

OCEAN WEST

WATER QUALITY

SURVEY RESULTS

1970

NASSAU COUNTY DEPARTMENT OF HEALTH

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July 9, 1971

RECORDS DEPARTMENT  
VERTICAL FILE  
SONY - STONY BROOK

## INTRODUCTION

The purpose of this report is to summarize the chemical and bacteriological results of the samples collected by the Department of Health in the Ocean West during 1970.

## STUDY AREA

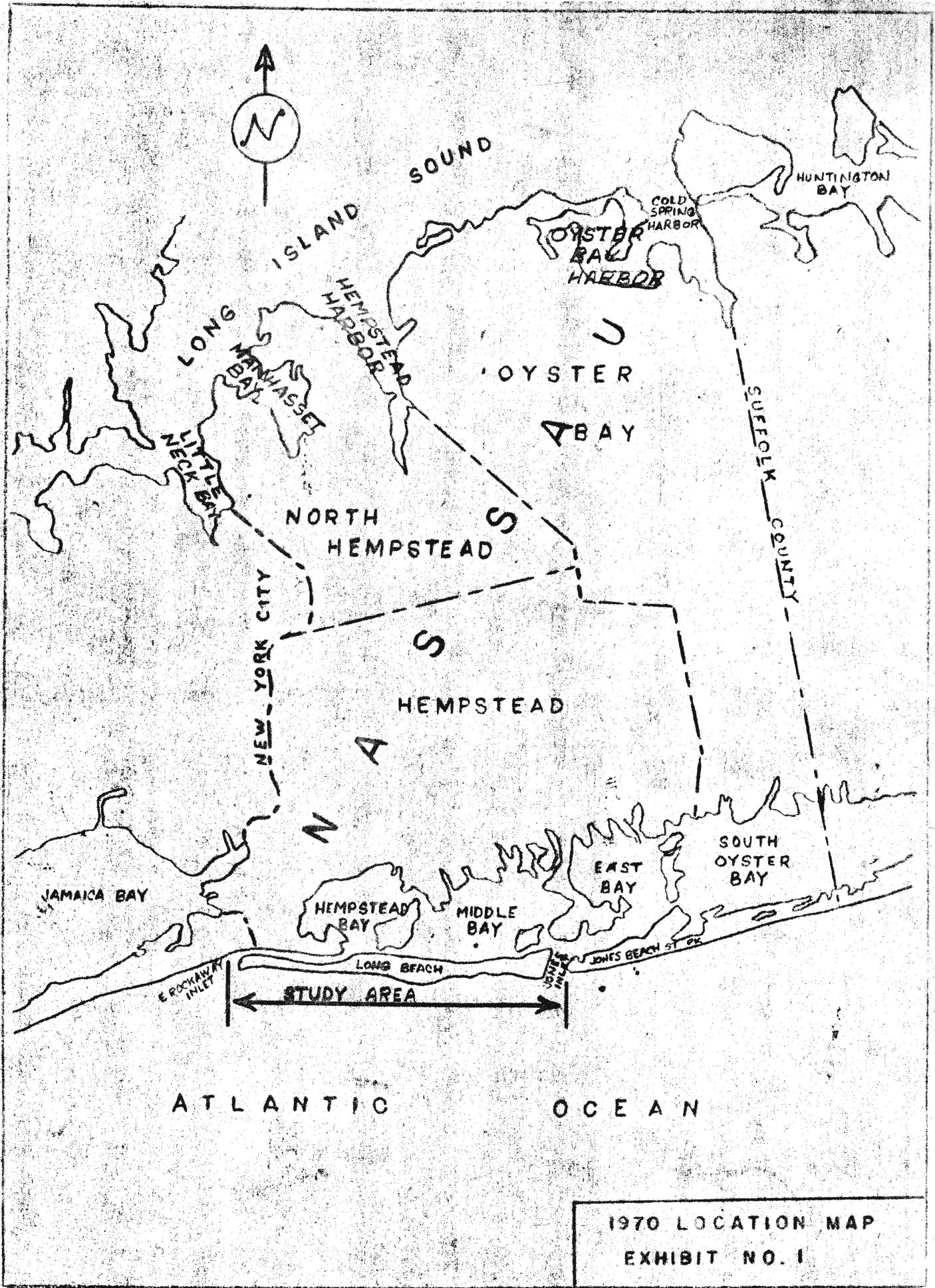
Ocean West has been defined as the area of water in the Atlantic Ocean immediately south of the Barrier beach extending from East Rockaway Inlet to Jones Inlet.

Exhibit 1 shows the location of the study area within the County and Exhibit 2 shows the sampling point locations.

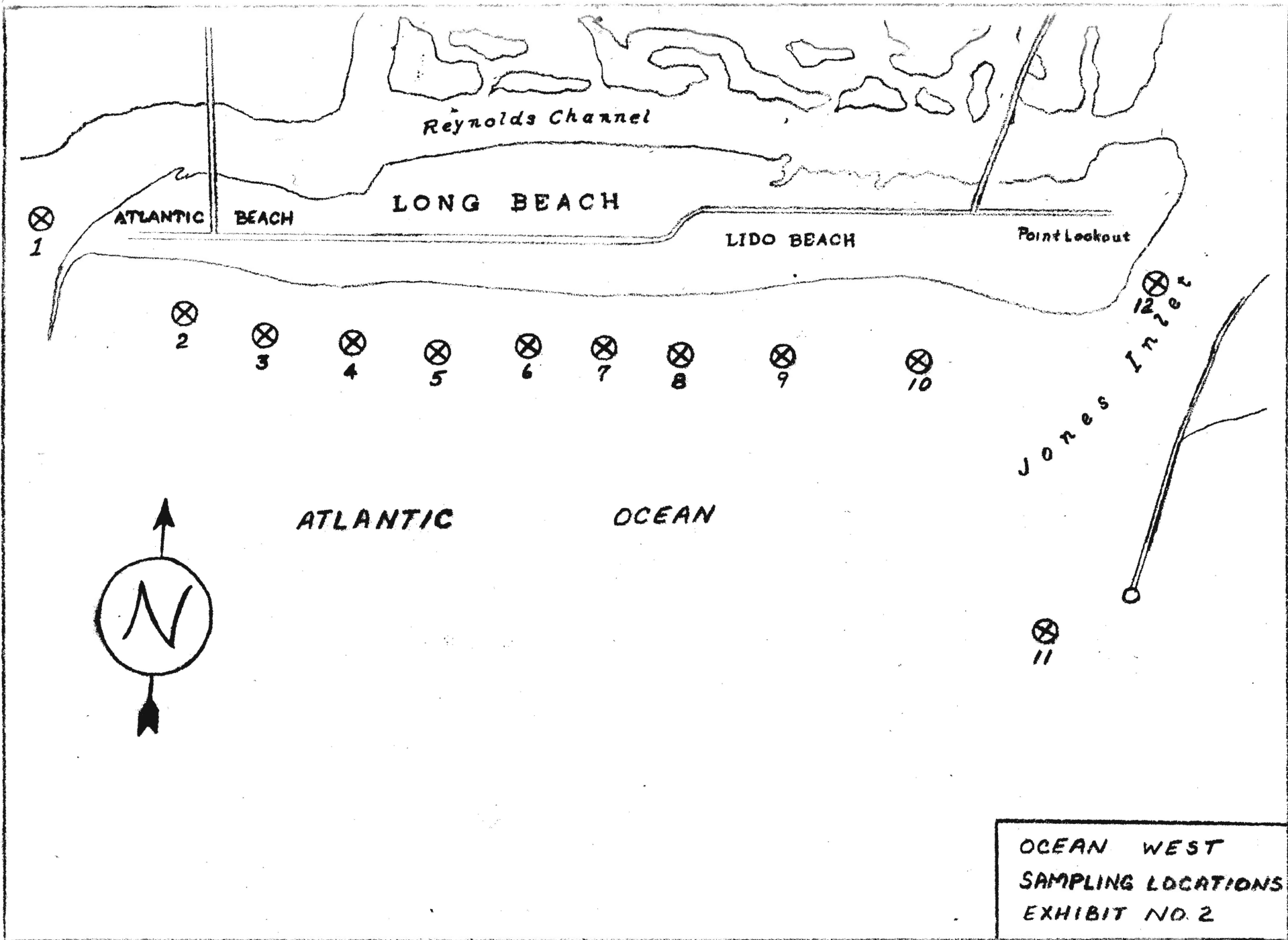
## SAMPLING PROCEDURE AND ANALYSES

All samples were collected by Health Department personnel and were analyzed in accordance with the procedures and methods outlined in the 12th edition of Standard Methods. Laboratory analyses were performed by the Health Department's Division of Laboratories and Research.

All bacteriological samples were collected at or near the surface. All chemical samples were collected approximately five feet below the surface.



1970 LOCATION MAP  
 EXHIBIT NO. 1



OCEAN WEST  
SAMPLING POINT LOCATIONS

<u>Point</u>	
* 1	Off Buoy No. "8" East Rockaway Inlet
2	$\frac{1}{4}$ mile South off Nautilus Hotel
* 3	$\frac{1}{4}$ mile South off Hebrew Academy
4	$\frac{1}{4}$ mile South off Tower in line with church
* 5	$\frac{1}{4}$ mile South off Long Beach Town Hall
6	$\frac{1}{4}$ mile South off Long Beach Bowl
* 7	$\frac{1}{4}$ mile South off green glass building west of cupolas
8	$\frac{1}{4}$ mile South off Lido Hotel
* 9	$\frac{1}{4}$ mile South off colored domes on beach
10	$\frac{1}{4}$ mile South off Water Tower ("golf ball")
11	Off Red Buoy No. "2" Jones Inlet
* 12	Approximately 100 yds. East off Point Lookout Near Red Nun "8A"
* Chemical Analyses in addition to Bacteriological Analyses	

OCEAN WEST  
TIDE AND PRECIPITATION DATA  
 1970

<u>Date</u>	<u>High Water</u> H.M.	<u>Low Water</u> H.M.	<u>Precipitation - Inches</u> Kennedy Airport
5/12	-	-	0
5/13	-	-	0
5/14	1507	0901	.02
6/3	-	-	.01
6/4	-	-	.08
6/5	0855	1455	.46
6/23	-	-	0
6/24	-	-	0
6/25	1319	0655	0
7/11	-	-	.01
7/12	-	-	-
7/13	1513	0851	0
7/21	-	-	0
7/22	-	-	0
7/23	1155	0534	0
8/3	-	-	.07
8/4	-	-	.02
8/5	1007	1607	0
8/11	-	-	Trace
8/12	-	-	0
8/13	0413	1019	0
9/26	-	-	0
9/27	-	-	.46
9/28	0643	1243	0
11/29	-	-	.10
11/30	-	-	.02
12/1	0837	1507	0

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BACTERIOLOGICAL RESULTS - COLIFORM - MPN/100 ml.

Sampling Point - 1				Sampling Point - 2			Sampling Point - 3		
Date	Time	Total	Fecal	Time	Total	Fecal	Time	Total	Fecal
5/14	1100	93	23		< 3.0	< 3.0	-	< 3.0	< 3.0
6/5	1050	9.1	< 3.0	1110		< 3.0	1120	< 3.0	< 3.0
	1050	29	-	1110	< 3.0	-	1120	15	-
6/25	1050	93	93	1100	< 3.0	< 3.0	1115	< 3.0	< 3.0
7/13	0940	43	< 3.0	0950	2100	< 3.0	1003	3.6	< 3.0
7/23	1230	7.3	-	1213	< 3.0	-	1205	23	-
8/5	1133	< 3.0	< 3.0	1110	< 3.0	-	1058	< 3.0	-
8/13	1050	930	210	1100	< 3.0	< 3.0	1108	< 3.0	< 3.0
9/28	0925	9.1	3.6	0935	9.1	9.1	0945	23	9.1
12/1	1040	23	23	1016	23	23	1010	23	9.1
Median		26	13		< 3.0	< 3.0		3.3	< 3.0
Log Average		29	13		8.1	4.7		6.6	4.1

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WATER QUALITY SURVEY RESULTS  
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BACTERIOLOGICAL RESULTS - COLIFORM - MPN/100 ml.

Date	Sampling Point - 4			Sampling Point - 5			Sampling Point -6		
	Time	Total	Fecal	Time	Total	Fecal	Time	Total	Fecal
5/14	-	3.6	3.6	-	< 3.0	< 3.0	-	< 3.0	< 3.0
6/5	1140	< 3.0	< 3.0	1150	9.1	3.6	1157	3.6	< 3.0
	1140	43	-	1150	9.1	-	1157	9.1	-
6/25	1130	9.1	9.1	1140	< 3.0	< 3.0	1148	< 3.0	< 3.0
7/13	1010	9.1	< 3.0	1016	9.1	< 3.0	1020	< 3.0	< 3.0
7/23	1155	23	-	1145	15	-	1132	93	-
8/5	1053	9.1	-	1037	9.1	-	1029	9.1	-
8/13	1120	15	< 3.0	1130	23	3.6	1134	23	9.1
9/28	0955	23	23	1005	43	9.1	1010	23	9.1
12/1	1004	9.1	< 3.0	0957	9.1	3.6	0953	3.6	3.6
Median		9.1	< 3.0		9.1	3.6		6.3	< 3.0
Log Average		11	4.8		9.8	3.8		8.2	4.2



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BACTERIOLOGICAL RESULTS - COLIFORM - MPN/100 ml.

Sampling Point - 7				Sampling Point - 8			Sampling Point - 9		
Date	Time	Total	Fecal	Time	Total	Fecal	Time	Total	Fecal
5/14	-	3.6	3.6	-	3.6	3.6	-	< 3.0	< 3.0
6/5	1210	9.1	9.1	1215	93	23	1227	< 3.0	< 3.0
	1210	43	-	1215	15	-	1227	< 3.0	-
6/25	1155	14	9.1	1205	7.3	< 3.0	1210	23	23
7/13	1030	23	< 3.0	1033	11000	< 3.0	1041	23	9.1
7/23	1127	43	-	1120	43	-	1113	9.3	-
8/5	1020	23	-	1016	93	-	1005	23	-
8/13	1145	3.6	< 3.0	1148	< 3.0	< 3.0	1157	23	3.6
9/28	1015	23	23	1020	9.1	< 3.0	1030	43	9.1
12/1	0946	9.1	3.0	0942	43	9.1	0935	< 3.0	< 3.0
Median		18	3.6	29		< 3.0	16		3.6
Log Average		14	5.6	34		4.8	9.9		5.7

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BACTERIOLOGICAL RESULTS - COLIFORM - MPN/100 ml.

Sampling Point - 10				Sampling Point - 11			Sampling Point - 12		
Date	Time	Total	Fecal	Time	Total	Fecal	Time	Total	Fecal
5/14		9.1	9.1		3.6	3.6	1140	< 3.0	< 3.0
6/5	1240	43	43	1255	< 3.0	< 3.0	1302	210	93
	1240	75	-	1255	3.6	-	1302	93	-
6/25	1218	23	23	1228	< 3.0	< 3.0	1235	21	9.1
7/13	1047	23	9.4	1055	< 3.0	< 3.0	1106	240	9.1
7/23	1102	43	-	1030	23	-	1020	21	-
8/5	0956	9.1	-	0952	< 3.0	-	0942	23	3.6
8/13	1202	23	23	1213	3.6	3.6	1215	43	43
9/23	1038	9.1	3.6	1048	23	23	1100	93	21
12/1	0929	3.6	< 3.0	0922	3.6	< 3.0	0917	43	43
Median		23	9.4		3.6	< 3.0		43	9.1
Log Average		18	11		4.8	4.2		44	15

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CHEMICAL RESULTS

SAMPLING POINT - 1

Date	Time	Chlorides	pH	Alkalinity	Suspended Solids	Temp °C	D.O.	B.O.D.
5/14	1100	16,600	7.4	101	27.	-	10.0	3.7
6/25	1050	18,800	7.5	-	-	18	7.4	2.7
7/13	0940	17,800	7.5	-	67	21	5.4	1.3 **
7/23	1230	17,200	8.2	-	57	21	8.2	3.7 *
8/5	1133	17,600	7.9	-	49.8	20	6.8	2.7
8/13	1050	17,600	7.9	-	39.	23	6.0	2.7
9/28	0925	18,200	7.6	-	37.	-	5.4	1.3 **
12/1	1040	18,800	8.0	-	39.	10	-	-
Averages		17,800	7.8	101	45	19	7.0	2.3

- Notes: (1) All readings are in mg/l unless otherwise noted.  
 (2) Chlorides expressed as mg/l Cl.  
 (3) Alkalinity expressed as mg/l CaCO<sub>3</sub>.  
 (4) \* Designates 6 day B.O.D.  
 (5) \*\* Designates 7 day B.O.D.

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CHEMICAL RESULTS

SAMPLING POINT - 1

Date	Time	Nitrogen as N			Phosphorous as PO <sub>4</sub>	
		NH <sub>3</sub>	NO <sub>2</sub>	NO <sub>3</sub>	Ortho	Total
5/14	1100	0.25	0.007	0.10	0.38	0.68
6/25	1050	0.08	0.003	0.05	0.105	0.19
7/13	0940	0.30	0.013	0.03	0.66	0.74
7/23	1230	0.02	<0.001	0.03	0.11	0.15
8/5	1133	0.07	0.002	<0.01	0.09	0.14
8/13	1050	0.07	0.015	0.04	0.62	0.68
9/23	0925	0.08	0.003	<0.01	0.19	0.25
12/1	1040	0.10	0.011	0.18	0.18	0.18
Averages		0.12	0.007	0.06	0.29	0.38

Notes: (1) All chemical readings expressed as mg/l.

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CHEMICAL RESULTS

SAMPLING POINT - 3

Date	Time	Chlorides	pH	Alkalinity	Suspended Solids	Temp °C	D.O.	B.O.D.
5/14	1120	16,200	8.0	100	28.1	-	10.0	4.0
6/25	1115	18,000	7.9	-	-	-	9.0	4.0
7/13	1003	17,600	8.0	-	65	19	7.8	2.0 **
7/23	1205	17,400	8.0	-	41	20	8.2	4.0 *
8/5	1058	18,000	8.0	-	59	20	7.8	3.0
8/13	1108	17,600	8.1	-	61.1	22	7.4	1.0
9/28	0945	18,200	7.8	-	56.1	-	5.4	1.0 **
12/1	1010	19,400	8.0	-	46.0	10	-	-
Averages		17,800	8.0	100	51	18	7.9	3.0

Notes: See Sampling Point 1 Chemical Results

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## CHEMICAL RESULTS

## SAMPLING POINT - 3

Date	Time	Nitrogen as N			Phosphorous as PO <sub>4</sub>	
		NH <sub>3</sub>	NO <sub>2</sub>	NO <sub>3</sub>	Ortho	Total
5/14	1120	0.05	0.003	0.04	0.04	0.11
6/25	1115	0.05	0.002	0.04	0.07	0.22
7/13	1003	0.03	0.003	0.01	0.08	0.16
7/23	1205	0.02	<0.001	0.04	0.18	0.25
8/5	1058	0.05	<0.001	<0.01	0.10	0.16
8/13	1108	0.02	0.001	0.01	0.10	0.10
9/28	0945	0.10	0.003	<0.01	0.21	0.22
12/1	1010	0.04	0.011	0.15	0.18	0.21
Averages		0.05	0.003	0.04	0.12	0.18

Notes: (1) All chemical readings expressed as mg/l.

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CHEMICAL RESULTS

SAMPLING POINT - 5

Date	Time	Chlorides	pH	Alkalinity	Suspended Solids	Temp °C	D.O.	B.O.D.
5/14	1100	17,200	8.1	100	46.0	-	10.0	3.0
6/25	1140	19,200	8.0	-	-	-	8.8	3.0
7/13	1020	17,800	8.0	-	52	18	7.0	2.0 **
7/23	1145	17,200	8.1	-	61	19	7.8	1.0 *
8/5	1037	18,000	8.0	-	27.0	21	8.6	3.0
8/13	1130	17,800	8.1	-	45.0	23	7.0	1.0
9/28	1005	18,000	7.9	-	48.0	-	6.0	1.0 **
12/1	0957	18,400	8.0	-	49.0	19	-	-
Averages		18,000	8.0	100	47	18	7.9	2.0

Notes: See Sampling - 1 Chemical Results

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CHEMICAL RESULTS

SAMPLING POINT - 5

Date	Time	Nitrogen as N			Phosphorous as PO <sub>4</sub>	
		NH <sub>3</sub>	NO <sub>2</sub>	NO <sub>3</sub>	Ortho	Total
5/14	1100	0.05	0.003	0.03	0.05	0.14
6/25	1140	0.05	0.001	0.04	0.04	0.13
7/13	1020	0.02	0.003	<0.01	0.13	0.15
7/23	1145	0.04	<0.001	0.04	0.18	0.23
8/5	1037	0.08	<0.001	<0.01	0.16	0.22
8/13	1130	0.02	0.001	0.02	0.16	0.20
9/28	1005	0.06	0.004	0.04	0.21	0.23
12/1	0957	0.10	0.012	0.15	0.19	0.19
Averages		0.05	0.003	0.04	0.14	0.19

Notes: (1) All chemical readings expressed as mg/l



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CHEMICAL RESULTS

SAMPLING POINT - 7

Date	Time	Chlorides	pH	Alkalinity	Suspended Solids	Temp °C	D.O.	B.O.D.
5/14	1200	16,400	8.2	100	45.0	-	10.4	3.0
6/25	1155	18,000	8.0	-	-	-	8.4	3.0
7/13	1030	18,200	8.0	-	55	16	6.4	1.0 **
7/23	1130	17,400	7.9	-	63	17	7.6	3.0 *
8/5	1020	17,600	8.0	-	27.0	21	7.8	4.0
8/13	1145	18,000	8.1	-	51.0	23	6.6	1.0
9/28	1015	18,200	7.9	-	58.0	-	5.8	1.0 **
12/1	0946	17,800	8.0	-	59.0	10	-	-
Average		17,700	8.0	100	51	17	7.6	2.0

Notes: See Sampling Point - 1 Chemical Results

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CHEMICAL RESULTS

SAMPLING POINT - 7

Date	Time	<u>Nitrogen as N</u>			<u>Phosphorous as PO<sub>4</sub></u>	
		NH <sub>3</sub>	NO <sub>2</sub>	NO <sub>3</sub>	Ortho	Total
5/14	1200	0.08	0.006	0.06	0.05	0.09
6/25	1155	0.05	0.005	0.05	0.11	0.22
7/13	1030	0.02	0.005	<0.01	0.15	0.16
7/23	1130	0.02	<0.001	0.03	0.18	0.22
8/5	1020	0.05	0.002	<0.01	0.19	0.47
8/13	1145	0.04	0.001	0.03	0.16	0.18
9/28	1015	0.04	0.004	<0.01	0.23	0.28
12/1	0946	0.06	0.011	0.15	0.19	0.19
Averages		0.05	0.004	0.04	0.16	0.23

Notes: (1) All chemical readings expressed as mg/l

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CHEMICAL RESULTS

SAMPLING POINT - 9

Date	Time	Chlorides	pH	Alkalinity	Suspended Solids	Temp °C	D.O.	B.O.D.
5/14	1115	17,200	8.2	101	55.0	-	9.8	3.0
6/25	1210	17,600	8.0	-	-	-	7.6	2.0
7/13	1041	17,800	8.1	-	110.0	18	7.0	2.0 **
7/23	1113	17,200	7.9	-	48.0	20	7.8	3.0 *
8/5	1005	17,600	7.9	-	31.0	21	8.0	2.0
8/13	1157	17,600	8.2	-	42.0	23	7.4	1.0
9/28	1030	18,000	8.0	-	96.0	-	3.6	2.0 **
12/1	0935	19,200	7.9	-	41.0	10	-	-
Averages		17,800	8.0	101	60.0	18	7.3	2.0

Notes: See Sampling Point - 1 Chemical Results

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CHEMICAL RESULTS

SAMPLING POINT - 9

Date	Time	Nitrogen as N			Phosphorous as PO <sub>4</sub>	
		NH <sub>3</sub>	NO <sub>2</sub>	NO <sub>3</sub>	Ortho	Total
5/14	1115	0.08	0.004	0.08	0.05	0.11
6/25	1210	0.05	0.002	0.05	0.10	0.26
7/13	1041	0.03	0.005	0.01	0.19	0.25
7/23	1113	0.02	0.001	0.03	0.19	0.26
8/5	1005	0.05	0.002	0.01	0.16	0.23
8/13	1157	0.02	0.001	0.05	0.14	0.20
9/28	1030	0.08	0.005	0.01	0.26	0.40
12/1	0935	0.09	0.010	0.15	0.14	0.15
Averages		0.05	0.004	0.05	0.15	0.23

Notes: (1) All chemical readings expressed as mg/l

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SAMPLING POINT - 12

Date	Time	Chlorides	pH	Alkalinity	Suspended Solids	Temp °C	D.O.	B.O.D.
5/14	1240	16,600	8.2	100	43	-	10.0	3.0
6/25	1235	18,800	8.0	-	-	-	8.2	2.0
7/13	1106	17,800	8.2	-	87	20	7.8	2.0 **
7/23	1020	17,800	7.5	-	41	18	6.8	2.0 *
8/5	0942	17,400	7.9	-	21.0	19	7.8	2.0
8/13	1215	18,000	8.0	-	64.0	24	6.2	1.0
9/28	1100	18,000	7.9	-	55.0	-	5.0	1.0 **
12/1	0917	19,600	7.8	-	43.0	10	-	-
Averages		18,000	7.9	100	51.0	18	7.4	2.0

Notes: See Sampling Point - 1 Chemical Results

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CHEMICAL RESULTS

SAMPLING POINT - 12

Date	Time	Nitrogen as N			Phosphorous as PO <sub>4</sub>	
		NH <sub>3</sub>	NO <sub>2</sub>	NO <sub>3</sub>	Ortho	Total
5/14	1240	0.085	0.003	0.07	0.07	0.10
6/25	1235	0.03	0.005	0.04	0.13	0.19
7/13	1106	0.02	0.003	0.05	0.20	0.27
7/23	1020	0.02	0.001	0.01	0.16	0.22
8/5	0942	0.03	<0.001	<0.01	0.05	0.08
8/13	1215	0.04	0.003	0.02	0.20	0.27
9/28	1100	0.02	0.005	<0.01	0.21	0.26
12/1	0917	0.04	0.010	0.13	0.23	0.32
Averages		0.04	0.004	0.04	0.16	0.21

Notes: (1) All chemical readings expressed as mg/l