	424
(WY)	(1976)	(1976)	(1976)	(1978)	(1981)	(1972)	(1978)	(1984)	(1996)	(1996)	(1996)	(1983)

Water-Data Report TX-2005

# 08025360 Sabine River at Toledo Bend Reservoir near Burkeville, TX---Continued

# **SUMMARY STATISTICS**

<u> </u>	Calendar Y	ear 2004	Water Ye	ar 2005	Water Yea	rs 1972 - 2005
Annual total	2,488,043		2,093,343			
Annual mean	6,798		5,735		5,999	
lighest annual mean					10,370	1995
owest annual mean					517	1996
lighest daily mean	22,300	Feb 26	15,300	Feb 25	117,000	Jan 31, 1999
owest daily mean	146	Jan 30	151	Oct 5	11	Dec 12, 2001
Annual seven-day minimum	146	Jan 30	207	Mar 29	25	Dec 7, 2001
Annual runoff (ac-ft)	4,935,000		4,152,000		4,346,000	
9 percent exceeds	15,000		14,900		14,800	
O percent exceeds	4,280		4,830		3,860	
90 percent exceeds	176		207		155	





## 08026000 Sabine River near Burkeville, TX

Sabine River Basin

LOCATION.--Lat 31°03′50″, long 93°31′10″ referenced to North American Datum of 1927, Newton County, Hydrologic Unit 12010005, near left edge of low-water channel on downstream side of bridge on State Highway 63, about 200 ft downstream from Pearl Creek, 10 mi northeast of Burkeville, 16 mi downstream from Bayou Toro and at mile 139.7.

DRAINAGE AREA.-7,482 mi2.

#### **WATER-DISCHARGE RECORDS**

PERIOD OF RECORD.—Sept. 1955 to current year. Published as "below Toledo Bend near Burkeville" for period 1955-75. Water-quality records: Chemical data: May 1968 to Sept. 1986. Biochemical data: May 1968 to Sept. 1986. Pesticide data: Oct. 1972 to Sept. 1981.

REVISED RECORDS.-WSP 1732: Drainage area.

- GAGE.--Water-stage recorder. Datum of gage is 60.59 ft above NGVD of 1929. Prior to Aug. 23, 1958, nonrecording gage at current site. Prior to Jan. 1, 1989, at present site at datum 10.00 ft higher. Telephone telemeter at station. Satellite telemeter at station.
- REMARKS.—Records good, except those for estimated daily discharge which are poor. Since water year 1961, at least 10% of contributing drainage area has been regulated.
- AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION .- 5 years (water years 1956-1960) 5,180 ft³/s (3,749,000 acre-ft/yr).
- EXTREMES OUTSIDE PERIOD OF RECORD.—Maximum stage since at least 1860: Flood in May 1884 reached a stage of 45.9 ft, current datum, from information by local resident. Flood of Apr. 15, 1945, reached a stage of 45.8 ft, current datum. Flood of May 23, 1953, reached a stage of 45.3 ft, current datum, from floodmarks.
- EXTREMES FOR PERIOD PRIOR TO REGULATION.—WATER YEARS 1956-1960: Maximum discharge, 52,900 ft³/s, May 15, 1957, gage height, 32.43 ft; minimum, 60 ft³/s, Sept. 26-30, 1956.

## 02026000 Sabine River near Burkeville, TX-Continued

# DISCHARGE, CUBIC FEET PER SECOND WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005 DAILY MEAN VALUES

[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	406	459	17,100	7,460	7,500	15,700	528	385	3,440	4,800	3,300	4,760
2	447	4,820	16,500	7,420	8,380	14,000	542	1,590	3,640	3,940	5,460	4,490
3	445	10,300	15,700	7,410	8,130	8,210	482	3,260	3,680	1,990	5,510	3,820
4	729	9,150	15,500	5,510	9,060	7,700	453	3,210	3,160	827	5,550	1,770
5	809	8,090	15,500	844	14,800	7,520	437	3,200	1,580	2,760	5,520	323
6	787	7,760	15,800	542	15,300	7,410	666	3,160	1,930	4,940	4,460	2,390
7	955	7,660	16,900	510	10,600	7,450	1,070	2,660	3,710	5,090	1,960	4,390
8	663	7,590	17,100	516	7,450	7,690	547	1,380	3,850	5,110	3,340	4,500
9	1,140	7,550	16,300	519	18,600	7,470	e1,100	1,630	4,100	4,100	5,560	4,490
10	573	6,040	15,700	2,360	18,800	7,250	e500	3,140	3,710	1,920	5,560	3,690
11	644	883	15,500	7,430	17,200	5,490	e2,210	3,120	2,530	2,880	5,550	1,710
12	1,050	2,590	15,500	7,740	15,900	911	8,080	3,230	883	5,000	5,580	1,790
13	539	7,220	15,400	8,400	15,800	614	7,940	3,240	2,220	5,070	e4,500	3,230
- 14	1,010	7,430	15,300	7,730	16,800	550	7,300	2,690	4,170	5,010	e1,950	3,260
15	572	7,440	15,400	1,740	16,500	512	7,130	1,360	3,330	5,110	e3,300	3,270
16	1,160	7,440	15,400	6,310	15,800	494	7,080	1,540	3,610	4,110	5,570	3,376
17	394	7,440	15,400	7,370	15,500	2,380	7,050	3,100	4,240	1,920	5,660	2,990
18	421	7,500	15,500	8,180	15,400	6,050	7,030	3,150	3,670	3,040	5,700	1,570
19	908	6,250	15,400	14,100	15,400	1,130	7,010	3,170	1,720	5,090	5,680	1,80
20	435	6,820	15,500	10,700	15,400	647	7,020	3,150	e2,000	5,100	4,560	3,30
21	3,070	8,380	15,600	14,900	15,400	2,560	7,020	2,680	e4,000	5,080	1,950	3,23
22	e1,600	12,400	15,800	15,300	15,500	7,310	7,010	1,410	4,280	5,110	3,330	3,23
23	c1,300	18,800	16,900	15,300	15,600	7,550	6,970	1,510	4,270	4,470	5,580	1,77
24	e600	22,100	16,600	12,700	16,200	7,300	6,970	3,110	4,280	1,930	5,610	1,06
25	e700	19,500	16,000	7,590	17,000	7,100	6,990	3,190	3,680	3,040	5,640	1,13
26	998	17,600	15,700	7,240	16,400	7,010	5,090	3,170	1,700	5,040	5,690	57
27	490	16,400	15,600	7,180	15,900	7,030	704	3,110	2,340	5,070	4,550	-38
28	953	16,000	15,600	7,210	15,800	5,620	445	2,620	4,250	5,070	1,970	30
29	541	15,800	15,600	7,220	· —	973	422	1,390	4,250	5,100	3,350	27
30	1,140	16,200	14,300	7,210		611	401	493	4,240	4,010	5,610	24
31	377	·	8,180	7,240		536	·	1,540		1,830	5,680	
otal	25,856	293,612	482,280	221,881	406,120	162,778	116,197	75,588	98,463	123,557		73,12
fean	834	9,787	15,560	7,157	14,500	5,251	3,873	2,438	3,282	3,986	4,620	2,43
Aax	3,070	22,100	17,100	15,300	18,800	15,700	8,080	3,260	4,280	5,110	5,700	4,76
<b>din</b>	377	459	8,180	510	7,450	494	401	385	883	827	1,950	24
Ac-ft	51,290	582,400	956,600	440,100	805,500	322,900	230,500	149,900	195,300	245,100	284,100	145,00

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 2005', BY WATER YEAR (WY)

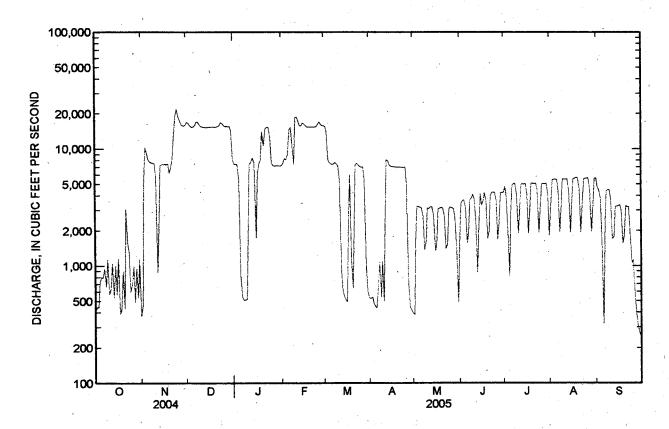
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	1.226	2.182	5,794	8,414	9,499	10,680	8,037	7,650	5,240	4,100	3,134	2,916
Max	6.846	12,880	17,990	28,510	27,320	45,040	26,530	32,070	25,310	23,750	6,662	11,660
(WY)	(1992)	(1995)	(1962)	(1974)	(1999)	(2001)	(1969)	(1966)	(1989)	(1989)	(1976)	(2001)
Min	82.5	86.2	247	484	266	485	231	471	400	166	91.7	77.6
(WY)	(1968)	(1968)	(1968)	(1968)	(1968)	(1968)	(1971)	(1967)	(1970)	(1964)	(1967)	(1967)

## 08026000 Sabine River near Burkeville, TX-Continued

## **SUMMARY STATISTICS**

	Calendar Y	ear 2004	Water Year	r 2005	Water Years	1961 - 2005*
Annual total	2,873,347		2,222,682			
Annual mean	7,851		6,090		5,723	
Highest annual mean					11,190	1995
Lowest annual mean					548	1967
Highest daily mean	28,300	May 14	22,100	Nov 24	117,000	Feb 1, 1999
Lowest daily mean	167	Apr 22	247	Sep 30	38	Sep 14, 1967
Annual seven-day minimum	416	Apr 20	513	Mar 30	41	Sep 9, 1967
Maximum peak flow			22,700	Nov 24	124,000	Feb 1, 1999
Maximum peak stage			29.34	Nov 24	48.05	Feb 1, 1999
Annual runoff (ac-ft)	5,699,000		4,409,000		4,146,000	
10 percent exceeds	18,300		15,600		15,300	
50 percent exceeds	4,620		4,500		2,820	
90 percent exceeds	471		. 563		282	

<sup>\*</sup> Period of regulated streamflow.



## 08028000 BAYOU ANACOCO NEAR ROSEPINE, LA

LOCATION.—Lat 30°5710", long 93°21'10", on line between secs.25 and 26, T.1 S., R.10 W., Vernon Parish, Hydrologic Unit 12010005, near center of span on downstream side of bridge on parish road from Rosepine to Evans, just downstream from Pocosin Creek, and 4.8 mi northwest of Rosepine.

DRAINAGE AREA.-365 mi<sup>2</sup>.

PERIOD OF RECORD.-October 1951 to current year.

REVISED RECORDS.-WSP 2122: Drainage area.

GAGE.-Water-stage recorder. Datum of gage is 118.09 ft above NGVD of 1929. Prior to Nov. 11, 1954, nonrecording gage at same site and datum.

REMARKS.—Records good above 10 ft<sup>3</sup>/s and fair below. Some effect from storage in Anacoco Lake (usable capacity, 41,300 acre-ft) except January 1956 to September 1958 and Vernon Lake (usable capacity, 580,000 acre-ft) since May 1963. Effected by occasional regulation July to September in most years caused by temporary lowering of the reservoirs upstream.

							T PER SEC					
				WATER			TO SEPTE	VIBER 2005				
					DAIL	Y MEAN V	ALUES					
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	49	123	1,220	386	698	77 <del>9</del>	329	76	205	17	51	30
2	58	1.840	1,140	.380	1,610	640	298	67	147	18	58	30
3	86	3,310	1,030	356	1,910	616	280	60	111	134	98	31
4	71	3,670	877	335	1,310	554	245	56	83	557	57	26
5	76	3,360	776	322	901	511	219	51	66	353	54	25
6	76	1.800	1,200	308	704	462	565	45	78	246	41	25
ž	e106	1.040	2,920	298	663	513	619	41	166	233	34	23
8	e116	732	3,400	312	1,430	1,000	539	42	323	256	44	23
9	149	551	3,070	326	2,860	852	434	140	219	192	43	23
10	319	420	1,660	298	3,340	647	348	135	161	159	32	22
11	369	340	1,120	283	2,780	520	406	91	123	128	30	22
12	297	287	852	269	1,820	433	1,100	74	98	96	28	22
	239	235	695	654	1,460	354	1,070	64	75	77	26	23
13								56	60	64		23
14	198	192	578	1,200	2,130	328	870				28	22
15	175	159	478	910	2,160	297	688	51	50	<b>c</b> 71	84	
16	137	142	417	664	1,560	292	528	50	44	172	258	22
17	113	127	418	536	1,180	261	416	42	39	107	- 88	22
18	98	829	388	437	892	232	331	35	35	137	52	22 22
19	87	1,140	361	364	706	205	270	30	43	122	40	22
20	81	1,460	336	327	595	374	222	29	39	103	34	22
21	77	2,780	305	300	527	686	190	28	32	84	31	22
22	72	3,610	610	282	481	983	168	27	26	74	29	21
23	67	4,300	1,890	275	492	1,550	147	26	24	103	29	256
24	64	6,500	1,600	222	976	908	135	24	22	162	34	1,530
25	80	11,700	1,050	194	1,960	629	112	23	21	327	29	2,110
			·									
26	103	6,060	809	185	1,720	521	103	22	22	238	29	1,270
27	135	4,460	663	191	1,180	523	92	22	25	151	33	817
28	118	3,130	562	207	950	605	82	21	21	113	42	690
29	105	1,790	488	237	***	511	65	33	20	88	63	373
30	90	1,340	437	236		418	61	185	18	71	53	238
. 31	82		404	273		364		312		56	37	
TOTAL	3,893	67,427	31,754	11,567	38,995	17,568	10,932	1,958	2,396	4,709	1,589	7,807
MEAN	126	2,248	1,024	373	1.393	567	364	63.2	79.9	152	51.3	260
MAX	369	11,700	3,400	1,200	3,340	1.550	1,100	312	323	557	258	2,110
MIN	49	123	305	185	481	205	61	21	18	17	26	21
AC-FT	7,720	133,700	62,980	22,940	77.350	34,850	21.680	3.880	4,750	9.340	3.150	15,490
CFSM	0.34	6.16	2.81	1.02	3.82	1.55	1.00	0.17	0.22	0.42	0.14	0.71
IN.	0.40				3.97	1.79	1.11	0.20	0.22	0.42	0.16	0.80
		6.87	3.24	1.18						0.46	0.10	0.80
STATIST	TICS OF M	ONTHLY M	EAN DATA	FOR WAT	ER YEARS	1952 - 2005	BY WATE	R YEAR (W	<b>Y</b> )			
MEAN	166	411	719	778	929	732	708	606	295	236	146	165
MAX	1,227	2,573	6,006	2,741	4,220	1,901	2,402	6,181	2,628	2,665	2,286	1,698
(WY)	(2003)	(2003)	(1983)	(1990)	(1966)	(1973)	(1952)	(1953)	(1989)	(1989)	(1955)	(1958)
MIN	7.95	`13.Ś	40.1	25.8	` 24.6	` 92.7	` 42.9	36.6	` 15.7	` 14.8	9.17	9.18
(WY) ·	(1964)	(1968)	(1955)	(2000)	(2000)	(2000)	(1981)	(1978)	(1971)	(1998)	(2000)	(1993)

## 08028000 BAYOU ANACOCO NEAR ROSEPINE, LA-Continued

SUMMARY STATISTICS	FOR 2004 CALE	NDAR YEAR	FOR 2005 WA	TER YEAR	WATER YEAR:	S 1952 - 2005
ANNUAL TOTAL ANNUAL MEAN	334,517 914		200,595 550		489	
HIGHEST ANNUAL MEAN LOWEST ANNUAL MEAN					1,265 102	1983 1981
HIGHEST DAILY MEAN LOWEST DAILY MEAN	11,700 37	Nov 25 Sep 20	11,700 17	Nov 25 Jul 1	49,900 4.9	Apr 30, 1953 Sep 7, 2000
ANNUAL SEVEN-DAY MINIMUM MAXIMUM PEAK FLOW MAXIMUM PEAK STAGE	39	Sep 16	20 14,100 22,53	Jun 26 Nov 25	64,300 64,300	Sep 2, 2000 May 19, 1953
INSTANTANEOUS LOW FLOW INSTANTANEOUS LOW STAGE			22.33 a17 b2.91	Nov 25 Jul 1 Jul 1	28.38 c4.0	May 19, 1953 Sep 28, 1981
ANNUAL RUNOFF (AC-FT) ANNUAL RUNOFF (CFSM)	663,500 2,50		397,900 1.51	Jur 1	354,000 1,34	
ANNUAL RUNOFF (INCHES) 10 PERCENT EXCEEDS	34.09 2.750		20.44 1,440		18.19 1,110	
50 PERCENT EXCEEDS 90 PERCENT EXCEEDS	324 65		219 26		148 20	

GAGE HEIGHT, FEET WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005 DAILY MEAN VALUES

					DAII	I MEAN V	ALUES					
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.18	3.82	8.97	5.31	6.79	7.18	5.00	3.44	4.25	2.92	3.19	3.00
	3.25	10.92	8.64	5.28	10.40	6.56	4.83	3.38	3.92	2.93	3.25	3.00
2 3 4	3.47	15.83	8.22	5.15	11.44	6.44	4.73	3.32	3.69	3.76	3.55	3.01
	3.35	16.86	7.59	5.04	9.29	6.15	4.55	3.28	3 <i>.</i> 49	6.04	3.24	2.97
<b>5</b> .	3.39	15. <b>9</b> 5	7.16	4.96	7. <del>69</del>	5.94	4.41	3.24	3.37	4.99	3.22	2.95
6	3.39	11.04	8.80	4.89	6.84	5.70	6.13	3.19	3.45	4.42	3.11	2.95
7		8.25	14.65	4.83	6.65	5.93	6.44	3.16	3.99	4.35	3.04	2.93
8		6.97	16.08	4.91	9.75	8.11	6.05	3.17	4.89	4.48	3.13	2.93
9	3.87	6.14	15.10	4.99	14.44	7.48	5.52	3.86	4.33	4.13	3.12	2.92
10	4.82	5.49	10.57	4.83	15.90	6.59	5.05	3.84	4.00	3.94	3.02	2.92
11	5.10	5.07	8.59	4.75	14.21	5.99	5.32	3.55	3. <b>76</b>	3.75	3.00	2.92
12	4.71	4.77	7.49	4.67	11.12	5.55	8.43	3.43	3.60	3.53	2.98	2.92
13	4.41	4.49	6.80	6.52	9.85	5.14	8.33	3.35	3.44	3.40	2.97	2.93
14	4.20	4.26	6.26	8.89	12.18	5.00	7.50	3.28	3.32	3.30	2.98	2.93
15	4.07	4.07	5.78	7.72	12.28	4.82	6.70	3.24	3.23		3.44	2.92
16	3.86	3.96	5.47	6.66	10.21	4.80	5.96	3.23	3.18	4.00	4.47	2.92
17	3.71	3.87	5.48	6.06	8.81	4.63	5.39	3.17	3.14	3.61	3.47	2.92
18	3.62	7.24	5.32	5.57	7.65	4.48	4.94	3.10	3.10	3.80	3.20	2.92
19	3.55	8.65	5.18	5.20	6.85	4.33	4.60	3.06	3.18	3.71	3.10	2.92
20	3.52	9.78	5.04	4.99	6.35	5.21	4.34	3.04	3.13	3.58	3.04	2.92
21 ·	3.50	14.22	4.87	4.85	6.02	6.76	4.17	3.03	3.07	3.45	3.01	2.92
22	3.47	16.67	6.27	4.74	5.80	7.94	4.04	3.02	3.02	3.37	2.99	2.91
23 24	3.44	18.57	11.37	4.70	5.85	10.19	3.92	3.01	2.99	3.57	2.99	4.41
24	3.43	20.56	10.36	4.42	7.95	7.71	3.84	2.99	2.97	3.96	3.04	9.78
25	3.55	22.22	8.30	4.27	11.61	6.50	3.69	2.97	2.96	4.86	2.99	12.03
26	3.71	20.89	7.30	4.22	10.77	5.99	3.63	2.97	2.96	4.38	3.00	9.05
27	3.92	18.84	6.66	4.26	8.81	6.00	3.56	2.97	3.01	3.89	3.03	7.25
28	3.81	15.26	6.19	4.34	7.90	6.39	3.48	2.96	2.96	3.65	3.12	6.70
29	3.72	11.01	5.83	4.50		5.94	3.35	3.08	2.94	3.48	3.29	5.15
30	3.62	9.42	5.57	4.50		5.48	3.32	4.10	2.93	3.35	3.21	4.43
31	3.56	****	5.40	4.70		5.20		4.83		3.23	3.07	. —
MAX	3.18	22,22	16.08	8.89	15.90	10.19	8.43	4.83	4.89	6.04	4.47	12.03
MIN	5.10	3.82	4.87	4.22	5.80	4.33	3.32	2.96	2.93	2.92	2.97	2.91

a Also occurred Jul. 2
b Also occurred Jul. 2 and several days in Sep.
c Also occurred Sep. 29, 30, 1981
e Estimated
\* Not determined

#### 08028200 BAYOU ANACOCO NEAR KNIGHT, LA

LOCATION.—Lat 30°52'14", long 93°30'38", in SE 1/4 sec. 20, T. 2 S., R. 11 W., Beauregard-Vernon Parish line, near right bank of low-water channel at downstream side of bridge on State Highway 111, 4.9 mi southwest of Knight, and 5.2 mi upstream from mouth.

DRAINAGE AREA.-425 mi<sup>2</sup>.

PERIOD OF RECORD.-Water years 1958, 1961, 1969 to current year.

PERIOD OF DAILY RECORD.—
SPECIFIC CONDUCTANCE: December 1969 to September 1972.
WATER TEMPERATURE: December 1969 to September 1971.
COLOR: December 1969 to July 1972.

REMARKS.—Some effect from storage in Anacoco Lake (usable capacity, 41,300 acre-ft) except January 1956 to September 1958 and Lake Vernon (usable capacity, 58,000 acre-ft) since May 1963. Water used by paper mill at De Ridder is pumped from wells and discharged later as waste into bayou above station. This discharge is not continuous but is stored in a reservoir and is released whenever flow of bayou is sufficient to dilute effluent from mill.

EXTREMES FOR PERIOD OF DAILY RECORD.

SPECIFIC CONDUCTANCE: Maximum daily, 910 micromhos Oct. 31, 1970; minimum daily, 40 micromhos Jan. 1, 1970, Jan. 7, 1972. WATER TEMPERATURE: Maximum daily, 33.0°C June 15, 1970; minimum daily, 7.0°C Jan. 9, 10, 1970. COLOR: Maximum daily, 600 units Mar. 16, 1971; minimum daily, 5 units June 20, 27-30, 1970.

EXTREMES OUTSIDE PERIOD OF DAILY RECORD.-A water temperature of 6.0°C was observed Jan. 19, 1984.

#### WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Color, water, fltrd, Pt-Co units (00080)	Turbdty white light, det ang 90+/-30 corretd NTRU (63676)	Dis- solved oxygen, mg/L (00300)	pH, water, unfitrd field, std units (00400)	Specif. conduc- tance, wat unf lab, uS/cm 25 degC (90095)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnes- ium, water, flird, mg/L (00925)	Potas- sium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat fit inc tit field, mg/L as CaCO3 (39086)
NOV													
18	1355	88	33	8.0	6.8	. 192		20.7	6.25	.999	2.38	34.1	26
JAN		105		0.5	• •	22.6	001	170	7.01		2.54	40.0	20
12	1115	125	32	8.5	5.9	236	251	17.8	7.21	1.05	2.54	42.0	28
MAR 23	1000	150	110	8.1	6.3	79		16.4	3.90	.628	1.23	10.7	15
MAY	1000	130	. 110	0.1	0.5	19	-	10.4	3.90	.026	1.43	10.7	13
26	1050	200	19	5.9	7.7	689	739	26.2	15.2	2.00	6.07	145	103
JUL	1000	200	~~	0.5	•••	007					, 3, 3,		
27	1145	200	. 50	6.8	7.0	517	527	30.0	11.0	1.30	3.71	91.7	65
SEP													
27	1140	200	96	-	6.1	56	58	26.5	3.79	.685	1.80	4.81	_

Date	Bicar- bonate, wat fit incrm. titr., field, mg/L (00453)	Chlor- ide, water, fltrd, mg/L (00940)	Fluor- ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue on evap. at 180degC wat fit mg/L (70300)	Ammonia + org-N, water, unfitrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Phos- phorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfitrd mg/L (00665)	Organic carbon, water, unfitrd mg/L (00680)
NOV		•											
18	32	13.0	<1	15.1	44.9	147	.59	<.04	.18	.011	.04	.11	13.2
JAN .	<u>.</u> .		<b>-</b> .							E 00.	T 00	00	
12	34	13.6	E.1	16.1	57.1	173	.66	.06	.10	E.004	E.02	.08	_
MAR		400		0.05	10.0	~.		- 04	07		.04		
23	18	4.86	<1	8.37	12.0	74	1.0	<.04	.07	<.008	<.04	.13	
MAY			- 4		100	***	-	••	40	061		••	
_26	126	23.6	E.1	19.9	196	505	.76	.10	.43	.061	.11	.18	-
JUL													
27	80	15.1	.1	14.0	142	372	1.0	.09	.30	.025	.10	.19	
SEP	,		_										
27	-	5.10	<.1	11.5	5.6	58		<.04	.09	< 008	E.03		

## 08028200 BAYOU ANACOCO NEAR KNIGHT, LA-Continued

		WALER	-QUALLE	DAIA,	WILK II	MAR OCIO		100111	WIDLE DOG	J O			
Date	BOD, water, unfitrd 5 day, 20 degC mg/L (00310)	E coli, m-TEC MF, water, col/ 100 mL (31633)	Fecal coli- form, M-FC 0.7u MF col/ 100 mL (31625)	Fecal strep- tococci KF MF, col/ 100 mL (31673)	Iron, water, fltrd, ug/L (01046)	Manganese, water, flurd, ug/L (01056)	1,2-Di- phenyl- hydra- zine, water, unfitrd ug/L (82626)	246-Tri bromo- phenol, sur Sch 1383/85 wat unf pct rcv (90652)	2,4,6- Tri- chloro- phenol, water, unfitrd ug/L (34621)	2,4-Di- chloro- phenol, water, unfitrd ug/L (34601)	2,4-Di- methyl- phenol, water, unfitrd ug/L (34606)	2,4-Di- nitro- phenol, water, unfitrd ug/L (34616)	2,4-Di- nitro- toluene water unfitrd ug/L (34611)
NOV 18	1.5		3,600	1,620	156	103	4	. 120	<1	<b>4</b>	<2.0	⋖3	<1
JAN 12	3.0		E58	E17	209	94.5			-			,	-
MAR 23		<del></del>	E3,000	-	137	38.8			_		-	-	; <b>-</b>
MAY 26	2.5		E7		218	424			-				<del>-</del>
JUL 27	4.4	,	E57	220	240	167				-	_	-	
SEP 27		340	1,000	-	66	21.4		***	. —	-		-	-
		WATE	R-QUALIT	Y DATA, V	VATER Y	EAR OCTO	BER 2004	TO SEPTE	MBER 200	5-CONT	INUED		
	2,6-Di- nitro- toluene	2- Chloro- naphth- alene,	2- chloro- phenol,	2- Methyl- 4,6-di- nitro-	2- nitro- phenol, water	3,3'-Di chloro- benzi- dine, water,	Bromo- phenyl phenyl ether,	4- Chioro- 3- methyl- phenol,	4- Chloro- phenyl phenyl ether,	4- Nitro- phenol, water,	9H- Fluor- ene, water,	Ace- naphth- enc, water,	Ace- naphth- ylene, water,
Date	water unflird ug/L (34626)	water, unfitrd ug/L (34581)	water, unfitrd ug/L (34586)	phenol, wat unf ug/L (34657)	unfitrd ug/L (34591)	unflird ug/L (34631)	wat unf ug/L (34636)	wat unf ug/L (34452)	wat unf ug/L (34641)	unflird ug/L (34646)	unfitrd ug/L (34381)	unfitrd ug/L (34205)	unfltrd ug/L (34200)
NOV				_	_		•				-1	_	<2
18 JAN	<2	<b>&lt;1</b>	<1	<2	<1	<.9	<2 ⋅	4	<1	M	<1	<2	
12 MAR	-	-		. —				-					
23 MAY	<b></b>									-		-	
26	_			_								'	-
JUL 27 SEP	**			-	<del></del>								
27	-			-	-	-				'			-
		WATE	R-QUALII	Y DATA,	WATER Y	EAR OCTO	DBER 2004	TO SEPT	EMBER 20	05CONT	TINUED		
Date	Anthracene, water, unfltrd ug/L (34220)	Benzo- [a]- anthra- cene, water, unfltrd ug/L (34526)	Benzo- [a]- pyrene, water, unfitrd ug/L (34247)	Benzo- [b]- fluor- anthene water unfitrd ug/L (34230)	Benzo- [ghi]- per- ylene, water, unfitrd ug/L (34521)	Benzo- [k]- fluor- anthene water unfitrd ug/L (34242)	Benzyl n-butyl phthal- ate, water, unfitrd ug/L (34292)	Bis(2- chloro- ethoxy) methane water unfitrd ug/L (34278)	Bis(2- chloro- ethyl) ether, water, unfltrd ug/L (34273)	Bis(2-chloro- iso- propyl) ether, wat unf ug/L (34283)	Bis(2- ethyl- hexyl) phthal- ate, wat unf ug/L (39100)	Chrys- ene, water, unfitrd ug/L (34320)	Di- benzo- [a,h]- anthra- cene, wat unf ug/L (34556)
NOV 18	М	2	<1	2	<2	<1	2	<1	<1	<1	<b>2</b>	<1	<b>4</b>
JAN	272	_		<del></del>		-		-					
12 MAR	-							<del></del>					
23 MAY	-			_			- <del>-</del>		-				
26 JUL	-			-			_				, <del></del>		
27 SEP	<del>-</del> .		·	-			-					<b></b>	
27										_		<del></del>	-

## 08028200 BAYOU ANACOCO NEAR KNIGHT, LA-Continued

		WATER	t-QUALITY	( DATA, V	VATER YE	AR OCTO	BER 2004	TO SEPTE	MBER 200	5CONTI	NUED		
Date	Di- ethyl phthal- atc, water, unfitrd ug/L (34336)	Di- methyl phthal- ate, water, unfitrd ug/L (34341)	Di-n- butyl phthal- atc, water, unflird ug/L (39110)	Di-n- octyl phthal- ate, water, unfird ug/L (34596)	Fluor- anthene water unfitrd ug/L (34376)	Hexa- chloro- benzene water unfltrd ug/L (39700)	Hexa- chloro- cyclo- penta- diene, wat unf ug/L (34386)	Indeno- [1,2,- 3-cd]- pyrene, water, unfitrd ug/L (34403)	Iso- phorone water unflird ug/L (34408)	Nitro- benzene water unflird ug/L (34447)	N- Nitroso -di- methyl- amine, wat unf ug/L (34438)	N- Nitroso -di-n- propyl- amine, wat unf ug/L (34428)	N- Nitroso -di- phenyl- amine, wat unf ug/L (34433)
NOV													_
18	<2	<1	<2 ⋅	<2	<1	<1	<1	<b>4</b>	M	<1	<2	4	<2
JAN					,								
12		-		-									
MAR 23	_			_						_			
MAY												· · · · ·	
26		•••		_									
JUL		<u>.</u>				_					- 1 <u></u> 1		
27 SEP	-	<del></del>									•		*
27	_				-		_			· .			
		WATE	R-QUALIT	Y DATA, V	WATER Y	EAR OCTO	BER 2004	TO SEPTI	EMBER 20	US-CONT	INUED		
				Phenoi-		1,2,4-				Неха-		.*	1,2,4-
: : 	Penta- chloro- phenol, water, unflird	Phenan- threne, water, unflird	Phenol, water, unfitrd	d5, surrog, Sched. 1383/85 wat unf	Pyrene, water, unfitrd	Tri- chloro- benzene water unfitrd	1,2-Di- chloro- benzene water unflird	1,3-Di- chloro- benzene water unflird	1,4-Di- chloro- benzene water unfltrd ug/L	chloro- buta- diene, water, unflird ug/L	Hexa- chloro- ethane, water, unfitrd ug/L.	Naphth- alene, water, unfitrd ug/L	Tri- chloro- benzene bed sed <2 mm ug/kg
Date	ug/L (39032)	ug/L (34461)	ug/L (34694)	pct rcv (90630)	ug/L (34469)	ug/L (34551)	ug/L (34536)	ug/L (34566)	(34571)	(39702)	(34396)	(34696)	(49438)
	(39032)	(34401)	(34024)	(20000)	(3440)	(3.455.1)	(5.000)	(/	(4 .4 /				` '
NOV		-4	-1.6	75.0	<2	<1	<2	<1	<1	<1	2	<2	<50
18 JAN	<2	<1	<1.6	75.2	<b>4</b> 2	<1	. 42	<1	~1	<b>~1</b>	~		~~
12				_						-			
MAR													
23				-							_		
MAY 26				_									
JŪL													
27		***	-		-								
SEP	. •									<u>.</u> c			
27	-	· <del></del>		_									
	,	WATE	R-OUALIT	Y DATA.	WATER Y	EAR OCTO	DBER 2004	TO SEPT	EMBER 20	05CONT	INUED		
									2,2'-Bi	236Tri-	2,4-Di-	2,6-Di-	2,6-Di-
	1,2-Di- chloro- benzene bed sed <2 mm	1,2-Di- methyl- naphth- alene, bed sed	1,3-Di- chloro- benzene bed sed <2 mm	1,4-Di- chloro- benzene bed sed <2 mm	1,6-Di- methyl- naphth- alene, bed sed	1Methyl -9H- fluor- ene, bed sed	Methyl- phenan- threne, bed sed	Methyl- pyrene, bed sed <2 mm,	quino- line, bed sed <2 mm,	methyl- naphth- alene, bed sed	nitro- toluene bed sed <2 mm wsv nat	methyl- naphth- alene, bed sed <2 mm,	nitro- toluene bed sed <2 mm wsv nat
Data	wsv nat	<2 mm, ug/kg	wsv nat	wsv nat ug/kg	<2 mm, ug/kg	<2 mm, ug/kg	<2 mm, ug/kg	wsv nat ug/kg	wsv nat ug/kg	<2 mm, ug/kg	ug/kg	ug/kg	ug/kg
Date	ug/kg (49439)	(49403)	ug/kg (49441)	(49442)	(49404)	(49398)	(49410)	(49388)	(49391)	(49405)	(49395)	(49406)	(49396)
	(/	(12 120)	(	, · · · · · · · · · · · ·		,	• •	•	•		•		
NOV 18	<50	<50	<50	ර0	⋖0	<50	<50	ර0	<50	<50	<50	⊲50	<50
JAN 12	_								'			••	
12 MAR				_									
23		-							-	-			-
MAY									_				
26 JUL		**		_									
27	_	· <del>-</del>		. ,						-		**	
SEP													
27	-	<del>-</del> '	-	. <del>-</del> .			-						<del></del>

## 08028200 BAYOU ANACOCO NEAR KNIGHT, LA-Continued

		WAIE	K-QUALIT	Y DATA, V	VATER Y	AR OCTU	DBER 2004	TO SEPTE	MBER 20	05—CONT	INUED		
Date	2- Chloro- naphth- alene, bed sed <2 mm, ug/kg (49407)	2- Chloro- phenol, bed sed <2 mm, wsv nat ug/kg (49467)	2-Ethyl naphth- alene bed sed <2 mm wsv nat ug/kg (49948)	2Fluoro -bi- phenyl, surrog, bed sed <2 mm, pct rev (49279)	2- Methyl- anthra- cene, bed sed <2 mm, ug/kg (49435)	3,5-Di- methyl- phenol, bed sed <2 mm, wsv nat ug/kg (49421)	4Bromophenyl phenyl ether, bed sed <2 mm, ug/kg (49454)	4Chlore 3methyl phenol, bed sed <2 mm, wsv nat ug/kg (49422)	4Chloro phenyi phenyi ether, bed sed <2 mm, ug/kg (49455)	45Meth- ylene- phenan- threne, bed sed <2 mm, ug/kg (49411)	9,10- Anthra- quinone bed sed <2 mm wsv nat ug/kg (49437)	9H- Fluor- ene, bed sed <2 mm, wsv nat ug/kg (49399)	Ace- naphth- ene, bed sed <2 mm, wsv nat ug/kg (49429)
NOV													
18	<50	<50	<50	50	<50	<50	<50	ර0	<50	⋖0	⋖50	<50 `	<50
JAN													
12	-								-				-
MAR 23				_					_				
MAY													
26	-		·										
JUL													
27	-	•										-	'
SEP 27			·										
41			-	_	_	: -					<del></del>		_
		WATE	R-QUALIT	Y DATA, 1	WATER Y	EAR OCTO	DBER 2004	TO SEPTE	EMBER 20	05—CONT	INUED		
	Ace-	Acri-	Anthra-	Azo-	Benzo-	Benzo-	Benzo-	Benzo-	Benzo-	Benzo-	Benzyl	Bis(2-	Bis(2-
	naphth-	dine.	cene.	benzene	[a]-	[a]-	[b]-	[c]-	[ghi]-	[k]-	n-butyl	chloro-	chloro-
	ylene,	bed sed	bed sed	bed sed	anthra-	pyrene,	fluor-	cinno-	peryl-	fluor-	phthal-	ethoxy)	ethyl)
	bed sed	<2 mm,	<2 mm,	<2 mm	cene,	bed sed	anthene	line,	ene,	anthene	ate,	methane	ether,
	<2 mm,	wsv nat	wsv nat	wsv nat	bed sed	<2 mm, wsv nat	bed sed	bed sed <2 mm,	bed sed <2 mm.	bed sed	bed sed <2 mm,	bed sed <2 mm	bed sed <2 mm,
Date	wsv nat ug/kg	field, ug/kg	field, ug/kg	field, ug/kg	<2 mm, ug/kg	ug/kg	<2 mm ug/kg	ug/kg	ug/kg	<2 mm ug/kg	ug/kg	ug/kg	ug/kg
Date	(49428)	(49430)	(49434)	(49443)	(49436)	(49389)	(49458)	(49468)	(49408)	(49397)	(49427)	(49401)	(49456)
	()	( /	,	` '		` ,	,	` ,	` ,	• 7	` ,	` '	
NOV 18	⊲0	<50	<50	<50	<50	ර0	<50	<50	<50	<50	<70	<50	<50
JAN	<b>C</b> 0	<b>-</b>	<b>S</b> 0	00	<b>~</b> 50	00	<b>\</b> 0	~~	~0	~50	~70	~0	~
12									_				
MAR		•											
23			<b></b> .	-							_		
MAY 26											`		
JUL				-									
27			٠	-					-		'		
SEP													
27	<b>-</b>			-	MAN-					-	-		-
		WATE	R-OUALI	Y DATA	WATER Y	EAR OCT	OBER 2004	TO SEPTI	EMBER 20	05CONT	TNUED		
	D:-/2E4										Fluor-	Неха-	Indeno-
	Bis(2Et hexyl)	C8- Alkyl-	Carba- zole,	Chry- sene.	Dibenzo -[a,h]-	Di- benzo-	Diethyl phthal-	Di- methyl	Dibutyl phthal-	Dioctyl phthal-	anthene	chloro-	[1,2,-
	phthal-	phenol.	bed sed	bed sed	antima-	thio-	ate	phthal-	ate,	ate,	bed sed	benzene	3-cd}-
	atc,	bed sed	<2 mm,	<2 mm,	cene,	phene,	bed sed	ate,	bed sed	bed sed	<2 mm	bed sed	pyrene,
	bed sed	<2 mm,	wsv nat	wsv nat	bed sed	bed sed	<2 mm,	bed sed	<2 mm,	<2 mm,	wsv nat	<2 mm,	bed sed
Dete	<2 mm,	wsv nat	field,	field,	<2 mm,	<2 mm, ug/kg	wsv nat ug/kg	<2 mm, ug/kg	wsv nat ug/kg	wsv nat ug/kg	field, ug/kg	wsv nat ug/kg	<2 mm ug/kg
Date	ug/kg (49426)	ug/kg (49424)	ug/kg (49449)	ug/kg (49450)	ug/kg (49461)	(49452)	(49383)	(49384)	(49381)	(49382)	(49466)	(49343)	(49390)
27011	()	(	( , )	(	\/	()	( )	7	/		/		
NOV	E73	<50	<50	<50	<50	<50	<50	<50	<50	E24	<50	<50	<50
18 JAN	E13	~00	~50	~	~0	~~0	~~0	~~~	~~0		~0	~0	
12				_			_	· _	. ,		_		
MAR													
23	-			-			· <b>-</b>						
MAY 26				_ '						_			
JUL				_		,	_	_	_	_		_	
27													
SEP	- T												
27			-									•	

## 08028200 BAYOU ANACOCO NEAR KNIGHT, LA-Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Iso- phorone bed sed <2 mm, wsv nat field, ug/kg (49400)	Iso- quino- line, bed sed <2 mm, wsv nat ug/kg (49394)	Naphth- alene, bed sed <2 mm wsv nat ug/kg (49402)	Nitro- benzene bed sed <2 mm wsv nat field, ug/kg (49444)	Nitro- benzene -d5, surrog, bed sed <2 mm, pct rcv (49280)	N-Nitro -sodi-n -propyl amine, bed sed <2 mm, ug/kg (49431)	N-Nitro -sodi- phenyl- amine, bed sed <2 mm, ug/kg (49433)	P- Cresol, bed sed <2 mm, wsv nat field, ug/kg (49451)	Penta- chloro- anisole bed sed <2 mm wsv nat ug/kg (49460)	Penta- chloro- nitro- benzene bed sed <2 mm ug/kg (49446)	Phenan- threne, bed sed <2 mm, wsv nat field, ug/kg (49409)	Phenan- thri- dine, bed sed <2 mm, wsv nat ug/kg (49393)	Phenol, bed sed <2 mm, wsv nat field, ug/kg (49413)
NOV						,							
18	<50	<50	<50	<50	52	<50	<50	<50	<50	<50	<50	<50	<50
JAN													
12	· -		<del></del>	-		_			· ·	,			-
MAR													
23	- '							_					-
MAY													
26		_		_	-	-	. —						
JUL													
27	<del>-</del>			<del></del>		-		<del></del> .		<b></b> ,			
SEP													
27	-												

Date	Pyrene, bod sed <2 mm, wsv nat field, ug/kg (49387)	Quino- line, bed sed <2 mm, wsv nat field, ug/kg (49392)	Terphenyldia, surrog, bed sed <2 mm, pet rev (49278)
NOV			
. 18	<50	<50	60
JAN			
12			-
MAR			
23 MAY	_	_	
26	_		
JUL.	_	-	_
27	· <b>-</b>	_	
SEP			
27	_	-	-

Remark codes used in this table:
< -- Less than.
E -- Estimated.
M-- Presence verified but not quantified.



## 08028500 Sabine River near Bon Wier, TX

Sabine River Basin

LOCATION.—Lat 30°44′49″, long 93°36′30″ referenced to North American Datum of 1927, Newton County, Hydrologic Unit 12010005, near left bank on downstream side of bridge on U.S. Highway 190, 0.7 mi upstream from Quicksand Creek, 0.8 mi upstream from Gulf, Colorado, and Santa Fe Railway Co. bridge, 2.0 mi east of Bon Wier, 2.4 mi upstream from Caney Creek and at mile 97.7.

DRAINAGE AREA.-8,229 mi<sup>2</sup>.

#### **WATER-DISCHARGE RECORDS**

PERIOD OF RECORD.—Oct. 1923 to current year. Monthly discharge only for some periods, published in WSP 1312. Gage-height records collected in this vicinity since 1913 are contained in reports of the National Weather Service.

REVISED RECORDS.--WSP 1342: 1953. WSP 1442: 1924, 1926-27(M), 1929(M), 1939. WSP 1732: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 33.42 ft above NGVD of 1929. Prior to July 8, 1931, nonrecording gage at site 0.8 mi downstream at datum 13.00 ft higher. July 8, 1931, to Oct. 15, 1958, nonrecording gage at present site at datum 13.00 ft higher. Oct. 16, 1958, to Sept. 30, 1975, water-stage recorder at present site at datum 13.00 ft higher. Oct. 1, 1975, to Dec. 31, 1988, at present site at datum 10.00 ft higher. Telephone telemeter at station. Satellite telemeter at station.

REMARKS.-Records good. Since water year 1961, at least 10% of contributing drainage area has been regulated.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.-37 years (water years 1924-1960) 7,155 ft³/s (5,184,000 acre-ft/yr).

EXTREMES OUTSIDE PERIOD OF RECORD.—Maximum stage since at least 1833, 43.5 ft Apr. 23 or 24, 1913, from information by Gulf, Colorado, and Santa Fe Railway Co. and local residents. Flood in May 1884 reached a stage of 39 ft. Floods occurring about 1844 and 1860 were higher than flood in May 1884, from information by local residents. All flood data referenced to current datum.

EXTREMES FOR PERIOD PRIOR TO REGULATION.—WATER YEARS, 1924-1960: Maximum discharge, 115,000 ft<sup>3</sup>/s, May 19, 1953, gage height, 38.70 ft, current datum; minimum, 160 ft<sup>3</sup>/s, Sept. 29, 1956.

## 08028500 Sabine River near Bon Wier, TX-Continued

## DISCHARGE, CUBIC FEET PER SECOND WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005 DAILY MEAN VALUES

[e, estimated]

			·		Įt	e, estimated	1]					
Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun `	Jul	Aug	Sep
1	854	733	19,800	9,950	9,200	18,700	1,480	984	2,520	4,640	2,190	6,010
2	789	2,230	19,800	9,240	11,100	18,300	1,390	953	4,150	5,220	3,930	5,080
3	826	13,000	19,000	9,090	12,200	14,800	1,340	2,280	4,350	4,340	5,820	4,810
4	851	14,700	18,200	8,940	11,300	10,900	1,250	3,690	4,370	2,720	6,040	4,000
5	997	13,200	17,800	5,430	13,500	9,970	1,180	3,750	3,660	1,790	6,070	2,050
6	1,130	11,800	18,100	2,080	16,900	·· 9,550	1,210	3,730	2,030	e3,600	5,970	94
7	1,090	10,000	21,400	1,570	17,000	9,380	1,800	3,720	2,850	e5,800	4,760	2,81
8	1,310	9,060	23,800	1,500	10,900	10,500	2,000	3,050	4,440	5,970	2,290	4,54
9	1,160	8,620	22,900	1,470	18,600	10,600	1,730	1,910	4,930	5,930	4,030	4,72
10	1,530	8,360	21,400	1,420	28,200	9,750	1,760	2,680	4,840	4,710	5,940	4,70
11	1,220	5,420	19,300	4,500	25,700	9,190	1,270	3,810	4,470	2,380	6,030	3,80
12	1,320	1,760	18,300	8,720	22,600	5,670	4,700	3,770	2,910	3,640	5,980	1,97
13	1,420	4,020	17,800	9,410	20,500	2,230	10,300	3,840	1,460	5,450	5,990	2,22
14	1.100	7,650	17,400	11,400	23,200	1,720	9,820	3,820	2,920	5,570	4,800	3,40
15	1,300	7,880	17,200	8,340	23,000	1,560	9,150	3,080	4,720	5,700	2,330	3,47
16	1,070	7,900	17,200	4,360	21,100	1,470	8,820	1,770	3,800	6,210	4,140	3,52
17	1,300	7,910	17,200	8,320	19,500	1,420	8,590	2,280	4,320	4,830	6,170	3,63
18	805	8,190	17,300	8,840	18,600	4,430	8,440	3,560	4,830	2,530	6,250	3,16
19	773	9,250	17,200	11,400	18,000	5,850	8,350	3,670	4,070	3,950	6,230	1,81
20	1,030	7,850	17,100	14,000	17,700	2,200	8,280	3,680	2,070	5,590	6,170	2,17
21	1,080	11,100	17,100	13,700	17,600	1,940	8,230	3,680	2,930	5,630	4,840	3,41
22	2,380	14,600	17,600	16,300	17,500	5,650	8,180	3,070	4,590	5,600	2,300	3,37
23	926	23,900	20,800	16,600	17,600	10,600	8,120	1,840	4,720	5,770	4,000	3,40
24	673	30,200	21,400	16,500	18,500	10,300	8,050	2,250	4,700	4,830	5,930	3,47
25	656	32,500	19,900	12,100	21,400	9,350	8,060	3,590	4,740	2,390	6,010	6,85
26	806	30,800	18,700	8,930	21,600	8,850	8,020	3,680	3,970	3,970	6,020	4,76
27	1,100	30,500	18,100	8,480	20,200	8,750	4,760	3,640	1,990	5,640	6,080	2,33
28	842	27,100	17,800	8,420	19,300	8,960	1,550	3,600	2,920	5,620	4,820	1,59
29	1,080	22,800	17,600	8,480		5,930	1,130	3,020	4,570	5,570	2,290	1,35
30	859	19,900	17,500	8,470		2,270	1,040	1,900	4,610	5,560	3,980	1,07
31	1,160	_	14,200	8,530		1,660		1,270	, <del></del>	4,320	5,910	
otal	33,437	402,933	578,900	266,490	512,500	232,450	150,000	91,567	113,450	145,470	153,310	100,4
Mean	1,079	13,430	18,670	8,596	18,300	7,498	5,000	2,954	3,782	4,693	4,945	3,34
Wax	2,380	32,500	23,800	16,600	28,200	18,700	10,300	3,840	4,930	6,210	6,250	6,85
Min	656	733	14,200	1,420	9,200	1,420	1,040	953	1,460	1,790	2,190	94
Ac-ft	66,320	799,200	,	528,600	1,017,000	461,100	297,500	181,600	225,000	288,500	304,100	199,20

# STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 2005', BY WATER YEAR (WY)

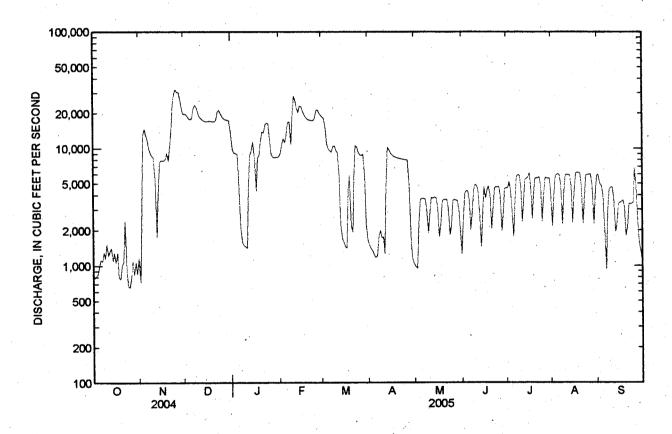
-	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	1.800	3,126	7,300	10,090	11,510	12,330	9,635	8,761	6,197	4,963	3,668	3,496
Max	8,948	13,430	21,420	30,930	31,390	46,850	27,370	31,210	26,340	31,490	7,288	12,310
(WY)	(2002)	(2005)	(1983)	(1974)	(1999)	(2001)	(1969)	(1966)	(1989)	(1989)	(1976)	(2001)
Min	188	217	822	994	746	1,288	634	1,011	663	530	211	206
(WY)	(1968)	(1968)	(1981)	(2000)	(1968)	(1981)	(1971)	(1996)	(1970)	(1964)	(1967)	(1967)

## 98028500 Sabine River near Bon Wier, TX-Continued

## **SUMMARY STATISTICS**

	Calendar Y	ear 2004	Water Yea	r 2005	Water Years	1961 -	2005°
Annual total	3,610,640		2,780,921	····	·		
Annual mean	9,865		7,619		6,886		
Highest annual mean					12,670		1975
Lowest annual mean					1,172		1967
Highest daily mean	38,600	May 15	32,500	Nov 25	98,000	Jul	4, 1989
Lowest daily mean	656	Oct 25	656	Oct 25	134	Nov	9, 1966
Annual seven-day minimum	859	Oct 24	859	Oct 24	142	Nov	3, 1966
Maximum peak flow			33,300	Nov 25	98,200	Jul	4, 1989
Maximum peak stage	•		31.51	Nov 25	37.90	Jul	4, 1989
Annual runoff (ac-ft)	7,162,000		5,516,000		4,989,000		
10 percent exceeds	23,800		18,400	. •	17,200		
50 percent exceeds	5,900		4,840		3,780		
90 percent exceeds	1,270		1,290		735		14.

Period of regulated streamflow.



#### 08028500 Sabine River near Bon Wier, TX-Continued

## **WATER-QUALITY RECORDS**

PERIOD OF RECORD.--CHEMICAL DATA: Oct. 1969 to current year. BIOCHEMICAL DATA: Oct. 1969 to May 1973. SEDIMENT DATA: Apr. 1957 to Sept. 1962.

PERIOD OF DAILY RECORD.-

SPECIFIC CONDUCTANCE: Nov. 1969 to June 1983. WATER TEMPERATURE: Nov. 1969 to June 1983.

EXTREMES FOR PERIOD OF DAILY RECORD.

SPECIFIC CONDUCTANCE: Maximum daily, 407 microsiemens/cm, Aug. 31, 1978; minimum daily, 33 microsiemens/cm, Dec. 14, 2001. WATER TEMPERATURE: Maximum daily, 33.0°C, July 17, 1978, and July 14, 26, 1980; minimum daily, 4.0°C, Feb. 2, 1980.

WATER-QUALITY DATA
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	Color, water, fitrd, Pt-Co units (00080)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	Chlor- ide, water, fitrd, mg/L (90940)	Sulfate water, fitrd, mg/L (09945)
Feb							
05	1645	14,400	20	141	11.5	13.9	14.5
10	1605	28,000	60	104	14.0	10.2	10.9
19	1640	17,300	40	140	14.0	13.1	13.9
25	1400	21.000	20	127	14.5	12.6	13.1
Mar	e						
05	1730	9,590	60	140	15.0	13.3	15.2
12	1140	5,600	70	137	15.0	13.0	15.6
19	1110	6,200	- 55	146	15.5	13.8	16.3
26,	1600	8,630	40	136	18.0	13.3	15.3
Apr							
82	1645	1,420	75	143	21.0	8.88	22.4
09	1915	2,050	70	136	22.5	9.11	21.9
15	1855	8,550	70	132	20.0	12.5	16.4
22	1620	7,750	40	145	22.0	14.0	17.5
27	1710	3,210	50	155	22.0	13.8	20.9
May							
97	1930	4,080	45	146	23.0	14.1	18.0
12	1420	3,880	55	148	24.0	13.6	19.0
20	1055	3,150	40	152	24.5	14.0	19.5
24	1030	1,310	90	188	28.0	13.6	30.5
Jun							
83	1740	4,810	45	148	28.5	<del></del> .	_
10	1940	4,900	40	159	26.0	13.8	22.8
15	1945	5,010	40	152	27.5	14.5	19.8
25	1945	4,980	30	149	28.0	14.6	18.7
Jul							
01	1540	5,200	30	144	31.0	14.8	16.9
99	1900	6,030	70	175	27.5	14.4	27.0
16	1515	6,910	45	139	27.0	13.1	17.8
23	1650	6,240	35	146	31.0	14.3	17.8



## 08029500 Big Cow Creek near Newton, TX

Sabine River Basin

LOCATION.—Lat 30°49'08", long 93°47'08" referenced to North American Datum of 1983, Newton County, Hydrologic Unit 12010005, on right bank near center of span on downstream side of bridge on State Highway 87, 2.6 mi southwest of Newton, 5.0 mi downstream from Melhomes Creek, and 8.0 mi upstream from White Oak Creek.

DRAINAGE AREA.-128 mi<sup>2</sup>.

#### **WATER-DISCHARGE RECORDS**

PERIOD OF RECORD .-- Apr. 1952 to current year.

GAGE.—Water-stage recorder. Datum of gage is 134.69 ft above NGVD of 1929. Prior to Dec. 19, 1957, nonrecording gage at same site and datum. Satellite telemeter at station.

REMARKS.--Records fair. No known regulation or diversions.

EXTREMES OUTSIDE PERIOD OF RECORD.—Maximum stage since at least 1907, 27.5 ft in Apr. 1922, from information by local resident.

## 08029500 Big Cow Creek near Newton, TX—Continued

# DISCHARGE, CUBIC FEET PER SECOND WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005 DAILY MEAN VALUES

					UAIL	Y MEAN V	ALUE9					
Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	77	77	382	137	366	207	116	78	80	36	44	44
2	90	738	229	139	690	186	131	76	62	35	43	50
3	132	2,160	184	133	449	403	114	69	56	39	44	50
4	110	593	168	128	214	264	105	66	52	54	47	4:
5	132	189	169	127	166	186	103	65	49	52	48	42
6	108	143	270	127	148	163	109	65	80	65	59	4
7	94	124	773	129	224	179	147	63	152	99	53	4
8	111	113	615	127	808	359	112	64	125	76	53	4
9	135	105	257	126	1,180	218	103	103	133	58	76	- 3
10	156	100	199	118	1,340	162	98	122	74	53	82	3
11	204	101	166	121	359	145	184	85	58	50	127	3
12	141	99	151	125	231	135	506	73	52	46	72	. 3
13	105	95	145	327	268	130	192	68	49	48	55	3
14	94	94	138	516	666	127	115	64	47	59	53	3
15	121	93	132	252	360	122	99	63	45	107	72	4
16	102	93	134	157	224	121	93	60	44	125	71	4
17	86	93	231	137	187	123	89	58	48	135	73	3
18	85	320	235	128	163	120	85	56	45	122	87	. 4
19	85	315	163	124	151	119	84	55	43	.90	63	3
20	80	418	142	123	148	246	83	54	43	70	56	3
21	76	1,090	136	126	153	249	82.	54	41	60	50	3
22	75	814	322	127	151	281	81	52	39	56	48	3
23	73	1,310	989	122	185	322	78	49	38	125	48	3
24	74	2,280	414	115	467	178	75	47	38	110	47	45
25	85	1,560	214	115	750	142	73	47	37	68	45	1,62
26	107	405	177	116	317	132	77	47	37	58	43	2,29
27	89	339	158	113	229	141	79	55	38	53	44	-59
28	78	360	147	118	302	169	72	51	38	50	51	19
29	74	227	140	161	·	138	69	66	. 37	47	49	12
30	72	321	136	139		123	69	118	36	46	45	9
31	71		136	135		119	- '	100		45	45	-
rtal	3,122	14,769	7,852	4,688	10,896	5,709	3,423	2,093	1,716	2,137	1,793	6,3
ean	101	492	253	151	389	184	114	67.5	57.2	68.9	57.8	2
ax	204	2,280	989	516	1,340	403	506	122	152	135	127	2,2
lin	71	77	132	113	148	119	69	47	36	35	43	
c-ft	6,190	29,290	15,570	9,300	21,610	11,320	6,790	4,150	3,400	4,240	3,560	12,52

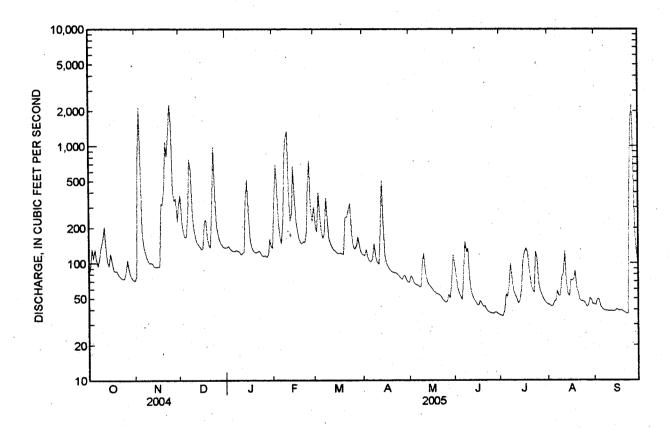
# STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1952 - 2005, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	72.5	129	175	191	220	177	163	150	: 115	71.6	55.4	75.8
Max	278	551	489	645	743	377	533	817	414	426	221	491
(WY)	(1995)	(2003)	(1983)	(1974)	(1984)	(1999)	(1953)	(1953)	(1993)	(1989)	(1973)	(1998)
Min	17.4	27.3	39.3	42.2	57.4	46.4	29.4	31.7	16.6	14.2	14.5	17.3
(WY)	(1957)	(1968)	(1982)	(1982)	(1996)	(1996)	(1971)	(1971)	(1971)	(1971)	(1956)	(1956)

## 08029500 Big Cow Creek near Newton, TX-Continued

## **SUMMARY STATISTICS**

	Calendar Y	ear 2004	Water Yea	2005	Water Years	1952 - 2005
Annual total	94,251		64,509			· · · · · · · · · · · · · · · · · · ·
Annual mean	258		177		133	
Highest annual mean					266	1999
Lowest annual mean					46.1	1965
Highest daily mean	3,180	Feb 12	2,290	Sep 26	9,720	Feb 12, 1984
Lowest daily mean	48	Sep 21	35	Jul 2	10	Jul 7, 1971
Annual seven-day minimum	50	Sep 17	37	Jun 26	11	Jul 17, 1971
Maximum peak flow		-	3,190	Nov 24	20,200	Apr 29, 1953
Maximum peak stage		- 1	15.98	Nov 24	19.45	Apr 29, 1953
Annual runoff (ac-ft)	186,900		128,000		95,990	<del>-</del>
18 percent exceeds	698		332		232	
50 percent exceeds	121	•	105		· 66	*
90 percent exceeds	68		44		. 28	





## 08030500 Sabine River near Ruliff, TX

Sabine River Basin

LOCATION.—Lat 30°18'13", long 93°44'37" referenced to North American Datum of 1927, Newton County, Hydrologic Unit 12010005, on downstream side of bridge on State Highway 12, 2.4 mi north of Ruliff, 4.2 mi upstream from the Kansas City Southern Railway Co. bridge, 4.5 mi downstream from Cypress Creek and at mile 40.2.

DRAINAGE AREA .- 9,329 mi2.

## **WATER-DISCHARGE RECORDS**

PERIOD OF RECORD.—Oct. 1924 to current year. Water-quality records: Chemical data: Sept. 1945 to Sept. 1946, Oct. 1947 to Sept. 1998. Biochemical data: Feb. 1968 to Sept. 1998. Radiochemical data: Oct. 1969 to Sept. 1995. Pesticide data: Jan. 1968 to May 1982. Sediment data: Oct. 1974 to Sept. 1995.

REVISED RECORDS.--WSP 1282: 1941(M), 1942. WSP 1442: 1925-29, 1937-39, 1943. WSP 1732: Drainage area.

GAGE.—Water-stage recorder. Datum of gage is 5.92 ft below NGVD of 1929. Prior to Mar. 1, 1941, nonrecording gage at Kansas City Southern Railway Co. bridge, 4.2 mi downstream and at datum 7.98 ft higher than current datum. Mar. 1, 1941, to Dec. 8, 1948, nonrecording gage at present site and at datum 10.00 ft higher than current datum. Dec. 9, 1948, to Dec. 31, 1989, recording gage at present site and at datum 10.00 ft higher than current datum. Telephone telemeter at station. Satellite telemeter at station.

REMARKS.--Records good. Since water year 1961, at least 10% of contributing drainage area has been regulated.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--36 years (water years 1925-1960) 8,780 ft³/s (6,359,000 acre-ft/yr).

EXTREMES OUTSIDE PERIOD OF RECORD.—Maximum stage since at least 1835, 32.2 ft in May or June 1884 (adjusted to present site and datum on basis of slope of flood of June 8, 9, 1950); flood of Apr. 26-29, 1913, reached a stage of 29.5 ft, present site and datum, from information by local resident.

EXTREMES FOR PERIOD PRIOR TO REGULATION.—WATER YEARS, 1925-1960: Maximum discharge, 121,000 ft³/s, May 22, 1953, gage height, 29.98 ft, current datum; minimum, 270 ft³/s, several days in Sept. and Oct. 1956.

## 08030500 Sabine River near Ruliff, TX-Continued

# DISCHARGE, CUBIC FEET PER SECOND WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005 DAILY MEAN VALUES

			*		DAIL	MEAN VA	TOE2					
Day	0ct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1 .	2,970	1,420	25,400	17,400	10,200	18,800	4,710	1,810	2,030	4,090	5,710	4,740
2	2,020	2,200	22,200	17,000	11,100	18,400	2,960	1,530	1,930	4,350	4,490	5,770
3	1,480	4,460	20,200	15,700	12,100	17,900	2,410	1,420	2,980	4,570	3,280	6,010
4	1,360	7,410	19,200	13,700	13,000	17,600	2,210	1,610	3,710	4,720	4,700	5,740
5	1,410	10,100	18,700	12,200	13,600	17,200	2,070	2,780	4,020	4,070	5,770	5,250
6	1,420	11,900	18,500	10,900	13,700	16,000	1,960	3,400	3,990	2,840	6,210	4,010
7	1,600	12,800	19,100	8,420	13,600	14,200	1,890	3,580	3,270	2,740	6,380	2,160
8	1,610	13,000	19,400	5,320	14,300	12,700	2,040	3,610	2,440	4,230	6,280	1,780
9	1,860	12,400	21,400	3,450	15,700	11,700	2,480	3,520	3,330	5,410	5,100	3,550
10	1,850	11,300	23,600	2,860	16,300	11,300	2,400	2,930	4,140	5,850	3,580	4,510
11	2,040	10,300	24,500	2,660	16,800	11,200	2,440	2,400	4,650	5,840	4,840	4,910
12	1,950	9,420	23,300	3,140	19,200	11,000	2,340	3,160	4,640	4,780	5,810	4,780
13	1,890	7,110	21,300	5,720	24,400	10,400	2,910	3,580	4,120	3,490	6,220	3,720
14	1,960	4,610	19,700	7,770	26,600	8,360	5,600	3,670	2,810	4,360	6,400	2,37
15	1,750	5,550	18,500	9,310	24,100	5,300	7,580	3,710	2,160	5,490	6,420	3,04
16	1,680	6,760	17,900	10,400	22,900	3,400	8,760	3,540	3,340	5,950	5,350	3,55
17	1,590	7,520	17,500	10,300	22,400	2,740	9,060	2,840	3,990	6,270	3,840	3,71
18	1,660	8,100	17,200	9,130	21,200	2,510	8,900	2,100	3,880	6,430	5,130	3,81
19	1,510	8,320	17,000	8,820	19,600	3,050	8,720	2,770	4,230	5,610	6,090	3,79
29	1,270	8,940	16,900	9,160	18,300	5,020	8,540	3,290	4,350	4,140	6,480	3,10
21	1,330	9,750	16,900	9,910	17,400	4,990	8,430	3,460	3,580	4,980	6,580	2,09
22	1,340	11,100	17,300	10,900	16,800	3,650	8,330	3,500	2,480	5,780	6,470	2,94
23	1,980	14,800	17,900	11,900	16,600	3,940	8,250	3,400	3,380	6,070	5,180	3,51
24	1,930	17,800	18,000	12,700	17,200	6,120	8,160	2,810	4,140	6,070	3,540	5,66
25	1,380	20,000	18,300	13,500	17,800	8,000	8,130	2,070	4,430	6,000	4,760	7,50
26	1,170	24,400	19,200	14,200	17,900	9,250	8,130	2,760	4,540	5,000	5,760	9,37
27	1,130	30,800	19,800	14,100	18,400	9,720	8,020	3,320	4,450	3,550	6,160	11,30
28	1,340	32,600	19,300	13,000	18,900	9,630	7,590	3,470	3,540	4,630	6,340	11,00
29	1,360	31,000	18,600	11,400		9,410	5,390	3,520	2,440	5,530	6,240	9,01
30	1,370	28,600	17,900	10,200		9,170	2,770	3,460	3,360	5,820	4,980	6,83
31	1,340		17,500	9,920		7,530	•	2,880		5,900	3,450	
otal	50,550	384,470	602,200	315,090	490,100	300,190	163,180	91,900	106,350	154,560	167,540	149,51
Aean	1,631	12,820	19,430	10,160	17,500	9,684	5,439	2,965	3,545	4,986	5,405	4,98
Aax	2,970	32,600	25,400	17,400	26,600	18,800	9,060	3,710	4,650	6,430	6,580	11,30
fin 💮	1,130	1,420	16,900	2,660	10,200	2,510	1,890	1,420	1,930	2,740	3,280	1,78
lc-ft	100,300	762,600	1,194,000	625,000	972,100	595,400	323,700	182,300	210,900	306,600	332,300	296,60

# STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 2005', BY WATER YEAR (WY)

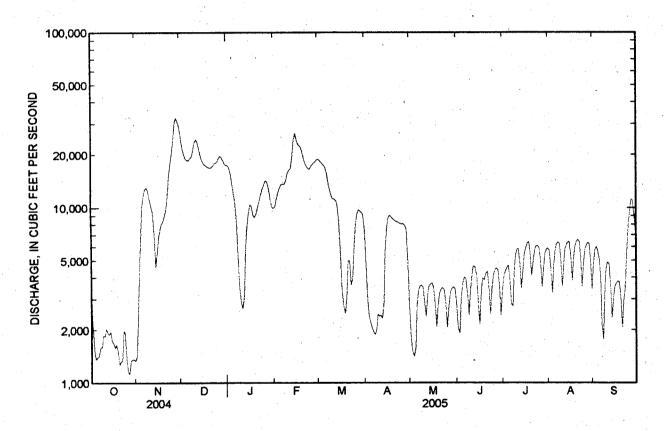
	Oct	Nov	Dec	Jan	Feb	Mar	Арг	May	Jun	Jui	Aug	Sep
Mean	2,627	3,996	8,838	12,060	13,190	13,930	11,220	9,779	7,479	5,902	4,183	4,223
Max	12,860	16,030	22,070	35,570	33,170	48,230	33,240	32,980	26,240	42,320	7,982	12,530
(WY)	(2002)	(2003)	(1983)	(1961)	(1999)	(2001)	(1969)	(1966)	(1989)	(1989)	(1975)	(1998)
Min	292	327	1,366	1,237	1,344	1,679	1,030	1,395	1,383	805	382	333
(WY)	(1968)	(1968)	(1981)	(2000)	(2000)	(2000)	(1971)	(1996)	(1963)	(1967)	(1967)	(1967)

# 08030500 Sabine River near Ruliff, TX-Continued

## **SUMMARY STATISTICS**

	Calendar Y	ear 2004	Water Yea	r 2005	Water Years	1961 - 2005 '
Annual total	4,102,050		2,975,640			
Annual mean	11,210		8,152		8,095	•
Highest annual mean					14,210	1975
Lowest annual mean					1,959	1967
Highest daily mean	39,400	May 19	32,600	Nov 28	108,000	Jul 6, 1989
Lowest daily mean	1,130	Oct 27	1,130	Oct 27	278	Oct 28, 1967
Annual seven-day minimum	1,300	Oct 25	1,300	Oct 25	282	Oct 9, 1967
Maximum peak flow			33,100	Nov 28	109,000	Jul 6, 1989
Maximum peak stage			25.09	Nov 28	29.15	Jul 6, 1989
Annual runoff (ac-ft)	8,136,000		5,902,000		5,865,000	
10 percent exceeds	23,200		18,400		18,900	
50 percent exceeds	7,580	7	5,710		4,880	
90 percent exceeds	2,030		1,970		1,200	

<sup>&#</sup>x27; Period of regulated streamflow.



## APPENDIX C

## SABINE RIVER COMPACT

The State of Texas and the State of Louisiana, parties signatory to this Compact (hereinafter referred to as "Texas" and "Louisiana," respectively, or individually as a "State," or collectively as the "States"), having resolved to conclude a compact with respect to the waters of the Sabine River, and having appointed representatives as follows:

FOR TEXAS:

Henry L. Woodworth, Interstate Compact Commissioner for Texas; and John W. Simmons, President of the Sabine River Authority of Texas;

FOR LOUISIANA: Roy T. Sessums, Director of the Department of Public Works of the State of Louisiana;

and consent to negotiate and enter into the said Compact having been granted by Act of the Congress of the United States approved November 1, 1951 (Public Law No. 252; 82d Congress, First Session), and pursuant thereto the President having designated Louis W. Prentiss as the representative of the United States, the said representatives for Texas and Louisiana, after negotiations participated in by the representative of the United States, have for such Compact agreed upon Articles as hereinafter set forth. The major purposes of this Compact are to provide for an equitable apportionment between the States of Louisiana and Texas of the waters of the Sabine River and its tributaries, thereby removing the causes of present and future controversy between the States over the conservation and utilization of said waters; to encourage the development, conservation and utilization of the water resources of the Sabine River and its tributaries; and to establish a basis for cooperative planning and action by the States for the construction, operation and maintenance of projects for water conservation and utilization purposes on that reach of the Sabine River touching both States, and for apportionment of the benefits therefrom.

## **ARTICLE I**

## AS USED IN THIS COMPACT:

- (A.) The Word "Stateline" means the point on the Sabine River where its waters in downstream flow first touch the States of both Louisiana and Texas.
- (B.) The term "waters of the Sabine River" means the waters either originating in the natural drainage basin of the Sabine River, or appearing as streamflow in said River and its tributaries, from its headwater source down to the mouth of the River where it enters into Sabine Lake.
- (C.) The term "Stateline flow" means the flow of waters of the Sabine River as determined by the Logansport gauge located on the U.S. Highway 84, approximately four (4) river

miles downstream from the Stateline. This flow, or the flow as determined by such substitute gauging station as may be established by the Administration, as hereinafter defined, pursuant to the provisions of Article VII of this Compact, shall be deemed the actual Stateline flow.

- (D.) The term "Stateline reach" means that portion of the Sabine River lying between the Stateline and Sabine Lake.
- (E.) The term "the Administration" means the Sabine River Compact Administration established under Article VII.
- (F.) The term "Domestic use" means the use of water by an individual, or by a family unit or household for drinking, cooking, laundering, sanitation, and other personal comforts and necessities; and for the irrigation of an area not to exceed one acre, obtained directly from the Sabine River or its tributaries by an individual or family unit not supplied by a water company, water district, or municipality.
- (G.) The term "stock water use" means the use of water for any and all livestock and poultry.
- (H.) The term "consumptive use" means use of water resulting in its permanent removal from the stream.
- (I.) The terms "'domestic' and 'stock water' reservoir" mean any reservoir for either or both of such uses having a storage capacity of fifty (50) acre feet or less.
- (J.) "Stored water" means water stored in reservoirs (exclusive of domestic or stock water reservoirs) or water withdrawn or released from reservoirs for specific uses and the identifiable return flow from such uses.
- (K.) The term "free water" means all waters other than "stored waters" in the Stateline reach including, but not limited to that appearing as natural stream flow, and not withdrawn or released from a reservoir for specific uses. Waters released from reservoirs for the purpose of maintaining stream flows as provided in Article V, shall be "free water." All reservoir spills or releases of stored waters made in anticipation of spills, shall be free water.
- (L.) Where the name of the State or the term "State" is used in this Compact, it shall be construed to include any person or entity of any nature whatsoever of the States of Louisiana or Texas using, claiming, or in any manner asserting any right to the use of the waters of the Sabine River under the authority of that State.
- (M.) Wherever any State or Federal official or agency is referred to in this Compact, such reference shall apply equally to the comparable official or agency succeeding to their duties and functions.

## **ARTICLE II**

Subject to the provisions of Article X, nothing in this Compact shall be construed as applying to, or interfering with, the right or power of either signatory State to regulate within its boundaries the appropriation, use and control of water, not inconsistent with its obligations under this Compact.

## **ARTICLE III**

Subject to the provisions of Article X, all rights to any of the waters of the Sabine River which have been obtained in accordance with the laws of the States are hereby recognized and affirmed; provided, however, that withdrawals, from time to time, for the satisfaction of such rights, shall be subject to the availability of supply in accordance with the apportionment of water provided under the terms of this Compact.

## **ARTICLE IV**

Texas shall have free and unrestricted use of all waters of the Sabine River and its tributaries above the Stateline subject, however, to the provisions of Articles V and X.

## ARTICLE V

Texas and Louisiana hereby agree upon the following apportionment of the waters of the Sabine River:

- (A.) All free water in the Stateline reach shall be divided equally between the two States, this division to be made without reference to the origin.
- (B.) The necessity of maintaining a minimum flow at the Stateline for the benefit of water users below the Stateline in both States is recognized, and to this end, it is hereby agreed that:
  - (1) Reservoirs and permits above the Stateline existing as of January 1, 1953, shall not be liable for maintenance of the flow at the Stateline.
  - (2) After January 1, 1953, neither State shall permit or authorize any additional uses which would have the effect of reducing the flow at the Stateline to less than 36 cubic feet per second.
  - (3) Reservoirs on which construction is commenced after January 1, 1953, above the Stateline shall be liable for their share of water necessary to provide a minimum flow at the Stateline of 36 cubic feet per second; provided that no reservoir shall be liable for a greater percentage of this minimum flow than the percentage of the drainage area above the Stateline contributing to that reservoir, exclusive of the watershed of any reservoir on which construction was started prior to January 1, 1953. Water released from Texas' reservoirs to establish the minimum flow of 36 cubic feet per second shall be classed as free water at the Stateline and divided equally between the two States.

- (C.) The right of each State to construct impoundment reservoirs and other works of improvement on the Sabine River or its tributaries located wholly within its boundaries is hereby recognized.
- (D.) In the event that either State constructs reservoir storage on the tributaries below Stateline after January 1, 1953, there shall be deducted from that State's share of the flow in the Sabine River all reductions in flow resulting from the operation of the tributary storage and conversely such State shall be entitled to the increased flow resulting from the regulation provided by such storage.
- (E.) Each State shall have the right to use the main channel of the Sabine River to convey water stored on the Sabine River or its tributaries located wholly within its boundaries, downstream to a desired point of removal without loss of ownership of such stored waters. In the event that such water is released by a State through the natural channel of a tributary and the channel of the Sabine River to a downstream point of removal, a reduction shall be made in the amount of water which can be withdrawn at the point of removal equal to the transmission losses.
- (F.) Each State shall have the right to withdraw its share of the water from the channel of the Sabine River in the Stateline reach in accordance with Article VII. Neither State shall withdraw at any point more than its share of the flow at that point except that persuant to findings and determination of the Administration as provided under Article VII of this Compact, either State may withdraw more or less of its share of the water at any point providing that its aggregate withdrawal shall not exceed its total share. Withdrawals made pursuant to this paragraph shall not prejudice or impair the existing rights of users of Sabine River waters.
- (G.) Waters stored in reservoirs constructed by the States in the Stateline reach shall be shared by each State in proportion to its contribution to the cost of storage. Neither State shall have the right to construct a dam on the Stateline reach without the consent of the other State.
- (H.) Each State may vary the rate and manner of withdrawal of its share of such jointly stored waters on the Stateline reach, subject to meeting the obligations for amortization of the cost of the joint storage. In any event, neither State shall withdraw more than its pro-rata share in any one year (a year meaning a water year, October 1 to September 30) except by authority of the Administration. All jointly stored water remaining at the end of a water year shall be reapportioned between the States in the same proportion as their contribution to the cost of storage.
- (I.) Except for jointly stored water, as provided in (H.) above, each State must use its apportionment of the natural stream flows as they occur, and there shall be no allowance of accumulation of credits or debits for or against either State. The failure of either State to use the stream flow or any part thereof, the use of which is apportioned to it under the terms of this Compact, shall not constitute a relinquishment of the right to such use in the future; conversely, the failure of either State to use the water at the time it is available does not give it the right to the flow in excess of its share of the flow at any other time.

- (J.) From the apportionment of waters of the Sabine River as defined in this Article, there shall be excluded from such apportionment all waters consumed in either State for domestic and stock water uses. Domestic and stock water reservoirs shall be so excluded.
- (K.) Each State may use its share of the water apportioned to it in any manner that may be deemed beneficial by that State.

#### **ARTICLE VI**

- (A.) The States, through their respective appropriate agencies or subdivisions, may construct jointly, or cooperate with any agency or instrumentality of the United States, in the construction of works on the Stateline reach for the development, conservation, and utilization for all beneficial purposes of the waters of the Sabine River.
- (B.) All monetary revenues growing out of any joint State ownership, title, and interest in works constructed under Section (A.) above and accruing to the States in respect thereof, shall be divided between the States in proportion to their respective contributions to the cost of construction; provided, however, that each State shall retain undivided all its revenues from recreational facilities within its boundaries incidental to the use of the waters of the Sabine River, and from its severally State-owned recreational facilities constructed appurtenant thereto.
- (C.) All operation and maintenance costs chargeable against any joint State ownership, title, and interest in works constructed under Section (A.) above, shall be assessed in proportion to the contribution of each State to the original cost of construction.

#### ARTICLE VII

- (A.) There is hereby created an inter-State adminstrative agency to be designated as the "Sabine River Compact Administration" herein referred to as the "Administration."
- (B.) The Administration shall consist of two members from each State and of one member as representative of the United States, chosen by the President of the United States who is hereby requested to appoint such a representative. The United States Member shall be ex-officio chairman of the Administration without vote and shall not be a domiciliary of or reside in either State. The appointed members for Texas and Louisiana shall be designated within thirty days after effective date of this compact.
- (C.) The Texas members shall be appointed by the Governor for a term of six years; provided, however, that one of the original Texas members shall be appointed for a term to establish a half-term interval between the expiration dates of the terms of such members, and thereafter one such member shall be appointed each three years for the regular term. The Louisiana members shall be residents of the Sabine Watershed and shall be appointed by the Governor for a term of four years, which shall run concurrent with the term of the Governor. Each State member shall hold office

subject to the laws of his State or until his successor has been duly appointed and qualified. (As amended by Public Law 87-418, March 16, 1962, and by Public Law 102-575, October 30, 1992).

- (D.) Interim vacancy, for whatever cause, in the office of any member of the Administration shall be filled for the unexpired term in the same manner as hereinabove provided for regular appointment.
- (E.) Within sixty days after the effective date of this Compact, the Administration shall meet and organize. A quorum for any meeting shall consist of three voting members of the Administration. Each State member shall have one vote, and every decision, authorization, determination, order, or other action, shall require the concurring votes of at least three members.
- (F.) The Administration shall have power to:
  - (1) Adopt, amend, and revoke by-laws, rules, and regulations, and prescribe procedures for administration of and consistent with the provisions of this Compact;
  - (2) Fix and determine from time to time the location of the Administration's principal office;
  - (3) Employ such engineering, legal, clerical, and other personnel without regard to the civil service laws of either State, as the Administration may determine necessary or proper to supplement State-furnished assistance as hereinafter provided, for the performance of its functions under this Compact; provided that such employees shall be paid by and be responsible to the Administration and shall not be considered to be employees of either State.
  - (4) Procure such equipment, supplies, and technical assistance as the Administration may determine to be necessary or proper to supplement State-furnished assistance as hereinafter provided, for the performance of its functions under this Compact;
  - (5) Adopt a seal which shall be judicially recognized.
- (G.) In cooperation with the chief official administering water rights in each State and with appropriate Federal agencies, the Administration shall have and perform powers and duties as follows:
  - (1) To collect, analyze, correlate, compile and report on data as to water supplies, stream flows, storage, diversions, salvage and use of the waters of the Sabine River and its tributaries, and as to all factual data necessary or proper for the administration of this Compact;
  - (2) To designate as official stations for the administration of this Compact such existing water gauging stations (and to operate, maintain, repair and abandon

the same), and to locate, establish, construct, operate, maintain, repair and abandon additional such stations as the Administration may from time to time find and determine necessary or appropriate;

- (3) To make findings as to the deliveries of water at Stateline, as hereinabove provided, from the stream-flow records of the Stateline gauge which shall be operated and maintained by the Administration or in cooperation with the appropriate Federal Agency, for determination of the actual Stateline flow, unless the Administration shall find and determine that, because of changed physical conditions, or for any other reason, reliable records are not obtainable thereat; in which case, such existing Stateline station may, with the approval of the Administration, be abandoned, and, with such approval, a substitute Stateline station established in lieu thereof;
- (4) To make findings as to the quantities of reservoir storage, (including joint storage) and releases therefrom; diversions, transmission losses and as to incident stream-flow changes; and as to the share of such quantities chargeable against or allocable to the respective States;
- (5) To record and approve all points of diversion at which water is to be removed from the Sabine River or its tributaries below the Stateline; provided that, in any case, the State agency charged with the administration of the water laws for the State in which such point of diversion is located shall first have approved such point for removal or diversion; provided further that any such point of removal or diversion once jointly approved by the appropriate State agency and the Administration shall not thereafter be changed without the joint amendatory approval of such State agency and the Administration;
- (6) To require water users at their expense to install and maintain measuring devices of approved type in any ditch, pumping station, or other water diversion works on the Sabine River or its tributaries below the Stateline, as the Administration may determine necessary or proper for the purposes of this Compact; provided that the chief official of each State charged with the administration of water rights therein shall supervise the execution and enforcement of the Administration's requirements for such measuring devices;
- (7) To investigate any violation of this Compact and to report findings and recommendations thereon to the chief official of the affected State charged with the administration of water rights, or to the Governor of such State as the Administration may deem proper;
- (8) To acquire, hold, occupy and utilize such personal and real property as may be necessary or proper for the performance of its duties and functions under this Compact;
- (9) To perform all functions required of the Administration by this Compact, and to do all things necessary, proper, or convenient in the performance of its duties hereunder.

- (H.) Each State shall provide such available facilities, supplies, equipment, technical information, and other assistance, as the Administration may require to carry out its duties and functions, and the execution and enforcement of the Administration's orders shall be the responsibility of the agents and officials of the respective States charged with the administration of water rights therein. State officials shall furnish pertinent factual and technical data to the Administration upon its request.
- (I.) Findings of fact made by the Administration shall not be conclusive in any court or before any agency or tribunal, but shall constitute prima facie evidence of such facts.
- (J.) In the case of a tie vote on any of the Administration's determinations, orders or other actions subject to arbitration, then arbitration shall be a condition precedent to any right of legal action. Either side of a tie vote may, upon request, submit the question to arbitration. If there shall be arbitration, there shall be three arbitrators: one named in writing by each side, and the third chosen by the two arbitrators so elected. If the arbitrators fail to select a third within ten days, then he shall be chosen by the Representative of the United States.
- (K.) The salaries, if any, and the personal expenses of each member of the Administration shall be paid by the Government which he represents. All other expenses incident to the Administration of this Compact, and which are not paid by the United States, shall be borne equally by the States. Ninety days prior to the Regular Session of the Legislature of either State, the Administration shall adopt and transmit to the Governor of such State for his approval its budget covering anticipated expenses for the forthcoming biennium, and the amount thereof payable by such State. Upon approval by its Governor, each State shall appropriate and pay the amount due by it to the Administration. The Administration shall keep accurate accounts of all receipts and disbursements, and shall include a statement thereof, together with a certificate of audit by a certified public accountant, in its annual report. Each State shall have the right to make an examination and audit of the accounts of the Administration at any time.
- (L.) The Administration shall, whenever requested, provide access to its records by the Governor of either State, or by the chief official of either State charged therein with the administration of water rights. The Administration shall annually on or before January 15 of each year make and transmit to the Governors of the signatory States, and to the President of the United States a report of the Administration's activities and deliberations for the preceding year.

#### ARTICLE VIII

- (A.) This Compact shall become effective when ratified by the Legislature and approved by the Governors of both States, and when approved by the Congress of the United States.
- (B.) The provisions of this Compact shall remain in full force and effect until modified, altered, or amended in the same manner as hereinabove required for ratification thereof. The right so to modify, alter, or amend this Compact is expressly reserved. This Compact may be terminated at any time by mutual consent of the signatory States. In the event this Compact is terminated as herein provided, all rights then vested hereunder shall continue unimpaired.
- (C.) Should a court of competent jurisdiction hold any part of this Compact to be contrary to the constitution of any signatory State or of the United States of America, all other severable provisions of this Compact shall continue in full force and effect.

#### ARTICLE IX

This Compact is made and entered into for the sole purpose of effecting an equitable apportionment and providing beneficial uses of the waters of the Sabine River, its tributaries, and its watershed, without regard to the boundary between Louisiana and Texas, and nothing herein contained shall be construed as an admission on the part of either State or any agency, commission, department or subdivision thereof, respecting the location of said boundary; and neither this Compact nor any data compiled for the preparation or administration thereof shall be offered, admitted, or considered in evidence in any dispute, controversy, or litigation bearing upon the matter of the location of said boundary.

The term "Stateline," as defined in this Compact, shall not be construed to define the actual boundary between the State of Texas and the State of Louisiana.

#### ARTICLE X

Nothing in this Compact shall be construed as affecting in any manner any present or future rights or powers of the United States, its agencies or instrumentalities in, to, and over the waters of the Sabine River Basin.

IN WITNESS WHEREOF, the Representatives have executed this Compact in three counterparts hereof, each of which shall be and constitute an original; one of which shall be forwarded to the Administrator, General Services Administration of the United States of America, and one of which shall be forwarded to the Governor of each State.

DONE IN THE City of Logansport, in the State of Louisiana, this 26th day of January, 1953.

HENRY L. WOODWORTH, Representative for the State of Texas

JOHN W. SIMMONS, Representative for the State of Texas

ROY T. SESSUMS, Representative for the State of Louisiana

APPROVED: LOUIS W. PRENTISS, Representative of the United States

#### APPENDIX D

# BY-LAWS of Sabine River Compact Administration

# ARTICLE I THE ADMINISTRATION

- 1. The Administration shall be that administration referred to in Article VII of the Sabine River Compact.
- 2. The credentials of each Member shall be filed with the Secretary of the Administration.
- 3. Each Member shall advise the office of the Administration in writing the address to which all official notices and other communications of the Administration shall be sent and shall further promptly advise the office of the Administration in writing of any change in such address.

## ARTICLE II OFFICERS

- 1. The officers of the Administration shall be: Chairman, Vice-Chairman, Secretary, and Treasurer.
- 2. The Representative of the United States shall be the Chairman of the Administration. The Chairman shall preside at meetings of the Administration. The Chairman's duties shall be such as are usually imposed upon such officers, and such as may be assigned by these By-Laws, or by the Administration from time to time; provided, however, that the Representative of the United States shall not have the right to vote.
- 2A. The Vice-Chairman shall be a member of the Administration and shall be elected by the Administration. The Vice-Chairman, once elected, shall serve a term expiring with their appointment or until such time as replaced by the Administration. The Vice-Chairman shall preside at any meeting in the absence of the Chairman and shall perform all duties of the Chairman. In the case of a vacancy in the office of Vice-Chairman, the Administration shall proceed as expeditiously as possible to elect a new Vice-Chairman.
- 3. The Secretary may be a Member of the Administration. The Secretary shall be elected by the Administration. The Secretary shall serve for such term and receive such salary and perform such duties as the Administration may direct. In the case of vacancy in the office of Secretary, the Administration shall proceed as expeditiously as possible to elect a new Secretary.

4. The Treasurer may be a Member of the Administration. The Treasurer shall receive, hold and disburse all funds of the Administration; and the Treasurer shall furnish a bond for the faithful performance of the Treasurer's duties in such amount as the Administration may direct. The cost of such bond shall be paid by the Administration. The Treasurer shall keep an accurate account of all funds of the Administration in a well bound book.

## ARTICLE III PRINCIPAL OFFICE

- 1. There shall be a principal office of the Administration located in the office of the Secretary of the Administration and such other offices as may be designated by the Administration from time to time as necessary.
- 2. The principal office shall be open for business on such hours and on such days as the Administration may from time to time direct.
- 3. All permanent books and records of the Administration shall be kept in the principal office of the Administration in a fireproof vault.

# ARTICLE IV MEETINGS

- 1. The annual meeting of the Administration shall be held during the month of November of each year.
- 2. A schedule of regular meetings shall be adopted by the Administration from time to time together with the place where such meetings shall be held.
- 3. Special Meetings of the Administration may be called by the Chairman at any time. Upon written request of any two Members of the Administration, setting forth the matters to be considered at such Special Meetings, it shall be the duty of the Chairman to call a Special Meeting and designate the place of such Special Meeting. In the case of a vacancy in the office of Chairman or inability of the Chairman to act, the Vice-Chairman may call special meetings at the written request of any two Members of the Administration and designate the place of such Special Meetings.
- 4. Notice of all Meetings of the Administration shall be sent by the Secretary, or in the case of a vacancy in the Office of the Secretary to act, by the Chairman, to all Members of the Administration and, for informational purposes, to the Secretary of State of the States of Louisiana and Texas, by ordinary mail at least ten days in advance of each such meeting, and such notice shall state the purpose thereof. Any other matter deemed pertinent by the Administration may be considered at any such Meeting.
- 5. All meetings of the Administration shall be held at such place as shall be agreed upon by the Members of the Administration.

- 6. Minutes of the Administration shall be preserved in a suitable manner. Minutes, until approved, shall not be official, and shall be furnished only to Members of the Administration, its employees, and committees.
- 7. A quorum for any meeting shall consist of three voting Members of the Administration. Each State Member shall have one vote, and every decision, authorization, determination, order, or other action, shall require the concurring votes of at least three members.
- 8. At each regular meeting or annual meeting of the Administration, the order of business, unless agreed otherwise, shall be as follows:

Call to Order
Reading of Unapproved Minutes
Approval of Unapproved Minutes
Report of Chairman
Report of Secretary
Report of Treasurer
Report of Committees
Unfinished Business
New Business
Adjournment

- 9. All meetings of the Administration except Executive Sessions shall be open to the public. Executive Sessions shall be open only to Members of the Administration and such advisors as may be designated by each Member and employees as permitted by the Administration; provided, however, that the Administration may call witnesses before it when in such Sessions.
- 10. Any meeting of the Administration may be recessed from time to time and from the place set for the meeting to another place.

#### ARTICLE V COMMITTEES

1. There shall be the following standing committees:

Budget Committee Engineering Committee Legal Committee

- 2. The standing committees shall have the following duties:
  - a. The Budget Committee shall prepare the annual budget and shall advise the Administration on all fiscal matters that may be referred to it.

- b. The Engineering Committee shall advise the Administration on all engineering matters that may be referred to it, and shall compile all pertinent engineering data and records.
- c. The Legal Committee shall advise the Administration on all legal matters that may be referred to it.
- 3. Members of the Committees may or may not be Members of the Administration. The number of Members of each committee shall be determined from time to time by the Administration. The two Members of the Administration from each State shall designate the member or members on each Committee representing their State.
- 4. The Chairman shall be ex-officio member of all Committees.
- 5. The Chairman of each Committee shall be elected by the members of the Committee from its membership.
- 6. The Administration may from time to time create special committees, composed of such members and others, and assigned such tasks as the Administration may determine.
- 7. Formal committee reports shall be made in writing and filed with the Administration.

## ARTICLE VI RULES AND REGULATIONS

- 1. The Administration shall adopt rules and regulations consistent with the Sabine River Compact, and, in addition thereto, shall prescribe procedures for approval of all points of diversion of water from the Sabine River and for such other matters as may properly come before the Administration.
- 2. Rules and regulations of the Administration may be compiled, and copies may be prepared for distribution to the public under such terms and conditions as the Administration may prescribe.

# ARTICLE VII FISCAL

- 1. All funds of the Administration shall be received by the Treasurer and deposited by him to the credit of the Administration in a depository or depositories designated by the Administration.
- 2. Disbursements of funds in the hands of the Treasurer shall be made by check, signed by him, upon voucher approved by the Members of the Administration.

- 3. On or before the 30th of June of each year, the Administration shall adopt and transmit a budget pursuant to the Sabine River Compact covering anticipated expenses for the forthcoming fiscal year, and the amount thereof payable by each State.
- 4. All receipts and disbursements of the Administration shall be audited annually by a qualified independent certified public accountant to be selected by the Administration.
- 5. The Administration shall include a statement of receipts and disbursements, together with a certificate of an audit report by a certified public accountant in its annual report.
- 6. An up-to-date inventory of all the property of the Administration shall be kept at the principal office of the Administration.
- 7. The fiscal year of the Administration shall begin September 1 of each year, and end August 31 of the next succeeding year.

### ARTICLE VIII ANNUAL REPORT

- 1. The Administration shall make and transmit to the Governors of the States signatory to the Sabine River Compact and to the President of the United States a report of the Administration's activities and deliberations for the preceding year, which shall be made on or before January 15 of each year.
- 2. The annual report shall include, among other things, the following:
  - a. The estimated budget
  - b. Report of annual audit
  - c. All hydrologic data which the Administration deems pertinent
  - d. Statements as to cooperative studies of water supplies made during the preceding year
  - e. All findings of fact made by the Administration during the preceding year
  - f. Such other pertinent matters as the Administration may require

## ARTICLE IX SEAL

- 1. The Administration shall have a seal which shall be a circular seal with the words "Sabine River Compact Administration" imprinted around the border.
- 2. The seal of the Administration shall be kept at the principal office of the Administration.

3. The seal shall be affixed to all contracts or other official instruments in writing, and no such instrument or contract in writing shall be binding upon the Administration without such seal affixed thereto.

# ARTICLE X MISCELLANEOUS

- 1. All contracts or other instruments in writing to be signed for and on behalf of the Administration, except matters relating to the receipt or disbursement of funds, shall be signed by those officers as designated by the Administration from time to time.
- 2. The Administration shall designate as official stations such existing water-gauging stations, and establish such additional water-gauging stations as may from time to time be necessary or appropriate for the Administration of the Sabine River Compact, provided such designation shall include a gauging station located at stateline, as defined in said Compact. Provided, further, such stateline station may, with the approval of the Administration, be abandoned; and with such approval, a substitute stateline station established in lieu thereof.

# ARTICLE XI AMENDMENTS TO BY-LAWS

Amendments to the By-Laws may be made at any meeting of the Administration, provided notice of the proposed amendment shall have been given in the notice of the meeting.

#### APPENDIX E

#### RULES AND REGULATIONS

The following rules and regulations, adopted December 13, 1955, and amended June 14, 1985, shall have binding force, subject to the provisions of the Sabine River Compact. They shall be constructed and enforced by the Sabine River Compact Administration in the manner best calculated to fairly and impartially accomplish the purposes for which the Compact was adopted:

- 1. Each State will provide annual surface water-use data for the stateline reach of the Sabine River Basin by April 15 of the following year. In addition, each State will provide daily or weekly surface water-use data for specific areas in the Stateline reach, when requested by the Administration in response to an official complaint that water-use by one State is preventing the other State from diverting or using its share of the joint water supply.
- 2. By December 31, 1985 each signatory State shall have submitted to the Administration documentation of each existing water use from the Sabine River and tributaries within the area subject to Compact administration. The documentation for each water-use project shall include the purpose of use, the location of the diversion point, the rate and method of diversion, the maximum quantity of water to be derived annually, the measuring device approved and/or in use, any other pertinent features or special conditions of the project and, where available, a description of the legal bases for the water use authorization. This documentation shall also be provided to the other State.
- 3. The Administration, through the procedures described herein, shall approve points of diversion and diversion measuring devices, and advise each State when the Administration considers new water uses in each State to have significant potential to cause a Compact violation based upon historic flow conditions.
  - a. All water-use projects in Texas or Louisiana initiated after the effective date of these rules or not timely submitted pursuant to Rule No. 2 above and subject to Compact Administration, shall be submitted by the appropriate State to the Administration for review. The information submitted shall include a description of the legal basis for the water use, the purpose of use, the location of the diversion point, the rate and method of diversion, the maximum quantity of water to be diverted annually, the measuring device approved and/or in use, and any other pertinent features or special conditions of the project.
  - b. The water-use projects first shall be reviewed by the Secretary of the Administration. The Secretary will determine if all required information has been submitted by the State in which the project is located and will provide all such information to the other State for comments. Comments by the other State shall be submitted to the Secretary, with a copy to the

State which submitted the project. The Secretary shall submit complete water- use project data and any State comments to the Engineering Committee members.

- c. The Engineering Committee will review the water-use projects and report its findings directly to the Compact Administration if the project is undisputed, or to a joint session of the Engineering and Legal Committees if a portion of the project is questioned. If the Engineering Committee concludes that a project may have a significant potential for causing a Compact violation, it shall specify the flow conditions under which a potential violation could occur. The Engineering and Legal Committees will jointly report to the Compact Administration on any projects reviewed by them.
- d. The Administration will vote on whether to approve diversion points and measuring devices, and on whether to inform the States that the Administration considers a water-use project to create a significant potential for causing a Compact violation. The findings of the Commission shall be provided to each State.
- 4. All points of diversion, if not in violation of the Sabine River Compact, shall be approved by the Administration. Disapproval shall not be used in an attempt to interfere with the right of either State to regulate within its boundaries the appropriation, use, and control of water not inconsistent with its obligation under the Compact.
- The Administration shall deem a water-use project to create a significant 5. potential for causing a Compact violation only if such project would exceed the amount estimated by the Administration as available for each State to use, considering the location of the diversion point, the flows of water available, In furtherance of this advisory function, the and existing water uses. Engineering Committee shall collect available flow and basin model data to estimate a range of flows available for use by each State in various reaches of the stateline based upon historical flow figures. A finding by the Administration regarding the potential of a water-use project to create a Compact violation shall in no way be deemed to interfere with the rights of Texas and Louisiana to apportion water within their respective states. However, the State in which such water-use project is located may be required by the Administration to monitor and report on a more frequent basis the diversions and flows in the affected reach of the streams in order to provide a higher degree of assurance of compliance with the terms of the Compact.
- 6. In accordance with ARTICLE VII(G) (6) of the Sabine River Compact, it shall be the policy of the Sabine River Compact Administration to require measuring equipment for all diverters subject to the terms of the Compact. Such measuring equipment shall be properly equipped with meters and devices of standard types to accurately measure the quantity of water diverted within generally accepted industry standards for accuracy, or as established by

the American Water Works Association. The measuring equipment so installed shall be properly maintained and shall be calibrated on a frequency as required for such equipment by the Administration. Metering devices shall be installed and maintained at the user's expense. The chief official of each state charged with the administration of water rights therein shall supervise the execution and enforcement of the Administration's standards for and requirements to install such metering devices.

- 7. The Administration may order a public hearing on any matter pending before it when it feels the public interest will be best served thereby.
- 8. All hearings shall be public, and the Administration shall hear any interested party and give due consideration to any pleadings, statements, or other offerings made by him. The Administration may waive formal rules of evidence.
- 9. Hearings by the Administration on any matter shall be conducted at such times and places as may be ordered by the Administration.
- 10. The Administration shall prepare and issue a notice of hearing after a resolution or order is entered in the minutes, setting the matter to be heard by public hearing. The notice of hearing shall be delivered or mailed to all interested parties at least fifteen days in advance of such hearing.
- 11. In the event anyone should desire to protest or oppose any matter pending before the Administration, a protest or opposition shall be filed with the Administration at least five days before the date on which the subject has been set for hearing.
- 12. Investigations of violations of the Compact shall be made by any member to the Administration or by any committee or employee therefore as directed by the Administration.

#### APPENDIX F

# WEB SITE ADDRESSES of PARTICIPATORY AGENCIES

- 1. U.S. Geological Survey (USGS) http://water.usgs.gov
- 2. Sabine River Authority of Texas http://www.sra.dst.tx.us
- 3. Sabine River Authority, State of Louisiana http://www.toledo-bend.com/srala
- 4. National Weather Service http://www.srh.noaa.gov
- 5. Louisiana Department of Transportation & Development (LADOTD) http://www.dotd.state.la.us
- 6. Louisiana Department of Environmental Quality (LDEQ) http://www.deq.state.la.us
- 7. Texas Attorney General's Office http://www.oag.state.tx.us
- 8. Texas Commission on Environmental Quality http://www.tceq.state.tx.us

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