

Job Report

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Project No. MF-R-6 Date June 28, 1965
Project Name: Analysis of Populations of Sports and Commercial Fin-Fish and
of Factors Which Affect These Populations in the Coastal Bays
of Texas
Period Covered: January 1, 1964 - December 31, 1964 Job No. 14

Hydrographic and Meteorological Study of the Matagorda Bay System

Abstract: Salinities and the Matagorda Bay System increased in 1964 and rainfall was slightly below normal. Water temperatures were similar to those found in 1963. A hard freeze occurred in mid-January.

Objective: To gather information on the hydrography and meteorology of Matagorda Bay.

Procedures: Water samples were taken periodically at stations shown in Figures 1 through 3 in conjunction with the shrimp (Project MS-R-6, Job No. 3), fin-fish (Project MF-R-6, Job No. 4), and oyster (Project MO-R-6, Job No. 9) projects.

Surface water samples were taken semimonthly at four 10-foot trawl stations from March through December, bimonthly at four trammel net stations throughout the year, semimonthly at five bar-seine stations from March through December, and monthly at six minnow seine stations from February through December. Three additional minnow seine stations, located in East Matagorda Bay, were sampled monthly from May through December.

A brief description of each of these stations is included in the Job Report for Project MC-R-3, Job No. 3.

Bottom water samples were taken monthly at three oyster sampling locations.

In addition, 15 hydrographic stations, located in primary and secondary bay areas, were sampled monthly. Bottom water samples were taken at all stations; surface water samples were taken from four selected stations.

Water temperature was recorded in degrees centigrade and salinity was calibrated in parts per thousand. Water salinity determinations were made by the use of specific gravity hydrometers and the readings were converted to salinity in parts per thousand by the use of Knudsen's Hydrographic Tables.

The Matagorda Bay system was divided into three areas in order to simplify the presentation of data. Area 1 includes Lavaca Bay, Cox Bay, Keller Bay, Carancahua Bay, and that portion of Matagorda Bay lying west of a line drawn from Shicke Point to Green's Bayou (Figure 1). Area 2 includes Turtle Bay, Tres Palacios Bay, and that portion of Matagorda Bay lying east of the above mentioned line (Figure 2). Area 3 consisted of East Matagorda Bay (Figure 3).

Findings and

Discussion:

Hydrographic data for each station is shown by month in Tables 1 through 7.

Rainfall data was obtained for the Palacios station. Total rainfall for 1964 was 36.4 inches. Rainfall totals for each month were as follows: January - 2.97 inches, February - 2.91 inches, March - 2.13 inches, April - 0.23 inches, May - 1.54 inches, June - 3.08 inches, July - 1.73 inches, August - 6.26 inches, September - 6.30 inches, October - 1.95 inches, November - 2.71 inches, and December - 4.59 inches. Air temperatures ranged from a low of 20° F. (-6.7° C.) on January 14 to a high of 95° F. (35° C.) on June 26, and August 4 and 5.

Two major alterations in bay conditions were noted in 1964, these being the closure of Brown Cedar Cut in March, and the dredging of a new pass to the Gulf through Matagorda Peninsula.

An ecological and hydrological study of Brown Cedar Cut area was initiated in May. Preliminary results of this study are discussed in the Job Report for Project No. MF-R-6, Amendment to Job No. 4 in this volume. The information presented in Table 7 indicates that salinities in East Matagorda Bay have not increased over the average for similar stations in Matagorda Bay. This is probably due to sufficient runoff from the Colorado River, Caney Creek and Live Oak Bayou.

Early in the year, a new pass was opened through Matagorda Peninsula to the Gulf of Mexico approximately one mile southwest of the Matagorda Club Airfield. The pass, which constitutes a part of the Matagorda Ship Channel Project of the U. S. Army Corps of Engineers, consists of a channel 38 feet deep by 300 feet wide from the 38-foot depth in the Gulf to the Gulf side of the Peninsula and a 36-foot deep by 300-foot wide channel through the Peninsula. In conjunction with this project, the existing 9-foot deep by 100-foot wide channel to Port Lavaca was redredged to enlarge it to 36 feet deep and 200 feet wide.

Rubble-mound jetties are being constructed from the Peninsula to the 24-foot depth in the Gulf and spoil jetties are being placed on the bay side of the channel for a distance of 1,000 feet.

In December, the 9-foot deep by 100-foot wide channel to Palacios was enlarged to 12 feet deep by 125 feet wide.

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Table 1
Water Temperature (In Degrees Centigrade) at Hydrographic
Stations by Month - Matagorda Bay - 1964

<u>STATIONS</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>SEP.</u>	<u>OCT.</u>	<u>NOV.</u>	<u>DEC.</u>
Well Point	10.8	--	15.0	--	26.6	28.6	29.2	29.8	--	19.8	16.4	13.6
Beacon 2	9.5	--	16.5	--	27.0	28.8	29.6	29.6	--	19.2	16.0	13.2
XA2 Well	8.5	--	16.5	--	26.8	28.4	29.7	29.6	--	19.6	16.2	12.8
Carancahua Pass	10.6	--	16.0	--	27.0	28.2	29.8	29.8	--	19.8	16.4	13.4
Lavaca No. 1	9.9	--	16.5	--	26.8	28.9	29.5	29.5	--	20.0	16.5	14.6
La Salle Bayou	10.1	--	16.0	--	26.8	28.9	29.8	29.2	--	19.8	16.8	14.6
Buoy 68--Bottom	10.6	--	15.0	--	--	28.8	30.0	29.8	--	20.2	18.2	14.6
Buoy 68--Surface	11.4	--	16.0	--	27.0	28.9	30.0	30.2	--	20.2	18.2	14.0
Middle No. 2--Bottom	9.0	--	15.5	--	--	27.9	30.2	29.8	--	20.6	18.8	14.4
Middle No. 2--Surface	11.3	--	16.0	--	26.8	28.0	30.4	30.0	--	20.8	19.0	14.0
Range D--Bottom	10.7	--	16.0	--	--	28.2	30.6	29.8	--	20.0	17.2	14.4
Range D--Surface	12.0	--	16.0	--	26.8	28.4	30.6	30.0	--	20.0	17.0	14.6
Piling No. 3--Bottom	9.7	--	16.0	--	--	28.8	29.8	30.0	--	20.2	16.0	13.8
Piling No. 3--Surface	12.6	--	16.0	--	27.2	29.3	30.4	30.0	--	20.2	15.8	14.2
Trout Bayou	11.6	--	16.0	--	27.6	28.9	--	30.0	--	19.6	16.0	14.0
State Mats	10.3	--	17.0	--	27.4	28.3	30.9	30.4	--	20.8	17.0	14.5
Buoy 10	9.4	--	17.0	--	27.4	28.8	30.4	30.8	--	21.0	16.6	14.0
Coon Island	12.2	--	17.0	--	27.0	28.6	31.0	30.6	--	20.0	18.0	14.6
Fence Post Reef	10.5	--	16.5	--	27.1	29.0	32.4	30.0	--	20.2	18.0	14.6

Table 2
Salinity in p.p.t. at Hydrographic Stations by Month
Matagorda Bay - 1964

<u>STATION</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>SEP.</u>	<u>OCT.</u>	<u>NOV.</u>	<u>DEC.</u>
Well Point	31.3	--	28.2	--	26.6	28.3	28.5	31.9	--	30.4	28.7	26.3
Beacon 2	31.5	--	29.3	--	26.7	28.5	29.3	32.4	--	30.1	28.9	27.5
XA2 Well	31.3	--	29.6	--	26.6	28.2	29.3	31.8	--	30.4	29.2	27.8
Carancahua Pass	31.0	--	29.3	--	26.6	26.6	29.0	30.3	--	29.6	27.9	27.5
Lavaca No. 1	30.7	--	29.0	--	26.3	25.3	28.5	31.3	--	29.9	29.2	28.9
La Salle Bayou	31.0	--	30.9	--	26.6	28.4	31.7	33.0	--	30.2	29.7	28.8
Buoy 68--Bottom	31.0	--	30.9	--	--	30.0	33.2	36.5	--	31.7	30.5	30.2
Buoy 68--Surface	31.3	--	31.1	--	24.6	29.9	33.0	36.3	--	31.7	30.0	29.4
Middle No. 2--Bottom	30.7	--	30.6	--	--	32.4	31.6	36.4	--	32.4	30.2	29.6
Middle No. 2--Surface	30.5	--	30.3	--	24.8	32.2	30.5	36.1	--	32.3	30.2	29.3
Range D--Bottom	31.3	--	31.1	--	--	31.9	31.6	35.2	--	31.8	29.7	29.6
Range D--Surface	31.3	--	30.6	--	25.0	30.8	31.1	32.9	--	31.0	29.4	27.7
Piling No. 3--Bottom	30.9	--	29.8	--	--	28.1	30.8	33.2	--	30.2	28.4	28.3
Piling No. 3--Surface	30.0	--	30.1	--	26.3	27.9	30.7	31.9	--	30.5	28.1	27.1
Trout Bayou	29.7	--	29.8	--	27.1	27.9	--	34.2	--	30.1	28.5	27.7
State Mats	29.2	--	29.8	--	27.3	25.4	30.3	33.3	--	28.3	28.1	25.3
Buoy 10	30.0	--	28.2	--	27.1	28.2	30.5	31.7	--	30.2	28.1	25.5
Coon Island	30.0	--	26.1	--	27.6	27.7	27.8	30.1	--	29.9	27.6	25.0
Fence Post Reef	28.9	--	24.0	--	28.2	26.5	24.9	26.6	--	27.8	26.3	24.5

Table 3
Area No. 1 Salinity - Matagorda Bay - 1964

<u>STATION</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>SEP.</u>	<u>OCT.</u>	<u>NOV.</u>	<u>DEC.</u>
<u>60' Seine</u>												
Keller Bay	--	--	--	--	30.1	26.0	29.1	27.5	31.9	25.5	26.5	--
Powderhorn Lake	--	22.9	20.3	23.7	26.1	8.4	18.6	13.0	25.9	26.3	19.0	--
Port O'Connor	--	28.7	31.7	27.7	24.9	28.6	33.3	35.8	34.3	31.7	30.9	--
Matagorda Club	--	--	33.4	--	28.1	20.5	32.0	33.9	--	31.7	29.8	--
<u>Trammel Net</u>												
Powderhorn Lake	--	--	27.9	--	27.0	--	30.5	--	27.5	--	25.4	--
<u>6' Bar-Seine</u>												
Keller Creek	--	--	0.0	13.2	29.4	22.6	8.3	16.8	0.0	--	7.5	24.2
			11.2	27.5	24.4	0.0	14.2	0.0	10.1	21.7	11.5	--
Powderhorn Lake	--	--	21.9	23.6	27.0	25.7	10.0	13.7	27.4	--	19.7	22.4
	--	--	27.9	27.7	26.0	10.3	18.5	12.8	27.2	20.7	24.8	--
<u>10' Trawl</u>												
Carancahua Pass	--	--	30.3	27.7	28.8	28.0	26.6	29.1	30.6	--	29.0	27.8
	--	--	28.7	29.1	26.8	--	28.7	30.5	32.1	30.2	26.6	--
<u>Oyster Sample</u>												
Sand Point	29.5	--	28.7	28.8	26.8	24.7	26.9	28.7	30.7	24.7	27.7	28.9
<u>Salinity Run</u>												
Carancahua Pass	31.0	--	29.3	--	26.6	26.6	29.0	30.3	--	29.6	27.9	27.5
Lavaca No. 1	30.7	--	29.0	--	26.3	25.3	28.5	31.3	--	29.9	29.2	28.9
LaSalle Bayou	31.0	--	30.9	--	26.6	28.4	31.7	33.0	--	30.2	29.7	28.8
Buoy 68--Bottom	31.0	--	30.9	--	--	30.0	33.2	36.5	--	31.7	30.5	30.2
Buoy 68--Surface	31.3	--	31.1	--	24.6	29.9	33.0	36.3	--	31.7	30.0	29.4
Range D--Bottom	31.3	--	31.1	--	--	31.9	31.6	35.2	--	31.8	29.7	29.6
Range D--Surface	31.3	--	30.6	--	25.0	30.8	31.1	32.9	--	31.0	29.4	27.7
Middle No. 2--Bottom	30.7	--	30.3	--	--	32.4	31.6	36.4	--	32.4	30.2	29.6
Middle No. 2--Surface	30.5	--	30.6	--	24.8	32.2	30.5	36.1	--	32.3	30.2	29.3
Piling No. 3--Bottom	30.9	--	29.8	--	--	28.1	30.8	33.2	--	30.2	28.4	28.3
Piling No. 3--Surface	30.0	--	30.1	--	26.3	27.9	30.7	31.9	--	30.5	28.1	27.1

Table 4
Area No. 1 - Temperatures - Matagorda Bay - 1964

<u>STATION</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>SEP.</u>	<u>OCT.</u>	<u>NOV.</u>	<u>DEC.</u>
<u>60' Seine</u>												
Keller Bay	--	--	--	--	30.8	28.4	34.0	32.2	27.3	24.0	21.6	--
Powderhorn Lake	--	17.4	21.9	27.2	31.0	32.5	29.8	30.4	28.6	22.7	23.6	--
Port O'Connor	--	13.3	19.0	27.5	28.4	32.5	30.6	30.0	29.5	20.0	16.6	--
Matagorda Club	--	--	16.5	--	27.8	28.6	32.0	31.6	--	20.0	18.0	--
<u>Trammel Net</u>												
Powderhorn Lake	--	--	17.4	--	26.4	--	27.4	--	--	--	11.4	--
<u>6' Bar-Seine</u>												
Keller Creek	--	--	17.3	25.3	25.4	28.8	32.5	30.8	30.5	--	23.2	16.8
	--	--	19.9	26.0	25.8	27.8	31.0	32.4	27.2	25.0	22.6	--
Powderhorn Lake	--	--	17.0	24.0	25.0	29.8	33.0	30.0	33.0	--	23.8	18.2
	--	--	19.0	24.4	24.4	27.4	30.0	34.2	26.2	26.0	24.0	--
<u>10' Trawl</u>												
Carancahua Pass	--	--	12.6	17.8	24.8	24.8	28.2	29.0	30.2	--	23.4	16.2
	--	--	17.2	21.0	26.0	--	29.4	30.2	27.4	21.6	24.4	--
<u>Oyster Sample</u>												
Sand Point	11.0	--	15.7	21.0	27.4	28.9	29.0	29.3	29.4	20.4	21.7	9.5
<u>Salinity Run</u>												
Carancahua Pass	10.6	--	16.0	--	27.0	28.2	29.8	29.8	--	19.8	16.4	13.4
Lavaca No. 1	9.9	--	16.5	--	26.8	28.9	29.5	29.5	--	20.0	16.5	14.6
La Salle Bayou	10.1	--	16.0	--	26.8	28.9	29.8	29.2	--	19.8	16.8	14.6
Buoy 68--Bottom	10.6	--	15.0	--	--	28.8	30.0	29.8	--	20.3	18.2	14.6
Buoy 68--Surface	11.4	--	16.0	--	27.0	28.9	30.0	30.2	--	20.2	18.2	14.0
Range D--Bottom	10.7	--	16.0	--	--	28.2	30.6	29.8	--	20.0	17.2	14.4
Range D--Surface	12.0	--	16.0	--	26.8	28.4	30.6	30.0	--	20.0	17.0	14.0
Middle No. 2--Bottom	9.0	--	15.5	--	--	27.9	30.2	29.8	--	20.6	18.8	14.4
Middle No. 2--Surface	11.3	--	16.0	--	26.8	28.0	30.4	30.0	--	20.8	19.0	14.6
Piling No. 3--Bottom	9.7	--	16.0	--	--	28.8	29.8	30.0	--	20.2	16.0	13.8
Piling No. 3--Surface	12.6	--	16.0	--	27.2	29.3	30.4	30.0	--	20.2	15.8	14.2

Table 5
Area No. 2 - Salinities - Matagorda Bay - 1964

<u>STATION</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>SEP.</u>	<u>OCT.</u>	<u>NOV.</u>	<u>DEC.</u>
<u>60' Seine</u>												
Crescent V	--	2.9	15.3	22.1	22.8	11.5	18.4	16.6	13.2	20.3	17.0	--
Whiskey Flats	--	1.0	18.5	25.2	20.1	16.8	9.9	14.5	13.7	15.4	18.6	--
<u>Trammel Net</u>												
Wolf Point	--	--	7.8	--	23.0	--	19.3	--	0.0	--	22.5	--
Shell Beach	--	21.9	--	28.5	--	28.2	--	28.4	--	26.8	--	0.0
Coon Island	--	24.9	--	27.7	--	28.5	--	28.4	--	30.3	--	5.3
<u>6' Bar-Seine</u>												
Carancahua Causeway	--	--	2.5	13.1	19.1	8.1	5.1	10.0	0.0	--	7.2	15.5
	--	--	4.3	16.6	11.0	8.2	10.0	0.0	8.0	7.4	9.1	--
Jensen Point	--	--	--	--	29.6	30.8	28.7	30.6	23.0	--	26.5	25.7
	--	--	--	29.2	30.8	25.2	29.3	21.1	24.2	27.1	22.2	--
Red Bluff	--	--	4.5	15.0	18.9	8.0	7.1	0.0	0.0	--	9.7	22.4
	--	--	6.5	18.0	10.0	13.5	6.6	0.0	7.7	12.2	8.0	--
<u>10' Trawl</u>												
Coon Island	--	--	27.1	27.7	28.5	28.3	27.2	28.9	29.3	--	27.9	27.0
	--	--	27.1	28.3	27.3	27.0	29.6	26.4	29.5	28.6	25.8	--
Cedars	--	--	28.9	29.4	28.1	27.3	27.4	29.4	30.1	--	25.8	27.0
	--	--	28.1	28.0	26.0	28.4	28.1	31.5	33.4	27.8	23.8	--
Cotton Bayou	--	--	30.4	29.4	27.0	27.3	26.7	31.7	32.4	--	31.0	28.3
	--	--	30.8	27.7	26.8	29.2	29.8	30.9	34.3	--	29.7	--
<u>Oyster Sample</u>												
Middle Ground	30.3	26.9	28.5	27.7	27.8	28.6	29.4	30.0	30.1	29.5	26.7	24.4
Gadwall Reef	30.8	27.7	28.6	29.3	27.3	29.4	28.5	28.9	32.0	29.7	27.1	29.1
<u>Salinity Run</u>												
Trout Bayou	29.7	--	29.8	--	27.1	27.9	--	34.2	--	30.1	28.5	27.7
State Mats	29.2	--	29.8	--	27.3	25.4	30.3	33.3	--	28.3	28.1	25.3
Buoy 10	30.0	--	28.2	--	27.1	28.2	30.5	31.7	--	30.2	28.1	25.5
Beacon 2	31.5	--	29.3	--	26.7	28.5	29.3	32.4	--	30.1	28.9	27.5
Well Point	31.3	--	28.2	--	26.6	28.2	28.5	31.9	--	30.4	28.6	26.3
Coon Island	30.0	--	26.1	--	27.6	27.7	27.8	30.1	--	29.9	27.6	25.0
Fence Post Reef	28.9	--	24.0	--	28.2	26.5	24.9	26.6	--	27.7	26.3	24.5

Table 6
Area No. 2 - Temperatures - Matagorda Bay - 1964

<u>STATION</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>SEP.</u>	<u>OCT.</u>	<u>NOV.</u>	<u>DEC.</u>
<u>60' Seine</u>												
Crescent V	--	18.1	24.8	26.5	34.2	27.6	32.5	32.9	27.5	24.4	21.0	--
Whiskey Flats	--	14.1	21.5	23.8	31.6	27.0	31.1	28.6	27.0	25.0	19.0	--
<u>Trammel Net</u>												
Wolf Point	--	--	17.0	--	24.0	--	25.8	--	--	--	11.0	--
Shell Beach	--	12.3	--	25.4	--	28.4	--	28.6	--	16.4	--	13.4
Coon Island	--	11.8	--	26.6	--	28.0	--	29.8	--	18.2	--	13.6
<u>6' Bar-Seine</u>												
Carancahua Bay	--	--	20.2	23.0	25.8	27.8	34.5	32.0	30.2	--	23.0	18.0
	--	--	17.8	26.8	25.4	29.4	30.0	33.0	27.8	25.0	21.8	--
Jensen Point	--	--	--	--	26.0	29.2	36.2	34.6	32.0	--	23.2	18.0
	--	--	--	27.8	30.2	29.2	33.0	34.0	32.0	24.5	24.6	--
Red Bluff	--	--	17.6	20.2	25.6	25.8	33.2	32.2	32.8	--	24.8	18.0
	--	--	18.5	25.8	27.6	28.0	32.4	32.5	30.0	24.0	24.8	--
<u>10' Trawl</u>												
Coon Island	--	--	14.1	17.9	25.6	23.6	27.4	28.8	30.0	--	24.0	18.0
	--	--	17.0	20.5	26.4	27.8	29.0	31.2	25.8	21.2	24.8	--
Cedars	--	--	13.2	18.0	24.6	25.0	29.2	28.2	30.4	--	23.6	17.5
	--	--	17.2	20.0	25.6	27.8	29.0	30.4	27.0	21.3	24.6	--
Cotton Bayou	--	--	12.5	18.0	25.0	25.0	29.4	29.2	30.2	--	23.2	17.0
	--	--	16.8	20.5	26.2	28.0	29.5	30.0	27.8	--	24.5	--
<u>Oyster Sample</u>												
Middle Ground	6.0	13.2	16.3	24.4	27.6	28.8	30.0	29.2	29.6	21.1	11.3	12.8
Gadwall Reef	6.4	13.2	16.2	21.2	28.2	28.7	28.7	29.6	29.7	20.6	24.4	10.2
<u>Salinity Run</u>												
Trout Bayou	11.6	--	16.0	--	27.6	28.9	--	30.0	--	19.6	16.0	14.0
State Mats	10.3	--	17.0	--	27.2	28.3	30.9	30.4	--	20.0	17.0	14.5
Buoy 10	9.4	--	17.0	--	27.4	28.8	30.4	30.8	--	21.0	16.6	14.0
Beacon 2	9.5	--	16.5	--	27.0	28.8	29.6	29.6	--	19.2	16.0	13.2
Well Point	10.8	--	15.0	--	26.6	28.6	29.2	29.8	--	19.8	16.4	13.6
Coon Island	12.2	--	17.0	--	27.0	28.6	31.0	30.6	--	20.0	18.0	14.6
Fence Post Reef	10.5	--	16.5	--	27.1	29.0	32.4	30.0	--	20.2	18.0	14.6

Table 7
Area No. 3 - Salinities and Temperatures - East Matagorda Bay - 1964

<u>STATION</u>	TEMPERATURE											
	<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>SEP.</u>	<u>OCT.</u>	<u>NOV.</u>	<u>DEC.</u>
Dressing Point	--	--	--	--	29.8	29.2	--	28.3	--	20.4	21.0	--
Brown Cedar Cut	--	--	--	--	30.0	30.0	--	28.0	--	22.8	20.0	--
Eidlebach Flats	--	--	--	--	30.0	30.8	27.0	28.0	--	22.8	21.0	--
Hog Island	--	--	--	--	27.5	32.2	27.2	--	--	22.0	--	--
Raymond Landing	--	--	--	--	26.8	30.6	27.4	28.0	--	22.0	21.4	--

<u>STATION</u>	SALINITY											
	<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>SEP.</u>	<u>OCT.</u>	<u>NOV.</u>	<u>DEC.</u>
Dressing Point	--	--	--	--	27.3	27.6	--	26.3	--	23.8	24.2	--
Brown Cedar Cut	--	--	--	--	22.5	28.7	--	25.4	--	24.6	24.3	--
Eidlebach Flats	--	--	--	--	24.9	28.7	26.2	26.5	--	25.9	25.1	--
Hog Island	--	--	--	--	27.8	28.8	31.5	--	--	25.4	--	--
Raymond Landing	--	--	--	--	24.6	28.7	29.1	26.1	--	25.7	25.3	--

Figure 1
Sampling Stations in Area 1
Matagorda Bay - 1964

Station	Gear
#1 Keller Bay	60' Seine
#2 Powderhorn Lake	60' Seine
#3 Port O'Connor	60' Seine
#4 Matagorda Club	60' Seine
#5 Powderhorn Lake	Trammel Net
#6 Powderhorn Lake	6' Bar-Seine
#7 Keller Creek	6' Bar-Seine
#8 Carancahua Pass	10' Trawl
#9 Sand Point	Oysters
#10 Carancahua Pass	Salinity Run
#11 Lavaca #1	Salinity Run
#12 La Salle Bayou	Salinity Run
#13 Buoy 68	Salinity Run
#14 Range Tower D	Salinity Run
#15 Middle #2	Salinity Run
#16 Piling #3	Salinity Run

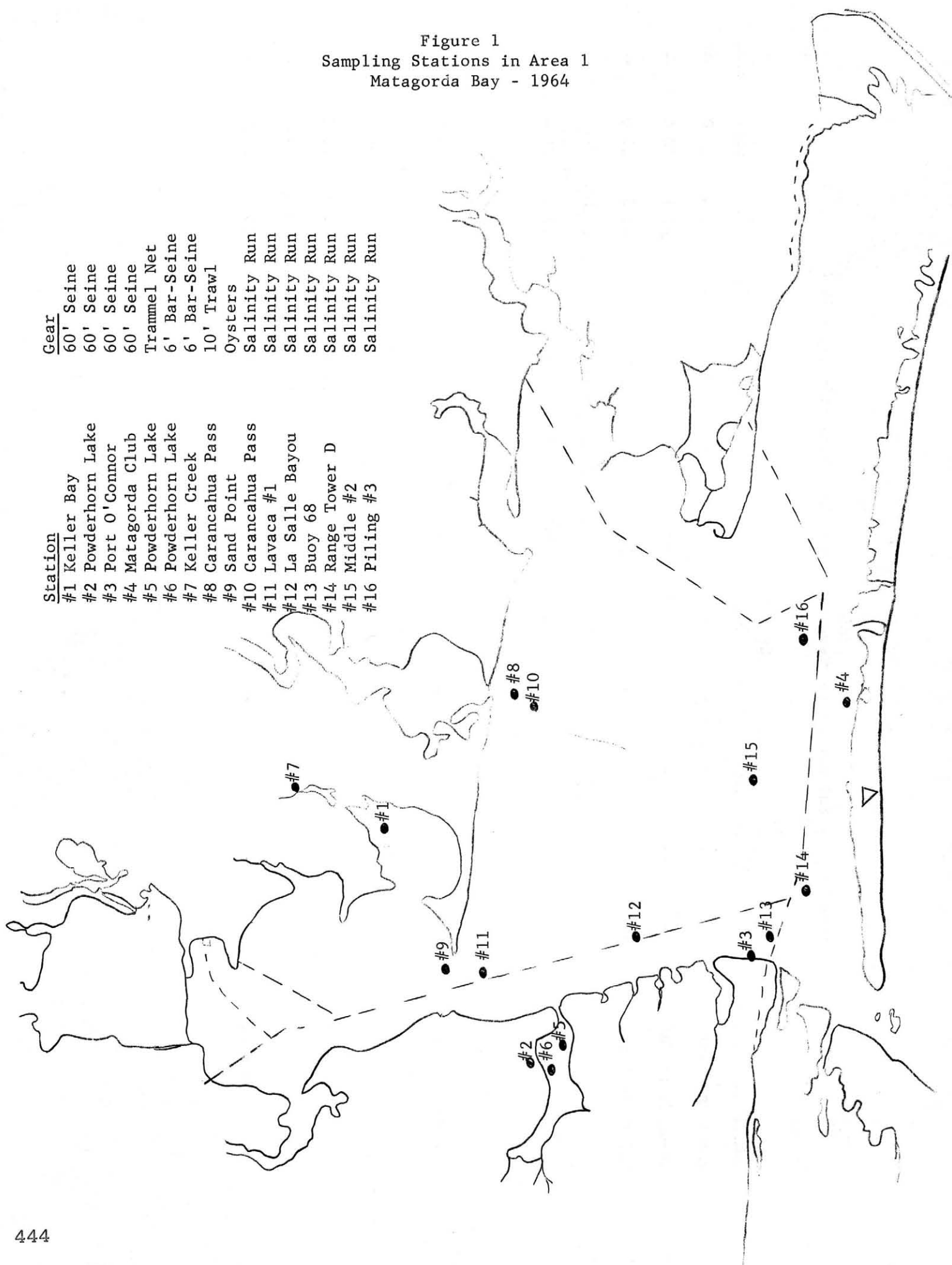
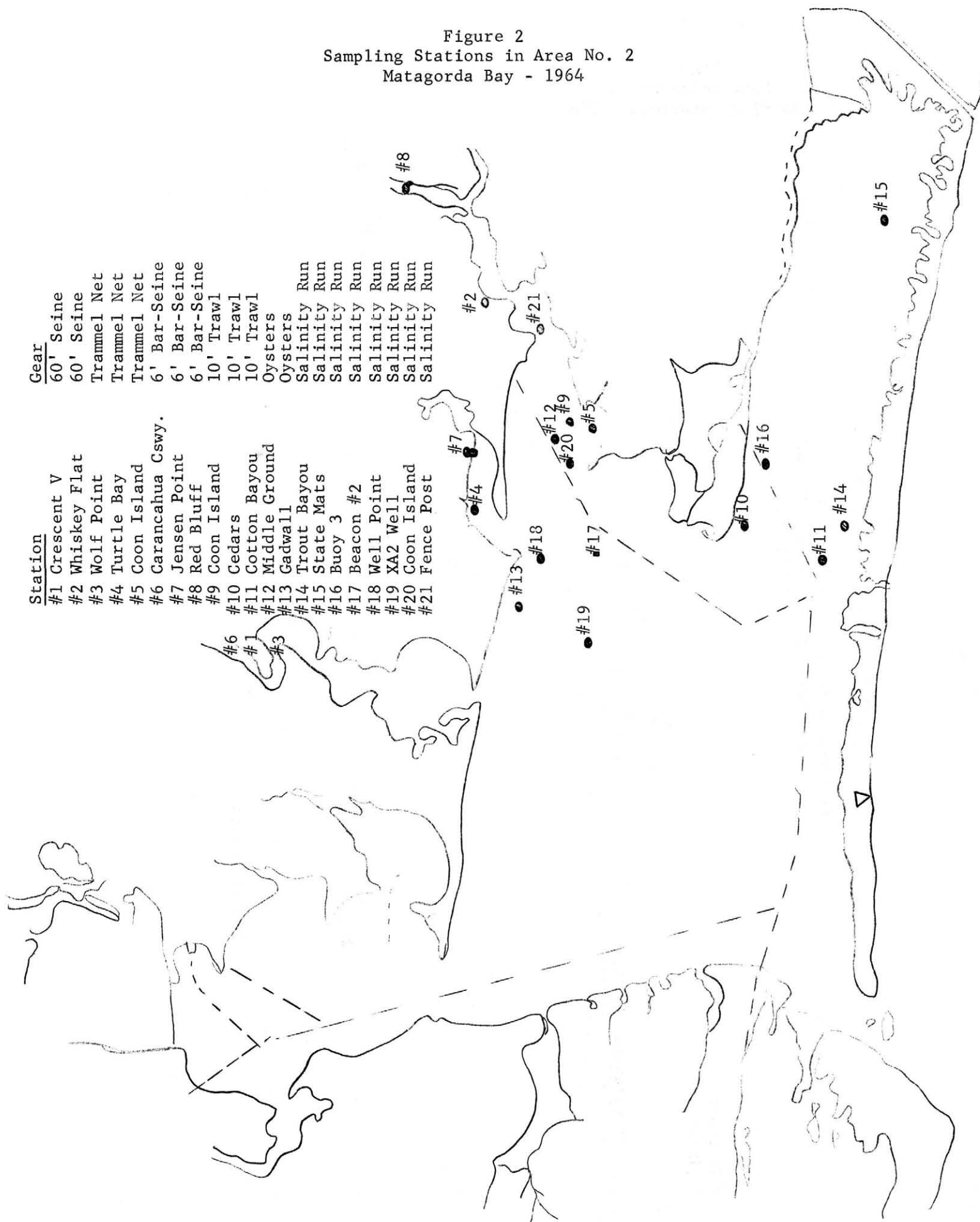


Figure 2
Sampling Stations in Area No. 2
Matagorda Bay - 1964



Hydrographic Stations - 60' Minnow Seine

- | | |
|--------------------|--------------------|
| #1 Dressing Point | -1-Brown Cedar Cut |
| #2 Raymond Landing | -2-Eidlebach Flat |
| | -3-Hog Island |

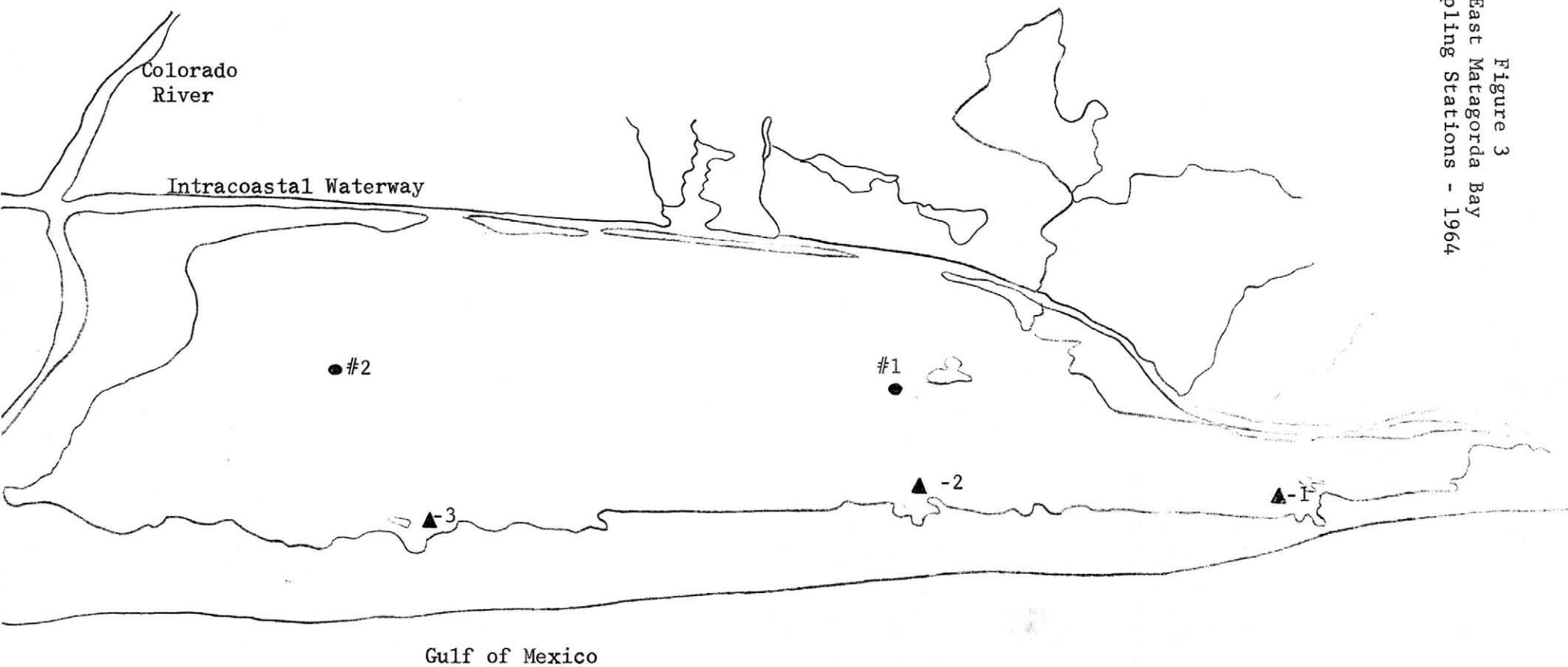


Figure 3
East Matagorda Bay
Sampling Stations - 1964