

**U.S. ENVIRONMENTAL PROTECTION AGENCY
NATIONAL EUTROPHICATION SURVEY**

WORKING PAPER SERIES



REPORT
ON
ALLEGHENY RESERVOIR
MCKEAN AND WARREN COUNTIES, PENNSYLVANIA
AND
CATTARAUGUS COUNTY, NEW YORK
EPA REGIONS II AND III
WORKING PAPER No. 147

PACIFIC NORTHWEST ENVIRONMENTAL RESEARCH LABORATORY

An Associate Laboratory of the

NATIONAL ENVIRONMENTAL RESEARCH CENTER - CORVALLIS, OREGON

and

NATIONAL ENVIRONMENTAL RESEARCH CENTER - LAS VEGAS, NEVADA

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WITH THE COOPERATION OF THE
PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES
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JUNE, 1975

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F O R E W O R D

The National Eutrophication Survey was initiated in 1972 in response to an Administration commitment to investigate the nationwide threat of accelerated eutrophication to fresh water lakes and reservoirs.

OBJECTIVES

The Survey was designed to develop, in conjunction with state environmental agencies, information on nutrient sources, concentrations, and impact on selected freshwater lakes as a basis for formulating comprehensive and coordinated national, regional, and state management practices relating to point-source discharge reduction and non-point source pollution abatement in lake watersheds.

ANALYTIC APPROACH

The mathematical and statistical procedures selected for the Survey's eutrophication analysis are based on related concepts that:

- a. A generalized representation or model relating sources, concentrations, and impacts can be constructed.
- b. By applying measurements of relevant parameters associated with lake degradation, the generalized model can be transformed into an operational representation of a lake, its drainage basin, and related nutrients.
- c. With such a transformation, an assessment of the potential for eutrophication control can be made.

LAKE ANALYSIS

In this report, the first stage of evaluation of lake and watershed data collected from the study lake and its drainage basin is documented. The report is formatted to provide state environmental agencies with specific information for basin planning [§303(e)], water quality criteria/standards review [§303(c)], clean lakes [§314(a,b)], and water quality monitoring [§106 and §305(b)] activities mandated by the Federal Water Pollution Control Act Amendments of 1972.

Beyond the single lake analysis, broader based correlations between nutrient concentrations (and loading) and trophic condition are being made to advance the rationale and data base for refinement of nutrient water quality criteria for the Nation's fresh water lakes. Likewise, multivariate evaluations for the relationships between land use, nutrient export, and trophic condition, by lake class or use, are being developed to assist in the formulation of planning guidelines and policies by EPA and to augment plans implementation by the states.

ACKNOWLEDGMENT

The staff of the National Eutrophication Survey (Office of Research & Development, U. S. Environmental Protection Agency) expresses sincere appreciation to the New York Department of Environmental Conservation and the Pennsylvania Department of Environmental Resources for professional involvement and to the New York and Pennsylvania National Guards for conducting the tributary sampling phase of the Survey.

Henry L. Diamond, commissioner, and Leo J. Hetling and Italo G. Carcich of the New York Department of Environmental Conservation; and Walter J. Lyon, Director, and Richard A. Boardman and James T. Ulanoski of the Pennsylvania Bureau of Water Quality, provided invaluable reservoir documentation and counsel during the Survey, reviewed the preliminary report, and provided critiques most useful in the preparation of this report on Allegheny Reservoir.

Major General John C. Baker, Chief of Staff to the Governor of New York; Major General Harry J. Mier, Jr., Adjutant General of Pennsylvania; and Project Officers Lt. Colonel Fred Peters and Major Ronald E. Wickard, who directed the volunteer efforts of the New York and Pennsylvania National Guardsmen, respectively, are also gratefully acknowledged for their assistance to the Survey.

NATIONAL EUTROPHICATION SURVEY

STUDY LAKES

STATE OF NEW YORK

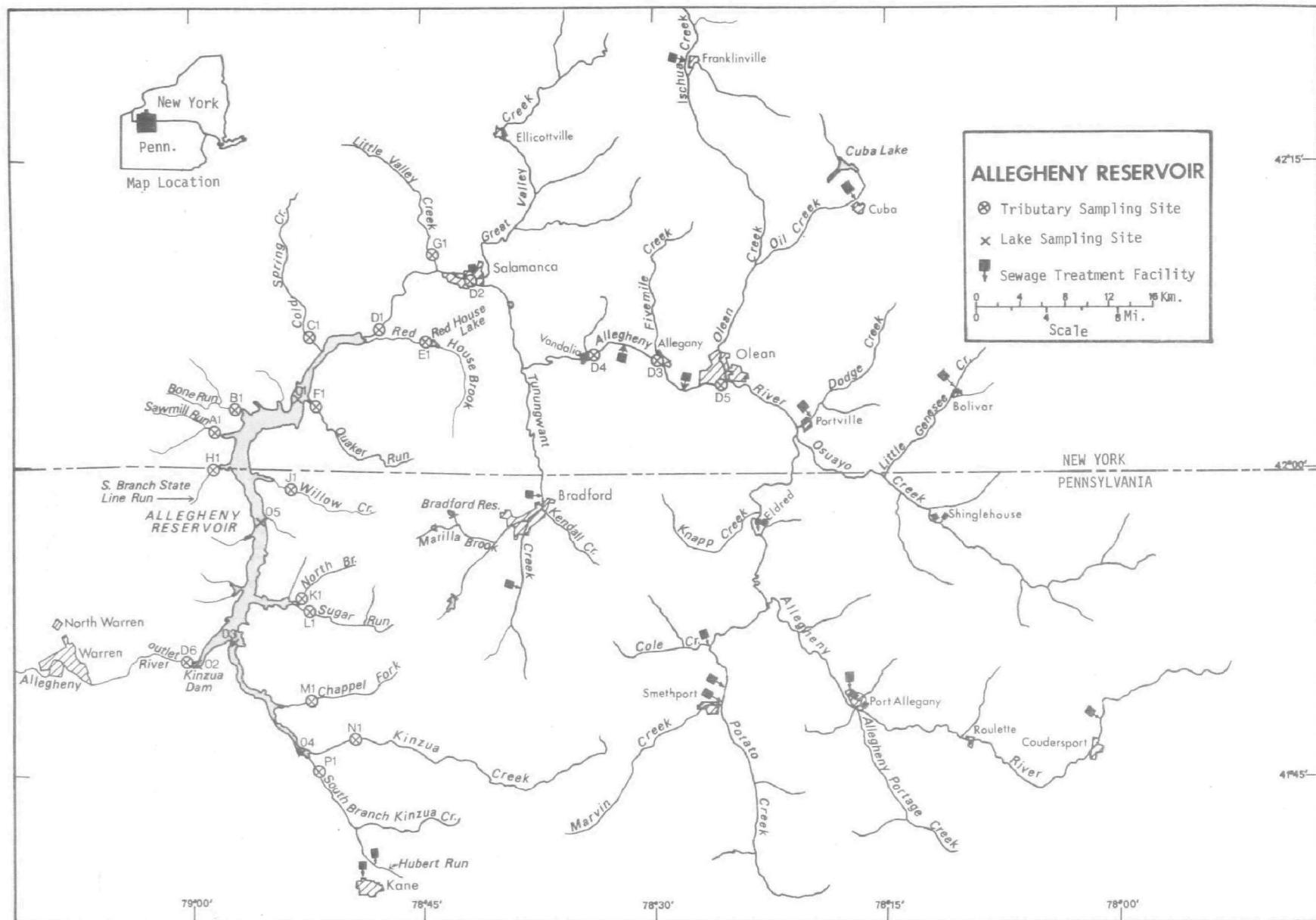
<u>LAKE NAME</u>	<u>COUNTY</u>
Allegheny Reservoir	Cattaraugus, NY; McLean, Warren, PA
Black	St. Lawrence
Canadaigua	Ontario
Cannonsville	Delaware
Carry Falls	St. Lawrence
Cassadaga	Chautauqua
Cayuga	Seneca, Tompkins
Champlain	Clinton, Essex, NY; Addison, Chittenden, Franklin, VT
Chautauqua	Chautauqua
Conesus	Livingston
Cross	Cayuga, Onondaga
Goodyear	Otsego
Huntington	Sullivan
Keuka	Ontario
Long	Hamilton
Lower St. Regis	Franklin
Otter	Cayuga
Owasco	Cayuga
Raquette Pond	Franklin
Round	Saratoga
Sacandaga Res.	Fulton, Saratoga
Saratoga	Saratoga
Schroon	Essex, Warren
Seneca	Seneca, Schyler, Yates
Swan	Sullivan
Swinging Bridge Res.	Sullivan

NATIONAL EUTROPHICATION SURVEY

STUDY LAKES

STATE OF PENNSYLVANIA

<u>LAKE NAME</u>	<u>COUNTY</u>
Allegheny Reservoir	McKean, Warren, PA; Cattaraugus, NY
Beaver Run Reservoir	Westmoreland
Beltzville	Carbon
Blanchard Reservoir	Centre
Canadohta	Crawford
Conneaut	Crawford
Conewago (Pinchot)	York
Greenlane	Montgomery
Harveys	Luzerne
Indian	Somerset
Naomi	Monroe
Ontelaunee	Berks
Pocono	Monroe
Pymatuning Reservoir	Crawford, PA; Ashtabula, OH
Shenango River Reservoir	Mercer
Stillwater	Monroe
Wallenpaupack	Pike, Wayne



ALLEGHENY RESERVOIR*

STORET NO. 3641

I. CONCLUSIONS

A. Trophic Condition:

Survey data indicate that the New York portion (station 1, northeast embayment) and the Kinzua Creek portion in Pennsylvania (station 4, southeast embayment) of Allegheny Reservoir are eutrophic. The quality of the central portion of the reservoir differs from these two areas and, based on the low median total phosphorus, mean chlorophyll a, and mean Secchi disc values at each sampling site (stations 2, 3, and 5), it appears to be mesotrophic. The reservoir ranked tenth in overall trophic quality when the 17 Pennsylvania lakes sampled in 1973 were compared using a combination of six parameters**. Seven of the lakes had less median total phosphorus, five had less and three had the same median dissolved phosphorus, ten had less median inorganic nitrogen, four had less mean chlorophyll a, and six had greater mean Secchi disc transparency. Depression of dissolved oxygen with depth occurred at station 1 in July of 1972; at stations 2, 3, and 5 in July, 1973; and at stations 2 and 3 in September, 1973.

Survey limnologists noted moderate algal blooms at station 1 in July of 1972. The four sites sampled in 1973 were reported to be free of algal blooms and macrophytes.

* Table of metric conversions--Appendix A.

** See Appendix B.

B. Rate-Limiting Nutrient:

The algal assay results indicate that Allegheny Reservoir was limited by phosphorus at the time the sample was taken. These results are substantiated by the lake data; i.e., the mean inorganic nitrogen to orthophosphorus (dissolved phosphorus at station 1) ratios were 23 to 1 or greater at all sampling times.

C. Nutrient Controllability:

1. Point sources--The phosphorus contribution of the listed point sources accounted for 26.3% of the total load to Allegheny Reservoir. Bradford, PA, contributed 9.1% of this total, Olean, NY, contributed 7.5%, and Salamanca, NY, contributed 2.2%. The remaining listed point sources collectively contributed 7.5% of the total.

There are other known point sources beyond the 40-kilometer limit of the Survey* that impact tributaries of Allegheny Reservoir. For this reason, it is likely that the percentage of the total phosphorus load contributed by point sources is greater than indicated above.

The present loading rate of $3.31 \text{ g/m}^2/\text{yr}$ is two times the rate proposed by Vollenweider (Vollenweider and Dillon, 1974) as a eutrophic rate (see page 20). For this reason, all phosphorus inputs should be minimized to the greatest practicable

* See Working Paper No. 175, "...Survey Methods, 1973-1976".

extent. While even complete removal of phosphorus at the listed point sources would only reduce the loading rate to 2.44 g/m²/yr, it is likely that a high degree of phosphorus control at all of the point sources would at least slow the present rate of eutrophication. The relatively short hydraulic retention time (77 days) would facilitate water quality improvement once phosphorus controls are initiated.

2. Non-point sources--The phosphorus contribution of non-point sources amounted to 73.7% of the total load to Allegheny Reservoir during the sampling year. The Allegheny River contributed the major portion of this load (66.2%). The remaining 13 sampled tributaries collectively contributed 4.9%. Ungaged tributaries were estimated to have contributed 2.1%.

The phosphorus export rate of the Allegheny River was appreciably higher than the rates of the other reservoir tributaries (see page 19). It is probable that the higher rate is due to the known but unmeasured point-source phosphorus contributions noted above.

II. LAKE AND DRAINAGE BASIN CHARACTERISTICS

A. Lake Morphometry[†]:

1. Surface area: 48.77 kilometers².
2. Mean depth: 14.4 meters.
3. Maximum depth: 39.0 meters.
4. Volume: 702.288×10^6 m³.
5. Mean hydraulic retention time: 77 days.

B. Tributary and Outlet: (See Appendix C for flow data)

1. Tributaries -

<u>Name</u>	<u>Drainage area (km²)^{††}</u>	<u>Mean flow^{††} (m³/sec)</u>
Sawmill Run	27.7	0.5
Bone Run	28.7	0.5
Cold Spring Creek	72.8	1.3
Allegheny River	4,256.9	76.2
Red House Brook	67.9	1.3
Quaker Run	67.9	1.3
Little Valley Creek*	120.2	2.2
S. Br., State Line Run	11.7	0.3
Willow Creek	40.9	1.2
N. Br., Sugar Run	30.6	0.4
Sugar Run	62.2	0.8
Chappel Fork	55.7	0.6
Kinzua Creek	176.6	3.0
S. Br., Kinzua Creek	101.0	1.4
Minor tributaries & immediate drainage -	<u>476.6</u>	<u>9.8</u>
Totals	5,597.4	100.8

2. Outlet -

Allegheny River	5,646.2**	105.6
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C. Precipitation***:

1. Year of sampling: 108.4 centimeters.
2. Mean annual: 107.5 centimeters.

[†] Ulanoski, 1975.

^{††} For limits of accuracy, see Working Paper No. 175.

* Since Little Valley Creek is upstream of the Allegheny River inlet station (D-1), the drainage area and flow of the creek was subtracted from the drainage area and flow of Allegheny River (see Appendix C).

** Includes area of lake.

*** See Working Paper No. 175.

III. LAKE WATER QUALITY SUMMARY

By means of a pontoon-equipped Huey helicopter, the New York portion of the Allegheny Reservoir was sampled three times at station 1 during the open-water season of 1972; and the Pennsylvania portion of the reservoir was sampled three times at stations 2, 3, 4, and 5 during the open-water season of 1973 (see map, page vi). Each time, samples for physical and chemical parameters were collected from the stations and from a number of depths at each station. During each visit, a single depth-integrated (4.6 m or near bottom to surface) sample was collected from the New York station and composited from the four Pennsylvania stations for phytoplankton identification and enumeration; and during the last visit in New York and the first visit in Pennsylvania, a single 18.9-liter depth-integrated sample was composited for algal assays. Also each time, a depth-integrated sample was collected from each of the stations for chlorophyll a analysis. The maximum depths sampled were 7.6 meters at station 1, 29.9 meters at station 2, 28.0 meters at station 3, 1.5 meters at station 4, and 21.6 meters at station 5.

The 1972 and 1973 lake sampling results are presented in full in Appendix D and are summarized in the following tables.

A. SUMMARY OF PHYSICAL AND CHEMICAL CHARACTERISTICS FOR ALLEGHENY RESERVOIR
STORET CODE 3641

PARAMETER	1ST SAMPLING (5/26/72)				2ND SAMPLING (7/27/72)				3RD SAMPLING (10/12/72)			
	1 SITES				1 SITES				1 SITES			
	RANGE	MEAN	MEDIAN		RANGE	MEAN	MEDIAN		RANGE	MEAN	MEDIAN	
TEMP (C)	11.9 - 19.1	16.3	17.8		20.3 - 23.3	22.1	22.8		10.4 - 10.6	10.5	10.5	
DISS OXY (MG/L)	7.4 - 10.2	9.1	9.6		5.8 - 9.0	7.5	7.8		9.7 - 9.8	9.7	9.7	
CNDCTVY (MCROMO)	120. - 165.	148.	160.		125. - 145.	138.	140.		180. - 190.	184.	182.	
PH (STAND UNITS)	7.1 - 8.2	7.7	7.8		7.2 - 8.0	7.7	7.8		7.7 - 7.8	7.7	7.8	
TOT ALK (MG/L)	19. - 39.	31.	36.		28. - 36.	34.	36.		35. - 37.	36.	35.	
TOT P (MG/L)	0.016 - 0.036	0.029	0.034		0.010 - 0.015	0.013	0.014		0.044 - 0.068	0.055	0.053	
DISS P (MG/L)	0.008 - 0.022	0.017	0.022		0.006 - 0.008	0.007	0.008		0.015 - 0.018	0.017	0.017	
NO2+NO3 (MG/L)	0.280 - 0.320	0.293	0.280		0.210 - 0.250	0.227	0.225		0.400 - 0.460	0.430	0.430	
AMMONIA (MG/L)	0.060 - 0.170	0.103	0.080		0.050 - 0.120	0.085	0.085		0.100 - 0.130	0.117	0.120	
KJEL N (MG/L)	*****	*****	*****		*****	*****	*****		*****	*****	*****	
INORG N (MG/L)	0.340 - 0.490	0.397	0.360		0.260 - 0.360	0.312	0.315		0.500 - 0.590	0.547	0.550	
TOTAL N (MG/L)	*****	*****	*****		*****	*****	*****		*****	*****	*****	
CHLRPYL A (UG/L)	11.1 - 11.1	11.1	11.1		16.7 - 16.7	16.7	16.7		10.0 - 10.0	10.0	10.0	
SECCHI (METERS)	1.8 - 1.8	1.8	1.8		1.6 - 1.6	1.6	1.6		0.5 - 0.5	0.5	0.5	

A. SUMMARY OF PHYSICAL AND CHEMICAL CHARACTERISTICS FOR ALLEGHENY RESERVOIR
STORET CODE 3641

PARAMETER	1ST SAMPLING (4/20/73)				2ND SAMPLING (7/27/73)				3RD SAMPLING (10/ 5/73)			
	4 SITES				4 SITES				4 SITES			
	RANGE	MEAN	MEDIAN		RANGE	MEAN	MEDIAN		RANGE	MEAN	MEDIAN	
TEMP (C)	6.6 - 12.1	8.7	7.8		11.1 - 23.2	18.5	18.9		11.4 - 17.9	17.2	17.7	
DISS OXY (MG/L)	10.4 - 11.8	11.1	11.0		1.2 - 8.5	6.1	6.3		2.4 - 8.0	5.7	5.9	
CNDCTVY (MCROMO)	95. - 165.	112.	100.		85. - 187.	119.	116.		134. - 194.	148.	139.	
PH (STAND UNITS)	8.2 - 8.6	8.4	8.3		6.4 - 7.8	7.1	6.9		6.6 - 7.2	6.8	6.8	
TOT ALK (MG/L)	10. - 18.	14.	13.		21. - 37.	29.	29.		23. - 36.	31.	30.	
TOT P (MG/L)	0.013 - 0.033	0.023	0.021		0.010 - 0.078	0.020	0.013		0.008 - 0.031	0.016	0.014	
ORTHO P (MG/L)	0.004 - 0.013	0.008	0.008		0.004 - 0.008	0.005	0.005		0.003 - 0.010	0.005	0.004	
NO2+NO3 (MG/L)	0.280 - 0.490	0.445	0.475		0.220 - 0.510	0.346	0.330		0.140 - 0.290	0.252	0.270	
AMMONIA (MG/L)	0.020 - 0.070	0.051	0.060		0.030 - 0.150	0.055	0.050		0.050 - 0.230	0.079	0.060	
KJEL N (MG/L)	0.200 - 0.400	0.312	0.300		0.200 - 1.200	0.477	0.500		0.300 - 0.600	0.437	0.400	
INORG N (MG/L)	0.300 - 0.560	0.496	0.520		0.270 - 0.580	0.401	0.385		0.200 - 0.490	0.331	0.330	
TOTAL N (MG/L)	0.480 - 0.880	0.757	0.780		0.430 - 1.490	0.824	0.840		0.540 - 0.880	0.689	0.675	
CHLORPYL A (UG/L)	0.4 - 3.2	1.4	0.9		3.0 - 5.8	4.9	5.0		3.0 - 7.7	4.8	4.3	
SECCHI (METERS)	1.0 - 1.2	1.1	1.0		0.5 - 4.0	3.1	3.6		1.1 - 3.1	2.4	2.8	

B. Biological characteristics:

1. Phytoplankton -

a. Station 1 (1972) -

<u>Sampling Date</u>	<u>Dominant Genera</u>	<u>Algal units per ml</u>
05/25/72	1. Navicula	933
	2. Cryptomonas	289
	3. Fragilaria	239
	4. Synedra	174
	5. Cyclotella	101
	Other genera	<u>527</u>
	Total	2,263
07/27/72	1. Fragilaria	1,341
	2. Dinobryon	256
	3. Melosira	158
	4. Schroederia	136
	5. Anabaena	121
	Other genera	<u>181</u>
	Total	2,193
10/12/72	1. Anabaena	1,158
	2. Cyclotella	122
	3. Navicula	122
	4. Melosira	104
	5. Synedra	85
	Other genera	<u>386</u>
	Total	1,977

b. Stations 2, 3, 4, and 5 (1973) -

<u>Sampling Date</u>	<u>Dominant Genera</u>	<u>Algal units per ml</u>
04/20/73	1. Dinobryon	316
	2. Asterionella	173
	3. Synedra	90
	4. Cryptomonas	75
	5. Cyclotella	37
	Other genera	<u>81</u>
	Total	772
07/27/73	1. Flagellates	572
	2. Stephanodiscus	177
	3. Cryptomonas	158
	4. Dinobryon	158
	5. Synedra	158
	Other genera	<u>847</u>
	Total	2,070
10/05/73	1. Flagellates	447
	2. Aphanizomenon	429
	3. Fragilaria	71
	4. Coccoid cells	36
	Other genera	<u>53</u>
	Total	1,036

2. Chlorophyll a -

<u>Sampling Date</u>	<u>Station Number</u>	<u>Chlorophyll <u>a</u> (μg/l)</u>
05/25/72	01	11.1*
04/20/73	02	1.0
	03	0.4
	04	0.9
	05	3.2
07/27/72	01	16.7*
07/27/73	02	3.6
	03	4.6
	04	5.8
	05	5.5
10/12/72	01	10.0*
10/05/73	02	3.4
	03	3.0
	04	5.3
	05	7.7

C. Limiting Nutrient Study:

1. Station 1 (1972)--autoclaved, filtered, and nutrient spiked -

<u>Spike (mg/l)</u>	<u>Ortho P Conc. (mg/l)</u>	<u>Inorganic N Conc. (mg/l)</u>	<u>Maximum yield (mg/l-dry wt.)</u>
Control	0.034	0.566	10.4
0.010 P	0.044	0.566	11.9
0.020 P	0.054	0.566	11.9
0.050 P	0.084	0.566	13.4
0.050 P + 5.0 N	0.084	5.566	29.2
0.050 P + 10.0 N	0.084	10.566	28.9
10.0 N	0.034	10.566	11.3

* Because of instrumentation problems during the 1972 sampling, these values may be in error by plus or minus 20 percent.

2. Stations 2-5 (1973)--filtered and nutrient spiked -

<u>Spike (mg/l)</u>	<u>Ortho P Conc. (mg/l)</u>	<u>Inorganic N Conc. (mg/l)</u>	<u>Maximum yield (mg/l-dry wt.)</u>
Control	0.010	0.347	0.2
0.050 P	0.060	0.347	10.4
0.050 P + 1.0 N	0.060	1.347	17.6
1.0 N	0.010	1.347	0.2

3. Discussion -

The control yields of the assay alga, Selenastrum capricornutum, indicate that at the time the samples were taken, the potential primary productivity of Allegheny Reservoir was high at station 1 (in 1972) and moderate at stations 2-5 (in 1973). Also, in both assays the significant increase in yield with the addition of orthophosphorus indicates that both areas of the lake were limited by phosphorus at those times. Note that in both assays, the addition of nitrogen alone resulted in a yield which was not significantly different than the control.

The differences shown by the control yields at station 1 (north end of the lake) and at stations 2-5 (central and south end of lake) indicate the differences in availability of nutrients for primary production. Note that the sample orthophosphorus concentration was three times greater at station 1 (34 $\mu\text{g/l}$) than at stations 2-5 (10 $\mu\text{g/l}$).

The lake chemistry data further indicate that Allegheny Reservoir was limited by phosphorus. At all sampling times, the mean inorganic nitrogen to orthophosphorus (dissolved phosphorus at station 1) ratios were 23 to 1 or greater.

IV. NUTRIENT LOADINGS (See Appendix E for data)

For the determination of nutrient loadings, the New York and Pennsylvania National Guards collected monthly near-surface grab samples from each of the tributary sites indicated on the map (page vi), except for the high runoff months of April and May in New York and February and March in Pennsylvania when two samples were collected. In New York, sampling was begun in November, 1972, and was completed in October, 1973. In Pennsylvania, sampling was begun in May, 1973, and was completed in April, 1974.

Through an interagency agreement, stream flow estimates for the year of sampling and a "normalized" or average year were provided by the New York and Pennsylvania District Offices of the U.S. Geological Survey for the tributary sites nearest the lake.

In this report, nutrient loads for sampled tributaries were determined by using a modification of a U.S. Geological Survey computer program for calculating stream loadings*. Nutrient loads shown are those measured minus point-source loads, if any.

Nutrient loads for unsampled "minor tributaries and immediate drainage" ("ZZ" of U.S.G.S.) were estimated using the means of the nutrient exports, in kg/km²/year, at stations F-1, H-1, J-1, K-1, L-1, and M-1 and multiplying the means by the ZZ area in km².

* See Working Paper No. 175.

The operators of the Cuba, Olean, Portville, Salamanca, Kane, Bradford, Quaker State Oil, Zippo Manufacturing Co., and W. R. Case and Sons Cutlery wastewater treatment plants provided monthly effluent samples and corresponding flow data. The operator of the wastewater treatment plant at Allegany did not participate in the sampling program, and nutrient loads were estimated at 1.134 kg P and 3.401 kg N/capita/year. Nutrient loads in the untreated wastes of the town of Ellicottville were estimated at 1.587 kg P and 4.263 kg N/capita/year.

The operators of a number of other wastewater treatment plants provided monthly samples, and the data are included in Appendix C. The locations of these plants are shown on the map (page vi), but nutrient contributions were not identified in the loadings of Allegheny Reservoir because the plants are beyond the 40-kilometer limit of the Survey*. However, the nutrient contributions of these sources are included in the loads attributed to the Allegheny River at station D-1.

Estimates of nutrient contributions by wild ducks and geese were based on the following numbers of waterfowl using the Pennsylvania portion of Allegheny Reservoir as provided by the Pennsylvania Department of Environmental Resources (Ulanoski, 1975):

Summer resident ducks	100
Migratory ducks	1,500
Migratory geese	400

* See Working Paper No. 175.

In calculating the nutrient loads, the following assumptions were made:

1. Twice as many waterfowl utilize the New York portion of the reservoir (the main waterfowl populations occur there; Ulanoski, op. cit.).
2. Each wild duck contributes 0.45 kg total nitrogen and 0.20 kg total phosphorus per year (Paloumpis and Starrett, 1960).
3. Each wild goose contributes the same amount as one duck since geese typically feed in fields away from the lake several hours each day.
4. Summer or winter resident waterfowl are at the lake for six months of the year.
5. Migratory waterfowl spend a total of one month per year at the lake; i.e., 15 days during Spring migration and 15 days during Fall migration.

A. Waste Sources:

1. Known municipal -

<u>Name</u>	<u>Pop. Served</u>	<u>Treatment</u>	<u>Mean Flow (m³/d)</u>	<u>Receiving Water</u>
Cuba*	1,735	trickling filter	1,842.3	Oil Creek
Olean*	19,169	prim. clarifier	12,255.2	Allegheny River
Portville*	1,304	Imhoff	1,188.6	Dodge Creek
Salamanca*	7,877	act. sludge	4,542.5	Allegheny River
Allegheny*	2,050	prim. clarifier	775.9***	Allegheny River
Bradford**	25,000	prim. clarifier	17,383.0	Tunungwant Creek
Kane** (Kinzua Rd.)	2,700	trickling filter	2,004.8	Hubert Run
Ellicottville*	955	none	361.5***	Great Valley Cr.

2. Known industrial -

<u>Name</u>	<u>Product</u>	<u>Treatment</u>	<u>Mean Flow (m³/d)</u>	<u>Receiving Water</u>
Quaker State Oil	oil refinery	NaOH and Cl removal	23,693.5	Potato Creek
W. R. Case and Sons Mfg. Co.	cutlery mfg.	none	37.9	Tunungwant Creek
Zippo Mfg. Co.	plating	ppt of nickel & chrome; pH adjustment; oxidizing of cyanide waste	45.4	Tunungwant Creek

* Anonymous, 1971 (population shown is 1970 Census).

** Treatment plant questionnaires.

*** Estimated at 0.3785 m³/capita/day.

B. Annual Total Phosphorus Loading - Average Year:

1. Inputs -

<u>Source</u>	<u>kg P/ yr</u>	<u>% of total</u>
a. Tributaries (non-point load) -		
Sawmill Run	230	0.1
Bone Run	460	0.3
Cold Spring Creek	1,375	0.9
Allegheny River	106,950	66.2
Red House Brook	675	0.4
Quaker Run	400	0.2
Little Valley Creek	1,270	0.8
S. Br., State Line Run	120	0.1
Willow Creek	555	0.3
N. Br., Sugar Run	140	0.1
Sugar Run	260	0.2
Chappel Fork	195	0.1
Kinzua Creek	1,400	0.9
S. Br., Kinzua Creek	790	0.5
b. Minor tributaries & immediate drainage (non-point load) -	3,415	2.1
c. Known municipal STP's -		
Cuba	2,855	1.8
Olean	12,030	7.4
Portville	740	0.5
Salamanca	3,570	2.2
Allegheny	2,325	1.4
Bradford	14,665	9.1
Kane	1,990	1.2
Ellicottville	1,515	0.9
d. Septic tanks* -	10	<0.1
e. Known industrial -		
Quaker State Oil Co.	2,740	1.7
W. R. Case and Sons Cutlery	5	<0.1
Zippo Mfg. Co.	5	<0.1
f. Wild ducks and geese -	125	0.1
g. Direct precipitation** -	855	0.5
Total	161,665	100.0

2. Outputs -

Lake outlet - Allegheny River 102,530

3. Net annual P accumulation - 59,135 kg.

* Estimate based on 5 campgrounds and 1 park; see Working Paper No. 175.

** See Working Paper No. 175.

C. Annual Total Nitrogen Loading - Average Year:

1. Inputs -

<u>Source</u>	<u>kg N/ yr</u>	<u>% of total</u>
a. Tributaries (non-point load) -		
Sawmill Run	6,805	0.3
Bone Run	8,470	0.3
Cold Spring Creek	22,065	0.9
Allegheny River	1,510,945	61.0
Red House Brook	23,195	0.9
Quaker Run	19,485	0.8
Little Valley Creek	86,860	3.5
S. Br., State Line Run	11,830	0.5
Willow Creek	30,030	1.2
N. Br., Sugar Run	17,330	0.7
Sugar Run	27,795	1.1
Chappel Fork	21,010	0.8
Kinzua Creek	111,730	4.5
S. Br., Kinzua Creek	64,525	2.6
b. Minor tributaries & immediate drainage (non-point load) -	271,820	11.0
c. Known municipal STP's -		
Cuba	5,990	0.2
Olean	64,550	2.6
Portville	6,835	0.3
Salamanca	14,120	0.6
Allegheny	6,970	0.3
Bradford	74,495	3.0
Kane	6,840	0.3
Ellicottville	4,070	0.2
d. Septic tanks* -	385	<0.1
e. Known industrial -		
Quaker State Oil Co.	7,075	0.3
W. R. Case and Sons Cutlery	25	<0.1
Zippo Mfg. Co.	35	<0.1
f. Wild ducks and geese -	285	<0.1
g. Direct precipitation** -	<u>52,650</u>	<u>2.1</u>
Total	2,478,220	100.0

2. Outputs -

Lake outlet - Allegheny River 4,461,615

3. Net annual N loss - 1,983,395 kg.

* Estimate based on 5 campgrounds and 1 park; see Working Paper No. 175.

** See Working Paper No. 175.

D. Mean Annual Non-point Nutrient Export by Subdrainage Area:

<u>Tributary</u>	<u>kg P/km²/yr</u>	<u>kg N/km²/yr</u>
Sawmill Run	8	246
Bone Run	16	295
Cold Spring Creek	19	303
Allegheny River	25	355
Red House Brook	10	342
Quaker Run	6	287
Little Valley Creek	11	723
S. Br., State Line Run	10	1,011
Willow Creek	14	734
N. Br., Sugar Run	5	566
Sugar Run	4	447
Chappel Fork	4	377
Kinzua Creek	8	633
S. Br., Kinzua Creek	8	639

E. Yearly Loading Rates:

In the following table, the existing phosphorus loading rates are compared to those proposed by Vollenweider (Vollenweider and Dillon, 1974). Essentially, his "dangerous" rate is the rate at which the receiving water would become eutrophic or remain eutrophic; his "permissible" rate is that which would result in the receiving water remaining oligotrophic or becoming oligotrophic if morphometry permitted. A mesotrophic rate would be considered one between "dangerous" and "permissible".

Note that Vollenweider's model may not be applicable to water bodies with short hydraulic retention times.

	<u>Total Phosphorus</u>		<u>Total Nitrogen</u>	
	<u>Total</u>	<u>Accumulated</u>	<u>Total</u>	<u>Accumulated</u>
grams/m ² /yr	3.31	1.21	50.8	loss*

Vollenweider loading rates for phosphorus
(g/m²/yr) based on mean depth and mean
hydraulic retention time of Allegheny Reservoir:

"Dangerous" (eutrophic rate)	1.56
"Permissible" (oligotrophic rate)	0.78

* There was an apparent loss of nitrogen during the sampling year. This may have been due to nitrogen fixation in the reservoir, solubilization of previously sedimented nitrogen, recharge with nitrogen-rich ground water, or unknown and unsampled point sources discharging directly to the reservoir. Whatever the cause, a similar loss of nitrogen has occurred at Shagawa Lake, Minnesota which has been intensively studied by EPA's National Eutrophication and Lake Restoration Branch (Malueg et al., 1975).

V. LITERATURE REVIEWED

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Paloumpis, A. A., and W. C. Starrett, 1960. An ecological study of benthic organisms in three Illinois River flood plain lakes. Amer. Midl. Nat., vol. 64, no. 2, pp. 406-435.

Ulanoski, James, 1975. Personal communication (lake morphometry; waterfowl numbers). PA Dept. of Env. Resources, Harrisburg.

Vollenweider, R. A., and P. J. Dillon, 1974. The application of the phosphorus loading concept to eutrophication research. Natl. Res. Council of Canada Publ. No. 13690, Canada Centre for Inland Waters, Burlington, Ontario.

VI. APPENDICES

APPENDIX A

CONVERSION FACTORS

CONVERSION FACTORS

Hectares x 2.471 = acres

Kilometers x 0.6214 = miles

Meters x 3.281 = feet

Cubic meters x 8.107×10^{-4} = acre/feet

Square kilometers x 0.3861 = square miles

Cubic meters/sec x 35.315 = cubic feet/sec

Centimeters x 0.3937 = inches

Kilograms x 2.205 = pounds

Kilograms/square kilometer x 5.711 = lbs/square mile

APPENDIX B

LAKE RANKINGS

LAKES RANKED BY INDEX NOS.

RANK	LAKE CODE	LAKE NAME	INDEX NO
1	4224	LAKE NAOMI	445
2	4220	BELTZVILLE DAM	423
3	4222	HARVEY'S LAKE	413
4	4228	STILLWATER LAKE	401
5	4227	POCONO LAKE	389
6	4223	INDIAN LAKE	388
7	3641	ALLEGHENY RESERVOIR	385
8	4229	LAKE WALLENPAUPACK	371
9	4221	CANADOHTA LAKE	369
10	4219	BEAVER RUN RESERVOIR	360
11	4204	CONNEAUT LAKE	307
12	4226	PINCHOT LAKE	256
13	4213	PYMATUNING RESERVOIR	206
14	4216	SHENANGO RIVER RESERVOIR	157
15	4225	ONTELAUNEE DAM	101
16	4201	BLANCHARD RESERVOIR	85
17	4207	GREENLANE DAM	53

PERCENT OF LAKES WITH HIGHER VALUES (NUMBER OF LAKES WITH HIGHER VALUES)

LAKE CODE	LAKE NAME	MEDIAN TOTAL P	MEDIAN INORG N	500- MEAN SEC	MEAN CHLORA	15- MIN DO	MEDIAN DISS P	INDEX NO
3641	ALLEGHENY RESERVOIR	56 (9)	38 (6)	63 (10)	100 (16)	69 (11)	59 (8)	385
4201	BLANCHARD RESERVOIR	13 (2)	13 (2)	25 (4)	31 (5)	3 (0)	0 (0)	85
4204	CONNEAUT LAKE	44 (7)	63 (10)	69 (11)	56 (9)	34 (5)	41 (6)	307
4207	GREENLANE DAM	6 (1)	6 (1)	19 (3)	13 (2)	3 (0)	6 (1)	53
4213	PYMATUNING RESERVOIR	0 (0)	72 (11)	6 (1)	0 (0)	100 (16)	28 (4)	206
4216	SHENANGO RIVER RESERVOIR	19 (3)	44 (7)	13 (2)	6 (1)	47 (7)	28 (4)	157
4219	BEAVER RUN RESERVOIR	94 (15)	19 (3)	88 (14)	81 (13)	19 (2)	59 (8)	360
4220	BELTZVILLE DAM	88 (14)	25 (4)	94 (15)	94 (15)	34 (5)	88 (13)	423
4221	CANADOHTA LAKE	50 (8)	97 (15)	56 (9)	19 (3)	59 (9)	88 (13)	369
4222	HARVEY'S LAKE	63 (10)	81 (13)	100 (16)	63 (10)	47 (7)	59 (8)	413
4223	INDIAN LAKE	100 (16)	31 (5)	75 (12)	75 (12)	19 (2)	88 (13)	388
4224	LAKE NAOMI	81 (13)	88 (14)	44 (7)	69 (11)	88 (14)	75 (12)	445
4225	ONTELAUNEE DAM	25 (4)	0 (0)	0 (0)	44 (7)	19 (2)	13 (2)	101
4226	PINCHOT LAKE	31 (5)	56 (9)	31 (5)	38 (6)	81 (13)	19 (3)	256
4227	POCONO LAKE	38 (6)	97 (15)	50 (8)	88 (14)	75 (12)	41 (6)	389
4228	STILLWATER LAKE	72 (11)	72 (11)	38 (6)	25 (4)	94 (15)	100 (16)	401
4229	LAKE WALLENPAUPACK	72 (11)	50 (8)	81 (13)	50 (8)	59 (9)	59 (8)	371

LAKE DATA TO BE USED IN RANKINGS

LAKE CODE	LAKE NAME	MEDIAN TOTAL P	MEDIAN INORG N	500- MEAN SEC	MEAN CHLORA	15- MIN DO	MEDIAN DISS P
3641	ALLEGHENY RESERVOIR	0.016	0.380	414.250	3.700	13.800	0.006
4201	BLANCHARD RESERVOIR	0.064	1.300	453.143	15.187	14.900	0.046
4204	CUNNEAUT LAKE	0.023	0.185	402.000	7.567	14.600	0.007
4207	GREENLANE DAM	0.066	1.475	460.222	24.011	14.900	0.020
4213	PYMATUNING RESERVOIR	0.070	0.180	467.750	56.333	7.700	0.008
4216	SHENANGO RIVER RESERVOIR	0.058	0.340	463.555	26.800	14.500	0.008
4219	BEAVER RUN RESERVOIR	0.009	0.835	384.833	5.183	14.800	0.006
4220	BELTZVILLE DAM	0.010	0.815	362.444	4.856	14.600	0.005
4221	CANADOHTA LAKE	0.020	0.130	436.000	19.167	14.100	0.005
4222	HARVEY'S LAKE	0.015	0.160	338.000	5.967	14.500	0.006
4223	INDIAN LAKE	0.008	0.520	400.222	5.211	14.800	0.005
4224	LAKE NAOMI	0.014	0.135	443.333	5.533	8.000	0.005
4225	ONTELAUNEE DAM	0.040	2.150	470.667	11.783	14.800	0.011
4226	PINCHOT LAKE	0.027	0.245	453.000	13.950	11.500	0.008
4227	POCONO LAKE	0.024	0.130	438.800	4.980	13.200	0.007
4228	STILLWATER LAKE	0.015	0.180	449.000	18.233	7.900	0.004
4229	LAKE WALLENPAUPACK	0.015	0.250	394.583	9.617	14.100	0.006

APPENDIX C

TRIBUTARY FLOW DATA

TRIBUTARY FLOW INFORMATION FOR NEW YORK

2/24/75

LAKE CODE 3641 ALLEGHENY RESERVOIR

TOTAL DRAINAGE AREA OF LAKE(SQ KM) 5646.2

TRIBUTARY	SUB-DRAINAGE AREA(SQ KM)	NORMALIZED FLOWS(CMS)												
		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
3641A1	27.7	0.71	0.74	1.25	1.05	0.48	0.28	0.14	0.09	0.14	0.19	0.40	0.65	0.51
3641B1	28.7	0.71	0.74	1.25	1.05	0.48	0.28	0.14	0.09	0.14	0.19	0.40	0.65	0.51
3641C1	72.8	1.59	1.70	3.11	2.83	1.42	0.82	0.45	0.34	0.42	0.54	0.99	1.59	1.31
3641D1	4377.1	101.94	86.37	180.38	172.73	103.07	53.80	29.45	17.90	18.41	33.41	65.13	76.72	78.39
3641E1	67.9	1.78	1.84	3.20	2.69	1.22	0.71	0.34	0.24	0.37	0.48	1.05	1.64	1.29
3641F1	67.9	1.78	1.84	3.20	2.69	1.22	0.71	0.34	0.24	0.37	0.48	1.05	1.64	1.29
3641G1	120.2	3.11	3.11	5.38	4.53	2.10	1.25	0.59	0.40	0.62	0.85	1.78	2.83	2.21
3641Z2	1004.1	25.77	26.62	45.31	39.64	17.56	10.19	4.81	3.40	5.38	7.08	15.01	23.79	18.66

SUMMARY

TOTAL DRAINAGE AREA OF LAKE = 5646.2
SUM OF SUB-DRAINAGE AREAS = 5766.4

TOTAL FLOW IN = 1251.56
TOTAL FLOW OUT = 0.0

NOTE *** TRIB G1 IS INCLUDED IN D1 - OUTFLOW IS IN PENNSYLVANIA

MEAN MONTHLY FLOWS AND DAILY FLOWS(CMS)

TRIBUTARY	MONTH	YEAR	MEAN FLOW	DAY	FLOW	DAY	FLOW	DAY	FLOW
3641A1	11	72	0.96	4	1.08				
	12	72	1.16	2	0.45				
	1	73	0.68	6	0.93				
	2	73	0.62	3	1.44				
	3	73	1.27	3	0.62				
	4	73	0.68	8	1.33	21	0.31		
	5	73	0.54	6	0.79	19	0.40		
	6	73	0.25	3	0.42	23	0.12		
	8	73	0.09	4	0.08				
	9	73	0.07	8	0.11				
3641B1	10	73	0.10	5	0.10				
	11	72	0.96	4	1.08				
	12	72	1.16	2	0.45				
	1	73	0.68	6	0.93				
	2	73	0.62	3	1.44				
	3	73	1.27	3	0.62				
	4	73	0.68	8	1.33	21	0.31		
	5	73	0.54	6	0.79	19	0.40		
	6	73	0.25	3	0.42	23	0.12		
	8	73	0.09	4	0.08				
	9	73	0.07	8	0.11				
	10	73	0.10	5	0.10				

TRIBUTARY FLOW INFORMATION FOR NEW YORK

2/24/75

LAKE CODE 3641 ALLEGHENY RESERVOIR

MEAN MONTHLY FLOWS AND DAILY FLOWS(CMS)

TRIBUTARY	MONTH	YEAR	MEAN FLOW	DAY	FLOW	DAY	FLOW	DAY	FLOW
3641C1	11	72	2.41	4	3.96				
	12	72	2.83	2	1.16				
	1	73	1.56	6	1.64				
	2	73	1.53	3	7.08				
	3	73	3.11	3	3.11				
	4	73	2.24	8	2.78	21	1.08		
	5	73	1.56	6	1.76	19	1.05		
	6	73	0.93	3	1.56	23	0.74		
	8	73	0.37	4	0.37				
	9	73	0.40	8	0.51				
3641D1	10	73	0.48	5	0.71				
	11	72	124.59	4	172.73				
	12	72	192.55	2	84.95				
	1	73	96.28	6	141.58				
	2	73	86.37	3	311.49				
	3	73	176.98	3	53.80				
	4	73	97.69	8	150.08	21	61.16		
	5	73	129.12	6	84.38	19	138.19		
	6	73	93.73	3	135.92	23	47.01		
	8	73	18.12	4	15.29				
3641E1	9	73	18.69	7	45.31				
	10	73	22.65	5	15.01				
	11	72	2.55	4	2.83				
	12	72	2.83	2	1.16				
	1	73	1.70	6	2.38				
	2	73	1.59	3	3.68				
	3	73	3.26	3	1.59				
	4	73	1.76	8	3.40	21	0.79		
	5	73	1.36	6	1.98	19	0.99		
	6	73	0.62	3	1.08	23	0.31		
3641F1	8	73	0.23	4	0.20				
	9	73	0.19	8	0.28				
	10	73	0.25	5	0.26				
	11	72	2.55	4	2.83				
	12	72	2.83	2	1.16				
	1	73	1.70	6	2.38				
	2	73	1.59	3	3.68				
	3	73	3.26	3	1.59				
	4	73	1.76	8	3.40	21	0.79		
	5	73	1.36	6	1.98	19	0.99		
	6	73	0.62	3	1.08	23	0.31		
	8	73	0.23	4	0.20				
	9	73	0.19	8	0.28				
	10	73	0.25	5	0.26				

TRIBUTARY FLOW INFORMATION FOR NEW YORK

2/24/75

LAKE CODE 3641 ALLEGHENY RESERVOIR

MEAN MONTHLY FLOWS AND DAILY FLOWS (CMS)

TRIBUTARY	MONTH	YEAR	MEAN FLOW	DAY	FLOW	DAY	FLOW	DAY	FLOW
3641G1	11	72	4.25	4	4.81				
	12	72	5.07	2	1.98				
	1	73	2.97	6	4.25				
	2	73	2.66	3	6.23				
	3	73	5.38	3	2.69				
	4	73	2.83	8	5.66	21	1.33		
	5	73	2.32	6	3.40	12	4.25		
	6	73	1.10	3	1.90	23	0.54		
	8	73	0.40	4	0.34				
	9	73	0.31	8	0.48				
3641ZZ	10	73	0.42	5	0.45				
	12	72	42.48						
	1	73	24.64						
	2	73	22.94						
	3	73	45.31						
	4	73	25.77						
	5	73	19.54						
	6	73	9.06						
	8	73	3.40						
	9	73	2.78						
	10	73	3.68						

TRIBUTARY FLOW INFORMATION FOR NEW YORK

1/27/75

LAKE CODE 3641 ALLEGHENY RESERVOIR

TOTAL DRAINAGE AREA OF LAKE (SQ KM) 5646.2

TRIBUTARY	SUB-DRAINAGE AREA(SQ KM)	NORMALIZED FLOWS(CMS)												
		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
3641D6	5646.2	135.44	126.41	220.05	233.10	131.81	75.46	47.63	28.20	28.37	46.27	80.59	116.07	105.63
3641H1	11.7	0.25	0.27	0.57	0.68	0.37	0.25	0.09	0.03	0.08	0.15	0.31	0.40	0.29
3641J1	40.9	0.96	1.10	2.55	3.11	1.56	0.96	0.28	0.10	0.25	0.54	1.30	1.70	1.20
3641K1	30.6	0.34	0.37	0.99	1.27	0.59	0.34	0.10	0.03	0.08	0.18	0.48	0.65	0.45
3641L1	62.2	0.66	0.74	1.36	1.73	0.96	0.68	0.28	0.13	0.25	0.45	0.85	1.02	0.76
3641M1	55.7	0.54	0.59	1.05	1.25	0.76	0.54	0.24	0.12	0.21	0.34	0.68	0.82	0.59
3641N1	176.6	2.80	3.11	5.38	6.23	3.96	2.83	1.30	0.62	1.10	1.87	3.40	3.96	3.04
3641P1	101.0	1.36	1.42	2.69	3.11	1.87	1.30	0.54	0.22	0.45	0.82	1.64	1.98	1.44
3641Z2	523.2	12.54	11.72	20.39	21.58	12.20	6.99	4.42	2.61	2.63	4.28	7.48	10.76	9.79

SUMMARY

 TOTAL DRAINAGE AREA OF LAKE = 5646.2
 SUM OF SUB-DRAINAGE AREAS = 1001.8

 TOTAL FLOW IN = 211.12
 TOTAL FLOW OUT = 1269.41

MEAN MONTHLY FLOWS AND DAILY FLOWS (CMS)

TRIBUTARY	MONTH	YEAR	MEAN FLOW	DAY	FLOW	DAY	FLOW	DAY	FLOW
3641D6	5	73	139.60	19	120.35				
	6	73	79.29	9	127.43				
	7	73	26.93	14	18.12				
	8	73	30.62	11	41.34				
	9	73	49.55	8	44.74				
	10	73	75.61	13	70.79				
	11	73	97.69	10	114.68				
	12	73	117.80	8	116.10				
	1	74	230.50	12	167.64				
	2	74	175.85	10	247.21				
	3	74	179.25	9	214.92				
	4	74	182.36	20	240.69				
3641H1	5	73	0.37	19	0.27				
	6	73	0.28	9	0.34				
	7	73	0.13	14	0.08				
	8	73	0.22	11	0.05				
	9	73	0.07	8	0.05				
	10	73	0.11	13	0.03				
	11	73	0.31	10	0.20				
	12	73	0.51	8	0.21				
	1	74	0.51	12	0.16				
	2	74	0.31	10	0.26				
	3	74	0.71	9	2.24				
	4	74	0.85	20	0.57				

TRIBUTARY FLOW INFORMATION FOR NEW YORK

1/27/75

LAKE CODE 3641 ALLEGHENY RESERVOIR

MEAN MONTHLY FLOWS AND DAILY FLOWS(CMS)

TRIBUTARY	MONTH	YEAR	MEAN FLOW	DAY	FLOW	DAY	FLOW
3641J1	5	73	1.56	19	1.08		
	6	73	1.16	9	1.33		
	7	73	0.42	14	0.24		
	8	73	0.79	11	0.13		
	9	73	0.21	8	0.15		
	10	73	0.37	13	0.08		
	11	73	1.33	10	0.71		
	12	73	2.32	8	0.76		
	1	74	2.32	12	0.57		
	2	74	1.27	10	1.02		
	3	74	3.11	9	12.74		
	4	74	3.96	20	2.55		
3641K1	5	73	0.59	19	0.40		
	6	73	0.42	9	0.51		
	7	73	0.14	14	0.08		
	8	73	0.28	11	0.04		
	9	73	0.07	8	0.05		
	10	73	0.12	13	0.02		
	11	73	0.51	10	0.25		
	12	73	0.91	8	0.27		
	1	74	0.91	12	0.20		
	2	74	0.48	10	0.37		
	3	74	1.36	9	5.66		
	4	74	1.76	20	1.02		
3641L1	5	73	0.96	19	0.74		
	6	73	0.76	9	0.85		
	7	73	0.37	14	0.24		
	8	73	0.57	11	0.16		
	9	73	0.22	8	0.17		
	10	73	0.34	13	0.11		
	11	73	0.85	10	0.54		
	12	73	1.27	8	0.57		
	1	74	1.27	12	0.45		
	2	74	0.82	10	0.68		
	3	74	1.64	9	4.53		
	4	74	1.98	20	1.36		
3641M1	5	73	0.76	19	0.59		
	6	73	0.62	9	0.68		
	7	73	0.31	14	0.21		
	8	73	0.45	11	0.14		
	9	73	0.19	8	0.15		
	10	73	0.28	13	0.10		
	11	73	0.68	10	0.45		
	12	73	0.99	8	0.45		
	1	74	0.99	12	0.37		
	2	74	0.65	10	0.57		
	3	74	1.30	9	3.40		
	4	74	1.53	20	1.05		

TRIBUTARY FLOW INFORMATION FOR NEW YORK

1/27/75

LAKE CODE 3641 ALLEGHENY RESERVOIR

MEAN MONTHLY FLOWS AND DAILY FLOWS(CMS)

TRIBUTARY	MONTH	YEAR	MEAN FLOW	DAY	FLOW	DAY	FLOW	DAY	FLOW
3641N1	5	73	3.96	19	2.97				
	6	73	3.11	9	3.40				
	7	73	1.64	14	1.13				
	8	73	2.46	11	0.74				
	9	73	0.99	8	0.82				
	10	73	1.50	13	0.54				
	11	73	3.40	10	2.29				
	12	73	5.10	8	2.38				
	1	74	5.10	12	1.95				
	2	74	3.40	10	2.83				
	3	74	6.51	9	16.42				
	4	74	7.65	20	5.38				
3641P1	5	73	1.87	19	1.39				
	6	73	1.50	9	1.67				
	7	73	0.71	14	0.45				
	8	73	1.10	11	0.28				
	9	73	0.40	8	0.31				
	10	73	0.62	13	0.20				
	11	73	1.67	10	1.05				
	12	73	2.55	8	1.08				
	1	74	2.55	12	0.85				
	2	74	1.59	10	1.36				
	3	74	3.40	9	9.63				
	4	74	3.96	20	2.69				
3641Z2	5	73	12.94	19	11.16				
	6	73	7.33	9	11.81				
	7	73	2.49	14	1.67				
	8	73	2.78	11	3.82				
	9	73	4.59	8	4.13				
	10	73	6.99	13	6.57				
	11	73	9.06	10	10.62				
	12	73	10.90	8	10.76				
	1	74	21.35	12	15.55				
	2	74	16.28	10	22.91				
	3	74	16.59	9	19.91				
	4	74	16.91	20	22.31				

APPENDIX D

PHYSICAL and CHEMICAL DATA

STORET RETRIEVAL DATE 75/02/25

364101
42 05 00.0 378 55 00.0
ALLEGHENY RESERVOIR
36 NEW YORK

11EPALES
0

2111202
0030 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00010 WATER TEMP CENT	00300 DO MG/L	00077 TRANSP SECCHI INCHES	00094 CONDUCTIVY FIELD MICROMHU	00400 PH SU	00410 T ALK CAC03 MG/L	00630 NO2&NO3 N-TOTAL MG/L	00610 NH3-N TOTAL MG/L	00655 PHOS-TOT MG/L P	00666 PHOS-DIS MG/L P
72/05/26	15 36	0000	19.1	10.2	72	165	8.20	39	0.280	0.060	0.034	0.022
	15 36	0010	17.8	9.6		160	7.80	36	0.280	0.080	0.030	0.022
	15 36	0020	11.9	7.4		120	7.10	19	0.320	0.170	0.016	0.008
72/07/27	18 00	0000			63	140	8.00	36	0.210	0.050	0.015	0.008
	18 00	0004	23.3	9.0		140	8.00	35	0.220	0.060	0.015	0.008
	18 00	0015	22.8	7.8		145	7.70	36	0.250	0.110	0.014	0.008
	18 00	0025	20.3	5.8		125	7.20	28	0.230	0.120	0.010	0.006
72/10/12	14 05	0000			19	180	7.75	35	0.400	0.100	0.064	0.015
	14 05	0004	10.6	9.8		182	7.75	35	0.430	0.120	0.044	0.010
	14 05	0008	10.4	9.7		190	7.68	37	0.460	0.130	0.053	0.017

32217

DATE FROM TO	TIME OF DAY	DEPTH FEET	CHLRPHYL A UG/L
72/05/26	15 36	0000	11.1J
72/07/27	18 00	0000	16.7J
72/10/12	14 05	0000	10.0J

J VALUE KNOWN TO BE IN ERROR

STORET RETRIEVAL DATE 75/02/25

364102
41 50 15.0 078 59 58.0
ALLEGHENY RESERVOIR
36 NEW YORK

11EPALES
3

2111202
0100 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00010 WATER TEMP CENT	00300 DO MG/L	00077 TRANSP SECCHI INCHES	00094 CONDUCTVY FIELD MICROMHO	00400 PH SU	00410 T ALK CACUJ MG/L	00610 NH3-N TOTAL MG/L	00625 TOT KJEL N MG/L	00630 NO2&NO3 N-TOTAL MG/L	00671 PHOS-DIS URTHO MG/L P
73/04/20	10 10	0000	8.4		38	100	8.60	14	0.050	0.400	0.470	0.007
	10 10	0015	7.9	11.1		95	8.30	15	0.060	0.300	0.490	0.007
	10 10	0045	7.2	11.0		100	8.50	13	0.060	0.300	0.480	0.007
	10 10	0075	6.8	11.0		95	8.30	13	0.070	0.300	0.490	0.008
	10 10	0095	6.7	11.1		95	8.20	13	0.060	0.300	0.480	0.008
73/07/27	10 30	0000	21.3		180	122	7.50	30	0.060	1.200	0.290	0.005
	10 30	0005	20.9	7.7		120	7.30	28	0.040	0.700	0.290	0.005
	10 30	0015	19.7	6.4		117	7.30	28	0.030	0.500	0.290	0.004
	10 30	0030	18.2	6.6		109	6.90	27	0.030	0.500	0.340	0.004
	10 30	0050	15.8	6.0		98	6.80	25	0.040	0.500	0.400	0.005
	10 30	0070	14.2	5.2		93	6.60	23	0.030	0.400	0.440	0.006
	10 30	0098	11.3	4.2		85	6.60	23	0.050	0.400	0.510	0.006
73/10/05	10 10	0000	17.7	4.4	100	137	7.20	32	0.070	0.500	0.280	0.006
	10 10	0020	17.7	5.6		137	7.10	33	0.060	0.400	0.270	0.004
	10 10	0030	17.7	5.8		137	7.00	34	0.060	0.400	0.270	0.004
	10 10	0040	17.7	5.4		137	6.70	35	0.060	0.300	0.270	0.005
	10 10	0060	17.6	4.4		139	6.70	36	0.080	0.400	0.290	0.004
	10 10	0077	17.5	4.2		145	6.60	30	0.100	0.400	0.280	0.004
	10 10	0094	16.7	2.4		171	6.70	38	0.230	0.600	0.260	0.007

STORET RETRIEVAL DATE 75/02/25

354102
41 50 15.0 078 55 55.0
ALLEGHENY RESERVOIR
30 NEW YORK

11EPALES 2111202
3 0100 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00665 PHOS-TOT MG/L P	32217 CHLRPHYL A UG/L
73/04/20	10 10	0000	0.026	1.0
	10 10	0015	0.021	
	10 10	0045	0.020	
	10 10	0075	0.022	
	10 10	0095	0.023	
73/07/27	10 30	0000	0.016	3.6
	10 30	0005	0.012	
	10 30	0015	0.012	
	10 30	0030	0.010	
	10 30	0050	0.010	
	10 30	0070	0.011	
	10 30	0098	0.016	
73/10/05	10 10	0000	0.018	3.4
	10 10	0020	0.015	
	10 10	0030	0.014	
	10 10	0040	0.013	
	10 10	0060	0.014	
	10 10	0077	0.015	
	10 10	0094	0.031	

STORET RETRIEVAL DATE 75/02/25

364103
41 51 32.0 078 57 35.0
ALLEGHENY RESERVOIR
36 NEW YORK

11EPALES
J

2111202
0084 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00010 WATER TEMP CENT	00300 DO MG/L	00077 TRANSP SECCHI INCHES	00094 CONDUCTIVY FIELD MICROMHO	00400 PH SU	00410 T ALK CAC03 MG/L	00610 NH3-N TOTAL MG/L	00625 TUT KJEL N MG/L	00630 NO2&NO3 N-TOTAL MG/L	00671 PHOS-PIS ORTHO MG/L P
73/04/20	11 00	0000	9.9		48	100	8.50	10K	0.030	0.300	0.420	0.006
	11 00	0015	6.8	11.0		98	8.30	13	0.060	0.300	0.480	0.007
	11 00	0040	6.7	11.0		100	8.50	13	0.060	0.300	0.490	0.009
	11 00	0080	6.6	11.0		95	8.40	11	0.060	0.400	0.480	0.009
73/07/27	11 15	0000	22.6		144	128	7.60	29	0.040	0.700	0.240	0.004
	11 15	0005	22.5	8.4		128	7.40	27	0.040	0.500	0.250	0.005
	11 15	0015	21.2	8.1		122	7.40	28	0.040	0.600	0.270	0.005
	11 15	0030	17.9	6.5		108	7.40	28	0.080	0.600	0.380	0.005
	11 15	0050	16.6	6.2		104	6.70	31	0.050	0.600	0.390	0.008
	11 15	0070	13.9	4.5		92	6.50	29	0.040	0.600	0.450	0.005
	11 15	0092	11.1	3.7		85	6.40	30	0.050	0.500	0.510	0.006
73/10/05	12 35	0000	17.8	6.4	122	134	7.00	28	0.060	0.400	0.270	0.004
	12 35	0025	17.8	6.0		135	6.80	27	0.050	0.300	0.270	0.003
	12 35	0050	17.8	6.0		135	6.70	27	0.060	0.400	0.270	0.003
	12 35	0080	11.4	4.2		139	6.80	29	0.080	0.400	0.290	0.003

DATE FROM TO	TIME OF DAY	DEPTH FEET	00665 PHOS-TOT MG/L P	32217 CHLRPHYL A UG/L
73/04/20	11 00	0000	0.015	0.4
	11 00	0015	0.022	
	11 00	0040	0.021	
	11 00	0080	0.021	
73/07/27	11 15	0000	0.012	4.6
	11 15	0005	0.011	
	11 15	0015	0.011	
	11 15	0030	0.023	
	11 15	0050	0.010	
	11 15	0070	0.014	
	11 15	0092	0.023	
73/10/05	12 35	0000	0.010	3.0
	12 35	0025	0.009	
	12 35	0050	0.008	
	12 35	0080	0.010	

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 75/02/25

364104
41 46 20.0 078 53 00.0
ALLEGHENY RESERVOIR
36 NEW YORK

11EPALES
3

2111202
0008 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00010 WATER TEMP CENT	00300 DO MG/L	00077 TRANSP SECCHI INCHES	00094 CONDUCTVY FIELD MICROMHO	00400 PH SU	00410 T ALK CACO3 MG/L	00610 NH3-N TOTAL MG/L	00625 TOT KjEL N MG/L	00630 NO2&NO3 N-TOTAL MG/L	00671 PHOS-DIS ORTHOP MG/L P
73/04/20	11 30	0000	12.1		40	165	8.30	10K	0.020	0.200	0.280	0.009
	11 30	0004	11.6	10.4		160	8.20	10K	0.020	0.300	0.280	0.013
73/07/27	13 15	0000	21.1		18	186	7.00	26	0.080	0.400	0.310	0.007
	13 15	0005	19.0	7.2		187	6.80	21	0.080	0.400	0.420	0.008
73/10/05	11 00	0000	17.2	7.8	42	194	6.90	24	0.070	0.600	0.150	0.008
	11 00	0005	17.1	8.0		194	6.70	23	0.060	0.400	0.140	0.007

DATE FROM TO	TIME OF DAY	DEPTH FEET	00665 PHOS-TOT MG/L P	32217 CHLRPHYL A UG/L
73/04/20	11 30	0000	0.016	0.9
	11 30	0004	0.013	
73/07/27	13 15	0000	0.044	5.8
	13 15	0005	0.078	
73/10/05	11 00	0000	0.025	5.3
	11 00	0005	0.020	

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 75/02/25

354105
41 57 27.0 078 55 50.0
ALLEGHENY RESERVOIR
36 NEW YORK

11EPALES
J

2111292
0070 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00010 WATER TEMP CENT	00300 DO MG/L	00077 TRANSP SECCHI INCHES	00094 CONDUCTVY FIELD MICROMHO	00400 PH SU	00410 T ALK CAC03 MG/L	00610 NH3-N TOTAL MG/L	00625 TOT KJEL N MG/L	00630 NO2NN03 N-TOTAL MG/L	00671 PHOS-DIS ORTH0 MG/L P
73/04/20	13 20	0000	11.8		40	110	8.30	16	0.050	0.300	0.450	0.007
	13 20	0004	11.3	11.6		140	8.40	17	0.040	0.400	0.450	0.008
	13 20	0015	10.2	11.8		105	8.40	15	0.040	0.300	0.480	0.004
	13 20	0045	7.8	11.4		120	8.60	15	0.060	0.300	0.460	0.009
	13 20	0065	7.6	10.7		115	8.20	18	0.070	0.300	0.440	0.009
73/07/27	13 45	0000	23.2		139	140	7.80	37	0.060	0.300	0.220	0.005
	13 45	0005	23.2	8.5		140	7.70	36	0.050	0.200K	0.250	0.005
	13 45	0015	23.1	8.4		138	7.60	36	0.040	0.200K	0.230	0.004
	13 45	0030	18.8	5.6		114	6.90	33	0.060	0.200K	0.320	0.005
	13 45	0050	16.5	5.6		102	6.70	30	0.060	0.200K	0.340	0.006
	13 45	0071	14.6	1.2		99	6.50	33	0.150	0.300	0.430	0.008
	13 15	0000	17.9	7.2		118	141	6.90	30	0.060	0.400	0.250
13 15	0025	17.8	7.2	141	6.70		30	0.050	0.500	0.240	0.004	
13 15	0054	17.5	6.8	148	6.90		33	0.110	0.600	0.230	0.010	

DATE FROM TO	TIME OF DAY	DEPTH FEET	00665 PHOS-TOT MG/L P	32217 CHLRPHYL A UG/L
73/04/20	13 20	0000	0.033	3.2
	13 20	0004	0.031	
	13 20	0015	0.021	
	13 20	0045	0.028	
	13 20	0065	0.033	
73/07/27	13 45	0000	0.016	5.5
	13 45	0005	0.016	
	13 45	0015	0.015	
	13 45	0030	0.013	
	13 45	0050	0.012	
	13 45	0071	0.049	
	13 15	0000	0.014	
13 15	0025	0.015		
13 15	0054	0.030		

K VALUE KNOWN TO BE
LESS THAN INDICATED

APPENDIX E

TRIBUTARY and WASTEWATER TREATMENT PLANT DATA

STORET RETRIEVAL DATE 75/10/16

3641A1 LS3641A1
 41 30 00.0 078 57 30.0
 SAWMILL RUN
 36 CATTARAUGUS CO
 T/ALLEGHENY RESERVOIR
 WEST BANK PERIMETER RD BRDG
 11EPALES 2111204
 4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
72/11/04	12 00		0.182	0.100K	0.038	0.005K	0.011
72/12/02	11 55		0.190	0.170	0.010	0.005K	0.010
73/01/06	10 50		0.231	0.200	0.025	0.005K	0.007
73/02/03	14 00		0.315	0.110	0.014	0.005K	0.025
73/03/03	10 15		0.280	0.160	0.033	0.007	0.015
73/04/08	11 05		0.252	0.100K	0.018	0.008	0.010
73/04/21	11 00		0.138	0.190	0.019	0.005K	0.010
73/05/06	08 15		0.154	0.340	0.015	0.005K	0.010
73/05/19	10 30		1.000		0.022	0.006	0.025
73/06/03	19 00		0.098	0.420	0.024	0.005K	0.010
73/06/23	11 35		0.198	0.260	0.035	0.020	0.025
73/09/08	10 20		0.061	0.370	0.040	0.005K	0.020
73/10/05	14 25		0.340	0.330	0.030	0.007	

K VALUE KNOWN TO BE
 LESS THAN INDICATED

STORET RETRIEVAL DATE 75/10/16

3641B1 LS3641B1
 42 02 00.0 078 56 30.0
 BONE RUN
 36 CATTARAUGUS CO
 T/ALLEGHENY RESERVOIR
 WEST BANK PERIMETER RD BRDG
 11EPALES 2111204
 4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
72/11/04	11 47		0.140	0.100K	0.073	0.005K	0.015
72/12/02	11 50		0.450	0.250	0.048	0.014	0.045
73/01/06	11 00		0.160	0.120	0.020	0.005K	0.017
73/02/03	13 35		0.280	0.100K	0.017	0.005K	0.035
73/03/03	10 05		0.250	0.500	0.023	0.006	0.025
73/04/08	11 10		0.150	0.120	0.009	0.005K	0.020
73/04/21	10 55		0.126	0.260	0.012	0.005K	0.030
73/05/06	08 30		0.100	0.360	0.014	0.005K	0.025
73/05/19	10 20		0.185	0.310	0.019	0.008	0.035
73/06/03	18 38		0.010K	0.380	0.009	0.010	0.015
73/06/23	11 45		0.250	1.260	0.056	0.005K	0.025
73/09/08	10 28		0.046	0.400	0.027	0.005K	0.025
73/10/05	14 20		0.260	0.420	0.044	0.008	0.075

K VALUE KNOWN TO BE
 LESS THAN INDICATED

STORET RETRIEVAL DATE 75/10/16

3641C1 LS3641C1
 42 06 30.0 078 52 30.0
 COLD SPRING CREEK
 36 CATTARAUGUS CO
 T/ALLEGHENY RESERVOIR
 HWY 17 BRDG
 11EPALES 2111204
 4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
72/11/04	12 19		0.360	0.250	0.052	0.007	0.028
72/12/02	10 05		0.480	0.160	0.011	0.006	0.019
73/01/06	11 02		0.510	0.100K	0.005K	0.005K	0.014
73/02/03	12 30		0.480	0.220	0.018	0.008	0.055
73/03/03	09 05		0.470	0.100K	0.038	0.005K	0.015
73/04/08	11 22		0.360	0.150	0.005K	0.009	0.010
73/04/21	11 55		0.120	0.290	0.016	0.013	0.040
73/05/06	08 45		0.120	0.180	0.008	0.005K	0.010
73/05/19	11 00		0.052	0.160	0.005K	0.005K	0.010
73/06/03	19 35		0.029	0.440	0.007	0.014	0.025
73/06/23	12 00		0.038	0.250	0.009	0.017	0.025
73/10/05	14 40		0.138	0.910	0.034	0.044	0.145

K VALUE KNOWN TO BE
 LESS THAN INDICATED

STORET RETRIEVAL DATE 75/10/16

3641D1 LS3641D1
42 07 00.0 078 48 00.0
ALLEGHENY RIVER
36 CATTARAUGUS CO
1/ALLEGHENY RESERVOIR
HWY 17 BRDG BELO SALAMANACA STP
11EPALES 2111204
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&N03 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
72/11/04	12 35		0.350	0.700	0.100	0.016	0.095
72/12/02	12 20		0.490	0.250	0.075	0.020	0.051
73/01/06	11 20		0.460	0.150	0.042	0.013	0.044
73/02/03	11 35		0.049	0.100K	0.017	0.005K	0.025
73/03/03	08 50		0.600	0.170	0.100	0.018	0.050
73/04/08	11 40		0.390	0.270	0.024	0.007	0.040
73/04/21	11 30		0.294	0.330	0.016	0.015	0.042
73/05/06	09 00		0.280	0.270	0.015	0.014	0.037
73/05/19	10 50		0.014	0.180	0.005K	0.005K	0.010
73/06/03	19 30		0.300	0.330	0.011	0.021	0.055
73/06/23	10 35		0.660	0.905	0.082	0.032	0.170
73/09/07	10 45		0.460	0.480	0.051	0.017	0.100
73/10/05	14 55		0.650	0.260	0.032	0.022	0.067

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 75/10/16

3641D2 LS3641D2
42 09 30.0 078 42 00.0
ALLEGHENY RIVER
36 CATTARAUGUS CO
T/ALLEGHENY RESERVOIR
MAIN ST BRDG ABOV SALAMANACA STP
11EPALES 2111204
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
72/12/02	10 30		0.470	0.420	0.099	0.020	0.056
73/01/06	10 35		0.450	0.200	0.058	0.011	0.042
73/02/03	10 55		0.410	1.000	0.077	0.020	
73/03/03	10 30		0.640	0.290	0.120	0.027	0.060
73/04/08	10 35		0.370	0.260	0.027	0.006	0.045
73/04/21	09 00		0.310	0.420	0.022	0.015	0.045
73/05/06	10 55		0.273	0.370	0.031	0.020	0.055
73/05/12	09 30		0.252	0.440	0.036	0.013	0.085
73/06/03	09 55		0.270	0.460	0.030	0.023	0.065
73/06/23	10 30		0.560	0.930	0.092	0.040	0.160
73/09/07	08 35		0.370	0.670	0.091	0.017	0.150
73/10/05	15 15		0.510	0.350	0.077	0.020	0.080

STORET RETRIEVAL DATE 75/10/16

3641D3 LS3641D3
 42 05 30.0 078 30 00.0
 ALLEGHENY RIVER
 36 CATTARAUGUS CO
 T/ALLEGHENY RESERVOIR
 BRDG W END OF ALLEGHENY ABOVE STP
 11EPALES 2111204
 4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
72/12/02	09 45		0.430	0.460	0.054	0.011	0.031
73/01/06	09 50		0.430	0.100K	0.024	0.008	0.028
73/02/03	10 15		0.399	0.940	0.060	0.019	0.250
73/03/03	09 50		0.490	0.180	0.072	0.017	0.040
73/04/08	10 10		0.350	0.210	0.018	0.005K	0.030
73/04/21	10 00		0.198	0.275	0.025	0.009	0.030
73/05/06	10 15		0.210	0.230	0.020	0.010	0.025
73/05/12	08 45		0.231	0.350	0.021	0.009	0.053
73/06/03	09 15		0.200	0.290	0.017	0.017	0.035
73/06/23	09 50		0.450	0.840	0.080	0.024	0.110
73/09/07	08 00		0.378	0.765	0.150	0.014	0.115
73/10/05	16 00		0.290	0.370	0.160	0.020	0.060

K VALUE KNOWN TO BE
 LESS THAN INDICATED

STORET RETRIEVAL DATE 75/10/16

3641D4 LS3641D4
 42 05 00.0 078 34 30.0
 ALLEGHENY RIVER
 36 CATTARAUGUS CO
 T/ALLEGHENY RIVER
 BRDG SE OF VANDALIA BELO ALLEGHENY STP
 11EPALES 2111204
 4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
72/12/02	09 35		0.500	0.310	0.084	0.015	0.040
73/01/06	10 15		0.490	0.200	0.066	0.010	0.032
73/02/03	10 35		0.410	1.890	0.077	0.019	0.260
73/03/03	10 10		0.580	0.380	0.160	0.024	0.070
73/04/08	10 20		0.390	0.230	0.034	0.005K	0.030
73/04/21	08 40		0.336	0.350	0.058	0.014	0.040
73/05/06	10 30		0.290	0.360	0.054	0.014	0.035
73/05/12	09 00		0.250	0.370	0.044	0.013	0.060
73/06/03	09 25		0.200	1.000	0.017	0.021	0.055
73/06/23	10 05		0.560	1.300	0.110	0.029	0.145
73/09/07	08 15		0.460	0.770	0.138	0.015	0.135
73/10/05	15 45		0.540	0.580	0.365	0.035	0.100

K VALUE KNOWN TO BE
 LESS THAN INDICATED

STORET RETRIEVAL DATE 75/10/16

3641D5 LS3641D5
 42 04 00.0 078 25 30.0
 ALLEGHENY RIVER
 36 CATTARAUGUS CO
 T/ALLEGHENY RESERVOIR
 BRDG IN OLEAN ABOV STP
 11EPALES 2111204
 4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
72/11/04	09 00		0.308	0.600	0.064	0.011	0.100
72/12/02	09 05		0.390	0.180	0.022	0.009	0.027
73/01/06	09 30		0.460	0.170	0.017	0.008	0.029
73/02/03	10 00		0.470	0.740	0.052	0.022	0.185
73/03/03	09 00		0.410	0.370	0.062	0.011	0.045
73/04/08	09 55		0.315	0.190	0.005K	0.005K	0.020
73/04/21			0.294	0.250	0.010	0.010	0.035
73/05/06	10 00		0.250	0.205	0.011	0.011	0.025
73/05/12	08 30		0.210	0.340	0.016	0.009	0.055
73/06/03	09 00		0.189	0.480	0.010	0.014	0.037
73/06/23	09 30		0.510	1.700	0.080	0.019	0.105
73/09/07	09 45		0.310	0.540	0.042	0.007	0.090
73/10/05	16 10		0.154	0.270	0.048	0.013	0.050

K VALUE KNOWN TO BE
 LESS THAN INDICATED

STORET RETRIEVAL DATE 75/10/16

364106
 41 50 17.0 079 00 15.0
 ALLEGHENY RIVER
 36 7.5 CLARENDON
 O/ALLEGHENY RES
 BANK BELO SPILLWAY OF KINZUA DAM
 11EPALES 2111204
 4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
73/05/19	14	25	0.350	0.820	0.037	0.005K	0.015
73/06/10	10	30	0.294	3.300	0.205	0.005K	0.020
73/08/05	11	30	0.210	0.420	0.014	0.005K	0.040
73/09/15	10	00	0.220	0.670	0.150	0.007	0.025
73/10/08	12	00	0.230	1.200	0.168	0.007	0.020
73/11/09	14	30	0.352	0.400	0.080	0.044	0.060
73/12/14	13	00	0.470	0.500	0.030	0.008	0.015
74/01/06	07	00	0.520	0.700	0.050	0.005	0.030
74/02/10	12	00	1.520	0.400	0.060	0.005	0.020
74/02/24	11	00	0.620	0.900	0.160	0.010	0.050
74/03/10	12	00	0.600	0.700	0.155	0.010	0.045
74/03/25	12	30	0.552	0.500	0.100	0.005	0.035
74/04/17	15	00	0.480	0.300	0.040	0.010	0.030

K VALUE KNOWN TO BE
 LESS THAN INDICATED

STORET RETRIEVAL DATE 75/10/16

3641E1 LS3641E1
42 06 30.0 078 45 30.0
RED HOUSE BROOK
36 CATTARAUGUS CO
T/ALLEGHENY RESERVOIR
SOUTHERN TIER EXPRESSWAY
11EPALES 2111204
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
72/11/04	10 57		0.180	0.400	0.037	0.005K	0.022
72/12/02	10 55		0.210	0.100K	0.009	0.005K	0.010
73/01/06	10 10		0.310	0.170	0.019	0.005K	0.011
73/02/03	12 00		0.315	0.210	0.033	0.005K	0.025
73/03/03	09 25		0.350	0.150	0.016	0.005K	0.010
73/04/08	10 30		0.320	0.110	0.005K	0.005K	0.010
73/04/21	11 40		0.220	0.810	0.044	0.005K	0.010
73/05/06	07 00		0.200	0.140	0.009	0.005K	0.010
73/05/19	09 30		0.350	0.205	0.008	0.007	0.010
73/06/03	06 00		0.120	0.170	0.006	0.008	0.015
73/06/23	10 55		0.105	1.400	0.042	0.018	0.020
73/09/08	09 37		0.030	0.420	0.007	0.005K	0.025
73/10/05	13 40		0.039	0.490	0.036	0.006	0.045

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 75/10/16

3641F1 LS3641F1
 42 04 30.0 078 52 30.0
 QUAKER RUN
 36 CATTARAUGUS CO
 T/ALLEGHENY RESERVOIR
 EAST BANK PERIMETER RD BRDG
 11EPALES 2111204
 4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
72/11/04	11 16		0.090	0.320	0.066	0.005K	0.015
72/12/02	11 05		0.790	0.150	0.010	0.005K	0.011
73/01/06	10 25		0.210	0.420	0.014	0.005K	0.011
73/02/03	13 05		0.231	0.100K	0.011	0.005K	0.010
73/03/03	09 45		0.280	0.420	0.038	0.005K	0.005K
73/04/08	10 45		0.250	0.170	0.005K	0.005K	0.005K
73/04/21	10 30		0.210	0.160	0.016	0.005K	0.010
73/05/06	07 20		0.176	0.250	0.016	0.005K	0.005K
73/05/19	09 40		0.240	0.170	0.010	0.006	0.010
73/06/03	06 15		0.130	0.750	0.007	0.008	0.010
73/06/23	11 05		0.130	0.200	0.050	0.005K	0.010
73/09/08	09 50		0.034	0.200	0.037	0.005K	0.010
73/10/05	13 55		0.020	0.220	0.100	0.005K	0.020

K VALUE KNOWN TO BE
 LESS THAN INDICATED

STORET RETRIEVAL DATE 75/10/16

3641G1 LS3641G1
 42 08 30.0 078 45 00.0
 LITTLE VALLEY CREEK
 36 CATTARAUGUS CO
 T/ALLEGHENY RESERVOIR
 HWY 353 BRDG
 11EPALES 2111204
 4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
72/11/04	10	36	0.641	0.730	0.063	0.006	0.032
72/12/02	10	40	1.240	0.110	0.006	0.020	0.020
73/01/06	10	45	0.710	0.100K	0.005K	0.005K	0.015
73/02/03	11	15	0.640	0.140	0.013	0.007	0.045
73/03/03	11	00	1.100	0.200	0.021	0.005K	0.020
73/04/08	10	45	0.560	0.110	0.013	0.005K	0.005K
73/04/21	09	15	0.650	0.140	0.034	0.005K	0.010
73/05/06	11	15	0.500	0.210	0.014	0.005K	0.010
73/05/12	09	30	0.470	0.160	0.005K	0.005K	0.020
73/06/03	10	41	0.440	0.690	0.014	0.007	0.020
73/06/23	10	45	0.590	0.920	0.072	0.034	0.155
73/08/04	10	30	2.020	0.540	0.012	0.005K	0.025
73/09/08	08	45	2.100	0.190	0.017	0.005K	0.015
73/10/05	13	30	1.860	0.140	0.036	0.005K	0.010

K VALUE KNOWN TO BE
 LESS THAN INDICATED

STORET RETRIEVAL DATE 75/02/03

3641H1
 41 59 48.0 078 59 05.0
 S BRANCH ST LINE RUN
 36 7.5 CORNPLANTER
 T/ALLEGHENY RES
 RD 61037 BRDG S OF PA-NY BORDER
 11EPALES 2111204
 4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
73/05/19	13 30		0.340	2.200	0.110	0.005K	0.005K
73/06/10	09 30		0.400	0.200	0.042	0.005K	0.010
73/08/05	10 30		0.315	0.520	0.021	0.010	0.010
73/09/15	11 00		0.357		0.009	0.005K	0.020
73/10/08	11 00		0.290	0.850	0.040	0.005K	0.005K
73/11/09	12 30		0.610	0.750	0.028	0.005K	0.030
73/12/12	17 00		0.540	1.000	0.352	0.005K	0.005
74/01/06	06 30		0.720	0.600	0.030	0.005K	0.005K
74/02/24	10 00		1.010	0.600	0.135	0.010	0.025
74/03/10	11 30		0.880	0.400	0.026	0.005K	0.015
74/03/25	11 00		0.660	0.800	0.040	0.005	0.010
74/04/17	15 50		0.552	0.100	0.030	0.005K	0.010

K VALUE KNOWN TO BE LESS
 THAN INDICATED

STORET RETRIEVAL DATE 75/02/03

3641J1
41 59 00.0 078 54 00.0
WILLOW CREEK
36 7.5 CORNPLANTER
T/ALLEGHENY RES
HWY 346 BRDG .8 MI WNW OF JCT HWY 321
11EPALES 2111204
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
73/05/19	12 05		0.130	1.260	0.054	0.005K	0.010
73/06/10	09 00		0.168	0.290	0.015	0.005K	0.015
73/08/05	10 00		0.105	0.120	0.010	0.007	0.010
73/09/15	12 00		0.030	0.260	0.006	0.005K	0.010
73/10/08	10 00		0.015	0.550	0.017	0.005K	0.005K
73/11/09	11 30		0.252	0.250	0.044	0.005K	0.035
73/12/14	18 00		0.240	0.100K	0.016	0.005K	0.005
74/01/06	06 00		0.450	0.800	0.030	0.005K	0.005
74/02/10	10 00		0.440	0.600	0.020	0.005K	0.005K
74/02/24	09 00		0.510	0.360	0.360	0.010	0.035
74/03/10	11 00		0.480	0.600	0.040	0.010	0.020
74/03/25	11 00		0.384	1.100	0.040	0.005	0.025
74/04/17	15 30		0.380	0.300	0.130	0.005K	0.015

K VALUE KNOWN TO BE LESS
THAN INDICATED

STORET RETRIEVAL DATE 75/02/03

3641K1
 41 53 30.0 078 53 16.0
 N BRANCH SUGAR RUN
 36 7.5 CORNPLANTER
 T/ALLEGHENY RES
 HWY 321 AT MOUTH OF STREAM
 11EPALES 2111204
 4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
73/05/19	11 40		0.200	0.120	0.022	0.005K	0.005K
73/06/10	10 50		0.280	1.640	0.058	0.005K	0.015
73/08/05	20 10		0.210	1.680	0.084	0.006	0.015
73/09/08	19 30		0.138	1.200	0.038	0.006	0.015
73/10/11	17 45		0.010K	1.200	0.032	0.005K	0.005K
73/11/10	13 40		0.352	0.525	0.020	0.005K	0.005K
73/12/14	16 00		0.336	0.700	0.040	0.005K	0.005K
74/01/15	17 00		0.480	0.750	0.040	0.005K	0.005
74/02/10	13 00		0.520	1.300	0.035	0.005K	0.005K
74/02/24	10 58		0.610	0.400	0.060	0.010	0.025
74/03/09	13 40		1.200	0.300	0.030	0.010	0.010
74/03/30	12 00		0.352	0.500	0.025	0.005K	0.010
74/04/17	18 40		0.470	0.100	0.035	0.005K	0.010

K VALUE KNOWN TO BE LESS
 THAN INDICATED

STORET RETRIEVAL DATE 75/02/03

3641L1
 41 53 00.0 078 52 45.0
 SUGAR RUN
 36 7.5 CORNPLANTER
 T/ALLEGHENY RES
 RD XING JUST S OF HWY 321
 11EPALES 2111204
 4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
73/05/19	11 30		0.378	0.100K	0.011	0.005K	0.005K
73/08/05	21 00		0.220	0.420	0.030	0.005K	0.010
73/09/08	19 20		0.115	0.160	0.062	0.005K	0.010
73/10/11	17 30		0.011	0.300	0.038	0.005K	0.005K
73/11/10	13 30		0.540	0.600	0.028	0.005K	0.025
73/12/14	16 15		0.510	1.200	0.028	0.005K	0.005K
74/01/06	15 25		0.740	1.100	0.035	0.005K	0.005
74/02/10	12 50		0.672	0.900	0.045	0.005K	0.005K
74/02/24	10 50		0.900	0.700	0.035	0.010	0.025
74/03/09	13 50		1.010	0.300	0.020	0.010	0.010
74/03/30	12 15		0.590	1.400	0.055	0.005	0.010
74/04/17	19 10		0.670	0.300	0.025	0.005K	0.015

K VALUE KNOWN TO BE LESS
 THAN INDICATED

STORET RETRIEVAL DATE 75/02/03

3641M1
 41 48 50.0 078 52 10.0
 CHAPPEL FORK
 36 MCKEAN CO MAP
 T/ALLEGHENY RES
 BANK OFF RD 42003 .3 MI W JCT RD T558
 11EPALES 2111204
 4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
73/05/19	10 45		0.457	0.540	0.029	0.005K	0.005K
73/06/10	10 05		0.470	0.660	0.074	0.005K	0.010
73/08/08	20 30		0.378	0.285	0.017	0.005	0.010
73/09/08	19 05		0.200	0.180	0.040	0.005K	0.010
73/10/11	17 15		0.087	1.400	0.037	0.005K	0.005K
73/11/10	14 00		0.570	0.300	0.012	0.005K	0.020
73/12/14	17 00		0.600	0.600	0.024	0.005K	0.005K
74/03/09	14 15		1.010	1.300	0.055	0.005	0.010
74/03/30	13 00		0.680	0.500	0.045	0.005K	0.010
74/04/17	18 10		0.730	0.200	0.025	0.005K	0.020

K: VALUE KNOWN TO BE LESS
 THAN INDICATED

STORET RETRIEVAL DATE 75/02/03

3641N1
 41 46 50.0 078 49 34.0
 KINZUA CREEK
 36 7.5 WESTLINE
 T/ALLEGHENY RES
 BANK OFF RD 2.5 MI W OF WESTLINE
 11EPALES 2111204
 4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
73/05/19	09 30		0.210	1.470	0.048	0.005K	0.005K
73/06/10	08 45		0.231	3.300	0.140	0.005K	0.015
73/08/05	20 00		0.138	0.140	0.022	0.008	0.010
73/09/08	18 30		0.039	0.960	0.028	0.005K	0.010
73/10/11	16 40			0.500	0.027	0.005K	0.010
73/11/10	14 30		0.312	0.250	0.028	0.005K	0.025
73/12/19	16 00		0.368	0.400	0.024	0.005K	0.005
74/03/09	12 00		0.580	0.200	0.025	0.005	0.030
74/03/26	11 00		0.384	0.600	0.055	0.005	0.010
74/04/17	17 00		0.390	0.500	0.045	0.005K	0.020

K VALUE KNOWN TO BE LESS
 THAN INDICATED

STORET RETRIEVAL DATE 75/02/03

3641P1
 41 45 10.0 078 51 58.0
 S BRANCH KINZUA CREEK
 36 7.5 WESTLINE
 T/ALLEGHENY RES
 RD BRDG .2 MI E OF JCT WITH HWY 321
 11EPALES 2111204
 4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
73/05/19	10 50		0.300	1.300	0.072	0.020	0.030
73/06/10	09 30		0.350	2.730	0.120	0.021	0.050
73/08/05	20 10		0.370	0.890	0.035	0.048	0.080
73/09/08	18 50		0.231	3.000	0.040	0.065	0.100
73/10/11	17 00		0.138	1.400	0.046	0.052	0.080
73/11/10	14 05		0.490	0.300	0.036	0.028	0.100
74/03/09	12 30		0.700	0.400	0.055	0.010	0.050
74/03/26	12 00		0.528	0.300	0.045	0.020	0.040
74/04/17	17 30		0.440	0.100	0.030	0.005K	0.025

K: VALUE KNOWN TO BE LESS
 THAN INDICATED

STORET RETRIEVAL DATE 75/02/27

364156 1F364156 PC01950
42 13 30.0 078 17 00.0
CUBA
36 1.250000 BUFFALO
T/ALLEGHENY RESERVOIR
OIL CREEK/OLEAN CREEK/ALLEGHENY RIVER
11EPALES 2141204
+ 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50651 FLOW RATE INST MG/D	50053 CONDUIT FLOW-MGD MONTHLY
73/01/31	07 30								
CP(T)-			0.700	11.500	1.400	5.050	6.400	0.419	0.578
73/01/31	14 30								
73/02/22	07 30								
CP(T)-			0.390	6.300	2.300	4.200	4.600	0.427	
73/02/22	12 30								
73/03/30	07 30								
CP(T)-			0.760	6.300	0.550	3.500	5.250	0.656	0.750
73/03/30	12 30								
73/04/24	07 30								
CP(T)-			0.600	9.200	1.500	3.700	5.000	0.551	0.600
73/04/24	12 30								
73/07/06	07 00								
CP(T)-			0.480	8.700	0.270	3.400	4.500	0.385	
73/07/06	12 00								
73/07/26	07 30								
CP(T)-			0.820	8.800	0.220	2.500	3.900	0.507	0.410
73/07/26	13 30								
73/08/15	13 00		0.630	8.600	0.500	1.980	3.900	0.399	0.394
73/09/16	13 00		1.940	8.300	0.160	3.200	4.200	0.254	0.390
73/10/03	13 00		2.300	11.600	0.290	3.900	4.900	0.344	0.400
73/11/12	16 00		1.100	7.400	0.230	2.600	3.200	0.446	0.450
73/12/13	13 00		1.470	8.800	0.130	2.800	4.200	0.539	0.522
74/01/25	13 20		1.760	4.800	0.130	1.560	2.250	0.950	0.520
74/02/20	13 00		0.560	7.200	1.680	3.700	4.800	0.438	0.501

STORET RETRIEVAL DATE 75/02/27

364154 PR364154 P02150
 42 04 30.0 078 10 30.0
 ULCAN
 36 1.250000 BUFFALO
 17ALLEGHENY RESERVOIR
 ALLEGHENY RIVER
 11EPALES 2141204
 4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
73/01/31	09 30		0.680	13.000	1.580	1.260	2.150	2.400	2.600
73/02/28	13 45		0.880	23.000	2.900	2.600		1.470	2.570
73/03/31	15 00		1.050	12.600	0.830	1.100	2.500	2.330	1.100
73/04/30	14 00		0.440	11.000	0.590	1.050	2.500	3.420	4.190
73/06/05	11 00		0.231	12.000	1.200	1.060	2.500	3.360	3.360
73/06/30	11 30		0.010K	12.000	2.350	0.712	2.200	5.040	2.870
73/08/03	09 25		0.400	12.000	1.260	1.180	2.590	3.890	4.420
73/09/04	10 15		0.050	15.100	3.600	1.160	2.300	3.290	3.510
73/10/11	10 45		0.340	18.500	4.200	1.500	3.600	2.620	3.090
73/11/08	11 15		0.480	16.500	2.250	1.500	2.700	3.290	3.340
74/01/31	11 30		0.840	9.700	2.520	0.690	3.200	3.700	3.600
74/03/06	11 15		1.520	19.000	1.150	1.250	3.000	3.150	4.200

K VALUE KNOWN TO BE
 LESS THAN INDICATED

STORET RETRIEVAL DATE 75/02/27

364155 1P364155 P001450
 42 02 30.0 078 20 30.0
 PORTVILLE
 36 1.250000 BUFFALO
 1/ALLEGHENY RESERVOIR
 DODGE CREEK/ALLEGHENY RIVER
 11EPALES 2141204
 4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
73/01/09	09 00							0.302	0.350
73/02/07	08 30		2.500	4.200	0.850	0.480	0.890	0.441	0.300
73/03/07	08 15		1.900	15.000	2.200	1.470	2.750		0.280
73/04/11	08 00		2.300	36.000	0.990	0.530	0.800	0.605	0.600
73/06/13	08 10		1.140	8.100	2.350	0.990	1.800	0.292	0.525
73/07/10	08 30		0.200	11.000	1.470	1.050	2.100	0.430	0.378
73/08/06	09 00		0.100	13.600	0.870	0.635	2.200	0.400	
73/09/12	08 00		0.120	7.500	1.040	1.100	2.400	0.120	
73/10/09	09 00		0.050	5.550	0.320	1.380	2.650	0.113	0.116
73/11/13	08 00		0.500	4.200	0.140	0.660	1.650	0.226	0.201
73/12/12	10 25		0.600	12.500	0.530	1.150	1.900	0.252	0.220

STORET RETRIEVAL DATE 75/02/27

364156 AS364156 2009250
 42 09 30.0 078 42 00.0
 SALAMANCA
 36 1.250000 BUFFALO
 T/ALLEGHENY RESERVOIR
 ALLEGHENY RIVER
 11EPALES 2141204
 4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
73/12/18	07 00								
CP(T)-			2.500	4.400	0.040K	1.640	2.300	1.200	1.000
73/12/18	15 30								

K: VALUE KNOWN TO BE
 LESS THAN INDICATED

STORET RETRIEVAL DATE 75/02/24

3641DA A53641DA P001063
 41 56 53.0 078 23 07.0
 BOROUGH OF ELKHED
 36 MCKEAN COUNTY
 T/ALLEGHENY RESERVOIR
 ALLEGHENY RESERVOIR
 11EPALES 2141204
 4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
73/08/08	07 00								
CP(T)-			9.000	0.540	0.100	2.500	4.500	0.167	0.150
73/08/08	15 00								
73/09/12	06 00								
CP(T)-			19.000	2.300	0.215	3.990	4.600	0.191	0.150
73/09/12	14 00								
73/10/11	06 00								
CP(T)-			19.800	0.750	0.230	5.000	5.500	0.187	0.165
73/10/11	14 00								
73/11/12	05 00								
CP(T)-			11.600	0.500K	0.120	2.600	4.800	0.231	0.200
73/11/12	13 00								
74/01/09	05 00								
CP(T)-			1.520	8.700	3.000	1.560	2.700	0.423	0.220
74/01/09	13 00								
74/02/12	05 00								
CP(T)-			1.160	14.000	2.730	2.100	4.100	0.212	0.225
74/02/12	13 00								
74/03/19	05 00								
CP(T)-			3.300	3.600	0.320	0.870	1.700	0.396	0.325
74/03/19	13 00								
74/04/11	05 00								
CP(T)-			1.480	1.000K	0.410	0.430	0.630	0.592	0.450
74/04/11	13 00								
74/05/13	05 00								
CP(T)-			1.760	3.800	0.730	0.450	0.860	0.462	0.245
74/05/13	12 00								
74/06/12	06 00								
CP(T)-			10.450	5.400	0.515	2.250	3.400	0.198	0.185
74/06/12	14 00								
74/07/23	05 00								
CP(T)-			13.500	2.000	0.320	2.700	3.300	0.170	0.181
74/07/23	13 00								
74/09/04	07 00								
CP(T)-			7.920	2.000	0.260	1.050	1.365	0.459	0.149
74/09/04	14 00								

K VALUE KNOWN TO BE
 LESS THAN INDICATED

STORET RETRIEVAL DATE 75/02/24

354106
41 48 00.0 078 02 00.0
DAMASCUS TANNING COMPANY
36 7.5 COUDERSPORT
T/ALLEGHENY RESERVOIR
ALLEGHENY RIVER
11EPALES

2141204
0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
73/06/29	10 30		0.240	73.000	28.000	0.290	1.400	0.100	0.066
73/08/31	09 30					0.670	1.470	0.100	0.066
73/09/28	09 00						2.600	0.100	0.066
73/10/31	10 00			92.000			2.400	0.100	0.066
73/11/28	10 45			135.000			1.300	0.100	0.066
74/01/07	11 00			165.000			1.050	0.100	0.066
74/03/07	10 45							0.100	0.066
74/03/29	15 00							0.100	0.066
74/04/30	09 15		1.320	290.000	66.000		1.100	0.100	0.066
74/05/31	14 30			270.000			2.400	0.100	0.066
74/06/28	10 30		0.048	105.000	51.000	0.250	2.100	0.100	0.067

STORED RETRIEVAL DATE 75/02/24

354100 NO364100 P000000*
 41 48 00.0 078 16 38.0
 PITTSBURGH CORNING CORPORATION
 36 MCKEAN COUNTY
 T/ALLEGHENY RESERVOIR
 ALLEGHENY RIVER
 11EPALES
 4 2141204
 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2-NH3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
73/07/30	13 35		0.980	0.140	0.066	0.070	0.110	0.110	0.110
73/08/28	13 30		0.970	0.140	0.091	0.060	0.060	0.110	0.110
73/09/27	14 05		1.200	1.000K	0.040	0.210	0.670	0.110	0.110
74/06/05	10 00		1.160	1.000K	0.050K	0.030	0.073	0.110	0.110
74/07/03	09 30		0.880	1.000K	0.070	0.040	0.050K	0.110	0.110
74/08/01	10 00		0.960	1.000K	0.110	0.090	0.025	0.110	0.110
74/08/29	10 30		0.040	2.300	0.050K	0.050K	0.062	0.110	0.110
74/09/27	10 30		1.000	0.500K	0.140	0.045	0.030	0.110	0.110
74/10/24	14 00		1.040	1.000K	0.050K	0.087		0.110	0.110
74/11/25	13 30		0.960	1.000K	0.150	0.140	0.100K	0.110	0.110
74/12/23	09 00		1.040		0.084	0.200		0.110	0.110
75/01/20	10 00							0.110	0.110

K VALUE KNOWN TO BE
 LESS THAN INDICATED

STORET RETRIEVAL DATE 75/02/24

35410E PD36410E P000500*
 41 48 50.0 078 16 33.0
 PIERCE GLASS COMPANY
 35 MCKEAN COUNTY
 T/ALLEGHENY RESERVOIR
 ALLEGHENY RIVER
 IIEPALES 2141204
 4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
73/07/26	10 55		0.630	0.360	0.240	0.026	0.050	0.223	0.223
73/08/08	10 45		0.830	0.340		0.044	0.060	0.223	0.223
73/09/04	14 45		1.140	1.000			0.060	0.223	0.223
73/10/01	00 00		0.700	0.580	0.027	0.068	0.085	0.223	0.223
73/10/30	13 15		0.840	1.000	0.150	0.110	0.400	0.223	0.223
73/11/30	14 00		0.880	0.500K	0.010K	0.180	0.490	0.223	0.223
74/01/02	15 30		1.400	0.500K	0.100	0.190		0.223	0.223
74/02/04	14 45		0.040	1.000K	0.040K		0.120	0.223	0.223
74/02/28	14 00		1.120	1.000	0.069		0.050K	0.223	0.223
74/04/01	15 30		0.760	1.000K	0.080	0.083	0.300	0.223	0.223
74/04/25	14 30		0.560	2.800	0.180	0.079	0.140	0.223	0.223

K VALUE KNOWN TO BE
 LESS THAN INDICATED

STORET RETRIEVAL DATE 75/02/24

3541DF AS3641DF P003750
 41 44 00.0 078 00 00.0
 COUDERSPORT WASTEWATER TREATMENT
 36 POTTER COUNTY
 T/ALLEGHENY RESERVOIR
 ALLEGHENY RIVER
 11EPALES 2141204
 4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KjEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
73/12/04	10 30		1.470	7.500	0.205	1.280	1.800	0.491	0.450
74/01/14	10 30		0.160	14.500	7.600	1.560	2.100	0.678	0.690
74/02/08	10 30		1.000	17.000	5.800	0.910	1.900	0.756	0.725
74/03/04	10 15		1.440	9.000	3.130	0.535	1.200	0.757	0.650
74/04/16	10 30		1.680	8.700	2.600	0.550	1.250	0.820	0.800
74/05/16	10 45		1.320	8.600	2.100	0.490	1.450	0.800	0.730
74/06/12	11 00		0.120	44.000	18.000	2.500	5.000	0.380	0.500
74/07/10	11 00		0.400	6.300	1.400	1.200	1.200	0.700	0.800
74/08/08	11 00		0.160	22.000	10.000	1.550	2.100	0.580	0.750
74/09/09	11 00		0.720	18.000	9.400	0.980	1.650	0.550	0.750
74/10/09	11 00		0.280	15.000	6.730	1.250	1.700	0.600	0.750
74/11/11	11 00		0.160	16.000	9.000	1.200	1.450	0.700	0.650
74/12/10	11 00		1.920	9.300	2.800	0.400	1.200	0.750	0.750

STORET RETRIEVAL DATE 75/02/24

36415A TF36415A P002500
 41 39 15.0 078 49 30.0
 BOROUGH OF KANE S.T.P. (PINE ST)
 36 MCKEAN COUNTY
 1/ALLEGHENY RESERVOIR
 WEST RUN
 11EPALES 2141204
 4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00635 NO2&NO3 N-TOTAL MG/L	00625 TOT NJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
73/07/16	08 00		3.400	11.000	2.600	3.400	4.600	0.352	0.371
73/09/04	08 00		2.420	11.000	1.320			0.202	0.226
73/11/30	10 00		2.940	4.800	2.200	1.470	2.300	0.488	0.342
73/12/28	08 00		2.950	2.500	0.890	0.380	0.610	0.684	0.523
74/01/31	11 00		1.480	4.500	3.400	1.040	2.900	0.438	0.615
74/04/05	11 00		1.360	3.300	1.550	0.510	0.760	1.540	0.722
74/05/03	13 30		0.520	13.000	5.900	1.880	2.700	0.471	0.792
74/06/14	15 00		4.900	17.000	7.700	3.750	5.000	0.267	0.483

STORET RETRIEVAL DATE 75/02/24

364114 TF364114 P002500
 41 40 39.0 078 48 27.0
 BOROUGH OF KANE S.T.P. (KINZUA RD
 36 MCKANN COUNTY
 T/ALLEGHENY RESERVOIR
 ROBERT RUN/S. BRANCH KINZUA CREEK
 11EPALES 2141204
 4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00633 NH3-N TOTAL MG/L	00625 TOT KjEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTH0 MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
73/07/16	09 00		1.960	10.500	4.400	4.800	6.100	0.314	0.353
73/09/04	09 00		4.300	12.600	2.100			0.238	0.242
73/11/30	09 00		5.000	5.300	1.900	1.470	2.600	0.500	0.437
73/12/28	09 00		2.700	2.900	1.150	0.590	0.790	0.836	0.618
74/01/31	10 00		1.480	4.900	3.600	1.800	3.900	0.516	0.626
74/04/05	10 30		1.480	5.700	1.400	0.640	1.000	1.210	0.858
74/05/03	11 00		0.600	11.000	5.000	2.400	3.450	0.475	0.625
74/06/14	10 00		5.300	14.000	4.700	4.900	5.800	0.295	0.478

STORET RETRIEVAL DATE 75/02/24

3641VA AS3641VA P000050
 41 02 00.0 078 26 30.0
 MCKEAN COMPANY (CLEARFIELD)
 36 7.5 CLEARFIELD
 T/ALLEGHENY RESERVOIR
 THREE MILE RUN/ALLEGHENY RIVER
 11EPALES 2141204
 4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
73/09/17	12 00		20.000	0.500K	0.080K	0.740	1.000	0.005	
73/10/17	14 00		21.000	0.500K	0.025	0.670	0.870		
73/11/16	14 00		22.000	11.500	6.300	0.210	1.200	0.001	0.001
73/12/17	12 30		32.000	4.700	2.940	0.260	0.670		
74/01/18	11 00		36.000	7.300	4.100	0.220	2.500		0.001
74/02/19	11 00		12.600	20.000	9.700	0.750	1.750	0.001	
74/03/15	11 00		0.400	44.000		0.050K	4.000	0.005	0.001
74/04/17	11 00		0.520	52.000	47.200	0.500	2.600	0.001	
74/05/17	13 00		0.120	74.000	47.200	0.290	2.400	0.001	
74/06/17	11 00		0.640	60.000	40.000	0.470	2.200		0.001
74/07/17	10 00		0.120	48.000	0.390	0.380	2.200		0.001
74/08/19	11 30		4.500	39.000	25.000	0.170	1.500		
74/09/17	13 00		19.200	24.500	10.500	0.447	1.760		

K VALUE KNOWN TO BE
 LESS THAN INDICATED

STORET RETRIEVAL DATE 75/02/24

3541WB N03641WB P000000*
 41 57 19.0 078 38 32.0
 W.R. CASE AND SONS CUTLERY CO.
 36 MCKEAN COUNTY
 1/ALLEGHENY RESERVOIR
 TONONEWANT CREEK/ALLEGHENY RIVER
 11EPALES 2141204
 4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 N026N03 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
73/06/27	14	30	0.378	1.190	0.170	0.120	0.160	0.010	0.010
73/08/27	14	00	0.270	0.130	0.130	0.050	0.092	0.010	0.010
73/09/27	10	00	0.240	0.200	0.230	0.066	0.135	0.010	0.010
73/10/25	10	30	0.080	0.200	0.315	0.210	2.700	0.010	0.010
73/11/25	10	00	0.340	0.430	0.220	0.150	0.180	0.010	0.010
73/12/27	13	00	0.400	0.770	0.260	0.130		0.010	0.010
74/01/29	09	00	0.520	0.500K	0.270	0.063	0.130	0.010	0.010
74/02/27	09	30	0.560	1.000K	0.250	0.240	0.900	0.010	0.010
74/03/27	09	30	1.000	1.000K	0.170	0.140	0.170	0.010	0.010
74/04/30	08	30	0.680	1.000K	0.360	0.210	0.320	0.010	0.010
74/05/28	08	30	0.585	1.200	0.160	0.140	0.230	0.010	0.010
74/06/27	09	30	0.400	1.000K	0.317	0.290	0.420	0.010	0.010

K VALUE KNOWN TO BE
 LESS THAN INDICATED

STORET RETRIEVAL DATE 75/02/24

3641WC N03641WC P000000*
 41 54 27.0 078 39 00.0
 ZIPPO MFG COMPANY (BRAUFORD)
 36 MCKEAN COUNTY
 T/ALLEGHENY RESERVOIR
 EAST BRANCH TUNENEWANT CR/ALLEGHENY RIV
 11EPALES 2141204
 4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 N02&N03 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
73/08/07	11 00								
CP(T)-			0.440	0.800	0.530		0.075	0.018	0.012
73/08/07	14 00								
73/09/10	11 00								
CP(T)-			0.340	5.100	2.060	0.120	0.540	0.018	0.012
73/09/10	14 00								
73/10/10	11 00								
CP(T)-			0.154	2.400	1.360	0.086	0.270	0.018	0.012
73/10/10	14 00								
73/11/09	11 00								
CP(T)-			0.330	0.500K	0.240	0.094	0.110	0.018	0.012
73/11/09	14 00								
73/12/11	11 00								
CP(T)-			0.580	0.500K	0.260	0.160	0.190	0.018	0.012
73/12/11	14 00								
74/02/12	11 00								
CP(T)-			0.800	1.300	0.260	0.110	0.310	0.018	0.012
74/02/12	14 00								
74/03/12	11 00								
CP(T)-			0.040	1.200	0.050K	0.050K	0.120	0.018	0.012
74/03/12	14 00								
74/04/15	11 00								
CP(T)-			0.880	1.000K	0.690	0.040	0.270	0.018	0.012
74/04/15	14 00								
74/05/15	11 00								
CP(T)-			0.840	2.300	0.840	0.070	0.170	0.018	0.012
74/05/15	14 00								
74/06/12	11 00								
CP(T)-			0.720	1.000K	0.280	0.066	0.170	0.018	0.012
74/06/12	14 00								
74/08/13	11 00								
CP(T)-			0.540	2.200	0.580	0.164	0.290	0.018	0.012
74/08/13	14 00								
74/09/12	10 30								
CP(T)-			0.400	0.580	0.580	0.030	0.040	0.018	0.012
74/09/12	13 30								

K VALUE KNOWN TO BE
 LESS THAN INDICATED

STORET RETRIEVAL DATE 15/12/24

3541A AS3541A P000450
 41 48 00.0 078 02 00.0
 CHAS. COLE MEMORIAL HOSPITAL
 35 7.5 SHINGLEHOUSE
 T/ALLEGHENY RESERVOIR
 MILL CREEK/ALLEGHENY RIVER
 11EPALES 2141204
 4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KjEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
73/07/09	09 30		4.300	12.600	2.300	4.960	6.600	0.019	0.018
73/08/10	10 00		5.700	1.380	0.180	4.500	4.900	0.019	0.017
73/09/10	10 00		8.500	3.900	0.140	4.210	4.400	0.019	0.019
73/10/10	10 00		9.350	0.850	0.150	4.650	5.250	0.018	0.020
73/11/11	10 30		17.000	2.400	0.230	6.200	7.100	0.021	0.020
73/12/11	10 30		7.600	2.900	0.059	9.000	9.000	0.019	0.020
74/03/28	08 00								
CP(T)-			6.900	4.500	0.120	6.900	8.000	0.021	0.020
74/03/28	14 00								
74/07/22	11 00		9.650	10.000	1.600	5.000	5.900	0.021	0.018
74/08/30	12 30		6.750	8.000	0.100	5.700	6.300	0.021	0.018
74/09/26	10 00		20.500	4.500	0.350	7.450	7.975	0.021	0.020
74/11/26	10 00		16.400	5.200	0.410	7.650	9.700	0.021	0.020

STORET RETRIEVAL DATE 75/02/24

3641ZA AS3641ZA P001883
 41 49 31.0 078 25 42.0
 SMETHPORT
 36 MCKEAN COUNTY
 T/ALLEGHENY RESERVOIR
 POTATO CREEK/ALLEGHENY RIVER
 11EPALES 2141204
 4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
73/06/19	10 00								
CP(T)-			2.400	2.030	0.525	2.000	2.400	0.300	0.290
73/06/19	14 30								
73/07/19	10 00								
CP(T)-			0.690	4.500	0.670	3.570	4.000	0.290	0.270
73/07/19	14 30								
73/08/20	10 30								
CP(T)-			4.200	0.154	0.154	2.080	2.100	0.300	0.270
73/08/20	14 30								
73/09/19	10 30								
CP(T)-			2.000	1.800	0.570	2.200	2.400	0.360	0.190
73/09/19	14 30								
73/10/19	10 30								
CP(T)-			1.470	3.500	0.154	2.100	2.500	0.303	0.323
73/10/19	14 30								
73/11/16	10 30								
CP(T)-			5.600	2.400	0.300	1.500	1.900	0.346	0.323
73/11/16	14 30								
73/12/19	10 30								
CP(T)-			4.800	3.500	0.770	0.580	1.000	0.383	0.384
73/12/19	14 30								
74/01/18	10 30								
CP(T)-			3.610	7.700	0.925	1.090	1.600	0.354	0.353
74/01/18	14 30								
74/02/18	10 30								
CP(T)-			4.000	2.600	1.700	1.520	1.800	0.330	0.366
74/02/18	14 30								
74/03/18	10 30								
CP(T)-			3.120	1.000K	0.790	1.250	1.500	0.320	0.319
74/03/18	14 30								
74/04/18	10 30								
CP(T)-			3.200	2.000	0.670	0.970	1.250	0.370	0.375
74/04/18	14 30								
74/05/16	10 30								
CP(T)-			3.300	3.500	0.270	0.930	1.400	0.382	0.368
74/05/16	14 30								

K: VALUE KNOWN TO BE
 LESS THAN INDICATED

STORET RETRIEVAL DATE 75/02/24

36412A AS36412A P001883
 41 49 31.0 078 25 42.0
 SMTIMPORT
 35 MCKEAN COUNTY
 17 ALLEGHENY RESERVOIR
 POTATO CREEK/ALLEGHENY RIVER
 11EPALES 2141204
 4 0000 FEET DEPTH

DATE	TIME	DEPTH	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHOP MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
FROM	OF	JAY FEET							
TO									
74/06/18	10	30							
CP(T)-			4.000	2.000	0.440	1.050	1.350	0.360	0.360
74/06/18	14	30							

STORET RETRIEVAL DATE 75/02/24

364124
 41 51 25.0 073 26 58.0
 JOHNSON STATE OIL REFINING CORP.
 35 MCKEAN COUNTY
 1/ALLEGHENY RESERVOIR
 POTATO CREEK/ALLEGHENY RIVER
 116PALES 2141204
 4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2+NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORPHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
73/06/27	11 00		0.095	0.100K	0.018	0.082	0.120	5.760	5.960
73/07/27	08 30		0.070	0.340	0.100	0.039	0.076	7.210	7.000
73/08/27	08 30		0.125	0.100K	0.034	0.062	0.100	0.701	7.060
73/09/27	08 00		0.150	0.140	0.010	0.030	0.080	6.370	6.060
73/11/27	11 00		0.100	0.250	0.053	0.100	0.115	5.820	5.900
73/12/20	08 30		0.320	0.500K	0.047	0.150	0.210	5.870	5.910
74/01/24	11 00		0.280	0.500K	0.091	0.110	0.110	6.100	6.190
74/02/27	08 30		0.150	1.000K	0.050K	0.120	2.800	4.920	5.950
74/05/07	09 00		0.320	1.000K	0.110	0.110	0.300	7.780	6.270
74/06/05	09 00		0.120	1.000K	0.050K	0.110	0.150	7.660	6.270
74/07/06	08 00		0.200	1.000K	0.078	0.110	0.110	8.640	6.270
74/08/08	09 00		0.080	1.000K	0.050K	0.085	0.130	7.690	6.270

K VALUE KNOWN TO BE
 LESS THAN INDICATED