

THREE MILE ISLAND AQUATIC STUDY
MONTHLY REPORT FOR JUNE 1985

Prepared for

GPU Nuclear Corporation
P. O. Box 480
Route 441 South
Middletown, Pennsylvania 17057

Prepared by

EA Engineering, Science and Technology, Inc.
Hunt Valley/Loveton Center
15 Loveton Circle
Sparks, Maryland 21152

JULY 1985

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INTRODUCTION

The objective of this monthly report is to document compliance with the nonradiological (aquatic) environmental monitoring programs specified in Sections 3.1.1.a(4), 3.1.2.a., and 4.6.1 of the Environmental Technical Specifications (ETS). These programs have been carried out as directed in the Environmental Controls Aquatic Sampling Manual. Program elements being conducted under contract to GPU Nuclear Corporation include benthic macroinvertebrates, ichthyoplankton, fish population dynamics (seine and electrofishing), creel surveys, and water quality. The ultimate purpose of these studies is to obtain a database sufficient to establish the natural fluctuations within the ecosystem and identify any significant biological alterations resulting from the TMINS.

Compliance with all programs specified in the ETS and detailed in the Aquatic Sampling Manual was achieved in June (Table 1). Creel surveys originally scheduled for 27 June were conducted on 13 June in order to more conveniently allow for field audits by TMI-EC as well as allowing for the availability of EA scientists on said date. All other field sample dates during June followed the prescribed 1985 "TMINS Aquatic Sampling Schedule" proposed by EA during March. Details are provided in the following pages wherein progress is described for each program.

Data presented in this report are considered provisional, pending subsequent proofing, analysis, and presentation in the annual report.

Water Quality Analysis

Objective: To measure select physical and chemical parameters of the Susquehanna River in the vicinity of Three Mile Island Nuclear Station (TMINS) concurrent with General Ecological Survey samples.

Progress: Water quality samples were collected on 11 June 1985 and forwarded to TMI-EC (Table 1). Water quality sample field collection procedures were audited by TMI-EC during collections

taken 11 June. Select water quality parameters were also measured at sampling times and locations of the General Ecological Survey.

Benthic Macroinvertebrates

Objective: To assess the abundance, distribution, and diversity of benthic macroinvertebrates at three stations in the vicinity of TMINS.

Progress: Benthos sampling on 11 June 1985 consisted of replicate (4) samples taken at each of the three benthos stations (Table 1). Benthos field sampling procedures were audited by TMI-EC during collections on 11 June. Laboratory sorting of benthos collected during April was also completed.

Ichthyoplankton

Objective: To determine species composition, relative abundance, density, seasonal and spatial distribution of ichthyoplankton at eight stations in the vicinity of TMINS.

Progress: Replicate (2) ichthyoplankton samples were taken at each of the eight sampling stations on 5, 12, 19, and 26 June (Table 1). Ichthyoplankton field sampling procedures were audited by TMI-EC during collections taken on 12 June. Laboratory sorting of ichthyoplankton collected on 1 April, 6 May, 13 May, and 29 May was also completed.

Seine

Objective: To assess species composition, relative abundance, seasonal and spatial distribution, condition factor, occurrence of parasites, anomalies and fish kills, and species diversity of fishes vulnerable to seine capture at six stations in the vicinity of TMINS.

Progress: Seine collections were taken at each of the six sampling stations on 4 and 18 June 1985 (Table 1). Seine sampling procedures were audited by TMI-EC during collections taken on 18 June.

Electrofishing

Objective: To assess species composition, relative abundance, occurrence of parasites, anomalies, and species diversity of fishes vulnerable to electrofisher capture at six stations in the vicinity of TMINS.

Progress: Electrofishing at the six stations was completed ON 6 and 20 June 1985 (Table 1). Electrofishing field sampling procedures were audited by TMI-EC during collections taken on 20 June. Samples consisted of 104 fish of 13 species and 195 fish of 12 species collected on 6 and 20 June respectively (Table 2 and 3). More fish were collected at Station 10A3 than at any other station on both 6 June (41 specimens) and 20 June (51 specimens). Most species were also taken at Station 10A3 on 6 June (8 species), while most species on 20 June (8 species) were collected at Station 10B3. Collectively, the centrarchids were most abundant with redbreast sunfish, pumpkinseed, and bluegill dominating the catch on both sample dates. However, the most abundant species collected on 20 June was the quillback (66 specimens). Ectoparasites observed on fishes taken by electrofishing during June included: leeches on 20 redbreast sunfish and 2 bluegill; anchor worms (*Lernaea*) on 1 redbreast sunfish, 5 pumpkinseed, 5 bluegill, and 1 black crappie; and miscellaneous cysts on 3 bluegill. Wounds related to angling (e.g., mouth fungus, eye injuries, etc.) were seen on one redbreast sunfish and one smallmouth bass. Open wounds or lesions (of undetermined origin) were seen on one bluegill specimen.

Creel Survey

Objective: To investigate the extent of success of sport-fishing, and determine angler residence and use of catch, in the Susquehanna River near TMINS.

Progress: Creel surveys were completed on 2, 13, 17, and 29 June 1985 (Table 1). Creel survey interview procedures were audited by TMI-EC on 13 June. Interviews consisted of 263 anglers who reportedly fished 512.81 hours, caught 556 fish, and harvested 188 fish (34% of the catch) (Tables 4 through 7). The average catch per effort (c/e) and harvest per effort (h/e) was 1.08 and 0.37 per hour, respectively. Smallmouth bass (175 specimens) was the predominant species caught by anglers, while walleye (53 specimens) dominated angler harvest. Most anglers (106), most fish caught (219), most fish harvested (77), and most hours fished (225.18) were recorded at the General Reservoir. However, the highest c/e (2.80) was recorded at the West Dam. Anglers interviewed were predominately residents of York or Dauphin counties, and the majority indicated that they eat at least a portion of their catch.

Tabulation of 11, 16, 19, and 22 May creel survey data was completed (Tables 8 through 11).

TABLE 1 AQUATIC SAMPLING CONDUCTED DURING JUNE 1985 IN
COMPLIANCE WITH THREE MILE ISLAND NUCLEAR STATION
ENVIRONMENTAL TECHNICAL SPECIFICATIONS

Discipline	JUNE 2-8	JUNE 9-15	JUNE 16-22	JUNE 23-29
Water Quality Analysis		X		
Benthic Macro- invertebrates		X		
Ichthyoplankton	X	X	X	X
Seine	X		X	
Electrofishing	X		X	
Creel Survey	X	X	X	X

TABLE 2 FISHES CAPTURED BY AC ELECTROFISHER ON 6 JUNE 1985 NEAR TMINS

Zone	TM-AQF -4A1	TM-AQF -13A1	TM-AQF -10A3	TM-AQF -9B5	TM-AQF -10B3	TM-AQF -11B1	TOTAL
Time	2245	2316	2337	0014	2200	2132	
Duration (min)	15	14	16	17	20	13	
Air Temp (C)	23.0	22.0	21.0	21.0	21.0	17.5	
Water Temp (C)	22.0	21.0	21.0	22.0	22.0	22.0	
Dissolved Oxygen (mg/l)	9.6	10.0	9.7	9.7	9.7	8.3	
pH	7.5	7.7	7.7	7.9	7.8	7.5	
Conductivity (micromhos/cm)	290	300	275	300	225	375	
Secchi Disc (cm)	45.7	40.6	40.6	53.3	53.3	50.8	
Volts	190	175	185	175	190	190	
Amps	6.5	8.0	6.5	8.0	4.5	7.0	
Gizzard shad	4	-	-	1	-	-	5
Common carp	1	-	1	-	-	1	3
Quillback	2	2	5	-	-	-	9
Shorthead redhorse	-	1	-	-	-	-	1
Rock bass	-	-	4	-	-	-	4
Redbreast sunfish	1	-	17	-	2	-	20
Green sunfish	1	-	-	-	-	-	1
Pumpkinseed	1	-	5	1	4	2	13
Bluegill	-	-	2	-	4	9	15
Smallmouth bass	-	4	6	3	-	-	13
Largemouth bass	2	-	-	-	-	1	3
White crappie	-	-	-	-	-	2	2
Black crappie	-	-	1	2	11	1	15
Total Specimens	12	7	41	7	21	16	104
Total Species	7	3	8	4	4	6	13

TABLE 2 FISHES CAPTURED BY AC ELECTROFISHER ON 20 JUNE 1985 NEAR TMINS

Zone	TM-AQF -4A1	TM-AQF -13A1	TM-AQF -10A3	TM-AQF -9B5	TM-AQF -10B3	TM-AQF -11B1	TOTAL
Time	2314	2348	0023	0105	2214	2142	
Duration (min)	23	20	19	23	23	16	
Air Temp (C)	14.5	16.0	17.0	15.0	15.0	14.0	
Water Temp (C)	21.0	20.0	21.0	21.0	22.0	22.0	
Dissolved Oxygen (mg/l)	8.4	8.7	8.7	8.1	9.1	8.0	
pH	7.7	7.7	7.5	7.3	7.8	7.7	
Conductivity (micromhos/cm)	325	300	300	225	275	350	
Secchi Disc (cm)	58.4	53.3	45.7	40.6	63.5	48.3	
Volts	175	180	180	180	175	180	
Amps	6.0	6.0	4.0	5.0	5.0	7.0	
Gizzard shad	-	1	-	-	-	-	1
Common carp	3	-	1	-	1	4	9
Spottail shiner	-	-	1	-	-	-	1
Quillback	14	27	5	19	1	-	66
Channel catfish	-	-	-	-	3	-	3
Rock bass	-	2	4	-	2	-	8
Redbreast sunfish	-	13	28	4	4	-	49
Pumpkinseed	-	1	11	-	4	-	16
Bluegill	1	-	1	4	24	6	36
Smallmouth bass	-	1	-	-	-	-	1
White crappie	-	-	-	-	-	1	1
Black crappie	-	2	-	1	1	-	4
Total Specimens	18	47	51	28	40	11	195
Total Species	3	7	7	4	8	3	12

TABLE 4. CREEL SURVEY DATA FROM THE GENERAL RESERVOIR (GR) FOR EACH SURVEY DAY IN JUNE 1985

Day	2 Sun			13 Thu			17 Mon			29 Sat			
Weather	Clear; Partly Cloudy; Partly Cloudy			Overcast;Overcast/windy Overcast/windy			Partly Cloudy/windy; Partly Cloudy;Partly Cloudy			Partly Cloudy; Partly Cloudy; Overcast			
River Stage (m)	1.24			1.16			1.22			1.07			
Air Temp (C)	25.5	27.5	27.0	19.0	17.5	17.5	23.5	25.5	26.0	23.5	26.0	24.0	
Water Temp (C)	22.0	23.5	24.0	22.0	21.5	21.5	21.0	22.0	23.0	22.0	24.0	23.5	
Times:													
a) morning (0900-1300)	a			a			a			a			
b) afternoon (1301-1700)		b			b			b			b		
c) evening (1701-2100)			c			c			c			c	
Total Per Time Period:													TOTAL
Anglers	17	16	11	4	2	-	3	2	3	20	6	22	106
Fish Caught	22	98	13	12	3	-	20	-	2	19	5	25	219
Fish Kept	2	43	-	2	2	-	14	-	2	10	-	2	77
Hours Fished	51.18	48.00	22.00	11.00	2.50	-	12.00	1.00	1.00	42.75	10.00	23.75	225.18
Catch/Effort (h)	0.43	2.04	0.59	1.09	1.20	-	1.67	0.00	2.00	0.44	0.50	1.05	0.97
Day Totals:													
Anglers		44			6			8			48		
Fish Caught		133			15			22			49		
Fish Kept		45			4			16			12		
Hours Fished		121.18			13.50			14.00			76.50		
Catch/Effort (h)		1.10			1.11			1.57			0.64		
Species:													
Common carp	1R	-	-	-	-	-	-	-	-	-	-	-	1R -
Channel catfish	-	-	-	2K	-	-	1K	-	-	1R	-	1K	4K 1R 5
Rock bass	1R	1K34	-	2R	-	-	-	-	-	2K	1R	1K	4K 7R 11
Pumpkinseed	1R	-	-	-	-	-	-	-	-	-	-	-	1R 1
Bluegill	-	-	-	-	2K1R	-	-	-	-	-	1R	-	2K 2R 4
Sunfishes (Lepomis spp.) ¹	-	6R	10R	6R	-	-	13K	-	1K	6K	-	2R	20K 24R 44
Smallmouth bass	2K17R	5R	3R	2R	-	-	6R	-	1K	2K7R	3R	21R	5K 64R 69
Largemouth bass	-	-	-	-	-	-	-	-	-	1R	-	-	- 1R 1
Crappies (Pomoxis spp.) ¹	-	42K41R	-	-	-	-	-	-	-	-	-	-	42K 41R 83

I General Identification

K Kept

R Released

TABLE 5. CREEL SURVEY DATA FROM THE WEST DAM (WD) FOR EACH SURVEY DAY IN JUNE 1985

Day	2 Sun			13 Thu			17 Mon			29 Sat					
Weather	Clear; Partly Cloudy; Partly Cloudy			Overcast/windy			Partly Cloudy			Partly Cloudy;Partly Cloudy; Overcast					
River Stage (m)	1.25			1.16			1.22			1.07					
Air Temp (C)	26.0	27.5	27.0	18.0	17.0	18.0	24.5	25.5	26.0	23.0	27.5	25.0			
Water Temp (C)	22.5	23.5	24.0	20.0	20.0	20.0	20.5	22.0	22.0	23.5	26.0	26.0			
Times:															
a) morning (0900-1300)	a			a			a			a					
b) afternoon (1301-1700)		b			b			b			b				
c) evening (1701-2100)			c			c			c			c			
Total Per Time Period:												TOTAL			
Anglers	8	2	-	-	2	-	-	5	-	11	2	16	46		
Fish Caught	52	10	-	-	5	-	-	33	-	24	1	43	168		
Fish Kept	22	-	-	-	3	-	-	-	-	3	-	18	46		
Hours Fished	18.75	5.00	-	-	2.00	-	-	4.50	-	15.99	0.50	13.36	60.10		
Catch/Effort (h)	2.77	2.00	-	-	2.50	-	-	7.33	-	1.50	2.00	3.22	2.80		
Day Totals:															
Anglers	10			2			5			29					
Fish Caught	62			5			33			68					
Fish Kept	22			3			-			21					
Hours Fished	23.75			2.00			4.50			29.85					
Catch/Effort (h)	2.61			2.50			7.33			2.28					
Species:															
Channel catfish	18K19R	5R	-	-	-	-	-	3R	-	1K4R	-	2K12R	21K	43R	64
Rock bass	2K	2R	-	-	-	-	-	1R	-	-	-	2K9R	4K	12R	16
Green sunfish	-	-	-	-	-	-	-	-	-	-	-	1R	-	1R	1
Sunfishes (<i>Lepomis</i> spp.) ¹	-	-	-	-	-	-	-	1R	-	-	-	12K	12K	1R	13
Smallmouth bass	2K9R	3R	-	-	1K2R	-	-	25R	-	17R	1R	1K3R	4K	60R	64
Crappies (<i>Pomoxis</i> spp.) ¹	-	-	-	-	-	-	-	3R	-	-	-	1K	1K	3R	4
Walleye	2R	-	-	-	2K	-	-	-	-	2K	-	-	4K	2R	6

1 General Identification

K Kept

R Released

TABLE 6. CREEL SURVEY DATA FROM THE EAST DAM (ED) FOR EACH SURVEY DAY IN JUNE 1985

Day Weather	2 Sun Clear; Partly Cloudy; Partly Cloudy			13 Thu Partly Cloudy/windy			17 Mon Partly Cloudy			29 Sat Partly Cloudy			
River Stage (m)	1.25			1.16			1.22			1.07			
Air Temp (C)	27.0	27.5	28.0	17.0	17.5	19.0	23.0	26.5	28.5	29.0	28.5	25.0	
Water Temp (C)	23.5	23.5	24.0	20.0	20.0	21.0	22.0	23.0	24.0	24.0	26.0	24.0	
Times:													
a) morning (0900-1300)	a			a			a			a			
b) afternoon (1301-1700)		b			b			b			b		
c) evening (1701-2100)			c			c			c			c	
Total Per Time Period:													TOTAL
Anglers	2	3	-	-	2	-	1	7	2	2	5	4	28
Fish Caught	3	3	-	-	1	-	-	7	2	13	5	11	45
Fish Kept	3	1	-	-	-	-	-	-	-	1	-	2	7
Hours Fished	8.00	6.00	-	-	4.00	-	1.00	20.50	3.00	0.67	7.50	18.00	68.67
Catch/Effort (h)	0.38	0.50	-	-	0.25	-	0.00	0.34	0.67	19.40	0.67	0.61	0.66
Day Totals:													
Anglers		5			2			10			11		
Fish Caught		6			1			9			29		
Fish Kept		4			-			-			3		
Hours Fished		14.00			4.00			24.50			26.17		
Catch/Effort (h)		0.43			0.25			0.37			1.11		
Species:													
Common carp	-	-	-	-	-	-	-	-	-	-	1R	-	1R
Channel catfish	-	-	-	-	-	-	-	-	-	-	1K	1K	1
Rock bass	1K	-	-	-	-	-	-	-	-	6R	1R	1K	8
Green sunfish	2K	-	-	-	-	-	-	-	-	-	-	2K	2
Sunfishes (Lepomis spp.) ¹	-	-	-	-	-	-	-	7R	2R	-	1R	6R	16R
Smallmouth bass	-	1K2R	-	-	1R	-	-	-	-	1K6R	3R	2R	14R
Walleye	-	-	-	-	-	-	-	-	-	-	1K	1K	1

¹ General Identification

K Kept

R Released

TABLE 7. CREEL SURVEY DATA FROM THE YORK HAVEN GENERATING STATION (YHGS) FOR EACH SURVEY DAY IN JUNE 1985

Day	2 Sun			13 Thu			17 Mon			29 Sat			
Weather	Partly Cloudy			Overcast/windy;overcast/ windy;Partly Cloudy/windy			Overcast;Partly Cloudy; Partly Cloudy			Partly Cloudy			
River Stage (m)	1.25			1.16			1.22			1.07			
Air Temp (C)	29.5	28.0	25.0	16.5	17.0	18.0	20.0	27.0	26.5	26.0	29.0	21.0	
Water Temp (C)	25.0	24.0	24.0	21.5	21.0	21.0	21.0	22.0	22.0	24.0	24.5	22.0	
Times:													
a) morning (0900-1300)	a			a			a			a			
b) afternoon (1301-1700)		b			b			b			b		
c) evening (1701-2100)			c			c			c			c	
Total Per Time Period:													TOTAL
Anglers	9	15	11	7	3	3	-	3	-	11	8	13	83
Fish Caught	8	7	11	11	10	24	-	-	-	46	5	2	124
Fish Kept	3	6	9	5	2	2	-	-	-	26	3	2	58
Hours Fished	19.25	32.92	23.00	27.50	4.75	3.50	-	0.51	-	19.75	6.25	21.43	158.86
Catch/Effort (h)	0.42	0.21	0.48	0.40	2.10	6.86	-	0.00	-	2.33	0.80	0.09	0.78
Day Totals:													
Anglers	35			13			3			32			
Fish Caught	26			45			-			53			
Fish Kept	18			9			-			31			
Hours Fished	75.17			35.75			0.51			47.43			
Catch/Effort (h)	0.34			1.26			0.00			1.12			
Species:													
Common carp	-	1R	-	1R	-	-	-	-	-	-	-	-	2R 2
Channel catfish	1K	2K	3K1R	4K2R	-	-	-	-	-	-	-	-	10K 3R 13
Rock bass	2K	3K	4K	1R	1R	-	-	-	-	2K	2K	1K	14K 2R 16
Bluegill	-	1K	-	-	-	-	-	-	-	-	-	-	1L - 1
Sunfishes (Lepomis spp.) ¹	-	-	-	-	-	-	-	-	-	15K	1R	-	15K 2R 17
Smallmouth bass	-	-	-	-	2R	1R	-	-	-	5K17R	1R	-	5K 21R 26
Crappies (Pomoxis spp.) ¹	1R	-	1K	1K	-	-	-	-	-	2K	-	1K	5K 1R 6
Yellow perch	-	-	1K	-	-	-	-	-	-	-	1K	-	2K - 2
Walleye	3R	-	1R	2R	2K5R	2K21R	-	-	-	2K3R	-	-	6K 35R 41

¹ General Identification

K Kept

R Released

TABLE 8. CREEL SURVEY DATA FROM THE GENERAL RESERVOIR (GR) FOR EACH SURVEY DAY IN MAY 1985

Day	11 Sat			16 Thu			19 Sun			22 Wed			
Weather	Clear; Partly Cloudy; Partly Cloudy			Overcast; Rain; Overcast			Clear/windy; Clear/ windy; Clear			Partly Cloudy			
River Stage (m)	1.28			1.24			1.32			1.28			
Air Temp (C)	25.0	27.5	26.5	15.0	17.5	16.5	17.0	21.0	20.5	20.0	23.0	22.0	
Water Temp (C)	20.5	23.5	22.0	19.0	19.0	19.0	16.0	17.5	18.0	20.5	22.0	22.0	
Times:													
a) morning (0900-1300)	a			a			a			a			
b) afternoon (1301-1700)		b			b			b			b		
c) evening (1701-2100)			c			c			c			c	
Total Per Time Period:													TOTAL
Anglers	30	23	21	3	-	-	30	37	14	6	6	1	171
Fish Caught	86	63	14	-	-	-	48	46	8	1	8	2	276
Fish Kept	28	10	11	-	-	-	7	18	-	1	5	2	82
Hours Fished	90.50	64.00	37.50	3.00	-	-	82.50	106.84	27.16	4.25	10.25	0.50	426.50
Catch/Effort (h)	0.95	0.98	0.37	0.00	-	-	0.58	0.43	0.29	0.24	0.78	4.00	0.65
Day Totals:													
Anglers		74		3				81			13		
Fish Caught		163		-				102			11		
Fish Kept		49		-				25			8		
Hours Fished		192.00		3.00				216.50			15.00		
Catch/Effort (h)		0.85		0.00				0.47			0.73		
Species:													
Channel catfish	1K2R	1R	-	-	-	-	-	-	-	1K1R	-	2K	4R 6
Rock bass	23K19R	23R	7K3R	-	-	-	2K	11K3R	4R	4K1R	-	47K	73R 120
Redbreast sunfish	-	2R	-	-	-	-	-	-	-	-	-	-	2R 2
Pumpkinseed	-	-	-	-	-	-	-	-	1R	-	-	-	1R 1
Bluegill	1R	1R	-	-	-	-	-	3R	-	1K	-	1L	5R 6
Sunfishes (Lepomis spp.) ¹	1R	8R	-	-	-	-	2R	-	-	-	-	-	11R 11
Saillmouth bass	4K7R	7K18R	4K	-	-	-	5K37R	7K18R	3R	-	2K	29K	83R 112
White crappie	-	-	-	-	-	-	1R	-	-	-	-	-	1R 1
Black crappie	-	-	-	-	-	-	1R	-	-	-	-	-	1R 1
Crappies (Pomoxis spp.) ¹	8R	3K	-	-	-	-	-	-	-	1R	-	3K	9R 12
Walleye	-	-	-	-	-	-	-	4R	-	-	-	-	4R 4

¹ General Identification

K Kept

R Released

TABLE 9. CREEL SURVEY DATA FROM THE WEST DAM (WD) FOR EACH SURVEY DAY IN MAY 1985

Day	11 Sat			16 Thu			19 Sun			22 Wed					
Weather	Clear; Partly Cloudy; Partly Cloudy			Heavy Rain;Light Rain Overcast			Clear/windy;Clear/ windy; Clear			Partly Cloudy					
River Stage (m)	1.28			1.24			1.32			1.28					
Air Temp (C)	26.0	28.0	26.5	15.0	16.0	16.0	15.0	18.0	19.5	22.0	22.0	23.0			
Water Temp (C)	21.0	22.0	22.5	19.5	19.0	19.5	16.0	17.5	19.0	21.0	21.5	23.0			
Times:															
a) morning (0900-1300)	a			a			a			a					
b) afternoon (1301-1700)		b			b			b			b				
c) evening (1701-2100)			c			c			c			c			
Total Per Time Period:												TOTAL			
Anglers	8	2	4	-	2	2	6	-	-	-	-	1	25		
Fish Caught	9	-	9	-	14	1	-	-	-	-	-	11	44		
Fish Kept	6	-	-	-	-	-	-	-	-	-	-	-	6		
Hours Fished	24.50	6.00	7.00	-	3.00	0.66	2.01	-	-	-	-	1.00	44.17		
Catch/Effort (h)	0.37	0.00	1.29	-	4.67	1.52	0.00	-	-	-	-	11.00	1.00		
Day Totals:															
Anglers	14			4			6			1					
Fish Caught	18			15			-			11					
Fish Kept	6			-			-			-					
Hours Fished	37.50			3.66			2.01			1.00					
Catch/Effort (h)	0.48			4.10			0.00			11.00					
Species:															
Channel catfish	6K	-	-	-	8R	-	-	-	-	-	-	8R	6K	1R	22
Rock bass	-	-	4R	-	-	-	-	-	-	-	-	-	-	4R	4
Green sunfish	-	-	-	-	-	-	-	-	-	-	-	-	-	1R	1
Smallmouth bass	1R	-	5R	-	4R	-	-	-	-	-	-	2R	-	12R	12
Crappies (<i>Pomoxis</i> spp.) ¹	1R	-	-	-	-	-	-	-	-	-	-	-	-	1R	1
Walleye	1R	-	-	-	2R	1R	-	-	-	-	-	-	-	4R	4

¹ General Identification

K Kept

R Released

TABLE 10. CREEL SURVEY DATA FROM THE EAST DAM (ED) FOR EACH SURVEY DAY IN MAY 1985

Day Weather	11 Sat Clear; Partly Cloudy; Partly Cloudy			16 Thu Rain; Rain; Overcast			19 Sun Clear/windy; Clear/ windy; Clear			22 Wed Partly Cloudy					
River Stage (m)	1.28			1.24			1.32			1.28					
Air Temp (C)	23.0	29.0	27.0	16.0	16.5	17.5	15.5	21.0	20.0	19.5	23.0	23.0			
Water Temp (C)	22.5	23.5	23.5	20.5	20.5	21.0	17.0	19.0	22.0	20.0	22.5	23.5			
Times:															
a) morning (0900-1300)	a			a			a			a					
b) afternoon (1301-1700)		b			b			b			b				
c) evening (1701-2100)			c			c			c			c			
Total Per Time Period:													TOTAL		
Anglers	5	-	4	-	2	2	2	2	4	-	-	6	27		
Fish Caught	4	-	6	-	-	14	7	2	4	-	-	2	39		
Fish Kept	2	-	6	-	-	9	-	2	3	-	-	-	22		
Hours Fished	5.18	-	12.00	-	1.00	4.00	4.00	1.25	4.00	-	-	1.02	32.45		
Catch/Effort (h)	0.77	-	0.50	-	0.00	3.50	1.75	1.60	1.00	-	-	1.96	1.20		
Day Totals:															
Anglers	9			4			8			6					
Fish Caught	10			14			13			2					
Fish Kept	8			9			5			-					
Hours Fished	17.18			5			9.25			1.02					
Catch/Effort (h)	0.58			2.80			1.40			1.96					
Species:															
Common carp	-	-	2K	-	-	-	-	-	-	-	-	-	2K	-	2
Suckers (Catostomidae)1	-	-	1K	-	-	-	-	-	-	-	-	-	1K	-	1
Channel catfish	-	-	-	-	-	1R	-	-	1K	-	-	-	1K	1R	2
Rock bass	2K2R	-	1K	-	-	3R	-	-	1K	-	-	-	4K	6R	10
Bluegill	-	-	-	-	-	1R	3R	-	-	-	-	-	-	4R	4
Sunfishes (Lepomis spp.)1	-	-	2K	-	-	-	-	2K	1K	-	-	-	5K	-	5
Smallmouth bass	-	-	-	-	-	7K	4R	-	1R	-	-	1R	7K	6R	13
Walleye	-	-	-	-	-	2K	-	-	-	-	-	-	2K	-	2

l General Identification

K Kept

R Released

TABLE 11. CREEL SURVEY DATA FROM THE YORK HAVEN GENERATING STATION (YHGS) FOR EACH SURVEY DAY IN MAY 1985

Day	11 Sat			16 Thu			19 Sun			22 Wed					
Weather	Clear; Partly Cloudy; Partly Cloudy			Rain; Overcast; Overcast			Clear/windy; Clear/ windy; Clear			Partly Cloudy; Partly Cloudy; Overcast					
River Stage (m)	1.28			1.24			1.32			1.28					
Air Temp (C)	29.0	29.0	25.0	16.5	18.0	17.0	20.0	25.0	27.0	21.5	24.0	20.0			
Water Temp (C)	22.5	24.0	23.5	21.0	20.0	18.5	17.0	18.0	18.0	21.0	22.0	21.0			
Times:															
a) morning (0900-1300)	a			a			a			a					
b) afternoon (1301-1700)		b			b			b			b				
c) evening (1701-2100)			c			c			c			c			
Total Per Time Period:													TOTAL		
Anglers	3	12	12	-	3	1	9	7	17	2	6	16	88		
Fish Caught	12	19	19	-	-	-	3	8	29	-	9	19	118		
Fish Kept	12	18	17	-	-	-	1	4	28	-	6	10	96		
Hours Fished	10.00	19.75	37.50	-	3.17	0.25	8.50	14.00	63.17	0.91	9.25	26.25	192.75		
Catch/Effort (h)	1.20	0.96	0.51	-	0.00	0.00	0.35	0.57	0.46	0.00	0.97	0.72	0.61		
Day Totals:															
Anglers	27			4			33			24					
Fish Caught	50			-			40			28					
Fish Kept	47			-			33			16					
Hours Fished	67.25			3.42			85.67			36.41					
Catch/Effort (h)	0.74			0.00			0.47			0.77					
Species:															
Common carp	-	-	1R	-	-	-	-	-	-	-	-	2R	-	3R	3
Quillback	-	-	1K	-	-	-	-	-	-	-	-	-	1K	-	1
Suckers (Castostomidae) ¹	-	-	-	-	-	-	1K	-	-	-	-	-	1K	-	1
Channel catfish	-	3K	15K	-	-	-	-	2K	8K	-	2K	2K1R	32K	1R	33
Rock bass	11K	12K	1K	-	-	-	-	2K	14K	-	3K	4K2R	47K	2R	49
Redbreast sunfish	1K	-	-	-	-	-	-	-	1K	-	-	1K	3K	-	3
Green sunfish	-	-	-	-	-	-	-	-	-	-	-	1K	1K	-	1
Pumpkinseed	-	-	-	-	-	-	-	-	2K	-	-	-	2K	-	2
Bluegill	-	1K	-	-	-	-	-	-	-	-	-	1K	2K	-	2
Sunfishes (Lepomis spp.) ¹	-	1R	-	-	-	-	-	-	-	-	-	2R	-	3R	3
Smallmouth bass	-	2K	1R	-	-	-	-	4R	1K1R	-	2R	1R	3K	9R	12
Crappies (Pomoxis spp.) ¹	-	-	-	-	-	-	-	-	-	-	-	1R	-	1R	1
Yellow perch	-	-	-	-	-	-	-	-	1K	-	-	-	1K	-	1
Walleye	-	-	-	-	-	-	2R	-	1K	-	1K1R	1K	3K	3R	6

¹ General Identification

K Kept

R Released