DATA REPORT

of the

CHEMICAL QUALITY

for the

CURWENSVILLE RESERVOIR, PENNSYLVANIA

1970

Field Operations Branch
Surveillance and Analysis Division
EPA - Region III
Philadelphia, Penna.

Chemical Quality of Impoundment Waters

Curwensville Reservoir, Pennsylvania

1970

Data Report

I. INTRODUCTION

The Curwensville Reservoir is located on the West Branch Susquehanna River near the town of Curwensville (Clearfield County) in north-central Pennsylvania. The conservation (recreation) pool covers 790 acres at elevation 1162 feet above mean sea level. The net storage capacity of the reservoir for flood control purposes is 119,300 acre-feet at the spillway elevation of 1228 feet MSL and the flood pool covers 3668 acres.

The impoundment was constructed and is operated by the U. S. Army Corps of Engineers, Baltimore District, as a part of a comprehensive plan for flood control, recreation and water quality control in the West Branch Susquehanna River Basin. Water quality control is necessary owing to acid mine pollution from abandoned coal mines upstream from the dam. This pollution has severely degraded water quality in the West Branch between Karthaus and Lock Haven. At Lock Haven, the river receives alkaline waters from Bald Eagle Creek which helps neutralize the acid-polluted waters from upstream. However, during low-flow periods, this neutralizing effect is lost and fish kills have occurred. To counteract this condition, the Curwensville Reservoir is operated to store temporarily these acid waters during low flow periods to prevent or minimize the

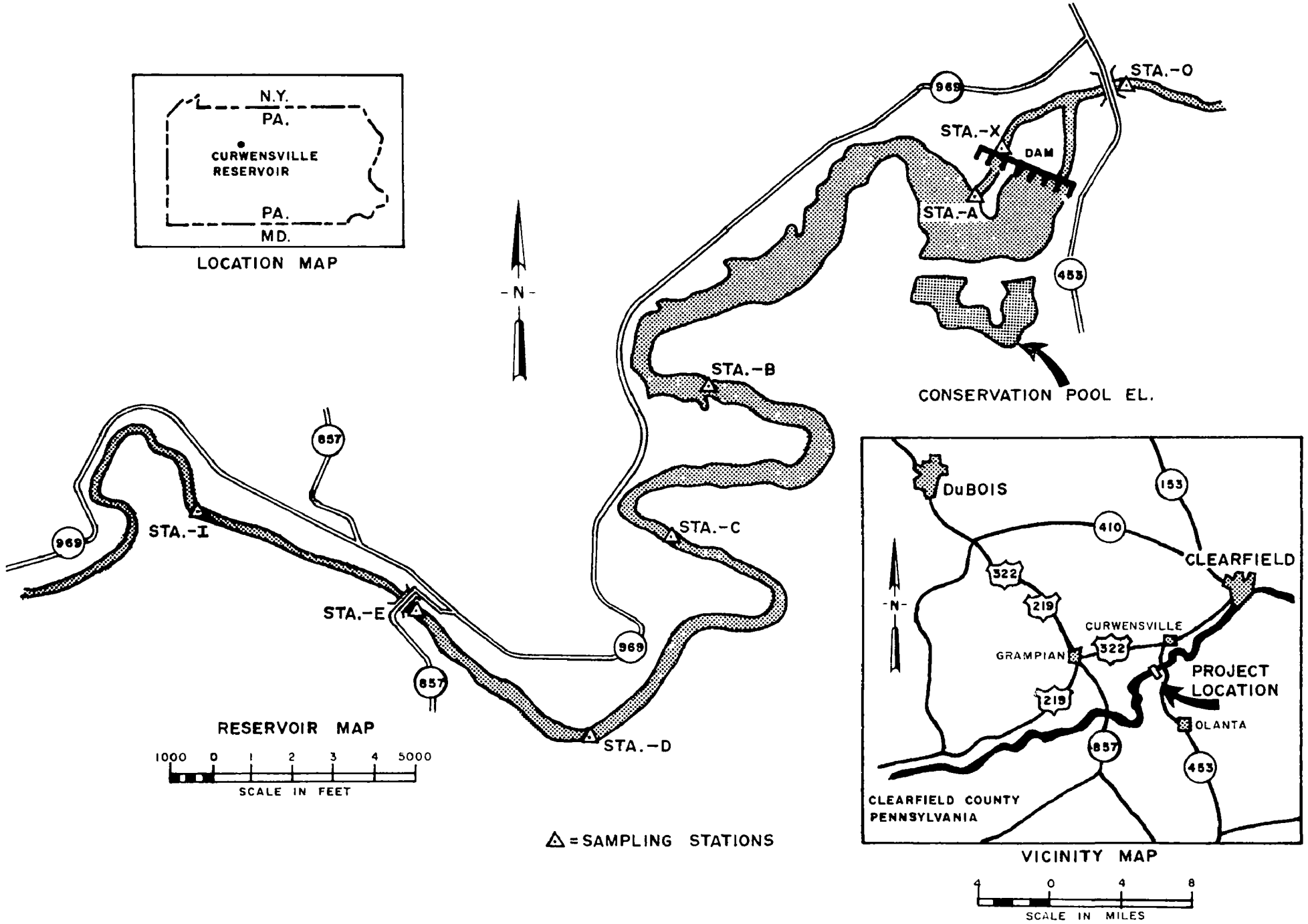

Figure 1 – Location Map of Curwensville Reservoir, Pennsylvania

severity of fish kills downstream from Lock Haven.

II. PURPOSE

In response to a request from the Baltimore District, U. S. Army Corps of Engineers, the Federal Water Quality Administration initiated a sampling program to monitor changes in water quality in the Curwensville Reservoir after the pool had filled. This report contains the results of these findings from 1966 to early 1969.

III. SCOPE

The scope of the sampling program was limited to acid mine drainage parameters including conductivity, pH, acidity, net alkalinity, total iron, sulfate, manganese and aluminum. In addition, calcium and magnesium determinations were made to evaluate total hardness of the water.

A total of six stations were sampled upstream from the damsite as shown in Fig. 1. Five of these stations were located in the impoundment with the sixth station (Station I) being located on the West Branch Susquehanna River upstream from the back-water effects of the impoundment. Two additional stations were located downstream from the damsite. The first site was located at the discharge conduit from the impoundment and the second located at the U. S. Geological Survey stream gage site at Curwensville, 0.85 mile downstream from the damsite.

IV. PROCEDURE

Field collection of the samples were made by the U. S. Army Corps of Engineer personnel using standard field sampling techniques outlined by the Federal Water Quality Administration. Laboratory analyses were performed by F.W.Q.A. chemists using methods given in the publication "Standard Methods for the Examination of Water and Wastewater," APHA, AWWA, WPCF, 12th ed., 1965.

V. STATION DESCRIPTION:

Station Number	Location
O	West Branch Susquehanna River at Pa. Rt. 453 at Curwensville, Pa.
X	At Discharge stilling basin of Curwensville Dam, 0.85 mi. upstream from Sta. O.
A	At intake channel of dam, 0.9 miles upstream from Sta. O.
B	Curwensville Reservoir 4.45 miles upstream from Sta. O.
C	Curwensville Reservoir 6.45 miles upstream from Sta. O.
D	Curwensville Reservoir 8.05 miles upstream from Sta. O.
E	Curwensville Reservoir 9.15 miles upstream from Sta. O.
I	West Branch Susquehanna River 10.23 miles upstream from Sta. O.

TABLE 1

Curwensville Reservoir Data Summary

Water Quality Sampling

1966

Sample Site	Depth of Sample	pH	Conductivity μ mhos	Net Alkalinity
A-1	ft.			
7-1-66	1	6.5	460	- 17.4
7-22-66		6.4	600	+ 3.1
8-11-66		6.0	650	- 1.0
8-18-66		5.3	560	- 10.6
9-1-66		5.1	580	- 16.0
9-22-66		3.7	580	- 38.2
A-2				
7-1-66	5	6.4	430	+ 4.0
7-22-66		6.6	605	+ 3.5
8-11-66		5.9	655	- 0.7
8-18-66		5.3	570	- 3.3
9-1-66		5.2	600	- 8.3
9-22-66		4.9	590	- 10.6
A-3				
7-1-66	10	6.5	460	+ 3.0
7-22-66		6.4	615	+ 2.0
8-11-66		6.0	655	- 1.5
8-18-66		7.4	560	+ 10.3
9-1-66		5.2	570	- 10.2
9-22-66		4.8	590	- 13.7
A-4				
7-1-66	15	6.1	465	- 65.1
7-22-66		6.4	610	+ 1.0
8-11-66		5.9	650	- 1.5
8-18-66		5.2	565	- 4.6
9-1-66		5.0	570	- 19.3
9-22-66		4.8	580	- 12.0
A-5				
7-1-66	20	6.0	430	- 4.3
7-22-66		6.0	600	- 4.6
8-11-66		4.8	660	- 11.0
8-18-66		5.0	590	- 12.0
9-1-66		4.9	560	- 18.8
9-22-66		4.8	690	- 15.0
A-6				
8-18-66	24	4.9	600	- 17.0

TABLE 1

Curwensville Reservoir Data Summary

Water Quality Sampling

1966

Sample Site	Depth of Sample	pH	Conductivity μmhos	Net Alkalinity
B-1	ft.			
7-1-66	1	6.3	620	- 109.2
7-22-66		6.2	710	- 0.6
8-11-66		4.8	700	- 29.8
8-18-66		4.9	620	- 17.0
9-1-66		4.9	520	- 30.1
9-22-66		5.2	500	- 5.8
B-2				
7-1-66	5	6.4	610	+ 4.4
7-22-66		6.2	710	- 0.8
8-11-66		4.7	720	- 24.3
8-18-66		4.8	580	- 17.4
9-1-66		4.9	500	- 25.7
9-22-66		5.2	510	- 8.1
B-3				
7-1-66	10	6.2	610	+ 1.5
7-22-66		5.9	760	- 1.6
8-11-66		4.6	750	- 34.9
8-18-66		4.4	620	- 38.3
9-1-66		4.9	530	- 30.6
9-22-66		5.2	580	- 10.0
B-4				
7-1-66	15	6.0	600	- 0.7
7-22-66		5.8	760	- 1.4
8-11-66		4.6	730	- 30.8
8-18-66		4.7	610	- 21.1
9-1-66		4.8	570	- 34.1
9-22-66		5.1	565	- 11.9
B-5				
7-22-66	19	5.8	740	- 2.3
8-11-66		4.6	770	- 30.1
8-18-66		5.1	610	- 95.8

TABLE 1

Curwensville Reservoir Data Summary

Water Quality Sampling

1966

Sample Site	Depth of Sample	pH	Conductivity μ mhos	Net Alkalinity
C-1	ft.			
7-1-66	1	6.2	680	+ 1.1
7-22-66		5.7	750	- 2.5
8-11-66		4.8	830	- 31.2
8-18-66		4.8	550	- 21.5
9-1-66		5.1	580	- 12.4
9-22-66		5.4	650	- 8.7
C-2				
7-1-66	5	6.2	680	+ 1.7
7-22-66		5.6	790	- 0.6
8-11-66		4.8	830	- 27.6
8-18-66		4.8	520	- 33.7
9-1-66		4.4	550	- 29.1
9-22-66		5.4	640	- 6.4
C-3				
7-1-66	9	6.3	680	- 0.1
7-22-66		4.0	820	- 19.0
8-11-66		4.8	840	- 21.8
8-14-66		4.8	520	- 16.6
9-1-66		5.0	540	- 14.6
9-22-66		5.6	680	- 6.4

TABLE 1A

Chemical Data

Curwensville Reservoir, Pennsylvania

Sample Site	Depth of Sample	pH	Conductivity μ mhos	Net Alkalinity (mg/l)	Total Iron (mg/l)	Mn (mg/l)	SO_4 (mg/l)	Ca (mg/l)	Mg (mg/l)	Al (mg/l)
Outlet 1	(ft)									
6-15-67	1	3.3	309	- 45.8	0.35	0.9	141	39.3	15.9	-
7-5-67		6.4	420	+ 3.2	0.70	1.1	199	50.4	17.5	2.6
7-26-67		4.8	480	- 15.6	0.47	1.3	241	49.1	21.7	0
8-16-67		5.6	370	- 5.3	0.2	1.1	174	42.0	9.2	1.1
8-28-67		5.1	325	- 8.5	0.09	1.5	226	13.6	15.3	0
9-18-67		5.2	413	- 33.2	0.0	1.6	168	5.5	14.8	0
7-2-68		7.1	350	- 1.5	0	0.4	201	32.8	11.5	0.0
7-11-68		6.8	300	5.8	0	0.8	151	41.0	13.9	0.0
8-1-68		7.0	340	14.8	0	0.5	248	46.0	14.5	0.0
8-26-68		7.5	460	- 25.0	0.16	0.3	117	49.5	16.5	0.0
9-5-68		6.8	360	1.9	0.10	0.1	194	46.0	16.6	0.0
10-16-68		4.4	580	-	0.10	1.1	352	71.0	24.3	0.0
1-27-69		5.0	355	- 9.9	0.0	1.25	131	35.2	12.0	0.4
2-27-69		4.6	320	- 15.3	0.69	1.00	118	31.2	10.6	0.5

TABLE 1A

Chemical Data

Curwensville Reservoir, Pennsylvania

Sample Site	Depth of Sample (ft)	pH	Conductivity μ mhos	Net Alkalinity (mg/l)	Total Iron (mg/l)	Mn (mg/l)	SO_4 (mg/l)	Ca (mg/l)	Mg (mg/l)	Al (mg/l)
A										
6-15-67	1	5.9	315	- 3.2	0.49	1.0	108	35.6	17.3	-
7-5-67		6.6	390	+ 4.5	0.04	1.0	183	46.1	15.2	0
7-26-67		6.7	450	+ 8.3	0.09	1.1	266	69.5	20.2	0
8-16-67		5.3	380	- 7.0	-	1.0	174	41.6	9.7	0.7
8-28-67		5.3	320	- 4.2	0.17	1.4	302	12.7	15.3	0
9-18-67		6.3	455	- 35.3	0.00	1.7	251	3.0	9.7	1.8
7-2-68		7.8	340	9.93	0	0.3	168	30.9	11.4	0
7-11-68		6.9	290	7.76	0	0.5	134	36.0	11.6	0
8-1-68		8.4	330	11.0	0	0.3	248	46.5	15.3	0
8-26-68		7.6	475	17.8	0.07	0.03	149	44.0	15.2	0.0
9-5-68		6.9	330	12.0	0.11	0.03	191	51.0	18.6	0.0
10-16-68		5.0	490	22.2	0.75	1.8	272	54.3	20.2	1.1
1-27-69		6.5	325	0.6	0.0	0.9	131	33.0	11.8	0.0
2-27-69		6.9	235	0.3	0.0	0.6	88	25.6	8.5	0.0
A_2										
6-15-67	5	5.9	290	1.2	0.41	1.0	224	37.7	15.3	
7-5-67		6.6	400	5.4	0.43	1.0	174	37.0	11.4	0
7-26-67		6.7	450	7.6	0.14	1.2	191	59.5	18.6	0
8-16-67		5.9	360	- 15.1	0.1	1.0	183	50.7	10.8	1.1
8-28-67		5.8	300	- 5.6	0.17	1.4	193	12.3	14.8	0.0
9-18-67		5.8	355	- 19.2	0.6	1.4	218	4.5	13.2	1.0

Sample Site	Depth of Sample (ft)	pH	Conductivity μ mhos	Net Alkalinity	Total Iron (mg/l)	Mn (mg/l)	SO_4 (mg/l)	Ca (mg/l)	Mg (mg/l)	Al (mg/l)
A2										
7-2-68		6.6	330	8.8	0.08	0.3	201	35	11.6	0.0
7-11-68		6.9	290	11.6	0	0.5	142	34	11.8	0.0
8-1-68		7.9	340	11.0	0	0.3	226	47	15.5	0.0
8-26-68		7.4	420	12.1	0.15	0.3	156	46	15.2	0.0
9-5-68		7.0	330	10.9	0.08	0.04	172	44	15.9	0.0
2-27-69		6.9	260	0.4	0.0	0.6	80.5	25.6	9.0	0.0
A3										
6-16-67	10	5.8	289	1.9	0.27	1.0	133	38.6	15.1	0.6
7-5-67		6.6	380	5.1	0.24	1.0	183	49.0	14.6	0
7-26-67		6.9	450	8.0	0.14	1.1	241	69.5	21.5	0
8-16-67		5.7	350	- 4.6	0.1	1.0	191	42.3	10.0	0
8-28-67		5.2	300	- 5.2	0.1	1.4	260	12.1	15.1	0
9-18-67		5.8	338	- 9.9	0.5	1.5	184	3.5	12.1	0
7-2-68		6.6	340	8.8	0.0	0.3	210	34.8	12.3	0.0
7-11-68		6.9	290	10.6	0.0	0.5	168	39.0	13.4	0.0
8-1-68		7.4	335	13.6	0.0	0.3	241	44.5	14.6	0.6
8-26-68		7.5	410	3.4	0.08	0.0	188	44.5	14.4	0.0
9-5-68		7.0	330	10.8	0.14	0.03	178	42.5	16.1	0.0
10-16-68		5.9	420	- 1.2	0.35	0.8	231	52.8	19.1	0.0
A-4										
6-15-67	15	6.0	275	2.9	0.55	0.9	141	37.1	16.0	-
7-5-67		6.5	382	4.5	0.23	1.0	182	58.2	17.2	0.4
7-26-67		6.9	450	6.8	0.1	1.2	241	53.4	21.0	1.9
8-16-67		5.6	340	- 5.2	0	0.9	174	42.3	10.0	0
8-28-67		5.3	320	- 4.2	0.1	1.4	210	12.0	15.6	0
9-18-67		5.8	350	- 7.8	0	1.5	193	4.5	13.2	0
7-2-68		6.6	340	9.3	0	0.3	218	34.4	11.6	0.0
7-11-68		6.9	290	15.5	0	0.4	184	42.0	14.2	0.0
8-1-68		7.2	330	10.7	0	0.3	226	43.5	15.0	0.0
8-26-68		7.2	430	12.3	0.09	0.03	180	45.0	14.5	0.0
9-5-68		6.8	320	8.0	0	0.02	169	42.5	19.0	0.0

Sample Site	Depth of Sample (ft)	pH	Conductivity μ mhos	Net Alkalinity (mg/l)	Total Iron (mg/l)	Mn (mg/l)	SO_4 (mg/l)	Ca (mg/l)	Mg (mg/l)	Al (mg/l)
A-5										
6-15-67	20	5.8	274	- 1.0	0.41	0.9	133	48.7	16.4	-
8-26-67		6.8	470	7.4	0.1	1.1	233	56.7	20.4	1.0
8-16-67		5.7	340	- 12.2	0.1	1.0	191	42.5	9.6	0.6
8-28-67		6.5	310	- 0.7	2.2	1.4	277	11.2	14.8	0
9-18-67		6.3	350	- 8.6	0.5	1.5	184	5.0	14.3	0
7-2-68		6.8	330	9.9	0.0	0.3	201	29.3	10.6	0.0
7-11-68		6.9	300	15.7	0.0	0.6	184	42.5	14.4	0.0
7-1-68		7.0	315	11.4	0.0	0.5	241	43.0	15.0	0.0
8-26-68		7.2	450	- 0.7	0.07	1.1	180	45.5	15.6	0.0
9-5-68		6.5	320	7.1	0.08	0.2	163	42.5	15.4	0.0
A-6										
6-15-67	25	5.8	261	0.6	0.14	0.9	141	42.3	15.6	-
7-26-67		6.9	480	6.3	0.1	1.2	233	60.2	21.5	1.0
8-16-67		5.2	370	- 8.2	0.1	1.0	174	32.3	8.4	0.7
8-28-67		5.4	300	- 6.1	0.1	1.4	285	11.3	15.7	0
9-18-67		6.2	330	- 6.0	0.5	0	176	5.0	14.6	0
7-2-68		6.7	360	10.0	0	0.4	197	39.6	13.4	0
7-11-68		6.8	310	10.9	0	0.6	176	44.0	15.5	0
8-1-68		7.0	320	9.5	0	0.6	248	38.7	12.3	0
8-26-68		7.0	430	12.9	0	1.2	149	44.5	15.6	0
9-5-68		6.5	310	7.7	0	1.4	188	45.5	17.0	0
A-7										
8-16-67	30	5.6	360	- 8.3	1.2	1.1	224	40.3	9.7	1.1
8-28-67		5.3	350	- 4.0	2.0	1.6	260	8.2	13.2	0
9-18-67		6.1	343	- 6.1	0	1.5	201	5.0	13.0	0.5
7-2-68		-	370	-	0	0.3	235	39.4	12.6	0.0
7-11-68		6.9	300	23.8	0	0.8	184	41.5	14.2	0.0
8-1-68		6.8	326	7.0	0	0.7	234	39.5	12.4	0.0
8-26-68		6.9	460	-	0.07	1.2	172	45.0	14.7	0.0
9-5-68		6.5	320	6.2	0.08	1.2	172	42.5	15.6	0.0
A-8										
7-2-68	34	6.4	345	11.2	0.08	0.3	226	35.9	12.6	0

TABLE 1A

Chemical Data

Curwensville Reservoir, Pennsylvania

Sample Site	Depth of Sample (ft)	pH	Conductivity μ mhos	Net Alkalinity (mg/l)	Total Iron (mg/l)	Mn (mg/l)	SO_4 (mg/l)	Ca (mg/l)	Mg (mg/l)	Al (mg/l)
B-1										
6-15-67	1	6.1	394	+ 5.9	0.9	1.1	208	44.0	17.7	-
7-5-67		3.3	710	- 56.5	1.0	1.2	241	20.7	0	1.7
7-26-67		6.9	490	+ 6.5	0.2	1.4	291	53.4	20.2	0.7
8-16-67		4.7	360	- 10.0	0.1	1.6	174	37.0	7.7	0.6
8-28-67		5.2	330	- 5.6	0.1	1.5	310	10.7	16.3	0
9-18-67		6.6	330	- 9.4	0	1.3	184	7.0	15.7	0
7-2-68		6.7	450	+ 12.1	0	0.3	218	45.1	14.9	0
7-11-68		6.7	300	+ 16.6	0	0.5	159	38.0	12.6	0
8-1-68		7.0	295	+ 10.0	0	0.5	241	41.0	12.2	0
8-26-68		7.6	450	+ 10.4	0.04	0.3	180	48.8	16.7	0
9-5-68		6.6	345	+ 5.0	0	0.2	210	45.5	16.8	0
10-16-68		6.0	430	- 3.7	0.63	0.9	255	54.3	19.7	0.35
B-2										
6-15-67	5	3.4	427	- 28.3	1.0	1.1	199	55.6	19.2	-
7-5-67		6.7	515	7.9	0.5	1.1	241	65.0	22.0	0.6
7-26-67		6.7	490	4.7	0.2	1.5	257	57.7	20.0	1.0
8-16-67		4.9	360	- 8.3	0.1	1.0	141	35.2	81.2	0.7
8-28-67		5.3	300	- 4.7	0.1	1.6	293	9.3	15.6	0
9-18-67		6.1	340	- 8.7	1.2	1.4	210	5.0	15.3	0
7-2-68		6.9	440	+ 14.1	0.3	0.4	268	49.2	15.4	0
7-11-68		6.9	300	16.3	0.0	0.5	201	43.0	14.2	0
8-1-68		6.9	320	11.7	0.0	0.5	234	38.0	12.1	0
8-26-68		7.6	440	14.0	0.04	0.4	156	47.5	16.0	0
9-5-68		6.9	345	6.0	0.0	0.2	194	48.0	17.6	0

Sample Site	Depth of Sample (ft)	pH	Conductivity μ mhos	Net Alkalinity (mg/l)	Total Iron (mg/l)	Mn (mg/l)	SO_4 (mg/l)	Ca (mg/l)	Mg (mg/l)	Al (mg/l)
B-3										
6-15-67	10	6.0	403	3.8	0.6	1.1	208	58.6	21.2	-
7-5-67		6.7	540	8.4	0.6	1.1	257	62.0	20.7	0
7-26-67		6.7	490	4.3	0.3	1.2	257	56.0	19.2	0
8-16-67		5.4	340	- 6.0	0.1	1.1	183	33.3	7.8	1.1
8-28-67		2.9	400	- 249	0.1	1.6	318	12.7	18.3	0
9-18-67		5.7	355	- 9.1	0	1.5	210	5.0	13.6	1.5
7-2-68		6.9	455	12.6	0	0.3	277	55.0	16.8	0
7-11-68		6.9	310	8.5	0	0.5	193	44.0	13.4	0
8-1-68		6.8	320	8.7	0	0.6	219	38.5	12.6	0
8-26-68		6.9	470	- 6.1	0.09	0.7	211	52.0	17.2	0
9-5-68		6.7	345	8.7	0	0.2	194	46.8	16.6	0
10-16-68		6.0	430	- 6.4	0.85	0.6	191	48.0	17.6	0
B-4										
6-15-67	15	6.2	390	3.8	0.7	0.9	208	51.8	18.9	-
7-5-67		6.7	530	7.3	0.6	1.1	266	66.6	20.7	0
7-26-67		6.9	480	7.5	0.3	1.2	233	56.3	18.8	0
8-16-67		4.8	350	- 14.0	0.1	1.0	183	42.5	9.2	
8-28-67		4.5	370	- 67.1	0.1	1.6	310	11.9	18.0	0
9-18-67		5.3	350	- 9.7	0	1.5	201	4.5	14.2	1.0
7-2-68		7.0	470	12.6	0.03	0.3	277	46.0	14.6	0
7-11-68		6.9	360	10.6	0	0.5	226	48.0	15.1	0
8-1-68		6.8	280	9.7	0	0.7	204	33.0	11.3	0
8-26-68		7.8	-	12.9	0.06	0.8	188	52.0	17.2	0.0
9-5-68		6.8	355	7.0	0	0.6	216	49.8	17.6	0

Sample Site	Depth of Sample (ft)	pH	Conductivity μ mhos	Net Alkalinity (mg/l)	Total Iron (mg/l)	Mn (mg/l)	SO_4 (mg/l)	Ca (mg/l)	Mg (mg/l)	Al (mg/l)
B-5										
6-15-67	20	5.5	331	- 1.4	0.49	0.6	158	42.4	15.5	
7-5-67		6.8	545	+ 8.4	0.63	1.1	249	55.3	19.5	0.9
7-26-67		3.9	580	- 29.2	0.5	1.1	274	55.0	21.9	0
8-16-67		4.9	330	- 8.3	0.2	0.9	183	40.3	9.1	0.6
8-28-67		4.4	300	- 34.8	0.1	1.7	335	13.7	19.2	0
9-18-67		5.2	375	- 9.1	0	1.2	234	4.5	14.2	0
7-2-68		7.0	445	13.8	0	0.3	235	45.3	15.0	0
7-11-68		6.9	360	14.3	0	0.5	243	49.5	15.6	0
8-1-68		6.7	305	6.2	0	0.8	212	37.0	12.7	0
8-26-68		7.6	480	4.0	0	0.9	180	50.0	17.2	0
9-5-68		6.5	400	2.4	0	0.9	279	54.0	19.6	0
10-16-68		6.1	450	- 3.0	2.38	0.6	282	50.5	19.5	0
B-6										
6-15-67	25	4.7	301	- 7.5	1.0	1.0	141	51.6	16.4	-
7-5-67		6.7	530	+ 7.3	0.63	1.1	241	57.6	19.3	1.2
8-16-67		4.8	360	- 10.6	4.1	1.1	174	39.8	9.3	0.7
8-27-67		4.8	460	- 9.5	0.3	1.6	335	13.5	18.5	0
9-18-67		5.2	428	- 9.1	0	1.4	243	5.0	16.5	0.5
7-2-68		7.1	440	16.1	0	0.3	226	50.0	15.6	0
7-11-68		7.0	350	17.3	0	0.7	243	50.5	16.6	0
8-1-68		6.7	305	8.8	0	1.0	212	36.5	12.1	0
8-26-68		6.8	460	- 85.4	0.13	1.3	227	49.5	16.4	0
9-5-68		6.5	400	39.9	0	0.9	266	52.8	19.9	0
B-7										
7-2-68	29	7.0	435	14.8	0	0.3	235	42.6	14.5	0
7-11-68		6.9	340	13.4	0	0.8	210	50.5	15.7	0
8-1-68		6.6	300	6.3	0	0.9	204	40.5	13.6	0
8-26-68		6.8	450	14.3	0	1.0	180	51.0	17.0	0
9-5-68		6.5	420	4.4	0	1.0	228	52.2	20.8	0

TABLE 1A

Chemical Data

Curwensville Reservoir, Pennsylvania

Sample Site	Depth of Sample	pH	Conductivity μ mhos	Net Alkalinity (mg/l)	Total Iron (mg/l)	Mn (mg/l)	SO_4 (mg/l)	Ca (mg/l)	Mg (mg/l)	Al (mg/l)
C-1	(ft)									
6-15-67	1	6.2	455	7.9	0.65	0.7	233	72.3	24.2	-
7-5-67		7.0	650	9.8	0.55	0.5	307	67.1	25.0	0.6
7-26-67		6.7	600	4.2	0.5	1.1	390	68.1	24.2	0
8-16-67		5.0	340	- 5.7	0.3	1.0	216	39.9	9.0	0.3
8-28-67		4.9	410	- 20.6	0.1	1.2	335	16.3	23.0	0
9-18-67		5.0	450	- 7.0	0.0	1.4	260	7.0	19.2	0.5
7-2-68		5.6	390	7.3	0.05	0.2	193	42.6	14.6	0
7-11-68		6.9	420	20.2	0	0.4	286	59.5	18.5	0
8-1-68		6.6	300	10.7	0	0.7	212	40.0	13.0	0
8-26-68		7.0	460	11.3	0	0.8	203	45.5	15.9	0
9-5-68		6.6	360	3.0	0	0.6	203	48.0	17.1	0
10-16-68		6.0	430	- 4.2	0	0.4	265	47.0	18.4	0
C-2										
6-15-67	5	4.4	470	- 23.2	0.77	0.7	224	67.8	22.7	-
7-5-67		7.1	615	-	0.48	0.6	307	66.6	31.2	2.1
7-26-67		6.8	590	+ 4.2	0.5	1.1	407	65.5	24.0	0
8-16-67		4.8	340	- 5.0	0.3	0.9	174	36.2	8.3	0.3
8-28-67		3.9	375	- 57.5	0.03	1.3	402	15.3	22.8	0
9-18-67		5.1	458	6.3	0.5	1.3	251	7.5	19.0	0
7-2-68		6.6	385	14.0	0.05	0.3	201	42.6	12.8	0
7-11-68		7.0	420	20.2	0	0.5	310	63.0	18.5	0
8-1-68		6.6	270	10.5	0	0.8	190	42.5	14.3	0
8-26-68		7.9	460	- 0.6	0	0.6	172	46.5	15.3	0
9-5-68		7.2	360	1.3	0	0.6	208	54.0	18.9	0

Sample Site	Depth of Sample (ft)	pH	Conductivity μ mhos	Net Alkalinity (mg/l)	Total Iron (mg/l)	Mn (mg/l)	SO_4 (mg/l)	Ca (mg/l)	Mg (mg/l)	Al (mg/l)
B-5										
6-15-67	20	5.5	331	- 1.4	0.49	0.6	158	42.4	15.5	
7-5-67		6.8	545	+ 8.4	0.63	1.1	249	55.3	19.5	0.9
7-26-67		3.9	580	- 29.2	0.5	1.1	274	55.0	21.9	0
8-16-67		4.9	330	- 8.3	0.2	0.9	183	40.3	9.1	0.6
8-28-67		4.4	300	- 34.8	0.1	1.7	335	13.7	19.2	0
9-18-67		5.2	375	- 9.1	0	1.2	234	4.5	14.2	0
7-2-68		7.0	445	13.8	0	0.3	235	45.3	15.0	0
7-11-68		6.9	360	14.3	0	0.5	243	49.5	15.6	0
8-1-68		6.7	305	6.2	0	0.8	212	37.0	12.7	0
8-26-68		7.6	480	4.0	0	0.9	180	50.0	17.2	0
9-5-68		6.5	400	2.4	0	0.9	279	54.0	19.6	0
10-16-68		6.1	450	- 3.0	2.38	0.6	282	50.5	19.5	0
B-6										
6-15-67	25	4.7	301	- 7.5	1.0	1.0	141	51.6	16.4	-
7-5-67		6.7	530	+ 7.3	0.63	1.1	241	57.6	19.3	1.2
8-16-67		4.8	360	- 10.6	4.1	1.1	174	39.8	9.3	0.7
8-27-67		4.8	460	- 9.5	0.3	1.6	335	13.5	18.5	0
9-18-67		5.2	428	- 9.1	0	1.4	243	5.0	16.5	0.5
7-2-68		7.1	440	16.1	0	0.3	226	50.0	15.6	0
7-11-68		7.0	350	17.3	0	0.7	243	50.5	16.6	0
8-1-68		6.7	305	8.8	0	1.0	212	36.5	12.1	0
8-26-68		6.8	460	- 85.4	0.13	1.3	227	49.5	16.4	0
9-5-68		6.5	400	39.9	0	0.9	266	52.8	19.9	0
B-7										
7-2-68	29	7.0	435	14.8	0	0.3	235	42.6	14.5	0
7-11-68		6.9	340	13.4	0	0.8	210	50.5	15.7	0
8-1-68		6.6	300	6.3	0	0.9	204	40.5	13.6	0
8-26-68		6.8	450	14.3	0	1.0	180	51.0	17.0	0
9-5-68		6.5	420	4.4	0	1.0	228	52.2	20.8	0

TABLE 1A

Chemical Data

Curwensville Reservoir, Pennsylvania

Sample Site	Depth of Sample (ft)	pH	Conductivity μ mhos	Net Alkalinity (mg/l)	Total Iron (mg/l)	Mn (mg/l)	SO_4 (mg/l)	Ca (mg/l)	Mg (mg/l)	Al (mg/l)
C-1										
6-15-67	1	6.2	455	7.9	0.65	0.7	233	72.3	24.2	-
7-5-67		7.0	650	9.8	0.55	0.5	307	67.1	25.0	0.6
7-26-67		6.7	600	4.2	0.5	1.1	390	68.1	24.2	0
8-16-67		5.0	340	- 5.7	0.3	1.0	216	39.9	9.0	0.3
8-28-67		4.9	410	- 20.6	0.1	1.2	335	16.3	23.0	0
9-18-67		5.0	450	- 7.0	0.0	1.4	260	7.0	19.2	0.5
7-2-68		5.6	390	7.3	0.05	0.2	193	42.6	14.6	0
7-11-68		6.9	420	20.2	0	0.4	286	59.5	18.5	0
8-1-68		6.6	300	10.7	0	0.7	212	40.0	13.0	0
8-26-68		7.3	460	11.3	0	0.8	203	45.5	15.9	0
9-5-68		6.6	360	3.0	0	0.6	203	48.0	17.1	0
10-16-68		6.0	430	- 4.2	0	0.4	265	47.0	18.4	0
C-2										
6-15-67	5	4.4	470	- 23.2	0.77	0.7	224	67.8	22.7	-
7-5-67		7.1	615	-	0.48	0.6	307	66.6	31.2	2.1
7-26-67		6.8	590	+ 4.2	0.5	1.1	407	65.5	24.0	0
8-16-67		4.8	340	- 5.0	0.3	0.9	174	36.2	8.3	0.3
8-28-67		3.9	375	- 57.5	0.03	1.3	402	15.3	22.8	0
9-18-67		5.1	458	6.3	0.5	1.3	251	7.5	19.0	0
7-2-68		6.6	385	14.0	0.05	0.3	201	42.6	12.8	0
7-11-68		7.0	420	20.2	0	0.5	310	63.0	18.5	0
8-1-68		6.6	270	10.5	0	0.8	190	42.5	14.3	0
8-26-68		7.9	460	- 0.6	0	0.6	172	46.5	15.3	0
9-5-68		7.2	360	1.3	0	0.6	208	54.0	18.9	0

Sample Site	Depth of Sample (ft)	pH	Conductivity μ mhos	Net Alkalinity (mg/l)	Total Iron (mg/l)	Mn (mg/l)	SO_4 (mg/l)	Ca (mg/l)	Mg (mg/l)	Al (mg/l)
C-3										
6-15-67	10	6.2	439	4.6	0.65	0.7	224	58.6	22.1	0
7-5-67		7.0	600	14.7	0.48	0.6	290	66.9	24.3	0
7-26-67		6.9	630	5.1	0.6	1.0	374	63.5	26.2	0
8-16-67		5.0	350	- 4.2	0.3	0.9	191	39.9	9.2	0
8-28-67		6.0	440	- 14.3	0.2	1.3	343	15.9	23.5	0
9-18-67		5.0	460	- 7.1	0	1.2	268	7.0	17.4	0
7-2-68		6.8	380	16.7	0	0.3	142	39.6	13.1	0
7-11-68		7.1	410	20.3	0	0.4	268	64.0	19.1	0
8-1-68		7.6	310	9.6	0	0.8	182	38.5	13.0	0
8-26-68		7.2	470	8.3	0	0.8	203	48.3	16.3	0
9-5-68		7.0	365	6.4	0	0.6	181	48.0	16.6	0
10-16-68		6.0	450	- 4.3	0	0.4	262	47.5	17.2	0
C-4										
6-15-67	15	5.3	450	- 5.5	0.76	0.8	208	65.3	26.2	0
7-5-67		6.9	600	+ 9.2	0.36	0.6	307	65.3	24.0	0.8
7-26-67		7.1	650	+ 8.4	0.7	1.0	407	67.0	25.6	0
8-16-67		4.9	340	- 6.9	0.3	0.8	183	31.4	7.4	1.3
8-28-67		5.0	440	- 14.3	0.1	1.3	419	15.3	22.5	2.1
9-18-67		5.6	485	- 8.8	0	1.3	285	7.5	19.4	0
7-2-68		7.0	410	+ 15.3	0	0.3	226	42.2	13.7	0
7-11-68		7.1	430	+ 12.9	0	0.4	310	63.0	20.2	0
8-1-68		7.2	340	+ 1.5	0	0.8	226	45.0	16.0	0
8-26-68		5.8	490	- 12.0	0.11	0.8	196	48.3	15.9	0
9-5-68		6.7	420	+ 4.8	0	1.0	207	57.7	20.3	0

Sample Site	Depth of Sample (ft)	pH	Conductivity μ mhos	Net Alkalinity (mg/l)	Total Iron (mg/l)	Mn (mg/l)	SO (mg/l)	Ca (mg/l)	Mg (mg/l)	Al (mg/l)
C-5										
7-2-68	19	6.8	425	15.6	0	0.3	201	45.8	15.6	0
7-11-68		7.1	460	24.1	0	0.4	327	63.0	20.0	0
8-1-68		7.2	330	9.7	0	0.8	226	42.0	15.0	0
8-26-68		6.3	450	12.3	0.18	0.7	203	51.5	16.1	0
9-5-68		6.7	470	2.1	0	0.9	272	61.3	22.9	0
10-16-68		5.9	460	5.7	0.20	0.5	272	54.3	19.0	0

TABLE 1A

Chemical Data

Curwensville Reservoir, Pennsylvania

Sample Site	Depth of Sample (ft)	pH	Conductivity μ mhos	Net Alkalinity (mg/l)	Total Iron (mg/l)	Mn (mg/l)	SO_4 (mg/l)	Ca (mg/l)	Mg (mg/l)	Al (mg/l)
D-1										
6-15-67	1	3.5	479	- 125.8	0.49	0.5	224	64.5	19.2	0
7-5-67		7.0	525	14.4	0.70	0.6	233	60.5	20.7	0
7-26-67		6.7	690	- 1.5	0.3	1.1	448	73.2	28.1	0
8-16-67		5.1	370	- 3.6	0.4	0.7	216	39.9	10.4	0.4
8-28-67		4.8	460	- 14.3	0.1	1.3	444	15.8	22.7	1.5
9-18-67		5.0	555	- 14.6	0	1.5	360	8.5	21.0	1.0
7-2-68		7.2	410	16.5	0	0.1	193	45.2	14.0	0
7-11-68		7.2	480	17.6	0	0.2	285	70.0	20.6	0
8-1-68		7.2	370	11.3	0	0.7	271	54.5	19.0	0
8-26-68		6.4	530	2 26.1	0.07	0.5	266	63.0	16.4	0
9-5-68		6.8	420	5.0	0	0.9	247	55.2	19.6	0
10-16-68		6.0	450	- 7.8	0.09	0.4	265	50.5	18.2	0
2-27-69		6.6	400	0.9	0.0	1.8	150	38.0	13.4	0
D-2										
6-15-67	5	6.0	423	+ 4.4	0.35	0.7	208	64.2	20.5	-
7-5-67		7.0	550	+ 8.1	0.43	0.7	266	67.1	23.3	1.2
7-26-67		6.6	700	+ 3.4	0.2	1.2	473	79.6	29.2	0
8-16-67		5.1	360	- 3.9	0.4	0.7	208	42.5	10.2	0.6
8-28-67		4.9	450	- 16.7	0.1	1.3	453	17.6	26.5	1.5
9-18-67		5.1	570	- 16.1	0	1.5	335	8.0	21.3	1.8
7-2-68		7.3	410	16.0	0	0.1	193	43.1	13.4	0
7-11-68		7.3	410	19.4	0	0.2	302	67.0	20.4	0
8-1-68		7.2	380	13.1	0	0.8	226	54.5	18.4	0
8-26-68		6.5	500	21.1	0.09	0.8	227	64.0	17.2	0
9-5-68		6.6	450	4.8	0	1.0	250	57.7	21.8	0
2-27-69		6.6	370	1.8	0.0	1.8	140	36.6	12.6	0

Sample Site	Depth of Sample (ft)	pH	Conductivity μ mhos	Net Alkalinity (mg/l)	Total Iron (mg/l)	Mn (mg/l)	SO_4 (mg/l)	Ca (mg/l)	Mg (mg/l)	Al (mg/l)
D-3										
6-15-67	10	3.3	488	- 130.2	0.14	0.7	208	53.0	19.2	-
7-5-67		7.0	600	+ 16.7	0.70	0.7	266	62.5	23.4	0.3
7-26-67		6.6	660	+ 4.4	0.6	1.4	481	93.2	34.7	
8-16-67		4.4	410	- 42.9	3.6	0.9	183	35.2	9.2	1.6
8-28-67		4.9	440	-	0.03	1.3	486	21.7	29.1	2.1
9-18-67		4.8	610	- 29.2	0	1.3	302	8.0	23.7	1.0
7-2-68		7.2	410	15.9	0	0.1	210	45.2	13.9	0
7-11-68		7.3	475	24.0	0	0.2	310	67.2	20.2	0
8-1-68		7.0	385	14.7	0	0.8	270	50.0	18.0	0
8-26-68		6.6	500	14.5	0	0.7	188	53.0	17.5	0
9-5-68		6.5	490	0	0	1.1	172	64.5	23.2	0
10-16-68		5.9	400	- 5.3	0.09	0.4	315	50.5	18.2	0
D-4										
7-2-68	14	7.3	400	+ 16.7	0	0.2	176	37.5	12.7	0
7-11-68		7.4	460	+ 25.2	0	0.2	293	74.5	21.6	0
8-1-68		7.0	390	+ 14.7	0	0.8	263	51.5	18.6	0
8-26-68		6.4	500	+ 16.0	0	0.3	203	52.5	17.0	0
9-5-68		6.6	510	+ 4.3	0	1.0	244	62.0	23.0	0
10-16-68		5.8	480	- 8.9	0.07	0.8	332	57.3	21.0	0

TABLE 1A

Chemical Data

Curwensville Reservoir, Pennsylvania

Sample Site	Depth of Sample (ft)	pH	Conductivity μ mhos	Net Alkalinity (mg/l)	Total Iron (mg/l)	Mn (mg/l)	SO_4 (mg/l)	Ca (mg/l)	Mg (mg/l)	Al (mg/l)
E-1										
6-15-67	1	6.0	442	+ 5.7	0.35	0.6	216	62.3	22.0	0
7-26-67		4.6	670	- 37.6	0.5	1.8	432	65.0	24.2	9.2
8-16-67		5.0	400	- 6.0	0.4	0.8	257	59.1	20.0	0.7
8-28-67		5.1	450	- 10.1	0.1	1.2	360	21.3	28.2	0
9-18-67		5.0	590	- 21.0	0	1.2	344	5.5	16.9	0.5
7-2-68		7.2	420	18.1	0	0.1	168	45.4	14.8	0
7-11-68		7.2	425	19.1	0	0.06	318	62.5	19.2	0
8-1-68		7.0	430	11.0	0.1	0.7	282	56.0	21.1	0
8-26-68		6.6	490	14.0	0	1.5	305	56.0	14.3	0
9-5-68		6.8	520	- 0.5	0	1.2	482	69.5	24.9	0
2-27-69		6.7	410	6.1	0.03	0.80	153	40.2	13.2	0.0
E-2										
6-15-67	5	6.0	445	+ 4.7	0.35	0.5	216	57.5	23.0	-
7-26-67		4.3	670	- 50.0	0.4	1.6	432	70.0	26.3	9.2
8-16-67		5.1	410	- 5.8	0.3	0.8	233	46.0	11.7	3.7
8-28-67		4.0	490	- 46.9	0.1	1.1	394	16.6	22.7	1.5
9-18-67		5.1	595	- 19.4	0	1.3	335	7.5	22.6	1.8
7-2-68		7.3	440	+ 17.6	0	0.1	268	41.1	13.8	0
7-11-68		7.3	480	+ 18.2	0	0.2	311	66.0	19.2	0
8-1-68		6.8	430	+ 21.6	0	0.8	248	56.5	21.1	0
8-26-68		6.8	480	+ 8.4	0.05	1.4	172	56.0	14.2	0
9-5-68		6.3	520	0	0	1.2	413	60.0	23.4	0
2-27-69		6.7	415	+ 11.3	0.0	0.8	148	40.8	13.8	0

Sample Site	Depth of Sample (ft)	pH	Conductivity μ mhos	Net Alkalinity (mg/l)	Total Iron (mg/l)	Mn (mg/l)	SO_4 (mg/l)	Ca (mg/l)	Mg (mg/l)	Al (mg/l)
E-3										
7-26-67	9	4.2	660	- 55.8	0.3	1.6	481	72.4	27.8	9.9
8-16-67		5.0	360	- 8.2	0.4	0.8	208	45.9	11.5	1.3
8-28-67		5.2	460	- 10.6	0.1	1.2	427	19.5	26.0	0
9-18-67		4.8	590	- 27.9	0	1.3	327	7.0	20.5	2.5
7-2-68		7.3	420	+ 17.3	0	0.1	201	43.0	13.7	0
7-11-68		7.2	480	+ 21.2	0	0.2	277	62.5	19.4	0
8-1-68		6.8	420	+ 21.6	0	0.8	292	56.5	20.8	0
8-26-68		6.9	480	+ 11.8	0.1	1.3	156	53.0	14.1	0
9-5-68		6.2	520	+ 0.5	0	1.2	479	59.5	82.6	0

TABLE 1A

Chemical Data

Curwensville Reservoir, Pennsylvania

Sample Site	Depth of Sample (ft)	pH	Conductivity μ mhos	Net Alkalinity (mg/l)	Total Iron (mg/l)	Mn (mg/l)	SO_4 (mg/l)	Ca (mg/l)	Mg (mg/l)	Al (mg/l)
Inlet 1										
6-15-67	1	5.1	447	- 6.6	0.35	0.9	125	57.5	22.2	0.6
7-5-67		7.1	570	+ 16.5	0.3	0.4	257	70.7	22.7	-
7-26-67		4.7	540	- 21.8	0.3	1.3	407	56.0	21.5	5.2
8-16-67		5.0	440	- 7.2	0.4	0.8	224	42.3	11.4	1.1
8-28-67		3.8	550	- 110.6	0	1.4	394	19.0	24.5	1.5
9-18-67		4.7	590	- 24.7	0	1.4	285	8.0	23.2	0
7-2-68		7.3	430	+ 15.4	0	0.03	218	45.0	14.6	0
7-11-68		7.3	500	+ 24.4	0	0.2	302	67.5	19.7	0
8-1-68		6.8	455	+ 21.6	0	0.5	233	62.5	22.0	0
8-26-68		7.8	450	+ 4.5	0.11	2.4	156	49.5	14.0	0
9-5-68		6.1	530	+ 0.8	0	1.2	473	58.8	23.5	0
10-16-68		5.9	610	- 9.5	0.18	0.6	375	53.0	18.4	0

TABLE 1A

Chemical Data

Curwensville Reservoir, Pennsylvania

Sample Site	Depth of Sample	pH	Conductivity μ mhos	Net Alkalinity (mg/l)	Total Iron (mg/l)	Mn (mg/l)	SO_4 (mg/l)	Ca (mg/l)	Mg (mg/l)	Al (mg/l)
Inlet 2	(ft)									
7-5-67	5	6.1	575	+ 11.75	0.43	0.5	250	66.6	24.8	0.8
7-26-67		4.8	570	- 21.47	0.4	1.2	407	56.9	22.0	5.2

TABLE 1A

Chemical Data

Curwensville Reservoir, Pennsylvania

Sample Site	Depth of Sample	pH	Conductivity μ mhos	Net Alkalinity (mg/l)	Total Iron (mg/l)	Mn (mg/l)	SO_4 (mg/l)	Ca (mg/l)	Mg (mg/l)	Al (mg/l)
Inlet 3	(ft)									
7-5-67	9	7.1	565	+ 19.33	0.55	0.5	261	70.0	26.2	1.7

TABLE 1A

Chemical Data

Curwensville Reservoir, Pennsylvania

Sample Site	Depth of Sample	pH	Conductivity μ mhos	Net Alkalinity (mg/l)	Total Iron (mg/l)	Mn (mg/l)	SO_4 (mg/l)	Ca (mg/l)	Mg (mg/l)	Al (mg/l)
X										
7-2-68	1	7.3	335	10.0	0	0.4	184	32.0	10.3	0
7-11-68		7.3	310	14.8	0	0.5	184	32.0	12.3	0
8-1-68		6.7	330	26.1	0	0.3	226	44.5	15.4	0
8-26-68		6.6	440	10.2	0.13	0.2	180	48.3	15.7	0
9-5-68		6.8	360	- 7.9	0	0	316	45.5	16.2	0
10-16-68		5.8	-		0.06	1.1	275	69.5	24.4	0
1-27-69		5.5	300	0.8	0.08	0.9	129	34.6	12.1	0
2-27-69		5.4	275	0.1	0.12	0.6	99	30.0	11.4	0

TABLE 1A

Chemical Data

Curwensville Reservoir, Pennsylvania

Sample Site	Depth of Sample	pH	Conductivity μ mhos	Net Alkalinity (mg/l)	Total Iron (mg/l)	Mn (mg/l)	SO_4 (mg/l)	Ca (mg/l)	Mg (mg/l)	Al (mg/l)
Well Drainage	(ft)									
7-2-68		6.6	270	4.0	0	0.8	101	23.1	12.3	0

TABLE 2

Curwensville Reservoir

pH Data Summary 1966-69

Station	7/1 66	7/22 66	8/11 66	8/18 66	9/1 66	9/22 66	6/15 67	7/5 67	7/26 67	8/16 67	8/28 67	9/18 67	7/2 68	7/11 68	8/1 68	8/26 68	9/5 68	10/16 68	1/27 69	2/27 69
A-1	6.5	6.4	6.0	5.3	5.1	3.7	5.9	6.6	6.7	5.3	5.3	6.3	7.8	6.9	8.4	7.6	6.9	5.0	6.5	6.9
A-2	6.4	6.6	5.9	5.3	5.2	4.9	5.9	6.6	6.7	5.9	5.8	5.8	6.6	6.9	7.9	7.4	7.0	-	6.4	6.9
A-3	6.5	6.4	6.0	7.4	5.2	4.8	5.8	6.6	6.9	5.7	5.2	5.8	6.6	6.9	7.4	7.5	7.0	5.9		
A-4	6.1	6.4	5.9	5.2	5.0	4.8	6.0	6.5	6.9	5.6	5.3	5.8	6.6	6.9	7.2	7.2	6.8			
A-5	6.0	6.0	4.8	5.0	4.9	4.8	5.8	-	6.8	5.7	6.5	6.3	6.8	6.9	7.0	7.2	6.5			
A-6				4.9			5.8	-	6.9	5.2	5.4	6.2	6.7	6.8	7.0	7.0	6.5			
A-7										5.6	5.3	6.1	-	6.9	6.8	6.9	6.5			
A-8													6.4							
B-1	6.3	6.2	4.8	4.9	4.9	5.2	6.1	(3.3)	6.9	4.7	5.2	6.6	6.7	6.7	7.0	7.6	6.6	6.0		
B-2	6.4	6.2	4.7	4.3	4.9	5.2	3.4	6.7	6.7	4.9	5.3	6.1	6.9	6.9	6.9	7.6	6.9			
B-3	6.2	5.9	4.6	4.4	4.9	5.2	6.0	6.7	6.7	5.4	-	5.7	6.9	6.9	6.8	6.9	6.7	6.0		
B-4	6.0	5.8	4.6	4.7	4.8	5.1	6.2	6.7	6.9	4.8	4.5	5.3	7.0	6.9	6.8	7.8	6.8			
B-5	-	5.8	4.6	5.1	-	-	5.5	6.8	3.9	4.9	4.4	5.2	7.0	6.9	6.7	7.6	6.5	6.1		
B-6							4.7	6.7	-	4.8	4.8	5.2	7.1	7.0	6.7	6.8	6.5			
B-7													7.0	6.9	6.6	6.8	6.5			
C-1	6.2	5.7	4.8	4.3	5.1	5.4	6.2	7.0	6.7	5.0	4.9	5.0	5.6	6.9	6.6	7.0	6.6	6.0		
C-2	6.2	5.6	4.8	4.8	4.4	5.4	4.4	7.1	6.8	4.8	3.9	5.1	6.6	7.0	6.6	7.9	7.2			
C-3	6.3	4.0	4.8	4.8	5.0	5.6	6.2	7.0	6.9	5.0	6.0	5.0	6.8	7.1	7.6	7.2	7.0	6.0		
C-4							5.3	6.9	7.1	4.9	5.0	5.6	7.0	7.1	7.2	5.8	6.7			
C-5													6.8	7.1	6.3	6.7	5.9			
D-1							3.5	7.0	6.7	5.1	4.8	5.0	7.2	7.2	7.2	6.4	6.8	6.0		6.6
D-2							6.0	7.0	6.6	5.1	4.9	5.1	7.3	7.3	7.2	6.5	6.6			6.65
D-3							3.3	7.0	6.6	4.4	4.9	4.8	7.2	7.3	7.0	6.6	6.5	5.9		
D-4													7.3	7.4	7.0	6.4	6.6	5.8		

Station	7/1 66	7/22 66	8/11 66	8/18 66	9/1 66	9/22 66	6/15 67	7/5 67	7/26 67	8/16 67	8/28 67	9/18 67	7/2 68	7/11 68	8/1 68	8/26 68	9/5 68	10/16 68	1/27 69	2/27 69
E-1							6.0	-	4.6	5.0	5.1	5.0	7.2	7.2	7.0	6.6	6.8		5.9	6.69
E-2							6.0	-	4.3	5.1	4.0	5.1	7.3	7.3	6.8	6.8	6.3			6.70
E-3									4.2	5.0	5.2	4.8	7.3	7.2	6.8	6.9	6.2			
I-1							5.1	7.1	4.7	5.0	3.8	4.7	7.3	7.3	6.8	7.8	6.1	5.9		
I-2								6.1	4.8											
I-3								7.1												
X													7.3	7.3	6.7	6.6	6.8	5.8	5.5	5.4
O							(3.3)	6.4	4.8	5.6	5.1	5.2	7.1	6.8	7.0	7.5	6.8	(4.4)	5.0	4.6

TABLE 3

Chemical Concentrations Not To Be Exceeded

In Drinking Water Supplies

Substance	Concentration, mg/l
Iron	0.3
Manganese	0.05
Sulfate	250

Ref: Manual for Evaluating Drinking Water Supplies
USPHS, 1969

AFO 1828

Data report of the
chemical quality for the
Curwensville Reservoir

EJDD PA 00093