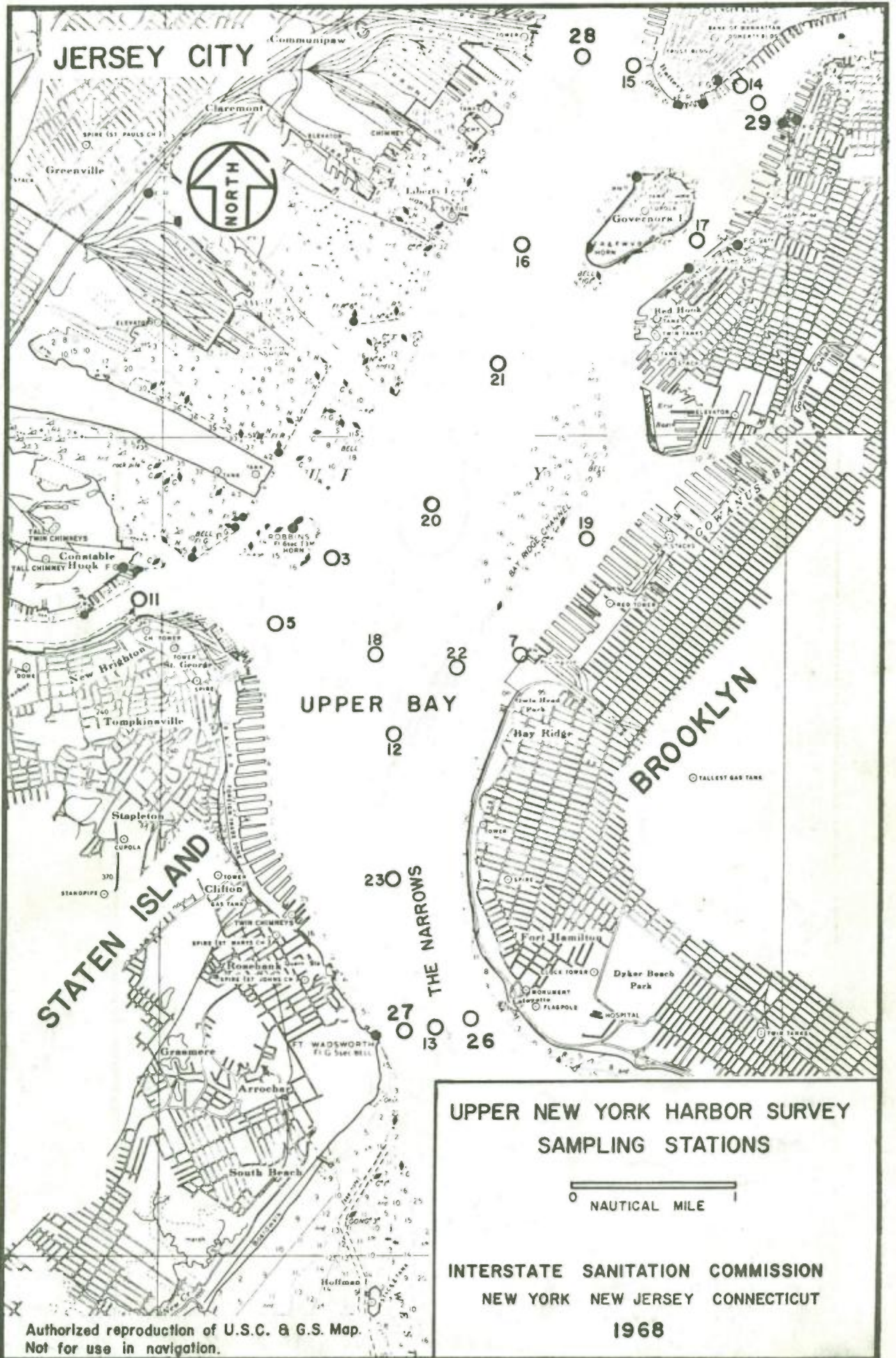


UPPER NEW YORK HARBOR
BOAT SURVEYS
1970, 1971, 1972, 1973



DESCRIPTION OF SAMPLING STATIONS
in
1958 UPPER NEW YORK HARBOR SURVEY

- STATION # 3 At Passaic Valley Outfall (East-West alignment obtained by using Robbins Reef Light and forward Water Power on Naval Dock, North-South alignment using Statue of Liberty and Black Bell Buoy #1-G). Samples are taken here at depths of 5, 20 and 40 feet.
- STATION # 5 Middle of ship channel going to Kill Van Kull. East-West alignment is established by aligning Fixed Green Range Lights on Esso Dock, Constable Hook, New Jersey. North-South alignment can be established using line of Black Buoys on main ship channel in Upper Harbor.
- STATION # 7 In center of Boil of Owls Head Treatment Plant. Outfall is located opposite the north end of the treatment plant building.
- STATION #11 Located in the Kill Van Kull, at mid-channel and directly opposite Flashing Green, Black Buoy #3.
- STATION #12 Center of junction of Main Channel with Bay Ridge Channel, 10 yards to west of Flashing Red Gong Buoy #22.
- STATION #13 Middle of channel in Narrows (midway between light on Fort Lafayette and light on Fort Wadsworth). Samples were taken at depths of 5, 40 and 80 feet.
- STATION # 27 300 yards east of Flshing Green Light on Fort Wadsworth (using same East-West alignment used for Station #13).

- STATION # 26 300 yards West of Flashing Red Light on Fort ~~Lafayette~~ ^{HAMILTON} (using same East-West alignment used for Station #13).
- STATION #14 Ten yards off Pier #11 in East River.
- STATION # 29 Mid-channel of East River in line with Pier #11 (Manhattan) and Pier #10 (Brooklyn). Samples were taken at depths of 5, 20 and 40 feet.
- STATION #15 Ten yards off Pier "A" in the Hudson River.
- STATION # 28 Mid-channel of Hudson River in line with Pier "A" (Manhattan) and tower on Central Railroad of New Jersey Ferry Pier on Jersey Shore. Samples were taken at depths of 5, 20 and 40 feet.
- STATION #16 In main ship channel 10 yards to the East of Flashing Green Bell Buoy #31.
- STATION #17 Mid-channel of Buttermilk Channel and opposite Private Bell Buoy #3.
- STATION #18 Mid-channel off 69th Street Ferry Dock, Brooklyn. East-West alignment obtained by using two gas holders at rear of 69th Street and two tall smokestacks on Constable Hook, N.J.
(Note: gas holders do not close in.)
North-South line formed by Red Buoys #24, #26 and #28 on main ship channel.
- STATION #19 In mid-channel of Bay Ridge Channel, approximately 300 yards off Black Can #5. East-West alignment Black Can #5 and Pier #2 at Bush Terminal.
- STATION #20 In main ship channel 10 yards to west of Flashing Red Bell Buoy #26.
- STATION #21 In main ship channel 10 yards to west of Flashing Red Bell Buoy #30.

STATION #22 In mid-channel of Bay Ridge Channel. East-West alignment of Flashing Red Beacon on 69th Street Ferry Dock (Brooklyn) and Flashing Bell Buoy #24. North-South alignment of Flashing Green Bell Buoy #3 and Flashing Red Gong Buoy #22.

STATION #23 In mid-channel of main shipping channel. East-West alignment of tower on Fort Hamilton High School, Brooklyn shore with twin chimneys on Merritt, Chapman and Scott Pier at Rosebank, Staten Island. North-South alignment, Flashing Red Gong Buoy #22 with Flashing Green Light on Fort Wadsworth.

Memorandum

October 16, 1964

To: G.T. Cowherd
From: F.W. Gross
Re: N.Y. Harbor Station Number Changes

<u>Old No.</u>	<u>New No.</u>
13-B-1	26
13-A-1	27
15A-T	28T
15A-M	28M
15A-B	28B
14A-T	29T
14A-M	29M
14A-B	29B

CC: F.W. Gross
T. Kosydar
T. Bonney
H. Anusiak
W. Dukelow
J. Czachor

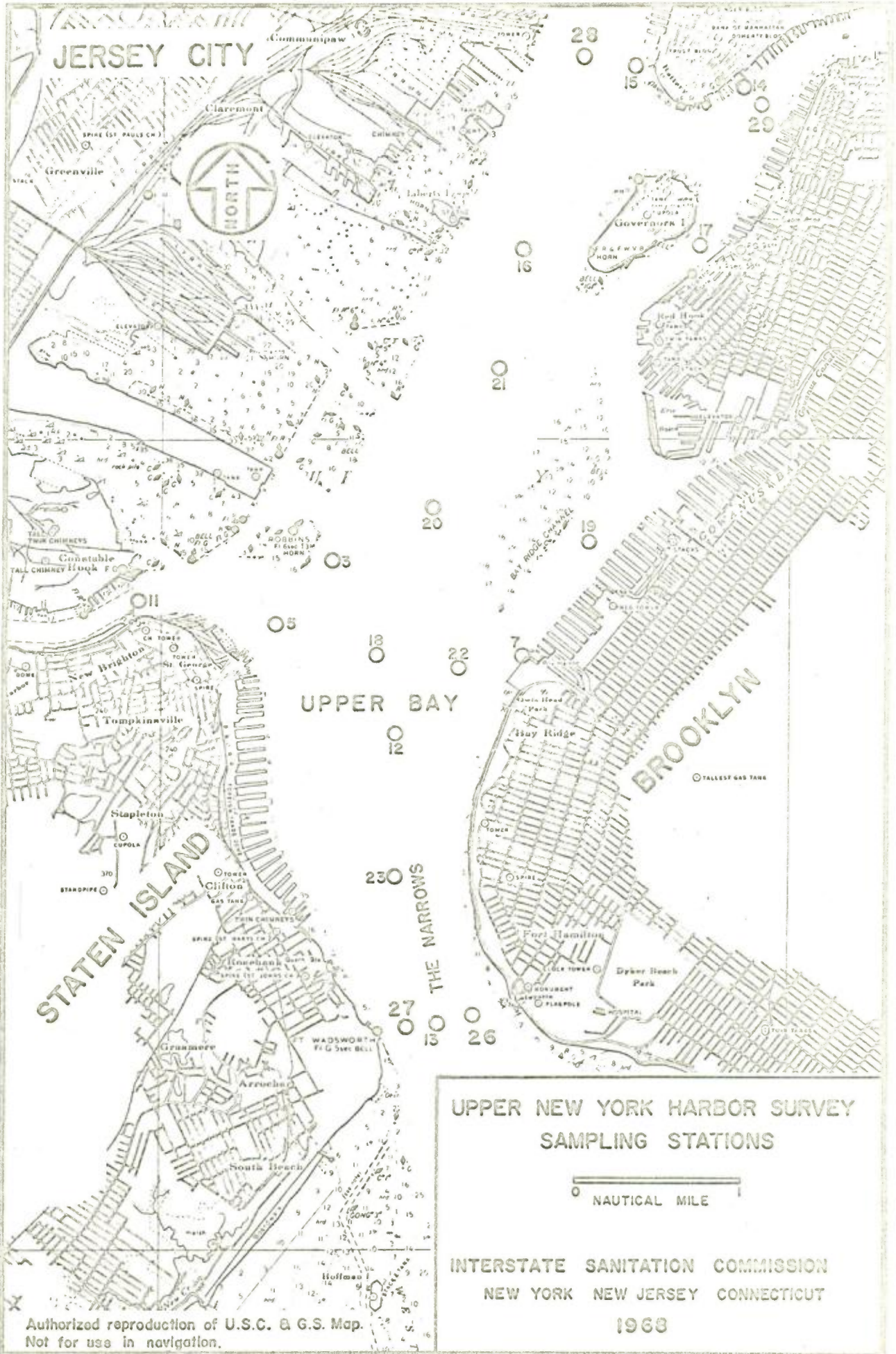
INTERSTATE SANITATION COMMISSION
10 COLUMBUS CIRCLE • NEW YORK 19, N.Y.

UPPER NEW YORK HARBOR

January 1, 1970

thru

December 31, 1970



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UPPER NEW YORK HARBOR SURVEY
SAMPLING STATIONS

0 1
NAUTICAL MILE

INTERSTATE SANITATION COMMISSION
NEW YORK NEW JERSEY CONNECTICUT
1968

CODE

#				REMARKS
1	Light	)	)	FLOATING SOLIDS
2	Medium))	
3	Heavy))	
4	Light	)	)	OIL a/o GREASE
5	Medium))	
6	Heavy))	
7	Light	)	)	DISCOLORATION
8	Medium))	
9	Heavy))	
10	PERCEPTIBLE ODOR			
11	RAW SEWAGE			

DESCRIPTION OF SAMPLING STATIONS
in
1958 UPPER NEW YORK HARBOR SURVEY

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- STATION #21 In main ship channel 10 yards to west of Flashing Red Bell Buoy #30.

STATION #22 In mid-channel of Bay Ridge Channel. East-West alignment of Flashing Red Beacon on 69th Street Ferry Dock (Brooklyn) and Flashing Bell Buoy #24. North-South alignment of Flashing Green Bell Buoy #3 and Flashing Red Gong Buoy #22.

STATION #23 In mid-channel of main shipping channel. East-West alignment of tower on Fort Hamilton High School, Brooklyn shore with twin chimneys on Merritt, Chapman and Scott Pier at Rosebank, Staten Island. North-South alignment, Flashing Red Gong Buoy #22 with Flashing Green Light on Fort Wadsworth.

INTERSTATE SANITATION COMMISSION
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SURVEY: UPPER NEW YORK HARBOR

STATION NO.: 3

DATE	TIME		DEPTH FEET	CHLORIDES PPM	H ₂ O TEMP. °C	D.O.		B.O.D. P.P.M.	MPN per ml.	CODE
	EST	MAX. EBB				OBS. PPM	% SAT.			
3- 3-70	1145		5	9,570	2.5	10.18	83.37	4.71		2-5
	1148	0548	15	10,060	2.3	9.94	81.60	5.24		2-5
	1152		20	10,080	2.0	9.98	81.33	5.62		2-5
3-10-70	0940		5	12,610	2.0	10.32	86.86	3.54		7
	0942	2318	15	12,440	1.8	4.62	39.58	----		7
	0944		20	12,510	1.8	10.26	85.78	3.50		7
4-28-70	0951		5	3,970	11.5	8.40	79.92	1.82		
	0954	0254	15	7,370	11.0	8.00	78.20	3.38		
	0958		20	9,740	11.0	7.26	72.89	≥6.60		
5- 5-70	1020		5	8,840	11.3	7.80	78.15	2.79		
	1023	0912	15	9,320	11.2	7.60	76.30	2.38		
	1028		20	9,700	11.0	7.82	78.51	3.30		
5-12-70	0958		5	7,670	15.0	6.20	66.16	1.76		
	0959	0224	15	9,240	14.0	5.90	62.83	2.36		
	1002		20	9,510	13.2	6.22	65.26	2.84		
5-26-70	1100		5	12,260	16.0	3.68	42.15	2.12		1-4
	1103	0136	15	12,100	15.8	3.62	41.18	0.73		1-4
	1106		20	13,300	15.3	4.54	51.82	2.45		1-4
7- 7-70	-----		5	11,650	20.1	3.82	46.92	2.20		10,3,8
	-----	-----	15	11,890	19.5	3.52	42.87	1.91		10,3,8
	-----		20	12,030	20.0	4.04	49.75	2.76		10,3,8
7-14-70	1000		5	-----	22.5	4.62	-----	1.75		
	1002	0518	15	-----	22.5	4.70	-----	2.07		
	1004		20	-----	22.0	4.00	-----	1.89		
9-15-70	1008		5	14,200	21.5	2.80	36.31	≥2.54	2400+	1
	1015	0912	15	14,600	21.3	3.32	43.14	≥3.01		1
	1020		20	14,480	21.3	3.22	41.79	≥2.92		1
9-29-70	1035		5	13,600	19.6	3.74	46.51	≥3.40	5400	
	1036	2336	15	14,000	19.8	3.42	42.85	2.00		
	1038		20	14,160	19.8	3.28	41.15	1.62		

INTERSTATE SANITATION COMMISSION
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SURVEY: UPPER NEW YORK HARBOR

STATION NO.: 5

DATE	TIME		DEPTH FEET	CHLORIDES PPM	H ₂ O TEMP. °C	D.O.		B.O.D. P.P.M.	MPN per ml.	CODE
	EST	MAX. EBB				OBS. PPM	% SAT.			
3- 3-70	1125	0548	5	10,270	2.7	9.14	75.97	4.49		
3-10-70	0925	2318	5	12,730	2.0	10.32	86.94	3.56		
4-28-70	0935	0254	5	4,110	11.0	8.41	79.41	2.17		
5- 5-70	1005	0912	5	10,090	11.0	7.30	73.66	3.25		
5-12-70	0947	0224	5	7,750	14.8	6.46	68.65	2.22		
5-26-70	1048	0136	5	11,570	16.3	3.52	40.18	1.84		
7- 7-70	----	----	5	11,810	20.1	4.00	49.20	3.13		
7-14-70	0935	0518	5	-----	22.8	4.58	-----	1.58		
9-15-70	0955	0912	5	14,100	21.7	1.98	25.74	1.25		
9-29-70	1015	2336	5	13,600	20.0	2.78	34.83	2.05		

2/10/72:rym

INTERSTATE SANITATION COMMISSION
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SURVEY: UPPER NEW YORK HARBOR

STATION NO.: 7

DATE	TIME		DEPTH FEET	CHLORIDES PPM	H ₂ O TEMP. °C	D.O.		B.O.D. P.P.M.	MPN per ml.	CODE
	EST	MAX. EBB				OBS. PPM	% SAT.			
3- 3-70	0950	0548	5	11,840	3.8	9.72	84.66	≥8.84		
3-10-70	0825	2318	5	9,330	2.8	9.90	81.48	5.92		
4-28-70	0830	0254	5	9,410	11.0	8.22	82.28	3.56		7
5- 5-70	0910	2100	5	10,900	11.5	8.02	81.75	≥7.29		
5-12-70	0845	0224	5	11,630	14.1	6.90	75.57	5.60		
5-26-70	0915	0136	5	11,550	16.3	3.66	41.78	3.33		
7- 7-70	-----	-----	5	12,210	21.1	3.20	40.30	2.18		10,2,8
7-14-70	0830	0518	5	-----	20.9	4.50	-----	3.38		
9-15-70	0835	2048	5	14,300	21.8	4.38	57.18	≥ 3.98		
9-29-70	0900	2336	5	14,780	19.2	4.80	60.07	2.29		

INTERSTATE SANITATION COMMISSION
10 Columbus Circle · New York, New York - 10019

SURVEY: UPPER NEW YORK HARBOR

STATION NO.: 11

DATE	TIME		DEPTH FEET	CHLORIDES PPM	H ₂ O TEMP. °C	D.O.		B.O.D. P.P.M.	MPN per ml.	CODE
	EST	MAX. EBB				OBS. PPM	% SAT.			
3- 3-70	1135	0548	5	9,750	3.0	8.42	69.99	4.67	1700	
3-10-70	0935	2318	5	11,150	----	9.96	-----	3.69	1300	
4-28-70	0942	0254	5	6,150	10.5	7.62	72.64	2.65	> 1	
5- 5-70	1015	0912	5	8,800	11.5	6.70	67.26	3.69	1700	
5-12-70	0951	0224	5	8,200	15.0	6.52	69.95	2.31	1700	
5-26-70	1055	0136	5	11,270	16.0	3.40	38.50	1.82	2400+	
7- 7-70	----	----	5	11,650	20.1	3.42	42.01	2.62	16000	
7-14-70	0950	0518	5	-----	23.5	4.80	-----	2.62	5400	
9-15-70	1000	0912	5	13,620	21.7	1.54	19.90	≥ 1.40	1700	2,4,7
9-29-70	1030	2336	5	12,920	19.8	2.42	29.95	≥ 2.20	24000+	

2/10/72:rym

INTERSTATE SANITATION COMMISSION
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SURVEY: UPPER NEW YORK HARBOR

STATION NO.: 12

DATE	TIME		DEPTH FEET	CHLORIDES PPM	H ₂ O TEMP. °C	D.O.		B.O.D. P.P.M.	MPN per ml.	CODE
	EST	MAX. EBB				OBS. PPM	% SAT.			
3- 3-70	1058	0548	5	9,390	2.0	10.22	82.61	4.73		
3-10-70	0912	2318	5	12,630	1.6	10.52	63.33	3.81		
4-28-70	0920	0254	5	6,110	10.0	7.60	71.69	2.36		
5- 5-70	0955	0912	5	9,870	11.3	7.70	78.01	2.47		
5-12-70	0922	0224	5	8,530	14.8	6.12	65.59	2.00		
5-26-70	1040	0136	5	11,530	16.0	3.32	37.68	1.38		
7- 7-70	----	----	5	11,890	20.0	3.42	42.06	1.47	2400+	
7-14-70	0915	0518	5	-----	20.4	4.02	-----	1.11	920	
9-15-70	0940	0912	5	15,080	21.2	3.96	51.62	1.05	920	
9-29-70	0947	2336	5	13,310	19.0	4.12	50.55	1.95	16000	

INTERSTATE SANITATION COMMISSION
10 Columbus Circle · New York, New York - 10019

SURVEY: UPPER NEW YORK HARBOR

STATION NO.: 13

DATE	TIME		DEPTH FEET	CHLORIDES PPM	H ₂ O TEMP. °C	D.O.		B.O.D. P.P.M.	MPN per ml.	CODE
	EST	MAX. EBB				OBS. PPM	% SAT.			
3- 3-70	1020		5	10,390	2.2	10.32	84.87	6.70	540	
	1022	0548	40	11,820	2.0	9.90	82.50	5.53		
	1027		80	15,670	2.0	10.80	94.57	3.62		
3-10-70	0845		5	12,160	1.5	10.40	85.80	3.41	350	
	0847	2318	40	12,150	1.6	5.32	44.00	----		
	0850		80	13,090	1.5	10.60	88.62	3.16		
4-28-70	0850		5	5,190	10.5	8.32	78.56	2.02	>1	
	0853	0254	40	5,280	10.0	7.82	73.08	2.20		
	0856		80	5,150	10.0	8.26	77.05	3.15		
5- 5-70	0930		5	11,570	10.3	2.99	30.20	2.99	350	
	0933	0912	40	12,470	10.2	9.20	93.87	2.63		
	0937		80	14,440	9.5	9.24	95.06	2.21		
5-12-70	0902		5	8,080	14.5	6.50	68.92	1.84	920	
	0905	0224	40	13,370	11.6	7.98	84.53	1.95		
	0907		80	15,420	9.6	8.30	86.63	1.82		
5-26-70	0950		5	11,900	15.5	3.86	43.56	1.44	2400+	
	0953	0136	40	13,070	15.2	4.32	49.14	1.85		
	0958		80	13,130	15.2	4.50	51.19	1.91		
7- 7-70	----		5	13,140	20.0	4.50	56.03	2.82	2400+	
	----	----	40	13,250	19.0	4.78	58.65	2.71		
	----		80	14,760	20.5	3.56	45.52	0.38		
7-14-70	0900		5	-----	25.0	4.40	----	1.67	920	
	0901	0518	40	-----	23.0	4.08	----	1.53		
	0902		80	-----	22.0	3.88	----	1.64		
9-15-70	0910	2048	5	15,320	21.2	4.32	56.43	1.32	920	
	0915	0912	40	15,660	21.0	4.82	63.00	1.40		
	0925	0912	80	15,760	20.8	4.94	64.32	1.24		
9-29-70	0917		5	14,680	19.0	5.06	63.01	2.13	16000	
	0920	2336	40	13,890	19.0	4.74	58.51	1.67		
	0922		80	14,190	19.0	4.56	56.43	1.53		

INTERSTATE SANITATION COMMISSION
10 Columbus Circle · New York, New York - 10019

SURVEY: UPPER NEW YORK HARBOR

STATION NO.: 14

DATE	TIME		DEPTH FEET	CHLORIDES PPM	H ₂ O TEMP. °C	D.O.		B.O.D. P.P.M.	MPN per ml.	CODE
	EST	MAX. EBB				OBS. PPM	% SAT.			
3- 3-70	1245	0548	5	11,500	2.0	9.80	81.26	4.91		
3-10-70	1030	2318	5	11,230	2.0	9.60	79.40	3.81		
4-28-70	1050	0254	5	8,260	11.5	7.08	70.65	1.91		
5- 5-70	1105	0912	5	10,230	11.0	7.24	73.20	4.03		
5-12-70	1105	0224	5	8,600	14.2	6.00	63.62	2.35		
5-26-70	1150	0136	5	11,900	16.5	3.20	36.84	1.91		
7- 7-70	-----	-----	5	12,520	19.4	3.10	37.96	1.31		
7-14-70	1055	0518	5	-----	22.5	2.20	-----	1.85		
9-15-70	1230	0912	5	13,380	23.7	1.26	16.86	≥ 1.15		
9-29-70	1130	2336	5	12,900	20.2	2.06	25.68	≥ 1.87		

INTERSTATE SANITATION COMMISSION
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SURVEY: UPPER NEW YORK HARBOR

STATION NO.: 15

DATE	TIME		DEPTH FEET	CHLORIDES PPM	H ₂ O TEMP. °C	D.O.		B.O.D. P.P.M.	MPN per ml.	CODE
	EST	MAX. EBB				OBS. PPM	% SAT.			
3- 3-70	1235	0548	5	8,970	2.3	5.72	46.27	1.16		
3-10-70	1016	2318	5	10,760	2.0	10.00	82.10	3.98		
4-28-70	1040	0254	5	4,170	11.0	8.42	79.50	2.20		
5- 5-70	-----	-----	5	9,380	11.2	7.00	70.28	2.36		
5-12-70	-----	-----	5	5,620	14.2	6.80	69.74	1.89		
5-26-70	1143	0136	5	11,130	16.2	3.28	37.23	≥ 0.98		
7- 7-70	-----	-----	5	12,110	20.0	3.10	38.20	1.27		
7-14-70	1050	0518	5	-----	23.5	5.48	-----	2.42		
9-15-70	1057	0912	5	14,400	21.7	2.30	30.00	1.30		
9-29-70	1115	2336	5	13,100	19.8	2.40	29.77	1.42		

2/10/72:rym

INTERSTATE SANITATION COMMISSION
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SURVEY: UPPER NEW YORK HARBOR

STATION NO.: 16

DATE	TIME		DEPTH FEET	CHLORIDES PPM	H ₂ O TEMP. °C	D.O.		B.O.D. P.P.M.	MPN per ml.	CODE
	EST	MAX. EBB				OBS. PPM	% SAT.			
3- 3-70	1215	0548	5	8,150	1.8	10.30	81.42	4.09	240	
3-10-70	1002	2318	5	10,670	1.8	10.22	83.40	1.47	540	
4-28-70	1020	0254	5	3,110	10.5	8.42	77.67	2.42	2400+	
5- 5-70	1043	0912	5	8,510	11.0	7.40	67.64	2.54	540	
5-12-70	1036	0224	5	5,640	14.4	6.72	69.20	1.65	920	
5-26-70	1125	0136	5	11,330	16.3	3.44	39.20	1.98	2400+	
7- 7-70	----	---	5	11,610	20.0	3.52	43.13	1.82	2400+	
7-14-70	1030	0518	5	-----	20.3	3.04	---	2.02	920	
9-15-70	1035	0912	5	14,200	21.7	2.42	31.48	1.49		
9-29-70	1100	2336	5	13,600	19.6	2.90	36.06	2.25		

2/10/72:rym

INTERSTATE SANITATION COMMISSION
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SURVEY: UPPER NEW YORK HARBOR

STATION NO.: 17

DATE	TIME		DEPTH FEET	CHLORIDES PPM	H ₂ O TEMP. °C	D.O.		B.O.D. P.P.M.	MPN per ml.	CODE
	EST	MAX. EBB				OBS. PPM	% SAT.			
3- 3-70	1418	0548	5	11,240	2.5	9.74	81.57	3.05		
3-10-70	1240	1136	5	11,070	2.8	9.60	80.80	4.07		
4-28-70	1244	0254	5	7,410	10.5	8.10	78.48	2.58		
5- 5-70	1300	0912	5	9,500	12.5	6.52	67.35	3.01		
5-12-70	1325	0224	5	10,250	14.2	6.40	69.18	2.56		
5-26-70	1315	0136	5	11,880	16.3	3.56	40.82	1.60		
7- 7-70	-----	---	5	11,990	20.2	3.42	42.27	1.85		
7-14-70	1305	0518	5	-----	22.5	4.50	---	2.29		
9-15-70	1300	0912	5	13,180	23.8	1.14	15.24	≥ 1.03		
9-29-70	1400	1200	5	13,410	20.4	1.68	21.15	≥ 1.53		

2/10/72:rym

INTERSTATE SANITATION COMMISSION
10 Columbus Circle · New York, New York - 10019

SURVEY: UPPER NEW YORK HARBOR

STATION NO.: 18

DATE	TIME		DEPTH FEET	CHLORIDES PPM	H ₂ O TEMP. °C	D.O.		B.O.D. P.P.M.	MPN per ml.	CODE
	EST	MAX. EBB				OBS. PPM	% SAT.			
3- 3-70	1125	0548	5	9,100	2.2	10.14	81.64	3.93		
3-10-70	0918	2318	5	12,845	1.8	10.44	87.73	3.49		
4-28-70	0930	0254	5	6,230	10.0	8.02	85.74	2.44		
5- 5-70	1000	0912	5	10,150	11.5	7.50	76.45	2.54		
5-12-70	0925	0224	5	8,120	15.2	6.20	66.73	1.82		
5-26-70	1043	0136	5	11,330	15.8	3.30	37.20	1.55		
7- 7-70	----	----	5	11,810	20.1	3.40	41.82	1.00		
7-14-70	0920	0518	5	-----	20.7	5.50	---	2.38		
9-15-70	0945	0912	5	14,660	21.2	2.98	38.67	1.16		
9-29-70	0952	2336	5	13,700	19.6	3.00	37.31	1.47		

2/10/72:rym

INTERSTATE SANITATION COMMISSION
10 Columbus Circle · New York, New York - 10019

SURVEY: UPPER NEW YORK HARBOR

STATION NO.: 19

DATE	TIME		DEPTH FEET	CHLORIDES PPM	H ₂ O TEMP. °C	D.O.		B.O.D. P.P.M.	MPN per ml.	CODE
	EST	MAX. EBB				OBS. PPM	% SAT.			
3- 3-70	1435	0548	5	13,020	2.5	10.40	88.96	4.27		
3-10-70	1250	1136	5	11,440	2.8	9.98	84.43	3.61		
4-28-70	1256	0254	5	6,540	11.0	8.18	79.26	2.51		
5- 5-70	1310	0912	5	10,090	12.2	7.10	73.42	2.81		
5-12-70	1330	0224	5	8,860	14.2	6.40	68.08	2.45		
5-26-70	1345	0136	5	12,020	16.5	3.28	37.81	1.44		
7- 7-70	-----	---	5	12,130	20.2	4.06	46.85	3.62		
7-14-70	1310	0518	5	-----	23.5	5.18	---	2.62		
9-15-70	1320	0912	5	13,480	22.5	1.28	16.78	≥ 1.16		
9-29-70	1415	1200	5	12,230	20.4	2.42	30.09	1.75		

2/10/72:rym

INTERSTATE SANITATION COMMISSION
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SURVEY: UPPER NEW YORK HARBOR

STATION NO.: 20

DATE	TIME		DEPTH FEET	CHLORIDES PPM	H ₂ O TEMP. °C	D.O.		B.O.D. P.P.M.	MPN per ml.	CODE
	EST	MAX. EBB				OBS. PPM	% SAT.			
3- 3-70	1157	0548	5	9,500	2.0	10.18	82.36	6.27		
3-10-70	0950	2318	5	12,750	1.8	10.60	88.85	4.81		
4-28-70	1000	0254	5	5,550	10.5	7.71	73.08	2.15		
5- 5-70	1035	0912	5	9,910	11.3	8.50	86.11	3.18		
5-12-70	1028	0224	5	7,460	14.4	6.30	66.28	1.69		
5-26-70	1112	0136	5	11,820	16.2	3.52	40.22	1.47		
7- 7-70	-----	-----	5	11,670	20.3	4.32	53.30	1.16		
7-14-70	1011	0518	5	-----	20.3	4.94	----	1.98		
9-15-70	1025	0912	5	14,300	21.5	2.92	37.92	1.40		
9-29-70	1046	2336	5	14,390	19.8	3.56	44.77	1.96		

INTERSTATE SANITATION COMMISSION
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SURVEY: UPPER NEW YORK HARBOR

STATION NO.: 21

DATE	TIME		DEPTH FEET	CHLORIDES PPM	H ₂ O TEMP. °C	D.O.		B.O.D. P.P.M.	MPN per ml.	CODE
	EST	MAX. EBB				OBS. PPM	% SAT.			
3- 3-70	1208	0548	5	8,580	2.0	10.18	81.30	3.36		
3-10-70	0955	2318	5	16,600	1.8	10.20	89.94	3.69		
4-28-70	1011	0254	5	4,690	10.0	8.12	75.39	2.24		
5- 5-70	1040	0912	5	9,910	11.0	7.82	78.75	2.70		
5-12-70	1033	0224	5	6,490	14.6	6.50	68.13	1.64		
5-26-70	1118	0136	5	11,900	16.0	3.48	39.68	1.35		
7- 7-70	---	---	5	11,910	20.6	3.42	42.51	2.29		
7-14-70	1015	0518	5	-----	23.0	5.84	---	2.55		
9-15-70	1030	0912	5	13,880	21.8	1.98	25.74	1.33		
9-29-70	1055	2336	5	14,010	19.8	3.48	43.60	2.07	1	

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INTERSTATE SANITATION COMMISSION
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SURVEY: UPPER NEW YORK HARBOR

STATION NO.: 22

DATE	TIME		DEPTH FEET	CHLORIDES PPM	H ₂ O TEMP. °C	D.O.		B.O.D. P.P.M.	MPN per ml.	CODE
	EST	MAX. EBB				OBS. PPM	% SAT.			
3- 3-70	1000	0548	5	12,170	2.3	10.00	84.17	4.71		
3-10-70	0830	2318	5	11,350	2.8	9.90	83.54	3.45		
4-28-70	0840	0254	5	6,270	11.0	7.82	75.62	2.60		
5- 5-70	0915	0912	5	9,600	11.5	7.18	72.74	2.98		
5-12-70	0849	0224	5	9,380	14.5	6.00	64.51	2.30		
5-26-70	0920	0136	5	11,590	16.0	3.28	37.35	1.96		
7- 7-70	----	---	5	11,870	21.0	5.40	67.66	2.55		
7-14-70	0835	0518	5	-----	20.9	5.10	---	1.58		
9-15-70	0845	2048	5	14,480	21.5	3.68	47.91	1.27		
9-29-70	0909	2336	5	13,410	19.5	3.24	40.14	1.85		

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INTERSTATE SANITATION COMMISSION
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SURVEY: UPPER NEW YORK HARBOR

STATION NO.: 23

DATE	TIME		DEPTH FEET	CHLORIDES PPM	H ₂ O TEMP. °C	D.O.		B.O.D. P.P.M.	MPN per ml.	CODE
	EST	MAX. EBB				OBS. PPM	% SAT.			
3- 3-70	1040	0548	5	11,150	2.0	10.10	83.33	3.75	350	
3-10-70	0907	2318	5	12,920	1.5	10.50	87.50	3.72	240	
4-28-70	0912	0254	5	7,140	10.0	8.10	77.29	2.38	7 1	
5- 5-70	0945	0912	5	10,100	11.0	8.00	80.72	2.07	240	
5-12-70	0916	0224	5	8,410	14.8	6.26	67.09	2.45	1600	
5-26-70	1030	0136	5	12,160	16.2	3.80	43.57	2.09	---	
7- 7-70	----	---	5	12,960	19.1	4.72	57.77	1.40		
7-14-70	0906	0518	5	-----	20.7	5.00	----	1.20		
9-15-70	0935	0912	5	15,020	21.2	4.02	52.34	1.02		
9-29-70	0937	2336	5	13,700	19.2	3.84	47.46	1.80		

INTERSTATE SANITATION COMMISSION
10 Columbus Circle · New York, New York - 10019

SURVEY: UPPER NEW YORK HARBOR

STATION NO.: 26

DATE	TIME		DEPTH FEET	CHLORIDES PPM	H ₂ O TEMP. °C	D.O.		B.O.D. P.P.M.	MPN per ml.	CODE
	EST	MAX. EBB				OBS. PPM	% SAT.			
3- 3-70	1015	0548	5	10,790	2.0	10.32	84.86	5.24	540	
3-10-70	0840	2318	5	12,320	1.5	10.50	94.67	3.36	920	
4-28-70	0845	0254	5	6,230	10.5	8.22	78.58	3.04	540	
5- 5-70	0925	0912	5	11,000	10.3	8.30	83.75	2.18	240	
5-12-70	0900	0224	5	9,300	13.6	6.48	68.42	2.11	1600	
5-26-70	0940	0136	5	12,000	16.0	3.56	40.63	1.60	350	
7- 7-70	----	---	5	13,160	21.0	4.82	61.24	1.98	1600	
7-14-70	0840	0518	5	-----	20.4	4.20	----	0.95	2400+	
9-15-70	0905	2048	5	14,880	21.3	3.56	46.38	1.23	1600	
9-29-70	0915	2336	5	14,190	19.4	4.50	56.17	2.69	1700	

2/10/72:rym

INTERSTATE SANITATION COMMISSION
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SURVEY: UPPER NEW YORK HARBOR

STATION NO.: 27

DATE	TIME		DEPTH FEET	CHLORIDES PPM	H ₂ O TEMP. °C	D.O.		B.O.D. P.P.M.	MPN per ml.	CODE
	EST	MAX. EBB				OBS. PPM	% SAT.			
3- 3-70	1035	0548	5	10,120	2.2	9.45	77.47	4.78	540	
3-10-70	0900	2318	5	12,180	1.6	10.40	86.02	3.10	540	
4-28-70	0905	0254	5	5,170	10.0	7.92	70.40	3.47	430	
5- 5-70	0940	0912	5	10,780	10.3	8.70	87.08	2.16	79	
5-12-70	0910	0224	5	7,830	14.6	6.62	70.20	3.20	920	
5-26-70	1005	0136	5	12,600	15.5	4.16	46.79	1.58	920	
7- 7-70	----	----	5	13,040	19.2	5.20	63.88	1.62	2400+	
7-14-70	0905	0518	5	-----	20.4	4.32	----	1.53	2400+	
9-15-70	0930	0912	5	15,460	21.2	4.32	56.54	0.84	920	
9-29-70	0925	2336	5	14,480	19.0	4.70	58.53	1.98	1700	

INTERSTATE SANITATION COMMISSION
10 Columbus Circle · New York, New York - 10019

SURVEY: UPPER NEW YORK HARBOR

STATION NO.: 28

DATE	TIME		DEPTH FEET	CHLORIDES PPM	H ₂ O TEMP. °C	D.O.		B.O.D. P.P.M.	MPN per ml.	CODE
	EST	MAX. EBB				OBS. PPM	% SAT.			
3- 3-70	1225		5	7,230	1.7	10.42	75.50	3.05	350	
	1228	0548	20	10,190	1.8	9.74	78.93	3.76		
	1230		40	12,570	2.0	9.68	81.34	5.40		
3-10-70	1005		5	11,150	2.0	4.70	38.77	---	920	
	1008	2318	20	11,640	2.0	5.52	45.88	1.49		
	1014		40	10,790	2.0	10.10	83.05	3.72		
4-28-70	1024		5	2,160	10.5	8.62	78.64	1.62	2400+	
	1028	0254	20	6,230	10.0	7.62	72.02	2.27		
	1030		40	3,050	10.0	8.40	76.64	2.09		
5-5-70	1050		5	7,640	11.3	7.40	73.12	1.99	23	
	1053	0912	20	9,700	11.0	7.40	74.29	3.16		
	1057		40	9,600	11.0	7.28	73.01	2.69		
5-12-70	1045		5	4,010	15.0	7.00	71.79	1.75	920	
	1047	0224	20	8,450	14.2	5.92	62.71	1.87		
	1050		40	13,720	12.6	7.30	79.00	2.87		
5-26-70	1130		5	10,420	16.2	3.24	36.48	1.42	540	
	1133	0136	20	10,600	15.7	3.14	35.06	1.95		
	1137		40	12,000	15.5	3.16	35.70	1.13		
7- 7-70	---		5	10,430	20.5	3.22	39.34	1.15	2400+	
	---	---	20	11,610	19.7	3.60	43.87	1.64		
	---		40	12,500	19.4	3.56	43.60	3.15		
7-14-70	1040		5	-----	24.5	5.82	-----	2.18	920	
	1042	0518	20	-----	20.3	5.86	-----	1.96		
	1044		40	-----	22.5	4.42	-----	2.56		
9-15-70	1040		5	13,540	21.8	1.84	23.81	≥ 1.67	130	
	1043	0912	20	13,620	21.3	1.84	23.63	≥ 1.67		
	1048		40	13,680	21.7	1.90	24.59	≥ 1.72		
9-29-70	1103		5	12,430	19.6	3.68	45.20	2.16	3500	
	1105	2336	20	12,820	19.8	2.84	35.14	1.73		
	1110		40	13,010	20.0	2.90	36.06	1.76		

INTERSTATE SANITATION COMMISSION
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SURVEY: UPPER NEW YORK HARBOR

STATION NO.: 29

DATE	TIME		DEPTH FEET	CHLORIDES PPM	H ₂ O TEMP. °C	D.O.		B.O.D. P.P.M.	MPN per ml.	CODE
	EST	MAX. EBB				OBS. PPM	% SAT.			
3- 3-70	1400		5	11,430	2.7	10.00	77.82	4.09		
	1403	0548	15	12,090	2.5	10.00	84.60	5.54	790	
	1407		20	10,960	2.5	9.72	81.00	5.78		
3-10-70	1230		5	10,570	2.8	9.50	79.36	3.87		
	1235	1136	15	10,860	3.0	3.60	30.37	----	700	
	1238		20	10,790	2.8	9.60	80.46	4.09		
4-28-70	1220		5	5,690	11.0	8.08	77.61	---		
	1228	0254	15	6,210	10.5	8.04	77.01	2.38	>1	
	1231		20	5,520	10.5	8.16	77.34	2.40		
5- 5-70	1245		5	9,600	13.3	6.58	69.26	≥ 5.98		
	1248	0912	15	9,380	13.0	6.42	67.50	2.92	24000+	
	1253		20	9,400	12.8	6.26	65.07	3.03		
5-12-70	1300		5	7,850	15.0	6.40	68.44	2.71		
	1309	0224	15	8,640	14.5	6.32	67.41	2.25	9200	
	1314		20	12,210	14.0	6.62	72.82	2.69		
5-26-70	1255		5	11,960	16.5	3.56	41.03	2.05		
	1258	0136	15	12,260	16.0	2.62	30.01	1.40	790	
	1305		20	12,520	15.8	3.58	40.91	1.89		
7- 7-70	---	---	5	12,360	21.0	0.10	1.26	2.45		
	---		15	12,420	20.5	2.92	36.45	1.85	790	
	---		20	12,520	20.2	2.88	35.03	2.09		
7-14-70	1300		5	-----	23.0	3.20	----	2.18		
	1302	0518	15	-----	23.0	2.94	----	≥ 2.94	2800	
	1304		20	-----	23.0	2.38	----	≥ 2.32		
9-15-70	1235		5	13,360	24.0	1.26	16.95	≥ 1.15		
	1240	0912	15	13,380	23.7	1.12	14.99	≥ 1.02	24000+	
	1253		20	13,380	23.5	1.10	14.67	≥ 1.00		
9-29-70	1345		5	13,310	20.8	2.60	32.95	≥ 2.36		
	1346	1200	15	13,600	20.8	1.84	23.40	≥ 1.67	24000+	1
	1348		20	13,600	21.0	1.38	17.62	≥ 1.25		

INTERSTATE SANITATION COMMISSION
10 COLUMBUS CIRCLE • NEW YORK 19, N.Y.

UPPER NEW YORK HARBOR

January 1, 1971

thru

December 31, 1971

CODE

#				REMARKS
1	Light)		
)		
2	Medium	)		FLOATING SOLIDS
)		
3	Heavy)		
<hr/>				
4	Light)		
)		
5	Medium	)		OIL a/o GREASE
)		
6	Heavy)		
<hr/>				
7	Light)		
)		
8	Medium	)		DISCOLORATION
)		
9	Heavy)		
<hr/>				
10	PERCEPTIBLE ODOR			
11	RAW SEWAGE			

NEW YORK HARBOR - 1971

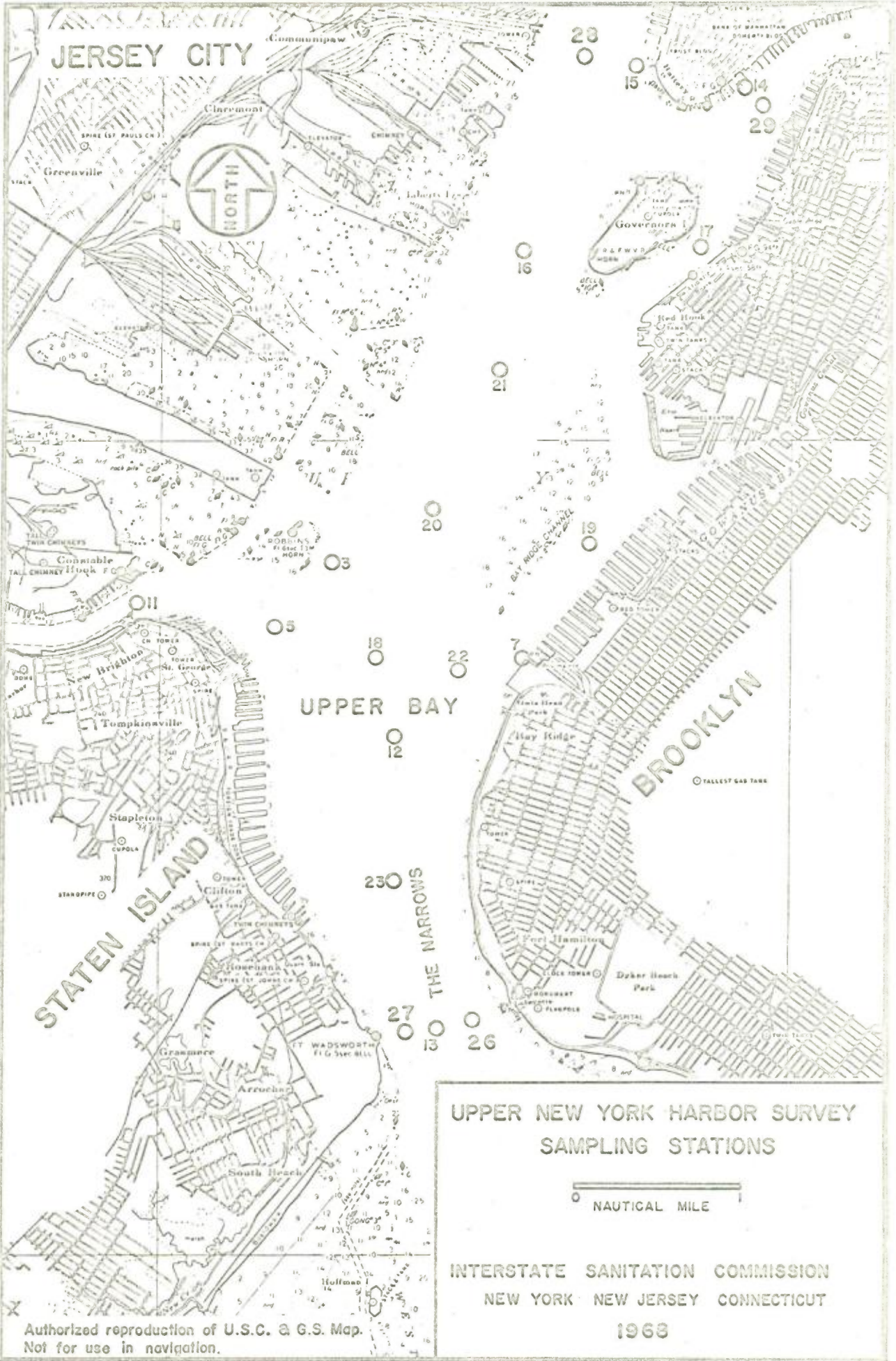
<u>Station</u>	<u>Date</u>	<u>Cu</u>	<u>Zn</u>	<u>Cd</u>	<u>Ni</u>	<u>Pb</u>	<u>Cr⁺⁶</u>	<u>Hg</u>
3T	12/7/71	0.050	0.150	.0020	0.025	0.031	<.01	<.0001
11	12/7/71	0.070	0.170	.0013	0.045	0.008	<.01	<.0001
12	12/7/71	0.070	0.110	.0013	0.045	0.006	<.01	<.0001
13T	12/7/71	0.085	0.110	.0012	0.035	0.007	<.01	<.0001
26	12/7/71	0.085	0.084	.0012	0.060	0.007	<.01	<.0001
27	12/7/71	0.060	0.076	.0011	0.040	0.004	<.01	<.0001
28	12/7/71	0.075	0.170	.0011	0.040	0.004	<.01	<.0001
29	12/7/71	0.105	0.076	.0013	0.035	0.006	<.01	<.0001

NEW YORK HARBOR - 1971

<u>Station</u>	<u>Date</u>	<u>Cu</u>	<u>Ni</u>	<u>Cr</u>	<u>Cd</u>	<u>Zn</u>
3T	5/12/71	0.05	<.05	<.05	<.01	0.04
11	5/12/71	0.05	<.05	<.05	<.01	0.12
12	5/12/71	0.05	<.05	<.05	<.01	0.04
13T	5/12/71	0.06	<.05	<.05	<.01	0.04
26	5/12/71	0.04	<.05	<.05	<.01	0.04
27	5/12/71	0.04	<.05	<.05	<.01	0.04
28	5/12/71	0.05	<.05	<.05	<.01	0.04
29	5/12/71	0.07	<.05	<.05	<.01	0.04

NEW YORK HARBOR - 1971

<u>Station</u>	<u>Date</u>	<u>Cu</u>	<u>Ni</u>	<u>Cr</u>	<u>Cd</u>	<u>Zn</u>
3T	4/20/71	0.05	<.05	<.05	<.01	0.08
11	4/20/71	0.04	<.05	<.05	<.01	0.08
12	4/20/71	0.07	<.05	<.05	<.01	0.06
13T	4/20/71	0.13	<.05	<.05	<.01	0.06
26	4/20/71	0.08	<.05	<.05	<.01	0.06
27	4/20/71	0.12	<.05	<.05	<.01	0.04
28	4/20/71	0.05	<.05	<.05	<.01	0.10
29	4/20/71	0.08	<.05	<.05	<.01	0.04



DESCRIPTION OF SAMPLING STATIONS
in
1958 UPPER NEW YORK HARBOR SURVEY

- STATION # 3 At Passaic Valley Outfall (East-West alignment obtained by using Robbins Reef Light and forward Water Power on Naval Dock, North-South alignment using Statue of Liberty and Black Bell Buoy #1-G). Samples are taken here at depths of 5, 20 and 40 feet.
- STATION # 5 Middle of ship channel going to Kill Van Kull. East-West alignment is established by aligning Fixed Green Range Lights on Esso Dock, Constable Hook, New Jersey. North-South alignment can be established using line of Black Buoys on main ship channel in Upper Harbor.
- STATION # 7 In center of Boil of Owls Head Treatment Plant. Outfall is located opposite the north end of the treatment plant building.
- STATION #11 Located in the Kill Van Kull, at mid-channel and directly opposite Flashing Green, Black Buoy #3.
- STATION #12 Center of junction of Main Channel with Bay Ridge Channel, 10 yards to west of Flashing Red Gong Buoy #22.
- STATION #13 Middle of channel in Narrows (midway between light on Fort Lafayette and light on Fort Wadsworth). Samples were taken at depths of 5, 40 and 80 feet.
- STATION # 27 300 yards east of Fishing Green Light on Fort Wadsworth (using same East-West alignment used for Station #13).

- STATION #26 300 yards West of Flashing Red Light on Fort ~~Madison~~ ^{Hamilton} (using same East-West alignment used for Station #13).
- STATION #14 Ten yards off Pier #11 in East River.
- STATION #29 Mid-channel of East River in line with Pier #11 (Manhattan) and Pier #10 (Brooklyn). Samples were taken at depths of 5, 20 and 40 feet.
- STATION #15 Ten yards off Pier "A" in the Hudson River.
- STATION #28 Mid-channel of Hudson River in line with Pier "A" (Manhattan) and tower on Central Railroad of New Jersey Ferry Pier on Jersey Shore. Samples were taken at depths of 5, 20 and 40 feet.
- STATION #16 In main ship channel 10 yards to the East of Flashing Green Bell Buoy #31.
- STATION #17 Mid-channel of Buttermilk Channel and opposite Private Bell Buoy #3.
- STATION #18 Mid-channel off 69th Street Ferry Dock, Brooklyn. East-West alignment obtained by using two gas holders at rear of 69th Street and two tall smokestacks on Constable Hook, N.J.
(Note: gas holders do not close in.)
North-South line formed by Red Buoys #24, #26 and #28 on main ship channel.
- STATION #19 In mid-channel of Bay Ridge Channel, approximately 300 yards off Black Can #5. East-West alignment Black Can #5 and Pier #2 at Bush Terminal.
- STATION #20 In main ship channel 10 yards to west of Flashing Red Bell Buoy #26.
- STATION #21 In main ship channel 10 yards to west of Flashing Red Bell Buoy #30.

STATION #22 In mid-channel of Bay Ridge Channel. East-West alignment of Flashing Red Beacon on 69th Street Ferry Dock (Brooklyn) and Flashing Bell Buoy #24. North-South alignment of Flashing Green Bell Buoy #3 and Flashing Red Gong Buoy #22.

STATION #23 In mid-channel of main shipping channel. East-West alignment of tower on Fort Hamilton High School, Brooklyn shore with twin chimneys on Merritt, Chapman and Scott Pier at Rosebank, Staten Island. North-South alignment, Flashing Red Gong Buoy #22 with Flashing Green Light on Fort Wadsworth.

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SURVEY: UPPER NEW YORK HARBOR

STATION NO.: 3

DATE	TIME		DEPTH FEET	CHLORIDES PPM	H ₂ O TEMP. °C	D.O.		B.O.D. P.P.M.	MPN per ml.	CODE
	EST	MAX. EBB				OBS. PPM	% SAT.			
2-24-71	1042	2330	5	11,480	2.0	9.08		3.88	460	
	1044	2330	15	11,810	1.8	9.30		3.98		
	1046	2330	20	12,440	2.0	9.52		4.42		
3- 2-71	1115	0436	5	6,100	3.2	9.40		3.20	490	
	1120	0436	15	6,940	2.9	9.00		3.09		
	1124	0436	20	9,100	2.9	9.10		3.71		
3- 9-71	1105	2242	5	7,610	1.2	10.48		2.79	130	
	1107	2242	15	8,310	1.4	10.48		2.69		
	1110	2242	20	8,400	1.5	10.40		3.19		
3-24-71	1120	1042	5	10,480	3.2	10.02		3.40	700	
	1122	1042	15	10,680	3.2	10.00		3.30		
	1125	1042	20	10,700	3.2	10.00		3.16		
4-20-71	1132	0836	5	6,800	8.4	9.44		2.60	496	
	1134	0836	15	7,380	7.6	9.34		2.78		
	1136	0836	20	7,480	7.4	9.42		3.16		
5-12-71	0940	0206	5	9,000	10.0	6.20		1.52	790	
	0942	0206	15	9,600	9.5	6.00		2.34		
	0944	0206	20	9,520	9.5	6.80		2.02		
10-20-71	1005	0100	5	12,250	15.5	5.00		1.73	Fecal 5000	
	1007	0100	15	12,250	15.5	4.84		1.49		
	1010	0100	20	12,940	15.2	5.08		1.25		
12-7-71	1115	0412	5	1,109	7.5	7.48		2.44	Fecal 780	3,4,7
	1119	0412	15	1,115	7.6	7.50		2.45		
	1124	0412	20	1,178	7.5	7.52		2.15		

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SURVEY: UPPER NEW YORK HARBOR

STATION NO.: 5

DATE	TIME		DEPTH FEET	CHLORIDES PPM	H ₂ O TEMP. °C	D.O.		B.O.D. P.P.M.	MPN per ml.	CODE
	EST	MAX. EBB				OBS. PPM	% SAT.			
2-24-71	1030	2330	5	10,660	2.5	8.82		4.00		
3- 2-71	1101	0436	5	6,134	2.2	9.28		3.18		
3- 9-71	1055	2242	5	8,830	1.5	10.32		3.01		
3-24-71	1110	1042	5	9,300	3.4	9.30		3.68		
4-20-71	1125	0836	5	6,080	8.6	9.70		2.62		
5-12-71	0925	0206	5	8.060	10.0	7.30		3.10		
10-20-71	0958	0100	5	11,790	15.5	4.68		1.62		
12-7-71	1059	0412	5	1,091	7.5	7.44		1.96		

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SURVEY: UPPER NEW YORK HARBOR

STATION NO.: 7

DATE	TIME		DEPTH FEET	CHLORIDES PPM	H ₂ O TEMP. °C	D.O.		B.O.D. P.P.M.	MPN per ml.	CODE
	EST	MAX. EBB				OBS. PPM	% SAT.			
2-24-71	0925	2330	5	11,700	3.4	8.82		7.52		
3-2-71	0945	0436	5	7,693	3.8	8.62		6.84		10, 7
3-9-71	1000	2242	5	8,110	2.1	10.40		5.50		
3-24-71	1000	2212	5	9,480	3.2	9.90		4.18		
4-20-71	1030	0836	5	10,940	9.4	8.30		7.54		
5-12-71	0840	0206	5	8,540	11.5	7.20		7.10		1
10-20-71	0905	0100	5	13,080	16.5	5.46		≥4.96		1
12-7-71	0950	0412	5	1,095	8.6	7.50		3.67		2,7

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SURVEY: UPPER NEW YORK HARBOR

STATION NO.: 11

DATE	TIME		DEPTH FEET	CHLORIDES PPM	H ₂ O TEMP. °C	D.O.		B.O.D. P.P.M.	MPN per mi.	CODE
	EST	MAX. EBB				OBS. PPM	% SAT.			
2-24-71	1040	2330	5	9,600	2.5	8.04		5.30	1300	
3- 2-71	1106	0436	5	5,580	2.3	9.42		3.64	220	
3- 9-71	1100	2242	5	7,800	2.0	9.84		4.39	490	
3-24-71	1115	1042	5	8,300	4.4	9.12		3.52	490	
4-20-71	1130	0836	5	7,640	9.0	9.52		3.25	170	
5-12-71	0930	0206	5	7,620	10.0	7.16		2.36	790	1,4
10-20-71	1000	0100	5	11,610	15.8	4.02		2.11	Fecal 33000	1
12- 7-71	1105	0412	5	1,079	8.0	7.58		2.49	Fecal 3300	

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SURVEY: UPPER NEW YORK HARBOR

STATION NO.: 12

DATE	TIME		DEPTH FEET	CHLORIDES PPM	H ₂ O TEMP. °C	D.O.		B.O.D. P.P.M.	MPN per ml.	CODE
	EST	MAX. EBB				OBS. PPM	% SAT.			
2-24-71	1012	2330	5	11,830	2.0	9.22		3.40	1100	
3-2-71	1040	0436	5	6,350	2.0	9.22		2.82		
3-9-71	1040	2242	5	7,950	1.2	10.50		2.92	330	
3-24-71	1050	1042	5	10,280	3.0	10.14		2.70	460	
4-20-71	1114	0836	5	7,520	8.9	9.70		2.45	1300	
5-12-71	0910	0206	5	8,380	10.0	7.38		2.18	790	
10-20-71	0950	0100	5	13,080	15.4	5.70		1.81	Fecal 5000	
12-7-71	1046	0412	5	1,097	7.6	7.40		1.96	Fecal 1400	1

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SURVEY: UPPER NEW YORK HARBOR

STATION NO.: 13

DATE	TIME		DEPTH FEET	CHLORIDES PPM	H ₂ O TEMP. °C	D.O.		B.O.D. P.P.M.	MPN per ml.	CODE
	EST	MAX. EBB				OBS. PPM	% SAT.			
2-24-71	0947	2330	5	11,970	2.0	9.72		2.72	130	
	0950	2330	40	12,130	2.0	9.64		3.02		
	0953	2330	80	13,750	1.8	10.00		3.10		
3-2-71	1012	0436	5	7,330	2.2	9.18		3.18	640	4,7
			40	8,820	2.0	9.22		2.76		
			80	10,211	2.2	9.30		3.35		
3-9-71	1017	2242	5	8,090	1.2	10.72		3.10	310	
			40	9,420	1.2	10.58		3.07		
			80	10,880	1.1	10.50		2.90		
3-24-71	1017	2212	5	10,480	3.0	10.44		3.06	230	
	1020	2212	40	10,340	2.8	10.52		3.32		
	1022	2212	80	11,520	2.8	10.28		3.08		
4-20-71	1042		5	7,100	8.4	9.82		3.53	330	
	1045	0836	40	8,300	8.0	9.64		3.35		
	1047		80	9,280	7.8	9.40		3.55		
5-12-71	0858	0206	5	10,340	9.5	8.10		3.30	490	
	0900	0206	40	10,400	9.8	8.10		2.78		
	0904	0206	80	10,900	9.5	8.80		2.80		
10-20-71	0928	0100	5	13,020	15.4	5.48		1.80	Fecal 2000	
	0930	0100	40	13,300	15.4	6.00		1.64		
	0932	0100	80	13,620	15.2	6.00		1.44		
12-7-71	1021	0412	5	1,249	7.5	7.74		2.07	Fecal 1300	
	1024	0412	40	1,247	7.5	7.70		2.18		
	1027	0412	80	1,269	7.5	7.72		1.78		

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SURVEY: UPPER NEW YORK HARBOR

STATION NO.: 14

DATE	TIME		DEPTH FEET	CHLORIDES PPM	H ₂ O TEMP. °C	D.O.		B.O.D. P.P.M.	MPN per ml.	CODE
	EST	MAX. EBB				OBS. PPM	% SAT.			
2-24-71	1125	2330	5	10,800	2.0	8.92		4.62		1
3-2-71	1220	0436	5	8,110	2.7	9.06		4.24		10,4,7
3-9-71	1200	1118	5	7,710	2.0	9.98		4.00		
3-24-71	1215	1042	5	10,680	3.2	9.64		4.62		
4-20-71	1239	0836	5	9,780	9.0	9.50		4.23		
5-12-71	1225	0206	5	8,480	10.4	6.92		3.72		
10-20-71	1100	0100	5	12,500	15.8	4.14		1.47		
12-7-71	1225	0412	5	1,139	7.6	7.60		2.27		

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SURVEY: UPPER NEW YORK HARBOR

STATION NO.: 15

DATE	TIME		DEPTH FEET	CHLORIDES PPM	H ₂ O TEMP. °C	D.O.		B.O.D. P.P.M.	MPN per ml.	CODE
	EST	MAX. EBB				OBS. PPM	% SAT.			
2-24-71	1120	2330	5	10,640	2.0	9.28		3.78		
3-2-71	1210	0436	5	6,060	2.4	9.04		3.02		
3-9-71	1150	1118	5	5,430	1.2	10.70		3.25		
3-24-71	1210	1042	5	8,080	3.0	10.22		3.60		
4-20-71	1230	0836	5	5,400	9.0	9.22		2.55		
5-12-71	1215	0206	5	5,720	10.8	7.12		2.36		
10-20-71	1045	0100	5	12,250	15.8	4.60		1.71		1
12-7-71	1220	0412	5	1,030	7.5	7.46		2.11		

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SURVEY: UPPER NEW YORK HARBOR

STATION NO.: 16

DATE	TIME		DEPTH FEET	CHLORIDES PPM	H ₂ O TEMP. °C	D.O.		B.O.D. P.P.M.	MPN per ml.	CODE
	EST	MAX. EBB				OBS. PPM	% SAT.			
2-24-71	1105	2330	5	11,400	1.8	9.10		4.18		1
3-2-71	1145	0436	5	5,980	2.5	9.00		3.09		
3-9-71	1135	1118	5	5,350	1.2	10.68		2.80		
3-24-71	1155	1042	5	7,180	2.8	10.56		3.14		
4-20-71	1208	0836	5	5,460	8.4	9.56		2.51		
5-12-71	0958	0206	5	7,700	10.2	6.80		2.50		
10-20-71	1032	0100	5	12,310	15.5	5.10		1.54		
12-7-71	1140	0412	5	1,077	7.6	7.78		2.69		

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SURVEY: UPPER NEW YORK HARBOR

STATION NO.: 17

DATE	TIME		DEPTH FEET	CHLORIDES PPM	H ₂ O TEMP. °C	D.O.		B.O.D. P.P.M.	MPN per ml.	CODE
	EST	MAX. EBB				OBS. PPM	% SAT.			
2-24-71	1145	2330	5	10,880	2.0	9.04		4.54		
3-2-71	1328	0436	5	5,980	2.5	9.02		3.10		
3-9-71	1350	1118	5	8,710	2.2	9.92		3.74		
3-24-71	1415	1042	5	10,880	3.2	9.84		3.84		
4-20-71	1405	0836	5	9,480	8.5	9.70		3.23		
5-12-71	1230	0206	5	8,680	10.2	4.16		0.96		4
10-20-71	1315	0100	5	12,270	16.0	3.88		1.80		
12-7-71	1332	0412	5	1,069	7.5	7.36		2.02		

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SURVEY: UPPER NEW YORK HARBOR

STATION NO.: 18

DATE	TIME		DEPTH FEET	CHLORIDES PPM	H ₂ O TEMP. °C	D.O.		B.O.D. P.P.M.	MPN per ml.	CODE
	EST	MAX. EBB				OBS. PPM	% SAT.			
2-24-71	1020	2330	5	11,050	2.0	9.00		3.66		
3-2-71	1050	0436	5	6,390	2.2	9.14		2.85		
3-9-71	1045	2242	5	8,900	1.2	10.66		2.67		
3-24-71	1100	1042	5	9,600	3.0	10.20		2.88		
4-20-71	1120	0836	5	6,020	8.4	9.54		2.22		
5-12-71	0917	0206	5	8,000	10.0	7.38		2.18		
10-20-71	0955	0100	5	12,920	15.2	5.48		1.35		
12-7-71	1051	0412	5	1,111	7.6	7.30		1.89		1

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SURVEY: UPPER NEW YORK HARBOR

STATION NO.: 19

DATE	TIME		DEPTH FEET	CHLORIDES PPM	H ₂ O TEMP. °C	D.O.		B.O.D. P.P.M.	MPN per ml.	CODE
	EST	MAX. EBB				OBS. PPM	% SAT.			
2-24-71	1205	1200	5	11,780	2.0	9.06		4.56		
3-2-71	1346	0436	5	6,630	2.5	9.30		3.16		
3-9-71	1400	1118	5	7,820	2.2	10.50		3.52		
3-24-71	1422	1042	5	11,800	3.2	9.76		3.04		
4-20-71	1420	0836	5	8,820	8.5	8.32		2.23		
5-12-71	1245	0206	5	8,540	10.2	7.34		2.74		
10-20-71	1325	0100	5	12,800	15.8	4.50		1.27		
12-7-71	1346	0412	5	1,150	7.5	7.40		2.13		

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SURVEY: UPPER NEW YORK HARBOR

STATION NO.: 20

DATE	TIME		DEPTH FEET	CHLORIDES PPM	H ₂ O TEMP. °C	D.O.		B.O.D. P.P.M.	MPN per ml.	CODE
	EST	MAX. EBB				OBS. PPM	% SAT.			
2-24-71	1050	2330	5	11,720	1.9	9.30		3.56		1
3-2-71	1130	0436	5	6,250	2.4	9.16		2.95		
3-9-71	1120	1118	5	6,930	1.2	10.86		3.23		
3-24-71	1135	1042	5	8,680	3.0	10.36		3.16		
4-20-71	1150	0836	5	6,520	8.8	9.46		2.80		
5-12-71	0945	0206	5	8,000	10.2	7.62		2.80		
10-20-71	1020	0100	5	13,200	15.2	5.48		1.44		
12-7-71	1130	0412	5	1,121	7.9	7.40		2.36		1

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SURVEY: UPPER NEW YORK HARBOR

STATION NO.: 21

DATE	TIME		DEPTH FEET	CHLORIDES PPM	H ₂ O TEMP. °C	D.O.		B.O.D. P.P.M.	MPN per ml.	CODE
	EST	MAX. EBB				OBS. PPM	% SAT.			
2-24-71	1100	2330	5	11,520	2.0	9.42		3.30		2
3-2-71	1140	0436	5	5,490	2.5	9.70		3.09		
3-9-71	1126	1118	5	6,210	1.2	10.68		2.98		
3-24-71	1145	1042	5	8,080	3.0	10.48		3.08		
4-20-71	1200	0836	5	5,740	8.6	6.40		0.36		
5-12-71	0952	0206	5	7,580	10.2	7.00		3.08		
10-20-71	1025	0100	5	12,170	15.2	4.90		1.36		
12-7-71	1136	0412	5	1,047	7.9	6.18		0.95		

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SURVEY: UPPER NEW YORK HARBOR

STATION NO.: 22

DATE	TIME		DEPTH FEET	CHLORIDES PPM	H ₂ O TEMP. °C	D.O.		B.O.D. P.P.M.	MPN per ml.	CODE
	EST	MAX. EBB				OBS. PPM	% SAT.			
2-24-71	0930	2330	5	12,030	3.0	9.32		3.18		
3-2-71	0955	0436	5	7,600	2.2	8.82		3.85		
3-9-71	1010	2242	5	7,730	1.8	10.70		3.36		
3-24-71	1005	2212	5	10,600	3.0	10.22		3.62		
4-20-71	1035	0836	5	7,620	9.2	9.60		2.96		
5-12-71	0845	0206	5	7,800	10.6	7.32		2.42		
10-20-71	0912	0100	5	13,560	15.8	5.06		1.31		
12-7-71	1000	0412	5	1,142	7.9	7.12		1.93		

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SURVEY: UPPER NEW YORK HARBOR

STATION NO.: 23

DATE	TIME		DEPTH FEET	CHLORIDES PPM	H ₂ O TEMP. °C	D.O.		B.O.D. P.P.M.	MPN per ml.	CODE
	EST	MAX. EBB				OBS. PPM	% SAT.			
2-24-71	1010	2330	5	11,850	2.0	9.50		3.00		
3-2-71	1033	0436	5	6,311	1.8	9.14		2.89		4,7
3-9-71	1035	2242	5	8,010	1.2	10.70		2.72		
3-24-71	1034	2212	5	9,880	3.0	10.30		2.90		
4-20-71	1105	0836	5	7,800	8.2	9.50		2.55		
5-12-71	0905	0206	5	10,260	10.0	9.00		2.74		1
10-20-71	0945	0100	5	12,900	15.2	5.48		1.35		
12-7-71	1039	0412	5	1,243	7.3	7.84		2.15		

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SURVEY: UPPER NEW YORK HARBOR

STATION NO.: 26

DATE	TIME		DEPTH FEET	CHLORIDES PPM	H ₂ O TEMP. °C	D.O.		B.O.D. P.P.M.	MPN per ml.	CODE
	EST	MAX. EBB				OBS. PPM	% SAT.			
2-24-71	0945	2330	5	11,740	3.0	9.10		5.71	24000+	
3-2-71	1005	0436	5	7,820	2.5	9.00		3.09	110	
3-9-71	1015	2242	5	8,190	1.2	10.50		3.36	2200	
3-24-71	1015	2212	5	10,080	3.0	10.08		3.06	1300	
4-20-71	1040	0836	5	7,780	8.9	9.52		2.84	700	
5-12-71	0855	0206	5	10,400	10.0	7.80		2.90	490	
10-20-71	0925	0100	5	13,140	15.4	5.58		1.53	Fecal 7000	
12-7-71	1013	0412	5	1,265	7.6	7.34		2.60	Fecal 1300	

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SURVEY: UPPER NEW YORK HARBOR

STATION NO.: 27

DATE	TIME		DEPTH FEET	CHLORIDES PPM	H ₂ O TEMP. °C	D.O.		B.O.D. P.P.M.	MPN per ml.	CODE
	EST	MAX. EBB				OBS. PPM	% SAT.			
2-24-71	1000	2330	5	12,050	1.9	9.32		3.04	330	
3-2-71		0436	5	8,620	2.3	9.30		3.09	220	
3-9-71	1027	2242	5	8,520	1.2	10.68		3.18	490	
3-24-71	1024	2212	5	10,680	3.2	9.66		3.54	700	
4-20-71	1051	0836	5	7,200	8.5	9.82		2.72	230	
5-12-71	0908	0206	5	11,060	10.0	9.30		3.50	460	1
10-20-71	0936	0100	5	12,820	15.4	5.60		1.36	Fecal 4000	
12-7-71	1030	0412	5	1,257	7.5	7.56		2.13	Fecal 1700	

INTERSTATE SANITATION COMMISSION
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SURVEY: UPPER NEW YORK HARBOR

STATION NO.: 28

DATE	TIME		DEPTH FEET	CHLORIDES PPM	H ₂ O TEMP. °C	D.O.		B.O.D. P.P.M.	MPN per ml.	CODE
	EST	MAX. EBB				OBS. PPM	% SAT.			
2-24-71	1110	2330	5		1.8	9.00		3.70		
	1112	2330	20		1.6	9.20		3.30	700	6
	1115	2330	40		1.5	9.30		3.62		
3-2-71	1155	0436	5	3,140	2.2	9.28		2.89		
	1159	0436	20	4,040	2.2	9.18		2.89	690	
	1204	0436	40	5,060	2.2	8.90		3.02		
3-9-71	1138	1118	5	4,060	1.2	10.92		2.90		
	1140	1118	20	7,210	1.0	9.98		2.80	130	
	1144	1118	40	7,990	1.0	10.04		3.36		
3-24-71	1158	1042	5	6,080	2.5	10.60		3.40		
	1200	1042	20	7,480	2.6	10.30		3.50	700	
	1202	1042	40	8,580	2.8	9.80		3.08		
4-20-71	1210	0836	5	3,620	9.0	9.90		2.79		
	1212	0836	20	3,820	8.5	9.68		2.64	170	
	1215	0836	40	4,320	8.4	10.16		2.96		
5-12-71	1000	0206	5	5,100	10.2	7.42		1.94		
	1002	0206	20	6,960	10.0	6.82		2.70	700	
	1005	0206	40	7,060	9.8	6.76		2.96		
10-20-71	1035	0100	5	11,610	15.5	4.30		2.36		
	1038	0100	20	12,370	15.5	4.54		1.85	Fecal	
	1040	0100	40	12,800	15.6	4.96		1.50	170000	
12-7-71	1155	0412	5	923	7.2	7.70		2.18		
	1158	0412	20	968	7.5	7.64		2.09	Fecal	
	1204	0412	40	1,049	7.5	7.64		2.73	7900	

INTERSTATE SANITATION COMMISSION
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SURVEY: UPPER NEW YORK HARBOR

STATION NO.: 29

DATE	TIME		DEPTH FEET	CHLORIDES PPM	H ₂ O TEMP. °C	D.O.		B.O.D. P.P.M.	MPN per ml.	CODE
	EST	MAX. EBB				OBS. PPM	% SAT.			
2-24-71	1126	2330	5	10,760	2.0	9.02		4.42	5400	1
	1128	2330	15	10,880	1.8	8.84		4.34		
	1130	2330	20	10,890	1.6	9.00		4.00		
3-2-71	1305	0436	5	6,272	3.0	8.92		2.96	330	
	1319	0436	15	6,290	2.9	9.08		3.16		
			20	7,130	2.8	8.90		3.13		
3-9-71	1335	1118	5	8,490	2.4	9.88		4.43	1400	
	1340	1118	15	8,670	2.4	9.76		4.23		
	1344	1118	20	9,280	2.2	9.82		4.38		
3-24-71	1400	1042	5	10,720	3.6	9.70		3.66	640	2
	1402	1042	15	11,280	3.5	9.42		3.70		
	1405	1042	20	11,180	3.5	9.58		4.28		
4-20-71	1345	0836	5	6,600	9.2	9.36		2.71	790	
	1347	0836	15	7,940	8.8	9.40		3.09		
	1350	0836	20	7,680	8.6	9.52		3.29		
5-12-71	1228	0206	5	8,980	10.2	6.84		2.86	330	
	1230	0206	15	8,880	10.2	6.80		3.38		
	1232	0206	20	9,080	10.0	6.72		3.20		
10-20-71	1245	0100	5	12,150	16.2	3.66		1.51	21,000	Fecal
	1250	0100	15	12,130	16.2	3.70		1.54		
	1255	0100	20	12,190	16.2	3.62		1.65		
12-7-71	1310	0412	5	1,117	7.7	7.40		1.93	22,000	Fecal
	1315	0412	15	1,152	7.7	7.40		2.25		
	1320	0412	20	1,137	7.4	7.32		2.22		

INTERSTATE SANITATION COMMISSION
10 COLUMBUS CIRCLE • NEW YORK 19, N.Y.

UPPER NEW YORK HARBOR

January 1, 1972

thru

December 31, 1972

CODE

#				REMARKS
1	Light	)	)	FLOATING SOLIDS
2	Medium))	
3	Heavy))	
4	Light	)	)	OIL a/o GREASE
5	Medium))	
6	Heavy))	
7	Light	)	)	DISCOLORATION
8	Medium))	
9	Heavy))	
10	PERCEPTIBLE ODOR			
11	RAW SEWAGE			

NEW YORK HARBOR - 1972

<u>Station</u>	<u>Date</u>	<u>Cu</u>	<u>Zn</u>	<u>Cd</u>	<u>Nl</u>	<u>Pb</u>	<u>Cr</u> ⁺⁶	<u>Hg</u>
3T	2/16/72	0.050	0.098	.0011	0.050	0.006	<.01	<.0001
11	2/16/72	0.075	0.080	.0013	0.055	0.006	<.01	<.0001
12	2/16/72	0.045	0.070	.0016	0.065	0.007	<.01	<.0001
13T	2/16/72	0.040	0.058	.0005	0.045	0.004	<.01	<.0001
26	2/16/72	0.030	0.050	.0004	0.020	0.007	<.01	<.0001
27	2/16/72	0.050	0.054	.0011	0.035	0.005	<.01	<.0001
28	2/16/72	0.065	0.044	.0013	0.050	0.006	<.01	<.0001
29	2/16/72	0.030	0.058	.0009	0.010	0.005	<.01	<.0001

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1972

SURVEY

UPPER NEW YORK HARBOR - METALS

STATION NO.

3T

Date	Cu	Zn	Mn	Ni	Cr	Cd	Pb	Hg		
8-9	0.050	0.82		.014	<.001	.0011	.0036	.0002		
8-23	0.040	0.52		.052	<.001	.0005	.0026	<.0001		
9-13	0.036	0.94		.024	<.001	.0005	.0028	<.0001		
9-20	0.060	1.46		.036	<.001	.0010	.0056	<.0001		

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SURVEY UPPER NEW YORK HARBOR - METALS STATION NO. 11

Date	Cu	Zn	Mn	Ni	Cr	Cd	Pb	Hg		
8-9	0.036	0.82		.024	<.001	.0006	.0032	<.0001		
8-23	0.066	1.42		.058	<.001	.0012	.0050	<.0001		
9-13	0.036	0.88		.044	<.001	.0007	.0030	<.0001		
9-20	0.052	1.20		.032	<.001	.0008	.0044	.0004		

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SURVEY

UPPER NEW YORK HARBOR - METALS

STATION NO. 12

Date	Cu	Zn	Mn	Ni	Cr	Cd	Pb	Hg		
8-9	0.060	0.66		.024	<.001	.0006	.0028	.0001		
8-23	0.038	0.96		.042	<.001	.0008	.0048	<.0001		
9-13	0.046	1.14		.052	<.001	.0009	.0030	<.0001		
9-20	0.040	1.28		.028	<.001	.0008	.0052	.0001		

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 SURVEY UPPER NEW YORK HARBOR - METALS STATION NO. 13T

Date	Cu	Zn	Mn	Ni	Cr	Cd	Pb	Hg		
8-9	0.058	1.16		.040	<.001	.0009	.0028	<.0001		
8-23	0.046	1.14		.026	<.001	.0009	.0032	<.0001		
9-13	0.036	1.22		.040	<.001	.0008	.0038	<.0001		
9-20	0.032	1.46		.026	<.001	.0015	.0060	<.0001		

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SURVEY

UPPER NEW YORK HARBOR - METALS

STATION NO. 26

Date	Cu	Zn	Mn	Ni	Cr	Cd	Pb	Hg		
8-9	0.038	0.78		.030	<.001	.0011	.0030	<.0001		
8-23	0.046	1.06		.032	<.001	.0009	.0038	<.0001		
9-13	0.042	1.42		.026	<.001	.0007	.0032	<.0001		
9-20	0.126	1.74		.008	<.001	.0010	.0270	<.0001		

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SURVEY

UPPER NEW YORK HARBOR - METALS

STATION NO. 27

Date	Cu	Zn	Mn	Ni	Cr	Cd	Pb	Hg		
8-9	0.010	0.70		.036	<.001	.0007	.0032	<.0001		
8-23	0.056	1.84		.028	<.001	.0010	.0038	<.0001		
9-13	0.036	1.16		.046	<.001	.0008	.0040	<.0001		
9-20	0.140	1.28		.016	<.001	.0012	.0296	<.0001		

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SURVEY

UPPER NEW YORK HARBOR - METALS

STATION NO. 28

Date	Cu	Zn	Mn	Ni	Cr	Cd	Pb	Hg		
8-9	0.096	2.20		.044	<.001	.0004	.0180	<.0001		
8-23	0.042	0.90		.024	<.001	.0010	.0038	<.0001		
9-13	0.032	1.10		.032	<.001	.0010	.0030	<.0001		
9-20	0.032	1.04		.026	<.001	.0012	.0030	<.0001		

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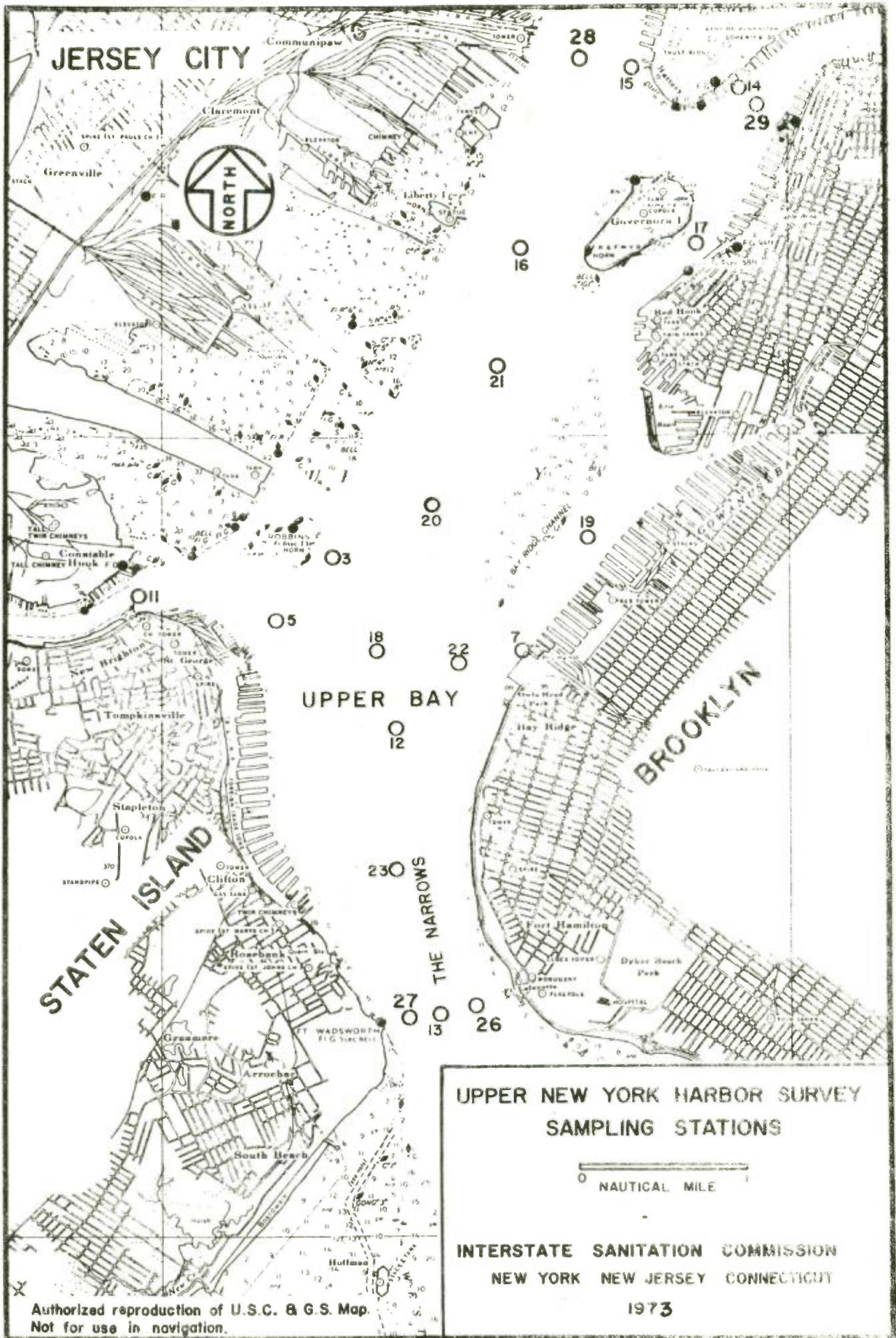
1972

SURVEY

UPPER NEW YORK HARBOR - METALS

STATION NO. 29T

Date	Cu	Zn	Mn	Ni	Cr	Cd	Pb	Hg		
8-9	0.038	0.68		.034	<.001	.0002	.0038	<.0001		
8-23	0.058	1.10		.022	<.001	.0013	.0034	<.0001		
9-13	0.030	1.02		.034	<.001	.0005	.0078	<.0001		
9-20	0.038	1.18		.026	<.001	.0015	.0054	<.0001		



DESCRIPTION OF SAMPLING STATIONS
in
1958 UPPER NEW YORK HARBOR SURVEY

- STATION # 3 At Passaic Valley Outfall (East-West alignment obtained by using Robbins Reef Light and forward Water Power on Naval Dock, North-South alignment using Statue of Liberty and Black Bell Buoy #1-G). Samples are taken here at depths of 5, 20 and 40 feet.
- STATION # 5 Middle of ship channel going to Kill Van Kull. East-West alignment is established by aligning Fixed Green Range Lights on Esso Dock, Constable Hook, New Jersey. North-South alignment can be established using line of Black Buoys on main ship channel in Upper Harbor.
- STATION # 7 In center of Boil of Owls Head Treatment Plant. Outfall is located opposite the north end of the treatment plant building.
- STATION #11 Located in the Kill Van Kull, at mid-channel and directly opposite Flashing Green, Black Buoy #3.
- STATION #12 Center of junction of Main Channel with Bay Ridge Channel, 10 yards to west of Flashing Red Gong Buoy #22.
- STATION #13 Middle of channel in Narrows (midway between light on Fort Lafayette and light on Fort Wadsworth). Samples were taken at depths of 5, 40 and 80 feet.
- STATION # 27 300 yards east of Flshing Green Light on Fort Wadsworth (using same East-West alignment used for Station #13).

- STATION #26 300 yards West of Flashing Red Light on Fort Hamilton (using same East-West alignment used for Station #13).
- STATION #14 Ten yards off Pier #11 in East River.
- STATION #29 Mid-channel of East River in line with Pier #11 (Manhattan) and Pier #10 (Brooklyn). Samples were taken at depths of 5, 20 and 40 feet.
- STATION #15 Ten yards off Pier "A" in the Hudson River.
- STATION #15A Mid-channel of Hudson River in line with Pier "A" (Manhattan) and tower on Central Railroad of New Jersey Ferry Pier on Jersey Shore. Samples were taken at depths of 5, 20 and 40 feet.
- STATION #16 In main ship channel 10 yards to the East of Flashing Green Bell Buoy #31.
- STATION #17 Mid-channel of Buttermilk Channel and opposite Private Bell Buoy #3.
- STATION #18 Mid-channel off 69th Street Ferry Dock, Brooklyn. East-West alignment obtained by using two gas holders at rear of 69th Street and two tall smokestacks on Constable Hook, N.J. (Note: gas holders do not close in.) North-South line formed by Red Buoys #24, #26 and #28 on main ship channel.
- STATION #19 In mid-channel of Bay Ridge Channel, approximately 300 yards off Black Can #5. East-West alignment Black Can #5 and Pier #2 at Bush Terminal.
- STATION #20 In main ship channel 10 yards to west of Flashing Red Bell Buoy #26.
- STATION #21 In main ship channel 10 yards to west of Flashing Red Bell Buoy #30.

STATION #22 In mid-channel of Bay Ridge Channel. East-West alignment of Flashing Red Beacon on 69th Street Ferry Dock (Brooklyn) and Flashing Bell Buoy #24. North-South alignment of Flashing Green Bell Buoy #3 and Flashing Red Gong Buoy #22.

STATION #23 In mid-channel of main shipping channel. East-West alignment of tower on Fort Hamilton High School, Brooklyn shore with twin chimneys on Merritt, Chapman and Scott Pier at Rosebank, Staten Island. North-South alignment, Flashing Red Gong Buoy #22 with Flashing Green Light on Fort Wadsworth.

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SURVEY

UPPER NEW YORK HARBOR

1972

STATION NO. 3

DATE	TIME		DEPTH Feet	CHLORIDES p.p.m.	H ₂ O TEMP. °C	D.O.		B.O.D. p.p.m.	Fecal Count per 100 ml	CODE
	E.S.T.	Max. Ebb				Obs. p.p.m	% Sat.			
2-16	1105	0134	5	12980	3.6	8.80	77.4	2.80	490	9
	1107	0134	20	13620	3.8	8.80	78.4	7.91		9
	1109	0134	40	13140	3.8	8.70	76.7	3.00		9
7-26	1025	0045	5	11260	21.3	3.40	42.6	1.58	<10000	
	1027	0045	20	11320	20.8	3.30	40.9	1.62		
	1032	0045	40	12020	20.7	4.42	55.3	2.00		
8-9	1016	0027	5	13220	22.5	3.16	41.3	1.48	<1000	
	1018	0027	20	13200	22.4	3.38	44.1	1.78		
	1020	0027	40	14890	22.2	4.86	64.4	1.66		
8-23	1000	2327	5	12820	21.8	6.28	80.7	2.36	99999	1,6
	1002	2327	20	12770	21.6	6.60	84.5	2.88		
	1005	2327	40	14460	21.0	4.30	55.5	2.72		
9-13	1050	0402	5	12590	21.0	2.36	29.8	0.78	5000	1
	1052	0402	20	13030	21.0	2.90	37.8	1.80		
	1054	0402	40	14220	20.6	4.06	51.8	2.72		
9-20	1050	2354	5	12060	20.0	4.80	59.1	2.18	15500	4
	1053	2354	20	12080	19.8	4.22	51.8	2.32		
	1058	2354	40	12280	19.8	4.20	51.5	1.88		

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INTERSTATE SANITATION COMMISSION
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SURVEY UPPER NEW YORK HARBOR 1972 STATION NO. 5

DATE	TIME		DEPTH Feet	CHLORIDES p.p.m.	H ₂ O TEMP. °C	D.O.		B.O.D. p.p.m.	Fecal Count per 100 ml	CODE
	E.S.T.	Max. Ebb				Obs. p.p.m	% Sat.			
2-16	1055	0134	5	13320	3.6	8.30	73.3	4.11		
7-26	1010	0045	5	11650	21.2	3.40	42.7	2.00		
8-9	1005	0027	5	13570	24.4	3.40	46.3	1.56		
8-23	0949	2327	5	13060	21.2	3.80	49.5	2.00		1
9-13	1040	0402	5	12180	21.0	2.42	30.4	1.62		
9-20	1038	2354	5	11980	19.8	2.60	32.5	2.50		

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INTERSTATE SANITATION COMMISSION
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SURVEY UPPER NEW YORK HARBOR 1972 STATION NO. 7

DATE	TIME		DEPTH Feet	CHLORIDES p.p.m.	H ₂ O TEMP. °C	D.O.		B.O.D. p.p.m.	Fecal Count per 100 ml	CODE
	E.S.T.	Max. Ebb				Obs. p.p.m	% Sat.			
2-16	10.00	0134	5	13500	4.8	8.90	81.1	7.73		
7-26	0903	0045	5	11570	20.7	3.90	48.4	1.70		
8-9	0906	0027	5	13930	22.6	4.12	54.4	2.90		
8-23	0900	2327	5	13220	21.8	4.78	61.7	3.06		
9-13	0925	0402	5	11190	21.8	3.10	39.5	2.60		
9-20	0945	2354	5	14020	20.0	4.10	51.6	2.38		

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SURVEY UPPER NEW YORK HARBOR 1972 STATION NO. 11

DATE	TIME		DEPTH Feet	CHLORIDES p.p.m.	H ₂ O TEMP. °C	D.O.		B.O.D. p.p.m.	Fecal Count per 100 ml	CODE
	E.S.T.	Max. Ebb				Obs. p.p.m	% Sat.			
2-16	1100	0134	5	12240	3.6	8.62	73.6	3.65	330	
7-26	1015	0045	5	10980	21.7	3.30	41.5	1.46	1000000	
8-9	1012	0027	5	12530	22.6	2.50	32.5	1.56	<1000	
8-23	0955	2327	5	12310	22.0	3.54	45.4	2.40	6363	
9-13	1047	0402	5	12470	21.2	2.28	74.2	1.24	4000	
9-20	1045	2354	5	11660	22.0	1.90	24.2	≥1.90	26000	

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SURVEY UPPER NEW YORK HARBOR 1972 STATION NO. 12

DATE	TIME		DEPTH Feet	CHLORIDES p.p.m.	H ₂ O TEMP. °C	D.O.		B.O.D. p.p.m.	Fecal Count per 100 ml	CODE
	E.S.T.	Max. Ebb				Obs. p.p.m	% Sat.			
2-16	1042	0134	5	13160	3.6	9.00	79.4	3.00	490	
7-26	0955	0045	5	12080	21.2	4.40	55.5	1.20	10000	
8-9	0950	0027	5	14480	22.4	4.70	61.8	1.16	<1000	3
8-23	0938	2327	5	13520	21.2	4.24	54.3	2.12	3000	
9-13	1032	0402	5	13480	21.6	3.42	44.1	2.62	<1000	
9-20	1025	2354	5	12870	19.5	4.70	57.9	1.46	2000	

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SURVEY UPPER NEW YORK HARBOR 1972 STATION NO. 13

DATE	TIME		DEPTH Feet	CHLORIDES p.p.m.	H ₂ O TEMP. °C	D.O.		B.O.D. p.p.m.	Fecal Count per 100 ml	CODE
	E.S.T.	Max. Ebb				Obs. p.p.m	% Sat.			
2-16	1018	0134	5	14100	3.6	9.20	02.1	2.96	170	
	1021	0134	40	14100	3.4	9.40	83.4	3.27		
	1022	0134	80	14640	3.2	9.42	83.7	3.02		
7-26	0925	0045	5	12300	21.7	4.00	51.0	1.20	30000	
	0927	0045	40	12420	21.3	4.70	59.7	2.00		
	0930	0045	80	14870	19.7	4.40	55.6	1.76		
8-9	0927	0027	5	14530	22.0	4.80	63.1	1.32	<1000	
	0930	0027	40	15480	21.8	5.50	72.8	1.98		
	0934	0027	80	15650	21.4	5.64	73.6	1.52		
8-23	0913	2327	5	14700	21.8	5.58	73.1	1.54	2000	
	0915	2327	40	14900	21.2	5.54	72.0	1.96		
	0918	2327	80	15970	20.6	6.44	83.9	1.54		
9-13	0947	0402	5	13170	21.0	3.02	38.4	≥3.02	<1000	
	0950	0402	40	13580	20.6	3.12	39.5	3.00		
	0952	0402	80	14770	20.2	4.78	60.9	≥4.78		
9-20	1005	2354	5	13270	18.3	4.72	57.1	2.00	1800	
	1008	2354	40	12970	19.5	4.70	58.0	1.58		
	1012	2354	80	12890	19.2	4.62	56.6	1.86		

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SURVEY UPPER NEW YORK HARBOR 1972 STATION NO. 14

DATE	TIME		DEPTH Feet	CHLORIDES p.p.m.	H ₂ O TEMP. °C	D.O.		B.O.D. p.p.m.	Fecal Count per 100 ml	CODE
	E.S.T.	Max. Ebb				Obs. p.p.m	% Sat.			
2-16	1200	0134	5	12460	33.6	8.50	74.3	4.25		3
7-26	1125	0045	5	11320	22.0	3.20	40.6	1.70		
8-9	1110	0027	5	13200	22.4	2.82	36.8	1.38		
8-23	1117	2327	5	12050	22.0	3.28	41.9	1.56		
9-13	1138	0402	5	12690	21.2	2.38	30.2	1.16		
9-20	1137	2354	5	12200	21.0	3.70	46.4	2.06		

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SURVEY UPPER NEW YORK HARBOR 1972 STATION NO. 15

DATE	TIME		DEPTH Feet	CHLORIDES p.p.m.	H ₂ O TEMP. °C	D.O.		B.O.D. p.p.m.	Fecal Count per 100 ml	CODE
	E.S.T.	Max. Ebb				Obs. p.p.m	% Sat.			
2-16	1145	0134	5	12200	3.4	8.82	76.4	3.36		
7-26	1118	0045	5	10350	21.8	4.00	50.1	1.90		
8-9	11000	0027	5	13320	22.5	3.20	41.9	2.10		
8-23	1110	2327	5	12050	21.8	3.80	48.4	1.52		
9-13	1128	0402	5	12380	21.2	2.54	32.2	1.34		
9-20	1132	2354	5	12200	20.2	2.60	32.2	1.58		

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SURVEY UPPER NEW YORK HARBOR 1972 STATION NO. 16

DATE	TIME		DEPTH Feet	CHLORIDES p.p.m.	H ₂ O TEMP. °C	D.O.		B.O.D. p.p.m.	Fecal Count per 100 ml	CODE
	E.S.T.	Max. Ebb				Obs. p.p.m	% Sat.			
2-16	1130	0134	5	11480	3.2	8.70	74.4	3.02		
7-26	1100	0045	5	10920	21.7	4.50	56.5	1.28		
8-9	1042	0027	5	13180	22.6	3.20	41.9	1.42		3
8-23	1055	2327	5	12530	21.8	3.62	46.4	1.78		
9-13	1114	0402	5	12180	21.2	2.30	29.0	1.20		
9-20	1115	2354	5	12280	20.7	2.60	32.5	2.30		

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SURVEY UPPER NEW YORK HARBOR 1972 STATION NO. 17

DATE	TIME		DEPTH Feet	CHLORIDES p.p.m.	H ₂ O TEMP. °C	D.O.		B.O.D. p.p.m.	Fecal Count per 100 ml	CODE
	E.S.T.	Max. Ebb				Obs. p.p.m	% Sat.			
2-16	1402	1400	5	11780	3.8	3.22	28.0	--		
7-26	1230	0045	5	10940	21.5	3.00	37.6	0.82		
8-9	1305	1245	5	12550	22.8	2.06	26.9	1.28		
8-23	1240	1140	5	11880	22.2	2.84	36.4	1.34		
9-13	1310	0402	5	12710	21.0	2.30	29.2	≥2.30		
9-20	1215	2354	5	12610	21.0	2.50	31.6	1.80		

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SURVEY UPPER NEW YORK HARBOR 1972 STATION NO. 18

DATE	TIME		DEPTH Feet	CHLORIDES p.p.m.	H ₂ O TEMP. °C	D.O.		B.O.D. p.p.m.	Fecal Count per 100 ml	CODE
	E.S.T.	Max. Ebb				Obs. p.p.m	% Sat.			
2-16	1046	0134	5	12900	3.6	8.72	76.6	3.48		
7-26	1000	0045	5	12300	22.0	4.32	55.4	1.50		
8-9	1000	0027	5	13260	22.2	3.84	50.0	2.22		
8-23	0945	2327	5	13320	21.2	3.96	50.6	1.58		
9-13	1037	0402	5	12770	21.8	2.19	27.0	0.14		4
9-20	1033	2354	5	12770	19.5	4.68	57.4	1.84		

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SURVEY UPPER NEW YORK HARBOR 1972 STATION NO. 19

DATE	TIME		DEPTH Feet	CHLORIDES p.p.m.	H ₂ O TEMP. °C	D.O.		B.O.D. p.p.m.	Fecal Count per 100 ml	CODE
	E.S.T.	Max. Ebb				Obs. p.p.m	% Sat.			
2-16	1412	1400	5	12760	3.8	8.48	74.7	3.80		
7-26	1240	0045	5	11670	21.5	3.40	42.9	1.98		
8-9	1315	1245	5	12610	22.8	2.86	37.7	1.98		
8-23	1250	1140	5	12650	22.2	3.44	44.5	1.32		
9-13	1315	0402	5	12670	21.0	2.10	26.6	≥2.10		
9-20	1228	2354	5	12990	20.5	3.30	41.4	1.52		

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SURVEY UPPER NEW YORK HARBOR 1972 STATION NO. 20

DATE	TIME		DEPTH Feet	CHLORIDES p.p.m.	H ₂ O TEMP. °C	D.O.		B.O.D. p.p.m.	Fecal Count per 100 ml	CODE
	E.S.T.	Max. Ebb				Obs. p.p.m	% Sat.			
2-16	1117	0134	5	13560	3.2	9.00	79.0	3.85		
7-26	1045	0045 0045 0045	5	11930	21.2	3.70	46.5	3.70		
8-9	1030	0027	5	13940	22.4	4.30	56.6	1.44		
8-23	1007	2327	5	12750	21.8	4.82	62.0	2.02		
9-13	1102	0402	5	12670	21.4	2.60	33.2	--		
9-20	1105	2354	5	12470	20.3	3.40	42.3	2.00		

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SURVEY UPPER NEW YORK HARBOR 1972 STATION NO. 21

DATE	TIME		DEPTH Feet	CHLORIDES p.p.m.	H ₂ O TEMP. °C	D.O.		B.O.D. p.p.m.	Fecal Count per 100 ml	CODE
	E.S.T.	Max. Ebb				Obs. p.p.m	% Sat.			
2-16	1123	0134	5	11500	3.4	8.60	73.8	3.09		
7-26	1053	0045	5	10790	21.7	4.30	54.0	1.58		
8-9	1036	0027	5	13260	22.6	2.94	38.5	1.54		
8-23	1050	2327	5	12610	21.8	5.14	65.9	2.24		
9-13	1107	0402	5	12830	21.0	2.58	32.7	1.68		
9-20	1110	2354	5	12570	20.2	3.30	41.0	1.62		

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SURVEY UPPER NEW YORK HARBOR 1972 STATION NO. 22

DATE	TIME		DEPTH Feet	CHLORIDES p.p.m.	H ₂ O TEMP. °C	D.O.		B.O.D. p.p.m.	Fecal Count per 100 ml	CODE
	E.S.T.	Max. Ebb				Obs. p.p.m.	% Sat.			
2-16	1005	0134	5	12560	4.6	8.70	68.2	4.00		
7-26	0910	0045	5	11550	21.2	3.80	47.7	2.08		
8-9	0912	0027	5	14130	22.4	4.18	55.0	1.96		
8-23	0904	2327	5	13440	21.5	4.14	53.2	1.94		
9-13	0932	0402	5	12690	21.2	2.30	29.2	1.86		
9-20	0950	2354	5	13210	20.0	4.60	57.4	2.06		

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SURVEY UPPER NEW YORK HARBOR 1972 STATION NO. 23

DATE	TIME		DEPTH Feet	CHLORIDES p.p.m.	H ₂ O TEMP. °C	D.O.		B.O.D. p.p.m.	Fecal Count per 100 ml	CODE
	E.S.T.	Max. Ebb				Obs. p.p.m	% Sat.			
2-16	1034	0134	5	13840	3.6	9.30	82.7	2.73		
7-26	0942	0045	5	12300	21.0	4.62	58.2	1.48		
8-9	0945	0027	5	14630	22.0	4.98	65.5	2.32		
8-23	0930	2327	5	13770	21.6	4.90	63.4	1.88		
9-13	1025	0402	5	13370	20.6	3.28	41.7	1.92		
9-20	1020	2354	5	12300	19.3	4.60	56.1	1.94		

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SURVEY UPPER NEW YORK HARBOR 1972 STATION NO. 26

DATE	TIME		DEPTH Feet	CHLORIDES p.p.m.	H ₂ O TEMP. °C	D.O.		B.O.D. p.p.m.	Fecal Count per 100 ml	CODE
	E.S.T.	Max. Ebb				Obs. p.p.m	% Sat.			
2-16	1015	0134	5	14680	3.6	9.70	87.2	3.18	70	
7-26	0920	0045	5	14740	21.5	4.60	60.0	1.68	20000	
8-9	0925	0027	5	14890	22.4	4.62	61.4	1.78	100000	
8-23	0910	2327	5	14010	21.2	4.96	63.8	1.66	1818	
9-13	0945	0402	5	13960	21.0	3.44	44.1	≥3.44	←1000	
9-20	1000	2354	5	13460	19.8	4.22	52.6	2.86	1000	

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SURVEY UPPER NEW YORK HARBOR 1972 STATION NO. 27

DATE	TIME		DEPTH Feet	CHLORIDES p.p.m.	H ₂ O TEMP. °C	D.O.		B.O.D. p.p.m.	Fecal Count per 100 ml	CODE
	E.S.T.	Max. Ebb				Obs. p.p.m	% Sat.			
2-16	1026	0134	5	14100	3.4	9.30	82.5	2.89	330	
7-26	0933	0045	5	12300	20.5	4.30	53.3	1.38	<10000	1
8-9	0936	0027	5	14280	22.0	4.62	60.6	1.32	<10000	
8-23	0922	2327	5	14190	21.0	5.10	65.6	1.70	2727	
9-13	1017	0402	5	13270	21.0	2.92	37.2	≥2.92	1000	4
9-20	1015	2354	5	12280	19.3	4.90	59.8	2.02	9100	

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SURVEY

UPPER NEW YORK HARBOR

1972

STATION NO.

28

DATE	TIME		DEPTH Feet	CHLORIDES p.p.m.	H ₂ O TEMP. °C	D.O.		B.O.D. p.p.m.	Fecal Count per 100 ml	CODE
	E.S.T.	Max. Ebb				Obs. p.p.m.	% Sat.			
2-16	1132	0134	5	10980	3.2	8.72	74.1	3.31	790	
	1134	0134	20	11720	3.0	8.60	73.3	3.02		
	1136	0134	40	12360	3.0	8.70	74.9	4.04		
7-26	1107	0045	5	11000	22.0	4.10	51.8	1.64	<10000	
	1110	0045	20	110200	21.8	4.22	52.8	1.38		
	1113	0045	40	10530	21.7	3.60	45.0	1.26		
8-9	1050	0027	5	12900	22.6	3.08	40.2	1.90	400000	
	1054	0027	20	13530	22.4	3.34	43.7	1.74		
	1056	0027	40	14320	22.2	3.78	49.7	1.50		
8-23	1100	2327	5	11440	21.8	4.64	58.7	1.90	1000	
	1102	2327	20	12920	21.6	4.46	57.1	2.18		
	1105	2327	40	13180	21.2	4.56	58.2	1.78		
9-13	1118	0402	5	11290	21.6	2.56	32.2	1.46	6000	
	1121	0402	20	120600	21.6	2.08	26.4	0.96		
	1125	0402	40	13270	21.2	2.80	35.8	1.40		
9-20	1118	2354	5	11680	19.8	4.50	55.0	2.00	15500	
	1122	2354	20	11760	20.2	3.80	46.9	1.80		
	1127	2354	40	13400	19.8	3.60	44.8	2.00		

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SURVEY UPPER NEW YORK HARBOR 1972 STATION NO. 29

DATE	TIME		DEPTH Feet	CHLORIDES p.p.m.	H ₂ O TEMP. °C	D.O.		B.O.D. p.p.m.	Fecal Count per 100 ml	CODE
	E.S.T.	Max. Ebb				Obs. p.p.m.	% Sat.			
2-16	1345	0134	5	11800	3.8	8.50	74.0	4.20	730	
	1347	0134	20	11720	3.6	8.40	73.3	3.38		
	1349	0134	40	11680	3.6	8.40	73.3	3.98		
7-26	1215	0045	5	11200	22.2	3.10	39.4	1.32	2000000	
	1218	0045	20	11160	22.0	3.60	45.6	1.72		
	1222	0045	40	11280	21.7	3.20	40.4	1.80		
8-9	1250	1245	5	12470	23.0	2.30	30.1	2.30	<1000	
	1252	1245	20	12370	23.0	2.06	26.9	1.38		
	1255	1245	40	12450	23.0	1.90	24.9	1.90		
8-23	1230	1140	5	11920	22.4	3.02	38.9	1.54	5000	
	1232	1140	20	11920	22.4	2.74	35.3	1.24		
	1234	1140	40	11900	22.4	2.60	33.5	1.50		
9-13	1250	0402	5	12690	21.2	2.34	29.7	1.40	8000	
	1252	0402	20	12670	21.2	2.44	31.0	1.48		
	1255	0402	40	12830	21.0	2.36	29.9	1.46		
9-20	1202	2354	5	12770	22.2	2.50	32.4	2.40	10900	
	1205	2354	20	12790	22.3	2.82	36.6	2.00		
	1208	2354	40	13930	22.0	2.42	31.6	1.68		

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INTERSTATE SANITATION COMMISSION
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UPPER NEW YORK HARBOR

July 1, 1973

thru

December 31, 1973

CODE

#			REMARKS
1	Light)	
2	Medium	)	FLOATING SOLIDS
3	Heavy)	
4	Light)	
5	Medium	)	OIL a/o GREASE
6	Heavy)	
7	Light)	
8	Medium	)	DISCOLORATION
9	Heavy)	
10	PERCEPTIBLE ODOR		
11	RAW SEWAGE		

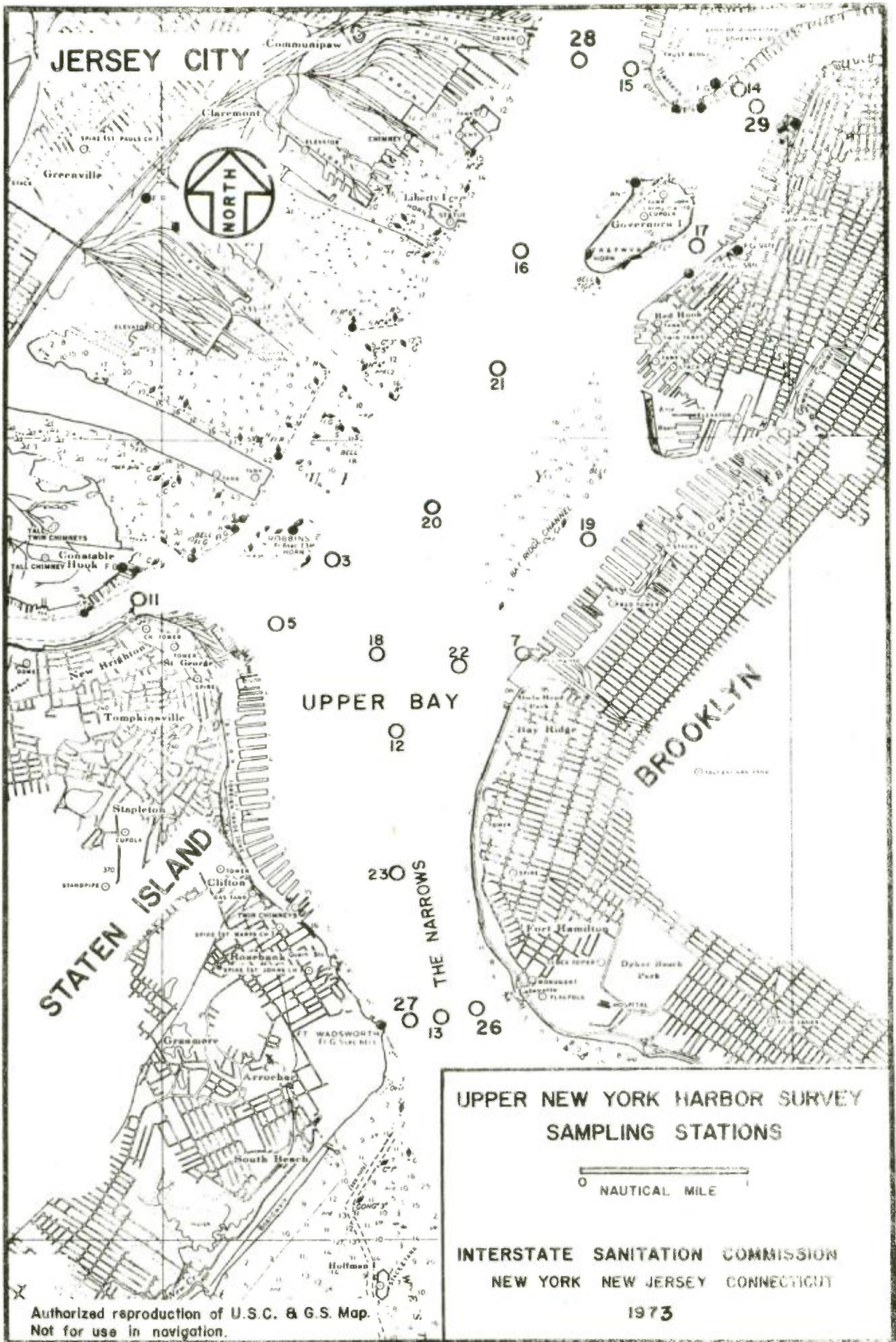
DESCRIPTION OF SAMPLING STATIONS
in
1958 UPPER NEW YORK HARBOR SURVEY

- STATION # 3 At Passaic Valley Outfall (East-West alignment obtained by using Robbins Reef Light and forward Water Power on Naval Dock, North-South alignment using Statue of Liberty and Black Bell Buoy #1-G). Samples are taken here at depths of 5, 20 and 40 feet.
- STATION # 5 Middle of ship channel going to Kill Van Kull. East-West alignment is established by aligning Fixed Green Range Lights on Esso Dock, Constable Hook, New Jersey. North-South alignment can be established using line of Black Buoys on main ship channel in Upper Harbor.
- STATION # 7 In center of Boil of Owls Head Treatment Plant. Outfall is located opposite the north end of the treatment plant building.
- STATION #11 Located in the Kill Van Kull, at mid-channel and directly opposite Flashing Green, Black Buoy #3.
- STATION #12 Center of junction of Main Channel with Bay Ridge Channel, 10 yards to west of Flashing Red Gong Buoy #22.
- STATION #13 Middle of channel in Narrows (midway between light on Fort Lafayette and light on Fort Wadsworth). Samples were taken at depths of 5, 40 and 80 feet.
- STATION # 27 300 yards east of Flshing Green Light on Fort Wadsworth (using same East-West alignment used for Station #13).

- STATION #26 300 yards West of Flashing Red Light on Fort Hamilton (using same East-West alignment used for Station #13).
- STATION #14 Ten yards off Pier #11 in East River.
- STATION #29 Mid-channel of East River in line with Pier #11 (Manhattan) and Pier #10 (Brooklyn). Samples were taken at depths of 5, 20 and 40 feet.
- STATION #15 Ten yards off Pier "A" in the Hudson River.
- STATION #15A Mid-channel of Hudson River in line with Pier "A" (Manhattan) and tower on Central Railroad of New Jersey Ferry Pier on Jersey Shore. Samples were taken at depths of 5, 20 and 40 feet.
- STATION #16 In main ship channel 10 yards to the East of Flashing Green Bell Buoy #31.
- STATION #17 Mid-channel of Buttermilk Channel and opposite Private Bell Buoy #3.
- STATION #18 Mid-channel off 69th Street Ferry Dock, Brooklyn. East-West alignment obtained by using two gas holders at rear of 69th Street and two tall smokestacks on Constable Hook, N.J. (Note: gas holders do not close in.) North-South line formed by Red Buoys #24, #26 and #28 on main ship channel.
- STATION #19 In mid-channel of Bay Ridge Channel, approximately 300 yards off Black Can #5. East-West alignment Black Can #5 and Pier #2 at Bush Terminal.
- STATION #20 In main ship channel 10 yards to west of Flashing Red Bell Buoy #26.
- STATION #21 In main ship channel 10 yards to west of Flashing Red Bell Buoy #30.

STATION #22 In mid-channel of Bay Ridge Channel. East-West alignment of Flashing Red Beacon on 69th Street Ferry Dock (Brooklyn) and Flashing Bell Buoy #24. North-South alignment of Flashing Green Bell Buoy #3 and Flashing Red Gong Buoy #22.

STATION #23 In mid-channel of main shipping channel. East-West alignment of tower on Fort Hamilton High School, Brooklyn shore with twin chimneys on Merritt, Chapman and Scott Pier at Rosebank, Staten Island. North-South alignment, Flashing Red Gong Buoy #22 with Flashing Green light on Fort Wadsworth.



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SURVEY UPPER NEW YORK HARBOR 1973 STATION NO. 3

DATE	TIME		DEPTH Feet	CHLORIDES p.p.m.	H ₂ O TEMP. °C	D.O.		B.O.D. p.p.m.	Fecal Count per 100 ml	CODE
	E.S.T.	Max. Ebb				Obs. p.p.m.	% Sat.			
7/5	0923	0422	5	5169	22.7	3.45	41.6	1.59	<1000	1,4,7
	0925		20	5566	22.0	3.10	37.0	1.08		1,4,7
	0928		40	8548	21.9	2.70	33.2	1.20		1,4,7
7/18	0858	0238	5	12124	21.0	3.38	42.5	1.60	1700	7
	0900		20	12124	20.8	3.32	41.3	1.94		7
	0905		40	13928	20.2	4.60	58.0	4.60		7
8/1	0840	0222	5	13026	22.0	2.10	27.1	2.10	2200	7
	0843		20	13427	21.7	2.40	31.0	2.02		7
	0847		40	14830	21.0	3.78	48.9	1.72		7
8/15	0845	0130	5	13078	21.9	1.70	22.0	0.90	4100	
	0847		20	13380	21.6	2.06	26.5	0.84		
	0850		40	14587	21.0	3.10	40.1	1.70		
9/5	0825	0652	5	10700	25.2	2.68	35.8	1.28	4200	
	0827		20	12300	24.8	2.04	27.6	1.54		
	0830		40	11800	24.8	2.20	29.6	2.20		
9/19	0830	0532	5	11747	19.7	3.14	38.2	2.30	<100	
	0833		20	12851	19.2	2.40	29.4	1.80		
	0838		40	13152	19.2	2.30	28.3	2.30		
10.3	0824	0512	5	11880	19.8	2.90	34.9	1.55	300	
	0826		20	12870	19.6	2.22	27.4	2.02		
	0828		40	14157	19.2	3.42	42.5	1.56		
10/17	0822	0415	5	12792	17.0	3.80	44.7	3.80	23000	
	0825		20	12792	17.0	3.64	42.8	3.64		
	0827		40	13186	16.8	3.60	42.3	3.60		
11/7	0910	2133	5	13212	10.2	6.70	68.9	1.84	360	
	0912		20	13114	10.4	6.52	67.0	1.92		
	0916		40	13508	10.6	6.70	69.8	6.70		
11/28	1010	0242	5	14013	10.8	5.90	62.1	2.18	800	
	1012		20	14332	10.6	5.64	59.3	2.56		
	1014		40	14119	10.6	5.60	58.9	2.12		
12/12	0923	0203	5	11770	7.5	6.70	63.8	2.28	450	
	0925		20	13375	8.0	6.84	67.2	1.92		
	0928		40	13910	7.8	6.84	67.3	3.84		

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SURVEY UPPER NEW YORK HARBOR - METALS 1973 STATION NO. 3 T

Date	Cu	Zn	Mn	Ni	Cr	Cd	Pb	Hg		
7/5	.005	.028	-	<.001	<.002	<.001	.002	.0009		
7/18	.008	.029	-	<.001	<.002	<.001	<.002	<.0001		
8/1	.004	.029	-	.003	<.002	<.001	<.002	<.0001		
8/15	.011	.047	-	.004	<.002	<.001	.008	<.0001		
9/5	.010	.050	-	.002	<.002	<.001	<.002	<.0001		
9/19	.023	.041	-	.021	<.001	<.001	.011	<.0001		
10/3	.021	.054	-	.035	<.001	<.001	.010	<.0001		
10/17	.032	.083	-	.090	<.001	<.001	.021	<.0001		
11/7	.021	.051	-	.043	<.001	<.001	.010	<.0001		
11/28			-					<.0001		
12/2			-					<.0001		

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SURVEY UPPER NEW YORK HARBOR 1973 STATION NO. 5

DATE	TIME		DEPTH Feet	CHLORIDES p.p.m.	H ₂ O TEMP. °C	D.O.		B.O.D. p.p.m.	Fecal Count per 100 ml	CODE
	E.S.T.	Max. Ebb				Obs. p.p.m	% Sat.			
7/5	0905	0422	5	5069	22.7	3.68	43.3	1.16		
7/18	0834	0238	5	11523	21.3	3.60	45.3	1.52		
8/1	0830	0222	5	12826	22.0	2.12	27.4	1.54		
8/15	0830	0130	5	12776	22.2	1.80	23.3	1.80		1
9/5	0819	0652	5	12000	25.2	2.52	34.2	1.90		
9/19	0822	0532	5	13654	19.5	2.42	30.1	1.84		
10/3	0815	0512	5	12573	20.0	2.06	25.5	1.87		
10/17	0815	0415	5	12202	17.0	3.48	40.6	1.68		
11/7	0900	2133	5	11438	11.1	6.14	63.0	2.52		
11/28	1000	0242	5	14544	11.0	5.28	56.1	1.74		
12/12	0909	0203	5	13161	8.2	6.68	65.7	1.98		

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SURVEY UPPER NEW YORK HARBOR 1973 STATION NO. 7

DATE	TIME		DEPTH Feet	CHLORIDES p.p.m.	H ₂ O TEMP. °C	D.O.		B.O.D. p.p.m.	Fecal Count per 100 ml	CODE
	E.S.T.	Max. Ebb				Obs. p.p.m.	% Sat.			
7/5	1100	0422	5	7853	23.2	4.65	58.1	4.65		
7/18	1025	0238	5	12225	20.3	4.98	61.7	2.44		7
8/1	1015	0222	5	13126	21.3	4.52	57.6	3.72		7
8/15	1037	0130	5	12977	20.4	3.14	39.4	3.14		
9/5	0955	0652	5	12500	24.8	3.60	48.7	3.60		
9/19	1008	0532	5	12550	20.0	3.20	39.7	3.20		
10/3	0945	0512	5	12474	19.8	3.10	38.2	2.07		
10/17	0940	0415	5	12398	17.0	4.30	50.3	2.78		
11/7	1038	1006	5	11339	11.0	6.50	66.5	5.68		
11/28	1140	0242	5	14225	11.5	4.80	51.3	2.58		
12/12	1048	0203	5	14231	8.2	7.00	67.9	2.04		

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SURVEY UPPER NEW YORK HARBOR 1973 STATION NO. 11

DATE	TIME		DEPTH Feet	CHLORIDES p.p.m.	H ₂ O TEMP. °C	D.O.		B.O.D. p.p.m.	Fecal Count per 100 ml	CODE
	E.S.T.	Max. Ebb				Obs. p.p.m	% Sat.			
7/5	0910	0422	5	5566	22.7	3.30	39.9	1.30	5000	
7/18	0842	0238	5	11423	21.5	3.62	45.5	1.42	1900	
8/1	0835	0222	5	13126	21.8	2.00	25.8	1.38	2100	
8/15	0837	0130	5	12676	22.4	1.68	21.8	1.68	8200	
9/5	0822	0652	5	11500	25.1	2.48	33.3	1.28	5500	
9/19	0827	0532	5	13052	19.1	2.46	30.2	1.20	<100	
10/3	0820	0512	5	12375	19.8	2.30	28.3	1.64	4900	1
10/17	0820	0415	5	12497	17.0	3.86	45.2	1.86	4000	
11/7	0905	2133	5	11142	10.8	6.02	61.2	2.42	600	
11/28	1007	0242	5	13058	11.0	5.26	55.0	2.70	5200	
12/12	0915	0203	5	10700	7.8	6.48	61.3	1.70	200	

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SURVEY UPPER NEW YORK HARBOR - METALS 1973 STATION NO. 11

Date	Cu	Zn	Mn	Ni	Cr	Cd	Pb	Hg		
7/5	.004	.027	-	<.001	<.002	<.001	<.002	.0026		
7/18	.006	.030	-	<.001	<.002	<.001	<.002	<.0001		
8/1	.004	.031	-	.003	<.002	<.001	<.002	<.0001		
8/15	.005	.040	-	.002	<.002	<.001	.006	<.0001		
9/5	.006	.037	-	.002	<.002	<.001	<.002	<.0001		
9/19	.022	.053	-	.035	<.001	<.001	.025	<.0001		
10/3	.024	.075	-	.047	<.001	<.001	.010	<.0001		
10/17	.023	.047	-	.025	<.001	<.001	.019	<.0001		
11/7	.069	.088	-	.020	<.001	<.001	.030	.0004		
11/28			-					<.0001		
12/12			-					<.0001		

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SURVEY UPPER NEW YORK HARBOR - NUTRIENTS STATION NO. 11

Date	NO ₂ -N	NO ₃ -N	NH ₃ -N	O-PO ₄ -P						
7/5	0.06	0.48	0.14	0.11						
7/18	0.06	0.44	0.50	0.12						
8/1	0.05	0.40	0.40	0.13						
8/15	0.07	0.41	0.50	0.15						
9/5	0.05	0.20	0.70	0.27						
9/19	0.07	0.51	2.1	0.21						
10/3	0.06	0.22	0.58	0.20						
10/17	0.07	0.28	0.36	0.15						
11/7	0.07	0.81	0.60	0.16						
11/28	0.06	0.42	0.44	0.09						
12/12	0.04	0.33	0.30	0.20						

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SURVEY UPPER NEW YORK HARBOR 1973 STATION NO. 12

DATE	TIME		DEPTH Feet	CHLORIDES p.p.m.	H ₂ O TEMP. °C	D.O.		B.O.D. p.p.m.	Fecal Count per 100 ml	CODE
	E.S.T.	Max. Ebb				Obs. p.p.m	% Sat.			
7/5	0848	0422	5	4970	22.7	3.30	37.9	1.04	4000	
7/18	0820	0238	5	11523	21.2	3.28	41.1	1.94	3200	
8/1	0815	0222	5	13727	22.0	2.82	36.7	2.42	3900	
8/15	0815	0130	5	13581	21.7	2.50	32.3	0.80	1000	
9/5	0810	0652	5	11500	21.5	1.90	23.9	1.10	5000	1
9/19	0808	0532	5	12450	19.3	2.84	34.7	0.94	200	
10/3	0805	0512	5	11979	19.8	3.12	38.3	1.58	1100	3,6
10/17	0755	0415	5	11906	16.2	4.32	49.4	1.32	400	
11/7	0845	2133	5	12621	11.0	6.56	70.8	1.66	200	
11/28	0950	0242	5	15393	11.0	5.60	60.2	1.82	1500	
12/12	0903	0203	5	12947	7.5	7.00	67.6	2.14	400	

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SURVEY UPPER NEW YORK HARBOR - METALS 1973 STATION NO. 12

Date	Cu	Zn	Mn	Ni	Cr	Cd	Pb	Hg		
7/5	.002	.031	-	<.001	<.002	<.001	<.002	<.0001		
7/18	.007	.025	-	<.001	<.002	<.001	<.002	<.0001		
8/1	.009	.033	-	.003	<.002	<.001	<.002	<.0001		
8/15	.007	.039	-	.002	<.002	<.001	.006	<.0001		
9/5	.010	.033	-	.003	<.002	<.001	<.002	<.0001		
9/19	.021	.049	-	.032	<.001	<.001	.017	<.0001		
10/3	.020	.076	-	.036	<.001	<.001	.014	<.0001		
10/17	.025	.041	-	.021	<.001	<.001	.005	<.0001		
11/7	.023	.044	-	.023	<.001	<.001	.008	.0003		
11/28			-					<.0001		
12/12			-					<.0001		

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SURVEY UPPER NEW YORK HARBOR - NUTRIENTS STATION NO. 12

Date	NO ₂ -N	NO ₃ -N	NH ₃ -N	O-PO ₄ -P						
7/5	0.06	0.61	0.16	.11						
7/18	0.07	0.43	0.50	0.11						
8/1	0.05	0.36	0.60	0.15						
8/15	0.07	0.53	1.00	0.14						
9/5	0.05	0.17	0.60	0.18						
9/19	0.07	0.62	2.0	0.26						
10/3	0.06	0.36	0.50	0.19						
10/17	0.08	0.57	0.39	0.16						
11/7	0.05	0.62	0.42	0.08						
11/28	0.05	0.32	0.40	0.09						
12/12	0.04	0.32	0.33	0.19						

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SURVEY

UPPER NEW YORK HARBOR

1973

STATION NO. 13

DATE	TIME		DEPTH Feet	CHLORIDES p.p.m.	H ₂ O TEMP. °C	D.O.		B.O.D. p.p.m.	Fecal Count per 100 ml	CODE
	E.S.T.	Max. Ebb				Obs. p.p.m.	% Sat.			
7/5	0803	0422	5	6362	22.3	3.40	41.2	3.40	3000	
	0807		40	7356	22.2	3.00	36.7	3.00		
	0812		80	8449	20.0	3.12	37.0	1.64		
7/18	0745	0238	5	12625	20.5	4.30	53.8	.90	1600	
	0748		40	13828	19.8	4.50	56.3	2.00		
	0755		80	15431	19.0	5.78	72.6	1.28		
8/1	0745	0222	5	13627	21.5	2.26	29.1	1.54	3400	
	0748		40	13527	21.0	2.37	30.2	1.35		
	0753		80	14529	20.8	3.83	49.2	1.87		
8/15	0740	0130	5	13782	21.5	2.20	28.4	1.20	2000	
	0743		40	14084	21.2	2.00	25.8	2.00		
	0745		80	14084	21.0	2.44	31.3	1.92		
9/5	0740	0652	5	12600	24.8	2.90	39.3	1.80	10000	
	0742		40	12700	24.6	2.68	36.2	2.68		
	0745		80	13500	24.5	2.46	33.5	2.46		
9/19	0740	0532	5	14658	18.6	2.82	34.9	2.82	270	
	0743		40	14357	19.2	2.80	34.9	2.80		
	0747		80	15060	19.8	2.20	24.8	1.54		
10/3	0735	0512	5	12474	19.8	2.86	35.3	1.60	1300	
	0739		40	13365	19.6	2.88	35.7	1.65		
	0740		80	14751	19.2	4.58	57.3	1.04		
10/17	0722	0415	5	12595	16.0	4.12	47.3	1.24	2300	
	0725		40	13678	16.0	4.94	57.4	1.52		
	0730		80	14268	15.8	5.40	63.0	1.70		
11/7	0816	2133	5	13212	10.2	7.82	80.5	1.32	500	
	0820		40	13410	10.6	7.16	74.5	1.16		
	0825		80	13804	10.6	7.50	78.4	1.30		
11/28	0934	0242	5	14225	11.0	5.60	59.3	1.98	1800	
	0936		40	15924	10.8	5.62	60.5	1.98		
	0940		80	14544	10.4	5.70	59.8	1.68		
12/12	0840	0203	5	12412	7.7	6.82	65.7	2.42	100	
	0843		40	12412	8.0	6.72	65.2	2.26		
	0850		80	12840	7.9	6.86	66.7	1.74		

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SURVEY UPPER NEW YORK HARBOR - METALS 1973 STATION NO. 13

Date	Cu	Zn	Mn	Ni	Cr	Cd	Pb	Hg		
7/5	.003	.029	-	<.001	<.002	<.001	<.002	<.0001		
7/14	.010	.037	-	<.001	<.002	<.001	<.002	<.0001		
8/1	.004	.032	-	.003	<.002	<.001	<.002	<.0001		
8/15	.010	.084	-	.002	<.002	<.001	.006	<.0001		
9/5	.005	.035	-	.002	<.002	<.001	<.002	<.0001		
9/19	.021	.044	-	.034	<.001	<.001	.018	<.0001		
10/3	.024	.062	-	.029	<.001	<.001	.006	<.0001		
10/17	.022	.042	-	.019	<.001	<.001	.006	<.0001		
11/7	.019	.037	-	.020	<.001	<.001	.012	<.0001		
11/28	.		-					<.0001		
12/12			-					<.0001		

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SURVEY UPPER NEW YORK HARBOR - NUTRIENTS STATION NO. 13

Date	NO ₂ -N	NO ₃ -N	NH ₃ -N	O-PO ₄ -P						
7/5	0.06	0.56	0.15	0.09						
7/18	0.07	0.40	0.50	0.12						
8/1	0.05	0.40	0.50	0.15						
8/15	0.07	0.47	0.50	0.14						
9/5	0.03	0.11	0.70	0.19						
9/19	0.06	0.67	-	0.27						
10/3	0.06	0.26	0.72	0.18						
10/17	0.08	0.31	0.42	0.15						
11/7	0.05	0.69	0.42	0.08						
11/28	0.06	0.44	0.44	0.08						
12/12	0.04	0.29	0.39	0.20						

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SURVEY UPPER NEW YORK HARBOR 1973 STATION NO. 14

DATE	TIME		DEPTH Feet	CHLORIDES p.p.m.	H ₂ O TEMP. °C	D.O.		B.O.D. p.p.m.	Fecal Count per 100 ml	CODE
	E.S.T.	Max. Ebb				Obs. p.p.m	% Sat.			
7/5	1025	0422	5	7554	22.3	2.30	28.2	2.23		7
7/18	0955	0238	5	12124	20.5	3.40	42.1	1.76		
8/1	0937	0222	5	13026	22.0	2.40	31.0	2.40		
8/15	0955	0130	5	13380	22.0	1.94	25.2	1.94		
9/5	0916	0652	5	12600	25.8	0.90	12.4	0.90		
9/19	0927	0532	5	13755	20.3	2.32	29.3	1.44		
10/3	0910	0512	5	12474	20.0	2.26	28.0	1.53		
10/17	0903	0415	5	12005	17.0	2.70	31.4	1.58		
11/7	0955	2133	5	11536	11.6	5.50	57.1	1.78		
11/28	1055	0242	5	14544	11.0	5.80	61.6	2.32		
12/12	1015	0203	5	11128	7.8	6.46	61.4	1.72		

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SURVEY UPPER NEW YORK HARBOR 1973 STATION NO. 15

DATE	TIME		DEPTH Feet	CHLORIDES p.p.m.	H ₂ O TEMP. °C	D.O.		B.O.D. p.p.m.	Fecal Count per 100 ml	CODE
	E.S.T.	Max. Ebb				Obs. p.p.m	% Sat.			
7/5	1020	0422	5	3578	23.2	3.75	44.9	1.15		
7/18	0948	0238	5	11323	21.8	3.32	42.0	1.24		
8/1	0930	0222	5	13226	22.2	2.00	26.0	2.00		
8/15	0945	0130	5	12877	22.2	2.18	28.2	2.18		
9/5	0910	0652	5	11600	25.2	2.20	29.7	2.20		
9/19	0920	0532	5	12450	20.3	2.82	35.0	2.06		
10/3	0907	0512	5	11583	20.0	2.50	30.6	1.80		
10/17	0900	0415	5	12398	17.0	3.26	38.1	2.16		
11/7	0950	2133	5	11339	11.0	6.46	66.1	1.38		
11/28	1047	0242	5	14544	11.0	4.92	52.3	1.72		
12/12	1008	0203	5	10807	7.8	6.52	61.7	1.92		

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SURVEY UPPER NEW YORK HARBOR 1973 STATION NO. 16

DATE	TIME		DEPTH Feet	CHLORIDES p.p.m.	H ₂ O TEMP. °C	D.O.		B.O.D. p.p.m.	Fecal Count per 100 ml	CODE
	E.S.T.	Max. Ebb				Obs. p.p.m	% Sat.			
7/5	0957	0422	5	3280	22.8	3.70	43.8	1.48		
7/18	0925	0238	5	11122	21.5	3.72	46.7	1.80		
8/1	0910	0222	5	12826	21.8	1.90	24.4	≥ 1.90		
8/15	0925	0130	5	12676	22.3	1.92	24.9	0.62		1
9/5	0855	0652	5	10900	25.5	2.42	32.6	1.92		
9/19	0857	0532	5	11044	20.2	2.74	33.5	0.74		
10/3	0850	0512	5	10890	19.8	2.70	32.7	1.27		
10/17	0846	0415	5	11021	17.0	3.10	35.7	1.50		
11/7	0931	2133	5	11832	11.6	6.96	72.5	2.24		
11/28	1036	0242	5	12739	11.0	5.34	55.6	1.80		1,4
12/12	0948	0203	5	11235	7.7	6.46	61.3	2.22		

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SURVEY UPPER NEW YORK HARBOR 1973 STATION NO. 17

DATE	TIME		DEPTH Feet	CHLORIDES p.p.m.	H ₂ O TEMP. °C	D.O.		B.O.D. p.p.m.	Fecal Count per 100 ml	CODE
	E.S.T.	Max. Ebb				Obs. p.p.m	% Sat.			
7/5	1040	0422	5	6958	22.7	3.20	39.3	1.06		
7/18	1012	0238	5	12325	21.2	3.46	43.7	1.36		
8/1	0955	0222	5	13427	21.8	2.00	25.9	≥2.00		
8/15	1012	0130	5	13078	21.9	1.68	21.7	≥1.68		1
9/5	0930	0652	5	12500	25.8	0.98	13.5	≥0.98		1,4
9/19	0943	0532	5	13855	20.3	2.30	29.0	≥2.30		
10/3	0925	0512	5	12573	20.4	2.12	26.5	1.38		
10/17	0915	0415	5	12694	17.0	3.64	42.7	1.74		
11/7	1016	1006	5	11339	11.4	5.76	59.4	1.26		
11/28	1120	0242	5	14862	11.4	5.30	57.1	1.88		
12/12	1030	0203	5	10700	7.8	6.42	60.7	1.42		

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SURVEY UPPER NEW YORK HARBOR 1973 STATION NO. 18

DATE	TIME		DEPTH Feet	CHLORIDES p.p.m.	H ₂ O TEMP. °C	D.O.		B.O.D. p.p.m.	Fecal Count per 100 ml	CODE
	E.S.T.	Max. Ebb				Obs. p.p.m	% Sat.			
7/5	0858	0422	5	5964	22.6	3.02	36.6	.80		
7/18	0828	0238	5	11623	21.2	3.98	49.9	1.66		
8/1	0823	0222	5	12826	22.0	2.00	2.00	≤ 2.00		
8/15	0822	0130	5	12877	22.0	2.28	29.4	0.68		
9/5	0815	0652	5	11700	25.0	2.24	30.2	≥ 2.24		
9/19	0818	0532	5	12650	19.7	2.42	29.7	1.84		
10/3	0810	0512	5	11682	19.8	2.80	34.2	1.56		
10/17	0810	0415	5	11710	16.2	4.00	45.7	1.82		
11/7	0855	2133	5	12128	11.0	6.18	63.8	1.92		
11/28	0955	0242	5	14969	11.0	5.42	58.0	1.56		
12/12	0905	0203	5	12412	8.0	6.56	63.6	1.76		

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SURVEY UPPER NEW YORK HARBOR 1973 STATION NO. 19

DATE	TIME		DEPTH Feet	CHLORIDES p.p.m.	H ₂ O TEMP. °C	D.O.		B.O.D. p.p.m.	Fecal Count per 100 ml	CODE
	E.S.T.	Max. Ebb				Obs. p.p.m.	% Sat.			
7/5	1050	0422	5	7057	23.0	2.90	35.8	1.76		
7/18	1018	0238	5	12325	20.7	3.82	47.8	1.92		
8/1	1005	0222	5	13026	22.0	2.32	49.4	>2.32		
8/15	1025	0130	5	13380	21.9	2.90	37.6	1.62		
9/5	0942	0652	5	12800	25.2	2.06	28.2	≥2.06		2
9/19	0953	0532	5	14056	20.0	2.54	32.0	1.64		
10/3	0937	0512	5	12870	20.0	2.52	31.3	1.34		1
10/17	0430	0415	5	12890	17.0	4.22	49.6	1.40		
11/7	1025	1006	5	12522	11.2	6.18	64.4	2.40		
11/28	1130	0242	5	13588	11.0	4.96	52.1	1.58		
12/12	1042	0203	5	10700	7.8	6.52	61.7	1.46		

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SURVEY UPPER NEW YORK HARBOR 1973 STATION NO. 20

DATE	TIME		DEPTH Feet	CHLORIDES p.p.m.	H ₂ O TEMP. °C	D.O.		B.O.D. p.p.m.	Fecal Count per 100 ml	CODE
	E.S.T.	Max. Ebb				Obs. p.p.m.	% Sat.			
7/5	0937	0422	5	5268	22.8	3.40	41.1	1.48		
7/18	0910	0238	5	12525	20.7	3.48	43.7	2.16		
8/1	0858	0272	5	13427	22.0	2.25	29.2	≥ 2.25		
8/15	0900	0130	5	12877	21.9	1.76	22.7	0.36		
9/5	0842	0652	5	10500	25.4	3.00	40.2	2.00		
9/19	0845	0532	5	12650	19.8	2.44	30.1	1.64		
10/3	0840	0512	5	12375	19.8	2.14	26.4	1.13		
10/17	0835	0415	5	11710	16.8	3.70	42.8	1.60		
11/7	0920	2133	5	12128	10.4	6.96	70.9	1.32		
11/28	1021	0242	5	14332	10.8	5.22	55.1	1.92		
12/12	0940	0203	5	11770	7.8	6.56	62.9	1.50		

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SURVEY UPPER NEW YORK HARBOR 1973 STATION NO. 21

DATE	TIME		DEPTH Feet	CHLORIDES p.p.m.	H ₂ O TEMP. °C	D.O.		B.O.D. p.p.m.	Fecal Count per 100 ml	CODE
	E.S.T.	Max. Ebb				Obs. p.p.m.	% Sat.			
7/5	0948	0422	5	4075	22.8	3.52	42.0	1.14		
7/18	0918	0238	5	11323	21.7	3.80	47.9	1.72		
8/1	0905	0222	5	13026	22.0	2.02	26.1	≥ 2.02		
8/15	0915	0130	5	13078	21.9	2.40	31.0	≥ 2.40		
9/5	0847	0652	5	11000	25.2	2.60	34.9	≥ 2.60		1
9/19	0853	0532	5	12550	20.0	2.22	27.5	0.90		
10/3	0845	0512	5	11979	20.0	2.22	27.3	1.25		
10/17	0840	0415	5	11710	17.0	3.40	39.4	1.80		
11/7	0925	2133	5	11931	11.0	6.94	> 1.5	1.16		
11/28	1030	0242	5	13801	11.0	5.04	53.1	1.84		1
12/12	0945	0203	5	10914	7.7	6.62	62.7	1.50		

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SURVEY UPPER NEW YORK HARBOR , 1973 STATION NO. 22

DATE	TIME		DEPTH Feet	CHLORIDES p.p.m.	H ₂ O TEMP. °C	D.O.		B.O.D. p.p.m.	Fecal Count per 100 ml	CODE
	E.S.T.	Max. Ebb				Obs. p.p.m	% Sat.			
7/5	1105	0422	5	6262	23.2	3.48	42.8	1.20		
7/18	1032	0238	5	12352	21.2	4.34	54.9	3.50		
8/1	1020	0222	5	13527	21.8	2.92	37.8	2.92		
8/15	1040	0130	5	13380	21.6	2.10	27.1	1.30		
9/5	1005	0652	5	11600	25.2	2.72	36.8	1.62		
9/19	1013	0532	5	13956	20.0	2.90	36.5	1.26		
10/3	0954	0512	5	12771	19.8	2.52	31.2	1.29		
10/17	0950	0415	5	12497	17.0	3.90	45.6	1.52		
11/7	1058	1006	5	12424	11.0	6.84	70.9	.96		
11/28	1153	0242	5	14225	11.0	6.10	64.6	1.70		
12/12	1057	0203	5	12519	7.7	6.72	64.8	1.08		

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SURVEY UPPER NEW YORK HARBOR 1973 STATION NO. 23

DATE	TIME		DEPTH Feet	CHLORIDES p.p.m.	H ₂ O TEMP. °C	D.O.		B.O.D. p.p.m.	Fecal Count per 100 ml	CODE
	E.S.T.	Max. Ebb				Obs. p.p.m	% Sat.			
7/5	0840	0422	5	6063	22.8	3.10	37.7	.88		
7/18	0808	0238	5	12224	20.6	3.60	44.9	1.12		
8/1	0810	0222	5	14028	21.3	2.90	37.4	2.50		
8/15	0810	0130	5	13581	21.6	2.32	29.9	≥2.32		
9/5	0800	0652	5	11900	25.0	2.58	34.8	1.58		
9/19	0803	0532	5	13654	18.4	2.80	34.1	1.82		
10/3	0755	0512	5	12276	19.8	2.74	33.7	1.29		
10/17	0745	0415	5	12103	16.0	3.88	44.3	1.26		
11/7	0840	2133	5	12917	10.8	6.74	70.0	1.42		
11/28	0945	0242	5	15287	11.0	5.58	59.8	2.18		
12/12	0859	0203	5	13054	7.5	6.82	65.9	1.54		

8/12/68 rym

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SURVEY UPPER NEW YORK HARBOR 1973 STATION NO. 26

DATE	TIME		DEPTH Feet	CHLORIDES p.p.m.	H ₂ O TEMP. °C	D.O.		B.O.D. p.p.m.	Fecal Count per 100 ml	CODE
	E.S.T.	Max. Ebb				Obs. p.p.m.	% Sat.			
7/5	0755	0422	5	5964	23.5	3.40	41.9	1.24	2000	
7/18	0740	0238	5	11723	21.0	3.48	43.6	1.58	1500	
8/1	0740	0222	5	13126	22.0	2.40	31.0	≥ 2.40	2900	
8/15	0738	0130	5	13883	21.0	2.62	33.5	1.42	730	
9/5	0738	0652	5	12000	25.0	2.82	38.1	1.10	2000	
9/19	0735	0532	5	13755	19.2	2.68	33.2	1.98	450	
10/3	0730	0512	5	12870	19.8	3.10	38.4	1.91	450	3.4
10/17	0720	0415	5	13481	16.0	4.30	49.9	1.92	<100	
11/7	0810	2133	5	12522	10.8	7.32	75.7	2.78	2300	
11/28	0930	0242	5	14438	11.0	6.52	68.9	2.10	2700	
12/12	0835	0203	5	13268	7.7	7.14	69.6	2.42	500	

8/12/68 rym

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SURVEY UPPER NEW YORK HARBOR - METALS 1973 STATION NO. 26

Date	Cu	Zn	Mn	Ni	Cr	Cd	Pb	Hg		
7/5	.007	.055	-	.003	<.002	<.001	<.002	<.0001		
7/18	.029	.108	-	<.001	<.002	<.001	.008	.0003		
8/1	.008	.054	-	.003	<.002	<.001	<.002	<.0001		
8/15	.014	.071	-	.002	<.002	<.001	.006	<.0001		
9/5	.014	.065	-	.007	<.002	<.001	<.002	<.0001		
9/19	.021	.044	-	.034	<.001	<.001	.018	<.0001		
10/3	.025	.054	-	.025	<.001	<.001	.010	<.0001		
10/17	.017	.047	-	.041	<.001	<.001	.005	<.0001		
11/7	.022	.046	-	.026	<.001	<.001	.010	<.0001		
11/28			-					<.0001		
12/12			-					<.0001		

INTERSTATE SANITATION COMMISSION

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SURVEY UPPER NEW YORK HARBOR - NUTRIENTS STATION NO. 26

Date	NO ₂ -N	NO ₃ -N	NH ₃ -N	O-PO ₄ -P						
7/5	0.06	0.67	0.14	0.09						
7/18	0.07	0.41	0.80	0.12						
8/1	0.07	0.38	0.60	0.55						
8/15	0.08	0.60	0.40	0.13						
9/5	0.04	0.18	0.70	0.20						
9/19	0.08	0.73	-	0.14						
10/3	0.06	0.27	0.56	0.18						
10/17	0.08	0.36	0.45	0.15						
11/7	0.05	0.69	0.48	0.08						
11/28	0.05	0.35	0.40	0.07						
12/12	0.04	0.32	0.30	0.19						

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SURVEY UPPER NEW YORK HARBOR 1973 STATION NO. 27

DATE	TIME		DEPTH Feet	CHLORIDES p.p.m.	H ₂ O TEMP. °C	D.O.		B.O.D. p.p.m.	Fecal Count per 100 ml	CODE
	E.S.T.	Max. Ebb				Obs. p.p.m.	% Sat.			
7/5	0817	0422	5	5467	22.7	3.58	43.2	1.08	5000	
7/18	0800	0238	5	12752	20.2	3.78	47.1	1.36	1400	
8/1	0758	0222	5	13727	21.2	2.06	26.4	1.78	3900	
8/15	0757	0130	5	13782	21.4	1.90	24.5	1.40	5600	
9/5	0755	0652	5	12200	24.9	2.52	34.1	1.92	4400	
9/19	0752	0532	5	13755	19.3	2.70	30.1	1.90	<100	
10/3	0750	0512	5	12375	19.8	2.50	30.8	1.82	1300	
10/17	0735	0415	5	12890	16.2	4.50	52.8	1.60	400	
11/7	0830	2133	5	12917	10.6	6.50	67.2	1.22	200	
11/28	0943	0242	5	14438	11.0	6.00	63.7	2.00	730	
12/12	0855	0203	5	12840	7.8	6.80	65.9	1.80	300	

8/12/68 rym

INTERSTATE SANITATION COMMISSION

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SURVEY UPPER NEW YORK HARBOR - METALS 73 STATION NO. 27

Date	Cu	Zn	Mn	Ni	Cr	Cd	Pb	Hg		
7/5	.003	.022	-	<.001	≤.002	<.001	<.002	≤.0001		
7/18	.007	.022	-	.002	≤.002	≤.001	≤.002	≤.0001		
8/1	.007	.027	-	.004	≤.002	<.001	<.002	≤.0001		
8/15	.006	.027	-	.002	≤.002	<.001	.006	≤.0001		
9/5	.007	.030	-	.002	≤.002	≤.001	<.002	≤.0001		
9/19	.021	.045	-	.045	≤.001	≤.001	.003	≤.0001		
10/3	.016	.048	-	.034	≤.001	≤.001	.008	≤.0001		
10/17	.022	.042	-	.036	≤.001	≤.001	.007	≤.0001		
11/7	.019	.047	-	.022	≤.001	≤.001	.009	.0003		
11/28			-					≤.0001		
12/12			-					≤.0001		

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SURVEY UPPER NEW YORK HARBOR 1973 STATION NO. 28

DATE	TIME		DEPTH Feet	CHLORIDES p.p.m.	H ₂ O TEMP. °C	D.O.		B.O.D. p.p.m.	Fecal Count per 100 ml	CODE
	E.S.T.	Max. Ebb				Obs. p.p.m.	% Sat.			
7/5	1007		5	2346	22.9	3.98	46.7	.98	<1000	
	1010	0422	20	2803	22.7	3.80	44.8	1.48		
	1014		40	5487	22.5	3.00	36.1	1.50		
7/18	0937		5	10521	22.0	4.00	50.3	1.66	<100	
	0940	0238	20	10521	21.7	4.94	61.8	2.28		
	0943		40	13527	20.7	3.82	48.4	2.06		
8/1	0915		5	12625	22.2	1.95	25.2	1.95	820	
	0918	0222	20	13026	22.0	1.70	22.0	1.18		
	0925		40	13727	21.7	2.22	28.7	1.72		
8/15	0935		5	12474	22.2	1.90	24.5	0.80	1800	4
	0847	0130	20	12575	22.4	2.00	25.9	1.30		
	0850		40	14185	22.0	2.44	31.9	1.80		
9/5	0900		5	8100	26.0	3.40	45.0	1.70	3600	
	0905	0652	20	10700	25.4	2.42	32.5	1.78		
	0909		40	13000	24.8	2.18	29.7	>2.18		
9/19	0908		5	10040	20.3	3.60	43.6	2.28	<100	
	0911	0532	20	10944	19.8	2.60	31.4	1.88		
	0915		40	12751	19.6	1.80	22.2	0.64		
10/3	0900		5	9306	19.8	2.94	35.0	1.56	1000	
	0902	0512	20	10593	19.8	2.44	29.5	1.09		
	0905		40	13068	19.6	2.10	26.0	1.24		
10/17	0848		5	9545	17.0	4.20	47.6	1.64	100	
	0850	0415	20	12202	17.0	1.40	16.3	NR		
	0855		40	13284	16.8	3.72	43.7	2.08		
11/7	0940		5	10747	10.8	7.10	65.3	1.54	100	
	0944	2133	20	11438	11.0	6.36	65.2	1.46		
	0948		40	12325	11.2	6.36	66.1	1.94		
11/28	1040		5	11465	10.8	5.74	58.6	2.04	1700	
	1042	0242	20	13376	10.6	4.90	51.0	3.12		
	1044		40	14438	10.8	5.62	59.4	1.92		
12/12	0955		5	8881	7.3	7.40	67.8	1.56	600	
	0956	0203	20	10272	7.8	6.62	64.3	1.78		
	0958		40	10700	7.7	6.52	61.5	2.42		

INTERSTATE SANITATION COMMISSION

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SURVEY UPPER NEW YORK HARBOR - METALS STATION NO. 28 T

Date	Cu	Zn	Mn	Ni	Cr	Cd	Pb	Hg		
7/5	.008	.029	-	.001	≤002	≤001	≤002	≤0001		
7/18	.008	.030	-	≤001	≤002	≤001	≤002	≤0001		
8/1	.008	.040	-	.004	≤002	≤001	≤002	≤0001		
8/15	.010	.080	-	≤001	≤002	≤001	.006	≤0001		
9/5	.008	.027	-	.002	≤002	≤001	≤002	≤0001		
9/19	.021	.036	-	.030	≤001	≤001	.014	≤0001		
10/3	.023	.048	-	.033	≤001	≤001	.008	≤0001		
10/17	.022	.041	-	.035	≤001	≤001	.006	≤0001		
11/7	.029	.044	-	.020	≤001	≤001	.014	≤0001		
11/28			-					≤0001		
12/12			-					≤0001		

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SURVEY UPPER NEW YORK HARBOR - NUTRIENTS STATION NO. 28

Date	NO ₂ -N	NO ₃ -N	NH ₃ -N	O-PO ₄ -P						
7/5	0.05	0.74	0.14	0.08						
7/18	0.08	0.44	0.80	0.08						
8/1	0.07	0.41	0.60	0.18						
8/15	0.08	0.42	0.60	0.15						
9/5	0.08	0.77	-	0.16						
10/3	0.05	0.42	0.36	0.19						
10/17	0.08	0.47	0.36	0.16						
11/7	0.05	0.83	0.36	0.11						
11/28	0.06	0.47	0.40	0.06						
12/12	0.04	0.40	0.30	0.20						

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SURVEY

UPPER NEW YORK HARBOR

1973

STATION NO. 29

DATE	TIME		DEPTH Feet	CHLORIDES p.p.m.	H ₂ O TEMP. °C	D.O.		B.O.D. p.p.m.	Fecal Count per 100 ml	CODE
	E.S.T.	Max. Ebb				Obs. p.p.m	% Sat.			
7/5	1028		5	4374	23.0	3.55	42.7	1.65	1000	
	1030	0422	20	5467	22.7	3.08	37.2	1.46		
	1035		40	5765	22.5	3.10	37.4	1.08		
7/18	0958		5	10922	21.7	3.58	44.9	1.28	270	
	1004	0238	20	11222	21.3	3.56	44.6	1.34		
	1008		40	12024	21.0	3.44	43.2	1.52		
8/1	0142		5	13226	22.0	1.80	23.3	1.80	1200	
	0945	0222	20	13427	21.8	1.76	22.8	1.76		
	0950		40	13427	21.5	1.84	23.7	1.84		
8/15	1000		5	13480	21.9	1.56	20.2	0.76	2300	
	1004	0130	20	13581	21.6	1.58	20.4	1.58		
	1007		40	13279	21.6	1.74	22.4	1.74		
9/5	0920		5	12600	25.8	.90	12.4	0.90	1200	
	0924	0652	20	12500	25.6	0.88	12.1	0.88		
	0927		40	12500	25.2	1.20	16.4	1.20		
9/19	0932		5	12550	20.2	2.44	30.4	1.30	1700	
	0935	0532	20	12851	20.3	2.80	35.0	2.30		
	0938		40	13052	20.5	1.82	22.8	1.82		
10/3	0912		5	11880	20.2	2.60	32.1	1.44	270	
	0914	0512	20	12177	20.2	2.24	27.7	1.45		
	0916		40	11880	20.2	2.12	26.2	1.44		
10/17	0905		5	11316	17.0	4.06	46.9	1.92	1300	
	0907	0415	20	12103	17.0	3.00	35.0	1.70		
	0910		40	12792	16.8	3.42	40.0	2.00		
11/7	0958		5	11438	11.6	6.30	65.3	1.42	200	
	1002	2133	20	11438	11.6	6.00	62.2	1.82		
	1005		40	11339	11.8	5.86	60.9	1.56		
11/28	1058		5	13907	11.0	5.08	53.6	1.66	2300	
	1100	0242	20	13486	11.0	5.14	54.0	1.84		
	1105		20	14862	11.0	5.16	55.0	2.30		
12/12	1020		5	10700	7.7	6.94	63.6	1.82	900	
	1022	0203	20	11128	8.0	6.10	58.3	2.10		
	1025		40	12305	8.0	6.10	59.1	2.48		

INTERSTATE SANITATION COMMISSION
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SURVEY UPPER NEW YORK HARBOR - METALS 1973 STATION NO. 29 T

Date	Cu	Zn	Mn	Ni	Cr	Cd	Pb	Hg		
7/5	.004	.034	-	<.001	<.002	<.001	<.002	<.0001		
7/18	.007	.026	-	<.001	<.002	<.001	<.002	<.0001		
8/1	.005	.031	-	.003	<.002	<.001	.002	<.0001		
8/15	.007	.050	-	.001	<.002	<.001	.006	<.0001		
9/5	.011	.038	-	.003	<.002	<.001	<.002	<.0001		
9/19	.022	.043	-	.035	<.001	<.001	.010	<.0001		
10/3	.023	.055	-	.025	<.001	<.001	.008	<.0001		
10/17	.024	.045	-	.056	<.001	<.001	.009	<.0001		
11/7	.027	.047	-	.022	<.001	<.001	.010	<.0001		
11/28			-					<.0001		
12/12			-					<.0001		

