THE SILT LOAD OF TEXAS STREAMS--PART VIII
(A Progress Report as of October 1, 1945, to September 30, 1946)

Prepared cooperatively by
TEXAS BOARD OF WATER ENGINEERS
and
UNITED STATES DEPARTMENT OF AGRICULTURE
Soil Conservation Service
Division of Irrigation

Compiled by
Dean W. Bloodgood, Irrigation Engineer
Ivan M. Stout, Testing Engineer

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Austin, Texas July, 1947

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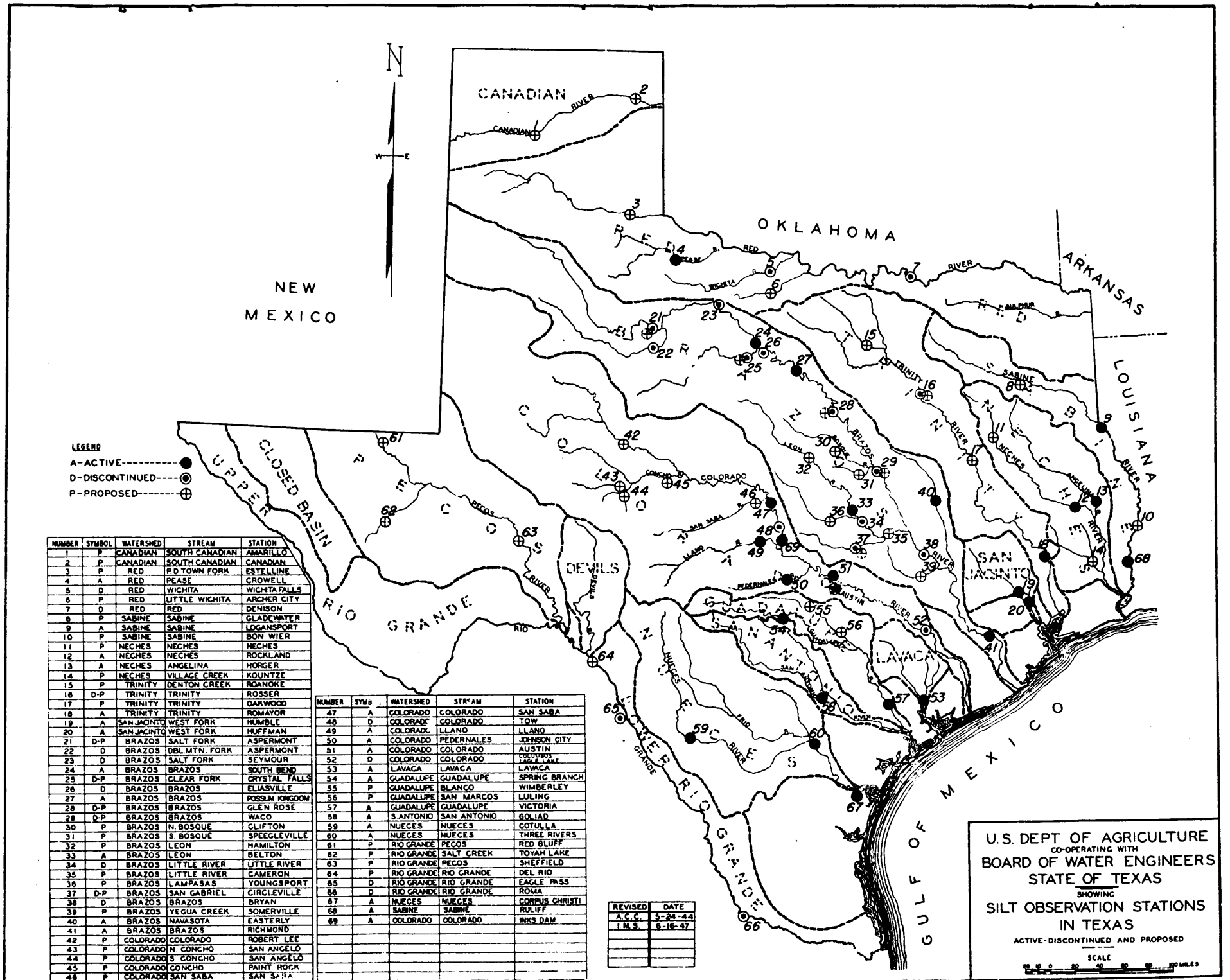

LEGEND

A-ACTIVE----------●

D-DISCONTINUED----◉

P-PROPOSED-------⊕

NUMBER	SYMBOL	WATERSHED	STREAM	STATION
1	P	CANADIAN	SOUTH CANADIAN	AMARILLO
2	P	CANADIAN	SOUTH CANADIAN	CANADIAN
3	P	RED	P.D.TOWN FORK	ESTELLINE
4	A	RED	PEASE	CROWELL
5	D	RED	WICHITA	WICHITA FALLS
6	P	RED	LITTLE WICHITA	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 CREEK	KOUNTZE
15	P	TRINITY	DENTON CREEK	ROANOKE
16	D-P	TRINITY	TRINITY	ROSSER
17	P	TRINITY	TRINITY	OAKWOOD
18	A	TRINITY	TRINITY	ROMAYOR
19	A	SAN JACINTO	WEST FORK	HUMBLE
20	A	SAN JACINTO	WEST FORK	HUFFMAN
21	D-P	BRAZOS	SALT FORK	ASPERMONT
22	D	BRAZOS	DBL.MTN. FORK	ASPERMONT
23	D	BRAZOS	SALT FORK	SEYMOUR
24	A	BRAZOS	BRAZOS	SOUTH BEND
25	D-P	BRAZOS	CLEAR FORK	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 RIVER	LITTLE RIVER
35	P	BRAZOS	LITTLE RIVER	CAMERON
36	P	BRAZOS	LAMPASAS	YOUNGSPORT
37	D-P	BRAZOS	SAN GABRIEL	CIRCLEVILLE
38	D	BRAZOS	BRAZOS	BRYAN
39	P	BRAZOS	YEGUA CREEK	SOMERVILLE
40	A	BRAZOS	NAVASOTA	EASTERLY
41	A	BRAZOS	BRAZOS	RICHMOND
42	P	COLORADO	COLORADO	ROBERT LEE
43	P	COLORADO	N. CONCHO	SAN ANGELO
44	P	COLORADO	S. CONCHO	SAN ANGELO
45	P	COLORADO	CONCHO	PAINT ROCK
46	P	COLORADO	SAN SABA	SAN SABA

NUMBER	SYMB.	WATERSHED	STREAM	STATION
47	A	COLORADO	COLORADO	SAN SABA
48	D	COLORADO	COLORADO	TOW
49	A	COLORADO	LLANO	LLANO
50	A	COLORADO	PEDERNALES	JOHNSON CITY
51	A	COLORADO	COLORADO	AUSTIN
52	D	COLORADO	COLORADO	COLUMBUS LAGGE LAKE
53	A	LAVACA	LAVACA	LAVACA
54	A	GUADALUPE	GUADALUPE	SPRING BRANCH
55	P	GUADALUPE	BLANCO	WIMBERLEY
56	P	GUADALUPE	SAN MARCOS	LULING
57	A	GUADALUPE	GUADALUPE	VICTORIA
58	A	S.ANTONIO	SAN ANTONIO	GOLIAD
59	A	NUECES	NUECES	COTULLA
60	A	NUECES	NUECES	THREE RIVERS
61	P	RIO GRANDE	PECOS	RED BLUFF
62	P	RIO GRANDE	SALT CREEK	TOYAH LAKE
63	P	RIO GRANDE	PECOS	SHEFFIELD
64	P	RIO GRANDE	RIO GRANDE	DEL RIO
65	D	RIO GRANDE	RIO GRANDE	EAGLE PASS
66	D	RIO GRANDE	RIO GRANDE	ROMA
67	A	NUECES	NUECES	CORPUS CHRISTI
68	A	SABINE	SABINE	RULIFF
69	A	COLORADO	COLORADO	INKS DAM

REVISED	DATE
A.C.C.	5-24-44
I.M.S.	6-16-47

U.S. DEPT OF AGRICULTURE
CO-OPERATING WITH
BOARD OF WATER ENGINEERS
STATE OF TEXAS

SHOWING

SILT OBSERVATION STATIONS IN TEXAS

ACTIVE-DISCONTINUED AND PROPOSED

SCALE

50 40 0 80 40 80 120 MILES

THE SILT LOAD OF TEXAS STREAMS
(Progress report as of September 30, 1946)

By Dean W. Bloodgood, Irrigation Engineer, Division of Irrigation, Soil Conservation Service 1/ and Ivan M. Stout, Testing Engineer, State Board of Water Engineers.

INTRODUCTION

In the greater part of Texas the precipitation varies widely throughout the year and also from year to year. At times long droughts occur, especially in the western part of the state, and at other times the precipitation is excessive. As a result of this erratic precipitation, wide fluctuations occur in the natural flow of the streams, sometimes varying in the course of a few days from only a small flow or even none at all to heavy floods.

It is planned to establish many reservoirs on the streams of Texas for the regulation and conservation of their waters so that these resources may be developed to their fullest usefulness. Many storages have already been built, such as the Buchanan, Marshall Ford, Possum Kingdom, Red Bluff and Denison reservoirs. Nevertheless, many additional larger reservoirs, as well as small storages on tributaries, must be created before the water resources of the state become completely available for domestic, livestock, municipal, irrigation, power and other uses, and before the prevention of floods in lower stream channels can be accomplished.

Many Texas streams carry large quantities of silt resulting from erosion on their watershed, especially at times of heavy precipitation. When a reservoir is established on such a silt-carrying stream, much of the transported material is deposited and the storage capacity of the reservoir is reduced accordingly. Hence, when each new reservoir is built, it is necessary to estimate the rate at which it will be filled with silt in order that its economic feasibility may be determined. To obtain accurate information both as to the amounts of silt carried in Texas streams and the manner and conditions of its deposition in reservoirs, a cooperative silt investigation was begun in June, 1924. This investigation has been carried on continuously to the present time.

The principal purpose of this cooperative investigation is to obtain the facts regarding the amount of silt carried by Texas streams from which the length of life of any proposed reservoir may be estimated. Accumulated results show definitely that, as affected by silt deposition, the life of any large reservoir built on major Texas streams will be far in excess of that necessary to satisfy the financial and economic consideration involved.

1/ Under the supervision of George D. Clyde, Chief of Division of Irrigation, Soil Conservation Service, U. S. Department of Agriculture.

It is also a matter of great importance to Texas cities and towns that will have to, more and more, resort to the streams for increased water supplies, to know the amount of silt being carried by such streams throughout the year. Determining the desirability of the supply and the economic handling and treating such supply depends upon a knowledge of the silt load of the stream. This is also true of the various industries seeking location in Texas. For many large industries, the quality of the water supply is of major importance, and consideration cannot be given to the location of such an industry along a stream unless the quality of water has been determined.

Silt Investigations - - - Method and Procedure

Sampling equipment:--An eight-ounce sample is accepted as being both convenient and sufficient in volume for all tests. Narrow-mouthed bottles are found to be more convenient for use in the laboratory.

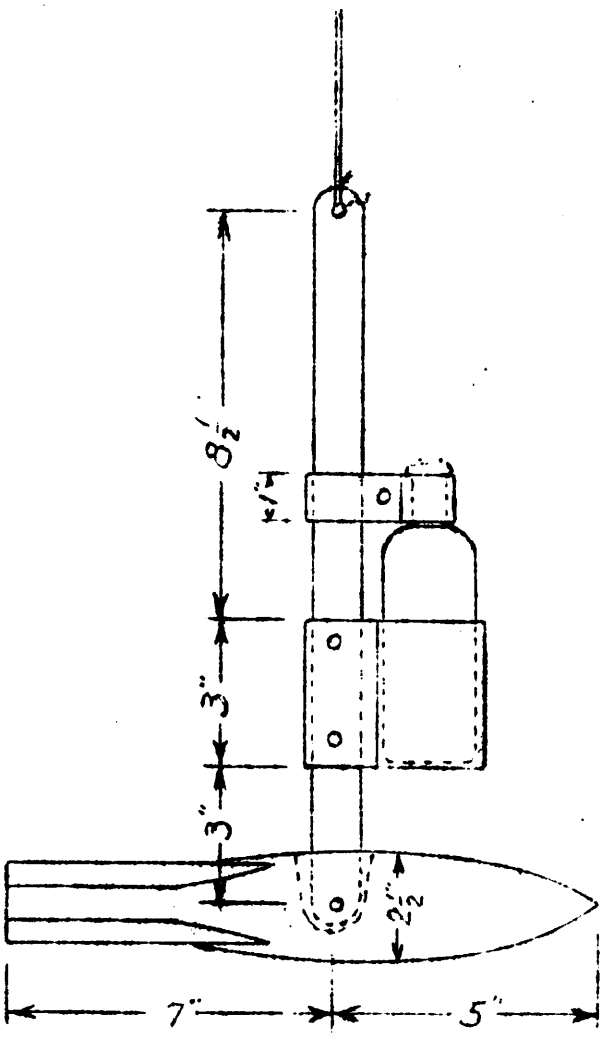

Fig. 1--Sampling apparatus used in Texas.

The apparatus adopted for handling bottles in the process of taking samples, shown in Figure 1, consists of a one-eighth by three-quarter by fifteen inch hanger to which a sheet metal bottle container, $2\frac{1}{2}$ inches in diameter, is fastened in such a way that the top of the neck of a round eight-ounce bottle is 0.8 foot above the lower extremity when attached to an old style 10-pound current meter weight. Above the container is a sliding clamp with a loop slightly larger in diameter than the lip on the neck of the bottle. A No. 8 sash cord is used as a hand line for lowering and raising the apparatus.

For sampling flood waters with high velocities, a special hanger made of steel, one-eighth inch thick, one-inch wide, and $16\frac{1}{4}$ inches long, with the vertical bottle container, using a 100 pound weight, was provided. The hoisting line used with this equipment was a 3/16 inch diameter airplane strand cable, and a hand winch with a 4-inch drum attached to an A-frame. 1/

1/ The sampling of flood waters in regular field work has been confined to surface flow (top 8 inches) and as a result the 100 pound weight, etc., has not been required.

Method of sampling--A study of many samples taken at various depths throughout a cross-section and at different gage heights showed that a sample from six-tenths the depth gave the mean percentage of silt in the vertical within limits of permissible error. It was further disclosed that the mean percentage of silt by weight in verticals as abscissas and the distances from the edge of the water surface in a cross-section as ordinates showed that the weighted mean of the results obtained from the 6/10 depths at three points in the cross-section, viz., 1/6, 1/2, and 5/6 of the width, gave mean percentages for the cross-section.

Bed Load--That portion of the silt load which is rolled along the bed of the stream by the velocity of the water is not included in this report for the reason that no practicable means have yet been devised for securing reliable measurement.

Samples are taken daily at designated intervals in the cross-section and each sample is immediately labeled for identification, as shown in Figure 2.

Stream_____ At_____

Date_____ Sampler_____

Station_____ Depth_____

Gage Height_____ Color_____

Time_____

Figure 2--Bottle label.

Laboratory Method-- (a) Fold Whatman No. 2. filter papers, 24 cm in diameter, three times; dry in oven at 110° C for 1½ hours, cool in a dessicator for one-half hour, and weigh on analytical balance to nearest .005 gram. (b) Weigh eight ounce silt laden water samples on torsion balance to nearest one-tenth gram. (c) Place one of the oven-dried filter papers in a No. 16 ribbed glass funnel, and into this pour an eight-ounce sample whose weight has been recorded. (d) Air dry the filter paper containing the silt and then transfer to oven where procedure is same as outlined in (a).

Then from the above data oven dry weight of silt divided by wet weight of 8-ounce sample and multiplied by one hundred, gives the percentage of dry silt by weight.

If the sample be taken at the surface of the stream (within the top 10 inches of flow) the per cent of silt by weight is multiplied by the factor 1.102 to secure the percentage that should be used for the six-tenths depth.

The daily average per cent of silt is accepted as-(1) that shown by a single sample when only one sample is received (2) that shown as an average when two samples are received (3) that shown as a weighted average when three samples are received; namely, add together the percentages for the one-sixth and five-sixth intervals, and to this sum add twice the percentage shown at midstream. Divide this total by four to secure weighted average.

Silt data subsequent to December 31, 1930, have been computed in accordance with the procedure used prior to that data and published by the United States Department of Agriculture, Bureau of Agricultural Engineering, as Technical Bulletin No. 382, "The Silt Load of Texas Streams" by the late O. A. Faris.

Since one cubic foot of run-off (water) is assumed to weigh 62.5 pounds, and one cubic foot of silt deposit in reservoirs is assumed to weigh 70 pounds, it follows that:

One ac. ft. of runoff = 1361.25 tons
One ac. ft. of silt = 1524.60 tons

$$\frac{\text{Tons of silt}}{1524.60} = \text{Tons of silt} \times .00065590975 = \text{ac. ft. of silt}$$

$$\frac{\text{Tons of silt} \times 100}{\text{Ac. ft. of run-off} \times 1361.25} = \frac{\text{Tons of silt}}{\text{Ac. ft. of runoff}} \times .073462$$

= per cent of dry silt by weight

The average weight of the dry material in silt deposits which are continuously submerged approaches 30 pounds per cubic foot. In those deposits which are occasionally exposed, the average dry weight approached 70 pounds per cubic foot. In deposits where reservoirs are used exclusively for flood control, the average weight ultimately approached 90 pounds per cubic foot. After a careful consideration of the volume-weight ratios of silt samples in different degrees of consolidation together with the fact that an indeterminable volume of vegetable matter in the form of logs and brush deposited in reservoirs become water-logged and lasts indefinitely, seventy (70) pounds was selected as the average ultimate weight of the dry material per cubic foot of deposit in reservoirs where the deposits are subjected to alternate wetting and drying.

In order to compute the silt load in acre-feet, the silt sampling station must be located where a stream flow measuring station is maintained.

The discharge records for Inks Dam were furnished by the Lower Colorado River Authority; at Possum Kingdom Dam, by the Brazos River Conservation and Reclamation District and that at Lake Corpus Christi by the Water Department, City of Corpus Christi. The discharge records for all other stations set up in this report were supplied by the Water Resources Branch of the United States Geological Survey.

The following organizations have assisted in the collection of water samples and other associated work:

Water Resources Branch of the United States Geological Survey, Austin, Texas; the Brazos River Conservation and Reclamation District, Mineral Wells, Texas; Lower Colorado River Authority, Austin, Texas; City of Houston , Houston, Texas; and City of Corpus Christi, Corpus Christi, Texas.

SILT RECORD
(As of Sept. 30, 1946)

Prepared by
TEXAS BOARD OF WATER ENGINEERS
and
UNITED STATES DEPARTMENT OF AGRICULTURE
Soil Conservation Service
Division of Irrigation

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

Water Year	Discharge			Average percent of silt by weight
	Water Acre-feet	Silt tons	Silt Acre-feet	
Total to Sept. 30, 1945	10;380 1/	26;320 1/	17 1/	.186
1945-46	664,000	1,187,070	779	.131
TOTALS	674,380	1,213,390	796	

For period of 1.083 years.

Average discharge in acre-feet per year	622,696
Average acre-feet of silt per year	735
Average acre-feet of silt per year per square mile of contributing watershed	.207
Average tons of silt per year	1,120,397
Average per cent of silt by weight	.132
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 ¼ mile upstream from bridge on U. S. Highway No. 81.

SILT RECORD

Leon River at Belton (Brazos River Watershed)

1945-46

Month	Discharge			Silt percent by weight
	Water Acre-feet	Silt tons	Silt Acre-feet	
(1945)				
October	43,170	57,670	38	.098
November	16,340	10,120	7	.045
December	39,470	107,630	71	.200
(1946)				
January	48,210	37,230	24	.057
February	83,190	186,610	122	.165
March	155,400	250,760	164	.119
April	43,960	11,490	8	.019
May	146,700	456,400	299	.229
June	48,430	46,560	31	.706
July	9,810	900	1	.067
August	3,050	150	0	.036
September	26,230	21,550	14	.060
Totals	664,000	1,187,070	779	.131

U. S. G. S. yearly discharge in acre-feet	664,000
Total silt for year in acre-feet	779
Acre-feet of silt per year per sq. mile of contributing watershed	.022
Average percent of silt by weight for year	.131
Drainage area in square miles (net)	3,547

SILT RECORD
(As of Sept. 30, 1946)

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

Water Year	Discharge			Average percent of silt by weight
	Water Acre-feet	Silt tons	Silt Acre-feet	
1941-42 1/	199,800	142,600	94	.052
1942-43	84,820	59,600	39	.052
1943-44	592,700	889,340	584	.110
1944-45	556,100	607,980	400	.080
1945-46	618,000	513,050	337	.061
TOTALS	2,051,420	2,212,570	1,454	

For period of 4.748 years.

Average discharge in acre-feet per year	432,060
Average acre-feet of silt per year	306
Average acre-feet of silt per year per square mile of contributing watershed	.322
Average tons of silt per year	466,000
Average percent of silt by weight	.079
Drainage area in square miles (net)	949

1/ Station was established January 1, 1942.

Note: A Water Year extends from October 1 to the following September 30, inclusive.

SILT RECORD
Navasota River at Easterly (Brazos River Watershed)
1945-46

Month	Discharge Water Acre-feet	Discharge Silt tons	Silt Acre-feet	Silt percent by weight
(1945)				
October	57,330	54,900	36	.070
November	5,180	2,700	2	.038
December	112,600	95,420	63	.062
(1946)				
January	52,800	51,640	34	.072
February	69,420	64,450	42	.068
March	72,230	65,100	43	.066
April	16,030	9,160	6	.042
May	176,100	137,690	90	.057
June	51,090	30,210	20	.043
July	1,650	490	0	.022
August	469	180	0	.028
September	3,080	1,110	1	.026
Totals	618,000	513,050	337	.061

U. S. G. S. yearly discharge in acre-feet---------- 618,000

Total silt for year in acre-feet---------- 513,050 337

Acre-feet of silt per year per sq. mile of contributing watershed---------- .355

Average percent of silt by weight for year---------- .061

Drainage area in square miles (net)---------- 949

SILT RECORD
(As of Sept. 30, 1946)

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

Water Year	Discharge			Average percent of silt by weight
	Water Acre-feet	Silt tons	Silt Acre-feet	
1941-42 1/	672,200	4,581,930	3,005	.501
1942-43	491,100	3,846,100	2,523	.575
1943-44	171,400	1,071,620	703	.459
1944-45	394,500	2,258,250	1,482	.421
1945-46	363,900	3,116,920	2,044	.629
TOTALS	2,093,100	14,874,820	9,757	

For period of 4.710 years.

Average discharge in acre-feet per year	444,395
Average acre-feet of silt per year	2,072
Average acre-feet of silt per year per square mile of contributing watershed	.168
Average tons of silt per year	3,158,135
Average per cent of silt by weight	.522
Drainage area in square miles (net)	12,360

1/ Station was established January 15, 1942.

Note: A water-year extends from October 1 to the following September 30, inclusive.

SILT RECORD

Brazos River at South Bend, 1945-46

Month	Discharge			Silt percent by weight
	Water Acre-feet	Silt tons	Silt Acre-feet	
(1945)				
October	66,160	547,150	359	.608
November	3,860	2,660	2	.051
December	2,000	770	1	.028
(1946)				
January	4,240	1,910	1	.033
February	1,440	410	0	.021
March	1,230	920	1	.055
April	1,950	1,300	1	.049
May	19,540	106,940	70	.402
June	35,210	392,460	257	.819
July	19,840	392,050	257	1.452
August	55,920	444,330	291	.584
September	152,500	1,226,020	804	.591
Totals	363,900	3,116,920	2044	.629

U. S. G. S. yearly discharge in acre-feet	363,900
Total silt for year in acre-feet	2,044
Acre-feet of silt per year per sq. mile of contributing watershed	.165
Average percent of silt by weight for year	.629
Drainage area in square miles (net)	12,360

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

Water Year	Discharge			Average percent of silt by weight
	Water Acre-feet	Silt tons	Silt Acre-feet	
1941-42 1/	588,000	55,070	36	.007
1942-43	851,300	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
TOTALS	2,131,860	789,030	515	

For period of 4.710 years.

Average discharge in acre-feet per year	452,624
Average acre-feet of silt per year	109
Average acre-feet of silt per year per square mile of contributing watershed	.008
Average tons of silt per year	167,522
Average percent of silt by weight	.027
Drainage area in square miles (net)	13,310

1/ Station was established Jan. 15, 1942.

Note: A water-year extends from October 1 to the following September 30, inclusive.

SILT RECORD

Brazos River at Possum Kingdom Dam, 1945-46

Month	Discharge			Silt percent by weight
	Water Acre-feet	Silt tons	Silt Acre-feet	
(1945)				
October	11,050	5,250	3	.035
November	8,400	4,560	3	.040
December	14,910	4,070	3	.020
(1946)				
January	52,410	6,720	4	.009
February	10,030	2,120	1	.009
March	5,840	750	0	.009
April	15,140	900	1	.004
May	11,140	1,290	1	.009
June	14,580	1,760	1	.009
July	40,580	4,020	3	.007
August	43,580	5,400	4	.009
September	65,450	4,410	3	.005
Totals	293,110	41,250	27	.010

U. S. G. S. yearly discharge in acre-feet---------- 293,110

Total silt for year in acre feet---------- 27

Acre-feet of silt per year per sq. mile of contributing watershed---------- .002

Average percent of silt by weight for year---------- .010

Drainage area in square miles (net)---------- 13,310

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

Water Year	Discharge			Average percent of silt by weight
	Water Acre-feet	Silt tons	Silt Acre-feet	
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	5,640,000	27,766,660	18,212	.362
2-3/				
1931-32	8,040,000	63,649,510	41,749	.582
1932-33	2,560,000	15,175,520	9,954	.435
1933-34	3,370,000	23,318,780	15,294	.508
1934-35	7,334,000	63,472,990	41,633	.636
1935-36	6,032,000	40,330,500	26,453	.491
1936-37	5,406,000	25,531,710	16,747	.347
1937-38	7,204,000	55,656,280	36,544	.568
1938-39	1,966,000	14,742,470	9,668	.551
1939-40	3,161,000	23,679,220	15,531	.550
1940-41	16,120,000	97,306,510	63,824	.443
1941-42	8,523,000	71,490,110	46,891	.616
1942-43	3,255,000	11,426,360	7,496	.258
1943-44	7,627,000	46,735,630	30,654	.450
1944-45	9,805,000	57,254,020	37,555	.429
1945-46	7,400,000	35,484,230	23,275	.352
	134,037,900	864,862,520	566,496	

For period of 22.306 years

Average discharge in acre-feet per year	6,009,051
Average acre-feet of silt per year	25,397
Average acre-feet of silt per year per square mile of contributing watershed	.730
Average tons of silt per year	38,772,640
Average percent of silt by weight	.474
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.

SILT RECORD
Brazos River at Richmond, 1945-46

Month	Discharge			Silt percent by weight
	Water Acre-feet	Silt tons	Silt Acre-feet	
(1945)				
October	478,900	1,471,690	965	.226
November	131,900	94,020	62	.052
December	490,600	1,768,840	1,160	.265
(1946)				
January	695,400	2,086,460	1,369	.220
February	875,200	3,863,690	2,534	.324
March	1,312,000	8,028,190	5,266	.450
April	511,200	838,160	550	.120
May	1,601,000	10,615,700	6,963	.487
June	844,900	2,785,070	1,827	.242
July	213,500	3,811,260	2,500	1.311
August	69,690	12,380	8	.013
September	175,300	108,770	71	.046
Totals	7,400,000	35,484,230	23,275	.352

U. S. G. S. yearly discharge in acre-feet	7,400,000
Total silt for year in acre-feet	23,275
Acre-feet of silt per year per sq. mile of contributing watershed	.669
Average percent of silt by weight for year	.352
Drainage area in square miles (net)	34,810

SILT RECORD
(As of Sept. 30, 1946)

Prepared by
TEXAS BOARD OF WATER ENGINEERS
and
UNITED STATES DEPARTMENT OF AGRICULTURE
Soil Conservation Service
Division of Irrigation

Stream: LLANO
Station: LLANO (Samples were taken at U. S. gaging station ½ mile downstream from bridge on State Highway No. 16).

Water Year	Discharge			Average percent of silt by weight
	Water Acre-feet	Silt tons	Silt Acre-feet	
1941-42 1/	66,000	252,700	166	.281
1942-43	235,500	381,560	250	.119
1943-44	196,100	120,450	79	.045
1944-45	156,900	90,120	60	.042
1945-46	142,700	249,740	164	.129
TOTALS	797,200	1,094,570	719	

For period of 4.167 years

Average discharge in acre-feet per year	191,313
Average acre-feet of silt per year	173
Average acre-feet of silt per year per square mile of contributing watershed	.043
Average tons of silt per year	262,676
Average percent of silt by weight	.101
Drainage area in square miles (net)	4,000

1/ Station was established August 1, 1942.

Note: A water-year extends from October 1 to the following September 30, inclusive.

SILT RECORD

Llano River at Llano (Colorado River Watershed)
1945-46

Month	Discharge			Silt
	Water Acre-feet	Silt tons	Silt Acre-feet	percent by weight
(1945)				
October	8,310	5,720	4	.051
November	4,100	1,710	1	.031
December	5,010	1,280	1	.019
(1946)				
January	8,580	3,580	2	.031
February	10,580	7,940	5	.055
March	5,920	1,330	1	.016
April	32,660	95,550	63	.215
May	45,050	126,990	83	.207
June	8,440	2,700	2	.024
July	1,570	220	0	.010
August	470	70	0	.011
September	12,050	2,650	2	.016
Totals	142,700	249,740	164	.129

U. S. G. S. yearly discharge in acre-feet---------- 142,700

Total silt for year in acre-feet---------- 164

Acre-feet of silt per year per sq. mile of contributing watershed---------- .041

Average percent of silt by weight for year---------- .129

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

SILT RECORD
(As of Sept. 30, 1946)

Prepared by
TEXAS BOARD OF WATER ENGINEERS
and
UNITED STATES DEPARTMENT OF AGRICULTURE
Soil Conservation Service
Division of Irrigation

Stream: PEDERNALES
Station: JOHNSON CITY
Sampler: JOHN W. GRISHAM

(Samples were taken from highway bridge on U. S. Highway No. 281, about 1½ miles north of Johnson City)

Water Year	Discharge			Average percent of silt by weight
	Water Acre-feet	Silt tons	Silt Acre-feet	
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
TOTALS	551,320	1,306,490	859	

For period of 4.167 years.

Average discharge in acre-feet per year	132,306
Average acre-feet of silt per year	206
Average acre-feet of silt per year per square mile of contributing watershed	.091
Average tons of silt per year	313,532
Average percent of silt by weight	.174
Drainage area in square miles (net)	947

1/ Station was established August 1, 1942.

Note: A water-year extends from October 1 to the following September 30, inclusive.

SILT RECORD

Pedernales River at Johnson City (Colorado River Watershed)
1945-46

Month	Discharge			Silt percent by weight
	Water Acre-feet	Silt tons	Silt Acre-feet	
(1945)				
October	11,680	13,550	9	.085
November	3,900	990	1	.019
December	5,170	1,070	1	.015
(1946)				
January	7,850	2,480	2	.023
February	7,510	3,730	2	.036
March	6,000	2,080	1	.025
April	15,860	62,000	41	.287
May	22,470	39,800	26	.130
June	8,040	5,340	4	.049
July	1,790	260	0	.011
August	720	100	0	.010
September	3,150	1,030	1	.024
Totals	94,140	132,430	88	.103

U. S. G. S. yearly discharge in acre-feet---------- 94,140

Total silt for year in acre-feet---------- 88

Acre-feet of silt per year per sq. mile of contributing watershed---------- .093

Average percent of silt by weight for year---------- .103

Drainage area in square miles (net)---------- 947

SILT RECORD
(As of Sept. 30, 1946)

Prepared by
TEXAS BOARD OF WATER ENGINEERS
and

UNITED STATES DEPARTMENT OF AGRICULTURE
Soil Conservation Service
Division of Irrigation

Stream: COLORADO
Station: NEAR SAN SABA (Samples were taken from Red Bluff bridge about midway between San Saba and Lometa)
Sampler: Robert A. Broyles

Water year	Discharge			Average percent of silt by weight
	Water Acre-feet	Silt tons	Silt Acre-feet	
1/				
1929-30	24,000	143,140	94	.439
1930-31	1,370,000	5,136,520	3,369	.275
1931-32	2,220,000	9,934,850	6,516	.328
1932-33	475,000	1,303,620	855	.201
1933-34	504,000	2,121,550	1,391	.309
1934-35	2,564,000	14,423,520	9,459	.413
1935-46	2,276,000	7,520,550	4,933	.243
1936-37	1,197,000	2,688,230	1,764	.165
1937-38	2,809,000	8,923,940	5,853	.233
1938-39	819,400	3,709,100	2,432	.333
1939-40	773,700	3,191,810	2.094	.303
1940-41	2,053,000	8,613,430	5,650	.308
1941-42	1,286,000	4,571,140	2,998	.261
1942-43	475,100	703,520	461	.109
1943-44	592,790	2,129,300	1,397	.264
1944-45	870,400	2,655,490	1,743	.224
1945-46	416,300	1,511,040	992	.267
TOTALS	20,725,690	79,280,750	52,001	

For period of 16.055 years.

Average discharge in acre-feet per year	1,290,918
Average acre-feet of silt per year	3,239
Average acre-feet of silt per year per square mile of contributing watershed	.172
Average tons of silt per year	4,938,072
Average percent of silt by weight	.281
Drainage area in square miles (net)	18,800

1/ Station was established September 11, 1930.

Note: A water-year extends from October 1 to the following September 30, inclusive.
Note: 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.

SILT RECORD

Colorado River at San Saba, 1945-46

Month	Discharge			Silt percent by weight
	Water Acre-feet	Silt tons	Silt Acre-feet	
(1945)				
October	53,070	237,160	156	.328
November	11,400	6,070	4	.039
December	12,380	6,960	5	.041
(1946)				
January	18,180	11,840	8	.048
February	28,150	66,790	44	.174
March	13,580	9,020	6	.049
April	8,670	3,710	2	.031
May	97,510	397,560	261	.300
June	30,340	18,200	12	.044
July	7,600	2,630	2	.025
August	5,210	4,950	3	.070
September	130,200	746,150	489	.421
Totals	416,300	1,511,040	992	.267

U. S. G. S. yearly discharge in acre-feet	416,300
Total silt for year in acre-feet	992
Acre-feet of silt per year per sq. mile of contributing watershed	.053
Average percent of silt by weight for year	.267
Drainage area in square miles (net)	18,800

SILT RECORD
(As of Sept. 30, 1946)

Prepared by
TEXAS BOARD OF WATER ENGINEERS
and
UNITED STATES DEPARTMENT OF AGRICULTURE
Soil Conservation Service
Division of Irrigation

Stream: COLORADO
Station: INKS DAM (Samples were taken from tailrace)
Sampler: T. A. Jones

Water Year	Discharge			Average percent of silt by weight
	Water Acre-feet	Silt tons	Silt Acre-feet	
1941-42 1/	285,200	41,270	27	.011
1942-43	662,400	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
TOTALS	3,146,050	527,910	347	

For period of 4.167 years.

Average discharge in acre-feet per year	754,992
Average acre-feet of silt per year	83
Average acre-feet of silt per year per square mile of contributing watershed	.004
Average tons of silt per year	126,688
Average percent of silt by weight	.012
Drainage area in square miles (net)	19,490

1/ Station was established August 1, 1942.

Note: A water-year extends from October 1 to the following September 30, inclusive.

SILT RECORD

Colorado River at Inks Dam, 1945-46

Month	Discharge			Silt percent by weight
	Water Acre-feet	Silt tons	Silt Acre-feet	
(1945)				
October	46,450	14,390	9	.023
November	37,250	11,730	8	.023
December	59,680	21,890	14	.027
(1946)				
January	60,930	12,340	8	.015
February	82,120	29,940	20	.027
March	93,980	18,110	12	.014
April	79,710	7,820	5	.007
May	11,790	1,830	1	.011
June	31,970	2,290	2	.005
July	83,440	8,090	5	.007
August	57,060	4,110	3	.005
September	34,080	1,490	1	.003
Totals	678,460	134,030	88	.015

U. S. G. S. yearly discharge in acre-feet	678,460
Total silt for year in acre-feet	88
Acre-feet of silt per year per sq. mile of contributing watershed	.004
Average percent of silt by weight for year	.015
Drainage area in square miles (net)	19,490

SILT RECORD
(As of Sept. 30, 1946)

Prepared by
TEXAS BOARD OF WATER ENGINEERS
and
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Soil Conservation Service
Division of Irrigation

Stream: COLORADO
Station: AUSTIN (Samples taken from Congress Avenue or Montopolis Bridge) 2/
Sampler: Mrs. G. L. Pliler

Water Year	Discharge			Average Percent of silt by weight
	Water Acre-feet	Silt tons	Silt Acre-feet	
1936-37 1/	48,040	1,830	1	.003
1937-38*	3,610,000	8,881,220	5,826	.181
1938-39	986,600	735,150	481	.055
1939-40*	1,334,000	906,750	596	.050
1940-41	3,869,000	979,240	642	.019
1941-42	986,400	121,570	80	.009
1942-43	1,788,000	328,050	215	.013
1943-44	1,392,380	186,590	122	.010
1944-45	1,751,000	444,540	292	.019
1945-46	1,554,930	256,770	170	.012
TOTALS	17,320,350	12,841,710	8,425	

For period of 9.164 years.

Average discharge in acre-feet per year	1,890,042
Average acre-feet of silt per year	919
Average acre-feet of silt per year per square mile of contributing watershed	.034
Average tons of silt per year	1,401,320
Average percent of silt by weight	.054
Drainage area in square miles (net)	26,360

1/ Station was established August 2, 1937
2/ All samples for 1945-46 taken from Montopolis Bridge.
Note: A water-year extends from October 1 to the following September 30, inclusive.

*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.

SILT RECORD

Colorado River at Austin, 1945-46

Month	Discharge			Silt percent by weight
	Water Acre-feet	Silt tons	Silt Acre-feet	
(1945)				
October	118,400	26,150	17	.016
November	121,400	21,090	14	.013
December	129,800	29,070	19	.016
(1946)				
January	133,700	21,290	14	.012
February	99,730	32,030	21	.024
March	114,800	33,370	22	.021
April	114,000	22,120	15	.014
May	167,400	34,630	23	.015
June	124,500	10,750	7	.006
July	118,100	8,430	6	.005
August	169,600	13,860	9	.006
September	143,500	3,980	3	.002
Totals	1,554,930	256,770	170	.012

U. S. G. S. yearly discharge in acre-feet	1,554,930
Total silt for year in acre-feet	170
Acre-feet of silt per year per sq. mile of contributing watershed	.006
Average percent of silt by weight for year	.012
Drainage area in square miles (net)	26,360

SILT RECORD
(As of Sept. 30, 1946)

Prepared by
TEXAS BOARD OF WATER ENGINEERS
and
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Soil Conservation Service
Division of Irrigation

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			Average percent of silt by weight
	Water Acre-feet	Silt tons	Silt Acre-feet	
1941-42 1/	167,150	164,150	108	.072
1942-43	145,600	79,630	52	.040
1943-44	272,800	401,650	262	.108
1944-45	304,900	190,830	126	.046
1945-46	185,100	148,700	96	.059
TOTALS	1,075,550	984,960	644	

For period of 4.748 years.

Average discharge in acre-feet per year	226,527
Average acre-feet of silt per year	136
Average acre-feet of silt per year per square mile of contributing watershed	:095
Average tons of silt per year	207,447
Average percent of silt by weight	:067
Drainage area in square miles (net)	1,432

1/ Station was established January 1, 1942.

Note: A water-year extends from October 1 to the following September 30, inclusive.

SILT RECORD

Guadalupe River at Spring Branch, 1945-46

Month	Discharge			Silt percent by weight
	Water Acre-feet	Silt tons	Silt Acre-feet	
(1945)				
October	20,210	16,380	11	.060
November	9,290	1,660	1	.013
December	23,640	27,640	18	.009
(1946)				
January	14,640	2,960	2	.015
February	17,170	6,510	4	.028
March	19,110	9,080	6	.035
April	14,480	3,420	2	.017
May	29,970	47,120	31	.012
June	13,920	3,790	2	.020
July	5,480	560	0	.008
August	3,340	440	0	.010
September	13,830	29,140	19	.015
Totals	185,100	148,700	96	.059

U. S. G. S. yearly discharge in acre-feet	185,100
Total silt for year in acre-feet	96
Acre-feet of silt per year per sq. mile of contributing watershed	.067
Average percent of silt by weight for year	.059
Drainage area in square miles (net)	1,432

SILT RECORD
(As of Sept. 30, 1946

Prepared by
TEXAS BOARD OF WATER ENGINEERS
and
UNITED STATES DEPARTMENT OF AGRICULTURE
Soil Conservation Service
Division of Irrigation

Stream: GUADALUPE
Station: VICTORIA
Sampler: A. E. Anders

(Samples taken from bridge on U. S. Highway No. 59)

Water Year	Discharge			Average percent of silt by weight
	Water Acre-feet	Silt tons	Silt Acre-feet	
1944-45 1/	38,430	19,480	13	
1945-46	1,320,000	949,130	624	.053
TOTALS	1,358,430	968,610	637	

For period of 1.083 years.

Average discharge in acre-feet per year	1,254,321
Average acre-feet of silt per year	588
Average acre-feet of silt per year per square mile of contributing watershed	.112
Average tons of silt per year	894,377
Average per cent of silt by weight	.052
Drainage area in square miles (net)	5,676

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

SILT RECORD

Guadalupe River at Victoria, 1945-46

Month	Discharge			Silt percent by weight
	Water Acre-feet	Silt tons	Silt Acre-feet	
(1945)				
October	77,990	50,380	33	.047
November	47,730	16,440	11	.025
December	63,730	28,400	19	.033
(1946)				
January	77,710	51,200	34	.048
February	102,500	96,880	64	.069
March	189,700	216,580	142	,084
April	91,740	54,010	35	.043
May	127,100	85,470	56	.049
June	139,700	81,230	53	.043
July	49,660	5,490	4	.008
August	64,260	33,300	22	.038
September	287,700	229,750	151	.059
Totals	1,320,000	949,130	624	.053

U. S. G. S. yearly discharge in acre-feet---------- 1,320,000

Total silt for year in acre-feet---------- 624

Acre-feet of silt per year per sq. mile of contributing watershed---------- .110

Average percent of silt by weight for year---------- .053

Drainage area in square miles (net)---------- 5,676

SILT RECORD
(As of Sept. 30, 1946)

Prepared by
TEXAS BOARD OF WATER ENGINEERS
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UNITED STATES DEPARTMENT OF AGRICULTURE
Soil Conservation Service
Division of Irrigation

Stream: LAVACA
Station: EDNA

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

Water Year	Discharge			Average percent of silt by weight
	Water Acre-feet	Silt tons	Silt Acre-feet	
1944-45	980	570	0	---
1945-46	266,300	327,240	215	.090
TOTALS	267,280	327,810	215	

For period of 1.083 years.

Average discharge in acre-feet per year	246,796
Average acre-feet of silt per year	199
Average acre-feet of silt per square mile of contributing watershed	.224
Average tons of silt per year	302,687
Average per cent of silt by weight	.090
Drainage area in square miles (net)	887

1/ Station established September 1, 1945.

SILT RECORD

Lavaca River at Edna, 1945-46

Month	Discharge			Silt percent by weight
	Water Acre-feet	Silt tons	Silt Acre-feet	
(1945)				
October	2,600	1,680	1	.047
November	1,210	290	0	.018
December	1,990	1,110	1	.041
(1946)				
January	5,090	4,690	3	.041
February	27,790	59,430	39	.157
March	14,920	38,200	25	.188
April	6,380	10,820	7	.125
May	10,130	19,430	13	.141
June	49,230	75,470	50	.113
July	6,560	11,270	7	.126
August	43,840	33,430	22	.056
September	96,590	71,420	47	.054
Totals	266,300	327,240	215	.090

U. S. G. S. yearly discharge in acre-feet---------- 266,300

Total silt for year in acre-feet---------- 215

Acre-feet of silt per year per sq. mile of contributing watershed---------- .242

Average percent of silt by weight for year---------- .090

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

SILT RECORD
(As of Sept. 30, 1946)

Prepared by
TEXAS BOARD OF WATER ENGINEERS
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Division of Irrigation

Stream: ANGELINA
Station: HORGER (Samples taken from bridge on State Highway No. 63 between Zavalla and Jasper)

Water Year	Discharge			Average percent of silt by weight
	Water Acre-feet	Silt tons	Silt Acre-feet	
1944-45 1/	19,470	11,020	7	.042
1945-46	3,869,000	1,826,050	1,198	.035
TOTALS	3,888,470	1,837,070	1,205	

For period of 1.083 years.

Average discharge in acre-feet per year	3,590,462
Average acre-feet of silt per year	1,113
Average acre-feet of silt per year per square mile of contributing watershed	.324
Average tons of silt per year	1,696,279
Average per cent of silt by weight	.035
Drainage area in square miles (net)	3,435

1/ Station established September 1, 1945.

SILT RECORD

Angelina River at Horger, 1945-46

Month	Discharge			Silt percent by weight
	Water Acre-feet	Silt tons	Silt Acre-feet	
(1945)				
October	165,700	121,060	79	.054
November	84,990	39,300	26	.034
December	178,200	106,620	70	.044
(1946)				
January	688,100	368,660	242	.039
February	885,500	497,610	326	.041
March	569,100	266,150	175	.034
April	345,700	134,330	88	.029
May	371,100	126,820	83	.025
June	393,800	121,060	79	.023
July	94,020	20,940	14	.016
August	33,690	8,440	6	.018
September	59,400	15,060	10	.019
Totals	3,869,000	1,826,050	1,198	.035

U. S. G. S. yearly discharge in acre-feet---------- 3,869,000

Total silt for year in acre-feet---------- 1,826,050 1,198

Acre-feet of silt per year per sq. mile of contributing watershed---------- .349

Average percent of silt by weight for year---------- .035

Drainage area in square miles (net)---------- 3,435

SILT RECORD
(As of Sept. 30, 1946)

Prepared by
TEXAS BOARD OF WATER ENGINEERS
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Soil Conservation Service
Division of Irrigation

Stream: NECHES
Station: NEAR ROCKLAND (Samples were taken from bridge on U. S. Highway 69 between Woodville and Lufkin)
Sampler: George W. Jones

Water Year	Discharge			Average percent of silt by weight
	Water Acre-feet	Silt tons	Silt Acre-feet	
1929-30 1/	10,620	290		.002
1930-31	1,490,000	229,220	151	.011
1931-32	2,560,000	193,940	128	.006
1932-33	1,400,000	144,700	95	.008
1933-34	1,550,000	174,070	112	.008
1934-35	2,602,000	297,100	194	.008
1935-36	1,041,000	140,280	91	.010
1936-37	928,400	110,180	71	.009
1937-38	1,400,000	225,940	147	.012
1938-39	854,400	140,590	91	.012
1939-40	1,098,000	227,590	149	.015
1940-41	3,578,000	586,140	384	.012
1941-42	2,522,000	550,920	361	.016
1942-43	748,500	316,090	207	.031
1943-44	3,230,410	1,865,580	1,223	.042
1944-45	3,396,000	1,967,220	1,290	.043
1945-46	3,535,000	1,285,240	845	.027
TOTALS	31,944,330	8,455,090	5,539	

For period of 16.148 years

Average discharge in acre-feet per year	1,978,222
Average acre-feet of silt per year	343
Average acre-feet of silt per year per square mile of contributing watershed	.097
Average tons of silt per year	523,600
Average percent of silt by weight	.019
Drainage area in square miles (net)	3,539

1/ Station was established August 8, 1930.

Note: A water-year extends from October 1 to the following September 30, inclusive.

SILT RECORD

Neches River near Rockland, 1945-46

Month	Discharge			Silt percent by weight
	Water Acre-feet	Silt tons	Silt Acre-feet	
(1945)				
October	116,110	72,790	48	.046
November	83,570	36,330	24	.032
December	135,600	78,410	51	.042
(1946)				
January	442,700	202,180	133	.034
February	782,800	379,320	249	.036
March	531,900	210,000	138	.029
April	336,900	94,070	62	.021
May	421,100	81,040	53	.014
June	458,900	89,290	59	.014
July	117,100	25,260	17	.016
August	25,800	7,120	5	.020
September	82,440	9,430	6	.008
Totals	3,535,000	1,285,240	845	.027

U. S. G. S. yearly discharge in acre-feet	3,535,000
Total silt for year in acre-feet	845
Acre-feet of silt per year per sq. mile of contributing watershed	.239
Average percent of silt by weight for year	.027
Drainage area in square miles (net)	3,539

SILT RECORD
(As of Sept. 30, 1946)

Prepared by
TEXAS BOARD OF WATER ENGINEERS
AND
UNITED STATES DEPARTMENT OF AGRICULTURE
Soil Conservation Service
Division of Irrigation

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

Water Year	Discharge			Average percent of silt by weight
	Water Acre-feet	Silt tons	Silt Acre-feet	
1941-42 1/	141,400	64,130	42	.033
1942-43	64,240	33,270	22	.038
1943-44	482,500	367,860	241	.056
1944-45	82,440	65,460	43	.058
1945-46	347,600	284,210	186	.060
TOTALS	1,118,180	814,930	534	

For period of 4.748 years.

Average discharge in acre-feet per year	235,505
Average acre-feet of silt per year	112
Average acre-feet of silt per year per square mile of contributing watershed	.010
Average tons of silt per year	171,636
Average per cent of silt by weight	.054
Drainage area in square miles (net)	5,260

1/ Station was established January 1, 1942.

Note: A water-year extends from Oct 1 to the following September 30, inclusive.

SILT RECORD

Nueces River at Cotulla, 1945-46

Month	Discharge			Silt percent by weight
	Water Acre-feet	Silt tons	Silt Acre-feet	
(1945) October	182,300	173,080	114	.070
November	172	60	0	.026
December	45	0	0	0
(1946) January	38	0	0	0
February	12	0	0	0
March	94	20	0	.016
April	84,300	57,720	38	.050
May	37,400	33,390	22	.066
June	19,380	5,220	3	.020
July	320	60	0	.014
August	1,000	620	0	.046
September	22,550	14,040	9	.046
Totals	347,600	284,210	186	.060

U. S. G. S. yearly discharge in acre-feet	347,600
Total silt for year in acre-feet	186
Acre-feet of silt per year per sq. mile of contributing watershed	.035
Average percent of silt by weight for year	.060
Drainage area in square miles (net)	5,260

SILT RECORD
(As of Sept. 30, 1946)

Prepared by
TEXAS BOARD OF WATER ENGINEERS
and
UNITED STATES DEPARTMENT OF AGRICULTURE
Soil Conservation Service
Division of Irrigation

Stream: NUECES
Station: NEAR THREE RIVERS (Samples were taken 2 miles south of Three Rivers from railroad bridge, except at extreme low stage when samples were taken at low dam)
Sampler: Carl Franze

Water Year	Discharge			Average percent of silt by weight
	Water Acre-feet	Silt tons	Silt Acre-feet	
1927-28 1/	318,927	617,917	405	.142
1928-29	741,299	1,303,605	855	.129
1929-30	596,507	721,443	473	.089
1930-31	456,000	443,420	291	.071
1931-32	1,010,000	581,880	381	.042
1932-33	287,000	275,050	179	.070
1933-34	254,000	668,320	438	.193
1934-35	2,547,000	2,383,630	1,565	.069
1935-36	768,200	752,320	494	.072
1936-37	318,000	142,270	94	.033
1937-38	479,700	771,540	506	.118
1938-39	306,600	450,960	297	.108
1939-40	840,200	1,035,600	679	.091
1940-41	1,301,000	1,635,320	1,073	.092
1941-42	1,108,000	987,340	648	.065
1942-43	260,500	323,990	213	.091
1943-44	700,090	668,660	439	.070
1944-45	297,100	590,010	387	.146
1945-46	927,400	1,134,770	744	.090
TOTALS	13,517,523	15,488,045	10,161	

For period of 19.000 years.

Average discharge in acre-feet per year	711,448
Average acre-feet of silt per year	535
Average acre-feet of silt per year per square mile of contributing watershed	.034
Average tons of silt per year	815,160
Average percent of silt by weight	.084
Drainage area in square miles (net)	15,600

1/ Station was established October 1, 1927.

Note: A water-year extends from October 1 to the following September 30, inclusive.

SILT RECORD

Nueces River at Three Rivers, 1945-46

Month	Discharge			Silt percent by weight
	Water Acre-feet	Silt tons	Silt Acre-feet	
(1945)				
October	248,000	273,000	179	.081
November	1,600	830	1	.038
December	1,170	530	0	.033
(1946)				
January	2,120	920	1	.032
February	2,180	2,570	2	.087
March	12,200	38,660	25	.233
April	38,930	79,930	52	.151
May	151,000	203,030	133	.099
June	127,700	154,180	101	.089
July	3,880	2,280	1	.043
August	76,920	147,310	97	.141
September	261,700	231,530	152	.065
Totals	927,400	1,134,770	744	.090

U. S. G. S. yearly discharge in acre-feet	927,400
Total silt for year in acre-feet	744
Acre-feet of silt per year per sq. mile of contributing watershed	.048
Average percent of silt by weight for year	.090
Drainage area in square miles (net)	15,600

SILT RECORD
(As of Sept. 30, 1946)

Prepared by
TEXAS BOARD OF WATER ENGINEERS
and
UNITED STATES DEPARTMENT OF AGRICULTURE
Soil Conservation Service
Division of Irrigation

Stream: NUECES
Station: CORPUS CHRISTI DAM
Sampler: EDDIE WRIGHT

(Samples taken below and adjacent to outlet gates).

Water Year	Discharge			Average percent of silt by weight
	Water Acre-feet	Silt tons	Silt Acre-feet	
1941-42 1/	1,203,000	546,500	358	.033
1942-43	249,600	44,790	29	.013
1943-44	740,310	323,550	212	.032
1944-45	273,800	125,070	81	.034
1945-46	936,900	350,430	231	.027
TOTALS	3,403,610	1,390,340	911	

For period of 4.660 years.

Average discharge in acre-feet per year	730,388
Average acre-feet of silt per year	195
Average acre-feet of silt per year per square mile of contributing watershed	.012
Average tons of silt per year	298,356
Average percent of silt by weight	.030
Drainage area in square miles (net)	16,660

1/ Station was established February 2, 1942.

Note: A water-year extends from October 1 to the following September 30, inclusive.

SILT RECORD

Nueces River at Corpus Christi Dam
1945-46

Month	Discharge			Silt percent by weight
	Water Acre-feet	Silt tons	Silt Acre-feet	
(1945)				
October	232,100	118,390	78	.037
November	3,430	1,360	1	.029
December	3,920	1,740	1	.033
(1946)				
January	3,240	1,940	1	.044
February	2,890	1,070	1	.027
March	10,580	3,100	2	.022
April	26,510	5,830	4	.016
May	158,200	33,320	22	.015
June	139,000	21,090	14	.011
July	6,760	870	1	.009
August	33,280	6,030	4	.013
September	317,000	155,690	102	.036
Totals	936,900	350,430	231	.027

U. S. G. S. yearly discharge in acre-feet---------- 936,900

Total silt for year in acre-feet---------- 231

Acre-feet of silt per year per sq. mile of contributing watershed---------- .014

Average percent of silt by weight for year---------- .027

Drainage area in square miles (net)---------- 16,660

SILT RECORD
(As of Sept. 30, 1945)

Prepared by
TEXAS BOARD OF WATER ENGINEERS
and
UNITED STATES DEPARTMENT OF AGRICULTURE
Soil Conservation Service
Division of Irrigation

Stream: PEASE
Station: CROWELL
Sampler: J. F. Bailey

(Samples were taken from highway bridge about 10 miles north of Crowell on U.S. Highway No. 283)

Water Year	Discharge			Average percent of silt by weight
	Water Acre-feet	Silt tons	Silt Acre-feet	
1941-42 1/	36,630	485,320	318	.973
1942-43	80,680	601,090	394	.547
1943-44	54,190	908,130	596	1.231
1944-45	96,060	1,591,185	1,043	1.217
1945-46	83,922	1,261,850	826	1.105
TOTALS	351,482	4,847,575	3,177	

For period of 4.252 years.

Average discharge in acre-feet per year	82,663
Average acre-feet of silt per year	747
Average acre-feet of silt per year per square mile of contributing watershed	.310
Average tons of silt per year	1,140,069
Average percent of silt by weight	1.013
Drainage area in square miles (net)	2,410

1/ Station was established July 1, 1942.

Note: A water-year extends from October 1 to the following September 30, inclusive.

SILT RECORD
Pease River at Crowell, 1945-46
(Red River Watershed)

Month	Discharge			Silt percent by weight
	Water Acre-feet	Silt tons	Silt Acre-feet	
(1945)				
October	2,090	2,732	2	.096
November	388	237	0	.045
December	313	162	0	.038
(1946)				
January	793	448	0	.041
February	397	407	0	.075
March	104	94	0	.066
April	37	30	0	.060
May	3,590	68,530	45	1.402
June	19,670	355,630	233	1.328
July	2,710	18,650	12	.506
August	1,980	33,880	22	1.257
September	51,850	781,050	512	1.107
Totals	83,922	1,261,850	826	1.105

U. S. G. S. yearly discharge in acre-feet---------- 83,922

Total silt for year in acre-feet---------- 826

Acre-feet of silt per year per sq. mile of contributing watershed---------- .343

Average percent of silt by weight for year---------- 1.105

Drainage area in square miles (net)---------- 2,410

SILT RECORD 1/
(As of Sept. 30, 1946)

Prepared by
TEXAS BOARD OF WATER ENGINEERS
and
UNITED STATES DEPARTMENT OF AGRICULTURE
Soil Conservation Service
Division of Irrigation

Stream: SABINE
Station: RULIFF (Samples taken from bridge on State Highway No. 87 between Deweyville, Texas and Starks, La.)

Water Year	Discharge			Average percent of silt by weight
	Water Acre-feet	Silt tons	Silt Acre-feet	
1/				
1944-45	115,800	78,760	52	.050
1945-46	12,240,000	6,171,670	3,331	.037
TOTALS	12,355,800	6,250,430	3,383	

For period of 1.083 years.

Average discharge in acre-feet per year	11,408,864
Average acre-feet of silt per year	3,124
Average acre-feet of silt per year per square mile of contributing watershed	.331
Average tons of silt per year	5,771,404
Average per cent of silt by weight	.037
Drainage area in square miles (net)	9,440

1/ Station established September 1, 1945.

SILT RECORD

Sabine River at Ruliff, 1945-46 [1/]

Month	Discharge			Silt percent by weight
	Water Acre-feet	Silt tons	Silt Acre-feet	
(1945)				
October	512,400	359,350	236	.052
November	299,000	186,070	122	.046
December	610,500	334,570	219	.040
(1946)				
January	1,779,000	826,620	542	.034
February	2,233,000	1,225,010	803	.040
March	1,766,000	974,160	639	.041
April	987,000	335,130	220	.025
May	998,900	268,910	176	.020
June	1,964,000	370,390	243	.014
July	769,100	138,400	91	.013
August	179,100	42,700	28	.018
September	143,600	19,000	12	.010
Totals	12,240,000	6,171,670	3,331	.037

U. S. G. S. yearly discharge in acre-feet	12,240,000
Total silt for year in acre-feet	3,331
Acre-feet of silt per year per sq. mile of contributing watershed	.353
Average percent of silt by weight for year	.037
Drainage area in square miles (net)	9,440

1/ Station established September 1, 1945.

SILT RECORD
(As of Sept. 30, 1946)

Prepared by
TEXAS BOARD OF WATER ENGINEERS
and
UNITED STATES DEPARTMENT OF AGRICULTURE
Soil Conservation Service
Division of Irrigation

Stream: SABINE
Station: LOGANSPORT (Samples were taken from highway bridge
Sampler: R. E. Davenport in downtown Logansport)

Water Year	Discharge			Average percent of silt by weight
	Water Acre-feet	Silt tons	Silt Acre-feet	
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;400	137;020	89	.012
1936-37	1;690;000	270;430	176	.012
1937-38	3;155;000	537;990	353	.013
1938-39	1;326;000	291;500	190	.016
1939-40	1;303;000	458;990	301	.026
1940-41	4;876;000	825;330	541	.012
1941-42	3,817;000	1,439;880	944	.028
1942-43	1;717,000	999;370	655	.043
1943-44	4;193;000	3;002,050	1;969	.053
1944-45	5;997;000	4;502;820	2;953	.055
1945-46	5,137,000	2,650,320	1,738	.038
TOTALS	36,681,210	15,625,620	10,243	

For period of 12.156 years.

Average discharge in acre-feet per year	3,017,539
Average acre-feet of silt per year	843
Average acre-feet of silt per year per square mile of contributing watershed	.174
Average tons of silt per year	1,285,424
Average per cent of silt by weight	.031
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: A water-year extends from October 1 to the following September 30, inclusive.

SILT RECORD
Sabine River at Logansport, 1945-46

Month	Discharge			Silt percent by weight
	Water Acre-feet	Silt tons	Silt Acre-feet	
(1945)				
October	272,500	209,950	138	.057
November	116,500	76,860	50	.048
December	209,200	150,690	99	.053
(1946)				
January	754,900	511,320	335	.050
February	867,600	586,410	385	.050
March	721,200	435,760	286	.044
April	335,100	189,140	124	.041
May	533,300	186,380	122	.026
June	1,186,000	276,480	181	.017
July	66,560	20,150	13	.022
August	21,500	4,170	3	.014
September	52,640	3,010	2	.004
Totals	5,137,000	2,650,320	1,738	.038

U. S. G. S. yearly discharge in acre-feet	5,137,000
Total silt for year in acre-feet	1,738
Acre-feet of silt per year per sq. mile of contributing watershed	.358
Average percent of silt by weight for year	.038
Drainage area in square miles (net)	4,858

SILT RECORD
(As of Sept. 30, 1946)

Prepared by
TEXAS BOARD OF WATER ENGINEERS
and
UNITED STATES DEPARTMENT OF AGRICULTURE
Soil Conservation Service
Division of Irrigation

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

Water Year	Discharge			Average percent of silt by weight
	Water Acre-feet	Silt tons	Silt Acre-feet	
1941-42 1/	699,600	848,340	556	.089
1942-43	453,200	581,740	382	.094
1943-44	365,100	725,630	475	.146
1944-45	352,500	567,440	371	.118
1945-46	663,080	1,387,180	910	.154
TOTALS	2,533,480	4,110,330	2,694	

For period of 4.748 years.

Average discharge in acre-feet per year	533,589
Average acre-feet of silt per year	567
Average acre-feet of silt per year per square mile of contributing watershed	.145
Average tons of silt per year	865,697
Average percent of silt by weight	.119
Drainage area in square miles (net)	3,914

1/ Station was established January 1, 1942.

Note: A water-year extends from October 1 to the following September 30, inclusive.

SILT RECORD

San Antonio River at Goliad, 1945-46

Month	Discharge			Silt percent by weight
	Water Acre-feet	Silt tons	Silt Acre-feet	
(1945)				
October	26,950	36,260	24	.099
November	15,110	8,020	5	.039
December	16,130	11,070	7	.050
(1946)				
January	20,990	16,740	11	.059
February	22,050	46,940	31	.156
March	30,810	101,740	67	.242
April	44,140	100,400	66	.167
May	97,310	307,600	202	.232
June	65,250	194,220	127	.218
July	16,380	23,780	16	.107
August	51,260	118,020	77	.169
September	256,700	422,390	277	.121
Totals	663,080	1,387,180	910	.154

U. S. G. S. yearly discharge in acre-feet---------- 663,080

Total silt for year in acre-feet---------- 1,387,180 910

Acre-feet of silt per year per sq. mile of contributing watershed---------- .232

Average percent of silt by weight for year---------- .154

Drainage area in square miles (net)---------- 3,914

SILT RECORD
(As of Sept. 30, 1946)

Prepared by
TEXAS BOARD OF WATER ENGINEERS
and
UNITED STATES DEPARTMENT OF AGRICULTURE
Soil Conservation Service
Division of Irrigation

Stream: SAN JACINTO
Station: HUFFMAN (Samples taken at Sheldon pumping plant,
Sampler: H. B. Scott City of Houston)

Water Year	Discharge			Average percent of silt by weight
	Water Acre-feet	Silt tons	Silt Acre-feet	
1944-45	221,940 1/	163,730	107	.054
1945-46	2,247,000	1,345,020	881	.044
TOTALS	2,468,940	1,508,750	988	

For period of 1.083 years.

Average discharge in acre-feet per year	2,279,723
Average acre-feet of silt per year	912
Average acre-feet of silt per year per square mile of contributing watershed	.327
Average tons of silt per year	1,393,121
Average per cent of silt by weight	.045
Drainage area in square miles (net)	2,791

1/ Station established September 1, 1945.

SILT RECORD

San Jacinto River at Huffman, 1945-46 [1/]

Month	Discharge			Silt percent by weight
	Water Acre-feet	Silt tons	Silt Acre-feet	
(1945) October	44,690	34,410	23	.057
November	18,790	9,630	6	.038
December	153,800	118,690	78	.057
(1946) January	364,200	237,940	156	.048
February	396,200	270,590	177	.050
March	288,900	259,010	190	.066
April	46,440	15,700	10	.025
May	421,800	246,610	162	.043
June	260,600	116,630	76	.033
July	213,800	29,280	19	.010
August	15,560	2,720	2	.013
September	21,920	3,810	2	.013
Totals	2,247,000	1,345,020	881	.044

U. S. G. S. yearly discharge in acre-feet	2,399,000
Total silt for year in acre feet	881
Acre-feet of silt per year per sq. mile of contributing watershed	.316
Average percent of silt by weight for year	.044
Drainage area in square miles (net)	2,791

1/ Station established September 1, 1945.

SILT RECORD
(As of Sept. 30, 1946)

Prepared by
TEXAS BOARD OF WATER ENGINEERS
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Soil Conservation Service
Division of Irrigation

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

Water Year	Discharge			Average percent of silt by weight
	Water Acre-feet	Silt tons	Silt Acre-feet	
1932-33 1/	253,210	144,800	93	.042
1933-34 2/	7,450	520	0	.005
1936-37 3/	12,540	1,370	1	.008
1937-38	491,900	150,650	97	.022
1938-39	319,500	120,660	77	.028
1939-40	282,700	162,070	105	.042
1940-41	2,566,000	896,050	588	.026
1941-42	909,200	373,670	245	.030
1942-43	545,800	290,820	191	.039
1943-44	881,200	660,570	434	.055
1944-45	1,577,400	1,241,490	815	.058
1945-46	1,320,330	774,810	509	.043
TOTALS	9,167,230	4,817,480	3,155	

For period of 10.337 years

Average discharge in acre-feet per year	886,837
Average acre-feet of silt per year	305
Average acre-feet of silt per year per square mile of contributing watershed	.168
Average tons of silt per year	466,042
Average percent of silt by weight	.039
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: A water-year extends from October 1 to the following September 30, inclusive.

SILT RECORD
San Jacinto River at Humble, 1945-46

Month	Discharge			Silt percent by weight
	Water Acre-feet	Silt tons	Silt Acre-feet	
(1945)				
October	26,450	19,140	13	.053
November	9,200	4,540	3	.036
December	74,690	51,630	34	.051
(1946)				
January	220,000	146,310	96	.049
February	235,300	150,300	99	.047
March	183,700	191,230	125	.076
April	28,110	9,510	6	.025
May	279,200	135,320	89	.036
June	152,700	39,900	26	.019
July	91,160	25,370	17	.020
August	6,670	950	1	.010
September	13,150	610	0	.003
Totals	1,320,330	774,810	509	.043

U. S. G. S. yearly discharge in acre feet---------- 1,320,330

Total silt for year in acre-feet---------- 509

Acre-feet of silt per year per sq. mile of contributing watershed---------- .281

Average percent of silt by weight for year---------- .043

Drainage area in square miles (net)---------- 1,811

SILT RECORD
(As of Sept. 30, 1946)

Prepared by
TEXAS BOARD OF WATER ENGINEERS
and
UNITED STATES DEPARTMENT OF AGRICULTURE
Soil Conservation Service
Division of Irrigation

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

Water Year	Discharge			Average percent of silt by weight
	Water Acre-feet	Silt tons	Silt Acre-feet	
1/				
1935-36	42,130	5,220	4	.009
1936-37	3,901,000	3,481,600	2,285	.066
1937-38	6,753,000	6,741,220	4,423	.073
1938-39	2,165,000	3,199,280	2,099	.109
1939-40	3,218,000	4,999,040	3,280	.114
1940-41	12,260,000	9,657,990	6,335	.058
1941-42	9,901,000	9,447,990	6,197	.070
1942-43	4,298,000	4,914,950	3,224	.084
1943-44	7,588,000	11,433,850	7,501	.111
1944-45	12,200,000	13,559,310	8,893	.082
1945-46	8,392,000	8,643,330	5,670	.076
TOTALS	70,718,130	76,083,780	49,911	

For period of 10.142 years,

Average discharge in acre-feet per year	6,972,799
Average acre-feet of silt per year	4,921
Average acre-feet of silt per year per square mile of contributing watershed	.286
Average tons of silt per year	7,501,852
Average percent of silt by weight	.079
Drainage area in square miles (net)	17,190

1/ Station was established August 10, 1936.

Note: A water-year extends from October 1 to the following September 30, inclusive.

SILT RECORD

Trinity River at Romayor, 1945-46

Month	Discharge			Silt percent by weight
	Water Acre-feet	Silt tons	Silt Acre-feet	
(1945)				
October	513,400	821,250	539	.118
November	201,900	198,730	130	.072
December	323,400	298,840	196	.068
(1946)				
January	846,900	1,021,610	670	.089
February	1,314,000	1,674,840	1099	.094
March	1,278,000	1,458,940	957	.084
April	383,200	273,760	180	.052
May	1,368,000	1,432,080	939	.077
June	1,704,000	1,184,760	777	.051
July	202,700	147,550	97	.053
August	57,800	7,710	5	.010
September	198,200	123,260	81	.046
Totals	8,392,000	8,643,330	5,670	.076

U. S. G. S. yearly discharge in acre-feet---------- 8,392,000

Total silt for year in acre-feet---------- 8,643,330 5,670

Acre-feet of silt per year per sq. mile of contributing watershed---------- .330

Average percent of silt by weight for year---------- .076

Drainage area in square miles (net)---------- 17,190

SUMMARY OF SILT RECORDS COVERING MAJOR STREAMS OF TEXAS

Prepared by TEXAS BOARD OF WATER ENGINEERS AND UNITED STATES DEPARTMENT OF AGRICULTURE

Austin, Texas — As of September 30, 1946

Water-shed	Stream	Silt station	Years samples taken	Total length record	Average per Year: Run-off	Average per Year: Silt		Silt per sq mi of water-shed	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	2,813	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.Fk.	Aspermont 1/	1924-33	9.244	135,280	2,665	406,240	1.765	2.206	1,510
Brazos	Clear Fk.	Crystal Falls 1/	1925-29	3.307	214,440	568	866,020	.131	.297	4,320
Brazos	Clear Fk.	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	1945-46	1.083	622,696	735	1,120,397	.207	.132	3,547
Brazos	Navasota	Easterly	1942-46	4.748	432,060	306	466,000	.322	.087	949
Brazos	Brazos	South Bend	1942-46	4.710	444,395	2,072	3,158,135	.168	.522	12,360
Brazos	Brazos	Possum K. Dam	1942-46	4.710	452,624	109	167,522	.008	.027	13,310
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	.94 %*	29,190
Brazos	Brazos	Richmond	1924-46	22.306	6,009,051	25,397	38,772,640	.730	.474	34,810
Colorado	Llano	Llano	1942-46	4.167	191,313	173	262,676	.043	.101	4,000
Colorado	Pedernales	Johnson City	1942-46	4.167	174,083	271	412,532	.286	.173	947
Colorado	Colorado	San Saba	1930-46	16.055	1,290,918	3,239	4,938,072	.172	.281	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	1942-46	4.167	754,992	83	126,688	.004	.012	19,490
Colorado	Colorado	Austin 4/	1937-46	9.164	1,890,390	919	1,401,320	.034	.054	26,360
Colorado	Colorado	Columbus-E.Lake	30-33; 37-41	6.997	3,167,710	5,898	8,991,960	.202	.209	29,140

*Percent of silt by volume

1/ 4/ Progress reports by numbers showing date by months when station was discontinued.

(continued)

Watershed	Stream	Silt station	Years samples taken	Total Length Record	Average per year			Silt per sq mi of watershed	Silt by weight	Net drainage area
					Run-off	Silt				
				Years	ac-ft	ac-ft	tons	ac-ft	per-cent	sq mi
Guadalupe	Guadalupe	Spring Branch	1942-46	4.748	369;735	136	207;447	.095	.041	1;432
Guadalupe	Guadalupe	Victoria	1945-46	1.083	1,254;321	588	894;377	.112	.052	5,676
Lavaca	Lavaca	Edna	1945-46	1.083	246;796	199	302;687	.224	.090	887
Neches	Angelina	Horger	1945-46	1.083	3;590;462	1,113	1,696;279	.032	.035	3;435
Neches	Neches	Rockland	1930-46	16.148	1,978;222	343	523;600	.097	.019	3;539
Nueces	Nueces	Cotulla	1942-46	4.748	235;505	112	171;636	.010	.054	5;260
Nueces	Nueces	Three Rivers	1927-46	19.000	711,448	535	815,160	.034	.084	15,600
Nueces	Nueces	Corpus Christi Dam	1942-46	4.660	730;388	195	298;356	.012	.030	16;660
Rio Grande	Rio Grande	Eagle Pass	1934-43 5/	9.068	3;180;057	9;776	14;904;545	.078	.344	125;260
Rio Grande	Rio Grande	Roma	1929-43 5/	14.184	4,166;619	12,588	19;192;311	.080	.338	157;204
Red	Pease	Crowell	1942-46	4.252	82;663	747	1,140,069	.310	1.013	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	32-33,35-46	12.156	2;827;556	762	1;168;078	.006	.050	4;858
Sabine	Sabine	Ruliff 2/	1945-46	1.083	11,139;040	3,124	5,771;404	.003	.039	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	1942-46	4.748	533;589	567	865,697	.014	.119	3;914
San Jacinto	West Fork	Humble	32-33,37-46	10.337	886;837	305	466;042	.168	.039	1;811
San Jacinto	San Jacinto	Huffman 2/	1945-46	1.083	2,279;723	912	1;393;121	.327	.045	2;791
Trinity	Trinity	Rosser 1/	1938-40	1.598	760;700	986	1;504;920	.122	.145	8;057
Trinity	Trinity	Romayor	1936-46	10.142	6,972,799	4,921	7,501,852	.286	.079	17,190

1/ Silt progress reports by numbers showing data by months when station was discontinued.
2/ Station established September 1, 1945.
* Percent by volume.