

Coastal Hydrographic and Meteorological Study  
Project No. CH-2-1 (Job No. 8)  
A. R. Martinez

Abstract

Hydrographic and meteorological data collected in the field and taken from publications are presented in this report for calendar year 1971.

Salinity patterns varied along the coast in relation to rainfall distribution but in general increased in most areas from January through July as a result of decreased rainfall and reduced runoff. Heavy rainfall from tropical storm Fern in September brought about flooding of low-lying areas.

Minor fish kills from cold weather were recorded during the first part of the year but in general, temperatures followed normal seasonal trends.

Dissolved oxygen and pH readings remained above critical levels and varied little from previous years. Turbidity readings were generally lower than those recorded in 1970, as a result of reduced runoff and calmer weather.

Habitat modifications included maintenance dredging of existing channels, dredging of new channels and basins, marine construction, discharging of oil field brine, drilling of oil wells, placement of pipelines and mud shell dredging.

Introduction

Hydrographic studies have been conducted in most Texas bays for a number of years. Because of increased emphasis on environmental conditions and the effect these conditions have on coastal fisheries, a separate hydrographic project was initiated. This project monitors rainfall, salinity, water temperature, tide, turbidity, pH, dissolved oxygen, and habitat modifications.

Materials and Methods

Water samples were taken at fixed stations in each bay area (Figures 1-6) on a monthly or semi-monthly basis throughout the period. These water samples were analyzed for salinity, turbidity, temperature, pH, and dissolved oxygen (Tables 1-6).

Salinity was determined using an American Optical Goldberg Refractometer. The refractive index was converted to salinity in parts per thousand. Turbidity was determined in parts per million using a Jackson turbidimeter. Temperature was measured in degrees centigrade. Hydrogen ion determinations were measured with a photovolt pH meter. Dissolved oxygen was determined in parts per million using a Hach kit.

Meteorological information was taken from U. S. Weather Bureau records.

Habitat modifications were determined in each bay area and changes or alterations were recorded.

## Results and Discussions

### Rainfall

Rainfall totals along the coast were 3.8 per cent higher in 1971 than in 1970, despite semi-drought conditions which existed for the first seven months of the year.

Variations in rainfall distribution were evident. Rainfall totals by area were as follows:

	<u>1970</u>	<u>1971</u>	<u>Difference</u>
Galveston Bay	48.19	37.77	-10.42
Matagorda Bay	41.83	38.65	- 3.18
San Antonio Bay	32.23	42.54	+10.31
Aransas Bay	41.45	50.13	+ 8.68
Corpus Christi Bay	39.47	36.88	- 2.59
Upper Laguna Madre	36.54	35.47	- 1.07
Lower Laguna Madre	26.54	34.92	+ 8.38

Exceptionally heavy rainfall from tropical storm Fern was recorded in September. Rainfall totals by area during September were as follows:

Matagorda Bay	11.80
San Antonio Bay	11.44
Aransas Bay	19.24
Corpus Christi Bay	12.17
Upper Laguna Madre	11.64
Lower Laguna Madre	13.14

Flooding from tropical storm Fern occurred along most of the coast and several miles inland.

Several tropical disturbances in the Gulf of Mexico also resulted in additional rainfall along the coast during September.

Moderate amounts of rainfall were recorded in October with totals ranging from 3.49 inches in Galveston Bay to 6.01 inches in Aransas Bay. Most major rivers remained at flood stage through October.

November rainfall totals decreased in most areas and ranged from 0.44 inches in the Corpus Christi Bay area to 3.29 inches in the Lower Laguna Madre area.

Moderate rainfall was again recorded in December and totals ranged from 1.68 inches in the Lower Laguna Madre to 10.64 inches in the San Antonio Bay area (Table 7 and Figure 7).

## Salinity

Salinities were generally higher than in 1970 as a result of decreased rainfall and lack of runoff during the first seven months of the year.

Comparison of monthly salinities were as follows:

	<u>1970</u>	<u>1971</u>	<u>Difference</u>
January	22.30	29.00	+6.70
February	23.70	27.85	+4.15
March	22.60	32.43	+9.83
April	22.88	32.06	+9.18
May	26.63	32.46	+5.83
June	22.60	34.33	+11.73
July	24.75	35.18	+10.43

A fish kill of over 700,000 pounds occurred in a land-locked area of the Laguna Madre known as the Graveyard. Salinities in the Graveyard at the time of the kill were 135.0 ppt.

Moderate rainfall in August reduced salinities slightly with averages ranging from 27.3 ppt in Matagorda Bay to 45.5 ppt in the Upper Laguna Madre.

Heavy rainfall from Hurricane Fern in September reduced salinities sharply with averages ranging from 6.6 in Aransas Bay to 25.8 ppt in the Upper Laguna Madre.

Salinities generally decreased from October through December as a result of continued rainfall and increased runoff and by December ranged from an average of 9.0 in Aransas Bay to 19.0 ppt in the Upper Laguna Madre (Table 8).

## Water Temperature

Water temperatures during the first six months of the year were slightly higher than those recorded in 1970, as a result of a generally less severe winter.

Comparisons of water temperature averages were as follows:

	<u>1970</u>	<u>1971</u>	<u>Difference</u>
January	14.3	18.4	+4.1
February	14.6	15.9	+1.3
March	17.4	19.7	+2.3
April	21.6	22.8	+1.2
May	23.1	24.0	+0.9
June	27.2	28.0	+0.8

A minor fish kill occurred in the Matagorda Bay area during the first week of January when temperatures dropped below freezing for four days.

Low temperatures in February resulted in a small fish kill in the Aransas Bay area with large trout as the main victims. A few small drum and one redfish were also killed.

Water temperatures increased gradually in all areas from March through August and decreased from September through December (Figure 8). The peak was in August with averages ranging from 27.2° C. in Corpus Christi Bay to 30.9° C. in Matagorda Bay. There was a decreasing trend from September through December with averages in December ranging from 15.0° C. in Matagorda Bay to 21.6° C. in the Upper Laguna Madre. Water temperature averages for each bay area are presented in Table 9.

#### Tide

Tides were low throughout winter which is a normal seasonal occurrence. Levels in the Lower Laguna Madre, for example, averaged 0.82 feet in February as recorded by the Harbormaster at Port Mansfield. Tides gradually increased in April and remained high through May. They subsided during June and remained normal through August.

Tropical storm Fern in September generated moderately high tides along most of the Texas coast and five feet above normal was recorded at Aransas Pass on September 11. Water levels gradually returned to normal by October and were noticeably low during November and December. Tide level at Port Mansfield averaged 1.3 feet in December.

Daily tide readings for the Lower Laguna Madre area are shown under supplemental data.

#### Dissolved Oxygen

Dissolved oxygen readings by month and by area are presented in Table 10. Summer averages remained above critical levels but were low during July (5.6 ppm) and August (5.8 ppm). They increased from an average of 5.6 ppm in July to 7.9 ppm by December. There was a direct correlation between increasing dissolved oxygen and decreasing water temperatures (Figure 8).

Diurnal samples were taken in the Upper Laguna Madre in July. Results, expressed in mg/l, were as follows:

	<u>10 a.m.</u>	<u>2 p.m.</u>	<u>6 p.m.</u>	<u>10 p.m.</u>	<u>2 a.m.</u>	<u>6 a.m.</u>	<u>7 a.m.</u>
Surface	6.0	10.0	9.0	5.0	4.0	3.0	4.0
Bottom	6.0	10.0	9.0	5.0	4.0	3.0	4.0

Results of winter samples taken in Corpus Christi Bay in November were as follows:

	<u>8 p.m.</u>	<u>12 p.m.</u>	<u>4 a.m.</u>	<u>8 a.m.</u>	<u>12 a.m.</u>	<u>4 p.m.</u>
Surface	8.1	8.1	8.1	8.1	9.1	9.3
Bottom	6.1	6.1	5.9	5.5	5.3	5.3

Levels in Galveston Bay, Matagorda Bay and in the Lower Laguna Madre remained good (6-10 ppm) during all hours sampled. Low readings (3-4 ppm) in the Upper Laguna Madre could be attributed to abundant vegetation taking up oxygen at night.



### Hydrogen Ion Determinations

Hydrogen ion determination averages, compared to 1970, are presented in Table 11. Values remained above critical levels and ranged from 7.7 in the Upper Laguna Madre in June to 8.7 in the Matagorda Bay area in August. In general, pH varied little from readings recorded in 1970. Figures 9 and 10 show monthly pH readings by area.

### Turbidity

Turbidity readings were generally lower than those recorded in 1970, probably as a result of reduced rainfall and runoff. Turbidities increased steadily from January through March when a peak of 59.8 ppm was reached (compared to 86.6 ppm in 1970). They declined steadily from May through August but heavy rainfall in September and October resulted in high readings.

Turbidities then declined from an average of 53.8 ppm in October to 37.2 ppm in December. Turbidity readings by month and by area are presented in Table 12.

### Commercial Landings

Commercial landings by species and by area are presented in Table 13.

Landings indicate that shrimp and crab production was higher in areas of greater rainfall and lower salinities. Shrimp production ranged from 4,081,046 pounds in Galveston Bay to 159,256 pounds in Corpus Christi Bay. Blue crab production ranged from 550,049 pounds in Galveston Bay to 4,000 pounds in the Lower Laguna Madre. Finfish production ranged from 1,361,572 pounds in the Lower Laguna Madre to 169,078 pounds in Corpus Christi Bay. Finfish totals were 630,906 pounds higher in 1971 than in 1970.

### Habitat Modifications

Lower Laguna Madre - Modifications in this area included maintenance dredging at the following locations:

1. Intracoastal waterway from Port Mansfield to Marker 294;
2. Intracoastal waterway north of Port Isabel;
3. Brazos Santiago Pass and Mansfield Pass;
4. Mouth of Arroyo Colorado;
5. Intracoastal waterway from Arroyo Colorado to Port Mansfield.

Upper Laguna Madre - Modifications in this area included trenching of a 30-inch water line across shallow flats from Flour Bluff to Padre Island. Channel dredging and laying of pipelines connected with mineral development covered approximately 7.2 acres of bay bottom in this shallow lagoon.

Corpus Christi Bay - The expanding economy of the Corpus Christi area brought about numerous habitat modifications including the following:

1. Dredging a 14,000-foot channel in Nueces Bay near Rincon Point;
2. Laying a water line across Oso Bay;
3. Dredging a channel for a 30-inch pipeline near Port Ingleside;
4. Laying a 2,400-foot pipeline near Pelican Island in Corpus Christi Bay;

5. Placement of two oil wells in Redfish Bay, two in Corpus Christi Bay and one in Nueces;
6. Laying a 12,678-foot pipeline in State Tracts 81, 51, 50, and 49 in Corpus Christi Bay;
7. Construction of a 215-foot cofferdam to retain pollutants in an industrial area adjacent to the Corpus Christi Ship Channel.

Four oil field brine discharge permit requests were received and evaluated for the Shamrock Island area in Corpus Christi Bay. Eleven were received and evaluated for the Nueces Bay area. One request was received to discharge 31,000 gallons per day from a platform in the middle of Corpus Christi Bay and one was requested to discharge into Corpus Christi Bay near Packery Channel. All these brine discharges have been in existence for several years but discharge permits were not required until 1971.

Mudshell dredging was limited to one dredge working in Nueces Bay.

Aransas Bay - Installation of a pipeline near Fulton Beach temporarily damaged about one acre of nursery grounds.

San Antonio Bay - No report of habitat modification was submitted from this area although some occurred.

Matagorda Bay - Habitat modifications in this area included the following:

1. Channel dredging at Intracoastal Waterway Mile 424;
2. Laying of pipelines across the San Bernard and Navidad Rivers and across Arenoso Creek;
3. Permits were approved to do oil well work in State Tracts 99, 100, 159, 165, 171, 172, 181, 182, and 192;
4. Permits were approved for a pipeline and a channel in Lavaca Bay.

Galveston Bay - Habitat modifications in this area included the following:

1. Placement of eight oil wells;
2. Laying of five pipelines;
3. Construction of five docking and shipping facilities;
4. Proposed plans were submitted and evaluated for a flood control levee in the Baytown area;
5. Primary objections were offered in an application to dike approximately 23 acres to be used as a waste treatment pond.

#### Comments

Several factors are expected to bring about changes in the environment of the bays, particularly in areas of expanding economy.

Increased effluent discharge from industry, construction of dams on watershed areas and disposition of dredged material from increased channel dredging are major factors capable of changing the ecology of the bays.

A continued study of hydrographic conditions is useful as an aid in evaluating ecological conditions in the coastal bays.

Table 1  
Hydrographic Data by Station  
Galveston Bay System

Sta.	<u>January 1971</u>					<u>February 1971</u>				
	Sal.	W.T.	Turb.	pH	D.O.	Sal.	W.T.	Turb.	pH	D.O.
1	22.9	N.D.	61	N.D.	9.0	27.8	12.0	N.D.	7.9	8.0
2	21.7	N.D.	54	N.D.	N.D.	22.2	16.0	N.D.	7.8	N.D.
3	20.0	N.D.	80	N.D.	8.0	20.5	16.0	N.D.	7.7	7.0
4	24.4	N.D.	80	N.D.	N.D.	18.9	18.0	N.D.	7.4	N.D.
5	18.9	N.D.	92	N.D.	9.0	24.4	16.0	N.D.	7.8	8.0
6	23.3	N.D.	97	N.D.	N.D.	22.2	16.5	N.D.	7.6	N.D.
7	23.3	N.D.	117	N.D.	N.D.	22.2	16.0	N.D.	7.7	N.D.
8	24.4	N.D.	68	N.D.	N.D.	28.9	17.0	N.D.	8.0	N.D.
9	25.5	N.D.	44	N.D.	N.D.	29.4	17.5	N.D.	8.0	N.D.
10	28.9	N.D.	86	N.D.	9.0	30.0	16.0	N.D.	8.1	9.0
11	26.6	N.D.	47	N.D.	N.D.	29.4	17.0	N.D.	8.1	N.D.
12	24.4	N.D.	49	N.D.	8.0	28.3	17.5	N.D.	8.1	9.0
13	23.9	N.D.	51	N.D.	N.D.	27.8	17.0	N.D.	8.0	N.D.
14	22.7	25.0	95	8.3	N.D.	25.0	18.0	49	8.0	10.0
15	23.3	25.0	81	8.5	N.D.	25.5	17.0	77	7.9	N.D.
16	21.1	25.0	90	8.2	N.D.	21.1	17.5	26	7.7	N.D.
17	20.0	25.0	90	8.6	N.D.	20.5	19.0	140	7.7	7.0
18	21.1	25.0	97	8.3	N.D.	18.3	18.0	59	8.0	N.D.
19	17.7	25.0	68	8.5	N.D.	17.7	18.5	N.D.	8.1	10.0
20	21.7	25.0	90	8.6	N.D.	16.7	19.0	36	7.8	N.D.
21	17.7	25.0	86	8.6	N.D.	18.3	19.0	44	7.8	9.0
22	18.3	25.0	140	8.6	N.D.	18.8	18.0	49	8.2	N.D.
23	18.9	25.0	134	8.4	N.D.	19.4	18.0	61	8.2	N.D.
24	18.9	25.0	258	8.6	N.D.	20.5	18.0	54	8.1	N.D.
25	18.9	25.0	123	8.3	N.D.	22.2	18.0	59	8.2	10.0
26	N.D.	25.0	N.D.	N.D.	N.D.	22.2	17.0	86	8.1	N.D.
27	21.1	25.0	88	8.4	N.D.	24.4	18.0	131	7.9	8.0
28	24.4	25.0	64	8.3	N.D.	27.8	18.0	44	8.0	N.D.
29	23.3	25.0	71	8.3	N.D.	26.6	18.0	32	7.9	N.D.
30	22.2	25.0	75	8.3	N.D.	25.5	18.0	42	7.9	N.D.
31	22.8	24.0	77	8.5	N.D.	23.3	19.0	30	8.0	9.0
32	22.2	18.5	59	8.6	N.D.	23.9	18.5	26	8.1	N.D.
33	21.1	18.0	101	8.5	N.D.	23.3	18.0	32	8.2	11.0
34	22.8	18.0	61	N.D.	8.5	23.9	18.0	N.D.	7.7	8.2
35	27.8	16.0	22	N.D.	8.0	30.0	16.0	N.D.	8.1	8.0
36	26.6	16.0	47	N.D.	8.0	30.0	16.0	N.D.	8.1	8.0
37	25.5	16.0	26	N.D.	7.0	31.1	16.0	N.D.	8.1	7.0
	<u>March 1971</u>					<u>April 1971</u>				
	Sal.	W.T.	Turb.	pH	D.O.	Sal.	W.T.	Turb.	pH	D.O.
1	25.0	17.5	123	7.9	7.0	24.4	25.0	92	7.9	7.0
2	22.2	17.5	117	7.8	N.D.	23.3	25.0	61	7.7	N.D.
3	21.1	17.0	137	7.8	3.0	23.3	25.0	86	7.9	7.0
4	18.3	17.0	101	7.8	N.D.	17.2	25.0	80	7.6	N.D.

Table 1 continued

<u>March 1971</u>						<u>April 1971</u>				
<u>Sta.</u>	<u>Sal.</u>	<u>W.T.</u>	<u>Turb.</u>	<u>pH</u>	<u>D.O.</u>	<u>Sal.</u>	<u>W.T.</u>	<u>Turb.</u>	<u>pH</u>	<u>D.O.</u>
5	22.2	18.0	114	7.8	6.0	22.2	25.0	65	8.3	7.0
6	25.0	18.5	90	7.8	N.D.	24.4	25.5	92	7.8	N.D.
7	26.1	18.5	88	7.9	N.D.	25.0	25.5	97	7.8	N.D.
8	25.5	19.0	112	7.9	N.D.	25.5	25.5	51	8.1	N.D.
9	25.0	18.0	123	7.9	N.D.	25.0	25.5	81	8.2	N.D.
10	25.0	18.5	68	8.1	8.0	24.4	24.0	47	8.4	9.0
11	26.1	19.0	109	7.9	N.D.	25.0	25.0	49	8.1	N.D.
12	27.8	19.0	80	8.0	8.0	25.5	26.0	36	8.1	6.0
13	26.6	19.5	95	7.8	N.D.	26.1	25.5	51	8.0	N.D.
14	24.4	15.0	81	8.0	5.0	24.4	25.5	32	7.7	6.0
15	24.4	15.0	64	7.9	N.D.	22.2	26.0	49	7.6	N.D.
16	22.2	16.0	104	7.8	N.D.	19.4	26.0	59	8.1	N.D.
17	21.1	16.0	125	7.9	4.0	22.2	26.0	86	8.1	6.0
18	21.1	16.0	114	8.0	N.D.	22.8	25.5	90	7.6	N.D.
19	19.4	16.0	90	8.2	6.0	22.8	25.0	109	7.9	6.0
20	16.7	16.0	101	8.2	N.D.	17.2	26.0	49	8.0	N.D.
21	17.7	16.0	81	8.2	5.0	17.7	26.0	77	7.7	6.0
22	19.4	16.0	112	8.2	N.D.	18.3	25.5	77	7.9	N.D.
23	17.2	16.0	65	8.2	N.D.	20.0	25.0	106	8.0	N.D.
24	17.7	16.0	335	8.2	N.D.	20.0	26.0	97	7.9	N.D.
25	21.1	16.0	49	8.3	8.0	22.2	26.0	131	8.1	7.0
26	19.4	16.0	106	8.2	5.0	20.5	26.0	157	7.9	6.0
27	22.8	16.0	75	8.1	N.D.	23.3	25.0	90	7.7	N.D.
28	27.8	15.0	61	7.9	N.D.	23.9	24.0	44	8.3	N.D.
29	27.2	15.0	59	7.9	N.D.	24.4	24.0	30	8.3	N.D.
30	25.0	15.5	95	7.9	3.0	24.4	25.0	51	8.1	6.0
31	23.9	16.0	64	8.0	N.D.	25.0	26.0	32	7.7	N.D.
32	23.3	16.0	59	8.0	N.D.	24.4	25.0	51	7.6	N.D.
33	22.8	15.0	64	8.3	9.0	22.8	26.0	59	7.9	7.0
34	19.4	20.0	137	7.7	8.1	22.2	26.0	42	7.7	7.6
35	30.0	18.0	16	7.3	9.0	24.4	N.D.	30	8.3	8.0
36	29.4	18.0	16	7.3	5.0	25.0	N.D.	44	8.2	7.0
37	27.8	19.0	22	7.2	6.0	27.8	N.D.	42	8.0	8.0
<u>May 1971</u>						<u>June 1971</u>				
1	24.4	24.5	49	8.2	7.0	26.1	26.0	140	7.8	7.0
2	25.0	24.5	47	8.1	N.D.	24.4	28.0	30	7.3	N.D.
3	22.2	24.5	56	8.0	7.0	26.6	28.0	20	7.3	7.0
4	20.5	26.0	56	7.9	N.D.	22.2	28.0	20	7.1	N.D.
5	24.5	24.5	86	8.0	7.0	26.6	28.0	42	7.6	7.0
6	24.4	25.0	59	8.0	N.D.	25.0	28.5	4	7.6	N.D.
7	26.1	25.0	64	8.2	N.D.	25.5	28.5	47	7.5	N.D.
8	28.9	25.	51	8.1	N.D.	26.6	28.5	117	7.7	N.D.
9	30.0	25.0	49	8.2	N.D.	27.2	28.5	77	7.8	N.D.
10	27.8	25.0	54	8.2	7.0	33.9	27.0	26	7.8	6.0
11	27.8	26.0	56	8.2	N.D.	30.5	29.0	39	7.9	N.D.
12	27.8	27.0	68	8.2	7.0	27.8	28.0	39	7.9	4.0
13	27.2	26.0	51	8.2	N.D.	27.2	28.5	20	7.9	N.D.

Table 1 continued

<u>May 1971</u>						<u>June 1971</u>				
<u>Sta.</u>	<u>Sal.</u>	<u>W.T.</u>	<u>Turb.</u>	<u>pH</u>	<u>D.O.</u>	<u>Sal.</u>	<u>W.T.</u>	<u>Turb.</u>	<u>pH</u>	<u>D.O.</u>
14	23.3	24.0	71	7.8	7.0	23.3	28.0	54	7.9	7.0
15	22.3	24.0	N.D.	7.6	N.D.	21.7	28.0	30	7.7	N.D.
16	22.2	25.0	47	7.8	N.D.	20.0	28.0	114	7.7	N.D.
17	23.3	25.0	101	7.9	8.0	20.0	28.0	84	7.5	6.0
18	23.3	25.0	49	8.0	N.D.	22.2	28.0	49	8.0	N.D.
19	21.1	25.0	144	8.0	8.0	22.8	28.0	42	7.8	8.0
20	13.9	25.0	137	8.0	N.D.	21.1	N.D.	42	7.7	N.D.
21	16.7	24.5	65	7.7	7.0	17.8	N.D.	101	7.6	8.0
22	13.3	24.5	280	7.8	N.D.	20.0	N.D.	42	7.8	N.D.
23	19.4	24.0	112	8.0	N.D.	22.2	N.D.	44	7.9	N.D.
24	23.3	24.0	140	7.9	N.D.	22.8	N.D.	47	8.1	N.D.
25	20.5	24.0	95	8.0	8.0	23.3	N.D.	12	8.1	10.0
26	24.0	24.4	360	7.9	7.0	22.8	N.D.	36	7.9	8.0
27	29.4	24.0	81	8.0	N.D.	23.9	N.D.	16	7.9	N.D.
28	27.8	24.0	56	7.7	N.D.	35.0	N.D.	12	8.0	N.D.
29	26.7	24.0	71	7.7	N.D.	31.6	N.D.	61	7.9	N.D.
30	25.5	23.5	101	7.5	7.0	28.3	N.D.	44	7.9	N.D.
31	26.6	24.0	75	7.8	N.D.	28.3	N.D.	49	7.7	7.0
32	23.9	24.0	160	7.5	N.D.	23.9	N.D.	47	7.9	N.D.
33	25.5	24.0	39	7.8	8.0	22.2	28.0	54	7.9	7.0
34	22.8	22.5	109	7.7	7.1	N.D.	N.D.	N.D.	N.D.	N.D.
35	25.5	23.0	101	7.9	7.0	N.D.	N.D.	N.D.	N.D.	N.D.
36	27.8	23.0	68	8.0	3.0	N.D.	N.D.	N.D.	N.D.	N.D.
37	27.8	23.0	68	7.9	2.0	N.D.	N.D.	N.D.	N.D.	N.D.
<u>July 1971</u>						<u>August 1971</u>				
1	26.7	28.0	73	7.9	6.0	26.1	29.3	42	8.0	9.0
2	26.7	29.0	65	7.9	N.D.	23.3	28.9	36	7.8	N.D.
3	26.7	30.0	81	7.9	6.6	22.2	28.9	77	8.0	7.0
4	24.4	29.0	77	7.2	N.D.	14.4	28.6	47	7.5	N.D.
5	27.2	30.0	56	7.7	6.8	27.8	29.9	54	7.8	6.0
6	28.9	30.0	68	7.9	N.D.	26.6	30.2	75	8.1	N.D.
7	28.9	30.0	65	8.0	N.D.	27.8	30.0	56	8.2	N.D.
8	30.0	30.0	88	8.0	N.D.	30.5	30.2	42	8.2	N.D.
9	30.0	31.0	75	8.2	N.D.	33.9	30.0	47	8.2	N.D.
10	34.4	32.0	68	8.1	6.2	36.1	29.9	8	8.3	8.0
11	35.5	31.0	75	8.1	N.D.	35.5	30.6	36	8.3	N.D.
12	31.6	32.0	64	8.2	7.4	29.4	32.0	77	8.3	7.0
13	28.9	31.0	75	8.2	N.D.	27.8	30.0	117	8.3	N.D.
14	26.7	26.0	68	8.4	5.2	26.6	30.0	61	8.1	7.0
15	25.5	26.0	68	8.2	N.D.	25.5	30.0	56	7.9	N.D.
16	23.3	26.0	77	7.9	N.D.	23.3	30.1	54	7.6	N.D.
17	24.4	25.5	114	8.5	5.4	22.2	29.9	68	7.7	3.0
18	24.9	26.0	97	8.5	N.D.	23.3	30.0	68	8.0	N.D.
19	21.1	25.0	88	8.3	6.6	22.2	30.0	65	7.8	5.0
20	18.9	26.0	120	8.2	N.D.	18.9	30.0	59	7.8	N.D.
21	19.4	25.5	114	8.2	5.0	22.8	30.0	59	7.9	6.0

Table 1 continued

July 1971						August 1971				
Sta.	Sal.	W.T.	Turb.	pH	D.O.	Sal.	W.T.	Turb.	pH	D.O.
22	20.0	26.0	101	8.2	N.D.	21.7	30.0	71	7.7	N.D.
23	23.3	26.0	104	8.1	N.D.	22.2	30.0	73	7.7	N.D.
24	25.0	26.0	123	8.2	N.D.	24.4	30.0	75	7.7	N.D.
25	22.2	26.0	109	8.2	5.8	25.0	30.0	64	7.9	5.0
26	27.8	26.0	128	8.0	5.6	26.6	30.0	81	7.7	6.0
27	31.1	26.0	73	8.1	N.D.	26.6	30.0	49	7.7	N.D.
28	35.5	26.5	30	8.2	N.D.	34.4	30.0	44	8.0	N.D.
29	34.4	26.0	64	8.2	N.D.	33.7	30.0	49	8.1	N.D.
30	31.1	27.0	71	8.2	N.D.	28.3	30.0	49	8.0	N.D.
31	28.9	27.0	70	8.2	5.4	26.6	30.0	59	7.9	5.0
32	29.4	27.0	68	8.3	N.D.	26.6	30.0	47	8.0	N.D.
33	23.3	27.0	92	8.4	5.8	23.3	30.0	47	8.4	6.0
34	N.D.	N.D.	N.D.	N.D.	N.D.	N.D. =	N.D.	N.D.	N.D.	N.D.
35	36.6	30.8	36	7.9	4.0	33.3	30.4	12	7.5	8.0
36	36.6	30.6	42	8.0	8.2	35.5	29.3	32	7.3	7.0
37	37.8	30.4	36	8.1	7.6	34.4	29.3	42	7.3	7.0

September 1971						October 1971				
1	22.2	27.0	39	8.1	8.0	21.1	27.5	68	8.4	9.0
2	20.5	27.0	32	7.9	N.D.	19.4	27.0	51	8.4	N.D.
3	20.0	27.0	56	8.1	8.0	19.4	28.0	51	8.4	7.0
4	15.5	27.0	137	7.3	N.D.	16.7	28.0	73	7.6	N.D.
5	21.1	28.0	36	7.6	8.0	21.1	27.5	81	7.8	8.0
6	20.0	28.0	30	7.7	N.D.	20.5	27.5	77	7.9	N.D.
7	21.1	28.0	39	7.8	N.D.	21.1	28.0	47	7.7	N.D.
8	23.3	27.0	39	8.0	N.D.	22.2	28.5	64	8.1	N.D.
9	23.9	27.0	39	8.2	N.D.	23.3	28.0	47	8.3	N.D.
10	26.1	27.0	20	8.3	9.0	24.4	27.0	59	8.1	8.0
11	25.5	27.0	26	8.3	N.D.	24.4	28.0	54	8.3	N.D.
12	23.9	27.0	54	8.3	7.0	23.3	29.0	86	8.3	7.0
13	22.2	27.0	59	8.4	N.D.	22.2	27.0	75	8.3	N.D.
14	22.2	26.0	68	8.2	7.0	19.4	26.0	59	8.0	7.0
15	18.9	26.0	49	7.9	N.D.	18.9	27.0	54	7.8	N.D.
16	17.2	26.0	56	8.0	N.D.	17.8	27.0	49	8.0	N.D.
17	17.7	26.0	75	8.4	9.0	18.9	26.0	56	5.0	N.D.
18	18.9	26.0	75	7.9	N.D.	19.4	26.0	77	8.0	N.D.
19	18.9	26.0	64	8.1	7.0	18.9	26.0	54	8.2	7.0
20	17.7	26.0	71	8.6	N.D.	16.1	27.0	56	8.4	N.D.
21	19.4	26.0	64	8.6	6.0	20.0	26.0	30	8.7	8.0
22	21.1	26.0	59	8.6	N.D.	20.0	26.0	30	8.6	N.D.
23	21.1	26.0	49	8.6	N.D.	20.0	26.0	36	8.6	N.D.
24	22.2	28.0	39	8.5	6.0	21.0	26.0	36	8.7	N.D.
25	21.1	28.0	54	8.3	N.D.	20.0	27.0	32	8.6	N.D.
26	20.0	28.0	71	8.2	5.0	19.4	27.0	54	8.4	8.0
27	23.3	28.0	51	8.1	N.D.	22.2	26.0	54	8.0	N.D.
28	25.5	28.0	20	8.3	N.D.	24.4	27.0	36	8.1	N.D.



Table 1 continued

Sta.	September 1971					October 1971				
	Sal.	W.T.	Turb.	pH	D.O.	Sal.	W.T.	Turb.	pH	D.O.
29	25.5	28.0	26	8.3	N.D.	24.4	27.0	54	8.0	N.D.
30	23.9	28.0	54	8.2	N.D.	22.8	27.0	42	8.1	N.D.
31	22.2	28.0	47	8.2	8.0	22.2	26.0	54	8.0	7.0
32	22.8	28.0	59	8.2	N.D.	20.5	26.0	47	8.1	N.D.
33	18.9	26.0	71	8.2	7.0	20.5	27.0	77	8.1	8.0
34	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
35	26.6	25.0	4	7.1	N.D.	28.9	22.0	20	7.9	6.0
36	26.6	26.0	8	7.2	N.D.	27.8	21.5	20	7.9	5.0
37	26.6	26.0	36	7.2	N.D.	26.6	22.0	30	7.9	5.0

Sta.	November 1971					December 1971				
	Sal.	W.T.	Turb.	pH	D.O.	Sal.	W.T.	Turb.	pH	D.O.
1	22.2	14.0	32	8.1	12.0	17.2	15.5	44	8.4	10.0
2	22.2	14.0	22	8.0	N.D.	16.7	16.0	44	8.2	N.D.
3	21.7	14.0	30	8.0	11.0	15.5	16.0	240	8.3	10.0
4	22.2	14.0	20	7.6	N.D.	11.1	17.0	51	7.3	N.D.
5	27.8	13.0	88	7.6	9.0	15.5	17.0	160	7.6	8.0
6	24.4	14.0	26	7.7	N.D.	18.0	17.0	56	8.9	N.D.
7	23.3	13.5	26	7.7	N.D.	20.0	17.0	44	7.8	N.D.
8	23.3	13.0	22	7.8	N.D.	18.0	17.0	32	8.3	N.D.
9	23.9	13.0	26	8.0	N.D.	18.3	18.0	36	8.3	N.D.
10	25.5	13.0	26	7.9	10.0	18.9	17.0	56	8.4	10.0
11	25.5	14.0	32	7.9	N.D.	18.9	16.5	64	8.5	N.D.
12	25.0	14.0	51	7.9	5.1	16.7	17.5	56	8.3	8.0
13	24.4	13.0	36	7.9	N.D.	18.3	17.0	61	8.5	N.D.
14	22.8	14.0	49	8.0	9.0	18.3	17.0	49	8.3	9.0
15	22.8	14.0	47	8.0	N.D.	14.4	17.0	44	8.0	N.D.
16	20.0	15.0	44	7.7	N.D.	15.0	18.0	49	7.9	N.D.
17	20.5	16.0	56	7.6	5.6	15.5	18.0	88	7.7	6.0
18	20.5	18.0	49	7.9	N.D.	10.0	18.0	61	8.1	N.D.
19	18.9	13.0	36	8.0	8.0	N.D.	18.0	73	8.1	9.0
20	17.2	14.0	39	8.0	N.D.	N.D.	18.0	75	8.0	N.D.
21	6.7	14.0	114	7.9	8.0	6.7	17.5	73	7.9	7.0
22	15.5	13.0	49	8.0	N.D.	8.3	18.0	44	8.3	N.D.
23	20.0	14.0	51	8.1	N.D.	8.9	18.0	43	8.3	N.D.
24	20.5	14.0	51	8.1	9.0	10.5	18.0	59	8.4	9.0
25	18.9	14.0	47	8.1	N.D.	8.9	19.0	56	8.3	N.D.
26	20.5	14.0	84	8.1	7.0	8.9	19.0	77	8.3	11.0
27	22.3	14.0	44	8.0	N.D.	15.5	18.0	61	8.4	N.D.
28	27.2	15.0	64	7.9	N.D.	N.D.	18.0	56	8.4	N.D.
29	26.1	15.0	26	7.9	N.D.	N.D.	18.5	61	8.4	N.D.
30	24.4	15.0	75	7.9	N.D.	N.D.	19.0	51	8.4	N.D.
31	23.9	15.0	64	8.1	8.0	N.D.	18.0	56	8.4	N.D.
32	23.3	15.0	36	8.0	N.D.	N.D.	18.0	51	8.2	N.D.
33	23.3	14.0	75	7.8	8.0	N.D.	18.0	61	8.2	9.0
34	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
35	27.8	16.0	36	7.8	8.0	25.5	19.5	26	7.7	6.0
36	27.8	16.0	26	8.0	9.0	25.5	19.0	22	7.7	5.0
37	27.8	16.0	N.D.	N.D.	10.0	N.D.	N.D.	20	7.5	4.0



Table 2  
Hydrographic Data by Station  
Matagorda Bay System

Station	<u>January 1971</u>					<u>February 1971</u>				
	Sal.	W.T.	Turb.	pH	D.O.	Sal.	W.T.	Turb.	pH	D.O.
Wells Point	23.9	17.0	0	8.4	8.0	24.4	12.0	15	8.4	7.0
XA2	21.1	20.0	0	8.3	6.0	24.9	13.0	10	8.5	8.0
Lavaca 60	23.2	19.0	0	8.3	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Lavaca 60 (bottom)	24.4	17.0	0	8.3	7.0	N.D.	N.D.	N.D.	N.D.	N.D.
Basin 88	24.4	17.0	0	8.3	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Basin 88 (bottom)	25.5	16.5	0	8.3	7.0	N.D.	N.D.	N.D.	N.D.	N.D.
Lavaca 47	24.9	19.8	15	8.2	N.D.	24.9	12.0	5	8.5	N.D.
Lavaca 47 (bottom)	24.9	17.0	110	8.3	7.0	26.6	13.0	60	8.4	8.0
Lavaca 35	25.5	17.0	10	8.3	N.D.	26.6	13.0	5	8.4	N.D.
Lavaca 35 (bottom)	28.3	16.0	5	8.5	5.0	27.8	13.0	15	8.6	7.0
Range D	27.8	17.0	0	8.5	N.D.	28.9	15.0	10	8.6	N.D.
Range D (bottom)	27.8	16.5	0	8.5	6.0	28.9	14.0	15	8.6	7.0
Middle #2	26.7	18.5	0	8.5	8.0	27.8	16.0	10	8.6	8.0
Piling #3	25.5	19.0	0	8.6	8.0	26.6	14.0	5	8.3	9.0
Beacon 40	N.D.	N.D.	N.D.	N.D.	N.D.	24.9	13.0	10	8.5	9.0
Cox's Bay	23.3	20.0	0	8.3	7.0	N.C.	N.D.	N.D.	N.D.	N.D.
Watermelon Mott	23.2	18.0	0	8.4	7.0	24.4	13.0	5	8.5	7.0
Mad Island	23.3	18.0	0	8.3	7.0	23.3	14.0	15	8.3	9.0
Palacios Point	22.8	19.0	0	8.4	9.0	23.9	13.0	10	8.5	9.0
Fence Post	24.4	17.5	0	8.4	7.0	22.8	14.0	30	8.5	7.0
Buoy 68	26.1	17.0	0	8.5	N.D.	27.2	14.0	15	8.5	9.0
Station	<u>March 1971</u>					<u>April 1971</u>				
	Sal.	W.T.	Turb.	pH	D.O.	Sal.	W.T.	Turb.	pH	D.O.
Wells Point	27.8	20.0	15	8.5	6.0	27.8	22.0	10	8.5	7.0
XA2	26.6	21.0	35	8.3	7.0	27.8	23.0	0	N.D.	7.0
Lavaca 60	24.4	21.0	5	8.4	N.D.	26.7	23.0	10	8.3	N.D.
Lavaca 60 (bottom)	27.2	21.0	400	8.4	7.0	27.8	23.0	25	8.4	7.0
Basin 88	26.6	25.0	0	8.3	N.D.	27.8	24.0	0	8.4	N.D.
Basin 88 (bottom)	27.2	20.0	10	8.4	5.0	27.8	24.0	40	8.3	6.0
Lavaca 47	27.8	19.0	20	8.4	N.D.	27.8	23.0	5	8.5	N.D.
Lavaca 47 (bottom)	27.8	20.0	20	8.5	6.0	27.8	22.0	35	8.3	5.0

Table 2 continued

Station	March 1971					April 1971				
	Sal.	W.T.	Turb.	pH	D.O.	Sal.	W.T.	Turb.	pH	D.O.
Lavaca 35	28.9	20.0	15	8.4	N.D.	27.8	23.0	5	8.6	N.D.
Lavaca 35 (bottom)	28.9	20.0	30	8.6	5.0	27.8	23.0	10	8.5	6.0
Range D	27.8	18.5	25	8.5	N.D.	26.6	22.0	0	8.5	N.D.
Range D (bottom)	27.8	19.0	10	8.4	7.0	26.6	22.5	15	8.5	6.0
Middle #2	27.8	19.0	15	8.4	6.0	27.8	22.5	0	8.4	7.0
Piling #3	28.3	19.0	5	8.5	7.0	26.6	22.5	0	8.5	6.0
Beacon 40	27.8	20.0	11	8.4	6.0	N.D.	N.D.	N.D.	N.D.	N.D.
Cox's Bay	26.6	21.0	35	8.3	7.0	28.9	23.5	10	8.3	3.0
Watermelon Mott	28.3	20.0	20	8.5	6.0	27.8	22.5	5	8.5	7.0
Mad Island	27.8	19.5	250	8.5	6.0	26.6	23.0	0	8.4	6.0
Palacios Point	27.8	20.0	145	8.5	6.0	25.5	22.0	50	8.4	7.0
Fence Post	26.6	20.0	60	8.2	6.0	24.4	22.0	10	8.6	9.0
Buoy 68	28.3	19.5	25	8.5	7.0	26.6	22.0	0	8.5	7.0
Station	May 1971					June 1971				
	Sal.	W.T.	Turb.	pH	D.O.	Sal.	W.T.	Turb.	pH	D.O.
Wells Point	25.5	19.0	5	8.3	8.0	24.4	28.0	20	8.2	7.0
XA2	27.8	20.0	10	7.7	7.0	24.4	28.0	25	8.2	7.0
Lavaca 60	26.6	20.0	35	7.9	N.D.	26.6	28.0	20	8.2	7.0
Lavaca 60 (bottom)	27.2	20.0	20	8.2	7.0	27.2	28.0	40	8.2	5.0
Basin 88	26.6	21.0	15	8.1	N.D.	26.1	28.0	20	8.2	7.0
Basin 88 (bottom)	27.8	21.0	15	8.5	7.0	27.2	28.0	25	8.2	4.0
Lavaca 47	27.2	20.5	18	8.1	N.D.	27.2	28.0	20	8.4	7.0
Lavaca 47 (bottom)	27.8	20.5	23	8.0	8.0	29.4	28.0	20	8.4	5.0
Lavaca 35	26.6	21.0	7	8.4	N.D.	29.4	28.0	20	8.4	7.0
Lavaca 35 (bottom)	26.6	21.0	42	8.0	7.0	30.5	28.0	20	8.4	5.0
Range D	25.5	22.0	0	8.3	N.D.	30.5	29.0	15	8.4	7.0
Range D (bottom)	26.6	22.0	0	8.3	7.0	30.5	28.5	20	8.4	5.0
Middle #2	26.6	22.0	4	8.4	8.0	29.4	29.0	15	8.4	7.0
Piling #3	26.6	22.0	18	8.0	7.0	28.3	29.0	10	8.3	8.0
Beacon 40	N.D.	N.D.	N.D.	N.D.	N.D.	29.4	29.0	20	8.3	8.0
Cox's Bay	27.2	20.0	20	8.3	8.0	25.5	28.5	25	8.2	7.0
Watermelon Mott	27.8	21.0	20	8.0	6.0	27.8	29.0	15	8.4	7.0
Mad Island	25.5	21.0	20	7.9	8.0	23.3	29.0	35	8.3	7.0

Table 2 continued

<u>Station</u>	<u>May 1971</u>					<u>June 1971</u>				
	<u>Sal.</u>	<u>W.T.</u>	<u>Turb.</u>	<u>pH</u>	<u>D.O.</u>	<u>Sal.</u>	<u>W.T.</u>	<u>Turb.</u>	<u>pH</u>	<u>D.O.</u>
Fence Post	22.2	21.0	9	7.6	7.0	23.3	29.5	20	8.2	7.0
Buoy 68	25.5	21.0	5	8.3	4.0	30.5	29.0	15	8.3	8.0
	<u>July 1971</u>					<u>August 1971</u>				
	<u>Sal.</u>	<u>W.T.</u>	<u>Turb.</u>	<u>pH</u>	<u>D.O.</u>	<u>Sal.</u>	<u>W.T.</u>	<u>Turb.</u>	<u>pH</u>	<u>D.O.</u>
Wells Point	27.2	N.D.	30	7.9	N.D.	31.1	29.0	10	8.7	5.6
XA2	27.8	28.0	35	8.4	6.0	27.8	30.0	10	8.7	5.4
Lavaca 60	27.8	29.9	34	8.6	N.D.	23.3	30.0	25	8.5	N.D.
Lavaca 60 (bottom)	27.2	28.5	125	8.4	4.0	27.8	31.0	25	8.7	5.8
Basin 88	26.6	28.5	25	8.5	N.D.	24.4	31.0	12	8.6	6.2
Basin 88 (bottom)	27.8	28.0	50	8.5	4.0	27.8	31.0	23	8.7	2.4
Lavaca 47	27.8	29.0	28	8.5	N.D.	25.5	31.0	25	8.7	N.D.
Lavaca 47 (bottom)	31.0	28.5	80	8.4	3.0	27.8	31.0	25	8.6	6.2
Lavaca 35	30.0	29.0	13	8.6	N.D.	28.8	31.0	30	8.7	N.D.
Lavaca 35 (bottom)	32.2	28.0	45	8.6	5.0	29.9	31.0	30	8.8	6.2
Range D	33.3	28.0	20	8.5	N.D.	32.2	31.5	20	8.8	N.D.
Range D (bottom)	33.3	28.0	28	8.6	5.0	32.2	32.0	20	8.8	6.8
Middle #2	28.9	29.0	15	8.5	6.0	29.9	32.0	15	8.7	7.0
Piling #3	27.8	29.0	21	8.6	6.0	29.9	31.5	15	8.7	7.2
Beacon 40	27.8	29.5	44	8.6	7.0	27.8	31.0	25	8.7	7.0
Cox's Bay	27.8	28.0	23	8.5	6.0	22.8	30.0	12	8.7	6.2
Watermelon Mott	27.8	29.0	30	8.6	6.0	28.8	31.0	30	8.8	7.0
Mad Island	28.9	29.0	125	8.5	6.0	24.4	31.0	35	8.7	7.2
Palacios Point	27.8	29.0	90	8.6	7.0	25.5	31.0	25	8.7	6.8
Fence Post	23.3	29.0	30	8.5	5.0	22.2	31.0	40	8.7	8.0
Buoy 68	31.6	29.0	15	8.6	6.0	29.9	31.0	30	8.7	7.6
	<u>September 1971</u>					<u>October 1971</u>				
	<u>Sal.</u>	<u>W.T.</u>	<u>Turb.</u>	<u>pH</u>	<u>D.O.</u>	<u>Sal.</u>	<u>W.T.</u>	<u>Turb.</u>	<u>pH</u>	<u>D.O.</u>
Wells Point	17.8	23.0	3	8.3	8.0	17.8	19.0	20	8.6	7.0
XA2	16.7	24.0	4	8.2	7.0	17.8	19.0	33	8.5	7.0
Lavaca 60	4.4	25.0	28	7.9	N.D.	11.1	19.0	48	8.5	N.D.
Lavaca 60 (bottom)	19.9	26.0	20	8.5	5.0	21.0	20.0	90	8.6	6.0
Basin 88	5.6	25.0	25	8.2	N.D.	5.6	18.0	25	7.1	N.D.

Table 2 continued

Station	<u>September 1971</u>					<u>October 1971</u>				
	<u>Sal.</u>	<u>W.T.</u>	<u>Turb.</u>	<u>pH</u>	<u>D.O.</u>	<u>Sal.</u>	<u>W.T.</u>	<u>Turb.</u>	<u>pH</u>	<u>D.O.</u>
Basin 88 (bottom)	19.9	26.5	0	8.4	4.0	21.0	20.5	75	8.6	5.0
Lavaca 47	5.5	24.0	20	7.8	N.D.	13.3	19.0	25	8.3	N.D.
Lavaca 47 (bottom)	22.2	26.0	63	8.4	6.0	23.3	20.0	50	8.4	6.0
Lavaca 35	8.9	25.0	10	8.4	N.D.	16.7	19.5	0	8.5	N.D.
Lavaca 35 (bottom)	22.2	26.0	30	8.5	6.0	23.3	20.0	75	8.5	6.0
Range D	19.9	26.0	10	8.3	N.D.	22.2	20.0	15	8.6	N.D.
Range D (bottom)	21.1	26.0	3	8.4	7.0	25.5	21.0	15	8.6	6.0
Middle #2	22.2	26.0	15	8.5	8.0	21.1	20.0	15	8.7	6.0
Piling #3	21.1	25.0	4	8.2	9.0	21.1	20.0	15	8.5	6.0
Beacon 40	17.8	26.0	15	7.2	8.0	17.8	21.0	35	8.4	7.0
Cox's Bay	3.3	24.0	2	7.9	9.0	5.6	19.0	38	8.4	7.0
Watermelon Mott	18.9	26.0	5	8.0	8.0	18.9	20.0	10	8.4	6.0
Mad Island	12.2	26.0	45	8.3	7.0	16.7	21.0	110	8.5	7.0
Palacios Point	16.7	27.0	25	7.5	9.0	17.8	21.0	130	8.3	7.0
Fence Post	17.8	26.0	12	7.4	6.0	14.4	21.0	35	8.5	8.0
Buoy 68	14.4	25.0	10	8.5	9.0	18.9	20.0	25	8.4	6.0
Station	<u>November 1971</u>					<u>December 1971</u>				
	<u>Sal.</u>	<u>W.T.</u>	<u>Turb.</u>	<u>pH</u>	<u>D.O.</u>	<u>Sal.</u>	<u>W.T.</u>	<u>Turb.</u>	<u>pH</u>	<u>D.O.</u>
Wells Point	17.8	24.0	20	8.7	7.0	0.0	12.0	30	8.5	9.0
XA2	18.9	24.0	5	8.6	6.0	14.4	12.0	15	8.7	8.0
Lavaca 60	13.3	24.0	5	8.6	7.0	12.2	12.0	10	8.6	N.D.
Lavaca 60 (bottom)	N.D.	N.D.	N.D.	N.D.	N.D.	24.4	14.0	10	8.6	6.0
Basin 88	13.3	23.0	5	8.4	7.0	8.8	13.0	15	8.6	N.D.
Basin 88 (bottom)	N.D.	N.D.	N.D.	N.D.	N.D.	23.2	14.0	55	8.6	4.0
Lavaca 47	19.9	24.0	20	8.1	6.0	17.2	12.5	5	8.6	N.D.
Lavaca 47 (bottom)	N.D.	N.D.	N.D.	N.D.	N.D.	25.5	14.5	25	8.6	6.0
Lavaca 35	23.3	24.0	0	8.7	7.0	8.8	13.0	10	8.6	N.D.
Lavaca 35 (bottom)	N.D.	N.D.	N.D.	N.D.	N.D.	26.6	15.0	60	8.7	4.0
Range D	25.5	24.0	20	8.9	7.0	18.8	13.0	15	8.6	N.D.
Range D (bottom)	N.D.	N.D.	N.D.	N.D.	N.D.	25.5	15.0	60	8.7	6.0
Middle #2	21.1	24.0	15	8.6	7.0	19.9	14.0	25	8.7	9.0
Piling #3	22.2	24.0	5	8.6	7.0	12.2	17.0	0	8.4	5.0
Beacon 40	16.7	24.0	20	8.6	8.0	16.1	16.0	10	8.6	8.0

Table 2 continued

<u>Station</u>	<u>November 1971</u>					<u>December 1971</u>				
	<u>Sal.</u>	<u>W.T.</u>	<u>Turb.</u>	<u>pH</u>	<u>D.O.</u>	<u>Sal.</u>	<u>W.T.</u>	<u>Turb.</u>	<u>pH</u>	<u>D.O.</u>
Cox's Bay	13.3	24.0	5	8.6	8.0	11.1	13.0	10	8.6	7.0
Watermelon Mott	22.2	24.0	5	8.6	7.0	5.6	17.0	0	8.4	9.0
Mad Island	14.4	24.0	68	8.7	8.0	5.6	17.0	25	8.4	8.0
Palacios Point	12.2	24.0	12	8.7	7.0	15.5	17.0	10	8.7	9.0
Fence Post	17.8	24.0	10	8.6	7.0	4.4	19.0	60	8.5	8.0
Buoy 68	27.8	24.0	5	8.4	7.0	6.6	14.0	40	8.7	9.0

Table 3  
Hydrographic Data by Station  
Aransas Bay System

<u>January 1971</u>						<u>February 1971</u>				
<u>Sta.</u>	<u>Sal.</u>	<u>W.T.</u>	<u>Turb.</u>	<u>pH</u>	<u>D.O.</u>	<u>Sal.</u>	<u>W.T.</u>	<u>Turb.</u>	<u>pH</u>	<u>D.O.</u>
1	22.2	18.0	25	7.9	8.0	25.5	12.0	25	8.5	8.0
2	22.2	17.5	25	7.9	8.0	24.4	12.0	25	8.5	7.0
3	25.5	17.0	25	7.8	6.0	23.8	11.0	25	8.5	8.0
4	28.3	17.0	25	7.8	7.0	22.2	11.0	86	8.5	7.0
5	28.8	17.0	25	7.9	6.0	22.7	11.0	59	8.7	8.0
6	24.4	18.0	25	7.9	7.0	21.0	10.0	28	8.7	9.0
7	23.3	17.5	25	8.0	8.0	22.2	9.0	34	8.7	7.0
8	22.2	18.0	52	8.0	8.0	21.6	10.5	95	8.6	7.0
9	23.3	18.0	25	7.9	8.0	18.8	9.0	55	8.5	8.0
10	22.2	18.2	25	7.9	8.0	22.2	11.0	26	8.5	7.0
11	22.2	18.0	25	8.0	7.0	21.0	9.0	38	8.5	7.0
12	22.7	17.5	38	8.1	8.0	21.0	9.5	35	8.7	6.0
13	29.4	17.0	25	8.1	7.0	23.8	9.5	81	8.6	7.0
14	22.2	17.0	25	8.1	7.0	22.2	9.0	62	8.5	8.0
15	22.2	18.0	36	8.3	7.0	22.2	10.2	85	8.7	6.0
16	22.2	18.2	25	8.1	8.0	18.8	11.0	57	8.5	6.0
17	19.9	18.0	25	8.1	8.0	18.3	11.0	70	8.7	8.0
18	18.8	18.0	25	8.2	7.0	17.7	11.0	25	8.6	8.0
19	18.8	19.0	41	8.2	8.0	17.7	10.0	61	8.5	7.0
20	20.2	20.5	195	8.1	8.0	20.5	11.0	25	8.4	8.0
21	17.7	16.0	85	7.8	7.0	18.8	12.0	37	7.9	8.0
22	18.8	18.5	25	8.2	8.0	19.9	11.0	80	8.6	8.0
23	19.9	20.0	25	7.8	7.0	23.3	9.0	25	8.2	7.0
24	22.2	20.0	25	7.9	6.0	21.6	9.0	25	8.8	1.6
25	17.2	20.0	25	8.0	7.0	18.8	9.5	25	8.7	8.0
26	16.6	20.0	25	8.0	8.0	18.3	9.0	25	8.6	8.0
27	15.5	21.0	122	7.9	6.0	17.2	9.0	25	8.6	7.0
28	16.6	20.0	25	7.9	7.0	17.7	10.0	25	8.5	8.0
29	18.3	20.0	25	8.0	7.0	18.8	10.5	25	8.5	10.0
30	23.3	19.5	25	7.9	7.0	22.2	10.0	25	8.4	8.0
31	21.0	20.0	25	8.0	6.0	22.2	9.5	25	8.2	7.0

<u>March 1971</u>						<u>April 1971</u>				
<u>Sta.</u>	<u>Sal.</u>	<u>W.T.</u>	<u>Turb.</u>	<u>pH</u>	<u>D.O.</u>	<u>Sal.</u>	<u>W.T.</u>	<u>Turb.</u>	<u>pH</u>	<u>D.O.</u>
1	26.6	21.0	25	7.6	7.0	28.8	23.0	25	7.6	8.0
2	36.6	21.0	25	7.9	7.0	28.8	25.0	25	8.4	8.0
3	32.1	21.0	25	8.1	5.0	29.4	25.0	25	8.4	8.0
4	34.4	20.0	70	8.4	6.0	31.0	25.0	42	8.5	7.0
5	32.1	20.0	53	8.4	7.0	28.8	25.0	39	8.6	8.0
6	29.9	21.0	28	8.4	5.0	29.4	25.2	25	8.5	8.0
7	29.9	21.0	29	8.4	6.0	27.7	25.0	25	8.4	8.0
8	24.4	21.0	87	8.5	7.0	27.7	25.5	52	8.6	8.0
9	27.7	21.0	44	8.3	7.0	25.5	23.5	50	8.3	7.0
10	26.4	23.0	35	8.6	7.0	28.8	23.0	25	8.3	8.0
11	28.8	21.0	76	8.6	6.0	29.9	25.5	132	8.4	8.0
12	28.8	21.0	73	8.6	7.0	27.7	25.0	145	8.4	8.0

Table 3 continued

<u>March 1971</u>						<u>April 1971</u>				
<u>Sta.</u>	<u>Sal.</u>	<u>W.T.</u>	<u>Turb.</u>	<u>pH</u>	<u>D.O.</u>	<u>Sal.</u>	<u>W.T.</u>	<u>Turb.</u>	<u>pH</u>	<u>D.O.</u>
13	33.3	20.5	45	8.6	6.0	27.7	25.0	50	8.4	8.0
14	27.7	20.5	75	8.7	7.0	27.7	25.2	155	8.6	7.0
15	23.3	21.0	122	8.6	7.0	26.6	25.5	137	8.6	7.0
16	27.7	22.0	31	8.6	6.0	24.4	23.5	35	N.D.	8.0
17	24.9	22.0	60	8.5	8.0	24.4	24.0	25	N.D.	9.0
18	24.4	22.0	60	8.6	7.0	24.4	24.0	25	N.D.	9.0
19	23.3	22.0	101	8.5	7.0	23.3	24.5	58	N.D.	8.0
20	19.4	19.5	127	7.8	8.0	26.6	25.0	29	N.D.	8.0
21	20.5	20.0	35	7.5	8.0	21.0	22.0	25	N.D.	8.0
22	22.2	22.0	52	8.6	7.0	24.4	26.0	25	N.D.	8.0
23	25.5	20.5	390	7.8	6.0	29.9	24.0	195	7.8	6.0
24	24.4	20.0	28	7.8	7.0	26.0	23.5	39	8.2	7.0
25	20.5	20.0	63	7.9	7.0	23.3	25.0	61	8.3	6.0
26	19.9	20.0	36	7.9	6.0	22.2	25.0	42	8.3	6.0
27	20.5	21.0	300	8.0	7.0	22.7	24.5	184	8.2	7.0
28	19.9	21.0	61	7.9	7.0	22.2	25.0	48	8.1	6.0
29	21.6	21.0	72	7.8	7.0	25.5	25.0	46	8.3	6.0
30	23.3	20.0	28	7.8	7.0	27.2	24.0	53	8.2	6.0
31	24.9	20.0	46	7.8	7.0	27.7	24.0	120	8.3	6.0

<u>May 1971</u>						<u>June 1971</u>				
1	31.0	23.5	25	7.8	6.0	32.7	28.0	37	7.9	6.0
2	29.9	24.0	48	7.9	6.0	32.1	28.0	34	8.0	6.0
3	31.0	24.0	50	7.8	6.0	31.6	28.0	33	8.0	6.0
4	31.0	24.0	117	8.0	6.0	34.4	28.0	38.	8.0	6.0
5	30.5	23.0	95	8.0	6.0	34.9	27.0	25	8.0	7.0
6	28.8	24.0	168	8.0	5.0	30.5	28.0	36	8.0	6.0
7	30.5	22.0	170	8.0	7.0	30.5	28.0	25	7.9	6.0
8	29.9	24.0	173	8.0	6.0	29.4	28.5	38	7.9	7.0
9	29.9	24.0	140	8.0	7.0	30.5	28.0	29	7.9	6.0
10	28.8	24.5	50	8.0	7.0	28.8	29.5	32	7.9	7.0
11	8.0	N.D.	N.D.	N.D.	N.D.	29.9	28.0	30	7.9	6.0
12	8.0	N.D.	N.D.	N.D.	N.D.	31.6	28.0	40	8.0	6.0
13	8.1	N.D.	N.D.	N.D.	N.D.	33.8	28.0	34	8.1	6.0
14	8.1	N.D.	N.D.	N.D.	N.D.	34.9	28.0	37	7.9	6.0
15	8.0	N.D.	N.D.	N.D.	N.D.	29.4	28.0	37	7.9	6.0
16	N.D.	N.D.	N.D.	N.D.	N.D.	28.3	29.0	32	7.9	8.0
17	N.D.	N.D.	N.D.	N.D.	N.D.	28.3	29.0	75	7.9	6.0
18	N.D.	N.D.	N.D.	N.D.	N.D.	28.3	30.0	44	8.0	6.0
19	N.D.	N.D.	N.D.	N.D.	N.D.	26.0	30.0	42	8.0	7.0
20	N.D.	N.D.	N.D.	N.D.	N.D.	24.4	29.0	40	8.0	5.0
21	N.D.	N.D.	N.D.	N.D.	N.D.	27.2	29.5	40	7.9	5.0
22	N.D.	N.D.	N.D.	N.D.	N.D.	28.8	29.0	27	8.0	7.0
23	32.7	25.0	25	7.9	7.0	30.5	28.0	43	8.0	5.0
24	28.8	25.5	25	7.8	6.0	29.9	28.5	44	8.0	5.0
25	27.7	26.0	25	7.8	5.0	29.9	29.0	38	8.3	5.0
26	25.5	25.0	25	7.8	6.0	28.8	28.0	43	8.0	5.0



Table 3 continued

<u>May 1971</u>						<u>June 1971</u>				
<u>Sta.</u>	<u>Sal.</u>	<u>W.T.</u>	<u>Turb.</u>	<u>pH</u>	<u>D.O.</u>	<u>Sal.</u>	<u>W.T.</u>	<u>Turb.</u>	<u>pH</u>	<u>D.O.</u>
27	27.2	25.5	128	7.5	4.0	28.3	29.0	200	8.4	5.0
28	26.0	25.5	25	7.8	6.0	28.3	29.0	59	7.9	4.0
29	26.6	25.5	25	7.9	7.0	28.8	29.0	66	7.9	6.0
30	28.8	25.5	25	7.8	6.0	30.5	28.5	65	8.0	4.0
31	29.4	25.0	25	7.8	6.0	29.9	28.0	49	8.0	5.0
<u>July 1971</u>						<u>August 1971</u>				
1	33.3	29.0	25	7.9	6.0	37.7	30.0	25	8.1	5.0
2	34.4	29.0	25	7.9	5.0	37.7	30.0	25	8.0	6.0
3	34.4	28.0	25	7.8	4.0	37.7	30.0	25	8.2	5.0
4	37.7	28.5	25	7.9	5.0	37.7	30.0	25	7.9	6.0
5	34.9	28.0	25	7.9	5.0	37.7	30.0	25	8.0	6.0
6	34.4	28.0	25	7.9	5.0	37.7	29.0	25	8.1	6.0
7	31.6	28.5	25	8.0	6.0	36.6	29.0	25	8.0	4.0
8	32.1	29.0	96	8.0	5.0	36.6	29.0	148	8.0	5.0
9	33.3	29.0	47	7.9	5.0	34.9	30.0	25	8.0	5.0
10	31.0	29.0	25	7.9	6.0	34.4	30.0	25	8.0	6.0
11	32.1	28.5	15	7.8	4.0	36.6	30.0	46	7.8	5.0
12	34.9	28.0	146	7.8	5.0	37.1	30.0	25	8.0	5.0
13	37.1	29.0	49	7.9	5.0	38.3	30.0	47	7.9	6.0
14	36.0	29.0	65	7.8	5.0	38.8	29.2	44	7.8	4.0
15	33.3	29.0	125	7.9	5.0	35.5	30.0	53	7.7	5.0
16	30.5	29.0	25	7.8	4.0	34.4	30.0	25	8.0	6.0
17	30.5	29.0	25	7.9	6.0	31.0	30.0	25	7.7	6.0
18	32.1	29.0	25	7.9	5.0	32.1	30.0	31	7.7	6.0
19	31.0	29.5	25	7.9	6.0	27.2	30.5	25	7.9	6.0
20	29.4	30.5	25	8.3	5.0	24.4	29.0	33	7.8	5.0
21	28.4	30.0	25	7.9	5.0	25.2	30.0	35	7.9	6.0
22	29.9	29.0	25	7.9	7.0	29.9	30.0	25	8.0	6.0
23	28.8	28.0	44	8.0	5.0	34.9	30.5	31	7.1	7.0
24	31.0	28.5	30	8.1	6.0	32.1	30.0	27	7.9	6.0
25	28.8	29.0	25	8.6	5.0	29.9	30.5	29	8.0	6.0
26	28.8	29.0	25	8.3	6.0	26.6	30.0	25	8.0	7.0
27	29.9	29.5	73	8.6	4.0	23.3	30.0	26	8.1	6.0
28	28.8	29.0	59	8.3	5.0	27.7	30.0	25	8.1	7.0
29	29.9	29.5	47	8.3	5.0	30.5	29.0	25	8.0	7.0
30	29.9	28.5	38	7.9	6.0	33.8	29.0	25	7.7	7.0
31	32.1	28.5	49	8.0	4.0	35.5	29.0	25	7.4	7.0
<u>September 1971</u>						<u>October 1971</u>				
1	8.8	23.0	25	7.6	8.0	11.1	N.D.	26	N.D.	N.D.
2	8.8	23.0	26	7.6	7.0	12.2	N.D.	28	N.D.	N.D.
3	9.9	23.0	35	7.6	7.0	14.4	N.D.	25	N.D.	N.D.
4	8.8	22.5	37	7.6	7.0	25.5	N.D.	27	N.D.	N.D.
5	11.1	22.0	64	7.9	8.0	13.8	N.D.	27	N.D.	N.D.

Table 3 continued

<u>September 1971</u>						<u>October 1971</u>				
<u>Sta.</u>	<u>Sal.</u>	<u>W.T.</u>	<u>Turb.</u>	<u>pH</u>	<u>D.O.</u>	<u>Sal.</u>	<u>W.T.</u>	<u>Turb.</u>	<u>pH</u>	<u>D.O.</u>
6	11.1	22.0	29	7.8	8.0	13.3	N.D.	29	N.D.	N.D.
7	8.8	21.0	48	7.9	7.0	12.2	N.D.	31	N.D.	N.D.
8	11.1	22.0	53	7.8	7.0	7.7	N.D.	40	N.D.	N.D.
9	5.5	22.0	137	7.8	7.0	7.7	N.D.	29	N.D.	N.D.
10	8.9	22.5	27	7.8	8.0	8.8	N.D.	26	N.D.	N.D.
11	14.4	21.0	43	7.8	7.0	11.1	22.3	25	7.9	7.0
12	14.4	21.0	78	8.0	8.0	9.9	22.5	33	8.0	7.0
13	15.5	21.0	53	8.0	7.0	13.3	22.2	30	8.0	9.0
14	15.5	21.0	54	7.9	7.0	9.9	22.6	31	7.9	7.0
15	12.2	22.0	57	7.9	8.0	7.2	22.7	28	8.1	8.0
16	2.2	22.0	53	8.1	7.0	4.4	25.5	41	8.0	8.0
17	2.2	22.0	61	7.9	7.0	2.2	24.6	71	8.0	8.0
18	1.6	22.0	50	7.8	7.0	2.2	26.0	55	8.0	8.0
19	1.1	21.0	55	7.7	7.0	3.3	26.3	102	8.1	9.0
20	2.2	21.0	56	7.8	7.0	3.3	25.2	98	8.0	8.0
21	2.2	22.0	50	7.8	7.0	3.4	25.6	34	7.9	7.0
22	3.3	22.0	61	7.8	7.0	4.4	25.8	77	7.9	7.0
23	3.3	27.0	32	7.6	6.0	8.8	25.7	75	7.8	5.0
24	2.7	27.5	53	7.8	7.0	4.4	25.6	51	8.0	6.0
25	1.6	27.0	38	7.8	6.0	2.2	25.5	56	8.1	6.0
26	1.1	27.0	61	7.7	6.0	2.2	24.6	57	7.7	6.0
27	0.5	27.5	71	7.6	6.0	0.0	26.0	157	7.6	5.0
28	1.1	27.5	37	7.6	5.0	1.6	26.3	290	7.6	5.0
29	2.2	27.0	46	7.6	6.0	2.2	25.2	180	7.7	7.0
30	5.5	27.0	32	7.8	7.0	6.6	25.2	33	7.9	6.0
31	11.6	27.0	68	7.8	6.0	9.4	25.6	54	7.9	7.0

<u>November 1971</u>						<u>December 1971</u>				
1	N.D.	N.D.	N.D.	N.D.	N.D.	12.0	20.0	25	7.9	9.0
2	N.D.	N.D.	N.D.	N.D.	N.D.	14.0	20.0	25	8.0	8.0
3	N.D.	N.D.	N.D.	N.D.	N.D.	14.5	19.8	25	8.0	8.0
4	N.D.	N.D.	N.D.	N.D.	N.D.	15.0	20.0	25	7.9	8.0
5	N.D.	N.D.	N.D.	N.D.	N.D.	16.0	19.5	25	8.0	9.0
6	N.D.	N.D.	N.D.	N.D.	N.D.	18.0	20.0	25	8.0	8.0
7	N.D.	N.D.	N.D.	N.D.	N.D.	14.5	20.0	25	7.9	8.0
8	N.D.	N.D.	N.D.	N.D.	N.D.	9.5	21.0	87	8.1	8.0
9	N.D.	N.D.	N.D.	N.D.	N.D.	12.0	22.0	25	7.9	8.0
10	N.D.	N.D.	N.D.	N.D.	N.D.	13.0	20.5	25	7.9	8.0
11	N.D.	N.D.	N.D.	N.D.	N.D.	13.0	21.0	25	7.9	8.0
12	N.D.	N.D.	N.D.	N.D.	N.D.	12.0	21.2	25	8.0	7.0
13	N.D.	N.D.	N.D.	N.D.	N.D.	18.0	21.0	25	7.9	7.0
14	N.D.	N.D.	N.D.	N.D.	N.D.	16.0	21.0	25	8.0	7.0
15	N.D.	N.D.	N.D.	N.D.	N.D.	10.0	21.5	25	8.5	8.0
16	N.D.	N.D.	N.D.	N.D.	N.D.	8.0	20.0	25	8.0	9.0
17	N.D.	N.D.	N.D.	N.D.	N.D.	7.8	20.2	25	8.0	8.0
18	N.D.	N.D.	N.D.	N.D.	N.D.	7.8	21.0	25	8.1	8.0

Table 3 continued

<u>Sta.</u>	<u>November 1971</u>					<u>December 1971</u>				
	<u>Sal.</u>	<u>W.T.</u>	<u>Turb.</u>	<u>pH</u>	<u>D.O.</u>	<u>Sal.</u>	<u>W.T.</u>	<u>Turb.</u>	<u>pH</u>	<u>D.O.</u>
19	N.D.	N.D.	N.D.	N.D.	N.D.	5.5	21.0	69	8.2	9.0
20	N.D.	N.D.	N.D.	N.D.	N.D.	5.0	20.5	36	8.2	9.0
21	N.D.	N.D.	N.D.	N.D.	N.D.	5.5	21.0	32	8.1	9.0
22	N.D.	N.D.	N.D.	N.D.	N.D.	6.0	21.0	22	8.1	9.0
23	8.8	19.0	58	7.6	8.0	7.7	16.4	25	7.9	8.0
24	6.1	18.8	25	7.8	8.0	4.4	16.5	25	8.1	9.0
25	3.8	19.0	31	7.9	7.0	1.1	16.0	31	8.0	8.0
26	3.8	18.9	26	7.9	8.0	0.0	17.0	36	7.9	7.0
27	2.2	19.2	195	7.9	8.0	0.0	17.0	145	7.6	7.0
28	3.8	19.0	87	7.8	8.0	1.1	16.8	27	7.8	8.0
29	5.0	19.0	34	7.8	8.0	1.6	18.0	52	8.1	10.0
30	6.6	19.2	43	7.6	8.0	4.4	16.5	25	8.0	9.0
31	7.7	19.2	40	7.8	8.0	8.8	16.6	25	8.0	9.0

Table 4

## Corpus Christi Bay System

<u>January 1971</u>						
<u>Station</u>	<u>Salinity</u>	<u>W. Temp.</u>	<u>Turb.</u>	<u>pH</u>	<u>Surface D.O.</u>	<u>Bottom D.O.</u>
Nueces #1	31.1	12.0	25	N.D.	N.D.	N.D.
Nueces #2	31.1	12.0	25	7.9	4.0	4.0
E. of Causeway	28.9	18.0	25	8.1	5.0	3.0
Reynolds 4	30.0	18.0	25	N.D.	N.D.	N.D.
Reynolds 5	30.0	18.0	25	N.D.	N.D.	N.D.
Redfish Bay	28.9	18.0	25	N.D.	N.D.	N.D.
E. Flats	30.0	18.0	25	N.D.	N.D.	N.D.
Shamrock	30.6	18.0	25	N.D.	N.D.	N.D.
Bulkheads	30.0	18.0	25	N.D.	N.D.	N.D.
Alta Vista	30.0	19.0	25	8.1	5.0	4.0
Marker 67	31.1	18.0	25	N.D.	N.D.	N.D.
Marker 22	28.9	18.0	25	N.D.	N.D.	N.D.
Marker 1 ICW	31.1	18.0	25	8.1	4.0	3.5
Navy Channel	30.0	18.0	25	8.1	3.0	3.0
Oso Bay	30.0	21.0	25	8.3	5.0	5.0
Nueces #3	31.1	12.0	25	N.D.	N.D.	N.D.
Viola	31.1	16.0	25	8.0	5.0	2.0
Harbor	30.0	18.5	25	8.1	6.0	6.0
Marker 38	30.0	18.0	25	8.0	4.0	5.5
<u>February 1971</u>						
Nueces #1	30.0	14.0	200	N.D.	N.D.	N.D.
Nueces #2	31.1	14.0	130	8.0	5.0	5.0
E. of Causeway	30.0	15.0	60	8.2	7.0	6.0
Reynolds 4	28.9	13.0	25	N.D.	N.D.	N.D.
Reynolds 5	28.9	13.0	25	N.D.	N.D.	N.D.
Redfish Bay	24.4	13.0	25	N.D.	N.D.	N.D.
E. Flats	28.9	13.0	25	N.D.	N.D.	N.D.
Shamrock	30.0	13.0	25	N.D.	N.D.	N.D.
Bulkheads	30.0	12.0	25	N.D.	N.D.	N.D.
Alta Vista	30.0	13.0	25	8.1	4.5	4.5
Marker 67	33.3	13.0	25	N.D.	N.D.	N.D.
Marker 22	28.9	13.0	25	N.D.	N.D.	N.D.
Marker 1 ICW	30.0	11.0	25	8.2	8.0	4.0
Navy Channel	28.9	13.0	25	8.1	4.0	3.0
Oso Bay	30.0	13.0	25	8.1	3.0	4.0
Nueces #3	30.0	14.0	180	N.D.	N.D.	N.D.
Viola	30.0	17.0	25	8.2	3.5	3.0
Harbor	30.0	16.0	25	8.2	6.5	2.5
Marker 38	28.9	17.0	25	8.1	5.5	5.0
<u>March 1971</u>						
Nueces #1	35.6	20.0	175	N.D.	N.D.	N.D.

Table 4 continued

<u>Station</u>	<u>Salinity</u>	<u>March 1971</u>		<u>pH</u>	<u>Surface</u>	<u>Bottom</u>
		<u>W. Temp.</u>	<u>Turb.</u>		<u>D.O.</u>	<u>D.O.</u>
Nueces #2	35.6	19.0	164	8.1	2.5	2.5
E. of Causeway	33.9	19.0	25	8.1	3.4	2.8
Reynolds 4	33.3	20.0	25	N.D.	N.D.	N.D.
Reynolds 5	33.3	20.0	25	N.D.	N.D.	N.D.
Redfish Bay	33.3	19.0	25	N.D.	N.D.	N.D.
E. Flats	33.3	19.0	25	N.D.	N.D.	N.D.
Shamrock	34.4	19.0	25	N.D.	N.D.	N.D.
Bulkheads	34.4	20.0	25	N.D.	N.D.	N.D.
Alta Vista	33.3	17.0	25	8.1	3.0	3.5
Marker 67	33.3	19.0	25	N.D.	N.D.	N.D.
Marker 22	33.3	19.0	25	N.D.	N.D.	N.D.
Marker 1 ICW	34.4	20.0	25	8.2	3.0	3.0
Navy Channel	34.4	19.0	25	8.4	4.0	3.0
Oso Bay	35.0	20.0	25	8.0	3.0	4.0
Nueces #3	35.5	20.0	80	N.D.	N.D.	N.D.
Viola	33.3	18.0	25	8.2	5.0	2.1
Harbor	33.9	18.0	25	8.2	3.3	2.1
Marker 38	33.3	18.0	25	8.2	5.0	4.0

<u>April 1971</u>						
Nueces #1	36.6	16.5	250	N.D.	N.D.	N.D.
Nueces #2	37.8	17.0	390	7.8	3.0	3.0
E. of Causeway	35.5	17.0	140	8.1	4.0	6.0
Reynolds 4	34.4	18.0	25	N.D.	N.D.	N.D.
Reynolds 5	34.4	18.0	25	N.D.	N.D.	N.D.
Redfish Bay	30.5	18.0	25	N.D.	N.D.	N.D.
E. Flats	33.3	18.0	25	N.D.	N.D.	N.D.
Shamrock	33.3	18.0	25	N.D.	N.D.	N.D.
Bulkheads	30.5	17.0	25	N.D.	N.D.	N.D.
Alta Vista	35.5	17.0	25	8.1	3.0	3.0
Marker 67	33.9	18.0	25	N.D.	N.D.	N.D.
Marker 22	34.4	18.0	25	N.D.	N.D.	N.D.
Marker 1 ICW	34.4	18.0	25	8.3	4.5	5.0
Navy Channel	34.4	18.0	25	8.1	7.0	5.0
Oso Bay	33.3	16.0	25	8.0	3.0	2.5
Nueces #3	36.6	16.0	175	N.D.	N.D.	N.D.
Viola	34.4	20.0	25	7.7	4.0	1.5
Harbor	34.4	18.0	25	7.7	5.0	4.0
Marker 38	34.4	18.0	25	8.2	5.0	4.0

<u>May 1971</u>						
Nueces #1	38.9	25.0	235	N.D.	N.D.	N.D.
Nueces #2	37.8	25.0	200	8.1	6.5	6.5
E. of Causeway	35.5	25.0	96	8.1	6.5	5.0
Reynolds 4	33.3	25.0	25	N.D.	N.D.	N.D.
Reynolds 5	33.3	25.0	25	N.D.	N.D.	N.D.

Table 4 continued

<u>Station</u>	<u>Salinity</u>	<u>May 1971</u>		<u>pH</u>	<u>Surface</u>	<u>Bottom</u>
		<u>W. Temp.</u>	<u>Turb.</u>		<u>D.O.</u>	<u>D.O.</u>
Redfish Bay	30.0	25.0	25	N.D.	N.D.	N.D.
E. Flats	33.3	25.0	34	N.D.	N.D.	N.D.
Shamrock	34.4	24.0	25	N.D.	N.D.	N.D.
Bulkheads	36.1	24.0	25	N.D.	N.D.	N.D.
Alta Vista	34.4	24.0	25	8.1	3.0	3.0
Marker 67	33.9	24.5	25	N.D.	N.D.	N.D.
Marker 22	32.2	25.0	25	N.D.	N.D.	N.D.
Marker 1 ICW	36.1	23.0	25	8.3	4.0	4.0
Navy Channel	36.6	24.0	25	8.3	4.0	2.5
Oso Bay	37.8	24.0	25	8.2	4.5	6.0
Nueces #3	37.8	25.0	235	N.D.	N.D.	N.D.
Viola	33.3	26.0	25	7.6	3.0	2.5
Harbor	32.2	25.0	25	8.1	3.0	3.0
Marker 38	34.4	25.0	25	8.2	3.0	4.0

<u>June 1971</u>						
Nueces #1	37.2	27.5	370	N.D.	N.D.	N.D.
Nueces #2	37.2	27.5	270	8.2	6.5	6.5
E. of Causeway	36.1	28.5	160	8.3	6.5	6.0
Reynolds 4	34.1	28.5	25	N.D.	N.D.	N.D.
Reynolds 5	34.1	28.5	25	N.D.	N.D.	N.D.
Redfish Bay	33.3	28.0	25	N.D.	N.D.	N.D.
E. Flats	34.4	28.0	25	N.D.	N.D.	N.D.
Shamrock	40.0	28.0	45	N.D.	N.D.	N.D.
Bulkheads	43.3	28.0	34	N.D.	N.D.	N.D.
Alta Vista	36.6	28.0	25	8.3	6.0	6.0
Marker 67	37.2	27.0	118	N.D.	N.D.	N.D.
Marker 22	32.8	28.0	25	N.D.	N.D.	N.D.
Marker 1 ICW	43.3	28.0	25	8.6	6.5	5.0
Navy Channel	37.8	27.5	25	8.4	7.0	5.0
Oso Bay	37.2	28.0	25	8.4	6.5	6.5
Nueces #3	37.2	27.0	420	N.D.	N.D.	N.D.
Viola	32.2	29.0	25	8.1	7.0	0.0
Harbor	34.4	28.0	25	8.3	5.0	6.0
Marker 38	34.4	28.0	25	8.3	7.0	5.5

<u>July 1971</u>						
Nueces #1	40.5	28.0	150	N.D.	N.D.	N.D.
Nueces #2	40.5	28.0	110	8.0	6.0	6.0
E. of Causeway	38.9	29.5	33	8.4	7.0	5.0
Reynolds 4	38.9	29.0	25	N.D.	N.D.	N.D.
Reynolds 5	38.9	29.0	25	N.D.	N.D.	N.D.
Redfish Bay	38.9	29.0	25	N.D.	N.D.	N.D.
E. Flats	37.2	29.0	25	N.D.	N.D.	N.D.
Shamrock	41.1	29.0	25	N.D.	N.D.	N.D.
Bulkheads	43.3	29.0	28	N.D.	N.D.	N.D.

Table 4 continued

<u>July 1971</u>						
<u>Station</u>	<u>Salinity</u>	<u>W. Temp.</u>	<u>Turb.</u>	<u>pH</u>	<u>Surface D.O.</u>	<u>Bottom D.O.</u>
Alta Vista	37.8	29.0	65	8.3	6.0	6.0
Marker 67	38.9	28.5	45	N.D.	N.D.	N.D.
Marker 22	37.2	27.0	25	N.D.	N.D.	N.D.
Marker 1 ICW	43.3	28.5	25	8.5	5.5	5.0
Navy Channel	39.4	29.0	30	8.3	6.0	6.0
Oso Bay	38.3	29.0	25	8.4	6.0	6.0
Nueces #3	40.0	28.0	180	N.D.	N.D.	N.D.
Viola	35.5	30.0	25	8.1	2.1	0.0
Harbor	36.6	30.0	25	8.3	7.5	4.0
Marker 38	38.9	29.0	25	8.3	6.0	6.0
<u>August 1971</u>						
Nueces #1	10.6	26.0	145	N.D.	N.D.	N.D.
Nueces #2	8.3	26.0	150	8.1	6.0	6.0
E. of Causeway	30.0	27.5	108	8.3	6.0	4.0
Reynolds 4	35.0	27.5	25	N.D.	N.D.	N.D.
Reynolds 5	35.5	27.5	25	N.D.	N.D.	N.D.
Redfish Bay	36.1	27.0	25	N.D.	N.D.	N.D.
E. Flats	36.6	27.0	25	N.D.	N.D.	N.D.
Shamrock	42.2	28.0	25	N.D.	N.D.	N.D.
Bulkheads	41.6	28.0	25	N.D.	N.D.	N.D.
Alta Vista	30.0	27.0	25	8.4	5.0	4.5
Marker 67	22.2	29.0	25	N.D.	N.D.	N.D.
Marker 22	36.1	27.0	25	N.D.	N.D.	N.D.
Marker 1 ICW	40.5	27.0	25	8.5	4.5	4.0
Navy Channel	34.4	27.0	25	8.4	5.0	2.0
Oso Bay	26.1	26.5	25	8.5	3.0	0.5
Nueces #3	11.1	26.0	160	N.D.	N.D.	N.D.
Viola	27.8	29.0	25	8.5	6.1	0.0
Harbor	30.0	28.0	25	8.1	3.0	3.0
Marker 38	37.8	27.5	25	8.3	6.0	5.0
<u>September 1971</u>						
Nueces #1	0.0	28.5	60	N.D.	N.D.	N.D.
Nueces #2	0.0	28.5	95	8.1	8.0	8.0
E. of Causeway	2.2	31.0	50	8.5	6.7	4.7
Reynolds 4	10.0	31.0	25	N.D.	N.D.	N.D.
Reynolds 5	15.5	31.0	25	N.D.	N.D.	N.D.
Redfish Bay	24.4	30.5	25	N.D.	N.D.	N.D.
E. Flats	25.0	30.5	25	N.D.	N.D.	N.D.
Shamrock	22.2	30.0	25	N.D.	N.D.	N.D.
Bulkheads	22.2	30.0	25	N.D.	N.D.	N.D.
Alta Vista	15.5	30.5	25	8.5	6.0	3.1
Marker 67	5.6	28.0	25	N.D.	N.D.	N.D.
Marker 22	22.0	30.5	25	N.D.	N.D.	N.D.
Marker 1 ICW	22.2	30.0	25	8.8	4.5	4.5



Table 4 continued

<u>Station</u>	<u>Salinity</u>	<u>September 1971</u>			<u>Surface</u>	<u>Bottom</u>
		<u>W. Temp.</u>	<u>Turb.</u>	<u>pH</u>	<u>D.O.</u>	<u>D.O.</u>
Navy Channel	22.2	30.0	25	8.6	4.5	4.0
Oso Bay	18.9	30.0	25	8.8	5.0	4.0
Nueces #3	0.0	28.5	135	N.D.	N.D.	N.D.
Viola	6.7	27.0	25	8.0	6.3	0.0
Harbor	1.1	28.0	25	8.7	7.5	3.5
Marker 38	17.8	30.5	25	8.2	4.0	3.0
<u>October 1971</u>						
Nueces #1	2.2	28.0	39	N.D.	N.D.	N.D.
Nueces #2	2.2	28.0	68	8.2	9.0	9.0
E. of Causeway	3.3	26.5	48	8.1	7.0	7.0
Reynolds 4	12.2	26.0	25	N.D.	N.D.	N.D.
Reynolds 5	12.2	26.0	25	N.D.	N.D.	N.D.
Redfish Bay	16.7	26.0	25	N.D.	N.D.	N.D.
E. Flats	16.7	26.0	25	N.D.	N.D.	N.D.
Shamrock	16.7	26.0	25	N.D.	N.D.	N.D.
Bulkheads	13.3	25.0	25	N.D.	N.D.	N.D.
Alta Vista	6.7	25.5	32	8.0	7.0	6.0
Marker 67	4.4	24.0	25	N.D.	N.D.	N.D.
Marker 22	16.7	26.0	27	N.D.	N.D.	N.D.
Marker 1 ICW	12.2	25.0	25	8.1	7.0	5.5
Navy Channel	8.9	25.0	25	8.1	8.0	6.0
Oso Bay	5.6	25.0	35	8.0	7.0	7.0
Nueces #3	1.7	28.0	75	N.D.	N.D.	N.D.
Viola	5.6	27.0	25	7.8	5.1	0.0
Harbor	6.7	27.0	25	7.7	6.0	2.7
Marker 38	13.3	27.0	25	8.1	6.0	6.0
<u>November 1971</u>						
Nueces #1	0.0	21.0	230	N.D.	N.D.	N.D.
Nueces #2	0.0	20.5	120	8.1	9.0	9.0
E. of Causeway	1.1	20.0	80	8.2	9.0	8.0
Reynolds 4	11.1	23.0	25	N.D.	N.D.	N.D.
Reynolds 5	11.1	23.0	25	N.D.	N.D.	N.D.
Redfish Bay	12.2	22.5	25	N.D.	N.D.	N.D.
E. Flats	11.1	22.5	25	N.D.	N.D.	N.D.
Shamrock	10.0	22.5	25	N.D.	N.D.	N.D.
Bulkheads	11.1	21.0	25	N.D.	N.D.	N.D.
Alta Vista	3.3	21.0	25	8.3	8.0	7.0
Marker 67	8.3	20.0	25	N.D.	N.D.	N.D.
Marker 22	10.0	22.5	25	N.D.	N.D.	N.D.
Marker 1 ICW	10.0	22.0	25	8.3	8.0	7.0
Navy Channel	5.6	21.0	25	8.3	8.0	7.0
Oso Bay	4.4	22.0	25	8.3	8.0	8.0
Nueces #3	0.0	21.0	120	N.D.	N.D.	N.D.

Table 4 continued

<u>Station</u>	<u>Salinity</u>	<u>November 1971</u>			<u>Surface</u>	<u>Bottom</u>
		<u>W. Temp.</u>	<u>Turb.</u>	<u>pH</u>	<u>D.O.</u>	<u>D.O.</u>
Viola	5.6	24.0	25	8.4	7.1	0.0
Harbor	4.4	20.0	25	8.0	7.0	2.1
Marker 38	8.9	23.0	25	8.3	8.0	6.0
<u>December 1971</u>						
Nueces #1	11.1	19.5	30	N.D.	N.D.	N.D.
Nueces #2	11.1	19.6	32	8.2	8.0	8.0
E. of Causeway	11.1	19.5	25	8.2	7.5	6.0
Reynolds 4	18.9	21.5	25	N.D.	N.D.	N.D.
Reynolds 5	18.9	21.5	25	N.D.	N.D.	N.D.
Redfish Bay	20.0	21.5	25	N.D.	N.D.	N.D.
E. Flats	18.9	21.5	25	N.D.	N.D.	N.D.
Shamrock	16.7	17.5	25	N.D.	N.D.	N.D.
Bulkheads	16.7	17.0	25	N.D.	N.D.	N.D.
Alta Vista	16.7	16.9	25	8.3	7.0	7.0
Marker 67	16.7	18.5	25	N.D.	N.D.	N.D.
Marker 22	18.9	21.0	25	N.D.	N.D.	N.D.
Marker 1 ICW	16.7	17.5	25	8.4	8.0	7.0
Navy Channel	16.7	16.9	25	8.3	7.0	6.0
Oso Bay	16.7	16.7	25	8.5	6.0	6.0
Nueces #3	8.9	19.5	43	N.D.	N.D.	N.D.
Viola	22.2	17.2	25	7.6	7.7	1.5
Harbor	20.0	17.5	25	8.1	7.7	6.1
Marker 38	17.8	21.5	25	8.2	8.5	7.0

Table 5

Hydrographic Data by Station  
Upper Laguna Madre

Station	January 1971					February 1971				
	Sal.	W.T.	Turb.	pH	D.O.	Sal.	W.T.	Turb.	pH	D.O.
25	35.5	18.0	25	8.0	7.0	37.7	17.5	30	N.D.	7.0
26	38.8	18.0	25	8.0	8.0	39.9	17.5	25	8.0	6.0
27	35.5	17.0	25	8.1	8.0	38.3	18.0	30	8.1	7.0
28	39.9	18.0	30	8.2	9.0	39.4	18.0	38	8.1	7.0
29	41.0	17.0	25	8.1	8.0	42.1	17.5	35	8.1	7.0
30	46.6	20.0	25	8.2	9.0	N.D.	N.D.	N.D.	N.D.	N.D.
31	45.5	17.5	25	8.2	8.0	N.D.	N.D.	N.D.	N.D.	N.D.
32	47.1	22.0	45	8.2	9.0	N.D.	N.D.	N.D.	N.D.	N.D.
34	42.7	20.5	25	8.1	7.0	N.D.	N.D.	N.D.	N.D.	N.D.
35	43.8	22.0	25	8.1	7.0	N.D.	N.D.	N.D.	N.D.	N.D.
36	41.6	21.5	25	8.1	7.0	N.D.	N.D.	N.D.	N.D.	N.D.
37	39.4	21.5	34	8.1	7.0	N.D.	N.D.	N.D.	N.D.	N.D.
Landcut	38.8	21.5	37	8.2	7.0	N.D.	N.D.	N.D.	N.D.	N.D.
Marker 21	36.0	18.0	30	8.1	7.0	38.8	17.5	25	8.1	6.0
Station	March 1971					April 1971				
	Sal.	W.T.	Turb.	pH	D.O.	Sal.	W.T.	Turb.	pH	D.O.
25	44.9	19.0	75	8.1	6.0	41.6	25.5	36	8.1	5.0
26	47.1	20.0	36	8.1	7.0	45.5	25.0	45	8.3	6.0
27	44.9	20.0	48	8.1	6.0	42.1	25.0	40	8.2	6.0
28	52.1	23.0	44	8.1	7.0	49.4	25.5	42	8.2	6.0
29	52.1	22.5	38	8.1	8.0	50.5	25.0	38	8.2	6.0
30	52.1	21.0	40	8.1	7.0	51.6	25.5	30	8.2	6.0
31	53.2	23.0	35	8.2	8.0	51.0	25.5	34	8.3	6.0
32	52.1	22.5	70	8.2	8.0	47.7	27.0	44	8.2	6.0
34	47.7	23.0	80	8.2	7.0	44.9	26.5	40	8.3	7.0
35	45.5	22.0	55	8.1	7.0	44.4	26.5	39	8.3	7.0
36	44.9	22.0	79	8.2	7.0	44.9	26.0	34	8.4	7.0
37	44.4	22.0	63	8.2	7.0	43.8	26.0	35	8.4	7.0
Landcut	44.4	22.0	33	8.3	7.0	43.8	26.0	38	8.3	6.0
Marker 21	36.6	19.5	66	8.1	6.0	42.7	25.5	48	8.2	5.0
Station	May 1971					June 1971				
	Sal.	W.T.	Turb.	pH	D.O.	Sal.	W.T.	Turb.	pH	D.O.
25	55.5	25.0	25	8.2	6.0	47.1	28.5	30	7.2	6.0
26	51.0	26.0	30	8.3	6.0	45.5	30.0	38	7.9	7.0
27	47.7	26.0	31	8.0	5.0	46.6	28.0	30	7.9	5.0
28	N.D.	N.D.	N.D.	N.D.	N.D.	46.6	29.5	30	7.9	6.0
29	54.4	28.0	60	8.2	7.0	47.7	29.0	25	7.6	6.0
30	53.2	25.0	60	8.2	7.0	47.7	27.5	50	7.9	5.0
31	47.7	28.0	63	8.2	7.0	46.6	29.0	34	8.0	5.0
32	48.8	27.5	65	8.2	7.0	N.D.	N.D.	N.D.	N.D.	N.D.
34	42.7	27.0	70	8.3	6.0	N.D.	N.D.	N.D.	N.D.	N.D.
35	51.6	26.0	72	8.3	6.0	N.D.	N.D.	N.D.	N.D.	N.D.

Table 5 continued

Station	May 1971					June 1971				
	Sal.	W.T.	Turb.	pH	D.O.	Sal.	W.T.	Turb.	pH	D.O.
36	45.5	26.0	68	8.4	6.0	N.D.	N.D.	N.D.	N.D.	N.D.
37	43.3	25.5	37	8.4	5.0	N.D.	N.D.	N.D.	N.D.	N.D.
Landcut	43.3	25.5	34	8.4	5.0	N.D.	N.D.	N.D.	N.D.	N.D.
Marker 21	51.0	27.5	50	8.2	5.0	47.7	29.0	34	7.3	7.0
	July 1971					August 1971				
	Sal.	W.T.	Turb.	pH	D.O.	Sal.	W.T.	Turb.	pH	D.O.
25	52.1	30.0	35	8.2	8.0	46.6	27.5	25	8.4	5.0
26	52.1	29.0	30	8.6	5.0	45.5	28.5	25	8.6	6.0
27	49.9	29.5	55	8.4	5.0	43.8	29.0	25	8.1	5.0
28	47.7	30.0	30	8.3	6.0	43.3	31.0	25	8.4	8.0
29	48.8	32.0	40	8.7	6.0	42.7	30.5	35	8.4	7.0
30	48.8	30.0	30	8.4	6.0	48.2	29.0	30	8.4	6.0
31	47.7	31.0	30	8.5	6.0	47.1	31.0	30	8.3	6.0
32	47.1	31.0	50	8.3	7.0	51.0	30.5	25	8.3	8.0
34	43.3	31.0	40	8.4	6.0	44.9	29.5	30	8.3	7.0
35	42.7	30.0	50	8.4	6.0	43.3	30.0	30	8.4	6.0
36	42.1	30.0	30	8.7	7.0	42.1	30.5	25	8.3	8.0
37	42.1	29.5	30	8.5	6.0	38.8	29.5	35	8.4	6.0
Landcut	51.6	30.5	40	8.7	8.0	44.9	28.0	30	8.5	5.0
Marker 21	42.1	29.0	30	8.5	6.0	32.7	30.5	35	8.6	9.0
	September 1971					October 1971				
	Sal.	W.T.	Turb.	pH	D.O.	Sal.	W.T.	Turb.	pH	D.O.
25	28.3	28.0	45	8.0	6.0	21.1	28.0	55	8.4	5.0
26	28.9	26.5	47	8.1	6.0	20.0	27.5	45	8.6	6.0
27	23.9	27.0	40	8.1	7.0	19.4	27.0	48	8.6	5.0
28	26.6	27.0	57	8.3	8.0	18.9	27.0	80	8.4	7.0
29	23.9	27.0	42	8.1	8.0	19.4	27.0	83	8.5	8.0
30	19.4	27.0	45	8.2	7.0	19.4	27.0	56	8.6	7.0
31	20.5	27.5	48	8.2	7.0	22.8	27.0	90	8.5	6.0
32	16.1	28.0	68	8.1	7.0	18.3	27.0	67	8.5	7.0
34	21.1	27.5	60	8.3	7.0	14.4	27.0	70	8.4	7.0
35	23.9	27.5	63	8.3	8.0	27.2	26.5	75	8.4	6.0
36	23.9	28.0	66	8.3	8.0	22.2	26.5	77	8.6	7.0
37	20.0	28.0	56	8.3	8.0	20.5	27.0	80	8.3	6.0
Landcut	22.2	28.0	42	8.3	8.0	26.7	26.5	95	8.4	6.0
Marker 21	29.4	27.5	48	8.1	6.0	21.1	27.0	45	8.5	6.0
	November 1971					December 1971				
	Sal.	W.T.	Turb.	pH	D.O.	Sal.	W.T.	Turb.	pH	D.O.
25	17.8	14.5	40	8.2	8.0	17.8	18.5	48	7.9	8.0
26	22.2	20.5	48	8.2	8.0	21.3	23.0	40	8.3	7.0
27	19.4	20.0	55	8.0	8.0	18.1	22.5	54	8.2	8.0
28	22.8	20.5	46	8.2	8.0	18.1	22.0	58	8.4	7.0
29	22.2	21.0	50	8.2	8.0	20.0	22.5	50	8.3	8.0
30	20.0	19.0	42	8.5	9.0	18.5	22.5	52	8.4	8.0

Table 5 continued

<u>Station</u>	<u>November 1971</u>					<u>December 1971</u>				
	<u>Sal.</u>	<u>W.T.</u>	<u>Turb.</u>	<u>pH</u>	<u>D.O.</u>	<u>Sal.</u>	<u>W.T.</u>	<u>Turb.</u>	<u>pH</u>	<u>D.O.</u>
31	N.D.	N.D.	N.D.	N.D.	N.D.	19.2	23.0	52	8.4	7.0
32	19.4	21.0	60	8.4	9.0	N.D.	N.D.	N.D.	N.D.	N.D.
34	19.4	20.5	54	8.5	7.0	N.D.	N.D.	N.D.	N.D.	N.D.
35	20.0	20.0	56	8.6	7.0	N.D.	N.D.	N.D.	N.D.	N.D.
36	18.9	20.0	59	8.6	6.0	N.D.	N.D.	N.D.	N.D.	N.D.
37	18.9	20.0	57	8.6	8.0	N.D.	N.D.	N.D.	N.D.	N.D.
Landcut	19.4	22.0	50	8.6	9.0	N.D.	N.D.	N.D.	N.D.	N.D.
Marker 21	17.8	15.5	43	8.0	8.0	18.9	19.9	50	8.1	8.0

Table 6

Hydrographic Data by Station  
Lower Laguna Madre

<u>Station</u>	<u>January 1971</u>					<u>February 1971</u>				
	<u>Sal.</u>	<u>W.T.</u>	<u>Turb.</u>	<u>pH</u>	<u>D.O.</u>	<u>Sal.</u>	<u>W.T.</u>	<u>Turb.</u>	<u>pH</u>	<u>D.O.</u>
14	31.3	19.0	25.	N.D.	N.D.	33.3	22.0	35	N.D.	N.D.
15	31.6	18.0	25	N.D.	N.D.	33.3	22.0	35	N.D.	N.D.
16	31.1	19.5	30	N.D.	N.D.	33.3	23.0	35	N.D.	N.D.
17	33.3	21.0	25	N.D.	N.D.	33.9	22.5	35	N.D.	N.D.
18	33.3	20.5	26	N.D.	N.D.	33.3	23.0	39	N.D.	N.D.
19	33.3	20.0	37	N.D.	N.D.	32.2	22.5	93	N.D.	N.D.
20	33.3	20.5	25	N.D.	N.D.	34.4	21.5	112	N.D.	N.D.
21	32.2	19.5	25	N.D.	N.D.	34.4	21.0	25	N.D.	N.D.
22	37.2	19.0	25	N.D.	N.D.	36.1	20.0	37	N.D.	N.D.
22A	33.3	22.0	25	N.D.	N.D.	34.4	19.5	25	N.D.	N.D.
22C	36.1	19.5	25	N.D.	N.D.	35.5	19.5	37	N.D.	N.D.
23	36.1	20.0	25	N.D.	N.D.	33.3	20.0	35	N.D.	N.D.
24	36.6	20.5	25	N.D.	N.D.	38.3	21.0	27	N.D.	N.D.
25	36.1	20.5	25	N.D.	N.D.	37.2	21.5	45	N.D.	N.D.
Port Isabel										
1	33.3	20.0	25	8.2	4.0	32.2	20.0	170	7.8	4.0
2	33.3	20.5	26	8.1	2.8	33.3	23.0	39	8.1	3.6
3	33.3	20.5	25	8.2	2.5	33.3	22.0	35	8.1	3.6
4	31.6	21.0	25	8.2	2.0	33.3	22.5	35	7.8	4.8
5	31.6	21.0	25	8.2	3.6	33.3	22.0	35	8.1	4.6
6	31.6	21.0	25	8.3	4.8	33.3	22.0	32	8.3	5.4
7	29.4	21.0	25	8.4	4.8	33.9	23.0	35	8.1	4.0
Redfish Bay										
1	34.4	20.5	25	8.3	2.4	33.9	21.5	33	8.0	5.6
2	32.2	19.5	25	8.4	2.0	34.4	21.0	25	8.0	5.0
3	32.2	19.5	25	8.4	3.8	34.4	22.0	28	8.0	6.2
	<u>March 1971</u>					<u>April 1971</u>				
	<u>Sal.</u>	<u>W.T.</u>	<u>Turb.</u>	<u>pH</u>	<u>D.O.</u>	<u>Sal.</u>	<u>W.T.</u>	<u>Turb.</u>	<u>pH</u>	<u>D.O.</u>
14	34.4	20.0	37	N.D.	N.D.	30.0	23.0	37	N.D.	N.D.
15	34.4	20.0	25	N.D.	N.D.	29.4	23.0	25	N.D.	N.D.
16	35.0	21.0	25	N.D.	N.D.	32.2	26.5	25	N.D.	N.D.
17	35.5	20.0	28	N.D.	N.D.	31.1	25.0	28	N.D.	N.D.
18	36.6	21.5	30	N.D.	N.D.	32.0	25.5	30	N.D.	N.D.
19	36.6	21.5	28	N.D.	N.D.	34.4	26.5	28	N.D.	N.D.
20	35.0	21.5	35	N.D.	N.D.	34.4	25.0	28	N.D.	N.D.
21	36.6	21.5	30	N.D.	N.D.	32.0	25.5	30	N.D.	N.D.
22	35.0	20.0	25	N.D.	N.D.	36.1	20.5	25	N.D.	N.D.
22A	36.6	22.0	25	N.D.	N.D.	35.0	21.0	25	N.D.	N.D.
22C	35.5	18.0	25	N.D.	N.D.	36.1	22.0	25	N.D.	N.D.
23	37.7	18.5	25	N.D.	N.D.	37.2	22.5	25	N.D.	N.D.
24	39.9	20.0	25	N.D.	N.D.	37.8	26.5	25	N.D.	N.D.

Table 6 continued

Station	<u>March 1971</u>					<u>April 1971</u>				
	<u>Sal.</u>	<u>W.T.</u>	<u>Turb.</u>	<u>pH</u>	<u>D.O.</u>	<u>Sal.</u>	<u>W.T.</u>	<u>Turb.</u>	<u>pH</u>	<u>D.O.</u>
25	39.9	19.5	25	N.D.	N.D.	38.9	26.0	25	N.D.	N.D.
Port Isabel										
1	36.6	22.0	32	8.2	4.0	32.2	25.0	25	8.3	6.2
2	36.6	21.5	30	8.2	6.0	32.0	25.5	25	8.2	6.0
3	36.6	21.5	28	8.2	6.2	32.0	25.5	25	8.2	5.6
4	36.6	21.5	28	8.2	5.8	33.3	25.5	25	8.2	6.0
5	35.5	21.5	28	8.2	6.0	32.2	25.5	25	8.2	6.2
6	35.5	22.0	200	8.2	6.2	33.3	26.0	25	8.2	6.0
7	35.5	23.0	25	8.6	7.0	34.0	26.0	25	8.3	6.4
Redfish Bay										
1	35.0	20.0	25	8.2	5.6	35.0	25.0	25	8.3	6.0
2	35.5	22.0	25	8.3	5.6	35.0	25.0	25	8.2	5.8
3	37.2	21.5	25	8.3	6.8	33.3	25.5	25	8.2	5.0
	<u>May 1971</u>					<u>June 1971</u>				
	<u>Sal.</u>	<u>W.T.</u>	<u>Turb.</u>	<u>pH</u>	<u>D.O.</u>	<u>Sal.</u>	<u>W.T.</u>	<u>Turb.</u>	<u>pH</u>	<u>D.O.</u>
14	33.3	22.5	30	N.D.	N.D.	43.3	24.0	77	N.D.	N.D.
15	33.9	22.5	26	N.D.	N.D.	37.8	24.0	26	N.D.	N.D.
16	30.0	22.5	25	N.D.	N.D.	43.3	27.5	26	N.D.	N.D.
17	32.2	22.0	63	N.D.	N.D.	42.2	27.5	25	N.D.	N.D.
18	33.3	24.0	60	N.D.	N.D.	38.9	27.0	63	N.D.	N.D.
19	30.5	22.0	90	N.D.	N.D.	41.1	27.0	80	N.D.	N.D.
20	31.1	22.5	100	N.D.	N.D.	41.1	24.5	45	N.D.	N.D.
21	33.3	24.0	60	N.D.	N.D.	40.0	26.5	110	N.D.	N.D.
22	28.9	25.5	60	N.D.	N.D.	40.0	26.5	26	N.D.	N.D.
22A	38.3	24.5	25	N.D.	N.D.	41.1	26.5	25	N.D.	N.D.
22C	36.6	24.5	25	N.D.	N.D.	41.1	26.0	46	N.D.	N.D.
23	38.3	24.5	25	N.D.	N.D.	38.9	26.5	25	N.D.	N.D.
24	37.2	24.5	25	N.D.	N.D.	38.9	27.0	25	N.D.	N.D.
25	35.5	23.5	25	N.D.	N.D.	37.8	28.5	25	N.D.	N.D.
Port Isabel										
1	33.3	24.0	80	8.3	5.8	38.9	26.5	59	8.2	5.8
2	33.3	24.0	60	8.2	6.2	38.9	27.0	63	8.2	6.0
3	33.9	23.5	50	8.2	6.0	41.1	27.0	100	8.2	5.8
4	33.3	24.5	80	8.2	5.6	44.4	27.0	120	8.3	5.6
5	33.3	24.0	100	8.3	5.8	38.9	27.5	67	8.3	6.2
6	33.9	24.0	90	8.1	6.0	38.9	27.5	36	8.3	6.2
7	35.0	25.0	100	8.3	6.2	40.0	28.5	25	8.8	7.0
Redfish Bay										
1	35.0	24.5	60	8.2	6.0	40.0	26.5	350	7.8	5.6



Table 6 continued

<u>Station</u>	<u>May 1971</u>					<u>June 1971</u>				
	<u>Sal.</u>	<u>W.T.</u>	<u>Turb.</u>	<u>pH</u>	<u>D.O.</u>	<u>Sal.</u>	<u>W.T.</u>	<u>Turb.</u>	<u>pH</u>	<u>D.O.</u>
Redfish Bay										
2	33.9	24.5	28	8.2	6.2	40.0	26.5	110	8.1	6.0
3	35.0	25.0	29	8.2	5.8	41.1	26.5	52	8.3	7.4
	<u>July 1971</u>					<u>August 1971</u>				
	<u>Sal.</u>	<u>W.T.</u>	<u>Turb.</u>	<u>pH</u>	<u>D.O.</u>	<u>Sal.</u>	<u>W.T.</u>	<u>Turb.</u>	<u>pH</u>	<u>D.O.</u>
14	34.4	27.0	45	N.D.	N.D.	35.0	27.5	75	N.D.	N.D.
15	34.4	24.0	25	N.D.	N.D.	34.4	27.5	25	N.D.	N.D.
16	34.4	27.0	25	N.D.	N.D.	33.9	27.5	25	N.D.	N.D.
17	34.4	29.0	25	N.D.	N.D.	33.3	29.0	25	N.D.	N.D.
18	35.0	27.5	63	N.D.	N.D.	34.4	27.0	28	N.D.	N.D.
19	35.5	30.0	80	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
20	36.1	27.0	45	N.D.	N.D.	34.4	26.0	25	N.D.	N.D.
21	33.3	28.0	54	N.D.	N.D.	34.4	27.0	25	N.D.	N.D.
22	35.5	27.0	25	N.D.	N.D.	34.4	28.0	25	N.D.	N.D.
22A	36.1	28.0	25	N.D.	N.D.	35.5	27.5	25	N.D.	N.D.
22C	34.4	26.5	25	N.D.	N.D.	34.4	28.0	25	N.D.	N.D.
23	33.9	26.5	25	N.D.	N.D.	36.1	28.0	25	N.D.	N.D.
24	36.0	29.0	25	N.D.	N.D.	36.6	28.0	25	N.D.	N.D.
25	36.6	28.0	25	N.D.	N.D.	36.6	28.0	25	N.D.	N.D.
Port Isabel										
1	35.0	27.0	40	8.1	3.6	34.4	27.0	27	8.4	4.6
2	35.0	27.5	40	8.1	4.2	34.4	27.0	28	8.3	4.6
3	35.5	28.5	110	8.0	6.2	34.4	27.5	28	8.3	5.0
4	35.9	30.0	45	8.1	5.0	34.4	27.5	32	8.3	5.4
5	35.5	30.0	45	8.2	5.2	34.4	29.0	161	8.3	4.8
6	35.5	31.0	26	8.3	6.0	33.1	30.0	40	8.3	5.4
7	35.0	31.0	25	8.8	4.2	34.4	30.5	25	8.8	5.6
Redfish Bay										
1	36.1	28.0	55	7.8	4.0	34.4	27.0	25	8.2	4.6
2	33.3	28.0	54	7.9	6.0	34.4	27.0	25	8.4	6.0
3	36.6	28.0	40	8.0	5.2	34.4	27.5	25	8.5	5.8
	<u>September 1971</u>					<u>October 1971</u>				
	<u>Sal.</u>	<u>W.T.</u>	<u>Turb.</u>	<u>pH</u>	<u>D.O.</u>	<u>Sal.</u>	<u>W.T.</u>	<u>Turb.</u>	<u>pH</u>	<u>D.O.</u>
14	24.4	26.4	25	N.D.	N.D.	26.1	26.0	149	N.D.	N.D.
15	28.3	25.5	25	N.D.	N.D.	28.9	26.0	97	N.D.	N.D.
16	30.5	25.5	25	N.D.	N.D.	21.1	25.5	25	N.D.	N.D.
17	29.4	25.0	25	N.D.	N.D.	26.6	27.0	25	N.D.	N.D.
18	22.8	27.5	25	N.D.	N.D.	16.7	25.5	25	N.D.	N.D.
19	26.7	25.5	26	N.D.	N.D.	14.4	25.5	68	N.D.	N.D.
20	12.2	25.0	25	N.D.	N.D.	10.0	25.5	45	N.D.	N.D.
21	17.8	26.0	25	N.D.	N.D.	10.0	23.0	128	N.D.	N.D.
22	8.9	26.0	105	N.D.	N.D.	5.0	23.5	75	N.D.	N.D.

Table 6 continued

<u>Station</u>	<u>November 1971</u>					<u>December 1971</u>				
	<u>Sal.</u>	<u>W.T.</u>	<u>Turb.</u>	<u>pH</u>	<u>D.O.</u>	<u>Sal.</u>	<u>W.T.</u>	<u>Turb.</u>	<u>pH</u>	<u>D.O.</u>
Redfish Bay										
1	23.0	23.0	44	7.8	8.4	N.D.	N.D.	N.D.	N.D.	N.D.
2	23.0	23.0	25	7.4	8.6	N.D.	N.D.	N.D.	N.D.	N.D.
3	25.0	25.0	25	7.5	8.0	N.D.	N.D.	N.D.	N.D.	N.D.

Table 6 continued

Station	September 1971					October 1971				
	Sal.	W.T.	Turb.	pH	D.O.	Sal.	W.T.	Turb.	pH	D.O.
22A	8.9	26.0	25	N.D.	N.D.	15.6	24.0	70	N.D.	N.D.
22C	35.0	26.0	25	N.D.	N.D.	6.7	24.5	91	N.D.	N.D.
23	34.4	23.5	25	N.D.	N.D.	17.8	26.5	81	N.D.	N.D.
24	27.8	24.5	25	N.D.	N.D.	20.0	26.5	45	N.D.	N.D.
25	28.0	24.0	27	N.D.	N.D.	21.7	24.5	33	N.D.	N.D.
Port Isabel										
1	30.5	25.5	25	8.1	6.4	21.1	25.5	25	8.1	5.4
2	31.1	24.5	25	8.0	6.8	16.7	25.5	81	8.0	5.6
3	22.8	27.5	25	8.0	7.8	16.7	25.5	25	8.0	5.8
4	31.1	25.5	25	8.1	7.4	23.3	27.0	25	7.8	7.2
5	30.2	25.0	25	8.1	7.4	24.5	27.0	25	7.9	6.4
6	29.4	25.0	25	8.0	7.6	26.6	27.0	25	8.0	5.6
7	30.0	27.0	25	8.2	7.4	25.5	27.5	25	8.2	6.8
Redfish Bay										
1	8.9	26.0	105	8.0	5.4	5.0	23.5	75	8.1	5.6
2	14.4	27.0	25	8.3	6.8	11.1	23.0	52	7.9	5.8
3	15.6	26.5	25	8.3	6.2	10.0	22.5	47	7.4	5.6
Station	November 1971					December 1971				
	Sal.	W.T.	Turb.	pH	D.O.	Sal.	W.T.	Turb.	pH	D.O.
14	29.4	25.5	85	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
15	29.4	25.0	105	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
16	22.2	23.5	56	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
17	26.7	24.0	25	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
18	16.7	24.0	43	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
19	15.6	23.0	375	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
20	15.0	23.0	110	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
21	16.1	22.5	42	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
22	14.4	23.0	44	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
22A	21.1	22.0	25	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
22C	15.6	22.5	54	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
23	17.8	23.0	25	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
24	20.0	22.0	25	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
25	19.4	21.5	25	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Port Isabel										
1	22.2	23.5	56	8.0	6.6	N.D.	N.D.	N.D.	N.D.	N.D.
2	18.9	24.0	135	7.9	6.4	N.D.	N.D.	N.D.	N.D.	N.D.
3	16.7	24.0	43	7.6	6.6	N.D.	N.D.	N.D.	N.D.	N.D.
4	25.5	23.5	74	8.0	5.	N.D.	N.D.	N.D.	N.D.	N.D.
5	26.0	23.5	50	7.9	6.0	N.D.	N.D.	N.D.	N.D.	N.D.
6	26.7	24.0	25	7.9	6.4	N.D.	N.D.	N.D.	N.D.	N.D.
7	27.8	24.0	25	7.9	7.2	N.D.	N.D.	N.D.	N.D.	N.D.

Table 7

## Rainfall Monthly Totals By Area (inches)

<u>Area</u>	<u>Year</u>	<u>Jan.</u>	<u>Feb.</u>	<u>Mar.</u>	<u>Apr.</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>Aug.</u>	<u>Sept.</u>	<u>Oct.</u>	<u>Nov.</u>	<u>Dec.</u>	<u>Total</u>
Galveston	1970	1.93	2.52	5.08	2.21	14.39	0.26	2.28	2.03	6.22	9.09	1.54	0.64	48.19
	1971	0.36	2.11	1.21	2.14	3.41	2.42	1.42	6.95	5.11	3.49	1.82	7.33	37.77
Matagorda	1970	2.76	2.52	4.38	2.84	4.42	6.92	3.13	4.01	7.20	2.75	0.15	0.74	41.82
	1971	0.43	1.86	0.18	1.82	2.41	0.99	0.07	4.88	11.80	3.98	2.49	7.74	38.65
San Antonio	1970	2.73	1.71	4.14	1.03	N.D.	1.29	3.48	2.20	6.67	8.24	0.10	0.64	32.23
	1971	0.08	1.46	0.20	1.73	3.33	3.12	0.43	3.84	11.44	3.90	2.37	10.64	42.54
Aransas	1970	2.49	1.12	2.44	0.65	5.26	1.51	4.31	2.54	9.36	10.17	1.00	0.60	41.45
	1971	0.10	0.45	tr.	1.55	5.31	0.18	0.28	7.64	19.24	6.01	1.80	7.57	50.13
Corpus Christi	1970	1.79	1.01	1.55	0.15	3.92	9.16	1.72	7.32	8.51	3.13	0.81	0.40	39.47
	1971	0.03	0.22	tr.	2.29	4.55	1.24	0.31	8.32	12.17	3.96	0.44	3.35	36.88
Upper Laguna	1970	2.69	1.02	1.68	0.22	6.04	5.01	1.30	3.78	10.57	3.11	0.68	0.44	36.54
	1971	0.11	0.34	tr.	2.09	2.94	0.65	0.10	7.47	11.64	4.99	0.70	4.44	35.47
Lower Laguna	1970	4.56	0.29	0.34	2.22	3.28	1.64	2.35	1.79	5.99	3.32	0.20	0.56	26.54
	1971	0.14	0.46	0.00	1.22	3.38	2.32	0.89	2.83	13.14	5.57	3.29	1.68	34.92

Table 8

## Salinity (ppm) Monthly Averages

<u>Area</u>	<u>Year</u>	<u>Jan.</u>	<u>Feb.</u>	<u>Mar.</u>	<u>Apr.</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>Aug.</u>	<u>Sept.</u>	<u>Oct.</u>	<u>Nov.</u>	<u>Dec.</u>
Galveston	1970	17.3	18.9	12.2	12.0	14.0	19.4	21.5	23.9	19.8	15.3	16.6	20.4
	1971	22.7	24.2	23.5	23.1	24.1	25.0	29.2	28.0	22.4	22.4	23.1	16.3
Matagorda	1970	23.8	24.5	19.7	17.9	25.2	17.8	24.8	24.3	21.9	17.7	21.7	23.9
	1971	24.8	17.7	27.5	27.1	26.3	27.1	28.7	27.3	13.9	15.7	17.9	10.3
San Antonio	1970	14.5	15.3	15.4	14.3	N.D.	12.1	8.2	12.6	16.0	18.1	17.7	19.2
	1971	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Aransas	1970	14.1	16.6	16.9	17.9	19.2	15.8	17.7	21.4	21.7	10.9	14.1	15.5
	1971	21.5	21.8	26.0	27.9	27.1	30.1	32.0	33.4	6.6	7.7	5.3	9.0
Corpus Christi	1970	27.3	27.1	27.0	27.6	28.4	22.7	25.8	30.2	31.0	28.2	28.4	29.5
	1971	30.2	29.6	34.0	34.3	34.7	36.5	39.1	30.1	13.2	9.3	6.6	16.6
Upper Laguna	1970	31.8	39.9	34.8	37.2	37.8	34.5	39.0	41.7	43.6	36.9	40.7	40.6
	1971	40.9	39.3	47.3	46.0	48.8	46.9	47.1	45.5	23.4	20.8	19.9	19.0
Lower Laguna	1970	27.3	29.5	32.2	33.7	35.2	35.9	36.3	41.4	36.5	32.1	32.6	34.3
	1971	33.9	34.5	36.3	34.0	33.7	40.4	35.0	34.9	25.8	17.2	19.9	N.D.

Table 9

## Water Temperature (°C) Monthly Averages

<u>Area</u>	<u>Year</u>	<u>Jan.</u>	<u>Feb.</u>	<u>Mar.</u>	<u>Apr.</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>Aug.</u>	<u>Sept.</u>	<u>Oct.</u>	<u>Nov.</u>	<u>Dec.</u>
Galveston	1970	12.8	14.8	14.7	21.2	22.4	27.4	28.3	27.7	27.8	21.0	15.2	15.6
	1971	18.0	17.3	17.1	25.1	24.3	28.0	27.8	30.0	26.7	25.9	14.5	17.9
Matagorda	1970	14.7	16.3	15.1	22.9	16.6	28.8	29.3	29.3	27.3	21.2	19.8	14.3
	1971	17.7	13.4	20.1	22.6	20.8	28.5	28.6	30.9	24.3	20.0	23.9	15.0
San Antonio	1970	9.2	13.4	19.1	17.9	N.D.	24.8	27.5	29.5	28.5	23.3	13.4	16.9
	1971	N.D.	N.D.	16.2	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Aransas	1970	9.7	14.4	16.9	22.1	24.4	26.5	29.0	29.7	29.6	23.8	20.2	14.1
	1971	18.5	12.3	20.8	22.0	24.9	28.5	28.8	29.7	23.4	23.6	19.0	19.4
Corpus Christi	1970	13.3	14.7	18.2	19.3	24.1	26.2	30.0	31.4	28.8	26.9	16.5	21.3
	1971	17.2	13.7	19.1	17.6	24.6	27.9	28.8	27.2	29.6	26.1	20.9	19.2
Upper Laguna	1970	18.7	13.5	19.6	24.0	27.9	29.9	29.6	30.7	29.4	21.2	17.2	15.1
	1971	19.4	17.7	21.5	25.8	26.4	28.8	30.1	29.6	27.5	27.0	19.6	21.6
Lower Laguna	1970	20.2	17.3	18.5	24.1	23.7	27.0	28.0	28.3	28.8	23.1	16.5	18.4
	1971	19.9	21.3	19.7	24.1	23.5	26.3	27.5	27.6	25.4	25.2	22.5	N.D.

Table 10

## Dissolved Oxygen (ppm) Averages

<u>Area</u>	<u>Year</u>	<u>Jan.</u>	<u>Feb.</u>	<u>Mar.</u>	<u>Apr.</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>Aug.</u>	<u>Sept.</u>	<u>Oct.</u>	<u>Nov.</u>	<u>Dec.</u>
Galveston	1970	10.6	8.4	8.8	7.9	7.8	6.9	7.2	6.9	5.8	7.0	8.4	8.4
	1971	8.3	8.3	6.2	6.8	6.8	6.8	6.2	6.5	7.4	7.1	9.0	8.2
Matagorda	1970	9.3	7.5	8.6	7.0	6.9	6.6	6.3	6.0	6.7	7.5	7.3	10.2
	1971	7.2	8.1	6.2	6.4	7.1	6.3	5.4	6.3	7.9	6.7	7.1	8.1
San Antonio	1970	10.9	10.0	9.3	9.6	N.D.	7.9	7.2	6.6	7.1	8.3	9.7	8.3
	1971	N.D.	8.6	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Aransas	1970	10.0	8.6	7.8	7.5	7.7	6.6	6.1	6.4	7.1	7.1	7.1	8.3
	1971	7.3	7.3	6.7	7.1	6.3	5.8	5.2	5.8	6.9	7.1	7.9	8.2
Corpus Christi	1970	4.2	7.2	5.5	5.3	4.6	4.9	6.0	4.2	4.2	3.9	4.5	4.3
	1971	4.6	5.2	3.6	4.3	4.2	6.4	5.7	4.9	5.8	6.9	8.0	7.5
Upper Laguna	1970	8.2	7.9	7.5	4.5	6.9	5.2	5.9	5.5	6.2	7.5	7.9	7.7
	1971	N.D.	6.2	7.0	6.1	6.0	5.8	6.3	6.6	7.8	6.4	8.0	7.6
Lower Laguna	1970	6.8	4.5	3.6	4.4	5.2	5.1	5.3	4.6	4.8	2.9	3.7	4.0
	1971	3.3	4.7	5.9	5.9	5.9	6.1	4.9	5.1	6.9	5.9	6.9	N.D.

Table 11

## pH Monthly Averages

<u>Area</u>	<u>Year</u>	<u>Jan.</u>	<u>Feb.</u>	<u>Mar.</u>	<u>Apr.</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>Aug.</u>	<u>Sept.</u>	<u>Oct.</u>	<u>Nov.</u>	<u>Dec.</u>
Galveston	1970	8.2	8.3	7.8	7.6	7.9	8.2	7.8	8.1	7.9	8.0	8.1	N.D.
	1971	N.D.	7.9	7.8	7.9	7.9	7.7	8.0	7.8	7.9	8.1	7.9	8.1
Matagorda	1970	8.3	8.4	8.3	8.3	8.2	8.3	8.2	8.5	8.1	8.2	8.4	8.3
	1971	8.3	8.5	8.4	8.4	8.0	8.3	8.5	8.7	8.1	8.4	8.6	8.5
San Antonio	1970	8.3	8.3	8.4	8.4	N.D.	8.0	8.1	8.3	8.4	8.3	8.3	8.3
	1971	N.D.	8.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Aransas	1970	8.2	8.1	8.1	8.1	8.2	7.8	8.2	8.2	8.1	8.3	7.9	7.3
	1971	8.0	8.5	8.2	8.4	7.8	8.0	8.0	7.9	7.8	7.9	7.7	8.0
Corpus Christi	1970	8.0	7.9	7.9	7.9	8.3	8.2	7.9	7.9	8.2	8.2	8.2	8.1
	1971	8.0	8.1	8.1	7.9	8.0	8.3	8.3	8.3	8.4	8.0	8.2	8.2
Upper Laguna	1970	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	7.7	8.3	8.1	8.1
	1971	8.1	8.1	8.2	8.3	8.3	7.7	8.5	8.4	8.2	8.5	8.4	8.3
Lower Laguna	1970	8.1	7.9	7.7	7.7	N.D.	7.9	8.0	8.2	7.8	7.8	7.7	8.1
	1971	8.3	8.0	8.2	8.2	8.2	8.2	8.1	8.3	8.1	7.9	7.8	N.D.



Table 12

## Turbidity Averages By Area

<u>Area</u>	<u>Year</u>	<u>Jan.</u>	<u>Feb.</u>	<u>Mar.</u>	<u>Apr.</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>Aug.</u>	<u>Sept.</u>	<u>Oct.</u>	<u>Nov.</u>	<u>Dec.</u>
Galveston	1970	67.5	80.0	191.5	105.2	83.0	54.6	69.8	91.2	69.4	84.1	28.0	70.4
	1971	79.0	55.2	84.6	64.2	91.0	47.8	73.3	52.4	44.8	48.5	43.4	55.4
Matagorda	1970	63.3	164.8	29.8	56.3	42.1	26.1	29.0	43.7	82.0	17.0	12.5	16.5
	1971	8.4	25.0	74.3	15.8	17.5	22.7	50.2	24.2	15.4	44.3	15.4	18.4
San Antonio	1970	55.0	129.0	58.0	35.1	N.D.	61.1	83.0	39.8	21.0	11.7	53.7	13.7
	1971	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Aransas	1970	39.5	43.0	61.5	65.1	50.9	47.3	44.9	38.1	49.5	53.8	49.5	28.9
	1971	37.7	63.8	74.1	62.3	53.7	45.5	46.5	33.1	51.2	60.1	57.6	34.3
Corpus Christi	1970	43.0	38.0	29.0	32.0	62.0	45.6	36.5	46.3	54.0	34.0	38.0	58.1
	1971	25.0	50.0	43.0	70.0	60.0	90.0	48.2	49.3	38.0	33.0	48.0	27.0
Upper Laguna	1970	47.0	39.0	48.0	50.0	34.0	25.0	25.0	25.0	37.0	35.0	41.0	35.0
	1971	40.0	30.0	55.0	38.0	53.0	35.0	35.0	29.0	52.0	69.0	51.0	51.0
Lower Laguna	1970	69.9	112.6	69.0	54.2	102.9	36.0	25.0	25.0	25.0	31.0	99.0	25.0
	1971	26.2	43.9	28.0	36.0	46.0	45.0	32.0	27.0	31.0	68.0	74.0	N.D.

Table 13

Commercial Landings By Area  
1970-1971

<u>Pounds of Finfish</u>						
<u>Year</u>	<u>Galveston</u>	<u>Matagorda</u>	<u>Aransas</u>	<u>Corpus Christi</u>	<u>Upper Laguna</u>	<u>Lower Laguna</u>
1971	228,592	275,703	564,484	169,078	1,269,865	1,361,572
1970	334,739	458,803	441,889	105,753	937,115	960,092
<u>Pounds of Shrimp</u>						
1971	4,081,046	1,543,679	921,116	159,256	-0-	-0-
1970	3,021,985	1,292,105	814,424	220,680	-0-	-0-
<u>Pounds of Crabs</u>						
1971	550,049	505,451	258,733	-0-	4,000	-0-
1970	2,561,041	269,609	289,628	-0-	4,720	-0-

# Supplemental Data

## Diurnal Samples By Area

### Galveston Bay - February 4, 1971

Time	Water Temp.	Salinity	Dissolved Oxygen	Turbidity
7:30 a.m.	17.5	22.2	7.0	64
11:30 a.m.	19.5	22.2	7.0	61
3:30 p.m.	19.5	22.2	8.0	59
7:30 p.m.	17.0	22.2	6.0	49
11:30 p.m.	16.0	22.2	7.0	68
3:30 a.m.	15.0	22.2	6.0	49

### Matagorda Bay - June 3, 1971

8:45 a.m.	23.5	24.4	7.8	70
10:45 a.m.	27.5	24.4	8.2	80
12:45 p.m.	29.5	24.4	8.1	100
2:45 p.m.	28.0	25.5	8.2	105
4:45 p.m.	28.0	26.1	8.2	50
6:45 p.m.	27.0	24.9	8.6	50

### Corpus Christi Bay - November 9, 1971

8:00 p.m.	20.2	0.0	8.1	58
12:30 a.m.	20.0	3.3	8.1	33
4:00 a.m.	19.2	5.6	8.1	40
8:00 a.m.	19.2	2.2	8.1	25
12:30 p.m.	21.5	3.3	9.1	30
4:00 p.m.	21.6	2.2	9.3	55

### Upper Laguna Madre - July 29, 1971

10:00 a.m.	N.D.	---	6.0	---
2:00 p.m.	N.D.	---	10.0	---
6:00 p.m.	N.D.	---	9.0	---
10:00 p.m.	N.D.	---	5.0	---
2:00 p.m.	N.D.	---	4.0	----
6:00 a.m.	N.D.	---	3.0	---
7:00a.m.	N.D.	---	4.0	---

# Supplemental Data

## Diurnal Samples By Area

### Lower Laguna Madre - November 4, 1971

Time	Water	Salinity	Dissolved Oxygen	Turbidity
10:30 a.m.	20.0	---	9.6	---
1:30 p.m.	20.0	---	9.4	---
4:30 p.m.	21.0	---	8.8	---
7:30 p.m.	20.0	---	8.2	---
10:30 p.m.	20.0	---	7.2	---
1:30 a.m.	20.0	---	7.0	---
4:30 a.m.	20.0	---	6.8	---
7:30 a.m.	20.0	---	6.6	---
10:30 a.m.	22.0	---	10.0	---

Supplemental Data  
Tide Data - Port Mansfield, Texas

Date	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.9	1.3	1.3	1.5	1.3		.9	.7		2.2	1.6	1.6
2	.8	1.2	1.3	1.3	1.2		.8	.7		2.4	1.6	1.3
3	1.0	.9		1.1	1.1		.8	.7		2.3	1.7	1.3
4	1.4	1.3		1.2	1.0		.7	.9		2.2	1.5	1.3
5	.1	1.4		1.4	.7		.7	.9		2.0	1.6	1.5
6	.2	1.5	.3	1.4	1.3	N	.8	1.0	N	2.1	1.8	1.4
7	.1	1.7	.5	1.0	1.7		.8	1.1		2.9	1.7	1.6
8		.5	.2	1.0	1.6	O	.7	1.1	O	1.9	1.4	1.6
9		.8	.3	.6	1.5		.6	1.0		2.8	1.6	1.5
10	.5	.7	.4	.3	1.0	T	.7	1.0	T	1.6	1.6	1.7
11	.7	.6	.4	.2	1.5		.9	1.0		1.6	1.5	1.4
12	.8	.9	.4	.4	1.2		1.0	1.0		1.5	1.4	1.4
13	1.0	.4	.6	.4	1.6		1.1	1.1		1.5	1.4	1.3
14	1.0	.1	.8	.7	1.0	A	.7	1.0	A	1.5	1.6	1.3
15	.9	.1	1.0	.7	.8		.9	.9		1.7	1.5	1.5
16	.7	.2	.8	1.0	1.0	V	.9	.8	V	1.8	1.8	1.5
17	.6	.4	.7	1.3	1.0		.8	.7		2.0	2.0	2.0
18	.8	.5	.5	1.4	1.0	A	.7	.6	A	2.1	2.1	1.0
19	.9	.9	1.0	1.6	1.4		.7	.7		2.2	1.9	0.9
20	.5	.8	.5	1.8	1.4	I	.6	.8	I	1.8	1.4	1.0
21	.5	1.0	.7	1.5	1.3		.5	.8		1.7	1.5	1.3
22	.8	.5	.7	1.5	1.3	L	.7	.9	L	1.7	1.5	1.3
23	1.0	.5	.8	1.7	1.5		.8	.9		1.7	2.2	1.1
24	1.1	.7	.9	1.5	1.5	A	.7	1.0	A	1.8	1.6	1.1
25	1.0	1.0	.9	1.4	1.9		.9	.9		2.0	1.3	1.4
26	1.0	1.0	1.4	1.5	1.6	B	.8	1.0	B	2.0	1.4	1.2
27	1.1	1.2	1.0	1.6	1.4		.7	1.0		1.8	1.4	1.4
28	1.0	1.0	1.2	1.6	1.5	L	.7	.9	L	1.8	1.5	1.5
29	1.1		1.6	1.6	1.4		.7	1.1		1.7	1.5	1.3
30	1.3		1.2	1.6	1.4	E		1.0	E	1.6	1.6	1.6
31	1.2		1.2	1.5	1.6						---	1.5

Figure 1  
Hydrographic Stations - Galveston Bay System

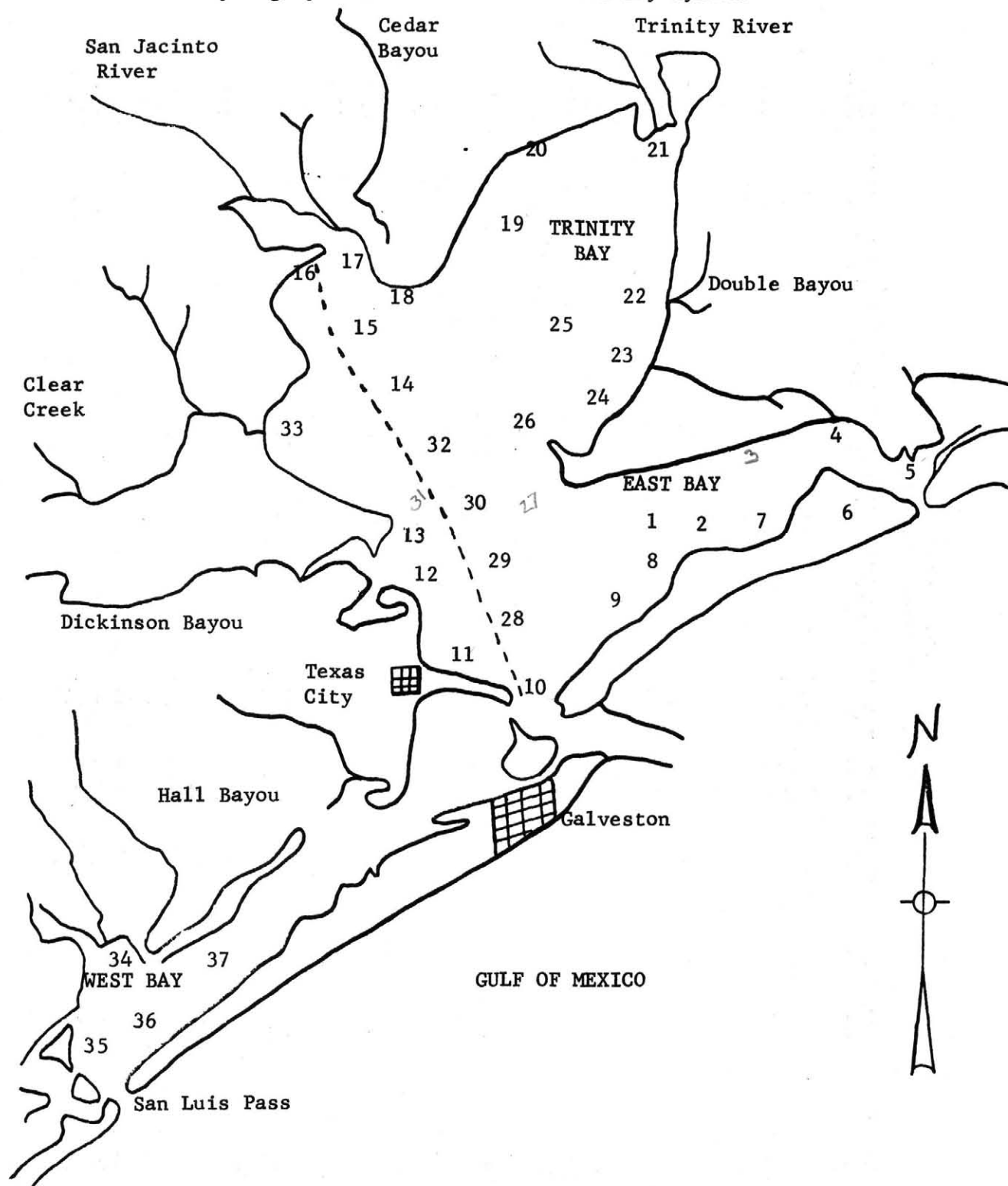


Figure 2  
Hydrographic Stations - Matagorda Bay System

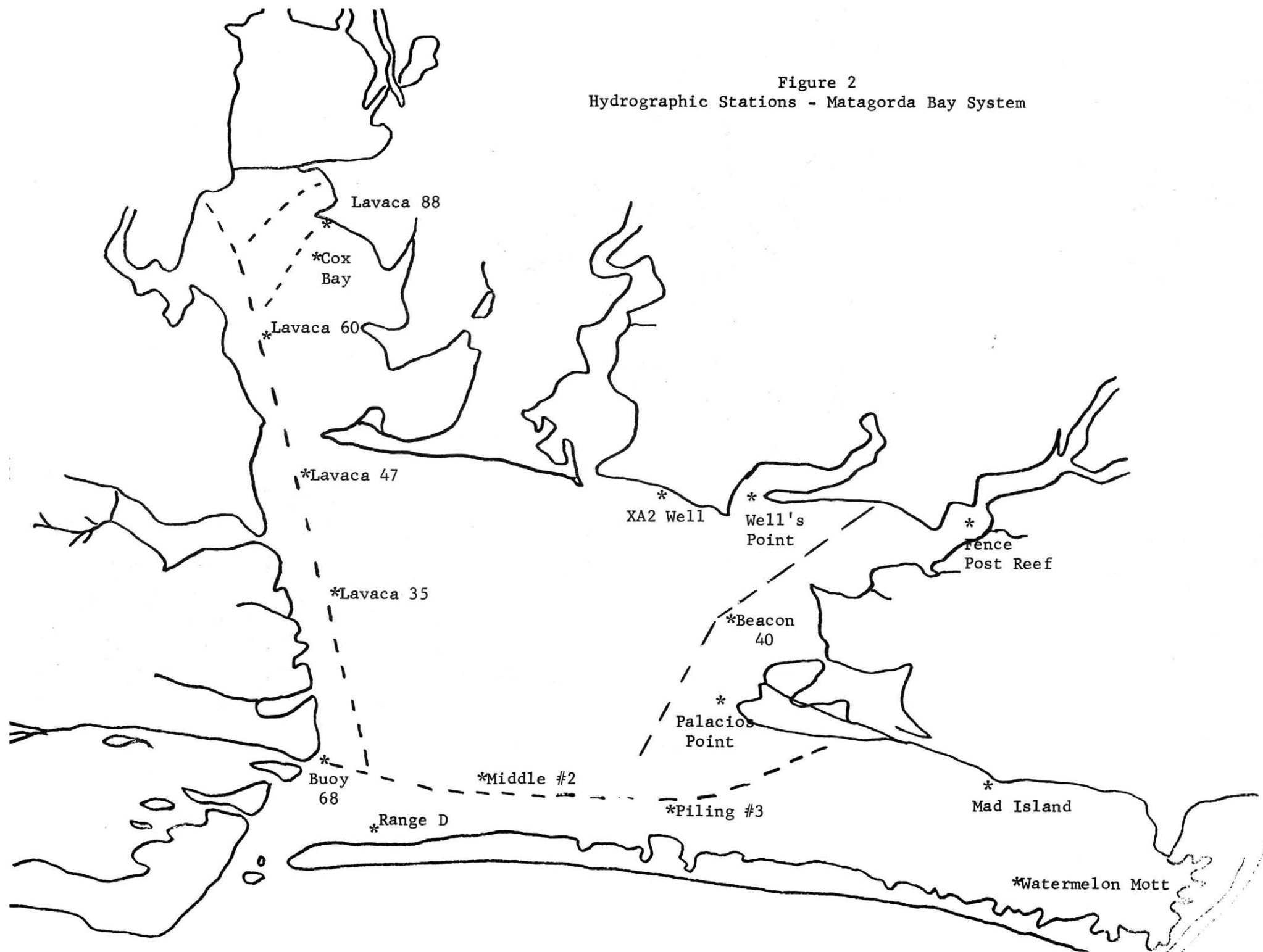
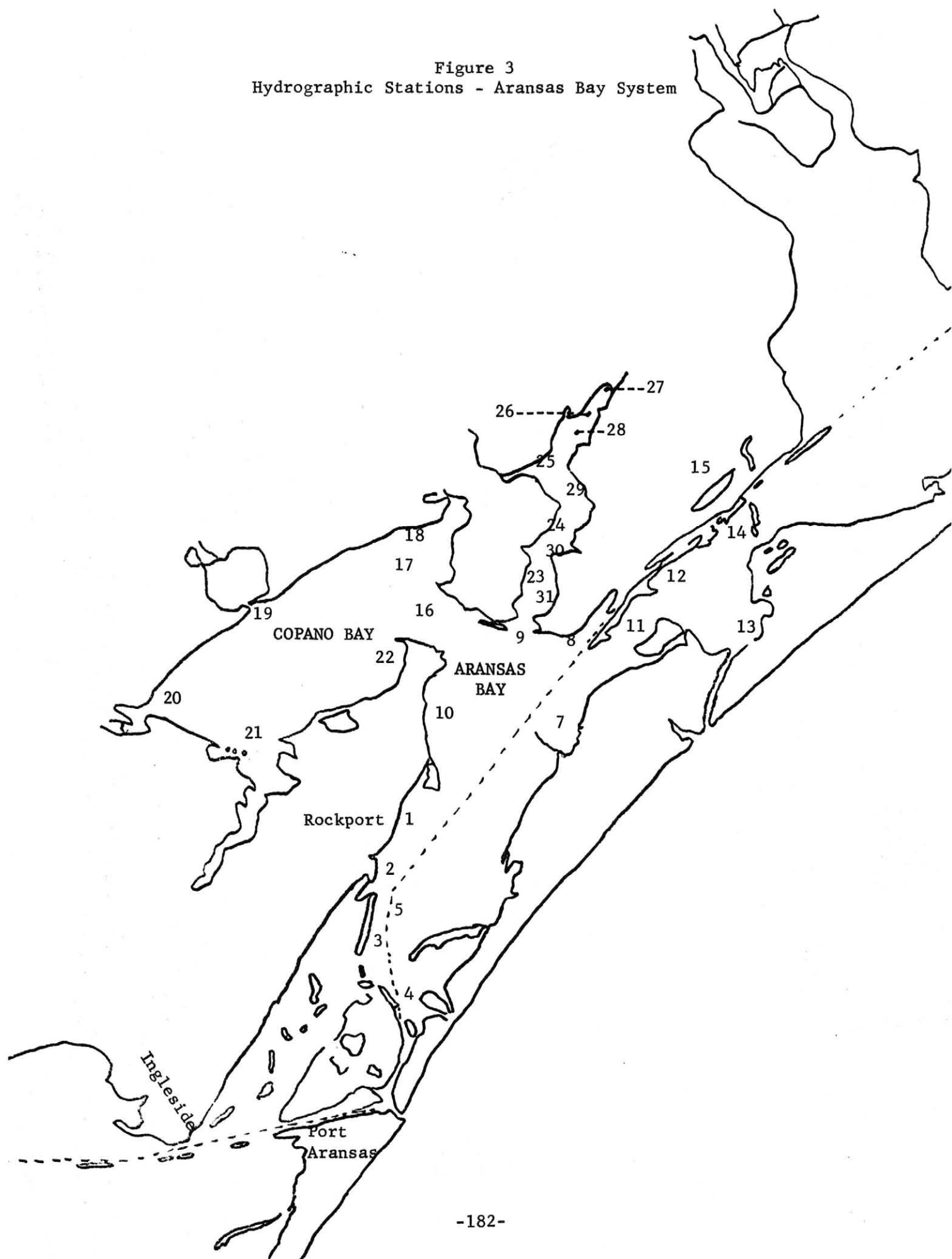


Figure 3  
Hydrographic Stations - Aransas Bay System





Hydrographic Stations -  
Corpus Christi Bay System

Figure 4

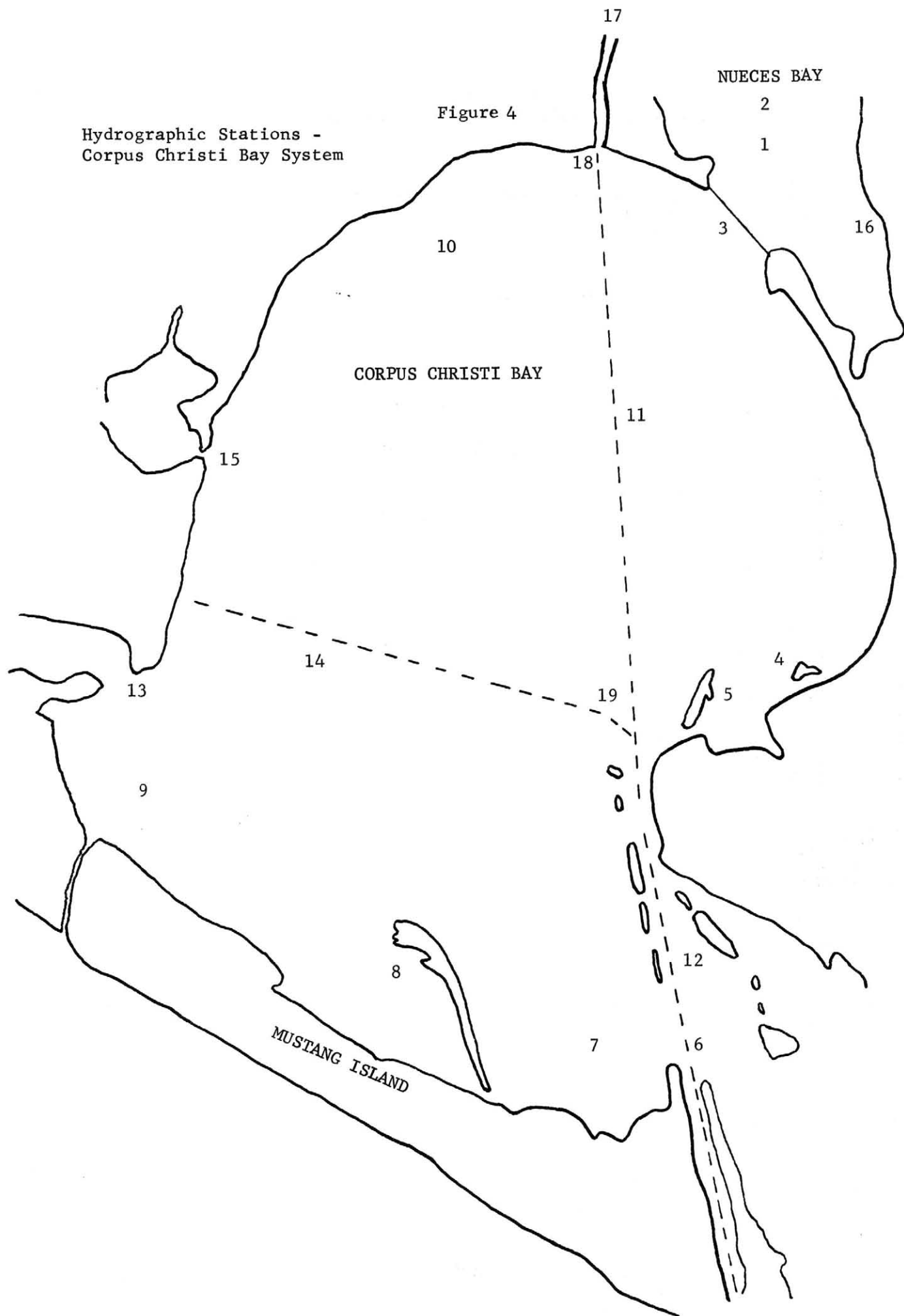


Figure 5  
Hydrographic Stations - Upper Laguna Madre

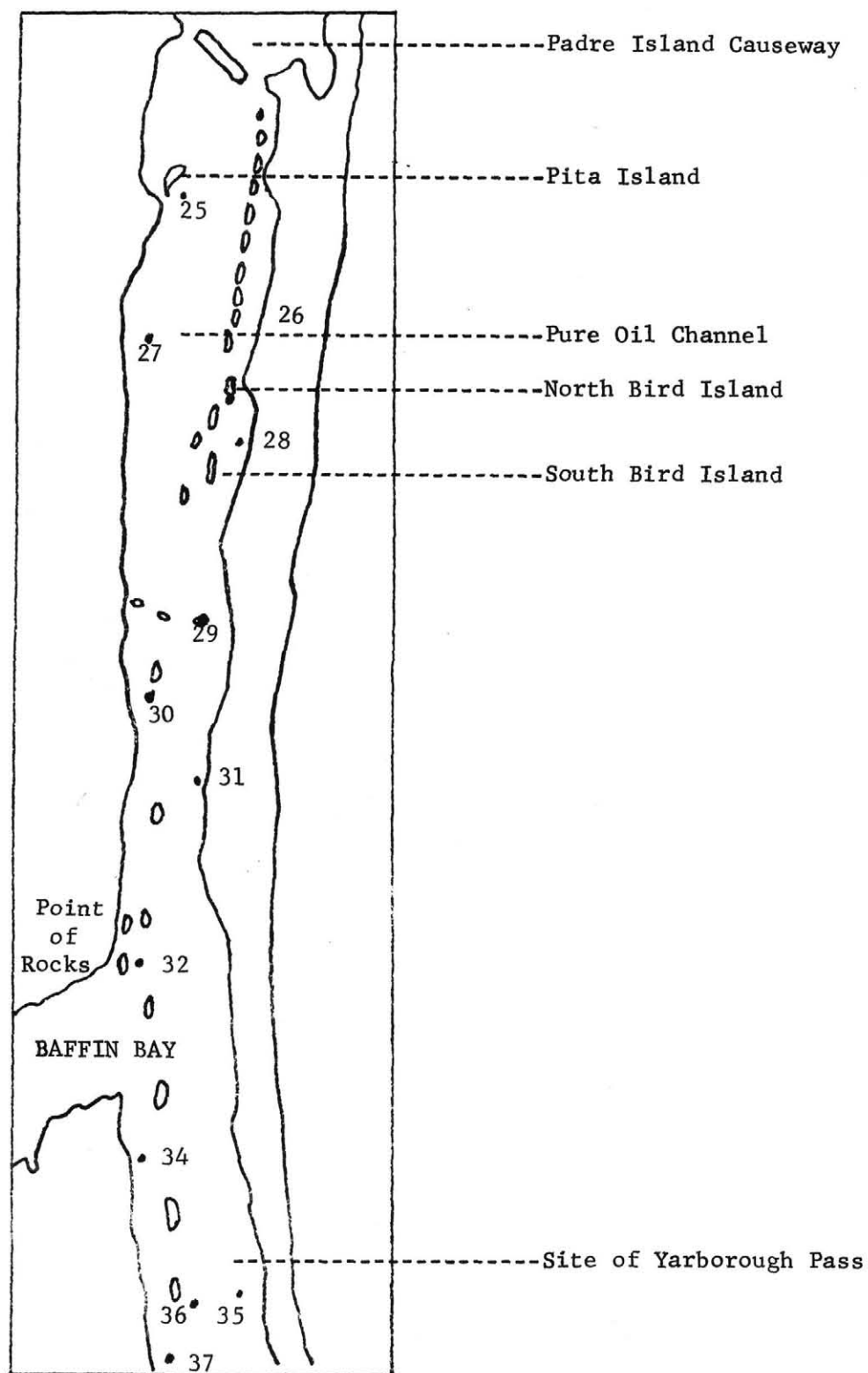


Figure 6  
Hydrographic Stations - Lower Laguna Madre

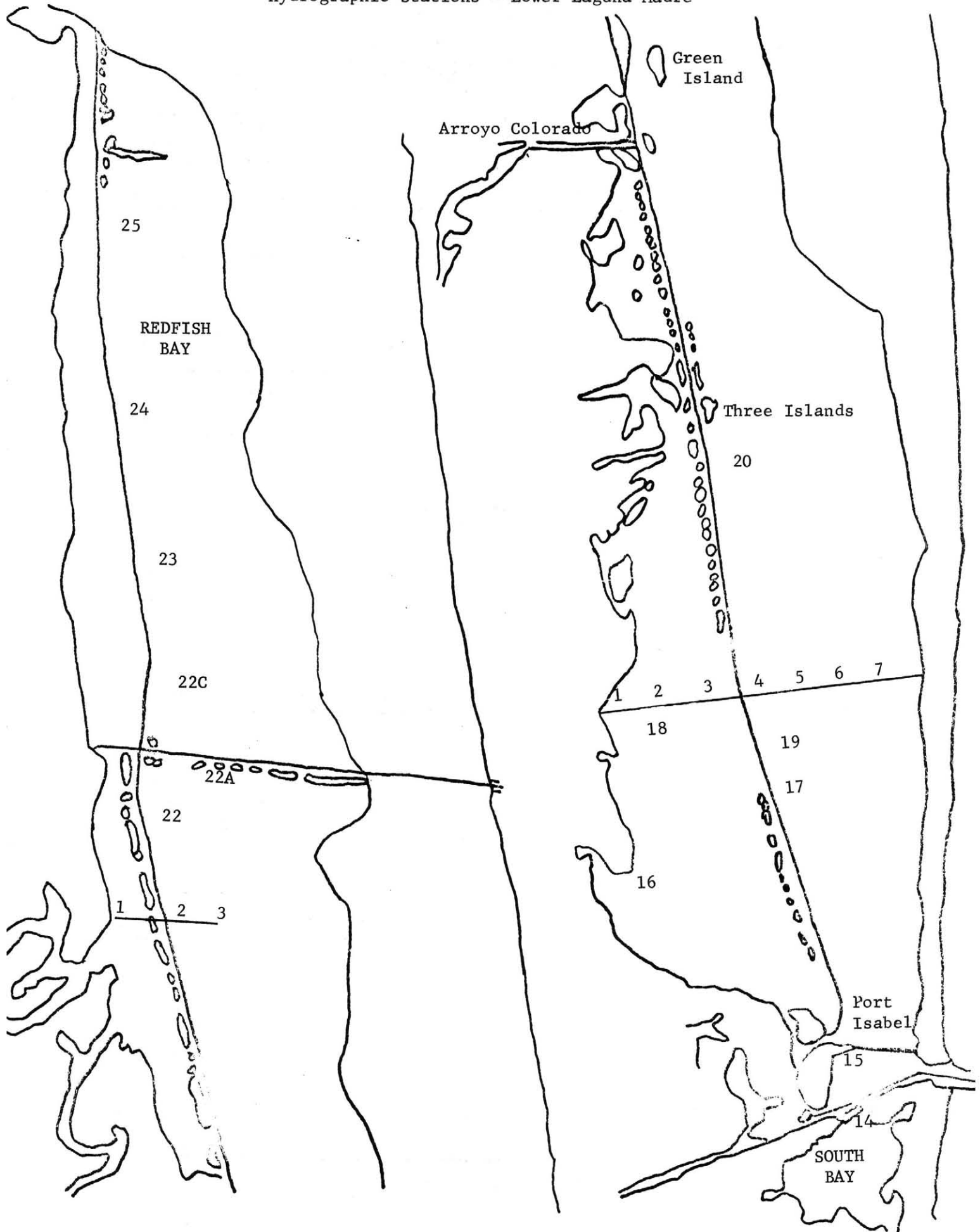


Figure 7  
Salinity, Rainfall and Turbidity  
1970-1971

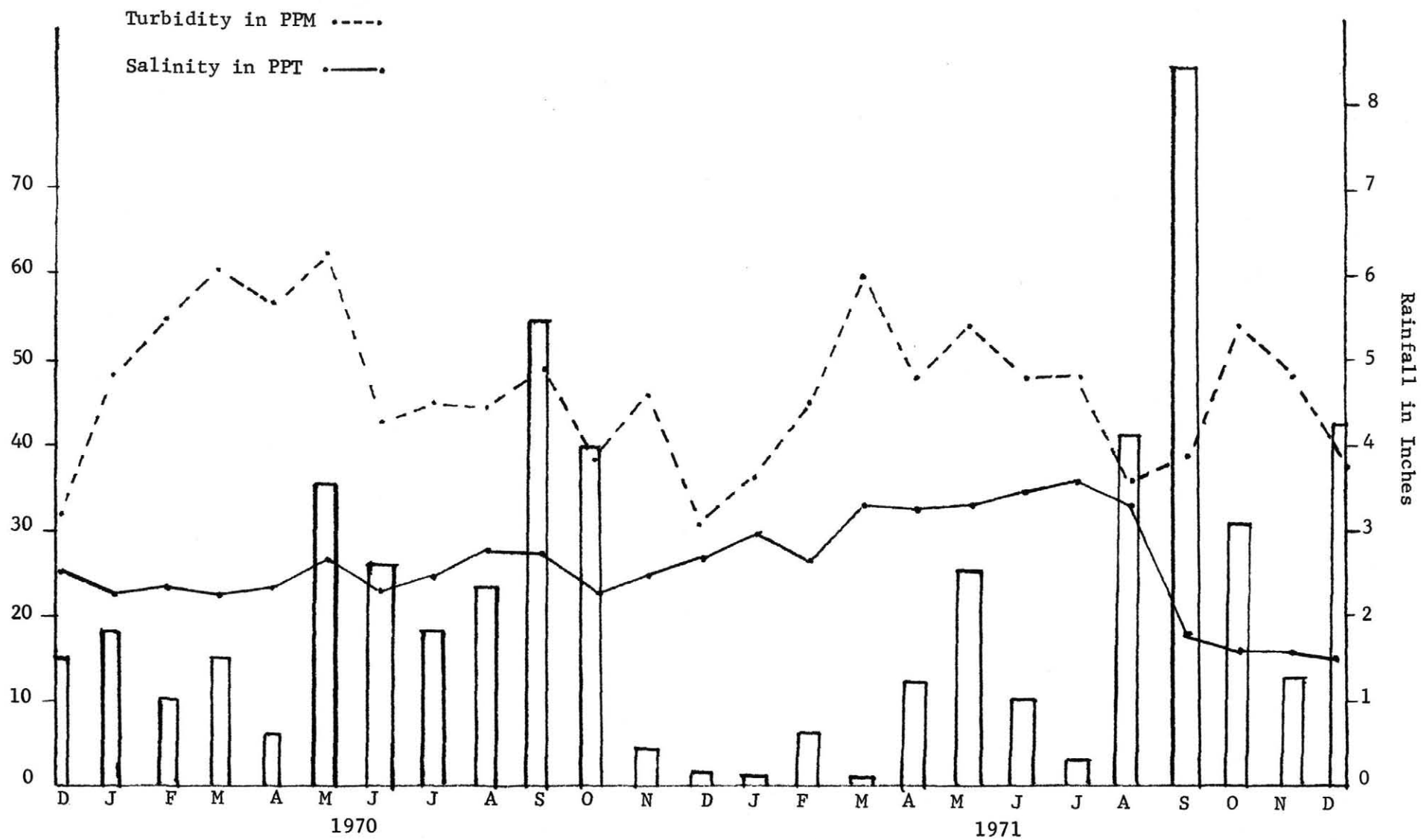


Figure 8

Dissolved Oxygen and Water Temperature  
1970-1971

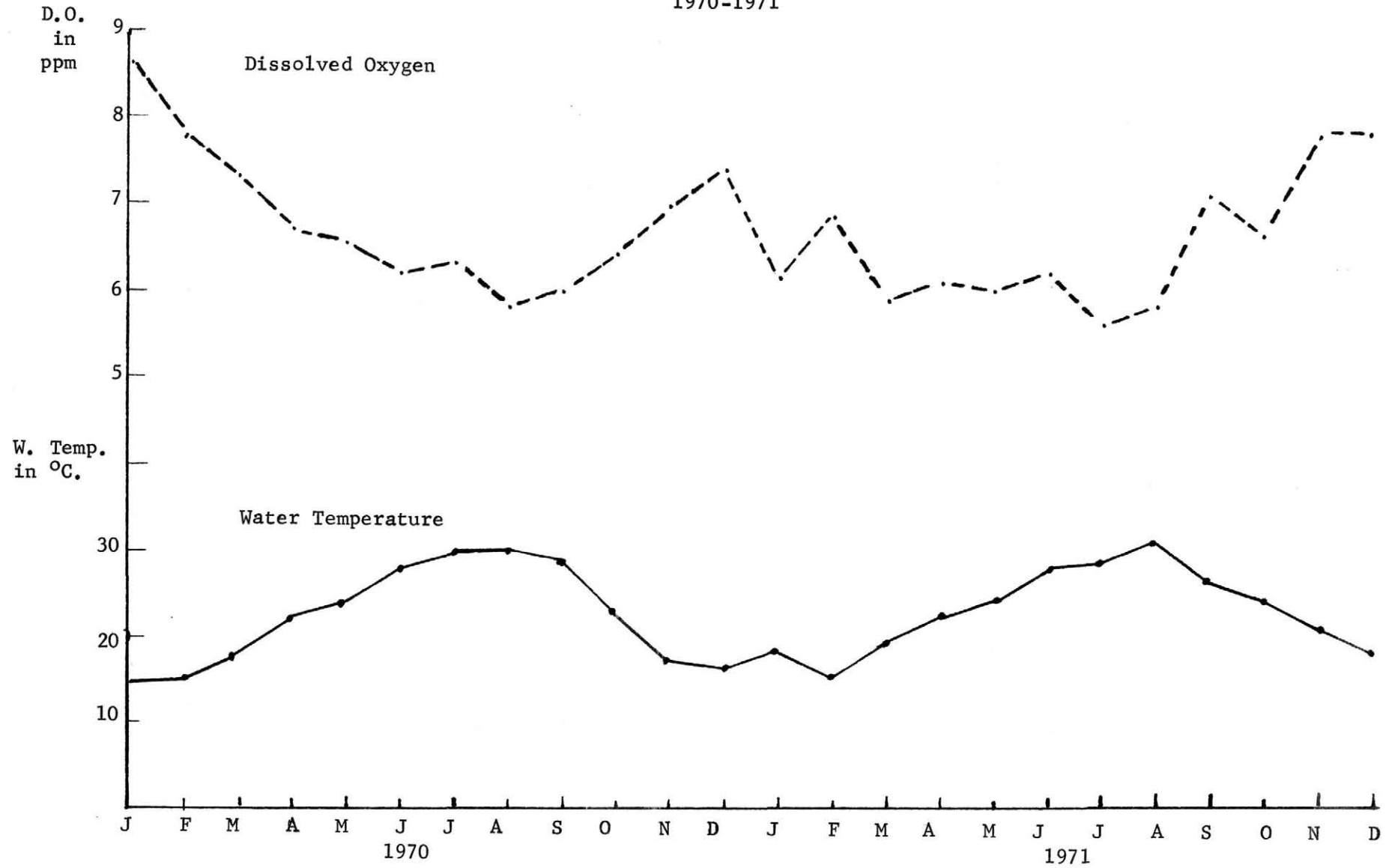
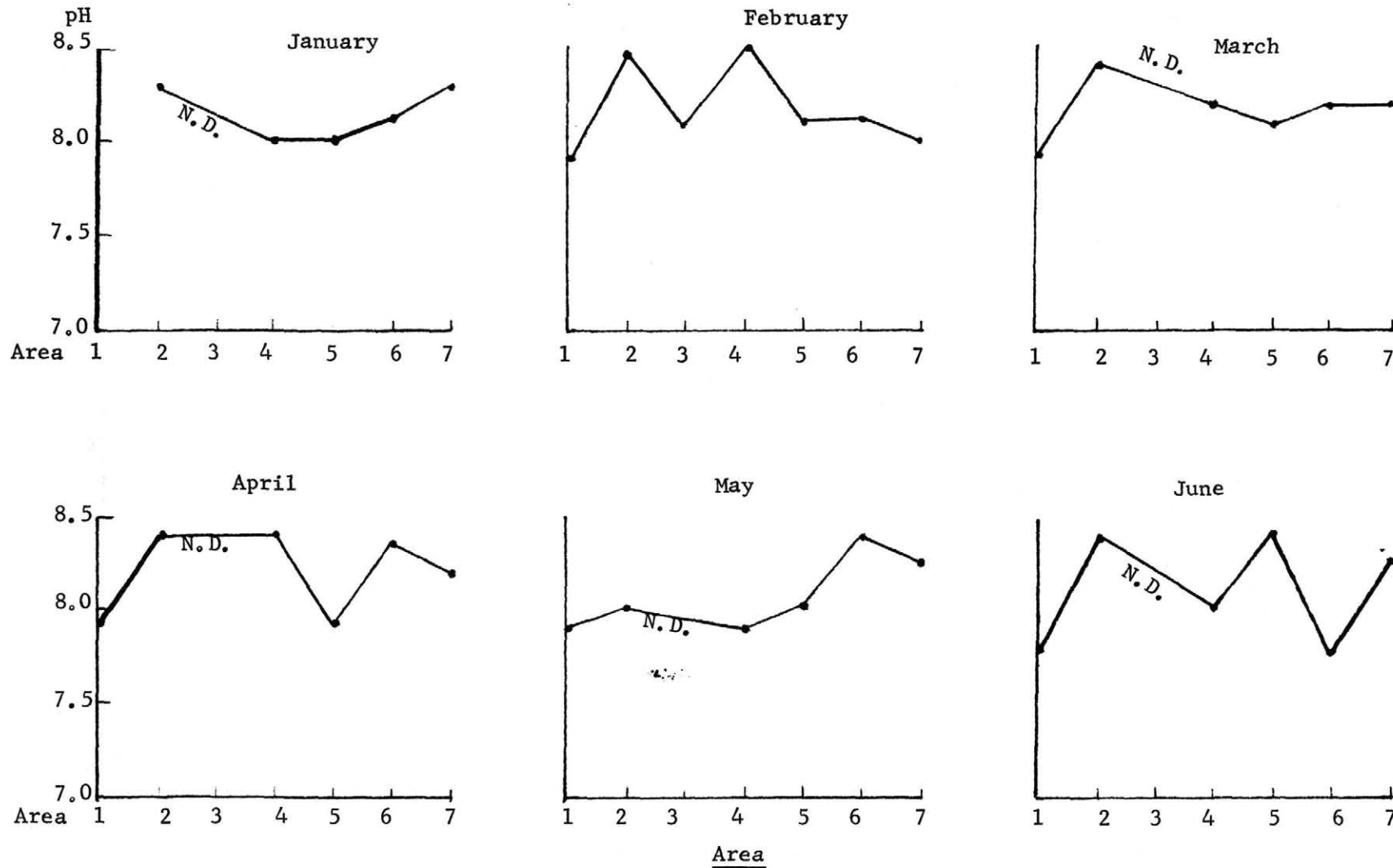


Figure 9

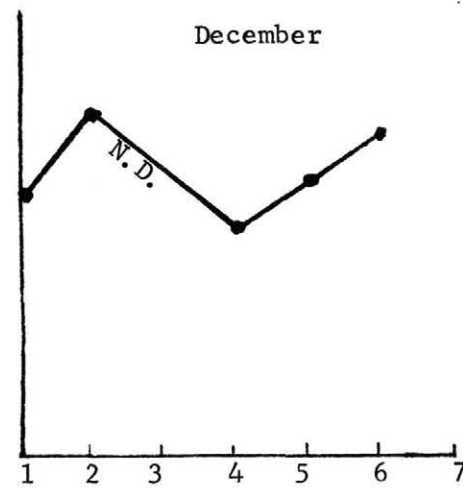
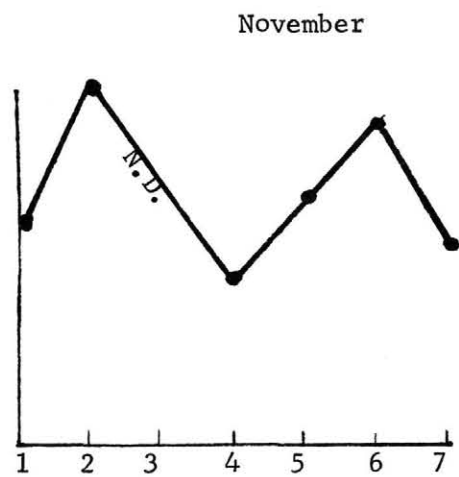
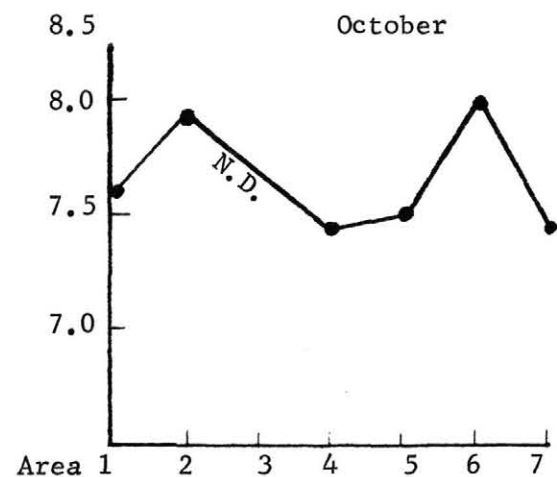
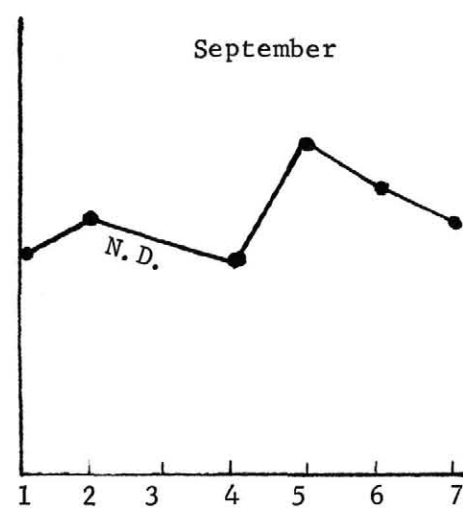
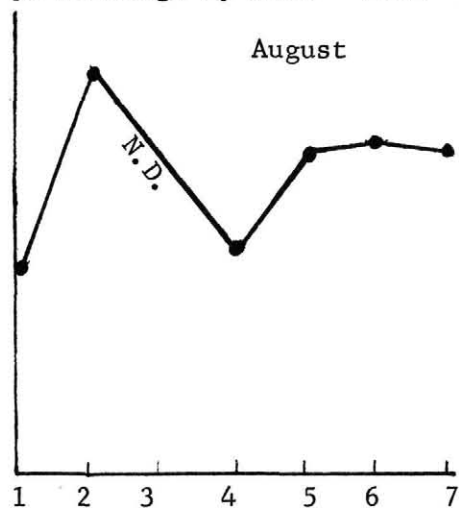
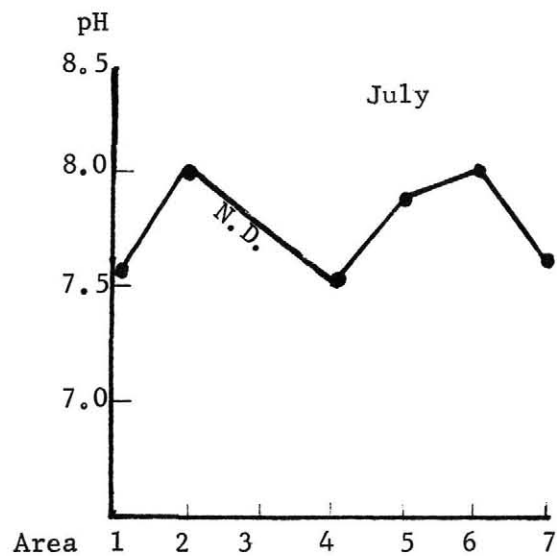
pH Readings By Area - 1971



1. Galveston Bay
2. Matagorda Bay
3. San Antonio Bay

4. Aransas Bay
5. Corpus Christi Bay
6. Upper Laguna Madre
7. Lower Laguna Madre

Figure 10  
pH Readings By Area - 1971



Area

- |                    |                       |
|--------------------|-----------------------|
| 1. Galveston Bay   | 4. Aransas Bay        |
| 2. Matagorda Bay   | 5. Corpus Christi Bay |
| 3. San Antonio Bay | 6. Upper Laguna Madre |
|                    | 7. Lower Laguna Madre |