

Pollution Control Division

AMBIENT WATER QUALITY

SARASOTA COUNTY,

FLORIDA

POLLUTION CONTROL DIVISION

OF

ENVIRONMENTAL SERVICES

1980

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501

TABLE OF CONTENTS

	<u>PAGE #</u>
Introduction	1-4
Water Quality Standards (County & State)	5-6
Class I, II, III, (Locations)	7
Bay Monitoring	8
Bay Run I	9-13
Bay Run II	14-18
Bay Run III	19-23
Bay Run IV	24-29
Stream Monitoring	30
North Sarasota County	31-36
Central Sarasota County	37-42
South & Southeast Sarasota County	44-50

Ambient Water Quality Monitoring Program

The purpose of our program is to monitor the water quality of Sarasota County. This objective is accomplished through a monthly surveillance of the waterways. Once a station is established the site is sampled on a regular basis to provide consistent documentation of water quality trends.

In the bays there are 41 stations that are sampled at least once a month for pH, Conductivity, Dissolved Oxygen, Redox Potential, Turbidity, and Total Coliform. The 34 stream run stations are also sampled once a month for Temperature, pH, Conductivity, Dissolved Oxygen, Redox Potential, Turbidity, and Total Coliform. Quarterly, these stations are sampled for Nitrates, Nitrites, Ammonia, TKN, Ortho Phosphates, and Total Phosphorous.

Physical, chemical, and bacteriological quality control is maintained through approved EPA/FDER procedures. The calibration of instruments, duplicate sampling and analysis, spike sample analysis and complete record keeping for all procedures is an integral part of our program.

Quality Assurance

In order to comply with State and Federal quality assurance requirements for laboratory certification, duplicate samples were collected and analyzed from stream and bay runs throughout the year. Results of duplicate sample pairs were then used to measure

precision. Warning and upper control limits were calculated for all parameters and are presented below. Paired differences falling outside the upper control limits indicate either sampling or laboratory error.

Starting in November 1980, a second quality control program was initiated. In this case duplicate lab analyses was done on the same water sample. One such analysis was done for each stream run and bay run station. Data from these analyses supplement the field duplicate sampling in evaluation of field and laboratory precision.

Shewhart Control Charts are used to evaluate quality control including both precision and accuracy of field and laboratory procedures. The charts utilize the range between duplicate or replicate analysis to graphically illustrate quality control. For precision determinations, the range is the difference between either the individual values obtained for two duplicate samples or the two values obtained from replicate analysis of a single sample. For the determination of accuracy the range is the difference between the known value of a "spiked" sample and the values obtained by analysis. A spiked sample is made by adding a known quantity of reagent grade chemical to a sample to be analyzed.

The following charts provide information on the precision of 12 field and laboratory parameters and precision and accuracy of 5 nutrient analyses for 1980:

PARAMETER	#REPLICATE PAIRS	\bar{R}	WARNING CONTROL LIMIT	UPPER CONTROL LIMIT	#OUT OF CONTROL	% ON CONTROL
<u>PRECISION</u>						
<u>FIELD</u>						
Temperature	46	0.074	0.186	0.242	4	91.3
pH	31	0.097	0.243	0.317	2	93.5
Conductivity	41	99.44	249.59	325.17	3	92.7
Redox	29	5.55	13.93	18.15	3	89.7
D.O.	45	0.099	0.248	0.324	3	93.3
<u>LABORATORY</u>						
pH	74	0.03	0.08	0.10	3	95.5
Turbidity	78	0.49	1.23	1.60	7	91.0
Conductivity	77	193	484	631	9	88.3
Color	43	4.0	10	13	3	93.0
<u>BACTERIOLOGY</u>						
Total Coliform	79	0.063	0.158	0.206	4	94.9
Fecal Coliform	48	0.059	0.148	0.193	3	93.8
Fecal Strep	44	0.079	0.198	0.258	4	90.9

<u>NUTRIENTS</u>						
<u>PRECISION</u>						
Nitrite+Nitrate (NO ₂ +NO ₃)-N	42	0.002	0.005	0.006	6	85.6
Ammonia(NH ₃)	23	0.008	0.021	0.027	4	82.6
TKN	30	0.208	0.522	0.679	2	93.3
P-Othro	22	0.003	0.008	0.010	2	90.9
Total P	28	0.018	0.044	0.058	5	82.1
<u>ACCURACY</u>						
Nitrite+Nitrate (NO ₂ +NO ₃)-N	25	0.013	0.033	0.043	0	100.0
Ammonia(NH ₃)	16	0.024	0.061	0.080	1	93.8
TKN	20	0.157	0.395	0.515	2	90.0
P-Ortho	15	0.041	0.103	0.134	1	93.3
Total P	20	0.311	0.783	1.018	1	95.0

Classification of Waters

County waters are classified according to water quality usage. According to Sarasota County Ordinance #72-37 surface waters are classified as follows:

Class I - Public Drinking Water Supply

Class II - Shellfish Harvesting

Class III - Recreation, Propagation and
Management of Fish and Wildlife

Of the many parameters monitored this report summarizes Dissolved Oxygen and Bacteriological quality to assess the water quality in the bays and streams. These results are compared with the standards set by Sarasota County Ordinance #72-37 and the State of Florida to determine violations.

County and State Standards

The standards for Dissolved Oxygen, Bacteriological Quality, Total Coliform and Fecal Coliform are presented in Table A and B.

BACTERIOLOGICAL QUALITY
(Total Coliform and Fecal Coliform)

CLASS I Public Water Supply	CLASS II Shellfish Harvesting	CLASS III Recreation-Propagation and Management of Fish and Wildlife
<p><u>Sarasota County Ordinance 72-37</u></p> <p>Coliform group not to exceed 1,000 MPN as a monthly average (either MPN or MF counts); nor to exceed this number in more than 20% of the samples examined during any month, nor to exceed 2,400 per 100 ml (MPN or MF) count on any day.</p>	<p>"areas classified for shellfish harvesting, the median coliform MPN (most probable number) of water cannot exceed seventy (70) per hundred (100) ml, and not more than ten (10) per cent of the samples ordinarily exceed an MPN of two hundred and thirty (230) per one hundred (100) ml, in those portions of areas most probably exposed to fecal contamination during most unfavorable hydrographic and pollutional conditions."</p>	<p>"not to exceed 1,000 per 100 milliliter as a monthly average (either MPN or MF counts); nor to exceed this number in more than 20% of the samples examined during any month; nor exceed 2,400 per 100 milliliters (MPN or MF count) on any day. This criteria shall apply only to waters used for body contact activities."</p>
<p><u>State of Florida Dept. of Environmental Regulation 17-3</u></p> <p>Coliform group not to exceed 1,000 per 100 milliliters as a monthly average, using either most probable number (MPN) or membrane filter (MF) counts; nor to exceed 1,000 per 100 milliliters in more than 20% of the samples examined during any month; nor exceed 2,400 per 100 milliliters (MPN or MF count) at any time. Based on a minimum of five samples taken over a 30-day period, the fecal coliform bacterial level shall not exceed 200 per 100 milliliters as computed by log mean, nor shall more than 10% of the total samples taken during any 30-day period exceed 400 per 100 milliliters.</p>	<p>"the median coliform MPN (most probable number) of water shall not exceed seventy (70) per hundred (100) milliliters, and not more than ten per cent (10%) of the samples shall exceed a MPN of two hundred and thirty (230) per one hundred (100) milliliters. The fecal coliform bacterial level shall not exceed a median value of 14 MPN per 100 milliliters with not more than ten percent (10%) of the samples exceeding 43 MPN per 100 ml."</p>	<p>"fecal coliform bacteria shall not exceed a monthly average of 200 per 100 ml of sample, nor exceed 400 per 100 ml of sample in 10 percent of the samples, nor exceed 800 per 100 ml on any one day, nor exceed a total coliform bacteria count of 1,000 per 100 ml as a monthly average, nor exceed 1,000 per 100 ml in more than 20 percent of the samples examined during any month, nor exceed 2,400 per 100 ml at any time. Monthly averages shall be expressed as geometric means based on minimum of 10 samples taken over a 30-day period. Either MPN or MF counts may be utilized."</p>

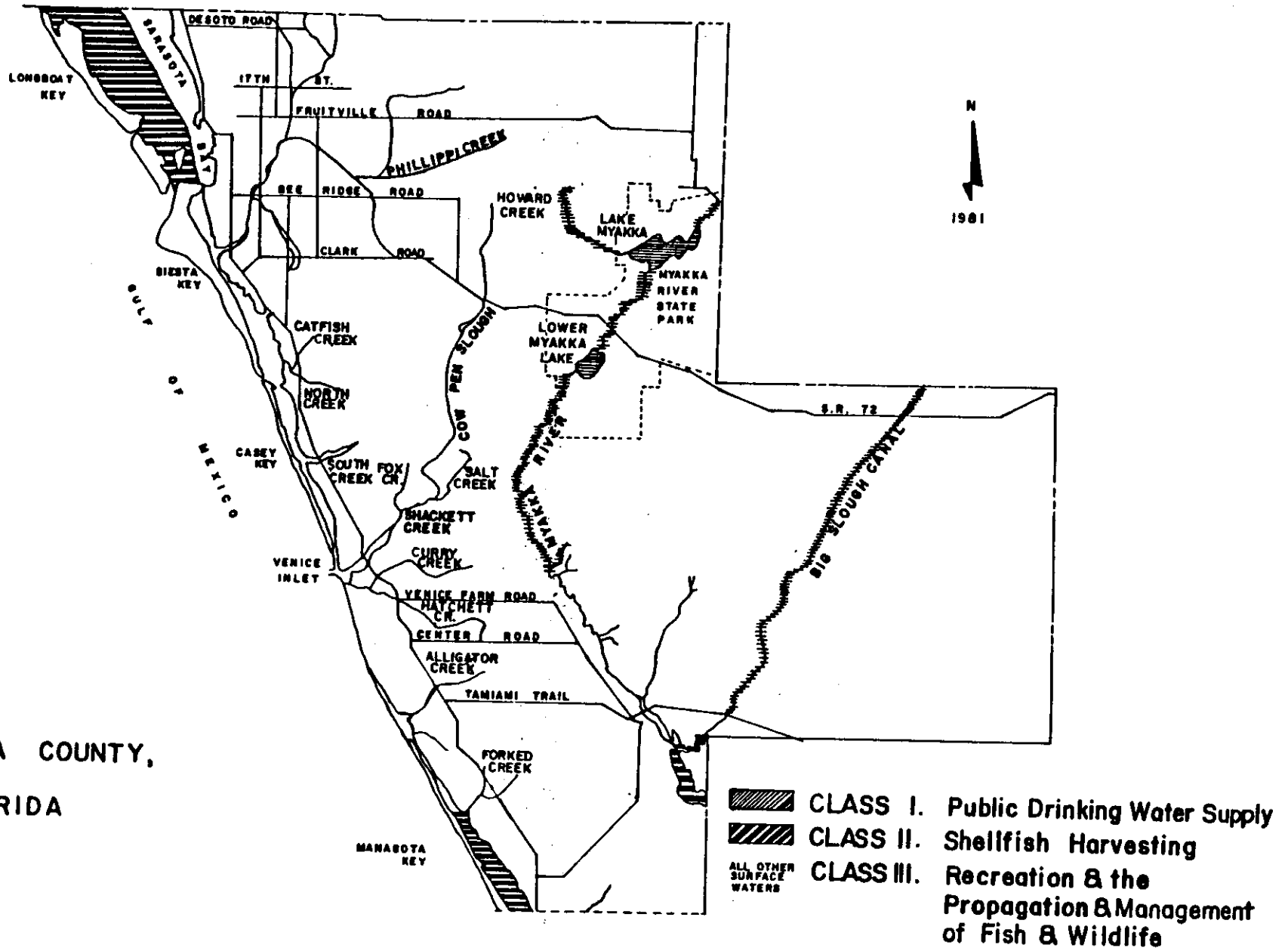
TABLE A

DISSOLVED OXYGEN

<p>CLASS I Public Water Supply</p>	<p>CLASS II Shellfish Harvesting</p>	<p>CLASS III Recreation-Propagation and Management of Fish and Wildlife</p>
<p><u>Sarasota County Ordinance 72-37</u></p> <p>Dissolved oxygen shall not be artificially depressed below the value of four PPM (4.0) (unless background information available to the Pollution Control Officer indicates prior existence under unpolluted conditions of lower values). In such cases, lower limits may be utilized after approval by the Pollution Control Officer.</p> <p><u>State of Florida Dept. of Environmental Regulation 17-3</u></p> <p>"shall not be less than 5 milligrams (mg/l). Normal daily and seasonal fluctuations above this level shall be maintained."</p>	<p>"the concentration in all waters shall not average less than 5 milligrams (mg/l) in a 24-hour period and shall never be less than 4 milligrams (mg/l). Normal daily and seasonal fluctuations above these levels shall be maintained."</p>	<p>"in predominantly fresh waters, the concentration shall not be less than 5 milligrams (mg/l). In predominantly marine waters, the concentration shall not average less than 5 milligrams (mg/l). Normal daily and seasonal fluctuations above these levels shall be maintained in both predominantly fresh waters and predominantly marine waters."</p>

TABLE B

SARASOTA COUNTY,
FLORIDA



Bay Monitoring

^{THE BAY WATERS IN SARASOTA COUNTY}
~~The County Bay waters~~ are Class II (Shellfish Harvesting)

and Class III (Recreation-Propagation and Management of Fish and Wildlife). A review of the maps and ^{DESCRIPTIONS} ~~description~~ ~~sections~~ ^{SE} ~~indicates~~ the specific areas.

Bay stations are grouped as 4 runs with ~~10 stations~~ ^{INCLUS}
~~and~~ Bay Run I, ^{IS} Sarasota Bay, Bay Run II, Roberts Bay and
Little Sarasota Bay, Bay Run III, ^{IS} Blackburn Bay, Dona Bay
and Roberts Bay and Bay Run IV, ^{IS} Lemon Bay.

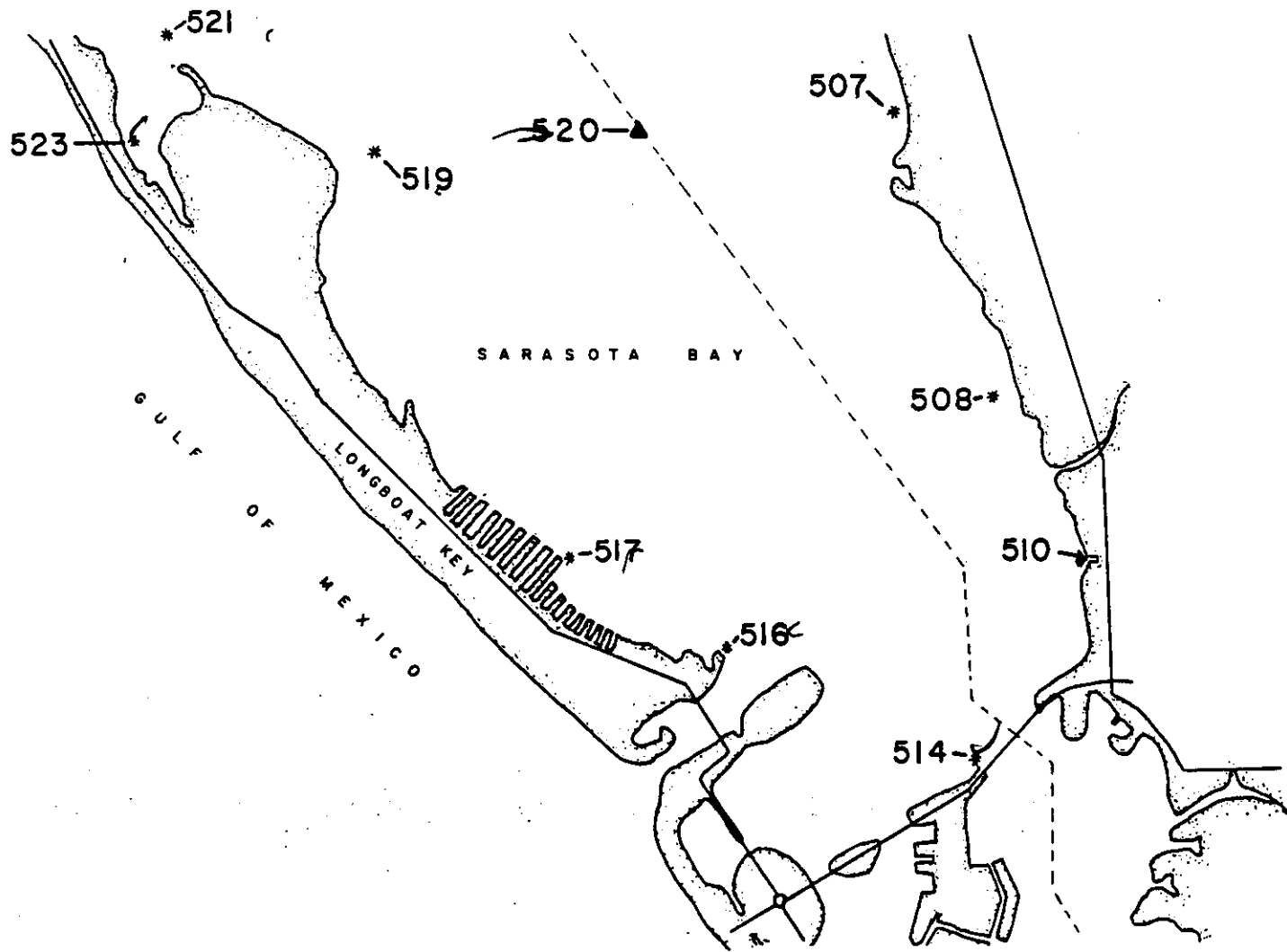
BAY RUN I
SARASOTA BAY

There are 10 stations which are sampled in this area. Seven of these stations are Class III while the other 3 are Class II. The results for Total Coliform and Dissolved Oxygen is presented in Table I-A followed by summaries of Temperature, Conductivity, pH, and Turbidity. Violations are listed below.

Class	Station Number	Location	Day/Time		Parameter	Value
III	507	Sarasota Bay, at the Ringling Home.	9/4/80	0915	D.O.	2.3
III	508	Sarasota Bay, end of Indian Beach Drive.	9/4/80	0900	D.O.	2.0
III	510	Sarasota Bay, in the Payne Terminal.	1/30/80	0930	Tot. Col.	4100
			9/4/80	0840	D.O.	1.2
			3/6/80	0930	Tot. Col.	6000
II	519	Sarasota Bay, 0.5 mi. offshore Bishops Pt.	9/4/80	0935	D.O.	3.8
II	521	Sarasota Bay, marker #6 at Buttonwood Harbor.	9/4/80	0945	D.O.	3.5
II	523	South side of Gulf to Bay's seawall.	9/4/80	0955	D.O.	2.6

Total Coliform - Maximum recorded values for Total Coliform was 6000 colonies/100 ml at the Payne Terminal (Station #510). The second highest was 4100 colonies/100 ml at the same location. Minimum values were less than 10 colonies/100 ml.

Dissolved Oxygen - Maximum recorded value was 9.2 Mg/l. The minimum value of 1.2 was reported at Payne Terminal (Station #510). The second minimum value was 2.3 Mg/l at the Coupola at the Ringling Home (Station #507).



SARASOTA COUNTY, FLORIDA



BAY RUN I

- #507 - Off Ringling Mansion
- #508 - Off Indian Beach Drive
- #510 - In Payne Terminal
- #514 - N.W. End Ringling Bridge
- #516 - Quick Point
- #517 - E. End Halyard Lane
- #519 - 0.5 Mile E. Bishops Point
- #520 - Marker #15
- #521 - Marker #6 - Buttonwood Harbor
- #523 - S. of Gulf to Bay Mobile
Home Park Seawall

BAY RUN I

TOTAL COLIFORM

	Station/Class	Number of times sampled	Maximum #Colonies /100ML	Minimum #Colonies /100ML	Geometric Mean
	507/III	8	2000	<100	201
	508/III	8	1200	<100	230
	510/III	8	6000	100	845
	514/ II	7	100	<100	100
	516/ II	8	700	<10	22
	517/ II	8	800	<10	38
	519/ II	8	100	<10	25
	520/ II	8	40	10	17
	521/ II	8	320	<10	24
	523/ II	8	1500	<10	48

Dissolved Oxygen

	Station/Class	Number of times sampled	Maximum MG/L	Minimum MG/L	Mean X
	507/III	8	8.7	2.3	5.8
	508/III	8	8.3	2.0	5.9
	510/III	8	8.3	1.2	5.7
	514/ II	7	8.0	6.5	7.2
	516/ II	8	8.8	5.2	6.9
	517/ II	8	8.3	4.7	6.8
	519/ II	8	8.6	3.8	6.5
	520/ II	7	9.2	4.6	6.4
	521/ II	8	7.8	3.5	6.0
	523/ II	8	8.3	2.6	5.8

Temperature

	Station	Number of times sampled	Maximum °C	Minimum °C	Mean
	507	8	30.0	14.0	21.8
	508	8	30.0	14.0	21.6
	510	8	28.4	15.0	22.3
	514	6	29.5	15.0	20.5
	516	8	30.5	15.0	22.0
	517	8	30.0	14.5	21.6
	519	8	30.0	14.0	21.2
	520	8	30.5	15.0	22.5
	521	8	29.0	13.5	21.1
	523	8	26.2	14.0	21.6

Conductivity

	Station	Number of times sampled	Maximum $\mu\text{mhos/cm}$ at 25 °C	Minimum $\mu\text{mhos/cm}$ at 25 °C	Mean
	507	8	56000	47000	51275
	508	8	56000	45000	51188
	510	8	56000	40000	49875
	514	7	57000	48000	52100
	516	8	57000	48000	52575
	517	8	56000	48000	51822
	519	8	56000	48000	51888
	520	8	57000	48000	51586
	521	8	56000	48000	51613
	523	8	56000	48000	45475

pH

	Station	Number of times sampled	Maximum Electrometric Units	Minimum Electrometric Units	Mean
	507	8	8.37	7.80	8.03
	508	8	8.40	7.80	7.97
	510	8	8.34	7.50	7.86
	514	7	8.41	7.80	8.04
	516	8	8.30	7.80	7.99
	517	8	8.45	7.80	8.10
	519	8	8.44	7.80	8.09
	520	8	8.38	7.90	8.08
	521	8	8.46	7.90	8.10
	523	8	8.41	7.90	8.10

Turbidity

	Station	Number of times sampled	Maximum NTU	Minimum NTU	Mean
	507	8	5.9	3.4	4.6
	508	8	14.0	3.8	6.8
	510	8	11.0	2.9	5.8
	514	7	7.0	3.5	4.7
	516	8	12.0	.9	6.0
	517	8	4.7	.9	3.0
	519	8	3.9	1.5	3.0
	520	8	7.7	2.0	5.0
	521	8	6.4	1.5	3.6
	523	8	6.0	1.9	3.1

BAY RUN II

ROBERT'S BAY AND LITTLE SARASOTA BAY

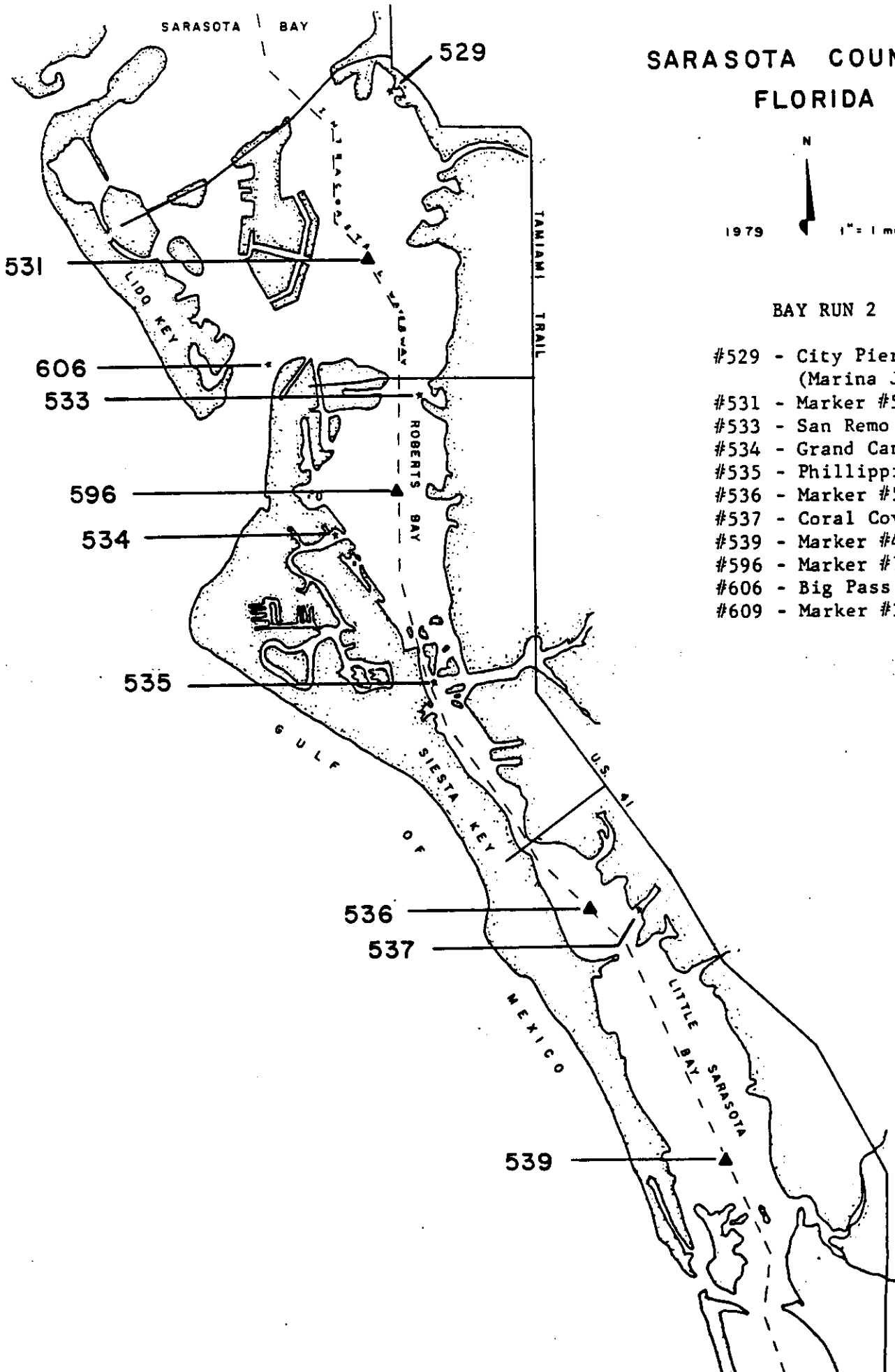
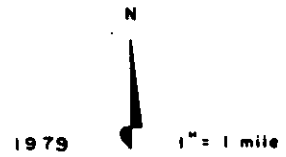
All of these waters are Class III. Below are the violations for Total Coliform and Dissolved Oxygen. Following the violations are the summary sheets for Total Coliform, Dissolved Oxygen, Temperature, Conductivity, pH, and Turbidity.

Class	Station Number	Location	Day/Time		Parameter	Value
III	535	Sarasota Bay, entrance to Phillippi Creek.	2/7/80	1030	Tot. Col.	4900
			7/31/80	1015	Tot. Col.	2600
			7/31/80	1015	D.O.	3.1
III	537	Sarasota Bay, and Coral Cove.	3/20/80	0910	D.O.	3.8

Total Coliform - The maximum recorded value was 4900 colonies/100 ml and the second highest of 2600 both at the entrance to Phillippi Creek (Station #535). The minimum value was less than 100 colonies/100 ml.

Dissolved Oxygen - The maximum value was determined as 9.2 in Little Sarasota Bay, at the inland waterway marker #48 (Station #539). The minimum was 3.1 mg/l at the mouth of Phillippi Creek (Station #535).

SARASOTA COUNTY,
FLORIDA



BAY RUN 2

- #529 - City Pier
(Marina Jack)
- #531 - Marker #5
- #533 - San Remo Cove
- #534 - Grand Canal
- #535 - Phillippi Creek
- #536 - Marker #57
- #537 - Coral Cove
- #539 - Marker #48
- #596 - Marker #79
- #606 - Big Pass
- #609 - Marker #38

BAY RUN II

TOTAL COLIFORM

	Station/Class	Number of times sampled	Maximum #Colonies /100ML	Minimum #Colonies /100ML	Geometric Mean
	529/III	10	1700	<100	240
	531/III	9	200	<100	117
	533/III	9	400	<100	88
	534/III	9	800	<100	233
	535/III	10	4900	<100	1051
	536/III	10	500	<100	215
	537/III	10	2000	<100	396
	539/III	10	300	<100	128
	596/III	9	600	<100	174
	606/III	10	500	<100	135
	609/III	10	600	<100	137

Dissolved Oxygen

	Station/Class	Number of times sampled	Maximum Mg/l	Minimum Mg/l	Mean \bar{x}
	529/III	8	7.6	5.9	6.8
	531/III	7	8.3	6.7	7.3
	533/III	7	7.8	6.2	7.1
	534/III	7	8.1	5.2	6.3
	535/III	8	8.1	3.1	6.2
	536/III	8	8.4	5.6	7.2
	537/III	7	7.9	3.8	5.8
	539/III	8	9.2	6.2	7.4
	596/III	7	8.0	5.8	7.0
	606/III	8	7.9	6.6	7.3
	609/III	8	8.1	6.0	7.2

Temperature

	Station	Number of times sampled	Maximum °C	Minimum °C	Mean \bar{X}
	529	9	30.5	12.5	22.9
	531	8	30.0	12.0	20.4
	533	8	30.0	12.0	20.7
	534	8	30.0	12.5	20.9
	535	9	30.5	12.5	21.9
	536	9	30.5	12.0	21.7
	537	9	31.5	14.0	23.0
	539	9	30.5	12.0	21.3
	596	8	30.0	12.0	20.7
	606	9	30.0	12.0	21.3
	609	9	31.0	12.5	21.5

Conductivity

	Station	Number of times sampled	Maximum $\mu\text{mhos/cm}$ at 25 °C	Minimum $\mu\text{mhos/cm}$ at 25 °C	Mean
	529	10	54000	45000	51220
	531	9	54000	45000	51356
	533	9	53500	43000	49589
	534	9	50000	35000	45400
	535	10	49000	21000	33200
	536	10	50000	38000	47880
	537	10	51000	20000	44410
	539	10	53000	38000	48720
	596	9	50000	35000	46933
	606	10	54000	45000	51278
	609	10	53000	41000	50370

pH

	Station	Number of times sampled	Maximum Electrometric Units	Minimum Electrometric Units	Mean
	529	10	8.41	6.40	7.8
	531	9	8.23	7.00	7.8
	533	9	8.19	7.00	7.8
	534	9	8.11	7.50	7.8
	535	10	8.09	7.00	7.7
	536	10	8.28	7.50	7.9
	537	10	8.09	7.53	7.7
	539	10	8.35	7.60	7.9
	596	9	8.15	7.30	7.7
	606	9	8.34	7.10	7.9
	609	10	8.36	7.60	7.9

Turbidity

	Station	Number of times sampled	Maximum NTU	Minimum NTU	Mean
	529	10	6.8	2.5	4.1
	531	9	14.0	1.1	4.3
	533	9	10.0	1.6	4.0
	534	9	12.0	1.6	4.8
	535	10	7.5	2.6	4.5
	536	10	6.5	2.3	4.4
	537	10	5.4	3.4	4.1
	539	9	9.0	1.9	4.0
	596	9	11.0	1.6	5.1
	606	10	13.0	1.3	3.8
	609	10	7.0	1.0	4.0

BAY RUN III

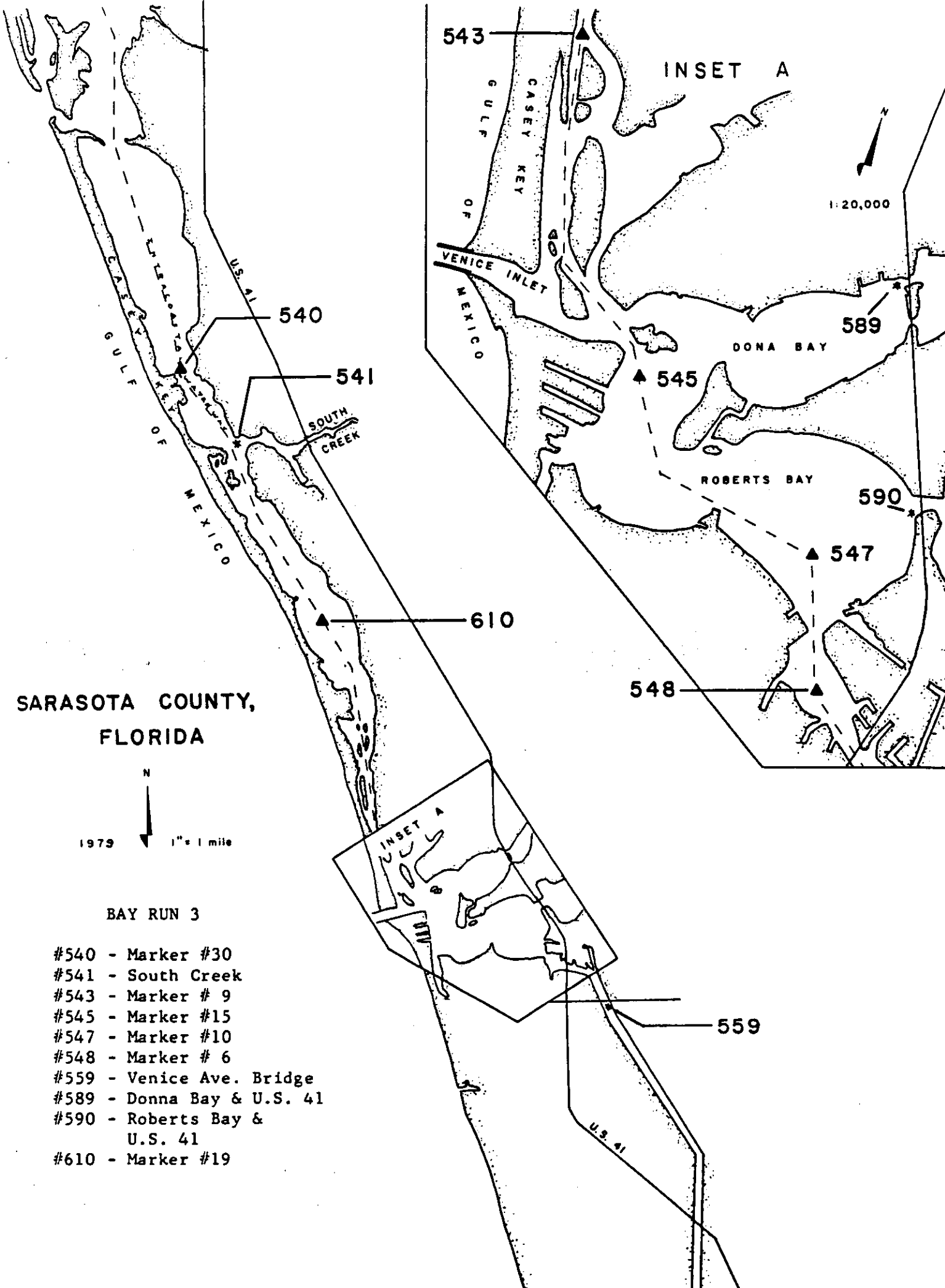
LITTLE SARASOTA BAY, BLACKBURN BAY,
ROBERT'S BAY & DONA BAY

All waters in this area are Class III. No Total Coliform violations were recorded. Dissolved Oxygen violations were recorded in all but one station location. Following the violations are the summary tables for Total Coliform, Dissolved Oxygen, Temperature, Conductivity, pH and Turbidity.

Class	Station Number	Location	Day/Time		Parameter	Value
III	541	Sarasota Bay, entrance to South Creek.	9/18/80	0935	D.O.	2.1
III	543	Robert's Bay at inland waterway marker #9.	9/18/80	1000	D.O.	3.3
III	547	Robert's Bay at inland waterway marker #10.	9/18/80	1025	D.O.	3.4
III	548	Robert's Bay at inland waterway marker #6.	9/18/80	1040	D.O.	3.1
III	559	Lemon Bay, bridge over waterway at Venice.	9/18/80	1045	D.O.	3.2
III	590	Robert's Bay at US 41 north of Venice.	8/21/80 9/18/80	1050 1035	D.O. D.O.	3.7 3.0
III	610	Marker #19 at Blackburn Bay.	9/18/80	0945	D.O.	3.3

Total Coliform - The maximum recorded value was 2100 in Sarasota Bay at the entrance to South Creek (Station #541). The minimum recorded value was less than 100 colonies/100 ml.

Dissolved Oxygen - The maximum recorded value was 8.2 Mg/l in Robert's Bay at intracoastal marker #15 (Station #545) and at intracoastal marker #10 (Station #547). The minimum value was 2.1 at the entrance of South Creek in Sarasota Bay (Station #541).



SARASOTA COUNTY,
FLORIDA

1979
N
1" = 1 mile

BAY RUN 3

- #540 - Marker #30
- #541 - South Creek
- #543 - Marker # 9
- #545 - Marker #15
- #547 - Marker #10
- #548 - Marker # 6
- #559 - Venice Ave. Bridge
- #589 - Donna Bay & U.S. 41
- #590 - Roberts Bay & U.S. 41
- #610 - Marker #19

BAY RUN III

TOTAL COLIFORM

	Station/Class	Number of times sampled	Maximum #Colonies /ML100	Minimum #Colonies /100ML	Geometric Mean
	541/III	9	2100	<100	402
	543/III	9	1100	<100	231
	545/III	9	600	<100	203
	547/III	9	1200	100	451
	548/III	9	1100	<100	336
	559/III	9	1500	100	386
	590/III	9	1200	<100	205
	610/III	9	1200	200	365

Dissolved Oxygen

	Station/Class	Number of times sampled	Maximum Mg/l	Minimum Mg/l	Mean X
	541/III	9	6.7	2.1	5.3
	541/III	9	7.9	3.3	6.5
	545/III	9	8.2	4.0	6.5
	547/III	9	8.2	3.4	6.2
	548/III	9	7.6	3.1	6.0
	559/III	9	7.2	3.2	6.0
	590/III	9	7.3	3.0	5.5
	610/III	9	8.1	3.3	6.1

Temperature

	Station	Number of times sampled	Maximum °C	Minimum °C	Mean
-	541	9	30.5	16.5	23.7
	543	9	30.5	15.0	23.3
	545	9	30.5	15.5	23.4
-	547	9	31.0	15.5	23.6
	548	9	30.5	15.5	23.7
	559	9	30.5	15.5	23.6
-	590	9	30.5	15.5	23.9
	610	9	30.5	15.5	23.4

Conductivity

	Station	Number of times sampled	Maximum $\mu\text{mhos/cm}$ at 25 °C	Minimum $\mu\text{mhos/cm}$ at 25 °C	Mean
-	541	9	55000	23000	46500
	543	9	57000	49000	52500
	545	9	57000	36800	50644
-	547	9	53500	42400	49322
	548	9	52000	44500	49822
	559	9	52000	42800	49422
-	590	9	55000	38000	47779
	610	9	56000	48900	52256

pH

	Station	Number of times sampled	Maximum Electrometric Units	Minimum Electrometric Units	Mean
	541	9	8.40	7.20	7.89
	543	9	8.50	7.70	8.03
	545	9	8.42	7.50	7.93
	547	9	8.39	7.60	7.91
	548	9	8.37	7.30	7.89
	559	9	8.35	7.10	7.87
	590	9	8.34	6.90	7.81
	610	9	8.60	7.70	8.01

Turbidity

	Station	Number of times sampled	Maximum NTU	Minimum NTU	Mean
	541	9	5.1	1.5	3.4
	543	9	16.0	1.0	5.6
	545	9	11.0	1.5	4.3
	547	9	7.1	2.3	4.1
	548	9	7.8	2.1	5.1
	559	9	8.0	2.2	5.0
	590	9	11.0	3.3	5.5
	610	9	14.0	1.0	4.3

BAY RUN IV

LEMON BAY

There are 10 stations in the Lemon Bay sampling area 5 of these stations are Class II while 5 are Class III. There were no violations of Total Coliform in the Class III waters but in Class II there were violations present in both Total Coliform and Dissolved Oxygen. These violations are listed below followed by summary tables for Total Coliform, Dissolved Oxygen, Temperature, Conductivity, pH, and Turbidity.

Class	Station Number	Location	Day/Time		Parameter	Value
III	564	Manasota Beach, 100' north of bridge.	8/27/80	1100	D.O.	3.9
II	569	Lemon Bay, 1/2 mile south of marker 28A.	1/24/80	1035	Tot. Col.	440
			6/19/80	1000	Tot. Col.	290
II	570	Lemon Bay, 3/4 mile east of marker #26.	1/24/80	1030	Tot. Col.	300
			6/19/80	0945	Tot. Col.	650
			8/27/80	0950	D.O.	3.8
II	572	Lemon Bay, and marker #33.	2/28/80	1040	Tot. Col.	470
			6/19/80	1030	Tot. Col.	920
II	573	Lemon Bay, 1 mile southwest of marker #26.	6/19/80	0930	Tot. Col.	670
			8/27/80	0940	Tot. Col.	350
			8/27/80	0940	D.O.	3.4

Total Coliform - For Class III waters the maximum value was 1400 colonies/100 ml at the south entrance to Red Lake and the inland waterway (Station #562) and 3/4 mile up Forked Creek (Station #567). The minimum was 20 at 100' north of the bridge going to Manasota Beach. In Class II waters the

maximum value was 920 colonies/100 ml. The minimum was less than 10 at three locations; 1) ½ mile south of marker 28A in Lemon Bay (Station #569) 2) marker #33 in Lemon Bay (Station #572) 3) 1 mile southwest of marker #25 in Lemon Bay (Station #573).

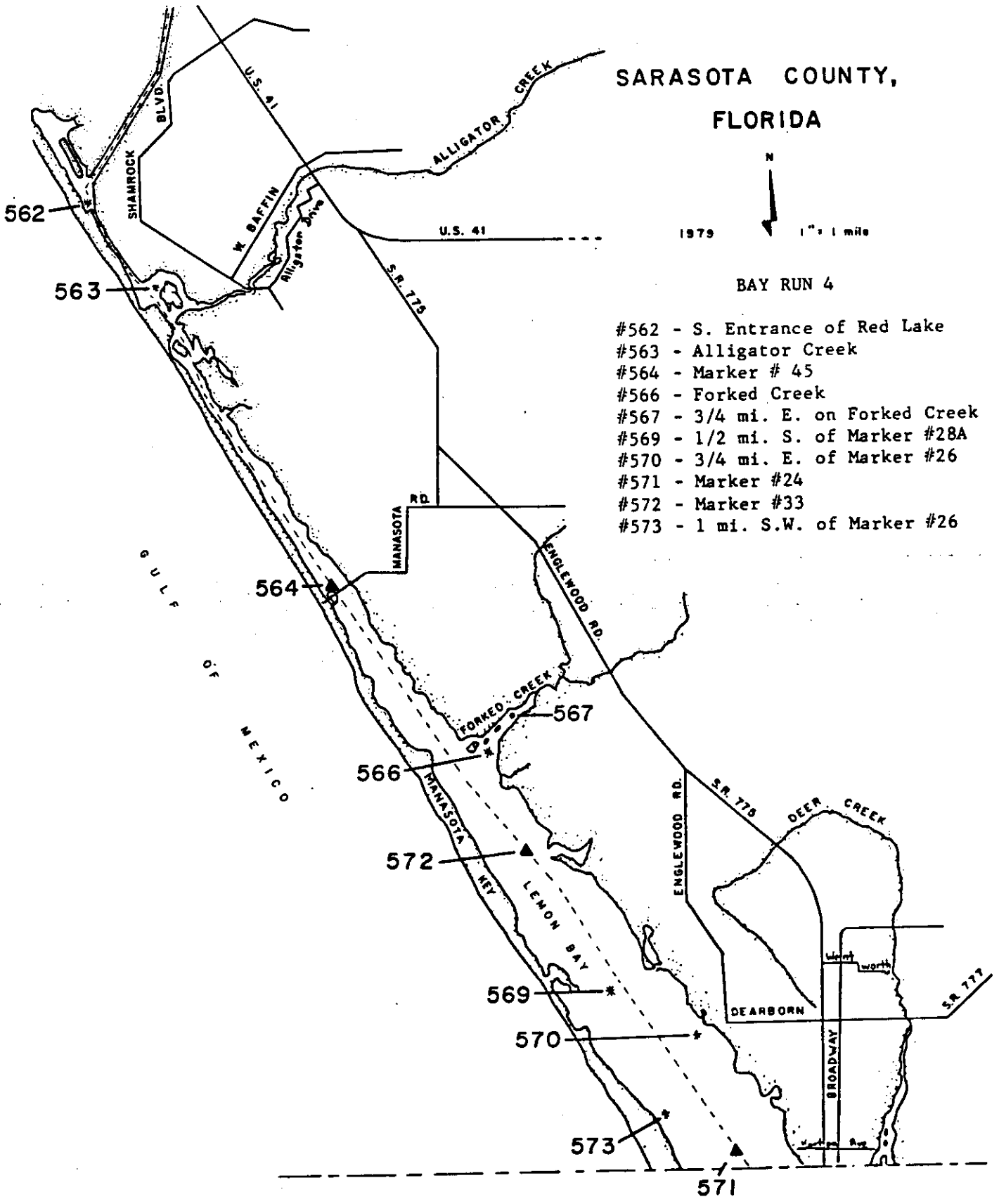
Dissolved Oxygen - Class III maximum value was 8.1 at marker #33 in Lemon Bay (Station #572). The minimum was 3.4 1 mile southwest of marker #26 in Lemon Bay (Station #573).

SARASOTA COUNTY,
FLORIDA

1979
1" = 1 mile

BAY RUN 4

- #562 - S. Entrance of Red Lake
- #563 - Alligator Creek
- #564 - Marker # 45
- #566 - Forked Creek
- #567 - 3/4 mi. E. on Forked Creek
- #569 - 1/2 mi. S. of Marker #28A
- #570 - 3/4 mi. E. of Marker #26
- #571 - Marker #24
- #572 - Marker #33
- #573 - 1 mi. S.W. of Marker #26



BAY RUN IV

TOTAL COLIFORM

	Station/Class	Number of times sampled	Maximum #Colonies /100ML	Minimum #Colonies /ML100	Geometric Mean
	562/III	9	1400	100	483
	563/III	9	1000	100	299
	564/III	9	600	20	197
	566/III	9	900	50	153
	567/III	9	1400	82	203
	569/ II	9	440	<10	60
	570/ II	9	650	20	78
	571/ II	9	130	20	63
	572/ II	9	920	<10	71
	573/ II	9	670	<10	77

DISSOLVED OXYGEN

	Station/Class	Number of times sampled	Maximum Mg/l	Minimum Mg/l	Mean \bar{x}
	562/III	6	6.8	4.7	5.6
	563/III	6	7.7	4.1	5.7
	564/III	6	7.6	3.9	5.5
	566/III	6	6.8	4.6	5.8
	567/III	6	6.9	4.1	5.4
	569/ II	6	7.6	4.0	6.3
	570/ II	6	7.5	3.8	6.1
	571/ II	6	7.1	4.9	6.4
	572/ II	6	8.1	4.2	6.1
	573/ II	6	7.6	3.4	6.4

Temperature

	Station	Number of times sampled	Maximum °C	Minimum °C	Mean
	562	8	31.0	16.5	24.6
	563	8	30.4	16.5	24.5
	564	8	30.0	16.5	24.0
	566	8	29.2	16.5	23.9
	567	8	31.0	17.5	24.7
	569	8	30.0	16.0	23.8
	570	8	31.0	17.0	24.1
	571	8	29.3	16.5	23.8
	572	8	29.1	16.0	23.6
	573	8	29.0	16.5	23.4

Conductivity

	Station	Number of times sampled	Maximum $\mu\text{mhos/cm}$ at 25 °C	Minimum $\mu\text{mhos/cm}$ at 25 °C	Mean
	562	8	51000	42900	41475
	563	8	51500	42000	46562
	564	8	51900	44000	47575
	566	8	51000	44000	47462
	567	9	49000	41400	44011
	569	8	54000	47500	49725
	570	8	56000	49000	51263
	571	8	55000	48900	51125
	572	8	52000	46000	48612
	573	8	54000	48700	50475

pH

	Station	Number of times sampled	Maximum Electrometric Units	Minimum Electrometric Units	Mean
	562	8	8.27	7.60	7.83
	563	8	8.26	7.60	7.82
	564	8	8.08	7.80	7.89
	566	8	8.12	7.70	7.93
	567	9	8.10	7.60	7.87
	569	8	8.47	7.90	8.10
	570	8	8.46	7.80	8.07
	571	8	8.48	7.80	8.04
	572	8	8.23	7.90	8.03
	573	8	8.57	7.80	8.07

Turbidity

	Station	Number of times sampled	Maximum NTU	Minimum NTU	Mean
	562	9	9.6	2.2	5.1
	563	9	6.8	1.7	4.4
	564	9	6.4	2.7	4.2
	566	9	4.9	2.4	3.2
	567	9	4.3	2.4	3.1
	569	9	6.0	0.9	3.4
	570	9	7.8	1.0	3.9
	571	9	7.0	1.5	3.8
	572	9	4.1	1.5	3.1
	573	9	6.4	0.9	3.5

Stream Monitoring

The surface waters in Sarasota County flow from the east and discharge into the bays and the Gulf of Mexico. The network of ambient sampling stations in the inland waters are classified Class I and Class III. For the purpose of analyzing the results we have grouped the stations according to natural drainage basins.

The first group ^{OF STATIONS ARE} includes the basins located from the north County line down to the mouth of Phillippi Creek. ^{IN THIS AREA}

~~The second group includes several small basins discharging roughly between Gulf Gate and the City of Venice.~~ ^{LOCATED FROM MATHEW CREEK TO THE GULF GATE SOUTH TO HATCHET CREEK ALONG THE EASTERN BOUNDARY OF SARASOTA COUNTY, THE CITY OF VENICE}

The third group includes those stations located on streams discharging into the coastal region from the City of Venice through the Englewood ~~area~~ down to the south County boundary then east to encompass the Myakka River basin.

Tabulated results showing Total Coliform, Fecal Coliform and Dissolved Oxygen are together. Violations of these parameters are listed with the minimum and maximum range and the locations where these values occurred. In separate tables Fecal Streptococcus, Temperature, pH, Conductivity, Turbidity and Color is presented to complete our monitoring effort.

In this table are the results of the first group of stations and location descriptions. This area includes Whitaker Bayou, Hudson Bayou, and Phillippi Creek. Of 128 observations there were 66 violations of Class III water quality standards or 52% of the total sampling. Below a summary table is presented.

Stream	Stations	Number of Observations	Violations	
			#	%
Whitaker Bayou	549,553,558	96	40	41%
Hudson Bayou	583	26	5	19%
Phillippi Creek	625,626,627, 628,629,630	57	27	47%

Total Coliform - The highest value recorded was on Phillippi Creek at 17th Street (Station #627) with 400,000 colonies/100 ml with the second highest at Phillippi Creek and Fruitville Road (Station #626).

The minimum value recorded was less than 10 colonies/100 ml at the entrance to Sarasota Bay from Whitaker Bayou (Station #549).

Fecal Coliform - Maximum value recorded is 34,000 colonies/100 ml at Hudson Bayou and Orange Avenue Bridge (Station #583) with the second highest 5,700 colonies/100 ml at Whitaker Bayou and the entrance to Sarasota Bay (Station #549).

The minimum value was 10 colonies/100 ml at Hudson Bayou and Orange Avenue Bridge (Station #583).

Dissolved Oxygen - Maximum value was 9.6 at Whitaker Bayou and Sarasota Bay (Station #549). The second highest was 9.1 at Tri-Par Drive and Brook Drive in Tri-Par Estates (Station #558).

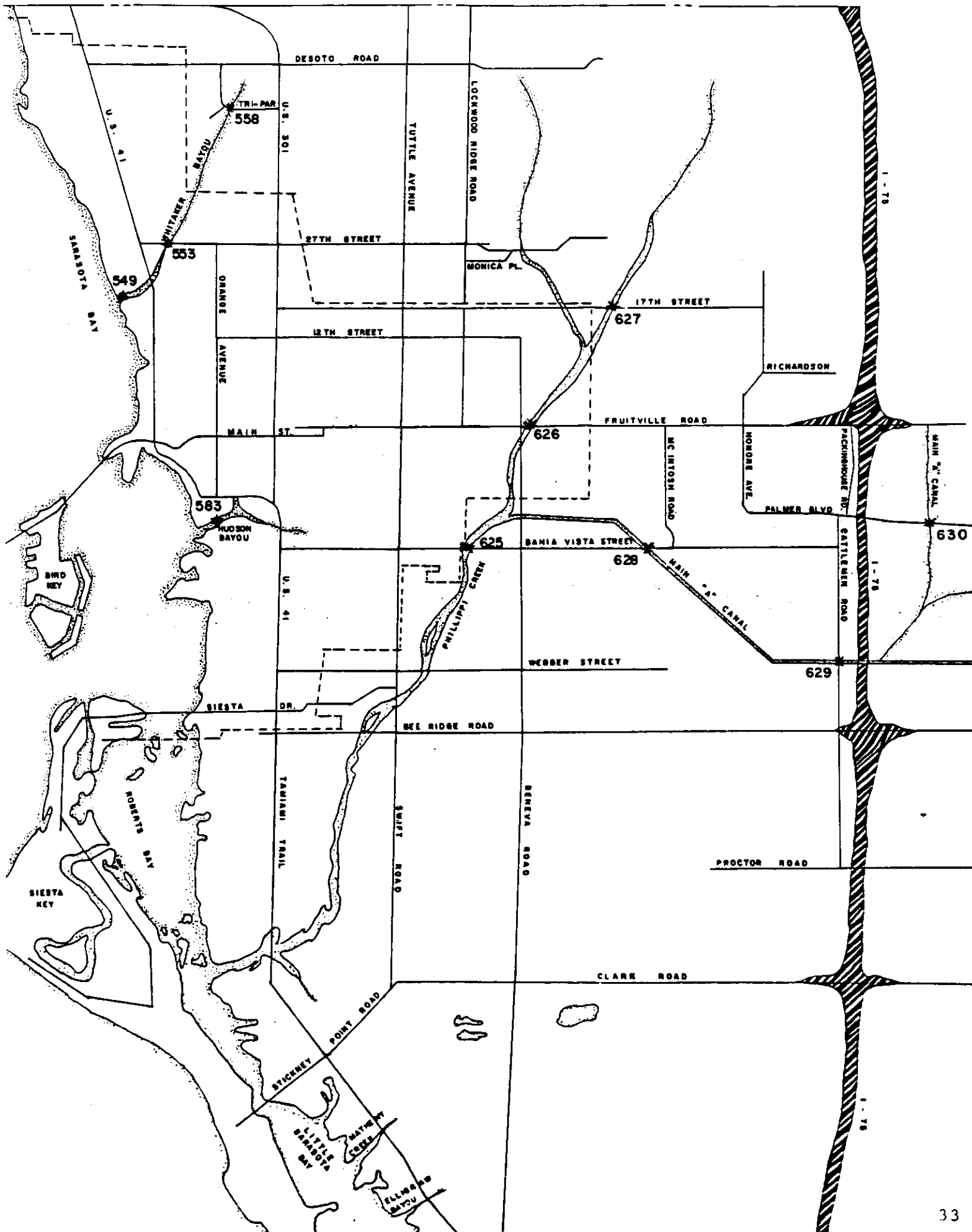
STREAM RUN STATIONS

1980

Station /Class	Total Coliform				Fecal Coliform				Dissolved Oxygen			
	Max.	Min.	N	V	Max.	Min.	N	V	Max.	Min.	N	V
#549/III	79,000	<10	15	5	5,700	<10	8	1	9.6	3.3	15	2
#553/III	77,000	600	10	9	4,700	100	10	2	8.1	0.0	10	5
#558/III	48,000	2,600	9	9	4,200	82	9	2	9.1	1.5	10	5
#583/III	46,000	600	9	1	34,000	10	9	1	6.7	2.2	8	3
#625/III	45,000	8,000	4	4	4,100	690	3	2	5.7	3.4	4	1
#626/III	380,000	1,800	4	2	640	190	2	0	3.9	1.9	4	4
#627/III	400,000	2,200	4	3	590	220	3	0	7.1	4.2	4	0
#628/III	80,000	1,700	4	3	1,100	240	3	0	7.7	4.6	4	0
#629/III	79,000	3,600	3	3	650	310	2	0	7.3	5.2	3	0
#630/III	51,000	2,800	2	2	420	420	1	0	3.9	3.8	3	3

LOCATION DESCRIPTIONS

- #549 Whitaker Bayou, 100 yards inside entrance from Sarasota Bay.
- #553 Whitaker Bayou, on 27th St. approx. 1/2 block east of Bradenton Road.
- #558 Whitaker Bayou, Tri-Par Dr. and Brook Dr. in Tri-Par Estates.
- #583 Hudson Bayou at Orange Avenue Bridge.
- #625 Phillippi Creek at Bahia Vista Street.
- #626 Phillippi Creek at Fruitville Road.
- #627 Phillippi Creek at 17th Street.
- #628 Main "A" Canal at Bahia Vista Street.
- #629 Main "A" Canal at Cattlemen Road.
- #630 Main "A" Canal at Palmer Blvd.



FECAL STREP

	Station/Class	Number of times sampled	Maximum #Colonies /100ML	Minimum #Colonies /100ML	Geometric Mean
	549/III	8	840	<10	32
	553/III	10	4,600	36	316
	558/III	9	2,500	40	348
	583/III	9	1,400	10	48
	625/III	4	3,000	310	782
	626/III	2	270	70	130
	627/III	4	500	50	131
	628/III	3	530	50	207
	629/III	2	300	270	284
	630/III	3	270	100	166

TEMPERATURE

	Station/Class	Number of times sampled	Maximum °C	Minimum °C	Mean
	549/III	15	30	15	24
	553/III	10	30	10	25
	558/III	10	28	10	22
	583/III	9	31	15	26
	625/III	4	27	15	20
	626/III	4	26	15	20
	627/III	4	26	15	19
	628/III	4	27	16	21
	629/III	3	21	15	18
	630/III	3	23	16	19

CONDUCTIVITY

	Station/Class	Number of times sampled	Maximum $\mu\text{hos/cm}$ at 25 °C	Minimum $\mu\text{hos/cm}$ at 25 °C	Mean
	549/III	15	53000	14400	28447
	553/III	9	30400	2500	20600
	558/III	9	730	380	472
	583/III	8	52900	44000	49075
	625/III	4	890	590	698
	626/III	4	620	410	495
	627/III	4	520	340	445
	628/III	4	930	650	788
	629/III	3	1100	810	967
	630/III	3	1300	680	630

pH

	Station/Class	Number of times sampled	Maximum Electrometric Units	Minimum Electrometric Units	Mean
	549/III	15	8.1	7.0	7.4
	553/III	9	7.9	6.6	7.3
	558/III	9	7.3	6.1	7.0
	583/III	8	8.3	7.7	8.0
	625/III	4	7.5	6.7	7.3
	626/III	4	7.2	6.5	7.0
	627/III	4	7.3	6.3	6.8
	628/III	4	7.5	7.1	7.3
	629/III	3	7.5	6.6	7.1
	630/III	3	7.6	4.8	7.3

TURBIDITY

	Station/Class	Number of times sampled	Maximum NTU	Minimum NTU	Mean
	549/III	15	13.0	2.8	6.0
	553/III	10	20.0	1.9	6.8
	558/III	10	43.0	1.9	10.0
	583/III	8	5.5	2.2	3.4
	625/III	4	9.3	3.5	5.5
	626/III	4	6.7	2.4	4.0
	627/III	4	7.1	4.5	6.3
	628/III	4	8.9	3.1	6.1
	629/III	3	4.6	3.5	4.0
	630/III	3	4.0	1.5	2.9

COLOR

	Station/Class	Number of times sampled	Maximum Pt-Co	Minimum Pt-Co	Mean
	549/III	8	70	20	45
	553/III	9	130	13	69
	558/III	9	160	70	109
	583/III	7	30	10	21
	625/III	4	120	68	97
	626/III	4	120	65	81
	627/III	4	120	80	98
	628/III	4	120	60	88
	629/III	3	100	50	77
	630/III	3	120	26	79

Below are the results of the Central portion of Sarasota County's drainage areas presented with their location descriptions. This area includes Matheny Creek, Cow Pen Slough, Catfish Creek, Elligraw Bayou, North Creek, South Creek, Shakett Creek, Curry Creek and Hatchett Creek. All are Class III waters. Of 283 observations 92 violations of Class III water quality standards occurred or 33% of the total sampling.

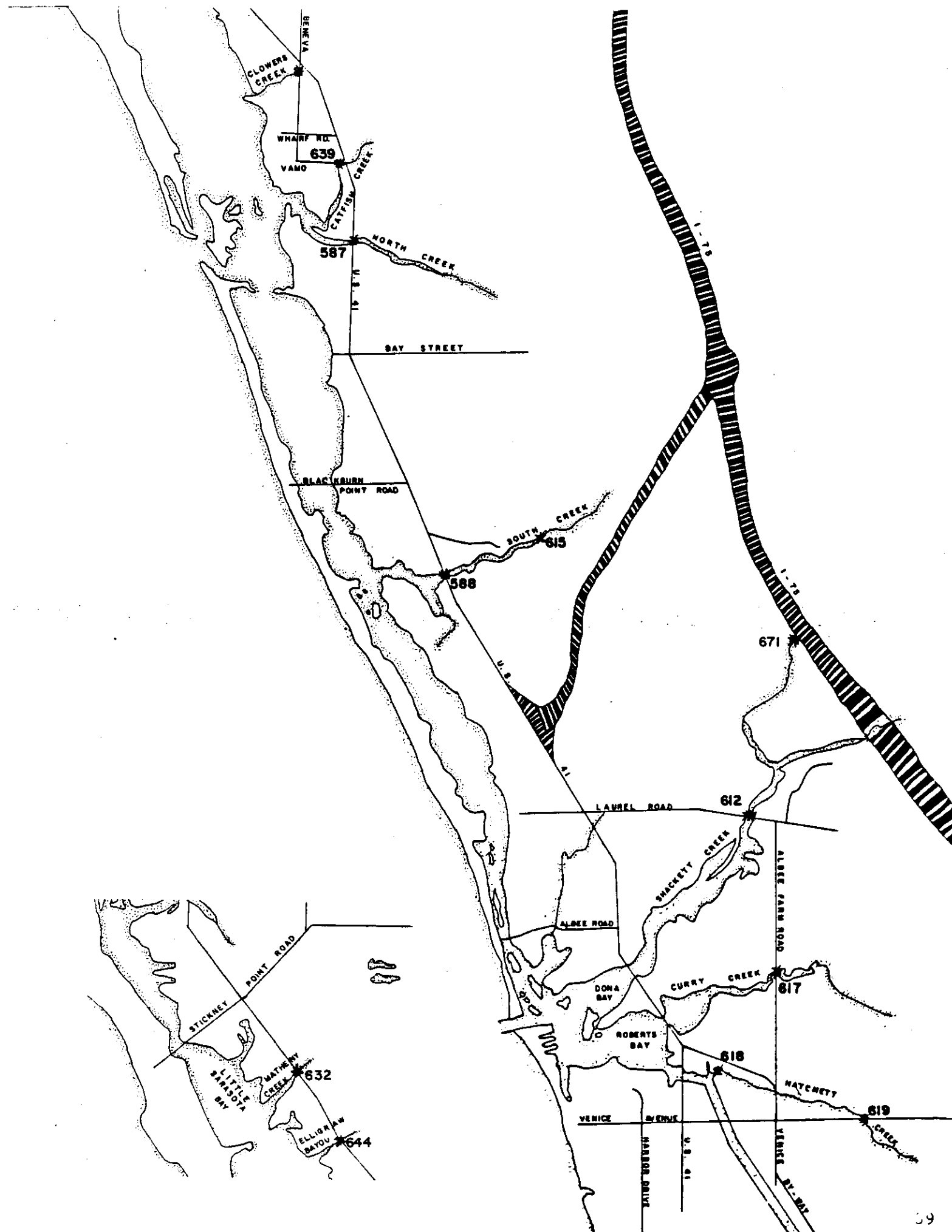
Stream	Stations	Number of Observations	Violations	
			#	%
South Creek	588,615	32	7	22%
North Creek	587	27	11	41%
Matheny Creek	632	30	14	47%
Cow Pen Slough	671	12	2	17%
Catfish Creek	639	26	13	50%
Elligraw Bayou	644	30	11	37%
Shakett Creek	612	33	3	10%
Curry Creek	617	33	7	21%
Hatchett Creek	618,619	60	24	40%

Total Coliform - Maximum value recorded was 79,000 colonies/100 ml at Elligraw Bayou at US 41 bridge (Station #644). The second highest value was 53,000 colonies/100 ml at Matheny Creek and US 41 bridge. The minimum value recorded was 100 simultaneously at 4 different locations.

Fecal Coliform - Maximum value was 20,000 colonies/100 ml at Elligraw Bayou and US 41 bridge (Station #644). The second highest was 7,600 colonies/100 ml at Matheny Creek and US 41 bridge (Station #632).

The minimum value recorded is 10 at 4 different locations.

Dissolved Oxygen - Maximum value was 9.3 at South Creek and US 41 bridge (Station #588). The minimum value was 0.0 at Catfish Creek at Vamo Way bridge (Station #639).



STREAM RUN STATIONS
1980

Station /Class	Total Coliform				Fecal Coliform				Dissolved Oxygen			
	Max.	Min.	N	V	Max.	Min.	N	V	Max.	Min.	N	V
#587/III	5,100	100	9	2	550	10	9	0	4.8	1.9	9	7
#588/III	4,800	100	8	2	800	10	8	0	9.3	1.9	8	5
#612/III	3,700	100	11	3	850	10	11	0	8.4	4.3	11	0
#615/III	6,700	700	8	3	900	100	8	0	6.5	1.7	8	5
#617/III	5,000	200	11	5	2,000	20	11	0	8.3	2.2	11	1
#618/III	5,800	500	11	6	2,200	50	11	0	5.7	2.9	11	4
#619/III	7,400	600	9	5	2,600	80	9	2	4.9	0.4	9	7
#632/III	53,000	630	10	7	7,600	30	10	2	8.8	1.1	10	5
#639/III	20,000	100	9	4	4,600	20	9	2	4.1	0.0	8	7
#644/III	79,000	200	10	5	20,000	27	10	2	8.2	1.9	10	4
#671/III	8,300	1,200	4	1	180	10	4	0	7.7	0.7	4	1

LOCATION DESCRIPTIONS

- #587 North Creek and US 41 bridge.
- #588 South Creek and US 41 bridge.
- #612 Shakett Creek at Laurel Road.
- #615 South Creek above dam in Oscar Scherer State Park.
- #617 Curry Creek at Albee Farm road.
- #618 Hatchett Creek at railroad bridge.
- #619 Hatchett Creek at Venice Farm road.
- #632 Matheny Creek at US 41 bridge.
- #639 Catfish Creek at Vamo Way bridge.
- #644 Elligraw Bayou at US 41 bridge.
- #671 Cow Pen Slough and I-75 bridge.

FECAL STREP

	Station	Number of times sampled	Maximum #Colonies /100ML	Minimum #Colonies /100ML	Geometric Mean
	587	9	610	10	31
	588	8	1,000	10	25
	612	11	2,200	10	49
	615	8	250	50	105
	617	11	2,600	10	53
	618	11	2,000	10	134
	619	9	3,200	10	287
	632	10	10,000	10	181
	639	9	1,200	10	92
	644	10	4,400	10	65
	671	4	340	10	41

TEMPERATURE

	Station	Number of times sampled	Maximum °C	Minimum °C	Mean
	587	8	32	18	26
	588	8	30	12	24
	612	11	33	13	24
	615	8	27	12	22
	617	11	31	13	23
	618	11	32	14	24
	619	9	28	9	21
	632	10	28	11	22
	639	9	33	17	27
	644	10	29	12	23
	671	4	26	14	21

CONDUCTIVITY

	Station	Number of times sampled	Maximum $\mu\text{mhos/cm}$ at 25 °C	Minimum $\mu\text{mhos/cm}$ at 25 °C	Mean
	587	9	46,000	31,000	37,767
	588	8	47,000	21,000	35,062
	612	11	42,000	504	26,119
	615	8	2,000	1,000	1,484
	617	11	39,000	840	18,208
	618	10	46,000	5,100	34,630
	619	9	11,000	763	2,179
	632	9	43,000	800	5,790
	639	9	41,000	14,000	33,678
	644	9	28,000	645	6,814
	671	4	730	380	620

pH

	Station	Number of times sampled	Maximum Electrometric Units	Minimum Electrometric Units	Mean
	587	9	7.8	7.0	7.5
	588	8	7.9	7.0	7.7
	612	11	8.0	6.8	7.6
	615	8	7.6	7.1	7.4
	617	11	7.9	6.8	7.5
	618	11	8.1	6.6	7.5
	619	9	7.5	6.8	7.3
	632	9	8.1	6.5	7.3
	639	9	7.5	6.8	7.2
	644	9	7.8	6.5	7.3
	671	4	7.6	6.6	7.3

TURBIDITY

	Station	Number of times sampled	Maximum NTU	Minimum NTU	Mean
	587	9	4.7	2.0	3.1
	588	8	4.2	1.5	2.7
	612	11	11.0	1.0	3.0
	615	8	20.0	2.2	9.5
	617	11	5.5	1.8	2.9
	618	11	5.8	1.2	3.6
	619	9	4.2	0.5	1.7
	632	9	5.4	1.1	2.7
	639	9	8.5	2.7	6.3
	644	9	4.7	1.4	2.5
	671	4	1.2	0.8	1.0

COLOR

	Station	Number of times sampled	Maximum Pt-Co	Minimum Pt-Co	Mean
	587	9	80	30	58
	588	8	140	20	59
	612	11	200	30	72
	615	8	280	60	116
	617	11	240	40	110
	618	10	70	10	44
	619	9	120	70	84
	632	9	90	20	63
	639	9	110	30	72
	644	9	100	20	72
	671	4	280	50	148

Below represents a resume of the Cow Pen Slough, Deer Creek, Alligator Creek, Forked Creek, Myakka River, Spring Run, Myakkahatchee Creek, and Big Slough drainage basins.

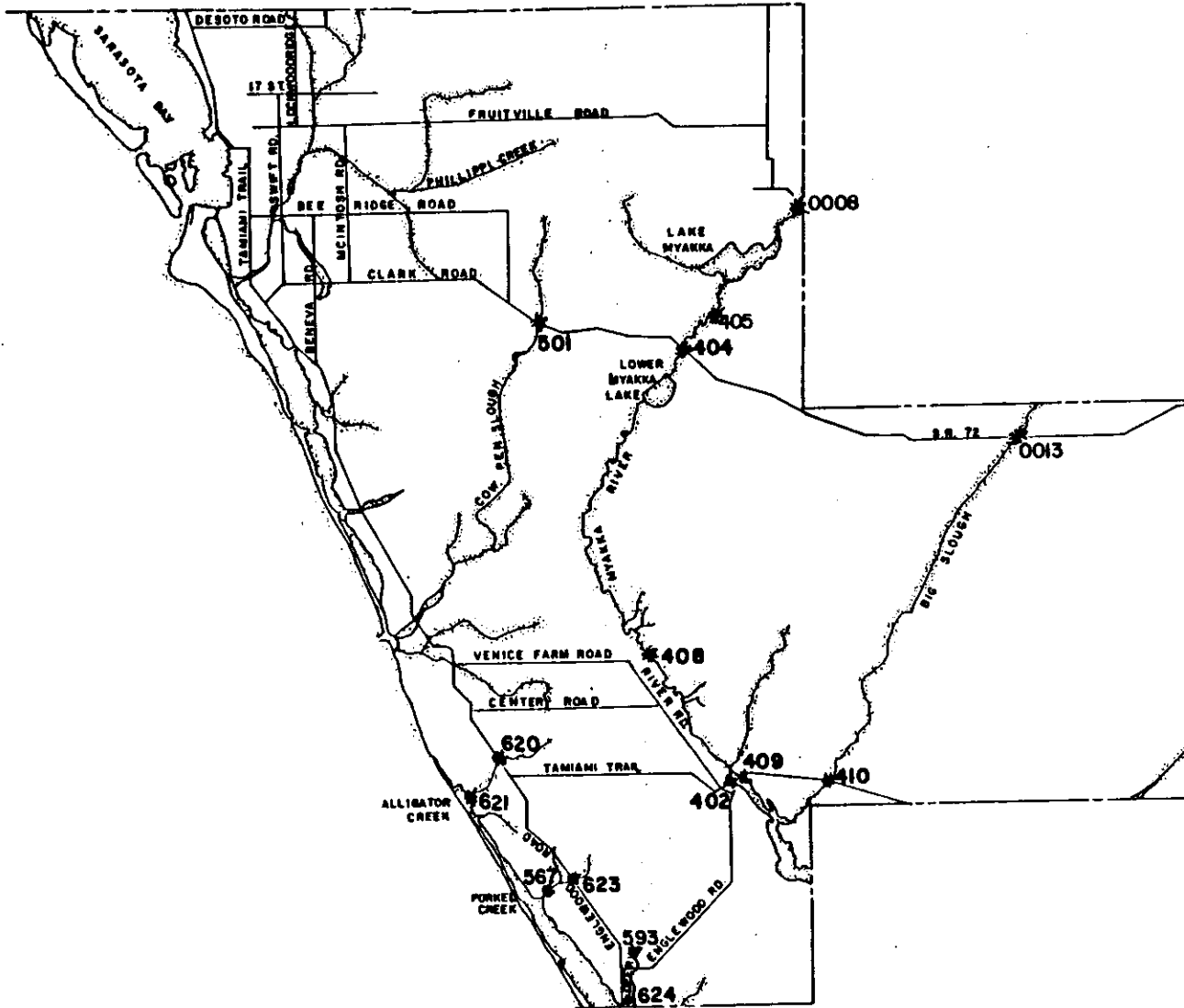
There are 13 stations 3 of which are Class I, while 10 stations are Class III. In the Class I stations 19 violations were found in 81 observations representing 23% of the sampling. In the Class III stations 60 violations were found in 269 observations representing 22% of the total sampling.

Stream	Stations	Number of Observations	Violations #	%
Cow Pen Slough	501	36	12	33%
Alligator Creek	621	24	3	13%
Forked Creek	623	24	2	1%
Deer Creek	593,624	46	8	17%
Myakka River	402,404,405, 408,0008	144	37	26%
Spring Run	409	30	3	10%
Myakkahatchee	410	30	4	13%
Big Slough	0013	16	8	50%

Total Coliform - Maximum value recorded was 73,000 colonies/100 ml at Cow Pen Slough at the south side of S.R. 72 (Station #501). The minimum value is 100 at 5 different locations.

Fecal Coliform - Maximum value recorded was 9,700 colonies/100 ml at Myakka River and S.R. 72 (Station #404). The minimum value recorded was 10 at 3 different locations.

Dissolved Oxygen - Maximum value recorded was 10.8 at Cow Pen Slough and the south side of S.R. 72 bridge. (Station #501) The minimum recorded value was 0.0 at Myakka River and S.R. 72 (Station #404).



STREAM RUN STATIONS
1980

Station /Class	Total Coliform				Fecal Coliform				Dissolved Oxygen			
	Max.	Min.	N	V	Max.	Min.	N	V	Max.	Min.	N	V
#501/III	73,000	100	12	7	8,000	10	12	2	10.8	1.9	12	3
#593/III	2,000	100	7	0	120	10	7	0	7.3	1.7	8	5
#621/III	12,000	300	8	1	590	60	8	0	8.9	1.9	8	2
#623/III	6,900	400	8	2	580	10	8	0	7.3	3.1	8	1
#624/III	2,400	100	8	0	380	10	8	0	7.3	2.4	8	3
#402/III	3,800	500	10	4	880	20	10	0	8.4	3.2	10	1
#404/I	11,000	270	11	4	9,700	10	11	1	7.5	0.0	11	6
#405/I	13,000	100	6	2	3,200	10	6	1	7.2	3.2	6	1
#408/III	8,600	700	10	3	2,100	30	10	0	8.8	3.9	10	3
#409/III	8,000	700	10	2	1,900	30	10	0	8.0	3.6	10	1
#410/I	3,600	360	10	3	930	10	10	0	8.4	3.6	10	1
#0008/III	12,000	100	11	7	2,100	10	11	0	6.6	0.4	11	6
#0013/III	7,700	2,000	5	4	2,000	40	5	0	6.9	2.2	6	4

LOCATION DESCRIPTIONS

#501 Cow Pen Slough at south side of S.R. 72 bridge.

#593 Deer Creek at Wentworth Street.

#621 Alligator Creek at Shamrock Blvd.

#623 Forked Creek at Rt. 775.

#624 Deer Creek at the end of Horton Avenue.

#402 Myakka River at US 41 bridge.

#404 Myakka River at S.R. 72.

#405 Myakka River at the bridge in Myakka River State Park.

#408 Myakka River at Snook Haven.

#409 Spring Run at US 41 bridge.

#410 Myakkahatchee Creek at US 41 bridge.

#0008 Myakka River at S.R. 780 bridge.

#0013 Big Slough at S.R. 72 bridge.

FECAL STREP

Station	Number of times sampled	Maximum #Colonies/100ML	Minimum #Colonies/100ML	Geometric Mean
501	12	370	10	41
593	7	30	10	15
621	8	140	10	16
623	8	530	10	46
624	8	70	10	23
402	10	5,900	10	39
404	11	10,000	10	34
405	6	110	10	25
408	10	760	10	56
409	10	720	10	27
410	10	4,100	10	38
0008	11	9,200	10	140
0013	5	540	120	224

TEMPERATURE

Station	Number of times sampled	Maximum °C	Minimum °C	Mean
501	12	27	20	23
593	8	33	19	28
621	8	32	17	26
623	8	32	16	27
624	8	32	16	26
402	10	29	15	25
404	10	28	21	25
405	6	27	19	23
408	10	30	15	25
409	10	31	20	26
410	10	30	22	26
0008	11	28	18	24
0013	6	26	22	25

CONDUCTIVITY

Station	Number of times sampled	Maximum $\mu\text{mhos/cm}$ at 25°C	Minimum $\mu\text{mhos/cm}$ at 25°C	Mean
501	12	800	220	552
593	8	44,300	550	32,356
621	8	43,900	9,900	35,888
623	8	47,100	570	38,834
624	8	51,400	20,000	42,800
402	10	22,000	500	7,531
404	11	270	190	237
405	6	340	175	246
408	10	4,100	240	798
409	10	23,500	1,000	15,008
410	9	23,000	610	6,712
0008	11	655	140	298
0013	6	690	223	419

pH

Station	Number of times sampled	Maximum Electrometric Units	Minimum Electrometric Units	Mean
501	12	8.9	5.8	7.7
593	8	8.0	6.5	7.5
621	8	7.9	7.3	7.9
623	8	8.3	7.1	8.0
624	8	8.2	7.5	7.8
402	10	7.7	6.2	7.3
404	11	7.6	5.9	6.9
405	6	7.5	6.2	6.8
408	10	8.1	6.0	7.1
409	10	7.8	6.4	7.4
410	10	7.9	6.6	7.5
0008	11	7.1	6.0	6.5
0013	6	7.7	6.3	7.1

TURBIDITY

	Station	Number of times sampled	Maximum NTU	Minimum NTU	Mean
	501	12	3.5	1.0	2.1
	593	8	3.6	1.4	2.4
	621	8	4.4	2.3	3.2
	623	8	4.5	1.9	4.0
	624	8	2.4	1.0	1.6
	402	10	7.0	1.7	3.6
	404	11	2.4	.5	1.3
	405	6	6.0	0.7	1.9
	408	10	5.3	1.0	2.5
	409	10	4.5	2.1	3.2
	410	10	4.2	2.2	3.1
	0008	11	4.5	0.9	1.7
	0013	6	3.4	1.6	2.5

COLOR

	Station	Number of times sampled	Maximum Pt-Co	Minimum Pt-Co	Mean
	501	12	280	40	10
	593	7	80	40	53
	621	7	100	30	46
	623	7	80	30	39
	624	7	40	20	28
	402	10	240	70	136
	404	11	240	80	146
	405	6	140	80	115
	408	10	240	70	135
	409	10	120	30	74
	410	10	120	50	88
	0008	11	280	80	167
	0013	6	280	80	185