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Monitoring of Coastal Finfish Resources for Sport Fish Management, October 1978 - September 1979

by H.E. Hegen and G.C. Matlock

Management Data Series Number 17
1980

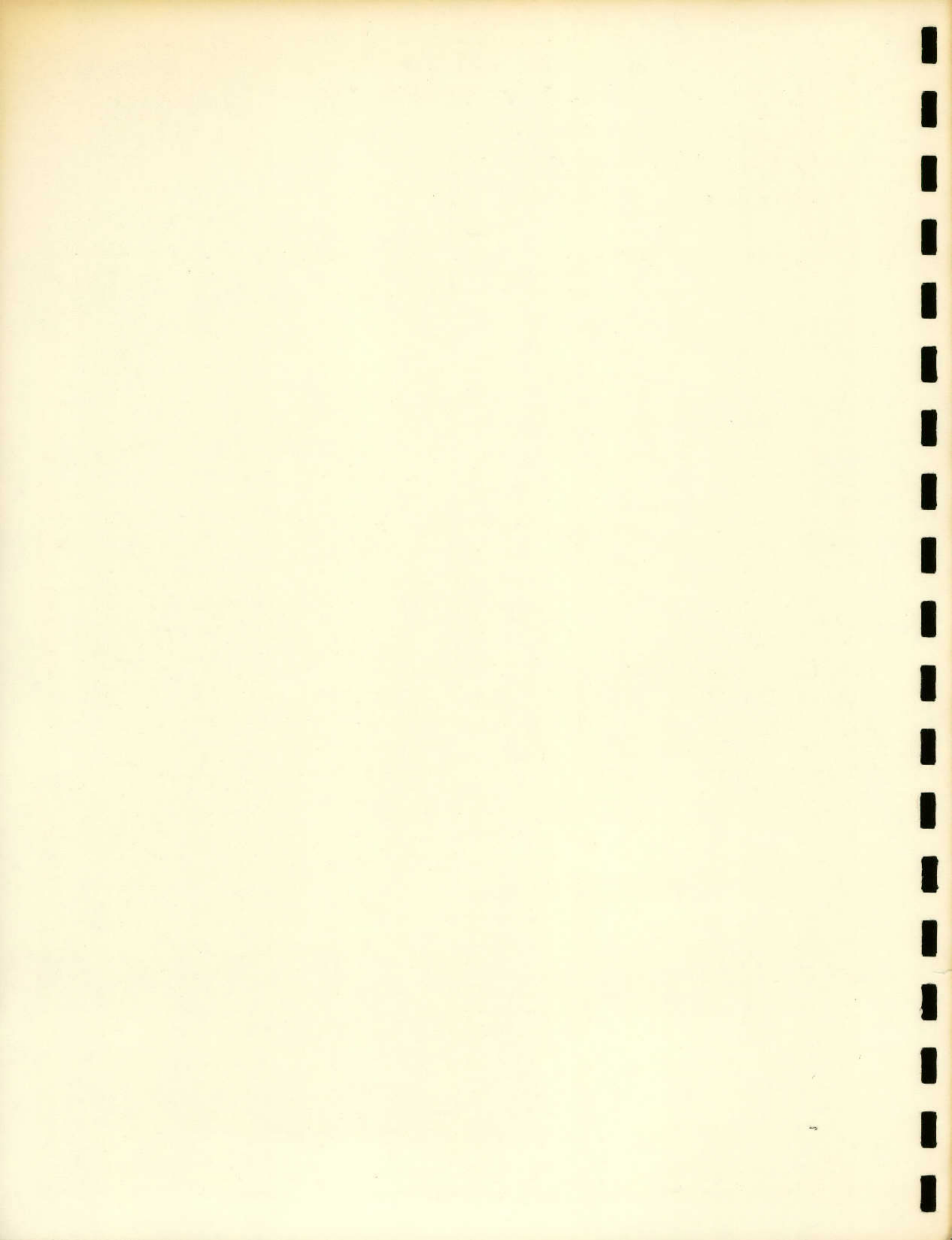
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MONITORING OF COASTAL FINFISH RESOURCES
FOR SPORT FISH MANAGEMENT
OCTOBER 1978-SEPTEMBER 1979

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MANAGEMENT DATA SERIES
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Texas Parks and Wildlife Department
Coastal Fisheries Branch
4200 Smith School Road
Austin, Texas 78744

MONITORING COASTAL FINFISH RESOURCES
FOR SPORT FISH MANAGEMENT
OCTOBER 1978-SEPTEMBER 1979

EXECUTIVE SUMMARY

Finfish in Texas bays support important and valuable commercial and recreational industries. Commercial fishermen in the Texas bay systems (Galveston, Matagorda, San Antonio, Aransas and Corpus Christi Bays and Laguna Madre) reported landing 4,049,700 lb of fish during September 1977-August 1978 (McEachron 1980). During the same period recreational fishermen harvested an estimated 1,619,000 lb of fish from these same bay systems. Six species-- spotted seatrout (Cynoscion nebulosus), red drum (Sciaenops ocellata), black drum (Pogonias cromis), sheepshead (Archosargus probatocephalus), southern flounder (Paralichthys lethostigma) and Atlantic croaker (Micropogon undulatus)-- accounted for 95.0% of the total weight caught by commercial fishermen and 81.0% of the total weight caught by sport fishermen.

Estimates of the harvest and availability of the finfish resource are necessary in order to evaluate and implement management decisions effectively. Commercial harvest statistics have been collected by the Texas Parks and Wildlife Department (TPWD) since 1936. Collection of marine recreational harvest and pressure statistics were initiated by the Department in 1974 (Heffernan et al. 1976).

Fish availability and gear selectivity studies have been conducted periodically along the Texas coast since the late 1800's. Information has been gathered on species diversities, relative abundances and life histories of commercially and recreationally important fishes.

In November 1975 the Coastal Fisheries Branch of TPWD initiated a standardized program for gathering comparable information on the availability of the finfish resources in Texas bay systems. In addition to gathering base-line data, various gear types and techniques were evaluated from November 1975 to September 1978.

In October 1978 the U. S. Department of Interior, Fish and Wildlife Service, approved a 5-yr program to continue monitoring trends in abundance and sizes of recreationally (and commercially) important saltwater fishes. This report is the summarization of the data collected during the first year.

Gill nets, trammel nets and bag seines were utilized during October 1978-September 1979 along the shoreline in each of seven Texas bay systems (Galveston, Matagorda, San Antonio, Aransas and Corpus Christi Bays and the upper and lower Laguna Madre) to monitor the trends in abundance and size of the recreationally important saltwater fishes: red drum, spotted seatrout, black drum, sheepshead, southern flounder and Atlantic croaker. During the same period, the trends in availability and size of the six species in the East Matagorda Bay system were randomly selected within each bay system. Gill nets were used during the night only, trammel nets and bag seines during the day only. Catch rates and mean fish size (total length) were determined on a monthly basis for selected species caught in each mesh size and in the total net.

Except in Aransas and Corpus Christi Bays, the annual mean catch rates with gill nets of red drum, spotted seatrout and black drum were higher than those of sheepshead, southern flounder and Atlantic croaker within each bay system (Table A). Atlantic croaker were caught with the least regularity, regardless of month or bay system. The highest annual catch of spotted seatrout (0.62 fish/h) and black drum (0.84 fish/h) occurred in the lower Laguna Madre. The highest catch of red drum (0.85 fish/h) occurred in the Matagorda Bay system.

Highest annual mean catches with trammel nets of red drum (1.14 fish/acre) and spotted seatrout (1.33 fish/acre) occurred in Matagorda Bay and the lower Laguna Madre, respectively (Table B). Annual catches of black drum were highest in Matagorda (2.17 fish/acre). Trammel net catches of sheepshead, southern flounder and Atlantic croaker did not exceed 1.00 fish/acre in any bay system. Mean annual catches of red drum, spotted seatrout and Atlantic croaker with trammel nets generally exceeded 0.40 fish/acre; black drum, sheepshead and southern flounder catches generally were < 0.40 fish/acre.

The lower coast bay systems yielded the highest catches of red drum with bag seines (> 11 fish/acre); the upper coast bay systems yielded the highest bag seine catches of spotted seatrout, black drum, sheepshead and Atlantic croaker (Table C). Southern flounder catches with bag seines were ≤ 1.26 fish/acre in each bay system.

Table A. Annual mean catch rate (no/h) and mean total length (in) of fishes caught with gill nets (all meshes combined) in Texas bay systems during October 1978-September 1979.

Bay system	Red drum		Spotted seatrout		Black drum		Sheepshead		Southern flounder		Atlantic croaker	
	No/h	Length	No/h	Length	No/h	Length	No/h	Length	No/h	Length	No/h	Length
Galveston	0.5	17.2	0.2	19.6	0.3	12.7	0.0	12.5	0.0	14.3	0.2	10.5
East Matagorda	0.4	16.4	0.4	16.9	0.6	12.2	0.1	11.9	0.1	13.0	0.1	9.8
Matagorda	0.8	15.9	0.5	17.6	0.7	15.3	0.0	14.6	0.1	11.1	0.1	10.2
San Antonio	0.7	15.9	0.3	16.3	0.3	16.2	0.1	13.0	0.1	12.9	0.0	10.4
Aransas	0.6	15.0	0.2	18.7	0.4	12.8	0.3	12.3	0.0	12.8	0.1	11.5
Corpus Christi	0.2	18.4	0.4	18.9	0.2	15.9	0.3	13.7	0.1	14.5	0.2	10.7
Upper Laguna Madre	0.2	19.1	0.2	18.7	0.3	15.7	0.1	15.0	0.0	14.7	0.1	11.5
Lower Laguna Madre	0.3	18.7	0.6	20.4	0.8	16.9	0.2	13.0	0.1	14.3	0.2	12.6

Table B. Annual mean catch rate (no/acre) and mean total length (in) of fishes caught with trammel nets in Texas bay systems during October 1978-September 1979.

Bay system	Red drum		Spotted seatrout		Black drum		Sheepshead		Southern flounder		Atlantic croaker	
	No/ac	Length	No/ac	Length	No/ac	Length	No/ac	Length	No/ac	Length	No/ac	Length
Galveston	0.64	17.0	0.47	18.6	0.80	10.7	0.14	13.3	0.17	12.2	0.98	10.2
Matagorda	1.14	17.8	1.01	16.6	2.17	14.0	0.25	12.9	0.23	11.8	0.51	9.6
San Antonio	0.61	15.6	0.82	16.1	0.27	11.1	0.26	12.8	0.15	12.1	0.06	9.8
Aransas	0.91	16.6	0.49	16.9	0.72	11.0	0.42	12.0	0.10	12.2	0.14	10.2
Corpus Christi	0.34	16.4	0.55	18.2	0.17	10.7	0.15	12.5	0.12	12.9	0.59	10.8
Upper Laguna Madre	0.18	17.0	0.34	18.1	0.36	12.4	0.15	14.9	0.02	14.5	0.25	10.7
Lower Laguna Madre	0.54	16.9	1.33	17.7	0.25	13.3	0.81	11.4	0.18	12.3	0.96	10.7

Table C. Annual mean catch rate (no/acre) and mean total length (in) of fishes caught with bag seines in Texas bay systems during October 1978-September 1979.

Bay system	Red drum		Spotted seatrout		Black drum		Sheepshead		Southern flounder		Atlantic croaker	
	No/ac	Length	No/ac	Length	No/ac	Length	No/ac	Length	No/ac	Length	No/ac	Length
Galveston	1.87	5.4	15.53	2.9	14.96	4.6	6.36	8.4	0.94	9.4	188.34	3.3
Matagorda	4.23	5.0	19.73	3.3	4.38	5.6	0.47	7.8	0.19	10.7	43.30	3.0
San Antonio	6.92	5.4	2.06	3.9	0.77	3.7	1.70	2.4	0.94	3.8	21.32	2.7
Aransas	1.98	5.5	1.82	2.6	0.71	4.0	1.87	7.1	0.00		2.74	2.9
Corpus Christi	5.26	4.5	4.21	2.5	3.28	3.3	5.17	2.8	0.26	3.9	10.43	2.8
Upper Laguna Madre	11.08	3.3	6.31	3.5	2.25	3.9	0.28	4.8	1.26	5.0	1.12	4.1
Lower Laguna Madre	11.98	3.7	0.63	6.1	4.12	4.4	0.26	1.7	0.50	1.5	107.71	2.7

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ABSTRACT

Gill nets, trammel nets and bag seines were utilized during October 1978-September 1979 in each of seven Texas bay systems (Galveston, Matagorda, San Antonio, Aransas and Corpus Christi Bays and the upper and lower Laguna Madre systems) to monitor the trends in relative abundance and size of the recreationally important saltwater fishes: red drum (Sciaenops ocellata), spotted seatrout (Cynoscion nebulosus), black drum (Pogonias cromis), sheepshead (Archosargus probatocephalus), southern flounder (Paralichthys lethostigma) and Atlantic croaker (Micropogon undulatus). During the same period the trends in relative availability and size of the six species in the East Matagorda Bay system were monitored utilizing gill nets only.

Except in Aransas and Corpus Christi Bays, the annual catch rates with gill nets of red drum, spotted seatrout and black drum were higher than those of sheepshead, southern flounder and Atlantic croaker within each bay system. Atlantic croaker were caught with the least regularity, regardless of month or bay system. The highest annual catch of spotted seatrout (0.62 fish/h) and black drum (0.84 fish/h) occurred in the lower Laguna Madre. The highest catch of red drum (0.85 fish/h) occurred in Matagorda Bay.

The individual meshes of the gill net were selective for species and size regardless of month or bay system. In each bay system, the 7.6- and 10.2-cm stretches meshes caught primarily red drum and spotted seatrout. Black drum and sheepshead were caught primarily in the 10.2- and 12.7-cm meshes. Catch rates of southern flounder were low in all mesh sizes and all bay system. Atlantic croaker were restricted almost exclusively to the 7.6-cm mesh.

Highest annual catch rates with trammel nets of red drum (2.82 fish/ha) and spotted seatrout (3.30 fish/ha) occurred in Matagorda Bay and the lower Laguna Madre, respectively. Annual catch rates of black drum were highest in Matagorda (5.38 fish/ha), Galveston (1.98 fish/ha) and Aransas Bays (1.79 fish/ha). Trammel net catches of sheepshead, southern flounder and Atlantic croaker either varied greatly or were too low to detect consistent monthly trends. Monthly changes in mean total lengths were apparent for red drum and spotted seatrout in all bay systems. No size variations were apparent for the other species in any bay system.

Annual catch rates with bag seines indicated variation in relative abundance among bay systems of juvenile red drum (4.39-29.66 fish/ha), spotted seatrout (1.56-48.83 fish/ha), black drum (1.90-37.04 fish/ha) and Atlantic croaker (2.78-466.20 fish/ha). Monthly catch rate and size patterns were apparent for red drum, spotted seatrout and Atlantic croaker. No apparent trends could be detected for catch rates and sizes of juvenile sheepshead and southern flounder.

INTRODUCTION

Finfish in Texas bays support important and valuable commercial and recreational industries. Commercial fishermen in the Texas bay systems (Galveston, Matagorda, San Antonio, Aransas, Corpus Christi Bays and Laguna Madre) reported landing 1,836,913 kg of fish during September 1977-August 1978 (McEachron 1980). During the same period recreational fishermen harvested an estimated 734,366 kg of fish from these same bay systems. Six species--spotted seatrout (Cynoscion nebulosus), red drum (Sciaenops ocellata), black drum (Pogonias cromis), sheepshead (Archosargus probatocephalus), southern flounder (Paralichthys lethostigma) and Atlantic croaker (Micropogon undulatus)--accounted for 95.0% of the total weight caught by commercial fishermen and 81.0% of the total weight caught by sport fishermen.

Estimates of the harvest and availability of the finfish resource are necessary in order to evaluate and implement management decisions effectively. Commercial harvest statistics have been collected by the Texas Parks and Wildlife Department (TPWD) since 1936. Collection of marine recreational harvest and pressure statistics were initiated by the Department in 1974 (Heffernan et al. (1976).

Fish availability and gear selectivity studies have been conducted periodically along the Texas coast since the late 1800's (Stevenson 1893). Information has been gathered on species diversities, relative abundances and life histories of the commercially and recreationally important fishes.

In November 1975 the Coastal Fisheries Branch of TPWD initiated a standardized program for gathering comparable information on the availability of the finfish resources in Texas bay systems. In addition to gathering baseline data, various gear types and techniques were evaluated from November 1975 to September 1977. In October 1977 an 8-mo study was funded by NOAA, NMFS under PL 88-309 (Project No. 2-313-R) to continue monitoring finfish resources with gill nets, trammel nets and bag seines for long-term fish availability trends.

In October 1978 the U. S. Department of Interior, USFWS approved a 5-yr program to continue monitoring trends in relative abundance and size of recreationally (and commercially) important saltwater fishes. This report is the summarization of the data collected during the first year.

AREA DESCRIPTION

The Texas Gulf coastline, extending from Sabine Pass to the mouth of the Rio Grande is approximately 595 km long (Diener 1975). Situated behind the barrier islands and peninsulas is a series of enclosed or semienclosed estuarine complexes (Figure 1).

Excluding Sabine Lake, the estuarine complexes of the Texas coast can be separated into eight physically and biologically distinct bay systems. These include Galveston, East Matagorda, Matagorda, San Antonio, Aransas and Corpus Christi Bay systems. The Laguna Madre can be considered as two distinct systems (upper and lower areas) due to the geographical barrier created by the "land cut" located approximately in the middle of the Laguna Madre.

Diener (1975) gave a comprehensive description of physical and biological

characteristics of the Texas coastal zone. Photocopies of the area descriptions from Matlock and Weaver (1979) are presented in Appendix A.

MATERIALS AND METHODS

Gill Nets

From October 1978 through September 1979 samples were collected with monofilament gill nets in the Galveston Bay, East Matagorda Bay, Matagorda Bay, San Antonio Bay, Aransas Bay, Corpus Christi Bay, upper Laguna Madre and lower Laguna Madre systems (Figures 2-10). One overnight set was made at four different stations each month in each bay system. Stations were randomly selected from a list of ≤ 100 sample stations compiled for each bay system (Appendix B). Each station on the list was at least 1.6 km of continuous shoreline from any other gill net station.

Two gill net sets were completed during the first two fullest weeks of each month and two additional sets were made during the last two fullest weeks of each month. Each sampling week extended from 1 h before sunset on Sunday through 1 h after sunrise the following Sunday.

Each gill net was set extending from the surface to the bottom and perpendicular to shore with the end with the smallest mesh on shore. Gill nets were set within 1 h before sunset and were raised within 1 h after the following sunrise. The total fishing time (to the nearest 0.1 h) was recorded.

Gill nets were 183 m long and 1.2 m deep with separate 46-m sections of 7.6-, 10.2-, 12.7- and 15.2-cm stretched monofilament meshes. Thread sizes were #277 (Nylon Net Company) for the 7.6- and 10.2-cm meshes, #6 for the 12.7-cm mesh and #7 for the 15.2-cm mesh. Webbing in each section was hung to both the float and lead lines on a one-half basis. One half basis indicates that a hung or finished gill net is one half the length of the amount (length) of stretched webbing before hanging. All four sections were tied together; 7.6-cm tied to 10.2-cm, 10.2-cm tied to 12.7-cm and 12.7-cm tied to 15.2-cm.

Each fish landed was identified to species (Parker 1972, Hoese and Moore 1977) and counted. The mesh size capturing each fish was noted. Total lengths (to the nearest mm) and wet weights (to the nearest 5 g) were obtained for the first 20 individuals of each species from each mesh size during each month.

Catch rates and fish sizes were determined on a monthly basis for red drum, black drum, spotted seatrout, sheepshead, southern flounder and Atlantic croaker caught in each mesh size and in the total net.

Monthly catch rates to the nearest 0.01 fish/h or kg/h were calculated for each species. Mean total lengths (mm) were calculated for each mesh size for each species for each month.

Trammel Nets

From October 1978 through September 1979 (except January and February 1979)

samples were collected with multifilament trammel nets in the Galveston Bay, Matagorda Bay, San Antonio Bay, Aransas Bay, Corpus Christi Bay, upper Laguna Madre and lower Laguna Madre systems (Figures 11-18). Twelve different sets were made each month in each bay system. Stations were randomly selected from a list of ≤ 100 sample stations compiled for each bay system (Appendix C). Each station on the list was at least 1.6 km of continuous shoreline from any other trammel net station.

Six trammel net sets were completed during the first two fullest weeks of each month and six additional sets were made during the last two fullest weeks of each month. Each sampling week extended from sunrise Monday through sunset the following Sunday.

Each trammel net was set to form a 1.67-ha rectangular area (91 m by 183 m) with the shoreline as one long side. The enclosed area was "struck" utilizing an outboard motor or walking techniques in order to create a disturbance thus scaring the enclosed fish into the net. Trammel nets were utilized only during daylight hours.

Trammel nets were 366 m long and 1.2 m deep with 30.5-cm stretched nylon multifilament (#15) mesh outer walls and 7.6-cm stretched nylon multifilament (#415) mesh inner walls. Webbing was colored with a combination of green and brown dyes.

Each fish landed was identified to species and counted. Total lengths and wet weights were obtained for the first 20 individuals of each species caught in each set during each month.

Abundances and fish sizes were determined on a monthly basis for red drum, black drum, spotted seatrout, sheepshead, southern flounder and Atlantic croaker.

Monthly abundance estimates, to the nearest 0.01 fish/ha or kg/ha, were calculated for each species. Mean total lengths (mm) were calculated for each species for each month.

Bag Seines

From October 1978 through September 1979 samples were taken with bag seines in the Galveston Bay, Matagorda Bay, San Antonio Bay, Aransas Bay, Corpus Christi Bay, upper Laguna Madre and lower Laguna Madre systems (Figures 19-26). Six different shoreline stations were sampled each month in each bay system. Stations were randomly selected from a list of ≤ 100 sample stations compiled for each bay system (Appendix D). Each station on the list was at least 1.6 km of continuous shoreline from any other bag seine station.

Three different stations were sampled with bag seines during each of the first two and last two fullest weeks of each month. Each sampling week extended from sunrise Monday through sunset of the following Sunday. If a preselected station was not sampled, an alternate randomly selected station was substituted. Stations were sampled only during daylight hours.

A bag seine sample was collected by pulling an extended seine parallel

to shore for a distance of no less than 15.2 m and no more than 30.5 m. The rectangular area sampled was estimated using the distance pulled and the length of extension of the bag seine.

Each bag seine was 18.3 m long and 1.8 m deep with 1.9-cm stretched nylon multifilament mesh in the lateral wings and 1.3-cm stretched nylon multifilament mesh in the central bag.

From each bag seine sample collected all fish were identified to species (Hoesel and Moore 1977; Walls 1975; Gutherz 1967; Hildebrand and Cable 1930, 1940; Pearson 1928) and counted. In addition, a random sample of no more than 20 individuals of each species was measured (total length).

General Procedures

The randomly selected stations for each gear type could not always be sampled as scheduled. If a preselected station could not be sampled, an alternate randomly selected station or an alternate day was substituted.

Fish data from each gear type were recorded on standard data forms. These data were key punched, placed on magnetic tape and summarized by computer at the Data Processing Section, TPWD, Austin.

Several hydrological parameters were measured at the time of the set and retrieval of each gill net sample and at the set of each trammel net and bag seine sample. Monthly means of salinity, water temperature, turbidity and dissolved oxygen are summarized in Appendix E.

RESULTS

Gill Nets

During October 1978-September 1979, 48 overnight gill net sets were successfully executed in each bay system. The annual mean catch rates (no/h) and mean total lengths (mm) for all meshes combined are summarized in Table 1.

Except in Aransas and Corpus Christi Bays the annual catch rates of red drum, spotted seatrout and black drum were equal to or higher than those of sheepshead, southern flounder and Atlantic croaker within each bay system (Table 1). In Aransas Bay, the catch rate of sheepshead (0.30 fish/h) exceeded that of spotted seatrout (0.24 fish/h). In Corpus Christi Bay the catch rate of sheepshead (0.31 fish/h) exceeded the catch rate of red drum (0.25 fish/h) and black drum (0.15 fish/h).

The monthly mean catch rates and mean total lengths by mesh size are summarized in Tables 2-49. The individual meshes of the gill net were generally selective for species and size regardless of month or bay system. In each bay system, the 7.6- and 10.2-cm stretched meshes caught primarily red drum and spotted seatrout. Black drum and sheepshead were caught primarily in the 10.2- and 12.7-cm meshes. Catch rates of southern flounder were generally low in all mesh sizes and all bay systems. Atlantic croaker catches were restricted almost exclusively to the 7.6-cm mesh.

Galveston Bay

Gill net catches of red drum ranged from 0.06 fish/h in April to 1.79 fish/h in December (Table 2). Mean lengths ranged from 313 mm in August to 559 mm in June. Smallest mean lengths occurred during July-September.

The highest spotted seatrout catch (0.54 fish/h) occurred in January (Table 3). No spotted seatrout were caught in June. Catches were highest in November, January and May. Mean length ranged from 362 mm in July to 665 mm in December.

The highest catches of black drum occurred during December (1.11 fish/h) (Table 4). No black drum were caught in February. Consistent catches (0.11-0.25 fish/h) were made during March-August. Mean total length ranged from 238 mm in May to 395 mm in October.

Sheepshead catches never exceeded 0.08 fish/h; mean total lengths never exceeded 360 mm (Table 5). No sheepshead were caught in January, March, April or August.

Southern flounder catches were lowest (0.02-0.04 fish/h) from November 1978 through July 1979 (Table 6). The highest catch (0.13 fish/h) occurred during October. Mean length ranged from 254 to 475 mm.

The highest catch (0.62 fish/h) of Atlantic croaker occurred in August (Table 7). No croaker were caught during December 1978-February 1979. No catches occurred in the 15.2-cm mesh section of the net. Mean length ranged from 253 to 296 mm.

East Matagorda Bay

Gill net catches of red drum ranged from 0.02 fish/h in March to 1.24 fish/h in December (Table 8). Mean length ranged from 308 mm in September to 637 mm in June. Smallest mean lengths occurred during July-September.

Spotted seatrout catches remained above 0.11 fish/h during the entire sample period (Table 9). The highest catch (1.12 fish/h) occurred in December. Mean total length ranged from 381 to 547 mm.

Lowest catches (0.12 fish/h) of black drum occurred during September 1979 (Table 10). The highest catch (1.45 fish/h) occurred during October 1978. Mean length ranged from 290 to 444 mm.

Highest catches of sheepshead, 0.25 and 0.19 fish/h, occurred during November and December, respectively (Table 11). No sheepshead were caught during July-September. Mean length ranged from 207 mm in June to 405 mm in February.

Southern flounder catches ranged from 0.02 to 0.20 fish/h (Table 12). Low catches (0.02-0.08 fish/h) occurred during December 1978-April 1979. Higher catches (0.13-0.20 fish/h) occurred during May-August. Mean length ranged from 188 to 408 mm.

Highest catches (0.41 fish/h) of Atlantic croaker occurred during September (Table 13). No croaker were caught in November, January, February or May.

Atlantic croaker were caught only in the 7.6-cm stretched mesh section of the net and ranged in length from 235 to 256 mm.

Matagorda Bay

Catches of red drum were highest (1.43-1.91 fish/h) during December 1978-February 1979 (Table 14). Lowest catches (0.13-0.19 fish/h) occurred during May-July. Mean length ranged from 331 mm in August to 492 mm in February.

The highest catches (0.98 fish/h) of spotted seatrout occurred during January (Table 15). High catches (0.28-0.98 fish/h) also occurred during October 1978-April 1979. Lowest catches (0.09-0.19 fish/h) occurred during May-July. Mean length ranged from 405 mm in October to 500 mm in June.

Black drum catches were high during December 1978 (1.91 fish/h) and January 1979 (1.93 fish/h) (Table 16). The lowest catches (0.18 fish/h) occurred during April. Mean length ranged from 195 mm during August to 534 mm during May.

Sheepshead catches never exceeded 0.16 fish/h (Table 17). No sheepshead were caught during February, June or July. Total length did not exceed 487 mm.

Southern flounder catches were highest during April (0.10 fish/h) and during June-August (0.11-0.15 fish/h) (Table 18). No flounder were caught during January or May. Mean length ranged from 230 mm in October to 390 mm in November.

Atlantic croaker were only caught during six months and only in the 7.6-cm mesh (Table 19). Highest catches occurred during October (0.32 fish/h) and September (0.26 fish/h). No croaker were caught during November 1978-April 1979. Mean length ranged from 235 to 281 mm.

San Antonio Bay

Gill net catches of red drum were highest during December (2.36 fish/h) and September (1.93 fish/h) (Table 20). Lowest catches (0.13-0.16 fish/h) occurred during February-March. Mean lengths were largest during January-June (424-454 mm) and smallest during August (298 mm).

Spotted seatrout catches ranged from 0.06 fish/h in June to 0.60 fish/h in November (Table 21). Mean length ranged from 361 mm in January to 471 mm in August.

Highest catches, 0.68 and 0.59 fish/h, of black drum occurred during December and January, respectively (Table 22). Lowest catches (0.02-0.08 fish/h) occurred during May-July. Mean length ranged from 281 mm in December to 637 mm in March.

No sheepshead were caught during December-February or during June (Table 23). Highest catches occurred during November (0.57 fish/h). Mean length ranged from 276 mm in July to 409 mm in August.

Highest catches (0.21 fish/h) of southern flounder occurred during October (Table 24). No flounder were caught during December 1978-January 1979. Catch rates during other months remained low (0.03-0.10 fish/h). Mean length ranged from 256 mm in November to 416 mm in May.

Atlantic croaker were caught only during October, July and August (Table 25). Mean length ranged from 260 to 273 mm.

Aransas Bay

Gill net catches of red drum were never <0.29 fish/h (Table 26). The highest catches (1.55 fish/h) occurred during November. Mean total length ranged from 358 to 482 mm.

No spotted seatrout were caught with gill nets during September (Table 27). Other catch rates ranged from 0.04 fish/h during October to 0.69 fish/h in April. Largest mean lengths (602 mm) occurred in December. Mean length increased from 394 mm in January to 520 mm in July.

The highest catches (0.97 fish/h) of black drum occurred during December and the lowest catches (0.12 fish/h) occurred during September (Table 28). Mean length ranged from 248 to 426 mm.

The highest catches (0.85 fish/h) of sheepshead occurred during July (Table 29). No sheepshead were caught during February. Other monthly mean catch rates ranged from 0.04 to 0.69 fish/h. Mean length ranged from 270 mm in August to 345 mm in June. No sheepshead were caught in the 7.6-cm mesh section of the net.

Catches of southern flounder never exceeded the 0.16 fish/h in November (Table 30). No flounder were caught during January. Consistently low catches (0.02-0.08 fish/h) occurred during the other months. Mean length ranged from 246 mm to 406 mm.

Although a high catch of 0.65 fish/h was recorded for Atlantic croaker during October, they were only caught during five months (Table 31). Mean length ranged from 206 to 326 mm.

Corpus Christi Bay

Gill net catches of red drum ranged from 0.08 fish/h during July to 0.47 fish/h during November (Table 32). Consistent catches (0.35-0.47 fish/h) occurred during October-December 1978. Mean length ranged from 327 mm in August to 549 mm in July.

Relatively high catches of spotted seatrout occurred during January-February (0.59-0.67 fish/h) and July-September (0.33-0.72 fish/h) (Table 33). The lowest catch rates (0.05 fish/h) occurred during March. Mean length ranged from 398 mm in November to 564 mm in January.

The lowest catches of black drum occurred during January (0.03 fish/h) while the highest catches (0.29 fish/h) occurred during August (Table 34). The mean length ranged from 310 to 453 mm.

Sheepshead catches ranged from 0.03 to 1.39 fish/h (Table 35). The mean length range was 312-378 mm.

Catch rates of southern flounder did not exceed 0.29 fish/h (Table 36). Mean length did not exceed 438 mm.

The highest catch rate of Atlantic croaker was 0.75 fish/h (Table 37). No croaker were caught during February or April. Consistent catches (0.10-0.25 fish/h) occurred during May-September. Mean length ranged from 233 to 296 mm. No croaker were caught in the 15.2-cm stretched mesh.

Upper Laguna Madre

Gill net catches of red drum never exceeded 0.30 fish/h (Table 38). Lowest catches (0.02 fish/h) occurred during January and July. Mean length ranged from 448 mm in February to 641 mm in January.

The highest catches (0.67 fish/h) of spotted seatrout occurred during October (Table 39). Consistent catches (0.34-0.57 fish/h) occurred during April-June. The lowest catch rates (0.02 fish/h) and the largest mean length (740 mm) occurred during January. Other monthly mean lengths ranged from 420 to 492 mm.

The highest catches (1.10 fish/h) of black drum occurred during October, followed by a general decline through January to 0.11 fish/h (Table 40). From February through September catch rates ranged from 0.11 to 0.41 fish/h. Mean length ranged from 338 mm in July to 470 mm in January.

The highest (0.34 fish/h) and the lowest (0.02 fish/h) catches of sheepshead occurred during December and January, respectively (Table 41). Mean length ranged from 356 mm in June to 418 mm in July. No sheepshead were caught in the 7.6-cm mesh.

Southern flounder catches never exceeded 0.13 fish/h (Table 42). Mean length ranged from 196 mm in February to 592 mm in September.

The catches of Atlantic croaker were somewhat erratic ranging from a high of 0.71 fish/h in October to 0.00 fish/h during November 1978-January 1979 and during March-April 1979 (Table 43). Mean length ranged from 260 to 330 mm.

Lower Laguna Madre

Gill net catches of red drum ranged from 0.10 fish/h during February to 1.04 fish/h during January (Table 44). There was a general decline in catch rate from March through August. Mean length ranged from 415 mm in September to 631 mm in February.

The catches of spotted seatrout ranged from 0.21 fish/h during February to 1.00 fish/h during July (Table 45). Mean length increased from 401 mm in October to 605 mm in February.

The lowest (0.12 fish/h) and highest (3.61 fish/h) catches of black drum occurred during June and July, respectively (Table 46). Mean length ranged from 373 mm in November to 486 mm in September.

The highest catches (0.29 fish/h) of sheepshead occurred during March-April (Table 47). The lowest catches (0.02 fish/h) occurred during October and May. The largest monthly mean total length was 412 mm.

Southern flounder catches ranged from 0.02 to 0.25 fish/h (Table 48). Mean length did not exceed 407 mm.

The lower Laguna Madre was the only system where Atlantic croaker were caught with gill nets each month (Table 49). The lowest catches (0.02 fish/h) occurred during October and February. The highest catches (0.69 fish/h) occurred during August. Maximum mean length was 379 mm.

Trammel Nets

During October 1978-September 1979, 120 trammel net strikes were successfully executed in each bay system. The annual mean catches (no/ha) and mean total lengths (mm) are summarized in Table 50.

Matagorda Bay had the highest annual mean catches of red drum (2.82 fish/ha), spotted seatrout (2.51 fish/ha), black drum (5.38 fish/ha) and southern flounder (0.58 fish/ha) (Table 50). The upper Laguna Madre had the lowest annual mean catches of red drum (0.44 fish/ha), spotted seatrout (0.89 fish/ha) and southern flounder (0.04 fish/ha).

Red drum catches with trammel nets in each bay system generally declined from October 1978 through March 1979, remained relatively low during April-July 1979 and increased during August or September (Tables 51-57). In all bay systems combined the monthly mean total lengths ranged from 291 to 537 mm, with slightly smaller fish being caught during October-November 1978 and August-September 1979 and larger fish being caught during the interim months.

Spotted seatrout catches in each bay system generally declined from October 1978 through March 1979 (Tables 58-64). Peak catches occurred during April-June 1979 in all bay systems except Galveston Bay which peaked in September 1979 (4.89 fish/ha) and the lower Laguna Madre which peaked in August 1979 (7.78 fish/ha). Substantial catches were recorded during September 1979 in all bay systems. The largest monthly mean total lengths coincided with periods of highest catches in most areas. Monthly mean lengths for all bay systems combined ranged from 368 to 574 mm.

Black drum catches with trammel nets generally remained below 1.00 fish/ha during October 1978-September 1979 in the San Antonio Bay, Corpus Christi Bay, upper Laguna Madre and lower Laguna Madre systems (Tables 65-71). In Galveston, Matagorda and Aransas Bays the highest monthly catches were 4.99, 15.92 and 4.39 fish/ha, respectively. Black drum ranged in mean total length from 223 to 431 mm in all bay systems combined.

Trammel net catches of sheepshead generally remained below 1.00 fish/ha in all bay systems except the lower Laguna Madre (Tables 72-78). Catch rates in the lower Laguna Madre were > 1.00 fish/ha from March through September 1979. Monthly catches in Galveston Bay, Corpus Christi Bay and the upper Laguna Madre remained low (0.00-0.85 fish/ha) while catches in Matagorda, San Antonio and Aransas Bays fluctuated considerably (0.05-3.04). Mean total lengths ranged from 194 mm in Corpus Christi Bay to 465 mm in the upper Laguna Madre.

Southern flounder catches with trammel nets in all bay systems were too low to detect any monthly trends (Tables 79-85). In all bay systems mean monthly catches were < 0.75 fish/ha except in Matagorda Bay (maximum 1.70 fish/ha during September 1979), San Antonio Bay (maximum 1.05 fish/ha during July 1979)

and the lower Laguna Madre (maximum 1.00 fish/ha during July 1979). Monthly mean lengths of southern flounder ranged between 160 and 417 mm with no monthly patterns discernible.

The highest catches of Atlantic croaker occurred during May-September 1979 in all bay systems except the upper Laguna Madre (Tables 86-92). The highest catches in the upper Laguna Madre occurred during October 1978 followed by consistent catches during May-September 1979. Coastwide, mean lengths ranged from 197 mm in Matagorda Bay in June to 335 mm in Corpus Christi Bay in November.

Bag Seines

During October 1978-September 1979, 72 bag seine samples were collected in each bay system. The annual mean catches (no/ha) and mean total lengths are summarized in Table 93.

Galveston Bay had the highest annual mean catches of spotted seatrout (38.43 fish/ha), black drum (37.04 fish/ha), sheepshead (15.74 fish/ha) and Atlantic croaker (466.20 fish/ha) (Table 93). The lower Laguna Madre had the highest catches of red drum (29.66 fish/ha). No southern flounder were caught with bag seines in Aransas Bay during the sampling period.

Bag seines caught red drum in each bay system during at least five months between October 1978 and July 1979 (Table 94). The largest red drum catches occurred between November 1978 and March 1979 in all bay systems. Peak catches ranged from 16.67 fish/ha in December in Aransas Bay to 145.83 fish/ha in February in the upper Laguna Madre. Monthly mean length ranged from 20 mm in the lower Laguna to 284 mm in Matagorda Bay. Overall mean total lengths were similar in all bay systems, as was the apparent increase in size from October 1978 through September 1979.

Catches of spotted seatrout were generally highest during October-November 1978 and August-September 1979 in all bay systems (Table 95). The highest catches (366.67 fish/ha) occurred during September 1979 in Galveston Bay. No spotted seatrout were caught during March-April 1979 in any bay system. Generally, the smallest fish were caught during the months of greatest catches. Monthly mean length ranged from 32 to 360 mm.

Bag seine catches of black drum were highest in each bay system during June-July 1979 except in the upper Laguna Madre (Table 96). Peak catches ranged from 7.14 fish/ha in Aransas Bay to 277.78 fish/ha in Galveston Bay. No black drum were caught during January-March 1979. Mean length ranged from 33 to 299 mm with consistently larger fish caught during October-December 1978 and smaller fish caught during May-July 1979.

Catches of sheepshead ranged from 0.00 to 142.86 fish/ha (Table 97). Mean length ranged from 29 to 378 mm. No apparent trends in monthly catches or length were detected.

Bag seine catches of southern flounder never exceeded 16.67 fish/ha and were predominantly 0.00 fish/ha in all bay systems (Table 98). Mean length ranged from 38 to 410 mm.

Atlantic croaker were caught primarily during February-May 1979 in all bay systems (Table 99). Catches did not exceed 777.78 fish/ha in any bay system or in any month except during March 1979 in Galveston (3233.34 fish/ha) and the lower Laguna Madre (2366.67 fish/ha). Mean length (range: 18-200 mm) generally increased from January through September 1979.

DISCUSSION

During October 1978-September 1979 gill nets, trammel nets and bag seines were used to monitor the relative availability, abundance and sizes of red drum, black drum, spotted seatrout, sheepshead, southern flounder and Atlantic croaker in Texas bay systems.

The inherent differences among each gear type may contribute to variable catches for similar species within the same bay system. Gill nets are considered to be a "passive" gear (Matlock and Weaver 1979). Catches with gill nets are dependent upon the natural movement of fishes. Trammel nets could be classified as "semi-passive", catches being dependent on induced fish movement. Bag seines are an "active" gear type; movement of the net is required in order to catch fish.

Webbing material and twine size of gill nets can affect the species caught as well as the catch rates (Hamley 1975, Pristas and Trent 1977). Monofilament webbing and smaller twine size usually achieve higher catch rates for small spotted seatrout and red drum. Pristas and Trent (1977) found that multifilament gill nets caught certain species such as sea catfish and gafftopsail catfish at significantly greater rates. This may hold true for multifilament trammel nets.

Gill nets set at night have significantly greater catches than day sets (Pristas and Trent 1977). TPWD experimental gill nets are set from sunset to sunrise. Trammel nets and bag seines are only utilized during daylight hours. Determinations need to be made on the optimum daylight hours for working these nets and/or the practicality of striking trammel nets or pulling bag seines at night.

Availability and relative abundance may be directly affected by mesh size selectivity. Trammel nets catch fish over a wide size range; therefore, they are considered to be less selective than single walled gill nets (Rounsefell 1975). Size selectivity was reported for TPWD experimental gill nets during 1975-1978 (Matlock and Weaver 1979) and during the current study. Fish size and body configuration also directly affect the selectivity of a net (Hamley 1975). This may contribute to the low catches of sheepshead and southern flounder with both gill nets and trammel nets.

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Table 1. Annual mean catch rate (no/h) and mean total length (mm) of fishes caught with gill nets (all meshes combined) in Texas bay systems during October 1978-September 1979.

Bay system	Red drum		Spotted seatrout		Black drum		Sheepshead		Southern flounder		Atlantic croaker	
	No/h	Length	No/h	Length	No/h	Length	No/h	Length	No/h	Length	No/h	Length
Galveston	0.49	438	0.17	498	0.26	323	0.02	318	0.04	364	0.17	267
East Matagorda	0.44	417	0.38	429	0.55	311	0.08	303	0.10	331	0.08	249
Matagorda	0.85	405	0.47	446	0.68	389	0.05	370	0.06	283	0.06	260
San Antonio	0.67	403	0.27	415	0.28	412	0.13	329	0.06	327	0.03	265
Aransas	0.65	380	0.24	476	0.44	324	0.30	312	0.05	325	0.09	293
Corpus Christi	0.25	468	0.36	480	0.15	405	0.31	347	0.11	369	0.16	271
Upper Laguna Madre	0.17	486	0.24	474	0.34	398	0.13	383	0.05	374	0.13	291
Lower Laguna Madre	0.33	475	0.62	518	0.84	430	0.15	331	0.11	363	0.19	320

Table 2. Mean catch rates and mean total lengths (mm) by mesh size of red drum caught with gill nets in the Galveston Bay system (NS = no samples taken, blank = no fish caught or no fish measured).

Month and year	Number of samples	7.6-cm			10.2-cm			12.7-cm			15.2-cm			All meshes		
		No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	kg/h	No/h	Length	Kg/h
Oct. 1978	(4)	0.17	360	0.08	0.02	391	0.01	0.04	588	0.08	0.06	633	0.15	0.29	469	0.35
Nov. 1978	(4)	0.16	374	0.10	0.12	434	0.11	0.05	515	0.08				0.34	419	0.29
Dec. 1978	(4)	0.47	405	0.33	1.04	444	0.90	0.28	485	0.39				1.79	439	1.62
Jan. 1979	(4)				0.14	424	0.12				0.02	620	0.05	0.16	445	0.17
Feb. 1979	(4)				0.09	428	0.08				0.04	633	0.10	0.13	487	0.18
Mar. 1979	(4)	0.09	380	0.06	0.81	443	0.78	0.21	513	0.31	0.06	660	0.19	1.17	468	1.44
Apr. 1979	(4)	0.04	442	0.04	0.02	454	0.02							0.06	446	0.06
May 1979	(4)	0.13	360	0.06	0.15	487	0.17	0.06	523	0.12				0.35	438	0.36
June 1979	(4)				0.05	461	0.05	0.07	535	0.14	0.05	693	0.17	0.16	559	0.36
July 1979	(4)	0.18	307	0.06	0.04	267	0.01	0.04	565	0.08	0.02	751	0.13	0.29	385	0.33
Aug. 1979	(4)	0.67	313	0.22				0.02						0.69	313	0.23
Sept. 1979	(4)	0.36	329	0.14	0.10	528	0.11	0.02	565	0.03				0.48	387	0.31

Table 3 . Mean catch rates and mean total lengths (mm) by mesh size of spotted seatrout caught with gill nets in the Galveston Bay system (NS = no samples taken, blank = no fish caught or no fish measured).

Month and year	Number of samples	7.6-cm			10.2-cm			12.7-cm			15.2-cm			All meshes		
		No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	kg/h	No/h	Length	Kg/h
Oct. 1978	(4)	0.06	394	0.03	0.06	525	0.09	0.02	556					0.13	486	0.13
Nov. 1978	(4)	0.11	382	0.06	0.09	499	0.11	0.14	613	0.34	0.07	670	0.22	0.41	531	0.73
Dec. 1978	(4)	0.02	665	0.05										0.02	665	0.05
Jan. 1979	(4)				0.23	468	0.23	0.21	575	0.40	0.10	705	0.35	0.54	555	0.98
Feb. 1979	(4)										0.02	549	0.03	0.02	549	0.03
Mar. 1979	(4)	0.02	323	0.01	0.04	435	0.03	0.02	543	0.03				0.08	434	0.07
Apr. 1979	(4)	0.10	367	0.06	0.04	505	0.05	0.02	654	0.06				0.16	428	0.17
May 1979	(4)	0.06	398	0.05	0.09	476	0.12	0.13	653	0.38	0.06	639	0.18	0.35	558	0.73
June 1979	(4)															
July 1979	(4)	0.02		0.01	0.02	362	0.01							0.04	362	0.02
Aug. 1979	(4)	0.13	371	0.06	0.02	470		0.04	405	0.05	0.02			0.22	397	0.15
Sept. 1979	(4)				0.04	466	0.05	0.02	602	0.06				0.06	511	0.10

Table 4. Mean catch rates and mean total lengths (mm) by mesh size of black drum caught with gill nets in the Galveston Bay system (NS = no samples taken, blank = no fish caught or no fish measured).

Month and year	Number of samples	7.6-cm			10.2-cm			12.7-cm			15.2-cm			All meshes		
		No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	kg/h	No/h	Length	Kg/h
Oct. 1978	(4)				0.12	315	0.05	0.31	407	0.37	0.12	444	0.14	0.54	395	0.56
Nov. 1978	(4)				0.07	320	0.03	0.07	376	0.05				0.14	348	0.08
Dec. 1978	(4)	0.66	229	0.32	0.07	333	0.05	0.19	381	0.14	0.19	460	0.28	1.11	297	0.79
Jan. 1979	(4)				0.02	244	0.00							0.02	244	0.00
Feb. 1979	(4)															
Mar. 1979	(4)	0.02	205	0.00	0.06	311	0.03	0.02	426	0.02	0.02	425	0.02	0.11	331	0.07
Apr. 1979	(4)	0.10	232	0.02				0.02	385	0.01	0.08	434	0.09	0.20	352	0.14
May 1979	(4)	0.22	238	0.04										0.22	238	0.04
June 1979	(4)	0.16	240	0.04	0.02	265	0.01				0.07	476	0.11	0.25	313	0.17
July 1979	(4)	0.02		0.01	0.04	271	0.01	0.04	343	0.02	0.04	430	0.05	0.15	363	0.10
Aug. 1979	(4)	0.04	235	0.01	0.02		0.01	0.02	368	0.02	0.02	539	0.04	0.11	381	0.09
Sept. 1979	(4)				0.04	289	0.01							0.04	289	0.01

Table 5. Mean catch rates and mean total lengths (mm) by mesh size of sheephead caught with gill nets in the Galveston Bay system (NS = no samples taken, blank = no fish caught or no fish measured).

Month and year	Number of samples	7.6-cm			10.2-cm			12.7-cm			15.2-cm			All meshes					
		No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	kg/h	No/h	Length	Kg/h			
Oct. 1978	(4)	0.02	383	0.02				0.02	302	0.01							0.04	342	0.03
Nov. 1978	(4)				0.02	238	0.00	0.02	271	0.01	0.02	346	0.01	0.05	285	0.02			
Dec. 1978	(4)							0.03	332	0.02				0.03	332	0.02			
Jan. 1979	(4)																		
Feb. 1979	(4)										0.02	327	0.01	0.02	327	0.01			
Mar. 1979	(4)																		
Apr. 1979	(4)																		
May 1979	(4)										0.02	360	0.02	0.02	360	0.02			
June 1979	(4)				0.02	250	0.01							0.02	250	0.01			
July 1979	(4)							0.02	290	0.01				0.02	290	0.01			
Aug. 1979	(4)																		
Sept. 1979	(4)							0.04	348	0.03	0.04	364	0.03	0.08	356	0.06			

Table 6 . Mean catch rates and mean total lengths (mm) by mesh size of southern flounder caught with gill nets in the Galveston Bay system (NS = no samples taken, blank = no fish caught or no fish measured).

Month and year	Number of samples	7.6-cm			10.2-cm			12.7-cm			15.2-cm			All meshes			
		No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	kg/h	No/h	Length	Kg/h	
Oct. 1978	(4)				0.08	304	0.04	0.06	362	0.03					0.13	333	0.07
Nov. 1978	(4)							0.02			0.02	475	0.02		0.04	475	0.05
Dec. 1978	(4)							0.02	385	0.01					0.02	385	0.01
Jan. 1979	(4)																
Feb. 1979	(4)																
Mar. 1979	(4)	0.02	429	0.02				0.02	312	0.01					0.04	370	0.03
Apr. 1979	(4)																
May 1979	(4)										0.02	451	0.02		0.02	451	0.02
June 1979	(4)																
July 1979	(4)							0.02	341	0.01					0.02	341	0.01
Aug. 1979	(4)	0.09	224	0.01				0.02	374	0.01					0.11	254	0.02
Sept. 1979	(4)	0.06	278	0.02	0.02	301	0.01	0.02	388	0.01					0.10	304	0.04

Table 7. Mean catch rates and mean total lengths (mm) by mesh size of Atlantic croaker caught with gill nets in the Galveston Bay system (NS = no samples taken, blank = no fish caught or no fish measured).

Month and year	Number of samples	7.6-cm			10.2-cm			12.7-cm			15.2-cm			All meshes					
		No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	kg/h	No/h	Length	Kg/h			
Oct. 1978	(4)	0.13	264	0.03													0.13	264	0.03
Nov. 1978	(4)	0.18	275	0.05	0.04	328	0.02	0.02	397	0.01							0.23	296	0.08
Dec. 1978	(4)																		
Jan. 1979	(4)																		
Feb. 1979	(4)																		
Mar. 1979	(4)	0.04	274	0.01													0.04	274	0.01
Apr. 1979	(4)	0.16	273	0.04	0.02	314	0.01										0.18	279	0.05
May 1979	(4)	0.24	265	0.06				0.04	164	0.00							0.28	254	0.07
June 1979	(4)	0.23	264	0.07													0.23	264	0.07
July 1979	(4)	0.24	260	0.05	0.02	174	0.00										0.27	253	0.05
Aug. 1979	(4)	0.56	256	0.13	0.06												0.62	256	0.14
Sept. 1979	(4)	0.04	260	0.01	0.04	280	0.02										0.08	266	0.02

Table 8. Mean catch rates and mean total lengths (mm) by mesh size of red drum caught with gill nets in the East Matagorda Bay system (NS = no samples taken, blank = no fish caught or no fish measured).

Month and year	Number of samples	7.6-cm			10.2-cm			12.7-cm			15.2-cm			All meshes		
		No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	kg/h	No/h	Length	Kg/h
Oct. 1979	(4)	0.61	352	0.30	0.15	400	0.10	0.15	470	0.21				0.91	380	0.64
Nov. 1978	(4)	0.25	385	0.14	0.07	364	0.05							0.32	382	0.20
Dec. 1978	(4)	0.17	368	0.09	0.72	403	0.51	0.23	547	0.41	0.12	576	0.26	1.24	451	1.37
Jan. 1979	(4)	0.11	355	0.05	0.34	402	0.24				0.04	762	0.16	0.48	418	0.45
Feb. 1979	(4)	0.04	347	0.02	0.02	439	0.01	0.02	556	0.03				0.07	422	0.06
Mar. 1979	(4)				0.02	457	0.02							0.02	457	0.02
Apr. 1979	(4)	0.12	419	0.09	0.06	418	0.04							0.17	418	0.13
May 1979	(4)	0.02		0.02	0.06	414	0.06				0.02	655	0.06	0.11	494	0.16
June 1979	(4)	0.02						0.04	637	0.13				0.77	637	0.20
July 1979	(4)	0.25	313	0.08										0.25	313	0.08
Aug. 1979		0.58	323	0.19										0.58	323	0.19
Sept. 1979	(4)	0.35	308	0.12										0.35	308	0.12

Table 9. Mean catch rates and mean total lengths (mm) by mesh size of spotted seatrout caught with gill nets in the East Matagorda Bay system (NS = no samples taken, blank = no fish caught or no fish measured).

Month and year	Number of samples	7.6-cm			10.2-cm			12.7-cm			15.2-cm			All meshes		
		No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	kg/h	No/h	Length	Kg/h
Oct. 1978	(4)	0.17	372	0.08				0.04	497	0.04				0.25	390	0.15
Nov. 1978	(4)	0.18	360	0.08	0.04	465	0.03	0.02	588	0.04				0.29	406	0.21
Dec. 1978	(4)	0.38	371	0.20	0.09	462	0.09	0.07	601	0.15				1.12	435	0.98
Jan. 1979	(4)	0.07	368	0.03	0.05	438	0.04	0.02	545	0.03				0.14	416	0.11
Feb. 1979	(4)	0.05	383	0.03	0.04	462	0.04				0.02	555	0.02	0.11	438	0.09
Mar. 1979	(4)	0.25	397	9.15	0.04	584	0.07							0.29	410	0.20
Apr. 1979	(4)	0.52	384	0.28	0.21	505	0.29				0.02	375	0.01	0.75	415	0.57
May 1979	(4)	0.06			0.09	506	0.09	0.02	628		0.02			0.19	547	0.19
June 1979	(4)	0.09	409	0.06	0.09		0.12							0.18	409	0.18
July 1979	(4)	0.58	381	0.32	0.02			0.02						0.63	381	0.34
Aug. 1979	(4)	0.13	340	0.05	0.17	428	0.21	0.13	579	0.23				0.42	501	0.57
Sept. 1979	(4)	0.23	404	0.19										0.23	404	0.19

Table 10. Mean catch rates and mean total lengths (mm) by mesh size of black drum caught with gill nets in the East Matagorda Bay system (NS = no samples taken, blank = no fish caught or no fish measured).

Month and year	Number of samples	7.6-cm			10.2-cm			12.7-cm			15.2-cm			All meshes		
		No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	kg/h	No/h	Length	Kg/h
Oct. 1978	(4)	0.21	215	0.04	0.38	329	0.20	0.70	377	0.51	0.15	447	0.22	1.45	340	0.98
Nov. 1978	(4)	0.11	267	0.03	0.18	327	0.09	0.09	404	0.07	0.05	466	0.08	0.43	350	0.28
Dec. 1978	(4)	0.09	220	0.01	0.35	304	0.15	0.24	384	0.21	0.28	451	0.37	0.96	363	0.74
Jan. 1979	(4)	0.05	204	0.01	0.12	285	0.05	0.05	390	0.05				0.23	290	0.10
Feb. 1979	(4)	0.07	326	0.04	0.11	287	0.04	0.05	354	0.04	0.02	477	0.03	0.25	326	0.14
Mar. 1979	(4)	0.19	216	0.03	0.08	316	0.03	0.12	379	0.09				0.38	293	0.16
Apr. 1979	(4)	0.10	218	0.02	0.15	332	0.05	0.06	372	0.04	0.06	457	0.09	0.37	342	0.22
May 1979	(4)	0.13	238	0.02	0.73	297	0.24	0.22	279	0.17	0.17	398	0.22	1.25	309	0.74
June 1979	(4)	0.04	307	0.02	0.18	297	0.06	0.09	298	0.05	0.02			0.34	300	0.13
July 1979	(4)	0.18	227	0.04	0.09	328	0.06	0.07	396	0.05	0.07	599	0.23	0.40	360	0.42
Aug. 1979	(4)	0.17	278	0.44	0.25	292	0.09	0.02	426	0.02	0.02	445	0.02	0.46	316	0.22
Sept. 1979	(4)	0.04	570	0.20	0.06	321	0.03				0.02	440	0.03	0.12	444	0.25

Table 11. Mean catch rates and mean total lengths (mm) by mesh size of sheepshead caught with gill nets in the East Matagorda Bay system (NS = no samples taken, blank = no fish caught or no fish measured).

Month and year	Number of samples	7.6-cm			10.2-cm			12.7-cm			15.2-cm			All meshes		
		No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	kg/h	No/h	Length	Kg/h
Oct. 1978	(4)				0.04	271	0.02	0.08	309	0.04				0.11	294	0.05
Nov. 1978	(4)				0.04	258	0.01	0.09	280	0.03	0.13	384	0.13	0.25	329	0.17
Dec. 1978	(4)							0.10	273	0.04	0.05	305	0.03	0.19	278	0.09
Jan. 1979	(4)				0.02	276	0.01	0.02	282	0.01				0.04	279	0.01
Feb. 1979	(4)										0.02	405	0.02	0.02	405	0.02
Mar. 1979	(4)	0.02	293	0.01	0.04	338	0.03				0.04	423	0.05	0.10	363	0.09
Apr. 1979	(4)	0.02	282	0.00										0.02	282	0.00
May 1979	(4)							0.15	288	0.07				0.15	288	0.07
June 1979	(4)										0.02	297	0.01	0.02	207	0.01
July 1979	(4)															
Aug. 1979	(4)															
Sept. 1979	(4)															

Table 12. Mean catch rates and mean total lengths (mm) by mesh size of southern flounder caught with gill nets in the East Matagorda Bay system (NS = no samples taken, blank = no fish caught or no fish measured).

Month and year	Number of samples	7.6-cm			10.2-cm			12.7-cm			15.2-cm			All meshes		
		No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	kg/h	No/h	Length	Kg/h
Oct. 1978	(4)	0.02	312	0.01	0.04	372	0.02	0.06	387	0.04	0.02		0.02	0.13	370	0.09
Nov. 1978	(4)	0.05	280	0.01	0.02		0.01	0.11	345	0.05	0.02			0.20	329	0.08
Dec. 1978	(4)							0.02	401	0.01	0.02	415	0.01	0.03	408	0.02
Jan. 1979	(4)	0.02	218	0.00	0.02	274	0.00							0.04	246	0.01
Feb. 1979	(4)				0.02	280	0.00	0.04	401	0.02	0.02	403	0.01	0.07	371	0.04
Mar. 1979	(4)				0.02	397	0.01	0.04	377	0.02	0.02	403	0.01	0.08	388	0.05
Apr. 1979	(4)							0.02	347	0.01				0.02	347	0.01
May 1979	(4)	0.02			0.02			0.11	335	0.05				0.15	335	0.06
June 1979	(4)				0.04	278	0.02	0.07	358	0.03	0.02	357	0.01	0.13	338	0.07
July 1979	(4)	0.04	303	0.01	0.04	282	0.01	0.09	348	0.04	0.02	259	0.00	0.20	309	0.07
Aug. 1979	(4)				0.04	235	0.00	0.08	370	0.04				0.13	343	0.06
Sept. 1979	(4)				0.02	188	0.00							0.02	188	0.00

Table 13. Mean catch rates and mean total lengths (mm) by mesh size of Atlantic croaker caught with gill nets in the East Matagorda Bay system (NS = no samples taken, blank = no fish caught or no fish measured).

Month and year	Number of samples	7.6-cm			10.2-cm			12.7-cm			15.2-cm			All meshes					
		No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	kg/h	No/h	Length	Kg/h			
Oct. 1979	(4)	0.15	248	0.03													0.15	248	0.03
Nov. 1978	(4)																		
Dec. 1978	(4)	0.02	256	0.00													0.02	256	0.00
Jan. 1979	(4)																		
Feb. 1979	(4)																		
Mar. 1979	(4)	0.04	235	0.01													0.04	235	0.01
Apr. 1979	(4)	0.04	248	0.01													0.04	248	0.01
May 1979	(4)																		
June 1979	(4)	0.04	255	0.01													0.04	255	0.01
July 1979	(4)	0.11	248	0.02													0.11	248	0.02
Aug. 1979	(4)	0.17	255	0.04													0.17	255	0.04
Sept. 1979	(4)	0.41	250	0.10													0.41	250	0.10

Table 14. Mean catch rates and mean total lengths (mm) by mesh size of red drum caught with gill nets in the Matagorda Bay system (NS = no samples taken, blank = no fish caught or no fish measured).

Month and year	Number of samples	7.6-cm			10.2-cm			12.7-cm			15.2-cm			All meshes		
		No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	kg/h	No/h	Length	Kg/h
Oct. 1978	(4)	0.85	348	0.40	0.08	422	0.07	0.22	547	0.41	0.08	630	0.21	1.23	415	1.16
Nov. 1978	(4)	0.73	367	0.39	0.04	398	0.03							0.77	370	0.42
Dec. 1978	(4)	0.94	374	0.52	0.73	404	0.53	0.18	526	0.30	0.07	643	0.20	1.91	418	1.65
Jan. 1979	(4)	0.36	364	0.19	0.85	396	0.64	0.13	540	0.20	0.09	619	0.22	1.43	415	1.25
Feb. 1979	(4)	0.60	368	0.30	0.21	423	0.17	0.28	580	0.55	0.41	651	1.20	1.51	492	2.47
Mar. 1979	(4)	0.21	390	0.11	0.19	413	0.14	0.11	460	0.10				0.51	415	0.35
Apr. 1979	(4)	0.45	399	0.31	0.12	421	0.09	0.06	606	0.13	0.10	633	0.28	0.73	450	0.79
May 1979	(4)	0.15	404	0.13	0.04	432	0.04							0.19	414	0.16
June 1979	(4)	0.06	440	0.05	0.02		0.02	0.02	360	0.03	0.02	457	0.04	0.13	419	0.16
July 1979	(4)	0.15	370	0.09										0.15	370	0.09
Aug. 1979	(4)	0.57	331	0.20										0.57	331	0.20
Sept. 1979	(4)	1.02	325	0.40				0.04	538	0.07	0.02	690	0.07	1.08	348	0.60

Table 15. Mean catch rates and mean total lengths (mm) by mesh size of spotted seatrout caught with gill nets in the Matagorda Bay system (NS = no samples taken, blank = no fish caught or no fish measured).

Month and year	Number of samples	7.6-cm			10.2-cm			12.7-cm			15.2-cm			All meshes		
		No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	kg/h	No/h	Length	Kg/h
Oct. 1978	(4)	0.71	390	0.39	0.10	484	0.11							0.81	405	0.51
Nov. 1978	(4)	0.42	378	0.22	0.31	480	0.35	0.07	568	0.14				0.81	439	0.73
Dec. 1978	(4)	0.07	404	0.05	0.12	490	0.14	0.09	513	0.13				0.28	476	0.32
Jan. 1979	(4)	0.58	365	0.28	0.33	485	0.36	0.07	550	0.11				0.98	420	0.76
Feb. 1979	(4)	0.41	380	0.21	0.20	473	0.19	0.04	529	0.05	0.02	680	0.06	0.66	424	0.51
Mar. 1979	(4)	0.17	437	0.14	0.27	498	0.30				0.02	542	0.03	0.45	477	0.48
Apr. 1979	(4)	0.31	410	0.22	0.24	536	0.34	0.04	596	0.09				0.59	477	0.66
May 1979	(4)	0.09	390	0.06	0.11	496	0.14							0.19	443	0.19
June 1979	(4)	0.06	460	0.06	0.06	540	0.11							0.13	500	0.17
July 1979	(4)	0.06	447	0.06	0.02	415	0.01							0.09	436	0.07
Aug. 1979	(4)	0.30	351	0.13	0.15	458	0.18							0.44	412	0.35
Sept. 1979	(4)	0.12	418	0.08	0.10	493	0.12							0.22	446	0.20

Table 16. Mean catch rates and mean total lengths (mm) by mesh size of black drum caught with gill nets in the Matagorda Bay system (NS = no samples taken, blank = no fish caught or no fish measured).

Month and year	Number of samples	7.6-cm			10.2-cm			12.7-cm			15.2-cm			All meshes		
		No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	kg/h	No/h	Length	Kg/h
Oct. 1978	(4)	0.14	214	0.02	0.16	351	0.10	0.16	404	0.14				0.45	329	0.27
Nov. 1978	(4)	0.09	495	0.02	0.16	480	0.08	0.07	407	0.07	0.11	601	0.14	0.44	497	0.32
Dec. 1978	(4)	0.16	206	0.02	0.37	312	0.16	0.73	384	0.67	0.65	439	0.81	1.91	376	1.66
Jan. 1979	(4)	0.24	208	0.03	0.33	320	0.17	0.89	362	0.61	0.49	447	0.55	1.93	357	1.35
Feb. 1979	(4)	0.02	247	0.00				0.18	390	0.15	0.07	458	0.10	0.27	398	0.25
Mar. 1979	(4)	0.06	244	0.01	0.15	345	0.09	0.27	419	0.30	0.21	554	0.29	0.68	434	0.72
Apr. 1979	(4)	0.06	227	0.01	0.06	582	0.42	0.04	380	0.03	0.02	441	0.02	0.18	425	0.54
May 1979	(4)	0.22	226	0.04	0.11	280	0.04	0.20	847	1.10	0.09	468	0.11	0.54	534	0.76
June 1979	(4)	0.13	288	0.03	0.19	413	0.32	0.17	480	0.29	0.02	640	0.08	0.51	432	0.71
July 1979	(4)	0.24	235	0.04	0.02	375	0.01	0.02	429	0.02	0.02	470	0.03	0.30	283	0.11
Aug. 1979	(4)	0.47	139	0.05	0.19	297	0.06	0.04	386	0.03				0.70	195	0.12
Sept. 1979	(4)	0.08	246	0.02	0.06	285	0.02	0.02	385	0.02	0.06	502	0.11	0.22	404	0.21

Table 17. Mean catch rates and mean total lengths (mm) by mesh size of sheepshead caught with gill nets in the Matagorda Bay system (NS= no samples taken, blank = no fish caught or no fish measured).

Month and year	Number of samples	7.6-cm			10.2-cm			12.7-cm			15.2-cm			All meshes		
		No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	kg/h	No/h	Length	Kg/h
Oct. 1978	(4)	0.02	385	0.02	0.04	349	0.03				0.02	407	0.02	0.08	372	0.07
Nov. 1978	(4)				0.02	310	0.01	0.07	304	0.03				0.09	305	0.04
Dec. 1978	(4)	0.04	214	0.00				0.07	281	0.03	0.05	360	0.04	0.16	293	0.08
Jan. 1979	(4)				0.02	392	0.02	0.02	286	0.01				0.04	339	0.03
Feb. 1979	(4)															
Mar. 1979	(4)							0.04	340		0.06	366	0.05	0.09	355	0.08
Apr. 1979	(4)							0.02	345	0.01	0.04	423	0.04	0.06	397	0.05
May 1979	(4)							0.06	370	0.05	0.03	415	0.04	0.06	385	0.06
June 1979	(4)															
July 1979	(4)															
Aug. 1979	(4)										0.02	487		0.02	487	
Sept. 1979	(4)							0.02	397	0.02				0.02	397	0.02

Table 18. Mean catch rates and mean total lengths (mm) by mesh size of southern flounder caught with gill nets in the Matagorda Bay system (NS = no samples taken, blank = no fish caught or no fish measured).

Month and year	Number of samples	7.6-cm			10.2-cm			12.7-cm			15.2-cm			All meshes					
		No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	kg/h	No/h	Length	Kg/h			
Oct. 1978	(4)							0.04	230	0.01							0.04	230	0.01
Nov. 1978	(4)							0.02	393	0.01	0.02	387	0.01	0.04	390	0.03			
Dec. 1978	(4)	0.04	196	0.00							0.02	421	0.01	0.05	271	0.02			
Jan. 1979	(4)																		
Feb. 1979	(4)	0.04	242	0.00	0.04	279	0.01							0.07	260	0.01			
Mar. 1979	(4)				0.02	279	0.00							0.02	279	0.00			
Apr. 1979	(4)				0.10	280	0.03							0.10	280	0.03			
May 1979	(4)																		
June 1979	(4)	0.02	217	0.00	0.06	298	0.02	0.02		0.01				0.11	271	0.03			
July 1979	(4)	0.06	238	0.01	0.04	298	0.01							0.11	268	0.03			
Aug. 1979	(4)				0.13	303	0.03				0.02	434		0.15	329	0.04			
Sept. 1979	(4)	0.02	216	0.00	0.04	276	0.01							0.06	256	0.01			

Table 19. Mean catch rates and mean total lengths (mm) by mesh size of Atlantic croaker caught with gill nets in the Matagorda Bay system (NS = no samples taken, blank = no fish caught or no fish measured).

Month and year	Number of samples	7.6-cm			10.2-cm			12.7-cm			15.2-cm			All meshes					
		No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	kg/h	No/h	Length	Kg/h			
Oct. 1978	(4)	0.32	250	0.07													0.32	250	0.07
Nov. 1978	(4)																		
Dec. 1978	(4)																		
Jan. 1979	(4)																		
Feb. 1979	(4)																		
Mar. 1979	(4)																		
Apr. 1979	(4)																		
May 1979	(4)	0.04	270	0.01													0.04	270	0.01
June 1979	(4)	0.04	257	0.01													0.04	257	0.01
July 1979	(4)	0.02	270	0.00													0.02	270	0.00
Aug. 1979	(4)	0.02	235	0.00													0.02	235	0.00
Sept. 1979	(4)	0.26	281	0.07													0.26	281	0.07

Table 20. Mean catch rates and mean total lengths (mm) by mesh size of red drum caught with gill nets in the San Antonio Bay system (NS = no samples taken, blank = no fish caught or no fish measured).

Month and year	Number of samples	7.6-cm			10.2-cm			12.7-cm			15.2-cm			All meshes		
		No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	kg/h	No/h	Length	Kg/h
Oct. 1978	(4)	0.52	357	0.25	0.02		0.03	0.04	568	0.08	0.02	630	0.05	0.60	394	0.45
Nov. 1978	(4)	0.43	363	0.25	0.14	406	0.11	0.02	568	0.03				0.60	382	0.40
Dec. 1978	(4)	0.88	377	0.52	1.25	404	0.89	0.19	441	0.23	0.05	566	0.11	2.36	401	1.77
Jan. 1979	(4)	0.03	341	0.01	0.31	393	0.20	0.07	473	0.08	0.05	611	0.13	0.46	424	0.43
Feb. 1979	(4)	0.12	368	0.06	0.02	423	0.01	0.03	485	0.05	0.02	595	0.04	0.16	425	0.15
Mar. 1979	(4)	0.04	414	0.03	0.05	435	0.05	0.04	505	0.04				0.13	454	0.12
Apr. 1979	(4)	0.16	376	0.09	0.21	479	0.24	0.06	493	0.12				0.43	447	0.48
May 1979	(4)	0.17	427	0.13	0.05	421	0.04	0.02	449	0.02				0.23	429	0.19
June 1979	(4)	0.04	316	0.01	0.19	472	0.22							0.23	433	0.25
July 1979	(4)	0.17	296	0.06	0.11	459	0.16	0.13	562	0.23				0.40	404	0.50
Aug. 1979	(4)	0.43	312	0.16	0.02	245	0.00	0.04	255	0.04				0.49	298	0.22
Sept. 1979	(4)	1.77	330	0.70	0.06	346	0.03	0.08	565	0.15	0.02	0.00		1.93	347	0.15

Table 21. Mean catch rates and mean total lengths (mm) by mesh size of spotted seatrout caught with gill nets in the San Antonio Bay system (NS = no samples taken, blank = no fish caught or no fish measured).

Month and year	Number of samples	7.6-cm			10.2-cm			12.7-cm			15.2-cm			All meshes		
		No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	kg/h	No/h	Length	Kg/h
Oct. 1978	(4)	0.24	369	0.13	0.09	514	0.13							0.34	424	0.28
Nov. 1978	(4)	0.55	365	0.25	0.05	483	0.04							0.60	370	0.29
Dec. 1978	(4)	0.12	386	0.06	0.05	442	0.05	0.03	573	0.07				0.20	427	0.17
Jan. 1979	(4)	0.08	360	0.04	0.02	367	0.01							0.10	361	0.04
Feb. 1979	(4)	0.14	413	0.09										0.10	413	0.06
Mar. 1979	(4)	0.27	393	0.16	0.05	500	0.08							0.33	400	0.24
Apr. 1979	(4)	0.17	424	0.15	0.02	470	0.02	0.04	408	0.03	0.02	406	0.01	0.25	423	0.20
May 1979	(4)	0.29	443	0.18										0.29	443	0.18
June 1979	(4)	0.06	415	0.05										0.06	415	0.05
July 1979	(4)	0.19	346	0.09	0.11	485	0.15							0.30	401	0.26
Aug. 1979	(4)	0.26	402	0.17	0.04	540	0.06	0.04						0.35	471	0.30
Sept. 1979	(4)	0.19	428	0.14	0.11									0.31	428	0.22

Table 22. Mean catch rates and mean total lengths (mm) by mesh size of black drum caught with gill nets in the San Antonio Bay system (NS = no samples taken, blank = no fish caught or no fish measured).

Month and year	Number of samples	7.6-cm			10.2-cm			12.7-cm			15.2-cm			All meshes		
		No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	kg/h	No/h	Length	Kg/h
Oct. 1978	(4)	0.11	218	0.02	0.06	314	0.02	0.02	348	0.01	0.02	525	0.04	0.21	290	0.09
Nov. 1978	(4)	0.18	230	0.03	0.08	309	0.04	0.08	414	0.07	0.03	455	0.04	0.38	307	0.20
Dec. 1978	(4)	0.25	233	0.05	0.25	282	0.10	0.14	357	0.09	0.03	427	0.03	0.68	281	0.28
Jan. 1979	(4)	0.07	217	0.01	0.18	260	0.05	0.33	363	0.23	0.02	395	0.01	0.59	316	0.31
Feb. 1979	(4)							0.07	572	0.40	0.03	461	0.05	0.10	535	0.45
Mar. 1979	(4)	0.02	238	0.00	0.04	578	0.17	0.11	724	1.10				0.16	637	1.28
Apr. 1979	(4)	0.02	352	0.00	0.02	265	0.01	0.31	480	0.55	0.14	516	0.28	0.48	476	0.84
May 1979	(4)	0.02		0.01										0.02		0.01
June 1979	(4)	0.02	255	0.00				0.04		0.03	0.02	578	0.06	0.08	416	0.09
July 1979	(4)							0.02	382	0.02	0.04	734	0.05	0.06	617	0.07
Aug. 1979	(4)	0.04	264	0.01	0.06	339	0.05	0.18	368	0.18				0.29	335	0.24
Sept. 1979	(4)	0.06	256	0.01	0.04	321	0.02	0.13	364	0.11	0.06	421	0.07	0.29	320	0.22

Table 23. Mean catch rates and mean total lengths (mm) by mesh size of sheepshead caught with gill nets in the San Antonio Bay system (NS = no samples taken, blank = no fish caught or no fish measured).

Month and year	Number of samples	7.6-cm			10.2-cm			12.7-cm			15.2-cm			All meshes		
		No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	kg/h	No/h	Length	Kg/h
Oct. 1978	(4)				0.02	232	0.00	0.04	312	0.02	0.19	372	0.18	0.24	352	0.20
Nov. 1978	(4)	0.02	477	0.03	0.02	320	0.01	0.18	361	0.17	0.35	388	0.38	0.57	380	0.59
Dec. 1978	(4)															
Jan. 1979	(4)															
Feb. 1979	(4)															
Mar. 1979	(4)	0.02	264	0.01	0.02	260	0.01	0.02	371	0.02				0.05	298	0.03
Apr. 1979	(4)							0.29	326	0.19	0.21	350	0.16	0.50	336	0.35
May 1979	(4)							0.02	402	0.02				0.02	402	0.02
June 1979	(4)															
July 1979	(4)	0.02	169	0.00				0.02	384	0.02				0.02	276	0.03
Aug. 1979	(4)										0.12	409	0.11	0.12	409	0.11
Sept. 1979	(4)				0.06	243	0.01	0.02	396	0.02				0.08	281	0.04

Table 24. Mean catch rates and mean total lengths (mm) by mesh size of southern flounder caught with gill nets in the San Antonio Bay system (NS = no samples taken, blank = no fish caught or no fish measured).

Month and year	Number of samples	7.6-cm			10.2-cm			12.7-cm			15.2-cm			All meshes		
		No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	kg/h	No/h	Length	Kg/h
Oct. 1978	(4)	0.02	202	0.00	0.13	312	0.06	0.02	300	0.01	0.04	412	0.03	0.21	319	0.10
Nov. 1978	(4)				0.03	256	0.01				0.02			0.05	256	0.01
Dec. 1978	(4)															
Jan. 1979	(4)															
Feb. 1979	(4)							0.02	352	0.01	0.02	419	0.02	0.03	386	0.02
Mar. 1979	(4)				0.02	268	0.00	0.02		0.01				0.04	268	0.01
Apr. 1979	(4)				0.04	277	0.01	0.02	440	0.02				0.06	358	0.03
May 1979	(4)							0.02	374	0.01	0.08	426	0.08	0.10	416	0.09
June 1979	(4)	0.04	350	0.02	0.02		0.01				0.02	406	0.02	0.08	378	0.05
July 1979	(4)				0.06	299	0.02							0.06	299	0.02
Aug. 1979	(4)				0.04	287	0.01	0.02	409					0.06	328	0.02
Sept. 1979	(4)	0.04	212	0.00	0.04	304	0.01							0.08	258	0.02

Table 25. Mean catch rates and mean total lengths (mm) by mesh size of Atlantic croaker caught with gill nets in the San Antonio Bay system (NS= no samples taken, blank = no fish caught or no fish measured).

Month and year	Number of samples	7.6-cm			10.2-cm			12.7-cm			15.2-cm			All meshes					
		No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	kg/h	No/h	Length	Kg/h			
Oct. 1978	(4)	0.11	210	0.02	0.04	336	0.02										0.15	260	0.06
Nov. 1978	(4)																		
Dec. 1978	(4)																		
Jan. 1979	(4)																		
Feb. 1979	(4)																		
Mar. 1979	(4)																		
Apr. 1979	(4)																		
May 1979	(4)																		
June 1979	(4)																		
July 1979	(4)	0.04	262	0.01													0.04	262	0.01
Aug. 1979	(4)	0.12	273	0.03													0.12	273	0.03
Sept. 1979	(4)																		

Table 26. Mean catch rates and mean total lengths (mm) by mesh size of red drum caught with gill nets in the Aransas Bay system (NS = no samples taken, blank = no fish caught or no fish measured).

Month and year	Number of samples	7.6-cm			10.2-cm			12.7-cm			15.2-cm			All meshes		
		No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	kg/h	No/h	Length	Kg/h
Oct. 1978	(4)	0.26	393	0.15	0.09	510	0.14	0.02	690	0.06				0.37	452	0.40
Nov. 1978	(4)	0.58	377	0.37	0.86	406	0.70	0.10	489	0.15	0.02	414	0.02	1.55	405	1.25
Dec. 1978	(4)	0.21	351	0.10	0.42	412	0.34	0.16	531	0.29	0.02	642	0.05	0.81	425	0.76
Jan. 1979	(4)	0.33	360	0.17	0.27	398	0.19	0.04	622	0.11				0.65	395	0.47
Feb. 1979	(4)	0.43	368	0.22	0.23	384	0.16				0.02			0.67	373	0.39
Mar. 1979	(4)	0.70	380	0.40	0.35	421	0.27	0.12	440	0.13	0.05	537	0.15	1.22	404	0.89
Apr. 1979	(4)	0.42	396	0.26	0.08	444	0.08							0.50	400	0.33
May 1979	(4)	0.19	436	0.15	0.17	465	0.19	0.06	504	0.09	0.02		0.02	0.44	461	0.44
June 1979	(4)	0.15	397	0.10	0.15	484	0.19							0.30	444	0.29
July 1979	(4)	0.14	466	0.19	0.14	487	0.18							0.29	482	0.37
Aug. 1979	(4)	0.31	337	0.15	0.04	483	0.05							0.35	358	0.21
Sept. 1979	(4)	0.58	348	0.28	0.02			0.02	558	0.04				0.62	363	0.35

Table 27. Mean catch rates and mean total lengths (mm) by mesh size of spotted seatrout caught with gill nets in the Aransas Bay system (NS = no samples taken, blank = no fish caught or no fish measured).

Month and year	Number of samples	7.6-cm			10.2-cm			12.7-cm			15.2-cm			All meshes		
		No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	kg/h	No/h	Length	Kg/h
Oct. 1978	(4)	0.02						0.02								0.04
Nov. 1978	(4)	0.16	371	0.08	0.12	480	0.12	0.02	475	0.02				0.30	414	0.22
Dec. 1978	(4)				0.05	502	0.07	0.05	622	0.12	0.02	745	0.06	0.11	602	0.25
Jan. 1979	(4)	0.09	375	0.05	0.02	470	0.02							0.11	394	0.07
Feb. 1979	(4)	0.07	368	0.03	0.05	462	0.06							0.12	408	0.09
Mar. 1979	(4)	0.30	432	0.22	0.25	499	0.33	0.05	612	0.11	0.02	526	0.04	0.62	488	0.71
Apr. 1979	(4)	0.34	460	0.34	0.34	542	0.53	0.02	560	0.04				0.69	499	0.91
May 1979	(4)	0.08	387	0.05	0.13	625	0.23	0.08		0.17	0.02	606	0.04	0.31	503	0.46
June 1979	(4)	0.06	456	0.06										0.06	456	0.06
July 1979	(4)				0.10	510	0.16	0.10	522	0.17				0.21	520	0.33
Aug. 1979	(4)	0.14	412	0.10	0.18	544	0.31							0.33	471	0.41
Sept. 1979	(4)															

Table 28. Mean catch rates and mean total lengths (mm) by mesh size of black drum caught with gill nets in the Aransas Bay system (NS = no samples taken, blank = no fish caught or no fish measured).

Month and year	Number of samples	7.6-cm			10.2-cm			12.7-cm			15.2-cm			All meshes		
		No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	kg/h	No/h	Length	Kg/h
Oct. 1978	(4)	0.22	234	0.04	0.07	342	0.04	0.07	364	0.06	0.04	0.08	0.41	261	0.24	
Nov. 1978	(4)	0.31	215	0.05	0.16	314	0.07	0.07	382	0.08	0.05	474	0.08	0.59	315	0.32
Dec. 1978	(4)	0.11	227	0.02	0.24	314	0.12	0.40	389	0.36	0.21	458	0.30	0.97	368	0.80
Jan. 1979	(4)	0.22	229	0.04	0.11	297	0.04						0.33	248	0.08	
Feb. 1979	(4)	0.23	226	0.04	0.11	274	0.04	0.07	368	0.06	0.02	475	0.03	0.43	264	0.16
Mar. 1979	(4)	0.05	216	0.01	0.17	350	0.10	0.30	376	0.26	0.10	462	0.14	0.62	367	0.51
Apr. 1979	(4)	0.12	228	0.02	0.08	337	0.04	0.20	343	0.13	0.12	462	0.19	0.51	348	0.39
May 1979	(4)	0.08	228	0.01	0.06	272	0.02	0.08	364	0.08	0.02	450	0.03	0.25	297	0.14
June 1979	(4)	0.11	228	0.02	0.13	352	0.08	0.04	0.06				0.28	302	0.17	
July 1979	(4)				0.23	355	0.14	0.10	578	0.09	0.02	473	0.03	0.35	426	0.27
Aug. 1979	(4)	0.10	380	0.04	0.14	336	0.07	0.12	384	0.10				0.37	362	0.22
Sept. 1979	(4)	0.06	272	0.02	0.04	341	0.02	0.02	470	0.03				0.12	326	0.06

Table 29. Mean catch rates and mean total lengths (mm) by mesh size of sheepshead caught with gill nets in the Aransas Bay system (NS = no samples taken, blank = no fish caught or no fish measured).

Month and year	Number of samples	7.6-cm			10.2-cm			12.7-cm			15.2-cm			All meshes		
		No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	kg/h	No/h	Length	Kg/h
Oct. 1978	(4)				0.30	254	0.12	0.21	328	0.16	0.19	352	0.17	0.69	302	0.44
Nov. 1978	(4)				0.14	288	0.07	0.17	284	0.08	0.10	333	0.08	0.42	298	0.22
Dec. 1978	(4)				0.03	238	0.01	0.29	306	0.18	0.21	344	0.16	0.53	317	0.35
Jan. 1979	(4)							0.07	285	0.03	0.04	332	0.03	0.11	305	0.06
Feb. 1979	(4)															
Mar. 1979	(4)				0.02	255	0.01	0.10	291	0.05	0.12	366	0.13	0.25	325	0.18
Apr. 1979	(4)							0.12	308	0.06	0.16	337	0.12	0.28	324	0.18
May 1979	(4)							0.02	345	0.02	0.15	311	0.10	0.17	316	0.12
June 1979	(4)				0.02			0.02	345	0.02				0.04	345	0.03
July 1979	(4)				0.14	279	0.06	0.25	354	0.23	0.46	364	0.45	0.85	342	0.73
Aug. 1979	(4)				0.04	270	0.02							0.04	270	0.02
Sept. 1979	(4)				0.16	279	0.07	0.02	234	0.00	0.08	349	0.06	0.25	288	0.13

Table 30. Mean catch rates and mean total lengths (mm) by mesh size of southern flounder caught with gill nets in the Aransas Bay system (NS= no samples taken, blank = no fish caught or no fish measured).

Month and year	Number of samples	7.6-cm			10.2-cm			12.7-cm			15.2-cm			All meshes				
		No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	kg/h	No/h	Length	Kg/h		
Oct. 1978	(4)	0.02	215	0.00									0.06	397	0.05	0.07	352	0.05
Nov. 1978	(4)							0.10	366	0.07			0.05	436	0.06	0.16	383	0.12
Dec. 1978	(4)							0.05	374	0.03						0.05	374	0.03
Jan. 1979	(4)																	
Feb. 1979	(4)	0.02	218	0.00				0.02	343	0.01						0.04	280	0.01
Mar. 1979	(4)							0.02	370							0.02	370	
Apr. 1979	(4)				0.02	270	0.00	0.02	324	0.01						0.04	297	0.01
May 1979	(4)				0.04	287	0.01									0.04	287	0.01
June 1979	(4)				0.04	278	0.01									0.04	278	0.01
July 1979	(4)	0.02			0.02	290	0.01	0.04	464	0.05						0.08	406	0.07
Aug. 1979	(4)							0.02	304	0.01						0.02	304	0.01
Sept. 1979	(4)	0.06	212	0.01	0.02	314	0.01									0.08	246	0.01

Table 31. Mean catch rates and mean total lengths (mm) by mesh size of Atlantic croaker caught with gill nets in the Aransas Bay system (NS = no samples taken, blank = no fish caught or no fish measured).

Month and year	Number of samples	7.6-cm			10.2-cm			12.7-cm			15.2-cm			All meshes					
		No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	kg/h	No/h	Length	Kg/h			
Oct. 1978	(4)	0.45	288	0.16	0.21	351	0.13										0.65	315	0.29
Nov. 1978	(4)	0.10	273	0.04	0.07	377	0.06										0.17	325	0.10
Dec. 1978	(4)																		
Jan. 1979	(4)																		
Feb. 1979	(4)																		
Mar. 1979	(4)																		
Apr. 1979	(4)																		
May 1979	(4)																		
June 1979	(4)	0.02															0.02		
July 1979	(4)																		
Aug. 1979	(4)	0.08	252	0.02	0.02	159	0.00										0.10	206	0.02
Sept. 1979	(4)	0.06	270	0.01	0.02			0.02	382	0.02							0.10	326	0.04

Table 32. Mean catch rates and mean total lengths (mm) by mesh size of red drum caught with gill nets in the Corpus Christi Bay system (NS = no samples taken, blank = no fish caught or no fish measured).

Month and year	Number of samples	7.6-cm			10.2-cm			12.7-cm			15.2-cm			All meshes		
		No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	kg/h	No/h	Length	Kg/h
Oct. 1978	(4)	0.24	339	0.11				0.05	561	0.11	0.05	673	0.10	0.35	432	0.41
Nov. 1978	(4)	0.20	357	0.10	0.13	432	0.12	0.08	543	0.14	0.05	619	0.13	0.47	446	0.52
Dec. 1978	(4)	0.18	374	0.10	0.21	443	0.20	0.07	490	0.11				0.46	419	0.38
Jan. 1979	(4)	0.03	388	0.02	0.03	430	0.03	0.02	363	0.01	0.08	643	0.24	0.17	522	0.30
Feb. 1979	(4)	0.05	411	0.04	0.02	446	0.02	0.03	596	0.06				0.10	478	0.12
Mar. 1979	(4)	0.05	446	0.07				0.05	559	0.10	0.04	603	0.03	0.14	528	0.21
Apr. 1979	(4)	0.06		0.05	0.15	410	0.12				0.04	683	0.13	0.25	546	0.39
May 1979	(4)				0.08	496	0.10	0.02						0.10	496	0.12
June 1979	(4)	0.02			0.27	486	0.34	0.08	474	0.12	0.02	700	0.07	0.40	496	0.56
July 1979	(4)	0.02		0.01	0.02	546	0.04	0.04	550	0.08				0.08	549	0.12
Aug. 1979	(4)	0.12	327	0.04				0.02		0.05				0.14	327	0.10
Sept. 1979	(4)	0.34	335	0.12	0.02			0.02	587	0.04				0.38	377	0.21

Table 33. Mean catch rates and mean total lengths (mm) by mesh size of spotted seatrout caught with gill nets in the Corpus Christi Bay system (NS = no samples taken, blank = no fish caught or no fish measured).

Month and year	Number of samples	7.6-cm			10.2-cm			12.7-cm			15.2-cm			All meshes		
		No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	kg/h	No/h	Length	Kg/h
Oct. 1978	(4)	0.09	382	0.04	0.07	564	0.11							0.16	455	0.15
Nov. 1978	(4)	0.12	388	0.06	0.02	470	0.02							0.13	398	0.08
Dec. 1978	(4)	0.05	393	0.03	0.02	513	0.02							0.07	423	0.05
Jan. 1979	(4)	0.07	434	0.05	0.27	533	0.40	0.28	606	0.67	0.05	658	0.14	0.67	564	1.27
Feb. 1979	(4)	0.51	400	0.29	0.08	536	0.12							0.59	429	0.44
Mar. 1979	(4)	0.02	380	0.00	0.04	518	0.05							0.05	472	0.07
Apr. 1979	(4)	0.29	458	0.28	0.46	512	0.61	0.06	624	0.15	0.02	696	0.06	0.82	513	1.14
May 1979	(4)	0.06	378	0.03				0.04	600	0.09	0.02			0.12	452	0.11
June 1979	(4)	0.02		0.02	0.15	544	0.26	0.06	672	0.17				0.23	562	0.41
July 1979	(4)	0.10	442	0.07	0.43	520	0.66	0.16	578	0.40	0.02	610		0.72	534	1.11
Aug. 1979	(4)	0.10	506	0.12	0.14	551	0.23	0.08	544	0.13				0.33	532	0.45
Sept. 1979	(4)	0.28	400	0.17	0.08	393	0.16				0.04	554	0.07	0.40	433	0.44

Table 34. Mean catch rates and mean total lengths (mm) by mesh size of black drum caught with gill nets in the Corpus Christi Bay system (NS = no samples taken, blank = no fish caught or no fish measured).

Month and year	Number of samples	7.6-cm			10.2-cm			12.7-cm			15.2-cm			All meshes		
		No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	kg/h	No/h	Length	Kg/h
Oct. 1978	(4)	0.02	235	0.00	0.04		0.03	0.02	384	0.01				0.07	310	0.04
Nov. 1978	(4)	0.02	481	0.02	0.07	331	0.03	0.07	414	0.07	0.03	438	0.04	0.18	408	0.17
Dec. 1978	(4)				0.02	268		0.07	418	0.08	0.03	449	0.05	0.11	406	0.14
Jan. 1979	(4)				0.02	368	0.01				0.02	472	0.03	0.03	420	0.04
Feb. 1979	(4)							0.03	404	0.03	0.02	510	0.03	0.05	440	0.07
Mar. 1979	(4)				0.04	282	0.01	0.11	434	0.14	0.04	471	0.05	0.18	411	0.22
Apr. 1979	(4)				0.06	286	0.02	0.08	390	0.07	0.06	520	0.10	0.19	400	0.17
May 1979	(4)	0.02			0.04			0.04	432	0.05	0.02	436	0.02	0.12	434	0.15
June 1979	(4)				0.04	294	0.02	0.08	424	0.10	0.02	497	0.04	0.15	415	0.17
July 1979	(4)				0.08	286	0.04	0.08	428	0.07				0.16	380	0.13
Aug. 1979	(4)	0.02		0.00	0.02		0.03	0.22	364	0.17	0.02	511	0.04	0.29	378	0.24
Sept. 1979	(4)	0.02			0.04	350	0.02	0.13	452	0.16	0.08	480	0.12	0.27	453	0.33

Table 35. Mean catch rates and mean total lengths (mm) by mesh size of sheephead caught with gill nets in the Corpus Christi Bay system (NS = no samples taken, blank = no fish caught or no fish measured).

Month and year	Number of samples	7.6-cm			10.2-cm			12.7-cm			15.2-cm			All meshes		
		No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	kg/h	No/h	Length	Kg/h
Oct. 1978	(4)	0.02	274	0.01				0.13	364	0.11	0.09	376	0.09	0.24	361	0.21
Nov. 1978	(4)							0.03	348	0.03				0.03	348	0.03
Dec. 1978	(4)	0.02	370	0.02	0.02	292	0.01	0.07	374	0.06	0.34	383		0.44	378	0.37
Jan. 1979	(4)							0.03	348	0.02	0.05	390	0.05	0.08	373	0.08
Feb. 1979	(4)	0.02	229	0.00	0.08	315	0.05	0.10	282	0.04	0.07	372	0.06	0.27	312	0.16
Mar. 1979	(4)				0.04	282	0.01	0.16	339	0.10	0.14	366	0.10	0.33	343	0.21
Apr. 1979	(4)				0.06	260	0.02	0.70	323	0.42	0.63	375	0.58	1.39	346	1.03
May 1979	(4)							0.06	336	0.04				0.06	336	0.04
June 1979	(4)				0.06	270	0.03	0.23	363	0.21	0.19	354	0.16	0.48	351	0.40
July 1979	(4)	0.02	320					0.06	329	0.04				0.08	327	0.05
Aug. 1979	(4)							0.06	346	0.04	0.02	427	0.03	0.08	366	0.07
Sept. 1979	(4)				0.06	241	0.02	0.11	351	0.09	0.02	432	0.03	0.19	323	0.14

Table 36. Mean catch rates and mean total lengths (mm) by mesh size of southern flounder caught with gill nets in the Corpus Christi Bay system (NS = no samples taken, blank = no fish caught or no fish measured).

Month and year	Number of samples	7.6-cm			10.2-cm			12.7-cm			15.2-cm			All meshes		
		No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	kg/h	No/h	Length	Kg/h
Oct. 1978	(4)	0.07	306	0.04	0.07	324	0.03	0.09	398	0.07	0.05	415	0.05	0.29	362	0.16
Nov. 1978	(4)	0.02			0.02	556		0.10	385	0.05	0.05	383	0.03	0.18	403	0.10
Dec. 1978	(4)				0.05	406	0.06	0.02	412	0.01	0.02	448	0.02	0.08	416	0.09
Jan. 1979	(4)	0.02	298	0.01							0.02	409	0.01	0.03	354	0.02
Feb. 1979	(4)															
Mar. 1979	(4)				0.02	350	0.01	0.02	391		0.04	451	0.04	0.07	411	0.06
April 1979	(4)	0.02						0.04	361	0.02	0.11	401	0.09	0.17	391	0.12
May 1979	(4)				0.08	308	0.03							0.08	308	0.03
June 1979	(4)				0.02	376	0.01	0.06	370	0.04	0.04	432	0.04	0.13	392	0.10
July 1979	(4)	0.02	230		0.08	312	0.03	0.02	295		0.02	402		0.14	310	0.05
Aug. 1979	(4)				0.02	278	0.06							0.02	278	0.01
Sept. 1979	(4)				0.02	459	0.02	0.02	403	0.02	0.02	451	0.02	0.06	438	0.06

Table 37. Mean catch rates and mean total lengths (mm) by mesh size of Atlantic croaker caught with gill nets in the Corpus Christi Bay system (NS = no samples taken, blank = no fish caught or no fish measured).

Month and year	Number of samples	7.6-cm			10.2-cm			12.7-cm			15.2-cm			All meshes		
		No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	kg/h	No/h	Length	Kg/h
Oct. 1978	(4)	0.57	285	0.17	0.16	342	0.09	0.02	283				0.75	296	0.26	
Nov. 1978	(4)	0.12	281	0.03									0.12	281	0.03	
Dec. 1978	(4)	0.07	267	0.01									0.07	267	0.01	
Jan. 1979	(4)	0.05	271	0.01									0.05	271	0.01	
Feb. 1979	(4)															
Mar. 1979	(4)	0.02	285	0.00	0.02	181	0.00						0.04	233	0.01	
Apr. 1979	(4)															
May 1979	(4)	0.10	259	0.02									0.10	259	0.02	
June 1979	(4)	0.23	266	0.06				0.02	318				0.25	274	0.06	
July 1979	(4)	0.23	270	0.06									0.23	270	0.06	
Aug. 1979	(4)	0.14	269	0.04	0.02	336	0.01						0.16	280	0.05	
Sept. 1979	(4)	0.09	282	0.03	0.02		0.01						0.11	282	0.04	

Table 38. Mean catch rates and mean total lengths (mm) by mesh size of red drum caught with gill nets in the upper Laguna Madre system (NS = no samples taken, blank = no fish caught or no fish measured).

Month and year	Number of samples	7.6-cm			10.2-cm			12.7-cm			15.2-cm			All meshes		
		No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	kg/h	No/h	Length	Kg/h
Oct. 1978	(4)	0.15	378	0.08	0.06	622	0.14	0.02	505	0.02				0.22	456	0.24
Nov. 1978	(4)	0.14	386	0.09	0.04	440	0.03	0.09	522	0.14	0.04	637	0.10	0.30	462	0.37
Dec. 1978	(4)	0.02	366	0.01	0.16	448	0.17	0.02	568	0.04				0.19	452	0.21
Jan. 1979	(4)							0.02	641	0.05				0.02	641	0.05
Feb. 1979	(4)	0.04	345	0.02	0.06	416	0.05	0.11	478	0.18	0.04	526	0.07	0.25	448	0.32
Mar. 1979	(4)	0.02	490	0.02	0.06	468	0.06				0.04	420	0.03	0.11	456	0.12
Apr. 1979	(4)	0.02	488	0.03	0.18	458	0.19							0.20	461	0.21
May 1979	(4)	0.06	478	0.08	0.15	497	0.18							0.22	490	0.26
June 1979	(4)	0.04	490	0.05	0.09	488	0.11							0.13	489	0.16
July 1979	(4)				0.02	509	0.03							0.02	509	0.03
Aug. 1979	(4)	0.04	288	0.01	0.08	484	0.11	0.10	574	0.21	0.02		0.05	0.24	502	0.38
Sept. 1979	(4)	0.09	346	0.05				0.10	597	0.21				0.17	472	0.20

Table 39. Mean catch rates and mean total lengths (mm) by mesh size of spotted seatrout caught with gill nets in the upper Laguna Madre system (NS = no samples taken, blank = no fish caught or no fish measured).

Month and year	Number of samples	7.6-cm			10.2-cm			12.7-cm			15.2-cm			All meshes		
		No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	kg/h	No/h	Length	Kg/h
Oct. 1978	(4)	0.52	409	0.28	0.13	508	0.15				0.02	670	0.05	0.67	443	0.50
Nov. 1978	(4)	0.16	385	0.08	0.02	515	0.02	0.02	635	0.04				0.20	420	0.14
Dec. 1978	(4)	0.05	391	0.03	0.02	485	0.01	0.04	646	0.09				0.11	492	0.13
Jan. 1979	(4)										0.02	740	0.07	0.02	740	0.07
Feb. 1979	(4)	0.02	380	0.01	0.04	410	0.02	0.02	608	0.04	0.02	570	0.03	0.10	475	0.11
Mar. 1979	(4)	0.09	395	0.05	0.04	585	0.07							0.13	450	0.12
Apr. 1979	(4)	0.24	417	0.17	0.06	495	0.07	0.04	670	0.08				0.34	447	0.32
May 1979	(4)	0.32	401	0.19	0.06	493	0.08	0.02	640	0.04	0.02	369	0.01	0.43	426	0.32
June 1979	(4)	0.33	418	0.25	0.22	528	0.32	0.02		0.04				0.57	462	0.61
July 1979	(4)	0.11	433	0.08	0.04	444	0.04							0.15	436	0.12
Aug. 1979	(4)	0.08	393	0.05				0.02	700	0.06				0.10	470	0.12
Sept. 1979	(4)	0.12	437	0.09										0.12	437	0.09

Table 40. Mean catch rates and mean total lengths (mm) by mesh size of black drum caught with gill nets in the upper Laguna Madre system (NS = no samples taken, blank = no fish caught or no fish measured).

Month and year	Number of samples	7.6-cm			10.2-cm			12.7-cm			15.2-cm			All meshes		
		No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	kg/h	No/h	Length	Kg/h
Oct. 1978	(4)	0.02	217	0.00	0.09	397	0.09	0.80	406	0.77	0.19	450	0.25	1.10	411	1.13
Nov. 1978	(4)	0.02	610	0.05	0.05	486	0.10	0.27	416	0.30	0.16	472	0.25	0.50	449	0.70
Dec. 1978	(4)	0.02	223	0.00	0.05	478	0.09	0.07	415	0.08	0.12	483	0.21	0.27	446	0.39
Jan. 1979	(4)	0.02	520	0.04	0.02	575	0.05	0.07	431	0.08				0.11	470	0.17
Feb. 1979	(4)	0.15	241	0.03	0.06	394	0.04	0.10	446	0.13	0.08	462	0.11	0.38	364	0.31
Mar. 1979	(4)	0.02	230	0.00	0.02	431	0.02	0.19	416	0.19	0.04	444	0.05	0.27	408	0.27
Apr. 1979	(4)	0.02	245	0.00	0.02	280	0.01	0.12	421	0.12	0.08	510	0.13	0.24	416	0.26
May 1979	(4)				0.22	302	0.08	0.09	431	0.09	0.11	498	0.19	0.41	378	0.36
June 1979	(4)				0.15	304	0.07	0.04	539	0.11	0.02	375	0.02	0.22	358	0.20
July 1979	(4)				0.06	310	0.03	0.04	420	0.05				0.11	338	0.08
Aug. 1979	(4)				0.12	330	0.07	0.06	340	0.04	0.06	432	0.10	0.24	352	0.21
Sept. 1979	(4)				0.14	357	0.10	0.14	375	0.12	0.08	474	0.12	0.28	390	0.27

Table 41. Mean catch rates and mean total lengths (mm) by mesh size of sheepshead caught with gill nets in the upper Laguna Madre system (NS = no samples taken, blank = no fish caught or no fish measured).

Month and year	Number of samples	7.6-cm		10.2-cm		12.7-cm		15.2-cm		All meshes					
		No/h	Length Kg/h	No/h	Length Kg/h	No/h	Length Kg/h	No/h	Length kg/h	No/h	Length Kg/h				
Oct. 1978	(4)					0.13	322	0.08	0.15	389	0.15	0.28	358	0.23	
Nov. 1978	(4)					0.09	377	0.09	0.13	413	0.16	0.22	398	0.24	
Dec. 1978	(4)			0.05	350	0.05	0.09	378	0.09	0.19	399	0.23	0.34	386	0.36
Jan. 1979	(4)								0.02	371	0.02	0.02	371	0.02	
Feb. 1979	(4)					0.02	382	0.02	0.13	422	0.19	0.15	417	0.21	
Mar. 1979	(4)					0.02	340	0.01	0.02	400	0.02	0.04	370	0.04	
Apr. 1979	(4)								0.08	378	0.08	0.08	378	0.08	
May 1979	(4)					0.04	362	0.04	0.02	411	0.03	0.06	379	0.07	
June 1979	(4)					0.04	372	0.04	0.07	345	0.05	0.11	356	0.09	
July 1979	(4)								0.04	418	0.06	0.04	418	0.06	
Aug. 1979	(4)					0.04	345	0.04	0.04	422	0.06	0.08	383	0.09	
Sept. 1979	(4)					0.12	366	0.12	0.12	408	0.15	0.19	387	0.21	

Table 42. Mean catch rates and mean total lengths (mm) by mesh size of southern flounder caught with gill nets in the upper Laguna Madre system (NS = no samples taken, blank = no fish caught or no fish measured).

Month and year	Number of samples	7.6-cm			10.2-cm			12.7-cm			15.2-cm			All meshes		
		No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	kg/h	No/h	Length	Kg/h
Oct. 1978	(4)				0.02	325	0.01							0.02	325	0.01
Nov. 1978	(4)	0.02	235	0.00	0.02	400	0.01	0.02	330	0.01	0.04	416	0.03	0.09	359	0.06
Dec. 1978	(4)							0.04	421	0.03				0.04	421	0.03
Jan. 1979	(4)	0.02	363	0.01							0.02	505	0.03	0.04	434	0.04
Feb. 1979	(4)	0.06	196	0.01										0.06	196	0.01
Mar. 1979	(4)							0.06	358	0.03	0.02	404	0.02	0.08	380	0.05
Apr. 1979	(4)				0.02	351	0.01							0.02	351	0.01
May 1979	(4)	0.02	215	0.00							0.02	410	0.02	0.04	312	0.02
June 1979	(4)	0.04	366	0.04	0.04	265	0.01	0.02	370	0.02	0.02	409	0.02	0.13	340	0.09
July 1979	(4)				0.04	354	0.03				0.02	418	0.02	0.06	375	0.05
Aug. 1979	(4)							0.02	409	0.02				0.02	409	0.02
Sept. 1979	(4)	0.02	285	0.01				0.04	900					0.05	592	0.02

Table 43. Mean catch rates and mean total lengths (mm) by mesh size of Atlantic croaker caught with gill nets in the upper Laguna Madre system (NS = no samples taken, blank = no fish caught or no fish measured).

Month and year	Number of samples	7.6-cm			10.2-cm			12.7-cm			15.2-cm			All meshes					
		No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	kg/h	No/h	Length	Kg/h			
Oct. 1978	(4)	0.52	265	0.13	0.19	336	0.10										0.71	287	0.25
Nov. 1978	(4)																		
Dec. 1978	(4)																		
Jan. 1979	(4)																		
Feb. 1979	(4)	0.04	287	0.01													0.04	287	0.01
Mar. 1979	(4)																		
Apr. 1979	(4)																		
May 1979	(4)	0.06	276	0.02	0.06	303	0.03										0.13	292	0.04
June 1979	(4)	0.44	280	0.15	0.09	322	0.04	0.04	352	0.03							0.57	293	0.21
July 1979	(4)	0.06	285	0.02				0.02	210	0.00							0.09	260	0.02
Aug. 1979	(4)				0.02												0.02		
Sept. 1979	(4)	0.02	279	0.00	0.02	380	0.02										0.03	330	0.02

Table 44. Mean catch rates and mean total lengths (mm) by mesh size of red drum caught with gill nets in the lower Laguna Madre system (NS = no samples taken, blank = no fish caught or no fish measured).

Month and year	Number of samples	7.6-cm			10.2-cm			12.7-cm			15.2-cm			All meshes		
		No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	kg/h	No/h	Length	Kg/h
Oct. 1978	(4)	0.19	362	0.10	0.17	480	0.20	0.10	537	0.15	0.10	681	0.24	0.56	488	0.60
Nov. 1978	(4)	0.02			0.09	411	0.09				0.05	685	0.19	0.16	502	0.48
Dec. 1978	(4)				0.12	395	0.06	0.05	437	0.07	0.03	636		0.20	445	0.16
Jan. 1979	(4)	0.07	445	0.08	0.36	416	0.30	0.26	543	0.59	0.35	659	1.28	1.04	530	1.29
Feb. 1979	(4)							0.03	566	0.07	0.07	664	0.21	0.10	631	0.28
Mar. 1979	(4)				0.34	446	0.35	0.05	511	0.08	0.05	624	0.14	0.45	477	0.58
Apr. 1979	(4)	0.09	396	0.07	0.25	415	0.21	0.05	414	0.09	0.04	567	0.08	0.43	426	0.45
May 1979	(4)	0.04	412	0.03	0.17	464	0.18				0.06	477	0.08	0.27	459	0.29
June 1979	(4)	0.02	303	0.01	0.14	471	0.15	0.02	493	0.02	0.02	505	0.02	0.20	460	0.21
July 1979	(4)				0.12	431	0.11	0.02	512	0.03				0.14	442	0.14
Aug. 1979	(4)	0.12	393	0.08	0.02	534	0.03							0.14	421	0.12
Sept. 1979	(4)	0.17	313	0.06	0.04	490	0.05	0.02	576	0.04	0.02	615	0.04	0.25	415	0.22

Table 45. Mean catch rates and mean total lengths (mm) by mesh size of spotted seatrout caught with gill nets in the lower Laguna Madre system (NS = no samples taken, blank = no fish caught or no fish measured).

Month and year	Number of samples	7.6-cm			10.2-cm			12.7-cm			15.2-cm			All meshes		
		No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	kg/h	No/h	Length	Kg/h
Oct. 1978	(4)	0.38	388	0.20				0.02	640	0.05				0.40	401	0.25
Nov. 1978	(4)	0.36	370	0.16	0.07	460	0.06	0.16	614	0.36	0.04	721	0.11	0.62	463	0.64
Dec. 1978	(4)	0.13	366	0.07	0.27	500	0.34	0.30	614	0.72	0.02	730	0.06	0.72	529	1.19
Jan. 1979	(4)	0.10	451	0.10	0.31	513	0.41	0.38	633	0.99	0.10	674	0.32	0.90	582	1.84
Feb. 1979	(4)	0.03	436	0.02	0.05	554	0.09	0.05	609	0.13	0.07	708	0.19	0.21	605	0.44
Mar. 1979	(4)	0.04	360	0.02	0.20	494	0.24	0.11	603	0.24	0.12	706	0.46	0.46	566	0.96
Apr. 1979	(4)	0.55	381	0.28	0.25	472	0.24	0.05	597	0.18	0.05	688	0.18	0.91	440	0.89
May 1979	(4)	0.06	401	0.03	0.10	570	0.15	0.08	631	0.18				0.23	548	0.37
June 1979	(4)	0.10	370	0.05	0.43	517	0.62	0.24	670	0.67	0.06	767	0.23	0.83	581	1.59
July 1979	(4)	0.66	424	0.42	0.20	536	0.29	0.06	628	0.15	0.08	718	0.21	1.00	489	1.09
Aug. 1979	(4)	0.26	402	0.14	0.10	522	0.11	0.20	674	0.54	0.08	742	0.26	0.63	538	1.06
Sept. 1979	(4)	0.36	427	0.25	0.15	543	0.19	0.02	737	0.07				0.53	471	0.51

Table 46. Mean catch rates and mean total lengths (mm) by mesh size of black drum caught with gill nets in the lower Laguna Madre system (NS = no samples taken, blank = no fish caught or no fish measured).

Month and year	Number of samples	7.6-cm			10.2-cm			12.7-cm			15.2-cm			All meshes		
		No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	kg/h	No/h	Length	Kg/h
Oct. 1978	(4)	0.06	219	0.01	0.08	344		0.10	401	0.12	0.10	464		0.33	374	0.32
Nov. 1978	(4)	0.04	205	0.00	0.04	252	0.02	0.28	376	0.23	0.12	459	0.17	0.48	373	0.38
Dec. 1978	(4)	0.02	263		0.02	386	0.01	0.29	388	0.31	0.54	463	0.74	0.86	432	1.08
Jan. 1979	(4)							0.10	403	0.12	0.55	484	1.42	0.66	471	1.23
Feb. 1979	(4)				0.02	338	0.01	0.12	417	0.14				0.14	407	0.15
Mar. 1979	(4)				0.09	389	0.11	0.48	384	0.41	0.25	486	0.41	0.82	414	0.92
Apr. 1979	(4)	0.02	330	0.01	0.23	307	0.10	0.39	389	0.34	0.23	454	0.33	0.87	388	0.78
May 1979	(4)				0.25	288	0.09	0.34	415	0.39	0.69	484	1.17	1.28	429	1.65
June 1979	(4)				0.06	340	0.05	0.04	481	0.05	0.02	526	0.04	0.12	457	0.14
July 1979	(4)				0.70	386	0.59	1.63	457	2.20	1.27	512	2.24	3.61	450	4.69
Aug. 1979	(4)	0.02	229	0.00	0.06	336	0.03	0.12	537	0.15	0.26	511	0.39	0.45	481	0.57
Sept. 1979	(4)							0.11	454	0.14	0.40	495	0.69	0.52	486	0.83

Table 47. Mean catch rates and mean total lengths (mm) by mesh size of sheepshead caught with gill nets in the lower Laguna Madre system (NS = no samples taken, blank = no fish caught or no fish measured).

Month and year	Number of samples	7.6-cm			10.2-cm			12.7-cm			15.2-cm			All meshes		
		No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	kg/h	No/h	Length	Kg/h
Oct. 1978	(4)	0.02	162	0.00	0.02	276	0.01	0.04	306	0.02	0.04	318	0.00	0.02	281	0.04
Nov. 1978	(4)							0.02			0.02	412		0.04	412	
Dec. 1978	(4)	0.02	153	0.01				0.02	400	0.02	0.07	358	0.05	0.10	331	0.07
Jan. 1979	(4)				0.02	313		0.16	306	0.11	0.10	339		0.28	319	0.19
Feb. 1979	(4)							0.07	348	0.06	0.05	371	0.05	0.12	358	0.10
Mar. 1979	(4)							0.23	306	0.13	0.05	335	0.05	0.29	315	0.18
Apr. 1979	(4)				0.04	345	0.03	0.14	351	0.10	0.11	311	0.06	0.29	339	0.19
May 1979	(4)										0.02	303	0.01	0.02	303	0.01
June 1979	(4)				0.02	280	0.01	0.08	346	0.06	0.02	370	0.02	0.12	339	0.08
July 1979	(4)				0.08	272	0.03	0.10	367	0.09	0.06	351	0.05	0.24	331	0.17
Aug. 1979	(4)				0.04	256	0.01	0.02	432	0.03	0.02	318	0.01	0.08	316	0.05
Sept. 1979	(4)	0.02	240	0.00	0.04	264	0.01	0.11	364	0.10	0.08	341	0.06	0.25	332	0.17

Table 48. Mean catch rates and mean total lengths (mm) by mesh size of southern flounder caught with gill nets in the lower Laguna Madre system (NS = no samples taken, blank = no fish caught or no fish measured).

Month and year	Number of samples	7.6-cm			10.2-cm			12.7-cm			15.2-cm			All meshes		
		No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	kg/h	No/h	Length	Kg/h
Oct. 1978	(4)				0.02	281		0.06	352	0.03				0.08	334	0.04
Nov. 1978	(4)							0.02						0.02		
Dec. 1978	(4)				0.05	309	0.03	0.05	400	0.05	0.03	423	0.03	0.13	372	0.12
Jan. 1979	(4)										0.02	390		0.02	390	
Feb. 1979	(4)				0.02	230	0.00	0.02	312	0.01				0.03	271	0.01
Mar. 1979	(4)				0.02			0.05	362	0.03	0.05	405	0.04	0.12	383	0.08
Apr. 1979	(4)	0.05	460	0.06				0.14	386	0.07	0.05	439	0.04	0.25	407	0.16
May 1979	(4)	0.04	242	0.01	0.08	304	0.03				0.02	505	0.03	0.13	315	0.06
June 1979	(4)	0.04		0.01	0.10	319	0.04	0.04	360	0.02				0.18	347	0.07
July 1979	(4)				0.02	582	0.04	0.08	360	0.04	0.02	374	0.01	0.12	400	0.10
Aug. 1979	(4)	0.02	275	0.00	0.06	296	0.02	0.06	432	0.05	0.06	423	0.05	0.20	381	0.13
Sept. 1979	(4)				0.04	287	0.01	0.02	475	0.02	0.02	501	0.03	0.08	388	0.06

Table 49. Mean catch rates and mean total lengths (mm) by mesh size of Atlantic croaker caught with gill nets in the lower Laguna Madre system (NS = no samples taken, blank = no fish caught or no fish measured).

Month and year	Number of samples	7.6-cm			10.2-cm			12.7-cm			15.2-cm			All meshes		
		No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	Kg/h	No/h	Length	kg/h	No/h	Length	Kg/h
Oct. 1978	(4)				0.02	336	0.01							0.02	336	0.01
Nov. 1978	(4)	0.02	240	0.00	0.02	418	0.02							0.04	329	0.02
Dec. 1978	(4)	0.08	262	0.02	0.02	298	0.01							0.10	268	0.03
Jan. 1979	(4)	0.02	257	0.00	0.09	365	0.05	0.09	412	0.08	0.03	389	0.02	0.22	379	0.16
Feb. 1979	(4)				0.02	365	0.01							0.02	365	0.01
Mar. 1979	(4)	0.07	268	0.02	0.02	315	0.01							0.09	280	0.03
Apr. 1979	(4)	0.25	265	0.06	0.12	346	0.07	0.04	412	0.03				0.41	302	0.16
May 1979	(4)	0.04	272	0.01	0.04	340	0.02							0.08	306	0.03
June 1979	(4)	0.02			0.02		0.01							0.04		0.02
July 1979	(4)	0.24	284	0.06	0.10	347	0.06							0.34	308	0.12
Aug. 1979	(4)	0.37	274	0.10	0.30	366	0.20	0.02	454	0.02				0.69	328	0.33
Sept. 1979	(4)	0.11	280	0.03	0.06	364	0.04	0.02	408	0.02				0.19	322	0.09

Table 50. Annual mean catch rate (no/ha) and mean total length (mm) of fishes caught with trammel nets in Texas bay systems during October 1978-September 1979.

Bay system	Red drum		Spotted seatrout		Black drum		Sheepshead		Southern flounder		Atlantic croaker	
	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length
Galveston	1.58	431	1.16	472	1.98	273	0.34	338	0.42	309	2.42	259
Matagorda	2.82	453	2.51	421	5.38	355	0.62	327	0.58	300	1.26	243
San Antonio	1.50	395	2.02	409	0.66	282	0.65	324	0.36	308	0.14	250
Aransas	2.25	421	1.22	428	1.79	280	1.03	306	0.24	309	0.35	258
Corpus Christi	0.88	417	1.35	463	0.43	273	0.38	317	0.30	327	1.47	275
Upper Laguna Madre	0.44	433	0.89	461	0.90	314	0.38	378	0.04	369	0.62	272
Lower Laguna Madre	1.34	430	3.30	450	0.62	338	2.03	289	0.44	313	2.37	273

Table 51 . Mean abundances (no/ha and kg/ha) and mean total lengths (mm) of red drum caught with trammel nets in the Galveston Bay system (NS = no sample; Blank = no fish caught or no fish measured).

Month and year	Number of samples	No/ha	Kg/ha	Length
Oct. 1978	(12)	2.54	2.87	459
Nov. 1978	(12)	2.54	2.30	430
Dec. 1978	(12)	2.00	2.21	458
Jan. 1979	(0)	NS		
Feb. 1979	(0)	NS		
Mar. 1979	(12)	0.35	0.33	443
Apr. 1979	(12)	1.40	1.63	469
May 1979	(12)	0.85	1.11	481
June 1979	(12)	0.65	0.74	434
July 1979	(12)	0.60	0.42	377
Aug. 1979	(12)	2.84	2.81	410
Sept. 1979	(12)	2.05	1.03	347

Table 52 . Mean abundances (no/ha and kg/ha) and mean total lengths (mm) of red drum caught with trammel nets in the Matagorda Bay system (NS = no sample; Blank = no fish caught or no fish measured).

Month and year	Number of samples	No/ha	Kg/ha	Length
Oct. 1978	(12)	3.34	3.35	423
Nov. 1978	(12)	3.39	4.59	470
Dec. 1978	(12)	5.64	5.18	420
Jan. 1979	(0)	NS		
Feb. 1979	(0)	NS		
Mar. 1979	(12)	1.35	0.69	414
Apr. 1979	(12)	3.49	8.28	457
May 1979	(12)	1.50	2.35	522
June 1979	(12)	0.80	1.20	497
July 1979	(12)	1.20	1.70	460
Aug. 1979	(12)	4.04	5.71	447
Sept. 1979	(12)	3.09	5.37	418

Table 53. Mean abundances (no/ha and kg/ha) and mean total lengths (mm) of red drum caught with trammel nets in the San Antonio Bay system (NS = no sample; Blank = no fish caught or no fish measured).

Month and year	Number of samples	No/ha	Kg/ha	Length
Oct. 1978	(12)	1.90	0.93	347
Nov. 1978	(12)	2.05	1.20	365
Dec. 1978	(12)	0.95	0.64	380
Jan. 1979	(0)	NS		
Feb. 1979	(0)	NS		
Mar. 1979	(12)	0.15	0.18	473
Apr. 1979	(12)	1.20	0.80	403
May 1979	(12)	0.40	0.40	445
June 1979	(12)	1.40	1.64	461
July 1979	(12)	1.40	1.13	376
Aug. 1979	(12)	1.85	0.42	369
Sept. 1979	(12)	3.69	1.30	327

Table 54. Mean abundances (no/ha and kg/ha) and mean total lengths (mm) of red drum caught with trammel nets in the Aransas Bay system (NS = no sample; Blank = no fish caught or no fish measured).

Month and year	Number of samples	No/ha	Kg/ha	Length
Oct. 1978	(12)	5.14	3.50	379
Nov. 1978	(12)	5.39	3.56	382
Dec. 1978	(12)	1.05	1.24	438
Jan. 1979	(0)	NS		
Feb. 1979	(0)	NS		
Mar. 1979	(12)	0.60	0.40	397
Apr. 1979	(12)	1.20	1.10	432
May 1979	(12)	1.30	1.27	456
June 1979	(12)	0.80	0.65	415
July 1979	(12)	1.75	1.87	449
Aug. 1979	(12)	1.00	0.99	423
Sept. 1979	(12)	4.24	2.65	438

Table 55. Mean abundances (no/ha and kg/ha) and mean total lengths (mm) of red drum caught with trammel nets in the Corpus Christi Bay system (NS = no sample; Blank = no fish caught or no fish measured).

Month and year	Number of samples	No/ha	Kg/ha	Length
Oct. 1978	(12)	1.10	0.88	409
Nov. 1978	(12)	0.25	0.16	389
Dec. 1978	(12)	0.45	0.34	413
Jan. 1979	(0)	NS		
Feb. 1979	(0)	NS		
Mar. 1979	(12)	0.20	0.17	416
Apr. 1979	(12)	1.10	0.93	456
May 1979	(12)	1.15	1.37	478
June 1979	(12)	0.40	0.57	483
July 1979	(12)	0.50	0.11	343
Aug. 1979	(12)	1.65	1.60	424
Sept. 1979	(12)	1.95	0.74	356

Table 56. Mean abundances (no/ha and kg/ha) and mean total lengths (mm) of red drum caught with trammel nets in the upper Laguna Madre system (NS = no sample; Blank = no fish caught or no fish measured).

Month and year	Number of samples	No/ha	Kg/ha	Length
Oct. 1978	(12)	0.75	1.17	503
Nov. 1978	(12)	0.40	0.38	437
Dec. 1978	(12)	0.15	0.24	491
Jan. 1979	(0)	NS		
Feb. 1979	(0)	NS		
Mar. 1979	(12)	0.25	0.36	483
Apr. 1979	(12)	0.05	0.03	390
May 1979	(12)	0.15	0.17	466
June 1979	(12)	0.35	0.82	537
July 1979	(12)	0.20	0.19	397
Aug. 1979	(12)	0.45	0.13	291
Sept. 1979	(12)	1.60	0.86	339

Table 57. Mean abundances (no/ha and kg/ha) and mean total lengths (mm) of red drum caught with trammel nets in the lower Laguna Madre system (NS = no sample; Blank = no fish caught or no fish measured).

Month and year	Number of samples	No/ha	Kg/ha	Length
Oct. 1978	(12)	1.45	0.79	385
Nov. 1978	(12)	0.50	0.31	419
Dec. 1978	(12)	0.65	0.61	408
Jan. 1979	(0)	NS		
Feb. 1979	(0)	NS		
Mar. 1979	(12)	0.85	0.85	433
Apr. 1979	(12)	2.45	2.63	451
May 1979	(12)	0.80	1.27	504
June 1979	(12)	1.10	1.47	490
July 1979	(12)	1.25	1.06	418
Aug. 1979	(12)	1.15	1.23	456
Sept. 1979	(12)	3.19	1.40	337

Table 58 . Mean abundances (no/ha and kg/ha) and mean total lengths (mm) of spotted seatrout caught with trammel nets in the Galveston Bay system (NS = no sample; B ank = no fish caught or no fish measured).

Month and year	Number of samples	No/ha	Kg/ha	Length
Oct. 1978	(12)	3.49	1.81	466
Nov. 1978	(12)	1.70	0.34	486
Dec. 1978	(12)	0.25	0.82	511
Jan. 1979	(0)	NS		
Feb. 1979	(0)	NS		
Mar. 1979	(12)	0.10	0.18	531
Apr. 1979	(12)	0.10	0.19	574
May 1979	(12)	0.30	0.16	382
June 1979	(12)	0.15	0.30	545
July 1979	(12)	0.15	0.16	449
Aug. 1979	(12)	0.45	0.31	413
Sept. 1979	(12)	4.89	0.58	368

Table 59. Mean abundances (no/ha and kg/ha) and mean total lengths (mm) of spotted seatrout caught with trammel nets in the Matagorda Bay system (NS = no sample; Blank = no fish caught or no fish measured).

Month and year	Number of samples	No/ha	Kg/ha	Length
Oct. 1978	(12)	1.20	1.02	451
Nov. 1978	(12)	1.45	1.26	444
Dec. 1978	(12)	2.20	1.47	413
Jan. 1979	(0)	NS		
Feb. 1979	(0)	NS		
Mar. 1979	(12)	0.55	0.58	479
Apr. 1979	(12)	8.68	6.69	412
May 1979	(12)	5.61	4.45	424
June 1979	(12)	1.40	0.89	402
July 1979	(12)	0.90	0.47	385
Aug. 1979	(12)	0.70	0.40	388
Sept. 1979	(12)	2.45	1.60	412

Table 60. Mean abundances (no/ha and kg/ha) and mean total lengths (mm) of spotted seatrout caught with trammel nets in the San Antonio Bay system (NS = no sample; Blank = no fish caught or no fish measured).

Month and year	Number of samples	No/ha	Kg/ha	Length
Oct. 1978	(12)	5.19	3.41	412
Nov. 1978	(12)	0.90	0.69	427
Dec. 1978	(12)	0.40	0.28	437
Jan. 1979	(0)	NS		
Feb. 1979	(0)	NS		
Mar. 1979	(12)	0.95	0.58	402
Apr. 1979	(12)	1.60	1.03	408
May 1979	(12)	3.69	2.98	420
June 1979	(12)	2.40	1.72	411
July 1979	(12)	0.80	0.49	385
Aug. 1979	(12)	1.85	0.94	380
Sept. 1979	(12)	2.45	1.47	414

Table 61. Mean abundances (no/ha and kg/ha) and mean total lengths (mm) of spotted seatrout caught with trammel nets in the Aransas Bay system (NS = no sample; Blank = no fish caught or no fish measured).

Month and year	Number of samples	No/ha	Kg/ha	Length
Oct. 1978	(12)	2.35	1.42	400
Nov. 1978	(12)	0.80	0.53	407
Dec. 1978	(12)	1.25	1.27	452
Jan. 1979	(0)	NS		
Feb. 1979	(0)	NS		
Mar. 1979	(12)	0.60	0.32	387
Apr. 1979	(12)	1.40	1.65	483
May 1979	(12)	0.85	0.96	447
June 1979	(12)	2.45	1.82	421
July 1979	(12)	0.30	0.35	476
Aug. 1979	(12)	0.35	0.22	389
Sept. 1979	(12)	1.85	1.45	421

Table 62 . Mean abundances (no/ha and kg/ha) and mean total lengths (mm) of spotted seatrout caught with trammel nets in the Corpus Christi Bay system (NS = no sample; Blank = no fish caught or no fish measured).

Month and year	Number of samples	No/ha	Kg/ha	Length
Oct. 1978	(12)	0.70	0.93	502
Nov. 1978	(12)	1.45	0.85	393
Dec. 1978	(12)	0.30	0.27	467
Jan. 1979	(0)	NS		
Feb. 1979	(0)	NS		
Mar. 1979	(12)	0.20	0.29	551
Apr. 1979	(12)	0.25	0.10	383
May 1979	(12)	2.89	2.61	442
June 1979	(12)	2.89	3.25	479
July 1979	(12)	1.20	1.43	504
Aug. 1979	(12)	1.55	1.93	504
Sept. 1979	(12)	2.10	1.23	409

Table 63. Mean abundances (no/ha and kg/ha) and mean total lengths (mm) of spotted seatrout caught with trammel nets in the upper Laguna Madre system. (NS = no sample; Blank = no fish caught or no fish measured).

Month and year	Number of samples	No/ha	Kg/ha	Length
Oct. 1978	(12)	1.10	0.88	446
Nov. 1978	(12)	0.70	0.69	471
Dec. 1978	(12)	0.50	0.53	489
Jan. 1979	(0)	NS		
Feb. 1979	(0)	NS		
Mar. 1979	(12)	0.65	0.58	478
Apr. 1979	(12)	0.85	0.62	422
May 1979	(12)	1.65	1.42	446
June 1979	(12)	1.10	1.23	456
July 1979	(12)	0.70	0.86	503
Aug. 1979	(12)	0.55	0.61	486
Sept. 1979	(12)	1.10	0.74	415

Table 64. Mean abundances (no/ha and kg/ha) and mean total lengths (mm) of spotted seatrout caught with trammel nets in the Lower Laguna Madre system (NS = no sample; Blank = no fish caught or no fish measured).

Month and year	Number of samples	No/ha	Kg/ha	Length
Oct. 1978	(12)	3.19	2.33	416
Nov. 1978	(12)	0.45	0.18	394
Dec. 1978	(12)	1.05	1.22	479
Jan. 1979	(0)	NS		
Feb. 1979	(0)	NS		
Mar. 1979	(12)	2.25	2.92	476
Apr. 1979	(12)	2.00	2.51	492
May 1979	(12)	3.19	3.54	458
June 1979	(12)	4.44	3.39	440
July 1979	(12)	4.49	4.94	482
Aug. 1979	(12)	7.78	5.89	437
Sept. 1979	(12)	4.14	2.89	424

Table 65. Mean abundances (no/ha and kg/ha) and mean total lengths (mm) of black drum caught with trammel nets in the Galveston Bay system (NS = no sample; Blank = no fish caught or no fish measured).

Month and year	Number of samples	No/ha	Kg/ha	Length
Oct. 1978	(12)	2.10	2.03	380
Nov. 1978	(12)	2.64	1.61	301
Dec. 1978	(12)	4.99	1.13	231
Jan. 1979	(0)	NS		
Feb. 1979	(0)	NS		
Mar. 1979	(12)	0.75	0.44	303
Apr. 1979	(12)	0.45	0.10	233
May 1979	(12)	1.60	0.24	223
June 1979	(12)	2.99	0.74	255
July 1979	(12)	1.20	0.23	239
Aug. 1979	(12)	1.10	0.33	275
Sept. 1979	(12)	1.95	0.74	286

Table 66. Mean abundances (no/ha and kg/ha) and mean total lengths (mm) of black drum caught with trammel nets in the Matagorda Bay system (NS = no sample; Blank = no fish caught or no fish measured).

Month and year	Number of samples	No/ha	Kg/ha	Length
Oct. 1978	(12)	15.92	11.19	344
Nov. 1978	(12)	2.99	2.53	364
Dec. 1978	(12)	5.14	3.19	327
Jan. 1979	(0)	NS		
Feb. 1979	(0)	NS		
Mar. 1979	(12)	3.49	2.20	357
Apr. 1979	(12)	4.14	5.24	403
May 1979	(12)	4.01	2.26	373
June 1979	(12)	6.29	2.66	303
July 1979	(12)	2.84	2.44	365
Aug. 1979	(12)	5.84	2.10	302
Sept. 1979	(12)	3.19	3.92	416

Table 67. Mean abundances (no/ha and kg/ha) and mean total lengths (mm) of black drum caught with trammel nets in the San Antonio Bay system (NS = no sample; Blank = no fish caught or no fish measured).

Month and year	Number of samples	No/ha	Kg/ha	Length
Oct. 1978	(12)	2.64	1.10	272
Nov. 1978	(12)	0.25	0.07	259
Dec. 1978	(12)	0.50	0.25	278
Jan. 1979	(0)	NS		
Feb. 1979	(0)	NS		
Mar. 1979	(12)	0.15	0.03	252
Apr. 1979	(12)	0.10		266
May 1979	(12)	0.15	0.06	306
June 1979	(12)	1.40	0.47	314
July 1979	(12)	0.75	0.48	328
Aug. 1979	(12)	0.10	0.02	248
Sept. 1979	(12)	0.60	0.13	302

Table 68. Mean abundances (no/ha and kg/ha) and mean total lengths (mm) of black drum caught with trammel nets in the Aransas Bay system (NS = no sample; Blank = no fish caught or no fish measured).

Month and year	Number of samples	No/ha	Kg/ha	Length
Oct. 1978	(12)	1.60	0.63	285
Nov. 1978	(12)	0.70	0.30	298
Dec. 1978	(12)	1.20	0.38	251
Jan. 1979	(0)	NS		
Feb. 1979	(0)	NS		
Mar. 1979	(12)	0.70	0.16	242
Apr. 1979	(12)	0.75	0.55	324
May 1979	(12)	4.39	1.19	261
June 1979	(12)	2.50	1.03	294
July 1979	(12)	2.50	0.98	287
Aug. 1979	(12)	0.55	0.14	260
Sept. 1979	(12)	2.99	1.33	300

Table 69. Mean abundances (no/ha and kg/ha) and mean total lengths (mm) of black drum caught with trammel nets in the Corpus Christi Bay system (NS = no sample; Blank = no fish caught or no fish measured).

Month and year	Number of samples	No/ha	Kg/ha	Length
Oct. 1978	(12)	0.60	0.17	257
Nov. 1978	(12)	0.05	0.01	251
Dec. 1978	(12)			
Jan. 1979	(0)	NS		
Feb. 1979	(0)	NS		
Mar. 1979	(12)	0.15	0.05	274
Apr. 1979	(12)	0.10	0.03	272
May 1979	(12)	0.15	0.04	256
June 1979	(12)	0.40	0.11	291
July 1979	(12)	0.45	0.22	336
Aug. 1979	(12)	0.65	0.20	260
Sept. 1979	(12)	1.75	0.58	257

Table 70. Mean abundances (no/ha and kg/ha) and mean total lengths (mm) of black drum caught with trammel nets in the upper Laguna Madre system (NS = no sample; Blank = no fish caught or no fish measured).

Month and year	Number of samples	No/ha	Kg/ha	Length
Oct. 1978	(12)	3.84	2.39	305
Nov. 1978	(12)	1.45	0.44	256
Dec. 1978	(12)	1.05	1.96	431
Jan. 1979	(0)	NS		
Feb. 1979	(0)	NS		
Mar. 1979	(12)	0.10	0.09	358
Apr. 1979	(12)	0.40	0.17	294
May 1979	(12)	0.30	0.12	280
June 1979	(12)	0.35	0.37	323
July 1979	(12)	0.35	0.21	323
Aug. 1979	(12)	0.45	0.32	349
Sept. 1979	(12)	0.75	0.14	223

Table 71. Mean abundances (no/ha and kg/ha) and mean total lengths (mm) of black drum caught with trammel nets in the lower Laguna Madre system (NS = no sample; Blank = no fish caught or no fish measured).

Month and year	Number of samples	No/ha	Kg/ha	Length
Oct. 1978	(12)	0.75	0.74	350
Nov. 1978	(12)	0.20	0.16	379
Dec. 1978	(12)	0.95	1.30	296
Jan. 1979	(0)	NS		
Feb. 1979	(0)	NS		
Mar. 1979	(12)	0.70	0.30	303
Apr. 1979	(12)	0.80	0.58	352
May 1979	(12)	0.30	0.28	362
June 1979	(12)	0.85	1.02	427
July 1979	(12)	0.50	0.23	335
Aug. 1979	(12)	0.60	0.25	299
Sept. 1979	(12)	0.50	0.20	272

Table 72. Mean abundances (no/ha and kg/ha) and mean total lengths (mm) of sheepshead caught with trammel nets in the Galveston Bay system (NS = no sample; Blank = no fish caught or no fish measured).

Month and year	Number of samples	No/ha	Kg/ha	Length
Oct. 1978	(12)	0.50	0.26	297
Nov. 1978	(12)	0.85	0.93	384
Dec. 1978	(12)	0.10	0.08	353
Jan. 1979	(0)	NS		
Feb. 1979	(0)	NS		
Mar. 1979	(12)	0.25	0.31	391
Apr. 1979	(12)	0.05	0.03	308
May 1979	(12)	0.20	0.17	348
June 1979	(12)	0.35	0.28	355
July 1979	(12)	0.45	0.39	356
Aug. 1979	(12)	0.35	0.20	306
Sept. 1979	(12)	0.35	0.17	287

Table 73. Mean abundances (no/ha and kg/ha) and mean total lengths (mm) of sheepshead caught with trammel nets in the Matagorda Bay system (NS = no sample; Blank = no fish caught or no fish measured).

Month and year	Number of samples	No/ha	Kg/ha	Length
Oct. 1978	(12)	0.30	0.14	304
Nov. 1978	(12)	0.65	0.56	340
Dec. 1978	(12)	0.55	0.43	348
Jan. 1979	(0)	NS		
Feb. 1979	(0)	NS		
Mar. 1979	(12)	1.05	1.32	350
Apr. 1979	(12)	1.70	1.04	323
May 1979	(12)	0.95	0.41	343
June 1979	(12)	0.95	0.44	306
July 1979	(12)	0.35	0.17	293
Aug. 1979	(12)	0.15	0.10	372
Sept. 1979	(12)	0.50	0.09	287

Table 74. Mean abundances (no/ha and kg/ha) and mean total lengths (mm) of sheepshead caught with trammel nets in the San Antonio Bay system (NS = no sample; Blank = no fish caught or no fish measured).

Month and year	Number of samples	No/ha	Kg/ha	Length
Oct. 1978	(12)	0.55	0.61	372
Nov. 1978	(12)	0.55	0.36	307
Dec. 1978	(12)	0.10	0.02	216
Jan. 1979	(0)	NS		
Feb. 1979	(0)	NS		
Mar. 1979	(12)			
Apr. 1979	(12)	0.35	0.14	324
May 1979	(12)	0.90	1.00	375
June 1979	(12)	0.15	0.15	313
July 1979	(12)	2.25	2.26	373
Aug. 1979	(12)	1.50	0.65	376
Sept. 1979	(12)	0.15		264

Table 75. Mean abundances (no/ha and kg/ha) and mean total lengths (mm) of sheepshead caught with trammel nets in the Aransas Bay system. (NS = no sample; Blank = no fish caught or no fish measured).

Month and year	Number of samples	No/ha	Kg/ha	Length
Oct. 1978	(12)	0.40	0.34	323
Nov. 1978	(12)	1.75	1.65	349
Dec. 1978	(12)	0.95	0.38	257
Jan. 1979	(0)	NS		
Feb. 1979	(0)	NS		
Mar. 1979	(12)	0.05	0.05	380
Apr. 1979	(12)	0.15	0.15	379
May 1979	(12)	1.00	0.74	317
June 1979	(12)	0.80	0.67	342
July 1979	(12)	1.80	1.01	276
Aug. 1979	(12)	0.35	0.11	225
Sept. 1979	(12)	3.04	0.64	208

Table 76 . Mean abundances (no/ha and kg/ha) and mean total lengths (mm) of sheepshead caught with trammel nets in the Corpus Christi Bay system (NS = no sample; Blank = no fish caught or no fish measured).

Month and year	Number of samples	No/ha	Kg/ha	Length
Oct. 1978	(12)			
Nov. 1978	(12)	0.15	0.26	452
Dec. 1978	(12)	0.45		350
Jan. 1979	(0)	NS		
Feb. 1979	(0)	NS		
Mar. 1979	(12)	0.65	0.57	257
Apr. 1979	(12)	0.45	0.36	352
May 1979	(12)	0.35	0.26	325
June 1979	(12)	0.45	0.36	320
July 1979	(12)	0.45	0.30	322
Aug. 1979	(12)	0.70	0.38	288
Sept. 1979	(12)	0.10	0.01	194

Table 77. Mean abundances (no/ha and kg/ha) and mean total lengths (mm) of sheepshead caught with trammel nets in the upper Laguna Madre system (NS = no sample; Blank = no fish caught or no fish measured).

Month and year	Number of samples	No/ha	Kg/ha	Length
Oct. 1978	(12)	0.50	0.53	382
Nov. 1978	(12)	0.45	0.57	405
Dec. 1978	(12)	0.30	0.54	465
Jan. 1979	(0)	NS		
Feb. 1979	(0)	NS		
Mar. 1979	(12)	0.05	0.06	384
Apr. 1979	(12)	0.10	0.08	306
May 1979	(12)	0.50	0.35	314
June 1979	(12)	0.50	0.69	357
July 1979	(12)	0.50	0.47	347
Aug. 1979	(12)	0.50	0.56	357
Sept. 1979	(12)	0.35	0.69	458

Table 78. Mean abundances (no/ha and kg/ha) and mean total lengths (mm) of sheepshead caught with trammel nets in the lower Laguna Madre system (NS = no sample; Blank = no fish caught or no fish measured).

Month and year	Number of samples	No/ha	Kg/ha	Length
Oct. 1978	(12)	1.30	0.48	284
Nov. 1978	(12)	0.50	0.29	295
Dec. 1978	(12)	0.95	1.21	329
Jan. 1979	(0)	NS		
Feb. 1979	(0)	NS		
Mar. 1979	(12)	2.20	0.87	260
Apr. 1979	(12)	1.25	0.42	248
May 1979	(12)	3.54	1.89	296
June 1979	(12)	2.35	1.19	290
July 1979	(12)	4.09	2.99	332
Aug. 1979	(12)	2.40	1.16	292
Sept. 1979	(12)	1.75	0.66	260

Table 79. Mean abundances (no/ha and kg/ha) and mean total lengths (mm) of southern flounder caught with trammel nets in the Galveston Bay system (NS = no sample; Blank = no fish caught or no fish measured).

Month and year	Number of samples	No/ha	Kg/ha	Length
Oct. 1978	(12)	0.70	0.29	312
Nov. 1978	(12)	0.30	0.07	268
Dec. 1978	(12)	0.10	0.07	404
Jan. 1979	(0)	NS		
Feb. 1979	(0)	NS		
Mar. 1979	(12)	0.55	0.24	336
Apr. 1979	(12)	0.15	0.03	318
May 1979	(12)	0.35	0.14	319
June 1979	(12)	0.15	0.02	216
July 1979	(12)	0.65	0.31	311
Aug. 1979	(12)	0.75	0.22	274
Sept. 1979	(12)	0.55	0.28	330

Table 80 . Mean abundances (no/ha and kg/ha) and mean total lengths (mm) of southern flounder caught with trammel nets in the Matagorda Bay system (NS = no sample; Blank = no fish caught or no fish measured).

Month and year	Number of samples	No/ha	Kg/ha	Length
Oct. 1978	(12)	0.30	0.21	386
Nov. 1978	(12)	0.40	0.19	314
Dec. 1978	(12)			
Jan. 1979	(0)	NS		
Feb. 1979	(0)	NS		
Mar. 1979	(12)	0.35	0.06	261
Apr. 1979	(12)	0.70	0.24	302
May 1979	(12)	0.35	0.07	265
June 1979	(12)	0.70	0.38	323
July 1979	(12)	0.65	0.23	307
Aug. 1979	(12)	0.60	0.14	285
Sept. 1979	(12)	1.70	0.33	258

Table 81. Mean abundances (no/ha and kg/ha) and mean total lengths (mm) of southern flounder caught with trammel nets in the San Antonio Bay system (NS = no sample; Blank = no fish caught or no fish measured).

Month and year	Number of samples	No/ha	Kg/ha	Length
Oct. 1978	(12)	0.30	0.23	388
Nov. 1978	(12)	0.20	0.09	314
Dec. 1978	(12)	0.05	0.04	403
Jan. 1979	(0)	NS		
Feb. 1979	(0)	NS		
Mar. 1979	(12)			
Apr. 1979	(12)	0.10	0.01	160
May 1979	(12)	0.85	0.20	263
June 1979	(12)	0.45	0.24	311
July 1979	(12)	1.05	0.44	302
Aug. 1979	(12)	0.25	0.11	320
Sept. 1979	(12)	0.40	0.04	312

Table 82. Mean abundances (no/ha and kg/ha) and mean total lengths (mm) of southern flounder caught with trammel nets in the Aransas Bay system (NS = no sample; Blank = no fish caught or no fish measured).

Month and year	Number of samples	No/ha	Kg/ha	Length
Oct. 1978	(12)	0.20	0.14	368
Nov. 1978	(12)	0.15	0.08	347
Dec. 1978	(12)			
Jan. 1979	(0)	NS		
Feb. 1979	(0)	NS		
Mar. 1979	(12)	0.35	0.11	283
Apr. 1979	(12)	0.10	0.03	314
May 1979	(12)	0.25	0.06	286
June 1979	(12)	0.25	0.05	249
July 1979	(12)	0.50	0.18	291
Aug. 1979	(12)	0.20	0.14	347
Sept. 1979	(12)	0.45	0.15	293

Table 83. Mean abundances (no/ha and kg/ha) and mean total lengths (mm) of southern flounder caught with trammel nets in the Corpus Christi Bay system (NS = no sample; Blank = no fish caught or no fish measured).

Month and year	Number of samples	No/ha	Kg/ha	Length
Oct. 1978	(12)	0.20	0.17	417
Nov. 1978	(12)	0.10	0.07	362
Dec. 1978	(12)			
Jan. 1979	(0)	NS		
Feb. 1979	(0)	NS		
Mar. 1979	(12)	0.25	0.17	363
Apr. 1979	(12)	0.35	0.09	279
May 1979	(12)	0.65	0.23	303
June 1979	(12)	0.50	0.20	322
July 1979	(12)	0.30	0.12	332
Aug. 1979	(12)	0.50	0.21	317
Sept. 1979	(12)	0.15	0.03	250

Table 84 . Mean abundances (no/ha and kg/ha) and mean total lengths (mm) of southern flounder caught with trammel nets in the upper Laguna Madre system (NS= no sample; Blank = no fish caught or no fish measured).

Month and year	Number of samples	No/ha	Kg/ha	Length
Oct. 1978	(12)	0.15	0.10	382
Nov. 1978	(12)			
Dec. 1978	(12)			
Jan. 1979	(0)	NS		
Feb. 1979	(0)	NS		
Mar. 1979	(12)	0.05	0.03	388
Apr. 1979	(12)	0.10	0.01	202
May 1979	(12)			
June 1979	(12)	0.05	0.08	510
July 1979	(12)	0.05	0.03	381
Aug. 1979	(12)	0.05	0.03	349
Sept. 1979	(12)			

Table 85 . Mean abundances (no/ha and kg/ha) and mean total lengths (mm) of southern flounder caught with trammel nets in the lower Laguna Madre system (NS = no sample; Blank = no fish caught or no fish measured).

Month and year	Number of samples	No/ha	Kg/ha	Length
Oct. 1978	(12)	0.15	0.18	363
Nov. 1978	(12)	0.15	0.05	315
Dec. 1978	(12)	0.20	0.24	393
Jan. 1979	(0)	NS		
Feb. 1979	(0)	NS		
Mar. 1979	(12)	0.75	0.28	309
Apr. 1979	(12)	0.90	0.17	284
May 1979	(12)	0.20	0.04	256
June 1979	(12)	0.30	0.09	294
July 1979	(12)	1.00	0.34	295
Aug. 1979	(12)	0.50	0.22	319
Sept. 1979	(12)	0.25	0.08	300

Table 86. Mean abundances (no/ha and kg/ha) and mean total lengths (mm) of Atlantic croaker caught with trammel nets in the Galveston Bay system (NS = no sample; Blank = no fish caught or no fish measured).

Month and year	Number of samples	No/ha	Kg/ha	Length
Oct. 1978	(12)	0.70	0.15	254
Nov. 1978	(12)	0.40	0.08	246
Dec. 1978	(12)			
Jan. 1979	(0)	NS		
Feb. 1979	(0)	NS		
Mar. 1979	(12)	0.10	0.02	266
Apr. 1979	(12)	0.35	0.08	260
May 1979	(12)	2.74	0.52	250
June 1979	(12)	5.94	1.40	261
July 1979	(12)	3.74	1.02	273
Aug. 1979	(12)	7.39	1.74	258
Sept. 1979	(12)	2.79	0.67	262

Table 87. Mean abundances (no/ha and kg/ha) and mean total lengths (mm) of Atlantic croaker caught with trammel nets in the Matagorda Bay system (NS = no sample; Blank = no fish caught or no fish measured).

Month and year	Number of samples	No/ha	Kg/ha	Length
Oct. 1978	(12)	0.65	0.14	254
Nov. 1978	(12)			
Dec. 1978	(12)			
Jan. 1979	(0)	NS		
Feb. 1979	(0)	NS		
Mar. 1979	(12)	0.05	0.01	250
Apr. 1979	(12)	0.10	0.02	254
May 1979	(12)	0.35	0.08	261
June 1979	(12)	1.05	0.15	197
July 1979	(12)	0.75	0.14	257
Aug. 1979	(12)	6.49	1.10	213
Sept. 1979	(12)	3.19	0.65	256

Table 88. Mean abundances (no/ha and kg/ha) and mean total lengths (mm) of Atlantic croaker caught with trammel nets in the San Antonio Bay system (NS = no sample; Blank = no fish caught or no fish measured).

Month and year	Number of samples	No/ha	Kg/ha	Length
Oct. 1978	(12)	0.35	0.09	250
Nov. 1978	(12)			
Dec. 1978	(12)			
Jan. 1979	(0)	NS		
Feb. 1979	(0)	NS		
Mar. 1979	(12)			
Apr. 1979	(12)			
May 1979	(12)			
June 1979	(12)	0.20	0.04	243
July 1979	(12)	0.20	0.05	256
Aug. 1979	(12)	0.25	0.04	244
Sept. 1979	(12)	0.45	0.11	257

Table 89 . Mean abundances (no/ha and kg/ha) and mean total lengths (mm) of Atlantic croaker caught with trammel nets in the Aransas Bay system (NS = no sample; Blank = no fish caught or no fish measured).

Month and year	Number of samples	No/ha	Kg/ha	Length
Oct. 1978	(12)	0.65	0.20	283
Nov. 1978	(12)			
Dec. 1978	(12)			
Jan. 1979	(0)	NS		
Feb. 1979	(0)	NS		
Mar. 1979	(12)			
Apr. 1979	(12)			
May 1979	(12)	0.10	0.02	249
June 1979	(12)	0.10	0.02	249
July 1979	(12)	0.35	0.09	257
Aug. 1979	(12)	1.05	0.21	247
Sept. 1979	(12)	1.25	0.32	266

Table 90. Mean abundances (no/ha and kg/ha) and mean total lengths (mm) of Atlantic croaker caught with trammel nets in the Corpus Christi Bay system (NS = no sample; Blank = no fish caught or no fish measured).

Month and year	Number of samples	No/ha	Kg/ha	Length
Oct. 1978	(12)	0.65	0.25	302
Nov. 1978	(12)	0.20	0.10	335
Dec. 1978	(12)	0.10	0.02	251
Jan. 1979	(0)	NS		
Feb. 1979	(0)	NS		
Mar. 1979	(12)			
Apr. 1979	(12)	2.59	0.54	252
May 1979	(12)	4.14	0.98	258
June 1979	(12)	0.65	0.14	254
July 1979	(12)	3.09	0.76	268
Aug. 1979	(12)	1.15	0.26	270
Sept. 1979	(12)	2.15	0.65	282

Table 91. Mean abundances (no/ha and kg/ha) and mean total lengths (mm) of Atlantic croaker caught with trammel nets in the upper Laguna Madre system (NS = no sample; Blank = no fish caught or no fish measured).

Month and year	Number of samples	No/ha	Kg/ha	Length
Oct. 1978	(12)	2.25	0.74	281
Nov. 1978	(12)	0.10	0.02	249
Dec. 1978	(12)	0.10	0.02	238
Jan. 1979	(0)	NS		
Feb. 1979	(0)	NS		
Mar. 1979	(12)			
Apr. 1979	(12)	0.20	0.05	283
May 1979	(12)	0.40	0.09	255
June 1979	(12)	1.30	0.56	302
July 1979	(12)	0.40	0.17	301
Aug. 1979	(12)	0.65	0.24	286
Sept. 1979	(12)	0.75	0.19	253

Table 92. Mean abundances (no/ha and kg/ha) and mean total lengths (mm) of Atlantic croaker caught with trammel nets in the lower Laguna Madre system (NS = no sample; Blank = no fish caught or no fish measured).

Month and year	Number of samples	No/ha	Kg/ha	Length
Oct. 1978	(12)	1.45	0.46	290
Nov. 1978	(12)	0.25	0.05	246
Dec. 1978	(12)	0.40	0.10	258
Jan. 1979	(0)	NS		
Feb. 1979	(0)	NS		
Mar. 1979	(12)	2.30	0.50	261
Apr. 1979	(12)	0.05	0.01	255
May 1979	(12)	1.40	0.37	269
June 1979	(12)	8.03	2.28	274
July 1979	(12)	1.70	0.46	277
Aug. 1979	(12)	4.14	1.13	277
Sept. 1979	(12)	3.94	1.59	323

Table 93. Annual mean catch rate (no/ha) and mean total length (mm) of fishes caught with bag seines in Texas bay systems during October 1978-September 1979 (Blank = no fish caught).

Bay system	Red drum		Spotted seatrout		Black drum		Sheepshead		Southern flounder		Atlantic croaker	
	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length
Galveston	4.63	137	38.43	79	37.04	118	15.74	214	2.32	240	466.20	83
Matagorda	10.48	127	4.83	83	10.85	143	1.16	198	0.46	272	107.18	77
San Antonio	17.13	136	5.09	98	1.90	94	4.21	61	2.32	97	52.76	69
Aransas	4.89	140	4.50	65	1.76	101	4.63	180			6.78	74
Corpus Christi	13.03	115	10.41	64	8.11	84	12.80	72	0.64	100	25.81	71
Upper Laguna Madre	27.43	84	15.63	90	5.56	100	0.69	122	3.12	126	2.78	104
Lower Laguna Madre	29.66	95	1.56	155	10.19	112	0.64	42	1.23	38	266.62	69

Table 94. Mean abundances (no/ha) and mean total length (mm) of red drum caught with bag seines in Texas bay systems (Blank = no fish caught or no fish measured).

Month and year (number of samples)	Galveston		Matagorda		San Antonio		Aransas		Corpus Christi		Upper Laguna Madre		Lower Laguna Madre	
	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length
Oct. 1978 (6)					38.89	26								
Nov. 1978 (6)			27.78	35	66.67	47	7.14	54	16.67	34	25.00	38	41.67	50
Dec. 1978 (6)			2.78	68	5.56	410 ^a	16.67	57	6.67	58	50.00	43	137.50	51
Jan. 1979 (6)			11.11	55					16.67	58	8.33	72	25.00	38
Feb. 1979 (6)	22.22	73	41.67	70	22.22	70			3.33	72	145.83	61	7.69	20
Mar. 1979 (6)			8.33	87	55.56	63			66.67	88	25.00	88	18.52	89
Apr. 1979 (6)	11.11	80			11.11	134	10.71	100	43.33	97	37.50	95	24.14	118
May 1979 (6)	5.56	143	16.67	205			6.67	122	3.33	174	16.67	120	17.24	153
June 1979 (6)	11.11	178					10.71	183	21.43	137	8.33	145	8.33	230
July 1979 (6)	5.56	213			5.56	201	3.33	250	4.35	182			75.86	105
Aug. 1979 (6)			11.90	210			3.45	212	6.90	246	4.17	68		
Sept. 1979 (6)			5.56	284							8.33	118		

^aLength based on only one fish.

Table 95. Mean abundances (no/ha) and mean total length (mm) of spotted seatrout caught with bag seines in Texas bay systems (Blank = no fish caught or no fish measured).

Month and year (number of samples)	Galveston		Matagorda		San Antonio		Aransas		Corpus Christi		Upper Laguna Madre		Lower Laguna Madre	
	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length
Oct. 1978 (6)	22.22	90	30.56	97	5.56	136	30.00	66	3.33	79	37.50	94		
Nov. 1978 (6)	27.78	101	2.78	90	11.11	94	3.57	74			16.67	81		
Dec. 1978 (6)							3.33	92			8.33	106		
Jan. 1979 (6)									3.33	58	4.17	123		
Feb. 1979 (6)											4.17	90		
Mar. 1979 (6)														
Apr. 1979 (6)														
May 1979 (6)											29.17	63	3.45	360
June 1979 (6)			5.56	45					82.14	38			4.17	87
July 1979 (6)	11.11	32	5.56	106			10.00	54	4.35	101	54.17	68	6.90	86
Aug. 1979 (6)	33.33	63	2.38	72	44.44	64			24.14	70				
Sept. 1979 (6)	366.67	77	11.11	86			7.14	39	7.69	35	33.33	91	4.17	86

Table 96. Mean abundances (no/ha) and mean total length (mm) of black drum caught with bag seines in Texas bay systems (Blank = no fish caught or no fish measured).

Month and year (number of samples)	Galveston		Matagorda		San Antonio		Aransas		Corpus Christi		Upper Laguna Madre		Lower Laguna Madre	
	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length
Oct. 1978 (6)	22.22	153	22.22	133	5.56	130								
Nov. 1978 (6)	5.56	136	8.33	167			7.14	161						
Dec. 1978 (6)	5.56	151												
Jan. 1979 (6)														
Feb. 1979 (6)														
Mar. 1979 (6)														
Apr. 1979 (6)													3.45	140
May 1979 (6)	5.56	145					3.33	50	10.00	62	4.17	33	3.45	50
June 1979 (6)	277.78	58	8.33	64	0.53	74	7.14	67	78.57	89			20.83	108
July 1979 (6)	50.00	76	72.22	88	16.67	78			8.70	102	20.83	94	86.21	123
Aug. 1979 (6)	44.44	102	2.38	299			3.45	127						
Sept. 1979 (6)	33.33	121	16.67	105							41.67	174	8.33	137

Table 97. Mean abundances (no/ha) and mean total length (mm) of sheepshead caught with bag seines in Texas bay systems (Blank = no fish caught or no fish measured).

Month and year (number of samples)	Gaiveston		Matagorda		San Antonio		Aransas		Corpus Christi		Upper Laguna Madre		Lower Laguna Madre	
	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length
Oct. 1978 (6)	16.67	354	2.78	217										
Nov. 1978 (6)	5.56	372									8.33	122		
Dec. 1978 (6)							13.33	260						
Jan. 1979 (6)													4.17	29
Feb. 1979 (6)														
Mar. 1979 (6)														
Apr. 1979 (6)			2.78	340										
May 1979 (6)			5.56	122			3.33	34						
June 1979 (6)					0.53	50	17.86	43	142.86	37				
July 1979 (6)	105.56	47			22.22	74	3.33	47					3.45	55
Aug. 1979 (6)					27.78	58	3.45	378	6.90	83				
Sept. 1979 (6)	61.11	82	2.78	115			14.29	323	3.85	96				

Table 98. Mean abundances (no/ha) and mean total length (mm) of southern flounder caught with bag seines in Texas bay systems (Blank = no fish caught or no fish measured).

Month and year (number of samples)	Galveston		Matagorda		San Antonio		Aransas		Corpus Christi		Upper Laguna Madre		Lower Laguna Madre	
	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length
Oct. 1978 (6)	5.56	382	2.78	410										
Nov. 1978 (6)														
Dec. 1978 (6)														
Jan. 1978 (6)														
Feb. 1979 (6)					11.11	156								
Mar. 1979 (6)					16.67	38			3.33	76	16.67	44	14.81	38
Apr. 1979 (6)	5.56	86									12.50	48		
May 1979 (6)	5.56	83												
June 1979 (6)			2.78	135										
July 1979 (6)	5.56	326							4.35	124				
Aug. 1979 (6)														
Sept. 1979 (6)	5.56	321									8.33	287		

Table 99. Mean abundances (no/ha) and total length (mm) of Atlantic croaker caught with bag seines in Texas bay systems (Blank = no fish caught or no fish measured).

Month and year (number of samples)	Galveston		Matagorda		San Antonio		Aranas		Corpus Christi		Upper Laguna Madre		Lower Laguna Madre	
	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length
Oct. 1978 (6)	16.67	147	2.78	153			3.33	68						
Nov. 1978 (6)	22.22	94	5.56	38	5.56	30			6.67	18			4.17	150
Dec. 1978 (6)			2.78	40					3.33	48			204.17	30
Jan. 1979 (6)	11.11	24	27.78	36					6.67	32			29.17	31
Feb. 1979 (6)	727.78	33	63.89	43	116.67	36			6.67	39			7.69	31
Mar. 1979 (6)	3233.34	45	272.22	47	411.11	42			73.33	49			2366.67	48
Apr. 1979 (6)	472.22	48	194.44	66	5.56	68	7.14	29	176.67	71	16.67	56	72.41	72
May 1979 (6)	777.78	76	369.44	71	88.89	88	50.00	71	23.33	114	8.33	105	31.03	93
June 1979 (6)	88.89	91	100.00	116			7.14	97					4.17	97
July 1979 (6)	116.67	99	155.56	100					13.04	200	8.33	152		
Aug. 1979 (6)	61.11	118	50.00	101	5.56	151	13.79	105						
Sept. 1979 (6)	66.67	137	41.67	118										

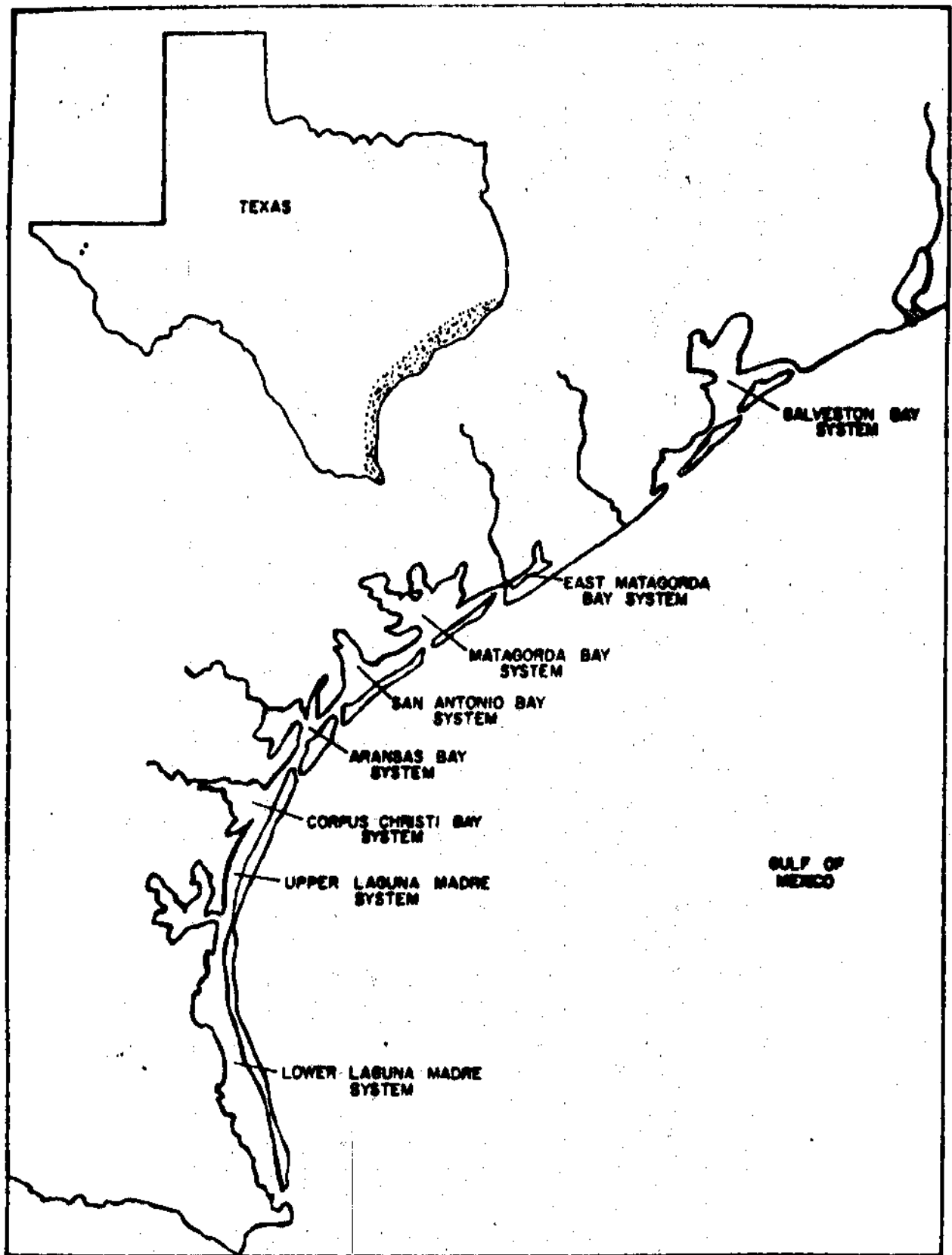


Figure 1. Texas bay systems.

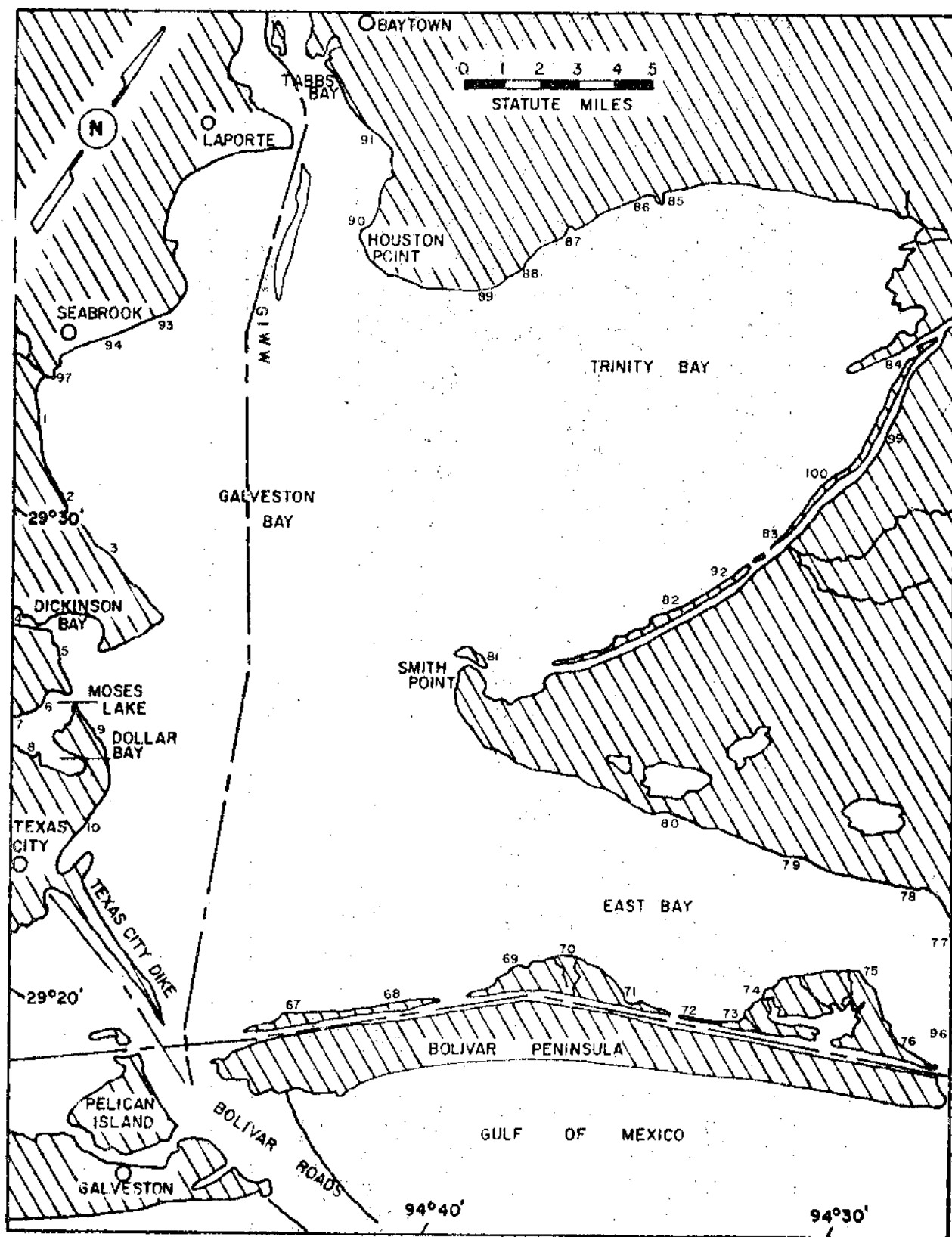


Figure 2. Gill net sample sites in the Galveston Bay system, October 1978-September 1979.

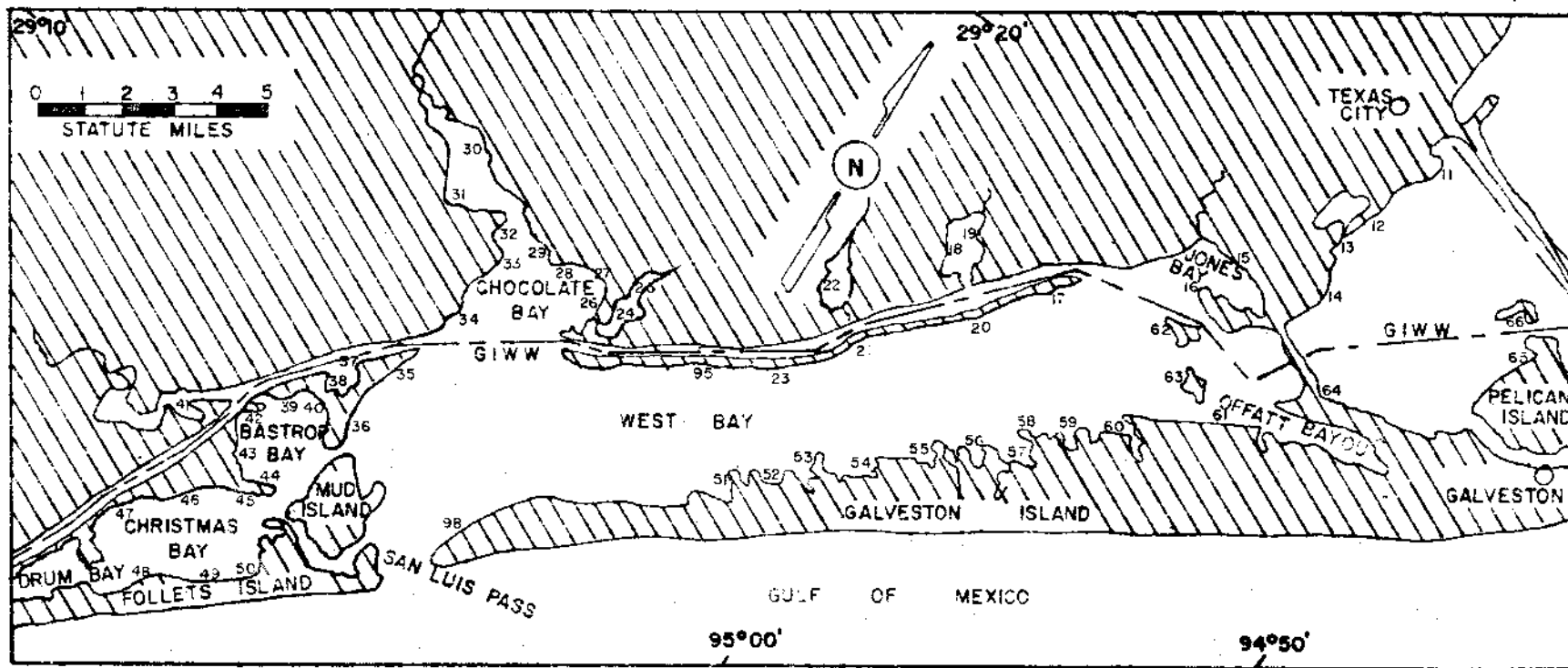


Figure 3. Gill net sample sites in the Galveston Bay system, October 1978-September 1979.

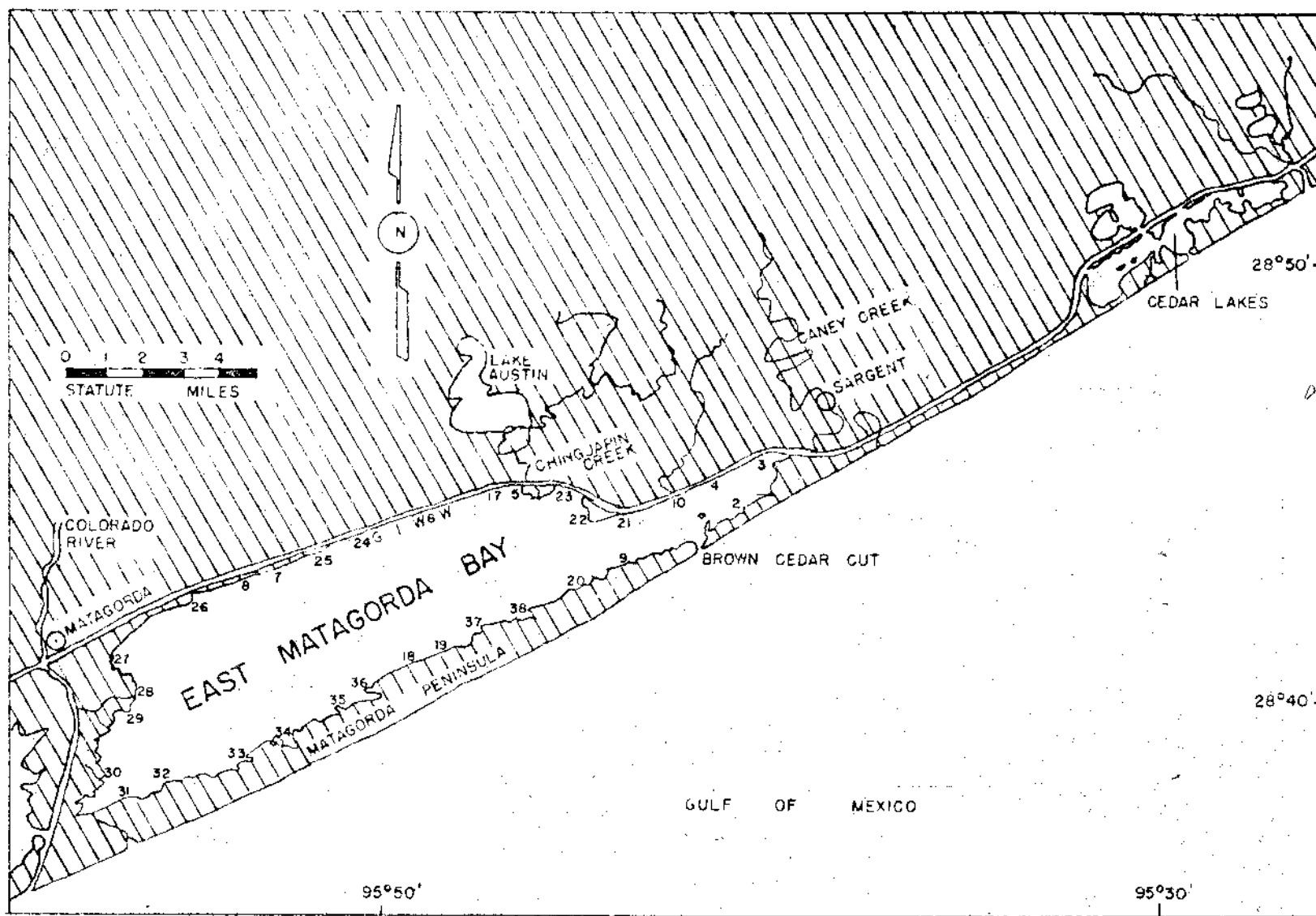


Figure 4 . Gill net sample sites in the East Matagorda Bay system, October 1978-September 1979.

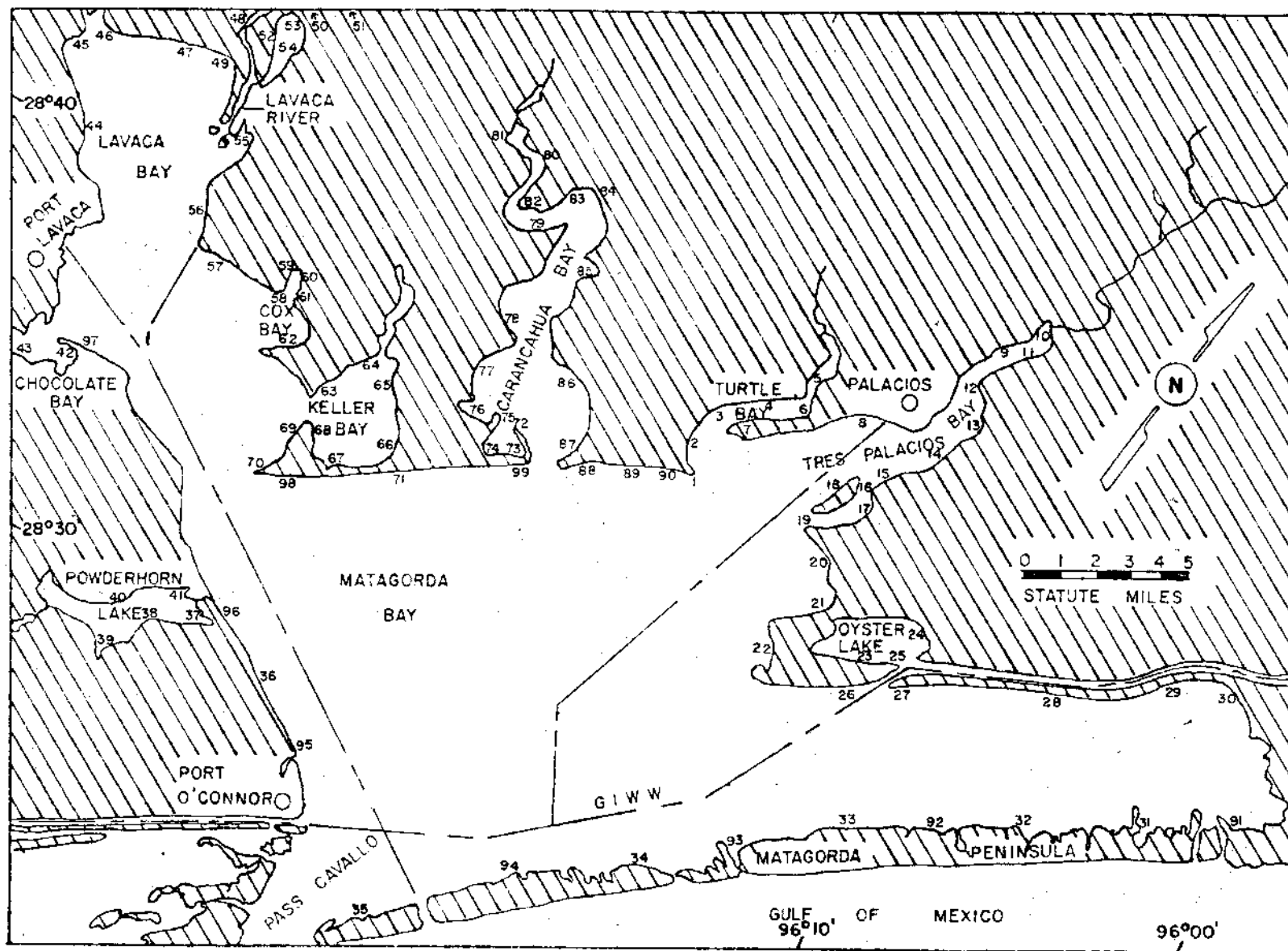


Figure 5. Gill net sample sites in the Matagorda Bay system, October 1978-September 1979.

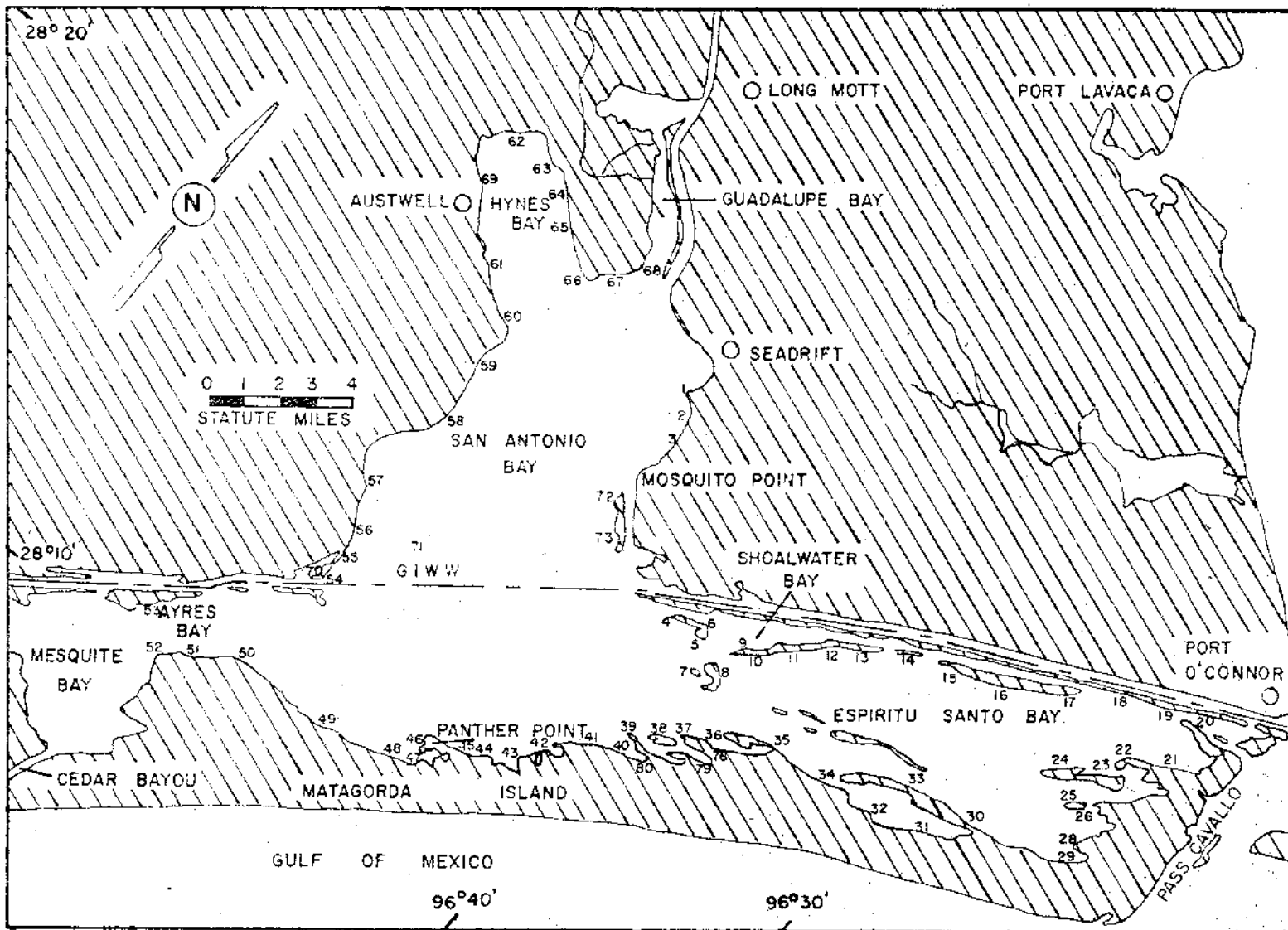


Figure 6. Gill net sample sites in the San Antonio Bay system, October 1978-September 1979.

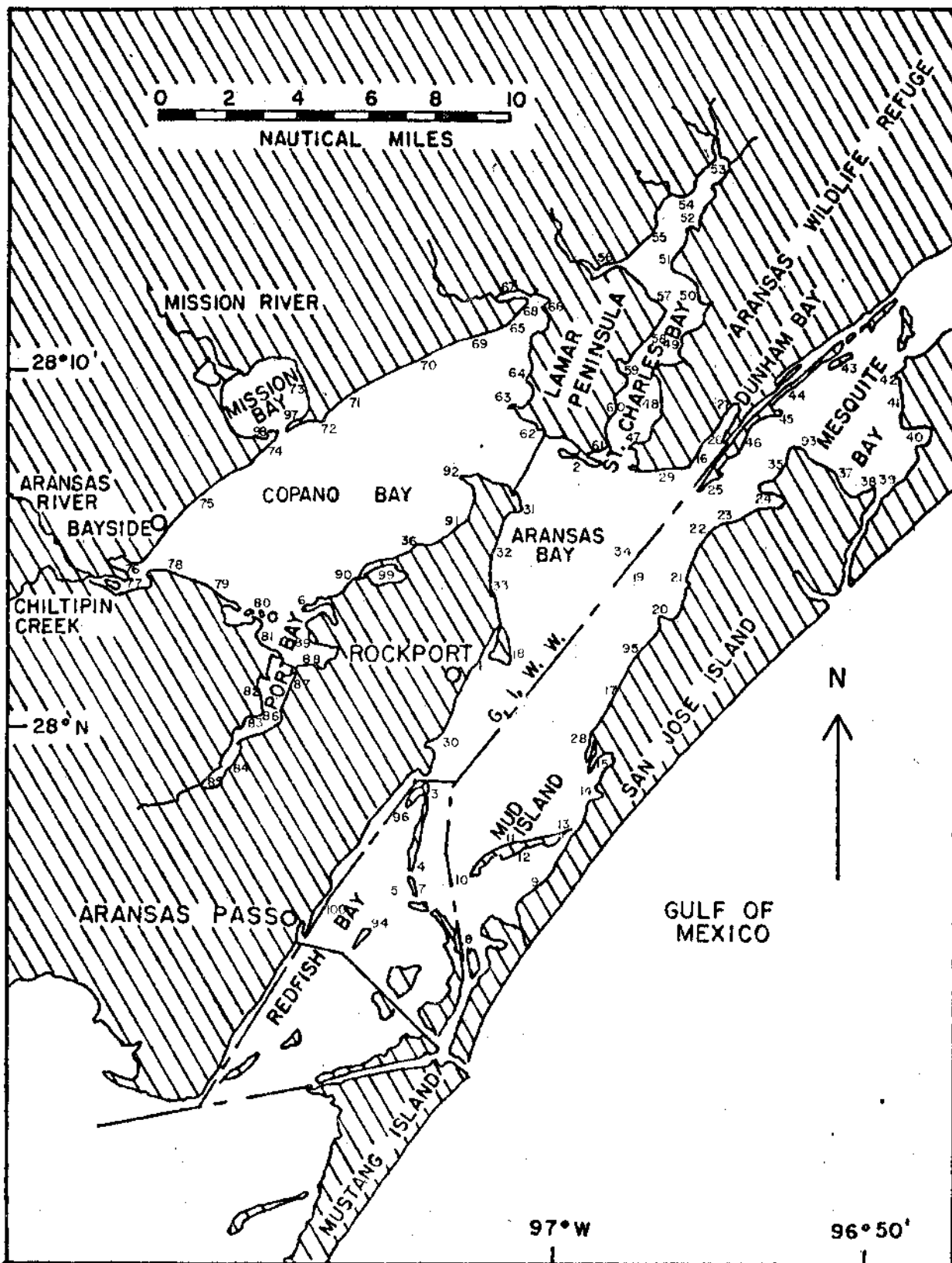


Figure 7. Gill net sample sites in the Aransas Bay system, October 1978-September 1979.

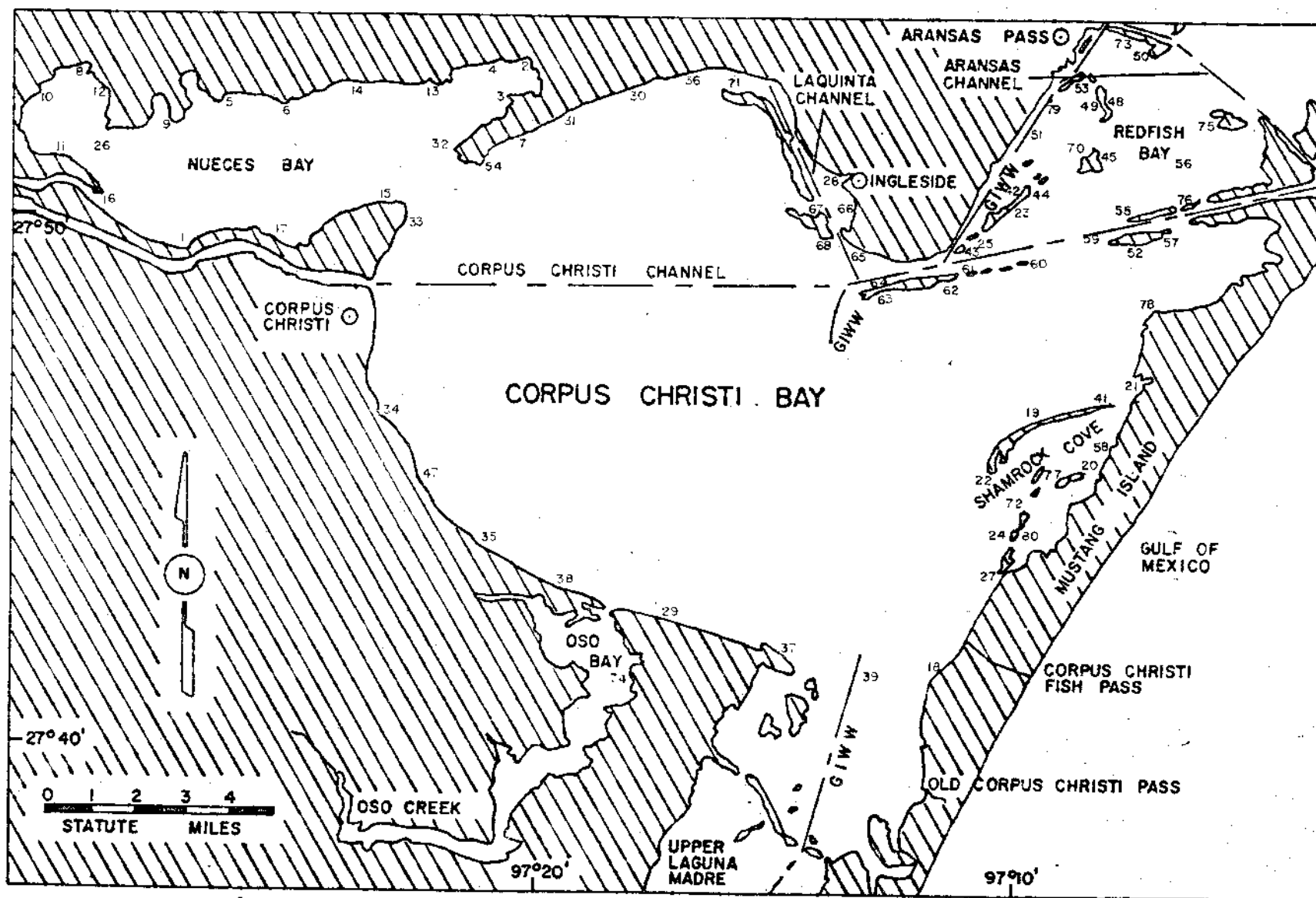


Figure 8. Gill net sample sites in the Corpus Christi Bay system, October 1978-September 1979.

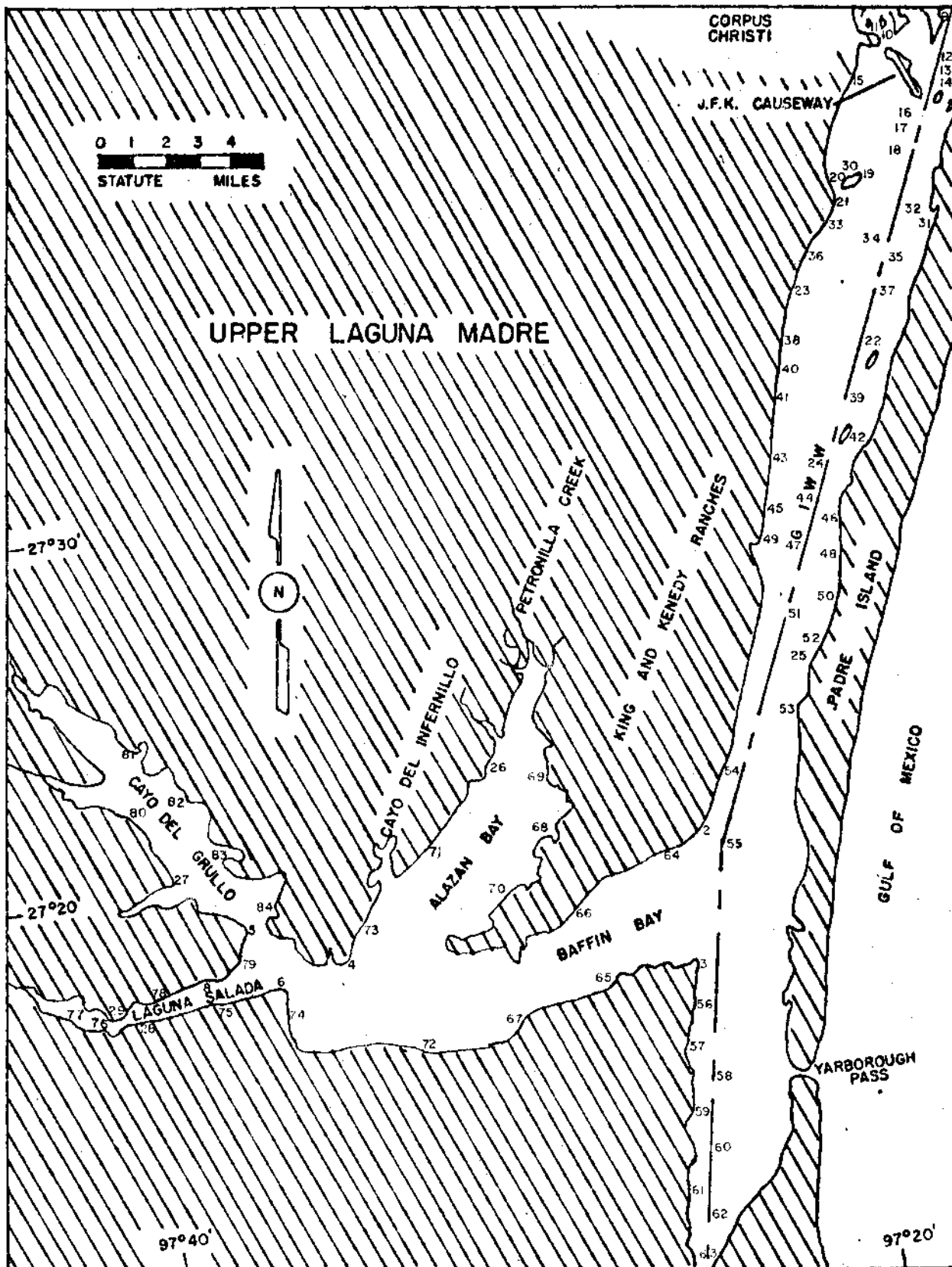


Figure 9. Gill net sample sites in the upper Laguna Madre system, October 1978-September 1979.

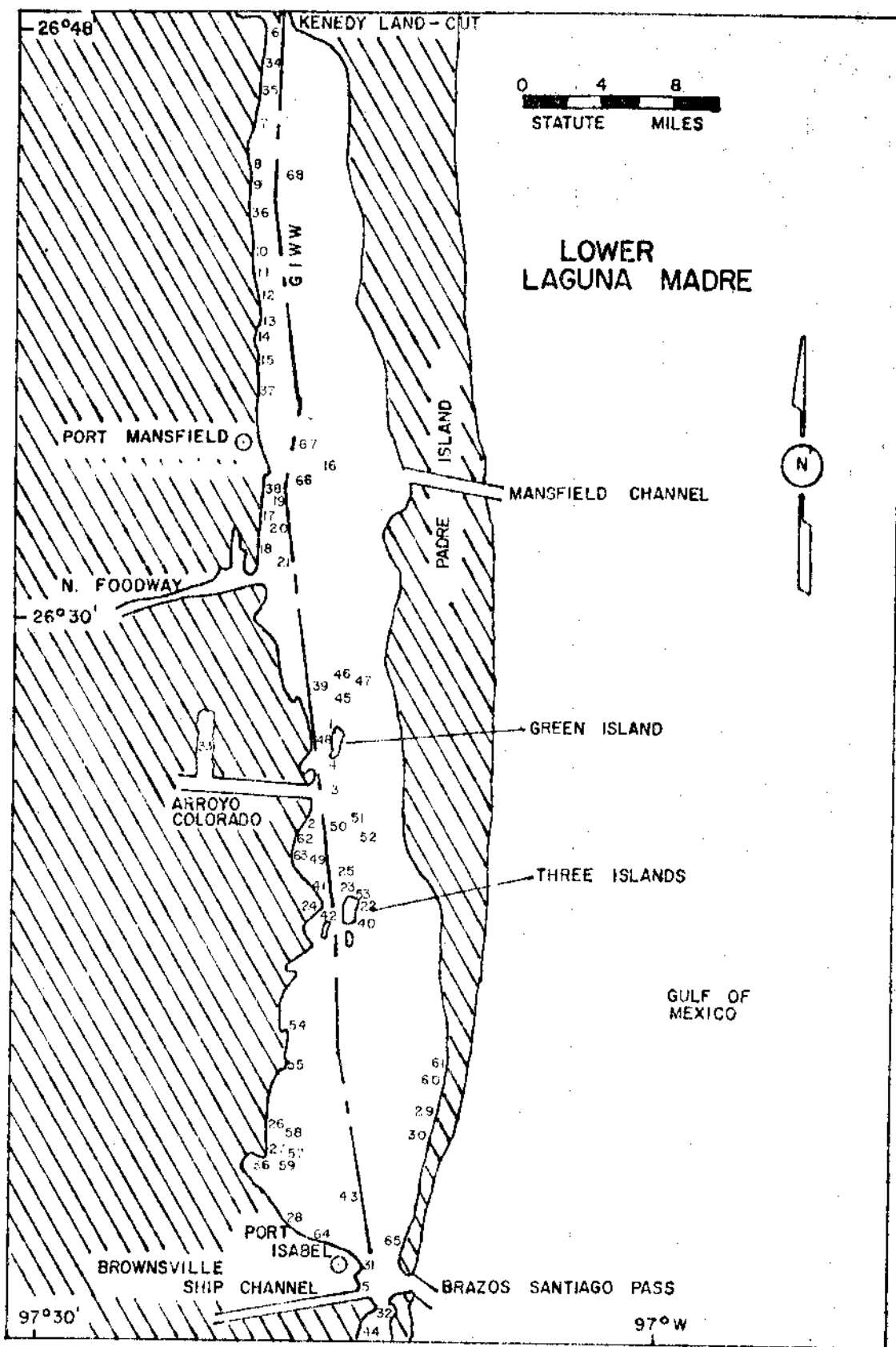


Figure 10. Gill net sample sites in the lower Laguna Madre system, October 1978-September 1979.

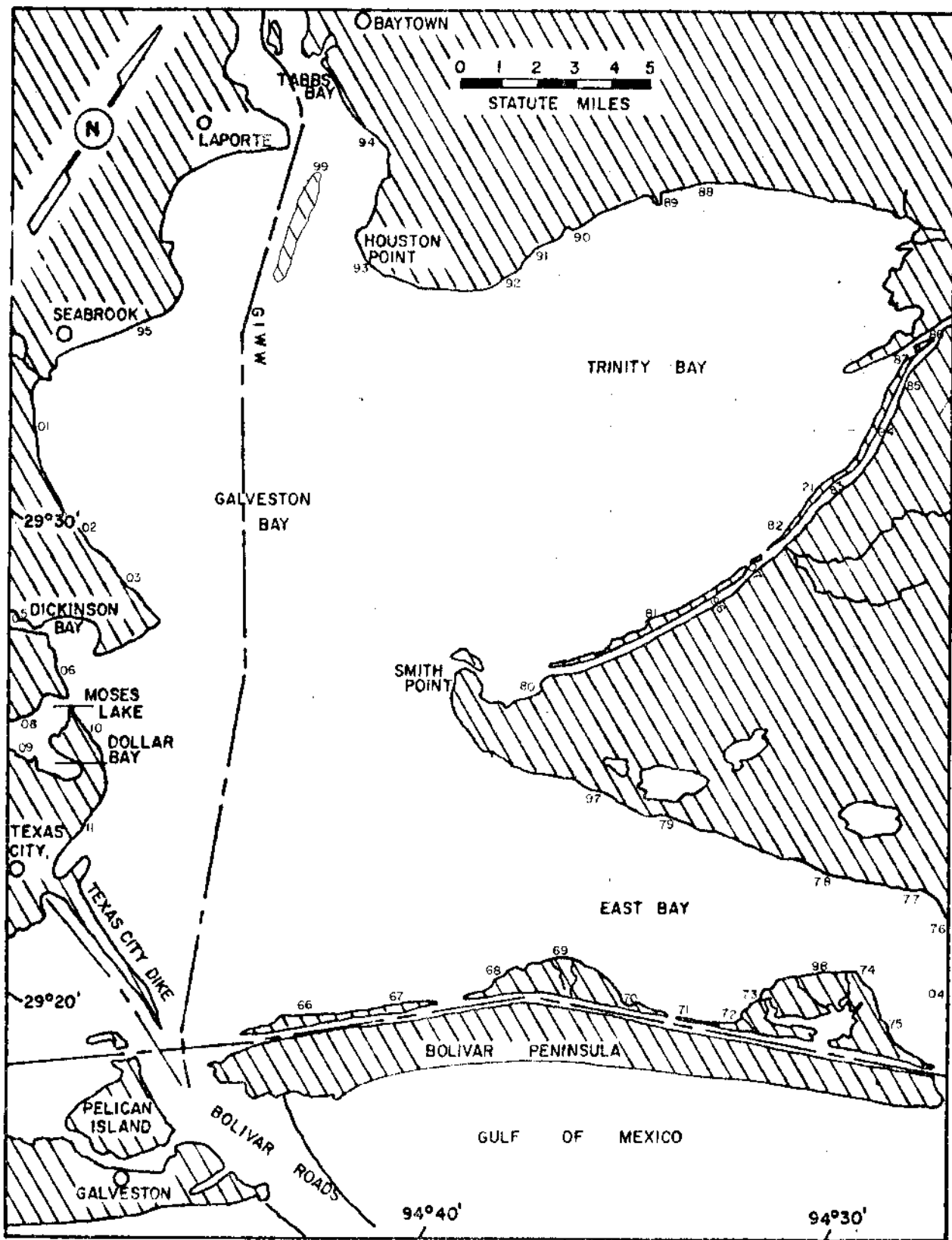


Figure 11. Trammel net sample sites in the Galveston Bay system, October 1978-September 1979.

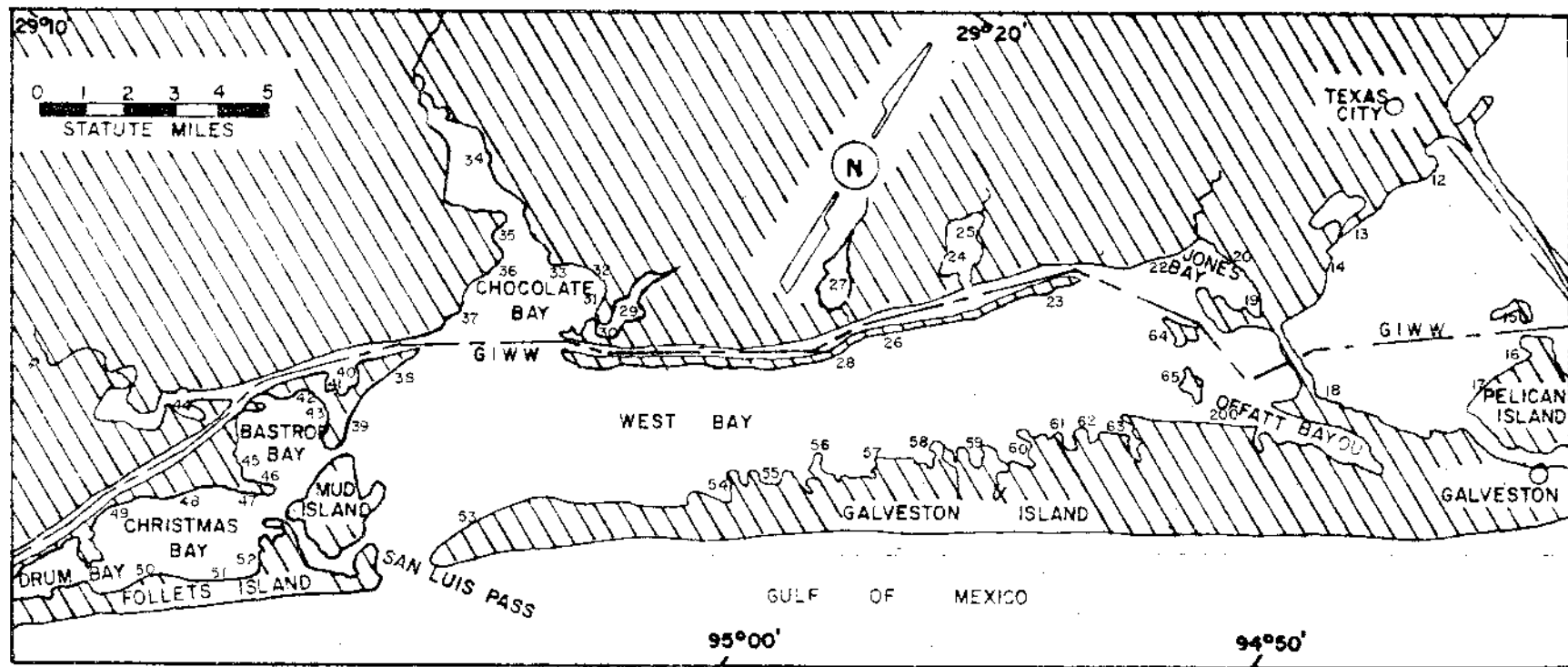


Figure 12. Trammel net sample sites in the Galveston Bay system, October 1978-September 1979.

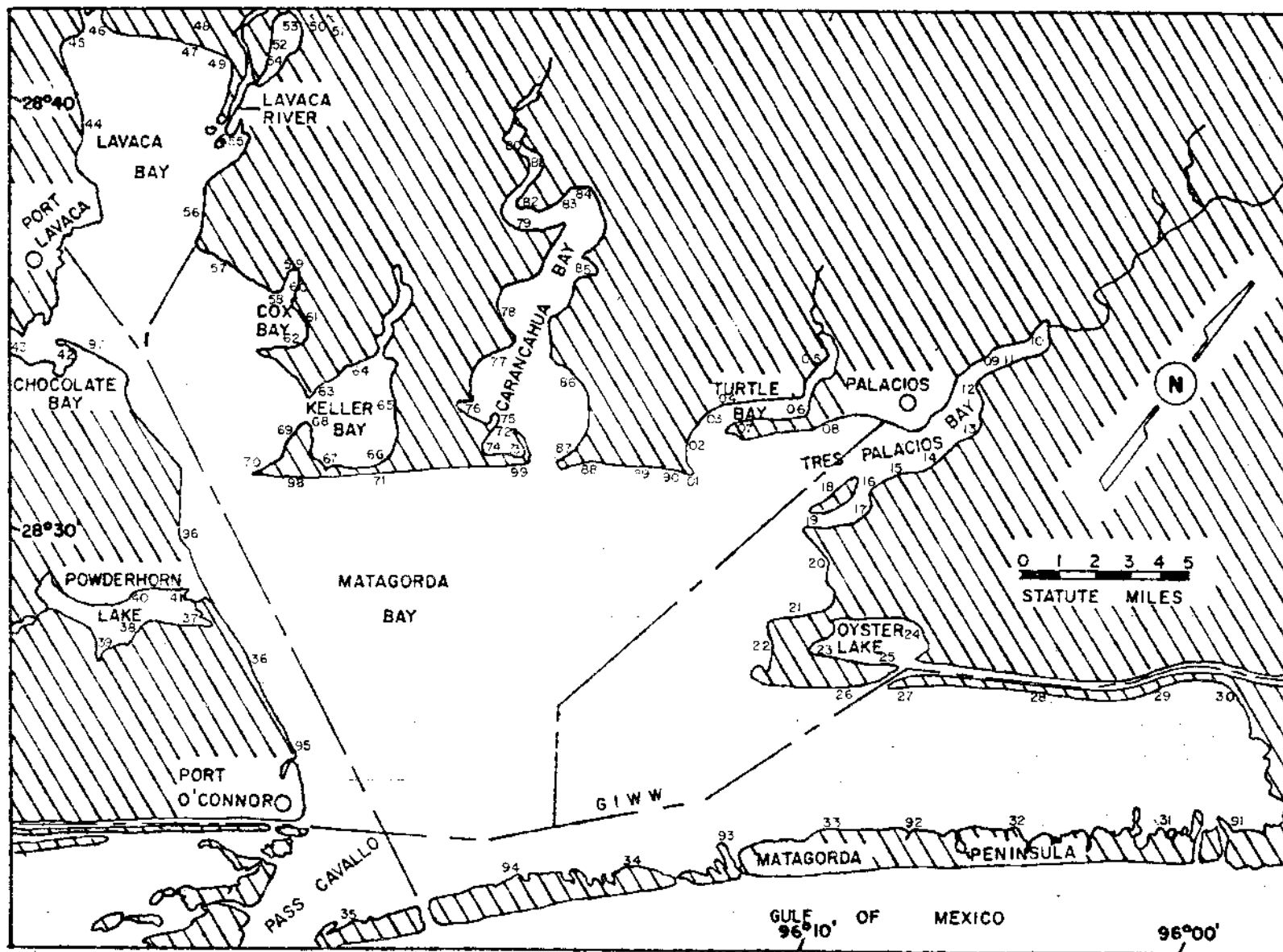


Figure 13. Trammel net sample sites in the Matagorda Bay system, October 1978-September 1979.

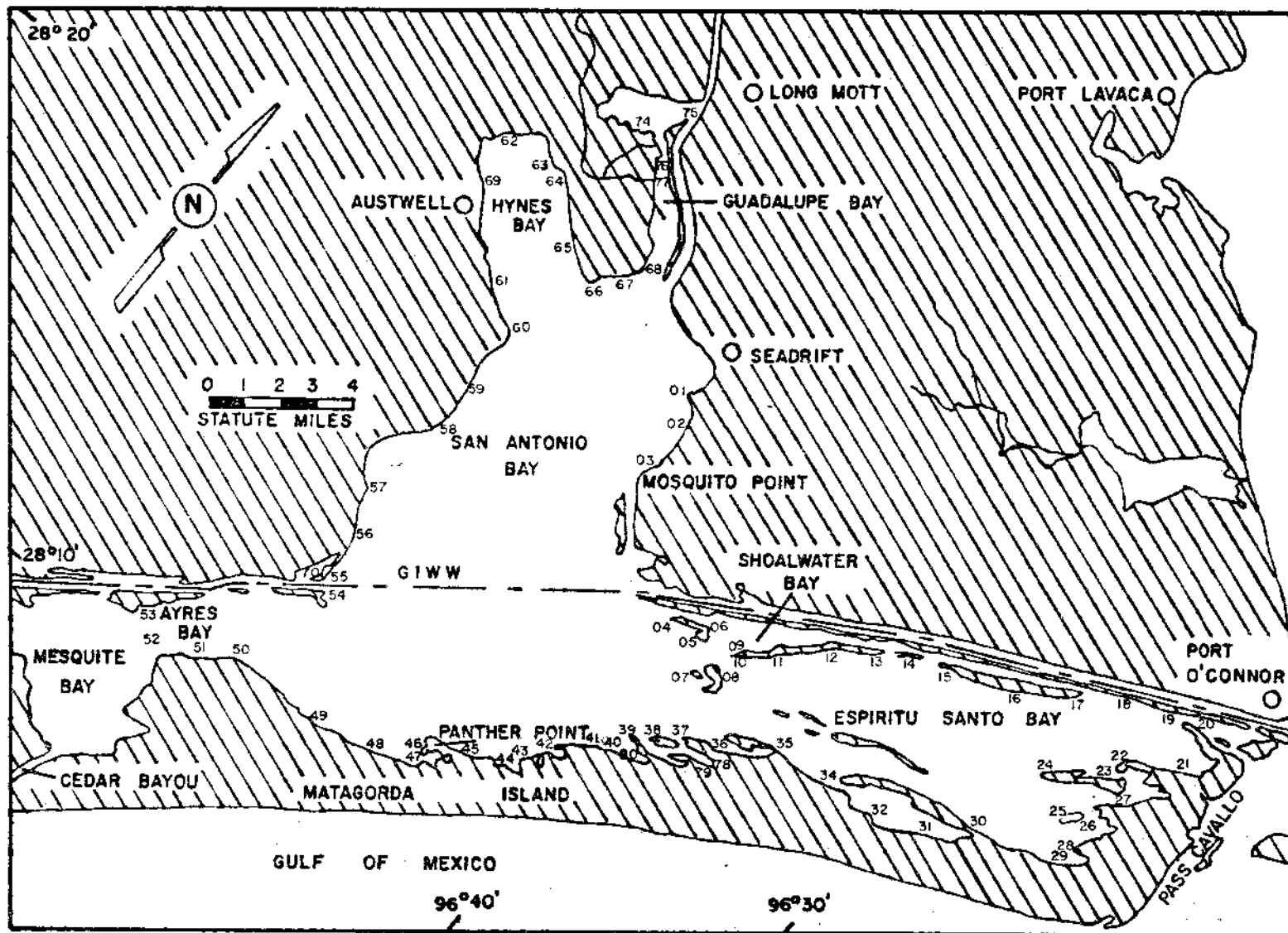


Figure 14. Trammel net sample sites in the San Antonio Bay system, October 1978-September 1979.

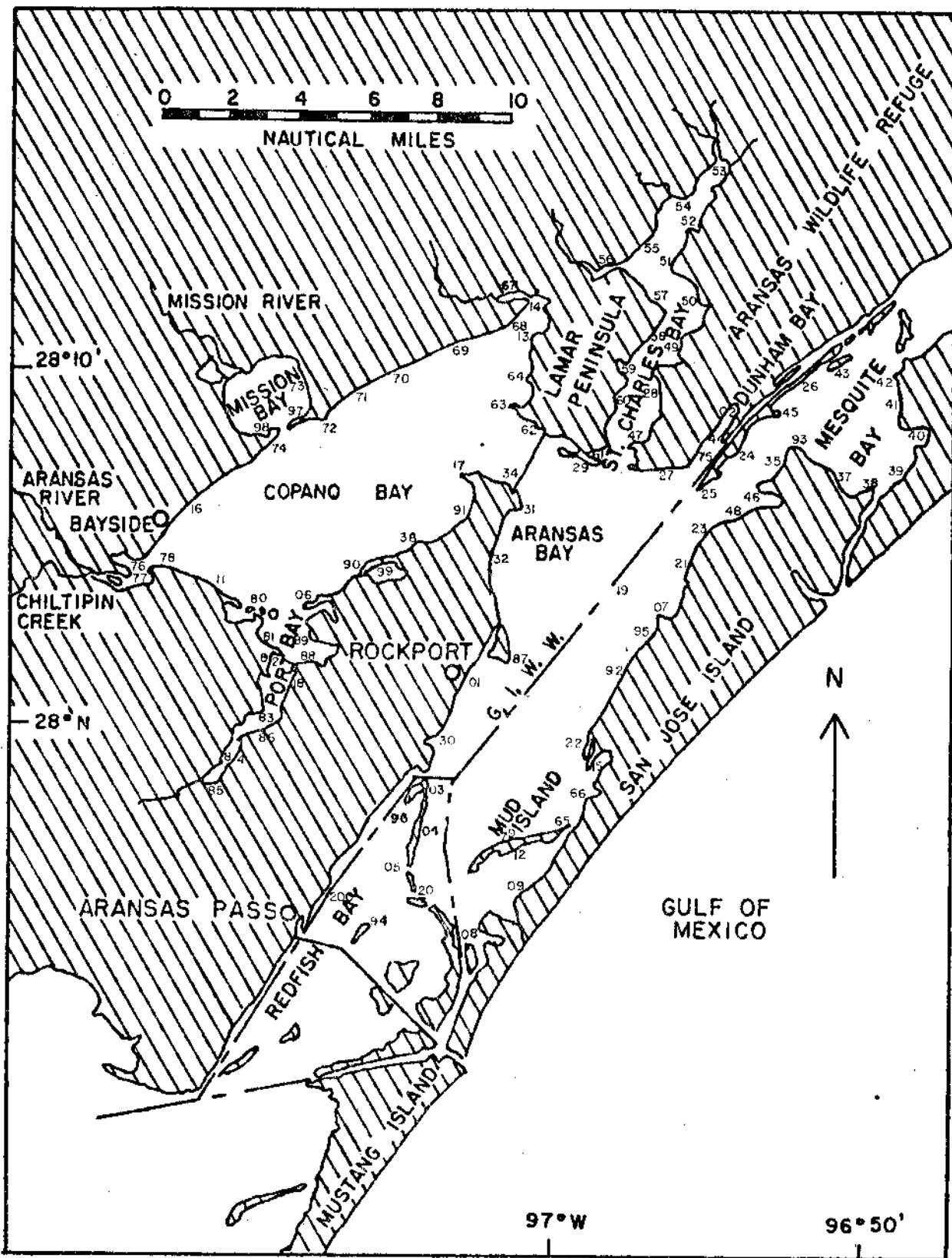


Figure 15. Trammel net sample sites in the Aransas Bay system, October 1978-September 1979.

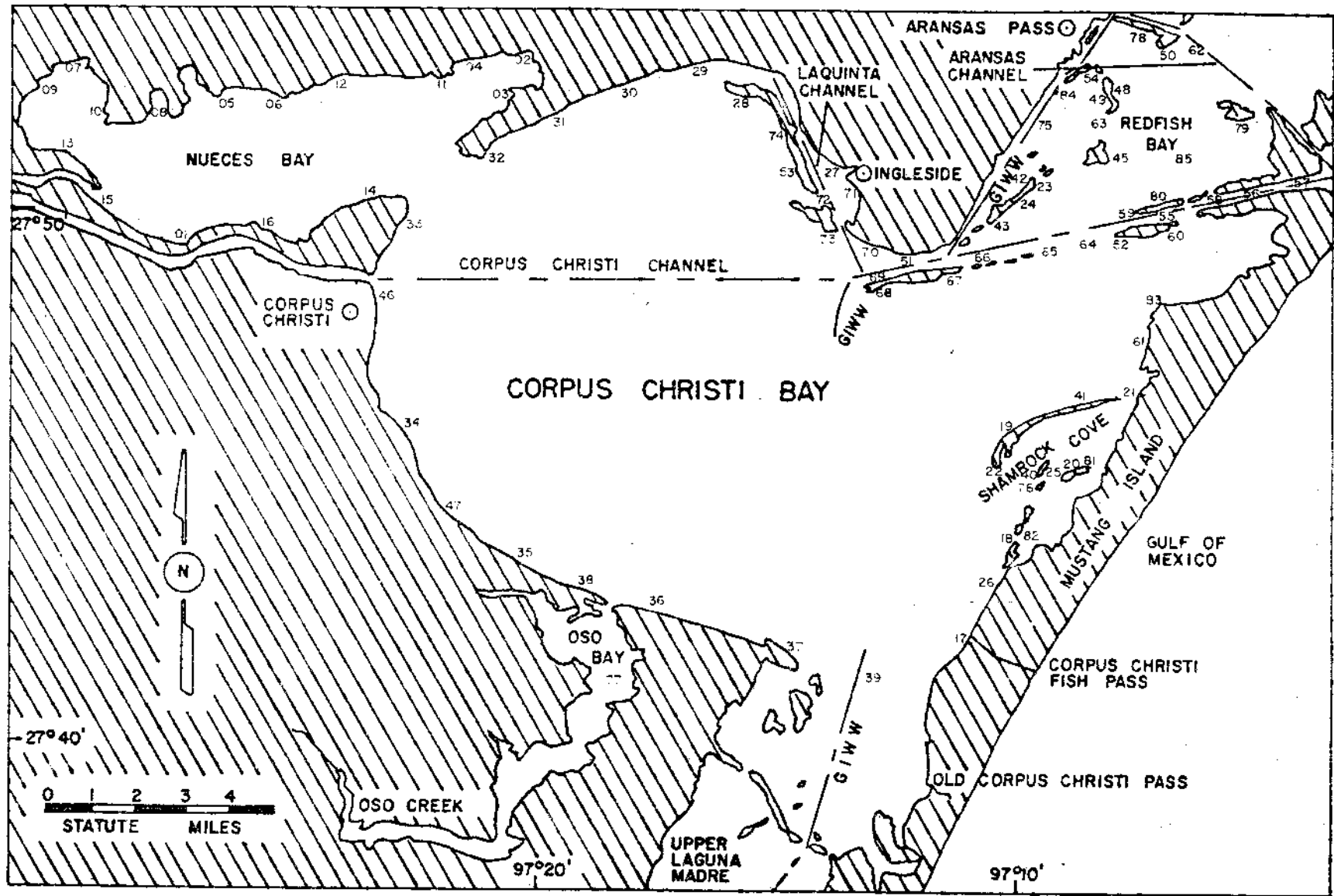


Figure 16. Trammel net sample sites in the Corpus Christi Bay system, October 1978-September 1979.

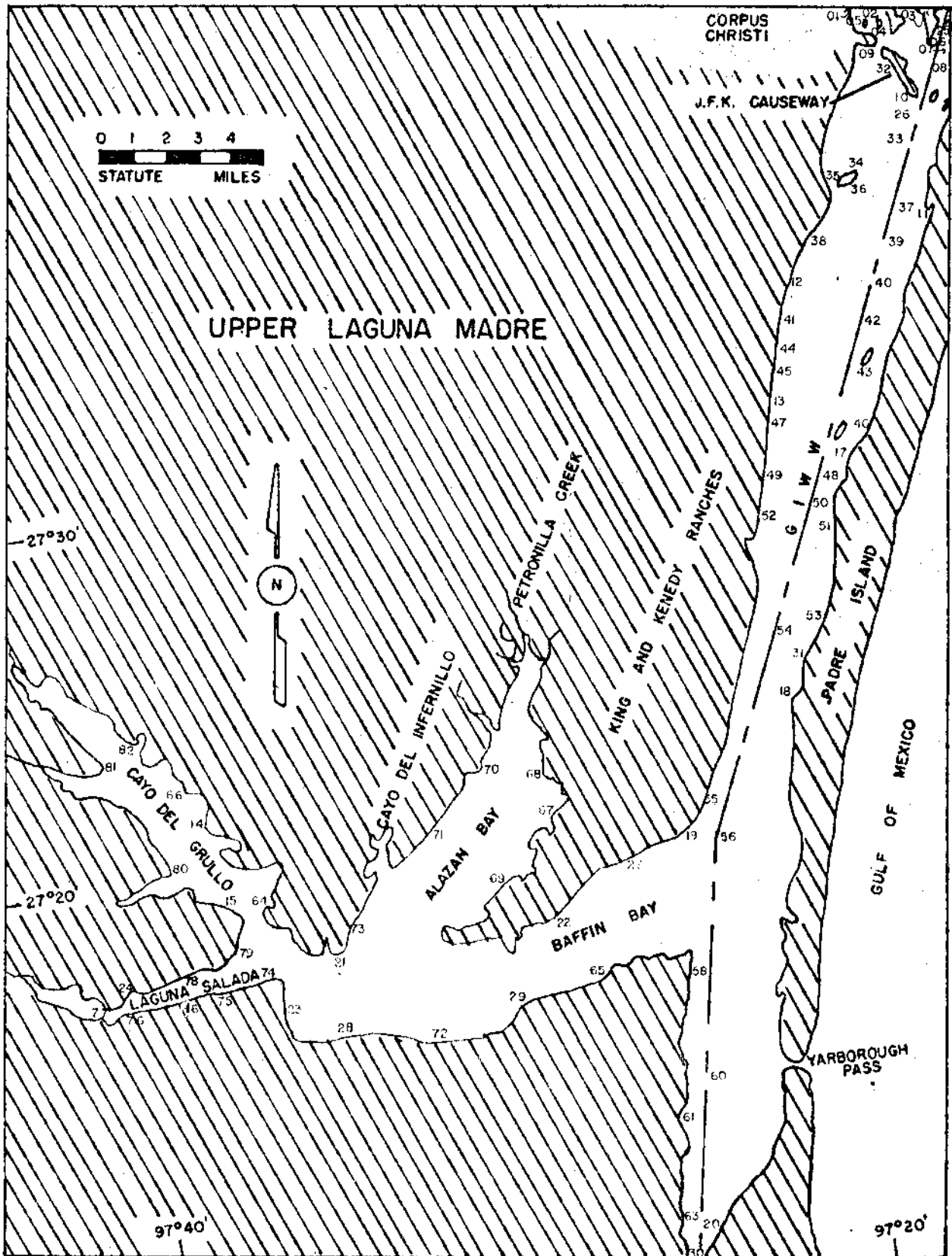


Figure 17. Trammel net sample sites in the upper Laguna Madre system, October 1978-September 1979.

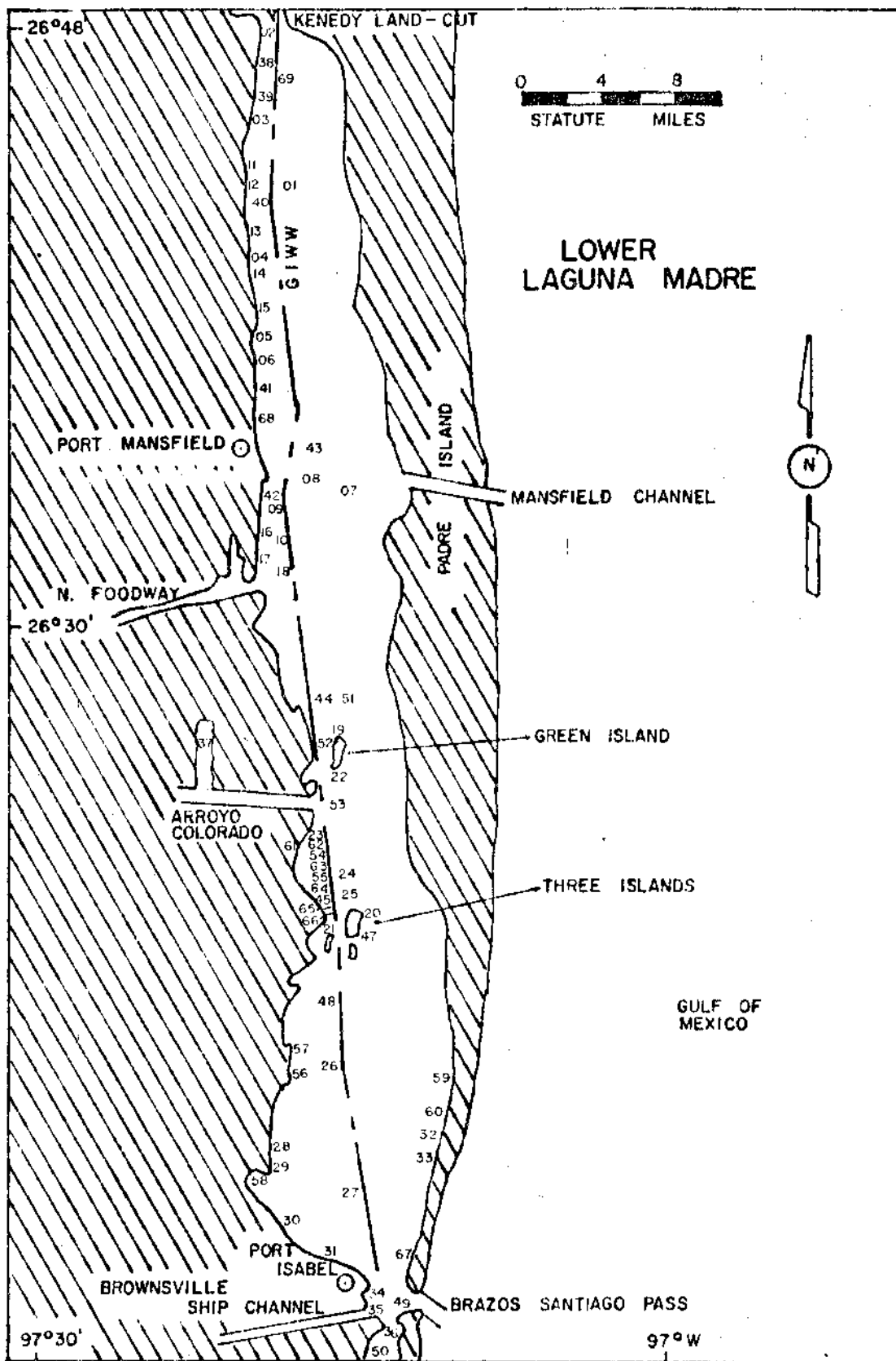


Figure 18. Trammel net sample sites in the lower Laguna Madre system, October 1978-September 1979.

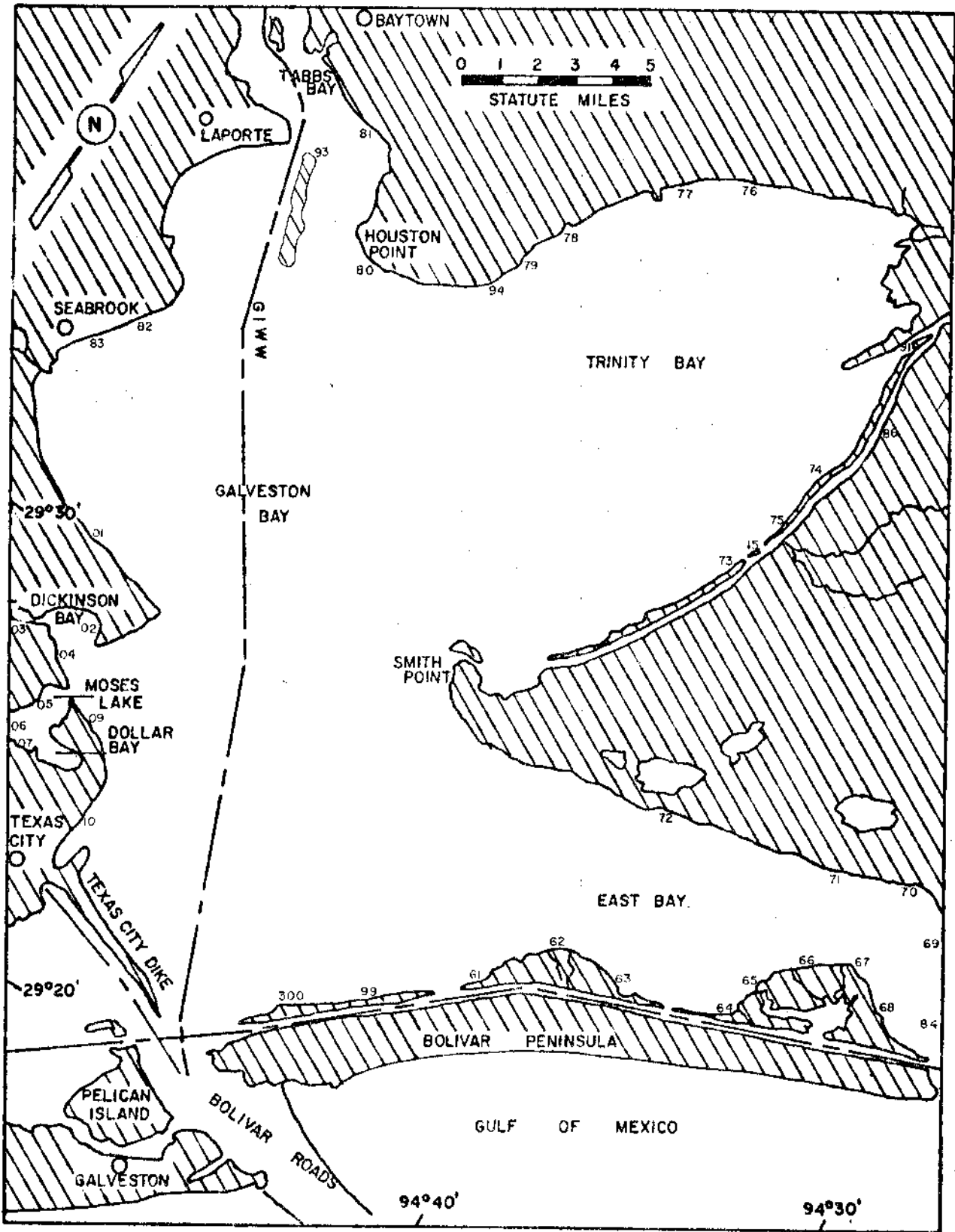


Figure 19. Bag seine sample sites in the Galveston Bay system, October 1978-September 1979.

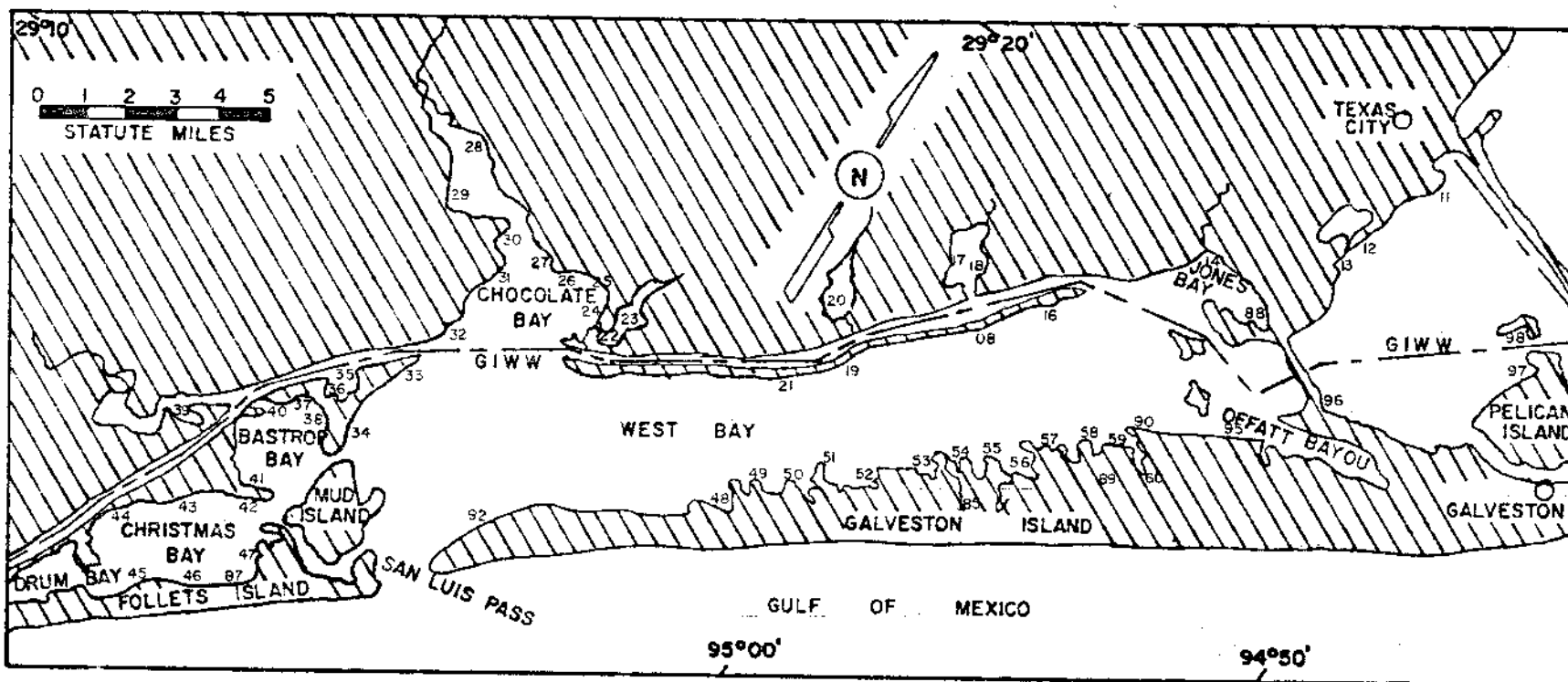


Figure 20. Bag seine sample sites in the Galveston Bay system, October 1978-September 1979.

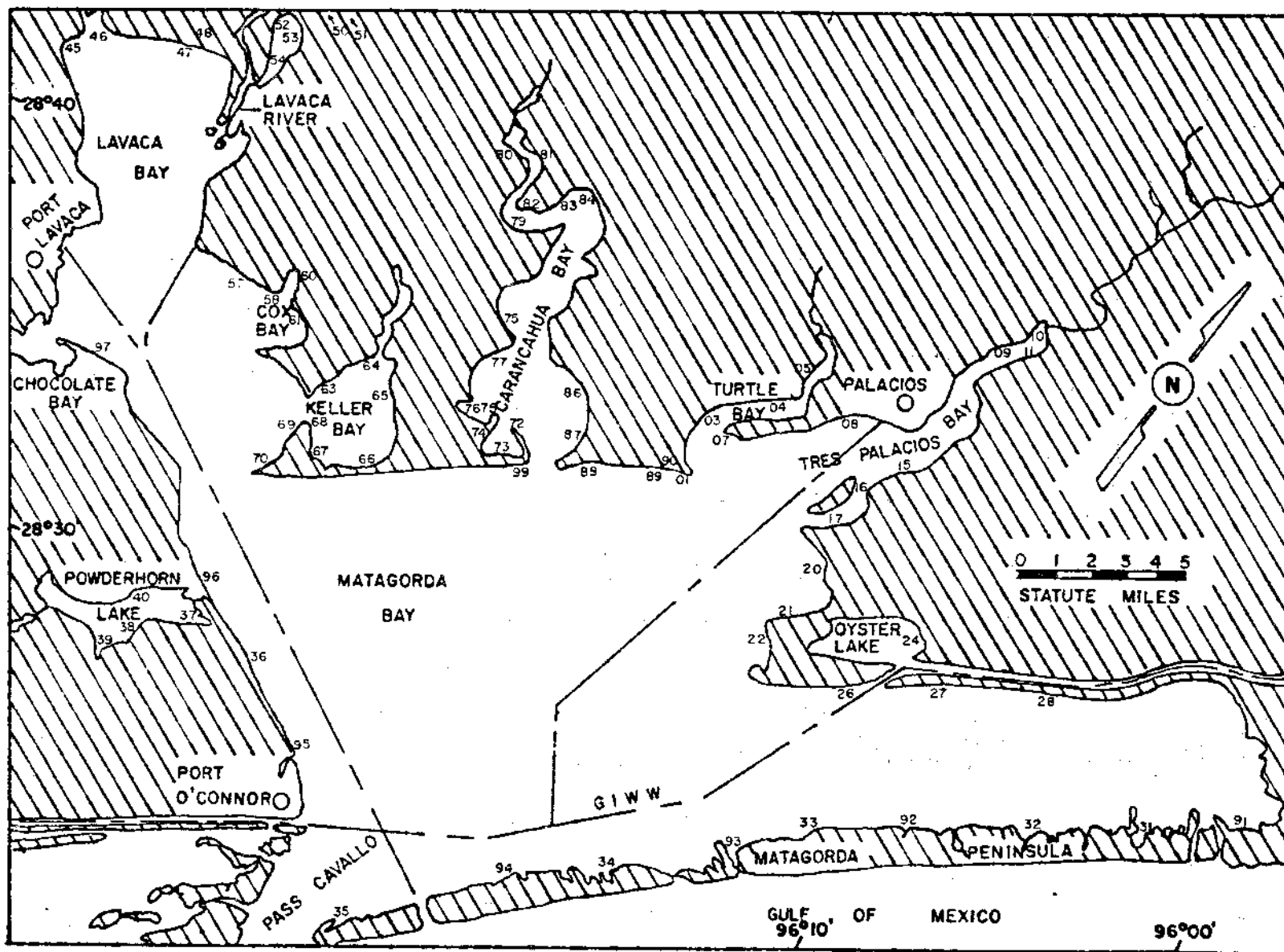


Figure 21. Bag seine sample sites in the Matagorda Bay system, October 1978-September 1979.

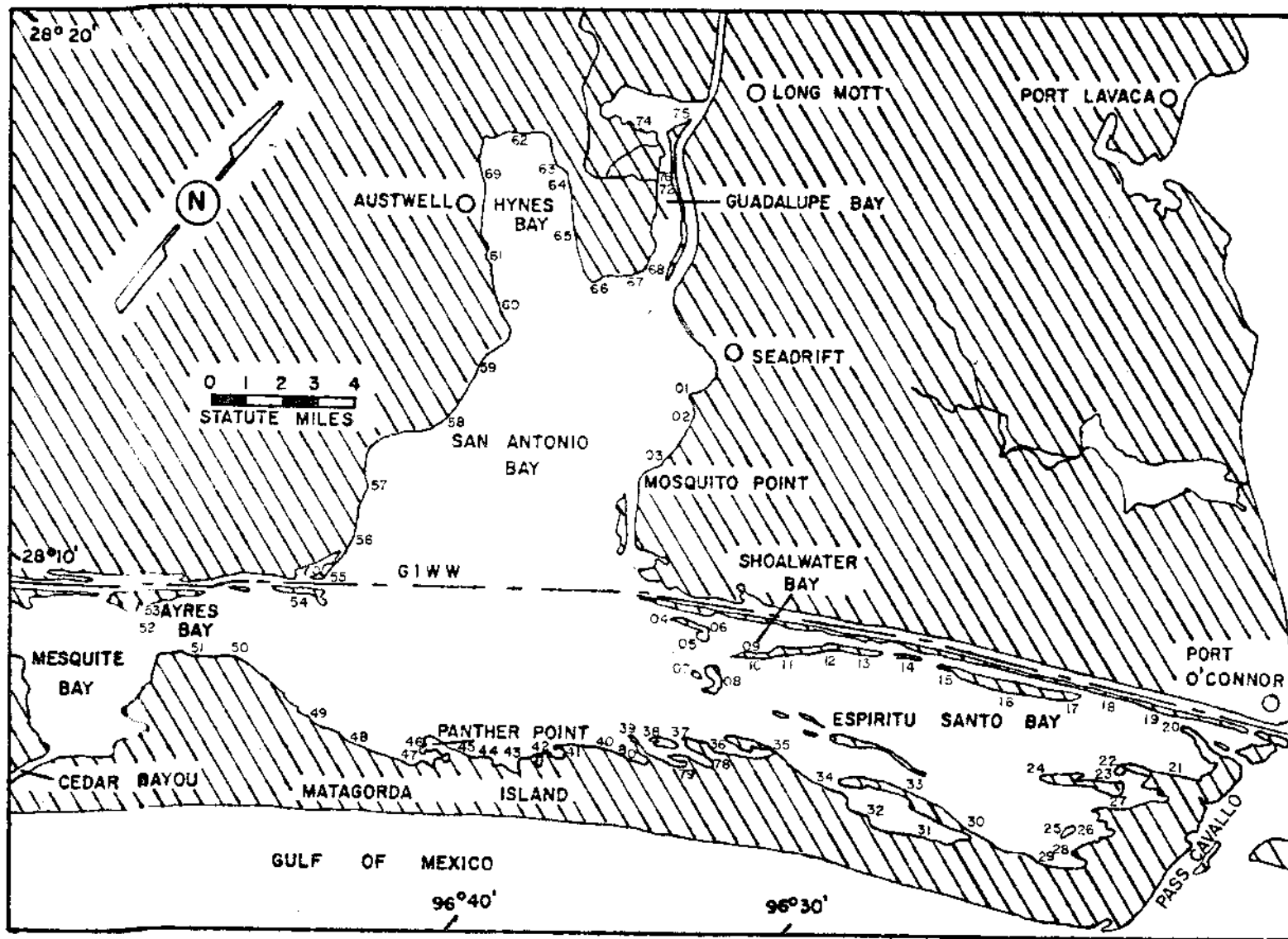


Figure 22. Bag seine sample sites in the San Antonio Bay system, October 1978-September 1979.

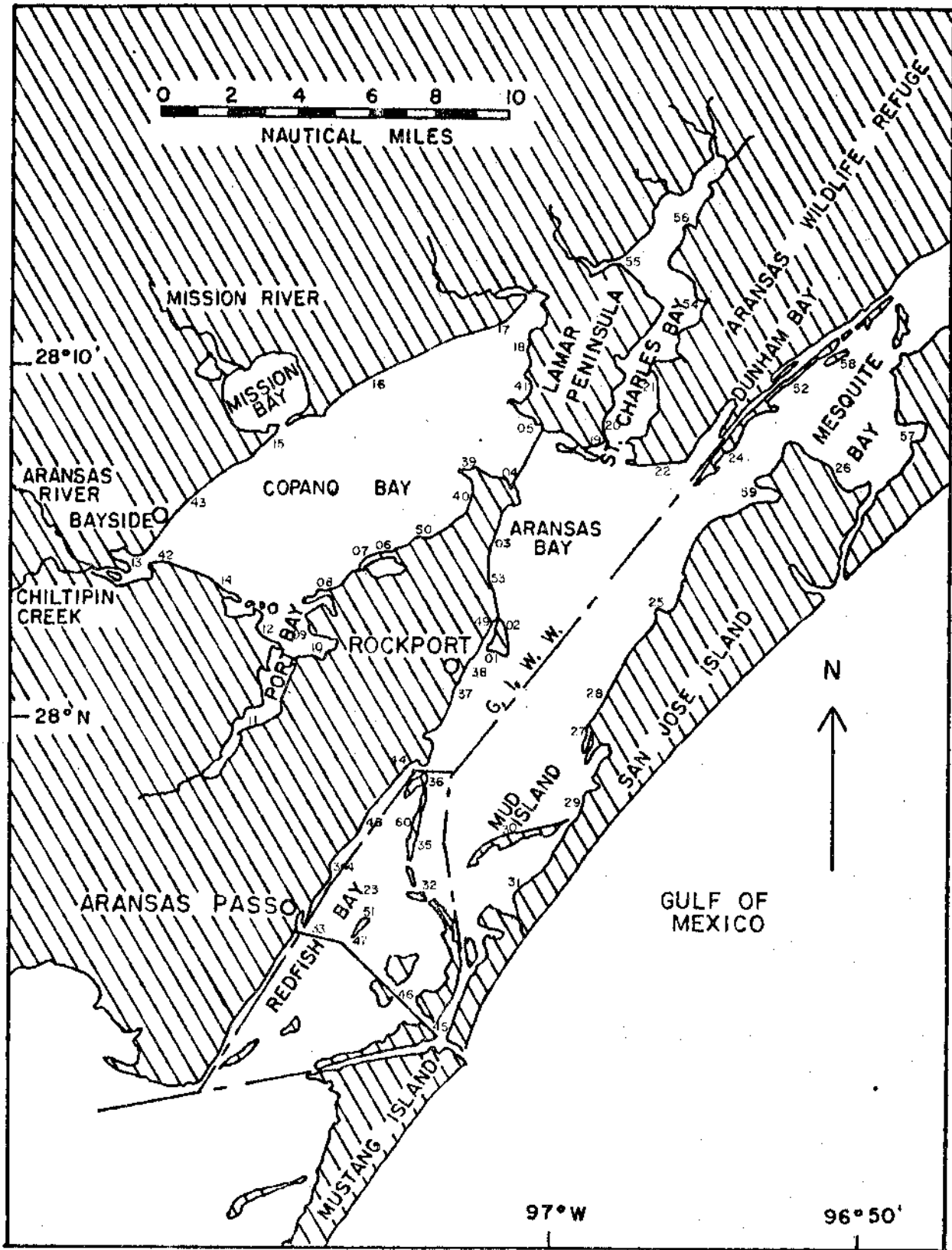


Figure 23. Bag seine sample sites in the Aransas Bay system, October 1978-September 1979.

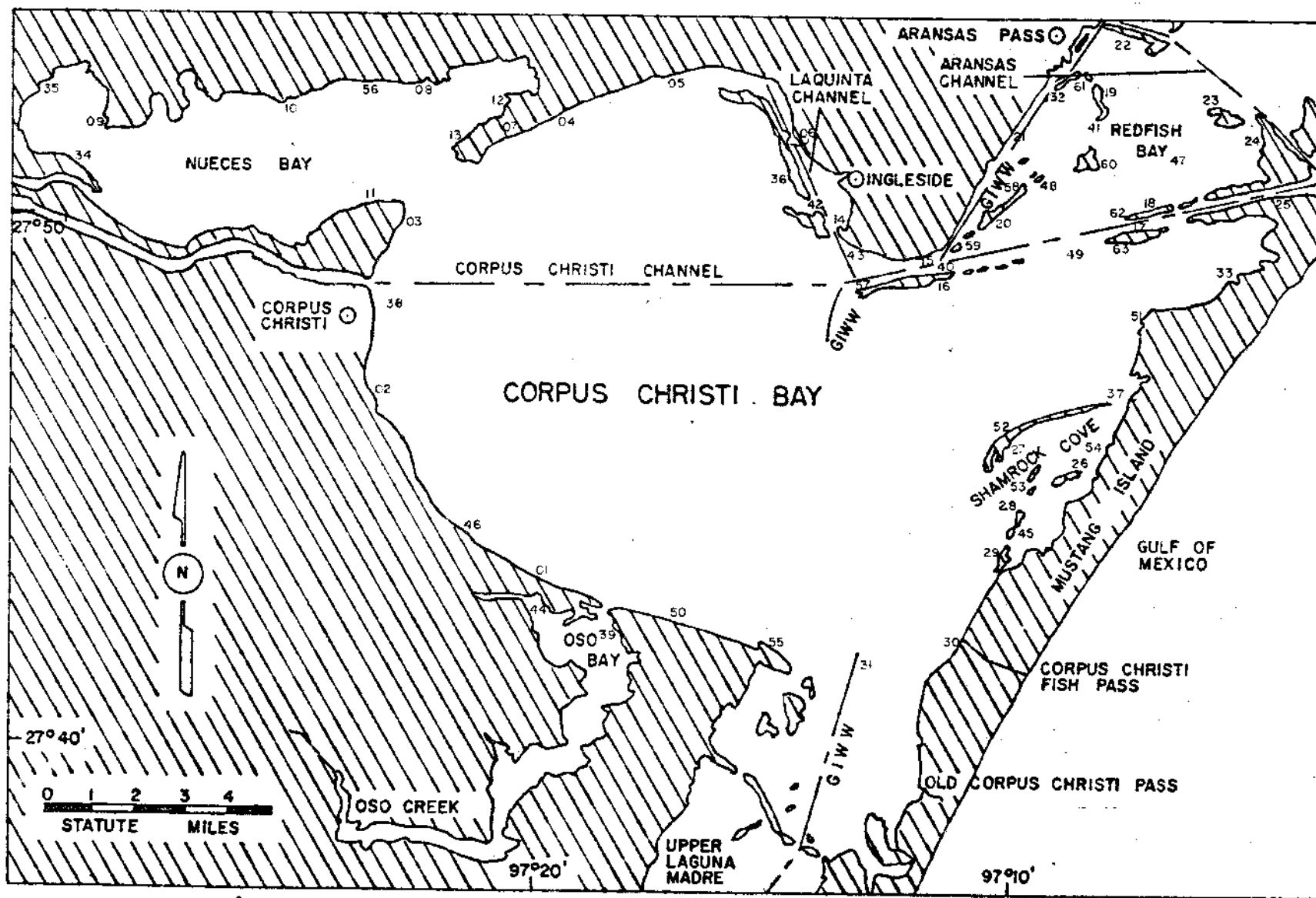


Figure 24. Bag seine sample sites in the Corpus Christi Bay system, October 1978-September 1979.

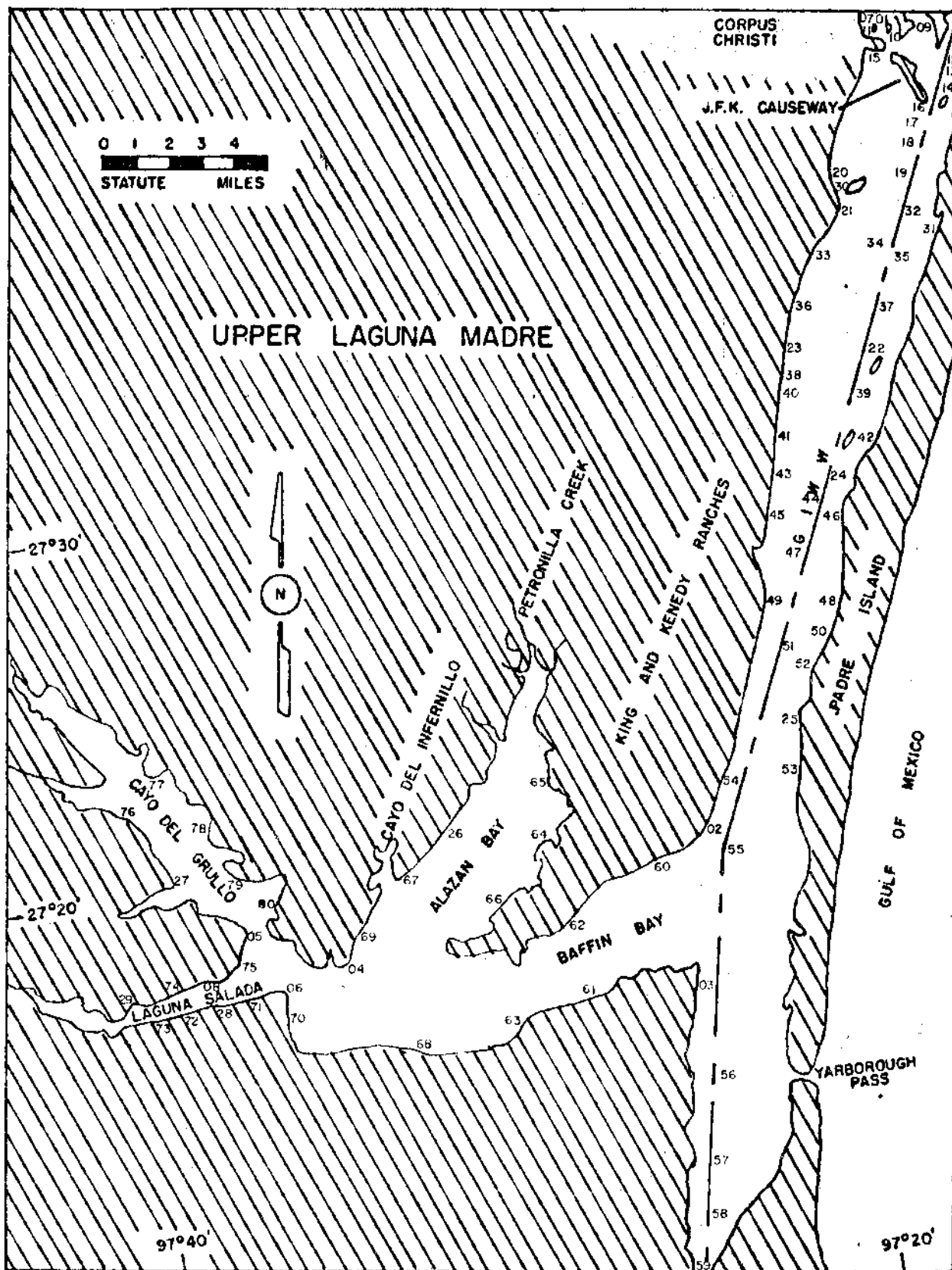


Figure 25. Bag seine sample sites in the upper Laguna Madre system, October 1978-September 1979.

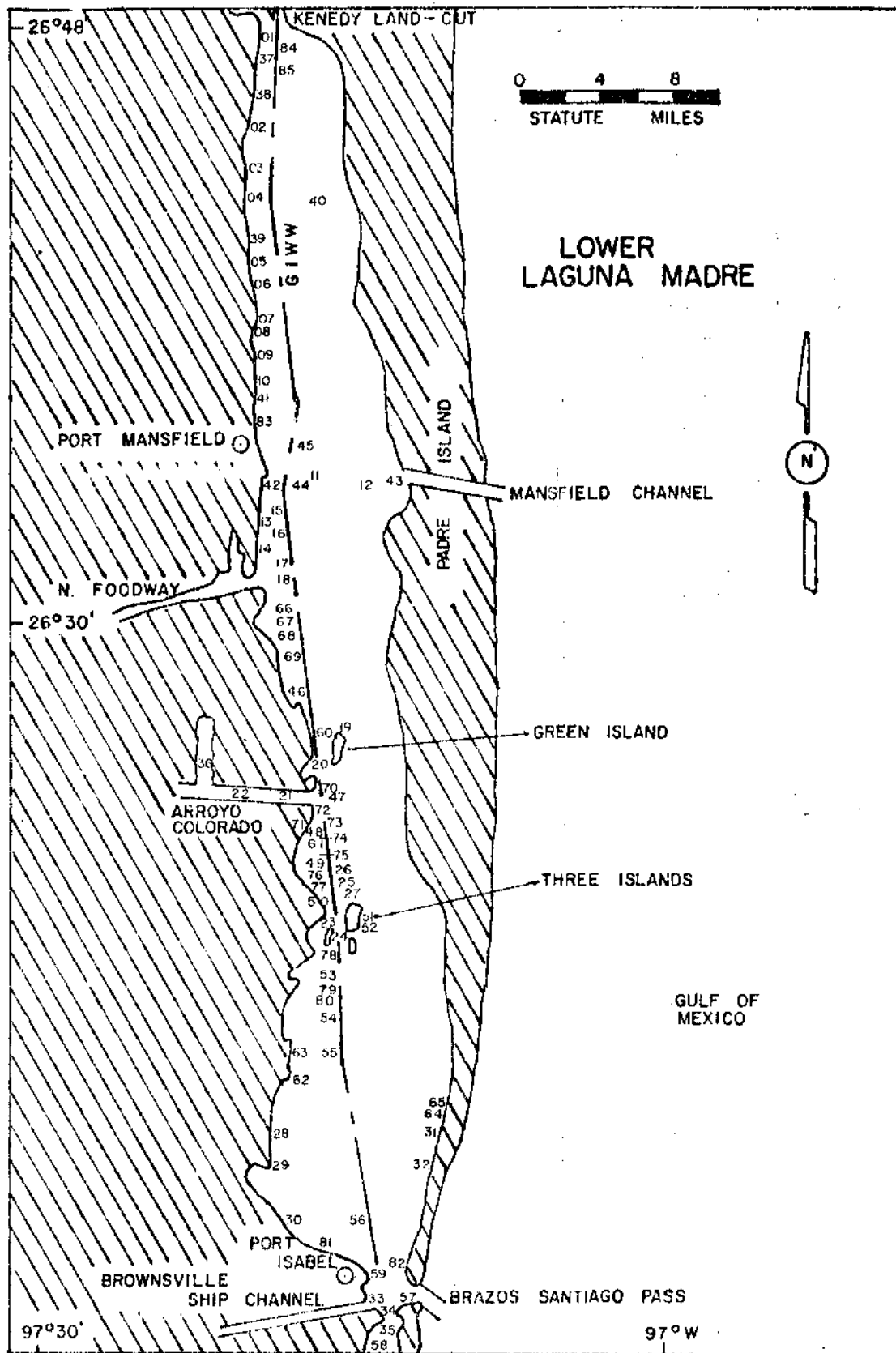


Figure 26. Bag seine sample sites in the lower Laguna Madre system, October 1978-September 1979.

Appendix A. Bay systems area descriptions.

AREA DESCRIPTIONS

Galveston Bay

The Galveston Bay system, which includes 353,768 acres, is the largest estuary on the Texas coast (Fisher et al. 1972) and consists of Galveston,

Trinity, East, West, Dickinson, Chocolate, Christmas, Bastrop, Dollar, Drum and Tabbs Bays and Clear, Moses and Jones Lakes (Fig. 1a-b).

The estuary is separated from the Gulf of Mexico by Bolivar Peninsula, Galveston Island and Follets Island. Two natural passes, Bolivar Roads and San Luis Pass, and one man-made pass, Rollover Pass, connect the estuary with the Gulf.

Bay depths average 6.9 ft or less except in dredged channels. Bolivar Roads, Houston, Texas City, Galveston and Bayport Ship Channels are dredged to 40 ft. The Intracoastal Waterway is dredged to 12.1 ft through East, lower Galveston, and West Bays (Diener 1975).

Bay substrates include mud, shell and clay; barrier island shorelines are predominately sand. Approximately 7,527 acres of oyster reefs lie in Galveston, Trinity, East, West and Dickinson Bays (Benefield and Hofstetter 1976). Numerous spoil "islands" occur along most dredged channels.

Shoreline marshes are present along portions of East, West, Trinity, Christmas, Bastrop, Drum and Chocolate Bays. Diener (1975) listed 231,342 acres of emergent vegetation--smooth cordgrass (Spartina alterniflora), salt meadow cordgrass (S. patens), bulrush (Scirpus olney), shoregrass (Monothochloe littoralis), rush (Juncus roemerianus), seashore saltgrass (Distichlis spicata) and saltwort (Batis maritima)--and 18,095 acres of submergent seagrasses--widgeon grass (Ruppia maritima) and Holodula beaudettei--in Galveston Bay. McEachron, Shaw and Moffett (1977) reported Halophila engelmanni and turtle grass (Thalassia testudinum) in Christmas and Bastrop Bays.

The bay receives an average 2642 billion gal of fresh water annually, 90% of which comes from the Trinity and San Jacinto Rivers (Environmental Protection Agency 1971). Diener (1975) reported salinities ranging from 5-15 o/oo in Trinity and upper Galveston Bays to 20-30 o/oo in the lower portions of Galveston Bay near the Gulf. From November 1975 through March 1976 bay salinities at gill net stations ranged from 2.2 to 28.9 o/oo, dissolved oxygen varied from 5 to 18 ppm and water temperatures ranged from 40.1 to 76.1 F (Texas Parks & Wildlife Dept., Seabrook, Texas).

The Galveston Bay complex is adjacent to the most populated and industrialized area of Texas. A population of 2,424,800 people reside in the eight counties bordering the bay (1974 Census Data, Houston--Galveston Area Council, personal communication). The highest concentrations of people and industrial complexes are on the western shores of Galveston Bay and the eastern shores of West Bay. From 1967 to 1969 the daily average flow of domestic wastewater into the Galveston Bay complex was at least 16.7 million gal and the industrial wastewater inflow at least 300 million gal (Diener 1975).

Sport fishermen caught an estimated 2,774,297 lb of fish in the bay from September 1974 through August 1975 (Heffernan et al. 1977). The commercial fishing industry harvested over 45.1 million lb of shrimp worth \$38,000,000, 15.4 million lb of blue crabs worth \$1,700,000, 6.6 million lb of finfish worth \$1,200,000, 21.4 million lb of shelled oysters worth \$11,700,000 and 9.3 million lb of small bait shrimp worth \$11,100,000 (O. B. Lynam, Texas Parks & Wildlife Dept., Seabrook, Texas, Unpublished data).

East Matagorda Bay

East Matagorda Bay (Fig. 2) is a relatively shallow (3.4 ft average depth), medium to high salinity (15-30 o/oo), turbid bay with a surface area of 37,810 acres at mean low water (MLW) (Diener 1975).

The bay's only connection with the Gulf of Mexico has historically been Brown Cedar Cut at the east end. Caney Creek and the Colorado River delta mark the northeast and southwest boundaries, respectively. The Matagorda Peninsula forms the southern boundary while the Intracoastal Waterway borders the northern shoreline of East Matagorda Bay.

Extensive stands of emergent cordgrass (*Spartina* sp.) occur along both the southern and northern boundaries with rush found on the northern shoreline. Submergent grasses include widgeon grass and *Halodule beaudettei*.

Oyster reefs are located throughout the system but no estimate of the acreage was available.

East Matagorda Bay receives fresh water from rainfall and runoff entering the Intracoastal Waterway from Caney Creek, the Colorado River and Peyton Creek (via Lake Austin and Live Oak Bayou). No estimates of the amount of annual fresh water inflow were available.

Population centers are located at each end of the bay in Matagorda (population 700) and in Sargent (population unknown). Fishing comprises the major activity of residents in both towns; however, information concerning commercial and recreational landings has been combined with data from the Matagorda Bay system.

Matagorda Bay

The Matagorda Bay system (Fig. 3) encompasses an area of 244,430 acres and has an average depth of about 6.9 ft at MLW (Diener 1975). It includes Tres Palacios, Turtle, Carancahua, Lavaca, Cox, Keller and Chocolate Bays and Oyster, Redfish, Salt and Powderhorn Lakes.

Matagorda Bay is a large primary bay of 167,529 acres and 7.9 ft mean depth (Diener 1975). The southern boundary is the long, narrow Matagorda Peninsula with sand shoreline and extensive areas of submergent and emergent grasses; the eastern confine is the Colorado River delta and the western boundary is a shallow sand shoreline with limited submergent and emergent vegetation. The community of Port O'Connor (population 1,400) is in the southwest corner. Several secondary and tertiary bays associated with major and minor drainages into Matagorda Bay indent the northern perimeter.

Oyster Lake is a shallow muddy tertiary system of 2335 acres and 2.6 ft mean depth (Diener 1975) located along the northwestern shoreline of Matagorda Bay. Numerous oyster reefs are located throughout the system and the periphery is surrounded by emergent vegetation. Tres Palacios Bay is a secondary system of 9436 acres and 3.9 ft mean depth (Diener 1975) with oyster reefs and scattered shell throughout. The community of Palacios (3,500 people) is located on the northern shoreline. Turtle Bay, with 1280 acres and 2.6 ft mean depth (Diener 1975), is a muddy system with a moderate number of oyster reefs. The

shoreline is primarily clay bluffs with scattered emergent vegetation communities.

Carancahua Bay, along the north central shoreline of Matagorda Bay, covers 13,076 acres and has a 3.9-ft mean depth (Diener 1975). Several resort communities (Port Alto, Schicke Point and Cape Carancahua) are located along the bay. This bay has little marsh except in the southern portion where the tertiary systems of Redfish and Salt Lakes are located. Steep banks and sandy clay constitute the majority of the shore areas.

Lavaca Bay is a large secondary bay in the northwest corner of Matagorda Bay with 44,729 acres and 4.3-ft mean depth (Diener 1975). The shoreline is primarily clay bluffs. On the southeastern shoreline of Lavaca Bay are two smaller secondary areas: Cox Bay and Keller Bay. Cox Bay is a shallow muddy system with a clay bluff periphery and scattered oyster reefs throughout. Keller Bay is a deeper system and the southern perimeter has the largest submerged grass beds found in the Lavaca Bay complex. The community of Olivia (240 people) is located at the head of Keller Bay. On the western shoreline of Lavaca Bay is Chocolate Bay, a small, muddy bay of 699 acres and 2.6-ft mean depth with clay bank shoreline (Diener 1975). North of Chocolate Bay is the city of Port Lavaca (12,000 people). The area of central Lavaca Bay is the most heavily industrialized in the Matagorda Bay system.

South of Lavaca Bay, on the western shoreline of Matagorda Bay, is Powderhorn Lake. This is a moderately saline, shallow body of water of 2889 acres and 2.3-ft mean depth (Diener 1975). This "lake" connects with Matagorda Bay through Powderhorn Bayou on which the community of Indianola (200 people) is located. The periphery of this bay is surrounded by large emergent grass communities.

There are two direct exchanges with the Gulf of Mexico, Pass Cavallo and the Matagorda Ship Channel, both located in the southwest corner of Matagorda Bay, and one indirect connection, the Colorado River, on the eastern boundary. The western portion of Matagorda Bay and the southern two-thirds of Lavaca Bay are transected by the Matagorda Ship Channel, 35.4 ft deep (Diener 1975), with associated spoil banks. The channel originates at the ALCOA (Aluminum Company of America) plant on the eastern shoreline of Lavaca Bay and terminates at the Gulf of Mexico through the Matagorda jetties. Small channels branch off in Lavaca Bay to the Refuge Harbor at Port Lavaca and to the Lavaca River. The Intracoastal Waterway, dredged to 12.1 ft (Diener 1975), intersects the Matagorda Ship Channel near Port O'Connor. The Palacios Ship Channel branches from the Intracoastal Waterway in south central Matagorda Bay.

Diener (1975) listed 119,970 acres of emergent vegetation--smooth cordgrass, salt meadow cordgrass, saltwort, shoregrass and coastal dropseed (Sporobolus virginicus)--and 7037 acres of submergent vegetation (widgeon grass and Halodule beaudettei) in the Matagorda Bay system.

Between 1957 and 1968 Matagorda Bay received an average 713 billion gal of freshwater discharge annually (Diener 1975), mainly through the Tres Palacios, Carancahua, Lavaca and Navidad Rivers with partial flow entering the bay from the Colorado River. From November 1975 through March 1976, bay water salinities at gill net stations ranged from 10.0 to 28.0 o/oo, dissolved oxygen varied from 6.0 to 13.0 ppm and water temperatures ranged from 44.6 to 78.8 F (Texas Parks & Wildlife Dept., Palacios).

Sport fishermen caught an estimated 844,600 fish weighing 968,832 lb in Matagorda Bay from September 1975 through August 1976; during the same period commercial fishermen landed 176,370 lb of fish (Breuer et al. 1977).

San Antonio Bay

The San Antonio Bay system consists of the primary bays San Antonio and Espiritu Santo and the secondary bays Hynes, Guadalupe and Shoalwater (Fig. 4). Several large natural saltwater lakes occur along Matagorda Island and connect with the primary bays via sloughs and small passes. Two major passes, Cedar Bayou Pass to the west and Pass Cavallo to the east, provide circulation routes between the Gulf of Mexico and the bay system.

San Antonio, Hynes and Guadalupe Bays cover approximately 84,012 acres and Espiritu Santo Bay covers 34,099 acres for a total bay system area of 118,111 acres (Collier and Hedgpeth 1950). The average depths of the unaltered bay system are 3.9 ft in San Antonio Bay (maximum of 7.6 ft) and 4.9 ft in Espiritu Santo Bay (maximum of 7.9 ft) (Collier and Hedgpeth 1950).

Bottom substrates are generally silty clay and sand in the upper bay region which gradually change to sand clay and sand in the lower bay and Espiritu Santo bay regions (Texas Parks & Wildlife 1975). Approximately 3015 acres of spoil islands and 2001 acres of oyster reefs occur in the bay system (Burg 1974). One of the major oyster reefs is Panther Reef which extends from Panther Point north toward Mosquito Point.

The Guadalupe and San Antonio Rivers are the major sources of fresh water for the San Antonio Bay system, providing an average annual inflow of 449 billion gal from a drainage area of 6,559,920 acres (Childress et al. 1975). The amount of fresh water entering the system generally depends upon rainfall in the upland drainage rather than on local drainage. Local rainy periods usually occur during early summer and fall. The average annual rainfall for the area is 33.9 inches (Texas Parks & Wildlife 1975).

Salinity values for the bay system generally increase as the distance from the rivers increases. Out-flowing fresh water moves along the west shore of San Antonio Bay while incoming Gulf water moves along the east shore (Childress et al. 1975). Average surface salinities range from 0.0 o/oo in Guadalupe Bay to about 8.0 o/oo in lower San Antonio Bay and from 14.0 to 21.0 o/oo in Espiritu Santo Bay (Childress et al. 1975). No seasonal turbidity patterns are noted within the bay system; however, turbidities tend to increase toward the upper bay and river-influenced areas, as well as in areas disturbed by mud-shell and channel dredging operations (Childress et al. 1975). Dissolved oxygen concentrations increase during cold months and decrease during warm months. Between May 1972 and August 1973, average dissolved oxygen concentrations ranged from 7.0 to 12.4 ppm (Childress et al. 1975).

About 24,993 acres of emergent and 16,345 acres of submergent vegetation are found in the San Antonio Bay system (Diener 1975). Smooth cordgrass is the dominant emergent plant in all areas of the bay system except in upper San Antonio Bay where common reed, Phragmites communis, is dominant (Childress et al. 1975). Other species of emergent vegetation include saltwort, saltgrass, shoregrass and salt meadow cordgrass (Diener 1975). The dominant submergent vegetation of the San Antonio Bay system is shoal grass, Diplanthera wrightii.

This plant is located primarily in the low turbidity areas of lower San Antonio Bay and Espiritu Santo Bay and in the shallow lakes and sloughs found along the northern margin of Matagorda Island. Other species of submergent vegetation found in the bay system include widgeon grass, and the algae Polysiphona gorgoniae, Spyridia filamentosa, Gracilaria folifera, Ulva lactuca and U. fasciata (Childress et al. 1975). The algae are usually found attached to submerged solid objects such as oyster shells or pilings. However, some algae can be found in calm areas attached to mud or sand substrates.

Four small towns occur on the shoreline of the San Antonio Bay system: Austwell, Long Mott, Seadrift and Port O'Connor. Less than 4,000 inhabitants live in these four communities combined (1970 census). The primary businesses found in this area are farming, ranching and fishing, including shrimping and oystering. The majority of the bay shoreline as well as the San Antonio-Guadalupe River drainage occurs on or near ranchland and farmland. Two major industries exist on the San Antonio Bay system; Union Carbide Corporation at Long Mott and DuPont de Nemours E.I. & Company at Bloomington, a town on the Guadalupe River approximately 20 miles from the bay.

The tourist industry is not very extensive, but a few fishing centers at Seadrift and Port O'Connor furnish tackle, guides and access to the bay system. Most of the sport fishing occurs in Espiritu Santo Bay. Between September 1974 and August 1975, sport fishermen harvested an estimated 416,453 lb of fish from the entire bay system; commercial fishermen harvested an estimated 482,592 lb of fish (Heffernan et al. 1977). In addition, approximately 883,172 lb of shrimp, 1,125,239 lb of blue crabs and 196,873 lb of oysters were harvested commercially during the 1974 calendar year (O. B. Lynam, Texas Parks & Wildlife Dept., Seabrook Field Station, personal communication).

Aransas Bay

The Aransas Bay complex consists of primary, secondary and tertiary bays. The system extends from Aransas Pass, Texas, northeastward to Mesquite Bay, and from its eastern boundary of San Jose Island, westward across Copano Bay to the small community of Bayside, Texas (Fig. 5).

Aransas Bay is the primary bay with a surface area at MLW of 56,207 acres and an average depth of 7.9 ft (Diener 1975). A direct water circulation and marine life migration route from the Gulf of Mexico to the bay is provided by a deep water (45.0-46.9 ft) pass, 600 to 712 ft in width, between San Jose Island and Mustang Island at Port Aransas, Texas (Anonymous 1971). This accounts for the higher than average salinities in the southern region of the bay (approximately 30 o/oo). The middle of the bay is the deepest part with a maximum value of 13.1 ft at MLW (U. S. Dept. Commerce 1976a). Six major oyster (Crassostrea virginica) reefs ranging in area from 25 to 257 acres are concentrated in the northern portion of Aransas Bay, along with scattered smaller reefs (Heffernan 1961). There are no private oyster leases in the Aransas Bay system (Diener 1975).

Copano, St. Charles, Redfish and Dunham Bays are considerably shallower, secondary areas, supporting extensive growths of algae and "grasses", which provide valuable nursery grounds for juvenile fish and crustaceans (Heffernan 1972a). Nutrient circulation in these bays is generally affected by freshwater runoff as well as by tidal fluctuations.

Copano Bay is the largest secondary bay with 41,730 acres of surface water and an average depth of 3.6 ft with a maximum depth of 8.9 ft (Diener 1975). The Mission and Aransas Rivers flow into the bay with respective discharges of 733.3 and 65.0 gal/s (Diener 1975).

Copano Bay has five large oyster reefs, ranging in size from 22 to 42 acres, plus a compliment of smaller reefs (Heffernan 1961). The transverse position of a few of the reefs near the mouth of Copano Bay dampen tidal action in much of the bay (Collier and Hedgpeth (1950).

The narrow St. Charles Bay, extending between Lamar Peninsula and the Aransas National Wildlife Refuge, has a surface area of 8408 acres with a 3.6-ft average depth (Diener 1975). Freshwater flow from five creeks enters the bay along its northern reaches. Nearly the entire bay is considered prime nursery ground (Heffernan 1972a).

Redfish and Dunham Bays, at the southern and northern ends, respectively, of Aransas Bay, are also very shallow nursery areas but these bays do not receive direct freshwater flow. Redfish Bay is densely vegetated while Dunham Bay is a muddy, sparsely vegetated area.

Tertiary nursery grounds are located principally in the lower regions of creeks and streams which enter the secondary bays. Port Bay with 1651 acres extends southward from Copano Bay and receives freshwater from creek drainage at its southern tip (Diener 1975).

Mission Bay and lower Mission River with nearly 3939 acres and located off the northwest shore of Copano Bay are the most valuable nursery grounds of the tertiary areas (Heffernan 1972b).

Copano Creek harbors a small portion of nursery grounds in the northwest corner of Copano Bay (Heffernan 1972a).

Tertiary regions of Chiltipin Creek and the Aransas River system are located along the western shore of Copano Bay (Heffernan 1972a).

The Aransas Bay system contains 137,514 acres of water (Heffernan 1972a) of which 44,989 acres are occupied by eight major species of emergent vegetation--saltwort, shoregrass, glassworts (Salicornia sp.), smooth cordgrass, salt meadow cordgrass, coastal dropseed, sea purselane (Sesurium portulacastrum) and seashore saltgrass--and 4,124 acres by three major species of submerged vegetation--(Halodule beaudettei), widgeon grass and turtle grass (Diener 1975; W. E. Mercer, TPWD, Personal Communication).

The climate of this area varies from semi-arid to dry sub-humid. Southeast winds are dominant most of the year but from December through February northerly winds associated with advancing cold fronts are common (Whitehouse and Williams 1953). Winters in the Aransas Bay system produce the lowest average monthly water temperatures (59.2 F) and rainfall (0.8 inch). Water temperatures increase through the spring (70.9 F), reach the highest values in the summer (83.7 F) and decline through the fall (73.6 F). Rainfall is greatest in the fall (6.4 inches). The amounts of rainfall in spring and summer average about 2.6 inches. Salinity values are inversely related to rainfall with the lowest salinity (14.1 o/oo) occurring in the fall. The highest salinity occurs in spring (26.8 o/oo). Dissolved oxygen, pH and

turbidity remain relatively constant throughout the year with average values of about 7.0 ppm, 8 and 50 Jackson Turbidity Units (JTU), respectively (Martinez 1970, 1971).

Water movement in the bay system is strongly influenced by wind action. Generally, however, the surface waters take a serpentine course, flowing during a falling tide from Copano Strait south toward Mud Island where there is a clockwise eddy which tends to return the bay water northward along the face of the more saline water from below Mud Island. On a strong rising tide this water is pushed east so that the eddy constricts into an ellipse (Collier and Hedgpeth 1956). The average tidal range for Aransas Bay is 0.49 ft (Diener 1975).

Mud is the predominant bottom sediment of the Aransas Bay system except along the sandy western shore of San Jose Island (Diener 1975).

The average total weight of finfish caught per year by commercial fishermen in the Aransas Bay system during the period 1969-1971 was 573,612 lb (Martinez 1970, 1971). The annual average harvest of commercially caught shrimp and crabs during the same period was 816,991 lb and 420,827 lb respectively.

Along the 230 miles of shoreline of the Aransas Bay system, the only communities of notable size are Lamar, Bayside, Fulton, Rockport and, the largest, Aransas Pass which has a population of about 6,000.

There are three domestic but no industrial waste outfalls in the bay system. Previous high discharges of toxic oilfield brine into Chiltipin Creek and the Mission River were ordered ceased in 1973 by the Texas Railroad Commission (Heffernan 1972b). A total of 14,796 acres in the Aransas Bay system are now closed to shellfishing by the Texas Board of Health (Diener 1975) because of domestic sewage problems.

Corpus Christi Bay

The Corpus Christi Bay system, composed of Corpus Christi, Nueces, lower Redfish and Oso Bays, is located on the lower third of the Texas Gulf coast between longitude $97^{\circ} 02'$ and $97^{\circ} 32'$ W and latitude $27^{\circ} 41'$ and $27^{\circ} 55'$ N (Fig. 6). It is bordered on the northeast by upper Redfish Bay, on the east by Mustang Island and on the south by the upper Laguna Madre. The city of Corpus Christi forms the western boundary of Corpus Christi Bay. Nueces Bay, the former coastal lagoon for the Nueces River basin, is positioned on an east-west axis, entering Corpus Christi Bay at the northwest corner, just north of Corpus Christi. The southern half of Redfish Bay separates Aransas from Corpus Christi Bay and enters Corpus Christi Bay in the northeast quadrant. Oso Bay, the semi-enclosed drainage area for Oso Creek, joins Corpus Christi Bay in the southwest quadrant.

The entire Corpus Christi Bay system has an area of 124,796 acres with 127 miles of shoreline. Corpus Christi Bay is the largest of the four bays in the system, having a total surface area of 95,997 acres. Nueces Bay has an area of 19,518 acres, Oso Bay covers approximately 17,095 acres and lower Redfish Bay covers approximately 5258 acres. The average depth of Corpus Christi Bay is 11.2 ft; Nueces, Oso and lower Redfish Bays average 2.0 ft in depth (Collier and Hedgpeth 1950, Hood 1953, Stevens 1959).

Sediment composition in Corpus Christi Bay ranges from fine sand to black mud. A mixture of gray clay and black mud is the dominant bottom type for the area. Brown silt occurs in areas of channelization while hard sand and fine shell can be found adjacent to Mustang Island.

Submergent vegetation is sparse in Corpus Christi Bay, except along its eastern shore where shoal grass and widgeon grass dominate. Emergent vegetation, found throughout the bay complex, consists primarily of saltwort, glassworts, shoregrass, smooth cordgrass, coastal dropseed, seablite, Suaeda linearis, sea oats, Uniola paniculata and saltmarsh bullrush, Scirpus maritimus. In Corpus Christi Bay, 19 oyster reefs total 563 acres and are confined primarily to the western and northern portions. Oysters occur throughout Nueces Bay (Stevens 1959, 1960; Diener 1975). The primary sources of freshwater inflow into the Corpus Christi Bay system are Oso Creek and the Nueces River. Prior to the construction of Wesley Seale Dam at Mathis, Texas, in 1958, the Nueces River averaged 20 billion gal of discharge per year. The reservoir furnishes the industrial and municipal freshwater needs for the city of Corpus Christi and surrounding towns. Freshwater inflow to Nueces and Corpus Christi Bays is now limited to periods of dam overflow and heavy land runoffs (Stevens 1959).

Prior to 1972, the primary source for water exchange between Corpus Christi Bay and the Gulf of Mexico was the Corpus Christi Channel. This ship channel extends approximately 18 miles from the Port of Corpus Christi to its intersection with the Aransas Ship Channel, which continues for approximately 1 mile to the Gulf of Mexico. The two channels are maintained at an average depth of 40.0 ft (U. S. Dept. Commerce 1974). Since its completion in 1972, the Corpus Christi Fish Pass has provided intermittent water exchange through the upper Laguna Madre, but in recent years this has only occurred in association with hurricane winds and tides. Water exchange for Corpus Christi Bay with lower Redfish Bay and the upper Laguna Madre takes place primarily through the Intracoastal Waterway and on a limited basis across the shallow flats during high tides.

The climate for the area is intermediate between the semi-arid regions to the west and southwest and the humid subtropical region to the northeast. For the period 1936-1975 the mean annual air temperature was 71.2 F and the mean annual rainfall was 28.5 inches (NOAA 1975).

The general water circulation pattern for the Corpus Christi Bay system is a counterclockwise movement along the shoreline (Stevens 1959). The predominant winds, generally from the southeast year-round with occasional "northers" in the winter, and the irregular lunar tides, have the greatest overall influence on the bay water movement. For the period 1968-1972, the mean salinity and the mean water temperature for the entire Corpus Christi Bay system was 26.1 o/oo and 73.4 F, respectively (Martinez 1968, 1969, 1970, 1971 and 1972). The mean turbidity for the same period was 43 JTU, although the mean for Nueces Bay during 1971 and 1972 was 107 JTU.

The entire system lies within Nueces County, Texas. The county, with an area of 536,301 acres, had a population of 237,544 persons as of the 1970 census. The City of Corpus Christi had a population estimate of 204,525 (Diener 1975). Extensive oil and gas exploration has resulted in numerous well platforms and submerged pipelines throughout Nueces and lower Redfish Bays and along the western shore of Corpus Christi Bay. Heavy industrialization

has occurred along the south shore of Nueces Bay and the north shore of Corpus Christi Bay in the area of La Quinta Channel.

Upper Laguna Madre

Located on the lower Texas coast between latitudes $27^{\circ} 10'$ and $27^{\circ} 41'$ the upper Laguna Madre system consists of the upper Laguna Madre and the Baffin Bay system (Fig. 7). The upper Laguna Madre is a long (approximately 41 miles), narrow (9.8 miles) and shallow (average depth 3.3 ft) lagoon extending from the Kenedy Land Cut to Corpus Christi Bay (Simmons 1957; Diener 1975; U. S. Dept. Commerce 1976b). Bordered on the east by Padre Island and on the west by the city of Corpus Christi and the King and Kenedy Ranches, the upper Laguna Madre covers approximately 47,228 acres at MLW (Diener 1975).

This long, narrow coastal lagoon is bisected imperfectly by the Intra-coastal Waterway, which is 124.7 ft wide and 12.1 ft deep. Spoil banks from this canal form a dike 13 miles long effectively dividing the northern part of the bay. Beyond this point, spoil banks are staggered and the division is less effective (Simmons 1957). The northern end of the lagoon is restricted by a land fill causeway which has three openings totaling about 899 ft in width at MLW. The southern end is restricted by a land fill through which the Intra-coastal Waterway extends.

The upper Laguna Madre is joined in the southern portion by the equally large Baffin Bay system--consisting of Baffin Bay, Alazan Bay, Laguna Salada, Cayo del Grullo and Cayo del Infernillo--which covers an estimated 54,117 acres. Baffin Bay, the central and largest bay of the group, is a narrow body of water, 19 miles long and 5 miles wide, bisected laterally by the demarcation line of Kleberg-Kenedy Counties (Breuer 1957). The average depth in Baffin Bay is 7.9 ft at MLW, with a maximum depth (MLW) of 12.1 ft near the entrance to the Laguna Madre (Breuer 1957, Diener 1975). There are approximately 31,861 acres of surface area (MLW) in Baffin Bay.

Alazan Bay, entirely within Kleberg County and the King Ranch, extends approximately 15 miles northeasterly to the mouth of Petronilla Creek (Breuer 1957, Diener 1975). The average water depth (MLW) in Alazan Bay is approximately 3.0 ft. The surface area of Alazan Bay is approximately 13,867 acres.

Cayo del Infernillo is a shallow slough (0.7 ft) extending westward from the west shore of Alazan Bay whose water surface at MLW covers 699 acres (Breuer 1957, Diener 1975).

Baffin Bay is joined by two small tertiary bays--Laguna Salada entering from the west and Cayo del Grullo from the northwest. Both bays have an average water depth (MLW) of 3.0 ft. Laguna Salada covers approximately 3227 acres and Cayo del Grullo about 4470 acres.

The upper Laguna Madre, with restricted openings at either end, no constant openings into the Gulf of Mexico and limited freshwater inflow, has been characterized as a hypersaline estuary (Simmons 1957, Breuer 1962a), with salinities of 50-60 o/oo common. The Intracoastal Waterway provides for limited water exchange at both ends of the lagoon. Since the dredging of the Intracoastal Waterway salinity "has neither risen above 80 o/oo in the lagoon nor in Baffin Bay (where 100 o/oo was formerly not uncommon), nor have waters of very low salinity remained in the area any length of time" (Simmons 1957).

The only substantial source of freshwater is runoff from the Kenedy, Kleberg, Jim Wells and Nueces County watersheds into the Baffin Bay system (Breuer 1957). The dry sand on Padre Island absorbs rain very rapidly and the very gradual slope of the lagoon's western shore makes these areas poor watersheds (Simmons 1957).

The upper Laguna Madre system lies in two climatic zones--north of Baffin Bay is sub-humid; south of that point is semi-arid (Simmons 1957). Rainfall in the area is highly variable but averages 27.0-29.1 inches annually (NOAA, Env. Data Svs., Natl. Climatological Center, Ashville, N. C. 1976). Annual average surface water temperatures for the period 1969-1972 ranged from 73.6 to 76.3 F in the upper lagoon (Martinez 1969, 1970, 1971 and 1972). No data concerning water temperature from Baffin Bay is available. Southeast or south-southeast winds are prevalent during most of the year and are directly responsible for the water circulation in the system (Simmons 1957). Water in the upper lagoon is generally clear (annual average turbidity during 1969-1972 ranged from 36.8 to 45.6 JTU) (Martinez 1969, 1970, 1971 and 1972); while water in Baffin Bay is often turbid and at times becomes a dark brown (Breuer 1957).

The bottom in the upper lagoon consists primarily of quartzose sand, silt and shell with some calcareous sand or mud in isolated areas (Simmons 1957). In the Baffin Bay system bottom types of soft mud, soft and hard clay, sand and concentrated shell (mostly Mulinia lateralis) can be found. Also, in Baffin Bay and near the junction of Baffin Bay and the upper Laguna Madre are extensive rock formations consisting of serpulid worm tubes, calcareous and quartzose material.

Simmons (1957) and Breuer (1957) reported dense vegetation--shoalgrass and widgeon grass--restricted to the northern one-third of the lagoon. They indicated that the remainder of the system has only sparse to moderate vegetation, with the exception of the area near the entrance to Baffin Bay and areas around spoil islands.

The only substantially populated center adjacent to the upper Laguna Madre is Corpus Christi, Texas, with a population of 204,525 (U. S. Dept. Commerce 1970a). An additional 33,166 people in Kleberg County (U. S. Dept. Commerce 1970b) are located near the Baffin Bay system.

Industrialization in the area has been held to a minimum because of limited access to the surrounding land. The only major industry in the system is a public utility (Central Power and Light Co.) which displaces approximately 3.3 million gal of water/min from the upper Laguna to Oso Bay (Mr. M. L. Sheperd, Central Power and Light Co., June 1976, Personal Communication). Most of the area surrounding Baffin Bay is private ranchland and consequently there is little urban development. There is considerable oil and gas development on these ranches, resulting in large quantities of oilfield brine production. In most cases the brine has been discharged into the bay or a creek which leads to the bay. Mackin (1971) reported that approximately 2,728,897 gal of oilfield brine is discharged each day into Petronilla Creek and thence into Alazan and Baffin Bays.

Lower Laguna Madre

The lower Laguna Madre is a long shallow bay that extends 55 miles northward from Port Isabel to the Kenedy Land Cut (Fig. 8). It varies from 3 miles

to 7.8 miles wide and is imperfectly bisected by the Intracoastal Waterway. The bay is bounded on the west by the Texas mainland and on the east by Padre Island and contains approximately 182,809 acres (Stokes 1974). Passes to the Gulf of Mexico are located near Port Isabel and east of Port Mansfield. Limited amounts of fresh water (average of 818.9 gal/s) enter lower Laguna Madre from the Arroyo Colorado and North Floodway (Bryan 1971).

Except for the Intracoastal Waterway with an average depth of 12.0 ft, the deepest areas are found in the northern and southern portions of the bay (Breuer 1962a). In the northern section, which extends from Port Mansfield to the Kenedy Land Cut, water depth is as much as 7.9 ft. From Port Mansfield south to Three Islands the water is shallow with most locations being < 3.0 ft deep. South of Three Islands the maximum water depth is 5.9 ft and water depths of 3.9-4.9 ft are prevalent.

Bottom types consist of sand, silty sand or a combination of sand, silt and clay (Shepard and Rusnak 1957). Shell is not commonly found in lower Laguna Madre. In general, sediments are coarser along the eastern or Padre Island side of the bay than along the western or mainland side of the bay.

Shoalgrass is the most common type of vegetation found in lower Laguna Madre (Stokes 1974). Dense stands of shoalgrass can be found in shallow water along most of the shoreline as well as in the entire middle portion (Port Mansfield to Three Island) of the bay. Light to dense stands of manatee grass (Cymodocea filiforme), turtle grass, widgeon grass, Halophila engelmannii and Acetabularia crenulata can be found scattered throughout the bay.

Hydrological parameters have been described by Stokes (1974). Average monthly salinities range from 16.0 to 41.0 o/oo. Excluding the Arroyo Colorado and North Floodway, salinities as low as 10.5 o/oo and as high as 44.9 o/oo are sometimes encountered. Average monthly bottom water temperatures range from 62.6 F during some winter months to 81.5 F in August. Turbidity values are generally highest from Port Mansfield to Three Islands (the shallowest portion of the bay). The average annual turbidity value in this region is 45 JTU. North of Port Mansfield the average turbidity is 28 JTU and south of Three Islands the average is 32 JTU.

The total population for the counties bordering lower Laguna Madre is 162,608 (Harlingen Chamber of Commerce). In 1973, 1,278,000 out-of-state residents visited the lower Rio Grande Valley. Although there are no figures available, it is probable that many of these people visited this area because of water related activities in lower Laguna Madre. Farming and ranching are the main industries along the bay. The only area of heavy industry is the Brownsville Ship Channel where several shrimp processing plants, a Union Carbide plant, a grain elevator, three ship dismantling plants, two oil loading docks and an oil rig construction company are located.

Appendix B. Gill net station locations.

Table 1. Gill net station locations in each bay system, October 1978-September 1979.

Bay system	Bay	Station number	Latitude	Longitude	Station identification
Galveston	Galveston	1	29°32'05"	95°00'35"	1.0 mile SE of Clear Creek entrance channel
	Galveston	2	29°30'50"	94°59'00"	0.3 mile W of surfaced ramp in Bacliff, Texas
	Galveston	3	29°30'20"	94°57'05"	0.3 mile E of HL & P Company's P. H. Robinson Generation Station's discharge canal
	Dickinson	4	29°28'00"	94°57'30"	N shoreline of Dickinson Bayou
	Dickinson	5	29°27'45"	94°56'40"	0.5 mile SE of junction of Dickinson Bayou and Bay
	Moses Lake	6	29°26'10"	94°56'10"	NW shore of Moses Lake
	Moses Lake	7	29°25'40"	94°57'05"	NW of Mouth of Moses Bayou
	Moses Lake	8	29°25'20"	94°56'20"	S shore of Moses Lake
	Galveston	9	29°26'25"	95°54'10"	1.0 mile W of Dollar Point
	Galveston	10	29°24'15"	94°53'15"	0.8 mile N of Texas City Dike
	Galveston	11	29°22'35"	94°52'45"	NW shore of Snake Island
	Galveston	12	29°20'35"	94°53'40"	0.5 mile N of Campbell Bayou
	Galveston	13	29°20'00"	94°53'50"	SE of Campbell Bayou
	Galveston	14	29°19'20"	94°53'35"	0.8 mile SE of Campbell Bayou
	Jones Lake	15	29°18'45"	94°55'45"	0.6 mile E of Highland Bayou
	Jones Lake	16	29°17'25"	94°56'05"	N shore of Spoil Island, ICWW Marker 54
West		17	29°16'40"	94°58'35"	SE shore of spoil bank, 0.9 mile NE of Greens Cut
Greens Lake		18	29°15'45"	94°59'55"	SW shore of Greens Lake, 0.3 mile W of mouth
Greens Lake		19	29°16'35"	94°59'35"	Greens Lake, NE of mouth
West		20	29°16'05"	94°59'05"	SE shore of spoil bank W of Greens Cut
West		21	29°14'15"	95°00'55"	0.2 mile SW of Carancahua Cut
Carancahua Lake		22	29°14'20"	95°01'35"	S shore of Carancahua Lake
West		23	29°13'10"	95°01'45"	Carancahua Point

Table 1. (Cont'd).

Bay system	Bay	Station number	Latitude	Longitude	Station identification
Galveston	Halls Lake	24	29°10'45"	95°06'20"	0.2 mile SE of The Narrows
	Halls Lake	25	29°11'15"	95°05'45"	E shore of Halls Lake
	Chocolate	26	29°11'15"	95°06'35"	0.3 mile NW of The Narrows
	Chocolate	27	29°11'45"	95°07'10"	0.2 mile E of Amerada Cut
	Chocolate	28	29°11'40"	95°07'40"	0.1 mile SW of New Bayou
	Chocolate	29	29°11'40"	95°08'25"	0.5 mile E of Shell Point
	Chocolate	30	29°12'25"	95°10'25"	0.2 mile N of Grassy Point
	Chocolate	31	29°11'35"	95°11'00"	1.5 mile W of Horse Grove Point
	Chocolate	32	29°11'15"	95°09'25"	0.5 mile S of Horse Grove Point
	Chocolate	33	29°10'30"	95°09'00"	Just S of Wharton Camp Bayou
	Chocolate	34	29°09'35"	95°09'10"	1.0 mile S of Wharton Camp Bayou
	West	35	29°09'15"	95°09'35"	2.1 mile N of Guyton Cut
	West	36	29°06'30"	95°09'40"	0.5 mile N of Guyton Cut
	Oyster Lake	37	29°07'45"	95°10'20"	N shore of Oyster Lake
	Oyster Lake	38	29°07'05"	95°10'55"	SW shore of Oyster Lake
	Bastrop	39	29°06'35"	95°11'15"	0.1 mile W of mouth of Oyster Lake Bayou
	Bastrop	40	29°06'20"	95°10'15"	0.7 mile NW of Guyton Cut
	Lost Lake	41	29°04'55"	95°12'40"	SW shore of Lost Lake
	Bastrop	42	29°05'50"	95°11'50"	0.5 mile NE of dredge cut between West Bastrop Bay and ICWW
	Bastrop	43	29°05'00"	95°11'40"	1.3 mile W of Christmas Point
	Bastrop	44	29°04'45"	95°10'50"	0.3 mile W of Christmas Point
	Christmas	45	29°04'25"	95°11'05"	0.8 mile SW of Christmas Point
	Christmas	46	29°03'45"	95°12'10"	2.0 mile SW of Christmas Point
	Christmas	47	29°02'50"	95°13'15"	1.3 mile NW of Rattlesnake Point
	Christmas	48	29°01'55"	95°11'45"	0.1 mile NE of mouth of Cedar Cut

Table 1. (Cont'd).

Bay system	Bay	Station number	Latitude	Longitude	Station identification
Galveston	Christmas	49	29° 02' 20"	95° 10' 55"	1.1 mile NE of mouth of Cedar Cut
	Christmas	50	29° 03' 15"	95° 09' 40"	0.2 mile S of mouth of Church-hill Bayou, SE Christmas Bay
	West	51	29° 09' 40"	95° 01' 45"	E side Snake Island Cove
	West	52	29° 10' 20"	95° 01' 20"	0.4 mile E of Maggies Point
	West	53	29° 11' 00"	95° 00' 40"	SW shore Shell Island Point
	West	54	29° 11' 20"	94° 59' 45"	Jumbile Cove
	West	55	29° 12' 30"	94° 58' 40"	Carancahua Cove
	West	56	29° 12' 45"	94° 58' 20"	W of mouth of Oak Bayou
	West	57	29° 12' 40"	94° 57' 50"	S shore of Dana Cove
	West	58	29° 13' 40"	94° 57' 05"	S shore of Hoeckers Cove
	West	59	29° 14' 05"	94° 56' 25"	SW shore of Starvation Cove
	West	60	29° 14' 45"	94° 55' 50"	NW of Melager Cove
	West	61	29° 16' 15"	94° 53' 20"	0.6 mile SW of Teichman Point
	West	62	29° 17' 00"	94° 55' 40"	SE shore of North Deer Island
	West	63	29° 16' 15"	94° 54' 55"	E shore of South Deer Island
	Galveston	64	29° 17' 25"	94° 52' 05"	0.1 mile E of SE end of Galveston Causeway
	Galveston	65	29° 20' 20"	94° 49' 20"	W shore of Pelican Island, 0.4 mile from ICWW
	Galveston	66	28° 21' 05"	94° 49' 35"	NW Pelican Island, S shore of Cove formed by ICWW
	Galveston	67	29° 23' 45"	94° 45' 45"	Baffle Point
	Galveston	68	29° 25' 35"	94° 43' 25"	0.7 mile SW of Sievers Cove
	East	69	29° 27' 40"	94° 41' 35"	1.8 mile SW of house on Elm-grove Point
	East	70	29° 28' 30"	94° 40' 30"	0.6 mile W of house on Elm-grove Point
	East	71	29° 28' 35"	94° 38' 55"	0.5 mile NW of Bob's Cut
	East	72	29° 28' 50"	94° 37' 15"	0.8 mile W of Stringree Cut
	East	73	29° 29' 30"	94° 35' 55"	0.6 mile NE of Stringree Cut

Table 1. (Cont'd).

Bay system	Bay	Station number	Latitude	Longitude	Station identification	
Galveston	East	74	29°30'20"	94°35'40"	Big Pasture Bayou, N shore	
	East	75	29°31'50"	94°33'50"	Marsh Point	
	East	76	29°31'15"	94°32'25"	1.4 mile SE of Marsh Point	
	East	77	29°33'20"	94°31'50"	1.0 mile N of Frozen Point	
	East	78	29°34'15"	94°34'20"	Robinson Bayou, 0.1 mile W of mouth	
	East	79	29°33'30"	94°36'25"	Second windmill W of Robinson Bayou (2.2 mile W of mouth)	
	East	80	29°32'15"	94°41'10"	Stephenson Point	
	Trinity	81	29°33'30"	94°46'50"	Vingt-et-un Island, N shore	
	Trinity	82	29°36'45"	94°43'10"	0.1 mile S of cut in spoil bank opposite Lone Oak Bayou	
	Trinity	83	29°39'35"	94°42'00"	0.7 mile N of cut in spoil bank opposite Double Bayou	
	Trinity	84	29°44'15"	94°41'55"	Bay side of spoil bank opposite Round Point	
	Trinity	85	29°45'50"	94°47'45"	1.2 mile NE of Houston Lighting and Power Company's Cedar Bayou Generating Station's discharge canal	
	Trinity	86	29°44'45"	94°49'30"	0.6 mile SW of Houston Lighting and Power Company's Cedar Bayou Generating Station's discharge canal	
	Trinity	87	29°43'35"	94°50'45"	0.7 mile SW of Point Barrow	
	Trinity	88	29°42'15"	94°51'30"	Midway between Point Barrow and Umbrella Point	
	Trinity	89	29°40'20"	94°52'10"	Umbrella Point	
	Galveston		90	29°39'35"	94°55'50"	Mesquite Knoll
	Galveston		91	29°41'50"	94°57'20"	0.5 mile W of Houston Lighting and Power Company's Cedar Bayou Generating Station's intake canal

Table 1. (Cont'd).

Bay system	Bay	Station number	Latitude	Longitude	Station identification
Galveston	Trinity	92	29°37'15"	94°42'45"	0.4 mile N of cut in spoil bank opposite Lone Oak Bayou
	Galveston	93	29°35'20"	94°59'35"	0.8 mile SW of Red Bluff
	Galveston	94	29°34'55"	95°00'00"	1.5 mile SW of Red Bluff
	West	95	29°12'35"	95°02'35"	1.6 mile NE of Cow Bayou
	East	96	29°32'40"	94°30'00"	1.3 mile E of Frozen Point
	Galveston	97	29°33'20"	95°01'05"	NE shore of island adjacent to Clear Creek Channel
	West	98	29°06'30"	95°06'15"	1.5 mile NE of San Luis Pass
	West	99	29°41'50"	94°41'20"	Inside spoil bank 0.3 mile S of Ash Point
	Trinity	100	29°40'30"	94°42'00"	Outside spoil bank 0.4 mile S of Black Point

Table 1. (Cont'd).

Bay system	Bay	Station number	Latitude	Longitude	Station identification
East Matagorda	East Matagorda	1	28°45'45"	95°39'35"	Caney Creek Cutoff
	East Matagorda	2	28°44'15"	95°40'55"	1.0 mile NE of Brown Cedar Cut
	East Matagorda	3	28°45'25"	95°40'28"	1.0 mile W of Caney Creek Cutoff
	East Matagorda	4	28°45'00"	95°41'25"	2.0 mile W of Caney Creek Cutoff
	East Matagorda	5	28°44'45"	95°46'10"	Mouth of Live Oak Bayou
	East Matagorda	6	28°44'10"	95°49'20"	Boggy Bayou
	East Matagorda	7	28°43'00"	95°52'40"	S of Micro Tower
	East Matagorda	8	28°42'40"	95°53'30"	W of Little Boggy Bayou Cut
	East Matagorda	9	28°43'10"	95°43'45"	2.0 mile W of Brown Cedar Cut
	East Matagorda	10	28°44'36"	95°42'37"	S of Mouth of Boggy Bayou
	East Matagorda	17	28°44'53"	95°47'13"	S of Pelton Lake
	East Matagorda	18	28°40'52"	95°49'36"	0.5 mile NE of Kain Cove
	East Matagorda	19	28°41'17"	95°48'36"	1.0 mile SW of Eidelbach Flat
	East Matagorda	20	28°42'39"	95°44'47"	Desert Catchall Basin
	East Matagorda	21	28°44'10"	95°43'40"	1.5 mile SW of mouth of Boggy Bayou
	East Matagorda	22	28°44'17"	95°44'35"	E end of Live Oak Bay
	Live Oak	23	28°44'50"	95°45'20"	N shore of Live Oak Bay
	East Matagorda	24	28°43'42"	95°50'45"	1.5 mile W of Boggy Bayou
	East Matagorda	25	28°43'20"	95°51'35"	1.0 mile E of Micro Tower
	East Matagorda	26	28°42'15"	95°54'43"	Mouth of Little Boggy Bayou
	East Matagorda	27	28°40'55"	95°56'38"	NE of Egret Island
	East Matagorda	28	28°40'20"	95°56'05"	St. Mary's Bayou #1
	East Matagorda	29	28°39'40"	95°56'33"	St. Mary's Bayou #2
	East Matagorda	30	28°38'31"	95°57'10"	Bayou El
	East Matagorda	31	28°37'50"	95°56'10"	Spring Bayou Cove
	East Matagorda	32	28°38'15"	95°55'12"	Burkhart Cove
	East Matagorda	33	28°38'35"	95°53'45"	Boiler Bayou
	East Matagorda	34	28°39'10"	95°52'35"	Hog Island

Table 1. (Cont'd).

Bay system	Bay	Station number	Latitude	Longitude	Station identification
East Matagorda	East Matagorda	35	28°39'50"	95°51'07"	Cleveland Bayou
	East Matagorda	36	28°40'15"	95°50'20"	Kain Cove
	East Matagorda	37	28°41'15"	95°47'25"	Eidelbach Flat
	East Matagorda	38	28°41'53"	95°46'30"	Oyster Farm Drain

Table 1. (Cont'd).

Bay system	Bay	Station number	Latitude	Longitude	Station identification
Matagorda	Matagorda	1	28°38'40"	96°18'17"	Wells Point
	Turtle	2	28°39'43"	96°18'16"	Silver Creek
	Turtle	3	28°40'35"	96°17'52"	Shell Beach
	Turtle	4	28°41'08"	96°17'00"	Buttermilk Slough
	Turtle	5	28°41'40"	96°15'45"	Jensen Point
	Turtle	6	28°41'20"	96°15'32"	Incinerator
	Turtle	7	28°40'20"	96°16'55"	Turtle Point
	Matagorda	8	28°41'35"	96°14'10"	Settergest Marsh
	Tres Palacios	9	28°44'47"	96°11'10"	Slaughter Flats
	Tres Palacios	10	28°45'15"	96°10'10"	Tres Palacios River, East
	Tres Palacios	11	28°44'10"	96°10'51"	Pepper Hill
	Tres Palacios	12	28°43'30"	96°11'20"	Collegeport Piling
	Tres Palacios	13	28°42'37"	96°10'54"	Pilkington Bayou
	Tres Palacios	14	28°41'40"	96°11'30"	Fence Post Reef
	Tres Palacios	15	28°41'30"	96°12'21"	Fedfish Lake
	Tres Palacios	16	28°39'53"	96°12'56"	Coon Island Point
	Coon Island	17	28°39'35"	96°12'40"	Coon Island Bayou
	Coon Island	18	28°39'27"	96°12'21"	Coon Island
	Coon Island	19	28°38'35"	96°14'00"	Oliver Point
	Matagorda	20	28°37'53"	96°13'22"	Pipeline Crossing
	Matagorda	21	28°37'00"	96°12'45"	Palacios Bayou Flats
	Matagorda	22	28°35'25"	96°13'50"	Boat Harbor
	Oyster Lake	23	28°36'14"	96°12'05"	Rattlesnake Island
	Oyster Lake	24	28°37'41"	96°10'40"	N Corner, Oyster Lake
	Oyster Lake	25	28°37'24"	96°10'47"	SE Shoreline, Oyster Lake
	Matagorda	26	28°35'44"	96°11'00"	ICWW, Southwest
	Matagorda	27	28°35'53"	96°10'16"	ICWW, Northeast
	Matagorda	28	28°37'20"	96°06'26"	Mad Island
	Matagorda	29	28°39'15"	96°01'45"	Shell Oil Cut
	Matagorda	30	28°39'15"	96°59'25"	Northeast Pocket
	Matagorda	31	28°35'22"	96°02'43"	Tide Gauge
	Matagorda	32	28°33'07"	96°07'15"	Watermelon Mott
	Matagorda	33	28°31'17"	96°11'25"	Oil Well Cut

Table I. (Cont'd).

Bay system	Bay	Station number	Latitude	Longitude	Station identification
Matagorda	Matagorda	34	28°29'05"	96°15'00"	Poco Agua
	Matagorda	35	28°25'00"	96°21'35"	Decro Point
	Matagorda	36	28°27'10"	96°29'30"	La Salle Bayou
	Powderhorn Lake	37	28°30'00"	96°29'05"	Corner Powderhorn Lake
	Powderhorn Lake	38	28°29'00"	96°30'42"	Powderhorn Ranch Marsh
	Powderhorn Lake	39	28°28'37"	96°31'39"	Powderhorn, West
	Powderhorn Lake	40	28°30'10"	96°31'00"	Powderhorn, North Shore
	Powderhorn Lake	41	28°30'40"	96°29'47"	Powderhorn, NE Corner
	Chocolate Bay	42	28°34'55"	96°35'36"	Cedar Point
	Chocolate Bay	43	28°34'16"	96°38'08"	Tanner Launch
	Lavaca	44	28°40'19"	96°38'10"	Maxwell Ditch
	Lavaca	45	28°41'46"	96°39'45"	Six Mile Creek
	Lavaca	46	28°42'38"	96°38'31"	Garcitas Cove
	Lavaca	47	28°43'05"	96°37'11"	Venado West
	Venado Lake	48	28°44'35"	96°36'45"	Venado Lake #2
	Lavaca	49	28°43'10"	96°35'00"	Venado East
	Redfish Lake	50	28°47'41"	96°34'27"	Redfish Lake, Northwest
	Redfish Lake	51	28°46'41"	96°33'43"	Redfish Lake, Southeast
	Swan Lake	52	28°44'13"	96°34'24"	Swan Lake, West
	Swan Lake	53	28°45'00"	96°34'09"	Swan Lake, North
	Swan Lake	54	28°43'55"	96°33'41"	Swan Lake, East
	Lavaca	55	28°41'47"	96°33'47"	Catfish Cove
	Lavaca	56	28°39'24"	96°34'25"	Alcoa
	Cox	57	28°38'40"	96°31'53"	C P & L Shoreline
	Cox	58	28°38'24"	96°31'05"	Cox Point
Cox	59	28°39'03"	96°31'05"	Cox Creek, West	
Cox	60	28°38'34"	96°30'35"	Huisache Cove	
Cox	61	28°38'07"	96°30'00"	Cox Cove, North	
Cox	62	28°37'24"	96°30'00"	Cox Cove, Southeast	
Keller	63	28°36'33"	96°28'55"	Mud Point	
Keller	64	28°37'49"	96°28'00"	Olivia	
Keller	65	28°37'39"	96°27'02"	Smith Ranch House	

Table 1. (Cont'd).

Bay system	Bay	Station number	Latitude	Longitude	Station identification
Matagorda	Keller	66	28° 35' 55"	96° 26' 20"	Smith's Slough
	Keller	67	28° 35' 10"	96° 27' 35"	Keller Bay, SW corner
	Keller	68	28° 35' 48"	96° 28' 30"	Smith's Point
	Lavaca	69	28° 35' 00"	96° 29' 00"	Humble Oil Dock
	Lavaca	70	28° 34' 15"	96° 29' 18"	Sand Point Lavaca
	Matagorda	71	28° 35' 25"	96° 26' 20"	Smith's Cedars
	Redfish Lake	72	28° 37' 43"	96° 23' 07"	Redfish Lake, N Pocket
	Redfish Lake	73	28° 37' 15"	96° 22' 55"	Redfish Lake, E Shore
	Redfish Lake	74	28° 37' 15"	96° 23' 55"	Redfish Lake, SW Shore
	Salt Lake	75	28° 37' 50"	96° 23' 53"	Salt Lake, Pocket
	Salt Lake	76	28° 37' 55"	96° 25' 00"	Salt Lake, W Pocket
	Carancahua	77	28° 38' 26"	96° 25' 00"	Port Alto, South
	Carancahua	78	28° 41' 33"	96° 24' 42"	Port Alto, North
	Carancahua	79	28° 42' 31"	96° 25' 55"	Wolf Point Flats
	Carancahua	80	28° 44' 19"	96° 26' 18"	Carancahua Bay, North
	Carancahua	81	28° 44' 32"	96° 25' 51"	Carancahua Bay, East
	Carancahua	82	28° 43' 03"	96° 25' 48"	Cape Carancahua
	Carancahua	83	28° 44' 05"	96° 25' 20"	Crescent V, West
	Carancahua	84	28° 43' 57"	96° 23' 40"	Crescent V, East
	Carancahua	85	28° 42' 29"	96° 23' 15"	Five Mile Draw
	Carancahua	86	28° 39' 43"	96° 22' 16"	Houston Point
	Carancahua	87	28° 37' 57"	96° 21' 34"	Schicke Point, Inside
	Matagorda	88	28° 37' 30"	96° 21' 34"	Schicke Point, Outside
	Matagorda	89	28° 38' 20"	96° 20' 00"	Piper Lake
	Matagorda	90	28° 38' 30"	96° 19' 11"	MFRS
	Matagorda	91	28° 36' 28"	95° 59' 05"	SE Pocket
	Matagorda	92	28° 32' 10"	96° 09' 54"	Trout Bayou
	Matagorda	93	28° 30' 30"	96° 12' 35"	Cotton Bayou
	Matagorda	94	28° 27' 25"	96° 18' 15"	Tom Cherry
Matagorda	95	28° 28' 24"	96° 25' 24"	Broad Bayou	
Matagorda	96	28° 30' 32"	96° 28' 47"	Powderhorn Bayou	
Lavaca	97	28° 35' 00"	96° 35' 00"	Alamo Beach	

Table 1. (Cont'd).

Bay system	Bay	Station number	Latitude	Longitude	Station identification
Matagorda	Matagorda	98	28°34'12"	96°28'49"	Sand Point, South Carancahua Pass, West
	Matagorda	99	28°37'00"	96°22'55"	

Table 1. (Cont'd).

Bay system	Bay	Station number	Latitude	Longitude	Station identification
San Antonio	San Antonio	1	28°23'22"	96°42'35"	Swan Point
	San Antonio	2	28°22'45"	96°41'50"	Mosquito Cove, 1 mile S of Swan Point
	San Antonio	3	28°21'55"	96°42'00"	Mosquito Cove, 1.25 miles N of Mosquito Point
	San Antonio	4	28°19'00"	96°39'15"	W point of Grass Island
	San Antonio	5	28°19'05"	96°37'55"	E point of Grass Island
	Shoalwater	6	28°19'25"	96°38'00"	N point of Grass Island
	San Antonio	7	28°18'15"	96°37'35"	Small island just W of Steamboat Island
	Espiritu Santo	8	28°18'36"	96°37'05"	Middle of E side of Steamboat Island
	Shoalwater	9	28°19'30"	96°36'55"	1 mile from W point of Long Island in Shoalwater Bay
	Espiritu Santo	10	28°19'25"	96°37'35"	1.25 mile from W point of Long Island in Espiritu Santo Bay
	Espiritu Santo	11	28°20'20"	96°35'47"	2.50 miles from W point of Long Island in Espiritu Santo Bay
	Espiritu Santo	12	28°21'10"	96°34'52"	Long Island 0.5 mile W of Lane
	Espiritu Santo	13	28°21'45"	96°33'52"	Long Island 0.5 mile E of Lane
	Espiritu Santo	14	28°22'10"	96°32'55"	Long Island 1.5 miles E of Lane
	Espiritu Santo	15	28°22'47"	96°31'07"	0.5 mile from W point of Dewberry Island
	Espiritu Santo	16	28°23'15"	96°30'10"	1.5 miles from W point of Dewberry Island
	Espiritu Santo	17	28°23'50"	96°29'12"	Dewberry Island 0.5 mile W of Army channel
	Espiritu Santo	18	28°24'13"	96°28'18"	Blackberry Island 0.75 mile E of Army channel
	Espiritu Santo	19	28°24'48"	96°27'12"	Blackberry Island 1.75 miles E of Army channel
	Espiritu Santo	20	28°25'18"	96°26'06"	Blackberry Island at mouth of Barroom Bay

Table 1. (Cont'd).

Bay system	Bay	Station number	Latitude	Longitude	Station identification
San Antonio	Espiritu Santo	21	28°23'49"	96°26'12"	1.25 miles E of Bayoucou Point
	Espiritu Santo	22	28°23'00"	96°27'09"	Bayoucou Point
	Espiritu Santo	23	28°22'40"	96°27'20"	N side of Grass Island 0.5 mile from E point
	Espiritu Santo	24	28°22'15"	96°28'10"	N side of Grass Island 0.5 mile from W point
	Espiritu Santo	25	28°21'35"	96°27'25"	W point of Farwell Island
	Espiritu Santo	26	28°21'50"	96°26'53"	E point of Farwell Island
	Espiritu Santo	27	28°21'15"	96°26'25"	0.5 mile S of second oil well off Saluria Bayou
	Espiritu Santo	28	28°21'00"	96°26'22"	Big Pocket
	Espiritu Santo	29	28°20'33"	96°26'33"	Lighthouse Cove W of derelict boat on shore
	Espiritu Santo	30	28°19'51"	96°28'48"	0.25 mile W of Army hole on Vandever Island
	Pringle Lake	31	28°18'51"	96°30'22"	S shore Pringle Lake 2 miles E of Rahal Bayou
	Pringle Lake	32	28°18'22"	96°31'25"	S shore Pringle Lake 1 mile E of Rahal Bayou
	Espiritu Santo	33	28°19'25"	96°31'21"	Pringle Cut in center of Vanderver Island
	Espiritu Santo	34	28°18'07"	96°33'10"	Rahal Bayou
	Espiritu Santo	35	28°18'05"	96°34'30"	South Pass Lake, E cut
	San Antonio	36	28°17'10"	96°35'53"	South Pass Lake, W cut
	San Antonio	37	28°16'50"	96°36'45"	Long Lake mouth on N shore
	San Antonio	38	28°16'35"	96°37'06"	Island N of Corey Cove
	San Antonio	39	28°16'05"	96°37'50"	Corey Cove point
	San Antonio	40	28°15'35"	96°37'50"	Pat's Bay mouth on S shore
	San Antonio	41	28°15'12"	96°39'06"	1 mile S Pat's Bay between two guts
San Antonio	42	28°14'25"	96°39'15"	Mouth of Twin Lakes	
San Antonio	43	28°13'54"	96°39'54"	Cedar Point	

Table 1. (Cont'd).

Bay system	Bay	Station number	Latitude	Longitude	Station identification
San Antonio	San Antonio	44	28°13'35"	96°40'00"	Mouth of Cedar Lake on S shore
	San Antonio	45	28°13'15"	96°41'00"	1 mile S of Cedar Lake
	San Antonio	46	28°12'30"	96°42'06"	0.5 mile S of Panther Point
	San Antonio	47	28°12'05"	96°41'55"	Panther Point Lake, just inside mouth on S shore
	San Antonio	48	28°11'45"	96°42'55"	1 mile S of Panther Point Lake mouth
	San Antonio	49	28°11'20"	96°45'05"	Mouth of Cottonwood Bayou
	San Antonio	50	28°11'21"	96°47'24"	Ayres Point
	Ayres	51	28°10'30"	96°48'55"	Point S of Ayres Point
	Ayres	52	28°10'05"	96°49'10"	Ayres Dugout
	Ayres	53	28°11'20"	96°50'00"	Rattlesnake Island
	Mustang Lake	54	28°13'50"	96°47'30"	Mouth of Mustang Lake E shore
	San Antonio	55	28°14'43"	96°46'35"	Point of land N of Marker 35
	San Antonio	56	28°15'20"	96°47'15"	Live Oak Point
	San Antonio	57	28°16'27"	96°47'47"	Daggar Point
	San Antonio	58	28°19'17"	96°47'45"	Webb Point
	San Antonio	59	28°20'21"	96°47'33"	0.5 mile S of Hopper Landing
	Hynes	60	28°21'48"	96°47'51"	McDowell Point
	Hynes	61	28°22'22"	96°49'00"	1 mile N of McDowell Point
	Hynes	62	28°25'20"	96°50'51"	Point of land in center head of Hynes Bay
	Hynes	63	28°25'40"	96°49'40"	1 mile S of Townsend Bayou
	Hynes	64	28°25'10"	96°48'45"	Opposite steel gate in marsh
	Hynes	65	28°24'33"	96°47'50"	Swan Lake Bayou N of mouth
Hynes	66	28°23'54"	96°46'37"	Grassey Point	
San Antonio	67	28°24'25"	96°47'20"	Midway between Grassey Point and Marsh Point	
Guadalupe	68	28°25'25"	96°45'50"	Foster Point	
Hynes	69	28°24'15"	96°51'00"	Opposite tall cylindrical tower	
San Antonio	70	28°14'00"	96°47'50"	Mouth of Mustang Lake W shore	
San Antonio	71	28°16'35"	96°46'30"	"V" reef	
San Antonio	72	28°20'18"	96°42'01"	Opposite Channel Marker 13	

Table 1. (Cont'd).

Bay system	Bay	Station number	Latitude	Longitude	Station identification
San Antonio	San Antonio	73	28°19'30"	96°41'30"	Opposite Channel Marker 11
	Long Lake	78	28°17'00"	96°35'50"	N shore of Long Lake
	Long Lake	79	28°16'35"	96°35'45"	S shore of Long Lake
	Pats	80	28°15'55"	96°37'05"	N shore of Pats Bay

Table 1. (Cont'd).

Bay system	Bay	Station number	Latitude	Longitude	Station identification
Aransas	Aransas	1	28°01'50"	97°02'00"	Off of bulkhead at NE end of Rockport beach
	Aransas	2	28°07'28"	96°59'00"	Off S side of Goose Island near restrooms
	Aransas	3	27°59'05"	97°04'00"	Halfway between Turtle Bayou and ICWW Marker 7
	Aransas	4	27°57'15"	97°04'15"	Just N of oil channel halfway between Big Bayou and Trout Bayou
	Redfish	5	27°56'00"	97°05'15"	Off second island NW of Big Bayou in Redfish Bay
	Copano	6	28°03'22"	97°08'10"	Off SW tip of Rattlesnake Point
	Aransas	7	27°55'13"	97°04'22"	Just N of mouth of Corpus Christi Bayou
	Aransas	8	27°53'40"	97°02'42"	Off NE tip of Lydia Ann Island
	Aransas	9	27°55'17"	97°01'03"	1.0 mile SW of tanks on San Jose Island behind Mud Island
	Aransas	10	27°55'43"	97°02'38"	On SW tip of Mud Island
	Aransas	11	27°56'42"	97°01'28"	Middle of Mud Island N side
	Aransas	12	27°56'18"	97°01'22"	Middle of Mud Island S side
	Aransas	13	27°57'05"	96°59'35"	On NE tip of Mud Island
	Aransas	14	27°58'06"	96°58'27"	1.0 mile N of San Jose Ranch house
	Aransas	15	27°59'00"	96°58'07"	2.0 miles N of San Jose Ranch house within Allyn's Bight
	Aransas	16	28°07'37"	96°55'42"	On Blackjack Peninsula at Dunham Point
	Aransas	17	28°01'14"	96°58'00"	On San Jose Island, 1.5 miles NE of Allyn's Lake
	Aransas	18	28°01'55"	97°01'29"	Off SE tip of Key Allegro Isle
	Aransas	19	28°04'00"	96°57'40"	Off Deadman Island NW of Long Reef
	Aransas	20	28°03'12"	96°56'44"	On Big Island at SE end of Long Reef
	Aransas	21	28°04'18"	96°55'55"	Midway between Long Reef and Jay Bird Reef

Table 1. (Cont'd).

Bay system	Bay	Station number	Latitude	Longitude	Station identification
Aransas	Aransas	22	28°05'10"	96°55'33"	On San Jose Island near Jay Bird Reef marker
	Aransas	23	28°06'03"	96°54'22"	S of Spalding Reef near TPWD post marker
	Aransas	24	28°06'40"	96°53'25"	SE end of Shell Reef at mouth of Spalding Bight
	Aransas	25	28°06'48"	96°55'26"	On SE side of SW tip of Dunham Island
	Dunham	26	28°07'57"	96°55'05"	On Grass Island at mouth of Dunham Bay
	Dunham	27	28°08'53"	96°54'22"	In NE most end of Dunham Bay
	Aransas	28	28°59'52"	96°58'47"	At the break between Allyn's Lake and the bay 200 yds N of duck blind
	Aransas	29	28°07'20"	96°56'45"	Midway between Dunham and Blackjack Point
	Aransas	30	28°00'00"	97°03'31"	Just S of Perry Bass docking facilities
	Aransas	31	28°06'15"	97°01'07"	On NE tip of Live Oak Point near reef marker
	Aransas	32	28°05'21"	97°02'00"	Off Fulton beach about 1.0 mile S of Racquet Club in front of Dr. Foster's residence
	Aransas	33	28°04'16"	97°02'07"	Along bulkhead shoreline just S of Sandollar Motel
	Aransas	34	28°04'38"	96°57'53"	On island at end of Halfmoon Reef near ICWW Marker 22
	Carlos	35	28°07'05"	96°53'07"	In SE corner of Carlos Bay
	Copano	36	28°05'05"	97°04'34"	Approximately 1.0 mile SW of airport
	Mesquite	37	28°07'09"	96°51'08"	1.5 miles W of mouth of Cedar Bayou
	Mesquite	38	28°06'58"	96°49'55"	At mouth of Cedar Bayou, W side
	Mesquite	39	28°07'18"	96°48'50"	In SE Mesquite Bay about 1.0 mile NE of mouth of Cedar bayou

Table 1. (Cont'd).

Bay system	Bay	Station number	Latitude	Longitude	Station identification
Aransas	Mesquite	40	28°08'21"	96°48'07"	At end of Bray Cove
	Mesquite	41	28°08'55"	96°49'04"	Matagorda Island, 1.5 miles S of Ayres Dugout
	Mesquite	42	28°10'01"	96°49'55"	At Ayres Dugout on the Mesquite Bay side
	Mesquite	43	28°10'23"	96°51'07"	Off Roddy Island in N part of Mesquite Bay
	Mesquite	44	28°09'55"	96°52'32"	1.0 mile SW of Sundown-Mesquite Bay Pass
	Carlos	45	28°08'52"	96°53'08"	S side of Cedar Point
	Carlos	46	28°07'50"	96°54'15"	On NE side of Cape Carlos by first refuge marker
	St. Charles	47	28°08'03"	96°57'38"	Off Bird Point inside St. Charles Bay
	St. Charles	48	28°09'57"	96°56'53"	Just S of Egg Point near clump of trees and refuge marker
	St. Charles	49	28°10'35"	96°56'18"	Point of land just N of Bill Mott Bayou
	St. Charles	50	28°12'05"	96°55'43"	Between Little Devil Bayou and Big Devil Bayou
	St. Charles	51	28°13'00"	96°56'33"	At Meile Dietrich Point
	St. Charles	52	28°14'32"	96°55'34"	Just N of McHugh Bayou
	St. Charles	53	28°16'10"	96°54'55"	At mouth of Twin Creek
	St. Charles	54	28°15'00"	96°56'30"	At mouth of Salt Creek outside cove
	St. Charles	55	28°13'41"	96°57'26"	1.5 miles SW of mouth of Salt Creek
	St. Charles	56	28°13'04"	96°58'47"	Inside Cavasso Creek close to Highway 35
	St. Charles	57	28°11'55"	96°56'50"	0.5 mile NW of Big Sharps Point
	St. Charles	58	28°10'53"	96°57'16"	0.5 mile SW of Little Sharps Point
St. Charles	59	28°10'00"	96°58'00"	On S side of Cow Chip Slough	

Table 1. (Cont'd).

Bay system	Bay	Station number	Latitude	Longitude	Station identification
Aransas	St. Charles	60	28°08'53"	96°58'20"	Just N of the Big Tree
	St. Charles	61	28°07'57"	96°58'28"	On SE tip of Hail Point
	Copano	62	28°08'10"	97°00'37"	On Lamar Peninsula on W side at N end of Copano Causeway
	Copano	63	28°09'01"	97°01'42"	On W tip of Newcomb Point
	Copano	64	28°09'43"	97°01'08"	Just S of Holiday Beach channel; Palmetto Point
	Copano	65	28°11'00"	97°01'05"	At W end of Shell Point near duck blind
	Copano	66	28°11'52"	97°00'42"	On a point of land 1.0 mile E of Turtle Pen Point
	Copano	67	28°12'07"	97°02'07"	On N side of the mouth of Copano Creek
	Copano	68	28°11'54"	97°01'14"	On S side of Turtle Pen Point
	Copano	69	28°11'18"	97°02'21"	1.5 miles SW of Turtle Pen Point
	Copano	70	28°10'41"	97°04'00"	About 3.0 miles SW of Turtle Pen Point
	Copano	71	28°10'00"	97°05'27"	About 4.5 miles SW of Turtle Pen Point
	Copano	72	28°08'57"	97°07'22"	Just to the NW of Copano Reef
	Mission	73	28°10'00"	97°08'27"	About 1.5 miles N of mouth of Mission Bay
	Copano	74	28°07'57"	97°09'27"	Between the mouth of Mission Bay and Shellbank Reef
	Copano	75	28°06'41"	97°11'15"	Approximately 1.5 miles NE of Bayside
	Copano	76	28°05'32"	97°13'28"	0.2 mile W of bridge at Black Point
	Copano	77	28°03'45"	97°13'22"	On S side of the mouth of the Aransas River
	Copano	78	28°04'18"	97°12'39"	0.5 mile E of the S end of Bayside bridge on Egery Island
Copano	79	28°03'39"	97°11'05"	2.0 miles SE of the S end of Bayside Bridge; Rincon de la Cera	

Table 1. (Cont'd).

Bay system	Bay	Station number	Latitude	Longitude	Station identification
Aransas	Copano	80	28°03'09"	97°09'07"	On N side at the E most island forming Swan Lake
	Port	81	28°01'57"	97°08'53"	On NW end of the old bridge ruins across Port Bay
	Port	82	28°01'15"	97°09'14"	1.0 mile SW of Port Bay Bait Stand, on E tip of land forming horseshoe
	Port	83	28°00'17"	97°09'23"	On point of land 0.8 mile NE of Highway 881 bridge on W side of bay
	Port	84	27°59'29"	97°10'15"	On E shore just S of Highway 881 bridge
	Port	85	27°58'53"	97°10'40"	On W shore 1.0 mile SW of Highway 881 bridge
	Port	86	27°59'54"	97°08'56"	0.8 mile due S of Port Bay ranch house near slough
	Port	87	28°01'05"	97°08'31"	0.5 mile S of E side of old bridge ruins
	Port	88	28°01'45"	97°07'47"	0.5 mile E of Port Bay Bait Stand
	Port	89	28°02'19"	97°07'48"	At point of land forming NW boundary of Italian Bend
	Copano	90	28,04'38"	97°06'03"	Hannibal Point
	Copano	91	28°05'50"	97°03'04"	The third T-head NE of Copano Village; close to airport
	Copano	92	28°07'03"	97°03'12"	On W tip of Redfish Point near old barge
	Mesquite	93	28°08'13"	96°53'21"	In Mesquite Bay 2.5 miles NW from mouth of Cedar Bayou
	Redfish	94	27°54'10"	97°05'47"	On S side of NE tip of Hog Island
	Aransas	95	28°02'27"	96°57'02"	0.5 mile SW of Pauls Mott reef marker
	Redfish	96	27°58'22"	97°04'50"	Off ICWW spoil near oil well inside Estes Cove
Mission	97	28°08'37"	97°08'20"	Just inside Mission Bay mouth on E side	

Table 1. (Cont'd).

Bay system	Bay	Station number	Latitude	Longitude	Station identification
Aransas	Mission	98	28°08'05"	97°10'10"	In Mission Bay on W shore due S of river entrance
	Copano	99	28°04'07"	97°05'45"	Inside Salt Lake off well pads
	Redfish	100	27°54'47"	97°07'42"	1.0 mile N of Aransas Pass Harbor, W of ICWW Marker 35.

Table 1. (Cont'd).

Bay system	Bay	Station number	Latitude	Longitude	Station identification
Corpus Christi	Nueces	1	27°49'12"	97°27'45"	2 miles W of westerly powerlines on S shore
	Nueces	2	27°52'52"	97°20'11"	2 miles NE of clay pits
	Nueces	3	27°52'09"	97°20'30"	0.2 mile NW of old Ramada Inn
	Nueces	4	27°52'50"	97°21'28"	1 mile E of clay pits
	Nueces	5	27°52'15"	97°26'27"	1 mile W of westerly powerlines on N shore
	Nueces	6	27°52'12"	97°25'05"	0.5 mile E of westerly powerlines on N shore
	Corpus Christi	7	27°51'24"	97°20'42"	0.8 mile N of Indian Point pier
	Nueces	8	27°53'00"	97°29'39"	0.5 mile NW of shallow cove on N shore
	Nueces	9	27°51'47"	97°27'52"	On E shore of first cove to the E of White Point
	Nueces	10	27°52'30"	97°30'40"	3 miles W and N of river cut
	Nueces	11	27°51'10"	97°30'00"	0.5 mile W of river cut on S shore
	Nueces	12	27°52'00"	97°29'00"	On W shore of White Point
	Nueces	13	27°52'28"	97°22'38"	Just W of clay pits
	Nueces	14	27°52'29"	97°23'38"	0.2 mile W of easterly powerlines on N shore
	Nueces	15	27°50'14"	97°23'15"	Just SW of the W.R.I.P. canal
	Nueces	16	27°50'15"	97°29'23"	Due S of island at Nueces River mouth
	Nueces	17	27°49'36"	97°25'38"	0.5 mile W of westerly powerlines on S shore
	Corpus Christi	18	27°41'34"	97°11'26"	0.2 mile S of water exchange pass (W.E.P.)
	Corpus Christi	19	27°46'00"	97°09'53"	Just S of tanks on NE end at Shamrock Island
	Corpus Christi	20	27°45'05"	97°08'49"	0.2 mile S of sportsmen club cabin
	Corpus Christi	21	27°46'35"	97°07'54"	0.2 mile NE of Sinclair Cut
	Corpus Christi	22	27°45'11"	97°10'20"	Extreme southern tip of Shamrock Island

Table 1. (Cont'd).

Bay system	Bay	Station number	Latitude	Longitude	Station identification
Corpus Christi	Corpus Christi	23	27°50'28"	97°09'41"	0.2 mile S of Dagger Point on S shore
	Corpus Christi	24	27°43'27"	97°10'05"	0.5 mile S of boat cove by Tenneco pumping station
	Corpus Christi	25	27°49'53"	97°10'26"	0.2 mile N of southern tip of Dagger Island on S shore
	Nueces	26	27°51'15"	97°29'05"	Off N side of spoil island, 0.5 mile N of river cut
	Corpus Christi	27	27°42'40"	97°10'32"	1 mile N of W.E.P.
	Corpus Christi	28	27°50'51"	97°14'09"	Welder Point, just NW of house on bluff
	Corpus Christi	29	27°42'22"	97°17'26"	0.5 mile NW of N.A.S. bulkheads
	Corpus Christi	30	27°52'29"	97°18'14"	2 miles W of jetties on La Quinta shore
	Corpus Christi	31	27°51'58"	97°19'37"	2 miles NE of Indian Point Pier
	Nueces	32	27°51'30"	97°21'45"	On spoil area, 0.5 mile NE of Nueces Bay causeway
	Corpus Christi	33	27°49'50"	97°22'48"	On the beach just SW of Rincon Point
	Corpus Christi	34	27°45'54"	97°22'56"	1 mile SE of Holiday Inn on Ocean Drive
	Corpus Christi	35	27°43'28"	97°20'40"	0.8 mile NW of Oso Fishing Pier
	Corpus Christi	36	27°52'48"	97°16'45"	0.8 mile W of jetties on La Quinta shore
	Corpus Christi	37	27°41'42"	97°14'51"	On N shore of Demit Island
	Corpus Christi	38	27°42'51"	97°19'09"	0.8 mile SE of Oso Fishing Pier
	Corpus Christi	39	27°41'18"	97°13'17"	N shore of spoil area near ICWW Marker 3
	Corpus Christi	40	27°45'14"	97°09'29"	0.2 mile N of Glenn Cove
	Corpus Christi	41	27°46'22"	97°08'49"	0.5 mile SW at Sinclair Cut, N of tanks
	Redfish	42	27°50'12"	97°10'11"	Middle of N shore at Dagger Point
	Corpus Christi	43	27°49'40"	97°10'46"	On S shore of spoil area just SW of Dagger Island

Table 1. (Cont'd).

Bay system	Bay	Station number	Latitude	Longitude	Station identification
Corpus Christi	Corpus Christi	44	27°50'46"	97°09'22"	On S shore of spoil area, 0.2 mile NE of Dagger Island
	Redfish	45	27°51'03"	97°08'08"	On SE shore of S. Ransom Island
	Corpus Christi	47	27°44'28"	97°22'06"	2.25 miles NW of Oso Fishing Pier
	Redfish	48	27°52'15"	97°08'04"	In the middle of E shore of N Ransom Island
	Redfish	49	27°52'11"	97°08'07"	In the middle of W shore of N Ransom Island
	Redfish	50	27°53'15"	97°07'01"	On W shore of Stedman Island
	Redfish	51	27°51'25"	97°09'46"	0.25 mile E of ICWW Marker 52 on NE side of spoil
	Corpus Christi	52	27°49'26"	97°07'55"	On SW shore of Point of Mustang
	Redfish	53	27°52'41"	97°08'20"	On SW shore of long spoil area just N of N Ransom Island
	Corpus Christi	54	27°51'01"	97°21'34"	0.25 mile SW of Indian Point Pier
	Corpus Christi	55	27°50'08"	97°07'14"	0.3 mile NE of CCSC Marker 14
	Redfish	56	27°50'51"	97°07'21"	0.8 mile E of S Ransom Island on spil area
	Corpus Christi	57	27°49'30"	97°07'10"	1 mile E of Pt. of Mustang on S shore
	Corpus Christi	58	27°45'21"	97°08'21"	0.5 mile SE of green cabin in Shamrock Cove
	Corpus Christi	59	27°49'20"	97°08'56"	0.2 mile SSW of CCSC Marker 19 on N side of spoil area
	Corpus Christi	60	27°49'18"	97°09'43"	0.3 mile E of CCSC Marker 25 on N side of spoil area just W of tanks
	Corpus Christi	61	27°48'56"	97°11'15"	On N side of spoil area just S of CCSC Marker 31
	Corpus Christi	62	27°48'45"	97°11'41"	On S shore, 1.5 miles NE of W tip of chain of CCSC spoil areas

Table 1. (Cont'd).

Bay system	Bay	Station number	Latitude	Longitude	Station identification
Corpus Christi	Corpus Christi	63	27°48'26"	97°13'05"	0.2 mile SE of W tip of chain of CCSC spoil area
	Corpus Christi	64	27°48'47"	97°12'29"	0.2 mile SE of CCSC Marker 36
	Corpus Christi	65	27°49'28"	97°13'10"	Just N of La Quinta Channel Marker 6 in front of houses
	Corpus Christi	66	27°50'05"	97°13'21"	Just SW of Ingleside Cove public ramp
	Corpus Christi	67	27°49'59"	97°13'38"	On N side of island just S of La Quinta Channel Marker 8
	Corpus Christi	68	27°48'38"	97°14'07"	0.8 mile SE of Ingleside Point
	Redfish	70	27°51'22"	97°08'48"	Off SW tip of island that is 0.5 mile SW of N Ransom Island
	Corpus Christi	71	27°52'22"	97°15'42"	Just SW of La Quinta Channel Marker 19
	Corpus Christi	72	27°44'36"	97°09'38"	Just SW of Arco plant at bay end of Wilson's Cut
	Redfish	73	27°53'33"	97°07'32"	0.5 mile SE of Conn Brown Harbor Bridge on S shore of spoil area
	Oso	74	27°42'25"	97°18'30"	On spoil just S of Oso Bridge
	Redfish	75	27°52'14"	97°05'59"	At S end of oil well cut, 1.25 miles SE of Fin and Feather Marina
	Corpus Christi	76	27°50'24"	97°06'06"	On N side of spoil area, 0.2 mile N of CCSC Marker 8
	Corpus Christi	77	27°45'34"	97°08'57"	Pink Shack Cove
	Corpus Christi	78	27°49'00"	97°07'30"	East Flats
	Redfish	79	27°52'31"	97°08'48"	0.2 mile SE of ICW Marker 44 on S shore of spoil area
	Corpus Christi	80	27°44'04"	97°09'39"	Boat cove

Table 1. (Cont'd).

Bay system	Bay	Station number	Latitude	Longitude	Station identification
Laguna Madre	Upper Laguna Madre	1	27°40'40"	97°15'03"	1.0 miles SSW of E tip of Demit Island
	Upper Laguna Madre	2	27°19'40"	97°24'24"	1.2 miles NNW of ICWW Flasher 103
	Upper Laguna Madre	3	27°14'58"	97°25'32"	0.4 mile ESE of ICWW Flasher 133
	Baffin	4	27°17'02"	97°36'45"	3.2 miles E of Riviera Beach
	Baffin	5	27°18'11"	97°39'15"	1.3 miles NNE of Riviera Beach
	Laguna Salada	6	27°16'33"	97°38'57"	1.2 miles SE of Riviera Beach
	Upper Laguna Madre	7	27°41'30"	97°15'01"	0.5 mile ENE of Naval Air Station Corpus Christi Marina
	Laguna Salada	8	27°17'00"	97°40'18"	0.7 mile WSW of Riviera Beach
	Upper Laguna Madre	9	27°40'50"	97°14'06"	0.8 mile ESE of Demit Island
	Upper Laguna Madre	10	27°40'25"	97°15'20"	1.3 miles SW of Demit Island
	Upper Laguna Madre	11	27°40'20"	97°15'57"	1.7 miles SW of Demit Island
	Upper Laguna Madre	12	27°39'20"	97°13'40"	2.0 miles WNW of Corpus Christi Pass
	Upper Laguna Madre	13	27°38'33"	97°12'55"	1.0 mile WSW of Corpus Christi Pass
	Upper Laguna Madre	14	27°38'28"	97°13'45"	2.0 miles WSW of Corpus Christi Pass
	Upper Laguna Madre	15	27°39'30"	97°16'25"	2.8 miles SW of Demit Island
	Upper Laguna Madre	16	27°38'25"	97°15'25"	3.0 miles NE of Pita Island
	Upper Laguna Madre	17	27°37'47"	97°15'45"	2.3 miles NE of Pita Island
	Upper Laguna Madre	18	27°37'20"	97°16'20"	1.4 miles NE of Pita Island
	Upper Laguna Madre	19	27°36'00"	97°16'00"	0.3 mile ESE of Pita Island
	Upper Laguna Madre	20	27°36'30"	97°17'55"	0.6 mile NW of Pita Island
	Upper Laguna Madre	21	27°35'40"	97°17'40"	0.6 mile SW of Pita Island
	Upper Laguna Madre	22	27°32'08"	97°17'10"	0.9 mile NNE of North Bird Island
	Upper Laguna Madre	23	27°33'10"	97°19'35"	3.0 miles NW of North Bird Island
	Upper Laguna Madre	24	27°27'10"	97°19'55"	2.5 miles SSE of South Bird Island
	Upper Laguna Madre	25	27°22'08"	97°21'30"	8.6 miles SSW of South Bird Island
	Alazan	26	27°20'25"	97°31'52"	3.5 miles NNE of Starvation Point

Table 1. (Cont'd).

Bay system	Bay	Station number	Latitude	Longitude	Station identification
Laguna Madre	Cayo del Grullo	27	27°19'32"	97°41'00"	0.7 mile SE of Loyola Beach
	Laguna Salada	28	27°16'10"	97°41'20"	1.4 miles ESE of Williamson's Boat Dock
	Laguna Salada	29	27°16'31"	97°17'35"	0.2 mile ESE of Williamson's Boat Dock
	Upper Laguna Madre	30	27°36'08"	97°17'35"	SW shore of Pita Island
	Upper Laguna Madre	31	27°34'20"	97°15'36"	2.4 miles W of Bob Hall Pier on Padre Island
	Upper Laguna Madre	32	27°34'33"	97°15'55"	2.2 miles SE of Pita Island
	Upper Laguna Madre	33	27°35'03"	97°18'15"	1.5 miles SW of Pita Island
	Upper Laguna Madre	34	27°34'02"	97°16'40"	2.3 miles SSE of Pita Island
	Upper Laguna Madre	35	27°35'58"	97°16'15"	3.1 miles NNE of North Bird Island
	Upper Laguna Madre	36	27°34'24"	97°19'10"	2.5 miles SW of Pita Island
	Upper Laguna Madre	37	27°33'25"	97°16'38"	2.3 miles NNE of North Bird Island
	Upper Laguna Madre	38	27°31'55"	97°20'10"	2.8 miles WNW of North Bird Island
	Upper Laguna Madre	39	27°30'30"	97°18'00"	0.8 mile SW of North Bird Island
	Upper Laguna Madre	40	27°31'00"	97°20'35"	3.2 miles W of North Bird Island
	Upper Laguna Madre	41	27°29'50"	97°20'48"	2.5 miles W of South Bird Island
	Upper Laguna Madre	42	27°29'00"	97°18'25"	0.7 mile S of South Bird Island
	Upper Laguna Madre	43	27°28'10"	97°21'28"	3.3 miles WSW of South Bird Island
	Upper Laguna Madre	44	27°26'42"	97°20'40"	3.7 miles SW of South Bird Island
	Upper Laguna Madre	45	27°27'57"	97°21'48"	1.6 miles WNW of ICWW Flasher 69
	Upper Laguna Madre	46	27°26'00"	97°19'50"	1.9 miles S of ICWW Flasher 63
	Upper Laguna Madre	47	27°25'35"	97°20'41"	0.9 mile SSW of ICWW Flasher 69
	Upper Laguna Madre	48	27°25'10"	97°19'49"	3.0 miles S of ICWW Flasher 63
	Upper Laguna Madre	49	27°25'50"	97°22'06"	1.8 miles WSW of ICWW Flasher 69
	Upper Laguna Madre	50	27°23'48"	97°20'27"	1.5 miles SE of ICWW Flasher 75
Upper Laguna Madre	51	27°23'32"	97°21'45"	0.8 mile NE of ICWW Flasher 83	
Upper Laguna Madre	52	27°22'56"	97°21'04"	1.3 miles E of ICWW Flasher 83	
Upper Laguna Madre	53	27°21'19"	97°21'45"	1.2 miles ESE of ICWW Flasher 89	
Upper Laguna Madre	54	27°20'31"	97°24'00"	0.7 mile WNW of ICWW Flasher 95	

Table 1. (Cont'd).

Bay system	Bay	Station number	Latitude	Longitude	Station identification
Laguna Madre	Upper Laguna Madre	55	27°18'40"	97°23'51"	0.2 mile SE of ICWW Flasher 103
	Upper Laguna Madre	56	27°14'00"	97°25'40"	0.8 mile SW of ICWW Flasher 139
	Upper Laguna Madre	57	27°12'42"	97°25'49"	0.6 mile WSW of ICWW Flasher 151
	Upper Laguna Madre	58	27°12'20"	97°25'36"	0.6 mile S of ICWW Flasher 151
	Upper Laguna Madre	59	27°11'49"	97°26'08"	0.6 mile NW of ICWW Flasher 163
	Upper Laguna Madre	60	27°10'39"	97°25'45"	0.7 mile NNE of ICWW Flasher 175
	Upper Laguna Madre	61	27°10'07"	97°26'30"	0.5 mile WNW of ICWW Flasher 175
	Upper Laguna Madre	62	27°09'56"	97°25'54"	0.1 mile SE of ICWW Flasher 175
	Upper Laguna Madre	63	27°08'26"	97°26'19"	0.1 mile S of ICWW Flasher 187
	Baffin	64	27°18'27"	97°27'49"	3.7 miles WNW of ICWW Flasher 115
	Baffin	65	27°15'07"	97°28'17"	3.5 miles WNW of ICWW Flasher 139
	Baffin	66	27°17'37"	97°29'13"	1.8 miles NE of E Kleberg Point
	Baffin	67	27°14'25"	97°30'15"	2.4 miles S of E Kleberg Point
	Alazan	68	27°18'45"	97°29'48"	3.3 miles ENE of Starvation Point
	Alazan	69	27°19'40"	97°30'22"	3.3 miles NE of Starvation Point
	Alazan	70	27°18'20"	97°31'04"	2.2 miles NNW of E Kleberg Point
	Alazan	71	27°19'53"	97°32'43"	2.8 miles N of Starvation Point
	Baffin	72	27°13'43"	97°32'41"	4.0 miles S of Starvation Point
	Alazan	73	27°17'30"	97°36'03"	0.9 mile NE of Kleberg Point
	Baffin	74	27°15'47"	97°38'27"	0.8 mile SSE of Pie de Gallo
	Laguna Salada	75	27°16'20"	97°40'00"	1.0 mile S of Riviera Beach
	Laguna Salada	76	27°15'55"	97°42'45"	0.8 mile SSW of Williamson's Boat Dock
	Laguna Salada	77	27°15'45"	97°43'30"	1.5 miles SW of Williamson's Boat Dock
	Laguna Salada	78	27°16'55"	97°41'18"	1.5 miles WSW of Riviera Beach
	Baffin	79	27°17'20"	97°39'40"	Baffin Bay shore immediately E of Riviera Beach
	Cayo del Grullo	80	27°20'37"	97°41'32"	0.8 mile N of Loyola Beach
	Cayo del Grullo	81	27°21'56"	97°40'34"	2.5 miles NNE of Loyola Beach
	Laguna Madre	82	27°20'35"	97°40'00"	1.7 miles ENE of Loyola Beach
	Cayo del Grullo	83	27°19'43"	97°39'30"	ENE of Kleberg County Kaufer Park
	Cayo del Grullo	84	27°18'09"	97°39'00"	2.0 miles NE of Riviera Beach

Table 1. (Cont'd).

Bay system	Bay	Station number	Latitude	Longitude	Station identification
Laguna Madre	Lower Laguna Madre	1	26°23'40"	97°19'35"	NW tip of Green Island
	Lower Laguna Madre	2	26°21'10"	97°19'30"	W side of dump W of ICWW Marker 2
	Lower Laguna Madre	3	26°22'00"	97°19'20"	Dump off mouth of Arroyo Colorado
	Lower Laguna Madre	4	26°23'15"	97°19'20"	SW tip of Green Island
	Lower Laguna Madre	5	26°03'10"	97°11'50"	S end of Long Island at Port Isabel
	Lower Laguna Madre	6	26°48'00"	97°28'20"	W of ICWW Marker 223A
	Lower Laguna Madre	7	26°45'15"	97°28'10"	W of ICWW Marker 237
	Lower Laguna Madre	8	26°44'00"	97°28'10"	W of ICWW Marker 241
	Lower Laguna Madre	9	26°42'30"	97°28'00"	W of ICWW Marker 245
	Lower Laguna Madre	10	26°40'40"	97°27'30"	W of ICWW Marker 253
	Lower Laguna Madre	11	26°39'40"	97°27'15"	W of ICWW Marker 259
	Lower Laguna Madre	12	26°39'10"	97°27'10"	W of ICWW Marker 261A
	Lower Laguna Madre	13	26°38'15"	97°26'45"	W of ICWW Marker 265
	Lower Laguna Madre	14	26°36'55"	97°26'50"	W of ICWW Marker 269
	Lower Laguna Madre	15	26°35'50"	97°20'15"	W of ICWW Marker 273A
	Lower Laguna Madre	16	26°33'30"	97°22'25"	S side of dump between Mansfield channel Markers 34 and 36
	Lower Laguna Madre	17	26°31'40"	97°25'11"	W of ICWW Marker 289
	Lower Laguna Madre	18	26°30'15"	97°24'20"	W of ICWW Marker 293A
	Lower Laguna Madre	19	26°31'48"	97°24'20"	W side of dump at ICWW Marker 289
	Lower Laguna Madre	20	26°30'50"	97°23'50"	W side of dump at ICWW Marker 293
	Lower Laguna Madre	21	26°29'50"	97°23'30"	W side of dump by ICWW Marker 297A
	Lower Laguna Madre	22	26°17'35"	97°17'20"	E first dump of Three Islands
	Lower Laguna Madre	23	26°18'05"	97°17'35"	Dump just E of ICWW Marker 31
	Lower Laguna Madre	24	26°17'50"	97°18'00"	Three Islands W of ICWW Marker 31
	Lower Laguna Madre	25	26°18'20"	97°17'45"	Dump just E of ICWW Marker 29
	Lower Laguna Madre	26	26°07'50"	97°17'15"	NW end of Loma de la Grulla
	Lower Laguna Madre	27	26°07'10"	97°17'00"	S end of Loma de la Grulla
	Lower Laguna Madre	28	26°05'35"	97°16'50"	0.5 mile SE of Laguna Vista tower

Table 1. (Cont'd).

Bay system	Bay	Station number	Latitude	Longitude	Station identification
Laguna Madre	Lower Laguna Madre	29	26°09'20"	97°10'50"	1.5 miles N of Padre Island water tower
	Lower Laguna Madre	30	26°08'50"	97°10'40"	0.25 mile N of Padre Island water tower
	Lower Laguna Madre	31	26°04'00"	97°11'50"	N end of Long Island at Port Isabel
	South Bay	32	26°01'50"	97°10'20"	E shore of South Bay, E of shipwreck
	Arroyo Colorado	33	26°21'00"	97°26'00"	Near inlet of ditch in Old Arroyo channel
	Lower Laguna Madre	34	26°47'10"	97°28'20"	W of ICWW Marker 229
	Lower Laguna Madre	35	26°46'10"	97°28'15"	W of ICWW Marker 234
	Lower Laguna Madre	36	26°41'40"	97°27'50"	W of ICWW Marker 249A
	Lower Laguna Madre	37	26°34'48"	97°25'50"	W of ICWW Marker 277A
	Lower Laguna Madre	38	26°32'50"	97°25'05"	W of ICWW Marker 285
	Lower Laguna Madre	39	26°24'45"	97°20'30"	Dump E of ICWW Marker 317
	Lower Laguna Madre	40	26°17'00"	97°17'05"	E side of island E of ICWW Marker 39
	Lower Laguna Madre	41	26°18'15"	97°18'00"	Dump W of ICWW Marker 29
	Lower Laguna Madre	42	26°17'50"	97°17'20"	Joe Breuer's cabin
	Lower Laguna Madre	43	26°06'40"	97°13'00"	Dump W of ICWW Marker 117
	South Bay	44	26°01'12"	97°11'13"	S shore at projection SSW of shipwreck
	Lower Laguna Madre	45	26°24'35"	97°20'15"	Second dump east of ICWW Marker 317
	Lower Laguna Madre	46	26°24'55"	97°20'10"	Third dump east of ICWW Marker 317
	Lower Laguna Madre	47	26°24'55"	97°20'05"	Fifth dump east of ICWW Marker 317
	Lower Laguna Madre	48	26°23'30"	97°20'10"	East of ICWW Marker 321 on east side of land strip
Lower Laguna Madre	49	26°19'20"	97°18'25"	Dump west of ICWW Marker 19	
Lower Laguna Madre	50	26°21'25"	97°18'55"	First dump east of ICWW Marker 2	

Table 1. (Cont'd).

Bay system	Bay	Station number	Latitude	Longitude	Station identification
Laguna Madre	Lower Laguna Madre	51	26°21'30"	97°18'45"	Second dump east of ICWW Marker 2
	Lower Laguna Madre	52	26°21'28"	97°18'30"	Third dump east of ICWW Marker 2
	Lower Laguna Madre	53	26°17'48"	97°17'28"	Breuer's cabin dump
	Lower Laguna Madre	54	26°11'00"	97°17'50"	Mainland shore west of ICWW Marker 89
	Lower Laguna Madre	55	26°09'20"	97°17'45"	Moranco Blanco
	Lower Laguna Madre	56	26°06'50"	97°17'25"	Mouth of Laguna Vista Cove
	Lower Laguna Madre	57	26°07'00"	97°16'25"	First east dump on Laguna Vista diagonal channel
	Lower Laguna Madre	58	26°07'40"	97°16'30"	Dump east of Loma de la Grulla wellhead
	Lower Laguna Madre	59	26°06'50"	97°16'40"	First west dump on Laguna Vista diagonal channel
	Lower Laguna Madre	60	26°12'15"	97°11'15"	2.5 miles N of South Padre Island water tower
	Lower Laguna Madre	61	26°12'50"	97°11'30"	3.5 miles N of South Padre Island water tower
	Lower Laguna Madre	62	26°21'10"	97°19'50"	North tip of Horse Island
	Lower Laguna Madre	63	26°20'15"	97°19'45"	North tip of Rattlesnake Island
	Lower Laguna Madre	64	26°04'50"	97°14'30"	1.0 mile E of Laguna Heights Pier
	Lower Laguna Madre	65	26°05'20"	97°10'00"	Just S of new causeway
	Lower Laguna Madre	66	26°33'20"	97°24'08"	E side of dump on S side of Mansfield channel Marker 24
	Lower Laguna Madre	67	26°33'50"	97°24'05"	Dump N of Mansfield channel Marker 26
	Lower Laguna Madre	68	26°42'50"	97°26'30"	Dump 0.5 mile E of ICWW Marker 246

Appendix C. Trammel net station locations.

Table 1. Trammel net station locations in each bay system, October 1978-September 1979.

Bay system	Bay	Station number	Latitude	Longitude	Station identification
Galveston	Galveston	101	29°32'05"	95°00'30"	0.9 mile S of entrance of Clear Lake Channel
	Galveston	102	29°31'00"	94°59'20"	0.6 mile W of surfaced ramp at Bacliff
	Galveston	103	29°30'20"	94°57'05"	0.2 mile E of Houston Lighting and Power Company's P. H. Robinson Generating Station's discharge canal
	East Dickinson	104	29°32'45"	94°29'50"	1.5 mile E of Frozen Point
	Dickinson	105	29°28'00"	94°57'50"	Dickinson Bayou, 0.5 mile N of bridge Hiway 146
	Dickinson	106	29°27'40"	94°56'30"	0.2 mile W of Marker 21 in Dickinson Bayou
	Trinity	107	29°38'45"	94°42'00"	0.3 mile S of Double Bayou
	Moses Lake	108	29°25'40"	94°57'05"	Mouth of Moses Bayou, NE side
	Moses Lake	109	29°25'20"	94°56'20"	0.8 mile E of mouth of bayou
	Galveston	110	29°26'30"	95°54'10"	0.9 mile E of entrance to Moses Lake
	Galveston	111	29°24'10"	94°53'10"	0.5 mile N of Texas City Dike
	Galveston	112	29°22'30"	94°52'45"	Snake Island
	Galveston	113	29°20'40"	94°53'35"	0.6 mile N of Campbell Bayou
	Galveston	114	29°20'00"	94°53'50"	0.1 mile SE of mouth of Campbell Bayou
	Galveston	115	29°21'05"	94°49'35"	North tip of Pelican Island
	Galveston	116	29°20'35"	94°49'20"	On Pelican Island, 0.2 mile S of ICWW
	Galveston	117	29°19'45"	94°49'25"	Middle of W side of Pelican Island
	Galveston	118	29°17'25"	94°52'05"	0.2 mile E of SE end of railroad bridge
	Jones Lake	119	29°18'35"	94°54'45"	E corner of Jones Lake
	Jones Lake	120	29°18'45"	94°55'45"	Highland Bayou, W end of Jones Lake

Table 1. (Cont'd).

Bay system	Bay	Station number	Latitude	Longitude	Station identification
Galveston	Trinity	121	29°40'30"	94°42'00"	0.3 mile S of Black Point
	Jones Lake	122	29°17'50"	94°56'50"	Basford Bayou
	West	123	29°16'35"	94°58'30"	0.9 mile NE of Greens Cut
	Greens Lake	124	29°15'50"	94°59'55"	S shore of Greens Lake
	Greens Lake	125	29°16'35"	94°59'30"	N shore of Greens Lake
	West	126	29°14'15"	95°00'55"	0.2 mile SW of Carancahua Cut
	Carancahua Lake	127	29°14'20"	95°01'30"	S shore of Carancahua Lake
	West	128	29°13'00"	95°01'45"	Carancahua Point, 1.5 mile SW of Carancahua Cut
	Halls Lake	129	29°11'15"	95°05'45"	E shore of Halls Lake
	Halls Lake	130	29°10'45"	95°06'20"	0.2 mile S of The Narrows
	Chocolate	131	29°11'10"	95°06'30"	0.2 mile NW of The Narrows
	Chocolate	132	29°11'50"	95°07'15"	Amerada Cut, 0.1 mile E
	Chocolate	133	29°11'30"	95°07'55"	Nymph Point, 0.3 mile NE
	Chocolate	134	29°12'25"	95°10'25"	Grassy Point, 0.2 mile N
	Chocolate	135	29°11'15"	95°09'25"	Horse Grove Point, 0.5 mile S
	Chocolate	136	29°10'30"	95°09'00"	Wharton Camp Bayou, 0.1 mile S
	Chocolate	137	29°09'35"	95°09'15"	0.5 mile NW of ICWW Marker 10
	West	138	29°08'15"	95°09'35"	0.4 mile S of ICWW Marker 11
	West	139	29°06'35"	95°09'40"	Guyton Cut, 0.5 mile NW of the mouth
	Oyster Lake	140	29°07'45"	95°10'20"	N shore of Oyster Lake
	Oyster Lake	141	29°07'00"	95°10'50"	S shore of Oyster Lake
	Bastrop	142	29°06'40"	95°11'00"	Oyster Lake Bayou, E edge
	Bastrop	143	29°06'20"	95°10'15"	0.7 mile N of Guyton Cut
	Lost Lake	144	29°04'55"	95°12'40"	S shore of Lost Lake
	Bastrop	145	29°05'00"	95°11'40"	1.3 mile W of Christmas Point
	Bastrop	146	29°04'45"	95°10'50"	Christmas Point, 0.5 mile W
	Christmas	147	29°04'25"	95°11'05"	Christmas Point, 0.9 mile SW
	Christmas	148	29°03'40"	95°12'10"	2.1 mile SW of Christmas Point
	Christmas	149	29°02'50"	95°13'15"	1.3 mile NW of Rattlesnake Point

Table 1. (Cont'd).

Bay system	Bay	Station number	Latitude	Longitude	Station identification
Galveston	Christmas	150	29° 02' 00"	95° 11' 45"	Cedar Cut, NE edge of mouth
	Christmas	151	29° 02' 20"	95° 10' 50"	1.0 mile NE of mouth of Cedar Cut
	Christmas	152	29° 03' 10"	95° 09' 45"	0.3 mile S of mouth of Church-hill Bayou
	West	153	29° 06' 20"	95° 06' 10"	1.2 mile NE of San Luis Pass
	West	154	29° 09' 45"	95° 01' 50"	NE shore of Snake Island Cove
	West	155	29° 10' 20"	95° 01' 25"	0.4 mile NE of Maggies Point
	West	156	29° 11' 00"	95° 00' 40"	0.1 mile E of Shell Island Point
	West	157	29° 11' 20"	94° 59' 45"	SE shore of Jumbile Cove
	West	158	29° 12' 30"	94° 58' 35"	NE shore of Carancahua Cove
	West	159	29° 12' 40"	94° 57' 50"	SW shore of Dana Cove
	West	160	29° 13' 30"	94° 56' 45"	NE shore of Hoeckers Cove
	West	161	29° 13' 55"	94° 56' 05"	S shore of Starvation Cove
	West	162	29° 14' 15"	94° 56' 05"	SW shore of Mentzell Bayou
	West	163	29° 14' 50"	94° 55' 30"	SW shore of mouth of Auzston Bayou
	West	164	29° 17' 00"	94° 55' 45"	North Deer Island, W shore
	West	165	29° 16' 15"	94° 54' 55"	South Deer Island, W shore
	Galveston	166	29° 23' 40"	94° 45' 40"	Eastern Baffle Point
	Galveston	167	29° 25' 30"	94° 43' 30"	0.7 mile SW of Sievers Cove
	East	168	29° 27' 40"	94° 41' 40"	1.6 mile SW of Elmgrove Point
	East	169	29° 28' 30"	94° 40' 30"	0.3 mile W of Elmgrove Point
East	170	29° 28' 35"	94° 39' 00"	0.4 mile NW of Bob's Cut	
East	171	29° 28' 50"	94° 37' 20"	2.5 mile E of Elmgrove Point	
East	172	29° 29' 30"	94° 35' 50"	S of Yates Bayou	
East	173	29° 30' 30"	94° 35' 45"	N of Big Pasture Bayou	
East	174	29° 31' 50"	94° 33' 50"	Marsh Point	
East	175	29° 31' 10"	94° 32' 20"	1.5 mile SE of Marsh Point	
East	176	29° 33' 20"	94° 31' 50"	0.9 mile NW of Frozen Point	
East	177	29° 34' 10"	94° 34' 20"	0.2 mile SW of Robinson Bayou	

Table 1. (Cont'd).

Bay system	Bay	Station number	Latitude	Longitude	Station identification
Galveston	East	178	29°33'20"	94°36'30"	Second windmill W of Robinson Bayou
	East	179	29°32'10"	94°41'10"	Stephenson Point
	Trinity	180	29°33'30"	94°45'20"	1.3 mile E of Vingt-et-un Island
	Trinity	181	29°36'40"	94°43'10"	On NW side of spoil island near mouth of Lone Oak Bayou
	Trinity	182	29°39'40"	94°42'00"	0.8 mile N of Double Bayou on spoil island
	Trinity	183	29°41'00"	94°41'40"	Northern edge Black Point
	Trinity	184	29°41'55"	94°41'30"	0.3 mile S of Ash Point
	Trinity	185	29°43'40"	94°41'35"	0.5 mile S of Round Point
	Trinity	186	29°44'30"	94°41'30"	0.5 mile N of Round Point in Anahuac Channel
	Trinity	187	29°44'10"	94°42'00"	Opposite Round Point on W shore of spoil island adjacent to new Anahuac Channel
	Trinity	188	29°46'00"	94°47'35"	1.3 mile NE of Houston Lighting and Power Company's Cedar Bayou Generating Station's discharge canal
	Trinity	189	29°44'50"	94°49'30"	0.5 mile SW of Houston Lighting and Power Company's Cedar Bayou Generating Station's discharge canal
	Trinity	190	29°43'30"	94°50'40"	0.8 mile SW of Point Barrow
	Trinity	191	29°42'20"	94°51'30"	2.5 mile SW of Point Barrow
	Trinity	192	29°40'20"	94°52'10"	Umbrella Point
Galveston		193	29°39'30"	94°55'35"	Mesquite Knoll, inside small lake
Galveston		194	29°41'55"	94°57'25"	0.6 mile W of Houston Lighting and Power Company's Cedar Bayou Generating Station's intake canal

Table 1. (Cont'd).

Bay system	Bay	Station number	Latitude	Longitude	Station identification
Galveston	Galveston	195	29°34'55"	95°00'00"	0.5 mile SW of Surf Oaks Bayou
	Trinity	196	29°37'05"	94°42'40"	0.3 mile N of Lone Oak Bayou
	East	197	29°31'45"	94°43'50"	2.3 mile W of Stephenson Point
	East	198	29°31'40"	94°34'35"	0.2 mile W of channel through Long Point
	Galveston	199	29°40'35"	94°57'50"	E shore of Atkinson Island, 0.6 mile SE of Barbours Cut
	West	200	29°16'15"	94°53'20"	0.3 mile SW of mouth of Offats Bayou

Table 1. (Cont'd).

Bay system	Bay	Station number	Latitude	Longitude	Station identification
Matagorda	Matagorda	101	28° 38' 40"	96° 18' 17"	Wells Point
	Turtle	102	28° 39' 43"	96° 18' 16"	Silver Creek
	Turtle	103	28° 40' 35"	96° 17' 52"	Shell Beach
	Turtle	104	28° 41' 08"	96° 17' 00"	Buttermilk Slough
	Turtle	105	28° 41' 40"	96° 15' 45"	Jensen Point
	Turtle	106	28° 41' 20"	96° 15' 32"	Incinerator
	Turtle	107	28° 40' 20"	96° 16' 55"	Turtle Point
	Matagorda	108	28° 41' 35"	96° 14' 10"	Settergest Marsh
	Tres Palacios	109	28° 44' 47"	96° 11' 10"	Slaughter Flats
	Tres Palacios	110	28° 45' 15"	96° 10' 10"	Tres Palacios River, East
	Tres Palacios	111	28° 44' 10"	96° 10' 51"	Pepper Hill
	Tres Palacios	112	28° 43' 30"	96° 11' 20"	Collegeport Piling
	Tres Palacios	113	28° 42' 37"	96° 10' 54"	Pilkington Bayou
	Tres Palacios	114	28° 41' 40"	96° 11' 30"	Fence Post Reef
	Tres Palacios	115	28° 41' 30"	96° 12' 21"	Redfish Lake
	Tres Palacios	116	28° 39' 53"	96° 12' 56"	Coon Island Point
	Coon Island	117	28° 39' 35"	96° 12' 40"	Coon Island Bayou
	Coon Island	118	28° 39' 27"	96° 12' 21"	Coon Island
	Coon Island	119	28° 38' 35"	96° 14' 00"	Oliver Point
	Matagorda	120	28° 37' 53"	96° 13' 22"	Pipeline Crossing
	Matagorda	121	28° 36' 24"	96° 12' 54"	Palacios Bayou Flats
	Matagorda	122	28° 35' 25"	96° 13' 50"	Boat Harbor
	Oyster Lake	123	28° 36' 14"	96° 12' 05"	Rattlesnake Island
	Oyster Lake	124	28° 37' 41"	96° 10' 40"	N Corner, Oyster Lake
	Oyster Lake	125	28° 37' 24"	96° 10' 47"	SE Shoreline, Oyster Lake
	Matagorda	126	28° 35' 44"	96° 11' 00"	ICWW, Southwest
	Matagorda	127	28° 35' 53"	96° 10' 16"	ICWW, Northeast
	Matagorda	128	28° 37' 20"	96° 06' 26"	Mad Island
	Matagorda	129	28° 39' 15"	96° 01' 45"	Shell Oil Cut
	Matagorda	130	28° 39' 15"	96° 59' 25"	Northeast Pocket
	Matagorda	131	28° 35' 22"	96° 02' 43"	Tide Gauge
	Matagorda	132	28° 33' 07"	96° 07' 15"	Watermelon Mott
	Matagorda	133	28° 31' 17"	96° 11' 25"	Oil Well Cut

Table 1. (Cont'd).

Bay system	Bay	Station number	Latitude	Longitude	Station identification
Matagorda	Matagorda	134	28°29'05"	96°15'00"	Poco Agua
	Matagorda	135	28°25'00"	96°21'35"	Decro Point
	Matagorda	136	28°28'10"	96°29'30"	La Salle Bayou
	Powderhorn Lake	137	28°30'00"	96°29'05"	Corner Powderhorn Lake
	Powderhorn Lake	138	28°29'00"	96°30'42"	Powderhorn Ranch Marsh
	Powderhorn Lake	139	28°28'37"	96°31'39"	Powderhorn, West
	Powderhorn Lake	140	28°30'10"	96°31'00"	Powderhorn, North Shore
	Powderhorn Lake	141	28°30'40"	96°29'47"	Powderhorn, NE Corner
	Chocolate Bay	142	28°34'55"	96°35'36"	Cedar Point
	Chocolate Bay	143	28°34'16"	96°38'08"	Tanner Launch
	Lavaca	144	28°40'19"	96°38'10"	Maxwell Ditch
	Lavaca	145	28°41'46"	96°39'45"	Six Mile Creek
	Lavaca	146	28°42'36"	96°38'31"	Garcitas Cove
	Lavaca	147	28°43'05"	96°37'11"	Venado West
	Venado Lake	148	28°44'35"	96°36'45"	Venado Lake #2
	Lavaca	149	28°43'10"	96°35'00"	Venado East
	Redfish Lake	150	28°47'41"	96°34'27"	Redfish Lake, Northwest
	Redfish Lake	151	28°46'41"	96°33'43"	Redfish Lake, Southeast
	Swan Lake	152	28°44'13"	96°34'24"	Swan Lake, West
	Swan Lake	153	28°45'00"	96°34'09"	Swan Lake, North
	Swan Lake	154	28°43'55"	96°33'41"	Swan Lake, East
	Lavaca	155	28°41'47"	96°33'47"	Catfish Cove
	Lavaca	156	28°39'24"	96°34'25"	Alcoa
	Cox	157	28°38'40"	96°31'53"	C P & L Shoreline
	Cox	158	28°38'24"	96°31'05"	Cox Point
	Cox	159	28°39'03"	96°31'05"	Cox Creek, West
	Cox	160	28°38'34"	96°30'35"	Huisache Cove
	Cox	161	28°38'07"	96°30'00"	Cox Cove, North
	Cox	162	28°37'24"	96°30'00"	Cox Cove, Southeast
	Keller	163	28°36'33"	96°28'55"	Mud Point
	Keller	164	28°37'49"	96°28'00"	Olivia

Table 1. (Cont'd).

Bay system	Bay	Station number	Latitude	Longitude	Station identification
Matagorda	Keller	165	28°37'39"	96°27'02"	Smith Ranch House
	Keller	166	28°35'55"	96°26'20"	Smith's Slough
	Keller	167	28°35'10"	96°27'35"	Keller Bay, SW corner
	Keller	168	28°35'48"	96°28'30"	Smith's Point
	Lavaca	169	28°35'00"	96°29'00"	Humble Oil Dock
	Lavaca	170	28°34'15"	96°29'18"	Sand Point Lavaca
	Matagorda	171	28°35'25"	96°26'20"	Smith's Cedars
	Redfish Lake	172	28°37'43"	96°23'07"	Redfish Lake, N Pocket
	Redfish Lake	173	28°37'15"	96°22'55"	Redfish Lake, E Shore
	Redfish Lake	174	28°37'15"	96°23'55"	Redfish Lake, SW Shore
	Salt Lake	175	28°37'50"	96°23'53"	Salt Lake, E Pocket
	Salt Lake	176	28°37'55"	96°25'00"	Salt Lake, W Pocket
	Carancahua	177	28°38'26"	96°25'00"	Port Alto, South
	Carancahua	178	28°41'33"	96°24'42"	Port Alto, North
	Carancahua	179	28°42'31"	96°25'55"	Wolf Point Flats
	Carancahua	180	28°44'19"	96°26'18"	Carancahua Bay, North
	Carancahua	181	28°44'32"	96°25'51"	Carancahua Bay, East
	Carancahua	182	28°43'03"	96°25'48"	Cape Carancahua
	Carancahua	183	28°44'05"	96°25'20"	Crescent V, West
	Carancahua	184	28°43'57"	96°23'40"	Crescent V, East
	Carancahua	185	28°42'29"	96°23'15"	Five Mile Draw
	Carancahua	186	28°39'43"	96°22'16"	Houston Point
	Carancahua	187	28°37'57"	96°21'34"	Schicke Point, Inside
	Matagorda	188	28°37'30"	96°21'34"	Schicke Point, Outside
	Matagorda	189	28°38'20"	96°20'00"	Piper Lake
	Matagorda	190	28°38'30"	96°19'11"	MFRS
Matagorda	191	28°36'28"	95°59'05"	S E Pocket	
Matagorda	192	28°32'10"	96°09'54"	Trout Bayou	
Matagorda	193	28°30'30"	96°12'35"	Cotton Bayou	
Matagorda	194	28°27'25"	96°18'15"	Tom Cherry	
Matagorda	195	28°28'24"	96°25'24"	Broad Bayou	
Matagorda	196	28°30'32"	96°28'47"	Powderhorn Bayou	

Table 1. (Cont'd).

Bay system	Bay	Station number	Latitude	Longitude	Station identification
Matagorda	Lavaca	197	28°35'00"	96°35'00"	Alamo Beach
	Matagorda	198	28°34'12"	96°28'49"	Sand Point, South
	Matagorda	199	28°37'00"	96°22'55"	Carancahua Pass, West

Table 1. (Cont'd).

Bay system	Bay	Station number	Latitude	Longitude	Station identification
San Antonio	San Antonio	101	28°23'22"	96°42'35"	Swan Point
	San Antonio	102	28°22'45"	96°41'50"	Mosquito Cove, 1 mile S of Swan Point
	San Antonio	103	28°21'55"	96°42'00"	Mosquito Cove, 1.25 miles N of Mosquito Point
	San Antonio	104	28°19'00"	96°39'15"	W point of Grass Island
	San Antonio	105	28°19'05"	96°37'55"	E point of Grass Island
	Soalwater	106	28°19'25"	96°38'00"	N point of Grass Island
	San Antonio	107	28°18'15"	96°37'35"	Small island just W of Steamboat Island
	Espiritu Santo	108	28°18'36"	96°37'05"	Middle of E side of Steamboat Island
	Shoalwater	109	28°19'30"	96°36'55"	1 mile from W point of Long Island in Shoalwater Bay
	Espiritu Santo	110	28°19'25"	96°37'35"	1.25 mile from W point of Long Island in Espiritu Santo Bay
	Espiritu Santo	111	28°20'20"	96°35'47"	2.5 miles from W point of Long Island in Espiritu Santo Bay
	Espiritu Santo	112	28°21'10"	96°34'52"	Long Island 0.5 mile W of Lane
	Espiritu Santo	113	28°21'45"	96°33'52"	Long Island 0.5 mile E of Lane
	Espiritu Santo	114	28°22'10"	96°32'55"	Long Island 1.5 miles E of Lane
	Espiritu Santo	115	28°22'47"	96°31'07"	0.5 mile from W point of Dewberry Island
	Espiritu Santo	116	28°23'15"	96°30'10"	1.5 miles from W point of Dewberry Island
	Espiritu Santo	117	28°23'50"	96°29'12"	Dewberry Island 0.5 mile W of Army channel
	Espiritu Santo	118	28°24'13"	96°28'18"	Blackberry Island 0.75 mile E of Army channel
	Espiritu Santo	119	28°24'48"	96°27'12"	Blackberry Island 1.75 miles E of Army channel
	Espiritu Santo	120	28°15'18"	96°26'06"	Blackberry Island at mouth of Barroom Bay

Table 1. (Cont'd).

Bay system	Bay	Station number	Latitude	Longitude	Station identification
San Antonio	Espiritu Santo	121	28°23'49"	96°26'12"	1.25 miles E of Bayoucou Point
	Espiritu Santo	122	28°23'00"	96°27'09"	Bayoucou Point
	Espiritu Santo	123	28°22'40"	96°27'20"	N side of Grass Island 0.5 mile from E point
	Espiritu Santo	124	28°22'15"	96°28'10"	N side of Grass Island 0.5 mile from W point
	Espiritu Santo	125	28°21'35"	96°27'25"	W point of Farwell Island
	Espiritu Santo	126	28°21'50"	96°26'53"	E point of Farwell Island
	Espiritu Santo	127	28°21'15"	96°26'25"	0.5 mile S of second oil well off Saluria Bayou
	Espiritu Santo	128	28°21'00"	96°26'22"	Big Pocket
	Espiritu Santo	129	28°20'33"	96°26'33"	Lighthouse Cove W of derelict boat on shore
	Espiritu Santo	130	28°19'51"	96°28'48"	0.25 mile W of Army hole on Vandever Island
	Pringle Lake	131	28°18'51"	96°30'22"	S shore Pringle Lake 2 miles E of Rahal Bayou
	Pringle Lake	132	28°18'22"	96°31'25"	S shore Pringle Lake 1 mile E of Rahal Bayou
	Espiritu Santo	133	28°19'25"	96°31'21"	Pringle Cut in center of Vanderver Island
	Espiritu Santo	134	28°18'07"	96°33'10"	Rahal Bayou
Espiritu Santo	135	28°18'05"	96°34'30"	South Pass Lake, E cut	
San Antonio	136	28°17'10"	96°35'53"	South Pass Lake, W cut	
San Antonio	137	28°16'50"	96°36'45"	Long Lake mouth on N shore	
San Antonio	138	28°16'35"	96°37'06"	Island N of Corey Cove	
San Antonio	139	28°16'05"	96°37'50"	Corey Cove Point	
San Antonio	140	28°15'35"	96°37'50"	Pat's Bay mouth on S shore	
San Antonio	141	28°15'12"	96°39'06"	1 mile S Pat's Bay between two guts	
San Antonio	142	28°14'25"	96°39'30"	Mouth of Twin Lakes	
San Antonio	143	28°13'54"	96°39'54"	Cedar Point	

Table 1. (Cont'd).

Bay system	Bay	Station number	Latitude	Longitude	Station identification
San Antonio	San Antonio	144	28°13'35"	96°40'00"	Mouth of Cedar Lake on S shore
	San Antonio	145	28°13'15"	96°41'00"	1 mile S of Cedar Lake
	San Antonio	146	28°12'30"	96°42'06"	0.5 mile S of Panther Point
	San Antonio	147	28°12'05"	96°41'55"	Panther Point Lake, just inside mouth on S shore
	San Antonio	148	28°11'45"	96°42'55"	1 mile S of Panther Point Lake mouth
	San Antonio	149	28°11'20"	96°45'05"	Mouth of Cottonwood Bayou
	San Antonio	150	28°11'21"	96°47'24"	Ayres Point
	Ayres	151	28°10'30"	96°48'55"	Point S of Ayres Point
	Ayres	152	28°10'05"	96°49'10"	Ayres Dugout
	Ayres	153	28°11'20"	96°50'00"	Rattlesnake Island
	Mustang Lake	154	28°13'50"	96°47'30"	Mouth of Mustang Lake E shore
	San Antonio	155	28°14'43"	96°46'35"	Point of land N of Marker 35
	San Antonio	156	28°15'20"	96°47'15"	Live Oak Point
	San Antonio	157	28°16'27"	96°47'47"	Dagger Point
	San Antonio	158	28°19'17"	96°47'45"	Webb Point
	San Antonio	159	28°20'21"	96°47'33"	0.5 mile S of Hopper Landing
	Hynes	160	28°21'48"	96°47'51"	McDowell Point
	Hynes	161	28°22'22"	96°49'00"	1 mile N of McDowell Point
	Hynes	162	28°25'20"	96°50'51"	Point of land in center head of Hynes Bay
	Hynes	163	28°25'40"	96°49'40"	1 mile S of Townsend Bayou
Hynes	164	28°25'10"	96°48'45"	Opposite steel gate in marsh	
Hynes	165	28°24'33"	96°47'50"	Swan Lake Bayou N of mouth	
Hynes	166	28°23'54"	96°46'37"	Grassey Point	
San Antonio	167	28°24'25"	96°47'20"	Midway between Grassey Point and Marsh Point	
Guadalupe	168	28°25'25"	96°45'50"	Foster Point	
Hynes	169	28°24'15"	96°51'00"	Opposite tall cylindrical tower	
San Antonio	170	28°14'00"	96°47'50"	Mouth of Mustang Lake W shore	

Table 1. (Cont'd).

Bay system	Bay	Station number	Latitude	Longitude	Station identification
San Antonio	Mission Lake	174	28°27'45"	96°48'10"	0.5 mile W of North Guadalupe River
	Mission Lake	175	28°28'15"	96°47'30"	Goff Bayou
	Guadalupe	176	28°27'15"	96°47'25"	South Guadalupe River
	Guadalupe	177	28°27'05"	96°46'40"	E of South Guadalupe River
	Long Lake	178	28°17'00"	96°35'50"	N shore of Long Lake
	Long Lake	179	28°16'35"	96°35'45"	S shore of Long Lake
	Pats	180	28°15'55"	96°37'05"	N shore of Pats Bay

Table 1. (Cont'd).

Bay system	Bay	Station number	Latitude	Longitude	Station identification
Aransas	Aransas	101	28°01'50"	97°02'00"	Just W of S channel entrance to Little Bay
	Dunham	102	28°08'53"	96°54'22"	NE corner of Dunham Bay
	Aransas	103	27°59'05"	97°04'00"	Halfway between Turtle Bayou and ICWW Marker 7
	Aransas	104	27°57'15"	97°04'15"	Oil well channel between Big and Trout bayous
	Redfish	105	27°56'00"	97°05'15"	Off second island NW of Big Bayou in Redfish Bay
	Copano	106	28°03'22"	97°08'10"	Rattlesnake Point
	Aransas	107	28°03'12"	96°56'44"	Long Reef
	Aransas	108	27°54'40"	97°02'42"	Lydia Ann Island
	Aransas	109	27°55'17"	97°01'03"	Oil tanks on St. Jose Island behind Mud Island
	Aransas	110	27°55'43"	97°02'38"	SW tip of Mud Island
	Copano	111	28°03'39"	97°11'05"	Rincon de la Cera
	Aransas	112	27°56'18"	97°01'22"	S side of middle of Mud Island
	Copano	113	28°11'00"	97°01'05"	Shell Point
	Copano	114	28°11'52"	97°00'42"	E of Turtle Pen Point
	Aransas	115	27°59'00"	96°58'07"	NE end of Allyn's Bight
	Copano	116	28°06'41"	97°11'15"	1.5 miles NE of Bayside
	Copano	117	28°07'03"	97°03'12"	Redfish Point
	Port	118	28°01'05"	97°08'31"	0.5 mile S of old bridge pilings
	Aransas	119	28°04'00"	96°57'40"	Deadman Island
	Aransas	120	27°55'13"	97°04'22"	Corpus Christi Bayou
	Aransas	121	28°04'18"	96°55'55"	Halfway between Long and Jay Bird reefs
	Aransas	122	27°59'52"	96°58'47"	Junction of Allyn's Lake and Aransas Bay
	Aransas	123	28°05'10"	96°55'33"	Jay Bird Reef
	Carlos	124	28°07'50"	96°54'15"	NE side of Cape Carlos
	Aransas	125	28°06'48"	96°55'26"	SW tip of Dunham Island

Table 1. (Cont'd).

Bay system	Bay	Station number	Latitude	Longitude	Station identification
Aransas	Mesquite	126	28°09'55"	96°52'32"	1 mile SW of area of Sundown and Mesquite bays junction
	Aransas	127	28°07'20"	96°56'45"	Halfway between Dunham and Blackjack points
	St. Charles	128	28°09'57"	96°56'53"	Egg Point
	Aransas	129	28°07'28"	96°59'00"	Goose Island (near restrooms)
	Aransas	130	28°00'00"	97°03'31"	Just S of Perry Bass docking facilities
	Aransas	131	28°06'15"	97°01'07"	Live Oak Point
	Aransas	132	28°05'21"	97°02'00"	1 mile S of Racquet Club
	Aransas	133	28°04'16"	97°02'07"	Just S of Sandollar Motel
	Aransas	134	28°06'48"	97°01'51"	S end of Copano Causeway, near boat ramp
	Carlos	135	28°07'05"	96°53'07"	SE corner of Carlos Bay
	Copano	136	28°05'05"	97°04'34"	1 mile SW of Aransas County airport
	Mesquite	137	28°07'09"	96°51'08"	1.5 mile W of mouth of Cedar Bayou
	Mesquite	138	28°06'58"	96°49'55"	Mouth of Cedar Bayou
	Mesquite	139	28°07'18"	96°48'50"	SE part of Mesquite Bay
	Mesquite	140	28°08'21"	96°48'07"	Bray Cove
	Mesquite	141	28°08'55"	96°49'04"	1.5 mile S of Ayres Dugout
	Mesquite	142	28°10'01"	96°49'55"	Ayres Dugout
	Mesquite	143	28°10'23"	96°51'07"	Roddy Island
	Dunham	144	28°07'57"	96°55'05"	Grass Island
	Carlos	145	28°08'52"	96°53'08"	S side of Cedar Point
	Aransas	146	28°06'40"	96°53'25"	Mouth of Spalding Bight
	St. Charles	147	28°08'03"	96°57'38"	Bird Point
	Aransas	148	28°06'03"	96°54'22"	S of Spalding Reef
	St. Charles	149	28°10'35"	96°56'18"	Bill Mott Bayou
	St. Charles	150	28°12'05"	96°55'43"	Indian Head Point
	St. Charles	151	28°13'00"	96°56'33"	Meile Dietrich Point
	St. Charles	152	28°14'32"	96°53'34"	McHugh Bayou
St. Charles	153	28°16'10"	96°54'55"	Twin Creek	

Table 1. (Cont'd).

Bay system	Bay	Station number	Latitude	Longitude	Station identification
Aransas	St. Charles	154	28°15'00"	96°56'30"	Salt Creek
	St. Charles	155	28°13'41"	96°57'26"	1.5 miles SW of mouth of Salt Creek
	St. Charles	156	28°13'04"	96°58'47"	Cavasso Creek, near Highway 35
	St. Charles	157	28°11'55"	96°56'50"	Big Sharps Point
	St. Charles	158	28°10'53"	96°57'16"	Little Sharps Point
	St. Charles	159	28°10'00"	96°58'00"	S side of Cow Chip Slough
	St. Charles	160	28°08'53"	96°58'20"	Just N of Big Tree
	St. Charles	161	28°07'57"	96°58'28"	Hail Point
	Copano	162	28°08'10"	97°00'37"	N end of Copano Causeway, west side
	Copano	163	28°09'01"	97°01'42"	Newcomb Point
	Copano	164	28°09'43"	97°01'08"	Holiday Beach channel
	Aransas	165	27°57'05"	96°59'35"	NE tip of Mud Island
	Aransas	166	27°58'06"	96°58'27"	1 mile N of ranch house on San Jose Island
	Copano	167	28°12'07"	97°02'07"	Copano Creek
	Copano	168	28°11'54"	97°01'14"	Turtle Pen Point
	Copano	169	28°11'18"	97°02'21"	1.5 miles SW of Turtle Pen Point
	Copano	170	28°10'41"	97°04'00"	3.0 miles SW of Turtle Pen Point
	Copano	171	28°10'00"	97°05'27"	4.5 miles SW of Turtle Pen Point
	Copano	172	28°08'57"	97°07'22"	Just NW of Copano Reef
	Mission	173	28°10'00"	97°08'27"	1.5 miles N of mouth of Mission Bay
	Copano	174	28°07'57"	97°09'27"	Between mouth of Mission Bay and Shellbank Reef
	Dunham	175	28°07'37"	96°55'42"	Dunham Point
	Copano	176	28°04'32"	97°13'28"	0.2 mile W of bridge at Black Point
	Copano	177	28°03'45"	97°13'22"	On S side of mouth of Aransas River
	Copano	178	28°04'18"	97°12'39"	W end of Egery Island

Table 1. (Cont'd).

Bay system	Bay	Station number	Latitude	Longitude	Station identification
Aransas	Aransas	179	27°56'42"	97°01'28"	N side of middle of Mud Island
	Copano	180	28°03'09"	97°09'07"	Mouth of Swan Lake
	Port	181	28°01'57"	97°08'53"	NW end of old bridge pilings
	Port	182	28°01'15"	97°09'14"	1 mile SW of Port Bay Bait Stand
	Port	183	28°00'17"	97°09'23"	0.8 mile NE of Highway 881
	Port	184	27°59'29"	97°10'15"	Just S of Highway 881
	Port	185	27°58'53"	97°10'40"	1 mile SW of Highway 881
	Port	186	27°59'54"	97°08'56"	0.8 mile S of Port Bay ranch house
	Aransas	187	28°01'55"	97°00'29"	SE tip of Key Allegro Isle
	Port	188	28°01'45"	97°07'47"	0.5 mile E of Port Bay Bait Stand
	Port	189	28°02'19"	97°07'48"	Mouth of Italian Bend, NW shore
	Copano	190	28°04'38"	97°06'03"	Hannibal Point
	Copano	191	28°05'50"	97°03'04"	Third T-head NE of Coapno Village
	Aransas	192	28°01'14"	96°58'00"	1.5 miles NE of Allyns Lake
	Mesquite	193	28°08'13"	96°52'21"	2.5 miles NW of mouth of Cedar Bayou
	Redfish	194	27°54'10"	97°05'47"	NE tip of Hog Island
	Aransas	195	28°02'27"	96°57'02"	0.5 mile SW of Pauls Mott Reef
	Redfish	196	27°58'22"	97°04'50"	Estes Cove
	Mission	197	28°08'37"	97°08'25"	Mouth of Mission Bay on E side
	Mission	198	28°08'05"	97°10'10"	S of mouth of Mission River
Copano	199	28°04'07"	97°05'45"	Salt Lake	
Redfish	200	27°54'47"	97°07'42"	W of ICWW Marker 35	

Table 1. (Cont'd).

Bay system	Bay	Station number	Latitude	Longitude	Station identification
Corpus Christi	Nueces	101	27°49'12"	97°27'45"	2 miles W of westerly powerlines on S shore
	Nueces	102	27°52'52"	97°20'11"	2 miles NE of Clay pits
	Nueces	103	27°52'09"	97°20'30"	0.25 mile NW of old Ramada Inn
	Nueces	104	27°52'50"	97°21'28"	1 mile E of clay pits
	Nueces	105	27°52'15"	97°26'27"	1 mile W of westerly powerlines on N shore
	Nueces	106	27°52'12"	97°25'05"	0.5 mile E of westerly powerlines on N shore
	Nueces	107	27°53'00"	97°29'39"	0.5 mile NW of shallow cove on N shore
	Nueces	108	27°51'47"	97°27'52"	On E shore of first cove to the E of White Point
	Nueces	109	27°52'30"	97°30'40"	3 miles W and N of Nueces River cut
	Nueces	110	27°52'00"	97°28'00"	On W shore of White Point
	Nueces	111	27°52'28"	97°22'38"	Just W of clay pits
	Nueces	112	27°52'29"	97°23'38"	0.25 mile W of easterly powerlines on N shore
	Nueces	113	27°51'10"	97°30'00"	0.5 mile W of Nueces River cut on S shore
	Nueces	114	27°50'14"	97°23'15"	Just SW of the Rincon Industrial Park canal
	Nueces	115	27°50'15"	97°29'23"	S of island at Nueces River mouth
	Nueces	116	27°49'36"	97°25'38"	0.5 mile W of westerly powerlines on S shore
	Corpus Christi	117	27°41'34"	97°11'26"	0.25 mile S of Water Exchange Pass
	Corpus Christi	118	27°43'27"	97°10'05"	0.5 mile S of Boat Cove by Tenneco pumping station
	Corpus Christi	119	27°46'00"	97°09'53"	Just S of storage tanks on NE end of Shamrock Island
	Corpus Christi	120	27°45'05"	97°08'49"	0.25 mile S of sportsmen's club cabin

Table 1. (Cont'd).

Bay system	Bay	Station number	Latitude	Longitude	Station identification
Corpus Christi	Corpus Christi	121	27°46'35"	97°07'54"	0.25 mile NE of Sinclair Cut
	Corpus Christi	122	27°45'11"	97°10'20"	Extreme southern tip of Shamrock Island
	Corpus Christi	123	27°50'28"	97°09'41"	0.25 mile S of Dagger Point on S shore
	Corpus Christi	124	27°49'53"	97°10'26"	0.25 mile N of southern tip of Dagger Island on S shore
	Corpus Christi	125	27°45'34"	97°08'57"	In Pink Shack Cove
	Corpus Christi	126	27°42'40"	97°10'32"	1 mile N of Water Exchange Pass
	Corpus Christi	127	27°50'51"	97°14'09"	Welder Point just NW of house on bluff
	Corpus Christi	128	27°52'00"	97°15'51"	On S shore 0.25 mile SE of tanks at N end of La Quinta channel shore
	Corpus Christi	129	27°52'48"	97°16'45"	0.75 mile W of jetties on La Quinta channel shore
	Corpus Christi	130	27°52'29"	97°18'14"	2 miles W of jetties on La Quinta channel shore
	Corpus Christi	131	27°51'58"	97°19'37"	2 miles NE of Indian Point Pier
	Corpus Christi	132	27°51'24"	97°20'42"	1/2 mile NE of Indian Point Pier
	Corpus Christi	133	27°49'50"	97°22'48"	On beach just SW of Rincon Point
	Corpus Christi	134	27°45'54"	97°22'56"	1 mile SE of Holiday Inn on Ocean Drive
	Corpus Christi	135	27°43'28"	97°20'40"	0.75 mile NW of Oso Fishing Pier
	Corpus Christi	136	27°42'22"	97°17'26"	0.5 mile NW of Naval Air Station bulkheads
	Corpus Christi	137	27°41'42"	97°14'51"	On N shore of Demit Island
Corpus Christi	138	27°42'51"	97°19'09"	0.75 mile SE of Oso Fishing Pier	
Corpus Christi	139	27°41'18"	97°13'17"	N shore of spoil area near ICWW Marker 3	
Corpus Christi	140	27°45'14"	97°09'29"	0.25 mile N of Glenn Cove	
Corpus Christi	141	27°46'22"	97°08'49"	0.5 mile SW of Sinclair Cut, N of tanks	

Table 1. (Cont'd).

Bay system	Bay	Station number	Latitude	Longitude	Station identification
Corpus Christi	Redfish	142	27°50'12"	97°10'11"	Middle of N shore of Dagger Island
	Corpus Christi	143	27°49'40"	97°10'46"	On S shore of spoil area just SW of Dagger Island
	Corpus Christi	144	27°50'46"	97°09'22"	On S shore of spoil area 0.25 mile NE of Dagger Island
	Redfish	145	27°51'03"	97°08'08"	On SE shore of South Ransom Island
	Corpus Christi	146	27°48'24"	97°23'16"	On spoil area, 0.25 mile S of Corpus Christi Ship Channel Marker 85
	Corpus Christi	147	27°44'28"	97°22'06"	2.25 miles NW of Oso Fishing Pier
	Redfish	148	27°52'15"	97°08'04"	In middle of E shore of North Ransom Island
	Redfish	149	27°52'11"	97°08'07"	In middle of W shore of North Ransom Island
	Redfish	150	27°53'15"	97°07'01"	On W shore of Stedman Island
	Corpus Christi	151	27°49'14"	97°12'09"	Just W of Sun Oil Company Dock Number 1 near Ingleside
	Corpus Christi	152	27°49'26"	97°07'55"	On SW shore of Point of Mustang
	Corpus Christi	153	27°50'35"	97°14'47"	On SW shore of La Quinta channel spoil, 0.25 mile NW of Ingleside Cove cut
	Redfish	154	27°52'41"	97°08'20"	On SW shore of long spoil area just N of North Ransom Island
	Corpus Christi	155	27°49'47"	97°07'12"	On N shore of Point of Mustang, 0.25 mile SE of Corpus Christi Ship Channel Marker 13
	Corpus Christi	156	27°50'04"	97°05'55"	0.25 mile SE of Corpus Christi Ship Channel Marker 7
	Corpus Christi	157	27°50'17"	97°04'47"	Just SE of Corpus Christi Ship Channel Marker 1
	Corpus Christi	158	27°50'27"	97°05'30"	N of Corpus Christi Ship Channel Markers 2 and 8

Table 1. (Cont'd).

Bay system	Bay	Station number	Latitude	Longitude	Station identification
Corpus Christi	Corpus Christi	159	27°50'08"	97°07'14"	0.3 mile NE of Corpus Christi Ship Channel Marker 14
	Corpus Christi	160	27°49'30"	97°07'10"	1 mile E of Point of Mustang on S shore
	Corpus Christi	161	27°47'34"	97°07'23"	1½ mile N of Sinclair Cut
	Redfish	162	27°53'08"	97°06'27"	0.25 mile SE of Fin and Feather Marina
	Redfish	163	27°51'36"	97°08'39"	0.5 mile SW of southern tip of North Ransom Island
	Corpus Christi	164	27°49'20"	97°08'56"	0.25 mile SSW of Corpus Christi Ship Channel Marker 19 on N side of spoil area
	Corpus Christi	165	27°49'18"	97°09'43"	0.3 mile E of Corpus Christi Ship Channel Marker 25 on N side of spoil area just W of tanks
	Corpus Christi	166	27°48'56"	97°11'15"	On N side of spoil area just S of Corpus Christi Ship Channel Marker 31
	Corpus Christi	167	27°48'45"	97°11'41"	On S shore 1.5 miles NE of W tip of chain of Corpus Christi Ship Channel spoil areas
	Corpus Christi	168	27°48'26"	97°13'05"	0.25 mile SE of W tip of chain of Corpus Christi Ship Channel spoil areas
	Corpus Christi	169	27°48'47"	97°12'29"	0.25 mile SE of Corpus Christi Ship Channel Marker 36
	Corpus Christi	170	27°49'28"	97°13'10"	Just N of LaQuinta Channel Marker 6 in front of houses
	Corpus Christi	171	27°50'05"	97°13'21"	Just SW of Ingleside Cove public boat ramp
	Corpus Christi	172	27°50'05"	97°14'00"	0.25 mile NE of LaQuinta Channel Marker 7

Table 1. (Cont'd).

Bay system	Bay	Station number	Latitude	Longitude	Station identification
Corpus Christi	Corpus Christi	173	27°49'38"	97°14'07"	0.75 mile SE of Ingleside Point
	Corpus Christi	174	27°51'37"	97°14'50"	1½ NW of Ingleside Cove Cut on SW shore
	Redfish	175	27°51'25"	97°09'46"	0.25 mile E of ICWW Marker 52
	Corpus Christi	176	27°44'36"	97°09'38"	Just SW of Arco Plant at bay end of Wilson's Cut
	Oso	177	27°42'30"	97°19'00"	Oso Bay
	Redfish	178	27°53'33"	97°07'32"	0.5 mile SE of Conn Brown Harbor Bridge on S shore of spoil area
	Redfish	179	27°52'14"	97°05'59"	At S end of oil well cut
	Corpus Christi	180	27°50'24"	97°06'06"	On N side of spoil area 0.25 mile N of Corpus Christi Ship Channel Marker 8
	Corpus Christi	181	27°45'21"	97°08'21"	0.5 mile SE of green cabin
	Corpus Christi	182	27°44'04"	97°09'39"	Inside the boat cove, on N shore
	Corpus Christi	183	27°47'00"	97°07'00"	East Flats
	Redfish	184	27°52'31"	97°08'48"	0.25 mile SE of ICWW Marker 44 on S shore of spoil area
	Redfish	185	27°50'51"	97°07'21"	0.75 mile E of South Ransom Island

Table 1. (Cont'd).

Bay system	Bay	Station number	Latitude	Longitude	Station identification
Laguna Madre	Upper Laguna Madre	101	27°41'30"	97°15'01"	0.5 mile ENE of Naval Air Station Corpus Christi Marina
	Upper Laguna Madre	102	27°40'40"	97°15'03"	1 mile SSW of E tip of Demit Island
	Upper Laguna Madre	103	27°40'50"	97°14'06"	0.8 mile ESE of Demit Island
	Upper Laguna Madre	104	27°40'25"	97°15'20"	1.3 miles SW of Demit Island
	Upper Laguna Madre	105	27°40'20"	97°15'57"	1.7 miles SW of Demit Island
	Upper Laguna Madre	106	27°39'20"	97°13'40"	2 miles WNW of Corpus Christi Pass
	Upper Laguna Madre	107	27°38'33"	97°12'55"	1 mile WSW of Corpus Christi Pass
	Upper Laguna Madre	108	27°38'28"	97°13'45"	2 miles SWS of Corpus Christi Pass
	Upper Laguna Madre	109	27°39'30"	97°16'25"	2.8 miles SW of Demit Island
	Upper Laguna Madre	110	27°38'25"	97°15'25"	3 miles NE of Pita Island
	Upper Laguna Madre	111	27°34'20"	97°15'36"	2.4 miles W of Bob Hall Pier
	Upper Laguna Madre	112	27°34'05"	97°19'04"	2.8 miles SW of Pita Island
	Upper Laguna Madre	113	27°29'50"	97°20'48"	2.5 miles W of South Bird Island
	Cayo del Grullo	114	27°19'42"	97°39'30"	1.6 miles ENE of Kleberg County Kaufer Park
Baffin	115	27°18'20"	97°39'26"	1.3 miles NNE of Riviera Beach	
Laguna Salada	116	27°16'10"	97°41'20"	1.4 miles ESE of Williamson's Boat Dock	
Upper Laguna Madre	117	27°26'27"	97°19'40"	3.8 miles SSW of South Bird Island	
Upper Laguna Madre	118	27°21'45"	97°21'50"	1.2 miles E of ICWW Flasher 89	
Upper Laguna Madre	119	27°19'45"	97°24'22"	Point of Rocks	
Upper Laguna Madre	120	27°10'08"	97°25'52"	0.1 mile E of ICWW Flasher 175	
Baffin	121	27°17'05"	97°37'00"	Kleberg Point	
Baffin	122	27°17'40"	97°29'10"	1.2 miles NE of East Kleberg Point	
Baffin	123	27°15'50"	97°38'27"	2.2 miles SW of Kleberg Point	
Laguna Salada	124	27°16'27"	97°43'00"	0.5 mile WSW of Williamson's Boat Dock	

Table 1. (Cont'd).

Bay system	Bay	Station number	Latitude	Longitude	Station identification
Laguna Madre	Upper Laguna Madre	125	27°40'15"	97°13'30"	2.2 mile NW of Corpus Christi Pass Bridge on Mustang Island
	Upper Laguna Madre	126	27°38'00"	97°15'40"	2.5 miles NE of Pita Island
	Baffin	127	27°18'27"	97°28'00"	4 miles NW of Penascal Point
	Baffin	128	27°14'30"	97°35'00"	3.5 miles SSE of Kleberg Point
	Baffin	129	27°14'20"	97°30'30"	2.5 miles S of East Kleberg Point
	Upper Laguna Madre	130	27°08'30"	97°26'35"	0.1 mile E of ICWW Flasher 187
	Upper Laguna Madre	131	27°22'56"	97°21'04"	1.3 miles ESE of ICWW Flasher 83
	Upper Laguna Madre	132	27°38'20"	97°15'50"	3.7 miles SSW of Demit Island
	Upper Laguna Madre	133	27°37'20"	97°16'20"	1.4 miles NE of Pita Island
	Upper Laguna Madre	134	27°36'30"	97°17'55"	0.6 mile NW of Pita Island
	Upper Laguna Madre	135	27°36'08"	97°17'35"	SW shore of Pita Island
	Upper Laguna Madre	136	27°35'40"	97°17'40"	0.6 miles SW of Pita Island
	Upper Laguna Madre	137	27°34'33"	97°15'55"	2.2 miles SE of Pita Island
	Upper Laguna Madre	138	27°34'55"	97°18'15"	1.5 miles SW of Pita Island
	Upper Laguna Madre	139	27°33'58"	97°16'15"	3.1 miles NNE of North Bird Island
	Upper Laguna Madre	140	27°33'25"	97°16'38"	2.3 miles NNE of North Bird Island
	Upper Laguna Madre	141	27°33'10"	97°19'35"	3 miles NW of North Bird Island
	Upper Laguna Madre	142	27°32'08"	97°17'10"	0.9 mile NNE of North Bird Island
	Upper Laguna Madre	143	27°31'15"	97°17'30"	W shore of North Bird Island
	Upper Laguna Madre	144	27°31'55"	97°20'10"	2.8 miles WNW of North Bird Island
	Upper Laguna Madre	145	27°31'00"	97°20'35"	3.2 miles W of North Bird Island
	Upper Laguna Madre	146	27°29'00"	97°18'25"	0.7 mile S of South Bird Island
	Upper Laguna Madre	147	27°28'10"	97°21'28"	3.3 miles WSW of South Bird Island
	Upper Laguna Madre	149	27°27'57"	97°21'48"	1.6 miles WNW of ICWW Flasher 69
	Upper Laguna Madre	150	27°25'35"	97°20'41"	0.9 mile SSW of ICWW Flasher 69
Upper Laguna Madre	151	27°25'10"	97°19'49"	3 miles S of ICWW Flasher 63	
Upper Laguna Madre	152	27°25'50"	97°22'06"	1.8 miles WSW of ICWW Flasher 69	
Upper Laguna Madre	153	27°23'48"	97°20'27"	1.5 miles SE of ICWW Flasher 75	
Upper Laguna Madre	154	27°23'32"	97°21'45"	0.8 mile NE of ICWW Flasher 83	
Upper Laguna Madre	155	27°20'31"	97°24'00"	0.7 mile WNW of ICWW Flasher 95	

Table 1. (Cont'd).

Bay system	Bay	Station number	Latitude	Longitude	Station identification
Laguna Madre	Upper Laguna Madre	156	27°18'40"	97°23'51"	0.2 mile SE of ICWW Flasher 103
	Upper Laguna Madre	158	27°14'00"	97°25'40"	0.8 mile SW of Flasher 139
	Upper Laguna Madre	160	27°12'20"	97°25'25"	0.6 mile SSW of ICWW Flasher 151
	Upper Laguna Madre	161	27°11'49"	97°26'08"	0.6 mile NW of ICWW Flasher 163
	Upper Laguna Madre	163	27°10'07"	97°26'30"	0.5 mile WNW of ICWW Flasher 175
	Cayo del Grullo	164	27°18'09"	97°38'00"	2 miles NE of Riviera Beach
	Baffin	165	27°15'07"	97°28'17"	3.5 miles WNW of ICWW Flasher 139
	Cayo del Grullo	166	27°30'35"	97°40'00"	1.7 miles ENE of Loyola Beach
	Alazan	167	27°18'45"	97°29'48"	3.3 miles ENE of Starvation Point
	Alazan	168	27°19'40"	97°30'22"	3.5 miles NE of Starvation Point
	Alazan	169	27°18'20"	97°31'04"	2.2 miles NNW of East Kleberg Point
	Alazan	170	27°20'30"	97°31'52"	3.5 miles NNE of Starvation Point
	Alazan	171	27°19'53"	97°32'43"	2.8 miles N of Starvation Point
	Baffin	172	27°13'43"	97°32'41"	4 miles S of Starvation Point
	Alazan	173	27°17'30"	97°36'03"	0.9 mile NE of Kleberg Point
	Laguna Salada	174	27°16'33"	97°38'57"	1.2 miles SE of Riviera Beach
	Laguna Salada	175	27°16'20"	97°40'00"	1 mile S of Riviera Beach
Laguna Salada	176	27°15'55"	97°42'45"	0.8 mile SSW of Williamson's Boat Dock	

Table 1. (Cont'd).

Bay system	Bay	Station number	Latitude	Longitude	Station identification
Laguna Madre	Laguna Salada	177	27°15'45"	97°43'30"	1.5 miles SW of Williamson's Boat Dock
	Laguna Salada	178	27°16'55"	97°41'18"	1.5 miles WSW of Riviera Beach
	Baffin	179	27°17'20"	97°39'35"	Baffin Bay shore immediately E of Riviera Beach
	Cayo del Grullo	180	27°19'32"	97°41'00"	0.7 mile SE of Loyola Beach
	Cayo del Grullo	181	27°20'37"	97°41'32"	0.8 mile N of Loyola Beach
	Cayo del Grullo	182	27°21'56"	97°40'34"	2.5 miles NNE of Loyola Beach

Table 1. (Cont'd).

Bay system	Bay	Station number	Latitude	Longitude	Station identification
Laguna Madre	Lower Laguna Madre	101	26°42'50"	97°26'30"	Spoil dump 0.5 mile E of ICWW Marker 246
	Lower Laguna Madre	102	26°48'00"	97°28'20"	W of ICWW Marker 223A
	Lower Laguna Madre	103	26°45'15"	97°28'10"	W of ICWW Marker 237
	Lower Laguna Madre	104	26°39'40"	97°27'15"	W of ICWW Marker 259
	Lower Laguna Madre	105	26°36'55"	97°26'50"	W of ICWW Marker 269
	Lower Laguna Madre	106	26°35'50"	97°20'15"	W of ICWW Marker 273A
	Lower Laguna Madre	107	26°33'30"	97°22'25"	S side of spoil dump between Mansfield Channel Markers 34 and 36
	Lower Laguna Madre	108	26°33'20"	97°24'08"	E side of spoil dump S side of Mansfield Channel Marker 24
	Lower Laguna Madre	109	26°31'48"	97°24'20"	W of ICWW Marker 289 W side of dump
	Lower Laguna Madre	110	26°30'50"	97°23'50"	W of ICWW Marker 293 W side of dump
	Lower Laguna Madre	111	26°44'00"	97°28'10"	W of ICWW Marker 241
	Lower Laguna Madre	112	26°42'30"	97°28'00"	W of ICWW Marker 245
	Lower Laguna Madre	113	26°40'40"	97°27'30"	W of ICWW Marker 253
	Lower Laguna Madre	114	26°39'10"	97°27'10"	W of ICWW Marker 261A
	Lower Laguna Madre	115	26°38'15"	97°26'45"	W of ICWW Marker 265
	Lower Laguna Madre	116	26°31'40"	97°25'11"	W of ICWW Marker 289
	Lower Laguna Madre	117	26°30'15"	97°24'20"	W of ICWW Marker 293A
	Lower Laguna Madre	118	26°29'50"	97°23'30"	W side of spoil dump at ICWW Marker 297A
	Lower Laguna Madre	119	26°23'40"	97°19'35"	NW tip of Green Island
	Lower Laguna Madre	120	26°17'35"	97°17'20"	First dump of Three Islands
	Lower Laguna Madre	121	26°17'50"	97°18'00"	Three Islands W of ICWW Marker 31
	Lower Laguna Madre	122	26°23'15"	97°19'20"	SW tip of Green Island
	Lower Laguna Madre	123	26°21'10"	97°19'30"	W side of spoil dump W of ICWW Marker 2
	Lower Laguna Madre	124	26°18'20"	97°17'45"	E of ICWW Marker 29
	Lower Laguna Madre	125	26°18'05"	97°17'35"	E of ICWW Marker 31
	Lower Laguna Madre	126	26°12'10"	97°15'45"	NW of ICWW Marker 79 on E side of spoil dump

Table 1. (Cont'd).

Bay system	Bay	Station number	Latitude	Longitude	Station identification
Laguna Madre	Lower Laguna Madre	127	26°06'40"	97°13'00"	W of ICWW Marker 117
	Lower Laguna Madre	128	26°07'50"	97°17'15"	NW end of Loma de la Grulla
	Lower Laguna Madre	129	26°07'10"	97°17'00"	S end of Loma de la Grulla
	Lower Laguna Madre	130	26°05'35"	97°16'50"	0.5 mile SE of Laguna Vista tower
	Lower Laguna Madre	131	26°04'50"	97°14'30"	1.0 mile E of Laguna Heights pier
	Lower Laguna Madre	132	26°09'20"	97°10'50"	1.5 miles N of Padre Island water tower
	Lower Laguna Madre	133	26°08'50"	97°10'40"	0.25 mile N of Padre Island water tower
	Lower Laguna Madre	134	26°03'45"	97°11'50"	N end of Long Island at Port Isabel
	Lower Laguna Madre	135	26°03'10"	97°11'50"	S end of Long Island at Port Isabel
	South Bay	136	26°01'50"	97°10'20"	E of shipwreck
	Arroyo Colorado	137	26°21'00"	97°26'00"	Near ditch in Old Arroyo channel
	Lower Laguna Madre	138	26°47'10"	97°28'20"	W of ICWW Marker 229
	Lower Laguna Madre	139	26°46'10"	97°28'15"	W of ICWW Marker 234
	Lower Laguna Madre	140	26°41'40"	97°27'50"	W of ICWW Marker 249A
	Lower Laguna Madre	141	26°34'48"	97°25'50"	W of ICWW Marker 277A
Lower Laguna Madre	142	26°32'50"	97°25'05"	W of ICWW Marker 285	
Lower Laguna Madre	143	26°33'50"	97°24'05"	N of Mansfield Channel Marker 26	
Lower Laguna Madre	144	26°24'45"	97°20'30"	E of ICWW Marker 317	
Lower Laguna Madre	145	26°19'20"	97°18'25"	W of ICWW Marker 19	
Lower Laguna Madre	146	26°18'15"	97°18'00"	W of ICWW Marker 29	
Lower Laguna Madre	147	26°17'00"	97°17'05"	Island E of ICWW Marker 39	
Lower Laguna Madre	148	26°13'10"	97°16'05"	W of ICWW Marker 69	
Lower Laguna Madre	149	26°03'45"	97°10'10"	S side of Brownsville Ship Channel between Markers 5 and 9	
South Bay	150	26°01'12"	97°11'13"	SSW of shipwreck at S shore projection	

Table 1. (Cont'd).

Bay system	Bay	Station number	Latitude	Longitude	Station identification
Lower Laguna Madre	Lower Laguna Madre	151	26°24'55"	97°20'10"	Third dump east of ICWW Marker 137
	Lower Laguna Madre	152	26°23'30"	97°20'10"	East of ICWW Marker 321 on east side of land strip
	Lower Laguna Madre	153	26°22'00"	97°19'20"	Dump off mouth of Arroyo Colorado
	Lower Laguna Madre	154	26°20'30"	97°19'10"	Dump west of ICWW Marker 9
	Lower Laguna Madre	155	26°19'50"	97°18'50"	Dump west of ICWW Marker 15
	Lower Laguna Madre	156	26°09'20"	97°17'45"	Moranco Blanco
	Lower Laguna Madre	157	26°11'00"	97°17'50"	Mainland shore west of ICWW Marker 89
	Lower Laguna Madre	158	26°06'50"	97°17'25"	Southeast lip of Laguna Vista Cove
	Lower Laguna Madre	159	26°12'50"	97°11'30"	3.5 mile N of South Padre water tower
	Lower Laguna Madre	160	26°12'15"	97°11'15"	2.5 mile N of South Padre water tower
	Lower Laguna Madre	161	26°21'10"	97°19'50"	North tip of Horse Island
	Lower Laguna Madre	162	26°20'45"	97°19'15"	Dump west of ICWW Marker 7
	Lower Laguna Madre	163	26°20'15"	97°18'58"	Dump west of ICWW Marker 11
	Lower Laguna Madre	164	26°19'28"	97°18'35"	Dump west of ICWW Marker 17
	Lower Laguna Madre	165	26°19'00"	97°18'30"	Dump west of ICWW Marker 21
	Lower Laguna Madre	166	26°18'35"	97°18'15"	Dump west of ICWW Marker 25
	Lower Laguna Madre	167	26°05'20"	97°10'00"	Just S of new causeway
	Lower Laguna Madre	168	26°34'05"	97°25'40"	End of N dirt road Port Mansfield
	Lower Laguna Madre	169	26°46'50"	97°27'45"	Dump E of ICWW Marker 229A

Appendix D. Bag seine station locations.

Table 1. Bag seine station locations in each bay system, October 1978-September 1979.

Bay system	Bay	Station number	Latitude	Longitude	Station identification
Galveston	Galveston	201	29°30'20"	94°57'05"	0.2 mile E of Houston Lighting and Power Company's P. H. Robinson Generating Station's discharge canal
	Dickinson	202	29°28'40"	94°55'40"	0.4 mile N of April Fool Point
	Dickinson	203	28°28'00"	94°57'30"	0.9 mile NE of bridge over Dickinson Bayou, Hiway 146
	Dickinson	204	29°27'40"	94°56'30"	0.3 mile W of Marker 21 in Dickinson Bay Channel
	Moses Lake	205	29°26'05"	94°56'05"	1.2 mile SW of tide gate on entrance of Moses Lake
	Moses Lake	206	29°25'40"	94°57'05"	NE side of mouth of Moses Bayou
	Moses Lake	207	29°25'20"	94°56'20"	S shore of Moses Lake, 0.8 mile E of mouth
	West	208	29°16'05"	94°59'10"	0.1 mile NE of Greens Cut
	Galveston	209	29°26'30"	95°54'10"	0.9 mile E of tide gate of entrance of Moses Lake
	Galveston	210	29°24'10"	94°53'10"	1.0 mile N of Texas City Dike
	Galveston	211	29°22'30"	94°52'45"	Snake Island
	Galveston	212	29°20'40"	94°53'40"	0.7 mile N of Campbell Bayou
	Galveston	213	29°20'00"	94°53'50"	0.2 mile S of Campbell Bayou
	Jones Lake	214	29°18'45"	94°55'45"	1.2 mile W of ramp of E end of Jones Lake
	Trinity	215	29°37'10"	94°42'40"	0.5 mile N of Lone Oak Bayou
	West	216	29°16'35"	94°58'30"	0.6 mile SW of ICWW Marker 6
	Greens Lake	217	29°15'45"	94°59'55"	SW shore of Greens Lake
	Greens Lake	218	29°16'35"	94°59'30"	N shore of Greens Lake
	West	219	29°14'15"	95°00'55"	0.2 mile SW of Carancahua Cut
	Carancahua Lake	220	29°14'20"	95°01'35"	S shore of Carancahua Lake
	West	221	29°13'10"	95°01'45"	1.4 mile SW of mouth of Carancahua Cut
	Halls Lake	222	29°10'45"	95°06'20"	0.2 mile S of The Narrows, SW shore of Halls Lake

Table 1. (Cont'd).

Bay system	Bay	Station number	Latitude	Longitude	Station identification
Galveston	Halls Lake	223	29°11'15"	95°05'45"	E shore of Halls Lake
	Chocolate	224	29°11'10"	95°06'30"	0.3 mile NW of The Narrows
	Chocolate	225	29°11'50"	95°07'15"	0.1 mile E of Amerada Cut
	Chocolate	226	29°11'40"	95°07'40"	0.6 mile NE of Nymph Point
	Chocolate	227	29°11'25"	95°08'15"	N edge Nymph Point
	Chocolate	228	29°12'25"	95°10'25"	0.2 mile N of Grassy Point
	Chocolate	229	29°11'30"	95°11'00"	1.4 mile W of Horse Grove Point
	Chocolate	230	29°11'15"	95°09'25"	0.5 mile S of Horse Grove Point
	Chocolate	231	29°10'30"	95°09'05"	0.5 mile S of Wharton Camp Bayou
	Chocolate	232	29°09'30"	95°09'15"	0.6 mile NW ICWW Marker 10
	West	233	29°08'15"	95°09'35"	0.4 mile S of ICWW Marker 11
	West	234	29°06'30"	95°09'40"	0.3 mile NW Guyton Cut
	Oyster Lake	235	29°07'45"	95°10'20"	N shore of Oyster Lake
	Oyster Lake	236	29°07'05"	95°10'50"	SW shore of Oyster Lake, 0.2 mile NW of mouth
	Bastrop	237	29°06'40"	95°11'05"	0.1 mile E of Oyster Lake Bayou
	Bastrop	238	29°06'30"	95°10'15"	0.8 mile NW of Guyton Cut
	Lost Lake	239	29°04'55"	95°12'40"	S shore of Lost Lake
	Bastrop Bay	240	29°05'55"	95°11'55"	0.4 mile NE of dredged channel that connects W side of Bastrop Bay with ICWW
	Bastrop Bay	241	29°04'40"	95°11'10"	0.8 mile W of Christmas Point
	Christmas	242	29°04'25"	95°11'15"	0.9 mile SW of Christmas Point
	Christmas	243	29°03'40"	95°12'10"	1.9 mile SW of Christmas Point
	Christmas	244	29°02'50"	95°13'15"	1.3 mile NW of Rattlesnake Point
	Christmas	245	29°01'55"	95°11'45"	0.1 mile NE of Cedar Cut
	Christmas	246	29°02'20"	95°10'55"	1.0 mile NE of Cedar Cut
	Christmas	247	29°03'20"	95°09'40"	0.2 mile S of Churchill Bayou
West	248	29°09'45"	95°01'50"	NE shore of Snake Island Cove	
West	249	29°10'20"	95°01'20"	0.2 mile NE of Maggies Point	
West	250	29°10'35"	95°01'10"	McAllis Point	

Table 1. (Cont'd).

Bay system	Bay	Station number	Latitude	Longitude	Station identification
Galveston	West	251	29° 11' 00"	95° 00' 40"	S edge of Shell Island Point
	West	252	29° 11' 20"	94° 59' 45"	SE shore of Jumbile Cove
	West	253	29° 12' 30"	94° 58' 35"	NE shore of Carancahua Cove
	West	254	29° 12' 40"	94° 57' 50"	SW shore of Dana Cove
	West	255	29° 13' 05"	94° 57' 40"	Point between Dana Cove and Hoeckers Cove
	West	256	29° 13' 40"	94° 57' 05"	SE edge of Hoeckers Point
	West	257	29° 13' 55"	94° 56' 55"	0.1 mile NE of Tucker Bayou
	West	258	29° 14' 05"	94° 56' 20"	SW shore of Starvation Cove
	West	259	29° 14' 10"	94° 56' 05"	SW edge of Mentzell Bayou
	West	260	29° 14' 45"	94° 55' 40"	0.4 mile SW of Auzston Bayou
	East	261	29° 27' 40"	94° 41' 40"	1.6 mile SW of Elmgrove Point
	East	262	29° 28' 30"	94° 40' 30"	0.3 mile W of Elmgrove Point
	East	263	29° 28' 30"	94° 39' 00"	0.4 mile NW of Bob's Cut
	East	264	29° 29' 30"	94° 35' 50"	S edge of Yates Bayou
	East	265	29° 30' 20"	94° 35' 45"	N edge Big Pasture Bayou
	East	266	29° 31' 30"	94° 34' 40"	0.4 mile SW of canal through Long Point
	East	267	29° 31' 50"	94° 33' 50"	0.5 mile NE of canal through Long Point
	East	268	29° 31' 20"	94° 32' 25"	1.7 mile E of canal through Long Point
	East	269	29° 33' 20"	94° 31' 50"	1.0 mile NW of Frozen Point
	East	270	29° 34' 10"	94° 34' 20"	0.2 mile SW of Robinson Bayou
	East	271	29° 33' 20"	94° 36' 30"	Second windmill W of Robinson Bayou
	East	272	29° 32' 10"	94° 41' 10"	Stephenson Point
	Trinity	273	29° 36' 40"	94° 43' 10"	NW side of spoil island off Lone Oak Bayou
	Trinity	274	29° 40' 30"	94° 42' 00"	NW side of spoil island 0.2 mile S at Black Point
	Trinity	275	29° 39' 40"	94° 42' 00"	0.8 mile N of Double Bayou, on NW side of spoil island

Table 1. (Cont'd).

Bay system	Bay	Station number	Latitude	Longitude	Station identification
Galveston	Trinity	276	29° 46' 00"	94° 48' 35"	1.4 mile NE of Houston Lighting and Power Company's Cedar Bayou Generating Station's discharge canal
	Trinity	277	29° 44' 50"	94° 49' 30"	0.5 mile SW of Houston Lighting and Power Company's Cedar Bayou Generating Station's discharge canal
	Trinity	278	29° 43' 30"	94° 50' 40"	1.0 mile SW of Point Barrow
	Trinity	279	29° 42' 20"	94° 51' 30"	2.4 mile SW of Point Barrow
	Galveston	280	29° 39' 30"	94° 55' 50"	Mesquite Knoll
	Galveston	281	29° 41' 55"	94° 57' 10"	0.3 mile W of Houston Lighting and Power Company's Cedar Bayou Generating Station's intake canal
	Galveston	282	29° 35' 20"	94° 59' 30"	N edge of Surf Oaks
	Galveston	283	29° 34' 55"	95° 00' 00"	0.7 mile SW of Surf Oaks
	East	284	29° 32' 35"	94° 30' 00"	1.3 mile E of Frozen Point
	West	285	29° 12' 15"	94° 57' 25"	NE shore of Oak Bayou, 0.9 mile E of mouth
	Trinity	286	29° 42' 25"	94° 41' 25"	Ash Point
	Christmas	287	29° 02' 50"	95° 10' 05"	0.7 mile S of mouth of Churchill Bayou
	Jones Lake	288	29° 18' 25"	94° 54' 25"	N of boat ramp located at E end Jones Lake
	West	289	29° 13' 20"	94° 56' 00"	NE side of Tucker Bayou, 1.1 mile SE of mouth
	West	290	29° 15' 20"	94° 55' 10"	W end of Anderson Ways Road
	Trinity	291	29° 44' 10"	94° 42' 00"	W shore of spoil island at Round Point
	West	292	29° 06' 30"	95° 06' 10"	1.4 mile NE of E side of San Luis Pass

Table 1. (Cont'd).

Bay system	Bay	Station number	Latitude	Longitude	Station identification
Galveston	Galveston	293	29° 41' 05"	94° 58' 15"	E shore of Atkinson Island, 0.3 mile SE of Barbours Cut
	Trinity	294	29° 40' 20"	94° 52' 10"	Umbrella Point
	West	295	29° 16' 15"	94° 53' 20"	0.6 mile SW of Teichman Point
	Galveston	296	29° 17' 25"	94° 52' 05"	SE end of railroad bridge
	Galveston	297	29° 20' 20"	94° 49' 20"	W side of Pelican Island, 0.3 mile south ICWW Galveston-Freeport cut off
	Galveston	298	29° 21' 05"	94° 49' 35"	N tip of Pelican Island, 0.4 mile NW of ICWW
	Galveston	299	29° 25' 30"	94° 43' 30"	0.8 mile SW of Sievers Cut
	Galveston	300	29° 23' 40"	94° 45' 40"	Baffle Point

Table 1. (Cont'd).

Bay system	Bay	Station number	Latitude	Longitude	Station identification
Matagorda	Matagorda	201	28° 38' 40"	96° 18' 17"	Wells Point
	Turtle	203	28° 40' 35"	96° 17' 52"	Shell Beach
	Turtle	204	28° 41' 08"	96° 17' 00"	Buttermilk Slough
	Turtle	205	28° 41' 40"	96° 15' 45"	Jensen Point
	Turtle	207	28° 40' 20"	96° 16' 55"	Turtle Point
	Matagorda	208	28° 41' 35"	96° 14' 10"	Settergest Marsh
	Tres Palacios	209	28° 44' 47"	96° 11' 10"	Slaughter Flats
	Tres Palacios	210	28° 45' 15"	96° 10' 10"	Tres Palacios River, East
	Tres Palacios	211	28° 44' 10"	96° 10' 51"	Pepper Hill
	Tres Palacios	215	28° 41' 30"	96° 12' 21"	Redfish Lake
	Tres Palacios	216	28° 39' 53"	96° 12' 56"	Coon Island Point
	Coon Island	217	28° 39' 35"	96° 12' 40"	Coon Island Bayou
	Matagorda	220	28° 37' 53"	96° 13' 22"	Pipeline Crossing
	Matagorda	221	28° 37' 00"	96° 12' 45"	Palacios Bayou Flats
	Matagorda	222	28° 35' 25"	96° 13' 50"	Boat Harbor
	Oyster Lake	224	28° 37' 41"	96° 10' 40"	N Corner, Oyster Lake
	Matagorda	226	28° 35' 44"	96° 11' 00"	ICWW, Southwest
	Matagorda	227	28° 35' 53"	96° 10' 16"	ICWW, Northeast
	Matagorda	228	28° 37' 20"	96° 06' 26"	Mad Island
	Matagorda	231	28° 35' 22"	96° 02' 43"	Tide Gauge
	Matagorda	232	28° 33' 07"	96° 07' 15"	Watermelon Mott
	Matagorda	233	28° 31' 17"	96° 11' 25"	Oil Well Cut
	Matagorda	234	28° 29' 05"	96° 15' 00"	Poco Agua
	Matagorda	235	28° 25' 00"	96° 21' 35"	Decro Point
	Matagorda	236	28° 27' 10"	96° 29' 30"	La Salle Bayou
	Powderhorn Lake	237	28° 30' 00"	96° 29' 05"	East Corner Powderhorn Lake
	Powderhorn Lake	238	28° 29' 00"	96° 30' 42"	Powderhorn Ranch Marsh
Powderhorn Lake	239	28° 28' 37"	96° 31' 39"	Powderhorn Lake, West	
Powderhorn Lake	240	28° 30' 10"	96° 31' 00"	Powderhorn N Central Shore	
Lavaca	245	28° 41' 46"	96° 39' 45"	Six Mile Creek	
Lavaca	246	28° 42' 38"	96° 38' 31"	Garcitas Cove	
Lavaca	247	28° 43' 05"	96° 37' 11"	Venado West	

Table 1. (Cont'd).

Bay system	Bay	Station number	Latitude	Longitude	Station identification
Matagorda	Venado Lake	248	28°44'35"	96°36'45"	Venado Lake #2
	Redfish Lake	250	28°47'41"	96°34'27"	Redfish Lake, Northwest
	Redfish Lake	251	28°46'41"	96°33'43"	Redfish Lake, Southeast
	Swan Lake	252	28°44'13"	96°34'24"	Swan Lake, West
	Swan Lake	253	28°45'00"	96°34'09"	Swan Lake, North
	Swan Lake	254	28°43'55"	96°33'41"	Swan Lake, East
	Cox	257	28°38'40"	96°31'53"	C P & L Shoreline
	Cox	258	28°38'24"	96°31'05"	Cox Point
	Cox	260	28°38'34"	96°30'35"	Huisache Cove
	Cox	261	28°38'07"	96°30'00"	Cox Cove, North
	Keller	263	28°36'33"	96°28'55"	Mud Point
	Keller	264	28°37'49"	96°28'00"	Olivia
	Keller	265	28°37'39"	96°27'02"	Smith Ranch House
	Keller	266	28°35'55"	96°26'20"	Smith's Slough
	Keller	267	28°35'10"	96°27'35"	Keller Bay, SW Corner
	Keller	268	28°35'48"	96°28'30"	Smith's Point
	Lavaca	269	28°35'00"	96°29'00"	Humble Oil Dock
	Lavaca	270	28°35'15"	96°29'18"	Sand Point Lavaca
	Matagorda	271	28°35'25"	96°26'20"	Smith's Cedars
	Redfish Lake	272	28°37'43"	96°23'07"	Redfish Lake, N Pocket
	Redfish Lake	273	28°37'15"	96°22'55"	Redfish Lake, E Shore
	Redfish Lake	274	28°37'15"	96°23'55"	Redfish Lake, SW Shore
	Salt Lake	275	28°37'50"	96°23'53"	Salt Lake, E Pocket
	Salt Lake	276	28°37'55"	96°25'00"	Salt Lake, W Pocket
	Carancahua	277	28°38'26"	96°25'00"	Port Alto, South
	Carancahua	278	28°41'33"	96°24'42"	Port Alto, North
	Carancahua	279	28°42'31"	96°25'55"	Wolf Point Flats
	Carancahua	280	28°44'19"	96°26'18"	Carancahua Bay, North
Carancahua	281	28°44'32"	96°25'51"	Carancahua Bay, East	
Carancahua	282	28°43'03"	96°25'48"	Cape Carancahua	
Carancahua	283	28°44'05"	96°25'20"	Crescent V, West	
Carancahua	284	28°43'57"	96°23'40"	Crescent V, East	

Table 1. (Cont'd).

Bay system	Bay	Station number	Latitude	Longitude	Station identification
Matagorda	Carancahua	286	28°39'43"	96°22'16"	Houston Point
	Carancahua	287	28°37'57"	96°21'34"	Schicke Point, Inside
	Matagorda	288	28°37'30"	96°21'34"	Schicke Point, Outside
	Matagorda	289	28°38'20"	96°20'00"	Piper Lake
	Matagorda	290	28°38'30"	96°19'11"	MFRS
	Matagorda	291	28°36'28"	96°59'05"	S E Pocket
	Matagorda	292	28°32'10"	96°09'54"	Trout Bayou
	Matagorda	293	28°30'30"	96°12'35"	Cotton Bayou
	Matagorda	294	28°27'25"	96°18'15"	Tom Cherry
	Matagorda	295	28°28'24"	96°25'24"	Broad Bayou
	Matagorda	296	28°30'32"	96°28'47"	Powderhorn Bayou
	Lavaca	297	28°35'00"	96°35'00"	Alamo Beach
	Matagorda	298	28°34'12"	96°28'49"	Sand Point, South
	Matagorda	299	28°37'00"	96°22'55"	Carancahua Pass, West

Table 1. (Cont'd).

Bay system	Bay	Station number	Latitude	Longitude	Station identification
San Antonio	San Antonio	201	28°23'22"	96°42'35"	Swan Point
	San Antonio	202	28°22'45"	96°41'50"	Mosquito Cove, 1 mile S of Swan Point
	San Antonio	203	28°21'55"	96°42'00"	Mosquito Cove, 1.25 miles N of Mosquito Point
	San Antonio	204	28°19'00"	96°39'15"	W point of Grass Island
	San Antonio	205	28°19'05"	96°37'55"	E point of Grass Island
	Shoalwater	206	28°19'25"	96°38'00"	N point of Grass Island
	San Antonio	207	28°18'15"	96°37'35"	Small island just W of Steamboat Island
	Espiritu Santo	208	28°18'36"	96°37'05"	Middle of E side of Steamboat Island
	Shoalwater	209	28°19'30"	96°36'55"	1 mile from W point of Long Island in Shoalwater Bay
	Espiritu Santo	210	28°19'25"	96°37'35"	1.25 mile from W point of Long Island in Espiritu Santo Bay
	Espiritu Santo	211	28°20'20"	96°35'47"	2.50 miles from W point of Long Island in Espiritu Santo Bay
	Espiritu Santo	212	28°21'10"	96°34'52"	Long Island 0.5 mile W of Lane
	Espiritu Santo	213	28°21'45"	96°33'52"	Long Island 0.5 mile E of Lane
	Espiritu Santo	214	28°22'10"	96°32'55"	Long Island 1.5 miles E of Lane
	Espiritu Santo	215	28°22'47"	96°31'07"	0.5 mile from W point of Dewberry Island
	Espiritu Santo	216	28°23'15"	96°30'10"	1.5 miles from W point of Dewberry Island
	Espiritu Santo	217	28°23'50"	96°29'12"	Dewberry Island 0.5 mile W of Army channel
	Espiritu Santo	218	28°24'13"	96°28'18"	Blackberry Island 0.75 mile E of Army channel
	Espiritu Santo	219	28°24'48"	96°27'12"	Blackberry Island 1.75 miles E of Army channel
	Espiritu Santo	220	28°15'18"	96°26'06"	Blackberry Island at mouth of Barroom Bay

Table 1. (Cont'd).

Bay system	Bay	Station number	Latitude	Longitude	Station identification
San Antonio	Espiritu Santo	221	28°23'49"	96°26'12"	1.25 miles E of Bayoucouc Point
	Espiritu Santo	222	28°23'00"	96°27'09"	Bayoucouc Point
	Espiritu Santo	223	28°22'40"	96°27'20"	N side of Grass Island 0.5 mile from E point
	Espiritu Santo	224	28°22'15"	96°28'10"	N side of Grass Island 0.5 mile from W point
	Espiritu Santo	225	28°21'35"	96°27'25"	W point of Farwell Island
	Espiritu Santo	226	28°21'50"	96°26'53"	E point of Farwell Island
	Espiritu Santo	227	28°21'15"	96°26'25"	0.5 mile S of second oil well off Saluria Bayou
	Espiritu Santo	228	28°21'00"	96°26'22"	Big Pocket
	Espiritu Santo	229	28°20'33"	96°26'33"	Lighthouse Cove W of derelict boat on shore
	Espiritu Santo	230	28°19'51"	96°28'48"	0.25 mile W of Army hole on Vandever Island
	Pringle Lake	231	28°18'51"	96°30'22"	S shore Pringle Lake 2 miles E of Rahal Bayou
	Pringle Lake	232	28°18'22"	96°31'25"	S shore Pringle Lake 1 mile E of Rahal Bayou
	Espiritu Santo	233	28°19'25"	96°31'21"	Pringle Cut in center of Vanderver Island
	Espiritu Santo	234	28°18'07"	96°33'10"	Rahal Bayou
	Espiritu Santo	235	28°18'05"	96°34'30"	South Pass Lake, E cut
	San Antonio	236	28°17'10"	96°35'53"	South Pass Lake, W cut
	San Antonio	237	28°16'50"	96°36'45"	Long Lake mouth on N shore
	San Antonio	238	28°16'35"	96°37'06"	Island N of Corey Cove
	San Antonio	239	28°16'05"	96°37'50"	Corey Cove point
	San Antonio	240	28°15'35"	96°37'50"	Pats Bay mouth on S shore
	San Antonio	241	28°15'12"	96°39'06"	1 mile S Pats Bay between two guts
	San Antonio	242	28°14'25"	96°39'15"	Mouth of Twin Lakes
	San Antonio	243	28°13'54"	96°39'54"	Cedar Point

Table 1. (Cont'd).

Bay system	Bay	Station number	Latitude	Longitude	Station identification
San Antonio	San Antonio	244	28°13'35"	96°40'00"	Mouth of Cedar Lake on S shore
	San Antonio	245	28°13'15"	96°41'00"	1 mile S of Cedar Lake
	San Antonio	246	28°12'30"	96°42'06"	0.5 mile S of Panther Point
	San Antonio	247	28°12'05"	96°41'55"	Panther Point Lake, just inside mouth on S shore
	San Antonio	248	28°11'45"	96°42'55"	1 mile S of Panther Point Lake mouth
	San Antonio	249	28°11'20"	96°45'05"	Mouth of Cottonwood Bayou
	San Antonio	250	28°11'21"	96°47'24"	Ayres Point
	Ayres	251	28°10'30"	96°48'55"	Point S of Ayres Point
	Ayres	252	28°10'05"	96°49'10"	Ayres Dugout
	Ayres	253	28°11'20"	96°50'00"	Rattlesnake Island
	Mustang Lake	254	28°13'50"	96°47'30"	Mouth of Mustang Lake E shore
	San Antonio	255	28°14'43"	96°46'35"	Point of land N of Marker 35
	San Antonio	256	28°15'20"	96°47'15"	Live Oak Point
	San Antonio	257	28°16'27"	96°47'47"	Daggar Point
	San Antonio	258	28°19'17"	96°47'45"	Webb Point
	San Antonio	259	28°20'21"	96°47'33"	0.5 mile S of Hopper Landing
	Hynes	260	28°21'48"	96°47'51"	McDowell Point
	Hynes	261	28°22'22"	96°49'00"	1 mile N of McDowell Point
	Hynes	262	28°25'20"	96°50'51"	Point of land in center head of Hynes Bay
	Hynes	263	28°25'40"	96°49'40"	1 mile S of Townsend Bayou
	Hynes	264	28°25'10"	96°48'45"	Opposite steel gate in marsh
	Hynes	265	28°24'33"	96°47'50"	Swan Lake Bayou N of mouth
	Hynes	266	28°23'54"	96°46'37"	Grassey Point
	San Antonio	267	28°24'25"	96°47'20"	Midway between Grassey Point and Marsh Point
	Guadalupe	268	28°25'25"	96°45'50"	Foster Point
	Hynes	269	28°24'15"	96°51'00"	Opposite tall cylindrical tower
	San Antonio	270	28°14'00"	96°47'50"	Mouth of Mustang Lake W shore
Mission Lake	274	28°27'45"	96°48'10"	0.5 mile W of North Guadalupe River	

Table 1. (Cont'd).

Bay system	Bay	Station number	Latitude	Longitude	Station identification
San Antonio	Mission Lake	275	28°28'15"	96°47'30"	Goff Bayou
	Guadalupe	276	28°27'15"	96°47'25"	South Guadalupe River
	Guadalupe	277	28°27'05"	96°46'40"	E of South Guadalupe River
	Long Lake	278	28°17'00"	96°35'50"	N shore of Long Lake
	Long Lake	279	28°16'35"	96°35'45"	S shore of Long Lake
	Pats	280	28°15'55"	96°37'05"	N shore of Pats Bay

Table 1 . (Cont'd).

Bay system	Bay	Station number	Latitude	Longitude	Station identification
Aransas	Little Aransas	201	28°01'40"	97°02'45"	SE corner of Little Bay
		202	28°03'17"	97°02'00"	0.25 miles S of Fulton Mansion off Fulton Beach Road
	Aransas	203	28°05'21"	97°02'00"	1 mile S of Racquet Club
	Copano	204	28°06'45"	97°01'35"	S end of Copano Causeway
	Copano	205	28°08'35"	97°01'00"	N end of Copano Causeway
	Copano	206	28°04'45"	97°05'25"	0.5 miles E Hannibal Point near tanks
	Copano	207	28°04'13"	97°06'26"	Junction of Salt Lake and Copano Bay
	Copano	208	28°03'35"	97°07'50"	E of Rattlesnake Point
	Copano	209	28°02'19"	97°07'48"	Mouth of Italian Bend, N shore
	Copano	210	28°01'38"	97°08'20"	E end of old bridge ruins
	Port	211	27°59'38"	97°10'02"	Redfish Camp
	Copano	212	28°01'57"	97°08'53"	Hey Camp Bend
	Copano	213	28°04'32"	97°13'28"	Black Point, SW side
	Copano	214	28°03'39"	97°11'05"	Rincon de la Cera
	Copano	215	28°07'57"	97°09'27"	Mouth of Mission Bay, W shore
	Copano	216	28°10'00"	97°05'27"	3.5 miles NE of mouth of Mission Bay
	Copano	217	28°11'18"	97°02'21"	1.5 mile SW of Turtle Pen Point
	Copano	218	28°10'30"	97°01'02"	Holiday Beach
	St. Charles	219	28°07'57"	96°58'28"	Hail Point
	St. Charles	220	28°08'53"	96°58'20"	Just N of Big Tree
	St. Charles	221	28°09'57"	96°56'53"	Egg Point
	Aransas	222	28°07'20"	96°56'45"	Halfway between Blackjack and Dunham points
	Redfish	223	27°56'00"	97°56'00"	Second island NW of Big Bayou in Redfish Bay
Carlos	224	28°07'50"	96°54'15"	NE side of Cape Carlos	
Aransas	225	28°03'12"	96°56'44"	Long Reef	
Mesquite	226	28°07'09"	96°51'08"	1.5 mile W of mouth of Cedar Bayou	
Aransas	227	27°59'52"	96°58'47"	Junction of Allyns Lake and Aransas Bay	

Table 1. (Cont'd).

Bay system	Bay	Station number	Latitude	Longitude	Station identification
Aransas	Aransas	228	28°01'14"	96°58'00"	1.5 mile NE of Allyns Lake
	Aransas	229	27°58'00"	96°58'48"	1.0 mile NE of St. Joseph Island Ranch House
Aransas	Aransas	230	27°56'42"	97°01'28"	N shore in middle of Mud Island
	Aransas	231	27°55'17"	97°01'03"	1.0 mile SW of oil tanks on San Jose Island
Aransas	Aransas	232	27°55'13"	97°04'22"	Corpus Christi Bayou
	Aransas	233	27°53'55"	97°08'08"	At entrance to Conn Brown Harbor
Aransas	Aransas	234	27°55'15"	97°07'22"	ICWW Marker 34
	Aransas	235	27°57'15"	97°04'15"	Oil well channel between Big and Trout bayous
Aransas	Aransas	236	27°59'05"	97°04'00"	Between Turtle Bayou and ICWW Marker 7
Aransas	Aransas	237	28°00'52"	97°03'09"	Hunts Courts
	Aransas	238	28°01'37"	97°02'35"	Rockport Beach, across from the big shell
Copano	Copano	239	28°07'05"	97°02'22"	0.75 miles E of Redfish Point
	Copano	240	28°05'50"	97°03'04"	Third T-head N of Copano Village
Copano	Copano	241	28°09'43"	97°01'08"	Palmetto Point
Copano	Copano	242	28°04'18"	97°12'39"	N end of Egery Island
Copano	Copano	243	28°06'07"	97°12'00"	Bayside
Aransas	Aransas	244	28°59'30"	97°04'10"	Just N of Cove Harbor between ICWW Marker 10 and 12
Redfish	Redfish	245	27°51'07"	97°04'00"	Harbor Island, near Fina loading Dock
Redfish	Redfish	246	27°51'55"	97°04'54"	Most easterly bridge between Aransas Pass and Port Aransas
Redfish	Redfish	247	27°53'25"	97°06'35"	Fin and Feather Bait Stand
Redfish	Redfish	248	27°57'20"	97°05'53"	City by the Sea
Little	Little	249	28°02'45"	97°02'00"	Bridge in Little Bay
Copano	Copano	250	28°05'10"	97°04'15"	1.0 mile SW of Aransas County Airport

Table 1. (Cont'd).

Bay system	Bay	Station number	Latitude	Longitude	Station identification
Aransas	Redfish	251	27°54'10"	97°05'47"	NE tip of Hog Island
	Mesquite	252	28°09'55"	96°52'32"	1.0 mile W of area of junction of Sundown and Mesquite bays
	Aransas	253	28°04'16"	97°02'07"	Sandollar Motel
	St. Charles	254	28°12'05"	96°55'43"	Indian Head Point
	St. Charles	255	28°12'55"	96°57'53"	Mouth of Cavasso Creek
	St. Charles	256	28°14'32"	96°55'34"	McHugh Bayou
	Mesquite	257	28°08'00"	96°48'37"	Bray Cove
	Mesquite	258	28°10'23"	96°51'07"	Roddy Island
	Aransas	259	28°06'40"	96°53'25"	N shore of Spaldings Bight
	Redfish	260	27°58'22"	97°04'50"	Estes Flats

Table 1. (Cont'd).

Bay system	Bay	Station number	Latitude	Longitude	Station identification
Corpus Christi	Corpus Christi	201	27°42'51"	97°19'09"	0.75 mile SE of Oso Fishing Pier
	Corpus Christi	202	27°46'25"	97°23'21"	Holiday Inn on Ocean Drive
	Corpus Christi	203	27°49'50"	97°22'48"	Rincon Point
	Corpus Christi	204	27°51'58"	97°19'37"	2.0 miles NE of Indian Point Pier
	Corpus Christi	205	27°52'48"	97°16'45"	0.75 mile W of jetties in La Quinta Channel
	Corpus Christi	206	27°51'37"	97°14'45"	0.25 mile W of La Quinta Channel Marker 14
	Sunset Lake	207	27°51'38"	97°20'36"	S end of Sunset Lake
	Nueces	208	27°52'28"	97°22'38"	Just W of clay pits
	Nueces	209	27°51'40"	97°28'30"	White Point
	Nueces	210	27°52'12"	97°25'05"	0.5 mile E of westerly power-lines on N shore
	Nueces	211	27°50'14"	97°23'15"	Mouth of Rincon Industrial Park canal
	Nueces	212	27°51'52"	97°20'37"	Ramada Inn Motel
	Nueces	213	27°51'14"	97°21'31"	Gunderland's
	Corpus Christi	214	27°50'06"	97°13'21"	Public boat ramp in Ingleside Cove
	Corpus Christi	215	27°49'14"	97°12'09"	Sun Oil Dock 1 at Port Ingleside
	Corpus Christi	216	27°48'45"	97°11'41"	ICWW Marker 31
	Corpus Christi	217	27°49'47"	97°07'12"	N shore of Point of Mustang near Corpus Christi Channel Marker 13
	Corpus Christi	218	27°50'24"	97°06'06"	Corpus Christi Channel Marker 8
	Redfish	219	27°52'15"	97°08'04"	Middle of E shore of North Ransom Island
	Corpus Christi	220	27°49'53"	97°10'26"	S tip of Dagger Island
	Redfish	221	27°51'28"	97°10'05"	ICWW Marker 51
	Redfish	222	27°53'33"	97°07'32"	0.5 mile SE of Conn Brown Harbor on S shore

Table 1 . (Cont'd).

Bay system	Bay	Station number	Latitude	Longitude	Station identification
Corpus Christi	Redfish	223	27°52'08"	97°05'55"	1.0 mile SE of Fin and Feather Marina
	Redfish	224	27°51'35"	97°04'56"	Most easterly bridge on causeway between Aransas Pass and Port Aransas
	Corpus Christi	225	27°50'21"	97°04'18"	Port Aransas side of ferry landing
	Corpus Christi	226	27°45'05"	97°08'49"	0.25 mile S of sportsmen club cabin
	Corpus Christi	227	27°45'38"	97°10'00"	Middle of Shamrock Island on SE shore
	Corpus Christi	228	27°44'36"	97°09'38"	Long Cove
	Corpus Christi	229	27°43'27"	97°10'05"	Boat Cove
	Corpus Christi	230	27°41'58"	97°10'55"	Water Exchange Channel
	Corpus Christi	231	27°41'18"	97°13'17"	ICWW Marker 3
	Redfish	232	27°52'56"	97°08'41"	Junction of Ransom Drive and ICWW
	Corpus Christi	233	27°48'30"	97°05'44"	Mustang Beach
	Nueces	234	27°51'10"	97°30'00"	Just W of Nueces River Cut on shore
	Nueces	235	27°52'30"	97°30'40"	3.0 miles NW of mouth of Nueces River
	Corpus Christi	236	27°50'35"	97°14'47"	0.25 mile NW of Ingleside on La Quinta Channel spoil
	Corpus Christi	237	27°46'35"	97°07'54"	Mouth of Sinclair Cut
	Corpus Christi	238	27°48'24"	97°23'16"	Corpus Christi Channel Marker 85
	Oso	239	27°40'48"	97°18'27"	Mouth of Oso Bay
	Corpus Christi	240	27°48'56"	97°11'15"	Corpus Christi Channel Marker 31
	Redfish	241	27°51'36"	97°08'39"	S tip of North Ransom Island
	Corpus Christi	242	27°50'05"	97°14'00"	La Quinta Channel Marker 7
Corpus Christi	243	27°49'28"	97°13'10"	McGloin Bluff	

Table 1 . (Cont'd).

Bay system	Bay	Station number	Latitude	Longitude	Station identification
Corpus Christi	Oso	244	27°42'35"	97°18'33"	Mouth of Oso Bay
	Corpus Christi	245	27°44'04"	97°09'39"	Boat Cove
	Corpus Christi	246	27°43'28"	97°20'40"	0.75 mile NW of Oso Fishing Pier
	Redfish	247	27°50'51"	97°07'21"	0.75 mile E of South Ransom Island
	Corpus Christi	248	27°50'46"	97°09'22"	0.25 mile NE of Dagger Island
	Corpus Christi	249	27°49'18"	97°09'43"	Corpus Christi Channel Marker 25
	Corpus Christi	250	27°42'22"	97°17'26"	0.5 mile NW of Naval Air Station bulkheads
	Corpus Christi	251	27°48'34"	97°07'06"	East flats
	Corpus Christi	252	27°46'00"	97°09'53"	N side of Shamrock Island
	Corpus Christi	253	27°45'14"	97°09'29"	Glenn Cove
	Corpus Christi	254	27°45'21"	97°08'21"	SE of Green cabin in Shamrock Cove
	Corpus Christi	255	27°41'42"	97°14'51"	N shore of Demit Island
	Nueces	256	27°52'29"	97°23'38"	E powerlines on N shore
	Corpus Christi	257	27°48'47"	97°12'29"	SE of CCSC Marker 36
	Redfish	258	27°50'12"	97°10'11"	N shore of Dagger Island
	Corpus Christi	259	27°49'40"	97°10'46"	SW of Dagger Island
	Redfish	260	27°51'03"	97°08'08"	SE shore of S Ransom Island
	Redfish	261	27°52'41"	97°08'20"	N of N Ransom Island
	Corpus Christi	262	27°50'08"	97°07'14"	NE of CCSC Marker 14
	Corpus Christi	263	27°49'26"	97°07'55"	Point of Mustang

Table 1. (Cont'd).

Bay system	Bay	Station number	Latitude	Longitude	Station identification
Laguna Madre	Upper Laguna Madre	201	27°40'40"	97°15'03"	1.0 mile SSW of E tip of Demit Island
	Upper Laguna Madre	202	27°19'40"	97°24'25"	Point of Rocks
	Upper Laguna Madre	203	27°14'58"	97°25'32"	0.8 mile NW of ICWW Marker 139
	Baffin	204	27°17'02"	97°36'45"	3.2 miles E of Riviera Beach
	Baffin	205	27°18'11"	97°39'15"	1.3 miles NNW of Riviera Beach
	Laguna Salada	206	27°16'33"	97°38'57"	1.2 miles SE of Riviera Beach
	Upper Laguna Madre	207	27°41'30"	97°15'01"	S shore of Demit Island
	Laguna Salada	208	27°17'00"	97°40'18"	0.7 mile SW of Riviera Beach
	Upper Laguna Madre	209	27°40'50"	97°14'06"	0.8 mile ESE of Demit Island
	Upper Laguna Madre	210	27°40'25"	97°15'20"	1.3 miles SW of Demit Island
	Upper Laguna Madre	211	27°40'20"	97°15'57"	1.7 miles SW of Demit Island
	Upper Laguna Madre	212	27°39'20"	97°13'40"	2.0 miles WNW of Corpus Christi Pass
	Upper Laguna Madre	213	27°38'33"	97°12'55"	1.0 mile WSW of Corpus Christi Pass
	Upper Laguna Madre	214	27°38'28"	97°13'45"	2.0 miles WSW of Corpus Christi Pass
	Upper Laguna Madre	215	27°39'30"	97°16'25"	2.8 miles SW of Demit Island
	Upper Laguna Madre	216	27°38'25"	97°15'25"	3.0 miles NE of Pita Island
	Upper Laguna Madre	217	27°37'47"	97°15'45"	2.3 miles NE of Pita Island
	Upper Laguna Madre	218	27°37'20"	97°16'20"	1.4 miles NE of Pita Island
	Upper Laguna Madre	219	27°36'00"	97°16'00"	0.3 mile ESE of Pita Island
	Upper Laguna Madre	220	27°36'30"	97°17'55"	0.6 mile NW of Pita Island
	Upper Laguna Madre	221	27°35'40"	97°17'40"	0.6 mile SW of Pita Island
	Upper Laguna Madre	222	27°32'08"	97°17'10"	0.9 mile NNE of North Bird Island
	Upper Laguna Madre	223	27°33'10"	97°19'35"	3.0 miles NW of North Bird Island
	Upper Laguna Madre	224	27°27'10"	97°19'55"	2.5 miles SSE of South Bird Island
	Upper Laguna Madre	225	27°22'08"	97°21'30"	8.6 miles SSW of South Bird Island
	Alazan	226	27°20'25"	97°31'52"	3.5 miles NNE of Starvation Point

Table 1 . (Cont'd).

Bay system	Bay	Station number	Latitude	Longitude	Station identification
Laguna Madre	Cayo del Grullo	227	27°19'32"	97°41'00"	0.7 mile SE of Loyola Beach
	Laguna Salada	228	27°16'10"	97°41'20"	1.4 miles ESE of Williamson's Boat Dock
	Laguna Salada	229	27°16'31"	97°42'20"	0.2 mile ESE of Williamson's Boat Dock
	Upper Laguna Madre	230	27°36'08"	97°17'35"	SW shore of Pita Island
	Upper Laguna Madre	231	27°34'20"	97°15'36"	2.4 miles W of Bob Hall Pier
	Upper Laguna Madre	232	27°34'30"	97°15'55"	2.2 miles SE of Pita Island
	Upper Laguna Madre	233	27°35'03"	97°18'15"	1.5 miles SW of Pita Island
	Upper Laguna Madre	234	27°34'02"	97°16'40"	2.3 miles SSE of Pita Island
	Upper Laguna Madre	235	27°35'58"	97°16'15"	3.1 miles NNE of North Bird Island
	Upper Laguna Madre	236	27°34'24"	97°19'10"	2.5 miles SW of Pita Island
	Upper Laguna Madre	237	27°33'25"	97°16'38"	2.3 miles NNE of North Bird Island
	Upper Laguna Madre	238	27°31'55"	97°20'10"	2.8 miles WNW of North Bird Island
	Upper Laguna Madre	239	27°30'30"	97°18'00"	0.8 mile SW of North Bird Island
	Upper Laguna Madre	240	27°31'00"	97°20'35"	3.2 miles W of North Bird Island
	Upper Laguna Madre	241	27°29'50"	97°20'48"	2.5 miles W of South Bird Island
	Upper Laguna Madre	242	27°29'00"	97°18'25"	0.7 mile S of South Bird Island
	Upper Laguna Madre	243	27°28'10"	97°21'28"	3.3 miles WSW of South Bird Island
	Upper Laguna Madre	244	27°26'42"	97°20'40"	3.7 miles SW of South Bird Island
	Upper Laguna Madre	245	27°27'57"	97°21'48"	1.6 miles WNW of ICWW Marker 69
	Upper Laguna Madre	246	27°06'00"	97°19'50"	1.9 miles S of ICWW Marker 63
	Upper Laguna Madre	247	27°25'35"	97°20'41"	0.9 mile SSW of ICWW Marker 69
	Upper Laguna Madre	248	27°25'10"	97°19'49"	3.0 miles S of ICWW Marker 63
	Upper Laguna Madre	249	27°25'50"	97°22'06"	1.8 miles WSW of ICWW Marker 69
	Upper Laguna Madre	250	27°23'48"	97°20'27"	1.5 miles SE of ICWW Marker 75
	Upper Laguna Madre	251	27°23'32"	97°21'45"	0.8 mile NE of ICWW Marker 83
Upper Laguna Madre	252	27°22'56"	97°21'04"	1.3 miles E of ICWW Marker 83	

Table 1. (Cont'd).

Bay system	Bay	Station number	Latitude	Longitude	Station identification
Laguna Madre	Upper Laguna Madre	253	27°22'56"	97°21'04"	1.3 miles E of ICWW Marker 89
	Upper Laguna Madre	254	27°20'31"	97°24'00"	0.7 mile WNW of ICWW Marker 95
	Upper Laguna Madre	255	27°18'40"	97°23'51"	0.2 mile SE of ICWW Marker 103
	Upper Laguna Madre	256	27°12'20"	97°25'25"	0.6 mile S of ICWW Marker 151
	Upper Laguna Madre	257	27°10'39"	97°25'45"	0.7 mile NNE of ICWW Marker 175
	Upper Laguna Madre	258	27°09'56"	97°25'54"	0.1 mile SE of ICWW Marker 175
	Upper Laguna Madre	259	27°08'30"	97°26'35"	0.1 mile E of ICWW Marker 187
	Baffin	260	27°18'27"	97°27'49"	3.7 miles WNW of ICWW Marker 115
	Baffin	261	27°15'07"	97°28'17"	3.5 miles WNW of ICWW Marker 139
	Baffin	262	27°17'37"	97°29'13"	1.8 miles NE of East Kleberg Point
	Baffin	263	27°14'25"	97°30'15"	2.4 miles S of East Kleberg Point
	Alazan	264	27°18'45"	97°29'48"	3.3 miles ENE of Starvation Point
	Alazan	265	27°19'40"	97°30'22"	3.5 miles NE of Starvation Point
	Alazan	266	27°18'20"	97°31'04"	2.2 miles NNE of East Kleberg Point
	Alazan	267	27°19'53"	97°32'43"	2.8 miles N of Starvation Point
	Baffin	268	27°13'43"	97°32'41"	4.0 miles S of Starvation Point
	Alazan	269	27°17'30"	97°36'03"	0.9 miles NE of Kleberg Point
	Baffin	270	27°15'47"	97°38'27"	0.8 mile SSE of Pie de Gallo
	Laguna Salada	271	27°16'20"	97°40'00"	1.0 mile S of Riviera Beach
	Laguna Salada	272	27°15'55"	97°42'45"	0.8 mile SSW of Williamson's Boat Dock
	Laguna Salada	273	27°15'45"	97°43'30"	1.5 miles SW of Williamson's Boat Dock
	Laguna Salada	274	27°16'55"	97°41'18"	1.5 miles WSW of Riviera Beach
	Baffin	275	27°17'20"	97°39'35"	E of Riviera Beach on Baffin Bay shore
	Cayo del Grullo	276	27°20'37"	97°41'32"	0.8 mile N of Loyola Beach
	Cayo del Grullo	277	27°21'56"	97°40'34"	2.5 miles NNE of Loyola Beach
	Cayo del Grullo	278	27°20'35"	97°40'00"	1.7 miles ENE of Loyola Beach
	Cayo del Grullo	279	27°19'43"	97°39'30"	1.5 miles ENE of Kleberg County Kaufer Park
	Cayo del Grullo	280	27°18'09"	97°38'00"	2.0 miles NE of Riviera Beach

Table 1 . (Cont'd).

Bay system	Bay	Station number	Latitude	Longitude	Station identification
Laguna Madre	Lower Laguna Madre	201	26°48'00"	97°28'20"	Shore W of ICWW Marker 223A
	Lower Laguna Madre	202	26°45'15"	97°28'10"	Shore W of ICWW Marker 237
	Lower Laguna Madre	203	26°44'00"	97°28'10"	Shore W of ICWW Marker 241
	Lower Laguna Madre	204	26°42'30"	97°28'00"	Shore W of ICWW Marker 245
	Lower Laguna Madre	205	26°40'40"	97°27'30"	Shore W of ICWW Marker 253
	Lower Laguna Madre	206	26°39'40"	97°27'15"	Shore W of ICWW Marker 259
	Lower Laguna Madre	207	26°39'10"	97°27'10"	Shore W of ICWW Marker 261A
	Lower Laguna Madre	208	26°38'15"	97°26'45"	Shore W of ICWW Marker 265
	Lower Laguna Madre	209	26°36'55"	97°26'50"	Shore W of ICWW Marker 269
	Lower Laguna Madre	210	26°35'50"	97°20'15"	Shore W of ICWW Marker 273A
	Lower Laguna Madre	211	26°33'25"	97°22'45"	N side of Drump at Mansfield Channel Marker 37
	Lower Laguna Madre	212	26°33'30"	97°22'25"	S side of Dump between Mansfield Channel Markers 34 and 36
	Lower Laguna Madre	213	26°31'40"	97°25'11"	Shore W of ICWW Marker 289
	Lower Laguna Madre	214	26°30'15"	97°24'20"	Shore W of ICWW Marker 293A
	Lower Laguna Madre	215	26°31'48"	97°24'20"	W side of Dump at ICWW Marker 289
	Lower Laguna Madre	216	26°30'50"	97°23'50"	W side of Dump at ICWW Marker 293
	Lower Laguna Madre	217	26°29'50"	97°23'30"	W side of Dump by ICWW Marker 297A
	Lower Laguna Madre	218	26°29'25"	97°23'15"	W side of Dump at ICWW Marker 299
	Lower Laguna Madre	219	26°23'40"	97°19'35"	NW tip of Green Island
	Lower Laguna Madre	220	26°22'50"	97°20'05"	E side of Dump at ICWW Marker 220
	Arroyo Colorado	221	26°21'30"	97°20'25"	Mouth of Slough 0.5 mile from mouth of Arroyo Colorado
	Arroyo Colorado	222	26°21'15"	97°21'50"	Mouth of Parker Lake
	Lower Laguna Madre	223	26°17'50"	97°18'00"	Three Islands W of ICWW Marker 31

Table 1. (Cont'd).

Bay system	Bay	Station number	Latitude	Longitude	Station identification
Laguna Madre	Lower Laguna Madre	224	26°17'25"	97°17'30"	W side of Dump E of ICWW Marker 35
	Lower Laguna Madre	225	26°18'05"	97°17'35"	Dump just E of ICWW Marker 31
	Lower Laguna Madre	226	26°18'20"	97°17'45"	Dump just E of ICWW Marker 29
	Lower Laguna Madre	227	26°17'50"	97°17'20"	Joe Breuer's cabin
	Lower Laguna Madre	228	26°07'50"	97°17'15"	NW end of Loma de la Grulla
	Lower Laguna Madre	229	26°07'10"	97°17'00"	S end of Loma de la Grulla
	Lower Laguna Madre	230	26°05'35"	97°16'50"	0.5 mile SE of Laguna Vista water tower
	Lower Laguna Madre	231	26°09'20"	97°10'50"	1.5 miles N of Padre Island water tower at indentation in bar
	Lower Laguna Madre	232	26°08'50"	97°10'40"	0.25 mile N of Padre Island water tower
	Lower Laguna Madre	233	26°03'10"	97°11'50"	S end of Long Island at Port Isabel
	Lower Laguna Madre	234	26°03'20"	97°10'50"	Shore S of Brownsville Ship Channel Marker 16
	South Bay	235	26°01'50"	97°10'20"	E shore of South Bay, E of shipwreck
	Arroyo Colorado	236	26°21'00"	97°26'00"	Near ditch inlet in Old Arroyo channel
	Lower Laguna Madre	237	26°47'10"	97°28'20"	Shore W of ICWW Marker 229
	Lower Laguna Madre	238	26°46'10"	97°28'15"	Shore W of ICWW Marker 234
	Lower Laguna Madre	239	26°41'40"	97°27'50"	Shore W of ICWW Marker 249A
	Lower Laguna Madre	240	26°42'50"	97°26'30"	Dump 0.5 mile E of ICWW Marker 246
	Lower Laguna Madre	241	26°34'48"	97°25'50"	Shore W of ICWW Marker 277A
	Lower Laguna Madre	242	26°32'50"	97°25'05"	Shore W of ICWW Marker 285
	Lower Laguna Madre	243	26°35'50"	97°21'45"	Dump S of Mansfield Channel Marker 32
	Lower Laguna Madre	244	26°33'20"	97°24'08"	E side of dump on S side of Mansfield Channel Marker 24
	Lower Laguna Madre	245	26°33'50"	97°24'05"	Dump N of Mansfield Channel Marker 26

Table 1. (Cont'd).

Bay system	Bay	Station number	Latitude	Longitude	Station identification
Laguna Madre	Lower Laguna Madre	246	26°24'50"	97°20'50"	Dump W of Marker 315A
	Lower Laguna Madre	247	26°22'00"	97°19'20"	Dump off Mouth of Arroyo Colorado
	Lower Laguna Madre	248	26°20'35"	97°19'10"	Dump W of ICWW Marker 9
	Lower Laguna Madre	249	26°19'20"	97°18'25"	Dump W of ICWW Marker 19
	Lower Laguna Madre	250	26°18'15"	97°18'00"	Dump W of ICWW Marker 29
	Lower Laguna Madre	251	26°17'35"	97°17'20"	E side of Three Islands
	Lower Laguna Madre	252	26°17'00"	97°17'05"	E side of Island, E of ICWW Marker 39
	Lower Laguna Madre	253	26°15'45"	97°17'00"	Dump W of ICWW Marker 49
	Lower Laguna Madre	254	26°13'10"	97°16'05"	Dump W of ICWW Marker 69
	Lower Laguna Madre	255	26°12'10"	97°15'45"	Dump just NW of ICWW Marker 79
	Lower Laguna Madre	256	26°06'40"	97°13'00"	Dump W of ICWW Marker 117
	Lower Laguna Madre	257	26°03'45"	97°10'10"	Shore on S side of Brownsville Ship Channel between Markers 5 and 9
	South Bay	258	26°01'12"	97°11'13"	S shore at projection SSW of ship wreck
	Lower Laguna Madre	259	26°03'45"	97°11'50"	N end of Long Island at Port Isabel
	Lower Laguna Madre	260	26°23'30"	97°20'10"	East of ICWW Marker 321 on east side of land strip
	Lower Laguna Madre	261	26°19'50"	97°18'50"	Dump west of ICWW Marker 15
	Lower Laguna Madre	262	26°09'20"	97°17'45"	Moranco Blanco
	Lower Laguna Madre	263	26°11'00"	97°17'50"	Mainland shore west of ICWW Marker 89
	Lower Laguna Madre	264	26°12'15"	97°11'15"	2.5 miles N of South Padre Island water tower
	Lower Laguna Madre	265	26°12'50"	97°11'30"	3.5 miles N of South Padre Island water tower
	Lower Laguna Madre	266	26°28'35"	97°22'45"	Dump west of ICWW Marker 301A
	Lower Laguna Madre	267	26°27'50"	97°22'15"	Dump west of ICWW Marker 305
	Lower Laguna Madre	268	26°27'00"	97°21'50"	Dump west of ICWW Marker 307A
	Lower Laguna Madre	269	26°26'12"	97°21'40"	Dump west of ICWW Marker 311

Table 1. (Cont'd).

Bay system	Bay	Station number	Latitude	Longitude	Station identification
Laguna Madre	Lower Laguna Madre	270	26°22'05"	97°19'50"	Dump west of ICWW Marker 325A
	Lower Laguna Madre	271	26°21'10"	97°19'50"	North tip of Horse Island
	Lower Laguna Madre	272	26°21'12"	97°19'25"	Dump west of ICWW Marker 2
	Lower Laguna Madre	273	26°20'45"	97°19'15"	Dump west of ICWW Marker 7
	Lower Laguna Madre	274	26°20'15"	97°18'58"	Dump west of ICWW Marker 11
	Lower Laguna Madre	275	26°19'28"	97°18'35"	Dump west of ICWW Marker 17
	Lower Laguna Madre	276	26°19'00"	97°18'30"	Dump west of ICWW Marker 21
	Lower Laguna Madre	277	26°18'35"	97°18'15"	Dump west of ICWW Marker 25
	Lower Laguna Madre	278	26°16'48"	97°17'25"	Dump southwest of ICWW Marker 39
	Lower Laguna Madre	279	26°14'50"	97°16'48"	Dump west of ICWW Marker 55
	Lower Laguna Madre	280	26°13'48"	97°16'30"	Dump west of ICWW Marker 63
	Lower Laguna Madre	281	26°04'50"	97°14'30"	1.0 mile E of Laguna Heights pier
	Lower Laguna Madre	282	26°05'20"	97°10'00"	Just S of new causeway
	Lower Laguna Madre	283	26°34'05"	97°25'40"	End of N dirt road Port Mansfield
	Lower Laguna Madre	284	26°48'05"	97°28'00"	Dump W of ICWW Marker 223A
	Lower Laguna Madre	285	26°46'50"	97°27'45"	Dump W of ICWW Marker 229A

Appendix E. Hydrological data summary.

Table 1. Monthly mean^a surface salinity (o/oo) at sampled gill net, trammel net and bag seine stations in each Texas bay system during October 1978-September 1979.

Month and year	Galveston	East Matagorda ^b	Matagorda	San Antonio	Aransas	Corpus Christi	upper Laguna Madre	lower Laguna Madre
Oct. 1978	21.4	18.0	14.4	13.4	10.2	26.0	40.1	21.5
Nov. 1978	22.8	19.5	17.6	17.1	14.5	25.9	36.9	18.6
Dec. 1978	19.6	20.5	18.8	16.1	14.8	28.2	36.4	24.8
Jan. 1979	19.8	13.4	13.8	15.3	12.7	26.6	34.1	31.9
Feb. 1979	11.6	14.0	8.6	10.9	13.3	24.9	32.1	28.7
Mar. 1979	14.6	14.1	15.7	12.4	11.1	27.2	35.0	28.3
April 1979	13.8	12.8	14.7	13.0	10.7	24.0	36.8	28.8
May 1979	7.6	14.0	7.9	11.3	6.5	18.8	35.1	25.7
June 1979	7.5	10.5	7.8	4.4	6.8	19.1	30.6	23.9
July 1979	10.4	10.1	8.9	2.0	10.0	20.6	30.5	30.1
Aug. 1979	8.3	7.2	10.7	8.1	9.7	26.1	33.8	37.4
Sept. 1979	9.4	7.9	5.8	11.9	5.6	21.0	28.1	22.7

^a Data collected at both the time of gill net set and retrieval are included.

^b Only gill net stations were sampled.

Table 2. Monthly mean^a surface water temperature (C) at sampled gill net, trammel net and bag seine stations in each Texas bay system during October 1978-September 1979.

Month and year	Galveston	East Matagorda ^b	Matagorda	San Antonio	Aransas	Corpus Christi	upper Laguna Madre	lower Laguna Madre
Oct. 1978	23.9	23.2	25.0	25.1	25.0	24.9	26.0	25.4
Nov. 1978	19.7	18.9	17.6	18.4	17.3	17.8	19.3	18.2
Dec. 1978	14.4	11.5	12.1	14.8	16.0	15.5	15.2	14.7
Jan. 1979	5.7	8.8	7.5	9.4	9.2	10.6	10.4	13.2
Feb. 1979	11.2	13.2	13.0	16.0	13.0	14.0	15.3	14.7
Mar. 1979	18.3	18.8	18.5	19.3	19.8	19.8	19.3	19.1
April 1979	21.5	21.3	21.5	23.4	23.0	23.6	24.2	24.9
May 1979	25.4	25.8	24.8	26.7	26.2	26.7	27.6	27.0
June 1979	29.4	28.4	28.6	29.4	28.3	28.4	29.1	28.5
July	30.3	28.1	29.0	29.9	30.1	29.4	29.7	30.8
Aug. 1979	30.5	29.4	30.2	30.2	30.0	29.6	30.2	29.9
Sept. 1979	26.0	25.8	26.8	27.7	27.6	26.9	27.2	27.6

^a Data collected at both the time of gill net set and retrieval are included.

^b Only gill net stations were sampled.

Table 3. Monthly mean^a surface turbidity^b (JTU) at sampled gill net, trammel net and bag seine stations in each Texas bay system during October 1978-September 1979.

Month and year	Galveston	East Matagorda ^c	Matagorda	San Antonio	Aransas	Corpus Christi	upper Laguna Madre	lower Laguna Madre
Oct. 1978	49	24	52	29	39	38	39	35
Nov. 1978	60	24	48	24	29	40	57	33
Dec. 1978	51	28	31	25	30	50	48	31
Jan. 1979	69	24	65	24	65	35	80	48
Feb. 1979	136	24	56	36	54	25	52	74
Mar. 1979	113	24	88	52	79	39	57	42
April 1979	78	34	69	52	32	63	46	52
May 1979	122	42	69	28	63	79	40	35
June 1979	100	43	56	44	60	39	53	82
July 1979	76	66	49	32	45	67	44	35
Aug. 1979	61	78	64	27	46	40	34	24
Sept. 1979	46	42	74	24	34	55	38	57

^a Data collected at both the time of gill net set and retrieval are included.

^b Any measurement ≤ 25 JTU was assigned a value of 24 JTU.

^c Only gill net stations were sampled.

Table 4. Monthly mean^a surface dissolved oxygen (ppm) at sampled gill net, trammel net and bag seine stations in each Texas bay system during October 1978-September 1979.

Month and year	Galveston	Matagorda ^b	East Matagorda	San Antonio	Aransas	Corpus Christi	upper Laguna Madre	lower Laguna Madre
Oct. 1978	9	10	9	8	8	7	7	7
Nov. 1978	8	12	10	9	9	8	8	8
Dec. 1978	12	12	10	8	9	9	7	8
Jan. 1979	11	11	10	6	11	10	8	9
Feb. 1979	11	10	10	7	12	11	8	10
Mar. 1979	12	8	10	6	9	9	8	10
April 1979	10	7	10	8	9	9	7	8
May 1979	11	6	10	10	10	9	8	10
June 1979	10	8	13	9	8	8	6	8
July 1979	11	8	11	8	9	8	6	8
Aug. 1979	9	9	11	8	8	8	6	6
Sept. 1979	8	9	10	8	8	8	6	7

^a Data collected at both the time of gill net set and retrieval are included.

^b Only gill net stations were sampled.





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