

BERGEN COUNTY UTILITIES AUTHORITY

**IMPACT ANALYSIS OF SEWAGE TREATMENT PLANT
DISCHARGES ON THE WATER QUALITY OF
THE LOWER HACKENSACK RIVER**

VOLUME III

APPENDIX B AND APPENDIX C



SEPTEMBER 1990



Clinton Bogert Associates

Consulting Engineers since 1924

March 16, 1990

(10 percent) analysis.

CSO's, storm sewer discharges, and locations upstream of overflow regulators (for calibrating the land use model) were all analyzed for the same parameter list as river stations except for chlorophyll-a. The list was reduced for 1989 samples to include only pH, CBOD 5, suspended solids, kjeldahl nitrogen, ammonia, nitrite, and nitrate. Tidal Marsh analyses included the same list as the river except for fecal coliform and long-term BOD.

Quality control analyses were performed on approximately 10 percent of the field samples for precision and matrix spike, blank spike and reference recoveries. A detailed evaluation of the QC data as well as a full presentation of the QC data base is given in Appendix I. Site specific acceptance limits were developed for this project and comparisons made with normal laboratory limits operational at the time of the study.

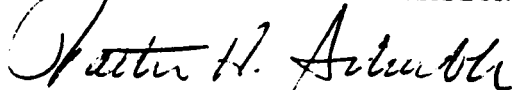
Chains of Custody, laboratory chronologies, and field data logs are available from the laboratory archives as needed. All laboratory raw data information and the field documentation has been catalogued and stored at our Hackensack facility.

Two significant difficulties were encountered analytically. High salinity concentrations caused varying interference to the digestion process in the kjeldahl procedure and a contaminated lot of one of the DO fixing reagents resulted in two days of river DO readings in the July, 1988 survey being unacceptable. With regard to TKN analysis, changing reagent proportions in the digestion process generally brought recoveries on subsequent runs within acceptance limits. No further difficulty was encountered with the DO analysis after reagent lots were changed and monitored more closely.

We enjoyed working with you and George Schevon and Dr. Najarian, Vajira Gunawardana and the staff of Najarian and Associates on this study. We stand ready to offer any assistance you may require in reviewing this report.

Best regards,

GENERAL TESTING CORPORATION



Walter H. Scheible
General Testing Project Coordinator

Sean Gormley
Analytical Coordinator

DATA AND QUALITY CONTROL QUALIFIERS

U - Indicates compound was analyzed but was not observed at a quantifiable concentration.

J - Indicates an estimated value

J Qualifiers (used in conjunction with J and/or QC page or chronology)

S - Surrogate recoveries outside of control limits

M - Matrix spike and/or matrix spike duplicate outside control limits

St - Surrogate recoveries outside of control limits, analysis repeated, same results obtained, matrix interference suspected

Mt - same as M

ORGANIC PARAMETERS: Matrix interference suspected, Organic reference standard was acceptable.

r - Laboratory replicates outside of laboratory advisory limits

INORGANIC PARAMETERS: Matrix interference suspected, Repeat analysis still unacceptable

t - Matrix interference suspected

Mr - INORGANICS PARAMETERS: Matrix interference suspected, repeat analysis not conducted due to holding time limitations

h - Holding time exceeded for analysis

B - Indicates that the analyte was found in the associated laboratory or field blank

B Qualifiers (used in conjunction with B)

l - Contamination in lab or method blank

e - Contamination in equipment blank

t - Contamination in trip blank

f - Contamination in field filtration blank

x - Contamination in two or more types of blanks (i.e. Lab or Method, Trip, Equipment, or Field Filtration Blank)

d - Results multiplied by dilution factor

MISCELLANEOUS QC AND DATA QUALIFIERS

ND - Not Detectable

NS - No Sample

NA - Not Analyzed

*+ - No limits currently established

** - See Attached Data

I - Insufficient sample to re-analyze

D - Surrogate standard diluted out

R - Sample re-analyzed outside of holding time

UP - Unable to perform analysis due to sample matrix

V - Spiked recovery cannot be determined, sample value >4 times spike concentration

↔ - Outside Laboratory acceptance limits (Blank Spikes, Ref. Spikes)

RC - Results confirmed via repeat analysis

NC - Not Calculable

LE - Lab Error: No data available

r - Surrogate Matrix Interference

PART 1

ANALYTICAL DATA

HACKENSACK RIVER AND TRIBUTARIES

APRIL 1988 TO OCTOBER 1989

MARCH 20, 1990

Submitted to:

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SUMMARY OF ANALYTICAL DATA SECTIONS

<u>Section</u>	<u>Description</u>
1	Analytical Data for River and Tributaries, April Dry Event, April 12-22, 1988.
2	Analytical Data for CSO and Storm Sewer Locations, April Dry Event, April 12-22, 1988.
3	Analytical Data for Sewage Treatment Plants, April Dry Event, April 12-22, 1988.
4	Analytical Data for PSE & G Channel, April Dry Event, April 12-22, 1988.
5	Analytical Data for River and Tributaries July Dry and Wet Events, July 11-25, 1988.
6	Analytical Data for CSO and Storm Sewer Locations, July Dry and Wet Events, July 11-25, 1988.
7	Analytical Data for Sewage Treatment Plants, July Dry and Wet Events, July 11-25, 1988.
8	Analytical Data for PSE & G Channel, July Dry and Wet Events, July 11-25, 1988.
9	Analytical Data for Land Use Stations, July Dry and Wet Events, July 11-25, 1988.
10	Analytical Data - 30-hour Baseflow Study of C2 & C11, July Dry and Wet Events, July 11-25, 1988.
11	Analytical Data for River and Special Tributary Study, August Wet Events, August 23-29, 1988.
12	Analytical Data for Special Tributary Study, August Wet Event, August 23-29, 1988 (Bellmans, Chromakill, and Sawmill Creeks).

SUMMARY OF ANALYTICAL DATA SECTIONS - con't

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| 13 | Analytical Data for CSO and Storm Sewer Locations, August Wet Event, August 24-29, 1988. |
| 14 | Analytical Data for Sewage Treatment Plants, August Wet Event, August 23-29, 1988. |
| 15 | Analytical Data for PSE & G Channel, August Wet Event, August 23-29, 1988. |
| 16 | Analytical Data for Land Use Stations, August Wet Event, August 29, 1988. |
| 17 | Analytical Data for 4-day Baseflow Study, October 17-20, 1988. |
| 18 | Analytical Data for Land Use Stations, October 21, 1988, Storm (Court and St. Paul only). |
| 19 | Analytical Data for Tidal Marsh Study, November 8-12, 1988 Event. |
| 20 | Analytical Data for CSO and Storm Sewer Locations, May 1-2, 1989, Storm Event. |
| 21 | Analytical Data for Storm Sewer Locations, May 23-24, 1989, Storm Event (E. Riser, and Overpeck Creek only). |
| 22 | Analytical Data for Tidal Marsh Study, July 23, 24, and August 6, 7, 1989 Events. |
| 23 | Analytical Data for CSO and Storm Sewer Locations, October 17 and 31, 1989, Storm Events. |

SECTION 1

ANALYTICAL DATA
RIVER AND TRIBUTARIES
APRIL DRY EVENT
APRIL 12-22, 1988

ANALYTICAL DATA FOR RIVER AND TRIBUTARIES
WACKENSACK RIVER STUDY

APRIL DRY EVENT - APRIL 12-22 1988

SAMPLE #	DATE	TIME	SITE	DEPTH	pH	TURBIDITY ntu	CBOD5 mg/l	CBOD20 mg/l	MM3 mg/l	M03/M02 mg/l	M02 mg/l	M03 mg/l	TKN mg/l	TP04 mg/l	OP04 mg/l	ORGANIC P04 mg/l	CHLORO-A mg/l	TEMP C	DO mg/l	SALINITY ppt	TSS mg/l	FEC. COL org/100ml	(NPN)
14	4/28/88	9:30	M1	T	7.6	11.0	(2.0)		0.90	0.66	(0.05)	0.66	1.17	(0.10)	0.10	(0.10)	9.83	11.0	8.00	14.0	35.6	170	
15	4/28/88	9:30	M1	B	7.45	7.0	(2.0)		0.92	0.68	(0.05)	0.68	1.55	(0.10)	0.09	(0.10)	8.31	11.0	8.10	12.5	29.2	130	
16	4/28/88	11:15	M1	T	7.3	11.0	(2.0)		1.26	0.81	0.06	0.75	1.86	(0.10)	0.17	(0.10)	25.4	12.0	8.20	11.0	44.0		
17	4/28/88	11:15	M1	B	7.2	11.0	(2.0)		1.20	0.80	0.06	0.74	1.78	(0.10)	0.16	(0.10)	17.4	11.5	8.30	11.0	46.4		
18	4/28/88	13:00	M1	B	7.23	7.0	91.20		1.55	0.90	0.08	0.82	2.48	0.31	0.24	0.07	20.4	13.5	8.40	9.79	22.4	20	
19	4/28/88	13:00	M1	T	7.44	6.5	(2.0)		1.44	0.88	0.07	0.81	1.89	0.29	0.21	0.08	24.3	13.5	8.60	10.2	37.3	80	
47	4/28/88	15:15	M1	B	7.30	15.00	(2.00)		1.00	0.68	(0.05)	0.68	1.54	0.14	0.12	0.02	3.05	11.50	5.10	13.40	56.40		
48	4/28/88	15:15	M1	T	7.35	15.00	(2.00)		0.95	0.66	(0.05)	0.66	1.52	0.14	0.10	0.04	4.96	11.20	5.20	13.00	72.40		
49	4/28/88	17:00	M1	T	7.45	6.90	(2.00)		0.83	0.61	(0.05)	0.61	1.17	0.11	0.07	0.04	4.81	9.50	8.50	14.70	20.80		
50	4/28/88	17:00	M1	B	7.32	17.00	(2.00)		0.82	0.56	(0.05)	0.56	1.22	0.45	0.08	0.37	4.63	9.00	13.40	15.20	72.80	130	
51	4/28/88	18:50	M1	B	7.16	15.00	(2.00)		0.68	0.49	(0.05)	0.49	1.02	(0.10)	(0.05)	(0.10)	5.18	8.00	8.50	16.30	57.20		
52	4/28/88	18:50	M1	T	7.25	6.00	(2.00)		0.81	0.53	(0.05)	0.53	1.22	(0.10)	(0.05)	(0.10)	2.31	9.00	8.40	15.40	20.00		
60	4/38/88	11:00	M1	T	7.34	9.4	91.10		1.51	0.98	0.07	0.81	2.07	0.30	0.19	0.11	19.2	11.0	8.50	11.4	38.4		
81	4/38/88	11:00	M1	B	7.55	9.5	91.45		1.41	0.89	0.08	0.81	2.35	0.30	0.20	0.10	23.8	10.0	8.10	11.3	41.4		
82	4/28/88	21:00	M1	B	7.13	17.0	(2.00)		0.87	0.44	(0.05)	0.44	1.26	0.12	0.07	0.05	3.60	9.5	8.10	14.3	79.2		
83	4/28/88	21:00	M1	T	6.83	17.0	(2.00)		0.88	0.44	(0.05)	0.44	1.22	0.12	0.08	0.04	7.32	10.0	8.10	14.4	71.0		
84	4/28/88	23:00	M1	T	7.20	20.0	(2.00)		1.06	0.74	0.05	0.69	1.75	0.17	0.12	0.05	10.5	10.0	8.00	13.2	74.4		
85	4/28/88	23:00	M1	B	7.29	21.0	(2.00)		1.07	0.73	0.05	0.68	1.75	1.38	0.12	1.26	7.27	11.0	8.00	13.1	124.0		
113	4/38/88	3:00	M1	B	7.45	10.0	(2.00)		1.14	0.81	0.05	0.76	1.41	0.14	0.14	0.00	8.52	10.0	7.90	12.4	53.6		
114	4/38/88	3:00	M1	T	7.47	7.0	(2.00)		1.28	0.87	0.06	0.81	1.80	0.24	0.17	0.07	5.46	9.5	8.10	11.7	29.6		
115	4/38/88	5:00	M1	T	6.82	7.7	(2.00)		0.87	0.46	(0.05)	0.46	1.41	0.12	0.09	0.03	2.60	9.0	8.10	13.6	38.0	1,700	
116	4/38/88	5:00	M1	B	7.32	9.5	(2.00)		0.84	0.63	(0.05)	0.63	1.27	(0.10)	0.09	(0.10)	2.15	9.0	8.20	14.7	40.8		
117	4/38/88	7:00	M1	B	7.46	5.4	(2.00)		0.79	0.59	(0.05)	0.59	1.22	(0.10)	0.08	(0.10)	4.17	9.0	8.40	15.2	28.8		
118	4/38/88	7:00	M1	T	7.34	8.4	(2.00)		0.67	0.54	(0.05)	0.54	1.17	(0.10)	0.15	(0.10)	3.04	9.5	8.6	16.0	45.6		
146	4/38/88	9:20	M1	T	7.63	8.50	(2.00)		0.83	0.62	(0.05)	0.62	1.06	0.23	0.10	0.13		8.00	8.50	14.60	23.20		
147	4/38/88	9:20	M1	B	7.61	8.40	(2.00)		0.78	0.62	(0.05)	0.62	0.95	0.18	0.10	0.08		8.00	8.40	14.60	40.40		
148	4/38/88	11:00	M1	T	7.45	10.00	2.05		1.05	0.79	0.05	0.74	1.66	0.23	0.14	0.09	4.20	9.50	8.10	13.00	40.00		
149	4/38/88	11:00	M1	B	7.47	10.00	91.00		1.09	0.81	0.05	0.76	1.77	0.22	0.15	0.07	9.46	9.00	8.30	12.90	63.20	300	
150	4/38/88	13:00	M1	B	7.45	9.00	2.25		1.52	0.99	0.07	0.92	2.10	0.34	0.24	0.10	3.77	11.00	9.20	10.60	35.60	70	
151	4/38/88	13:00	M1	B	7.42	10.00	2.10		1.50	0.98	0.07	0.98	1.97	0.40	0.23	0.17	10.6	11.00	8.50	10.90	38.80		
189	4/38/88	18:50	M1	T	7.54	5.90	91.00		0.81	0.61	(0.05)	0.61	0.97	0.11	0.09	0.02	2.89	8.00	8.70	15.00	20.00	300	
190	4/38/88	18:50	M1	B	7.61	7.40	91.20		0.80	0.58	(0.05)	0.58	(0.20) 0.691	(0.10)	0.09	(0.10)	2.18	8.00	8.70	16.00	26.00	170	
191	4/38/88	15:05	M1	B	7.35	6.30	2.35		1.38	0.91	0.06	0.85	2.18	0.37	0.23	0.14	5.27	13.00	8.40	11.40	20.20	40	
192	4/38/88	15:05	M1	B	7.31	7.00	2.70		1.38	0.91	0.06	0.85	2.34	0.31	0.20	0.11	(2.36)	12.50	8.60	12.20	26.00	40	
193	4/38/88	17:00	M1	T	7.72	8.30	91.95		0.88	0.71	(0.05)	0.71	(0.20)	0.19	0.11	0.08	1.35	10.50	8.50	14.40	29.00		
194	4/38/88	17:00	M1	B	7.49	9.80	(2.00)		0.87	0.65	(0.05)	0.65	(0.20) 0.761	0.10	0.10	0.08	4.03	10.20	8.60	15.10	40.20		
216	4/38/88	21:00	M1	B	7.86	5.20	(2.00)		0.79	0.58	(0.05)	0.58	0.61 +	0.13	0.08	0.05	4.24	10.50	8.30	15.80	14.40		
217	4/38/88	21:00	M1	B	7.68	6.60	(2.00)		0.74	0.56	(0.05)	0.56	0.59 +	0.19	0.08	0.11	(1.00)	10.00	8.00	14.80	14.40		
218	4/38/88	23:00	M1	T	7.49	13.0	(2.00)		0.90	0.68	(0.05)	0.68	0.75 +	(0.10)	0.11	(0.10)	2.38	11.0	8.40	14.4	31.4	280	
219	4/38/88	23:00	M1	B	4.40	14.0	(2.00)		0.90	0.69	(0.05)	0.69	1.59	(0.10)	0.11	(0.10)	1.53	11.5	7.90	12.0	41.8	530	
220	4/48/88	1:00	M1	B	7.49	9.5	91.55		1.42	0.94	0.07	0.87	2.03	0.17	0.20	(0.10)	30.00	10.5	8.40	11.7	35.8		
221	4/48/88	1:00	M1	B	7.55	13.0	91.35		1.42	0.94	0.07	0.87	2.07	0.17	0.20	(0.10)	3.84	10.0	6.70	11.6	39.0		
249	4/48/88	3:00	M1	T	7.63	6.5	(2.00)		1.61	1.07	0.08	0.99	2.93	0.39			14.40	11.0	8.80	8.95	23.6	20	
250	4/48/88	3:00	M1	B	7.60	6.9	(2.00)		1.57	1.04	0.08	0.96	2.60	0.28			4.50	11.0	8.40	9.49	30.4	40	
251	4/48/88	5:00	M1	T	7.45	6.9	(2.00)		1.01	0.78	(0.05)	0.78	1.38	0.31			(0.88)	11.5	8.50	13.99	28.8		
252	4/48/88	5:00	M1	B	7.54	9.7	(2.00)		0.96	0.76	(0.05)	0.76	1.21	0.18			2.30	10.5	7.10	13.77	40.8		
253	4/48/88	7:00	M1	B	7.61	7.7	(2.00)		0.80	0.62	(0.05)	0.62	1.18	0.25			(2.24)	10.0	8.00	13.30	27.8	270	
254	4/48/88	7:00	M1	B	7.59	8.4	(2.00)		0.81	0.62	(0.05)	0.62	0.86	0.13			0.70	9.5	13.2	15.6	46.8	500	
283	4/48/88	9:10	M1	T	7.5	4.5	(2.00)		0.80	0.61	(0.05)	0.61	(0.20) +	0.17			3.20	9.5	10.2	15.6	15.6		

-1-

ANALYTICAL DATA FOR RIVER AND TRIBUTARIES HACKENSACK RIVER STUDY

APRIL DRY EVENT - APRIL 12-22 1988

HACK	DATE	TIME	SITE	DEPTH	pH	TURBIDITY ntu	CBOD20 mg/l	NH3 mg/l	NO3/NO2 mg/l	NO2 mg/l	NO3 mg/l	TKN mg/l	TP04 mg/l	DP04 mg/l	P04 mg/l	CHLORO-A mg/L	TEMP C	DO mg/l	SALINITY ppt	TSS mg/l	FEC. COL I cfu/100ml	(RPM)
284	41488	9:10	MI	B	7.54	5.1	91.65	0.77	0.60	<0.05	0.60	<0.20 +	0.15			3.00	9.5	4.15	16.4	20.8		
285	41488	11:00	MI	T	7.46	9.5	<2.00	0.90	0.74	<0.05	0.74	0.92	0.20			2.70	9.7	8.32	15.00	60.0	230	
286	41488	11:00	MI	B	7.49	10.0	<2.00	0.98	0.75	<0.05	0.75	1.31	0.21			2.70	9.7	8.30	14.4	54.8	173	
287	41488	12:50	MI	T	7.53	8.4	91.10	NS	0.75	0.07	0.68	NS	NS			3.70	11.5	8.60	12.3	40.0	130	
288	41488	12:50	MI	B	7.55	8.4	91.80	0.44	1.02	0.08	0.94	2.27	0.31			22.40	11.0	8.71	12.41	32.4	80	
323	41488	15:15	MI	T	7.60	4.90	<2.00	1.56	1.01	0.08	0.93	2.70	0.40			21.20	11.70	9.20	9.66	23.60		
324	41488	15:15	MI	B	7.58	4.90	2.10	1.08	0.80	0.06	0.74	1.19	0.22			29.00	11.50	9.10	12.10	23.60		
325	41488	17:00	MI	T	7.61	6.50	91.00	1.05	0.76	0.05	0.71	<0.20 +	0.21			11.30	9.00	9.20	12.40	31.20	130	
326	41488	17:00	MI	B	7.65	8.4	<2.00	0.82	0.59	<0.05	0.59	<0.20 +	0.14			5.10	9.0	9.00	14.8	44.20		
327	41488	18:50	MI	T	7.51	6.1	<2.00	0.74	0.55	<0.05	0.55	<0.20 +	0.14			6.80	8.3	8.70	13.7	24.4		
328	41488	18:50	MI	B	7.52	7.9	<2.00	0.79	0.57	<0.05	0.57	0.98	0.12			3.70	8.5	8.90	15.1	20.0		
349	41488	21:00	MI	T	6.68	5.3	<2.00	0.83	0.61	<0.05	0.61	<0.20 +	0.16			5.20	9.5	8.60	16.1	22.8	230	
350	41488	21:00	MI	B	7.14	9.2	<2.00	0.77	0.52	<0.05	0.52	<0.20 +	0.15			<2.17	9.5	8.70	16.7	28.2	170	
351	41588	23:00	MI	T	7.04	6.1	<2.00	0.83	0.61	<0.05	0.61	<0.20 +	0.15			<2.25	9.5	8.20	16.1	40.0		
352	41588	23:00	MI	B	7.24	9.8	1.70	0.83	0.61	<0.05	0.61	1.37	0.22			10.70	10.5	8.40	16.4	36.8		
353	41588	1:00	MI	T	7.31	15.0	1.65	1.09	0.54	0.06	0.48	1.77	0.22			7.30	10.0	8.20	13.2	41.6		
354	41588	1:00	MI	B	7.38	15.0	1.70	1.14	0.54	0.06	0.48	2.90	0.42			6.20	9.50	8.88	9.34	35.2		
381	41588	3:00	MI	T	7.43	8.0	3.00	1.61	1.05	0.10	0.95	1.57	0.41			6.34	10.0	8.60	9.50	38.8		
382	41588	3:00	MI	B	7.47	6.4	2.55	1.55	1.03	0.10	0.93	1.29	0.29			7.30	10.0	8.20	13.2	41.6		
383	41588	5:00	MI	T	7.37	6.4	1.55	1.23	0.90	<0.05	0.90	1.62	0.24		0.17	0.25	4.20	9.50	8.88	9.34	35.2	
384	41588	5:00	MI	B	7.42	9.3	1.55	1.13	0.82	0.07	0.75	1.82	0.24		0.16	0.25	4.34	10.0	8.60	9.50	38.8	
385	41588	7:00	MI	T	7.42	15.0	1.75	0.83	0.61	<0.05	0.61	0.50 +	0.21		0.15	0.14	10.5	8.40	11.4	23.6		
386	41588	7:00	MI	B	7.38	13.0	1.50	0.79	0.60	<0.05	0.60	<0.20 +	0.18		0.10	0.10	10.5	5.80	12.00	31.8		
414	41588	9:05	MI	T	7.5	4.3	<2.00	0.79	0.60	<0.05	0.60	<0.20 +	0.18		0.09	0.12	4.70	7.40	16.5	56.4		
415	41588	9:05	MI	B	7.48	6.5	<2.00	0.79	0.57	<0.05	0.57	1.10	0.17		0.09	0.09	2.20	7.70	16.5	60.5		
416	41588	11:00	MI	T	7.46	7.6	<2.00	0.69	0.53	<0.05	0.53	1.06	0.15		0.11	0.06	<2.18	9.5	8.30	14.10	10.60	
417	41588	11:00	MI	B	7.48	9.4	1.15	0.80	0.61	<0.05	0.61	0.37 +	0.13		0.15	0.00	4.90	8.70	15.00	21.60	1,100	
418	41588	11:00	MI	T	7.5	11.0	1.50	0.85	0.83	<0.05	0.83	0.36 +	0.20		0.08	0.05	4.00	8.40	16.20	29.20	500	
419	41588	12:50	MI	B	7.51	16.0	1.45	1.10	0.92	0.07	0.85	1.78	0.38		0.08	0.12	4.20	8.20	15.00	35.20		
433	41588	15:15	MI	T	7.61	7.80	<2.00	1.26	<0.05	0.07	<0.05	1.34	0.32		0.12	0.20	3.20	10.05	8.00	12.30	44.00	
434	41588	15:15	MI	B	7.61	14.00	<2.00	0.95	0.60	<0.05	0.60	0.77 +	0.15		0.13	0.02	3.20	10.05	8.00	56.50	300	
455	41588	17:00	MI	T	7.51	6.50	91.75	0.83	0.57	<0.05	0.57	0.70 +	0.16		0.13	0.03	4.30	8.30	14.10	36.80	800	
456	41588	17:00	MI	B	7.48	7.90	91.45	1.41	0.93	0.08	0.85	1.65	0.32		0.13	0.03	11.70	12.00	8.70	24.40	60	
457	41588	18:50	MI	T	7.43	7.30	2.65	NS	1.07	0.07	1.00	NS	0.21		<0.10	<0.10	2.85	11.90	8.60	24.00	220	
458	41588	18:50	MI	B	7.41	7.40	2.30	1.72	1.06	0.10	0.96	2.36	0.28		0.21	0.06	28.00	10.00	8.90	10.60		
482	41588	21:00	MI	T	7.09	6.8	1.85	1.66	1.06	0.10	0.96	1.85	0.35		0.30	0.05	28.00	10.00	8.90	10.60		
483	41588	21:00	MI	B	7.28	7.0	1.05	0.84	0.55	<0.05	0.55	<0.20 +	0.22		0.05	0.05	10.00	8.30	10.30	31.60		
484	41588	23:00	MI	T	7.34	6.5	91.10	0.79	0.55	<0.05	0.55	0.86	0.16		0.10	0.06	3.30	10.5	8.10	14.6	25.6	
485	41588	23:00	MI	B	7.46	7.6	91.45	0.81	0.56	<0.05	0.56	<0.20 +	0.13		0.10	0.06	10.0	8.60	15.1	23.0		
486	41688	1:00	MI	T	7.35	15.0	91.65	0.81	0.60	<0.05	0.60	<0.20 +	0.14		0.11	0.03	2.15	10.5	7.70	15.1	22.8	
487	41688	1:00	MI	B	7.38	16.0	91.95	1.13	0.81	0.06	0.75	1.24	0.36		0.11	0.03	2.85	11.90	8.60	24.00	170	
529	41688	3:00	MI	T	7.47	13.0	2.55	1.55	1.04	0.10	0.94	1.77	0.43		0.10	0.03	28.00	10.00	8.90	10.60	800	
530	41688	3:00	MI	B	7.45	15.0	2.25	1.50	1.04	0.10	0.94	1.77	0.43		0.10	0.03	28.00	10.00	8.90	10.60		
531	41688	5:00	MI	T	7.35	5.9	3.45	1.68	1.10	0.11	0.99	2.02	0.31		0.10	0.03	25.30	10.0	7.40	9.68		
532	41688	5:00	MI	B	7.42	5.9	2.10	1.53	1.04	0.10	0.94	1.80	0.37		0.08	0.03	32.60	12.0	4.90	9.11		
533	41688	7:00	MI	T	7.18	19.0	1.10	0.90	0.66	<0.05	0.66	1.80	0.37		0.25	0.12	7.50	11.0	6.30	9.69		
534	41688	7:00	MI	B	7.26	17.0	<2.00	0.86	0.62	<0.05	0.62	2.27	0.19		0.12	0.07	10.80	10.0	6.30	12.7		
561	41688	9:15	MI	T	7.67	5.5	<2.00	0.79	0.59	<0.05	0.59	2.03	0.29		0.11	0.18	5.50	10.5	5.10	13.9		
562	41688	9:15	MI	B	7.66	6.3	<2.00	0.78	0.56	<0.05	0.56	0.90	<0.10		0.09	<0.10	2.37	8.5	8.0	15.5		
												0.90	0.12		0.05	0.12	8.7	9.20	15.3	32.0		

ANALYTICAL DATA FOR RIVER AND TRIBUTARIES HACKENSACK RIVER STUDY

APRIL DRY EVENT - APRIL 12-22 1988

SAMPLE #

SAMPLE #	DATE	TIME	SITE	DEPTH	pH	TURBIDITY ntu	CHLORO5 mg/l	CHLORO20 mg/l	MM3 mg/l	NO3/N2O2 mg/l	NO2 mg/l	NO3 mg/l	TKN mg/l	TP04 mg/l	DP04 mg/l	P04 mg/l	CHLORO-A mg/m3	TEMP C	DO mg/l	SALINITY ppt	TSS mg/l	FEC. COLI org/100ml	(NPK)
563	41688	11:05	M1	T	7.50	5.4	1.25		0.93	0.70	0.07	0.63	1.41	0.18	0.05	0.18	2.19	10.0	8.10	13.9	26.4	1,100	
564	41688	11:05	M1	B	7.48	5.9	2.00		0.87	0.61	0.05	0.61	1.10	0.15	0.05	0.15	7.12	9.7	8.10	16.8	30.8		
565	41688	12:55	M1	T	7.47	8.5	2.10		1.13	0.84	0.07	0.77	1.61	0.24	0.05	0.24	3.18	9.7	7.90	13.2	38.0		
566	41688	12:55	M1	B	7.47	8.1	2.00		1.17	0.82	0.07	0.75	1.69	0.24	0.05	0.24	4.54	9.5	7.90	14.8	42.8		
597	41688	15:10	M1	T	7.47	7.5	4.38		1.67	1.10	0.11	0.99	2.04	0.43	0.08	0.35	30.40	11.0	9.1	11.03	37.3	300	
598	41688	15:10	M1	B	7.47	7.5	3.05		1.66	1.10	0.11	0.99	2.34	0.51	0.18	0.33	28.20	11.3	9.2	11.2	47.0	20	
599	41688	17:00	M1	T	7.61	4.4	3.56		1.79	1.21	0.06	1.15	2.67	0.47	0.33	0.14	38.40	10.3	8.8	10.9	23.6	800	
600	41688	17:00	M1	B	7.56	5.0	3.15		1.77	1.12	0.11	1.01	3.00	0.46	0.29	0.17	44.80	10.3	8.1	13.4	53.5	500	
601	41688	18:50	M1	T	7.52	9.4	2.10	4.45	1.04	0.84	0.06	0.78	1.49	0.21	0.05	0.21	12.20	9.0	8.1	13.4	53.5	800	
602	41688	18:50	M1	B	7.50	19.0	1.80	3.40	1.04	0.80	0.06	0.74	1.52	0.18	0.00	0.18	13.70	8.5	8.7	12.2	77.5	500	
630	41688	21:00	M1	T	7.51	8.6	1.90		0.78	0.60	0.05	0.60	1.19	0.55	0.46	0.09	3.90	10.0	8.1	14.5	39.6		
631	41688	21:00	M1	T	7.64	6.8	2.00		0.78	0.60	0.05	0.60	1.23	0.10	0.05	0.10	3.67	10.0	7.0	16.8	20.4		
632	41688	23:00	M1	B	7.34	4.8	2.00		0.68	0.51	0.03	0.51	1.07	0.10	0.05	0.10	14.40	9.0	7.0	16.9	20.4		
633	41688	23:00	M1	T	7.5	5.4	2.00		0.78	0.56	0.05	0.56	1.21	0.10	0.05	0.10	3.58	9.0	6.2	17.6	20.4		
634	41788	1:00	M1	T	7.56	14.0	2.00		0.89	0.71	0.06	0.65	1.24	0.12	0.05	0.12	4.72	10.0	5.9	14.9	49.2		
635	41788	1:00	M1	B	7.36	16.0	2.00		0.91	0.71	0.06	0.65	1.46	0.10	0.05	0.10	7.78	9.5	7.0	14.9	86.0	220	
662	41788	3:00	M1	T	7.32	16.00	2.80		1.29	0.97	0.08	0.89	1.93	0.65	0.41	0.24	16.50	10.0	7.20	11.80	86.00		
663	41788	3:00	M1	T	7.20	19.00	3.63		1.28	0.98	0.08	0.90	1.98	0.69	0.47	0.22	24.30	11.0	6.50	11.80	79.00		
664	41788	5:00	M1	T	7.90	5.60	4.30		1.66	1.13	0.10	1.03	2.32	0.49	0.19	0.30	50.60	9.50	7.60	10.20	22.40		
665	41788	5:00	M1	B	7.58	7.80	3.98		1.59	1.11	0.10	1.01	2.65	0.46	0.18	0.28	35.20	9.00	6.95	10.50	32.80	300	
666	41788	7:00	M1	T	7.79	6.30	3.73		1.25	0.95	0.76	0.19	1.85	0.39	0.17	0.22	15.60	9.00	4.50	12.40	26.40	300	
667	41788	7:00	M1	T	7.65	9.10	2.65		1.13	0.90	0.68	0.22	1.35	0.33	0.14	0.19	17.00	10.50	5.00	12.80	39.80	230	
695	41788	9:00	M1	B	7.5	5.9	4.35		0.86	0.70	0.05	0.70	0.71	0.22	0.12	0.10	3.55	11.5	9.0	13.30	22.0		
696	41788	9:00	M1	T	7.6	5.8	4.10		0.93	0.80	0.05	0.75	1.05	0.22	0.11	0.11	4.29	11.0	9.3	14.68	20.4	130	
697	41788	11:00	M1	T	7.5	6.0	4.20		0.77	0.60	0.05	0.55	0.20 +	0.16	0.08	0.08	2.89	12.0	8.6	17.44	28.8	130	
698	41788	11:00	M1	B	7.5	6.0	4.10		0.68	0.54	0.05	0.54	0.20 +	0.20	0.13	0.07	2.02	11.0	8.8	16.91	24.0	130	
699	41788	12:00	M1	T	7.45	9.1	4.55		0.88	0.67	0.05	0.67	0.20 +	0.27	0.17	0.10	7.00	13.0	8.6	14.56	31.0	70	
700	41788	12:00	M1	B	7.57	8.4	2.85		0.91	0.73	0.05	0.68	0.42 +	0.68	0.57	0.11	7.77	12.0	8.6	12.87	46.4	140	
732	41788	15:00	M1	T	7.78	8.4	2.85		1.55	1.01	0.09	0.92	2.48	0.39	0.16	0.23	25.40	13.0	8.8	11.62	44.0		
733	41788	15:00	M1	B	7.75	9.9	2.45		1.51	1.01	0.09	0.92	2.51	0.29	0.06	0.23	22.70	14.0	8.6	11.59	40.7		
734	41788	17:00	M1	T	7.76	5.3	2.70		1.60	1.04	0.10	0.00	2.55	0.38	0.14	0.24	31.20	13.2	8.9	11.22	31.6		
735	41788	17:00	M1	B	7.75	5.8	2.65		1.15	1.03	0.09	0.94	2.61	0.39	0.17	0.22	26.50	13.0	9.1	11.79	30.0		
736	41788	17:00	M1	T	7.68	8.5	9.75		1.06	0.82	0.06	0.76	1.65	0.29	0.15	0.14	11.70	12.0	8.9	13.33	44.5	500	
737	41788	17:00	M1	B	7.64	11.0	9.70		1.11	0.78	0.06	0.72	1.84	0.18	0.04	0.14	9.10	11.08	8.6	13.67	62.0	300	
744	41888	21:00	M1	T	7.43	6.9	9.00		0.85	0.61	0.05	0.61	0.39 +	0.19	0.11	0.08	2.58	13.0	5.1	16.70	40.2	130	
765	41888	21:00	M1	B	7.4	7.6	12.00		0.77	0.57	0.05	0.57	1.24	0.17	0.08	0.09	2.43	13.0	5.3	17.26	36.0	110	
766	41888	23:00	M1	T	7.46	5.1	12.00		0.77	0.55	0.05	0.55	1.26	0.17	0.09	0.08	2.20	13.0	10.3	17.40	16.8		
767	41888	23:00	M1	B	7.54	6.7	1.05		0.74	0.50	0.05	0.50	1.24	0.17	0.10	0.07	2.40	13.0	4.5	18.53	30.0		
768	41888	1:00	M1	T	7.44	9.8	1.30		0.78	0.53	0.05	0.53	1.21	0.16	0.09	0.07	2.10	12.0	6.1	17.88	44.6		
769	41888	1:00	M1	B	7.54	14.0	1.55		0.75	0.53	0.05	0.53	1.36	0.17	0.09	0.08	2.10	12.0	8.9	17.89	57.6	80	
796	41888	3:00	M1	T	7.46	13.0	12.00		0.92	0.74	0.05	0.69	1.72	0.19	0.06	0.13	4.80	13.0	5.2	16.23	75.0		
797	41888	3:00	M1	B	7.45	12.0	1.40		0.86	0.75	0.06	0.69	1.72	0.27	0.14	0.13	4.80	13.0	6.0	16.46	66.5		
798	41888	5:00	M1	T	7.54	13.0	2.15		1.41	1.06	0.10	0.96	2.74	0.48	0.22	0.26	11.20	13.0	6.1	12.65	50.4	300	
799	41888	5:00	M1	B	7.35	12.0	2.85		1.30	1.05	0.10	0.95	2.67	0.31	0.07	0.24	27.80	13.0	5.3	14.53	26.0	230	
800	41888	7:15	M1	T	7.41	7.1	9.50		1.13	0.89	0.07	0.82	1.56	0.24	0.08	0.16	11.60	13.0	6.6	12.65	40.4		
801	41888	7:15	M1	B	7.41	6.9	1.35		1.02	0.83	0.07	0.76	1.64	0.23	0.07	0.16	11.75	13.0	5.6	15.19	30.8		
802	41888	6:35	M1	T	7.45	4.2	3.88		2.39	1.22	0.14	1.08	3.89	0.66	0.26	0.40	28.20	12.0	12.6	9.36	20.4		
829	41888	9:20	M1	T	7.44	6.9	2.05		0.78	0.60	0.05	0.60	1.47	0.19	0.09	0.10	2.00	12.0	8.41	16.34	22.6		
830	41888	9:20	M1	B	7.45	8.2	1.95		0.78	0.57	0.05	0.57	1.42	0.17	0.07	0.10	5.00	11.5	8.72	16.76	37.6		

ANALYTICAL DATA FOR RIVER AND TRIBUTARIES
HACKENSACK RIVER STUDY

APRIL DRY EVENT - APRIL 12-22 1988

SAMPLE 4

HACK	DATE	TIME	SITE	DEPTH	pH	TURBIDITY ntu	CBOD5 mg/l	CBOD20 mg/l	WHS mg/l	NO3/NO2 mg/l	NO2 mg/l	NO3 mg/l	TKN mg/l	TP04 mg/l	DP04 mg/l	PO4 mg/l	CHLORO-A mg/L	TEMP C	DO mg/l	SALINITY ppt	TSS mg/l	FEC. COLI org/100ml	(MPN)
831	41888	11:10	M1	T	7.56	4.0	1.65		1.27	0.59	(0.05)	0.59	1.87	0.17	0.07	0.10	(1.88	13.3	8.61	16.90	23.6		
832	41888	11:10	M1	B	7.58	4.8	1.40		1.19	0.55	(0.05)	0.55	1.50	0.14	0.06	0.08	7.40	13.0	8.75	17.55	17.0		
833	41888	13:00	M1	T	7.47	5.8	1.45		1.72	0.82	(0.05)	0.62	2.09	0.17	0.08	0.09		12.0	8.77	17.03	23.6		
834	41888	13:00	M1	B	7.45	8.9	1.50		1.24	0.58	(0.05)	0.58	1.72	0.15	0.06	0.09	7.51	12.0	8.67	17.76	10.8		
883	41888	15:00	M1	T	7.5	7.5	14.0	(2.00	0.89	0.78	0.06	0.72	1.93	0.24	0.13	0.11	5.00		7.9	13.67	68.0	170	
884	41888	15:00	M1	B	7.44	13.0	(2.00		0.95	0.78	0.06	0.72	1.98	0.25	0.13	0.12	8.20		8.3	13.95	49.5	230	
885	41888	18:55	M1	T	7.52	8.9	(2.00		1.03	0.85	0.07	0.78	1.98	0.33	0.19	0.14	26.00		8.4	13.19	46.8	170	
886	41888	18:55	M1	B	7.54	8.3	(2.00		0.97	0.80	0.06	0.74	1.97	0.31	0.19	0.12	26.40		8.7	14.16	42.0	170	
887	41888	17:00	M1	T	7.52	6.1	2.55		1.31	1.02	0.09	0.93	2.63	0.36	0.17	0.19	24.70		8.8	10.17	24.8		
888	41888	17:00	M1	B	7.56	5.2	2.30		1.29	1.01	0.09	0.92	2.58	0.36	0.17	0.19	20.00		8.3	11.53	39.0		
918	41888	21:20	M1	T	7.44	8.4	1.55		0.73	0.54	(0.05)	0.54	1.62	0.15	0.09	0.06	7.30	10.0	8.6	18.53	34.8	5,000	
919	41888	21:20	M1	B	7.28	8.3	1.45		0.63	0.52	(0.05)	0.52	1.54	0.16	0.09	0.07	2.90	10.0	8.5	19.24	47.6	1,700	
920	41888	23:10	M1	T	7.17	5.0	1.45		0.44	0.52	(0.05)	0.52	1.46	0.12	0.06	0.06	3.03	9.0	8.7	19.25	52.8	300	
921	41888	23:10	M1	T	7.28	6.0	1.40		0.72	0.54	(0.05)	0.54	1.49	0.14	0.08	0.06	6.80	9.0	8.3	18.60	23.3	3,000	
922	41888	12:50	M1	T	7.32	9.7	(2.00		0.70	0.52	(0.05)	0.52	1.62	0.15	0.08	0.07		9.0	8.8	16.55	40.0	3,000	
954	41988	3:00	M1	T	7.75	9.3	1.10		0.89	0.80	0.07	0.73	(0.20 (0.32) +	0.24	0.07	0.17	8.88	9.0	6.5	14.48	43.6		
955	41988	3:00	M1	B	7.33	9.6	2.05		0.86	0.79	0.06	0.73	(0.20 (0.47) +	0.26	0.14	0.12	12.80	8.0	8.0	16.81	42.4		
956	41988	5:37	M1	T	7.51	8.6	2.20		1.23	1.13	0.06	1.07	(0.20 (1.05) +	0.38	0.15	0.23	8.74	8.5	8.3	13.63	26.0		
957	41988	5:37	M1	B	7.53	7.0	2.30		0.44	0.92	0.10	0.82	2.87	0.39	0.14	0.25	18.80	7.0	8.3	13.63	27.6		
958	41988	7:18	M1	T	7.6	5.4	1.90		0.91	1.01	0.10	0.91	2.11	0.38	0.14	0.24	12.30	9.5	8.1	13.49	19.8		
959	41988	7:15	M1	B	7.48	5.4	2.00		0.86	0.90	0.10	0.80	0.42 +	0.39	0.16	0.23	16.40	9.0	8.2	13.99	35.6		
968	41988	9:15	M1	T	7.35	7.4	1.10		0.78	0.65	0.05	0.60	1.04	0.19	0.10	0.09	58.00	11.0	5.6	16.37	20.8		
987	41988	9:15	M1	B	7.54	9.6	(2.00		0.74	0.56	(0.05)	0.56	0.99	0.17	0.09	0.08	3.70	10.0	6.1	18.28	80.4		
988	41988	11:00	M1	T	7.36	5.5	(2.00		0.75	0.58	(0.05)	0.58	1.04	0.15	0.06	0.09	(1.80	10.0	5.4	17.69	63.6	1,700	
989	41988	11:00	M1	B	7.48	4.7	(2.00		0.65	0.55	(0.05)	0.55	(0.20 +	0.13	0.05	0.08	(2.20	10.0	5.0	19.17	36.8	5,000	
990	41988	13:00	M1	T	7.37	4.6	(2.00		0.72	0.59	(0.05)	0.59	0.26 +	0.15	(0.05	0.15	3.90	10.0	5.0	17.76	42.4		
991	41988	13:00	M1	B	7.43	5.0	(2.00		0.68	0.50	(0.05)	0.50	0.96	0.13	0.05	0.08	2.30	10.0	5.0	18.21	29.8		
1025	41988	15:00	M1	T	7.4	7.7	.35		0.94	0.80	0.04	0.74	1.39	0.17	0.05	0.12	12.10	11.0	5.0	15.09	60.8	2,400	
1026	41988	15:00	M1	B	7.52	8.1	1.50		0.33	0.80	0.06	0.74	1.49	0.17	0.06	0.11	33.80	11.0	5.1	14.54	34.0	3,000	
1027	41988	17:00	M1	T	7.37	5.7	2.35		1.29	1.02	0.09	0.93	1.79	0.27	0.09	0.18	21.80	11.0	5.4	12.68	22.4		
1028	41988	17:00	M1	B	7.44	4.4	2.55		1.07	1.00	0.09	0.91	1.72	0.27	0.08	0.19	25.30	11.0	5.1	12.20	27.0		
1029	41988	19:00	M1	T	7.45	5.7	2.30		1.15	0.94	0.08	0.86	1.64	0.27	0.09	0.18	9.86	10.0	8.2	13.01	25.2	1,300	
1030	41988	19:00	M1	B	7.63	15.0	2.25		0.95	0.85	0.07	0.78	1.73	0.21	0.07	0.14	1.56	10.0	8.6	13.74	45.0	1,700	
1057	41988	21:00	M1	T	7.36	8.0	1.30		0.87	0.68	(0.05)	0.68	1.17	0.14	0.10	0.04	2.76	10.0	7.3	15.90	25.4		
1058	41988	21:00	M1	B	7.4	11.0	1.45		1.03	0.65	(0.05)	0.65	0.97	0.10	0.10	0.00	3.60	10.0	5.0	16.67	32.3		
1059	41988	23:00	M1	T	7.45	5.7	1.10		0.84	0.60	(0.05)	0.60	1.26	0.14	0.09	(0.10	4.03	9.0	8.5	17.28	13.8		
1060	41988	23:00	M1	B	7.53	7.1	1.50		0.77	0.53	(0.05)	0.53	1.04	0.15	0.06	0.09		9.5	8.6	18.25	28.4		
1061	41988	01:00	M1	T	7.53	5.9	1.20		0.79	0.54	(0.05)	0.54	1.04	(0.10	0.08	(0.10	2.40	9.0	5.1	17.98	15.6		
1062	41988	01:00	M1	B	7.6	5.5	1.30		0.79	0.54	(0.05)	0.54	1.10	0.11	0.07	0.04	40.00	9.0	9.4	18.04	15.2		
1090	42088	3:00	M1	T	7.5	8.2	2.30		1.07	0.73	0.05	0.68	0.99	0.14	0.09	0.05	6.00	9.0	7.7	15.96	31.6	800	
1091	41988	3:00	M1	B	7.5	17.0	2.20		0.96	0.72	0.05	0.67	0.88	0.16	(0.05	0.16	9.60	9.0	7.4	15.96	69.0	1,300	
1092	41988	5:00	M1	T	7.42	7.6	2.35		1.31	0.97	0.08	0.89	1.09	0.27	-0.15	0.12	8.10	9.0	1.7	13.41	46.0		
1093	41988	5:00	M1	B	7.45	8.0	2.30		1.24	0.97	0.08	0.89	1.31	0.28	0.15	0.13	18.00	9.0	8.3	13.48	26.0		
1094	41988	7:00	M1	T	7.5	6.6	2.45		1.26	1.12	0.10	1.02	2.51	0.39	0.21	0.18	29.00	10.0	6.2	11.44	25.6	220	
1095	41988	7:00	M1	B	7.44	6.2	3.62		1.65	1.16	0.10	1.06	2.77	0.37	0.22	0.15	24.20	10.5	8.5	11.48	19.6	230	
1124	42088	9:15	M1	T	7.4	5.6	2.15		1.29	0.92	0.07	0.85	1.13	0.24	0.13	0.11	10.30	10.0	8.4	13.83	15.8	700	
1125	42088	9:15	M1	B	7.38	7.4	(2.00		1.09	0.87	0.07	0.80	1.65	0.21	0.12	0.09	7.63	10.0	8.17	14.62	32.0	130	
1126	42088	11:00	M1	T	7.45	4.7	(2.00		1.10	0.69	(0.05	0.69	1.07	0.14	0.08	0.06	5.20	11.0	8.41	16.97	20.5		

ANALYTICAL DATA FOR RIVER AND TRIBUTARIES
HACKENSACK RIVER STUDY

APRIL DRY EVENT - APRIL 12-22 1988

SAMPLE # HACK	DATE	TIME	SITE	DEPTH	pH	TURBIDITY ntu	CBOD5 mg/l	CBOD20 mg/l	NH3 mg/l	NO3/NO2 mg/l	NO3 mg/l	TKN mg/l	TP04 mg/l	DP04 mg/l	P04 mg/l	CHLORO-A mg/m3	TEMP C	DO mg/l	SALINITY ppt	TSS mg/l	(HPI) FEC. COL.1 org/100ml
1127	42088	11:00	W1	B	7.43	5.4	2.00		0.96	0.58	0.05	0.58 (0.20 (0.36) +	0.10	0.06	0.04	4.23	10.5	8.4	17.44	30.0	
1128	42088	12:50	W1	T	7.60	4.0	2.00		0.85	0.62	0.05	0.62 (0.20 +	0.12	0.07	0.05	9.00	12.0	8.45	17.58	21.5	
1129	42088	12:50	W1	B	7.63	5.5	2.00		1.24	0.60	0.05	0.60 (0.20 +	0.11	0.09	0.02	1.95	11.3	8.25	18.53	19.0	
1164	42088	15:20	W1	T	7.68	4.4	1.85		0.92	0.78	0.10	0.68	0.20	0.10	0.10	6.94	13.0	8.7	14.90	14.0	
1165	42088	15:20	W1	B	7.66	5.1	1.35		0.82	0.66	0.05	0.61	0.16	0.09	0.05		13.0	8.4	16.38	20.8	
1166	42088	17:05	W1	T	7.7	6.6	2.30		1.12	0.96	0.09	0.87	0.37	0.16	0.21	25.60	13.0	9.1	13.22	27.6	
1167	42088	17:05	W1	B	7.7	7.1	2.30		1.19	0.97	0.08	0.89	0.28	0.21	0.07	14.60	12.0	8.9	13.22	29.6	
1168	42088	18:50	W1	B	7.67	3.1	3.57		1.40	1.13	0.10	1.03	0.37	0.22	0.15	16.40	10.2	9.7	11.57	14.4	
1197	42088	21:15	W1	B	7.55	5.9	2.90		0.88	0.82	0.05	0.77	0.10	0.26	0.10	27.90	11.0	6.4	10.31	33.6	
1198	42088	21:15	W1	B	7.46	12.0	2.10		0.76	0.72	0.05	0.72	0.15	0.19	0.10	17.20	10.0	5.8	17.21	24.8	130
1199	42088	23:00	W1	T	7.5	6.7	3.15		0.69	0.64	0.05	0.64 (0.20 (0.35) +	0.15	0.12	0.10	2.90	10.0	5.0	18.64	34.2	110
1200	42088	23:00	W1	B	7.52	8.7	2.20		0.75	0.54	0.05	0.54 (0.20 +	0.11	0.11	0.00	3.12	10.0	5.2	18.94	20.4	
1201	42088	1:05	W1	T	7.6	5.2	2.00		0.75	0.57	0.05	0.57 (0.20 (0.42) +	0.14	0.13	0.01	9.20	10.0	5.4	17.21	17.2	
1201	42088	1:05	W1	B	7.6	5.4	2.00		0.75	0.57	0.05	0.57 (0.20 (0.42) +	0.14	0.13	0.01	9.20	10.0	5.4	17.21	17.2	
1228	42188	3:25	W1	T	7.6	8.4	2.22	3.20	1.09	0.86	0.05	0.86	0.18	0.15	0.03	2.98	10.0	4.7	13.67	32.8	80
1229	42188	3:25	W1	T	7.6	8.4	2.00	2.85	1.11	0.86	0.06	0.80	0.32	0.16	0.16	2.00	11.0	5.4	11.66	27.6	110
1230	42188	5:00	W1	T	7.68	6.1	2.55	3.85	1.02	0.68	0.05	0.68	0.14	0.12	0.02	9.70	10.5	5.7	12.49	48.0	
1231	42188	5:00	W1	B	7.58	6.6	1.90	3.55	0.98	0.65	0.05	0.65	0.14	0.12	0.02	9.70	10.5	5.7	12.49	48.0	
1232	42188	7:00	W1	T	7.7	5.9	2.14		1.44	1.08	0.10	0.98	0.28	0.21	0.07	15.2	11.0	8.6	12.65	21.1	60
1233	42188	7:00	W1	B	7.5	6.0	2.62	4.78	1.44	1.05	0.09	0.96	0.31	0.22	0.09	18.1	11.0	8.6	12.65	21.1	70
1257	42188	9:25	W1	T	7.7	5.9	1.70	3.15	0.88	0.87	0.06	0.87	0.23	0.20	0.03	11.63	13.0	8.3	15.21	17.6	1,300
1258	42188	9:25	W1	B	7.65	9.8	1.45	2.65	0.91	0.78	0.06	0.80	0.16	0.15	0.01	2.67	13.0	8.3	15.84	26.4	800
1259	42188	11:10	W1	T	7.7	4.6	2.45	4.45	0.86	0.76	0.05	0.80	0.17	0.14	0.03	2.32	12.0	8.5	16.14	17.2	
1260	42188	11:10	W1	B	7.6	8.5	0.80	1.65	0.80	0.67	0.05	0.80	0.14	0.12	0.02	1.78	11.3	8.5	17.15	35.2	
1261	42188	13:00	W1	T	7.7	5.0	2.10	3.80	0.84	0.71	0.05	0.80	0.16	0.10	0.06	2.23	12.0	8.5	16.65	28.0	1,400
1262	42188	13:00	W1	B	7.6	6.0	0.90	1.75	0.72	0.57	0.05	0.72 (0.20 (0.55) +	0.11	0.14	0.10	1.87	12.0	8.7	17.72	21.2	250
1304	42188	15:15	W1	T	7.6	4.1	4.45		0.90	0.76	0.06	0.76	0.18	0.13	0.05	2.13	12.0	8.5	16.37	12.4	500
1305	42188	15:15	W1	B	7.6	5.1	4.20		0.75	0.61	0.05	0.61 (0.20 (0.32) +	0.15	0.11	0.04	2.13	11.7	8.6	18.13	15.6	
1306	42188	17:00	W1	T	7.53	8.4	2.35		1.03	0.92	0.07	0.85	0.26	0.16	0.10	8.70	11.5	9.1	15.02	30.4	40
1307	42188	17:00	W1	B	7.5	9.5	2.55		1.01	0.91	0.07	0.84	0.26	0.16	0.10	15.2	11.5	9.3	14.84	41.6	140
1308	42188	18:50	W1	T	7.6	4.2	2.60		1.25	1.11	0.09	1.02	0.35	0.22	0.13	23.1	10.0	9.4	11.72	18.0	900,000
1309	42188	18:50	W1	B	7.5	7.9	2.65		1.21	1.07	0.09	0.98	0.22	0.20	0.02	12.5	9.5	9.4	11.72	18.0	900,000
1333	42188	21:15	W1	T	7.5	6.1	2.10	3.60	0.85	0.82	0.07	0.75	0.18	0.13	0.05	2.56	9.5	8.9	15.28	21.2	
1334	42188	21:15	W1	B	7.5	6.8	2.30	4.25	0.87	0.81	0.06	0.75	0.18	0.13	0.05	2.34	9.5	8.9	15.65	23.6	
1335	42188	23:30	W1	T	7.6	7.7	1.55	2.55	0.78	0.63	0.05	0.63	0.30	0.10	0.10	13.6	8.5	8.4	17.58	31.2	
1336	42188	23:30	W1	B	7.5	8.4	1.65	2.90	0.73	0.59	0.05	0.59	0.48	0.10	0.10	2.50	8.0	6.3	18.30	33.4	
1337	42188	23:30	W1	T	7.4	6.0	1.20	2.45	0.78	0.64	0.05	0.64	0.22	0.11	0.10	2.18	9.0	8.9	17.79	19.6	
1338	42188	1:15	W1	B	7.4	7.1	1.75	3.05	0.65	0.58	0.05	0.58	0.20	0.10	0.07	2.03	9.0	8.0	18.44	34.0	
1365	42288	3:30	W1	T	7.5	4.6	1.80	3.25	0.73	0.64	0.06	0.64	0.12	0.02	0.10	2.79	9.0	7.7	16.86	12.0	
1366	42288	3:30	W1	B	7.4	5.1	1.40	2.50	0.53	0.53	0.05	0.48 (0.02 (0.24) +	0.10	0.00	0.10	1.38	8.5	8.8	18.01	19.2	
1367	42288	5:15	W1	T	7.4	7.2	1.65	3.50	0.84	0.82	0.08	0.74 (0.02 (0.28) +	0.22	0.08	0.14	5.30	8.5	8.6	14.86	26.8	
1368	42288	5:15	W1	B	7.5	7.6	3.50	5.75	0.84	0.73	0.07	0.66	0.14	0.01	0.13	1.31	8.5	8.6	15.52	36.6	
1369	42288	7:00	W1	T	7.5	7.0	2.65	5.10	1.11	0.98	0.09	0.89	0.27	0.27	0.00	4.80	9.5	8.6	13.95	28.2	500
1370	42288	7:00	W1	B	7.5	6.2	8.90		0.86	0.97	0.09	0.86	0.25	0.25	0.00		9.5	7.0		20.0	500

ANALYTICAL DATA FOR RIVER AND TRIBUTARIES
HACKENSACK RIVER STUDY

APRIL DRY EVENT - APRIL 12-22 1988

SAMPLE #	DATE	TIME	SITE	DEPTH	pH	TURBIDITY ntu	CBOD5 mg/l	W3 mg/l	W3/W2	W2 mg/l	M03 mg/l	TKN mg/l	TP04 mg/l	DP04 mg/l	ORGANIC P04 mg/l	CHLORO-A mg/m3	TEMP C	DO mg/l	SALINITY ppt	TSS mg/l	(MPN) FEC. COLI org/100ml
1	4/28/88	9:17	W2	1	7.2	9.0	(2.00)	3.03	0.95	0.08	0.87	3.10	0.29	0.27	0.02	51.4	11.0	7.20	10.8	18.0	40
2	4/28/88	9:17	W2	8	7.2	10.0	(2.00)	2.60	0.93	0.08	0.85	3.51	0.29	0.24	0.05	45.9	11.0	7.40	11.2	27.6	70
26	4/28/88	12:36	W2	1	7.4	6.0	2.80	2.49	1.02	0.11	0.91	4.15	0.56	0.40	0.16	56.2	13.0	10.2	7.47	24.0	
27	4/28/88	12:36	W2	8	7.5	6.4	2.70	2.46	1.03	0.11	0.92	3.82	0.57	0.38	0.19	60.6	12.0	10.0	7.48	7.60	
34	4/28/88	13:30	W2	1	7.5	8.0	1.45	2.02	1.00	0.10	0.90	3.48	0.45	0.31	0.14	43.9	10.0	9.80	8.41	39.2	<20
35	4/28/88	15:30	W2	8	7.5	8.5	1.30	2.06	1.00	0.10	0.90	3.39	0.48	0.32	0.16	45.3	11.0	9.80	9.76	42.8	20
60	4/28/88	18:40	W2	8	6.70	16.00	(2.00)	1.17	0.74	0.06	0.68	1.76	0.19	0.14	0.05	17.10	10.00	10.60	13.00	66.40	
61	4/28/88	18:40	W2	1	6.30	16.00	(2.00)	1.16	0.78	0.06	0.72	1.78	0.19	0.13	0.06	19.60	11.00	10.60	13.10	61.60	
72	4/28/88	21:40	W2	1	7.40	5.50	2.65	2.26	0.96	0.09	0.87	2.46	0.37	0.27	0.10	40.30	10.00	9.40	9.89	27.60	
73	4/28/88	21:40	W2	8	6.90	9.50	3.10	1.76	0.96	0.09	0.87	2.70	0.32	0.26	0.06	44.00	11.00	9.70	10.40	34.00	
91	4/38/88	0:48	W2	1	6.5	4.8	2.10	2.56	1.12	0.11	1.01	3.47	0.59	0.38	0.21	42.81	11.0	9.60	8.55	29.6	
92	4/38/88	0:48	W2	8	6.8	6.0	2.10	2.42	1.10	0.11	0.99	3.44	0.62	0.36	0.26	52.6	11.0	10.0	8.90	30.4	
100	4/38/88	3:35	W2	1	7.6	7.1	2.25	2.10	1.13	0.10	1.03	3.07	0.64	0.34	0.30	47.3	10.0	9.20	9.25	34.2	
101	4/38/88	3:35	W2	8	7.6	9.0	(2.00)	2.12	1.12	0.10	1.02	2.91	0.55	0.34	0.21	30.3	10.0	9.20	9.51	9.0	
124	4/38/88	6:30	W2	1	7.4	9.4	(2.00)	1.22	0.83	0.07	0.76	1.89	0.26	0.16	0.10	33.73	9.0	6.10	11.8	38.0	
125	4/38/88	6:30	W2	8	7.4	8.5	(2.00)	1.16	0.83	0.05	0.78	1.67	0.17	0.15	0.02	19.6	9.0	7.10	12.3	56.0	120
138	4/38/88	9:17	W2	1	7.3	7.8	(2.00)	1.26	0.88	0.06	0.82	1.76	0.33	0.17	0.16	7.52	8.0	6.80	16.9	22.4	202
139	4/38/88	9:17	W2	8	7.8	6.6	1.35	1.35	0.93	0.07	0.86	1.40	0.36	0.19	0.17	17.9	10.0	6.75	15.8	21.8	
157	4/38/88	12:30	W2	1	7.80	7.80	3.25	2.30	1.14	0.11	1.03	2.73	0.57	0.40	0.17	51.40	11.00	9.75	7.54	15.80	
158	4/38/88	12:30	W2	8	7.70	8.20	4.70	2.32	1.13	0.11	1.02	3.75	0.47	0.40	0.07	15.40	12.00	10.20	7.87	24.80	
175	4/38/88	15:25	W2	1	7.50	5.80	4.12	2.36	1.13	0.11	1.02	3.42	0.54	0.40	0.14	2.12	13.00	10.40	8.12	31.70	40
176	4/38/88	15:25	W2	8	7.70	7.95	3.50	2.31	1.13	0.11	1.02	3.74	0.61	0.38	0.23	12.90	12.00	10.60	7.98	21.00	72.1
195	4/38/88	18:45	W2	1	7.50	11.50	1.82	1.28	0.88	0.06	0.80	1.89	0.24	0.18	0.06	3.10	11.00	10.60	13.20	37.20	
196	4/38/88	18:45	W2	8	7.50	11.00	2.32	1.28	0.86	0.06	0.82	1.49	0.31	0.16	0.15	6.20	11.00	8.50	13.10	31.80	
208	4/38/88	21:30	W2	1	7.50	7.95	1.15	1.16	0.85	0.06	0.79	2.03	0.30	0.18	0.12	2.11	9.00	8.15	12.00	18.30	
209	4/38/88	21:30	W2	8	7.20	9.30	1.10	1.16	0.82	0.04	0.76	1.25	0.37	0.16	0.21	9.56	10.00	8.50	12.30	27.20	
228	4/48/88	00:28	W2	1	7.4	8.85	2.52	2.22	1.15	0.10	1.05	3.71	0.43	0.36	0.07	11.20	10.0	9.90	8.884	21.8	
229	4/48/88	00:28	W2	8	7.4	15.0	3.38	2.16	1.13	0.11	1.02	3.26	0.45	0.37	0.08	55.20	10.0	9.60	7.13	29.4	
241	4/48/88	3:20	W2	1	7.6	5.3	2.99	2.49	1.17	0.11	1.06	3.45	0.58	0.31	0.08	9.80	10.0	9.90	7.72	31.6	
242	4/48/88	3:20	W2	8	7.7	6.3	3.48	2.34	1.18	0.11	1.07	3.53	0.63	0.38	0.23	19.50	11.0	9.75	7.89	29.4	
260	4/48/88	6:22	W2	1	7.2	12.7	1.30	1.47	1.02	0.07	0.94	2.49	0.30	0.30	0.10	10.30	10.0	8.65	11.4	20.6	
261	4/48/88	6:22	W2	8	7.2	9.7	1.28	1.93	0.99	0.08	0.92	2.09	0.30	0.30	0.10	3.34	10.0	8.80	11.4	23.2	
273	4/48/88	9:09	W2	1	6.9	6.0	(2.00)	1.10	0.83	0.06	0.77	1.27	0.22	0.22	0.08	9.70	10.0	8.10	13.6	26.0	130
274	4/48/88	9:09	W2	8	6.9	7.2	1.10	1.04	0.82	0.06	0.76	1.30	0.31	0.31	0.10	7.20	10.0	8.20	14.1	22.0	1,100
294	4/48/88	12:15	W2	1	7.70	9.80	2.90	1.98	1.18	0.10	1.08	3.00	0.10	0.10	0.05	8.90	13.00	9.60	9.76	61.00	
295	4/48/88	12:15	W2	8	7.70	14.00	2.70	2.14	1.20	0.10	1.10	3.35	0.55	0.35	0.10	53.80	14.00	10.30	9.57	56.50	90
309	4/48/88	15:25	W2	1	7.10	4.40	4.80	2.68	1.19	0.12	1.07	4.19	0.70	0.64	0.20	9.90	14.00	10.50	8.26	19.50	270
310	4/48/88	15:25	W2	8	7.50	3.90	4.35	2.66	1.19	0.12	1.07	4.39	0.64	0.64	0.20	11.40	14.00	10.40	8.63	18.00	
329	4/48/88	18:30	W2	1	7.3	8.1	2.45	1.55	1.04	0.09	0.95	2.66	0.38	0.38	0.10	13.50	11.0	9.30	10.2	33.6	
330	4/48/88	18:30	W2	8	7.3	9.5	2.45	1.55	1.03	0.09	0.94	2.62	0.37	0.37	0.10	39.90	12.0	9.20	10.5	47.5	
342	4/48/88	21:10	W2	1	6.9	6.4	2.15	1.05	0.80	0.06	0.74	1.75	0.32	0.32	0.10	9.40	10.0	8.40	9.78	21.0	
343	4/48/88	21:10	W2	8	7.3	7.6	2.00	1.06	0.78	0.06	0.72	1.96	0.23	0.23	0.10	7.34	11.0	9.20	12.8	26.0	
355	4/58/88	00:15	W2	1	7.5	14.0	1.40	1.85	1.13	0.10	1.03	3.47	0.46	0.46	0.10	12.20	10.0	9.00	10.2	72.8	
356	4/58/88	00:15	W2	8	7.5	14.0	9.70	1.81	1.12	0.10	1.02	3.63	0.50	0.50	0.10	9.40	11.0	8.90	7.50	55.6	
368	4/58/88	3:16	W2	1	6.1	6.3	4.02	2.52	1.15	0.13	1.02	4.29	0.70	0.70	0.10	45.80	11.0	9.40	7.13	24.8	
369	4/58/88	3:16	W2	8	7.1	7.9	4.10	2.39	1.16	0.13	1.03	4.53	0.63	0.63	0.10	42.00	11.0	9.50	7.56	29.6	
377	4/58/88	3:05	W2	1	7.5	3.85	(2.00)	0.05	0.50	<0.05	0.50	0.41	<0.10	<0.05	<0.10	4.37	11.0	10.8	0.32	10.2	
387	4/58/88	6:25	W2	1	7.6	8.1	2.95	1.68	1.11	0.11	1.00	2.95	0.44	0.25	0.19	7.30	11.0	9.00	10.6	58.0	
388	4/	6:25	W2	8	7.6	8.5	3.05	1.63	1.08	0.11	1.00	2.45	0.41	0.15	0.26	10.00	11.0	9.10	9.32	54.5	

ANALYTICAL DATA FOR RIVER AND TRIBUTARIES
HACKENSACK RIVER STUDY

APRIL DRY EVENT - APRIL 12-22 1988

SAMPLE #

HACK	DATE	TIME	SITE	DEPTH	pH	TURBIDITY ntu	COBOD20 mg/l	MM3 mg/l	MD2 mg/l	MD3 mg/l	TKN mg/l	TP04 mg/l	OP04 mg/l	ORGANIC PO4 mg/l	CHLORO-A mg/L	TEMP C	DO mg/l	SALINITY ppt	TSS mg/l	FEC. COLI org/100ml
400	41588	9:19	M2	T	7.5	7.7	2.00	1.03	0.77	0.06	1.42	0.27	0.11	0.16	2.53	10.00	6.80	12.10	42.50	500
401	41588	9:19	M2	B	7.5	8.8	1.75	1.05	0.79	0.06	1.00	0.26	0.10	0.16	44.00	11.00	7.70	13.80	31.60	700
425	41588	12:14	M2	T	7.5	9.6	3.10	1.71	1.09	0.11	2.48	0.38	0.40	0.10	4.44	12.00	8.20	10.30	59.30	
426	41588	12:14	M2	B	7.55	7.8	3.10	1.64	1.07	0.10	2.81	0.43	0.41	0.02	55.10	12.00	9.20	9.36	45.50	
440	41588	15:03	M2	T	7.40	6.50	4.80	4.18	1.13	0.14	3.89 +	0.62	0.58	0.04	64.60	12.00	9.00	8.72	26.50	40
441	41588	15:03	M2	B	7.60	9.00	5.35	2.72	1.15	0.12	3.85	0.59	0.59	0.00	9.10	12.00	9.40	9.35	33.20	40
459	41588	18:00	M2	T	7.50	15.00	3.70	2.26	1.16	0.12	2.96	0.49	0.38	0.11	9.20	13.00	8.90	9.71	41.20	
460	41588	18:00	M2	B	7.55	8.50	3.70	2.25	1.15	0.12	2.86	0.36	0.39	0.10	52.80	12.00	9.00	8.72	60.80	
472	41588	22:03	M2	T	7.1	6.5	4.60	1.10	0.78	0.06	1.42	0.23	0.18	0.05	11.91	10.0	8.10	11.6	31.2	
473	41588	22:03	M2	B	7.3	8.0	4.75	1.08	0.75	0.05	1.30	0.18	0.18	0.00	4.70	10.0	8.00	13.9	26.8	
493	41688	0:18	M2	T	7.1	9.2	6.27	2.53	1.19	0.14	2.58	0.68	0.46	0.22	33.40	10.0	8.60	8.28	43.5	
494	41688	0:18	M2	B	7.15	17.5	4.84	2.46	1.20	0.13	3.60	0.68	0.27	0.41	23.70	10.0	8.55	8.51	43.8	
512	41688	3:00	M2	T	7.6	9.1	4.25	2.46	1.24	0.15	4.67	0.67	0.14	0.53	23.00	10.0	8.40	6.99	16.00	
513	41688	3:30	M2	B	7.5	8.9	4.15	2.40	1.26	0.15	4.09	0.66	0.14	0.52	44.30	10.0	8.70	7.04	36.0	
535	41688	6:41	M2	T	7.35	9.8	4.75	1.99	1.20	0.12	2.49	0.53	0.36	0.17	14.00	10.0	7.40	9.17	59.8	
548	41688	9:24	M2	B	7.45	9.0	3.05	1.91	1.20	0.09	2.29	0.57	0.36	0.21	11.60	11.0	7.20	9.81	54.4	
549	41688	9:24	M2	T	6.8	7.5	1.53	1.36	1.00	0.09	1.91	0.32	0.06	0.25	18.70	11.0	7.70	12.5	31.6	300
567	41688	12:45	M2	B	7.3	6.8	1.50	1.31	0.95	0.08	2.00	0.30	0.05	0.25	23.00	11.0	6.30	13.2	42.4	220
569	41688	12:45	M2	T	6.9	4.6	4.10	2.03	1.20	0.13	3.16	0.55	0.10	0.43	7.82	11.0	7.40	9.66	20.4	
588	41688	15:40	M2	B	7.7	4.1	5.23	2.79	1.20	0.16	3.90	0.69	0.23	0.46	47.10	11.0	6.5	8.77	22.8	
589	41688	15:40	M2	T	7.7	7.0	4.80	2.53	1.20	0.15	4.18	0.69	0.16	0.53	63.70	11.0	9.3	8.18	34.4	
603	41688	18:45	M2	T	7.4	9.7	4.48	1.87	1.21	0.14	3.67	0.57	0.17	0.40	51.40	10.0	9.5	9.46	74.0	
604	41688	18:45	M2	B	7.6	8.9	3.78	1.84	1.20	0.14	2.74	0.54	0.11	0.43	39.50	11.0	9.6	9.20	58.0	
622	41688	21:50	M2	T	10.0	10.0	2.05	0.95	0.90	0.07	0.83	0.34	0.04	0.30	13.70	9.0	8.3	12.9	46.0	
623	41688	21:50	M2	B	10.0	10.0	1.70	0.08	0.90	0.07	0.83	0.32	0.17	0.05	11.90	9.0	8.2	12.0	58.4	
641	41788	0:27	M2	T	7.2	8.0	2.10	1.36	1.10	0.09	2.28	0.26	0.03	0.23	13.90	10.0	8.5	10.1	42.0	
642	41788	0:27	M2	B	7.4	12.0	3.10	1.35	1.00	0.10	2.23	0.19	0.05	0.19	19.50	10.0	8.4	12.3	63.5	
654	41788	3:16	M2	T	7.35	13.0	3.85	2.06	1.21	0.15	3.59	0.50	0.06	0.44	50.70	10.0	8.80	8.68	51.2	
655	41788	3:16	M2	B	7.45	9.0	4.95	1.78	1.21	0.15	3.47	0.50	0.12	0.38	22.80	9.0	9.0	8.47	49.0	
673	41788	6:35	M2	T	7.45	7.90	5.80	1.97	1.21	0.13	3.41	0.70	0.30	0.40	48.50	9.00	9.30	8.30	31.60	
674	41788	6:35	M2	B	7.50	7.20	5.78	2.02	1.20	0.13	3.26	0.61	0.23	0.38	45.10	10.00	8.90	8.24	27.20	
686	41788	9:28	M2	T	7.40	7.10	2.45	1.18	1.05	0.09	1.94	0.42	0.17	0.25	25.80	11.00	8.60	11.72	39.50	130
687	41788	9:28	M2	B	7.45	9.00	2.60	1.46	1.05	0.09	2.04	0.40	0.16	0.24	19.30	11.00	8.70	11.64	38.20	40
706	41788	12:21	M2	T	7.4	4.0	3.10	1.71	1.10	0.10	2.60	0.43	0.16	0.27	20.30	12.0	6.7	10.94	23.2	
707	41788	12:21	M2	B	7.5	4.4	2.50	1.70	1.10	0.10	2.66	0.44	0.17	0.27	45.00	14.0	10.5	8.43	46.0	300
718	41788	15:31	M2	T	7.7	8.8	4.18	2.48	1.21	0.14	4.20	0.64	0.37	0.27	45.00	14.0	9.6	8.13	44.7	
726	41788	15:31	M2	B	7.55	6.8	4.48	2.67	1.20	0.14	4.32	0.84	0.43	0.41	54.00	14.0	9.6	8.13	44.7	
738	41788	19:05	M2	T	7.4	8.4	4.68	2.16	1.22	0.15	3.39	0.64	0.31	0.33	44.60	13.0	10.0	9.29	52.4	
739	41788	19:05	M2	B	7.4	8.3	3.20	2.28	1.22	0.13	3.49	0.57	0.24	0.33	27.70	12.0	10.1	9.29	52.5	
751	41788	21:36	M2	T	7.4	9.1	2.22	1.21	0.90	0.07	1.99	0.28	0.10	0.18	12.70	11.0	8.7	12.10	40.0	
752	41788	21:36	M2	B	7.3	9.1	2.38	1.21	0.90	0.07	1.99	0.19	0.03	0.16	10.90	12.0	6.7	12.61	46.0	
770	41888	0:45	M2	T	7.3	5.7	1.60	1.04	0.81	0.06	1.67	0.27	0.13	0.14	5.70	11.0	8.4	13.85	20.6	
771	41888	0:45	M2	B	7.4	5.1	1.35	1.03	0.81	0.06	1.87	0.26	0.11	0.15	5.70	11.0	8.4	13.85	20.6	
783	41888	3:45	M2	T	7.5	7.9	4.80	2.26	1.20	0.13	3.38	0.65	0.27	0.38	41.60	11.0	9.4	9.03	35.5	
784	41888	3:45	M2	B	7.6	10.0	5.20	2.26	1.20	0.13	3.38	0.65	0.27	0.38	41.60	11.0	9.4	9.03	35.5	
803	41888	6:35	M2	T	7.55	8.1	3.88	2.33	1.22	0.14	4.17	0.67	0.28	0.39	41.00	12.0	8.92	9.60	24.4	
815	41888	9:10	M2	B	7.35	10.0	2.65	0.15	1.06	0.09	2.87	0.48	0.24	0.24	10.00	12.0	6.2	11.18	36.7	
816	41888	9:10	M2	T	7.4	9.8	3.60	1.47	1.06	0.10	3.34	0.47	0.22	0.25	10.00	12.0	5.9	11.06	38.5	

ANALYTICAL DATA FOR RIVER AND TRIBUTARIES HACKENSACK RIVER STUDY

APRIL DRY EVENT - APRIL 12-22 1988

SAMPLE #	DATE	TIME	SITE	DEPTH	pH	TURBIDITY ntu	CBOD5 mg/l	CBOD20 mg/l	MW3 mg/l	MW3/MW2	MW2 mg/l	MW3 mg/l	TKN mg/l	TP04 mg/l	DP04 mg/l	PO4 mg/l	CHLORO-A mg/l	TEMP C	DO mg/l	SALINITY ppt	TSS mg/l	FEC. COL. org/100ml
836	41888	12:12	M2	1	6.89	5.9	91.40		0.81	0.83	0.07	0.76	0.20 +	0.22	0.06	0.16	11.30	12.00	4.8	13.56	25.6	
837	41888	12:12	M2	8	6.91	6.0	91.55		1.15	0.83	0.07	0.76	0.82	0.26	0.10	0.16	6.40	12.00	5.72	14.13	24.0	
845	41888	15:38	M2	1	7.30	14.0	4.25		2.56	1.26	0.13	1.13	3.03	0.70	0.36	0.34	26.90	12.0	4.4	8.92	45.2	20
846	41888	15:38	M2	8	7.40	6.4	4.18		2.10	1.22	0.14	1.08	3.10	0.40	0.05	0.35	4.07	12.0	6.1	7.97	53.2	
894	41888	18:51	M2	1	7.6	7.6	4.25		1.91	1.21	0.13	1.08	4.35	0.53	0.21	0.32	22.80	12.0	9.2	8.97	40.0	
895	41888	18:51	M2	8	7.6	6.4	4.28		1.90	1.22	0.13	1.09	3.92	0.51	0.20	0.31	28.90	12.0	9.7	9.00	39.5	
910	41888	21:25	M2	1	7.4	13.0	2.55		1.04	0.99	0.09	0.90	2.49	0.40	0.21	0.19	12.20	11.0	8.3	11.71	52.4	
911	41888	21:25	M2	8	7.4	11.0	2.30		1.11	0.98	0.08	0.90	2.78	0.38	0.22	0.16	14.30	10.0	8.3	13.31	47.2	
924	41888	6:30	M2	1	7.3	4.9	91.75		0.81	0.80	0.06	0.74	0.20 +	0.21	0.08	0.13	9.40	10.0	8.1	15.28	54.8	
925	41888	6:30	M2	8	7.4	4.6	91.60		0.82	0.79	0.06	0.73	0.48	0.24	0.12	0.12	17.90	9.0	8.2	13.64	26.0	
942	41888	3:25	M2	1	7.4	9.9	4.05	7.60	1.76	1.19	0.12	1.07	4.10	0.54	0.19	0.35	31.40	9.0	8.4	9.74	42.8	
943	41888	3:25	M2	8	7.3	15.0	4.78	8.90	1.74	1.19	0.15	1.04	4.53	0.62	0.28	0.34	8.19	9.0	8.6	9.95	134.0	
960	41888	6:45	M2	1	7.5	4.6	4.38		2.13	1.15	0.15	1.00	4.23	0.69	0.25	0.44	39.40	9.0	4.5	8.03	31.2	
961	41888	6:45	M2	8	7.4	4.9	4.28		2.05	1.18	0.15	1.03	5.20	0.68	0.26	0.42	34.50	10.0	7.1	8.26	34.8	
973	41888	9:15	M2	1	7.7	8.6	2.30		1.61	1.20	0.12	1.08	2.93	0.55	0.23	0.32	34.90	10.0	7.4	10.08	42.5	
974	41888	9:15	M2	8	7.8	9.9	3.12		1.63	1.17	0.12	1.05	3.91	0.56	0.25	0.31	45.50	10.0	5.4	10.11	38.4	
992	41888	12:24	M2	1	7.7	5.1	12.00		1.26	0.91	0.08	0.83	1.86	0.30	0.11	0.19	7.90	10.0	8.1	13.84	24.0	
993	41888	12:24	M2	8	7.9	5.1	12.00		1.28	0.93	0.08	0.85	2.07	0.29	0.09	0.20	4.82	11.0	8.5	14.13	22.0	
1011	41888	15:44	M2	1	7.4	6.8	2.75		1.86	1.17	0.13	1.04	4.98	0.53	0.18	0.35	26.70	11.0	9.5	9.57	32.5	110
1012	41888	15:44	M2	8	7.6	8.4	2.75		1.87	1.17	0.13	1.04	4.94	0.51	0.20	0.31	33.00	12.0	9.7	10.18	45.5	230
1031	41888	18:43	M2	1	7.6	5.3	4.98		2.17	1.21	0.15	1.04	3.56	0.61	0.22	0.39	20.80	11.0	11.2	8.56	18.7	
1032	41888	18:43	M2	8	7.8	4.2	4.98		1.91	1.20	0.13	1.07	3.59	0.39	0.03	0.36	56.20	11.0	12.7	8.68	43.4	
1045	41888	21:38	M2	1	7.5	7.0	2.95	2.95	1.30	1.24	0.10	1.14	2.20	0.43	0.18	0.25	20.20	10.0	9.8	10.96	47.0	
1063	42088	00:15	M2	1	7.0	5.4	2.10		1.05	0.87	0.06	0.81	1.83	0.38	0.16	0.22	42.70	10.0	8.3	14.28	23.2	
1064	42088	00:15	M2	8	7.2	6.8	2.00		1.02	0.88	0.06	0.82	1.54	0.15	0.18	0.10	2.33	10.0	8.3	14.61	19.6	
1076	42088	03:30	M2	1	7.7	4.9	3.55		1.82	1.30	0.12	1.18	2.21	0.43	0.27	0.16	60.40	9.0	9.1	9.93	18.4	
1077	42088	03:30	M2	8	7.6	6.3	4.38		1.82	1.36	0.12	1.24	2.25	0.45	0.27	0.18	28.10	10.0	9.1	9.93	22.8	
1097	42088	6:40	M2	1	7.6	5.3	7.86	8.58	2.75	1.29	0.15	1.14	5.97	0.64	0.39	0.25	46.80	9.0	8.8	7.86	18.7	
1098	42088	6:40	M2	8	7.7	5.9	6.70	9.03	2.81	1.29	0.15	1.14	3.31	0.62	0.37	0.25	48.40	9.0	6.6	9.03	19.3	
1110	42088	9:30	M2	1	7.7	5.4	4.65		2.44	1.28	0.13	1.15	3.21	0.79	0.28	0.51	42.00	10.0	8.9	9.51	27.5	360
1111	42088	9:30	M2	8	7.7	7.1	4.58		2.11	1.29	0.12	1.17	2.97	0.79	0.28	0.51	44.70	10.0	7.7	9.85	22.8	300
1136	42088	12:08	M2	1	7.8	4.1	2.40		1.55	1.17	0.10	1.07	3.46	0.33	0.32	0.01	2.35	11.0	7.14	11.42	46.0	
1137	42088	12:08	M2	8	7.8	5.0	2.50		1.54	1.18	0.10	1.08	2.39	0.37	0.20	0.17	30.30	11.0	7.45	11.79	17.6	
1150	42088	15:14	M2	1	7.5	4.4	4.25		1.70	1.22	0.12	1.10	1.70	0.47	0.26	0.21	31.20	11.0	10.0	9.95	20.4	
1151	42088	15:14	M2	8	7.6	3.9	3.75		1.53	1.16	0.11	1.05	1.84	0.43	0.26	0.17	2.08	11.0	7.4	10.77	17.2	
1169	42088	18:50	M2	1	7.5	5.7	2.45		1.21	0.95	0.08	0.87	1.70	0.25	0.24	0.01	8.13	11.0	9.2	13.01	20.8	
1170	42088	18:28	M2	8	7.5	6.7	5.05		2.47	1.28	0.14	1.14	3.66	0.64	0.44	0.22	46.60	11.0	10.7	8.68	20.0	
1171	42088	18:28	M2	1	7.7	5.0	5.18		2.34	1.26	0.14	1.12	3.24	0.61	0.44	0.17	48.90	12.0	10.4	6.61	19.6	
1172	42088	18:20	M2	8	7.5	5.4	6.05		3.75	1.12	0.19	0.93	4.31	0.93	0.66	0.29	57.40	12.0	10.7	7.12	34.0	
1173	42088	18:20	M2	1	7.6	6.1	5.78		3.31	1.19	0.17	1.02	7.61	0.86	0.48	0.38	10.90	12.0	10.6	10.00	27.6	
1183	42088	21:20	M2	1	7.3	6.6	4.62		1.75	0.24	0.12	1.12	4.33	0.43	0.28	0.15	27.10	11.0	10.4	10.00	27.6	
1184	42088	21:20	M2	8	7.6	5.9	5.22		1.70	1.24	0.11	1.13	5.37	0.48	0.27	0.21	14.10	11.0	10.4	10.19	25.6	
1202	42188	0:23	M2	1	6.5	4.9	LOST		0.94	0.97	0.01	0.96	2.02	0.23	0.24	0.02	17.10	10.0	8.8	14.02	22.0	
1203	42188	0:23	M2	8	7.1	6.9	LOST		1.03	0.92	0.08	0.84	2.69	0.25	0.23	0.02	14.00	10.0	9.0	14.39	28.4	
1210	42088	3:18	M2	1	6.7	3.7	3.30		2.22	1.28	0.11	1.17	10.05	0.54	0.30	0.24	3.20	10.0	9.3	10.23	13.2	
1211	42088	3:18	M2	8	7.0	5.6	3.17		1.42	1.08	0.09	0.99	2.85	0.36	0.26	0.10	11.50	10.0	9.2	12.86	32.8	
1234	42188	6:05	M2	1	7.4	5.6	4.68	9.18	2.38	1.31	0.13	1.18	2.95	0.61	0.42	0.19	42.83	11.0	8.8	9.02	24.4	
1235	42188	6:25	M2	8	7.6	7.9	5.40	11.8	2.22	1.30	0.13	1.17	4.64	0.54	0.38	0.16	44.2	11.0	8.8	9.09	38.8	
1248	42188	9:32	M2	1	7.6	4.8	3.20		1.88	1.28	0.13	1.15	2.78	0.52	0.34	0.18	48.4	12.0	9.2	9.05	16.8	40

ANALYTICAL DATA FOR RIVER AND TRIBUTARIES
HACKENSACK RIVER STUDY

APRIL DRY EVENT - APRIL 12-22 1988

SAMPLE #	DATE	TIME	SITE	DEPTH	pH	TURBIDITY ntu	CBOD5 mg/l	NH3 mg/l	NO3/NO2 mg/l	NO3 mg/l	TKN mg/l	TP04 mg/l	DP04 mg/l	ORGANIC P04 mg/l	CHLORO-A mg/a3	TEMP C	DO mg/l	SALINITY ppt	TSS mg/l	(MPN) FEC. COLI org/100ml
1249	42188	9:32	M2	B	7.6	3.3	3.20	1.87	1.29	0.13	2.83	0.56	0.36	0.20	184	12.0	17.7	8.95	16.8	230
1277	42188	12:21	M2	T	7.4	4.2	2.10	1.44	1.14	0.10	2.23	0.37	0.24	0.13		12.0	5.6	12.06	16.4	
1278	42188	12:21	M2	B	7.4	4.2	2.50	1.37	1.15	0.10	2.40	0.38	0.05	0.33	67.2	12.0	3.8	12.35	20.4	
1290	42188	15:25	M2	T	7.8	5.0	3.35	1.62	1.22	0.11	3.10	0.44	0.29	0.15	39.3	11.0	10.4	11.40	19.6	230
1291	42188	15:25	M2	B	7.8	4.5	2.80	1.61	1.22	0.11	3.35	0.43	0.08	0.35	39.0	11.0	10.2	11.75	19.2	230
1312	42188	18:45	M2	T	7.6	5.4	4.9	2.22	1.30	0.14	4.25	0.69	0.37	0.32	33.10	11.0	9.5	8.75	21.8	
1313	42188	18:45	M2	B	7.8	8.5	4.87	2.05	1.33	0.14	3.99	0.61	0.33	0.28	4.90	11.0	11.3	9.23	59.6	
1325	42188	22:07	M2	T	7.5	6.0	4.03	1.43	1.25	0.12	3.27	0.49	0.32	0.17	76.3	10.0	10.5	9.61	43.0	
1326	42188	22:07	M2	B	7.5	6.9	3.60	1.55	1.27	0.13	3.78	0.50	0.31	0.19	3.86	9.0	10.6	9.92	32.3	
1344	42288	1:17	M2	T	8.4	3.8	2.55	<0.05	1.14	0.10	1.94	0.34	0.22	0.12	23.8	9.0	9.6	12.70	20.8	
1345	42288	1:17	M2	B	6.8	3.8	3.33	1.26	1.15	0.10	2.80	0.33	0.23	0.10	24.2	10.0	10.0	11.74	20.0	
1352	42288	3:07	M2	T	6.8	3.8	2.45	1.06	1.11	0.10	1.89	0.34	0.11	0.23	13.8	9.0	9.6	11.45	19.6	
1353	42288	3:07	M2	B	7.1	3.9	3.03	1.18	1.10	0.09	2.50	0.21	0.09	0.21	42.2	10.0	10.3	12.13	15.2	
1376	42288	6:22	M2	T	7.5	5.9	4.05	2.03	1.30	0.15	3.24	0.69	0.32	0.37	69.9	10.0	9.1	9.85	20.4	
1377	42288	6:22	M2	B	7.5	6.1	4.05	1.84	1.29	0.14	3.55	0.58	0.24	0.34	76.0	10.0	8.7	10.85	24.4	

ANALYTICAL DATA FOR RIVER AND TRIBUTARIES HACKENSACK RIVER STUDY

APRIL DAY EVENT - APRIL 12-22 1988

SAMPLE #

DATE	TIME	SITE	DEPTH	pH	TURBIDITY ntu	CBOD5 mg/l	CBOD20 mg/l	WHS mg/l	NH3/NH2 mg/l	NH2 mg/l	NH3 mg/l	TKN mg/l	TP04 mg/l	OP04 mg/l	P04 mg/l	CHLORO-A mg/g	TEMP C	DO mg/l	SALINITY ppt	TSS mg/l	FEC. COL. org/100ml	(NFW)
3	41288	9:51	M3	7.2	9.0	2.35		4.16	1.05	0.11	0.94	4.06	0.37	0.45	<0.10	91.4	10.0	7.20	7.23	49.6	80	
4	41288	9:51	M3	7.2	16.0	91.85		3.35	1.05	0.11	0.94	4.69	0.47	0.41	0.06	88.1	10.0	6.10	8.53	50.4	80	
28	41288	12:58	M3	7.2	5.5	3.90		3.99	0.91	0.14	0.77	5.20	0.89	0.65	0.24	11.4	13.0	8.90	5.40	18.8		
29	41288	12:58	M3	7.3	5.0	4.95		3.68	0.93	0.14	0.79	3.89	0.85	0.60	0.25	92.7	13.0	9.00	6.11	20.0		
36	41288	15:45	M3	7.5	7.00	7.30		3.75	1.03	0.11	0.92	4.27	0.58	0.40	0.18	45.9	10.5	11.0	7.48	30.4	<20	
37	41288	15:45	M3	7.50	5.70	2.35		2.53	1.03	0.11	0.92	4.18	0.60	0.40	0.20	82.10	10.50	10.70	7.54	28.50	70	
58	41288	19:00	M3	6.40	6.30	2.15		1.85	0.76	0.09	0.87	2.41	0.47	0.27	0.20	48.30	11.00	8.70	9.98	32.80		
59	41288	19:00	M3	6.70	5.00	2.00		2.11	0.98	0.10	0.88	2.65	0.46	0.31	0.15	29.20	12.00	12.00	9.42	23.60		
74	41288	22:05	M3	7.4	5.6	3.70		2.60	1.02	0.11	0.91	2.77	0.61	0.41	0.20	49.0	11.0	10.7	8.21	24.0		
75	41288	22:05	M3	6.8	7.4	3.55		2.56	1.02	0.11	0.91	4.64	0.58	0.40	0.18	66.6	11.0	13.4	8.25	33.6		
93	41388	1:21	M3	7.3	3.9	2.40		3.58	1.03	0.14	0.89	4.85	0.99	0.58	0.41	74.0	11.0	8.80	6.83	12.0		
94	41388	1:21	M3	7.4	4.9	2.35		3.34	1.04	0.13	0.91	4.71	0.81	0.51	0.30	39.2	11.0	8.80	7.07	20.4		
102	41388	4:00	M3	7.6	5.5	2.85		2.77	1.14	0.11	1.03	3.54	0.69	0.44	0.25	57.9	10.0	9.50	8.27	2.32		
103	41388	4:00	M3	7.6	6.0	2.80		2.71	1.13	0.11	1.02	3.48	0.66	0.42	0.24	43.1	10.0	9.90	8.10	34.0		
126	41388	6:50	M3	7.4	0.5	91.05		2.16	1.10	0.10	1.00	2.92	0.50	0.33	0.17	40.1	9.0	5.30	9.42	26.0		
127	41388	6:50	M3	7.4	8.3	91.05		1.93	1.07	0.09	0.98	2.68	0.52	0.29	0.23	37.5	10.0	6.30	10.0	39.6		
140	41388	9:54	M3	7.8	7.5	91.30	3.85	2.38	1.13	0.10	1.03	3.42	0.62	0.37	0.25	13.6	10.0	7.60	12.0	21.0	20	
141	41388	9:54	M3	7.7	9.0	4.00	8.70	2.07	1.12	0.10	1.02	3.20	0.60	0.36	0.24	50.6	13.0	7.50	12.1	37.5	20	
159	41388	12:55	M3	7.30	5.50	4.32		3.43	1.05	0.13	0.92	5.57	0.77	0.56	0.21	9.47	12.00	8.70	6.57	20.80		
160	41388	12:55	M3	7.50	6.00	4.15		3.05	1.06	0.12	0.94	4.65	0.84	0.49	0.35	8.70	13.00	7.90	6.94	25.50		
177	41388	15:55	M3	7.20	5.90	3.90		2.95	1.09	0.12	0.97	4.20	0.72	0.46	0.26	45.30	13.00	10.60	7.55	33.00	40	
178	41388	15:55	M3	7.30	6.10	4.70		2.86	1.10	0.12	0.98	3.87	0.65	0.45	0.20	57.90	13.00	10.60	7.55	33.00		
197	41388	19:10	M3	7.50	7.40	3.50		1.82	1.10	0.09	1.01	2.12	0.36	0.30	0.06	<24.70	11.00	9.30	10.60	33.00		
198	41388	19:10	M3	7.50	8.20	2.95		1.70	1.08	0.09	0.99	2.86	0.37	0.30	0.07	<23.40	12.00	9.30	10.20	33.60		
210	41388	22:05	M3	7.50	5.50	2.75		2.16	1.10	0.10	1.00	3.73	0.60	0.35	0.25	49.00	11.00	9.70	8.87	19.80		
211	41388	22:05	M3	7.60	6.60	2.45		2.06	1.11	0.10	1.01	3.50	0.51	0.34	0.17	10.40	11.00	9.60	5.58	24.40		
230	41488	1:08	M3	7.5	4.8	2.95		0.32	1.07	0.13	0.94	4.95	0.99	0.53	0.46	69.20	12.0	9.70	7.40	23.6		
231	41488	1:08	M3	7.5	6.0	2.82		3.09	1.08	0.13	0.95	4.60	0.77	0.50	0.77	27.00	12.0	10.6	5.23	24.0		
243	41488	3:51	M3	7.4	6.0	3.75		3.20	1.13	0.13	1.00	5.46	0.76	0.50	0.76	12.90	12.0	9.40	6.80	18.8		
244	41488	3:51	M3	7.5	6.1	2.90		3.10	1.14	0.13	1.01	6.01	0.76	0.53	0.53	16.60	10.0	6.50	9.28	29.6		
262	41488	6:55	M3	7.2	7.6	2.05		2.02	1.17	0.10	1.07	2.83	0.53	0.50	0.50	36.50	10.0	5.40	8.50	23.2		
263	41488	6:55	M3	7.4	7.0	2.65		2.05	1.16	0.10	1.06	3.53	0.50	0.50	0.50	7.40	11.0	7.70	9.51	16.0	80	
275	41488	9:28	M3	7.3	4.9	2.55		2.02	1.11	0.10	1.01	2.53	0.50	0.50	0.50	7.40	11.0	7.70	9.51	16.0		
276	41488	9:28	M3	7.3	5.5	1.95		2.05	1.14	0.09	1.05	3.57	0.41	0.41	0.41	6.30	11.0	7.60	10.2	18.8	20	
296	41488	12:40	M3	7.30	8.40	3.20	7.08	2.89	1.17	0.13	1.04	4.05	0.74	0.74	0.74	13.70	12.00	9.00	7.93	54.00		
297	41488	12:40	M3	7.40	7.70	4.15	6.40	2.30	1.17	0.12	1.05	4.05	0.70	0.70	0.70	14.80	13.00	9.30	7.26	50.50		
311	41488	15:40	M3	7.10	4.50	5.10		3.65	1.10	0.16	0.94	7.32	0.82	0.82	0.82	12.50	14.00	9.90	6.80	20.00	1,700	
312	41488	15:40	M3	7.50	4.20	6.20		3.74	1.09	0.16	0.93	7.20	0.97	0.97	0.97	93.20	15.00	9.60	6.65	21.20	500	
331	41488	18:50	M3	7.6	7.5	3.00		2.10	1.15	0.11	1.04	4.62	0.54	0.54	0.54	11.00	12.0	10.1	8.59	28.4		
332	41488	18:50	M3	7.5	8.0	3.70		2.13	1.14	0.11	1.03	4.32	0.55	0.55	0.55	60.00	11.0	10.1	7.34	32.0		
344	41488	21:30	M3	7.7	5.4	3.95		1.80	1.08	0.10	0.98	3.09	0.50	0.50	0.50	26.70	11.0	9.40	9.56	27.6		
345	41488	21:30	M3	7.5	5.6	3.10		1.60	1.04	0.09	0.95	2.58	0.42	0.42	0.42	25.80	11.0	8.40	11.2	23.4		
357	41588	00:38	M3	7.7	10.0	4.80		2.58	1.14	0.12	1.02	4.18	0.63	0.63	0.63	16.80	11.0	9.80	7.21	51.4		
358	41588	00:38	M3	7.7	8.2	4.32		2.56	1.13	0.12	1.01	3.46	0.57	0.57	0.57	70.80	11.0	10.0	7.33	36.4		
370	41588	3:36	M3	7.6	5.1	5.12		3.76	1.05	0.13	0.92	6.33	1.05	0.43	0.62	8.45	13.0	8.30	6.35	25.2		
371	41588	3:36	M3	7.5	6.0	4.35		3.51	1.08	0.17	0.91	4.69	0.95	0.37	0.58	56.40	12.0	8.50	5.96	21.0		
389	41588	6:51	M3	7.53	8.2	3.55		2.16	1.16	0.13	1.03	3.55	0.52	0.23	0.29	6.10	11.0	8.20	7.14	50.5		
390	41588	6:51	M3	7.6	9.0	4.10		2.22	1.17	++	1.84	3.84	0.58	0.24	0.34	13.50	11.0	7.00	7.98	44.5		
402	41588	9:35	M3	7.65	5.65	3.88		1.95	1.11	0.11	1.00	3.27	0.58	0.24	0.34	8.25	11.00	8.70	9.74	22.20	40	

* Est. Value

ANALYTICAL DATA FOR RIVER AND TRIBUTARIES
HACKENSACK RIVER STUDY

APRIL DRY EVENT - APRIL 12-22 1988

SAMPLE #	DATE	TIME	SITE	DEPTH	pH	TURBIDITY ntu	CBOD5 mg/l	CBOD20 mg/l	NH3 mg/l	NH3/NH2 mg/l	NO2 mg/l	NO3 mg/l	TKN mg/l	TP04 mg/l	DP04 mg/l	PD04 mg/l	CHLORO-A mg/L	TEMP C	DO mg/l	SALINITY ppt	TSS mg/l	(NPN) FEC. COLI org/100ml
403	41588	9:35	M3	B	7.65	5.6	3.45		1.82	1.10	0.11	0.99	3.04	0.55	0.21	0.34	33.70	12.00	8.55	10.30	20.50	20
427	41588	12:31	M3	T	7.65	15.0	4.14		2.48	1.13	0.14	0.99	4.23	0.74	0.45	0.29	8.38	12.00	8.75	8.05	35.20	
428	41588	12:31	M3	B	7.65	9.1	4.66		2.41	1.14	0.13	1.01	3.45	0.42	0.40	0.02	38.40	13.00	6.00	7.95	27.00	
442	41588	15:25	M3	T	7.40	5.75	4.08		3.88	1.04	0.17	0.87	3.82	0.89	0.22	0.67	45.00	14.00	8.00	5.67	24.00	330
443	41588	15:25	M3	B	7.40	7.95	5.54		3.37	1.07	0.17	0.90	6.58	0.78	0.65	0.13	61.00	14.00	8.45	6.67	18.00	190
461	41588	18:18	M3	T	7.60	9.10	3.80	9.90	2.65	1.15	0.13	1.02	4.37	0.52	0.45	0.07	60.40	12.00	9.35	8.32	31.60	
462	41588	18:18	M3	B	7.60	13.50	3.75	9.25	2.74	1.16	0.14	1.02	4.25	0.71	0.48	0.23	10.80	12.00	9.05	7.89	24.80	
474	41588	22:38	M3	T	7.7	5.7	3.40		2.17	1.13	0.11	1.02	3.78	0.53	0.37	0.16	42.40	10.0	8.60	8.20	16.8	
475	41588	22:38	M3	B	7.7	4.45	3.48		2.13	1.17	0.11	1.06	2.44	0.53	0.37	0.16	38.90	10.0	8.80	9.10	11.6	
495	41688	0:48	M3	T	7.5	7.8	5.90		5.11	0.99	0.26	0.73	7.94	1.41	0.58	0.83	86.10	11.0	6.80	5.38	22.0	
496	41688	0:48	M3	B	7.6	8.8	5.32		4.38	1.07	0.20	0.87	4.42	1.21	0.46	0.75	81.80	12.0	8.10	6.33	41.6	
514	41688	3:53	M3	T	7.3	6.55	4.84		3.72	1.12	0.20	0.92	4.37	0.98	0.23	0.75	7.50	12.0	6.50	5.48	30.0	
515	41688	3:53	M3	B	7.4	6.2	4.68		3.51	1.14	0.19	0.95	4.77	0.95	0.22	0.73	20.20	12.0	6.70	4.58	24.8	
537	41688	7:02	M3	T	7.4	8.85	3.80		2.30	1.04	0.14	0.90	3.72	0.66	0.46	0.20	15.70	10.0	8.20	8.97	16.8	
538	41688	9:42	M3	B	7.45	8.05	3.62		2.23	1.21	0.14	1.07	3.77	0.61	0.44	0.17	48.50	11.0	8.15	8.94	17.4	
550	41688	9:42	M3	B	7.35	5.4	3.25		2.13	1.22	0.13	1.09	3.46	0.90	0.12	0.78	20.30	11.0	8.00	8.26	19.7	20
551	41688	9:42	M3	B	7.35	4.9	2.90		2.47	1.20	0.15	1.05	4.53	0.70	0.13	0.57	11.40	12.0	7.50	9.95	24.0	110
569	41688	13:05	M3	T	7.2	5.1	4.35		2.13	1.22	0.13	1.09	3.46	0.90	0.12	0.78	20.30	11.0	8.00	8.26	19.7	
590	41688	15:55	M3	T	7.65	6.5	5.08		3.69	1.20	0.15	1.05	4.53	0.70	0.13	0.57	11.40	12.0	8.3	9.02	18.4	
591	41688	15:55	M3	B	7.7	5.9	4.70		3.84	1.10	0.19	0.91	4.79	0.95	0.25	0.70	76.60	12.0	8.5	6.59	26.0	40
605	41688	19:00	M3	T	7.6	9.1	5.45	12.0	2.41	1.20	0.16	1.04	3.18	0.66	0.05	0.46	64.40	11.0	9.4	8.40	60.7	
606	41688	19:00	M3	B	7.6	14.0	5.00	11.0	2.39	1.20	0.15	1.05	4.59	0.64	0.11	0.55	63.10	11.0	9.3	8.21	49.5	
624	41688	22:10	M3	T	7.7	5.4	3.15		1.49	1.14	0.12	1.02	2.48	0.41	0.05	0.34	38.20	10.0	8.9	9.21	28.0	
625	41688	22:10	M3	B	7.0	7.0	3.30		1.48	1.14	0.12	1.02	3.12	0.42	0.08	0.34	43.00	9.0	9.0	10.6	32.8	
643	41788	0:50	M3	T	7.7	16.0	4.30		1.89	1.20	0.14	1.06	2.85	0.44	0.06	0.38		11.0	9.0	9.23	66.5	
644	41788	0:50	M3	B	7.7	14.0	4.60		1.90	1.20	0.14	1.06	2.85	0.44	0.06	0.38		11.0	9.0	9.23	66.5	
656	41788	3:33	M3	T	7.5	6.1	4.75		2.94	1.14	0.17	0.97	3.59	0.75	0.05	0.75	57.70	11.0	7.65	7.02	34.4	
657	41788	3:33	M3	B	7.20	6.00	4.85		4.83	0.91	0.28	0.63	5.75	0.77	0.05	0.77	45.80	11.0	7.65	7.02	34.4	
675	41788	7:00	M3	T	7.50	7.10	6.28		2.83	1.15	0.16	0.99	3.89	0.81	0.32	0.49	58.40	10.00	8.70	7.32	30.80	
676	41788	7:00	M3	B	7.45	7.00	6.80		2.59	1.16	0.16	1.00	3.66	0.86	0.36	0.50	34.50	11.00	9.30	7.32	32.40	
688	41788	9:50	M3	T	7.50	6.20	3.55		1.77	1.22	0.13	1.09	2.68	0.60	0.25	0.35	41.30	11.00	8.30	9.81	28.40	130
689	41788	9:50	M3	B	7.50	6.20	3.25		1.75	1.22	0.12	1.10	2.88	0.61	0.24	0.37	33.50	11.00	7.80	8.30	23.60	220
708	41788	12:42	M3	T	7.6	4.5	3.25		2.59	1.20	0.13	1.07	3.29	0.67	0.29	0.38	53.40	12.0	9.7	8.75	18.8	
709	41788	12:42	M3	B	7.6	5.1	3.10		2.45	1.20	0.13	1.07	4.02	0.61	0.29	0.32	62.20	12.0	9.0	9.17	21.6	
719	41788	15:50	M3	T	7.6	6.5	5.78		3.72	1.10	0.18	0.92	6.33	0.93	0.39	0.54	60.80	14.0	9.3	6.56	29.5	40
720	41788	15:50	M3	B	7.6	6.0	5.30		3.47	1.10	0.17	0.93	5.68	1.95	1.42	0.53	50.50	14.0	9.7	6.76	33.5	140
740	41788	19:22	M3	T	7.55	6.9	4.55		3.00	1.20	0.15	1.05	5.13	0.72	0.32	0.40	37.70	13.0	10.4	8.76	38.3	
741	41788	19:22	M3	B	7.6	6.9	3.05		2.82	1.20	0.14	1.06	5.75	0.65	0.05	0.60	53.00	12.0	10.2	8.19	43.5	
753	41788	21:55	M3	T	7.5	5.6	4.30	8.10	1.78	**	0.12	1.08	3.49	0.51	0.21	0.30	46.10	11.0	9.6	9.74	26.5	
754	41788	21:55	M3	B	7.4	7.7	3.80	8.75	1.89	1.20	0.12	1.08	3.49	0.53	0.23	0.30	33.40	12.0	9.6	9.93	35.5	
772	41888	1:05	M3	T	6.9	5.0	3.00		2.16	1.20	0.13	1.07	3.42	0.59	0.26	0.33	9.50	12.0	9.2	9.28	19.5	
773	41888	1:05	M3	B	6.8	4.1	4.73		2.04	1.20	0.12	1.08	3.32	0.54	0.23	0.31	66.0	11.0	9.5	9.68	16.8	
785	41888	4:00	M3	T	7.5	4.5	4.67		3.00	1.17	0.16	1.01	3.75	0.86	0.36	0.50	42.00	13.0	8.9	7.42	30.5	
786	41888	4:00	M3	B	7.6	6.8	4.68		2.95	1.17	0.16	1.01	4.53	0.84	0.36	0.48	42.30	13.0	9.1	7.53	34.8	
804	41888	6:55	M3	T	7.6	5.9	4.60		3.10	1.15	0.17	0.98	5.33	0.89	0.38	0.51	51.50	12.0	8.6	8.00	25.2	
805	41888	6:55	M3	B	7.55	7.0	4.52		3.08	1.13	0.16	0.97	4.67	0.87	0.36	0.51	43.10	12.0	7.15	7.98	28.5	
817	41888	9:55	M3	T	7.5	7.3	4.18		2.03	1.20	0.12	1.08	4.29	0.81	0.51	0.32	21.50	12.0	6.03	9.37	23.5	
818	41888	9:55	M3	B	7.5	7.0	4.60		2.05	1.20	0.13	1.07	4.68	0.82	0.48	0.34	22.90	12.0	7.7	9.11	21.5	
828	41888	12:30	M3	T	7.30	5.1	3.05		1.89	1.17	0.13	1.04	2.75	0.58	0.25	0.33	24.00	12.00	8.97	9.64	18.0	

* Estimated Value

ANALYTICAL DATA FOR RIVER AND TRIBUTARIES
HACKENSACK RIVER STUDY

APRIL DRY EVENT - APRIL 12-22 1988

SAMPLE #	DATE	TIME	SITE	DEPTH	pH	TURBIDITY ntu	CD0020 mg/l	MHS mg/l	M03/M02 mg/l	M02 mg/l	M03 mg/l	TKN mg/l	TP04 mg/l	DP04 mg/l	ORGANIC P04 mg/l	CHLORO-A mg/m3	TEMP C	DO mg/l	SALINITY ppt	ISS mg/l	FEC. COLI org/100ml	(MPH)
839	41888	12:30	M3	B	7.20	4.7	2.55	1.85	1.18	0.12	1.06	2.43	0.49	0.19	0.30	25.70	12.0	8.1	9.41	16.8		
847	41888	15:52	M3	T	7.45	8.8	4.58	2.64	1.18	0.15	1.03	4.77	0.87	0.42	0.45	50.80	13.0	7.9	6.58	38.0	80	
848	41888	15:52	M3	B	7.50	5.0	4.42	3.42	1.25	0.14	1.11	5.11	0.78	0.38	0.40	43.70	13.0	8.9	8.01	39.6	40	
896	41888	19:08	M3	T	7.55	7.0	4.88	1.85	1.17	0.15	1.02	5.29	0.75	0.36	0.39		13.0	8.6	7.77	23.6		
897	41888	19:08	M3	B	7.55	6.1	5.02	2.62	1.18	0.15	1.05	5.30	0.77	0.36	0.41	38.10	12.0	8.8	7.51	36.8		
912	41888	21:48	M3	B	7.2	8.2	4.03	1.65	1.23	0.12	1.11	6.60	0.59	0.32	0.27	42.20	11.0	9.2	10.34	59.2		
913	41888	21:48	M3	B	7.7	8.4	4.05	1.61	1.21	0.12	1.09	4.10	0.51	0.32	0.28	54.30	11.0	9.1	10.47	34.0		
926	41888	0:49	M3	T	7.7	4.4	3.45	1.68	1.19	0.12	1.07	5.00	0.55	0.27	0.28	23.80	10.0	9.0	10.08	28.8		
927	41888	0:49	M3	B	7.6	4.6	3.05	1.51	1.18	0.12	1.06	2.98	0.52	0.25	0.27	29.30	10.0	8.7	10.34	18.3		
944	41888	3:40	M3	T	7.6	7.7	5.10	2.37	1.22	0.15	1.07	4.86	0.72	0.27	0.45	40.10	10.0	8.5	7.94	34.7		
945	41888	3:40	M3	B	7.5	9.5	5.20	2.33	1.21	0.15	1.06	5.45	0.70	0.30	0.40	25.00	10.0	9.0	8.04	75.0		
962	41888	7:05	M3	T	7.6	6.0	5.25	3.25	1.09	0.18	0.91	5.38	0.98	0.35	0.63	46.80	11.0	5.3	6.60	31.2		
963	41888	7:05	M3	B	7.6	5.5	4.85	3.07	1.11	0.17	0.94	6.21	0.92	0.32	0.60	95.90	11.0	6.5	6.67	33.6		
975	41888	9:29	M3	T	7.8	6.5	3.85	2.14	1.21	0.14	1.07	4.12	0.66	0.26	0.40	44.50	10.0	7.9	8.41	21.5		
976	41888	9:29	M3	B	7.8	7.8	3.48	2.15	1.23	0.15	1.08	3.81	0.66	0.27	0.39	47.00	10.0	8.5	8.61	27.5		
994	41888	12:41	M3	T	7.9	4.4	3.75	2.05	1.23	0.13	1.10	3.82	0.57	0.19	0.38	28.70	11.0	9.3	9.72	19.6		
995	41888	12:41	M3	B	7.4	4.2	2.85	1.82	1.21	0.12	1.09	5.42	0.71	0.28	0.43	30.50	11.0	9.0	7.42	30.5	140	
1013	41888	16:03	M3	T	7.6	6.1	4.15	2.50	1.14	0.15	0.99	5.90	0.66	0.27	0.39	41.70	11.0	9.2	8.98	22.8	170	
1014	41888	16:03	M3	B	7.6	6.3	3.65	2.37	1.18	0.14	1.04	5.09	0.66	0.32	0.49	43.00	11.0	8.7	6.65	28.0		
1033	41888	19:00	M3	T	7.5	4.9	5.85	2.82	1.15	0.15	1.00	3.96	0.81	0.32	0.49	43.00	11.0	8.7	6.65	28.0		
1034	41888	19:00	M3	B	7.6	4.6	4.90	2.89	1.18	0.15	1.03	3.57	0.79	0.31	0.48	81.00	11.0	9.0	7.22	18.7		
1046	41888	21:54	M3	T	7.4	6.2	3.92	2.70	1.26	0.12	1.14	2.86	0.59	0.26	0.33	48.70	11.0	10.6	9.20	24.0		
1047	41888	21:54	M3	B	7.6	4.1	3.70	1.98	1.28	0.12	1.16	2.48	0.55	0.22	0.33	51.10	10.0	10.1	9.11	24.7		
1065	42088	00:30	M3	T	7.3	4.7	3.70	1.95	1.26	0.12	1.14	2.56	0.54	0.32	0.22	10.50	10.0	9.7	9.73	13.2		
1066	42088	00:30	M3	B	7.4	6.0	3.88	1.99	1.25	0.12	1.13	2.72	0.54	0.33	0.21	84.60	10.0	9.9	9.92	18.0		
1078	42088	03:50	M3	T	7.6	5.6	4.65	2.54	1.37	0.15	1.22	3.35	0.62	0.36	0.26	51.50	9.0	9.6	7.37	16.0		
1079	42088	03:50	M3	B	7.6	4.8	4.70	2.53	1.36	0.14	1.22	2.54	0.65	0.37	0.28	52.50	10.0	9.7	7.43	19.2		
1099	42088	6:50	M3	T	7.7	5.6	6.70	4.26	1.14	0.19	0.95	4.60	1.0	0.62	0.38	54.70	11.0	6.3	6.70	22.0		
1100	42088	6:50	M3	B	7.7	8.1	7.20	3.78	1.19	0.18	1.01	4.32	0.91	0.54	0.37	76.30	11.0	3.9	7.20	26.0		
1112	42088	9:45	M3	T	7.8	5.1	4.90	2.64	1.28	0.15	1.13	4.10	0.93	0.37	0.56	43.60	11.0	8.9	8.50	21.2	300	
1113	42088	9:45	M3	B	7.9	6.0	5.10	2.69	1.30	0.15	1.15	3.23	0.90	0.37	0.53	44.00	11.0	8.8	8.42	20.4	400	
1138	42088	12:22	M3	T	7.8	4.4	4.38	2.65	1.31	0.14	1.17	4.62	0.61	0.32	0.29	45.80	12.0	9.22	8.62	16.4		
1139	42088	12:22	M3	B	7.8	4.6	4.60	2.27	1.14	0.14	1.00	3.27	0.54	0.29	0.25	42.80	12.0	9.16	8.57	19.2		
1152	42088	15:32	M3	T	7.5	4.3	4.50	2.58	1.26	0.15	1.11	2.90	0.68	0.39	0.29	59.70	11.0	9.9	8.60	15.2		
1153	42088	15:32	M3	B	7.6	4.4	4.28	2.29	1.26	0.14	1.12	2.19	0.58	0.35	0.15	46.00	11.0	10.1	8.78	20.4		
1185	42088	21:44	M3	T	7.6	6.1	4.70	2.39	1.24	0.14	1.10	5.49	0.65	0.35	0.30	40.20	11.0	10.6	8.67	24.4		
1186	42088	21:44	M3	B	7.7	6.7	4.62	2.38	1.27	0.15	1.12	2.99	0.69	0.36	0.33	15.00	11.0	10.4	8.57	26.0		
1204	42088	0:40	M3	T	7.5	4.9	3.92	1.97	1.37	0.14	1.23	5.02	0.54	0.41	0.13	41.80	11.0	10.3	9.45	17.6		
1205	42188	0:40	M3	B	7.6	5.0	4.75	1.75	1.24	0.12	1.12	4.90	0.45	0.34	0.11	36.40	11.0	11.1	9.03	20.4		
1212	42088	3:35	M3	T	7.6	6.0	4.00	1.72	1.25	0.14	1.11	4.01	0.66	0.39	0.27	56.20	11.0	9.9	9.28	22.8		
1213	42088	3:35	M3	B	7.6	5.6	4.03	2.25	1.29	0.13	1.16	3.68	0.60	0.38	0.25	40.70	12.0	11.0	9.13	32.8		
1236	42188	6:42	M3	T	7.5	4.8	4.22	2.69	1.27	0.17	1.03	4.74	0.93	0.58	0.32	58.2	12.0	8.9	6.23	33.2		
1237	42188	6:42	M3	B	7.6	5.3	4.28	2.84	1.28	0.15	1.13	3.91	0.75	0.49	0.26	73.8	12.0	9.1	8.46	28.0		
1250	42188	9:48	M3	T	7.6	4.8	4.22	2.69	1.27	0.07	1.20	3.42	0.74	0.64	0.10	91.6	12.0	10.3	7.53	14.0	140	
1251	42188	9:48	M3	B	7.6	5.2	5.02	2.66	1.30	0.15	1.15	3.51	0.73	0.47	0.26	39.8	12.0	8.4	8.24	19.6	20	
1279	42188	12:45	M3	T	7.5	4.9	3.95	2.12	1.31	0.13	1.18	3.36	0.63	0.37	0.26	63.2	12.0	8.7	9.29	15.2		
1280	42188	12:45	M3	B	7.6	4.9	3.82	2.06	1.34	0.13	1.21	3.97	0.57	0.41	0.16	38.1	12.0	9.8	9.61	18.4		
1292	42188	15:46	M3	T	7.6	4.4	5.10	2.37	1.29	0.15	1.14	4.53	0.71	0.42	0.29	50.0	12.0	10.9	8.76	17.6	40	
1293	42188	15:46	M3	B	7.8	4.1	4.05	2.32	1.27	0.14	1.13	3.99	0.67	0.39	0.28	55.2	12.0	10.1	9.37	14.0	80	

ANALYTICAL DATA FOR RIVER AND TRIBUTARIES
HACKENSACK RIVER STUDY

APRIL DRY EVENT - APRIL 12-22 1988

SAMPLE # HACK	DATE	TIME	SITE	DEPTH	pH	TURBIDITY ntu	CBOD20 mg/l	CBOD5 mg/l	NH3 mg/l	NO3/NO2 mg/l	NO3 mg/l	TKN mg/l	TP04 mg/l	OP04 mg/l	ORGANIC		CHLORID-A mg/l	TEMP C	DO mg/l	SALINITY ppt	TSS mg/l	(MPN) FEC. COLI org/100ml
															PD4 mg/l	PO4 mg/l						
1314	42188	19:10	W3	1	7.7	5.1	4.35		3.73	1.12	0.20	0.92	5.71	1.07	0.58	0.49	61.0	11.0	11.5	6.34	23.6	
1315	42188	19:10	W3	8	7.6	5.1	4.18		3.49	1.14	0.18	0.96	5.77	0.99	0.55	0.44	196	11.0	10.9	6.64	18.4	
1327	42188	22:30	W3	1	7.4	5.0	4.38		2.25	1.26	0.15	1.11	4.39	0.68	0.41	0.27		11.0	10.6	8.47	18.0	
1328	42188	22:30	W3	8	7.4	5.1	4.50		2.35	1.27	0.15	1.12	4.55	0.69	0.41	0.28	61.1	10.0	10.6	8.42	24.8	
1346	42288	11:31	W3	1	6.9	5.0	5.02		1.94	1.29	0.14	1.15	3.21	0.54	0.36	0.18	30.1	11.0	10.5	9.04	14.4	
1347	42288	11:31	W3	8	7.3	5.0	5.12		2.13	1.28	0.14	1.14	4.25	0.60	0.34	0.26	69.0	10.0	11.5	9.68	20.0	
1354	42288	3:21	W3	1	7.2	4.4	4.48		2.30	1.38	0.15	1.23	5.42	0.65	0.27	0.38	151	10.0	10.6	8.31	16.8	
1355	42288	3:21	W3	8	7.4	4.4	4.60		1.96	1.33	0.14	1.19	2.44	0.54	0.22	0.32	38.7	10.0	10.6	8.88	14.8	
1378	42288	6:38	W3	1	7.4	4.9	5.40		3.42	1.20	0.19	1.01	5.57	1.03	0.47	0.56	51.0	11.0	9.3	7.75	22.4	
1379	42288	6:38	W3	8	7.5	5.1	4.82		2.89	1.24	0.17	1.07	4.24	0.90	0.40	0.50	3.80	11.0	10.1	8.42	17.4	

ANALYTICAL DATA FOR RIVER AND TRIBUTARIES
HACKENSACK RIVER STUDY

APRIL DRY EVENT - APRIL 12-22 1988

SAMPLE #	DATE	TIME	SITE	DEPTH	pH	TURBIDITY ntu	CBOD5 mg/l	CBOD20 mg/l	WH3 mg/l	NO3/NO2 mg/l	NO3 mg/l	TKN mg/l	TP04 mg/l	OP04 mg/l	P04 mg/l	CHLORO-A mg/L	TEMP C	DO mg/l	SALINITY ppt	TSS mg/l	FEC. COLI org/100ml	
5	41288	10:20	M4	T	7.2	5.5	4.25		5.70	0.87	0.19	0.68	7.44	1.14	0.80	0.34	107.0	13.0	6.90	4.76	7.0	80
6	41288	10:20	M4	B	7.2	5.0	3.45		6.18	0.89	0.17	0.72	7.42	1.01	0.74	0.27	109.0	13.0	7.40	4.78	3.75	20
30	41288	13:23	M4	T	7.2	6.5	3.75		5.32	0.79	0.22	0.57	5.72	1.12	0.86	0.26	141.0	17.0	7.50	4.29	29.8	
31	41288	13:23	M4	B	7.3	7.0	3.65		5.19	0.80	0.21	0.59	5.55	1.10	0.84	0.26	65.2	17.0	7.10	4.79	65.2	
38	41288	16:10	M4	T	7.30	6.00	3.10		4.47	0.87	0.17	0.70	4.89	0.99	0.73	0.26	101.00	12.00	10.10	5.86	22.80	40
39	41288	16:10	M4	B	7.30	9.50	3.15		4.18	0.88	0.16	0.72	5.66	0.92	0.69	0.23	53.40	12.00	8.40	5.18	48.80	130
56	41288	19:25	M4	B	6.50	5.00	2.80		3.58	0.95	0.13	0.82	4.72	0.79	0.56	0.23	67.50	12.00	11.00	6.59	24.60	
57	41288	19:25	M4	T	6.90	3.60	3.20		3.58	0.94	0.13	0.81	5.07	0.80	0.57	0.23	67.00	12.00	11.80	6.69	20.40	
76	41288	22:40	M4	T	6.9	5.5	4.70		4.94	0.86	0.20	0.66	5.64	1.09	0.77	0.32	55.4	12.0	9.20	5.40	24.4	
77	41288	22:40	M4	B	7.0	6.0	4.95		4.90	0.87	0.21	0.66	5.91	1.10	0.76	0.34	48.5	15.0	10.0	5.31	23.2	
95	41388	1:50	M4	T	7.2	4.5	3.95		5.30	0.89	0.24	0.65	5.84	1.23	0.84	0.39	72.3	15.0	6.70	5.12	21.2	
96	41388	1:50	M4	B	7.2	5.5	3.20		4.86	0.91	0.21	0.70	7.93	1.21	0.79	0.42	90.7	15.0	6.30	5.22	29.6	
104	41388	4:24	M4	T	7.5	7.0	2.95		4.80	1.74	0.18	1.56	8.05	1.19	0.74	0.45	74.7	11.0	7.20	5.65	22.0	
105	41388	4:24	M4	B	7.4	5.6	3.40		4.47	0.95	0.17	0.78	8.13	1.14	0.71	0.43	58.6	12.0	5.90	5.85	40.8	
128	41388	7:11	M4	T	7.5	4.4	2.85		3.60	1.04	0.14	0.90	5.60	0.88	0.58	0.30	76.5	10.0	6.26	6.66	17.2	
129	41388	7:11	M4	B	7.5	6.2	2.70		3.43	1.05	0.13	0.92	5.41	0.86	0.55	0.31	57.9	10.0	6.90	6.82	19.6	
142	41388	10:17	M4	T	7.6	6.0	2.00	10.80	4.50	0.95	0.17	0.78	5.45	1.08	0.74	0.34	72.2	13.0	6.80	7.77	72.2	170
143	41388	10:17	M4	B	7.6	6.6	2.00	13.2	4.22	0.98	0.16	0.82	5.82	1.03	0.70	0.33	75.2	15.0	6.40	6.74	72.7	210
161	41388	13:20	M4	T	7.60	6.30	5.00		5.17	0.89	0.23	0.66	7.22	1.34	0.83	0.51	8.81	16.00	6.20	4.26	20.70	
162	41388	13:20	M4	B	7.60	6.70	4.75		4.99	0.90	0.23	0.67	4.90	1.35	0.82	0.53	11.90	16.00	5.30	4.79	27.50	
179	41388	16:20	M4	T	7.20	6.10	5.40		4.45	0.95	0.19	0.76	6.65	1.01	0.72	0.29	32.50	15.00	10.40	5.46	28.00	500
180	41388	16:20	M4	B	6.90	7.90	5.53		4.37	0.87	0.18	0.69	7.05	0.81	0.68	0.13	87.80	15.00	8.70	5.40	34.00	120
199	41388	19:35	M4	T	7.60	5.20	6.10		3.49	1.05	0.14	0.91	7.53	0.81	0.56	0.25	94.90	12.00	10.10	4.73	20.60	
200	41388	19:35	M4	B	7.70	6.50	5.30		3.28	1.06	0.13	0.93	6.43	0.73	0.53	0.20	86.40	13.00	10.30	7.19	26.00	
212	41388	22:35	M4	T	7.40	5.60	4.40		4.65	0.94	0.18	0.76	8.14	1.16	0.74	0.42	32.40	13.00	9.40	6.08	14.60	
213	41388	22:35	M4	B	7.50	5.60	3.60		3.91	1.00	0.16	0.84	6.60	1.02	0.64	0.38	26.30	12.00	9.10	4.48	21.80	
232	41488	1:30	M4	T	7.3	6.1	4.52		5.20	0.94	0.24	0.70	8.75	1.32	0.77	0.55	79.00	15.0	7.30	5.21	20.0	
233	41488	1:30	M4	B	7.4	6.3	4.40		4.88	0.95	0.23	0.72	6.61	1.13	0.76	0.37	58.90	16.0	7.50	5.20	27.0	
245	41488	4:10	M4	T	7.4	5.9	6.25		4.92	0.97	0.24	0.73	8.30	1.16	0.76	0.37	78.00	15.0	7.20	4.80	16.4	
246	41488	4:10	M4	B	7.4	9.4	4.30		4.49	1.00	0.20	0.73	6.47	1.11	0.86	0.13	14.00	14.0	7.30	5.05	45.5	
264	41488	7:16	M4	T	7.3	4.5	4.22		3.63	1.08	0.15	0.93	4.38	0.86	0.58	0.30	43.20	10.0	6.58	6.58	14.4	
265	41488	7:16	M4	B	7.4	5.2	3.73		5.27	1.09	0.14	0.95	3.86 +	0.87	0.76	0.37	22.50	11.0	7.2	6.67	20.4	
277	41488	9:46	M4	T	7.1	4.5	3.65		2.92	1.09	0.15	0.94	5.11	0.88	0.80	0.10	8.10	12.0	7.10	7.10	18.4	220
278	41488	9:46	M4	B	7.1	5.1	3.85		2.22	1.12	0.13	0.99	5.12	0.78	0.78	0.10	20.60	12.0	5.30	7.45	17.6	110
298	41488	12:55	M4	T	7.20	7.00	3.60	9.72	4.84	0.97	0.23	0.78	7.40	1.18	0.78	0.10	87.60	12.00	6.80	5.78	24.80	
299	41488	12:55	M4	B	7.20	5.80	4.15	9.80	4.67	1.00	0.22	0.78	7.32	1.12	0.78	0.10	12.20	17.00	10.00	5.09	31.30	60
313	41488	16:00	M4	T	7.40	6.40	4.20		5.11	0.96	0.25	0.71	7.48	1.22	0.78	0.10	22.40	17.00	7.60	5.22	22.70	90
314	41488	16:00	M4	B	7.40	5.30	5.50		7.46	0.92	0.24	0.68	7.61	1.20	0.64	0.38	85.40	17.00	7.60	5.22	22.70	
321	41488	19:20	M4	T	9.00	6.90	15.00		1.16	0.83	0.10	0.73	4.43	0.64	0.40	0.14	34.40	11.00	20.80	2.15	43.30	
333	41488	19:05	M4	T	7.3	4.3	5.30		3.55	1.05	0.15	0.90	4.40	1.14	0.82	0.10	52.30	13.0	9.90	6.23	24.0	
334	41488	19:05	M4	B	7.5	5.7	4.65		3.84	1.06	0.15	0.91	3.66	1.10	0.82	0.10	82.70	13.0	9.90	6.04	30.0	
346	41488	21:55	M4	T	7.2	4.6	4.90		3.32	1.07	0.15	0.92	5.30	0.85	0.72	0.10	15.10	12.0	9.50	7.12	10.4	
347	41488	21:55	M4	B	7.4	4.8	5.42		2.85	1.11	0.13	0.98	4.79	0.75	0.75	0.10	16.1	12.0	7.40	6.59	10.7	
359	41588	00:57	M4	T	7.5	6.3	6.52		4.87	0.97	0.24	0.73	4.57	1.07	0.78	0.10	40.70	15.0	7.20	4.51	21.6	
360	41588	00:57	M4	B	7.5	5.8	6.32		4.66	0.97	0.23	0.74	6.02	1.18	0.78	0.10	23.00	16.0	8.00	4.63	22.4	
372	41588	3:56	M4	T	7.4	7.4	5.40		5.22	0.91	0.20	0.71	6.49	1.29	0.51	0.78	12.80	16.0	5.80	4.74	25.6	
373	41588	3:56	M4	B	7.4	7.4	5.70		5.20	0.91	0.30	0.61	6.66	1.27	0.64	0.63	9.60	17.0	5.90	4.72	26.8	
391	41588	7:11	M4	T	7.65	7.1	4.60		3.65	1.05	0.12	3	5.51	0.93	0.34	0.59	38.30	13.0	7.70	5.97	29.2	
404	41588	9:59	M4	T	7.65	5.1	5.12		3.12	1.09	0.16	73	4.78	0.92	0.47	0.45	6.70	12.00	8.20	7.09	20.40	50

ANALYTICAL DATA FOR RIVER AND TRIBUTARIES
HACKENSACK RIVER STUDY

APRIL DRY EVENT - APRIL 12-22 1988

SAMPLE #	DATE	TIME	SITE	DEPTH	pH	TURBIDITY ntu	CBOD20 mg/l	NO3 mg/l	NO3/NO2 mg/l	NO2 mg/l	TKN mg/l	TP04 mg/l	OP04 mg/l	ORGANIC P04 mg/l	CHLORD-A ug/l	TEMP C	DO mg/l	SALINITY ppt	TSS mg/l	(MPN) FEC. COLI org/100ml
405	41588	9:59	M4	B	7.65	4.9	4.68	2.90	1.11	0.16	0.95	0.91	0.48	0.43	13.80	12.00	8.80	6.72	20.00	110
429	41588	12:52	M4	T	7.5	7.5	6.18	4.45	0.97	0.24	0.73	1.04	0.74	0.30	56.20	14.00	4.60	5.12	21.50	
430	41588	12:52	M4	B	7.5	8.4	5.78	4.17	1.00	0.22	0.78	0.98	0.70	0.28	47.70	15.00	5.60	5.59	24.50	
444	41588	16:40	M4	T	7.30	8.80	6.58	5.54	0.88	0.30	0.58	1.21	1.04	0.17	86.10	18.00	4.90	4.73	24.40	80
445	41588	16:40	M4	B	7.30	8.00	5.25	5.71	0.89	0.30	0.59	1.10	0.87	0.23	11.60	18.00	5.00	5.10	25.50	40
463	41588	18:50	M4	T	7.50	7.70	5.25	4.29	1.03	0.20	0.83	0.98	0.89	0.29	86.10	14.00	7.00	6.19	42.40	
464	41588	18:50	M4	B	7.45	16.00	4.68	4.13	1.02	0.20	0.82	1.00	0.64	0.36	67.60	14.00	7.00	6.41	60.40	
476	41588	23:00	M4	T	7.6	5.0	5.22	3.70	1.14	0.17	0.97	0.93	0.60	0.33	62.80	10.0	7.60	6.78	13.2	
477	41588	23:00	M4	B	7.6	4.8	4.98	3.58	1.13	0.17	0.96	0.89	0.60	0.29	70.40	10.0	7.80	7.15	17.2	
497	41688	1:10	M4	T	7.7	20.0	4.02	5.71	0.89	0.29	0.60	0.98	0.64	0.34	23.20	13.0	4.20	4.14	76.5	
498	41688	1:10	M4	B	7.65	7.3	7.18	5.72	0.90	0.29	0.61	1.39	0.73	0.66	94.10	13.0	4.10	4.26	48.8	
516	41688	4:20	M4	T	7.2	9.1	6.40	5.33	0.92	0.29	0.63	1.42	0.37	1.05	61.00	15.0	4.00	3.81	28.4	
517	41688	4:20	M4	B	7.2	9.4	6.30	5.27	0.91	0.29	0.62	1.40	0.38	1.02	8.90	14.0	3.90	3.68	36.0	
539	41688	7:30	M4	T	7.3	9.1	4.45	3.55	1.10	0.20	0.90	0.99	0.68	0.31	50.60	12.0	5.20	6.88	40.0	
540	41688	7:30	M4	B	7.3	14.00	5.05	3.56	1.11	0.20	0.91	1.07	0.68	0.39	11.00	12.0	5.40	6.70	53.2	
552	41688	10:01	M4	T	7.2	5.9	5.10	3.75	1.10	0.20	0.90	0.98	0.62	0.36	12.90	12.0	6.50	6.22	29.0	800
553	41688	10:01	M4	B	7.4	5.4	4.55	3.53	1.12	0.19	0.93	0.96	0.62	0.34	21.00	12.0	6.80	6.78	20.8	232
570	41688	13:05	M4	B	7.3	5.4	3.55	2.54	1.20	0.15	1.05	0.70	0.14	0.56	50.70	12.0	8.0	9.98	22.0	
571	41688	13:20	M4	T	7.2	7.1	6.63	4.79	0.97	0.26	0.71	1.27	0.32	0.95	83.20	14.0	5.0	4.75	24.0	
592	41688	16:25	M4	T	7.5	9.0	5.98	5.18	0.90	0.29	0.61	1.32	0.36	0.96	84.20	14.0	5.5	4.52	29.2	40
593	41688	16:25	M4	B	7.5	8.0	5.08	5.18	0.92	0.24	0.64	0.90	0.36	0.54	83.80	14.0	4.9	4.18	31.2	<20
607	41688	19:25	M4	T	7.4	8.5	6.08	4.17	1.00	0.24	0.76	1.16	0.31	0.85	61.20	12.0	7.0	5.02	36.4	
608	41688	19:25	M4	B	7.4	9.9	5.30	4.21	1.00	0.23	0.77	1.15	0.28	0.87	92.00	12.0	6.9	5.68	52.0	
626	41688	22:37	M4	T		5.5	4.98	2.75	1.12	0.17	0.95	0.76	0.21	0.55	73.50	11.0	8.5	7.06	23.0	
627	41688	22:37	M4	B		6.9	4.93	2.65	1.20	0.17	1.03	0.81	0.17	0.64	48.20	11.0	9.2	7.53	22.7	
645	41788	1:12	M4	T	7.4	7.4	6.85	3.97	1.02	0.22	0.72	1.13	0.33	0.80	59.60	14.0	7.3	4.44	60.0	
646	41788	1:12	M4	B	7.4	7.8	6.85	3.97	1.02	0.22	0.80	1.14	0.26	0.74	58.80	13.0	7.5	4.19	53.0	
658	41788	3:54	M4	T	7.20	9.40	6.13	4.70	0.90	0.28	0.62	1.25	0.40	0.85	11.70	13.0	4.60	4.46	7.20	
659	41788	3:54	M4	B	7.10	14.00	7.40	3.49	0.93	0.23	0.70	1.10	0.39	0.28	54.10	13.0	5.65	4.50	3.17	
677	41788	7:24	M4	T	7.40	8.00	5.58	4.34	0.94	0.23	0.71	1.21	0.44	0.77	45.30	12.00	6.90	4.91	26.50	
678	41788	7:24	M4	B	7.35	8.10	8.40	4.22	0.94	0.22	0.72	1.40	0.65	0.75	40.40	13.00	1.50	5.03	36.00	
690	41788	10:10	M4	T	7.50	5.85	6.08	3.24	1.10	0.18	0.92	1.01	0.41	0.60	54.60	12.00	7.50	6.33	24.20	198
691	41788	10:10	M4	B	7.50	5.35	4.20	3.26	1.10	0.18	0.92	0.99	0.38	0.61	39.30	12.00	6.55	5.66	16.20	130
710	41788	13:12	M4	T	7.4	5.1	5.98	4.67	0.96	0.21	0.75	1.18	0.48	0.70	70.50	14.0	7.2	5.39	20.4	
711	41788	13:12	M4	B	7.45	5.75	5.96	4.50	1.00	0.20	0.80	1.26	0.61	0.65	62.60	14.0	6.45	5.59	20.0	
721	41788	16:12	M4	T	7.45	9.05	7.34	5.85	0.85	0.25	0.60	1.57	0.83	0.74	73.70	16.0	7.35	3.78	35.5	265
722	41788	16:12	M4	B	7.45	8.25	7.98	5.78	0.96	0.26	0.64	1.43	0.67	0.76	83.60	16.0	6.7	3.81	39.5	40
742	41788	19:40	M4	T	7.5	13.5	5.72	4.86	0.97	0.22	0.75	1.22	0.50	0.72	48.70	14.0	8.75	4.98	36.7	
743	41788	19:40	M4	B	7.45	10.0	5.94	4.68	0.97	0.21	0.76	1.24	0.55	0.69	62.00	14.0	8.15	5.05	51.3	
755	41788	22:19	M4	T	7.45	18.2	5.20	3.50	1.11	0.18	0.93	1.38	0.85	0.53	65.90	13.0	9.5	6.15	30.0	
756	41788	22:19	M4	B	7.5	6.95	5.73	3.44	1.10	0.17	0.93	1.06	0.31	0.55	56.50	13.0	9.35	5.46	18.2	
774	41888	1:25	M4	T	7.6	5.35	5.95	3.82	1.05	0.19	0.86	1.03	0.52	0.51	25.80	14.0	9.65	6.10	13.8	
775	41888	1:25	M4	B	7.5	6.85	5.11	3.51	1.10	0.17	0.93	1.05	0.54	0.51	31.60	13.0	9.0	6.28	16.6	
787	41888	4:30	M4	T		13.0	6.88	5.25	0.87	0.26	0.61	1.46	0.69	0.77	48.80	14.0	6.75	4.51	34.0	
788	41888	4:30	M4	B		9.6	7.05	5.15	0.87	0.25	0.62	1.39	0.61	0.78	48.00	13.0	5.7	4.56	32.0	
806	41888	7:15	M4	T	7.5	8.0	5.93	5.24	0.87	0.25	0.62	1.41	0.63	0.78	209.00	14.0	5.7	4.75	22.4	
807	41888	7:15	M4	B	7.4	9.7	6.15	5.19	0.88	0.25	0.63	1.41	0.65	0.76	45.00	14.0	5.75	4.96	35.3	
819	41888	10:10	M4	T	7.55	6.9	6.20	3.43	1.09	0.17	0.92	0.83	0.28	0.55	43.60	12.0	6.6	6.21	22.0	
820	41888	10:10	M4	B	7.55	5.8	4.38	3.45	1.09	0.17	0.92	0.96	0.40	0.56	4.80	13.0	7.2	6.72	21.2	

ANALYTICAL DATA FOR RIVER AND TRIBUTARIES
HACKENSACK RIVER STUDY

APRIL DRY EVENT - APRIL 12-22 1988

SAMPLE #	DATE	TIME	SITE	DEPTH	pH	TURBIDITY ntu	CR005 mg/l	CR0020 mg/l	MN3 mg/l	MN3/MN2 mg/l	MN2 mg/l	MN3 mg/l	TKM mg/l	TP04 mg/l	DP04 mg/l	ORGANIC P04 mg/l	CHLORO-A mg/l	TEMP C	DO mg/l	SALINITY ppt	TSS mg/l	(FEC) FEC. COLI org/100ml
840	41888	12:42	M4	1	7.28	5.0	4.50		3.53	1.11	0.17	0.94	5.32	0.92	0.41	0.51	22.10	13.0	6.5	6.18	21.2	
841	41888	12:42	M4	8	7.20	5.3	3.30		3.05	1.15	0.17	0.98	5.18	0.88	0.39	0.49	47.20	13.0	7.42	7.06	20.0	
849	41888	16:07	M4	1	7.20	7.0	4.05		5.53	0.95	0.26	0.69	7.97	1.27	0.55	0.72	58.70	16.0	6.0	4.71	32.0	230
850	41888	16:07	M4	8	7.30	7.9	6.50		4.96	0.93	0.24	0.69	8.53	1.26	0.58	0.68	56.40	16.0	6.0	4.70	36.0	130
898	41888	19:28	M4	1	7.5	8.0	5.58		4.67	0.94	0.23	0.71	7.56	1.17	0.53	0.64	52.40	14.0	5.9	4.86	29.6	
899	41888	19:28	M4	8	7.4	9.6	6.32		4.54	0.96	0.22	0.74	7.65	1.33	0.70	0.63	56.30	14.0	5.8	4.96	39.3	
914	41888	22:07	M4	1	7.7	6.3	5.60		3.04	1.12	0.16	0.96	5.90	0.90	0.44	0.46	31.20	12.0	8.3	7.45	24.4	
915	41888	22:07	M4	8	7.6	6.9	5.40		2.92	1.15	0.16	0.99	<0.20	0.93	0.39	0.54	48.60	11.0	8.4	7.71	36.0	
928	41888	1:15	M4	1	7.6	6.0	5.50		3.92	1.02	0.19	0.83	4.42	1.10	0.50	0.60	96.10	11.0	6.8	6.32	24.8	
929	41888	1:15	M4	8	7.5	5.0	4.60		2.78	1.16	0.16	1.00	4.74	0.85	0.46	0.39	35.00	11.0	8.4	7.96	18.8	
946	41888	4:05	M4	1	7.3	7.7	6.35	14.2	4.78	0.96	0.25	0.71	9.12	1.29	0.46	0.83	37.70	13.0	5.1	4.37	29.5	
947	41888	4:05	M4	8	7.5	7.6	7.42	15.4	4.29	1.00	0.23	0.77	7.29	1.20	0.44	0.76	60.60	13.0	6.1	5.34	30.4	
944	41888	7:20	M4	1	7.6	13.0	6.78		5.09	0.88	0.26	0.62	6.29	1.29	0.50	0.79	144.00	11.0	2.9	4.46	42.4	
965	41888	7:20	M4	8	7.5	14.0	6.78		4.71	0.89	0.25	0.64	6.28	1.33	0.57	0.76	60.90	11.0	3.2	4.66	46.4	
977	41888	9:45	M4	1	7.6	8.4	4.80		3.73	1.03	0.21	0.82	5.99	1.10	0.43	0.67	55.10	12.0	4.6	5.86	26.5	
978	41888	9:45	M4	8	7.6	9.0	5.58		3.73	1.04	0.21	0.83	5.03	1.10	0.43	0.67	10.80	13.0	5.5	5.74	28.0	
996	41888	13:00	M4	1	7.6	5.1	15.95		3.37	1.11	0.18	0.93	4.80	0.95	0.34	0.61	33.80	12.0	8.2	6.84	16.8	
997	41888	13:00	M4	8	7.6	4.9	4.90		3.39	1.13	0.17	0.96	2.40	0.87	0.33	0.54	46.30	13.0	7.3	6.89	19.2	
1015	41888	16:27	M4	1	7.3	9.4	7.40		4.91	0.96	0.24	0.72	8.70	1.21	0.52	0.69	32.40	14.0	5.8	5.20	36.5	110
1016	41888	16:27	M4	8	7.4	12.0	6.18		5.10	0.99	0.23	0.76	8.32	1.15	0.34	0.81	46.50	14.0	5.9	5.39	22.0	170
1035	41888	19:22	M4	1	7.3	7.6	6.60		5.29	0.93	0.24	0.69	7.28	1.29	0.49	0.80	77.00	14.0	5.6	4.56	27.3	
1036	41888	19:22	M4	8	7.3	7.0	6.05		4.54	0.96	0.21	0.75	6.12	1.21	0.52	0.69	77.00	14.0	5.2	5.00	24.0	
1048	41888	22:11	M4	1	6.9	4.5	4.85		3.18	2.96	0.17	0.00	4.44	0.97	0.42	0.55	44.70	11.0	8.9	6.72	15.2	
1049	41888	22:11	M4	8	7.2	7.6	5.10		3.05	2.74	0.17	0.00	4.31	0.95	0.43	0.52	103.00	12.0	8.7	6.90	26.0	
1067	42088	01:00	M4	1	7.2	4.3	5.80		3.86	1.11	0.18	0.93	5.45	0.98	0.59	0.39	49.30	11.0	8.0	6.42	18.0	
1068	42088	01:00	M4	8	7.3	5.3	5.45		3.27	1.18	0.16	1.02	4.17	0.89	0.51	0.38	107.00	12.0	8.6	6.78	16.0	
1080	42088	04:05	M4	1	7.5	8.4	6.40		5.76	1.09	0.26	0.82	9.12	1.35	0.83	0.63	71.80	12.0	5.7	4.70	20.0	
1101	42088	7:10	M4	1	7.7	8.9	4.50	13.6	5.86	0.93	0.27	0.66	9.12	1.35	0.83	0.52	88.10	13.0	3.9	4.71	24.0	
1102	42088	7:10	M4	8	7.7	9.1	4.52	12.4	5.37	0.95	0.26	0.69	7.09	1.33	0.78	0.55	84.60	13.0	5.8	4.78	27.0	
1114	42088	10:00	M4	1	7.7	7.7	6.00		4.84	1.05	0.22	0.83	6.87	1.23	0.74	0.49	63.20	13.0	5.9	5.68	18.8	
1115	42088	10:00	M4	8	7.7	9.0	4.40		5.04	1.06	0.22	0.84	6.45	1.23	0.74	0.52	72.00	13.0	6.0	5.86	29.2	200
1141	42088	12:39	M4	1	7.4	5.8	5.85		4.44	1.15	0.20	0.95	5.04	1.04	0.51	0.33	96.50	15.0	7.3	4.94	30.0	500
1154	42088	15:36	M4	1	7.4	6.0	4.05		4.14	0.93	0.19	0.74	5.39	1.02	0.56	0.46	63.20	13.0	7.85	6.31	18.8	
1155	42088	15:36	M4	8	7.5	7.2	6.80		5.60	0.98	0.26	0.72	4.91	1.29	0.77	0.52	79.50	15.0	9.2	5.87	23.5	
1174	42088	19:08	M4	1	7.4	7.4	4.32		4.89	1.04	0.22	0.82	4.25	1.18	0.78	0.40	43.50	14.0	8.8	4.48	26.8	
1175	42088	19:08	M4	8	7.3	8.8	9.00		6.04	0.93	0.29	0.84	6.67	1.43	0.80	0.63	128.00	15.0	8.4	4.75	26.4	
1187	42088	22:08	M4	1	7.4	6.7	6.02		5.49	0.95	0.27	0.68	7.31	1.41	0.75	0.45	79.60	15.0	6.4	4.75	26.4	
1188	42088	22:08	M4	8	7.5	13.0	7.00		4.08	1.01	0.23	0.78	5.44	1.33	0.83	0.50	77.20	13.0	8.5	5.69	30.8	
1206	42088	0:58	M4	1	7.5	6.0	6.58		3.58	1.22	0.18	1.04	5.76	0.96	0.84	0.32	58.00	12.0	9.9	6.15	18.0	
1214	42088	3:54	M4	1	7.4	6.6	5.52		3.74	1.15	0.18	0.97	5.48	0.97	0.62	0.35	49.80	12.0	7.7	5.54	17.6	
1215	42088	3:54	M4	8	7.4	7.2	6.50		5.23	1.01	0.22	0.79	7.23	1.30	0.80	0.50	57.10	13.0	9.0	6.04	24.4	
1238	42188	7:02	M4	1	7.3	8.4	7.10	16.4	5.87	0.98	0.27	0.71	7.44	1.42	0.90	0.52	69.6	15.0	6.2	4.76	26.8	
1252	42188	10:14	M4	1	7.3	7.5	7.88	20.6	5.63	0.99	0.26	0.73	7.80	1.44	0.90	0.54	97.1	15.0	5.6	5.20	25.2	
1253	42188	10:14	M4	8	7.4	6.7	6.05		5.19	0.98	0.25	0.00	7.14	1.42	0.84	0.58	75.4	15.0	5.8	5.25	25.0	170
1281	42188	13:07	M4	1	7.6	6.0	4.32		4.53	1.06	0.21	0.00	6.40	1.24	0.77	0.47	44.5	15.0	6.7	5.91	22.8	70
1282	42188	13:07	M4	8	7.6	6.4	4.60		3.75	1.09	0.20	0.00	5.00	1.14	0.68	0.46	89.6	14.0	6.8	5.68	27.2	
									4.11	1.12	0.19	5.01	5.01	1.04	0.69	0.35	82.5	14.0	7.3	6.58	24.8	

ANALYTICAL DATA FOR RIVER AND TRIBUTARIES
HACKENSACK RIVER STUDY

APRIL DRY EVENT - APRIL 12-22 1988

SAMPLE #	DATE	TIME	SITE	DEPTH	pH	TURBIDITY ntu	CBOD5 mg/l	CBOD20 mg/l	NH3 mg/l	NO3/NO2 mg/l	NO3 mg/l	TKN mg/l	TP04 mg/l	OP04 mg/l	ORGANIC PD4 mg/l	CHLORO-A mg/l	TEMP C	DO mg/l	SALINITY ppt	TSS mg/l	FEC. COLI org/100ml	(MPN)
1294	42188	16:12	M4	T	7.5	7.3	8.40		5.71	0.93	0.27	0.66	7.78	1.53	<0.05	1.53	94.6	15.0	9.6	5.27	22.0	3,000
1295	42188	16:12	M4	B	7.5	6.2	7.12		5.01	1.00	<0.05	1.00	7.81	1.31	<0.05	1.31	70.3	14.0	9.1	5.86	21.6	80
1316	42188	19:25	M4	T	0.2	8.7	920		5.43	0.94	0.29	0.63	8.58	1.39	0.81	0.58	80.3	14.0	7.5	4.62	28.8	
1317	42188	19:25	M4	B	7.2	8.6	8.70		4.11	0.93	0.29	0.64	7.70	1.40	0.80	0.60	3.70	14.0	9.2	4.57	28.2	
1329	42188	23:15	M4	T	7.3	7.1	6.45		4.75	1.01	0.23	0.78	7.44	1.19	0.71	0.48	93.2	12.0	9.2	5.41	20.0	
1330	42188	23:15	M4	B	7.3	7.0	9.80		4.45	1.01	0.23	0.78	7.00	1.21	0.71	0.50	74.1	12.0	9.4	4.09	29.0	
1348	42288	1:47	M4	T	7.1	6.9	6.88		4.20	1.07	0.22	0.85	6.30	1.10	0.67	0.43	55.6	13.0	10.0	6.01	31.5	
1349	42288	1:47	M4	B	7.3	7.9	6.40		4.08	1.20	0.20	1.00	5.70	0.97	0.59	0.38	<2.38	12.0	10.5	5.67	18.8	
1356	42288	3:38	M4	T	7.0	6.1	5.98		4.24	1.09	0.24	0.95	6.70	1.23	0.52	0.71	57.0	10.0	8.6	5.65	18.4	
1357	42288	3:38	M4	B	7.3	5.5	5.58		4.27	1.18	0.22	0.94	5.87	1.13	0.49	0.64	100	10.0	10.3	6.11	21.0	
1380	42288	6:55	M4	T	7.1	7.9	6.78		5.79	1.00	0.32	0.68	7.80	1.53	0.67	0.86	97.0	14.0	5.6	4.59	23.0	
1381	42288	6:55	M4	B	7.2	7.4	6.45		5.11	1.02	0.28	0.74	7.45	1.45	0.64	0.81	36.4	14.0	6.4	5.55	26.4	

ANALYTICAL DATA FOR RIVER AND TRIBUTARIES
HACKENSACK RIVER STUDY

APRIL DRY EVENT - APRIL 12-22 1988

SAMPLE #

HACK	DATE	TIME	SITE	DEPTH	pH	TURBIDITY ntu	CBOD20 mg/l	WM3 mg/l	M03/M02 mg/l	M02 mg/l	M03 mg/l	TKM mg/l	TP04 mg/l	OP04 mg/l	ORGANIC PD4 mg/l	CHLORO-A mg/l	TEMP C	DO mg/l	SALINITY ppt	TSS mg/l	FEC. COLI org/100ml	(HFM)
7	4/28/88	10:44	W5	1	7.2	13.0	3.85	7.37	0.78	0.22	0.56	8.21	0.90	0.79	0.11	179.0	15.0	6.10	3.70	12.0	130	
8	4/28/88	10:44	W5	8	7.2	16.0	4.30	3.97	0.78	0.22	0.56	9.18	0.19	0.78	0.10	158.0	16.0	5.35	4.21	63.0	230	
32	4/28/88	13:53	W5	1	7.3	9.3	3.85	3.38	0.78	0.17	0.61	2.38	0.80	0.52	0.28	176.0	16.0	10.5	3.43	37.6		
33	4/28/88	13:53	W5	8	7.3	9.0	4.48	4.05	0.77	0.17	0.60	6.00	0.89	0.54	0.35	128.0	16.0	10.2	3.00	23.2		
40	4/28/88	16:30	W5	1	7.30	8.50	4.05	5.64	0.78	0.24	0.54	5.66	1.18	0.86	0.32	91.30	15.00	8.00	4.54	47.60	20	
41	4/28/88	16:30	W5	8	7.30	8.10	3.70	5.44	0.78	0.22	0.61	5.56	1.25	0.86	0.39	71.90	15.00	8.00	4.21	34.80	40	
54	4/28/88	19:50	W5	8	6.70	6.10	4.55	5.24	0.83	0.22	0.61	5.57	1.11	0.81	0.30	70.30	16.00	10.80	5.01	24.00		
55	4/28/88	19:50	W5	1	6.50	6.00	4.20	5.30	0.82	0.23	0.59	5.42	1.13	0.81	0.32	71.80	15.00	9.80	4.82	22.00		
78	4/28/88	23:05	W5	1	6.9	12.0	5.60	4.99	0.80	0.23	0.57	5.75	1.07	0.72	0.35	92.3	15.0	9.30	4.30	40.4		
79	4/28/88	23:05	W5	8	6.9	9.4	4.55	5.18	0.80	0.23	0.57	6.25	1.07	0.72	0.35	115.0	16.0	10.9	4.20	42.4		
97	4/28/88	21:13	W5	1	7.4	7.9	3.90	3.41	0.86	0.15	0.71	6.00	0.81	0.37	0.44	117.0	13.0	10.4	3.12	34.8		
98	4/28/88	21:13	W5	8	7.4	6.7	4.82	3.50	0.86	0.16	0.70	5.58	0.83	0.39	0.44	100.0	13.0	10.3	3.08	29.2		
106	4/28/88	4:48	W5	1	7.2	7.9	3.90	5.96	0.85	0.25	0.60	8.12	1.42	0.87	0.55	79.4	16.0	14.6	4.54	49.6		
107	4/28/88	4:48	W5	8	7.2	12.0	3.90	5.98	0.85	0.25	0.60	9.23	1.44	0.89	0.55	81.5	17.0	14.6	4.48	30.6		
130	4/28/88	7:45	W5	1	7.3	6.4	3.50	5.45	0.88	0.24	0.64	7.21	1.18	0.84	0.34	92.5	14.0	5.80	4.84	18.4		
131	4/28/88	7:45	W5	8	7.3	6.1	4.05	5.24	0.89	0.22	0.67	7.63	1.20	0.82	0.38	14.2	14.0	6.00	4.86	18.4		
144	4/28/88	10:39	W5	1	7.5	10.0	2.00	5.56	0.84	0.24	0.60	6.94	1.19	0.85	0.34	77.5	15.0	6.80	5.91	38.7	1,100	
145	4/28/88	10:39	W5	8	7.4	10.0	2.00	5.51	0.85	0.24	0.61	6.27	1.13	0.85	0.28	109.0	17.0	5.40	5.27	46.0	383	
163	4/28/88	13:45	W5	1	7.70	9.40	6.75	3.35	0.87	0.10	0.77	8.24	1.84	0.39	1.45	100.00	15.00	11.70	2.90	37.50		
164	4/28/88	13:45	W5	8	7.80	10.00	7.12	3.45	0.87	0.16	0.71	5.38	0.97	0.41	0.56	28.70	16.00	11.20	2.91	43.60		
181	4/28/88	16:40	W5	1	7.10	9.50	7.67	6.14	0.97	0.26	0.71	9.82	1.02	0.83	0.19	61.70	18.00	8.70	4.15	38.00	500	
201	4/28/88	19:55	W5	1	7.40	12.00	6.60	5.98	0.84	0.25	0.59	8.84	0.95	0.82	0.13	102.00	17.00	9.00	4.19	46.40	1,300	
202	4/28/88	19:55	W5	8	7.70	6.60	4.65	4.95	0.92	0.26	0.66	8.47	0.96	0.78	0.18	37.10	16.00	9.00	4.82	27.60		
214	4/28/88	23:00	W5	1	7.40	7.00	4.25	5.50	0.87	0.25	0.62	8.03	1.25	0.81	0.44	95.80	15.00	7.50	4.47	24.00		
215	4/28/88	23:00	W5	8	7.30	7.10	4.20	5.54	0.86	0.25	0.61	7.62	1.20	0.80	0.40	14.60	16.00	7.40	15.40	26.20		
234	4/28/88	1:40	W5	1	7.5	12.0	5.08	3.78	0.89	0.19	0.70	6.09	0.78	0.48	0.30	129.00	15.0	10.5	3.47	42.4		
235	4/28/88	1:47	W5	8	7.4	9.1	4.00	3.80	0.90	0.19	0.71	6.26	0.78	0.47	0.31	96.10	14.0	10.3	3.56	35.0		
247	4/28/88	4:28	W5	1	7.5	12.0	4.90	4.74	0.97	0.30	0.67	7.35	1.11			22.20	16.0	7.30	4.14	74.7		
248	4/28/88	4:28	W5	8	7.4	14.0	5.95	4.74	0.97	0.30	0.67	7.62	1.16			22.70	17.0	7.70	4.26	60.7		
266	4/28/88	7:34	W5	1	7.3	6.5	4.83	5.17	0.94	0.24	0.70	8.15	1.20			14.60	13.0	5.00	5.07	20.8		
267	4/28/88	7:34	W5	8	7.3	7.3	4.55	5.04	0.94	0.23	0.71	7.78	1.20			34.00	14.0	5.40	4.85	26.4		
279	4/28/88	10:14	W5	1	7.3	5.6	5.52	6.04	0.91	0.25	0.66	11.5	1.21			24.30	16.0	6.40	4.81	18.6	20	
280	4/28/88	10:14	W5	8	7.3	5.9	5.62	5.10	0.92	0.24	0.68	9.42	1.21			50.40	16.0	6.40	5.09	19.2	130	
300	4/28/88	13:15	W5	1	7.40	13.00	4.40	4.18	0.92	0.22	0.70	6.12	0.99			141.00	16.00	10.30	3.68	57.00		
301	4/28/88	13:15	W5	8	7.60	12.00	2.00	4.33	0.93	0.22	0.71	7.10	1.0			125.00	16.00	9.00	3.81	55.30		
315	4/28/88	16:20	W5	1	7.50	9.00	8.12	4.24	0.92	0.22	0.70	7.44	0.97			135.00	16.00	11.30	3.86	40.00	1,100	
316	4/28/88	16:20	W5	8	7.50	8.50	8.15	4.20	0.91	0.22	0.69	6.69	0.93			121.00	17.00	11.30	3.86	54.10	120	
335	4/28/88	19:25	W5	1	7.2	7.9	6.05	4.87	0.92	0.26	0.66	5.86	1.24			67.60	16.0	7.90	4.43	33.6		
336	4/28/88	19:25	W5	8	7.2	9.1	6.40	4.95	0.92	0.26	0.66	6.94	1.20			101.00	17.0	7.70	3.80	60.0		
348	4/28/88	22:15	W5	1	7.4	8.0	6.88	5.08	0.93	0.26	0.67	6.76	1.20			9.27	16.0	7.40	4.78	19.2		
348B	4/28/88	22:15	W5	8	7.3	8.1	6.78	4.92	0.92	0.23	0.69	5.76	1.18			13.20	16.0	7.40	5.20	30.2		
374	4/28/88	4:12	W5	1	7.8	6.8	6.20	2.82	0.91	0.18	0.73	4.97	0.81	0.28	0.53	107.00	14.0	11.1	2.57	30.0		
375	4/28/88	4:12	W5	8	7.8	7.5	7.28	2.82	0.90	0.18	0.72	9.18	0.81	0.30	0.51	11.00	13.0	11.1	2.73	34.8		
393	4/28/88	7:26	W5	1	7.6	13.0	5.58	5.20	0.90	0.30	0.60	7.09	1.14	0.47	0.67	16.00	16.0	5.00	4.24	37.6		
394	4/28/88	7:26	W5	8	7.55	14.0	6.72	5.13	0.91	0.31	0.60	8.34	1.25	0.56	0.69	11.80	17.0	5.00	4.08	38.4		
406	4/28/88	10:22	W5	1	7.55	7.8	6.12	5.01	0.91	0.28	0.63	7.78	1.28	0.71	0.57	62.10	16.00	5.10	4.79	23.20	130	
407	4/28/88	10:22	W5	8	7.5	7.6	7.25	4.97	0.92	0.27	0.65	8.87	1.22	0.71	0.51	61.20	17.00	5.20	5.07	24.80	20	
431	4/28/88	13:07	W5	1	7.5	15.0	7.18	6.13	0.89	0.29	0.65	8.63	1.39	0.72	0.67	23.30	17.00	4.70	4.28	51.50		

ANALYTICAL DATA FOR RIVER AND TRIBUTARIES
HACKENSACK RIVER STUDY

APRIL DRY EVENT - APRIL 12-22 1988

SAMPLE #

HACK	DATE	TIME	SITE	DEPTH	pH	TURBIDITY ntu	CR005 mg/l	CR0020 mg/l	MW3 mg/l	MW3/MW2 mg/l	MW2 mg/l	NO3 mg/l	TKN mg/l	TP04 mg/l	OP04 mg/l	ORGANIC P04 mg/l	CHLORO-A mg/l	TEMP C	DO mg/l	SALINITY ppt	TSS mg/l	FEC. COL org/100ml	(HPI)
432	41588	13:07	M5	B	7.5	16.0	8.10		4.96	0.88	0.29	0.59	7.66	0.76	0.71	0.05	111.00	17.00	1.50	4.35	56.70		
446	41588	17:19	M5	T	7.40	21.00	6.65		4.94	0.88	0.31	0.57	5.88	0.79	0.74	0.05	76.60	17.00	4.30	4.06	72.00	110	
447	41588	17:19	M5	B	7.40	29.00	7.10		4.93	0.89	0.31	0.58	7.48	1.12	0.74	0.38	25.70	17.00	7.10	3.66	98.00	80	
465	41588	19:11	M5	T	7.45	9.00	7.12	15.0	6.11	0.88	0.30	0.58	7.46	1.09	0.86	0.23	17.50	17.00	5.20	4.55	38.80		
466	41588	19:11	M5	B	7.40	17.00	5.75		5.91	0.88	0.29	0.59	9.00	1.06	0.79	0.27	46.20	17.00	4.90	4.53	53.30		
478	41588	23:20	M5	T	7.4	5.9	5.48		4.68	1.03	0.21	0.82	7.15	1.04	0.67	0.37	66.10	12.0	4.80	4.04	16.8		
479	41588	23:20	M5	B	7.4	7.8	6.72		5.50	0.94	0.26	0.68	7.67	1.10	0.76	0.34	72.0	12.0	4.90	4.86	20.0		
499	41688	1:26	M5	T	7.7	7.0	2.65		1.68	1.09	0.10	0.99	2.25	0.51	0.29	0.22	4.10	14.0	7.90	9.72	35.2		
500	41688	1:20	M5	B	7.65	19.0	5.70		1.68	1.20	0.11	1.09	2.70	0.50	0.31	0.19	8.20	15.0	8.20	9.81	57.8		
518	41688	4:40	M5	T	7.4	19.0	5.10		2.90	0.94	0.19	0.75	6.56	0.88	0.20	0.68	119.00	13.0	7.90	2.17	58.5		
519	41688	4:40	M5	B	7.4	20.0	6.22		2.96	0.93	0.19	0.74	5.38	0.83	0.18	0.75	92.50	14.0	7.70	2.18	58.0		
541	41688	7:45	M5	T	7.2	14.0	6.17		5.20	0.91	0.29	0.62	7.66	1.41	0.42	0.99	75.30	14.0	3.40	4.67	35.6		
542	41688	7:45	M5	B	7.2	15.0	7.80		5.11	0.91	0.29	0.62	7.80	1.30	0.40	0.90	21.00	15.0	2.00	4.68	42.0		
554	41688	10:22	M5	T	7.2	9.1	6.13		5.13	0.92	0.28	0.64	9.22	1.34	0.86	0.48	90.80	15.0	4.0	4.84	33.3	330	
555	41688	10:22	M5	B	7.3	9.1	6.70		5.11	0.93	0.28	0.65	7.60	1.30	0.91	0.39	66.20	15.0	3.0	4.14	35.5	230	
572	41688	13:20	M5	B	7.2	6.5	5.53		4.25	1.02	0.23	0.79	7.30	1.16	0.74	0.42	78.00	14.0	4.3	3.84	30.5		
573	41688	13:40	M5	T	7.2	15.0	9.40		4.98	0.90	0.29	0.61	6.96	1.23	0.95	0.30	64.20	15.0	4.3	3.06	24.5		
594	41688	16:50	M5	T	7.95	16.0	6.43		2.78	0.94	0.18	0.76	4.47	0.52	0.15	0.37	137.00	13.0	10.1	2.21	48.8	170	
595	41688	15:50	M5	B	7.95	13.0	6.18		2.80	0.94	0.18	0.76	2.44	0.69	0.16	0.53	123.00	13.0	9.7	2.51	61.6	2,400	
609	41688	19:40	M5	T	7.2	19.0	6.12	16.2	5.13	0.90	0.30	0.55	7.65	1.27	0.44	0.83	106.00	14.0	5.3	3.62	56.0		
610	41688	19:40	M5	B	7.3	22.0	5.75	17.8	5.12	0.85	0.30	0.55	5.94	1.05	0.26	0.79		15.0	5.4	3.54	94.0		
628	41688	22:45	M5	T	7.1	7.1	6.10		4.73	0.92	0.27	0.65	6.49	1.38	0.47	0.91	63.00	14.0	5.8	4.89	24.8		
629	41688	22:45	M5	B	7.9	7.9	6.68		4.57	0.92	0.26	0.66	6.26	1.44	0.50	0.94	59.50	13.0	5.8	5.04	23.7		
647	41788	1:26	M5	T	7.4	16.0	7.38		4.91	0.90	0.28	0.62	4.95	1.03	0.24	0.79	57.50	13.0	5.0	4.74	27.3		
648	41788	1:26	M5	B	7.4	16.0	4.45		4.95	0.90	0.28	0.62	4.18	1.14	0.35	0.79	84.00	16.0	4.5	5.64	26.5		
660	41788	9:13	M5	T	7.10	25.00	7.20		3.59	0.91	0.23	0.68	4.48	0.73	0.47	0.26	58.60	13.0	5.60	2.85	76.70		
661	41788	9:13	M5	B	7.15	29.00	5.75		2.91	1.14	++		4.29	0.72	0.72	0.00	11.90	14.0		2.84	87.00	300	
679	41788	7:49	M5	T	7.35	18.00	9.70		4.78	0.87	0.28	0.59	7.70	1.21	0.46	0.75		14.00	5.70	0.89	50.70		
680	41788	7:49	M5	B	7.30	15.00	11.40		4.79	0.87	0.28	0.59	6.32	1.46	0.71	0.75	85.40	14.00	5.50	3.66	48.00		
692	41788	11:50	M5	T	7.40	8.40	7.20		4.75	0.90	0.24	0.66	6.63	1.35	0.57	0.78	52.10	15.00	4.20	4.60	29.00	130	
712	41788	13:32	M5	T	7.45	18.0	7.02		5.49	0.82	0.26	0.56	7.16	1.39	0.69	0.70	77.00	16.0	5.3	3.87	61.0		
713T	41788	13:32	M5	B	7.4	20.0	7.02		5.60	0.82	0.26	0.56	7.97	1.11	0.40	0.71	75.60	16.0	5.3	4.02	60.0		
723	41788	16:50	M5	T	7.65	17.0	6.95		3.85	0.90	0.26	0.64	6.70	0.67	0.45	0.22	82.80	16.0	9.2	2.33	43.3	1,700	
724	41788	16:50	M5	B	7.65	18.0	7.75		3.93	0.90	0.19	0.71	6.80	1.08	0.86	0.22	38.10	15.0	8.3	2.65	46.0	2,400	
745	41788	20:04	M5	T	7.45	15.0	7.02		5.72	0.85	0.27	0.58	9.46	1.24	0.52	0.72	67.80	15.0	6.8	3.74	40.7		
745	41788	20:04	M5	B	7.4	16.0	6.15	14.2	5.82	0.84	0.27	0.57	9.40	1.04	0.28	0.78	86.00	14.0		3.80	60.0		
757	41788	22:40	M5	T	7.4	9.3	7.15		5.34	0.90	0.24	0.66	7.10	1.25	0.52	0.73	36.40	15.0	6.7	4.41	31.3		
758	41788	22:40	M5	B	7.6	8.9	6.88	15.0	5.45	0.90	0.25	0.65	7.58	1.34	0.60	0.74	43.40	15.0	7.3	4.39	32.7		
776	41888	1:45	M5	T	7.6	14.0	6.38		5.38	0.84	++		7.66	1.58	0.86	0.72	71.40	130	5.9	4.40	41.0		
777	41888	1:45	M5	B	7.4	9.6	5.00		5.56	0.84	0.25	0.59	7.61	1.64	0.91	0.73	63.00	15.0	5.9	4.42	35.2		
789	41888	4:50	M5	T	7.2	18.0	7.58		7.73	0.87	0.25	0.62	6.10	1.42	0.96	0.46	3.20	14.0	6.5	3.26	59.3		
790	41888	4:50	M5	B	7.2	18.0	6.42		4.47	0.87	0.25	0.62	7.76	1.41	0.95	0.46	102.00	14.0	5.6	3.26	64.0		
808	41888	7:35	M5	T	7.4	24.0	6.58		5.07	0.83	0.27	0.56	8.86	1.84	1.26	0.58	102.00	15.0	5.3	3.91	137.0		
809	41888	7:35	M5	B	7.4	25.0	8.30		5.08	0.83	0.27	0.56	9.54	2.01	1.44	0.57	40.50	15.0	5.1	3.94	99.0		
821	41888	10:30	M5	T	7.5	10.0	7.63		5.33	0.86	0.26	0.60	8.34	1.40	0.68	0.72	84.60	16.0	5.2	4.22	26.4		
822	41888	10:30	M5	B	7.4	16.0	7.60		5.28	0.85	0.25	0.60	8.22	1.38	0.63	0.75	64.50	15.0	5.1	4.40	28.0		
842	41888	13:00	M5	T	7.00	8.8	6.00		5.30	0.88	0.25	0.63	7.48	0.94	0.20	0.74	44.10	16.0	5.08	4.23	22.0		
843	41888	13:00	M5	B	7.10	9.0	6.08		5.07	0.86	0.25	0.61	6.50	1.07	0.32	0.75	57.80	15.0	4.91	4.35	17.2		
851	41888	16:31	M5	T	7.35	23.0	6.92		4.60	0.89	0.25	0.64	6.60	1.42	0.96	0.46	192.00	15.0	5.4	3.21	67.4	220	

ANALYTICAL DATA FOR RIVER AND TRIBUTARIES
HACKENSACK RIVER STUDY

APRIL DRY EVENT - APRIL 12-22 1988

SAMPLE #	HACK	DATE	TIME	SITE	DEPTH	pH	TURBIDITY ntu	CBOD5 mg/l	CBOD20 mg/l	NH3 mg/l	NO3/NH2 mg/l	NO3 mg/l	TKN mg/l	TP04 mg/l	OP04 mg/l	PD4 mg/l	CHLORO-A mg/l	TEMP C	DO mg/l	SALINITY ppt	TSS mg/l	(HPI)
852	41888	16:31		W5	B	7.4	19.0	4.80		4.48	0.87	0.26	6.41	0.94	0.47	0.47	85.20	15.0	5.9	3.23	62.0	300
900	41888	19:44		W5	T	7.4	14.0	6.12		4.82	0.91	0.30	6.61	1.23	0.66	0.57	36.20	16.0	4.9	3.78	56.7	
901	41888	19:44		W5	B	7.35	17.0	6.82		4.82	0.91	0.30	6.61	1.23	0.66	0.57	36.20	16.0	4.9	3.78	56.7	
916	41888	22:25		W5	T	7.2	9.4	7.40		5.07	0.91	0.26	6.65	1.37	0.53	0.84	49.00	16.0	4.8	3.94	50.7	
917	41888	22:25		W5	B	7.1	15.0	6.60		4.88	0.90	0.24	6.66	1.39	0.60	0.79	34.20	14.0	5.0	5.00	26.0	
930	41988	1:15		W5	T	7.4	8.1	6.80		5.30	0.89	0.25	6.64	1.17	0.33	0.84	4.59	14.0	4.8	5.02	45.3	
931	41988	1:15		W5	B	7.4	8.0	5.90		5.08	0.91	0.25	6.66	1.23	0.45	0.78	61.60	13.0	8.9	3.73	31.6	
948	41988	4:20		W5	T	7.6	15.0	6.98	14.8	4.94	0.86	0.28	6.58	1.30	0.65	0.65	62.60	13.0	3.7	3.12	58.7	
949A	41988	4:20		W5	B	7.5	9.1	5.48		5.07	0.88	0.28	6.60	1.62	0.97	0.65	86.40	13.0	3.7	3.52	121.0	
966	41988	7:25		W5	T	7.5	14.0	7.00		3.77	0.89	0.23	6.66	0.95	0.56	0.39	6.49	11.0	5.1	3.06	36.4	
967	41988	7:35		W5	B	7.5	14.0	5.70		3.79	0.87	0.23	6.64	0.95	0.54	0.41	76.70	11.0	4.7	3.04	39.2	
979	41988	10:15		W5	T	7.5	15.5	6.40		5.45	0.84	0.28	6.56	1.24	0.65	1.24	124.00	14.0	3.6	4.17	36.4	28
980	41988	10:15		W5	B	7.4	15.5	6.44		5.19	0.83	0.28	6.55	1.43	0.54	0.89	38.40	15.0	3.15	4.36	51.6	49
998	41988	13:19		W5	T	7.4	8.6	6.33		4.92	0.94	0.26	6.68	1.20 +	0.47	0.77	53.80	14.0	5.05	4.61	30.6	
999	41988	13:19		W5	B	7.4	8.55	6.65		4.79	0.96	0.25	6.71	1.29	0.53	0.76	59.00	15.0	4.6	4.49	32.3	
1017	41988	16:55		W5	T	7.4	17.5	7.96		4.39	0.86	0.27	6.59	1.03	0.51	0.52	87.80	14.0	7.15	3.45	44.3	270
1018	41988	16:55		W5	B	7.4	19.0	10.4		4.38	0.88	0.26	6.62	0.96	0.41	0.55	82.40	14.0	6.9	3.37	47.2	225
1037	41988	19:40		W5	T	7.4	12.5	3.37		4.93	0.86	0.25	6.61	1.31	0.73	0.58	71.20	14.0	5.7	3.37	4.5	
1038	41988	19:40		W5	B	7.4	23.0	3.42		4.69	0.85	0.26	6.59	1.14	0.54	0.60	80.40	14.0	6.2	3.42	57.6	
1039	41988	21:40		W5	M	7.9	36.0	1.54		0.58	0.94	0.12	6.82	0.78	0.72	0.06	62.00	12.0	11.6	1.54	248.0	
1050	41988	22:27		W5	T	7.1	13.5	8.30		6.08	0.92	0.26	6.66	1.62	0.65	0.97	87.40	16.0	4.9	4.20	37.6	
1051	41988	22:27		W5	B	7.2	17.6	8.30		6.01	0.92	0.25	6.67	1.56	0.86	0.70	451.00	15.0	4.85	4.42	41.8	
1069	42088	01:30		W5	T	7.5	11.0	7.32		3.34	0.93	0.26	6.67	1.32	0.84	0.48	40.00	13.0	4.6	4.42	19.8	
1070	42088	01:30		W5	B	7.6	9.55	7.04		5.54	0.92	0.25	6.67	1.42	0.84	0.58	18.00	14.0	4.9	4.58	27.0	
1083	42088	4:30		W5	B	7.3	15.5	9.35		6.15	0.99	0.30	6.69	1.32	0.73	0.59	37.50	12.0	3.65	3.71	59.0	
1103	42088	7:25		W5	T	7.8	15.5	4.20	7.50	4.67	0.93	0.22	6.71	0.87	0.31	0.36	107.00	11.0	6.9	3.02	36.8	
1104	42088	7:25		W5	B	7.8	16.0	7.70	14.3	4.08	0.93	0.23	6.70	1.09	0.32	0.77	212.00	11.0	6.6	2.94	41.0	130
1116	42088	10:25		W5	T	7.7	15.0	9.20		6.46	0.91	0.29	6.62	1.41	0.82	0.59	79.50	15.0	4.4	4.11	34.0	230
1117	42088	10:25		W5	B	7.7	20.0	10.0		6.13	0.90	0.27	6.63	1.45	0.74	0.71	47.10	15.0	3.7	4.24	62.0	
1142	42088	12:54		W5	T	7.6	9.8	6.60		6.00	0.94	0.27	6.67	1.33	0.79	0.54	101.00	16.0	5.5	4.53	26.0	
1143	42088	12:54		W5	B	7.6	9.0	7.20		6.20	0.94	0.26	6.68	1.24	0.74	0.50	105.00	16.0	5.0	4.48	24.4	
1156	42088	16:23		W5	T	7.3	17.0	8.60		5.91	0.89	0.28	6.61	1.24	0.68	0.56	89.20	15.0	6.4	3.96	53.6	
1157	42088	16:23		W5	B	7.4	17.0	8.40		5.87	0.89	0.27	6.62	1.24	0.64	0.60	126.00	16.0	6.8	3.90	51.5	
1176	42088	19:26		W5	T	7.5	16.0	8.20		4.44	0.92	0.23	6.69	1.01	0.35	0.66	197.00	14.0	9.3	2.76	34.8	
1189	42088	22:25		W5	T	7.3	13.0	9.20		6.15	1.03	0.28	6.75	1.54	0.93	0.61	78.30	14.0	5.9	4.43	26.4	
1190	42088	22:25		W5	B	7.3	11.0	4.70		6.01	0.89	0.28	6.61	1.36	0.99	0.37	87.80	15.0	5.7	4.61	43.5	
1208	42088	1:14		W5	T	7.4	8.8	7.20		5.59	0.95	0.28	6.78	1.36	0.92	0.44	48.60	16.0	6.7	4.73	23.7	
1209	42088	1:14		W5	B	7.3	8.9	7.30		6.02	0.91	0.27	6.64	1.34	0.92	0.42	82.60	16.0	6.5	4.61	23.2	
1216	42088	4:10		W5	T	7.4	13.0	7.60		6.07	0.92	0.25	6.67	1.51	0.90	0.61	61.5	15.0	5.1	4.34	34.8	
1217	42188	4:10		W5	B	7.3	13.0	7.15		4.79	0.95	0.26	6.69	1.46	0.90	0.56	70.70	15.0	5.1	3.76	35.2	
1240	42188	7:22		W5	T	7.3	13.0	7.15	14.7	4.79	0.95	0.26	6.69	1.46	0.90	0.56	70.70	15.0	5.1	3.76	35.2	
1241	42188	7:22		W5	B	7.3	14.0	6.40	14.6	4.75	0.95	0.26	6.69	1.46	0.90	0.56	70.70	15.0	5.1	3.76	35.2	
1254	42188	10:32		W5	T	7.3	6.2	7.87		5.92	0.90	0.31	6.88	1.44	0.87	0.57	81.8	17.0	5.0	4.19	29.6	20
1255	42188	10:32		W5	B	7.3	9.2	6.62		5.91	0.91	0.30	6.88	1.47	0.87	0.60	87.7	17.0	3.8	4.24	34.2	70
1283	42188	13:32		W5	T	7.4	8.4	7.90		5.81	0.92	0.29	6.63	1.53	0.84	0.69	163	17.0	4.7	3.95	28.4	
1284	42188	13:32		W5	B	7.4	9.4	6.75		5.81	0.91	0.28	6.63	1.45	0.91	0.54	26.0	17.0	5.1	4.57	48.7	
1296	42188	16:46		W5	T	7.5	9.6	7.10		5.40	0.88	0.29	6.59	1.37	0.79	1.08	29.3	14.0	7.2	4.26	42.5	110
1297	42188	16:46		W5	B	7.5	10.0	7.05		5.32	0.88	0.30	6.58	1.42	0.86	0.56	114	16.0	7.0	4.37	55.0	20
1318	42188	20:00		W5	T	7.6	14.0	9.00		10.44	0.92	0.23	6.69	0.89	0.37	0.52	130	12.0	10.6	3.33	43.0	

ANALYTICAL DATA FOR RIVER AND TRIBUTARIES
HACKENSACK RIVER STUDY

APRIL DRY EVENT - APRIL 12-22 1988

SAMPLE #	DATE	TIME	SITE	DEPTH	pH	TURBIDITY ntu	CBOD5 mg/l	CBOD20 mg/l	NH3 mg/l	ORGANIC					INORGANIC					TEMP C	DO mg/l	SALINITY ppt	TSS mg/l	FEC. COLI org/100ml
										NO3/NO2 mg/l	NO2 mg/l	NO3 mg/l	TKN mg/l	TP04 mg/l	OP04 mg/l	P04 mg/l	CHLORO-A mg/L							
1319	42188	20:00	W5	B	7.4	15.0	8.80		4.09	0.91	0.24	0.67	7.29	1.00	0.39	0.61	95.7	13.0	10.5	3.24	40.5			
1331	42188	23:35	W5	T	7.2	10.0	4.92		6.36	0.89	0.30	0.59	9.46	1.57	0.93	0.64		14.0	6.1	4.34	25.6			
1332	42188	23:35	W5	B	7.2	10.0	5.05		5.92	0.89	0.28	0.61	9.04	1.47	0.86	0.61	59.6	14.0	6.3	5.37	20.8			
1350	42288	2:01	W5	T	7.0	9.7	9.60		6.16	1.01	0.31	0.70	5.85	1.39	0.85	0.54	93.4	14.0	6.3	3.96	26.4			
1351	42288	2:01	W5	B	7.1	8.6	8.20		5.60	0.91	0.30	0.61	4.62	1.36	0.83	0.53	149	15.0	7.1	4.34	29.2			
1358	42288	3:55	W5	T	7.1	9.1	7.18		5.89	1.06	0.31	0.84	11.11	1.42	0.58	0.84	65.0	14.0	5.6	4.68	22.0			
1359	42288	3:55	W5	B	7.1	7.6	6.85		5.92	1.07	0.31	0.76	7.33	1.39	0.55	0.84	96.8	15.0	5.7	4.74	28.8			
1382	42288	7:14	W5	T	7.1	17	5.75		4.34	0.97	0.26	0.71	6.22	0.96	0.51	0.45	112	13.0	5.9	3.92	51.2			
1383	42288	7:14	W5	B	7.2	18	6.55		NS	NS	0.27	NS	NS	NS	NS	NS	33.4	13.0	8.0	4.05	53.3			

ANALYTICAL DATA FOR RIVER AND TRIBUTARIES HACKENSACK RIVER STUDY

APRIL DRY EVENT - APRIL 12-22 1988

SAMPLE #

HACK	DATE	TIME	SITE	DEPTH	pH	TURBIDITY ntu	CBOD5 mg/l	CBOD20 mg/l	MW3 mg/l	MW3/MW2 mg/l	MW2 mg/l	MD3 mg/l	TKN mg/l	TP04 mg/l	DPO4 mg/l	PO4 mg/l	ORGANIC mg/l	CHLORO-A mg/L	TEMP C	DO mg/l	SALINITY ppt	TSS mg/l	FEC. COLI mpn/100ml	(MPN)
9	4/288	10:10	M6	M	7.9	11.0	3.97		2.66	0.89	0.06	0.83	3.29	<0.10	<0.05	<0.10	234.0	12.0	14.6	11.6	48.5	3,000		
20	4/288	13:28	M6	M	7.9	10.5	2.90		0.06	0.85	<0.05	0.85	1.13	0.12	<0.05	0.12	86.9	14.5	13.4	4.94	35.8			
42	4/288	16:30	M6	M	8.40	10.0	6.07		1.27	0.86	0.08	0.78	3.81	0.33	0.07	0.26	178.00		16.40	1.31	44.40	1,100		
62	4/288	19:28	M6	M	7.90	7.00	4.22		2.14	0.84	0.11	0.73	3.95	0.43	0.16	0.27	135.00	13.00	13.00	2.16	28.40			
67	4/288	22:14	M6	M	8.20	9.10	3.75		0.97	0.85	0.17	0.68	3.38	0.42	0.06	0.36	135.00	11.50	16.10	1.15	43.20			
86	4/388	1:15	M6	M	8.2	12.0	3.15		0.09	0.84	<0.05	0.84	1.42	0.59	<0.05	0.59	22.7	9.0	15.1	7.35	32.8			
108	4/388	4:23	M6	M	8.1	22.0	3.55		0.83	0.93	0.07	0.86	2.95	0.50	0.08	0.42	128.0	11.0	11.2	1.19	112.0			
119	4/388	7:15	M6	M	7.8	8.1	3.38		2.24	0.89	0.11	0.78	3.41	0.56	0.20	0.36	149.0	10.0	9.90	2.18	33.6			
133	4/388	9:45	M6	M	8.2	10.0	4.90	11.8	1.64	0.90	0.10	0.80	2.98	0.56	0.13	0.43	150.0	12.0	11.8	2.07	49.8			
152	4/388	12:45	M6	M	8.60	10.00	6.80		0.23	0.90	<0.05	0.90	1.11	0.25	<0.05	0.25	86.4	12.00	16.50	8.62	48.00	1,400		
166	4/388	15:50	M6	M	8.60	11.00	5.10		0.24	0.87	<0.05	0.87	2.22	0.14	<0.05	0.14	52.50	13.50	18.00	6.57	51.60	220		
184	4/388	18:45	M6	M	8.30	13.00	9.20		1.61	0.89	0.10	0.79	3.49	0.59	0.16	0.43	32.00	13.00	10.70	1.80	51.50			
205	4/388	21:50	M6	M	8.20	5.50	<2.00		<0.05	1.11	<0.05	1.11	0.73	<0.10	<0.05	<0.10	2.46	12.00	11.90	0.34	7.00			
222	4/488		M6	M	8.2	9.70	5.10		0.37	0.88	0.05	0.83	2.48	0.34	<0.05	0.34	99.10	7.0	16.3	3.84	58.0			
236	4/488	3:55	M6	M	7.7	21.0	2.95		0.11	0.88	<0.05	0.88	2.67	0.30			33.70	9.0	13.7	7.04	77.5			
255	4/488	6:55	M6	M	8.0	12.0	5.88		1.62	1.00	<0.05	1.00	4.35	0.50			21.50	12.0	12.4	1.67	38.5			
268	4/488	10:00	M6	M	8.15	8.0	6.80		1.76	0.93	0.11	0.82	4.79	0.60			146.00	13.0	16.7	1.04	67.4	700		
289	4/488	13:15	M6	M	8.5	18.0	6.30	14.1	0.40	0.92	0.05	0.87	2.76	0.35			13.70	13.00	14.90	0.45	53.30	2,200		
304	4/488	16:10	M6	M	8.15	16.00	5.78		0.11	0.85	<0.05	0.85	2.69	0.25			121.00	12.00	16.10	1.53	86.00			
318	4/488	18:50	M6	M	8.50	17.00	7.58		1.09	0.96	0.08	0.88	3.89	0.95			4.10	13.0	11.90	0.37	10.0			
337	4/488	22:05	M6	M	8.0	4.0	<2.00		0.06	1.11	<0.05	1.11	0.31	<0.10			9.25	11.0	13.7	0.08	13.8			
363	4/588	1:15	M6	M	8.2	4.5	7.60		0.59	0.88	0.06	0.82	2.98	0.21	<0.05	0.33	82.60	11.0	10.7	0.46	90.0			
376	4/588	4:05	M6	M	7.4	13.0	4.18		0.15	0.78	<0.05	0.78	1.75	0.33			5.20	11.0	10.7	0.46	90.0			
395	4/588	8:30	M6	M	7.8	13.0	7.08		1.91	0.91	0.14	0.77	5.20	0.77	0.15	0.62	138.00	12.00	10.7	1.86	30.80	3,000		
409	4/588	10:45	M6	M	7.8	8.5	9.70		1.69	0.91	0.13	0.78	3.48	0.19	0.07	0.12	83.40	12.00	13.4	1.17	63.30			
420	4/588	12:50	M6	T	7.8	18.0	8.25		0.77	0.89	0.08	0.81	3.68	0.30	<0.05	0.30	102.00	12.00	10.90	0.53	116.00	2,400		
435	4/588	16:00	M6	M	7.65	32.00	7.18	2.45	0.20	0.79	<0.05	0.79	0.22	0.10	0.13	<0.10	4.80	13.00	13.10	0.35	7.00	500		
448	4/588	19:00	M6	M	8.00	6.20	1.10		2.81	0.91	0.17	0.74	5.63	0.40	0.32	0.28	94.40	12.00	9.40	2.30	32.50			
467	4/588	21:50	M6	M	7.60	8.90	6.52		1.09	0.94	0.09	0.85	3.31	0.49	0.11	0.38	143.00	11.0	11.0	1.44	69.4			
488	4/688	1:10	M6	M	7.5	20.0	7.22		1.16	1.02	<0.05	1.02	3.00	1.77	0.06	1.71	10.20	9.0	9.30	5.04	179.0			
507	4/688	3:05	M6	M	7.3	43.0	4.18		0.96	0.92	0.08	0.84	4.68	1.58	0.05	1.53	127.00	9.5	9.20	2.17	45.5	16,000		
524	4/688	7:05	M6	M	7.5	4.90	6.90		2.20	0.94	0.16	0.78	3.57	0.59	0.11	0.48	111.00	18.0	8.50	2.17	45.5			
543	4/688	9:45	M6	M	7.3	16.0	7.50		1.02	0.94	0.09	0.85	<0.20 (0.41) +	0.46	<0.05	0.46	147.00	10.0	11.4	1.36	54.7			
556	4/688	2:40	M6	M	7.6	17.0	7.80		1.02	0.94	0.09	0.85	<0.20 (0.41) +	0.46	<0.05	0.46	147.00	10.0	11.4	1.36	54.7			
574	4/688	13:40	M6	B	7.2	13.0	8.40		4.95	0.90	0.29	0.61	7.87	1.22	0.76	0.46	98.90	16.0	4.7	3.87	32.0			
611	4/688	19:05	M6	M	8.0	59.0	9.30	25.8	0.60	0.92	0.06	0.86	8.45	0.17	0.17	0.00	93.70	11.0	8.3	0.98	476.0			
617	4/688	22:00	M6	M	7.35	25.0	4.85		3.03	0.91	0.16	0.75	2.59	0.48	0.43	0.05	86.60	12.0	7.1	2.03	98.0			
636	4/788	1:10	M6	M	7.2	21.0	4.88		1.24	0.71	0.12	0.59	3.25	0.34	0.21	0.13		10.0	9.9	1.84	76.3			
649	4/788	3:55	M6	M	7.3	48.0	7.68		<0.05	0.94	<0.05	0.94	2.92	<0.10	<0.05	<0.10	2.70	9.0	9.2	0.73	194.0			
668	4/788	7:20	M6	M	7.10	56.00	7.95		0.47	0.93	<0.05	0.93	2.62	1.10	1.10	0.00	47.90	9.00	8.40	0.62	306.00			
681	4/788	10:02	M6	M	7.40	26.00	7.70		1.39	0.92	0.11	0.81	3.42	0.84	0.79	0.05	80.60	12.00	8.00	0.62	306.00			
701	4/788	13:00	M6	M	7.8	22.0	6.90		1.44	0.92	0.10	0.82	5.76	0.77	0.77	0.00	91.50	13.8	10.6	1.55	79.3			
713B	4/788	16:00	M6	M	7.45	46.0	7.42		0.78	0.92	<0.05	0.92	3.81	1.32	1.32	0.00		14.0	13.0					
727	4/788	19:00	M6	M	7.6	39.0	5.40		0.61	0.92	<0.05	0.92	3.98	1.28	1.28	0.00	102.00	13.0	11.7	7.00	184.0			
746	4/788	21:55	M6	M	7.0	26.0	7.92	21.5	2.84	0.90	0.16	0.74	6.05	0.48	0.36	0.12	81.00	13.0	8.8	2.12	7.60			
759	4/888	24:45	M6	M	7.4	13.0	*1.85		3.51	0.90	0.18	0.72	5.51	0.65	0.44	0.21	55.80	14.0	7.9	2.61	30.0			
778	4/888	3:45	M6	M	7.5	23.0	6.28		3.85	1.15	0.09	1.06	<0.20 +	0.88	0.79	0.09	59.20	13.0	10.3	1.30	86.0			
791	4/888	7:10	M6	M	7.0	29.0	6.08		0.42	0.91	<0.05	0.91	<0.20 +	0.75	0.70	0.05	1.17	11.0	9.0	4.55	95.8			
810	4/888	9:40	M6	M	7.7	25.0	6.60		1.79	0.91	0.13	0.78	<2.00 +	1.17	<0.05	1.17	89.20	11.0	8.1	1.97	44.0			

* Estro. + Matrix Interference

ANALYTICAL DATA FOR RIVER AND TRIBUTARIES
HACKENSACK RIVER STUDY

APRIL DRY EVENT - APRIL 12-22 1988

SAMPLE #	DATE	TIME	SITE	DEPTH	pH	TURBIDITY ntu	CBOD5 mg/l	CBOD20 mg/l	MH3 mg/l	MH3/MH2 mg/l	MH2 mg/l	NO3 mg/l	TKN mg/l	TP04 mg/l	OP04 mg/l	P04 mg/l	CHLORO-A mg/l	TEMP C	DO mg/l	SALINITY ppt	TSS mg/l	FEC. COLI org/100ml
824	41888	12:45	M6	M	7.5	17.0	9.10		2.83	0.88	0.18	0.70	<2.00 +	0.74	0.57	0.17	114.00	13.0	7.31	2.27	38.0	
854	41888	18:00	M6	M	7.5	31.0	6.32		0.35	0.88	<0.05	0.88	2.88	1.19	1.19	0.00	76.50	11.0	10.4	6.50	130.0	5,000
889	41888	19:55	M6	M	7.5	39.0	10.3		0.70	0.90	0.08	0.82	4.80	<0.10	<0.05	<0.10	136.00		9.6	1.10	154.0	
902	41888	21:45	M6	M	7.3	29.0	7.82		1.99	0.89	0.15	0.74	<0.20 +	1.49	1.39	0.10	98.80	12.0	7.6	2.13	150.0	
932	41988	1:15	M6	M	7.3	13.0	5.30		1.98	0.88	0.17	0.71	5.00	0.64	0.46	0.18	36.50	10.0	6.2	2.01	34.2	
937	41988	4:05	M6	M	7.4	23.0	8.12	16.4	1.09	0.93	0.10	0.83	4.10	1.18	1.09	0.09		10.0	8.1	1.34	80.0	
9498	41988	6:40	M6	M	7.3	34.0			0.72	0.89	<0.05	0.89	2.11	1.22	1.22	0.00	95.00	7.0	8.1			
968	41988	9:50	M6	M	7.5	33.0	6.00		1.31	0.92	0.12	0.80	4.77	1.78	1.78	0.00	142.00	11.0	7.8	1.58	161.0	
982	41988	12:50	M6	M	7.6	15.0	9.30		3.26	0.89	0.18	0.71	<0.20 +	0.78	0.60	0.18	256.00	12.5	7.8	2.44	30.0	
1006	41988	16:02	M6	M	8.4	25.0	6.50		1.26	0.95	0.11	0.84	4.13	0.73	0.73	0.00	95.20	13.0	11.6	1.40	18.4	14,000
1020	41988	18:25	M6	M	7.4	20.0	3.55		0.27	0.89	<0.05	0.89	2.41	0.30	0.30	0.00	90.00	11.0	14.8	0.71	71.3	
1040	41988	21:00	M6	M	8.3	2.6	9.20		<0.05	0.52	<0.05	0.52	0.38	<0.10	<0.05	<0.10	7.66	10.0	10.9	9.20	13.2	
1052	41988	00:40	M6	M	7.6	9.8	7.78		3.36	0.91	0.18	0.73	7.58	0.68	0.20	0.48	135.00	11.0	7.1	2.55	28.8	
1071	42088	03:50	M6	M	7.5	16.0	6.70		1.59	1.37	0.13	1.24	3.19	0.48	<0.05	0.48	119.00	9.0	11.0	1.70	52.0	
1085	42088	6:50	M6	M	7.1	31.0	6.28	12.8	0.46	0.90	<0.05	0.90	2.64	0.62	<0.05	0.62	175.00	9.0	11.6	0.68	111.0	
1105	42088	9:40	M6	M	7.9	38.0	11.2		1.39	0.97	0.10	0.87	4.34	1.19	<0.05	1.19	229.00	9.0	11.6	1.27	112.0	
1119	42088	12:40	M6	M	8.0	14.5	11.3		2.53	0.99	0.15	0.84	4.39	0.53	0.09	0.44	120.00	12.0	11.5	1.99	38.2	
1145	42088	15:55	M6	M	8.3	24.0	10.0		1.90	1.00	0.13	0.87	4.06	0.52	<0.05	0.52	111.00	12.0	15.6	1.49	203.0	5,920
1159	42088	18:40	M6	M	8.5	32.0	11.4		0.70	0.85	0.05	0.80	4.30	0.90	<0.05	0.90	202.00	12.0	19.2	0.76	371.0	
1178	42088	21:40	M6	M	8.5	37.0	12.4		1.51	0.92	0.10	0.82	4.55	0.46	<0.05	0.46	158.00	11.0	16.0	1.32	197.0	
1191	42188	0:40	M6	M	5.7	12.0	9.25		3.07	0.90	0.19	0.71		0.58	0.23	0.35	34.20	11.0	9.6	2.47	28.4	
1218	42188	3:40	M6	M	7.8	15.0	8.40		2.33	0.97	0.15	0.82	3.98	0.55	0.14	0.41	87.60	11.0	10.4	1.91	44.8	
1223	42188	6:50	M6	M	8.0	22.0	8.30	17.8	1.04	0.92	0.07	0.85	3.52	0.34	<0.05	0.34	191	10.0	14.5	0.98	88.7	
1243	42188	10:00	M6	M	8.3	19.0	8.60		1.44	1.00	0.10	0.90	4.27	0.60	0.05	0.55	248	11.5	6.0	1.34	69.7	2,200
1272	42188	13:35	M6	M	8.3	14.0	12.2		2.64	0.98	0.17	0.00	3.51	0.68	0.79	<0.10		13.5	13.5	2.22	50.7	
1285	42188	16:00	M6	M	8.6	14.0	7.45		2.06	0.97	0.13	0.84	3.35	0.62	0.09	0.53	218	13.0	17.9	1.72	85.3	7,000
1299	42188	18:15	M6	M	8.8	14.0	7.50		0.14	0.91	0.06	0.85	3.50	0.47	<0.05	0.47	712	12.0	22.4	0.93	155.0	
1320	42188	21:25	M6	M	8.6	16.0	9.20		0.15	0.93	0.06	0.87	1.32	0.43	<0.05	0.43	154	11.0	20.6	0.88	91.0	
1339	42288	1:35	M6	M	8.2	9.7	13.0		2.47	0.97	0.17	0.80	0.94 +	0.44	0.13	0.31	123	11.0	11.6	2.34	32.4	
1362	42288	4:00	M6	M	8.2	5.6	<2.00		0.10	1.05	<0.05	1.05	<0.20	<0.10	<0.05	<0.10	<1.83	11.0	7.3	0.34	6.0	
1371	42288	7:20	M6	M	8.5	17	2.35	4.55	0.17	0.91	0.07	0.84	<0.20	0.37	0.37	0.00	195	10.0	15.3	0.94	111.0	

ANALYTICAL DATA FOR RIVER AND TRIBUTARIES
HACKENSACK RIVER STUDY

APRIL DRY EVENT - APRIL 12-22 1988

SAMPLE #

SAMPLE #	HAZ	DATE	TIME	SITE	DEPTH	pH	TURBIDITY	CBOD5	CBOD20	NH3	NO2	NO3	TKN	TP04	DP04	PO4	CHLORO-A	TEMP	DO	SALINITY	TSS	FEC. COL	(MPN)	ORGANIC																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
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10		41288	9:07	M7	M	7.3	4.5	2.0		0.92	0.57	0.05	0.57	0.84	<0.10	0.05	0.10	22.5	11.0	11.2	3.11	45.4	20																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												

* Esti. value + Matrix Interference

ANALYTICAL DATA FOR RIVER AND TRIBUTARIES
HACKENSACK RIVER STUDY

APRIL DRY EVENT - APRIL 12-22 1988

SAMPLE # HACK	DATE	TIME	SITE	DEPTH	pH	TURBIDITY ntu	CBOD5 mg/l	MB3 mg/l	NO3/NO2 mg/l	NO3 mg/l	TKN mg/l	TP04 mg/l	OP04 mg/l	P04 mg/l	CHLORO-A mg/m3	TEMP C	DO mg/l	SALINITY ppt	TSS mg/l	FEC. COL org/100ml
825	41888	12:10	W7	M	7.3	4.3	1.75	<0.05	0.51	<0.05	0.51	<0.10	<0.05	<0.10	<2.04	11.5	10.27	3.23	12.3	
855	41888	17:30	W7	M	7.1	4.1	1.50	0.35	0.51	<0.05	0.51	<0.10	<0.05	<0.10	7.20	11.0	10.4	0.33	14.8	<20
890	41888	19:25	W7	M	7.2	4.6	<2.00	<0.05	0.50	<0.05	0.50	<0.10	<0.05	<0.10	4.00	10.1	10.3	0.34	14.4	
903	41888	21:10	W7	M	7.1	27.0	<2.00	<0.05	0.52	<0.05	0.52	<0.10	<0.05	<0.10	3.43	11.0	10.3	0.35	12.0	
933	41888	01:15	W7	M	7.0	3.2	41.35	<0.05	0.51	<0.05	0.51	<0.10	<0.05	<0.10	8.56	8.0	10.3	0.29	10.6	
938	41888	3:25	W7	M	7.0	3.4	0.95	<0.05	0.51	<0.05	0.51	<0.10	<0.05	<0.10	4.15	10.0	10.4	3.15	12.4	
950	41888	6:10	W7	M	6.9	4.7	1.55	<0.05	0.50	<0.05	0.50	<0.10	<0.05	<0.10	9.1	9.1	10.3	0.36	14.4	
969	41888	9:10	W7	M	7.3	4.6	<2.00	<0.05	0.49	<0.05	0.49	<0.10	<0.05	<0.10	5.70	9.0	10.3	0.33	20.0	
983	41888	12:20	W7	M	7.3	3.3	2.08	<0.05	0.47	<0.05	0.47	<0.10	<0.05	<0.10	7.10	11.0	10.9	0.34	12.4	
1007	41888	15:10	W7	M	7.5	3.4	41.15	<0.05	0.51	<0.05	0.51	<0.10	<0.05	<0.10	4.60	12.0	10.9	0.34	10.0	20
1021	41888	18:00	W7	M	7.2	3.6	<2.00	<0.05	0.51	<0.05	0.51	<0.10	<0.05	<0.10	5.48	9.0	12.8	0.33	11.5	
1041	41888	21:20	W7	M	7.9	4.9	0.33	<0.05	1.23	<0.05	1.23	<0.10	<0.05	<0.10	(2.04	8.0	8.7	0.34	10.2	
1053	41888	00:15	W7	M	7.0	3.4	1.40	<0.05	0.53	<0.05	0.53	<0.10	<0.05	<0.10	4.72	9.0	9.5	0.33	14.7	
1072	42088	03:50	W7	M	7.0	3.3	1.55	<0.05	0.53	<0.05	0.53	<0.10	<0.05	<0.10	5.23	9.0	11.4	0.31	14.7	
1086	42088	6:20	W7	M	7.5	4.6	1.40	<0.05	0.55	<0.05	0.55	<0.10	<0.05	<0.10	4.70	9.5	10.6	0.32	15.6	<20
1106	42088	9:10	W7	M	7.4	3.5	2.10	0.32	0.57	<0.05	0.57	<0.10	<0.05	<0.10	(1.96	11.0	10.5	1.90	42.8	
1120A	42088	12:10	W7	M	7.5	3.6	11.2	0.11	0.56	<0.05	0.56	<0.10	<0.05	<0.10	(1.70	11.0	10.5	0.33	42.8	
1120B	42088	12:10	W7	M	7.5	3.6	11.2	<0.05	0.53	<0.05	0.53	<0.10	<0.05	<0.10	(2.04	12.0	10.52	0.33	7.2	<20
1146	42088	15:10	W7	M	7.4	4.7	1.45	<0.05	0.54	<0.05	0.54	<0.10	<0.05	<0.10	(2.14	10.0	12.4	0.33	11.5	
1160	42088	18:00	W7	M	7.3	3.4	2.00	<0.05	0.54	<0.05	0.54	<0.10	<0.05	<0.10	5.80	10.0	8.8	0.34	14.8	
1180	42088	21:00	W7	M	8.3	4.4	4.50	<0.05	0.94	<0.05	0.94	<0.10	0.06	<0.10	9.60	10.0	9.8	0.29	21.2	
1192	42188	01:15	W7	M	7.4	4.7	1.30	<0.05	0.54	<0.05	0.54	<0.10	<0.05	<0.10	5.34	10.0	10.4	0.31	20.8	<20
1219	42188	3:05	W7	BM	7.2	5.8	1.05	<0.05	0.57	<0.05	0.57	<0.10	<0.05	<0.10	18.4	11.0	6.2	0.31	14.6	
1224	42188	6:15	W7	M	7.3	3.9	2.02	<0.05	0.57	<0.05	0.57	<0.10	<0.05	<0.10	2.96	10.2	9.75	0.31	16.8	
1244	42188	9:05	W7	M	7.4	6.25	1.70	<0.05	0.57	<0.05	0.57	<0.10	<0.05	<0.10	27.3	13.0	10.4	0.33	20.2	283
1273	42188	12:15	W7	M	7.3	5.35	41.12	<0.05	0.52	<0.05	0.52	<0.10	<0.05	<0.10	5.22	12.0	10.5	0.33	22.2	
1286	42188	15:20	W7	M	7.4	5.0	41.35	<0.05	0.54	<0.05	0.54	<0.10	<0.05	<0.10	(2.20	11.0	10.5	0.31	11.8	
1300	42188	18:30	W7	M	7.2	7.25	<2.00	0.06	0.56	<0.05	0.56	<0.10	<0.05	<0.10	8.15	9.0	10.5	0.34	12.5	
1321	42188	21:05	W7	M	7.1	6.0	<2.00	0.07	0.59	<0.05	0.59	<0.10	<0.05	<0.10	162	10.0	11.8	2.21	32.0	
1340	42288	1:35	W7	M	7.0	4.0	<2.00	0.09	0.59	<0.05	0.59	<0.10	<0.05	<0.10	8.00	9.0	8.85	0.32	14.2	
1360	42288	3:20	W7	M	7.2	9.9	7.68	2.15	0.98	0.17	0.67	0.43	0.30	0.13						
1372	42288	6:20	W7	M	7.0	4.25	1.20	0.06	0.59	<0.05	0.59	<0.10	<0.05	<0.10						

ANALYTICAL DATA FOR RIVER AND TRIBUTARIES
HACKENSACK RIVER STUDY

APRIL DRY EVENT - APRIL 12-22 1988

SAMPLE #	DATE	TIME	SITE	DEPTH	pH	TURBIDITY ntu	CBOD5 mg/l	CBOD20 mg/l	NH3 mg/l	NO2 mg/l	NO3 mg/l	TKN mg/l	TP04 mg/l	DP04 mg/l	ORGANIC P04 mg/l	CHLORO-A mg/m3	TEMP C	DO mg/l	SALINITY ppt	TSS mg/l	FEC. COLI or g/100ml	(MPN)
11	41288	9:45	W8	M	6.8	5.5	2.0		1.28	1.16	1.16	(0.20)(0.36)+	(0.10	(0.05	(0.10	13.1	12.0	9.80	3.39	22.61	1,700	
22	41288	13:03	W8	M	7.4	6.0	(2.00		0.09	1.13	1.13	0.37	(0.10	(0.05	(0.10	11.4	14.5	13.0	3.45	11.4		
44	41288	16:20	W8	M	7.90	6.30	(2.00		<0.05	1.08	1.08	0.57	(0.10	(0.05	(0.10	21.90	14.00	13.80	3.31	11.20	300	
64	41288	19:05	W8	M	8.00	5.20	(2.00		0.06	1.10	1.10	0.35	(0.10	(0.05	(0.10	5.09	14.00	12.40	3.48	8.80		
69	41288	21:50	W8	M	7.60	5.50	(2.00		<0.05	1.12	1.12	0.24	(0.10	(0.05	(0.10	3.88	12.00	10.30	3.38	12.00		
88	41388	1:00	W8	M	7.5	5.9	(2.00		<0.05	1.17	1.17	0.24	(0.10	(0.05	(0.10	3.22	10.0	8.50	3.48	7.0		
110	41388	3:55	W8	M	7.3	5.1	(2.00		0.09	1.18	1.18	0.32	(0.10	(0.05	(0.10	5.89	9.0	7.30	3.53	47.6		
121	41388	7:00	W8	M	7.5	5.1	(2.00	2.30	0.07	1.17	1.17	0.53	(0.10	(0.05	(0.10	5.60	10.0	8.50	3.35	5.60		
135	41388	9:30	W8	M	7.5	6.8	(2.00		0.09	1.16	1.16	0.51	(0.10	(0.05	(0.10	6.03	10.0	9.90	0.41	4.0		
154	41388	12:25	W8	M	7.80	6.70	(2.00		0.08	1.14	1.14	0.26	(0.10	(0.05	(0.10	16.50	11.00	12.80	2.90	26.00		
168	41388	15:35	W8	M	8.50	6.60	(2.00		<0.05	1.10	1.10	0.66	(0.10	(0.05	(0.10	7.51	14.00	14.90	3.21	46.00		
186	41388	18:20	W8	M	8.10	5.60	(2.00		<0.05	1.11	1.11	0.67	(0.10	(0.05	(0.10	12.30	13.00	14.00	0.34	8.50		
204	41388	21:30	W8	M	7.70	5.00	(2.00		<0.05	0.53	0.53	0.71	(0.10	(0.05	(0.10	12.80	12.00	11.50	0.35	12.20		
224	41488	12:35	W8	M	7.4	5.77	(2.00		0.05	1.13	1.13	0.90	(0.10	(0.05	(0.10	2.45	9.0	8.80	2.03	12.7		
238	41488	3:35	W8	M	7.4	5.8	(2.00		0.08	1.17	1.17	0.46	(0.10	(0.05	(0.10	5.80	9.0	7.90	3.55	8.5		
257	41488	6:45	W8	M	7.3	5.6	(2.00		0.10	1.16	1.16	0.49	(0.10	(0.05	(0.10	3.60	9.0	8.40	3.66	4.0		
270	41488	9:45	W8	M	7.6	6.1	LOST		0.45	1.15	1.15	0.45	(0.10	(0.05	(0.10	3.10	15.0	8.30	3.07	5.6		
291	41488	12:50	W8	M	7.80	5.90	(2.00	2.05	0.06	1.14	1.14	0.54	(0.10	(0.05	(0.10	5.60	11.50	13.20	0.35	35.00		
306	41488	15:50	W8	M	8.15	6.50	(2.00		<0.05	1.15	1.15	0.64	(0.10	(0.05	(0.10	21.40	13.00	15.20	0.34	11.0		
320	41488	18:35	W8	M	8.25	5.20	(2.00		<0.05	1.08	1.08	0.58	(0.10	(0.05	(0.10	6.30	13.00	14.90	0.32	11.30		
339	41488	21:54	W8	M	7.6	7.5	5.72		2.30	0.90	0.13	4.17	(0.60	(0.10	(0.10	132.00	12.0	13.9	2.26	21.0		
365	41588	1:00	W8	M	7.5	5.3	1.15		0.05	1.11	1.11	0.23	(0.10	(0.05	(0.10	3.70	9.0	17.9	6.0	6.0		
378	41588	3:45	W8	M	7.4	5.1	(2.00		<0.05	1.10	1.10	0.40	(0.10	(0.05	(0.10	3.30	9.0	8.10	0.31	7.20		
397	41588	8:20	W8	M	7.3	5.0	(2.00		0.05	1.10	1.10	0.43	(0.10	(0.05	(0.10	3.30	10.0	7.90	0.49	7.60		
411	41588	10:30	W8	M	7.4	5.4	(2.00		0.08	1.11	1.11	0.45	(0.10	(0.05	(0.10	2.98	11.00	9.30	0.30	6.00		
422	41588	12:40	W8	M	7.5	5.1	(2.00		0.09	1.12	1.12	0.48	(0.10	(0.05	(0.10	2.98	11.00	10.10	0.37	4.8		
437	41588	15:35	W8	M	7.85	5.50	1.15		0.09	1.15	1.15	0.34	(0.10	(0.05	(0.10	2.95	11.00	12.20	0.33	5.20		
450	41588	18:35	W8	M	8.00	31.00	7.90	17.2	1.05	0.99	0.08	3.20	(0.10	(0.05	(0.10	25.40	11.00	12.00	1.38	207.00		
469	41588	21:30	W8	M	7.70	6.00	41.35		0.13	1.20	1.20	0.43	(0.10	(0.05	(0.10	6.30	10.00	12.40	0.35	9.41		
490	41688	0:45	W8	M	7.0	13.0	10.6		0.55	1.72	1.72	1.69	(0.28	(0.07	(0.21	23.20	9.0	9.10	2.07	70.0		
509	41688	3:05	W8	M	7.3	7.1	3.70		0.33	1.67	1.67	0.90	(0.10	(0.05	(0.10	8.30	8.0	17.7	2.52	28.0		
526	41688	6:50	W8	M	7.3	7.0	7.50		0.46	1.80	1.80	1.24	(0.10	(0.05	(0.10	6.60	10.0	9.20	1.89	13.0		
545	41688	9:30	W8	M	7.0	6.7	8.59		0.45	1.80	1.80	1.20	(0.10	(0.05	(0.10	3.63	8.0	9.65	<0.22	6.3		
558	41688	12:20	W8	M	7.5	6.25	6.88		0.38	0.73	0.73	1.32	(0.10	(0.05	(0.10	3.22	9.0	11.2	<0.22	16.7		
584	41688	15:15	W8	M	7.3	4.5	(2.00		<0.05	0.51	0.51	0.30	(0.10	(0.05	(0.10	67.30	11.0	11.0	0.34	13.6		
614	41688	18:30	W8	M	7.5	5.35	5.68	9.83	0.26	1.62	1.62	0.96	(0.10	(0.05	(0.10	4.72	10.0	10.4	0.24	7.75		
619	41688	21:35	W8	M	7.3	5.2	5.66		0.21	1.53	1.53	0.43	(0.10	(0.05	(0.10	5.48	8.0	10.4	<0.22	10.7		
639	41788	24:45	W8	M	7.0	7.6	11.0		0.20	1.51	1.51	0.69	(0.10	(0.05	(0.10	214.0	8.0	16.0	1.93	44.0		
651	41788	3:30	W8	M	7.0	4.65	4.12		0.19	1.50	1.50	0.67	(0.10	(0.05	(0.10	2.45	7.0	8.15	0.24	7.5		
670	41788	7:00	W8	M	7.20	4.50	5.25		0.16	1.45	1.45	0.75	(0.10	(0.05	(0.10	2.24	7.00	8.22	0.24	7.00		
683	41788	9:30	W8	M	7.40	3.50	41.95		0.15	1.44	1.44	0.90	(0.10	(0.05	(0.10	8.79	8.00	10.20	2.18	4.00		
703	41788	12:45	W8	M	7.6	3.3	41.95		0.13	1.42	1.42	0.64	(0.10	(0.05	(0.10	2.36	11.0	12.6	2.41	4.0		
715	41788	15:25	W8	M	8.0	3.0	41.85		0.05	1.40	1.40	0.79	(0.10	(0.05	(0.10	12.20	14.0	14.5	3.06	15.3		
729	41788	18:25	W8	M	7.9	3.0	1.55		0.14	1.34	1.34	0.88	(0.10	(0.05	(0.10	4.60	13.0	13.1	2.66	13.3		
748	41788	21:30	W8	M	7.4	3.6	2.68	4.35	0.09	1.30	1.30	0.70	(0.10	(0.05	(0.10	8.50	13.0	10.9	2.90	72.0		
761	41688	24:25	W8	M	7.3	4.0	41.45		0.06	1.21	1.21	0.51	(0.10	(0.05	(0.10	3.44	12.0	8.5	3.06	7.2		
780	41688	3:25	W8	M	7.3	3.2	41.55		0.11	1.23	1.23	0.59	(0.10	(0.05	(0.10	<2.20	11.0	7.2	3.11	4.4		
793	41688	6:45	W8	M	9.0	3.5	41.00		0.11	1.21	1.21	0.61	(0.10	(0.05	(0.10	<2.17	11.0	7.6	3.58	10.4		
812	41688	9:25	W8	M	7.5	3.7	(2.00		0.11	1.30	1.30	0.59	(0.10	(0.05	(0.10	<2.17	11.0	8.7	3.40	9.7		

ANALYTICAL DATA FOR RIVER AND TRIBUTARIES
HACKENSACK RIVER STUDY

APRIL DRY EVENT - APRIL 12-22 1988

SAMPLE #	DATE	TIME	SITE	DEPTH	pH	TURBIDITY ntu	CR005 mg/l	CR0020 mg/l	MN3 mg/l	MN3/MN2 mg/l	MN2 mg/l	MN3 mg/l	TKN mg/l	TP04 mg/l	OP04 mg/l	P04 mg/l	CHLORO-A mg/l	TEMP C	DO mg/l	SALINITY ppt	TSS mg/l	(MPN) FEC. COLI org/100ml
826	41888	12:30	M8	M	7.7	4.1	1.60		0.21	1.14	<0.05	1.14	0.54	<0.10	<0.05	<0.10	1.42	12.0	10.65	0.31	7.6	
856	41888	17:50	M8	M	7.5	4.5	1.55		<0.05	1.13	<0.05	1.13	0.49	<0.10	<0.05	<0.10	5.22	13.0	11.9	0.31	8.4	1,300
891	41888	19:40	M8	M	7.5	5.5	<2.00		0.11	1.11	<0.05	1.11	0.73	<0.10	<0.05	<0.10	6.70	12.0	10.2	0.32	12.8	
904	41888	21:40	M8	M	7.4	5.4	2.15		0.10	1.11	NS		0.71	<0.10	<0.05	<0.10	4.90	11.0	8.7	0.32	7.33	
934	41988	0:45	M8	M	7.3	5.4	2.35		0.10	1.14	<0.05	1.14	0.71	<0.10	<0.05	<0.10	<2.28	9.0	7.6	0.26	9.6	
939	41988	3:45	M8	M	7.0	5.0	1.10	2.65	0.12	1.15	<0.05	1.15	0.68	<0.10	<0.05	<0.10	<1.89	10.0	8.6	3.20	8.0	
951	41988	6:25	M8	M	6.9	5.0	1.65		0.14	1.13	<0.05	1.13	0.78	<0.10	<0.05	<0.10	1.73	10.0	8.7	0.38	8.8	
970	41988	9:35	M8	M	7.7	5.0	<2.00		0.11	1.15	<0.05	1.15	0.39	<0.10	<0.05	<0.10	2.08	9.0	10.9	0.31	4.8	
984	41988	12:40	M8	M	7.9	6.8	2.00		0.13	1.20	<0.05	1.20	0.62	<0.10	<0.05	<0.10	6.30	11.0	13.7	0.35	7.6	
1008	41988	15:40	M8	M	8.1	5.5	<2.00		0.11	1.21	<0.05	1.21	0.61	<0.10	<0.05	<0.10	8.20	10.0	14.6	0.34	15.7	9,390
1022	41988	18:15	M8	M	8.1	4.4	<2.00		<0.05	1.16	<0.05	1.16	0.58	<0.10	<0.05	<0.10	37.20	10.0	15.2	0.35	6.8	
1042	41988	22:20	M8	M	9.2	7.9	1.99		0.84	0.85	0.11	0.74	5.17	0.73	0.65	0.08	379.00	12.0	13.6	1.99	47.0	
1054	41988	00:25	M8	M	7.5	4.8	1.15		0.08	1.21	<0.05	1.21	0.39	<0.10	<0.05	<0.10	<1.77	8.0	7.8	0.34	<6.67	
1073	42088	03:30	M8	M	7.5	5.1	1.40		0.10	1.07	<0.05	1.07	0.35	<0.10	<0.05	<0.10		7.0	7.6	0.33	8.0	
1087	42088	6:40	M8	M	7.4	4.7	0.65	0.85	0.15	1.16	<0.05	1.16	0.42	<0.10	<0.05	<0.10	3.96	9.0	8.7	0.30	<5.26	
1107	42088	9:30	M8	M	7.6	4.1	1.45		0.21	1.16	<0.05	1.16	5.17	<0.10	<0.05	<0.10	<2.50	8.0	10.7	0.32	<4.0	800
1121	42088	12:30	M8	M	7.9	3.7	<2.00		0.17	1.16	<0.05	1.16	0.61	<0.10	<0.05	<0.10	7.00	10.0	16.6	0.33	13.0	
1147	42088	15:30	M8	M	7.5	5.4	1.75		<0.05	1.11	<0.05	1.11	0.41	<0.10	<0.05	<0.10	10.40	12.0	14.8	0.32	17.3	500
1161	42088	18:20	M8	M	8.2	3.6	1.30		<0.05	1.14	<0.05	1.14	0.34	<0.10	<0.05	<0.10	0.00	13.0	14.7	0.32	12.7	
1179	42088	21:15	M8	M	7.7	4.2	1.45		<0.05	0.97	<0.05	0.97	0.56	<0.10	<0.05	<0.10	6.37	11.0	10.4	0.32	15.2	
1193	42188	0:30	M8	M	7.5	4.3	1.35		<0.05	0.54	<0.05	0.54	0.79	<0.10	<0.05	<0.10	3.90	10.0	7.3	0.34	5.0	
1220	42188	3:30	M8	M	7.4	4.8	<2.00		0.24	1.16	<0.05	1.16	0.65	0.01	<0.05	<0.10	1.84	9.0	7.1	0.33	10.0	
1225	42188	6:35	M8	M	7.3	4.4	1.78		0.05	1.16	<0.05	1.16	0.47	<0.10	<0.05	<0.10	3.65	9.5	8.1	0.34	11.0	
1245	42188	9:45	M8	M	7.8	4.8	1.05		<0.05	1.17	<0.05	1.17	0.38	0.01	<0.05	<0.10	<2.52	11.0	0.6	0.32	4.4	
1274	42188	13:05	M8	M	8.0	5.0	3.07		<0.05	1.14	<0.05	1.14	0.52	0.03	<0.05	0.03		10.2	8.3	0.34	15.2	
1287	42188	15:50	M8	M	8.3	5.9	<2.00	2.70	<0.05	1.09	<0.05	1.09	0.77	0.01	<0.05	0.01		11.0	14.6	0.34	27.5	
1301	42188	19:05	M8	M	8.3	5.0	<2.00		0.07	1.06	<0.05	1.06	0.65	<0.10	<0.05	<0.10	7.70	13.0	13.9	0.34	19.0	
1322	42188	21:10	M8	M	7.8	5.9	<1.95		<0.05	1.08	<0.05	1.08	0.73	<0.10	<0.05	<0.10	6.3	12.0	12.0	0.33	13.3	
1341	42288	1:20	M8	M	7.5	5.1	<1.45		<0.05	1.09	<0.05	1.09	0.59	<0.10	<0.05	<0.10	15.2	9.0	8.8	0.35	6.0	
1361	42288	3:40	M8	M	7.5	4.2	1.30	2.20	0.11	0.57	<0.05	0.40	0.39	<0.10	<0.05	<0.10	40.5	9.0	10.2	0.30	14.4	
1373	42288	7:00	M8	M	7.5	5.1	<2.00		0.05	1.01	<0.05	1.01	<0.20	<0.10	<0.05	<0.10	5.90	9.0	7.2	0.35	5.2	

* Estimated Value + Matrix Interference

ANALYTICAL DATA FOR RIVER AND TRIBUTARIES
HACKENSACK RIVER STUDY

APRIL DRY EVENT - APRIL 12-22 1988

SAMPLE #	DATE	TIME	SITE	DEPTH	pH	TURBIDITY	CBOD5	CBOD20	NH3	NO3/NO2	NO3	TKN	TP04	OP04	P04	CHLORO-A	TEMP	DO	SALINITY	TSS	IRPNI
HACK						ntu	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/a3	C	mg/l	ppt	mg/l	org/100ml
12	41288	10:55	M9	M	8.3	8.5	7.55		3.78	0.79	0.10	3.76 +	<0.10	0.12	<0.10	250.0	11.0	18.2	1.83	4.00	40
23	41288	14:07	M9	M	8.5	11.0	11.7		1.26	0.78	0.09	4.54	0.48	0.08	0.40	183.0	14.0	23.4	1.61	46.0	
45	41288	15:18	M9	M	9.00	9.50	8.90		1.17	0.79	0.09	7.56	0.40	0.08	0.32	176.00	13.00	24.70	1.43	72.60	<20
65	41288		M9	M	9.00	7.30	9.20		1.14	0.78	0.09	6.28	0.44	0.09	0.35	228.00	13.50	19.30	1.71	47.60	
70	41288	22:43	M9	M	8.80	7.30	6.9		1.36	0.80	0.10	4.78	0.74	0.13	0.61	172.00	12.00	17.70	1.86	36.80	
89	41288		M9	M	8.7	6.0	8.90		1.42	0.83	0.10	4.34	0.38	0.13	0.25	40.1	10.0	18.2	1.90	24.0	
111	41388	5:15	M9	M	8.8	7.0	4.92		2.01	0.83	0.09	3.26	0.42	0.12	0.30	131.0	8.0	17.3	1.81	34.8	
122	41388	7:45	M9	M	8.8	8.1	5.20		1.39	0.84	0.10	2.86	0.77	0.12	0.65	188.0	10.0	5.70	1.73	43.0	
136	41388	10:10	M9	M	8.7	10.0	8.85	11.4	1.79	0.84	0.12	3.20	0.57	0.12	0.45	150.0	12.0	16.4	2.78	54.5	
155	41388	13:10	M9	M	8.90	8.50	15.90		1.40	0.84	0.10	2.75	0.39	0.15	0.24	100.00	13.00	18.40	1.91	43.50	80
169	41388	16:20	M9	M	9.20	4.40	>15.40		1.24	0.82	0.10	3.35	0.69	0.13	0.56	96.30	14.00	23.90	1.81	43.30	20
187	41388	19:10	M9	M	9.20	8.50	>14.80		1.14	0.83	0.09	4.22	0.58	0.10	0.48	41.00	13.00	24.50	1.81	53.20	
206	41388	22:20	M9	M	8.90	7.50	9.30		1.27	0.85	0.11	4.84	0.73	0.13	0.60	101.00	12.00	21.40	1.95	30.30	
225	41488	1:30	M9	M	8.9	6.73	4.15		1.41	0.84	0.10	3.86	0.49	0.15	0.34	210.00	9.0	18.2	5.52	23.0	
239	41488	4:30	M9	M	8.8	6.4	4.42		1.42	0.86	0.11	4.17	0.54			42.60	8.0	16.9	2.08	28.5	
258	41488	7:30	M9	M	8.8	6.1	8.90		1.34	0.88	0.10	3.95	0.53			173.00	5.0	15.8	1.92	21.8	
271	41488	10:30	M9	M	9.0	8.0	7.18		1.17	0.87	0.10	2.75	0.59			81.30	12.0	11.8	3.48	51.0	1,700
292	41488	23:50	M9	M	9.20	9.10	8.10	32.8	0.94	0.87	<0.05	3.33	1.02			86.00	13.00	25.50	1.80	91.00	
307	41488	16:35	M9	M	9.20	8.60	14.40		1.00	0.87	0.09	5.71	0.73			99.00	13.00	22.90	1.91	69.00	70
340	41488	22:30	M9	M	8.9	7.1	14.6		1.22	0.84	0.10	4.16	0.58			176.00	10.0	19.9	1.68	23.5	
366	41588	1:15	M9	M	8.9	5.5	9.60		1.62	0.83	0.10	3.71	0.54			151.00	9.0	17.9	0.70	26.8	
379	41588	4:45	M9	M	8.9	5.8	7.72		1.32	0.81	0.11	3.95	0.49	0.12	<0.10	29.10	10.0	16.5	2.14	22.8	
398	41588	9:05	M9	M	8.9	8.4	10.2		0.76	0.78	0.05	2.83	0.74	<0.05	0.74	182.00	10.0	17.7	1.73	54.0	
412	41588	11:10	M9	M	9.0	9.5	>15.7		0.81	0.78	0.05	7.56	0.80	0.08	0.72	1051	11.00	18.9	1.54	42.00	170
423	41588	13:20	M9	M	8.9	9.2	14.40		1.29	0.82	0.12	4.23	0.60	0.40	0.20	46.00	11.00	19.80	2.21	61.30	
438	41588	16:20	M9	M	8.75	6.60	5.78		1.72	0.81	0.11	3.14	0.35	0.23	0.12	22.60	13.00	16.10	2.39	21.50	20
451	41588	19:25	M9	M	8.80	7.00	12.0	23.0	1.26	0.82	0.12	4.00	0.82	0.19	0.63	156.00	13.00	20.90	2.07	63.30	70
470	41588	22:20	M9	M	8.75	7.90	15.50		1.55	0.87	0.13	3.92	0.80	0.20	0.60	114.00	12.00	15.00	1.97	45.70	
491	41688	1:45	M9	M	8.8	9.4	15.0		1.12	0.82	0.09	4.04	0.63	0.10	0.53	55.40	10.0	18.2	1.85	38.4	
510	41688	4:20	M9	M	9.0	6.9	12.6		0.89	0.84	0.09	3.52	0.61	0.10	0.51	59.90	9.0	6.70	1.40	32.8	
527	41688	7:35	M9	M	8.9	7.4	13.4		0.92	0.83	0.10	2.66	0.64	0.10	0.54	92.40	9.5	16.0	1.54	38.5	
546	41688	10:20	M9	M	7.47	14.0	14.02		0.63	0.80	<0.05	1.48	0.04	<0.05	0.04	5.10	11.0	9.80	2.47	32.0	800
559	41688	13:10	M9	M	8.5	9.6	17.0		2.15	0.97	0.19	6.58	0.79	0.47	0.32	138.00	11.0	14.3	2.81	50.0	
585	41688	15:35	M9	M	7.0	5.55	6.68		0.34	1.74	0.06	1.04	<0.10	<0.05	<0.10	31.00	9.0	12.0	<0.22	10.4	535
615	41688	19:25	M9	M	9.1	7.0	15.8	32.7	0.99	0.83	0.11	4.96	0.65	0.56	0.09	88.30	11.0	14.3	1.97	50.0	
620	41688	22:30	M9	M	8.7	21.0	15.4		0.39	0.43	<0.05	18.11	0.27	0.22	0.05	154.00	9.0	17.2	2.08	38.0	
640	41788	1:30	M9	M	8.7	8.0	4.53		0.46	0.40	<0.05	0.90	0.26	0.26	0.00	11.0	9.0	7.3	0.42	0.67	
652	41788	4:25	M9	M	8.9	6.9	14.8		0.85	0.84	0.11	3.58	0.51	0.40	0.11	160.00	9.0	16.9	1.84	40.0	
671	41788	7:35	M9	M	8.90	7.80	9.58		0.51	0.82	0.10	3.56	0.65	0.65	0.00	139.00	8.00	17.50	1.83	37.00	80
684	41788	10:30	M9	M	8.90	6.60	12.00		0.53	0.88	0.10	3.50	0.82	0.76	0.06	104.00	10.00	18.60	2.03	47.00	
704	41788	13:10	M9	M	9.0	7.1	13.2		0.97	0.89	0.13	5.91	0.87	0.77	0.10	128.00	13.0	19.8	2.16	4.97	
716	41788	16:35	M9	M	9.1	6.6	>14.8		0.53	0.81	0.10	7.12	0.87	0.87	0.00	212.00	14.0	23.0	1.83	52.0	40
730	41788	19:20	M9	M	9.0	6.8	14.3		0.77	0.81	0.10	5.49	0.68	0.83	0.05	99.08	12.0	2.05	1.93	44.7	
749	41788	22:40	M9	M	7.0	6.2	10.7	24.9	8.57	0.85	0.11	5.02	0.49	0.42	0.07	1050.08	9.0	18.3	1.87	35.3	
762	41888	1:05	M9	M	8.9	6.5	12.6		0.88	0.83	0.11	3.80	0.53	0.47	0.08	130.00	11.0	17.0	2.09	35.5	
781	41888	4:05	M9	M	9.0	6.6	11.5		0.90	0.80	0.10	3.65	0.53	0.48	0.05	172.00	12.0	16.5	1.95	30.4	
794	41888	7:10	M9	M	7.0	6.4	14.2		0.65	0.81	0.10	3.37	0.60	0.54	0.06	255.00	12.0	18.6	2.09	28.7	
813	41888	10:10	M9	M	9.1	7.25	12.0		0.67	0.82	0.10	6.88	0.82	0.76	0.06	211.00	11.0	18.45	1.95	31.3	
827	41888	13:15	M9	M	8.9	8.0	11.8		1.50	0.85	0.15	6.48	0.69	0.54	0.15	216.00	12.0	15.78	2.04	33.6	

* Mat* erference * Estimated Value

ANALYTICAL DATA FOR RIVER AND TRIBUTARIES
HACKENSACK RIVER STUDY

APRIL DRY EVENT - APRIL 12-22 1988

SAMPLE # HACK	DATE	TIME	SITE	DEPTH	pH	TURBIDITY ntu	CRUDS mg/l	CRUD20 mg/l	MN3 mg/l	MN3/MN2 mg/l	MN2 mg/l	NO3 mg/l	TKN mg/l	TP04 mg/l	DP04 mg/l	ORGANIC PO4 mg/l	CHLORO-A mg/a3	TEMP C	DO mg/l	SALINITY ppt	TSS mg/l	(NPN) FEC. COLI org/100ml
857	41888	18:30	W9	M	9.0	6.8	>15.2		0.60	0.72	0.11	0.61	0.67	0.82	0.74	0.08	296.00	12.0	18.1	1.90	41.4	<20
892	41888	20:25	W9	M	8.9	6.9	15.2		0.62	0.79	0.11	0.68	2.66	0.62	0.57	0.05	242.00	11.0	15.25	1.83	49.0	
905	41888	22:10	W9	M	8.8	7.8	14.6		1.01	0.79	0.13	0.66	1.18	0.64	0.54	0.10	261.00	8.0	16.3	2.16	35.6	
935	41988	1:55	W9	M	8.7	7.25	12.2		1.48	0.83	0.16	0.67	6.13	0.77	0.59	0.18	161.00	10.0	9.25	1.93	44.0	
940	41988	4:40	W9	M	8.9	6.0	16.6	33.0	<0.05	0.79	0.10	0.69	4.61	0.54	0.54	0.00	39.80	10.0	11.4	1.68	45.3	
952	41988	7:05	W9	M	9.0	7.55	>14.6		<0.05	0.76	0.10	0.66	4.92	0.50	0.50	0.00	300.00	9.0	16.0	1.84	42.5	
971	41988	10:15	W9	M	9.2	8.4	>15.6		0.52	0.81	0.10	0.71	5.08	0.73	0.73	0.00	59.30	11.0	19.1	1.73	63.0	
985	41988	13:20	W9	M	9.0	7.1	13.4		1.43	0.84	0.14	0.70	4.59	0.69	0.58	0.11	268.00	12.5	12.2	2.21	49.0	
1009	41988	16:25	W9	M	9.0				1.96	0.86	0.15	0.71	3.03	0.20	0.09	0.11	239.00	12.0				
1023	41988	19:00	W9	M	9.3	6.9	>14.4		0.18	0.84	0.09	0.75	5.32	0.71	0.71	0.00	203.00	11.0	24.9	1.85	50.0	
1043	41988	21:38	W9	M	7.5	26.0	0.42		0.28	0.35	<0.05	0.35	1.46	0.10	0.10	0.00	<1.76	9.0	9.0	0.42	18.0	
1055	41988	01:10	W9	M	9.0	7.0	>16.8		1.14	0.84	0.11	0.73	6.86	0.78	0.08	0.70	239.00	9.0	9.0	1.99	40.0	
1074	42088	04:20	W9	M	9.0	8.3	9.80		1.29	0.99	0.13	0.86	4.23	0.70	0.09	0.61	371.00	9.0	5.4	2.10	39.0	
1088	42088	7:15	W9	M	9.1	7.4	7.30	20.0	0.21	0.81	0.09	0.72	4.67	0.62	<0.05	0.62	596.00	8.5	18.4	1.65	51.3	70
1108	42088	9:40	W9	M	7.9	8.5	>14.4		1.19	0.87	0.12	0.75	5.76	0.97	<0.05	0.97	484.00	9.0	17.6	1.96	44.0	
1122	42088	13:10	W9	M	8.9	8.9	10.8		2.01	0.88	0.13	0.75	7.21	0.53	0.10	0.43	85.10	12.0	12.9	2.22	48.0	
1148	42088	16:20	W9	M	8.7	12.0	7.50		2.63	0.90	0.19	0.71	3.31	0.57	0.21	0.36	238.00	12.0	14.1	2.76	48.0	210
1162	42088	19:05	W9	M	9.2	7.5	>15.2		1.36	0.75	0.10	0.65	3.55	0.71	0.09	0.62	333.00	11.0	20.4	1.85	41.3	
1181	42088	22:05	W9	M	9.1	33.0	10.1		1.26	1.13	0.10	1.03	5.42	0.69	<0.05	0.69	310.00	11.0	18.9	0.48	14.0	
1194	42188	1:25	W9	M	9.0	7.9	>16.0		1.59	1.17	0.12	1.05	4.65	0.60	0.09	0.51	336.00	10.0	11.7	2.02	46.7	
1221	42188	4:15	W9	M	8.9	7.2	>14.8		1.65	0.86	0.13	0.73	4.28	0.78	0.12	0.66	335	11.0	8.5	2.13	38.4	
1226	42188	7:15	W9	M	9.0	7.3	12.6		0.92	0.84	0.09	0.75	3.54	0.69	<0.05	0.69	6.05	10.0	17.8	1.56	53.3	
1246	42188	10:35	W9	M	9.2	8.4	15.6		0.86	0.84	0.10	0.74	5.45	0.65	<0.05	0.65	1048	12.0	14.9	1.53	38.8	40
1275	42188	14:00	W9	M	8.8	9.5	61.10		0.28	0.95	0.19	0.00	6.65	0.88	0.24	0.64		14.0	12.6	2.77	58.7	
1288	42188	16:25	W9	M	8.6	9.3	8.70		3.24	0.95	0.22	0.73	7.81	0.89	0.33	0.56		14.0	13.1	2.37	43.5	40
1302	42188	19:25	W9	M	9.2	7.2	14.8		0.72	0.83	0.12	0.71	5.25	0.74	0.06	0.68	435	12.0	17.8	1.97	71.2	
1323	42188	22:00	W9	M	9.1	7.1	>14.8		0.69	0.87	0.11	0.76	4.92	0.55	0.06	0.49	432	11.0	16.6	1.93	50.0	
1342	42288	2:10	W9	M	9.0	7.6	>15.2		0.99	0.89	0.14	0.75	3.81	0.58	0.08	0.50	393	11.0	10.5	2.18	39.6	
1363	42288	4:30	W9	M	8.8	7.4	9.93		0.90	0.80	0.13	0.80	4.09	0.55	0.47	0.08	170	9.0	9.4	1.65	37.0	
1374	42288	7:40	W9	M	9.2	6.9	>15.4		0.56	0.78	0.11	0.67	4.08	0.55	0.35	0.00	261	10.0	11.4	1.80	42.7	

ANALYTICAL DATA FOR RIVER AND TRIBUTARIES HACKENSACK RIVER STUDY

APRIL DRY EVENT - APRIL 12-22 1988

SAMPLE #	DATE	TIME	SITE	DEPTH	pH	TURBIDITY ntu	CBOD5 mg/l	CHLORO-A mg/a3	TP04 mg/l	DP04 mg/l	PO4 mg/l	TKN mg/l	MD3 mg/l	MD2 mg/l	MD3/MD2	NH3 mg/l	CR020 mg/l	DO mg/l	TEMP C	SALINITY ppt	TSS mg/l	FEC. COLI org/100ml
13	41288	11:30	M10	M	6.8	13.0	2.0	12.3	0.10	0.05	0.10	1.51	0.52	0.05	0.52	0.85	0.52	9.75	13.0	4.46	10.0	458
24	41288	14:35	M10	M	6.9	33.0	2.0	182.0	0.10	0.05	0.10	1.35	0.58	0.05	0.58	0.82	0.58	9.75	14.0	4.25	110.0	
46	41288	17:49	M10	M	6.80	2.50	1.00	162.0	0.10	0.05	0.10	1.30	0.18	0.05	0.18	0.83	0.22	11.7	15.00	4.96	13.00	800
66	41288	20:25	M10	M	6.80	38.00	0.98	5.12	0.10	0.05	0.10	1.46	0.18	0.05	0.18	0.78	0.18	11.20	12.00	5.21	9.20	
71	41288	23:07	M10	M	7.00	34.00	2.00	3.66	0.10	0.05	0.10	1.50	0.17	0.05	0.17	0.89	0.17	8.20	12.00	5.25	13.20	
90	41388	2:20	M10	M	6.9	33.0	1.25	2.13	0.10	0.05	0.10	1.72	0.21	0.05	0.21	1.09	0.21	5.80	9.0	5.10	14.4	
112	41388	5:35	M10	M	6.8	23.0	2.00	2.26	0.10	0.05	0.10	2.11	0.17	0.05	0.17	1.23	0.17	6.00	7.0	5.10	14.4	
123	41388	8:15	M10	M	6.9	20.0	2.00	2.41	0.10	0.05	0.10	1.83	0.66	0.05	0.66	0.99	0.66	7.00	5.00	12.4		
137	41388	10:35	M10	M	6.9	23.0	2.00	2.41	0.10	0.05	0.10	1.83	0.47	0.05	0.47	0.97	0.47	7.00	5.00	12.4		
156	41388	13:40	M10	M	7.10	24.00	1.60	4.74	0.10	0.05	0.10	1.59	0.30	0.05	0.30	0.97	0.30	10.0	6.60	8.64	4.40	
170	41388	16:45	M10	M	7.20	27.00	2.00	7.30	0.10	0.05	0.10	1.51	0.78	0.05	0.78	0.72	0.78	10.20	5.07	9.50		
188	41388	19:30	M10	M	7.20	31.00	2.00	10.70	0.10	0.05	0.10	1.84	0.40	0.05	0.40	0.81	0.40	12.90	4.78	11.50		
207	41388	22:50	M10	M	6.90	33.00	2.00	2.64	0.10	0.05	0.10	2.06	0.20	0.05	0.20	0.89	0.20	11.50	0.48	11.00		
226	41488	2:05	M10	M	6.9	19.4	2.00	2.90	0.10	0.05	0.10	2.19	0.18	0.05	0.18	1.00	0.18	7.90	0.52	11.00		
240	41488	5:00	M10	M	6.8	35.0	2.00	2.90	0.10	0.05	0.10	2.78	0.19	0.05	0.19	1.10	0.19	6.30	4.82	16.0		
259	41488	8:00	M10	M	6.9	28.0	2.00	2.90	0.10	0.05	0.10	2.40	0.71	0.05	0.71	0.97	0.71	6.20	5.12	14.6		
272	41488	10:35	M10	M	7.0	34.0	1.65	0.00	0.10	0.05	0.10	1.46	0.51	0.05	0.51	0.97	0.51	9.90	5.52	11.2		
293	41488	14:10	M10	M	7.20	30.00	2.00	4.60	0.10	0.05	0.10	1.83	0.79	0.05	0.79	0.73	0.79	9.00	5.39	16.0		
308	41488	17:00	M10	M	7.50	31.00	1.45	5.20	0.10	0.05	0.10	1.25	0.73	0.05	0.73	0.76	0.73	12.60	0.50	8.40		
322	41488	19:40	M10	M	7.00	33.00	2.00	4.50	0.10	0.05	0.10	1.26	0.49	0.05	0.49	0.75	0.49	13.30	0.50	10.70		
341	41488	22:50	M10	M	7.0	35.0	2.00	2.54	0.10	0.05	0.10	1.89	0.25	0.05	0.25	0.82	0.25	11.80	0.49	13.50		
367	41588	2:10	M10	M	7.0	20.0	2.30	3.65	0.10	0.05	0.10	1.56	0.23	0.05	0.23	0.99	0.23	8.30	0.49	10.8		
380	41588	5:15	M10	M	7.0	18.0	2.00	3.55	0.10	0.05	0.10	1.83	0.14	0.05	0.14	1.12	0.14	6.00	0.48	8.40		
399	41588	9:30	M10	M	6.8	29.00	2.50	3.85	0.10	0.05	0.10	1.65	0.54	0.05	0.54	0.93	0.54	7.40	0.60	15.00		
413	41588	11:35	M10	M	7.0	29.0	2.55	3.85	0.10	0.05	0.10	1.79	0.59	0.05	0.59	0.90	0.59	6.00	0.48	8.40		
424	41588	13:45	M10	M	7.3	39.0	2.30	3.85	0.10	0.05	0.10	1.52	0.79	0.05	0.79	0.88	0.79	9.00	0.48	11.80		
439	41588	16:45	M10	M	7.30	31.00	2.30	3.85	0.10	0.05	0.10	1.52	0.79	0.05	0.79	0.88	0.79	9.00	0.48	11.80		
452	41588	19:40	M10	M	7.20	33.00	2.70	3.85	0.10	0.05	0.10	1.52	0.79	0.05	0.79	0.88	0.79	9.00	0.48	11.80		
492	41688	2:10	M10	M	6.8	35.0	4.25	6.23	0.26	0.05	0.26	2.25	0.64	0.05	0.64	1.01	0.32	11.30	0.46	11.20		
511	41688	5:00	M10	M	6.7	31.0	14.0	7.71	0.13	0.05	0.13	1.86	1.05	0.05	1.05	1.36	1.05	11.80	0.47	23.3		
528	41688	8:00	M10	M	6.7	21.0	16.8	1.75	0.13	0.05	0.13	1.59	0.90	0.05	0.90	1.10	0.90	7.60	0.47	58.0		
560	41688	10:35	M10	M	7.0	15.0	7.30	1.75	0.11	0.05	0.11	1.52	0.69	0.05	0.69	0.76	0.74	7.50	0.47	18.0		
586	41688	13:35	M10	M	7.1	7.9	5.93	1.47	0.22	0.11	0.22	5.93	0.77	0.17	0.77	1.77	0.94	3.20	0.42	3.20		
587	41688	16:35	M10	M	7.0	13.0	1.98	1.47	0.22	0.11	0.22	5.93	0.77	0.17	0.77	1.77	0.94	3.20	0.42	3.20		
616	41688	19:50	M10	M	9.05	7.6	15.2	1.47	0.22	0.11	0.22	5.93	0.77	0.17	0.77	1.77	0.94	3.20	0.42	3.20		
621	41688	22:45	M10	M	7.43	16.0	1.67	1.47	0.22	0.11	0.22	5.93	0.77	0.17	0.77	1.77	0.94	3.20	0.42	3.20		
638	41788	2:00	M10	M	6.5	8.4	9.60	1.47	0.22	0.11	0.22	5.93	0.77	0.17	0.77	1.77	0.94	3.20	0.42	3.20		
653	41788	4:45	M10	M	6.8	4.65	4.88	1.47	0.22	0.11	0.22	5.93	0.77	0.17	0.77	1.77	0.94	3.20	0.42	3.20		
672	41788	8:00	M10	M	6.80	23.00	5.05	1.47	0.22	0.11	0.22	5.93	0.77	0.17	0.77	1.77	0.94	3.20	0.42	3.20		
685	41788	11:50	M10	M	7.0	23.0	4.35	1.47	0.22	0.11	0.22	5.93	0.77	0.17	0.77	1.77	0.94	3.20	0.42	3.20		
705	41788	17:00	M10	M	7.1	25.0	2.35	1.47	0.22	0.11	0.22	5.93	0.77	0.17	0.77	1.77	0.94	3.20	0.42	3.20		
731	41788	19:45	M10	M	6.8	27.0	2.80	1.47	0.22	0.11	0.22	5.93	0.77	0.17	0.77	1.77	0.94	3.20	0.42	3.20		
750	41788	22:50	M10	M	6.9	27.0	3.22	1.47	0.22	0.11	0.22	5.93	0.77	0.17	0.77	1.77	0.94	3.20	0.42	3.20		
763	41888	1:25	M10	M	6.9	26.0	1.55	1.47	0.22	0.11	0.22	5.93	0.77	0.17	0.77	1.77	0.94	3.20	0.42	3.20		
782	41888	4:25	M10	M	6.8	30.0	3.55	1.47	0.22	0.11	0.22	5.93	0.77	0.17	0.77	1.77	0.94	3.20	0.42	3.20		
795	41888	8:00	M10	M	7.41	28.0	2.00	1.47	0.22	0.11	0.22	5.93	0.77	0.17	0.77	1.77	0.94	3.20	0.42	3.20		

ANALYTICAL DATA FOR RIVER AND TRIBUTARIES
HACKENSACK RIVER STUDY

APRIL DRY EVENT - APRIL 12-22 1988

SAMPLE #	DATE	TIME	SITE	DEPTH	pH	TURBIDITY ntu	CRD020 mg/l	MHS mg/l	M03/M02 mg/l	M02 mg/l	M03 mg/l	TKN mg/l	TP04 mg/l	DP04 mg/l	ORGANIC P04 mg/l	CHLORO-A mg/l	TEMP C	DO mg/l	SALINITY ppt	TSS mg/l	FEC. COLI org/100ml
814	41888	10:40	M10	M	7.0	33.0	2.25	0.59	0.52	<0.05	0.52	1.26	0.16	0.16	0.00	<2.23	11.0	8.0	5.17	11.3	
828	41888	13:40	M10	M	7.1	33.0	2.50	0.55	0.51	<0.05	0.51	1.45	<0.10	<0.05	0.10	20.20	12.0	10.35	0.45	11.5	
858	41888	18:45	M10	M	6.9	31.0	4.30	0.56	0.31	<0.05	0.31	1.75	0.14	0.14	0.00	4.30	12.0	8.5	1.89	21.4	500
893	41888	20:30	M10	M	6.7	30.0	5.75	0.68	0.50	0.07	0.43	1.68	0.22	0.22	0.00	<2.00	12.0	6.5	0.37	27.1	
906	41888	22:30	M10	M	6.7	26.0	6.03	0.67	0.46	<0.05	0.46	1.81	0.34	0.34	0.00	3.60	11.0	6.1	0.43	9.50	
936	41988	21:40	M10	M	6.7	23.0	7.10	6.05	0.31	<0.05	0.31	4.10	0.51	0.51	0.00		8.0	5.8	0.40	14.0	
941	41988	5:15	M10	M	7.0	30.0	12.5	0.23	0.28	<0.05	0.28	1.76	0.27	0.27	0.00	<1.75	7.5	6.0	4.83	25.0	
953	41988	7:30	M10	M	6.9	29.0	6.20	0.11	0.54	<0.05	0.54	1.40	0.22	0.22	0.00	2.05	7.0	6.5	.52	16.0	
972	41988	10:40	M10	M	7.1	27.0	3.60	0.32	0.45	<0.05	0.45	1.38	0.33	0.33	0.00	7.36	9.0	9.4	0.43	31.0	
986	41988	13:40	M10	M	7.1	29.0	3.40	0.43	0.58	<0.05	0.58	2.07	0.90	0.90	0.00	3.20	11.0	12.0	0.46	144.0	
1010	41988	16:25	M10	M	7.1			0.53	0.67	<0.05	0.67	0.75	0.48	0.48	0.00	6.00	12.0				
1024	41988	19:20	M10	M	7.7	26.0	2.10	0.43	0.43	<0.05	0.43	1.37	<0.10	<0.05	<0.10	<2.39	12.0	11.6	0.45	11.0	
1044	41988	21:38	M10	T	7.0	5.6	10.82	1.32	1.22	0.10	1.12	2.18	0.39	0.13	0.26	25.70	12.0	9.2	10.86	31.5	
1056	41988	01:30	M10	M	6.7	2.7	4.20	0.65	0.31	<0.05	0.31	1.55	<0.10	<0.05	0.10	<1.80	8.0	7.6	0.44	9.2	
1075	42088	04:40	M10	M	6.7	26.0	3.30	0.88	0.29	<0.05	0.29	1.45	0.21	<0.05	0.21	2.35	7.0	7.0	0.46	17.0	
1089	42088	7:40	M10	M	6.9	25.0	6.15	0.94	0.61	<0.05	0.61	1.47	<0.10	0.08	<0.10	5.47	8.0	7.7	0.45	11.2	
1109	42088	10:15	M10	M	9.1	25.0	2.30	0.75	0.72	<0.05	0.72	1.32	0.36	<0.05	0.36	93.00	10.0	10.2	0.47	16.0	1,300
1123	42088	13:30	M10	M	7.3	23.0	2.50	0.89	0.62	<0.05	0.62	1.65	<0.10	<0.05	<0.10	5.30	12.0	12.5	0.47	13.6	
1149	42088	16:45	M10	M	7.3			0.86	0.54	<0.05	0.54	2.77	0.14	<0.05	0.14	80.50	12.0				
1163	42088	19:25	M10	M	7.3	30.0	2.40	0.57	0.27	<0.05	0.27	1.37	<0.10	<0.05	<0.10	4.80	13.0	12.2	0.50	10.8	
1182	42088	22:25	M10	M	6.8	4.6	4.10	0.51	0.83	<0.05	0.83	1.47	0.27	<0.05	0.27	<2.37	11.0	8.8	10.00	27.6	
1195	42088	1:40	M10	M	6.8	30.0	2.90	1.02	0.81	<0.05	0.81	1.18	<0.10	<0.05	0.10	0.00	10.0	6.6	0.50	12.0	
1222	42188	4:40	M10	M	6.9	26.0	2.00	0.92	0.27	<0.05	0.27	1.09	0.05	<0.05	0.05	42.2	10.0	5.7	0.50	12.0	
1227	42188	7:40	M10	M	6.9	24.0	3.82	0.81	0.52	<0.05	0.52	3.70	<0.10	<0.05	<0.10	34.1	10.0	6.8	0.48	10.4	
1247	42188	10:35	M10	M	7.0	23.0	4.00	0.76	0.62	<0.05	0.62	1.44	<0.10	<0.05	<0.10	4.20	12.0	10.4	0.47	9.6	170
1276	42188	14:30	M10	M	7.3		7.70	12.64	0.52	<0.05	0.52	3.48	0.34	<0.05	0.34	130	16.0	10.7	0.49	263.0	
1289	42188	16:45	M10	M	7.2	27.0	6.60	0.58	0.52	<0.05	0.52	1.61	<0.10	<0.05	<0.10	7.70	14.0	13.1	0.48	22.0	300
1303	42188	19:25	M10	M	7.1	20.0	2.10	0.69	0.23	<0.05	0.23	1.35	<0.10	<0.05	<0.10	<1.63	13.0	11.5	0.53	18.0	170
1324	42188	22:25	M10	M	7.0	30.0	<2.00	0.34	0.27	<0.05	0.27	1.65	<0.10	<0.05	<0.10	3.00	10.0	8.6	0.50	10.7	
1343	42288	2:35	M10	M	7.0	27.0	<2.00	0.68	0.28	<0.05	0.28	1.54	<0.10	<0.05	<0.10	2.0	9.0	16.4	0.50	11.2	
1364	42288	4:55	M10	M	6.8	27.0	2.10	0.94	0.22	<0.05	0.22	1.47	<0.10	<0.05	<0.10	<1.29	7.0	89.2	0.44	11.6	
1375	42288	8:20	M10	M	7.2	23	<2.00	0.67	0.53	<0.05	0.53	1.23	<0.10	<0.05	<0.10	1.99	8.0	7.6	0.51	10.0	

NOTES:
M1 - Hackensack River at Route 1 & 9 Bridge
M2 - Hackensack River at Erie Lackawanna RR Bridge
M3 - Hackensack River at Conrail RR Bridge
M4 - Hackensack River at Bellean Cr. Confluence
M5 - Hackensack River at Route 46 Bridge
M6 - Hackensack River at Old Bridge Road Bridge
M7 - Hackensack River at Dradell Avenue Bridge
M8 - Coles Brook at Main Street
M9 - Overpeck Creek at Bergen Turnpike Bridge
M10 - Berry's Creek at Industrial Avenue Bridge

SECTION 2

ANALYTICAL DATA

CSO AND STORM SEWER LOCATIONS

APRIL DRY EVENT

APRIL 12-22, 1988

ANALYTICAL DATA FOR CSD AND STORM SEWER LOCATIONS
HACKENSACK RIVER STUDY

APRIL DRY EVENT - APRIL 12-22 1989

SAMPLE #	DATE	TIME	SITE	pH	TURBIDITY ntu	CONDUS ug/l	NO3 ug/l	NO2 ug/l	NO3 ug/l	TKN ug/l	TP04 ug/l	OP04 ug/l	ORGANIC P04 ug/l	DO ug/l	SALINITY ppt	TSS ug/l	FEC. COLI org/100ml	FLOW RATE cfs
480	41388	2300	C1	ND	20.0	4.55	0.58	<0.05	1.56	1.75	<0.10	0.15	<0.10	9.90	<0.22	71.2	<2,000,000	3.77
481	41388	2346	C1	ND	18.0	6.55	0.46	<0.05	1.43	1.83	<0.10	0.10	<0.10	10.0	<0.22	204.0	<2,000,000	2.41
843	41888	1745	C1	ND	27.0	14.1	0.36	0.08	1.44	1.54	0.39	0.39	0.00	8.3	0.22	47.1	<20,000	0.13
	41888	1756	C1															0.27
	41888	1805	C1															0.45
864	41888	1815	C1	ND	25.0	60.0	0.37	0.26	0.88	2.67	0.98	0.84	0.14	8.0	<0.22	69.0	<20,000	0.45
	41888	1830	C1															0.45
	41888	1845	C1															0.45
	41888	1915	C1															0.13
	41888	1945	C1															0.27
1256	42188	815	C1	ND	5.6	116.0	16.80	<0.05	0.44	<2.00 +	4.82	0.13	4.69	1.1	0.61	104.0	2,200,000	
1311	42188	1925	C1	6.85	40.0	150.0	10.49	<0.05	0.40	15.05	3.37	0.41	2.96	3.5	0.52	96.7		--
99	41388	300	C2	6.8	27.0	55.8	10.6	0.30	0.38	19.42	++	1.38		2.80	5.62	56.0	<16,000	1.51
165	41388	1510	C2	ND	22.00	11.40	10.1	0.19	0.44	21.1	3.11	1.62	1.49	3.00	5.44	51.00	70	2.04
227	41488	1407	C2	ND	26.0	357.0	11.7	0.29	0.29	25.1	3.40	1.44	1.96	1.80	8.63	42.0	<20	1.32
302	41488	1455	C2	ND	40.00	10.80	10.5	0.04	0.54	20.0	3.60	1.68	2.82	2.00	0.56	57.50	>160,000	1.89
433	41588	1616	C2	7.00	45.0	99.13	10.3	0.07	0.50	23.44	4.50	1.68	2.82	1.50	0.51	56.50	2,000,000	3.60
501	41688	115	C2	ND	23.0	70.5	2.88	<0.05	1.37	3.72	1.24	0.62	0.62	7.90	2.67	77.5	<2,000,000	3.90
502	41688	145	C2	ND	24.0	42.0	4.17	0.06	1.21	8.59	1.42	0.75	0.67	6.20	1.90	71.9	<2,000,000	4.14
503	41688	215	C2	ND	26.0	54.0	5.35	0.07	1.11	10.9	1.85	0.93	0.92	5.70	2.25	71.0	4,000,000	3.10
504	41688	245	C2	ND	26.0	45.4	7.38	0.08	0.96	11.0	1.83	1.10	0.73	4.00	2.03	75.0	7,000,000	1.21
520	41688	315	C2	ND	23.0	34.8	7.78	0.09	0.86	10.73	1.87	0.42	1.45	3.66	3.13	47.3		1.89
521	41688	345	C2	ND	19.0	132.4	7.64	0.09	0.92	11.81	1.65	0.44	1.21	3.80	3.06	42.0		1.59
522	41688	415	C2	ND	12.0	30.0	7.70	0.09	1.01	12.68	1.65	0.41	1.24	4.50	3.26	36.7		1.74
523	41688	445	C2	ND	16.0	73.2	7.58	0.08	0.99	12.65	1.63	0.32	1.31	4.70	3.36	25.0		1.29
	41888	1430	C2															7.75
868	41888	1500	C2	ND	45.0	75.0	11.31	<0.05	0.56	28.48	4.23	2.40	1.83	1.0	0.52	84.0	3,000,000	2.22
869	41888	1525	C2	ND	43.0	87.0	10.29	<0.05	0.56	26.06	3.94	2.21	1.73		0.52	93.3	132,000	2.36
870	41888	1544	C2	ND	56.0	81.0	10.20	<0.05	0.61	23.41	4.01	2.47	1.54	3.0	0.52	101.4	9,000,000	1.56
	41888	1600	C2															1.56
871	41888	1620	C2	ND	59.0	117	10.35	<0.05	0.56	16.79	3.70	2.35	1.55	1.1	0.50	96.0	9,000,000	1.42
872	41888	1641	C2	ND	66.0	75.0	10.39	<0.05	0.43	23.18	3.80	2.15	1.45	2.2	0.49	84.3	5,000,000	1.28
873	41888	1713	C2	ND	54.0	90.0	9.44	0.30	0.47	20.75	3.57	2.02	1.35	1.8	0.48	75.7	3,000,000	1.28
874	41888	1746	C2	ND	63.0	87.0	8.69	0.43	0.30	21.91	3.04	2.02	1.02	1.3	0.42	63.7	2,800,000	1.28
875	41888	1811	C2	ND	58.0	105	8.60	0.60	0.11	21.3	2.95	1.80	1.15	2.2	0.42	90.5	3,000,000	10.72
876	41888	1840	C2	ND	89.0	129	8.21	0.07	0.59	29.4	5.64	4.26	1.38	1.2	0.34	390.0	1,700,000	14.30
877	41888	1900	C2	ND	77.0	144	7.38	0.12	0.53	25.7	5.55	4.29	1.26	1.5	0.31	360.0	5,000,000	11.05
878	41888	1930	C2	ND	57.0	82.2	5.78	<0.05	0.68	20.90	3.57	2.33	1.24	2.3	0.27	137.0	3,000,000	12.25
879	41888	1951	C2	ND	45.0	81.0	5.66	<0.05	0.68	6.60	2.90	1.98	0.92	2.3	0.28	114.0	300,000	5.33
1096	42088	745	C2	ND	40.0	0.60	13.70	<0.05	0.63	41.13	4.42	1.73	2.68	8.7	0.60	76.0	16,000,000	4.89
1242	42188	845	C2	ND	39.0	78.0	16.69	<0.05	0.05	38.49	4.10	1.86	2.24	5.6	0.51	136.0	>160,000	6.92
1310	42188	2045	C2	7.1	31.0	102.0	11.37	<0.05	0.52	26.02	3.88	1.46	2.42	2.0	0.48	63.8	170,000	2.61
	41388	330	C3															0.0
	41388	1335	C3															0.0
303	41488	1445	C3	ND	55.00	12.20	13.9	<0.05	0.37	21.9	2.80			2.00	0.60	125.00	>160,000	1.55
434	41588	1556	C3	7.2	37.0	93.00	16.8	0.06	0.22	26.6	3.7	1.24	2.36	0.50	0.67	57.10	23,000,000	0.99
505	41588	245	C3	ND	26.0	52.8	4.54	0.07	1.06	6.96	1	0.74	0.54	5.40	2.80	51.0	<2,000,000	5.39
506	41688	315	C3	ND	23.0	41.4	5.02	0.07	0.76	6.80	1.22	0.59	0.63	5.40	4.91	55.7	2,000,000	<0.5

ANALYTICAL DATA FOR CSO AND STORM SEWER LOCATIONS
HACKENSACK RIVER STUDY

APRIL DRY EVENT - APRIL 12-22, 1988

SAMPLE #	INCK	DATE	TIME	SITE	pH	TURBIDITY ntu	COND5 ug/l	NH3 ug/l	NO2 ug/l	NO3 ug/l	TKN ug/l	TP04 ug/l	DP04 ug/l	ORGANIC				DO ug/l	SALINITY ppt	TSS ug/l	FEC. COLI org/100ml	FLOW RATE cfs
														P04 ug/l	P04 ug/l	B0	B0					
859		4/18/88	1615	C3	ND	48.0	99.0	12.37	0.11	0.25	29.49	4.23	2.60	1.63	1.4	0.58	52.8	2,100,000	7.47			
860		4/18/88	1645	C3	ND	47.0	120	12.57	0.08	0.29	28.11	3.70	1.99	1.71	1.7	0.58	104.0	2,400,000	3.97			
861		4/18/88	1715	C3	ND	54.0	105	12.29	0.05	0.29	25.23	3.17	1.67	1.50	1.6	0.56	60.0	3,000,000	2.22			
862		4/18/88	1745	C3	ND	66.0	117	11.91	0.05	0.31	23.29	2.82	1.38	1.44	2.3	0.53	54.3	9,000,000	1.19			
865		4/18/88	1815	C3	ND	57.0	96.0								2.1	0.51	183.0	3,000,000	2.74			
866		4/18/88	1845	C3	ND	75.0	105	8.14	0.12	0.56	22.50	3.17	1.91	1.26	3.5	0.42	148.0	300,000	6.85			
867		4/18/88	1915	C3	ND	61.0	74.4	6.38	0.09	0.66	14.22	2.57	1.77	0.80	4.0	0.34	122.0	2,400,000	4.28			
882		4/18/88	1800	C4	ND	85.0	154	4.42	0.05	0.82	18.29	2.68	1.87	0.81	5.6	0.30	251.0	7,000,000				
881		4/18/88	1830	C4	ND	47.0	130	3.92	0.09	0.67	18.81	2.57	1.93	0.64	6.8	0.24	153.0	3,000,000				
880		4/18/88	1900	C4	ND	61.0	154	5.10	0.07	0.84	21.62	4.80	3.70	1.10	6.0	0.31	95.0	500,000				
907		4/18/88	1752	C7	6.8	49.0	83.7	2.42	0.09	0.84	10.90	1.46	1.32	0.34	7.2	0.22	87.1	2,400,000	0.86			
908		4/18/88	1830	C7	6.9	37.0	80.4	2.48	0.09	0.72	11.80	1.34	1.04	0.50	7.2	0.22	63.0	500,000	0.39			
909		4/18/88	1900	C7	6.9	36.0	91.2	2.94	0.08	0.68	12.20	1.54	1.08	0.46	6.8	0.22	51.3	1,300,000	0.0			

++ - No Result - Laboratory Error
ND - Non-Detectable

C1 = New Milford Storm Sewer
C2 = Anderson Street CSO
C3 = Court Street CSO
C4 = Paulson Street CSO
C5 = Manhattan Avenue CSO

SECTION 3

ANALYTICAL DATA
SEWAGE TREATMENT PLANT
APRIL DRY EVENT
APRIL 12-22, 1988

ANALYTICAL DATA FOR SEWAGE TREATMENT PLANTS
HACKENSACK RIVER STUDY

APRIL DRY EVENT - APRIL 12-22, 1988

SAMPLE #	DATE	TIME	SITE	INORGANIC										ORGANIC			(MPN)		
				CD005	NO3	NO3/NO2	NO2	NO3	TKN	TP04	OP04	P04	DO	SALINITY	TSS	FEC. COLI			
				ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ppt	ug/l	org/100ml			
171	4/13/88	13:57	STP1	43.20	5.14	0.06	<0.05	0.06	12.1	1.24	0.81	0.43	LOST	<1.00	44.00	<20			
11306	4/20/88	13:50	STP1										5.95			<200			
1130C	4/20/88	13:50	STP1	27.6	7.47	0.06			18.44	2.41	1.66	0.75	7.13	0.74	56.7				
172	4/13/88	13:27	STP2	120.00	18.2	<0.05	<0.05	<0.05	24.2	5.91	4.40	1.51	0.60	12.90	86.00	>16,000			
10006	4/19/88	15:00	STP2										0.6			>160,000			
1000C	4/19/88	15:00	STP2	410.8	19.55	<0.05	<0.05	<0.05	<0.20 +	5.68	2.36	3.32	2.8	NA	61.0				
11316	4/20/88	14:10	STP2										1.2			2,400,000			
1131C	4/20/88	14:10	STP2	129.0	20.73	0.06	<0.05	0.06	29.39	6.79	4.29	2.50	1.1	1.05	44.0				
1001C	4/19/88	14:25	STP3	57.0	12.79	0.40	<0.05	0.40	11.2 +	3.68	2.42	1.26	2.1	NA	65.0				
10016	4/19/88	14:25	STP3										3.3			50,000			
11326	4/20/88	11:10	STP3										3.5			220			
1132C	4/20/88	11:10	STP3	96.0	15.51	0.95	<0.05	0.95	33.7	4.37	3.01	1.36	5.43	0.64	49.0				
173	4/13/88	12:11	STP4	12.90	15.1	0.18	0.15	0.03	20.5	1.53	0.61	0.92	3.60	7.82	32.80	>16,000			
282	4/14/88	12:15	STP4	3.95	17.5	0.25	0.27	<0.05	26.1	3.10			10.2	NA	34.8	20			
10026	4/19/88	13:33	STP4										3.9		132.0	11,000			
1002C	4/19/88	13:33	STP4	38.7	15.63	0.06	0.12	<0.05	25.9	4.44	1.71	2.73	8.5	NA	58.0				
1133C	4/20/88	10:10	STP4	63.9	22.46	0.09	0.09	0.00	28.97	7.51	5.56	1.95	9.41	0.72	51.5				
11336	4/20/88	10:10	STP4										3.72			28,000			
174	4/13/88	14:53	STP5	66.00	12.4	0.14	<0.05	0.14	23.5	3.80	1.41	2.39	5.30	12.20	45.60	170			
1003C	4/19/88	16:05	STP5	44.4	7.61	<0.05	<0.05	<0.05	15.6	2.68	2.19	0.49	1.3	NA	68.0	>160,000			
1134C	4/20/88	10:35	STP5	36.0	18.23	4.85	0.13	4.72	31.4	6.0	4.18	1.82	6.58	0.47	63.0				
11346	4/20/88	10:35	STP5										4.4			<20			
10046	4/19/88	14:00	STP6										4.3		43.0	<20			
1004C	4/19/88	14:00	STP6	41.7	17.30	3.47	0.18	3.29	30.3	6.28	2.19	4.09	6.0	NA					
11356	4/20/88	12:40	STP6										6.8			<20			
1135C	4/20/88	12:40	STP6	23.4	51.66	0.10	<0.05	0.10	66.0	18.70	16.80	1.90	10.21	1.68	54.0				
1005C	4/19/88	15:40	STP7	23.1	0.66	0.26	<0.05	0.26	43.5	14.55	4.25	10.30	9.5	NA	127.0	<20			
10056	4/19/88	15:40	STP7										5.6		11.6				

NOTES: TIME REPRESENTS ENDING TIME OF 6 HOUR COMPOSITES COLLECTED BY PLANT PERSONNEL

+ = Matrix Interference.

STP1 = North Bergen

STP2 = Secaucus

STP3 = North Arlington

STP4 = BCUA Plant

STP5 = Jersey West

STP6 = Woodridge

STP7 = Kearney

SECTION 4

ANALYTICAL DATA
PSE&G CHANNEL
APRIL DRY EVENT
APRIL 12-22, 1988

ANALYTICAL DATA FOR PSEB (P-15) CHANNEL
HACKENSACK RIVER STUDY

APRIL DRY EVENT - APRIL 3-2-22 1988

SAMPLE #	DATE	TIME	SITE	DEPTH	PH	TURBIDITY ntu	COND5 ug/l	COND20 ug/l	NH3 ug/l	NO3/MO2 ug/l	NO2 ug/l	NO3 ug/l	TKN ug/l	TP04 ug/l	OP04 ug/l	ORGANIC		TEMP C	DO ug/l	SALINITY ppt	TSS ug/l	FEC. COLI org/100ml
																P04 ug/l	CHLORO-A ug/l					
25	4/288	13:42	P15	M	7.3	8.0	3.75		4.55	0.97	0.38	0.59	4.53	1.08	0.78	0.30	135.0	22.0	9.00	4.06	36.4	<20
53	4/288	18:03	P15	M	6.90	8.10	5.10		5.42	0.98	0.42	0.56	6.00	1.14	0.82	0.32	117.00	21.00	9.10	4.47	30.40	
132	4/388	7:32	P15	M	7.3	6.9	3.88		5.20	0.99	0.35	0.64	8.44	1.19	0.80	0.39	60.6	19.0	5.30	4.42	23.6	
183	4/388	14:55	P15	M	7.20	9.00	8.50		4.28	1.08	0.40	0.68	8.31	0.86	0.60	0.26	23.90	22.00	8.80	3.64	40.50	1100
281	4/488	10:03	P15	M	7.2	6.2	6.10		4.73	1.06	0.36	0.70	6.68	1.20				22.0	7.00	4.75	21.2	110
317	4/488	14:50	P15	M	7.50	6.60	8.38		4.41	1.12	0.40	0.72	7.09	1.17			111.00	21.00	9.70	4.59	30.70	
408	4/588	10:13	P15	M	7.5	7.9	7.12		4.62	1.00	0.40	0.60	8.40	1.23	0.69	0.54	15.00	22.00	5.10	3.85	24.00	80
596	4/688	15:05	P15	M	7.8	8.9	7.93		4.57	1.04	0.41	0.65	4.66	1.19	0.34	0.65		17.0	7.9	4.22	32.0	230
613	4/688	18:10	P15	M	7.5	22.0		19.6	2.86	1.10	0.38	0.72	6.56	0.46	0.17	0.29	76.40	16.0	8.7	2.84	86.7	70
725	4/788	16:12	P15	M	7.65	9.4	6.85		4.83	0.90	0.37	0.53	9.01	1.38	0.78	0.60	60.50	17.0	8.4	4.07	38.0	
694	4/788	10:40	P15	M	7.4	9.4	6.00		4.74	0.93	0.33	0.60	7.62	1.38	0.71	0.67	62.40	17.0	4.9	3.89	37.5	130
823	4/888	10:20	P15	M	7.4	13.0	8.40		5.29	0.91	0.36	0.55	8.54	1.35	0.66	0.69	43.00	21.0	4.27	3.32	32.0	
853	4/888	16:23	P15	M	7.3	7.3	5.72		4.90	1.00	0.38	0.62	6.94	1.35	0.63	0.72	5.40	21.0	6.3	4.34	28.5	
981	4/988	9:55	P15	M	7.5	16.0	8.30		4.71	0.89	0.37	0.52	9.49	1.39	0.64	0.75	124.00	21.0		3.84	2.50	17
1019	4/988	16:43	P15	M	7.5	10.0	7.22		4.38	0.99	0.39	0.60	7.91	1.25	0.52	0.73	38.40	20.0	7.1	4.65	31.0	
1118	4/2088	10:10	P15	M	7.0	16.0	9.60		5.32	1.02	0.37	0.65	6.23	1.28	0.60	0.68	159.00	19.0	4.8	3.79	49.6	130
1158	4/2088	16:18	P15	M	7.3	8.6	9.50		5.45	1.05	0.40	0.65	6.01	1.35	0.73	0.62	91.20			4.25	32.0	
1298	4/2188	16:34	P15	M	7.6	9.0	6.45		5.26	1.06	0.48	0.58	9.28	1.47	0.07	1.40	70.4	21.0	8.7	4.65	36.5	<20

SECTION 5

ANALYTICAL DATA

RIVER AND TRIBUTARIES

JULY DRY AND WET EVENTS

JULY 11-25, 1988

ANALYTICAL DATA FOR RIVER AND TRIBUTARIES
HACKENSACK RIVER STUDY

JULY DRY & WET EVENTS - JULY 11-25, 1988

SAMPLE #	DATE	TIME	SITE	DEPTH	pH	TURBIDITY ntu	CBOD20 mg/l	NH3 mg/l	NO2 mg/l	NO3 mg/l	TKN mg/l	TP04 mg/l	OP04 mg/l	PO4 mg/l	CHLORO-a mg/m3	TEMP C	B.O. mg/l	SALINITY ppt	TSS mg/l	FEC. COLI org/100ml
14	7/11/88	1330	M1	1	7.60	7	1.20	1.53	0.26	0.51	1.44	0.52	0.35	0.17	2.61	21.0	0.20	19.1	18.4	
15	7/11/88	1330	M1	9	7.65	6.6	1.55	1.43	0.25	0.47	2.01	0.49	0.34	0.15	1.73	20.0	1.40	19.0	16.0	
16	7/11/88	1510	M1	1	7.40	13	1.00	1.04	0.18	0.38	0.50++	++	0.27	++	1.96	21.0	1.60	21.4	34.2	
17	7/11/88	1510	M1	1	7.65	4	0.95	1.27	0.22	0.57	1.90	0.42	0.31	0.11	6.76	26.0	1.80	19.7	24.8	
19	7/11/88	1710	M1	9	7.65	17.4	2.30	1.04	0.16	0.45	1.57	0.39	0.25	0.14	2.24	26.0	1.40	19.8	21.6	2800
18	7/11/88	1710	M1	1	7.60	11	2.15	0.93	0.14	0.44	1.77	0.32	0.21	0.11	1.85	25.0	1.60	21.6	34.8	700
46	7/11/88	1915	M1	1	7.60	4.5	<2	0.81	0.12	0.49	0.68	0.20	0.15	0.04	13.98	24.0	4.80	22.3	28.8	
47	7/11/88	1915	M1	9	7.60	8.3	<2	0.76	0.10	0.37	0.68	0.20	0.15	0.05	14.30	24.0	4.00	20.9	40.4	
48	7/11/88	2105	M1	1	7.55	4.3	<2	0.78	0.11	0.44	0.66	0.17	0.17	0.00	12.44	23.0	2.00	23.0	22.4	
49	7/11/88	2105	M1	9	7.55	6.8	<2	0.75	0.10	0.53	0.51++	0.20	0.15	0.05	12.64	23.0	2.60	22.6	14.0	
50	7/11/88	2300	M1	1	7.60	14	<2	0.82	0.16	0.53	1.68	0.30	0.32	0.10	12.00	23.0	3.30	21.2	42.8	
51	7/11/88	2300	M1	1	7.55	13.4	<2	0.82	0.16	0.45	1.09	0.33	0.09	0.24	1.96	23.0	3.90	21.4	56.0	1100
72	7/12/88	120	M1	1	7.55	9.8	<2	1.25	0.25	0.40	2.11	0.41	0.10	0.31	12.07	25.0	2.60	18.4	25.2	300
73	7/12/88	120	M1	9	7.90	8.3	1.75	1.24	0.25	0.37	2.00	0.47	0.12	0.35	12.42	25.0	2.50	18.9	30.0	
74	7/12/88	310	M1	1	7.72	6.5	1.00	1.53	0.28	0.37	1.98	0.53	0.17	0.36	4.25	25.0	1.60	17.8	22.8	<20,000
75	7/12/88	310	M1	9	7.72	6.4	1.40	1.35	0.26	0.34	1.61	0.48	0.21	0.27	4.73	25.0	1.70	18.5	24.0	<20,000
76	7/12/88	515	M1	1	7.60	5.4	2.05	1.17	0.23	0.36	1.43	0.42	0.19	0.23	12.08	25.0	3.00	19.6	18.8	
77	7/12/88	515	M1	9	7.30	6.9	1.00	1.01	0.20	0.36	1.22	0.34	0.19	0.15	4.92	25.0	3.60	17.8	21.6	
169	7/12/88	750	M1	1	7.64	7.1	1.70	0.73	0.13	0.38	1.41	1.37	0.05	1.37	12.41	24.0	2.20	20.6	21.2	1300
170	7/12/88	750	M1	9	7.22	8.5	2.35	0.88	0.11	0.35	1.01	0.28	0.05	0.28	11.69	24.0	3.80	22.7	42.4	800
171	7/12/88	910	M1	1	7.64	6.1	1.95	0.75	0.13	0.37	0.82	0.23	0.05	0.18	3.58	24.0	3.70	22.4	27.0	
172	7/12/88	910	M1	9	7.40	6.5	2.10	0.70	0.12	0.35	0.88	0.18	0.05	0.18	11.49	24.0	3.30	22.4	22.0	
173	7/12/88	1105	M1	1	7.68	6.1	1.40	0.95	0.18	0.40	0.73++	0.29	0.05	0.29	5.78	25.0	3.60	21.8	20.7	2400
174	7/12/88	1105	M1	9	7.62	4.8	1.65	0.84	0.16	0.38	1.21	0.26	0.05	0.26	11.95	25.0	4.70	22.4	30.4	1700
201	7/12/88	1330	M1	1	7.30	6.9	<2	1.33	0.27	0.37	1.04	0.39	0.10	0.29	8.39	26.0	2.50	18.4	35.6	
202	7/12/88	1330	M1	9	7.30	5.6	<2	1.32	0.26	0.36	6.00	0.45	0.13	0.13	12.32	26.0	2.60	18.8	25.2	
203	7/12/88	1515	M1	1	7.25	4.5	<2	1.52	0.28	0.65	1.13	0.35	0.17	0.18	11.69	26.0	2.40	18.0	34.8	300
204	7/12/88	1515	M1	9	7.30	5.9	<2	1.25	0.25	0.36	1.54	0.34	0.13	0.21	11.77	26.0	3.30	19.4	52.8	2800
205	7/12/88	1700	M1	1	7.40	4.5	<2	1.08	0.21	0.36	0.85	0.54	0.07	0.47	11.80	25.0	3.10	20.5	45.6	
208	7/12/88	1700	M1	9	7.40	3.9	<2	0.05	0.07	0.46	0.85	0.28	0.05	0.28	11.72	25.0	8.10	0.29	9.56	
240	7/12/88	1910	M1	1	7.30	5.5	<2	0.71	0.12	0.32	4.49	0.14	0.05	0.14	4.11	24.0	4.90	21.9	47.3	2200
239	7/12/88	1910	M1	9	7.30	5.1	<2	0.72	0.13	0.32	2.83	0.13	0.05	0.13	8.59	24.0	4.40	22.0	41.3	1700
241	7/12/88	2110	M1	1	7.30	5.4	<2	0.69	0.11	0.32	3.39	0.13	0.05	0.13	11.68	23.0	3.90	22.3	63.3	
242	7/12/88	2110	M1	9	7.30	4.5	<2	0.66	0.11	0.31	1.21	0.10	0.05	0.10	12.23	23.0	4.30	22.5	34.0	
243	7/12/88	2315	M1	1	7.38	9.5	<2	0.74	0.14	0.35	2.11	0.15	0.05	0.15	7.74	23.0	4.20	21.5	70.0	995
244	7/12/88	2315	M1	9	7.22	7.5	1.85	0.75	0.13	0.35	2.65	0.15	0.05	0.15	11.94	23.0	4.40	21.7	49.5	3500
279	7/12/88	100	M1	1	7.16	8.3	1.55	1.25	0.22	0.39	4.85	0.33	0.07	0.26	12.09	25.0	2.00	16.8	35.0	
280	7/12/88	100	M1	9	7.10	6.4	1.90	1.24	0.22	0.36	4.61	0.33	0.08	0.25	4.84	25.0	1.90	20.2	46.8	
281	7/12/88	305	M1	1	7.20	5.9	1.05	1.60	0.20	0.43	5.80	0.47	0.11	0.36	1.72	25.0	1.70	18.6	33.2	1300
282	7/12/88	305	M1	9	7.25	4.5	2.40	1.54	0.24	0.38	5.44	0.43	0.12	0.31	1.72	25.0	1.90	18.7	25.0	800
283	7/12/88	510	M1	1	7.45	4.6	1.7	1.61	0.24	0.37	6.57	0.42	0.12	0.30	11.86	25.0	1.60	19.1	25.0	
284	7/12/88	510	M1	9	7.55	7.5	1.25	1.32	0.21	0.38	5.97	0.38	0.11	0.27	11.75	25.0	1.90	20.1	47.0	
300	7/12/88	715	M1	1	7.47	5.8	1.40	1.10	0.16	0.37	<20++	0.31	0.05	0.26	11.56	25.0	2.00	20.2	14.4	90,000
301	7/12/88	715	M1	9	7.51	6.9	1.3	0.96	0.14	0.36	<20++	0.29	0.06	0.23	11.72	25.0	2.50	20.9	51.2	5000
302	7/12/88	900	M1	1	7.45	6.3	1.2	0.88	0.12	0.33	<20++	0.23	0.05	0.18	8.04	25.0	2.30	21.3	38.5	
303	7/12/88	900	M1	9	7.55	3.1	1.10	0.78	0.11	0.32	<20++	0.23	0.04	0.19	11.82	25.0	2.00	22.2	25.2	

ANALYTICAL DATA FOR RIVER AND TRIBUTARIES
HACKENSACK RIVER STUDY

JULY DRY & WET EVENTS - JULY 11-25, 1988

SAMPLE #	DATE	TIME	SITE	DEPTH	pH	TURBIDITY ntu	CBOD5 mg/l	CBOD20 mg/l	NH3 mg/l	NO2 mg/l	NO3 mg/l	TKN mg/l	TP04 mg/l	OP04 mg/l	P04 mg/l	CHLORO-a mg/e3	TEMP C	D.O. mg/l	SALINITY ppt	TSS mg/l	FEC. COLI org/100ml	(MPN)
304	71388	1100	M1	T	7.52	5.5	1.00		0.92	0.15	0.35	<0.20++	0.28	0.04	0.24	<2.46	25.0	2.00	20.9	19.3	5000	
305	71388	1100	M1	B	7.50	6.3	1.10		0.86	0.12	0.32	<0.20++	0.22	0.04	0.18	<2.46	25.0	2.60	21.6	23.3	3000	
337	71388	1300	M1	T	7.40	7.0	1.35	3.15	1.28	0.22	0.44	1.21	0.36	<0.05	0.36	<1.12	25.0	2.00	20.5	47.3		
338	71388	1300	M1	B	7.40	9.5	1.375	2.75	1.32	0.21	0.44	1.11	0.38	<0.05	0.38	<2.09	25.0	3.30	18.2	31.2		
340	71388	1510	M1	B	7.40	4.8	1.40		0.98	0.23	0.44	1.14	0.94	0.05	0.89	1.36	26.0	2.80	18.4	25.6	2400	
339	71388	1510	M1	T	7.40	6.5	1.55		1.64	0.27	0.43	1.51	0.48	<0.05	0.48	2.25	26.0	2.40	17.3	23.2	5000	
341	71388	1710	M1	T	7.30	5.5	1.40		1.40	0.23	0.44	1.18	0.37	0.06	0.31	2.15	26.0	3.00	18.4	20.0		
342	71388	1710	M1	B	7.35	3.9	<2		1.26	0.18	0.44	1.06	0.32	0.08	0.24	5.63	26.0	3.80	19.6	28.4	2200	
377	71388	1915	M1	T	7.35	6.6			0.82	0.13	0.47	0.61	0.29	0.12	0.17	9.83	29.0	4.20	20.6	33.6	800	
378	71388	1915	M1	B	7.38	8.6	1.10		0.78	0.12	0.45	1.28	0.33	0.16	0.17	<2.39	24.0	3.50	20.5	25.2		
379	71388	2100	M1	T	7.35	5.2	<2		0.73	0.10	0.46	1.10	0.26	0.12	0.14	<2.41	24.0	3.90	23.8	28.8		
380	71388	2100	M1	B	7.40	4.8	1.00		0.65	0.09	0.40	0.90	0.23	0.03	0.20	<2.08	23.0	4.60	22.7	20.4		
381	71388	2330	M1	T	7.40	6.9	1.15		0.73	0.11	0.45	0.85	0.25	<0.05	0.25	<2.59	23.0	6.10	24.1	43.2	1100	
382	71388	2330	M1	B	7.35	6.9	<2		0.72	0.10	0.42	0.74	0.26	<0.05	0.26	<2.58	23.0	4.40	23.7	6.80	3000	
410	71488	140	M1	B	7.28	15.0	2.45		1.02	0.18	0.59	2.63	0.30	0.16	0.14	7.06	23.0	2.70	18.9	46.4	800	
411	71488	320	M1	B	7.42	7.6	2.60		1.45	0.23	0.63	3.30	0.42	0.30	0.12	2.76	23.0	2.20	17.5	30.4	1300	
412	71488	320	M1	T	7.48	9.4	<2		1.42	0.23	0.63	2.65	0.40	0.29	0.11	5.76	23.0					
413	71488	500	M1	T	7.40	4.3	<2		1.53	0.22	0.59	2.50	0.44	0.29	0.15	6.95	23.5		16.2	18.5		
414	71488	500	M1	B	7.34	7.6	<2		1.28	0.21	0.59	2.37	0.39	0.30	0.09	<1.71	23.5		18.3	33.2		
428	71488	800	M1	T	7.30	7.3	1.95		0.90	0.13	0.57	0.95	0.23	0.16	0.07	<2.39	25.0	2.30	20.8	18.6		
429	71488	800	M1	B	7.41	6.9	1.90		0.85	0.12	0.57	0.95	0.23	0.16	0.07	<2.39	25.0	2.60	21.5	26.7		
430	71488	920	M1	T	7.40	6.0	2.05		0.78	0.11	0.44	0.62	0.27	0.12	0.15	<2.24	25.0	2.10	22.0	20.2		
431	71488	920	M1	B	7.30	6.8	2.50		0.72	0.10	0.50	0.78	0.24	0.11	0.13	<2.21	25.0	4.20	22.8	35.7		
433	71488	1100	M1	B	7.60	4.4	1.50		0.73	0.10	0.49	0.90	0.25	0.14	0.11	4.83	25.0	3.50	22.2	3.20	230	
432	71488	1100	M1	T	7.30	4.6	1.90		0.75	0.10	0.48	0.79	0.23	0.13	0.10	<1.95	24.0	3.00	22.7	20.0	500	
465	71488	1300	M1	T	7.57	2.9	1.63	1.93	0.90	0.13	0.56	1.48	0.33	0.12	0.21	4.54	26.0	2.10	21.7	29.2		
466	71488	1300	M1	B	7.59	5.6	1.35	1.95	0.82	0.13	0.51	0.72	0.30	0.12	0.28	2.67	26.0	2.90	21.3	32.7		
467	71488	1510	M1	T	7.50	7.6	1.30		0.79	0.14	0.79	1.14	0.49	*	*	4.13	27.0	3.40	18.7	30.2	171	
468	71488	1510	M1	B	7.50	8.1	1.00		1.19	0.21	0.56	0.75	0.45	0.23	0.22	<1.85	27.0	3.20	18.7	33.2	220	
469	71488	1715	M1	T	7.65	7.4	<2		1.32	0.22	0.58	1.77	0.42	0.17	0.25	4.81	27.0	3.60	19.2	14.6		
470	71488	1715	M1	B	7.65	7.9	1.00		1.12	0.18	0.56	1.45	0.38	0.15	0.23	<2.34	27.0	3.70	19.7	28.0		
498	71488	1930	M1	T	7.40	7.1	<2		0.90	0.14	0.38	1.20	<0.10	<0.05	<0.10	10.6	27.0	4.40	21.0	22.2	1300	
499	71488	1930	M1	B	7.40	13.0	1.25		0.88	0.14	0.40	0.70	<0.10	<0.05	<0.10	4.65	27.0	4.80	21.2	3.20	1700	
501	71488	2115	M1	B	7.40	7.3	<2		0.76	0.11	0.33	1.31	0.25	<0.05	0.25	4.09	25.0	4.80	22.2	28.5		
500	71488	2115	M1	T	7.40	7.1	<2		0.76	0.11	0.36	1.58	0.31	<0.05	0.31	5.00	26.0	4.60	22.2	28.5	800	
502	71488	2310	M1	B	7.35	3.9	1.25		0.74	0.10	0.34	1.38	0.33	<0.05	0.33	4.07	25.0	4.80	22.2	32.6	500	
503	71488	2310	M1	T	7.40	3.5	1.15		0.75	0.10	0.33	1.33	0.23	<0.05	0.23	4.96	26.0	4.60	22.6	19.4	800	
536	71588	100	M1	B	7.36	8.8	1.88		0.91	0.15	0.44	1.23	<0.10	0.07	<0.10	5.70	27.0	3.30	18.6	46.4	3000	
537	71588	100	M1	T	7.18	6.5	1.25		1.18	0.21	0.47	1.52	<0.10	0.16		4.54	27.0	2.90	19.6	30.2		
538	71588	300	M1	B	7.36	4.5	1.60		1.19	0.21	0.46	1.81	0.35	0.16	0.19	6.36	27.0	2.50	19.5	36.8		
539	71588	300	M1	T	7.40	4.6	1.55		1.62	0.27	0.45	2.06	0.53	0.27	0.26	3.96	27.0	2.90	18.2	16.8		
535	71588	500	M1	T	7.35	1.5	1.60		0.92	0.16	0.45	1.69	0.09	-0.09	-0.09	3.36	27.0	3.30	20.8	44.4		
540	71588	500	M1	B	7.34	8.9	1.90		1.47	0.24	0.55	2.20	0.53	0.17	0.36	5.03	27.0	3.00	18.9	46.8		
570	71588	720	M1	B	7.28	4.2	2.00		1.06	0.17	0.44	2.02	0.59	0.19	0.40	13.5	26.5	2.70	19.1	35.2	500	
569	71588	720	M1	T	7.55	4.5	2.00		1.24	0.20	0.43	2.14	0.32	0.18	0.14	<1.68	27.0	2.50	19.0	16.8		
571	71588	900	M1	B	7.39	4.5	2.00		0.76	0.14	0.41	1.79	0.25	<0.05	0.25	2.96	27.0	1.80	18.2	17.2		

ANALYTICAL DATA FOR RIVER AND TRIBUTARIES
HACKENSACK RIVER STUDY

JULY DRY & WET EVENTS - JULY 11-25, 1988

SAMPLE #	DATE	TIME	SITE	DEPTH	pH	TURBIDITY ntu	CRUDS mg/l	CRUDZO mg/l	NH3 mg/l	NO2 mg/l	NO3 mg/l	TKN mg/l	TP04 mg/l	OP04 mg/l	P04 mg/l	CHLORO-a mg/e3	TEMP C	D.O. mg/l	SALINITY ppt	TSS mg/l	(MPN) FEC. COLI org/100ml
572	7/588	900	M1	T	7.41	14.0	1.30		0.74	0.11	0.36	0.56	0.18	<0.05	0.18	3.43	27.0	2.30	21.4	38.0	
573	7/588	1100	M1	T	7.51	5.3	1.50		0.75	0.11	0.37	0.54	0.15	<0.05	0.15	<2.22	27.0	1.60	21.0	15.4	300
574A	7/588	1100	M1	B	7.52	5.4	1.95	2.90	0.64	0.10	0.33	0.44++	0.18	<0.05	0.18	<1.80	27.0		21.8	12.4	200
610	7/588	1320	M1	T		6.9	1.45	2.80	0.95	0.06	0.53	1.74	0.31	<0.05	0.31	<1.87	27.0	3.80	20.9	28.8	
611	7/588	1320	M1	B		4.2	1.55	2.65	0.70	0.06	0.47	0.75	<0.10	<0.05	<0.10	<4.19	27.0	3.60	21.7	39.5	
612	7/588	1520	M1	T	7.25	6.9	1.40		1.21	0.31	0.47	1.33	*	0.07	*	6.00	29.0	3.90	19.6	33.0	300
613	7/588	1520	M1	B	7.30	8.5	1.15		1.12	0.20	0.45	1.24	<0.33	<0.05	<0.33	14.8	30.0	4.10	20.1	48.2	500
615	7/588	1710	M1	B	7.30	2.9	1.45		1.30	0.24	0.48	1.16	0.48	<0.05	0.48	15.8	28.0	5.00	19.0	120	
614	7/588	1710	M1	T	7.30	3.9	1.65		1.48	0.26	0.46	1.26	0.45	0.05	0.40	2.94	28.0	4.00	18.4	21.4	
647	7/588	2000	M1	T	7.35	5.1	2.40		0.65	0.11	0.40	1.14	0.21	<0.05	0.21	<1.43	25.0	4.80	22.0	40.4	
646	7/588	2000	M1	B	7.40	6.5	1.40		0.85	0.16	0.42	2.98	0.28	<0.05	0.28	4.52	27.0	4.70	20.6	32.2	
645	7/588	2000	M1	T	7.35	5.3	2.90		0.98	0.20	0.46	1.21	0.21	<0.05	0.21	3.27	27.0	4.30	19.4	17.4	
648	7/588	2000	M1	B	7.30	8.4	1.95		0.61	0.10	0.39	2.31	0.11	<0.05	0.11	3.54	24.0	4.80	21.8	29.6	1100
649	7/588	2330	M1	T	7.30	5.5	1.85		0.63	0.11	0.38	0.89	0.16	<0.05	0.16	3.38	24.0		22.3	35.0	
650	7/588	2330	M1	B	7.30	4.5	1.55		0.57	0.09	0.36	0.70	0.13	<0.05	0.13	<1.74	23.0	4.70	22.3		
682	7/688	100	M1	T	7.55	5.9	2.20		0.86	0.13	0.40	1.15	0.14	0.09	0.05	13.7	24.5	3.70	19.8	21.0	230
683	7/688	100	M1	B	7.48	5.5	2.58	3.4	0.85	0.14	0.38	0.90	0.11	0.16	<0.10	7.81	24.0	3.50	20.3		300
685	7/688	300	M1	B	7.38	14.0	1.95		1.06	0.19	0.42	1.55	0.39	0.26	0.13	10.3	24.0	3.50	20.1	48.3	
684	7/688	300	M1	T	7.30	6.6	2.38	6.85	1.02	0.18	0.42	1.50	0.27	0.18	0.09	13.6	24.0	3.50	19.3	49.5	
686	7/688	445	M1	T	7.38	6.9	1.60		1.56	0.26	0.43	2.02	0.37	0.36	0.01	14.2	26.0	2.30	16.7	17.6	40
687	7/688	445	M1	B	7.35	3.5	1.45		1.48	0.26	0.42	1.58	0.38	0.32	0.06	*	26.0	2.10	17.9	16.4	230
705	7/688	730	M1	T	7.24	3.2	1.80		1.21	0.23	0.39	1.48	0.23	0.05	0.18	15.5	27.0	3.00	19.4	17.0	
706	7/688	730	M1	B	7.42	3.4	1.85		1.05	0.19	0.42	0.92	0.21	<0.05	0.21	13.4	26.5	3.50	21.2	19.0	
707	7/688	915	M1	T	7.48	3.2	1.80		0.87	0.14	0.38	2.37	0.15	0.05	0.10	10.2	27.0	3.90	21.5	18.0	5000
708	7/688	915	M1	B	7.50	8.5	1.90		0.84	0.13	0.38	1.49	0.12	<0.05	0.12	15.1	26.5	4.20	21.9	24.2	5000
709	7/688	1100	M1	T	7.50	5.2	2.00		0.79	0.12	0.35	1.30	<0.10	<0.05	<0.10	7.89	27.5	4.20	22.2	16.0	
710	7/688	1100	M1	B	7.44	6.4	1.85		0.80	0.12	0.34	1.24	<0.10	<0.05	<0.10	7.71	27.0	4.00	23.3	23.2	
756	7/688	1315	M1	B	7.20	2.6	1.0		0.77	0.12	0.41	1.24	0.45	0.09	0.36	4.45	28.0	2.90	21.2	16.2	5000
755	7/688	1315	M1	T	7.30	2.8	<2.0		0.79	0.14	0.47	1.28	0.44	0.09	0.35	8.26	29.0	2.90	21.1	12.8	3000
757	7/688	1500	M1	T	7.25	3.1	<2.0		1.02	0.19	0.45	1.64	0.48	0.14	0.34	23.9	30.0	2.80	20.1	33.6	
758	7/688	1500	M1	B	7.15	2.9	<2.0		0.96	0.18	0.49	1.53	0.49	0.17	0.32	22.3	30.0	2.90	20.3	26.8	
759	7/688	1700	M1	T	7.20	3.2	1.35		1.29	0.26	0.46	1.94	0.58	0.25	0.35	5.51	29.0	3.10	18.8	16.5	100
760	7/688	1700	M1	B	7.20	3.5	<2.0		1.25	0.25	0.46	1.96	0.63	0.24	0.39	27.3	29.0	3.10	18.4	28.0	5000
781	7/688	1900	M1	T	7.15	3.9	1.4		1.17	0.23	0.49	0.61++	0.50	0.14	0.36	10.1	29.0	3.90	19.0	14.8	500
782	7/688	1900	M1	B	7.15	5.5	1.4		0.99	0.19	0.45	1.82	0.48	0.22	0.26	8.63	28.0	2.90	20.5	17.0	5000
783	7/688	2120	M1	T	7.00	3	1.85		0.79	0.14	0.41	1.54	0.51	0.15	0.36	12.5	27.0	5.00	21.6	18.2	
784	7/688	2120	M1	B	6.90	3.0	1.5		0.77	0.13	0.41	1.58	0.43	0.23	0.20	4.90	27.0	6.00	21.4	26.4	
820	7/788	100	M1	B	7.32	3.4	1.9		0.86	0.15	0.34	0.78	0.29	0.16	0.13	6.23	25.0	4.50	20.7	17.6	
819	7/788	100	M1	T	7.35	6.6	1.90		0.83	0.14	0.40	0.74	0.23	0.08	0.15	16.6	25.0	2.90	21.0		
821	7/788	330	M1	T	7.44	7.0	1.55		1.19	0.24	0.45	1.28	0.42	0.05	0.37	10.9	26.5	3.70	19.0	34.8	1306
822	7/788	330	M1	B	7.38	3.0	1.8		1.18	0.25	0.44	1.36	0.43	0.07	0.36	*	27.0	3.80	19.2	34.6	1400
823	7/788	515	M1	T	7.24	4.9	1.6		1.59	0.31	0.44	1.88	0.56	0.08	0.48	<2.02	27.0	2.30	17.6	15.4	
824	7/788	515	M1	B	7.22	4.0	2.25		1.49	0.30	0.44	1.75	0.51	0.06	0.45	4.20	27.0	2.30	18.0	20.2	
844	7/788	720	M1	T	7.44	3.5	1.7		1.44	0.28	0.54	2.40	0.57	0.06	0.51	7.43	27.0	2.80	19.16	13.6	300
845	7/788	720	M1	B	7.30	3.6	2.05		1.21	0.23	0.47	1.52	0.40	<0.05	0.40	9.23	26.5	3.00	19.16	16.4	2800
846	7/788	900	M1	T	7.15	3.4	1.65		1.00	0.19	0.46	1.45	0.31	<0.05	0.31	11.0	28.0	3.40	19.2	15.4	

ANALYTICAL DATA FOR RIVER AND TRIBUTARIES
HACKENSACK RIVER STUDY

JULY DRY & WET EVENTS - JULY 11-25, 1988

SAMPLE #	DATE	TIME	SITE	DEPTH	pH	TURBIDITY ntu	CBOD5 mg/l	CBOD20 mg/l	NH3 mg/l	NO2 mg/l	NO3 mg/l	TKN mg/l	TP04 mg/l	DP04 mg/l	F04 mg/l	CHLORO-a mg/m3	TEMP C	D.O. mg/l	SALINITY ppt	TSS mg/l	(MPN) FEC. COLI org/100ml
847	7/1988	900	M1	B	7.05	3.7	2.0		0.94	0.17	0.44	1.43	0.34	<0.05	0.34	6.87	27.5	3.20	22.0	16.2	
854	7/1988	1100	M1	B	7.35	5.5	2.0	2.85	0.42	0.11	0.37	7.63	0.10	<0.05	0.10	7.51	28.0	4.20	23.2	35.0	
853	7/1988	1100	M1	T	7.40	3.8	2.05	3.28	0.78	0.12	0.43	1.02	0.26	<0.05	0.26	49.0	28.5	4.20	21.5	17.6	
933	7/1988	1345	M1	T	7.25	6.6	1.8		0.82	0.15	0.42	0.67	0.28	<0.05	0.28	15.9	29.0	4.65	20.6	17.6	
934	7/1988	1345	M1	B	7.20	6.9	1.8		0.83	0.14	0.43	1.15	0.27	<0.05	0.27	15.5	28.5	4.70	22.1	19.2	
935	7/1988	1500	M1	T	7.35	6.4	1.2		0.95	0.18	0.48	1.28	0.34	<0.05	0.34	133.5	29.0	4.00	19.5	19.6	
936	7/1988	1500	M1	B	7.25	4.3	1.45		0.94	0.18	0.49	1.34	0.34	<0.05	0.34	6.89	28.0	4.40	20.8	28.4	
937	7/1988	1700	M1	T	7.25	5.8	1.0		1.21	0.26	0.48	1.39	0.43	<0.05	0.43	11.3	29.5	4.60	18.3	20.8	
938	7/1988	1700	M1	B	7.30	7.2	1.25		1.29	0.27	0.52	1.28	0.51	<0.05	0.51	12.3	29.0	3.10	18.6	21.4	
940	7/1988	2100	M1	B	7.25	5.6	1.3										27.0	4.80	19.8		1700
939	7/1988	2100	M1	T	7.30	6.2	1.55		1.00	0.17	0.53	1.22	0.34	<0.05	0.34	<0.57	26.0	4.60	19.3	17.4	2400
974	7/1988	130	M1	T	7.40	5.4	<2.0		0.78	0.16	0.49	0.60	0.22	<0.05	0.22	12.0	26.0	2.50	19.4	23.2	
975	7/1988	130	M1	B	7.30	3.4	<2.0		0.84	0.19	0.45	0.21	0.27	<0.05	0.27	6.99	26.0	2.20	21.9	31.8	1300
976	7/1988	330	M1	T	7.30	8.4	<2.0		0.96	0.21	0.47	<0.20	0.18	<0.05	0.18	9.15	24.0	1.40	21.4	31.2	2400
977	7/1988	330	M1	B	7.40	7.8	1.5		0.84	0.17	0.43	<0.20	0.29	<0.05	0.29	9.03	25.0	1.80	21.7	35.9	700
1001	7/1988	500	M1	T		1.0	2.05	3.85	1.39	0.29	0.46	2.42	0.54	0.36	0.54	*	26.0	2.50	18.0	21.0	3000
1002	7/1988	500	M1	B		6.0	0.85	1.8	1.21	0.25	0.48	1.87	0.45	0.22	0.45	9.32	27.0	1.90	19.1	18.8	2400
1003	7/1988	700	M1	T	7.50	7.6	<2.0		0.85	0.16	0.52	2.80	0.42	0.17	0.42	4.55	26.0	0.80	21.6	32.2	
1004	7/1988	700	M1	B	7.50	8.2	3.98		0.93	0.21	0.47	2.02	0.39	0.20	0.39	5.15	27.0	2.90	17.5	24.0	
1032	7/1988	915	M1	T	7.45	4.4	<2.0		0.66	0.12	0.43	0.33	0.16	0.10	0.08	<2.81	28.0	4.60	22.9	19.0	
1033	7/1988	915	M1	B	7.30	5.3	<2.0		0.66	0.11	0.40	1.01	0.16	*	*	<2.75	28.0	4.50	23.8	36.0	
1034	7/1988	1205	M1	T	7.45	4.4	1.0		0.66	0.11	0.39	0.24	0.16	0.09	0.07	<3.27	28.0	4.50	23.7	26.0	2800
1035	7/1988	1205	M1	B	7.40	4.6	1.20		0.69	0.12	0.41	0.25	0.24	0.06	0.18	10.1	28.0	3.90	22.2	23.6	230
1036	7/1988	1300	M1	T	7.40	4.6	1.30		0.76	0.15	0.44	0.29	0.25	0.09	0.16	7.49	28.0	3.90	21.2	17.0	
1037	7/1988	1300	M1	B	7.45	4.8	1.00		0.76	0.15	0.44	<0.20	0.26	0.10	0.16	<2.61	28.0	4.10	21.3	34.5	
1071	7/1988	1700	M1	B	7.50	7.9	1.70		1.09	0.23	0.43	<0.20	0.32	0.27	0.05	<1.61	31.0	3.40	20.0	36.8	
1072	7/1988	1700	M1	T	7.55	8.9	3.95		0.94	0.46	0.25	0.34	0.23	0.25	<0.10	21.7	30.5	4.60	19.1	91.5	
1073	7/1988	1900	M1	B	7.35	6.0	1.35		1.23	0.39	0.33	0.39	0.41	0.32	0.09	*	29.0	4.00	19.2	24.9	1300
1074	7/1988	1900	M1	T	7.40	5.9	1.45		1.12	0.23	0.51	0.35	0.27	0.28	<0.10	41.2	29.0	4.30	18.7	23.9	3000
1075	7/1988	2100	M1	T	7.35	5.6	2.45		0.86	0.17	0.47	0.48	0.20	0.20	0.00	<2.06	28.5	4.70	20.8	18.8	
1076	7/1988	2100	M1	B	7.35	6.1	2.05		0.79	0.16	0.44	<0.20	0.22	0.19	0.03	4.74	27.0	4.70	21.1	30.6	
1078	7/1988	2300	M1	B	7.35	6.9	1.35		0.67	0.12	0.40	<0.20	0.06	0.15	<0.10	<1.78	26.0	4.80	22.9	33.8	1400
1077	7/1988	2300	M1	T	7.30	6.3	1.35		0.75	0.15	0.45	0.77	0.21	0.09	0.02	5.77	26.5	4.70	21.7	17.38	2400
1100	7/1988	120	M1	T	7.30	5.9	1.25		0.65	0.12	0.41	0.79	<0.10	<0.05	<0.10	7.31	5.0	2.00	22.4	17.4	
1101	7/1988	120	M1	B	7.30	7.6	1.05		0.64	0.11	0.46	<0.20	0.14	<0.05	0.14	<2.18	24.5	2.00	21.1	25.2	
1102	7/1988	300	M1	T	7.30	6.8	1.20		0.79	0.15	0.43	<0.20	0.17	0.08	0.09	<1.47	26.0	2.10	21.5	28.0	
1103	7/1988	300	M1	B	7.35	5.6	1.20		0.73	0.13	0.51	0.60	0.22	0.09	0.13	<2.13	25.0	2.60	15.3	11.4	
1130	7/1988	554	M1	T	7.30	8.5	1.10		1.17	0.26	0.54	1.33	0.63	0.06	0.57	6.05	28.0	4.60	19.1	24.0	
1131	7/1988	554	M1	B	7.30	1.50	2.15		1.16	0.26	0.53	1.04	0.18	0.17	0.01	<1.45	27.0	3.10	16.8	24.6	1700
1132	7/1988	730	M1	T	7.25	0.9	2.45		1.29	0.28	0.63	1.40	0.41	0.24	0.17	3.96	28.0	0.60	18.0	18.4	2800
1133	7/1988	730	M1	B	7.35	6.9	2.20		1.01	0.22	0.56	1.20	0.21	0.22	<0.10	<2.36	27.0	0.70	19.1	34.4	
1134	7/1988	900	M1	T	7.30	5.8	2.55		0.92	0.19	0.58	1.46	0.33	0.21	<0.10	<2.51	28.0	1.80	20.0	33.2	
1135	7/1988	900	M1	B	7.35	4.8	2.60		0.99	0.24	0.54	1.46	0.63	0.12	0.12	3.26	28.0	2.50	19.1	18.0	
1162	7/1988	1100	M1	T	7.35	4.8	0.55	2.33	0.89	0.14	0.48	0.63	2.64	0.12	2.52	2.52	28.0	4.00	21.1	44.8	1700
1163	7/1988	1100	M1	B	7.40	6.1	0.28	2.63	0.73	0.12	0.41	<0.20	1.63	0.15	1.48	7.39	27.0	4.40	22.0	37.2	500
1164	7/1988	1300	M1	T	7.40	4.1	1.45		0.73	0.12	0.44	*	3.30	0.14	3.16	6.76	27.5	4.40	18.0	21.2	

ANALYTICAL DATA FOR RIVER AND TRIBUTARIES
HACKENSACK RIVER STUDY

JULY DRY & WET EVENTS - JULY 11-25, 1988

SAMPLE #	DATE	TIME	SITE	DEPTH	pH	TURBIDITY ntu	CBOD5 mg/l	CBOD20 mg/l	NH3 mg/l	NO2 mg/l	NO3 mg/l	TKN mg/l	TP04 mg/l	OP04 mg/l	ORGANIC PD4 mg/l	CHLORO-a mg/l	TEMP C	D.O. mg/l	SALINITY ppt	TSS mg/l	(NPN) FEC. COLI org/100ml
1165	7/1988	1300	M1	B	7.40	4.4	1.65		0.73	0.11	0.42	0.92	5.03	0.14	4.89	12.3	27.5	4.70	21.8	24.4	
1166	7/1988	1500	M1	T	7.40	4.9	1.55		0.73	0.12	0.45	2.39	3.30	0.18	3.12	7.43	28.0	4.40	21.1	26.0	800
1167	7/1988	1500	M1	B	7.40	4.8	1.45		0.70	0.11	0.43	1.06	2.82	0.14	2.68	2.31	27.5	4.30	20.7	21.6	230
1214	7/1988	1700	M1	T	7.25	7.8	2.00		1.01	0.21	0.46	0.36++	2.59	0.18	2.41	5.88	29.0	++	18.7	40.8	
1215	7/1988	1700	M1	B	7.35	8.9	1.40		1.00	0.21	0.44	0.20++	1.73	0.19	1.54	4.26	28.5	++	18.9	43.2	
1217	7/1988	1900	M1	B	7.25	6.6	1.50		1.25	0.26	0.45	1.29	2.29	0.10	2.19	5.45	29.0	++	18.2	28.6	1100
1216	7/1988	1900	M1	T	7.30	6.1	1.00		1.28	0.27	0.47	2.11	1.86	0.12	1.74	7.80	29.0	++	18.2	24.8	500
1218	7/1988	2130	M1	T	7.30	6.5	1.05		1.10	0.23	0.47	0.80	2.56	0.07	2.49	4.14	27.5	++	18.5	14.0	
1219	7/1988	2130	M1	T	7.30	5.1	1.75		1.01	0.20	0.45	2.00	1.65	0.09	1.56	2.61	27.5	++	19.2	22.4	
1220	7/1988	2300	M1	T	7.30	5.4	1.90		0.85	0.16	0.45	2.10	2.76	0.06	2.70	4.53	27.0	++	19.6	27.4	
1221	7/1988	2300	M1	B	7.30	6.9*	1.80		0.79	0.16	0.43	0.45	1.92	0.06	1.86	*	27.0	++	19.5	21.6	
1262	7/2088	215	M1	T	7.25	6.8	1.10		0.77	0.12	0.53	0.69	0.10	0.13	0.10	11.1	25.0	++	19.9	26.0	
1263	7/2088	215	M1	B	7.35	8.6	1.40		0.74	0.13	0.49	0.29++	0.10	0.13	0.10	1.42	25.0	++	21.0	39.6	
1264	7/2088	315	M1	T	7.30	6.6	1.20		0.86	0.17	0.53	0.73	0.25	0.15	0.10	2.49	25.5	++	19.9	32.0	1700
1265	7/2088	315	M1	B	7.35	6.5	1.90		0.10	0.14	0.93	0.54	0.16	0.17	0.10	7.66	25.0	++	19.3	34.8	1400
1295	7/2088	600	M1	B	7.30	6.90	1.30		1.15	0.28	0.44	1.45	0.20	0.25	0.10	2.55	27.0	++	17.4	43.0	
1294	7/2088	600	M1	T	7.25	7.40	2		1.30	0.29	0.44	6.55	0.30	0.24	0.06	*	27.0	++	17.4	36.6	
1296	7/2088	730	M1	T	7.30	6.10	1.20		1.54	0.33	0.43	1.22	0.35	0.23	0.12	*	28.0	++	16.3	33.3	1300
1297	7/2088	730	M1	B	7.30	5.50	1.50		1.44	0.32	0.44	1.62	0.40	0.13	0.27	*	28.5	++	16.7	16.8	700
1298	7/2088	900	M1	T	7.30	4.8	1.60		1.33	0.30	0.43	1.53	0.39	0.19	0.20	*	28.0	++	17.3	16.8	
1299	7/2088	900	M1	B	7.30	9.90	2.00		1.15	0.26	0.45	1.19	0.34	0.21	0.13	1.13	27.5	++	18.0	54.8	
1333	7/2088	1130	M1	T	7.80	5.8	1.2		0.84	0.17	0.49	1.75	1.64	0.05	1.64	2.13	27.5	++	19.16	22.5	50,000
1334	7/2088	1130	M1	B	7.60	3.0	0.9	2.0	0.79	0.15	0.44	1.63	0.12	0.08	0.04	3.60	27.5	++	20.25	31.8	50,000
1335	7/2088	1300	M1	T	7.80	3.2	2		0.86	0.17	0.50	1.87	0.21	0.08	0.13	1.06	27.0	++	19.16	22.8	
1336	7/2088	1300	M1	B	7.90	7.5	1.00		0.79	0.15	0.46	1.26	0.33	0.06	0.27	3.29	27.0	++	20.79	34.6	
1338	7/2088	1500	M1	B	7.70	6.6	1.00		0.75	0.14	0.44	1.66	0.21	0.06	0.15	3.91	27.0	++	20.41	40.0	
1337	7/2088	1500	M1	T	7.90	5.4	1.00		0.80	0.16	0.49	1.62	0.29	0.06	0.23	5.80	27.5	++	20.07	28.4	
1367	7/2088	1700	M1	T	7.80	6.2	2		1.08	0.22	0.55	2.37	0.99	0.10	0.89	1.29	28.0	++	16.46	30.8	
1368	7/2088	1700	M1	B	7.90	3.8	1.10		1.02	0.21	0.56	1.71	0.29	0.10	0.19	2.16	27.5	++	13.75	25.0	
1369	7/2088	1900	M1	T	7.90	4.0	1.00		1.44	0.29	0.53	2.15	0.72	0.13	0.59	2.41	28.0	++	13.03	38.4	
1370	7/2088	1900	M1	B	8.00	3.7	2.0		1.41	0.29	0.54	2.43	1.26	0.13	1.13	*	27.5	++	16.09	38.4	
1371	7/2088	2100	M1	T	7.15	6.3	1.10		1.61	0.31	0.52	2.71	0.46	0.17	0.29	*	28.5	++	15.91	22.8	
1372	7/2088	2100	M1	B	7.25	4.2	1.10		1.15	0.23	0.55	2.32	0.28	0.27	0.01	1.48	27.5	++	17.18	30.0	
1400	7/2088	2355	M1	T	7.15	5.7	1.10		1.00	0.19	0.47	0.71	0.29	0.05	0.24	*	26.0	++	19.4		5000
1401	7/2088	2355	M1	B	7.20	6.5	1.00		0.88	0.15	0.43	0.75	0.18	0.11	0.07	11.1	25.0	++	18.98	35.0	5000
1403	7/2188	10	M1	B	7.10	4.8	1.30		0.97	0.17	0.71	0.82	0.23	0.06	0.17	2.42	26.0	++	14.47	22.2	50,000
1402	7/2188	10	M1	T	7.05	6.3	1.10		0.89	0.16	0.46	0.63	0.84	0.05	0.84	1.38	26.0	++	19.16	25.4	17,000
1404	7/2188	300	M1	T	7.00	6.6	2.00		0.93	0.18	0.49	0.63	0.81	0.05	0.81	*	26.0	++	18.44	27.6	50,000
1405	7/2188	300	M1	B	7.10	6.5	1.00		0.80	0.13	0.40	1.08	0.15	0.07	0.08	14.4	25.0	++	20.07	32.6	5000
1437	7/2188	700	M1	T	7.10	7.8	0.95	0.95	1.47	0.28	0.49	1.88	1.40	0.23	1.17	1.69	28.5	++	14.83	36.6	5000
1438	7/2188	700	M1	B	7.10	5.5	1.78	2.45	1.28	0.25	0.49	1.88	0.21	0.29	0.10	1.74	27.5	++	17.36	26.4	8000
1439	7/2188	900	M1	T	7.10	7.6	0.50		1.51	0.29	0.48	2.13	0.51	0.29	0.22	1.16	29.0	++	17.00	35.6	
1440	7/2188	900	M1	B	7.10	5.1	0.50		1.28	0.25	0.50	1.82	0.39	0.29	0.10	*	28.5	++	16.28	36.4	
1462	7/2188	1130	M1	T	7.36	5.4	5.02		0.93	0.17	0.66	1.19	0.32	0.14	0.18	5.17	28.5	++	15.01	28.0	>160,000
1463	7/2188	1130	M1	B	7.35	7.1	1.10		0.87	0.16	0.59	1.28	0.33	0.17	0.16	5.70	28.5	++	17.00	36.8	16,000
1465	7/2188	1300	M1	B	7.40	6.7	2.00		0.86	0.15	0.55	1.67	0.26	0.05	0.26	3.45	28.0	++	17.18	51.6	

ANALYTICAL DATA FOR RIVER AND TRIBUTARIES
HACKENSACK RIVER STUDY

JULY DRY & WET EVENTS - JULY 11-25, 1988

SAMPLE #	DATE	TIME	SITE	DEPTH	pH	TURBIDITY ntu	CBOD20 mg/l	NH3 mg/l	NO2 mg/l	NO3 mg/l	TKN mg/l	TP04 mg/l	DP04 mg/l	ORGANIC P04 mg/l	CHLORO-a mg/d3	TEMP C	B.O. mg/l	SALINITY ppt	TSS mg/l	(MPN) FEC. COLI org/100ml
1464	72188	1300	M1	T	7.30	6.2	<2.00	0.94	0.17	0.68	2.19	0.29	0.32	<0.10	4.45	28.5	++	15.91	18.0	
1466	72188	1500	M1	T	7.25	6.6	<2.00	0.78	0.14	0.57	1.27	0.25	<0.05	0.25	4.37	27.5	++	19.70	66.8	3000
1467	72188	1500	M1	B	7.25	7.2	<2.00	0.73	0.13	0.49	1.27	0.18++	1.12	++	<2.09	26.6	++	18.76	64.8	7000
1528	72188	1700	M1	T	7.25	4.5	2.40	0.77	0.14	0.77	4.14	0.22	*	*	<1.85	8.5	++	17.54	13.5	
1529	72188	1700	M1	B	7.25	3.8	<2.00	0.87	0.16	0.45	2.05	0.17	0.21	<0.10	<1.86	27.5	++	18.80	34.0	
1530	72188	1900	M1	T	7.30	4.4	<2.00	1.20	0.23	0.49	2.25	0.32	0.31	0.01	6.98	28.5	++	16.28	38.0	90,000
1531	72188	1900	M1	B	7.25	3.9	<2.00	1.13	0.21	0.48	1.94	0.34	0.29	0.05	11.9	28.0	++	17.18	30.0	635
1532	72188	2100	M1	T	7.30	4.5	<2.00	1.53	0.28	0.71	2.44	0.35	0.34	0.01	<2.43	28.5	++	15.01	19.2	
1533	72188	2100	M1	B	7.25	4.5	<2.00	1.27	<0.05	0.71	1.54	0.33	0.31	0.02	6.23	27.5	++	16.82	38.4	
1563	72288	120	M1	T	7.20	6.2	3.70	0.95	0.17	0.65	2.82	0.25	0.14	0.11	4.90	25.0	3.00	13.93	58	
1564	72288	120	M1	B	7.30	5.7	<2.00	0.90	0.16	0.45	1.36	0.19	0.18	0.01	3.05	25.0	2.00	18.08	53.6	
1565	72288	300	M1	T	7.10	4.6	<2.00	1.01	0.18	0.55	1.27	0.17	0.18	<0.10	1.96	25.0	2.30	16.09	39.7	17,000
1566	72288	300	M1	B	7.30	6.5	<2.00	0.24	0.17	0.47	1.14	0.30	0.22	0.08	1.96	25.0	2.40	15.55	17.6	90,000
1577	72288	610	M1	T	7.25	5.8	<2.00	1.45	0.26	0.48	3.09	*	0.39	*	3.59	27.5	1.70	15.19	16.5	
1578	72288	610	M1	B	7.50	6.3	<2.00	1.02	0.18	0.42	1.68	*	0.14	*	4.38	26.0	1.90	17.54	14	
1579	72288	730	M1	T	7.10	8.4	<2.00	1.70	0.28	0.43	++	0.36	0.16	0.20	4.54	28.0	1.80	14.65	20.4	8000
1580	72288	730	M1	B	7.25	5.5	<2.00	1.23	0.18	0.41	++	0.28	0.24	0.04	<2.05	26.0	1.80	17.36	69	8000
1581	72288	900	M1	T	7.25	6.8	0.83	2.34	0.33	0.36	1.86	0.30	0.41	<0.10	<1.27	29.0	1.50	14.29	33.0	
1582	72288	900	M1	B	7.40	8.1	0.35	1.83	0.29	0.51	0.98	*	0.32	*	1.42	27.0	2.40	13.93	22.7	
1610	72288	1130	M1	B	7.30	2.7	<2.00	0.95	0.16	0.39	1.55	0.26	0.07	0.19	<2.00	27.0	2.20	18.44	22.8	13,000
1609	72288	1130	M1	T	7.30	3.4	<2.00	1.55	0.26	0.44	1.86	0.51	0.07	0.44	<1.49	25.0	2.10	14.29	8.00	24,000
1611	72288	1315	M1	T	7.30	2.9	<2.00	1.25	0.21	0.53	1.78	0.40	0.23	0.17	<1.29	25.0	2.30	14.47	12.4	
1612	72288	1315	M1	B	7.25	2.2	<2.00	1.02	0.17	0.47	2.24	*	0.22	*	<1.14	26.0	2.60	16.46	40	
1613	72288	1500	M1	T	7.25	4.1	<2.00	0.81	0.14	0.41	0.81	0.25	0.17	0.08	11.1	26.0	2.90	14.83	20.4	17,000
1614	72288	1500	M1	B	7.25	3.6	<2.00	0.98	0.17	0.54	1.54	0.32	0.23	0.09	1.70	27.0	3.20	18.98	25.3	7000
1642	72288	1710	M1	T	7.28	3.0	<2.00	1.19	0.17	0.47	3.06	*	0.14	*	<2.09	27.5	2.30	15.91	10.0	
1643	72288	1710	M1	B	7.36	2.5	1.00	0.91	0.14	0.41	2.27	0.26	0.07	0.19	1.97	26.5	2.60	18.08	32.8	11,000
1644	72288	1900	M1	T	7.40	2.7	<2.00	1.33	0.22	0.45	2.42	0.40	0.07	0.33	1.84	28.0	1.80	15.19	16.8	5000
1645	72288	1900	M1	B	7.40	6.3	<2.00	1.22	0.20	0.44	2.55	0.64	0.09	0.55	<0.98	27.0	2.10	16.64	20.0	
1647	72288	2100	M1	B	7.34	9.5	<2.00	1.44	0.24	0.39	1.89	*	0.13	*	<1.24	27.0	1.90	15.19	21.6	
1646	72288	2100	M1	T	7.50	6.2	<2.00	1.71	0.27	0.37	2.74	0.50	0.17	0.33	<1.70	28.0	1.60	14.65	15.6	13,000
1666	72288	2300	M1	T	7.15	3.9	3.72	1.65	0.27	0.39	2.90	0.50	0.47	0.03	<2.32	26.0	1.90	14.29	11.3	17,000
1667	72288	2300	M1	B	7.15	4.6	1.60	1.35	0.23	0.41	2.64	0.41	0.40	0.01	<1.54	26.0	1.70	15.19	18.6	
1668	72388	100	M1	T	7.25	4.2	1.80	1.18	0.20	0.45	0.95	0.33	0.35	<0.10	<1.20	25.0	2.02	14.83	12.1	
1669	72388	100	M1	B	7.25	3.7	1.40	0.85	0.15	0.38	1.53	<0.10	0.25	<0.10	<1.32	26.0	2.30	16.82	15.3	
1670	72388	300	M1	T	7.20	4.3	1.85	1.00	0.18	0.46	1.83	0.21	0.31	<0.10	<1.24	24.0	2.10	13.39	13.0	26,800
1671	72388	300	M1	B	7.15	7.0	<2.00	0.77	0.14	1.41		0.32	0.23	0.09	<2.14	24.0	2.30	17.36	16.0	28,000
1707	72388	500	M1	T	7.38	5.9	<2.00	0.76	0.14	0.38	2.70	0.16	<0.05	0.16	5.23	25.0	1.90	17.18	22.4	
1708	72388	500	M1	B	7.48	4.6	1.05	0.97	0.17	0.49	2.30	0.36	0.07	0.29	<2.44	25.0	2.30	15.55	17.6	
1710	72388	655	M1	B	7.31	5.0	1.45	1.05	0.18	0.40	2.23	0.24	0.08	0.16	<2.61	25.0	1.60	15.01	23.8	7000
1709	72388	655	M1	T	7.30	5.3	1.15	1.25	0.20	0.41	2.57	0.23	0.09	0.14	<2.64	25.0	1.20	16.46	19.2	8000
1711	72388	855	M1	T	7.42	5.0	1.25	1.75	0.26	0.39	2.62	0.39	0.15	0.24	29.3	28.0	1.30	14.29	13.6	
1712	72388	855	M1	B	7.49	5.2	1.40	1.30	0.20	0.40	2.51	0.23	0.09	0.14	<1.34	27.0	1.90	16.28	25.6	
1741	72388	1100	M1	T	7.15	3.6	<2.00	1.89	0.25	0.35	2.94	0.51	0.45	0.06	1.14	28.0	1.30	14.47	15.4	
1742	72388	1100	M1	B	7.12	2.6	<2.00	1.38	0.21	0.38	3.19	0.42	0.37	0.05	<2.00	27.0	1.10	16.28	10.8	
1743	72388	1300	M1	T	7.35	4.1	<2.00	1.725	0.23	0.22	2.37	0.45	0.37	0.08	*	28.0	1.20	14.65		17,000

ANALYTICAL DATA FOR RIVER AND TRIBUTARIES HACKENSACK RIVER STUDY

JULY DRY & NET EVENTS - JULY 11-25, 1988

SAMPLE #	DATE	TIME	SITE	DEPTH	pH	TURBIDITY ntu	CBOD20 mg/l	NH3 mg/l	NO2 mg/l	NO3 mg/l	TKN mg/l	TP04 mg/l	OP04 mg/l	ORGANIC P04 mg/l	CHLORO-a mg/L	TEMP C	D.O. mg/l	SALINITY ppt	TSS mg/l	(NPN) FEC. COLI org/100ml
1744	72388	1300	W1	B	7.35	3.4	2.00	1.09	0.17	0.39	2.28	0.18	0.27	<0.10	*	28.0	1.50	17.00	25.5	17,000
1745	72388	1500	W1	T	3.15	3.7	2.00	0.90	0.15	0.46	2.05	0.23	0.00	0.23	<2.26	26.0	2.00	15.55	14.2	14,900
1746	72388	1500	W1	B	7.12	5.7	2.00	0.81	0.13	0.41	1.88	<0.10	0.24	<0.10	3.42	26.0	1.70	17.72	23.1	8000
1803	72388	1700	W1	T	7.15	4.7	2.00	0.85	0.14	0.46	1.46	<0.10	0.04	<0.10	4.36	26.0	6.70	16.46	16.4	
1804	72388	1700	W1	B	7.13	4.4	2.00	1.16	0.07	0.58	1.26	<0.10	0.06	<0.10	<1.13	26.0	1.80	17.72	12.3	
1805	72388	1900	W1	T	7.35	4.0	2.00	0.85	0.07	0.60	1.52	<0.10	0.07	<0.10	4.68	26.0	1.80	14.83	9.60	5000
1806	72388	1900	W1	B	7.31	4.5	2.00	0.98	0.15	0.48	1.54	<0.10	0.07	<0.10	<2.00	26.0	1.50	16.64	22.0	7000
1807	72388	2100	W1	T	7.30	5.2	2.00	1.48	0.21	0.46	2.00	0.17	0.14	0.03	<2.76	26.0	1.80	15.19	21.3	
1808	72388	2100	W1	B	7.40	5.9	1.00	1.33	0.20	0.44	1.75	<0.10	0.35	<0.10	1.57	26.0	2.30	15.55	28.0	
1809	72388	2300	W1	T	7.13	4.2	2.00	1.46	0.21	0.55	2.01	0.24	0.40	<0.10	6.01	26.0	2.50	13.57	11.2	11,000
1810	72388	2300	W1	B	7.15	4.0	1.10	1.46	0.21	0.50	1.74	<0.10++	0.41	<0.10++	1.74	26.0	1.40	13.75	26.8	17,000
1811	72488	100	W1	T	7.25	4.0	1.30	1.73	0.24	0.42	2.36	0.20++	0.46	++	4.65	25.0	1.50	14.47	15.2	
1812	72488	100	W1	B	7.26	4.2	1.25	1.38	0.20	0.64	1.96	<0.10++	0.38	++	<1.91	26.0	1.00	15.37	18.8	
1862	72488	300	W1	T	7.20	2.7	1.15	1.08	0.16	0.51	1.57	0.15	0.09	0.06	5.68	24.0	2.40	15.01	18.2	50,000
1861	72488	300	W1	B	7.15	3.5	2.00	1.00	0.15	1.33		<0.10	0.29	<0.10	<2.61	24.0	2.30	13.57	17.2	24,000
1876	72488	525	W1	T	7.21	3.3	2.00	1.00	0.15	1.33		<0.10	0.29	<0.10	4.03	24.0	1.70	13.93	20.8	
1877	72488	525	W1	B	7.11	3.1	2.00	1.00	0.15	1.33		<0.10	0.29	<0.10	<2.44	25.0	2.20	15.01	24.0	28,000
1878	72488	700	W1	T	7.10	3.2	1.35	1.08	0.16	0.44	1.72	<0.10	0.29	<0.10	12.9	25.0	2.20	16.28	12.2	30,000
1879	72488	700	W1	B	7.15	3.5	1.4	1.04	0.15	0.42	1.90	<0.10	0.44	<0.10	10.2	28.0	1.50	13.57	36.5	
1880	72488	845	W1	T	7.35	3.2	2.00	1.57	0.21	0.39	1.82	<0.10	0.42	<0.10	5.85	27.0	1.40	14.83	36.4	
1881	72488	845	W1	B	7.35	3.4	1.15	1.51	0.21	0.40	1.64	<0.10	0.88	<0.10	4.50	29.0	1.40	12.85	12.8	1700
1895	72488	1120	W1	T	7.18	3.4	1.15	4.26	0.31	0.04	8.92	0.86	0.61	0.25	3.58	27.5	1.30	15.55	24.2	5000
1896	72488	1120	W1	B	7.20	5.1	2.00	2.27	0.26	0.26		++	0.62	++	5.11	29.0	1.20	13.03	18.2	
1897	72488	1300	W1	T	7.19	3.8	1.05	2.24	0.26	0.51	2.81	0.39++	0.63	++	5.40	28.0	1.50	15.19	22.8	
1898	72488	1300	W1	B	7.21	4.7	2.00	1.43	0.19	0.37	1.61	0.11	0.12	<0.10	<2.64	28.0	1.85	12.85	13.1	14,000
1925	72488	1500	W1	T	4.07	3.7	2.00	1.08	0.15	0.83	1.65	0.43	0.31	0.12	6.48	28.0	1.60	15.55	17.2	13,000
1926	72488	1500	W1	B	7.23	4.3	2.00	0.99	0.14	0.46	1.70	0.37	0.27	0.10	5.34	28.0	2.90	15.55	19.6	
1928	72488	1700	W1	B	7.20	3.7	2.00	0.99	0.14	0.46	0.78	0.39	0.31	0.08	6.21	28.0	3.00	12.67	25.7	
1927	72488	1700	W1	T	7.21	3.6	2.00	1.09	0.15	0.54	1.67	0.38	0.31	0.07	4.61	26.0	1.50	11.76	19.6	
1967	72588	120	W1	T	7.29	4.2	1.8	1.89	0.23	0.34	2.91	0.55	0.58	<0.10	*	26.0	1.60	13.39	24.6	5000
1968	72588	120	W1	B	7.35	4.9	1.60	1.77	0.22	0.36	2.65	0.56	0.52	0.04	*	28.0	1.80	13.03	23.9	28,000
1965	72588	300	W1	T	7.35	4.4	1.50	1.80	0.22	0.36	2.89	0.65	0.60	0.05	*	27.5	1.80	13.75	27.2	
1966	72588	300	W1	B	7.40	5.7	1.35	0.94	0.13	0.54	0.68	0.30	0.30	0.00	<1.15	26.0	1.70	13.57	14.3	
2012	72588	500	W1	T	7.29	3.2	2.00	0.94	0.13	0.43	1.30	<0.10++	0.27	++	<2.25	26.0	1.90	14.11	13.6	
2013	72588	500	W1	B	7.35	3.9	2.80	0.82	0.12	0.43	0.84	0.32	*	*	<1.57	26.0	1.80	12.48	10.0	9000
2014	72588	700	W1	T	7.41	2.8	2.00	0.92	0.13	0.55	0.64	0.34	0.31	0.03	<2.84	25.0	1.90	13.75	15.6	2400
2015	72588	700	W1	B	7.45	2.8	1.60	0.94	0.13	0.42	0.56	0.46	0.42	0.04	4.94	28.0	1.50	14.29	10.4	
2017	72588	900	W1	B	7.32	3.5	1.80	1.39	0.18	0.40	0.88	0.46	0.53	0.48	<1.32	29.5	1.50	13.03	11.5	
2016	72588	900	W1	T	7.30	3.1	2.00	1.69	0.20	0.38	0.66	0.53	0.48	0.05	1.93	28.0	1.50	13.75	14.9	13,000
2019	72588	1100	W1	B	7.27	4.0	2.50	1.42	0.17	0.42	0.98	0.44	0.43	0.01	<1.76	28.0	1.40	13.75	16.7	13,000
2018	72588	1100	W1	T	7.31	3.5	1.05	1.64	0.20	0.40	1.36	0.46	0.49	<0.10						

NOTES:

* = Insufficient sample for repeat analysis

++ = Matrix Interference

++ = Zero (0) mg/l concentration found; suspect contamination of DO Fixing Reagents

ANALYTICAL DATA FOR RIVER AND TRIBUTARIES
HACKENSACK RIVER STUDY

JULY DRY & WET EVENTS - JULY 11-25, 1988

SAMPLE #	DATE	TIME	SITE	DEPTH	pH	TURBIDITY ntu	CBOD5 mg/l	CBOD20 mg/l	NH3 mg/l	NO2 mg/l	NO3 mg/l	TKN mg/l	TP04 mg/l	OP04 mg/l	P04 mg/l	CHLORO-a mg/m3	TEMP C	D.O. mg/l	SALINITY ppt	TSS mg/l	(MPN)	
ORGANIC																						

E = Velocities from in-line Flo-Tote not reliable
++ = Estimated

ANALYTICAL DATA FOR RIVER AND TRIBUTARIES
HACKENSACK RIVER STUDY

JULY DRY & WET EVENTS - JULY 11-25, 1988

SAMPLE #	DATE	TIME	SITE	DEPTH	pH	TURBIDITY ntu	CBOD5 mg/l	CBOD20 mg/l	NH3 mg/l	NO2 mg/l	NO3 mg/l	TKN mg/l	TP04 mg/l	DP04 mg/l	PD4 mg/l	CHLORO-a mg/l	TEMP C	B.O. mg/l	SALINITY ppt	TSS mg/l	FEC. COLI org/100ml
7	7/11/88	1411	W2	B	7.38	7	2.55		2.81	0.34	0.32	3.60	0.86	0.69	0.17	14.76	27.5	5.80	12.9	13.2	170
6	7/11/88	1411	W2	T	7.30	6.3	3.25		3.33	0.33	0.14	3.60	0.90	0.70	0.20	18.09	28.0	4.70	12.3	12.4	230
26	7/11/88	1715	W2	B	7.30	7.6	1.30		1.97	0.29	0.48	2.34	0.81	0.53	0.28	9.97	28.0	2.00	17.4	20.4	
25	7/11/88	1715	W2	T	7.26	8.1	1.10		1.95	0.28	0.24	1.67	0.68	0.51	0.17	4.96	28.0	2.80	17.0	22.4	
39	7/11/88	2105	W2	B	7.30	4.5	0.88	1.88	1.15	0.19	0.47	1.13	0.35	0.29	0.06	2.10	26.0	3.10	19.7	17.6	
38	7/11/88	2105	W2	T	7.30	5.6	0.90	4.70	1.13	0.19	1.72	1.09	++	0.31	++	10.90	27.0	3.00	19.4	21.2	
58	7/12/88	55	W2	B	7.40	7.8	2		2.25	0.33	0.25	3.76	0.72	0.27	0.45	4.09	28.0	2.50	13.4	29.6	
57	7/12/88	55	W2	T	7.40	6.3	2		2.29	0.32	0.30	4.62	0.73	0.29	0.44	1.91	28.0	3.00	15.7	31.2	
107	7/12/88	445	W2	T	7.38	7.6	3.20		2.37	0.32	0.33	3.99	0.75	0.23	0.52	10.08	28.0	2.40	12.6	26.9	
108	7/12/88	445	W2	B	7.37	5.9	2.40		2.5	0.33	0.30	4.10	0.68	0.22	0.46	6.54	28.0	3.30	13.0	25.0	
162	7/12/88	725	W2	B	7.25	5.8	2		1.51	0.28	0.41	2.70	0.66	0.16	0.50	11.12	28.0	2.50	17.6	23.2	
161	7/12/88	725	W2	T	7.25	7.5	1.20		1.53	0.28	0.39	2.24	0.59	0.16	0.43	1.71	27.0	2.50	17.7	27.0	
175	7/12/88	1010	W2	T	7.10	4.6	1.50		1.61	0.29	0.39	2.48	0.83	0.11	0.72	2.47	28.0	3.90	18.0	19.2	
176	7/12/88	1010	W2	B	7.10	4.0	1.40		1.59	0.30	0.36	3.16	0.83	0.11	0.72	6.36	28.0	3.90	17.7	16.4	
193	7/12/88	1323	W2	T	7.20	6.4	1.60		2.60	0.33	0.20	6.71	0.86	0.21	0.65	7.68	28.0		14.2	27.3	1100
212	7/12/88	1323	W2	B	7.30	5.1	1.35		2.67	0.31	0.23	5.65	++	0.19	++	4.40	28.0		13.8	20.8	800
213	7/12/88	1616	W2	T	7.30	4.9	1.85		2.54	0.32	0.22	2.73	0.76	0.24	0.52	14.04	28.0	2.40	14.5	13.6	
221	7/12/88	1919	W2	B	7.30	3.8	2.00		2.56	0.32	0.22	5.13	0.78	0.19	0.59	9.03	28.0	2.70	14.7	18.4	
222	7/12/88	1919	W2	T	7.30	6.6	1.25	3.18	1.33	0.27	0.34	4.21	0.39	0.09	0.30	6.54	27.0	0.80	18.5	24.6	
246	7/12/88	2115	W2	B	7.30	5.8	0.925	2.30	1.33	0.27	0.34	5.42	0.38	0.10	0.28	1.85	28.0	2.60	18.3	26.5	
245	7/12/88	2115	W2	T	7.25		1.45		1.03	0.20	0.37	4.70	0.29	0.05	0.29	1.95	28.0	3.10	20.2	32.0	
259	7/13/88	29	W2	T	7.20	6.3	1.8		1.04	0.20	0.37	5.20	0.27	0.05	0.27	1.83	28.0	3.10	20.0	30.0	
258	7/13/88	29	W2	B	7.26	4.9	1.55		1.91	0.30	0.30	5.52	0.63	0.15	0.48	1.77	26.0	1.90	17.8	30.8	
324	7/13/88	229	W2	T	7.24	3.1	1.65		2.18	0.31	0.29	6.54	0.63	0.17	0.46	4.33	27.0	2.00	17.0	28.8	
325	7/13/88	229	W2	B	7.10	4.9	2.3	3.85	2.66	0.30	0.33	2.93	0.74	0.14	0.60	2.18	28.0	2.00	15.8	14.0	
267	7/13/88	318	W2	T	7.24	5.5	1.5	3.53	2.47	0.30	0.35	3.07	0.71	0.12	0.59	2.02	29.0	2.30	16.1	22.8	
266	7/13/88	318	W2	B	7.34	5.5	2.20		2.78	0.30	0.18	3.37	0.80	0.20	0.60	1.76	28.0	2.00	14.8	28.0	
286	7/13/88	630	W2	T	7.26	3.6	2.50		3.15	0.30	0.21	3.64	0.18	0.18	0.18	2.09	27.0	2.20	18.3	30.0	
285	7/13/88	630	W2	B	7.32	4.5	2		2.07	0.29	0.28	5.52	0.76	0.59	0.17	13.16	28.0	2.00	15.4	24.0	
312	7/13/88	951	W2	T	7.28	5.5	1.35		2.09	0.30	0.27	2.75	0.76	0.56	0.20	1.55	27.0	1.50	15.1	31.0	
311	7/13/88	951	W2	B	7.23	12.5	2		1.51	0.24	0.44	0.204	0.49	0.11	0.38	2.20	27.0	2.50	18.2	18.0	1700
344	7/13/88	1547	W2	T	7.22	4.6	1.85		1.58	0.25	0.45	2.14	0.51	0.12	0.39	2.64	28.0	2.30	18.2	14.0	300
343	7/13/88	1547	W2	B	7.40	3.9	3.10		3.08	0.34	0.28	3.87	0.91	0.28	0.63	1.83	28.0	5.70	14.8	18.2	
357	7/13/88	1904	W2	T	7.35	3.3	2.95		3.11	0.33	0.25	4.29	0.92	0.07	0.85	4.41	28.0	6.20	13.6	20.0	
356	7/13/88	1904	W2	B	7.17	5.6	1.45		1.84	0.29	0.50	2.78	0.61	0.10	0.51	1.74	28.0	3.20	16.9	22.4	1300
370	7/13/88	2345	W2	T	7.18	6.5	2.55		1.71	0.29	0.56	2.68	0.74	0.08	0.66	2.33	27.0	3.20	17.0	9.20	3000
369	7/13/88	2345	W2	B	7.04	5.6	2.10		1.20	0.18	0.52	1.06	0.39	0.19	0.20	2.19	29.0	3.30	20.8	24.0	
393	7/14/88	215	W2	T	6.86	4.9	2.65		1.25	0.19	0.55	0.95	0.43	0.22	0.21	2.00	25.0	3.50	20.3	26.8	
394	7/14/88	215	W2	T	7.06	3.7	1.95		1.99	0.27	0.48	2.66	0.72	0.20	0.52	4.32	27.0	2.90	15.2	12.3	
397	7/14/88	321	W2	B	7.08	5.1	2.40		1.68	0.26	0.48	3.74	0.61	0.15	0.46	4.20	27.0	3.10	16.6	15.4	
421	7/14/88	709	W2	T	7.19	4.5	2.10		5.93	0.28	0.36	3.43	0.92	0.60	0.30	2.88	27.0	2.50	13.3	17.7	
420	7/14/88	709	W2	B	7.10	5.6	2		1.93	0.05	0.49	4.02	0.90	0.60	0.53	0.07	2.00	2.70	14.4	13.2	
439	7/14/88	1033	W2	T	7.30	4.5	2.25		1.94	0.28	0.54	3.20	0.62	0.58	0.04	2.04	28.0	2.65	15.5	17.2	429
438	7/14/88	1033	W2	T	7.00	3.0	1.45		1.36	0.24	0.58	2.14	0.52	0.44	0.12	1.66	28.0	2.40	18.4	23.6	387
					7.15	4.8	2.05									1.61					

ANALYTICAL DATA FOR RIVER AND TRIBUTARIES
HACKENSACK RIVER STUDY

JULY DRY & WET EVENTS - JULY 11-25, 1988

SAMPLE #	DATE	TIME	SITE	DEPTH	pH	TURBIDITY ntu	CBOD5 mg/l	CBOD20 mg/l	NO3 mg/l	NO2 mg/l	NO3 mg/l	TKN mg/l	TP04 mg/l	OP04 mg/l	ORGANIC P04 mg/l	CHLORO-a mg/l	TEMP C	D.O. mg/l	SALINITY ppt	TSS mg/l	FEC. COLI org/100ml	(MPN)
452	7/188	1258	W2	B	7.07	4.3	1.53	4.58	1.74	0.29	0.39	2.08	0.70	0.62	0.08	3.93	29.0	2.50	16.2	15.1		
451	7/188	1258	W2	T	7.05	4.5	1.23	2.03	2.05	0.29	0.40	3.26	0.76	0.61	0.15	5.31	29.0	2.70	16.2	13.0		
472	7/188	1607	W2	B	7.32	3.2	2.52		1.83	0.29	0.40	0.24++	0.95	0.63	0.32	3.26	29.0	5.90	14.2	21.5		
471	7/188	1607	W2	T	7.19	3.1	3.49		2.57	0.31	0.37	4.55	0.93	0.63	0.30	8.57	30.0	4.10	14.0	23.0		
486	7/188	1849	W2	T	7.12	5.2	1.42		1.87	0.30	0.36	1.68	0.71	0.50	0.21	6.82	29.0	2.80	15.3	18.8	500	
487	7/188	1849	W2	B	7.16	5.75	1.58		3.92	0.29	0.38	2.80++	0.71	0.47	0.24	*	28.0	3.10	15.6	25.0	230	
510	7/188	30	W2	T	6.96	5.3	2		1.77	0.14	0.52	1.90	0.49	0.47	0.02	4.36	28.0	4.00	19.0	34.0		
509	7/188	30	W2	B	7.04	4.3	2		1.92	0.27	0.40	2.47	0.56	0.39	0.17	8.41	27.0	3.00	18.0	17.5		
527	7/188	500	W2	T	7.35	5.4	2		2.91	0.31	0.36	3.71	0.60	0.42	0.18	9.98	27.0	3.35	14.6	34.4		
528	7/188	500	W2	B	7.24	3.5	1.05		2.55	0.31	0.37	2.45	0.61	0.46	0.25	8.20	28.0	4.23	15.4	26.0		
547	7/188	645	W2	B	7.20	3.8	1.7		2.62	0.31	0.35	4.86	0.84	0.49	0.35	5.42	27.0	2.60	14.0	18.8		
546	7/188	645	W2	T	7.20	4.6	1.45		2.55	0.32	0.36	4.82	0.84	0.49	0.43	4.17	27.0	3.10	14.1	14.0		
562	7/188	950	W2	B	7.20	4.2	1.50		1.65	0.26	0.46	2.13	0.55	0.63	0.10	3.13	27.0	2.60	17.8	30.4		
561	7/188	950	W2	T	7.20	4.4	1.70		1.60	0.26	0.46	1.93	0.52	0.25	0.27	4.45	27.0	2.50	18.2	32.0		
582	7/188	1254	W2	B	7.25	4.9	1.75		1.65	0.28	0.47	2.25	0.65	0.37	0.28	2.55	28.0	2.60	17.7	32.0		
581	7/188	1254	W2	T	7.20	5.5	2.12		1.94	0.29	0.44	2.35	0.55	0.38	0.17	4.82	28.0	2.60	16.0	16.9		
596	7/188	1553	W2	T	7.33	5.6	3.79	6.78	2.68	0.32	0.32	2.46	0.8	0.21	0.59	6.23	29.0	4.50	14.3	15.2	500	
597	7/188	1553	W2	B	7.47	3.9	1.85	7.9	3.24	0.33	0.41	4.32	0.84	0.21	0.63	20.1	29.0	6.00	14.9	14.4	800	
619	7/188	1834	W2	B	7.49	4.2	2.90		2.29	0.32	0.39	4.73	0.70	0.56	0.14	34.5	28.0	6.30	14.8	15.2		
618	7/188	1834	W2	T	7.48	4.7	3.95		2.24	0.32	0.37	1.82++	0.59	0.09	0.50	1.93	28.0	6.10	14.7	20.8		
633	7/188	2133	W2	B	7.23	7.1	2		1.91	0.32	0.37	2.40	0.54	0.31	0.23	5.43	26.0	3.50	15.8	21.8		
632	7/188	2133	W2	T	7.16	6.0	2		1.40	*	0.70	2.83	0.56	*	*	*	26.0	5.10	18.8	27.2		
652	7/188	35	W2	T	7.10	23.0	1.50		10.87	0.05	0.05	14.9	1.87	0.30	1.57	3.54	28.0	4.70	17.6	13.8	13,200,000	
653	7/188	35	W2	B	7.20	2.6	2.00		2.32	0.32	0.05	0.20++	0.77	0.11	0.66	6.39	27.0	4.40	18.2	15.8		
666	7/188	330	W2	B	7.20	13.0	2.30		2.15	0.32	0.36	2.12	0.79	0.19	0.60	3.52	27.0	3.00	12.8	40.0		
665	7/188	330	W2	T	7.20	5.9	2.00		1.12	0.06	0.58	1.66	0.71	0.05	0.71	14.7	28.0	3.65	15.2	12.8		
691	7/188	635	W2	B	7.50	4.4	2.65	4.23	0.27	0.32	0.29	2.31	0.80	0.14	0.66	17.9	27.0	2.80	15.6	18.4		
690	7/188	635	W2	T	7.20	4.8	2.63	3.82	2.87	0.31	0.28	2.28++	0.78	0.61	0.17	*	27.0	2.90	15.3	13.6		
716	7/188	945	W2	T	7.20	3.1	1.30		1.71	0.30	0.39	2.47	0.48	0.44	0.04	2.42	28.0	2.00	17.5	16.8		
717	7/188	945	W2	B	7.20	4.8	1.60		1.73	0.30	0.43	1.95	0.51	0.47	0.04	2.32	29.0	2.90	17.4	24.8		
731	7/188	1317	W2	T	7.10	4.1	3.55		1.90	0.31	0.34	2.53	0.76	0.24	0.52	4.43	29.0	2.70	16.7	14.8		
732	7/188	1317	W2	B	7.30	2.5	1.55		1.62	0.28	0.59	1.88	0.64	0.16	0.48	23.4	29.0	2.70	18.1	32.8		
747	7/188	1543	W2	T	7.30	4.0	1.60		2.11	0.36	0.34	2.74	0.76	0.47	0.48	11.8	30.0	8.20	15.3	20.7		
748	7/188	1543	W2	B	7.50	3.4	2.30		2.09	0.35	0.36	2.87	0.81	0.27	0.54	3.69	30.0	8.20	15.3	29.3		
769	7/188	1833	W2	B	7.50	3.6	1.50		2.37	0.34	0.37	3.77	0.66	0.49	0.17	*	30.0	7.30	15.1	13.6	800	
768	7/188	1833	W2	T	7.30	5.1			2.31	0.34	0.37	2.80	0.65	0.48	0.17	4.11	29.0	7.00	15.1	24.6	300	
811	7/188	2134	W2	T	7.10	5.5	1.75		1.76	0.29	0.44	2.09	0.57	0.36	0.21	10.7	29.0	3.40	18.1	26.2		
812	7/188	2134	W2	B	7.10	6.5	1.55		1.77	0.20	0.54	2.10	0.50	0.31	0.19	4.91	30.0	2.80	18.4	22.2		
830	7/188	640	W2	T	7.08	4.6	1.95		3.38	0.32	0.30	3.36	0.94	0.21	0.73	16.7	28.0	2.40	12.5	14.3	1100	
831	7/188	640	W2	B	7.14	4.5	1.4		2.96	0.32	0.32	3.60	0.93	0.22	0.71	11.6	28.0	1.60	14.1	11.4	2400	
856	7/188	1020	W2	T	7.40	3.6	1.78	2.75	1.92	0.30	0.45	0.85++	0.54	0.25	0.29	*	29.0	3.00	17.5	30.9		
857	7/188	1020	W2	B	7.30	3.4	1.98	2.88	1.89	0.26	0.50	0.96++	0.59	0.33	0.26	5.34	29.0	3.40	17.5	32.3		
870	7/188	1311	W2	B	7.10	3.3	1.1		1.78	0.29	0.47	0.51++	0.50	0.08	0.42	7.34	30.0	3.20	16.7	10.6		
869	7/188	1311	W2	T	7.20	3.9	1.7		1.76	0.30	0.46	0.41++	0.50	0.11	0.39	5.01	30.0	3.50	18.6	30.2		
883	7/188	1606	W2	B	7.55	2.1	3.62		2.00	0.36	0.39	2.04	0.69	0.42	0.27	26.0	31.0	4.80	16.1	21.6		
882	7/188	1606	W2	T	7.10	3.5	2.8		0.69	0.38	0.36	1.34	0.60	0.42	0.18	18.8	31.0	4.90	15.9	24.2		

753 VCB

ANALYTICAL DATA FOR RIVER AND TRIBUTARIES
HACKENSACK RIVER STUDY

JULY DRY & WET EVENTS - JULY 11-25, 1988

SAMPLE #	DATE	TIME	SITE	DEPTH	pH	TURBIDITY ntu	COD20 mg/l	COD5 mg/l	NH3 mg/l	NO2 mg/l	NO3 mg/l	TKN mg/l	TP04 mg/l	OP04 mg/l	P04 mg/l	CHLORO-a mg/e3	TEMP C	D.O. mg/l	SALINITY ppt	TSS mg/l	FEC. COLI org/100ml	(MFP)
1411	72188	326	W2	T	6.90	4.3	2.90		2.07	0.33	0.40	2.66	0.65	0.48	0.17	<1.46	29.0	2.30	15.01	32.4		
1412	72188	326	W2	B	7.10	4.8	2.00		1.68	0.32	0.43	1.90	0.59	0.68	<0.10	<2.83	28.0	1.90	15.91	29.6		
1424	72188	659	W2	T	7.20	3.7	0.925	2.7	3.37	0.30	0.25	4.54	0.92	0.70	0.22	13.6	27.0	1.90	11.58	11.2		
1425	72188	659	W2	B	7.20	3.1	1.575	2.2	3.03	0.29	0.25	3.75	1.43	0.70	0.73	3.89	27.0	1.70	11.58	14.4		
1442	72188	942	W2	B	7.30	4.9	1.10		3.03	0.33	0.30	3.11	0.22++	0.72	++	5.58	28.0	1.60	11.76	33.2		
1441	72188	942	W2	T	7.20	5.7	1.75		3.04	0.41	0.34	3.33	0.66	0.65	0.01	*	28.0	2.00	9.60	36.4		
1454	72188	1240	W2	T	7.30	6.2	1.15		1.85	0.37	0.40	2.89	0.65	0.53	0.12	9.92	28.0	1.90	13.57	23.6	1700	
1455	72188	1240	W2	B	7.20	6.1	<2.00		1.67	0.30	0.44	2.39	0.52	0.48	0.04	<1.63	28.0	2.30	15.19	48.8	5000	
1478	72188	1559	W2	T	7.35	5.6	1.65		1.87	0.29	0.44	3.10	0.61	0.21	0.40	<2.03	30.0	1.90	13.21	34.0		
1479	72188	1559	W2	B	7.30	5.4	1.00		1.82	0.29	0.46	3.55	0.41	0.11	0.30	4.39	30.0	1.60	15.73	29.6		
1589	72288	1100	W2	T	7.20	4.6	0.6	1.18	3.82	0.29	0.14	5.15	0.93	0.87	0.06	4.58	26.0	1.60	10.14	14.8		
1588	72288	1100	W2	B	7.30	5.1	0.85	1.73	3.89	0.28	0.16	5.45	0.94	0.88	0.06	*	27.0	1.70	10.14	12.3		
1602	72288	1353	W2	B	7.20	5.7	<2.00		2.34	0.32	0.33	7.06	*	0.15	*	*	28.0	1.80	13.93	66.8	8000	
1601	72288	1353	W2	T	7.00	6.5	1.00		2.42	0.32	0.33	7.45	0.62	0.15	0.47	<1.51	29.0	2.20	13.93	32.8	24,000	
1616	72288	1617	W2	T		5.4	1.00		2.10	0.30	0.36	4.81	0.63	0.51	0.12	<1.56	29.0	2.10	14.29	15.3		
1617	72288	1617	W2	B		4.7	1.05		2.12	0.30	0.35	3.46	*	0.51	*	2.50	29.0	1.80	14.65	30.0		
1629	72288	1807	W2	T	7.10	4.8	1.45		3.17	0.31	0.22	3.81	0.79	0.73	0.06	<2.08	29.0	2.40	10.68	22.0	5000	
1630	72288	1807	W2	B	7.10	5.2	1.50		3.10	0.32	0.23	4.45	0.77	0.72	0.05	<1.92	29.0	2.10	10.86	14.0	8000	
1653	72288	2214	W2	T	7.60	7.6	1.40		4.01	0.29	0.02	7.27	0.94	0.40	0.54	<2.64	27.0	2.10	4.30	25.4	7280	
1654	72288	2214	W2	B	7.60	3.8	1.55		4.01	0.29	0.10	7.17	0.34	0.40	<0.10	<1.91	27.0	2.20	9.42	17.3		
1673	72388	115	W2	B	8.00	5.0	<2.00		2.98	0.31	0.22	4.38	0.85	0.76	0.09	<1.37	26.0	2.20	11.40	11.2		
1672	72388	115	W2	T		6.0	<2.00		2.98	0.30	0.21	5.18	0.82	0.76	0.06	<1.38	27.0	2.60	11.40	20.0		
1686	72388	440	W2	B	7.20	4.0	<2.00		2.53	0.30	0.33	6.97	0.63	0.65	<0.10	<1.73	28.0	1.80	10.50	16.8		
1685	72388	440	W2	T	7.00	4.2	<2.00		2.44	0.29	0.35	2.33	0.75	0.64	0.11	4.36	28.0	1.90	12.30	16.4		
1699	72388	735	W2	B	7.10	4.0	1.70		3.30	0.27	0.16	*	0.87	0.69	<0.10	<1.80	27.0	1.70	8.51	12.8	8000	
1698	72388	735	W2	T	7.10	4.3	1.35		3.39	0.29	0.17	*	0.84	0.92	<0.10	<2.10	27.0	1.40	9.78	12.2	5000	
1714	72388	1000	W2	B	7.42	3.6	2.20		4.36	0.28	0.14	5.75	0.97	0.40	0.57	5.91	27.0	1.40	9.42	8.0		
1713	72388	1000	W2	T	7.39	4.3	2.60		3.65	0.28	0.13	4.74	1.00	0.39	0.61	<1.36	27.0	1.20	9.42	8.4		
1726	72388	1210	W2	T	7.32	4.4	1.50		3.57	0.28	0.16	4.79	0.87	0.95	<0.10	4.35	28.0	1.30	10.14	12.8		
1727	72388	1210	W2	B	7.30	4.2	1.15		3.36	0.28	0.17	4.12	0.87	0.30	0.57	2.30	28.0	1.30	10.50	7.6		
1752	72388	1537	W2	T	7.21	4.6	<2.00		5.77	0.24	0.33	3.46++	0.08++	0.48	++	*	28.0	1.40	14.83	15.2	13,000	
1753	72388	1537	W2	B	7.26	3.4	<2.00		2.55	0.23	0.34	3.02	0.43	0.46	<0.10	5.61	27.0	2.10	14.83	22.4	5000	
1766	72388	1900	W2	T	7.90	3.9	1.75		2.83	0.28	0.23	2.86	0.67	0.75	<0.10	<1.87	28.0	1.60	12.67	14.8		
1767	72388	1900	W2	B	8.00	4.1	<2.00		2.55	0.27	0.26	3.49	0.51	0.71	<0.10	<1.21	28.0	1.50	12.85	17.6		
1869	72488	450	W2	B	7.25	4.0	1.45		2.36	0.25	0.32	*	0.36	<0.05	0.36	<3.44	29.0	1.80	12.85	6.2		
1868	72488	450	W2	T	7.27	3.4	1.25		2.60	0.26	2.87	*	0.53	0.57	<0.10	4.88	27.0	2.20	10.50	14.4		
1882	72488	805	W2	T	7.13	2.9	<2.0		3.53	0.28	0.16	4.80	++0.54	0.80	++	7.77	27.0	1.60	10.14	24.4		
1883	72488	805	W2	B	7.20	4.7	<2.0		3.17	0.27	0.21	3.11	++0.54	0.99	++	8.92	27.0	2.00	11.22	46		
1904	72488	1034	W2	T	7.32	3.5	2.0		3.83	0.26	0.09	4.16	0.66	0.93	<0.10	6.12	27.0	1.50	9.24	10.3		
1905	72488	1034	W2	B	7.30	3.6	1.3		3.71	0.27	0.10	4.16	0.75	*	*	21.7	27.0	1.70	9.42	9.1		
1913	72488	1351	W2	T	7.24	4.5	1.05		3.34	0.27	0.16	3.12	1.01	0.78	0.23	6.47	28.0	2.20	10.50	18.6		
1912	72488	1351	W2	B	7.28	4.3	<2.0		3.34	0.27	0.16	3.74	0.99	0.85	0.14	5.45	28.0	1.80	10.32	16.6		
1996	72488	1602	W2	T	7.70	4.8	<2.0		2.43	0.25	0.33	*	*	0.62	*	2.75	28.0	1.50	13.03	24		
1995	72488	1602	W2	B	7.70	4.8	<2.0		2.42	0.24	0.31	*	*	0.64	*	5.17	28.0	1.60	12.48	21.7		
1926	72488	1804	W2	T	8.00	4.8	<2.0		1.73	0.21	0.38	1.75	0.50	0.47	0.03	4.80	27.0	1.70	14.11	17.8		
1925	72488	1804	W2	B	7.40	3.3	1.15		1.73	0.21	0.38	1.75	0.50	0.47	0.03	4.80	27.0	1.70	14.11	17.8		
1925	72488	1804	W2	T	7.60	3.3	1.3		1.81	0.21	0.37	2.44	0.50	0.45	0.05	<2.05	27.0	1.80	14.65	16.8		

ANALYTICAL DATA FOR RIVER AND TRIBUTARIES
HACKENSACK RIVER STUDY

JULY DRY & WET EVENTS - JULY 11-25, 1988

SAMPLE #	DATE	TIME	SITE	DEPTH	pH	TURBIDITY ntu	CBOD5 mg/l	CBOD20 mg/l	NH3 mg/l	NO2 mg/l	NO3 mg/l	TKN mg/l	TP04 mg/l	OP04 mg/l	P04 mg/l	CHLORO-a mg/l	TEMP C	D.O. mg/l	SALINITY ppt	TSS mg/l	(MPN) FEC. COLI org/100ml
946	7/1788	2131	W2	1	7.29	4.5	1.75		1.80	0.32	0.49	2.46	0.68	0.36	0.32	7.27	28.0	2.30	17.1	21.7	
947	7/1788	2131	W2	8	7.29	4.9	1.55		1.76	0.33	0.47	2.18	0.70	0.36	0.34	4.84	27.0	2.90	17.4	28.4	
960	7/1888	135	W2	8	7.24	4.2	1.45		1.60	0.31	0.49	1.31	0.57	0.22	0.35	2.35	27.0	3.20	16.1	12.6	
959	7/1888	135	W2	1	7.17	4.1	1.2		1.66	0.33	0.49	*	0.56	0.05	0.56	3.78	27.0	3.30	17.5	14.8	
979	7/1888	355	W2	8	7.45	3.9	1.2		2.21	0.37	0.37	8.92	0.74	0.10	0.64	2.27	27.0	2.80	16.4	43.6	
978	7/1888	355	W2	1	7.40	4.3	4.7		2.31	0.36	0.39	2.70	0.71	0.09	0.62	1.02	27.0	3.40	16.8	21.8	
987	7/1888	700	W2	1	7.41	4.1	2.25		2.91	0.35	0.29	5.93	1.07	0.11	0.96	22.3	27.0	2.70	13.4	14.6	
988	7/1888	700	W2	8	7.40	4.2	1.30		2.93	0.34	0.25	0.20++	0.98	0.10	0.88	11.6	27.0	2.00	13.4	15.8	
1010	7/1888	940	W2	1	7.49	6.3	1.68	2.88	1.98	0.33	0.45	0.20++	0.57	0.52	0.57	*	30.0	3.00	15.4	28.9	5000
1011	7/1888	940	W2	8	7.52	6.1	1.08	2.23	2.00	0.33	0.05	0.20++	0.68	0.53	0.68	3.45	30.0	3.10	13.0	23.6	5000
1025	7/1888	1255	W2	8	7.30	3.8	1.20		1.26	0.28	0.05	5.00	0.47	0.21	0.26	5.01	31.0	3.20	19.1	20.4	3000
1024	7/1888	1255	W2	1	7.30	2.9	2.55		1.47	0.13	0.64	0.66++	0.57	0.14	0.43	4.09	31.0	3.00	18.5	26.0	3000
1044	7/1888	1536	W2	8	7.40	4.2	1.45		1.90	0.34	0.44	2.41	0.66	0.21	0.45	2.37	32.0	4.20	16.3	19.6	
1043	7/1888	1536	W2	1	7.30	4.1	2.1		2.13	0.34	0.37	2.60	0.70	0.25	0.45	2.29	32.0	5.70	15.3	14.2	
1058	7/1888	1921	W2	1	7.40	4.1	2.05		2.42	0.34	0.32	2.00++	0.94	0.27	0.94	109.5	29.0	6.70	14.2	10.0	
1059	7/1888	1921	W2	8	7.40	4.2	2.05		2.58	0.34	0.33	2.60++	0.87	0.32	0.87	13.1	30.0	6.60	13.9	16.0	
1060	7/1888	2203	W2	8	7.30	4.0	2.15		1.64	0.34	0.45	2.08	0.55	0.51	0.04	*	29.0	3.90	16.7	16.4	2200
1079	7/1888	2203	W2	1	7.10	3.9	2.70		1.73	0.32	0.47	2.57	0.57	0.49	0.08	4.42	28.0	4.10	16.8	22.4	5000
1093	7/1888	32	W2	8	7.10	5.4	1.90		1.30	0.07	0.73	1.17++	0.40	0.07	0.33	2.32	27.0	3.60	19.1	22.2	
1092	7/1888	32	W2	1	7.10	5.1	3.10		1.82	0.27	0.53	0.50++	0.35	0.08	0.27	2.13	28.0	4.40	18.8	15.6	
1105	7/1888	337	W2	8	7.10	2.6	2.0		2.53	0.33	0.48	1.50++	0.55	0.47	0.08	2.51	28.0	3.50	13.4	18.7	
1104	7/1888	337	W2	1	7.10	4.2	1.20		2.56	0.32	0.47	1.29++	0.65	0.44	0.21	4.41	29.0	3.00	16.6	19.6	
1122	7/1888	637	W2	1	7.00	3.8	2.10		3.02	0.34	0.35	2.84	0.87	0.05	0.87	1.79	29.0	3.40	13.8	11.0	
1123	7/1888	637	W2	8	7.00	4.6	2.65		2.80	0.34	0.34	2.50	0.79	0.20	0.59	*	29.0	3.20	11.5	8.8	
1142	7/1888	1005	W2	8	7.02	4.2	0.5	2.7	0.22	0.34	0.44	2.23	0.68	0.54	0.14	5.12	31.0	3.00	15.5	44.8	
1141	7/1888	1005	W2	1	6.92	5.1	0.65	3.00	0.22	0.33	0.47	2.62	0.74	0.54	0.20	1.95	31.0	2.80	15.3	24.0	
1155	7/1888	1256	W2	8	7.10	4.6	1.75		2.01	0.26	0.54	2.00	3.02	0.35	2.67	4.63	31.0	3.40	16.5	27.5	
1154	7/1888	1256	W2	1	7.10	3.6	1.45		1.50	0.28	0.53	1.57	3.30	0.38	2.92	3.75	30.0	0.00	18.4	16.8	1300
1174	7/1888	1533	W2	8	7.02	5.4	2.20		1.55	0.30	0.50	2.58	3.52	0.12	3.40	10.3	30.0	3.40	17.8	25.0	1700
1173	7/1888	1533	W2	1	6.98	4.6	1.65		1.85	0.33	0.47	3.09	3.34	0.16	3.18	6.59	31.0	3.50	16.3	10.2	
1187	7/1888	1820	W2	1	6.80	4.9	2.00		2.59	0.34	0.35	2.50	6.64	0.05	6.64	*	30.0	3.70	14.3	11.8	
1188	7/1888	1820	W2	8	6.93	4.8	1.85		2.52	0.34	0.35	*	3.96	0.25	3.71	1.84	30.0	5.80	14.6	16.6	
1267	72088	405	W2	8		5.4	1.15		2.21	0.35	0.54	13.29	0.65	0.45	0.20	*	29.0	3.60	15.2	30.4	
1266	72088	405	W2	1		4.9	2		2.33	0.34	0.54	2.05	0.78	0.42	0.36	9.44	29.0	3.10	15.0	52.2	
1286	72088	650	W2	1		5.2	1.80		3.30	0.34	0.27	3.74	1.17	0.59	0.58	12.4	28.0	3.00	12.5	11.6	
1287	72088	650	W2	8		4.4	1.80		3.35	0.34	0.26	4.16	0.89	0.63	0.26	3.19	28.0	2.10	12.4	18.4	
1306	72088	1020	W2	8		4.8	2		2.64	0.36	0.31	3.01	0.61	0.51	0.10	1.41	30.0	2.70	13.3	25.6	
1305	72088	1020	W2	1		4.9	1.80		2.61	0.59	0.10	2.20	0.77	0.52	0.25	2.23	30.0	2.70	13.2	20.8	
1318	72088	1348	W2	1	7.00	4.9	1.05	1.38	1.90	0.34	0.43	2.23	2.46	0.48	1.98	2.61	30.0	2.60	16.00	46.8	1970
1319	72088	1348	W2	8	7.00	5.6	1.73	1.80	1.87	0.31	0.48	2.23	2.66	0.48	2.18	1.17	29.0	2.65	16.18	46.0	1700
1345	72088	1543	W2	8	9.85	4.0	1.00		2.26	0.33	0.48	3.15	0.56	0.45	0.11	1.75	30.0	2.70	14.65	15.8	
1344	72088	1543	W2	1	6.84	4.0	1.60		2.28	0.32	0.49	2.67	0.38	0.43	0.10	0.89	29.0	2.70	15.37	16.8	
1352	72088	1830	W2	1	7.06	3.5	2.40		2.96	0.32	0.36	3.45	0.95	0.29	0.66	1.18	28.0	2.80	11.40	15.2	
1353	72088	1830	W2	8	7.03	4.3	2.10		2.87	0.32	0.36	4.07	0.76	0.19	0.57	1.74	29.0	3.30	13.03	17.0	
1393	72188	105	W2	8	7.50	5.4	1.10		1.70	0.34	0.52	3.19	0.59	0.25	0.34	1.08	28.0	2.20	15.73	18.2	15,000
1392	72188	105	W2	1	7.70	4.0	1.10		1.76		0.84	3	0.54	0.26	0.28	*	28.0	2.30	15.37	12.8	30,000

ANALYTICAL DATA FOR RIVER AND TRIBUTARIES
HACKENSACK RIVER STUDY

JULY DRY & NET EVENTS - JULY 11-25, 1988

SAMPLE #	DATE	TIME	SITE	DEPTH	pH	TURBIDITY ntu	CBOD5 mg/l	CBOD20 mg/l	NH3 mg/l	NO2 mg/l	NO3 mg/l	TKN mg/l	TP04 mg/l	DP04 mg/l	P04 mg/l	CHLORO-a mg/m3	TEMP C	D.O. mg/l	SALINITY ppt	TSS mg/l	FEC. COLI org/100ml	(MPN)
1947	72488	2321	W2	B	8.20	4.6	2.0		3.72	0.27	0.17	4.47	1.03	0.86	0.17	3.08	27.0	3.20	9.60	39.8		
1946	72488	2321	W2	T	8.00	5.5	1.75				0.49	4.30	1.01	#	#		2.78	29.0	3.00	9.60	14.7	
1970	72588	205	W2	B	7.90	4.6	1.75		3.65	0.27	0.15	4.06	0.94	0.90	0.04	3.38	25.0	1.70	9.78	14.4		
1969	72588	205	W2	T	8.00	5.0	1.75		3.69	0.27	0.13	3.18	0.96	0.92	0.04	9.33	26.0	1.68	9.42	13.8		
1983	72588	503	W2	B		4.53	1.55		2.93	0.27	0.23	3.30	1.35	0.77	0.58	4.43	26.0	1.50	11.58	39.6		
1982	72588	503	W2	T		4.2	1.07		2.97	0.26	0.24	3.95	0.71	0.78	0.10	4.36	27.0	1.50	10.86	20.4		
2004	72588	815	W2	T	7.80	3.75			3.36	0.27	0.18	2.18++	0.85	0.84	0.01	13.8	27.0	1.60	9.51	12.0		
2005	72588	815	W2	B	8.00	3.35	<2.0		3.27	0.27	0.19	2.83++	0.83	0.83	0.00	3.29	28.0	1.95	9.42	18.4		
2027	72588	1104	W2	T	7.38	3.95	1.67		4.01	0.25	0.11	5.65	1.44	1.00	0.44	12.9	28.0	2.0	8.51	36		
2028	72588	1104	W2	B	7.36	4.6	1.6		3.94	0.25	0.12	3.93	1.37	0.97	0.40	4.53	28.0	1.9	7.97	9.2		

NOTES:

- * - Insufficient sample for repeat analysis
- ++ - Matrix Interference
- ++ - Zero (0) mg/l concentration found; suspect contamination of BD Fixing Reagents
- E - Velocities from in-line Flo-Tote not reliable
- ++ - Estimated

ANALYTICAL DATA FOR RIVER AND TRIBUTARIES
HACKENSACK RIVER STUDY

10/14/88

JULY DRY & WET EVENTS - JULY 11-25, 1988

SAMPLE #	DATE	TIME	SITE	DEPTH	pH	TURBIDITY ntu	ORGANIC				TKN	TP04	OP04	P04	CHLORO-a	TEMP C	D.O. mg/l	SALINITY ppt	TSS mg/l	FEC. COLI (NPM)
							CBOD20	NH3	NH2	NH3										
8	7/11/88	1457	M3	T	7.30	6.4	3.45	5.05	0.26	0.30	6.20	1.11	0.85	0.26	37.91	28.0	2.80	11.2	12.8	500
9	7/11/88	1457	M3	B	7.30	5.8	2.90	4.31	0.27	0.32	22.0	1.11	0.82	0.29	33.01	28.5	2.80	12.0	13.6	500
28	7/11/88	1740	M3	B	7.30	6.4	1.65	2.99	0.30	0.40	4.10	1.03	0.68	0.35	8.23	27.5	3.50	15.4	24.0	
27	7/11/88	1740	M3	T	7.30	7.5	3.05	3.04	0.30	0.41	4.10	0.82	0.70	0.12	5.56	28.0	3.70	15.3	20.0	
40	7/11/88	2135	M3	T	7.35	4.8	1.43	2.44	0.33	0.35	4.03	0.69	0.32	0.37	8.39	28.0	2.60	15.1	12.8	
41	7/11/88	2135	M3	B	7.30	4.2	0.50	1.9	0.28	0.46	3.24	0.61	0.49	0.12	22.21	29.0	2.10	16.6	22.4	
59	7/12/88	130	M3	T	7.40	5.5	1.10	3.71	0.28	0.16	5.14	0.98	0.44	0.54	6.87	28.0	2.30	12.4	20.4	
60	7/12/88	130	M3	B	7.40	5.5	1.00	3.52	0.28	0.20	4.01	0.93	0.39	0.54	12.63	28.0	2.90	12.2	22.4	
109	7/12/88	515	M3	T	7.35	4.1	2.20	3.48	0.30	0.23	4.63	0.87	0.30	0.57	9.15	27.0	2.60	11.2	15.6	
110	7/12/88	515	M3	B	7.36	5.2	2.50	3.33	0.30	0.23	4.50	0.93	0.33	0.60	9.13	28.0	2.50	11.3	18.0	
163	7/12/88	755	M3	T	7.29	4.5	1.95	2.82	0.32	0.28	6.92	0.88	0.25	0.63	11.85	27.0	2.40	14.4	17.6	
164	7/12/88	755	M3	B	7.32	6.0	1.95	2.48	0.32	0.30	5.24	0.80	0.25	0.55	11.91	28.0	2.30	15.0	18.8	
177	7/12/88	1035	M3	T	7.30	3.5	1.20	2.95	0.32	0.27	2.69	0.85	0.23	0.62	4.84	28.0	3.90	14.2	11.6	
178	7/12/88	1035	M3	B	7.20	3.4	1.65	2.60	0.32	0.26	5.78	0.86	0.17	0.69	12.81	28.0	3.80	15.3	24.8	300
195	7/12/88	1350	M3	T	7.10	2.9	2.75				7.83	1.07			11.63	28.0	1.90	11.5	12.8	500
196	7/12/88	1350	M3	B	7.10	3.0	3.5				6.44	1.08			11.43	28.0	1.80	11.5	12.8	
214	7/12/88	1630	M3	T	7.30	4.2	2.05	3.83	0.29	0.15	7.32	0.94	0.28	0.66	8.28	28.0	2.60	12.1	18.6	
216	7/12/88	1630	M3	B	7.30	4.1	3.05	3.71	0.28	0.16	8.71	0.97	0.39	0.58	3.87	26.0	0.80	12.4		
224	7/12/88	1937	M3	B	7.30	4.5	1.45	2.22	0.33	0.25	2.83	1.03	0.19	0.84	5.28	29.0	2.60	15.7	23.0	
223	7/12/88	1937	M3	T	7.30	5.5	2.18	3.78	0.33	0.24	5.53	0.70	0.24	0.46	4.85	28.0	1.60	15.5	27.5	
247	7/12/88	2130	M3	T	7.23	3.8	1.35	2.35	0.30	0.29	2.04	0.69	0.15	0.54	4.25	31.0	2.90	13.4	27.5	
248	7/12/88	2130	M3	B	7.27	3.8	1.30	2.12	0.31	0.31	2.46	0.56	0.14	0.42	1.93	30.0	2.40	14.2	29.0	
260	7/12/88	46	M3	T	7.28	4.9	2.50	3.49	0.30	0.18	4.09	0.92	0.23	0.69	5.13	28.0	2.10	13.0	19.2	
261	7/12/88	46	M3	B	7.31	4.0	2.45	3.38	0.30	0.18	3.34	0.87	0.21	0.66	6.43	27.0	1.90	12.9	20.5	
268	7/12/88	331	M3	T	7.27	4.1	3.30	4.23	0.27	0.15	5.33	1.06	0.25	0.81	9.58	27.0	1.10	12.3	17.0	
269	7/12/88	331	M3	B	7.31	3.3	3.0	4.05	0.29	0.18	2.72	1.03	0.27	0.78	7.05	27.0	1.50	12.5	28.0	
287	7/12/88	645	M3	T	7.29	3.5	2.50	3.09	0.29	0.18	2.49	0.97	0.69	0.33	10.46	27.0	1.70	12.1	31.0	
288	7/12/88	645	M3	B	7.36	5.4	2.20	2.69	0.29	0.18	2.49	0.97	0.69	0.28	16.02	28.0	1.80	13.8	23.0	
313	7/12/88	1010	M3	T	7.28	3.5	1.65	3.09	0.29	0.28	3.17	0.83	0.27	0.56	1.47	22.0	2.00	14.7	19.6	800
314	7/12/88	1010	M3	B	7.25	3.6	3.45	3.01	0.29	0.29	3.13	0.83	0.27	0.56	8.43	27.0	1.90	14.7	18.8	2400
327	7/12/88	1254	M3	B	7.26	4.4	3.3	3.68	0.28	0.21	3.93	0.94	0.28	0.66	11.71	27.0	1.90	13.2	14.8	
326	7/12/88	1254	M3	T	7.20	4.5	3.65	4.13	0.28	0.19	2.31	1.03	0.29	0.74	5.57	28.0	2.20	12.8	17.2	
345	7/12/88	1605	M3	T	7.28	3.8	4.68	5.14	0.27	0.18	5.45	1.20	0.31	0.89	4.38	29.0	3.00	11.3	16.8	
346	7/12/88	1605	M3	B	7.30	3.5	3.05	5.26	0.27	0.17	5.98	1.18	0.35	0.83	5.84	29.0	2.30	10.6	13.7	
358	7/12/88	1925	M3	T	7.20	5.9	3.00	2.76	0.32	0.43	3.44	0.84	0.14	0.70	1.75	28.0	3.90	15.0	19.4	
359	7/12/88	1925	M3	B	7.12	5.1	1.75	2.71	0.32	0.41	3.43	0.73	0.14	0.09	4.13	28.0	3.70	15.0	26.8	
372	7/12/88	2345	M3	B	9.03	5.6	2.70	1.73	0.26	0.21	1.36	0.73	0.38	0.35	2.89	28.0	3.10	17.2	8.8	
371	7/12/88	2345	M3	T	7.06	4.3	2.40	2.50	0.27	0.45	3.24	0.83	0.41	0.42	2.59	28.0	3.70	16.2	14.0	
385	7/12/88	102	M3	T	7.08	4.9	2.15	2.73	0.28	0.37	2.68	0.91	0.33	0.58	4.80	26.0	3.50	13.6	15.0	
386	7/12/88	102	M3	B	7.12	3.1	3.20	2.39	0.28	0.41	2.67	0.87	0.79	0.32	6.87	28.0	3.00	14.0	14.4	
398	7/12/88	334	M3	T	7.07	7.3	2.45	3.85	0.24	0.21	5.26	1.11	0.77	0.31	3.61	27.0	2.60	11.8	12.5	
399	7/12/88	334	M3	B	7.11	3.6	2.55	3.84	0.24	0.25	4.87	1.08	0.77	0.31	3.61	27.0	2.50	9.88	12.7	
423	7/12/88	742	M3	B	7.10	5.6	2.30	2.85	0.26		7.38	0.82	0.69	0.13	5.31	27.0	2.30	13.7	18.0	
422	7/12/88	742	M3	T	7.30	5.1	1.90	2.83	0.28		4.79	0.83	0.73	0.10	4.06	26.0	2.00	14.6	15.3	
440	7/12/88	1052	M3	T	7.20	3.3	1.45	2.63	0.26	0.46	4.83	0.87	0.61	0.16	3.94	28.0	2.60	14.6	11.2	824
441	7/12/88	1052	M3	B	7.10	3.4	2.85	2.44	0.16	0.82	1.97	0.85	0.82	0.03	3.19	29.0	2.40	15.1	26.9	230

ANALYTICAL DATA FOR RIVER AND TRIBUTARIES
HACKENSACK RIVER STUDY

10/14/88

JULY DRY & WET EVENTS - JULY 11-25, 1988

SAMPLE #	DATE	TIME	SITE	DEPTH	pH	TURBIDITY ntu	CBOD5 mg/l	NH3 mg/l	NO2 mg/l	NO3 mg/l	TKN mg/l	TP04 mg/l	DP04 mg/l	ORGANIC		CHLORO-a mg/m3	TEMP C	D.O. mg/l	SALINITY ppt	TSS mg/l	(MPN) FEC. COLI org/100ml
														P04 mg/l	PO4 mg/l						
453	7/14/88	1334	M3	1	7.08	3.5	1.28	5.98	3.26	0.26	0.29	4.57	1.09	0.76	0.33	<2.45	28.0	2.50	13.0	12.7	
454	7/14/88	1334	M3	8	7.07	3.8	3.00	5.15	2.94	0.27	0.37	3.42	1.06	0.72	0.34	<2.58	28.0	2.10	13.7	14.5	
476	7/14/88	1637	M3	8	7.17	2.9	2.60				0.45	<0.20	1.13	*	*	2.25	29.0	2.40	12.1	6.60	
475	7/14/88	1637	M3	1	7.17	4.0	2.80				0.18	6.04	1.20	0.73	0.47	4.40	29.0	4.00	11.7	7.60	
488	7/14/88	1925	M3	1	7.00	6.1	2.25				0.46	0.34	0.86	<0.05	0.86	4.75	28.0	3.50	14.2	21.6	800
489	7/14/88	1925	M3	8	7.30	6.6	2.20				1.16	0.74	0.89	*	*	17.0	28.0	4.10	14.1	23.6	500
512	7/15/88	55	M3	8	7.08	4.9	<2				2.65	3.00	0.79	0.13	0.67	5.86	28.0	3.90	14.6	14.2	
511	7/15/88	55	M3	1	7.30	3.8	1.70				2.79	2.17++	0.83	0.18	0.65	<2.32	27.0	3.60	15.2	16.2	
529	7/15/88	500	M3	1	7.45	3.0	1.20				4.10	4.98	1.01	0.86	0.15	12.9	27.0	2.80	12.6	34.0	
530	7/15/88	500	M3	8	7.40	3.4	<2				3.86	4.80	0.11	0.64	0.47	13.6	28.0	2.60	12.8	22.4	
548	7/15/88	715	M3	1	7.10	3.1	2.15				3.51	5.68	0.49	0.53	<0.10	16.8	27.0	2.40	12.4	19.6	
549	7/15/88	715	M3	8	7.20	5.1	2.60				5.38	5.53	1.02	0.28	0.74	*	27.0		12.3	21.2	
563	7/15/88	1015	M3	1	7.10	5.4	1.40				0.56	3.33	0.33	0.17	0.62	<2.53	28.0	3.20	15.2	15.6	
564	7/15/88	1015	M3	8	7.20	4.9	1.60				2.41	3.55	0.89	0.46	0.43	4.12	28.0	2.80	15.3	16.4	
583	7/15/88	1323	M3	1	7.22	3.9	2.45				3.01	3.79	0.91	0.58	0.33	13.2	27.0	3.70	13.7	20.2	
584	7/15/88	1323	M3	8	7.27	6.2	1.50				1.85	3.62	0.88	0.54	0.34	4.68	28.0	2.70	14.6	19.2	
598	7/15/88	1611	M3	1	7.36	3.1	0.78	4.85			4.43	4.24	1.18	0.27	0.91	<2.21	29.0	4.30	10.7	16.0	800
599	7/15/88	1611	M3	8	7.34	4.9					3.91	3.24	1.08	0.32	0.76	35.1	28.0	3.70	10.6	28.0	500
620	7/15/88	1849	M3	1	7.48	6.5	2.65				3.57	0.29	0.20	0.87	*	7.44	28.0	4.20	13.0	20.4	
621	7/15/88	1849	M3	8	7.31	7.1	2.65				3.176	0.30	0.26	0.88	0.67	6.63	28.0	4.50	13.2	28.8	
634	7/15/88	2150	M3	1	7.26	6.9	2.25										26.0	4.50	15.7	18.6	
635	7/15/88	2150	M3	8	7.33												26.0	4.20	0.55	53.0	
655A	7/16/88	55	M3	8	7.30	3.1	2.65				2.36	2.17	0.81	0.16	0.65	5.40	27.0	2.50	15.4	12.8	
654	7/16/88	55	M3	1	7.20	4.4	2.00				1.37	1.62	0.46	0.07	0.39	11.6	28.0	2.70	19.0	10.4	
667	7/16/88	345	M3	1	7.20	4.5	1.60				3.53	3.42	0.79	0.24	0.55	*	27.0	2.60	13.2	11.2	
668	7/16/88	345	M3	8	7.10	4.3	2.30				3.31	4.94	0.98	0.27	0.71	57.8	27.0	3.80	9.67	15.2	
692	7/16/88	655	M3	1	7.20	3.6	3.2	5.03			4.31	3.75++	1.03	0.26	0.71	26.4	28.0	2.00	12.8		
693	7/16/88	655	M3	8	7.20	4.1	2.55	4.63			4.18	3.88++	1.05	0.27	0.78	34.1	28.0	2.20	12.9	15.4	
718	7/16/88	1007	M3	1	7.20	3.4	1.60				2.55	2.49	0.73	0.56	0.17	<2.37	29.0	3.00	15.2	16.2	
719	7/16/88	1007	M3	8	7.30	4.6	1.65				2.52	5.54	0.73	0.60	0.13	3.34	29.0	3.20	15.1	14.6	
733	7/16/88	1344	M3	1	7.20	2.6	2.60				3.07	2.80++	0.92	0.39	0.53	28.8	29.0	2.30	14.7	10.4	
734	7/16/88	1344	M3	8	7.30	2.8	2.00				2.66	2.97	0.82	0.34	0.48	5.23	29.0	3.60	15.1	24.4	
749	7/16/88	1609	M3	1	7.30	2.6	2.30				4.09	3.89	1.11	0.32	0.79	44.3	29.0	5.30	12.2	23.3	
750	7/16/88	1609	M3	8	7.40	2.8	3.30				3.51	3.70	1.00	0.41	0.59	18.7	29.0	3.50	13.1	14.4	
771	7/16/88	1858	M3	1	7.30	3.6					3.44	3.91	1.01	0.38	0.63	16.6	29.0	4.70	13.2	14.2	80
770	7/16/88	1858	M3	8	7.30	2.8	1.60				3.79	4.85	1.05	0.69	0.36	4.10	29.0	4.70	12.8	13.8	500
813	7/17/88	400	M3	1	7.20	4.5	2.2				3.94	5.44	1.05	0.70	0.35	5.92	29.0	2.25	12.3	18.3	
814	7/17/88	400	M3	8	7.13	3.9	2.0				3.88	4.04	1.07	0.75	0.32	16.1	29.0	2.40	12.2	19.0	
832	7/17/88	700	M3	1	7.05	4.6	2.15				4.50	9.02	1.15	0.71	0.44	16.0	27.0	1.95	11.8	10.0	1540
833	7/17/88	700	M3	8	7.02	3.5	1.9				4.25	2.82++	1.16	0.74	0.42	7.19	27.0	1.75	12.2		1700
859	7/17/88	1040	M3	1	7.20	3.1	2.2	3.75			3.74	3.34	0.34	0.58	0.15	6.23	29.0	3.30	15.4	16.8	
858	7/17/88	1040	M3	8	7.10	3.3	2.35	4.18			2.38	3.26	*	0.49	*	5.05	29.0	3.30	15.6	15.6	
871	7/17/88	1336	M3	1	7.00	3.5	2.2				2.89	3.31	0.86	0.16	0.70	14.3	30.0	4.00	15.0	9.4	
872	7/17/88	1336	M3	8	6.90	3.1	1.45				2.84	2.56	0.81	0.55	0.26	7.36	30.0	3.45	15.2	21.6	
884	7/17/88	1622	M3	1	7.25	2.5	2.47				1.11	4.69	1.09	0.68	0.41	49.9	30.0	2.00	12.6	12.4	
885	7/17/88	1622	M3	8	7.20	3.1	3.17				6.57	1.29	1.00	0.67	0.33	11.9	30.0	2.15	13.0	13.6	

ANALYTICAL DATA FOR RIVER AND TRIBUTARIES
HACKENSACK RIVER STUDY

JULY DRY & WET EVENTS - JULY 11-25, 1988

10/14/88

SAMPLE #	DATE	TIME	SITE	DEPTH	pH	TURBIDITY ntu	CBOD20 mg/l	NH3 mg/l	NO2 mg/l	NO3 mg/l	TKN mg/l	TP04 mg/l	DP04 mg/l	ORGANIC P04 mg/l	CHLORO-a mg/L	TEMP C	B.O. mg/l	SALINITY ppt	TSS mg/l	(NPN) FEC. COLI org/100ml
949	7/188	2151	M3	B	7.49	5.8	2.5	2.95	0.34	0.36	6.29	0.85	0.55	0.30	5.34	27.0	3.90	14.8	22.2	
948	7/188	2151	M3	T	7.44	4.1	2.3	3.04	0.35	0.35	2.64++	0.88	0.56	0.32	9.91	27.0	3.95	15.1	6.4	
961	7/188	200	M3	T	7.36	4.3	2.0	3.02	0.34	0.32	2.28++	0.88	0.40	0.48	3.78	27.0	4.25	12.8	12.75	
962	7/188	200	M3	B	7.46	3.4	2.3	2.56	0.35	0.35	0.20++	0.83	0.58	0.25	0.20	27.0	4.40	14.1	20.7	
980	7/188	415	M3	T	7.30	4.2	1.8	3.48	0.31	0.26	9.27	0.93	0.73	0.20	24.0	26.0	2.95	13.4	21.0	
981	7/188	415	M3	B	7.35	3.6	1.6	3.96	0.32	0.28	4.83	0.98	0.69	0.29	10.3	27.0	3.00	13.3	16.2	
989	7/188	720	M3	T	7.26	4.5	1.48	4.87	0.32	0.16	4.50	1.22	0.86	0.36	22.4	26.0	1.70	10.2	12.8	
990	7/188	720	M3	B	7.51	4.2	1.50	4.22	0.31	0.24	7.26	1.13	0.80	0.33	10.0	26.0	1.80	12.0	13.8	
1012	7/188	1000	M3	T	7.30	5.4	0.7	2.85	0.32	0.27	7.08	0.83	0.71	0.12	11.6	29.0	3.10	13.9	23.3	2020
1013	7/188	1000	M3	B	7.46	5.4	2.18	2.90	0.33	0.28	0.20++	0.80	0.68	0.12	15.6	29.0	2.90	13.0	20.0	1350
1026	7/188	1320	M3	T	7.30	3.6	2.40	3.13	0.33	0.28	3.29	0.94	0.55	0.39	4.36	30.0	3.00	13.9	11.4	3910
1027	7/188	1320	M3	B	7.40	3.4	2.60	2.98	0.33	0.30	4.16	0.89	0.77	0.12	0.67	32.0	3.20	14.1	14.2	6710
1046	7/188	1558	M3	T	7.30	3.5	2.85	3.59	0.32	0.23	4.18	1.01	0.37	0.64	20.9	30.0	3.20	13.0	13.0	
1045	7/188	1558	M3	T	7.30	3.4	2.55	3.48	0.31	0.25	4.16	0.97	0.36	0.61	0.83	31.0	3.60	13.0	15.0	
1060	7/188	1940	M3	T	7.40	3.6	2.00	4.30	0.31	0.20	2.00++	1.09	0.45	1.09	0.53	30.0	3.20	11.4	11.6	
1061	7/188	1940	M3	B	7.40	3.9	1.80	4.16	0.31	0.21	2.70++	1.07	0.30	1.07	5.26	29.0	2.80	11.6	19.3	
1081	7/188	2229	M3	T	7.30	6.4	4.53	2.35	0.34	0.45	2.30	0.67	0.19	0.48	0.63	28.0	5.90	14.6	20.2	1400
1082	7/188	2229	M3	B	7.40	5.4	3.10	2.59	0.35	0.52	1.80	0.60	0.16	0.44	0.02	28.0	5.80	14.5	28.6	2400
1095	7/188	58	M3	B	7.30	2.9	1.75	2.31	0.35	0.43	2.18	0.69	0.18	0.51	4.74		4.30	15.0	15.8	
1094	7/188	58	M3	T	7.30	3.9	1.70	2.61	0.35	0.39	2.45++	0.76	0.24	0.52	0.05	29.0	3.20	14.6	11.6	
1106	7/188	402	M3	T	7.30	3.1	1.80	3.36	0.32	0.34	2.23++	0.85	0.63	0.20	0.38	28.0	3.40	13.3	17.4	
1107	7/188	402	M3	B	7.30	5.3	2.95	2.85	0.33	0.36	3.34	0.87	0.65	0.22	0.60	28.0	3.90	9.31	14.2	
1124	7/188	655	M3	B	7.00	3.9	1.90	4.56	0.31	0.23	5.24	1.10	0.18	0.92	3.60	28.0	2.10	11.9	9.8	
1125	7/188	655	M3	B	7.10	3.4	2.20	0.42	0.31	0.23	3.05	0.98	0.33	0.65	0.50	29.0	2.20	9.20	17.0	
1144	7/188	1040	M3	B	7.10	6.4	3.93	0.31	0.33	0.33	2.97	0.83	0.70	0.13	4.54	30.0	3.50	13.8	24.5	
1143	7/188	1040	M3	T	7.10	5.4	3.9	0.31	0.33	0.32	4.17	0.76	0.68	0.08	8.09	29.0	3.60	13.4	24.8	
1156	7/188	1317	M3	T	7.10	3.5	1.98	2.86	0.33	0.35	3.00	4.29	0.70	3.59	11.2	31.0	3.00	14.2	15.3	
1157	7/188	1317	M3	B	7.10	3.1	2.63	2.89	0.33	0.37	4.35	3.61	0.65	2.96	6.98	31.0	2.70	14.2	3.00	
1176	7/188	1550	M3	B	7.06	4.8	3.78	2.89	0.33	0.32	4.85	4.66	0.23	4.43	7.08	29.0	3.30	14.1	9.80	860
1190	7/188	1836	M3	B	7.04	4.2	1.75	2.64	0.34	0.35	4.04	3.85	0.20	3.65	7.68	30.0	3.80	14.6	15.4	1300
1189	7/188	1836	M3	B	6.99	4.8	2.30	4.16	0.31	0.22	*	4.16	*	*	3.86	30.0	2.60	12.1	13.6	
1268	7/188	420	M3	T	6.91	4.9	3.20	4.10	0.31	0.21	*	3.74	*	*	181.1	30.0	2.90	11.8	14.2	
1289	7/188	420	M3	B	7.10	4.3	2.85	3.63	0.31	0.23	5.11	1.02	0.67	0.35	5.11	29.0	2.40	10.68	10.0	
1288	7/188	733	M3	T	7.10	4.9	2.8	3.89	0.31	0.23	3.75	3.14	0.82	2.32	0.88	29.0	2.60	12.30	22.8	5000
1289	7/188	733	M3	B	6.98	3.0	1.30	3.66	0.30	0.28	5.11	1.02	0.67	0.35	5.11	29.0	2.40	10.68	10.0	
1308	7/188	1035	M3	B	7.00	2.5	1.30	3.47	0.36	0.26	4.91	1.00	0.87	0.13	0.65	29.0	2.40	10.68	20.4	
1307	7/188	1035	M3	T	7.10	4.3	2.85	3.76	0.31	0.23	3.56	2.88	0.81	2.07	0.74	29.0	2.60	12.30	22.8	
1320	7/188	1410	M3	B	7.10	4.9	2.8	3.63	0.31	0.23	3.75	3.14	0.82	2.32	0.88	29.0	2.40	10.68	10.0	
1321	7/188	1410	M3	T	7.10	4.9	2.8	3.89	0.31	0.23	3.75	3.14	0.82	2.32	0.88	29.0	2.60	12.30	22.8	
1346	7/188	1556	M3	B	6.98	3.0	1.30	3.66	0.30	0.28	5.11	1.02	0.67	0.35	5.11	29.0	2.40	10.68	10.0	
1355	7/188	1844	M3	B	7.00	4.2	2.20	4.83	0.31	0.23	6.21	1.30	0.40	0.90	2.39	29.0	1.70	10.50	28.8	
1354	7/188	1844	M3	T	6.95	3.1	3.00	4.42	0.31	0.25	6.70	1.07	0.31	0.76	1.80	29.0	2.40	9.42	40.2	
1394	7/188	124	M3	T	7.80	3.9	1.70	3.42	0.32	0.29	4.17	1.10	0.36	0.74	0.32	28.0	2.50	11.76	15.2	14,000
1395	7/188	124	M3	B	7.80	4.6	1.40	2.73	0.33	0.36	0.77	0.81	0.38	0.43	0.89	27.0	0.50	12.30	20.8	8000

ANALYTICAL DATA FOR RIVER AND TRIBUTARIES
HACKENSACK RIVER STUDY

10/14/88

JULY DRY & WET EVENTS - JULY 11-25, 1988

SAMPLE #	DATE	TIME	SITE	DEPTH	pH	TURBIDITY ntu	CBOD5 mg/l	CBOD20 mg/l	WHS mg/l	MD2 mg/l	NO3 mg/l	TKN mg/l	TP04 mg/l	OP04 mg/l	ORGANIC P04 mg/l	CHLORO-a mg/δ3	TEMP C	D.O. mg/l	SALINITY ppt	TSS mg/l	FEC. COLI αrg/100ml	(MPN)
1413	72188	347	M3	T	7.20	3.6	2.10		3.38	0.30	0.25	2.48++	0.85	0.44	0.41	8.63	28.0	2.20	11.94	30.0		
1414	72188	347	M3	B	7.30	3.8	1.40		3.16	0.32	0.22	2.36++	0.94	0.74	0.20	4.21	27.0	2.50	11.76	13.2		
1427	72188	717	M3	T	7.20	3.2	1.95	4.125	3.99	0.29	0.19	4.07	1.09	0.80	0.29	5.70	27.0	11.40	9.60	15.6		
1426	72188	717	M3	T	7.10	3.0	2.28	4.2	4.18	0.28	0.19	4.74	1.01	0.79	0.22	*	28.0	0.60	9.06	11.6		
1443	72188	955	M3	T	7.20	3.7	1.15		4.24	0.27	0.24	2.86++	0.99	0.78	0.21	3.30	28.0	1.20	9.60	15.2		
1444	72188	955	M3	B	7.20	3.4	1.15		4.40	0.28	0.23	4.35	0.99	0.83	0.16	9.68	28.0	1.00	9.60	11.6		
1456	72188	1258	M3	T	7.20	3.8	1.40		3.48	0.28	0.23	4.20	1.05	0.77	0.28	3.83	29.0	1.60	10.86	27.2		
1457	72188	1258	M3	B	7.30	5.3	1.45		3.12	0.28	0.24	4.01	1.07	0.74	0.33	*	29.0	1.50	11.40	18.4		
1481	72188	1615	M3	B	7.10	6.3	1.20		3.19	0.29	0.27	4.92	1.03	0.50	0.53	<1.95	29.0	3.10	12.48	20.8		
1480	72188	1615	M3	T	7.25	5.2	1.40		3.30	0.27	0.29	4.37	0.85	0.30	0.55	<2.35	29.0	1.90	11.76	15.2		
1590	72288	1115	M3	T	7.40	3.8	1.25	2.7	4.32	0.28	0.13	2.67++	0.74	0.94	<0.10	5.61	27.0	6.20	8.51	8.67		
1591	72288	1115	M3	B	7.20	3.9	1.025	2.0	4.26	0.29	0.13	4.74	0.92	0.32	0.60	*	27.0	1.40	9.24	8.86		
1603	72288	1411	M3	T	7.10	4.2	<2.00		3.95	0.30	0.16	5.38	0.97	0.26	0.71	32.4	28.0	1.90	10.86	46.0		
1604	72288	1411	M3	B	7.20	4.0	<2.00		3.81	0.29	0.16	5.00	0.82	0.27	0.55	4.48	27.0	1.90	10.86	23.7		
1619	72288	1630	M3	B	7.90	4.8	1.00		3.85	0.27	0.14	3.47	0.92	0.81	0.11	6.97	28.0	1.90	9.06			
1618	72288	1630	M3	T	8.50	4.7	1.80		3.92	0.26	0.14	4.14	0.89	0.80	0.09	<1.85	27.0	2.00	8.87	21.1		
1631	72288	1818	M3	T	7.30	4.5	1.80		4.27	0.27	0.12	4.71	1.00	0.87	0.13	8.63	27.0	1.90	8.33	11.2		
1632	72288	1818	M3	B	7.10	4.9	1.40		4.25	0.29	0.11	6.98	*	0.88	*	14.4	26.0	2.00	8.87	12.0		
1655	72288	2230	M3	T	8.00	3.3	2.30		4.66	0.29	0.07	6.57	1.02	0.37	0.65	*	27.0	1.70	6.89	10.5		
1656	72288	2230	M3	B	7.70	3.7	2.30		4.71	0.29	0.06	7.45	1.03	0.30	0.73	6.86	27.0	1.60	7.07	8.0		
1675	72388	146	M3	B	7.80	3.9	<2.00		3.74	0.28	0.13	6.16	0.90	0.87	0.03	3.80	28.0	2.20	9.24	9.2		
1674	72388	146	M3	T	7.70	3.9	1.45		3.58	0.30	0.14	6.09	1.18	0.84	0.34	8.21	28.0	2.20	9.78	15.6		
1687	72388	500	M3	T	7.10	3.9	1.30		3.94	0.28	0.17	3.96	0.94	0.91	0.03	4.71	28.0	1.80	8.50	9.6		
1688	72388	500	M3	B	7.20	2.5	1.25		3.60	0.27	0.19	2.08++	1.04	0.85	0.19	*	28.0	1.80	8.49	8.0		
1700	72388	755	M3	T	7.20	3.5	1.60		4.10	0.26	0.12	4.82	1.17	0.90	0.27	13.3	27.0	1.10	7.97	12.8		
1701	72388	755	M3	B	7.20	3.4	1.35		3.98	0.27	0.11	5.00	1.01	0.52	0.49	<2.06	27.0	1.10	7.61	13.5		
1716	72388	1013	M3	B	7.40	2.9	2.35		4.14	0.28	0.09	5.54	1.04	0.51	0.53	29.8	28.0	0.80	7.61	7.6		
1715	72388	1013	M3	T	7.43	4.2	2.65		4.20	0.28	0.09	4.85	1.07	0.53	0.54	7.10	27.0	0.80	7.43	9		
1728	72388	1220	M3	T	7.24	4.0	2.05		3.82	0.27	0.11	5.12	1.00	0.37	0.63	<2.61	28.0	1.00	8.69	12.4		
1729	72388	1220	M3	B	7.26	3.4	1.45		3.91	0.27	0.11	4.55	0.97	0.34	0.63	3.87	29.0	1.10	8.69	11.4		
1754	72388	1556	M3	T	7.40	4.0	<2.00		3.53	0.28	0.13	4.99	0.93	0.86	0.07	*	28.0	1.60	9.96	16.4		
1755	72388	1556	M3	B	7.40	4.8	<2.00		3.22	0.28	0.17	3.16	0.79	0.78	0.01	2.72	28.0	1.80	11.04	15.2		
1769	72388	1920	M3	B	8.00	4.0	<2.00		3.95	0.26	0.12	5.66	0.89	1.00	<0.10	18.5	27.0	1.50	9.42	8.8		
1768	72388	1920	M3	T	8.00	3.6	<2.00		4.13	0.27	0.09	4.86	0.96	1.05	<0.10	5.01	27.0	1.60	9.24	8.2		
1870	72488	520	M3	T	7.31	3.6	1.50									19.8	26.0	1.90	9.42	7.6		
1871	72488	520	M3	B	7.30	3.7	<2.0									4.55	27.0	1.90	6.17	12.8		
1884	72488	830	M3	T	7.19	3.3	<2.0		4.20	0.25	0.09	4.21	1.11	<0.05	1.11	6.81	26.0	1.20	8.33	4.8		
1885	72488	830	M3	B	7.23	3.3	<2.0		4.13	0.26	0.07	4.16	0.81	0.93	<0.10	4.24	26.0	1.30	8.51	11.6		
1907	72488	1046	M3	B	7.40	28.0	1.8		4.19	0.26	0.01	6.07	1.04	0.99	0.05	16.5	27.0	1.10	7.43	13.7		
1906	72488	1046	M3	T	7.24	3.5	2.15		4.31	0.24	0.08	4.64	1.18	0.98	0.20	28.3	27.0	1.30	7.25	13.5		
1914	72488	1402	M3	T	7.22	3.5	<2.0		3.89	0.24	0.09	4.57	1.06	0.89	0.17	18.3	27.0	1.90	7.97	15.0		
1915	72488	1402	M3	B	7.24	4.0	<2.0		3.96	0.24	0.10	4.42	1.11	0.83	0.28	3.24	27.0	1.70	8.51	13.9		
1998	72488	1613	M3	B	7.90	5.0	1.15		3.68	0.27	0.15	2.37++	0.94	0.88	0.06	*	28.0	1.80	8.51	18.0		
1997	72488	1613	M3	T	8.00	4.6	1.50		3.77	0.51	<0.05	2.46++	0.94	0.92	0.02	6.47	28.0	1.70	8.33	13.1		
1938	72488	1816	M3	B	8.20	3.2	1.5		3.58	0.25	0.17	2.87++	0.94	0.80	0.14	<3.95	27.0	2.30	9.42	10.5		
1937	72488	1816	M3	T	7.90	3.4	1.2		3.79	0.24	0.11	4.32	1.04	0.84	0.20	<1.53	27.0	2.10	8.87	8.2		

ANALYTICAL DATA FOR RIVER AND TRIBUTARIES
HACKENSACK RIVER STUDY

10/14/88

JULY DRY & WET EVENTS - JULY 11-25, 1988

SAMPLE #	DATE	TIME	SITE	DEPTH	pH	TURBIDITY ntu	CBOD20 mg/l	NH3 mg/l	NO2 mg/l	NO3 mg/l	TKN mg/l	TP04 mg/l	OP04 mg/l	ORGANIC PO4 mg/l	CHLORO-a mg/L	TEMP C	D.O. mg/l	SALINITY ppt	TSS mg/l	(MPN) FEC. COLI org/100ml
1949	72488	2341	M3	B	8.10	4.0	2.3	4.08	0.23	0.18	3.90	1.00	0.88	0.12	14.4	27.0	2.00	7.25	16.7	
1948	72488	2341	M3	T	7.70	4.1	1.45	4.09	0.22	0.09	5.24	0.98	0.86	0.12	9.08	27.0	1.70	6.89	12.6	
1974	72588	244	M3	B	8.00	4.8	1.75	4.15	0.24	0.09	4.13	1.02	0.96	0.06	10.0	26.0	1.85	7.79	16.4	
1973	72588	244	M3	T	8.00	4.8	1.7	4.15	0.24	0.09	3.41++	1.01	0.97	0.04	12.11	27.0	1.80	6.71	18.7	
1985	72588	530	M3	B		5.15	1.25			0.39	3.69	0.96			2.83	27.0	1.70	8.15	13.2	
1984	72588	530	M3	T			1.25	3.86	0.26	0.13	4.06	0.95	0.97	0.10	2.70	26.0	1.70	9.24	14.7	
2007	72588	840	M3	B	7.90	3.4	1.50	4.01	0.23	0.13	2.64++	1.00	0.96	0.04	10.6	27.0	1.10	7.79	10.0	
2006	72588	840	M3	T	7.50	3.4	1.50	4.10	0.23	0.10	2.26++	0.91	0.98	0.10	10.8	27.0	1.20	7.61	16.2	
2029	72588	1131	M3	T	7.51	4.0	2.15	4.45	0.21	0.09	4.96	1.12	0.98	0.14	16.9	28.0	2.1	6.17	10.0	
2030	72588	1131	M3	B	7.40	3.6	1.45	4.39	0.22	0.09		1.20	1.21	0.10	18.3	28.0	1.7	6.53	10.7	

NOTES: * - Insufficient sample for repeat analysis

++ - Matrix Interference

++ - Zero (0) mg/l concentration found; suspect contamination of DO Fixing Reagents

E - Velocities from in-line Flo-Tote not reliable

++ - Estimated

Handwritten notes and signatures, including "B:32" and "W3".

Handwritten notes in a box, including "W3" and "22-11-11".