Environment Canada
Environnement Canada
Environmental Management
Gestion de l'environnement

NUTRIENT CONCENTRATIONS AND LOADS IN THE THOMPSON RIVER SYSTEM

E.OGUSS & W.E.ERLEBACH

SEPTEMBER 1975

Inland Waters Directorate
Pacific and Yukon Region
Vancouver, B.C.

NUTRIENT CONCENTRATIONS AND LOADS IN THE THOMPSON RIVER SYSTEM*

E. OGUSS
W.E. ERLEBACH

WATER QUALITY BRANCH
INLAND WATERS DIRECTORATE
SEPTEMBER 1975

* A contribution to the Joint Federal/Provincial Task Force on Kamloops Lake and the Thompson River.

TABLE OF CONTENTS

INTRODUCTION

In the fall of 1973, a joint federal-provincial task force was created to study the cause of excessive algal growth, foaming, colour and fish tainting in the Thompson River. The task accepted by the Water Quality Branch was the measurement of nutrient concentrations and estimation of annual loads at several strategic locations for one year. The locations were (1) the North and South Thompson Rivers near their confluence, indicating the background nutrient levels from natural and diffuse cultural sources, (2) the Thompson River just downstream of the City of Kamloops, determining the contribution of known point sources to nutrient concentrations, and (3) the Thompson River just below Kamloops Lake, where the nuisance algal growth occurs. The nutrients measured were nitrate + nitrite, Kjeldahl nitrogen, total phosphorus and dissolved phosphorus. Provisional daily discharges were obtained from Water Survey of Canada for the calculation of nutrient loads. In addition, visual observations and nutrient analysis of benthic algae were done in April 1975.

This report presents the nutrient concentrations and estimates of annual loads, and offers some conclusions and recommendations concerning nutrients and algal growth in the Thompson River system.

METHODS

(1) Study Period

Field work began on May 1, 1974 when samples for total (unfiltered) phosphorus and nitrate + nitrite analysis were collected as described below. Field filtration of phosphorus samples began on July 17, 1974 and sampling for Kjeldahl nitrogen began on June 11, 1974. Sampling was done weekly during freshet and on a biweekly schedule at other times. Field work ended on June 17, 1975.

(2) Sampling Stations

Sampling stations were established on May 1, 1974 at the Overlander Bridge, Tranquille and the highway bridge near Savona. The North and South Thompson Rivers flow together shortly before the Overlander Bridge; during freshet the waters of the two rivers just below the bridge remained unmixed and sampling was done from this bridge. By August, some mixing was detected, and new sampling stations were established above the confluence. These new stations were the C.N. railway bridge over the North Thompson and the highway bridge over the South Thompson. The locations of the transections sampled are shown in Figure 1.

The sampling at Tranquille was done from a boat, at six points evenly spaced in a transection across the river. The intent was to estimate nutrient transport through each of six segments of equal width in the transection. This estimate would have required the measurement of discharge and concentration for each segment during the year of study. Since no statistically significant concentration gradients were found for the nutrients studied, making estimates for each segment was not warranted. Therefore, mean daily discharges through the transection and mean concentrations were used to calculate daily loads. The transection was generally sited in line with a group of pilings on the north side of the river

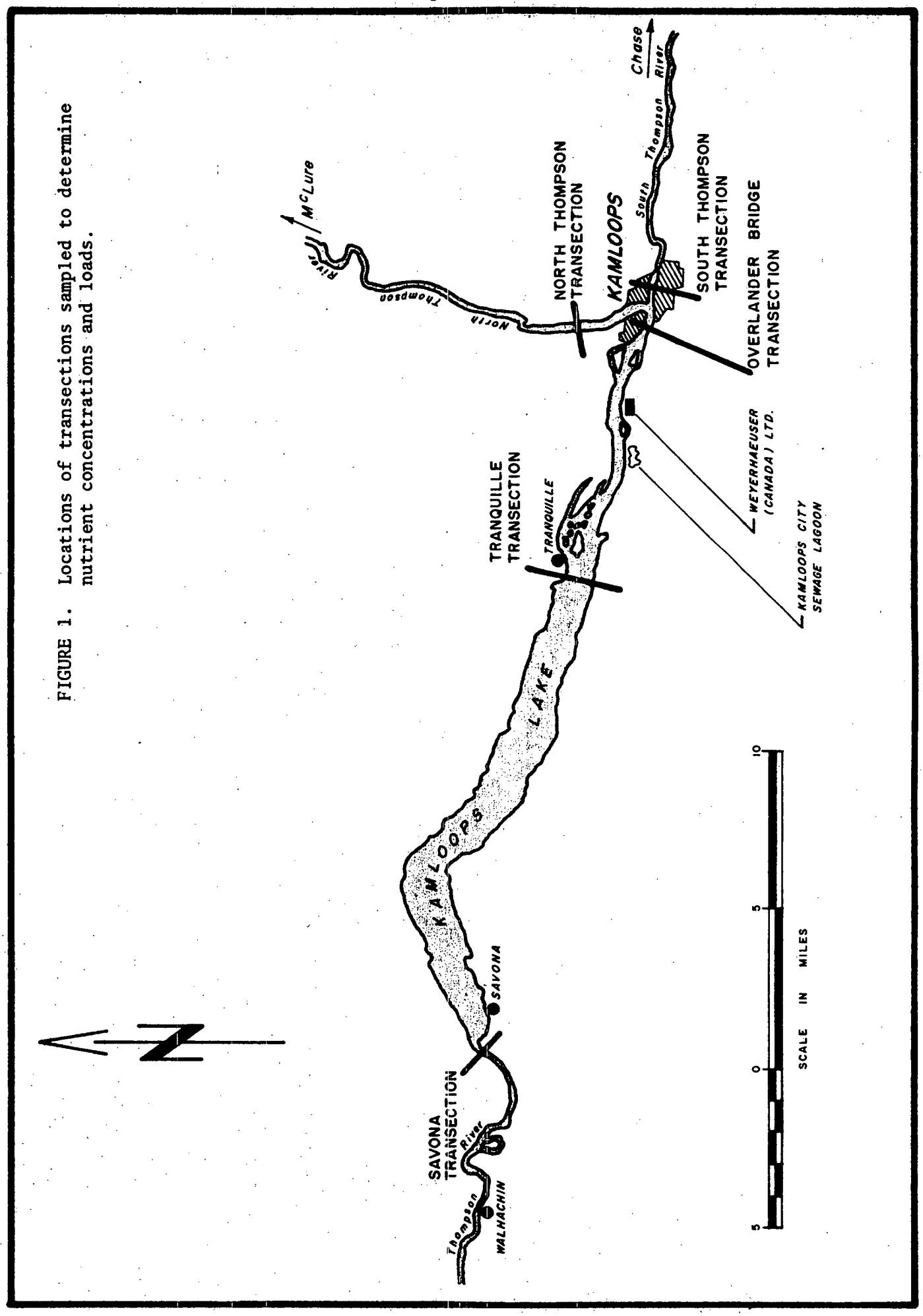

FIGURE 1. Locations of transections sampled to determine nutrient concentrations and loads.

between the Tranquille School and the Tranquille River. The exact location of the transection varied slightly during the year as necessitated by ice and sandbars. On January 15 and 28, ice prohibited launching of the boat, and samples were collected from the north bank of the river.

It should be noted that the Savona station was located on the Thompson River and not in Kamloops Lake.

(3) Replicate Sampling

All samples were collected in replicate so that confidence limits could be established for the estimates of mean concentration. A sampler which simultaneously fills six bottles from the top metre of water was used to collect samples for total phosphorus, dissolved phosphorus, and nitrate + nitrite measurements. This sampler is described in an earlier report (Oguss and Erlebach, 1975). Samples for dissolved phosphorus were filtered within one-half hour of taking the sample, using 0.45μ cellulose acetate filters and a hand pump. Kjeldahl nitrogen samples were collected in pairs in one-litre plastic bottles. It should be noted that only surface waters were sampled. During the initial survey, samples were taken at a number of depths and no significant vertical gradients were found at that time. But the absence of vertical gradients during the remainder of the study cannot be confirmed. Nutrients associated with settleable solids may be underestimated in some cases. Bedload transport was not measured.

(4) Statistical Methods

Means, standard errors and standard deviations were calculated for each set of replicates. Since no significant lateral gradients were found at Tranquille, all 36 samples (six sets of six replicates) were pooled.

"Outliers," defined here as individual samples whose magnitude exceeds the value of the next closest individual sample by two or more

standard deviations, were encountered regularly in unfiltered samples. These outliers are believed to represent a true component of nutrient distribution in these waters. Therefore, outliers were not excluded from the calculation of means, etc. Their presence and frequency are indicated in the Appendix.

An intensive evaluation of spacial and temporal variability of some nutrients and metal concentrations in the Thompson River at Shaw Springs (Oguss and Erlebach, 1975) indicates a very large degree of temporal variability in this system. This fact should not be overlooked in determining the significance of changes in concentration, especially when single, infrequent samples are compared.

Confidence limits for the daily loading estimates were based on the standard error of the estimate of the mean concentration and on a 5% error on the flow data. Confidence limits for the estimates of annual loads were calculated by taking the root mean squares of the daily load errors.

(5) Chemical Analyses

Total phosphate was determined by the automated Murphy-Riley method (Murphy and Riley, 1962) (Technicon AutoAnalyzer II Methodology, 1971) after the entire field sample was digested with sulphuric acid and potassium persulphate.

The concentrations of nitrate + nitrite were measured by an automated method (Technicon AutoAnalyzer II Methodology, 1972) which was modified. An aliquot of the sample was buffered at a pH of 8.5 with NH_4Cl and NH_4OH and then reduced by passage through a column packed with particles of copper-coated cadmium. A solution of sulphanilamide, N-1-napthylene-diamine dihydrochloride, and phosphoric acid was added to the reduced aliquot to develop the azo dye. The dye concentration was determined spectrophotometrically at 550 nm.

Total Kjeldahl nitrogen which includes the nitrogen from organic compounds converted to ammonium bisulphate by the digestion method used and the nitrogen from free ammonia was determined using the method described in Inland Waters Directorate Analytical Methods Manual (1974). After the sample was distilled into boric acid, the colour was developed using the indophenol-blue method. Colour intensity was measured spectrophotometrically at 640 nm.

RESULTS AND DISCUSSION

A complete listing of mean concentrations (with confidence limits, etc.), flows, and calculated loads for each nutrient and each sampling transection is given in the Appendix. Figures 2 through 5 show the concentrations of nutrients measured during the period of low flow. Figures 6 through 9 show the calculated daily loads at the four transections. For days when sampling was not done, concentrations were estimated by assuming a linear change in mean concentration between sampling times. Loads were calculated for each day from the estimated concentration and the measured daily flow. Table I presents the calculated annual loads.

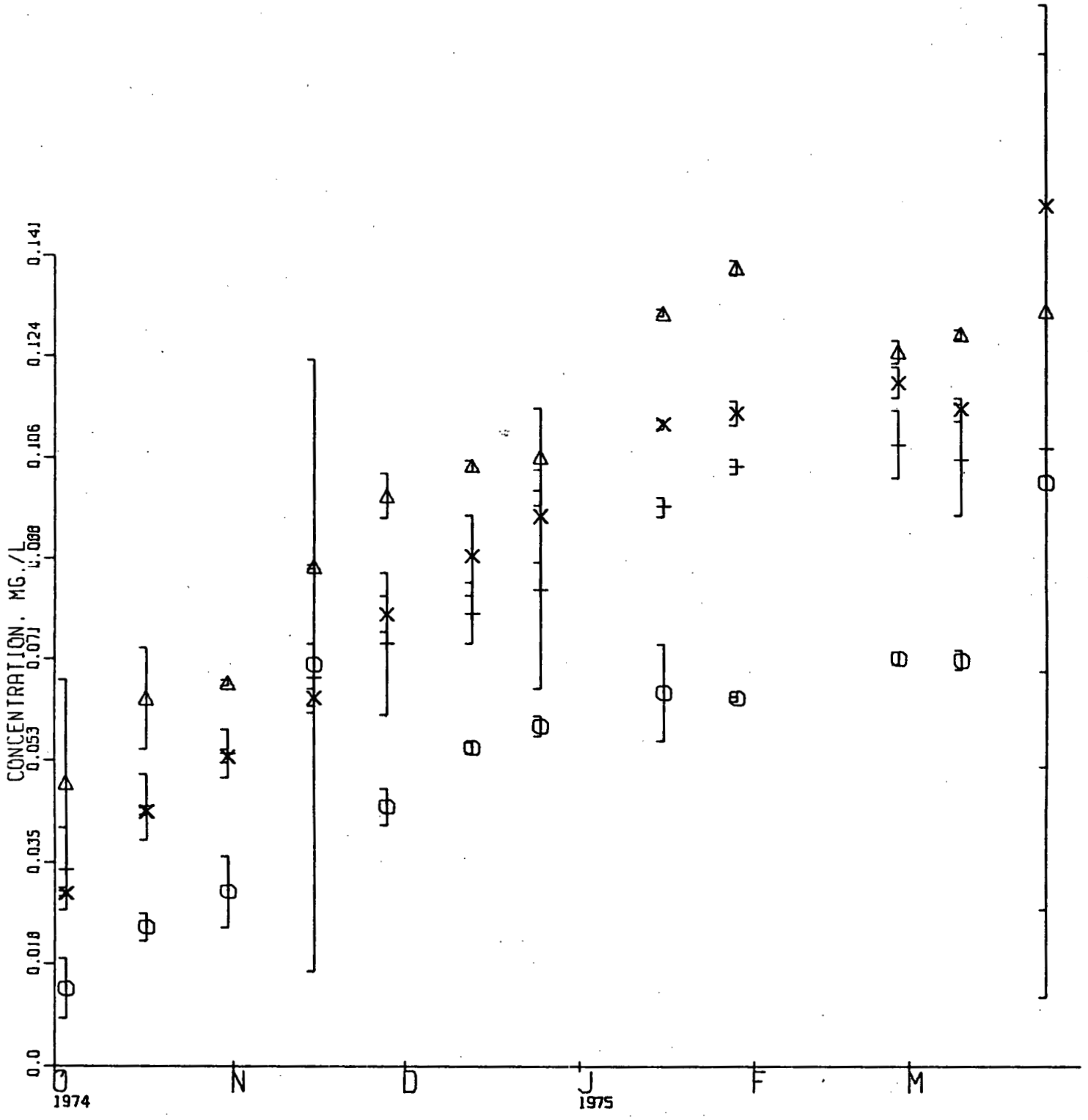

FIGURE 2. Concentrations of nitrate+nitrite at the four sampling transections during low flow.
□ = South Thompson River, Δ = North Thompson River
+ = Tranquille, X = Savona
The vertical bar through each symbol indicates one standard deviation.

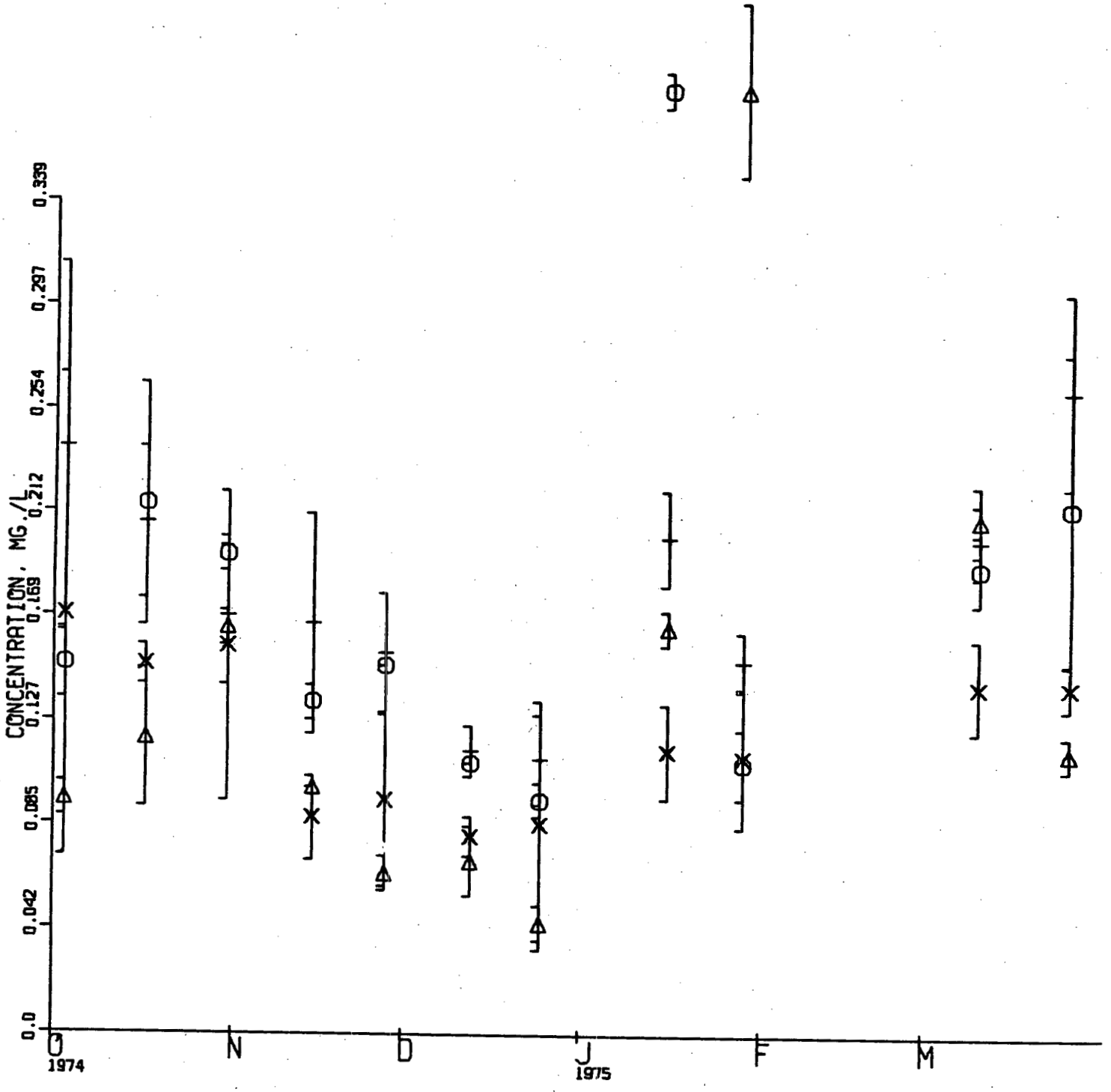

FIGURE 3. Concentrations of Kjeldahl nitrogen at the four sampling transections during low flow.
□ = South Thompson River △ = North Thompson River
+ = Tranquille × = Savona
The vertical bar through each symbol indicates one standard deviation.

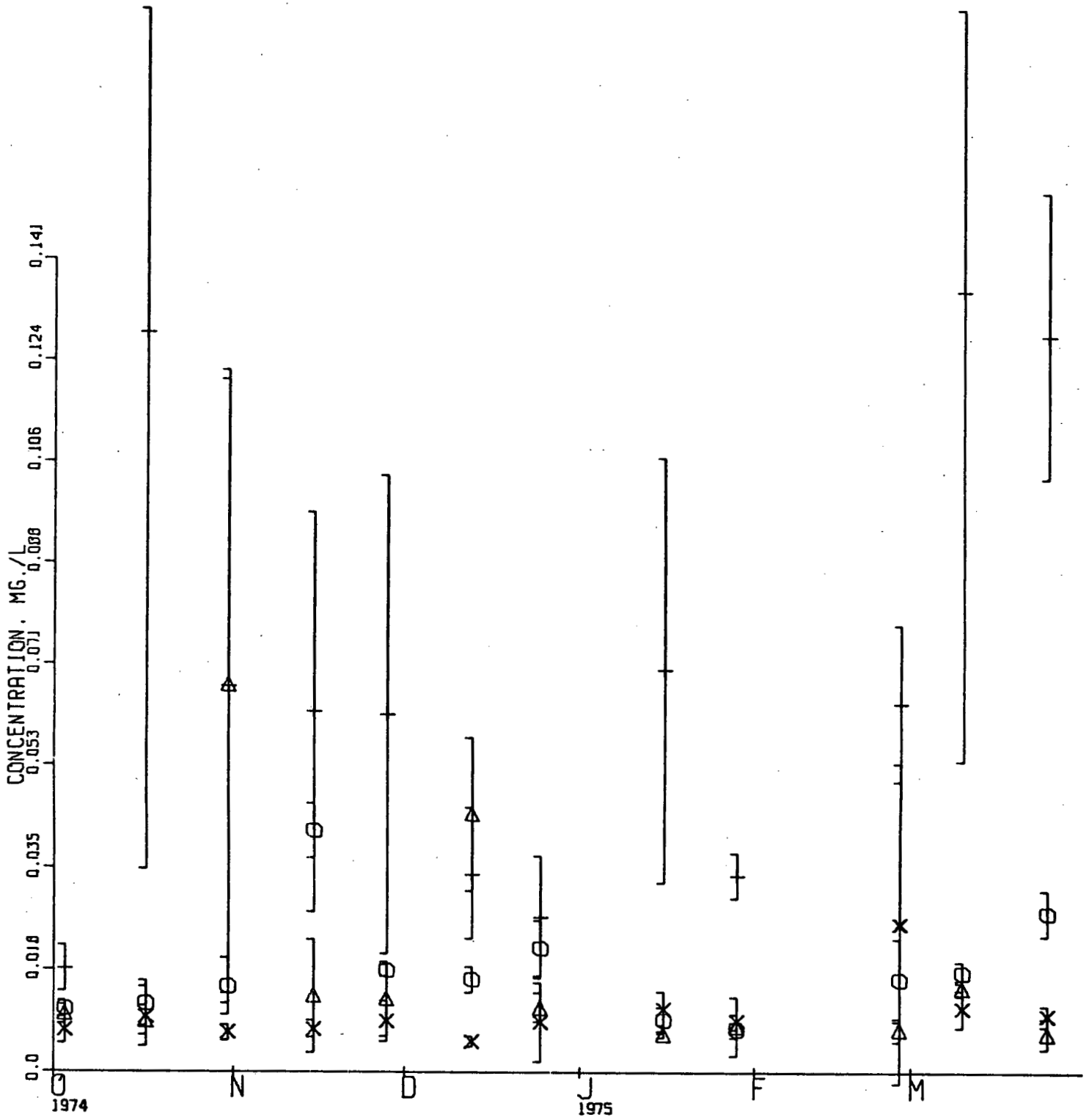

FIGURE 4. Concentrations of unfiltered phosphorus at the four sampling transections during low flow.

□ = South Thompson River △ = North Thompson River
+ = Tranquille X = Savona

The vertical bar through each symbol indicates one standard deviation.

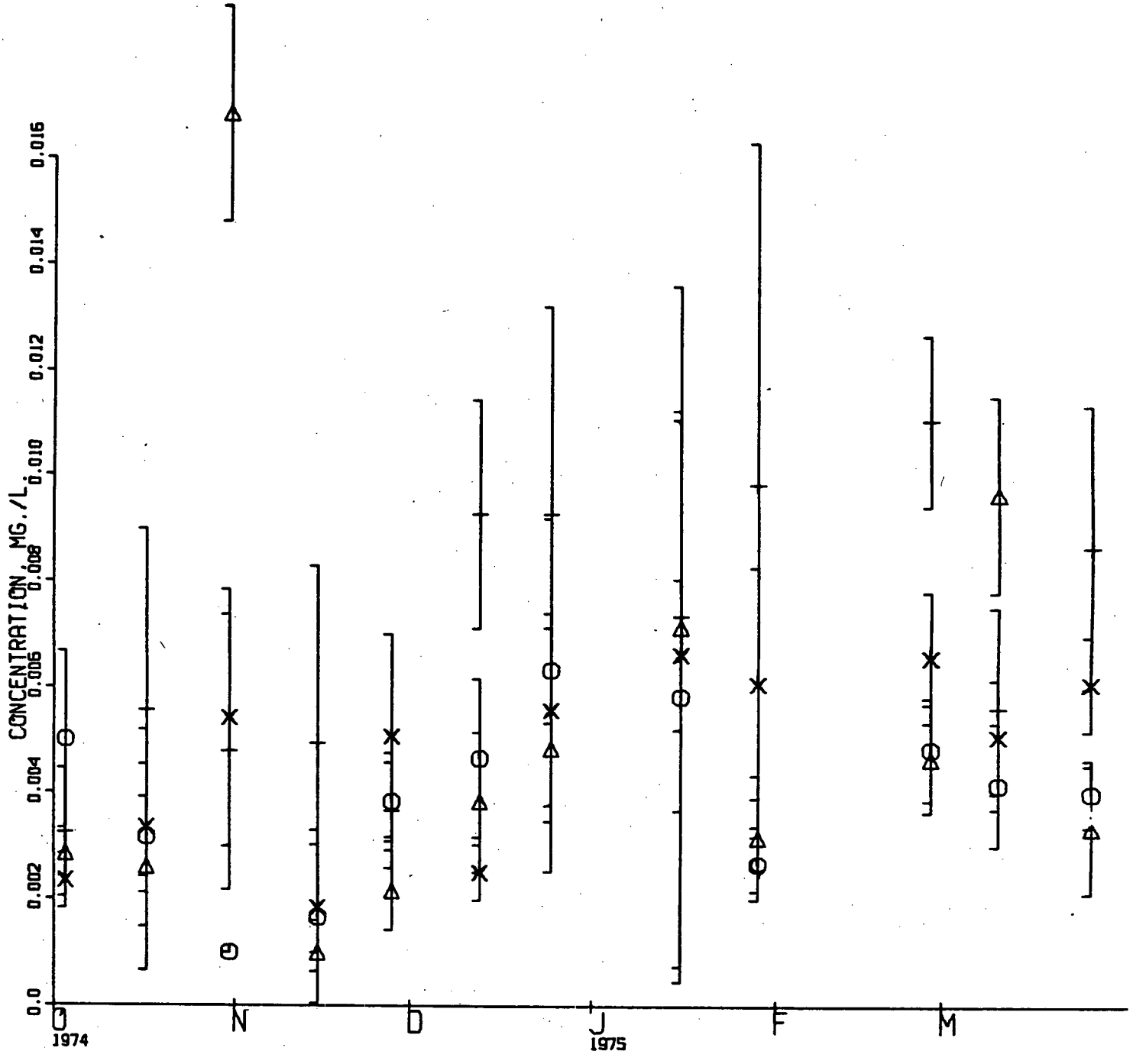

FIGURE 5. Concentrations of dissolved phosphorus at the four sampling transections during low flow.
□ = South Thompson River △ = North Thompson River
+ = Tranquille × = Savona
The vertical bar through each symbol indicates one standard deviation.

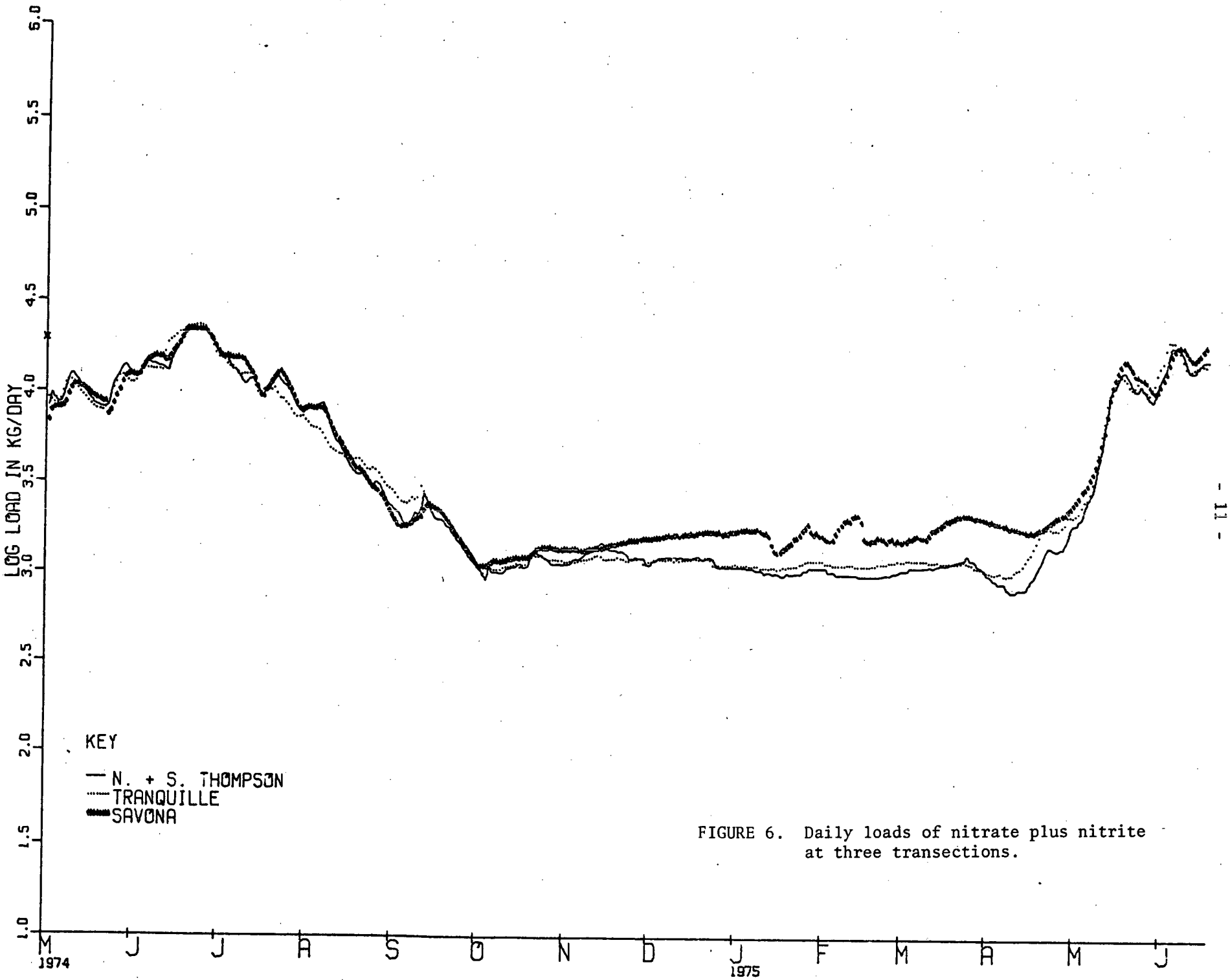

FIGURE 6. Daily loads of nitrate plus nitrite at three transections.

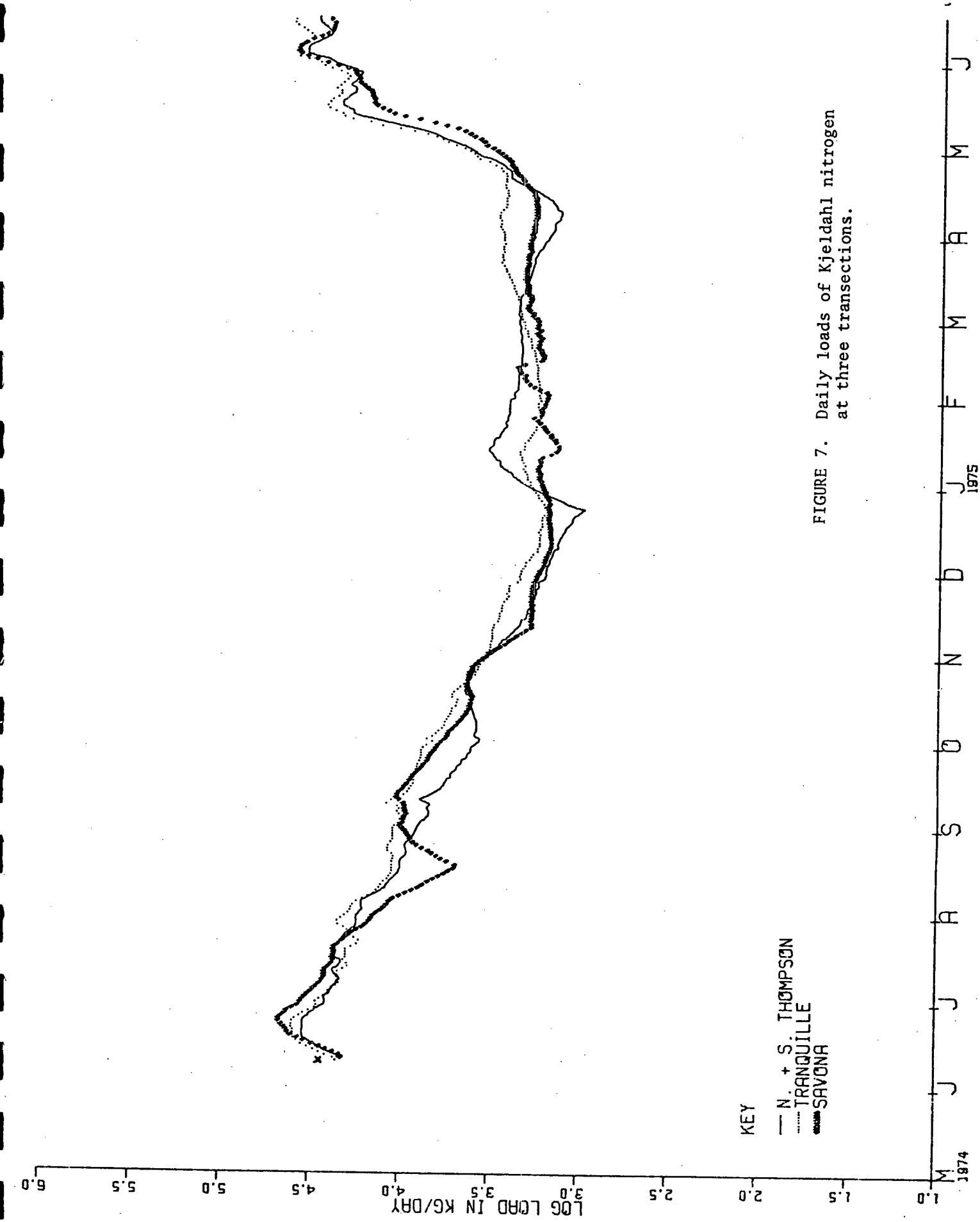

FIGURE 7. Daily loads of Kjeldahl nitrogen at three transections.

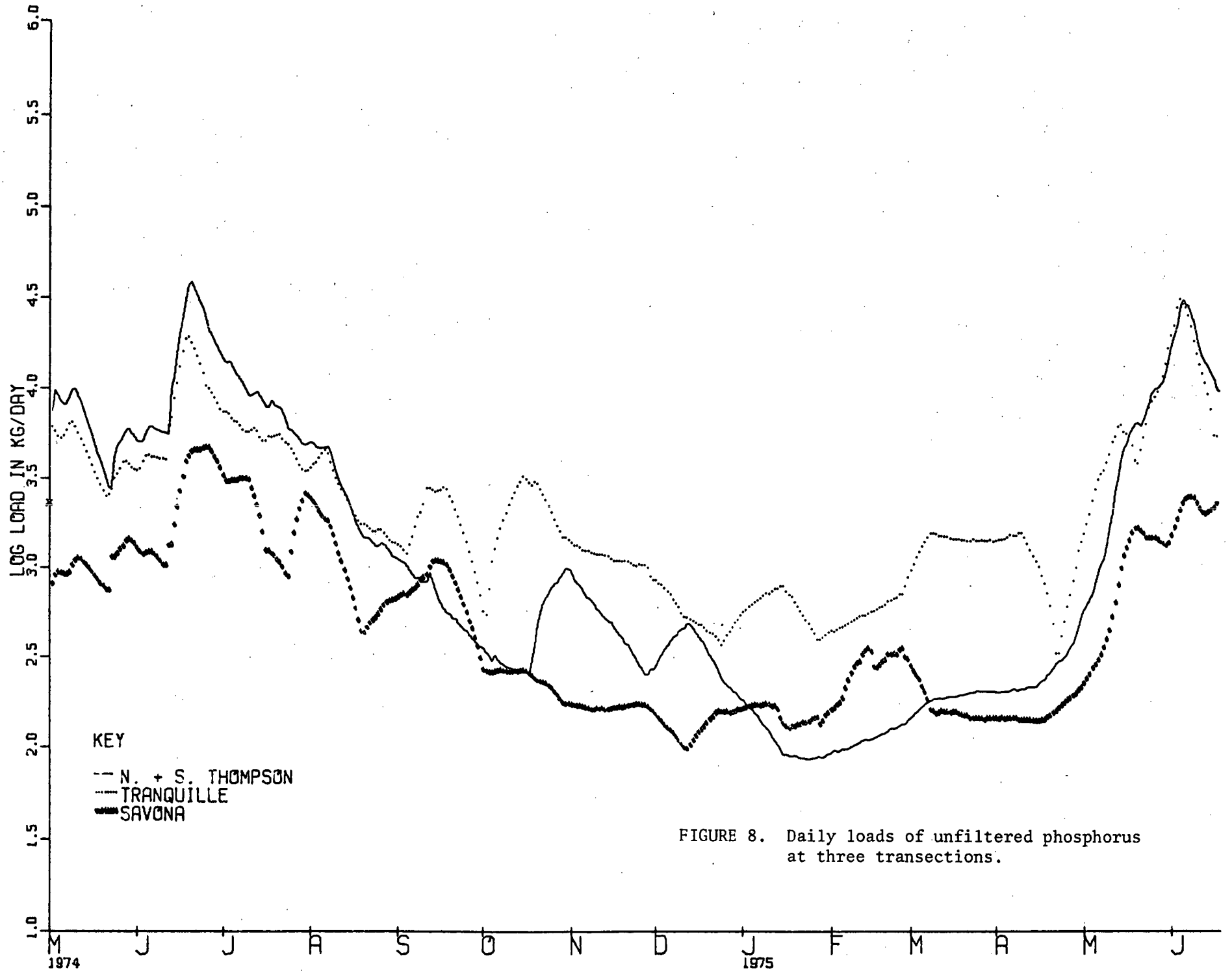

FIGURE 8. Daily loads of unfiltered phosphorus at three transections.

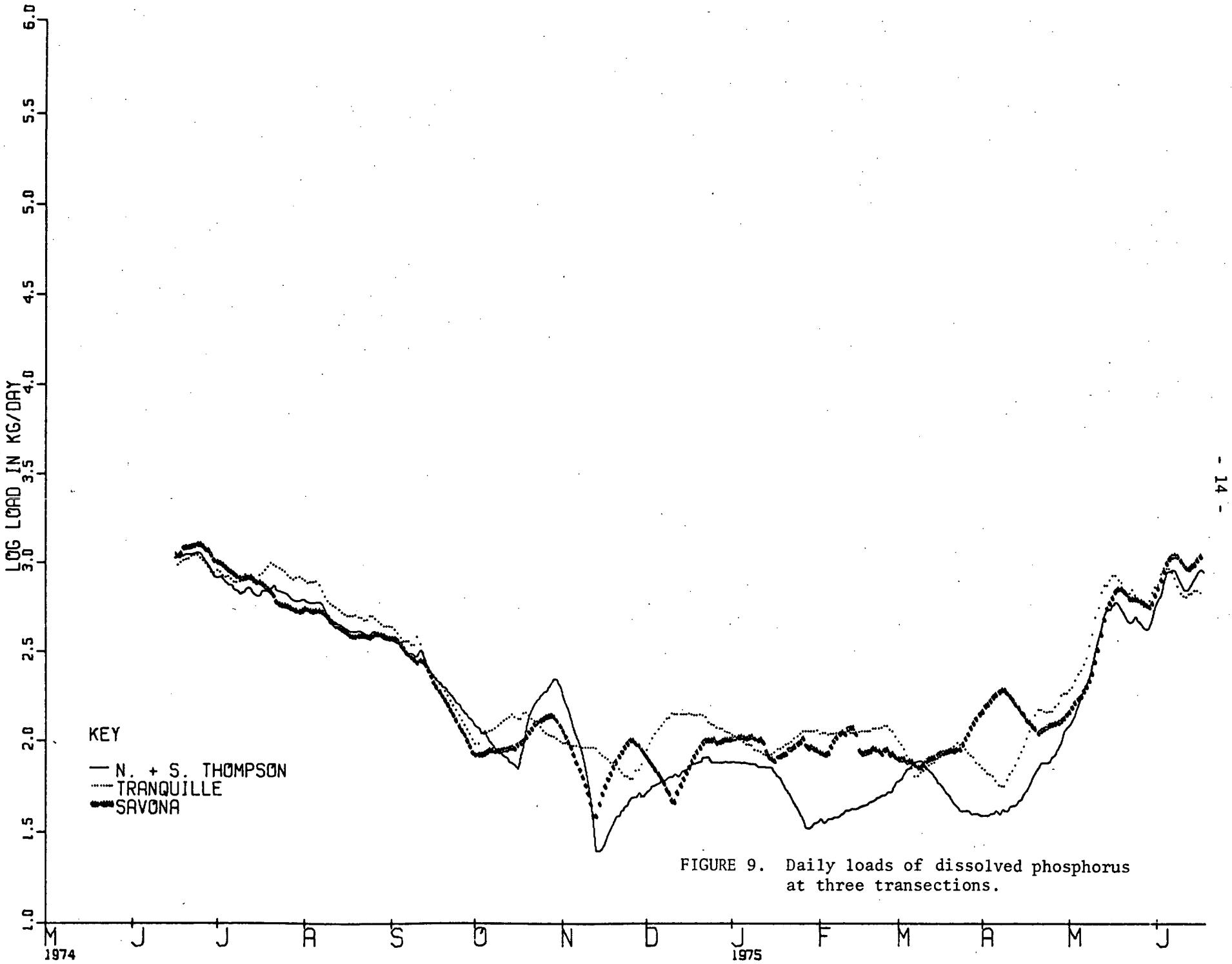

FIGURE 9. Daily loads of dissolved phosphorus at three transections.

TABLE I

ANNUAL NUTRIENT LOADS (Tonnes) 2/

	Nitrate + Nitrite	Kjeldahl Nitrogen	Total Phosphorus	Dissolved Phosphorus
(1) South Thompson	412 ± 2	1377 ± 17	371 ± 2	38 ± 1
(2) North Thompson	1198 ± 3	1804 ± 19	885 ± 8	60 ± 1
(3) Combined North and South Thompson (1 + 2)	1611 ± 4	3181 ± 25	1256 ± 8 1/	98 ± 2
(4) Tranquille	1640 ± 9	3671 ± 30	1188 ± 10 1/	118 ± 2
(5) Tranquille less combined Rivers (4-3)	29 ± 10	490 ± 39	- 68 ± 13	20 ± 3
(6) Savona	1812 ± 7	3266 ± 41	287 ± 4	111 ± 2
(7) Tranquille less Savona (4-6)	-172 ± 11	405 ± 50	901 ± 11	7 ± 2

1/ The deposition of sediment with associated phosphate in the delta between the confluence and Tranquille can partly explain the lower load at Tranquille. The deposited load in the delta should in fact be increased by an amount of phosphate equivalent to the 100 tonnes estimated to have entered the river in Kamloops.

2/ The errors on the load are shown as 1.96 times the standard error. This error corresponds with a 95 percent confidence interval.

(1) Nitrate and Nitrite

In both the North and South Thompson Rivers, there are two seasonal peaks in the nitrate plus nitrite concentrations. The lower peak in each river occurs during early freshet (0.131 mg/l for the North Thompson on May 2 and 0.076 for the South Thompson on May 23), and the higher peak during low water (0.139 mg/l for the North Thompson on January 28; 0.101 mg/l for the South Thompson on March 24). The lowest concentrations in the rivers occur during late summer. The nitrate and nitrite loads calculated for the Tranquille transection were generally very close to the combined load (1,611 tonnes) of the North and South Thompson Rivers, with a net increase for the year estimated at 29 ± 10 tonnes (less than 2% of the total load). Annual loading estimates at Savona indicate a net increase of 172 tonnes (approximately 9% of the total load). This addition may represent production of nitrate in the lake. Most of this additional loading occurs during low water. From November through March the average concentration of the combined North and South Thompson Rivers was 0.090 ± .011 mg/l, while at Savona it was 0.104 ± .025 mg/l.

The high background levels of nitrate, plus the possibility of nitrate production in the lake, indicate that controlling algal growth via nitrogen limitation is not feasible in this system.

(2) Kjeldahl Nitrogen

Kjeldahl nitrogen concentration varied without an identifiable pattern on the North and South Thompson Rivers, except that concentrations were generally higher early in the freshet than at peak or falling flows. The loads calculated for the Tranquille transection are generally higher than the combined loads from the North and South Thompson Rivers. On two out of 29 occasions the combined loads were significantly higher than the loads measured at Tranquille. This may be attributable to sedimentation in the delta between the confluence and Tranquille. Annual totals indicate

a net increase in Kjeldahl nitrogen of 490 ± 28 tonnes (approximately 13% of the total load) from sources in the Kamloops area. Low Kjeldahl nitrogen concentrations at Savona indicate sedimentation or chemical conversion of this material in the lake, amounting to 405 ± 35 tonnes per year. From November through March, the average concentration of the combined North and South Thompson Rivers was 0.16 mg/l ± .08, while at Savona it was 0.11 mg/l ± .02.

The combined total Kjeldahl and nitrate plus nitrite loads of nitrogen from sources in the Kamloops area (based on differences between the combined river loads and the load at the Tranquille transection) amounted to 577 tonnes per year. This can be compared with a calculated annual load of 460 tonnes based on estimated daily loads of total nitrogen in effluent from the two major point sources for a non-concurrent but overlapping period. The latter estimate was made in an interim report by Olan (1974).

(3) Total Phosphorus

Phosphorus concentrations are high in the Kamloops area, largely due to non-filterable solids; between 30 and 90% of the total phosphorus can be removed by filtration. Samples of solids concentrated from surface waters upstream of Kamloops during freshet and separated by centrifugation showed that between 60 and 95% (by volume) of these solids are inorganic. The mineral apatite is believed to constitute part of this material and may account for the high phosphorus concentrations found in unfiltered samples. While it is generally believed that the phosphorus in apatite is not biologically available, this hypothesis has not been tested with the appropriate bioassays. It is also possible that some phosphorus is adsorbed on the surface of clay particles and other solids.

Total phosphorus concentrations are very strongly correlated with flow in the Thompson River system, with maximum daily loads as high as 32.6 (± 2.8) tonnes in the North Thompson and 6.9 (± 0.2) tonnes in the

South Thompson occurring during peak freshet. These high input levels obscure detection of additional loads from point sources in the urban area during freshet.

From November to April the combined North and South Thompson total phosphorus daily loads range between 0.5 and 0.1 tonnes, and net increases of between 0.3 and 0.7 tonnes per day were commonly observed at Tranquille. The variation in these differences may reflect variations in the discharges from the point sources and in the resuspension of sediments in the delta immediately above Tranquille. A mean value of approximately 0.6 tonnes per day for the period can be compared with the estimated point source discharges (Olan, 1974) of 0.3 tonnes per day.

Total phosphorus concentrations at Savona are lower than at Tranquille, largely due to the settling of non-filterable material in the lake. The estimate of the annual load to the lake of 901 ± 11 tonnes is based on an assumption that 168 tonnes were deposited in the delta. This would account for the difference of 68 tonnes between the loads at Tranquille and the confluence and the approximately 100 additional tonnes estimated by Olan (1974) to have entered the river in Kamloops. If there were no accumulation of phosphate in the delta between the confluence and Tranquille, the annual accumulation in the lake could reach 1,069 tonnes. During a year of higher flow, some of this accumulation in the delta could be transferred to the lake. Bedload transport which was not measured would reduce the estimated deposition in the delta and increase the deposition in the lake below the delta.

(4) Dissolved Phosphorus

Concentrations of dissolved phosphorus are relatively constant under all flow conditions in the North and South Thompson Rivers. Therefore, the highest daily loads occur during freshet, peaking at 0.8 (± 0.2) tonnes in the North Thompson and 0.3 (± 0.1) tonnes for the South Thompson. Additional loads from the Kamloops area cannot be detected at Tranquille

during freshet. Nevertheless, Figure 9 shows that the load at Tranquille exceeds the combined river loads for approximately 80 percent of the study period.

During low water the effect of point sources is evident (see Figure 3), with concentrations at Tranquille averaging 0.003 mg/l higher than upstream values. Since the average concentration of dissolved phosphorus above Kamloops ranges between 0.003 and 0.006 mg/l at this time of the year, the increase in concentration sometimes is as great as 100 percent. [However, this percentage should be accepted with some caution because the concentrations are close to the detection limit of the laboratory analysis (0.002 mg/l) and to the average standard deviation in sets of six replicates (± 0.002 mg/l).] Comparing annual loads, the increase detected at Tranquille amounts to 20 ± 3 tonnes, which is approximately 20 percent of the total dissolved phosphorus load into the lake.

Concentrations of dissolved phosphorus leaving Kamloops Lake are similar to the concentrations found in the North and South Thompson Rivers. From November through March the average concentration of the combined North and South Thompson Rivers was .004 ± .002 mg/l, while the average concentration at Savona was .005 ± .002 mg/l. The fact that these concentrations are not statistically different is relevant to the discussion of differences in periphyton growth at sites referred to in the next section.

An estimate of the reduction of dissolved phosphorus concentrations at Savona following the elimination of phosphorus additions in Kamloops would be useful in assessing the effect of these sources since phosphorus is most often found to be the limiting nutrient for algal growth in fresh water. Unfortunately, it is not possible to determine the amount of reduction by simple subtraction. A simulation model to predict phosphorus concentrations at Savona would have to include the dynamics of exchange between the pools of dissolved and particulate phosphorus. The relatively constant concentrations of dissolved phosphorus observed in the North and

South Thompson Rivers and at Savona raise the possibility that such an equilibrium may be a major factor in controlling dissolved phosphorus concentrations. Physical and biological processes in the lake would affect the rates of exchange, as would additions of different types of solids (i.e., mainly organic) from a point source.

(5) Periphyton

A comparison of algal abundance in the North and South Thompson with the abundance in the Thompson at Savona, made in order to assess the availability of nutrients at these locations, is of uncertain value. The presence of the lake between the two upper and the lower reaches of the river changes the nutrient concentrations and availability, moderates water temperatures, and reduces turbidity. Differences in substrate availability and suitability, and flow velocities over the substrate add to the questionability of conclusions based on the comparison. Since, however, such comparisons are ~~made,~~ it should again be pointed out that the calculated mean concentrations of dissolved phosphorus in the combined North and South Thompson Rivers and at Savona are not significantly different during the low flow period. Consequently, these mean values cannot be used to support an explanation of the significantly greater algal abundance reported by Langer and Nassichuk (1975) in the river below the lake.

A limited investigation of the ratios of nitrogen to phosphorus in algal tissues and trial assays of alkaline phosphatase (an algal enzyme involved in phosphorus uptake) were made shortly after the peak of the spring bloom in the three reaches. On April 23, 1975, samples of gelatinous attached diatoms were collected from natural substrates in the vicinity of artificial substrates placed by Fisheries Operations at Chase, McLure, Savona and Walhachin and examined for nutrient content and alkaline phosphatase bioassay. The percentages (by dry weight) of Kjeldahl nitrogen and total phosphorus were determined by Kistritz (1975). Mean values based on duplicate tests are given in Table II.

TABLE II

KJELDAHL NITROGEN AND TOTAL PHOSPHORUS IN ATTACHED DIATOMS

Site	% N	% P	N:P Ratio
Chase	0.79	.078	10.0 : 1.0
McLure	0.86	.057	15.1 : 1.0
Savona	1.04	.045	23.1 : 1.0
Walhachin	1.58	.078	20.2 : 1.0

The interpretation of N:P ratios is controversial under the best of circumstances since so many factors can raise or lower the percentages of nitrogen and phosphorus. Interpretation of these four samples is made especially difficult by the lack of reported N:P ratios for gelatinous attached diatoms in the literature. Normal values for planktonic green and blue-green algae are generally between 7:1 and 11.5:1. The higher ratios observed in this case may be caused by extracellular proteins in the gelatinous stalks of the diatoms.

The alkaline phosphatase bioassay technique, which uses the titre of the enzyme alkaline phosphatase in fresh samples of indigenous algae as an indicator of phosphorus-limited growth, was used on periphyton samples from the four sites. High levels of the enzyme are found only when cells are starved for phosphorus (Fitzgerald, 1969). The results of the bioassay at all sites were negative; e.g., the algae were not limited by a lack of phosphorus. Since the samples were taken shortly after the peak of the algal bloom, when competition for phosphorus would be near the maximum, it can be concluded that there is more than sufficient phosphorus available. At the time of sampling, the abundant algal growth on gravel bars at Chase and McLure had in the estimate of the samplers reached nuisance levels. Other than these limited gravel bars, lack of suitable substrate for periphyton attachment between the two upstream sites and Kamloops could account for the limited algal standing crop in these regions of the North and South Thompson Rivers.

These observations of abundant algae at locations near Chase and McLure indicate that the supply of biologically available phosphorus in waters upstream of Kamloops is sufficient to support substantial growth of algae where substrates are available and other physical conditions are favorable. Since in general algal populations are scarce in this part of the Thompson River system, the amount of these nutrients used is small and the remainder may constitute a supply of phosphorus sufficient to support blooms in downstream areas where physical conditions are favorable. Additions of phosphorus from diffuse cultural sources in both upstream watersheds should not be overlooked if control by phosphorus limitation is chosen as the means of suppressing nuisance algal growth.

CONCLUSIONS

(1) Replicate sampling is necessary to determine significant differences in concentrations of nutrients in this system.

(2) High background levels (i.e., upstream from Kamloops) of nitrate, plus the possibility of nitrate production in the lake, indicate that controlling algal growth via nitrogen limitation is not feasible in this system.

(3) During low water the concentrations of phosphorus in filtered and unfiltered samples are higher at Tranquille than at the North and South Thompson River stations.

(4) During low water there is no significant difference in the phosphorus concentration in filtered samples from the North and South Thompson River stations and the Savona station. Therefore, the higher algal growth rates reported at Savona cannot with confidence be attributed to differences in concentrations of dissolved phosphorus.

(5) Elimination of phosphorus additions in Kamloops would probably result in a reduction in phosphorus concentration at Savona. However, there is no direct way of calculating the magnitude of this reduction and no way of knowing if it would be sufficient to make phosphorus the limiting factor in algal growth below Savona.

RECOMMENDATIONS

(1) Additions of biologically available phosphorus should be reduced wherever possible, both in the Kamloops area and in the North and South Thompson River watersheds.

(2) The effluent from the Weyerhaeuser pulp mill should be examined in detail in order to identify potential biologically stimulating or inhibiting components, and should be tested with bioassays for its effect on river algae and invertebrates.

(3) The biological availability of the phosphorus associated with non-filterable solids in the North and South Thompson Rivers should be determined.

ACKNOWLEDGEMENTS

The contribution from the Analytical Services Division of the Water Quality Branch in precisely analysing the approximately 6,000 samples collected in this nutrient study is much appreciated.

The efforts on the part of staff of Water Survey of Canada in making provisional data on river flow available and in providing technical advice are gratefully acknowledged.

Discussions with other members of the Federal-Provincial Thompson River Task Force were stimulating and helpful.

Finally, thanks are due to other members of the Water Quality Branch for assistance in planning, sampling, interpretation and report preparation.

REFERENCES

Fitzgerald, George P., 1969. "Field and Laboratory Evaluation of Bioassays for Nitrogen and Phosphorus With Algae and Aquatic Weeds." Limnology and Oceanography, 14:206-212.

Inland Waters Directorate, 1974. "Analytical Methods Manual," Water Quality Branch, Inland Waters Directorate, Environment Canada.

Kistritz, R.V., M.S. 1975. "The Fate of Aquatic Macrophyte Production: The Decomposition, Mineralization and Nutrient Recycling of the Submerged Aquatic Vascular Plant (myriophyllum spp.)." M.S. Thesis, Department of Zoology, University of British Columbia, 142 p.

Langer, O.E., and M.D. Nassichuk, 1975. "Selective Biological Studies of the Thompson River System." Technical Report Series No. PAC/T-75-22, Southern Operations Branch, Fisheries and Marine, Environment Canada.

Murphy, J., and J.P. Riley, 1962. "Modified Single Solution Method for the Determination of Phosphate in Natural Waters." Anal. Chim. Acta., 27, 31.

Oguss, E., and W.E. Erlebach, 1975. "Limitations of Single Water Samples as Representatives of Mean Water Quality. I. Thompson River at Shaw Springs, B.C." Inland Waters Directorate, Environment Canada. In press.

Olan, J.W., 1974. "Interim Report on the Federal-Provincial Study of the Thompson River System. A. Chemical and Physical Results for the Thompson River System." Water Investigations Branch, British Columbia Water Resources Service.

Technicon AutoAnalyzer II Methodology, 1971. "Orthophosphate in Seawater, Industrial Method Number 155-71W."

Technicon AutoAnalyzer II Methodology, 1972. "Nitrate and Nitrite in Water and Seawater, Industrial Method Number 158-71W."

INLAND WATERS DIRECTORATE
WATER QUALITY BRANCH
* * * * * * *
THOMPSON RIVER PROJECT -- NITRATE+NITRITE LOADS
* * * * * * *

MAY 1, 1974

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	11600	0.0284	6	0	.042	+/-0.000	.001	1206.	+/- 121.
N. THOMPSON	23500	0.0575	12	1	.124	+/-0.001	.002	7125.	+/- 701.
OVERLANDER	35100	0.0859						8331.	+/- 711.
TRANQUILLE	35100	0.0859	36	0	.086	+/-0.003	.016	7376.	+/- 845.
SAVONA	25900	0.0634	18	0	.097	+/-0.001	.003	6143.	+/- 607.

MAY 2, 1974

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	12400	0.0303	6	1	.050	+/-0.007	.016	1517.	+/- 421.
N. THOMPSON	25600	0.0626	12	0	.131	+/-0.003	.012	8220.	+/- 911.
OVERLANDER	38000	0.0930						9737.	+/- 1003.
TRANQUILLE	38000	0.0930	36	0	.099	+/-0.002	.013	9248.	+/- 989.
SAVONA	29300	0.0717	12	0	.096	+/-0.000	.001	6894.	+/- 676.

MAY 22, 1974

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	18500	0.0453	6	1	.059	+/-0.001	.001	2678.	+/- 268.
N. THOMPSON	24300	0.0595	12	0	.097	+/-0.001	.002	5767.	+/- 568.
OVERLANDER	42800	0.1047						8445.	+/- 628.
TRANQUILLE	42800	0.1047	36	0	.077	+/-0.001	.006	8107.	+/- 817.
SAVONA	41000	0.1003	12	0	.088	+/-0.000	.001	8352.	+/- 871.

MAY 23, 1974

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	18900	0.0462	6	0	.076	+/-0.015	.036	3537.	+/- 1367.
N. THOMPSON	26900	0.0658	12	1	.094	+/-0.003	.012	6159.	+/- 745.
OVERLANDER	45800	0.1121						9696.	+/- 1557.
TRANQUILLE	45800	0.1121	36	0	.076	+/-0.001	.008	8472.	+/- 878.
SAVONA	41500	0.1015	12	0	.074	+/-0.001	.002	7539.	+/- 752.

INLAND WATERS DIRECTORATE
WATER QUALITY BRANCH
* * * * * *
THOMPSON RIVER PROJECT -- NITRATE+NITRITE LOADS
* * * * * *

JUNE 11, 1974

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	27400	0.0670	6	0	.053	+/-0.000	.001	3586.	+/- 356.
N. THOMPSON	39100	0.0957	12	1	.103	+/-0.002	.006	9829.	+/- 1014.
OVERLANDER	66500	0.1627						13416.	+/- 1075.
TRANQUILLE	66500	0.1627	36	0	.081	+/-0.002	.014	13156.	+/- 1488.
SAVONA	68000	0.1664	12	1	.094	+/-0.011	.037	15708.	+/- 3849.

JUNE 13, 1974

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	28800	0.0705	6	0	.052	+/-0.001	.002	3676.	+/- 373.
N. THOMPSON	48100	0.1177	11	0	.093	+/-0.000	.001	10998.	+/- 1081.
OVERLANDER	76900	0.1881						14673.	+/- 1143.
TRANQUILLE	76900	0.1881	36	2	.099	+/-0.019	.116	18537.	+/- 7384.
SAVONA	68000	0.1664	12	2	.091	+/-0.004	.013	15070.	+/- 1943.

JUNE 19, 1974

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	37600	0.0920	6	0	.055	+/-0.002	.004	5044.	+/- 572.
N. THOMPSON	79700	0.1950	12	0	.085	+/-0.001	.002	16509.	+/- 1639.
OVERLANDER	117300	0.2870						21553.	+/- 1736.
TRANQUILLE	117300	0.2870	36	0	.077	+/-0.002	.013	22026.	+/- 2476.
SAVONA	104000	0.2544	12	0	.084	+/-0.001	.002	21437.	+/- 2122.

JUNE 26, 1974

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	45900	0.1123	6	0	.057	+/-0.004	.011	6364.	+/- 1145.
N. THOMPSON	73600	0.1801	12	0	.081	+/-0.001	.003	14510.	+/- 1445.
OVERLANDER	119500	0.2924						20874.	+/- 1844.
TRANQUILLE	119500	0.2924	36	1	.077	+/-0.009	.054	22447.	+/- 5622.
SAVONA	119000	0.2911	11	0	.076	+/-0.002	.007	22047.	+/- 2506.

INLAND WATERS DIRECTORATE
WATER QUALITY BRANCH
* * * * * *
THOMPSON RIVER PROJECT -- NITRATE+NITRITE LOADS
* * * * * *

JULY 3, 1974

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	43900	0.1074	6	1	.051	+/-0.002	.005	5513.	+/- 682.
N. THOMPSON	51300	0.1255	12	1	.076	+/-0.004	.012	9601.	+/- 1278.
OVERLANDER	95200	0.2329						15115.	+/- 1448.
TRANQUILLE	95200	0.2329	36	0	.065	+/-0.001	.007	15062.	+/- 1576.
SAVONA	96400	0.2359	12	0	.067	+/-0.000	.001	15723.	+/- 1551.

JULY 10, 1974

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	38900	0.0952	6	0	.034	+/-0.000	.001	3252.	+/- 331.
N. THOMPSON	41600	0.1018	12	0	.080	+/-0.001	.003	8100.	+/- 816.
OVERLANDER	80500	0.1970						11351.	+/- 881.
TRANQUILLE	80500	0.1970	36	0	.064	+/-0.003	.018	12550.	+/- 1680.
SAVONA	82100	0.2009	12	0	.075	+/-0.012	.041	15031.	+/- 4989.

JULY 17, 1974

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	36900	0.0903	4	0	.032	+/-0.000	.001	2866.	+/- 293.
N. THOMPSON	47600	0.1165	8	0	.065	+/-0.000	.000	7599.	+/- 746.
OVERLANDER	94500	0.2067						10465.	+/- 801.
TRANQUILLE	84500	0.2067	24	0	.050	+/-0.002	.012	10371.	+/- 1394.
SAVONA	79100	0.1935	8	0	.050	+/-0.003	.007	9604.	+/- 1355.

JULY 24, 1974

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	33200	0.0812	4	0	.027	+/-0.001	.001	2234.	+/- 242.
N. THOMPSON	43400	0.1062	8	1	.082	+/-0.007	.021	8667.	+/- 1774.
OVERLANDER	76600	0.1874						10901.	+/- 1791.
TRANQUILLE	76600	0.1874	24	0	.049	+/-0.003	.015	9183.	+/- 1422.
SAVONA	79200	0.1938	8	0	.064	+/-0.001	.003	12474.	+/- 1298.

INLAND WATERS DIRECTORATE
WATER QUALITY BRANCH
* * * * * *
THOMPSON RIVER PROJECT -- NITRATE+NITRITE LOADS
* * * * * *

JULY 31, 1974

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	28300	0.0692	4	0	.023	+/-0.001	.001	1592.	+/- 183.
N. THOMPSON	36400	0.0891	8	0	.076	+/-0.001	.004	6813.	+/- 715.
OVERLANDER	64700	0.1583						8405.	+/- 738.
TRANQUILLE	64700	0.1583	24	0	.047	+/-0.003	.016	7427.	+/- 1261.
SAVONA	63600	0.1556	8	0	.051	+/-0.002	.006	7955.	+/- 991.

AUGUST 7, 1974

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	33600	0.0577	6	0	.031	+/-0.004	.010	1771.	+/- 509.
N. THOMPSON	32300	0.0790	12	0	.083	+/-0.002	.008	6559.	+/- 744.
OVERLANDER	55900	0.1368						8330.	+/- 902.
TRANQUILLE	55900	0.1368	36	0	.044	+/-0.003	.021	5953.	+/- 1095.
SAVONA	57100	0.1397	12	0	.059	+/-0.002	.008	8242.	+/- 1008.

AUGUST 20, 1974

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	16100	0.0394	6	1	.013	+/-0.001	.003	532.	+/- 116.
N. THOMPSON	18800	0.0460	12	0	.066	+/-0.000	.001	3051.	+/- 300.
OVERLANDER	34900	0.0854						3583.	+/- 321.
TRANQUILLE	34900	0.0854	36	1	.051	+/-0.004	.023	4329.	+/- 771.
SAVONA	33900	0.0829	12	0	.046	+/-0.001	.004	3794.	+/- 421.

SEPTEMBER 4, 1974

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	11200	0.0274	6	0	.012	+/-0.003	.006	320.	+/- 141.
N. THOMPSON	14400	0.0352	12	0	.044	+/-0.004	.015	1565.	+/- 338.
OVERLANDER	25600	0.0525						1885.	+/- 366.
TRANQUILLE	25600	0.0626	36	2	.040	+/-0.004	.022	2523.	+/- 512.
SAVONA	27200	0.0665	12	0	.027	+/-0.003	.009	1808.	+/- 390.

INLAND WATERS DIRECTORATE
WATER QUALITY BRANCH
* * * * * * *
THOMPSON RIVER PROJECT -- NITRATE+NITRITE LOADS
* * * * * * *

SEPTEMBER 18, 1974

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	8300	0.0203	12	1	.007	+/-0.001	.005	146.	+/- 61.
N. THOMPSON	10900	0.0267	12	0	.066	+/-0.000	.002	1767.	+/- 175.
OVERLANDER	19200	0.0470						1912.	+/- 185.
TRANQUILLE	19200	0.0470	36	0	.047	+/-0.004	.022	2225.	+/- 404.
SAVONA	21200	0.0519	12	0	.042	+/-0.000	.001	2187.	+/- 216.

OCTOBER 2, 1974

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	6000	0.0147	6	1	.013	+/-0.002	.005	198.	+/- 64.
N. THOMPSON	6400	0.0157	6	1	.049	+/-0.007	.018	767.	+/- 239.
OVERLANDER	12400	0.0303						965.	+/- 248.
TRANQUILLE	12400	0.0303	36	1	.034	+/-0.001	.007	1038.	+/- 124.
SAVONA	15000	0.0367	12	0	.030	+/-0.000	.001	1101.	+/- 109.

OCTOBER 16, 1974

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	4800	0.0117	6	1	.024	+/-0.001	.002	284.	+/- 36.
N. THOMPSON	5100	0.0125	6	1	.064	+/-0.004	.009	796.	+/- 118.
OVERLANDER	9900	0.0242						1080.	+/- 124.
TRANQUILLE	9900	0.0242	36	0	.045	+/-0.001	.006	1089.	+/- 116.
SAVONA	11300	0.0276	12	0	.044	+/-0.000	.001	1219.	+/- 120.

OCTOBER 30, 1974

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	3900	0.0095	6	1	.030	+/-0.003	.006	289.	+/- 56.
N. THOMPSON	5100	0.0125	6	0	.066	+/-0.000	.001	830.	+/- 81.
OVERLANDER	9000	0.0220						1119.	+/- 99.
TRANQUILLE	9000	0.0220	36	0	.054	+/-0.001	.004	1194.	+/- 121.
SAVONA	10400	0.0254	12	0	.054	+/-0.000	.001	1366.	+/- 135.

INLAND WATERS DIRECTORATE
WATER QUALITY BRANCH
* * * * * *
THOMPSON RIVER PROJECT -- NITRATE+NITRITE LOADS
* * * * * *

NOVEMBER 14, 1974

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	3500	0.0086	6	1	.070	+/-0.022	.053	597.	+/- 370.
N. THOMPSON	4100	0.0100	6	0	.087	+/-0.000	.000	871.	+/- 85.
OVERLANDER	7600	0.0186						1468.	+/- 380.
TRANQUILLE	7600	0.0186	36	0	.067	+/-0.001	.006	1253.	+/- 128.
SAVONA	8900	0.0218	12	0	.064	+/-0.000	.002	1392.	+/- 138.

NOVEMBER 27, 1974

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	3200	0.0078	6	0	.045	+/-0.001	.003	352.	+/- 40.
N. THOMPSON	3600	0.0088	6	1	.099	+/-0.002	.004	873.	+/- 90.
OVERLANDER	6900	0.0166						1226.	+/- 98.
TRANQUILLE	6300	0.0166	36	1	.073	+/-0.002	.013	1220.	+/- 138.
SAVONA	8100	0.0198	12	0	.078	+/-0.001	.003	1556.	+/- 157.

DECEMBER 12, 1974

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	2900	0.0071	6	0	.055	+/-0.000	.001	391.	+/- 39.
N. THOMPSON	3300	0.0081	6	0	.104	+/-0.000	.001	844.	+/- 83.
OVERLANDER	6200	0.0152						1235.	+/- 92.
TRANQUILLE	6200	0.0152	36	0	.079	+/-0.001	.005	1195.	+/- 120.
SAVONA	7600	0.0186	12	1	.089	+/-0.002	.007	1650.	+/- 178.

DECEMBER 24, 1974

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	2900	0.0071	6	0	.059	+/-0.001	.002	419.	+/- 42.
N. THOMPSON	2700	0.0066	6	0	.106	+/-0.004	.009	700.	+/- 82.
OVERLANDER	5600	0.0137						1119.	+/- 92.
TRANQUILLE	5600	0.0137	36	1	.083	+/-0.003	.017	1135.	+/- 136.
SAVONA	7400	0.0181	12	1	.096	+/-0.002	.008	1732.	+/- 185.

INLAND WATERS DIRECTORATE
WATER QUALITY BRANCH
* * * * * *
THOMPSON RIVER PROJECT -- NITRATE+NITRITE LOADS
* * * * * *

JANUARY 15, 1975

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	2800	0.0069	6	1	.065	+/-0.003	.008	444.	+/- 64.
N. THOMPSON	1800	0.0044	6	0	.131	+/-0.000	.001	577.	+/- 57.
OVERLANDER	4600	0.0113						1021.	+/- 85.
TRANQUILLE	4600	0.0113	36	0	.097	+/-0.000	.002	1094.	+/- 107.
SAVONA	5000	0.0122	12	0	.112	+/-0.000	.001	1300.	+/- 134.

JANUARY 28, 1975

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	2700	0.0066	6	0	.064	+/-0.000	.000	422.	+/- 41.
N. THOMPSON	2000	0.0049	6	0	.139	+/-0.001	.001	680.	+/- 67.
OVERLANDER	4700	0.0115						1102.	+/- 79.
TRANQUILLE	4700	0.0115	36	0	.104	+/-0.000	.001	1199.	+/- 118.
SAVONA	6300	0.0154	12	0	.114	+/-0.001	.002	1751.	+/- 173.

FEBRUARY 26, 1975

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	2500	0.0061	6	0	.071	+/-0.000	.001	433.	+/- 43.
N. THOMPSON	2000	0.0049	6	0	.124	+/-0.001	.002	608.	+/- 60.
OVERLANDER	4500	0.0110						1042.	+/- 74.
TRANQUILLE	4500	0.0110	36	1	.108	+/-0.001	.006	1191.	+/- 119.
SAVONA	5600	0.0137	12	0	.119	+/-0.001	.003	1630.	+/- 161.

MARCH 9, 1975

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	2500	0.0061	6	0	.070	+/-0.001	.002	431.	+/- 43.
N. THOMPSON	2200	0.0054	6	0	.127	+/-0.000	.001	685.	+/- 67.
OVERLANDER	4700	0.0115						1117.	+/- 80.
TRANQUILLE	4700	0.0115	35	0	.106	+/-0.002	.010	1214.	+/- 125.
SAVONA	5800	0.0142	12	0	.114	+/-0.001	.002	1622.	+/- 160.

INLAND WATERS DIRECTORATE
WATER QUALITY BRANCH
* * * * * *
THOMPSON RIVER PROJECT -- NITRATE+NITRITE LOADS
* * * * * *

MARCH 24, 1975

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	2500	0.0061	6	0	.101	+/-0.030	.074	621.	+/- 369.
N. THOMPSON	2000	0.0049	6	2	.131	+/-0.026	.063	643.	+/- 255.
OVERLANDER	4500	0.0110						1264.	+/- 448.
TRANQUILLE	4500	0.0110	36	3	.108	+/-0.016	.096	1185.	+/- 363.
SAVONA	6000	0.0147	12	1	.150	+/-0.028	.098	2196.	+/- 840.

APRIL 9, 1975

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	2500	0.0061	6	0	.052	+/-0.001	.002	317.	+/- 33.
N. THOMPSON	2000	0.0049	6	1	.102	+/-0.019	.047	501.	+/- 192.
OVERLANDER	4500	0.0110						818.	+/- 195.
TRANQUILLE	4500	0.0110	36	3	.092	+/-0.017	.101	1015.	+/- 376.
SAVONA	5800	0.0142	12	0	.132	+/-0.018	.062	1868.	+/- 531.

APRIL 22, 1975

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	2700	0.0066	6	0	.039	+/-0.000	.001	261.	+/- 26.
N. THOMPSON	4200	0.0103	6	0	.115	+/-0.001	.001	1182.	+/- 116.
OVERLANDER	5900	0.0169						1443.	+/- 119.
TRANQUILLE	6900	0.0169	36	0	.114	+/-0.003	.018	1932.	+/- 215.
SAVONA	6900	0.0169	12	1	.116	+/-0.001	.003	1961.	+/- 195.

MAY 7, 1975

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	4900	0.0120	6	0	.029	+/-0.000	.001	346.	+/- 35.
N. THOMPSON	10100	0.0247	6	0	.110	+/-0.000	.001	2726.	+/- 268.
OVERLANDER	15000	0.0367						3072.	+/- 270.
TRANQUILLE	15000	0.0367	36	1	.080	+/-0.003	.015	2945.	+/- 342.
SAVONA	12400	0.0303	12	0	.116	+/-0.002	.006	3529.	+/- 361.

INLAND WATERS DIRECTORATE
WATER QUALITY BRANCH
* * * * * *
THOMPSON RIVER PROJECT -- NITRATE+NITRITE LOADS
* * * * * *

MAY 20, 1975

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	15700	0.0384	6	1	.057	+/-0.002	.004	2209.	+/- 253.
N. THOMPSON	33700	0.0825	6	0	.128	+/-0.000	.001	10554.	+/- 1035.
OVERLANDER	49400	0.1209						12762.	+/- 1065.
TRANQUILLE	49400	0.1209	36	0	.104	+/-0.004	.024	12576.	+/- 1552.
SAVONA	51300	0.1255	12	0	.128	+/-0.004	.013	16044.	+/- 1811.

JUNE 4, 1975

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	24100	0.0590	6	0	.071	+/-0.003	.006	4216.	+/- 508.
N. THOMPSON	61700	0.1510	6	0	.100	+/-0.000	.001	15171.	+/- 1488.
OVERLANDER	85800	0.2099						19387.	+/- 1572.
TRANQUILLE	85800	0.2099	36	0	.099	+/-0.005	.032	20881.	+/- 3012.
SAVONA	69200	0.1693	12	0	.093	+/-0.001	.003	15731.	+/- 1562.

JUNE 17, 1975

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	34000	0.0832	6	1	.051	+/-0.001	.003	4256.	+/- 474.
N. THOMPSON	59600	0.1458	6	0	.081	+/-0.001	.002	11884.	+/- 1185.
OVERLANDER	93600	0.2290						16140.	+/- 1276.
TRANQUILLE	93600	0.2290	36	1	.067	+/-0.002	.010	15273.	+/- 1662.
SAVONA	90100	0.2204	12	0	.088	+/-0.000	.001	19509.	+/- 1914.

INLAND WATERS DIRECTORATE
WATER QUALITY BRANCH
* * * * * *
THOMPSON RIVER PROJECT -- KJELDAHL NITROGEN LOADS
* * * * * *

APRIL 22, 1975

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	2700	0.0066	2	0	.165	+/-0.015	.021	1090.	+/- 222.
N. THOMPSON	4200	0.0103	2	0	.150	+/-0.0	.0	1541.	+/- 151.
OVERLANDER	6900	0.0169						2631.	+/- 268.
TRANQUILLE	6900	0.0169	12	1	.167	+/-0.020	.070	2814.	+/- 726.

MAY 7, 1975

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	4900	0.0120	2	0	.185	+/-0.005	.007	2218.	+/- 247.
N. THOMPSON	10100	0.0247	2	0	.205	+/-0.015	.021	5066.	+/- 880.
OVERLANDER	15000	0.0367						7283.	+/- 914.
TRANQUILLE	15000	0.0367	6	0	.190	+/-0.006	.014	6973.	+/- 800.
SAVONA	12400	0.0303	4	0	.140	+/-0.018	.037	4247.	+/- 1163.

MAY 20, 1975

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	15700	0.0384	2	0	.195	+/-0.065	.092	7490.	+/- 4948.
N. THOMPSON	33700	0.0825	2	0	.170	+/-0.010	.014	14016.	+/- 2121.
OVERLANDER	49400	0.1209						21507.	+/- 5384.
TRANQUILLE	49400	0.1209	6	1	.220	+/-0.050	.123	26589.	+/-12174.
SAVONA	51300	0.1255	4	0	.125	+/-0.003	.006	15689.	+/- 1694.

JUNE 4, 1975

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
N. THOMPSON	61700	0.1510	2	0	.180	+/-0.010	.014	27172.	+/- 3981.
OVERLANDER	85800	0.2099						34662.	+/- 6351.
TRANQUILLE	85800	0.2099	6	0	.155	+/-0.016	.038	40934.	+/- 7587.
SAVONA	69200	0.1693	2	0	.220	+/-0.010	.014	37247.	+/- 4933.

INLAND WATERS DIRECTORATE
WATER QUALITY BRANCH
* * * * * *
THOMPSON RIVER PROJECT -- KJELDAHL NITROGEN LOADS
* * * * * *

JUNE 17, 1975

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	34000	0.0832	2	0	.135	+/-0.005	.007	11230.	+/- 1370.
N. THOMPSON	59600	0.1458	2	0	.140	+/-0.020	.028	20414.	+/- 6056.
OVERLANDER	93600	0.2290						31644.	+/- 6209.
TRANQUILLE	93600	0.2290	6	0	.188	+/-0.013	.032	43128.	+/- 7211.
SAVONA	90100	0.2204	4	1	.125	+/-0.005	.010	27555.	+/- 3458.

INLAND WATERS DIRECTORATE
WATER QUALITY BRANCH
* * * * * *
THOMPSON RIVER PROJECT -- KJELDAHL NITROGEN LOADS
* * * * * *

JUNE 11, 1974

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	27400	0.0670	6	0	.125	+/-0.006	.014	8380.	+/- 1105.
TRANQUILLE	66500	0.1627	18	0	.142	+/-0.008	.034	23139.	+/- 3439.

JUNE 26, 1974

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	45900	0.1123	1	0	.110	+/-0.020	.020	12353.	+/- 4565.
N. THOMPSON	73600	0.1801	1	0	.110	+/-0.020	.020	19807.	+/- 7321.
OVERLANDER	119500	0.2924						32160.	+/- 8628.
TRANQUILLE	119500	0.2924	2	0	.130	+/-0.0	.0	38008.	+/- 3725.
SAVONA	119000	0.2911	2	0	.160	+/-0.030	.042	46583.	+/-17717.

JULY 24, 1974

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
TRANQUILLE	76600	0.1874	12	0	.091	+/-0.005	.018	17023.	+/- 2561.

JULY 31, 1974

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
N. THOMPSON	36400	0.0891	5	0	.100	+/-0.003	.007	8906.	+/- 1033.
OVERLANDER	64700	0.1583						21258.	+/- 4681.
TRANQUILLE	64700	0.1583	18	0	.156	+/-0.015	.063	24711.	+/- 5185.

INLAND WATERS DIRECTORATE
WATER QUALITY BRANCH
* * * * * *
THOMPSON RIVER PROJECT -- KJELDAHL NITROGEN LOADS
* * * * * *

AUGUST 7, 1974

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
N. THOMPSON	32300	0.0790	6	0	.105	+/-0.006	.015	8298.	+/- 1257.
OVERLANDER	55900	0.1368						20650.	+/- 4735.
TRANQUILLE	55900	0.1368	18	0	.136	+/-0.007	.030	18615.	+/- 2636.

AUGUST 20, 1974

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
TRANQUILLE	34900	0.0854	12	1	.132	+/-0.016	.054	11242.	+/- 2820.
SAVONA	33900	0.0829	2	0	.060	+/-0.000	.000	4976.	+/- 488.

SEPTEMBER 4, 1974

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
TRANQUILLE	25600	0.0626	12	0	.165	+/-0.016	.056	10334.	+/- 2243.
SAVONA	27200	0.0665	4	1	.147	+/-0.002	.005	9816.	+/- 1016.

SEPTEMBER 18, 1974

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
TRANQUILLE	19200	0.0470	12	0	.183	+/-0.020	.071	8612.	+/- 2067.
SAVONA	21200	0.0519	4	0	.177	+/-0.019	.038	9206.	+/- 2120.

INLAND WATERS DIRECTORATE
WATER QUALITY BRANCH
* * * * * *
THOMPSON RIVER PROJECT -- KJELDAHL NITROGEN LOADS
* * * * * *

OCTOBER 2, 1974

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	6000	0.0147	2	0	.150	+/-0.010	.014	2202.	+/- 360.
N. THOMPSON	6400	0.0157	2	0	.095	+/-0.005	.007	1488.	+/- 212.
OVERLANDER	12400	0.0303						3689.	+/- 417.
TRANQUILLE	12400	0.0303	6	0	.238	+/-0.031	.075	7230.	+/- 1958.
SAVONA	15000	0.0367	4	0	.170	+/-0.049	.098	6239.	+/- 3588.

OCTOBER 16, 1974

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	4800	0.0117	2	0	.215	+/-0.035	.049	2525.	+/- 843.
N. THOMPSON	5100	0.0125	2	0	.120	+/-0.020	.028	1497.	+/- 511.
OVERLANDER	9900	0.0242						4022.	+/- 985.
TRANQUILLE	9900	0.0242	8	0	.207	+/-0.011	.031	5026.	+/- 717.
SAVONA	11300	0.0276	4	0	.150	+/-0.004	.008	4147.	+/- 463.

OCTOBER 30, 1974

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	3900	0.0095	2	0	.195	+/-0.005	.007	1861.	+/- 205.
N. THOMPSON	5100	0.0125	2	0	.165	+/-0.005	.007	2059.	+/- 236.
OVERLANDER	9000	0.0220						3919.	+/- 312.
TRANQUILLE	9000	0.0220	6	0	.170	+/-0.012	.028	3743.	+/- 619.
SAVONA	10400	0.0254	4	0	.157	+/-0.031	.063	4007.	+/- 1617.

NOVEMBER 14, 1974

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	3500	0.0086	2	0	.135	+/-0.005	.007	1156.	+/- 141.
N. THOMPSON	4100	0.0100	2	0	.100	+/-0.0	.0	1003.	+/- 98.
OVERLANDER	7600	0.0186						2159.	+/- 172.
TRANQUILLE	7600	0.0186	6	1	.167	+/-0.018	.045	3099.	+/- 729.
SAVONA	8900	0.0218	4	0	.087	+/-0.009	.017	1905.	+/- 409.

INLAND WATERS DIRECTORATE
WATER QUALITY BRANCH
* * * * * *
THOMPSON RIVER PROJECT -- KJELDAHL NITROGEN LOADS
* * * * * *

NOVEMBER 27, 1974

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	3200	0.0078	2	0	.150	+/-0.0	.0	1174.	+/- 115.
N. THOMPSON	3600	0.0088	2	0	.065	+/-0.005	.007	572.	+/- 103.
OVERLANDER	6800	0.0166						1747.	+/- 154.
TRANQUILLE	6800	0.0166	6	0	.155	+/-0.010	.024	2579.	+/- 410.
SAVONA	8100	0.0198	4	0	.095	+/-0.018	.035	1883.	+/- 707.

DECEMBER 12, 1974

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	2900	0.0071	2	0	.110	+/-0.0	.0	780.	+/- 76.
N. THOMPSON	3300	0.0081	2	0	.070	+/-0.010	.014	565.	+/- 168.
OVERLANDER	6200	0.0152						1346.	+/- 184.
TRANQUILLE	6200	0.0152	6	0	.115	+/-0.004	.010	1744.	+/- 213.
SAVONA	7600	0.0186	4	0	.080	+/-0.004	.008	1488.	+/- 208.

DECEMBER 24, 1974

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	2900	0.0071	2	0	.095	+/-0.005	.007	674.	+/- 96.
N. THOMPSON	2700	0.0066	2	0	.045	+/-0.005	.007	297.	+/- 71.
OVERLANDER	5600	0.0137						971.	+/- 119.
TRANQUILLE	5600	0.0137	6	0	.112	+/-0.007	.018	1530.	+/- 251.
SAVONA	7400	0.0181	4	0	.085	+/-0.025	.051	1539.	+/- 911.

JANUARY 15, 1975

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	2800	0.0069	2	0	.385	+/-0.005	.007	2637.	+/- 267.
N. THOMPSON	1800	0.0044	2	0	.165	+/-0.005	.007	727.	+/- 83.
OVERLANDER	4600	0.0113						3364.	+/- 280.
TRANQUILLE	4600	0.0113	6	0	.202	+/-0.008	.019	2270.	+/- 283.
SAVONA	5000	0.0122	4	0	.115	+/-0.010	.019	1407.	+/- 268.

INLAND WATERS DIRECTORATE
WATER QUALITY BRANCH
* * * * * *
THOMPSON RIVER PROJECT -- KJELDAHL NITROGEN LOADS
* * * * * *

JANUARY 28, 1975

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	2700	0.0066	2	0	.110	+/-0.010	.014	727.	+/- 148.
N. THOMPSON	2000	0.0049	2	0	.385	+/-0.025	.035	1884.	+/- 303.
OVERLANDER	4700	0.0115						2610.	+/- 337.
TRANQUILLE	4700	0.0115	6	0	.152	+/-0.005	.012	1744.	+/- 202.
SAVONA	6300	0.0154	4	0	.112	+/-0.014	.029	1734.	+/- 466.

MARCH 9, 1975

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	2500	0.0061	2	0	.150	+/-0.010	.014	1162.	+/- 165.
N. THOMPSON	2200	0.0054	2	0	.210	+/-0.010	.014	1130.	+/- 153.
OVERLANDER	4700	0.0115						2292.	+/- 225.
TRANQUILLE	4700	0.0115	6	0	.202	+/-0.006	.015	2319.	+/- 265.
SAVONA	5800	0.0142	4	0	.142	+/-0.009	.019	2022.	+/- 329.

MARCH 24, 1975

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	2500	0.0061	2	0	.215	+/-0.045	.064	1315.	+/- 555.
N. THOMPSON	2000	0.0049	2	0	.115	+/-0.005	.007	563.	+/- 73.
OVERLANDER	4500	0.0110						1878.	+/- 559.
TRANQUILLE	4500	0.0110	6	0	.263	+/-0.016	.040	2859.	+/- 452.
SAVONA	6000	0.0147	4	0	.142	+/-0.005	.010	2092.	+/- 247.

APRIL 9, 1975

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	2500	0.0061	2	0	.140	+/-0.010	.014	856.	+/- 146.
N. THOMPSON	2000	0.0049	2	0	.105	+/-0.005	.007	514.	+/- 70.
OVERLANDER	4500	0.0110						1370.	+/- 162.
TRANQUILLE	4500	0.0110	6	0	.278	+/-0.042	.103	3064.	+/- 954.
SAVONA	5800	0.0142	4	0	.132	+/-0.025	.049	1880.	+/- 709.

INLAND WATERS DIRECTORATE
WATER QUALITY BRANCH
* * * * * *
THOMPSON RIVER PROJECT -- UNFILTERED PHOSPHORUS LOADS
* * * * * *

MAY 1, 1974

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	11600	0.0284	6	0	.039	+/-0.001	.003	1116.	+/- 131.
N. THOMPSON	23500	0.0575	12	0	.111	+/-0.004	.013	6396.	+/- 749.
OVERLANDER	35100	0.0859						7513.	+/- 760.
TRANQUILLE	35100	0.0859	36	0	.056	+/-0.002	.012	4842.	+/- 575.
SAVONA	25900	0.0634	18	0	.012	+/-0.000	.002	789.	+/- 90.

MAY 2, 1974

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	12400	0.0303	6	0	.059	+/-0.006	.014	1785.	+/- 389.
N. THOMPSON	25600	0.0626	12	0	.129	+/-0.004	.015	8053.	+/- 947.
OVERLANDER	38000	0.0930						9838.	+/- 1024.
TRANQUILLE	38000	0.0930	35	0	.066	+/-0.003	.018	6157.	+/- 820.
SAVONA	29300	0.0717	12	0	.011	+/-0.001	.003	818.	+/- 132.

MAY 22, 1974

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	18500	0.0453	6	0	.022	+/-0.001	.002	996.	+/- 115.
N. THOMPSON	24300	0.0595	12	1	.032	+/-0.002	.008	1888.	+/- 315.
OVERLANDER	42800	0.1047						2883.	+/- 336.
TRANQUILLE	42800	0.1047	36	1	.024	+/-0.001	.009	2565.	+/- 386.
SAVONA	41000	0.1003	12	0	.007	+/-0.001	.002	752.	+/- 132.

MAY 23, 1974

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	18900	0.0462	6	0	.027	+/-0.002	.005	1256.	+/- 225.
N. THOMPSON	26900	0.0658	12	0	.043	+/-0.003	.009	2841.	+/- 449.
OVERLANDER	45800	0.1121						4097.	+/- 502.
TRANQUILLE	45800	0.1121	36	0	.024	+/-0.000	.002	2745.	+/- 283.
SAVONA	41500	0.1015	12	0	.011	+/-0.000	.002	1151.	+/- 144.

INLAND WATERS DIRECTORATE
WATER QUALITY BRANCH
* * * * * *
THOMPSON RIVER PROJECT -- UNFILTERED PHOSPHORUS LOADS
* * * * * *

JUNE 11, 1974

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	27400	0.0670	6	1	.023	+/-0.001	.004	1531.	+/- 245.
N. THOMPSON	39100	0.0957	12	0	.042	+/-0.002	.008	4010.	+/- 598.
OVERLANDER	66500	0.1627						5540.	+/- 646.
TRANQUILLE	66500	0.1627	36	0	.025	+/-0.001	.004	4018.	+/- 459.
SAVONA	68000	0.1664	12	0	.006	+/-0.000	.002	1026.	+/- 189.

JUNE 13, 1974

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	28800	0.0705	6	0	.028	+/-0.004	.009	1973.	+/- 525.
N. THOMPSON	48100	0.1177	12	0	.081	+/-0.004	.014	9522.	+/- 1313.
OVERLANDER	76900	0.1881						11495.	+/- 1414.
TRANQUILLE	76900	0.1881	36	1	.037	+/-0.002	.012	6935.	+/- 994.
SAVONA	68000	0.1664	12	0	.008	+/-0.001	.002	1345.	+/- 228.

JUNE 19, 1974

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	37600	0.0920	6	0	.062	+/-0.005	.012	5673.	+/- 1061.
N. THOMPSON	79700	0.1950	12	0	.167	+/-0.011	.039	32596.	+/- 5354.
OVERLANDER	117300	0.2870						38269.	+/- 5458.
TRANQUILLE	117300	0.2870	36	1	.067	+/-0.012	.069	19363.	+/- 6754.
SAVONA	104000	0.2544	12	0	.017	+/-0.001	.003	4220.	+/- 582.

JUNE 26, 1974

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	45900	0.1123	6	0	.032	+/-0.002	.005	3612.	+/- 563.
N. THOMPSON	73600	0.1801	12	1	.089	+/-0.010	.035	16041.	+/- 3890.
OVERLANDER	119500	0.2924						19653.	+/- 3930.
TRANQUILLE	119500	0.2924	36	0	.034	+/-0.002	.012	10013.	+/- 1478.
SAVONA	119000	0.2911	12	0	.016	+/-0.000	.001	4731.	+/- 519.

INLAND WATERS DIRECTORATE
WATER QUALITY BRANCH
* * * * * *
THOMPSON RIVER PROJECT -- UNFILTERED PHOSPHORUS LOADS
* * * * * *

JULY 3, 1974

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	43900	0.1074	4	0	.060	+/-0.001	.003	6417.	+/- 682.
N. THOMPSON	51300	0.1255	8	0	.057	+/-0.007	.019	7138.	+/- 1776.
OVERLANDER	95200	0.2329						13556.	+/- 1902.
TRANQUILLE	95200	0.2329	24	0	.031	+/-0.001	.007	7240.	+/- 949.
SAVONA	96400	0.2359	8	0	.013	+/-0.001	.003	3037.	+/- 532.

JULY 10, 1974

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	38900	0.0952	4	0	.040	+/-0.002	.004	3831.	+/- 520.
N. THOMPSON	41600	0.1018	8	0	.052	+/-0.005	.014	5254.	+/- 1126.
OVERLANDER	80500	0.1970						9085.	+/- 1240.
TRANQUILLE	80500	0.1970	24	0	.029	+/-0.001	.004	5753.	+/- 651.
SAVONA	82100	0.2009	8	0	.015	+/-0.002	.005	3113.	+/- 732.

JULY 17, 1974

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	36900	0.0903	6	0	.030	+/-0.003	.008	2678.	+/- 620.
N. THOMPSON	47600	0.1165	12	0	.050	+/-0.003	.009	5813.	+/- 809.
OVERLANDER	84500	0.2067						8491.	+/- 1023.
TRANQUILLE	84500	0.2067	36	0	.026	+/-0.001	.005	5415.	+/- 631.
SAVONA	79100	0.1935	11	0	.006	+/-0.001	.002	1232.	+/- 270.

JULY 24, 1974

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	33200	0.0812	6	0	.017	+/-0.001	.003	1381.	+/- 263.
N. THOMPSON	43400	0.1062	12	0	.042	+/-0.002	.007	4433.	+/- 592.
OVERLANDER	76600	0.1874						5814.	+/- 648.
TRANQUILLE	76600	0.1874	36	0	.026	+/-0.001	.004	4904.	+/- 539.
SAVONA	79200	0.1938	12	0	.005	+/-0.001	.002	888.	+/- 233.

INLAND WATERS DIRECTORATE
WATER QUALITY BRANCH
* * * * * *
THOMPSON RIVER PROJECT -- UNFILTERED PHOSPHORUS LOADS
* * * * * *

JULY 31, 1974

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	28300	0.0692	6	0	.023	+/-0.002	.005	1616.	+/- 308.
N. THOMPSON	36400	0.0891	12	0	.038	+/-0.001	.005	3406.	+/- 419.
OVERLANDER	54700	0.1533						5022.	+/- 520.
TRANQUILLE	64700	0.1583	36	0	.022	+/-0.001	.004	3518.	+/- 410.
SAVONA	63600	0.1556	12	0	.016	+/-0.001	.002	2541.	+/- 313.

AUGUST 7, 1974

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	23600	0.0577	6	0	.026	+/-0.003	.008	1530.	+/- 405.
N. THOMPSON	32300	0.0790	12	0	.037	+/-0.001	.005	2950.	+/- 364.
OVERLANDER	55900	0.1368						4480.	+/- 544.
TRANQUILLE	55900	0.1368	36	1	.032	+/-0.008	.045	4350.	+/- 2060.
SAVONA	57100	0.1397	12	0	.013	+/-0.002	.007	1839.	+/- 592.

AUGUST 20, 1974

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	16100	0.0394	6	0	.013	+/-0.001	.002	506.	+/- 81.
N. THOMPSON	18800	0.0460	12	1	.021	+/-0.002	.007	962.	+/- 194.
OVERLANDER	34900	0.0854						1468.	+/- 210.
TRANQUILLE	34900	0.0854	36	1	.021	+/-0.004	.023	1758.	+/- 669.
SAVONA	33900	0.0829	12	0	.005	+/-0.000	.001	435.	+/- 59.

SEPTEMBER 4, 1974

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	11200	0.0274	6	0	.015	+/-0.001	.003	406.	+/- 83.
N. THOMPSON	14400	0.0352	12	0	.016	+/-0.001	.004	558.	+/- 100.
OVERLANDER	25600	0.0525						964.	+/- 130.
TRANQUILLE	25600	0.0626	36	1	.019	+/-0.002	.012	1207.	+/- 265.
SAVONA	27200	0.0665	12	0	.010	+/-0.002	.006	699.	+/- 251.

INLAND WATERS DIRECTORATE
WATER QUALITY BRANCH
* * * * * *
THOMPSON RIVER PROJECT -- UNFILTERED PHOSPHORUS LOADS
* * * * * *

SEPTEMBER 18, 1974

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	8300	0.0203	12	0	.010	+/-0.000	.002	203.	+/- 27.
N. THOMPSON	10900	0.0267	12	0	.013	+/-0.000	.002	342.	+/- 42.
OVERLANDER	19200	0.0470						545.	+/- 50.
TRANQUILLE	19200	0.0470	36	0	.058	+/-0.008	.049	2741.	+/- 802.
SAVONA	21200	0.0519	12	2	.020	+/-0.009	.033	1037.	+/- 961.

OCTOBER 2, 1974

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	6000	0.0147	6	0	.011	+/-0.001	.001	161.	+/- 23.
N. THOMPSON	6400	0.0157	6	0	.010	+/-0.001	.002	157.	+/- 26.
OVERLANDER	12400	0.0303						318.	+/- 35.
TRANQUILLE	12400	0.0303	36	0	.018	+/-0.001	.004	545.	+/- 67.
SAVONA	15000	0.0367	12	0	.007	+/-0.001	.002	263.	+/- 54.

OCTOBER 16, 1974

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	4800	0.0117	6	0	.012	+/-0.002	.004	139.	+/- 40.
N. THOMPSON	5100	0.0125	6	1	.009	+/-0.001	.003	110.	+/- 28.
OVERLANDER	9900	0.0242						249.	+/- 48.
TRANQUILLE	9900	0.0242	36	0	.128	+/-0.016	.093	3110.	+/- 799.
SAVONA	11300	0.0276	12	0	.010	+/-0.002	.005	265.	+/- 86.

OCTOBER 30, 1974

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	3900	0.0095	6	1	.015	+/-0.002	.005	142.	+/- 41.
N. THOMPSON	5100	0.0125	6	1	.067	+/-0.022	.053	836.	+/- 540.
OVERLANDER	9000	0.0220						978.	+/- 541.
TRANQUILLE	9000	0.0220	36	0	.067	+/-0.009	.055	1472.	+/- 422.
SAVONA	10400	0.0254	12	0	.007	+/-0.000	.001	174.	+/- 26.

INLAND WATERS DIRECTORATE
WATER QUALITY BRANCH
* * * * * *
THOMPSON RIVER PROJECT -- UNFILTERED PHOSPHORUS LOADS
* * * * * *

NOVEMBER 14, 1974

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	3500	0.0036	6	0	.042	+/-0.002	.005	358.	+/- 48.
N. THOMPSON	4100	0.0100	6	0	.013	+/-0.004	.010	132.	+/- 80.
OVERLANDER	7600	0.0186						490.	+/- 94.
TRANQUILLE	7600	0.0136	36	0	.063	+/-0.006	.035	1163.	+/- 240.
SAVONA	8900	0.0218	12	0	.007	+/-0.000	.002	163.	+/- 25.

NOVEMBER 27, 1974

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	3200	0.0078	6	0	.018	+/-0.000	.001	138.	+/- 15.
N. THOMPSON	3600	0.0088	6	0	.013	+/-0.003	.007	112.	+/- 47.
OVERLANDER	6800	0.0166						250.	+/- 50.
TRANQUILLE	5800	0.0156	36	0	.062	+/-0.007	.042	1031.	+/- 247.
SAVONA	8100	0.0198	12	0	.009	+/-0.001	.004	173.	+/- 43.

DECEMBER 12, 1974

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	2900	0.0071	6	0	.016	+/-0.001	.002	114.	+/- 17.
N. THOMPSON	3300	0.0081	6	0	.045	+/-0.005	.013	361.	+/- 93.
OVERLANDER	6200	0.0152						474.	+/- 94.
TRANQUILLE	5200	0.0152	36	0	.034	+/-0.002	.011	523.	+/- 76.
SAVONA	7600	0.0186	12	0	.005	+/-0.000	.001	99.	+/- 13.

DECEMBER 24, 1974

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	2900	0.0071	6	0	.021	+/-0.002	.005	153.	+/- 32.
N. THOMPSON	2700	0.0066	6	0	.011	+/-0.001	.003	74.	+/- 15.
OVERLANDER	5600	0.0137						226.	+/- 35.
TRANQUILLE	5600	0.0137	36	0	.027	+/-0.002	.011	369.	+/- 60.
SAVONA	7400	0.0181	12	1	.009	+/-0.002	.007	157.	+/- 73.

INLAND WATERS DIRECTORATE
WATER QUALITY BRANCH
* * * * * *
THOMPSON RIVER PROJECT -- UNFILTERED PHOSPHORUS LOADS
* * * * * *

JANUARY 15, 1975

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	2800	0.0069	6	0	.009	+/-0.001	.002	62.	+/- 14.
N. THOMPSON	1300	0.0044	6	0	.006	+/-0.000	.001	29.	+/- 3.
OVERLANDER	4600	0.0113						90.	+/- 14.
TRANQUILLE	4600	0.0113	36	0	.070	+/-0.006	.037	784.	+/- 156.
SAVONA	5000	0.0122	12	0	.011	+/-0.001	.003	135.	+/- 24.

JANUARY 28, 1975

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	2700	0.0066	6	0	.007	+/-0.001	.001	48.	+/- 9.
N. THOMPSON	2000	0.0049	6	0	.008	+/-0.002	.005	39.	+/- 20.
OVERLANDER	4700	0.0115						88.	+/- 22.
TRANQUILLE	4700	0.0115	36	0	.034	+/-0.001	.004	393.	+/- 41.
SAVONA	6300	0.0154	12	0	.009	+/-0.000	.001	135.	+/- 17.

FEBRUARY 26, 1975

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	2500	0.0061	6	0	.016	+/-0.003	.007	98.	+/- 37.
N. THOMPSON	2000	0.0049	6	0	.007	+/-0.001	.002	36.	+/- 8.
OVERLANDER	4500	0.0110						134.	+/- 38.
TRANQUILLE	4500	0.0110	36	0	.064	+/-0.002	.014	704.	+/- 85.
SAVONA	5600	0.0137	12	1	.026	+/-0.008	.028	354.	+/- 218.

MARCH 9, 1975

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	2500	0.0061	6	0	.017	+/-0.001	.002	106.	+/- 14.
N. THOMPSON	2200	0.0054	6	0	.015	+/-0.001	.001	79.	+/- 10.
OVERLANDER	4700	0.0115						185.	+/- 17.
TRANQUILLE	4700	0.0115	35	2	.136	+/-0.014	.082	1560.	+/- 347.
SAVONA	5800	0.0142	12	0	.011	+/-0.001	.003	157.	+/- 30.

INLAND WATERS DIRECTORATE
WATER QUALITY BRANCH
* * * * * *
THOMPSON RIVER PROJECT -- UNFILTERED PHOSPHORUS LOADS
* * * * * *

MARCH 24, 1975

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	2500	0.0061	6	0	.028	+/-0.002	.004	169.	+/- 26.
N. THOMPSON	2000	0.0049	6	1	.007	+/-0.001	.003	33.	+/- 11.
OVERLANDER	4500	0.0110						202.	+/- 28.
TRANQUILLE	4500	0.0110	36	0	.128	+/-0.004	.025	1408.	+/- 164.
SAVONA	5000	0.0147	12	0	.010	+/-0.001	.002	144.	+/- 21.

APRIL 9, 1975

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	2500	0.0061	6	0	.021	+/-0.001	.003	128.	+/- 20.
N. THOMPSON	2000	0.0049	6	0	.017	+/-0.002	.004	82.	+/- 17.
OVERLANDER	4500	0.0110						210.	+/- 27.
TRANQUILLE	4500	0.0110	36	1	.142	+/-0.020	.119	1561.	+/- 454.
SAVONA	5800	0.0142	12	0	.010	+/-0.001	.002	142.	+/- 20.

APRIL 22, 1975

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	2700	0.0066	6	0	.021	+/-0.001	.004	142.	+/- 24.
N. THOMPSON	4200	0.0103	6	0	.015	+/-0.000	.001	159.	+/- 18.
OVERLANDER	6900	0.0169						301.	+/- 30.
TRANQUILLE	6900	0.0169	35	0	.020	+/-0.002	.013	333.	+/- 79.
SAVONA	6900	0.0169	11	0	.010	+/-0.001	.003	164.	+/- 30.

MAY 7, 1975

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	4900	0.0120	6	1	.029	+/-0.004	.010	346.	+/- 98.
N. THOMPSON	10100	0.0247	6	0	.032	+/-0.001	.002	795.	+/- 88.
OVERLANDER	15000	0.0367						1141.	+/- 131.
TRANQUILLE	15000	0.0367	35	0	.092	+/-0.023	.139	3358.	+/- 1719.
SAVONA	12400	0.0303	11	0	.011	+/-0.001	.002	328.	+/- 48.

INLAND WATERS DIRECTORATE
WATER QUALITY BRANCH
* * * * * *
THOMPSON RIVER PROJECT -- UNFILTERED PHOSPHORUS LOADS
* * * * * *

MAY 20, 1975

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	15700	0.0384	6	0	.070	+/-0.003	.006	2682.	+/- 328.
N. THOMPSON	33700	0.0825	6	0	.043	+/-0.004	.010	3587.	+/- 724.
OVERLANDER	49400	0.1209						6269.	+/- 794.
TRANQUILLE	49400	0.1209	36	0	.032	+/-0.001	.009	3844.	+/- 510.
SAVONA	51300	0.1255	12	1	.013	+/-0.002	.007	1684.	+/- 509.

JUNE 4, 1975

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	24100	0.0590	6	0	.116	+/-0.003	.008	6869.	+/- 762.
N. THOMPSON	61700	0.1510	6	0	.160	+/-0.005	.013	24127.	+/- 2814.
OVERLANDER	85800	0.2099						30997.	+/- 2915.
TRANQUILLE	85800	0.2099	36	0	.149	+/-0.006	.036	31272.	+/- 3938.
SAVONA	69200	0.1693	12	0	.012	+/-0.001	.003	2116.	+/- 322.

JUNE 17, 1975

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	34000	0.0832	6	0	.027	+/-0.001	.002	2246.	+/- 271.
N. THOMPSON	59600	0.1458	6	0	.050	+/-0.001	.003	7364.	+/- 300.
OVERLANDER	93600	0.2290						9610.	+/- 844.
TRANQUILLE	93600	0.2290	36	0	.024	+/-0.001	.007	5420.	+/- 740.
SAVONA	90100	0.2204	12	1	.010	+/-0.001	.002	2315.	+/- 322.

INLAND WATERS DIRECTORATE
WATER QUALITY BRANCH
* * * * * *
THOMPSON RIVER PROJECT -- DISSOLVED PHOSPHORUS LOADS
* * * * * *

JULY 17, 1974

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	36900	0.0903	2	0	.003	+/-0.001	.002	316.	+/- 267.
N. THOMPSON	47600	0.1165	4	0	.003	+/-0.001	.002	378.	+/- 219.
OVERLANDER	84500	0.2067						694.	+/- 346.
TRANQUILLE	84500	0.2067	24	0	.004	+/-0.000	.002	853.	+/- 154.
SAVONA	79100	0.1935	4	1	.004	+/-0.001	.002	774.	+/- 387.

JULY 24, 1974

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
TRANQUILLE	76600	0.1874	22	0	.005	+/-0.000	.002	937.	+/- 200.
SAVONA	79200	0.1938	4	0	.003	+/-0.001	.003	581.	+/- 517.

SEPTEMBER 4, 1974

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	11200	0.0274	6	0	.007	+/-0.001	.002	183.	+/- 45.
N. THOMPSON	14400	0.0352	6	0	.004	+/-0.001	.001	153.	+/- 41.
OVERLANDER	25600	0.0626						335.	+/- 61.
TRANQUILLE	25600	0.0626	18	0	.006	+/-0.001	.003	400.	+/- 99.
SAVONA	27200	0.0665	12	0	.005	+/-0.000	.002	366.	+/- 67.

OCTOBER 2, 1974

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	6000	0.0147	6	0	.005	+/-0.001	.002	73.	+/- 21.
N. THOMPSON	6400	0.0157	6	0	.003	+/-0.000	.000	44.	+/- 7.
OVERLANDER	12400	0.0303						118.	+/- 22.
TRANQUILLE	12400	0.0303	12	0	.003	+/-0.000	.001	99.	+/- 23.
SAVONA	15000	0.0367	6	0	.002	+/-0.000	.001	86.	+/- 17.

INLAND WATERS DIRECTORATE
WATER QUALITY BRANCH
* * * * * *
THOMPSON RIVER PROJECT -- DISSOLVED PHOSPHORUS LOADS
* * * * * *

OCTOBER 16, 1974

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	4800	0.0117	6	0	.003	+/-0.000	.001	37.	+/- 8.
N. THOMPSON	5100	0.0125	5	1	.003	+/-0.001	.002	32.	+/- 22.
OVERLANDER	9900	0.0242						70.	+/- 23.
TRANQUILLE	9900	0.0242	18	0	.006	+/-0.001	.003	135.	+/- 41.
SAVONA	11300	0.0276	6	1	.003	+/-0.001	.002	92.	+/- 42.

OCTOBER 30, 1974

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	3900	0.0095	6	0	.001	+/-0.000	.000	10.	+/- 1.
N. THOMPSON	5100	0.0125	6	0	.017	+/-0.001	.002	210.	+/- 29.
OVERLANDER	9000	0.0220						220.	+/- 29.
TRANQUILLE	9000	0.0220	18	0	.005	+/-0.001	.003	105.	+/- 28.
SAVONA	10400	0.0254	12	0	.005	+/-0.001	.002	138.	+/- 37.

NOVEMBER 14, 1974

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	3500	0.0086	6	1	.002	+/-0.001	.002	14.	+/- 11.
N. THOMPSON	4100	0.0100	6	0	.001	+/-0.000	.000	10.	+/- 1.
OVERLANDER	7600	0.0186						24.	+/- 11.
TRANQUILLE	7600	0.0186	18	0	.005	+/-0.001	.003	92.	+/- 30.
SAVONA	8900	0.0218	12	0	.002	+/-0.000	.001	40.	+/- 15.

NOVEMBER 27, 1974

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	3200	0.0078	6	0	.004	+/-0.000	.001	30.	+/- 6.
N. THOMPSON	3600	0.0088	6	0	.002	+/-0.000	.001	19.	+/- 6.
OVERLANDER	6800	0.0166						49.	+/- 8.
TRANQUILLE	6800	0.0166	18	0	.004	+/-0.000	.001	61.	+/- 10.
SAVONA	8100	0.0198	12	1	.005	+/-0.001	.002	101.	+/- 24.

INLAND WATERS DIRECTORATE
WATER QUALITY BRANCH
* * * * * *
THOMPSON RIVER PROJECT -- DISSOLVED PHOSPHORUS LOADS
* * * * * *

DECEMBER 12, 1974

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	2900	0.0071	6	0	.005	+/-0.001	.002	33.	+/- 9.
N. THOMPSON	3300	0.0081	6	0	.004	+/-0.001	.001	31.	+/- 9.
OVERLANDER	6200	0.0152						64.	+/- 13.
TRANQUILLE	6200	0.0152	18	0	.009	+/-0.001	.002	141.	+/- 20.
SAVONA	7600	0.0186	12	0	.002	+/-0.000	.001	46.	+/- 7.

DECEMBER 24, 1974

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	2900	0.0071	6	0	.006	+/-0.001	.003	45.	+/- 17.
N. THOMPSON	2700	0.0066	6	0	.005	+/-0.001	.002	32.	+/- 13.
OVERLANDER	5600	0.0137						77.	+/- 21.
TRANQUILLE	5600	0.0137	18	0	.009	+/-0.001	.004	127.	+/- 28.
SAVONA	7400	0.0181	12	0	.006	+/-0.001	.002	101.	+/- 21.

JANUARY 15, 1975

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	2800	0.0069	6	0	.006	+/-0.002	.005	40.	+/- 30.
N. THOMPSON	1800	0.0044	6	1	.007	+/-0.003	.006	32.	+/- 23.
OVERLANDER	4600	0.0113						72.	+/- 38.
TRANQUILLE	4600	0.0113	11	0	.007	+/-0.001	.004	83.	+/- 26.
SAVONA	5000	0.0122	11	0	.007	+/-0.000	.001	81.	+/- 13.

JANUARY 28, 1975

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	2700	0.0066	6	0	.003	+/-0.000	.001	18.	+/- 3.
N. THOMPSON	2000	0.0049	6	0	.003	+/-0.000	.001	15.	+/- 5.
OVERLANDER	4700	0.0115						33.	+/- 6.
TRANQUILLE	4700	0.0115	18	1	.010	+/-0.002	.006	113.	+/- 36.
SAVONA	6300	0.0154	12	0	.006	+/-0.001	.002	94.	+/- 21.

INLAND WATERS DIRECTORATE
WATER QUALITY BRANCH
* * * * * *
THOMPSON RIVER PROJECT -- DISSOLVED PHOSPHORUS LOADS
* * * * * *

FEBRUARY 26, 1975

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	2500	0.0061	6	0	.005	+/-0.000	.001	30.	+/- 6.
N. THOMPSON	2000	0.0049	6	0	.005	+/-0.000	.001	23.	+/- 5.
OVERLANDER	4500	0.0110						52.	+/- 7.
TRANQUILLE	4500	0.0110	18	0	.011	+/-0.000	.002	122.	+/- 15.
SAVONA	5600	0.0137	12	0	.007	+/-0.000	.001	90.	+/- 13.

MARCH 9, 1975

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	2500	0.0061	6	0	.004	+/-0.000	.001	25.	+/- 6.
N. THOMPSON	2200	0.0054	6	0	.010	+/-0.001	.002	52.	+/- 10.
OVERLANDER	4700	0.0115						78.	+/- 11.
TRANQUILLE	4700	0.0115	18	0	.006	+/-0.000	.002	65.	+/- 12.
SAVONA	5800	0.0142	12	0	.005	+/-0.000	.001	72.	+/- 11.

MARCH 24, 1975

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	2500	0.0061	6	0	.004	+/-0.000	.001	24.	+/- 4.
N. THOMPSON	2000	0.0049	6	0	.003	+/-0.000	.001	16.	+/- 5.
OVERLANDER	4500	0.0110						41.	+/- 6.
TRANQUILLE	4500	0.0110	18	0	.009	+/-0.001	.003	95.	+/- 16.
SAVONA	6000	0.0147	12	0	.006	+/-0.000	.001	89.	+/- 12.

APRIL 9, 1975

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	2500	0.0061	6	0	.004	+/-0.000	.001	25.	+/- 6.
N. THOMPSON	2000	0.0049	5	0	.003	+/-0.000	.000	16.	+/- 2.
OVERLANDER	4500	0.0110						41.	+/- 7.
TRANQUILLE	4500	0.0110	18	1	.005	+/-0.000	.001	56.	+/- 9.
SAVONA	5800	0.0142	12	1	.014	+/-0.008	.026	193.	+/- 212.

INLAND WATERS DIRECTORATE
WATER QUALITY BRANCH
* * * * * *
THOMPSON RIVER PROJECT -- DISSOLVED PHOSPHORUS LOADS
* * * * * *

APRIL 22, 1975

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	2700	0.0066	6	0	.004	+/-0.000	.001	30.	+/- 5.
N. THOMPSON	4200	0.0103	6	0	.004	+/-0.001	.002	46.	+/- 18.
OVERLANDER	6900	0.0169						76.	+/- 18.
TRANQUILLE	6900	0.0169	18	1	.009	+/-0.004	.016	150.	+/- 122.
SAVONA	6900	0.0169	12	1	.007	+/-0.001	.005	115.	+/- 48.

MAY 7, 1975

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	4900	0.0120	6	0	.005	+/-0.001	.002	56.	+/- 17.
N. THOMPSON	10100	0.0247	6	1	.006	+/-0.001	.001	152.	+/- 33.
OVERLANDER	15000	0.0367						208.	+/- 37.
TRANQUILLE	15000	0.0367	18	0	.007	+/-0.001	.002	269.	+/- 50.
SAVONA	12400	0.0303	12	1	.006	+/-0.001	.002	192.	+/- 44.

MAY 20, 1975

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	15700	0.0384	6	0	.003	+/-0.000	.001	122.	+/- 26.
N. THOMPSON	33700	0.0825	6	0	.005	+/-0.001	.001	399.	+/- 96.
OVERLANDER	49400	0.1209						520.	+/- 99.
TRANQUILLE	49400	0.1209	18	0	.006	+/-0.000	.002	772.	+/- 139.
SAVONA	51300	0.1255	12	0	.006	+/-0.001	.003	722.	+/- 220.

JUNE 17, 1975

STATION	DISCHARGE (CFS)	DISCHARGE (KM3/DAY)	SAMPLE SIZE	OUTLIERS	MEAN CONC. (MG/L)	STANDARD ERROR	STANDARD DEVIATION	LOAD (KG/DAY)	95% CONFIDENCE LIMITS
S. THOMPSON	34000	0.0832	6	0	.002	+/-0.001	.002	208.	+/- 111.
N. THOMPSON	59600	0.1458	6	0	.005	+/-0.001	.003	778.	+/- 352.
OVERLANDER	93600	0.2290						986.	+/- 369.
TRANQUILLE	93600	0.2290	18	0	.003	+/-0.000	.001	598.	+/- 107.
SAVONA	90100	0.2204	12	0	.005	+/-0.001	.004	1102.	+/- 488.