

DRAINAGE AREAS OF TEXAS STREAMS RIO GRANDE BASIN



LP-204

TEXAS WATER DEVELOPMENT BOARD

OCTOBER 1986

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RIO GRANDE BASIN**

By

**S. A. Sullivan and B. R. Critendon
Texas Water Development Board**

**This report was prepared under
cooperative agreement between the
U.S. Geological Survey and the Texas
Water Development Board**

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METRIC CONVERSIONS

For readers interested in using the metric system, the inch-pound units used in this report may be converted to metric units by the following factors:

<u>From</u>	<u>Multiply by</u>	<u>To obtain</u>
inch	2.54	centimeter
mile	1.609	kilometer
square mile	2.590	square kilometer

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INTRODUCTION

In 1951, the Federal Inter-Agency River Basin Committee, Subcommittee on Hydrology, designated the U.S. Army Corps of Engineers as the coordinating agency for the determination of drainage areas in the Arkansas and Red River basins. The U.S. Geological Survey was designated as the coordinating agency for all other river basins in Texas (fig. 1). In 1979, the U.S. Geological Survey also assumed coordinating responsibility for determination of drainage areas in the Arkansas and Red River basins.

Purpose and Scope of This Report

Data on the drainage areas of Texas streams are being appropriately compiled in cooperation with the Texas Water Development Board so that information of uniform accuracy and reliability will be available for hydraulic, hydrologic, or general engineering use. Only recently has large-scale topographic-map coverage of the Rio Grande basin been completed. The mapping was largely financed through a cooperative program between the Texas Water Development Board and the U.S. Geological Survey Topographic Division.

In addition, the International Boundary and Water Commission has a significant impact on the Rio Grande since its responsibility deals with the determination of the international boundary and distribution of Rio Grande waters for Mexico and the United States.

This report gives the drainage areas as determined by measurements at 186 points within the Rio Grande basin. It also utilizes data obtained from International Boundary and Water Commission publications on drainage areas outside of Texas and mainstream river mileages. These data are given in table 1, which gives the latitude and longitude of the point of determination, the drainage area in square miles above each point, and the distance in miles from the point to the mouth of the stream.

Previous Reports

Previous reports on the drainage area of Texas streams have been published as follows:

Texas Water Commission, 1962, Drainage areas of Texas streams, Sabine River basin and Sabine-Neches coastal area: Circular 62-02.

_____ 1962, Drainage areas of Texas streams, Neches River basin and Neches Trinity coastal area: Circular 62-03.

_____ 1962, Drainage areas of Texas streams, San Jacinto River basin and San Jacinto-Brazos coastal area: Circular 6205.

____1963, Drainage areas of Texas streams, Trinity River basin and Trinity-San Jacinto coastal area: Circular 63-01.

____1963, Drainage areas of Texas streams, San Antonio River basin: Circular 63-07.

____1965, Drainage areas of Texas streams, coastal areas between the Brazos River and the Rio Grande: Circular 65-01.

U.S. Army Corps of Engineers, 1954, Drainage-area data, Arkansas, White, and Red River basins.

U.S. Geological Survey, 1973, Drainage area of Texas streams, Lavaca River basin: U.S. Geological Survey open-file report.

____1974, Drainage area of Texas streams, Guadalupe River basin: U.S. Geological Survey open-file report.

____1977, Drainage area of Texas streams, Brazos River basin: U.S. Geological Survey open-file report.

____U.S. Geological Survey and Texas Department of Water Resources, 1981, Drainage area of Texas Streams, Colorado River Basin: TDWR LP-145.

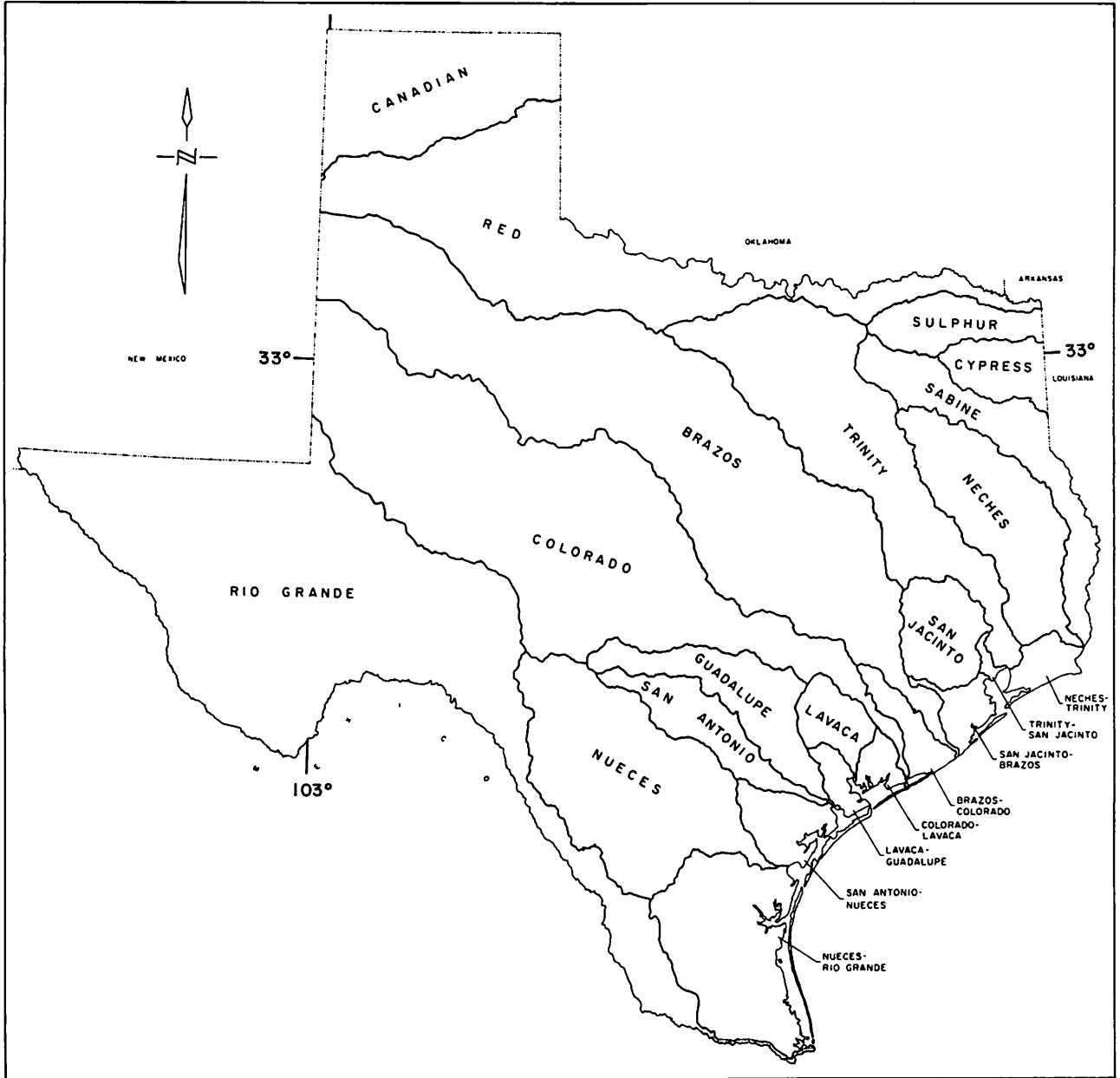


FIGURE 1.--State designated river basins and coastal basins in Texas

Concepts of Drainage Areas

The drainage area of a stream at a specified location is defined as an area, measured in a horizontal plane, that is enclosed by a topographic divide so that direct surface runoff from precipitation normally drains by gravity into the river basin above the specified point (U.S. Geological Survey, 1960).

The concept of noncontributing areas is not susceptible to precise definition because individual judgment must be used in determining what part of an area is totally noncontributing and what part may contribute runoff under certain conditions. In this report, a noncontributing area is defined as an area that contributes no direct surface runoff to the point of measurement. Runoff may occur within the noncontributing area, but this runoff drains to natural surface depressions and does not flow directly to a contributing stream.

Description of the Basin

The Rio Grande is the fifth longest river in North America (Figure 2). It rises in southern Colorado at an elevation of more than 12,000 feet and flows southerly through Colorado and New Mexico. It enters Texas about 20 miles northwest of El Paso, where it becomes the border between Texas and Mexico until it empties into the Gulf of Mexico, 23 miles east of Brownsville. Precipitation over the basin ranges from an annual mean of 8



Figure 2
Major Streams and Tributaries in the Rio Grande Basin

inches to over 30 inches. The mean temperature ranges from 42 F at the source to 73 F at the mouth. Average annual net lake-surface evaporation loss ranges from a high of 75 inches to 30 inches.

The Rio Grande basin in Texas is bounded by the Colorado, Nueces, and Nueces-Rio Grande Coastal basins. The basin has two large tributaries in Texas: Pecos and Devils Rivers; and three important tributaries from Mexico: Rio Conchos, Rio Salado, and Rio San Juan. The Texas portion of the basin also includes a large closed basin which does not contribute any runoff. The total contributing area of the basin is 176,333 square miles. The total drainage area in Texas is 49,525 square miles of which 8,409 square miles do not contribute any runoff. The Rio Grande basin contains over 18 percent of the area of the State of Texas.

Historically the Rio Grande has served as a monument to Texas and the United States. It has been fought over, discussed and has been the subject of many treaties. The Rio Grande also has been the source of many movies and songs depicting the colorful past of Texas and the United States.

METHODS OF DRAINAGE-AREA DETERMINATIONS

Drainage areas are determined at sites of existing and discontinued continuous-record gaging stations and partial-record gaging stations as appropriate, at sites of existing and proposed or considered major dams, at miscellaneous sites where the peak discharge for unusual floods was determined, and at the mouths of significant tributaries.

Drainage boundaries were delineated on U.S. Geological Survey topographic maps, most of which were at a scale of 1:24,000. The Texas Water Development Board reviewed the boundary as drawn between the Colorado River and the Rio Grande basins.

An index map of the area (not included in this report) was prepared to show the relative position of the different maps used. To insure accurate determinations, the maps were checked for gaps or overlaps between adjacent sheets, for continuity of topographic or cultural detail between adjacent sheets, and for agreement of latitude and longitude at the borders of adjacent maps.

All areas and subareas within a quadrilateral, which comprise the area bounded by latitude and longitude within a quadrangle, were measured with a digitizer. Actual areas within a quadrilateral have been computed accurately (Federal Inter-Agency River Basin Committee, 1951, and U.S. Geological Survey, 1924), providing an exact check between the total area digitized and the actual area within each quadrilateral.

Drainage-areas outside of Texas were obtained from publications of the International Boundary and Water Commission.

Drainage areas are given in table 1 in square miles. Although areas are measured to the nearest hundredth of a square mile, the values are rounded to the nearest square mile for areas of more than 100 square miles, to tenths of

a square mile for areas from 10 to 100 square miles, and to hundredths of a square mile for areas of less than 10 square miles.

METHODS OF RIVER-MILE DETERMINATION

River mileages on the main stem and major tributaries were obtained from the (International Boundary and Water Commission) where available. New mileages were compiled from the U.S. Geological Survey maps using the procedures described by the Hydrology Committee of the Water Resources Council (Water Resources Council, 1968).

The accuracy of measurements given in this report are adequate for general purposes, such as measuring river lengths or identifying points along a stream. The accuracy may not be accurate enough for detailed engineering studies in which precise measurements are required.

TABULATION OF DATA

The points at which drainage areas were determined (table 1) are tabulated in downstream order along the main stem. A tributary that enters between two main-stem points is tabulated between these two points. A similar order is followed on all tributaries.

A tabulation includes: (1) The name of the stream; (2) a description of the point of determination, including latitude and longitude; (3) the

drainage area above the point, or in the case of a dam, above a plane through the axis of the dam; and (4) the river mile of the point of determination.

Redeterminations of drainage areas were made for several sites at which the peak discharge for an unusual flood had been determined. This was necessary because of the very poor maps available at the time the drainage area values were originally determined and published. The importance of unit values of peak runoff in hydrologic studies also warranted these redetermination.

REFERENCES CITED

Federal Inter-Agency River Basin Committee, 1951, Interagency coordination of drainage-area data: Subcommittee on Hydrology, Notes on Hydrologic Activities, Bulletin No. 4, 48 p.

Texas Board of Water Engineers, 1959, Summary of peak flood flow measurements and other measurements of stream discharge in Texas at points other than gaging stations: Bulletin 5807C, 255 p., 4 pls.

U.S. Geological Survey, 1924, Geographic tables and formulas: U.S. Geological Survey Bulletin 650, 4th edition, 424 p.

____ 1960, General introduction and hydrologic definitions, manual of hydrology; Part 1. General surface-water techniques: U.S. Geological Survey Water-Supply Paper 1541-A, p. 8.

Water Resources Council, 1968, River mileage measurement: Hydrology Committee Bulletin No. 14, 17 p.

International Boundary and Water Commission, United States and Mexico, 1983, Flow of the Rio Grande and Related Data: Water Bulletin Number 53, 149 p.

Table 1.--Drainage Area Data for the Rio Grande Basin

Name of Stream	Point of Determination	Latitude/ Longitude	Drainage Area Above Point Texas	Non Con- tributing	Con- tributing	United States: Mexico	Outside Texas: Con- tributing	Total	River Miles Above Mouth
Rio Grande	IB&WC gage 08362500 below Caballo Dam, New Mexico	32°53'05" 107°17'31"	0	0	27,760	0	27,760	1,360.8	
Rio Grande	USGS discontinued gage 08363840 at Vinton Bridge near Anthony, Texas	31°57'32" 106°36'17"	16.8	0	28,663	0	28,680	1,269.8	
Rio Grande	IB&WC and USGS gage 08364000 at El Paso, Texas	31°48'10" 106°32'25"	96	0	29,171	0	29,267	1,255.9	
Rio Grande	IB&WC gage 08365000 below American Dam at El Paso, Texas	31°46'35" 106°31'20"	100	0	29,171	0	29,271	1,253.4	
McKelligon Canyon	USGS discontinued gage 08365600 at El Paso, Texas	31°49'17" 106°28'03"	2.33	0	0	0	2.33	0	
Jesuit Draw	Site of miscellaneous measurement of peak discharge	31°44'36" 106°19'24"	1.55	0	0	0	1.55	2.5	
Pendall Draw	Site is miscellaneous measurement of peak discharge	31°43'24" 106°19'09"	1.47	0	0	0	1.47	2.5	
Eight Mile Draw	Site of miscellaneous measurement of peak discharge near Salt Flat, Texas	31°44'20" 105°08'29"	0	1,955	0	0	0	*	
Washburn Draw	Site of miscellaneous measurement of peak discharge near Dell City, Texas	31°57'09" 105°19'27"	0	88.6	0	0	0	*	
Wild Horse Draw	Site of miscellaneous measurement of peak discharge near Van Horn, Texas	31°02'41" 104°45'38"	0	1,765	0	0	0	*	

Name of Stream	Point of Determination	Latitude/ Longitude	USGS discontinued gage	Near	Con-tributing	Non Con-tributing	Drainage Area Above Point (Square Miles)		River Miles
							United States: Mexico	Total	
					Con-tributing	tributing	Con-tributing	tributing	Above Mouth
Wild Horse Draw Tributary	USGS discontinued gage 08370800 near Van Horn, Texas	31°02'55" N 104°40'13" W	0		0	.64	0	0	*
Salt Basin	Total of all closed areas in Texas in the Rio Grande Basin		0		6,227	0	0	0	*
Rio Grande	IB&WC discontinued gage 08370000 near Fort Hancock, Texas	31°17'04" N 105°51'55" W	929		6,227	29,211	*	*	1,195.4
Camp Rice Arroyo Tributary	USGS discontinued gage 08370200 near Fort Hancock, Texas	31°17'51" N 105°48'52" W	.13		0	0	0	.13	--
Rio Grande	IB&WC and USGS gage 08370500 at Fort Quitman, Texas	31°05'14" N 105°36'32" W	1,585		6,227	29,211	1,338	32,134	1,173.2
Rio Grande	Above mouth of Red Light Draw	30°46'46" N 105°10'00" W	1771		6,227	29,211	*	*	1,118.8
Red Light Draw	At mouth	30°46'46" N 105°10'00" W	263		0	0	0	263	0
Rio Grande	Below mouth of Red Light Draw	30°46'46" N 105°10'00" W	2,034		6,227	29,211	*	*	1,118.8
Rio Grande	IB&WC discontinued gage 08371000 at La Nutria, Texas	30°14'49" N 104°43'08" W	2,614		6,227	29,211	2,025	33,850	1,044.9
Rio Grande	IB&WC and USGS gage 08371500 above Rio Conchos near Presidio, Texas	29°38'07" N 104°30'36" W	3,144		6,227	29,211	2,748	35,103	963.7

(continued)

Name of Stream	Point of Determination	Latitude/ Longitude	Drainage Area Above Point (Square Miles)		Total	River		
			Texas	Mexico			United States	Miles
			Con-tributing	Con-tributing	Con-tributing	Above Mouth		
Rio Grande	IB&WC discontinued gage 08373500 below Rio Conchos (above Alamito Creek) near Presidio, Texas	29°34'33" 104°24'17"	3,206	6,227	29,211	29,152	61,569	960.4
Rio Grande	Above mouth of Cibolo Creek	29°34'06" 104°23'47"	3,213	6,227	29,211	*	*	959.6
Cibolo Creek	USGS discontinued gage 08373200 near Presidio, Texas	29°34'50" 104°21'55"	273	0	0	0	273	2.2
Cibolo Creek	At mouth	29°34'06" 104°23'47"	274	0	0	0	274	0
Rio Grande	Below mouth of Cibolo Creek	29°34'06" 104°23'47"	3,487	6,227	29,211	*	*	959.6
Rio Grande	Above mouth of Alamito Creek	29°31'17" 104°17'31"	3,530	6,227	29,211	29,152	61,893	950.1
Alamito Creek	IB&WC gage 08374000 near Presidio, Texas	29°31'21" 104°17'22"	1,563	0	0	0	1,563	0.2
Alamito Creek	At mouth	29°31'17" 104°17'31"	1,563	0	0	0	1,563	0
Rio Grande	Below mouth of Alamito Creek	29°31'17" 104°17'31"	5,093	6,227	29,211	29,152	63,456	950.1
Rio Grande	IB&WC gage 08374200 below Rio Conchos near Presidio, Texas	29°31'07" 104°17'18"	5,093	6,227	29,211	29,243	63,547	949.8
Rio Grande	Above mouth of Terlingua Creek	29°09'54" 103°36'35"	5,704	6,227	29,211	*	*	885.2

(continued)

Name of Stream	Point of Determination	Latitude/ Longitude	Drainage Area Above Point (Square Miles)		River Miles		
			Texas	United States: Mexico		Total	
			Con- tributing	Non Con- tributing	Con- tributing	Con- tributing	Above Mouth
Terlingua Creek	IB&WC gage 08374500 near Terlingua, Texas	29°12'00" 103°36'19"	1,090	0	0	1,090	2.9
Terlingua Creek	At mouth	29°09'54" 103°36'35"	1,102	0	0	1,102	0
Rio Grande	Below mouth of Terlingua Creek	29°09'54" 103°36'35"	6,806	6,227	29,211	*	885.2
Rio Grande	IB&WC gage 08375000 at Johnson Ranch near Castolon, Texas	29°02'05" 103°23'26"	7,000	6,227	29,211	31,501	862.4
Rio Grande	IB&WC discontinued gage 08375500 at Boquillas, Texas	29°10'45" 102°57'33"	7,687	6,227	29,211	33,927	806.6
Rio Grande	Above mouth of Maravillas Canyon	29°33'43" 102°46'34"	7,864	6,227	29,211	*	765.6
Maravillas Creek	At mouth	29°39'17" 103°04'50"	758	0	0	0	758
Nine Point Draw	At mouth	29°39'17" 103°04'50"	872	0	0	0	872
Maravillas Canyon	At confluence with Maravillas Creek and Nine Point Draw	29°39'17" 103°04'50"	1,630	0	0	0	1,630
Maravillas Canyon	At mouth	29°33'43" 102°46'34"	2,151	0	0	0	2,151
Rio Grande	Below mouth of Maravillas Canyon	29°33'43" 102°46'34"	10,015	6,227	29,211	*	765.6

(continued)

Name of Stream	Point of Determination	Latitude/Longitude	Drainage Area Above Point (Square Miles)		Total Con-tributing	River Miles Above Mouth
			Texas	Mexico		
Rio Grande	Above mouth of San Francisco Creek	29°52'49" N 102°49'15" W	10,193	6,227	29,211	710.6
San Francisco	Above mouth of Maxon Creek	29°53'32" N 102°24'03" W	628	0	0	7.7
Maxon Creek	At mouth	29°53'32" N 102°24'03" W	233	0	0	0
San Francisco Creek	Below mouth of Maxon Creek	29°53'32" N 102°24'03" W	861	0	0	7.7
San Francisco Creek	Above mouth of Washboard Canyon	29°53'05" N 102°19'25" W	908	0	0	0.4
Washboard Canyon	At mouth	29°53'05" N 102°19'25" W	151	0	0	0
San Francisco Creek	Below mouth of Washboard Canyon	29°53'05" N 102°19'25" W	1,059	0	0	0.4
San Francisco Creek	At mouth	29°52'49" N 102°49'15" W	1,059	0	0	0
Rio Grande	Below mouth of San Francisco Creek	29°52'49" N 102°49'15" W	11,252	6,227	29,211	710.6
Rio Grande	Above mouth of Sanderson Creek	29°50'54" N 102°11'03" W	11,297	6,227	29,211	697.9
Sanderson Creek	Site of miscellaneous measurement of peak discharge	30°08'40" N 102°25'32" W	178	0	0	35.2

(continued)

Name of Stream	Point of Determination	Latitude/ Longitude	Drainage Area Above Point (Square Miles)			River Miles	
			Con- tributing	Non Con- tributing	United States: Mexico Outside Texas: Con- tributing		Total Con- tributing
Three Mile Draw	Site of miscellaneous measurement of peak discharge	30°09'15" 102°24'51"	35.3	0	0	35.3	0.6
Sanderson Creek	USGS gage 08376300 at Sanderson, Texas	30°07'42" 102°23'04"	219	0	0	219	31.8
Sanderson Creek	At mouth	29°50'54" 102°11'03"	358	0	0	358	0
Rio Grande	Below mouth of Sanderson Creek	29°50'54" 102°11'03"	11,655	6,227	29,211	*	697.9
Rio Grande	IB&WC discontinued gage 08376500 at Agua Verde, Texas	29°48'10" 102°01'15"	11,695	6,227	29,211	*	694.3
Rio Grande	Above mouth of Lozier Creek	29°48'04" 101°48'18"	11,794	6,227	29,211	*	663
Downie Draw	At mouth	30°09'48" 102°03'47"	364	0	0	364	0
Eight Mile Draw	At mouth	30°09'48" 102°03'47"	76.7	0	0	76.7	0
Meyers Canyon	At confluence with Downie Draw and Eight Mile Draw	30°09'48" 102°03'47"	441	0	0	441	12.2
Meyers Canyon	Above mouth of Big Canyon	30°04'40" 101°55'21"	501	0	0	501	0
Big Canyon	At mouth	30°04'40" 101°55'21"	797	0	0	797	0

(continued)

Name of Stream	Point of Determination	Latitude/Longitude	Con-tributing	Non Con-tributing	United States	Mexico	Drainage Area Above Point (Square Miles)		River Miles
							Texas	Con-tributing	
Meyers Canyon	Below mouth of Big Canyon	30°04'40" 101°55'21"	1,298	0	0	0	1,298	0	0
Lozier Creek	IB&WC discontinued gage 08377000 near Langtry, Texas	29°48'06" 101°47'07"	1,684	0	0	0	1,684	2.0	2.0
Lozier Creek	At mouth	29°48'04" 101°48'18"	1,685	0	0	0	1,685	0	0
Rio Grande	Below mouth of Lozier Creek	29°48'04" 101°48'18"	13,479	6,227	29,211	*	*	663	663
Rio Grande	IB&WC and USGS gage 08377200 at Foster Ranch near Langtry, Texas	29°46'51" 101°45'20"	13,484	6,227	29,211	38,071	80,766	657.5	657.5
Rio Grande	IB&WC discontinued gage 08377500 at Langtry, Texas	29°48'00" 101°34'00"	13,667	6,227	29,211	38,576	81,454	639.6	639.6
Rio Grande Tributary	USGS discontinued gage 08377600 near Langtry, Texas	29°48'17" 101°29'01"	.26	0	0	0	.26	--	--
Rio Grande	Above mouth of Pecos River	29°41'55" 101°22'21"	13,712	6,227	29,211	*	*	616	616
Delaware River Tributary	USGS discontinued gage 08407800 near Orla, Texas	31°55'46" 104°28'52"	40.8	0	*	0	*	--	--
Red Bluff Reservoir	USGS gage 08410000 near Orla, Texas	31°54'04" 103°54'34"	931	0	18,639	0	19,570	408.4	408.4
Pecos River	Above mouth of Salt Creek	31°52'33" 103°52'57"	937	0	18,639	0	19,576	405.5	405.5

(continued)

Name of Stream	Point of Determination	Latitude/ Longitude	Drainage Area Above Point (Square Miles)			River Miles Above Mouth	
			Texas	United States	Mexico		Total
			Con- tributing	Non Con- tributing	Con- tributing	Con- tributing	
Salt Creek	USGS discontinued gage 08411500 near Orla, Texas	31°52'45" 103°56'50"	501	0	0	501	4.9
Salt Creek	Site of miscellaneous measurement of peak discharge	31°52'34" 103°53'17"	516	0	0	516	.4
Salt Creek	At mouth	31°52'33" 103°52'57"	517	0	0	517	0
Pecos River	Below mouth of Salt Creek	31°52'33" 103°52'57"	1,454	0	18,639	20,093	405.5
Pecos River	USGS gage 08412500 near Orla, Texas	31°52'21" 103°49'52"	1,498	7.04	18,639	20,137	399.5
Pecos River	USGS discontinued gage 08414000 near Mentone, Texas	31°40'07" 103°37'34"	1,902	7.04	18,639	20,541	369.3
Pecos River	USGS discontinued gage 08146500 above Barstow (above Barstow Canal) Texas	31°33'50" 103°30'11"	1,990	7.04	18,639	20,629	346.6
Pecos River	Above mouth of Toyah Creek	31°24'47" 103°19'36"	2,911	710	18,639	21,550	316.5
Madera Canyon	USGS discontinued gage 08424500 near Toyahvale, Texas	30°51'54" 103°58'06"	55.9	0	0	55.9	12.4
Toyah Creek	USGS discontinued gage 08431000 near Pecos, Texas	31°16'51" 103°27'31"	1,029	0	0	1,029	1.4
Toyah Creek	At confluence with Toyah Lake	31°17'46" 103°26'48"	1,045	0	0	1,045	0

(continued)

Name of Stream	Point of Determination	Latitude/Longitude	Drainage Area Above Point (Square Miles)		Total Con-tributing	River Miles Above Mouth
			United States: Texas	Mexico		
Salt Draw	USGS discontinued gage 08431500 near Pecos, Texas	31°18'55" N 103°29'06" W	1,418	0	1,418	1.1
Salt Draw	At confluence with Toyah Lake	31°18'55" N 103°28'08" W	1,419	0	1,419	0
Limpia Creek	USGS gage 08431700 above Fort Davis, Texas	30°36'51" N 104°00'10" W	37.6	0	37.6	28.9
Limpia Creek	USGS discontinued gage 08431800 below Fort Davis, Texas	30°40'52" N 103°47'30" W	213	0	213	9.5
Limpia Creek	USGS discontinued gage 08432000 near Fort Davis, Texas	30°46'36" N 103°44'38" W	292	0	292	0
Barrilla Draw	USGS gage 08433000 near Saragosa, Texas	30°57'28" N 103°27'33" W	570	0	570	30.2
Barrilla Draw	At confluence with Toyah Lake	31°20'11" N 103°23'02" W	697	0	697	0
Toyah Creek	Below confluence of Toyah Lake and Barrilla Draw	31°20'11" N 103°23'02" W	3,161	0	3,161	5.8
Toyah Creek	USGS discontinued gage 08434000 below Toyah Lake near Pecos, Texas	31°21'54" N 103°23'03" W	3,241	0	3,241	0
Toyah Creek	At mouth	31°24'47" N 103°19'36" W	3,261	0	3,261	0
Pecos River	Below mouth of Toyah Creek	31°24'47" N 103°19'36" W	6,172	710	18,639	316.5

(continued)

Name of Stream	Point of Determination	Latitude/ Longitude	Drainage Area Above Point (Square Miles)		United States: Mexico	Total	River Miles	
			Con- tributing	Non Con- tributing				Con- tributing
Pecos River	USGS discontinued gage 08435500 below Barstow, Texas	31°25'21" 103°15'24"	6,201	710	18,639	0	24,840	309.2
Pecos River	Above mouth of Hackberry Draw	31°21'49" 103°06'45"	6,399	2,103	18,639	0	25,038	297.2
Hackberry Draw	Above mouth of Coyanosa Draw	31°17'24" 103°07'17"	252	0	0	0	252	6.6
Coyanosa Draw	Above mouth of Paisano Creek	30°46'38" 103°16'36"	78.8	0	0	0	78.8	44.5
Paisano Creek	Above mouth of Alpine Creek	30°27'12" 103°37'12"	46	0	0	0	46	39.4
Alpine Creek	USGS discontinued gage 08435620 at Alpine, Texas	30°21'09" 103°40'02"	17.8	0	0	0	17.8	9.5
Alpine Creek	Above mouth of Toronto Creek	30°22'45" 103°39'21"	24.7	0	0	0	24.7	7.4
Toronto Creek	USGS discontinued gage 08435600 near Alpine, Texas	30°21'28" 103°42'48"	28.2	0	0	0	28.2	4.0
Toronto Creek	At mouth	30°22'45" 103°39'21"	31.3	0	0	0	31.3	0
Alpine Creek	Below mouth of Toronto Creek	30°22'45" 103°39'21"	56.0	0	0	0	56.0	7.4
Alpine Creek	Above mouth of Sunny Glen Canyon	30°24'14" 103°38'32"	57.8	0	0	0	57.8	5.3

(continued)

Name of Stream	Point of Determination	Latitude/ Longitude	Drainage Area Above Point (Square Miles)		Total Con-	River Miles Above Mouth
			Texas	United States		
			tributing	tributing	tributing	
Sunny Glen Canyon	USGS discontinued gage 08435700 near Alpine, Texas	30°23'02" 103°43'45"	28.2	0	0	28.2 5.7
Sunny Glen Canyon	At mouth	30°24'14" 103°38'32"	35.0	0	0	35.0 0
Alpine Creek	Below mouth of Sunny Glen Canyon	30°24'14" 103°38'22"	92.8	0	0	92.8 5.3
Alpine Creek	Above mouth of Moss Creek	30°24'17" 103°38'27"	92.8	0	0	92.8 5.2
Moss Creek	USGS discontinued gage 08435660 near Alpine, Texas	30°20'09" 103°38'27"	10.3	0	0	10.3 5.8
Moss Creek	At mouth	30°24'17" 103°38'27"	29.7	0	0	29.7 0
Alpine Creek	Below mouth of Moss Creek	30°24'17" 103°38'27"	123	0	0	123 5.2
Alpine Creek	At mouth	30°27'12" 103°37'12"	145	0	0	145 0
Paisano Creek	Below mouth of Alpine Creek	30°27'12" 103°37'12"	191	0	0	191 39.4
Paisano Creek	At mouth	30°46'38" 103°16'36"	975	0	0	975 0
Coyanosa Draw	Below mouth of Paisano Creek	30°46'38" 103°16'36"	1,054	0	0	1,054 44.5

(continued)

Name of Stream	Point of Determination	Latitude/Longitude	Drainage Area Above Point (Square Miles)			River Miles
			Texas	United States	Total	
			Con-tributing	Con-tributing	Con-tributing	Above Mouth
Coyanosa Draw	Peak discharge site No. 61 in TBWE Bulletin 5807C	30°48'45" N 103°12'58" W	1,068	0	1,068	39.3
Coyanosa Draw	USGS discontinued gage 08435800 near Fort Stockton, Texas	31°02'25" N 103°08'12" W	1,173	0	1,173	20
Coyanosa Draw	At mouth	31°17'14" N 103°07'17" W	1,262	0	1,262	0
Hackberry Draw	Below mouth of Coyanosa Draw	31°17'24" N 103°07'17" W	1,514	0	1,514	6.6
Hackberry Draw	At mouth	31°21'49" N 103°06'45" W	1,528	0	1,528	0
Pecos River	Below mouth of Hackberry Draw	31°21'49" N 103°06'45" W	7,927	2,103	18,639	297.2
Courtney Creek Tributary	USGS discontinued gage 08436800 near Fort Stockton, Texas	30°54'00" N 103°02'50" W	1.16	0	1.16	--
Monument Draw Tributary	USGS discontinued gage 08437650 near Pyote, Texas	31°33'35" N 103°08'00" W	.01	0	.01	--
Pecos River	USGS gage 08446500 near Girvin, Texas	31°06'47" N 102°25'02" W	9,729	2,182	18,639	209.8
Lake Leon Tributary	USGS discontinued gage 08437550 near Fort Stockton, Texas	30°54'00" N 103°02'50" W	.40	0	.40	--
Three Mile Mesa Creek	USGS discontinued gage 08444400 near Fort Stockton, Texas	30°50'15" N 102°50'30" W	1.03	0	1.03	0

(continued)

Name of Stream	Point of Determination	Latitude/ Longitude	Drainage Area Above Point (Square Miles)		Con-tributing	Con-tributing	Total	River Miles
			Texas	United States: Mexico				
Pecos River	Above mouth of Tunas Creek	31°02'08" 102°13'53"	11,043	0	18,639	0	29,682	189.8
Tunas Creek	At mouth	31°02'08" 102°13'53"	966	0	0	0	966	0
Pecos Creek	Below mouth of Tunas Creek	31°02'08" 102°13'53"	12,009	2,182	18,639	0	30,648	189.8
Pecos Creek	Above mouth of Five Mile Creek	31°59'36" 102°01'36"	12,176	2,182	18,639	0	30,815	169.1
Five Mile Creek	At mouth	31°59'36" 102°01'36"	433	0	0	0	433	0
Pecos River	Below mouth of Five Mile Creek	31°59'36" 102°01'36"	12,609	2,182	18,639	0	31,248	169.1
Pecos River	Above mouth of Four Mile Draw	30°45'10" 101°48'59"	12,834	2,182	18,639	0	31,473	138.8
Four Mile Draw	At mouth	30°45'10" 101°48'59"	267	0	0	0	267	0
Pecos River	Below mouth of Four Mile Draw	30°45'10" 101°48'59"	13,101	2,182	18,639	0	31,740	138.8
Pecos River	USGS discontinued gage 08447000 near Sheffield, Texas	30°39'34" 101°46'11"	13,214	2,182	18,639	0	31,853	130.5
Pecos River	Above mouth of Live Oak Creek	30°39'07" 101°42'31"	13,241	2,182	18,639	0	31,880	125.2

(continued)

Name of Stream	Point of Determination	Latitude/	Longitude	Drainage Area Above Point (Square Miles)			River
				Con-tributing	United States: Mexico	Total	
				Non Con-tributing	Outside Texas	Con-tributing	Miles Above Mouth
Live Oak Creek	At mouth	30°39'07" 101°42'31"		418	0	418	0
Pecos River	Below mouth of Live Oak Creek	30°39'07" 101°42'31"		13,659	2,182	18,639	125.2
Pecos River	Above mouth of Independence Creek	30°26'41" 101°43'12"		13,812	2,182	18,639	100.8
Independence Creek	USGS gage 08447020 near Sheffield, Texas	30°27'07" 101°43'58"		770	0	770	0.9
Independence Creek	At mouth	30°26'41" 101°43'12"		771	0	771	0
Pecos River	Below mouth of Independence Creek	30°26'41" 101°43'12"		14,583	2,182	18,639	100.8
Pecos River	Above mouth of Howard Draw	30°08'47" 101°34'35"		14,867	2,182	18,639	63.1
Howard Draw Tributary	USGS discontinued gage 08447200 near Ozona, Texas	30°41'18" 101°20'51"		7.48	0	7.48	--
Howard Draw	At mouth	30°08'47" 101°34'35"		1,095	0	1,095	0
Pecos River	Below mouth of Howard Draw	30°08'47" 101°34'35"		15,962	2,182	18,639	63.1
Pecos River	IB&WC discontinued gage 08447400 near Shumla, Texas	29°49'20" 101°24'35"		16,522	2,182	18,639	18.5

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Name of Stream	Point of Determination	Latitude/ Longitude	Drainage Area Above Point (Square Miles)		Total Contributing	River Miles Above Mouth		
			Texas	United States: Mexico				
			Con- tributing	Non Con- tributing	Con- tributing	Con- tributing		
Pecos River	IB&WC and USGS gage 08447410 near Langtry, Texas	29°48'08" 101°26'32"	16,538	2,182	18,639	0	35,177	14.9
Deadmans Canyon	IB&WC gage 08447420 near Comstock, Texas	29°47'05" 101°19'25"	88.1	0	0	0	88.1	2.3
Pecos River	IB&WC discontinued gage 08447500 near Comstock, Texas	29°45'30" 101°21'22"	16,653	2,182	18,639	0	35,292	5.5
Pecos River	IB&WC discontinued gage 08447700 above mouth near Comstock, Texas	29°42'17" 101°21'26"	16,667	2,182	18,639	0	35,306	1.0
Pecos River	At mouth	29°41'55" 101°22'21"	16,669	2,182	18,639	0	35,308	0
Rio Grande	Below mouth of Pecos River	29°41'55" 101°22'21"	30,381	8,409	47,850	*	*	616.0
Rio Grande	Above mouth of Devil's River	29°27'33" 101°03'24"	30,552	8,409	47,850	*	*	574.6
Granger Draw	At confluence with Dry Devil's River	30°19'39" 100°56'32"	896	0	0	0	896	0
Dry Devil's River Tributary	USGS discontinued gage 08448750 at Sonora, Texas	30°36'13" 100°38'20"	.46	0	0	0	.46	--
Dry Devil's River	At confluence with Granger Draw	30°19'39" 100°56'32"	722	0	0	0	722	0
Devil's River	Below confluence of Dry Devil's River and Granger Draw	30°19'39" 100°56'32"	1,618	0	0	0	1,618	99.1

(continued)

Name of Stream	Point of Determination	Latitude/Longitude	Drainage Area Above Point (Square Miles)		Con-tributing	Non Con-tributing	United States: Mexico	Con-tributing	Con-tributing	Total	River Miles Above Mouth
			Texas	Outside Texas							
Devil's River	Above mouth of Johnson Draw	30°07'50" 101°07'29"	1,988	0	0	0	1,988	0	1,988	76.5	
Johnson Draw	Peak discharge site No. 120 in TBWE Bulletin 5807C near Ozona, Texas	30°44'15" 101°12'04"	123	0	0	0	123	0	123	55.1	
Johnson Draw	At mouth	30°07'50" 101°07'29"	651	0	0	0	651	0	651	0	
Devil's River	Below mouth of Johnson Draw	30°07'50" 101°07'29"	2,639	0	0	0	2,639	0	2,639	76.5	
Devil's River	USGS discontinued gage 08449000 near Juno, Texas	29°57'48" 101°08'42"	2,776	0	0	0	2,776	0	2,776	58.2	
Devil's River	Above mouth of Dry Devil's River	29°47'07" 100°59'18"	3,104	0	0	0	3,104	0	3,104	33.8	
Mailtrail Creek	Peak discharge site No. 123 in TBWE Bulletin 5807C near Loma Alta, Texas	29°58'47" 100°44'19"	72.1	0	0	0	72.1	0	72.1	1.6	
Little Red Bluff Creek	Peak discharge site No. 124 in TBWE Bulletin 5807C near Carta Valley, Texas	29°47'43" 100°40'29"	10.6	0	0	0	10.6	0	10.6	28.6	
Dry Devil's River	Peak discharge site No. 125 in TBWE Bulletin 5807C near Carta Valley, Texas	29°48'28" 100°56'47"	721	0	0	0	721	0	721	5.1	
Dry Devil's River	Peak discharge site No. 126 in TBWE Bulletin 5807C	29°48'06" 100°59'10"	728	0	0	0	728	0	728	1.2	

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Name of Stream	Point of Determination	Latitude/ Longitude	Drainage Area Above Point (Square Miles)		Con- tributing	Con- tributing	Con- tributing	Total	River Miles Above Mouth
			Texas	United States: Mexico					
Dry Devil's River	At mouth	29°47'07" 100°59'18"	730	0	0	0	730	0	
Devil's River	Below mouth of Dry Devil's River	29°47'07" 100°59'18"	3,834	0	0	0	3,834	33.8	
Devil's River	IB&WC discontinued gage 08449300 at Upper Devil's River near Comstock, Texas	29°44'45" 101°00'30"	3,848	0	0	0	3,848	30.7	
Devil's River	IB&WC and USGS gage 08449400 at Pafford Crossing near Comstock, Texas	29°40'40" 101°00'02"	3,906	0	0	0	3,906	25.6	
Big Satan Creek	IB&WC gage 08449440 near Comstock, Texas	29°39'50" 100°57'50"	42.8	0	0	0	42.8	1.1	
Rough Canyon Creek Tributary	USGS discontinued gage 08449470 near Del Rio, Texas	29°25'50" 100°51'51"	8.2	0	0	0	8.2	--	
Rough Canyon	IB&WC gage 08449475 near Del Rio, Texas	29°34'40" 100°56'00"	25	0	0	0	25	3.4	
North Texas San Pedro Creek	IB&WC gage 08449485 near Del Rio, Texas	29°31'20" 100°53'00"	17.3	0	0	0	17.3	8.4	
Middle Fork San Pedro Creek	IB&WC gage 08449490 near Del Rio, Texas,	29°29'23" 100°52'54"	11.7	0	0	0	11.7	2.7	
Devil's River	IB&WC discontinued gage 08449500 near Del Rio, Texas	29°29'00" 101°00'00"	4,206	0	0	0	4,206	4.8	

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Name of Stream	Point of Determination	Latitude/ Longitude	Drainage Area Above Point (Square Miles)	United States: Mexico	Total	Con- tributing	Con- tributing	Con- tributing	River Miles
			Texas	Con- tributing	Con- tributing	Con- tributing	Con- tributing	Con- tributing	Above Mouth
Evans Creek Tributary	USGS discontinued gage 08449600 near Del Rio, Texas	29°33'00" 101°04'58"	.4	0	0	0	0	.4	--
Evans Creek	IB&WC discontinued gage 08449600 near Del Rio	29°31'48" 101°05'54"	74.1	0	0	0	0	74.1	9.8
Devil's River	IB&WC discontinued gage 08450500 at mouth near Del Rio, Texas	29°28'10" 101°03'25"	4,245	0	0	0	0	4,245	0.8
Devil's River	At mouth	29°27'33" 101°03'24"	4,246	0	0	0	0	4,246	0
Rio Grande	Below mouth of Devil's River	29°27'33" 101°03'24"	34,798	8,409	47,850	*	*	574.6	
Rio Grande	IB&WC gage 08450800 Amistad Reservoir near Del Rio, Texas	29°26'59" 101°03'24"	34,799	8,409	47,850	40,451	123,100	573.9	
Rio Grande	IB&WC discontinued gage 08450600 near Devil's River near Del Rio, Texas	29°26'22" 101°03'19"	34,799	8,409	47,850	*	*	573.9	
Rio Grande	IB&WC and USGS gage 08450900 below Amistad Dam near Del Rio, Texas	29°25'30" 101°02'27"	34,804	8,409	47,850	40,455	123,109	571.9	
Rio Grande	Above mouth of Eight Mile Creek	29°23'42" 101°01'28"	34,807	8,409	47,850	*	*	569.3	
Eight Mile Creek	IB&WC gage 08451130 near Del Rio, Texas	29°24'03" 101°00'57"	13.6	0	0	0	13.6	13.6	0.8
Eight Mile Creek	At mouth	29°23'42" 101°01'28"	14.4	0	0	0	14.4	14.4	0

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Name of Stream	Point of Determination	Latitude/Longitude	Drainage Area Above Point (Square Miles)		Con-tributing	Non Con-tributing	United States	Mexico	Total	River Miles Above Mouth
			Texas	Con-tributing						
Rio Grande	Below mouth of Eight Mile Creek	29°23'42" N 101°01'28" W	8,409	47,850	*	*	*	*	569.3	
Rio Grande	Above mouth of Cienegas Creek	29°20'43" N 100°56'43" W	8,409	47,850	*	*	*	*	562.9	
Cienegas Creek	IB&WC gage 08451500 near Del Rio, Texas	29°20'51" N 100°56'43" W	0	0	0	0	0	23.5	0.2	
Cienegas Creek	At mouth	29°20'43" N 100°56'43" W	0	0	0	0	0	23.5	0	
Rio Grande	Below mouth of Cienegas Creek	29°20'43" N 100°56'43" W	8,409	47,850	*	*	*	*	562.9	
Rio Grande	IB&WC gage 08451800 at Del Rio, Texas	29°19'41" N 100°55'51" W	8,409	47,850	40,555	123,266			561.2	
Rio Grande	IB&WC discontinued gage 08452500 near Del Rio, Texas	29°19'35" N 100°55'39" W	8,409	47,850	*	*	*	*	561.0	
Rio Grande	Above mouth of San Felipe Creek	29°19'34" N 100°55'09" W	8,409	47,850	40,905	123,617			560.5	
San Felipe Creek	IB&WC gage 08453000 near Del Rio, Texas	29°19'51" N 100°53'20" W	0	0	0	0	0	45.8	2.2	
San Felipe Creek	At mouth	29°19'34" N 100°55'09" W	0	0	0	0	0	53.3	0	
Rio Grande	Below mouth of San Felipe Creek	29°19'34" N 100°55'09" W	8,409	47,850	40,905	123,670			560.5	

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Name of Stream	Point of Determination	Latitude/ Longitude	Drainage Area Above Point (Square Miles)		Total Con-tributing	River Miles Above
			Texas	Mexico		
Zorro Creek	USGS discontinued gage 08453100 near Del Rio, Texas	29°19'52" 100°49'54"	9.5	0	9.5	--
Rio Grande	Above mouth of Sycamore Creek	29°14'31" 100°47'37"	34,946	8,409	47,850	549.0
Sycamore Creek	Above mouth of East Fork Sycamore Creek	29°24'54" 100°42'01"	256	0	256	18.3
East Fork Sycamore Creek	At mouth	29°24'54" 100°42'01"	165	0	165	0
Sycamore Creek	Below mouth of East Fork Sycamore Creek	29°24'54" 100°42'01"	421	0	421	18.3
Sycamore Creek	USGS discontinued gage 08453500 near Del Rio, Texas	29°15'15" 100°45'02"	496	0	496	4.4
Sycamore Creek	At mouth	29°14'31" 100°47'37"	535	0	535	0
Rio Grande	Below mouth of Sycamore Creek	29°14'31" 100°47'37"	35,491	8,409	47,850	549.0
Rio Grande	IB&WC discontinued gage 08454700 below Maverick Dam near Del Rio, Texas	29°07'54" 100°43'41"	35,503	8,409	47,850	542.6
Rio Grande	Above mouth of Pinto Creek	29°07'22" 100°42'52"	35,503	8,409	47,850	536.9
East Perdido Creek	USGS discontinued gage 08454900 near Bracketville, Texas	29°20'50" 100°34'32"	2.9	0	2.9	0

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Name of Stream	Point of Determination	Latitude/ Longitude	Drainage Area Above Point (Square Miles)		Con-tributing	Con-tributing	Con-tributing	Total	River Miles Above
			Texas	Mexico					
Pinto Creek	At mouth	29°07'22" 100°42'52"	244	0	0	0	244	0	
Rio Grande	Below mouth of Pinto Creek	29°07'22" 100°42'52"	35,747	8,409	47,850	*	*	536.9	
Rio Grande	IB&WC discontinued gage 08455700 near Jimenez, Coahuila, Mexico	29°03'00" 100°39'50"	35,804	8,409	47,850	41,874	125,528	530.3	
Rio Grande	IB&WC gage 08455800 below Maverick Dam near Quemado, Texas	29°02'58" 100°39'48"	35,855	8,409	47,850	43,037	126,742	530.3	
Rio Grande	Above mouth of Las Moras Creek	28°59'42" 100°38'53"	35,855	8,409	47,850	*	*	526.2	
Las Moras Creek	IB&WC discontinued gage 08456500 near Eagle Pass, Texas	29°00'22" 100°38'11"	168	0	0	0	168	1.3	
Las Moras Creek	At mouth	28°59'42" 100°38'53"	169	0	0	0	169	0	
Rio Grande	Below mouth of Las Moras Creek	28°59'42" 100°38'53"	36,024	8,409	47,850	*	*	526.2	
Rio Grande	Above mouth of Elm Creek	28°44'36" 100°30'36"	36,145	8,409	47,850	*	*	499.2	
Elm Creek	At mouth	28°44'36" 100°30'36"	225	0	0	0	225	0	
Rio Grande	Below mouth of Elm Creek	28°44'36" 100°30'36"	36,370	8,409	47,850	*	*	499.2	

(continued)

Name of Stream	Point of Determination	Latitude/ Longitude	Drainage Area Above Point (Square Miles)		Con-tributing	Con-tributing	Con-tributing	Total	River Miles Above Mouth
			Texas	United States: Mexico					
Rio Grande	IB&WC gage 08458000 at Eagle Pass, Texas	28°42'50" 100°30'25"	8,409	47,850	*	*	*	497.0	
Rio Grande	IB&WC gage 08458700 at San Antonio Crossing near El Indio, Texas	28°20'40" 100°18'35"	8,409	47,850	44,746	129,218		460.4	
Rio Grande	Above mouth of San Ambrosia Creek	28°09'13" 100°06'38"	8,409	47,850	*	*	*	439.4	
San Ambrosia Creek	At mouth	28°09'13" 100°06'38"	0	0	0	246		0	
Rio Grande	Below mouth of San Ambrosia Creek	28°09'13" 100°06'38"	8,409	47,850	*	*	*	439.4	
Rio Grande	Above mouth of San Lorenzo Creek	28°02'20" 100°00'44"	8,409	47,850	*	*	*	428.3	
San Lorenzo Creek	At mouth	28°02'20" 100°00'44"	0	0	0	123		0	
Rio Grande	Below mouth of San Lorenzo Creek	28°02'20" 100°00'44"	8,409	47,850	*	*	*	428.3	
Rio Grande	Above mouth of Espada Creek	27°54'17" 99°53'39"	8,409	47,850	*	*	*	414.6	
Espada Creek	At mouth	27°54'17" 99°53'39"	0	0	0	77		0	

(continued)

Name of Stream	Point of Determination	Latitude/ Longitude	Drainage Area Above Point (Square Miles)		Total Miles Above Mouth
			Texas	Mexico	
			Con-tributing	Con-tributing	Con-tributing
Rio Grande	Below mouth of Espada Creek	27°54'17" N 99°53'39" W	8,409	47,850	414.6
Rio Grande	IB&WC gage 08458800 at Palafox near Laredo, Texas	27°47'55" N 99°52'40" W	8,409	47,850	406.0
Rio Grande	Above mouth of Santa Isabel Creek	27°38'31" N 99°37'35" W	8,409	47,850	379.3
Santa Isabel Creek	At mouth	27°38'31" N 99°37'35" W	0	0	0
Rio Grande	Below mouth of Santa Isabel Creek	27°38'31" N 99°37'35" W	8,409	47,850	379.3
Rio Grande	IB&WC and USGS gage 08459000 at Laredo, Texas	27°29'45" N 99°29'30" W	8,409	47,850	360.0
Rio Grande	Above mouth of Chacon Creek	27°29'09" N 99°28'47" W	8,409	47,850	358.8
Chacon Creek	Lake Casa Blanca near Laredo, Texas	27°32'58" N 99°26'42" W	0	0	6.8
Chacon Creek	At mouth	27°29'09" N 99°28'47" W	0	0	0
Rio Grande	Below mouth of Chacon Creek	27°29'09" N 99°28'47" W	8,409	47,850	358.8
Rio Grande	Above mouth of Dolores Creek	27°12'40" N 99°25'59" W	8,409	47,850	332.0

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Name of Stream	Point of Determination	Latitude/ Longitude	Drainage Area Above Point (Square Miles)		Con-tributing	Non Con-tributing	United States: Mexico	Outside Texas: Con-tributing	Total	River Miles	Above Mouth
			Texas	Con-tributing							
Dolores Creek	IB&WC discontinued gage 08459500 near San Ignacio, Texas	27°13'56" 99°24'42"	571	0	0	0	571	571	3.2		
Dolores Creek	At mouth	27°12'40" 99°25'59"	579	0	0	0	579	579	0		
Rio Grande	Below mouth of Dolores Creek	27°12'40" 99°25'59"	38,681	8,409	47,850	*	*	*	332.0		
Arroyo San Bartolo	USGS discontinued gage 08459600 at Zapata, Texas	26°55'39" 99°17'20"	.61	0	0	0	.61	.61	0		
Rio Grande	Above Falcon Dam	26°33'33" 99°10'01"	39,892	8,409	47,850	71,512	159,254	274.8			
Rio Grande	IB&WC and USGS gage 08461300 below Falcon Dam near Falcon Heights, Texas	26°33'19" 99°10'05"	39,892	8,409	47,850	71,512	159,254	272.3			
Rio Grande	IB&WC discontinued gage 08461500 at Chapeno, Texas	26°31'57" 99°09'17"	39,894	8,409	47,850	*	*	272.4			
Rio Grande	IB&WC discontinued gage 08462500 at Roma, Texas	26°24'13" 99°01'06"	39,980	8,409	47,850	*	*	255.0			
Rio Grande	IB&WC and USGS gage 08464700 at Fort Ringgold near Rio Grande City, Texas	26°22'02" 98°48'12"	40,093	8,409	47,850	86,382	174,325	235			
Rio Grande	Above mouth of Los Olmos Creek	26°21'22" 98°47'49"	40,093	8,409	47,850	*	*	234.1			

(continued)

Name of Stream	Point of Determination	Latitude/ Longitude	Drainage Area Above Point (Square Miles)		Total Con-tributing	River Miles Above Mouth
			Texas	United States: Mexico		
			Con-tributing	Con-tributing	Con-tributing	Con-tributing
Las Blancas Creek	At confluence with El Sauz Creek	26°33'55" N 98°51'48" W	203	0	203	0
El Sauz Creek	At confluence with Las Blancas Creek	26°33'55" N 98°51'48" W	163	0	163	0
Los Olmos Creek	Below confluence of Las Blancas and El Sauz Creek	26°33'55" N 98°51'48" W	366	0	366	20.2
Los Olmos Creek	At mouth	26°21'22" N 98°47'49" W	531	0	531	0
Rio Grande	Below mouth of Los Olmos Creek	26°21'22" N 98°47'49" W	40,624	8,409	47,850	234.1
Rio Grande	IB&WC discontinued gage 08465500 near Rio Grande City, Texas	26°19'32" N 98°46'37" W	40,625	8,409	47,850	232.3
Rio Grande Tributary	USGS discontinued gage 08466100 near Rio Grande City, Texas	26°18'58" N 98°39'45" W	1.3	0	1.3	--
Rio Grande Tributary	USGS discontinued gage 08466200 near Sullivan City, Texas	26°17'12" N 98°35'16" W	.5	0	.5	--
Rio Grande	IB&WC and USGS gage 08466300 near Los Ebanos, Texas	26°14'21" N 98°33'53" W	40,864	8,409	47,850	204.3
Rio Grande	IB&WC and USGS gage 08465200 below Anzalduas Dam near Hidalgo, Texas	26°07'51" N 98°19'51" W	41,082	8,409	47,850	176,084

(continued)

Name of Stream	Point of Determination	Latitude/ Longitude	Drainage Area Above Point (Square Miles)		River Miles		
			Texas	United States: Mexico		Total	
			Con-tributing	Non Con-tributing	Con-tributing	Con-tributing	Above Mouth
Rio Grande	IB&WC discontinued gage 08471500 at Hidalgo, Texas	26°05'43" 98°16'17"	41,061	8,409	47,850	*	159.5
Rio Grande	IB&WC discontinued gage 08472000 at Buenas Aires, Tamaulipas, Mexico	26°02'28" 98°04'02"	41,075	8,409	47,850	*	135.1
Rio Grande	IB&WC discontinued gage 08473000 at Las Palmas, Tamaulipas, Mexico	26°02'32" 98°02'16"	41,076	8,409	47,850	*	132.9
Rio Grande	IB&WC gage 08473300 near Progreso, Texas	26°03'43" 97°56'59"	41,082	8,409	47,850	87,343	176,275
Rio Grande	IB&WC discontinued gage 08473500 at Mercedes Bridge near Mercedes, Texas	26°03'36" 97°53'34"	41,084	8,409	47,850	*	117.7
Rio Grande	IB&WC gage 08473700 near San Benito, Texas	26°01'52" 97°43'39"	41,090	8,409	47,850	87,352	176,304
Rio Grande	IB&WC discontinued gage 08474500 at Matamoros, Tamaulipas, Mexico	25°53'30" 97°30'18"	41,101	8,409	47,850	*	56.4
Rio Grande	IB&WC and USGS gage 08475000 near Brownsville, Texas	25°52'31" 97°27'17"	41,102	8,409	47,850	87,367	176,319
Rio Grande	At mouth	25°57'21" 97°08'44"	41,116	8,409	47,850	87,367	176,333

Year	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024																																																																																																																										
Population	100	105	110	115	120	125	130	135	140	145	150	155	160	165	170	175	180	185	190	195	200	205	210	215	220	225	230	235	240	245	250	255	260	265	270	275	280	285	290	295	300	305	310	315	320	325	330	335	340	345	350	355	360	365	370	375	380	385	390	395	400	405	410	415	420	425	430	435	440	445	450	455	460	465	470	475	480	485	490	495	500	505	510	515	520	525	530	535	540	545	550	555	560	565	570	575	580	585	590	595	600	605	610	615	620	625	630	635	640	645	650	655	660	665	670	675	680	685	690	695	700	705	710	715	720	725	730	735	740	745	750	755	760	765	770	775	780	785	790	795	800	805	810	815	820	825	830	835	840	845	850	855	860	865	870	875	880	885	890	895	900	905	910	915	920	925	930	935	940	945	950	955	960	965	970	975	980	985	990	995	1000																
GDP	100	105	110	115	120	125	130	135	140	145	150	155	160	165	170	175	180	185	190	195	200	205	210	215	220	225	230	235	240	245	250	255	260	265	270	275	280	285	290	295	300	305	310	315	320	325	330	335	340	345	350	355	360	365	370	375	380	385	390	395	400	405	410	415	420	425	430	435	440	445	450	455	460	465	470	475	480	485	490	495	500	505	510	515	520	525	530	535	540	545	550	555	560	565	570	575	580	585	590	595	600	605	610	615	620	625	630	635	640	645	650	655	660	665	670	675	680	685	690	695	700	705	710	715	720	725	730	735	740	745	750	755	760	765	770	775	780	785	790	795	800	805	810	815	820	825	830	835	840	845	850	855	860	865	870	875	880	885	890	895	900	905	910	915	920	925	930	935	940	945	950	955	960	965	970	975	980	985	990	995	1000																
Unemployment	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5	9.0	9.5	10.0	10.5	11.0	11.5	12.0	12.5	13.0	13.5	14.0	14.5	15.0	15.5	16.0	16.5	17.0	17.5	18.0	18.5	19.0	19.5	20.0	20.5	21.0	21.5	22.0	22.5	23.0	23.5	24.0	24.5	25.0	25.5	26.0	26.5	27.0	27.5	28.0	28.5	29.0	29.5	30.0	30.5	31.0	31.5	32.0	32.5	33.0	33.5	34.0	34.5	35.0	35.5	36.0	36.5	37.0	37.5	38.0	38.5	39.0	39.5	40.0	40.5	41.0	41.5	42.0	42.5	43.0	43.5	44.0	44.5	45.0	45.5	46.0	46.5	47.0	47.5	48.0	48.5	49.0	49.5	50.0	50.5	51.0	51.5	52.0	52.5	53.0	53.5	54.0	54.5	55.0	55.5	56.0	56.5	57.0	57.5	58.0	58.5	59.0	59.5	60.0	60.5	61.0	61.5	62.0	62.5	63.0	63.5	64.0	64.5	65.0	65.5	66.0	66.5	67.0	67.5	68.0	68.5	69.0	69.5	70.0	70.5	71.0	71.5	72.0	72.5	73.0	73.5	74.0	74.5	75.0	75.5	76.0	76.5	77.0	77.5	78.0	78.5	79.0	79.5	80.0	80.5	81.0	81.5	82.0	82.5	83.0	83.5	84.0	84.5	85.0	85.5	86.0	86.5	87.0	87.5	88.0	88.5	89.0	89.5	90.0	90.5	91.0	91.5	92.0	92.5	93.0	93.5	94.0	94.5	95.0	95.5	96.0	96.5	97.0	97.5	98.0	98.5	99.0	99.5	100.0						
Inflation	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5	9.0	9.5	10.0	10.5	11.0	11.5	12.0	12.5	13.0	13.5	14.0	14.5	15.0	15.5	16.0	16.5	17.0	17.5	18.0	18.5	19.0	19.5	20.0	20.5	21.0	21.5	22.0	22.5	23.0	23.5	24.0	24.5	25.0	25.5	26.0	26.5	27.0	27.5	28.0	28.5	29.0	29.5	30.0	30.5	31.0	31.5	32.0	32.5	33.0	33.5	34.0	34.5	35.0	35.5	36.0	36.5	37.0	37.5	38.0	38.5	39.0	39.5	40.0	40.5	41.0	41.5	42.0	42.5	43.0	43.5	44.0	44.5	45.0	45.5	46.0	46.5	47.0	47.5	48.0	48.5	49.0	49.5	50.0	50.5	51.0	51.5	52.0	52.5	53.0	53.5	54.0	54.5	55.0	55.5	56.0	56.5	57.0	57.5	58.0	58.5	59.0	59.5	60.0	60.5	61.0	61.5	62.0	62.5	63.0	63.5	64.0	64.5	65.0	65.5	66.0	66.5	67.0	67.5	68.0	68.5	69.0	69.5	70.0	70.5	71.0	71.5	72.0	72.5	73.0	73.5	74.0	74.5	75.0	75.5	76.0	76.5	77.0	77.5	78.0	78.5	79.0	79.5	80.0	80.5	81.0	81.5	82.0	82.5	83.0	83.5	84.0	84.5	85.0	85.5	86.0	86.5	87.0	87.5	88.0	88.5	89.0	89.5	90.0	90.5	91.0	91.5	92.0	92.5	93.0	93.5	94.0	94.5	95.0	95.5	96.0	96.5	97.0	97.5	98.0	98.5	99.0	99.5	100.0