Flood Stages and Discharges For Small Streams in Texas

Compilation of Data through September 1969

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES DIVISION

In cooperation with the Texas Highway Department and the U. S. Department of Transportation, Federal Highway Administration

Flood Stages and Discharges For Small Streams in Texas

By E. E. Schroeder

U.S. GEOLOGICAL SURVEY
WATER RESOURCES DIVISION
I. D. Yost, District Chief

Texas District Open-File Report
Research Study 4-5-65-85
Interim Report No. 85-5

Compilation of Data through September 1969

In cooperation with the Texas Highway Department and the U. S. Department of Transportation, Federal Highway Administration

December 1971

CONTENTS

Page

Introduction---------- 1
Program objective---------- 1
Program planning---------- 1
Instrumentation---------- 2
Status of the program---------- 3
Martin Street pump station---------- 5
Program for the year ending September 30, 1969---------- 5
Discontinued stations---------- 11
Hydrologic conditions---------- 11
Data compilation---------- 12
Definition of terms---------- 13
Selected references---------- 14
Station data---------- 103
Arkansas River basin---------- 104
East Fork Cheyenne Creek tributary near Channing, Tex. (4)---------- 104
Tecovas Creek tributary near Bushland, Tex. (4)---------- 105
White Woman Creek tributary near Darrouzett, Tex. (4)---------- 106
Red River basin---------- 107
Middle Tule Draw near Tulia, Tex. (5)---------- 107
Rock Creek tributary near Silverton, Tex. (25)---------- 108
North Groesbeck Creek tributary near Kirkland, Tex. (25)---- 109
Oklahoma Draw tributary near Hedley, Tex. (25)---------- 110
Doodlebug Creek near Wheeler, Tex. (25)---------- 111
Cottonwood Creek tributary near Afton, Tex. (25)---------- 112
Plum Creek near Vernon, Tex. (3)---------- 113
Beaver Creek tributary near Crowell, Tex. (25)---------- 114
Wolf Creek near Iowa Park, Tex. (3)---------- 115
North Fork Little Wichita River tributary near Archer City, Tex. (3)---------- 116
Farmers Creek near Saint Jo, Tex. (3)---------- 117
Cooper Creek near Bonham, Tex. (1)---------- 118
McKinney Bayou near Leary, Tex. (19)---------- 119
Nelson Branch near Leonard, Tex. (1)---------- 120
Dial Branch near Bagwell, Tex. (1)---------- 121
Buck Creek near Cookville, Tex. (19)---------- 122
Dragoo Creek near Mount Pleasant, Tex. (19)---------- 123
Williamson Creek near Pittsburg, Tex. (19)---------- 124
Cypress Creek tributary near Jefferson, Tex. (19)---------- 125
Taylor Branch near Smithland, Tex. (19)---------- 126
Sabine River basin---------- 127
Burnett Branch near Canton, Tex. (10)---------- 127
Grace Creek tributary at Longview, Tex. (10)---------- 128
Redmond Branch near Hallsville, Tex. (19)---------- 129

Page

Station data - Continued
Sabine River basin - Continued
Dorsey Branch near Milam, Tex. (11)---------- 130
Moore Branch near Newton, Tex. (20)---------- 131
Adams Bayou tributary near Deweyville, Tex. (20)---------- 132
Neches River basin---------- 133
Bethlehem Branch near Van, Tex. (10)---------- 133
Hurricane Creek tributary near Palestine, Tex. (10)--------- 134
One Arm Creek near Maydelle, Tex. (10)---------- 135
Squirrel Creek near Elkhart, Tex. (10)---------- 136
Piney Creek tributary near Pennington, Tex. (11)---------- 137
Shawnee Creek tributary near Huntington, Tex. (11)---------- 138
Greenwood Creek tributary near Colmesneil, Tex. (20)-------- 139
Gingham Branch near Mount Enterprise, Tex. (10)---------- 140
Little Sandy Creek tributary near Jasper, Tex. (20)--------- 141
Drakes Branch near Spurger, Tex. (20)---------- 142
Double Bayou basin---------- 143
West Fork Double Bayou near Anahuac, Tex. (20)---------- 143
Trinity River basin---------- 144
North Creek near Jacksboro, Tex. (2) a/---------- 144
Walker Creek near Boyd, Tex. (2)---------- 145
West Creek at Fort Worth, Tex. (2)---------- 146
Dry Branch at Blandin St., Fort Worth, Tex. (2) a/---------- 147
Dry Branch at Fain St., Fort Worth, Tex. (2) a/---------- 148
Little Fossil Creek at Interstate Highway 820,
Fort Worth, Tex. (2) a/---------- 149
Little Fossil Creek at Mesquite St.,
Fort Worth, Tex. (2) a/---------- 150
Deer Creek tributary near Crowley, Tex. (2)---------- 151
Elm Fork Trinity River subwatershed No. 6-0 near
Muenster, Tex. (3) a/---------- 152
Little Elm Creek subwatershed No. 10 near
Gunter, Tex. (18) a/---------- 153
Jones Valley Creek tributary near Forestburg, Tex. (3)------ 154
Gamble Branch near Argyle, Tex. (18)---------- 155
Joes Creek at State Highway 114, Dallas, Tex. (18) a/------- 156
Bachman Branch at Dallas, Tex. (18) a/---------- 157
Turtle Creek at Dallas, Tex. (18) a/---------- 158
Coombs Creek at Sylvan Avenue, Dallas, Tex. (18) a/--------- 159
Cedar Creek at Bonnie View Road, Dallas, Tex. (18) a/------- 160
Spanky Branch at McCallum Lane, Dallas, Tex. (18) a/-------- 161
Cottonwood Creek at Forest Lane, Dallas, Tex. (18) a/------- 162
Floyd Branch at Forest Lane, Dallas, Tex. (18) a/---------- 163
Ash Creek at Highland Road, Dallas, Tex. (18) a/---------- 164

Page

Station data - Continued
Trinity River basin - Continued
Forney Creek at Lawnview Avenue, Dallas, Tex. (18) a/------- 165
Fivemile Creek at U.S. Highway 77, Dallas, Tex. (18) a/----- 166
Woody Branch at U.S. Highway 77, Dallas, Tex. (18) a/------- 167
Fivemile Creek at Lancaster Road, Dallas, Tex. (18) a/------ 168
Honey Creek subwatershed No. 11 near
McKinney, Tex. (18) a/---------- 169
Honey Creek subwatershed No. 12 near
McKinney, Tex. (18) a/---------- 170
Arls Branch near Westminister, Tex. (18)---------- 171
Duck Creek at Buckingham Road, Garland, Tex. (18) a/-------- 172
South Mesquite Creek at State Highway 352,
Garland, Tex. (18) a/---------- 173
Bachelor Creek near Terrell, Tex. (18)---------- 174
Red Oak Branch near Eustace, Tex. (10)---------- 175
Briar Creek tributary near Corsicana, Tex. (18)---------- 176
Pin Oak Creek near Hubbard, Tex. (9) a/---------- 177
Alvarado Branch near Alvarado, Tex. (2)---------- 178
Kings Branch near Reagor Springs, Tex. (18)---------- 179
Saline Branch tributary near Bethel, Tex. (10)---------- 180
Mayes Branch near Latexo, Tex. (11)---------- 181
Bluff Creek tributary near Livingston, Tex. (11)---------- 182
Tanner Bayou tributary near Moss Hill, Tex. (20)---------- 183
San Jacinto River basin---------- 184
Welch Branch near Huntsville, Tex. (17)---------- 184
Landrum Creek tributary near Montgomery, Tex. (12)---------- 185
Mill Creek tributary near Dobbin, Tex. (12)---------- 186
Bear Creek near Cleveland, Tex. (11)---------- 187
Stoney Brook Street Ditch at Houston, Tex. (12) a/---------- 188
Bering Ditch at Woodway Drive, Houston, Tex. (12) a/-------- 189
Cole Creek at Guhn Road, Houston, Tex. (12) a/---------- 190
Cole Creek at Deihl Road, Houston, Tex. (12) a/---------- 191
Brickhouse Gully at Clarblak St., Houston, Tex. (12) a/----- 192
Brickhouse Gully at Costa Rica St., Houston, Tex. (12) a/--- 193
Keegans Bayou at Keegan Road near Houston, Tex. (12) a/----- 194
Keegans Bayou at Roark Road near Houston, Tex. (12) a/------ 195
Bintliff Ditch at Bissonnet St., Houston, Tex. (12) a/------ 196
Willow Waterhole Bayou at Landsdowne St.,
Houston, Tex. (12) a/---------- 197
Sims Bayou at Carlsbad St., Houston, Tex. (12) a/---------- 198
Sims Bayou at Hiram Clarke St., Houston, Tex. (12) a/------- 199
Berry Bayou at Gilpin St., Houston, Tex. (12) a/---------- 200
Berry Bayou tributary at Globe St., Houston, Tex. (12) a/--- 201

Page

Station data - Continued
San Jacinto River basin - Continued
Berry Bayou at Forest Oak St., Houston, Tex. (12) a/-------- 202
Berry Creek at Galveston Road, Houston, Tex. (12) a/-------- 203
Hunting Bayou tributary at Cavalcade St., Houston, Tex. (12) a/---------- 204
Hunting Bayou at Falls St., Houston, Tex. (12) a/---------- 205
Hunting Bayou at U.S. Highway 90-A, Houston, Tex. (12) a/--- 206
Greens Bayou at Cutten Road near Houston, Tex. (12) a/------ 207
Halls Bayou at Deertrail St., Houston, Tex. (12) a/--------- 208
Halls Bayou at Houston, Tex. (12) a/---------- 209
Clear Creek basin---------- 210
Clear Creek tributary at Hall Road, Houston, Tex. (12) a/--- 210
Clear Creek near Friendswood, Tex. (12) a/---------- 211
Cowart Creek near Friendswood, Tex. (12)---------- 212
Highland Bayou basin---------- 213
Highland Bayou at Hitchcock, Tex. (12) a/---------- 213
Highland Bayou tributary near Texas City, Tex. (12) a/------ 214
Brazos River basin---------- 215
Playa Draw at Littlefield, Tex. (5)---------- 215
Barnum Springs Draw near Post, Tex. (5)---------- 216
Rattlesnake Creek near Post, Tex. (5)---------- 217
Guest-Flowers Draw near Aspermont, Tex. (8)---------- 218
Callahan Draw near Lockney, Tex. (5)---------- 219
Red Mud Creek near Spur, Tex. (25)---------- 220
North Elm Creek near Throckmorton, Tex. (3)---------- 221
Humphries Draw near Haskell, Tex. (8)---------- 222
Pecan Creek near Eolian, Tex. (23) a/---------- 223
Salt Creek at Olney, Tex. (3) a/---------- 224
Briar Creek near Graham, Tex. (3) a/---------- 225
Elm Creek tributary near Graford, Tex. (2)---------- 226
Cidwell Branch near Granbury, Tex. (2)---------- 227
Morris Branch near Bluff Dale, Tex. (2)---------- 228
Panter Branch near Tolar, Tex. (2)---------- 229
Bond Branch near Hillsboro, Tex. (9)---------- 230
Cobb Creek near Abbott, Tex. (9) a/---------- 231
Green Creek subwatershed No. 1 near Dublin, Tex. (2) a/----- 232
South Bosque River near McGregor, Tex. (9)---------- 233
Willow Branch at McGregor, Tex. (9)---------- 234
Box Branch at Robinson, Tex. (9)---------- 235
Cow Bayou subwatershed No. 4 near Bruceville, Tex. (9) a/---------- 236
Little Pond Creek at Burlington, Tex. (17) a/---------- 237
Sabana River tributary near De Leon, Tex. (23)---------- 238

Page

Station data - Continued
Brazos River basin - Continued
Eidson Creek near Hamilton, Tex. (9)---------- 239
Bermuda Branch near Gatesville, Tex. (9)---------- 240
Hoffman Branch near Hamilton, Tex. (9)---------- 241
School Branch near Lampasas, Tex. (23)---------- 242
Fleece Branch near Lampasas, Tex. (23)---------- 243
South Fork San Gabriel River near Bertram, Tex. (14)-------- 244
Avery Branch near Taylor, Tex. (14)---------- 245
Little Branch near Bryan, Tex. (17)---------- 246
Plummers Creek at Mexia, Tex. (9)---------- 247
Burton Creek at Villa Maria Road, Bryan, Tex. (17) a/------- 248
Hudson Creek near Bryan, Tex. (17) a/---------- 249
Winkleman Creek near Brenahm, Tex. (17)---------- 250
Seabourne Creek near Rosenberg, Tex. (12)---------- 251
Dry Creek near Rosenberg, Tex. (12) a/---------- 252
San Bernard River basin---------- 253
Mound Creek tributary at Guy, Tex. (12)---------- 253
Colorado River basin---------- 254
Sulphur Springs Draw near Wellman, Tex. (5)---------- 254
Coahoma Draw tributary near Big Spring, Tex. (8)---------- 255
Bull Creek tributary near Forsan, Tex. (8)---------- 256
Bitter Creek near Silver, Tex. (7)---------- 257
Fish Creek tributary near Hylton, Tex. (8)---------- 258
Dry Creek near Christoval, Tex. (7)---------- 259
Quarry Creek near Sterling City, Tex. (7)---------- 260
Broome Creek near Broome, Tex. (7)---------- 261
Nolke Station Creek near San Angelo, Tex. (7)---------- 262
Gravel Pit Creek near San Angelo, Tex. (7)---------- 263
Puddle Creek near Veribest, Tex. (7)---------- 264
Frog Pond Creek near Eden, Tex. (7)---------- 265
Mukewater Creek subwatershed No. 10A near Trickham, Tex. (23) a/---------- 266
Mukewater Creek subwatershed No. 9 near Trickham, Tex. (23) a/---------- 267
Deep Creek subwatershed No. 3 near Placid, Tex. (23) a/----- 268
Deep Creek subwatershed No. 8 (Dry Prong Deep Creek) near Mercury, Tex. (23) a/---------- 269
Dry Prong Deep Creek near Mercury, Tex. (23) a/---------- 270
McCall Branch near Coleman, Tex. (23)---------- 271
Browns Creek tributary near Goldthwaite, Tex. (23)---------- 272
Brady Creek tributary near Brady, Tex. (23)---------- 273
Llano River tributary near London, Tex. (7)---------- 274
Stone Creek tributary near Art, Tex. (14)---------- 275

Page

Station data - Continued
Colorado River basin - Continued
Johnson Creek near Valley Spring, Tex. (14)---------- 276
Little Flatrock Creek near Marble Falls, Tex. (14)---------- 277
Spring Creek near Fredericksburg, Tex. (14)---------- 278
Cane Branch at Stonewall, Tex. (14)---------- 279
Waller Creek at 38th St., Austin, Tex. (14) a/---------- 280
Waller Creek at 23d St., Austin, Tex. (14) a/---------- 281
Fox Branch near Oak Hill, Tex. (14)---------- 282
Wilbarger Creek near Pflugerville, Tex. (14) a/---------- 283
Reeds Creek near Bastrop, Tex. (14)---------- 284
Redgate Creek near Columbus, Tex. (13) a/---------- 285
Dry Branch tributary near Altair, Tex. (13)---------- 286
Guadalupe River basin---------- 287
Turtle Creek tributary near Kerrville, Tex. (15)---------- 287
Rebecca Creek near Spring Branch, Tex. (15) a/---------- 288
Trough Creek near New Braunfels, Tex. (15)---------- 289
West Prong Dry Comal Creek tributary near New Braunfels, Tex. (15)---------- 290
Walnut Branch at Sequin, Tex. (15)---------- 291
East Pecan Branch near Gonzales, Tex. (13)---------- 292
West Elm Creek near Niederwald, Tex. (14)---------- 293
Irish Creek near Cuero, Tex. (13)---------- 294
Threemile Creek near Cuero, Tex. (13)---------- 295
Olmos Creek tributary at Farm Road 1535, Shavano Park, Tex. (15) a/---------- 296
Olmos Creek at Dresden Drive, San Antonio, Tex. (15) a/----- 297
Alazan Creek at St. Cloud St., San Antonio, Tex. (15) a/---- 298
Panther Springs Creek at Farm Road 2696 near San Antonio, Tex. (15) a/---------- 299
Salado Creek tributary at Bitters Road, San Antonio, Tex. (15) a/---------- 300
Bandera Creek tributary near Bandera, Tex. (15)---------- 301
Medina River tributary near Pipe Creek, Tex. (15)---------- 302
Leon Creek tributary at Farm Road 1604, San Antonio, Tex. (15) a/---------- 303
French Creek tributary near Helotes, Tex. (15)---------- 304
Helotes Creek at Helotes, Tex. (15) a/---------- 305
Calaveras Creek subwatershed No. 6 near Elmendorf, Tex. (15) a/---------- 306
Escondido Creek subwatershed No. 1 near Kenedy, Tex. (16) a/---------- 307
Escondido Creek subwatershed No. 11 (Dry Escondido Creek) near Kenedy, Tex. (16) a/---------- 308

Page

Station data - Continued
Guadalupe River basin - Continued
Baugh Creek at Goliad, Tex. (16)---------- 309
Aransas River basin---------- 310
Olmos Creek tributary near Skidmore, Tex. (16)---------- 310
Nueces River basin---------- 311
Plant Creek near Tilden, Tex. (15)---------- 311
East Elm Creek near Sabinal, Tex. (15)---------- 312
Bone Creek near Hondo, Tex. (15)---------- 313
Leona River tributary near Uvalde, Tex. (22)---------- 314
Rutledge Hollow Creek at Poteet, Tex. (15)---------- 315
Lucas Creek near Pleasanton, Tex. (15)---------- 316
Petronilla Creek basin---------- 317
Pintas Creek tributary near Banquette, Tex. (16)---------- 317
San Fernando Creek basin---------- 318
Tranquitas Creek at Kingsville, Tex. (16) a/---------- 318
North Las Animas Creek tributary near Freer, Tex. (21)------ 319
Rio Grande basin---------- 320
McKelligon Canyon at El Paso, Tex. (24) a/---------- 320
Government Ditch at El Paso, Tex. (24) a/---------- 321
Camp Rice Arroyo tributary near Fort Hancock, Tex. (24)----- 322
Wildhorse Creek tributary near Van Horn, Tex. (24)---------- 323
Rio Grande tributary near Langtry, Tex. (22)---------- 324
Delaware River tributary near Orla, Tex. (24)---------- 325
Courtney Creek tributary near Fort Stockton, Tex. (6)------- 326
Lake Leon tributary near Fort Stockton, Tex. (6)---------- 327
Monument Draw tributary at Pyote, Tex. (6)---------- 328
Three Mile Mesa Creek near Fort Stockton, Tex. (6)---------- 329
Howards Creek tributary near Ozona, Tex. (7)---------- 330
Sonora Field Creek at Sonora, Tex. (7)---------- 331
Rough Canyon tributary near Del Rio, Tex. (22)---------- 332
Evans Creek tributary near Del Rio, Tex. (22)---------- 333
Zorro Creek near Del Rio, Tex. (22)---------- 334
East Perdido Creek near Brackettville, Tex. (22)---------- 335
Arroyo San Bartolo at Zapata, Tex. (21)---------- 336
Rio Grande tributary near Rio Grande City, Tex. (21)-------- 337
Rio Grande tributary near Sullivan City, Tex. (21)---------- 338

(4) Numbers in parentheses identify Highway Districts in which the stations are located.

a/ Small watershed streamflow station in the U.S. Geological Survey network financed by funds from agencies other than the Texas Highway Department.

ILLUSTRATIONS

Page

Figure 1. Map showing gaging stations on small streams in Texas, September 30, 1969----------In pocket
2. Inflow-outflow hydrographs and rainfall-runoff mass curves, Martin Street pump station at Interstate Highway 35, San Antonio, Tex., October 3, 1968-------- 6
3. Inflow-outflow hydrographs and rainfall-runoff mass curves, Martin Street pump station at Interstate Highway 35, San Antonio, Tex., November 30, 1968------ 7
4. Inflow-outflow hydrographs and rainfall-runoff mass curves, Martin Street pump station at Interstate Highway 35, San Antonio, Tex., June 24, 1969---------- 8
5. Inflow-outflow hydrographs and rainfall-runoff mass curves, Martin Street pump station at Interstate Highway 35, San Antonio, Tex., September 9, 1969------ 9
6. Inflow-outflow hydrographs and rainfall-runoff mass curves, Martin Street pump station at Interstate Highway 35, San Antonio, Tex., September 23, 1969----- 10

TABLES

Page

Table 1. Notable flood events during the 1969 water year---------- 15
2. Maximum discharge at miscellaneous sites---------- 16
3. Rainfall and inflow for significant storms at the Martin Street pump station, San Antonio, Tex.---------- 17
4. Incremental rainfall and discharge for significant storms---------- 28

FLOOD STAGES AND DISCHARGES FOR SMALL STREAMS IN TEXAS

by

E. E. Schroeder
U.S. Geological Survey

INTRODUCTION

Research Study No. 4-5-65-85, "Hydrologic Investigation of Small Drainage Areas in Texas," is a cooperative program between the Texas Highway Department and the Water Resources Division of the U.S. Geological Survey. This program, which began in September 1964, is financed by funds made available for research by the Texas Highway Department and the U.S. Department of Transportation, Federal Highway Administration.

This report is the fifth in a series of interim reports that describe the objectives, planning of the project, the instrumentation, the progress and status of the project, and the data collected during the year.

Program Objective

The objective of the program is to obtain basic hydrologic data that may be used to define the magnitude and frequency of floods for drainage areas of less than 20 square miles. When sufficient data have been obtained, a magnitude and frequency analysis of floods for streams of less than 20 square miles will be prepared. These data will supplement those used by Patterson (1963).

Program Planning

To accomplish the objective, a network of 151 partial-record crest-stage gages was established. These gages are distributed throughout the State to sample all hydrologic areas and flood-frequency regions as defined by Patterson (1963), and to obtain a representative sample of physical characteristics. Information for unusual peak discharges at ungaged sites is obtained as the opportunity arises.

The present flood-frequency analysis (index-flood method) requires a minimum of 10 years of annual peak-discharge data to satisfy the requirements of statistical methods. About 10 years of peak-discharge data are required to sample the variations associated with a minor climatic cycle.

The planning of this program is also directed toward satisfying the objective by the use of methods other than the index-flood method. Five principal methods currently being studied by research groups for the purpose of developing a frequency-magnitude relation for drainage areas of less than 20 square miles are:

1. Index-flood method, Gumbel distribution.
2. Log-Pearson Type III distribution.
3. Multiple-regression analysis.
4. Various mathematical models of the hydrologic processes that predict the response of the flood hydrographs to rainfall.
5. Probability distribution methods.

INSTRUMENTATION

Each site is equipped with one or more crest-stage gages and a stage-rainfall recorder. The crest-stage gage consists of two modified 2-inch pipe caps attached to an appropriate length of 2-inch pipe that encloses a wooden or metal rod. The upper cap contains a 1/4-inch vent hole to release trapped air and the lower cap has six 1/4-inch intake holes that allow water to enter. The intake holes in the lower cap are designed to give optimum performance with respect to "drawdown" and "stackup". The gage is mounted in a vertical position on the flood plain.

A small amount of granulated cork is placed inside the 2-inch pipe near the bottom of the inner rod. When a rise occurs, the water entering the pipe floats the cork inside the pipe. At the maximum stage, the cork adheres to the inner rod leaving a distinct "peak mark", the elevation of which is determined from the datum to which the gage was originally set.

A typical installation consists of two crest-stage gages--one headwater gage and one tailwater gage. The headwater gage is located upstream from the culvert at a distance approximately equal to one culvert width in order to record the true water-surface elevation upstream from any drawdown-zone disturbance. The tailwater gage is located downstream from the culvert to record the water-surface elevation at the culvert outlet. The difference between the recorded headwater and tailwater peaks is known as the differential head. A peak rate of flow is determined from the differential head by standard U.S. Geological Survey methods of computation (Bodhaine, 1968).

Additional hydrologic data are obtained at each site by a stage and rainfall recorder (S-R recorder). This recorder is a small compact instrument that records, on a circular chart, the time distribution of rainfall and stage. The recorder chart makes one complete revolution each day. The instrument is ideally suited for recording a single storm between visits, but when more than one storm event occurs between visits the record is superimposed. Although the S-R recorder has limitations, sufficient data can be obtained over a period of time to satisfy the needs for the rainfall-runoff analyses.

STATUS OF THE PROGRAM

The construction phase of the program was completed during the 1967 water year by the addition of 31 gages, making a total of 151 S-R recorders now installed throughout the State. The locations of these gages are shown on figure 1 (in pocket). All combinations of flood-frequency regions and hydrologic areas have been sampled with the exception of subregion 6-A, a low-lying coastal subregion near the Aransas Bay-Nueces Bay area. No suitable site could be found in that area. A complete list of gaging stations is contained in the section "Station Data".

Theoretical stage-discharge ratings have been computed for 142 stations utilizing the culvert geometry and slope in a computer program (Somers and Selner, 1965). These theoretical ratings give the stage-discharge relation from the lowest elevation controlled by the culvert to an elevation at which flow over the roadway begins. Above the roadway, the discharge is a combination of field-determined culvert flow plus the measured or computed flow over the roadway.

The stage-discharge relation for the other nine gages, which are located at bridges, will be defined by current-meter measurements, or by indirect methods such as slope-area, contracted-opening, slope-conveyance, flow-over-roadway embankment, or other special studies.

One provision of the cooperative agreement is to obtain peak discharges for floods of unusual magnitude or for floods creating special problems at miscellaneous or ungaged sites. Notable flood events that occurred during the water year are listed in table 1. During the year, two miscellaneous measurements were obtained (table 2).

Figure 1

Gaging stations on small streams in Texas, October 1, 1969.

(Map is in pocket on back cover of the report)

MARTIN STREET PUMP STATION

A depressed interchange on U.S. Highway 81 in San Antonio was selected as the site for special study. A water-stage recorder equipped with a float-type rain-gage attachment was installed in the Martin Street pump station on August 29, 1966. The objective of this study is to determine the rainfall-runoff relation for a small controlled drainage area having a high percentage of impervious cover. The instrumentation will be moved to another site after sufficient data have been obtained at the Martin Street site.

Data from five storms that occurred during the 1969 water year are tabulated in table 3. The rainfall and runoff, in inches, for these five storms are plotted as mass curves on figures 2-6. Outflow and computed inflow hydrographs are also shown. The computed inflow is the average rate during a time increment and is plotted as a bar·graph. Inflow is computed from the algebraic sum of the change in contents of the wet well and the pumpage during the selected time increment.

Results of data collected to date indicate that the hydrographs of flow into the wet-well system can be computed in this manner with high accuracy.

PROGRAM FOR THE YEAR ENDING SEPTEMBER 30, 1970

Data from existing gages will be collected and tabulated. Stage-discharge curves will be defined and extended as the need arises. Operation and maintenance will be performed as required.

Watershed characteristics as follows will be tabulated for each watershed on a 7-1/2-minute series USGS topographic map, scale 1:24,000: (1) Drainage area, (2) main-channel length measured from the gage to the drainage divide, and (3) a slope index.

There is no standard method of determining a slope index; however, the unit slope between points located 85 and 10 percent of the channel length above the gage is a significant factor when used as an independent variable in regression analysis (Benson, 1962). In these analyses, the 85-10 slope index is generally second only to drainage area in statistical significance when correlated with peak discharge.

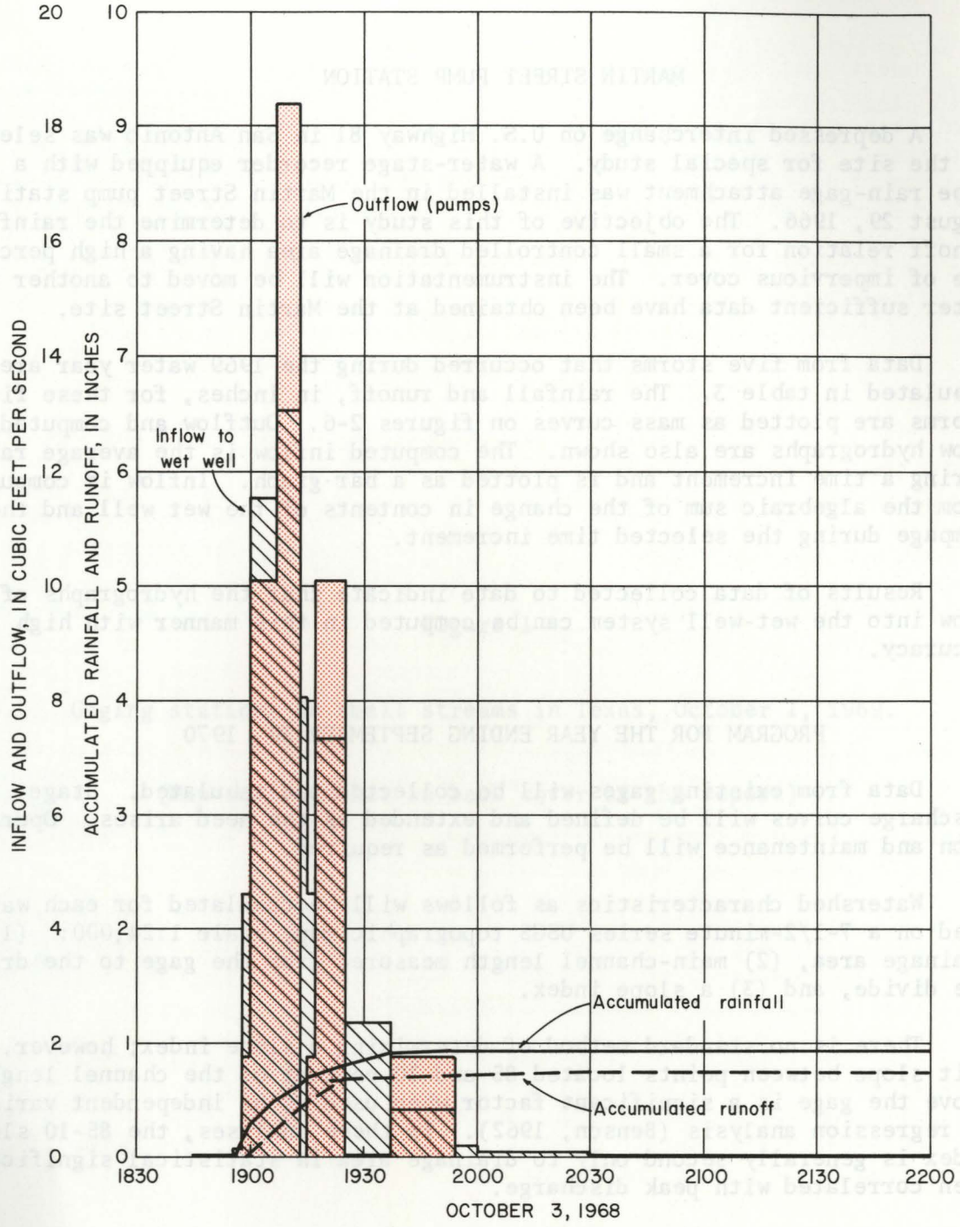


FIGURE 2

Inflow-outflow hydrographs and rainfall-runoff mass curves, Marlin Street pump station at Interstate Highway 35, San Antonio, Texas, October 3, 1968

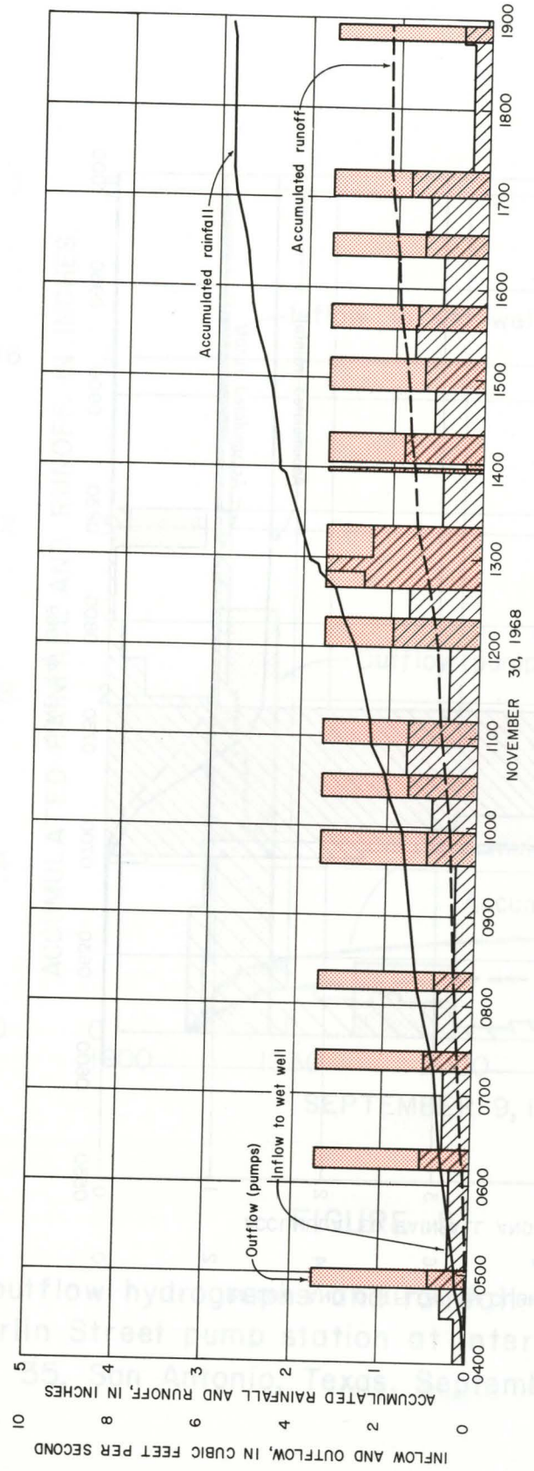


FIGURE 3

Inflow-outflow hydrographs and rainfall-runoff mass curves, Marlin Street pump station at Interstate Highway 35, San Antonio, Texas, November 23, 1968

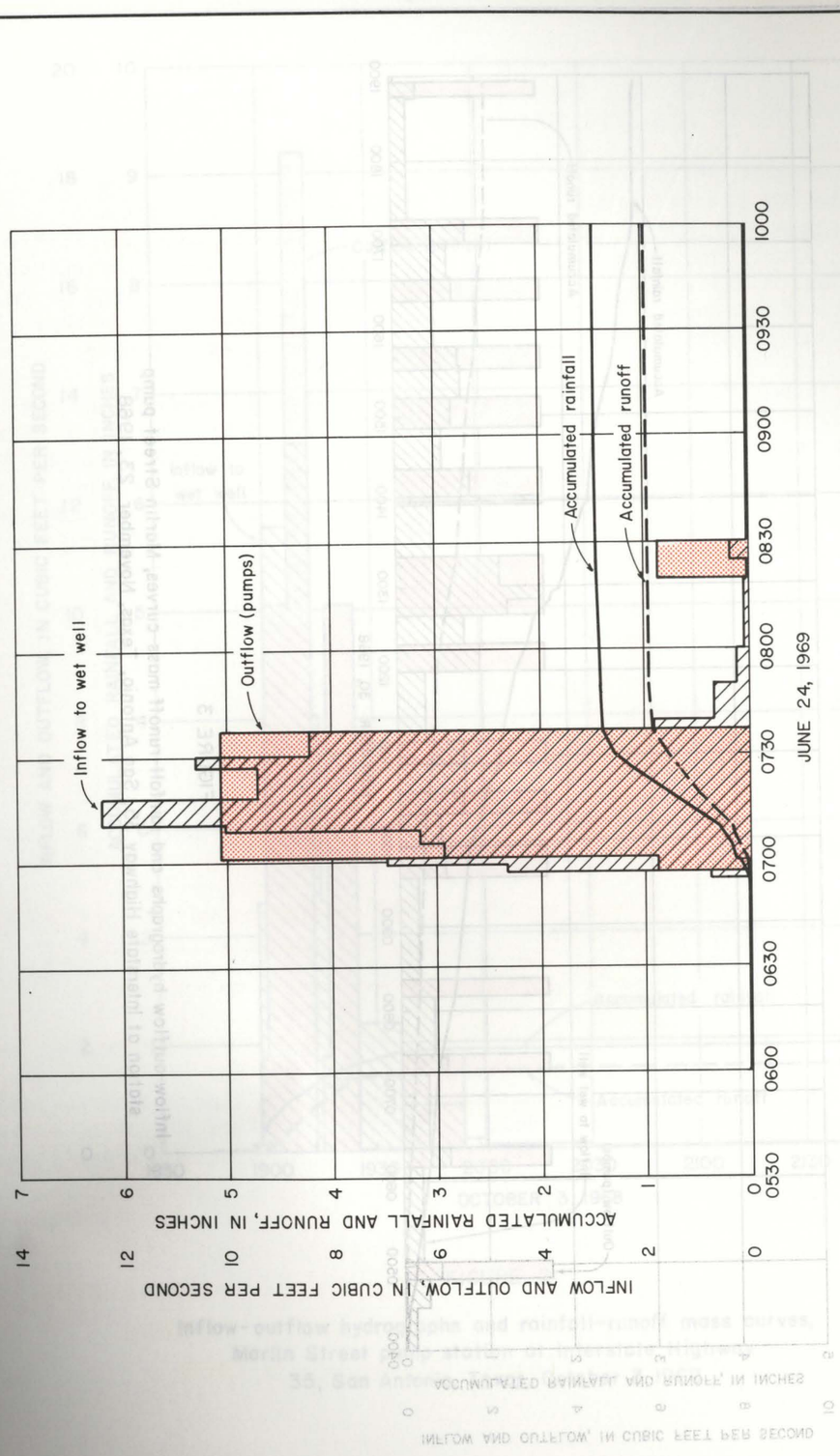


FIGURE 4

Inflow-outflow hydrographs and rainfall-runoff mass curves, Marlin Street pump station at Interstate Highway 35, San Antonio, Texas, JUNE 24, 1969

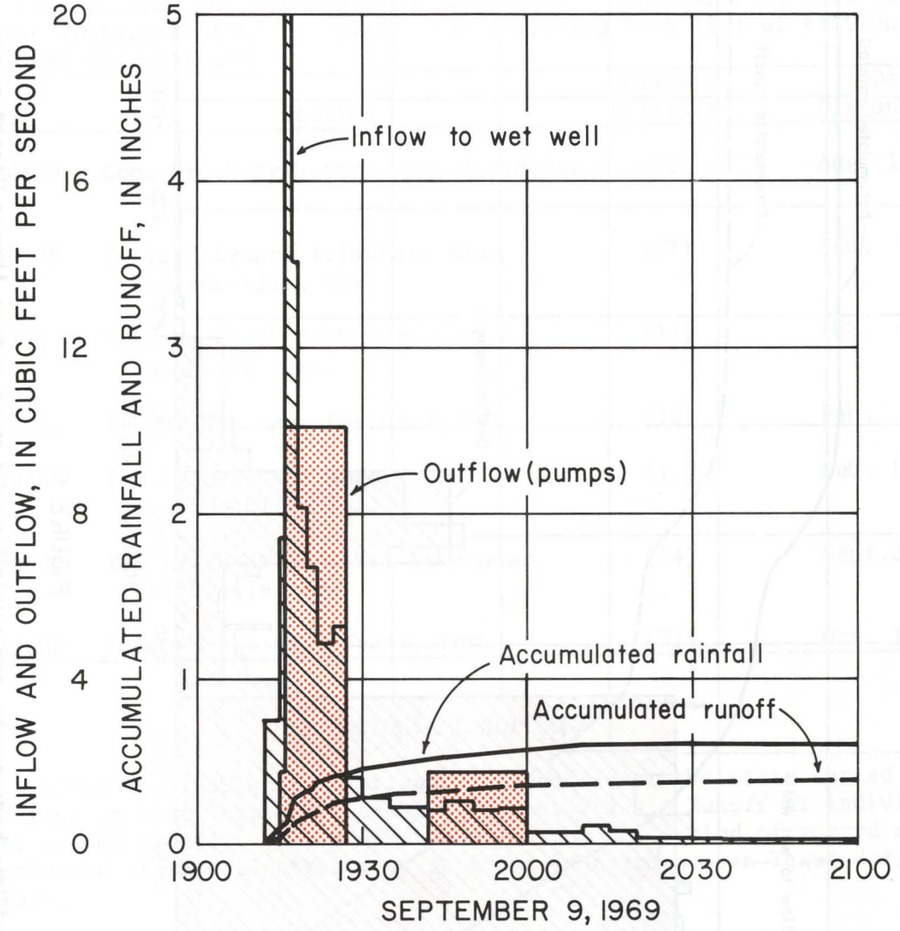


FIGURE 5

Inflow-outflow hydrographs and rainfall-runoff mass curves, Marlin Street pump station at Interstate Highway 35, San Antonio, Texas, September 9, 1969

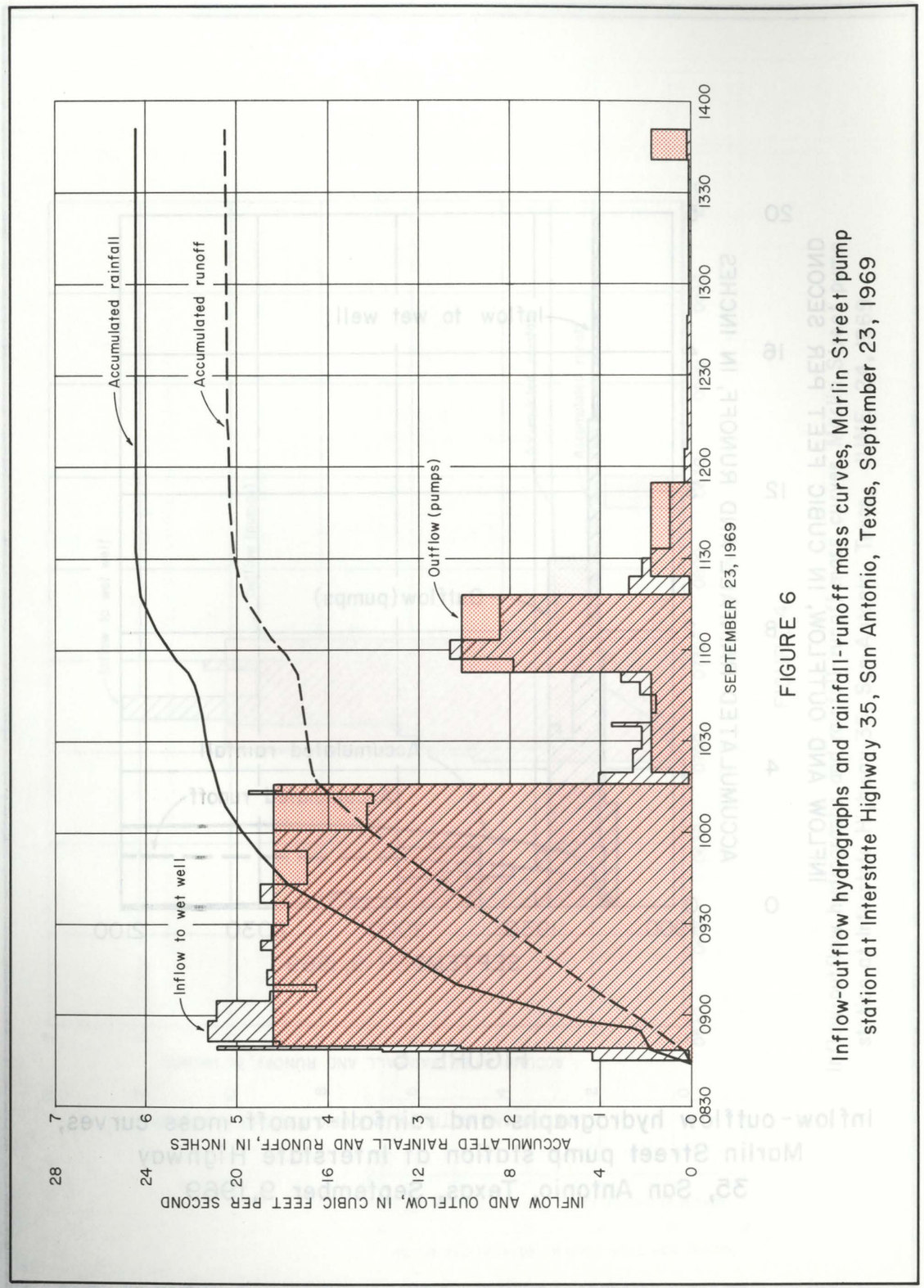


FIGURE 6

Inflow-outflow hydrographs and rainfall-runoff mass curves, Marlin Street pump station at Interstate Highway 35, San Antonio, Texas, September 23, 1969

DISCONTINUED STATIONS

Occasionally, after a station has been established and operated for a period of time, conditions develop that prove the site to be undesirable. When this occurs, the station is discontinued. A new site is then selected and the instrumentation is moved. The following is a list of stations that have been discontinued.

Station No.	Station	Highway District	Date Discontinued
08114800	Coon Creek tributary near Rosenberg, Tex.	(12)	Aug. 11, 1966
08065900	Pollard Branch tributary near Madisonville, Tex.	(17)	Feb. 9, 1967
8069750	McCombs Creek tributary near Oak Hurst, Tex.	(11)	Feb. 9, 1967
08071050	Bee Branch near Fostoria, Tex.	(12)	Feb. 9, 1967
08068150	Brushy Creek tributary near near Hockley, Tex.	(12)	Feb. 10, 1967
08160000	Dry Creek at Buescher Lake near Smithville, Tex.	(14)	Sept.30, 1967
08211600	Hamon Creek near Freer, Tex.	(21)	Oct. 10, 1968

HYDROLOGIC CONDITIONS

During the 1969 water year, annual runoff over the state varied from deficient in west Texas to excessive in east Texas. Runoff at individual sites varied greatly. New peak discharges for the period of record were experienced at several streamflow stations in northeastern Texas during January.

The Concho River watershed experienced deficient runoff during most of the year. The city of San Angelo had to pump from the dead-storage pool of Twin Buttes Reservoir for water supply.

Some degree of flooding occurred during the 8 month period. January through August. This flooding varied in areal extent from relatively small local areas receiving intense summertime thunderstorms to larger coastal areas receiving maritime rain showers ranging up to 11 inches.

DATA COMPILATION

The "station data" section of this report lists the available annual peak data for watersheds of less than 20 square miles. In addition to the 151 Highway Program stations, 84 other stations are included, thereby grouping all of the available continuous data for small watersheds into one volume. These 84 stations are identified in the table of contents by (a/).

All stations are listed in downstream order by station number, which appears to the left of the station name. The number appearing to the right of the station name identifies the Highway District in which the station is located. All stations are plotted on figure 1 and are identified by number. In addition, symbols are used to identify the type of station.

Although the state contractual year ends on August 31, the water year ending on September 30 is used as the 12-month period of data collection so that reporting will be continuous with previously collected streamflow data.

Some notable floods that occurred during the period October 1, 1968, to September 30, 1969, are listed in table 1. This list includes only those floods associated with unusual amounts of rainfall or runoff or for which a special request regarding peak discharge was received. Additional details about some of the more destructive floods are contained in various reports prepared by the U.S. Geological Survey, Texas Water Development Board, U.S. Army Engineers, National Weather Service, U.S. Department of Agriculture, and others.

The measurements of peak discharge at miscellaneous small-area sites obtained during the reporting period are contained in table 2. Additional information concerning these measurements may be obtained from the files of the U.S. Geological Survey district office in Austin, Texas.

Table 3 gives the rainfall and inflow for significant storms at the Martin Street pump station, San Antonio, Texas.

Table 4 is a tabulation of runoff and point rainfall data collected at selected gaging stations. Data for the storm that produced the maximum annual rate of runoff and for other significant storms are listed.

DEFINITION OF TERMS

Some of the terms and abbreviations used in this report are defined as follows:

Gaging station.--A particular site on a stream where systematic observations of gage height or discharge are obtained.

Cubic foot per second (cfs).--the rate of discharge of a stream whose channel is one square foot in cross-sectional area and whose average velocity is one foot per second.

Gage height.--the water-surface elevation referred to some arbitrary gage datum. Gage height is often used interchangeably with the more general term "stage" although gage height is more appropriate when used with a reading on a gage. When the gage is referred to mean sea level datum, the term "elevation" is commonly used instead of gage height.

Drainage area.--of a stream at a specified location is that area, measured in a horizontal plane, which is so enclosed by a topographic divide that direct surface runoff from precipitation normally would drain by gravity into the stream above the specified point. Drainage areas given herein include noncontributing areas unless otherwise noted.

Main-channel length.--the distance, in miles, of the main channel, extended to the watershed divide, as measured with a divider, set to a distance equal to 0.05 mile. Mile zero is at the gaging station.

Slope index.--equal to the difference in elevation between the 85 and 10 percent points, in feet, divided by the main-channel distance between these points, in miles, where these points are 10 and 85 percent of the distance along the main channel upstream from the station.

Time of day.--is expressed in 24-hour local standard time; for example, 12:30 a.m. is 0030 and 1:30 p.m. is 1330.

Water year.--A 12-month period ending on September 30, identified by the year in which it ends; thus, the 12-month period ending September 30, 1969, is identified as the 1969 water year.

SELECTED REFERENCES

Benson, M. A., 1962, Factors influencing the occurrence of floods in a humid region of diverse terrain: U.S. Geol. Survey Water-Supply Paper 1580-B, 64 p.

Bodhaine, G. L., 1968, Measurements of peak discharge at culverts by indirect methods, Techniques of water-resources investigations of the U.S. Geol. Survey, Book 3, Chapter A3, Applications of hydraulics.

Patterson, J. L., 1963, Floods in Texas, magnitude and frequency of peak flow: Texas Water Comm. Bull. 6311.

Ruggles, F. H., Jr., 1966, Floods on small streams in Texas: U.S. Geol. Survey open-file rept. no. 89.

Schroeder, E. E., 1967, Flood stages and discharges for small streams in Texas 1966: Interim Rept. no. 85-2, U.S. Geol. Survey open-file rept.

_____ 1969, Flood stages and discharges for small streams in Texas 1967: Interim Rept. no. 85-3, U.S. Geol. Survey open-file rept.

Somers, W. P., and Selner, G. I., 1965, Computation of stage-discharge relationships at culverts: U.S. Geol. Survey surface-water techniques, Hydraulic measurement and computation, Book 1, Chapter 8.

Table 1.--Notable flood events during the 1969 water year.

Location	Date	Remarks
Middle and Upper Coast	Feb. 13-14, 1969	Flooding at Sinton, hurricane-force winds and high seas along the middle and upper coast.
North Central Texas	May 6- 8, 1969	Major flooding in the upper Trinity and upper Brazos Basins. Three persons drowned in Johnson County and one in Dallas County.
Bailey, Hale, and Lamb Counties	June 13, 1969	Local flooding, two persons drowned.

Table 2.--Maximum discharge at miscellaneous sites.

Basin	Stream	Location	Drainage area (sq mi)	Date	Discharge (cfs)	cfs per sq mi
Brazos	East Buffalo Creek	Lat 32°20'19", long 97°22'48", at Santa Fe Railway Co. bridge, near south boundry of Cleburne, Johnson County.	35.6	5-7-69	18,500	520
Brazos	West Buffalo Creek	Lat 32°20'25", long 97°23'19", at bridge on West Hill Drive, at Cleburne, Johnson County.	11.8	5-7-69	8,870	752

Table 3.--Rainfall and inflow for significant storms at the Martin Street Pump Station, San Antonio, Texas

Drainage area is 6.36 acres, 0.0099375 square mile.

Date and Time	Gage Height	Storage	Time int.	Δ Storage	Outflow		Inflow		Runoff			Rainfall	
Oct. 3 1968	ft	ft^3	min.	ft^3	ft^3/min.	ft^3	ft^3	ft^3/sec.	in/hr	inches	acc. inches	inches	in/hr
1845	14.45 633.95	2,147									0.000		
1855	14.46 633.96	2,149	10	+ 2			2	0.003	0.0005	0.0001	0.000	0	
1858	14.55 634.05	2,172	03	+ 23			23	.128	.020	.001	.001	.18	3.60
1900	15.90 635.40	2,515	02	+ 343	105	210	553	4.608	.719	.024	.025	.30	3.60
1907	17.64 637.14	3,128	07	+ 613	605	4,235	4,848	11.543	1.800	.210	.235	.50	1.71
1913	10.73 630.23	1,202	06	-1,926	1,105	6,630	4,704	13.067	2.038	.204	.439	.63	1.30
1915	14.55 634.05	2,172	02	+ 970		0	970	8.083	1.261	.042	.481	.71	2.40
1917	15.90 635.40	2,515	02	+ 343	105	210	553	4.608	.719	.024	.505	.75	1.20
1925	10.73 630.23	1,202	08	-1,313	605	4,840	3,527	7.348	1.746	.153	.658	.81	.45
1937	14.56 634.06	2,174	12	+ 972		0	972	1.350	.211	.042	.700	.91	.50
1954	10.80 630.30	1,219	17	- 955	105	1,785	830	.814	.127	.036	.736	.93	.07
2000	11.07 630.57	1,288	06	+ 69		0	69	.192	.030	.003	.739	.93	
2030	11.75 631.25	1,461	30	+ 173		0	173	.096	.015	.007	.746	.93	
2100	11.88 631.38	1,493	30	+ 32			32	.018	.003	.001	.747	.93	
2200	11.97 631.47	1,517	60	+ 24			24	.007	.001	.001	.748	.93	

Note.--Texas Highway Department Datum = Gage Height +619.50 ft.

Table 3.--Rainfall and inflow for significant storms at the Martin Street Pump Station, San Antonio, Texas--Continued

Drainage area is 6.36 acres, 0.0099375 square mile.

Date and Time	Gage Height	Storage	Time int.	Δ Storage	Outflow		Inflow		Runoff			Rainfall	
Nov. 30 1968	ft	ft^3	min.	ft^3	ft^3/min.	ft^3	ft^3	ft^3/sec.	in/hr	inches	acc. inches	inches	in/hr
0000	11.94 631.44	1,509									0.000	0.00	
0400	12.40 631.90	1,626	240	+ 117	0	0	+117	0.008	0.001	0.005	0.005	0.01	
0430	13.20 632.70	1,829	30	+ 203	0	0	+203	.113	.018	.009	.014	.04	0.06
0450	14.53 634.03	2,167	20	+ 338	0	0	+338	.282	.044	.015	.028	.12	.24
0502	10.80 630.30	1,219	12	- 948	105	1,260	+312	.433	.068	.014	.042	.14	.10
0610	14.53 634.03	2,167	68	+ 948	0		+948	.232	.036	.041	.083	.30	.14
0623	10.80 630.30	1,219	13	- 948	105	1,365	+417	.535	.083	.018	.107	.33	.14
0716	14.53 634.03	2,167	53	+ 948	0	0	+948	.298	.046	.041	.142	.43	.11
0729	10.79 630.29	1,217	13	- 950	105	1,365	+415	.532	.083	.018	.160	.48	.23
0810	14.53 634.03	2,167	41	+ 950	0	0	+950	.386	.060	.041	.201	.63	.22
0822	10.79 630.29	1,217	12	- 950	105	1,260	+310	.431	.067	.013	.215	.66	.15
0934	14.53 634.03	2,167	72	+ 950	0	0	+950	.220	.034	.041	.256	.80	.12
0947	10.79 630.29	1,217	13	- 950	105	1,365	+415	.532	.083	.018	.274	.82	.09
1019	14.53 634.03	2,167	32	+ 950	0	0	+950	.495	.077	.041	.315	1.00	.34
1035	10.79 630.29	1,217	16	- 950	105	1,680	+730	.760	.119	.032	.347	1.04	.15

Note.--Texas Highway Department Datum = Gage Height +619.50 ft.

Table 3.--Rainfall and inflow for significant storms at the Martin Street Pump Station, San Antonio, Texas--Continued

Drainage area is 6.36 acres, 0.0099375 square mile.

Date and Time	Gage Height	Storage	Time int.	Δ Storage	Outflow		Inflow		Runoff			Rainfall	
Nov. 30 1968	ft	ft^3	min.	ft^3	ft^3/min.	ft^3	ft^3	ft^3/sec.	in/hr	inches	acc. inches	inches	in/hr
1055	14.53 634.03	2,167	20	+ 950	0	0	950	0.792	0.123	0.041	0.388	1.21	0.51
1111	10.80 630.30	1,219	16	- 948	105	1,680	732	.762	.119	.032	.420	1.22	.04
1200	14.53 634.03	2,167	49	+ 948	0	0	948	.322	.050	.041	.461	1.40	.22
1220	10.80 630.30	1,219	20	- 948	105	2,100	1,152	.960	.150	.050	.511	1.53	.39
1240	14.53 634.03	2,167	20	+ 948	0	0	948	.790	.123	.041	.552	1.64	.33
1250	13.47 632.97	1,898	10	- 269	105	1,050	781	1.302	.203	.034	.585	1.81	1.02
1255	13.49 632.99	1,903	05	+ 05	105	525	530	1.767	.276	.023	.608	1.84	.36
1300	13.49 632.99	1,903	05	0	105	525	525	1.750	.273	.023	.631	1.92	.96
1322	10.80 630.30	1,219	22	- 684	105	2,310	1,626	1.232	.192	.070	.702	2.02	.27
1358	14.53 634.03	2,167	36	+ 948	0	0	948	.439	.068	.041	.743	2.22	.33
1400	14.51 634.01	2,162	02	- 05	105	210	205	1.708	.266	.009	.752	2.28	1.80
1404	14.67 634.17	2,202	04	+ 40	0	0	40	.167	.026	.001	.753	2.28	0
1423	10.80 630.30	1,219	19	- 983	105	1,995	1,012	.888	.138	.044	.797	2.31	.09
1452	14.53 634.03	2,167	29	+ 948	0	0	948	.545	.085	.041	.838	2.39	.16
1513	10.80 630.30	1,219	21	- 948	105	2,205	1,257	.998	.156	.054	.892	2.48	.26

Note.--Texas Highway Department Datum = Gage Height +619.50 ft.

Table 3.--Rainfall and inflow for significant storms at the Martin Street Pump Station, San Antonio, Texas--Continued

Drainage area is 6.36 acres, 0.0099375 square mile.

Date and Time	Gage Height	Storage	Time int.	Δ Storage	Outflow		Inflow		Runoff			Rainfall	
Nov. 30 1968	ft	ft^3	min.	ft^3	ft^3/min.	ft^3	ft^3	ft^3/sec.	in/hr	inches	acc. inches	inches	in/hr
1533	14.53 634.03	2,167	20	+ 948	0	0	948	0.790	0.123	0.041	0.934	2.57	0.27
1549	10.80 630.30	1,219	16	- 948	105	1,680	732	.762	.119	.032	.965	2.62	.19
1621	14.53 634.03	2,167	32	+ 948	0	0	948	.494	.077	.041	1.007	2.68	.11
1636	10.80 630.30	1,219	15	- 948	105	1,575	627	.697	.109	.027	1.034	2.72	.16
1701	14.53 634.03	2,167	25	+ 948	0	0	948	.632	.099	.041	1.075	2.82	.24
1719	10.80 630.30	1,219	18	- 948	105	1,890	942	.872	.136	.041	1.116	2.85	.10
1845	14.53 634.03	2,167	86	+ 948	0	0	948	.184	.029	.041	1.151	2.88	.02
1856	10.80 630.30	1,219	11	- 948	105	1,155	207	.314	.049	.009	1.166		
1930	11.17 630.67	1,313	34	+ 94	0	0	94	.046	.007	.004	1.170	2.90	.03
2100	12.18 631.68	1,569	90	+ 256	0	0	256	.047	.007	.011	1.181		
2230	12.92 632.42	1,758	90	+ 189	0	0	189	.035	.005	.008	1.189		
2400	13.51 633.01	1,908	90	+ 150	0	0	150	.028	.004	.006	1.200	2.90	

Note.--Texas Highway Department Datum = Gage Height +619.50 ft.

Table 3.--Rainfall and inflow for significant storms at the Martin Street Pump Station, San Antonio, Texas--Continued

Drainage area is 6.36 acres, 0.0099375 square mile.

Date and Time	Gage Height	Storage	Time int.	Δ Storage	Outflow		Inflow		Runoff			Rainfall	
June 24 1969	ft	ft^3	min.	ft^3	ft^3/min.	ft^3	ft^3	ft^3/sec.	in/hr	inches	acc. inches	inches	in/hr
0000	14.13 633.63	2,065											
0630	14.17 633.67	2,075	390	+ 10	0	0	+10	0.0004	0.0000	0.000	0.000	0.00	0
0655	14.18 633.68	2,077	25	+ 02	0	0	02	.001	.0002	.000	.000	.00	0
0657	14.53 634.03	2,167	02	+ 90	0	0	90	.750	.117	.004	.004	.04	1.20
0659	15.90 635.40	2,515	02	+ 348	105	210	558	4.650	.725	.024	.029	.07	.90
0701	17.66 637.16	3,137	02	+ 622	105	210	832	6.933	1.081	.036	.065	.15	2.40
0705	14.35 633.85	2,121	04	- 1,016	605	2,420	1,404	5.850	.912	.061	.125	.18	.45
0709	10.79 630.29	1,217	04	- 904	605	2,420	1,516	6.317	.985	.066	.191	.28	1.50
0711	10.79 630.29	1,217	02	0	605	1,210	1,210	10.083	1.573	.052	.244	.36	2.40
0718	14.63 634.13	2,192	07	+ 975	605	4,235	5,210	12.405	1.935	.226	.469	.72	3.09
0727	13.10 632.60	1,803	09	- 389	605	5,445	5,056	9.363	1.460	.219	.688	1.16	2.93
0730	13.46 632.96	1,895	03	+ 92	605	1,815	1,907	10.594	1.652	.083	.771	1.30	2.80
0737	10.72 630.22	1,199	07	- 696	605	4,235	3,539	8.426	1.314	.153	.924	1.40	.86
0740	12.00 631.50	1,524	03	+ 325	0	0	325	1.806	.282	.014	.938	1.41	.20
0750	13.56 633.06	1,920	10	+ 396	0	0	396	.660	.103	.017	.956	1.43	.12

Note.--Texas Highway Department Datum = Gage Height +619.50 ft.

Table 3.--Rainfall and inflow for significant storms at the Martin Street Pump Station, San Antonio, Texas--Continued

Drainage area is 6.36 acres, 0.0099375 square mile.

Date and Time	Gage Height	Storage	Time int.	Δ Storage	Outflow		Inflow		Runoff			Rainfall	
June 24 1969	ft	ft^3	min.	ft^3	ft^3/min.	ft^3	ft^3	ft^3/sec.	in/hr	inches	acc. inches	inches	in/hr
0800	14.10 633.60	2,057	10	+ 137	0	0	137	0.228	0.036	0.006	0.961	1.43	0
0820	14.55 634.05	2,172	20	+ 115	0	0	115	.096	.015	.005	.966	1.44	.03
0825	12.45 631.95	1,639	05	- 533	105	525	08	.027	.004	.0003	.967	1.45	.12
0830	10.80 630.30	1,219	05	- 420	105	525	105	.350	.055	.0046	.971	1.45	0
0845	10.90 630.40	1,245	15	+ 26	0	0	26	.029	.005	.0011	.972	1.45	0
0900	10.99 630.49	1,268	15	+ 23	0	0	23	.026	.004	.0010	.973	1.46	.04
1000	11.18 630.68	1,315	60	+ 47	0	0	47	.013	.002	.0020	.976	1.46	0
1100	11.24 630.74	1,331	60	+ 16	0	0	16	.004	.001	.001	.976		
1200	11.25 630.75	1,334	60	+ 03	0	0	03	.001	.000	.0000	.976		
1400	11.27 630.77	1,339	120	+ 05	0	0	05	.000	.000	.0000	.976	1.46	

Note.--Texas Highway Department Datum = Gage Height +619.50 ft.

Table 3.--Rainfall and inflow for significant storms at the Martin Street Pump Station, San Antonio, Texas--Continued

Drainage area is 6.36 acres, 0.0099375 square mile.

Date and Time	Gage Height	Storage	Time int.	Δ Storage	Outflow		Inflow		Runoff			Rainfall	
Sept. 9 1969	ft	ft^3	min.	ft^3	ft^3/min.	ft^3	ft^3	ft^3/sec.	in/hr	inches	acc. inches	inches	in/hr
1800	12.43 631.93	1,634									0.000		
1900	12.44 631.94	1,636	60	+ 02	0	0	+02	0.0006	0.0001	0.0001	0.000	0.00	
1912	12.44 631.94	1,636	12	0	0	0	0	0	0	.000	.000	.00	
1915	14.56 634.06	2,174	03	+ 538	0	0	+538	2.989	.466	.023	.023	.10	2.00
1916	15.90 635.40	2,515	01	+ 341	105	105	+446	7.433	1.159	.019	.043	.13	1.80
1917	17.60 637.10	3,110	01	+ 595	605	605	+1,200	20.000	3.119	.052	.095	.20	4.20
1918	18.11 637.61	3,355	01	+ 245	605	605	+805	14.167	2.210	.037	.132	.29	5.40
1920	17.65 637.15	3,122	02	- 233	605	1,210	977	8.142	1.270	.042	.174	.32	.90
1922	16.70 636.20	2,720	02	- 402	605	1,210	808	6.733	1.050	.035	.209	.37	1.50
1925	13.00 632.50	1,778	03	- 942	605	1,815	873	4.850	.756	.038	.247	.40	.60
1927	10.71 630.21	1,197	02	- 581	605	1,210	629	5.242	.818	.027	.274	.42	.60
1930	11.87 631.37	1,491	03	+ 294	0	0	294	1.633	.255	.013	.287	.45	.60
1935	13.15 632.65	1,816	05	+ 325	0	0	325	1.083	.169	.014	.301	.48	.36
1942	14.56 634.06	2,174	07	+ 358	0	0	358	.852	.133	.016	.316	.50	.17
1945	13.88 633.38	2,001	03	- 173	105	315	142	.789	.123	.006	.322	.52	.40

Note.--Texas Highway Department Datum = Gage Height +619.50 ft.

Table 3.--Rainfall and inflow for significant storms at the Martin Street Pump Station, San Antonio, Texas--Continued

Drainage area is 6.36 acres, 0.0099375 square mile.

Date and Time	Gage Height	Storage	Time int.	Δ Storage	Outflow		Inflow		Runoff			Rainfall	
Sept. 9 1969	ft	ft^3	min.	ft^3	ft^3/min.	ft^3	ft^3	ft^3/sec.	in/hr	inches	acc. inches	inches	in/hr
1950	13.00 632.50	1,778	05	- 223	105	525	302	1.007	.157	.013	.336	.53	0.12
1955	11.88 631.38	1,493	05	- 285	105	525	240	.800	.125	.010	.346	.55	.24
2000	10.80 630.30	1,219	05	- 274	105	525	251	.837	.131	.011	.357	.57	.24
2005	11.10 630.60	1,295	05	+ 76	0	0	76	.253	.039	.003	.360	.58	.12
2010	11.42 630.92	1,377	05	+ 82	0		82	.273	.043	.004	.364	.60	.24
2015	11.92 631.42	1,504	05	+ 127			127	.423	.066	.006	.369	.60	
2020	12.25 631.75	1,588	05	+ 84			84	.280	.044	.004	.373	.60	
2025	12.46 631.96	1,641	05	+ 53			53	.177	.028	.002	.375	.60	
2035	12.67 632.17	1,694	10	+ 53			53	.088	.014	.002	.377	.60	
2045	12.77 632.27	1,720	10	+ 26			26	.043	.007	.001	.378	.60	
2100	12.85 632.35	1,740	15	+ 20			20	.022	.003	.001	.379	.60	
2130	12.91 632.41	1,756	30	+ 16			16	.009	.001	.001	.380		
2200	12.94 632.44	1,763	30	+ 07			07	.004	.001	.000	.380		
2300	12.99 632.49	1,776	60	+ 13			13	.004	.001	.001	.381		
2400	13.02 632.52	1,783	60	+ 07			07	.002	.000	0	.381		

Note.--Texas Highway Department Datum = Gage Height +619.50 ft.

Table 3.--Rainfall and inflow for significant storms at the Martin Street Pump Station, San Antonio, Texas--Continued

Drainage area is 6.36 acres, 0.0099375 square mile.

Date and Time	Gage Height	Storage	Time int.	Δ Storage	Outflow		Inflow		Runoff			Rainfall	
Sept. 23 1969	ft	ft^3	min.	ft^3	ft^3/min.	ft^3	ft^3	ft^3/sec.	in/hr	inches	acc. inches	inches	in/hr
0844												0	
0845	10.94 630.44	1,255										0.06	3.60
0848½	14.56 634.06	2,174	03½	+ 919	0	0	919	4.376	0.682	0.040	0.040	.41	6.00
0849	15.90 635.46	2,530	½	+ 356	105	52	408	13.600	2.121	.018	.058	.46	6.00
0850	17.75 637.25	3,178	01	+ 648	605	605	1,253	20.883	3.257	.054	.112	.55	5.40
0851½	17.70 637.20	3,155	01½	- 23	1,105	1,658	1,635	18.167	2.834	.071	.183	.68	5.20
0858	20.00 639.50	4,310	06½	+ 1,115	1,105	7,182	8,297	21.274	3.318	.359	.542	1.26	5.35
0905	22.60 642.10	5,350	07	+ 1,040	1,105	7,735	8,775	20.893	3.259	.380	.922	2.03	6.60
0908	22.67 642.17	5,378	03	+ 28	1,105	3,315	3,343	18.572	2.899	.145	1.067	2.36	6.60
0910	22.10 641.60	5,150	02	- 228	1,105	2,210	1,982	16.517	2.576	.086	1.153	2.58	6.60
0915	22.32 641.82	5,238	05	+ 88	1,105	5,525	5,613	18.710	2.918	.243	1.396	2.85	3.24
0922	22.32 641.82	5,238	07	0	1,105	7,735	7,735	18.417	2.873	.335	1.731	3.23	3.25
0925	22.52 642.02	5,318	03	+ 80	1,105	3,315	3,395	18.861	2.942	.147	1.878	3.39	3.20
0930	22.55 642.05	5,330	05	+ 12	1,105	5,525	5,537	18.457	2.879	.240	2.118	3.68	3.48
0937	21.88 641.38	5,062	07	- 268	1,105	7,735	7,467	17.778	2.773	.324	2.442	4.06	3.25

Note.--Texas Highway Department Datum = Gage Height +619.50 ft.

Table 3.--Rainfall and inflow for significant storms at the Martin Street Pump Station, San Antonio, Texas--Continued

Drainage area is 6.36 acres, 0.0099375 square mile.

Date and Time	Gage Height	Storage	Time int.	Δ Storage	Outflow		Inflow		Runoff			Rainfall	
Sept. 23 1969	ft	ft^3	min.	ft^3	ft^3/min.	ft^3	ft^3	ft^3/sec.	in/hr	inches	acc. inches	inches	in/hr
0943	22.44 641.94	5,286	06	+ 224	1,105	6,630	6,854	19.039	2.970	0.297	2.739	4.46	4.00
0954	20.00 639.50	4,310	11	- 976	1,105	12,155	11,178	16.936	2.642	.484	3.223	4.77	1.69
1001	19.95 639.45	4,290	07	- 20	1,105	7,735	7,715	18.369	2.865	.334	3.557	4.97	1.71
1009	15.00 634.50	2,286	08	- 2,004	1,105	8,840	6,836	14.242	2.221	.296	3.853	5.13	1.20
1013	10.80 630.30	1,219	04	- 1,067	1,105	4,420	3,353	13.971	2.179	.145	3.999	5.20	1.05
1013½	10.92 632.42	1,250	½	+ 31	1,105	552	583	19.433	3.031	.025	4.024	5.20	0
1015½	10.73 630.23	1,202	02	- 48	1,105	2,210	2,162	18.017	2.810	.094	4.118	5.22	.60
1019½	14.56 634.06	2,174	04	+ 972	0	0	972	4.050	.632	.042	4.160	5.25	.45
1027	15.90 635.40	2,515	07½	+ 341	105	808	1,149	2.553	.398	.050	4.210	5.31	.48
1035	16.85 636.15	2,706	08	+ 191	105	840	1,031	2.148	.335	.044	4.254	5.36	.37
1036	16.93 636.43	2,812	01	+ 106	105	105	211	3.517	.548	.009	4.263	5.37	.60
1039	16.93 636.43	2,812	03	0	105	315	315	1.750	.273	.014	4.277	5.39	.40
1045	16.70 636.20	2,720	06	- 92	105	630	538	1.494	.233	.023	4.300	5.43	.40
1049	17.00 636.50	2,840	04	+ 120	105	420	540	2.250	.351	.023	4.324	5.46	.45
1052½	17.62 637.12	3,119	03½	+ 279	105	368	647	3.081	.481	.028	4.352	5.53	1.20

Note.--Texas Highway Department Datum = Gage Height +619.50 ft.

Table 3.--Rainfall and inflow for significant storms at the Martin Street Pump Station, San Antonio, Texas--Continued

Drainage area is 6.36 acres, 0.0099375 square mile.

Date and Time	Gage Height	Storage	Time int.	Δ Storage	Outflow		Inflow		Runoff			Rainfall	
Sept. 23 1969	ft	ft^3	min.	ft^3	ft^3/min.	ft^3	ft^3	ft^3/sec.	in/hr	inches	acc. inches	inches	in/hr
1057	15.82 635.32	2,494	04½	- 625	605	2,722	2,097	7.767	1.211	0.091	4.443	5.68	2.00
1103	16.56 636.06	2,682	06	+ 188	605	3,630	3,818	10.606	1.654	.165	4.608	5.80	1.20
1107	15.00 634.50	2,286	04	- 394	605	2,420	2,026	8.442	1.317	.088	4.696	5.88	1.20
1118	10.73 630.23	1,202	11	- 1,084	605	6,655	5,571	8.441	1.317	.241	4.937	6.06	.98
1124	14.56 634.06	2,174	06	+ 972	0	0	972	2.700	.421	.042	4.979	6.08	.20
1130	15.10 634.60	2,311	06	+ 137	105	630	767	2.131	.332	.033	5.012	6.10	.20
1133	15.10 634.60	2,311	03	0	105	315	315	1.750	.273	.014	5.026	6.11	.20
1155	10.80 630.30	1,219	22	- 1,092	105	2,310	1,218	.923	.144	.053	5.079	6.11	0
1211	12.00 631.50	1,524	16	+ 305	0	0	305	.318	.050	.013	5.092	6.11	0
1250	13.50 633.00	1,905	39	+ 381	0	0	381	.163	.025	.016	5.108	6.11	0
1341	14.56 634.06	2,174	51	+ 269	0	0	269	.088	.014	.012	5.120	6.11	0
1351	10.80 630.30	1,219	10	- 955	105	1,050	95	.158	.025	.004	5.124	6.11	0

Note.--Texas Highway Department Datum = Gage Height +619.50 ft.

Table 4.--Incremental rainfall and discharge for significant storms.

07297920 Middle Tule Draw near Tulia, Tex. (05)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
Aug. 26, 1969	2100	0	-
	2115	.05	-
	2130	.12	440
	2145	.20	540
	2150	.22	710
	2155	.25	1,150
	2200	.30	1,230
	2230	.40	1,230
	2300	.55	1,340
	2330	.62	1,360
	2400	.75	1,350
Aug. 27	0200	1.10	1,110
	0315	1.25	1,300
	0400	-	1,300
	0800	-	1,110
	1200	-	870
	1800	-	710
	2400	1.25	540
Aug. 28	0300	1.25	440
	0600	1.25	-

Table 4.--Incremental rainfall and discharge for significant storms.--Continued.

07298150 Rock Creek Trib. near Silverton, Tex. (25)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
June 14, 1969	1000	0	-
	1030	.35	-
	1100	.50	-
	1200	.60	-
	1800	.60	-
	1845	.75	-
	2000	.90	-
	2100	1.00	2.7
	2130	1.00	5.4
	2200	1.00	8.0
	2230	1.00	8.8
	2300	1.00	11
	2400	1.00	12
June 15	0100	1.00	11
	0200	1.00	8.8
	0300	1.00	8.0
	0400	1.00	7.0
	0600	1.00	5.4
	0900	1.00	3.9
	1000	1.00	2.7
	1200	1.00	-

Table 4.--Incremental rainfall and discharge for significant storms.--Continued.

07299575 North Groesbeck Creek Trib. near Kirkland, Tex. (25)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
Aug. 26, 1969	0810	0	-
	0820	.10	-
	0845	.25	-
	0900	.30	-
	0930	.40	-
	1000	.65	1.6
	1015	.90	2.7
	1030	1.15	10
	1045	1.35	21
	1100	1.40	22
	1115	1.40	14
	1130	1.50	9.3
	1145	1.50	6.0
	1200	1.50	2.7
	1230	1.50	1.9
	1300	1.50	1.6
	1400	1.50	-

Table 4.--Incremental rainfall and discharge for significant storms.--Continued.

07301405 Doodlebug Creek near Wheeler, Tex. (25)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
Aug. 26, 1969	0730	-	-
	0745	-	125
	0800	-	160
	0815	-	275
	0830	-	370
	0845	-	470
	0900	-	555
	0915	-	690
	0930	-	740
	0945	-	720
	1000	-	650
	1015	-	590
	1030	-	490
	1045	-	390
	1100	-	325
	1130	-	217
	1200	-	160
	1230	-	125
	1300	+4.95	-

Table 4.--Incremental rainfall and discharge for significant storms.--Continued.

07307720 Cottonwood Creek Trib. near Afton, Tex. (25)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
May 5, 1969	1900	0	-
	2000	.05	-
	2100	.10	-
	2200	.15	-
	2400	.30	-
May 6	0400	.38	-
	0455	.50	-
	0515	.60	-
	0525	.70	-
	0600	.75	-
	0625	.75	175
	0630	.75	230
	0640	.75	285
	0650	.75	310
	0700	.75	310
	0715	.75	262
	0730	.75	230
	0745	.75	210
	0800	.75	198
	0900	.75	175
	1000	.75	-

Table 4.--Incremental rainfall and discharge for significant storms.--Continued.

07312140 Beaver Creek Trib. near Crowell, Tex. (25)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
Sept. 21, 1969	1600	0	-
	1700	.10	-
	1730	.25	-
	1800	.38	-
	1830	.50	-
	1900	.63	-
	2000	.65	-
	2200	.70	-
	2300	.77	-
	2400	.85	-
Sept. 22	0100	.88	-
	0130	.95	-
	0200	1.15	-
	0300	1.45	-
	0400	1.50	-
	0630	1.50	38
	0700	1.50	40
	0800	1.50	62
	0900	1.50	72
	1000	1.50	56
	1100	1.50	48
	1200	1.50	38
	1400	1.50	-

Table 4.--Incremental rainfall and discharge for significant storms.--Continued.

07315550 Farmers Creek near Saint Jo, Tex. (03)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
June 14, 1969	0000	0	-
	0030	0	28
	0045	0	44
	0100	.40	93
	0115	.75	120
	0130	1.35	145
	0145	1.50	145
	0200	1.60	145
	0230	1.65	142
	0300	1.65	127
	0330	1.65	112
	0400	1.65	80
	0430	1.65	69
	0500	1.65	60
	0600	1.65	48
	0700	1.65	40
	0800	1.65	31
	0900	1.65	28
	1000	1.65	-

Table 4.--Incremental rainfall and discharge for significant storms.--Continued.

07336940 McKinney Bayou near Leary, Tex. (19)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
May 19, 1969	0500	0	-
	0600	.10	-
	0700	.15	-
	0800	.20	13
	0900	.25	30
	0915	.40	30
	0930	.65	30
	0945	.70	30
	1000	.80	30
	1030	.90	30
	1100	1.05	36
	1200	1.10	36
	1300	1.15	36
	1400	1.15	36
	1500	1.15	36
	1600	1.15	36
	1700	1.15	36
	1800	1.20	36
	1900	1.20	43
	2000	1.20	43
	2100	1.20	43
	2200	1.20	43
	2300	1.20	43
	2400	1.20	36
May 20	2430	1.40	36
	0100	1.50	36
	0200	1.55	36
	0300	1.55	36
	0400	1.55	30
	0500	1.55	30
	0515	1.60	30
	0530	1.75	30
	0545	1.85	30
	0600	1.95	30
	0700	2.05	30
	0730	2.20	30
	0800	2.30	30
	0900	2.45	30

Table 4.--Incremental rainfall and discharge for significant storms.--Continued.

07336940 McKinney Bayou near Leary, Tex. (19)--Continued

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
May 20, 1969-Con.	1000	2.45	24
	1200	2.45	24
	1400	2.45	24
	1600	2.45	24
	1800	2.45	24
	2000	2.45	24
	2200	2.45	18
	2400	2.45	18
May 21	0200	2.45	18
	0400	2.45	13
	0600	2.45	13
	0800	2.45	13
	1000	2.45	13
	1100	2.45	8
	1200	2.45	-
	1300	2.45	-
	2400	2.45	-

Table 4.--Incremental rainfall and discharge for significant storms.--Continued.

07343350 Dial Branch near Bagwell, Tex. (01)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
Nov. 29, 1968	1730	0	-
	1800	.05	-
	1830	.15	-
	1900	.30	-
	1930	.45	12
	2000	.45	28
	2030	.75	62
	2100	.90	114
	2130	1.05	134
	2200	1.25	134
	2230	1.25	144
	2300	1.30	114
	2330	1.30	78
	2400	1.30	55
Nov. 30	2430	1.30	41
	0100	1.30	34
	0130	1.30	21
	0200	1.30	16
	0230	1.30	12
	0300	1.30	-
Jan. 30, 1969	1000	0	-
	1300	0	-
	1500	.25	27
	1700	.30	41
	1800	.30	55
	1850	.50	62
	1900	.50	70
	1930	.75	70
	2000	1.00	124
	2045	1.20	284
	2130	1.25	164
	2300	1.30	62
	2330	1.40	55
	2400	2.10	164
Jan. 31	0030	2.45	456
	0100	2.70	456
	0200	3.15	344
	0300	3.40	248
	0400	3.60	204
	0500	3.70	154
	0600	3.75	95
	0700	3.75	95

Table 4.--Incremental rainfall and discharge for significant storms.--Continued.

07343350 Dial Branch near Bagwell, Tex. (01)--Continued.

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
Jan. 31, 1969-Con.	0800	3.75	78
	0900	3.75	62
	1000	3.75	55
	1200	3.75	41
	1300	3.75	34
	1350	3.75	27
	1400	3.75	-
Feb. 2	0730	0	-
	0830	.15	-
	0930	.20	-
	1030	.30	-
	1130	.35	-
	1230	.45	-
	1330	.45	-
	1430	.50	-
	1530	.55	-
	1630	.65	-
	1730	.70	-
	1830	.75	-
	1930	.80	-
	2030	.85	-
	2130	.90	-
	2230	.95	-
	2330	.95	-
Feb. 22	0030	1.05	-
	0130	1.05	-
	0230	1.05	-
	0330	1.05	-
	0430	1.05	-
	0530	1.05	-
	0630	1.05	-
	0730	1.15	21
	0800	1.30	48
	0830	1.30	78
	0900	1.30	78
	1000	1.30	55
	1100	1.40	41
	1200	1.55	41
	1300	1.65	48
	1330	1.80	95
	1400	2.00	154
	1430	2.10	164

Table 4.--Incremental rainfall and discharge for significant storms.--Continued.

07343350 Dial Branch near Bagwell, Tex. (01)--Continued.

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
Feb. 22, 1969-Con.	1500	2.10	164
	1600	2.15	95
	1700	2.35	70
	1800	2.45	95
	1900	2.45	70
	2000	2.45	55
	2100	2.45	48
	2200	2.45	48
	2300	2.45	41
	2400	2.45	41
Feb. 23	0100	2.45	34
	0200	2.45	27
	0300	2.45	21
	0400	2.45	-
Mar. 23	0100	0	-
	0200	.20	-
	0300	.20	-
	0400	.20	-
	0430	.25	-
	0500	.40	-
	0600	.45	21
	0630	.55	27
	0700	.60	34
	0730	.75	55
	0800	1.00	86
	0830	1.20	194
	0900	1.35	248
	0930	1.35	204
	1000	1.50	144
	1030	1.50	134
	1100	1.55	124
	1130	1.55	104
	1200	1.55	78
	1230	1.55	62
	1300	1.55	48
	1330	1.55	34
	1400	1.55	27
	1430	1.55	27
	1500	1.55	21
	1600	1.55	-

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

08085300 Humphries Draw near Haskell, Tex. (08)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
May 6, 1969	1145	0	-
	1200	.25	-
May 7	0015	.50	-
	0030	.85	26
	0045	.90	29
	1300	.95	70
	1315	.95	560
	1330	.95	690
	1345	1.05	740
	1400	1.25	780
	1415	1.60	840
	1430	1.75	880
	1445	2.10	910
	1500	2.15	970
	1600	2.15	1,270
	1700	2.15	1,570
	1800	2.15	1,650
	2000	2.15	1,470
	2400	2.15	1,200
May 8	0400	2.15	940
	0800	2.15	640
	1200	2.15	42
	1600	2.15	30
	2400	2.15	28
May 9	1200	2.15	26
	2400	2.15	-

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

08089100 Elm Creek Tributary near Graford, Tex. (02)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
Mar. 23, 1969	0030	0	-
	0045	.20	-
	0100	.30	-
	0115	.60	-
	0130	.70	-
	0145	.90	4.9
	0200	.90	7.4
	0210	.90	8.9
	0220	.90	16
	0230	.90	23
	0250	.90	25
	0300	.90	24
	0315	.90	23
	0330	.90	15
	0400	.90	8.9
	0500	.90	7.9
	0700	.90	6.4
	1100	.90	4.9
	1200	.90	-

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

08091700 Panter Branch near Tolar, Tex. (02)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
May 5, 1969	0000	0	-
	0030	.40	-
	0100	.60	-
	0130	.85	-
	0200	.90	-
	0230	1.00	-
	0300	1.05	-
	0400	1.30	-
	0430	1.30	85
	0445	1.30	85
	0500	1.30	113
	0515	1.30	162
	0530	1.30	200
	0545	1.30	260
	0600	1.30	260
	0615	1.30	260
	0630	1.30	260
	0645	1.30	282
	0700	1.30	240
	0715	1.30	220
	0730	1.30	180
	0800	1.30	145
	0830	1.30	99
	0900	1.30	85
	1000	1.30	-
May 6	1830	0	-
	1900	.10	-
	1930	.20	-
	2000	.40	-
	2030	.75	-
	2100	.90	-
	2130	.95	-
	2200	1.00	-
	2215	1.00	85
	2230	1.00	99
	2245	1.00	113
	2300	1.00	113
	2315	1.00	113
	2330	1.00	113
	2345	1.00	128
	2400	1.05	128
May 7	0015	1.05	145

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

08091700 Panter Branch near Tolar, Tex. (02)--Continued

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
May 7, 1969-Con.	0030	1.05	145
	0045	1.05	145
	0100	1.10	145
	0115	1.10	113
	0130	1.10	99
	0145	1.10	85
	0200	1.10	85
	0300	1.15	-
	0400	1.25	-
	0700	1.25	-
	1000	1.25	-
	1100	1.25	-
	1115	1.30	-
	1130	1.40	-
	1200	1.40	-
	1215	1.45	85
	1230	1.45	162
	1245	1.50	260
	1300	1.55	348
	1315	1.55	392
	1330	1.65	480
	1345	1.80	558
	1400	1.80	610
	1415	1.80	532
	1430	1.80	436
	1445	1.80	436
	1500	1.80	392
	1515	1.90	370
	1530	1.95	348
	1600	1.95	304
	1630	1.95	220
	1700	1.95	162
	1730	1.95	128
	1800	1.95	99
	1830	1.95	85
	2000	1.95	85
	2100	1.95	-
	2200	2.05	-
	2300	2.15	-
	2400	2.15	-
May 8	0100	2.20	-
	0200	2.25	-
	0300	2.25	-
	0345	2.40	-
	0400	2.40	-

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

08093200 Bond Branch near Hillsboro, Tex. (09)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
May 6, 1969	2000	0	-
	2015	.10	-
	2030	.35	-
	2045	.55	-
	2100	1.00	40
	2115	1.05	58
	2130	1.05	143
	2145	1.15	197
	2200	1.20	151
	2215	1.25	118
	2230	1.25	110
	2245	1.25	110
	2300	1.25	102
	2315	1.25	86
	2330	1.25	72
	2345	1.25	65
	2400	1.25	65
May 7	0015	1.25	58
	0030	1.25	58
	0045	1.25	52
	0100	1.25	52
	0115	1.25	52
	0130	1.25	52
	0145	1.25	46
	0200	1.25	46
	0215	1.25	46
	0230	1.25	40
	0245	1.50	40
	0300	1.60	40
	0315	1.65	52
	0330	1.65	79
	0345	1.70	86
	0400	1.70	79
	0415	1.70	72
	0430	1.70	65
	0445	1.70	58
	0500	1.70	52
	0515	1.70	46
	0530	1.70	40
	0545	1.70	40

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

08093200 Bond Branch near Hillsboro, Tex. (09)--Continued

Date	Time	Accumulated rainfall (inches	Discharge (cfs)
May 17, 1969	1700	0	-
	1730	0	-
	1800	.10	-
	1815	.30	-
	1830	.30	-
	1845	.35	-
	1900	.40	34
	1915	.60	58
	1930	.60	65
	1945	.60	52
	2000	.65	52
	2015	.65	52
	2030	.75	52
	2045	1.00	46
	2100	1.10	40
	2115	1.15	52
	2130	1.15	86
	2145	1.30	102
	2200	1.40	86
	2215	1.40	79
	2230	1.45	79
	2245	1.50	79
	2300	1.50	72
	2315	1.50	65
	2330	1.50	58
	2345	1.50	58
	2400	1.50	52
May 18	0015	1.50	52
	0030	1.55	46
	0045	1.55	46
	0100	1.55	46
	0115	1.55	46
	0130	1.55	40
	0145	1.55	40
	0200	1.55	34

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

08952500 Willow Branch at McGregor, Tex. (09)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
Apr. 12, 1969	0500	0	-
	0530	.16	-
	0545	.26	-
	0600	.38	-
	0630	.45	-
	0700	.60	-
	0730	.62	-
	0800	.72	-
	0830	.90	-
	0900	1.40	-
	0930	1.68	-
	1000	1.82	-
	1030	1.90	280
	1100	1.95	285
	1115	1.95	310
	1130	1.95	345
	1145	1.95	365
	1200	1.95	382
	1215	1.95	385
	1230	1.95	385
	1245	1.95	385
	1300	1.95	367
	1330	1.95	343
	1400	1.95	330
	1430	1.95	315
	1500	1.95	310
	1530	1.95	305
	1600	1.95	295
	1630	1.95	-

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

08100800 Hoffman Branch near Hamilton, Tex. (09)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
June 12, 1969	0000	0	4.9
	0300	0	2.95
	0315	.14	2.85
	0330	.60	2.65
	0345	.99	3.6
	0400	1.07	5.2
	0425	1.07	510
	0430	1.07	470
	0445	1.08	380
	0500	1.08	342
	0515	1.08	400
	0530	1.08	361
	0545	1.08	332
	0600	1.08	300
	0630	1.08	110
	0700	1.08	19.4
	0800	1.08	9.2
	0900	1.10	6.2
	1000	1.20	5.6
	1100	1.25	4.9
	1200	1.25	3.6
	1400	1.25	2.95
	2000	1.25	2.15
	2400	1.25	1.40

Table 4.--Incremental rainfall and dischrge for significant storms.--Continued

08103450 Fleece Branch near Lampasas, Tex. (23)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
July 23, 1969	1300	0	-
	1315	.08	-
	1320	.15	-
	1330	.35	-
	1335	.65	-
	1340	1.25	-
	1345	1.35	-
	1350	1.50	-
	1355	1.55	-
	1400	1.63	77
	1410	1.65	125
	1415	1.65	150
	1420	1.65	175
	1425	1.65	188
	1430	1.65	205
	1435	1.65	205
	1440	1.65	188
	1445	1.65	175
	1500	1.65	100
	1515	1.65	77
	1530	0	-

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

08108800 Little Branch near Bryan, Tex. (17)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
Apr. 13, 1969	1300	0	-
	1355	0.60	-
	1400	.80	-
	1415	.86	-
	1430	.93	-
	1445	1.13	-
	1500	1.15	-
	1505	1.15	20.5
	1510	1.15	43.0
	1515	1.15	49.0
	1520	1.15	52.0
	1525	1.15	63.0
	1530	1.15	63.0
	1535	1.15	57.2
	1540	1.15	56.0
	1545	1.18	55.0
	1550	1.18	53.5
	1555	1.19	49.0
	1600	1.20	48.5
	1615	1.20	37.0
	1630	1.20	34.0
	1645	1.20	31.0
	1700	1.20	28.5
	1715	1.20	25.7
	1730	1.20	23.0
	1745	1.20	21.0
	1800	1.20	20.6
	2000	1.20	-

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

08114900 Seabourne Creek near Rosenberg, Tex. (12)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
Feb. 14, 1969	0345	0	-
	0400	.12	1
	0500	.64	19
	0530	1.13	34
	0600	1.28	68
	0700	1.50	134
	0730	1.60	142
	0800	1.60	150
	0900	1.60	158
	1000	1.60	150
	1100	1.60	142
	1200	1.60	127
	1400	1.60	98
	1600	1.60	80
	1800	1.60	68
	2100	1.60	47
	2400	1.60	43
Feb. 15	0600	1.60	34
	1200	1.60	26
	1800	1.60	22
	2400	1.60	16
Mar. 15	0200	0	-
	0330	.15	-
	0800	.15	-
	1300	.19	-
	1345	.22	-
	1400	.41	-
	1430	.68	16
	1500	1.05	74
	1600	1.18	125
	1700	1.23	134
	1800	1.27	137
	1900	1.29	142
	2100	1.29	122
	2400	1.29	86
Mar. 16	0300	1.29	63
	0400	1.36	-
	0430	1.37	-
	0500	1.46	57
	0600	1.50	63
	0700	1.50	68
	0900	1.50	63

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

08114900 Seabourne Creek near Rosenberg, Tex. (12)--Continued

Date	Time	*Accumulated rainfall (inches)	Discharge (cfs)
Mar. 16, 1969-Con.	1200	1.50	53
	1800	1.50	43
	2400	1.50	34
Mar. 17	1200	1.50	16

* Total from Otto Schatz (rainfall obs.) with distribution based on Dry Creek recording rain gage.

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

08133300 Quarry Creek near Sterling City, Tex. (07)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
July 28, 1969	0600	0	-
	0615	.1	<100
	0630	.3	<100
	0645	.5	176
	0700	.7	160
	0715	.9	114
	0730	1.2	<100
	0745	1.4	<100
	0800	1.5	<100
	0815	1.5	<100
	0830	1.5	<100
	0845	1.5	<100
	0900	1.5	<100
	0915	1.5	<100
	0930	1.5	<100
	0945	1.5	<100
	1000	1.5	<100
	1015	1.5	<100
	1030	1.5	<100
	1045	1.5	<100
	1100	1.5	-

< Less than.

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

08150900 Stone Creek Tributary near Art, Tex. (14)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
July 27, 1969	0300	0	-
	0310	.1	-
	0320	.3	-
	0330	.4	-
	0600	.4	-
	0610	.5	-
	0620	.7	-
	0630	1.2	-
	0640	1.9	< 50
	0650	2.1	68
	0700	2.2	112
	0710	2.2	127
	0720	2.2	89
	0730	2.2	< 50
	0740	2.2	< 50
	0750	2.2	< 50
	0800	2.2	-
Sept. 10	2000	0	-
	2010	0	-
	2020	0	-
	2030	.1	-
	2040	.4	-
	2050	.9	-
	2100	1.6	< 50
	2110	2.1	94
	2120	2.2	110
	2130	2.2	100
	2140	2.2	64
	2150	2.2	< 50
	2200	2.2	< 50
	2210	2.2	< 50
	2220	2.2	< 50
	2230	2.2	-

< Less than.

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

08158900 Fox Branch near Oak Hill, Tex. (14)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
Aug. 28, 1969	1000	0	-
	1030	.20	-
	1035	.40	-
	1040	.65	-
	1045	.88	-
	1050	1.00	-
	1055	1.03	-
	1100	1.05	8.2
	1110	1.30	13.3
	1115	1.52	15.5
	1120	1.87	17.0
	1125	2.02	23.5
	1130	2.05	24.0
	1135	2.09	28.7
	1145	2.10	33.5
	1200	2.11	34.0
	1215	2.12	24.0
	1300	2.20	11.5
	1315	2.20	8.2

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

08161580 Dry Branch Tributary near Altair, Tex. (13)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
Jan. 16, 1969	0345	0	-
	0400	.10	-
	0500	.30	-
	0600	.80	-
	0630	1.50	-
	0700	1.55	-
	0800	1.75	30
	0930	1.75	36
	1100	1.75	39
	1400	1.75	36
	1800	1.75	32
	2400	1.75	20
Jan. 17	0600	1.75	(8)
	1200	1.75	(3)
May 1	1745	0	-
	1800	.15	-
	1830	.95	-
	1845	1.30	(1)
	1900	1.40	(3)
	2000	1.50	(12)
	2100	1.75	18
	2300	1.75	24
May 2	0300	1.75	18
	0600	1.75	(12)
	0900	1.75	(8)
	1200	1.75	(5)
	1800	1.75	(3)

( ) Estimated.

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

08167600 Rebecca Creek near Spring Branch, Tex. (15)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
Apr. 11, 1969	0000	0	2.5
	0600	.1	2.5
	0700	.8	2.5
	0800	1.3	5.4
	0900	1.3	5.4
	1000	1.3	49
	1100	1.3	38
	1200	1.3	25
	1300	1.3	18
	1500	1.3	12
	1800	1.3	8.1
	2200	1.3	6.0
	2300	1.6	6.0
	2400	1.8	9.7
Apr. 12	0100	1.8	357
	0200	1.9	103
	0300	1.9	59
	0400	1.9	40
	0500	2.1	34
	0700	2.1	25
	0800	2.3	22
	1000	2.3	22
	1100	2.9	28
	1200	2.9	67
	1300	2.9	117
	1400	2.9	90
	1600	2.9	51
	1800	2.9	38
	2100	2.9	27
	2400	2.9	24
Apr. 13	0600	2.9	19
	1200	2.9	18
	1800	2.9	16
	2400	2.9	14
Apr. 27	0000	0	6.0
	0700	0	6.0
	0800	1.0	8.1
	0900	1.5	14
	1000	1.5	14
	1100	1.5	57
	1200	1.5	44
	1400	1.5	25

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

08167600 Rebecca Creek near Spring Branch, Tex. (15)--Continued

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
Apr. 27, 1969-Con.	1600	1.5	19
	1800	1.5	16
	2100	1.5	12
	2400	1.5	11
May 15	0000	0	6.7
	0700	0	6.7
	0800	.1	6.0
	0900	.9	9.7
	1000	.9	254
	1100	.9	141
	1200	.9	87
	1300	.9	62
	1500	.9	36
	1800	.9	24
	2400	.9	18
May 16	1000	.9	14
	1100	1.6	18
	1200	1.9	32
	1300	2.0	216
	1500	2.0	141
	1700	2.0	90
	1900	2.0	67
	2100	2.0	54
	2400	2.0	44
June 3	0000	0	5.4
	0600	0	5.4
	0700	.5	6.0
	0800	.8	6.7
	1000	.8	6.7
	1100	1.1	18
	1200	1.3	46
	1300	1.4	34
	1400	1.4	133
	1430	1.4	133
	1500	1.4	133
	1600	1.4	83
	1800	1.4	44
	2000	1.4	27
	2400	1.4	18

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

08167600 Rebecca Creek near Spring Branch, Tex. (15)--Continued

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
June 24, 1969	0000	0	2.5
	0500	0	2.5
	0600	1.4	6.7
	0700	1.6	6.0
	0800	1.6	6.0
	0830	1.6	103
	1000	1.6	51
	1100	1.6	32
	1300	1.6	16
	1600	1.6	9.7
	2400	1.6	5.4

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

08189600 Olmos Creek Tributary near Skidmore, Tex. (16)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
July 16, 1969	0900	0	-
	2400	.1	-
July 17	1000	.2	-
	1305	.2	-
	1320	.4	-
	1355	.5	-
	1410	.9	-
	1455	1.1	-
	1515	1.8	-
	1550	1.8	0.7
	1610	1.8	2.3
	1700	1.8	4.5
	1900	1.8	4.5
	2030	1.8	28
	2200	1.8	12
	2400	1.8	12
July 18	0400	1.8	7.8
	0600	1.8	4.5
	1200	1.8	2.3
	1400	1.8	.7

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

08207700 Lucas Creek near Pleasanton, Tex. (15)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
Feb. 13, 1969	0900	0	-
	1000	0	-
	1100	0	-
	1230	.1	-
	1300	.1	-
	1515	.1	-
	1530	.1	-
	1600	.1	-
	1700	.2	-
	1800	.2	-
	1855	.2	-
	1900	.2	-
	1915	.2	-
	2110	.3	-
	2115	.4	-
	2130	.4	-
	2135	.4	-
	2145	.5	-
	2150	.7	-
	2205	.8	-
	2210	1.1	-
	2215	1.4	-
	2225	1.8	-
	2235	1.8	36
	2300	1.9	39
	2335	2.1	68
	2400	2.1	90
Feb. 14	0030	2.2	105
	0040	2.3	111
	0130	2.3	120
	0155	2.3	120
	0200	2.4	120
	0210	2.5	120
	0230	2.6	115
	0300	2.6	139
	0325	2.7	168
	0400	2.7	215
	0500	2.7	305
	0515	2.7	312
	0530	2.8	335

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

08207700 Lucas Creek near Pleasanton, Tex. (15)--Continued

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
Feb. 14, 1969-Con.	0600	2.8	352
	0730	2.8	380
	0930	2.8	335
	1100	2.8	280
	1300	2.8	193
	1500	2.8	139
	1700	2.8	95
	1900	2.8	76
	2100	2.8	68
	2400	2.8	56
Feb. 15	0200	2.8	48
	0400	2.8	44
	0600	2.8	36
May 12	0745	0	-
	0750	.05	-
	0855	.05	-
	0900	.12	-
	0905	.50	-
	0910	.65	-
	0925	1.50	-
	0935	1.70	-
	0945	2.30	-
	0955	2.83	-
	1015	2.87	20
	1045	2.92	92
	1100	2.92	140
	1200	2.92	550
	1310	2.92	860
	1345	2.92	960
	1425	2.92	1,040
	1450	2.92	1,120
	1535	2.92	1,300
	1630	2.92	1,550
	1800	2.92	1,320
	2000	2.92	1,000
	2200	2.92	550
	2400	2.92	255
May 13	0200	2.92	150
	0400	2.92	102
	0600	2.92	70
	0900	2.92	49
	2400	2.92	41

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

08211550 Pintas Creek Tributary near Banquete, Tex. (16)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
Feb. 12, 1969	0600	0	-
	0630	.2	-
	0730	.3	-
	0800	.4	-
	1000	.5	-
	1125	.6	-
	1145	.7	-
	1215	.8	-
	1245	1.5	-
	1305	1.6	-
	1335	2.3	-
	2400	2.4	-
Feb. 13	0100	2.4	-
	0120	2.5	-
	0205	2.6	-
	0230	3.4	-
	0250	3.4	62
	0310	3.8	82
	0330	3.8	100
	0400	3.8	120
	0445	3.8	130
	0600	3.8	120
	0630	3.8	100
	0700	3.8	92
	0730	3.8	82
	0800	3.8	62

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

08444400 Threemile Mesa Creek near Fort Stockton, Tex. (06)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
Apr. 12, 1969	0250	0	-
	0300	.1	-
	0310	.2	<50
	0320	.3	<50
	0330	.6	<50
	0340	1.1	<50
	0350	1.2	59
	0400	1.2	68
	0410	1.3	68
	0420	1.3	74
	0430	1.4	68
	0440	1.4	68
	0450	1.4	59
	0500	1.5	<50
	0510	1.5	<50
	0520	1.6	<50
	0530	1.6	-
	0540	1.6	-
	0550	1.6	-
	0600	1.6	-
	0610	1.6	-
	0620	1.6	-
	0630	1.7	-
	0640	1.7	-
	0650	1.7	-
	0700	1.7	-
	0710	1.7	-

< Less than.

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

08453100 Zorro Creek near Del Rio, Tex. (22)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
Apr. 10, 1969	1730	0	-
	1750	.5	-
	1755	.6	-
	1800	.7	-
	1820	1.0	-
	1825	1.0	-
	1830	1.0	-
	1850	1.0	180
	1930	1.0	1,000
	2000	1.0	1,660
	2020	1.0	1,920
	2035	1.0	2,000
	2055	1.0	1,920
	2130	1.0	1,620
	2200	1.0	1,300
	2300	1.0	860
	2330	1.0	480
	2400	1.3	450
Apr. 11	0010	1.4	4.50
	0040	1.7	-
	0115	1.8	-
	0130	2.2	180
	0140	2.3	180
	0200	2.5	1,100
	0230	2.5	1,300
	0300	2.6	1,400
	0330	2.6	1,440
	0400	2.8	1,480
	0415	3.1	1,480
	0430	3.3	1,440
	0445	3.5	1,440
	0500	3.7	1,440
	0530	3.8	1,300
	0550	3.9	1,200
	0620	3.9	1,000
	0630	3.9	1,000
	0700	3.9	1,200
	0800	3.9	1,160
	0900	3.9	860

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

08453100 Zorro Creek near Del Rio, Tex. (22)--Continued

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
Apr. 11, 1969-Con.	1000	3.9	450
	1200	3.9	-
	1300	3.9	-
	1315	3.9	-
	1830	3.9	-
	1845	4.2	-
	1900	4.3	-
	1920	4.7	-
	2015	4.9	-
	2045	5.4	-
	2105	5.5	-
	2130	5.6	-
	2135	5.6	-
	2200	5.6	-
	2240	5.6	-
	2300	5.6	-
	2400	5.6	-
Apr. 12	0030	5.6	-
	0100	5.6	-
	0130	5.6	-

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

08454900 East Perdido Creek near Brackettville, Tex. (22)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
Apr. 11, 1969	1800	0	-
	1820	.7	-
	1830	1.2	-
	1900	1.4	-
	1930	1.7	-
	2000	1.8	-
	2020	1.8	-
	2040	1.8	-
	2100	1.8	-
	2130	1.8	-
	2400	1.8	-
Apr. 12	0800	1.9	-
	1355	1.9	-
	1400	2.0	-
	1420	2.1	-
	1440	2.4	-
	1500	3.3	-
	1530	3.9	234
	1600	3.9	225
	1700	3.9	194
	1800	3.9	-
	1900	3.9	-
	2000	3.9	-
	2100	3.9	-
	2200	3.9	-

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

08459600 Arroyo San Bartolo at Zapata, Tex. (21)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
May 15, 1969	1000	0	-
	1030	.1	-
	1040	.3	-
	1050	.5	-
	1100	1.4	-
	1110	2.3	-
	1120	2.8	-
	1130	3.0	-
	1145	3.2	-
	1200	3.4	150
	1215	3.4	360
	1230	3.4	558
	1240	3.4	560
	1250	3.4	620
	1300	3.4	559
	1305	3.4	554
	1310	3.4	290
	1315	3.4	129
	1320	3.4	-
	1400	3.4	-
	1420	3.4	-
	1430	3.4	-
	1440	3.4	-

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

08466200 Rio Grande Tributary near Sullivan City, Tex. (21)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
June 2, 1969	1945	0	-
	2000	.1	-
	2015	.5	-
	2030	.6	-
	2245	.6	-
	2300	.8	-
	2400	.9	-
June 3	0050	.9	-
	0110	1.1	-
	1330	1.1	-
	1500	1.5	-
	1645	1.5	-
	1745	2.1	26
	1800	2.1	63
	1810	2.1	81
	1815	2.1	63
	1825	2.1	26

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

07344490 Dragoo Creek near Mt. Pleasant, Tex. (19)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
Mar. 24, 1969	0430	0	-
	0500	0	-
	0530	.25	-
	0600	.40	-
	0630	.65	-
	0700	.90	-
	0730	1.20	53
	0800	1.40	81
	0830	1.50	115
	0900	1.75	175
	0930	1.80	245
	1000	1.80	295
	1030	1.80	395
	1100	1.80	395
	1130	1.80	370
	1200	1.80	320
	1230	1.80	245
	1300	1.80	220
	1330	1.80	155
	1400	1.80	115
	1430	1.80	98
	1500	1.80	81
	1530	1.80	67
	1600	1.80	53
	1700	1.80	-
May 7	1100	0	-
	1130	0	-
	1200	.15	-
	1230	.15	-
	1300	.20	-
	1330	.25	-
	1400	.30	-
	1430	.35	-
	1500	.35	-
	1530	.35	-
	1600	.40	-
	1630	.50	-
	1700	.65	-

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

07344490 Drangoo Creek near Mt. Pleasant, Tex. (19)--Continued

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
May 7, 1969-Con.	1730	.80	-
	1800	.90	-
	1830	1.00	-
	1900	1.10	-
	1930	1.15	-
	2000	1.40	-
	2030	1.55	-
	2100	1.55	-
	2200	1.55	-
	2400	1.55	-
May 8	0030	1.55	-
	0045	1.55	115
	0100	1.55	345
	0130	1.60	690
	0200	1.85	1,220
	0230	1.95	1,400
	0245	2.00	1,480
	0300	2.05	1,400
	0400	2.10	1,180
	0500	2.10	795
	0600	2.10	620
	0700	2.10	470
	0800	2.10	370
	0900	2.10	220
	1000	2.10	175
	1100	2.10	115
	1200	2.10	-

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

07344600 Williamson Creek near Pittsburg, Tex. (19)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
Jan. 31, 1969	0400	0	-
	0430	.70	-
	0500	.90	-
	0530	1.05	-
	0600	1.15	-
	0700	1.25	-
	0800	1.25	-
	0900	1.30	-
	1000	1.35	-
	1100	1.40	-
	1130	1.50	-
	1200	1.70	-
	1230	1.80	-
	1300	1.95	-
	1330	2.10	-
	1400	2.10	42
	1500	2.15	54
	1530	2.15	78
	1600	2.40	105
	1630	2.55	120
	1700	2.70	135
	1800	2.90	222
	1900	3.00	282
	2000	3.00	383
	2100	3.00	324
	2200	3.00	324
	2300	3.00	340
	2400	3.00	324
Feb. 1	0100	3.00	324
	0200	3.00	261
	0300	3.00	240
	0400	3.00	204
	0500	3.00	186
	0600	3.00	168
	0700	3.00	135
	0800	3.00	135
	0900	3.00	120
	1000	3.00	120
	1100	3.00	120
	1200	3.00	105
	1300	3.00	105
	1400	3.00	78

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

07344600 Williamson Creek near Pittsburg, Tex. (19)--Continued

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
Feb. 1, 1969-Con.	1500	3.00	54
	1600	3.00	42
	1700	3.00	-
Mar. 24	2100	0	-
	2130	.05	-
	2200	.10	-
	2230	.15	-
	2300	.20	-
	2330	.30	-
	2400	.40	-
Mar. 25	0030	.50	-
	0100	.60	-
	0130	.60	-
	0200	.65	-
	0230	.65	-
	0300	.70	-
	0330	.70	-
	0400	.70	-
	0430	.70	-
	0500	.70	-
	0530	.70	-
	0600	.75	135
	0630	.75	168
	0700	.75	168
	0730	.75	204
	0800	.75	204
	0830	.75	222
	0900	.75	222
	0930	.75	240
	1000	.75	240
	1030	.75	261
	1100	.75	261
	1130	.75	282
	1200	.75	282
	1230	.75	303
	1300	.75	303
	1330	.75	303
	1400	.75	303
	1430	.75	303
	1500	.75	324
	1530	.80	324

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

07344600 Williamson Creek near Pittsburg, Tex. (19)--Continued

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
Mar. 25, 1969-Con.	1600	.85	324
	1630	.95	324
	1700	1.00	324
	1730	1.00	324
	1800	1.15	324
	1900	1.25	303
	2000	1.35	282
	2100	1.35	240
	2200	1.35	222
	2300	1.35	204
	2400	1.35	186
Mar. 26	0100	1.35	168
	0200	1.35	168
	0300	1.35	150
	0400	1.35	150
	0500	1.35	135
	0600	1.35	105
	0700	1.35	-

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

07346072 Taylor Branch near Smithland, Tex. (19)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
Nov. 19, 1968	2130	0	-
	2145	.10	-
	2200	.25	-
	2230	.35	-
	2300	.40	-
	2330	.40	-
	2400	.45	-
Nov. 20	0030	.60	-
	0130	.60	-
	0230	.60	10
	0245	.60	35
	0300	.60	44
	0330	.60	35
	0400	.60	35
	0430	.60	26
	0500	.60	26
	0600	.60	26
	0700	.60	18
	0800	.60	10
	0900	.60	10
Mar. 23, 1969	0400	0	-
	0445	0	-
	0500	.05	-
	0600	.20	-
	0700	.30	-
	0745	.50	26
	0800	.55	35
	0900	.85	106
	1000	1.15	146
	1100	1.35	169
	1200	1.40	160
	1300	1.40	92
	1400	1.40	44
	1430	1.40	26
	1500	1.40	-

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

08017700 Burnett Branch near Canton, Tex. (10)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
Jan. 30, 1969	1400	0	-
	1500	.10	6
	1530	.25	13
	1600	.60	17
	1630	.75	21
	1700	1.10	37
	1730	1.25	69
	1800	1.25	57
	1830	1.25	44
	1900	1.25	26
	1930	1.25	13
	2000	1.25	6
	2100	1.25	-

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

08020800 Grace Creek Tributary at Longview, Tex. (10)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
Nov. 20, 1968	1900	0	-
	2000	0	-
	2030	.10	-
	2100	.10	-
	2130	.25	-
	2145	.50	-
	2200	.60	71
	2215	.75	90
	2230	.95	128
	2245	1.05	166
	2300	1.25	206
	2315	1.45	278
	2330	1.55	414
	2400	1.55	386
Nov. 21	0030	1.55	330
	0100	1.55	304
	0130	1.55	304
	0200	1.55	186
	0300	1.55	186
	0400	1.55	186
	0500	1.55	166
	0600	1.55	128
	0700	1.55	90
	0800	1.55	71
	0900	1.55	-
Dec. 21	1200	0	-
	1300	0	90
	1315	.20	147
	1330	.50	186
	1345	.70	278
	1400	.80	330
	1430	.80	252
	1500	.80	166
	1530	.80	147
	1600	.80	128
	1700	.80	90
	1800	.80	-

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

08022010 Redmon Branch near Hallisville, Tex. (19)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
Sept. 3, 1968	0600	0	-
	0700	.20	-
	0730	1.00	-
	0800	1.20	-
	0830	1.40	-
	0900	1.40	-
	1000	1.40	-
	1030	1.70	3
	1100	2.20	24
	1115	2.70	52
	1130	2.90	44
	1145	3.00	36
	1200	3.00	27
	1230	3.20	18
	1300	3.20	13
	1330	3.30	9
	1400	3.30	7
	1430	3.30	5
	1500	3.30	3
	1600	3.30	2
	1700	3.30	-
	1800	3.30	-
	1900	3.30	-
Nov. 19	2300	0	-
	2330	0	-
	2400	.50	-
Nov. 20	2430	.80	-
	0100	1.10	2
	0115	1.40	4
	0130	1.40	11
	0145	1.40	15
	0200	1.40	21
	0300	1.40	21
	0400	1.40	21
	0500	1.40	21
	0600	1.40	15
	0700	1.40	15
	0800	1.40	11
	0900	1.40	11
	1000	1.40	11
	1100	1.40	11

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

08022010 Redmon Branch near Hallisville, Tex. (19)--Continued

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
Nov. 20, 1968-Con.	1200	1.40	9
	1300	1.40	9
	1400	1.40	9
	1500	1.40	9
	1600	1.40	9
	1700	1.40	9
	1730	1.40	9
	1800	1.40	5
	1900	1.40	4
	2000	1.40	2
	2100	1.40	-
Dec. 22	1200	0	-
	1300	0	2
	1330	0	3
	1345	.20	4
	1400	.50	4
	1415	.80	4
	1430	1.00	7
	1445	1.00	11
	1500	1.00	15
	1530	1.00	24
	1600	1.00	21
	1630	1.00	15
	1700	1.00	11
	1730	1.00	9
	1800	1.00	7
	1830	1.00	4
	1900	1.00	2
	2000	1.00	-
Mar. 23, 1969	0400	0	-
	0500	.20	-
	0530	.40	-
	0600	.50	-
	0630	.60	-
	0700	.80	2
	0730	.80	7
	0800	1.00	24
	0830	1.20	33
	0900	1.40	40
	0930	1.65	56
	1000	1.70	80
	1030	1.70	64

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

08022010 Redmon Branch near Hallisville, Tex. (19)--Continued

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
Mar. 23, 1969-Con.	1100	1.70	48
	1130	1.70	33
	1200	1.70	27
	1230	1.70	21
	1300	1.70	18
	1330	1.70	11
	1400	1.70	4
	1430	1.70	-
	1500	1.70	-

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

08028505 Moore Branch near Newton, Tex. (20)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
May 7, 1969	0000	0	-
	0100	.05	-
	0200	.25	-
	0800	.25	-
	0830	1.20	24
	0900	2.05	27
	1000	2.15	38
	1200	2.15	42
	1400	2.15	42
	1445	2.15	42
	1500	2.15	52
	1600	2.15	88
	1700	2.15	82
	1800	2.15	76
	2100	2.15	47
	2400	2.15	34
May 8	0300	2.15	27
	0600	2.15	24
May 17	1800	0	-
	1815	.10	-
	1830	.85	-
	1845	1.75	-
	1900	2.00	24
	2000	2.05	47
	2100	2.05	42
	2200	2.20	38
	2400	2.20	30
May 18	0100	2.20	30
	0300	2.20	42
	0400	2.20	47
	0600	2.20	52
	0900	2.20	47
	1200	2.20	38
	1500	2.20	27
	1700	2.20	24

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

08031100 Bethlehem Branch near Van, Tex. (10)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
Mar. 17, 1969	0700	0	-
	0800	.10	-
	0900	.35	-
	1000	.40	-
	1100	.50	-
	1200	.60	-
	1300	.60	-
	1400	.60	18
	1500	.85	29
	1600	1.00	42
	1700	1.25	51
	1800	1.30	60
	1900	1.50	69
	2000	1.60	78
	2100	1.75	87
	2200	1.95	78
	2300	2.35	69
	2400	2.80	60
Mar. 18	0100	3.05	42
	0200	3.15	35
	0300	3.15	29
	0400	3.15	29
	0500	3.15	23
	0600	3.15	18

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

08322500 One Arm Creek near Maydelle, Tex. (10)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
Mar. 23, 1969	0300	0	-
	0400	.05	-
	0500	.11	-
	0600	.50	-
	0700	1.04	-
	0800	1.26	-
	0845	0	155
	0900	1.97	230
	0930	0	420
	1000	2.04	620
	1030	0	520
	1100	2.08	360
	1130	0	275
	1200	2.09	200
	1300	2.10	170
	1400	2.11	155
May 6	0000	0	-
	1500	0	-
	1515	.30	-
	1530	1.20	215
	1545	2.50	630
	1600	3.00	1,300
	1630	3.40	1,820
	1645	3.72	2,450
	1700	3.72	2,750
	1730	3.72	2,350
	1800	3.72	1,630
	1830	3.72	1,150
	1900	3.72	850
	2000	3.72	500
	2100	3.72	310
	2200	3.72	215
	2300	3.72	140
	2400	3.72	100
May 7	0000	0	100
	0300	0	50
	0600	0	10
	1200	0	-
	2400	0	-

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

08032300 Squirrel Creek near Elkhart, Tex. (10)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
Apr. 12, 1969	2045	0	-
	2100	.25	-
	2120	1.20	88
	2130	1.25	118
	2145	1.30	130
	2200	1.35	138
	2230	1.35	130
	2300	1.35	108
	2330	1.35	88
May 16	0230	0	-
	0300	.25	-
	0315	.50	-
	0330	.90	-
	0345	1.00	88
	0400	1.15	98
	0430	2.00	140
	0445	2.25	175
	0500	2.30	210
	0530	2.65	260
	0600	2.80	210
	0630	2.80	152
	0700	2.80	130
	0800	2.80	88

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

08033250 Piney Creek Tributary near Pennington, Tex. (11)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
Mar. 14, 1969	1700	0	-
	2100	.15	-
	2300	.60	-
	2400	.75	-
Mar. 15	0200	.85	-
	0430	.90	-
	0500	1.20	-
	0600	1.40	-
	0630	1.50	46
	0700	1.65	68
	0800	1.95	100
	0900	2.05	121
	1000	2.35	136
	1100	2.75	174
	1130	2.85	191
	1200	2.90	183
	1300	2.95	174
	1400	3.30	167
	1500	3.55	174
	1600	3.55	170
	1700	3.55	142
	1800	3.55	121
	1900	3.55	80
	2000	3.55	57
	2100	3.55	46

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

08414000 Drakes Branch near Spurger, Tex. (20)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
May 6, 1969	2300	0	-
	2400	.25	-
May 7	0200	.40	-
	0300	1.10	-
	0330	3.00	60
	0400	4.80	110
	0415	4.95	162
	0440	4.95	233
	0500	5.50	290
	0600	5.50	520
	0700	5.50	840
	0800	5.50	1,050
	0900	5.50	990
	1000	5.50	740
	1100	5.50	535
	1200	5.50	405
	1300	5.50	290
	1500	5.50	205
	1800	5.50	175
	2400	5.50	110
May 8	0300	5.50	100
	0700	5.50	60

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

08047200 West Creek at Fort Worth, Tex. (02)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
Mar. 14, 1969	2100	0	-
	2200	.15	-
	2300	.25	-
	2400	.30	-
Mar. 15	0100	.40	-
	0200	.45	-
	0300	.50	-
	0310	.50	16
	0315	.50	39
	0330	.50	24
	0340	.50	44
	0400	.50	39
	0430	.55	29
	0445	.55	16
	0500	.60	-

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

08062850 Bachelor Creek near Terrell, Tex. (18)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
Mar. 22, 1969	1000	0	-
	1100	0	-
	1200	.30	-
	1300	.45	-
	1400	.55	-
	1500	.55	-
	1600	.60	-
	1700	.60	-
	1800	.70	-
	1815	.70	10
	1830	.70	12
	1900	.70	17
	2000	.75	32
	2015	.75	39
	2030	1.05	43
	2045	1.40	51
	2100	1.50	65
	2130	1.50	80
	2200	1.55	95
	2230	1.55	105
	2300	1.55	125
	2330	1.65	175
	2400	1.70	200
Mar. 23	0100	1.80	225
	0200	1.90	305
	0300	1.95	345
	0400	2.05	345
	0500	2.05	385
	0600	2.15	385
	0700	2.15	385
	0800	2.15	425
	0900	2.15	465
	1000	2.15	425
	1100	2.15	385
	1200	2.15	345
	1400	2.15	265
	1600	2.15	150

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

08062850 Bachelor Creek near Terrell, Tex. (18)--Continued

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
Mar. 23, 1969-Con.	1800	2.15	115
	2000	2.15	80
	2200	2.15	70
	2400	2.15	70
Mar. 24	0200	2.15	65
	0400	2.15	65
	0600	2.15	60
	0800	2.15	55
	1000	2.15	51
	1200	2.15	43
	1400	2.15	39
	1600	2.15	32
	1800	2.15	29
	2000	2.15	26
	2200	2.15	23
	2400	2.15	23
Mar. 25	0200	2.15	17
	0400	2.15	14
	0600	2.15	10
June 7	1400	0	-
	1415	0	-
	1430	.25	-
	1500	.75	-
	1530	.85	-
	1600	1.00	-
	1630	1.05	-
	1700	1.20	-
	1730	1.25	-
	1800	1.25	-
	1900	1.25	12
	2000	1.25	29
	2100	1.25	55
	2200	1.25	60
	2300	1.25	65
	2400	1.25	.70

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

08062850 Bachelor Creek near Terrell, Tex. (18)--Continued

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
June 8, 1969	0100	1.25	75
	0200	1.25	80
	0300	1.25	75
	0400	1.25	70
	0500	1.25	65
	0600	1.25	60
	0700	1.25	51
	0800	1.25	39
	0900	1.25	29
	1000	1.25	23
	1100	1.25	14
	1200	1.25	10
	1300	1.25	-

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

08053100 Jones-Valley Creek near Forestburg, Tex. (03)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
May 4, 1969	2100	0	-
	2115	.10	-
	2200	.25	-
	2215	.35	-
	2230	.45	-
	2245	.50	26
	2300	1.00	37
	2330	1.35	62
	2345	1.35	68
	2400	1.35	57
May 5	0030	1.60	51
	0045	1.85	62
	0100	2.25	285
	0115	2.40	390
	0130	2.40	440
	0145	2.40	300
	0200	2.40	175
	0300	2.40	39
	0400	2.40	31
	0440	2.40	100
	0500	2.40	70
	0700	2.40	26

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

08063005 Red Oak Branch near Eustace, Tex. (10)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
Mar. 19, 1969	0700	0	-
	0800	.10	-
	0900	.20	-
	1000	.20	-
	1100	.40	-
	1200	.50	-
	1300	.50	-
	1400	.90	24
	1500	1.00	32
	1530	1.00	32
	1600	1.00	36
	1630	1.00	40
	1700	1.00	44
	1730	1.00	59
	1800	1.00	59
	1830	1.00	54
	1900	1.00	49
	1930	1.00	49
	2000	1.00	44
	2030	1.00	40
	2100	1.00	36
	2130	1.00	32
	2200	1.00	28
	2230	1.00	24
	2300	1.00	-

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

08063180 Briar Creek Tributary near Corsicana, Tex. (18)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
Mar. 17, 1969	0700	0	-
	0800	.10	-
	0900	.30	-
	1000	.40	241
	1100	.50	277
	1130	.70	331
	1200	.90	340
	1230	1.00	353
	1300	1.00	353
	1330	1.00	345
	1400	1.00	331
	1430	1.00	313
	1500	1.00	295
	1530	1.00	277
	1600	1.00	241
	1630	1.00	-

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

08063620 Kings Branch near Reagan Springs, Tex. (18)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
Mar. 17, 1969	0100	0	-
	0130	.15	-
	0200	.20	-
	0300	.40	-
	0400	.60	-
	0430	.70	67
	0500	.80	89
	0530	.80	125
	0600	.80	113
	0630	.80	100
	0700	.80	89
	0730	.80	83
	0800	.80	77
	0830	.80	67
	0900	.80	-

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

08064630 Saline Branch Tributary near Bethel, Tex (10)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
Apr. 12, 1969	0800	0	-
	0900	.25	-
	1000	.60	-
	1100	.80	-
	1200	1.05	29
	1300	1.60	34
	1330	2.00	46
	1400	2.65	66
	1430	3.05	92
	1500	3.15	66
	1530	3.15	49
	1600	3.15	40
	1700	3.15	37
	2000	3.15	32
	2400	3.15	29

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

08653200 Mayes Branch near Latexo, Tex. (11)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
Apr. 12, 1969	1100	0	-
	1200	.10	-
	1300	.30	200
	1330	.70	295
	1400	1.45	325
	1430	1.50	335
	1500	1.55	325
	1600	1.55	275
	1700	1.55	235
	1800	1.80	215
	1900	1.85	200

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

08677500 Landrum Creek Tributary near Montgomery, Tex. (12)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
Apr. 27, 1969	0900	0	-
	0930	.15	-
	1000	.15	-
	1015	.80	14
	1030	1.10	23
	1040	1.10	51
	1050	1.10	32
	1100	1.10	22
	1115	1.10	16
	1130	1.10	14

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

08068300 Mill Creek near Dobbin, Tex. (12)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
Oct. 9, 1968	1400	0	-
	1430	.50	-
	1445	1.10	-
	1500	1.55	-
	1530	1.55	17
	1600	1.55	76
	1620	1.55	142
	1640	1.55	178
	1700	1.55	165
	1730	1.55	142
	1800	1.55	132
	1830	1.55	76
	1900	1.55	42
	2000	1.55	17
Feb. 21, 1969	0200	*0	-
	0300	.01	-
	0600	.11	-
	0700	.21	-
	0800	.81	19
	0830	0	50
	0900	1.26	105
	1000	1.45	200
	1100	1.71	300
	1200	2.17	395
	1230	0	410
	1300	2.26	395
	1400	2.35	345
	1500	2.60	305
	1600	3.12	325
	1700	3.14	285
	1800	3.14	175
	1900	3.14	76
	2000	3.14	32
	2100	3.14	24
	2130	3.14	19

* Following rainfall was distributed using the hourly precipitation record from Conroe.

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

08079400 Playa Draw at Littlefield, Tex. (05)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
June 14, 1969	0900	0	-
	0920	0	-
	0930	.70	-
	0945	1.20	-
	1000	1.65	-
	1100	1.70	-
	1630	1.70	-
	1655	1.75	20
	1715	1.95	36
	1730	2.70	195
	1745	3.00	235
	1800	3.10	225
	1830	3.15	135
	1900	3.25	102
	1930	3.75	135
	2000	3.85	123
	2100	3.85	106
	2200	3.85	78
	2300	3.85	57
	2400	3.85	36
June 15	0100	3.85	20
	0200	3.85	-

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

08080510 Guest-Flowers Draw near Aspermont, Tex. (08)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
Sept. 21, 1969	1200	0	-
	1215	.35	-
	1230	.50	-
	1245	.60	-
	1300	.65	-
	2220	.65	-
	2230	.85	-
	2245	1.00	-
	2300	1.15	-
	2330	1.25	-
	2400	1.30	-
Sept. 22	0715	1.30	72
	0730	1.30	96
	0745	1.30	120
	0800	1.30	205
	0830	1.30	230
	0900	1.30	230
	1000	1.30	215
	1100	1.30	190
	1300	1.30	135
	1500	1.30	96
	1630	1.30	72
	1800	1.30	-

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

08080750 Callahan Draw near Lockney, Tex. (05)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
May 6, 1969	2000	0	-
	2020	.05	-
	2030	.35	6.4
	2040	.80	10
	2050	1.00	12
	2100	1.20	18
	2115	1.25	25
	2130	1.25	45
	2200	1.25	80
	2230	1.25	132
	2300	1.25	160
	2330	1.25	167
	2400	1.25	167
May 7	0100	1.25	150
	0300	1.25	121
	0600	1.25	80
	0900	1.25	56
	1200	1.25	18
	1330	1.25	6.4
	1400	1.25	-

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

08080918 Red Mud Creek near Spur, Tex. (25)

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
May 6, 1969	0600	0	-
	0700	.10	-
	0730	.25	-
	0740	.60	-
	0750	.95	15
	0800	1.00	18
	0845	1.00	46
	0900	1.00	160
	1000	1.05	295
	1020	1.10	410
	1030	1.45	465
	1040	1.55	500
	1100	1.55	540
	1200	1.60	465
	1220	1.60	445
	1300	1.60	840
	1325	1.60	940
	1400	1.60	845
	1500	1.60	660
	1600	1.60	480
	1800	1.60	240
	2000	1.60	120
	2400	1.60	15
May 7	0300	1.60	-
May 15	2000	0	-
	2100	.15	-
	2145	.15	18
	2200	.15	265
	2230	.15	385
	2300	.20	550
	2400	.25	730

Table 4.--Incremental rainfall and discharge for significant storms.--Continued

08080918 Red Mud Creek near Spur, Tex. (25)--Continued

Date	Time	Accumulated rainfall (inches)	Discharge (cfs)
May 16, 1969	0030	.25	1,020
	0100	.25	1,450
	0125	.25	1,510
	0135	.65	1,520
	0200	.75	1,450
	0230	.75	1,230
	0300	.75	1,000
	0400	.75	800
	0600	.75	500
	0800	.75	350
	1200	.75	150
	1800	.75	52
	2300	.75	18
	2400	.75	-

STATION DATA

PEAK DISCHARGES AT GAGING STATIONS

LISTED BY BASIN AND IN DOWNSTREAM ORDER

ARKANSAS RIVER BASIN

07227460 East Fork Cheyenne Creek tributary near Channing, Tex. (04)

Location.--Lat 35°40'35", long 102°16'55", Hartley County, at culvert on State Highway 354 and 2.5 miles east of Channing.

Drainage area.--0.86 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1965	June 25, 1965	8.40	2,260
1966	Aug. 31, 1966	a4.84	520
1967	June 29, 1967	5.18	590
1968	July 6, 1968	3.00	32
1969	July 6, 1969	3.13	36

a Maximum for period Dec. 30, 1965, to Sept. 30, 1966.

ARKANSAS RIVER BASIN

07227480 Tecovas Creek tributary near Bushland, Tex. (04)

Location.--Lat 35°15'55", long 102°00'20", Potter County at culvert on Farm Road 1061 and 5.5 miles northeast of Bushland.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	-	-	-
1967	Apr. 11, 1967	5.07	105
1968	Aug. 14, 1968	2.59	11
1969	1969	<1.71	<6

< Less than amount shown.

ARKANSAS RIVER BASIN

07234150 White Woman Creek tributary near Darrouzett, Tex. (04)

Location.--Lat 36°24'00", long 100°16'30", Lipscomb County, at culvert on State Highway 305, 4.5 miles southeast of Darrouzett, and 11.9 miles north of Lipscomb.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Aug. 31, 1966	5.20	416
1967	June 10, 1967	2.81	35
1968	June 16, 1968	3.15	62
1969	Sept. 1, 1969	3.21	74

RED RIVER BASIN

07297920 Middle Tule Draw near Tulia, Tex. (05)

Location.--Lat 34°31'46", long 101°53'30", Swisher County, at culvert on State Highway 86 and 6.5 miles west of Tulia.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1967	July 4, 1967	a5.39	230
1968	June 16, 1968	9.03	2,500
1969	May 7, 1969	8.09	1,850

a Maximum for period Jan. 12 to Sept. 30, 1967.

RED RIVER BASIN

07298150 Rock Creek tributary near Silverton, Tex. (25)

Location.--Lat 34°28'40", long 101°25'50", Briscoe County, at culvert on State Highway 86 and 6.7 miles west of Silverton.

Drainage area.--13.7 sq mi, of which 11.5 sq mi is probably noncontributing.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Aug. 24, 1966	6.70	48
1967	July 13, 1967	5.27	5.5
1968	May 8, 1968	5.53	10
1969	May 16, 1969	6.33	35

RED RIVER BASIN

07299575 North Groesbeck Creek tributary near Kirkland, Tex. (25)

Location.--Lat 34°24', long 100°03', Childress County, at culvert on Farm Road 1033, 1.4 miles north of Kirkland, and 1.5 miles upstream from North Groesbeck Creek.

Drainage area.--0.16 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 0.3 mile; slope index, 90.9 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1965	Sept. 19, 1965	a5.32	12
1966	Aug. 23, 1966	8.22	74
1967	May 28, 1967	5.52	16
1968	May 8, 1968	5.59	16
1969	Aug. 26, 1969	5.88	22

a Maximum for period June 4 to Sept. 30, 1965.

07299940 Oklahoma Draw tributary near Hedley, Tex. (25)

Location.--Lat 34°53'12", long 100°37'18", Donley County, at culvert on State Highway 203 and 2.7 miles northeast of Hedley.

Drainage area.--1.15 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 2.0 miles; slope index, 53 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1965	Sept. 19, 1965	a5.25	87
1966	Apr. 25, 1966	5.20	83
1967	-	<5.00	<63
1968	May 8, 1968	5.97	162
1969	May 7, 1969	5.25	88

a Maximum for period June 5 to Sept. 30, 1965.
< Less than amount shown.

07301405 Doodlebug Creek near Wheeler, Tex. (25)

Location.--Lat 35°26'40", long 100°13'50", Wheeler County, at culvert on State Highway 152 and 2.5 miles southeast of Wheeler.

Drainage area.--0.19 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 0.7 mile; slope index, 58 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1967	-	a<6.68	<120
1968	Aug. 29, 1968	7.70	275
1969	Aug. 26, 1969	9.92	740

a Maximum for period Jan. 11 to Sept. 30, 1967.
< Less than amount shown.

07307720 Cottonwood Creek tributary near Afton, Tex. (25)

Location.--Lat 33 44'20", long 100 50'30", Dickens County, at culvert on State Highway 70 and 2 miles southwest of Afton.

Drainage area.--1.09 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 1.9 miles; slope index, 74.8 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1967	July 5, 1967	a2.23	245
1968	May 9, 1968	3.80	660
1969	June 14, 1969	4.50	890

a Maximum for period Dec. 6, 1966, to Sept. 30, 1967.

07308220 Plum Creek near Vernon, Tex. (03)

Location.--Lat 34°06'38", long 99°13'22", Wilbarger County, at culvert on Farm Road 433 and 4.0 miles southeast of Vernon.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1967	Apr. 12, 1967	a6.09	265
1968	May 16, 1968	5.79	187
1969	Mar. 16, 1969	5.08	15

a Maximum for period Jan. 10 to Sept. 30, 1967.

RED RIVER BASIN

07312140 Beaver Creek tributary near Crowell, Tex. (25)

Location.--Lat 33°58'54", long 99°41'30", Foard County, at culvert on U.S. Highway 70 and 2 miles east of Crowell.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Aug. 31, 1966	5.67	385
1967	June 26, 1967	6.37	520
1968	June 1, 1968	4.27	114
1969	Sept 22, 1969	3.96	72

RED RIVER BASIN

07312300 Wolf Creek near Iowa Park, Tex. (03)

Location.--Lat 33°54'45", long 98°48'30", Wichita County, at culvert on Farm Road 367 and 8.5 miles southwest of Iowa Park.

Drainage area.--8.13 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 5.9 miles; slope index, 19.7 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Aug. 28, 1966	a10.06	(+)
1967	Apr. 12, 1967	10.80	(+)
1968	Apr. 18, 1968	3.66	b124
1969	July 22, 1969	4.95	b300

a Maximum for period July 20 to Sept.30, 1966.
b Estimated.
+ Discharge not determined.

07314200 North Fork Little Wichita River tributary
near Archer City, Tex. (03)

Location.--Lat 33°39'50", long 98°43'30", Archer County, at culvert on State Highway 25, 1.3 miles upstream from North Fork Little Wichita River, and 7.4 miles northwest of Archer City.

Drainage area.--0.10 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 0.4 mile; slope index, 234 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1965	-	-	a0
1966	Sept. 16, 1966	5.67	215
1967	Apr. 12, 1967	2.95	52
1968	July 7, 1968	4.73	152
1969	June 14, 1969	2.95	52

a No flow for the period May 25 to Sept. 30, 1965.

07315550 Farmers Creek near Saint Jo, Tex. (03)

Location.--Lat 33°42'45", long 97°33'05", Montague County, at culvert on U.S. Highway 82 and 2.0 miles northwest of Saint Jo.

Drainage area.--0.82 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 2.85 miles; slope index, 51 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Aug. 24, 1966	a3.64	31
1967	June 26, 1967	4.02	57
1968	July 1, 1968	4.70	104
1969	June 14, 1969	5.30	145

a Maximum for the period Aug. 4 to Sept. 30, 1966.

RED RIVER BASIN

07332602 Cooper Creek near Bonham, Tex. (01)

Location.--Lat 33°32'24", long 96°12'03", Fannin County, at culvert on Farm Road 1629, 1.7 miles upstream from Bois d'Arc Creek, and 2.9 miles south of Bonham.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Apr. 28, 1966	19.11	3,100
1967	Sept. 6, 1967	20.26	ab3,180
1968	Apr. 19, 1968	17.69	2,430
1969	May 7, 1969	17.84	a2,100

a Affected by backwater.
b Revised.

RED RIVER BASIN

07336940 McKinney Bayou near Leary, Tex. (19)

Location.--Lat 33°31'33", long 94°11'32", Bowie County, at culvert on Farm Road 2253, 1.1 miles north of Mount Zion, 3.2 miles north of Farm Road 2148, and 4.3 miles north of Leary.

Drainage area.--3.33 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 6.45 miles; slope index, 1 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Apr. 25, 1966	15.23	220
1967	May 31, 1967	12.67	130
1968	May 10, 1968	13.08	90
1969	Jan. 31, 1969	13.06	a145

a Affected by backwater.

07342450 Nelson Branch near Leonard, Tex. (01)

Location.--Lat 33°21'20", long 96°13'25", Fannin County, at culvert on U.S. Highway 69, 0.4 mile southeast of Hunt-Fannin County line, and 2.2 miles southeast of Leonard.

Drainage area.--0.22 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 0.78 mile; slope index, 66.6 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1965	Sept. 21, 1965	a10.93	16
1966	Apr. 28, 1966	16.52	300
1967	May 30, 1967	17.65	340
1968	Apr. 19, 1968	12.38	68
1969	May 7, 1969	15.35	230

a Maximum for period June 23 to Sept. 30, 1965.

07343350 Dial Branch near Bagwell, Tex. (01)

Location.--Lat 33°37'50", long 95°10'15", Red River County, at culvert on U.S. Highway 82, 1.8 miles upstream from mouth, and 2.3 miles south of Bagwell.

Drainage area.--1.00 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 1.45 miles; slope index, 45 ft. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Feb. 9, 1966	16.21	660
1967	Apr. 26, 1967	17.77	880
1968	June 26, 1968	15.92	618
1969	May 8, 1969	15.53	552

07343900 Buck Creek near Cookville, Tex. (19)

Location.--Lat 33°11'10", long 94°52'20", Titus County, at culvert on U.S. Highway 67, 1 mile west of Cookville, and 5.5 miles east of Mount Pleasant.

Drainage area.--0.78 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 1.03 miles; slope index, 87.2 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Apr. 24, 1966	17.08	590
1967	May 1, 1967	13.30	190
1968	Sept. 18, 1968	14.95	350
1969	May 8, 1969	15.77	440

07344490 Dragoo Creek near Mount Pleasant, Tex. (19)

Location.--Lat 33°09'40", long 95°01'55", Titus County, at culvert on Interstate Highway 30, 1.8 miles upstream from mouth, and 3.8 miles west of Mount Pleasant.

Drainage area.--4.27 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 3.6 miles; slope index, 26.9 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1967	Apr. 13, 1967	a15.03	bc1,150
1968	Apr. 1, 1968	15.09	1,170
1969	May 8, 1969	15.70	b1,480

a Maximum for period Jan. 1 to Sept. 30, 1967.
b Affected by backwater.
c Revised.

07344600 Williamson Creek near Pittsburg, Tex. (19)

Location.--Lat 33°02'55", long 94°52'35", Titus County, at culvert on Farm Road 2348 and 1.3 miles northeast of Pittsburg.

Drainage area.--7.11 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 6.8 miles; slope index, 20.3 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1967	May 31, 1967	a12.94	b310
1968	May 10, 1968	12.96	320
1969	May 8, 1969	13.09	b340

a Maximum for period Jan. 1 to Sept. 30, 1967.
b Affected by backwater.

07346010 Cypress Creek tributary near Jefferson, Tex. (19)

Location.--Lat 32°42'50", long 94°25'52", Marion County, at culvert on Farm Road 2208, 4.3 miles upstream from Cypress Creek, and 5.5 miles southwest of Jefferson.

Drainage area.--0.21 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 0.75 mile; slope index, 75 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Apr. 24, 1966	13.78	129
1967	-	<10.74	<7
1968	Sept. 4, 1968	11.07	13
1969	Mar. 23, 1969	10.74	6.4

< Less than amount shown.

RED RIVER BASIN

07346072 Taylor Branch near Smithland, Tex. (19)

Location.--Lat 32°47'20", long 94°15'02", Marion County, at culvert on State Highway 49 and 6.4 miles northeast of Jefferson.

Drainage area.--0.73 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 1.40 miles; slope index, 61 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Apr. 24, 1966	13.33	430
1967	Nov. 10, 1966	10.73	38
1968	May 9, 1968	11.30	100
1969	Mar. 23, 1969	11.79	169

SABINE RIVER BASIN

08017700 Burnett Branch near Canton, Tex. (10)

Location.--Lat 32°32'17", long 95°51'44", Van Zandt County, at culvert on State Highway 19 and 1.3 miles south of Canton.

Drainage area.--0.33 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 0.80 mile; slope index, 22 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Apr. 24, 1966	14.49	330
1967	May 31, 1967	11.14	39
1968	Oct. 16, 1967	13.05	184
1969	May 8, 1969	14.60	345

SABINE RIVER BASIN

08020800 Grace Creek tributary at Longview, Tex. (10)

Location.--Lat 32°31'02", long 94°44'23", Gregg County, at culvert on U.S. Highway 259, 1.2 miles north of Longview, and 1.7 miles upstream from mouth.

Drainage area.--5.05 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 4.15 miles; slope index, 28 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1967	July 4, 1967	a13.02	620
1968	May 9, 1968	13.15	670
1969	Apr 17, 1969	13.73	870

a Maximum for period Jan. 1 to Sept. 30, 1967.

SABINE RIVER BASIN

08022010 Redmon Branch near Hallsville, Tex. (19)

Location.--Lat 32°29'41", long 94°28'47", Harrison County, at culvert on Farm Road 968, 2.6 miles upstream from Potters Creek, and 5.6 miles east of Hallsville.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Apr. 24, 1966	15.70	725
1967	July 4, 1967	14.81	150
1968	Apr. 1, 1968	12.90	76
1969	Mar. 23, 1969	13.03	80

SABINE RIVER BASIN

08024290 Dorsey Branch near Milam, Tex. (11)

Location.--Lat 31°30'44", long 93°50'45", Sabine County, at culvert on State Highway 87 and 5.5 miles north of Milam.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1967	-	<1.83	<122
1968	July 24, 1968	5.72	382
1969	May 7, 1969	3.0	136

< Less than amount shown.

SABINE RIVER BASIN

08028505 Moore Branch near Newton, Tex. (20)

Location.--Lat 30°53'00", long 93°40'59", Newton County, at culvert on Farm Road 1414 and 5.2 miles northeast of Newton.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	-	a<0.88	<19
1967	Apr. 13, 1967	3.13	140
1968	Apr. 9, 1968	2.83	118
1969	Feb. 21, 1969	2.82	117

a Maximum for period July 29 to Sept. 30, 1966.
< Less than amount shown.

SABINE RIVER BASIN

08030700 Adams Bayou tributary near Deweyville, Tex (20)

Location.--Lat 30°14'53", long 93°48'56", Newton County, at culvert on State Highway 12 and 5.5 miles southwest of Deweyville.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	-	a<0.63	(+)
1967	Apr. 14, 1967	1.74	90
1968	June 22, 1968	2.94	195
1969	Feb. 21, 1969	b1.90	c95

a Maximum for period Aug. 2 to Sept. 30, 1966.
+ Discharge not determined.
< Less than amount shown.
b Occurred different time than peak discharge.
c Estimated.

NECHES RIVER BASIN

08031100 Bethlehem Branch near Van, Tex. (10)

Location.--Lat 32°29'04", long 95°38'35", Van Zandt County, at culvert on Farm Road 314, 0.7 mile upstream from mouth, and 3.1 miles south of Van.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Apr. 23, 1966	15.83	660
1967	May 31, 1967	14.25	280
1968	May 10, 1968	14.22	270
1969	May 8, 1969	13.15	a188

a Affected by backwater.

NECHES RIVER BASIN

08032100 Hurricane Creek tributary near Palestine, Tex. (10)

Location.--Lat 31°52'10", long 95°34'20", Anderson County, at culvert on State Highway 155 and 8.5 miles northeast of Palestine.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	-	a<0.92	<6
1967	Apr. 13, 1967	1.75	29
1968	May 11, 1968	1.86	32
1969	Mar. 22, 1969	1.92	34

a Maximum for period July 22 to Sept. 30, 1966.
< Less than amount shown.

NECHES RIVER BASIN

08032250 One Arm Creek near Maydelle, Tex. (10)

Location.--Lat 31°48'29", long 95°17'19", Cherokee County, at culvert on U.S. Highway 84 and 1.0 mile east of Maydelle.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1967	July 2, 1967	a2.90	158
b1968	June 24, 1968	5.9	670
1969	May 6, 1969	12.64	2,750

a Maximum for period Mar. 9 to Sept. 30, 1967.
b Revised.

NECHES RIVER BASIN

08032300 Squirrel Creek near Elkhart, Tex. (10)

Location.--Lat 31°37'09", long 95°30'15", Anderson County, at culvert on State Highway 294 and 4.5 miles east of Elkhart.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1967	-	a<1.35	<48
1968	Apr. 8, 1968	2.26	136
1969	May 6, 1969	3.33	260

a Maximum for period Mar. 8 to Sept. 30, 1967.
< Less than amount shown.

NECHES RIVER BASIN

08033250 Piney Creek tributary near Pennington, Tex. (11)

Location.--Lat 31°12'12", long 95°06'58", Trinity County, at culvert on Farm Road 358 and 7.5 miles east of Pennington.

Drainage area.--1.17 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream 2.30 miles; slope index, 27 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1967	June 1, 1967	a2.80	134
1968	Apr. 8, 1968	4.35	265
1969	May 6, 1969	6.01	430

a Maximum for period Mar. 13 to Sept. 30, 1967.

08033450 Shawnee Creek tributary near Huntington, Tex. (11)

Location.--Lat 31°13'17", long 94°30'51", Angelina County, at culvert on U.S. Highway 69 and 5.3 miles southeast of Huntington.

Drainage area.--0.52 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 1.30 miles; slope index, 64 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	-	a<1.86	(+)
1967	Oct. 4, 1966	2.31	28
1968	Apr. 8, 1968	8.63	310
1969	Mar. 15, 1969	5.56	126

a Maximum for period Aug. 3 to Sept. 30, 1966.
+ Discharge not determined.
< Less than amount shown.

08033480 Greenwood Creek tributary near Colmesneil, Tex. (20)

Location.--Lat 30°58'48", long 94°24'22", Tyler County, at culvert on U.S. Highway 69 and 5.2 miles north of Colmesneil.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	-	a<2.70	(+)
1967	Apr. 10, 1967	3.37	50
1968	-	<2.70	26
1969	May 6, 1969	3.47	55

a Maximum for period July 28 to Sept. 30, 1966.
+ Discharge not determined.
< Less than amount shown.

NECHES RIVER BASIN

08037300 Gingham Branch near Mount Enterprise, Tex. (10)

Location.--Lat 31°55'14", long 94°33'33", Rusk County, at culvert on U.S. Highway 84 and 7.5 miles east of Mount Enterprise.

Drainage area.--

Gage .--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1967	June 1, 1967	a6.92	20
1968	Apr. 8, 1968	10.31	132
1969	Mar. 15, 1969	8.44	64

a Maximum for period Mar. 10 to Sept. 30, 1967.

NECHES RIVER BASIN

08039900 Little Sandy Creek tributary near Jasper, Tex. (20)

Location.--Lat 30°56'39", long 93°56'16", Jasper County, at culvert on State Highway 63 and 4.0 miles east of Jasper.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1967	-	a<2.35	<20
1968	-	2.5	20
1969	May 6, 1969	2.60	39

a Maximum for period Mar. 11 to Sept. 30, 1967.
< Less than amount shown.

NECHES RIVER BASIN

08041400 Drakes Branch near Spurger, Tex. (20)

Location.--Lat 30°41'02", long 94°15'32", Tyler County, at culvert on Farm Road 1013 and 5.2 miles west of Spurger.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1967	Apr. 13, 1967	a1.87	118
1968	June 21, 1968	2.61	220
1969	May 6, 1969	5.85	1,050

a Maximum for period Mar. 12 to Sept. 30, 1967.

DOUBLE BAYOU BASIN

08042550 West Fork Double Bayou near Anahuac, Tex. (20)

Location.--Lat 29°45'39", long 94°38'00", Chambers County, at bridge on Farm Road 562 and 3 miles southeast of Anahuac.

Drainage area.--4.43 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 3.15 miles; slope index, 0.5 ft per mile. (Map scale, 1:24,000).

Remarks.--This site was instrumented with a water-stage recorder during the periods March to July 1963 and November 1963 to February 1965 as part of the Houston Ship Channel Model Study.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Aug. 5, 1966	a12.22	(+)
1967	May 21, 1967	13.60	250
1968	Apr. 9, 1968	15.80	300
1969	Apr. 12, 1969	14.30	205

a Maximum for period Aug. 5 to Sept. 30, 1966.
+ Discharge not determined.

08042700 North Creek near Jacksboro, Tex. (02)

Location.--Lat 33°16'55", long 98°17'55", Jack County, on left bank at downstream side of bridge on U.S. Highway 281, 1.5 miles upstream from Henderson Creek, 9.3 miles northwest of Jacksboro, and 14 miles upstream from mouth.

Drainage area.--21.6 sq mi.

Gage.--Recording. Datum of gage is 1,016.33 ft above mean sea level (State Highway Department bench mark).

Historical data.--Flood of Apr. 28, 1957, was the highest since at least 1915, from information by local resident.

Remarks.--Three recording and two non-recording rain gages located in the watershed. Tabulations of significant storm rainfall and run-off data are on file in the U.S. Geological Survey District office.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1956	May 3, 1956	21.58	5,700
1957	Apr. 28, 1957	24.45	6,990
1958	Nov. 4, 1957	12.56	1,760
1959	June 26, 1959	14.45	2,500
1960	Oct. 3, 1959	19.65	4,830
1961	July 16, 1961	15.23	2,840
1962	June 10, 1962	18.10	4,130
1963	Apr. 28, 1963	11.55	1,370
1964	May 29, 1964	13.60	1,360
1965	Sept. 18, 1965	16.82	2,250
1966	Apr. 23, 1966	17.38	2,790
1967	May 31, 1967	12.25	1,150
1968	Mar. 20, 1968	10.49	621
1969	May 5, 1969	16.23	2,050

08044200 Walker Creek near Boyd, Tex. (02)

Location.--Lat 33°04'32", long 97°34'58", Wise County, at culvert on State Highway 114, 1.1 miles upstream from Salt Creek, and 1.1 miles west of Boyd.

Drainage area.--2.95 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 3.35 miles; slope index, 44 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1965	Sept. 22, 1965	a12.75	270
1966	Feb. 8, 1966	13.83	450
1967	May 30, 1967	13.23	350
1968	Mar. 19, 1968	14.50	580
1969	May 7, 1969	13.48	390

a Maximum for period June 16 to Sept. 30, 1965.

TRINITY RIVER BASIN

08047200 West Creek at Fort Worth, Tex. (02)

Location.--Lat 32°40'25", long 97°22'06", Tarrant County, at culvert on Bilglade Road at intersection of West Creek Drive in Fort Worth.

Drainage area.--0.31 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 0.85 mile; slope index, 119 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1965	July 14, 1965	a14.18	275
1966	Aug. 29, 1966	16.30	495
1967	May 30, 1967	13.86	250
1968	June 15, 1968	12.64	127
1969	Feb. 20, 1969	13.79	235

a Maximum for period July 2 to Sept. 30, 1965.

TRINITY RIVER BASIN

08048550 Dry Branch at Blandin St, Fort Worth, Tex. (02)

Location.--Lat 32°47'19", long 97°18'22", Tarrant County, at culvert on Blandin Street in north Fort Worth and 2.8 miles upstream from mouth.

Drainage area.--1.08 sq mi.

Gage.--Stage recorder.

Remarks.--This station operated as research project for runoff from urban areas.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1969	Apr. 16, 1969	a587.15	217

a Maximum for period February to September.

08048600 Dry Branch at Fain Street, Fort Worth, Tex. (02)

Location.--Lat 32°46'34", long 97°17'18", Tarrant County, on right bank 30 ft upstream from culverts on Fain Street at intersection of Fain and Beach Streets in Fort Worth, 1.1 miles upstream from the mouth.

Drainage area.--2.13 sq mi.

Gage.--Recording. Datum of gage is 537.51 ft above mean sea level.

Remarks.--This station operated as research project for runoff from urban areas.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1969	May 6, 1969	4.58	292

08048820 Little Fossil Creek at Interstate Highway 820, Fort Worth, Tex. (02)

Location.--Lat 32°50'22", long 97°19'20", Tarrant County, at culvert on south access road to Interstate Highway 820, and 5.7 miles north of courthouse, Fort Worth.

Drainage area.--5.64 sq mi.

Gage.--Stage recorder.

Remarks.--This station operated as research project for runoff from urban areas.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1969	May 6, 1969	a612.55	715

a Maximum for period April to September.

08048850 Little Fossil Creek at Mesquite St, Fort Worth, Tex. (02)

Location.--Lat 32°48'33", long 97°17'28", Tarrant County, on right bank at inersection of Mesquite Street and Broadway Avenue in Fort Worth, 150 ft upstream from bridge on Alta Vista Road (Beach Street), 4.3 miles northeast of County Courthouse, and approximately 4.3 miles upstream from Big Fossil Creek.

Drainage area.--12.3 sq mi.

Gage.--Recording. Datum of gage is 548.62 ft above mean sea level.

Remarks.--This station operated as research project for runoff from urban areas.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1969	May 6, 1969	8.30	1,530

08048900 Deer Creek tributary near Crowley, Tex. (02)

Location.--Lat 32°35'06", long 97°21'04", Tarrant County, at culvert on Farm Road 731, 0.7 mile upstream from mouth, and 0.7 mile northeast of Crowley.

Drainage area.--5.86 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 5.4 miles; slope index, 23 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1967	-	a<11.51	<170
1968	Apr. 19, 1968	14.98	1,060
1969	May 7, 1969	14.53	910

a Maximum for period Jan. 12 to Sept. 30, 1967.
< Less than amount shown.

TRINITY RIVER BASIN

08050200 Elm Fork Trinity River subwatershed No. 6-0
near Muenster, Tex. (03)

Location.--Lat 33°37'13", long 97°24'15", Cooke County, near center of earthfill dam on unnamed tributary of Elm Fork Trinity River, 1.0 mile west of Farm Road 373, and 2.6 miles southwest of Muenster.

Drainage area.--0.77 sq mi.

Gage.--Recording. Datum of gage is 941.75 ft above mean sea level, datum of 1929 (U.S. Soil Conservation Service bench mark).

Remarks.--Peak discharge based on maximum inflow (average for 5 or 15-minute intervals), computed from outflow and change in reservoir contents, adjusted for rainfall on the reservoir surface during time of peak inflow. Recording rain gage located at station. Tabulations of significant storm rainfall and runoff data are on file in the U.S. Geological Survey District office.

Annual maximum discharge

Water year	Date	Discharge (cfs)
1957	June 1, 1957	449
1958	May 1, 1958	688
1959	Nov. 16, 1958	34
1960	Oct. 3, 1959	842
1961	Mar. 25, 1961	51
1962	June 18, 1962	287
1963	Nov. 26, 1962	221
1964	Sept. 21, 1964	261
1965	Nov. 18, 1964	367
1966	Feb. 9, 1966	476
1967	May 30, 1967	316
1968	Mar. 20, 1968	188
1969	May 6, 1969	477

TRINITY RIVER BASIN

08052630 Little Elm Creek subwatershed No. 19 near Gunter, Tex. (18)

Location.--Lat 33°24'33", long 96°48'41", Grayson County, near center of dam on Walnut Fork, 1.6 miles upstream from mouth and, 4.7 miles southwest of Gunter.

Drainage area.--2.10 sq mi.

Gage.--Water-stage recorder. Datum of gage is 615.51 ft above mean sea level, datum of 1929 (Soil Conservation Service bench mark).

Topographic characteristics.--Length of main stream, 2.52 miles; slope index, 37.3 ft per mile. (Map scale, 1:24,000).

Remarks.--Peak discharge based on maximum inflow (average for 5 or 15-minute intervals), computed from outflow and change in reservoir contents, adjusted for rainfall on the reservoir surface during time of peak inflow. Rain gage 3S located 1/4 mile southeast of dam. Tabulations of significant storm rainfall and runoff data are on file in the U.S. Geological Survey District office.

Annual maximum discharge

Water year	Date	Discharge (cfs)
1966	Apr. 28, 1966	823
1967	May 30, 1967	3,240
1968	Mar. 20, 1968	635
1969	May 14, 1969	1,370

08053100 Jones Valley Creek tributary near Forestburg, Tex. (03)

Location.--Lat 33°33'15", long 97°37'05", Montague County, at culvert on Farm Road 455, 0.7 mile upstream from Jones Valley Creek, and 3.8 miles northwest of Forestburg.

Drainage area.--1.70 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 2.35 miles; slope index, 78.5 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1965	Sept. 19, 1965	a17.80	605
1966	Feb. 9, 1966	20.15	860
1967	Sept. 7, 1967	14.66	305
1968	Mar. 19, 1968	12.23	122
1969	May 6, 1969	16.08	440

a Maximum for period June 22 to Sept. 30, 1965.

08054200 Gamble Branch near Argyle, Tex. (18)

Location.--Lat 33°04'53", long 97°11'48", Denton County, at culvert on U.S. Highway 377, and 2.8 miles south of Argyle.

Drainage area.--0.50 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 0.88 mile; slope index, 89 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1965	Sept. 22, 1965	a11.56	68
1966	Apr. 29, 1966	14.17	306
1967	May 21, 1967	11.38	57
1968	May 13, 1968	14.18	310
1969	May 16, 1969	12.50	142

a Maximum for period June 18 to Sept. 30, 1965.

08053100 Jones Valley Creek tributary near Forestburg, Tex. (03)

Location.--Lat 33°33'15", long 97°37'05", Montague County, at culvert on Farm Road 455, 0.7 mile upstream from Jones Valley Creek, and 3.8 miles northwest of Forestburg.

Drainage area.--1.70 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 2.35 miles; slope index, 78.5 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1965	Sept. 19, 1965	a17.80	605
1966	Feb. 9, 1966	20.15	860
1967	Sept. 7, 1967	14.66	305
1968	Mar. 19, 1968	12.23	122
1969	May 6, 1969	16.08	440

a Maximum for period June 22 to Sept. 30, 1965.

08054200 Gamble Branch near Argyle, Tex. (18)

Location.--Lat 33°04'53", long 97°11'48", Denton County, at culvert on U.S. Highway 377, and 2.8 miles south of Argyle.

Drainage area.--0.50 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 0.88 mile; slope index, 89 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1965	Sept. 22, 1965	a11.56	68
1966	Apr. 29, 1966	14.17	306
1967	May 21, 1967	11.38	57
1968	May 13, 1968	14.18	310
1969	May 16, 1969	12.50	142

a Maximum for period June 18 to Sept. 30, 1965.

08055600 Joes Creek at State Highway 114, Dallas, Tex. (18)

Location.--Lat 32°51'33", long 96°53'00", Dallas County, at bridge on State Highway 114, Dallas, and 0.9 mile upstream from mouth.

Drainage area.--7.51 sq mi.

Gage.--Recording. Datum of gage is mean sea level, datum of 1929, supplementary adjustment of 1953.

Historical data.--Since at least 1904, maximum discharge that of Oct. 8, 1962; maximum elevation, 431 ft in 1908, backwater from Trinity River.

Remarks.--Urbanizing.

Annual maximum stage and discharge

Water year	Date	Elevation (ft)	Discharge (cfs)
1962	July 27, 1962	423.6	3,100
1963	Oct. 8, 1962	425.3	7,430
1964	Sept. 21, 1964	420.95	1,440
1965	May 10, 1965	421.30	1,520
1966	Apr. 28, 1966	426.4	a6,350
1967	Apr. 21, 1967	418.50	930
1968	Aug. 13, 1968	421.18	1,500
1969	May 7, 1969	423.70	2,350

a Corrected.

08055700 Bachman Branch at Dallas, Tex. (18)

Location.--Lat 32°51'36", long 96°50'12", Dallas County, on left bank on downstream side of bridge on Midway Road in Dallas, 1,400 ft south of Northwest Highway, 1.5 miles upstream from Bachman Lake Dam, and 6.0 miles northwest of Dallas City Hall.

Drainage area.--10.0 sq mi.

Gage.--Water-stage recorder. Datum of gage is mean sea level, datum of 1929, supplementary adjustment of 1953.

Topographic characteristics.--Length of main stream, 6.0 miles; slope index, 31.8 ft per mile. (Map scale, 1:24,000).

Historical data.--Maximum stage known since at least 1900, that of Apr. 28, 1966, from information by local residents. The second greatest flood since 1900 occurred Oct. 8, 1962.

Remarks.--This watershed is about 75% urbanized (1966). Six recording rain gages are located in the watershed above the station. Tabulations of significant rainfall and runoff data are on file in the U.S. Geological Survey District office.

Annual maximum stage and discharge

Water year	Date	Elevation (ft)	Discharge (cfs)
1963	Oct. 8, 1962	465.6	9,200
1964	Sept. 21, 1964	459.30	3,620
1965	May 10, 1965	461.43	5,170
1966	Apr. 28, 1966	467.97	16,000
1967	Apr. 21, 1967	455.21	1,450
1968	Aug. 13, 1968	455.68	1,760
1969	May 6, 1969	464.84	8,360

08056500 Turtle Creek at Dallas, Tex. (18)

Location.--Lat 32°48'26", long 96°48'08", Dallas County, on left bank 68 ft upstream from Hall Street Dam, 210 ft upstream from Hall Street in Dallas, and 2.0 miles north of Dallas County Courthouse.

Drainage area.--7.98 sq mi.

Gage.--Recording. Datum of gage is 428.13 ft above mean sea level, datum of 1929.

Historical data.--Flood of Apr. 28, 1966, reached the highest stage since at least 1903.

Remarks.--Five recording rain gages installed in 1961 are located in the watershed above this station and tabulations of significant rainfall and runoff data are on file in the U.S. Geological Survey District office. The watershed is in a highly-developed urban area.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1947	Aug. 27, 1947	6.8	3,350
1948	May 11, 1948	4.68	1,630
1949	May 18, 1949	6.15	2,800
1950	May 1, 1950	5.29	2,060
1951	Sept. 12, 1951	4.82	1,700
1952	May 17, 1952	5.47	2,220
1953	Apr. 23, 1953	3.54	910
1954	Apr. 12, 1954	6.40	2,980
1955	June 18, 1955	3.44	852
1956	May 1, 1956	4.84	1,740
1957	Apr. 26, 1957	7.30	3,850
1958	Apr. 26, 1958	6.54	3,070
1959	Feb. 14, 1959	4.47	1,460
1960	Oct. 1, 1959	8.10	4,650
1961	Oct. 13, 1960	4.08	1,240
1962	July 27, 1962	7.96	4,640
1963	Apr. 28, 1963	7.77	4,290
1964	Sept. 21, 1964	6.79	3,240
1965	May 10, 1965	7.97	4,520
1966	Apr. 28, 1966	10.54	12,200
1967	Apr. 21, 1967	5.14	1,790
1968	May 13, 1968	6.77	3,220
1969	May 6, 1969	9.96	8,840

08057020 Coombs Creek at Sylvan Avenue, Dallas, Tex. (18)

Location.--Lat 32°46'01", long 96°50'07", Dallas County, at bridge on Sylvan Avenue, Dallas, and 1.2 miles upstream from mouth.

Drainage area.--4.75 sq mi.

Gage.--Recording. Datum of gage is mean sea level, datum of 1929, supplementary adjustment of 1953.

Remarks.--Urbanizing.

Annual maximum stage and discharge

Water year	Date	Elevation (ft)	Discharge (cfs)
1965	May 10, 1965	426.55	4,260
1966	Apr. 28, 1966	423.33	2,780
1967	June 12, 1967	420.50	1,570
1968	June 16, 1968	423.59	2,900
1969	May 6, 1969	423.72	2,960

08057050 Cedar Creek at Bonnie View Road, Dallas, Tex. (18)

Location.--Lat 32°44'50", long 96°47'44", Dallas County, at bridge on Bonnie View Road, Dallas, and 0.9 mile upstream from mouth.

Drainage area.--9.42 sq mi.

Gage.--Recording. Recording. Datum of gage is mean sea level, datum of 1929, supplementary adjustment of 1953.

Remarks.--Urbanizing.

Annual maximum stage and discharge

Water year	Date	Elevation (ft)	Discharge (cfs)
1965	May 10, 1965	404.15	7,300
1966	Apr. 28, 1966	404.04	6,260
1967	Apr. 21, 1967	398.04	2,140
1968	June 16, 1968	404.3	7,500
1969	May 6, 1969	a407.14	b4,250

a Occurred May 8, 1969.
b Affected by backwater.

08057120 Spanky Branch at McCallum Lane, Dallas, Tex. (18)

Location.--Lat 32°57'58", long 96°48'11", Dallas County, at bridge on McCallum Lane, Dallas, and 0.5 mile upstream from mouth.

Drainage area .--6.77 sq mi.

Gage.--Crest stage only. Datum of gage is mean sea level, datum of 1929.

Historical data.--Maximum elevation known since at least 1917, that of Sept. 21, 1964, from information by local residents.

Remarks.--Rural.

Annual maximum stage and discharge

Water year	Date	Elevation (ft)	Discharge (cfs)
1962	July 27, 1962	567.03	4,020
1963	Oct. 8, 1962	564.61	3,000
1964	Sept. 21, 1964	572.02	7,870
1965	May 10, 1965	563.91	2,650
1966	Apr. 28, 1966	569.3	5,000
1967	May 31, 1967	556.27	635
1968	Mar. 20, 1968	559.58	1,470
1969	May 6, 1969	566.69	3,680

08057140 Cottonwood Creek at Forest Lane, Dallas, Tex. (18)

Location.--Lat 32°54'33", long 96°45'54", Dallas County, at bridge on Forest Lane, Dallas, and 0.2 mile upstream from Floyd Branch.

Drainage area.--8.50 sq mi.

Gage.--Recording. Datum of gage is mean sea level, datum of 1929, supplementary adjustment of 1953.

Historical data.--Maximum elevation known since at least 1892, that of Apr. 28, 1966.

Remarks.--Urban.

Annual maximum stage and discharge

Water year	Date	Elevation (ft)	Discharge (cfs)
1962	July 27, 1962	509.90	5,090
1963	Oct. 8, 1962	511.74	17,400
1964	Sept. 21, 1964	510.09	6,200
1965	May 10, 1965	509.49	4,450
1966	Apr. 28, 1966	512.32	17,600
1967	May 31, 1967	509.20	4,080
1968	Aug. 13, 1968	505.51	1,380
1969	May 6, 1969	509.52	4,530

08057160 Floyd Branch at Forest Lane, Dallas, Tex. (18)

Location.--Lat 32°54'33", long 96°45'34", Dallas County, at bridge on Forest Lane, Dallas, and 0.3 mile upstream from mouth.

Drainage area.--4.17 sq mi.

Gage.--Crest stage only. Datum of gage is mean sea level, datum of 1929, supplementary adjustment of 1953.

Historical data.--Maximum elevation known since at least 1909, that of Apr. 28, 1966.

Remarks.--Urban.

Annual maximum stage and discharge

Water year	Date	Elevation (ft)	Discharge (cfs)
1962	July 27, 1962	509.62	3,200
1963	Oct. 8, 1962	512.63	4,850
1964	Sept. 21, 1964	510.26	3,500
1965	May 10, 1965	508.87	2,850
1966	Apr. 28, 1966	514.19	8,590
1967	-	<503.65	<1,170
1968	Mar. 20, 1968	503.39	1,110
1969	May 6, 1969	509.96	3,350

< Less than amount shown.

TRINITY RIVER BASIN

08057320 Ash Creek at Highland Road, Dallas, Tex. (18)

Location.--Lat 32°48'18", long 96°43'04", Dallas County, at bridge on Highland Road, Dallas, and 0.4 mile upstream from mouth.

Drainage area.--6.92 sq mi.

Gage.--Crest stage only. Datum of gage is mean sea level, datum of 1929, supplementary adjustment of 1961.

Remarks.--Urban.

Annual maximum stage and discharge

Water year	Date	Elevation (ft)	Discharge (cfs)
1963	Apr. 28, 1963	430.99	4,700
1964	Sept. 21, 1964	<427.28	<3,150
1965	May 10, 1965	429.74	3,600
1966	Apr. 28, 1966	431.38	5,180
1967	May 31, 1967	429.52	3,400
1968	Apr. 19, 1968	427.58	1,540
1969	May 6, 1969	423.94	4,330

< Less than amount shown.

TRINITY RIVER BASIN

08057340 Forney Creek at Lawnview Avenue, Dallas, Tex. (18)

Location.--Lat 32°46'45", long 96°43'02", Dallas County, at culvert on Lawnview Avenue, Dallas, and 0.8 mile upstream from mouth.

Drainage area.--1.84 sq mi.

Gage.--Recording. Datum of gage is mean sea level, datum of 1929, supplementary adjustment of 1961.

Remarks.--Urban.

Annual maximum stage and discharge

Water year	Date	Elevation (ft)	Discharge (cfs)
1963	Apr. 28, 1963	431.36	621
1964	Sept. 21, 1964	430.04	245
1965	May 10, 1965	431.21	566
1966	Apr. 28, 1966	435.42	1,090
1967	-	-	-
1968	Mar. 20, 1968	428.80	394
1969	May 6, 1969	435.92	1,130

08057420 Fivemile Creek at U.S. Highway 77, Dallas, Tex. (18)

Location.--Lat 32°41'15", long 96°49'22", Dallas County, at bridge on U.S. Highway 77, Dallas, 0.2 mile upstream from Woody Branch, and 8.0 miles upstream from mouth.

Drainage area.--13.2 sq mi.

Gage.--Recording. Datum of gage is mean sea level, datum of 1929, supplementary adjustment of 1961.

Remarks.-- Urban.

Annual maximum stage and discharge

Water year	Date	Elevation (ft)	Discharge (cfs)
1965	May 10, 1965	464.88	2,400
1966	Apr. 28, 1966	470.32	7,000
1967	June 12, 1967	459.78	1,440
1968	Sept. 24, 1968	463.70	2,880
1969	May 6, 1969	475.86	11,800

08057425 Woody Branch at U.S. Highway 77, Dallas, Tex. (18)

Location.--Lat 32°40'58", long 96°49'22", Dallas County, at bridge on U.S. Highway 77, Dallas, and 0.4 mile upstream from mouth.

Drainage area.--11.5 sq mi.

Gage.--Recording. Datum of gage is mean sea level, datum of 1929, supplementary adjustment of 1961.

Remarks.--Urban.

Annual maximum stage and discharge

Water year	Date	Elevation (ft)	Discharge (cfs)
1965	May 10, 1965	463.3	500
1966	Apr. 28, 1966	471.60	3,860
1967	June 12, 1967	464.13	802
1968	Sept. 4, 1968	468.50	2,680
1969	May 6, 1969	481.50	7,160

08057430 Fivemile Creek at Lancaster Road, Dallas, Tex. (18)

Location.--Lat 32°40'49", long 96°47'10", Dallas County, at bridge on Lancaster Road, Dallas, and 6.7 miles upstream from mouth.

Drainage area.--37.9 sq mi.

Gage.--Recording. Datum of gage is mean sea level, datum of 1929, supplementary adjustment of 1961.

Annual maximum stage and discharge

Water year	Date	Elevation (ft)	Discharge (cfs)
1965	May 10, 1965	431.7	2,520
1966	Apr. 28, 1966	437.68	9,150
1967	June 12, 1967	430.85	1,760
1968	Sept. 4, 1968	436.14	6,900
1969	May 6, 1969	442.97	15,900

08057500 Honey Creek subwatershed No. 11, near McKinney, Tex. (18)

Location.--Lat 33°18'12", long 96°41'22", Collin County, near center of dam on unnamed tributary of Honey Creek, 1.5 miles west of Farm Road 543, and 8.4 miles northwest of McKinney.

Drainage area.--2.14 sq mi.

Gage.--Recording. Datum of gage is 629.00 ft above mean sea level, datum of 1929.

Remarks.--Peak discharge based on maximum inflow (average for 5 or 30-minute intervals), computed from outflow and change in reservoir contents, adjusted for rainfall on the reservoir surface during time of peak inflow. Recording rain gage located at station. Tabulations of significant rainfall and runoff data are on file in the U.S. Geological Survey District office.

Annual maximum discharge

Water year	Date	Discharge (cfs)
1953	May 15, 1953	268
1954	June 8, 1954	235
1955	Feb. 19, 1955	42
1956	Feb. 17, 1956	264
1957	May 21, 1957	1,630
1958	May 1, 1958	1,880
1959	July 24, 1959	156
1960	Aug. 26, 1960	320
1961	May 1, 1961	1,320
1962	Apr. 27, 1962	169
1963	May 30, 1963	546
1964	Sept. 21, 1964	1,380
1965	Nov. 18, 1964	842
1966	Apr. 30, 1966	3,380
1967	May 30, 1967	530
1968	Mar. 20, 1968	827
1969	May 17, 1969	958

08058000 Honey Creek subwatershed No. 12 near McKinney, Tex. (18)

Location.--Lat 33°18'20", long 96°40'12", Collin County, near center of dam on unnamed tributary of Honey Creek, 0.5 mile west of Farm Road 543, and 7.8 miles northwest of McKinney.

Drainage area.--1.26 sq mi.

Gage.--Recording. Datum of gage is 623.00 ft above mean sea level, datum of 1929.

Remarks.--Peak discharge based on maximum inflow (average for 5 or 30-minute interval), computed from outflow and change in reservoir contents, adjusted for rainfall on the reservoir surface during time of peak inflow. One nonrecording and two recording rain gages located in the watershed above the station. Tabulations of significant rainfall and runoff data are on file in the U.S. Geological Survey District office.

Annual maximum discharge

Water year	Date	Discharge(cfs)
1953	Apr. 28, 1953	a423
1954	June 15, 1954	212
1955	Oct. 23, 1954	123
1956	Feb. 17, 1956	295
1957	May 21, 1957	1,490
1958	May 1, 1958	1,410
1959	July 24, 1959	40
1960	June 8, 1960	286
1961	May 1, 1961	589
1962	Apr. 24, 1962	158
1963	May 30, 1963	663
1964	Sept. 21, 1964	850
1965	May 28, 1965	791
1966	Apr. 30, 1966	1,370
1967	May 30, 1967	907
1968	Mar. 20, 1968	624
1969	May 6, 1969	858

a Unadjusted for rainfall on water surface.

08059200 Arls Branch near Westminister, Tex. (18)

Location.--Lat 33°21'20", long 96°26'35", Collin County, at culvert on State Highway 121 and 1.2 miles east of Westminister.

Drainage area.--0.52 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 1.00 mile; slope index, 86 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1965	Sept. 21, 1965	a13.48	170
1966	Apr. 28, 1966	14.95	310
1967	May 30, 1967	16.97	500
1968	May 10, 1968	16.13	420
1969	May 7, 1969	14.73	290

a Maximum for period June 23 to Sept. 30, 1965.

08061620 Duck Creek at Buckingham Road, Garland, Tex. (18)

Location.--Lat 32°55'53", long 96°39'55", Dallas County, at dam 200 ft upstream from Buckingham Road in north Garland and 17.5 miles upstream from mouth.

Drainage area.--8.05 sq mi.

Gage.--Stage recorder.

Remarks.--This station operated as research project for runoff from urban areas.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1969	May 6, 1969	a564.04	4,640

a Maximum for period March to September.

08061920 South Mesquite Creek at State Highway 352, Mesquite, Tex. (18)

Location.--Lat 32°46'09", long 96°37'18", Dallas County, at bridge on State Highway 352 in west Mesquite and 9.6 miles upstream from mouth.

Drainage area.--13.4 sq mi.

Gage.--Stage recorder.

Remarks.--This station operated as research project for runoff from urban areas.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1969	May 6, 1969	a448.12	b4,000

a Maximum for period March to September.
b Estimated.

TRINITY RIVER BASIN

08062850 Bachelor Creek near Terrell, Tex. (18)

Location.--Lat 32°42'42", long 96°17'52", Kaufman County, at culvert on Interstate Highway 20, 1.7 miles northwest of State Highway 34, and 2.2 miles southwest of Terrell.

Drainage area.--13.0 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 12.0 miles; slope index, 8 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1967	May 1, 1967	a13.92	430
1968	Oct. 15, 1967	15.58	1,150
1969	May 6, 1969	18.32	3,600

a Maximum for period Jan. 31 to Sept. 30, 1967.

TRINITY RIVER BASIN

08063005 Red Oak Branch near Eustace, Tex. (10)

Location.--Lat 32°18'36", long 95°57'38", Henderson County, at culvert on Farm Road 2709, 1.3 miles upstream from Clear Creek, and 2.2 miles east of Eustace.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Apr. 26, 1966	16.53	1,300
1967	Apr. 22, 1967	10.86	19
1968	May 9, 1968	15.98	700
1969	May 8, 1969	14.50	230

08063180 Briar Creek tributary near Corsicana, Tex. (18)

Location.--Lat 32°02'55", long 96°34'45", Navarro County, at culvert on Farm Road 744, 1.3 miles upstream from Briar Creek, and 7.7 miles west of Corsicana.

Drainage area.--0.72 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 1.28 miles; slope index, 39.6 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Apr. 23, 1966	13.90	560
1967	Sept. 5, 1967	13.08	390
1968	May 10, 1968	14.39	660
1969	Mar. 17, 1969	12.91	353

08063200 Pin Oak Creek near Hubbard, Tex. (09)

Location.--Lat 31°48'05", long 96°43'10", Hill County, on right bank 85 ft downstream from bridge on State Highway 171 and 5.8 miles southeast of Hubbard.

Drainage area.--17.6 sq mi.

Gage.--Recording. Datum of gage is 463.08 ft above mean sea level, datum of 1929, supplementary adjustment of 1942.

Topographic characteristics.--Length of main stream, 8.0 miles; slope index, 14.2 ft per mile. (Map scale, 1:24,000).

Historical data.--Maximum stage since at least 1900, about 17 ft in August 1919, from information by local resident.

Remarks.--Floodwater-retarding structures partially controlling 7.29 sq mi above this station were built during 1963. Six rain gages are operated in the watershed above this station. Tabulations of significant rainfall and runoff data are on file in the U.S. Geological Survey District office.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1958	Aug. 24, 1958	13.86	4,340
1959	June 24, 1959	13.73	4,100
1960	Oct. 4, 1959	11.52	1,810
1961	June 18, 1961	11.60	1,870
1962	Apr. 27, 1962	12.42	2,580
1963	Apr. 28, 1963	4.52	89
1964	Sept. 17, 1964	4.65	126
1965	May 14, 1965	11.15	1,230
1966	Apr. 24, 1966	11.98	2,040
1967	June 12, 1967	9.90	815
1968	May 10, 1968	13.03	3,300
1969	Apr. 4, 1969	10.33	828

TRINITY RIVER BASIN

08063550 Alvarado Branch near Alvarado, Tex. (02)

Location.--Lat 32°24'49", long 97°12'20", Johnson County, at culvert on Farm Road 1706, 0.2 mile south of U.S. Highway 67, and 0.6 mile northeast of Alvarado.

Drainage area.--0.84 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 1.42 miles; slope index, 50 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1965	-	a<10.63	<15
1966	Apr. 25, 1966	14.42	550
1967	Sept. 22, 1967	12.01	170
1968	May 9, 1968	14.63	590
1969	May 7, 1969	16.35	950

a Maximum for period July 26 to Sept. 30, 1965.
< Less than amount shown.

TRINITY RIVER BASIN

08063620 Kings Branch near Reagor Springs, Tex. (18)

Location.--Lat 32°20'41", long 96°47'02", Ellis County, at culvert on Rock Island and Pacific Railroad, 0.7 mile upstream from Waxahachie Creek, and 1.8 miles northwest of Reagor Spring.

Drainage area.--0.62 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 1.18 miles; slope index, 44 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1965	May 16, 1965	18.50	580
1966	Apr. 24, 1966	17.52	470
1967	-	<11.21	<12
1968	Aug. 27, 1968	15.91	305
1969	May 7, 1969	a16.80	395

< Less than amount shown.
a Estimated.

08064630 Saline Branch tributary near Bethel, Tex. (10)

Location.--Lat 31°55'46", long 95°55'58", Anderson County, at culvert on U.S. Highway 287 and 0.3 mile northwest of Bethel.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Sept. 9, 1966	a4.36	51
1967	Apr. 13, 1967	3.88	36
1968	Mar. 11, 1968	4.65	61
1969	Apr. 12, 1969	5.5	b92

a Maximum for period July 20 to Sept. 30, 1966.
b Estimated.

08065320 Mayes Branch near Latexo, Tex. (11)

Location.--Lat 31°25'58", long 95°28'29", Houston County, at culvert on U.S. Highway 287 and 2.6 miles north of Latexo.

Drainage area.--4.26 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 3.60 miles; slope index, 36 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	-	a<1.73	(+)
1967	-	<1.73	(+)
1968	Sept. 5, 1968	5.31	236
1969	Apr. 12, 1969	5.8	335

a Maximum for period July 26 to Sept. 30, 1966
+ Discharge not determined.
< Less than amount shown.

08067550 Welch Branch near Huntsville, Tex. (17)

Location.--Lat 30°38'33", long 95°40'47", Walker County, at culvert on Farm Road 1791 and 6.9 miles southwest of Huntsville.

Drainage area.--2.35 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 4.7 miles; slope index, 20 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1965	-	a<2.46	<12
1966	Apr. 24, 1966	b5.30	127
1967	-	<2.46	<12
1968	June 21, 1968	5.09	138
1969	Apr. 12, 1969	7.83	470

a Maximum for period Aug. 19 to Sept. 30, 1965.
b Occurred on Feb. 10, 1966, backwater from log jam in channel downstream from gage.
< Less than amount shown.

08066750 Landrum Creek tributary near Montgomery, Tex. (12)

Location.--Lat 30°21'03", long 95°41'50", Montgomery County, at culvert on State Highway 149 and 2.4 miles south of Montgomery.

Drainage area.--0.08 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 0.42 mile; slope index, 213 ft (revised) per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1965	-	a<1.94	(+)
1966	Apr. 24, 1966	7.88	114
1967	Sept. 21, 1967	5.13	57
1968	Mar. 10, 1968	8.82	129
1969	Apr. 27, 1969	4.86	51

a Maximum for period Aug. 18 to Sept. 30, 1965.
+ Discharge not determined.
< Less than amount shown.

SAN JACINTO BASIN

08068300 Mill Creek tributary near Dobbin, Tex. (12)

Location.--Lat 30°15'37", long 95°46'14", Montgomery County, at culvert on Farm Road 1486 and 7.8 miles south of Dobbin.

Drainage area.--4.07 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 3.65 miles; slope index, 15 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1967	Sept. 21, 1967	a3.50	19
1968	June 24, 1968	8.25	670
1969	Feb. 21, 1969	7.39	410

a Maximum for period Mar. 16 to Sept. 30, 1967.

SAN JACINTO BASIN

08069850 Bear Creek near Cleveland, Tex. (11)

Location.--Lat 30°26'58", long 95°13'11", San Jacinto County, at culvert on Farm Road 1725 and 12.9 miles northwest of Cleveland.

Drainage area.--1.46 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 2.25 miles; slope index, 45 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1967	-	a<2.58	<80
1968	June 24, 1968	4.71	290
1969	May 6, 1969	3.40	156

a Maximum for period Mar. 15 to Sept. 30, 1967.
< Less than amount shown.

SAN JACINTO RIVER BASIN

08073750 Stoney Brook Street Ditch at Houston, Tex. (12)

Location.--Lat 29°44'05", long 95°30'22", Harris County, at culvert on Stoney Brook Street in west Houston.

Drainage area .--0.50 sq mi.

Gage.--Recording. Datum of gage is mean sea level, datum of 1929, supplementary adjustment of 1964.

Remarks.--Drainage area is urban. Impervious cover was 33 percent as of October 1966.

Annual maximum stage and discharge

Water year	Date	Elevation (ft)	Discharge (cfs)
1967	Sept. 21, 1967	65.78	145
1968	Sept. 14, 1968	67.54	247
1969	Sept. 19, 1969	65.34	144

SAN JACINTO RIVER BASIN

08073800 Bering Ditch at Woodway Drive, Houston, Tex. (12)

Location.--Lat 29°45'22", long 95°29'44", Harris County, at bridge on Woodway Drive in west Houston.

Drainage area.--2.74 sq mi.

Gage.--Recording. Datum of gage is mean sea level, datum of 1929, supplementary adjustments of 1957 and 1959.

Remarks.--Urban.

Annual maximum stage and discharge

Water year	Date	Elevation (ft)	Discharge (cfs)
1965	Dec. 10, 1964	53.14	91
1966	May 18, 1966	55.58	724
1967	Sept. 21, 1967	55.30	535
1968	Sept. 14, 1968	57.81	1,580
1969	Nov. 30, 1968	55.58	694

08074100 Cole Creek at Guhn Road, Houston, Tex. (12)

Location.--Lat 29°51'24", long 95°30'55", Harris County, at bridge on Guhn Road in northwest Houston.

Drainage area.--7.05 sq mi.

Gage.--Recording. Datum of gage is mean sea level, datum of 1929, supplementary adjustment of 1957.

Remarks.--Urban.

Annual maximum stage and discharge

Water year	Date	Elevation (ft)	Discharge (cfs)
1965	Feb. 16, 1965	87.06	266
1966	Apr. 14, 1966	90.39	744
1967	Apr. 13, 1967	85.79	79
1968	May 12, 1968	89.94	503
1969	Feb. 21, 1969	91.30	708

08074150 Cole Creek at Deihl Road, Houston, Tex. (12)

Location.--Lat 29°51'04", long 95°29'16", Harris County, on downstream side of bridge at Deihl Road in northwest Houston and 1.8 miles upstream from mouth.

Drainage area.--At Deihl Road, Apr. 14, 1964, to Apr. 1, 1965, 10.0 sq mi; Apr. 2 to May 17, 1965, 8.81 sq mi. At Antoine Drive, May 18 to Aug. 1, 1965, 9.94 sq mi; Aug. 2, 1965, to Sept. 1, 1966, 10.2 sq mi. At Deihl Road, Sept. 2, 1966, to Sept. 30, 1968, 8.81 sq mi. Drainage area changes caused by changes in storm sewers.

Gage.--Water-stage recorder. Datum of gage is mean sea level, datum of 1929, adjustment of 1957.

Remarks.--Station was established at Deihl Road and was temporarily relocated to Antoine Drive because of bridge construction and channel rectification. On Sept. 2, 1966, station was moved back to Deihl Road. Recording rain gage located at station.

Annual maximum stage and discharge

Water year	Date	Elevation (ft)	Discharge (cfs)
1964	May 31, 1964	-	a400
1965	Feb. 16, 1965	78.23	338
1966	Apr. 14, 1966	c71.50	b950
1967	May 29, 1967	d71.84	160
1968	May 10, 1968	75.88	810
1969	Feb. 21, 1969	74.82	966

a Maximum for period April to September 1964.
b Estimated.
c Backwater from Whiteoak Bayou.
d Occurred Sept. 21, 1967, backwater from channel vegetation.

08074200 Brickhouse Gully at Clarblak Street, Houston, Tex. (12)

Location.--Lat 29°49'53", long 95°31'42", Harris County, at bridge on Clarblak Street in northwest Houston.

Drainage area.--2.05 sq mi.

Gage.--Recording. Datum of gage is mean sea level, datum of 1929, supplementary adjustment of 1957.

Remarks.--Urban.

Annual maximum stage and discharge

Water year	Date	Elevation (ft)	Discharge (cfs)
1965	Feb. 16, 1965	89.46	54
1966	Apr. 14, 1966	90.46	121
1967	Sept. 21, 1967	89.78	73
1968	May 10, 1968	92.58	328
1969	Feb. 21, 1969	92.30	294

08074250 Brickhouse Gully at Costa Rica Street, Houston, Tex. (12)

Location.--Lat 29°49'40", long 95°28'09", Harris County, on right bank at downstream side of bridge at Costa Rica Street in northwest Houston, and 1.0 mile upstream from Whiteoak Bayou.

Drainage area.--10.4 sq mi. Prior to May 1965, 10.5 sq mi; May to August 1965, 10.7 sq mi; August 1965 to September 1967, 10.5 sq mi. Drainage area changes caused by changes in storm sewers.

Gage.--Water-stage recorder. Datum of gage is mean sea level, datum of 1929, adjustment of 1957.

Remarks.--Recording rain gage located at station.

Annual maximum stage and discharge

Water year	Date	Elevation (ft)	Discharge (cfs)
1964	Aug. 23, 1964	a60.08	235
1965	Sept. 22, 1965	b64.60	550
1966	Apr. 14, 1966	64.87	1,040
1967	Sept. 21, 1967	59.45	323
1968	May 10, 1968	65.94	2,280
1969	Feb. 21, 1969	61.24	1,370

a Maximum for period August to September 1964.
b Backwater from construction dam.

SAN JACINTO RIVER BASIN

08074780 Keegans Bayou at Keegan Road near Houston, Tex. (12)

Location.--Lat 29°39'55", long 95°35'42", Harris County, at bridge on Keegan Road about 16 miles southwest of Houston.

Drainage area.--5.77 sq mi.

Gage.--Recording. Datum of gage is mean sea level, datum of 1929, supplementary adjustment of 1957.

Remarks.--Urban.

Annual maximum stage and discharge

Water year	Date	Elevation (ft)	Discharge (cfs)
1965	Dec. 10, 1964	81.08	94
1966	Apr. 14, 1966	83.53	206
1967	Dec. 5, 1966	80.52	59
1968	June 24, 1968	83.23	192
1969	Feb. 21, 1969	82.12	136

SAN JACINTO RIVER BASIN

08074800 Keegans Bayou at Roark Road near Houston, Tex. (12)

Location.--Lat 29°39'23", long 95°33'43", Harris County, on left bank at downstream side of bridge on Roark Road and about 2.0 miles southwest of city limits of Houston.

Drainage area.--9.28 sq mi. Prior to Jan. 1, 1967, 9.66 sq mi, due to drainage ditch changes.

Gage.--Water-stage recorder. Datum of gage is mean sea level, datum of 1929 through 1957 adjustment.

Remarks.--Recording rain gage located at station.

Annual maximum stage and discharge

Water year	Date	Elevation (ft)	Discharge (cfs)
1965	Dec. 10, 1964	66.43	140
1966	Apr. 14, 1966	57.64	588
1967	Jan. 13-14, 1967	a64.83	43
1968	June 23, 1968	67.89	352
1969	May 3, 1970	67.27	659

a Occurred Sept. 21, 1967, backwater from channel vegetation.

08074850 Bintliff Ditch at Bissonnet Street, Houston, Tex. (12)

Location.--Lat 29°41'16", long 95°30'20", Harris County, at bridge on Bissonnet Street in southwest Houston.

Drainage area.--4.29 sq mi.

Gage.--Recording.

Remarks.--Urban.

Annual maximum stage and discharge

Water year	Date	Elevation (ft)	Discharge (cfs)
1968	Sept. 14, 1968	62.19	a1,030
1969	Sept. 15, 1969	61.75	968

a Maximum for period August to September; probably peak for year.

08074900 Willow Waterhole Bayou at Landsdowne Street, Houston, Tex. (12)

Location.--Lat 29°39'01", long 95°29'11", Harris County, at bridge on Landsdowne Street in southwest Houston.

Drainage area.--11.2 sq mi.

Gage.--Recording. Datum of gage is mean sea level, datum of 1929, supplementary adjustment of 1957.

Remarks.--Urban.

Annual maximum stage and discharge

Water year	Date	Elevation (ft)	Discharge (cfs)
1965	Dec. 10, 1964	56.88	350
1966	Apr. 14, 1966	60.00	1,300
1967	Aug. 25, 1967	57.90	450
1968	June 23, 1968	60.76	1,680
1969	Feb. 21, 1969	58.96	884

08075300 Sims Bayou at Carlsbad Street, Houston, Tex. (12)

Location.--Lat 29°37'33", long 95°29'56", Harris County, at bridge on Carlsbad Street in southwest Houston.

Drainage area.--4.99 sq mi.

Gage.--Recording. Datum of gage is mean sea level, datum of 1929, supplementary adjustment of 1957.

Remarks.--Urban.

Annual maximum stage and discharge

Water year	Date	Elevation (ft)	Discharge (cfs)
1965	June 18, 1965	60.71	108
1966	Apr. 14, 1966	62.59	320
1967	Sept. 21, 1967	62.59	314
1968	June 23, 1968	63.45	470
1969	Feb. 21, 1969	61.52	174

08075400 Sims Bayou at Hiram Clarke Street, Houston, Tex. (12)

Location.--Lat 29°37'07", long 95°26'45", Harris County, on right bank at downstream side of Hiram Clarke Street bridge in southwest section of Houston, 12.7 miles upstream from gage, Sims Bayou at Houston, and 19.7 miles upstream from mouth.

Drainage area.--20.2 sq mi.

Gage.--Water-stage recorder. Datum of gage is mean sea level, datum of 1929, adjustment of 1929.

Remarks.--Recording rain gage located at station.

Annual maximum stage and discharge

Water year	Date	Elevation (ft)	Discharge (cfs)
1964	Sept. 17, 1964	a43.83	96
1965	Dec. 10, 1964	48.70	960
1966	Apr. 14, 1966	51.08	2,280
1967	Sept. 21, 1967	46.77	350
1968	June 23, 1968	52.35	2,200
1969	Feb. 21, 1969	52.08	2,280

a Maximum for period August to September 1964.

08075550 Berry Bayou at Gilpin Street, Houston, Tex. (12)

Location.--Lat 29°38'32", long 95°13'22", Harris County, at bridge on Gilpin Street in southeast Houston.

Drainage area.--3.26 sq mi.

Gage.--Recording. Datum of gage is mean sea level, datum of 1929, supplementary adjustments of 1957 and 1959.

Remarks.--Urban.

Annual maximum stage and discharge

Water year	Date	Elevation (ft)	Discharge (cfs)
1965	Dec. 10, 1964	34.76	290
1966	Feb. 9, 1966	34.48	607
1967	Apr. 13, 1967	31.83	235
1968	May 10, 1968	35.19	738
1969	Feb. 21, 1969	34.03	535

08075600 Berry Bayou tributary at Globe Street, Houston, Tex. (12)

Location.--Lat 29°39'00", long 95°14'48", Harris County, at bridge on Globe Street in southeast Houston.

Drainage area.--1.58 sq mi.

Gage.--Recording. Datum of gage is mean sea level, datum of 1929, supplementary adjustments of 1957 and 1959.

Remarks.--Urban.

Annual maximum stage and discharge

Water year	Date	Elevation (ft)	Discharge (cfs)
1965	Dec. 10, 1964	37.89	145
1966	Feb. 9, 1966	39.48	308
1967	Apr. 13, 1967	37.27	114
1968	June 22, 1968	39.03	254
1969	Feb. 21, 1969	38.35	198

08075650 Berry Bayou at Forest Oaks Street, Houston, Tex. (12)

Location.--Lat 29°40'35", long 95°14'37", Harris County, near left bank at downstream side of Forest Oaks Street bridge in southeast Houston, 0.8 mile upstream from auxiliary gage at mouth of Berry Creek, and 1.7 miles upstream from Sims Bayou.

Drainage area.--11.1 sq mi.

Gage.--Recording. Datum of gage is mean sea level.

Remarks.--This station operated as research project for runoff from urban areas.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1964	Sept. 17, 1964	a5.90	350
1965	-	-	b800
1966	Feb. 9, 1966	c16.36	2,630
1967	Apr. 13, 1967	9.68	886
1968	May 16, 1968	d16.98	3,110
1969	Feb. 21, 1969	e17.59	1,410

a Maximum for period April to September 1964.
b Estimated.
c Occurred Apr. 14, 1966.
d Occurred June 24, 1968.
e Backwater.

08075700 Berry Creek at Galveston Road, Houston, Tex. (12)

Location.--Lat 29°40'59", long 95°15'11", Harris County, at bridge on Galveston Road and 0.5 mile upstream from mouth in southeast Houston.

Drainage area.--4.86 sq mi.

Gage.--Recording. Datum of gage is mean sea level, datum of 1929, supplementary adjustments of 1957 and 1959.

Remarks.--Urban.

Annual maximum stage and discharge

Water year	Date	Elevation (ft)	Discharge (cfs)
1965	Dec. 10, 1964	17.57	280
1966	Apr. 14, 1966	20.47	607
1967	Apr. 13, 1967	16.66	286
1968	May 10, 1968	21.56	789
1969	Feb. 21, 1969	20.29	644

SAN JACINTO RIVER BASIN

08075750 Hunting Bayou tributary at Cavalcade Street, Houston, Tex. (12)

Location.--Lat 29°48'00", long 95°20'02", Harris County, at bridge on Cavalcade Street in northeast Houston.

Drainage area.--1.03 sq mi.

Gage.--Recording.

Remarks.--

Annual maximum stage and discharge

Water year	Date	Elevation (ft)	Discharge (cfs)
1965	Sept. 22, 1965	43.37	109
1966	Apr. 14, 1966	43.63	119
1967	Oct. 4, 1966	44.14	140
1968	May 10, 1968	44.38	149
1969	Jan. 16, 1969	43.10	140

SAN JACINTO RIVER BASIN

08075760 Hunting Bayou at Falls Street, Houston, Tex. (12)

Location.--Lat 29°48'22", long 95°19'50", Harris County, at bridge on Falls Street in northeast Houston.

Drainage area.--3.42 sq mi.

Gage.--Recording. Datum of gage is mean sea level, datum of 1929, supplementary adjustments of 1957 and 1959.

Remarks.--Urban.

Annual maximum stage and discharge

Water year	Date	Elevation (ft)	Discharge (cfs)
1965	Sept. 22, 1965	41.95	236
1966	Apr. 14, 1966	40.64	485
1967	Oct. 4, 1966	42.46	399
1968	May 10, 1968	42.28	445
1969	Jan. 16, 1969	40.97	380

08075770 Hunting Bayou at Highway 90-A, Houston, Tex. (12)

Location.--Lat 29°47'43", long 95°16'21", Harris County, on right bank 100 ft downstream from bridge on U.S. Highway 90-A, in northeast section of Houston, and 9.2 miles upstream from mouth.

Drainage area.--14.4 sq mi.

Gage.--Water-stage recorder. Datum of gage is mean sea level, datum of 1929, adjustment of 1959.

Topographic characteristics.--Length of main stream, 7.1 miles; slope index, 1.1 ft per mile. (Map scale, 1:24,000).

Remarks.--Recording rain gage located at station.

Annual maximum stage and discharge

Water year	Date	Elevation (ft)	Discharge (cfs)
1964	Apr. 17, 1964	a24.39	166
1965	Dec. 10, 1964	26.60	355
1966	Apr. 14, 1966	31.43	1,150
1967	Oct. 5, 1966	30.44	920
1968	May 10, 1968	32.66	1,460
1969	Feb. 21, 1969	31.03	1,050

a Maximum for period April to September 1964.

08075780 Green Bayou at Cutten Road near Houston, Tex. (12)

Location.--Lat 29°56'56", long 95°31'10", Harris County, at bridge on Cutten Road and about 16.5 miles northwest of Houston.

Drainage area.--8.73 sq mi.

Gage.--Recording. Datum of gage is mean sea level, datum of 1929, supplementary adjustments of 1957 and 1959.

Remarks.--Urbanizing.

Annual maximum stage and discharge

Water year	Date	Elevation (ft)	Discharge (cfs)
1965	Feb. 16, 1965	115.27	151
1966	Apr. 14, 1966	117.63	514
1967	Sept. 21, 1967	118.30	468
1968	May 12, 1968	117.15	390
1969	Feb. 21, 1969	118.04	508

08076200 Halls Bayou at Deertrail Street, Houston, Tex. (12)

Location.--Lat 29°54'07", long 95°25'21", Harris County, at bridge on Deertrail Street, 0.6 mile west of U.S. Highway 75, and about 11 miles northwest of Houston.

Drainage area.--6.31 sq mi.

Gage.--Recording. Datum of gage is mean sea level, datum of 1929, supplementary adjustment of 1961.

Remarks.--Urbanizing.

Annual maximum stage and discharge

Water year	Date	Elevation (ft)	Discharge (cfs)
1965	Sept. 22, 1965	81.33	130
1966	Apr. 14, 1966	83.52	614
1967	Sept. 21, 1967	85.22	710
1968	May 10, 1968	82.65	318
1969	Feb. 21, 1969	84.73	596

08076500 Halls Bayou at Houston, Tex. (12)

Location.--Lat 29°51'42", long 95°20'05", Harris County, on right bank at downstream side of bridge on Jensen Drive in northeast section of Houston, and 11.0 miles upstream from mouth.

Drainage area.--24.7 sq mi.

Gage.--Recording. Datum of gage is 0.66 ft below mean sea level, datum of 1929, adjustment of 1957.

Remarks.--Channel was rectified in June 1956.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1953	May 18, 1953	59.05	2,410
1954	July 30, 1954	60.65	2,020
1955	Feb. 6, 1955	56.62	1,530
1956	Jan. 22, 1956	51.53	357
1957	Apr. 29, 1957	52.51	620
1958	Oct. 15, 1957	57.09	1,280
1959	May 23, 1959	58.10	1,980
1960	June 26, 1960	58.79	2,230
1961	Sept. 12, 1961	60.50	3,400
1962	Nov. 13, 1961	58.28	2,540
1963	Nov. 27, 1962	57.02	1,870
1964	May 31, 1964	55.27	1,470
1965	Sept. 22, 1965	55.02	1,250
1966	Apr. 14, 1966	58.93	2,640
1967	Sept. 21, 1967	57.65	1,110
1968	May 10, 1968	58.26	2,340
1969	Feb. 21, 1969	58.93	2,560

08077100 Clear Creek tributary at Hall Road, Houston, Tex. (12)

Location.--Lat 29°36'09", long 95°16'41", Harris County, at bridge on Hall Road in south Houston.

Drainage area.--1.33 sq mi. Prior to Oct. 1, 1966, 1.27 sq mi.

Gage.--Recording. Datum of gage is mean sea level, datum of 1929, supplementary adjustment of 1957 and 1959.

Remarks.--Urbanizing.

Annual maximum stage and discharge

Water year	Date	Elevation (ft)	Discharge (cfs)
1965	Dec. 10, 1964	a42.73	b100
1966	Feb. 9, 1966	c44.91	b150
1967	Apr. 13, 1967	d41.38	132
1968	May 10, 1968	e44.91	390
1969	May 3, 1969	a43.03	294

a Occurred at different time than peak discharge, backwater from Clear Creek.
b Estimated.
c Occurred May 21, 1966, backwater from Clear Creek.
d Occurred Oct. 4, 1966, backwater from vegetation in channel.
e Occurred May 11, 1968, backwater from Clear Creek.

08077200 Clear Creek near Friendswood, Tex.

Location.--Lat 29°31'02", long 95°10'42", Galveston County, at bridge on Farm Road 5.28 and 1.5 miles southeast of Friendswood.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Remarks.--Records are stage only.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Apr. 14, 1966	13.38	-
1967	-	10.74	-
1968	June 24, 1968	15.93	-
1969	May 17, 1969	10.92	-

CLEAR CREEK BASIN

08077550 Cowart Creek near Friendswood, Tex. (12)

Location.--Lat 29°30'46", long 95°13'21", Brazoria County, at downstream side of bridge on county road and 1.7 miles southwest of Friendswood.

Drainage area.--18.0 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 8.05 miles; slope index, 5 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1965	-	a<11.70	<130
1966	Apr. 14, 1966	18.74	948
1967	Feb. 6, 1967	14.27	307
1968	June 21, 1968	21.02	1,280
1969	Oct. 9, 1968	19.10	938

a Maximum for period Aug. 25 to Sept. 30, 1965.
< Less than amount shown.

HIGHLAND BAYOU BASIN

08077700 Highland Bayou at Hitchcock, Tex.

Location.--Lat 29°21'12", long 95°01'49", Galveston County, at downstream side of bridge on Farm Road 2004, 0.6 mile west of Hitchcock, and 7 miles from mouth and Jones Bay.

Drainage area.--15.6 sq mi.

Gage.--Recording. Datum of gage is mean sea level.

Remarks.--Stage record only.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1963	Sept. 25, 1963	2.54	-
1964	Feb. 5, 1964	3.33	-
1965	Dec. 10, 1964	7.70	-
1966	Dec. 18, 1965	5.49	-
1967	Nov. 11 or 12, 1966	4.54	-
1968	June 21, 1968	8.15	-
1969	Apr. 12, 1969	5.88	-

HIGHLAND BAYOU BASIN

08077750 Highland Bayou trib. near Texas City, Tex. (12)

Location.--Lat 29°20'31", long 94°57'03", Galveston County, at Texas City Terminal Railway Company tracks, 600 ft downstream from mouth, and 3 miles southwest of Texas City.

Drainage area.--1.97 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Remarks.--Records are of stage only.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	May 5, 1966	3.23	-
1967	Sept. 21, 1967	4.10	-
1968	June 29, 1968	3.74	-
1969	Feb. 14, 1969	4.29	-

BRAZOS RIVER BASIN

08079400 Playa Draw at Littlefield, Tex. (05)

Location.--Lat 33°55'00", long 102°21'16", Lamb County, at culvert on U.S. Highway 84 and 0.5 mile west of Littlefield.

Drainage area.--0.63 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 1.4 miles; slope index, 28 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1967	Aug. 5, 1967	a1.89	44
1968	June 8, 1968	2.08	59
1969	June 14, 1969	3.64	235

a Maximum for period Dec. 6, 1966, to Sept. 30, 1967.

08079570 Barnum Springs Draw near Post, Tex. (05)

Location.--Lat 33°16'54", long 101°23'30", Garza County, at culvert on Farm Road 122 and 6.4 miles north of Post.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Aug. 10, 1966	3.55	58
1967	Mar. 23, 1967	3.65	63
1968	May 31, 1968	8.40	435
1969	May 6, 1969	4.25	97

08079580 Rattlesnake Creek near Post, Tex. (05)

Location.--Lat 33°13'36", long 101°21'36", Garza County, at culvert on Farm Road 651 and 2.7 miles north of Post.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Aug. 31, 1966	4.58	196
1967	June 27, 1967	5.88	295
1968	June 8, 1968	3.62	106
1969	May 6, 1969	3.09	70

08080510 Guest-Flowers Draw near Aspermont, Tex. (08)

Location.--Lat 33°07'25", long 100°08'15", Stonewall County, at culvert on U.S. Highway 380, 0.2 mile upstream from Tonk Creek, and 5.3 miles east of Aspermont.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1965	June 21, 1965	a17.85	155
1966	Aug. 31, 1966	17.25	80
1967	June 9, 1967	19.57	410
1968	-	<16.75	<30
1969	Sept 22, 1969	18.37	230

a Maximum for period June 4 to Sept. 30, 1965.
< Less than amount shown.

08080750 Callahan Draw near Lockney, Tex. (05)

Location.--Lat 33°59'48", long 101°32'54", Floyd County, at culvert on Farm Road 784, 7 miles upstream from Running Water Draw, and 10.5 miles northwest of Lockney.

Drainage area.--37.5 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Aug. 24, 1966	3.01	106
1967	May 31, 1967	3.69	185
1968	May 9, 1968	2.95	100
1969	May 6, 1969	3.55	167

08080918 Red Mud Creek near Spur, Tex. (25)

Location.--Lat 33°19'24", long 100°55'18", Dickens County, at culvert on Farm Road 1081 and 11 miles southwest of Spur.

Drainage area.--65.1 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 23 miles; slope index, 16.1 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Aug. 24, 1966	15.14	4,340
1967	July 4, 1967	11.70	1,850
1968	June 16, 1968	14.13	2,900
1969	May 16, 1969	10.44	1,520

08082900 North Elm Creek near Throckmorton, Tex. (03)

Location.--Lat 33°10'50", long 99°22'05", Throckmorton County, at culvert on State Highway 24 and 11.3 miles west of Throckmorton.

Drainage area.--3.58 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 3.0 miles; slope index, 36.4 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1965	-	-	a0
1966	Apr. 30, 1966	26.28	1,350
1967	-	<22.84	<160
1968	May 12, 1968	23.21	264
1969	May 5, 1969	24.50	650

a No flow for period June 3 to Sept. 30, 1965.
< Less than amount shown.

08085300 Humphries Draw near Haskell, Tex. (08)

Location.--Lat 33°10'40", long 99°34'30", Haskell County, at culvert on State Highway 24 and 9.3 miles east of Haskell.

Drainage area.--3.53 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 3.27 miles; slope index, 21.8 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1965	Sept. 19, 1965	a14.38	(+)
1966	Aug. 25, 1966	16.31	820
1967	July 20, 1967	17.29	1,150
1968	Jan. 21, 1968	17.65	1,250
1969	May 7, 1969	18.80	1,650

a Maximum for period June 3 to Sept. 30, 1965.
+ Discharge not determined.

08086260 Pecan Creek near Eolian, Tex. (23)

Location.--Lat 32°35'01", long 99°01'57", Stephens County, at county road crossing 1.4 miles east of Farm Road 1853, 3.3 miles upstream from Battle Creek, and 5.8 miles south of Eolian.

Drainage area.--25.4 sq mi.

Gage.--Recording. Altitude of gage is 1,274 ft, from AMS topographic map.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1967	July 19, 1967	5.85	335
1968	Apr. 18, 1958	11.26	580
1969	May 6, 1969	12.78	648

BRAZOS RIVER BASIN

08088100 Salt Creek at Olney, Tex. (03)

Location.--Lat 33°22'13", long 98°44'40", Young County, on right bank 21 ft downstream from bridge on State Highway 199 and 0.5 mile east of Olney.

Drainage area.--9.6 sq mi.

Gage.--Recording. Datum of gage is 1,164.03 ft above mean sea level, datum of 1929.

Historical data.--Maximum stage since at least 1908, 16.7 ft in June 1915, from information by local residents.

Remarks.--Rain gage at site.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1958	Sept. 16, 1958	8.18	345
1959	June 22, 1959	7.30	264
1960	Oct. 3, 1959	10.16	1,040
1961	Sept. 12, 1961	5.95	162
1962	Nov. 22, 1961	9.66	485
1963	Nov. 26, 1962	9.32	360
1964	May 29, 1964	10.05	498
1965	May 10, 1965	6.62	148
1966	Apr. 29, 1966	12.14	11,500
1967	Sept. 18, 1967	9.74	625
1968	Jan. 21, 1968	8.83	273
1969	May 5, 1969	11.67	2,640

BRAZOS RIVER BASIN

08088300 Briar Creek near Graham, Tex. (03)

Location.--Lat 33°12'40", long 98°37'05", Young County, on downstream side of bridge on Farm Road 1769, 2.5 miles upstream from mouth, and 7.0 miles northwest of Graham.

Drainage area.--19.7 sq mi.

Gage.--Recording.

Historical data.--Maximum stage since at least 1900, 15.2 ft in September 1955; flood in May 1957 reached a stage of 15.0 ft, from information by local residents.

Remarks.--

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1959	June 23, 1959	4.08	207
1960	Oct. 3, 1959	9.02	649
1961	Oct. 18, 1960	8.42	555
1962	June 10, 1962	10.50	750
1963	Apr. 27, 1963	5.10	268
1964	May 30, 1964	6.47	390
1965	Nov. 19, 1964	7.14	444
1966	Apr. 23, 1966	11.42	723
1967	July 19, 1967	8.62	516
1968	Mar. 13, 1968	4.50	220
1969	Sept 23, 1969	8.22	543

08089100 Elm Creek tributary near Graford, Tex. (02)

Location.--Lat 32°54'35", long 98°17'35", Palo Pinto County, at culvert on Farm Road 4, 0.2 mile upstream from Elm Creek, and 3.2 miles southwest of Graford.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1965	-	-	a0
1966	Apr. 30, 1966	12.71	40
1967	May 20, 1967	12.21	33
1968	Mar. 20, 1968	11.15	16
1969	Mar. 23, 1969	11.69	25

a No flow for period June 22 to Sept. 30, 1965.

08090850 Cidwell Branch near Granbury, Tex. (02)

Location.--Lat 32°35'41", long 97°46'24", Hood County, at culvert on State Highway 51 and 10.5 miles north of Granbury.

Drainage area.--3.37 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 5.65 miles; slope index, 49 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Apr. 29, 1966	16.65	540
1967	-	<11.16	<37
1968	May 10, 1968	14.44	290
1969	May 6, 1969	11.36	48

< Less than amount shown.

BRAZOS RIVER BASIN

08091200 Morris Branch near Bluff Dale, Tex. (02)

Location.--Lat 32°21'25", long 98°00'00", Erath County, at culvert on U.S. Highway 377 and 1.2 miles east of Bluff Dale.

Drainage area.--0.06 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 0.23 mile; slope index, 382 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1965	-	a<11.44	<25
1966	Apr. 29, 1966	13.71	107
1967	May 11, 1967	11.76	35
1968	Aug. 14, 1968	12.54	61
1969	Apr. 12, 1969	10.63	7.4

a Maximum for period June 10 to Sept. 30, 1965.
< Less than amount shown.

BRAZOS RIVER BASIN

08091700 Panter Branch near Tolar, Tex. (02)

Location.--Lat 32°20'59", long 97°51'25", Hood County, at culvert on State High-way 51, 2.5 miles upstream from mouth, and 4.6 miles southeast of Tolar.

Drainage area.--7.82 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 5.0 miles; slope index, 49 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Apr. 29, 1966	14.49	880
1967	May 20, 1967	16.9	1,650
1968	May 9, 1968	21.70	3,800
1969	May 7, 1969	13.50	610

08093200 Bond Branch near Hillsboro, Tex. (09)

Location.--Lat 32°02'20", long 97°06'30", Hill County, at culvert on U.S. Highway 77 and 2.3 miles northeast of Hillsboro.

Drainage area.--0.36 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 0.85 mile; slope index, 70.6 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1965	June 24, 1965	14.19	305
1966	Apr. 25, 1966	14.00	285
1967	May 1, 1967	11.0	34
1968	May 9, 1968	15.91	505
1969	May 7, 1969	13.09	197

08093400 Cobb Creek near Abbott, Tex. (09)

Location.--Lat 31°55'11", long 97°05'57", Hill County, at downstream side of bridge on service road on downstream side of Interstate Highway 35, 1.5 miles downstream from Missouri, Kansas and Texas Railroad Co. bridge, 2.8 miles northwest of Abbott, and 9 miles upstream from mouth.

Drainage area.--11.7 sq mi.

Gage.--Recording. Datum of gage is 575.00 ft above mean sea level, datum of 1929.

Topographic characteristics.--Length of main stream, 10.7 miles; slope index, 20.7 ft per mile. (Map scale, 1:24,000).

Remarks.--Maximum stage since at least 1932, 11.1 ft, date unknown, from information by Texas Highway Department.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1967	May 31, 1967	7.85	785
1968	May 9, 1968	10.50	2,720
1969	May 7, 1969	7.77	880

08094000 Green Creek subwatershed No. 1 near Dublin, Tex. (02)

Location.--Lat 32°09'57", long 98°20'28", Erath County, near center of dam on main headwater channel of Green Creek, 0.9 mile downstream from county road, 1.3 miles east of Farm Road 219, and 5.5 miles north of Dublin.

Drainage area.--3.34 sq mi.

Gage.--Recording. Datum of gage is 1,408.00 ft above mean sea level, datum of 1929 (levels by U.S. Soil Conservation Service).

Remarks.--Peaks are based on maximum inflow (average for 5 or 15-minute intervals), computed from outflow and change in reservoir contents, adjusted for rainfall on the reservoir surface during time of peak inflow. No adjustment made for reservoir losses. One recording rain gage is located in the watershed above the station. Tabulations of significant storm rainfall and runoff data are on file in the U.S. Geological Survey District office.

Annual maximum discharge

Water year	Date	Discharge (cfs)
1955	May 18, 1955	3,630
1956	May 1, 1956	11,500
1957	Apr. 26, 1957	887
1958	July 22, 1958	748
1959	June 26, 1959	493
1960	Oct. 3, 1959	1,540
1961	July 9, 1961	261
1962	Sept. 7, 1962	516
1963	Apr. 28, 1963	621
1964	Sept. 21, 1964	2,090
1965	May 15, 1965	365
1966	Apr. 30, 1966	645
1967	Sept. 14, 1967	102
1968	May 12, 1968	3,540
1969	July 27, 1969	604

08095220 South Bosque River near McGregor, Tex. (09)

Location.--Lat 31°23'22", long 97°22'54", McLennan County, on downstream side of bridge on State Highway 317 and 3.8 miles south of McGregor.

Drainage area.--15.9 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 6.14 miles; slope index, 28.4 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1967	Apr. 22, 1967	2.73	178
1968	May 10, 1968	9.56	(+)
1969	Apr. 12, 1969	6.05	(+)

+ Discharge not determined.

08095250 Willow Branch at McGregor, Tex. (09)

Location.--Lat 31°26'25", long 97°25'15", McLennan County, at culvert on U.S. Highway 84 and on west edge of McGregor.

Drainage area.--2.52 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 3.55 miles; slope index, 19.4 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Sept. 18, 1966	a5.54	367
1967	Apr. 22, 1967	4.90	238
1968	July 8, 1968	5.39	337
1969	Apr. 12, 1969	5.63	385

a Maximum for period July to September 1966.

08096550 Box Branch at Robinson, Tex. (09)

Location.--Lat 31°29'35", long 97°08'45", McLennan County, at culvert on Loop 340 in Robinson and 4.9 miles south of Waco.

Drainage area.--0.40 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 0.80 mile; slope index, 60 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1965	-	-	a0
1966	May 1, 1966	12.90	460
1967	-	<9.78	<20
1968	June 24, 1968	10.93	150
1969	-	<9.78	<29

a No flow for period August to September 1965.
< Less than amount shown.

08096800 Cow Bayou subwatershed No. 4 near Bruceville, Tex. (09)

Location.--Lat 31°20'10", long 97°15'50", McLennan County, near center of dam on Foster Branch, 1.0 mile upstream from South Fork Cow Bayou, and 2.1 miles west of Bruceville.

Drainage area.--5.25 sq mi.

Gage.--Recording. Datum of gage is 574.46 ft above mean sea level, datum of 1929 (levels by U.S. Soil Conservation Service).

Remarks.--Peak discharge based on maximum inflow (average for 5 or 15-minute intervals), computed from outflow and change in reservoir contents, adjusted for rainfall on the reservoir surface during time of peak inflow. Recording rain gage located at station. Tabulations of significant storm rainfall and runoff are on file in the U.S. Geological Survey District office.

Annual maximum discharge

Water year	Date	Discharge (cfs)
1957	May 11, 1957	6,900
1958	Oct. 14, 1957	1,510
1959	June 23, 1959	1,690
1960	Oct. 4, 1959	1,400
1961	June 8, 1961	628
1962	June 30, 1962	293
1963	Oct. 26, 1962	19
1964	June 16, 1964	151
1965	May 16, 1965	1,780
1966	Feb. 9, 1966	1,830
1967	Sept. 17, 1967	36
1968	May 10, 1968	2,340
1969	Mar. 23, 1969	481

08098300 Little Pond Creek at Burlington, Tex. (17)

Location.--Lat 31°01'35", long 96°59'17", Milam County, on left bank 80 ft downstream from bridge on U.S. Highway 77, 1 mile north of Burlington, and 2.5 miles downstream from Keys Creek.

Drainage area.--22.2 sq mi.

Gage.--Water-stage recorder. Datum of gage is 388.51 ft above mean sea level, datum of 1929.

Historical data.--Maximum stage since at least 1938, 17.5 ft in 1950, from information by local residents.

Remarks.--Three recording rain gages are located in the watershed. Data from these gages are on file in the U.S. Geological Survey Austin Field Unit office.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1963	Nov. 27, 1962	7.50	418
1964	Sept. 24, 1964	10.09	745
1965	May 16, 1965	15.61	5,980
1966	Apr. 25, 1966	13.02	2,550
1967	May 1, 1967	9.82	748
1968	May 10, 1968	a14.60	4,250
1969	Apr. 12, 1969	14.72	4,530

a Occurred June 24, 1968.

08099350 Sabana River tributary near De Leon, Tex. (23)

Location.--Lat 32°06'44", long 98°33'58", Comanche County, 13 ft upstream from culvert on Farm Road 587 and 1.6 miles west of De Leon.

Drainage area.--

Gage .--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Apr. 29, 1966	a7.56	51
1967	Sept. 21, 1967	7.97	68
1968	Jan. 20, 1968	7.22	41
1969	Aug. 25, 1969	3.92	47

a Maximum for period February to September 1966.

08100100 Eidson Creek near Hamilton, Tex. (09)

Location.--Lat 31°46'10", long 98°07'25", Hamilton County, at culvert on U.S. Highway 281 and 4.6 miles north of Hamilton.

Drainage area.--2.91 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 4.03 miles; slope index, 55 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1965	-	-	a0
1966	Oct. 18, 1965	10.06	150
1967	June 12, 1967	10.00	138
1968	May 27, 1968	12.63	900
1969	Aug. 4, 1969	10.08	155

a No flow for period August to September 1965.

BRAZOS RIVER BASIN

08100400 Bermuda Branch near Gatesville, Tex. (09)

Location.--Lat 31°32'26", long 97°47'53", Coryell County, at culvert on State Highway 36 and 8.0 miles northwest of Gatesville.

Drainage area.--0.50 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 1.17 miles; slope index, 168 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	-	-	a0
1967	-	b<5.63	b<46
1968	Jan. 21, 1968	b5.6	b44
1969	Feb. 21, 1969	b5.79	b60

a No flow for period July to September 1966.
b Revised
< Less than amount shown.

BRAZOS RIVER BASIN

08100800 Hoffman Branch near Hamilton, Tex. (09)

Location.--Lat 31°35'01", long 98°11'45", Hamilton County, at culvert on Farm Road 2414 and 9.3 miles southwest of Hamilton.

Drainage area.--5.56 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 5.50 miles; slope index, 49 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Sept. 18, 1966	11.71	a50
1967	July 1, 1967	5.59	17
1968	Jan. 21, 1968	9.19	620
1969	May 7, 1969	8.04	510

a Discharge estimated, culvert was partially plugged with debris.

BRAZOS RIVER BASIN

08102900 School Branch near Lampasas, Tex. (23)

Location.--Lat 31°13'48", long 98°09'25", Lampasas County, at culvert on Farm Road 1690 and 11.5 miles north of Lampasas.

Drainage area.--0.90 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 0.95 mile; slope index, 58 ft per mile. (Map scale, 1:24,000)

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Aug. 12, 1966	a5.36	83
1967	May 1, 1967	4.88	53
1968	May 25, 1968	5.40	88
1969	May 7, 1969	4.95	55

a Maximum for period July to September 1966.

BRAZOS RIVER BASIN

08103450 Fleece Branch near Lampasas, Tex. (23)

Location.--Lat 31°05'46", long 98°12'30", Lampasas County, at culvert on U.S. Highways 183 and 190, 0.7 mile upstream from Burleson Creek, and 2.8 miles northwest of Lampasas.

Drainage area.--1.08 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 2.00 miles; slope index, 100 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1965	-	-	a0
1966	June 19, 1966	15.18	980
1967	-	<9.81	<60
1968	July 8, 1968	10.17	101
1969	Apr. 12, 1969	12.33	425

a No flow for period August to September 1965.
< Less than amount shown.

08104850 South Fork San Gabriel River near Bertram, Tex. (14)

Location.--Lat 30°43'14", long 98°06'15", Burnet County, on downstream side of bridge on Farm Road 243 and 3.4 miles southwest of Bertram.

Drainage area.--8.84 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 5.8 miles; slope index, 40 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1967	May 1, 1967	3.93	(+)
1968	May 17, 1968	12.14	(+)
1969	Apr 12, 1969	6.68	(+)

+ Discharge not determined.

08105900 Avery Branch near Taylor, Tex. (14)

Location.--Lat 30°29'11", long 97°27'27", Williamson County, at culvert on Farm Road 973 and 6.4 miles southwest of Taylor.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Sept. 27, 1966	a6.20	280
1967	May 2, 1967	7.21	595
1968	Nov. 10, 1967	7.03	535
1969	Apr. 12, 1969	7.55	710

a Maximum for period July to September 1966.

BRAZOS RIVER BASIN

08108800 Little Branch near Bryan, Tex. (17)

Location.--Lat 30°45'14", long 96°28'01", Robertson County, at culvert on U.S. Highway 190 and State Highway 6 and 8.3 miles northwest of Bryan.

Drainage area.--0.14 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 0.43 mile; slope index, 108 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1965	-	-	a0
1966	May 1, 1966	13.33	99
1967	Oct. 14, 1966	13.03	87
1968	July 9, 1968	13.08	88
1969	Apr. 13, 1969	12.36	60

a No flow for period August to September 1965.

BRAZOS RIVER BASIN

08110350 Plummers Creek at Mexia, Tex. (09)

Location.--Lat 31°40', long 96°30', Limestone County, at culvert on State Highway 14 and at southwest city limits of Mexia.

Drainage area.--4.42 sq mi.

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 5.2 miles; slope index, 14.8 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1965	-	-	a0
1966	Apr. 18, 1966	15.34	2,000
1967	Sept. 7, 1967	11.65	570
1968	May 10, 1968	14.92	1,830
1969	Apr. 12, 1969	11.95	680

a No flow for period August to September 1965.

08111025 Burton Creek at Villa Maria Road, Bryan, Tex. (17)

Location.--Lat 30°38'48", long 96°20'57", Brazos County, on left bank 60 ft downstream from culvert on Villa Maria Road at Bryan and 2.8 miles upstream from Carters Creek.

Drainage area.--1.33 sq mi.

Gage.--Recording. Datum of gage is 281.23 ft above mean sea level, datum of 1929.

Remarks.--Urban. Two recording rain gages are located in the watershed.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1968	June 24, 1968	a8.33	466
1969	Sept 16, 1969	8.72	1,850

a Maximum for period April to September 1968

08111050 Hudson Creek near Bryan, Tex. (17)

Location.--Lat 30°39'38", long 96°17'59", Brazos County, on left bank 5 ft upstream from culvert on Farm Road 158 and 4.3 miles east of Bryan.

Drainage area.--1.94 sq mi.

Gage.--Recording. Datum of gage is 269.2 ft above mean sea level (Texas Highway Department bridge plans).

Historical data.--Maximum stage since at least 1879, that of July 9, 1968.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1968	July 9, 1968	10.85	828
1969	Apr. 12, 1969	9.13	691

BRAZOS RIVER BASIN

08111100 Winkleman Creek near Brenham, Tex. (17)

Location.--Lat 30°15'19", long 96°15'44", Washington County, at culvert on State Highway 90 and 10.7 miles northeast of Brenham.

Drainage area.--0.75 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 1.28 miles; slope index, 48 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1965	-	-	a0
1966	Feb. 27, 1966	10.53	95
1967	-	<9.81	<30
1968	July 9, 1968	13.27	500
1969	Apr. 12, 1969	12.75	390

a No flow for period August to September 1965.
< Less than amount shown.

BRAZOS RIVER BASIN

08114900 Seabourne Creek near Rosenberg, Tex. (12)

Location.--Lat 29°31'27", long 95°48'29", Fort Bend County, at culvert on State Highway 36 and 2.4 miles south of Rosenberg.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Sept. 9, 1966	a4.92	310
1967	Aug. 25, 1967	4.82	160
1968	June 23, 1968	6.21	295
1969	May 16, 1969	6.78	355

a Maximum for period Aug. 12 to Sept. 30, 1966.

BRAZOS RIVER BASIN

08116400 Dry Creek near Rosenberg, Tex. (12)

Location.--Lat 29°30'42", long 95°44'45", Fort Bend County, on right bank, 38 ft downstream from county road bridge, 5.0 miles southeast of Rosenberg, and 8.2 miles upstream from Smithers Lake spillway.

Drainage area.--8.53 sq mi.

Gage.--Recording. Datum of gage is 71.90 ft above mean sea level, datum of 1929, supplementary adjustment of 1943.

Historical data.--Highest flood since at least 1932, Oct. 31, 1959, from information by local residents.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1959	Apr. 11, 1959	8.00	504
1960	Oct. 31, 1959	12.66	2,410
1961	June 19, 1961	11.13	1,120
1962	Nov. 13, 1961	6.88	348
1963	Jan. 17, 1963	9.83	762
1964	Mar. 19, 1964	8.13	386
1965	Feb. 16, 1965	10.30	860
1966	Apr. 14, 1966	10.96	900
1967	Aug. 25, 1967	6.56	338
1968	June 24, 1968	10.30	860
1969	May 16, 1969	11.29	975

SAN BERNARD RIVER BASIN

08117800 Mound Creek tributary at Guy, Tex. (12)

Location.--Lat 29°20'49", long 95°46'30", Fort Bend County, at culvert on State Highway 36 and 0.2 mile southeast of Guy.

Drainage area.--1.48 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 2.80 miles; slope index, 3.3 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	-	a<1.58	(+)
1967	-	<1.58	(+)
1968	-	<1.58	(+)
1969	-	<1.58	(+)

a Maximum for period July 12 to Sept. 30, 1966.
+ Discharge not determined.
< Less than amount shown.

COLORADO RIVER BASIN

08123620 Sulphur Springs Draw near Wellman, Tex. (05)

Location.--Lat 33°04'36", long 102°27'54", Terry County, at culvert on Farm Road 402 and 3 miles northwest of Wellman.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Aug. 24, 1966	7.41	240
1967	June 25, 1967	4.01	102
1968	July 1, 1968	3.32	69
1969	-	<2.05	<11

< Less than amount shown.

COLORADO RIVER BASIN

08123750 Coahoma Draw tributary near Big Spring, Tex. (08)

Location.--Lat 32°21'17", long 101°24'18", Howard County, at culvert on State Highway 350 and 8.5 miles northeast of Big Spring.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1965	Sept. 21, 1965	a4.05	265
1966	Apr. 30, 1966	3.47	185
1967	July 20, 1967	5.54	480
1968	June 15, 1968	4.47	328
1969	June 9, 1969	6.12	610

a Maximum for period June to September 1965.

08123760 Bull Creek tributary near Forsan, Tex. (08)

Location.--Lat 32°08'23", long 101°10'53", Howard County, at culvert on Farm Road 2183 and 11.4 miles east of Forsan.

Drainage area.--0.40 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 0.9 mile; slope index, 128 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Apr. 30, 1966	a8.23	140
1967	-	-	0
1968	-	<6.02	<25
1969	-	<6.02	<25

a Maximum for period February to September 1966.
< Less than amount shown.

08123920 Bitter Creek near Silver, Tex. (07)

Location.--Lat 31°58'48", long 100°42'52", Coke County, at culvert on Farm Road 2059, 2.5 miles upstream from mouth, and 6.4 miles south of Silver.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1967	July 19, 1967	3.24	98
1968	May 10, 1968	6.42	370
1969	-	<2.10	<32

< Less than amount shown.

COLORADO RIVER BASIN

08126300 Fish Creek tributary near Hylton, Tex. (08)

Location.--Lat 32°07'57", long 100°14'02", Nolan County, at culvert on Farm Road 1170 and 1.8 miles west of Hylton.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 0.7 mile; slope index, 147 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Apr. 30, 1966	a5.14	36
1967	July 19, 1967	8.18	155
1968	Aug. 14, 1968	7.41	120
1969	May 4, 1969	7.40	119

a Maximum for period February to September 1966.

COLORADO RIVER BASIN

08127100 Dry Creek near Christoval, Tex. (07)

Location.--Lat 31°05'21", long 100°20'56", Tom Green County, at culvert on Farm Road 2084 and 11.4 miles southeast of Christoval.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1965	Aug. 12, 1965	a1.77	<200
1966	Sept. 18, 1966	3.64	285
1967	July 20, 1967	4.64	470
1968	-	<1.41	<200
1969	-	<1.41	<200

a Maximum for period June to September 1965.
< Less than amount shown.

COLORADO RIVER BASIN

08133300 Quarry Creek near Sterling City, Tex. (07)

Location.--Lat 31°50'48", long 101°09'18", Sterling County, at culvert on State Highway 158 and 9.8 miles west of Sterling City.

Drainage area.--3.25 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 3.0 miles; slope index, 95 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1965	Sept. 18, 1965	a4.73	170
1966	Oct. 17, 1965	4.81	190
1967	June 2, 1967	4.83	195
1968	May 10, 1968	4.57	130
1969	Sept. 9, 1969	5.65	420

a Maximum for period June to September 1965.

COLORADO RIVER BASIN

08133800 Broome Creek near Broome, Tex. (07)

Location.--Lat 31°46'05", long 100°51'09", Sterling County, at culvert on U.S. Highway 87 and 1.1 miles northwest of Broome.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1965	Sept. 18, 1965	a2.81	150
1966	Oct. 17, 1965	2.87	160
1967	Mar. 20, 1967	2.60	115
1968	-	<2.37	<84
1969	Apr. 12, 1969	2.60	107

a Maximum for period June to September 1965.
< Less than amount shown.

COLORADO RIVER BASIN

08134300 Nolke Station Creek near San Angelo, Tex. (07)

Location.--Lat 31°31'34", long 100°33'46", Tom Green County, at culvert on Farm Road 2288 and 8.6 miles northwest of San Angelo.

Drainage area.--0.59 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 1.72 miles; slope index, 67 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1965	May 17, 1965	7.58	281
1966	Apr. 30, 1966	6.16	170
1967	Mar. 22, 1967	3.89	42
1968	-	<2.74	<20
1969	Aug. 26, 1969	3.01	<20

< Less than amount shown.

COLORADO RIVER BASIN

08134400 Gravel Pit Creek near San Angelo, Tex. (07)

Location.--Lat 31°27'54", long 100°31'17", Tom Green County, at culvert on Farm Road 2288 and 5.0 miles west of San Angelo.

Drainage area.--0.19 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 0.55 mile; slope index, 80 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1965	June 4, 1965	a2.09	24
1966	Aug. 24, 1966	2.79	41
1967	Sept. 4, 1967	2.15	25
1968	Apr. 10, 1968	1.63	15
1969	Aug. 26, 1969	1.30	<30

a Maximum for period May to September 1965.
< Less than amount shown.

COLORADO RIVER BASIN

08136200 Puddle Creek near Veribest, Tex. (07)

Location.--Lat 31°30'38", long 100°09'31", Tom Green County, at culvert on Farm Road 1692 and 6.2 miles northeast of Veribest.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	July 31, 1966	a5.70	72
1967	July 19, 1967	5.46	50
1968	May 9, 1968	5.11	<50
1969	Sept 9, 1969	6.35	115

a Maximum for period February to September 1966.
< Less than amount shown.

COLORADO RIVER BASIN

08136300 Frog Pond Creek near Eden, Tex. (07)

Location.--Lat 31°14'21", long 99°59'54", Concho County, at culvert on U.S. Highway 87 and 9.4 miles west of Eden.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1967	Aug. 17, 1967	3.69	318
1968	Apr. 9, 1968	2.52	86
1969	Sept 11, 1969	4.82	490

08136900 Mukewater Creek subwatershed No. 10A near Trickham, Tex. (23)

Location.--Lat 31°39'01", long 99°13'30", Coleman County, near center of dam on Mukewater Creek, 1.8 miles upstream from East Fork, and 4.3 miles north of Trickham.

Drainage area.--21.8 sq mi.

Gage.--Recording. Datum of gage is 1,462.00 ft above mean sea level, datum of 1929.

Remarks.--Peak discharge based on maximum inflow (average for 5-minute interval), computed from outflow and change in reservoir contents, adjusted for rainfall on the reservoir surface during time of peak inflow. There are eight rain gages (two recording and six nonrecording) located in watershed. Tabulations of significant storm rainfall and runoff data are on file in the U.S. Geological Survey District office.

Annual maximum discharge

Water year	Date	Discharge (cfs)
1966	Sept. 9, 1966	806
1967	Sept. 15, 1967	1,300
1968	Mar. 20, 1968	1,540
1969	Sept. 11, 1969	649

08137000 Mukewater Creek subwatershed No. 9 near Trickham, Tex. (23)

Location.--Lat 31°41'40", long 99°12'18", Coleman County, near center of dam on tributary to East Fork Mukewater Creek, 1.5 miles upstream from mouth, 4.5 miles southwest of Bangs, and 7.1 miles north of Trickham.

Drainage area.--4.02 sq mi.

Gage.--Recording. Datum of gage is 1,500.01 ft above mean sea level, datum of 1929.

Topographic characteristics.--Length of main stream, 3.6 miles; slope index, 20.4 ft per mile. (Map scale, 1:24,000).

Remarks.--Peak discharge based on maximum inflow (average for 5 or 15-minute intervals), computed from outflow and change in reservoir contents, adjusted for rainfall on the reservoir surface during time of peak inflow. Recording rain gage located at station. Tabulations of significant storm rainfall and runoff data are on file in the U.S. Geological Survey District office.

Annual maximum discharge

Water year	Date	Discharge (cfs)
1961	June 5, 1961	a1,440
1962	Oct. 9, 1961	44
1963	May 22, 1963	186
1964	Apr. 23, 1964	1,170
1965	Nov. 17, 1964	838
1966	Nov. 8, 1965	267
1967	Sept. 15, 1967	b380
1968	Mar. 20, 1968	853
1969	Sept. 10, 1969	460

a Maximum for period January to September 1961.
b Estimated.

08139000 Deep Creek subwatershed No. 3 near Placid, Tex. (23)

Location.--Lat 31°17'10", long 99°09'25", McCulloch County, near right of dam on tributary to Deep Creek and 2.8 miles southeast of Placid.

Drainage area.--3.42 sq mi.

Gage.--Water-stage recorder. Datum of gage is 1,500.00 ft above mean sea level, datum of 1929. Prior to Dec. 1, 1953, staff gage at same site and datum.

Remarks.--Peak discharge based on maximum inflow (average for 5 or 15-minute intervals), computed from outflow and change in reservoir contents, adjusted for rainfall on the reservoir surface during time of peak inflow. Recording rain gage located at station. Tabulations of significant storm rainfall and runoff data are on file in the U.S. Geological Survey District office.

Annual maximum discharge

Water year	Date	Discharge (cfs)
1954	Oct. 4, 1953	742
1955	May 18, 1955	1,800
1956	Aug. 28, 1956	218
1957	May 12, 1957	1,160
1958	Mar. 6, 1958	448
1959	June 3, 1959	938
1960	Oct. 4, 1959	a280
1961	June 5, 1961	235
1962	June 26, 1962	154
1963	May 30, 1963	208
1964	Sept. 27, 1964	681
1965	Feb. 8, 1965	322
1966	Sept. 15, 1966	280
1967	May 20, 1967	203
1968	Jan. 20, 1968	315
1969	May 6, 1969	736

a Estimated.

08140000 Deep Creek subwatershed No. 8 (Dry Prong Deep Creek) near Mercury, Tex. (23)

Location.--Lat 31°23'05", long 99°08'30", McCulloch County, near center of dam on Dry Prong Deep Creek, 1.9 miles southeast of Mercury, and 3.5 miles upstream from mouth.

Drainage area.--5.41 sq mi.

Gage.--Recording. Datum of gage is 1,377.13 ft above mean sea level, datum of 1929 (levels by Soil Conservation Service).

Remarks.--Peak discharges based on maximum inflow (average for 5 to 30-minute intervals) computed from outflow and change in reservoir contents, adjusted for rainfall on the reservoir surface during time of peak inflow. Recording rain gage located at station. Tabulations of significant storm rainfall and runoff data are on file in the U.S. Geological Survey District office.

Annual maximum discharge

Water year	Date	Discharge (cfs)
1952	Apr. 18, 1952	ab500
1953	May 12, 1953	ab900
1954	Oct. 4, 1953	1,570
1955	May 17, 1955	2,550
1956	Aug. 28, 1956	557
1957	May 12, 1957	894
1958	Nov. 2, 1957	[illegible]
1959	June 3, 1959	[illegible]
1960	Oct. 3, 1959	[illegible]
1961	Dec. 7, 1960	217
1962	Nov. 2, 1961	b[illegible]0
1963	May 5, 1963	[illegible]
1964	Sept. 21, 1964	[illegible]
1965	May 16, 1965	241
1966	Sept. 18, 1966	90
1967	Sept. 16, 1967	687
1968	Jan. 20, 1968	b200
1969	May 6, 1969	296

a Unadjusted for rainfall on water surface.
b Estimated.

08140500 Dry Prong Deep Creek near Mercury, Tex. (23)

Location.--Lat 31°24'10", long 99°08'10", McCulloch County, near center of span on downstream side of bridge on Farm Road 502, 1.3 miles southeast of Mercury, 1.7 miles downstream from floodwater-retarding structure, and 1.8 miles upstream from mouth.

Drainage area.--8.31 sq mi.

Gage.--Recording. Datum of gage is 1,339.02 ft above mean sea level, datum of 1929.

Historical data.--Flood of May 17, 1955, is the highest since at least 1924, from information by local resident.

Remarks.--In December 1951, one floodwater-retarding structure was built on the creek at a site 1.7 miles upstream from this station. This structure has a total floodwater-retarding capacity of 1,410 acre-ft below flood-spillway crest, and partly controls the flow from 4.32 sq mi above this station. Two recording rain gages are located in the watershed above the station. Tabulations of significant storm rainfall and runoff data are on file in the U.S. Geological Survey District office.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1938	July 23, 1938	8.7	-
1952	Apr. 18, 1952	5.80	105
1953	May 12, 1953	5.30	293
1954	Oct. 4, 1953	7.94	776
1955	May 17, 1955	9.00	2,000
1956	May 1, 1956	7.20	960
1957	May 12, 1957	6.46	664
1958	Nov. 2, 1957	4.85	253
1959	June 4, 1959	4.95	274
1960	Oct. 3, 1959	4.65	226
1961	Feb. 5, 1961	3.91	129
1962	Oct. 9, 1961	4.32	182
1963	May 5, 1963	5.72	425
1964	Sept. 21, 1964	9.00	1,970
1965	Feb. 8, 1965	4.09	144
1966	Sept. 15, 1966	4.85	258
1967	Sept. 16, 1967	6.70	729
1968	Jan. 20, 1968	4.85	247
1969	Aug. 23, 1969	6.95	851

08141100 McCall Branch near Coleman, Tex. (23)

Location.--Lat 31°50'57", long 99°33'12", Coleman County, at culvert on State Highway 53, 1 mile upstream from Hords Creek, and 8.2 miles west of Coleman.

Drainage area.--2.17 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 2.33 miles; slope index, 54.3 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	June 18, 1966	a4.78	440
1967	Sept. 15, 1967	3.97	230
1968	Jan. 20, 1968	5.24	710
1969	June 12, 1969	4.76	605

a Maximum for period March to September 1966.

08143700 Browns Creek tributary near Goldthwaite, Tex. (23)

Location.--Lat 31°31'01", long 98°34'00", Mills County, at culvert on State Highway 16 and 4.6 miles north of Goldthwaite.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Apr. 29, 1966	a4.48	230
1967	-	<3.36	<20
1968	May 10, 1968	3.46	76
1969	Sept 11, 1969	4.55	241

a Maximum for period February to September 1966.
< Less than amount shown.

08145100 Brady Creek tributary near Brady, Tex. (23)

Location.--Lat 31°05'05", long 99°17'33", McCulloch County, at culvert on Farm Road 734 and 4.3 miles southeast of Brady.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1967	May 20, 1967	4.14	218
1968	Jan. 20, 1968	3.51	140
1969	Sept 10, 1969	2.84	60

COLORADO RIVER BASIN

08150200 Llano River tributary near London, Tex. (07)

Location.--Lat 30°38'22", long 99°35'52", Kimble County, at culvert on U.S. Highway 377 and 2.7 miles south of London.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 1.3 miles; slope index, 168 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Apr. 28, 1966	a5.21	10
1967	July 20, 1967	5.49	21
1968	Jan. 20, 1968	5.38	17
1969	Aug. 27, 1969	5.52	22

a Maximum for period February to September 1966.

COLORADO RIVER BASIN

08150900 Stone Creek tributary near Art, Tex. (14)

Location.--Lat 30°44'17", long 99°03'29", Mason County, at culvert on State Highway 29, 3.2 miles east of Art, and 10.6 miles east of Mason.

Drainage area.--0.40 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 1.25 miles; slope index, 45.7 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Aug. 11, 1966	a3.88	45
1967	-	<2.98	<20
1968	May 11, 1968	4.66	82
1969	July 27, 1969	5.44	127

a Maximum for period February to September 1966.
< Less than amount shown.

08151300 Johnson Creek near Valley Spring, Tex. (14)

Location.--Lat 30°51'38", long 98°49'52", Llano County, at culvert on Farm Road 734, 0.8 mile west of Valley Spring, and 12 miles of Llano.

Drainage area.--5.66 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 5.72 miles; slope index, 68.8 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1967	May 20, 1967	3.22	190
1968	July 9, 1968	4.96	750
1969	May 15, 1969	3.56	270

08152700 Little Flatrock Creek near Marble Falls, Tex. (14)

Location.--Lat 30°30'52", long 98°18'44", Burnet County, at culvert on State Highway 71 and 4.8 miles southwest of Marble Falls.

Drainage area.--3.20 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 4.2 miles; slope index, 37.9 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	-	-	a0
1967	-	<4.80	<50
1968	Jan. 21, 1968	7.15	680
1969	May 7, 1969	5.26	126

a No flow for period July to September 1966.
< Less than amount shown.

COLORADO RIVER BASIN

08152800 Spring Creek near Fredericksburg, Tex. (14)

Location.--Lat 30°18'10", long 99°03'20", Gillespie County, on downstream side of bridge on U.S. Highway 290 and 11 miles west of Fredericksburg.

Drainage area.--15.2 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 6.15 miles; slope index, 43.8 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1967	May 21, 1967	3.38	110
1968	May 10, 1968	4.37	620
1969	May 8, 1969	4.36	610

COLORADO RIVER BASIN

08153100 Cane Branch at Stonewall, Tex. (14)

Location.--Lat 30°14'07", long 98°39'21", Gillespie County, at culvert on U.S. Highway 290 at Stonewall and 0.6 mile upstream from Pedernal River.

Drainage area.--1.37 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 3.35 miles; slope index, 59 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1965	-	-	a0
1966	Sept. 10, 1966	9.91	24
1967	Sept. 15, 1967	10.92	74
1968	July 13, 1968	11.78	135
1969	Apr. 10, 1969	9.88	22

a No flow for period August to September 1965.

08157000 Waller Creek at 38th Street, Austin, Tex. (14)

Location.--Lat 30°17'49", long 97°43'36", Travis County, on right bank 200 ft upstream from bridge on East 38th Street at Austin, 1.1 miles upstream from West Branch of Waller Creek, and 3.3 miles upstream from Colorado River.

Drainage area.--2.31 sq mi.

Gage.--Recording. Datum of gage is 555.44 ft above mean sea level, datum of 1929, Fort Worth supplementary adjustment of 1942.

Topographic characteristics.--Length of main stream, 4.3 miles; slope index, 45.8 ft per mile. (Map scale, 1:24,000).

Remarks.--This station operated as research project for runoff from urban areas. Two standard and one recording rain gages located in watershed. Tabulations of significant storm rainfall and runoff data are on file in the U.S. Geological Survey District office.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1956	May 1, 1956	3.94	a108
1957	May 26, 1957	5.75	596
1958	Oct. 14, 1957	5.54	518
1959	Sept. 23, 1959	5.41	468
1960	Oct. 4, 1959	4.67	251
1961	Oct. 29, 1960	7.77	1,970
1962	June 10, 1962	7.11	1,420
1963	June 18, 1963	4.72	263
1964	Sept. 27, 1964	7.01	1,340
1965	May 16, 1965	6.15	805
1966	Aug. 11, 1966	5.75	618
1967	Apr. 23, 1967	5.72	604
1968	Oct. 15, 1967	6.03	745
1969	Aug. 14, 1969	5.07	361

a Maximum for period Apr. 1 to Sept. 30, 1956.

08157500 Waller Creek at 23d Street, Austin, Tex. (14)

Location.--Lat 30°17'08", long 97°44'01", Travis County, on San Jacinto Boulevard, 50 ft upstream from bridge on East 23d Street at Austin, and 2.1 miles upstream from Colorado River.

Drainage area.--4.13 sq mi.

Gage.--Recording. Datum of gage is 509.95 ft above mean sea level, datum of 1929, Fort Worth supplementary adjustment of 1942.

Topographic characteristics.--Length of main stream, 5.3 miles; slope index, 45.5 ft per mile. (Map scale, 1:24,000).

Remarks.--Three recording and three nonrecording rain gages located in watershed. Tabulations of significant storm rainfall and runoff data are on file in the U.S. Geological Survey District office.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1951	June 12, 1951	-	a2,010
1954	Oct. 23, 1953	8.0	-
1955	May 18, 1955	b5.40	1,640
1956	May 1, 1956	3.90	615
1957	June 12, 1957	5.85	2,050
1958	Apr. 26, 1958	5.47	1,700
1959	Sept. 23, 1959	5.71	1,910
1960	Oct. 4, 1959	4.11	726
1961	Oct. 29, 1960	7.96	3,710
1962	June 3, 1962	6.40	2,270
1963	June 18, 1963	4.70	1,070
1964	Sept. 27, 1964	7.08	2,280
1965	May 16, 1965	7.12	2,320
1966	Aug. 11, 1966	6.25	1,680
1967	Apr. 23, 1967	4.96	900
1968	May 27, 1968	5.54	1,220
1969	May 8, 1969	5.75	1,350

a Peak discharge determined by slope-area measurement half a mile downstream from gage.
b Maximum for period January to September 1955.

08158900 Fox Branch near Oak Hill, Tex. (14)

Location.--Lat 30°14'00", long 97°52'25", Travis County, at culvert on State Highway 71, near intersection with U.S. Highway 290, 0.2 mile upstream from Williamson Creek, and 1.0 mile west of Oak Hill.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1965	-	-	a0
1966	Sept. 8, 1966	10.15	11
1967	Sept. 4, 1967	13.81	249
1968	Oct. 15, 1967	11.53	82
1969	Aug. 27, 1969	10.71	34

a No flow for period August to September 1965.

08159150 Wilbarger Creek near Pflugerville, Tex. (14)

Location.--Lat 30°27'16", long 97°36'02", Travis County, on left bank 131 ft downstream from county road (Pfluger Lane), 800 ft downstream from Farm Road 685, 1.6 miles northeast of Pflugerville, and 1.9 miles downstream from Missouri-Kansas-Texas Railroad.

Drainage area.--4.61 sq mi.

Gage.--Water-stage recorder. Datum of gage is 670.61 ft above mean sea level, datum of 1929.

Remarks.--Three recording rain gages located in the watershed. Tabulations of significant storm rainfall and runoff data are on file in the U.S. Geological Survey District office.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1964	June 16, 1964	6.92	1,760
1965	Feb. 16, 1965	4.75	737
1966	Apr. 24, 1966	3.67	396
1967	May 1, 1967	3.76	418
1968	Jan. 18, 1968	4.27	559
1969	Apr. 12, 1969	4.03	488

COLORADO RIVER BASIN

08159450 Reeds Creek near Bastrop, Tex. (14)

Location.--Lat 30°00'26", long 97°15'03", Bastrop County, on downstream side of bridge on Farm Road 2571 and 8.3 miles southeast of Bastrop.

Drainage area.--5.31 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1965	May 11, 1965	a9.4	b4,000
1967	Sept. 21, 1967	3.28	600
1968	Jan. 22, 1968	4.16	1,060
1969	-	<2.28	<330

a Not previously published.
b Computation of flow through culvert and over roadway.
< Less than amount shown.

COLORADO RIVER BASIN

08160800 Redgate Creek near Columbus, Tex. (13)

Location.--Lat 29°47'56", long 96°31'55", Colorado County on left bank, 68 ft downstream from bridge on Farm Road 109, 1.8 miles upstream from Cummins Creek, and 7 miles north of Columbus.

Drainage area.--17.3 sq mi.

Gage.--Recording. Datum of gage is 210.82 ft above mean sea level.

Remarks.--No known diversion above station.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1962	June 30, 1962	6.95	1,060
1963	Feb. 18, 1963	4.45	391
1964	Mar. 19, 1964	4.95	508
1965	Jan. 22, 1965	14.20	3,990
1966	Nov. 8, 1965	5.75	655
1967	Sept. 15, 1967	7.68	1,130
1968	May 27, 1968	12.03	2,900
1969	Feb. 21, 1969	11.12	2,630

COLORADO RIVER BASIN

08161580 Dry Branch tributary near Altair, Tex. (13)

Location.--Lat 29°34'39", long 96°28'16", Colorado County, at culvert on State Highway 71 and 0.9 mile northwest of Altair.

Drainage area.--0.68 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 1.15 miles; slope index, 20 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	-	a<0.13	(+)
1967	Sept. 21, 1967	1.45	54
1968	June 23, 1968	2.27	188
1969	Feb. 21, 1969	1.59	75

a Maximum for period Aug. 10 to Sept. 30, 1966.
+ Discharge not determined.
< Less than amount shown.

GUADALUPE RIVER BASIN

08166300 Turtle Creek tributary near Kerrville, Tex. (15)

Location.--Lat 29°58'11", long 99°11'02", Kerr County, at culvert on Farm Road 2771 and 5.9 miles south of Kerrville.

Drainage area.--0.46 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 1.02 miles; slope index, 191 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	May 22, 1966	a8.82	81
1967	Sept. 15, 1967	8.81	80
1968	Oct. 14, 1967	8.66	74
1969	Apr. 12, 1969	6.47	20

a Maximum for period Mar. 17 to Sept. 30, 1966.

08167600 Rebecca Creek near Spring Branch, Tex. (15)

Location.--Lat 29°55'06", long 98°22'10", Comal County, on right bank 72 ft upstream from private road crossing, 2.9 miles upstream from mouth, and 3.7 miles northeast of Spring Branch.

Drainage area (revised).--10.9 sq mi.

Gage.--Recording. Datum of gage is 985.55 ft above mean sea level, datum of 1929.

Topographic characteristics.--Length of main stream, 3.9 miles; slope index, 45.5 ft per mile. (Map scale, 1:24,000).

Historical data.--Maximum stage since at least 1885, 25-1/2 ft in September 1952, from information by local residents.

Remarks.--Rain gage at site.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1961	Oct. 29, 1960	6.18	4,340
1962	Apr. 27, 1962	2.12	3.8
1963	Apr. 5, 1963	6.20	4,340
1964	Mar. 18, 1964	2.99	249
1965	May 11, 1965	7.70	8,500
1966	Oct. 18, 1965	7.97	9,300
1967	Sept. 4, 1967	4.09	1,130
1968	Jan. 18, 1968	6.00	3,970
1969	Apr. 12, 1969	3.16	357

08168720 Trough Creek near New Braunfels, Tex. (15)

Location.--Lat 29°46'20", long 98°15'55", Comal County, at culvert on State Highway 46 and 11.0 miles northwest of New Braunfels.

Drainage area.--0.54 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 1.25 miles; slope index, 152 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1965	May 16, 1965	a10.0	386
1966	Dec. 2, 1965	8.59	236
1967	-	<6.47	<20
1968	Jan. 18, 1968	8.73	255
1969	-	<6.47	<20

a Maximum for period Aug. 17 to Sept. 30, 1965.
< Less than amount shown.

08168750 West Prong Dry Comal Creek tributary
near New Braunfels, Tex. (15)

Location.--Lat 29°42'48", long 98°17'26", Comal County, at culvert on Farm Road 1863 and 10.3 miles west of New Braunfels.

Drainage area.--0.32 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 0.95 mile; slope index, 206 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	June 18, 1966	a6.37	<100
1967	-	<6.37	<100
1968	Jan. 18, 1968	6.71	140
1969	-	<6.37	<100

a Maximum for period June 18 to Sept. 30, 1966.
< Less than amount shown.

08169750 Walnut Branch at Seguin, Tex. (15)

Location.--Lat 29°34'47", long 97°58'46", Guadalupe County, at culvert on U.S. Highway 90 (West Kingsbury Street) at Seguin.

Drainage area.--5.46 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 4.75 miles; slope index, 14 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1967	Sept. 21, 1967	6.08	1,030
1968	Jan. 19, 1968	5.60	780
1969	Feb. 14, 1969	4.07	180

GUADALUPE RIVER BASIN

08169850 East Pecan Branch near Gonzales, Tex. (13)

Location.--Lat 29°29'58", long 97°31'36", Gonzales County, at culvert on U.S. Highway 90-A and 3.7 miles west of Gonzales.

Drainage area.--0.24 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 0.87 mile; slope index, 111 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	May 4, 1966	6.88	73
1967	Sept. 22, 1967	8.91	165
1968	June 23, 1968	6.02	<70
1969	Apr. 11, 1969	5.71	<70

< Less than amount shown.

GUADALUPE RIVER BASIN

08172100 West Elm Creek near Niederwald, Tex. (14)

Location.--Lat 29°59'04", long 97°44'39", Caldwell County, at culvert on Farm Road 2001 and 2.3 miles southwest of Niederwald.

Drainage area.--0.44 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 0.84 mile; slope index, 106 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Dec. 2, 1965	6.84	261
1967	Sept. 21, 1967	4.45	40
1968	Jan. 20, 1968	5.57	127
1969	May 14, 1969	7.39	330

08176200 Irish Creek near Cuero, Tex. (13)

Location.--Lat 29°08'02", long 97°12'10", DeWitt County, at bridge on Farm Road 1447 and 6.2 miles northeast of Cuero.

Drainage area.--15.5 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 6.8 miles; slope index, 15 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1967	Sept. 21, 1967	7.86	4,650
1968	May 12, 1968	8.01	(+)
1969	Apr. 11, 1969	6.83	(+)

(+) Discharge not determined.

08176600 Threemile Creek near Cuero, Tex. (13)

Location.--Lat 29°02'00", long 97°20'52", DeWitt County, at culvert on Farm Road 2718 and 5.2 miles southwest of Cuero.

Drainage area.--0.48 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 0.80 mile; slope index, 37 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	May 5, 1966	a6.62	22
1967	Sept. 21, 1967	11.71	1,140
1968	May 11, 1968	8.70	116
1969	-	6.32	<9

a Maximum for period Feb. 9 to Sept. 30, 1966.
< Less than amount shown.

08177600 Olmos Creek tributary at Farm Road 1535,
Shavano Park, Tex. (15)

Location.--Lat 29°34'35", long 98°32'45", Bexar County, at culvert on Farm Road 1535 at Shavano Park.

Drainage area.--0.33 sq mi.

Gage.--Stage-Rainfall (Dual-Digital) and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1969	May 16, 1969	2.94	(+)

(+) Discharge not determined.

08177700 Olmos Creek at Dresden Drive, San Antonio, Tex. (15)

Location.--Lat 29°29'56", long 98°30'36", Bexar County, on right bank 30 ft downstream from low-water bridge on Dresden Drive at San Antonio, 0.15 mile west of intersection of Blanco Road and Dresden Drive, and 4.0 miles upstream from Olmos Dam.

Drainage area.--21.2 sq mi.

Gage.--Recording. Datum of gage is 726.10 ft above mean sea level.

Remarks.--This station operated as research project for runoff from urban areas.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1968	Sept. 5, 1968	a4.76	154
1969	Aug. 24, 1969	6.86	620

a Maximum for period June to September.

08178300 Alazan Creek at St. Cloud Street, San Antonio, Tex. (15)

Location.--Lat 29°27'29", long 98°32'59", Bexar County, at bridge on St. Cloud Street at San Antonio.

Drainage area.--3.26 sq mi.

Gage.--Stage-Rainfall (Dual-Digital) recorder and crest-stage gage.

Remarks.--This station operated as research project for runoff from urban areas.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1969	Aug. 24, 1969	11.59	1,560

08178600 Panther Springs Creek at Farm Road 2696 near San Antonio, Tex. (15)

Location.--Lat 29°37'31", long 98°31'06", Bexar County, at culvert on Farm Road 2696 and 5.5 miles north of San Antonio.

Drainage area.--9.54 sq mi.

Gage.--Stage-Rainfall (Dual-Digital) recorder and crest-stage gage.

Remarks.--This station operated as research project for runoff from urban areas.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1969	May 16, 1969	9.84	4,450

08178690 Salado Creek tributary at Bitters Road,
San Antonio, Tex. (15)

Location.--Lat 29°31'36", long 98°26'25", Bexar County, at culvert on Bitters Road at San Antonio.

Drainage area.--0.62 sq mi.

Gage.--Stage-Rainfall (Dual-Digital) recorder and crest-stage gage.

Remarks.--This station operated as research project for runoff from urban areas.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1969	June 4, 1969	3.89	46

08178900 Bandera Creek tributary near Bandera, Tex. (15)

Location.--Lat 29°50'51", long 99°06'12", Bandera County, at culvert on Farm Road 689 and 10 miles north of Bandera.

Drainage area.--0.27 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 0.92 mile (revised); index, 244 ft (revised) per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Apr. 25, 1966	a6.29	(+)
1967	Sept. 15, 1967	6.38	(+)
1968	Oct. 15, 1967	6.98	(+)
1969	June 24, 1969	<6.26	(+)

a Maximum for period Mar. 16 to Sept. 30, 1966.
+ Discharge not determined.
< Less than amount shown.

08179200 Medina River tributary near Pipe Creek, Tex. (15)

Location.--Lat 29°38'12", long 98°56'13", Bandera County, at culvert on Farm Road 1283 and 6.8 miles south of Pipe Creek.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Apr. 17, 1966	a4.12	<30
1967	Sept. 3, 1967	7.17	220
1968	Apr. 1, 1968	4.59	150
1969	Apr. 12, 1969	4.28	<30

a Maximum for period Mar. 17 to Sept. 30, 1966.
< Less than amount shown.

08181000 Leon Creek tributary at Farm Road 1604, San Antonio, Tex. (15)

Location.--Lat 29°35'14", long 98°37'40", Bexar County, at culvert on Farm Road 1604, at San Antonio.

Drainage area.--5.57 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Remarks.--This station operated as research project for runoff from urban areas.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1969	1969	<3.04	(+)

+ Discharge not determined.
< Less than amount shown.

GUADALUPE RIVER BASIN

08181200 French Creek tributary near Helotes, Tex. (15)

Location.--Lat 29°33'43", long 98°39'26", Bexar County, at culvert on Farm Road 1604 and 2.2 miles east of Helotes.

Drainage area.--1.08 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 2.07 miles; slope index, 76.8 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Aug. 27, 1966	a5.91	107
1967	-	<5.89	<104
1968	Jan. 17, 1968	7.03	255
1969	May 16, 1969	5.86	54

a Maximum for period Mar. 15 to Sept. 30, 1966.
< Less than amount shown.

GUADALUPE RIVER BASIN

08181400 Helotes Creek at Helotes, Tex. (15)

Location.--Lat 29°34'42", long 98°41'29", Bexar County, on left bank 13 ft downstream from centerline of bridge on State Highway 16, 0.1 mile northwest of Helotes, and 8.6 miles upstream from mouth.

Drainage area.--15.0 sq mi.

Gage.--Recording. Datum of gage is 1,014.82 ft above mean sea level.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1968	June 2, 1968	a2.18	47
1969	May 16, 1969	3.10	184

a Maximum for period June to September.

08182400 Calaveras Creek subwatershed No. 6 near Elmendorf, Tex. (15)

Location.--Lat 29°22'53", long 98°17'34", Bexar County, near center of dam on Chupaderas Creek, tributary to Calaveras Creek, 0.4 mile north of Sayer, 9.1 miles north of Elmendorf, and 9.2 miles upstream from mouth.

Drainage area.--7.01 sq mi.

Gage.--Recording. Datum of gage is 516.06 ft above mean sea level, datum of 1929 (levels by U.S. Soil Conservation Service).

Remarks.--Peak discharge based on maximum inflow (average for 5-minute intervals), computed from outflow and change in reservoir contents, adjusted for rainfall on the reservoir surface during time of peak inflow. There are two recording rain gages, one at the station and one in the watershed. Tabulations of significant storm rainfall and runoff data are on file in the U.S. Geological Survey District office.

Annual maximum discharge

Water year	Date	Discharge (cfs)
1957	Sept. 25, 1957	3,750
1958	May 3, 1958	1,900
1959	Apr. 11, 1959	266
1960	Oct. 4, 1959	443
1961	June 18, 1961	827
1962	Nov. 13, 1961	385
1963	Apr. 4, 1963	13
1964	Feb. 3, 1964	1,810
1965	May 18, 1965	3,330
1966	Dec. 3, 1965	501
1967	Sept. 22, 1967	1,500
1968	Jan. 18, 1968	4,270
1969	Feb. 14, 1969	327

08187000 Escondido Creek subwatershed No. 1 near Kenedy, Tex. (16)

Location.--Lat 28°46'41", long 97°53'41", Karnes County, near center of dam on unnamed fork of Panther Creek, 900 ft upstream from State Highway 72, and 3.9 miles southwest of Kenedy.

Drainage area.--3.29 sq mi.

Gage.--Recording. Datum of gage is 350.00 ft above mean sea level, datum of 1929 (levels by Soil Conservation Service).

Remarks.--Peaks are based on maximum inflow (average for 5 or 15-minute interval), computed from outflow and change in reservoir contents, adjusted for rainfall on the reservoir surface during time of peak inflow. No adjustment made for reservoir losses. There are two recording rain gages located in the watershed, one of which is at the station. Tabulations of significant storm rainfall and runoff data are on file in the U.S. Geological Survey District office.

Annual maximum discharge

Water year	Date	Discharge (cfs)
1955	Aug. 11, 1955	2,100
1956	June 19, 1956	486
1957	May 27, 1957	al,800
1958	May 3, 1958	1,700
1959	Sept. 29, 1959	181
1960	July 17, 1960	[illegible]
1961	Oct. 25, 1960	[illegible]
1962	June 1, 1962	[illegible]
1963	Nov. 27, 1962	1,300
1964	Aug. 8, 1964	809
1965	Jan. 21, 1965	[illegible]
1966	Oct. 18, 1965	157
1967	Sept. 21, 1967	2,910
1968	May 7, 1968	1,640
1969	May 4, 1969	401

08187900 Escondido Creek subwatershed No. 11 (Dry Escondido Creek) near Kenedy, Tex. (16)

Location.--Lat 28°51'39", long 97°50'39", Karnes County, near center of dam on Dry Escondido Creek, 0.5 mile upstream from bridge on Farm Road 792, 3 miles north of Kenedy, and 5.0 miles upstream from Escondido Creek.

Drainage area.--8.43 sq mi.

Gage.--Water-stage recorder. Datum of gage is 285.12 ft above mean sea level, datum of 1929.

Remarks.--Peak discharge based on maximum inflow (average for 5 or 15-minute intervals) computed from outflow and change in reservoir contents, adjusted for rainfall on the reservoir surface during time of peak inflow. There are two recording rain gages located in the watershed, one of which is at the station. Tabulations of significant storm rainfall and runoff data are on file in the U.S. Geological Survey District office.

Annual maximum discharge

Water year	Date	Discharge (cfs)
1958	Sept. 22, 1958	1,540
1959	June 5, 1959	122
1960	Oct. 4, 1959	54
1961	Oct. 25, 1960	750
1962	June 2, 1962	722
1963	June 26, 1962	1,190
1964	Feb. 3, 1964	435
1965	May 19, 1965	4,950
1966	Sept. 17, 1966	334
1967	Sept. 21, 1967	8,030
1968	May 12, 1968	765
1969	May 4, 1969	175

08188400 Baugh Creek at Goliad, Tex. (16)

Location.--Lat 28°39'50", long 97°25'05", Goliad County, at culvert on U.S. Highway 59 and 1.5 miles west of Goliad.

Drainage area.--3.02 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 3.85 miles; slope index, 32 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Aug. 20, 1966	5.50	360
1967	Sept. 21, 1967	7.73	1,000
1968	Oct. 15, 1967	5.79	460
1969	Apr. 11, 1969	4.66	250

08189600 Olmos Creek tributary near Skidmore, Tex. (16)

Location.--Lat 28°15'27", long 97°44'15", Bee County, at culvert on Farm Road 797 and 3.4 miles west of Skidmore.

Drainage area.--0.58 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Apr. 25, 1966	a8.00	235
1967	Sept. 22, 1967	8.71	325
1968	May 11, 1968	9.01	(+)
1969	Oct. 3, 1968	6.56	80

a Maximum for period Feb. 8, 1966, to Sept. 30, 1966.
+ Discharge not determined.

08194550 Plant Creek near Tilden, Tex. (15)

Location.--Lat 28°24'04", long 98°32'58", McMullen County, at culvert on State Highway 16 and 4.0 miles south of Tilden.

Drainage area.--0.36 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 0.66 mile; slope index, 77.6 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Nov. 11, 1965	7.30	32
1967	Sept. 22, 1967	10.06	220
1968	May 7, 1968	7.36	34
1969	Apr. 11, 1969	<7.28	<5

< Less than amount shown.

NUECES RIVER BASIN

08198900 East Elm Creek near Sabinal, Tex. (15)

Location.--Lat 29°18'36", long 99°23'50", Medina County, at bridge on U.S. Highway 90 and 4 miles east of Sabinal.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1967	Sept. 3, 1967	a1.09	(+)
1968	Jan. 19, 1968	1.81	(+)
1969	May 3, 1969	1.89	(+)

a Maximum for period Dec. 22, 1966, to Sept. 30, 1967.
+ Discharge not determined.

NUECES RIVER BASIN

08200900 Bone Creek near Hondo, Tex. (15)

Location.--Lat 29°33'16", long 99°06'12", Medina County, at culvert on Farm Road 689 and 14 miles north of Hondo.

Drainage area.--0.19 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 0.42 mile; slope index, 291 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Apr. 25, 1966	3.22	<10
1967	Sept. 22, 1967	3.97	29
1968	Jan. 19, 1968	3.49	15
1969	May 16, 1969	4.14	36

< Less than amount shown.

08203500 Leona River tributary near Uvalde, Tex. (22)

Location.--Lat 29°17'30", long 99°45'31", Uvalde County, at culvert on U.S. Highway 83 and 5.2 miles north of Uvalde.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Aug. 13, 1966	a6.67	<20
1967	Apr. 13, 1967	6.69	<20
1968	-	<6.65	<20
1969	-	<6.65	<20

a Maximum for period Feb. 3 to Sept. 30, 1966.
< Less than amount shown.

08207200 Rutledge Hollow Creek at Poteet, Tex. (15)

Location.--Lat 29°02'29", long 98°34'41", Atascosa County, at culvert on Farm Road 476 (School Road) at Poteet.

Drainage area.--18.3 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1967	Sept. 22, 1967	8.69	1,800
1968	May 11, 1968	8.95	2,300
1969	Nov. 30, 1968	4.31	52

NUECES RIVER BASIN

08207700 Lucas Creek near Pleasanton, Tex. (15)

Location.--Lat 29°00'52", long 98°22'47", Atascosa County, at bridge on State Highway 97 and 8 miles northeast of Pleasanton.

Drainage area.--32.8 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 10.7 miles; slope index, 13.6 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1967	Sept. 22, 1967	12.97	2,970
1968	May 11, 1968	13.25	3,500
1969	May 12, 1969	11.56	1,550

PETRONILLA CREEK BASIN

08211550 Pintas Creek tributary near Banquette, Tex. (16)

Location.--Lat 27°42'36", long 97°49'57", Nueces County, at culvert on Farm Road 666 and 7.0 miles south of Banquette.

Drainage area.--3.28 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	May 5, 1966	a8.43	84
1967	Sept. 21, 1967	10.40	1,300
1968	July 11, 1968	8.07	37
1969	Feb. 13, 1969	8.93	130

a Maximum for period Mar. 8 to Sept. 30, 1966.

08212300 Tranquitas Creek at Kingsville, Tex.

Location.--Lat 27°31'33", long 97°52'02", Kleberg County, at bridge on U.S. Highway 77, Business Route at Kingsville, 4.9 miles upstream from San Fernando Creek, and 5.9 miles downstream from Tranquitas Dam.

Drainage area.--48.5 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Remarks.--Stage only station.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1965	May 16, 1965	a3.9	-
1966	Apr. 8, 1966	3.6	-
1967	Sept 23, 1967	4.51	-
1968	May 6, 1968	3.36	-
1969	Oct. 4, 1968	2.53	-

a Maximum for period April to September.

08212320 North Las Animas Creek tributary near Freer, Tex.

Location.--Lat 27°47'07", long 98°37'03", Duval County, at culvert on State Highway 16, and 6.8 miles south of Freer.

Drainage area.--0.12 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1969	1969	<3.74	(+)

\+ Discharge not determined.
< Less than amount shown.

08365600 McKelligon Canyon at El Paso, Tex. (24)

Location.--Lat 31°49'20", long 106°28'09", El Paso County, on left bank 120 ft south of McKelligon Canyon Drive, 0.2 mile west of Alabama Avenue, 0.5 mile south of crest of Sugarloaf Mountain, 1.6 miles west of U.S. Highway 54, and 4.5 miles north of El Paso Post Office.

Drainage area.--2.3 sq mi, approximately.

Gage.--Recording. Altitude of gage is 4,257.33 ft above mean sea level (levels by city of El Paso).

Topographic characteristics.--Length of main stream, 3.2 miles; slope index, 440 ft per mile. (Map scale, 1:24,000).

Remarks.--No flow except Sept. 11, 12, 1958. Floodflow controlled by four small reservoirs upstream, with a total capacity of about 95 acre-feet.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
a1958	Sept. 11, 1958	-	76
1959			0
1960			0
1961			0
1962			0
1963			0
1964			0
1965			0
1966			0
1967			0
1968			0
1969			0

a Maximum for period June to September 1958.

08365800 Government Ditch at El Paso, Tex. (24)

Location.--Lat 31°47'02", long 106°26'04", El Paso County, at intersection of Montana and Houston Streets and 2 miles northeast of the business center of El Paso.

Drainage area.--6.4 sq mi, approximately.

Gage.--Recording. Altitude of gage is 3,740 ft (from topographic map).

Topographic characteristics.--Length of main stream, 3.5 miles; slope index, 106 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1958	Sept. 11, 1958	a2.64	550
1959	Aug. 5, 1959	.70	58
1960	July 14, 1960	.84	78
1961	Sept. 8, 1961	2.18	374
1962	Sept. 2, 1962	1.93	299
1963	Aug. 18, 1963	.66	53
1964	Sept. 11, 1964	2.06	338
1965	Sept. 6, 1965	1.44	179
1966	Sept. 23, 1966	2.03	329
1967	July 29, 1967	1.46	184
1968	July 6, 1968	2.13	359
1969	May 22, 1969	0.86	81

a Maximum for period June to September 1958.

08370200 Camp Rice Arroyo tributary near Fort Hancock, Tex. (24)

Location.--Lat 31°17'51", long 105°48'52", Hudspeth County, at culvert on Interstate Highway 10 and 1.6 miles east of Fort Hancock.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	June 27, 1966	a5.35	62
1967	Sept. 17, 1967	6.31	165
1968	Aug. 22, 1968	6.03	130
1969	1969	<5.06	<40

a Maximum for period April to September 1966.
< Less than amount shown.

08370800 Wildhorse Creek tributary near Van Horn, Tex. (24)

Location.--Lat 31°02'55", long 104°40'12", Culberson County, at culvert on U.S. Highway 80 and 9.5 miles east of Van Horn.

Drainage area.--0.74 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 2.28 miles; slope index, 100 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Aug. 22, 1966	a5.38	190
1967	-	<4.37	<55
1968	-	<4.37	<55
1969	July 9, 1969	4.86	104

a Maximum for period April to September 1966.
< Less than amount shown.

08377600 Rio Grande tributary near Langtry, Tex. (22)

Location.--Lat 29°48'17", long 101°29'01", Val Verde County, at culvert on U.S. Highway 90 and 4.7 miles east of Langtry.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Sept. 9, 1966	a7.05	120
1967	-	<4.18	<20
1968	July 2, 1968	8.08	59
1969	Apr. 17, 1969	9.60	141

a Maximum for period January to September 1966.
< Less than amount shown.

08407800 Delaware River tributary near Orla, Tex. (24)

Location.--Lat 31°55'46", long 104°28'52", Reeves County, at culvert on State Highway 652 and 36 miles west of Orla.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Aug. 21, 1966	11.52	1,700
1967	-	<3.11	<50
1968	-	<3.11	<50
1969	Sept 22, 1969	4.17	<50

< Less than amount shown.

08436800 Courtney Creek tributary near Fort Stockton, Tex. (06)

Location.--Lat 31°00'28", long 103°04'20", Pecos County, at culvert on Farm Road 1776, 0.2 mile north of U.S. Highway 285, and 14 miles northwest of Fort Stockton.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	June 12, 1966	a2.82	45
1967	June 14, 1967	2.49	31
1968	Aug. 30, 1968	2.79	44
1969	Apr. 12, 1969	2.28	23

a Maximum for period January to September 1966.

08437550 Lake Leon tributary near Fort Stockton, Tex. (06)

Location.--Lat 30°54'04", long 103°02'50", Pecos County, at culvert on U.S. Highway 290 and 10 miles west of Fort Stockton.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Apr. 24, 1966	a7.25	740
1967	May 29, 1967	8.01	980
1968	Aug. 30, 1968	6.27	360
1969	July 22, 1969	5.51	230

a Maximum for period January to September 1966.

08437650 Monument Draw tributary at Pyote, Tex. (06)

Location.--Lat 31°33'33", long 103°07'43", Ward County, at culvert on Spur 247 and 2.1 miles northwest of Pyote.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	July 12, 1966	a3.22	30
1967	July 20, 1967	1.71	5.5
1968	Sept. 22, 1968	3.10	27
1969	Apr. 12, 1969	2.02	9.4

a Maximum for period January to September 1966.

08444400 Three Mile Mesa Creek near Fort Stockton, Tex. (06)

Location.--Lat 30°50'16", long 102°50'26", Pecos County, at culvert on State Highway 285 and 4.6 miles southeast of Fort Stockton.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1965	June 10, 1965	a2.84	76
1966	Apr. 24, 1966	2.71	69
1967	May 29, 1967	2.43	45
1968	Sept. 21, 1968	2.88	84
1969	Apr. 12, 1969	2.77	74

a Maximum for period June to September 1965.

08447200 Howards Creek tributary near Ozona, Tex. (07)

Location.--Lat 30°41'18", long 101°20'51", Crockett County, at culvert on U.S. Highway 290 and 8.7 miles west of Ozona.

Drainage area.--7.53 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 7.75 miles; slope index, 39.6 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1967	June 13, 1967	a4.20	<200
1968	May 11, 1968	3.32	<200
1969	Apr. 12, 1969	4.95	<200

a Maximum for period Jan. 11 to Sept. 30, 1967.
< Less than amount shown.

08448800 Sonora Field Creek at Sonora, Tex. (07)

Location.--Lat 30°34'40", long 100°38'54", Sutton County, at culvert on U.S. Highway 277 at Sonora.

Drainage area.--2.60 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 2.4 miles; slope index, 54.2 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1965	-	a2.39	<50
1966	May 29, 1966	5.44	510
1967	Apr. 17, 1967	3.72	96
1968	May 10, 1968	5.07	410
1969	Apr. 11, 1969	3.35	<50

a Maximum for period June to September 1965.
< Less than amount shown.

08449470 Rough Canyon tributary near Del Rio, Tex. (22)

Location.--Lat 29°35'50", long 100°51'51", Val Verde County, at culvert on U.S. Highway 277 and 16 miles north of Del Rio.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1967	Sept. 2, 1967	6.80	710
1968	Apr. 18, 1968	5.80	240
1969	Oct. 3, 1968	4.13	115

08449600 Evans Creek tributary near Del Rio, Tex. (22)

Location.--Lat 29°33'00", long 101°04'58", Val Verde County, at culvert on U.S. Highway 90 and 16 miles northwest of Del Rio.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Apr. 25, 1966	a3.49	48
1967	Oct. 5, 1966	2.81	17
1968	June 17, 1968	3.95	78
1969	Apr. 11, 1969	4.76	138

a Maximum for period January to September 1966.

08453100 Zorro Creek near Del Rio, Tex. (22)

Location.--Lat 29°19'52", long 100°49'54", Val Verde County, at culvert on U.S. Highway 277 and 4.7 miles southeast of Del Rio.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Apr. 24, 1966	a9.53	800
1967	Sept. 17, 1967	<7.28	<100
1968	-	<7.28	<100
1969	Apr. 11, 1969	11.85	1,900

a Maximum for period Feb. 2 to Sept. 30, 1966.
< Less than amount shown.

08454900 East Perdido Creek near Brackettville, Tex. (22)

Location.--Lat 29°20'50", long 100°34'32", Kinney County, at culvert on U.S. Highway 90 and 9.7 miles northwest of Brackettville.

Drainage area.--

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Apr. 24, 1966	6.84	200
1967	-	<5.29	<30
1968	-	<5.29	<30
1969	Apr. 12, 1969	7.47	234

< Less than amount shown.

08459600 Arroyo San Bartolo at Zapata, Tex. (21)

Location.--Lat 26°55'39", long 99°17'20", Zapata County, at culvert on U.S. Highway 83 and 1.0 mile north of Zapata.

Drainage area.--0.61 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Apr. 14, 1966	a5.64	550
1967	May 16, 1967	10.9	570
1968	Apr. 29, 1968	2.40	118
1969	May 11, 1969	8.41	620

a Maximum for period Feb. 17 to Sept. 30, 1966.

08466100 Rio Grande tributary near Rio Grande City, Tex. (21)

Location.--Lat 26°18'58", long 98°39'45", Starr County, at culvert on U.S. Highway 83 and 10.7 miles southeast of Rio Grande City.

Drainage area (revised).--1.20 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 1.23 miles; slope index, 62.4 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (cfs)
1966	June 19, 1966	a4.61	100
1967	Sept. 22, 1967	4.79	125
1968	1968	<3.99	<50
1969	1969	<3.99	<50

a Maximum for period Feb. 16 to Sept. 30, 1966.
< Less than amount shown.

RIO GRANDE BASIN

08466200 Rio Grande tributary near Sullivan City, Tex. (21)

Location.--Lat 26°17'12", long 98°35'16", Starr County, at culvert on U.S. Highway 83 and 1.6 miles northwest of Sullivan City.

Drainage area (revised).--0.40 sq mi.

Gage.--Stage-Rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 1.4 miles; slope index, 39.4 ft per mile. (Map scale, 1:24,000).

Annual maximum stage and discharge

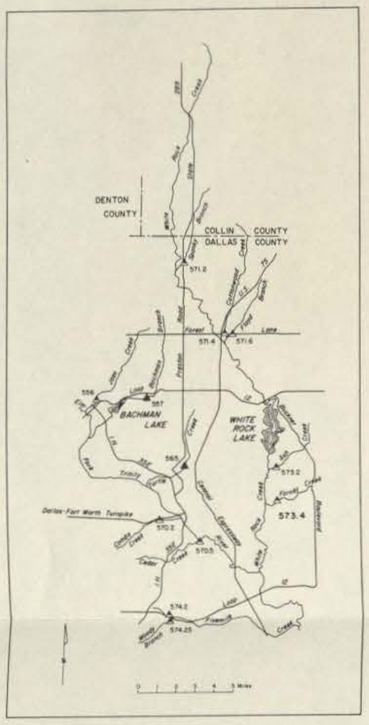
Water year	Date	Gage height (ft)	Discharge (cfs)
1966	Apr. 19, 1966	a6.63	20
1967	Aug. 24, 1967	7.42	47
1968	June 19, 1968	6.69	22
1969	Sept 1, 1969	7.33	44

a Maximum for period Feb. 16 to Sept. 30, 1966.

DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

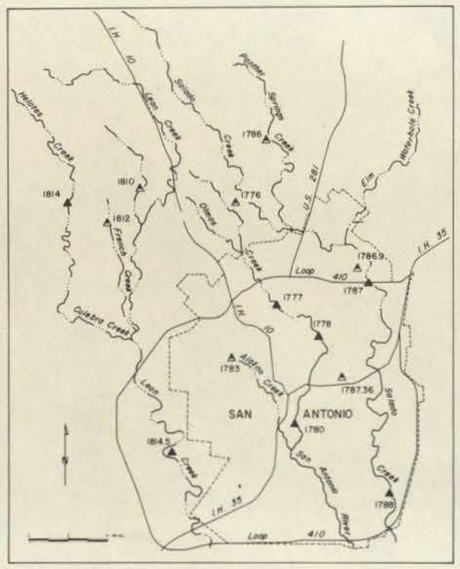
PREPARED IN COOPERATION WITH THE TEXAS HIGHWAY DEPARTMENT AND U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION

WATER RESOURCES DIVISION
TEXAS DISTRICT



Inset A

Inset B



Inset C

NEW MEXICO

OKLAHOMA

ARKANSAS

LOUISIANA

MEXICO

GULF OF MEXICO

EXPLANATION

7-2999.4▲ Stream-gaging or reservoir-content station

8-908.5△ Crest-stage partial-record station

Number indicates permanent station number. Prefix 7 is used in Red and Arkansas River Basins; 8 is used in other basins. (Prefixes omitted on map)

9 Texas Highway District

Base compiled, with some modification, from River Basin Maps, IACWR, Subcommittee on Hydrology. (1949 ed.)

FIGURE 1

Gaging stations on small streams in Texas, September 30, 1969

50 0 50 100 MILES