

**2021**

**SIXTY-SEVENTH  
ANNUAL REPORT**

**SABINE RIVER COMPACT  
ADMINISTRATION  
LOUISIANA AND TEXAS**

# Sabine River Basin

ARKANSAS

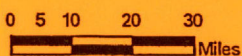
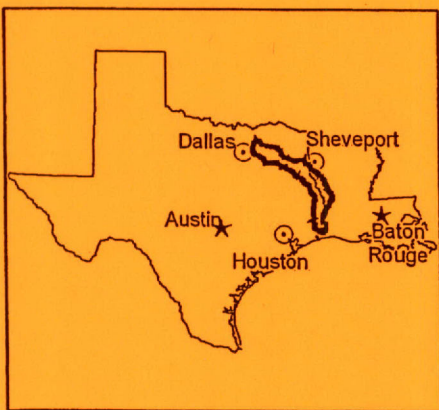
LOUISIANA

TEXAS

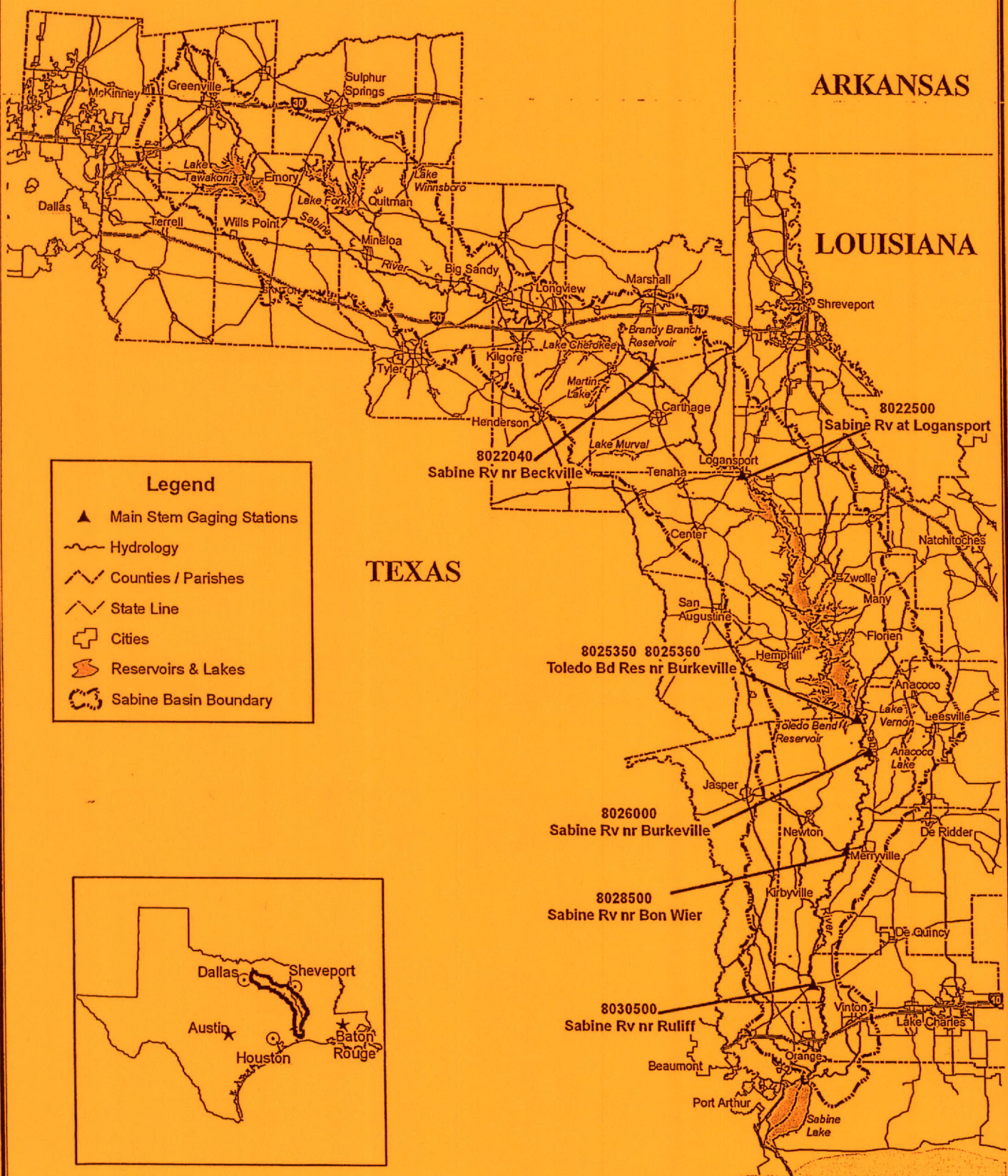
GULF OF MEXICO

## Legend

- ▲ Main Stem Gaging Stations
- ~ Hydrology
- ▭ Counties / Parishes
- State Line
- Cities
- ◊ Reservoirs & Lakes
- Sabine Basin Boundary



Road Coverage from TIGER Files  
 Hydrology from various sources  
 Cities & Counties from LA-GIS, TNRS, TIGER  
 Projection: UTM Zone 15, Datum: NAD 83  
 Map Produced by SRA-Tx for the Sabine River Compact  
 May 2005



- 8022500 Sabine Rv at Logansport
- 8022040 Sabine Rv nr Beckville
- 8025350 8025360 Toledo Bd Res nr Burkeville
- 8026000 Sabine Rv nr Burkeville
- 8028500 Sabine Rv nr Bon Wier
- 8030500 Sabine Rv nr Ruliff

**SIXTY-SEVENTH ANNUAL REPORT**

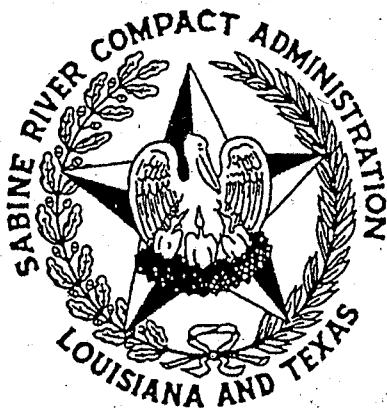
# **SABINE RIVER COMPACT ADMINISTRATION**

**FOR THE YEAR 2021**

**To the President of the United States**

**and**

**The Governors of Louisiana and Texas**



**The Administration  
Federal Representative and Chairman  
Vacant since March 3, 2017**

**George D. Brandon, DVM and James Pratt  
for Louisiana**

**Michael H. Lewis and Jerry Gipson  
for Texas**

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Annual Report of

SABINE RIVER COMPACT ADMINISTRATION  
2021

Report Year: October 1, 2020 through September 30, 2021

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, 2021.

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: Vacant since 3/3/17  
Louisiana Representatives: George D. Brandon, DVM  
James W. "Jim" Pratt  
Texas Representatives: Jerry Gipson  
Michael "Mike" H. Lewis

2. Officers of the Administration

Chairman: Vacant since 3/3/17  
Vice Chairman: George D. Brandon, DVM, Leesville, LA 71446  
Treasurer: Jerry Gipson, Longview, TX 75605  
Secretary: Kellie Ferguson, 15091 TX Hwy., Many, LA 71449

3. Standing Committees

Budget Committee:  
USGS LA Representative:  
Todd Baumann, Baton Rouge, LA  
USGS TX Representative:  
Jason Pollender, Shenandoah, TX  
LA Sabine River Authority Representative:  
Warren Founds, Many, LA)  
TX Commission on Environmental Quality Representative:  
Scott Van Winkle

**Engineering Committee:**

**Bill Hughes, Chairman, Orange, TX**  
**Todd Baumann, Baton Rouge, LA**  
**David Brown, The Woodlands, TX**  
**Jim Brown, Orange, TX**  
**Mike Carr, Many, LA**  
**David Daigle, Lake Charles, LA**  
**Jamie East, Orange, TX**  
**Kellie Ferguson, Many, LA**  
**Warren Founds, Many, LA**  
**Rodney Alan Fulton, Many, LA (from 10/14/20)**  
**Gene Guidry, Many, Vice-Chairman, Many, LA**  
**Machelle Hall, Baton Rouge, LA (from 10/14/20)**  
**Heather Hunziker, Austin, TX**  
**Don Iles, Hemphill, TX**  
**Christopher Knotts, Baton Rouge, LA**  
**Mark Mann, Orange, TX (from 10/14/20)**  
**David Montagne, Orange, TX**  
**Jason Pollender, Shenandoah, TX**  
**Barton Rumsey, Many, LA**  
**Deborah Stagner, Orange, TX**  
**Scott Van Winkle, Austin, TX**  
**Harry Vorhoff, Baton Rouge, LA (thru 10/14/20)**  
**Travis Williams, Orange, TX**  
**Chief, State Programs Section; USEPA, Dallas, TX**  
**Meteorologist in Charge, NWS, Lake Charles, LA**

**Engineering Sub-Committees:**

**Diversion:** **Jim Brown**  
**Mike Carr**  
**Jamie East**  
**Gene Guidry**  
**Bill Hughes**  
**Mark Mann (from 10/14/20)**  
**Barton Rumsey**

**Gaging:** **David Brown**  
**Jim Brown**  
**Jamie East**  
**Rodney Alan Fulton, Many, LA (from 10/14/20)**  
**Gene Guidry**  
**Bill Hughes**  
**Mark Mann (from 10/14/20)**

**Water Quality:** **Jim Brown**  
**Scott Van Winkle**  
**Travis Williams**

**Legal Committee:** **Heather Hunziker**  
**Harry Vorhoff (thru 10/14/20)**  
**Machelle Hall (from 10/14/20)**

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

#### 4. Meetings

Meetings held during the report year were as follows:

October 14, 2020 at Sabine River Authority of Texas in Orange, TX. (135<sup>th</sup> meeting)

May 10, 2021 at Cypress Bend Resort, Many, LA (136<sup>th</sup> meeting)

#### 5. Fiscal

(a) 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, 2020 through August 31, 2021. The report of this audit is attached as Appendix C.

Stream Gaging Program	\$ 85,100.00
Quality of Water Program	12,800.00
Administrative Expenses	<u>9,700.00</u>
Total Budget	\$ 107,600.00

Note: The total cost of the stream gaging and quality of water programs is to be funded as follows: \$30,800 with USGS funds, \$21,800 with GWSIP funds, and \$45,300 with SRCA funds (one-half from each State). The total cost of the administrative expenses, \$9,700, is funded by SRCA, one-half from each State. A detailed breakdown of these costs is attached as Appendix B.

#### 6. General Activities

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

For the fiscal year ending August 31, 2021, the Administration and the Water Resources Division, U.S. Geological Survey provided funds for the cost of operating the basic-records part of the program, consisting of the full support for nine continuous-record discharge stations; one reservoir stage and contents station; one stage station; and water quality analyses for one site. Details and Water Year records for these stations are contained in Appendix A.

The discharge station on the Sabine River near Beckville is used for the determination of Stateline flow as defined by Article VII: Paragraph 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, 2020 - September 30, 2021.

## DIVERSIONS IN ACRE-FEET

Purpose	State	Sabine River Below Toledo Bend Dam	Tributaries Below Toledo Bend Dam	Toledo Bend Reservoir	Tributaries flowing into Toledo Bend Reser. Below State Line
Irrigation	Louisiana	282	0.00	0.00	0.00
	Texas	594.21	0.00	0.00	0.00
Industrial	Louisiana	75,619.6	0.00	18,833.45	93.10
	Texas	51,486.67	0.00	3,113.93	0.00
Mining	Louisiana	0.00	0.00	2,455.88	0.00
	Texas	0.00	0.00	1,723.75	0.00
Municipal	Louisiana	21.0	0.00	3,319.14	0.00
	Texas	69.25	0.00	1,133.18	548.77
Total	Louisiana	75,922.6	0.00	24,608.47	93.10
	Texas	52,149.13	0.00	5,970.86	548.77
Total Diversion					
For Louisiana					100,624.17
For Texas					58,668.76
<b>Grand Total</b>					<b>159,292.93</b>

The municipal diversion for Louisiana from the Reservoir includes water used by Logansport as riparian water, royalty free. The Louisiana industrial diversion shown from tributaries flowing into Toledo Bend Reservoir below the State Line is water used by Weyerhaeuser from Bayou San Miguel as riparian water, royalty free, as approved by the SRCA.

### 7. Hydrologic Conditions

Lawsuits relative to the March, 2016 spillway releases are continuing.

The spillway gates at Toledo Bend Dam were operated during the year to pass flood water in accordance with the "Guide for Spillway Gate Operation, Revised June 27, 2001" as follows:

April 30–May 8: released 99,810 AF at a maximum of 11,000 CFS

May 9–June 18: released 1,046,870 AF at a maximum of 22,000 CFS

According to Toledo Bend Project Joint Operation daily records for the Water Year, the minimum elevation of the Reservoir was 167.74 on November 24, 2020 and the maximum elevation was 172.90 on May 22, 2021. The USGS records show a minimum of 167.63 on November 24, 2020 at 14:15 and a maximum of 173.33 on May 11, 2021 at 20:00.

Data for USGS station 08022040, Sabine River near Beckville, TX, for the Water Year showing the discharge in cubic feet per second as reflected by USGS records is shown in Appendix A. According to these records, the minimum daily flow at Beckville for the entire



Water Year was ABOVE 21.556 CFS, the flow that is required to produce a Stateline flow above 36 CFS as detailed in Item 13 of the Rules and Regulations of the Compact.

Another unusual occurrence is that the rainfall in the lower basin, 5 inches at the gage at the dam site, 8 inches at the Bon Wier gage, 11 inches at the International Paper Co. gage near Orange, and 9 inches at the Navy Pier gage at Orange produced a stage slightly above 24.0 feet at the Deweyville gage, the stage at which minor flooding begins. The stages at Bon Wier and Burkeville did not reach the action stage at either location (22 feet compared to an action stage of 30 feet at Bon Wier and 15.5 feet compared to an action stage of 38 feet at Burkeville).

## 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. Current and historical data is available on various websites.

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.

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 A.

1. Bayou Grand Cane near Stanley, LA
2. Bayou San Patricio near Benson, LA
3. Bayou Toro near Toro, LA
4. 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 (1979-89)
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 (1974-96)
  11. Murvaul Bayou near Gary, TX (1958-83)
  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 (1952-83)
  17. Sabine River near Ruliff, TX
  18. Cow Bayou near Mauriceville, TX (1952-86)
- 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 (1962-86)
  3. Lake Fork Reservoir near Quitman, TX
  4. Lake Cherokee near Longview, TX (1951-83)
  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 Commission on Environmental Quality (TCEQ), 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 mid-lake 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) (1968-72, 1973-96)

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) (1961-86)
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) (1985-86)
25. Lake Cherokee near Longview, TX (USGS-TX) (1969-83)
26. Sabine River near Beckville, TX (USGS-TX) (1962-98)
27. Martin Lake near Tatum, TX (USGS-TX) (1939-45)
28. Sabine River near Deadwood, TX (SRA-TX)
29. Sabine River near Logansport, LA (LDEQ, TCEQ, USGS, SRA-TX) (1939-45)
30. Bayou Castor near Logansport, LA (USGS-LA)
31. Tenaha Creek south of Campiti, TX (TCEQ)
32. Toledo Bend Reservoir, Tenaha arm near Center, TX (SRA-TX)
33. Toledo Bend Reservoir near Milam, TX (SRA-TX)
34. Toledo Bend Reservoir near Huxley Water Plant Intake (SRA-TX)
35. Toledo Bend Reservoir, Sunshine Bay near Milam, TX (SRA-TX)
36. Toledo Bend in Six Mile Boat Lane at US 87 Bridge (SRA-TX)
37. Toledo Bend Reservoir at Toledo Bend Dam, TX (SRA-TX)
38. Sabine River below spillway of Toledo Bend Reservoir, TX (SRA-TX)
39. Sabine River at Toledo Bend Dam near Burkeville, TX (USGS-TX) (1967-86)
40. Sabine River near Burkeville, TX (SRA-TX, USGS-TX) (1968-72)
41. Bayou Anacoco near Knight, LA (USGS-LA)
42. Sabine River near Bon Weir, TX (LDEQ, TCEQ, USGS-TX, SRA-TX) (1969-85)
43. Sabine River near Ruliff, TX (USGS-TX, SRA-TX) (1945, 1947-98)
44. Sabine River at IH-10 at Orange, TX (LDEQ, TCEQ)
45. Adams Bayou at FM 1006 near Orange, TX (TCEQ)
46. Adams Bayou at IH-10 at Orange, TX (TCEQ)
47. Sabine River at Channel Marker 3 below Cow Bayou, TX (TCEQ)
48. Cow Bayou at FM 1442 east of Bridge City, TX (TCEQ)

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 various websites and 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 on the Sabine River:**

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

### **Continuous-record stations on tributaries flowing into the Sabine River:**

- Bayou Grand Cane near Stanley, LA**
- Bayou San Patricio near Benson, LA**
- Bayou Toro near Toro, LA**
- Bayou Anacoco near Rosepine, LA**
- Big Cow Creek near Newton, TX**

### **Water quality stations are maintained at the following locations:**

- Bayou Anacoco near Knight, LA (TCEQ ID 10340 SRA-TX ID BA4)**
- Sabine River near Bon Wier, TX (TCEQ ID 10398 SRA-TX ID SR3)**

Water Quality for these stations is provided on a monthly basis by the Sabine River Authority of Texas Environmental Services and is available at [www.sratx.org](http://www.sratx.org) or at the Texas Commission on Environmental Quality (TCEQ) Clean Rivers Program (CRP) Data tool website: <http://www80.tceq.texas.gov/swqmisWeb/public/crpweb.faces>.

Records for the continuous-record stations listed above are given in Appendix A.

Respectfully submitted,

**SABINE RIVER COMPACT ADMINISTRATION**

**(Vacant since 3/3/17)**  
**Chairman**  
**Representative of the United States**

**George D. Brandon**  
**Vice-Chairman**  
**Commissioner for Louisiana**

**James W. "Jim" Pratt**  
**Commissioner for Louisiana**

**Jerry Gipson**  
**Commissioner for Texas**

**Michael H. Lewis**  
**Commissioner for Texas**

## APPENDIX A

### GAGING STATION RECORDS

U.S. Geological Survey data for WY 2020-2021 for discharge gaging stations in the Sabine Basin is herewith included. This data is utilized to produce an Annual Report for the preceding WY in accordance with Article VII, L of the Compact and Article VIII of the By-Laws.

The data available from the USGS 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. Only daily reservoir elevation data (and in graph form) are 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".

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.

Data obtained from the U.S. Geological Survey website is included for the following stations:

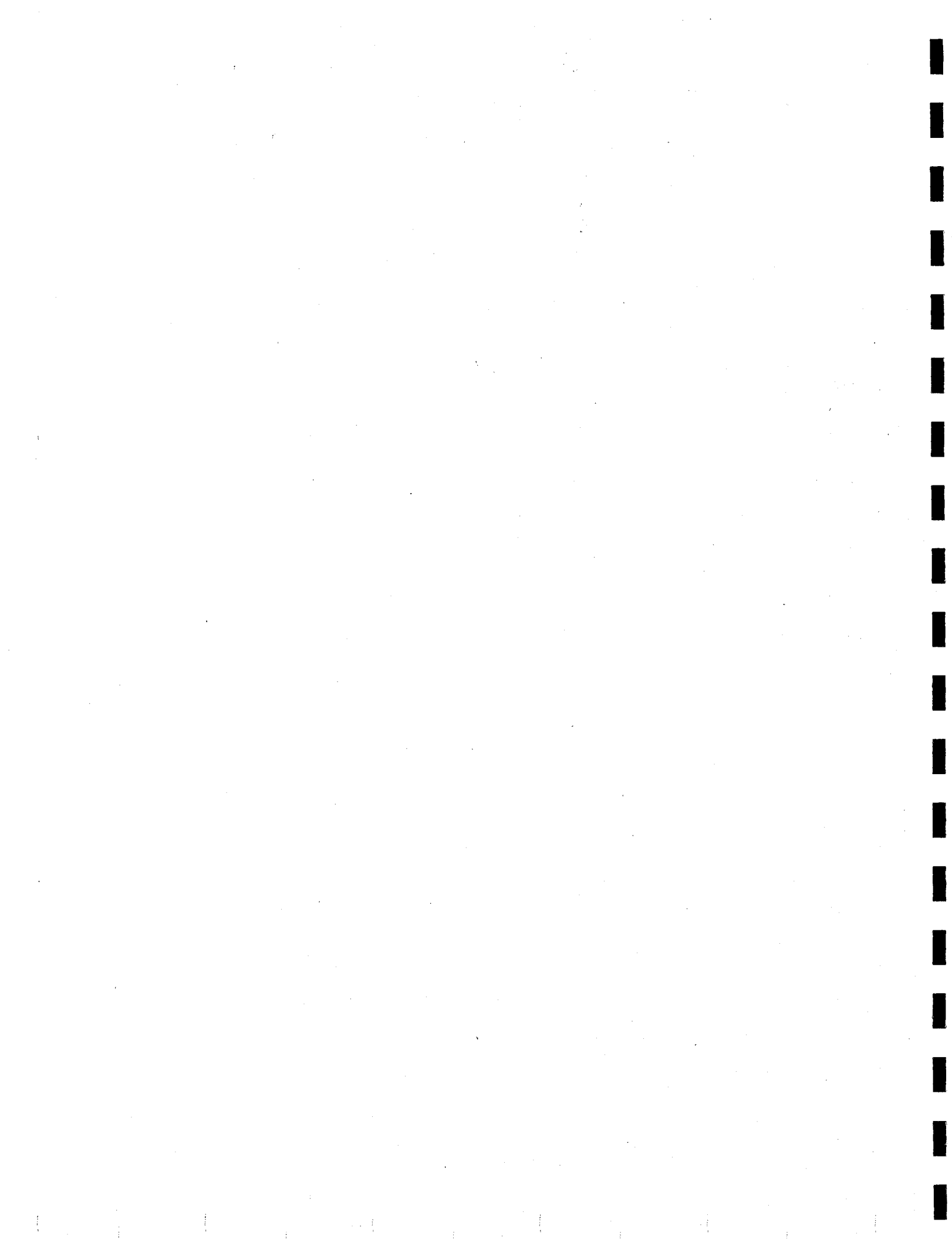
- Station 08022040, Sabine River near Beckville, TX (discharge in CFS)
- Station 08022500, Sabine River at Logansport, LA (gage height in feet)
- Station 08023080, Bayou Grand Cane near Stanley, LA (discharge in CFS)
- Station 08023400, Bayou San Patricio near Benson, LA (discharge in CFS)
- Station 08025350, Toledo Bend Reservoir near Burkeville, TX (elevation of reservoir water surface above datum in feet)
- Station 08025500, Bayou Toro near Toro, LA (discharge in CFS)
- Station 08026000, Sabine River near Burkeville, Tx (discharge in CFS)
- Station 08028000, Bayou Anacoco near Rosepine, LA (discharge in CFS)
- Station 08028200, Bayou Anacoco near Knight, LA (water quality)
- Station 08028500, Sabine River near Bon Wier, TX (discharge in CFS)
- Station 08029500, Big Cow Creek near Newton, TX (discharge in CFS)
- Station 08030500, Sabine River near Ruliff, TX (discharge in CFS)

The data herein presented for water quality stations consists of a summary of certain water quality data for monthly sampling intervals.

Data obtained from the SRATX Environmental Services Division is included for the following stations:

TCEQ ID 10340 (SRA-TX ID BA4), Bayou Anacoco at LA Hwy 111 crossing  
SW of Knight, LA

TCEQ ID 10398 (SRA-TX ID SR3), Sabine River at US 190 crossing East of Bon  
Wier, TX (USGS Station 08028500)







USGS Water-Year Summary 2021

**08022040 Sabine River near Beckville, TX**

LOCATION - Lat 32°19'38", long 94°21'12" referenced to North American Datum of 1927, Panola County, TX, Hydrologic Unit 12010002, on downstream side of downstream bridge on U.S. Highway 59, 0.9 mi upstream from Eight-mile 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 mi<sup>2</sup>.

**SURFACE-WATER RECORDS**

PERIOD OF RECORD - Oct. 1938 to current year. Prior to Oct. 1978, published as "near Tatum" (station 08022000). PERIOD OF RECORD, Water-Quality.-- CHEMICAL DATA: Feb. 1952 to Mar. 1999. BIOCHEMICAL DATA: Jan. 1968 to Mar. 1999. PESTICIDE DATA: Mar. 1968 to June 1981. RADIOCHEMICAL DATA: Jan. to June 1981. PERIOD OF DAILY RECORD, Water-Quality.-- 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 - Some records listed in the "Period of Record" for surface water and water quality may not be available electronically. 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.

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 ft<sup>3</sup>/s, Apr. 4, 1945, from rating curve extended above 66,000 ft<sup>3</sup>/s on basis of partly estimated discharge measurement of 88,900 ft<sup>3</sup>/s, gage height, 33.80 ft, from graph based on gage readings; minimum observed, 2.4 ft<sup>3</sup>/s, Aug. 11, 1964.

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).

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

Suggested citation: U.S. Geological Survey, 2022, National Water Information System data available on the World Wide Web (USGS Water Data for the Nation), accessed [March 29, 2022], [https://nwis.waterdata.usgs.gov/nwis/wys\\_rpt?dv\\_ts\\_ids=&132626\\_132627\\_132628&adr\\_begin\\_date=2020-10-01&adr\\_end\\_date=2021-09-30&site\\_no=08022040&agency\\_cd=USGS](https://nwis.waterdata.usgs.gov/nwis/wys_rpt?dv_ts_ids=&132626_132627_132628&adr_begin_date=2020-10-01&adr_end_date=2021-09-30&site_no=08022040&agency_cd=USGS)

**DISCHARGE, CUBIC FEET PER SECOND  
 YEAR 2020-10-01 to 2021-09-30  
 DAILY VALUES**

[e, Value has been estimated.]

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	October			November			December		
1	559	516	530	549	524	539	267	251	264
2	516	484	506	524	463	494	322	252	285
3	484	422	450	502	453	470	816	317	532
4	422	374	397	509	484	499	824	692	772
5	374	320	345	484	429	461	692	571	625
6	320	276	298	429	341	384	571	541	553
7	276	237	256	341	273	301	552	536	545
8	237	208	221	276	250	261	549	521	541
9	216	208	211	252	245	249	524	464	489
10	208	192	202	250	237	243	464	429	448
11	197	181	193	240	216	229	432	392	417
12	192	170	185	224	213	221	766	432	561
13	181	147	162	221	205	218	787	749	774
14	147	126	139	216	176	198	1,540	787	1,190
15	160	134	150	184	160	172	1,540	1,300	1,460
16	157	134	149	168	152	164	1,300	1,070	1,160
17	137	102	120	179	157	169	1,070	1,040	1,050
18	123	99.2	110	184	168	177	1,040	944	991
19	131	116	125	173	160	170	944	899	917
20	139	126	132	173	152	163	1,340	932	1,200
21	157	131	145	187	150	167	1,320	1,080	1,200
22	150	131	142	192	173	188	1,080	917	988
23	137	116	127	192	179	189	921	855	887
24	170	116	133	192	176	187	873	791	845
25	187	165	178	235	187	214	791	680	734
26	179	160	172	335	235	299	680	575	623
27	179	173	175	329	306	312	575	524	551
28	190	170	181	312	295	305	524	477	497
29	371	173	238	300	281	294	490	470	484
30	509	371	450	292	260	276	524	480	497
31	545	509	533				2,570	521	1,060
<b>Total</b>	<b>7,950</b>	<b>6,787</b>	<b>7,355</b>	<b>8,644</b>	<b>7,700</b>	<b>8,213</b>	<b>26,690</b>	<b>20,490</b>	<b>23,140</b>
<b>Mean</b>	<b>256</b>	<b>219</b>	<b>237</b>	<b>288</b>	<b>257</b>	<b>274</b>	<b>861</b>	<b>661</b>	<b>746</b>
<b>Max</b>	<b>559</b>	<b>516</b>	<b>533</b>	<b>549</b>	<b>524</b>	<b>539</b>	<b>2570</b>	<b>1300</b>	<b>1460</b>
<b>Min</b>	<b>123</b>	<b>99.2</b>	<b>110</b>	<b>168</b>	<b>150</b>	<b>163</b>	<b>267</b>	<b>251</b>	<b>264</b>
<b>Ac-ft</b>	<b>15,770</b>	<b>13,460</b>	<b>14,590</b>	<b>17,140</b>	<b>15,270</b>	<b>16,289</b>	<b>52,930</b>	<b>40,640</b>	<b>45,900</b>

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	January			February			March		
1	6,460	2,570	4,830	2,330	2,140	2,260	8,250	3,900	5,820
2	7,190	6,460	6,980	2,140	1,870	2,010	11,500	8,250	10,500
3	6,770	5,320	6,060	1,870	1,640	1,730	11,400	10,400	11,000
4	5,320	4,650	4,900	1,650	1,570	1,620	10,400	9,100	9,770
5	4,650	4,220	4,460	1,580	1,490	1,540	9,100	8,020	8,540
6	4,620	4,070	4,170	1,490	1,380	1,420	8,020	7,390	7,670
7	8,290	4,620	6,640	1,380	1,290	1,340	7,410	7,010	7,200
8	9,730	8,290	9,340	1,290	1,170	1,230	7,010	6,690	6,840
9	9,670	9,060	9,410	1,170	1,140	1,160	6,690	6,440	6,560
10	9,060	8,360	8,690	1,140	1,100	1,110	6,460	6,320	6,370
11	8,360	7,810	8,070	1,360	1,100	1,170	6,340	6,180	6,280
12	7,810	7,460	7,630	1,440	1,360	1,420	6,180	5,880	6,050
13	7,460	6,800	7,170	1,380	1,270	1,320	5,880	5,160	5,540
14	6,800	5,520	6,260	1,280	1,250	1,260	5,160	4,060	4,640
15	5,520	3,540	4,520	1,360	1,260	1,320	4,060	3,190	3,570
16	3,540	2,520	2,960	1,460	1,360	1,410	3,190	2,720	2,930
17	2,520	1,990	2,230	1,500	1,450	1,470	2,900	2,650	2,710
18	1,990	1,660	1,820	1,620	1,500	1,550	3,600	2,900	3,360
19	1,660	1,490	1,540	1,690	1,620	1,660	3,600	3,110	3,420
20	2,760	1,550	2,200	1,940	1,690	1,790	3,110	2,590	2,820
21	2,840	2,710	2,790	2,750	1,940	2,330	2,590	2,380	2,480
22	2,720	2,640	2,670	3,500	2,750	3,180	2,390	2,310	2,350
23	2,820	2,720	2,790	3,530	3,290	3,460	2,900	2,320	2,560
24	2,790	2,610	2,700	3,290	2,670	2,950	3,060	2,840	2,990
25	2,610	2,470	2,540	2,670	2,330	2,490	2,840	2,350	2,570
26	2,470	2,370	2,410	2,770	2,280	2,430	2,350	2,170	2,250
27	2,370	2,240	2,320	3,650	2,770	3,270	2,180	2,090	2,120
28	2,250	2,210	2,230	3,900	3,650	3,750	3,700	2,180	2,830
29	2,330	2,250	2,290				4,020	3,700	3,960
30	2,360	2,320	2,340				4,000	3,840	3,900
31	2,370	2,330	2,360				3,910	3,840	3,880
<b>Total</b>	<b>148,100</b>	<b>124,800</b>	<b>137,300</b>	<b>57,130</b>	<b>50,330</b>	<b>53,650</b>	<b>164,200</b>	<b>142,000</b>	<b>153,500</b>
<b>Mean</b>	<b>4,778</b>	<b>4,027</b>	<b>4,430</b>	<b>2,039</b>	<b>1,797</b>	<b>1,916</b>	<b>5,296</b>	<b>4,580</b>	<b>4,951</b>
<b>Max</b>	<b>9730</b>	<b>9060</b>	<b>9410</b>	<b>3900</b>	<b>3650</b>	<b>3750</b>	<b>11500</b>	<b>10400</b>	<b>11000</b>
<b>Min</b>	<b>1660</b>	<b>1490</b>	<b>1540</b>	<b>1140</b>	<b>1100</b>	<b>1110</b>	<b>2180</b>	<b>2090</b>	<b>2120</b>
<b>Ac-ft</b>	<b>293,800</b>	<b>247,600</b>	<b>272,400</b>	<b>113,300</b>	<b>99,830</b>	<b>106,400</b>	<b>325,700</b>	<b>281,600</b>	<b>304,400</b>

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	April			May			June		
1	3,950	3,900	3,930	2,200	1,960	2,050	15,600	14,900	15,200
2	3,990	3,940	3,970	4,880	2,200	3,090	15,000	14,200	14,600
3	4,040	3,990	4,020	7,410	4,880	6,380	14,300	13,600	14,000
4	4,040	3,990	4,020	8,040	7,400	7,850	13,700	13,000	13,300
5	3,990	3,770	3,900	8,020	7,170	7,700	13,000	12,300	12,700
6	3,770	3,210	3,520	7,170	5,420	6,310	12,300	12,100	12,200
7	3,210	2,450	2,830	5,420	4,260	4,760	12,100	12,000	12,000
8	2,450	1,930	2,160	4,260	3,870	4,030	12,200	12,000	12,100
9	1,930	1,650	1,770	3,880	3,840	3,850	12,200	12,000	12,100
10	1,650	1,500	1,580	3,930	3,860	3,890	12,000	11,100	11,600
11	1,500	1,400	1,460	10,300	3,920	5,520	11,100	10,400	10,800
12	1,400	1,290	1,340	14,800	10,300	13,700	10,400	9,860	10,100
13	1,290	1,210	1,260	14,500	13,100	13,700	9,860	9,510	9,680
14	1,290	1,220	1,230	13,100	12,100	12,600	9,510	9,400	9,440
15	1,700	1,290	1,470	12,100	11,200	11,700	9,530	9,390	9,480
16	3,490	1,700	2,100	11,200	10,000	10,600	9,390	9,090	9,240
17	6,790	3,490	5,410	10,100	9,350	9,610	9,090	8,790	8,950
18	8,740	6,790	8,080	9,510	9,330	9,420	8,790	8,470	8,650
19	8,740	8,460	8,660	9,550	9,450	9,500	8,480	8,100	8,290
20	8,460	6,920	7,780	10,300	9,470	9,840	8,100	7,610	7,870
21	6,920	5,100	5,970	11,600	10,300	11,000	7,610	7,030	7,340
22	5,100	3,940	4,460	13,200	11,600	12,400	7,030	6,300	6,690
23	3,940	3,400	3,610	14,200	13,100	13,700	6,300	5,250	5,800
24	4,120	3,390	3,690	14,900	14,100	14,500	5,250	4,130	4,690
25	4,130	3,560	3,920	15,600	14,700	15,100	4,130	3,280	3,670
26	3,560	2,320	2,870	16,300	15,300	15,800	3,280	2,650	2,960
27	2,320	1,900	2,070	16,500	16,100	16,400	2,650	2,180	2,400
28	1,900	1,850	1,870	16,900	16,300	16,600	2,180	1,900	2,020
29	1,950	1,870	1,910	17,100	16,600	16,900	1,900	1,770	1,850
30	1,970	1,950	1,960	16,800	16,200	16,500	1,770	1,630	1,690
--				16,300	15,500	15,900			
<b>Total</b>	112,300	93,380	102,800	340,100	302,900	320,900	268,700	253,900	261,400
<b>Mean</b>	3,744	3,113	3,427	10,970	9,770	10,350	8,958	8,465	8,714
<b>Max</b>	8740	8460	8660	17100	16600	16900	15600	14900	15200
<b>Min</b>	1290	1210	1230	2200	1960	2050	1770	1630	1690
<b>Ac-ft</b>	222,800	185,200	203,900	674,500	600,800	636,500	533,100	503,700	518,499

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	July			August			September		
1	1,630	1,570	1,600	951	882	923	401	370	384
2	1,900	1,570	1,710	1,040	850	929	410	370	394
3	3,220	1,900	2,490	1,100	926	1,020	373	335	357
4	3,420	2,980	3,300	1,170	1,020	1,060	335	291	312
5	2,980	2,270	2,610	1,270	1,170	1,240	303	277	291
6	2,270	1,790	2,000	1,210	943	1,090	294	264	284
7	1,790	1,720	1,750	968	e869	e904	264	238	249
8	1,730	1,660	1,700	e869	e848	e864	259	236	251
9	1,660	1,490	1,580	e848	e727	e798	246	223	234
10	1,490	1,350	1,410	e727	e647	e690	236	223	230
11	1,470	1,320	1,380	e647	e551	e594	228	211	221
12	1,670	1,470	1,620	e551	e493	e521	211	184	205
13	1,610	1,500	1,540	e493	e446	e466	218	193	212
14	1,500	1,430	1,470	e446	e439	e440	209	173	194
15	1,440	1,360	1,390	e498	e434	e447	216	184	196
16	1,380	1,350	1,360	819	e498	e707	226	211	220
17	1,350	1,300	1,330	739	556	624	221	197	210
18	1,320	1,220	1,280	1,300	545	750	204	193	200
19	3,000	1,200	1,660	2,090	1,300	1,830	221	202	209
20	4,710	3,000	4,310	2,770	2,090	2,380	297	221	262
21	4,440	3,570	3,940	3,040	2,770	2,970	294	248	279
22	3,730	3,570	3,660	2,900	2,150	2,550	248	221	233
23	3,730	3,310	3,580	2,150	1,480	1,780	228	206	215
24	3,310	2,560	2,930	1,480	1,100	1,270	206	190	196
25	2,560	1,990	2,250	1,100	834	963	193	179	189
26	1,990	1,610	1,780	834	667	746	197	186	192
27	1,610	1,350	1,480	676	575	620	199	186	196
28	1,350	1,170	1,250	575	464	511	197	157	183
29	1,170	947	1,060	470	416	443	173	153	166
30	997	906	946	425	410	418	179	161	173
31	955	943	946	416	401	410			
<b>Total</b>	67,380	55,379	61,310	34,570	27,500	30,960	7,486	6,683	7,137
<b>Mean</b>	2,174	1,786	1,978	1,115	887	999	250	223	238
<b>Max</b>	4710	3570	4310	3040	2770	2970	410	370	394
<b>Min</b>	955	906	946	416	401	410	173	153	166
<b>Ac-ft</b>	133,600	109,800	121,600	68,570	54,550	61,400	14,850	13,260	14,160

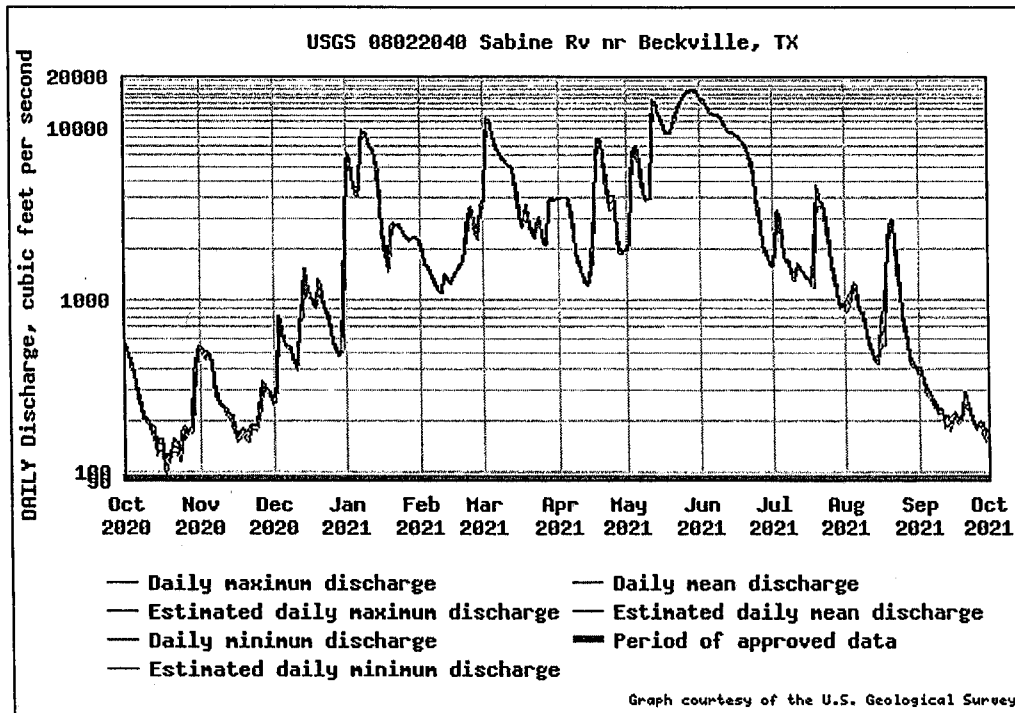
**STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 2021, BY WATER YEAR (WY)**

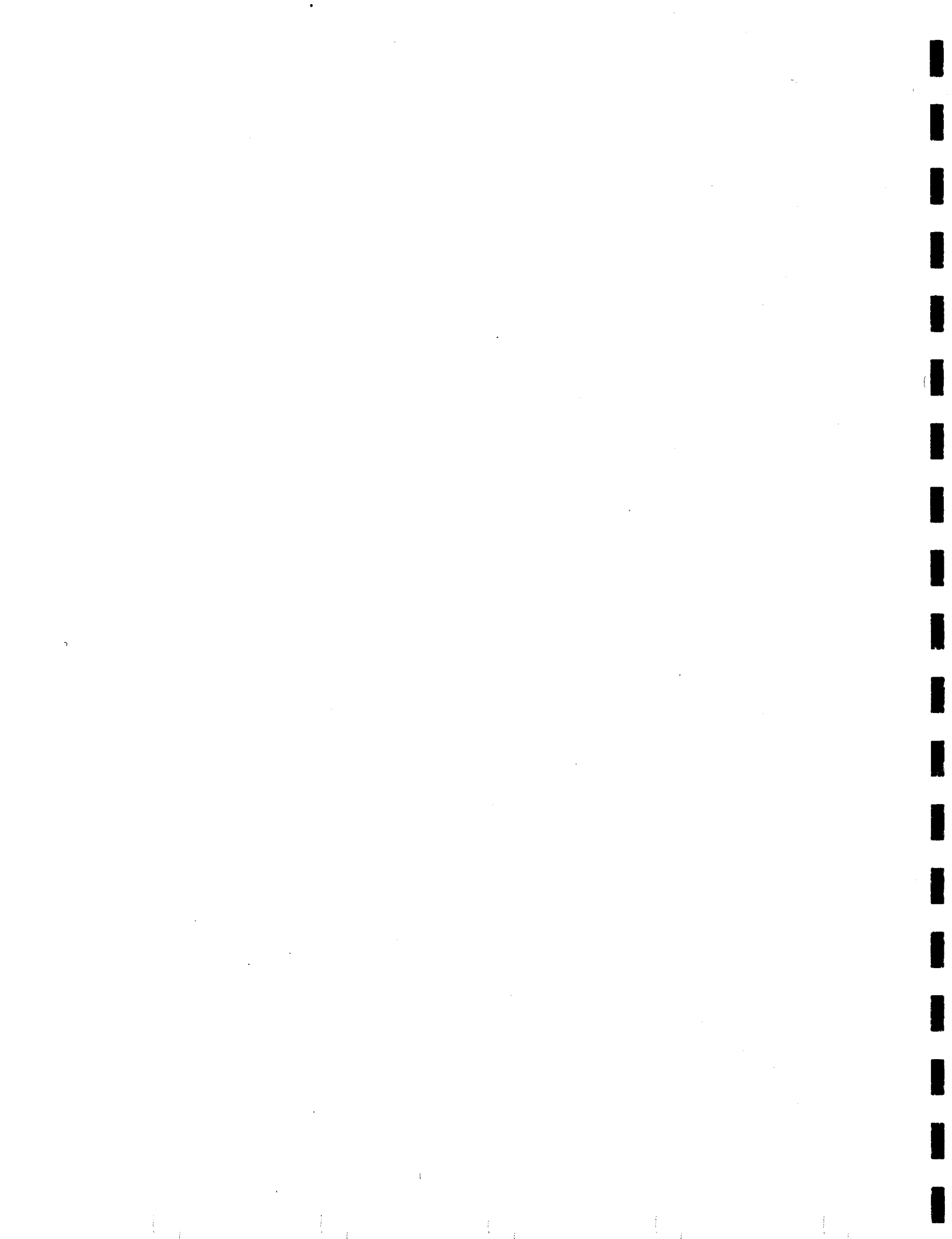
	<b>Oct</b>	<b>Nov</b>	<b>Dec</b>	<b>Jan</b>	<b>Feb</b>	<b>Mar</b>	<b>Apr</b>	<b>May</b>	<b>Jun</b>	<b>Jul</b>	<b>Aug</b>	<b>Sep</b>
<b>Mean</b>	789	1,728	3,095	3,505	3,773	4,822	3,852	4,389	2,682	1,134	371	429
<b>Max</b>	10,870	10,380	17,100	16,000	11,930	21,620	11,330	21,010	11,580	12,080	2,232	3,434
<b>(WY)</b>	(2010)	(2010)	(2016)	(2016)	(1975)	(2001)	(1990)	(1966)	(1989)	(2007)	(2007)	(1974)
<b>Min</b>	42.5	82.1	104	239	322	317	355	250	60.3	30.1	22.4	25.1
<b>(WY)</b>	(1964)	(1964)	(2006)	(1964)	(1996)	(1996)	(1971)	(2011)	(2006)	(2011)	(2011)	(2006)

**SUMMARY STATISTICS**

	Water Year 2021		Water Years 1961 - 2021	
Annual total	1,168,000			
Annual mean	3,199		2,542	
Highest annual mean			7,206	2016
Lowest annual mean			265.4	2011
Highest daily mean	16,900	May 29	48,100	May 02, 1966
Lowest daily mean	110.0	Oct 18	2.40	Aug 11, 1964
Annual 7-day minimum	128.7	Oct 17	3.80	Aug 07, 1964
Maximum peak flow	17,100 <sup>a</sup>	May 29	49,400 <sup>a</sup>	May 02, 1966
Maximum peak stage	28.42	May 29	32.87	Mar 30, 1989
Annual runoff (cfsm)	0.891		0.708	
Annual runoff (inches)	12.1		9.62	
10 percent exceeds	9,456		7,640	
50 percent exceeds	1,580		811.0	
90 percent exceeds	196.0		95.0	

<sup>a</sup> Discharge affected by Regulation or Diversion









USGS Water-Year Summary 2021

**08022500 Sabine River at Logansport, LA**

LOCATION - Lat 31°58'20", long 94°00'22" referenced to North American Datum of 1927, Shelby County, TX, 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.

REVISIONS HISTORY - WSP 1312: 1903-06 (monthly and annual means). WSP 1732: 1929(M), 1933(M).

**SURFACE-WATER RECORDS**

PERIOD OF RECORD - July 1903 to Apr. 1968 (daily mean discharge), Mar. 1968 to current year (daily gage height). Aug. 2018 to current year (daily mean discharge). PERIOD OF RECORD, Water-Quality.-- CHEMICAL DATA: Apr. 1971 to July 1985. BIOCHEMICAL DATA: Mar. 1973 to July 1985. RADIOCHEMICAL DATA: Apr. 1979 to July 1981. PESTICIDE DATA: Apr. 1971 to Oct. 1984. SEDIMENT DATA: Oct. 1980 to July 1983. PERIOD OF DAILY RECORD, Water-Quality.-- SPECIFIC CONDUCTANCE: 1939 to 1945. WATER TEMPERATURE: 1939 to 1945.

GAGE - Water-stage recorder and water-velocity 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 - 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 mi<sup>2</sup> in the Mill Creek drainage basin. Numerous diversions above station for oil field operations, municipal and industrial uses. Some records listed in the "Period of Record" for surface water and water quality may not be available electronically

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 ft<sup>3</sup>/s Apr. 8, 1945, gage height, 44.07 ft, from floodmark; minimum, 16 ft<sup>3</sup>/s, Sept. 26-28, Oct. 3, 4, 1939.

AVERAGE DISCHARGE FOR PERIOD OF RECORD - 7 years (water years 1961-1967), 2,252 ft<sup>3</sup>/s (1,632,000 acre-ft/yr).

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION - 57 years (water years 1904-1960), 3,325 ft<sup>3</sup>/s (2,407,000 acre-ft/yr).

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

Suggested citation: U.S. Geological Survey, 2022, National Water Information System data available on the World Wide Web (USGS Water Data for the Nation), accessed [March 29, 2022], [https://nwis.waterdata.usgs.gov/nwis/wys\\_rpt?dv\\_ts\\_ids=&132663\\_132664\\_132665&adr\\_begin\\_date=2020-10-01&adr\\_end\\_date=2021-09-30&site\\_no=08022500&agency\\_cd=USGS](https://nwis.waterdata.usgs.gov/nwis/wys_rpt?dv_ts_ids=&132663_132664_132665&adr_begin_date=2020-10-01&adr_end_date=2021-09-30&site_no=08022500&agency_cd=USGS)

Water-Data Report 2021  
08022500 Sabine River at Logansport, LA -- Continued

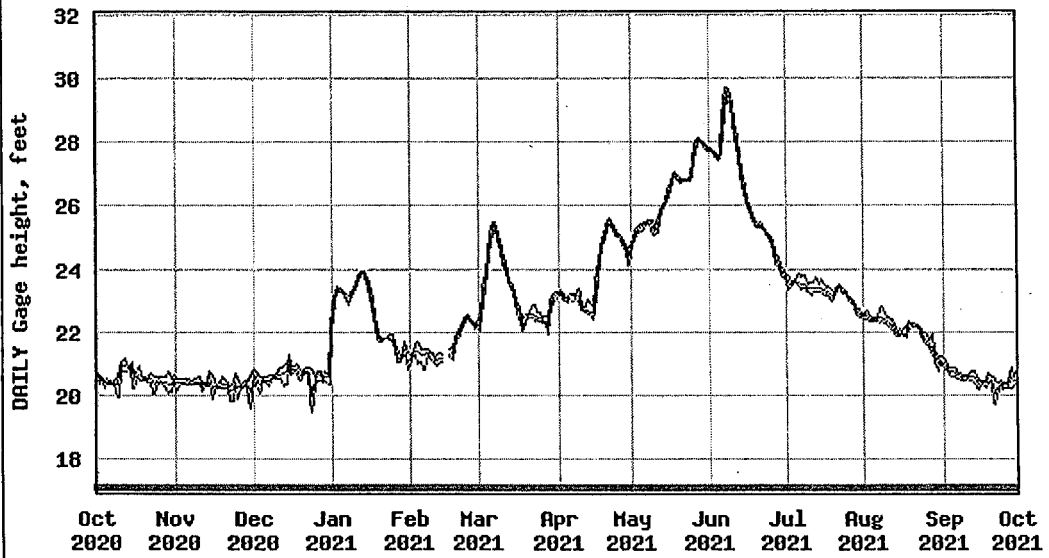
**GAGE HEIGHT, FEET**  
**YEAR 2020-10-01 to 2021-09-30**  
**DAILY VALUES**

Day	October			November			December			January			February		
	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
1	20.68	20.45	20.59	20.50	20.11	20.34	20.79	20.42	20.59	22.90	22.04	22.46	21.27	20.93	21.07
2	20.58	20.32	20.46	20.49	20.28	20.38	20.71	20.34	20.51	23.29	22.90	23.13	21.36	21.25	21.30
3	20.58	20.42	20.49	20.49	20.35	20.40	20.53	20.05	20.31	23.43	23.29	23.38	21.55	21.29	21.37
4	20.46	20.22	20.37	20.52	20.33	20.41	20.56	20.21	20.37	23.40	23.28	23.32	21.69	20.98	21.40
5	20.51	20.32	20.39	20.51	20.31	20.42	20.58	20.46	20.50	23.31	23.22	23.27	21.44	21.03	21.29
6	20.43	20.33	20.39	20.48	20.32	20.36	20.54	20.34	20.47	23.27	23.10	23.18	21.42	20.77	21.27
7	20.41	20.30	20.36	20.44	20.31	20.34	20.60	20.25	20.42	23.15	22.84	22.93	21.42	20.77	21.25
8	20.46	20.33	20.38	20.48	20.30	20.38	20.64	20.43	20.52	23.19	22.98	23.09	21.43	21.29	21.35
9	20.56	19.94	20.35	20.48	20.32	20.39	20.60	20.48	20.53	23.33	23.17	23.26	21.38	21.17	21.31
10	20.88	19.91	20.60	20.54	20.30	20.40	20.66	20.51	20.57	23.51	23.33	23.43	21.30	21.02	21.22
11	21.01	20.80	20.91	20.35	20.11	20.25	20.83	20.52	20.64	23.77	23.51	23.61	21.16	21.00	21.08
12	21.12	20.74	20.90	20.39	20.25	20.34	20.87	20.46	20.68	23.90	23.77	23.83	21.26	20.93	21.07
13	20.97	20.71	20.85	20.46	20.24	20.35	20.89	20.29	20.68	23.92	23.87	23.90	21.31	21.05	21.17
14	20.94	20.78	20.86	20.73	20.40	20.53	20.98	20.32	20.72	23.92	23.73	23.84	21.29	21.05	21.17
15	21.05	20.22	20.72	20.64	19.86	20.21	21.26	20.95	21.07	23.73	23.38	23.54	---	---	---
16	20.63	20.22	20.48	20.38	20.16	20.28	20.95	20.64	20.80	23.48	23.08	23.28	---	---	---
17	20.82	20.53	20.64	20.31	20.19	20.25	20.90	20.75	20.82	23.08	22.43	22.73	21.43	21.18	21.29
18	20.90	20.45	20.60	20.37	20.22	20.28	21.00	20.62	20.78	22.43	22.14	22.25	21.51	21.08	21.32
19	20.61	20.47	20.53	20.57	20.21	20.34	20.77	20.47	20.64	22.22	21.72	21.92	21.78	21.46	21.61
20	20.55	20.42	20.48	20.43	20.20	20.31	20.70	20.52	20.62	21.77	21.67	21.72	21.89	21.73	21.81
21	20.50	20.41	20.45	20.32	20.19	20.23	20.81	20.69	20.74	21.81	21.66	21.71	22.14	21.88	22.01
22	20.65	20.40	20.50	20.28	19.78	20.11	20.83	20.69	20.75	21.82	21.75	21.78	22.29	22.06	22.16
23	20.59	20.01	20.40	20.41	19.80	20.17	20.83	19.83	20.60	21.81	21.78	21.80	22.52	22.29	22.40
24	20.53	20.01	20.30	20.65	20.25	20.38	20.79	19.46	19.95	21.92	21.72	21.78	22.53	22.42	22.48
25	20.55	20.41	20.49	20.52	19.86	20.18	20.55	20.24	20.42	21.92	21.60	21.76	22.42	22.31	22.36
26	20.55	20.36	20.45	20.34	20.19	20.25	20.73	20.46	20.54	21.62	21.44	21.52	22.34	22.20	22.28
27	20.57	20.27	20.39	20.41	20.21	20.29	20.75	20.46	20.62	21.44	21.05	21.22	22.27	22.11	22.19
28	20.54	20.15	20.36	20.47	20.26	20.37	20.53	20.39	20.45	21.23	21.04	21.15	22.26	22.15	22.20
29	20.71	20.02	20.31	20.47	19.84	20.20	20.76	20.46	20.55	21.39	21.18	21.25			
30	20.49	20.09	20.35	20.53	19.55	20.11	20.70	20.30	20.53	21.67	21.26	21.44			
31	20.59	20.41	20.49				22.04	20.31	20.90	21.32	20.81	21.02			
Mean	20.66	20.34	20.51	20.47	20.16	20.31	20.8	20.4	20.59	22.68	22.41	22.53			
Max	21.12	20.80	20.91	20.73	20.40	20.53	22.04	20.95	21.07	23.92	23.87	23.90			
Min	20.41	19.91	20.30	20.28	19.55	20.11	20.53	19.46	19.95	21.23	20.81	21.02			

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	March			April			May			June			July		
1	22.51	22.03	22.22	23.28	23.12	23.22	24.94	24.74	24.87	27.83	27.74	27.79	23.80	23.56	23.66
2	23.36	22.51	22.97	23.31	23.21	23.26	25.28	24.91	25.09	27.82	27.71	27.77	23.78	23.33	23.55
3	23.91	23.36	23.64	23.24	23.03	23.14	25.38	25.18	25.28	27.73	27.55	27.65	23.55	23.42	23.48
4	24.42	23.91	24.14	23.07	22.96	23.00	25.42	25.23	25.33	27.57	27.43	27.50	23.60	23.51	23.56
5	25.14	24.42	24.80	23.09	22.94	23.00	25.46	25.23	25.36	27.68	27.49	27.55	23.64	23.53	23.58
6	25.49	25.14	25.33	23.22	23.04	23.11	25.48	25.41	25.45	28.84	27.68	28.13	23.86	23.44	23.53
7	25.50	25.34	25.44	23.20	23.00	23.12	25.54	25.44	25.49	29.74	28.83	29.35	23.76	23.35	23.48
8	25.35	24.94	25.14	23.13	23.01	23.06	25.57	25.47	25.53	29.73	29.47	29.62	23.80	23.36	23.48
9	24.94	24.54	24.75	23.41	22.99	23.17	25.53	25.11	25.32	29.50	29.16	29.34	23.60	23.26	23.41
10	24.54	24.16	24.34	23.18	22.68	22.83	25.34	25.11	25.20	29.17	28.66	28.93	23.52	23.24	23.40
11	24.18	23.84	24.00	22.81	22.65	22.75	25.68	25.13	25.37	28.67	28.14	28.41	23.55	23.14	23.39
12	23.84	23.59	23.70	22.80	22.59	22.69	25.82	25.56	25.68	28.15	27.57	27.87	23.56	23.28	23.38
13	23.59	23.44	23.49	23.03	22.56	22.70	26.05	25.82	25.94	27.58	27.02	27.29	23.71	23.29	23.41
14	23.51	23.19	23.38	22.90	22.54	22.64	26.17	26.05	26.11	27.06	26.59	26.80	23.49	23.28	23.38
15	23.20	22.94	23.11	22.78	22.41	22.62	26.49	26.17	26.31	26.60	26.19	26.38	23.68	23.24	23.37
16	22.98	22.63	22.80	23.57	22.69	23.06	26.76	26.49	26.61	26.19	25.91	26.03	23.50	23.15	23.31
17	22.79	22.24	22.60	24.24	23.57	23.86	27.00	26.74	26.89	25.91	25.68	25.80	23.38	23.16	23.21
18	22.30	22.02	22.11	24.66	24.24	24.40	27.06	26.96	27.00	25.71	25.50	25.60	23.43	23.13	23.24
19	22.53	22.23	22.32	24.99	24.66	24.80	26.99	26.78	26.87	25.53	25.39	25.45	23.34	23.00	23.16
20	22.55	22.44	22.50	25.31	24.99	25.18	26.85	26.72	26.77	25.47	25.35	25.41	23.21	23.01	23.12
21	22.62	22.47	22.54	25.56	25.23	25.42	26.85	26.75	26.78	25.48	25.31	25.38	23.40	23.20	23.32
22	22.87	22.42	22.55	25.59	25.45	25.53	26.84	26.79	26.82	25.34	25.18	25.25	23.52	23.37	23.45
23	22.87	22.30	22.48	25.46	25.22	25.34	26.87	26.80	26.83	25.22	25.10	25.15	23.43	23.29	23.34
24	22.62	22.40	22.49	25.35	25.07	25.19	26.93	26.81	26.86	25.15	24.96	25.06	23.34	23.20	23.26
25	22.62	22.33	22.45	25.09	25.01	25.05	27.52	26.92	27.12	25.03	24.73	24.89	23.23	23.15	23.19
26	22.42	22.28	22.35	25.10	24.89	24.99	27.92	27.52	27.69	24.87	24.50	24.66	23.17	23.00	23.08
27	22.49	22.29	22.35	24.95	24.76	24.84	28.13	27.91	28.05	24.52	24.14	24.31	23.04	22.86	22.97
28	22.47	21.91	22.19	24.77	24.53	24.66	28.17	28.08	28.13	24.37	24.07	24.16	22.99	22.73	22.80
29	22.98	22.47	22.76	24.56	24.11	24.31	28.11	27.96	28.05	24.10	23.82	23.98	22.82	22.57	22.66
30	23.20	22.98	23.10	24.74	24.14	24.50	27.98	27.82	27.90	23.95	23.73	23.82	22.72	22.47	22.54
31	23.25	22.98	23.14				27.85	27.73	27.79				22.58	22.43	22.51
Mean	23.45	23.09	23.26	24.01	23.71	23.85	26.52	26.3	26.4	26.68	26.35	26.51	23.42	23.16	23.27
Max	25.50	25.34	25.44	25.59	25.45	25.53	28.17	28.08	28.13	29.74	29.47	29.62	23.86	23.56	23.66
Min	22.30	21.91	22.11	22.78	22.41	22.62	24.94	24.74	24.87	23.95	23.73	23.82	22.58	22.43	22.51

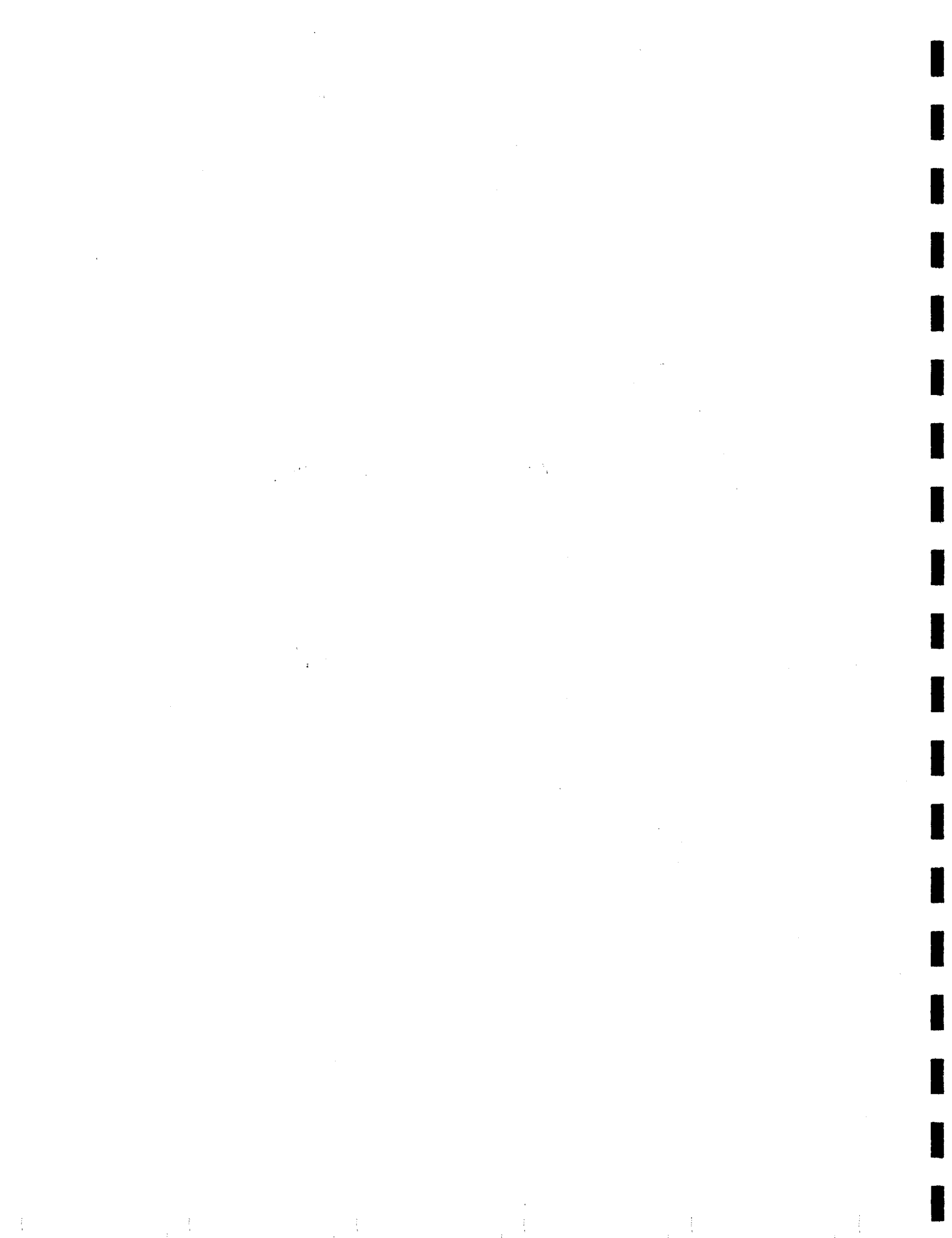
<b>Day</b>	<b>Max</b>	<b>Min</b>	<b>Mean</b>	<b>Max</b>	<b>Min</b>	<b>Mean</b>
	<b>August</b>			<b>September</b>		
<b>1</b>	22.56	22.38	22.48	21.22	20.94	21.05
<b>2</b>	22.68	22.41	22.49	21.06	20.80	20.91
<b>3</b>	22.58	22.35	22.45	20.91	20.75	20.82
<b>4</b>	22.47	22.33	22.40	20.88	20.64	20.75
<b>5</b>	22.47	22.33	22.39	20.84	20.57	20.72
<b>6</b>	22.42	22.31	22.37	20.85	20.55	20.67
<b>7</b>	22.68	22.28	22.42	20.68	20.52	20.60
<b>8</b>	22.78	22.32	22.47	20.68	20.43	20.57
<b>9</b>	22.54	22.28	22.40	20.57	20.43	20.50
<b>10</b>	22.43	22.19	22.32	20.64	20.47	20.55
<b>11</b>	22.45	22.16	22.26	20.61	20.48	20.54
<b>12</b>	22.41	22.04	22.18	20.74	20.43	20.56
<b>13</b>	22.18	21.93	22.05	20.72	20.37	20.56
<b>14</b>	21.99	21.84	21.93	20.74	20.35	20.52
<b>15</b>	22.07	21.86	21.94	20.46	20.14	20.30
<b>16</b>	22.04	21.89	21.95	20.44	20.28	20.38
<b>17</b>	22.12	21.84	21.92	20.46	20.30	20.36
<b>18</b>	22.11	21.77	21.92	20.47	20.23	20.36
<b>19</b>	22.33	22.01	22.12	20.66	20.38	20.49
<b>20</b>	22.29	22.12	22.18	20.56	20.39	20.47
<b>21</b>	22.25	22.12	22.17	20.54	19.71	20.27
<b>22</b>	22.21	22.13	22.16	20.42	19.70	20.04
<b>23</b>	22.17	21.97	22.07	20.40	20.19	20.29
<b>24</b>	22.04	21.80	21.90	20.42	20.24	20.32
<b>25</b>	21.98	21.60	21.72	20.35	20.16	20.27
<b>26</b>	21.88	21.55	21.65	20.41	20.22	20.30
<b>27</b>	21.72	21.43	21.55	20.40	20.19	20.28
<b>28</b>	21.90	21.26	21.50	20.88	20.20	20.51
<b>29</b>	21.38	21.03	21.22	20.58	20.28	20.42
<b>30</b>	21.17	20.73	20.97	20.72	20.30	20.46
<b>31</b>	21.18	21.02	21.11			
<b>Mean</b>	22.18	21.91	22.02	20.64	20.35	20.49
<b>Max</b>	22.78	22.41	22.49	21.22	20.94	21.05
<b>Min</b>	21.17	20.73	20.97	20.35	19.70	20.04

USGS 08022500 Sabine Rv at Logansport, LA



— Daily maximum gage height — Daily mean gage height  
- - - Daily minimum gage height ■■ Period of approved data

Graph courtesy of the U.S. Geological Survey





USGS Water-Year Summary 2021

**08023080 Bayou Grand Cane near Stanley, LA**

LOCATION - Lat 31°57'45.2", long 93°56'27.5" referenced to North American Datum of 1927, in SW 1/4 SE 1/4 sec.6, T.11 N., R.15 W., DeSoto Parish, LA, Hydrologic Unit 12010004, near center of span on downstream side of bridge on U.S. Highway 84, 2.8 mi upstream from Bayou Castor, 2.9 mi west of Stanley, and 3.2 mi east of Logansport.

DRAINAGE AREA - 72.5 mi<sup>2</sup>.

**SURFACE-WATER RECORDS**

PERIOD OF RECORD - January 1980 to current year.

GAGE - Water-stage recorder. Datum of gage is 172.40 ft above NGVD of 1929.

REMARKS - Records good above 100 ft<sup>3</sup>/s, fair between 100 ft<sup>3</sup>/s and 50 ft<sup>3</sup>/s, and poor below. Satellite telemetry at station.

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

Suggested citation: U.S. Geological Survey, 2022, National Water Information System data available on the World Wide Web (USGS Water Data for the Nation), accessed [March 29, 2022], [https://nwis.waterdata.usgs.gov/nwis/wys\\_rpt?dv\\_ts\\_lds=&61782&adr\\_begin\\_date=2020-10-01&adr\\_end\\_date=2021-09-30&site\\_no=08023080&agency\\_cd=USGS](https://nwis.waterdata.usgs.gov/nwis/wys_rpt?dv_ts_lds=&61782&adr_begin_date=2020-10-01&adr_end_date=2021-09-30&site_no=08023080&agency_cd=USGS)

Water-Data Report 2021  
08023080 Bayou Grand Cane near Stanley, LA -- Continued

**DISCHARGE, CUBIC FEET PER SECOND**  
**YEAR 2020-10-01 to 2021-09-30**  
**DAILY MEAN VALUES**

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	2020	2020	2020	2021	2021	2021	2021	2021	2021	2021	2021	2021
1	1.86	0.97	8.81	1,280	29.6	125	21.5	255	38.8	15.0	0.83	2.06
2	1.50	0.44	7.58	895	25.2	393	22.5	249	185	26.4	2.20	1.97
3	1.35	0.21	18.7	362	22.3	426	21.0	423	124	68.5	2.37	1.90
4	1.26	0.13	28.4	95.8	21.5	173	20.2	296	52.8	25.9	36.4	1.84
5	1.28	0.29	9.09	55.5	21.2	75.1	16.5	223	255	14.4	9.32	1.79
6	1.02	0.90	4.71	46.7	19.9	56.4	12.8	114	829	10.2	3.29	1.74
7	0.45	0.93	3.29	275	19.0	52.1	14.8	52.2	730	8.73	1.60	1.57
8	0.65	1.05	2.72	379	16.9	37.2	42.7	37.8	772	65.2	1.20	1.40
9	1.70	1.27	2.61	160	13.5	30.5	86.9	28.5	626	32.0	1.02	1.41
10	41.4	1.45	1.89	65.4	12.7	27.2	212	24.0	305	12.7	0.82	1.16
11	108	1.73	3.20	56.4	12.6	25.0	146	101	80.4	10.3	0.71	1.06
12	15.2	1.84	73.9	105	14.0	23.1	54.2	787	42.3	15.5	0.59	1.09
13	3.43	2.06	79.7	104	14.0	18.1	35.0	871	29.4	34.1	0.45	1.27
14	1.76	2.34	66.2	70.2	13.0	15.6	28.9	388	22.1	17.0	0.72	1.74
15	1.26	2.61	51.1	49.4	13.6	18.1	25.9	84.7	21.6	11.2	0.94	1.83
16	1.60	2.93	20.4	37.8	14.5	88.2	166	45.7	17.0	8.70	0.57	1.70
17	2.82	3.00	20.9	32.1	24.6	189	943	66.3	13.4	5.17	1.26	1.64
18	2.63	3.58	13.0	29.5	117	296	679	293	11.4	4.27	8.27	1.60
19	2.48	4.02	23.7	30.1	118	128	247	357	9.69	4.38	33.9	1.73
20	2.30	3.81	146	28.2	106	48.1	78.0	124	8.32	4.68	18.9	1.70
21	2.16	3.80	97.0	29.0	204	35.3	48.6	224	8.08	4.90	13.2	1.65
22	1.58	3.60	25.7	60.5	276	30.3	36.2	408	11.3	4.47	6.04	1.56
23	1.68	3.49	11.1	111	209	30.8	33.9	271	11.6	2.98	3.76	1.26
24	1.32	3.46	9.51	62.9	89.0	32.0	315	81.3	7.97	2.37	2.73	1.18
25	0.60	4.96	12.0	52.1	53.7	28.3	447	128	5.75	1.90	2.30	1.50
26	0.63	5.06	8.24	66.8	69.0	23.9	174	725	5.21	1.54	2.17	1.54
27	0.51	6.63	6.75	58.4	135	20.8	59.5	645	4.80	1.30	2.27	1.42
28	1.61	7.12	6.10	37.0	82.1	34.8	41.1	261	5.08	1.19	2.24	1.36
29	11.4	8.56	5.37	29.0		46.8	33.2	254	43.4	1.14	2.27	1.40
30	10.0	8.93	5.61	26.5		31.2	94.8	113	29.0	1.04	2.60	1.49
31	2.42		141	28.2		25.1		52.8		0.88	2.23	
<b>Total</b>	<b>228</b>	<b>91.2</b>	<b>914</b>	<b>4,719</b>	<b>1,767</b>	<b>2,584</b>	<b>4,157</b>	<b>7,983</b>	<b>4,305</b>	<b>418</b>	<b>167</b>	<b>46.6</b>
<b>Mean</b>	<b>7.35</b>	<b>3.04</b>	<b>29.5</b>	<b>152</b>	<b>63.1</b>	<b>83.4</b>	<b>139</b>	<b>258</b>	<b>144</b>	<b>13.5</b>	<b>5.39</b>	<b>1.55</b>
<b>Max</b>	<b>108</b>	<b>8.93</b>	<b>146</b>	<b>1280</b>	<b>276</b>	<b>426</b>	<b>943</b>	<b>871</b>	<b>829</b>	<b>68.5</b>	<b>36.4</b>	<b>2.06</b>
<b>Min</b>	<b>0.45</b>	<b>0.13</b>	<b>1.89</b>	<b>26.5</b>	<b>12.6</b>	<b>15.6</b>	<b>12.8</b>	<b>24.0</b>	<b>4.80</b>	<b>0.88</b>	<b>0.45</b>	<b>1.06</b>
<b>Ac-ft</b>	<b>452</b>	<b>181</b>	<b>1,813</b>	<b>9,359</b>	<b>3,505</b>	<b>5,125</b>	<b>8,246</b>	<b>15,830</b>	<b>8,540</b>	<b>829</b>	<b>332</b>	<b>92.4</b>

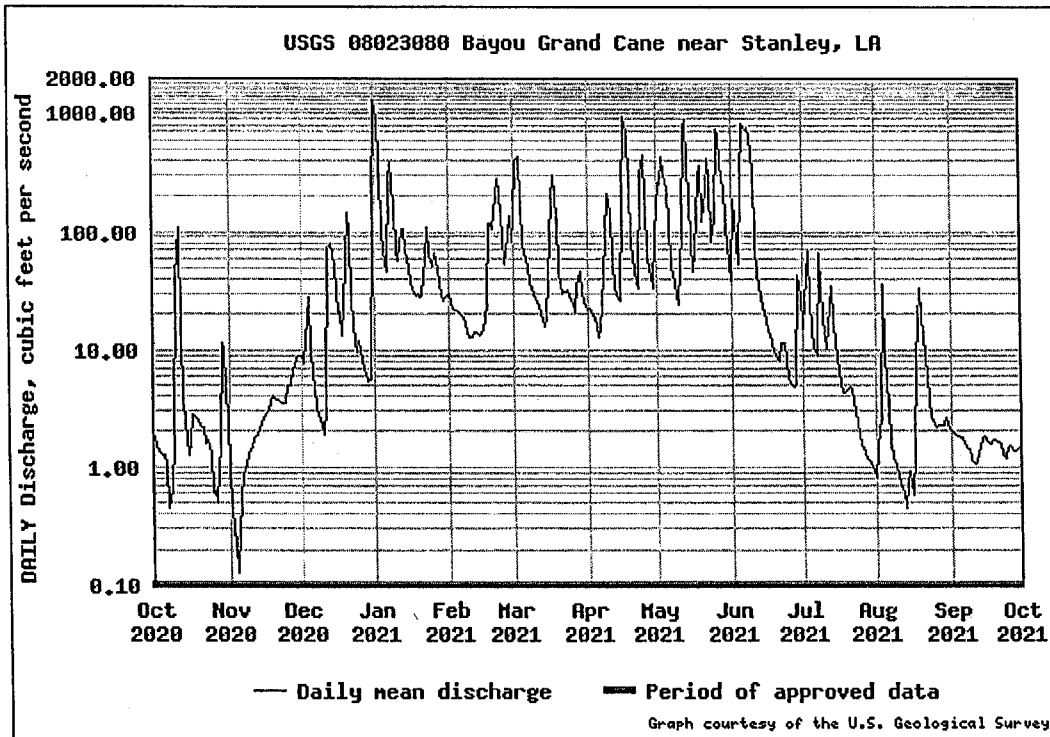


**STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1981 - 2021, BY WATER YEAR  
(WY)**

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
<b>Mean</b>	27.7	39.5	114	139	180	156	105	84.3	61.2	16.2	9.31	6.61
<b>Max</b>	448	232	463	704	514	1,012	451	389	433	291	136	84.6
<b>(WY)</b>	(2010)	(2019)	(2002)	(1999)	(1987)	(2016)	(1991)	(1990)	(1989)	(1989)	(2017)	(2017)
<b>Min</b>	.000	.000	.000	.39	1.94	.28	.015	.036	.000	.000	.000	.000
<b>(WY)</b>	(1991)	(1996)	(2011)	(1981)	(1996)	(2011)	(2011)	(2011)	(2011)	(1984)	(1985)	(1982)

**SUMMARY STATISTICS**

	Water Year 2021		Water Years 1981 - 2021	
Annual total	27,380			
Annual mean	75.0		77.7	
Highest annual mean			171.1	2016
Lowest annual mean			0.218	2011
Highest daily mean	1,280	Jan 01	12,600	Mar 09, 2016
Lowest daily mean	0.130	Nov 04	0.0	Oct 01, 1980
Annual 7-day minimum	0.553	Nov 01	0.0	Oct 01, 1980
Maximum peak flow	1,730	Jan 01	17,000	Mar 09, 2016
Maximum peak stage	11.70	Jan 01	18.87	Mar 09, 2016
Annual runoff (cfsm)	1.03		1.07	
Annual runoff (inches)	14.0		14.6	
10 percent exceeds	223.4		154.0	
50 percent exceeds	16.5		5.00	
90 percent exceeds	1.27		0.0	





USGS Water-Year Summary 2021

**08023400 Bayou San Patricio near Benson, LA**

LOCATION - Lat 31°52'30", long 93°39'30" referenced to North American Datum of 1927, in sec.38, T.10 N., R.13 W., DeSoto Parish, LA, Hydrologic Unit 12010004, near right bank on downstream side of bridge on State Highway 512, 2.2 mi east of Benson, and 3.9 mi upstream from Bear Creek.

DRAINAGE AREA - 80.2 mi<sup>2</sup>.

REVISIONS HISTORY - WDR LA-80-1: 1958(M).

**SURFACE-WATER RECORDS**

PERIOD OF RECORD - Annual maximums, water years, 1954-68. Occasional low-flow measurements, water years 1954-63, October 1977 to current year.

GAGE - Water-stage recorder. Datum of gage is 208.67 ft above NGVD of 1929. Oct. 29, 1953 to Sept. 30, 1968, crest-stage gage at same site and datum.

REMARKS - Records good above 50 cfs and fair below, except for estimated record, which is poor. Satellite telemetry at station.

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

Suggested citation: U.S. Geological Survey, 2022, National Water Information System data available on the World Wide Web (USGS Water Data for the Nation), accessed [March 29, 2022], [https://nwis.waterdata.usgs.gov/nwis/wys\\_rpt?dv\\_ts\\_ids=&61786&adr\\_begin\\_date=2020-10-01&adr\\_end\\_date=2021-09-30&site\\_no=08023400&agency\\_cd=USGS](https://nwis.waterdata.usgs.gov/nwis/wys_rpt?dv_ts_ids=&61786&adr_begin_date=2020-10-01&adr_end_date=2021-09-30&site_no=08023400&agency_cd=USGS)

**DISCHARGE, CUBIC FEET PER SECOND  
 YEAR 2020-10-01 to 2021-09-30  
 DAILY MEAN VALUES**

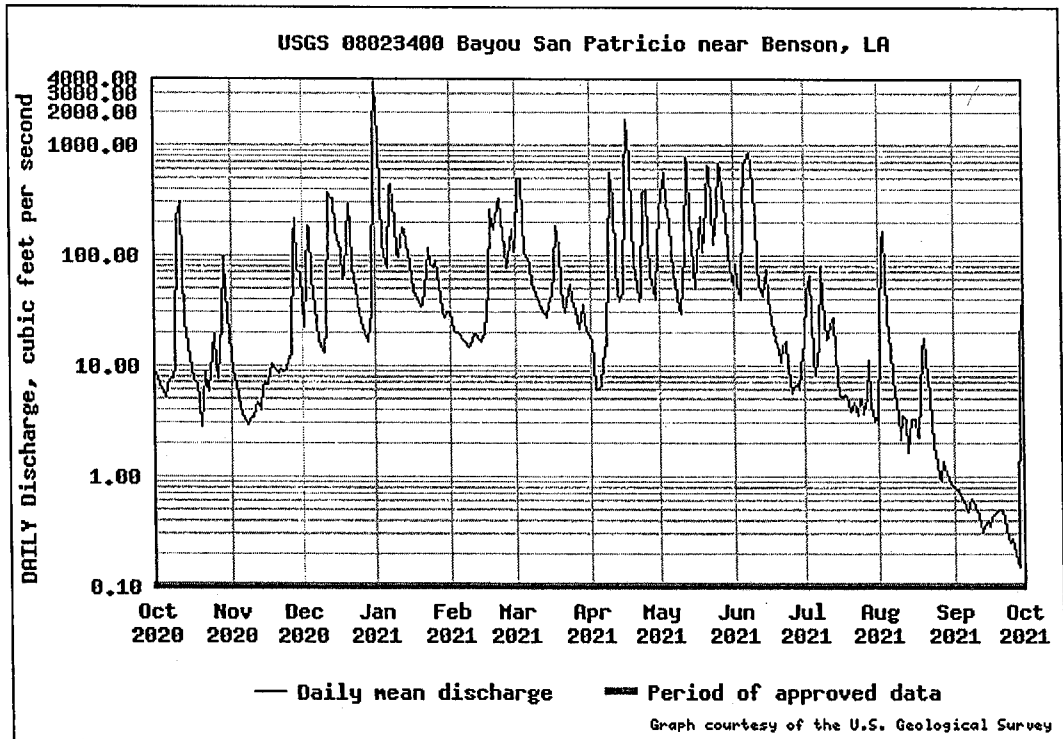
Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	2020	2020	2020	2021	2021	2021	2021	2021	2021	2021	2021	2021
1	8.54	12.6	37.5	3,680	30.1	118	18.3	395	54.3	15.9	2.93	0.78
2	7.62	8.96	22.4	1,120	23.9	507	16.3	408	82.1	46.3	131	0.76
3	6.65	6.69	185	345	20.4	497	10.4	559	55.7	66.7	167	0.75
4	5.89	5.26	177	128	19.8	211	6.07	290	40.7	28.4	68.5	0.63
5	5.20	4.15	62.0	87.7	19.4	104	6.09	202	277	11.7	27.3	0.60
6	6.23	3.34	34.4	75.4	17.9	93.8	6.53	112	667	8.19	13.4	0.55
7	7.28	3.12	23.0	413	16.5	78.8	10.6	67.7	790	15.6	8.01	0.49
8	7.58	2.91	17.6	452	15.5	55.5	17.2	44.9	869	79.7	5.58	0.63
9	10.0	3.27	14.6	198	14.7	45.5	81.8	31.9	670	40.4	3.71	0.61
10	215	3.45	13.1	99.8	15.1	40.1	565	29.2	223	17.2	2.18	0.52
11	301	4.08	22.1	96.5	19.6	36.8	330	108	84.1	17.8	3.61	0.44
12	75.1	4.63	366	181	19.6	32.7	78.8	777	54.9	24.0	3.31	0.37
13	25.1	4.06	324	171	18.1	29.2	46.3	657	43.6	27.1	1.64	0.32
14	15.3	6.33	326	126	16.7	26.9	38.3	219	57.2	13.3	2.22	0.39
15	11.6	7.01	163	87.4	17.9	35.3	45.9	75.0	74.8	7.64	3.33	0.40
16	9.38	6.86	124	61.2	19.1	44.9	400	49.8	39.2	5.46	3.25	0.36
17	7.51	8.73	110	48.1	48.3	73.2	1,700	94.5	26.0	5.21	2.37	0.43
18	6.80	10.3	60.1	40.2	266	184	746	226	20.2	5.34	2.23	0.46
19	4.56	9.67	68.4	36.8	187	119	211	108	17.0	5.22	13.1	0.48
20	2.79	8.89	297	34.1	172	51.1	83.3	154	13.8	3.86	18.1	0.51
21	8.75	8.59	177	35.3	285	36.8	53.9	662	10.7	4.03	11.4	0.50
22	6.27	9.16	76.2	71.3	327	30.8	38.9	621	15.0	4.69	5.21	0.41
23	5.95	9.01	49.3	118	215	47.0	41.5	278	16.4	3.55	3.02	0.33
24	13.3	9.27	38.6	83.1	112	53.7	371	125	10.0	5.10	1.92	0.25
25	19.0	10.8	29.0	78.0	76.9	39.4	399	264	6.98	4.99	1.31	0.27
26	9.89	13.3	22.7	89.0	93.7	32.3	129	683	5.58	3.76	0.95	0.23
27	7.71	134	19.6	65.2	171	24.9	65.1	585	6.51	5.03	0.92	0.20
28	25.4	220	17.8	43.0	107	21.2	48.9	263	6.80	11.1	1.36	0.15
29	95.1	74.1	16.6	30.8		36.0	40.7	226	6.02	4.42	1.06	12.4
30	46.9	68.9	31.0	26.7		25.0	130	105	13.2	3.21	0.97	35.4
31	18.7		1,130	30.0		21.0		60.8		3.44	0.87	
<b>Total</b>	996	681	4,055	8,152	2,365	2,752	5,736	8,481	4,257	498	512	60.6
<b>Mean</b>	32.1	22.7	131	263	84.5	88.8	191	274	142	16.1	16.5	2.02
<b>Max</b>	301	220	1130	3680	327	507	1700	777	869	79.7	167	35.4
<b>Min</b>	2.79	2.91	13.1	26.7	14.7	21.0	6.07	29.2	5.58	3.21	0.87	0.15
<b>Ac-ft</b>	1,976	1,351	8,043	16,170	4,691	5,457	11,380	16,820	8,443	988	1,015	120

**STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 2021, BY WATER YEAR  
(WY)**

	<b>Oct</b>	<b>Nov</b>	<b>Dec</b>	<b>Jan</b>	<b>Feb</b>	<b>Mar</b>	<b>Apr</b>	<b>May</b>	<b>Jun</b>	<b>Jul</b>	<b>Aug</b>	<b>Sep</b>
<b>Mean</b>	22.8	52.7	129	169	202	166	128	106	58.7	18.1	17.7	14.0
<b>Max</b>	250	336	498	971	592	658	544	530	574	288	439	94.3
<b>(WY)</b>	(2010)	(2019)	(2002)	(1999)	(1983)	(2016)	(1991)	(1983)	(1989)	(1989)	(2017)	(2017)
<b>Min</b>	.000	.000	.000	.18	1.43	.55	.20	.11	.000	.000	.000	.000
<b>(WY)</b>	(1981)	(1981)	(1981)	(1981)	(2011)	(2011)	(2011)	(2001)	(1988)	(1978)	(1980)	(1980)

**SUMMARY STATISTICS**

	Water Year 2021		Water Years 1978 - 2021	
Annual total	38,550			
Annual mean	105.6		88.0	
Highest annual mean			190.3	1989
Lowest annual mean			0.868	2011
Highest daily mean	3,680	Jan 01	10,700	May 18, 1989
Lowest daily mean	0.150	Sep 28	0.0	Oct 01, 1977
Annual 7-day minimum	0.263	Sep 22	0.0	Oct 01, 1977
Maximum peak flow	4,240	Jan 01	16,700	May 18, 1989
Maximum peak stage	16.95	Jan 01	21.19	May 18, 1989
Annual runoff (cfs)	1.32		1.12	
Annual runoff (inches)	17.9		15.2	
10 percent exceeds	280.8		177.0	
50 percent exceeds	25.4		7.70	
90 percent exceeds	1.81		0.0	





USGS Water-Year Summary 2021

**08025350 Toledo Bend Reservoir near Burkeville, TX**

LOCATION - Lat 31°11'46", long 93°34'19" referenced to North American Datum of 1927, Sabine Parish, LA, Hydrologic Unit 12010004, prior to Sept. 20, 2007, 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 mi<sup>2</sup>.

**SURFACE-WATER RECORDS**

PERIOD OF RECORD - Oct. 1966 to current year (reservoir contents). PERIOD OF RECORD, Water-Quality.-- CHEMICAL DATA: May 1968 to July 1976. BIOCHEMICAL DATA: May 1968 to July 1976. BIOLOGICAL DATA: Dec. 1975 to July 1976. PESTICIDE DATA: Dec. 1975 to July 1976.

GAGE - Water-stage recorder. Datum of gage is NGVD of 1929 (levels by Sabine River Authority). Prior to July 20, 1967, nonrecording gage at powerhouse 1.6 mi south of present site and at same datum. July 20, 1967, to June 30, 1973, recording gage at same site and datum. July 1, 1973, to Sept. 20, 2007, recording gage at powerhouse 1.6 mi south of present site and at same datum. Satellite telemeter at station.

COOPERATION - Capacity table furnished by the Sabine River Authority.

REMARKS - Some records listed in the "Period of Record" for surface water and water quality may not be available electronically. 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

EXTREMES FOR PERIOD OF RECORD - Maximum contents, 4,927,000 acre-ft, March 10, 2016, elevation, 174.4 ft; minimum since initial filling of reservoir, 2,692,000 acre-ft, Sept. 27, 2011, elevation, 160.47 ft.

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

Suggested citation: U.S. Geological Survey, 2022, National Water Information System data available on the World Wide Web (USGS Water Data for the Nation), accessed [March 29, 2022], [https://nwis.waterdata.usgs.gov/nwis/wys\\_rpt?dv\\_ts\\_ids=&132677&adr\\_begin\\_date=2020-10-01&adr\\_end\\_date=2021-09-30&site\\_no=08025350&agency\\_cd=USGS](https://nwis.waterdata.usgs.gov/nwis/wys_rpt?dv_ts_ids=&132677&adr_begin_date=2020-10-01&adr_end_date=2021-09-30&site_no=08025350&agency_cd=USGS)

## Water-Data Report 2021

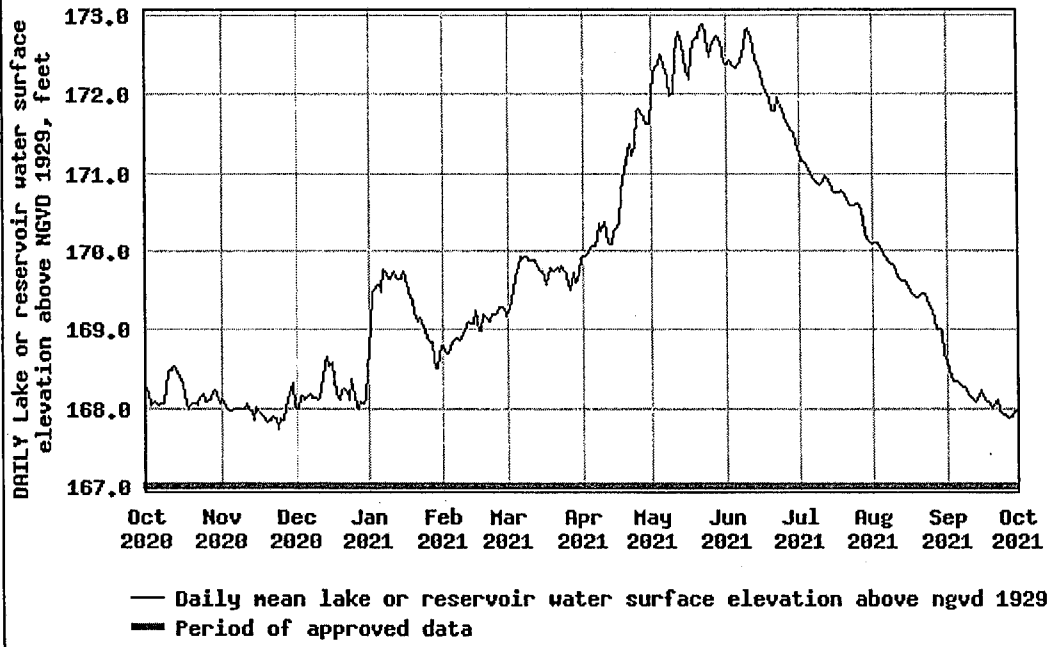
08025350 Toledo Bend Reservoir near Burkeville, TX -- Continued

**LAKE OR RESERVOIR WATER SURFACE ELEVATION ABOVE NGVD 1929, FEET**  
**YEAR 2020-10-01 to 2021-09-30**  
**DAILY MEAN VALUES**

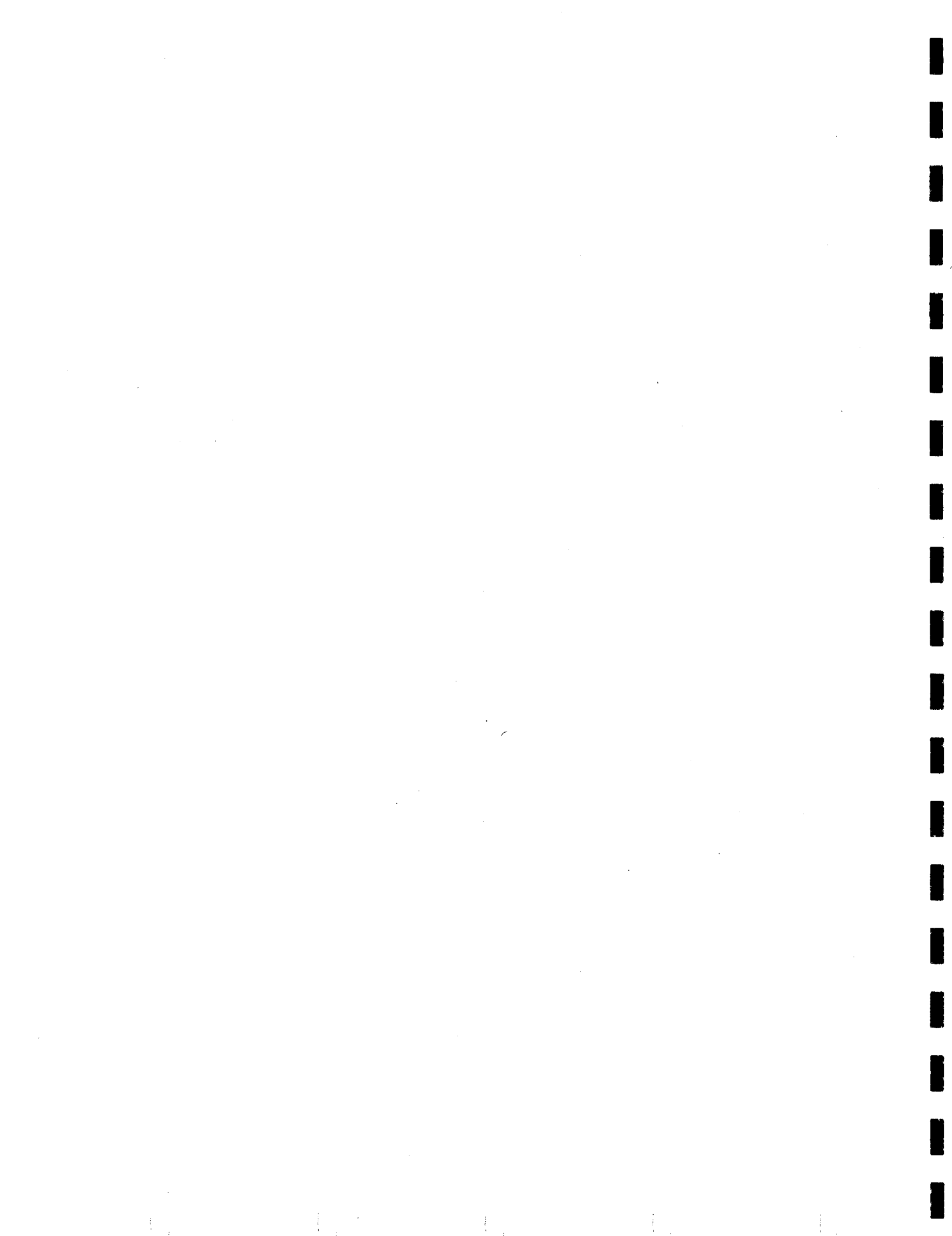
Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	2020	2020	2020	2021	2021	2021	2021	2021	2021	2021	2021	2021
1	168.26	168.11	168.02	169.04	168.79	169.26	169.92	172.26	172.38	171.25	170.10	168.59
2	168.18	168.05	167.98	169.46	168.72	169.36	169.92	172.34	172.44	171.15	170.12	168.50
3	168.04	168.00	168.15	169.50	168.71	169.50	169.98	172.38	172.39	171.16	170.13	168.40
4	168.08	167.97	168.15	169.57	168.76	169.68	170.04	172.51	172.36	171.10	170.05	168.35
5	168.07	167.97	168.11	169.58	168.83	169.81	170.08	172.46	172.33	171.04	170.01	168.35
6	168.04	168.00	168.15	169.49	168.89	169.93	170.07	172.30	172.39	170.99	169.94	168.33
7	168.05	168.00	168.19	169.76	168.88	169.91	170.16	172.20	172.40	170.95	169.88	168.29
8	168.05	167.98	168.14	169.72	168.87	169.93	170.35	171.98	172.62	170.89	169.85	168.28
9	168.24	167.99	168.14	169.65	168.90	169.89	170.26	172.00	172.79	170.87	169.84	168.26
10	168.47	167.99	168.12	169.65	168.98	169.87	170.37	172.48	172.84	170.84	169.80	168.19
11	168.48	168.05	168.14	169.74	169.06	169.87	170.23	172.68	172.72	170.91	169.73	168.14
12	168.53	167.99	168.39	169.68	169.10	169.88	170.12	172.80	172.60	170.96	169.68	168.10
13	168.52	167.97	168.55	169.65	169.08	169.81	170.10	172.65	172.43	170.94	169.63	168.08
14	168.40	167.86	168.66	169.64	169.08	169.74	170.23	172.46	172.36	170.88	169.62	168.10
15	168.36	168.01	168.54	169.73	169.24	169.74	170.29	172.31	172.25	170.79	169.62	168.22
16	168.29	167.95	168.58	169.64	168.99	169.65	170.35	172.21	172.16	170.75	169.55	168.16
17	168.06	167.93	168.36	169.57	168.98	169.58	170.76	172.48	172.07	170.75	169.47	168.11
18	168.00	167.89	168.17	169.41	169.19	169.78	170.91	172.68	171.99	170.75	169.45	168.09
19	168.03	167.83	168.12	169.35	169.16	169.76	171.03	172.72	171.93	170.77	169.42	168.04
20	168.06	167.84	168.22	169.23	169.10	169.75	171.27	172.72	171.80	170.75	169.41	168.01
21	168.07	167.86	168.26	169.11	169.10	169.78	171.37	172.87	171.80	170.68	169.44	168.07
22	168.04	167.90	168.20	169.16	169.20	169.75	171.24	172.88	171.97	170.61	169.46	168.12
23	168.13	167.87	168.11	169.10	169.19	169.82	171.35	172.75	171.88	170.59	169.45	167.96
24	168.18	167.73	168.37	168.99	169.22	169.75	171.80	172.57	171.79	170.58	169.37	167.92
25	168.09	167.88	168.15	168.89	169.30	169.70	171.82	172.49	171.72	170.61	169.31	167.92
26	168.08	167.86	168.01	168.86	169.30	169.58	171.74	172.67	171.65	170.61	169.21	167.89
27	168.10	167.98	167.98	168.84	169.26	169.51	171.70	172.69	171.61	170.53	169.12	167.87
28	168.20	168.11	168.08	168.64	169.18	169.72	171.63	172.74	171.54	170.41	169.01	167.90
29	168.23	168.25	168.05	168.52		169.59	171.62	172.67	171.50	170.24	169.00	167.96
30	168.17	168.31	168.14	168.51		169.62	171.99	172.54	171.39	170.16	168.95	167.96
31	168.07		168.48	168.79		169.89		172.42		170.12	168.71	
<b>Mean</b>	168.18	167.97	168.22	169.31	169.04	169.72	170.76	172.51	172.14	170.76	169.56	168.14
<b>Max</b>	168.53	168.31	168.66	169.76	169.30	169.93	171.99	172.88	172.84	171.25	170.13	168.59
<b>Min</b>	168.00	167.73	167.98	168.51	168.71	169.26	169.92	171.98	171.39	170.12	168.71	167.87



USGS 08025350 Toledo Bd Res nr Burkeville, TX



Graph courtesy of the U.S. Geological Survey





USGS Water-Year Summary 2021

**08025500 Bayou Toro near Toro, LA**

LOCATION - Lat 31°18'25", long 93°30'56" referenced to North American Datum of 1927, in SW 1/4 sec.20, T.4 N., R.11 W., Sabine Parish, LA, Hydrologic Unit 12010005, near right bank on downstream side of bridge on state highway 473, 0.2 mi upstream from Hamby Creek, 2.5 mi northeast of Toro, and 7.8 mi west of Hornbeck.

DRAINAGE AREA - 148 mi<sup>2</sup>.

**SURFACE-WATER RECORDS**

PERIOD OF RECORD - October 1955 to September 1986, October 1988 to current year.

GAGE - Water-stage recorder. Datum of gage is 138.00 ft above NGVD of 1929 (levels by Louisiana Department of Transportation and Development). Nonrecording gage at same site and datum read once daily from Dec. 2, 1985 to May 15, 1986 and twice daily May 16, 1986 to Sept. 30, 1986. Prior to Dec. 2, 1985 at site 500 ft downstream at same datum.

REMARKS - Records good above 10 cfs and fair below, except for periods of estimated record, which are poor. Satellite telemetry at station.

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

Suggested citation: U.S. Geological Survey, 2022, National Water Information System data available on the World Wide Web (USGS Water Data for the Nation), accessed [March 29, 2022], [https://nwis.waterdata.usgs.gov/nwis/wys\\_rpt?dv\\_ts\\_ids=&61795&adr\\_begin\\_date=2020-10-01&adr\\_end\\_date=2021-09-30&site\\_no=08025500&agency\\_cd=USGS](https://nwis.waterdata.usgs.gov/nwis/wys_rpt?dv_ts_ids=&61795&adr_begin_date=2020-10-01&adr_end_date=2021-09-30&site_no=08025500&agency_cd=USGS)

Water-Data Report 2021  
08025500 Bayou Toro near Toro, LA -- Continued

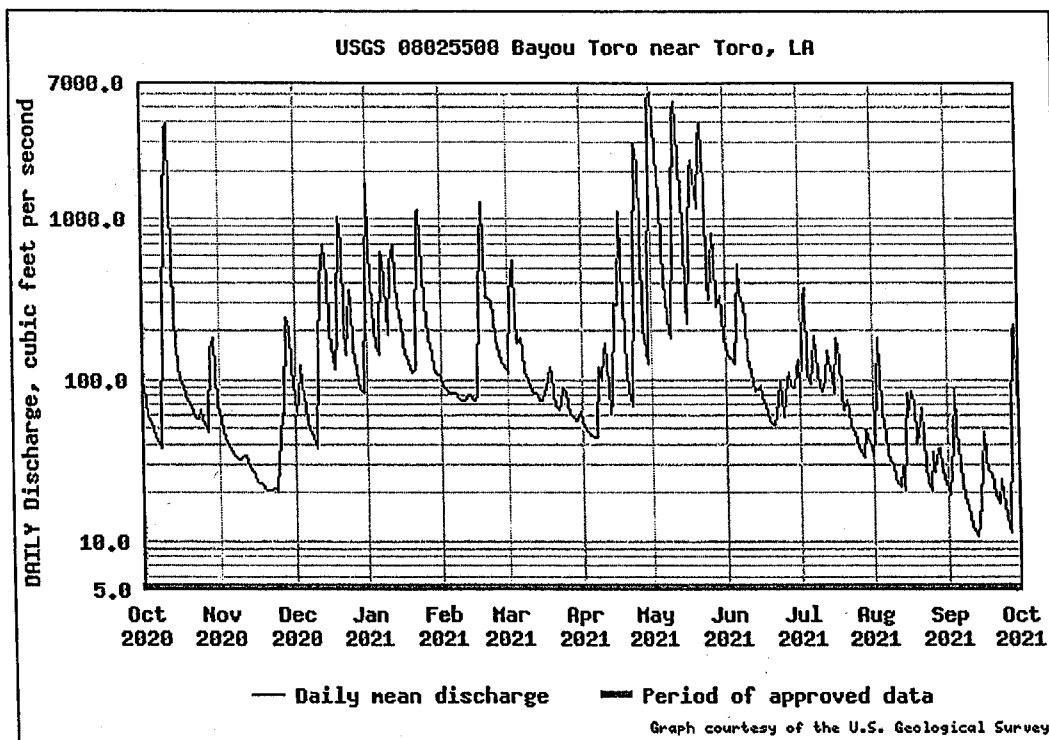
**DISCHARGE, CUBIC FEET PER SECOND**  
**YEAR 2020-10-01 to 2021-09-30**  
**DAILY MEAN VALUES**

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	2020	2020	2020	2021	2021	2021	2021	2021	2021	2021	2021	2021
1	91.9	56.5	94.1	1,650	101	111	56.4	6,210	142	132	34.1	21.3
2	72.8	48.7	63.2	654	91.9	342	52.0	4,000	138	78.3	45.1	19.5
3	61.0	42.9	74.4	278	86.6	543	47.5	2,510	136	321	181	39.5
4	53.7	38.9	122	200	83.9	250	45.6	1,350	126	367	116	87.4
5	50.0	36.4	93.3	164	82.6	167	45.4	662	226	108	63.9	48.4
6	44.5	34.4	66.9	143	82.9	183	44.5	409	521	94.3	45.7	30.9
7	40.1	32.7	56.0	630	82.9	146	44.7	249	343	126	35.9	22.7
8	37.5	32.2	49.4	571	78.3	115	120	194	294	189	31.1	18.9
9	255	32.0	44.1	269	75.2	98.6	99.4	182	233	114	29.6	16.4
10	3,680	33.2	40.0	193	75.0	91.1	148	4,710	139	90.0	25.0	14.3
11	3,980	33.8	38.1	540	75.0	85.7	168	5,460	110	85.7	22.6	12.5
12	1,300	31.3	439	699	79.7	82.4	90.3	3,780	94.9	99.8	21.5	11.0
13	241	29.1	525	415	81.5	79.0	62.7	2,240	85.3	150	29.1	10.6
14	158	27.0	691	296	76.7	75.3	72.0	849	86.9	133	20.4	12.5
15	123	25.1	439	222	75.4	75.3	304	304	92.7	105	82.6	27.3
16	102	23.2	201	172	80.7	85.8	295	227	78.4	83.1	66.2	48.0
17	89.0	23.1	159	143	340	87.6	1,110	2,060	68.3	184	84.4	33.3
18	81.2	22.4	117	129	1,270	119	520	2,350	61.4	137	72.6	27.2
19	74.3	21.4	201	119	694	111	183	1,840	56.5	80.8	40.9	25.9
20	69.5	20.7	1,020	112	321	80.3	114	1,180	53.0	65.7	47.0	22.7
21	64.1	20.5	702	116	325	69.8	85.7	3,100	52.5	74.1	67.9	19.2
22	58.5	20.7	218	1,120	307	65.5	69.8	3,980	60.1	64.3	44.3	17.2
23	56.7	21.4	144	1,160	243	70.7	434	1,530	97.8	53.6	29.7	24.1
24	65.5	20.3	358	469	178	90.4	2,970	392	76.7	46.6	23.6	20.1
25	55.6	30.7	300	293	144	85.3	2,210	313	59.6	41.5	20.5	14.4
26	51.2	62.1	155	237	131	71.0	821	821	101	37.3	35.9	12.2
27	48.2	59.8	116	184	127	62.9	206	603	111	33.8	27.1	11.2
28	156	245	97.1	143	118	59.5	150	287	92.4	32.9	37.4	204
29	184	208	86.3	120		56.1	125	333	89.6	49.4	37.7	218
30	107	118	83.1	111		55.9	5,660	266	113	44.3	27.2	79.9
31	70.3		367	108		63.0		176		38.2	23.0	
<b>Total</b>	<b>11,520</b>	<b>1,452</b>	<b>7,160</b>	<b>11,660</b>	<b>5,507</b>	<b>3,678</b>	<b>16,350</b>	<b>52,569</b>	<b>3,938</b>	<b>3,260</b>	<b>1,469</b>	<b>1,171</b>
<b>Mean</b>	<b>372</b>	<b>48.4</b>	<b>231</b>	<b>376</b>	<b>197</b>	<b>119</b>	<b>545</b>	<b>1,696</b>	<b>131</b>	<b>105</b>	<b>47.4</b>	<b>39.0</b>
<b>Max</b>	<b>3980</b>	<b>245</b>	<b>1020</b>	<b>1650</b>	<b>1270</b>	<b>543</b>	<b>5660</b>	<b>6210</b>	<b>521</b>	<b>367</b>	<b>181</b>	<b>218</b>
<b>Min</b>	<b>37.5</b>	<b>20.3</b>	<b>38.1</b>	<b>108</b>	<b>75.0</b>	<b>55.9</b>	<b>44.5</b>	<b>176</b>	<b>52.5</b>	<b>32.9</b>	<b>20.4</b>	<b>10.6</b>
<b>Ac-ft</b>	<b>22,850</b>	<b>2,879</b>	<b>14,199</b>	<b>23,130</b>	<b>10,920</b>	<b>7,296</b>	<b>32,440</b>	<b>104,300</b>	<b>7,813</b>	<b>6,465</b>	<b>2,914</b>	<b>2,322</b>



**SUMMARY STATISTICS**

	Water Year 2021		Water Years 1956 - 2021	
Annual total	119,700			
Annual mean	328.0		164.8	
Highest annual mean			408.6	1975
Lowest annual mean			17.9	2011
Highest daily mean	6,210	May 01	34,000	Mar 10, 2016
Lowest daily mean	10.6	Sep 13	0.0	Aug 22, 2011
Annual 7-day minimum	13.7	Sep 08	0.0	Aug 22, 2011
Maximum peak flow	11,200	Apr 30	42,000	Mar 10, 2016
Maximum peak stage	22.84	Apr 30	28.50	Mar 10, 2016
Annual runoff (cfsm)	2.22		1.12	
Annual runoff (inches)	30.1		15.3	
10 percent exceeds	639.6		304.0	
50 percent exceeds	89.0		33.0	
90 percent exceeds	26.6		5.30	





USGS Water-Year Summary 2021

**08026000 Sabine River near Burkeville, TX**

LOCATION - Lat 31°03'50", long 93°31'10" referenced to North American Datum of 1927, Newton County, TX, 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 mi<sup>2</sup>.

REVISIONS HISTORY - WSP 1732: Drainage area.

**SURFACE-WATER RECORDS**

PERIOD OF RECORD - Sept. 1955 to current year. Published as "below Toledo Bend near Burkeville" for period 1955-75. PERIOD OF RECORD, Water-Quality.-- CHEMICAL DATA: May 1968 to Aug. 1986. BIOCHEMICAL DATA: May 1968 to Aug. 1986. PESTICIDE DATA: Oct. 1970 to Aug. 1986. RADIOCHEMICAL DATA: Jan. 1981 to May 1981.

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. Satellite telemeter at station.

REMARKS - Since water year 1961, at least 10% of contributing drainage area has been regulated. Some records listed in the "Period of Record" for surface water and water quality may not be available electronically.

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 ft<sup>3</sup>/s, May 15, 1957, gage height, 32.43 ft; minimum, 60 ft<sup>3</sup>/s, Sept. 26-30, 1956.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION - 5 years (water years 1956-1960) 5,180 ft<sup>3</sup>/s (3,749,000 acre-ft/yr).

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

Suggested citation: U.S. Geological Survey, 2022, National Water Information System data available on the World Wide Web (USGS Water Data for the Nation), accessed [March 29, 2022], [https://nwis.waterdata.usgs.gov/nwis/wys\\_rpt?dv\\_ts\\_ids=&132682\\_164761\\_164762&adr\\_begin\\_date=2020-10-01&adr\\_end\\_date=2021-09-30&site\\_no=08026000&agency\\_cd=USGS](https://nwis.waterdata.usgs.gov/nwis/wys_rpt?dv_ts_ids=&132682_164761_164762&adr_begin_date=2020-10-01&adr_end_date=2021-09-30&site_no=08026000&agency_cd=USGS)

**DISCHARGE, CUBIC FEET PER SECOND  
YEAR 2020-10-01 to 2021-09-30  
DAILY VALUES**

[e, Value has been estimated.]

Day	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min
	October			November			December			January		
1	7,270	7,330	7,070	1,980	3,890	681	4,430	6,580	630	3,160	3,730	1,550
2	7,280	7,340	7,170	2,080	3,840	676	6,060	6,550	3,810	10,800	13,300	3,430
3	4,850	7,300	1,270	1,900	3,730	635	1,490	3,810	738	13,300	13,400	13,100
4	766	1,270	592	1,210	3,370	464	677	738	640	13,100	13,200	13,000
5	519	592	457	407	464	367	638	650	610	13,000	13,100	12,900
6	500	698	405	379	393	367	567	610	534	13,000	13,300	12,800
7	505	693	412	366	378	356	e526	538	507	13,800	14,200	13,200
8	403	412	367	358	363	353	482	507	460	14,000	14,200	13,700
9	1,400	5,810	374	353	360	339	443	464	427	13,400	13,800	13,200
10	9,460	10,600	5,810	821	2,260	315	1,100	2,230	427	13,200	13,300	13,100
11	6,310	8,360	5,350	672	1,620	378	531	879	389	14,000	14,400	13,300
12	4,290	5,360	2,860	628	2,200	339	1,390	3,300	525	14,200	14,400	14,000
13	5,840	11,300	1,750	838	2,100	385	2,020	3,120	1,520	13,700	14,000	13,500
14	5,340	8,780	3,080	568	1,740	296	5,030	7,120	2,220	13,300	13,500	13,200
15	7,650	12,000	3,010	698	1,640	363	7,370	11,500	3,410	13,100	13,300	13,000
16	8,990	11,900	5,540	581	2,100	280	11,300	13,100	7,590	13,000	13,100	13,000
17	7,130	11,000	3,190	808	2,020	356	13,300	13,300	13,100	13,000	13,000	12,900
18	3,070	8,550	786	945	2,020	322	13,300	13,300	13,200	12,900	13,000	12,800
19	627	786	552	424	732	318	13,500	14,000	13,200	13,000	13,000	12,800
20	549	581	529	584	2,080	312	6,490	13,700	2,980	13,000	13,000	12,900
21	506	534	472	812	2,010	385	2,310	2,980	1,920	13,000	13,200	12,900
22	478	498	456	595	2,080	299	9,930	13,000	1,910	14,900	16,000	13,200
23	462	477	419	803	1,990	353	13,300	13,600	13,000	15,400	15,900	14,900
24	514	552	447	571	2,130	268	5,900	13,300	2,100	14,400	14,900	13,800
25	806	2,500	481	867	2,060	452	5,050	9,490	1,570	13,700	13,800	13,600
26	972	2,370	489	668	2,180	381	5,850	9,500	2,990	13,500	13,600	13,400
27	866	2,600	412	1,110	2,090	764	1,300	2,990	806	13,300	13,400	13,200
28	1,890	4,120	743	1,190	2,540	764	732	806	687	13,300	13,300	12,900
29	2,390	4,260	1,010	1,350	2,430	961	640	687	580	5,080	12,900	1,310
30	2,180	4,000	834	761	979	640	656	839	566	916	1,310	781
31	1,780	3,940	650				1,030	1,550	839	721	800	660
<b>Total</b>	<b>95,590</b>	<b>146,500</b>	<b>56,989</b>	<b>25,330</b>	<b>57,790</b>	<b>13,170</b>	<b>137,300</b>	<b>184,700</b>	<b>93,880</b>	<b>372,200</b>	<b>389,300</b>	<b>352,000</b>
<b>Mean</b>	<b>3,084</b>	<b>4,726</b>	<b>1,838</b>	<b>844</b>	<b>1,926</b>	<b>439</b>	<b>4,430</b>	<b>5,959</b>	<b>3,029</b>	<b>12,010</b>	<b>12,559</b>	<b>11,360</b>
<b>Max</b>	<b>9460</b>	<b>12000</b>	<b>7170</b>	<b>2080</b>	<b>3890</b>	<b>961</b>	<b>13500</b>	<b>14000</b>	<b>13200</b>	<b>15400</b>	<b>16000</b>	<b>14900</b>
<b>Min</b>	<b>403</b>	<b>412</b>	<b>367</b>	<b>353</b>	<b>360</b>	<b>268</b>	<b>443</b>	<b>464</b>	<b>389</b>	<b>721</b>	<b>800</b>	<b>660</b>
<b>Ac-ft</b>	<b>189,600</b>	<b>290,600</b>	<b>113,000</b>	<b>50,230</b>	<b>114,600</b>	<b>26,120</b>	<b>272,400</b>	<b>366,400</b>	<b>186,200</b>	<b>738,200</b>	<b>772,200</b>	<b>698,200</b>



Day	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min
	February			March			April		
1	658	707	595	12,900	13,000	12,700	261	292	225
2	633	655	610	5,020	12,700	1,400	237	253	217
3	586	615	543	1,090	1,400	975	623	1,600	212
4	554	585	507	766	975	587	739	1,570	250
5	1,270	2,480	557	9,130	12,600	587	339	822	210
6	638	979	502	12,900	13,100	12,600	530	1,530	185
7	1,330	2,640	494	13,000	13,100	12,900	410	1,060	215
8	683	1,050	557	12,900	13,000	12,700	873	2,020	415
9	1,290	2,580	534	12,900	13,000	12,700	9,110	12,300	1,300
10	595	949	460	12,800	13,000	12,700	12,600	12,800	12,200
11	1,230	2,530	452	12,800	12,900	12,700	12,900	13,000	12,800
12	673	1,060	538	12,800	12,900	12,700	8,150	12,800	6,000
13	1,190	2,370	511	12,800	12,900	12,700	1,940	6,000	330
14	605	974	473	12,800	12,900	12,700	310	505	222
15	1,170	2,320	468	12,900	12,900	12,800	409	689	288
16	9,030	12,100	823	12,900	13,000	12,800	624	745	527
17	13,000	14,400	12,100	12,900	13,000	12,600	2,010	3,730	745
18	6,660	14,200	2,570	4,430	12,600	725	2,080	3,180	1,280
19	6,390	7,620	2,550	458	725	380	756	1,670	433
20	7,330	7,580	7,150	765	1,770	337	348	433	273
21	7,130	7,200	7,010	743	1,420	314	8,640	12,200	273
22	7,130	7,190	7,010	4,040	5,450	757	12,400	12,600	12,200
23	6,970	7,100	6,840	5,610	5,680	5,450	4,770	12,300	1,270
24	6,880	6,980	6,750	10,300	12,500	5,610	17,800	19,800	8,620
25	6,800	6,840	6,720	12,700	12,900	12,500	17,100	18,800	16,100
26	6,700	6,840	6,620	12,800	12,900	12,400	15,200	16,100	14,200
27	10,900	12,500	6,840	4,730	12,400	1,170	13,500	14,200	13,100
28	12,700	12,900	12,500	882	1,730	359	13,000	13,100	12,900
--				4,020	5,390	827	12,900	13,000	12,800
--				1,750	5,370	338	15,100	19,000	12,900
--				288	338	259			
<b>Total</b>	<b>120,700</b>	<b>145,900</b>	<b>93,280</b>	<b>246,800</b>	<b>287,500</b>	<b>210,300</b>	<b>185,700</b>	<b>228,100</b>	<b>142,700</b>
<b>Mean</b>	<b>4,312</b>	<b>5,212</b>	<b>3,332</b>	<b>7,962</b>	<b>9,276</b>	<b>6,783</b>	<b>6,189</b>	<b>7,603</b>	<b>4,756</b>
<b>Max</b>	<b>13000</b>	<b>14400</b>	<b>12500</b>	<b>13000</b>	<b>13100</b>	<b>12900</b>	<b>17800</b>	<b>19800</b>	<b>16100</b>
<b>Min</b>	<b>554</b>	<b>585</b>	<b>452</b>	<b>288</b>	<b>338</b>	<b>259</b>	<b>237</b>	<b>253</b>	<b>185</b>
<b>Ac-ft</b>	<b>239,500</b>	<b>289,500</b>	<b>185,000</b>	<b>489,600</b>	<b>570,300</b>	<b>417,100</b>	<b>368,200</b>	<b>452,400</b>	<b>283,000</b>

Day	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min
	May			June			July		
1	21,500	22,500	19,000	28,100	29,300	27,600	13,300	13,500	12,800
2	22,300	23,800	21,800	27,100	27,600	26,800	13,700	13,900	13,400
3	23,300	23,900	22,300	26,600	26,800	26,400	7,130	13,500	4,760
4	21,400	22,300	20,600	26,300	26,500	26,200	7,680	7,850	7,140
5	23,700	25,400	20,700	26,500	27,700	26,200	7,500	7,750	7,280
6	25,300	25,700	23,100	28,700	29,100	27,700	7,310	7,520	7,080
7	20,500	23,100	19,100	27,600	28,400	27,300	7,810	8,020	7,520
8	18,400	19,100	16,500	27,000	27,300	26,800	7,660	7,950	7,370
9	14,300	16,500	13,400	26,700	26,900	26,500	5,760	9,140	2,510
10	19,900	24,400	14,300	29,200	33,300	26,500	1,770	4,840	781
11	26,100	31,200	24,400	34,900	35,900	33,300	681	781	596
12	36,200	38,500	31,200	36,300	36,800	35,800	3,210	8,700	606
13	39,000	39,200	38,500	35,900	36,900	32,700	4,470	8,600	1,340
14	38,600	39,200	36,200	29,800	32,700	27,900	6,550	12,000	2,100
15	32,200	36,200	29,600	26,500	27,900	23,300	8,730	12,000	4,790
16	24,600	29,600	21,300	20,800	23,300	19,400	7,720	11,600	3,510
17	25,200	30,300	20,700	19,000	19,400	18,700	3,290	9,680	777
18	31,000	31,300	30,300	18,200	18,800	15,900	641	777	578
19	30,400	30,600	30,200	14,400	15,900	13,800	4,520	11,000	540
20	30,500	30,800	30,200	13,600	13,800	13,500	7,520	11,700	3,280
21	30,800	32,500	30,200	13,600	13,700	13,500	7,710	11,500	3,610
22	36,400	38,800	32,500	13,400	13,600	13,100	7,450	11,300	3,300
23	39,200	39,500	38,800	12,900	13,200	12,700	7,430	11,400	3,180
24	38,500	39,400	35,800	12,800	12,900	12,600	3,110	9,510	603
25	32,400	35,800	30,200	12,800	12,900	12,600	436	603	373
26	29,300	30,200	28,600	12,700	12,800	12,600	4,570	11,000	348
27	28,000	28,600	27,400	12,700	12,800	12,600	7,400	11,800	3,040
28	30,000	33,800	27,200	12,900	13,100	12,700	12,800	13,200	11,800
29	35,100	36,000	33,700	13,000	13,100	12,800	13,200	13,300	12,900
30	36,400	36,700	36,000	12,800	12,900	12,700	6,990	12,900	3,300
31	32,000	36,100	29,300				1,760	5,690	439
<b>Total</b>	<b>892,500</b>	<b>951,000</b>	<b>833,100</b>	<b>652,800</b>	<b>675,300</b>	<b>630,200</b>	<b>199,800</b>	<b>293,000</b>	<b>131,700</b>
<b>Mean</b>	<b>28,790</b>	<b>30,680</b>	<b>26,870</b>	<b>21,760</b>	<b>22,510</b>	<b>21,010</b>	<b>6,445</b>	<b>9,452</b>	<b>4,247</b>
<b>Max</b>	<b>39200</b>	<b>39500</b>	<b>38800</b>	<b>36300</b>	<b>36900</b>	<b>35800</b>	<b>13700</b>	<b>13900</b>	<b>13400</b>
<b>Min</b>	<b>14300</b>	<b>16500</b>	<b>13400</b>	<b>12700</b>	<b>12800</b>	<b>12600</b>	<b>436</b>	<b>603</b>	<b>348</b>
<b>Ac-ft</b>	<b>1,770,000</b>	<b>1,886,000</b>	<b>1,652,000</b>	<b>1,295,000</b>	<b>1,339,000</b>	<b>1,250,000</b>	<b>396,300</b>	<b>581,200</b>	<b>261,100</b>

Day	Mean	Max	Min	Mean	Max	Min
	August			September		
1	347	439	299	8,170	11,700	4,260
2	2,800	8,300	265	7,730	11,200	3,870
3	4,020	9,370	1,730	7,580	11,100	3,730
4	7,040	11,900	1,470	3,200	8,700	986
5	3,040	8,210	498	813	986	681
6	4,030	8,150	955	3,290	9,020	645
7	1,610	5,290	416	2,380	6,700	697
8	332	416	286	550	697	485
9	2,590	7,910	237	1,210	3,340	435
10	3,930	8,130	845	1,750	3,520	635
11	4,160	8,810	879	972	2,420	516
12	4,490	8,880	1,070	455	516	412
13	4,800	8,970	1,280	1,230	3,440	400
14	1,690	5,630	381	1,730	3,650	666
15	299	381	265	1,900	3,410	937
16	3,010	9,330	237	710	937	600
17	4,850	8,970	1,280	1,740	4,590	529
18	4,580	8,980	1,110	1,350	3,650	561
19	4,560	8,970	1,070	485	561	427
20	4,770	8,930	1,240	1,680	4,590	404
21	2,620	5,650	645	1,290	3,610	477
22	1,800	4,090	439	432	485	393
23	4,610	10,600	660	402	419	367
24	7,160	11,500	2,840	390	400	356
25	7,870	11,500	3,780	388	396	360
26	7,900	11,600	3,840	374	389	339
27	8,380	11,600	4,460	365	378	332
28	7,740	11,600	3,650	3,610	6,380	328
29	8,110	11,700	4,110	3,090	5,700	1,520
30	8,030	11,600	4,030	1,080	1,520	823
31	8,100	11,600	4,150			
<b>Total</b>	<b>139,300</b>	<b>259,000</b>	<b>48,420</b>	<b>60,350</b>	<b>114,400</b>	<b>27,170</b>
<b>Mean</b>	<b>4,493</b>	<b>8,355</b>	<b>1,562</b>	<b>2,012</b>	<b>3,812</b>	<b>906</b>
<b>Max</b>	<b>8380</b>	<b>11900</b>	<b>4460</b>	<b>8170</b>	<b>11700</b>	<b>4260</b>
<b>Min</b>	<b>299</b>	<b>381</b>	<b>237</b>	<b>365</b>	<b>378</b>	<b>328</b>
<b>Ac-ft</b>	<b>276,200</b>	<b>513,700</b>	<b>96,030</b>	<b>119,700</b>	<b>226,900</b>	<b>53,890</b>

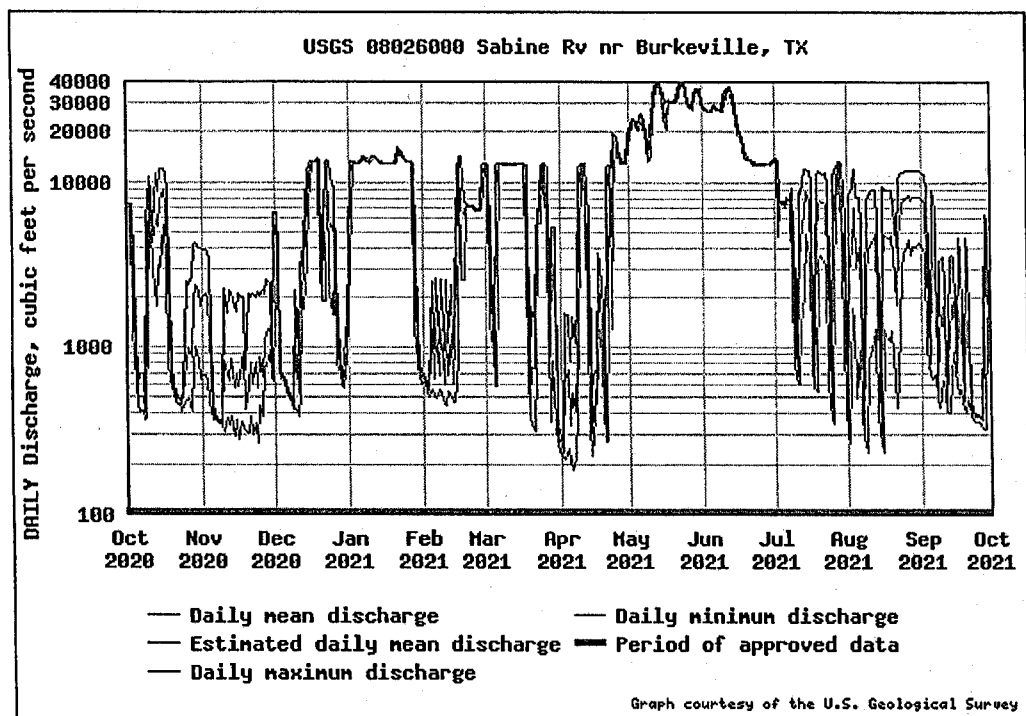
**STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 2021, BY WATER YEAR (WY)**

	<b>Oct</b>	<b>Nov</b>	<b>Dec</b>	<b>Jan</b>	<b>Feb</b>	<b>Mar</b>	<b>Apr</b>	<b>May</b>	<b>Jun</b>	<b>Jul</b>	<b>Aug</b>	<b>Sep</b>
<b>Mean</b>	1,447	2,615	5,481	8,317	8,215	10,590	8,208	8,129	5,598	4,139	3,224	3,185
<b>Max</b>	7,346	26,870	17,990	32,200	27,320	45,040	26,529	32,070	25,310	23,750	9,971	21,840
<b>(WY)</b>	(2010)	(2010)	(1962)	(2019)	(1999)	(2001)	(1969)	(1966)	(1989)	(1989)	(2017)	(2017)
<b>Min</b>	82.5	86.2	247	429	266	485	231	355	400	166	91.7	77.6
<b>(WY)</b>	(1968)	(1968)	(1968)	(2008)	(1968)	(1968)	(1971)	(2013)	(1970)	(1964)	(1967)	(1967)

**SUMMARY STATISTICS**

	Water Year 2021		Water Years 1961 - 2021	
Annual total	3,128,000			
Annual mean	8,571		5,752	
Highest annual mean			14,700	2019
Lowest annual mean			547.7	1967
Highest daily mean	39,200	May 23	232,000	Mar 11, 2016
Lowest daily mean	237.0	Apr 02	38.0	Sep 14, 1967
Annual 7-day minimum	431.0	Mar 31	40.9	Sep 09, 1967
Maximum peak flow			254,000 <sup>a</sup>	Mar 11, 2016
Maximum peak stage			54.88	Mar 11, 2016
Annual runoff (cfsm)	1.15		0.769	
Annual runoff (inches)	15.5		10.4	
10 percent exceeds	24,840		15,300	
50 percent exceeds	5,610		2,610	
90 percent exceeds	517.0		312.0	

<sup>a</sup> Discharge affected by Regulation or Diversion







USGS Water-Year Summary 2021

**08028000 Bayou Anacoco near Rosepine, LA**

LOCATION - Lat 30°57'10", long 93°21'10" referenced to North American Datum of 1927, in sec.25, T.1 S., R.10 W., Vernon Parish, LA, 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>.

REVISIONS HISTORY - WSP 2122: Drainage area.

**SURFACE-WATER RECORDS**

PERIOD OF RECORD - October 1951 to current year.

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, 58,000 acre-ft) since May 1963. Effected by occasional regulation July to September in most years caused by temporary lowering of the reservoirs upstream.

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

Suggested citation: U.S. Geological Survey, 2022, National Water Information System data available on the World Wide Web (USGS Water Data for the Nation), accessed [March 29, 2022], [https://nwis.waterdata.usgs.gov/nwis/wys\\_rpt?dv\\_ts\\_ids=&61799&adr\\_begin\\_date=2020-10-01&adr\\_end\\_date=2021-09-30&site\\_no=08028000&agency\\_cd=USGS](https://nwis.waterdata.usgs.gov/nwis/wys_rpt?dv_ts_ids=&61799&adr_begin_date=2020-10-01&adr_end_date=2021-09-30&site_no=08028000&agency_cd=USGS)

Water-Data Report 2021  
08028000 Bayou Anacoco near Rosepine, LA -- Continued

**DISCHARGE, CUBIC FEET PER SECOND**  
**YEAR 2020-10-01 to 2021-09-30**  
**DAILY MEAN VALUES**

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
	2020	2020	2020	2021	2021	2021	2021	2021	2021	2021	2021
1	1,970	450	415	1,000	553	584	465	2,750	655	425	269
2	1,230	435	243	1,090	534	1,000	384	3,320	730	422	270
3	812	424	233	968	520	1,310	362	4,170	751	511	403
4	610	414	344	809	511	988	354	4,810	720	434	335
5	533	405	334	707	509	785	346	3,870	800	394	286
6	511	396	297	618	499	860	331	3,240	1,180	409	263
7	497	386	274	1,220	487	779	328	1,950	1,490	515	250
8	489	377	258	1,350	474	653	1,000	1,220	1,540	458	242
9	886	370	248	1,030	466	591	760	969	1,430	487	231
10	4,620	349	240	809	457	571	459	3,260	1,210	638	218
11	10,500	335	238	1,160	458	560	387	3,560	954	981	203
12	9,090	325	421	1,500	587	548	345	5,550	712	987	189
13	5,550	318	687	1,350	672	537	323	6,000	604	768	177
14	3,660	312	1,930	1,090	564	527	439	4,050	571	866	172
15	1,840	304	1,530	906	513	524	822	2,980	550	553	166
16	1,090	289	986	748	501	519	968	1,630	533	487	152
17	780	151	722	642	836	512	1,620	2,870	518	477	189
18	612	100	608	592	2,410	511	1,380	5,010	504	477	129
19	576	95.7	695	574	1,990	487	706	6,200	496	435	101
20	554	93.2	1,470	559	1,470	477	515	6,670	484	460	106
21	536	90.9	1,190	559	1,020	469	455	6,840	482	459	97.6
22	522	89.5	937	1,640	925	464	423	9,770	591	428	91.7
23	519	88.1	849	2,450	796	480	539	8,030	551	403	89.0
24	558	87.3	1,390	2,610	700	483	3,190	5,200	494	377	91.4
25	520	156	1,650	2,270	650	465	3,190	3,490	472	359	109
26	497	251	1,420	1,500	627	446	3,360	2,530	471	344	135
27	482	320	1,040	1,090	608	431	3,270	1,330	447	331	139
28	483	1,120	805	832	589	426	2,070	953	445	325	154
29	520	762	664	670		409	1,200	839	475	313	122
30	493	798	600	590		397	1,410	751	448	305	109
31	468		716	573		437		681		289	102
<b>Total</b>	<b>52,010</b>	<b>10,090</b>	<b>23,430</b>	<b>33,510</b>	<b>20,930</b>	<b>18,230</b>	<b>31,400</b>	<b>114,500</b>	<b>21,310</b>	<b>15,120</b>	<b>5,591</b>
<b>Mean</b>	<b>1,678</b>	<b>336</b>	<b>756</b>	<b>1,081</b>	<b>747</b>	<b>588</b>	<b>1,047</b>	<b>3,693</b>	<b>710</b>	<b>488</b>	<b>180</b>
<b>Max</b>	<b>10500</b>	<b>1120</b>	<b>1930</b>	<b>2610</b>	<b>2410</b>	<b>1310</b>	<b>3360</b>	<b>9770</b>	<b>1540</b>	<b>987</b>	<b>403</b>
<b>Min</b>	<b>468</b>	<b>87.3</b>	<b>233</b>	<b>559</b>	<b>457</b>	<b>397</b>	<b>323</b>	<b>681</b>	<b>445</b>	<b>289</b>	<b>89.0</b>
<b>Ac-ft</b>	<b>103,200</b>	<b>20,020</b>	<b>46,480</b>	<b>66,460</b>	<b>41,510</b>	<b>36,160</b>	<b>62,280</b>	<b>227,100</b>	<b>42,260</b>	<b>29,980</b>	<b>11,090</b>

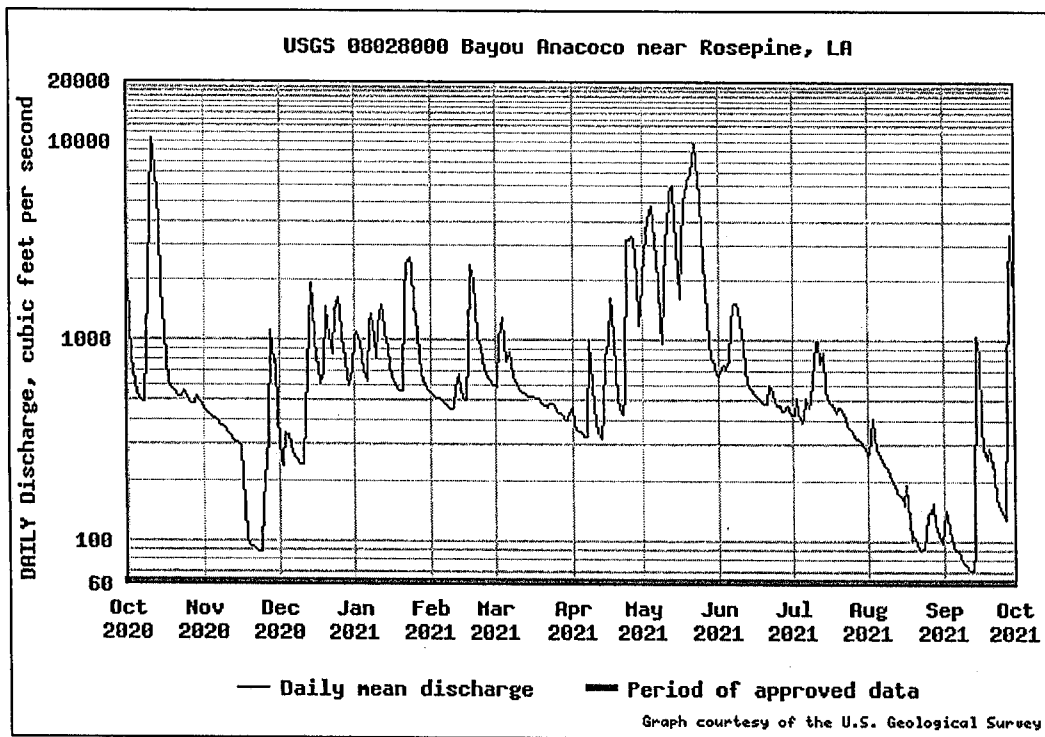


<u>Day</u>	<u>Sep</u>
<u>2021</u>	
1	96.3
2	142
3	133
4	112
5	96.0
6	90.1
7	89.8
8	82.7
9	78.5
10	75.0
11	72.4
12	70.6
13	70.7
14	88.4
15	1,060
16	849
17	385
18	291
19	256
20	289
21	269
22	220
23	161
24	153
25	140
26	132
27	127
28	1,940
29	3,400
30	1,950
--	
<b>Total</b>	<b>12,920</b>
<b>Mean</b>	<b>431</b>
<b>Max</b>	<b>3400</b>
<b>Min</b>	<b>70.6</b>
<b>Ac-ft</b>	<b>25,620</b>



**SUMMARY STATISTICS**

	Water Year 2021		Water Years 1952 - 2021	
Annual total	359,000			
Annual mean	983.6		490.6	
Highest annual mean			1,265	1983
Lowest annual mean			27.0	2011
Highest daily mean	10,500	Oct 11	49,900	Apr 30, 1953
Lowest daily mean	70.6	Sep 12	0.560	Sep 02, 2011
Annual 7-day minimum	76.9	Sep 08	1.12	Aug 17, 2011
Maximum peak flow	12,400	Oct 11	64,300	May 19, 1953
Maximum peak stage	23.07	Oct 11	29.01	Mar 11, 2016
Annual runoff (cfsm)	2.69		1.34	
Annual runoff (inches)	36.6		18.3	
10 percent exceeds	2,150		1,110	
50 percent exceeds	520.0		151.5	
90 percent exceeds	141.2		19.0	



ANACOCO BAYOU AT LA HWY 111 CROSSING SW OF KNIGHT LA  
(TCEQ ID 10340, SRA-TX ID BA4)  
WATER QUALITY

Date and Time	Station	Depth meters	Temp °C	pH SU	DO mg/L	% Sat	Cond µS/cm	TDS mg/L	Secchi meters	Turbidity NTU	E.coli mpn/ 100mL
10/14/2020 10:03	10340(BA4)	0.3	22.1	6.1	5.7	66	27	17	0.17	49.1	75
11/18/2020 10:26	10340(BA4)	0.3	16.2	7	8.1	82	270	172	0.18	54.5	41
12/9/2020 10:40	10340(BA4)	0.3	11.8	7.3	9.5	88	281	179	0.18	51	66
1/14/2021 11:05	10340(BA4)	0.3	8.9	7.1	10.8	94	76	49	0.22	54.3	184
2/10/2021 11:10	10340(BA4)	0.3	15	7.1	9.1	90	233	1,495	0.22	48.8	11
3/16/2021 11:14	10340(BA4)	0.3	20.3	7.2	6.5	72	346	222	0.24	32.1	6
4/14/2021 11:29	10340(BA4)	0.3	21.4	7.1	7.4	84	265	169	0.15	32.1	52
5/12/2021 11:03	10340(BA4)	0.3	21.3	6.3	6.5	78	51	33	0.11	91.1	387
6/9/2021 10:46	10340(BA4)	0.3	26.4	6.8	6.7	82	96	61	0.2	50.5	36
7/21/2021 11:05	10340(BA4)	0.3	27.5	7	6.6	83	189	121	0.3	35.5	50
8/18/2021 11:29	10340(BA4)	0.3	29.2	7.2	6.8	89	217	139	0.22	35.9	12
9/29/2021 11:10	10340(BA4)	0.3	22.4	6.2	6.4	74	69	44	0.08	199	2,420



USGS Water-Year Summary 2021

**08028500 Sabine River near Bon Wier, TX**

LOCATION - Lat 30°44'49", long 93°36'30" referenced to North American Datum of 1927, Newton County, TX, 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>.

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

**SURFACE-WATER 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.

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. Satellite telemeter at station.

REMARKS - Since water year 1961, at least 10% of contributing drainage area has been regulated. Some records listed in the "Period of Record" for surface water and water quality may not be available electronically.

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.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION - 37 years (water years 1924-1960) 7,155 ft<sup>3</sup>/s (5,184,000 acre-ft/yr).

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

Suggested citation: U.S. Geological Survey, 2022, National Water Information System data available on the World Wide Web (USGS Water Data for the Nation), accessed [March 29, 2022], [https://nwis.waterdata.usgs.gov/nwis/wys\\_rpt?dv\\_ts\\_ids=&132684\\_164763\\_164764&adr\\_begin\\_date=2020-10-01&adr\\_end\\_date=2021-09-30&site\\_no=08028500&agency\\_cd=USGS](https://nwis.waterdata.usgs.gov/nwis/wys_rpt?dv_ts_ids=&132684_164763_164764&adr_begin_date=2020-10-01&adr_end_date=2021-09-30&site_no=08028500&agency_cd=USGS)

**DISCHARGE, CUBIC FEET PER SECOND  
 YEAR 2020-10-01 to 2021-09-30  
 DAILY VALUES**

Day	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min
	October			November			December			January		
1	9,050	9,520	8,760	2,850	3,190	2,460	2,930	3,560	2,540	4,410	5,610	2,620
2	9,360	9,530	9,060	2,850	3,140	2,500	5,860	6,860	3,560	7,220	11,100	5,610
3	8,590	9,060	7,600	2,840	3,090	2,540	5,810	6,880	4,020	13,800	14,900	11,100
4	4,880	7,600	2,600	2,710	2,990	2,380	2,810	4,020	2,050	14,800	14,900	14,700
5	1,880	2,600	1,540	2,060	2,830	1,600	1,850	2,050	1,710	14,600	14,700	14,500
6	1,430	1,550	1,350	1,440	1,600	1,360	1,620	1,710	1,540	14,500	14,800	14,300
7	1,330	1,380	1,290	1,330	1,360	1,310	1,460	1,540	1,390	16,200	17,600	14,800
8	1,310	1,380	1,230	1,300	1,320	1,280	1,340	1,390	1,290	17,700	17,900	17,400
9	1,670	4,230	1,200	1,270	1,280	1,260	1,250	1,290	1,210	16,800	17,400	16,100
10	20,600	30,500	4,230	1,260	1,270	1,250	1,180	1,210	1,140	15,700	16,100	15,400
11	25,000	30,400	19,200	1,540	1,940	1,250	1,570	1,780	1,160	16,200	17,300	15,400
12	16,500	19,200	15,500	1,550	1,910	1,280	1,670	2,080	1,540	17,600	17,800	17,300
13	15,100	15,600	14,400	1,410	1,860	1,210	3,060	4,110	2,080	17,100	17,500	16,700
14	15,500	16,700	13,200	1,570	1,870	1,260	6,220	8,580	4,110	16,200	16,700	15,800
15	11,500	13,200	10,100	1,340	1,700	1,160	9,340	9,880	8,580	15,500	15,800	15,200
16	11,300	12,100	10,400	1,460	1,700	1,200	11,300	12,900	9,400	15,000	15,200	14,800
17	10,300	11,600	8,180	1,300	1,740	1,130	14,100	14,700	12,900	14,700	14,800	14,500
18	8,620	9,590	6,660	1,410	1,740	1,060	14,700	14,800	14,600	14,400	14,600	14,300
19	4,100	6,660	2,490	1,370	1,580	1,050	14,800	15,500	14,500	14,300	14,400	14,200
20	2,110	2,490	1,940	1,100	1,370	957	15,700	17,000	12,800	14,300	14,300	14,200
21	1,850	1,940	1,800	1,100	1,580	931	9,310	12,800	6,540	14,300	14,400	14,200
22	1,750	1,800	1,710	1,320	1,580	1,030	6,300	9,790	5,140	15,700	18,100	14,400
23	1,680	1,720	1,640	1,110	1,560	926	13,100	14,900	9,790	19,700	20,200	18,100
24	1,840	1,930	1,720	1,300	1,570	993	14,700	15,700	12,100	19,300	20,000	18,700
25	1,880	1,940	1,780	1,160	1,740	921	8,750	12,100	6,840	18,200	18,700	17,800
26	1,980	2,500	1,720	1,580	1,760	1,420	8,470	9,050	7,380	17,200	17,800	16,600
27	2,040	2,500	1,670	1,580	2,260	1,330	7,260	9,100	4,850	16,200	16,600	15,700
28	2,020	2,630	1,640	3,370	3,910	2,260	3,500	4,850	2,710	15,500	15,800	15,200
29	3,160	3,770	2,540	3,970	4,190	3,840	2,440	2,710	2,250	13,400	15,200	9,310
30	3,530	3,790	3,250	3,910	4,190	3,430	2,140	2,250	2,080	5,650	9,310	3,200
31	3,180	3,400	2,890				2,320	2,630	2,080	2,480	3,200	2,130
<b>Total</b>	<b>205,000</b>	<b>242,800</b>	<b>163,300</b>	<b>54,360</b>	<b>63,820</b>	<b>46,580</b>	<b>196,900</b>	<b>227,700</b>	<b>163,900</b>	<b>448,700</b>	<b>472,700</b>	<b>424,300</b>
<b>Mean</b>	<b>6,614</b>	<b>7,833</b>	<b>5,266</b>	<b>1,812</b>	<b>2,127</b>	<b>1,553</b>	<b>6,350</b>	<b>7,346</b>	<b>5,286</b>	<b>14,470</b>	<b>15,250</b>	<b>13,690</b>
<b>Max</b>	<b>25000</b>	<b>30500</b>	<b>19200</b>	<b>3970</b>	<b>4190</b>	<b>3840</b>	<b>15700</b>	<b>17000</b>	<b>14600</b>	<b>19700</b>	<b>20200</b>	<b>18700</b>
<b>Min</b>	<b>1310</b>	<b>1380</b>	<b>1200</b>	<b>1100</b>	<b>1270</b>	<b>921</b>	<b>1180</b>	<b>1210</b>	<b>1140</b>	<b>2480</b>	<b>3200</b>	<b>2130</b>
<b>Ac-ft</b>	<b>406,700</b>	<b>481,600</b>	<b>323,900</b>	<b>107,800</b>	<b>126,599</b>	<b>92,390</b>	<b>390,500</b>	<b>451,700</b>	<b>325,100</b>	<b>889,900</b>	<b>937,600</b>	<b>841,500</b>

Day	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min
	February			March			April		
1	2,020	2,130	1,910	13,900	14,100	13,700	1,810	1,950	1,770
2	1,850	1,910	1,790	13,000	14,300	9,960	1,660	1,770	1,540
3	1,740	1,790	1,700	6,960	9,960	4,880	1,480	1,540	1,430
4	1,670	1,700	1,620	4,060	4,880	3,500	1,780	2,090	1,430
5	1,660	1,690	1,630	4,060	8,300	3,040	1,990	2,130	1,820
6	2,180	2,430	1,670	12,200	14,000	8,300	1,600	1,980	1,390
7	1,790	2,120	1,620	14,300	14,400	14,000	1,660	2,100	1,360
8	2,170	2,420	1,640	14,300	14,400	14,200	2,210	2,790	1,970
9	1,760	2,090	1,590	14,100	14,200	14,000	4,340	8,590	2,790
10	2,090	2,350	1,600	14,100	14,100	14,000	11,800	13,200	8,590
11	1,690	2,000	1,560	14,000	14,100	14,000	13,500	13,600	13,200
12	2,230	2,560	1,600	14,000	14,100	13,900	12,700	13,600	10,500
13	2,150	2,410	1,990	14,000	14,100	13,900	7,920	10,500	5,160
14	2,360	2,580	1,990	14,000	14,100	13,900	3,200	5,160	2,250
15	1,910	2,270	1,730	14,100	14,100	14,000	3,050	3,340	2,300
16	3,170	7,550	1,740	14,100	14,100	14,000	4,420	7,320	3,150
17	11,600	14,300	7,550	14,100	14,300	14,000	7,300	7,590	6,840
18	15,400	16,600	13,300	12,700	14,300	8,890	6,780	7,160	5,910
19	10,500	13,300	9,500	5,280	8,890	2,900	5,110	5,910	3,970
20	10,500	10,600	10,100	2,270	2,900	1,980	2,960	3,970	2,330
21	9,930	10,400	9,510	2,300	2,560	1,960	2,830	6,880	2,010
22	9,340	9,510	9,180	2,570	4,050	2,180	10,900	12,800	6,880
23	9,000	9,180	8,830	5,930	6,810	4,050	11,700	13,000	8,850
24	8,650	8,830	8,500	7,680	10,200	6,810	15,400	24,700	8,550
25	8,400	8,520	8,280	12,300	13,400	10,200	25,500	26,200	24,000
26	8,230	8,310	8,130	13,600	13,700	13,400	22,000	24,000	20,600
27	8,920	11,100	8,180	12,200	13,800	8,470	19,300	20,600	18,300
28	12,900	13,700	11,100	5,300	8,470	3,020	17,400	18,300	16,700
--				2,840	4,100	2,490	15,900	16,700	15,300
--				5,300	5,890	4,100	15,500	17,200	15,000
--				2,950	4,560	1,950			
<b>Total</b>	<b>155,800</b>	<b>174,400</b>	<b>139,500</b>	<b>302,500</b>	<b>335,200</b>	<b>269,700</b>	<b>253,699</b>	<b>296,700</b>	<b>215,900</b>
<b>Mean</b>	<b>5,565</b>	<b>6,227</b>	<b>4,984</b>	<b>9,758</b>	<b>10,810</b>	<b>8,699</b>	<b>8,457</b>	<b>9,889</b>	<b>7,196</b>
<b>Max</b>	<b>15400</b>	<b>16600</b>	<b>13300</b>	<b>14300</b>	<b>14400</b>	<b>14200</b>	<b>25500</b>	<b>26200</b>	<b>24000</b>
<b>Min</b>	<b>1660</b>	<b>1690</b>	<b>1560</b>	<b>2270</b>	<b>2560</b>	<b>1950</b>	<b>1480</b>	<b>1540</b>	<b>1360</b>
<b>Ac-ft</b>	<b>309,000</b>	<b>345,800</b>	<b>276,800</b>	<b>600,000</b>	<b>664,800</b>	<b>534,900</b>	<b>503,200</b>	<b>588,400</b>	<b>428,200</b>

Day	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min
	May			June			July		
1	21,200	24,600	17,200	36,100	37,800	34,400	15,000	15,200	14,800
2	26,100	27,400	24,600	33,100	34,400	32,200	15,400	15,800	15,100
3	28,200	28,900	27,400	31,500	32,200	30,900	14,400	16,000	11,000
4	28,600	28,900	28,000	30,600	31,000	30,300	9,720	11,000	9,350
5	27,800	28,500	27,500	30,100	30,500	29,800	9,710	9,830	9,570
6	29,400	30,100	28,400	30,700	31,700	29,900	9,410	9,610	9,290
7	29,000	30,200	26,600	32,200	32,500	31,600	9,880	10,500	9,470
8	24,100	26,600	22,300	31,900	32,400	31,500	10,700	10,900	10,300
9	20,300	22,300	18,300	31,200	31,700	30,900	9,290	10,300	7,770
10	23,900	30,500	18,200	30,600	31,000	30,300	7,810	8,720	6,020
11	33,100	35,100	30,500	32,500	34,300	30,800	4,550	6,020	3,950
12	36,500	38,600	35,100	35,800	37,100	34,300	5,250	5,620	4,250
13	40,200	41,600	38,600	37,700	38,400	36,900	7,710	8,820	5,620
14	42,300	42,900	41,500	37,800	38,500	36,400	7,730	8,300	7,040
15	42,700	43,200	41,800	34,200	36,400	32,200	10,200	11,400	7,600
16	39,400	41,800	35,900	29,700	32,200	26,500	10,700	11,600	9,390
17	33,900	36,100	32,700	24,000	26,500	22,300	9,980	11,000	7,920
18	39,600	41,500	36,100	21,600	22,300	21,100	4,870	7,920	2,880
19	41,600	42,100	41,200	19,400	21,100	17,400	2,480	2,880	2,300
20	41,700	42,400	41,300	16,400	17,400	15,800	7,120	8,910	2,390
21	42,600	42,900	42,300	15,700	15,900	15,600	9,780	10,800	8,310
22	42,400	42,800	42,200	15,900	16,300	15,700	9,730	10,700	8,560
23	43,400	44,600	42,400	16,000	16,400	15,500	9,340	10,300	8,300
24	45,400	46,200	44,500	15,200	15,600	15,000	9,110	10,200	7,240
25	45,600	46,300	44,400	15,000	15,100	14,800	4,220	7,240	2,270
26	42,600	44,700	40,300	14,700	14,900	14,600	1,840	2,270	1,660
27	37,900	40,300	35,600	14,700	14,900	14,500	6,570	8,370	1,720
28	34,000	35,600	33,000	15,000	15,700	14,700	11,000	13,900	7,640
29	34,100	35,600	33,000	16,000	16,200	15,600	14,400	14,700	13,900
30	36,700	37,900	35,500	15,400	15,900	15,100	13,200	14,700	9,690
31	38,000	38,300	37,600				8,000	9,690	5,520
<b>Total</b>	<b>1,092,000</b>	<b>1,139,000</b>	<b>1,044,000</b>	<b>760,700</b>	<b>786,300</b>	<b>736,600</b>	<b>279,100</b>	<b>313,200</b>	<b>230,800</b>
<b>Mean</b>	<b>35,230</b>	<b>36,730</b>	<b>33,680</b>	<b>25,360</b>	<b>26,210</b>	<b>24,550</b>	<b>9,003</b>	<b>10,100</b>	<b>7,446</b>
<b>Max</b>	<b>45600</b>	<b>46300</b>	<b>44500</b>	<b>37800</b>	<b>38500</b>	<b>36900</b>	<b>15400</b>	<b>16000</b>	<b>15100</b>
<b>Min</b>	<b>20300</b>	<b>22300</b>	<b>17200</b>	<b>14700</b>	<b>14900</b>	<b>14500</b>	<b>1840</b>	<b>2270</b>	<b>1660</b>
<b>Ac-ft</b>	<b>2,167,000</b>	<b>2,258,000</b>	<b>2,071,000</b>	<b>1,509,000</b>	<b>1,560,000</b>	<b>1,461,000</b>	<b>553,600</b>	<b>621,200</b>	<b>457,800</b>



Day	Mean	Max	Min	Mean	Max	Min
	August			September		
1	3,280	5,520	1,990	9,030	9,960	8,100
2	1,770	1,990	1,680	8,990	9,960	7,760
3	4,570	6,120	1,730	8,360	9,220	7,420
4	7,550	10,100	5,210	8,080	9,150	6,140
5	6,460	9,830	3,440	3,380	6,140	1,830
6	4,840	5,930	3,160	1,550	1,830	1,360
7	5,470	6,270	4,550	3,980	5,580	1,350
8	2,940	4,790	1,880	2,570	4,520	1,430
9	1,660	1,880	1,550	1,180	1,430	1,060
10	3,950	5,410	1,550	1,580	2,200	1,030
11	5,230	5,980	4,280	2,070	2,390	1,730
12	5,530	6,430	4,380	1,470	2,130	1,070
13	5,740	6,530	4,780	984	1,070	944
14	5,920	6,740	4,810	1,640	2,410	934
15	2,760	4,810	1,570	2,930	4,170	2,030
16	1,370	1,570	1,250	3,920	4,210	3,230
17	4,280	6,110	1,250	2,430	3,230	1,880
18	5,870	6,660	5,020	2,730	3,530	1,800
19	5,770	6,620	4,840	2,160	3,180	1,540
20	5,740	6,550	4,830	1,360	1,540	1,280
21	5,800	6,610	4,700	2,340	3,280	1,290
22	3,660	4,700	2,990	1,990	2,980	1,360
23	2,870	3,250	2,380	1,190	1,360	1,080
24	6,140	7,640	2,940	1,020	1,080	972
25	8,360	9,360	6,770	951	977	920
26	8,880	9,810	7,870	912	935	884
27	9,040	9,880	8,040	879	899	859
28	9,290	10,300	8,010	2,640	8,070	864
29	9,040	9,960	8,020	11,800	13,200	8,070
30	9,170	10,100	8,200	8,610	11,200	6,650
31	9,060	9,990	8,110			
<b>Total</b>	<b>172,000</b>	<b>207,400</b>	<b>131,800</b>	<b>102,700</b>	<b>131,800</b>	<b>76,870</b>
<b>Mean</b>	<b>5,548</b>	<b>6,692</b>	<b>4,251</b>	<b>3,424</b>	<b>4,394</b>	<b>2,562</b>
<b>Max</b>	<b>9290</b>	<b>10300</b>	<b>8200</b>	<b>11800</b>	<b>13200</b>	<b>8100</b>
<b>Min</b>	<b>1370</b>	<b>1570</b>	<b>1250</b>	<b>879</b>	<b>899</b>	<b>859</b>
<b>Ac-ft</b>	<b>341,200</b>	<b>411,500</b>	<b>261,400</b>	<b>203,800</b>	<b>261,500</b>	<b>152,500</b>

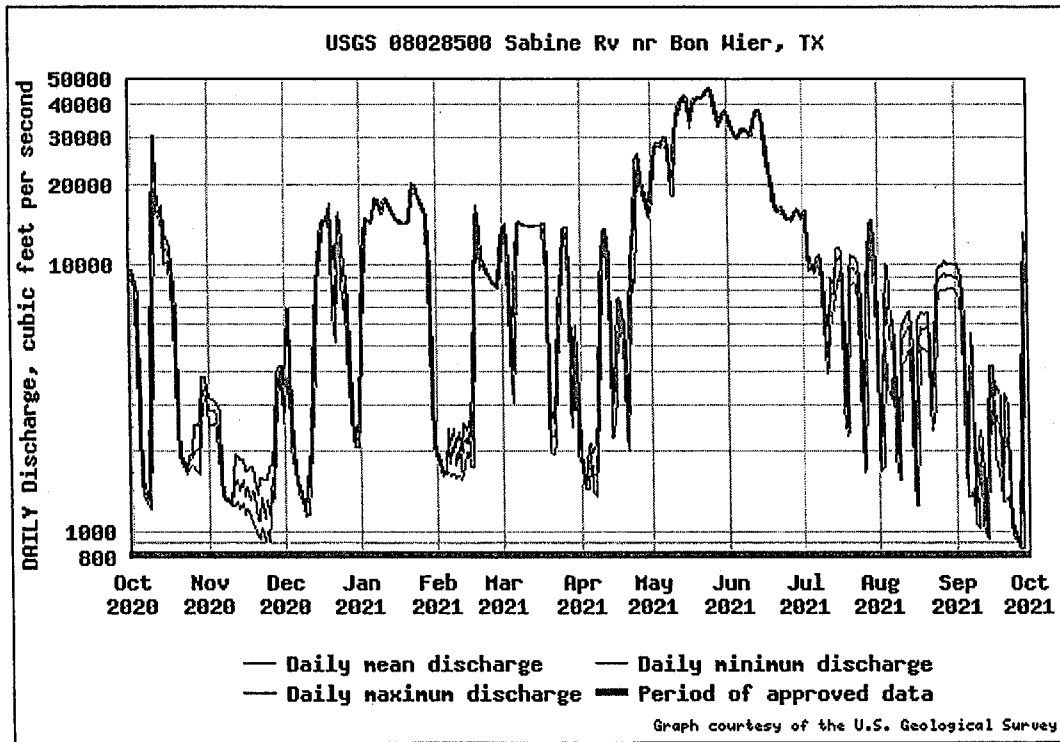
**STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 2021, BY WATER YEAR  
(WY)**

	<b>Oct</b>	<b>Nov</b>	<b>Dec</b>	<b>Jan</b>	<b>Feb</b>	<b>Mar</b>	<b>Apr</b>	<b>May</b>	<b>Jun</b>	<b>Jul</b>	<b>Aug</b>	<b>Sep</b>
<b>Mean</b>	2,148	3,595	6,917	10,030	10,180	12,060	9,869	9,485	6,692	4,934	3,718	3,705
<b>Max</b>	8,948	29,220	21,420	36,960	31,390	61,870	27,370	35,240	26,340	31,490	10,700	27,870
<b>(WY)</b>	(2002)	(2010)	(1983)	(2019)	(1999)	(2016)	(1969)	(2021)	(1989)	(1989)	(2017)	(2017)
<b>Min</b>	189	217	820	988	746	1,159	634	876	663	530	211	206
<b>(WY)</b>	(1968)	(1968)	(2008)	(2008)	(1968)	(2011)	(1971)	(2011)	(1970)	(1964)	(1967)	(1967)

**SUMMARY STATISTICS**

	Water Year 2021		Water Years 1961 - 2021	
Annual total	4,024,000			
Annual mean	11,020		6,876	
Highest annual mean			17,030	2016
Lowest annual mean			928.0	2011
Highest daily mean	45,600	May 25	270,000	Mar 13, 2016
Lowest daily mean	879.0	Sep 27	134.0	Nov 09, 1966
Annual 7-day minimum	1,209	Nov 19	142.0	Nov 03, 1966
Maximum peak flow			279,000 <sup>a</sup>	Mar 13, 2016
Maximum peak stage			44.30	Mar 13, 2016
Annual runoff (cfsm)	1.34		0.842	
Annual runoff (inches)	18.2		11.4	
10 percent exceeds	29,860		17,200	
50 percent exceeds	8,360		3,480	
90 percent exceeds	1,546		741.0	

<sup>a</sup> Discharge affected by Regulation or Diversion



SABINE RIVER AT US 190 EAST OF BON WIER, TX  
(TCEQ ID 10398, SRA-TX ID SR3)  
WATER QUALITY

Date and Time	Station	Depth meters	Temp °C	pH SU	DO mg/L	% Sat	Cond µS/cm	TDS mg/L	Secchi meters	Turbidity NTU	E.coli mpn/ 100mL
10/14/2020 10:25	10398(SR3)	0.3	22.6	6.2	6.3	73	36	22	0.08	129	387
11/18/2020 10:50	10398(SR3)	0.3	17	7.4	9.2	96	168	108	0.28	19.5	16
12/9/2020 11:02	10398(SR3)	0.3	12.5	7.3	9.8	92	132	85	0.3	25.3	53
1/14/2021 11:30	10398(SR3)	0.3	10.8	7.3	10.5	94	94	60	0.37	16.7	70
2/10/2021 11:35	10398(SR3)	0.3	15.2	7.1	9.5	94	149	95	0.28	25.4	24
3/16/2021 11:40	10398(SR3)	0.3	13.5	7.2	10.2	98	132	84	0.66	13.3	5
4/14/2021 11:53	10398(SR3)	0.3	19.7	7.2	8.6	94	141	90	0.48	17.8	28
5/12/2021 11:28	10398(SR3)	0.3	20.4	6.8	7.5	83	85	54	0.13	75.8	387
6/9/2021 11:07	10398(SR3)	0.3	24.6	6.9	6.8	82	129	82	0.42	18.1	16
7/21/2021 11:30	10398(SR3)	0.3	28.5	7.1	6.9	88	141	91	0.33	25.4	26
8/18/2021 12:03	10398(SR3)	0.3	30.5	7.3	7.1	95	148	94	0.58	13.2	9
9/29/2021 11:35	10398(SR3)	0.3	23.2	6.2	6.4	76	57	37	0.08	183	>2,420



USGS Water-Year Summary 2021

## 08030500 Sabine River near Ruliff, TX

LOCATION - Lat 30°18'13", long 93°44'37" referenced to North American Datum of 1927, Newton County, TX, 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 mi<sup>2</sup>.

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

### SURFACE-WATER RECORDS

PERIOD OF RECORD - Oct. 1924 to current year. PERIOD OF RECORD, Water-Quality.-- CHEMICAL DATA: Sept. 1945 to Sept. 1946, Oct. 1947 to Feb. 1999. BIOCHEMICAL DATA: Oct. 1967 to Feb. 1999. BIOLOGICAL DATA: Oct. 1974 to Aug. 1995. PESTICIDE DATA: Feb. 1968 to May 1982. RADIOCHEMICAL DATA: Oct. 1969 to Feb. 1999. SEDIMENT DATA: Oct. 1974 to Aug. 1995. PERIOD OF DAILY RECORD, Water-Quality.-- SPECIFIC CONDUCTANCE: Sept. 1945 to Sept. 1946, Oct. 1947 to Apr. 1999. WATER TEMPERATURE: Oct. 1947 to Apr. 1999. COLOR: Nov. 1969 to Dec. 1975.

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 - Since water year 1961, at least 10% of contributing drainage area has been regulated. Some records listed in the "Period of Record" for surface water and water quality may not be available electronically.

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 ft<sup>3</sup>/s, May 22, 1953, gage height, 29.98 ft, current datum; minimum, 270 ft<sup>3</sup>/s, several days in Sept. and Oct. 1956.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION - 36 years (water years 1925-1960) 8,780 ft<sup>3</sup>/s (6,359,000 acre-ft/yr).

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

Suggested citation: U.S. Geological Survey, 2022, National Water Information System data available on the World Wide Web (USGS Water Data for the Nation), accessed [March 29, 2022], [https://nwis.waterdata.usgs.gov/nwis/wys\\_rpt?dv\\_ts\\_ids=&132719\\_164767\\_164768&adr\\_begin\\_date=2020-10-01&adr\\_end\\_date=2021-09-30&site\\_no=08030500&agency\\_cd=USGS](https://nwis.waterdata.usgs.gov/nwis/wys_rpt?dv_ts_ids=&132719_164767_164768&adr_begin_date=2020-10-01&adr_end_date=2021-09-30&site_no=08030500&agency_cd=USGS)

**DISCHARGE, CUBIC FEET PER SECOND**  
**YEAR 2020-10-01 to 2021-09-30**  
**DAILY VALUES**

Day	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min
	October			November			December			January		
1	16,000	17,600	14,900	4,440	4,490	4,360	7,440	7,520	7,300	5,230	5,570	5,090
2	14,300	15,000	13,700	4,160	4,360	4,020	6,900	7,300	6,500	5,990	6,850	5,250
3	13,300	13,900	12,800	3,910	4,020	3,850	6,690	7,070	6,460	7,750	8,780	6,850
4	12,600	13,000	12,300	3,800	3,860	3,770	7,410	7,590	7,070	9,970	11,000	8,780
5	11,700	12,500	10,800	3,690	3,780	3,640	7,210	7,590	6,640	11,700	12,600	10,900
6	8,920	10,800	7,060	3,430	3,640	3,110	5,870	6,670	5,080	13,100	13,900	12,400
7	5,610	7,060	4,380	2,760	3,110	2,480	4,400	5,090	3,860	14,100	14,500	13,800
8	3,680	4,380	3,220	2,330	2,480	2,220	3,480	3,860	3,180	14,600	15,100	14,300
9	3,580	5,390	3,080	2,160	2,220	2,110	2,960	3,180	2,780	15,100	15,600	14,700
10	8,790	12,400	5,390	2,080	2,110	2,050	2,630	2,780	2,510	16,200	17,000	15,400
11	15,200	17,400	12,400	2,020	2,050	2,000	2,400	2,510	2,320	17,200	17,500	16,700
12	19,400	22,400	17,300	2,040	2,190	1,990	2,540	2,810	2,350	17,200	17,500	16,800
13	27,300	31,600	22,200	2,290	2,320	2,190	3,070	3,610	2,810	16,900	17,500	16,600
14	31,000	32,200	28,800	2,130	2,260	2,070	5,050	6,500	3,610	16,900	17,200	16,700
15	26,100	29,200	23,400	2,220	2,270	2,120	7,800	9,240	6,500	17,100	17,300	16,800
16	21,700	23,600	19,700	2,060	2,200	1,990	10,700	11,800	9,200	16,800	17,200	16,400
17	18,500	20,100	17,200	2,070	2,100	2,010	12,600	13,300	11,800	16,200	16,800	15,700
18	16,300	17,400	15,500	1,940	2,050	1,880	13,500	13,900	13,200	15,600	15,900	15,100
19	14,800	15,600	14,100	2,010	2,050	1,920	14,300	15,200	13,700	15,100	15,500	14,800
20	13,200	14,200	11,700	1,910	1,980	1,880	15,200	15,600	14,800	14,700	15,000	14,400
21	9,910	11,700	7,910	1,880	1,940	1,760	15,600	16,000	15,200	14,500	14,800	14,300
22	6,480	7,910	5,250	1,650	1,760	1,600	15,900	16,200	15,500	14,500	14,900	14,300
23	4,460	5,250	3,860	1,800	1,860	1,660	15,900	16,300	15,500	14,400	14,600	14,200
24	3,520	3,860	3,270	1,720	1,830	1,660	15,300	16,200	14,600	14,600	15,100	14,300
25	3,170	3,270	3,130	1,830	1,890	1,690	14,500	14,900	14,100	15,200	15,800	14,800
26	3,120	3,150	3,080	1,770	1,870	1,710	14,300	14,500	14,100	16,200	17,000	15,500
27	3,050	3,130	3,020	2,180	2,840	1,770	14,200	14,500	13,800	16,800	17,100	16,500
28	3,220	3,280	3,130	3,430	4,130	2,840	13,500	14,000	12,800	16,700	17,100	16,400
29	3,110	3,200	3,060	5,400	6,540	4,130	11,800	13,000	10,600	16,300	16,700	15,900
30	3,540	3,980	3,170	7,100	7,430	6,540	8,950	10,600	7,440	15,800	16,200	15,300
31	4,270	4,490	3,980				6,390	7,440	5,570	15,000	15,600	14,300
<b>Total</b>	<b>349,800</b>	<b>389,000</b>	<b>312,800</b>	<b>82,210</b>	<b>87,630</b>	<b>77,020</b>	<b>288,500</b>	<b>306,800</b>	<b>270,900</b>	<b>447,400</b>	<b>463,200</b>	<b>433,300</b>
<b>Mean</b>	<b>11,290</b>	<b>12,550</b>	<b>10,090</b>	<b>2,740</b>	<b>2,921</b>	<b>2,567</b>	<b>9,306</b>	<b>9,895</b>	<b>8,738</b>	<b>14,430</b>	<b>14,940</b>	<b>13,980</b>
<b>Max</b>	<b>31000</b>	<b>32200</b>	<b>28800</b>	<b>7100</b>	<b>7430</b>	<b>6540</b>	<b>15900</b>	<b>16300</b>	<b>15500</b>	<b>17200</b>	<b>17500</b>	<b>16800</b>
<b>Min</b>	<b>3050</b>	<b>3130</b>	<b>3020</b>	<b>1650</b>	<b>1760</b>	<b>1600</b>	<b>2400</b>	<b>2510</b>	<b>2320</b>	<b>5230</b>	<b>5570</b>	<b>5090</b>
<b>Ac-ft</b>	<b>693,900</b>	<b>771,500</b>	<b>620,400</b>	<b>163,100</b>	<b>173,800</b>	<b>152,800</b>	<b>572,200</b>	<b>608,500</b>	<b>537,300</b>	<b>887,500</b>	<b>918,700</b>	<b>859,400</b>

Day	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min
	February			March			April		
1	13,100	14,400	11,400	11,200	11,500	10,900	6,760	7,460	5,880
2	9,300	11,400	7,320	12,300	12,900	11,500	4,880	5,880	4,060
3	6,040	7,320	4,960	13,400	14,000	12,800	3,630	4,060	3,290
4	4,290	4,960	3,800	14,100	14,300	13,800	3,060	3,290	2,870
5	3,550	3,800	3,370	13,400	14,200	12,300	2,830	2,920	2,790
6	3,250	3,370	3,170	10,800	12,400	9,630	2,990	3,040	2,920
7	3,250	3,370	3,170	9,590	10,000	9,370	2,930	3,050	2,760
8	3,300	3,380	3,180	10,700	11,400	9,940	2,720	2,860	2,660
9	3,200	3,280	3,150	12,100	12,900	11,300	3,100	3,440	2,860
10	3,200	3,280	3,070	13,500	14,100	12,800	4,270	5,410	3,440
11	3,140	3,370	3,050	14,300	14,700	13,800	6,600	7,670	5,410
12	3,590	3,760	3,360	14,700	15,100	14,300	8,690	9,770	7,650
13	3,960	4,210	3,750	15,000	15,300	14,700	10,600	11,300	9,740
14	4,260	4,300	4,190	15,100	15,300	14,900	12,300	13,000	11,200
15	4,230	4,260	4,190	15,200	15,400	15,000	12,400	13,000	11,200
16	4,010	4,220	3,790	15,200	15,400	15,000	9,630	11,200	8,330
17	4,130	5,230	3,750	15,500	15,800	15,100	8,000	8,330	7,840
18	6,890	8,520	5,230	15,600	15,800	15,300	8,790	9,550	8,110
19	10,200	11,900	8,520	15,900	16,200	15,400	10,100	10,500	9,480
20	13,100	14,300	11,600	15,700	16,200	15,100	10,500	10,600	10,200
21	14,900	15,300	14,200	13,200	15,200	10,900	9,370	10,300	8,170
22	15,000	15,400	14,700	8,580	10,900	6,880	7,150	8,170	6,590
23	14,400	14,900	14,000	5,980	6,880	5,490	7,200	8,000	6,610
24	13,600	14,200	13,200	5,950	6,530	5,490	9,000	10,100	8,000
25	12,800	13,400	12,300	7,120	7,710	6,530	10,900	11,800	10,000
26	11,900	12,400	11,500	8,500	9,480	7,710	13,200	14,600	11,800
27	11,300	11,600	11,100	10,300	11,100	9,440	16,400	18,300	14,600
28	11,000	11,200	10,900	11,700	12,400	11,100	20,800	22,700	18,300
--				12,400	12,600	11,900	22,400	23,000	21,300
--				10,600	11,900	8,950	21,000	21,800	20,100
--				8,000	8,980	7,440			
<b>Total</b>	<b>214,900</b>	<b>231,000</b>	<b>199,900</b>	<b>375,600</b>	<b>396,600</b>	<b>354,800</b>	<b>272,200</b>	<b>295,100</b>	<b>248,200</b>
<b>Mean</b>	<b>7,675</b>	<b>8,251</b>	<b>7,140</b>	<b>12,120</b>	<b>12,790</b>	<b>11,440</b>	<b>9,073</b>	<b>9,837</b>	<b>8,272</b>
<b>Max</b>	<b>15000</b>	<b>15400</b>	<b>14700</b>	<b>15900</b>	<b>16200</b>	<b>15400</b>	<b>22400</b>	<b>23000</b>	<b>21300</b>
<b>Min</b>	<b>3140</b>	<b>3280</b>	<b>3050</b>	<b>5950</b>	<b>6530</b>	<b>5490</b>	<b>2720</b>	<b>2860</b>	<b>2660</b>
<b>Ac-ft</b>	<b>426,200</b>	<b>458,200</b>	<b>396,500</b>	<b>745,000</b>	<b>786,600</b>	<b>703,700</b>	<b>539,900</b>	<b>585,300</b>	<b>492,200</b>

Day	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min
	May			June			July		
1	19,700	20,700	18,900	25,600	26,100	25,100	12,800	13,100	12,500
2	18,600	19,200	18,000	26,300	26,900	25,800	12,700	12,900	12,400
3	18,600	19,500	18,200	27,100	28,300	26,200	12,800	13,100	12,400
4	21,300	24,500	19,200	27,100	28,300	26,200	12,700	13,100	12,300
5	26,400	28,000	24,300	25,200	26,400	23,900	12,500	12,900	12,100
6	28,100	28,600	27,500	26,300	27,400	23,800	12,000	12,500	11,500
7	27,100	27,800	26,000	26,100	27,300	24,700	11,200	11,700	10,900
8	26,100	26,600	25,700	24,000	25,200	23,000	10,600	10,900	10,300
9	25,800	26,200	25,000	23,000	23,500	22,500	10,400	10,800	10,100
10	24,300	25,400	22,900	22,200	22,800	21,400	11,000	11,200	10,700
11	22,500	23,200	21,700	21,200	21,800	20,600	11,100	11,300	10,900
12	22,000	22,600	21,500	20,300	20,800	19,600	10,600	11,000	10,200
13	24,500	27,700	22,300	20,000	20,500	19,700	9,710	10,200	9,390
14	31,400	34,900	27,500	21,300	22,400	20,200	9,480	9,650	9,350
15	37,300	39,400	34,700	23,400	24,500	22,200	9,760	9,840	9,610
16	40,300	41,300	39,200	24,700	25,200	24,200	9,960	10,200	9,760
17	48,200	54,400	40,800	23,600	24,700	22,200	10,400	10,600	10,200
18	55,100	55,600	53,900	21,000	22,600	19,500	10,600	10,700	10,500
19	57,600	61,900	55,300	18,200	19,700	16,800	10,300	10,700	9,760
20	66,000	70,400	61,500	16,200	17,200	15,300	9,070	9,990	8,170
21	70,500	71,400	69,100	14,900	15,600	14,400	8,120	8,310	8,020
22	66,800	69,900	64,100	14,200	14,700	13,700	9,290	10,300	8,280
23	61,200	64,100	57,900	13,600	13,900	13,300	10,800	11,100	10,300
24	55,000	58,100	52,100	13,100	13,500	12,700	11,100	11,300	11,000
25	49,900	52,400	48,000	12,900	13,300	12,600	10,700	11,100	10,300
26	47,200	48,300	46,200	13,100	13,800	12,500	9,650	10,300	8,610
27	45,700	46,700	44,500	13,400	13,800	13,100	7,360	8,640	6,210
28	43,000	45,000	40,800	13,200	13,500	13,000	6,090	6,460	5,900
29	37,200	41,000	33,600	12,900	13,200	12,700	7,150	7,920	6,460
30	30,800	33,900	27,800	12,800	13,200	12,600	8,590	9,290	7,920
31	26,600	28,100	25,400				9,710	10,100	9,210
<b>Total</b>	<b>1,175,000</b>	<b>1,237,000</b>	<b>1,114,000</b>	<b>596,900</b>	<b>620,100</b>	<b>573,500</b>	<b>318,200</b>	<b>331,200</b>	<b>305,300</b>
<b>Mean</b>	<b>37,900</b>	<b>39,900</b>	<b>35,920</b>	<b>19,900</b>	<b>20,670</b>	<b>19,120</b>	<b>10,270</b>	<b>10,680</b>	<b>9,847</b>
<b>Max</b>	<b>70500</b>	<b>71400</b>	<b>69100</b>	<b>27100</b>	<b>28300</b>	<b>26200</b>	<b>12800</b>	<b>13100</b>	<b>12500</b>
<b>Min</b>	<b>18600</b>	<b>19200</b>	<b>18000</b>	<b>12800</b>	<b>13200</b>	<b>12500</b>	<b>6090</b>	<b>6460</b>	<b>5900</b>
<b>Ac-ft</b>	<b>2,330,000</b>	<b>2,453,000</b>	<b>2,209,000</b>	<b>1,184,000</b>	<b>1,230,000</b>	<b>1,138,000</b>	<b>631,200</b>	<b>656,900</b>	<b>605,500</b>



Day	Mean	Max	Min	Mean	Max	Min
	August			September		
1	10,200	10,400	10,000	8,050	8,100	8,000
2	9,580	10,200	8,540	8,060	8,140	8,000
3	7,090	8,540	5,640	8,050	8,100	7,960
4	5,160	5,640	4,990	8,040	8,080	7,980
5	5,640	6,190	5,210	7,920	8,080	7,780
6	6,550	6,700	6,190	7,370	7,850	6,610
7	6,390	6,700	6,120	5,130	6,610	3,730
8	5,950	6,160	5,810	3,520	3,870	3,300
9	5,360	5,820	4,620	3,810	4,000	3,340
10	3,760	4,620	3,120	2,670	3,340	2,120
11	3,320	3,880	3,040	1,900	2,120	1,800
12	4,430	4,870	3,880	2,170	2,350	1,960
13	5,090	5,300	4,870	2,270	2,370	2,060
14	5,440	5,690	5,290	2,040	2,330	1,920
15	5,760	5,870	5,630	3,050	3,890	2,330
16	5,360	5,860	4,520	4,490	5,070	3,890
17	3,770	4,520	3,260	5,390	5,520	5,070
18	3,720	4,510	3,250	5,100	5,510	4,540
19	5,130	5,560	4,510	4,100	4,540	3,940
20	5,760	5,910	5,560	3,780	3,950	3,470
21	5,910	5,930	5,870	3,130	3,470	2,800
22	5,910	5,950	5,880	2,710	2,910	2,600
23	5,520	5,880	4,970	2,970	3,050	2,840
24	4,330	4,970	3,950	2,500	2,840	2,170
25	4,370	5,050	3,950	1,920	2,170	1,730
26	5,710	6,290	5,050	1,620	1,730	1,540
27	6,700	7,030	6,290	1,490	1,540	1,440
28	7,370	7,740	7,000	2,280	4,820	1,430
29	7,910	8,080	7,720	7,600	9,820	4,820
30	8,100	8,160	8,040	10,800	11,400	9,820
31	8,080	8,160	8,000			
<b>Total</b>	<b>183,400</b>	<b>196,200</b>	<b>170,800</b>	<b>133,900</b>	<b>147,600</b>	<b>121,000</b>
<b>Mean</b>	<b>5,915</b>	<b>6,328</b>	<b>5,508</b>	<b>4,464</b>	<b>4,919</b>	<b>4,033</b>
<b>Max</b>	<b>10200</b>	<b>10400</b>	<b>10000</b>	<b>10800</b>	<b>11400</b>	<b>9820</b>
<b>Min</b>	<b>3320</b>	<b>3880</b>	<b>3040</b>	<b>1490</b>	<b>1540</b>	<b>1430</b>
<b>Ac-ft</b>	<b>363,700</b>	<b>389,100</b>	<b>338,700</b>	<b>265,600</b>	<b>292,700</b>	<b>240,000</b>

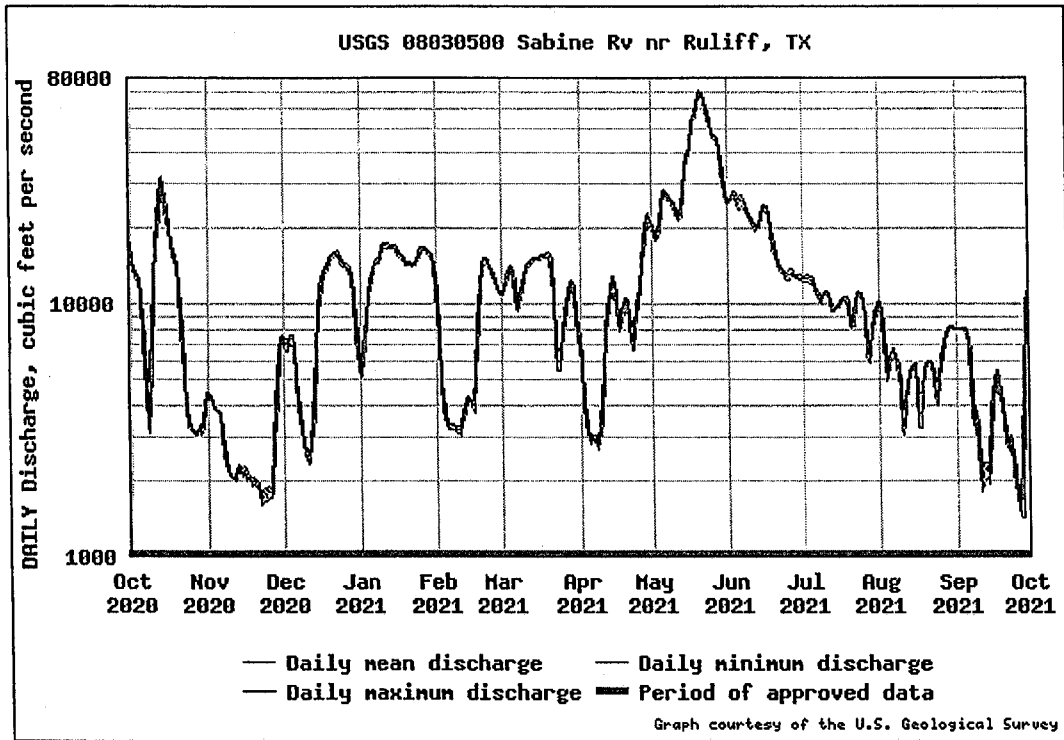
**STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 2021, BY WATER YEAR  
(WY)**

	<b>Oct</b>	<b>Nov</b>	<b>Dec</b>	<b>Jan</b>	<b>Feb</b>	<b>Mar</b>	<b>Apr</b>	<b>May</b>	<b>Jun</b>	<b>Jul</b>	<b>Aug</b>	<b>Sep</b>
<b>Mean</b>	3,073	4,419	8,093	11,640	11,810	13,669	11,250	10,240	7,613	5,790	4,331	4,910
<b>Max</b>	15,310	24,990	22,070	38,220	33,170	57,140	33,240	37,900	26,240	42,320	11,160	45,050
<b>(WY)</b>	(2007)	(2010)	(1983)	(2019)	(1999)	(2016)	(1969)	(2021)	(1989)	(1989)	(2017)	(2017)
<b>Min</b>	292	327	987	1,237	1,344	1,287	946	892	845	805	382	333
<b>(WY)</b>	(1968)	(1968)	(2011)	(2000)	(2000)	(2011)	(2011)	(2011)	(2011)	(1967)	(1967)	(1967)

**SUMMARY STATISTICS**

	Water Year 2021		Water Years 1961 - 2021	
Annual total	4,438,000			
Annual mean	12,160		8,053	
Highest annual mean			17,070	2016
Lowest annual mean			1,057	2011
Highest daily mean	70,500	May 21	202,000	Mar 15, 2016
Lowest daily mean	1,490	Sep 27	278.0	Oct 28, 1967
Annual 7-day minimum	1,794	Nov 20	282.4	Oct 09, 1967
Maximum peak flow			206,000 <sup>a</sup>	Mar 15, 2016
Maximum peak stage			33.28	Mar 15, 2016
Annual runoff (cfsm)	1.30		0.863	
Annual runoff (inches)	17.7		11.7	
10 percent exceeds	24,120		18,400	
50 percent exceeds	10,100		4,630	
90 percent exceeds	2,802		1,110	

<sup>a</sup> Discharge affected by Regulation or Diversion







USGS Water-Year Summary 2021

## 08029500 Big Cow Creek near Newton, TX

LOCATION - Lat 30°49'08", long 93°47'08" referenced to North American Datum of 1983, Newton County, TX, 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 Melhones Creek, and 8.0 mi upstream from White Oak Creek.  
DRAINAGE AREA - 128 mi<sup>2</sup>.

### SURFACE-WATER RECORDS

PERIOD OF RECORD - Apr. 1952 to current year. PERIOD OF RECORD, Water-Quality.-- CHEMICAL DATA: July 1975 to Jan. 1979. SEDIMENT DATA: Dec. 1976 to Jan. 1979.

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 - No known regulation or diversions. Some records listed in the "Period of Record" for surface water and water quality may not be available electronically.

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

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

Suggested citation: U.S. Geological Survey, 2022, National Water Information System data available on the World Wide Web (USGS Water Data for the Nation), accessed [March 29, 2022], [https://nwis.waterdata.usgs.gov/nwis/wys\\_rpt?dv\\_ts\\_ids=&132686\\_164765\\_164766&adr\\_begin\\_date=2020-10-01&adr\\_end\\_date=2021-09-30&site\\_no=08029500&agency\\_cd=USGS](https://nwis.waterdata.usgs.gov/nwis/wys_rpt?dv_ts_ids=&132686_164765_164766&adr_begin_date=2020-10-01&adr_end_date=2021-09-30&site_no=08029500&agency_cd=USGS)

Water-Data Report 2021  
08029500 Big Cow Creek near Newton, TX -- Continued

**DISCHARGE, CUBIC FEET PER SECOND**  
**YEAR 2020-10-01 to 2021-09-30**  
**DAILY VALUES**

Day	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min
	October			November			December			January		
1	95.9	103	90.4	70.2	72.1	67.9	121	153	100	1,290	1,580	861
2	86.6	90.4	82.9	66.5	67.9	64.9	93.6	100	88.8	1,010	1,520	545
3	80.7	82.9	77.9	63.9	64.9	62.9	181	276	97.9	326	545	220
4	75.9	77.9	74.2	62.2	62.9	61.4	216	276	160	193	220	173
5	73.1	74.2	71.6	61.4	61.9	61.0	125	160	105	160	173	149
6	70.5	71.6	69.0	61.4	61.9	61.0	97.3	105	91.8	163	412	137
7	67.7	69.0	66.4	61.4	61.4	61.4	87.4	91.8	83.6	861	1,020	412
8	66.7	68.4	65.9	61.4	61.4	61.0	80.4	83.6	77.5	524	861	311
9	198	863	68.4	62.3	62.9	61.4	75.8	77.5	74.8	231	311	189
10	1,170	1,310	863	63.8	64.4	62.9	73.5	74.8	72.6	178	237	165
11	832	1,290	405	64.5	64.9	63.4	72.9	84.2	71.0	759	1,030	237
12	236	405	158	62.2	63.4	61.0	197	329	84.2	655	1,000	389
13	136	158	119	59.3	61.0	58.1	331	586	260	278	389	218
14	109	119	101	57.6	58.1	57.2	734	848	533	196	218	177
15	96.2	101	93.0	57.0	57.2	56.2	322	533	211	164	177	152
16	90.8	94.2	88.2	57.1	57.6	56.7	215	228	202	143	152	135
17	85.2	88.2	82.5	56.1	57.2	55.3	173	211	142	131	135	127
18	81.7	82.5	80.8	54.8	55.3	54.4	127	142	115	124	128	121
19	80.3	80.8	79.7	54.8	54.8	54.4	223	650	107	119	121	116
20	79.2	79.7	78.6	54.9	55.3	54.4	896	1,020	650	115	117	114
21	78.4	79.7	77.5	55.7	56.2	54.8	400	718	224	117	142	113
22	75.9	77.5	74.2	56.2	56.2	55.8	177	224	148	494	844	142
23	73.3	74.8	72.1	55.7	56.2	55.3	143	214	128	608	842	385
24	81.2	94.8	74.8	55.5	55.8	55.3	391	509	214	279	385	220
25	88.1	94.2	81.3	75.0	92.4	54.4	294	440	191	202	220	190
26	77.0	81.3	74.8	110	123	83.6	156	191	135	176	190	160
27	73.4	74.8	72.1	124	166	99.7	126	136	119	146	160	132
28	82.6	97.2	71.6	290	348	166	114	119	109	124	133	117
29	97.2	102	94.8	287	302	266	105	109	103	113	117	111
30	94.1	102	83.0	212	279	153	105	126	99.7	111	113	110
31	76.5	83.0	72.1				307	861	126	112	113	111
<b>Total</b>	<b>4,709</b>	<b>6,270</b>	<b>3,664</b>	<b>2,534</b>	<b>2,761</b>	<b>2,241</b>	<b>6,760</b>	<b>9,676</b>	<b>4,924</b>	<b>10,100</b>	<b>13,610</b>	<b>6,739</b>
<b>Mean</b>	<b>152</b>	<b>202</b>	<b>118</b>	<b>84.5</b>	<b>92.0</b>	<b>74.7</b>	<b>218</b>	<b>312</b>	<b>159</b>	<b>326</b>	<b>439</b>	<b>217</b>
<b>Max</b>	<b>1170</b>	<b>1310</b>	<b>863</b>	<b>290</b>	<b>348</b>	<b>266</b>	<b>896</b>	<b>1020</b>	<b>650</b>	<b>1290</b>	<b>1580</b>	<b>861</b>
<b>Min</b>	<b>66.7</b>	<b>68.4</b>	<b>65.9</b>	<b>54.8</b>	<b>54.8</b>	<b>54.4</b>	<b>72.9</b>	<b>74.8</b>	<b>71.0</b>	<b>111</b>	<b>113</b>	<b>110</b>
<b>Ac-ft</b>	<b>9,341</b>	<b>12,440</b>	<b>7,267</b>	<b>5,026</b>	<b>5,477</b>	<b>4,445</b>	<b>13,410</b>	<b>19,190</b>	<b>9,766</b>	<b>20,040</b>	<b>26,980</b>	<b>13,370</b>

Day	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min
	February			March			April			May		
1	108	111	104	98.5	99.7	96.6	88.6	99.7	79.7	1,150	1,250	858
2	101	104	99.1	407	760	99.1	73.4	79.7	68.4	869	1,070	719
3	98.2	99.1	97.9	444	742	241	66.5	68.4	65.4	854	1,090	471
4	98.1	98.5	97.9	176	241	141	65.4	65.9	64.9	297	471	217
5	98.1	99.1	97.2	127	141	119	65.8	66.4	64.9	196	217	178
6	98.6	99.1	97.9	117	120	116	64.5	65.4	63.9	162	178	143
7	98.1	99.1	95.4	114	121	105	65.9	93.6	63.4	134	143	125
8	93.7	96.0	91.8	98.1	105	93.0	340	508	93.6	120	125	113
9	91.8	92.4	91.2	90.8	93.6	88.8	241	368	157	111	113	107
10	93.1	94.2	92.4	88.0	88.8	87.1	114	157	97.9	1,020	2,130	113
11	97.1	108	93.0	86.9	87.1	85.3	96.6	97.9	91.2	1,580	2,090	1,300
12	107	111	104	86.4	87.1	85.3	80.6	91.2	73.7	1,740	2,120	1,350
13	112	117	104	84.0	85.3	82.5	70.2	73.7	67.5	961	1,350	584
14	98.2	104	94.2	81.8	83.0	80.8	80.7	141	67.0	387	584	260
15	99.3	104	94.8	83.1	85.9	81.3	346	459	141	220	260	192
16	105	107	104	88.1	89.4	85.9	559	1,120	185	178	192	168
17	167	449	105	89.8	103	84.2	1,320	1,440	1,120	4,340	14,100	168
18	743	855	449	118	126	103	632	1,160	265	4,290	12,800	1,680
19	433	638	274	109	127	89.4	197	265	154	1,450	1,680	1,330
20	231	274	208	83.6	89.4	80.2	135	154	119	1,740	2,020	1,460
21	189	208	173	78.9	80.8	78.0	109	119	99.9	1,490	1,840	1,190
22	158	173	144	78.3	87.1	76.9	94.4	99.9	89.6	937	1,190	681
23	133	144	123	91.6	95.4	87.1	108	330	87.2	538	681	434
24	116	123	111	98.6	100	95.4	2,980	6,730	330	381	434	354
25	108	111	107	88.2	96.6	83.0	1,470	2,130	886	408	425	372
26	106	107	105	79.9	83.0	76.9	429	886	235	745	895	425
27	105	106	103	74.5	76.9	73.1	199	235	174	584	815	432
28	101	103	99.7	72.6	73.1	72.1	164	174	155	375	432	334
--				70.5	72.1	69.0	147	155	137	295	334	264
--				68.2	69.0	67.4	558	1,090	134	239	264	216
--				79.6	101	68.4				202	216	190
<b>Total</b>	<b>4,187</b>	<b>4,935</b>	<b>3,561</b>	<b>3,552</b>	<b>4,410</b>	<b>2,892</b>	<b>10,960</b>	<b>18,520</b>	<b>5,430</b>	<b>27,990</b>	<b>51,510</b>	<b>16,430</b>
<b>Mean</b>	<b>150</b>	<b>176</b>	<b>127</b>	<b>115</b>	<b>142</b>	<b>93.3</b>	<b>365</b>	<b>617</b>	<b>181</b>	<b>903</b>	<b>1,661</b>	<b>530</b>
<b>Max</b>	<b>743</b>	<b>855</b>	<b>449</b>	<b>444</b>	<b>760</b>	<b>241</b>	<b>2980</b>	<b>6730</b>	<b>1120</b>	<b>4340</b>	<b>14100</b>	<b>1680</b>
<b>Min</b>	<b>91.8</b>	<b>92.4</b>	<b>91.2</b>	<b>68.2</b>	<b>69.0</b>	<b>67.4</b>	<b>64.5</b>	<b>65.4</b>	<b>63.4</b>	<b>111</b>	<b>113</b>	<b>107</b>
<b>Ac-ft</b>	<b>8,305</b>	<b>9,787</b>	<b>7,062</b>	<b>7,045</b>	<b>8,748</b>	<b>5,736</b>	<b>21,740</b>	<b>36,740</b>	<b>10,770</b>	<b>55,520</b>	<b>102,200</b>	<b>32,579</b>

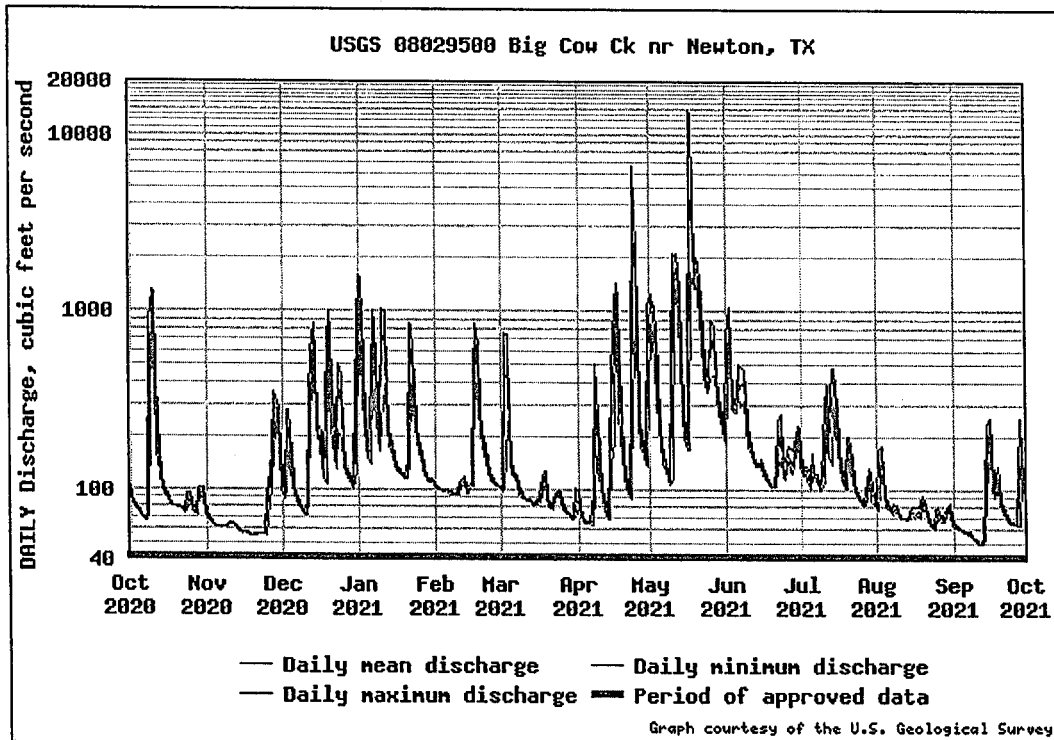
Day	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min
	June			July			August			September		
1	244	716	182	175	217	133	81.3	84.2	78.0	65.8	69.0	63.4
2	932	1,060	621	124	133	120	94.4	166	76.4	62.6	64.4	61.0
3	380	621	283	128	134	123	159	177	123	61.2	62.9	60.5
4	281	284	278	129	136	113	105	123	91.8	60.0	60.5	59.5
5	283	350	269	109	124	102	86.9	91.8	80.8	58.4	59.5	57.6
6	417	502	346	138	159	120	77.9	80.8	75.3	57.2	57.6	56.7
7	365	493	291	119	122	116	74.9	75.3	73.7	57.5	59.0	56.2
8	416	464	315	118	123	110	76.5	83.6	72.6	56.3	58.6	54.4
9	287	364	230	105	110	99.9	77.7	81.3	75.8	53.4	54.4	52.6
10	195	230	174	108	118	99.3	74.4	75.8	71.6	51.4	52.6	50.4
11	166	174	157	152	299	111	70.8	71.6	69.5	49.7	50.4	49.5
12	151	157	144	317	385	227	69.0	69.5	68.4	49.4	49.9	49.0
13	141	144	135	191	227	157	68.3	68.4	67.9	50.9	53.0	49.5
14	136	140	135	286	480	139	68.2	69.0	66.9	68.6	94.8	53.0
15	145	150	135	402	483	294	74.0	80.2	68.4	144	232	94.8
16	127	135	119	187	294	163	75.2	80.2	71.6	229	251	171
17	116	119	112	160	172	135	72.5	79.1	70.0	119	171	100
18	110	112	107	121	135	111	75.1	79.1	71.6	96.4	103	90.6
19	106	107	104	106	111	102	77.1	85.9	70.0	117	136	103
20	105	105	103	145	199	102	86.8	91.2	81.3	94.7	115	83.0
21	111	133	103	178	199	151	78.5	81.3	72.6	79.2	83.0	75.8
22	158	241	132	125	151	110	68.8	72.6	65.9	73.6	75.8	71.0
23	211	262	153	104	110	97.9	64.2	65.9	62.4	68.6	71.0	66.4
24	130	153	116	95.7	97.9	91.8	61.3	62.4	60.5	65.4	66.9	64.4
25	121	146	114	89.0	91.8	85.3	62.6	76.9	59.5	64.7	65.9	63.9
26	161	175	146	83.6	85.3	81.3	75.2	79.7	71.0	64.1	64.9	63.9
27	141	172	127	81.7	86.5	79.1	69.2	71.0	66.4	64.1	64.4	62.9
28	140	168	122	93.2	111	86.5	66.9	68.4	65.4	139	251	63.4
29	179	199	159	124	131	111	68.7	76.9	65.9	139	159	117
30	220	228	199	95.7	119	85.9	79.0	82.5	76.4	107	118	96.6
--				86.9	90.0	84.2	76.8	83.6	69.0			
<b>Total</b>	6,675	8,304	5,611	4,477	5,434	3,741	2,416	2,634	2,260	2,467	2,875	2,161
<b>Mean</b>	223	277	187	144	175	121	77.9	85.0	72.9	82.2	95.8	72.0
<b>Max</b>	932	1060	621	402	483	294	159	177	123	229	251	171
<b>Min</b>	105	105	103	81.7	85.3	79.1	61.3	62.4	59.5	49.4	49.9	49.0
<b>Ac-ft</b>	13,239	16,470	11,130	8,880	10,780	7,421	4,792	5,225	4,482	4,894	5,701	4,286





**SUMMARY STATISTICS**

	Water Year 2021		Water Years 1952 - 2021	
Annual total	86,830			
Annual mean	237.9		134.3	
Highest annual mean			278.6	2007
Lowest annual mean			26.7	2011
Highest daily mean	4,340	May 17	27,500	Aug 30, 2017
Lowest daily mean	49.4	Sep 12	1.45	Aug 23, 2011
Annual 7-day minimum	52.7	Sep 07	2.36	Aug 17, 2011
Maximum peak flow			41,500	Oct 17, 2006
Maximum peak stage			21.09	Oct 17, 2006
Annual runoff (cfsm)	1.86		1.05	
Annual runoff (inches)	25.2		14.2	
10 percent exceeds	464.0		227.0	
50 percent exceeds	109.0		64.9	
90 percent exceeds	64.1		27.0	



## APPENDIX B

### SABINE RIVER COMPACT ADMINISTRATION BUDGET SEPTEMBER 1, 2020 -- AUGUST 31, 2021

TEXAS USGS	COST 20-21		
<b>A. Surface Water</b>			
Sabine River nr Beckville (Oper & Maint of DCP)			0
Sabine River at Logansport (Oper & Maint of DCP)			0
Sabine River at Logansport (stage)			18,900
Toledo Bend Reservoir nr Burkeville (2 stage & contents)			6,400
<b>Full Range Streamflow Stations</b>			
Sabine River at Toledo Bend Dam nr Burkeville			0
Sabine River nr Burkeville			0
Sabine River nr Bon Weir			0
Sabine River nr Ruliff			0
	<b>Sub-Total</b>		<b>25,300</b>
<b>B. Quality of Water</b>			
Sabine River nr Bon Weir (bi-weekly specific conductance, color, chloride, and sulphate determinations: annual for inorganics)			0
	<b>Sub-Total</b>		<b>0</b>
	<b>TOTAL TEXAS PROGRAM</b>		<b>25,300</b>
	<b>SRCA SHARE</b>		<b>18,300</b>
	<b>USGS SHARE</b>		<b>7,000</b>
<b>LOUISIANA USGS:</b>			
<b>A. Surface Water</b>			
Bayou Grand Cane nr Stanley (discharge)			14,950
Bayou San Patricio nr Benson (discharge)			14,950
Bayou Toro nr Toro (discharge)			14,950
Bayou Anacoco nr Rosepine (discharge)			14,950
	<b>Sub-Total</b>		<b>59,800 (1)</b>
<b>B. Quality of Water</b>			
Bayou Anacoco nr Knight (bimonthly sampling of water for inorganics and nutrients; annual sampling of water for semivolatiles, total organic carbon; and semivolatiles in bed material.)			12,800
	<b>Sub-Total</b>		<b>12,800</b>
	<b>TOTAL LOUISIANA PROGRAM</b>		<b>72,600</b>
	<b>GWSIP SHARE</b>		<b>21,800</b>
	<b>SRCA SHARE</b>		<b>27,000</b>
	<b>USGS SHARE</b>		<b>23,800</b>
<b>C. Other Costs</b>			
Secretary			4,400
Treasurer			1,800
Audit			2,500
Treasurer's Bond			50
Semi-Annual Meetings			950
	<b>TOTAL INTERNAL COSTS</b>		<b>9,700</b>
<b>SUMMARY</b>			
Activity	<b>COST 20-21</b>		<b>GWSIP</b>
	<b>USGS</b>	<b>SRCA</b>	
TX District USGS, Stream Gaging	7,000	18,300	
TX District USGS, Quality of Water	0	0	
LA District USGS, Stream Gaging	17,700	20,300	21,800
LA District USGS, Quality of Water	6,100	6,700	
Internal Costs		<u>9,700</u>	
	<b>TOTAL</b>	<b>30,800</b>	<b>55,000</b>
	<b>EACH STATE</b>	<b>27,500</b>	

(1) These stations will be partially funded under USGS GWSIP Program in the amount of \$21,800

**APPENDIX C – AUDIT REPORT**

**SABINE RIVER COMPACT ADMINISTRATION**

**FINANCIAL REPORT**

**AUGUST 31, 2021**



October 25, 2021

Board of Directors  
Sabine River Compact Administration  
Orange, Texas

We have audited the financial statements of the governmental activities, each major fund of Sabine River Compact Administration for the year ended August 31, 2021. Professional standards require that we provide you with information about our responsibilities under generally accepted auditing standards and *Government Auditing Standards*, as well as certain information related to the planned scope and timing of our audit. We have communicated such information in our engagement letter to you dated August 11, 2021. Professional standards also require that we communicate to you the following information related to our audit.

#### Significant Audit Matters

##### *Qualitative Aspects of Accounting Practices*

Management is responsible for the selection and use of appropriate accounting policies. The significant accounting policies used by Sabine River Compact Administration are described in Note 1 to the financial statements. No new accounting policies were adopted in the current year and the application of existing policies was not changed during 2021. We noted no transactions entered into by Sabine River Compact Administration during the year for which there is a lack of authoritative guidance or consensus. All significant transactions have been recognized in the financial statements in the proper period.

Accounting estimates are an integral part of the financial statements prepared by management and are based on management's knowledge and experience about past and current events and assumptions about future events. Certain accounting estimates are particularly sensitive because of their significance to the financial statements and because of the possibility that future events affecting them may differ significantly from those expected. The Sabine River Compact Administration had no particularly sensitive accounting estimates that affected the financial statements as of and for the year ended August 31, 2021.

The financial statement disclosures are neutral, consistent, and clear.

##### *Difficulties Encountered in Performing the Audit*

We encountered no significant difficulties in dealing with management in performing and completing our audit.

##### *Corrected and Uncorrected Misstatements*

Professional standards require us to accumulate all known and likely misstatements identified during the audit, other than those that are trivial, and communicate them to the appropriate level of management. We noted no such misstatements.

*Disagreements with Management*

For purposes of this letter, a disagreement with management as a financial accounting, reporting, or auditing matter, whether or not resolved to our satisfaction that could be significant to the financial statements or the auditor's report. We are pleased to report that no such disagreements arose during the course of our audit.

*Management Representations*

We have requested certain representations from management that are included in the management representation letter dated October 25, 2021.

*Management Consultations with Other Independent Accountants*

In some cases, management may decide to consult with other accountants about auditing and accounting matters, similar to obtaining a "second opinion" on certain situations. If a consultation involves application of an accounting principle to the Administration's financial statements or a determination of the type of auditor's opinion that may be expressed on those statements, our professional standards require the consulting accountant to check with us to determine that the consultant has all the relevant facts. To our knowledge, there were no such consultations with other accountants.

*Other Audit Findings or Issues*

We generally discuss a variety of matters, including the application of accounting principles and auditing standards, with management each year prior to retention as Sabine River Compact Administration's auditors. However, these discussions occurred in the normal course of our professional relationship and our responses were not a condition to our retention.

Other Matters

We applied certain limited procedures to the management discussion and analysis and the budgetary comparison schedule, which are required supplementary information (RSI) that supplements the basic financial statements. Our procedures consisted of inquires of management regarding the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We did not audit the RSI and do not express an opinion or provide any assurance on the RSI.

We were engaged to report on the schedule of compensation benefits and other payments to agency head which accompanies the financial statements but is not RSI. With respect to this supplementary information, we made certain inquiries of management and evaluated the form, content, and methods of preparing the information to determine that the information complies with accounting principles generally accepted in the United States of America, the method of preparing it has not changed from the prior period, and the information is appropriate and complete in relation to our audit of the financial statements. We compared and reconciled the supplementary information to the underlying accounting records used to prepare the financial statements or to the financial statements themselves.

Board of Directors  
Sabine River Compact Administration  
October 25, 2021  
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Restriction on Use

This information is intended solely for the information and use of the Board of Commissioners and management of Sabine River Compact Administration and is not intended to be, and should not be, used by anyone other than these specified parties.

Very truly yours,



BROUSSARD POCHE', LLP  
Certified Public Accountants

**SABINE RIVER COMPACT ADMINISTRATION**

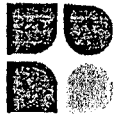
**FINANCIAL REPORT**

**AUGUST 31, 2021**



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**INDEPENDENT AUDITORS' REPORT**

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

We have audited the accompanying financial statements of the governmental activities and each major fund of 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, 2021 and 2020, and the related notes to financial statements, which collectively comprise the Administration's basic financial statements as listed in the table of contents.

**Management's Responsibility for the Financial Statements**

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

**Auditors' Responsibility**

Our responsibility is to express opinions 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 from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

**Opinions**

In our opinion, the financial statements referred to above present fairly, in all material respects, the respective financial position of the governmental activities and each major fund of the Sabine River Compact Administration, as of August 31, 2021 and 2020 and the respective changes in financial position for the years then ended in accordance with accounting principles generally accepted in the United States of America.

## Other Matters

### *Required Supplementary Information*

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis on pages 3 and 4 and budgetary comparison information on pages 16 and 17 be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

### *Other Information*

Our audit was conducted for the purpose of forming opinions on the financial statements that collectively comprise the Sabine River Compact Administration's basic financial statements. The accompanying financial information listed as the schedule of compensation, benefits and other payments to agency head in the table of contents is presented for purposes of additional analysis and is not a required part of the basic financial statements.

The schedule of compensation, benefits, and other payments to agency head is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the basic financial statements. Such information has been subjected to the auditing procedures applied to the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the schedule of compensation, benefits and other payments to agency head is fairly stated in all material respects in relation to the basic financial statements as a whole.

### **Other Reporting Required by Government Auditing Standards**

In accordance with Government Auditing Standards, we have also issued our report dated October 25, 2021 on our consideration of the Sabine River Compact Administration's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with Government Auditing Standards in considering Sabine River Compact Administration's internal control over financial reporting and compliance.



Lafayette, Louisiana  
October 25, 2021

## SABINE RIVER COMPACT ADMINISTRATION

### 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 years that ended August 31, 2021, 2020 and 2019. Please read this section in conjunction with SRCA's financial statements, which follow this section.

#### FINANCIAL HIGHLIGHTS

SRCA's total assets exceeded total liabilities at the close of the year by \$50,470 (net position). Net position overall increased from \$49,816 to \$50,470 or 1.3% during the year ending August 31, 2021.

SRCA's intergovernmental revenues increased from \$53,250 to \$55,000 or 3.3%. General governmental expenses increased from \$53,142 to \$54,392 or 2.4% during the year ending August 31, 2021.

#### 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 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 statements of net position and the statements of activities.

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

The statements of activities present information showing how SRCA's assets changed as a result of current year operations. Regardless of when cash is affected, all changes in net position 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 statements of net position.

#### FINANCIAL ANALYSIS

##### Net Position

SRCA's total net position increased by \$654 or 1.3% for the year ended August 31, 2021, increased by \$124 or 0.2% for the year ended August 31, 2020 and increased by \$3,605 or 7.8% for the year ended August 31, 2019. Below is condensed statement of net position information as of August 31, 2021, 2020 and 2019.

**SRCA'S STATEMENTS OF NET POSITION**

	<u>2021</u>	<u>2020</u>	<u>2019</u>
<b>ASSETS</b>			
Cash	\$ 73,120	\$ 71,091	\$ 58,825
Due from other governments	<u>625</u>	<u>1,250</u>	<u>-</u>
Total Assets	<u>\$ 73,745</u>	<u>\$ 72,341</u>	<u>\$ 58,825</u>
<b>LIABILITIES</b>			
Accounts payable	\$ 23,275	\$ 22,525	\$ 9,133
Total liabilities	<u>\$ 23,275</u>	<u>\$ 22,525</u>	<u>\$ 9,133</u>
Net position	<u>\$ 50,470</u>	<u>\$ 49,816</u>	<u>\$ 49,692</u>
Total liabilities and net position	<u>\$ 73,745</u>	<u>\$ 72,341</u>	<u>\$ 58,825</u>

**Changes in Net Position**

The changes in net position for the years ended August 31, 2021, 2020 and 2019 were an increase of \$654, an increase of \$124 and an increase of \$3,605, respectively. Below is the summary of the changes in net position for the years ending August 31, 2021, 2020 and 2019.

**SRCA'S CHANGES IN NET POSITION**

	<u>2021</u>	<u>2020</u>	<u>2019</u>
<b>General revenues:</b>			
Intergovernmental	\$ 55,000	\$ 53,250	\$ 53,250
Other	<u>46</u>	<u>16</u>	<u>18</u>
Total revenues	<u>\$ 55,046</u>	<u>\$ 53,266</u>	<u>\$ 53,268</u>
<b>General government expenses:</b>			
Secretary	\$ 4,400	\$ 4,400	\$ 4,400
Treasurer	1,800	1,800	1,800
Water resource investigation	45,150	44,442	40,963
Audit fees	2,500	2,500	2,500
Other	<u>542</u>	<u>-</u>	<u>-</u>
Total expenses	<u>\$ 54,392</u>	<u>\$ 53,142</u>	<u>\$ 49,663</u>
Change in net position	<u>\$ 654</u>	<u>\$ 124</u>	<u>\$ 3,605</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.

**BASIC FINANCIAL STATEMENTS**

**GOVERNMENT-WIDE FINANCIAL STATEMENTS**

SABINE RIVER COMPACT ADMINISTRATION

STATEMENTS OF NET POSITION  
August 31, 2021 and 2020

	<u>2021</u>	<u>2020</u>
<b>ASSETS</b>		
Cash	\$ 73,120	\$ 71,091
Due from other governments	<u>625</u>	<u>1,250</u>
Total assets	<u>\$ 73,745</u>	<u>\$ 72,341</u>
<b>LIABILITIES</b>		
Accounts payable	<u>\$ 23,275</u>	<u>\$ 22,525</u>
Total liabilities	<u>\$ 23,275</u>	<u>\$ 22,525</u>
<b>NET POSITION</b>		
Unrestricted	<u>\$ 50,470</u>	<u>\$ 49,816</u>
Total liabilities and net position	<u>\$ 73,745</u>	<u>\$ 72,341</u>

See Notes to Financial Statements.



SABINE RIVER COMPACT ADMINISTRATION

STATEMENTS OF ACTIVITIES  
 Years Ended August 31, 2021 and 2020

	<u>2021</u>	<u>2020</u>
<b>EXPENSES:</b>		
Governmental activities –		
General government	\$ <u>54,392</u>	\$ <u>53,142</u>
Total governmental activities	\$ <u>54,392</u>	\$ <u>53,142</u>
<b>GENERAL REVENUES:</b>		
Intergovernmental	\$ 55,000	\$ 53,250
Interest	<u>46</u>	<u>16</u>
Total general revenues	\$ <u>55,046</u>	\$ <u>53,266</u>
Change in net position	\$ 654	\$ 124
Net position, beginning of the year	<u>49,816</u>	<u>49,692</u>
Net position, end of the year	\$ <u>50,470</u>	\$ <u>49,816</u>

See Notes to Financial Statements.

FUND FINANCIAL STATEMENTS

SABINE RIVER COMPACT ADMINISTRATION

BALANCE SHEETS – GOVERNMENTAL FUND

August 31, 2021 and 2020

	<u>2021</u>	<u>2020</u>
<b>ASSETS</b>		
Cash	\$ 73,120	\$ 71,091
Due from other governments	<u>625</u>	<u>1,250</u>
Total assets	<u>\$ 73,745</u>	<u>\$ 72,341</u>
 <b>LIABILITIES AND FUND BALANCE</b>		
Accounts payable	<u>\$ 23,275</u>	<u>\$ 22,525</u>
Total liabilities	<u>\$ 23,275</u>	<u>\$ 22,525</u>
Fund balance – unassigned	<u>\$ 50,470</u>	<u>\$ 49,816</u>
Total liabilities and fund balance	<u>\$ 73,745</u>	<u>\$ 72,341</u>

See Notes to Financial Statements.

**SABINE RIVER COMPACT ADMINISTRATION**  
**STATEMENTS OF REVENUES, EXPENDITURES AND**  
**CHANGES IN FUND BALANCE – GOVERNMENTAL FUND**  
**Years Ended August 31, 2021 and 2020**

	<u>2021</u>	<u>2020</u>
<b>REVENUES:</b>		
Intergovernmental	\$ 55,000	\$ 53,250
Interest	<u>46</u>	<u>16</u>
Total revenues	<u>\$ 55,046</u>	<u>\$ 53,266</u>
<b>EXPENDITURES:</b>		
General government	<u>\$ 54,392</u>	<u>\$ 53,142</u>
Net change in fund balance	\$ 654	\$ 124
Fund balance, beginning of the year	<u>49,816</u>	<u>49,692</u>
Fund balance, end of the year	<u>\$ 50,470</u>	<u>\$ 49,816</u>

See Notes to Financial Statements.

## SABINE RIVER COMPACT ADMINISTRATION

### NOTES TO FINANCIAL STATEMENTS

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

##### Basis of presentation:

The financial statements of the Sabine River Compact Administration have been prepared in accordance with generally accepted accounting principles in the United States of America ("GAAP") applicable to state and local governments. The Governmental Accounting Standards Board ("GASB") is the accepted standard-setting body for establishing governmental accounting and financial reporting principles. The significant accounting and reporting policies and practices used by the Administration are described below.

##### 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 Congress). The objective of the Compact is to provide equitable 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 statements of net position and the statements of activities display information about the reporting government as a whole. These statements include all the financial activities of the Administration.

The GWFS were prepared using the economic resources measurement focus and the accrual basis of accounting. All governmental activities are reported on a full accrual, economic resource basis, which recognizes all long-term assets and receivables as well as long-term debt and obligations.

###### 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 balance sheets. The statements of revenues, expenditures and changes in fund balance report 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, 2021 and 2020.

## NOTES TO FINANCIAL STATEMENTS

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 within 60 days after year end. Expenditures are recorded when the related fund liability is incurred.

The major source of revenue is intergovernmental and is susceptible to accrual.

### Cash:

Cash consists of amounts in interest bearing deposit accounts.

### Equity classifications:

#### Government-wide financial statements -

Government-wide equity is classified as net position. The Administration's entire net position is classified as unrestricted.

#### Fund financial statements -

Governmental fund equity is classified as fund balance. The following classifications describe the relative strength of the spending constraints placed on the purposes for which resources can be used:

- **Nonspendable fund balance** - amounts that are not in a spendable form (such as inventory) or are required to be maintained intact;
- **Restricted fund balance** - amounts constrained to specific purposes by their providers (such as grantors, bondholders, and higher levels of government), through constitutional provisions, or by enabling legislation;
- **Committed fund balance** - amounts constrained to specific purposes by a government itself, using its highest level of decision-making authority; to be reported as committed, amounts cannot be used for any other purpose unless the government takes the same highest level action to remove or change the constraint;
- **Assigned fund balance** - amounts a government intends to use for a specific purpose; intent can be expressed by the governing body or by an official or body to which the governing body delegates the authority;
- **Unassigned fund balance** - amounts that are available for any purpose; positive amounts are reported only in the general fund.

## NOTES TO FINANCIAL STATEMENTS

The Board of Commissioners establishes (and modifies or rescinds) fund balance commitments by passage of an ordinance or resolution. This is typically done through adoption and amendment of the budget. A fund balance commitment is further indicated in the budget document as a designation or commitment of the fund (such as for special incentives). Assigned fund balance is established by the Board of Commissioners through adoption or amendment of the budget as intended for specific purpose (such as the purchase of fixed assets, construction, debt service, or for other purposes). In governmental funds, the Administration's policy is to first apply the expenditure toward restricted fund balance and then to other, less-restrictive classifications—committed and then assigned fund balances before using unassigned fund balances.

The Administration's entire fund balance is classified as unassigned.

### Use of estimates:

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect certain reported amounts and disclosures. Accordingly, actual results could differ from those estimates.

### Note 2. Deposits

The bank balances of deposits was \$ 73,120 and \$ 71,091 at August 31, 2021 and 2020, which were entirely covered by federal depository insurance. Accordingly, the Administration did not have any custodial credit risk at August 31, 2021 and 2020.

### Note 3. Intergovernmental Revenues

All of the intergovernmental revenues recognized in 2021 and 2020 were derived from the Sabine River Authorities of Texas and Louisiana.

### Note 4. Coronavirus Pandemic

On January 30, 2020, the World Health Organization declared the coronavirus outbreak a "Public Health Emergency of International Concern" and on March 10, 2020, declared it to be a pandemic. Actions taken around the world to help mitigate the spread of the coronavirus include restrictions on travel, and quarantines in certain areas, and forced closures of certain types of public places and businesses. The coronavirus and actions taken to mitigate it have had and are expected to continue to have an adverse impact on the economies and financial markets of many countries, including the geographical areas in which the Administration operates. It is unknown how long these conditions will last and what the complete financial effect will be to the Administration. Additionally, it is reasonably possible that estimates made in the financial statements have been, or will be, significantly and adversely impacted in the near term as a result of these conditions.

**REQUIRED SUPPLEMENTARY INFORMATION**



**SABINE RIVER COMPACT ADMINISTRATION**  
**BUDGETARY COMPARISON SCHEDULE**  
**GENERAL FUND**  
For the Year Ended August 31, 2021  
With Comparative Actual Amounts for Year Ended August 31, 2020

	2021			Variance With Final Budget - Positive (Negative)	2020 Actual
	Original Budget	Final Budget	Actual		
<b>REVENUES:</b>					
Intergovernmental –					
State of Texas	\$ 27,500	\$ 27,500	\$ 27,500	\$ -	\$ 26,625
State of Louisiana	27,500	27,500	27,500	-	26,625
Interest	-	-	46	46	16
Total revenues	<u>\$ 55,000</u>	<u>\$ 55,000</u>	<u>\$ 55,046</u>	<u>\$ 46</u>	<u>\$ 53,266</u>
<b>EXPENDITURES:</b>					
General governmental –					
Maintenance – office of:					
Secretary	\$ 4,400	\$ 4,400	\$ 4,400	\$ -	\$ 4,400
Treasurer	1,800	1,800	1,800	-	1,800
Water resources investigation	52,600	52,600	45,150	7,450	44,442
Audit fees	2,500	2,500	2,500	-	2,500
Other	1,000	1,000	542	458	-
Total expenditures	<u>\$ 62,300</u>	<u>\$ 62,300</u>	<u>\$ 54,392</u>	<u>\$ 7,908</u>	<u>\$ 53,142</u>
Net change in fund balance	\$ (7,300)	\$ (7,300)	\$ 654	\$ 7,954	\$ 124
Fund balance, beginning of the year	49,816	49,816	49,816	-	49,692
Fund balance, end of the year	<u>\$ 42,516</u>	<u>\$ 42,516</u>	<u>\$ 50,470</u>	<u>\$ 7,954</u>	<u>\$ 49,816</u>

See Note to Budgetary Comparison Schedule.

**SABINE RIVER COMPACT ADMINISTRATION**  
**NOTE TO BUDGETARY COMPARISON SCHEDULE**

**Note 1. Budgets and Budgetary Accounting**

The Sabine River Compact Administration follows the procedures detailed below in adopting its budget.

1. An annual budget, prepared on a basis consistent with generally accepted accounting principles as applied to governmental units, is adopted for the General Fund. The budget is proposed by the Administration's management and adopted by the Board.
2. Any amendments must be approved by the Board of Sabine River Compact Administration. All appropriations lapse at the end of the fiscal year.

Budgeted amounts presented reflect the original budget and the final budget.

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OTHER INFORMATION

**SABINE RIVER COMPACT ADMINISTRATION**

**SCHEDULE OF COMPENSATION, BENEFITS AND OTHER  
PAYMENTS TO AGENCY HEAD**

**For the Year Ended August 31, 2021**

**AGENCY HEAD: George D. Brandon (Vice-Chairman)**

**There were no payments for compensation, benefits or any other like payments during the fiscal year.**



**INDEPENDENT AUDITORS' REPORT ON INTERNAL CONTROL  
OVER FINANCIAL REPORTING AND ON COMPLIANCE AND  
OTHER MATTERS BASED ON AN AUDIT OF FINANCIAL  
STATEMENTS PERFORMED IN ACCORDANCE WITH  
GOVERNMENT AUDITING STANDARDS**

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

We have audited, in accordance with the 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, the financial statements of the governmental activities and each major fund of Sabine River Compact Administration (the "Administration"), as of and for the year ended August 31, 2021, and the related notes to the financial statements, which collectively comprise the Administration's basic financial statements, and have issued our report thereon dated October 25, 2021.

Internal Control Over Financial Reporting

In planning and performing our audit of the financial statements, we considered the Administration's internal control over financial reporting (internal control) to determine the audit procedures that are appropriate in the circumstances for the purpose of expressing our opinions on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the Administration's internal control. Accordingly, we do not express an opinion on the effectiveness of the Administration's internal control.

*A deficiency in internal control* exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A material weakness is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected on a timely basis. A *significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

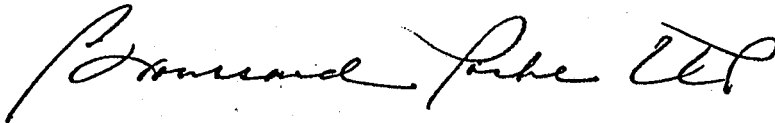
Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

Compliance and Other Matters

As part of obtaining reasonable assurance about whether the Administration's financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the financial statements. 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 or other matters that are required to be reported under Government Auditing Standards.

Purpose of this Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the entity's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the entity's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.



Lafayette, Louisiana  
October 25, 2021

SABINE RIVER COMPACT ADMINISTRATION

SCHEDULE OF FINDINGS AND RESPONSES

Year Ended August 31, 2021

We have audited the basic financial statements of Sabine River Compact Administration as of and for the year ended August 31, 2021, and have issued our report thereon dated October 25, 2021. 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. Our audit of the basic financial statements as of August 31, 2021 resulted in an unmodified opinion.

Section I - Summary of Auditors' Reports

A. Report on Internal Control and Compliance Material to the Financial Statements

Internal Control

Material weakness(es) identified  Yes  No

Control deficiencies identified  
that are not considered to be  
material weakness(es)

Yes  None reported

Compliance

Noncompliance material to  
financial statements

Yes  No

Section II - Financial Statement Findings

None.



**SABINE RIVER COMPACT ADMINISTRATION**

**SCHEDULE OF PRIOR FINDINGS**

**For the Year Ended August 31, 2021**

**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 include a management letter.

**APPENDIX D**  
**WEB SITE ADDRESSES**  
**OF**  
**PARTICIPATORY AGENCIES**

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



