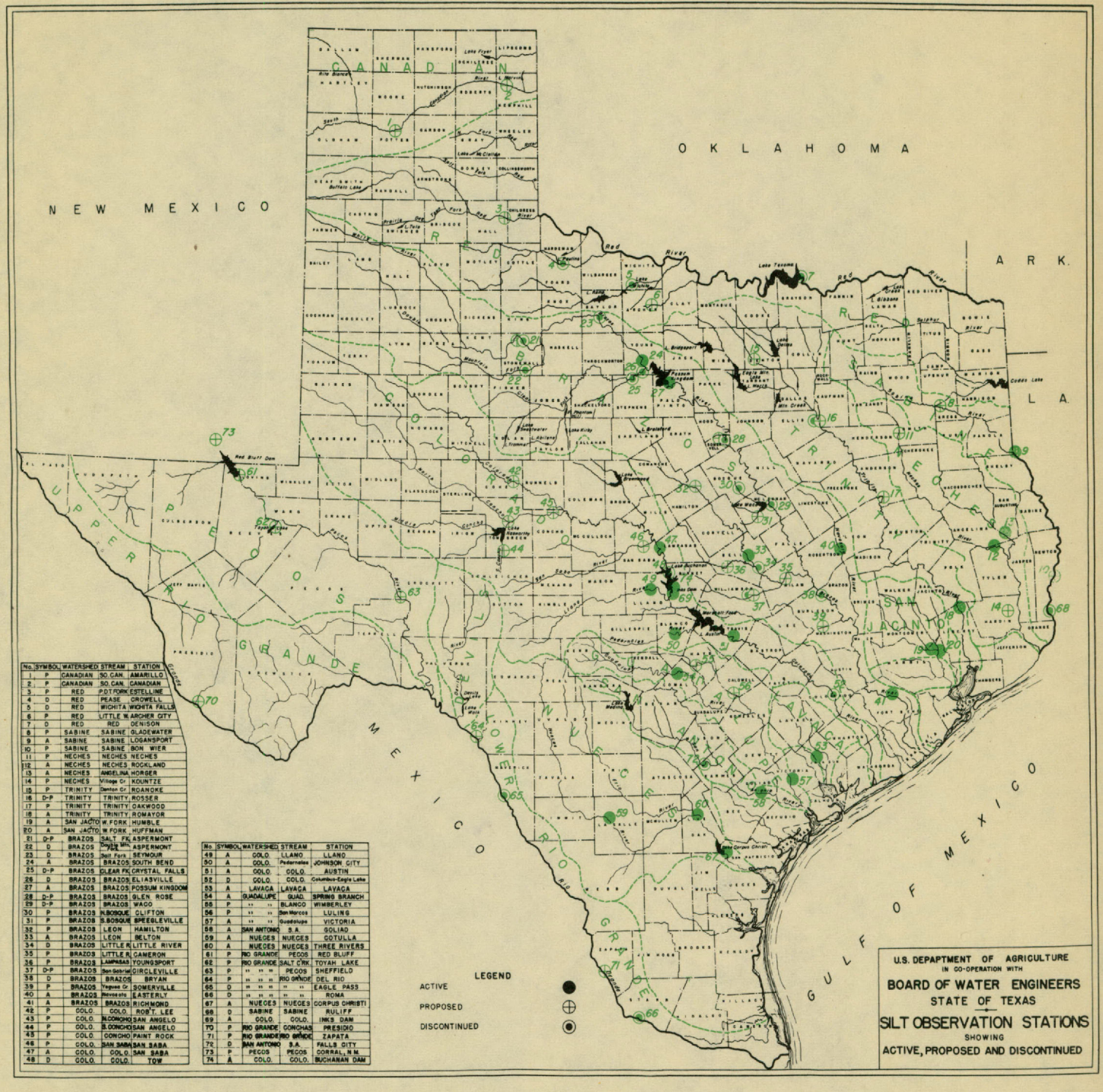
STATE OF TEXAS
BOARD OF WATER ENGINEERS
and
UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
DIVISION OF IRRIGATION AND WATER CONSERVATION

PROGRESS REPORT NO. 10
of
SILT LOAD OF TEXAS STREAMS
(1947-1948)

(The silt data contained in this report were obtained under a cooperative agreement between the Board of Water Engineers and U. S. Department of Agriculture, Soil Conservation Service, Division of Irrigation and Water Conservation.)
Austin, Texas
August, 1949



No.	SYMBOL	WATERSHED	STREAM	STATION
1	P	CANADIAN	SO.CAN.	AMARILLO
2	P	CANADIAN	SO.CAN.	CANADIAN
3	P	RED	P.DT.FORK	ESTELLINE
4	D	RED	PEASE	CROWELL
5	D	RED	WICHITA	WICHITA FALLS
6	P	RED	LITTLE W.	ARCHER CITY
7	D	RED	RED	DENISON
8	P	SABINE	SABINE	GLADEWATER
9	A	SABINE	SABINE	LOGANSPORT
10	P	SABINE	SABINE	BON WIER
11	P	NECHES	NECHES	NECHES
12	A	NECHES	NECHES	ROCKLAND
13	A	NECHES	ANGELINA	HORGER
14	P	NECHES	Village Cr.	KOUNTZE
15	P	TRINITY	Denton Cr.	ROANOKE
16	D-P	TRINITY	TRINITY	ROSSER
17	P	TRINITY	TRINITY	OAKWOOD
18	A	TRINITY	TRINITY	ROMAYOR
19	A	SAN JACTO	W. FORK	HUMBLE
20	A	SAN JACTO	W. FORK	HUFFMAN
21	D-P	BRAZOS	SALT FK.	ASPERMONT
22	D	BRAZOS	Double Mtn. Fork	ASPERMONT
23	D	BRAZOS	Salt Fork	SEYMOUR
24	A	BRAZOS	BRAZOS	SOUTH BEND
25	D-P	BRAZOS	CLEAR FK.	CRYSTAL FALLS
26	D	BRAZOS	BRAZOS	ELIASVILLE
27	A	BRAZOS	BRAZOS	POSSUM KINGDOM
28	D-P	BRAZOS	BRAZOS	GLEN ROSE
29	D-P	BRAZOS	BRAZOS	WACO
30	P	BRAZOS	N.BOSQUE	CLIFTON
31	P	BRAZOS	S.BOSQUE	SPEEGLEVILLE
32	P	BRAZOS	LEON	HAMILTON
33	A	BRAZOS	LEON	BELTON
34	D	BRAZOS	LITTLE R.	LITTLE RIVER
35	P	BRAZOS	LITTLE R.	CAMERON
36	P	BRAZOS	LAMPASAS	YOUNGSPORT
37	D-P	BRAZOS	San Gabriel	GIRCLEVILLE
38	D	BRAZOS	BRAZOS	BRYAN
39	P	BRAZOS	Yegua Cr.	SOMERVILLE
40	A	BRAZOS	Navasota	EASTERLY
41	A	BRAZOS	BRAZOS	RICHMOND
42	P	COLO.	COLO.	ROB'T. LEE
43	P	COLO.	N.CONCHO	SAN ANGELO
44	P	COLO.	S.CONCHO	SAN ANGELO
45	P	COLO.	CONCHO	PAINT ROCK
46	P	COLO.	SAN SABA	SAN SABA
47	A	COLO.	COLO.	SAN SABA
48	D	COLO.	COLO.	TOW

No.	SYMBOL	WATERSHED	STREAM	STATION
49	A	COLO.	LLANO	LLANO
50	A	COLO.	Pedernales	JOHNSON CITY
51	A	COLO.	COLO.	AUSTIN
52	D	COLO.	COLO.	Columbus-Eagle Lake
53	A	LAVACA	LAVACA	LAVACA
54	A	GUADALUPE	GUAD.	SPRING BRANCH
55	P	"	BLANCO	WIMBERLEY
56	P	"	San Marcos	LULING
57	A	"	Guadalupe	VICTORIA
58	A	SAN ANTONIO	S.A.	GOLIAD
59	A	NUECES	NUECES	COTULLA
60	A	NUECES	NUECES	THREE RIVERS
61	P	RIO GRANDE	PECOS	RED BLUFF
62	P	RIO GRANDE	SALT CRK.	TOYAH LAKE
63	P	" "	PECOS	SHEFFIELD
64	P	" "	RIO GRNDE	DEL RIO
65	D	" "	"	EAGLE PASS
66	D	" "	"	ROMA
67	A	NUECES	NUECES	CORPUS CHRISTI
68	D	SABINE	SABINE	RULIFF
69	A	COLO.	COLO.	INKS DAM
70	P	RIO GRANDE	CONCHAS	PRESIDIO
71	P	RIO GRANDE	RIO GRNDE	ZAPATA
72	D	SAN ANTONIO	S.A.	FALLS CITY
73	P	PECOS	PECOS	CORRAL, N.M.
74	A	COLO.	COLO.	BUCHANAN DAM

U.S. DEPAPTMENT OF AGRICULTURE
IN CO-OPERATION WITH
BOARD OF WATER ENGINEERS
STATE OF TEXAS

SILT OBSERVATION STATIONS

SHOWING
ACTIVE, PROPOSED AND DISCONTINUED

STATE OF TEXAS
BOARD OF WATER ENGINEERS
and
UNITED STATES DEPARTMENT OF AGRICULTURE
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Austin, Texas
August, 1949

O R G A N I Z A T I O N

STATE OF TEXAS

BOARD OF WATER ENGINEERS
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UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
DIVISION OF IRRIGATION AND WATER CONSERVATION
Cooperating in Studies on Silt of Texas Streams

H. H. Bennett, Chief of Service
M. L. Nichols, Chief of Research
Geo. D. Clyde, Chief, Division of Irrigation

TABLE OF CONTENTS

(continued on next page)

TABLE OF CONTENTS (Cont'd.)

Progress Report No. 10
of
THE SILT LOAD OF TEXAS STREAMS, 1947-1948

by

Dean W. Bloodgood, Irrigation Engineer 1/
Division of Irrigation Research
Soil Conservation Service
U. S. Department of Agriculture

INTRODUCTION

The purpose of the silt studies is to make a determination of the characteristics of the suspended silt load of Texas streams.

The tenth annual progress report for Silt Load of Texas Streams is one of a series that have been prepared annually since 1939.

The first report contains cooperative and other available data on the suspended silt load of Texas streams for a period from 1899 to 1939. These data were obtained at 27 stations located on 10 of the watersheds of Texas and consisted of the amount of silt load in tons and acre feet for each month and for the year, as well as a summary for the period the station was in operation. This report also contains a description of the equipment used in obtaining the water samples, the technique used in the laboratory and computation of data.

The subsequent reports contain a compilation of silt data obtained during the water years ending each September 30 and a summary of the yearly silt load up to the time of the present report. Most of these reports are available for free distribution upon request.

Prior to 1939, 14 silt sampling stations were discontinued, out of a total of 27, on account of insufficient funds for their operation and maintenance.

Since 1939 and to September 30, 1948, 18 new silt sampling stations have been established, and 7 have been discontinued. There are now 24 active silt sampling stations located on 10 of the watersheds of Texas. Since 1899 silt data have been obtained at 45 stations. The complete silt program calls for studies at 74 stations, which include the 45 that have contributed data.

The water samples collected for silt determinations were obtained by a simple, inexpensive, and easily operated device known as the Texas or Department of Agriculture sampler. This type of sampler has been in continuous use during the past 25 years in obtaining water samples for suspended silt load of Texas streams. During this long period to September 30, 1948, a total of 100,508 daily observations have been made with this type of sampler. Each observation consisted of obtaining one to three

1/ Member of a Sub-committee on Physical Aspects, Joint Committee on Sedimentation in Reservoirs, American Society of Civil Engineers.

water samples for regular river flows and extra samples during a flood stage of a stream. During the water year 1947-1948, 7,775 daily observations were made at 24 stations, and 11,062 water samples were received and silt determinations made at our cooperative silt laboratory.

The Texas or Department of Agriculture silt sampler is not designed or used for collecting water samples containing bed load material. It is used, however, for collecting water samples near the surface of a stream for suspended silt material. This is the type of material that contributes to most of the sediment deposited in the larger artificial lakes. The bed load material contributes mostly to a river channel and upper portion of a lake sedimentation.

All silt data compiled for this report have been computed for a water year October 1 to the following September 30. This is a year adopted by the Surface Water Branch, United States Geological Survey, in all of their stream measurements. It is necessary and essential to use river discharge data in connection with any silt determination of Texas streams, so that period has also been adopted as a year for the silt calculations.

The silt determinations are made by calculating the percentage of dry silt by weight as obtained from a water sample.

For the main purpose of the sedimentation studies of Texas streams all calculations are based on one cubic foot of silt weighing 70 pounds.

SUMMARIZED SILT DATA

Belton Station, Leon River

The average discharge of the Leon River at the Belton Station for a 2-year record is 497,780 acre feet, while for the year 1947-1948, it was 122,140 acre feet, or 25% of the average flow. The average silt load for the same period is 486 acre feet, while for 1947-1948, it was 77 acre feet, or 16% of the average load. The total load for a 3-year period is 1,611,940 tons or 1,089 acre feet of silt.

South Bend Station, Brazos River

The average discharge of the Brazos River at the South Bend Station (upper portion of watershed) for a 5.7-year period is 497,400 acre feet, while for the year 1947-1948, it was 391,140 acre feet, or 79% of the average flow. The average silt load for the same period is 2,216 acre feet, while for the year 1947-1948, it was 1,783 acre feet, or 80% of the average load. The total load for the 6.7-year period was 22,007,940 tons, or 14,437 acre feet of silt.

Richmond Station, Brazos River

The average discharge of the Brazos River at the Richmond Station (lower portion of the watershed) for a 23.3-year period is 6,023,540 acre

feet, while for the year 1947-1948, it was 1,950,620 acre feet, which is 32% of the average flow. The average load for the same period is 24,898 acre feet, while for the year it was 2,591 acre feet, which is 10% of the average load. The total load for a 24.3-year period is 889,824,770 tons or 582,870 acre feet of silt. This large quantity of silt is sufficient to have jeopardized the economic life of a water storage reservoir similar to Lake Possum Kingdom located on the same watershed and which has a capacity of 750,000 acre feet of water. The data obtained at the Richmond Station are probably the longest continuous daily silt records in existence (25.1 years to August, 1949).

Easterly Station, Navasota River

The average discharge of the Navasota River (a tributary of the Brazos River) at the Easterly Station for a 5.7-year period is 433,650 acre feet, while for the year 1947-1948, it was 99,160 acre feet, which is 23% of the average flow. The average silt load for the same period is 275 acre feet, while for 1947-1948, it was 53 acre feet, which is 19% of the average load. The total load for a 6.7-year period is 2,485,660 tons or 1,634 acre feet of silt.

San Saba Station, Colorado River

The average discharge of the Colorado River at the San Saba Station (located a few miles above the upper portion of Lake Buchanan) for a 17-year period is 1,245,570 acre feet, while for the year 1947-1948, it was 604,200 acre feet, which is 48% of the average flow. The average silt load for the same period is 3,148 acre feet, while for the year 1947-1948, it was 2,222 acre feet, which is 71% of the average load. The total load for an 18-year period is 85,258,480 tons or 55,919 acre feet of silt. The silt records obtained at this station are also among the longest daily continuous records (18.8 years to August, 1949).

Johnson City Station, Pedernales River

The average discharge of the Pedernales River (a tributary of the Colorado River) at the Johnson City Station for a 5.2-year period is 131,570 acre feet, while for the year 1947-1948, it was 31,690 acre feet, which is 24% of the average flow. The average silt load for the same period is 180 acre feet, while for the year 1947-1948, it was 27 acre feet, which is 15% of the average load. The total load for a 6.2-year period is 1,456,500 tons or 957 acre feet of silt.

Llano Station, Llano River

The average discharge of the Llano River (a tributary of the Colorado River and joining it between Lake Buchanan and Lake Travis) at the Llano Station for a 5.2-year period is 181,690 acre feet, while for the year 1947-1948, it was 327,420 acre feet, which is 180% of the average flow. This is one of the few streams that had any excessive flood waters during the year. The upper watersheds of this stream are located in areas where excessive and very high rainfall occurred during the year, some of which

exceeded all previous records. The rainfall (cloudbursts) on a small area of the Llano watershed, which contained little moisture and vegetative growth (weeds, etc.) due to drouth, caused the run-off to be extremely rapid and high. The rainfall for the storm of June 23-24, 1948, which occurred on a small watershed area of one of the tributaries of the Llano River varied from 8 to 22 inches according to the Weather Bureau records.

The soils of the small watershed area at the time of the storm were dry and aerated due to the prolonged drouth. When the hard - cloud-burst proportion - rain fell upon the dry pulverized soil, the erosion was exceedingly great. This erosion caused the Llano River to carry a large silt load with the flood waters.

The average annual silt load of the Llano River is 143 acre feet, while for one month, June, it amounted to 902 acre feet. For the entire year it was 965 acre feet, which is 675% of the average load. The total load for a 6.2-year period is 2,594,720 tons, or 1,702 acre feet of silt.

Spring Branch Station, Guadalupe River

The average discharge of the Guadalupe River at the Spring Branch Station (upper portion of the watershed) for a 5.7-year period is 240,700 acre feet, while for the year 1947-1948, it was 59,460 acre feet, which is 25% of the average flow. The average silt load for the same period is 127 acre feet, while for the year 1947-1948, it was 38 acre feet, which is 30% of the average load.

Practically all of the silt load occurred in one month, June, when it was 37 acre feet out of a total of 38 acre feet for the entire year. Most of the discharge of the river also occurred during June and amounted to 55,680 acre feet out of a total of 60,110 acre feet for the entire year.

The total load for a 6.7-year period is 1,173,110 tons, or 766 acre feet of silt.

Victoria Station, Guadalupe River

The average discharge of the Guadalupe River at the Victoria Station (lower portion of the watershed) for a 2.1-year period is 1,417,870 acre feet, while for the year 1947-1948, it was 509,960 acre feet, which is 36% of the average flow. The average silt load for the same period is 551 acre feet, while for 1947-1948, it was 111 acre feet, which is 20% of the average load. The total load for a 3.1-year period is 1,915,860 tons, or 1,259 acre feet of silt.

Edna Station, Lavaca River

The average discharge of the Lavaca River at the Edna Station for a 2.1-year period is 248,480 acre feet, while for the year 1947-1948, it was 114,240 acre feet, or 46% of the average flow. The average silt load for the same period is 164 acre feet, while for the year 1947-1948, it was 66 acre feet, or 40% of the average load. The total load for a 3.1-year period is 618,860 tons, or 407 acre feet of silt.

Rockland Station, Neches River

The average discharge of the Neches River at the Rockland Station for a 17.1-year period is 2,052,740 acre feet, while for the year 1947-1948, it was 1,250,360 acre feet, which is 61% of the average flow. The average silt load for the same period is 338 acre feet, while for 1947-1948, it was 77 acre feet, which is 23% of the average load. The total silt load for an 18.1-year period is 8,953,060 tons, or 5,865 acre feet of silt. This is also one of the stations with a long continuous silt record.

Horger Station, Angelina River

The average discharge of the Angelina River, a tributary of the Neches River, at the Horger Station for a 2.1-year period is 3,403,490 acre feet, while for the year 1947-1948, it was 1,619,040 acre feet, which is 48% of the average flow. The average silt load is 703 acre feet, while for 1947-1948, it was 149 acre feet, which is 21% of the average load. The total load for a 3.1-year period is 2,457,670 tons, or 1,613 acre feet of silt.

Cotulla Station, Nueces River

The average discharge of the Nueces River at the Cotulla Station for a 5.7-year period is 210,645 acre feet, while for the year 1947-1948, it was 72,900 acre feet, which is 35% of the average flow. The average silt load is 95 acre feet, while for 1947-1948, it was 19 acre feet, which is 20% of the average load. The entire discharge and silt load occurred in June, July, and September. During the other months of the year the river was entirely dry at the Cotulla Station. The total load for a 6.7-year period is 860,580 tons, or 564 acre feet of silt.

Three Rivers Station, Nueces River

The average discharge of the Nueces River at the Three Rivers Station for a 20-year period is 716,380 acre feet, while for 1947-1948 it was 129,330 acre feet, which is 18% of the average flow. The average silt load for the same period is 527 acre feet, while for the year 1947-1948, it was 164 acre feet, which is 31% of the average load. The total silt load for a 21-year period is 16,319,750 tons, or 10,704 acre feet of silt. This is also one of the long continuous silt records.

Logansport, La. Station, Sabine River

The average discharge of the Sabine River at the Logansport, La. Station for a 13.2-year period is 3,040,380 acre feet, while for the year 1947-1948 it was 2,820,560 acre feet, which is 93% of the average flow. The average silt load for the same period is 806 acre feet, while for 1947-1948, it was 298 acre feet, which is 37% of the average load. The total load for a 14.2-year period is 16,631,910 tons, or 10,904 acre feet of silt.

Goliad Station, San Antonio River

The average discharge of the San Antonio River at the Goliad Station for a 5.7-year period is 562,470 acre feet, while for the year 1947-1948, it was 226,510 acre feet, which is 40% of the average flow. The average silt load for the same period is 550 acre feet, while for 1947-1948, it was 155 acre feet or 28% of the average load. The total silt load for a 6.7-year period is 5,067,120 tons or 3,321 acre feet of silt.

Huffman Station, San Jacinto River

The average discharge of the San Jacinto River at Huffman (Sheldon Pumping Plant) Station near the lower end of the river for a 2.1-year period is 2,369,630 acre feet, while for the year 1947-1948, it was 499,740 acre feet, which is 21% of the average flow. The average silt load for the same period is 1,135 acre feet, while for the year 1947-1948, it was 70 acre feet, which is 6% of the average load. The total load for the 3.1-year period is 3,713,780 tons, or 2,435 acre feet of silt.

Humble Station, San Jacinto River

The average discharge of the West Fork of the San Jacinto River at the Humble Station for an 11.3-year period is 925,490 acre feet, while for the year 1947-1948, it was 284,340 acre feet, which is 31% of the average flow. The average silt load for the same period is 298 acre feet, while for 1947-1948, it was 25 acre feet, which is 8% of the average load. The total silt load for a 12.3-year period is 5,203,760 tons, or 3,408 acre feet of silt.

Romayor Station, Trinity River

The average discharge of the Trinity River at the Romayor Station for an 11.1-year period is 6,976,050 acre feet, while for the year 1947-1948, it was 4,476,720 acre feet, which is 64% of the average flow. The average silt load for the same period is 4,791 acre feet, while for the year 1947-1948, it was 2,154 acre feet, which is 45% of the average load. The total load for a 12.1 year period is 84,659,480 tons, or 55,533 acre feet of silt.

Lake Possum Kingdom

The average flow from Lake Possum Kingdom on the upper watershed area of the Brazos River through the outlet gates and turbines and over the spillway for a 5.7-year period is 702,270 acre feet, while for the year 1947-1948, it was 323,380 acre feet, which is 46% of the average flow. The average silt load by-passing the lake for the same period is 108 acre feet, while for the year 1947-1948, it was 22 acre feet, which is 20% of the average load. The total silt load by-passing the dam for a 6.7-year period is 895,370 tons, or 586 acre feet of silt. The Lake Possum Kingdom has a capacity of 750,000 acre feet of water. During the 6.7-year period 14,437 acre feet of suspended silt load entered Lake Possum Kingdom at the South Bend Station. During the same period 586 acre feet of silt, or 2.3%, by-passed the dam.

Lake Corpus Christi

The average flow from Lake Corpus Christi, located on the Nueces River, during a 5.7-year period is 764,150 acre feet, while for the year 1947-1948, it was 107,320 acre feet, which is 14% of the average flow. The average silt load for the same period is 189 acre feet, while for 1947-1948 it was only 8 acre feet, which is 4% of the average flow. The total silt load for a 6.7-year period, including 1947-1948, that by-passed the dam is 1,079 acre feet. The capacity of Lake Corpus Christi is about 64,000 acre feet.

The silt load entering Lake Corpus Christi as obtained at the Three Rivers Station for a 6.7-year period is approximately 2,949 acre feet. The station is located about 30 miles from the upper portion of the lake. The watershed area between them is about 1,000 square miles. This area, however, contributes a very small amount of silt to the lake. The amount of silt being by-passed from the lake for the same 6.7-year period amounts to 1,650,240 tons, or 1,079 acre feet, and represents 37% of the amount entering the lake.

A silt survey of the lake was made in 1948 by the Sedimentation Division, Soil Conservation Service, United States Department of Agriculture. A report of this survey is in process of preparation.

Lake Buchanan

The flow from Lake Buchanan, located on the Colorado River, for one year (record started October 1, 1947) was 576,440 acre feet. The capacity of the lake is 992,475 acre feet. The silt load by-passing the lake for the same period was 46,530 tons or 30 acre feet. The discharge of the Colorado River into the lake at the San Saba Station for the year was 604,200 acre feet, and the silt load for the same period was 2,222 acre feet.

Lake Inks

The average flow from Lake Inks, which is located downstream and adjacent to Lake Buchanan, for a 5.2-year period is 705,450 acre feet, while for the year 1947-1948, it was 580,500 acre feet, which is 82% of the average flow. The average silt load by-passing the lake for the same period is 71 acre feet, while for 1947-1948 it was 38 acre feet, which is 54% of the average load. The capacity of Lake Inks is 16,200 acre feet. During the year 1947-1948 the silt load by-passing Lake Buchanan was 30 acre feet, while at Lake Inks, immediately below it, the silt load was 38 acre feet. The total amount of silt by-passing Lake Inks for a 6.2-year period is 612,480 tons or 405 acre feet.

Lake Austin

The average discharge of the Colorado River at the Montopolis Bridge Station, which is located about 4 miles downstream from Lake Austin, for a 7-year period, and since the completion of Tom Miller Dam in 1940, is 1,837,800 acre feet, while for the year 1947-1948, it was 957,750 acre feet,

which is 52% of the average discharge. This flow was water released at various intervals from four lakes above the station, namely, Buchanan, Inks, Mansfield or Travis (Marshall Ford) and Austin. The average silt load by-passing the four lakes for the 7-year period is 239 acre feet, while for the year 1947-1948 it was 82 acre feet, which is 34% of the average load.

Cooperation

Some of the silt determinations were made possible through the splendid financial cooperation of several agencies in Texas who are interested in silt problems. Those cooperating agencies are the Brazos River Conservation and Reclamation District; the Lower Colorado River Authority; and the Water Departments of the Cities of Houston and Corpus Christi. The Water Resources Branch of the United States Geological Survey has also offered helpful and congenial cooperation in furnishing river discharge data and information.

Acknowledgements

Acknowledgements are due the silt sample collectors, some of whom have many years of continuous service, for their faithful performance of their duties in obtaining water samples every day of the year; to Mr. Ray Case for his good work in the cooperative silt laboratory; to Mrs. Virginia Adcock for her excellent assistance in the office in computing, checking, compilation, and typing silt data, and to Mr. Ivan Stout for his general assistance in the silt studies.

SILT DATA

Brazos River Watershed
at
BELTON STATION ON LEON RIVER

for

Water Year 1947-1948
(October 1, 1947 to September 30, 1948)

Month	Discharge of Stream	Silt Load of Stream		Percentage of dry silt by weight
	Ac.-ft.	Tons	Ac.-ft.	Pct.
1947				
October	690	30	0	.003
November	3,720	540	0	.011
December	8,200	3,480	2	.031
1948				
January	3,350	170	0	.004
February	20,090	68,230	45	.249
March	11,420	3,570	2	.023
April	7,630	910	1	.009
May	29,860	8,930	6	.022
June	10,810	3,870	3	.026
July	17,180	19,360	13	.083
August	1,160	290	0	.018
September	8,000	9,140	5	.084
Total	122,110	118,520	77	

U. S. G. S. yearly discharge in acre-feet	122,100
Total silt for year in acre-feet	77
Acre-feet of silt per year per square mile of contributing watershed	.022
Average percent of silt by weight for year	.071
Drainage area in square miles (net)	3,547

SUMMARY OF SILT DATA

for

Brazos River Watershed

Stream: LEON
Station: BELTON 2/ (Samples taken from Highway Bridge on State Hwy. 317)
Sampler: N. H. Hander

Water Year	Discharge of Stream	Silt Load of Stream		Average Percentage of Dry Silt by Weight
	Ac.-ft.	Tons	Ac.-ft.	Pct.
Sept., 1945	10,380	26,320	17	.186
1945-46	663,960	1,187,070	779	.131
1946-47	362,480	280,030	216	.057
1947-48	122,110	118,520	77	.071
TOTALS	1,158,930	1,611,940	1,089	

For period of 3.083 years

Average discharge in acre-feet per year	375,910
Average acre-feet of silt per year	353
Average acre-feet of silt per year per square mile of contributing watershed	.100
Average tons of silt per year	522,848
Average percent of silt by weight	.103
Drainage area in square miles (net)	3,547

1/ One month record. Station was established September 1, 1945.
2/ Prior to October 1, 1945 samples were taken from inlet to pumping plant north of Belton -- located about $\frac{1}{4}$ mile upstream from bridge on U. S. Highway No. 81.

Note: Yearly discharge data changed to conform to totals used by U. S. G. S. in computing monthly river discharge.

SILT DATA

Brazos River Watershed
at
EASTERLY STATION ON NAVASOTA RIVER

for
Water Year 1947-1948
(October 1, 1947 to September 30, 1948)

Month	Discharge of Stream	Silt Load of Stream		Percentage of dry silt by weight
	Ac.-ft.	Tons	Ac.-ft.	Pct.
1947				
October	200	30	0	.011
November	320	90	0	.021
December	3,340	1,270	1	.028
1948				
January	6,920	4,190	3	.044
February	28,450	16,040	11	.041
March	12,930	5,440	4	.031
April	12,720	11,610	8	.067
May	30,650	38,770	25	.093
June	820	380	0	.034
July	2,620	2,150	1	.060
August	90	10	0	.008
September	100	0	0	0
Total	99,160	79,980	53	

U. S. G. S. yearly discharge in acre-feet	99,150
Total silt for year in acre-feet	53
Acre-feet of silt per year per square mile of contributing watershed	.056
Average percent of silt by weight for year	.059
Drainage area in square miles (net)	949

SUMMARY OF SILT DATA

for

Brazos River Watershed

Stream: NAVASOTA
Station: EASTERLY (Samples taken from bridge on U. S. Highway No. 79
Sampler: Goree King

Water Year	Discharge of Stream	Silt Load of Stream		Average Percentage of Dry Silt by Weight
	Ac.-ft.	Tons	Ac.-ft.	Pct.
1941-42 1/	199,750	142,600	94	.052
1942-43	84,820	59,600	39	.052
1943-44	592,670	889,340	584	.110
1944-45	556,120	607,980	400	.080
1945-46	617,980	513,050	337	.061
1946-47	441,190	193,110	127	.032
1947-48	99,160	79,980	53	.059
TOTALS	2,591,690	2,485,660	1,634	

For period of 6.748 years

Average discharge in acre-feet per year	384,068
Average acre-feet of silt per year	242
Average acre-feet of silt per year per square mile of contributing watershed	.255
Average tons of silt per year	368,355
Average percent of silt by weight	.070
Drainage area in square miles (net)	949

1/ Station was established January 1, 1942.

Note: Yearly discharge data changed to conform to totals used by U. S. G. S. in computing monthly river discharge.

SILT DATA

Brazos River Watershed
at
SOUTH BEND STATION ON BRAZOS RIVER

for
Water Year 1947-1948
(October 1, 1947 to September 30, 1948)

Month	Discharge of Stream	Silt Load of Stream		Percentage of dry silt by weight
	Ac.-ft.	Tons	Ac.-ft.	Pct.
1947				
October	31,120	113,340	74	.267
November	10,190	3,910	3	.028
December	27,370	225,500	148	.605
1948				
January	3,800	1,970	1	.038
February	11,060	176,680	116	1.174
March	15,400	122,810	81	.586
April	3,790	1,580	1	.031
May	27,160	86,960	57	.235
June	131,120	826,170	542	.463
July	118,680	1,137,170	746	.704
August	10,440	21,800	14	.153
September	1,010	330	0	.024
Total	391,140	2,718,220	1,783	

U. S. G. S. yearly discharge in acre-feet	391,200
Total silt for year in acre-feet	1,783
Acre-feet of silt per year per square mile of contributing watershed	.144
Average percent of silt by weight for year	.510
Drainage area in square miles (net)	12,360

SUMMARY OF SILT DATA

for

Brazos River Watershed

Stream: BRAZOS
Station: SOUTH BEND (Samples taken from bridge on State Highway No. 67)
Sampler: O. W. Hill

Water Year	Discharge of Stream	Silt Load of Stream		Average Percentage of Dry Silt by Weight
	Ac.-ft.	Tons	Ac.-ft.	Pct.
1/				
1941-42	672,230	4,581,930	3,005	.501
1942-43	491,060	3,846,100	2,523	.575
1943-44	171,360	1,071,620	703	.459
1944-45	394,460	2,258,250	1,482	.421
1945-46	363,890	3,116,920	2,044	.629
1946-47	747,030	4,414,900	2,897	.434
1947-48	391,140	2,718,220	1,783	.510
TOTALS	3,231,170	22,007,940	14,437	

For period of 6.710 years

Average discharge in acre-feet per year	481,545
Average acre-feet of silt per year	2,152
Average acre-feet of silt per year per square mile of contributing watershed	.174
Average tons of silt per year	3,279,872
Average percent of silt by weight	.500
Drainage area in square miles (net)	12,360

1/ Station was established January 15, 1942.

Note: Yearly discharge data changed to conform to totals used by U. S. G. S. in computing monthly river discharge.

SILT DATA

Brazos River Watershed
at
POSSUM KINGDOM DAM STATION ON BRAZOS RIVER

for
Water Year 1947-1948
(October 1, 1947 to September 30, 1948)

Month	Discharge of Stream	Silt Load of Stream		Percentage of dry silt by weight
	Ac.-ft.	Tons	Ac.-ft.	Pct.
1947				
October	17,690	1,690	1	.007
November	11,450	1,470	1	.009
December	18,310	940	1	.004
1948				
January	23,720	820	1	.003
February	24,760	3,080	2	.009
March	19,450	1,270	1	.005
April	28,840	4,520	3	.012
May	14,670	1,740	1	.009
June	35,750	2,630	2	.005
July	45,000	7,400	5	.012
August	58,710	4,690	3	.006
September	25,030	810	1	.002
Total	323,380	31,060	22	

Yearly discharge in acre-feet	323,380 1/
Total silt for year in acre-feet	22
Acre-feet of silt per year per square mile of contributing watershed	-----
Average percent of silt by weight for year	.007
Drainage area in square miles (net)	----

1/ Discharge figures for this station obtained from Brazos River Conservation & Reclamation District

SUMMARY OF SILT DATA

for

Brazos River Watershed

Stream: BRAZOS
Station: POSSUM KINGDOM DAM (Samples taken in tailrace and over spillway)
Sampler: J. P. Cochran

Water Year	Discharge of Stream	Silt Load of Stream		Average Percentage of Dry Silt by Weight
	Ac.-ft.	Tons	Ac.-ft.	Pct.
1941-42 1/	588,030	55,070	36	.007
1942-43	851,290	625,770	410	.054
1943-44	92,040	15,590	10	.012
1944-45	307,410	51,350	32	.012
1945-46	293,110	41,250	27	.010
1946-47	946,860	75,280	49	.006
1947-48	323,380	31,060	22	.007
TOTALS	3,402,120	895,370	586	

For period of 6.710 years

Average discharge in acre-feet per year	507,022
Average acre-feet of silt per year	87
Average acre-feet of silt per year per square mile of contributing watershed	----
Average tons of silt per year	133,438
Average percent of silt by weight	.019
Drainage area in square miles (net)	----

1/ Station was established January 15, 1942.

SILT DATA

Brazos River Watershed
at
RICHMOND STATION ON BRAZOS RIVER

for
Water Year 1947-1948
(October 1, 1947 to September 30, 1948)

Month	Discharge of Stream	Silt Load of Stream		Percentage of dry silt by weight
	Ac.-ft.	Tons	Ac.-ft.	Pct.
1947				
October	57,940	6,160	4	.008
November	91,760	56,050	37	.045
December	213,940	212,250	139	.073
1948				
January	120,120	34,460	23	.021
February	257,300	265,920	174	.076
March	350,020	1,169,300	767	.245
April	165,500	236,850	155	.105
May	282,110	1,359,490	892	.354
June	123,660	245,360	161	.146
July	184,840	356,780	234	.142
August	34,960	5,140	3	.011
September	68,470	2,960	2	.003
Total	1,950,620	3,950,720	2,591	

U. S. G. S. yearly discharge in acre-feet	1,951,000
Total silt for year in acre-feet	2,591
Acre-feet of silt per year per square mile of contributing watershed	.074
Average percent of silt by weight for year	.149
Drainage area in square miles (net)	34,810

SUMMARY OF SILT DATA

for

Brazos River Watershed

Stream: BRAZOS
Station: RICHMOND (Samples taken from bridge on U. S. Highway No. 90)
Sampler: S. J. Butler

Water Year	Discharge of Stream	Silt Load of Stream		Average Percentage of Dry Silt by Weight
	Ac.-ft.	Tons	Ac.-ft.	Pct.
1923-24 1/	494,900	714,220	468	.106
1924-25	1,237,300	12,676,710	8,314	.753
1925-26	8,762,800	44,939,350	29,476	.377
1926-27	5,562,600	34,377,320	21,739	.454
1927-28	3,318,400	28,163,890	18,472	.623
1928-29	6,000,000	32,284,200	21,174	.395
1929-30	5,218,900	38,686,330	25,373	.545
1930-31	5,639,000	27,766,660	18,212	.362
1931-32 2-3/	8,041,000	63,649,510	41,749	.582
1932-33	2,563,100	15,175,520	9,954	.435
1933-34	3,372,670	23,318,780	15,294	.508
1934-35	7,334,480	63,472,990	41,633	.636
1935-36	6,031,540	40,330,500	26,453	.491
1936-37	5,405,790	25,531,710	16,747	.347
1937-38	7,203,600	55,656,280	36,544	.568
1938-39	1,966,110	14,742,470	9,668	.551
1939-40	3,161,120	23,679,220	15,531	.550
1940-41	16,124,370	97,306,510	63,824	.443
1941-42	8,522,910	71,490,110	46,891	.616
1942-43	3,255,310	11,426,360	7,496	.258
1943-44	7,626,500	46,735,630	30,654	.450
1944-45	9,804,730	57,254,020	37,555	.429
1945-46	7,399,590	35,484,230	23,275	.352
1946-47	6,345,770	21,011,530	13,783	.243
1947-48	1,950,620	3,950,720	2,591	.149
TOTALS	142,343,110	889,824,770	582,870	

For period of 24.306 years

Average discharge in acre-feet per year	5,856,295
Average acre-feet of silt per year	23,980
Average acre-feet of silt per year per square mile of contributing watershed	.689
Average tons of silt per year	36,609,263
Average percent of silt by weight	.459
Drainage area in square miles (net)	34,810

1/ Station was established at Rosenberg, June 11, 1924.
2/ Station was discontinued at Rosenberg, April 12, 1932.
3/ Station was established at Richmond, April 13, 1932.
Note: Yearly discharge data changed to conform to totals used by U. S. G. S. in computing monthly river discharge.

SILT DATA

Colorado River Watershed
at
LLANO STATION ON LLANO RIVER

for
Water Year 1947-1948
(October 1, 1947 to September 30, 1948)

Month	Discharge of Stream	Silt Load of Stream		Percentage of dry silt by weight
	Ac.-ft.	Tons	Ac.-ft.	Pct.
1947				
October	1,820	160	0	.006
November	3,370	110	0	.002
December	4,680	160	0	.003
1948				
January	4,530	210	0	.003
February	7,140	610	0	.006
March	4,870	250	0	.004
April	6,310	1,720	1	.020
May	13,280	26,170	17	.145
June	181,890	1,374,580	902	.555
July	76,980	63,570	42	.061
August	8,870	970	1	.008
September	13,680	2,890	2	.016
Total	327,420	1,471,400	965	

U. S. G. S. yearly discharge in acre-feet ---------- 327,400

Total silt for year in acre-feet ---------- 965

Acre-feet of silt per year per square mile of contributing watershed ---------- .241

Average percent of silt by weight for year ---------- .330

Drainage area in square miles (net) ---------- 4,000

SUMMARY OF SILT DATA

for

Colorado River Watershed

Stream: LLANO
Station: LLANO
Sampler: Mrs. Tracy M. Ward

(Samples were taken at U. S. Gaging Station ½ mile downstream from bridge on State Highway No. 16)

Water Year	Discharge of Stream	Silt Load of Stream		Average Percentage of Dry Silt by Weight
	Ac.-ft.	Tons	Ac.-ft.	Pct.
1941-42 1/	65,990	252,700	166	.281
1942-43	235,470	381,560	250	.119
1943-44	196,070	120,450	79	.045
1944-45	156,920	90,120	60	.042
1945-46	142,740	249,740	164	.129
1946-47	141,550	28,750	18	.015
1947-48	327,420	1,471,400	965	.330
TOTALS	1,266,160	2,594,720	1,702	

For period of 6.167 years

Average discharge in acre-feet per year	205,312
Average acre-feet of silt per year	276
Average acre-feet of silt per year per square mile of contributing watershed	.069
Average tons of silt per year	420,743
Average percent of silt by weight	.151
Drainage area in square miles (net)	4,000

1/ Station was established August 1, 1942.

Note: Yearly discharge data changed to conform to totals used by U. S. G. S. in computing monthly river discharge.

SILT DATA

Colorado River Watershed
at
JOHNSON CITY STATION ON PEDERNALES RIVER

for
Water Year 1947-1948
(October 1, 1947 to September 30, 1948)

Month	Discharge of Stream	Silt Load of Stream		Percentage of dry silt by weight
	Ac.-ft.	Tons	Ac.-ft.	Pct.
1947				
October	620	60	0	.007
November	1,060	70	0	.005
December	2,310	480	0	.015
1948				
January	1,400	110	0	.006
February	1,960	180	0	.007
March	1,930	120	0	.005
April	10,140	31,990	21	.232
May	5,060	4,540	3	.066
June	1,920	2,020	1	.077
July	3,710	1,630	1	.032
August	650	220	0	.025
September	930	920	1	.073
Total	31,690	42,340	27	

U. S. G. S. yearly discharge in acre-feet	31,630
Total silt for year in acre-feet	27
Acre-feet of silt per year per square mile of contributing watershed	.029
Average percent of silt by weight for year	.098
Drainage area in square miles (net)	947

SUMMARY OF SILT DATA

for

Colorado River Watershed

Stream: PEDERNALES
Station: JOHNSON CITY
Sampler: John W. Grisham

(Samples were taken from highway bridge on U.S. Hwy. 281, about 1½ miles north of Johnson City)

Water Year	Discharge of Stream	Silt Load of Stream		Average Percentage of Dry Silt by Weight
	Ac.-ft.	Tons	Ac.-ft.	Pct.
1941-42 1/	22,630	107,030	70	.347
1942-43	79,850	150,740	99	.139
1943-44	167,700	724,550	476	.317
1944-45	187,000	191,740	126	.075
1945-46	94,140	132,430	88	.103
1946-47	128,460	107,670	71	.062
1947-48	31,690	42,340	27	.098
TOTALS	711,470	1,456,500	957	

For period of 6.167 years

Average discharge in acre-feet per year	115,367
Average acre-feet of silt per year	155
Average acre-feet of silt per year per square mile of contributing watershed	.164
Average tons of silt per year	236,176
Average percent of silt by weight	.150
Drainage area in square miles (net)	947

1/ Station was established August 1, 1942.

Note: Yearly discharge data changed to conform to totals used by U. S. G. S. in computing monthly river discharge.

SILT DATA

Colorado River Watershed

at

SAN SABA STATION ON COLORADO RIVER

for

Water Year 1947-1948
(October 1, 1947 to September 30, 1948)

Month	Discharge of Stream	Silt Load of Stream		Percentage of dry silt by weight
	Ac.-ft.	Tons	Ac.-ft.	Pct.
1947				
October	36,770	416,290	273	.832
November	10,480	8,310	5	.058
December	38,210	139,850	92	.269
1948				
January	7,630	380	0	.004
February	15,550	56,050	37	.264
March	25,340	93,600	61	.271
April	15,250	10,000	7	.048
May	64,680	303,600	199	.345
June	49,300	269,970	177	.402
July	273,940	1,865,240	1,223	.500
August	34,380	111,330	73	.238
September	32,670	114,960	75	.258
Total	604,200	3,389,580	2,222	

U. S. G. S. yearly discharge in acre-feet	604,200
Total silt for year in acre-feet	2,222
Acre-feet of silt per year per square mile of contributing watershed	.118
Average percent of silt by weight for year	.412
Drainage area in square miles (net)	18,800

SUMMARY OF SILT DATA

for

Colorado River Watershed

Stream: COLORADO
Station: NEAR SAN SABA
Sampler: Robert A. Broyles

(Samples were taken from Red Bluff bridge about midway between San Saba and Lometa) 2/

Water Year	Discharge of Stream	Silt Load of Stream		Average Percentage of Dry Silt by Weight
	Ac.-ft.	Tons	Ac.-ft.	Pct.
1/				
1929-30	24,000	143,140	94	.439
1930-31	1,373,750	5,136,520	3,369	.275
1931-32	2,223,900	9,934,850	6,516	.328
1932-33	475,300	1,303,620	855	.201
1933-34	504,380	2,121,550	1,391	.309
1934-35	2,564,290	14,423,520	9,459	.413
1935-36	2,276,400	7,520,550	4,933	.243
1936-37	1,197,100	2,688,230	1,764	.165
1937-38	2,809,340	8,923,940	5,853	.233
1938-39	819,430	3,709,100	2,432	.333
1939-40	773,690	3,191,810	2,094	.303
1940-41	2,052,980	8,613,430	5,650	.308
1941-42	1,285,920	4,571,140	2,998	.261
1942-43	475,090	703,520	461	.109
1943-44	592,790	2,129,300	1,397	.264
1944-45	870,370	2,655,490	1,743	.224
1945-46	416,390	1,511,040	992	.267
1946-47	517,540	2,588,150	1,696	.367
1947-48	604,200	3,389,580	2,222	.412
TOTALS	21,856,860	85,258,480	55,919	

For period of 18.055 years

Average discharge in acre-feet per year	1,210,571
Average acre-feet of silt per year	3,097
Average acre-feet of silt per year per square mile of contributing watershed	.165
Average tons of silt per year	4,722,153
Average percent of silt by weight	.287
Drainage area in square miles (net)	18,800

1/ Station was established September 11, 1930
2/ Water samples were discontinued at old Red Bluff bridge and started one-half mile upstream at the new Red Bluff bridge on May 24, 1940.

Note: Yearly discharge data changed to conform to totals used by U. S. G. S. in computing monthly river discharge.

SILT DATA

Colorado River Watershed
at
INKS DAM STATION ON COLORADO RIVER

for
Water Year 1947-1948
(October 1, 1947 to September 30, 1948)

Month	Discharge of Stream	Silt Load of Stream		Percentage of dry silt by weight
	Ac.-ft.	Tons	Ac.-ft.	Pct.
1947				
October	66,170	8,670	6	.010
November	59,790	3,980	3	.005
December	45,440	1,590	1	.003
1948				
January	34,340	1,060	1	.002
February	50,100	3,090	2	.005
March	47,990	3,600	2	.006
April	44,460	2,700	2	.004
May	31,860	4,060	3	.009
June	43,380	8,790	6	.015
July	54,460	6,570	4	.009
August	55,970	11,240	7	.015
September	46,540	1,350	1	.002
Total	580,500	56,700	38	

Yearly discharge in acre-feet	580,500 1/
Total silt for year in acre-feet	38
Acre-feet of silt per year per square mile of contributing watershed	------
Average percent of silt by weight for year	.007
Drainage area in square miles (net)	------

1/ Discharge figures for this station obtained from Lower Colorado River Authority

SUMMARY OF SILT DATA

for

Colorado River Watershed

Stream: COLORADO
Station: INKS DAM (Samples were taken from tailrace)
Sampler: Lloyd Myers

Water Year	Discharge of Stream	Silt Load of Stream		Average Percentage of Dry Silt by Weight
	Ac.-ft.	Tons	Ac.-ft.	Pct.
1941-42 1/	285,200	41,270	27	.011
1942-43	662,460	67,090	44	.007
1943-44	768,040	127,980	84	.012
1944-45	751,950	157,540	104	.015
1945-46	678,460	134,030	88	.015
1946-47	498,980	27,870	20	.004
1947-48	580,500	56,700	38	.007
TOTALS	4,225,590	612,480	405	

For period of 6.167 years.

Average discharge in acre-feet per year	685,194
Average acre-feet of silt per year	66
Average acre-feet of silt per year per square mile of contributing watershed	----
Average tons of silt per year	99,316
Average percent of silt by weight	.011
Drainage area in square miles (net)	----

1/ Station was established August 1, 1942.

SILT DATA

Colorado River Watershed
at
BUCHANAN DAM STATION ON COLORADO RIVER

for
Water Year 1947-1948
(October 1, 1947 to September 30, 1948)

Month	Discharge of Stream	Silt Load of Stream		Percentage of dry silt by weight
	Ac.-ft.	Tons	Ac.-ft.	Pct.
1947				
October	65,460	8,080	5	.009
November	59,110	4,570	3	.006
December	45,840	1,710	1	.003
1948				
January	35,640	1,020	1	.002
February	51,340	3,740	2	.005
March	47,000	2,680	2	.004
April	42,970	3,130	2	.005
May	29,350	1,700	1	.004
June	43,540	6,160	4	.010
July	54,380	8,290	5	.011
August	54,940	4,180	3	.006
September	46,870	1,270	1	.002
Total	576,440	46,530	30	

Yearly discharge in acre-feet	576,440 [1/]
Total silt for year in acre-feet	30
Acre-feet of silt per year per square mile of contributing watershed	-----
Average percent of silt by weight for year	.006
Drainage area in square miles (net)	-----

1/ Discharge figures for this station obtained from Lower Colorado River Authority.

SUMMARY OF SILT DATA

for

Colorado River Watershed

Stream: COLORADO (Samples taken at power house)
Station: BUCHANAN DAM
Sampler: Lloyd Myers

Water Year	Discharge of Stream	Silt Load of Stream		Average Percentage of Dry Silt by Weight
	Ac.-ft.	Tons	Ac.-ft.	Pct.
1947-48 1/	576,440	46,530	30	.006
TOTALS	576,440	46,530	30	.

For period of 1.000 year

Average discharge in acre-feet per year	576,440
Average acre-feet of silt per year	30
Average acre-feet of silt per year per square mile of contributing watershed	----
Average tons of silt per year	46,530
Average percent of silt by weight	.006
Drainage area in square miles (net)	----

1/ Station established October 1, 1947.

SILT DATA

Colorado River Watershed
at
AUSTIN STATION ON COLORADO RIVER

for
Water Year 1947-1948
(October 1, 1947 to September 30, 1948)

Month	Discharge of Stream	Silt Load of Stream		Percentage of dry silt by weight
	Ac.-ft.	Tons	Ac.-ft.	Pct.
1947				
October	69,830	5,770	4	.006
November	68,460	4,430	3	.005
December	58,240	4,300	3	.005
1948				
January	56,380	7,460	5	.010
February	59,030	5,870	4	.007
March	61,920	5,380	4	.006
April	62,830	8,820	6	.010
May	80,190	15,100	10	.014
June	114,110	31,370	21	.020
July	130,630	12,390	8	.007
August	125,170	19,180	13	.011
September	70,960	1,990	1	.002
Total	957,750	122,060	82	

U. S. G. S. yearly discharge in acre-feet	957,700
Total silt for year in acre-feet	82
Acre-feet of silt per year per square mile of contributing watershed	.003
Average percent of silt by weight for year	.009
Drainage area in square miles (net)	26,360

SUMMARY OF SILT DATA

for

Colorado River Watershed

Stream: COLORADO
Station: AUSTIN (Samples taken from Montopolis Bridge)
Sampler: Mrs. G. L. Pliler

Water Year	Discharge of Stream	Silt Load of Stream		Average Percentage of Dry Silt by Weight
	Ac.-ft.	Tons	Ac.-ft.	Pct.
1936-37 1/	48,040	1,830	1	.003
1937-38 *	3,609,570	8,881,220	5,826	.181
1938-39 2/	986,630	735,150	481	.055
1939-40 *	1,334,120	906,750	596	.050
1940-41	3,869,250	979,240	642	.019
1941-42	986,440	121,570	80	.009
1942-43	1,787,770	328,050	215	.013
1943-44	1,392,380	186,590	122	.010
1944-45	1,750,770	444,540	292	.019
1945-46	1,554,930	256,770	170	.012
1946-47	1,523,070	234,770	155	.011
1947-48	957,750	122,060	82	.009
TOTALS	19,800,720	13,198,540	8,662	

For period of 11.164 years

Average discharge in acre-feet per year	1,773,622
Average acre-feet of silt per year	776
Average acre-feet of silt per year per square mile of contributing watershed	.029
Average tons of silt per year	1,182,241
Average percent of silt by weight	.049
Drainage area in square miles (net)	26,360

1/ Station was established August 2, 1937, and samples taken from Congress Avenue bridge.

2/ Samples taken from Montopolis bridge.

* Rehabilitation of the old Austin Dam (now termed Tom Miller Dam) was started August 1, 1938. This construction at times doubtless distorted the silt load of samples which were taken from 1½ to 4 miles downstream therefrom. Rehabilitation was completed and the impounding of water was begun on January 7, 1940.

Note: Yearly discharge data changed to conform to totals used by U. S. G. S. in computing monthly river discharge.

SILT DATA

Guadalupe River Watershed
at
SPRING BRANCH STATION ON GUADALUPE RIVER

for
Water Year 1947-1948
(October 1, 1947 to September 30, 1948)

Month	Discharge of Stream	Silt Load of Stream		Percentage of dry silt by weight
	Ac.-ft.	Tons	Ac.-ft.	Pct.
1947				
October	3,390	250	0	.005
November	4,530	330	0	.005
December	5,610	260	0	.003
1948				
January	5,510	250	0	.003
February	5,170	170	0	.002
March	5,450	210	0	.003
April	5,310	700	0	.010
May	4,600	650	0	.010
June	9,910	55,680	37	.413
July	5,500	1,150	1	.015
August	2,150	250	0	.009
September	2,330	210	0	.007
Total	59,460	60,110	38	

U. S. G. S. yearly discharge in acre-feet	59,450
Total silt for year in acre-feet	38
Acre-feet of silt per year per square mile of contributing watershed	.027
Average percent of silt by weight for year	.074
Drainage area in square miles (net)	1,432

SUMMARY OF SILT DATA

for

Guadalupe River Watershed

Stream: GUADALUPE
Station: SPRING BRANCH
Sampler: Alfred Beierle

(Samples taken 4 miles southeast of Spring Branch from bridge on old Highway No. 46)

Water Year	Discharge of Stream	Silt Load of Stream		Average Percentage of Dry Silt by Weight
	Ac.-ft.	Tons	Ac.-ft.	Pct.
1941-42 1/	167,150	164,150	108	.072
1942-43	145,610	79,630	52	.040
1943-44	272,850	401,650	262	.108
1944-45	304,860	190,830	126	.046
1945-46	185,080	148,700	96	.059
1946-47	307,960	128,040	84	.031
1947-48	59,460	60,110	38	.074
TOTALS	1,442,970	1,173,110	766	

For period of 6.748 years

Average discharge in acre-feet per year	213,837
Average acre-feet of silt per year	114
Average acre-feet of silt per year per square mile of contributing watershed	.080
Average tons of silt per year	173,846
Average percent of silt by weight	.060
Drainage area in square miles (net)	1,432

1/ Station was established January 1, 1942.

Note: Yearly discharge data changed to conform to totals used by U. S. G. S. in computing monthly river discharge.

SILT DATA

Guadalupe River Watershed
at
VICTORIA STATION ON GUADALUPE RIVER

for
Water Year 1947-1948
(October 1, 1947 to September 30, 1948)

Month	Discharge of Stream	Silt Load of Stream		Percentage of dry silt by weight
	Ac.-ft.	Tons	Ac.-ft.	Pct.
1947				
October	35,860	4,210	3	.009
November	37,940	2,560	2	.005
December	44,240	7,720	5	.013
1948				
January	41,160	2,220	1	.004
February	47,390	10,930	7	.017
March	47,240	8,620	6	.013
April	32,860	5,280	3	.012
May	86,920	80,640	53	.068
June	33,380	5,990	4	.013
July	45,770	9,820	6	.016
August	33,680	29,260	19	.064
September	23,520	2,310	2	.007
Total	509,960	169,560	111	

U. S. G. S. yearly discharge in acre-feet	510,000
Total silt for year in acre-feet	111
Acre-feet of silt per year per square mile of contributing watershed	.020
Average percent of silt by weight for year	.024
Drainage area in square miles (net)	5,676

SUMMARY OF SILT DATA

for

Guadalupe River Watershed

Stream: GUADALUPE
Station: VICTORIA (Samples taken from bridge on U. S. Highway No. 59)
Sampler: A. E. Anders

Water Year	Discharge of Stream	Silt Load of Stream		Average Percentage of Dry Silt by Weight
	Ac.-ft.	Tons	Ac.-ft.	Pct.
1944-45 1/	38,430	19,480	13	.037
1945-46	1,319,520	949,130	624	.053
1946-47	1,595,300	777,690	511	.036
1947-48	509,960	169,560	111	.024
TOTALS	3,463,210	1,915,860	1,259	

For period of 3.083 years

Average discharge in acre-feet per year	1,123,325
Average acre-feet of silt per year	408
Average acre-feet of silt per year per square mile of contributing watershed	.072
Average tons of silt per year	621,427
Average percent of silt by weight	.041
Drainage area in square miles (net)	5,676

1/ Station was established September 1, 1945. Record for one month.

Note: Yearly discharge data changed to conform to totals used by U. S. G. S. in computing monthly river discharge.

SUMMARY OF SILT DATA

for

Lavaca River Watershed

Stream: LAVACA
Station: EDNA
Sampler: Mrs. Ida Berryhill

(Samples taken from bridge on U.S. Highway No. 59 between Victoria and Edna)

Water Year	Discharge of Stream	Silt Load of Stream		Average Percentage of Dry Silt by Weight
	Ac.-ft.	Tons	Ac.-ft.	Pct.
1944-45 1/	980	570	0	----
1945-46	266,330	327,240	215	.090
1946-47	250,340	192,850	126	.057
1947-48	114,240	98,200	66	.063
TOTALS	631,890	618,860	407	

For period of 3.083 years

Average discharge in acre-feet per year	204,959
Average acre-feet of silt per year	132
Average acre-feet of silt per year per square mile of contributing watershed	.149
Average tons of silt per year	200,733
Average percent of silt by weight	.072
Drainage area in square miles (net)	887

1/ Station established September 1, 1945.

Note: Yearly discharge data changed to conform to totals used by U. S. G. S. in computing monthly river discharge.

SILT DATA

Lavaca River Watershed
at
EDNA STATION ON LAVACA RIVER

for
Water Year 1947-1948
(October 1, 1947 to September 30, 1948)

Month	Discharge of Stream	Silt Load of Stream		Percentage of dry silt by weight
	Ac.-ft.	Tons	Ac.-ft.	Pct.
1947				
October	1,060	80	0	.006
November	2,080	770	1	.027
December	2,730	1,170	1	.031
1948				
January	3,730	2,510	2	.049
February	10,280	7,540	5	.054
March	9,550	8,960	6	.069
April	2,520	860	1	.025
May	73,140	73,580	48	.074
June	4,290	630	0	.011
July	2,980	790	1	.019
August	720	90	0	.009
September	1,160	1,220	1	.077
Total	114,240	98,200	66	

U. S. G. S. yearly discharge in acre-feet ---------- 114,300

Total silt for year in acre-feet ---------- 66

Acre-feet of silt per year per square mile of contributing watershed ---------- .074

Average percent of silt by weight for year ---------- .063

Drainage area in square miles (net) ---------- 887

SILT DATA

Neches River Watershed
at
HORGER STATION ON ANGELINA RIVER

for
Water Year 1947-1948
(October 1, 1947 to September 30, 1948)

Month	Discharge of Stream	Silt Load of Stream		Percentage of dry silt by weight
	Ac.-ft.	Tons	Ac.-ft.	Pct.
1947				
October	11,460	1,000	1	.006
November	49,960	9,900	6	.015
December	149,550	23,700	16	.012
1948				
January	138,900	14,450	9	.008
February	464,330	62,470	41	.010
March	310,770	21,970	14	.005
April	268,110	56,440	37	.015
May	150,090	30,090	20	.015
June	45,780	5,340	4	.009
July	18,070	1,060	1	.004
August	5,900	430	0	.005
September	6,120	220	0	.003
Total	1,619,040	227,070	149	

U. S. G. S. yearly discharge in acre-feet	1,619,000
Total silt for year in acre-feet	149
Acre-feet of silt per year per square mile of contributing watershed	.043
Average percent of silt by weight for year	.010
Drainage area in square miles (net)	3,435

SUMMARY OF SILT DATA

for

Neches River Watershed

Stream: ANGELINA
Station: HORGER
Sampler: D. W. Moye

(Samples taken from bridge on State Highway No. 63 between Zavalla and Jasper)

Water Year	Discharge of Stream	Silt Load of Stream		Average Percentage of Dry Silt by Weight
	Ac.-ft.	Tons	Ac.-ft.	Pct.
1944-45 1/	19,470	11,020	7	.042
1945-46	3,869,300	1,826,050	1,198	.035
1946-47	3,200,750	393,530	259	.009
1947-48	1,619,040	227,070	149	.010
TOTALS	8,708,560	2,457,670	1,613	

For period of 3.083 years

Average discharge in acre-feet per year	2,824,702
Average acre-feet of silt per year	523
Average acre-feet of silt per year per square mile of contributing watershed	.152
Average tons of silt per year	797,168
Average percent of silt by weight	.021
Drainage area in square miles (net)	3,435

1/ Station established September 1, 1945.

Note: Yearly discharge data changed to conform to totals used by U. S. G. S. in computing monthly river discharge.

SILT DATA

Neches River Watershed
at
ROCKLAND STATION ON NECHES RIVER

for
Water Year 1947-1948
(October 1, 1947 to September 30, 1948)

Month	Discharge of Stream	Silt Load of Stream		Percentage of dry silt by weight
	Ac.-ft.	Tons	Ac.-ft.	Pct.
1947				
October	8,510	620	0	.005
November	25,560	4,400	3	.013
December	91,790	7,410	5	.006
1948				
January	106,670	5,060	3	.003
February	320,450	29,330	19	.007
March	265,080	12,360	8	.003
April	203,490	20,630	14	.007
May	125,300	25,570	17	.015
June	77,970	10,880	7	.010
July	17,880	1,920	1	.008
August	4,110	300	0	.005
September	3,550	280	0	.006
Total	1,250,360	118,760	77	

U. S. G. S. yearly discharge in acre-feet	1,250,000
Total silt for year in acre-feet	77
Acre-feet of silt per year per square mile of contributing watershed	.022
Average percent of silt by weight for year	.007
Drainage area in square miles (net)	3,539

SUMMARY OF SILT DATA

for

Neches River Watershed

Stream: NECHES
Station: ROCKLAND
Sampler: George W. Jones

(Samples were taken from bridge on U. S. Highway 69 between Woodville and Lufkin)

Water Year	Discharge of Stream	Silt Load of Stream		Average Percentage of Dry Silt by Weight
	Ac.-ft.	Tons	Ac.-ft.	Pct.
1929-30 1/	10,620	290	0	.002
1930-31	1,490,250	229,220	151	.011
1931-32	2,560,930	193,940	128	.006
1932-33	1,395,940	144,700	95	.008
1933-34	1,552,630	174,070	112	.008
1934-35	2,601,910	297,100	194	.008
1935-36	1,040,600	140,280	91	.010
1936-37	928,420	110,180	71	.009
1937-38	1,400,070	225,940	147	.012
1938-39	854,380	140,590	91	.012
1939-40	1,097,590	227,590	149	.015
1940-41	3,578,370	586,140	384	.012
1941-42	2,522,390	550,920	361	.016
1942-43	748,520	316,090	207	.031
1943-44	3,230,410	1,865,580	1,223	.042
1944-45	3,396,060	1,967,220	1,290	.043
1945-46	3,534,920	1,285,240	845	.027
1946-47	3,255,520	379,210	249	.009
1947-48	1,250,360	118,760	77	.007
TOTALS	36,449,890	8,953,060	5,865	

For period of 18.148 years

Average discharge in acre-feet per year	2,008,480
Average acre-feet of silt per year	323
Average acre-feet of silt per year per square mile of contributing watershed	.091
Average tons of silt per year	493,336
Average percent of silt by weight	.018
Drainage area in square miles (net)	3,539

1/ Station was established August 8, 1930.

Note: Yearly discharge data changed to conform to totals used by U. S. G. S. in computing monthly river discharge.

SILT DATA

Nueces River Watershed
at
COTULLA STATION ON NUECES RIVER

for
Water Year 1947-1948
(October 1, 1947 to September 30, 1948)

Month	Discharge of Stream	Silt Load of Stream		Percentage of dry silt by weight
	Ac.-ft.	Tons	Ac.-ft.	Pct.
1947				
October	0	-	-	-
November	0	-	-	-
December	0	-	-	-
1948				
January	0	-	-	-
February	0	-	-	-
March	0	-	-	-
April	0	-	-	-
May	0	-	-	-
June	26,060	17,170	11	.048
July	35,210	11,000	7	.023
August	0	-	-	-
September	11,630	930	1	.006
Total	72,900	29,100	19	

U. S. G. S. yearly discharge in acre-feet ----------	72,900
Total silt for year in acre-feet ----------	19
Acre-feet of silt per year per square mile of contributing watershed ----------	.004
Average percent of silt by weight for year ----------	.029
Drainage area in square miles (net) ----------	5,260

SUMMARY OF SILT DATA

for

Nueces River Watershed

Stream: NUECES
Station: COTULLA (Samples taken from highway bridge in Cotulla)
Sampler: Joe G. Jennings

Water Year	Discharge of Stream	Silt Load of Stream		Average Percentage of Dry Silt by Weight
	Ac.-ft.	Tons	Ac.-ft.	Pct.
1941-42 1/	141,380	64,130	42	.033
1942-43	64,240	33,270	22	.038
1943-44	482,520	367,860	241	.056
1944-45	82,440	65,460	43	.058
1945-46	347,610	284,210	186	.060
1946-47	92,610	16,550	11	.013
1947-48	72,900	29,100	19	.029
TOTALS	1,283,700	860,580	564	

For period of 6.748 years

Average discharge in acre-feet per year	190,234
Average acre-feet of silt per year	84
Average acre-feet of silt per year per square mile of contributing watershed	.016
Average tons of silt per year	127,531
Average percent of silt by weight	.049
Drainage area in square miles (net)	5,260

1/ Station was established January 1, 1942.

Note: Yearly discharge data changed to conform to totals used by U.S.G.S. in computing monthly river discharge.

SILT DATA

Nueces River Watershed
at
THREE RIVERS STATION ON NUECES RIVER

for

Water Year 1947-1948
(October 1, 1947 to September 30, 1948)

Month	Discharge of Stream	Silt Load of Stream		Percentage of dry silt by weight
	Ac.-ft.	Tons	Ac.-ft.	Pct.
1947				
October	340	50	0	.011
November	7,640	15,290	10	.147
December	1,930	600	0	.023
1948				
January	800	70	0	.006
February	1,660	100	0	.004
March	1,380	160	0	.009
April	600	70	0	.009
May	2,300	5,120	3	.164
June	2,600	21,620	14	.611
July	92,710	169,630	111	.134
August	7,870	28,000	18	.261
September	8,500	12,690	8	.110
Total	128,330	253,400	164	

U. S. G. S. yearly discharge in acre-feet ----------	128,300
Total silt for year in acre-feet ----------	164
Acre-feet of silt per year per square mile of contributing watershed ----------	.011
Average percent of silt by weight for year ----------	.145
Drainage area in square miles (net) ----------	15,600

SUMMARY OF SILT DATA

for

Nueces River Watershed

Stream: NUECES
Station: NEAR THREE RIVERS
Sampler: Carl Franze

(Samples were taken 2 miles south of Three Rivers from railroad bridge, except at extreme low stage when samples were taken at low dam)

Water Year	Discharge of Stream	Silt Load of Stream		Average Percentage of Dry Silt by Weight
	Ac.-ft.	Tons	Ac.-ft.	Pct.
1927-28 1/	318,930	617,920	405	.142
1928-29	741,300	1,303,600	855	.129
1929-30	596,510	721,440	473	.089
1930-31	455,880	443,420	291	.071
1931-32	1,006,200	581,880	381	.042
1932-33	287,120	275,050	179	.070
1933-34	253,800	668,320	438	.193
1934-35	2,547,150	2,383,630	1,565	.069
1935-36	768,200	752,320	494	.072
1936-37	318,050	142,270	94	.033
1937-38	479,730	771,540	506	.118
1938-39	306,600	450,960	297	.108
1939-40	840,190	1,035,600	679	.091
1940-41	1,300,860	1,635,320	1,073	.092
1941-42	1,107,790	987,340	648	.065
1942-43	260,470	323,990	213	.091
1943-44	700,090	668,660	439	.070
1944-45	297,070	590,010	387	.146
1945-46	927,400	1,134,770	744	.090
1946-47	810,070	578,310	379	.052
1947-48	128,330	253,400	164	.145
TOTALS	14,451,740	16,319,750	10,704	

For period of 21.000 years

Average discharge in acre-feet per year	688,178
Average acre-feet of silt per year	510
Average acre-feet of silt per year per square mile of contributing watershed	.033
Average tons of silt per year	777,131
Average percent of silt by weight	.083
Drainage area in square miles (net)	15,600

1/ Station was established October 1, 1927.

Note: Yearly discharge data changed to conform to totals used by U. S. G. S. in computing monthly river discharge.

SILT DATA

Nueces River Watershed
at
CORPUS CHRISTI DAM STATION ON NUECES RIVER

for
Water Year 1947-1948
(October 1, 1947 to September 30, 1948)

Month	Discharge of Stream	Silt Load of Stream		Percentage of dry silt by weight
	Ac.-ft.	Tons	Ac.-ft.	Pct.
1947				
October	5,110	650	0	.009
November	3,890	310	0	.006
December	2,010	270	0	.010
1948				
January	2,440	220	0	.007
February	1,900	210	0	.008
March	1,750	170	0	.007
April	2,210	250	0	.008
May	2,400	300	0	.009
June	2,600	320	0	.009
July	72,170	11,030	7	.011
August	2,820	410	0	.010
September	8,020	1,030	1	.009
Total	107,320	15,170	8	

U. S. G. S. yearly discharge in acre-feet ----------	107,300
Total silt for year in acre-feet ----------	15,170
Acre-feet of silt per year per square mile of contributing watershed ----------	------
Average percent of silt by weight for year ----------	.010
Drainage area in square miles (net) ----------	------

SUMMARY OF SILT DATA

for

Nueces River Watershed

Stream: NUECES
Station: CORPUS CHRISTI DAM (Samples taken below and adjacent to outlet gates)
Sampler: Eddie Wright

Water Year	Discharge of Stream	Silt Load of Stream		Average Percentage of Dry Silt by Weight
	Ac.-ft.	Tons	Ac.-ft.	Pct.
1941-42 1/	1,202,820	546,500	358	.033
1942-43	249,640	44,790	29	.013
1943-44	740,310	323,550	212	.032
1944-45	273,820	125,070	81	.034
1945-46	936,910	350,430	231	.027
1946-47	921,510	244,730	160	.020
1947-48	107,320	15,170	8	.010
TOTALS	4,432,330	1,650,240	1,079	

For period of 6.660 years

Average discharge in acre-feet per year	665,515
Average acre-feet of silt per year	162
Average acre-feet of silt per year per square mile of contributing watershed	-----
Average tons of silt per year	247,784
Average percent of silt by weight	.027
Drainage area in square miles (net)	-----

1/ Station was established February 2, 1942.

Note: Yearly discharge data changed to conform to totals used by U. S. G. S. in computing monthly river discharge.

SILT DATA

Sabine River Watershed
at
LOGANSPORT STATION ON SABINE RIVER

for
Water Year 1947-1948
(October 1, 1947 to September 30, 1948)

Month	Discharge of Stream	Silt Load of Stream		Percentage of dry silt by weight
	Ac.-ft.	Tons	Ac.-ft.	Pct.
1947				
October	12,370	1,460	1	.009
November	68,670	19,510	13	.021
December	331,500	73,980	49	.016
1948				
January	421,610	69,200	45	.012
February	580,600	42,180	28	.005
March	583,930	95,680	63	.012
April	201,700	48,240	32	.018
May	419,090	87,000	57	.015
June	157,810	10,520	7	.005
July	26,060	3,450	2	.010
August	11,280	1,010	1	.007
September	5,940	160	0	.002
Total	2,820,560	452,390	298	

U. S. G. S. yearly discharge in acre-feet	2,821,000
Total silt for year in acre-feet	298
Acre-feet of silt per year per square mile of contributing watershed	.061
Average percent of silt by weight for year	.012
Drainage area in square miles (net)	4,858

SUMMARY OF SILT DATA

for

Sabine River Watershed

Stream: SABINE
Station: LOGANSPORT, LA.
Sampler: R. E. Davenport

(Samples were taken from U. S. Highway 84 bridge in downtown Logansport, La.)

Water Year	Discharge of Stream	Silt Load of Stream		Average Percentage of Dry Silt by Weight
	Ac.-ft.	Tons	Ac.-ft.	Pct.
1932-33 1/	2,545,700	503,740	330	.015
1933-34 2/	69,200	5,780	4	.006
1934-35 3/	13,910	400	0	.002
1935-36	841,410	137,020	89	.012
1936-37	1,689,660	270,430	176	.012
1937-38	3,155,000	537,990	353	.013
1938-39	1,325,580	291,500	190	.016
1939-40	1,302,990	458,990	301	.026
1940-41	4,876,180	825,330	541	.012
1941-42	3,817,160	1,439,880	944	.028
1942-43	1,716,620	999,370	655	.043
1943-44	4,193,070	3,002,050	1,969	.053
1944-45	5,996,730	4,502,820	2,953	.055
1945-46	5,137,000	2,650,320	1,738	.038
1946-47	3,318,320	553,900	363	.012
1947-48	2,820,560	452,390	298	.012
TOTALS	42,819,090	16,631,910	10,904	

For period of 14.156 years

Average discharge in acre-feet per year	3,024,801
Average acre-feet of silt per year	770
Average acre-feet of silt per year per square mile of contributing watershed	.159
Average tons of silt per year	1,174,902
Average percent of silt by weight	.029
Drainage area in square miles (net)	4,858

1/ Station was established December 1, 1932.
2/ Station was discontinued December 27, 1933.
3/ Station was reestablished September 1, 1935.

Note: Yearly discharge data changed to conform to totals used by U. S. G. S. in computing monthly river discharge.

SILT DATA

San Antonio River Watershed
at
GOLIAD STATION ON SAN ANTONIO RIVER

for
Water Year 1947-1948
(October 1, 1947 to September 30, 1948)

Month	Discharge of Stream	Silt Load of Stream		Percentage of dry silt by weight
	Ac.-ft.	Tons	Ac.-ft.	Pct.
1947				
October	13,820	3,070	2	.016
November	16,340	7,450	5	.033
December	17,490	2,800	2	.012
1948				
January	16,040	1,750	1	.008
February	17,320	3,050	2	.013
March	15,640	4,850	3	.023
April	14,200	12,630	8	.065
May	18,970	38,850	25	.150
June	8,120	1,210	1	.011
July	24,510	43,990	29	.132
August	46,930	95,650	63	.150
September	17,130	21,720	14	.093
Total	226,510	237,020	155	

U. S. G. S. yearly discharge in acre-feet ----------	226,500
Total silt for year in acre-feet ----------	155
Acre-feet of silt per year per square mile of contributing watershed ----------	.040
Average percent of silt by weight for year ----------	.077
Drainage area in square miles (net) ----------	3,918

SUMMARY OF SILT DATA

for

San Antonio River Watershed

Stream: SAN ANTONIO
Station: GOLIAD (Samples were taken near Goliad
Sampler: Polo Perez from bridge on State Highway No. 29)

Water Year	Discharge of Stream	Silt Load of Stream		Average Percentage of Dry Silt by Weight
	Ac.-ft.	Tons	Ac.-ft.	Pct.
1941-42 1/	699,580	848,340	556	.089
1942-43	453,180	581,740	382	.094
1943-44	365,060	725,630	475	.146
1944-45	352,460	567,440	371	.118
1945-46	663,080	1,387,180	910	.154
1946-47	699,560	719,770	472	.076
1947-48	226,510	237,020	155	.077
TOTALS	3,459,430	5,067,120	3,321	

For period of 6.748 years

Average discharge in acre-feet per year	512,660
Average acre-feet of silt per year	492
Average acre-feet of silt per year per square mile of contributing watershed	.126
Average tons of silt per year	750,907
Average percent of silt by weight	.108
Drainage area in square miles (net)	3,918

1/ Station was established January 1, 1942.

Note: Yearly discharge data changed to conform to totals used by U. S. G. S. in computing monthly river discharge.

SILT DATA

San Jacinto River Watershed
at
HUFFMAN STATION ON SAN JACINTO RIVER

for
Water Year 1947-1948
(October 1, 1947 to September 30, 1948)

Month	Discharge of Stream	Silt Load of Stream		Percentage of dry silt by weight
	Ac.-ft.	Tons	Ac.-ft.	Pct.
1947				
October	8,070	980	0	.009
November	13,500	1,680	1	.009
December	72,110	25,650	17	.026
1948				
January	41,700	4,480	3	.008
February	114,720	24,820	16	.016
March	121,860	24,940	16	.015
April	65,710	15,130	10	.017
May	31,780	5,070	3	.012
June	8,970	1,280	1	.010
July	9,580	1,140	1	.009
August	5,320	1,880	1	.026
September	6,420	1,250	1	.014
Total	499,740	108,300	70	

U. S. G. S. yearly discharge in acre-feet	499,700
Total silt for year in acre-feet	70
Acre-feet of silt per year per square mile of contributing watershed	.025
Average percent of silt by weight for year	.016
Drainage area in square miles (net)	2,791

SUMMARY OF SILT DATA

for

San Jacinto River Watershed

Stream: SAN JACINTO
Station: HUFFMAN (Samples were taken at Sheldon
Sampler: Phil Baker Scott Pumping Plant, City of Houston)

Water Year	Discharge of Stream	Silt Load of Stream		Average Percentage of Dry Silt by Weight
	Ac.-ft.	Tons	Ac.-ft.	Pct.
1944-45 1/	221,940	163,730	107	.054
1945-46	2,246,700	1,345,020	881	.044
1946-47	2,466,540	2,096,730	1,377	.062
1947-48	499,740	108,300	70	.016
TOTALS	5,434,920	3,713,780	2,435	

For period of 3.083 years

Average discharge in acre-feet per year	1,762,867
Average acre-feet of silt per year	790
Average acre-feet of silt per year per square mile of contributing watershed	.283
Average tons of silt per year	1,204,599
Average percent of silt by weight	.050
Drainage area in square miles (net)	2,791

1/ Station established September 1, 1945.

Note: Yearly discharge data changed to conform to totals used by U. S. G. S. in computing monthly river discharge.

SILT DATA

San Jacinto River Watershed
at
HUMBLE STATION ON SAN JACINTO RIVER

for
Water Year 1947-1948
(October 1, 1947 to September 30, 1948)

Month	Discharge of Stream	Silt Load of Stream		Percentage of dry silt by weight
	Ac.-ft.	Tons	Ac.-ft.	Pct.
1947				
October	3,910	410	0	.008
November	6,550	750	0	.008
December	43,550	4,710	3	.008
1948				
January	21,730	800	1	.003
February	59,010	13,550	9	.017
March	82,780	7,910	5	.007
April	35,210	8,080	5	.017
May	17,750	3,490	2	.014
June	4,470	670	0	.011
July	4,240	180	0	.003
August	2,300	160	0	.005
September	2,840	430	0	.011
Total	284,340	41,140	25	

U. S. G. S. yearly discharge in acre-feet	284,300
Total silt for year in acre-feet	25
Acre-feet of silt per year per square mile of contributing watershed	.014
Average percent of silt by weight for year	.011
Drainage area in square miles (net)	1,811

SUMMARY OF SILT DATA

for

San Jacinto River Watershed

Stream: WEST FORK OF SAN JACINTO
Station: NEAR HUMBLE (Samples were taken from highway
Sampler: L. C. Clark bridge about 2 mi. north of Humble)

Water Year	Discharge of Stream	Silt Load of Stream		Average Percentage of Dry Silt by Weight
	Ac.-ft.	Tons	Ac.-ft.	Pct.
1932-33 1/	253,210	144,800	93	.042
1933-34 2/	7,450	520	0	.005
1936-37 3/	12,450	1,370	1	.008
1937-38	491,940	150,650	97	.022
1938-39	319,500	120,660	77	.028
1939-40	282,680	162,070	105	.042
1940-41	2,566,090	896,050	588	.026
1941-42	909,180	373,670	245	.030
1942-43	545,760	290,820	191	.039
1943-44	881,200	660,570	434	.055
1944-45	1,577,380	1,241,490	815	.058
1945-46	1,320,330	774,810	509	.043
1946-47	1,325,000	345,140	228	.019
1947-48	284,340	41,140	25	.011
TOTALS	10,776,600	5,203,760	3,408	

For period of 12.337 years

Average discharge in acre-feet per year	873,519
Average acre-feet of silt per year	276
Average acre-feet of silt per year per square mile of contributing watershed	.152
Average tons of silt per year	421,801
Average percent of silt by weight	.035
Drainage area in square miles (net)	1,811

1/ Station established December 1, 1932.
2/ Station discontinued December 31, 1933.
3/ Station re-established July 1, 1937.

Note: Yearly discharge data changed to conform to totals used by U. S. G. S. in computing monthly river discharge.

SILT DATA

Trinity River Watershed
at
ROMAYOR STATION ON TRINITY RIVER

for
Water Year 1947-1948
(October 1, 1947 to September 30, 1948)

Month	Discharge of Stream	Silt Load of Stream		Percentage of dry silt by weight
	Ac.-ft.	Tons	Ac.-ft.	Pct.
1947				
October	60,680	10,730	7	.013
November	111,080	55,000	36	.036
December	618,450	404,300	265	.048
1948				
January	425,550	425,570	279	.073
February	626,100	323,570	212	.038
March	999,490	578,180	379	.042
April	402,590	301,340	198	.055
May	807,790	912,430	598	.083
June	159,340	96,420	63	.044
July	172,270	156,470	103	.067
August	50,230	13,480	9	.020
September	43,150	7,230	5	.012
Total	4,476,720	3,284,720	2,154	

U. S. G. S. yearly discharge in acre-feet	4,477,000
Total silt for year in acre-feet	2,154
Acre-feet of silt per year per square mile of contributing watershed	.125
Average percent of silt by weight for year	.054
Drainage area in square miles (net)	17,200

SUMMARY OF SILT DATA

for

Trinity River Watershed

Stream: TRINITY
Station: ROMAYOR (Samples taken from the railroad bridge)
Sampler: Claud Allen

Water Year	Discharge of Stream	Silt Load of Stream		Average Percentage of Dry Silt by Weight
	Ac.-ft.	Tons	Ac.-ft.	Pct.
1935-36 1/	42,130	5,220	4	.009
1936-37	3,900,920	3,481,600	2,285	.066
1937-38	6,753,160	6,741,220	4,423	.073
1938-39	2,165,150	3,199,280	2,099	.109
1939-40	3,218,170	4,999,040	3,280	.114
1940-41	12,258,630	9,657,990	6,335	.058
1941-42	9,901,100	9,447,990	6,197	.070
1942-43	4,298,370	4,914,950	3,224	.084
1943-44	7,588,430	11,433,850	7,501	.111
1944-45	12,202,840	13,559,310	8,893	.082
1945-46	8,391,500	8,643,330	5,670	.076
1946-47	7,009,180	5,290,980	3,468	.055
1947-48	4,476,720	3,284,720	2,154	.054
TOTALS	82,206,300	84,659,480	55,533	

For period of 12.142 years

Average discharge in acre-feet per year	6,770,408
Average acre-feet of silt per year	4,574
Average acre-feet of silt per year per square mile of contributing watershed	.266
Average tons of silt per year	6,972,449
Average percent of silt by weight	.076
Drainage area in square miles (net)	17,200

1/ Station was established August 10, 1936.

Note: Yearly discharge data changed to conform to totals used by U. S. G. S. in computing monthly river discharge.

SUMMARY OF SILT DATA FOR SOME OF THE MAJOR TEXAS STREAMS

(For Water Year Ending September 30, 1948)

Water-shed	Stream	Silt Station	Years Samples Taken	Total Length Record	Average Runoff of Stream	Average Amount of Silt		Amt. of Silt per Sq. Mi. Watershed	Silt by weight	Net drainage area
				years	ac-ft	ac-ft	tons	ac-ft	per-cent	sq.mi.
Brazos	Salt Fork	Aspermont 1/	1924-25	1.238	111,100	2,818	4,297,420	1.272	2.842	2,216
Brazos	Salt Fork	Seymour 1/	1924-30	6.107	337,790	5,450	8,309,370	1.038	1.807	5,250
Brazos	Dbl.Mt.Fork	Aspermont 1/	1924-33	9.244	135,280	2,665	4,062,400	1.765	2.206	1,510
Brazos	Clear Fork	Crystal Falls1/	1925-29	3.307	214,440	568	866,020	.131	.297	4,320
Brazos	Clear Fork	Eliasville 1/	1924-25	1.244	177,240	529	808,630	.092	.335	5,740
Brazos	Little River	Little River 1/	1924-29	4.962	419,870	752	1,147,190	.143	.201	5,253
Brazos	San Gabriel	Circleville 1/	1924-29	5.403	110,744	222	339,590	.369	.225	602
Brazos	Leon	Belton	1945-48	3.083	373,980	353	522,850	.100	.103	3,547
Brazos	Navasota	Easterly	1942-48	6.748	384,080	242	368,360	.255	.070	949
Brazos	Brazos	South Bend	1942-48	6.710	481,565	2,152	3,279,870	.174	.500	12,360
Brazos	Brazos	Possum King.Dam	1942-48	6.710	507,022	87	133,438	----	.019	-----
Brazos	Brazos	Mineral Wells 1/	1924-34	10.332	953,550	6,506	9,920,060	.468	.764	13,910
Brazos	Brazos	Glen Rose 1/	1924-29	4.588	1,181,370	8,378	12,773,810	.537	.794	15,600
Brazos	Brazos	Waco 1/	1924-33	9.254	1,717,130	10,325	15,742,010	.536	.673	19,260
Brazos	Brazos	Bryan 1/	1899-02	3.419	4,156,736	39,117	-----	1.340	.941*	29,190
Brazos	Brazos	Richmond	1924-48	24.306	5,855,940	23,980	36,609,260	.689	.459	34,810
Colorado	Colorado	Llano	1942-48	6.167	205,320	276	420,740	.069	.151	4,000
Colorado	Pedernales	Johnson City	1942-48	6.167	115,370	155	236,180	.164	.150	947
Colorado	Colorado	San Saba	1930-48	18.055	1,210,050	3,097	4,722,150	.165	.287	18,800
Colorado	Colorado	Tow 1/	1927-32	5.162	1,245,440	3,360	5,122,520	.174	.302	19,300
Colorado	Colorado	Inks Dam	1942-48	6.167	685,190	66	99,320	----	.011	-----
Colorado	Colorado	Buchanan Dam 2/	1947-48	1.000	576,440	30	46,530	----	.006	-----
Colorado	Colorado	Austin	1937-48	11.164	1,773,650	776	1,182,240	.029	.049	26,360
Colorado	Colorado	Columbus-E.Lake 3/	30-33;37-41	6.997	3,167,710	5,898	8,991,960	.202	.209	29,140
Guadalupe	Guadalupe	Spring Branch	1942-48	6.748	213,840	114	173,850	.080	.060	1,432
Guadalupe	Guadalupe	Victoria	1945-48	3.083	1,123,400	408	621,430	.072	.041	5,676

* Percent of silt by volume.

1/ Silt by months and summary data prior to 1940 contained in progress report No. 1.

2/ Station established October 1, 1947.

3/ Station discontinued October 31, 1941.

SUMMARY OF SILT DATA (Continued)

Water-shed	Stream	Silt Station	Years Samples Taken	Total Length Record	Average Runoff of Stream	Average Amount of Silt		Amt. of Silt per Sq. Mi. Watershed	Silt by Weight	Net drainage area
				years	ac-ft.	ac-ft.	tons	ac-ft.	per-cent	sq.mi.
Lavaca	Lavaca	Edna	1945-48	3.083	204,960	132	200,730	.149	.072	887
Neches	Angelina	Horger	1945-48	3.083	2,824,670	523	797,170	.152	.021	3,435
Neches	Neches	Rockland	1930-48	18.148	2,008,500	323	493,340	.091	.018	3,539
Nueces	Nueces	Cotulla	1942-48	6.748	190,234	84	127,531	.016	.049	5,260
Nueces	Nueces	Three Rivers	1927-48	21.000	688,380	510	777,130	.033	.083	15,600
Nueces	Nueces	Corpus Chr.Dam	1942-48	6.660	665,515	162	247,784	----	.027	----
Rio Grande	Rio Grande	Eagle Pass 4/	1934-43	9.068	3,180,057	9,776	14,904,545	.078	.344	125,260
Rio Grande	Rio Grande	Roma 4/	1929-43	14.184	4,166,619	12,588	19,192,311	.080	.338	157,204
Red	Pease	Crowell 5/	1942-47	5.002	113,411	992	1,512,834	.412	.930	2,410
Red	Wichita	Wichita Falls 1/	1900-02	2.014	566,420	5,516	-----	1.776	.974*	3,105
Red	Red	Denison 1/	30-33;36-39	6.260	3,326,780	13,640	20,793,380	.415	.459	32,840
Sabine	Sabine	Logansport,La.	32-33;35-48	14.156	3,024,801	770	1,174,902	.159	.029	4,858
Sabine	Sabine	Ruliff 6/	1945-46	1.083	11,408,860	3,124	5,771,404	.331	.037	9,440
San Antonio	San Antonio	Falls City 1/	1927-33	5.967	127,120	142	216,730	.069	.125	2,070
San Antonio	San Antonio	Goliad	1942-48	6.748	512,680	492	750,910	.126	.108	3,918
San Jacinto	West Fork	Humble	32-33;37-48	12.337	873,510	276	421,800	.152	.035	1,811
San Jacinto	San Jacinto	Huffman	1945-48	3.083	1,763,100	790	1,204,600	.283	.050	2,791
Trinity	Trinity	Rosser 7/	1938-40	1.598	760,700	986	1,504,920	.122	.145	8,057
Trinity	Trinity	Romayor	1936-48	12.142	6,770,210	4,574	6,972,450	.266	.076	17,200

* Percent of silt by volume.
1/ Silt by months and summary data prior to 1940 contained in progress report No. 1.
4/ Station discontinued May 31, 1943.
5/ Station discontinued June 30, 1947.
6/ Station established September 1, 1945 and discontinued September 30, 1946.
7/ Station discontinued June 27, 1940.