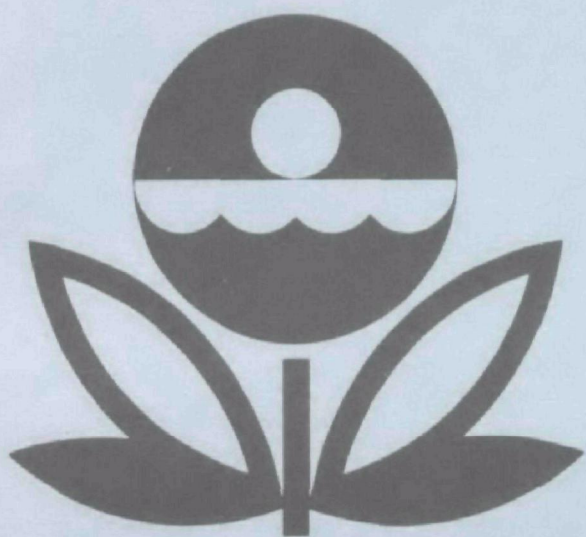


**U.S. ENVIRONMENTAL PROTECTION AGENCY
NATIONAL EUTROPHICATION SURVEY**

WORKING PAPER SERIES



REPORT
ON
SACANDAGA RESERVOIR
FULTON AND SARATOGA COUNTIES
NEW YORK
EPA REGION II
WORKING PAPER No. 167

PACIFIC NORTHWEST ENVIRONMENTAL RESEARCH LABORATORY

An Associate Laboratory of the

NATIONAL ENVIRONMENTAL RESEARCH CENTER - CORVALLIS, OREGON

and

NATIONAL ENVIRONMENTAL RESEARCH CENTER - LAS VEGAS, NEVADA

REPORT
ON
SACANDAGA RESERVOIR
FULTON AND SARATOGA COUNTIES
NEW YORK
EPA REGION II
WORKING PAPER No. 167

WITH THE COOPERATION OF THE
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
AND THE
NEW YORK NATIONAL GUARD
NOVEMBER, 1974

CONTENTS

	<u>Page</u>
Foreword	ii
List of New York Study Lakes	iv
Lake and Drainage Area Map	v
 <u>Sections</u>	
I. Conclusions	1
II. Lake and Drainage Basin Characteristics	3
III. Lake Water Quality Summary	5
IV. Nutrient Loadings	9
V. Literature Reviewed	15
VI. Appendices	16

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 for professional involvement and to the New York National Guard for conducting the tributary sampling phase of the Survey.

Henry L. Diamond, Commissioner of the New York Department of Environmental Conservation, and Leo J. Hetling, Director, and Italo G. Carcich, Senior Sanitary Engineer, Environmental Quality Research, Department of Environmental Conservation, provided invaluable lake documentation and counsel during the Survey.

Major General John C. Baker, the Adjutant General of New York, and Project Officer Lieutenant Colonel Fred Peters, who directed the volunteer efforts of the New York National Guardsmen, are also gratefully acknowledged for their assistance to the Survey.

NATIONAL EUTROPHICATION SURVEY

STUDY LAKES

STATE OF NEW YORKLAKE NAMECOUNTY

Allegheny Reservoir

Cattaraugus, NY; McLean,
Warren, PA

Black

St. Lawrence

Canandaigua

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

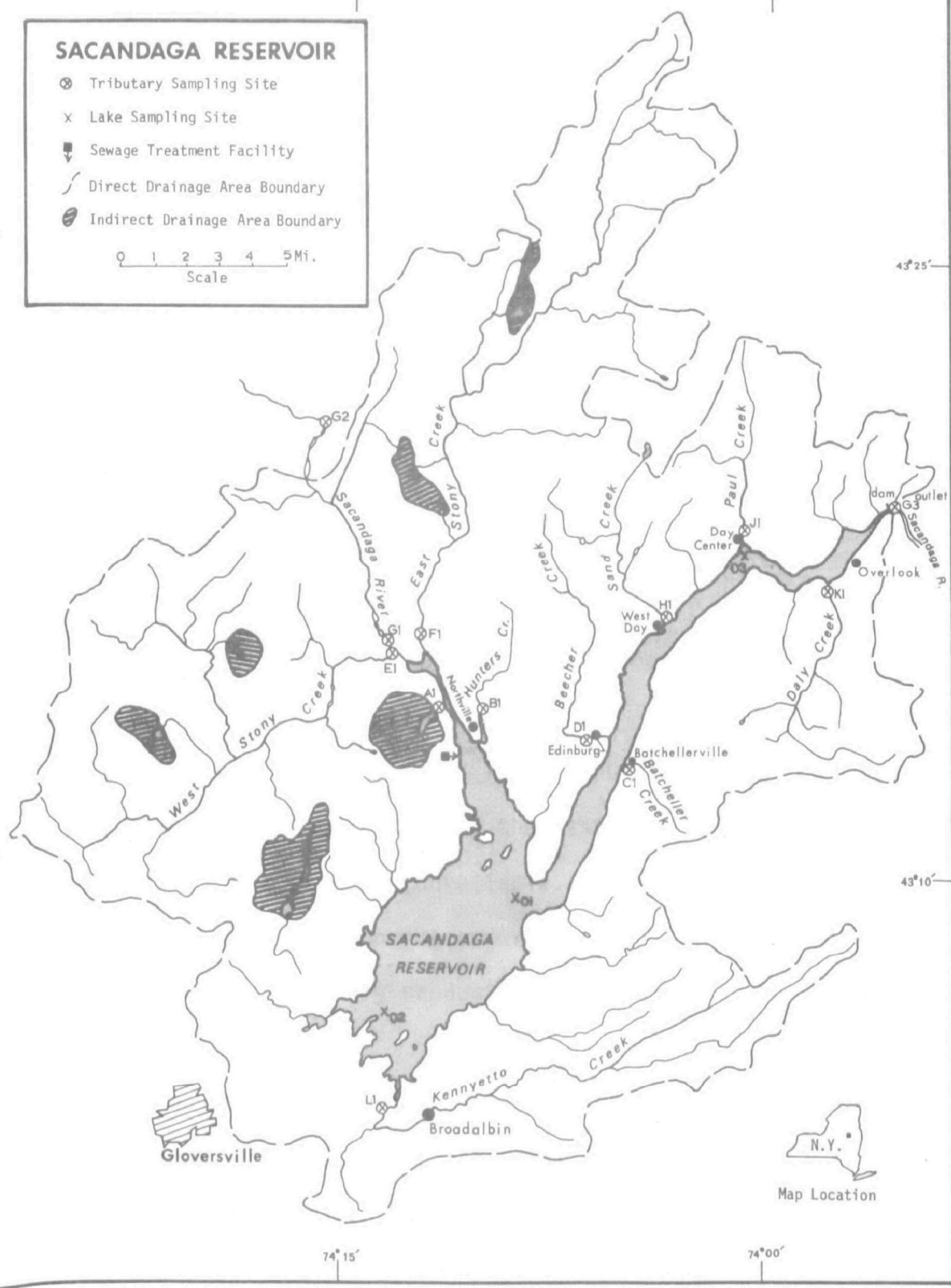
Swinging Bridge Res.

Sullivan

SACANDAGA RESERVOIR

- ⊗ Tributary Sampling Site
- × Lake Sampling Site
- Sewage Treatment Facility
- Direct Drainage Area Boundary
- ▨ Indirect Drainage Area Boundary

0 1 2 3 4 5 Mi.
Scale



SACANDAGA RESERVOIR

STORET NO. 3632

I. CONCLUSIONS

A. Trophic Condition:

Survey data show that Sacandaga Reservoir is mesotrophic. Of the 26 New York lakes sampled in the fall of 1972, when all were essentially well-mixed, three had less mean total phosphorus, seven had less mean inorganic nitrogen, and one had less mean dissolved phosphorus. For all data, five of the New York lakes had less mean chlorophyll a, and only four had greater Secchi disc transparency.

Survey limnologists noted that the water was very clear on all sampling occasions, and no algal blooms were observed.

B. Rate-Limiting Nutrient:

There was a significant loss in nutrients between the time the sample was collected and the assay was begun; therefore, the results are considered unreliable. However, the low level of mean dissolved phosphorus observed (0.004 mg/l) indicates that the potential primary productivity would have been low at that time.

The lake data indicate that phosphorus was the limiting nutrient at the time the assay was collected as well as the other sampling dates (all N/P ratios were greater than 39/1, and phosphorus limitation would be expected).

C. Nutrient Controllability:

1. Point sources--During the sampling year, Sacandaga Reservoir received a total phosphorus load at a rate less than that proposed by Vollenweider (in press) as "permissible", i.e., an oligotrophic rate (see page 13). The contribution from point sources was about 3% of the total load.

Phosphorus removal at the point sources would not be expected to appreciably change the trophic condition of the reservoir, but would provide additional protection for the existing trophic condition.

2. Non-point sources--During the sampling year, the mean total annual non-point phosphorus export was greatest from the Sacandaga River; however, the export rate of this river was less than other streams sampled (see page 13). The phosphorus export rate (156 lbs/mi²/yr) and the export N/P ratio (28/1) of the Kenneyetto Creek may be indicative of a point source(s) or cultural practices that result in nutrient inputs to this drainage.

II. LAKE AND DRAINAGE BASIN CHARACTERISTICS

A. Lake Morphometry[†]:

1. Surface area: 30,146 acres.
2. Mean depth: 24.9 feet.
3. Maximum depth: 50.2 feet.
4. Volume: 750,635 acre/feet.
5. Mean hydraulic retention time: 166 days.

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

1. Tributaries -

<u>Name</u>	<u>Drainage area*</u>	<u>Mean flow*</u>
Sacandaga River	525.0 mi ²	1,149.4 cfs
Unnamed Creek (A-1)	4.1 mi ²	9.0 cfs
Hunters Creek	6.6 mi ²	14.4 cfs
Batcheller Creek	6.8 mi ²	14.8 cfs
Beecher Creek	11.5 mi ²	25.2 cfs
West Stony Brook	88.0 mi ²	192.6 cfs
East Stony Brook	95.4 mi ²	208.8 cfs
Sand Creek	16.1 mi ²	35.3 cfs
Paul Creek	20.5 mi ²	44.9 cfs
Daly Creek	27.2 mi ²	59.6 cfs
Kenyetto Creek	36.8 mi ²	80.5 cfs
Minor tributaries & immediate drainage -	<u>158.9 mi²</u>	<u>451.4 cfs</u>
Totals	996.9 mi ²	2,285.9 cfs

2. Outlet -

Sacandaga River	1,044.0 mi ² **	2,285.9 cfs
-----------------	----------------------------	-------------

[†] Wood, 1974.

* Drainage areas are accurate within $\pm 5\%$, except for small basins ($\pm 10\%$); mean daily flows are accurate within ± 5 and 25% ; and normalized mean monthly flows are accurate within $\pm 15\%$.

** Includes area of lake.

C. Precipitation*:

1. Year of sampling: 46.2 inches.
2. Mean annual: 41.9 inches.

* See Working Paper No. 1, "Survey Methods".

III. LAKE WATER QUALITY SUMMARY

Sacandaga Reservoir was sampled three times during the open-water season of 1972 by means of a pontoon-equipped Huey helicopter. Each time, samples for physical and chemical parameters were collected from three stations on the lake and from a number of depths at each station (see map, page v). During each visit, a single depth-integrated (15 feet to surface) sample was composited from the three stations for phytoplankton identification and enumeration; and during the last visit, a single five-gallon 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 31 feet at station 1, 35 feet at station 2, and 36 feet at station 3.

The results obtained are presented in full in Appendix B, and the data for the fall sampling period, when the lake was essentially well-mixed, are summarized below. Note, however, the Secchi disc summary is based on all values.

For differences in the various parameters at the other sampling times, refer to Appendix B.

A. Physical and chemical characteristics:

FALL VALUES

(10/10/72)

<u>Parameter</u>	<u>Minimum</u>	<u>Mean</u>	<u>Median</u>	<u>Maximum</u>
Temperature (Cent.)	12.9	14.2	14.0	15.2
Dissolved oxygen (mg/l)	8.6	9.0	9.2	9.4
Conductivity (umhos)	50	50	50	50
pH (units)	6.9	7.0	7.0	7.2
Alkalinity (mg/l)	10	10	10	12
Total P (mg/l)	0.007	0.009	0.009	0.012
Dissolved P (mg/l)	0.002	0.004	0.004	0.007
NO ₂ + NO ₃ (mg/l)	0.080	0.106	0.110	0.130
Ammonia (mg/l)	0.030	0.069	0.050	0.120

ALL VALUES

Secchi disc (inches)	114	139	139	196
----------------------	-----	-----	-----	-----

B. Biological characteristics:

1. Phytoplankton -

<u>Sampling Date</u>	<u>Dominant Genera</u>	<u>Number per ml</u>
05/18/72	1. Dinobryon	1,212
	2. Flagellates	624
	3. Phacus	325
	4. Cryptomonas	27
	5. Synedra	18
	Other genera	<u>100</u>
	Total	2,306
07/31/72	1. Lyngbya	2,711
	2. Fragilaria	1,265
	3. Dinobryon	1,175
	4. Polycystis	994
	5. Peridinium	120
	Other genera	<u>241</u>
	Total	6,506
10/10/72	1. Stichococcus	2,211
	2. Dinobryon	829
	3. Flagellates	502
	4. Fragilaria	402
	5. Anabaena	327
	Other genera	<u>1,809</u>
	Total	6,080

2. Chlorophyll a -

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

<u>Sampling Date</u>	<u>Station Number</u>	<u>Chlorophyll a ($\mu\text{g/l}$)</u>
05/18/72	01	3.0
	02	1.6
07/31/72	01	4.6
	02	8.1
	03	1.9
10/10/72	01	7.2
	02	7.0
	03	5.4

C. Limiting Nutrient Study:

There was a significant loss in nutrients in the assay sample from the time the sample was collected and the beginning of the assay; therefore, the results are considered unreliable. However, the low level of mean dissolved phosphorus measured in the reservoir in October (0.004 mg/l) indicates that the potential primary productivity would have been low at that time.

The lake data indicate that phosphorus was the limiting nutrient at the time the assay sample was collected as well as the other sampling dates (N/P ratios were greater than 39/1, and phosphorus limitation would be expected).

IV. NUTRIENT LOADINGS

(See Appendix C for data)

For the determination of nutrient loadings, the New York National Guard collected monthly near-surface grab samples from each of the tributary sites indicated on the map (page v), except for the high runoff months of April and May when two samples were collected. Sampling was begun in November, 1972, and was completed in October, 1972.

Through an interagency agreement, stream flow estimates for the year of sampling and a "normalized" or average year were provided by the New York District Office 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 loadings for unsampled "minor tributaries and immediate drainage" ("ZZ" of U.S.G.S.) were estimated by using the means of the nutrient loads, in lbs/mi²/year, at stations C-1, D-1, E-1, H-1, and K-1 and multiplying the means by the ZZ area in mi².

Nutrient loads from Sacandaga Park were estimated at 2.5 lbs P and 7.5 lbs N/capita/year.

* See Working Paper No. 1.

A. Waste Sources:

1. Known municipal -

<u>Name</u>	<u>Pop. Served*</u>	<u>Treatment</u>	<u>Mean Flow (mgd)</u>	<u>Receiving Water</u>
Sacandaga Park	500	Imhoff tank	0.050**	Sacandaga Reservoir

2. Known industrial - None

* Anonymous, 1971.

** Estimated at 100 gal/capita/day.

B. Annual Total Phosphorus Loading - Average Year:

1. Inputs -

<u>Source</u>	<u>lbs P/ yr</u>	<u>% of total</u>
a. Tributaries (non-point load) -		
Sacandaga River	17,750	36.8
Unnamed Creek (A-1)	160	0.3
Hunters Creek	410	0.9
Batcheller Creek	330	0.7
Beecher Creek	460	1.0
West Stoney Brook	3,470	7.2
East Stoney Brook	4,870	10.1
Sand Creek	590	1.2
Paul Creek	800	1.7
Daly Creek	980	2.0
Kennyetto Creek	5,740	11.9
b. Minor tributaries & immediate drainage (non-point load) -	6,390	13.2
c. Known municipal -		
Sacandaga Park	1,250	2.6
d. Septic tanks* -	330	0.7
e. Known industrial - None	-	-
f. Direct precipitation** -	<u>4,700</u>	<u>9.7</u>
Total	48,230	100.0

2. Outputs -

Lake outlet - Sacandaga River 35,450

3. Net annual P accumulation - 12,780 pounds

* Estimate based on 526 shoreline dwellings; see Working Paper No. 1.

** See Working Paper No. 1.

C. Annual Total Nitrogen Loading - Average Year:

1. Inputs -

<u>Source</u>	<u>lbs N/ yr</u>	<u>% of total</u>
a. Tributaries (non-point load) -		
Sacandaga River	1,818,100	48.8
Unnamed Creek (A-1)	9,100	0.3
Hunters Creek	14,500	0.4
Batcheller Creek	24,140	0.6
Beecher Creek	42,900	1.2
West Stoney Brook	293,880	7.9
East Stoney Brook	291,570	7.8
Sand Creek	55,800	1.5
Paul Creek	85,040	2.3
Daly Creek	79,580	2.1
Kennyetto Creek	165,100	4.4
b. Minor tributaries & immediate drainage (non-point load) -	540,640	14.5
c. Known municipal -		
Sacandaga Park	3,750	0.1
d. Septic tanks* -	12,360	0.3
e. Known industrial - None	-	-
f. Direct precipitation** -	<u>290,430</u>	<u>7.8</u>
Total	3,726,890	100.0

2. Outputs -

Lake outlet - Sacandaga River 3,840,480

3. Net annual N loss - 113,590 pounds

* Estimate based on 526 shoreline dwellings; see Working Paper No. 1.

** See Working Paper No. 1.

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

<u>Tributary</u>	<u>lbs P/mi²/yr</u>	<u>lbs N/mi²/yr</u>
Sacandaga River	34	3,463
Unnamed Creek (A-1)	39	2,219
Hunters Creek	62	2,197
Batcheller Creek	49	3,550
Beecher Creek	40	3,730
West Stoney Brook	39	3,340
East Stoney Brook	51	3,056
Sand Creek	37	3,466
Paul Creek	39	4,148
Daly Creek	36	2,926
Kennyetto Creek	156	4,486

E. Yearly Loading Rates:

In the following table, the existing phosphorus loading rates are compared to those proposed by Vollenweider (in press). Essentially, his "dangerous" rate is the rate at which the receiving waters 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".

Units	Total Phosphorus		Total Nitrogen	
	Total	Accumulated	Total	Accumulated
lbs/acre/yr	1.6	0.4	123.6	loss*
grams/m ² /yr	0.18	0.04	13.9	-

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

"Dangerous" (eutrophic rate)	0.80
"Permissible" (oligotrophic rate)	0.40

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

V. LITERATURE REVIEWED

Anonymous, 1971. Inventory of municipal waste facilities. Publ. No. OWP-1, Vol. 2, EPA, Washington, D.C.

Vollenweider, Richard A., (in press). Input-output models. Schweiz. A. Hydrol.

Wood, Lindsey W., 1974. Personal communication (morphometry data). NY Dept. of Health, Albany.

VII. APPENDICES

APPENDIX A

TRIBUTARY FLOW DATA

TRIBUTARY FLOW INFORMATION FOR NEW YORK

11/26/74

LAKE CODE 3632 GREAT SACANDAGA LAKE

TOTAL DRAINAGE AREA OF LAKE 1044.00

TRIBUTARY	SUB-DRAINAGE AREA	NORMALIZED FLOWS												
		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
3632A1	4.10	7.05	5.81	13.10	30.70	14.40	6.08	3.60	2.01	2.78	5.26	8.82	8.21	8.98
3632B1	6.60	11.30	9.36	21.00	49.50	23.10	9.79	5.80	3.23	4.48	8.47	14.20	13.20	14.44
3632C1	6.77	11.60	9.60	21.60	50.80	23.70	10.00	5.95	3.32	4.60	8.69	14.60	13.60	14.82
3632D1	11.50	19.80	16.30	36.60	86.20	40.30	17.10	10.10	5.63	7.81	14.80	24.70	23.00	25.17
3632E1	88.00	151.00	125.00	280.00	660.00	308.00	131.00	77.40	43.10	59.80	113.00	189.00	176.00	192.60
3632F1	95.40	164.00	135.00	304.00	715.00	334.00	142.00	83.80	46.70	64.80	122.00	205.00	191.00	208.75
3632G1	525.00	903.00	745.00	1670.00	3940.00	1840.00	779.00	461.00	257.00	357.00	674.00	1130.00	1050.00	1149.44
3632G3	1044.00	1790.00	1480.00	3330.00	7830.00	3660.00	1550.00	917.00	511.00	709.00	1340.00	2250.00	2090.00	2285.99
3632H1	16.10	27.70	22.80	51.30	121.00	56.40	23.90	14.20	7.88	10.90	20.70	34.60	32.20	35.27
3632J1	20.50	35.20	29.10	65.30	154.00	71.80	30.40	18.00	10.00	13.90	26.30	44.10	41.10	44.89
3632K1	27.20	46.80	38.60	86.60	204.00	95.30	40.40	23.90	13.30	18.50	34.90	58.50	54.50	59.55
3632L1	36.80	63.30	52.20	117.00	276.00	129.00	54.60	32.30	18.00	25.00	47.20	79.20	73.70	80.55
3632ZZ	206.03	354.00	292.00	656.00	1550.00	722.00	306.00	181.00	101.00	140.00	264.00	443.00	413.00	451.42

SUMMARY

TOTAL DRAINAGE AREA OF LAKE = 1044.00
SUM OF SUB-DRAINAGE AREAS = 1044.00

TOTAL FLOW IN = 27455.75
TOTAL FLOW OUT = 27457.00

MEAN MONTHLY FLOWS AND DAILY FLOWS

TRIBUTARY	MONTH	YEAR	MEAN FLOW	DAY	FLOW	DAY	FLOW	DAY	FLOW
3632A1	11	72	18.20	5	9.05				
	12	72	10.20	3	7.22				
	1	73	14.70	6	9.05				
	2	73	9.68	3	21.40				
	3	73	25.80	3	2.60				
	4	73	25.40	7	20.60	21	12.00		
	5	73	19.10	6	5.65	20	26.30		
	6	73	6.52	2	7.20				
	7	73	3.29	7	2.35				
	8	73	1.23	4	1.75				
3632B1	9	73	2.27	8	1.66				
	10	73	2.16	6	1.68				
	11	72	29.20	5	10.80				
	12	72	16.40	3	8.58				
	1	73	23.50	6	10.80				
	2	73	15.60	3	25.40				
	3	73	41.30	3	3.06				
	4	73	41.00	7	26.00	21	16.00		
	5	73	30.60	6	8.00	20	32.50		
	6	73	10.50	2	7.60				
	7	73	5.30	7	0.76				
	8	73	1.97	4	1.55				
	9	73	3.66	8	1.30				
	10	73	3.48	6	1.48				

TRIBUTARY FLOW INFORMATION FOR NEW YORK

11/26/74

LAKE CODE 3632 GREAT SACANDAGA LAKE

MEAN MONTHLY FLOWS AND DAILY FLOWS

TRIBUTARY	MONTH	YEAR	MEAN FLOW	DAY	FLOW	DAY	FLOW	DAY	FLOW
3632C1	11	72	30.00	5	25.50				
	12	72	16.90	3	20.30				
	1	73	24.10	5	31.30				
	2	73	16.00	2	16.00				
	3	73	42.50	6	17.20				
	4	73	42.00	10	27.20	16	18.40		
	5	73	31.40	6	12.00	12	25.00		
	6	73	10.70	2	14.40				
	7	73	5.44	2	13.20				
	8	73	2.02	7	2.50				
3632D1	9	73	3.76	25	5.26				
	10	73	3.57	6	3.90				
	11	72	50.80	5	56.90				
	12	72	28.50	3	45.40				
	1	73	41.20	5	694.00				
	2	73	27.20	2	35.50				
	3	73	72.10	6	38.00				
	4	73	71.30	10	40.00	16	27.60		
	5	73	53.40	6	17.40	12	37.40		
	6	73	18.30	2	21.20				
3632E1	7	73	9.23	2	19.60				
	8	73	3.43	7	4.20				
	9	73	6.39	25	7.30				
	10	73	6.08	6	5.30				
	11	72	389.00	5	278.00				
	12	72	218.00	3	222.00				
	1	73	314.00	6	278.00				
	2	73	208.00	3	658.00				
	3	73	551.00	3	80.00				
	4	73	546.00	7	518.00	21	360.00		
3632F1	5	73	408.00	6	198.00	20	604.00		
	6	73	140.00	2	243.00				
	7	73	70.70	7	74.00				
	8	73	26.30	4	47.50				
	9	73	48.90	8	37.50				
	10	73	46.40	6	45.00				
	11	72	422.00	5	224.00				
	12	72	237.00	3	178.00				
	1	73	341.00	6	224.00				
	2	73	225.00	3	532.00				
3632G1	3	73	598.00	3	65.00				
	4	73	592.00	7	542.00	21	350.00		
	5	73	443.00	6	173.00	20	675.00		
	6	73	152.00	2	197.00				
	7	73	76.60	7	50.00				
	8	73	28.50	4	46.00				
	9	73	53.00	8	41.00				
	10	73	50.10	6	44.50				

TRIBUTARY FLOW INFORMATION FOR NEW YORK

11/26/74

LAKE CODE 3632 GREAT SACANDAGA LAKE

MEAN MONTHLY FLOWS AND DAILY FLOWS

TRIBUTARY	MONTH	YEAR	MEAN FLOW	DAY	FLOW	DAY	FLOW	DAY	FLOW
3632G1	11	72	2330.00	5	1740.00				
	12	72	1300.00	3	1390.00				
	1	73	1880.00	6	1740.00				
	2	73	240.00	3	4130.00				
	3	73	3290.00	3	496.00				
	4	73	3260.00	7	3880.00	21	2450.00		
	5	73	2440.00	6	1220.00	20	4790.00		
	6	73	835.00	2	1540.00				
	7	73	421.00	7	454.00				
	7	73	421.00	7	454.00				
3632G3	8	73	157.00	4	321.00				
	9	73	292.00	8	274.00				
	10	73	277.00	6	307.00				
	11	72	4630.00	5	48.00				
	12	72	2590.00	3	3040.00				
	1	73	3720.00	5	4110.00				
	2	73	2470.00	2	5000.00				
	3	73	6560.00	6	4580.00				
	4	73	6480.00	10	5480.00	16	4080.00		
	5	73	4850.00	6	127.00	12	2010.00		
3632H1	6	73	1660.00	2	4070.00				
	7	73	838.00	2	2480.00				
	7	73	838.00	2	2480.00				
	8	73	312.00	7	2550.00				
	9	73	580.00	25	2100.00				
	10	73	550.00	6	2060.00				
	11	72	71.20	5	80.00				
	12	72	39.90	3	64.00				
	1	73	57.60	5	98.00				
	2	73	38.00	2	54.50				
3632J1	3	73	101.00	6	53.50				
	4	73	100.00	10	68.00	16	46.40		
	5	73	74.80	6	29.20	12	63.00		
	6	73	25.60	2	26.00				
	7	73	13.00	2	33.00				
	7	73	13.00	2	33.00				
	8	73	4.81	7	4.20				
	9	73	8.91	25	11.00				
	10	73	8.50	6	7.50				
	11	72	90.80	5	136.00				
3632J1	12	72	51.00	3	108.00				
	1	73	73.20	5	167.00				
	2	73	48.50	2	93.00				
	3	73	129.00	6	92.00				
	4	73	127.00	10	80.00	16	50.40		
	5	73	95.20	6	30.00	12	72.00		
	6	73	32.60	2	37.40				
	7	73	16.40	2	33.50				
	7	73	16.40	2	33.50				
	8	73	6.10	7	2.28				
3632J1	9	73	11.40	25	8.25				
	10	73	10.80	6	4.95				

TRIBUTARY FLOW INFORMATION FOR NEW YORK

11/26/74

LAKE CODE 3632 GREAT SACANDAGA LAKE

MEAN MONTHLY FLOWS AND DAILY FLOWS

TRIBUTARY	MONTH	YEAR	MEAN FLOW	DAY	FLOW	DAY	FLOW	DAY	FLOW
3632K1	11	72	120.00	5	178.00				
	12	72	67.60	3	143.00				
	1	73	97.30	5	218.00				
	2	73	64.30	2	122.00				
	3	73	170.00	6	120.00				
	4	73	169.00	10	126.00	16	83.00		
	5	73	126.00	6	50.00	12	114.00		
	6	73	43.30	2	64.00				
	7	73	21.80	2	59.00				
	7	73	21.80	2	59.00				
3632L1	8	73	8.11	7	4.90				
	9	73	15.10	25	18.00				
	10	73	14.30	6	11.50				
	11	72	163.00	5	106.00				
	12	72	91.40	3	80.40				
	1	73	132.00	5	123.00				
	2	73	87.00	3	238.00				
	3	73	230.00	3	2.90				
	4	73	228.00	7	107.00	21	74.00		
	5	73	171.00	6	46.00	20	130.00		
3632ZZ	6	73	58.50	2	49.00				
	7	73	29.50	7	17.60				
	7	73	29.50	7	17.60				
	8	73	11.00	4	13.20				
	9	73	20.40	8	11.60				
	10	73	19.40	6	12.80				
	11	72	912.00	5	684.00				
	12	72	512.00	3	545.00				
	1	73	736.00	5	759.00				
	2	73	487.00	3	1040.00				
	3	73	1290.00	3	326.00				
	4	73	1280.00	10	1140.00	21	961.00		
	5	73	957.00	6	478.00				
	6	73	328.00	2	604.00				
	7	73	165.00	2	554.00				
	7	73	165.00	2	554.00				
	8	73	61.60	7	65.90				
	9	73	114.00	25	179.00				
	10	73	108.00	6	120.00				

APPENDIX B

PHYSICAL and CHEMICAL DATA

STORET RETRIEVAL DATE 74/11/26

363201
43 09 00.0 074 09 00.0
SACANDAGA RESERVOIR
36 NEW YORK

11EPALES 2111202
5 0035 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	00630 NO2&NO3 N-TOTAL MG/L	00610 NH3-N TOTAL MG/L	00665 PHOS-TOT MG/L P	00666 PHOS-DIS MG/L P
72/05/18	10 20	0000	12.7	9.6	196	50	6.70	10K	0.430	0.060	0.013	0.006
	10 20	0010	7.5	11.7		50	6.20	10K	0.450	0.020	0.010	0.006
	10 20	0030	7.1	9.4		50	6.30	10K	0.470	0.030	0.009	0.005
72/07/31	08 45	0000			144	50K	6.60	10K	0.210	0.070	0.011	0.005
	08 45	0004	23.2	7.6		48	6.60	10K	0.210	0.070	0.007	0.006
	08 45	0015	22.6	7.6		45	6.40	10K	0.200	0.070	0.015	0.012
	08 45	0022	18.2	5.0		40	6.10	10K	0.220	0.110	0.010	0.007
	08 45	0030	15.9	2.8		43	6.00	10K	0.200	0.150	0.016	0.006
72/10/10	15 00	0000			120	50K	7.00	10K	0.090	0.050	0.009	0.004
	15 00	0004	13.8	9.2		50K	7.10	10K	0.090	0.050	0.007	0.004
	15 00	0015	13.3	9.4		50K	7.05	10K	0.110	0.080	0.012	0.003
	15 00	0022	13.2	9.2		50K	7.05	10K	0.100	0.050	0.008	0.004
	15 00	0031	12.9	9.2		50K	7.00	10	0.120	0.050	0.007	0.006

DATE FROM TO	TIME OF DAY	DEPTH FEET	32217 CHLRPHYL A UG/L
72/05/18	10 20	0000	3.0J
72/07/31	08 45	0000	4.6J
72/10/10	15 00	0000	7.2J

K VALUE KNOWN TO BE LESS
THAN INDICATED

J VALUE KNOWN TO BE IN ERROR

STORET RETRIEVAL DATE 74/11/26

363202
43 06 00.0 074 13 30.0
SACANDAGA RESERVOIR
36 NEW YORK

11EPALES
4 2111202
0042 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00010 WATER TEMP CENT	00300 DO MG/L	00077 TRANSP SECCHI INCHES	00094 CNDUCTVY FIELD MICROMHO	00400 PH SU	00410 T ALK CAC03 MG/L	00630 NO2&NO3 N-TOTAL MG/L	00610 NH3-N TOTAL MG/L	00665 PHOS-TOT MG/L P	00666 PHOS-DIS MG/L P
72/05/18	10 47	0000	13.4	10.0	139	50	6.90	10K	0.400	0.030	0.009	0.005
	10 47	0010	9.6	11.5		50	6.60	10K	0.450	0.030	0.009	0.004
	10 47	0035	7.1	10.2		50	6.20	10K	0.500	0.050	0.008	0.003
72/07/28	11 50	0000			144							
	11 50	0027	16.3	3.0		50K	6.60	12	0.200	0.160	0.009	0.007
72/07/31	07 55	0000			132	50K	6.60	10	0.190	0.060	0.013	0.008
	07 55	0004	22.4	8.4		50K	6.50	10K	0.200	0.060	0.010	0.009
	07 55	0015	22.3	8.4		50K	6.50	10K	0.200	0.060	0.010	0.009
	07 55	0020	21.8	7.6		50K	6.50	10K	0.200	0.060	0.011	0.006
	07 55	0024	20.1	4.4		50K	6.40	20	0.200	0.190	0.021	0.012
72/10/10	14 30	0000			120	50K	7.20	11	0.080	0.040	0.009	0.004
	14 30	0004		8.6		50K	7.15	12	0.080	0.030	0.011	0.005
	14 30	0015	14.0	9.3		50K	7.10	10K	0.090	0.040	0.010	0.007

DATE FROM TO	TIME OF DAY	DEPTH FEET	32217 CHLRPHYL A UG/L
72/05/18	10 47	0000	1.6J
72/07/31	07 55	0000	8.1J
72/10/10	14 30	0000	7.0J

K VALUE KNOWN TO BE LESS
THAN INDICATED

J VALUE KNOWN TO BE IN ERROR

STORET RETRIEVAL DATE 74/11/26

363203
43 20 00.0 074 00 00.0
SACANDAGA RESERVOIR
36035 NEW YORK

11EPALES 2111202
6 0036 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	00630 NO2&NO3 N-TOTAL MG/L	00610 NH3-N TOTAL MG/L	00665 PHOS-TOT MG/L P	00666 PHOS-DIS MG/L P
72/07/31	09 15	0000			144	50K	6.70	10K	0.210	0.060	0.010	0.007
	09 15	0004	24.4	7.2		50K	6.60	10K	0.210	0.060	0.008	0.005
	09 15	0015	23.8	7.6		50K	6.40	10K	0.220	0.070	0.007	0.005
	09 15	0025	17.0	2.8		50K	6.10	10K	0.240	0.130	0.009	0.007
	09 15	0036	13.9	4.6		50K	6.00	10K	0.260	0.180	0.011	0.010
72/10/10	15 35	0000			114	50K	7.10	10K	0.120	0.100	0.010	0.005
	15 35	0004	15.2	8.6		50K	7.00	10K	0.120	0.100	0.009	0.006
	15 35	0015	15.1	8.6		50K	6.95	10K	0.130	0.100	0.007	0.003
	15 35	0022	15.0	8.6		50K	6.95	10K	0.130	0.120	0.009	0.003
	15 35	0029	14.9	9.2		50K	6.95	10K	0.120	0.090	0.008	0.002

DATE FROM TO	TIME OF DAY	DEPTH FEET	32217 CHLRPHYL A UG/L
72/07/31	09 15	0000	1.9J
72/10/10	15 35	0000	5.4J

K VALUE KNOWN TO BE LESS
THAN INDICATED

J VALUE KNOWN TO BE IN ERROR

APPENDIX C

TRIBUTARY DATA

STORET RETRIEVAL DATE 74/11/26

3632A1 LS3632A1
 43 14 00.0 074 12 00.0
 UNNAMED CREEK
 36 7.5/NORTHVILLE
 T/SACANDAGA RESERVOIR
 GIFFORD VALLEY ROAD BRIDGE
 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
72/11/05	14 05		0.034	0.300	0.060	0.005K	0.008
72/12/03	13 35		0.064	0.150	0.014	0.005K	0.005K
73/01/06	13 45		0.147	0.250	0.034	0.005K	0.005K
73/02/03	13 45		0.105		0.063	0.005K	0.005K
73/03/03	11 45		0.099	0.120	0.056	0.005K	0.005K
73/04/07	13 50		0.052	0.460	0.033	0.005K	0.015
73/04/21	13 35		0.021	0.115	0.027	0.005K	0.005K
73/05/06	12 30		0.042	0.540	0.039	0.005K	0.015
73/05/20	11 25		0.023	0.240	0.026	0.010	0.010
73/06/02	16 15		0.015	0.520	0.008	0.005K	0.010
73/07/07	10 15		0.033	0.230	0.018	0.005K	0.010
73/08/04	10 00		0.640	0.380	0.033	0.005K	0.015
73/09/09			0.410	1.470	0.252	0.006	0.085
73/10/06	13 15		0.028	0.400	0.063	0.005K	0.010

K VALUE KNOWN TO BE
 LESS THAN INDICATED

STORET RETRIEVAL DATE 74/11/26

363281 LS363281
 43 14 00.0 074 10 00.0
 HUNTERS CREEK
 36 7.5/NORTHVILLE
 T/SACANDAGA RESERVOIR
 RIDGE RD NE OF NORTHVILLE
 11EPALES 2111204
 4 6000 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
72/11/05	15 35		0.052	0.630	0.084	0.005K	0.008
72/12/03	15 00		0.083	0.100K	0.025	0.005K	0.006
73/01/06	14 40		0.034	0.140	0.028	0.005K	0.005K
73/02/03	14 45		0.099	0.150	0.028	0.005K	0.010
73/03/03	12 40		0.140	0.120	0.042	0.005K	0.015
73/04/07	15 05		0.044	0.500	0.010	0.005K	0.015
73/04/21	14 40		0.048	0.330	0.048	0.005K	0.010
73/05/06	14 00		0.065	1.050	0.054	0.005K	0.030
73/05/20	13 30		0.032	0.520	0.072	0.005	0.010
73/06/02	17 10		0.035	0.580	0.030	0.005K	0.010
73/07/07	11 30		0.042	0.440	0.026	0.005K	0.020
73/08/04	11 25		0.115	0.420	0.029	0.005K	0.020
73/09/08			0.154	0.920	0.120	0.009	0.035
73/10/06	12 00		0.033	0.310	0.040	0.005K	0.015

K VALUE KNOWN TO BE LESS
 THAN INDICATED

STORET RETRIEVAL DATE 74/11/26

3632C1 LS3632C1
 43 12 30.0 074 05 00.0
 HATCHELLER CREEK
 36 7.5/EDINBURG
 T/SACANDAGA RESERVOIR
 MED DUTY RD BRIDGE NEAR HATCHELLERVILLE
 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
72/11/05	11 03		0.076	0.150	0.050	0.005K	0.009
72/12/03	09 30		0.120	0.100K	0.006	0.005K	0.006
73/01/05	08 30		0.168	0.180	0.013	0.005K	0.005K
73/02/02	09 05		0.230	0.520	0.060	0.005K	0.015
73/03/06	08 14		0.260	0.200	0.038	0.005K	0.010
73/04/10	10 03		0.147	0.100K	0.021	0.005K	0.005K
73/04/16	09 00		0.132	2.500	0.070	0.005K	0.005K
73/05/06	10 20		0.074	0.420	0.034	0.006	0.015
73/05/12	19 10		0.054	2.300	0.063	0.008	0.020
73/06/02	09 26		0.230	0.460	0.105	0.005K	0.010
73/07/02	07 45		0.072	0.540	0.092	0.005K	0.020
73/08/07	09 40			3.360	0.790		0.005K
73/09/25	10 45		0.150	0.930	0.060	0.008	0.015
73/10/06			0.078	0.600	0.056	0.005K	0.020

K VALUE KNOWN TO BE LESS
 THAN INDICATED

STORET RETRIEVAL DATE 74/11/26

363201 L5363201
 43 13 30.0 074 06 30.0
 BEECHER CREEK
 36 7.5/EDINBURG
 T/SACANDAGA RESERVOIR
 LIGHT DUTY ROAD BRIDGE IN EDINBURG
 11EPALES 2111204
 4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO ₃ -N N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH ₃ -N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
72/11/05	10 07		0.088	0.210	0.046	0.005K	0.011
72/12/03	09 00		0.110	0.110	0.008	0.005K	0.006
73/01/05	08 10		0.126	0.280	0.023	0.005K	0.005K
73/02/02	09 25		0.190	0.520	0.044	0.005K	0.010
73/03/06	08 54		0.252	0.130	0.039	0.005K	0.005K
73/04/10			0.147	0.150	0.063	0.005K	0.005K
73/04/16	09 30		0.132	2.800	0.065	0.005K	0.010
73/05/06	10 10		0.074	1.800	0.052	0.009	0.025
73/05/12	19 25		0.046	1.760	0.050	0.005K	0.010
73/06/02	09 05		0.240	0.560	0.038	0.005K	0.015
73/07/02	07 00		0.250	0.460	0.154	0.005K	0.010
73/08/07	09 58		0.090	0.660	0.315	0.006	0.006
73/09/25	10 28		0.147	0.230	0.029		0.005K
73/10/06			0.078	0.640	0.050	0.005K	0.010

K VALUE KNOWN TO BE LESS
 THAN INDICATED

STORET RETRIEVAL DATE 74/11/26

3432E1 LS3632E1
 43 15 00.0 074 13 30.0
 WEST STONY CREEK
 36 15/HARRISBURG
 T/SACANDAGA RESERVOIR
 BPDG AT CONFLUENCE WITH SA CANDAGA RIVER
 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
72/11/05	14 30		0.234	0.210	0.054	0.005K	0.007
72/12/03	13 45		0.280	0.160	0.010	0.005K	0.007
73/01/06	13 50		0.357	0.360	0.017	0.005K	0.005K
73/02/03	14 40		0.490	0.800	0.095	0.006	0.015
73/03/03	12 00		0.315		0.021	0.005K	0.010
73/04/07	14 05		0.290	0.690	0.038	0.005K	0.010
73/04/21	13 45		0.260	0.300	0.040	0.009	0.010
73/05/06	12 45		0.140	0.960	0.032	0.005K	0.010
73/05/20	11 35		0.198	2.100	0.100	0.006	0.010
73/06/02	16 00		0.060	0.310	0.012	0.005K	0.005K
73/07/07	10 25		0.040	0.270	0.018	0.005K	0.010
73/08/04	10 10		0.115	0.325	0.006	0.005K	0.015
73/09/08			0.058	0.960	0.063	0.005K	0.010
73/10/06	13 00		0.014	0.280	0.034	0.005K	0.010

K VALUE KNOWN TO BE LESS
 THAN INDICATED

STORET RETRIEVAL DATE 74/11/26

3632F1 LS3632F1
 43 16 00.0 074 12 30.0
 EAST STONY CREEK
 36 15/HARRISBURG
 T/SACANDAGA RESERVOIR
 ST HWY 30 BRIDGE
 11EPALES 2111204
 4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO3AN03 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
72/11/05	15	30	0.195	0.600	0.061	0.005K	0.008
72/12/03	14	40	0.260		0.024	0.005K	0.015
73/01/06	14	30	0.280	0.190	0.023	0.005K	0.024
73/02/03	14	30	0.420	1.600	0.147	0.021	0.040
73/03/03	12	35	0.290	0.100K	0.020	0.005K	0.015
73/04/07	14	40	0.230	0.860	0.020	0.005K	0.005K
73/04/21	14	25	0.160	0.400	0.082	0.005K	0.005K
73/05/06	13	45	0.105	1.470	0.025	0.005K	0.005K
73/05/20	13	00	0.154	0.330	0.016	0.005K	0.010
73/06/02	17	20	0.058	0.260	0.044	0.005K	0.005K
73/07/07	11	15	0.039	0.270	0.013	0.005K	0.010
73/08/04	11	05	0.073	0.290	0.010	0.005K	0.010
73/09/08			0.026	0.720	0.032	0.005K	0.010
73/10/06	13	15	0.010K	0.220	0.030	0.005K	0.010

K VALUE KNOWN TO BE LESS
 THAN INDICATED

STORET RETRIEVAL DATE 74/11/26

363261 LS363261
 43 15 30.0 074 14 00.0
 SACANDAGA RIVER
 36 15/HARRISBURG
 I/SACANDAGA RESERVOIR
 HWY BRIDGE DOWNSTREAM OF N HAMPTON STP
 11EPALFS 2111204
 4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO ₃ -N N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH ₃ -N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
72/11/05	14 45		0.338	0.260	0.058	0.005K	0.004
72/12/03	13 55		0.430	0.330	0.019	0.005K	0.011
73/01/06	13 50		0.560	0.290	0.026	0.005K	0.005K
73/02/03	14 03		0.500	0.800	0.189	0.008	0.015
73/03/03	12 05		0.400	0.390	0.042	0.005K	0.010
73/04/07	14 07		0.450	0.350	0.010	0.005K	0.005K
73/04/21	13 50		0.430	0.400	0.018	0.005K	0.005K
73/05/06	12 55		0.300	1.100	0.069	0.005K	0.005K
73/05/20	11 50		0.380	3.400	0.115	0.005K	0.010
73/06/02	16 31		0.220	0.690	0.015	0.005K	0.005K
73/07/07	10 35		0.110	0.300	0.019	0.005K	0.010
73/08/04	10 20		0.110	0.330	0.017	0.005K	0.010
73/09/08			0.072	1.150	0.036	0.005K	0.010
73/10/06	12 10		0.046	0.300	0.032	0.005K	0.005K

K VALUE KNOWN TO BE LESS
 THAN INDICATED

STORET RETRIEVAL DATE 74/11/26

363262 LS3632L2
 43 21 00.0 074 16 00.0
 SACANDAGA RIVER
 36 15/LAKE PLEASANT
 T/SACANDAGA RESERVOIR
 GAGING STA NEAR PUMPKIN HOLLOW
 11EPALES 2111204
 4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJFL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
72/11/05	15 40		0.340	0.220	0.050	0.005K	0.010
72/12/03	14 05		0.420	0.270	0.017	0.005K	0.005K
73/01/06	14 00		0.530	0.330	0.017	0.005K	0.005K
73/02/03	14 15		0.490	0.230	0.020	0.005K	0.010
73/03/03	12 20		0.390	0.740	0.110	0.005K	0.005K
73/04/07	14 35		0.420	0.610	0.063	0.005K	0.010
73/04/21	14 05		0.390	0.335	0.012	0.005K	0.005K
73/05/06	13 15		0.237	0.450	0.031	0.005K	0.005K
73/05/20	12 10		0.340	0.970	0.046	0.005K	0.010
73/06/02	17 00		0.220	0.850	0.031	0.005K	0.010
73/07/07	11 00		0.100	0.390	0.023	0.005K	0.015
73/08/04	10 40		0.105	0.240	0.005K	0.005K	0.010
73/09/08			0.052	0.550	0.037	0.005K	0.010
73/10/06	12 30		0.096	0.350	0.032	0.005K	0.010

K VALUE KNOWN TO BE LESS
 THAN INDICATED

STORET RETRIEVAL DATE 74/11/26

343263 LS363263
 43 19 00.0 073 55 30.0
 SACANDAGA RIVER
 36 15/LK LUZERNE
 0/SACANDAGA RESERVOIR
 CONKLINGVILLE DAM AT NORTH SHORE RD
 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 OPHOS MG/L P	00665 PHOS-TOT MG/L P
72/11/05	10 00		0.095	0.230	0.060	0.005K	0.008
72/12/03	11 10		0.088	0.200	0.029	0.005K	0.005K
73/01/05	09 40		0.240	0.290	0.028	0.005K	0.005K
73/02/02	09 10		0.315	0.340	0.041	0.005K	0.005K
73/03/06	18 58		0.390	0.230	0.052	0.005K	0.005K
73/04/10	08 13		0.300	0.120	0.022	0.005K	0.005K
73/04/16	08 40		0.350	2.000	0.054	0.005K	0.005K
73/05/06	11 00		0.399	2.200	0.071	0.005K	0.010
73/05/12	18 30		0.370	0.330	0.074	0.005K	0.005K
73/06/02	08 00		0.052	0.720	0.019	0.005K	0.010
73/07/02	19 55		0.097	0.460	0.075	0.005K	0.015
73/08/07	08 20		0.160	0.880	0.280	0.005K	0.005K
73/09/25	09 25		0.140	0.440	0.075	0.005K	0.010
73/10/06			0.048	0.580	0.042	0.009	0.020

K VALUE KNOWN TO BE LESS
 THAN INDICATED

STORET RETRIEVAL DATE 74/11/26

3632H1 LS3632H1
 43 16 30.0 074 03 30.0
 SAND CREEK
 36 15/HARRISHURG
 T/SACANDAGA RESERVOIR
 NORTH SHORE RD BRIDGE IN WEST DAY
 11EPALES 2111204
 4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2AM03 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
72/11/05	10 15		0.156	0.190	0.037	0.005K	0.008
72/12/03	08 10		0.273	0.210	0.014	0.005K	0.005K
73/01/05	07 50		0.340	0.180	0.017	0.005K	0.010
73/02/02	09 55		0.399	1.250	0.083	0.005K	0.045
73/03/06	19 30		0.378	0.200	0.052	0.005K	0.005K
73/04/10			0.147	0.180	0.063	0.005K	0.005K
73/04/16			0.138	1.760	0.052	0.005K	0.005K
73/05/06	10 00		0.160	0.480	0.023	0.005K	0.005K
73/05/12	19 35		0.168	2.100	0.100	0.005K	0.010
73/06/02	08 37		0.046	0.580	0.011	0.005K	0.010
73/07/02	19 35		0.048	0.420	0.066	0.005K	0.015
73/08/07	08 55		0.168	0.540	0.240	0.008	0.015
73/09/25	09 04		0.140	0.250	0.038	0.005K	0.010
73/10/06			0.080	0.420	0.033	0.005K	0.010

K VALUE KNOWN TO BE LESS
 THAN INDICATED

STORET RETRIEVAL DATE 74/11/26

3632J1 LS3632J1
 43 18 30.0 074 00 00.0
 PAUL CREEK
 36 15/HARRISBURG
 T/SACANDAGA RESERVOIR
 NORTH SHORE RD BRIDGE IN DAY CENTER
 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
72/11/05	10 23		0.097	0.180	0.044	0.005K	0.007
72/12/03	07 30		0.132	0.175	0.010	0.005K	0.005K
73/01/05	07 30		0.200	0.180	0.020	0.005K	0.010
73/02/02	10 10		0.240	0.290	0.030	0.005K	0.020
73/03/06	19 50		0.370	0.170	0.034	0.005K	0.005K
73/04/10	09 30		0.140	0.150	0.017	0.005K	0.005K
73/04/16	10 15		0.138	2.600	0.066	0.005K	0.010
73/05/06	09 45		0.056	1.320	0.027	0.005K	0.005K
73/05/12	19 45		0.078	3.400	0.250	0.005K	0.010
73/06/02	08 47		0.050	1.000	0.037	0.005K	0.010
73/07/02	20 15		0.066	0.560	0.160	0.005K	0.010
73/08/07	09 00		0.210	1.000	0.840	0.016	0.020
73/09/25	09 45		0.147	0.150	0.019	0.005K	0.005K
73/10/06			0.080	0.460	0.028	0.005K	0.010

K VALUE KNOWN TO BE LESS
 THAN INDICATED

STORET RETRIEVAL DATE 74/11/26

3632K1 LS3632K1
 43 17 00.0 073 58 00.0
 DALY CREEK
 36 15/LK LUZERNE
 T/SACANDAGA RESERVOIR
 S SHORE RD BRIDGE SW OF OVERLOOK
 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
72/11/05	09	40	0.063	0.280	0.044	0.005K	0.010
72/12/03	10	30	0.110	0.220	0.022	0.005K	0.005K
73/01/05	09	10	0.200	0.370	0.048	0.005K	0.005K
73/02/02	08	35	0.231	0.250	0.050	0.005K	0.005K
73/03/06	19	13	0.315	0.280	0.060	0.005K	0.005K
73/04/10	08	45	0.310	0.310	0.038	0.005K	0.005K
73/04/16	09	10	0.350	1.400	0.051	0.005K	0.005K
73/05/06	10	45	0.054	1.150	0.063	0.005K	0.005K
73/05/12	18	47	0.058	1.000	0.180	0.005K	0.010
73/06/02	08	15	0.040	0.210	0.006	0.005K	0.010
73/07/02	19	10	0.036	0.700	0.176	0.005K	0.020
73/08/07	08	35	0.081	0.460	0.147	0.005K	0.010
73/09/25	09	10	0.140	0.160	0.031	0.005K	0.015
73/10/06			0.080	0.370	0.033	0.005K	0.010

K VALUE KNOWN TO BE LESS
 THAN INDICATED

STORET RETRIEVAL DATE 74/11/26

3632L1 LS3632L1
 43 03 30.0 073 13 30.0
 KENYETTO CREEK
 36 7.5/BROADALBIN
 T/SACANDAGA RESERVOIR
 ST HWY 30 BRIDGE N OF BROADALBIN
 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
72/11/05	16 20		0.182		0.063	0.011	0.054
72/12/03	15 30		0.260	0.350	0.032	0.010	0.029
73/01/05	15 25		0.320	0.320	0.044	0.011	0.033
73/02/03	13 30		0.360	0.900	0.138	0.019	0.070
73/03/03	13 50		0.450	1.300	0.260	0.037	0.065
73/04/07	16 05		0.140	1.260	0.033	0.005K	0.025
73/04/21	15 15		0.210	0.440	0.048	0.017	0.035
73/05/06	14 20		0.126	1.800	0.073	0.008	0.015
73/05/20	14 00		0.110	0.460	0.019	0.006	0.027
73/06/02	15 45		0.126	1.100	0.034	0.010	0.035
73/07/07	11 55		0.290	0.480	0.025	0.009	0.035
73/08/04			0.378	0.390	0.015	0.012	0.035
73/09/08			0.320	1.400	0.080	0.016	0.040
73/10/06	13 35		0.110	0.360	0.025	0.011	0.030

K VALUE KNOWN TO BE LESS
 THAN INDICATED