TEXAS WATER COMMISSION

Joe D. Carter, Chairman
O. F. Dent, Commissioner
H. A. Beckwith, Commissioner

Circular No. 62-01

THE PRESENT RECONNAISSANCE STUDY
PROGRAM OF THE CHEMICAL QUALITY
OF STREAMS IN TEXAS

A Part of the Cooperative Program
of the Texas Water Commission and the
U. S. Geological Survey

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INTRODUCTION

Water quality is affected by climate, particularly total rainfall, by geology, topography, and cultural factors. In planning for any water utilization project, it is necessary to know the quality of the water which will be available. Chemical-quality data are of particular importance to municipalities and industries in order to determine whether the water is of satisfactory quality for the uses intended. Also, in determining the suitability of water for irrigation, the chemical quality is of primary importance.

Among the many problems requiring the use of chemical-quality data for their solution are: (1) the location and determination of the magnitude of natural mineralization of the surface-water resources of the state; (2) the detection and control of man-made pollution of surface-water supplies; (3) salt-water encroachment into coastal streams; (4) re-use of water; and (5) demineralization of water.

A partial network of daily chemical-quality sampling stations is operated on streams throughout Texas, but funds have never been adequate for a complete inventory of the chemical quality of the surface waters of the state. In order that vitally needed information on the chemical quality of all significant streams in the state may be made available to the people, a reconnaissance study to supplement the daily-station network was begun in September 1961.
This study is financed on a fifty-fifty basis by funds appropriated to the Texas Water Commission and the U. S. Geological Survey. The quality-of-water information obtained in the reconnaissance study, particularly at sites where water-development projects are planned or are in operation and where no information on the quality of water is now available, will be invaluable in the planning of water developments and the wise management of the water resources of the state. The data collected at the reconnaissance sampling sites will aid in the delineation of problem areas and the identification of probable sources of pollution. Also, the studies will bring to light those areas where more detailed investigations are needed. The planning and execution of these more intensive investigations will be enhanced by the data obtained during the reconnaissance studies.

A reconnaissance report summarizing the surface-water quality is planned for each of the major river basins of the state. One or more of these reports will be prepared each year, beginning with a report on the Sabine River Basin in the 1963 State fiscal year. Reports for the Neches and San Jacinto Basins will be completed at the end of the 1964 fiscal year, and during subsequent years reports will be prepared on the remaining river basins.

Sampling during the first year of the reconnaissance program will cover the entire state, with emphasis on sampling at sites of reservoirs that are listed in the Water Commission's 1961 Planning Report for completion by 1980 plus some additional future reservoir sites listed in master plan reports of various river authorities. Four to twelve samples will be collected during the year at a point near the site of each proposed reservoir.

Samples will be collected over a range of water discharge. At low flows, concentrations of dissolved minerals are likely to be highest, and the analyses of low-flow samples will indicate where pollution and salinity problems exist.
Samples of medium and high flows will indicate the probable quality of the water that will be stored in the reservoirs. Where possible, stream-gaging stations and partial-record stations will be used as sampling sites so that discharge data may be available for possible correlation of chemical quality with streamflow. At other sites special streamflow measurement will usually be made when the samples are collected.

Data for chemical analyses of water which may have been made by other responsible groups will be used in the investigation when appropriate stream discharge data is available.

During 1962, sampling in the Sabine River Basin will be more intensive than in other basins. Thus, data needed for the report which is scheduled the following year will be available. In addition to sampling at proposed reservoir sites, reconnaissance samples will be collected from the principal streams in each basin. Also, each principal existing reservoir will be sampled. These samples will provide the best possible measure of the chemical quality of the composite water yield of the watershed above the reservoirs. In the second year of the reconnaissance program, the sampling will be intensified in the Neches and San Jacinto River Basins, for which reports are scheduled in 1964.

Reports for the river basins in the eastern portion of the state were scheduled for completion first as data for a more complete range of high and low flow conditions could be obtained in those basins in a shorter period of time. The tentative scheduling of reports is listed on the following page.
## Schedule of River Basin Reports of the Reconnaissance Program, by State Fiscal Years

<table>
<thead>
<tr>
<th>River Basin</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canadian River Basin</td>
<td>1968</td>
</tr>
<tr>
<td>Red River Basin</td>
<td>1966</td>
</tr>
<tr>
<td>Sabine River Basin</td>
<td>1963</td>
</tr>
<tr>
<td>Neches River Basin</td>
<td>1964</td>
</tr>
<tr>
<td>Trinity River Basin</td>
<td>1965</td>
</tr>
<tr>
<td>San Jacinto River Basin</td>
<td>1964</td>
</tr>
<tr>
<td>Brazos River Basin</td>
<td>1965</td>
</tr>
<tr>
<td>Colorado River Basin</td>
<td>1966</td>
</tr>
<tr>
<td>Lavaca River Basin</td>
<td>1967</td>
</tr>
<tr>
<td>Guadalupe-San Antonio River Basins</td>
<td>1967</td>
</tr>
<tr>
<td>Nueces River Basin</td>
<td>1967</td>
</tr>
<tr>
<td>Rio Grande Basin</td>
<td>1968</td>
</tr>
<tr>
<td>Coastal Areas</td>
<td>1968</td>
</tr>
</tbody>
</table>

Chemical-quality records now available are listed in statements on the following pages and the work currently being done in each major river basin is described. The details of reconnaissance sampling in 1962 and plans for sampling in future years are given. Schedules of sampling are tentative, and actual collection of samples at specific sites will depend on runoff and other hydrologic conditions. Appraisals of the adequacy of the sampling program will be made as data become available and the program will be adjusted to correct apparent deficiencies.

Prior to the completion of the reports, the data obtained in this reconnaissance program will be available for use by anyone desiring same.
CANADIAN RIVER BASIN

1. Daily records available:
   - Canadian River near Tascosa
   - Canadian River near Amarillo
   - Canadian River near Borger

   June 1948 - September 1953
   February 1950 - September 1950 - October 1951

2. Reconnaissance sampling, 1962 fiscal year:

<table>
<thead>
<tr>
<th>Reservoir</th>
<th>Sampling site</th>
<th>Number of samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Palo Duro</td>
<td>Palo Duro Creek near Spearman</td>
<td>4</td>
</tr>
</tbody>
</table>

3. Future sampling and report schedule:

   Reconnaissance sampling will be increased slightly during 1963, and remain at that level through 1967. A report is scheduled in 1968.

RED RIVER BASIN

1. Daily records available:
   - Prairie Dog Town Fork Red River near Brice
   - Mulberry Creek near Brice
   - Salt Fork Red River near Hedley
   - Salt Fork Red River near Wellington
   - Elm Creek near Shamrock
   - Quitaque Creek near Quitaque
   - Pease River near Crowell
   - Little Wichita River near Archer City
   - Little Wichita River near Henrietta
   - Little Wichita River near Ringgold
   - Red River near Gainesville
   - Red River at Denison Dam near Denison
   - South Sulphur River near Cooper
   - Sulphur River near Darden

   August 1949 - July 1951
   August 1949 - July 1951
   March 1956 - September 1961
   June 1952 - September 1954
   October 1946 - December 1947
   November 1945 - November 1946
   July 1942 - June 1943
   January 1953 - January 1956
   January 1953 - January 1956,
   March 1959 -
   March 1959 -
   May 1944 - September 1947
   November 1958 -
   October 1947 - January 1950

2. Reconnaissance sampling, 1962 fiscal year:

<table>
<thead>
<tr>
<th>Reservoirs</th>
<th>Sampling sites</th>
<th>Number of samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buffalo Creek</td>
<td>Buffalo Creek near Iowa Park</td>
<td>6</td>
</tr>
<tr>
<td>Paris</td>
<td>Sanders Creek near Chicota</td>
<td>6</td>
</tr>
<tr>
<td>Pine</td>
<td>Big Pine Creek near Manchester</td>
<td>3</td>
</tr>
<tr>
<td>Barkman Creek</td>
<td>Barkman Creek near Leary</td>
<td>6</td>
</tr>
</tbody>
</table>

3. Future sampling and report schedule:

   Reconnaissance sampling in 1963 will be decreased slightly. The scope of the sampling will be increased in 1964 and 1965, and a report prepared in 1966.
1. Daily records available:

   Sabine River near Emory
   Sabine River near Tatum
   Sabine River at Logansport, La.
   Sabine River near Ruliff
   Cow Bayou near Mauriceville

   July 1952 - September 1954
   February 1952 -
   August 1939 - January 1941,
   October 1941 - September 1942,
   December 1943 - August 1945
   October 1945 - September 1946,
   October 1947 -
   March 1952 - December 1955

2. Reconnaissance sampling, 1962 fiscal year:

<table>
<thead>
<tr>
<th>Reservoir</th>
<th>Sampling sites</th>
<th>Number of samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lake Fork</td>
<td>Lake Fork Sabine River near Quitman</td>
<td>12</td>
</tr>
<tr>
<td>Big Sandy</td>
<td>Big Sandy Creek near Big Sandy</td>
<td>12</td>
</tr>
<tr>
<td>Kilgore</td>
<td>Wilds Creek near Laird Hill</td>
<td>4</td>
</tr>
<tr>
<td>Cherokee No. 2</td>
<td>Cherokee Bayou near Oak Hill</td>
<td>4</td>
</tr>
</tbody>
</table>

   Other sampling in Sabine River Basin for comprehensive coverage:

   Martins Creek near Beckville
   Eight Mile Creek at U. S. Highway 59 near Tatum
   Socagee Creek near Carthage
   Flat Fork near Center
   Tenaha Creek near Shelbyville
   Patroon Bayou near Milam
   Palo Gaucho Bayou near Hemphill
   Housen Bayou near Yellowpine
   Sandy Creek near Yellowpine
   Little Cow Creek near Burkeville
   Big Cow Creek near Newton
   Nichols Creek near Buna
   Cypress Creek near Buna
   Lake Tawakoni
   Lake Gladewater
   Lake Cherokee
   Murvaul Reservoir
   Greenville Reservoir

   Number of samples

3. Future sampling and report schedule:

   The reconnaissance sampling program will be completed in 1962 and a report prepared in 1963.
1. Daily records available:

- Neches River near Alto
- Angelina River near Lufkin
- Neches River near Rockland
- Neches River at Evadale

Daily records are available from:
- October 1959 -
- October 1954 -
- October 1941 - September 1942,
- September 1945 - September 1947
- October 1947 -

2. Reconnaissance sampling, 1962 fiscal year:

<table>
<thead>
<tr>
<th>Reservoir</th>
<th>Sampling sites</th>
<th>Number of samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flat Creek</td>
<td>Flat Creek at FM Road 607 near Athens</td>
<td>6</td>
</tr>
<tr>
<td>Mud Creek</td>
<td>Mud Creek near Jacksonville</td>
<td>6</td>
</tr>
<tr>
<td>Ponta</td>
<td>Angelina River near Alto</td>
<td>12</td>
</tr>
</tbody>
</table>

3. Future sampling and report schedule:

The reconnaissance sampling in 1963 will be at about triple the 1962 rate. A report is scheduled for 1964.
1. Daily records available:

- Clear Fork Trinity River at Fort Worth: October 1948 - September 1952
- Trinity River near Rosser: October 1954 -
- Cedar Creek near Mabank: April 1956 - September 1957
- Chambers Creek near Corsicana: September 1961 -
- Richland Creek near Fairfield: April 1956 -
- Trinity River near Oakwood: October 1947 - September 1954
- Trinity River at Romayor: October 1945 - November 1949, November 1950 - September 1951, October 1953 -
- Trinity River near Moss Bluff: October 1949 -
- Old River near Cove: October 1949 -
- Trinity River at Anahuac: October 1949 -
- Trinity Bay at mouth of Trinity River near Anahuac: October 1950 -

2. Reconnaissance sampling, 1962 fiscal year:

<table>
<thead>
<tr>
<th>Reservoirs</th>
<th>Sampling sites</th>
<th>Number of samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aubrey</td>
<td>Elm Fork Trinity River near Sanger</td>
<td>12</td>
</tr>
<tr>
<td>Aubrey</td>
<td>Isle du Bois Creek near Pilot Point</td>
<td>4</td>
</tr>
<tr>
<td>Lavon Enlargement</td>
<td>Lavon Reservoir</td>
<td>2</td>
</tr>
<tr>
<td>Bardwell</td>
<td>Waxahachie Creek near Bardwell</td>
<td>12</td>
</tr>
<tr>
<td>Tehuacana</td>
<td>Tehuacana Creek near Fairfield (2 channels)</td>
<td>6</td>
</tr>
<tr>
<td>Upper Keechi</td>
<td>Upper Keechi Creek near Oakwood</td>
<td>12</td>
</tr>
<tr>
<td>Big Elkhart</td>
<td>Big Elkhart Creek near Grapeland</td>
<td>3</td>
</tr>
<tr>
<td>Lower Keechi</td>
<td>Lower Keechi Creek near Centerville</td>
<td>3</td>
</tr>
<tr>
<td>Bedias</td>
<td>Bedias Creek near Madisonville</td>
<td>3</td>
</tr>
<tr>
<td>Gail</td>
<td>Gail Creek near Lovelady</td>
<td>3</td>
</tr>
<tr>
<td>Long King</td>
<td>Long King Creek near Livingston</td>
<td>3</td>
</tr>
</tbody>
</table>

3. Future sampling and report schedule:

Reconnaissance sampling will be reduced about one-third in 1963, then expanded to intensive coverage in 1964. The report will be prepared in 1965.
SAN JACINTO RIVER BASIN

1. Daily records available:
   - West Fork San Jacinto River near Conroe: September 1961 -
   - West Fork San Jacinto River near Humble: October 1941 - September 1946
   - San Jacinto River near Huffman: September 1945 - July 1948, December 1948 - April 1954

2. Reconnaissance sampling, 1962 fiscal year:

<table>
<thead>
<tr>
<th>Reservoir</th>
<th>Sampling sites</th>
<th>Number of samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Honea</td>
<td>West Fork San Jacinto River west of Conroe</td>
<td>6</td>
</tr>
<tr>
<td>Cleveland</td>
<td>East Fork San Jacinto River near Cleveland</td>
<td>12</td>
</tr>
</tbody>
</table>

3. Future sampling and report schedule:
   
   Reconnaissance sampling in 1963 will be double the 1962 rate. A report will be prepared in 1964.
1. Daily records available:

Double Mountain Fork Brazos River near Rotan
Double Mountain Fork Brazos River near Aspermont
Salt Fork Brazos River near Peacock
Croton Creek near Jayton
Salt Croton Creek near Aspermont
Salt Fork Brazos River near Aspermont
Brazos River at Seymour
Clear Fork Brazos River at Nugent
Paint Creek near Haskell
Clear Fork Brazos River at Fort Griffin
Hubbard Creek near Albany
North Prong Hubbard Creek near Albany
Big Sandy Creek near Breckenridge
Hubbard Creek near Breckenridge
Clear Fork Brazos River at Eliasville
Brazos River at South Bend
Salt Creek at Olney
Salt Creek near Newcastle
Brazos River at Possum Kingdom Dam near Graford
Brazos River near Whitney
Leon River near Eastland
Lampasas River at Youngsport
Lampasas River near Belton
Little River at Cameron
Brazos River at State Highway 21 near Bryan
Yegua Creek near Somerville
Navasota River near Easterly
Navasota River near Bryan
Brazos River at Richmond
Brazos River at Harris Reservoir near Angleton
Brazos River at Brazoria Reservoir near Brazoria

December 1949 - September 1951
October 1948 - November 1951,
September 1956 -
December 1949 - September 1951
July 1959 -
October 1956 -
October 1948 - October 1951,
October 1956 -
August 1959 -
August 1948 - September 1953
December 1949 - September 1951
November 1949 - September 1951
February 1962 -
February 1962 -
February 1962 -
April 1955 -
October 1961 -
January 1942 - March 1948
April 1958 - September 1960
April 1958 - March 1960
January 1942 -
October 1947 - May 1948,
October 1948 -
September 1950 - September 1953
September 1961 -
April 1943 - June 1944
October 1959 -
August 1961 -
September 1961 -
January to December 1942
October 1958 -
October 1945 -
January 1962 -
January 1962 -
BRAZOS RIVER BASIN--Continued

2. Reconnaissance sampling, 1962 fiscal year:

<table>
<thead>
<tr>
<th>Reservoirs</th>
<th>Sampling sites</th>
<th>Number of samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>White River</td>
<td>White River near Crosbyton</td>
<td>6</td>
</tr>
<tr>
<td>Millers Creek</td>
<td>Millers Creek near Seymour</td>
<td>12</td>
</tr>
<tr>
<td>Keechi Creek</td>
<td>Keechi Creek near Graford</td>
<td>6</td>
</tr>
</tbody>
</table>

In addition 6 to 12 samples will be collected at each of 16 sites as part of a project in cooperation with the Brazos River Authority:

- Croton Creek near Jayton (3 sites)
- Salt Croton Creek near Aspermont (3 sites)
- Palo Pinto Creek near Sonto
- Paluxy Creek at Glen Rose
- Aquilla Creek near Aquilla
- North Bosque River near Clifton
- Middle Bosque River near McGregor
- Leon River near Hasse
- Lake Belton
- North Fork San Gabriel River at Georgetown
- South Fork San Gabriel River at Georgetown
- San Gabriel River at Georgetown

3. Future sampling and report schedule:

Sampling will be continued at a reduced rate during the 1963 and 1964 fiscal years. A report is scheduled for 1965 as a part of the Brazos River Authority project. Two reports on quality of surface waters of the Brazos River basin are in process of being reviewed: "Chemical Quality of Surface Waters of the Brazos River Basin in Texas," by Burdge Irelan and H. B. Mendieta, and "Natural Sources of Salinity in the Brazos River, Texas, with Particular Reference to the Salt Croton and Croton Creek Basins," by R. C. Baker, L. S. Hughes, and I. D. Yost.
COLORADO RIVER BASIN

1. Daily records available:
   - Colorado River above Bull Creek near Knapp
   - Bull Creek near Ira
   - Bluff Creek near Ira
   - Colorado River near Ira
   - Deep Creek near Dunn
   - Colorado River at Colorado City
   - Morgan Creek near Colorado City
   - Beals Creek near Westbrook
   - Colorado River near Silver
   - Colorado River at Robert Lee
   - Oak Creek near Blackwell
   - Colorado River at Ballinger
   - Colorado River near San Saba
   - Colorado River at Austin
   - Colorado River at Wharton

2. Reconnaissance sampling, 1962 fiscal year:

<table>
<thead>
<tr>
<th>Reservoir</th>
<th>Sampling sites</th>
<th>Number of samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Twin Buttes</td>
<td>Middle Concho River above Tankersly</td>
<td>3</td>
</tr>
<tr>
<td>San Angelo</td>
<td>North Concho River near Carlsbad</td>
<td>3</td>
</tr>
<tr>
<td>Jim Ned</td>
<td>Jim Ned Creek at U. S. 283 near Coleman</td>
<td>6</td>
</tr>
<tr>
<td>Brady</td>
<td>Brady Creek at Brady</td>
<td>4</td>
</tr>
</tbody>
</table>

3. Future sampling and report schedule:

   Reconnaissance sampling in 1963 and 1964 will be limited to the four reservoir sites. The basin will be sampled intensively in 1965 and a report prepared in 1966.

LAVACA RIVER BASIN

1. Daily records available:
   - Navidad River near Ganado

2. Reconnaissance sampling, 1962 fiscal year:

<table>
<thead>
<tr>
<th>Reservoir</th>
<th>Sampling site</th>
<th>Number of samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Edna</td>
<td>Lavaca River near Edna</td>
<td>4</td>
</tr>
</tbody>
</table>

3. Future sampling and report schedule:

   Reconnaissance sampling will be stepped up slightly from 1963 to 1966, and a report prepared in 1967.
GUADALUPE-SAN ANTONIO RIVER BASINS

1. Daily records available:

- Guadalupe River near Spring Branch
  - January to December 1942, December 1943 - August 1945
- Guadalupe River at Victoria
- San Antonio River at Goliad
  - October 1945 - September 1945, September 1958 -

2. Reconnaissance sampling, 1962 fiscal year:

<table>
<thead>
<tr>
<th>Reservoirs</th>
<th>Sampling sites</th>
<th>Number of samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cloptin Crossing</td>
<td>Blanco River at Wimberly</td>
<td>3</td>
</tr>
<tr>
<td>Lockhart</td>
<td>Plum Creek at Lockhart</td>
<td>3</td>
</tr>
<tr>
<td>Cuero II</td>
<td>Peach Creek below Dilworth</td>
<td>3</td>
</tr>
<tr>
<td>Confluence</td>
<td>Coleto Creek near Schroeder</td>
<td>3</td>
</tr>
<tr>
<td>Cibolo</td>
<td>Cibolo Creek near Falls City</td>
<td>6</td>
</tr>
<tr>
<td>Ecleto</td>
<td>Ecleto Creek near Runge</td>
<td>10</td>
</tr>
</tbody>
</table>

3. Future sampling and report schedule:

Reconnaissance sampling will continue at about the same level from 1963 to 1965. Intensive sampling in 1966 will be followed by a report in 1967.

NUECES RIVER BASIN

1. Daily records available:

- Nueces River at Cotulla
  - January to December 1942
- Nueces River at Tilden
  - December 1949 - September 1950
- Nueces River near Three Rivers
  - September 1945 - September 1946, September 1950 - September 1952
- Nueces River near Mathis
  - October 1947 -

2. Reconnaissance sampling, 1962 fiscal year:

<table>
<thead>
<tr>
<th>Reservoirs</th>
<th>Sampling sites</th>
<th>Number of samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crystal City</td>
<td>Nueces River near Asherton</td>
<td>3</td>
</tr>
<tr>
<td>Caimanche</td>
<td>Turkey Creek near Crystal City</td>
<td>3</td>
</tr>
<tr>
<td>Cotulla</td>
<td>Nueces River at Cotulla</td>
<td>3</td>
</tr>
<tr>
<td>Fowlerton</td>
<td>Frio River near Derby</td>
<td>3</td>
</tr>
<tr>
<td>Choke Canyon</td>
<td>Frio River at Calliham</td>
<td>3</td>
</tr>
</tbody>
</table>

3. Future sampling and report schedule:

Reconnaissance sampling will be continued through 1966 and a report prepared in 1967.
1. Daily records available:

*Rio Grande near El Paso 1933 -
*Rio Grande below Old Fort Quitman 1933 -
*Rio Grande at Upper Presidio 1935 -
*Rio Grande near Johnson Ranch 1948 -
*Rio Grande at Langtry 1944 -
Salt (Screwbean) Draw near Orla October 1943 - September 1944,
October 1946 - September 1947
Pecos River near Orla July 1937 -
Pecos River at Pecos April 1939 - June 1941
Toyah Creek near Pecos September 1939 - September 1940,
October 1943 - September 1944
Salt Draw near Pecos October 1939 - September 1940,
October 1943 - September 1944
Toyah Creek below Toyah Lake near Pecos September 1939 - March 1941
Pecos River near Barstow April 1939 - June 1942,
October 1946 - September 1956
Pecos River below Grandfalls October 1939 - June 1941,
October 1946 - September 1947,
October 1953 -
Pecos River near Girvin November 1939 - June 1941,
October 1946 - September 1947
Pecos River near Sheffield October 1954 -
*Rpecos River near Shumla January 1959 -
*Rio Grande at Laredo July 1955 -
*Rio Grande below Falcon Dam July 1955 -
*Rio Grande at Roma October 1942 - May 1943
*Rio Grande at Fort Ringgold, Rio Grande City
Rio Grande at Mission Pumping Plant near Mission January 1959 -
*Rio Grande at Anzalduas Dam July 1945 - September 1950
Rio Grande near San Benito March 1959 -
Rio Grande at Los Fresnos Pumping Plant November 1942 - June 1943
near Brownsville July 1945 - June 1946
Rio Grande near Brownsville March 1943 - February 1944

2. Reconnaissance sampling, 1962 fiscal year:

None.

3. Future sampling and report schedule:

No reconnaissance sampling has been scheduled from 1962 through 1964. The main stem of the Rio Grande is being studied by the International Boundary and Water Commission. It will be decided later whether the reconnaissance project will be extended to cover the Rio Grande Basin. A report could be scheduled for 1968.

COASTAL AREAS

1. Daily records available:

Mission River at Refugio September 1961 -

2. Reconnaissance sampling, 1962 fiscal year:

<table>
<thead>
<tr>
<th>Reservoirs</th>
<th>Sampling sites</th>
<th>Number of samples</th>
</tr>
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<tbody>
<tr>
<td>Guadalupe-Nueces Coastal Area</td>
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<tr>
<td>Beeville</td>
<td>Medio Creek near Beeville</td>
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<tr>
<td>Blanco</td>
<td>Blanco Creek at State Highway 202 near Refugio</td>
<td>6</td>
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<tr>
<td>Woodboro</td>
<td>Aransas River near Skidmore</td>
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<tr>
<td>Nueces-Rio Grande Coastal Area</td>
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<tr>
<td>Alice</td>
<td>San Fernando Creek near Alice</td>
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<tr>
<td>Kingsville</td>
<td>San Fernando Creek at Kingsville</td>
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</tr>
<tr>
<td>Kingsville</td>
<td>Santa Gertrudis Creek near Kingsville</td>
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<tr>
<td>Kingsville</td>
<td>Escondido Creek near Kingsville</td>
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</tbody>
</table>

3. Future sampling, and report schedule:

Reconnaissance sampling will be decreased slightly for 1963 and 1964, but will be increased in 1966 and 1967, and a report prepared in 1968.