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ESTIMATES OF NUTRIENT LOAD CARRIED BY THE OKANAGAN RIVER INTO OSOYOOS LAKE

PART II

Statistical Characteristics of Nutrient Concentration and Load
Okanagan River Near Oliver

DATA REPORT

PREPARED FOR:

CANADA - BRITISH COLUMBIA
OKANAGAN BASIN IMPLEMENTATION BOARD

L. JOHN ZEMAN AND H. OLAV SLAYMAKER

SEPTEMBER 1982

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CANADA - BRITISH COLUMBIA OKANAGAN BASIN
IMPLEMENTATION AGREEMENT

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DATA REPORT

L. John Zeman and H. Olav Slaymaker

INLAND WATERS DIRECTORATE

VANCOUVER

June 1982

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PART II

Statistical Characteristics of Nutrient Concentration and Load
Okanagan River Near Oliver

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S-3 Arithmetic mean loads of the ratio of dissolved silica to total phosphorus (P) and their statistical characteristics during sampling periods. 467

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A

OKANAGAN RIVER BELOW OKANAGAN LAKE

Topographic Map of the Okanagan River Between Okanagan and Osoyoos Lakes

Water Quality and Stream Gauging Stations

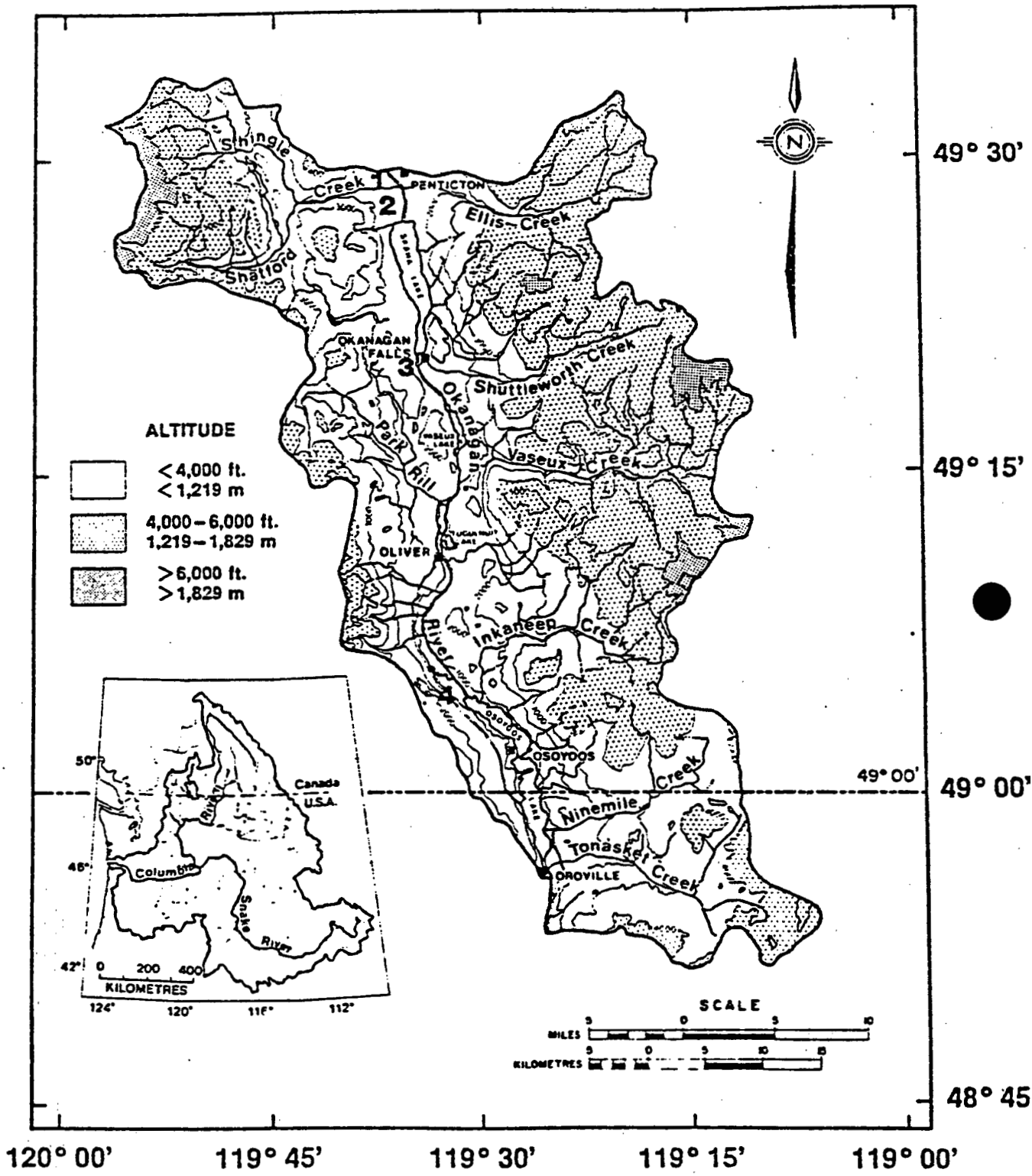


Figure 1. Southern part of the Okanagan River Basin. Hydrometric stations (1, 3 and 4) and Water Quality Sampling sites (1, 2, 3 and 4)

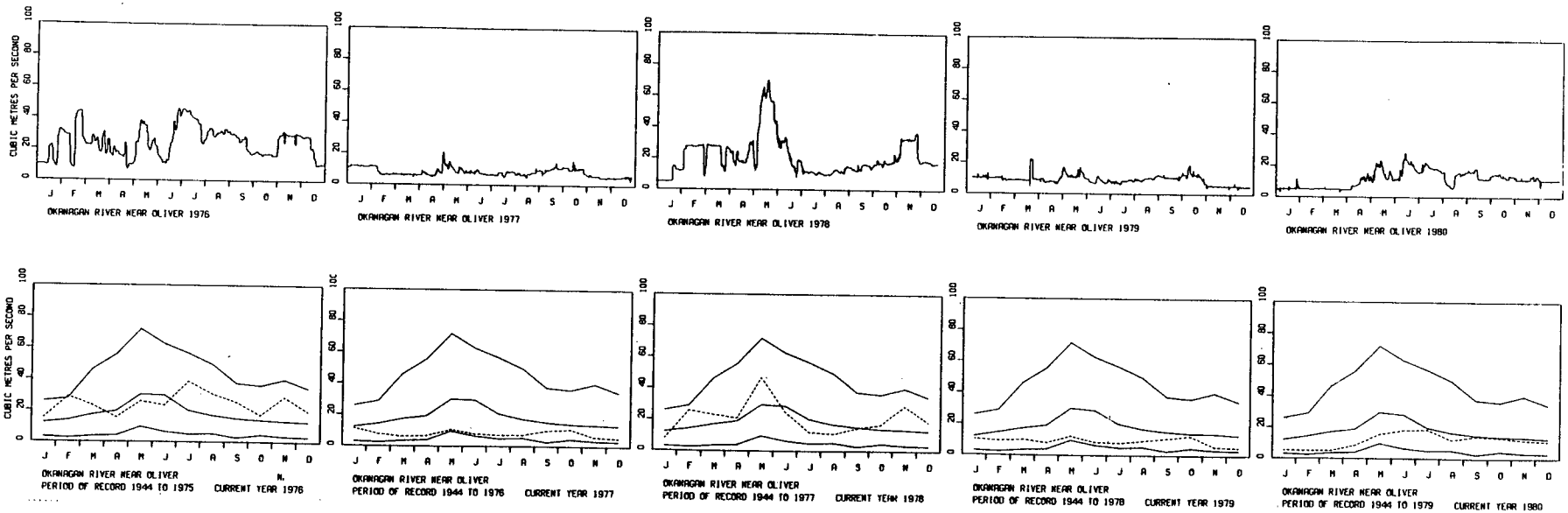
B

OKANAGAN RIVER NEAR OLIVER

DISCHARGE

Annual hydrographs of hourly discharges

Graphs of discharge ranges derived from historical records.


CUBIC METRES PER SECOND
0 20 40 60 80 100
J F M A M J J A S O N D
OKANAGAN RIVER NEAR OLIVER 1976
OKANAGAN RIVER NEAR OLIVER 1977
OKANAGAN RIVER NEAR OLIVER 1978
OKANAGAN RIVER NEAR OLIVER 1979
OKANAGAN RIVER NEAR OLIVER 1980
OKANAGAN RIVER NEAR OLIVER
PERIOD OF RECORD 1944 TO 1975
CURRENT YEAR 1976
OKANAGAN RIVER NEAR OLIVER
PERIOD OF RECORD 1944 TO 1976
CURRENT YEAR 1977
OKANAGAN RIVER NEAR OLIVER
PERIOD OF RECORD 1944 TO 1977
CURRENT YEAR 1978
OKANAGAN RIVER NEAR OLIVER
PERIOD OF RECORD 1944 TO 1978
CURRENT YEAR 1979
OKANAGAN RIVER NEAR OLIVER
PERIOD OF RECORD 1944 TO 1979
CURRENT YEAR 1980
MAXIMUM
MEAN
CURRENT YEAR
MEAN
MINIMUM

C-1

OKANAGAN RIVER NEAR OLIVER

Statistical Characteristics of Nutrient Concentrations

Period of Sampling June 1977 to December 1980.

TOTAL PHOSPHORUS (P)

Arithmetic mean concentrations and their statistical characteristics determined for:

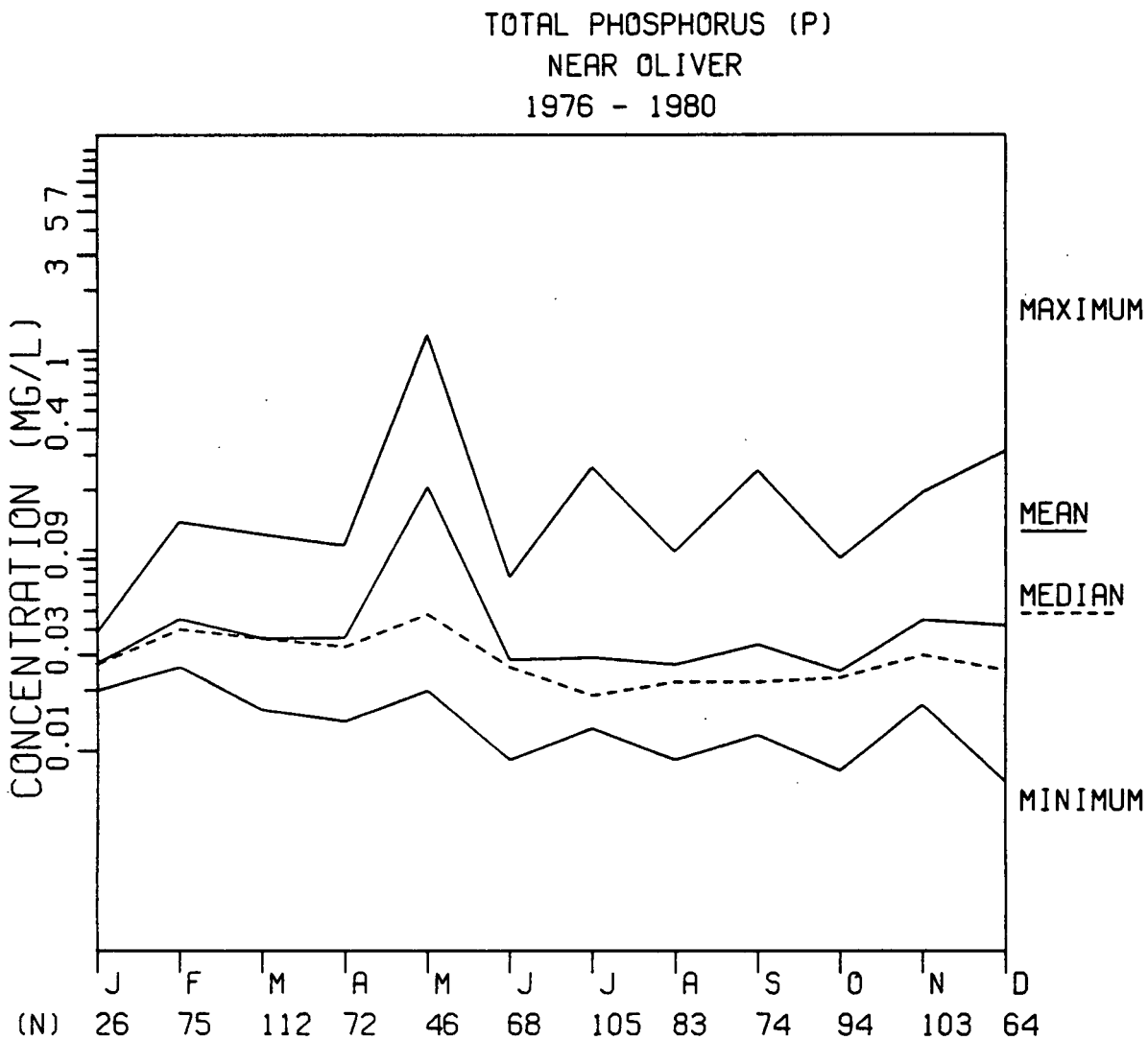
- Individual Months
- All Months
  - Graph of monthly concentration ranges
- Individual years
- Seasons
  - April to September
  - October to March
  - April to March
- All Years
  - Histogram of concentration distribution

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
TOTAL PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
				(MG/L)			
1977 JUNE	28	0.0090	0.067	0.026	0.0099	0.0019	± 0.0038
JULY	42	0.0140	0.027	0.019	0.0027	0.0004	± 0.0008
AUGUST	28	0.0130	0.037	0.023	0.0058	0.0011	± 0.0022
OCTOBER	26	0.0130	0.043	0.021	0.0071	0.0014	± 0.0029
NOVEMBER	27	0.0210	0.033	0.028	0.0040	0.0008	± 0.0016
DECEMBER	10	0.0070	0.023	0.020	0.0050	0.0016	± 0.0036
1978 JANUARY	1	0.0210	0.021	0.021			
FEBRUARY	44	0.0260	0.073	0.041	0.0079	0.0012	± 0.0024
MARCH	60	0.0160	0.120	0.032	0.0158	0.0020	± 0.0041
APRIL	36	0.0140	0.064	0.025	0.0123	0.0021	± 0.0042
MAY	30	0.0250	1.200	0.294	0.3683	0.0672	± 0.1375
JUNE	25	0.0140	0.073	0.029	0.0165	0.0033	± 0.0068
JULY	32	0.0130	0.047	0.018	0.0063	0.0011	± 0.0023
AUGUST	24	0.0090	0.023	0.016	0.0051	0.0010	± 0.0021
SEPTEMBER	38	0.0120	0.250	0.036	0.0518	0.0084	± 0.0170
OCTOBER	32	0.0150	0.091	0.035	0.0173	0.0031	± 0.0062
NOVEMBER	48	0.0190	0.195	0.067	0.0428	0.0062	± 0.0124
DECEMBER	30	0.0200	0.315	0.063	0.0654	0.0119	± 0.0244
1979 JANUARY	10	0.0240	0.039	0.030	0.0042	0.0013	± 0.0030
FEBRUARY	19	0.0270	0.139	0.057	0.0309	0.0071	± 0.0149
MARCH	36	0.0250	0.061	0.046	0.0060	0.0010	± 0.0020
APRIL	24	0.0300	0.062	0.047	0.0064	0.0013	± 0.0027
JULY	11	0.0740	0.259	0.113	0.0540	0.0163	± 0.0363
AUGUST	16	0.0270	0.098	0.052	0.0196	0.0049	± 0.0104
SEPTEMBER	16	0.0300	0.065	0.041	0.0104	0.0026	± 0.0055
OCTOBER	20	0.0080	0.031	0.018	0.0070	0.0016	± 0.0033
NOVEMBER	12	0.0190	0.031	0.023	0.0032	0.0009	± 0.0020
DECEMBER	12	0.0220	0.027	0.024	0.0016	0.0005	± 0.0010
1980 JANUARY	15	0.0200	0.033	0.026	0.0041	0.0011	± 0.0023
FEBRUARY	12	0.0280	0.057	0.041	0.0102	0.0030	± 0.0065
MARCH	16	0.0180	0.045	0.029	0.0082	0.0021	± 0.0044
APRIL	12	0.0240	0.106	0.048	0.0265	0.0076	± 0.0168
MAY	16	0.0200	0.092	0.046	0.0186	0.0046	± 0.0099
JUNE	15	0.0200	0.040	0.032	0.0052	0.0014	± 0.0029
JULY	20	0.0130	0.033	0.021	0.0067	0.0015	± 0.0032
AUGUST	15	0.0130	0.033	0.024	0.0071	0.0018	± 0.0039
SEPTEMBER	20	0.0170	0.039	0.023	0.0074	0.0017	± 0.0035
OCTOBER	16	0.0090	0.025	0.019	0.0057	0.0014	± 0.0030
NOVEMBER	16	0.0170	0.033	0.023	0.0043	0.0011	± 0.0023
DECEMBER	12	0.0150	0.046	0.027	0.0091	0.0026	± 0.0058

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
TOTAL PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
				(MG/L)			
- -78-79-80 JANUARY	26	0.0200	0.039	0.027	0.0046	0.0009	± 0.0018
- -78-79-80 FEBRUARY	75	0.0260	0.139	0.045	0.0183	0.0021	± 0.0042
- -78-79-80 MARCH	112	0.0160	0.120	0.036	0.0143	0.0013	± 0.0027
- -78-79-80 APRIL	72	0.0140	0.106	0.036	0.0178	0.0021	± 0.0042
- -78- -80 MAY	46	0.0200	1.200	0.208	0.3191	0.0470	± 0.0947
-77-78- -80 JUNE	68	0.0090	0.073	0.028	0.0122	0.0015	± 0.0029
-77-78-79-80 JULY	105	0.0130	0.259	0.029	0.0337	0.0033	± 0.0065
-77-78-79-80 AUGUST	83	0.0090	0.098	0.027	0.0160	0.0018	± 0.0035
- -78-79-80 SEPTEMBER	74	0.0120	0.250	0.034	0.0380	0.0044	± 0.0088
-77-78-79-80 OCTOBER	94	0.0080	0.091	0.025	0.0135	0.0014	± 0.0028
-77-78-79-80 NOVEMBER	103	0.0170	0.195	0.045	0.0357	0.0035	± 0.0070
-77-78-79-80 DECEMBER	64	0.0070	0.315	0.042	0.0488	0.0061	± 0.0122


TOTAL PHOSPHORUS (P)
NEAR OLIVER
1976 - 1980
CONCENTRATION (MG/L)
0.01 0.03 0.09 0.4 1 3 5 7
MAXIMUM
MEAN
MEDIAN
MINIMUM
J F M A M J J A S O N D
(N) 26 75 112 72 46 68 105 83 74 94 103 64

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
TOTAL PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
				(MG/L)			
1976							
1977 JUN JUL AUG OCT NOV DEC	161	0.0070	0.067	0.023	0.0068	0.0005	± 0.0011
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	400	0.0090	1.200	0.057	0.1246	0.0062	± 0.0122
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC	176	0.0080	0.259	0.045	0.0283	0.0021	± 0.0042
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	185	0.0090	0.106	0.029	0.0139	0.0010	± 0.0020

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
TOTAL PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
				(MG/L)			
			APRIL TO SEPTEMBER				
1976							
1977	98	0.0090	0.067	0.022	0.0068	0.0007	± 0.0014
1978	185	0.0090	1.200	0.069	0.1785	0.0131	± 0.0259
1979	67	0.0270	0.259	0.058	0.0346	0.0042	± 0.0084
1980	98	0.0130	0.106	0.031	0.0166	0.0017	± 0.0033
1976-80	448	0.0090	1.200	0.049	0.1173	0.0055	± 0.0109
			OCTOBER TO MARCH				
1976-77							
1977-78	168	0.0070	0.120	0.031	0.0130	0.0010	± 0.0020
1978-79	175	0.0150	0.315	0.053	0.0392	0.0030	± 0.0059
1979-80	87	0.0080	0.057	0.026	0.0095	0.0010	± 0.0020
1980-81	44	0.0090	0.046	0.022	0.0070	0.0011	± 0.0021
1976-80	474	0.0070	0.315	0.038	0.0281	0.0013	± 0.0025
			APRIL TO MARCH				
1976-80	922	0.0070	1.200	0.043	0.0844	0.0028	± 0.0055

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
TOTAL PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
				(MG/L)			
1976							
1977 JUN JUL AUG OCT NOV DEC							
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC							
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC							
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC							
	922	0.0070	1.200	0.043	0.0844	0.0028	± 0.0055

TOTAL PHOSPHORUS (P)

n = 922

C-2

OKANAGAN RIVER NEAR OLIVER

Statistical Characteristics of Nutrient Concentrations

Period of Sampling June 1977 to December 1980.

TOTAL PHOSPHORUS (P)

Median concentrations and their statistical characteristics determined for

- Individual Months
- All Months
- Individual years
- Seasons
  - April to September
  - October to March
  - April to March
- All Years
  - Cumulative distribution of concentration data

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
TOTAL PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
		(MG/L)			
1977 JUNE	28	0.025	0.0230	0.0270	0.964
JULY	42	0.019	0.0180	0.0200	0.956
AUGUST	28	0.022	0.0200	0.0230	0.964
OCTOBER	26	0.019	0.0170	0.0240	0.971
NOVEMBER	27	0.030	0.0260	0.0310	0.964
DECEMBER	10	0.022	0.0170	0.0230	0.979
1978 JANUARY	1	0.021			
FEBRUARY	44	0.039	0.0390	0.0420	0.951
MARCH	60	0.026	0.0250	0.0320	0.960
APRIL	36	0.021	0.0200	0.0230	0.953
MAY	30	0.078	0.0430	0.4000	0.957
JUNE	25	0.021	0.0190	0.0320	0.957
JULY	32	0.016	0.0150	0.0190	0.965
AUGUST	24	0.018	0.0120	0.0200	0.957
SEPTEMBER	38	0.020	0.0180	0.0250	0.966
OCTOBER	32	0.031	0.0290	0.0340	0.965
NOVEMBER	48	0.051	0.0360	0.0800	0.956
DECEMBER	30	0.033	0.0260	0.0530	0.957
1979 JANUARY	10	0.029	0.0270	0.0340	0.979
FEBRUARY	19	0.054	0.0310	0.0800	0.959
MARCH	36	0.046	0.0440	0.0480	0.953
APRIL	24	0.047	0.0430	0.0500	0.957
JULY	11	0.091	0.0800	0.1530	0.961
AUGUST	16	0.049	0.0410	0.0630	0.951
SEPTEMBER	16	0.038	0.0340	0.0540	0.951
OCTOBER	20	0.019	0.0130	0.0230	0.959
NOVEMBER	12	0.022	0.0210	0.0260	0.961
DECEMBER	12	0.024	0.0220	0.0250	0.961
1980 JANUARY	15	0.026	0.0230	0.0280	0.965
FEBRUARY	12	0.039	0.0330	0.0530	0.961
MARCH	16	0.029	0.0220	0.0350	0.951
APRIL	12	0.035	0.0290	0.0680	0.961
MAY	16	0.038	0.0360	0.0530	0.951
JUNE	15	0.033	0.0290	0.0370	0.965
JULY	20	0.020	0.0150	0.0270	0.959
AUGUST	15	0.024	0.0170	0.0310	0.965
SEPTEMBER	20	0.019	0.0180	0.0250	0.959
OCTOBER	16	0.017	0.0140	0.0250	0.951
NOVEMBER	16	0.023	0.0200	0.0260	0.951
DECEMBER	12	0.026	0.0160	0.0320	0.961

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
TOTAL PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
		(MG/L)			
- -78-79-80 JANUARY	26	0.027	0.0240	0.0290	0.971
- -78-79-80 FEBRUARY	75	0.040	0.0380	0.0430	0.963
- -78-79-80 MARCH	112	0.036	0.0300	0.0400	0.953
- -78-79-80 APRIL	72	0.033	0.0240	0.0420	0.956
- -78- -80 MAY	46	0.048	0.0400	0.0830	0.960
-77-78- -80 JUNE	68	0.026	0.0240	0.0290	0.961
-77-78-79-80 JULY	105	0.019	0.0180	0.0200	0.959
-77-78-79-80 AUGUST	83	0.022	0.0200	0.0230	0.952
- -78-79-80 SEPTEMBER	74	0.022	0.0190	0.0310	0.953
-77-78-79-80 OCTOBER	94	0.023	0.0190	0.0250	0.951
-77-78-79-80 NOVEMBER	103	0.030	0.0270	0.0320	0.952
-77-78-79-80 DECEMBER	64	0.025	0.0240	0.0290	0.954

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
TOTAL PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
		(MG/L)			
1976					
1977 JUN JUL AUG OCT NOV DEC	161	0.022	0.0210	0.0230	0.951
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	400	0.029	0.0260	0.0310	0.954
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC	176	0.041	0.0380	0.0440	0.959
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	185	0.027	0.0250	0.0280	0.953

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
TOTAL PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

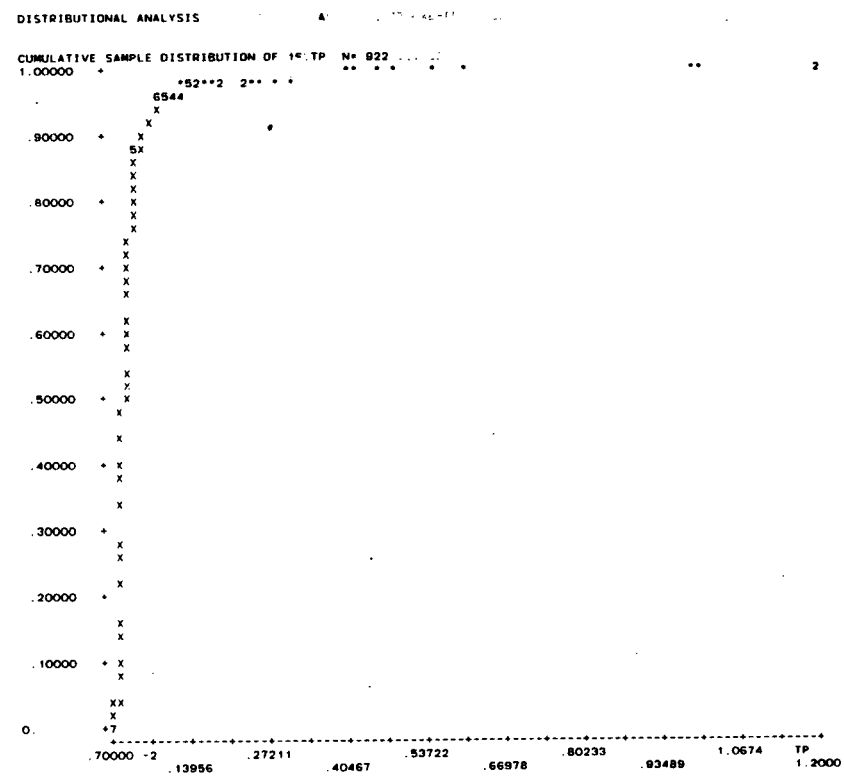
SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
		(MG/L)			
		APRIL TO SEPTEMBER			
1976					
1977	98	0.020	0.0200	0.0220	0.956
1978	185	0.021	0.0200	0.0220	0.953
1979	67	0.048	0.0430	0.0510	0.950
1980	98	0.029	0.0250	0.0330	0.956
1976-80	448	0.024	0.0220	0.0260	0.953
		OCTOBER TO MARCH			
1976-77					
1977-78	168	0.030	0.0260	0.0320	0.955
1978-79	175	0.042	0.0360	0.0450	0.951
1979-80	87	0.024	0.0230	0.0270	0.958
1980-81	44	0.023	0.0200	0.0250	0.951
1976-80	474	0.030	0.0280	0.0310	0.952
		APRIL TO MARCH			
1976-80	922	0.027	0.0260	0.0290	0.952

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
TOTAL PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
		(MG/L)			
1976					
1977 JUN JUL AUG OCT NOV DEC					
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC					
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC					
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC					
	922	0.027	0.0260	0.0290	0.952

DISTRIBUTIONAL ANALYSIS

CUMULATIVE SAMPLE DISTRIBUTION OF 1ST TP N= 922



PROB	QUANTILE	LEVEL	CONFIDENCE INTERVAL		SIZE
.1000	.16000 -1	.9500	.16000 -1	.17000 -1	.9521
.3000	.22000 -1	.9500	.21000 -1	.22000 -1	.9519
.5000	.27000 -1	.9500	.26000 -1	.29000 -1	.9518
.7000	.37000 -1	.9500	.35000 -1	.39000 -1	.9519
.9000	.62000 -1	.9500	.54000 -1	.73000 -1	.9521

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OKANAGAN RIVER NEAR OLIVER

Statistical Characteristics of Nutrient Loads

Period of Sampling June 1977 to December 1980.

TOTAL PHOSPHORUS (P)

Arithmetic mean loads and their statistical characteristics determined for

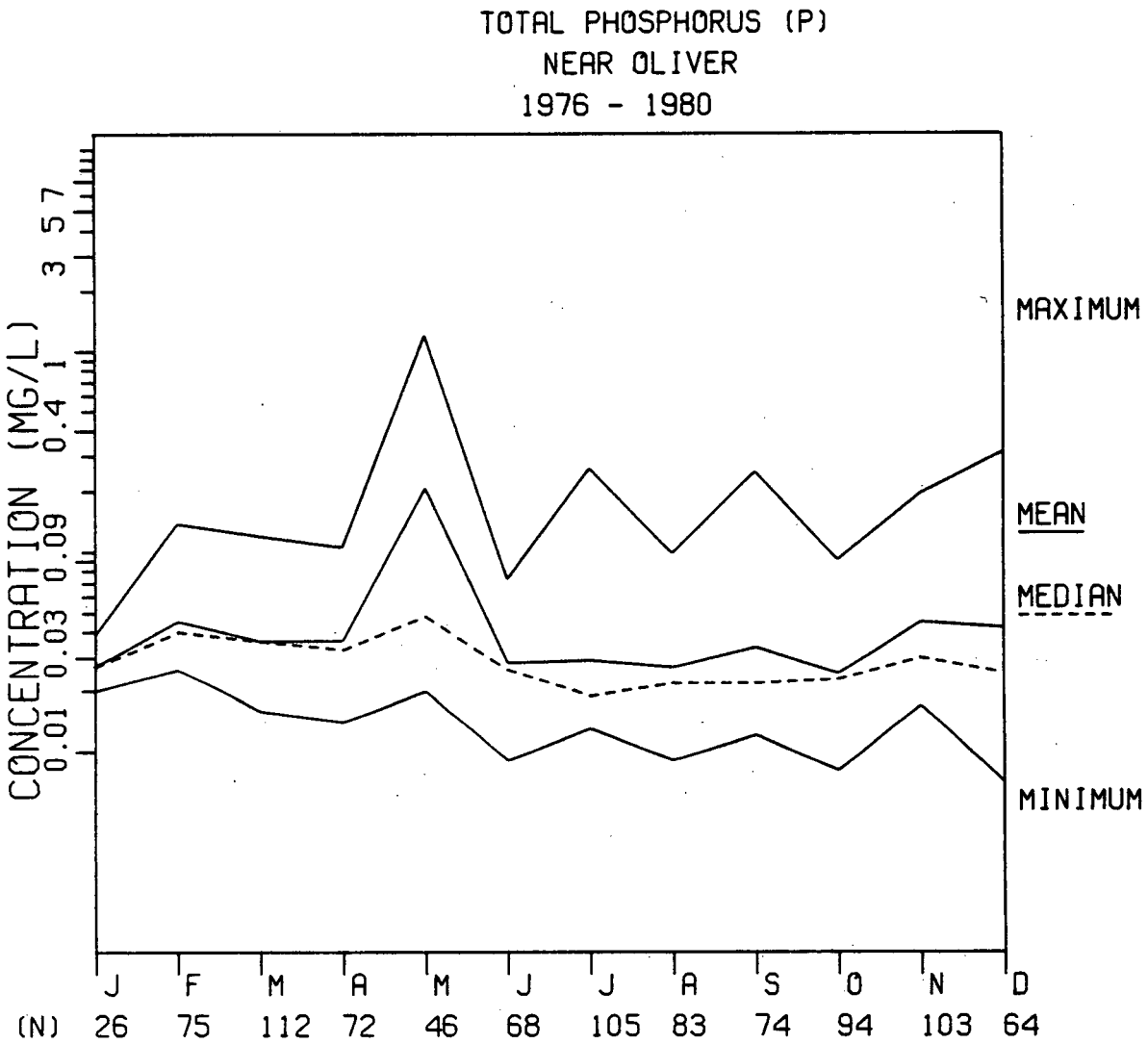
- Individual Months
- All Months
  - Graph of monthly load ranges
- Individual years
- Seasons
  - April to September
  - October to March
  - April to March
- All Years

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
TOTAL PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
				(KG/DAY)			
1977 JUNE	7	12.5000	17.900	14.829	2.0164	0.7621	± 1.8645
JULY	11	7.8300	12.300	10.494	1.4390	0.4339	± 0.9665
AUGUST	8	8.3300	16.600	12.529	2.8691	1.0144	± 2.3985
OCTOBER	10	11.3000	27.100	17.700	4.6629	1.4745	± 3.3360
NOVEMBER	10	9.3100	27.400	15.941	5.0247	1.5889	± 3.5940
DECEMBER	5	6.6800	10.600	9.174	1.5733	0.7036	± 1.9538
1978 JANUARY	1	21.4000	21.400	21.400			
FEBRUARY	10	72.1000	133.000	93.950	16.8420	5.3259	± 12.0490
MARCH	18	23.9000	85.600	48.217	19.2580	4.5392	± 9.5770
APRIL	9	25.9000	107.000	50.411	28.0430	9.3477	± 21.5560
MAY	10	29.7000	5410.000	1254.300	1686.0000	533.1599	± 1206.1094
JUNE	7	14.2000	157.000	64.457	51.0080	19.2792	± 47.1740
JULY	9	13.4000	24.300	17.689	3.7334	1.2445	± 2.8700
AUGUST	6	8.2500	23.400	16.175	6.1880	2.5262	± 6.4940
SEPTEMBER	13	17.6000	95.300	40.769	26.8610	7.4499	± 16.2320
OCTOBER	8	26.6000	75.400	50.600	20.0420	7.0859	± 16.7550
NOVEMBER	11	42.2000	377.000	174.520	98.5970	29.7281	± 66.2400
DECEMBER	6	35.2000	257.000	103.080	89.9970	36.7411	± 94.4463
1979 JANUARY	4	24.4000	28.600	26.325	2.1407	1.0703	± 3.4060
FEBRUARY	7	23.7000	64.500	37.757	17.3540	6.5592	± 16.0500
MARCH	9	28.5000	40.400	34.644	3.4482	1.1494	± 2.6505
APRIL	6	31.5000	43.000	35.967	4.4724	1.8258	± 4.6935
JULY	3	59.4000	89.500	72.000	15.6370	9.0280	± 38.8420
AUGUST	4	28.1000	54.900	41.925	11.7910	5.8955	± 18.7620
SEPTEMBER	4	29.3000	59.600	39.450	13.8340	6.9170	± 22.0140
OCTOBER	5	8.5700	27.600	19.254	7.0822	3.1673	± 8.7940
NOVEMBER	3	10.3000	11.700	10.900	0.7211	0.4163	± 1.7912
DECEMBER	3	9.7500	11.800	10.617	1.0611	0.6126	± 2.6355
1980 JANUARY	4	9.4600	13.900	11.615	2.3607	1.1803	± 3.7562
FEBRUARY	3	14.0000	22.500	17.833	4.3108	2.4888	± 10.7087
MARCH	4	8.7700	16.000	12.442	3.2285	1.6143	± 5.1374
APRIL	3	13.4000	88.500	40.633	41.5850	24.0091	± 103.3045
MAY	4	35.7000	79.100	55.475	21.4030	10.7015	± 34.0560
JUNE	4	26.9000	74.400	49.775	19.6160	9.8080	± 31.2130
JULY	5	19.5000	47.500	34.320	11.1810	5.0003	± 13.8830
AUGUST	4	14.7000	30.600	23.175	6.9935	3.4967	± 11.1280
SEPTEMBER	5	17.9000	50.400	27.920	13.1150	5.8652	± 16.2850
OCTOBER	4	17.0000	29.000	22.725	5.3012	2.6506	± 8.4350
NOVEMBER	4	20.0000	31.400	24.150	5.1984	2.5992	± 8.2720
DECEMBER	2	15.8000	29.300	22.550	9.5459	6.7500	± 85.7685

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
TOTAL PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
				(KG/DAY)			
- -78-79-80 JANUARY	9	9.4600	28.600	19.240	7.6525	2.5508	± 5.8820
- -78-79-80 FEBRUARY	20	14.0000	133.000	62.865	35.9510	8.0389	± 16.8250
- -78-79-80 MARCH	31	8.7700	85.600	39.660	19.0950	3.4296	± 7.0045
- -78-79-80 APRIL	18	13.4000	107.000	43.967	25.0190	5.8970	± 12.4415
- -78- -80 MAY	14	29.7000	5410.000	911.780	1511.3000	403.9119	± 872.6079
-77-78- -80 JUNE	18	12.5000	157.000	41.894	38.9040	9.1698	± 19.3465
-77-78-79-80 JULY	28	7.8300	89.500	23.651	20.1180	3.8019	± 7.8010
-77-78-79-80 AUGUST	22	8.2500	54.900	20.804	12.5280	2.6710	± 5.5545
- -78-79-80 SEPTEMBER	22	17.6000	95.300	37.609	22.3960	4.7748	± 9.9300
-77-78-79-80 OCTOBER	27	8.5700	75.400	28.480	18.5290	3.5659	± 7.3300
-77-78-79-80 NOVEMBER	28	9.3100	377.000	78.872	98.8070	18.6728	± 38.3160
-77-78-79-80 DECEMBER	16	6.6800	257.000	46.332	69.1790	17.2947	± 36.8627


TOTAL PHOSPHORUS (P)
NEAR OLIVER
1976 - 1980
CONCENTRATION (MG/L)
0.01 0.03 0.09 0.4 1 3 5 7
MAXIMUM
MEAN
MEDIAN
MINIMUM
J F M A M J J A S O N D
(N) 26 75 112 72 46 68 105 83 74 94 103 64

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
TOTAL PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
				(KG/DAY)			
1976							
1977 JUN JUL AUG OCT NOV DEC	51	6.6800	27.400	13.760	4.4294	0.6202	± 1.2455
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	108	8.2500	5410.000	175.980	602.0300	57.9304	± 114.8390
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC	48	8.5700	89.500	33.323	16.6760	2.4070	± 4.8420
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	46	8.7700	88.500	28.894	18.7950	2.7712	± 5.5815

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
TOTAL PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
				(KG/DAY)			
			APRIL TO SEPTEMBER				
1976							
1977	26	7.8300	17.900	12.287	2.7113	0.5317	± 1.0950
1978	54	8.2500	5410.000	263.600	843.1101	114.7328	± 230.1239
1979	17	28.1000	89.500	44.547	16.6100	4.0285	± 8.5400
1980	25	13.4000	88.500	37.872	20.9890	4.1978	± 8.6640
1976-80	122	7.8300	5410.000	133.260	570.2600	51.6289	± 102.2110
			OCTOBER TO MARCH				
1976-77							
1977-78	54	6.6800	133.000	40.946	32.3370	4.4005	± 8.8260
1978-79	45	23.7000	377.000	80.542	81.6500	12.1717	± 24.5290
1979-80	22	8.5700	27.600	14.116	5.1939	1.1073	± 2.3030
1980-81	10	15.8000	31.400	23.260	5.3937	1.7056	± 3.8580
1976-80	131	6.6800	377.000	48.692	57.5960	5.0322	± 9.9555
			APRIL TO MARCH				
1976-80	253	6.6800	5410.000	89.472	399.5601	25.1201	± 49.4700

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
TOTAL PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
				(KG/DAY)			
1976							
1977 JUN JUL AUG OCT NOV DEC							
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC							
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC							
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC							
	253	6.6800	5410.000	89.472	399.5601	25.1201	± 49.4700

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OKANAGAN RIVER NEAR OLIVER

Statistical Characteristics of Nutrient Loads

Period of Sampling June 1977 to December 1980.

TOTAL PHOSPHORUS (P)

Median loads and their statistical characteristics determined for

- Individual Months
- All Months
- Individual years
- Seasons
  - April to September
  - October to March
  - April to March
- All Years

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
TOTAL PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
		(KG/DAY)			
1977 JUNE	7	14.800	12.5000	17.9000	0.984
JULY	11	10.500	9.4600	12.2000	0.961
AUGUST	8	11.600	10.4000	16.6000	0.961
OCTOBER	10	16.800	13.0000	21.3000	0.979
NOVEMBER	10	16.200	10.1000	17.8000	0.979
DECEMBER	5	9.580		6.6800	0.969
1978 JANUARY	1	21.400			
FEBRUARY	10	87.800	84.6000	106.0000	0.979
MARCH	18	49.100	29.8000	59.4000	0.969
APRIL	9	42.300	29.4000	87.2000	0.961
MAY	10	182.000	48.8000	2260.0000	0.979
JUNE	7	35.700	14.2000	157.0000	0.984
JULY	9	18.300	13.6000	20.9000	0.961
AUGUST	6	17.600	8.2500	23.4000	0.969
SEPTEMBER	13	33.200	21.0000	68.5000	0.978
OCTOBER	8	45.800	27.7000	75.4000	0.961
NOVEMBER	11	182.000	94.7000	262.0000	0.961
DECEMBER	6	42.100	35.2000	257.0000	0.969
1979 JANUARY	4	24.600			
FEBRUARY	7	26.200	23.7000	64.5000	0.984
MARCH	9	34.200	33.0000	38.8000	0.961
APRIL	6	34.000	31.5000	43.0000	0.969
JULY	3	67.100			
AUGUST	4	37.000			
SEPTEMBER	4	31.700			
OCTOBER	5	19.500		8.5700	0.969
NOVEMBER	3	10.700			
DECEMBER	3	10.300			
1980 JANUARY	4	9.700			
FEBRUARY	3	17.000			
MARCH	4	10.900			
APRIL	3	20.000			
MAY	4	39.100			
JUNE	4	45.500			
JULY	5	31.600		19.5000	0.969
AUGUST	4	20.600			
SEPTEMBER	5	23.500		17.9000	0.969
OCTOBER	4	20.000			
NOVEMBER	4	20.800			
DECEMBER	2	15.800			

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
TOTAL PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN (KG/DAY)	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
- -78-79-80 JANUARY	9	21.400	9.7000	27.7000	0.961
- -78-79-80 FEBRUARY	20	64.500	25.4000	87.8000	0.959
- -78-79-80 MARCH	31	34.200	29.8000	49.1000	0.971
- -78-79-80 APRIL	18	34.000	31.5000	46.0000	0.969
- -78- -80 MAY	14	96.500	48.8000	1960.0000	0.965
-77-78- -80 JUNE	18	26.900	14.8000	52.3000	0.969
-77-78-79-80 JULY	28	13.700	11.8000	20.9000	0.964
-77-78-79-80 AUGUST	22	16.600	12.1000	26.8000	0.965
- -78-79-80 SEPTEMBER	22	29.300	23.4000	42.0000	0.965
-77-78-79-80 OCTOBER	27	21.300	17.6000	27.7000	0.964
-77-78-79-80 NOVEMBER	28	20.800	16.6000	94.7000	0.964
-77-78-79-80 DECEMBER	16	11.800	10.3000	42.1000	0.951

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
TOTAL PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
		(KG/DAY)			
1976					
1977 JUN JUL AUG OCT NOV DEC	51	12.500	11.3000	15.7000	0.951
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	108	46.400	35.2000	67.7000	0.957
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC	48	31.700	27.7000	34.8000	0.956
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	46	22.500	20.0000	29.3000	0.960

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
TOTAL PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
		(KG/DAY)			
		APRIL TO SEPTEMBER			
1976					
1977	26	11.800	10.5000	13.2000	0.971
1978	54	32.100	23.4000	42.3000	0.960
1979	17	37.200	32.7000	54.9000	0.951
1980	25	30.600	23.5000	45.5000	0.957
1976-80	122	28.100	21.3000	32.7000	0.953
		OCTOBER TO MARCH			
1976-77					
1977-78	54	27.000	17.8000	49.1000	0.960
1978-79	45	40.500	34.8000	64.5000	0.964
1979-80	22	11.800	10.3000	17.0000	0.965
1980-81	10	20.800	17.0000	29.3000	0.979
1976-80	131	27.700	24.6000	33.6000	0.955
		APRIL TO MARCH			
1976-80	253	27.800	24.9000	31.5000	0.956

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
TOTAL PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
		(KG/DAY)			
1976					
1977 JUN JUL AUG OCT NOV DEC					
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC					
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC					
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC					
	253	27.800	24.9000	31.5000	0.956

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OKANAGAN RIVER NEAR OLIVER

Statistical Characteristics of Nutrient Concentrations

Period of Sampling June 1977 to December 1980.

TOTAL DISSOLVED PHOSPHORUS (P)

Arithmetic mean concentrations and their statistical characteristics determined for:

- Individual Months
- All Months
  - Graph of monthly concentration ranges
- Individual years
- Seasons
  - April to September
  - October to March
  - April to March
- All Years
  - Histogram of concentration distribution

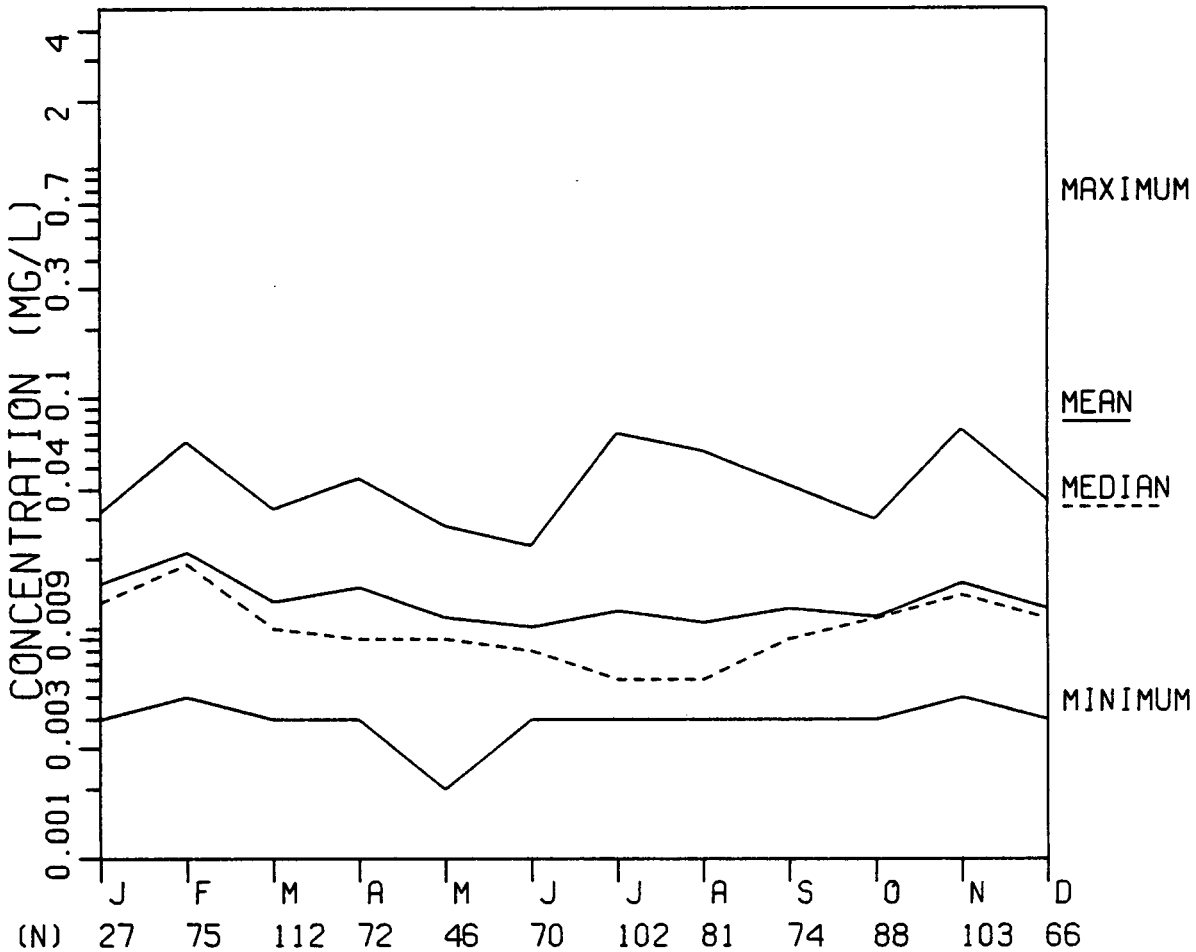
STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
TOTAL DISSOLVED PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
				(MG/L)			
1977 JUNE	29	0.0050	0.023	0.010	0.0037	0.0007	± 0.0014
JULY	42	0.0050	0.012	0.008	0.0027	0.0004	± 0.0008
AUGUST	28	0.0050	0.020	0.007	0.0046	0.0009	± 0.0018
OCTOBER	26	0.0040	0.018	0.008	0.0044	0.0009	± 0.0018
NOVEMBER	27	0.0070	0.014	0.011	0.0018	0.0003	± 0.0007
DECEMBER	10	0.0040	0.011	0.007	0.0023	0.0007	± 0.0017
1978 JANUARY	1	0.0080	0.008	0.008			
FEBRUARY	44	0.0050	0.020	0.014	0.0051	0.0008	± 0.0016
MARCH	60	0.0040	0.017	0.007	0.0031	0.0004	± 0.0008
APRIL	36	0.0040	0.036	0.007	0.0057	0.0009	± 0.0019
MAY	30	0.0020	0.015	0.007	0.0027	0.0005	± 0.0010
JUNE	25	0.0040	0.017	0.006	0.0025	0.0005	± 0.0010
JULY	32	0.0040	0.008	0.005	0.0010	0.0002	± 0.0004
AUGUST	24	0.0040	0.008	0.005	0.0010	0.0002	± 0.0004
SEPTEMBER	38	0.0040	0.024	0.009	0.0043	0.0007	± 0.0014
OCTOBER	32	0.0080	0.030	0.014	0.0050	0.0009	± 0.0018
NOVEMBER	48	0.0080	0.074	0.019	0.0105	0.0015	± 0.0030
DECEMBER	32	0.0080	0.036	0.014	0.0062	0.0011	± 0.0022
1979 JANUARY	11	0.0170	0.032	0.024	0.0042	0.0013	± 0.0028
FEBRUARY	19	0.0230	0.065	0.037	0.0146	0.0033	± 0.0070
MARCH	36	0.0120	0.033	0.024	0.0043	0.0007	± 0.0014
APRIL	24	0.0180	0.045	0.028	0.0058	0.0012	± 0.0025
JULY	8	0.0570	0.071	0.061	0.0046	0.0016	± 0.0039
AUGUST	14	0.0110	0.059	0.024	0.0139	0.0037	± 0.0080
SEPTEMBER	16	0.0110	0.042	0.025	0.0109	0.0027	± 0.0058
OCTOBER	17	0.0070	0.019	0.012	0.0041	0.0010	± 0.0021
NOVEMBER	12	0.0130	0.022	0.017	0.0030	0.0009	± 0.0019
DECEMBER	12	0.0080	0.016	0.012	0.0025	0.0007	± 0.0016
1980 JANUARY	15	0.0040	0.015	0.010	0.0038	0.0010	± 0.0021
FEBRUARY	12	0.0100	0.043	0.023	0.0111	0.0032	± 0.0071
MARCH	16	0.0070	0.020	0.013	0.0037	0.0009	± 0.0020
APRIL	12	0.0080	0.019	0.015	0.0039	0.0011	± 0.0025
MAY	16	0.0110	0.028	0.019	0.0036	0.0009	± 0.0019
JUNE	16	0.0050	0.022	0.017	0.0049	0.0012	± 0.0026
JULY	20	0.0050	0.021	0.012	0.0057	0.0013	± 0.0027
AUGUST	15	0.0060	0.020	0.012	0.0047	0.0012	± 0.0026
SEPTEMBER	20	0.0050	0.015	0.009	0.0032	0.0007	± 0.0015
OCTOBER	13	0.0060	0.016	0.011	0.0034	0.0009	± 0.0021
NOVEMBER	16	0.0050	0.018	0.013	0.0040	0.0010	± 0.0021
DECEMBER	12	0.0060	0.021	0.013	0.0051	0.0015	± 0.0032

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
TOTAL DISSOLVED PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
				(MG/L)			
- -78-79-80 JANUARY	27	0.0040	0.032	0.016	0.0080	0.0015	± 0.0032
- -78-79-80 FEBRUARY	75	0.0050	0.065	0.021	0.0136	0.0016	± 0.0031
- -78-79-80 MARCH	112	0.0040	0.033	0.013	0.0085	0.0008	± 0.0016
- -78-79-80 APRIL	72	0.0040	0.045	0.015	0.0110	0.0013	± 0.0026
- -78- -80 MAY	46	0.0020	0.028	0.011	0.0065	0.0010	± 0.0019
-77-78- -80 JUNE	70	0.0040	0.023	0.010	0.0054	0.0006	± 0.0013
-77-78-79-80 JULY	102	0.0040	0.071	0.012	0.0149	0.0015	± 0.0029
-77-78-79-80 AUGUST	81	0.0040	0.059	0.011	0.0094	0.0010	± 0.0021
- -78-79-80 SEPTEMBER	74	0.0040	0.042	0.012	0.0089	0.0010	± 0.0021
-77-78-79-80 OCTOBER	88	0.0040	0.030	0.011	0.0051	0.0005	± 0.0011
-77-78-79-80 NOVEMBER	103	0.0050	0.074	0.016	0.0082	0.0008	± 0.0016
-77-78-79-80 DECEMBER	66	0.0040	0.036	0.012	0.0054	0.0007	± 0.0013

TOTAL DISSOLVED PHOSPHORUS (P)
NEAR OLIVER
1976 - 1980



STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
TOTAL DISSOLVED PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
				(MG/L)			
1976							
1977 JUN JUL AUG OCT NOV DEC	162	0.0040	0.023	0.008	0.0037	0.0003	± 0.0006
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	402	0.0020	0.074	0.010	0.0070	0.0003	± 0.0007
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC	169	0.0070	0.071	0.025	0.0133	0.0010	± 0.0020
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	183	0.0040	0.043	0.014	0.0061	0.0005	± 0.0009

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
TOTAL DISSOLVED PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
				(MG/L)			
			APRIL TO SEPTEMBER				
1976							
1977	99	0.0050	0.023	0.008	0.0037	0.0004	± 0.0007
1978	185	0.0020	0.036	0.007	0.0037	0.0003	± 0.0005
1979	62	0.0110	0.071	0.031	0.0151	0.0019	± 0.0038
1980	99	0.0050	0.028	0.014	0.0055	0.0006	± 0.0011
1976-80	445	0.0020	0.071	0.012	0.0105	0.0005	± 0.0010
			OCTOBER TO MARCH				
1976-77							
1977-78	168	0.0040	0.020	0.010	0.0048	0.0004	± 0.0007
1978-79	178	0.0080	0.074	0.020	0.0108	0.0008	± 0.0016
1979-80	84	0.0040	0.043	0.014	0.0067	0.0007	± 0.0015
1980-81	41	0.0050	0.021	0.012	0.0042	0.0006	± 0.0013
1976-80	471	0.0040	0.074	0.015	0.0092	0.0004	± 0.0008
			APRIL TO MARCH				
1976-80	916	0.0020	0.074	0.013	0.0099	0.0003	± 0.0006

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
TOTAL DISSOLVED PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
				(MG/L)			
1976							
1977 JUN JUL AUG OCT NOV DEC							
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC							
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC							
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC							
	916	0.0020	0.074	0.013	0.0099	0.0003	± 0.0006

TOTAL DISSOLVED PHOSPHORUS (P)

n = 916

CONCENTRATION (mg l^{-1})

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OKANAGAN RIVER NEAR OLIVER

Statistical Characteristics of Nutrient Concentrations

Period of Sampling June 1977 to December 1980.

TOTAL DISSOLVED PHOSPHORUS (P)

Median concentrations and their statistical characteristics determined for

- Individual Months
- All Months
- Individual years
- Seasons
  - April to September
  - October to March
  - April to March
- All Years
  - Cumulative distribution of concentration data

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
TOTAL DISSOLVED PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
		(MG/L)			
1977 JUNE	29	0.010	0.0070	0.0100	0.957
JULY	42	0.006	0.0060	0.0080	0.956
AUGUST	28	0.005	0.0050	0.0060	0.964
OCTOBER	26	0.006	0.0050	0.0080	0.971
NOVEMBER	27	0.012	0.0100	0.0120	0.964
DECEMBER	10	0.007	0.0050	0.0100	0.979
1978 JANUARY	1	0.008			
FEBRUARY	44	0.014	0.0140	0.0160	0.951
MARCH	60	0.006	0.0050	0.0070	0.960
APRIL	36	0.005	0.0050	0.0060	0.953
MAY	30	0.006	0.0060	0.0070	0.957
JUNE	25	0.006	0.0050	0.0070	0.957
JULY	32	0.005	0.0050	0.0050	0.965
AUGUST	24	0.005	0.0050	0.0060	0.957
SEPTEMBER	38	0.007	0.0060	0.0090	0.966
OCTOBER	32	0.012	0.0110	0.0150	0.965
NOVEMBER	48	0.016	0.0150	0.0200	0.956
DECEMBER	32	0.012	0.0100	0.0150	0.965
1979 JANUARY	11	0.024	0.0210	0.0300	0.961
FEBRUARY	19	0.028	0.0250	0.0500	0.959
MARCH	36	0.024	0.0230	0.0260	0.953
APRIL	24	0.026	0.0250	0.0300	0.957
JULY	8	0.059	0.0570	0.0710	0.961
AUGUST	14	0.017	0.0140	0.0290	0.965
SEPTEMBER	16	0.022	0.0140	0.0360	0.951
OCTOBER	17	0.011	0.0070	0.0150	0.951
NOVEMBER	12	0.017	0.0130	0.0190	0.961
DECEMBER	12	0.011	0.0100	0.0150	0.961
1980 JANUARY	15	0.012	0.0050	0.0130	0.965
FEBRUARY	12	0.024	0.0130	0.0340	0.961
MARCH	16	0.013	0.0100	0.0160	0.951
APRIL	12	0.015	0.0090	0.0180	0.961
MAY	16	0.019	0.0170	0.0210	0.951
JUNE	16	0.018	0.0180	0.0210	0.951
JULY	20	0.012	0.0070	0.0180	0.959
AUGUST	15	0.011	0.0100	0.0190	0.965
SEPTEMBER	20	0.009	0.0070	0.0120	0.959
OCTOBER	13	0.012	0.0070	0.0140	0.978
NOVEMBER	16	0.013	0.0110	0.0170	0.951
DECEMBER	12	0.012	0.0070	0.0180	0.961

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
TOTAL DISSOLVED PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
		(MG/L)			
- -78-79-80 JANUARY	27	0.013	0.0120	0.0220	0.964
- -78-79-80 FEBRUARY	75	0.019	0.0150	0.0200	0.963
- -78-79-80 MARCH	112	0.010	0.0080	0.0140	0.953
- -78-79-80 APRIL	72	0.009	0.0070	0.0180	0.956
- -78- -80 MAY	46	0.009	0.0060	0.0150	0.960
-77-78- -80 JUNE	70	0.008	0.0070	0.0100	0.959
-77-78-79-80 JULY	102	0.006	0.0060	0.0070	0.952
-77-78-79-80 AUGUST	81	0.006	0.0060	0.0070	0.955
- -78-79-80 SEPTEMBER	74	0.009	0.0070	0.0110	0.953
-77-78-79-80 OCTOBER	88	0.011	0.0100	0.0120	0.958
-77-78-79-80 NOVEMBER	103	0.014	0.0130	0.0150	0.952
-77-78-79-80 DECEMBER	66	0.011	0.0100	0.0120	0.950

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
TOTAL DISSOLVED PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
		(MG/L)			
1976					
1977 JUN JUL AUG OCT NOV DEC	162	0.007	0.0060	0.0090	0.951
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	402	0.008	0.0070	0.0080	0.954
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC	169	0.024	0.0220	0.0250	0.955
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	183	0.013	0.0120	0.0150	0.954

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
TOTAL DISSOLVED PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

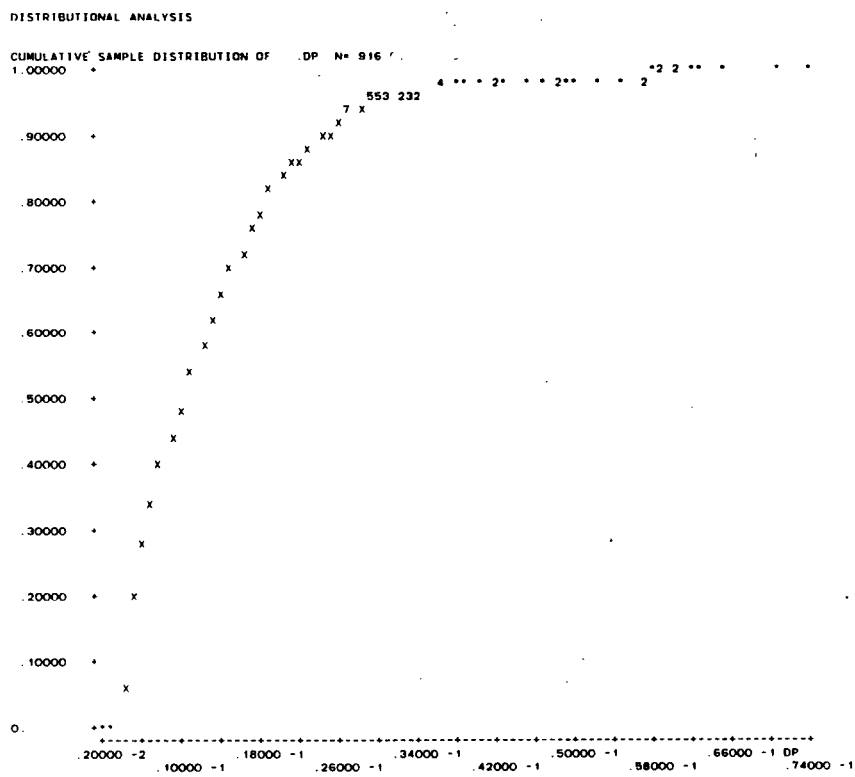
SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
		(MG/L)			
		APRIL TO SEPTEMBER			
1976					
1977	99	0.007	0.0060	0.0070	0.956
1978	185	0.006	0.0050	0.0060	0.953
1979	62	0.026	0.0250	0.0290	0.957
1980	99	0.015	0.0120	0.0170	0.956
1976-80	445	0.007	0.0070	0.0080	0.954
		OCTOBER TO MARCH			
1976-77					
1977-78	168	0.008	0.0070	0.0100	0.955
1978-79	178	0.019	0.0170	0.0210	0.957
1979-80	84	0.013	0.0120	0.0140	0.962
1980-81	41	0.012	0.0120	0.0140	0.956
1976-80	471	0.013	0.0120	0.0140	0.952
		APRIL TO MARCH			
1976-80	916	0.011	0.0100	0.0110	0.952

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
TOTAL DISSOLVED PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
		(MG/L)			
1976					
1977 JUN JUL AUG OCT NOV DEC					
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC					
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC					
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC					
	916	0.011	0.0100	0.0110	0.952

DISTRIBUTIONAL ANALYSIS

CUMULATIVE SAMPLE DISTRIBUTION OF .DP N= 916



PROB	QUANTILE	LEVEL	CONFIDENCE INTERVAL		SIZE
.1000	.50000 -2	.9500	.50000 -2	.50000 -2	.9528
.3000	.70000 -2	.9500	.60000 -2	.70000 -2	.9527
.5000	.11000 -1	.9500	.10000 -1	.11000 -1	.9525
.7000	.16000 -1	.9500	.15000 -1	.17000 -1	.9527
.9000	.25000 -1	.9500	.24000 -1	.26000 -1	.9528

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OKANAGAN RIVER NEAR OLIVER

Statistical Characteristics of Nutrient Loads

Period of Sampling June 1977 to December 1980.

TOTAL DISSOLVED PHOSPHORUS (P)

Arithmetic mean loads and their statistical characteristics determined for

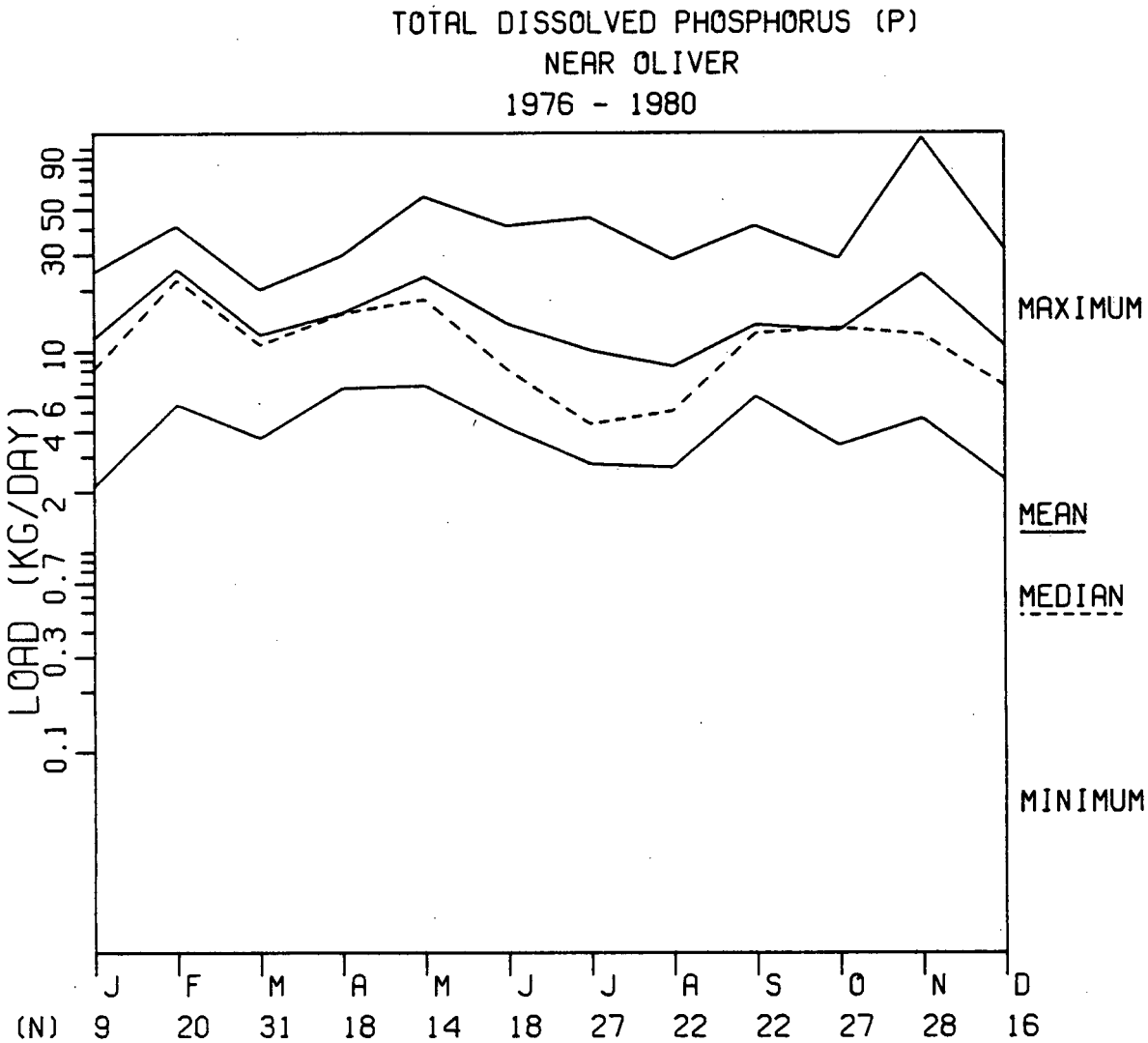
- Individual Months
- All Months
  - Graph of monthly load ranges
- Individual years
- Seasons
  - April to September
  - October to March
  - April to March
- All Years

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
TOTAL DISSOLVED PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
				(KG/DAY)			
1977 JUNE	7	4.1700	8.130	5.680	1.3390	0.5061	± 1.2384
JULY	11	2.7400	6.240	3.604	1.0234	0.3086	± 0.6876
AUGUST	8	2.6500	5.070	3.541	0.7566	0.2675	± 0.6326
OCTOBER	10	3.4200	12.900	6.174	3.1395	0.9928	± 2.2459
NOVEMBER	10	4.6500	12.000	6.417	2.1183	0.6699	± 1.5153
DECEMBER	5	2.2900	5.060	3.330	1.1271	0.5041	± 1.3995
1978 JANUARY	1	8.1700	8.170	8.170			
FEBRUARY	10	13.7000	41.600	29.560	10.2070	3.2277	± 7.3010
MARCH	18	6.9900	14.400	10.482	2.1091	0.4971	± 1.0488
APRIL	9	6.5600	29.600	13.179	7.0111	2.3370	± 5.3891
MAY	10	6.7800	58.000	23.520	16.9500	5.3601	± 12.1260
JUNE	7	4.3000	28.200	13.489	8.6280	3.2611	± 7.9795
JULY	9	4.0300	6.760	4.906	0.9756	0.3252	± 0.7500
AUGUST	6	3.8100	6.430	5.297	1.0420	0.4254	± 1.0934
SEPTEMBER	13	5.9800	25.500	11.038	5.6359	1.5631	± 3.4055
OCTOBER	8	14.2000	28.500	19.987	5.2297	1.8490	± 4.3725
NOVEMBER	11	20.4000	113.000	48.545	26.5630	8.0090	± 17.8455
DECEMBER	6	12.7000	31.500	19.550	6.5899	2.6903	± 6.9160
1979 JANUARY	4	14.7000	24.600	19.525	4.0442	2.0221	± 6.4350
FEBRUARY	7	21.4000	36.900	26.443	5.9338	2.2428	± 5.4880
MARCH	9	15.0000	20.200	17.856	1.8091	0.6030	± 1.3905
APRIL	6	17.5000	25.800	21.433	3.0566	1.2479	± 3.2075
JULY	2	43.6000	45.600	44.600	1.4142	1.0000	± 12.7060
AUGUST	4	9.0800	28.300	18.445	8.4128	4.2064	± 13.3868
SEPTEMBER	4	13.4000	41.700	23.700	12.7330	6.3665	± 20.2609
OCTOBER	5	7.1700	17.400	12.114	3.8224	1.7094	± 4.7461
NOVEMBER	3	6.5200	8.610	7.853	1.1582	0.6687	± 2.8769
DECEMBER	3	4.3200	6.850	5.293	1.3621	0.7864	± 3.3837
1980 JANUARY	4	2.1400	5.340	4.395	1.5255	0.7628	± 2.4275
FEBRUARY	3	5.4700	15.200	10.103	4.8815	2.8183	± 12.1265
MARCH	4	3.7100	6.740	5.462	1.3105	0.6553	± 2.0853
APRIL	3	6.5700	18.300	10.637	6.6408	3.8341	± 16.4965
MAY	4	18.0000	30.000	23.200	5.5546	2.7773	± 8.8390
JUNE	4	10.3000	41.400	27.625	13.7920	6.8960	± 21.9458
JULY	5	9.5900	31.800	19.858	9.0100	4.0294	± 11.1871
AUGUST	4	5.9100	18.400	12.777	5.1501	2.5750	± 8.1947
SEPTEMBER	5	7.3400	16.500	11.288	4.4801	2.0036	± 5.5629
OCTOBER	4	8.4900	20.000	14.172	4.7251	2.3625	± 7.5186
NOVEMBER	4	8.8300	17.700	13.507	3.6505	1.8252	± 5.8086
DECEMBER	2	6.7300	12.400	9.565	4.0093	2.8350	± 36.0220

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
TOTAL DISSOLVED PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
				(KG/DAY)			
- -78-79-80 JANUARY	9	2.1400	24.600	11.539	8.1137	2.7046	± 6.2369
- -78-79-80 FEBRUARY	20	5.4700	41.600	25.550	10.4600	2.3389	± 4.8955
- -78-79-80 MARCH	31	3.7100	20.200	11.975	4.5751	0.8217	± 1.6780
- -78-79-80 APRIL	18	6.5600	29.600	15.507	7.1077	1.6753	± 3.5345
- -78- -80 MAY	14	6.7800	58.000	23.429	14.3550	3.8365	± 8.2885
-77-78- -80 JUNE	18	4.1700	41.400	13.593	11.5150	2.7141	± 5.7259
-77-78-79-80 JULY	27	2.7400	45.600	10.084	12.2610	2.3596	± 4.8504
-77-78-79-80 AUGUST	22	2.6500	28.300	8.409	6.9974	1.4919	± 3.1027
- -78-79-80 SEPTEMBER	22	5.9800	41.700	13.397	8.3582	1.7820	± 3.7060
-77-78-79-80 OCTOBER	27	3.4200	28.500	12.552	6.9783	1.3430	± 2.7604
-77-78-79-80 NOVEMBER	28	4.6500	113.000	24.134	25.8770	4.8903	± 10.0340
-77-78-79-80 DECEMBER	16	2.2900	31.500	10.560	8.4596	2.1149	± 4.5079


TOTAL DISSOLVED PHOSPHORUS (P)
NEAR OLIVER
1976 - 1980
LOAD (KG/DAY)
0.1
0.3
0.7
2
4
6
10
30
50
90
MAXIMUM
MEAN
MEDIAN
MINIMUM
J F M A M J J A S O N D
(N) 9 20 31 18 14 18 27 22 22 27 28 16

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
TOTAL DISSOLVED PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
				(KG/DAY)			
1976							
1977 JUN JUL AUG OCT NOV DEC	51	2.2900	12.900	4.908	2.2293	0.3122	± 0.6270
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	108	3.8100	113.000	18.253	16.4200	1.5800	± 3.1320
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC	47	4.3200	45.600	19.368	9.4436	1.3775	± 2.7730
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	46	2.1400	41.400	13.949	8.8124	1.2993	± 2.6170

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
TOTAL DISSOLVED PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
				(KG/DAY)			
			APRIL TO SEPTEMBER				
1976							
1977	26	2.6500	8.130	4.144	1.3838	0.2714	± 0.5589
1978	54	3.8100	58.000	12.364	10.5530	1.4361	± 2.8803
1979	16	9.0800	45.600	24.149	10.8290	2.7072	± 5.7705
1980	25	5.9100	41.400	17.682	9.6316	1.9263	± 3.9760
1976-80	121	2.6500	58.000	13.255	11.0020	1.0002	± 1.9805
			OCTOBER TO MARCH				
1976-77							
1977-78	54	2.2900	41.600	11.759	10.0100	1.3622	± 2.7324
1978-79	45	12.7000	113.000	27.447	18.1870	2.7112	± 5.4640
1979-80	22	2.1400	17.400	7.716	3.9069	0.8330	± 1.7322
1980-81	10	6.7300	20.000	12.985	4.1253	1.3045	± 2.9510
1976-80	131	2.1400	113.000	16.563	14.8750	1.2996	± 2.5710
			APRIL TO MARCH				
1976-80	252	2.1400	113.000	14.974	13.2370	0.8339	± 1.6425

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
TOTAL DISSOLVED PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
				(KG/DAY)			
1976							
1977 JUN JUL AUG OCT NOV DEC							
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC							
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC							
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC							
	252	2.1400	113.000	14.974	13.2370	0.8339	± 1.6425

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OKANAGAN RIVER NEAR OLIVER

Statistical Characteristics of Nutrient Loads

Period of Sampling June 1977 to December 1980.

TOTAL DISSOLVED PHOSPHORUS (P)

Median loads and their statistical characteristics determined for

- Individual Months
- All Months
- Individual years
- Seasons
  - April to September
  - October to March
  - April to March
- All Years

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
TOTAL DISSOLVED PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
		(KG/DAY)			
1977 JUNE	7	5.300	4.1700	8.1300	0.984
JULY	11	3.380	2.8200	4.3500	0.961
AUGUST	8	3.330	2.9700	5.0700	0.961
OCTOBER	10	5.100	3.7500	10.6000	0.979
NOVEMBER	10	5.790	5.0400	7.2400	0.979
DECEMBER	5	2.960		2.2900	0.969
1978 JANUARY	1	8.170			
FEBRUARY	10	33.100	13.8000	41.0000	0.979
MARCH	18	10.200	9.1400	12.3000	0.969
APRIL	9	10.200	8.4500	16.8000	0.961
MAY	10	15.400	7.4200	43.7000	0.979
JUNE	7	10.000	4.3000	28.2000	0.984
JULY	9	4.430	4.0500	5.8400	0.961
AUGUST	6	5.080	3.8100	6.4300	0.969
SEPTEMBER	13	9.160	6.3800	14.7000	0.978
OCTOBER	8	17.300	14.3000	28.5000	0.961
NOVEMBER	11	40.700	32.6000	82.9000	0.961
DECEMBER	6	17.900	12.7000	31.5000	0.969
1979 JANUARY	4	19.400			
FEBRUARY	7	22.600	21.4000	36.9000	0.984
MARCH	9	18.500	16.0000	19.6000	0.961
APRIL	6	20.400	17.5000	25.8000	0.969
JULY	2	43.600			
AUGUST	4	14.500			
SEPTEMBER	4	16.200			
OCTOBER	5	12.900		7.1700	0.969
NOVEMBER	3	8.430			
DECEMBER	3	4.710			
1980 JANUARY	4	4.780			
FEBRUARY	3	9.640			
MARCH	4	5.290			
APRIL	3	7.040			
MAY	4	19.400			
JUNE	4	23.300			
JULY	5	16.000		9.5900	0.969
AUGUST	4	13.300			
SEPTEMBER	5	9.440		7.3400	0.969
OCTOBER	4	13.500			
NOVEMBER	4	13.300			
DECEMBER	2	6.730			

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
TOTAL DISSOLVED PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN (KG/DAY)	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
- -78-79-80 JANUARY	9	8.170	4.7800	19.4000	0.961
- -78-79-80 FEBRUARY	20	22.600	21.4000	33.3000	0.959
- -78-79-80 MARCH	31	10.700	9.4300	14.4000	0.971
- -78-79-80 APRIL	18	15.300	9.0800	20.4000	0.969
- -78- -80 MAY	14	18.000	15.1000	34.6000	0.965
-77-78- -80 JUNE	18	8.130	5.3000	18.6000	0.969
-77-78-79-80 JULY	27	4.350	4.0300	6.7600	0.964
-77-78-79-80 AUGUST	22	5.080	3.8100	13.3000	0.965
- -78-79-80 SEPTEMBER	22	12.300	7.4600	15.7000	0.965
-77-78-79-80 OCTOBER	27	12.900	7.1700	16.5000	0.964
-77-78-79-80 NOVEMBER	28	12.000	6.8100	32.6000	0.964
-77-78-79-80 DECEMBER	16	6.730	4.3200	17.9000	0.951

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
TOTAL DISSOLVED PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
		(KG/DAY)			
1976					
1977 JUN JUL AUG OCT NOV DEC	51	4.460	3.7500	5.1500	0.951
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	108	12.700	10.6000	15.1000	0.957
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC	47	19.100	16.2000	20.7000	0.960
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	46	13.300	8.8300	15.7000	0.960

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
TOTAL DISSOLVED PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
		(KG/DAY)			
		APRIL TO SEPTEMBER			
1976					
1977	26	3.510	3.3300	4.4600	0.971
1978	54	8.450	6.5600	12.3000	0.960
1979	16	20.700	17.5000	28.3000	0.951
1980	25	16.000	10.3000	19.4000	0.957
1976-80	121	9.160	6.7600	13.2000	0.955
		OCTOBER TO MARCH			
1976-77					
1977-78	54	8.790	6.5200	10.6000	0.960
1978-79	45	21.400	19.1000	25.0000	0.964
1979-80	22	6.520	5.3200	9.6400	0.965
1980-81	10	13.300	8.4900	17.7000	0.979
1976-80	131	12.900	10.6000	14.7000	0.955
		APRIL TO MARCH			
1976-80	252	11.300	9.4400	13.5000	0.956

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
TOTAL DISSOLVED PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
		(KG/DAY)			
1976					
1977 JUN JUL AUG OCT NOV DEC					
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC					
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC					
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC					
	252	11.300	9.4400	13.5000	0.956

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OKANAGAN RIVER NEAR OLIVER

Statistical Characteristics of Nutrient Concentrations

Period of Sampling June 1977 to December 1980.

RATIO OF TOTAL DISSOLVED PHOSPHORUS (P) TO TOTAL PHOSPHORUS (P)

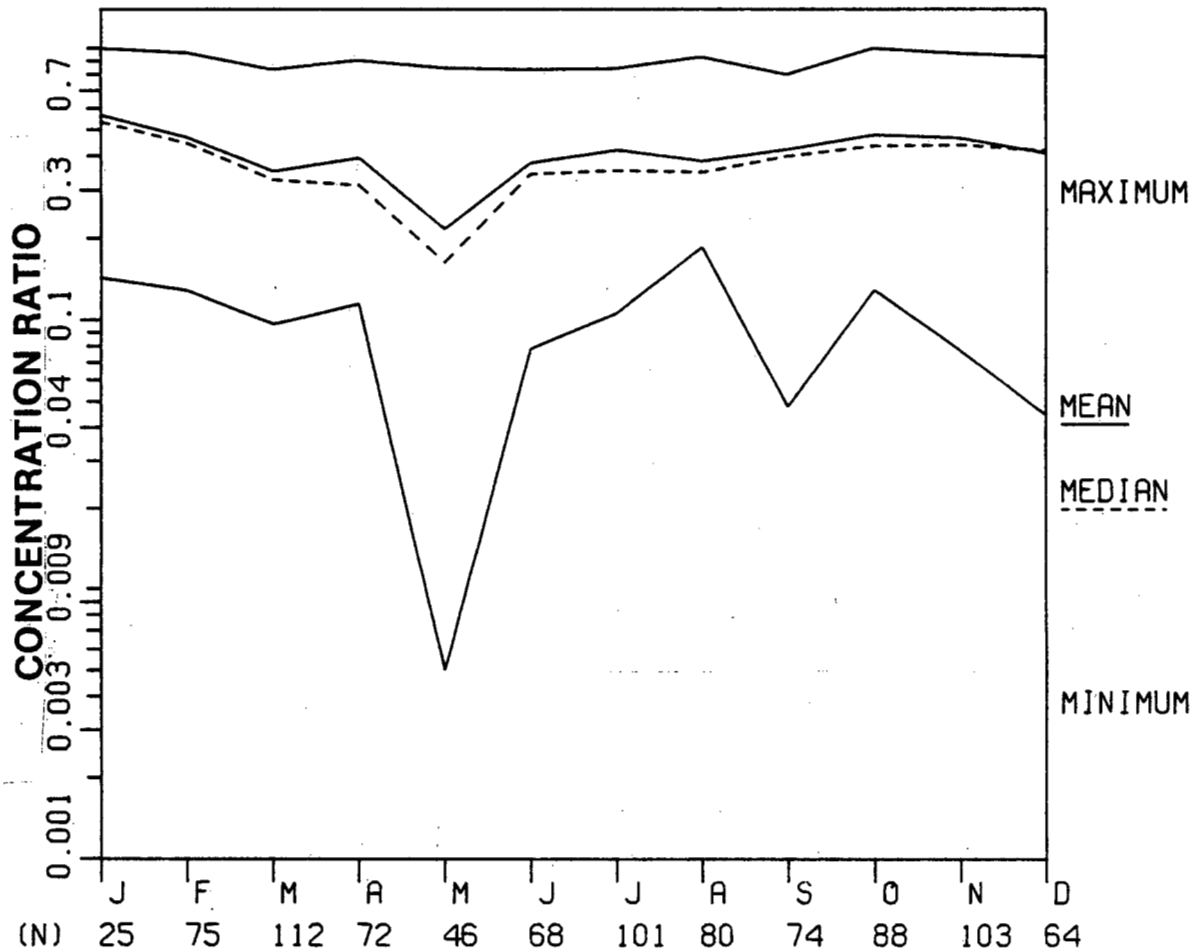
Arithmetic mean concentrations and their statistical characteristics determined for:

- Individual Months
- All Months
  - Graph of monthly concentration ranges
- Individual years
- Seasons
  - April to September
  - October to March
  - April to March
- All Years
  - Histogram of concentration distribution

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF TOTAL DISSOLVED PHOSPHORUS (P) / TOTAL PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
1977 JUNE	28	0.1852	0.778	0.393	0.1324	0.0250	± 0.0513
JULY	42	0.2083	0.667	0.401	0.1441	0.0222	± 0.0449
AUGUST	28	0.1852	0.556	0.300	0.1043	0.0197	± 0.0405
OCTOBER	26	0.1667	0.615	0.353	0.1209	0.0237	± 0.0488
NOVEMBER	27	0.2800	0.571	0.407	0.0827	0.0159	± 0.0327
DECEMBER	10	0.2273	0.571	0.377	0.1023	0.0324	± 0.0732
1978 JANUARY	1	0.3809	0.381	0.381			
FEBRUARY	44	0.1282	0.538	0.341	0.1290	0.0194	± 0.0392
MARCH	60	0.0964	0.478	0.222	0.0811	0.0105	± 0.0209
APRIL	36	0.1154	0.905	0.268	0.1344	0.0224	± 0.0455
MAY	30	0.0050	0.231	0.091	0.0775	0.0141	± 0.0289
JUNE	25	0.0784	0.467	0.252	0.0823	0.0165	± 0.0340
JULY	32	0.1064	0.400	0.294	0.0649	0.0115	± 0.0234
AUGUST	24	0.2174	0.545	0.360	0.1034	0.0211	± 0.0437
SEPTEMBER	38	0.0478	0.800	0.361	0.1770	0.0287	± 0.0582
OCTOBER	32	0.1290	1.000	0.458	0.2004	0.0354	± 0.0722
NOVEMBER	48	0.0775	0.963	0.404	0.2714	0.0392	± 0.0788
DECEMBER	30	0.0444	0.931	0.348	0.2230	0.0407	± 0.0833
1979 JANUARY	9	0.6296	1.000	0.851	0.1196	0.0399	± 0.0919
FEBRUARY	19	0.3957	0.964	0.719	0.1756	0.0403	± 0.0847
MARCH	36	0.2553	0.840	0.522	0.0977	0.0163	± 0.0331
APRIL	24	0.3860	0.810	0.601	0.1017	0.0208	± 0.0429
JULY	7	0.6116	0.811	0.695	0.0672	0.0254	± 0.0622
AUGUST	14	0.2000	0.937	0.465	0.2257	0.0603	± 0.1303
SEPTEMBER	16	0.3529	0.778	0.574	0.1508	0.0377	± 0.0804
OCTOBER	17	0.3684	1.000	0.619	0.1911	0.0463	± 0.0982
NOVEMBER	12	0.5909	0.857	0.721	0.0879	0.0254	± 0.0559
DECEMBER	12	0.2963	0.640	0.499	0.1052	0.0304	± 0.0669
1980 JANUARY	15	0.1429	0.650	0.411	0.1772	0.0458	± 0.0981
FEBRUARY	12	0.3571	0.768	0.541	0.1438	0.0415	± 0.0913
MARCH	16	0.2500	0.727	0.451	0.1156	0.0289	± 0.0616
APRIL	12	0.1509	0.586	0.358	0.1464	0.0422	± 0.0930
MAY	16	0.2895	0.850	0.452	0.1386	0.0347	± 0.0739
JUNE	15	0.2500	0.840	0.560	0.1317	0.0340	± 0.0729
JULY	20	0.2917	0.846	0.565	0.1748	0.0391	± 0.0818
AUGUST	14	0.3333	0.714	0.513	0.1158	0.0309	± 0.0669
SEPTEMBER	20	0.1622	0.789	0.418	0.1406	0.0314	± 0.0658
OCTOBER	13	0.4000	0.923	0.596	0.1629	0.0452	± 0.0984
NOVEMBER	16	0.2778	0.810	0.558	0.1443	0.0361	± 0.0769
DECEMBER	12	0.2391	0.600	0.496	0.1209	0.0349	± 0.0768

RATIO OF TOTAL DISSOLVED PHOSPHORUS (P) / TOTAL PHOSPHORUS (P)
NEAR OLIVER
1976 - 1980



STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF TOTAL DISSOLVED PHOSPHORUS (P) / TOTAL PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
- -78-79-80 JANUARY	25	0.1429	1.000	0.568	0.2646	0.0529	± 0.1092
- -78-79-80 FEBRUARY	75	0.1282	0.964	0.469	0.2164	0.0250	± 0.0498
- -78-79-80 MARCH	112	0.0964	0.840	0.351	0.1676	0.0158	± 0.0314
- -78-79-80 APRIL	72	0.1154	0.905	0.394	0.1956	0.0231	± 0.0460
- -78- -80 MAY	46	0.0050	0.850	0.216	0.2015	0.0297	± 0.0598
-77-78- -80 JUNE	68	0.0784	0.840	0.378	0.1631	0.0198	± 0.0395
-77-78-79-80 JULY	101	0.1064	0.846	0.420	0.1749	0.0174	± 0.0345
-77-78-79-80 AUGUST	80	0.1852	0.937	0.384	0.1557	0.0174	± 0.0346
- -78-79-80 SEPTEMBER	74	0.0478	0.800	0.423	0.1808	0.0210	± 0.0419
-77-78-79-80 OCTOBER	88	0.1290	1.000	0.478	0.1992	0.0212	± 0.0422
-77-78-79-80 NOVEMBER	103	0.0775	0.963	0.465	0.2264	0.0223	± 0.0442
-77-78-79-80 DECEMBER	64	0.0444	0.931	0.408	0.1838	0.0230	± 0.0459

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF TOTAL DISSOLVED PHOSPHORUS (P) / TOTAL PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
1976							
1977 JUN JUL AUG OCT NOV DEC	161	0.1667	0.778	0.373	0.1248	0.0098	± 0.0194
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	400	0.0050	1.000	0.309	0.1818	0.0091	± 0.0179
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC	166	0.2000	1.000	0.604	0.1697	0.0132	± 0.0260
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	181	0.1429	0.923	0.493	0.1573	0.0117	± 0.0231

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF TOTAL DISSOLVED PHOSPHORUS (P) / TOTAL PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
			APRIL TO SEPTEMBER				
1976							
1977	98	0.1852	0.778	0.369	0.1366	0.0138	± 0.0274
1978	185	0.0050	0.905	0.273	0.1476	0.0108	± 0.0214
1979	61	0.2000	0.937	0.573	0.1609	0.0206	± 0.0412
1980	97	0.1509	0.850	0.482	0.1588	0.0161	± 0.0320
1976-80	441	0.0050	0.937	0.382	0.1860	0.0089	± 0.0174
			OCTOBER TO MARCH				
1976-77							
1977-78	168	0.0964	0.615	0.313	0.1245	0.0096	± 0.0190
1978-79	174	0.0444	1.000	0.486	0.2446	0.0185	± 0.0366
1979-80	84	0.1429	1.000	0.536	0.1754	0.0191	± 0.0381
1980-81	41	0.2391	0.923	0.552	0.1463	0.0228	± 0.0462
1976-80	467	0.0444	1.000	0.439	0.2107	0.0098	± 0.0192
			APRIL TO MARCH				
1976-80	908	0.0050	1.000	0.411	0.2010	0.0067	± 0.0131

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF TOTAL DISSOLVED PHOSPHORUS (P) / TOTAL PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
1976							
1977 JUN JUL AUG OCT NOV DEC							
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC							
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC							
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC							
	908	0.0050	1.000	0.411	0.2010	0.0067	± 0.0131

TOTAL DISSOLVED PHOSPHORUS (P) / TOTAL PHOSPHORUS (P)

n = 908

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OKANAGAN RIVER NEAR OLIVER

Statistical Characteristics of Nutrient Concentrations

Period of Sampling June 1977 to December 1980.

RATIO OF TOTAL DISSOLVED PHOSPHORUS (P) TO TOTAL PHOSPHORUS (P)

Median concentrations and their statistical characteristics determined for

- Individual Months
- All Months
- Individual years
- Seasons
  - April to September
  - October to March
  - April to March
- All Years
  - Cumulative distribution of concentration data

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF TOTAL DISSOLVED PHOSPHORUS (P) / TOTAL PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
1977 JUNE	28	0.360	0.3214	0.4167	0.964
JULY	42	0.353	0.3158	0.4444	0.956
AUGUST	28	0.273	0.2273	0.3333	0.964
OCTOBER	26	0.353	0.2778	0.3889	0.971
NOVEMBER	27	0.400	0.3636	0.4762	0.964
DECEMBER	10	0.353	0.2632	0.4783	0.979
1978 JANUARY	1	0.381			
FEBRUARY	44	0.354	0.2979	0.4167	0.951
MARCH	60	0.200	0.1852	0.2273	0.960
APRIL	36	0.238	0.2273	0.2500	0.953
MAY	30	0.067	0.0196	0.1395	0.957
JUNE	25	0.250	0.2188	0.2857	0.957
JULY	32	0.294	0.2667	0.3333	0.965
AUGUST	24	0.333	0.2778	0.4444	0.957
SEPTEMBER	38	0.333	0.3000	0.4167	0.966
OCTOBER	32	0.400	0.3784	0.5625	0.965
NOVEMBER	48	0.317	0.2449	0.5000	0.956
DECEMBER	30	0.308	0.2034	0.4286	0.957
1979 JANUARY	9	0.828	0.7500	1.0000	0.961
FEBRUARY	19	0.723	0.6250	0.8710	0.959
MARCH	36	0.509	0.4884	0.5349	0.953
APRIL	24	0.619	0.5652	0.6512	0.957
JULY	7	0.689	0.6116	0.8108	0.984
AUGUST	14	0.393	0.3137	0.6087	0.965
SEPTEMBER	16	0.554	0.4194	0.7250	0.951
OCTOBER	17	0.579	0.4516	0.7391	0.951
NOVEMBER	12	0.708	0.6364	0.8261	0.961
DECEMBER	12	0.458	0.4400	0.6000	0.961
1980 JANUARY	15	0.481	0.1786	0.5357	0.965
FEBRUARY	12	0.583	0.3939	0.6342	0.961
MARCH	16	0.429	0.3889	0.5000	0.951
APRIL	12	0.279	0.2571	0.5135	0.961
MAY	16	0.462	0.3673	0.5135	0.951
JUNE	15	0.568	0.4865	0.5938	0.965
JULY	20	0.600	0.4242	0.6786	0.959
AUGUST	14	0.500	0.4074	0.6250	0.965
SEPTEMBER	20	0.412	0.3158	0.4839	0.959
OCTOBER	13	0.538	0.4800	0.7273	0.978
NOVEMBER	16	0.556	0.5000	0.6539	0.951
DECEMBER	12	0.552	0.4000	0.5938	0.961

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF TOTAL DISSOLVED PHOSPHORUS (P) / TOTAL PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
- -78-79-80 JANUARY	25	0.536	0.4546	0.7500	0.957
- -78-79-80 FEBRUARY	75	0.444	0.3846	0.5000	0.963
- -78-79-80 MARCH	112	0.327	0.2500	0.4194	0.953
- -78-79-80 APRIL	72	0.313	0.2500	0.4630	0.956
- -78- -80 MAY	46	0.163	0.0897	0.2895	0.960
-77-78- -80 JUNE	68	0.343	0.2917	0.4000	0.961
-77-78-79-80 JULY	101	0.353	0.3182	0.4000	0.954
-77-78-79-80 AUGUST	80	0.348	0.3137	0.4000	0.955
- -78-79-80 SEPTEMBER	74	0.400	0.3529	0.4444	0.953
-77-78-79-80 OCTOBER	88	0.438	0.3939	0.4839	0.958
-77-78-79-80 NOVEMBER	103	0.440	0.3793	0.5091	0.952
-77-78-79-80 DECEMBER	64	0.419	0.3809	0.4667	0.954

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF TOTAL DISSOLVED PHOSPHORUS (P) / TOTAL PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
1976					
1977 JUN JUL AUG OCT NOV DEC	161	0.353	0.3333	0.3704	0.951
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	400	0.273	0.2500	0.2941	0.954
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC	166	0.591	0.5714	0.6250	0.956
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	181	0.500	0.4667	0.5135	0.955

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF TOTAL DISSOLVED PHOSPHORUS (P) / TOTAL PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

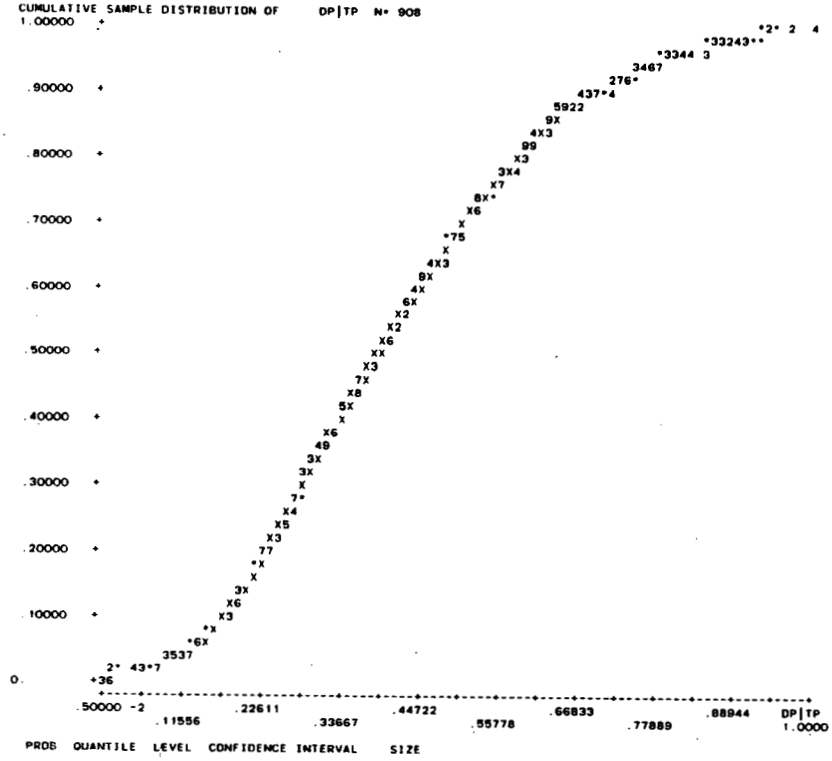
SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
		APRIL TO SEPTEMBER			
1976					
1977	98	0.333	0.3158	0.3600	0.956
1978	185	0.263	0.2500	0.2857	0.953
1979	61	0.604	0.5500	0.6342	0.960
1980	97	0.484	0.4286	0.5135	0.958
1976-80	441	0.346	0.3214	0.3667	0.955
		OCTOBER TO MARCH			
1976-77					
1977-78	168	0.304	0.2778	0.3478	0.955
1978-79	174	0.474	0.4348	0.5122	0.951
1979-80	84	0.500	0.4583	0.5909	0.962
1980-81	41	0.556	0.5000	0.5938	0.956
1976-80	467	0.429	0.4000	0.4516	0.953
		APRIL TO MARCH			
1976-80	908	0.389	0.3684	0.4000	0.953

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF TOTAL DISSOLVED PHOSPHORUS (P) / TOTAL PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
1976					
1977 JUN JUL AUG OCT NOV DEC					
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC					
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC					
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC					
	908	0.389	0.3684	0.4000	0.953

DISTRIBUTIONAL ANALYSIS

CUMULATIVE SAMPLE DISTRIBUTION OF DP|TP N= 908



PROB	QUANTILE	LEVEL	CONFIDENCE INTERVAL		SIZE
.1000	.17241	.9500	.16000	.18519	.9536
.3000	.28000	.9500	.27027	.29630	.9535
.5000	.38889	.9500	.36842	.40000	.9535
.7000	.50000	.9500	.48571	.52632	.9535
.9000	.69231	.9500	.64706	.73077	.9536

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OKANAGAN RIVER NEAR OLIVER

Statistical Characteristics of Nutrient Loads

Period of Sampling June 1977 to December 1980.

RATIO OF TOTAL DISSOLVED PHOSPHORUS (P) TO TOTAL PHOSPHORUS (P)

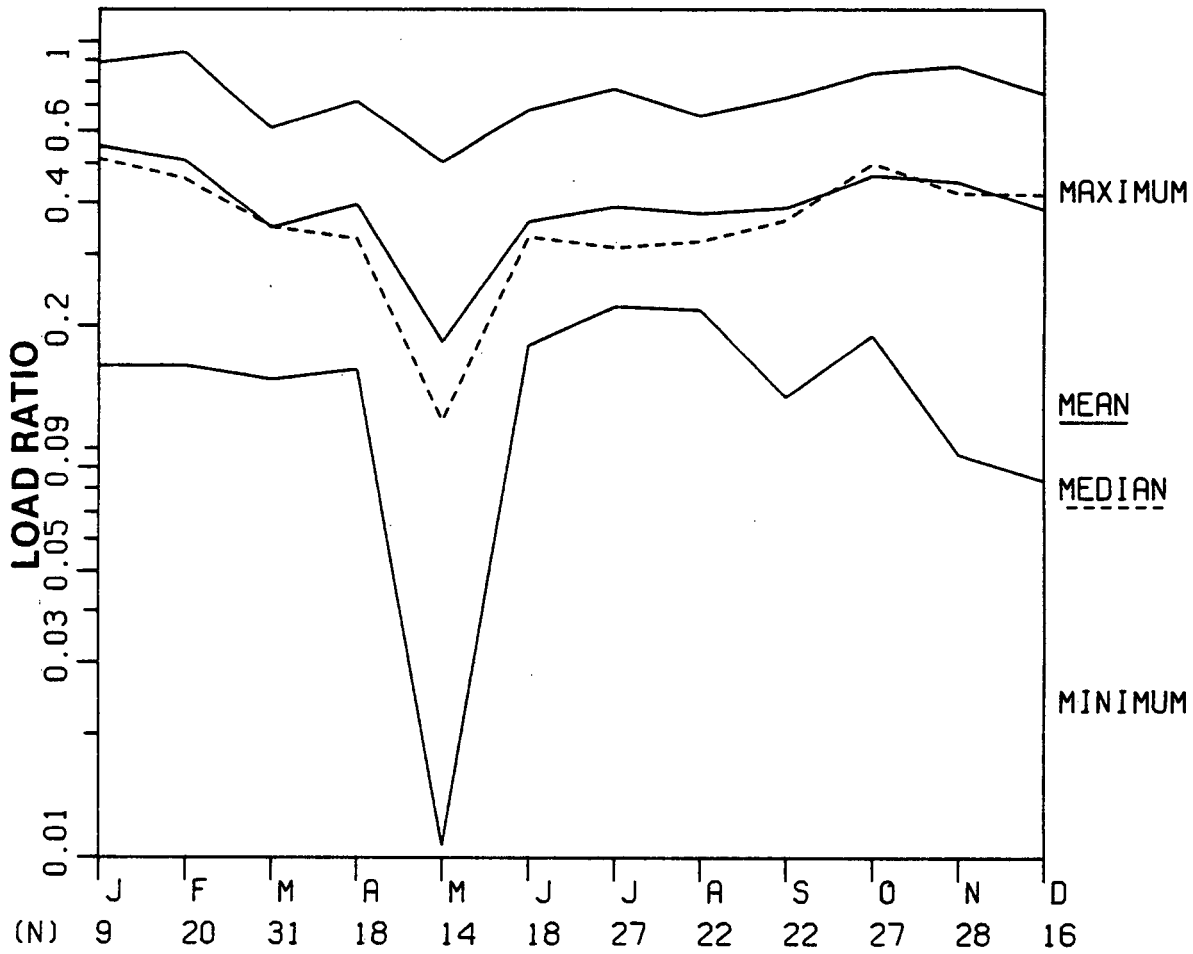
Arithmetic mean loads and their statistical characteristics determined for

- Individual Months
- All Months
  - Graph of monthly load ranges
- Individual years
- Seasons
  - April to September
  - October to March
  - April to March
- All Years

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF TOTAL DISSOLVED PHOSPHORUS (P) / TOTAL PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
1977 JUNE	7	0.3159	0.650	0.389	0.1176	0.0445	± 0.1088
JULY	11	0.2350	0.594	0.349	0.1090	0.0328	± 0.0732
AUGUST	8	0.2190	0.400	0.289	0.0562	0.0199	± 0.0470
OCTOBER	10	0.1901	0.527	0.341	0.1040	0.0329	± 0.0744
NOVEMBER	10	0.3234	0.553	0.410	0.0710	0.0225	± 0.0508
DECEMBER	5	0.2629	0.477	0.360	0.0810	0.0362	± 0.1006
1978 JANUARY	1	0.3818	0.382	0.382			
FEBRUARY	10	0.1601	0.475	0.318	0.1133	0.0358	± 0.0811
MARCH	18	0.1484	0.413	0.245	0.0872	0.0206	± 0.0434
APRIL	9	0.1570	0.411	0.275	0.0758	0.0253	± 0.0583
MAY	10	0.0107	0.228	0.080	0.0751	0.0237	± 0.0537
JUNE	7	0.1795	0.303	0.235	0.0554	0.0210	± 0.0513
JULY	9	0.2237	0.316	0.280	0.0325	0.0108	± 0.0250
AUGUST	6	0.2748	0.499	0.357	0.0976	0.0398	± 0.1024
SEPTEMBER	13	0.1337	0.731	0.321	0.1604	0.0445	± 0.0969
OCTOBER	8	0.2526	0.556	0.429	0.1213	0.0429	± 0.1014
NOVEMBER	11	0.0967	0.870	0.374	0.2577	0.0777	± 0.1731
DECEMBER	6	0.0833	0.748	0.338	0.2666	0.1088	± 0.2797
1979 JANUARY	4	0.5140	0.888	0.746	0.1615	0.0807	± 0.2570
FEBRUARY	7	0.4605	0.945	0.765	0.1686	0.0637	± 0.1559
MARCH	9	0.4464	0.612	0.518	0.0573	0.0191	± 0.0441
APRIL	6	0.4628	0.715	0.602	0.0970	0.0396	± 0.1018
JULY	2	0.6498	0.768	0.709	0.0834	0.0590	± 0.7491
AUGUST	4	0.3231	0.515	0.422	0.0833	0.0416	± 0.1325
SEPTEMBER	4	0.4573	0.700	0.575	0.1106	0.0553	± 0.1760
OCTOBER	5	0.5128	0.837	0.657	0.1329	0.0594	± 0.1650
NOVEMBER	3	0.6330	0.788	0.719	0.0788	0.0455	± 0.1958
DECEMBER	3	0.4194	0.581	0.494	0.0811	0.0468	± 0.2015
1980 JANUARY	4	0.1597	0.548	0.399	0.1743	0.0871	± 0.2773
FEBRUARY	3	0.3907	0.676	0.544	0.1438	0.0830	± 0.3571
MARCH	4	0.3819	0.485	0.442	0.0488	0.0244	± 0.0777
APRIL	3	0.2068	0.525	0.354	0.1608	0.0928	± 0.3994
MAY	4	0.3211	0.504	0.441	0.0845	0.0422	± 0.1344
JUNE	4	0.3829	0.679	0.533	0.1222	0.0611	± 0.1944
JULY	5	0.4918	0.669	0.560	0.0770	0.0344	± 0.0956
AUGUST	4	0.4020	0.655	0.539	0.1126	0.0563	± 0.1791
SEPTEMBER	5	0.3274	0.565	0.416	0.0903	0.0404	± 0.1121
OCTOBER	4	0.4994	0.803	0.621	0.1460	0.0730	± 0.2323
NOVEMBER	4	0.4415	0.639	0.557	0.0833	0.0416	± 0.1325
DECEMBER	2	0.4232	0.426	0.425	0.0019	0.0014	± 0.0174

RATIO OF TOTAL DISSOLVED PHOSPHORUS (P) / TOTAL PHOSPHORUS (P)
NEAR OLIVER
1976 - 1980



STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF TOTAL DISSOLVED PHOSPHORUS (P) / TOTAL PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
- -78-79-80 JANUARY	9	0.1597	0.888	0.552	0.2352	0.0784	± 0.1808
- -78-79-80 FEBRUARY	20	0.1601	0.945	0.508	0.2465	0.0551	± 0.1154
- -78-79-80 MARCH	31	0.1484	0.612	0.350	0.1472	0.0264	± 0.0540
- -78-79-80 APRIL	18	0.1570	0.715	0.397	0.1776	0.0419	± 0.0883
- -78- -80 MAY	14	0.0107	0.504	0.183	0.1848	0.0494	± 0.1067
-77-78- -80 JUNE	18	0.1795	0.679	0.361	0.1497	0.0353	± 0.0744
-77-78-79-80 JULY	27	0.2237	0.768	0.392	0.1559	0.0300	± 0.0617
-77-78-79-80 AUGUST	22	0.2190	0.655	0.377	0.1208	0.0258	± 0.0536
- -78-79-80 SEPTEMBER	22	0.1337	0.731	0.389	0.1662	0.0354	± 0.0737
-77-78-79-80 OCTOBER	27	0.1901	0.837	0.467	0.1733	0.0333	± 0.0685
-77-78-79-80 NOVEMBER	28	0.0967	0.870	0.450	0.2004	0.0379	± 0.0777
-77-78-79-80 DECEMBER	16	0.0833	0.748	0.385	0.1732	0.0433	± 0.0923

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF TOTAL DISSOLVED PHOSPHORUS (P) / TOTAL PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
1976							
1977 JUN JUL AUG OCT NOV DEC	51	0.1901	0.650	0.357	0.0968	0.0136	± 0.0272
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	108	0.0107	0.870	0.290	0.1574	0.0151	± 0.0300
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC	47	0.3231	0.945	0.616	0.1512	0.0221	± 0.0444
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	46	0.1597	0.803	0.490	0.1262	0.0186	± 0.0375

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF TOTAL DISSOLVED PHOSPHORUS (P) / TOTAL PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
			APRIL TO SEPTEMBER				
1976							
1977	26	0.2190	0.650	0.341	0.1025	0.0201	± 0.0414
1978	54	0.0107	0.731	0.255	0.1316	0.0179	± 0.0359
1979	16	0.3231	0.768	0.564	0.1272	0.0318	± 0.0678
1980	25	0.2068	0.679	0.479	0.1197	0.0239	± 0.0494
1976-80	121	0.0107	0.768	0.361	0.1682	0.0153	± 0.0303
			OCTOBER TO MARCH				
1976-77							
1977-78	54	0.1484	0.553	0.320	0.1076	0.0146	± 0.0294
1978-79	45	0.0833	0.945	0.502	0.2386	0.0356	± 0.0717
1979-80	22	0.1597	0.837	0.542	0.1580	0.0337	± 0.0700
1980-81	10	0.4232	0.803	0.556	0.1230	0.0389	± 0.0880
1976-80	131	0.0833	0.945	0.438	0.1979	0.0173	± 0.0342
			APRIL TO MARCH				
1976-80	252	0.0107	0.945	0.401	0.1879	0.0118	± 0.0233

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF TOTAL DISSOLVED PHOSPHORUS (P) / TOTAL PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
1976							
1977 JUN JUL AUG OCT NOV DEC							
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC							
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC							
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC							
	252	0.0107	0.945	0.401	0.1879	0.0118	± 0.0233

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OKANAGAN RIVER NEAR OLIVER

Statistical Characteristics of Nutrient Loads

Period of Sampling June 1977 to December 1980.

RATIO OF TOTAL DISSOLVED PHOSPHORUS (P) TO TOTAL PHOSPHORUS (P)

Median loads and their statistical characteristics determined for

- Individual Months
- All Months
- Individual years
- Seasons
  - April to September
  - October to March
  - April to March
- All Years

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF TOTAL DISSOLVED PHOSPHORUS (P) / TOTAL PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD		NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
1977	JUNE	7	0.340	0.3159	0.6504	0.984
	JULY	11	0.305	0.2779	0.4910	0.961
	AUGUST	8	0.272	0.2357	0.3998	0.961
	OCTOBER	10	0.308	0.2358	0.4760	0.979
	NOVEMBER	10	0.375	0.3488	0.4990	0.979
	DECEMBER	5	0.370		0.2629	0.969
1978	JANUARY	1	0.382			
	FEBRUARY	10	0.307	0.1619	0.4591	0.979
	MARCH	18	0.207	0.1640	0.3410	0.969
	APRIL	9	0.253	0.2048	0.3395	0.961
	MAY	10	0.035	0.0107	0.1521	0.979
	JUNE	7	0.210	0.1795	0.3028	0.984
	JULY	9	0.296	0.2443	0.3110	0.961
	AUGUST	6	0.293	0.2748	0.4989	0.969
	SEPTEMBER	13	0.314	0.1616	0.4398	0.978
	OCTOBER	8	0.379	0.2958	0.5561	0.961
	NOVEMBER	11	0.300	0.1764	0.7725	0.961
	DECEMBER	6	0.148	0.0833	0.7482	0.969
1979	JANUARY	4	0.789			
	FEBRUARY	7	0.849	0.4605	0.9452	0.984
	MARCH	9	0.517	0.4520	0.5719	0.961
	APRIL	6	0.633	0.4628	0.7147	0.969
	JULY	2	0.650			
	AUGUST	4	0.392			
	SEPTEMBER	4	0.511			
	OCTOBER	5	0.630		0.5128	0.969
	NOVEMBER	3	0.736			
	DECEMBER	3	0.483			
1980	JANUARY	4	0.384			
	FEBRUARY	3	0.567			
	MARCH	4	0.423			
	APRIL	3	0.328			
	MAY	4	0.441			
	JUNE	4	0.512			
	JULY	5	0.520		0.4918	0.969
	AUGUST	4	0.496			
	SEPTEMBER	5	0.402		0.3274	0.969
	OCTOBER	4	0.507			
	NOVEMBER	4	0.564			
	DECEMBER	2	0.423			

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF TOTAL DISSOLVED PHOSPHORUS (P) / TOTAL PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
- -78-79-80 JANUARY	9	0.514	0.3818	0.7951	0.961
- -78-79-80 FEBRUARY	20	0.459	0.3362	0.6756	0.959
- -78-79-80 MARCH	31	0.351	0.2127	0.4520	0.971
- -78-79-80 APRIL	18	0.328	0.2493	0.5254	0.969
- -78- -80 MAY	14	0.117	0.0193	0.4412	0.965
-77-78- -80 JUNE	18	0.331	0.2801	0.3904	0.969
-77-78-79-80 JULY	27	0.311	0.2956	0.4918	0.964
-77-78-79-80 AUGUST	22	0.323	0.2934	0.4618	0.965
- -78-79-80 SEPTEMBER	22	0.364	0.3136	0.4573	0.965
-77-78-79-80 OCTOBER	27	0.499	0.3603	0.5388	0.964
-77-78-79-80 NOVEMBER	28	0.423	0.3652	0.5532	0.964
-77-78-79-80 DECEMBER	16	0.419	0.3090	0.4831	0.951

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF TOTAL DISSOLVED PHOSPHORUS (P) / TOTAL PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
1976					
1977 JUN JUL AUG OCT NOV DEC	51	0.344	0.3090	0.3696	0.951
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	108	0.280	0.2443	0.3028	0.957
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC	47	0.612	0.5155	0.6482	0.960
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	46	0.496	0.4412	0.5254	0.960

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF TOTAL DISSOLVED PHOSPHORUS (P) / TOTAL PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
APRIL TO SEPTEMBER					
1976					
1977	26	0.313	0.2860	0.3573	0.971
1978	54	0.275	0.2237	0.2984	0.960
1979	16	0.515	0.4628	0.6498	0.951
1980	25	0.496	0.4020	0.5254	0.957
1976-80	121	0.323	0.3051	0.3581	0.955
OCTOBER TO MARCH					
1976-77					
1977-78	54	0.336	0.2805	0.3696	0.960
1978-79	45	0.507	0.4464	0.5561	0.964
1979-80	22	0.513	0.4780	0.6330	0.965
1980-81	10	0.507	0.4259	0.6750	0.979
1976-80	131	0.423	0.3819	0.4760	0.955
APRIL TO MARCH					
1976-80	252	0.379	0.3488	0.4112	0.956

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF TOTAL DISSOLVED PHOSPHORUS (P) / TOTAL PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
1976					
1977 JUN JUL AUG OCT NOV DEC					
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC					
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC					
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC					
	252	0.379	0.3488	0.4112	0.956

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OKANAGAN RIVER NEAR OLIVER

Statistical Characteristics of Nutrient Concentrations

Period of Sampling June 1977 to December 1980.

NITRATE PLUS NITRITE (N)

Arithmetic mean concentrations and their statistical characteristics determined for:

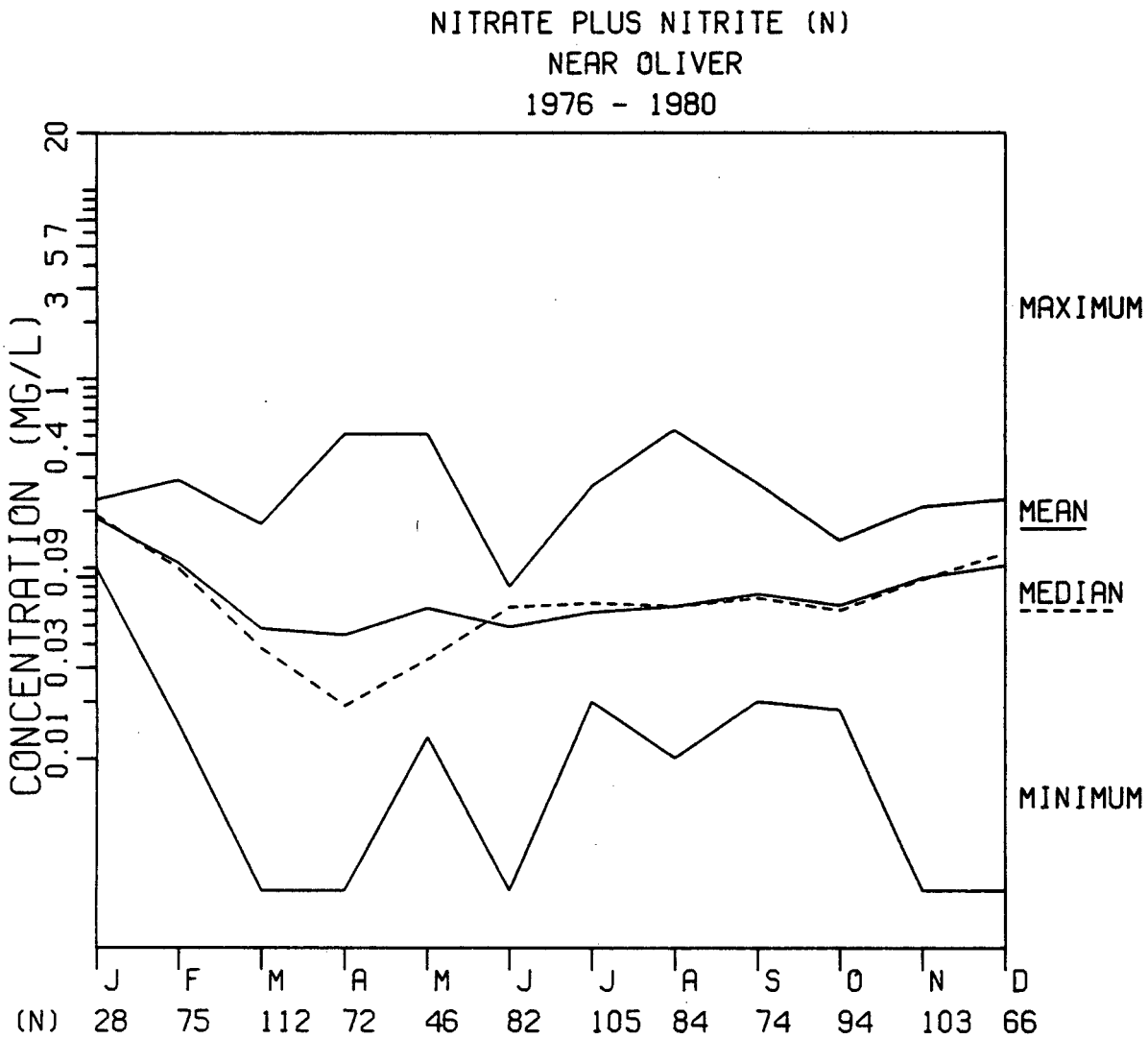
- Individual Months
- All Months
  - Graph of monthly concentration ranges
- Individual years
- Seasons
  - April to September
  - October to March
  - April to March
- All Years
  - Histogram of concentration distribution

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
NITRATE PLUS NITRITE (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
				(MG/L)			
1977 JUNE	41	0.0260	0.080	0.071	0.0086	0.0013	± 0.0027
JULY	42	0.0540	0.270	0.076	0.0321	0.0050	± 0.0100
AUGUST	28	0.0100	0.110	0.052	0.0402	0.0076	± 0.0156
OCTOBER	26	0.0670	0.140	0.087	0.0150	0.0029	± 0.0061
NOVEMBER	27	0.1200	0.210	0.155	0.0267	0.0051	± 0.0105
DECEMBER	10	0.0350	0.210	0.163	0.0552	0.0174	± 0.0394
1978 JANUARY	1	0.1000	0.100	0.100			
FEBRUARY	44	0.0150	0.104	0.070	0.0295	0.0044	± 0.0090
MARCH	60	0.0020	0.120	0.023	0.0306	0.0040	± 0.0079
APRIL	36	0.0020	0.510	0.055	0.0851	0.0142	± 0.0288
MAY	30	0.0130	0.510	0.079	0.1177	0.0215	± 0.0439
JUNE	25	0.0020	0.067	0.031	0.0241	0.0048	± 0.0099
JULY	31	0.0340	0.230	0.073	0.0333	0.0060	± 0.0122
AUGUST	24	0.0630	0.540	0.109	0.1040	0.0212	± 0.0439
SEPTEMBER	38	0.0370	0.280	0.100	0.0448	0.0073	± 0.0147
OCTOBER	32	0.0180	0.130	0.052	0.0214	0.0038	± 0.0077
NOVEMBER	48	0.0020	0.150	0.032	0.0432	0.0062	± 0.0125
DECEMBER	32	0.0020	0.140	0.038	0.0473	0.0084	± 0.0170
1979 JANUARY	12	0.1700	0.200	0.188	0.0127	0.0037	± 0.0081
FEBRUARY	19	0.0860	0.290	0.160	0.0561	0.0129	± 0.0271
MARCH	36	0.0020	0.097	0.046	0.0258	0.0043	± 0.0087
APRIL	24	0.0020	0.002	0.002			
JULY	12	0.0200	0.030	0.023	0.0045	0.0013	± 0.0029
AUGUST	16	0.0200	0.080	0.042	0.0226	0.0056	± 0.0120
SEPTEMBER	16	0.0200	0.090	0.066	0.0159	0.0040	± 0.0085
OCTOBER	20	0.0200	0.110	0.065	0.0393	0.0088	± 0.0184
NOVEMBER	12	0.1500	0.210	0.175	0.0188	0.0054	± 0.0120
DECEMBER	12	0.1400	0.230	0.189	0.0294	0.0085	± 0.0187
1980 JANUARY	15	0.1300	0.230	0.185	0.0304	0.0079	± 0.0169
FEBRUARY	12	0.1000	0.180	0.157	0.0271	0.0078	± 0.0172
MARCH	16	0.1300	0.170	0.148	0.0133	0.0033	± 0.0071
APRIL	12	0.0500	0.140	0.097	0.0323	0.0093	± 0.0205
MAY	16	0.0200	0.050	0.029	0.0124	0.0031	± 0.0066
JUNE	16	0.0200	0.030	0.021	0.0025	0.0006	± 0.0013
JULY	20	0.0200	0.040	0.022	0.0052	0.0012	± 0.0024
AUGUST	16	0.0200	0.080	0.032	0.0201	0.0050	± 0.0107
SEPTEMBER	20	0.0200	0.070	0.025	0.0128	0.0029	± 0.0060
OCTOBER	16	0.0200	0.070	0.045	0.0146	0.0037	± 0.0078
NOVEMBER	16	0.0300	0.130	0.081	0.0309	0.0077	± 0.0164
DECEMBER	12	0.1100	0.160	0.142	0.0171	0.0049	± 0.0109

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
NITRATE PLUS NITRITE (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
				(MG/L)			
- -78-79-80 JANUARY	28	0.1000	0.230	0.183	0.0286	0.0054	± 0.0111
- -78-79-80 FEBRUARY	75	0.0150	0.290	0.107	0.0575	0.0066	± 0.0132
- -78-79-80 MARCH	112	0.0020	0.170	0.048	0.0502	0.0047	± 0.0094
- -78-79-80 APRIL	72	0.0020	0.510	0.044	0.0697	0.0082	± 0.0164
- -78- -80 MAY	46	0.0130	0.510	0.062	0.0977	0.0144	± 0.0290
-77-78- -80 JUNE	82	0.0020	0.080	0.049	0.0265	0.0029	± 0.0058
-77-78-79-80 JULY	105	0.0200	0.270	0.059	0.0364	0.0036	± 0.0070
-77-78-79-80 AUGUST	84	0.0100	0.540	0.063	0.0679	0.0074	± 0.0147
- -78-79-80 SEPTEMBER	74	0.0200	0.280	0.073	0.0461	0.0054	± 0.0107
-77-78-79-80 OCTOBER	94	0.0180	0.140	0.063	0.0286	0.0029	± 0.0059
-77-78-79-80 NOVEMBER	103	0.0020	0.210	0.088	0.0690	0.0068	± 0.0135
-77-78-79-80 DECEMBER	66	0.0020	0.230	0.103	0.0775	0.0095	± 0.0190


NITRATE PLUS NITRITE (N)
NEAR OLIVER
1976 - 1980
CONCENTRATION (MG/L)
20
5 7
3
1
0.4
0.09
0.03
0.01
MAXIMUM
MEAN
MEDIAN
MINIMUM
J F M A M J J A S O N D
(N) 28 75 112 72 46 82 105 84 74 94 103 66

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
NITRATE PLUS NITRITE (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
				(MG/L)			
1976							
1977 JUN JUL AUG OCT NOV DEC	174	0.0100	0.270	0.090	0.0463	0.0035	± 0.0069
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	401	0.0020	0.540	0.057	0.0630	0.0031	± 0.0062
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC	179	0.0020	0.290	0.082	0.0714	0.0053	± 0.0105
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	187	0.0200	0.230	0.076	0.0615	0.0045	± 0.0089

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
NITRATE PLUS NITRITE (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
				(MG/L)			
			APRIL TO SEPTEMBER				
1976							
1977	111	0.0100	0.270	0.068	0.0300	0.0028	± 0.0056
1978	184	0.0020	0.540	0.075	0.0789	0.0058	± 0.0115
1979	68	0.0020	0.090	0.030	0.0285	0.0035	± 0.0069
1980	100	0.0200	0.140	0.034	0.0281	0.0028	± 0.0056
1976-80	463	0.0020	0.540	0.058	0.0579	0.0027	± 0.0053
			OCTOBER TO MARCH				
1976-77							
1977-78	168	0.0020	0.210	0.075	0.0580	0.0045	± 0.0088
1978-79	179	0.0020	0.290	0.064	0.0627	0.0047	± 0.0092
1979-80	87	0.0200	0.230	0.146	0.0543	0.0058	± 0.0116
1980-81	44	0.0200	0.160	0.085	0.0448	0.0068	± 0.0136
1976-80	478	0.0020	0.290	0.084	0.0651	0.0030	± 0.0059
			APRIL TO MARCH				
1976-80	941	0.0020	0.540	0.071	0.0630	0.0021	± 0.0040

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
NITRATE PLUS NITRITE (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
				(MG/L)			
1976							
1977 JUN JUL AUG OCT NOV DEC							
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC							
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC							
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC							
	941	0.0020	0.540	0.071	0.0630	0.0021	± 0.0040

NITRATE PLUS NITRITE (N)

n = 941

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OKANAGAN RIVER NEAR OLIVER

Statistical Characteristics of Nutrient Concentrations

Period of Sampling June 1977 to December 1980.

NITRATE PLUS NITRITE (N)

Median concentrations and their statistical characteristics determined for

- Individual Months
- All Months
- Individual years
- Seasons
  - April to September
  - October to March
  - April to March
- All Years
  - Cumulative distribution of concentration data

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
NITRATE PLUS NITRITE (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
		(MG/L)			
1977 JUNE	41	0.072	0.0720	0.0730	0.956
JULY	42	0.068	0.0660	0.0740	0.956
AUGUST	28	0.054	0.0100	0.0880	0.964
OCTOBER	26	0.082	0.0790	0.0940	0.971
NOVEMBER	27	0.150	0.1300	0.1800	0.964
DECEMBER	10	0.180	0.0920	0.2000	0.979
1978 JANUARY	1	0.100			
FEBRUARY	44	0.077	0.0720	0.0840	0.951
MARCH	60	0.008	0.0020	0.0150	0.960
APRIL	36	0.028	0.0190	0.0520	0.953
MAY	30	0.045	0.0320	0.0530	0.957
JUNE	25	0.032	0.0020	0.0470	0.957
JULY	31	0.069	0.0640	0.0750	0.971
AUGUST	24	0.075	0.0720	0.0890	0.957
SEPTEMBER	38	0.098	0.0820	0.1200	0.966
OCTOBER	32	0.052	0.0430	0.0600	0.965
NOVEMBER	48	0.002	0.0020	0.0350	0.956
DECEMBER	32	0.006	0.0020	0.0370	0.965
1979 JANUARY	12	0.190	0.1700	0.2000	0.961
FEBRUARY	19	0.140	0.1100	0.1900	0.959
MARCH	36	0.050	0.0400	0.0590	0.953
APRIL	24	0.002	0.0020	0.0020	0.957
JULY	12	0.020	0.0200	0.0300	0.961
AUGUST	16	0.030	0.0200	0.0600	0.951
SEPTEMBER	16	0.070	0.0600	0.0800	0.951
OCTOBER	20	0.060	0.0200	0.1100	0.959
NOVEMBER	12	0.170	0.1600	0.1900	0.961
DECEMBER	12	0.180	0.1600	0.2200	0.961
1980 JANUARY	15	0.200	0.1600	0.2100	0.965
FEBRUARY	12	0.170	0.1400	0.1800	0.961
MARCH	16	0.140	0.1400	0.1600	0.951
APRIL	12	0.100	0.0600	0.1300	0.961
MAY	16	0.020	0.0200	0.0400	0.951
JUNE	16	0.020	0.0200	0.0200	0.951
JULY	20	0.020	0.0200	0.0200	0.959
AUGUST	16	0.020	0.0200	0.0500	0.951
SEPTEMBER	20	0.020	0.0200	0.0200	0.959
OCTOBER	16	0.050	0.0400	0.0600	0.951
NOVEMBER	16	0.080	0.0800	0.1100	0.951
DECEMBER	12	0.150	0.1200	0.1600	0.961

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
NITRATE PLUS NITRITE (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
		(MG/L)			
- -78-79-80 JANUARY	28	0.190	0.1700	0.2000	0.964
- -78-79-80 FEBRUARY	75	0.099	0.0840	0.1030	0.963
- -78-79-80 MARCH	112	0.038	0.0150	0.0500	0.953
- -78-79-80 APRIL	72	0.019	0.0060	0.0420	0.956
- -78- -80 MAY	46	0.033	0.0300	0.0480	0.960
-77-78- -80 JUNE	82	0.062	0.0400	0.0710	0.952
-77-78-79-80 JULY	105	0.065	0.0600	0.0670	0.959
-77-78-79-80 AUGUST	84	0.063	0.0400	0.0720	0.962
- -78-79-80 SEPTEMBER	74	0.069	0.0580	0.0800	0.953
-77-78-79-80 OCTOBER	94	0.060	0.0520	0.0700	0.951
-77-78-79-80 NOVEMBER	103	0.087	0.0680	0.1300	0.952
-77-78-79-80 DECEMBER	66	0.120	0.0870	0.1500	0.950

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
NITRATE PLUS NITRITE (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
		(MG/L)			
1976					
1977 JUN JUL AUG OCT NOV DEC	174	0.076	0.0730	0.0810	0.951
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	401	0.051	0.0440	0.0580	0.954
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC	179	0.060	0.0500	0.0700	0.956
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	187	0.050	0.0400	0.0700	0.951

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
NITRATE PLUS NITRITE (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

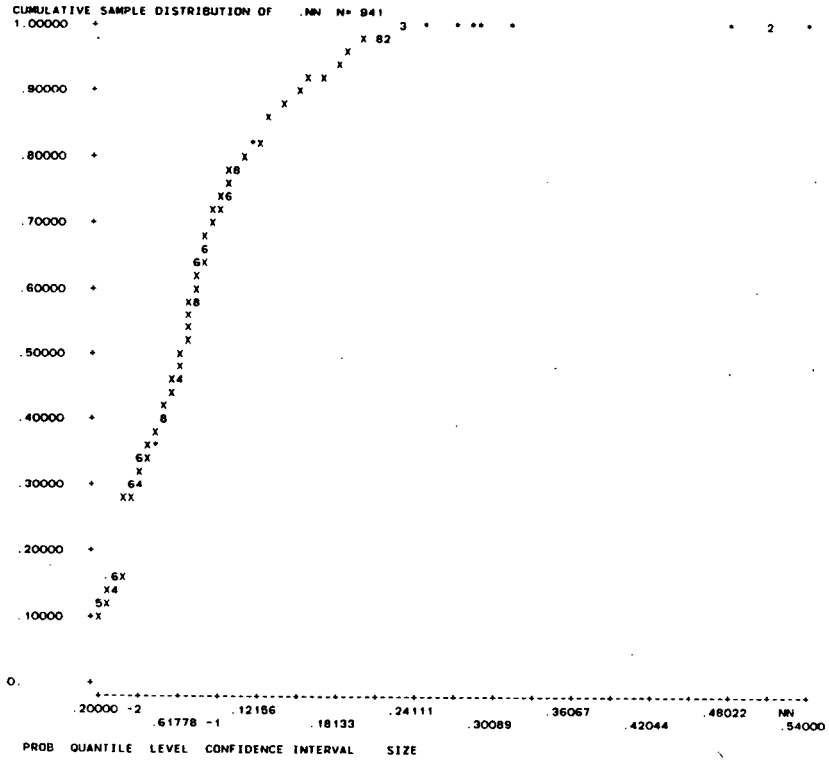
SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
		(MG/L)			
		APRIL TO SEPTEMBER			
1976					
1977	111	0.072	0.0700	0.0730	0.953
1978	184	0.063	0.0570	0.0690	0.954
1979	68	0.020	0.0200	0.0300	0.961
1980	100	0.020	0.0200	0.0200	0.954
1976-80	463	0.057	0.0500	0.0620	0.954
		OCTOBER TO MARCH			
1976-77					
1977-78	168	0.077	0.0690	0.0820	0.955
1978-79	179	0.050	0.0400	0.0590	0.956
1979-80	87	0.160	0.1500	0.1700	0.958
1980-81	44	0.080	0.0500	0.1100	0.951
1976-80	478	0.077	0.0680	0.0820	0.951
		APRIL TO MARCH			
1976-80	941	0.064	0.0600	0.0670	0.953

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
NITRATE PLUS NITRITE (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
		(MG/L)			
1976					
1977 JUN JUL AUG OCT NOV DEC					
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC					
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC					
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC					
	941	0.064	0.0600	0.0670	0.953

DISTRIBUTIONAL ANALYSIS

CUMULATIVE SAMPLE DISTRIBUTION OF .NN N= 941



PROB	QUANTILE	LEVEL	CONFIDENCE INTERVAL		SIZE
.1000	.20000 -2	.9500	.20000 -2	.70000 -2	.9558
.3000	.30000 -1	.9500	.20000 -1	.34000 -1	.9537
.5000	.64000 -1	.9500	.60000 -1	.67000 -1	.9532
.7000	.86000 -1	.9500	.80000 -1	.91000 -1	.9537
.9000	.16000	.9500	.15000	.17000	.9558

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OKANAGAN RIVER NEAR OLIVER

Statistical Characteristics of Nutrient Loads

Period of Sampling June 1977 to December 1980.

NITRATE PLUS NITRITE (N)

Arithmetic mean loads and their statistical characteristics determined for

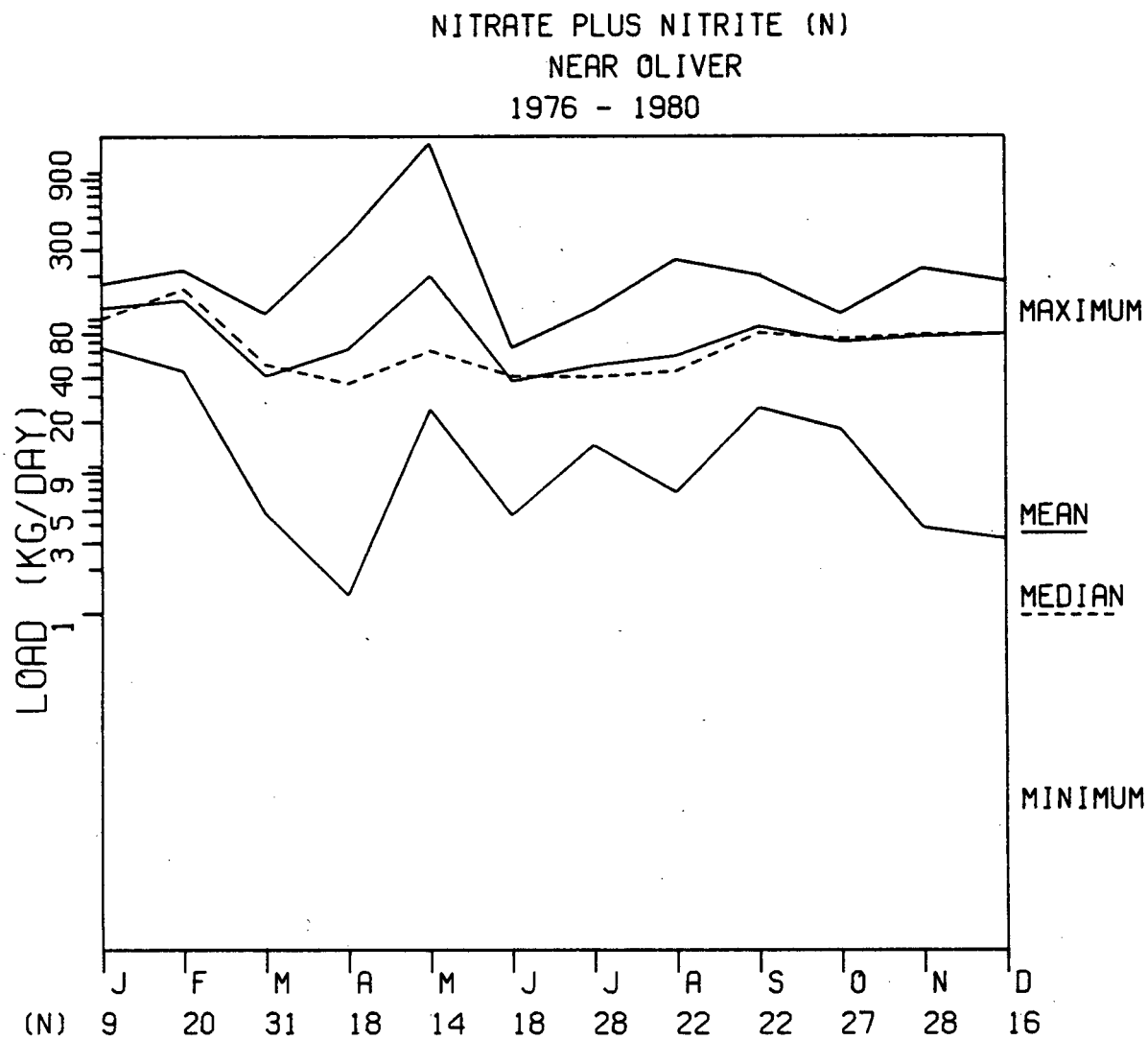
- Individual Months
- All Months
  - Graph of monthly load ranges
- Individual years
- Seasons
  - April to September
  - October to March
  - April to March
- All Years

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
NITRATE PLUS NITRITE (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
				(KG/DAY)			
1977 JUNE	7	35.8000	45.000	41.814	3.4715	1.3121	± 3.2105
JULY	11	34.8000	46.000	39.527	3.5404	1.0675	± 2.3785
AUGUST	8	6.6400	66.700	45.830	19.9280	7.0456	± 16.6600
OCTOBER	10	69.3000	89.400	76.510	6.3460	2.0068	± 4.5400
NOVEMBER	10	66.6000	111.000	80.020	12.7710	4.0385	± 9.1360
DECEMBER	5	64.1000	96.600	80.100	12.5150	5.5969	± 15.5390
1978 JANUARY	1	102.0000	102.000	102.000			
FEBRUARY	10	44.1000	215.000	150.960	63.1980	19.9850	± 45.2100
MARCH	18	4.7200	109.000	39.148	33.2210	7.8303	± 16.5205
APRIL	9	18.1000	375.000	104.200	116.8200	38.9400	± 89.7985
MAY	10	53.1000	1590.000	267.260	468.1899	148.0547	± 334.9199
JUNE	7	4.6500	64.300	37.807	26.2280	9.9133	± 24.2565
JULY	9	45.8000	95.700	69.367	16.8260	5.6087	± 12.9335
AUGUST	6	57.9000	259.000	105.800	75.9610	31.0109	± 79.7185
SEPTEMBER	13	74.9000	203.000	120.500	40.2550	11.1647	± 24.3280
OCTOBER	8	52.0000	109.000	73.100	18.3340	6.4820	± 15.3270
NOVEMBER	11	3.8400	224.000	70.748	85.0940	25.6568	± 57.1695
DECEMBER	6	3.1800	182.000	62.293	82.0660	33.5033	± 86.1250
1979 JANUARY	4	151.0000	176.000	164.250	13.6230	6.8115	± 21.6800
FEBRUARY	7	75.3000	219.000	142.270	51.4110	19.4315	± 47.5480
MARCH	9	6.9100	67.000	35.031	19.6970	6.5657	± 15.1405
APRIL	6	1.3300	1.670	1.537	0.1283	0.0524	± 0.1346
JULY	3	13.9000	17.300	15.167	1.8583	1.0729	± 4.6165
AUGUST	4	22.0000	49.200	33.350	12.0860	6.0430	± 19.2310
SEPTEMBER	4	57.5000	67.100	61.925	4.3500	2.1750	± 6.9220
OCTOBER	5	18.0000	110.000	65.140	37.9100	16.9539	± 47.0710
NOVEMBER	3	77.5000	91.300	82.333	7.7732	4.4879	± 19.3080
DECEMBER	3	69.5000	89.400	82.733	11.4610	6.6170	± 28.4680
1980 JANUARY	4	64.2000	90.300	81.375	12.1650	6.0825	± 19.3560
FEBRUARY	3	58.0000	77.600	68.000	9.8061	5.6616	± 24.3600
MARCH	4	55.0000	71.900	63.375	8.6063	4.3032	± 13.6950
APRIL	3	54.9000	65.600	61.000	5.5055	3.1786	± 13.6760
MAY	4	24.4000	51.100	34.925	12.5900	6.2950	± 20.0330
JUNE	4	19.2000	42.500	31.450	9.9447	4.9724	± 15.8240
JULY	5	27.4000	117.000	48.720	38.3010	17.1287	± 47.5570
AUGUST	4	25.3000	33.700	28.275	3.7116	1.8558	± 5.9060
SEPTEMBER	5	24.9000	38.100	29.100	5.3456	2.3906	± 6.6370
OCTOBER	4	34.6000	65.500	54.500	14.3550	7.1775	± 22.8420
NOVEMBER	4	38.3000	114.000	83.725	33.2850	16.6425	± 52.9645
DECEMBER	2	125.0000	129.000	127.000	2.8284	2.0000	± 25.4100

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
NITRATE PLUS NITRITE (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
				(KG/DAY)			
- -78-79-80 JANUARY	9	64.2000	176.000	120.500	43.4770	14.4923	± 33.4200
- -78-79-80 FEBRUARY	20	44.1000	219.000	135.470	59.9900	13.4142	± 28.0750
- -78-79-80 MARCH	31	4.7200	109.000	41.079	28.5620	5.1299	± 10.4765
- -78-79-80 APRIL	18	1.3300	375.000	62.779	93.0500	21.9321	± 46.2720
- -78- -80 MAY	14	24.4000	1590.000	200.880	404.5400	108.1179	± 233.5729
-77-78- -80 JUNE	18	4.6500	64.300	37.953	16.7510	3.9482	± 8.3300
-77-78-79-80 JULY	28	13.9000	117.000	48.150	24.6450	4.6575	± 9.5560
-77-78-79-80 AUGUST	22	6.6400	259.000	56.725	50.2060	10.7040	± 22.2600
- -78-79-80 SEPTEMBER	22	24.9000	203.000	89.077	50.4210	10.7498	± 22.3540
-77-78-79-80 OCTOBER	27	18.0000	110.000	70.133	20.2500	3.8971	± 8.0105
-77-78-79-80 NOVEMBER	28	3.8400	224.000	77.155	53.7860	10.1646	± 20.8560
-77-78-79-80 DECEMBER	16	3.1800	182.000	79.779	52.2130	13.0532	± 27.8215


NITRATE PLUS NITRITE (N)
NEAR OLIVER
1976 - 1980
LOAD (KG/DAY)
900
300
80
40
20
9
5
3
1
MAXIMUM
MEAN
MEDIAN
MINIMUM
J F M A M J J A S O N D
(N) 9 20 31 18 14 18 28 22 22 27 28 16

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
NITRATE PLUS NITRITE (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
				(KG/DAY)			
1976							
1977 JUN JUL AUG OCT NOV DEC	51	6.6400	111.000	59.999	21.3170	2.9850	± 5.9955
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	108	3.1800	1590.000	99.571	159.9400	15.3902	± 30.5095
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC	48	1.3300	219.000	67.185	57.0010	8.2274	± 16.5515
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	46	19.2000	129.000	55.230	29.5330	4.3544	± 8.7705

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
NITRATE PLUS NITRITE (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
				(KG/DAY)			
			APRIL TO SEPTEMBER				
1976							
1977	26	6.6400	66.700	42.082	11.2470	2.2057	± 4.5425
1978	54	4.6500	1590.000	124.090	213.9700	29.1176	± 58.4025
1979	17	1.3300	67.100	25.636	24.7750	6.0088	± 12.7385
1980	25	19.2000	117.000	38.028	20.4140	4.0828	± 8.4270
1976-80	122	1.3300	1590.000	75.257	148.9200	13.4826	± 26.6925
			OCTOBER TO MARCH				
1976-77							
1977-78	54	4.7200	215.000	79.297	51.0530	6.9474	± 13.9345
1978-79	45	3.1800	224.000	82.333	68.2000	10.1667	± 20.4885
1979-80	22	18.0000	110.000	72.905	20.2030	4.3073	± 8.9575
1980-81	10	34.6000	129.000	80.690	34.9920	11.0654	± 25.0305
1976-80	131	3.1800	224.000	79.373	52.8940	4.6214	± 9.1430
			APRIL TO MARCH				
1976-80	253	1.3300	1590.000	77.388	109.9800	6.9144	± 13.6170

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
NITRATE PLUS NITRITE (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
				(KG/DAY)			
1976							
1977 JUN JUL AUG OCT NOV DEC							
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC							
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC							
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC							
	253	1.3300	1590.000	77.388	109.9800	6.9144	± 13.6170

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OKANAGAN RIVER NEAR OLIVER

Statistical Characteristics of Nutrient Loads

Period of Sampling June 1977 to December 1980.

NITRATE PLUS NITRITE (N)

Median loads and their statistical characteristics determined for

- Individual Months
- All Months
- Individual years
- Seasons
  - April to September
  - October to March
  - April to March
- All Years

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
NITRATE PLUS NITRITE (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
		(KG/DAY)			
1977 JUNE	7	43.000	35.8000	45.0000	0.984
JULY	11	38.900	36.6000	43.1000	0.961
AUGUST	8	44.300	35.7000	66.7000	0.961
OCTOBER	10	75.000	70.6000	82.4000	0.979
NOVEMBER	10	79.600	68.1000	85.4000	0.979
DECEMBER	5	79.600		64.1000	0.969
1978 JANUARY	1	102.000			
FEBRUARY	10	168.000	45.5000	214.0000	0.979
MARCH	18	24.300	4.7800	67.7000	0.969
APRIL	9	61.900	29.2000	206.0000	0.961
MAY	10	131.000	55.7000	224.0000	0.979
JUNE	7	51.800	4.6500	64.3000	0.984
JULY	9	62.100	60.1000	93.2000	0.961
AUGUST	6	77.600	57.9000	259.0000	0.969
SEPTEMBER	13	109.000	81.7000	158.0000	0.978
OCTOBER	8	73.600	53.0000	109.0000	0.961
NOVEMBER	11	16.800	5.5700	176.0000	0.961
DECEMBER	6	7.980	3.1800	182.0000	0.969
1979 JANUARY	4	154.000			
FEBRUARY	7	163.000	75.3000	219.0000	0.984
MARCH	9	32.100	9.4700	51.7000	0.961
APRIL	6	1.500	1.3300	1.6700	0.969
JULY	3	14.300			
AUGUST	4	26.200			
SEPTEMBER	4	59.300			
OCTOBER	5	73.500		18.0000	0.969
NOVEMBER	3	78.200			
DECEMBER	3	89.300			
1980 JANUARY	4	81.300			
FEBRUARY	3	68.400			
MARCH	4	57.000			
APRIL	3	62.500			
MAY	4	25.500			
JUNE	4	28.600			
JULY	5	34.500		27.4000	0.969
AUGUST	4	26.900			
SEPTEMBER	5	28.000		24.9000	0.969
OCTOBER	4	53.400			
NOVEMBER	4	80.600			
DECEMBER	2	125.000			

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
NITRATE PLUS NITRITE (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN (KG/DAY)	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
- -78-79-80 JANUARY	9	102.000	81.3000	176.0000	0.961
- -78-79-80 FEBRUARY	20	163.000	77.6000	177.0000	0.959
- -78-79-80 MARCH	31	49.200	18.3000	56.9000	0.971
- -78-79-80 APRIL	18	36.600	1.6700	62.5000	0.969
- -78- -80 MAY	14	60.600	51.1000	175.0000	0.965
-77-78- -80 JUNE	18	41.200	28.6000	45.0000	0.969
-77-78-79-80 JULY	28	40.400	35.0000	60.1000	0.964
-77-78-79-80 AUGUST	22	44.300	33.7000	66.7000	0.965
- -78-79-80 SEPTEMBER	22	80.900	59.3000	124.0000	0.965
-77-78-79-80 OCTOBER	27	73.500	65.5000	78.1000	0.964
-77-78-79-80 NOVEMBER	28	78.200	66.6000	85.4000	0.964
-77-78-79-80 DECEMBER	16	79.600	64.1000	125.0000	0.951

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
NITRATE PLUS NITRITE (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
		(KG/DAY)			
1976					
1977 JUN JUL AUG OCT NOV DEC	51	65.500	44.3000	71.2000	0.951
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	108	68.600	60.2000	81.7000	0.957
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC	48	57.500	35.4000	77.5000	0.956
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	46	51.100	34.9000	64.5000	0.960

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
NITRATE PLUS NITRITE (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
		(KG/DAY)			
		APRIL TO SEPTEMBER			
1976					
1977	26	41.200	37.5000	44.3000	0.971
1978	54	78.400	62.1000	93.3000	0.960
1979	17	17.300	1.6700	49.2000	0.951
1980	25	29.800	27.2000	38.1000	0.957
1976-80	122	45.800	41.2000	59.3000	0.953
		OCTOBER TO MARCH			
1976-77					
1977-78	54	73.100	69.3000	81.3000	0.960
1978-79	45	67.000	39.0000	109.0000	0.964
1979-80	22	73.500	68.4000	89.3000	0.965
1980-81	10	65.500	38.3000	125.0000	0.979
1976-80	131	73.500	69.3000	79.6000	0.955
		APRIL TO MARCH			
1976-80	253	62.500	56.5000	68.1000	0.956

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
NITRATE PLUS NITRITE (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
		(KG/DAY)			
1976					
1977 JUN JUL AUG OCT NOV DEC					
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC					
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC					
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC					
	253	62.500	56.5000	68.1000	0.956

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OKANAGAN RIVER NEAR OLIVER

Statistical Characteristics of Nutrient Concentrations

Period of Sampling June 1977 to December 1980.

RATIO OF NITRATE PLUS NITRITE (N) TO TOTAL NITROGEN (N)

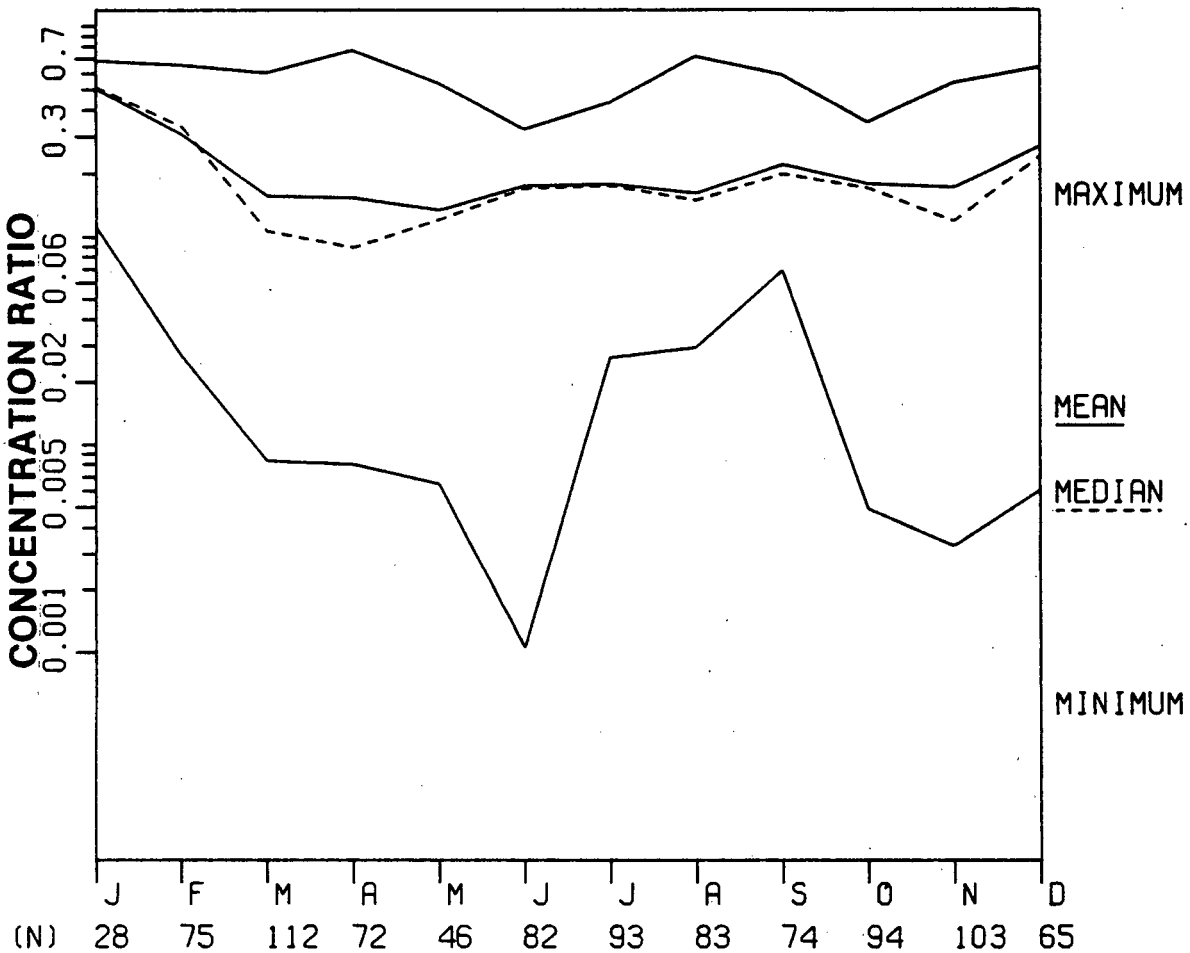
Arithmetic mean concentrations and their statistical characteristics determined for:

- Individual Months
- All Months
  - Graph of monthly concentration ranges
- Individual years
- Seasons
  - April to September
  - October to March
  - April to March
- All Years
  - Histogram of concentration distribution

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF NITRATE PLUS NITRITE (N) / TOTAL NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
1977 JUNE	41	0.1061	0.327	0.261	0.0353	0.0055	± 0.0111
JULY	42	0.0775	0.435	0.241	0.0510	0.0079	± 0.0159
AUGUST	28	0.0294	0.313	0.135	0.1063	0.0201	± 0.0412
OCTOBER	26	0.0049	0.339	0.223	0.1312	0.0257	± 0.0530
NOVEMBER	27	0.0255	0.173	0.073	0.0511	0.0098	± 0.0202
DECEMBER	10	0.1050	0.408	0.195	0.0995	0.0315	± 0.0712
1978 JANUARY	1	0.1111	0.111	0.111			
FEBRUARY	44	0.0267	0.368	0.204	0.1185	0.0179	± 0.0360
MARCH	60	0.0083	0.207	0.061	0.0658	0.0085	± 0.0170
APRIL	36	0.0087	0.773	0.194	0.1592	0.0265	± 0.0538
MAY	30	0.0065	0.539	0.134	0.1020	0.0186	± 0.0381
JUNE	25	0.0011	0.191	0.087	0.0733	0.0147	± 0.0303
JULY	31	0.0263	0.233	0.143	0.0409	0.0073	± 0.0150
AUGUST	24	0.1255	0.720	0.236	0.1331	0.0272	± 0.0562
SEPTEMBER	38	0.0831	0.596	0.282	0.1301	0.0211	± 0.0428
OCTOBER	32	0.0103	0.247	0.110	0.0530	0.0094	± 0.0191
NOVEMBER	48	0.0033	0.429	0.103	0.1309	0.0189	± 0.0380
DECEMBER	32	0.0061	0.344	0.118	0.1288	0.0228	± 0.0464
1979 JANUARY	12	0.5000	0.541	0.523	0.0155	0.0045	± 0.0098
FEBRUARY	19	0.2091	0.659	0.430	0.1261	0.0289	± 0.0608
MARCH	36	0.0083	0.346	0.167	0.0998	0.0166	± 0.0338
APRIL	24	0.0080	0.010	0.009	0.0005	0.0001	± 0.0002
JULY	4	0.0784	0.122	0.093	0.0198	0.0099	± 0.0315
AUGUST	16	0.0548	0.176	0.110	0.0500	0.0125	± 0.0266
SEPTEMBER	16	0.0690	0.360	0.224	0.0702	0.0176	± 0.0374
OCTOBER	20	0.0930	0.349	0.225	0.1008	0.0225	± 0.0472
NOVEMBER	12	0.4368	0.538	0.489	0.0321	0.0093	± 0.0204
DECEMBER	11	0.4179	0.603	0.521	0.0534	0.0161	± 0.0358
1980 JANUARY	15	0.3250	0.687	0.517	0.1007	0.0260	± 0.0558
FEBRUARY	12	0.3774	0.557	0.502	0.0550	0.0159	± 0.0350
MARCH	16	0.4127	0.604	0.491	0.0597	0.0149	± 0.0318
APRIL	12	0.1724	0.438	0.320	0.0927	0.0268	± 0.0589
MAY	16	0.0870	0.217	0.134	0.0481	0.0120	± 0.0256
JUNE	16	0.0714	0.109	0.087	0.0107	0.0027	± 0.0057
JULY	16	0.0816	0.186	0.104	0.0289	0.0072	± 0.0154
AUGUST	15	0.0800	0.372	0.142	0.0918	0.0237	± 0.0508
SEPTEMBER	20	0.0784	0.269	0.105	0.0467	0.0104	± 0.0218
OCTOBER	16	0.0851	0.286	0.184	0.0582	0.0146	± 0.0310
NOVEMBER	16	0.1304	0.433	0.312	0.1008	0.0252	± 0.0537
DECEMBER	12	0.4000	0.638	0.507	0.0701	0.0202	± 0.0445

RATIO OF NITRATE PLUS NITRITE (N) / TOTAL NITROGEN (N)
NEAR OLIVER
1976 - 1980



STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF NITRATE PLUS NITRITE (N) / TOTAL NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
- -78-79-80 JANUARY	28	0.1111	0.687	0.505	0.1064	0.0201	± 0.0413
- -78-79-80 FEBRUARY	75	0.0267	0.659	0.309	0.1698	0.0196	± 0.0391
- -78-79-80 MARCH	112	0.0083	0.604	0.156	0.1646	0.0155	± 0.0308
- -78-79-80 APRIL	72	0.0080	0.773	0.153	0.1624	0.0191	± 0.0382
- -78- -80 MAY	46	0.0065	0.539	0.134	0.0865	0.0127	± 0.0257
-77-78- -80 JUNE	82	0.0011	0.327	0.174	0.0995	0.0110	± 0.0219
-77-78-79-80 JULY	93	0.0263	0.435	0.178	0.0732	0.0076	± 0.0151
-77-78-79-80 AUGUST	83	0.0294	0.720	0.161	0.1141	0.0125	± 0.0249
- -78-79-80 SEPTEMBER	74	0.0690	0.596	0.222	0.1256	0.0146	± 0.0291
-77-78-79-80 OCTOBER	94	0.0049	0.349	0.178	0.1041	0.0107	± 0.0213
-77-78-79-80 NOVEMBER	103	0.0033	0.538	0.173	0.1729	0.0170	± 0.0338
-77-78-79-80 DECEMBER	65	0.0061	0.638	0.270	0.2108	0.0261	± 0.0522

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF NITRATE PLUS NITRITE (N) / TOTAL NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
1976							
1977 JUN JUL AUG OCT NOV DEC	174	0.0049	0.435	0.197	0.1031	0.0078	± 0.0154
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	401	0.0011	0.773	0.147	0.1273	0.0064	± 0.0125
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC	170	0.0080	0.659	0.250	0.1893	0.0145	± 0.0287
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	182	0.0714	0.687	0.269	0.1826	0.0135	± 0.0267

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF NITRATE PLUS NITRITE (N) / TOTAL NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
			APRIL TO SEPTEMBER				
1976							
1977	111	0.0294	0.435	0.222	0.0826	0.0078	± 0.0155
1978	184	0.0011	0.773	0.185	0.1321	0.0097	± 0.0192
1979	60	0.0080	0.360	0.099	0.0974	0.0126	± 0.0252
1980	95	0.0714	0.438	0.140	0.0911	0.0093	± 0.0186
1976-80	450	0.0011	0.773	0.173	0.1157	0.0055	± 0.0107
			OCTOBER TO MARCH				
1976-77							
1977-78	168	0.0049	0.408	0.134	0.1181	0.0091	± 0.0180
1978-79	179	0.0033	0.659	0.183	0.1711	0.0128	± 0.0252
1979-80	86	0.0930	0.687	0.439	0.1399	0.0151	± 0.0300
1980-81	44	0.0851	0.638	0.319	0.1504	0.0227	± 0.0457
1976-80	477	0.0033	0.687	0.224	0.1846	0.0085	± 0.0166
			APRIL TO MARCH				
1976-80	927	0.0011	0.773	0.199	0.1570	0.0052	± 0.0101

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF NITRATE PLUS NITRITE (N) / TOTAL NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
1976							
1977 JUN JUL AUG OCT NOV DEC							
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC							
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC							
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC							
	927	0.0011	0.773	0.199	0.1570	0.0052	± 0.0101

NITRATE PLUS NITRITE (N) / TOTAL NITROGEN (N)

n = 927

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OKANAGAN RIVER NEAR OLIVER

Statistical Characteristics of Nutrient Concentrations

Period of Sampling June 1977 to December 1980.

RATIO OF NITRATE PLUS NITRITE (N) TO TOTAL NITROGEN (N)

Median concentrations and their statistical characteristics determined for

- Individual Months
- All Months
- Individual years
- Seasons
  - April to September
  - October to March
  - April to March
- All Years
  - Cumulative distribution of concentration data

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF NITRATE PLUS NITRITE (N) / TOTAL NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
1977 JUNE	41	0.268	0.2594	0.2761	0.956
JULY	42	0.239	0.2318	0.2485	0.956
AUGUST	28	0.169	0.0303	0.2046	0.964
OCTOBER	26	0.279	0.2469	0.3179	0.971
NOVEMBER	27	0.044	0.0368	0.1187	0.964
DECEMBER	10	0.150	0.1058	0.3182	0.979
1978 JANUARY	1	0.111			
FEBRUARY	44	0.188	0.1596	0.2400	0.951
MARCH	60	0.033	0.0111	0.0455	0.960
APRIL	36	0.144	0.0905	0.2364	0.953
MAY	30	0.122	0.0931	0.1645	0.957
JUNE	25	0.119	0.0012	0.1488	0.957
JULY	31	0.145	0.1348	0.1568	0.971
AUGUST	24	0.211	0.1469	0.2629	0.957
SEPTEMBER	38	0.307	0.1966	0.3636	0.966
OCTOBER	32	0.096	0.0942	0.1261	0.965
NOVEMBER	48	0.011	0.0095	0.1061	0.956
DECEMBER	32	0.032	0.0111	0.1762	0.965
1979 JANUARY	12	0.515	0.5135	0.5405	0.961
FEBRUARY	19	0.407	0.3333	0.5278	0.959
MARCH	36	0.161	0.1250	0.2308	0.953
APRIL	24	0.009	0.0091	0.0095	0.957
JULY	4	0.085			
AUGUST	16	0.097	0.0571	0.1647	0.951
SEPTEMBER	16	0.215	0.2000	0.2917	0.951
OCTOBER	20	0.240	0.1111	0.3103	0.959
NOVEMBER	12	0.484	0.4595	0.5161	0.961
DECEMBER	11	0.512	0.5000	0.5946	0.961
1980 JANUARY	15	0.553	0.4789	0.5714	0.965
FEBRUARY	12	0.507	0.4857	0.5454	0.961
MARCH	16	0.475	0.4375	0.5333	0.951
APRIL	12	0.328	0.2000	0.3934	0.961
MAY	16	0.103	0.0976	0.1860	0.951
JUNE	16	0.085	0.0816	0.0976	0.951
JULY	16	0.093	0.0889	0.1000	0.951
AUGUST	15	0.091	0.0833	0.1923	0.965
SEPTEMBER	20	0.085	0.0816	0.1000	0.959
OCTOBER	16	0.196	0.1509	0.2222	0.951
NOVEMBER	16	0.327	0.2909	0.4000	0.951
DECEMBER	12	0.508	0.4364	0.5357	0.961

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF NITRATE PLUS NITRITE (N) / TOTAL NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
- -78-79-80 JANUARY	28	0.515	0.5070	0.5405	0.964
- -78-79-80 FEBRUARY	75	0.333	0.2250	0.3643	0.963
- -78-79-80 MARCH	112	0.106	0.0484	0.1539	0.953
- -78-79-80 APRIL	72	0.089	0.0286	0.1818	0.956
- -78- -80 MAY	46	0.121	0.1000	0.1644	0.960
-77-78- -80 JUNE	82	0.170	0.1396	0.2500	0.952
-77-78-79-80 JULY	93	0.167	0.1468	0.2167	0.951
-77-78-79-80 AUGUST	83	0.150	0.1255	0.1758	0.952
- -78-79-80 SEPTEMBER	74	0.200	0.1536	0.2472	0.953
-77-78-79-80 OCTOBER	94	0.170	0.1176	0.2083	0.951
-77-78-79-80 NOVEMBER	103	0.119	0.0441	0.1636	0.952
-77-78-79-80 DECEMBER	65	0.241	0.1417	0.3444	0.954

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF NITRATE PLUS NITRITE (N) / TOTAL NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
1976					
1977 JUN JUL AUG OCT NOV DEC	174	0.233	0.2214	0.2473	0.951
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	401	0.131	0.1111	0.1442	0.954
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC	170	0.209	0.1690	0.2750	0.953
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	182	0.196	0.1667	0.2857	0.955

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF NITRATE PLUS NITRITE (N) / TOTAL NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

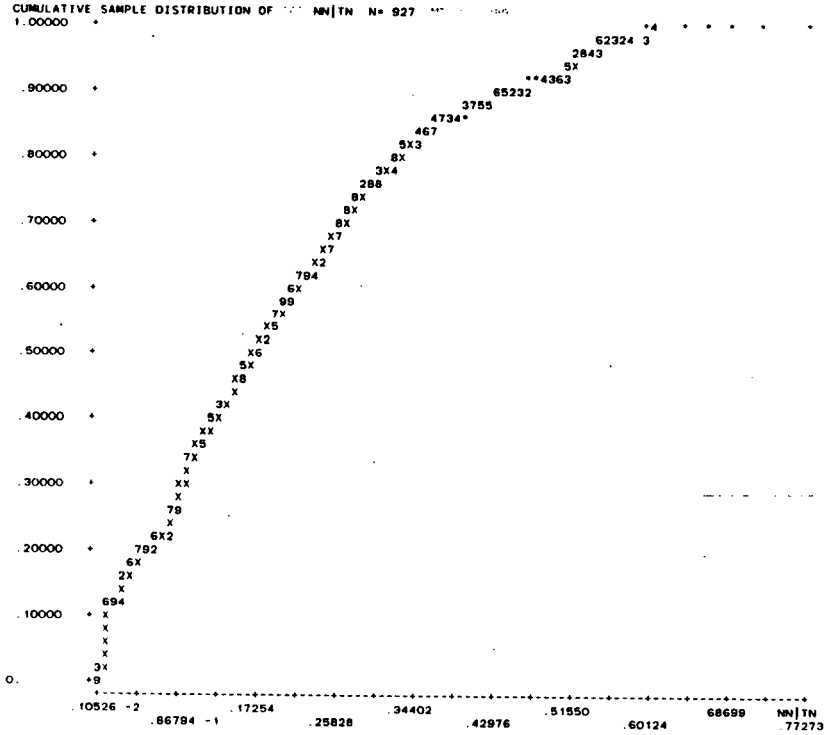
SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
		APRIL TO SEPTEMBER			
1976					
1977	111	0.241	0.2329	0.2552	0.953
1978	184	0.152	0.1436	0.1676	0.954
1979	60	0.063	0.0095	0.1429	0.960
1980	95	0.098	0.0909	0.1000	0.960
1976-80	450	0.157	0.1449	0.1724	0.952
		OCTOBER TO MARCH			
1976-77					
1977-78	168	0.105	0.0500	0.1469	0.955
1978-79	179	0.136	0.1061	0.1680	0.956
1979-80	86	0.486	0.4590	0.5079	0.960
1980-81	44	0.320	0.2083	0.4000	0.951
1976-80	477	0.177	0.1615	0.2064	0.951
		APRIL TO MARCH			
1976-80	927	0.168	0.1539	0.1792	0.951

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF NITRATE PLUS NITRITE (N) / TOTAL NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
1976					
1977 JUN JUL AUG OCT NOV DEC					
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC					
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC					
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC					
	927	0.168	0.1539	0.1792	0.951

DISTRIBUTIONAL ANALYSIS

CUMULATIVE SAMPLE DISTRIBUTION OF NN|TN N= 927



PROB	QUANTILE	LEVEL	CONFIDENCE INTERVAL		SIZE
.1000	.11111 -1	.9500	.10000 -1	.16418 -1	.9514
.3000	.93023 -1	.9500	.85106 -1	.97561 -1	.9513
.5000	.16774	.9500	.15385	.17917	.9513
.7000	.26333	.9500	.24815	.27619	.9513
.9000	.43750	.9500	.41270	.50000	.9514

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OKANAGAN RIVER NEAR OLIVER

Statistical Characteristics of Nutrient Loads

Period of Sampling June 1977 to December 1980.

RATIO OF NITRATE PLUS NITRITE (N) TO TOTAL NITROGEN (N)

Arithmetic mean loads and their statistical characteristics determined for

- Individual Months
- All Months
  - Graph of monthly load ranges
- Individual years
- Seasons
  - April to September
  - October to March
  - April to March
- All Years

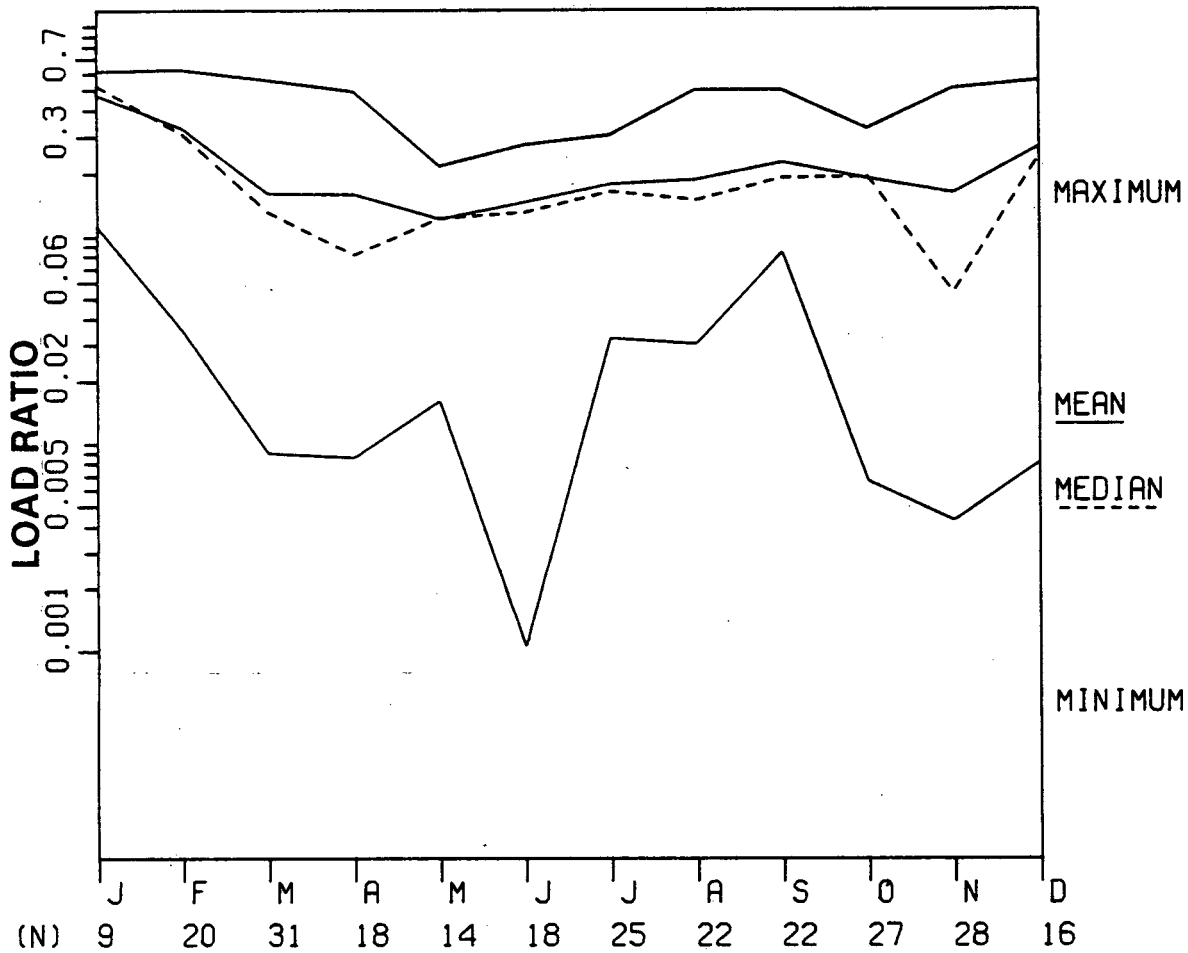
STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF NITRATE PLUS NITRITE (N) / TOTAL NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
1977 JUNE	7	0.2434	0.273	0.255	0.0109	0.0041	± 0.0101
JULY	11	0.1494	0.271	0.234	0.0356	0.0107	± 0.0239
AUGUST	8	0.0302	0.310	0.202	0.0905	0.0320	± 0.0756
OCTOBER	10	0.0066	0.325	0.242	0.1227	0.0388	± 0.0878
NOVEMBER	10	0.0254	0.155	0.061	0.0449	0.0142	± 0.0321
DECEMBER	5	0.1050	0.402	0.209	0.1188	0.0531	± 0.1475
1978 JANUARY	1	0.1110	0.111	0.111			
FEBRUARY	10	0.0353	0.355	0.177	0.0991	0.0314	± 0.0709
MARCH	18	0.0090	0.208	0.083	0.0756	0.0178	± 0.0376
APRIL	9	0.0358	0.497	0.205	0.1540	0.0513	± 0.1184
MAY	10	0.0162	0.217	0.117	0.0745	0.0236	± 0.0533
JUNE	7	0.0011	0.154	0.073	0.0714	0.0270	± 0.0661
JULY	9	0.0322	0.180	0.132	0.0423	0.0141	± 0.0325
AUGUST	6	0.1359	0.500	0.246	0.1356	0.0554	± 0.1423
SEPTEMBER	13	0.1023	0.499	0.271	0.1324	0.0367	± 0.0800
OCTOBER	8	0.0220	0.169	0.104	0.0482	0.0170	± 0.0403
NOVEMBER	11	0.0043	0.382	0.107	0.1335	0.0402	± 0.0897
DECEMBER	6	0.0081	0.324	0.122	0.1401	0.0572	± 0.1471
1979 JANUARY	4	0.5016	0.542	0.523	0.0182	0.0091	± 0.0290
FEBRUARY	7	0.3086	0.629	0.466	0.1213	0.0459	± 0.1122
MARCH	9	0.0374	0.337	0.168	0.0993	0.0331	± 0.0763
APRIL	6	0.0086	0.010	0.009	0.0004	0.0002	± 0.0004
JULY	1	0.0930	0.093	0.093			
AUGUST	4	0.0696	0.150	0.111	0.0370	0.0185	± 0.0589
SEPTEMBER	4	0.1904	0.317	0.225	0.0615	0.0307	± 0.0978
OCTOBER	5	0.1098	0.319	0.224	0.1026	0.0459	± 0.1274
NOVEMBER	3	0.4546	0.507	0.488	0.0293	0.0169	± 0.0727
DECEMBER	3	0.4929	0.548	0.522	0.0279	0.0161	± 0.0693
1980 JANUARY	4	0.3821	0.614	0.518	0.0979	0.0489	± 0.1558
FEBRUARY	3	0.4640	0.547	0.504	0.0417	0.0241	± 0.1036
MARCH	4	0.4254	0.562	0.490	0.0618	0.0309	± 0.0983
APRIL	3	0.2089	0.413	0.320	0.1031	0.0595	± 0.2562
MAY	4	0.1000	0.200	0.134	0.0457	0.0229	± 0.0728
JUNE	4	0.0817	0.098	0.087	0.0075	0.0038	± 0.0120
JULY	4	0.0866	0.304	0.148	0.1044	0.0522	± 0.1662
AUGUST	4	0.0853	0.267	0.139	0.0867	0.0433	± 0.1379
SEPTEMBER	5	0.0842	0.148	0.106	0.0247	0.0110	± 0.0307
OCTOBER	4	0.1197	0.232	0.184	0.0469	0.0234	± 0.0746
NOVEMBER	4	0.1576	0.390	0.313	0.1062	0.0531	± 0.1690
DECEMBER	2	0.4682	0.478	0.473	0.0068	0.0048	± 0.0611

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF NITRATE PLUS NITRITE (N) / TOTAL NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
- -78-79-80 JANUARY	9	0.1110	0.614	0.475	0.1494	0.0498	± 0.1148
- -78-79-80 FEBRUARY	20	0.0353	0.629	0.327	0.1829	0.0409	± 0.0856
- -78-79-80 MARCH	31	0.0090	0.562	0.160	0.1562	0.0281	± 0.0573
- -78-79-80 APRIL	18	0.0086	0.497	0.159	0.1614	0.0380	± 0.0803
- -78- -80 MAY	14	0.0162	0.217	0.122	0.0662	0.0177	± 0.0382
-77-78- -80 JUNE	18	0.0011	0.273	0.147	0.0989	0.0233	± 0.0492
-77-78-79-80 JULY	25	0.0322	0.304	0.178	0.0719	0.0144	± 0.0297
-77-78-79-80 AUGUST	22	0.0302	0.500	0.186	0.1050	0.0224	± 0.0465
- -78-79-80 SEPTEMBER	22	0.0842	0.499	0.225	0.1241	0.0265	± 0.0550
-77-78-79-80 OCTOBER	27	0.0066	0.325	0.189	0.1063	0.0205	± 0.0420
-77-78-79-80 NOVEMBER	28	0.0043	0.507	0.161	0.1697	0.0321	± 0.0658
-77-78-79-80 DECEMBER	16	0.0081	0.548	0.268	0.1967	0.0492	± 0.1048

RATIO OF NITRATE PLUS NITRITE (N) / TOTAL NITROGEN (N)
NEAR OLIVER
1976 - 1980



STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF NITRATE PLUS NITRITE (N) / TOTAL NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
1976							
1977 JUN JUL AUG OCT NOV DEC	51	0.0066	0.402	0.197	0.1026	0.0144	± 0.0289
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	108	0.0011	0.500	0.146	0.1195	0.0115	± 0.0228
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC	46	0.0086	0.629	0.272	0.1966	0.0290	± 0.0584
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	45	0.0817	0.614	0.267	0.1765	0.0263	± 0.0530

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF NITRATE PLUS NITRITE (N) / TOTAL NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
			APRIL TO SEPTEMBER				
1976							
1977	26	0.0302	0.310	0.230	0.0571	0.0112	± 0.0231
1978	54	0.0011	0.500	0.180	0.1281	0.0174	± 0.0350
1979	15	0.0086	0.317	0.099	0.0955	0.0247	± 0.0529
1980	24	0.0817	0.413	0.147	0.0930	0.0190	± 0.0393
1976-80	119	0.0011	0.500	0.174	0.1113	0.0102	± 0.0202
			OCTOBER TO MARCH				
1976-77							
1977-78	54	0.0066	0.402	0.138	0.1116	0.0152	± 0.0305
1978-79	45	0.0043	0.629	0.213	0.1895	0.0282	± 0.0569
1979-80	22	0.1098	0.614	0.441	0.1372	0.0293	± 0.0608
1980-81	10	0.1197	0.478	0.293	0.1308	0.0414	± 0.0936
1976-80	131	0.0043	0.629	0.226	0.1814	0.0158	± 0.0314
			APRIL TO MARCH				
1976-80	250	0.0011	0.629	0.201	0.1541	0.0097	± 0.0192

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF NITRATE PLUS NITRITE (N) / TOTAL NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
1976							
1977 JUN JUL AUG OCT NOV DEC							
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC							
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC							
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC							
	250	0.0011	0.629	0.201	0.1541	0.0097	± 0.0192

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OKANAGAN RIVER NEAR OLIVER

Statistical Characteristics of Nutrient Loads

Period of Sampling June 1977 to December 1980.

RATIO OF NITRATE PLUS NITRITE (N) TO TOTAL NITROGEN (N)

Median loads and their statistical characteristics determined for

- Individual Months
- All Months
- Individual years
- Seasons
  - April to September
  - October to March
  - April to March
- All Years

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF NITRATE PLUS NITRITE (N) / TOTAL NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD		NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
1977	JUNE	7	0.254	0.2434	0.2735	0.984
	JULY	11	0.242	0.2260	0.2614	0.961
	AUGUST	8	0.212	0.1363	0.3102	0.961
	OCTOBER	10	0.283	0.0188	0.3244	0.979
	NOVEMBER	10	0.040	0.0297	0.1278	0.979
	DECEMBER	5	0.150		0.1050	0.969
1978	JANUARY	1	0.111			
	FEBRUARY	10	0.182	0.0408	0.2588	0.979
	MARCH	18	0.045	0.0110	0.1654	0.969
	APRIL	9	0.192	0.0689	0.3388	0.961
	MAY	10	0.123	0.0294	0.2162	0.979
	JUNE	7	0.069	0.0011	0.1538	0.984
	JULY	9	0.137	0.1131	0.1640	0.961
	AUGUST	6	0.211	0.1359	0.5000	0.969
	SEPTEMBER	13	0.274	0.1291	0.3929	0.978
	OCTOBER	8	0.090	0.0708	0.1685	0.961
	NOVEMBER	11	0.040	0.0089	0.2609	0.961
	DECEMBER	6	0.027	0.0081	0.3238	0.969
1979	JANUARY	4	0.514			
	FEBRUARY	7	0.514	0.3086	0.6293	0.984
	MARCH	9	0.143	0.0535	0.2677	0.961
	APRIL	6	0.009	0.0086	0.0096	0.969
	JULY	1	0.093			
	AUGUST	4	0.091			
	SEPTEMBER	4	0.191			
	OCTOBER	5	0.276		0.1098	0.969
	NOVEMBER	3	0.503			
	DECEMBER	3	0.525			
1980	JANUARY	4	0.525			
	FEBRUARY	3	0.501			
	MARCH	4	0.455			
	APRIL	3	0.338			
	MAY	4	0.109			
	JUNE	4	0.083			
	JULY	4	0.094			
	AUGUST	4	0.089			
	SEPTEMBER	5	0.098		0.0842	0.969
	OCTOBER	4	0.193			
	NOVEMBER	4	0.332			
	DECEMBER	2	0.468			

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF NITRATE PLUS NITRITE (N) / TOTAL NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
- -78-79-80 JANUARY	9	0.525	0.3821	0.5493	0.961
- -78-79-80 FEBRUARY	20	0.309	0.1989	0.5006	0.959
- -78-79-80 MARCH	31	0.131	0.0447	0.1814	0.971
- -78-79-80 APRIL	18	0.082	0.0096	0.3216	0.969
- -78- -80 MAY	14	0.123	0.0774	0.2004	0.965
-77-78- -80 JUNE	18	0.131	0.0817	0.2512	0.969
-77-78-79-80 JULY	25	0.164	0.1344	0.2343	0.957
-77-78-79-80 AUGUST	22	0.150	0.1333	0.2192	0.965
- -78-79-80 SEPTEMBER	22	0.191	0.1291	0.3272	0.965
-77-78-79-80 OCTOBER	27	0.193	0.1165	0.2829	0.964
-77-78-79-80 NOVEMBER	28	0.054	0.0362	0.2536	0.964
-77-78-79-80 DECEMBER	16	0.241	0.1050	0.4778	0.951

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF NITRATE PLUS NITRITE (N) / TOTAL NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
1976					
1977 JUN JUL AUG OCT NOV DEC	51	0.234	0.1861	0.2540	0.951
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	108	0.134	0.1023	0.1503	0.957
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC	46	0.245	0.1433	0.3367	0.960
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	45	0.200	0.1130	0.3709	0.964

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF NITRATE PLUS NITRITE (N) / TOTAL NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
		APRIL TO SEPTEMBER			
1976					
1977	26	0.243	0.2192	0.2561	0.971
1978	54	0.142	0.1293	0.1922	0.960
1979	15	0.091	0.0091	0.1904	0.965
1980	24	0.100	0.0940	0.1482	0.957
1976-80	119	0.149	0.1333	0.1922	0.957
		OCTOBER TO MARCH			
1976-77					
1977-78	54	0.111	0.0450	0.1773	0.960
1978-79	45	0.145	0.0888	0.2677	0.964
1979-80	22	0.493	0.4254	0.5253	0.965
1980-81	10	0.232	0.1576	0.4682	0.979
1976-80	131	0.181	0.1454	0.2536	0.955
		APRIL TO MARCH			
1976-80	250	0.164	0.1450	0.1989	0.950

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF NITRATE PLUS NITRITE (N) / TOTAL NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
1976					
1977 JUN JUL AUG OCT NOV DEC					
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC					
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC					
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC					
	250	0.164	0.1450	0.1989	0.950

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OKANAGAN RIVER NEAR OLIVER

Statistical Characteristics of Nutrient Concentrations

Period of Sampling June 1977 to December 1980.

RATIO OF NITRATE PLUS NITRITE (N) TO DISSOLVED SILICA

Arithmetic mean concentrations and their statistical characteristics determined for:

- Individual Months
- All Months
  - Graph of monthly concentration ranges
- Individual years
- Seasons
  - April to September
  - October to March
  - April to March
- All Years
  - Histogram of concentration distribution

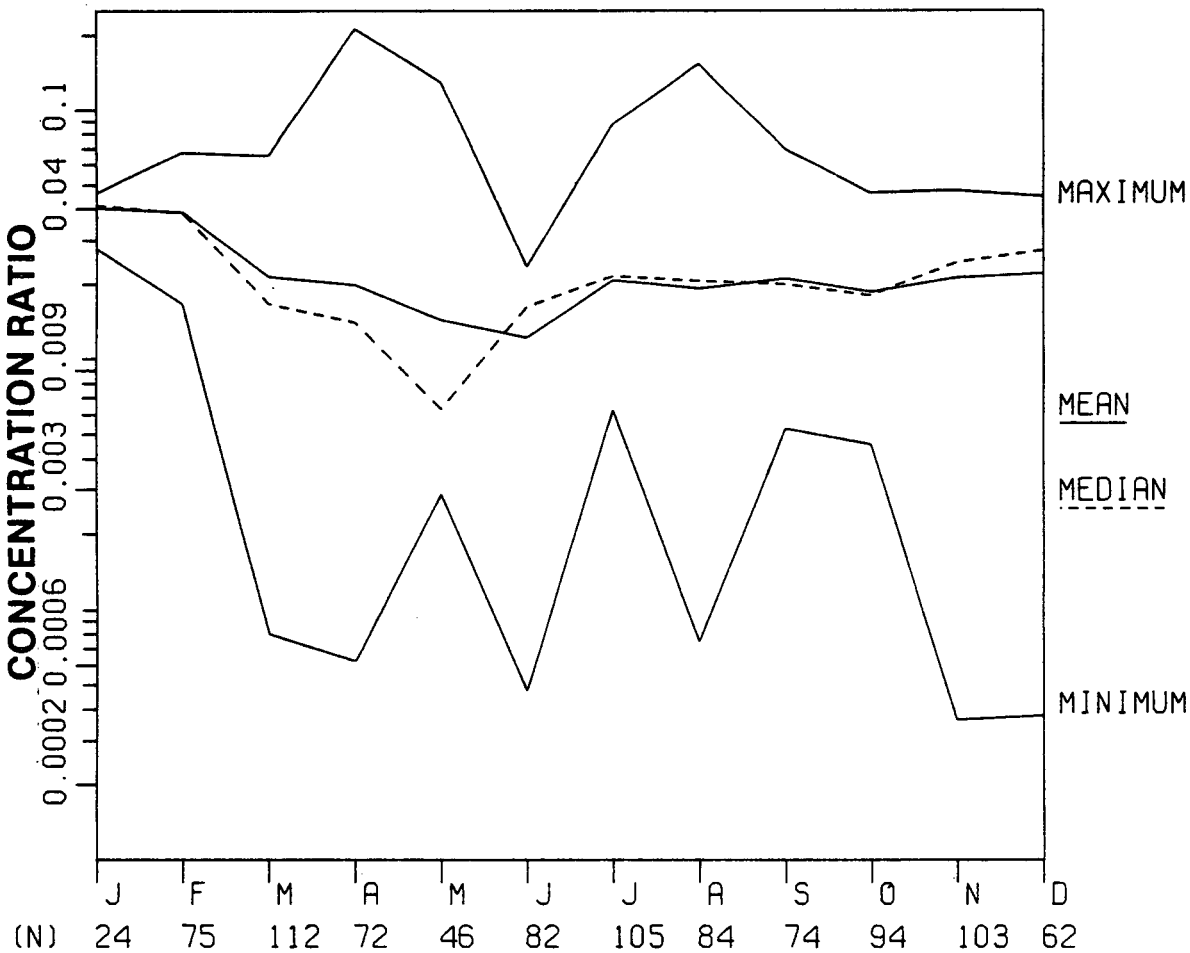
STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF NITRATE PLUS NITRITE (N) / DISSOLVED SILICA
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
1977 JUNE	41	0.0060	0.024	0.018	0.0028	0.0004	± 0.0009
JULY	42	0.0174	0.087	0.025	0.0103	0.0016	± 0.0032
AUGUST	28	0.0007	0.030	0.015	0.0119	0.0022	± 0.0046
OCTOBER	26	0.0181	0.033	0.025	0.0039	0.0008	± 0.0016
NOVEMBER	27	0.0277	0.048	0.035	0.0059	0.0011	± 0.0023
DECEMBER	10	0.0071	0.045	0.036	0.0134	0.0042	± 0.0096
1978 JANUARY	1	0.0370	0.037	0.037			
FEBRUARY	44	0.0167	0.058	0.040	0.0113	0.0017	± 0.0034
MARCH	60	0.0050	0.066	0.020	0.0154	0.0020	± 0.0040
APRIL	36	0.0011	0.212	0.028	0.0339	0.0057	± 0.0115
MAY	30	0.0037	0.131	0.020	0.0309	0.0056	± 0.0115
JUNE	25	0.0005	0.018	0.008	0.0066	0.0013	± 0.0027
JULY	31	0.0131	0.085	0.027	0.0129	0.0023	± 0.0047
AUGUST	24	0.0223	0.154	0.034	0.0288	0.0059	± 0.0122
SEPTEMBER	38	0.0106	0.070	0.029	0.0111	0.0018	± 0.0036
OCTOBER	32	0.0060	0.046	0.017	0.0072	0.0013	± 0.0026
NOVEMBER	48	0.0004	0.041	0.009	0.0123	0.0018	± 0.0036
DECEMBER	32	0.0004	0.034	0.010	0.0127	0.0022	± 0.0046
1979 JANUARY	12	0.0395	0.047	0.042	0.0019	0.0006	± 0.0012
FEBRUARY	19	0.0224	0.067	0.038	0.0126	0.0029	± 0.0061
MARCH	36	0.0008	0.027	0.015	0.0081	0.0013	± 0.0027
APRIL	24	0.0006	0.001	0.001	0.0001	0.0000	± 0.0000
JULY	12	0.0063	0.012	0.008	0.0020	0.0006	± 0.0013
AUGUST	16	0.0063	0.030	0.014	0.0083	0.0021	± 0.0044
SEPTEMBER	16	0.0057	0.028	0.020	0.0054	0.0013	± 0.0029
OCTOBER	20	0.0045	0.031	0.019	0.0106	0.0024	± 0.0050
NOVEMBER	12	0.0364	0.046	0.040	0.0032	0.0009	± 0.0020
DECEMBER	8	0.0292	0.045	0.040	0.0051	0.0018	± 0.0043
1980 JANUARY	11	0.0277	0.047	0.039	0.0072	0.0022	± 0.0049
FEBRUARY	12	0.0213	0.047	0.037	0.0087	0.0025	± 0.0055
MARCH	16	0.0371	0.047	0.042	0.0033	0.0008	± 0.0017
APRIL	12	0.0076	0.050	0.033	0.0177	0.0051	± 0.0113
MAY	16	0.0029	0.006	0.004	0.0010	0.0003	± 0.0005
JUNE	16	0.0024	0.006	0.004	0.0015	0.0004	± 0.0008
JULY	20	0.0077	0.016	0.010	0.0021	0.0005	± 0.0010
AUGUST	16	0.0063	0.022	0.010	0.0052	0.0013	± 0.0028
SEPTEMBER	20	0.0053	0.019	0.007	0.0033	0.0007	± 0.0015
OCTOBER	16	0.0059	0.019	0.012	0.0037	0.0009	± 0.0020
NOVEMBER	16	0.0073	0.029	0.019	0.0067	0.0017	± 0.0036
DECEMBER	12	0.0229	0.036	0.030	0.0043	0.0012	± 0.0027

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF NITRATE PLUS NITRITE (N) / DISSOLVED SILICA
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
- -78-79-80 JANUARY	24	0.0277	0.047	0.040	0.0052	0.0011	± 0.0022
- -78-79-80 FEBRUARY	75	0.0167	0.067	0.039	0.0112	0.0013	± 0.0026
- -78-79-80 MARCH	112	0.0008	0.066	0.021	0.0149	0.0014	± 0.0028
- -78-79-80 APRIL	72	0.0006	0.212	0.020	0.0284	0.0033	± 0.0067
- -78- -80 MAY	46	0.0029	0.131	0.014	0.0259	0.0038	± 0.0077
-77-78- -80 JUNE	82	0.0005	0.024	0.012	0.0070	0.0008	± 0.0015
-77-78-79-80 JULY	105	0.0063	0.087	0.021	0.0123	0.0012	± 0.0024
-77-78-79-80 AUGUST	84	0.0007	0.154	0.019	0.0196	0.0021	± 0.0043
- -78-79-80 SEPTEMBER	74	0.0053	0.070	0.021	0.0123	0.0014	± 0.0029
-77-78-79-80 OCTOBER	94	0.0045	0.046	0.019	0.0082	0.0008	± 0.0017
-77-78-79-80 NOVEMBER	103	0.0004	0.048	0.021	0.0157	0.0015	± 0.0031
-77-78-79-80 DECEMBER	62	0.0004	0.045	0.022	0.0166	0.0021	± 0.0042

RATIO OF NITRATE PLUS NITRITE (N) / DISSOLVED SILICA
NEAR OLIVER
1976 - 1980



STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF NITRATE PLUS NITRITE (N) / DISSOLVED SILICA
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
1976							
1977 JUN JUL AUG OCT NOV DEC	174	0.0007	0.087	0.024	0.0108	0.0008	± 0.0016
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	401	0.0004	0.212	0.022	0.0206	0.0010	± 0.0020
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC	175	0.0006	0.067	0.021	0.0153	0.0012	± 0.0023
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	183	0.0024	0.050	0.019	0.0150	0.0011	± 0.0022

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF NITRATE PLUS NITRITE (N) / DISSOLVED SILICA
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
			APRIL TO SEPTEMBER				
1976							
1977	111	0.0007	0.087	0.020	0.0098	0.0009	± 0.0019
1978	184	0.0005	0.212	0.025	0.0243	0.0018	± 0.0035
1979	68	0.0006	0.030	0.010	0.0091	0.0011	± 0.0022
1980	100	0.0024	0.050	0.010	0.0110	0.0011	± 0.0022
1976-80	463	0.0005	0.212	0.018	0.0183	0.0009	± 0.0017
			OCTOBER TO MARCH				
1976-77							
1977-78	168	0.0050	0.066	0.029	0.0143	0.0011	± 0.0022
1978-79	179	0.0004	0.067	0.017	0.0147	0.0011	± 0.0022
1979-80	79	0.0045	0.047	0.034	0.0117	0.0013	± 0.0026
1980-81	44	0.0059	0.036	0.020	0.0089	0.0013	± 0.0027
1976-80	470	0.0004	0.067	0.025	0.0153	0.0007	± 0.0014
			APRIL TO MARCH				
1976-80	933	0.0004	0.212	0.021	0.0172	0.0006	± 0.0011

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF NITRATE PLUS NITRITE (N) / DISSOLVED SILICA
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
1976							
1977 JUN JUL AUG OCT NOV DEC							
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC							
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC							
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC							
	933	0.0004	0.212	0.021	0.0172	0.0006	± 0.0011

NITRATE PLUS NITRITE (N) / DISSOLVED SILICA

n = 933

CONCENTRATION RATIO

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OKANAGAN RIVER NEAR OLIVER

Statistical Characteristics of Nutrient Concentrations

Period of Sampling June 1977 to December 1980.

RATIO OF NITRATE PLUS NITRITE (N) TO DISSOLVED SILICA

Median concentrations and their statistical characteristics determined for

- Individual Months
- All Months
- Individual years
- Seasons
  - April to September
  - October to March
  - April to March
- All Years
  - Cumulative distribution of concentration data

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF NITRATE PLUS NITRITE (N) / DISSOLVED SILICA
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD		NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
1977	JUNE	41	0.017	0.0171	0.0174	0.956
	JULY	42	0.023	0.0224	0.0253	0.956
	AUGUST	28	0.018	0.0027	0.0259	0.964
	OCTOBER	26	0.024	0.0225	0.0279	0.971
	NOVEMBER	27	0.032	0.0317	0.0395	0.964
	DECEMBER	10	0.040	0.0144	0.0439	0.979
1978	JANUARY	1	0.037			
	FEBRUARY	44	0.040	0.0343	0.0453	0.951
	MARCH	60	0.010	0.0100	0.0173	0.960
	APRIL	36	0.021	0.0191	0.0267	0.953
	MAY	30	0.009	0.0080	0.0119	0.957
	JUNE	25	0.008	0.0005	0.0138	0.957
	JULY	31	0.026	0.0214	0.0278	0.971
	AUGUST	24	0.025	0.0242	0.0277	0.957
	SEPTEMBER	38	0.026	0.0241	0.0324	0.966
	OCTOBER	32	0.015	0.0139	0.0188	0.965
	NOVEMBER	48	0.001	0.0006	0.0113	0.956
	DECEMBER	32	0.002	0.0006	0.0119	0.965
1979	JANUARY	12	0.041	0.0404	0.0429	0.961
	FEBRUARY	19	0.033	0.0271	0.0452	0.959
	MARCH	36	0.016	0.0103	0.0203	0.953
	APRIL	24	0.001	0.0007	0.0008	0.957
	JULY	12	0.008	0.0067	0.0111	0.961
	AUGUST	16	0.011	0.0065	0.0214	0.951
	SEPTEMBER	16	0.020	0.0194	0.0242	0.951
	OCTOBER	20	0.019	0.0077	0.0282	0.959
	NOVEMBER	12	0.039	0.0372	0.0435	0.961
	DECEMBER	8	0.040	0.0370	0.0449	0.961
1980	JANUARY	11	0.042	0.0319	0.0457	0.961
	FEBRUARY	12	0.038	0.0298	0.0447	0.961
	MARCH	16	0.041	0.0389	0.0437	0.951
	APRIL	12	0.042	0.0093	0.0455	0.961
	MAY	16	0.004	0.0034	0.0054	0.951
	JUNE	16	0.004	0.0027	0.0061	0.951
	JULY	20	0.009	0.0083	0.0100	0.959
	AUGUST	16	0.007	0.0065	0.0135	0.951
	SEPTEMBER	20	0.006	0.0057	0.0071	0.959
	OCTOBER	16	0.013	0.0108	0.0158	0.951
	NOVEMBER	16	0.019	0.0178	0.0244	0.951
	DECEMBER	12	0.031	0.0250	0.0341	0.961

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF NITRATE PLUS NITRITE (N) / DISSOLVED SILICA
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
- -78-79-80 JANUARY	24	0.041	0.0404	0.0432	0.957
- -78-79-80 FEBRUARY	75	0.039	0.0341	0.0442	0.963
- -78-79-80 MARCH	112	0.017	0.0114	0.0203	0.953
- -78-79-80 APRIL	72	0.014	0.0076	0.0210	0.956
- -78- -80 MAY	46	0.006	0.0056	0.0091	0.960
-77-78- -80 JUNE	82	0.016	0.0111	0.0171	0.952
-77-78-79-80 JULY	105	0.022	0.0191	0.0231	0.959
-77-78-79-80 AUGUST	84	0.021	0.0111	0.0239	0.962
- -78-79-80 SEPTEMBER	74	0.020	0.0187	0.0242	0.953
-77-78-79-80 OCTOBER	94	0.018	0.0158	0.0203	0.951
-77-78-79-80 NOVEMBER	103	0.024	0.0186	0.0289	0.952
-77-78-79-80 DECEMBER	62	0.027	0.0119	0.0333	0.957

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF NITRATE PLUS NITRITE (N) / DISSOLVED SILICA
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
1976					
1977 JUN JUL AUG OCT NOV DEC	174	0.023	0.0224	0.0253	0.951
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	401	0.019	0.0170	0.0209	0.954
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC	175	0.020	0.0159	0.0233	0.951
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	183	0.011	0.0092	0.0161	0.954

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF NITRATE PLUS NITRITE (N) / DISSOLVED SILICA
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

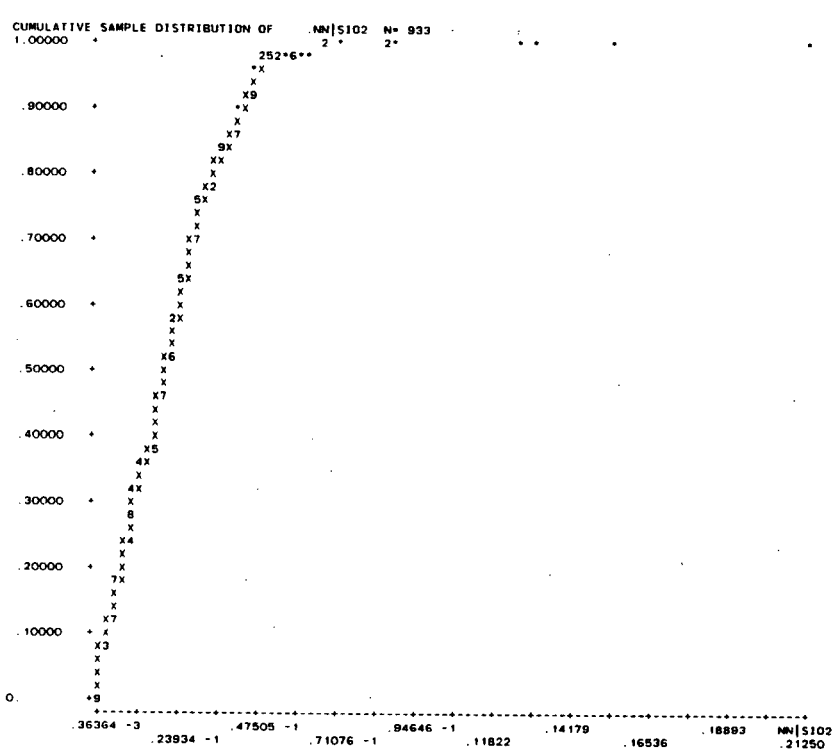
SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
		APRIL TO SEPTEMBER			
1976					
1977	111	0.020	0.0177	0.0224	0.953
1978	184	0.022	0.0192	0.0241	0.954
1979	68	0.007	0.0063	0.0111	0.961
1980	100	0.007	0.0063	0.0077	0.954
1976-80	463	0.017	0.0160	0.0176	0.954
		OCTOBER TO MARCH			
1976-77					
1977-78	168	0.030	0.0275	0.0325	0.955
1978-79	179	0.016	0.0120	0.0188	0.956
1979-80	79	0.039	0.0364	0.0405	0.958
1980-81	44	0.019	0.0135	0.0233	0.951
1976-80	470	0.025	0.0225	0.0268	0.953
		APRIL TO MARCH			
1976-80	933	0.019	0.0185	0.0210	0.951

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF NITRATE PLUS NITRITE (N) / DISSOLVED SILICA
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
1976					
1977 JUN JUL AUG OCT NOV DEC					
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC					
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC					
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC					
	933	0.019	0.0185	0.0210	0.951

DISTRIBUTIONAL ANALYSIS

CUMULATIVE SAMPLE DISTRIBUTION OF .NN|SIO2 N= 933



PROB	QUANTILE	LEVEL	CONFIDENCE INTERVAL		SIZE
.1000	.27027 -2	.9500	.83333 -3	.37736 -2	.9508
.3000	.10000 -1	.9500	.97436 -2	.11724 -1	.9506
.5000	.19500 -1	.9500	.18537 -1	.21000 -1	.9506
.7000	.27273 -1	.9500	.26176 -1	.28205 -1	.9506
.9000	.42222 -1	.9500	.40541 -1	.43902 -1	.9508

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OKANAGAN RIVER NEAR OLIVER

Statistical Characteristics of Nutrient Loads

Period of Sampling June 1977 to December 1980.

RATIO OF NITRATE PLUS NITRITE (N) TO DISSOLVED SILICA

Arithmetic mean loads and their statistical characteristics determined for

- Individual Months
- All Months
  - Graph of monthly load ranges
- Individual years
- Seasons
  - April to September
  - October to March
  - April to March
- All Years

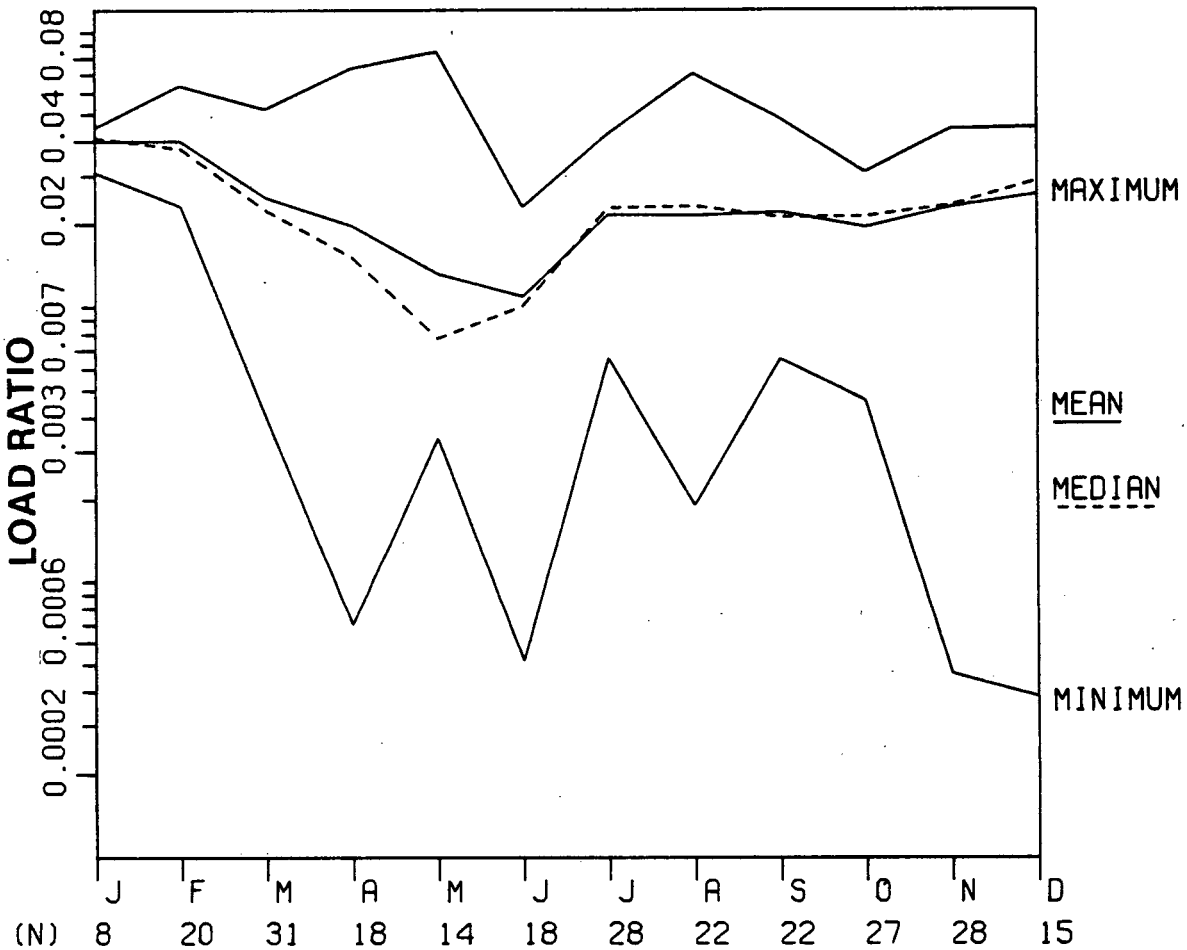
STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF NITRATE PLUS NITRITE (N) / DISSOLVED SILICA
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
1977 JUNE	7	0.0131	0.023	0.018	0.0033	0.0013	± 0.0031
JULY	11	0.0219	0.027	0.025	0.0018	0.0006	± 0.0012
AUGUST	8	0.0019	0.029	0.022	0.0086	0.0030	± 0.0072
OCTOBER	10	0.0212	0.030	0.025	0.0035	0.0011	± 0.0025
NOVEMBER	10	0.0293	0.044	0.034	0.0051	0.0016	± 0.0036
DECEMBER	5	0.0252	0.045	0.037	0.0081	0.0036	± 0.0100
1978 JANUARY	1	0.0370	0.037	0.037			
FEBRUARY	10	0.0231	0.053	0.037	0.0097	0.0031	± 0.0069
MARCH	18	0.0080	0.052	0.026	0.0167	0.0039	± 0.0083
APRIL	9	0.0114	0.073	0.028	0.0189	0.0063	± 0.0145
MAY	10	0.0063	0.085	0.017	0.0241	0.0076	± 0.0173
JUNE	7	0.0005	0.016	0.008	0.0069	0.0026	± 0.0064
JULY	9	0.0166	0.042	0.027	0.0082	0.0027	± 0.0063
AUGUST	6	0.0231	0.070	0.034	0.0181	0.0074	± 0.0190
SEPTEMBER	13	0.0183	0.048	0.028	0.0088	0.0024	± 0.0053
OCTOBER	8	0.0113	0.024	0.016	0.0046	0.0016	± 0.0038
NOVEMBER	11	0.0005	0.036	0.010	0.0124	0.0037	± 0.0083
DECEMBER	6	0.0004	0.030	0.011	0.0138	0.0056	± 0.0145
1979 JANUARY	4	0.0405	0.042	0.041	0.0005	0.0003	± 0.0008
FEBRUARY	7	0.0257	0.064	0.045	0.0159	0.0060	± 0.0147
MARCH	9	0.0040	0.025	0.015	0.0078	0.0026	± 0.0060
APRIL	6	0.0007	0.001	0.001	0.0001	0.0000	± 0.0001
JULY	3	0.0066	0.010	0.008	0.0016	0.0009	± 0.0039
AUGUST	4	0.0078	0.023	0.014	0.0071	0.0035	± 0.0113
SEPTEMBER	4	0.0153	0.024	0.020	0.0040	0.0020	± 0.0063
OCTOBER	5	0.0046	0.031	0.019	0.0112	0.0050	± 0.0139
NOVEMBER	3	0.0374	0.043	0.040	0.0026	0.0015	± 0.0065
DECEMBER	2	0.0368	0.043	0.040	0.0042	0.0030	± 0.0381
1980 JANUARY	3	0.0307	0.045	0.040	0.0078	0.0045	± 0.0193
FEBRUARY	3	0.0282	0.046	0.037	0.0089	0.0051	± 0.0221
MARCH	4	0.0380	0.046	0.042	0.0032	0.0016	± 0.0052
APRIL	3	0.0098	0.048	0.033	0.0206	0.0119	± 0.0513
MAY	4	0.0034	0.005	0.004	0.0008	0.0004	± 0.0012
JUNE	4	0.0027	0.006	0.004	0.0016	0.0008	± 0.0026
JULY	5	0.0078	0.026	0.013	0.0077	0.0034	± 0.0096
AUGUST	4	0.0065	0.016	0.010	0.0046	0.0023	± 0.0074
SEPTEMBER	5	0.0065	0.010	0.007	0.0014	0.0006	± 0.0018
OCTOBER	4	0.0081	0.014	0.012	0.0028	0.0014	± 0.0045
NOVEMBER	4	0.0086	0.023	0.019	0.0069	0.0035	± 0.0110
DECEMBER	2	0.0280	0.029	0.028	0.0004	0.0003	± 0.0037

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF NITRATE PLUS NITRITE (N) / DISSOLVED SILICA
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
- -78-79-80 JANUARY	8	0.0307	0.045	0.040	0.0044	0.0016	± 0.0037
- -78-79-80 FEBRUARY	20	0.0231	0.064	0.040	0.0122	0.0027	± 0.0057
- -78-79-80 MARCH	31	0.0040	0.052	0.025	0.0156	0.0028	± 0.0057
- -78-79-80 APRIL	18	0.0007	0.073	0.020	0.0203	0.0048	± 0.0101
- -78- -80 MAY	14	0.0034	0.085	0.013	0.0209	0.0056	± 0.0121
-77-78- -80 JUNE	18	0.0005	0.023	0.011	0.0077	0.0018	± 0.0038
-77-78-79-80 JULY	28	0.0066	0.042	0.022	0.0088	0.0017	± 0.0034
-77-78-79-80 AUGUST	22	0.0019	0.070	0.021	0.0139	0.0030	± 0.0062
- -78-79-80 SEPTEMBER	22	0.0065	0.048	0.022	0.0110	0.0024	± 0.0049
-77-78-79-80 OCTOBER	27	0.0046	0.031	0.019	0.0072	0.0014	± 0.0029
-77-78-79-80 NOVEMBER	28	0.0005	0.044	0.023	0.0151	0.0029	± 0.0059
-77-78-79-80 DECEMBER	15	0.0004	0.045	0.026	0.0161	0.0041	± 0.0089

RATIO OF NITRATE PLUS NITRITE (N) / DISSOLVED SILICA
NEAR OLIVER
1976 - 1980



STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF NITRATE PLUS NITRITE (N) / DISSOLVED SILICA
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
1976							
1977 JUN JUL AUG OCT NOV DEC	51	0.0019	0.045	0.026	0.0079	0.0011	± 0.0022
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	108	0.0004	0.085	0.023	0.0164	0.0016	± 0.0031
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC	47	0.0007	0.064	0.023	0.0172	0.0025	± 0.0051
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	45	0.0027	0.048	0.019	0.0150	0.0022	± 0.0045

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF NITRATE PLUS NITRITE (N) / DISSOLVED SILICA
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
			APRIL TO SEPTEMBER				
1976							
1977	26	0.0019	0.029	0.022	0.0056	0.0011	± 0.0023
1978	54	0.0005	0.085	0.024	0.0168	0.0023	± 0.0046
1979	17	0.0007	0.024	0.010	0.0088	0.0021	± 0.0045
1980	25	0.0027	0.048	0.011	0.0115	0.0023	± 0.0047
1976-80	122	0.0005	0.085	0.019	0.0143	0.0013	± 0.0026
			OCTOBER TO MARCH				
1976-77							
1977-78	54	0.0080	0.053	0.031	0.0120	0.0016	± 0.0033
1978-79	45	0.0004	0.064	0.020	0.0172	0.0026	± 0.0052
1979-80	20	0.0046	0.046	0.035	0.0116	0.0026	± 0.0054
1980-81	10	0.0081	0.029	0.018	0.0076	0.0024	± 0.0054
1976-80	129	0.0004	0.064	0.027	0.0149	0.0013	± 0.0026
			APRIL TO MARCH				
1976-80	251	0.0004	0.085	0.023	0.0151	0.0010	± 0.0019

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF NITRATE PLUS NITRITE (N) / DISSOLVED SILICA
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
1976							
1977 JUN JUL AUG OCT NOV DEC							
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC							
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC							
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC							
	251	0.0004	0.085	0.023	0.0151	0.0010	± 0.0019

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OKANAGAN RIVER NEAR OLIVER

Statistical Characteristics of Nutrient Loads

Period of Sampling June 1977 to December 1980.

RATIO OF NITRATE PLUS NITRITE (N) TO DISSOLVED SILICA

Median loads and their statistical characteristics determined for

- Individual Months
- All Months
- Individual years
- Seasons
  - April to September
  - October to March
  - April to March
- All Years

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF NITRATE PLUS NITRITE (N) / DISSOLVED SILICA
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
1977 JUNE	7	0.018	0.0131	0.0230	0.984
JULY	11	0.025	0.0228	0.0266	0.961
AUGUST	8	0.024	0.0198	0.0288	0.961
OCTOBER	10	0.023	0.0213	0.0288	0.979
NOVEMBER	10	0.032	0.0303	0.0415	0.979
DECEMBER	5	0.039		0.0252	0.969
1978 JANUARY	1	0.037			
FEBRUARY	10	0.037	0.0261	0.0477	0.979
MARCH	18	0.019	0.0100	0.0401	0.969
APRIL	9	0.021	0.0151	0.0378	0.961
MAY	10	0.008	0.0071	0.0153	0.979
JUNE	7	0.008	0.0005	0.0163	0.984
JULY	9	0.027	0.0188	0.0354	0.961
AUGUST	6	0.026	0.0231	0.0704	0.969
SEPTEMBER	13	0.026	0.0198	0.0348	0.978
OCTOBER	8	0.015	0.0115	0.0242	0.961
NOVEMBER	11	0.003	0.0006	0.0234	0.961
DECEMBER	6	0.002	0.0004	0.0300	0.969
1979 JANUARY	4	0.041			
FEBRUARY	7	0.046	0.0257	0.0637	0.984
MARCH	9	0.015	0.0053	0.0233	0.961
APRIL	6	0.001	0.0007	0.0008	0.969
JULY	3	0.009			
AUGUST	4	0.010			
SEPTEMBER	4	0.019			
OCTOBER	5	0.022		0.0046	0.969
NOVEMBER	3	0.041			
DECEMBER	2	0.037			
1980 JANUARY	3	0.043			
FEBRUARY	3	0.037			
MARCH	4	0.041			
APRIL	3	0.043			
MAY	4	0.004			
JUNE	4	0.003			
JULY	5	0.010		0.0078	0.969
AUGUST	4	0.007			
SEPTEMBER	5	0.007		0.0065	0.969
OCTOBER	4	0.013			
NOVEMBER	4	0.019			
DECEMBER	2	0.028			

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF NITRATE PLUS NITRITE (N) / DISSOLVED SILICA
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
- -78-79-80 JANUARY	8	0.041	0.0370	0.0449	0.961
- -78-79-80 FEBRUARY	20	0.038	0.0282	0.0459	0.959
- -78-79-80 MARCH	31	0.022	0.0117	0.0380	0.971
- -78-79-80 APRIL	18	0.015	0.0008	0.0274	0.969
- -78- -80 MAY	14	0.008	0.0052	0.0119	0.965
-77-78- -80 JUNE	18	0.010	0.0028	0.0172	0.969
-77-78-79-80 JULY	28	0.023	0.0188	0.0263	0.964
-77-78-79-80 AUGUST	22	0.023	0.0164	0.0263	0.965
- -78-79-80 SEPTEMBER	22	0.021	0.0183	0.0293	0.965
-77-78-79-80 OCTOBER	27	0.021	0.0144	0.0242	0.964
-77-78-79-80 NOVEMBER	28	0.023	0.0166	0.0326	0.964
-77-78-79-80 DECEMBER	15	0.029	0.0048	0.0387	0.965

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF NITRATE PLUS NITRITE (N) / DISSOLVED SILICA
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
1976					
1977 JUN JUL AUG OCT NOV DEC	51	0.026	0.0230	0.0276	0.951
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	108	0.021	0.0166	0.0256	0.957
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC	47	0.022	0.0120	0.0263	0.960
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	45	0.010	0.0081	0.0234	0.964

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF NITRATE PLUS NITRITE (N) / DISSOLVED SILICA
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
APRIL TO SEPTEMBER					
1976					
1977	26	0.023	0.0206	0.0260	0.971
1978	54	0.021	0.0166	0.0259	0.960
1979	17	0.009	0.0008	0.0164	0.951
1980	25	0.007	0.0062	0.0098	0.957
1976-80	122	0.018	0.0153	0.0214	0.953
OCTOBER TO MARCH					
1976-77					
1977-78	54	0.030	0.0274	0.0353	0.960
1978-79	45	0.019	0.0115	0.0242	0.964
1979-80	20	0.037	0.0307	0.0427	0.959
1980-81	10	0.014	0.0086	0.0280	0.979
1976-80	129	0.027	0.0234	0.0303	0.957
APRIL TO MARCH					
1976-80	251	0.023	0.0198	0.0244	0.957

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF NITRATE PLUS NITRITE (N) / DISSOLVED SILICA
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
1976					
1977 JUN JUL AUG OCT NOV DEC					
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC					
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC					
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC					
	251	0.023	0.0198	0.0244	0.957

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OKANAGAN RIVER NEAR OLIVER

Statistical Characteristics of Nutrient Concentrations

Period of Sampling June 1977 to December 1980.

AMMONIA (N)

Arithmetic mean concentrations and their statistical characteristics determined for:

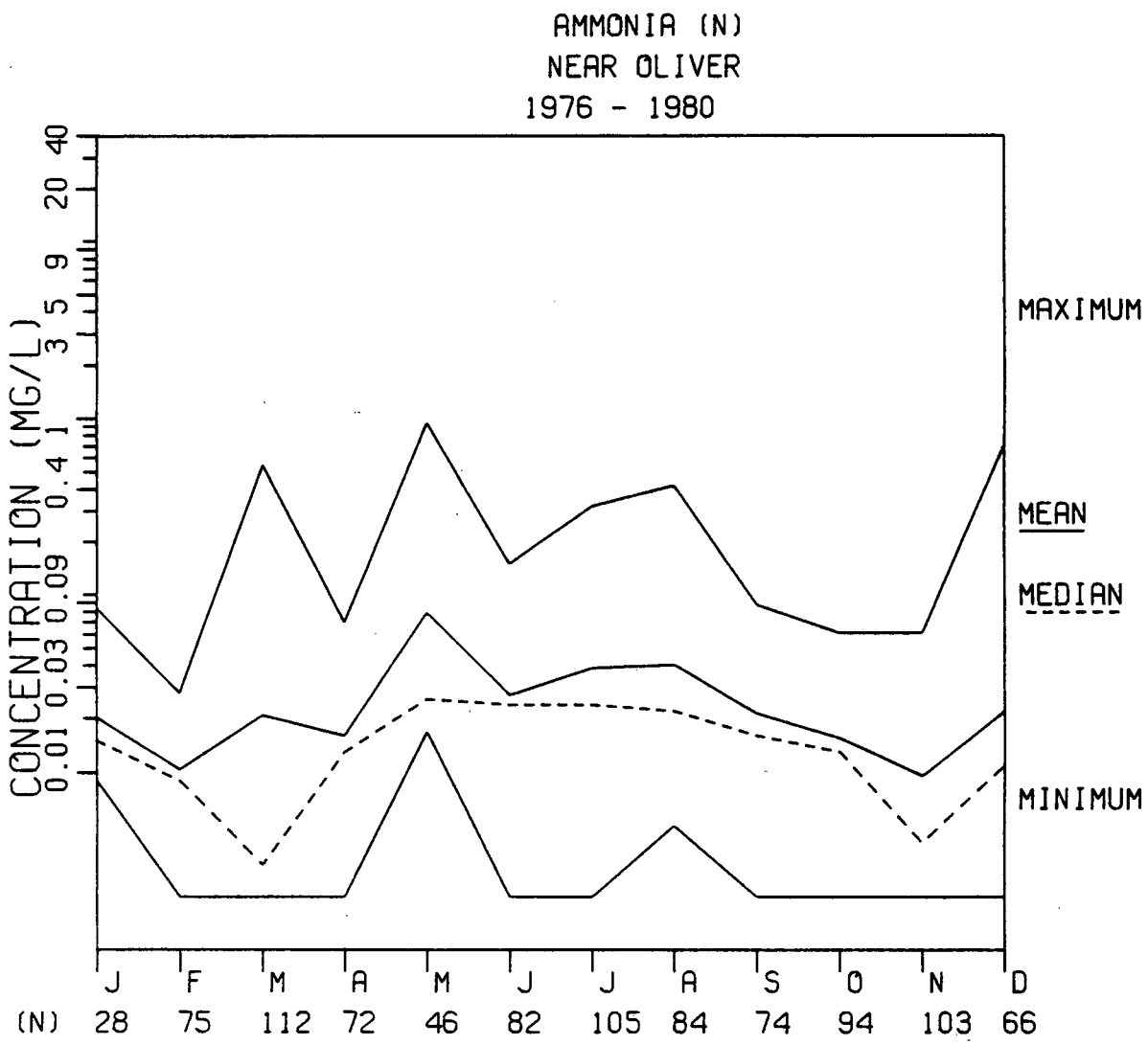
- Individual Months
- All Months
  - Graph of monthly concentration ranges
- Individual years
- Seasons
  - April to September
  - October to March
  - April to March
- All Years
  - Histogram of concentration distribution

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
AMMONIA (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
				(MG/L)			
1977 JUNE	41	0.0020	0.062	0.025	0.0139	0.0022	± 0.0044
JULY	42	0.0020	0.048	0.021	0.0127	0.0020	± 0.0039
AUGUST	28	0.0100	0.150	0.043	0.0416	0.0079	± 0.0161
OCTOBER	26	0.0020	0.014	0.005	0.0039	0.0008	± 0.0016
NOVEMBER	27	0.0020	0.044	0.006	0.0097	0.0019	± 0.0038
DECEMBER	10	0.0020	0.720	0.087	0.2227	0.0704	± 0.1593
1978 JANUARY	1	0.0840	0.084	0.084			
FEBRUARY	44	0.0020	0.026	0.008	0.0074	0.0011	± 0.0023
MARCH	60	0.0020	0.550	0.030	0.0781	0.0101	± 0.0202
APRIL	36	0.0020	0.063	0.019	0.0150	0.0025	± 0.0051
MAY	30	0.0170	0.950	0.111	0.1888	0.0345	± 0.0705
JUNE	25	0.0030	0.150	0.036	0.0304	0.0061	± 0.0126
JULY	31	0.0110	0.320	0.082	0.0780	0.0140	± 0.0286
AUGUST	24	0.0050	0.420	0.062	0.0803	0.0164	± 0.0339
SEPTEMBER	38	0.0020	0.062	0.021	0.0151	0.0024	± 0.0050
OCTOBER	32	0.0020	0.061	0.021	0.0164	0.0029	± 0.0059
NOVEMBER	48	0.0020	0.061	0.009	0.0129	0.0019	± 0.0037
DECEMBER	32	0.0020	0.045	0.008	0.0107	0.0019	± 0.0039
1979 JANUARY	12	0.0090	0.028	0.018	0.0055	0.0016	± 0.0035
FEBRUARY	19	0.0020	0.028	0.011	0.0106	0.0024	± 0.0051
MARCH	36	0.0020	0.024	0.003	0.0037	0.0006	± 0.0012
APRIL	24	0.0020	0.070	0.008	0.0141	0.0029	± 0.0059
JULY	12	0.0110	0.055	0.018	0.0118	0.0034	± 0.0075
AUGUST	16	0.0120	0.073	0.021	0.0145	0.0036	± 0.0077
SEPTEMBER	16	0.0110	0.088	0.019	0.0188	0.0047	± 0.0100
OCTOBER	20	0.0120	0.036	0.016	0.0057	0.0013	± 0.0027
NOVEMBER	12	0.0090	0.033	0.015	0.0072	0.0021	± 0.0046
DECEMBER	12	0.0090	0.015	0.011	0.0017	0.0005	± 0.0011
1980 JANUARY	15	0.0110	0.037	0.017	0.0072	0.0019	± 0.0040
FEBRUARY	12	0.0120	0.026	0.018	0.0048	0.0014	± 0.0030
MARCH	16	0.0120	0.117	0.030	0.0263	0.0066	± 0.0140
APRIL	12	0.0150	0.032	0.023	0.0061	0.0018	± 0.0039
MAY	16	0.0170	0.040	0.021	0.0058	0.0014	± 0.0031
JUNE	16	0.0150	0.037	0.021	0.0057	0.0014	± 0.0030
JULY	20	0.0120	0.030	0.022	0.0045	0.0010	± 0.0021
AUGUST	16	0.0170	0.034	0.023	0.0045	0.0011	± 0.0024
SEPTEMBER	20	0.0120	0.076	0.024	0.0168	0.0038	± 0.0079
OCTOBER	16	0.0110	0.055	0.023	0.0142	0.0035	± 0.0075
NOVEMBER	16	0.0100	0.017	0.013	0.0020	0.0005	± 0.0011
DECEMBER	12	0.0140	0.026	0.018	0.0033	0.0009	± 0.0021

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
AMMONIA (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
				(MG/L)			
- -78-79-80 JANUARY	28	0.0090	0.084	0.020	0.0140	0.0026	± 0.0054
- -78-79-80 FEBRUARY	75	0.0020	0.028	0.010	0.0088	0.0010	± 0.0020
- -78-79-80 MARCH	112	0.0020	0.550	0.021	0.0591	0.0056	± 0.0111
- -78-79-80 APRIL	72	0.0020	0.070	0.016	0.0148	0.0017	± 0.0035
- -78- -80 MAY	46	0.0170	0.950	0.080	0.1576	0.0232	± 0.0468
-77-78- -80 JUNE	82	0.0020	0.150	0.027	0.0202	0.0022	± 0.0044
-77-78-79-80 JULY	105	0.0020	0.320	0.039	0.0513	0.0050	± 0.0099
-77-78-79-80 AUGUST	84	0.0050	0.420	0.040	0.0516	0.0056	± 0.0112
- -78-79-80 SEPTEMBER	74	0.0020	0.088	0.021	0.0163	0.0019	± 0.0038
-77-78-79-80 OCTOBER	94	0.0020	0.061	0.016	0.0135	0.0014	± 0.0028
-77-78-79-80 NOVEMBER	103	0.0020	0.061	0.010	0.0108	0.0011	± 0.0021
-77-78-79-80 DECEMBER	66	0.0020	0.720	0.022	0.0877	0.0108	± 0.0216


AMMONIA (N)
NEAR OLIVER
1976 - 1980
CONCENTRATION (MG/L)
0.01 0.03 0.09 0.4 1 3 5 9 20 40
MAXIMUM
MEAN
MEDIAN
MINIMUM
J F M A M J J A S O N D
(N) 28 75 112 72 46 82 105 84 74 94 103 66

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
AMMONIA (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
				(MG/L)			
1976							
1977 JUN JUL AUG OCT NOV DEC	174	0.0020	0.720	0.024	0.0578	0.0044	± 0.0087
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	401	0.0020	0.950	0.033	0.0734	0.0037	± 0.0072
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC	179	0.0020	0.088	0.012	0.0120	0.0009	± 0.0018
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	187	0.0100	0.117	0.021	0.0116	0.0008	± 0.0017

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
AMMONIA (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
				(MG/L)			
			APRIL TO SEPTEMBER				
1976							
1977	111	0.0020	0.150	0.028	0.0252	0.0024	± 0.0047
1978	184	0.0020	0.950	0.053	0.0941	0.0069	± 0.0137
1979	68	0.0020	0.088	0.015	0.0159	0.0019	± 0.0038
1980	100	0.0120	0.076	0.022	0.0088	0.0009	± 0.0017
1976-80	463	0.0020	0.950	0.035	0.0628	0.0029	± 0.0057
			OCTOBER TO MARCH				
1976-77							
1977-78	168	0.0020	0.720	0.020	0.0727	0.0056	± 0.0111
1978-79	179	0.0020	0.061	0.010	0.0128	0.0010	± 0.0019
1979-80	87	0.0090	0.117	0.018	0.0134	0.0014	± 0.0029
1980-81	44	0.0100	0.055	0.018	0.0095	0.0014	± 0.0029
1976-80	478	0.0020	0.720	0.016	0.0444	0.0020	± 0.0040
			APRIL TO MARCH				
1976-80	941	0.0020	0.950	0.025	0.0550	0.0018	± 0.0035

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
AMMONIA (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
				(MG/L)			
1976							
1977 JUN JUL AUG OCT NOV DEC							
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC							
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC							
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC							
	941	0.0020	0.950	0.025	0.0550	0.0018	± 0.0035

AMMONIA (N)

n = 941

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OKANAGAN RIVER NEAR OLIVER

Statistical Characteristics of Nutrient Concentrations

Period of Sampling June 1977 to December 1980.

AMMONIA (N)

Median concentrations and their statistical characteristics determined for

- Individual Months
- All Months
- Individual years
- Seasons
  - April to September
  - October to March
  - April to March
- All Years
  - Cumulative distribution of concentration data

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
AMMONIA (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD		NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
			(MG/L)			
1977	JUNE	41	0.028	0.0230	0.0300	0.956
	JULY	42	0.019	0.0120	0.0290	0.956
	AUGUST	28	0.016	0.0140	0.0600	0.964
	OCTOBER	26	0.002	0.0020	0.0060	0.971
	NOVEMBER	27	0.002	0.0020	0.0030	0.964
	DECEMBER	10	0.019	0.0020	0.0280	0.979
1978	JANUARY	1	0.084			
	FEBRUARY	44	0.002	0.0020	0.0110	0.951
	MARCH	60	0.009	0.0030	0.0110	0.960
	APRIL	36	0.016	0.0130	0.0210	0.953
	MAY	30	0.035	0.0270	0.1100	0.957
	JUNE	25	0.028	0.0170	0.0420	0.957
	JULY	31	0.053	0.0400	0.0790	0.971
	AUGUST	24	0.052	0.0280	0.0650	0.957
	SEPTEMBER	38	0.017	0.0130	0.0210	0.966
	OCTOBER	32	0.015	0.0130	0.0200	0.965
	NOVEMBER	48	0.002	0.0020	0.0060	0.956
	DECEMBER	32	0.002	0.0020	0.0050	0.965
1979	JANUARY	12	0.018	0.0140	0.0230	0.961
	FEBRUARY	19	0.002	0.0020	0.0210	0.959
	MARCH	36	0.002	0.0020	0.0020	0.953
	APRIL	24	0.003	0.0020	0.0060	0.957
	JULY	12	0.014	0.0140	0.0170	0.961
	AUGUST	16	0.016	0.0150	0.0200	0.951
	SEPTEMBER	16	0.013	0.0130	0.0170	0.951
	OCTOBER	20	0.014	0.0130	0.0170	0.959
	NOVEMBER	12	0.013	0.0100	0.0150	0.961
	DECEMBER	12	0.011	0.0100	0.0120	0.961
1980	JANUARY	15	0.014	0.0120	0.0210	0.965
	FEBRUARY	12	0.017	0.0140	0.0230	0.961
	MARCH	16	0.021	0.0170	0.0310	0.951
	APRIL	12	0.020	0.0170	0.0300	0.961
	MAY	16	0.019	0.0180	0.0210	0.951
	JUNE	16	0.020	0.0160	0.0230	0.951
	JULY	20	0.022	0.0200	0.0240	0.959
	AUGUST	16	0.022	0.0190	0.0240	0.951
	SEPTEMBER	20	0.016	0.0160	0.0210	0.959
	OCTOBER	16	0.016	0.0150	0.0310	0.951
	NOVEMBER	16	0.013	0.0120	0.0150	0.951
	DECEMBER	12	0.017	0.0150	0.0190	0.961

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
AMMONIA (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
		(MG/L)			
- -78-79-80 JANUARY	28	0.015	0.0140	0.0210	0.964
- -78-79-80 FEBRUARY	75	0.009	0.0020	0.0120	0.963
- -78-79-80 MARCH	112	0.003	0.0020	0.0100	0.953
- -78-79-80 APRIL	72	0.013	0.0070	0.0180	0.956
- -78- -80 MAY	46	0.026	0.0210	0.0400	0.960
-77-78- -80 JUNE	82	0.024	0.0220	0.0290	0.952
-77-78-79-80 JULY	105	0.024	0.0210	0.0290	0.959
-77-78-79-80 AUGUST	84	0.022	0.0190	0.0270	0.962
- -78-79-80 SEPTEMBER	74	0.016	0.0150	0.0180	0.953
-77-78-79-80 OCTOBER	94	0.013	0.0120	0.0140	0.951
-77-78-79-80 NOVEMBER	103	0.004	0.0020	0.0100	0.952
-77-78-79-80 DECEMBER	66	0.011	0.0060	0.0150	0.950

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
AMMONIA (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
		(MG/L)			
1976					
1977 JUN JUL AUG OCT NOV DEC	174	0.014	0.0110	0.0160	0.951
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	401	0.015	0.0130	0.0180	0.954
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC	179	0.012	0.0110	0.0130	0.956
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	187	0.019	0.0180	0.0200	0.951

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
AMMONIA (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

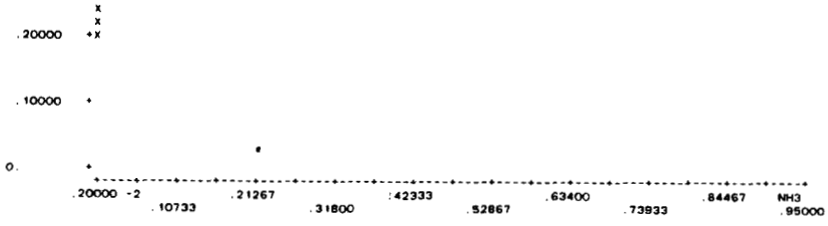
SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
		(MG/L)			
		APRIL TO SEPTEMBER			
1976					
1977	111	0.024	0.0160	0.0290	0.953
1978	184	0.028	0.0230	0.0330	0.954
1979	68	0.013	0.0120	0.0140	0.961
1980	100	0.020	0.0190	0.0220	0.954
1976-80	463	0.021	0.0190	0.0220	0.954
		OCTOBER TO MARCH			
1976-77					
1977-78	168	0.003	0.0020	0.0080	0.955
1978-79	179	0.002	0.0020	0.0060	0.956
1979-80	87	0.014	0.0140	0.0160	0.958
1980-81	44	0.016	0.0140	0.0170	0.951
1976-80	478	0.011	0.0090	0.0120	0.951
		APRIL TO MARCH			
1976-80	941	0.015	0.0140	0.0160	0.953

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
AMMONIA (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
		(MG/L)			
1976					
1977 JUN JUL AUG OCT NOV DEC					
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC					
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC					
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC					
	941	0.015	0.0140	0.0160	0.953

DISTRIBUTIONAL ANALYSIS

CUMULATIVE SAMPLE DISTRIBUTION OF .NH3 N= 94(



PROB	QUANTILE	LEVEL	CONFIDENCE INTERVAL		SIZE
.1000	.20000 -2	.9500	.20000 -2	.20000 -2	.9558
.3000	.90000 -2	.9500	.80000 -2	.11000 -1	.9537
.5000	.15000 -1	.9500	.14000 -1	.16000 -1	.9532
.7000	.22000 -1	.9500	.21000 -1	.24000 -1	.9537
.9000	.47000 -1	.9500	.42000 -1	.55000 -1	.9558

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OKANAGAN RIVER NEAR OLIVER

Statistical Characteristics of Nutrient Loads

Period of Sampling June 1977 to December 1980.

AMMONIA (N)

Arithmetic mean loads and their statistical characteristics determined for

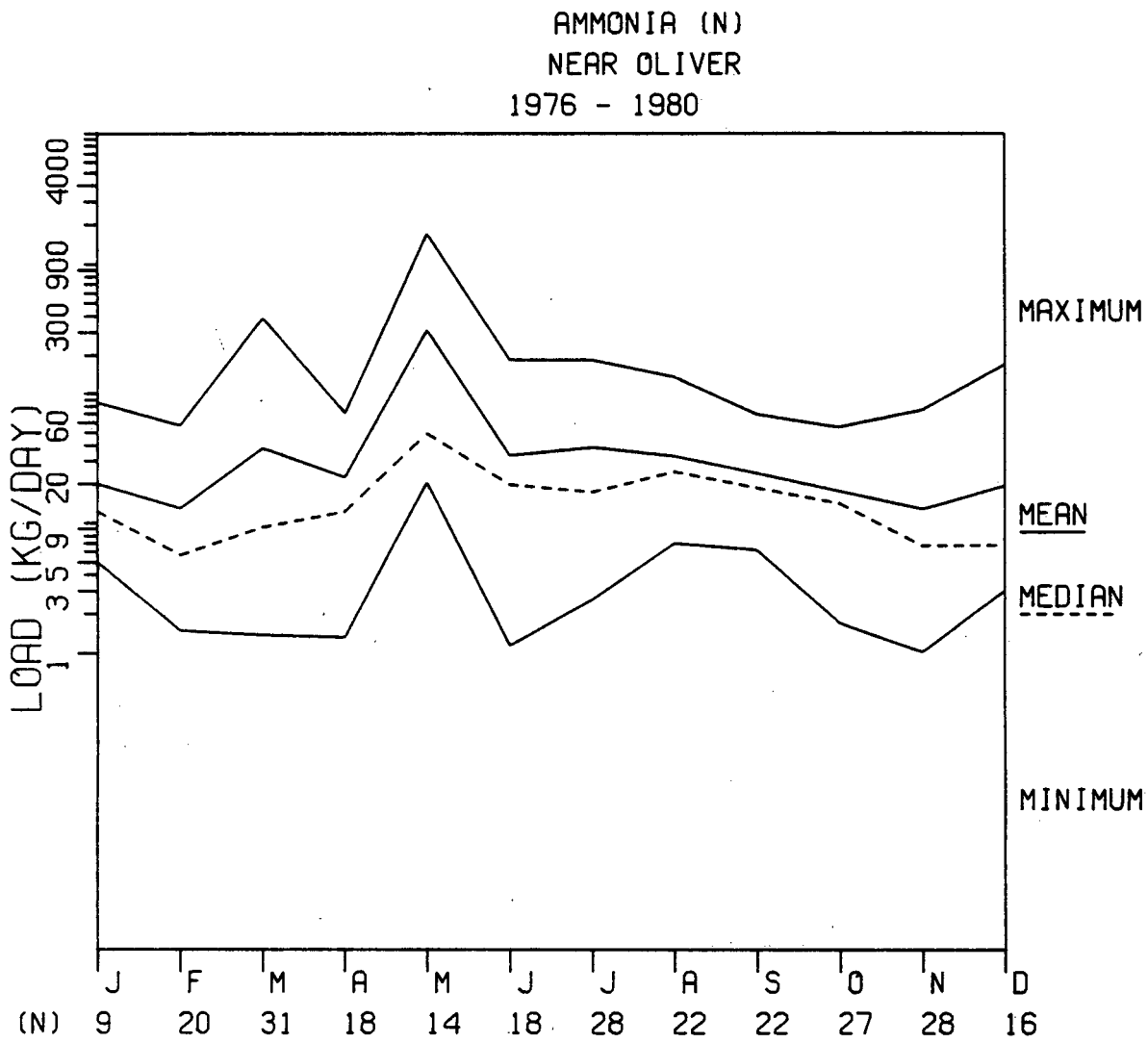
- Individual Months
- All Months
  - Graph of monthly load ranges
- Individual years
- Seasons
  - April to September
  - October to March
  - April to March
- All Years

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
AMMONIA (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
				(KG/DAY)			
1977 JUNE	7	1.1500	19.700	9.736	7.3319	2.7712	± 6.7811
JULY	11	2.6100	21.900	10.405	5.7313	1.7281	± 3.8504
AUGUST	8	6.9400	62.500	28.355	21.5300	7.6120	± 18.0000
OCTOBER	10	1.7100	11.500	4.555	3.5864	1.1341	± 2.5655
NOVEMBER	10	1.0300	10.100	2.911	3.2710	1.0344	± 2.3399
DECEMBER	5	6.3900	170.000	41.128	72.0880	32.2387	± 89.5105
1978 JANUARY	1	85.8000	85.800	85.800			
FEBRUARY	10	4.3700	57.000	15.483	18.0870	5.7196	± 12.9388
MARCH	18	3.0500	389.000	61.343	89.1810	21.0202	± 44.3480
APRIL	9	4.0800	70.900	35.474	23.8070	7.9357	± 18.2995
MAY	10	34.0000	1740.000	427.190	552.5200	174.7222	± 395.2488
JUNE	7	6.9800	185.000	58.240	58.2230	22.0062	± 53.8486
JULY	9	17.4000	185.000	79.500	53.1800	17.7267	± 40.8790
AUGUST	6	27.7000	137.000	56.650	42.9070	17.5167	± 45.0290
SEPTEMBER	13	6.2200	62.000	24.138	17.1110	4.7457	± 10.3395
OCTOBER	8	9.3600	49.100	29.632	12.7910	4.5223	± 10.6935
NOVEMBER	11	4.1500	75.700	23.116	27.8920	8.4098	± 18.7378
DECEMBER	6	3.0400	36.100	10.330	12.8190	5.2333	± 13.4530
1979 JANUARY	4	12.2000	19.800	15.850	4.0600	2.0300	± 6.4601
FEBRUARY	7	1.5000	23.300	11.860	9.6179	3.6352	± 8.8951
MARCH	9	1.4000	5.560	1.952	1.3554	0.4518	± 1.0419
APRIL	6	1.3300	16.200	6.028	5.3103	2.1679	± 5.5727
JULY	3	9.0300	15.100	11.910	3.0469	1.7591	± 7.5689
AUGUST	4	12.4000	22.600	16.675	4.4327	2.2163	± 7.0532
SEPTEMBER	4	11.4000	35.000	17.925	11.4200	5.7100	± 18.1711
OCTOBER	5	11.9000	25.900	16.840	5.8102	2.5984	± 7.2142
NOVEMBER	3	6.6300	8.260	7.180	0.9354	0.5400	± 2.3236
DECEMBER	3	4.4200	6.010	4.967	0.9039	0.5219	± 2.2454
1980 JANUARY	4	5.0000	11.200	7.927	2.5528	1.2764	± 4.0623
FEBRUARY	3	5.6900	9.570	7.863	1.9816	1.1441	± 4.9227
MARCH	4	6.0900	28.000	12.902	10.1520	5.0760	± 16.1545
APRIL	3	9.2200	29.300	16.907	10.8360	6.2562	± 26.9175
MAY	4	20.7000	41.900	26.600	10.2630	5.1315	± 16.3300
JUNE	4	17.3000	47.200	31.650	12.4160	6.2080	± 19.7570
JULY	5	27.8000	88.400	43.740	25.2850	11.3078	± 31.3950
AUGUST	4	14.7000	31.200	23.050	6.8869	3.4434	± 10.9590
SEPTEMBER	5	14.9000	70.400	30.040	23.0550	10.3105	± 28.6270
OCTOBER	4	16.7000	55.600	27.550	18.7730	9.3865	± 29.8718
NOVEMBER	4	11.2000	17.400	13.900	2.5781	1.2891	± 4.1022
DECEMBER	2	15.6000	15.700	15.650	0.0707	0.0500	± 0.6350

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
AMMONIA (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
				(KG/DAY)			
- -78-79-80 JANUARY	9	5.0000	85.800	20.101	25.1260	8.3753	± 19.3131
- -78-79-80 FEBRUARY	20	1.5000	57.000	13.072	13.8730	3.1021	± 6.4930
- -78-79-80 MARCH	31	1.4000	389.000	37.850	72.9270	13.0981	± 26.7500
- -78-79-80 APRIL	18	1.3300	70.900	22.564	21.8910	5.1598	± 10.8865
- -78- -80 MAY	14	20.7000	1740.000	312.740	496.6299	132.7299	± 286.7439
-77-78- -80 JUNE	18	1.1500	185.000	33.468	41.5690	9.7979	± 20.6715
-77-78-79-80 JULY	28	2.6100	185.000	38.728	43.7150	8.2614	± 16.9510
-77-78-79-80 AUGUST	22	6.9400	137.000	32.984	28.9840	6.1794	± 12.8505
- -78-79-80 SEPTEMBER	22	6.2200	70.400	24.350	17.4000	3.7097	± 7.7145
-77-78-79-80 OCTOBER	27	1.7100	55.600	17.667	14.8220	2.8525	± 5.8630
-77-78-79-80 NOVEMBER	28	1.0300	75.700	12.876	19.3850	3.6634	± 7.5168
-77-78-79-80 DECEMBER	16	3.0400	170.000	19.614	40.9200	10.2300	± 21.8044


AMMONIA (N)
NEAR OLIVER
1976 - 1980
LOAD (KG/DAY)
4000
900
300
60
20
9
5
3
1
MAXIMUM
MEAN
MEDIAN
MINIMUM
J F M A M J J A S O N D
(N) 9 20 31 18 14 18 28 22 22 27 28 16

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
AMMONIA (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
				(KG/DAY)			
1976							
1977 JUN JUL AUG OCT NOV DEC	51	1.0300	170.000	13.524	25.5350	3.5756	± 7.1818
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	108	3.0400	1740.000	76.539	201.8100	19.4192	± 38.4935
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC	48	1.3300	35.000	10.311	7.9567	1.1484	± 2.3102
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	46	5.0000	88.400	22.801	16.7580	2.4708	± 4.9765

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
AMMONIA (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
				(KG/DAY)			
			APRIL TO SEPTEMBER				
1976							
1977	26	1.1500	62.500	15.748	15.1450	2.9702	± 6.1173
1978	54	4.0800	1740.000	117.930	274.7400	37.3874	± 74.9910
1979	17	1.3300	35.000	12.371	8.0980	1.9641	± 4.1635
1980	25	9.2200	88.400	29.793	17.7320	3.5464	± 7.3195
1976-80	122	1.1500	1740.000	63.382	188.6600	17.0805	± 33.8160
			OCTOBER TO MARCH				
1976-77							
1977-78	54	1.0300	389.000	30.094	60.8870	8.2857	± 16.6185
1978-79	45	1.4000	75.700	15.940	18.1520	2.7059	± 5.4535
1979-80	22	4.4200	28.000	10.343	6.4395	1.3729	± 2.8549
1980-81	10	11.2000	55.600	19.710	12.8710	4.0702	± 9.2080
1976-80	131	1.0300	389.000	21.123	41.2750	3.6062	± 7.1345
			APRIL TO MARCH				
1976-80	253	1.0300	1740.000	41.501	135.7100	8.5320	± 16.8035

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
AMMONIA (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
				(KG/DAY)			
1976							
1977 JUN JUL AUG OCT NOV DEC							
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC							
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC							
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC							
	253	1.0300	1740.000	41.501	135.7100	8.5320	± 16.8035

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OKANAGAN RIVER NEAR OLIVER

Statistical Characteristics of Nutrient Loads

Period of Sampling June 1977 to December 1980.

AMMONIA (N)

Median loads and their statistical characteristics determined for

- Individual Months
- All Months
- Individual years
- Seasons
  - April to September
  - October to March
  - April to March
- All Years

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
AMMONIA (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
		(KG/DAY)			
1977 JUNE	7	9.100	1.1500	19.7000	0.984
JULY	11	10.200	6.9600	15.9000	0.961
AUGUST	8	15.000	8.1000	62.5000	0.961
OCTOBER	10	1.890	1.8000	8.7500	0.979
NOVEMBER	10	1.270	1.0500	7.9000	0.979
DECEMBER	5	9.660		6.3900	0.969
1978 JANUARY	1	85.800			
FEBRUARY	10	4.730	4.4700	35.7000	0.979
MARCH	18	31.400	10.0000	65.9000	0.969
APRIL	9	33.500	4.5900	59.9000	0.961
MAY	10	73.500	43.7000	954.0000	0.979
JUNE	7	42.000	6.9800	185.0000	0.984
JULY	9	77.600	28.2000	125.0000	0.961
AUGUST	6	29.300	27.7000	137.0000	0.969
SEPTEMBER	13	18.600	10.6000	37.0000	0.978
OCTOBER	8	27.900	18.1000	49.1000	0.961
NOVEMBER	11	7.820	5.5700	70.9000	0.961
DECEMBER	6	3.990	3.0400	36.1000	0.969
1979 JANUARY	4	12.500			
FEBRUARY	7	14.700	1.5000	23.3000	0.984
MARCH	9	1.480	1.4300	1.6800	0.961
APRIL	6	3.760	1.3300	16.2000	0.969
JULY	3	11.600			
AUGUST	4	14.400			
SEPTEMBER	4	11.800			
OCTOBER	5	14.200		11.9000	0.969
NOVEMBER	3	6.650			
DECEMBER	3	4.470			
1980 JANUARY	4	7.430			
FEBRUARY	3	8.330			
MARCH	4	8.240			
APRIL	3	12.200			
MAY	4	20.700			
JUNE	4	28.400			
JULY	5	33.900		27.8000	0.969
AUGUST	4	21.400			
SEPTEMBER	5	23.800		14.9000	0.969
OCTOBER	4	17.400			
NOVEMBER	4	13.300			
DECEMBER	2	15.600			

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
AMMONIA (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
		(KG/DAY)			
- -78-79-80 JANUARY	9	12.200	7.4300	19.8000	0.961
- -78-79-80 FEBRUARY	20	5.690	4.6800	15.1000	0.959
- -78-79-80 MARCH	31	9.280	3.5800	31.4000	0.971
- -78-79-80 APRIL	18	12.200	4.2800	33.5000	0.969
- -78- -80 MAY	14	49.700	34.0000	588.0000	0.965
-77-78- -80 JUNE	18	19.700	9.1000	42.0000	0.969
-77-78-79-80 JULY	28	17.400	12.3000	38.4000	0.964
-77-78-79-80 AUGUST	22	24.900	15.0000	40.0000	0.965
- -78-79-80 SEPTEMBER	22	18.600	13.5000	29.2000	0.965
-77-78-79-80 OCTOBER	27	14.200	8.7500	24.7000	0.964
-77-78-79-80 NOVEMBER	28	6.630	4.1500	10.1000	0.964
-77-78-79-80 DECEMBER	16	6.790	4.4700	15.6000	0.951

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
AMMONIA (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
		(KG/DAY)			
1976					
1977 JUN JUL AUG OCT NOV DEC	51	7.020	5.0800	9.6600	0.951
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	108	29.300	24.2000	41.3000	0.957
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC	48	9.030	5.5600	12.9000	0.956
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	46	17.400	14.9000	24.9000	0.960

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
AMMONIA (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
		(KG/DAY)			
		APRIL TO SEPTEMBER			
1976					
1977	26	9.820	6.9600	15.9000	0.971
1978	54	42.000	29.2000	54.4000	0.960
1979	17	11.800	7.0600	15.1000	0.951
1980	25	25.500	20.7000	31.2000	0.957
1976-80	122	23.200	18.6000	29.2000	0.953
		OCTOBER TO MARCH			
1976-77					
1977-78	54	7.020	4.7100	11.5000	0.960
1978-79	45	8.280	5.5400	15.1000	0.964
1979-80	22	8.240	6.6300	11.9000	0.965
1980-81	10	15.700	13.3000	20.5000	0.979
1976-80	131	8.410	7.0200	11.9000	0.955
		APRIL TO MARCH			
1976-80	253	14.900	12.2000	18.1000	0.956

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
AMMONIA (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
		(KG/DAY)			
1976					
1977 JUN JUL AUG OCT NOV DEC					
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC					
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC					
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC					
	253	14.900	12.2000	18.1000	0.956

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OKANAGAN RIVER NEAR OLIVER

Statistical Characteristics of Nutrient Concentrations

Period of Sampling June 1977 to December 1980.

RATIO OF AMMONIA (N) TO NITRATE PLUS NITRITE (N)

Arithmetic mean concentrations and their statistical characteristics determined for:

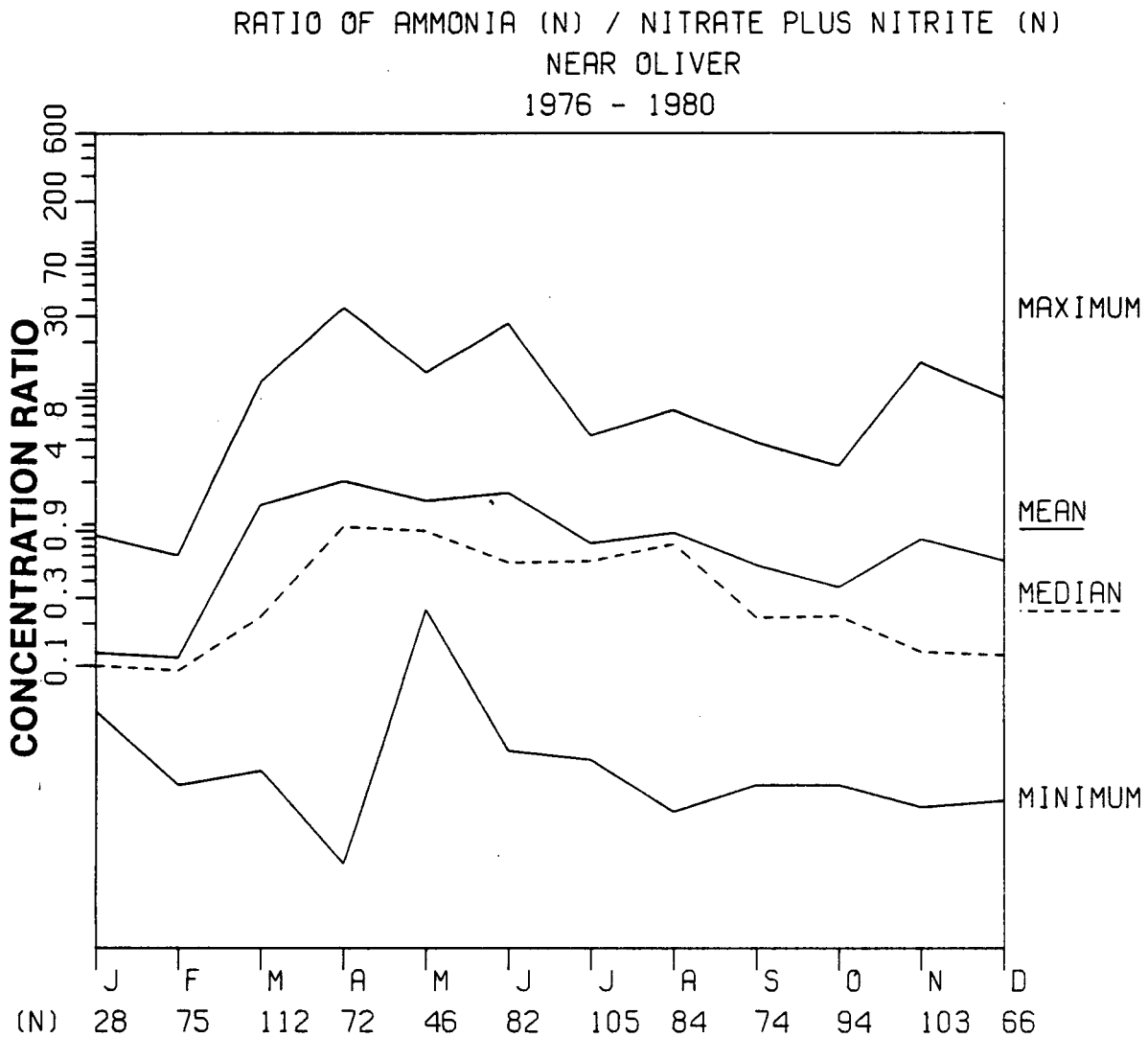
- Individual Months
- All Months
  - Graph of monthly concentration ranges
- Individual years
- Seasons
  - April to September
  - October to March
  - April to March
- All Years
  - Histogram of concentration distribution

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF AMMONIA (N) / NITRATE PLUS NITRITE (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
1977 JUNE	41	0.0250	2.385	0.382	0.3638	0.0568	± 0.1148
JULY	42	0.0215	0.738	0.296	0.1875	0.0289	± 0.0584
AUGUST	28	0.1042	6.522	1.206	1.1557	0.2184	± 0.4481
OCTOBER	26	0.0143	0.189	0.054	0.0452	0.0089	± 0.0183
NOVEMBER	27	0.0100	0.232	0.035	0.0512	0.0099	± 0.0203
DECEMBER	10	0.0111	7.826	0.865	2.4461	0.7735	± 1.7498
1978 JANUARY	1	0.8400	0.840	0.840			
FEBRUARY	44	0.0208	0.605	0.137	0.1532	0.0231	± 0.0466
MARCH	60	0.0182	10.333	2.433	2.5661	0.3313	± 0.6628
APRIL	36	0.0039	14.000	1.411	2.6796	0.4466	± 0.9067
MAY	30	0.2500	11.957	1.828	2.3195	0.4235	± 0.8661
JUNE	25	0.3095	26.500	4.209	6.6483	1.3297	± 2.7443
JULY	31	0.1594	4.247	1.142	0.9533	0.1712	± 0.3497
AUGUST	24	0.0093	3.500	0.684	0.6807	0.1390	± 0.2874
SEPTEMBER	38	0.0143	1.018	0.277	0.2746	0.0445	± 0.0903
OCTOBER	32	0.0357	1.677	0.434	0.3666	0.0648	± 0.1322
NOVEMBER	48	0.0133	14.000	1.575	2.7439	0.3960	± 0.7968
DECEMBER	32	0.0215	7.500	0.794	1.3027	0.2303	± 0.4697
1979 JANUARY	12	0.0474	0.147	0.097	0.0256	0.0074	± 0.0163
FEBRUARY	19	0.0143	0.142	0.058	0.0503	0.0115	± 0.0243
MARCH	36	0.0206	1.000	0.141	0.2450	0.0408	± 0.0829
APRIL	24	1.0000	35.000	3.771	7.0449	1.4380	± 2.9748
JULY	12	0.5000	1.833	0.785	0.3540	0.1022	± 0.2250
AUGUST	16	0.2500	1.217	0.568	0.2736	0.0684	± 0.1458
SEPTEMBER	16	0.1444	1.100	0.304	0.2506	0.0627	± 0.1335
OCTOBER	20	0.1091	0.900	0.386	0.2814	0.0629	± 0.1317
NOVEMBER	12	0.0429	0.174	0.087	0.0373	0.0108	± 0.0237
DECEMBER	12	0.0476	0.094	0.061	0.0137	0.0040	± 0.0087
1980 JANUARY	15	0.0550	0.161	0.096	0.0358	0.0092	± 0.0198
FEBRUARY	12	0.0778	0.153	0.117	0.0251	0.0072	± 0.0159
MARCH	16	0.0750	0.688	0.196	0.1540	0.0385	± 0.0821
APRIL	12	0.1250	0.560	0.272	0.1472	0.0425	± 0.0935
MAY	16	0.3800	1.333	0.809	0.2746	0.0687	± 0.1463
JUNE	16	0.7333	1.850	1.008	0.2933	0.0733	± 0.1563
JULY	20	0.6000	1.400	1.000	0.2135	0.0477	± 0.0999
AUGUST	16	0.2750	1.550	0.880	0.3355	0.0839	± 0.1788
SEPTEMBER	20	0.2143	3.800	1.131	0.9044	0.2022	± 0.4233
OCTOBER	16	0.1833	2.600	0.677	0.7461	0.1865	± 0.3976
NOVEMBER	16	0.1091	0.400	0.198	0.1026	0.0256	± 0.0547
DECEMBER	12	0.0933	0.163	0.124	0.0184	0.0053	± 0.0117

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF AMMONIA (N) / NITRATE PLUS NITRITE (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
1976							
1977 JUN JUL AUG OCT NOV DEC	174	0.0100	7.826	0.419	0.8474	0.0642	± 0.1268
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	401	0.0039	26.500	1.349	2.6223	0.1310	± 0.2574
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC	179	0.0143	35.000	0.730	2.8170	0.2106	± 0.4155
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	187	0.0550	3.800	0.591	0.5633	0.0412	± 0.0813


RATIO OF AMMONIA (N) / NITRATE PLUS NITRITE (N)
NEAR OLIVER
1976 - 1980
CONCENTRATION RATIO
0.1 0.3 0.9 4 8 30 70 200 600
MAXIMUM
MEAN
MEDIAN
MINIMUM
J F M A M J J A S O N D
(N) 28 75 112 72 46 82 105 84 74 94 103 66

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF AMMONIA (N) / NITRATE PLUS NITRITE (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
- -78-79-80 JANUARY	28	0.0474	0.840	0.123	0.1438	0.0272	± 0.0558
- -78-79-80 FEBRUARY	75	0.0143	0.605	0.114	0.1244	0.0144	± 0.0286
- -78-79-80 MARCH	112	0.0182	10.333	1.377	2.1959	0.2075	± 0.4112
- -78-79-80 APRIL	72	0.0039	35.000	2.008	4.6217	0.5447	± 1.0861
- -78- -80 MAY	46	0.2500	11.957	1.473	1.9320	0.2849	± 0.5738
-77-78- -80 JUNE	82	0.0250	26.500	1.671	4.0117	0.4430	± 0.8814
-77-78-79-80 JULY	105	0.0215	4.247	0.736	0.6622	0.0646	± 0.1281
-77-78-79-80 AUGUST	84	0.0093	6.522	0.873	0.8139	0.0888	± 0.1766
- -78-79-80 SEPTEMBER	74	0.0143	3.800	0.514	0.6379	0.0742	± 0.1478
-77-78-79-80 OCTOBER	94	0.0143	2.600	0.360	0.4437	0.0458	± 0.0909
-77-78-79-80 NOVEMBER	103	0.0100	14.000	0.784	2.0063	0.1977	± 0.3921
-77-78-79-80 DECEMBER	66	0.0111	7.826	0.549	1.3267	0.1633	± 0.3261

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF AMMONIA (N) / NITRATE PLUS NITRITE (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
			APRIL TO SEPTEMBER				
1976							
1977	111	0.0215	6.522	0.557	0.7305	0.0693	± 0.1374
1978	184	0.0039	26.500	1.485	3.1122	0.2294	± 0.4527
1979	68	0.1444	35.000	1.675	4.4210	0.5361	± 1.0701
1980	100	0.1250	3.800	0.890	0.5229	0.0523	± 0.1038
1976-80	463	0.0039	35.000	1.162	2.6534	0.1233	± 0.2423
			OCTOBER TO MARCH				
1976-77							
1977-78	168	0.0100	10.333	0.975	1.9699	0.1520	± 0.3001
1978-79	179	0.0133	14.000	0.683	1.6344	0.1222	± 0.2411
1979-80	87	0.0429	0.900	0.178	0.1924	0.0206	± 0.0410
1980-81	44	0.0933	2.600	0.352	0.5105	0.0770	± 0.1552
1976-80	478	0.0100	14.000	0.663	1.5722	0.0719	± 0.1413
			APRIL TO MARCH				
1976-80	941	0.0039	35.000	0.909	2.1856	0.0712	± 0.1398

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF AMMONIA (N) / NITRATE PLUS NITRITE (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
1976							
1977 JUN JUL AUG OCT NOV DEC							
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC							
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC							
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC							
	941	0.0039	35.000	0.909	2.1856	0.0712	± 0.1398

AMMONIA (N) / NITRATE PLUS NITRITE (N)

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OKANAGAN RIVER NEAR OLIVER

Statistical Characteristics of Nutrient Concentrations

Period of Sampling June 1977 to December 1980.

RATIO OF AMMONIA (N) TO NITRATE PLUS NITRITE (N)

Median concentrations and their statistical characteristics determined for

- Individual Months
- All Months
- Individual years
- Seasons
  - April to September
  - October to March
  - April to March
- All Years
  - Cumulative distribution of concentration data

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF AMMONIA (N) / NITRATE PLUS NITRITE (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
1977 JUNE	41	0.389	0.3182	0.4225	0.956
JULY	42	0.247	0.1852	0.4024	0.956
AUGUST	28	1.200	0.7253	1.4000	0.964
OCTOBER	26	0.029	0.0247	0.0737	0.971
NOVEMBER	27	0.015	0.0133	0.0200	0.964
DECEMBER	10	0.100	0.0571	0.1500	0.979
1978 JANUARY	1	0.840			
FEBRUARY	44	0.100	0.0286	0.1176	0.951
MARCH	60	1.034	0.8667	3.0000	0.960
APRIL	36	0.672	0.5000	0.9762	0.953
MAY	30	0.900	0.7292	1.8627	0.957
JUNE	25	1.000	0.6897	4.0000	0.957
JULY	31	0.813	0.5119	1.3235	0.971
AUGUST	24	0.552	0.3205	0.7257	0.957
SEPTEMBER	38	0.180	0.1250	0.2250	0.966
OCTOBER	32	0.286	0.2391	0.4667	0.965
NOVEMBER	48	1.000	0.7000	1.0000	0.956
DECEMBER	32	0.833	0.1583	1.0000	0.965
1979 JANUARY	12	0.090	0.0824	0.1150	0.961
FEBRUARY	19	0.023	0.0182	0.0900	0.959
MARCH	36	0.040	0.0377	0.0588	0.953
APRIL	24	1.500	1.0000	3.0000	0.957
JULY	12	0.700	0.5500	0.8500	0.961
AUGUST	16	0.533	0.3375	0.7500	0.951
SEPTEMBER	16	0.212	0.1857	0.3500	0.951
OCTOBER	20	0.222	0.1556	0.6500	0.959
NOVEMBER	12	0.081	0.0556	0.0938	0.961
DECEMBER	12	0.055	0.0500	0.0667	0.961
1980 JANUARY	15	0.108	0.0600	0.1191	0.965
FEBRUARY	12	0.120	0.0882	0.1294	0.961
MARCH	16	0.157	0.1214	0.2231	0.951
APRIL	12	0.190	0.1500	0.3800	0.961
MAY	16	0.900	0.7250	1.0000	0.951
JUNE	16	0.900	0.8000	1.1500	0.951
JULY	20	1.050	0.8500	1.1500	0.959
AUGUST	16	0.950	0.8500	1.1000	0.951
SEPTEMBER	20	0.800	0.6500	1.0500	0.959
OCTOBER	16	0.320	0.3000	0.7750	0.951
NOVEMBER	16	0.150	0.1250	0.3250	0.951
DECEMBER	12	0.119	0.1125	0.1357	0.961

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF AMMONIA (N) / NITRATE PLUS NITRITE (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
- -78-79-80 JANUARY	28	0.100	0.0722	0.1150	0.964
- -78-79-80 FEBRUARY	75	0.092	0.0693	0.1176	0.963
- -78-79-80 MARCH	112	0.223	0.1615	0.5000	0.953
- -78-79-80 APRIL	72	0.955	0.6000	1.0000	0.956
- -78- -80 MAY	46	0.900	0.8000	1.0370	0.960
-77-78- -80 JUNE	82	0.534	0.4247	0.7500	0.952
-77-78-79-80 JULY	105	0.550	0.4615	0.7000	0.959
-77-78-79-80 AUGUST	84	0.725	0.6000	0.9286	0.962
- -78-79-80 SEPTEMBER	74	0.220	0.2046	0.4667	0.953
-77-78-79-80 OCTOBER	94	0.224	0.1636	0.3000	0.951
-77-78-79-80 NOVEMBER	103	0.125	0.0857	0.1750	0.952
-77-78-79-80 DECEMBER	66	0.119	0.1000	0.1500	0.950

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF AMMONIA (N) / NITRATE PLUS NITRITE (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
1976					
1977 JUN JUL AUG OCT NOV DEC	174	0.169	0.1176	0.2838	0.951
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	401	0.552	0.4667	0.6897	0.954
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC	179	0.150	0.1150	0.2182	0.956
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	187	0.400	0.3000	0.6000	0.951

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF AMMONIA (N) / NITRATE PLUS NITRITE (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

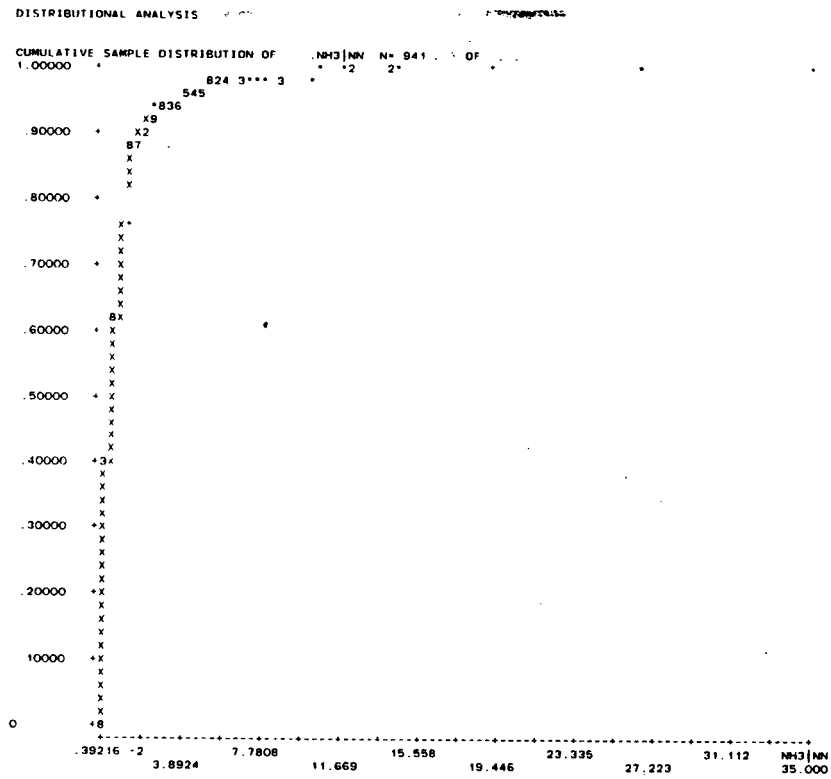
SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
		APRIL TO SEPTEMBER			
1976					
1977	111	0.405	0.3582	0.4459	0.953
1978	184	0.663	0.5263	0.7292	0.954
1979	68	0.700	0.6000	1.0000	0.961
1980	100	0.900	0.8000	0.9500	0.954
1976-80	463	0.650	0.5500	0.7000	0.954
		OCTOBER TO MARCH			
1976-77					
1977-78	168	0.106	0.0899	0.1474	0.955
1978-79	179	0.161	0.1105	0.2526	0.956
1979-80	87	0.119	0.0938	0.1333	0.958
1980-81	44	0.175	0.1400	0.3000	0.951
1976-80	478	0.127	0.1176	0.1485	0.951
		APRIL TO MARCH			
1976-80	941	0.347	0.2917	0.4024	0.953

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF AMMONIA (N) / NITRATE PLUS NITRITE (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
1976					
1977 JUN JUL AUG OCT NOV DEC					
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC					
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC					
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC					
	941	0.347	0.2917	0.4024	0.953

DISTRIBUTIONAL ANALYSIS

CUMULATIVE SAMPLE DISTRIBUTION OF .NH3|NN N= 941 OF



PROB	QUANTILE	LEVEL	CONFIDENCE INTERVAL		SIZE
.1000	.30769 -1	.9500	.26316 -1	.40000 -1	.9558
.3000	.12778	.9500	.11667	.14851	.9537
.5000	.34722	.9500	.29167	40244	.9532
.7000	.80000	.9500	.72308	.90000	.9537
.9000	1.6000	.9500	1.4000	2.1277	.9558

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OKANAGAN RIVER NEAR OLIVER

Statistical Characteristics of Nutrient Loads

Period of Sampling June 1977 to December 1980.

RATIO OF AMMONIA (N) TO NITRATE PLUS NITRITE (N)

Arithmetic mean loads and their statistical characteristics determined for

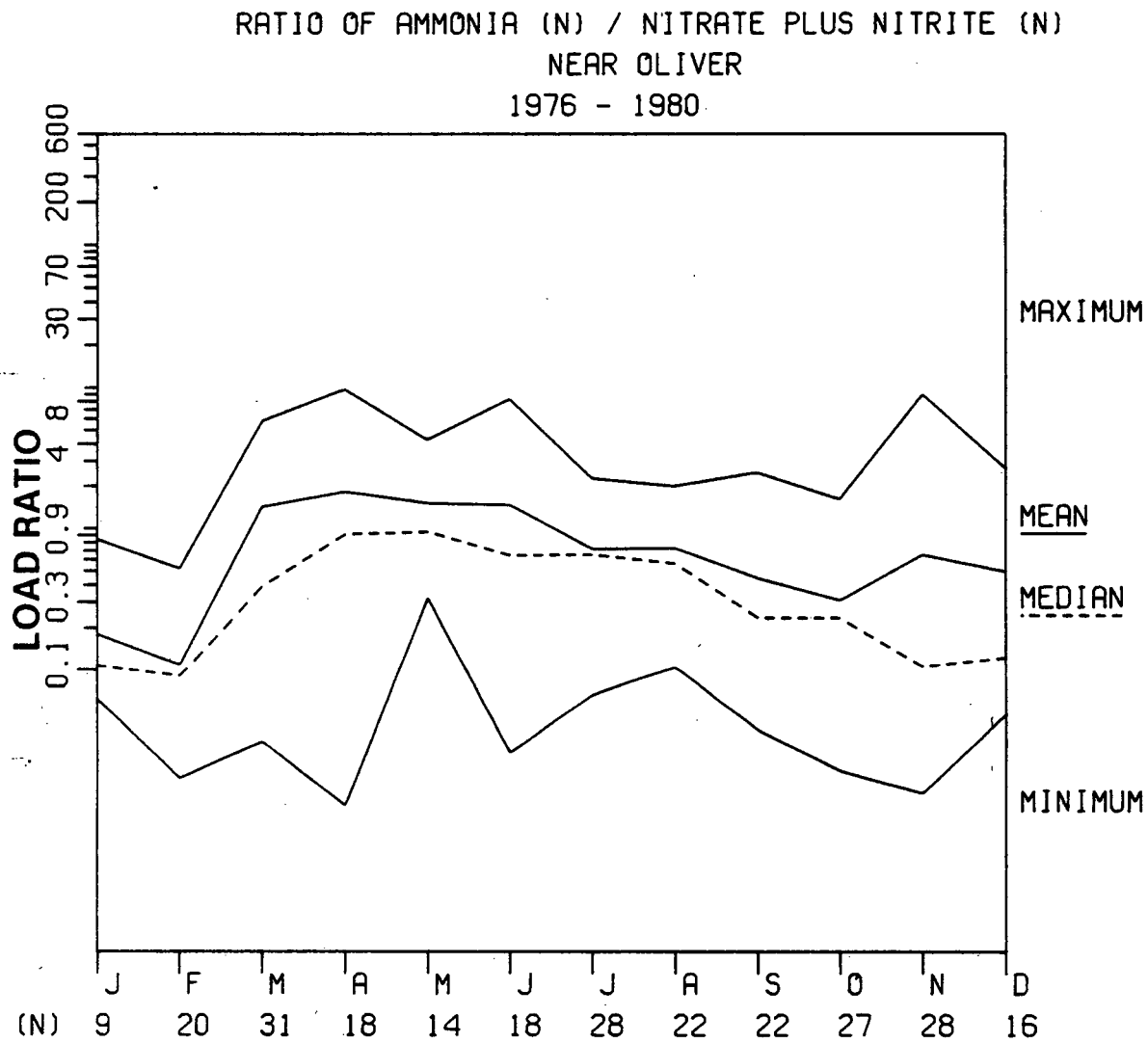
- Individual Months
- All Months
  - Graph of monthly load ranges
- Individual years
- Seasons
  - April to September
  - October to March
  - April to March
- All Years

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF AMMONIA (N) / NITRATE PLUS NITRITE (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
1977 JUNE	7	0.0256	0.550	0.239	0.1897	0.0717	± 0.1754
JULY	11	0.0664	0.570	0.262	0.1432	0.0432	± 0.0962
AUGUST	8	0.1040	1.751	0.777	0.5859	0.2072	± 0.4899
OCTOBER	10	0.0191	0.159	0.059	0.0471	0.0149	± 0.0337
NOVEMBER	10	0.0133	0.126	0.037	0.0421	0.0133	± 0.0301
DECEMBER	5	0.0803	2.652	0.614	1.1394	0.5096	± 1.4147
1978 JANUARY	1	0.8412	0.841	0.841			
FEBRUARY	10	0.0221	0.518	0.130	0.1572	0.0497	± 0.1124
MARCH	18	0.0541	5.746	2.387	2.0329	0.4792	± 1.0109
APRIL	9	0.0109	3.917	0.996	1.2032	0.4011	± 0.9249
MAY	10	0.3206	4.259	1.793	1.4534	0.4596	± 1.0397
JUNE	7	0.4348	8.296	2.967	3.5311	1.3346	± 3.2657
JULY	9	0.2867	2.284	1.091	0.6058	0.2019	± 0.4656
AUGUST	6	0.1710	1.997	0.696	0.6680	0.2727	± 0.7010
SEPTEMBER	13	0.0372	0.740	0.255	0.2386	0.0662	± 0.1442
OCTOBER	8	0.1766	0.944	0.419	0.2310	0.0817	± 0.1931
NOVEMBER	11	0.0185	8.937	1.523	2.5403	0.7659	± 1.7066
DECEMBER	6	0.0478	2.628	0.735	0.9873	0.4031	± 1.0361
1979 JANUARY	4	0.0792	0.113	0.095	0.0169	0.0085	± 0.0269
FEBRUARY	7	0.0171	0.142	0.073	0.0530	0.0200	± 0.0490
MARCH	9	0.0310	0.207	0.076	0.0611	0.0204	± 0.0470
APRIL	6	1.0000	9.701	3.802	3.1353	1.2800	± 3.2902
JULY	3	0.6496	1.056	0.792	0.2288	0.1321	± 0.5684
AUGUST	4	0.3516	0.628	0.523	0.1193	0.0597	± 0.1899
SEPTEMBER	4	0.1759	0.549	0.288	0.1756	0.0878	± 0.2794
OCTOBER	5	0.1340	0.789	0.376	0.2818	0.1260	± 0.3499
NOVEMBER	3	0.0726	0.106	0.088	0.0166	0.0096	± 0.0413
DECEMBER	3	0.0494	0.067	0.060	0.0096	0.0055	± 0.0238
1980 JANUARY	4	0.0615	0.125	0.098	0.0285	0.0143	± 0.0454
FEBRUARY	3	0.0981	0.140	0.115	0.0220	0.0127	± 0.0546
MARCH	4	0.0875	0.389	0.197	0.1322	0.0661	± 0.2103
APRIL	3	0.1679	0.447	0.270	0.1536	0.0887	± 0.3817
MAY	4	0.4051	1.083	0.812	0.2927	0.1463	± 0.4657
JUNE	4	0.8000	1.178	0.997	0.1768	0.0884	± 0.2813
JULY	5	0.7556	1.138	0.977	0.1595	0.0713	± 0.1980
AUGUST	4	0.4362	1.147	0.839	0.2970	0.1485	± 0.4727
SEPTEMBER	5	0.4094	2.514	1.069	0.8387	0.3751	± 1.0414
OCTOBER	4	0.2550	1.607	0.626	0.6545	0.3272	± 1.0414
NOVEMBER	4	0.1304	0.358	0.195	0.1089	0.0545	± 0.1733
DECEMBER	2	0.1217	0.125	0.123	0.0022	0.0015	± 0.0197

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF AMMONIA (N) / NITRATE PLUS NITRITE (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
- -78-79-80 JANUARY	9	0.0615	0.841	0.179	0.2490	0.0830	± 0.1914
- -78-79-80 FEBRUARY	20	0.0171	0.518	0.108	0.1156	0.0259	± 0.0541
- -78-79-80 MARCH	31	0.0310	5.746	1.434	1.9095	0.3430	± 0.7004
- -78-79-80 APRIL	18	0.0109	9.701	1.810	2.3967	0.5649	± 1.1918
- -78- -80 MAY	14	0.3206	4.259	1.513	1.3016	0.3479	± 0.7515
-77-78- -80 JUNE	18	0.0256	8.296	1.468	2.4531	0.5782	± 1.2199
-77-78-79-80 JULY	28	0.0664	2.284	0.713	0.5176	0.0978	± 0.2007
-77-78-79-80 AUGUST	22	0.1040	1.997	0.720	0.4968	0.1059	± 0.2203
- -78-79-80 SEPTEMBER	22	0.0372	2.514	0.446	0.5392	0.1150	± 0.2391
-77-78-79-80 OCTOBER	27	0.0191	1.607	0.308	0.3476	0.0669	± 0.1375
-77-78-79-80 NOVEMBER	28	0.0133	8.937	0.649	1.7052	0.3223	± 0.6612
-77-78-79-80 DECEMBER	16	0.0478	2.652	0.494	0.8690	0.2173	± 0.4631


RATIO OF AMMONIA (N) / NITRATE PLUS NITRITE (N)
NEAR OLIVER
1976 - 1980
LOAD RATIO
0.1 0.3 0.9 4 8 30 70 200 600
MAXIMUM
MEAN
MEDIAN
MINIMUM
J F M A M J J A S O N D
(N) 9 20 31 18 14 18 28 22 22 27 28 16

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF AMMONIA (N) / NITRATE PLUS NITRITE (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
1976							
1977 JUN JUL AUG OCT NOV DEC	51	0.0133	2.652	0.290	0.4833	0.0677	± 0.1359
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	108	0.0109	8.937	1.246	1.7682	0.1701	± 0.3373
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC	48	0.0171	9.701	0.674	1.5903	0.2295	± 0.4617
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	46	0.0615	2.514	0.580	0.5074	0.0748	± 0.1507

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF AMMONIA (N) / NITRATE PLUS NITRITE (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
			APRIL TO SEPTEMBER				
1976							
1977	26	0.0256	1.751	0.414	0.4171	0.0818	± 0.1685
1978	54	0.0109	8.296	1.203	1.6837	0.2291	± 0.4596
1979	17	0.1759	9.701	1.672	2.3961	0.5811	± 1.2320
1980	25	0.1679	2.514	0.865	0.4562	0.0912	± 0.1883
1976-80	122	0.0109	9.701	1.031	1.4955	0.1354	± 0.2680
			OCTOBER TO MARCH				
1976-77							
1977-78	54	0.0133	5.746	0.910	1.6040	0.2183	± 0.4378
1978-79	45	0.0171	8.937	0.580	1.3898	0.2072	± 0.4175
1979-80	22	0.0494	0.789	0.175	0.1792	0.0382	± 0.0795
1980-81	10	0.1217	1.607	0.353	0.4503	0.1424	± 0.3221
1976-80	131	0.0133	8.937	0.631	1.3402	0.1171	± 0.2317
			APRIL TO MARCH				
1976-80	253	0.0109	9.701	0.824	1.4285	0.0898	± 0.1769

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF AMMONIA (N) / NITRATE PLUS NITRITE (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
1976							
1977 JUN JUL AUG OCT NOV DEC							
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC							
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC							
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC							
	253	0.0109	9.701	0.824	1.4285	0.0898	± 0.1769

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OKANAGAN RIVER NEAR OLIVER

Statistical Characteristics of Nutrient Loads

Period of Sampling June 1977 to December 1980.

RATIO OF AMMONIA (N) TO NITRATE PLUS NITRITE (N)

Median loads and their statistical characteristics determined for

- Individual Months
- All Months
- Individual years
- Seasons
  - April to September
  - October to March
  - April to March
- All Years

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF AMMONIA (N) / NITRATE PLUS NITRITE (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
1977 JUNE	7	0.204	0.0256	0.5503	0.984
JULY	11	0.267	0.1789	0.3777	0.961
AUGUST	8	0.667	0.1237	1.7507	0.961
OCTOBER	10	0.027	0.0246	0.1062	0.979
NOVEMBER	10	0.016	0.0148	0.1058	0.979
DECEMBER	5	0.100		0.0803	0.969
1978 JANUARY	1	0.841			
FEBRUARY	10	0.027	0.0247	0.2242	0.979
MARCH	18	1.533	0.9127	4.5679	0.969
APRIL	9	0.907	0.0223	1.5518	0.961
MAY	10	1.094	0.6403	4.2000	0.979
JUNE	7	1.004	0.4348	8.2960	0.984
JULY	9	0.988	0.6157	1.6071	0.961
AUGUST	6	0.374	0.1710	1.9971	0.969
SEPTEMBER	13	0.132	0.0576	0.4574	0.978
OCTOBER	8	0.379	0.2413	0.9442	0.961
NOVEMBER	11	1.000	0.0542	2.1563	0.961
DECEMBER	6	0.198	0.0478	2.6281	0.969
1979 JANUARY	4	0.083			
FEBRUARY	7	0.067	0.0171	0.1417	0.984
MARCH	9	0.049	0.0325	0.1478	0.961
APRIL	6	2.507	1.0000	9.7006	0.969
JULY	3	0.671			
AUGUST	4	0.550			
SEPTEMBER	4	0.192			
OCTOBER	5	0.235		0.1340	0.969
NOVEMBER	3	0.086			
DECEMBER	3	0.064			
1980 JANUARY	4	0.089			
FEBRUARY	3	0.107			
MARCH	4	0.150			
APRIL	3	0.195			
MAY	4	0.812			
JUNE	4	0.901			
JULY	5	1.015		0.7556	0.969
AUGUST	4	0.846			
SEPTEMBER	5	0.815		0.4094	0.969
OCTOBER	4	0.318			
NOVEMBER	4	0.139			
DECEMBER	2	0.122			

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF AMMONIA (N) / NITRATE PLUS NITRITE (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
- -78-79-80 JANUARY	9	0.107	0.0792	0.1249	0.961
- -78-79-80 FEBRUARY	20	0.090	0.0256	0.1387	0.959
- -78-79-80 MARCH	31	0.389	0.0875	1.5330	0.971
- -78-79-80 APRIL	18	0.914	0.3538	2.5067	0.969
- -78- -80 MAY	14	0.947	0.7256	2.4971	0.965
-77-78- -80 JUNE	18	0.642	0.2284	1.1106	0.969
-77-78-79-80 JULY	28	0.650	0.2952	0.9882	0.964
-77-78-79-80 AUGUST	22	0.564	0.4098	0.9029	0.965
- -78-79-80 SEPTEMBER	22	0.235	0.1321	0.5984	0.965
-77-78-79-80 OCTOBER	27	0.235	0.1062	0.3788	0.964
-77-78-79-80 NOVEMBER	28	0.106	0.0255	0.3577	0.964
-77-78-79-80 DECEMBER	16	0.122	0.0803	0.3809	0.951

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF AMMONIA (N) / NITRATE PLUS NITRITE (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
1976					
1977 JUN JUL AUG OCT NOV DEC	51	0.106	0.0817	0.1856	0.951
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	108	0.663	0.3936	0.9127	0.957
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC	48	0.139	0.0858	0.2355	0.956
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	46	0.405	0.1952	0.8151	0.960

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF AMMONIA (N) / NITRATE PLUS NITRITE (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
		APRIL TO SEPTEMBER			
1976					
1977	26	0.267	0.1789	0.4379	0.971
1978	54	0.716	0.4348	0.9153	0.960
1979	17	0.650	0.5486	2.1198	0.951
1980	25	0.875	0.7556	1.0146	0.957
1976-80	122	0.642	0.5026	0.8000	0.953
		OCTOBER TO MARCH			
1976-77					
1977-78	54	0.106	0.0541	0.2242	0.960
1978-79	45	0.148	0.0828	0.3788	0.964
1979-80	22	0.107	0.0875	0.1628	0.965
1980-81	10	0.153	0.1248	0.3577	0.979
1976-80	131	0.126	0.1058	0.1591	0.955
		APRIL TO MARCH			
1976-80	253	0.347	0.2284	0.4094	0.956

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF AMMONIA (N) / NITRATE PLUS NITRITE (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
1976					
1977 JUN JUL AUG OCT NOV DEC					
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC					
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC					
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC					
	253	0.347	0.2284	0.4094	0.956

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OKANAGAN RIVER NEAR OLIVER

Statistical Characteristics of Nutrient Concentrations

Period of Sampling June 1977 to December 1980.

RATIO OF AMMONIA (N) TO TOTAL NITROGEN (N)

Arithmetic mean concentrations and their statistical characteristics determined for:

- Individual Months
- All Months
  - Graph of monthly concentration ranges
- Individual years
- Seasons
  - April to September
  - October to March
  - April to March
- All Years
  - Histogram of concentration distribution

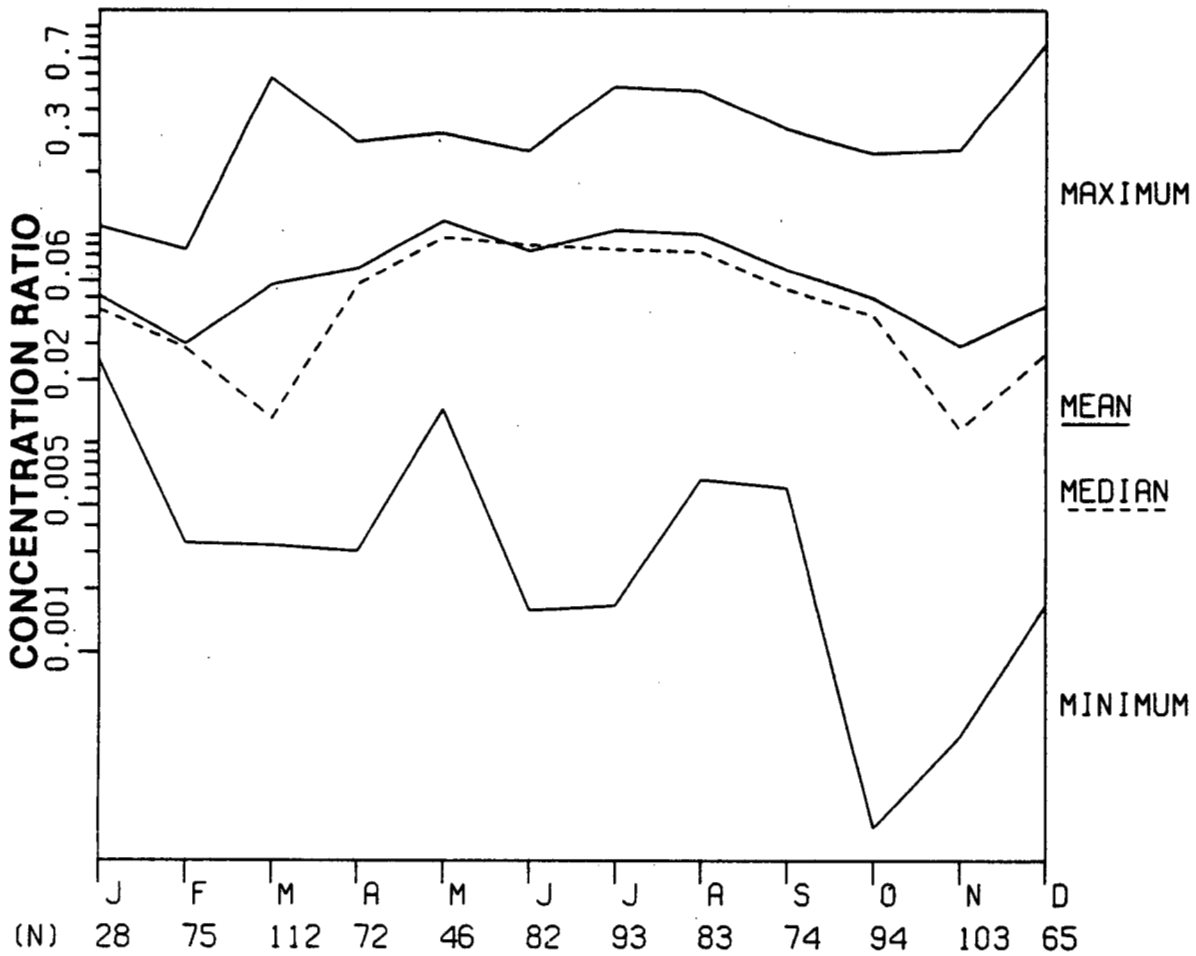
STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF AMMONIA (N) / TOTAL NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD		NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
1977	JUNE	41	0.0064	0.253	0.092	0.0523	0.0082	± 0.0165
	JULY	42	0.0017	0.160	0.070	0.0430	0.0066	± 0.0134
	AUGUST	28	0.0323	0.278	0.100	0.0786	0.0149	± 0.0305
	OCTOBER	26	0.0001	0.064	0.015	0.0165	0.0032	± 0.0067
	NOVEMBER	27	0.0004	0.040	0.004	0.0090	0.0017	± 0.0035
	DECEMBER	10	0.0017	0.828	0.100	0.2560	0.0809	± 0.1831
1978	JANUARY	1	0.0933	0.093	0.093			
	FEBRUARY	44	0.0033	0.068	0.022	0.0206	0.0031	± 0.0062
	MARCH	60	0.0032	0.579	0.076	0.1038	0.0134	± 0.0268
	APRIL	36	0.0030	0.252	0.091	0.0684	0.0114	± 0.0232
	MAY	30	0.0145	0.306	0.126	0.0647	0.0118	± 0.0242
	JUNE	25	0.0016	0.160	0.066	0.0482	0.0096	± 0.0199
	JULY	31	0.0262	0.519	0.160	0.1400	0.0251	± 0.0513
	AUGUST	24	0.0067	0.494	0.131	0.1015	0.0207	± 0.0429
	SEPTEMBER	38	0.0061	0.111	0.051	0.0292	0.0047	± 0.0096
	OCTOBER	32	0.0014	0.190	0.047	0.0438	0.0077	± 0.0158
	NOVEMBER	48	0.0033	0.254	0.032	0.0490	0.0071	± 0.0142
	DECEMBER	32	0.0059	0.167	0.028	0.0373	0.0066	± 0.0135
1979	JANUARY	12	0.0250	0.076	0.051	0.0137	0.0040	± 0.0087
	FEBRUARY	19	0.0045	0.078	0.029	0.0288	0.0066	± 0.0139
	MARCH	36	0.0063	0.086	0.009	0.0131	0.0022	± 0.0044
	APRIL	24	0.0087	0.280	0.033	0.0570	0.0116	± 0.0241
	JULY	4	0.0549	0.074	0.062	0.0081	0.0041	± 0.0129
	AUGUST	16	0.0333	0.190	0.056	0.0365	0.0091	± 0.0194
	SEPTEMBER	16	0.0319	0.241	0.062	0.0501	0.0125	± 0.0267
	OCTOBER	20	0.0338	0.100	0.062	0.0198	0.0044	± 0.0093
	NOVEMBER	12	0.0231	0.076	0.042	0.0169	0.0049	± 0.0107
	DECEMBER	11	0.0241	0.048	0.031	0.0065	0.0020	± 0.0044
1980	JANUARY	15	0.0310	0.110	0.049	0.0215	0.0056	± 0.0119
	FEBRUARY	12	0.0418	0.085	0.059	0.0157	0.0045	± 0.0100
	MARCH	16	0.0393	0.360	0.098	0.0851	0.0213	± 0.0453
	APRIL	12	0.0492	0.105	0.076	0.0206	0.0059	± 0.0131
	MAY	16	0.0739	0.190	0.099	0.0286	0.0072	± 0.0152
	JUNE	16	0.0625	0.137	0.086	0.0196	0.0049	± 0.0104
	JULY	16	0.0558	0.150	0.101	0.0229	0.0057	± 0.0122
	AUGUST	15	0.0773	0.151	0.099	0.0190	0.0049	± 0.0105
	SEPTEMBER	20	0.0490	0.323	0.106	0.0800	0.0179	± 0.0374
	OCTOBER	16	0.0407	0.244	0.095	0.0646	0.0162	± 0.0344
	NOVEMBER	16	0.0392	0.064	0.053	0.0075	0.0019	± 0.0040
	DECEMBER	12	0.0475	0.087	0.062	0.0106	0.0031	± 0.0067

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF AMMONIA (N) / TOTAL NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
- -78-79-80 JANUARY	28	0.0250	0.110	0.051	0.0196	0.0037	± 0.0076
- -78-79-80 FEBRUARY	75	0.0033	0.085	0.030	0.0255	0.0029	± 0.0059
- -78-79-80 MARCH	112	0.0032	0.579	0.058	0.0890	0.0084	± 0.0167
- -78-79-80 APRIL	72	0.0030	0.280	0.069	0.0642	0.0076	± 0.0151
- -78- -80 MAY	46	0.0145	0.306	0.117	0.0561	0.0083	± 0.0167
-77-78- -80 JUNE	82	0.0016	0.253	0.083	0.0474	0.0052	± 0.0104
-77-78-79-80 JULY	93	0.0017	0.519	0.105	0.0947	0.0098	± 0.0195
-77-78-79-80 AUGUST	83	0.0067	0.494	0.100	0.0768	0.0084	± 0.0168
- -78-79-80 SEPTEMBER	74	0.0061	0.323	0.068	0.0562	0.0065	± 0.0130
-77-78-79-80 OCTOBER	94	0.0001	0.244	0.050	0.0468	0.0048	± 0.0096
-77-78-79-80 NOVEMBER	103	0.0004	0.254	0.029	0.0380	0.0037	± 0.0074
-77-78-79-80 DECEMBER	65	0.0017	0.828	0.046	0.1031	0.0128	± 0.0255

RATIO OF AMMONIA (N) / TOTAL NITROGEN (N)
NEAR OLIVER
1976 - 1980



STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF AMMONIA (N) / TOTAL NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
1976							
1977 JUN JUL AUG OCT NOV DEC	174	0.0001	0.828	0.063	0.0831	0.0063	± 0.0124
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	401	0.0014	0.579	0.071	0.0833	0.0042	± 0.0082
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC	170	0.0045	0.280	0.038	0.0368	0.0028	± 0.0056
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	182	0.0310	0.360	0.084	0.0478	0.0035	± 0.0070

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF AMMONIA (N) / TOTAL NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
			APRIL TO SEPTEMBER				
1976							
1977	111	0.0017	0.278	0.086	0.0580	0.0055	± 0.0109
1978	184	0.0016	0.519	0.102	0.0898	0.0066	± 0.0131
1979	60	0.0087	0.280	0.049	0.0492	0.0064	± 0.0127
1980	95	0.0490	0.323	0.096	0.0420	0.0043	± 0.0086
1976-80	450	0.0016	0.519	0.090	0.0714	0.0034	± 0.0066
			OCTOBER TO MARCH				
1976-77							
1977-78	168	0.0001	0.828	0.042	0.0926	0.0071	± 0.0141
1978-79	179	0.0014	0.254	0.031	0.0389	0.0029	± 0.0057
1979-80	86	0.0231	0.360	0.059	0.0444	0.0048	± 0.0095
1980-81	44	0.0392	0.244	0.071	0.0432	0.0065	± 0.0131
1976-80	477	0.0001	0.828	0.044	0.0653	0.0030	± 0.0059
			APRIL TO MARCH				
1976-80	927	0.0001	0.828	0.066	0.0721	0.0024	± 0.0046

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF AMMONIA (N) / TOTAL NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
1976							
1977 JUN JUL AUG OCT NOV DEC							
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC							
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC							
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC							
	927	0.0001	0.828	0.066	0.0721	0.0024	± 0.0046

AMMONIA (N) / TOTAL NITROGEN (N)

n = 927

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OKANAGAN RIVER NEAR OLIVER

Statistical Characteristics of Nutrient Concentrations

Period of Sampling June 1977 to December 1980.

RATIO OF AMMONIA (N) TO TOTAL NITROGEN (N)

Median concentrations and their statistical characteristics determined for

- Individual Months
- All Months
- Individual years
- Seasons
  - April to September
  - October to March
  - April to March
- All Years
  - Cumulative distribution of concentration data

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF AMMONIA (N) / TOTAL NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD		NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
1977	JUNE	41	0.107	0.1029	0.1167	0.956
	JULY	42	0.066	0.0414	0.0935	0.956
	AUGUST	28	0.048	0.0412	0.1395	0.964
	OCTOBER	26	0.007	0.0069	0.0207	0.971
	NOVEMBER	27	0.001	0.0006	0.0013	0.964
	DECEMBER	10	0.018	0.0079	0.0388	0.979
1978	JANUARY	1	0.093			
	FEBRUARY	44	0.006	0.0050	0.0333	0.951
	MARCH	60	0.041	0.0158	0.0556	0.960
	APRIL	36	0.076	0.0619	0.1191	0.953
	MAY	30	0.107	0.0923	0.1348	0.957
	JUNE	25	0.060	0.0279	0.0905	0.957
	JULY	31	0.091	0.0714	0.1839	0.971
	AUGUST	24	0.096	0.0694	0.1714	0.957
	SEPTEMBER	38	0.047	0.0320	0.0621	0.966
	OCTOBER	32	0.031	0.0174	0.0636	0.965
	NOVEMBER	48	0.011	0.0091	0.0214	0.956
	DECEMBER	32	0.011	0.0100	0.0133	0.965
1979	JANUARY	12	0.049	0.0424	0.0622	0.961
	FEBRUARY	19	0.007	0.0056	0.0486	0.959
	MARCH	36	0.007	0.0067	0.0080	0.953
	APRIL	24	0.014	0.0095	0.0261	0.957
	JULY	4	0.060			
	AUGUST	16	0.045	0.0435	0.0565	0.951
	SEPTEMBER	16	0.045	0.0425	0.0636	0.951
	OCTOBER	20	0.060	0.0480	0.0690	0.959
	NOVEMBER	12	0.038	0.0260	0.0476	0.961
	DECEMBER	11	0.029	0.0273	0.0378	0.961
1980	JANUARY	15	0.038	0.0343	0.0585	0.965
	FEBRUARY	12	0.053	0.0429	0.0721	0.961
	MARCH	16	0.067	0.0557	0.1069	0.951
	APRIL	12	0.067	0.0618	0.1000	0.961
	MAY	16	0.092	0.0837	0.1026	0.951
	JUNE	16	0.082	0.0732	0.1000	0.951
	JULY	16	0.100	0.0913	0.1163	0.951
	AUGUST	15	0.092	0.0844	0.1070	0.965
	SEPTEMBER	20	0.070	0.0640	0.1040	0.959
	OCTOBER	16	0.070	0.0625	0.1319	0.951
	NOVEMBER	16	0.055	0.0490	0.0578	0.951
	DECEMBER	12	0.061	0.0509	0.0681	0.961

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF AMMONIA (N) / TOTAL NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
- -78-79-80 JANUARY	28	0.044	0.0371	0.0579	0.964
- -78-79-80 FEBRUARY	75	0.029	0.0057	0.0429	0.963
- -78-79-80 MARCH	112	0.013	0.0087	0.0417	0.953
- -78-79-80 APRIL	72	0.058	0.0318	0.0692	0.956
- -78- -80 MAY	46	0.097	0.0923	0.1095	0.960
-77-78- -80 JUNE	82	0.089	0.0732	0.1053	0.952
-77-78-79-80 JULY	93	0.083	0.0723	0.0963	0.951
-77-78-79-80 AUGUST	83	0.082	0.0556	0.0923	0.952
- -78-79-80 SEPTEMBER	74	0.055	0.0478	0.0640	0.953
-77-78-79-80 OCTOBER	94	0.041	0.0303	0.0533	0.951
-77-78-79-80 NOVEMBER	103	0.012	0.0091	0.0260	0.952
-77-78-79-80 DECEMBER	65	0.027	0.0125	0.0328	0.954

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF AMMONIA (N) / TOTAL NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
1976					
1977 JUN JUL AUG OCT NOV DEC	174	0.039	0.0323	0.0483	0.951
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	401	0.049	0.0429	0.0556	0.954
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC	170	0.035	0.0275	0.0424	0.953
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	182	0.071	0.0667	0.0800	0.955

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF AMMONIA (N) / TOTAL NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

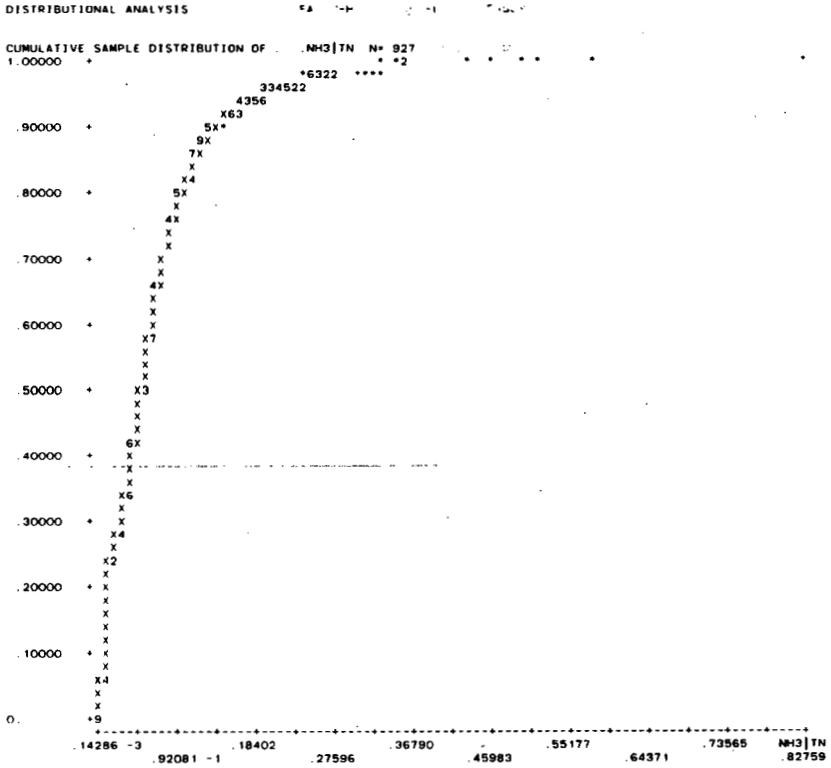
SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
		APRIL TO SEPTEMBER			
1976					
1977	111	0.087	0.0508	0.1065	0.953
1978	184	0.076	0.0692	0.0867	0.954
1979	60	0.043	0.0338	0.0478	0.960
1980	95	0.090	0.0826	0.0933	0.960
1976-80	450	0.076	0.0696	0.0827	0.952
		OCTOBER TO MARCH			
1976-77					
1977-78	168	0.011	0.0087	0.0190	0.955
1978-79	179	0.011	0.0091	0.0125	0.956
1979-80	86	0.048	0.0429	0.0576	0.960
1980-81	44	0.059	0.0558	0.0640	0.951
1976-80	477	0.030	0.0250	0.0364	0.951
		APRIL TO MARCH			
1976-80	927	0.050	0.0471	0.0542	0.951

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF AMMONIA (N) / TOTAL NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
1976					
1977 JUN JUL AUG OCT NOV DEC					
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC					
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC					
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC					
	927	0.050	0.0471	0.0542	0.951

DISTRIBUTIONAL ANALYSIS

CUMULATIVE SAMPLE DISTRIBUTION OF NH3|TN N= 927



PROB	QUANTILE	LEVEL	CONFIDENCE INTERVAL		SIZE
.1000	.64516 -2	.9500	.55556 -2	.71429 -2	.9514
.3000	.25641 -1	.9500	.18750 -1	.30000 -1	.9513
.5000	.50000 -1	.9500	.47059 -1	.54167 -1	.9513
.7000	.76364 -1	.9500	.72131 -1	.82927 -1	.9513
.9000	.13636	.9500	.12500	.15161	.9514

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OKANAGAN RIVER NEAR OLIVER

Statistical Characteristics of Nutrient Loads

Period of Sampling June 1977 to December 1980.

RATIO OF AMMONIA (N) TO TOTAL NITROGEN (N)

Arithmetic mean loads and their statistical characteristics determined for

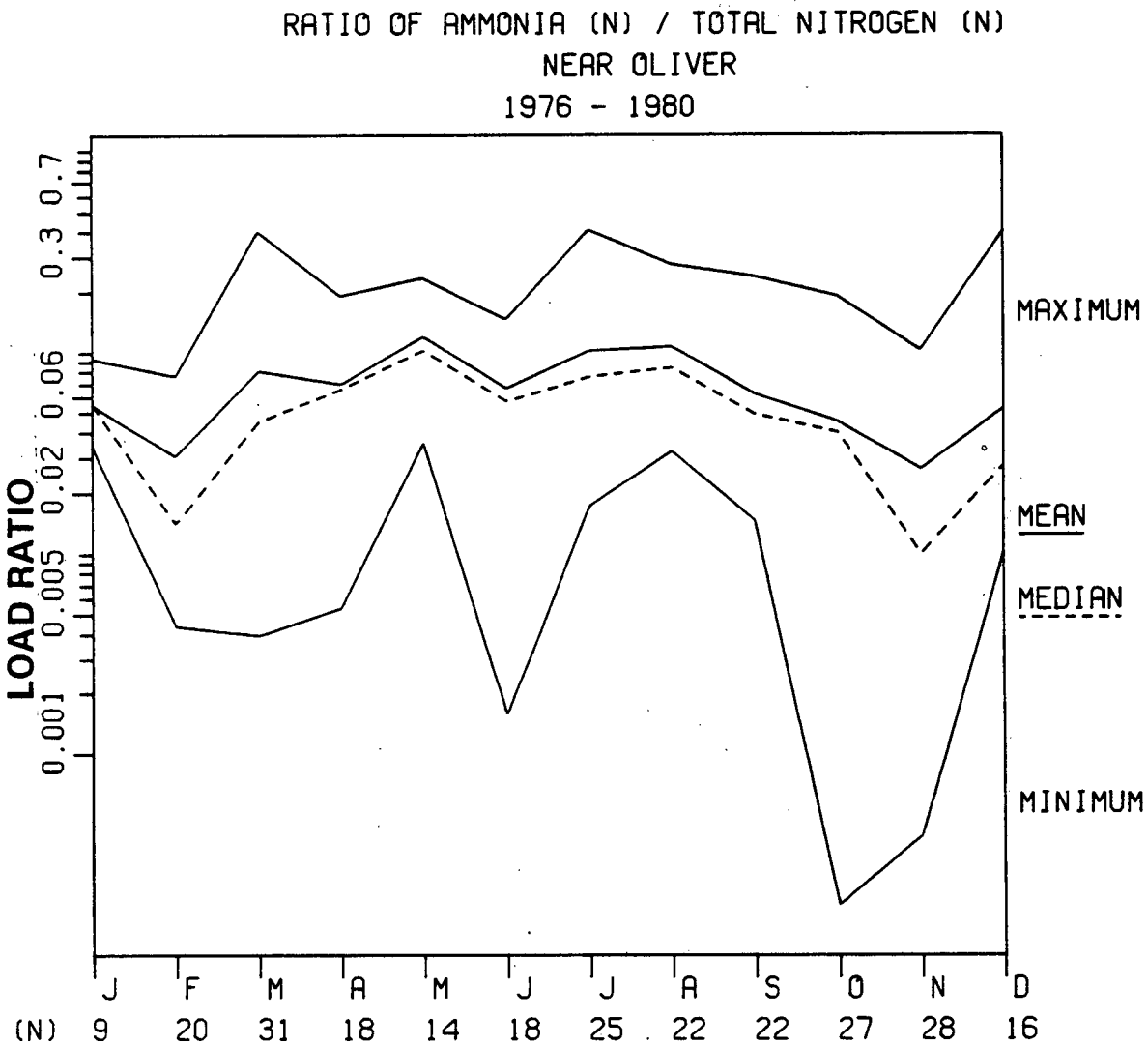
- Individual Months
- All Months
  - Graph of monthly load ranges
- Individual years
- Seasons
  - April to September
  - October to March
  - April to March
- All Years

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF AMMONIA (N) / TOTAL NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
1977 JUNE	7	0.0065	0.146	0.062	0.0516	0.0195	± 0.0477
JULY	11	0.0173	0.138	0.061	0.0343	0.0103	± 0.0230
AUGUST	8	0.0323	0.239	0.117	0.0772	0.0273	± 0.0646
OCTOBER	10	0.0002	0.049	0.017	0.0164	0.0052	± 0.0117
NOVEMBER	10	0.0004	0.020	0.003	0.0059	0.0019	± 0.0042
DECEMBER	5	0.0105	0.399	0.099	0.1683	0.0753	± 0.2090
1978 JANUARY	1	0.0934	0.093	0.093			
FEBRUARY	10	0.0044	0.049	0.017	0.0188	0.0060	± 0.0135
MARCH	18	0.0040	0.404	0.112	0.1096	0.0258	± 0.0545
APRIL	9	0.0054	0.192	0.091	0.0616	0.0205	± 0.0473
MAY	10	0.0355	0.237	0.129	0.0595	0.0188	± 0.0425
JUNE	7	0.0016	0.142	0.059	0.0501	0.0189	± 0.0463
JULY	9	0.0421	0.410	0.146	0.1160	0.0387	± 0.0891
AUGUST	6	0.0683	0.276	0.134	0.0901	0.0368	± 0.0946
SEPTEMBER	13	0.0146	0.096	0.045	0.0233	0.0065	± 0.0141
OCTOBER	8	0.0080	0.129	0.045	0.0380	0.0134	± 0.0318
NOVEMBER	11	0.0043	0.102	0.033	0.0360	0.0108	± 0.0242
DECEMBER	6	0.0103	0.064	0.022	0.0209	0.0085	± 0.0219
1979 JANUARY	4	0.0397	0.060	0.050	0.0105	0.0052	± 0.0166
FEBRUARY	7	0.0054	0.075	0.038	0.0302	0.0114	± 0.0280
MARCH	9	0.0065	0.028	0.010	0.0069	0.0023	± 0.0053
APRIL	6	0.0096	0.085	0.034	0.0276	0.0113	± 0.0290
JULY	1	0.0624	0.062	0.062			
AUGUST	4	0.0392	0.084	0.056	0.0191	0.0096	± 0.0304
SEPTEMBER	4	0.0367	0.110	0.062	0.0331	0.0166	± 0.0527
OCTOBER	5	0.0402	0.087	0.063	0.0189	0.0085	± 0.0235
NOVEMBER	3	0.0368	0.048	0.043	0.0056	0.0032	± 0.0139
DECEMBER	3	0.0271	0.035	0.031	0.0041	0.0024	± 0.0103
1980 JANUARY	4	0.0338	0.065	0.050	0.0137	0.0068	± 0.0218
FEBRUARY	3	0.0455	0.077	0.059	0.0161	0.0093	± 0.0399
MARCH	4	0.0454	0.219	0.100	0.0797	0.0398	± 0.1268
APRIL	3	0.0659	0.093	0.076	0.0149	0.0086	± 0.0371
MAY	4	0.0812	0.118	0.099	0.0152	0.0076	± 0.0242
JUNE	4	0.0746	0.096	0.086	0.0113	0.0057	± 0.0180
JULY	4	0.0823	0.230	0.132	0.0667	0.0333	± 0.1061
AUGUST	4	0.0827	0.117	0.098	0.0140	0.0070	± 0.0223
SEPTEMBER	5	0.0607	0.241	0.106	0.0771	0.0345	± 0.0957
OCTOBER	4	0.0491	0.192	0.095	0.0660	0.0330	± 0.1051
NOVEMBER	4	0.0461	0.060	0.053	0.0064	0.0032	± 0.0102
DECEMBER	2	0.0581	0.058	0.058	0.0002	0.0001	± 0.0018

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF AMMONIA (N) / TOTAL NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
- -78-79-80 JANUARY	9	0.0338	0.093	0.055	0.0179	0.0060	± 0.0138
- -78-79-80 FEBRUARY	20	0.0044	0.077	0.031	0.0269	0.0060	± 0.0126
- -78-79-80 MARCH	31	0.0040	0.404	0.081	0.0981	0.0176	± 0.0360
- -78-79-80 APRIL	18	0.0054	0.192	0.069	0.0522	0.0123	± 0.0259
- -78- -80 MAY	14	0.0355	0.237	0.121	0.0520	0.0139	± 0.0300
-77-78- -80 JUNE	18	0.0016	0.146	0.066	0.0444	0.0105	± 0.0221
-77-78-79-80 JULY	25	0.0173	0.410	0.103	0.0851	0.0170	± 0.0351
-77-78-79-80 AUGUST	22	0.0323	0.276	0.107	0.0689	0.0147	± 0.0305
- -78-79-80 SEPTEMBER	22	0.0146	0.241	0.062	0.0472	0.0101	± 0.0209
-77-78-79-80 OCTOBER	27	0.0002	0.192	0.045	0.0422	0.0081	± 0.0167
-77-78-79-80 NOVEMBER	28	0.0004	0.102	0.026	0.0291	0.0055	± 0.0113
-77-78-79-80 DECEMBER	16	0.0103	0.399	0.052	0.0942	0.0236	± 0.0502


RATIO OF AMMONIA (N) / TOTAL NITROGEN (N)
NEAR OLIVER
1976 - 1980
LOAD RATIO
0.7
0.3
0.06
0.02
0.005
0.001
MAXIMUM
MEAN
MEDIAN
MINIMUM
J F M A M J J A S O N D
(N) 9 20 31 18 14 18 25 22 22 27 28 16

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF AMMONIA (N) / TOTAL NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
1976							
1977 JUN JUL AUG OCT NOV DEC	51	0.0002	0.399	0.054	0.0732	0.0102	± 0.0206
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	108	0.0016	0.410	0.077	0.0795	0.0077	± 0.0152
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC	46	0.0054	0.110	0.040	0.0263	0.0039	± 0.0078
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	45	0.0338	0.241	0.087	0.0475	0.0071	± 0.0143

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF AMMONIA (N) / TOTAL NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
			APRIL TO SEPTEMBER				
1976							
1977	26	0.0065	0.239	0.078	0.0588	0.0115	± 0.0238
1978	54	0.0016	0.410	0.097	0.0773	0.0105	± 0.0211
1979	15	0.0096	0.110	0.049	0.0275	0.0071	± 0.0152
1980	24	0.0607	0.241	0.101	0.0447	0.0091	± 0.0189
1976-80	119	0.0016	0.410	0.088	0.0646	0.0059	± 0.0117
			OCTOBER TO MARCH				
1976-77							
1977-78	54	0.0002	0.404	0.055	0.0921	0.0125	± 0.0251
1978-79	45	0.0043	0.129	0.031	0.0299	0.0045	± 0.0090
1979-80	22	0.0271	0.219	0.060	0.0390	0.0083	± 0.0173
1980-81	10	0.0461	0.192	0.071	0.0436	0.0138	± 0.0312
1976-80	131	0.0002	0.404	0.049	0.0657	0.0057	± 0.0114
			APRIL TO MARCH				
1976-80	250	0.0002	0.410	0.067	0.0679	0.0043	± 0.0085

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF AMMONIA (N) / TOTAL NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
1976							
1977 JUN JUL AUG OCT NOV DEC							
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC							
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC							
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC							
	250	0.0002	0.410	0.067	0.0679	0.0043	± 0.0085

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OKANAGAN RIVER NEAR OLIVER

Statistical Characteristics of Nutrient Loads

Period of Sampling June 1977 to December 1980.

RATIO OF AMMONIA (N) TO TOTAL NITROGEN (N)

Median loads and their statistical characteristics determined for

- Individual Months
- All Months
- Individual years
- Seasons
  - April to September
  - October to March
  - April to March
- All Years

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF AMMONIA (N) / TOTAL NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
1977 JUNE	7	0.052	0.0065	0.1459	0.984
JULY	11	0.066	0.0277	0.0795	0.961
AUGUST	8	0.090	0.0378	0.2386	0.961
OCTOBER	10	0.007	0.0004	0.0344	0.979
NOVEMBER	10	0.001	0.0004	0.0035	0.979
DECEMBER	5	0.035		0.0105	0.969
1978 JANUARY	1	0.093			
FEBRUARY	10	0.005	0.0045	0.0432	0.979
MARCH	18	0.053	0.0215	0.1903	0.969
APRIL	9	0.093	0.0075	0.1404	0.961
MAY	10	0.123	0.0693	0.1934	0.979
JUNE	7	0.057	0.0016	0.1424	0.984
JULY	9	0.107	0.0470	0.2160	0.961
AUGUST	6	0.079	0.0683	0.2762	0.969
SEPTEMBER	13	0.044	0.0266	0.0679	0.978
OCTOBER	8	0.030	0.0171	0.1289	0.961
NOVEMBER	11	0.014	0.0071	0.0886	0.961
DECEMBER	6	0.013	0.0103	0.0642	0.969
1979 JANUARY	4	0.043			
FEBRUARY	7	0.042	0.0054	0.0752	0.984
MARCH	9	0.008	0.0066	0.0083	0.961
APRIL	6	0.023	0.0096	0.0853	0.969
JULY	1	0.062			
AUGUST	4	0.050			
SEPTEMBER	4	0.045			
OCTOBER	5	0.063		0.0402	0.969
NOVEMBER	3	0.043			
DECEMBER	3	0.032			
1980 JANUARY	4	0.044			
FEBRUARY	3	0.054			
MARCH	4	0.068			
APRIL	3	0.069			
MAY	4	0.095			
JUNE	4	0.078			
JULY	4	0.099			
AUGUST	4	0.096			
SEPTEMBER	5	0.069		0.0607	0.969
OCTOBER	4	0.063			
NOVEMBER	4	0.048			
DECEMBER	2	0.058			

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF AMMONIA (N) / TOTAL NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
- -78-79-80 JANUARY	9	0.055	0.0397	0.0655	0.961
- -78-79-80 FEBRUARY	20	0.014	0.0054	0.0462	0.959
- -78-79-80 MARCH	31	0.045	0.0097	0.0693	0.971
- -78-79-80 APRIL	18	0.066	0.0228	0.0933	0.969
- -78- -80 MAY	14	0.102	0.0912	0.1574	0.965
-77-78- -80 JUNE	18	0.057	0.0320	0.0963	0.969
-77-78-79-80 JULY	25	0.076	0.0624	0.1069	0.957
-77-78-79-80 AUGUST	22	0.084	0.0683	0.1457	0.965
- -78-79-80 SEPTEMBER	22	0.049	0.0367	0.0686	0.965
-77-78-79-80 OCTOBER	27	0.040	0.0264	0.0628	0.964
-77-78-79-80 NOVEMBER	28	0.010	0.0035	0.0432	0.964
-77-78-79-80 DECEMBER	16	0.027	0.0129	0.0581	0.951

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF AMMONIA (N) / TOTAL NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
1976					
1977 JUN JUL AUG OCT NOV DEC	51	0.032	0.0173	0.0427	0.951
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	108	0.049	0.0421	0.0683	0.957
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC	46	0.040	0.0279	0.0480	0.960
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	45	0.074	0.0628	0.0933	0.964

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF AMMONIA (N) / TOTAL NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
		APRIL TO SEPTEMBER			
1976					
1977	26	0.057	0.0378	0.0898	0.971
1978	54	0.071	0.0630	0.0988	0.960
1979	15	0.045	0.0236	0.0624	0.965
1980	24	0.095	0.0812	0.0988	0.957
1976-80	119	0.073	0.0662	0.0853	0.957
		OCTOBER TO MARCH			
1976-77					
1977-78	54	0.012	0.0071	0.0373	0.960
1978-79	45	0.017	0.0100	0.0397	0.964
1979-80	22	0.048	0.0432	0.0681	0.965
1980-81	10	0.058	0.0484	0.0737	0.979
1976-80	131	0.035	0.0215	0.0432	0.955
		APRIL TO MARCH			
1976-80	250	0.049	0.0447	0.0584	0.950

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF AMMONIA (N) / TOTAL NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
1976					
1977 JUN JUL AUG OCT NOV DEC					
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC					
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC					
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC					
	250	0.049	0.0447	0.0584	0.950

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OKANAGAN RIVER NEAR OLIVER

Statistical Characteristics of Nutrient Concentrations

Period of Sampling June 1977 to December 1980.

ORGANIC NITROGEN (N)

Arithmetic mean concentrations and their statistical characteristics determined for:

- Individual Months
- All Months
  - Graph of monthly concentration ranges
- Individual years
- Seasons
  - April to September
  - October to March
  - April to March
- All Years
  - Histogram of concentration distribution

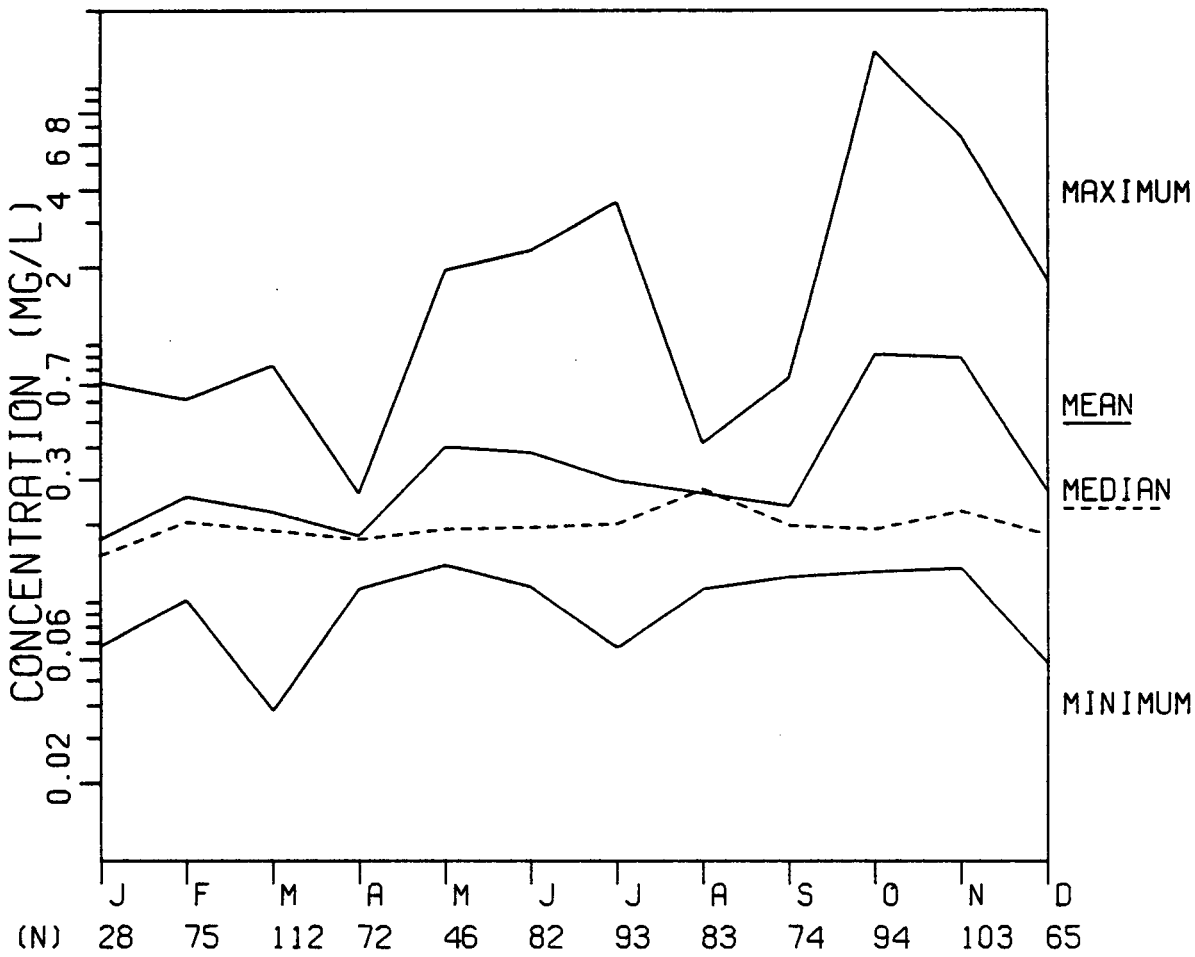
STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
ORGANIC NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
				(MG/L)			
1977 JUNE	41	0.1150	0.232	0.176	0.0258	0.0040	± 0.0081
JULY	42	0.1730	1.105	0.230	0.1467	0.0226	± 0.0457
AUGUST	28	0.1890	0.367	0.282	0.0460	0.0087	± 0.0178
OCTOBER	26	0.1320	13.929	2.172	3.7622	0.7378	± 1.5196
NOVEMBER	27	0.8660	6.415	2.806	1.4726	0.2834	± 0.5826
DECEMBER	10	0.0580	1.769	0.767	0.5382	0.1702	± 0.3850
1978 JANUARY	1	0.7160	0.716	0.716			
FEBRUARY	44	0.1560	0.614	0.316	0.1253	0.0189	± 0.0381
MARCH	60	0.1660	0.837	0.246	0.1347	0.0174	± 0.0348
APRIL	36	0.1130	0.265	0.161	0.0303	0.0051	± 0.0103
MAY	30	0.1820	1.958	0.529	0.5017	0.0916	± 0.1873
JUNE	25	0.1540	2.325	0.834	0.7548	0.1510	± 0.3115
JULY	31	0.0670	3.580	0.463	0.6175	0.1109	± 0.2265
AUGUST	24	0.1570	0.415	0.272	0.0815	0.0166	± 0.0344
SEPTEMBER	38	0.1770	0.742	0.267	0.1329	0.0216	± 0.0437
OCTOBER	32	0.1690	7.362	0.744	1.2972	0.2293	± 0.4677
NOVEMBER	48	0.1440	0.606	0.249	0.0855	0.0123	± 0.0248
DECEMBER	32	0.1450	0.326	0.205	0.0420	0.0074	± 0.0152
1979 JANUARY	12	0.1460	0.161	0.153	0.0051	0.0015	± 0.0033
FEBRUARY	19	0.1290	0.346	0.199	0.0615	0.0141	± 0.0297
MARCH	36	0.1590	0.278	0.229	0.0389	0.0065	± 0.0132
APRIL	24	0.1780	0.234	0.211	0.0132	0.0027	± 0.0056
JULY	4	0.1930	0.221	0.204	0.0120	0.0060	± 0.0192
AUGUST	16	0.2520	0.360	0.307	0.0323	0.0081	± 0.0172
SEPTEMBER	16	0.1440	0.303	0.219	0.0514	0.0129	± 0.0274
OCTOBER	20	0.1420	0.275	0.185	0.0370	0.0083	± 0.0173
NOVEMBER	12	0.1380	0.212	0.169	0.0247	0.0071	± 0.0157
DECEMBER	11	0.1340	0.195	0.162	0.0213	0.0064	± 0.0143
1980 JANUARY	15	0.0680	0.256	0.158	0.0479	0.0124	± 0.0265
FEBRUARY	12	0.1020	0.165	0.136	0.0204	0.0059	± 0.0130
MARCH	16	0.0380	0.164	0.125	0.0404	0.0101	± 0.0215
APRIL	12	0.1600	0.221	0.180	0.0200	0.0058	± 0.0127
MAY	16	0.1400	0.193	0.165	0.0131	0.0033	± 0.0070
JUNE	16	0.1620	0.237	0.197	0.0234	0.0058	± 0.0125
JULY	16	0.1400	0.202	0.173	0.0164	0.0041	± 0.0087
AUGUST	15	0.1130	0.204	0.176	0.0262	0.0068	± 0.0145
SEPTEMBER	20	0.1260	0.235	0.190	0.0303	0.0068	± 0.0142
OCTOBER	16	0.1400	0.214	0.176	0.0217	0.0054	± 0.0115
NOVEMBER	16	0.1360	0.188	0.159	0.0148	0.0037	± 0.0079
DECEMBER	12	0.0690	0.160	0.122	0.0245	0.0071	± 0.0156

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
ORGANIC NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
				(MG/L)			
- -78-79-80 JANUARY	28	0.0680	0.716	0.176	0.1114	0.0211	± 0.0432
- -78-79-80 FEBRUARY	75	0.1020	0.614	0.258	0.1242	0.0143	± 0.0286
- -78-79-80 MARCH	112	0.0380	0.837	0.223	0.1096	0.0104	± 0.0205
- -78-79-80 APRIL	72	0.1130	0.265	0.181	0.0329	0.0039	± 0.0077
- -78- -80 MAY	46	0.1400	1.958	0.402	0.4392	0.0648	± 0.1304
-77-78- -80 JUNE	82	0.1150	2.325	0.381	0.5103	0.0564	± 0.1121
-77-78-79-80 JULY	93	0.0670	3.580	0.297	0.3853	0.0399	± 0.0793
-77-78-79-80 AUGUST	83	0.1130	0.415	0.265	0.0692	0.0076	± 0.0151
- -78-79-80 SEPTEMBER	74	0.1260	0.742	0.236	0.1043	0.0121	± 0.0242
-77-78-79-80 OCTOBER	94	0.1320	13.929	0.923	2.2420	0.2312	± 0.4592
-77-78-79-80 NOVEMBER	103	0.1360	6.415	0.896	1.3661	0.1346	± 0.2670
-77-78-79-80 DECEMBER	65	0.0580	1.769	0.269	0.2976	0.0369	± 0.0737

ORGANIC NITROGEN (N)
NEAR OLIVER
1976 - 1980



STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
ORGANIC NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
				(MG/L)			
1976							
1977 JUN JUL AUG OCT NOV DEC	174	0.0580	13.929	0.946	1.8698	0.1417	± 0.2797
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	401	0.0670	7.362	0.362	0.5083	0.0254	± 0.0499
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC	170	0.1290	0.360	0.210	0.0534	0.0041	± 0.0081
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	182	0.0380	0.256	0.165	0.0347	0.0026	± 0.0051

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
ORGANIC NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
				(MG/L)			
			APRIL TO SEPTEMBER				
1976							
1977	111	0.1150	1.105	0.223	0.1024	0.0097	± 0.0193
1978	184	0.0670	3.580	0.400	0.4772	0.0352	± 0.0694
1979	60	0.1440	0.360	0.238	0.0526	0.0068	± 0.0136
1980	95	0.1130	0.237	0.180	0.0247	0.0025	± 0.0050
1976-80	450	0.0670	3.580	0.288	0.3238	0.0153	± 0.0300
			OCTOBER TO MARCH				
1976-77							
1977-78	168	0.0580	13.929	1.007	1.8854	0.1455	± 0.2872
1978-79	179	0.1290	7.362	0.314	0.5806	0.0434	± 0.0856
1979-80	86	0.0380	0.275	0.157	0.0402	0.0043	± 0.0086
1980-81	44	0.0690	0.214	0.155	0.0294	0.0044	± 0.0089
1976-80	477	0.0380	13.929	0.515	1.2286	0.0563	± 0.1105
			APRIL TO MARCH				
1976-80	927	0.0380	13.929	0.405	0.9163	0.0301	± 0.0591

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
ORGANIC NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
				(MG/L)			
1976							
1977 JUN JUL AUG OCT NOV DEC							
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC							
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC							
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC							
	927	0.0380	13.929	0.405	0.9163	0.0301	± 0.0591

ORGANIC NITROGEN (N)

n = 927

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OKANAGAN RIVER NEAR OLIVER

Statistical Characteristics of Nutrient Concentrations

Period of Sampling June 1977 to December 1980.

ORGANIC NITROGEN (N)

Median concentrations and their statistical characteristics determined for

- Individual Months
- All Months
- Individual years
- Seasons
  - April to September
  - October to March
  - April to March
- All Years
  - Cumulative distribution of concentration data

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
ORGANIC NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD		NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
			(MG/L)			
1977	JUNE	41	0.167	0.1610	0.1850	0.956
	JULY	42	0.197	0.1920	0.2060	0.956
	AUGUST	28	0.297	0.2700	0.3070	0.964
	OCTOBER	26	0.197	0.1890	0.2350	0.971
	NOVEMBER	27	2.968	1.6680	3.6560	0.964
	DECEMBER	10	0.791	0.0730	1.2090	0.979
1978	JANUARY	1	0.716			
	FEBRUARY	44	0.318	0.2390	0.3800	0.951
	MARCH	60	0.191	0.1860	0.2110	0.960
	APRIL	36	0.158	0.1490	0.1720	0.953
	MAY	30	0.225	0.1930	0.4790	0.957
	JUNE	25	0.350	0.2820	1.5810	0.957
	JULY	31	0.346	0.2870	0.3950	0.971
	AUGUST	24	0.253	0.2130	0.3180	0.957
	SEPTEMBER	38	0.195	0.1870	0.2190	0.966
	OCTOBER	32	0.438	0.2090	0.5670	0.965
	NOVEMBER	48	0.226	0.2060	0.2470	0.956
	DECEMBER	32	0.186	0.1830	0.2160	0.965
1979	JANUARY	12	0.152	0.1470	0.1580	0.961
	FEBRUARY	19	0.183	0.1520	0.2480	0.959
	MARCH	36	0.246	0.2260	0.2540	0.953
	APRIL	24	0.212	0.2060	0.2160	0.957
	JULY	4	0.200			
	AUGUST	16	0.315	0.2800	0.3310	0.951
	SEPTEMBER	16	0.212	0.1970	0.2570	0.951
	OCTOBER	20	0.178	0.1580	0.1870	0.959
	NOVEMBER	12	0.171	0.1420	0.1870	0.961
	DECEMBER	11	0.160	0.1400	0.1890	0.961
1980	JANUARY	15	0.145	0.1370	0.1620	0.965
	FEBRUARY	12	0.141	0.1130	0.1530	0.961
	MARCH	16	0.138	0.1240	0.1560	0.951
	APRIL	12	0.170	0.1650	0.1970	0.961
	MAY	16	0.164	0.1570	0.1750	0.951
	JUNE	16	0.195	0.1800	0.2190	0.951
	JULY	16	0.168	0.1660	0.1850	0.951
	AUGUST	15	0.186	0.1510	0.1980	0.965
	SEPTEMBER	20	0.194	0.1840	0.2100	0.959
	OCTOBER	16	0.174	0.1570	0.1930	0.951
	NOVEMBER	16	0.155	0.1530	0.1720	0.951
	DECEMBER	12	0.121	0.1130	0.1410	0.961

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
ORGANIC NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
		(MG/L)			
- -78-79-80 JANUARY	28	0.152	0.1460	0.1590	0.964
- -78-79-80 FEBRUARY	75	0.204	0.1690	0.2780	0.963
- -78-79-80 MARCH	112	0.190	0.1850	0.2110	0.953
- -78-79-80 APRIL	72	0.176	0.1700	0.1960	0.956
- -78- -80 MAY	46	0.192	0.1860	0.2250	0.960
-77-78- -80 JUNE	82	0.195	0.1800	0.2100	0.952
-77-78-79-80 JULY	93	0.201	0.1960	0.2110	0.951
-77-78-79-80 AUGUST	83	0.275	0.2520	0.2970	0.952
- -78-79-80 SEPTEMBER	74	0.199	0.1930	0.2100	0.953
-77-78-79-80 OCTOBER	94	0.193	0.1840	0.2020	0.951
-77-78-79-80 NOVEMBER	103	0.226	0.2040	0.2590	0.952
-77-78-79-80 DECEMBER	65	0.183	0.1680	0.1890	0.954

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
ORGANIC NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
		(MG/L)			
1976					
1977 JUN JUL AUG OCT NOV DEC	174	0.208	0.2010	0.2170	0.951
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	401	0.212	0.2060	0.2260	0.954
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC	170	0.201	0.1870	0.2140	0.953
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	182	0.164	0.1600	0.1700	0.955

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
ORGANIC NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

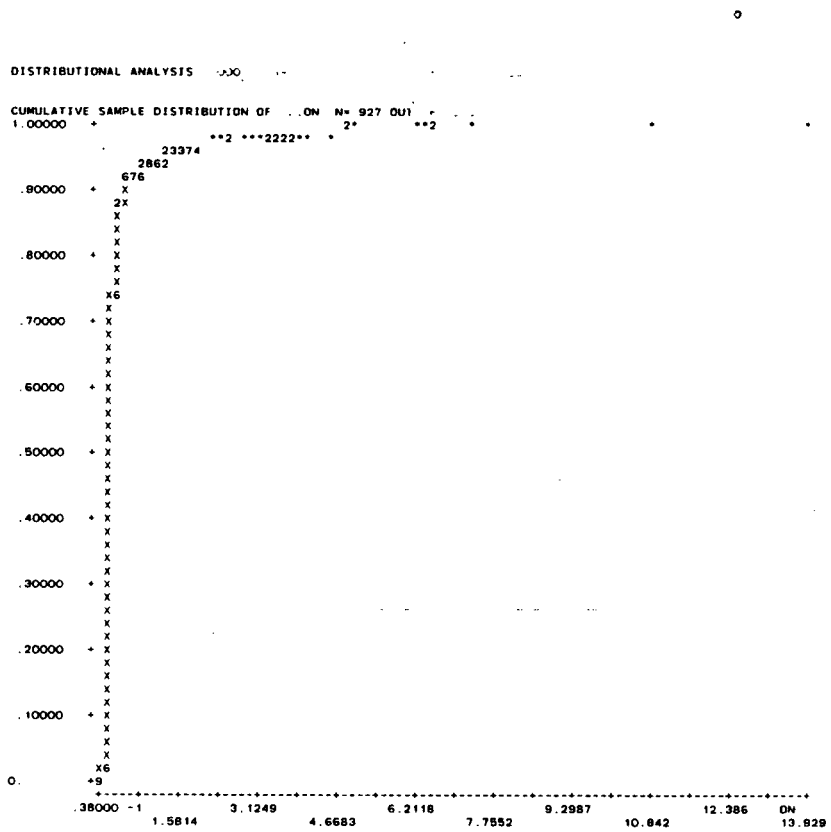
SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
		(MG/L)			
		APRIL TO SEPTEMBER			
1976					
1977	111	0.199	0.1940	0.2080	0.953
1978	184	0.213	0.1980	0.2640	0.954
1979	60	0.218	0.2120	0.2480	0.960
1980	95	0.180	0.1720	0.1860	0.960
1976-80	450	0.201	0.1960	0.2060	0.952
		OCTOBER TO MARCH			
1976-77					
1977-78	168	0.228	0.2090	0.3520	0.955
1978-79	179	0.216	0.1980	0.2330	0.956
1979-80	86	0.153	0.1460	0.1600	0.960
1980-81	44	0.155	0.1510	0.1640	0.951
1976-80	477	0.192	0.1870	0.2000	0.951
		APRIL TO MARCH			
1976-80	927	0.198	0.1940	0.2030	0.951

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
ORGANIC NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
		(MG/L)			
1976					
1977 JUN JUL AUG OCT NOV DEC					
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC					
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC					
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC					
	927	0.198	0.1940	0.2030	0.951

DISTRIBUTIONAL ANALYSIS

CUMULATIVE SAMPLE DISTRIBUTION OF ..ON N= 927 OUT



PROB	QUANTILE	LEVEL	CONFIDENCE INTERVAL		SIZE
.1000	.14900	.9500	.14400	.15300	.9514
.3000	.17600	.9500	.17300	.18000	.9513
.5000	.19800	.9500	.19400	.20300	.9513
.7000	.24700	.9500	.23300	.25900	.9513
.9000	.46400	.9500	.43500	.61000	.9514

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OKANAGAN RIVER NEAR OLIVER

Statistical Characteristics of Nutrient Loads

Period of Sampling June 1977 to December 1980.

ORGANIC NITROGEN (N)

Arithmetic mean loads and their statistical characteristics determined for

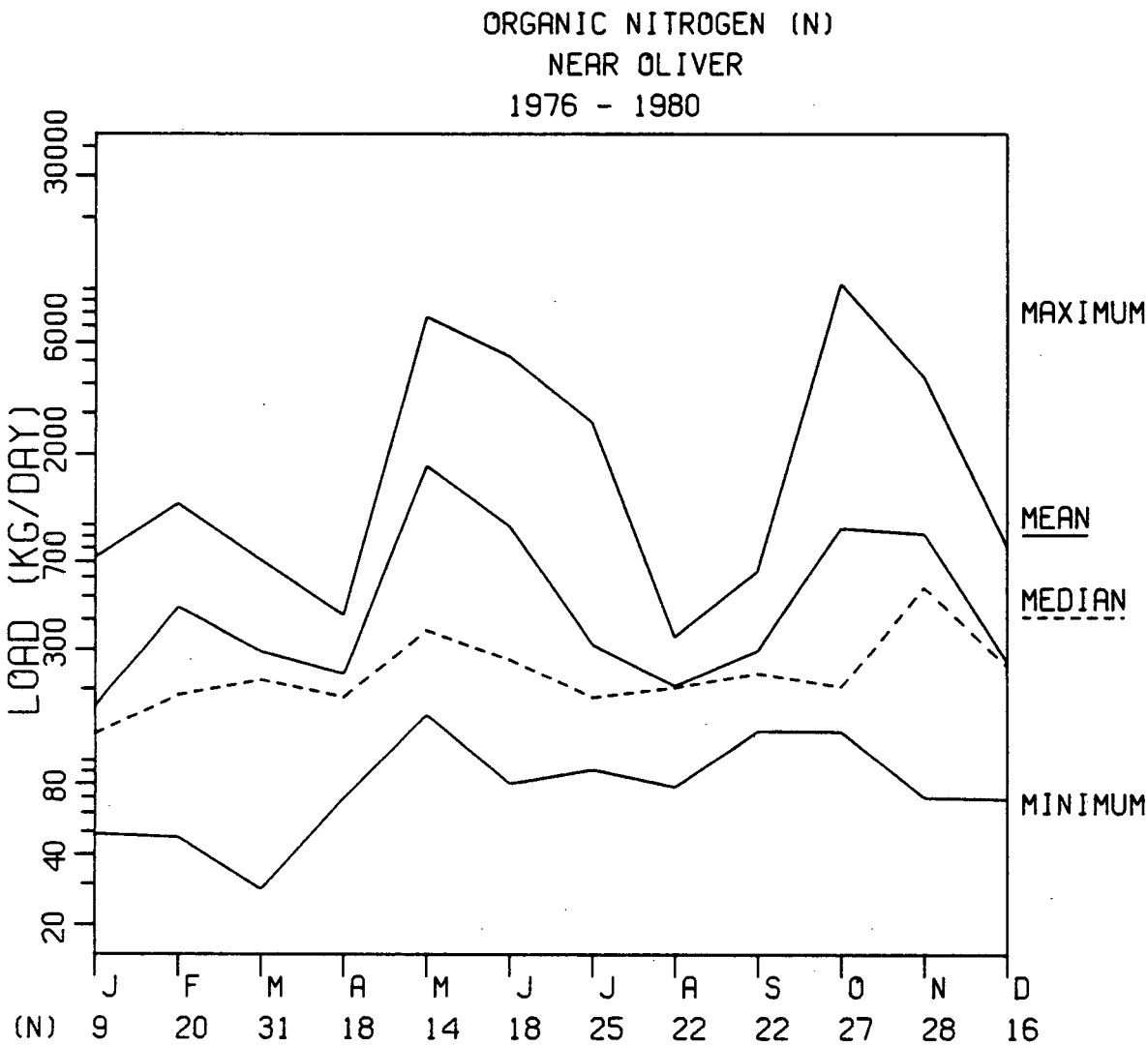
- Individual Months
- All Months
  - Graph of monthly load ranges
- Individual years
- Seasons
  - April to September
  - October to March
  - April to March
- All Years

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
ORGANIC NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
				(KG/DAY)			
1977 JUNE	7	79.7000	131.000	112.540	17.6750	6.6805	± 16.3470
JULY	11	91.7000	206.000	123.130	32.9140	9.9239	± 22.1100
AUGUST	8	115.0000	204.000	155.130	26.2160	9.2688	± 21.9150
OCTOBER	10	152.0000	10600.000	1664.800	3443.1001	1088.8040	± 2463.0098
NOVEMBER	10	425.0000	4260.000	1791.000	1102.3999	348.6094	± 788.6001
DECEMBER	5	102.0000	814.000	366.600	283.2400	126.6688	± 351.6895
1978 JANUARY	1	731.0000	731.000	731.000			
FEBRUARY	10	366.0000	1240.000	786.100	259.6699	82.1148	± 185.7600
MARCH	18	189.0000	712.000	408.110	146.4500	34.5186	± 72.8300
APRIL	9	177.0000	416.000	314.000	92.4430	30.8143	± 71.0600
MAY	10	220.0000	7690.000	2412.900	2593.5000	820.1367	± 1855.2944
JUNE	7	271.0000	5250.000	2252.600	2329.3999	880.4304	± 2154.3184
JULY	9	186.0000	2750.000	593.000	814.8000	271.5999	± 626.3069
AUGUST	6	165.0000	339.000	255.500	60.2880	24.6125	± 63.2700
SEPTEMBER	13	192.0000	637.000	353.310	159.3400	44.1929	± 96.2900
OCTOBER	8	280.0000	3370.000	967.380	1033.2000	365.2913	± 863.7349
NOVEMBER	11	334.0000	1400.000	632.360	324.0000	97.6897	± 217.6650
DECEMBER	6	256.0000	402.000	325.000	60.2000	24.5765	± 63.1799
1979 JANUARY	4	130.0000	141.000	133.750	5.1881	2.5940	± 8.2600
FEBRUARY	7	114.0000	190.000	144.000	28.0420	10.5989	± 25.9300
MARCH	9	127.0000	200.000	170.560	25.9670	8.6557	± 19.9600
APRIL	6	136.0000	185.000	162.670	18.2830	7.4640	± 19.1850
JULY	1	157.0000	157.000	157.000			
AUGUST	4	211.0000	282.000	250.750	29.9490	14.9745	± 47.6499
SEPTEMBER	4	133.0000	241.000	206.000	49.4910	24.7455	± 78.7500
OCTOBER	5	132.0000	249.000	193.000	42.8540	19.1649	± 53.2100
NOVEMBER	3	69.6000	85.800	79.000	8.4071	4.8538	± 20.8840
DECEMBER	3	68.6000	74.300	70.800	3.0643	1.7692	± 7.6120
1980 JANUARY	4	48.8000	96.600	69.200	20.2640	10.1320	± 32.2425
FEBRUARY	3	47.2000	68.700	59.167	10.9550	6.3249	± 27.2125
MARCH	4	28.2000	67.700	52.975	17.1380	8.5690	± 27.2710
APRIL	3	69.0000	219.000	132.670	77.5260	44.7596	± 192.5845
MAY	4	157.0000	275.000	203.000	50.7810	25.3905	± 80.8000
JUNE	4	195.0000	404.000	296.250	85.5040	42.7520	± 136.0599
JULY	4	180.0000	302.000	254.500	53.2570	26.6285	± 84.7400
AUGUST	4	77.7000	261.000	191.670	84.4300	42.2150	± 134.3455
SEPTEMBER	5	194.0000	294.000	220.600	41.3260	18.4816	± 51.3100
OCTOBER	4	193.0000	258.000	214.000	29.8110	14.9055	± 47.4400
NOVEMBER	4	151.0000	191.000	165.500	17.5210	8.7605	± 27.8800
DECEMBER	2	125.0000	126.000	125.500	0.7071	0.5000	± 6.3500

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
ORGANIC NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
				(KG/DAY)			
- -78-79-80 JANUARY	9	48.8000	731.000	171.420	212.7000	70.9000	± 163.4897
- -78-79-80 FEBRUARY	20	47.2000	1240.000	452.320	387.6399	86.6789	± 181.4250
- -78-79-80 MARCH	31	28.2000	712.000	293.320	180.2600	32.3756	± 66.1200
- -78-79-80 APRIL	18	69.0000	416.000	233.330	108.7300	25.6279	± 54.0699
- -78- -80 MAY	14	157.0000	7690.000	1781.500	2393.8999	639.7966	± 1382.1899
-77-78- -80 JUNE	18	79.7000	5250.000	985.600	1732.8999	408.4482	± 861.7849
-77-78-79-80 JULY	25	91.7000	2750.000	314.660	519.2400	103.8480	± 214.3350
-77-78-79-80 AUGUST	22	77.7000	339.000	206.530	65.9340	14.0572	± 29.2350
- -78-79-80 SEPTEMBER	22	133.0000	637.000	296.360	141.8200	30.2361	± 62.8800
-77-78-79-80 OCTOBER	27	132.0000	10600.000	970.670	2186.6001	420.8113	± 864.9548
-77-78-79-80 NOVEMBER	28	69.6000	4260.000	920.180	960.0000	181.4229	± 372.2349
-77-78-79-80 DECEMBER	16	68.6000	814.000	265.400	193.9600	48.4900	± 103.3500


ORGANIC NITROGEN (N)
NEAR OLIVER
1976 - 1980
LOAD (KG/DAY)
30000
6000
2000
700
300
80
40
20
MAXIMUM
MEAN
MEDIAN
MINIMUM
J F M A M J J A S O N D
(N) 9 20 31 18 14 18 25 22 22 27 28 16

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
ORGANIC NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
				(KG/DAY)			
1976							
1977 JUN JUL AUG OCT NOV DEC	51	79.7000	10600.000	779.890	1719.7000	240.8062	± 483.6399
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	108	165.0000	7690.000	803.420	1225.2000	117.8949	± 233.7051
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC	46	68.6000	282.000	162.010	52.7530	7.7780	± 15.6650
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	45	28.2000	404.000	171.510	88.4010	13.1780	± 26.5600

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
ORGANIC NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
				(KG/DAY)			
			APRIL TO SEPTEMBER				
1976							
1977	26	79.7000	206.000	130.120	31.7620	6.2290	± 12.8300
1978	54	165.0000	7690.000	1003.400	1649.6001	224.4821	± 450.2600
1979	15	133.0000	282.000	197.330	48.0040	12.3946	± 26.5850
1980	24	69.0000	404.000	220.110	76.2380	15.5620	± 32.1900
1976-80	119	69.0000	7690.000	553.040	1181.0000	108.2621	± 214.3900
			OCTOBER TO MARCH				
1976-77							
1977-78	54	102.0000	10600.000	969.060	1615.8999	219.8961	± 441.0500
1978-79	45	114.0000	3370.000	438.290	541.5300	80.7265	± 162.6899
1979-80	22	28.2000	249.000	94.573	59.3530	12.6541	± 26.3165
1980-81	10	125.0000	258.000	176.900	40.6840	12.8654	± 29.1000
1976-80	131	28.2000	10600.000	579.400	1134.3000	99.1042	± 196.0699
			APRIL TO MARCH				
1976-80	250	28.2000	10600.000	566.850	1154.5000	73.0170	± 143.8149

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
ORGANIC NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
				(KG/DAY)			
1976							
1977 JUN JUL AUG OCT NOV DEC							
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC							
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC							
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC							
	250	28.2000	10600.000	566.850	1154.5000	73.0170	± 143.8149

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OKANAGAN RIVER NEAR OLIVER

Statistical Characteristics of Nutrient Loads

Period of Sampling June 1977 to December 1980.

ORGANIC NITROGEN (N)

Median loads and their statistical characteristics determined for

- Individual Months
- All Months
- Individual years
- Seasons
  - April to September
  - October to March
  - April to March
- All Years

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
ORGANIC NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
		(KG/DAY)			
1977 JUNE	7	119.000	79.7000	131.0000	0.984
JULY	11	118.000	101.0000	161.0000	0.961
AUGUST	8	149.000	141.0000	204.0000	0.961
OCTOBER	10	174.000	156.0000	4670.0000	0.979
NOVEMBER	10	1810.000	581.0000	2270.0000	0.979
DECEMBER	5	262.000		102.0000	0.969
1978 JANUARY	1	731.000			
FEBRUARY	10	736.000	502.0000	1030.0000	0.979
MARCH	18	413.000	314.0000	451.0000	0.969
APRIL	9	368.000	190.0000	398.0000	0.961
MAY	10	512.000	286.0000	4880.0000	0.979
JUNE	7	645.000	271.0000	5250.0000	0.984
JULY	9	300.000	263.0000	548.0000	0.961
AUGUST	6	262.000	165.0000	339.0000	0.969
SEPTEMBER	13	279.000	231.0000	527.0000	0.978
OCTOBER	8	458.000	292.0000	3370.0000	0.961
NOVEMBER	11	546.000	390.0000	1010.0000	0.961
DECEMBER	6	285.000	256.0000	402.0000	0.969
1979 JANUARY	4	130.000			
FEBRUARY	7	144.000	114.0000	190.0000	0.984
MARCH	9	177.000	137.0000	197.0000	0.961
APRIL	6	160.000	136.0000	185.0000	0.969
JULY	1	157.000			
AUGUST	4	248.000			
SEPTEMBER	4	219.000			
OCTOBER	5	195.000		132.0000	0.969
NOVEMBER	3	81.600			
DECEMBER	3	69.500			
1980 JANUARY	4	61.200			
FEBRUARY	3	61.600			
MARCH	4	57.900			
APRIL	3	110.000			
MAY	4	183.000			
JUNE	4	288.000			
JULY	4	255.000			
AUGUST	4	178.000			
SEPTEMBER	5	204.000		194.0000	0.969
OCTOBER	4	199.000			
NOVEMBER	4	160.000			
DECEMBER	2	125.000			

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
ORGANIC NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN (KG/DAY)	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
- -78-79-80 JANUARY	9	130.000	61.2000	141.0000	0.961
- -78-79-80 FEBRUARY	20	190.000	122.0000	736.0000	0.959
- -78-79-80 MARCH	31	220.000	184.0000	413.0000	0.971
- -78-79-80 APRIL	18	185.000	160.0000	368.0000	0.969
- -78- -80 MAY	14	359.000	220.0000	4040.0000	0.965
-77-78- -80 JUNE	18	271.000	122.0000	404.0000	0.969
-77-78-79-80 JULY	25	186.000	120.0000	292.0000	0.957
-77-78-79-80 AUGUST	22	204.000	164.0000	262.0000	0.965
- -78-79-80 SEPTEMBER	22	236.000	207.0000	311.0000	0.965
-77-78-79-80 OCTOBER	27	206.000	184.0000	378.0000	0.964
-77-78-79-80 NOVEMBER	28	546.000	358.0000	1010.0000	0.964
-77-78-79-80 DECEMBER	16	256.000	125.0000	384.0000	0.951

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
ORGANIC NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
		(KG/DAY)			
1976					
1977 JUN JUL AUG OCT NOV DEC	51	163.000	141.0000	192.0000	0.951
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	108	390.000	366.0000	451.0000	0.957
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC	46	157.000	137.0000	184.0000	0.960
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	45	183.000	126.0000	204.0000	0.964

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
ORGANIC NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
		(KG/DAY)			
		APRIL TO SEPTEMBER			
1976					
1977	26	120.000	115.0000	142.0000	0.971
1978	54	331.000	289.0000	376.0000	0.960
1979	15	185.000	157.0000	241.0000	0.965
1980	24	204.000	194.0000	275.0000	0.957
1976-80	119	231.000	204.0000	262.0000	0.957
		OCTOBER TO MARCH			
1976-77					
1977-78	54	451.000	409.0000	706.0000	0.960
1978-79	45	280.000	184.0000	384.0000	0.964
1979-80	22	69.500	61.6000	96.6000	0.965
1980-81	10	160.000	126.0000	206.0000	0.979
1976-80	131	256.000	195.0000	366.0000	0.955
		APRIL TO MARCH			
1976-80	250	238.000	204.0000	263.0000	0.950

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
ORGANIC NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
		(KG/DAY)			
1976					
1977 JUN JUL AUG OCT NOV DEC					
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC					
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC					
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC					
	250	238.000	204.0000	263.0000	0.950

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OKANAGAN RIVER NEAR OLIVER

Statistical Characteristics of Nutrient Concentrations

Period of Sampling June 1977 to December 1980.

RATIO OF ORGANIC NITROGEN (N) TO TOTAL NITROGEN (N)

Arithmetic mean concentrations and their statistical characteristics determined for:

- Individual Months
- All Months
  - Graph of monthly concentration ranges
- Individual years
- Seasons
  - April to September
  - October to March
  - April to March
- All Years
  - Histogram of concentration distribution

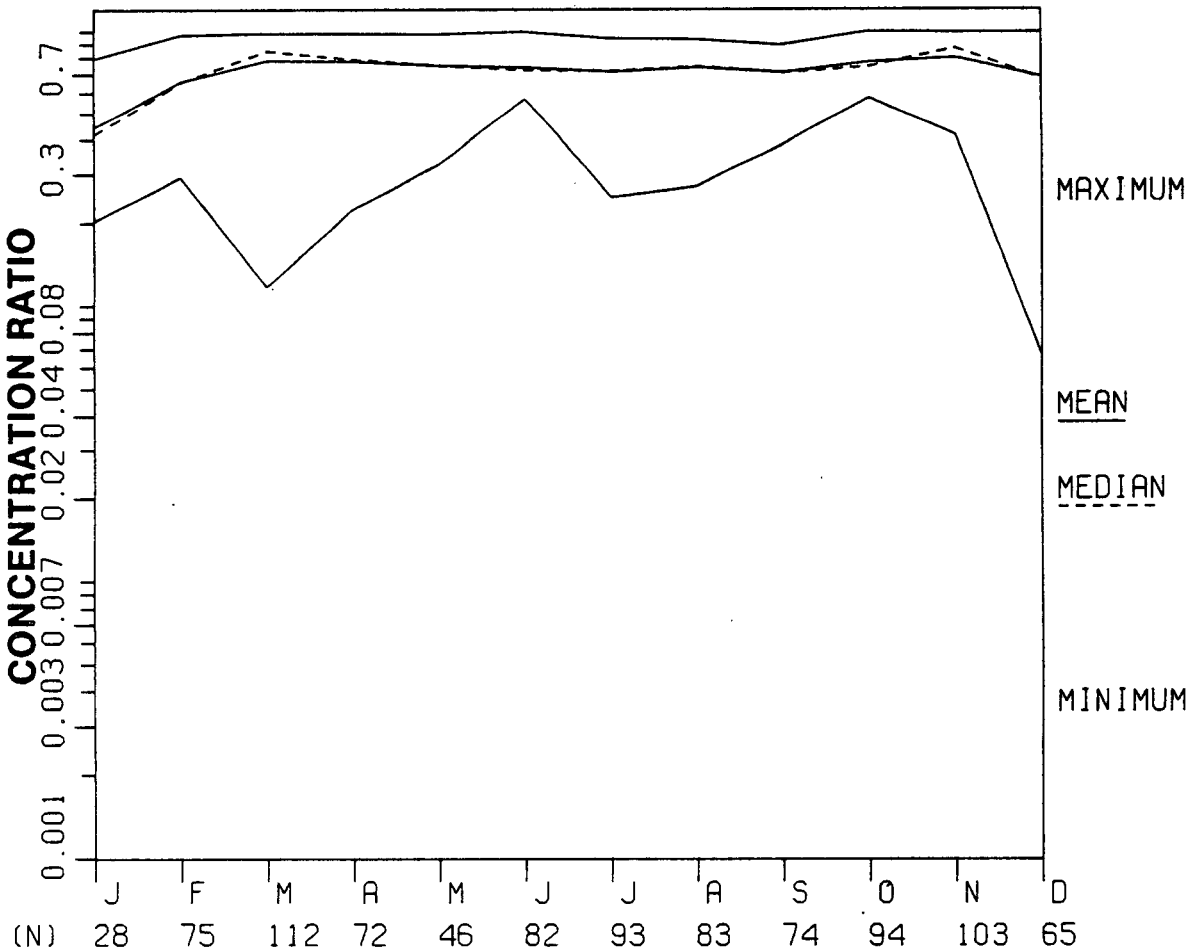
STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF ORGANIC NITROGEN (N) / TOTAL NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
1977 JUNE	41	0.5693	0.777	0.646	0.0577	0.0090	± 0.0182
JULY	42	0.5387	0.921	0.689	0.0659	0.0102	± 0.0205
AUGUST	28	0.5841	0.938	0.765	0.1457	0.0275	± 0.0565
OCTOBER	26	0.6000	0.995	0.762	0.1422	0.0279	± 0.0574
NOVEMBER	27	0.7873	0.974	0.923	0.0574	0.0111	± 0.0227
DECEMBER	10	0.0667	0.885	0.705	0.2469	0.0781	± 0.1766
1978 JANUARY	1	0.7956	0.796	0.796			
FEBRUARY	44	0.5750	0.970	0.774	0.1293	0.0195	± 0.0393
MARCH	60	0.3400	0.982	0.864	0.1411	0.0182	± 0.0364
APRIL	36	0.2242	0.981	0.715	0.1471	0.0245	± 0.0498
MAY	30	0.3258	0.979	0.740	0.1193	0.0218	± 0.0446
JUNE	25	0.6907	0.997	0.846	0.1144	0.0229	± 0.0472
JULY	31	0.2481	0.942	0.697	0.1597	0.0287	± 0.0586
AUGUST	24	0.2733	0.823	0.633	0.1510	0.0308	± 0.0638
SEPTEMBER	38	0.3851	0.894	0.667	0.1177	0.0191	± 0.0387
OCTOBER	32	0.6967	0.982	0.843	0.0805	0.0142	± 0.0290
NOVEMBER	48	0.5657	0.993	0.865	0.1407	0.0203	± 0.0409
DECEMBER	32	0.5889	0.988	0.854	0.1454	0.0257	± 0.0524
1979 JANUARY	12	0.3973	0.465	0.427	0.0234	0.0068	± 0.0149
FEBRUARY	19	0.2932	0.786	0.541	0.1502	0.0345	± 0.0724
MARCH	36	0.5750	0.983	0.823	0.1045	0.0174	± 0.0354
APRIL	24	0.7120	0.983	0.958	0.0568	0.0116	± 0.0240
JULY	4	0.8163	0.867	0.844	0.0218	0.0109	± 0.0347
AUGUST	16	0.6546	0.910	0.834	0.0710	0.0178	± 0.0378
SEPTEMBER	16	0.5397	0.886	0.714	0.0881	0.0220	± 0.0470
OCTOBER	20	0.5746	0.843	0.713	0.0933	0.0209	± 0.0436
NOVEMBER	12	0.4135	0.513	0.469	0.0322	0.0093	± 0.0204
DECEMBER	11	0.3671	0.549	0.448	0.0539	0.0163	± 0.0362
1980 JANUARY	15	0.2030	0.640	0.434	0.1096	0.0283	± 0.0607
FEBRUARY	12	0.3574	0.577	0.439	0.0652	0.0188	± 0.0414
MARCH	16	0.1169	0.521	0.410	0.1219	0.0305	± 0.0650
APRIL	12	0.5000	0.762	0.604	0.0854	0.0246	± 0.0542
MAY	16	0.6667	0.839	0.767	0.0574	0.0143	± 0.0306
JUNE	16	0.7889	0.859	0.826	0.0204	0.0051	± 0.0109
JULY	16	0.6977	0.851	0.795	0.0446	0.0111	± 0.0238
AUGUST	15	0.5256	0.833	0.759	0.0991	0.0256	± 0.0549
SEPTEMBER	20	0.5915	0.871	0.789	0.0855	0.0191	± 0.0400
OCTOBER	16	0.6222	0.839	0.721	0.0582	0.0145	± 0.0310
NOVEMBER	16	0.5133	0.817	0.636	0.1000	0.0250	± 0.0533
DECEMBER	12	0.2936	0.542	0.431	0.0761	0.0220	± 0.0484

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF ORGANIC NITROGEN (N) / TOTAL NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
- -78-79-80 JANUARY	28	0.2030	0.796	0.444	0.1059	0.0200	± 0.0411
- -78-79-80 FEBRUARY	75	0.2932	0.970	0.661	0.1873	0.0216	± 0.0431
- -78-79-80 MARCH	112	0.1169	0.983	0.786	0.2002	0.0189	± 0.0375
- -78-79-80 APRIL	72	0.2242	0.983	0.778	0.1759	0.0207	± 0.0413
- -78- -80 MAY	46	0.3258	0.979	0.749	0.1022	0.0151	± 0.0303
-77-78- -80 JUNE	82	0.5693	0.997	0.742	0.1225	0.0135	± 0.0269
-77-78-79-80 JULY	93	0.2481	0.942	0.716	0.1134	0.0118	± 0.0234
-77-78-79-80 AUGUST	83	0.2733	0.938	0.739	0.1461	0.0160	± 0.0319
- -78-79-80 SEPTEMBER	74	0.3851	0.894	0.710	0.1149	0.0134	± 0.0266
-77-78-79-80 OCTOBER	94	0.5746	0.995	0.772	0.1136	0.0117	± 0.0233
-77-78-79-80 NOVEMBER	103	0.4135	0.993	0.798	0.1862	0.0183	± 0.0364
-77-78-79-80 DECEMBER	65	0.0667	0.988	0.684	0.2374	0.0294	± 0.0588

RATIO OF ORGANIC NITROGEN (N) / TOTAL NITROGEN (N)
NEAR OLIVER
1976 - 1980



STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF ORGANIC NITROGEN (N) / TOTAL NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
1976							
1977 JUN JUL AUG OCT NOV DEC	174	0.0667	0.995	0.739	0.1411	0.0107	± 0.0211
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	401	0.2242	0.997	0.782	0.1546	0.0077	± 0.0152
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC	170	0.2932	0.983	0.712	0.1959	0.0150	± 0.0297
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	182	0.1169	0.871	0.648	0.1758	0.0130	± 0.0257

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF ORGANIC NITROGEN (N) / TOTAL NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
			APRIL TO SEPTEMBER				
1976							
1977	111	0.5387	0.938	0.692	0.1009	0.0096	± 0.0190
1978	184	0.2242	0.997	0.713	0.1478	0.0109	± 0.0215
1979	60	0.5397	0.983	0.852	0.1199	0.0155	± 0.0310
1980	95	0.5000	0.871	0.765	0.0944	0.0097	± 0.0192
1976-80	450	0.2242	0.997	0.737	0.1335	0.0063	± 0.0124
			OCTOBER TO MARCH				
1976-77							
1977-78	168	0.0667	0.995	0.824	0.1498	0.0116	± 0.0228
1978-79	179	0.2932	0.993	0.787	0.1816	0.0136	± 0.0268
1979-80	86	0.1169	0.843	0.502	0.1466	0.0158	± 0.0314
1980-81	44	0.2936	0.839	0.611	0.1413	0.0213	± 0.0430
1976-80	477	0.0667	0.995	0.732	0.2022	0.0093	± 0.0182
			APRIL TO MARCH				
1976-80	927	0.0667	0.997	0.735	0.1722	0.0057	± 0.0111

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF ORGANIC NITROGEN (N) / TOTAL NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
1976							
1977 JUN JUL AUG OCT NOV DEC							
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC							
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC							
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC							
	927	0.0667	0.997	0.735	0.1722	0.0057	± 0.011[illegible]

ORGANIC NITROGEN (N) / TOTAL NITROGEN (N)

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OKANAGAN RIVER NEAR OLIVER

Statistical Characteristics of Nutrient Concentrations

Period of Sampling June 1977 to December 1980.

RATIO OF ORGANIC NITROGEN (N) TO TOTAL NITROGEN (N)

Median concentrations and their statistical characteristics determined for

- Individual Months
- All Months
- Individual years
- Seasons
  - April to September
  - October to March
  - April to March
- All Years
  - Cumulative distribution of concentration data

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF ORGANIC NITROGEN (N) / TOTAL NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
1977 JUNE	41	0.623	0.6089	0.6480	0.956
JULY	42	0.675	0.6600	0.6966	0.956
AUGUST	28	0.680	0.6469	0.9212	0.964
OCTOBER	26	0.704	0.6552	0.7444	0.971
NOVEMBER	27	0.955	0.9042	0.9633	0.964
DECEMBER	10	0.791	0.5531	0.8636	0.979
1978 JANUARY	1	0.796			
FEBRUARY	44	0.800	0.7469	0.8319	0.951
MARCH	60	0.933	0.9198	0.9500	0.960
APRIL	36	0.710	0.6518	0.8200	0.953
MAY	30	0.738	0.7154	0.7958	0.957
JUNE	25	0.804	0.7500	0.9711	0.957
JULY	31	0.769	0.6419	0.7830	0.971
AUGUST	24	0.666	0.5657	0.7432	0.957
SEPTEMBER	38	0.623	0.5919	0.7513	0.966
OCTOBER	32	0.844	0.8133	0.9000	0.965
NOVEMBER	48	0.919	0.8531	0.9792	0.956
DECEMBER	32	0.915	0.7765	0.9778	0.965
1979 JANUARY	12	0.416	0.4054	0.4472	0.961
FEBRUARY	19	0.585	0.4000	0.6700	0.959
MARCH	36	0.829	0.8000	0.8710	0.953
APRIL	24	0.975	0.9667	0.9809	0.957
JULY	4	0.839			
AUGUST	16	0.852	0.7831	0.8986	0.951
SEPTEMBER	16	0.712	0.6542	0.7575	0.951
OCTOBER	20	0.688	0.6320	0.8000	0.959
NOVEMBER	12	0.455	0.4444	0.5054	0.961
DECEMBER	11	0.458	0.3975	0.4925	0.961
1980 JANUARY	15	0.406	0.3816	0.4563	0.965
FEBRUARY	12	0.421	0.3709	0.4714	0.961
MARCH	16	0.448	0.4133	0.4875	0.951
APRIL	12	0.582	0.5164	0.7000	0.961
MAY	16	0.795	0.7200	0.8100	0.951
JUNE	16	0.824	0.8109	0.8464	0.951
JULY	16	0.805	0.7952	0.8217	0.951
AUGUST	15	0.817	0.6711	0.8267	0.965
SEPTEMBER	20	0.816	0.7750	0.8468	0.959
OCTOBER	16	0.729	0.6800	0.7565	0.951
NOVEMBER	16	0.616	0.5719	0.7591	0.951
DECEMBER	12	0.414	0.3800	0.5127	0.961

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF ORGANIC NITROGEN (N) / TOTAL NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
- -78-79-80 JANUARY	28	0.416	0.4028	0.4479	0.964
- -78-79-80 FEBRUARY	75	0.658	0.6036	0.7550	0.963
- -78-79-80 MARCH	112	0.847	0.8167	0.9069	0.953
- -78-79-80 APRIL	72	0.791	0.7095	0.8650	0.956
- -78- -80 MAY	46	0.752	0.7222	0.8051	0.960
-77-78- -80 JUNE	82	0.727	0.7085	0.7774	0.952
-77-78-79-80 JULY	93	0.723	0.6966	0.7681	0.951
-77-78-79-80 AUGUST	83	0.749	0.7000	0.8000	0.952
- -78-79-80 SEPTEMBER	74	0.712	0.6500	0.7696	0.953
-77-78-79-80 OCTOBER	94	0.744	0.7269	0.8000	0.951
-77-78-79-80 NOVEMBER	103	0.865	0.7894	0.9267	0.952
-77-78-79-80 DECEMBER	65	0.676	0.5531	0.8118	0.954

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF ORGANIC NITROGEN (N) / TOTAL NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
1976					
1977 JUN JUL AUG OCT NOV DEC	174	0.697	0.6754	0.7226	0.951
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	401	0.796	0.7778	0.8133	0.954
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC	170	0.746	0.6913	0.7889	0.953
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	182	0.680	0.6327	0.7412	0.955

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF ORGANIC NITROGEN (N) / TOTAL NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

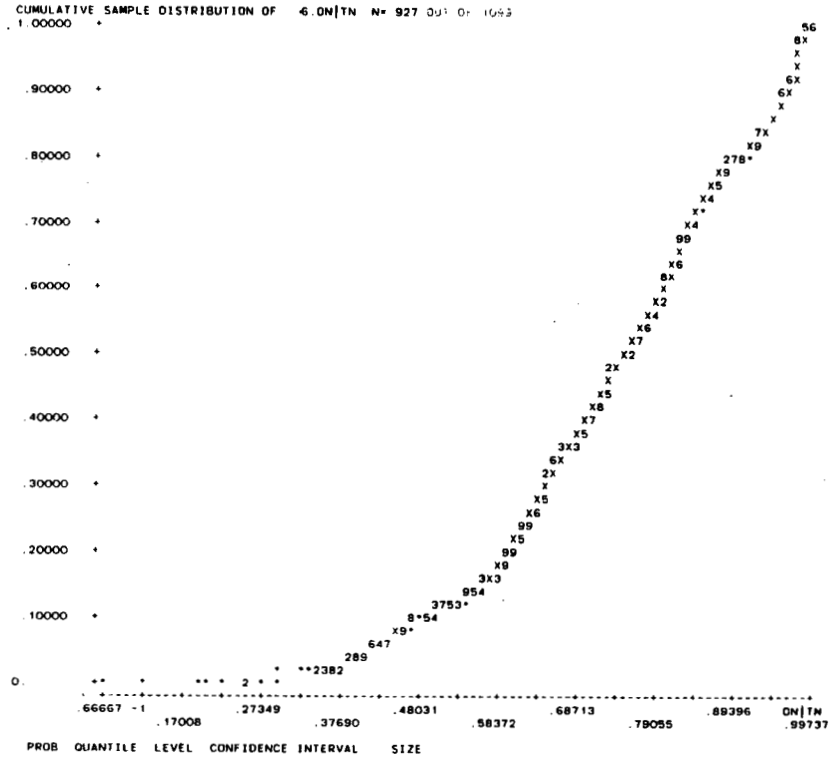
SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
		APRIL TO SEPTEMBER			
1976					
1977	111	0.661	0.6482	0.6891	0.953
1978	184	0.733	0.7154	0.7667	0.954
1979	60	0.872	0.8163	0.9478	0.960
1980	95	0.805	0.7950	0.8167	0.960
1976-80	450	0.742	0.7227	0.7667	0.952
		OCTOBER TO MARCH			
1976-77					
1977-78	168	0.852	0.8227	0.9198	0.955
1978-79	179	0.828	0.7909	0.8682	0.956
1979-80	86	0.468	0.4479	0.4925	0.960
1980-81	44	0.624	0.5440	0.6800	0.951
1976-80	477	0.762	0.7292	0.8000	0.951
		APRIL TO MARCH			
1976-80	927	0.749	0.7296	0.7696	0.951

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF ORGANIC NITROGEN (N) / TOTAL NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
1976					
1977 JUN JUL AUG OCT NOV DEC					
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC					
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC					
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC					
	927	0.749	0.7296	0.7696	0.951

DISTRIBUTIONAL ANALYSIS -O[illegible]

CUMULATIVE SAMPLE DISTRIBUTION OF -6.ON|TN N= 927 OUT OF 1043



PROB	QUANTILE	LEVEL	CONFIDENCE INTERVAL		SIZE
.1000	.48710	.9500	.45588	.51642	.9514
.3000	.64815	.9500	.63235	.65862	.9513
.5000	.74865	.9500	.72955	.76957	.9513
.7000	.83548	.9500	.82439	.84815	.9513
.9000	.96364	.9500	.95652	.97273	.9514

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OKANAGAN RIVER NEAR OLIVER

Statistical Characteristics of Nutrient Loads

Period of Sampling June 1977 to December 1980.

RATIO OF ORGANIC NITROGEN (N) TO TOTAL NITROGEN (N)

Arithmetic mean loads and their statistical characteristics determined for

- Individual Months
- All Months
  - Graph of monthly load ranges
- Individual years
- Seasons
  - April to September
  - October to March
  - April to March
- All Years

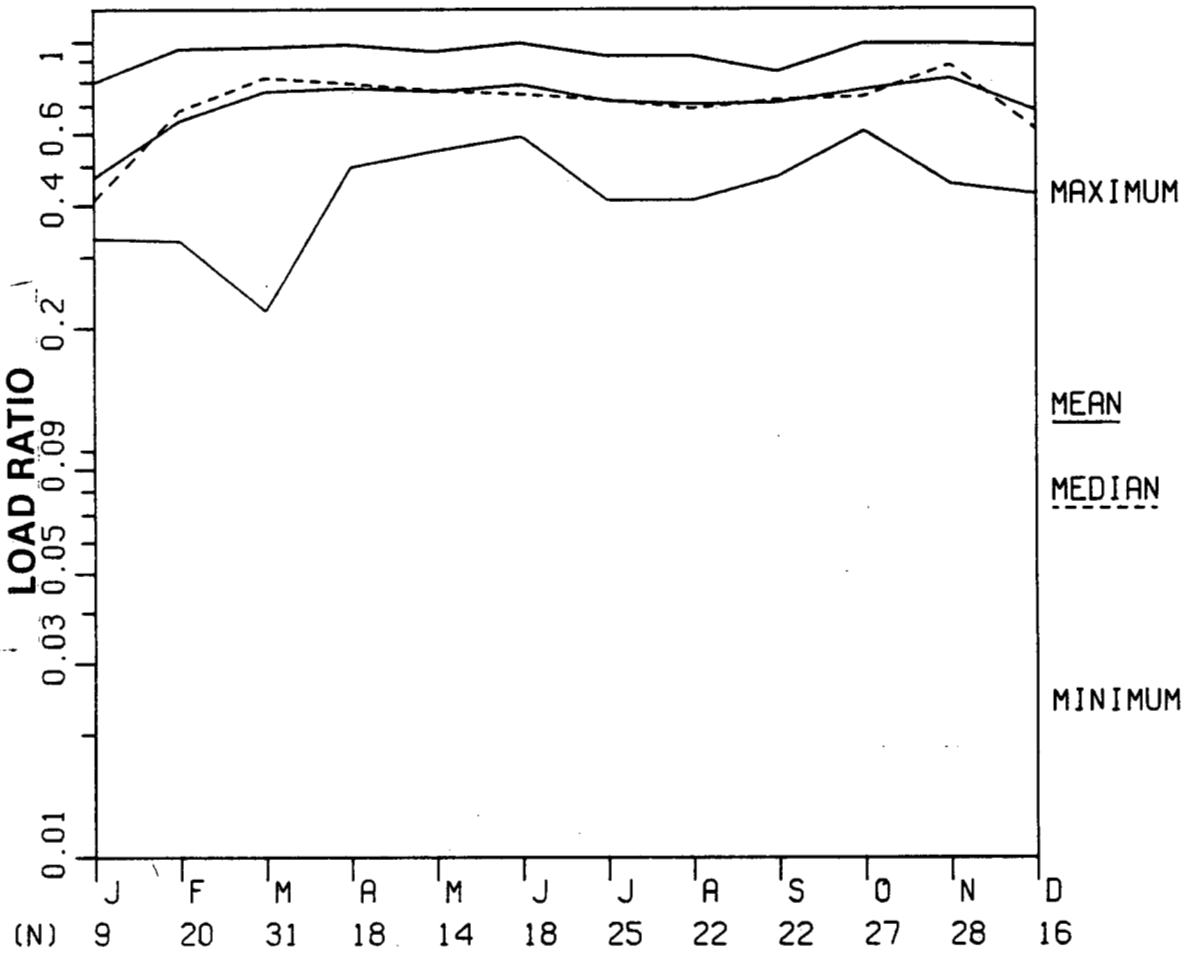
STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF ORGANIC NITROGEN (N) / TOTAL NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
1977 JUNE	7	0.5904	0.740	0.682	0.0600	0.0227	± 0.0555
JULY	11	0.6208	0.821	0.705	0.0503	0.0152	± 0.0338
AUGUST	8	0.6091	0.927	0.681	0.1023	0.0362	± 0.0855
OCTOBER	10	0.6417	0.991	0.741	0.1326	0.0419	± 0.0949
NOVEMBER	10	0.8252	0.975	0.937	0.0499	0.0158	± 0.0357
DECEMBER	5	0.4507	0.885	0.693	0.1848	0.0826	± 0.2295
1978 JANUARY	1	0.7954	0.795	0.795			
FEBRUARY	10	0.6050	0.961	0.806	0.1051	0.0332	± 0.0752
MARCH	18	0.5260	0.973	0.805	0.1581	0.0373	± 0.0786
APRIL	9	0.4980	0.868	0.704	0.1311	0.0437	± 0.1007
MAY	10	0.5457	0.948	0.754	0.1053	0.0333	± 0.0754
JUNE	7	0.7094	0.998	0.868	0.1183	0.0447	± 0.1094
JULY	9	0.4124	0.926	0.723	0.1430	0.0477	± 0.1099
AUGUST	6	0.4131	0.796	0.619	0.1456	0.0595	± 0.1528
SEPTEMBER	13	0.4717	0.844	0.683	0.1209	0.0335	± 0.0731
OCTOBER	8	0.7349	0.968	0.852	0.0769	0.0272	± 0.0643
NOVEMBER	11	0.6099	0.993	0.860	0.1388	0.0419	± 0.0933
DECEMBER	6	0.6103	0.979	0.855	0.1557	0.0635	± 0.1633
1979 JANUARY	4	0.4000	0.459	0.427	0.0285	0.0143	± 0.0454
FEBRUARY	7	0.3276	0.684	0.496	0.1460	0.0552	± 0.1351
MARCH	9	0.6382	0.957	0.823	0.1037	0.0346	± 0.0797
APRIL	6	0.9053	0.986	0.958	0.0286	0.0117	± 0.0300
JULY	1	0.8441	0.844	0.844			
AUGUST	4	0.7815	0.892	0.832	0.0521	0.0261	± 0.0830
SEPTEMBER	4	0.6274	0.775	0.714	0.0694	0.0347	± 0.1104
OCTOBER	5	0.6087	0.819	0.713	0.0937	0.0419	± 0.1163
NOVEMBER	3	0.4520	0.499	0.468	0.0267	0.0154	± 0.0663
DECEMBER	3	0.4264	0.487	0.450	0.0321	0.0185	± 0.0797
1980 JANUARY	4	0.3320	0.575	0.433	0.1021	0.0510	± 0.1624
FEBRUARY	3	0.3776	0.493	0.438	0.0578	0.0334	± 0.1435
MARCH	4	0.2203	0.505	0.409	0.1295	0.0647	± 0.2060
APRIL	3	0.5188	0.697	0.604	0.0897	0.0518	± 0.2227
MAY	4	0.7176	0.807	0.768	0.0371	0.0186	± 0.0591
JUNE	4	0.8178	0.841	0.826	0.0099	0.0050	± 0.0158
JULY	4	0.4675	0.823	0.721	0.1703	0.0852	± 0.2710
AUGUST	4	0.6167	0.831	0.765	0.1000	0.0500	± 0.1591
SEPTEMBER	5	0.6644	0.847	0.789	0.0736	0.0329	± 0.0914
OCTOBER	4	0.6886	0.759	0.721	0.0352	0.0176	± 0.0560
NOVEMBER	4	0.5480	0.786	0.634	0.1055	0.0527	± 0.1679
DECEMBER	2	0.4630	0.472	0.467	0.0063	0.0045	± 0.0568

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF ORGANIC NITROGEN (N) / TOTAL NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
- -78-79-80 JANUARY	9	0.3320	0.795	0.470	0.1381	0.0460	± 0.1062
- -78-79-80 FEBRUARY	20	0.3276	0.961	0.643	0.2023	0.0452	± 0.0947
- -78-79-80 MARCH	31	0.2203	0.973	0.759	0.1937	0.0348	± 0.0710
- -78-79-80 APRIL	18	0.4980	0.986	0.772	0.1703	0.0401	± 0.0847
- -78- -80 MAY	14	0.5457	0.948	0.758	0.0897	0.0240	± 0.0518
-77-78- -80 JUNE	18	0.5904	0.998	0.787	0.1176	0.0277	± 0.0585
-77-78-79-80 JULY	25	0.4124	0.926	0.720	0.1107	0.0221	± 0.0457
-77-78-79-80 AUGUST	22	0.4131	0.927	0.707	0.1283	0.0273	± 0.0569
- -78-79-80 SEPTEMBER	22	0.4717	0.847	0.713	0.1097	0.0234	± 0.0486
-77-78-79-80 OCTOBER	27	0.6087	0.991	0.766	0.1119	0.0215	± 0.0443
-77-78-79-80 NOVEMBER	28	0.4520	0.993	0.813	0.1838	0.0347	± 0.0713
-77-78-79-80 DECEMBER	16	0.4264	0.979	0.680	0.2151	0.0538	± 0.1146

RATIO OF ORGANIC NITROGEN (N) / TOTAL NITROGEN (N)
NEAR OLIVER
1976 - 1980



STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF ORGANIC NITROGEN (N) / TOTAL NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
1976							
1977 JUN JUL AUG OCT NOV DEC	51	0.4507	0.991	0.749	0.1338	0.0187	± 0.0376
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	108	0.4124	0.998	0.776	0.1444	0.0139	± 0.0276
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC	46	0.3276	0.986	0.689	0.2023	0.0298	± 0.0601
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	45	0.2203	0.847	0.647	0.1708	0.0255	± 0.0513

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF ORGANIC NITROGEN (N) / TOTAL NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
			APRIL TO SEPTEMBER				
1976							
1977	26	0.5904	0.927	0.692	0.0703	0.0138	± 0.0284
1978	54	0.4124	0.998	0.723	0.1382	0.0188	± 0.0377
1979	15	0.6274	0.986	0.852	0.1109	0.0286	± 0.0614
1980	24	0.4675	0.847	0.753	0.1062	0.0217	± 0.0449
1976-80	119	0.4124	0.998	0.739	0.1248	0.0114	± 0.0227
			OCTOBER TO MARCH				
1976-77							
1977-78	54	0.4507	0.991	0.807	0.1453	0.0198	± 0.0397
1978-79	45	0.3276	0.993	0.756	0.2006	0.0299	± 0.0603
1979-80	22	0.2203	0.819	0.500	0.1425	0.0304	± 0.0632
1980-81	10	0.4630	0.786	0.636	0.1170	0.0370	± 0.0837
1976-80	131	0.2203	0.993	0.725	0.1969	0.0172	± 0.0340
			APRIL TO MARCH				
1976-80	250	0.2203	0.998	0.731	0.1663	0.0105	± 0.0207

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF ORGANIC NITROGEN (N) / TOTAL NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
1976							
1977 JUN JUL AUG OCT NOV DEC							
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC							
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC							
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC							
	250	0.2203	0.998	0.731	0.1663	0.0105	± 0.0207

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OKANAGAN RIVER NEAR OLIVER

Statistical Characteristics of Nutrient Loads

Period of Sampling June 1977 to December 1980.

RATIO OF ORGANIC NITROGEN (N) TO TOTAL NITROGEN (N)

Median loads and their statistical characteristics determined for

- Individual Months
- All Months
- Individual years
- Seasons
  - April to September
  - October to March
  - April to March
- All Years

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF ORGANIC NITROGEN (N) / TOTAL NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
1977 JUNE	7	0.699	0.5904	0.7401	0.984
JULY	11	0.708	0.6704	0.7352	0.961
AUGUST	8	0.643	0.6259	0.9273	0.961
OCTOBER	10	0.705	0.6468	0.9811	0.979
NOVEMBER	10	0.958	0.8698	0.9701	0.979
DECEMBER	5	0.724		0.4507	0.969
1978 JANUARY	1	0.795			
FEBRUARY	10	0.796	0.7339	0.9537	0.979
MARCH	18	0.863	0.6321	0.9448	0.969
APRIL	9	0.739	0.5556	0.8238	0.961
MAY	10	0.730	0.6875	0.8470	0.979
JUNE	7	0.861	0.7094	0.9977	0.984
JULY	9	0.747	0.6493	0.8173	0.961
AUGUST	6	0.585	0.4131	0.7958	0.969
SEPTEMBER	13	0.701	0.5810	0.8265	0.978
OCTOBER	8	0.839	0.7683	0.9684	0.961
NOVEMBER	11	0.902	0.7261	0.9823	0.961
DECEMBER	6	0.895	0.6103	0.9790	0.969
1979 JANUARY	4	0.406			
FEBRUARY	7	0.440	0.3276	0.6844	0.984
MARCH	9	0.848	0.7249	0.9378	0.961
APRIL	6	0.967	0.9053	0.9855	0.969
JULY	1	0.844			
AUGUST	4	0.796			
SEPTEMBER	4	0.689			
OCTOBER	5	0.673		0.6087	0.969
NOVEMBER	3	0.453			
DECEMBER	3	0.437			
1980 JANUARY	4	0.411			
FEBRUARY	3	0.443			
MARCH	4	0.434			
APRIL	3	0.595			
MAY	4	0.772			
JUNE	4	0.823			
JULY	4	0.777			
AUGUST	4	0.795			
SEPTEMBER	5	0.802		0.6644	0.969
OCTOBER	4	0.694			
NOVEMBER	4	0.582			
DECEMBER	2	0.463			

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF ORGANIC NITROGEN (N) / TOTAL NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
- -78-79-80 JANUARY	9	0.414	0.4000	0.5750	0.961
- -78-79-80 FEBRUARY	20	0.681	0.4432	0.7957	0.959
- -78-79-80 MARCH	31	0.818	0.6382	0.9203	0.971
- -78-79-80 APRIL	18	0.791	0.6000	0.9487	0.969
- -78- -80 MAY	14	0.763	0.7176	0.8074	0.965
-77-78- -80 JUNE	18	0.746	0.7094	0.8405	0.969
-77-78-79-80 JULY	25	0.723	0.6875	0.7774	0.957
-77-78-79-80 AUGUST	22	0.689	0.6367	0.7964	0.965
- -78-79-80 SEPTEMBER	22	0.723	0.6274	0.8023	0.965
-77-78-79-80 OCTOBER	27	0.735	0.6942	0.8249	0.964
-77-78-79-80 NOVEMBER	28	0.879	0.7261	0.9612	0.964
-77-78-79-80 DECEMBER	16	0.610	0.4719	0.8951	0.951

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF ORGANIC NITROGEN (N) / TOTAL NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
1976					
1977 JUN JUL AUG OCT NOV DEC	51	0.711	0.6886	0.7256	0.951
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	108	0.789	0.7466	0.8238	0.957
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC	46	0.689	0.6274	0.8178	0.960
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	45	0.694	0.5750	0.7774	0.964

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF ORGANIC NITROGEN (N) / TOTAL NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
		APRIL TO SEPTEMBER			
1976					
1977	26	0.689	0.6589	0.7212	0.971
1978	54	0.739	0.7089	0.7750	0.960
1979	15	0.858	0.7749	0.9668	0.965
1980	24	0.795	0.7725	0.8229	0.957
1976-80	119	0.740	0.7141	0.7749	0.957
		OCTOBER TO MARCH			
1976-77					
1977-78	54	0.825	0.7518	0.9203	0.960
1978-79	45	0.825	0.7153	0.8791	0.964
1979-80	22	0.453	0.4336	0.5750	0.965
1980-81	10	0.621	0.4719	0.7588	0.979
1976-80	131	0.744	0.6942	0.8135	0.955
		APRIL TO MARCH			
1976-80	250	0.740	0.7212	0.7725	0.950

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF ORGANIC NITROGEN (N) / TOTAL NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
1976					
1977 JUN JUL AUG OCT NOV DEC					
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC					
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC					
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC					
	250	0.740	0.7212	0.7725	0.950

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OKANAGAN RIVER NEAR OLIVER

Statistical Characteristics of Nutrient Concentrations

Period of Sampling June 1977 to December 1980.

TOTAL NITROGEN (N)

Arithmetic mean concentrations and their statistical characteristics determined for:

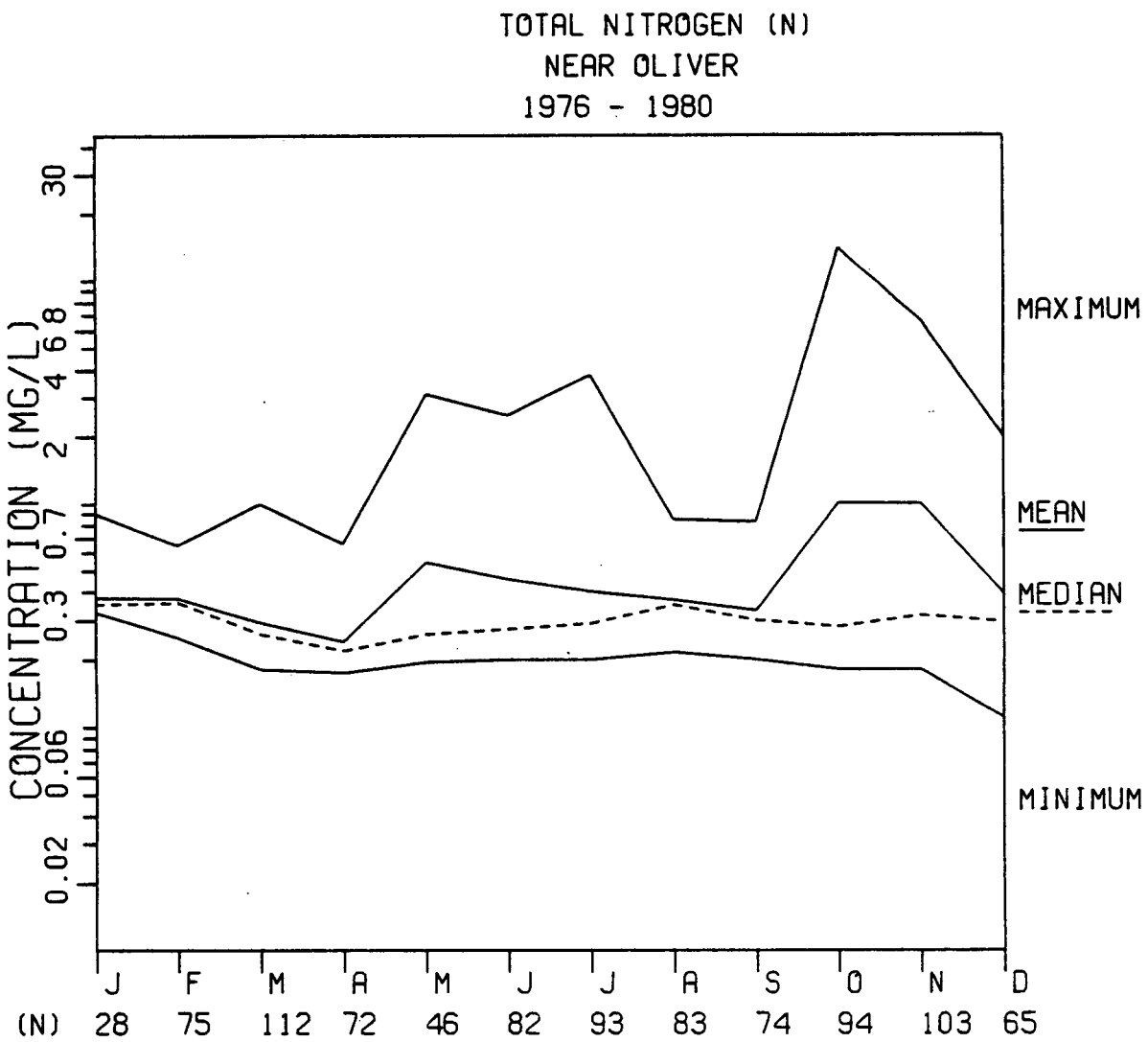
- Individual Months
- All Months
  - Graph of monthly concentration ranges
- Individual years
- Seasons
  - April to September
  - October to March
  - April to March
- All Years
  - Histogram of concentration distribution

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
TOTAL NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
				(MG/L)			
1977 JUNE	41	0.2020	0.327	0.271	0.0214	0.0033	± 0.0067
JULY	42	0.2600	1.200	0.326	0.1528	0.0236	± 0.0476
AUGUST	28	0.2700	0.540	0.376	0.0769	0.0145	± 0.0298
OCTOBER	26	0.2200	14.000	2.263	3.7614	0.7377	± 1.5192
NOVEMBER	27	1.1000	6.600	2.967	1.4536	0.2797	± 0.5751
DECEMBER	10	0.1100	2.000	1.016	0.5121	0.1620	± 0.3664
1978 JANUARY	1	0.9000	0.900	0.900			
FEBRUARY	44	0.2500	0.650	0.394	0.1011	0.0152	± 0.0307
MARCH	60	0.1800	1.000	0.298	0.1885	0.0243	± 0.0487
APRIL	36	0.1750	0.660	0.236	0.0791	0.0132	± 0.0268
MAY	30	0.2400	3.100	0.718	0.6904	0.1260	± 0.2578
JUNE	25	0.2000	2.500	0.901	0.7411	0.1482	± 0.3059
JULY	31	0.2700	3.800	0.619	0.6427	0.1154	± 0.2357
AUGUST	24	0.3000	0.850	0.443	0.1376	0.0281	± 0.0581
SEPTEMBER	38	0.2300	0.830	0.388	0.1259	0.0204	± 0.0414
OCTOBER	32	0.2200	7.500	0.817	1.3127	0.2321	± 0.4733
NOVEMBER	48	0.1800	0.610	0.290	0.0859	0.0124	± 0.0250
DECEMBER	32	0.1600	0.450	0.250	0.0797	0.0141	± 0.0287
1979 JANUARY	12	0.3300	0.380	0.360	0.0160	0.0046	± 0.0101
FEBRUARY	19	0.2700	0.440	0.369	0.0474	0.0109	± 0.0229
MARCH	36	0.2300	0.320	0.277	0.0301	0.0050	± 0.0102
APRIL	24	0.2000	0.250	0.221	0.0118	0.0024	± 0.0050
JULY	4	0.2300	0.255	0.241	0.0111	0.0055	± 0.0176
AUGUST	16	0.3100	0.460	0.370	0.0439	0.0110	± 0.0234
SEPTEMBER	16	0.2300	0.400	0.304	0.0507	0.0127	± 0.0270
OCTOBER	20	0.1800	0.400	0.266	0.0718	0.0161	± 0.0336
NOVEMBER	12	0.3100	0.435	0.359	0.0398	0.0115	± 0.0253
DECEMBER	11	0.3150	0.415	0.364	0.0351	0.0106	± 0.0236
1980 JANUARY	15	0.3250	0.400	0.360	0.0205	0.0053	± 0.0114
FEBRUARY	12	0.2650	0.355	0.311	0.0344	0.0099	± 0.0218
MARCH	16	0.2600	0.325	0.303	0.0187	0.0047	± 0.0100
APRIL	12	0.2750	0.335	0.299	0.0195	0.0056	± 0.0124
MAY	16	0.1950	0.250	0.215	0.0156	0.0039	± 0.0083
JUNE	16	0.2000	0.280	0.238	0.0266	0.0067	± 0.0142
JULY	16	0.2000	0.245	0.217	0.0137	0.0034	± 0.0073
AUGUST	15	0.2150	0.260	0.231	0.0143	0.0037	± 0.0079
SEPTEMBER	20	0.2000	0.295	0.240	0.0222	0.0050	± 0.0104
OCTOBER	16	0.2250	0.270	0.243	0.0136	0.0034	± 0.0073
NOVEMBER	16	0.2150	0.300	0.253	0.0239	0.0060	± 0.0127
DECEMBER	12	0.2350	0.300	0.282	0.0180	0.0052	± 0.0114

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
TOTAL NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
				(MG/L)			
- -78-79-80 JANUARY	28	0.3250	0.900	0.379	0.1036	0.0196	± 0.0402
- -78-79-80 FEBRUARY	75	0.2500	0.650	0.375	0.0869	0.0100	± 0.0200
- -78-79-80 MARCH	112	0.1800	1.000	0.292	0.1390	0.0131	± 0.0260
- -78-79-80 APRIL	72	0.1750	0.660	0.241	0.0626	0.0074	± 0.0147
- -78- -80 MAY	46	0.1950	3.100	0.543	0.6048	0.0892	± 0.1796
-77-78- -80 JUNE	82	0.2000	2.500	0.457	0.5008	0.0553	± 0.1100
-77-78-79-80 JULY	93	0.2000	3.800	0.401	0.4130	0.0428	± 0.0851
-77-78-79-80 AUGUST	83	0.2150	0.850	0.368	0.1130	0.0124	± 0.0247
- -78-79-80 SEPTEMBER	74	0.2000	0.830	0.330	0.1132	0.0132	± 0.0262
-77-78-79-80 OCTOBER	94	0.1800	14.000	1.002	2.2474	0.2318	± 0.4603
-77-78-79-80 NOVEMBER	103	0.1800	6.600	0.994	1.3926	0.1372	± 0.2721
-77-78-79-80 DECEMBER	65	0.1100	2.000	0.393	0.3370	0.0418	± 0.0835


TOTAL NITROGEN (N)
NEAR OLIVER
1976 - 1980
CONCENTRATION (MG/L)
30
8
6
4
2
0.7
0.3
0.06
0.02
MAXIMUM
MEAN
MEDIAN
MINIMUM
J F M A M J J A S O N D
(N) 28 75 112 72 46 82 93 83 74 94 103 65

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
TOTAL NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
				(MG/L)			
1976							
1977 JUN JUL AUG OCT NOV DEC	174	0.1100	14.000	1.060	1.8764	0.1422	± 0.2808
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	401	0.1600	7.500	0.452	0.5376	0.0268	± 0.0528
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC	170	0.1800	0.460	0.306	0.0676	0.0052	± 0.0102
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	182	0.1950	0.400	0.263	0.0470	0.0035	± 0.0069

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
TOTAL NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
				(MG/L)			
			APRIL TO SEPTEMBER				
1976							
1977	111	0.2020	1.200	0.319	0.1097	0.0104	± 0.0206
1978	184	0.1750	3.800	0.528	0.5198	0.0383	± 0.0756
1979	60	0.2000	0.460	0.284	0.0711	0.0092	± 0.0184
1980	95	0.1950	0.335	0.238	0.0316	0.0032	± 0.0064
1976-80	450	0.1750	3.800	0.382	0.3596	0.0170	± 0.0333
			OCTOBER TO MARCH				
1976-77							
1977-78	168	0.1100	14.000	1.103	1.9008	0.1466	± 0.2895
1978-79	179	0.1600	7.500	0.387	0.5875	0.0439	± 0.0867
1979-80	86	0.1800	0.435	0.321	0.0573	0.0062	± 0.0123
1980-81	44	0.2150	0.300	0.257	0.0244	0.0037	± 0.0074
1976-80	477	0.1100	14.000	0.615	1.2362	0.0566	± 0.1112
			APRIL TO MARCH				
1976-80	927	0.1100	14.000	0.502	0.9283	0.0305	± 0.0598

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
TOTAL NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
				(MG/L)			
1976							
1977 JUN JUL AUG OCT NOV DEC							
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC							
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC							
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC							
	927	0.1100	14.000	0.502	0.9283	0.0305	± 0.0598

TOTAL NITROGEN (N)

n = 927

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OKANAGAN RIVER NEAR OLIVER

Statistical Characteristics of Nutrient Concentrations

Period of Sampling June 1977 to December 1980.

TOTAL NITROGEN (N)

Median concentrations and their statistical characteristics determined for

- Individual Months
- All Months
- Individual years
- Seasons
  - April to September
  - October to March
  - April to March
- All Years
  - Cumulative distribution of concentration data

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
TOTAL NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
		(MG/L)			
1977 JUNE	41	0.272	0.2650	0.2800	0.956
JULY	42	0.290	0.2850	0.2990	0.956
AUGUST	28	0.340	0.3300	0.4300	0.964
OCTOBER	26	0.290	0.2800	0.3200	0.971
NOVEMBER	27	3.100	1.8000	3.8000	0.964
DECEMBER	10	1.000	0.4900	1.4000	0.979
1978 JANUARY	1	0.900			
FEBRUARY	44	0.400	0.3200	0.4400	0.951
MARCH	60	0.220	0.2200	0.2400	0.960
APRIL	36	0.210	0.2100	0.2500	0.953
MAY	30	0.290	0.2700	0.7500	0.957
JUNE	25	0.440	0.3800	1.6000	0.957
JULY	31	0.470	0.4200	0.5400	0.971
AUGUST	24	0.370	0.3600	0.4900	0.957
SEPTEMBER	38	0.330	0.3200	0.3700	0.966
OCTOBER	32	0.510	0.2600	0.6600	0.965
NOVEMBER	48	0.260	0.2500	0.3100	0.956
DECEMBER	32	0.210	0.2000	0.2700	0.965
1979 JANUARY	12	0.370	0.3400	0.3700	0.961
FEBRUARY	19	0.370	0.3600	0.4000	0.959
MARCH	36	0.280	0.2600	0.3000	0.953
APRIL	24	0.220	0.2100	0.2300	0.957
JULY	4	0.235			
AUGUST	16	0.355	0.3500	0.3900	0.951
SEPTEMBER	16	0.300	0.2850	0.3450	0.951
OCTOBER	20	0.250	0.2100	0.3150	0.959
NOVEMBER	12	0.365	0.3150	0.3900	0.961
DECEMBER	11	0.365	0.3350	0.4100	0.961
1980 JANUARY	15	0.355	0.3500	0.3750	0.965
FEBRUARY	12	0.305	0.2750	0.3500	0.961
MARCH	16	0.305	0.3000	0.3150	0.951
APRIL	12	0.290	0.2850	0.3200	0.961
MAY	16	0.210	0.2050	0.2300	0.951
JUNE	16	0.235	0.2250	0.2700	0.951
JULY	16	0.215	0.2100	0.2300	0.951
AUGUST	15	0.230	0.2150	0.2400	0.965
SEPTEMBER	20	0.240	0.2350	0.2500	0.959
OCTOBER	16	0.240	0.2350	0.2550	0.951
NOVEMBER	16	0.250	0.2450	0.2750	0.951
DECEMBER	12	0.280	0.2750	0.2950	0.961

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
TOTAL NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
		(MG/L)			
- -78-79-80 JANUARY	28	0.355	0.3500	0.3700	0.964
- -78-79-80 FEBRUARY	75	0.360	0.3500	0.3900	0.963
- -78-79-80 MARCH	112	0.260	0.2400	0.2900	0.953
- -78-79-80 APRIL	72	0.220	0.2200	0.2300	0.956
- -78- -80 MAY	46	0.260	0.2400	0.2900	0.960
-77-78- -80 JUNE	82	0.272	0.2670	0.2820	0.952
-77-78-79-80 JULY	93	0.290	0.2890	0.3100	0.951
-77-78-79-80 AUGUST	83	0.350	0.3300	0.3600	0.952
- -78-79-80 SEPTEMBER	74	0.300	0.2900	0.3300	0.953
-77-78-79-80 OCTOBER	94	0.280	0.2600	0.3000	0.951
-77-78-79-80 NOVEMBER	103	0.315	0.2750	0.3500	0.952
-77-78-79-80 DECEMBER	65	0.295	0.2700	0.3350	0.954

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
TOTAL NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
		(MG/L)			
1976					
1977 JUN JUL AUG OCT NOV DEC	174	0.300	0.2900	0.3200	0.951
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	401	0.310	0.2900	0.3300	0.954
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC	170	0.310	0.3000	0.3250	0.953
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	182	0.250	0.2450	0.2650	0.955

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
TOTAL NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

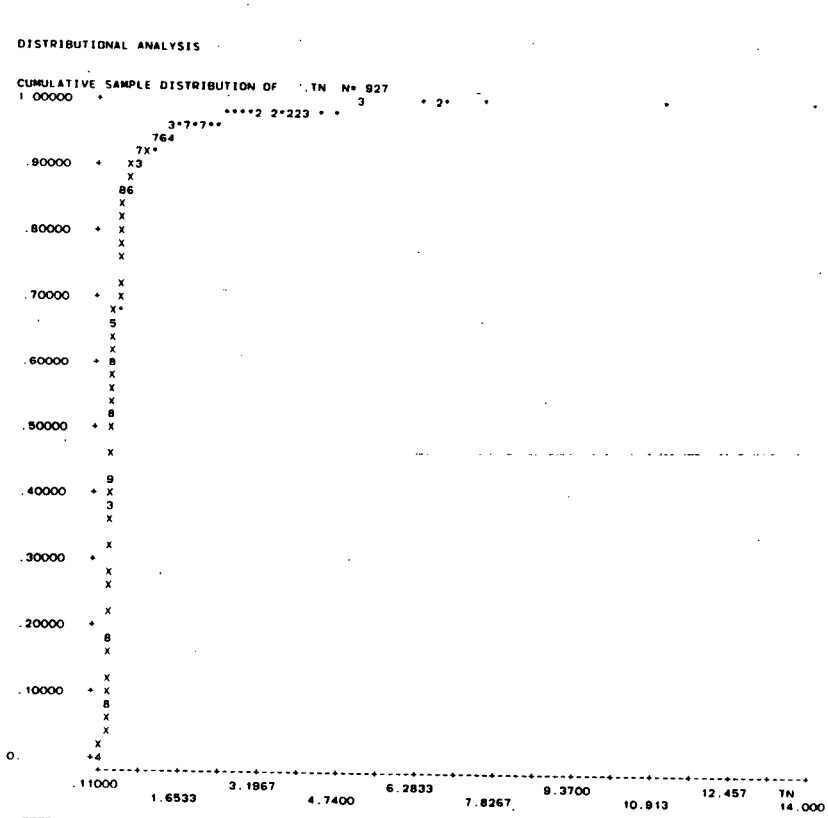
SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
		(MG/L)			
		APRIL TO SEPTEMBER			
1976					
1977	111	0.290	0.2820	0.2990	0.953
1978	184	0.350	0.3300	0.3800	0.954
1979	60	0.250	0.2300	0.3150	0.960
1980	95	0.230	0.2250	0.2400	0.960
1976-80	450	0.285	0.2800	0.2920	0.952
		OCTOBER TO MARCH			
1976-77					
1977-78	168	0.320	0.2900	0.4400	0.955
1978-79	179	0.300	0.2700	0.3100	0.956
1979-80	86	0.325	0.3100	0.3500	0.960
1980-81	44	0.255	0.2450	0.2700	0.951
1976-80	477	0.300	0.2900	0.3100	0.951
		APRIL TO MARCH			
1976-80	927	0.290	0.2870	0.3000	0.951

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
TOTAL NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
		(MG/L)			
1976					
1977 JUN JUL AUG OCT NOV DEC					
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC					
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC					
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC					
	927	0.290	0.2870	0.3000	0.951

DISTRIBUTIONAL ANALYSIS

CUMULATIVE SAMPLE DISTRIBUTION OF .TN N= 927



PROB	QUANTILE	LEVEL	CONFIDENCE INTERVAL		SIZE
.1000	.21000	.9500	.21000	.21500	.9514
.3000	.25000	.9500	.24500	.26000	.9513
.5000	.29000	.9500	.28700	.30000	.9513
.7000	.35500	.9500	.34000	.37000	.9513
.9000	.62000	.9500	.54000	.85000	.9514

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OKANAGAN RIVER NEAR OLIVER

Statistical Characteristics of Nutrient Loads

Period of Sampling June 1977 to December 1980.

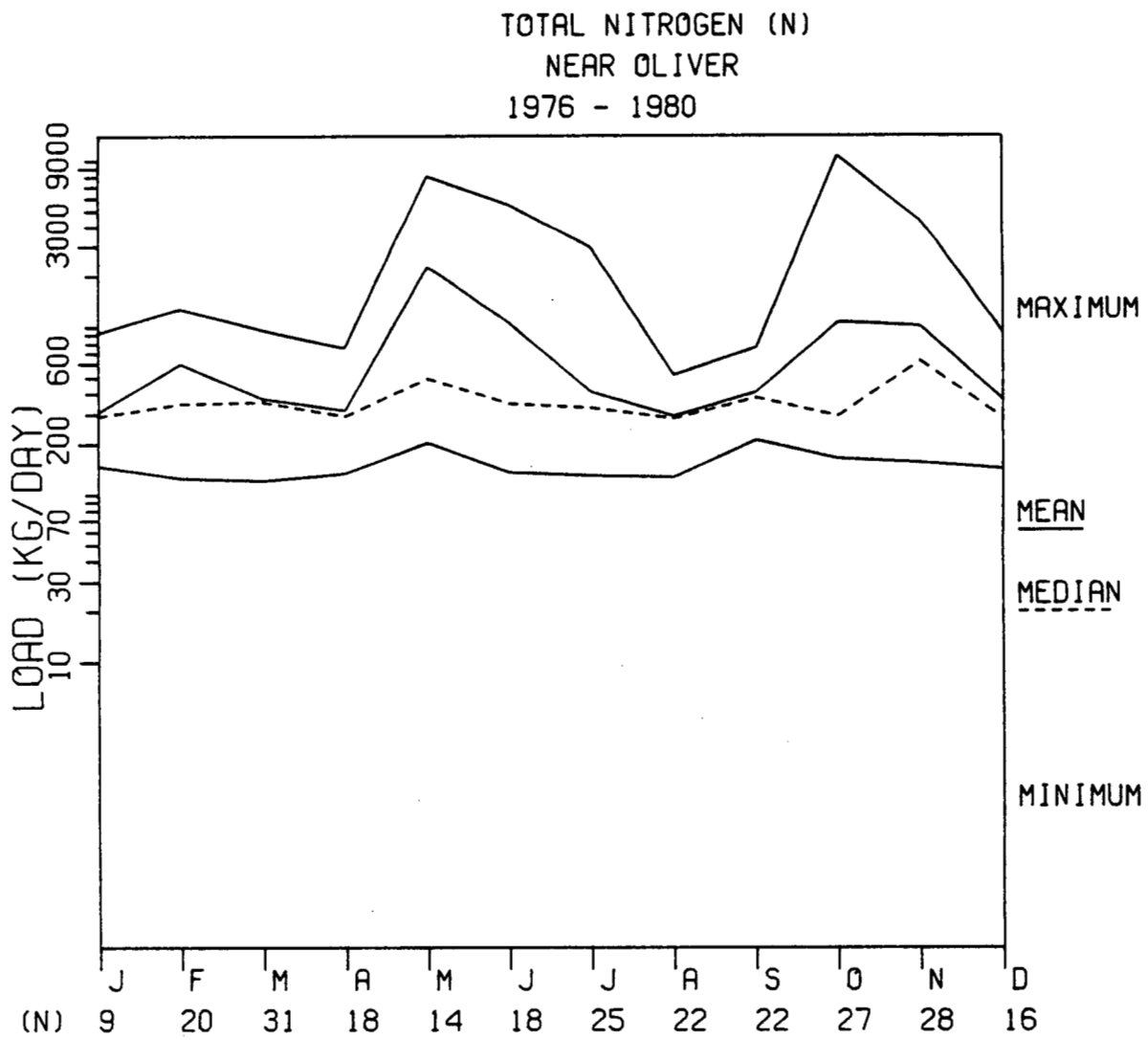
TOTAL NITROGEN (N)

Arithmetic mean loads and their statistical characteristics determined for

- Individual Months
- All Months
  - Graph of monthly load ranges
- Individual years
- Seasons
  - April to September
  - October to March
  - April to March
- All Years

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
TOTAL NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
				(KG/DAY)			
1977 JUNE	7	135.0000	177.000	164.140	14.8710	5.6207	± 13.7550
JULY	11	129.0000	251.000	173.180	34.1080	10.2839	± 22.9150
AUGUST	8	167.0000	284.000	229.250	34.9810	12.3677	± 29.2400
OCTOBER	10	235.0000	10700.000	1748.300	3449.6001	1090.8594	± 2467.6836
NOVEMBER	10	515.0000	4370.000	1872.600	1108.6001	350.5701	± 793.0000
DECEMBER	5	182.0000	920.000	487.800	275.5500	123.2297	± 342.1299
1978 JANUARY	1	919.0000	919.000	919.000			
FEBRUARY	10	605.0000	1290.000	952.400	209.1100	66.1264	± 149.5950
MARCH	18	299.0000	962.000	508.440	172.7900	40.7270	± 85.9250
APRIL	9	295.0000	755.000	453.780	150.9400	50.3133	± 116.0250
MAY	10	320.0000	8110.000	3107.800	3143.2000	993.9670	± 2248.4941
JUNE	7	382.0000	5460.000	2347.900	2329.3000	880.3926	± 2154.2305
JULY	9	370.0000	2970.000	741.560	842.6201	280.8733	± 647.7214
AUGUST	6	331.0000	518.000	418.330	75.3990	30.7815	± 79.1250
SEPTEMBER	13	346.0000	755.000	498.000	141.9000	39.3560	± 85.7500
OCTOBER	8	354.0000	3480.000	1070.000	1041.8000	368.3318	± 870.9949
NOVEMBER	11	421.0000	1410.000	725.910	315.1599	95.0243	± 211.7300
DECEMBER	6	286.0000	562.000	398.000	133.6300	54.5542	± 140.2400
1979 JANUARY	4	294.0000	330.000	314.000	16.5930	8.2965	± 26.3999
FEBRUARY	7	244.0000	348.000	298.140	35.5690	13.4438	± 32.8950
MARCH	9	177.0000	229.000	207.440	20.3840	6.7947	± 15.6650
APRIL	6	138.0000	190.000	170.000	20.8130	8.4969	± 21.8400
JULY	1	186.0000	186.000	186.000			
AUGUST	4	270.0000	329.000	301.000	26.5460	13.2730	± 42.2400
SEPTEMBER	4	212.0000	318.000	285.750	49.6010	24.8005	± 78.9300
OCTOBER	5	164.0000	345.000	275.000	68.1620	30.4830	± 84.6299
NOVEMBER	3	154.0000	180.000	168.670	13.3170	7.6886	± 33.0800
DECEMBER	3	141.0000	170.000	158.000	15.1330	8.7370	± 37.5900
1980 JANUARY	4	147.0000	171.000	158.500	12.7670	6.3835	± 20.3200
FEBRUARY	3	125.0000	155.000	135.000	17.3210	10.0003	± 43.0285
MARCH	4	121.0000	134.000	129.250	6.1847	3.0924	± 9.8400
APRIL	3	133.0000	314.000	210.670	93.1900	53.8033	± 231.4949
MAY	4	203.0000	356.000	264.500	64.9740	32.4870	± 103.3899
JUNE	4	232.0000	494.000	359.500	107.1500	53.5750	± 170.5000
JULY	4	328.0000	385.000	356.000	25.1000	12.5500	± 39.9399
AUGUST	4	126.0000	319.000	242.500	87.9190	43.9595	± 139.8999
SEPTEMBER	5	243.0000	347.000	279.400	41.8720	18.7257	± 51.9899
OCTOBER	4	277.0000	340.000	296.000	29.8330	14.9165	± 47.4700
NOVEMBER	4	243.0000	292.000	263.250	24.3910	12.1955	± 38.8100
DECEMBER	2	267.0000	270.000	268.500	2.1213	1.5000	± 19.0600


TOTAL NITROGEN (N)
NEAR OLIVER
1976 - 1980
LOAD (KG/DAY)
9000
3000
600
200
70
30
10
MAXIMUM
MEAN
MEDIAN
MINIMUM
J F M A M J J A S O N D
(N) 9 20 31 18 14 18 25 22 22 27 28 16

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
TOTAL NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
				(KG/DAY)			
1976							
1977 JUN JUL AUG OCT NOV DEC	51	129.0000	10700.000	853.650	1726.7000	241.7864	± 485.6499
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	108	286.0000	8110.000	979.470	1401.8999	134.8979	± 267.4248
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC	46	138.0000	348.000	241.700	65.8120	9.7034	± 19.5450
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	45	121.0000	494.000	249.980	88.7420	13.2289	± 26.6599

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
TOTAL NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
				(KG/DAY)			
- -78-79-80 JANUARY	9	147.0000	919.000	312.110	240.8400	80.2800	± 185.1249
- -78-79-80 FEBRUARY	20	125.0000	1290.000	600.800	392.7000	87.8104	± 183.7900
- -78-79-80 MARCH	31	121.0000	962.000	372.130	210.2000	37.7530	± 77.1000
- -78-79-80 APRIL	18	133.0000	755.000	318.670	177.1800	41.7617	± 88.1100
- -78- -80 MAY	14	203.0000	8110.000	2295.400	2935.5000	784.5452	± 1694.9500
-77-78- -80 JUNE	18	135.0000	5460.000	1056.800	1745.2000	411.3474	± 867.9048
-77-78-79-80 JULY	25	129.0000	2970.000	407.560	553.8401	110.7680	± 228.6099
-77-78-79-80 AUGUST	22	126.0000	518.000	296.270	97.4140	20.7687	± 43.1900
- -78-79-80 SEPTEMBER	22	212.0000	755.000	409.730	154.8800	33.0205	± 68.6699
-77-78-79-80 OCTOBER	27	164.0000	10700.000	1059.300	2191.5000	421.7542	± 866.9448
-77-78-79-80 NOVEMBER	28	154.0000	4370.000	1009.600	957.2100	180.8957	± 371.1599
-77-78-79-80 DECEMBER	16	141.0000	920.000	364.880	203.7200	50.9300	± 108.5549

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
TOTAL NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
				(KG/DAY)			
			APRIL TO SEPTEMBER				
1976							
1977	26	129.0000	284.000	188.000	40.7620	7.9941	± 16.4600
1978	54	295.0000	8110.000	1245.500	1893.8000	257.7134	± 516.9248
1979	15	138.0000	329.000	236.870	69.2230	17.8733	± 38.3350
1980	24	126.0000	494.000	288.290	84.5220	17.2530	± 35.6900
1976-80	119	126.0000	8110.000	694.240	1367.1001	125.3219	± 248.1649
			OCTOBER TO MARCH				
1976-77							
1977-78	54	182.0000	10700.000	1078.600	1613.2000	219.5287	± 440.3250
1978-79	45	177.0000	3480.000	536.510	544.5801	81.1812	± 163.6101
1979-80	22	121.0000	345.000	177.770	63.8750	13.6182	± 28.3200
1980-81	10	243.0000	340.000	277.400	27.4920	8.6937	± 19.6700
1976-80	131	121.0000	10700.000	679.930	1135.8999	99.2440	± 196.3500
			APRIL TO MARCH				
1976-80	250	121.0000	10700.000	686.740	1248.7000	78.9747	± 155.5500

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
TOTAL NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
				(KG/DAY)			
1976							
1977 JUN JUL AUG OCT NOV DEC							
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC							
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC							
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC							
	250	121.0000	10700.000	686.740	1248.7000	78.9747	± 155.5500

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OKANAGAN RIVER NEAR OLIVER

Statistical Characteristics of Nutrient Loads

Period of Sampling June 1977 to December 1980.

TOTAL NITROGEN (N)

Median loads and their statistical characteristics determined for

- Individual Months
- All Months
- Individual years
- Seasons
  - April to September
  - October to March
  - April to March
- All Years

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
TOTAL NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
		(KG/DAY)			
1977 JUNE	7	164.000	135.0000	177.0000	0.984
JULY	11	165.000	154.0000	219.0000	0.961
AUGUST	8	220.000	214.0000	284.0000	0.961
OCTOBER	10	254.000	240.0000	4760.0000	0.979
NOVEMBER	10	1890.000	668.0000	2340.0000	0.979
DECEMBER	5	426.000		182.0000	0.969
1978 JANUARY	1	919.000			
FEBRUARY	10	925.000	684.0000	1160.0000	0.979
MARCH	18	464.000	422.0000	525.0000	0.969
APRIL	9	424.000	322.0000	608.0000	0.961
MAY	10	717.000	373.0000	7330.0000	0.979
JUNE	7	749.000	382.0000	5460.0000	0.984
JULY	9	451.000	400.0000	734.0000	0.961
AUGUST	6	371.000	331.0000	518.0000	0.969
SEPTEMBER	13	425.000	398.0000	649.0000	0.978
OCTOBER	8	546.000	381.0000	3480.0000	0.961
NOVEMBER	11	623.000	460.0000	1190.0000	0.961
DECEMBER	6	296.000	286.0000	562.0000	0.969
1979 JANUARY	4	307.000			
FEBRUARY	7	308.000	244.0000	348.0000	0.984
MARCH	9	211.000	185.0000	228.0000	0.961
APRIL	6	165.000	138.0000	190.0000	0.969
JULY	1	186.000			
AUGUST	4	289.000			
SEPTEMBER	4	302.000			
OCTOBER	5	296.000		164.0000	0.969
NOVEMBER	3	172.000			
DECEMBER	3	163.000			
1980 JANUARY	4	148.000			
FEBRUARY	3	125.000			
MARCH	4	128.000			
APRIL	3	185.000			
MAY	4	244.000			
JUNE	4	350.000			
JULY	4	344.000			
AUGUST	4	224.000			
SEPTEMBER	5	258.000		243.0000	0.969
OCTOBER	4	278.000			
NOVEMBER	4	243.000			
DECEMBER	2	267.000			

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
TOTAL NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN (KG/DAY)	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
- -78-79-80 JANUARY	9	294.000	148.0000	330.0000	0.961
- -78-79-80 FEBRUARY	20	348.000	279.0000	925.0000	0.959
- -78-79-80 MARCH	31	358.000	224.0000	464.0000	0.971
- -78-79-80 APRIL	18	295.000	181.0000	424.0000	0.969
- -78- -80 MAY	14	493.000	320.0000	6060.0000	0.965
-77-78- -80 JUNE	18	350.000	176.0000	494.0000	0.969
-77-78-79-80 JULY	25	328.000	176.0000	400.0000	0.957
-77-78-79-80 AUGUST	22	284.000	234.0000	331.0000	0.965
- -78-79-80 SEPTEMBER	22	379.000	311.0000	430.0000	0.965
-77-78-79-80 OCTOBER	27	296.000	266.0000	492.0000	0.964
-77-78-79-80 NOVEMBER	28	623.000	460.0000	1190.0000	0.964
-77-78-79-80 DECEMBER	16	286.000	267.0000	549.0000	0.951

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
TOTAL NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN (KG/DAY)	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
1976					
1977 JUN JUL AUG OCT NOV DEC	51	240.000	214.0000	262.0000	0.951
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	108	496.000	460.0000	587.0000	0.957
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC	46	228.000	190.0000	294.0000	0.960
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	45	257.000	224.0000	289.0000	0.964

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
TOTAL NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
		(KG/DAY)			
		APRIL TO SEPTEMBER			
1976					
1977	26	176.000	164.0000	215.0000	0.971
1978	54	456.000	418.0000	518.0000	0.960
1979	15	212.000	181.0000	311.0000	0.965
1980	24	292.000	244.0000	347.0000	0.957
1976-80	119	329.000	295.0000	368.0000	0.957
		OCTOBER TO MARCH			
1976-77					
1977-78	54	544.000	464.0000	916.0000	0.960
1978-79	45	348.000	296.0000	492.0000	0.964
1979-80	22	155.000	141.0000	172.0000	0.965
1980-81	10	275.000	243.0000	292.0000	0.979
1976-80	131	348.000	299.0000	456.0000	0.955
		APRIL TO MARCH			
1976-80	250	340.000	310.0000	368.0000	0.950

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
TOTAL NITROGEN (N)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
		(KG/DAY)			
1976					
1977 JUN JUL AUG OCT NOV DEC					
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC					
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC					
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC					
	250	340.000	310.0000	368.0000	0.950

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OKANAGAN RIVER NEAR OLIVER

Statistical Characteristics of Nutrient Concentrations

Period of Sampling June 1977 to December 1980.

RATIO OF TOTAL NITROGEN (N) TO TOTAL PHOSPHORUS (P)

Arithmetic mean concentrations and their statistical characteristics determined for:

- Individual Months
- All Months
  - Graph of monthly concentration ranges
- Individual years
- Seasons
  - April to September
  - October to March
  - April to March
- All Years
  - Histogram of concentration distribution

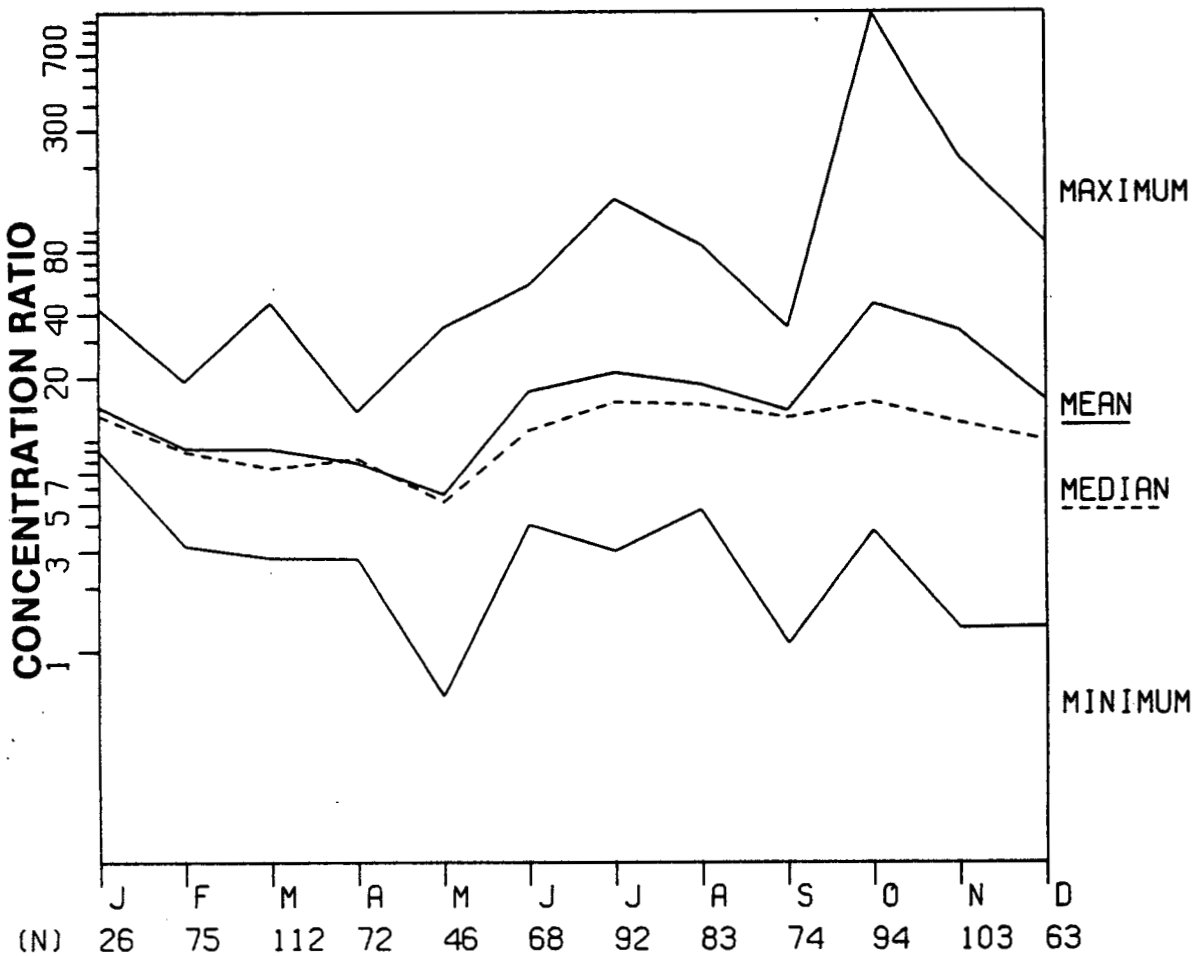
STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF TOTAL NITROGEN (N) / TOTAL PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
1977 JUNE	28	3.9851	28.667	11.761	4.4159	0.8345	± 1.7120
JULY	42	10.2310	63.158	17.265	8.4320	1.3011	± 2.6275
AUGUST	28	9.1892	27.000	17.541	5.3773	1.0162	± 2.0855
OCTOBER	26	10.4000	1076.900	103.880	221.8300	43.5044	± 89.5990
NOVEMBER	27	44.0000	220.000	101.900	42.6650	8.2109	± 16.8795
DECEMBER	10	15.7140	86.957	47.566	18.9830	6.0030	± 13.5795
1978 JANUARY	1	42.8570	42.857	42.857			
FEBRUARY	44	4.3836	19.118	9.912	3.2993	0.4974	± 1.0030
MARCH	60	2.7711	45.455	10.451	7.4126	0.9570	± 1.9146
APRIL	36	4.6552	13.684	9.988	2.2123	0.3687	± 0.7484
MAY	30	0.6083	34.375	5.706	6.1512	1.1230	± 2.2969
JUNE	25	5.4902	55.172	28.791	15.1870	3.0374	± 6.2690
JULY	31	11.7390	140.740	33.556	25.7930	4.6326	± 9.4610
AUGUST	24	13.9130	85.000	31.530	18.7210	3.8214	± 7.9050
SEPTEMBER	38	1.0870	34.583	17.886	7.9512	1.2899	± 2.6135
OCTOBER	32	3.7288	300.000	29.751	53.3870	9.4376	± 19.2480
NOVEMBER	48	1.2821	17.368	6.458	4.1508	0.5991	± 1.2052
DECEMBER	30	1.3095	15.000	6.444	3.7884	0.6917	± 1.4146
1979 JANUARY	10	8.9744	15.000	12.307	1.5531	0.4911	± 1.1110
FEBRUARY	19	3.1655	14.194	8.396	4.2934	0.9850	± 2.0692
MARCH	36	3.9344	9.600	6.105	1.0826	0.1804	± 0.3663
APRIL	24	3.8710	7.667	4.815	0.7839	0.1600	± 0.3310
JULY	3	2.9870	3.176	3.075	0.0950	0.0548	± 0.2358
AUGUST	16	4.6939	13.333	7.976	2.6816	0.6704	± 1.4289
SEPTEMBER	16	4.4615	10.811	7.692	1.8945	0.4736	± 1.0095
OCTOBER	20	9.3478	22.500	15.615	4.2713	0.9551	± 1.9990
NOVEMBER	12	14.0320	18.333	15.525	1.4250	0.4114	± 0.9055
DECEMBER	11	13.1250	18.864	14.962	1.6078	0.4848	± 1.0800
1980 JANUARY	15	11.5150	17.500	14.136	1.8220	0.4704	± 1.0090
FEBRUARY	12	4.8246	10.606	7.928	1.8482	0.5335	± 1.1742
MARCH	16	6.8889	16.111	11.034	2.7590	0.6897	± 1.4700
APRIL	12	2.7358	12.708	7.748	3.3396	0.9641	± 2.1219
MAY	16	2.5543	9.750	5.246	1.6341	0.4085	± 0.8707
JUNE	15	6.0606	12.750	7.625	1.6499	0.4260	± 0.9137
JULY	16	6.9697	14.667	10.017	2.6933	0.6733	± 1.4354
AUGUST	15	6.9355	17.692	10.604	3.4157	0.8819	± 1.8915
SEPTEMBER	20	5.4054	15.526	11.327	3.3125	0.7407	± 1.5501
OCTOBER	16	9.2000	28.333	14.388	5.2666	1.3166	± 2.8065
NOVEMBER	16	8.0303	15.278	11.254	1.9694	0.4924	± 1.0495
DECEMBER	12	6.4130	19.667	11.945	4.5425	1.3113	± 2.8864

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF TOTAL NITROGEN (N) / TOTAL PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
- -78-79-80 JANUARY	26	8.9744	42.857	14.537	6.0741	1.1912	± 2.4535
- -78-79-80 FEBRUARY	75	3.1655	19.118	9.210	3.4708	0.4008	± 0.7986
- -78-79-80 MARCH	112	2.7711	45.455	9.137	5.9192	0.5593	± 1.1080
- -78-79-80 APRIL	72	2.7358	13.684	7.890	3.1258	0.3684	± 0.7345
- -78- -80 MAY	46	0.6083	34.375	5.546	5.0322	0.7420	± 1.4943
-77-78- -80 JUNE	68	3.9851	55.172	17.110	13.1930	1.5999	± 3.1935
-77-78-79-80 JULY	92	2.9870	140.740	21.031	18.5600	1.9350	± 3.8435
-77-78-79-80 AUGUST	83	4.6939	85.000	18.489	13.9340	1.5295	± 3.0425
- -78-79-80 SEPTEMBER	74	1.0870	34.583	13.909	7.3600	0.8556	± 1.7050
-77-78-79-80 OCTOBER	94	3.7288	1076.900	44.632	124.8300	12.8752	± 25.5670
-77-78-79-80 NOVEMBER	103	1.2821	220.000	33.277	46.5920	4.5908	± 9.1060
-77-78-79-80 DECEMBER	63	1.3095	86.957	15.507	16.4660	2.0745	± 4.1465

RATIO OF TOTAL NITROGEN (N) / TOTAL PHOSPHORUS (P)
NEAR OLIVER
1976 - 1980



STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF TOTAL NITROGEN (N) / TOTAL PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
1976							
1977 JUN JUL AUG OCT NOV DEC	161	3.9851	1076.900	46.419	98.3180	7.7485	± 15.3025
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	399	0.6083	300.000	15.761	20.7790	1.0403	± 2.0450
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC	167	2.9870	22.500	9.228	4.7348	0.3664	± 0.7234
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	181	2.5543	28.333	10.356	3.9507	0.2937	± 0.5796

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF TOTAL NITROGEN (N) / TOTAL PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
			APRIL TO SEPTEMBER				
1976							
1977	98	3.9851	63.158	15.772	7.0741	0.7146	± 1.4185
1978	184	0.6083	140.740	20.256	17.7840	1.3111	± 2.5870
1979	59	2.9870	13.333	6.364	2.4058	0.3132	± 0.6269
1980	94	2.5543	17.692	8.906	3.4652	0.3574	± 0.7097
1976-80	435	0.6083	140.740	14.909	13.3380	0.6395	± 1.2570
			OCTOBER TO MARCH				
1976-77							
1977-78	168	2.7711	1076.900	41.868	97.4600	7.5192	± 14.8450
1978-79	175	1.2821	300.000	11.187	24.4290	1.8467	± 3.6450
1979-80	86	4.8246	22.500	13.336	3.8023	0.4100	± 0.8150
1980-81	44	6.4130	28.333	12.582	4.2767	0.6447	± 1.3000
1976-80	473	1.2821	1076.900	22.605	61.5660	2.8308	± 5.5625
			APRIL TO MARCH				
1976-80	908	0.6083	1076.900	18.918	45.5240	1.5108	± 2.9650

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF TOTAL NITROGEN (N) / TOTAL PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
1976							
1977 JUN JUL AUG OCT NOV DEC							
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC							
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC							
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC							
	908	0.6083	1076.900	18.918	45.5240	1.5108	± 2.9650

TOTAL NITROGEN (N) / TOTAL PHOSPHORUS (P)

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OKANAGAN RIVER NEAR OLIVER

Statistical Characteristics of Nutrient Concentrations

Period of Sampling June 1977 to December 1980.

RATIO OF TOTAL NITROGEN (N) TO TOTAL PHOSPHORUS (P)

Median concentrations and their statistical characteristics determined for

- Individual Months
- All Months
- Individual years
- Seasons
  - April to September
  - October to March
  - April to March
- All Years
  - Cumulative distribution of concentration data

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF TOTAL NITROGEN (N) / TOTAL PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD		NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
1977	JUNE	28	10.600	9.8889	11.7500	0.964
	JULY	42	15.000	14.5000	15.7500	0.956
	AUGUST	28	15.714	14.3480	20.7690	0.964
	OCTOBER	26	17.500	15.0000	23.0770	0.971
	NOVEMBER	27	106.250	65.2170	126.6700	0.964
	DECEMBER	10	47.826	28.8240	60.8700	0.979
1978	JANUARY	1	42.857			
	FEBRUARY	44	10.233	7.3684	11.6220	0.951
	MARCH	60	8.000	7.5000	10.0000	0.960
	APRIL	36	10.294	9.2857	10.5880	0.953
	MAY	30	4.348	3.0769	6.5116	0.957
	JUNE	25	24.444	20.0000	34.2470	0.957
	JULY	31	28.824	24.7370	31.4290	0.971
	AUGUST	24	19.474	18.8890	42.7270	0.957
	SEPTEMBER	38	18.065	15.5000	20.3700	0.966
	OCTOBER	32	11.579	7.8947	26.0870	0.965
	NOVEMBER	48	5.596	4.3103	7.2222	0.956
	DECEMBER	30	6.774	3.5556	8.2609	0.957
1979	JANUARY	10	12.333	10.8820	13.2140	0.979
	FEBRUARY	19	5.556	4.6667	12.8570	0.959
	MARCH	36	6.098	5.6818	6.5217	0.953
	APRIL	24	4.583	4.4231	5.1163	0.957
	JULY	3	3.063			
	AUGUST	16	7.157	6.4286	9.3421	0.951
	SEPTEMBER	16	7.742	6.5714	9.6053	0.951
	OCTOBER	20	14.130	11.8330	19.2310	0.959
	NOVEMBER	12	15.000	14.0910	16.3160	0.961
	DECEMBER	11	14.800	13.9580	16.0420	0.961
1980	JANUARY	15	13.704	12.6790	15.4350	0.965
	FEBRUARY	12	8.537	5.7547	9.4643	0.961
	MARCH	16	10.333	9.3750	13.4090	0.951
	APRIL	12	8.143	4.0441	11.0340	0.961
	MAY	16	5.385	4.3396	5.8571	0.951
	JUNE	15	7.069	6.6129	8.4848	0.965
	JULY	16	8.600	7.9630	12.2500	0.951
	AUGUST	15	9.600	7.6786	13.4380	0.965
	SEPTEMBER	20	12.143	9.6000	13.6110	0.959
	OCTOBER	16	12.045	10.0000	17.3080	0.951
	NOVEMBER	16	11.000	9.8148	12.7780	0.951
	DECEMBER	12	10.000	8.4375	18.3330	0.961

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF TOTAL NITROGEN (N) / TOTAL PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
- -78-79-80 JANUARY	26	13.214	12.3330	14.7920	0.971
- -78-79-80 FEBRUARY	75	8.864	7.3684	10.6060	0.963
- -78-79-80 MARCH	112	7.407	6.6667	8.0000	0.953
- -78-79-80 APRIL	72	8.261	5.2500	9.2857	0.956
- -78- -80 MAY	46	5.132	3.8182	5.8571	0.960
-77-78- -80 JUNE	68	11.222	10.2190	14.4210	0.961
-77-78-79-80 JULY	92	15.263	14.6110	17.4710	0.953
-77-78-79-80 AUGUST	83	14.783	13.4380	17.5000	0.952
- -78-79-80 SEPTEMBER	74	12.895	10.9090	14.7060	0.953
-77-78-79-80 OCTOBER	94	15.263	12.7270	16.7860	0.951
-77-78-79-80 NOVEMBER	103	12.174	9.8077	14.0320	0.952
-77-78-79-80 DECEMBER	63	10.000	8.4000	13.5710	0.957

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF TOTAL NITROGEN (N) / TOTAL PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
1976					
1977 JUN JUL AUG OCT NOV DEC	161	16.111	15.2630	18.8750	0.951
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	399	10.476	9.5238	11.6220	0.955
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC	167	7.500	6.5306	8.9744	0.956
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	181	9.750	9.2000	10.9090	0.955

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF TOTAL NITROGEN (N) / TOTAL PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

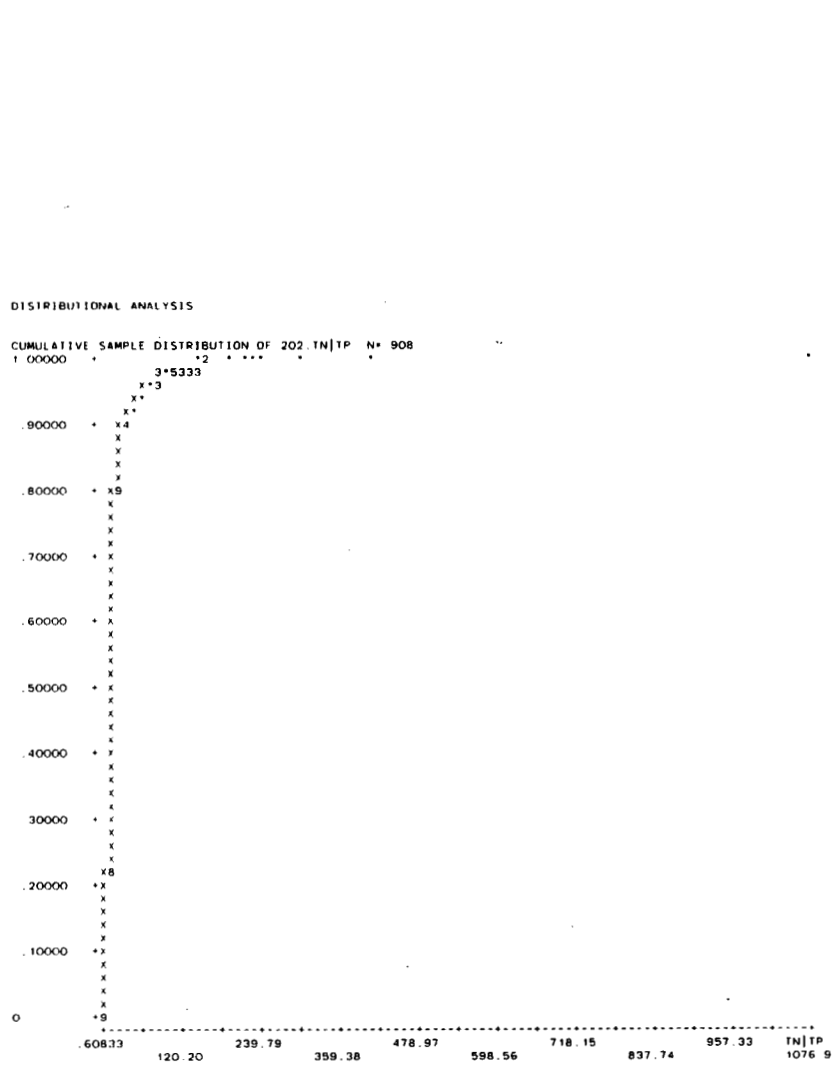
SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
APRIL TO SEPTEMBER					
1976					
1977	98	14.545	14.1050	15.2630	0.956
1978	184	16.087	13.4040	18.8890	0.954
1979	59	5.278	5.0000	6.8627	0.964
1980	94	8.200	7.2973	8.9706	0.951
1976-80	435	11.739	10.7410	12.7270	0.951
OCTOBER TO MARCH					
1976-77					
1977-78	168	12.222	11.1760	14.0630	0.955
1978-79	175	7.059	6.3265	7.5610	0.951
1979-80	86	13.654	12.6190	14.4440	0.960
1980-81	44	11.154	10.0000	12.7270	0.951
1976-80	473	10.882	10.0000	11.6220	0.952
APRIL TO MARCH					
1976-80	908	11.154	10.5260	11.7950	0.953

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF TOTAL NITROGEN (N) / TOTAL PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
1976					
1977 JUN JUL AUG OCT NOV DEC					
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC					
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC					
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC					
	908	11.154	10.5260	11.7950	0.953

DISTRIBUTIONAL ANALYSIS

CUMULATIVE SAMPLE DISTRIBUTION OF 202.TN|TP N= 908



PROB	QUANTILE	LEVEL	CONFIDENCE INTERVAL		SIZE
.1000	4.6988	.9500	4.3396	5.1163	.9536
.3000	7.6786	.9500	7.2727	8.2609	.9535
.5000	11.154	.9500	10.526	11.795	.9535
.7000	14.792	.9500	14.194	15.500	.9535
.9000	30.000	.9500	26.250	36.000	.9536

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OKANAGAN RIVER NEAR OLIVER

Statistical Characteristics of Nutrient Loads

Period of Sampling June 1977 to December 1980.

RATIO OF TOTAL NITROGEN (N) TO TOTAL PHOSPHORUS (P)

Arithmetic mean loads and their statistical characteristics determined for

- Individual Months
- All Months
  - Graph of monthly load ranges
- Individual years
- Seasons
  - April to September
  - October to March
  - April to March
- All Years

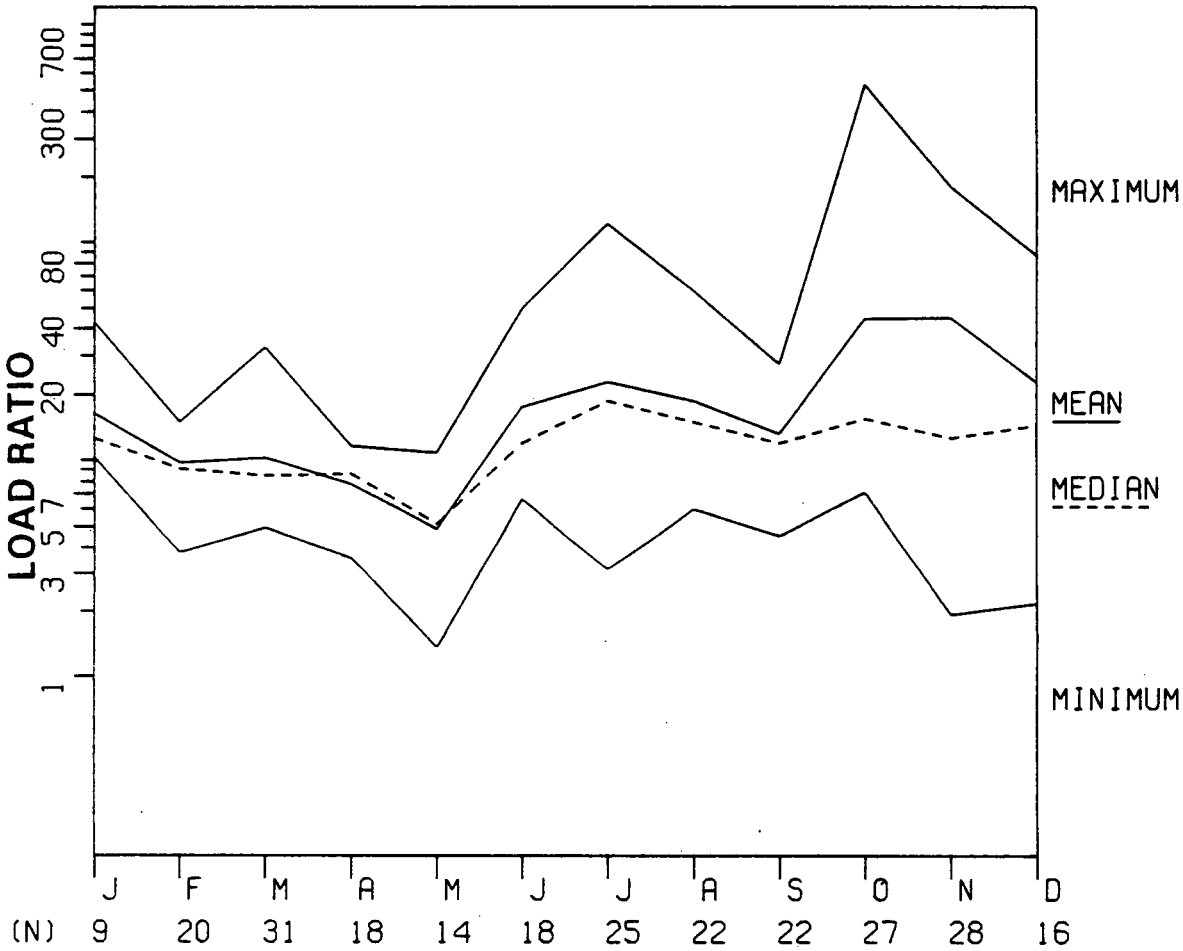
STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF TOTAL NITROGEN (N) / TOTAL PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
1977 JUNE	7	8.8827	13.333	11.201	1.4925	0.5641	± 1.3806
JULY	11	12.9200	24.135	16.726	3.6557	1.1022	± 2.4560
AUGUST	8	13.2530	25.192	19.069	4.7489	1.6790	± 3.9700
OCTOBER	10	11.5020	532.340	83.812	165.4000	52.3041	± 118.3180
NOVEMBER	10	55.3170	182.260	111.480	43.6660	13.8084	± 31.2390
DECEMBER	5	27.2460	86.792	50.674	22.2590	9.9545	± 27.6385
1978 JANUARY	1	42.9440	42.944	42.944			
FEBRUARY	10	6.2180	14.965	10.414	2.8750	0.9092	± 2.0568
MARCH	18	5.4206	32.833	12.271	6.9396	1.6357	± 3.4508
APRIL	9	5.6822	11.633	9.837	1.8443	0.6148	± 1.4178
MAY	10	1.3549	10.774	4.751	2.9242	0.9247	± 2.0918
JUNE	7	14.0270	50.000	29.899	15.0390	5.6842	± 13.9085
JULY	9	19.1390	122.220	38.252	31.9420	10.6473	± 24.5530
AUGUST	6	15.7260	60.121	31.381	18.3120	7.4758	± 19.2170
SEPTEMBER	13	4.5121	27.555	15.742	7.0126	1.9449	± 4.2380
OCTOBER	8	7.1825	130.830	29.911	42.1710	14.9097	± 35.2554
NOVEMBER	11	1.9310	12.543	5.765	3.7650	1.1352	± 2.5293
DECEMBER	6	2.1868	13.349	6.301	4.4293	1.8083	± 4.6482
1979 JANUARY	4	10.2800	13.415	12.002	1.3380	0.6690	± 2.1288
FEBRUARY	7	3.7829	13.282	9.525	4.2642	1.6117	± 3.9436
MARCH	9	4.9257	6.818	6.023	0.6745	0.2248	± 0.5185
APRIL	6	4.3810	5.323	4.738	0.3830	0.1564	± 0.4020
JULY	1	3.1313	3.131	3.131			
AUGUST	4	5.9927	9.608	7.550	1.8136	0.9068	± 2.8859
SEPTEMBER	4	5.0671	10.032	7.674	2.0830	1.0415	± 3.3145
OCTOBER	5	11.0140	19.602	15.253	3.8808	1.7355	± 4.8185
NOVEMBER	3	14.7010	16.822	15.492	1.1593	0.6693	± 2.8800
DECEMBER	3	14.4070	15.825	14.898	0.8036	0.4640	± 1.9960
1980 JANUARY	4	12.3020	15.539	13.909	1.7262	0.8631	± 2.7470
FEBRUARY	3	5.5556	9.118	7.867	2.0042	1.1571	± 4.9787
MARCH	4	8.3750	14.595	10.894	2.7093	1.3546	± 4.3112
APRIL	3	3.5480	9.925	7.575	3.5033	2.0226	± 8.7026
MAY	4	3.2238	6.240	5.096	1.3144	0.6572	± 2.0914
JUNE	4	6.6398	8.625	7.470	0.8893	0.4446	± 1.4150
JULY	4	7.9630	12.315	9.691	2.0706	1.0353	± 3.2950
AUGUST	4	7.3203	14.612	10.602	3.2996	1.6498	± 5.2505
SEPTEMBER	5	5.7937	13.575	11.137	3.1407	1.4046	± 3.8996
OCTOBER	4	9.5862	17.000	13.523	3.0393	1.5196	± 4.8362
NOVEMBER	4	9.2994	13.221	11.157	1.8378	0.9189	± 2.9245
DECEMBER	2	9.2150	16.899	13.057	5.4332	3.8419	± 48.8155

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF TOTAL NITROGEN (N) / TOTAL PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
- -78-79-80 JANUARY	9	10.2800	42.944	16.288	10.1300	3.3767	± 7.7865
- -78-79-80 FEBRUARY	20	3.7829	14.965	9.721	3.3000	0.7379	± 1.5442
- -78-79-80 MARCH	31	4.9257	32.833	10.279	6.0010	1.0778	± 2.2013
- -78-79-80 APRIL	18	3.5480	11.633	7.760	2.9329	0.6913	± 1.4585
- -78- -80 MAY	14	1.3549	10.774	4.849	2.5189	0.6732	± 1.4543
-77-78- -80 JUNE	18	6.6398	50.000	17.643	13.5660	3.1975	± 6.7465
-77-78-79-80 JULY	25	3.1313	122.220	22.806	22.3030	4.4606	± 9.2060
-77-78-79-80 AUGUST	22	5.9927	60.121	18.793	13.0970	2.7923	± 5.8070
- -78-79-80 SEPTEMBER	22	4.5121	27.555	13.229	6.4366	1.3723	± 2.8535
-77-78-79-80 OCTOBER	27	7.1825	532.340	44.732	104.5200	20.1149	± 41.3452
-77-78-79-80 NOVEMBER	28	1.9310	182.260	45.332	56.3170	10.6429	± 21.8375
-77-78-79-80 DECEMBER	16	2.1868	86.792	22.624	23.1020	5.7755	± 12.3100

RATIO OF TOTAL NITROGEN (N) / TOTAL PHOSPHORUS (P)
NEAR OLIVER
1976 - 1980



STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF TOTAL NITROGEN (N) / TOTAL PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
1976							
1977 JUN JUL AUG OCT NOV DEC	51	8.8827	532.340	51.396	83.0850	11.6342	± 23.3680
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	108	1.3549	130.830	16.583	19.0490	1.8330	± 3.6335
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC	46	3.1313	19.602	9.321	4.4824	0.6609	± 1.3309
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	45	3.2238	17.000	10.166	3.4430	0.5133	± 1.0344

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF TOTAL NITROGEN (N) / TOTAL PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
			APRIL TO SEPTEMBER				
1976							
1977	26	8.8827	25.192	15.960	4.6784	0.9175	± 1.8895
1978	54	1.3549	122.220	20.047	19.3490	2.6331	± 5.2810
1979	15	3.1313	10.032	6.163	2.1014	0.5426	± 1.1637
1980	24	3.2238	14.612	8.743	3.1411	0.6412	± 1.3264
1976-80	119	1.3549	122.220	15.124	14.3170	1.3124	± 2.5990
			OCTOBER TO MARCH				
1976-77							
1977-78	54	5.4206	532.340	47.671	82.0170	11.1611	± 22.3860
1978-79	45	1.9310	130.830	11.320	19.2700	2.8726	± 5.7892
1979-80	22	5.5556	19.602	13.193	3.5003	0.7463	± 1.5520
1980-81	10	9.2150	17.000	12.483	2.9698	0.9391	± 2.1245
1976-80	131	1.9310	532.340	26.708	56.4070	4.9283	± 9.7500
			APRIL TO MARCH				
1976-80	250	1.3549	532.340	21.194	42.3310	2.6772	± 5.2730

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF TOTAL NITROGEN (N) / TOTAL PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
1976							
1977 JUN JUL AUG OCT NOV DEC							
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC							
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC							
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC							
	250	1.3549	532.340	21.194	42.3310	2.6772	± 5.2730

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OKANAGAN RIVER NEAR OLIVER

Statistical Characteristics of Nutrient Loads

Period of Sampling June 1977 to December 1980.

RATIO OF TOTAL NITROGEN (N) TO TOTAL PHOSPHORUS (P)

Median loads and their statistical characteristics determined for

- Individual Months
- All Months
- Individual years
- Seasons
  - April to September
  - October to March
  - April to March
- All Years

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF TOTAL NITROGEN (N) / TOTAL PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
1977 JUNE	7	10.800	8.8827	13.3330	0.984
JULY	11	14.915	13.4660	20.8570	0.961
AUGUST	8	19.339	13.4380	25.1920	0.961
OCTOBER	10	17.673	11.6340	175.6500	0.979
NOVEMBER	10	106.180	58.2100	159.4900	0.979
DECEMBER	5	44.468		27.2460	0.969
1978 JANUARY	1	42.944			
FEBRUARY	10	10.943	6.9143	12.7660	0.979
MARCH	18	9.846	7.9795	14.2630	0.969
APRIL	9	10.120	8.6583	11.3900	0.961
MAY	10	3.589	1.5694	7.6434	0.979
JUNE	7	26.901	14.0270	50.0000	0.984
JULY	9	27.206	24.1320	37.0710	0.961
AUGUST	6	18.929	15.7260	60.1210	0.969
SEPTEMBER	13	17.793	6.9147	21.6570	0.978
OCTOBER	8	8.211	7.2606	130.8300	0.961
NOVEMBER	11	6.071	2.1298	10.9000	0.961
DECEMBER	6	3.330	2.1868	13.3490	0.969
1979 JANUARY	4	11.733			
FEBRUARY	7	12.222	3.7829	13.2820	0.984
MARCH	9	6.210	5.4094	6.7857	0.961
APRIL	6	4.483	4.3810	5.3235	0.969
JULY	1	3.131			
AUGUST	4	6.059			
SEPTEMBER	4	7.236			
OCTOBER	5	13.641		11.0140	0.969
NOVEMBER	3	14.951			
DECEMBER	3	14.462			
1980 JANUARY	4	12.537			
FEBRUARY	3	8.929			
MARCH	4	9.503			
APRIL	3	9.250			
MAY	4	5.235			
JUNE	4	6.922			
JULY	4	8.105			
AUGUST	4	8.571			
SEPTEMBER	5	12.482		5.7937	0.969
OCTOBER	4	13.655			
NOVEMBER	4	9.959			
DECEMBER	2	9.215			

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF TOTAL NITROGEN (N) / TOTAL PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
- -78-79-80 JANUARY	9	12.582	11.7330	15.5390	0.961
- -78-79-80 FEBRUARY	20	9.118	6.9143	12.7050	0.959
- -78-79-80 MARCH	31	8.468	6.7857	11.0790	0.971
- -78-79-80 APRIL	18	8.658	4.7739	10.1200	0.969
- -78- -80 MAY	14	5.109	3.2238	6.2404	0.965
-77-78- -80 JUNE	18	11.892	8.8827	20.9800	0.969
-77-78-79-80 JULY	25	18.736	13.4660	24.1350	0.957
-77-78-79-80 AUGUST	22	14.965	11.9030	21.8350	0.965
- -78-79-80 SEPTEMBER	22	11.988	8.3602	17.9490	0.965
-77-78-79-80 OCTOBER	27	15.536	12.8700	19.1370	0.964
-77-78-79-80 NOVEMBER	28	12.543	9.0180	58.2100	0.964
-77-78-79-80 DECEMBER	16	14.407	8.3853	41.5610	0.951

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF TOTAL NITROGEN (N) / TOTAL PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
1976					
1977 JUN JUL AUG OCT NOV DEC	51	19.339	14.9650	24.4830	0.951
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	108	11.079	9.1783	12.7050	0.957
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC	46	7.236	6.2105	12.2220	0.960
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	45	9.586	8.6245	12.1500	0.964

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF TOTAL NITROGEN (N) / TOTAL PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
		APRIL TO SEPTEMBER			
1976					
1977	26	14.426	13.2530	19.3390	0.971
1978	54	15.726	11.1820	20.1490	0.960
1979	15	5.323	4.4828	8.3602	0.965
1980	24	8.105	6.9216	10.9360	0.957
1976-80	119	11.786	10.1200	13.4150	0.957
		OCTOBER TO MARCH			
1976-77					
1977-78	54	14.965	11.7780	23.7350	0.960
1978-79	45	6.818	6.2105	9.0180	0.964
1979-80	22	13.641	11.1010	15.2580	0.965
1980-81	10	12.150	9.2994	16.8990	0.979
1976-80	131	12.150	10.9000	13.2210	0.955
		APRIL TO MARCH			
1976-80	250	11.892	10.9000	12.8700	0.950

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF TOTAL NITROGEN (N) / TOTAL PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
1976					
1977 JUN JUL AUG OCT NOV DEC					
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC					
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC					
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC					
	250	11.892	10.9000	12.8700	0.950

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OKANAGAN RIVER NEAR OLIVER

Statistical Characteristics of Nutrient Concentrations

Period of Sampling June 1977 to December 1980.

RATIO OF TOTAL NITROGEN (N) TO TOTAL DISSOLVED PHOSPHORUS (P)

Arithmetic mean concentrations and their statistical characteristics determined for:

- Individual Months
- All Months
  - Graph of monthly concentration ranges
- Individual years
- Seasons
  - April to September
  - October to March
  - April to March
- All Years
  - Histogram of concentration distribution

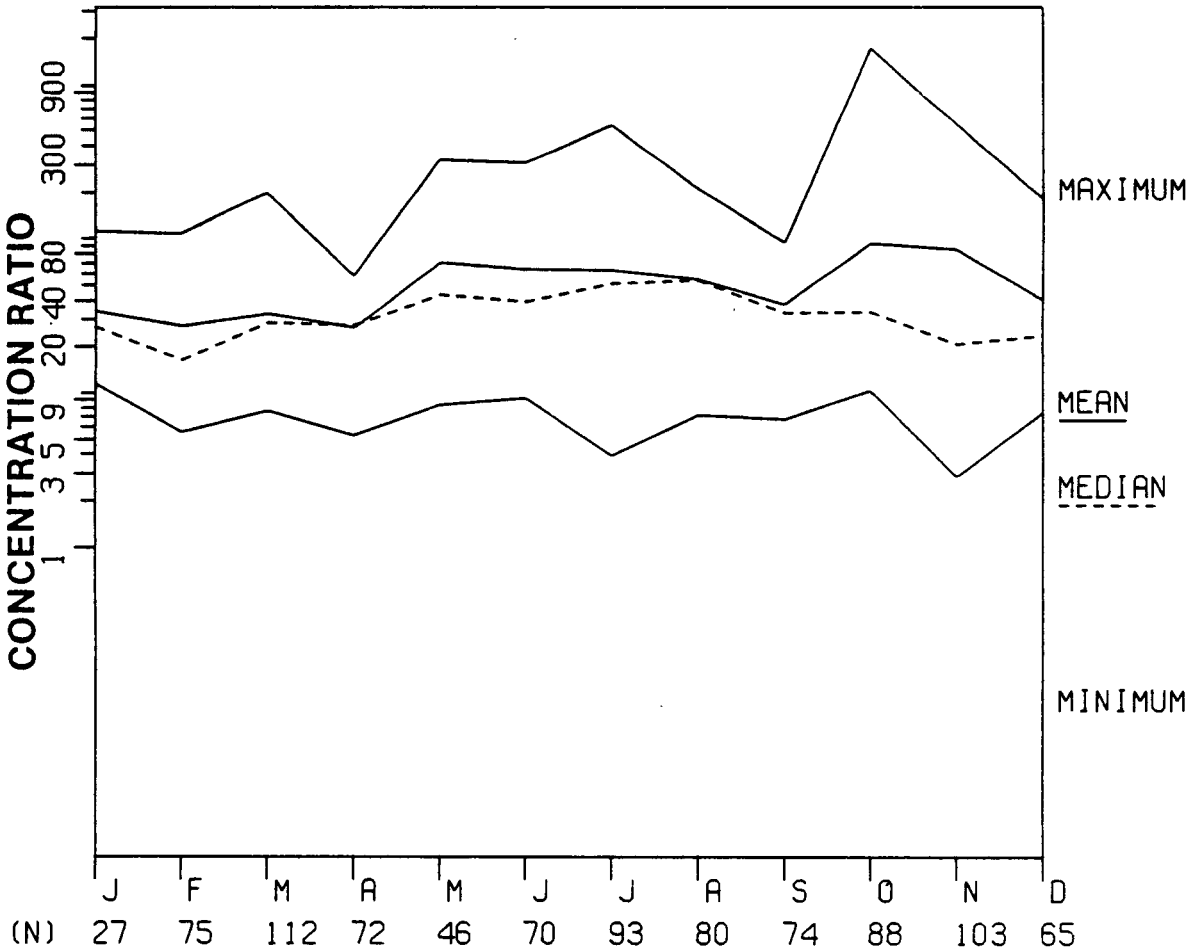
STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF TOTAL NITROGEN (N) / TOTAL DISSOLVED PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
1977 JUNE	29	11.6090	56.400	31.983	10.9390	2.0313	± 4.1615
JULY	42	22.5000	100.000	45.922	16.1280	2.4886	± 5.0255
AUGUST	28	17.0000	100.000	64.071	22.0810	4.1729	± 8.5620
OCTOBER	26	28.8890	1750.000	209.320	361.3501	70.8666	± 145.9514
NOVEMBER	27	100.0000	550.000	270.490	138.7600	26.7044	± 54.8899
DECEMBER	10	27.5000	181.820	133.770	49.7580	15.7349	± 35.5950
1978 JANUARY	1	112.5000	112.500	112.500			
FEBRUARY	44	13.5000	108.330	37.183	26.8600	4.0493	± 8.1665
MARCH	60	22.0000	200.000	47.454	29.9730	3.8695	± 7.7425
APRIL	36	10.2630	57.500	40.617	9.7497	1.6249	± 3.2990
MAY	30	34.2860	325.000	101.780	80.2150	14.6452	± 29.9545
JUNE	25	28.5710	312.500	130.480	87.8690	17.5738	± 36.2700
JULY	31	45.0000	542.860	114.990	88.6210	15.9168	± 32.5080
AUGUST	24	46.2500	212.500	84.405	36.4500	7.4403	± 15.3915
SEPTEMBER	38	15.4170	94.000	51.984	18.0610	2.9299	± 5.9365
OCTOBER	32	10.4350	416.670	62.235	81.4890	14.4054	± 29.3800
NOVEMBER	48	2.8378	55.455	17.931	8.6145	1.2434	± 2.5015
DECEMBER	32	7.5000	32.143	19.938	5.7527	1.0169	± 2.0745
1979 JANUARY	11	11.5620	19.412	15.378	2.2036	0.6644	± 1.4800
FEBRUARY	19	5.6000	16.087	11.171	3.8465	0.8824	± 1.8540
MARCH	36	7.6667	26.667	12.085	3.3559	0.5593	± 1.1355
APRIL	24	5.3333	11.667	8.188	1.5977	0.3261	± 0.6747
JULY	4	3.9167	4.298	4.091	0.1601	0.0801	± 0.2548
AUGUST	14	7.2034	30.364	18.987	8.1388	2.1752	± 4.6995
SEPTEMBER	16	6.7857	27.500	14.740	6.4532	1.6133	± 3.4390
OCTOBER	17	12.3530	35.714	24.879	6.5638	1.5920	± 3.3750
NOVEMBER	12	19.2110	24.231	21.681	1.7958	0.5184	± 1.1410
DECEMBER	11	22.3330	51.250	31.861	8.8932	2.6814	± 5.9745
1980 JANUARY	15	23.6670	81.250	43.141	22.8050	5.8882	± 12.6290
FEBRUARY	12	7.0930	26.923	16.306	7.2740	2.0998	± 4.6215
MARCH	16	15.0000	37.143	25.386	6.9917	1.7479	± 3.7260
APRIL	12	14.4740	34.375	22.096	7.0663	2.0399	± 4.4895
MAY	16	8.3929	17.727	11.667	1.9086	0.4771	± 1.0170
JUNE	16	9.3182	51.000	16.864	11.6630	2.9157	± 6.2150
JULY	16	10.7500	40.000	19.301	9.4937	2.3734	± 5.0590
AUGUST	14	10.7500	40.833	21.438	8.9418	2.3898	± 5.1630
SEPTEMBER	20	13.3330	49.167	29.062	10.5260	2.3537	± 4.9265
OCTOBER	13	16.5630	39.167	23.570	8.0732	2.2391	± 4.8785
NOVEMBER	16	13.8890	46.000	21.838	8.7007	2.1752	± 4.6365
DECEMBER	12	13.0560	49.167	25.799	12.0040	3.4653	± 7.6270

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF TOTAL NITROGEN (N) / TOTAL DISSOLVED PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
- -78-79-80 JANUARY	27	11.5620	112.500	34.399	26.7150	5.1413	± 10.5680
- -78-79-80 FEBRUARY	75	5.6000	108.330	27.253	23.9820	2.7692	± 5.5180
- -78-79-80 MARCH	112	7.6667	200.000	32.933	27.4010	2.5892	± 5.1310
- -78-79-80 APRIL	72	5.3333	57.500	26.721	16.5240	1.9474	± 3.8830
- -78- -80 MAY	46	8.3929	325.000	70.439	77.6600	11.4503	± 23.0620
-77-78- -80 JUNE	70	9.3182	312.500	63.705	72.8770	8.7105	± 17.3770
-77-78-79-80 JULY	93	3.9167	542.860	62.566	64.9480	6.7348	± 13.3760
-77-78-79-80 AUGUST	80	7.2034	212.500	54.821	36.0380	4.0292	± 8.0200
- -78-79-80 SEPTEMBER	74	6.7857	94.000	37.736	21.0930	2.4520	± 4.8870
-77-78-79-80 OCTOBER	88	10.4350	1750.000	92.763	214.3000	22.8445	± 45.4060
-77-78-79-80 NOVEMBER	103	2.8378	550.000	85.180	131.4400	12.9512	± 25.6890
-77-78-79-80 DECEMBER	65	7.5000	181.820	40.551	45.0050	5.5822	± 11.1520

RATIO OF TOTAL NITROGEN (N) / TOTAL DISSOLVED PHOSPHORUS (P)
NEAR OLIVER
1976 - 1980



STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF TOTAL NITROGEN (N) / TOTAL DISSOLVED PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
1976							
1977 JUN JUL AUG OCT NOV DEC	162	11.6090	1750.000	115.640	179.2800	14.0856	± 27.8185
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	401	2.8378	542.860	58.428	59.5610	2.9743	± 5.8470
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC	164	3.9167	51.250	15.638	8.3716	0.6537	± 1.2910
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	178	7.0930	81.250	23.181	12.9590	0.9713	± 1.9170

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF TOTAL NITROGEN (N) / TOTAL DISSOLVED PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
			APRIL TO SEPTEMBER				
1976							
1977	99	11.6090	100.000	46.972	20.6840	2.0788	± 4.1255
1978	184	10.2630	542.860	83.389	68.2880	5.0343	± 9.9330
1979	58	3.9167	30.364	12.320	7.1833	0.9432	± 1.8890
1980	94	8.3929	51.000	20.339	10.4370	1.0765	± 2.1375
1976-80	435	3.9167	542.860	52.000	54.2590	2.6015	± 5.1135
			OCTOBER TO MARCH				
1976-77							
1977-78	168	13.5000	1750.000	111.190	178.0900	13.7399	± 27.1255
1978-79	178	2.8378	416.670	24.195	38.9990	2.9231	± 5.7685
1979-80	83	7.0930	81.250	27.501	14.0070	1.5375	± 3.0585
1980-81	41	13.0560	49.167	23.547	9.5003	1.4837	± 2.9985
1976-80	470	2.8378	1750.000	55.817	116.7000	5.3830	± 10.5785
			APRIL TO MARCH				
1976-80	905	2.8378	1750.000	53.982	92.1040	3.0616	± 6.0085

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF TOTAL NITROGEN (N) / TOTAL DISSOLVED PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
1976							
1977 JUN JUL AUG OCT NOV DEC							
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC							
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC							
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC							
	905	2.8378	1750.000	53.982	92.1040	3.0616	± 6.0085

TOTAL NITROGEN (N) / TOTAL DISSOLVED PHOSPHORUS (P)

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OKANAGAN RIVER NEAR OLIVER

Statistical Characteristics of Nutrient Concentrations

Period of Sampling June 1977 to December 1980.

RATIO OF TOTAL NITROGEN (N) TO TOTAL DISSOLVED PHOSPHORUS (P)

Median concentrations and their statistical characteristics determined for

- Individual Months
- All Months
- Individual years
- Seasons
  - April to September
  - October to March
  - April to March
- All Years
  - Cumulative distribution of concentration data

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF TOTAL NITROGEN (N) / TOTAL DISSOLVED PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD		NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
1977	JUNE	29	27.400	26.5000	40.4290	0.957
	JULY	42	48.167	41.4290	52.5000	0.956
	AUGUST	28	66.000	54.0000	75.0000	0.964
	OCTOBER	26	56.000	54.0000	80.0000	0.971
	NOVEMBER	27	250.000	157.1400	364.2900	0.964
	DECEMBER	10	133.330	81.6670	175.0000	0.979
1978	JANUARY	1	112.500			
	FEBRUARY	44	26.667	22.3530	32.8570	0.951
	MARCH	60	42.000	38.7500	47.5000	0.960
	APRIL	36	42.000	37.1430	45.0000	0.953
	MAY	30	54.000	46.6670	125.0000	0.957
	JUNE	25	88.000	73.3330	228.5700	0.957
	JULY	31	97.500	86.0000	110.0000	0.971
	AUGUST	24	72.000	65.0000	96.0000	0.957
	SEPTEMBER	38	55.333	47.1430	61.1110	0.966
	OCTOBER	32	27.857	22.0000	47.0590	0.965
	NOVEMBER	48	16.000	14.7060	18.7500	0.956
	DECEMBER	32	20.000	18.0000	23.7500	0.965
1979	JANUARY	11	15.417	14.2310	17.6190	0.961
	FEBRUARY	19	12.500	7.9167	14.4440	0.959
	MARCH	36	11.304	10.4350	12.5000	0.953
	APRIL	24	7.857	7.5862	9.1667	0.957
	JULY	4	4.035			
	AUGUST	14	15.000	12.2410	29.1670	0.965
	SEPTEMBER	16	13.036	11.2070	18.4620	0.951
	OCTOBER	17	25.714	21.1110	28.8890	0.951
	NOVEMBER	12	21.389	19.7730	23.8460	0.961
	DECEMBER	11	28.636	25.3850	41.5000	0.961
1980	JANUARY	15	29.583	27.3080	75.0000	0.965
	FEBRUARY	12	14.167	8.0882	22.3330	0.961
	MARCH	16	22.143	20.3330	32.2220	0.951
	APRIL	12	19.118	17.6320	31.6670	0.961
	MAY	16	11.316	11.0530	12.0590	0.951
	JUNE	16	12.778	11.3890	15.0000	0.951
	JULY	16	15.769	11.6670	30.7140	0.951
	AUGUST	14	20.455	13.0000	26.6670	0.965
	SEPTEMBER	20	28.333	19.6150	35.0000	0.959
	OCTOBER	13	20.000	16.7860	32.1430	0.978
	NOVEMBER	16	18.846	17.6470	23.8890	0.951
	DECEMBER	12	19.643	14.2860	39.2860	0.961

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF TOTAL NITROGEN (N) / TOTAL DISSOLVED PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
- -78-79-80 JANUARY	27	26.923	16.5220	35.0000	0.964
- -78-79-80 FEBRUARY	75	16.316	14.7370	24.0000	0.963
- -78-79-80 MARCH	112	28.750	23.0000	36.0000	0.953
- -78-79-80 APRIL	72	27.500	17.6320	35.0000	0.956
- -78- -80 MAY	46	43.333	34.2860	54.0000	0.960
-77-78- -80 JUNE	70	39.143	27.2220	45.8330	0.959
-77-78-79-80 JULY	93	51.667	43.7140	58.0000	0.951
-77-78-79-80 AUGUST	80	54.000	45.7140	66.0000	0.955
- -78-79-80 SEPTEMBER	74	33.571	27.5000	47.1430	0.953
-77-78-79-80 OCTOBER	88	33.636	27.5000	41.4290	0.958
-77-78-79-80 NOVEMBER	103	21.000	19.2110	23.8460	0.952
-77-78-79-80 DECEMBER	65	23.750	22.0000	26.8180	0.954

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF TOTAL NITROGEN (N) / TOTAL DISSOLVED PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
1976					
1977 JUN JUL AUG OCT NOV DEC	162	56.000	51.6670	62.0000	0.951
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	401	42.000	38.7500	46.2500	0.954
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC	164	13.158	12.0830	15.0000	0.957
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	178	19.615	18.2140	21.3330	0.957

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF TOTAL NITROGEN (N) / TOTAL DISSOLVED PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

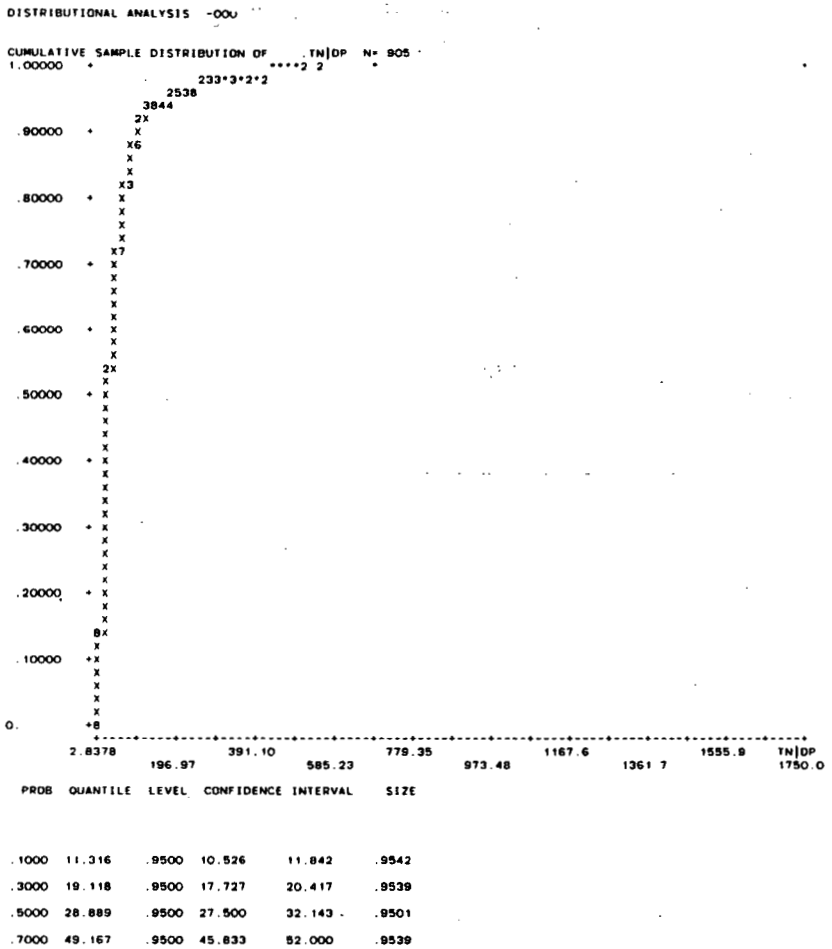
SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
		APRIL TO SEPTEMBER			
1976					
1977	99	46.667	41.4290	51.6670	0.956
1978	184	61.667	56.0000	70.0000	0.954
1979	58	9.231	8.0769	12.1430	0.952
1980	94	16.429	14.4740	19.5450	0.951
1976-80	435	40.714	36.0000	44.0000	0.951
		OCTOBER TO MARCH			
1976-77					
1977-78	168	50.000	45.0000	55.8820	0.955
1978-79	178	15.714	14.7620	17.0000	0.957
1979-80	83	25.000	22.5000	27.3080	0.952
1980-81	41	19.643	18.2140	23.8890	0.956
1976-80	470	24.000	22.5000	26.6670	0.953
		APRIL TO MARCH			
1976-80	905	28.889	27.5000	32.1430	0.950

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF TOTAL NITROGEN (N) / TOTAL DISSOLVED PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
1976					
1977 JUN JUL AUG OCT NOV DEC					
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC					
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC					
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC					
	905	28.889	27.5000	32.1430	0.950

DISTRIBUTIONAL ANALYSIS -00U

CUMULATIVE SAMPLE DISTRIBUTION OF .TN|DP N= 905



PROB	QUANTILE	LEVEL	CONFIDENCE INTERVAL		SIZE
.1000	11.316	.9500	10.526	11.842	.9542
.3000	19.118	.9500	17.727	20.417	.9539
.5000	28.889	.9500	27.500	32.143	.9501
.7000	49.167	.9500	45.833	52.000	.9539
.9000	102.00	.9500	90.000	116.67	.9542

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OKANAGAN RIVER NEAR OLIVER

Statistical Characteristics of Nutrient Loads

Period of Sampling June 1977 to December 1980.

RATIO OF TOTAL NITROGEN (N) TO TOTAL DISSOLVED PHOSPHORUS (P)

Arithmetic mean loads and their statistical characteristics determined for

- Individual Months
- All Months
  - Graph of monthly load ranges
- Individual years
- Seasons
  - April to September
  - October to March
  - April to March
- All Years

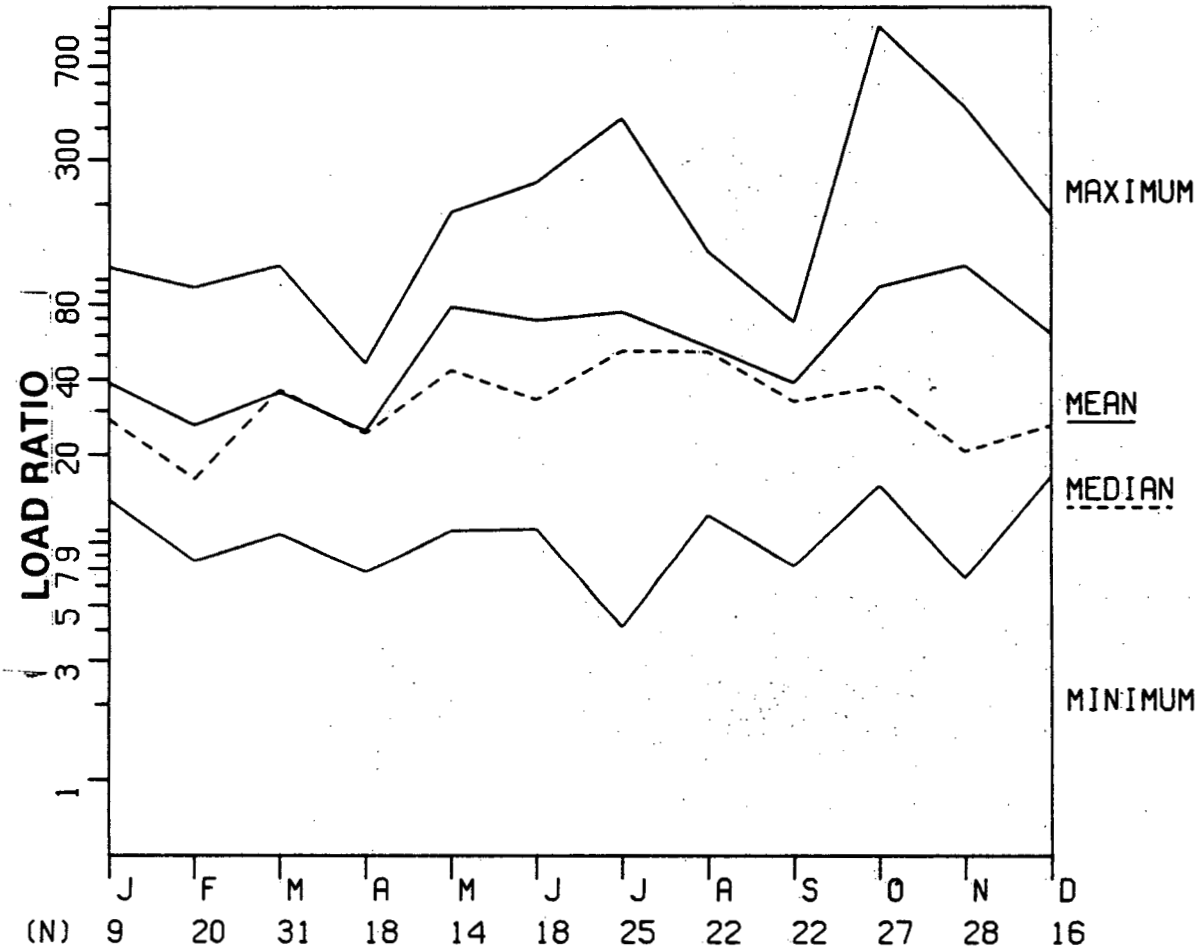
STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF TOTAL NITROGEN (N) / TOTAL DISSOLVED PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
1977 JUNE	7	16.6050	42.206	30.504	8.1668	3.0868	± 7.5530
JULY	11	35.0960	61.220	49.334	7.6920	2.3192	± 5.1675
AUGUST	8	43.3930	88.302	67.290	17.2780	6.1087	± 14.4450
OCTOBER	10	40.0310	1009.400	182.190	307.1499	97.1293	± 219.7194
NOVEMBER	10	100.0000	486.020	287.900	133.5100	42.2196	± 95.5049
DECEMBER	5	71.9370	181.820	139.970	41.0500	18.3581	± 50.9705
1978 JANUARY	1	112.4800	112.480	112.480			
FEBRUARY	10	14.5430	93.478	39.513	26.0280	8.2308	± 18.6195
MARCH	18	25.5560	114.470	50.140	20.8180	4.9068	± 10.3525
APRIL	9	24.3940	46.373	37.302	8.3229	2.7743	± 6.3975
MAY	10	41.2070	187.060	104.590	65.3180	20.6554	± 46.7260
JUNE	7	48.1520	245.950	138.170	84.3880	31.8957	± 78.0460
JULY	9	75.9010	439.350	138.520	116.0400	38.6800	± 89.1965
AUGUST	6	57.2320	130.180	82.609	27.2650	11.1309	± 28.6120
SEPTEMBER	13	25.4510	67.893	51.012	15.5150	4.3031	± 9.3755
OCTOBER	8	15.2400	245.070	63.136	76.5780	27.0744	± 64.0223
NOVEMBER	11	6.4425	35.250	16.693	7.1981	2.1703	± 4.8355
DECEMBER	6	16.5360	26.262	20.548	3.5331	1.4424	± 3.7080
1979 JANUARY	4	13.2110	20.000	16.512	2.8155	1.4078	± 4.4800
FEBRUARY	7	7.5610	15.398	11.902	3.4729	1.3126	± 3.2121
MARCH	9	9.6859	15.200	11.740	1.8392	0.6131	± 1.4140
APRIL	6	6.7647	9.548	8.002	1.0456	0.4269	± 1.0973
JULY	1	4.0789	4.079	4.079			
AUGUST	4	11.6250	29.736	19.088	8.3883	4.1941	± 13.3475
SEPTEMBER	4	7.2422	19.630	13.982	5.2045	2.6023	± 8.2814
OCTOBER	5	17.4710	26.600	23.245	3.6869	1.6488	± 4.5780
NOVEMBER	3	19.9770	23.620	21.650	1.8395	1.0620	± 4.5695
DECEMBER	3	24.8180	37.731	30.828	6.5030	3.7545	± 16.1545
1980 JANUARY	4	27.8200	78.505	42.275	24.2170	12.1085	± 38.5350
FEBRUARY	3	8.2237	22.852	15.718	7.3208	4.2267	± 18.1859
MARCH	4	19.8810	34.501	24.797	6.5892	3.2946	± 10.4850
APRIL	3	17.1580	28.158	21.403	5.9142	3.4146	± 14.6918
MAY	4	10.0390	12.577	11.440	1.0745	0.5373	± 1.7097
JUNE	4	10.1970	22.524	14.919	5.4487	2.7243	± 8.6702
JULY	4	12.1070	23.677	17.329	5.6600	2.8300	± 9.0063
AUGUST	4	12.1740	23.985	19.944	5.2956	2.6478	± 8.4265
SEPTEMBER	5	17.6970	35.150	26.949	7.2122	3.2254	± 8.9555
OCTOBER	4	17.0000	34.040	22.618	7.7496	3.8748	± 12.3315
NOVEMBER	4	16.4970	27.520	20.452	5.0595	2.5297	± 8.0505
DECEMBER	2	21.7740	39.673	30.724	12.6560	8.9491	± 113.7150

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF TOTAL NITROGEN (N) / TOTAL DISSOLVED PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
- -78-79-80 JANUARY	9	13.2110	112.480	38.626	34.0000	11.3333	± 26.1345
- -78-79-80 FEBRUARY	20	7.5610	93.478	26.280	22.7220	5.0808	± 10.6340
- -78-79-80 MARCH	31	9.6859	114.470	35.721	23.7490	4.2654	± 8.7110
- -78-79-80 APRIL	18	6.7647	46.373	24.885	14.8800	3.5072	± 7.3995
- -78- -80 MAY	14	10.0390	187.060	77.978	69.7220	18.6340	± 40.2540
-77-78- -80 JUNE	18	10.1970	245.950	68.912	76.2290	17.9673	± 37.9080
-77-78-79-80 JULY	25	4.0789	439.350	74.511	84.2370	16.8474	± 34.7700
-77-78-79-80 AUGUST	22	11.6250	130.180	54.096	32.3230	6.8913	± 14.3315
- -78-79-80 SEPTEMBER	22	7.2422	67.893	38.810	19.8600	4.2342	± 8.8055
-77-78-79-80 OCTOBER	27	15.2400	1009.400	93.840	198.1800	38.1398	± 78.3985
-77-78-79-80 NOVEMBER	28	6.4425	486.020	114.620	152.5300	28.8255	± 59.1425
-77-78-79-80 DECEMBER	16	16.5360	181.820	61.067	59.2230	14.8058	± 31.5580

RATIO OF TOTAL NITROGEN (N) / TOTAL DISSOLVED PHOSPHORUS (P)
NEAR OLIVER
1976 - 1980



STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF TOTAL NITROGEN (N) / TOTAL DISSOLVED PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
1976							
1977 JUN JUL AUG OCT NOV DEC	51	16.6050	1009.400	131.280	171.3800	23.9980	± 48.2015
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	108	6.4425	439.350	64.597	62.2390	5.9889	± 11.8725
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC	46	4.0789	37.731	15.501	7.3568	1.0847	± 2.1850
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	45	8.2237	78.505	22.281	11.4740	1.7104	± 3.4470

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF TOTAL NITROGEN (N) / TOTAL DISSOLVED PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
			APRIL TO SEPTEMBER				
1976							
1977	26	16.6050	88.302	49.789	18.0420	3.5383	± 7.2875
1978	54	24.3940	439.350	88.044	72.7430	9.8991	± 19.8555
1979	15	4.0789	29.736	12.291	6.9274	1.7886	± 3.8361
1980	24	10.0390	35.150	18.895	7.2044	1.4706	± 3.0420
1976-80	119	4.0789	439.350	56.191	58.8450	5.3943	± 10.6820
			OCTOBER TO MARCH				
1976-77							
1977-78	54	14.5430	1009.400	126.130	168.3900	22.9150	± 45.9630
1978-79	45	6.4425	245.070	23.711	36.0750	5.3777	± 10.8385
1979-80	22	8.2237	78.505	26.777	13.2310	2.8209	± 5.8665
1980-81	10	16.4970	39.673	23.372	7.8996	2.4981	± 5.6510
1976-80	131	6.4425	1009.400	66.417	120.6400	10.5404	± 20.8535
			APRIL TO MARCH				
1976-80	250	4.0789	1009.400	61.550	96.2590	6.0880	± 11.9905

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF TOTAL NITROGEN (N) / TOTAL DISSOLVED PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
1976							
1977 JUN JUL AUG OCT NOV DEC							
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC							
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC							
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC							
	250	4.0789	1009.400	61.550	96.2590	6.0880	± 11.9905

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OKANAGAN RIVER NEAR OLIVER

Statistical Characteristics of Nutrient Loads

Period of Sampling June 1977 to December 1980.

RATIO OF TOTAL NITROGEN (N) TO TOTAL DISSOLVED PHOSPHORUS (P)

Median loads and their statistical characteristics determined for

- Individual Months
- All Months
- Individual years
- Seasons
  - April to September
  - October to March
  - April to March
- All Years

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF TOTAL NITROGEN (N) / TOTAL DISSOLVED PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD		NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
1977	JUNE	7	30.566	16.6050	42.2060	0.984
	JULY	11	48.889	47.0410	57.0930	0.961
	AUGUST	8	63.501	50.1500	88.3020	0.961
	OCTOBER	10	53.691	42.6090	368.9900	0.979
	NOVEMBER	10	261.050	132.5400	433.3301	0.979
	DECEMBER	5	144.090		71.9370	0.969
1978	JANUARY	1	112.480			
	FEBRUARY	10	27.674	24.8350	78.8320	0.979
	MARCH	18	42.835	40.7280	49.5280	0.969
	APRIL	9	37.665	25.5070	45.0110	0.961
	MAY	10	50.270	42.7150	185.5800	0.979
	JUNE	7	88.837	48.1520	245.9500	0.984
	JULY	9	98.775	77.2260	165.6900	0.961
	AUGUST	6	65.157	57.2320	130.1800	0.969
	SEPTEMBER	13	56.737	27.9220	63.8930	0.978
	OCTOBER	8	28.439	19.1580	245.0700	0.961
	NOVEMBER	11	14.355	13.6100	20.6370	0.961
	DECEMBER	6	19.067	16.5360	26.2620	0.969
1979	JANUARY	4	15.825			
	FEBRUARY	7	13.839	7.5610	15.3980	0.984
	MARCH	9	11.139	10.1530	14.3130	0.961
	APRIL	6	7.449	6.7647	9.5477	0.969
	JULY	1	4.079			
	AUGUST	4	13.196			
	SEPTEMBER	4	13.234			
	OCTOBER	5	22.946		17.4710	0.969
	NOVEMBER	3	21.352			
	DECEMBER	3	29.936			
1980	JANUARY	4	30.753			
	FEBRUARY	3	16.079			
	MARCH	4	21.931			
	APRIL	3	18.892			
	MAY	4	11.278			
	JUNE	4	11.932			
	JULY	4	13.030			
	AUGUST	4	21.320			
	SEPTEMBER	5	27.225		17.6970	0.969
	OCTOBER	4	18.912			
	NOVEMBER	4	17.113			
	DECEMBER	2	21.774			

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF TOTAL NITROGEN (N) / TOTAL DISSOLVED PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
- -78-79-80 JANUARY	9	27.820	15.8250	78.5050	0.961
- -78-79-80 FEBRUARY	20	16.079	14.3930	27.6740	0.959
- -78-79-80 MARCH	31	36.535	19.8810	42.8350	0.971
- -78-79-80 APRIL	18	24.394	8.9143	37.6650	0.969
- -78- -80 MAY	14	43.628	12.5770	175.1400	0.965
-77-78- -80 JUNE	18	33.208	22.5240	78.1310	0.969
-77-78-79-80 JULY	25	51.917	47.0410	77.2260	0.957
-77-78-79-80 AUGUST	22	51.559	23.9850	80.3680	0.965
- -78-79-80 SEPTEMBER	22	32.574	25.4510	59.5120	0.965
-77-78-79-80 OCTOBER	27	37.477	22.9460	61.1980	0.964
-77-78-79-80 NOVEMBER	28	20.677	17.1130	132.5400	0.964
-77-78-79-80 DECEMBER	16	26.262	21.7740	143.9200	0.951

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF TOTAL NITROGEN (N) / TOTAL DISSOLVED PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
1976					
1977 JUN JUL AUG OCT NOV DEC	51	61.198	50.1500	80.3680	0.951
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	108	45.011	42.6040	54.2320	0.957
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC	46	13.839	11.4050	17.0100	0.960
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	45	20.677	17.1580	22.8520	0.964

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF TOTAL NITROGEN (N) / TOTAL DISSOLVED PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
		APRIL TO SEPTEMBER			
1976					
1977	26	48.810	38.1610	55.5960	0.971
1978	54	63.893	50.2700	78.1310	0.960
1979	15	9.548	7.3643	15.8210	0.965
1980	24	17.697	12.5770	22.5240	0.957
1976-80	119	42.993	33.2080	48.8100	0.957
		OCTOBER TO MARCH			
1976-77					
1977-78	54	53.691	46.5890	90.7550	0.960
1978-79	45	15.200	14.1100	17.8410	0.964
1979-80	22	22.946	21.9310	29.9360	0.965
1980-81	10	20.519	17.0000	34.0400	0.979
1976-80	131	26.600	22.8730	35.2500	0.955
		APRIL TO MARCH			
1976-80	250	34.040	27.6740	40.7280	0.950

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF TOTAL NITROGEN (N) / TOTAL DISSOLVED PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
1976					
1977 JUN JUL AUG OCT NOV DEC					
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC					
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC					
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC					
	250	34.040	27.6740	40.7280	0.950

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OKANAGAN RIVER NEAR OLIVER

Statistical Characteristics of Nutrient Concentrations

Period of Sampling June 1977 to December 1980.

RATIO OF TOTAL NITROGEN (N) TO DISSOLVED SILICA

Arithmetic mean concentrations and their statistical characteristics determined for:

- Individual Months
- All Months
  - Graph of monthly concentration ranges
- Individual years
- Seasons
  - April to September
  - October to March
  - April to March
- All Years
  - Histogram of concentration distribution

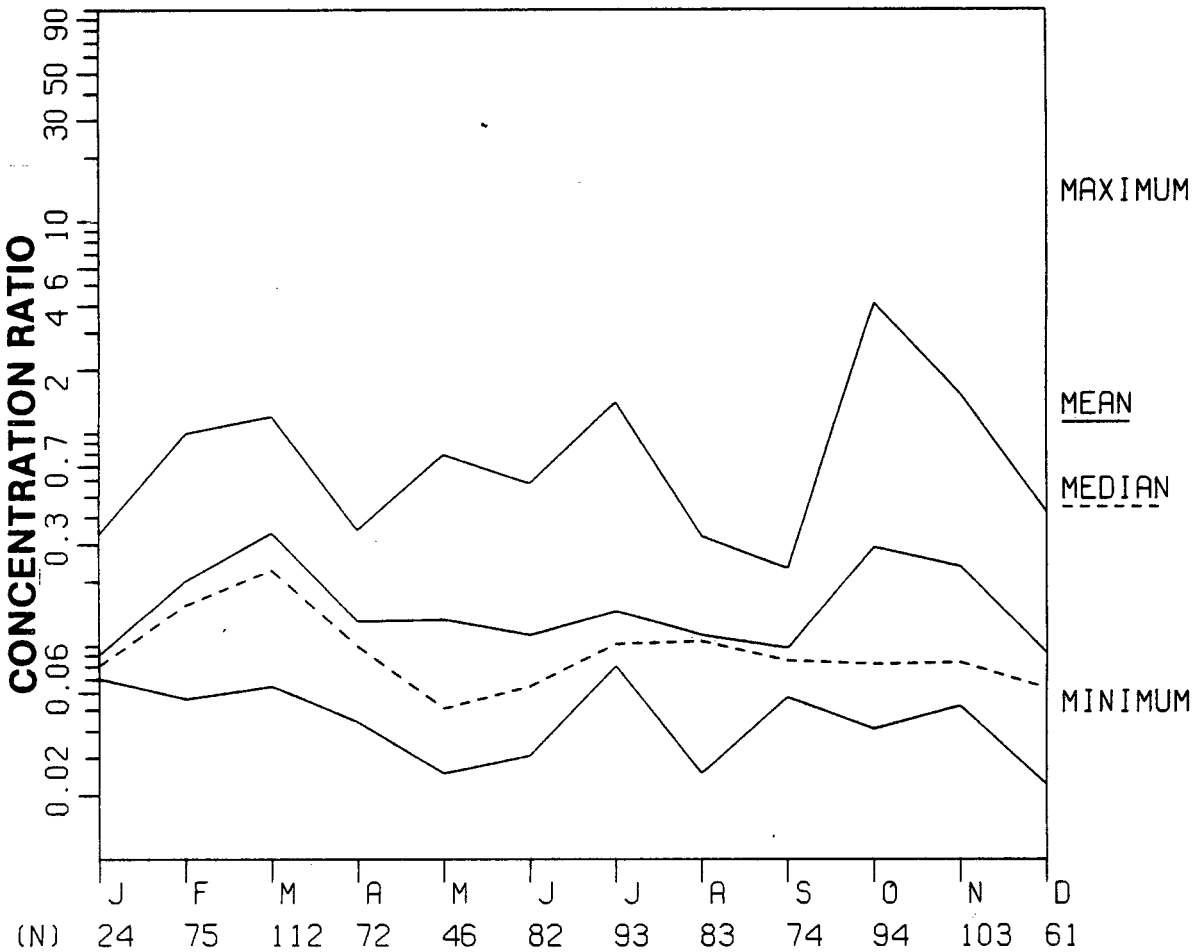
STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF TOTAL NITROGEN (N) / DISSOLVED SILICA
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
1977 JUNE	41	0.0470	0.092	0.068	0.0100	0.0016	± 0.0031
JULY	42	0.0813	0.414	0.110	0.0530	0.0082	± 0.0165
AUGUST	28	0.0254	0.156	0.099	0.0364	0.0069	± 0.0141
OCTOBER	26	0.0667	4.118	0.640	1.0804	0.2119	± 0.4364
NOVEMBER	27	0.2157	1.535	0.679	0.3442	0.0662	± 0.1362
DECEMBER	10	0.0224	0.426	0.224	0.1208	0.0382	± 0.0864
1978 JANUARY	1	0.3333	0.333	0.333			
FEBRUARY	44	0.1136	1.000	0.286	0.2172	0.0327	± 0.0660
MARCH	60	0.1879	1.200	0.557	0.3231	0.0417	± 0.0835
APRIL	36	0.0722	0.350	0.171	0.0820	0.0137	± 0.0277
MAY	30	0.0459	0.795	0.186	0.1884	0.0344	± 0.0704
JUNE	25	0.0556	0.581	0.231	0.1829	0.0366	± 0.0755
JULY	31	0.0906	1.407	0.226	0.2401	0.0431	± 0.0881
AUGUST	24	0.0811	0.327	0.147	0.0569	0.0116	± 0.0240
SEPTEMBER	38	0.0575	0.231	0.115	0.0429	0.0070	± 0.0141
OCTOBER	32	0.0710	2.273	0.255	0.4001	0.0707	± 0.1442
NOVEMBER	48	0.0525	0.142	0.085	0.0203	0.0029	± 0.0059
DECEMBER	32	0.0377	0.110	0.067	0.0214	0.0038	± 0.0077
1979 JANUARY	12	0.0755	0.086	0.080	0.0032	0.0009	± 0.0020
FEBRUARY	19	0.0730	0.107	0.087	0.0093	0.0021	± 0.0045
MARCH	36	0.0667	0.113	0.093	0.0111	0.0018	± 0.0037
APRIL	24	0.0714	0.104	0.085	0.0077	0.0016	± 0.0032
JULY	4	0.0920	0.098	0.096	0.0030	0.0015	± 0.0048
AUGUST	16	0.0969	0.169	0.124	0.0213	0.0053	± 0.0114
SEPTEMBER	16	0.0742	0.125	0.093	0.0161	0.0040	± 0.0086
OCTOBER	20	0.0409	0.106	0.078	0.0196	0.0044	± 0.0092
NOVEMBER	12	0.0716	0.104	0.083	0.0083	0.0024	± 0.0053
DECEMBER	7	0.0698	0.085	0.077	0.0046	0.0017	± 0.0043
1980 JANUARY	11	0.0707	0.087	0.081	0.0041	0.0012	± 0.0027
FEBRUARY	12	0.0564	0.093	0.073	0.0145	0.0042	± 0.0092
MARCH	16	0.0650	0.097	0.086	0.0092	0.0023	± 0.0049
APRIL	12	0.0439	0.152	0.097	0.0408	0.0118	± 0.0259
MAY	16	0.0253	0.040	0.032	0.0046	0.0012	± 0.0025
JUNE	16	0.0308	0.064	0.044	0.0129	0.0032	± 0.0069
JULY	16	0.0860	0.129	0.099	0.0107	0.0027	± 0.0057
AUGUST	15	0.0581	0.084	0.072	0.0079	0.0020	± 0.0044
SEPTEMBER	20	0.0618	0.084	0.071	0.0063	0.0014	± 0.0030
OCTOBER	16	0.0615	0.073	0.067	0.0036	0.0009	± 0.0019
NOVEMBER	16	0.0538	0.067	0.059	0.0034	0.0009	± 0.0018
DECEMBER	12	0.0534	0.065	0.060	0.0032	0.0009	± 0.0020

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF TOTAL NITROGEN (N) / DISSOLVED SILICA
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
- -78-79-80 JANUARY	24	0.0707	0.333	0.091	0.0517	0.0106	± 0.0218
- -78-79-80 FEBRUARY	75	0.0564	1.000	0.201	0.1941	0.0224	± 0.0447
- -78-79-80 MARCH	112	0.0650	1.200	0.340	0.3317	0.0313	± 0.0621
- -78-79-80 APRIL	72	0.0439	0.350	0.130	0.0730	0.0086	± 0.0172
- -78- -80 MAY	46	0.0253	0.795	0.133	0.1684	0.0248	± 0.0500
-77-78- -80 JUNE	82	0.0308	0.581	0.113	0.1275	0.0141	± 0.0280
-77-78-79-80 JULY	93	0.0813	1.407	0.146	0.1526	0.0158	± 0.0314
-77-78-79-80 AUGUST	83	0.0254	0.327	0.113	0.0465	0.0051	± 0.0102
- -78-79-80 SEPTEMBER	74	0.0575	0.231	0.098	0.0366	0.0043	± 0.0085
-77-78-79-80 OCTOBER	94	0.0409	4.118	0.292	0.6482	0.0669	± 0.1328
-77-78-79-80 NOVEMBER	103	0.0525	1.535	0.236	0.3173	0.0313	± 0.0620
-77-78-79-80 DECEMBER	61	0.0224	0.426	0.093	0.0767	0.0098	± 0.0196

RATIO OF TOTAL NITROGEN (N) / DISSOLVED SILICA
NEAR OLIVER
1976 - 1980



STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF TOTAL NITROGEN (N) / DISSOLVED SILICA
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
1976							
1977 JUN JUL AUG OCT NOV DEC	174	0.0224	4.118	0.272	0.5055	0.0383	± 0.0756
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	401	0.0377	2.273	0.232	0.2570	0.0128	± 0.0252
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC	166	0.0409	0.169	0.090	0.0178	0.0014	± 0.0027
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	178	0.0253	0.152	0.069	0.0229	0.0017	± 0.0034

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF TOTAL NITROGEN (N) / DISSOLVED SILICA
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
			APRIL TO SEPTEMBER				
1976							
1977	111	0.0254	0.414	0.092	0.0419	0.0040	± 0.0079
1978	184	0.0459	1.407	0.176	0.1526	0.0112	± 0.0222
1979	60	0.0714	0.169	0.098	0.0216	0.0028	± 0.0056
1980	95	0.0253	0.152	0.068	0.0291	0.0030	± 0.0059
1976-80	450	0.0253	1.407	0.122	0.1108	0.0052	± 0.0103
			OCTOBER TO MARCH				
1976-77							
1977-78	168	0.0224	4.118	0.497	0.5188	0.0400	± 0.0790
1978-79	179	0.0377	2.273	0.114	0.1804	0.0135	± 0.0266
1979-80	78	0.0409	0.106	0.080	0.0131	0.0015	± 0.0030
1980-81	44	0.0534	0.073	0.062	0.0048	0.0007	± 0.0015
1976-80	469	0.0224	4.118	0.241	0.3815	0.0176	± 0.0346
			APRIL TO MARCH				
1976-80	919	0.0224	4.118	0.183	0.2893	0.0095	± 0.0187

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF TOTAL NITROGEN (N) / DISSOLVED SILICA
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
1976							
1977 JUN JUL AUG OCT NOV DEC							
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC							
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC							
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC							
	919	0.0224	4.118	0.183	0.2893	0.0095	± 0.0187

TOTAL NITROGEN (N) / DISSOLVED SILICA

n = 912

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OKANAGAN RIVER NEAR OLIVER

Statistical Characteristics of Nutrient Concentrations

Period of Sampling June 1977 to December 1980.

RATIO OF TOTAL NITROGEN (N) TO DISSOLVED SILICA

Median concentrations and their statistical characteristics determined for

- Individual Months
- All Months
- Individual years
- Seasons
  - April to September
  - October to March
  - April to March
- All Years
  - Cumulative distribution of concentration data

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF TOTAL NITROGEN (N) / DISSOLVED SILICA
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
1977 JUNE	41	0.065	0.0631	0.0681	0.956
JULY	42	0.097	0.0950	0.1000	0.956
AUGUST	28	0.089	0.0865	0.1235	0.964
OCTOBER	26	0.085	0.0778	0.0941	0.971
NOVEMBER	27	0.707	0.4318	0.8085	0.964
DECEMBER	10	0.213	0.0980	0.3333	0.979
1978 JANUARY	1	0.333			
FEBRUARY	44	0.211	0.1857	0.2316	0.951
MARCH	60	0.440	0.3143	0.6000	0.960
APRIL	36	0.138	0.1187	0.2000	0.953
MAY	30	0.070	0.0540	0.2206	0.957
JUNE	25	0.122	0.1050	0.4211	0.957
JULY	31	0.168	0.1543	0.1926	0.971
AUGUST	24	0.119	0.1062	0.1815	0.957
SEPTEMBER	38	0.097	0.0889	0.1100	0.966
OCTOBER	32	0.152	0.0867	0.2063	0.965
NOVEMBER	48	0.079	0.0759	0.0909	0.956
DECEMBER	32	0.063	0.0512	0.0818	0.965
1979 JANUARY	12	0.079	0.0771	0.0833	0.961
FEBRUARY	19	0.084	0.0818	0.0929	0.959
MARCH	36	0.094	0.0882	0.1000	0.953
APRIL	24	0.084	0.0821	0.0917	0.957
JULY	4	0.098			
AUGUST	16	0.115	0.1109	0.1444	0.951
SEPTEMBER	16	0.083	0.0792	0.1030	0.951
OCTOBER	20	0.083	0.0781	0.0895	0.959
NOVEMBER	12	0.082	0.0756	0.0860	0.961
DECEMBER	7	0.077	0.0698	0.0847	0.984
1980 JANUARY	11	0.081	0.0807	0.0841	0.961
FEBRUARY	12	0.069	0.0596	0.0921	0.961
MARCH	16	0.089	0.0833	0.0909	0.951
APRIL	12	0.103	0.0467	0.1375	0.961
MAY	16	0.032	0.0304	0.0368	0.951
JUNE	16	0.036	0.0337	0.0621	0.951
JULY	16	0.100	0.0909	0.1043	0.951
AUGUST	15	0.074	0.0667	0.0774	0.965
SEPTEMBER	20	0.069	0.0671	0.0742	0.959
OCTOBER	16	0.066	0.0635	0.0691	0.951
NOVEMBER	16	0.058	0.0570	0.0611	0.951
DECEMBER	12	0.060	0.0573	0.0625	0.961

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF TOTAL NITROGEN (N) / DISSOLVED SILICA
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
- -78-79-80 JANUARY	24	0.081	0.0791	0.0833	0.957
- -78-79-80 FEBRUARY	75	0.155	0.1000	0.1857	0.963
- -78-79-80 MARCH	112	0.227	0.1040	0.2600	0.953
- -78-79-80 APRIL	72	0.100	0.0917	0.1187	0.956
- -78- -80 MAY	46	0.051	0.0459	0.0700	0.960
-77-78- -80 JUNE	82	0.065	0.0636	0.0710	0.952
-77-78-79-80 JULY	93	0.102	0.1000	0.1066	0.951
-77-78-79-80 AUGUST	83	0.106	0.0919	0.1152	0.952
- -78-79-80 SEPTEMBER	74	0.085	0.0829	0.0947	0.953
-77-78-79-80 OCTOBER	94	0.083	0.0778	0.0895	0.951
-77-78-79-80 NOVEMBER	103	0.084	0.0788	0.0946	0.952
-77-78-79-80 DECEMBER	61	0.063	0.0607	0.0769	0.960

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF TOTAL NITROGEN (N) / DISSOLVED SILICA
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
1976					
1977 JUN JUL AUG OCT NOV DEC	174	0.093	0.0900	0.0973	0.951
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	401	0.142	0.1211	0.1625	0.954
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC	166	0.085	0.0837	0.0905	0.956
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	178	0.067	0.0649	0.0703	0.957

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF TOTAL NITROGEN (N) / DISSOLVED SILICA
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

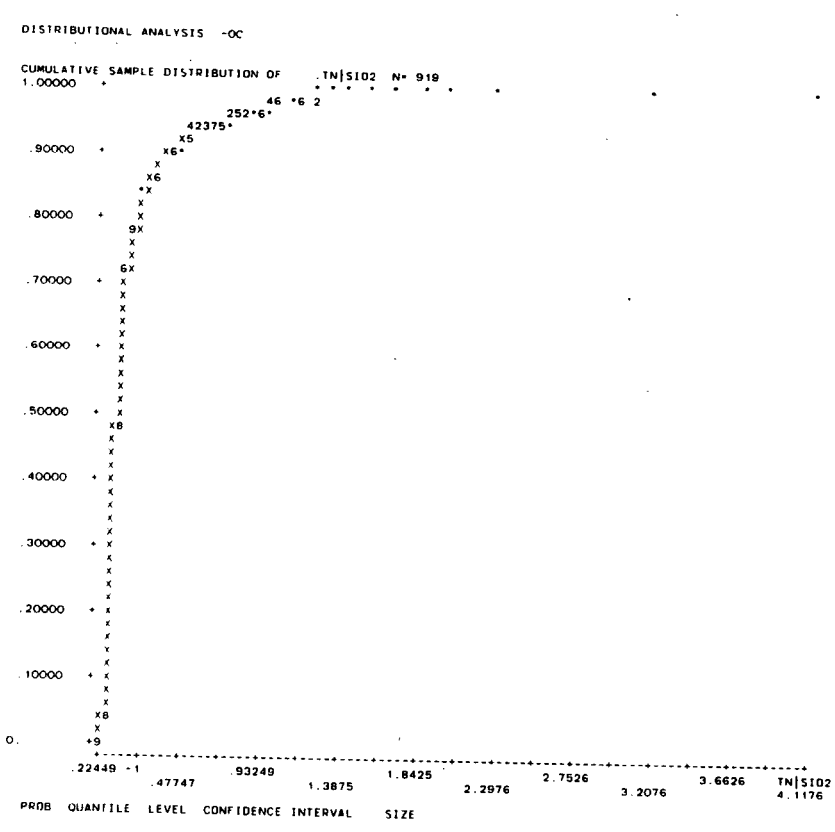
SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
		APRIL TO SEPTEMBER			
1976					
1977	111	0.089	0.0838	0.0921	0.953
1978	184	0.122	0.1114	0.1543	0.954
1979	60	0.092	0.0875	0.1015	0.960
1980	95	0.068	0.0625	0.0742	0.960
1976-80	450	0.093	0.0906	0.0971	0.952
		OCTOBER TO MARCH			
1976-77					
1977-78	168	0.288	0.2556	0.3488	0.955
1978-79	179	0.084	0.0818	0.0872	0.956
1979-80	78	0.082	0.0806	0.0841	0.958
1980-81	44	0.061	0.0604	0.0633	0.951
1976-80	469	0.091	0.0869	0.0946	0.953
		APRIL TO MARCH			
1976-80	919	0.092	0.0900	0.0947	0.952

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF TOTAL NITROGEN (N) / DISSOLVED SILICA
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
1976					
1977 JUN JUL AUG OCT NOV DEC					
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC					
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC					
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC					
	919	0.092	0.0900	0.0947	0.952

DISTRIBUTIONAL ANALYSIS -OC

CUMULATIVE SAMPLE DISTRIBUTION OF .TN|SIO2 N= 919



PROB	QUANTILE	LEVEL	CONFIDENCE INTERVAL		SIZE
.1000	.59524 -1	.9500	.56757 -1	.61458 -1	.9522
.3000	.78125 -1	.9500	.76667 -1	.80769 -1	.9523
.5000	.91892 -1	.9500	.90000 -1	.94737 -1	.9523
.7000	.12857	.9500	.11406	.15000	.9523
.9000	.35556	.9500	.30000	.44737	.9522

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OKANAGAN RIVER NEAR OLIVER

Statistical Characteristics of Nutrient Loads

Period of Sampling June 1977 to December 1980.

RATIO OF TOTAL NITROGEN (N) TO DISSOLVED SILICA

Arithmetic mean loads and their statistical characteristics determined for

- Individual Months
- All Months
  - Graph of monthly load ranges
- Individual years
- Seasons
  - April to September
  - October to March
  - April to March
- All Years

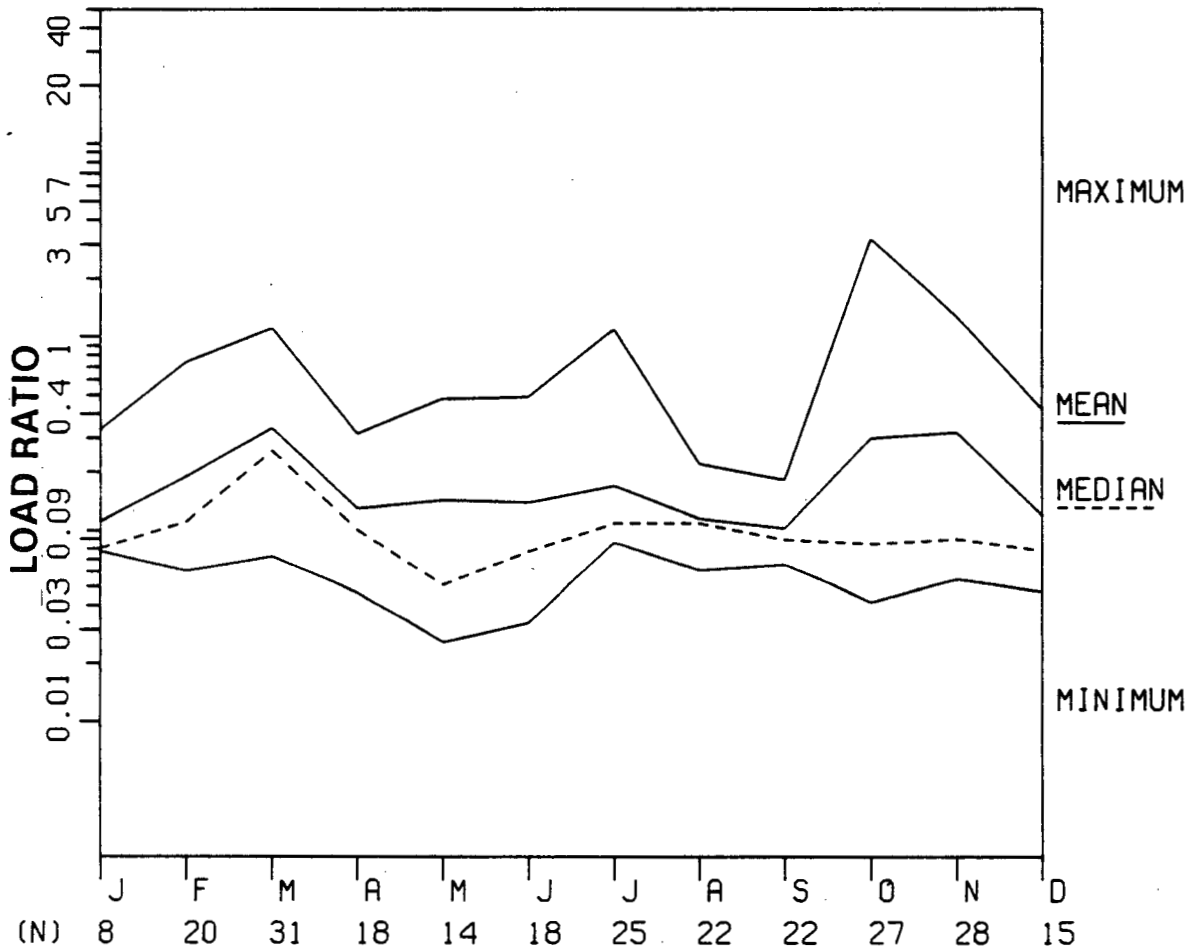
STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF TOTAL NITROGEN (N) / DISSOLVED SILICA
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD		NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
1977	JUNE	7	0.0493	0.090	0.072	0.0142	0.0054	± 0.0131
	JULY	11	0.0884	0.147	0.107	0.0180	0.0054	± 0.0121
	AUGUST	8	0.0634	0.146	0.108	0.0296	0.0105	± 0.0247
	OCTOBER	10	0.0734	3.213	0.541	1.0441	0.3302	± 0.7469
	NOVEMBER	10	0.2668	1.274	0.760	0.3440	0.1088	± 0.2461
	DECEMBER	5	0.0795	0.426	0.226	0.1359	0.0608	± 0.1687
1978	JANUARY	1	0.3330	0.333	0.333			
	FEBRUARY	10	0.1440	0.741	0.293	0.1981	0.0626	± 0.1417
	MARCH	18	0.2214	1.112	0.518	0.2964	0.0699	± 0.1474
	APRIL	9	0.0767	0.318	0.170	0.0786	0.0262	± 0.0604
	MAY	10	0.0466	0.477	0.189	0.1654	0.0523	± 0.1183
	JUNE	7	0.0772	0.487	0.259	0.1977	0.0747	± 0.1829
	JULY	9	0.1102	1.100	0.287	0.3114	0.1038	± 0.2394
	AUGUST	6	0.0957	0.221	0.146	0.0488	0.0199	± 0.0513
	SEPTEMBER	13	0.0830	0.183	0.119	0.0373	0.0103	± 0.0225
	OCTOBER	8	0.0768	0.890	0.253	0.2721	0.0962	± 0.2275
	NOVEMBER	11	0.0597	0.114	0.085	0.0175	0.0053	± 0.0118
	DECEMBER	6	0.0473	0.098	0.066	0.0232	0.0095	± 0.0243
1979	JANUARY	4	0.0770	0.081	0.079	0.0022	0.0011	± 0.0034
	FEBRUARY	7	0.0833	0.112	0.096	0.0117	0.0044	± 0.0109
	MARCH	9	0.0745	0.107	0.093	0.0105	0.0035	± 0.0080
	APRIL	6	0.0758	0.093	0.085	0.0067	0.0027	± 0.0070
	JULY	1	0.0964	0.096	0.096			
	AUGUST	4	0.1059	0.156	0.124	0.0224	0.0112	± 0.0356
	SEPTEMBER	4	0.0771	0.113	0.093	0.0171	0.0085	± 0.0272
	OCTOBER	5	0.0418	0.097	0.078	0.0210	0.0094	± 0.0261
	NOVEMBER	3	0.0744	0.089	0.083	0.0075	0.0043	± 0.0186
	DECEMBER	2	0.0746	0.078	0.076	0.0024	0.0017	± 0.0215
1980	JANUARY	3	0.0804	0.083	0.082	0.0011	0.0006	± 0.0028
	FEBRUARY	3	0.0607	0.092	0.073	0.0163	0.0094	± 0.0405
	MARCH	4	0.0727	0.093	0.086	0.0090	0.0045	± 0.0143
	APRIL	3	0.0469	0.141	0.097	0.0475	0.0274	± 0.1180
	MAY	4	0.0260	0.038	0.032	0.0049	0.0025	± 0.0079
	JUNE	4	0.0325	0.063	0.045	0.0143	0.0071	± 0.0227
	JULY	4	0.0869	0.109	0.099	0.0093	0.0047	± 0.0149
	AUGUST	4	0.0612	0.077	0.072	0.0075	0.0037	± 0.0119
	SEPTEMBER	5	0.0657	0.077	0.071	0.0046	0.0021	± 0.0057
	OCTOBER	4	0.0619	0.070	0.066	0.0035	0.0017	± 0.0056
	NOVEMBER	4	0.0549	0.063	0.059	0.0034	0.0017	± 0.0054
	DECEMBER	2	0.0599	0.060	0.060	0.0000	0.0000	± 0.0000

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF TOTAL NITROGEN (N) / DISSOLVED SILICA
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
- -78-79-80 JANUARY	8	0.0770	0.333	0.112	0.0894	0.0316	± 0.0748
- -78-79-80 FEBRUARY	20	0.0607	0.741	0.191	0.1723	0.0385	± 0.0807
- -78-79-80 MARCH	31	0.0727	1.112	0.339	0.3093	0.0556	± 0.1135
- -78-79-80 APRIL	18	0.0469	0.318	0.129	0.0703	0.0166	± 0.0350
- -78- -80 MAY	14	0.0260	0.477	0.144	0.1559	0.0417	± 0.0900
-77-78- -80 JUNE	18	0.0325	0.487	0.139	0.1541	0.0363	± 0.0766
-77-78-79-80 JULY	25	0.0869	1.100	0.170	0.2011	0.0402	± 0.0830
-77-78-79-80 AUGUST	22	0.0612	0.221	0.115	0.0400	0.0085	± 0.0177
- -78-79-80 SEPTEMBER	22	0.0657	0.183	0.103	0.0354	0.0075	± 0.0157
-77-78-79-80 OCTOBER	27	0.0418	3.213	0.299	0.6620	0.1274	± 0.2619
-77-78-79-80 NOVEMBER	28	0.0549	1.274	0.322	0.3875	0.0732	± 0.1503
-77-78-79-80 DECEMBER	15	0.0473	0.426	0.120	0.1073	0.0277	± 0.0594

RATIO OF TOTAL NITROGEN (N) / DISSOLVED SILICA
NEAR OLIVER
1976 - 1980



STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF TOTAL NITROGEN (N) / DISSOLVED SILICA
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
1976							
1977 JUN JUL AUG OCT NOV DEC	51	0.0493	3.213	0.327	0.5425	0.0760	± 0.1526
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	108	0.0466	1.112	0.242	0.2351	0.0226	± 0.0449
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC	45	0.0418	0.156	0.091	0.0173	0.0026	± 0.0052
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	44	0.0260	0.141	0.070	0.0229	0.0035	± 0.0070

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF TOTAL NITROGEN (N) / DISSOLVED SILICA
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
			APRIL TO SEPTEMBER				
1976							
1977	26	0.0493	0.147	0.098	0.0260	0.0051	± 0.0105
1978	54	0.0466	1.100	0.189	0.1701	0.0231	± 0.0464
1979	15	0.0758	0.156	0.098	0.0215	0.0056	± 0.0119
1980	24	0.0260	0.141	0.068	0.0291	0.0059	± 0.0123
1976-80	119	0.0260	1.100	0.133	0.1268	0.0116	± 0.0230
			OCTOBER TO MARCH				
1976-77							
1977-78	54	0.0734	3.213	0.495	0.5199	0.0707	± 0.1419
1978-79	45	0.0473	0.890	0.115	0.1274	0.0190	± 0.0383
1979-80	20	0.0418	0.097	0.080	0.0126	0.0028	± 0.0059
1980-81	10	0.0549	0.070	0.062	0.0047	0.0015	± 0.0033
1976-80	129	0.0418	3.213	0.264	0.3953	0.0348	± 0.0689
			APRIL TO MARCH				
1976-80	248	0.0260	3.213	0.202	0.3049	0.0194	± 0.0381

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF TOTAL NITROGEN (N) / DISSOLVED SILICA
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
1976							
1977 JUN JUL AUG OCT NOV DEC							
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC							
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC							
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC							
	248	0.0260	3.213	0.202	0.3049	0.0194	± 0.0381

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OKANAGAN RIVER NEAR OLIVER

Statistical Characteristics of Nutrient Loads

Period of Sampling June 1977 to December 1980.

RATIO OF TOTAL NITROGEN (N) TO DISSOLVED SILICA

Median loads and their statistical characteristics determined for

- Individual Months
- All Months
- Individual years
- Seasons
  - April to September
  - October to March
  - April to March
- All Years

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF TOTAL NITROGEN (N) / DISSOLVED SILICA
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
1977 JUNE	7	0.071	0.0493	0.0903	0.984
JULY	11	0.101	0.0976	0.1369	0.961
AUGUST	8	0.094	0.0837	0.1456	0.961
OCTOBER	10	0.085	0.0758	1.5355	0.979
NOVEMBER	10	0.738	0.3461	1.1590	0.979
DECEMBER	5	0.168		0.0795	0.969
1978 JANUARY	1	0.333			
FEBRUARY	10	0.210	0.1490	0.5655	0.979
MARCH	18	0.388	0.2602	0.7593	0.969
APRIL	9	0.148	0.1010	0.2516	0.961
MAY	10	0.071	0.0500	0.3920	0.979
JUNE	7	0.111	0.0772	0.4873	0.984
JULY	9	0.184	0.1259	0.3321	0.961
AUGUST	6	0.121	0.0957	0.2214	0.969
SEPTEMBER	13	0.097	0.0882	0.1629	0.978
OCTOBER	8	0.111	0.0828	0.8900	0.961
NOVEMBER	11	0.083	0.0700	0.1093	0.961
DECEMBER	6	0.054	0.0473	0.0981	0.969
1979 JANUARY	4	0.077			
FEBRUARY	7	0.089	0.0833	0.1116	0.984
MARCH	9	0.092	0.0830	0.1037	0.961
APRIL	6	0.083	0.0758	0.0931	0.969
JULY	1	0.096			
AUGUST	4	0.112			
SEPTEMBER	4	0.081			
OCTOBER	5	0.081		0.0418	0.969
NOVEMBER	3	0.084			
DECEMBER	2	0.075			
1980 JANUARY	3	0.082			
FEBRUARY	3	0.068			
MARCH	4	0.088			
APRIL	3	0.104			
MAY	4	0.032			
JUNE	4	0.034			
JULY	4	0.097			
AUGUST	4	0.074			
SEPTEMBER	5	0.072		0.0657	0.969
OCTOBER	4	0.066			
NOVEMBER	4	0.059			
DECEMBER	2	0.060			

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF TOTAL NITROGEN (N) / DISSOLVED SILICA
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
- -78-79-80 JANUARY	8	0.081	0.0773	0.3330	0.961
- -78-79-80 FEBRUARY	20	0.112	0.0893	0.2099	0.959
- -78-79-80 MARCH	31	0.258	0.0983	0.3880	0.971
- -78-79-80 APRIL	18	0.101	0.0834	0.1478	0.969
- -78- -80 MAY	14	0.051	0.0379	0.3206	0.965
-77-78- -80 JUNE	18	0.077	0.0630	0.1101	0.969
-77-78-79-80 JULY	25	0.109	0.0994	0.1468	0.957
-77-78-79-80 AUGUST	22	0.110	0.0870	0.1359	0.965
- -78-79-80 SEPTEMBER	22	0.090	0.0805	0.1128	0.965
-77-78-79-80 OCTOBER	27	0.085	0.0770	0.1101	0.964
-77-78-79-80 NOVEMBER	28	0.090	0.0756	0.3461	0.964
-77-78-79-80 DECEMBER	15	0.078	0.0556	0.1609	0.965

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF TOTAL NITROGEN (N) / DISSOLVED SILICA
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
1976					
1977 JUN JUL AUG OCT NOV DEC	51	0.101	0.0909	0.1369	0.951
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	108	0.149	0.1175	0.2012	0.957
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC	45	0.088	0.0830	0.0931	0.964
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	44	0.068	0.0619	0.0765	0.951

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF TOTAL NITROGEN (N) / DISSOLVED SILICA
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
		APRIL TO SEPTEMBER			
1976					
1977	26	0.095	0.0850	0.1029	0.971
1978	54	0.126	0.1102	0.1715	0.960
1979	15	0.093	0.0805	0.1117	0.965
1980	24	0.067	0.0480	0.0772	0.957
1976-80	119	0.099	0.0921	0.1089	0.957
		OCTOBER TO MARCH			
1976-77					
1977-78	54	0.291	0.2500	0.4412	0.960
1978-79	45	0.089	0.0828	0.0981	0.964
1979-80	20	0.081	0.0746	0.0882	0.959
1980-81	10	0.060	0.0586	0.0677	0.979
1976-80	129	0.093	0.0886	0.1101	0.957
		APRIL TO MARCH			
1976-80	248	0.097	0.0916	0.1039	0.951

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF TOTAL NITROGEN (N) / DISSOLVED SILICA
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
1976					
1977 JUN JUL AUG OCT NOV DEC					
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC					
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC					
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC					
	248	0.097	0.0916	0.1039	0.951

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OKANAGAN RIVER NEAR OLIVER

Statistical Characteristics of Nutrient Concentrations

Period of Sampling June 1977 to December 1980.

SILICA

Arithmetic mean concentrations and their statistical characteristics determined for:

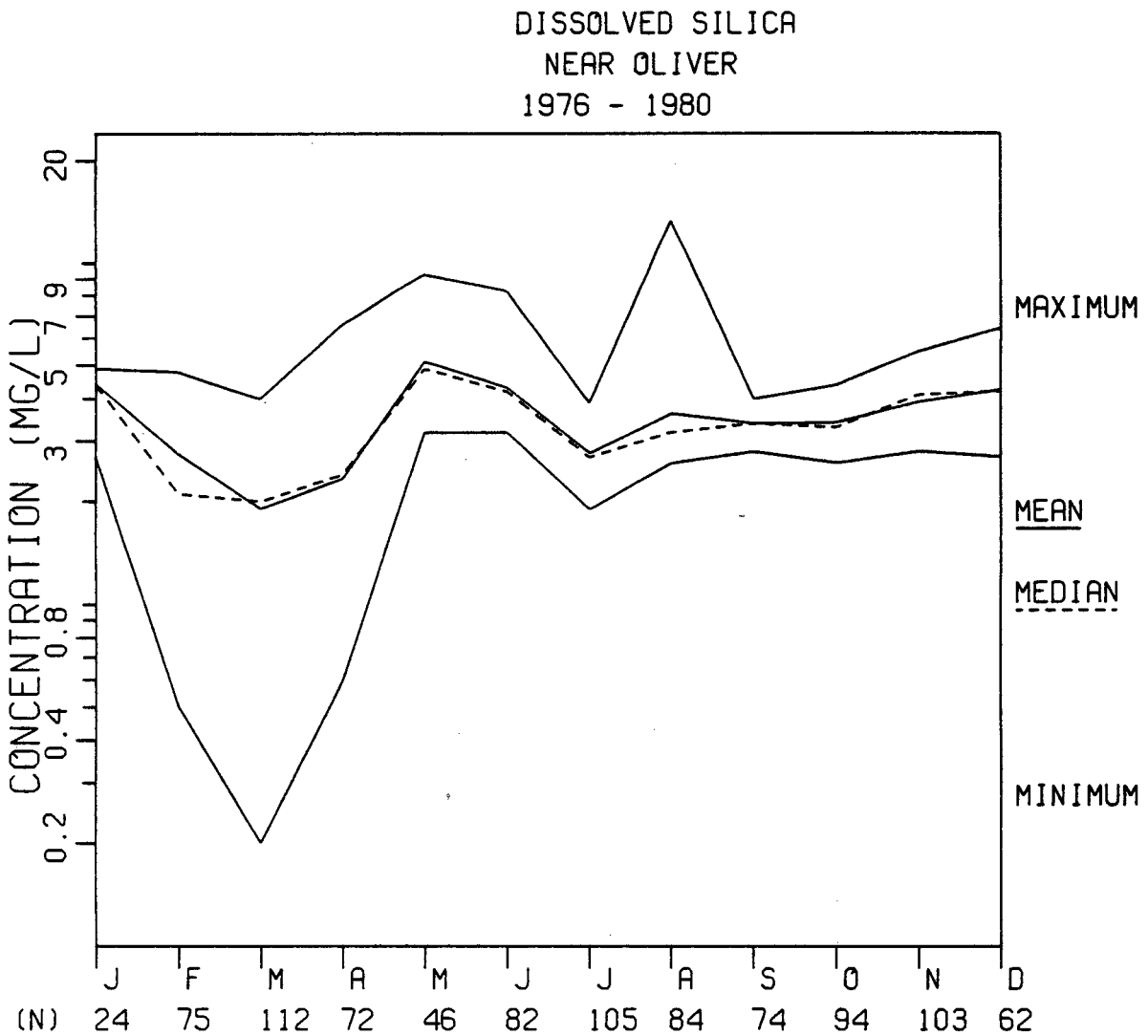
- Individual Months
- All Months
  - Graph of monthly concentration ranges
- Individual years
- Seasons
  - April to September
  - October to March
  - April to March
- All Years
  - Histogram of concentration distribution

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
DISSOLVED SILICA
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
				(MG/L)			
1977 JUNE	41	3.3000	4.300	4.042	0.3384	0.0528	± 0.1068
JULY	42	2.7000	3.800	2.993	0.2111	0.0326	± 0.0658
AUGUST	28	3.0000	13.400	4.611	3.1107	0.5879	± 1.2062
OCTOBER	26	3.2000	4.200	3.485	0.2361	0.0463	± 0.0954
NOVEMBER	27	4.0000	5.100	4.407	0.2999	0.0577	± 0.1186
DECEMBER	10	4.1000	6.400	4.720	0.6893	0.2180	± 0.4931
1978 JANUARY	1	2.7000	2.700	2.700			
FEBRUARY	44	0.5000	2.200	1.700	0.4784	0.0721	± 0.1454
MARCH	60	0.2000	3.300	0.803	0.7107	0.0917	± 0.1836
APRIL	36	0.6000	3.600	1.686	0.8686	0.1448	± 0.2939
MAY	30	3.2000	6.100	4.257	0.7916	0.1445	± 0.2956
JUNE	25	3.4000	4.300	3.800	0.2179	0.0436	± 0.0900
JULY	31	2.5000	3.900	2.813	0.3888	0.0698	± 0.1426
AUGUST	24	2.6000	3.800	3.125	0.4110	0.0839	± 0.1735
SEPTEMBER	38	3.0000	4.000	3.450	0.3203	0.0520	± 0.1053
OCTOBER	32	2.8000	3.500	3.159	0.1604	0.0283	± 0.0578
NOVEMBER	48	2.8000	5.500	3.413	0.4350	0.0628	± 0.1263
DECEMBER	32	2.7000	5.300	3.788	0.7065	0.1249	± 0.2547
1979 JANUARY	12	4.1000	4.900	4.508	0.2968	0.0857	± 0.1886
FEBRUARY	19	3.6000	4.800	4.237	0.2565	0.0588	± 0.1237
MARCH	36	2.4000	3.900	3.014	0.4492	0.0749	± 0.1520
APRIL	24	2.4000	3.200	2.617	0.2259	0.0461	± 0.0953
JULY	12	2.4000	3.200	2.733	0.2570	0.0742	± 0.1633
AUGUST	16	2.7000	3.300	3.006	0.2016	0.0504	± 0.1075
SEPTEMBER	16	3.0000	3.800	3.281	0.2428	0.0607	± 0.1293
OCTOBER	20	2.6000	4.400	3.505	0.6878	0.1538	± 0.3219
NOVEMBER	12	4.1000	4.600	4.342	0.1929	0.0557	± 0.1226
DECEMBER	8	4.2000	5.300	4.762	0.4104	0.1451	± 0.3431
1980 JANUARY	11	4.3000	4.700	4.491	0.1514	0.0456	± 0.1017
FEBRUARY	12	3.8000	4.700	4.300	0.3908	0.1128	± 0.2483
MARCH	16	3.2000	4.000	3.556	0.2607	0.0652	± 0.1389
APRIL	12	2.0000	6.600	3.767	1.8391	0.5309	± 1.1685
MAY	16	5.3000	9.300	6.806	1.4401	0.3600	± 0.7673
JUNE	16	3.2000	8.300	5.881	2.0041	0.5010	± 1.0678
JULY	20	1.9000	2.600	2.280	0.2262	0.0506	± 0.1059
AUGUST	16	3.0000	3.700	3.206	0.2720	0.0680	± 0.1449
SEPTEMBER	20	2.8000	3.800	3.385	0.3646	0.0815	± 0.1706
OCTOBER	16	3.4000	3.900	3.663	0.1708	0.0427	± 0.0910
NOVEMBER	16	4.0000	4.500	4.281	0.1721	0.0430	± 0.0918
DECEMBER	12	4.4000	4.800	4.692	0.1676	0.0484	± 0.1065

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
DISSOLVED SILICA
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
				(MG/L)			
- -78-79-80 JANUARY	24	2.7000	4.900	4.425	0.4326	0.0883	± 0.1827
- -78-79-80 FEBRUARY	75	0.5000	4.800	2.759	1.3358	0.1542	± 0.3074
- -78-79-80 MARCH	112	0.2000	4.000	1.907	1.3376	0.1264	± 0.2505
- -78-79-80 APRIL	72	0.6000	6.600	2.343	1.2244	0.1443	± 0.2878
- -78- -80 MAY	46	3.2000	9.300	5.144	1.6132	0.2379	± 0.4791
-77-78- -80 JUNE	82	3.2000	8.300	4.327	1.1910	0.1315	± 0.2617
-77-78-79-80 JULY	105	1.9000	3.900	2.774	0.3800	0.0371	± 0.0736
-77-78-79-80 AUGUST	84	2.6000	13.400	3.613	1.9295	0.2105	± 0.4187
- -78-79-80 SEPTEMBER	74	2.8000	4.000	3.396	0.3211	0.0373	± 0.0744
-77-78-79-80 OCTOBER	94	2.6000	4.400	3.408	0.4013	0.0414	± 0.0822
-77-78-79-80 NOVEMBER	103	2.8000	5.500	3.917	0.5865	0.0578	± 0.1146
-77-78-79-80 DECEMBER	62	2.7000	6.400	4.239	0.7545	0.0958	± 0.1916


DISSOLVED SILICA
NEAR OLIVER
1976 - 1980
CONCENTRATION (MG/L)
20
9
7
5
3
0.8
0.4
0.2
MAXIMUM
MEAN
MEDIAN
MINIMUM
J F M A M J J A S O N D
(N) 24 75 112 72 46 82 105 84 74 94 103 62

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
DISSOLVED SILICA
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
				(MG/L)			
1976							
1977 JUN JUL AUG OCT NOV DEC	174	2.7000	13.400	3.892	1.4088	0.1068	± 0.2108
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	401	0.2000	6.100	2.715	1.2425	0.0620	± 0.1220
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC	175	2.4000	5.300	3.426	0.7767	0.0587	± 0.1159
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	183	1.9000	9.300	4.121	1.5017	0.1110	± 0.2190

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
DISSOLVED SILICA
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
				(MG/L)			
			APRIL TO SEPTEMBER				
1976							
1977	111	2.7000	13.400	3.788	1.6944	0.1608	± 0.3187
1978	184	0.6000	6.100	3.134	1.0171	0.0750	± 0.1479
1979	68	2.4000	3.800	2.885	0.3487	0.0423	± 0.0844
1980	100	1.9000	9.300	4.128	1.9889	0.1989	± 0.3946
1976-80	463	0.6000	13.400	3.469	1.4737	0.0685	± 0.1346
			OCTOBER TO MARCH				
1976-77							
1977-78	168	0.2000	6.400	2.277	1.5724	0.1213	± 0.2395
1978-79	179	2.4000	5.500	3.515	0.6364	0.0476	± 0.0939
1979-80	79	2.6000	5.300	4.028	0.6332	0.0712	± 0.1418
1980-81	44	3.4000	4.800	4.168	0.4517	0.0681	± 0.1374
1976-80	470	0.2000	6.400	3.220	1.2906	0.0595	± 0.1170
			APRIL TO MARCH				
1976-80	933	0.2000	13.400	3.344	1.3894	0.0455	± 0.0893

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
DISSOLVED SILICA
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
				(MG/L)			
1976							
1977 JUN JUL AUG OCT NOV DEC							
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC							
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC							
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC							
	933	0.2000	13.400	3.344	1.3894	0.0455	± 0.0893

DISSOLVED SILICA

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OKANAGAN RIVER NEAR OLIVER

Statistical Characteristics of Nutrient Concentrations

Period of Sampling June 1977 to December 1980.

SILICA

Median concentrations and their statistical characteristics determined for

- Individual Months
- All Months
- Individual years
- Seasons
  - April to September
  - October to March
  - April to March
- All Years
  - Cumulative distribution of concentration data

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
DISSOLVED SILICA
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
		(MG/L)			
1977 JUNE	41	4.200	4.2000	4.2000	0.956
JULY	42	3.000	2.9000	3.1000	0.956
AUGUST	28	3.700	3.4000	3.7000	0.964
OCTOBER	26	3.400	3.3000	3.6000	0.971
NOVEMBER	27	4.400	4.2000	4.7000	0.964
DECEMBER	10	4.700	4.1000	5.0000	0.979
1978 JANUARY	1	2.700			
FEBRUARY	44	1.800	1.8000	1.9000	0.951
MARCH	60	0.700	0.3000	0.9000	0.960
APRIL	36	1.600	1.0000	2.0000	0.953
MAY	30	3.900	3.8000	4.7000	0.957
JUNE	25	3.800	3.6000	3.8000	0.957
JULY	31	2.700	2.6000	2.7000	0.971
AUGUST	24	3.100	2.7000	3.5000	0.957
SEPTEMBER	38	3.400	3.3000	3.6000	0.966
OCTOBER	32	3.200	3.1000	3.3000	0.965
NOVEMBER	48	3.300	3.3000	3.4000	0.956
DECEMBER	32	3.800	3.5000	3.9000	0.965
1979 JANUARY	12	4.300	4.2000	4.8000	0.961
FEBRUARY	19	4.300	4.2000	4.4000	0.959
MARCH	36	2.900	2.8000	3.3000	0.953
APRIL	24	2.600	2.4000	2.8000	0.957
JULY	12	2.600	2.5000	3.0000	0.961
AUGUST	16	3.000	2.9000	3.2000	0.951
SEPTEMBER	16	3.200	3.1000	3.5000	0.951
OCTOBER	20	3.200	3.1000	4.3000	0.959
NOVEMBER	12	4.300	4.2000	4.6000	0.961
DECEMBER	8	4.800	4.2000	5.3000	0.961
1980 JANUARY	11	4.400	4.4000	4.7000	0.961
FEBRUARY	12	4.400	3.8000	4.7000	0.961
MARCH	16	3.500	3.4000	3.9000	0.951
APRIL	12	3.100	2.0000	6.1000	0.961
MAY	16	6.000	5.9000	8.9000	0.951
JUNE	16	5.100	4.5000	7.7000	0.951
JULY	20	2.200	2.2000	2.5000	0.959
AUGUST	16	3.100	3.0000	3.6000	0.951
SEPTEMBER	20	3.500	3.1000	3.7000	0.959
OCTOBER	16	3.700	3.7000	3.8000	0.951
NOVEMBER	16	4.300	4.2000	4.5000	0.951
DECEMBER	12	4.800	4.5000	4.8000	0.961

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
DISSOLVED SILICA
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
		(MG/L)			
- -78-79-80 JANUARY	24	4.400	4.3000	4.7000	0.957
- -78-79-80 FEBRUARY	75	2.100	1.9000	3.8000	0.963
- -78-79-80 MARCH	112	2.000	1.1000	2.6000	0.953
- -78-79-80 APRIL	72	2.400	2.0000	2.5000	0.956
- -78- -80 MAY	46	4.900	4.0000	5.5000	0.960
-77-78- -80 JUNE	82	4.200	4.0000	4.2000	0.952
-77-78-79-80 JULY	105	2.700	2.7000	2.9000	0.959
-77-78-79-80 AUGUST	84	3.200	3.1000	3.4000	0.962
- -78-79-80 SEPTEMBER	74	3.400	3.3000	3.5000	0.953
-77-78-79-80 OCTOBER	94	3.300	3.3000	3.4000	0.951
-77-78-79-80 NOVEMBER	103	4.100	3.8000	4.2000	0.952
-77-78-79-80 DECEMBER	62	4.200	4.1000	4.7000	0.957

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
DISSOLVED SILICA
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
		(MG/L)			
1976					
1977 JUN JUL AUG OCT NOV DEC	174	3.700	3.5000	4.0000	0.951
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	401	3.100	3.0000	3.2000	0.954
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC	175	3.200	3.1000	3.4000	0.951
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	183	3.800	3.7000	4.0000	0.954

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
DISSOLVED SILICA
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

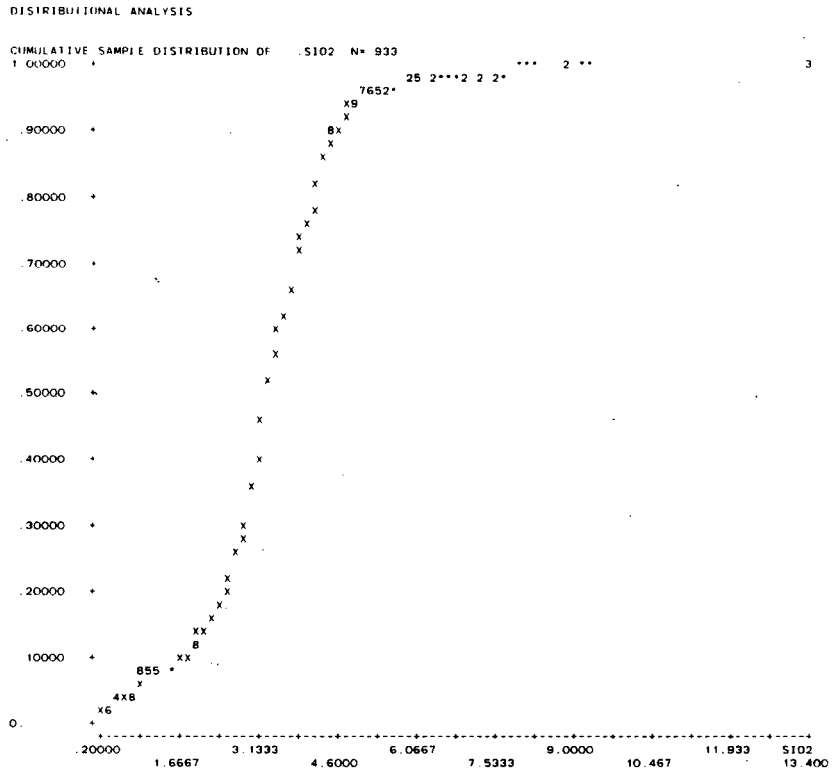
SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
		(MG/L)			
		APRIL TO SEPTEMBER			
1976					
1977	111	3.400	3.3000	3.7000	0.953
1978	184	3.400	3.1000	3.5000	0.954
1979	68	2.900	2.7000	3.0000	0.961
1980	100	3.200	3.1000	3.7000	0.954
1976-80	463	3.200	3.1000	3.3000	0.954
		OCTOBER TO MARCH			
1976-77					
1977-78	168	1.900	1.8000	2.1000	0.955
1978-79	179	3.300	3.3000	3.5000	0.956
1979-80	79	4.200	3.9000	4.3000	0.958
1980-81	44	4.200	3.9000	4.4000	0.951
1976-80	470	3.400	3.3000	3.5000	0.953
		APRIL TO MARCH			
1976-80	933	3.300	3.3000	3.4000	0.951

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
DISSOLVED SILICA
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
		(MG/L)			
1976					
1977 JUN JUL AUG OCT NOV DEC					
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC					
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC					
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC					
	933	3.300	3.3000	3.4000	0.951

DISTRIBUTIONAL ANALYSIS

CUMULATIVE SAMPLE DISTRIBUTION OF .SIO2 N= 933



PROB	QUANTILE	LEVEL	CONFIDENCE INTERVAL		SIZE
.1000	1.8000	.9500	1.3000	2.0000	.9508
.3000	2.9000	.9500	2.8000	3.0000	.9506
.5000	3.3000	.9500	3.3000	3.4000	.9506
.7000	3.8000	.9500	3.8000	3.9000	.9506
.9000	4.6000	.9500	4.4000	4.7000	.9508

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OKANAGAN RIVER NEAR OLIVER

Statistical Characteristics of Nutrient Loads

Period of Sampling June 1977 to December 1980.

SILICA

Arithmetic mean loads and their statistical characteristics determined for

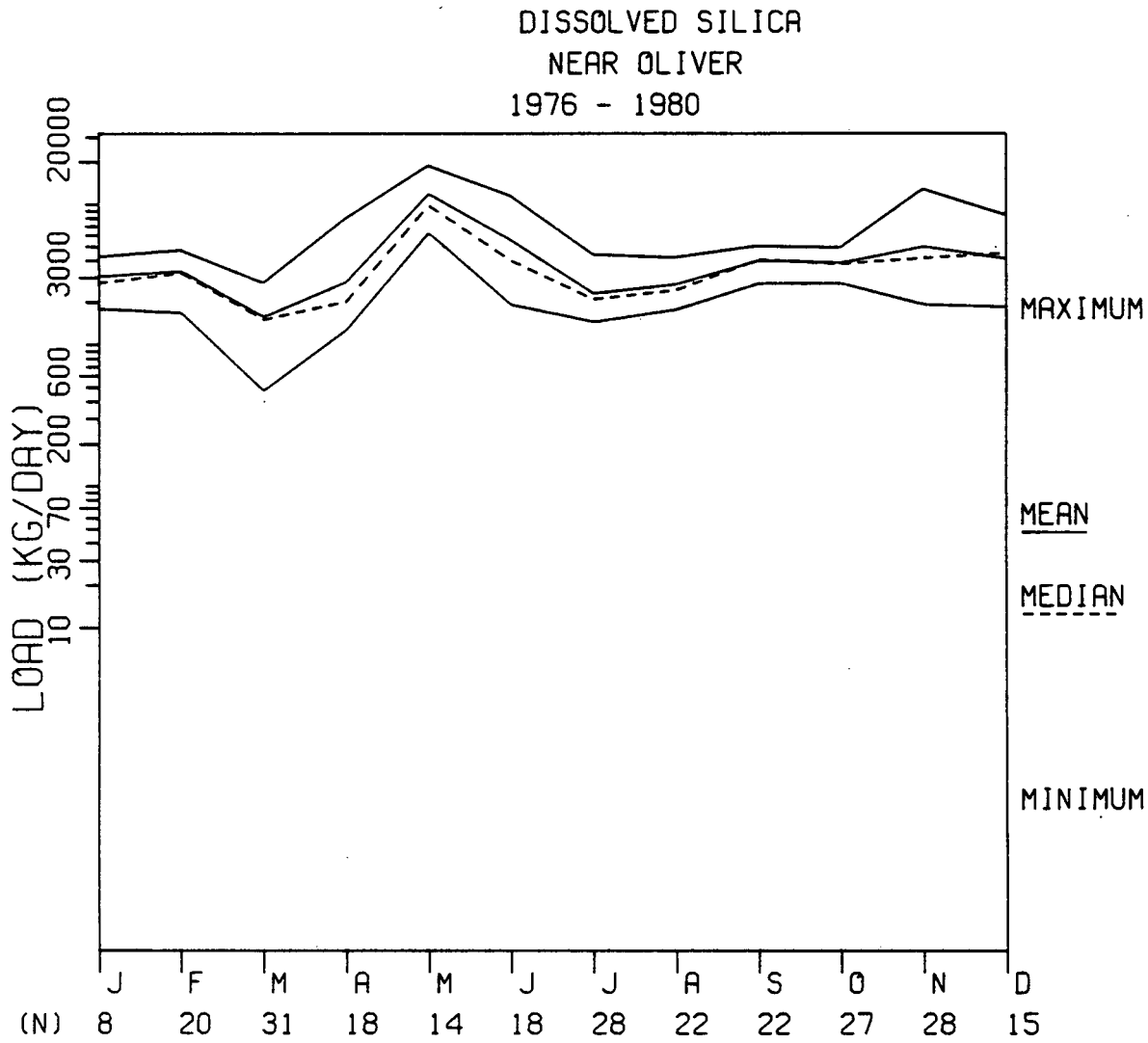
- Individual Months
- All Months
  - Graph of monthly load ranges
- Individual years
- Seasons
  - April to September
  - October to March
  - April to March
- All Years

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
DISSOLVED SILICA
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
				(KG/DAY)			
1977 JUNE	7	1930.0000	2740.000	2332.900	360.4500	136.2373	± 333.3499
JULY	11	1460.0000	1770.000	1612.700	118.4100	35.7020	± 79.5500
AUGUST	8	1780.0000	3470.000	2240.000	582.2100	205.8423	± 486.7000
OCTOBER	10	2720.0000	3350.000	3105.000	223.9700	70.8255	± 160.2000
NOVEMBER	10	1930.0000	3430.000	2359.000	487.4099	154.1326	± 348.7000
DECEMBER	5	1860.0000	2540.000	2220.000	245.6600	109.8625	± 305.0000
1978 JANUARY	1	2760.0000	2760.000	2760.000			
FEBRUARY	10	1740.0000	4750.000	3895.000	1122.8999	355.0920	± 803.3003
MARCH	18	472.0000	2100.000	1243.600	610.9600	144.0046	± 303.8049
APRIL	9	1590.0000	7930.000	3211.100	2054.0000	684.6665	± 1578.8499
MAY	10	6870.0000	18900.000	13386.000	4819.8984	1524.1858	± 3448.0000
JUNE	7	3470.0000	11600.000	7270.000	3089.3000	1167.6458	± 2857.0508
JULY	9	2200.0000	3630.000	2625.600	498.1699	166.0566	± 382.9500
AUGUST	6	2240.0000	3680.000	3011.700	619.1699	252.7751	± 649.8000
SEPTEMBER	13	3880.0000	5060.000	4242.301	316.2300	87.7064	± 191.0992
OCTOBER	8	3910.0000	4920.000	4486.301	373.4800	132.0451	± 312.2500
NOVEMBER	11	5130.0000	12900.000	8394.500	2205.1001	664.8625	± 1481.4492
DECEMBER	6	5310.0000	8360.000	6140.000	1137.6001	464.4231	± 1193.8984
1979 JANUARY	4	3630.0000	4270.000	3980.000	314.4299	157.2150	± 500.3003
FEBRUARY	7	2760.0000	3660.000	3135.700	333.7100	126.1305	± 308.5999
MARCH	9	1730.0000	2760.000	2258.900	350.8000	116.9333	± 269.6499
APRIL	6	1810.0000	2400.000	2010.000	228.3900	93.2398	± 239.7000
JULY	3	1500.0000	2120.000	1850.000	317.6499	183.3952	± 789.1001
AUGUST	4	2110.0000	2830.000	2467.500	365.0000	182.5000	± 580.8000
SEPTEMBER	4	2750.0000	3750.000	3095.000	456.3999	228.2000	± 726.2000
OCTOBER	5	3290.0000	3920.000	3580.000	261.1499	116.7898	± 324.3000
NOVEMBER	3	1930.0000	2140.000	2046.700	106.9300	61.7361	± 265.6499
DECEMBER	2	1890.0000	2090.000	1990.000	141.4200	99.9991	± 1270.6101
1980 JANUARY	3	1810.0000	2090.000	1990.000	156.2000	90.1821	± 388.0000
FEBRUARY	3	1690.0000	2060.000	1866.700	185.5600	107.1331	± 460.9500
MARCH	4	1300.0000	1760.000	1520.000	188.3300	94.1650	± 299.7000
APRIL	3	1280.0000	6700.000	3096.700	3120.6001	1801.6792	± 7752.1992
MAY	4	6270.0000	9820.000	8182.500	1699.7000	849.8499	± 2704.5508
JUNE	4	5720.0000	10300.000	8337.500	2282.5000	1141.2500	± 3631.7500
JULY	5	3350.0000	4430.000	3606.000	464.3601	207.6682	± 576.6008
AUGUST	4	2060.0000	4170.000	3300.000	1007.8999	503.9500	± 1603.6995
SEPTEMBER	5	3540.0000	4500.000	3918.000	371.2400	166.0236	± 461.0000
OCTOBER	4	4190.0000	4840.000	4447.500	290.7900	145.3950	± 462.6995
NOVEMBER	4	4150.0000	4920.000	4465.000	325.8301	162.9150	± 518.5000
DECEMBER	2	4460.0000	4510.000	4485.000	35.3550	24.9998	± 317.6992

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
DISSOLVED SILICA
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
				(KG/DAY)			
- -78-79-80 JANUARY	8	1810.0000	4270.000	3081.300	1017.8000	359.8464	± 850.9500
- -78-79-80 FEBRUARY	20	1690.0000	4750.000	3325.000	1075.2000	240.4220	± 503.2000
- -78-79-80 MARCH	31	472.0000	2760.000	1574.000	674.1599	121.0827	± 247.3000
- -78-79-80 APRIL	18	1280.0000	7930.000	2791.700	1863.2000	439.1604	± 926.5498
- -78- -80 MAY	14	6270.0000	18900.000	11899.000	4764.6016	1273.3933	± 2750.8496
-77-78- -80 JUNE	18	1930.0000	11600.000	5587.199	3411.8000	804.1689	± 1696.6492
-77-78-79-80 JULY	28	1460.0000	4430.000	2319.600	826.9600	156.2807	± 320.6499
-77-78-79-80 AUGUST	22	1780.0000	4170.000	2684.500	745.2500	158.8878	± 330.4500
- -78-79-80 SEPTEMBER	22	2750.0000	5060.000	3960.000	552.6599	117.8275	± 245.0000
-77-78-79-80 OCTOBER	27	2720.0000	4920.000	3801.100	692.5701	133.2852	± 274.0000
-77-78-79-80 NOVEMBER	28	1930.0000	12900.000	4997.500	3190.8999	603.0232	± 1237.3003
-77-78-79-80 DECEMBER	15	1860.0000	8360.000	4059.300	2045.0000	528.0166	± 1132.5002


DISSOLVED SILICA
NEAR OLIVER
1976 - 1980
LOAD (KG/DAY)
20000
3000
600
200
70
30
10
MAXIMUM
MEAN
MEDIAN
MINIMUM
J F M A M J J A S O N D
(N) 8 20 31 18 14 18 28 22 22 27 28 15

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
DISSOLVED SILICA
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
				(KG/DAY)			
1976							
1977 JUN JUL AUG OCT NOV DEC	51	1460.0000	3470.000	2308.400	598.3201	83.7816	± 168.2500
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	108	472.0000	18900.000	4996.898	3911.3000	376.3650	± 746.0996
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC	47	1500.0000	4270.000	2682.600	743.0400	108.3835	± 218.1500
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	45	1280.0000	10300.000	4188.000	2385.6001	355.6240	± 716.6995

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
DISSOLVED SILICA
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
				(KG/DAY)			
			APRIL TO SEPTEMBER				
1976							
1977	26	1460.0000	3470.000	1999.600	497.1399	97.4971	± 200.7999
1978	54	1590.0000	18900.000	5750.000	4607.0000	626.9331	± 1257.5000
1979	17	1500.0000	3750.000	2344.700	570.3999	138.3423	± 293.3000
1980	25	1280.0000	10300.000	5047.602	2671.2000	534.2400	± 1102.5996
1976-80	122	1280.0000	18900.000	4332.301	3678.7000	333.0537	± 659.3997
			OCTOBER TO MARCH				
1976-77							
1977-78	54	472.0000	4750.000	2404.400	1167.3000	158.8494	± 318.6499
1978-79	45	1730.0000	12900.000	4961.602	2570.5000	383.1873	± 772.2500
1979-80	20	1300.0000	3920.000	2283.500	807.7300	180.6139	± 378.0000
1980-81	10	4150.0000	4920.000	4462.000	252.8400	79.9550	± 180.8984
1976-80	129	472.0000	12900.000	3437.200	2119.8999	186.6468	± 369.3000
			APRIL TO MARCH				
1976-80	251	472.0000	18900.000	3872.300	3008.6001	189.9012	± 374.0503

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
DISSOLVED SILICA
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
				(KG/DAY)			
1976							
1977 JUN JUL AUG OCT NOV DEC							
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC							
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC							
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC							
	251	472.0000	18900.000	3872.300	3008.6001	189.9012	± 374.0503

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OKANAGAN RIVER NEAR OLIVER

Statistical Characteristics of Nutrient Loads

Period of Sampling June 1977 to December 1980.

SILICA

Median loads and their statistical characteristics determined for

- Individual Months
- All Months
- Individual years
- Seasons
  - April to September
  - October to March
  - April to March
- All Years

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
DISSOLVED SILICA
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
		(KG/DAY)			
1977 JUNE	7	2490.000	1930.0000	2740.0000	0.984
JULY	11	1620.000	1470.0000	1740.0000	0.961
AUGUST	8	1940.000	1800.0000	3470.0000	0.961
OCTOBER	10	3100.000	2830.0000	3350.0000	0.979
NOVEMBER	10	2110.000	1930.0000	2720.0000	0.979
DECEMBER	5	2250.000		1860.0000	0.969
1978 JANUARY	1	2760.000			
FEBRUARY	10	4110.000	1910.0000	4750.0000	0.979
MARCH	18	1230.000	594.0000	1920.0000	0.969
APRIL	9	2420.000	1880.0000	5110.0000	0.961
MAY	10	11000.000	7460.0000	18700.0000	0.979
JUNE	7	6740.000	3470.0000	11600.0000	0.984
JULY	9	2560.000	2210.0000	3200.0000	0.961
AUGUST	6	3060.000	2240.0000	3680.0000	0.969
SEPTEMBER	13	4200.000	3960.0000	4450.0000	0.978
OCTOBER	8	4500.000	3980.0000	4920.0000	0.961
NOVEMBER	11	8760.000	6570.0000	10400.0000	0.961
DECEMBER	6	5730.000	5310.0000	8360.0000	0.969
1979 JANUARY	4	3800.000			
FEBRUARY	7	3060.000	2760.0000	3660.0000	0.984
MARCH	9	2240.000	1800.0000	2670.0000	0.961
APRIL	6	1870.000	1810.0000	2400.0000	0.969
JULY	3	1930.000			
AUGUST	4	2200.000			
SEPTEMBER	4	2820.000			
OCTOBER	5	3570.000		3290.0000	0.969
NOVEMBER	3	2070.000			
DECEMBER	2	1890.000			
1980 JANUARY	3	2070.000			
FEBRUARY	3	1850.000			
MARCH	4	1500.000			
APRIL	3	1310.000			
MAY	4	7250.000			
JUNE	4	7130.000			
JULY	5	3380.000		3350.0000	0.969
AUGUST	4	2900.000			
SEPTEMBER	5	3820.000		3540.0000	0.969
OCTOBER	4	4270.000			
NOVEMBER	4	4360.000			
DECEMBER	2	4460.000			

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
DISSOLVED SILICA
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN (KG/DAY)	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
- -78-79-80 JANUARY	8	2760.000	2070.0000	4270.0000	0.961
- -78-79-80 FEBRUARY	20	3270.000	2760.0000	4110.0000	0.959
- -78-79-80 MARCH	31	1520.000	1270.0000	2060.0000	0.971
- -78-79-80 APRIL	18	2040.000	1820.0000	2910.0000	0.969
- -78- -80 MAY	14	9820.000	7460.0000	18000.0000	0.965
-77-78- -80 JUNE	18	4000.000	2570.0000	9070.0000	0.969
-77-78-79-80 JULY	28	2120.000	1710.0000	2630.0000	0.964
-77-78-79-80 AUGUST	22	2460.000	2110.0000	3360.0000	0.965
- -78-79-80 SEPTEMBER	22	4030.000	3820.0000	4240.0000	0.965
-77-78-79-80 OCTOBER	27	3750.000	3330.0000	4470.0000	0.964
-77-78-79-80 NOVEMBER	28	4150.000	2160.0000	6570.0000	0.964
-77-78-79-80 DECEMBER	15	4460.000	2160.0000	5730.0000	0.965

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
DISSOLVED SILICA
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
		(KG/DAY)			
1976					
1977 JUN JUL AUG OCT NOV DEC	51	2160.000	1940.0000	2560.0000	0.951
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	108	4100.000	3680.0000	4500.0000	0.957
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC	47	2670.000	2160.0000	2830.0000	0.960
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	45	4070.000	3370.0000	4430.0000	0.964

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
DISSOLVED SILICA
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
		(KG/DAY)			
		APRIL TO SEPTEMBER			
1976					
1977	26	1800.000	1710.0000	2090.0000	0.971
1978	54	4000.000	3460.0000	4450.0000	0.960
1979	17	2120.000	1930.0000	2750.0000	0.951
1980	25	4070.000	3500.0000	6270.0000	0.957
1976-80	122	3060.000	2660.0000	3630.0000	0.953
		OCTOBER TO MARCH			
1976-77					
1977-78	54	2160.000	1950.0000	2720.0000	0.960
1978-79	45	4470.000	3630.0000	5310.0000	0.964
1979-80	20	2060.000	1810.0000	2140.0000	0.959
1980-81	10	4430.000	4190.0000	4840.0000	0.979
1976-80	129	2930.000	2560.0000	3430.0000	0.957
		APRIL TO MARCH			
1976-80	251	3060.000	2720.0000	3370.0000	0.957

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
DISSOLVED SILICA
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
		(KG/DAY)			
1976					
1977 JUN JUL AUG OCT NOV DEC					
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC					
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC					
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC					
	251	3060.000	2720.0000	3370.0000	0.957

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OKANAGAN RIVER NEAR OLIVER

Statistical Characteristics of Nutrient Concentrations

Period of Sampling June 1977 to December 1980.

RATIO OF DISSOLVED SILICA TO TOTAL PHOSPHORUS (P)

Arithmetic mean concentrations and their statistical characteristics determined for:

- Individual Months
- All Months
  - Graph of monthly concentration ranges
- Individual years
- Seasons
  - April to September
  - October to March
  - April to March
- All Years
  - Histogram of concentration distribution

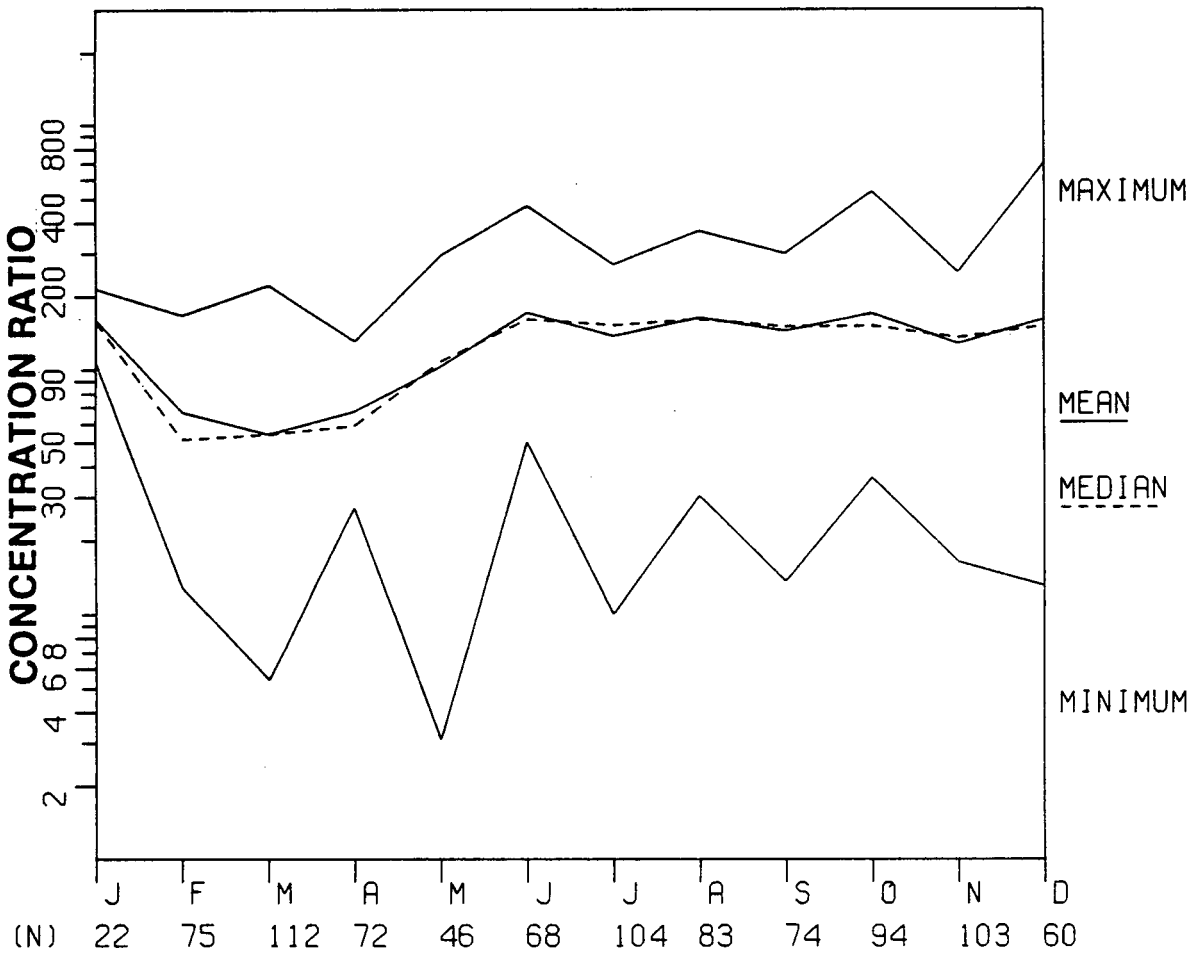
STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF DISSOLVED SILICA / TOTAL PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
1977 JUNE	28	50.7460	466.670	173.780	70.7740	13.3750	± 27.4450
JULY	42	107.6900	214.290	158.070	25.6370	3.9559	± 7.9900
AUGUST	28	137.0400	372.220	192.650	64.3470	12.1604	± 24.9500
OCTOBER	26	97.6740	261.540	177.710	47.4540	9.3065	± 19.1700
NOVEMBER	27	124.2400	209.520	160.130	28.7780	5.5383	± 11.3850
DECEMBER	10	178.2600	700.000	270.400	157.6600	49.8565	± 112.7800
1978 JANUARY	1	128.5700	128.570	128.570			
FEBRUARY	44	12.8210	76.923	42.013	13.5300	2.0397	± 4.1135
MARCH	60	5.4054	96.875	26.524	22.8380	2.9484	± 5.9000
APRIL	36	27.2730	131.250	69.706	31.0110	5.1685	± 10.4925
MAY	30	3.0833	234.620	72.108	71.9010	13.1273	± 26.8480
JUNE	25	58.9040	271.430	162.410	66.7760	13.3552	± 27.5600
JULY	31	55.3190	269.230	161.730	36.7310	6.5971	± 13.4750
AUGUST	24	134.7800	300.000	204.340	52.5330	10.7233	± 22.1850
SEPTEMBER	38	13.6000	300.000	161.400	68.7510	11.1529	± 22.6000
OCTOBER	32	36.2640	220.000	108.820	46.5820	8.2346	± 16.7960
NOVEMBER	48	16.4100	173.680	74.259	43.3900	6.2628	± 12.5995
DECEMBER	30	13.0160	165.220	99.951	50.5390	9.2271	± 18.8700
1979 JANUARY	10	107.6900	179.170	153.800	20.2990	6.4191	± 14.5200
FEBRUARY	19	29.4960	162.960	96.549	48.3140	11.0840	± 23.2890
MARCH	36	44.6430	100.000	65.997	11.2200	1.8700	± 3.7965
APRIL	24	44.4440	90.000	56.966	9.4907	1.9373	± 4.0075
JULY	11	10.0390	32.967	27.446	7.8497	2.3668	± 5.2735
AUGUST	16	30.6120	122.220	66.599	26.1880	6.5470	± 13.9545
SEPTEMBER	16	53.8460	103.330	82.373	13.4900	3.3725	± 7.1885
OCTOBER	20	113.0400	537.500	227.270	128.4200	28.7156	± 60.1049
NOVEMBER	12	135.4800	219.050	189.620	24.2460	6.9992	± 15.4050
DECEMBER	8	188.4600	222.730	198.620	11.6310	4.1122	± 9.7200
1980 JANUARY	11	139.3900	215.000	167.490	21.9900	6.6302	± 14.7750
FEBRUARY	12	77.1930	167.860	110.800	32.6180	9.4160	± 20.7265
MARCH	16	77.7780	222.220	132.250	45.8510	11.4627	± 24.4350
APRIL	12	57.1430	106.900	80.535	16.7220	4.8272	± 10.6245
MAY	16	101.0900	295.000	160.680	44.2600	11.0650	± 23.5850
JUNE	15	96.9700	365.000	185.750	77.3530	19.9725	± 42.8350
JULY	20	66.6670	200.000	117.020	40.1410	8.9758	± 18.7865
AUGUST	15	93.9390	238.460	147.290	44.9350	11.6022	± 24.8800
SEPTEMBER	20	71.7950	217.650	160.070	47.7280	10.6723	± 22.3350
OCTOBER	16	148.0000	422.220	214.700	74.1110	18.5277	± 39.4900
NOVEMBER	16	130.3000	250.000	191.310	33.4200	8.3550	± 17.8100
DECEMBER	12	104.3500	320.000	199.040	75.4400	21.7776	± 47.9350

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF DISSOLVED SILICA / TOTAL PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
- -78-79-80 JANUARY	22	107.6900	215.000	159.500	22.3910	4.7738	± 9.9300
- -78-79-80 FEBRUARY	75	12.8210	167.860	66.835	41.7000	4.8151	± 9.5945
- -78-79-80 MARCH	112	5.4054	222.220	54.316	44.0270	4.1602	± 8.2440
- -78-79-80 APRIL	72	27.2730	131.250	67.264	24.8030	2.9231	± 5.8285
- -78- -80 MAY	46	3.0833	295.000	102.910	76.1810	11.2323	± 22.6245
-77-78- -80 JUNE	68	50.7460	466.670	172.240	70.3130	8.5267	± 17.0200
-77-78-79-80 JULY	104	10.0390	269.230	137.450	51.7880	5.0782	± 10.0700
-77-78-79-80 AUGUST	83	30.6120	372.220	163.540	72.5690	7.9655	± 15.8450
- -78-79-80 SEPTEMBER	74	13.6000	300.000	143.950	63.9280	7.4315	± 14.8150
-77-78-79-80 OCTOBER	94	36.2640	537.500	171.100	89.0840	9.1883	± 18.2500
-77-78-79-80 NOVEMBER	103	16.4100	250.000	128.390	63.3560	6.2427	± 12.3800
-77-78-79-80 DECEMBER	60	13.0160	700.000	161.330	102.6400	13.2508	± 26.5150

RATIO OF DISSOLVED SILICA / TOTAL PHOSPHORUS (P)
NEAR OLIVER
1976 - 1980



STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF DISSOLVED SILICA / TOTAL PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
1976							
1977 JUN JUL AUG OCT NOV DEC	161	50.7460	700.000	177.310	65.7950	5.1854	± 10.2400
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	399	3.0833	300.000	96.236	71.1660	3.5628	± 7.0045
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC	172	10.0390	537.500	105.880	79.2790	6.0450	± 11.9325
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	181	57.1430	422.220	156.060	61.2070	4.5495	± 8.9750

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF DISSOLVED SILICA / TOTAL PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
			APRIL TO SEPTEMBER				
1976							
1977	98	50.7460	466.670	172.440	55.0680	5.5627	± 11.0400
1978	184	3.0833	300.000	134.700	74.8180	5.5157	± 10.8850
1979	67	10.0390	122.220	60.487	23.4430	2.8640	± 5.7185
1980	98	57.1430	365.000	143.620	57.1840	5.7765	± 11.4600
1976-80	447	3.0833	466.670	133.800	70.0420	3.3129	± 6.5100
			OCTOBER TO MARCH				
1976-77							
1977-78	168	5.4054	700.000	90.575	89.6750	6.9186	± 13.6570
1978-79	175	13.0160	220.000	90.249	46.0140	3.4783	± 6.8655
1979-80	79	77.1930	537.500	173.390	80.8290	9.0940	± 18.1050
1980-81	44	104.3500	422.220	201.920	62.1810	9.3741	± 18.9050
1976-80	466	5.4054	700.000	115.010	82.9110	3.8408	± 7.5450
			APRIL TO MARCH				
1976-80	913	3.0833	700.000	124.210	77.4110	2.5619	± 5.0300

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF DISSOLVED SILICA / TOTAL PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
1976							
1977 JUN JUL AUG OCT NOV DEC							
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC							
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC							
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC							
	913	3.0833	700.000	124.210	77.4110	2.5619	± 5.0300

DISSOLVED SILICA / TOTAL PHOSPHORUS (P)

n = 913

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OKANAGAN RIVER NEAR OLIVER

Statistical Characteristics of Nutrient Concentrations

Period of Sampling June 1977 to December 1980.

RATIO OF DISSOLVED SILICA TO TOTAL PHOSPHORUS (P)

Median concentrations and their statistical characteristics determined for

- Individual Months
- All Months
- Individual years
- Seasons
  - April to September
  - October to March
  - April to March
- All Years
  - Cumulative distribution of concentration data

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF DISSOLVED SILICA / TOTAL PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
1977 JUNE	28	159.260	150.0000	175.0000	0.964
JULY	42	157.890	147.3700	163.1600	0.956
AUGUST	28	168.180	160.8700	183.3300	0.964
OCTOBER	26	181.820	141.6700	200.0000	0.971
NOVEMBER	27	154.840	141.3800	180.7700	0.964
DECEMBER	10	204.350	178.2600	294.1201	0.979
1978 JANUARY	1	128.570			
FEBRUARY	44	43.902	40.0000	48.6490	0.951
MARCH	60	19.231	11.5380	25.0000	0.960
APRIL	36	60.345	47.6190	90.9090	0.953
MAY	30	53.012	8.0952	93.0230	0.957
JUNE	25	171.430	118.7500	215.7900	0.957
JULY	31	166.670	152.9400	173.3300	0.971
AUGUST	24	194.440	177.7800	245.4500	0.957
SEPTEMBER	38	166.670	136.0000	187.5000	0.966
OCTOBER	32	97.059	96.6670	112.9000	0.965
NOVEMBER	48	60.714	43.0770	94.1180	0.956
DECEMBER	30	111.540	67.3080	139.1300	0.957
1979 JANUARY	10	155.560	141.1800	175.0000	0.979
FEBRUARY	19	75.926	53.0120	138.7100	0.959
MARCH	36	65.854	61.7020	71.7390	0.953
APRIL	24	55.814	52.1740	58.3330	0.957
JULY	11	31.250	20.6110	32.5840	0.961
AUGUST	16	61.364	51.6670	84.2110	0.951
SEPTEMBER	16	83.333	80.0000	96.7740	0.951
OCTOBER	20	169.570	140.9100	238.4600	0.959
NOVEMBER	12	186.960	176.9200	214.2900	0.961
DECEMBER	8	191.670	190.9100	222.7300	0.961
1980 JANUARY	11	164.290	153.3300	191.3000	0.961
FEBRUARY	12	92.683	83.0190	142.4200	0.961
MARCH	16	106.670	105.8800	185.7100	0.951
APRIL	12	79.412	62.2640	91.1760	0.961
MAY	16	157.500	146.1500	172.5000	0.951
JUNE	15	151.520	121.6200	240.6300	0.965
JULY	20	100.000	87.5000	146.6700	0.959
AUGUST	15	144.000	96.7740	177.7800	0.965
SEPTEMBER	20	168.180	140.0000	194.7400	0.959
OCTOBER	16	176.190	156.0000	261.5400	0.951
NOVEMBER	16	187.500	165.3800	222.2200	0.951
DECEMBER	12	165.520	140.6300	300.0000	0.961

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF DISSOLVED SILICA / TOTAL PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
- -78-79-80 JANUARY	22	157.140	151.8500	167.8600	0.965
- -78-79-80 FEBRUARY	75	51.807	47.6190	55.2630	0.963
- -78-79-80 MARCH	112	54.545	36.3640	62.2220	0.953
- -78-79-80 APRIL	72	58.824	55.8140	67.3080	0.956
- -78- -80 MAY	46	108.160	58.9740	148.5700	0.960
-77-78- -80 JUNE	68	161.540	148.4800	178.9500	0.961
-77-78-79-80 JULY	104	152.630	142.1100	157.8900	0.961
-77-78-79-80 AUGUST	83	161.900	147.6200	176.4700	0.952
- -78-79-80 SEPTEMBER	74	150.000	106.2500	172.2200	0.953
-77-78-79-80 OCTOBER	94	152.000	140.0000	168.1800	0.951
-77-78-79-80 NOVEMBER	103	135.480	124.2400	154.8400	0.952
-77-78-79-80 DECEMBER	60	152.000	139.1300	182.6100	0.960

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF DISSOLVED SILICA / TOTAL PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
1976					
1977 JUN JUL AUG OCT NOV DEC	161	163.330	160.0000	172.2200	0.951
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	399	81.818	67.3080	96.7740	0.955
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC	172	73.171	66.6670	84.2110	0.952
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	181	154.170	146.1500	163.1600	0.955

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF DISSOLVED SILICA / TOTAL PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

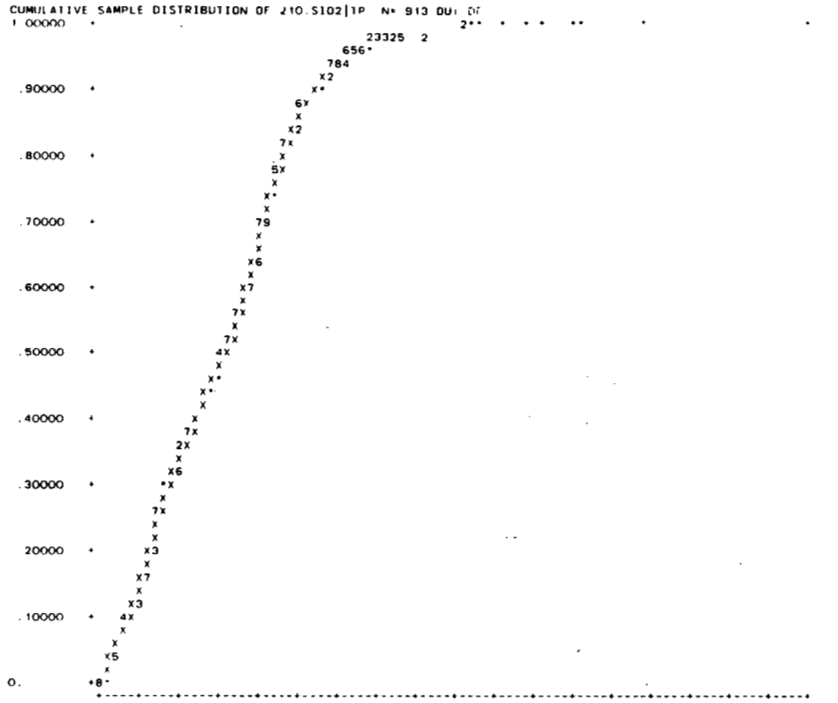
SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
APRIL TO SEPTEMBER					
1976					
1977	98	160.870	157.8900	168.1800	0.956
1978	184	136.000	125.0000	152.9400	0.954
1979	67	57.143	53.8460	63.2650	0.950
1980	98	140.000	121.6200	157.1400	0.956
1976-80	447	137.840	131.0300	147.3700	0.953
OCTOBER TO MARCH					
1976-77					
1977-78	168	52.381	45.4550	69.5650	0.955
1978-79	175	76.744	70.2130	96.6670	0.951
1979-80	79	165.380	142.4200	185.7100	0.958
1980-81	44	184.620	165.3800	217.6500	0.951
1976-80	466	106.250	96.6670	122.2200	0.954
APRIL TO MARCH					
1976-80	913	125.000	115.1500	133.3300	0.953

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF DISSOLVED SILICA / TOTAL PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
1976					
1977 JUN JUL AUG OCT NOV DEC					
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC					
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC					
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC					
	913	125.000	115.1500	133.3300	0.953

DISTRIBUTIONAL ANALYSIS EAN-JUAN-MIN

CUMULATIVE SAMPLE DISTRIBUTION OF 210.SIO2|TP N= 913 DUI DF



PROB	QUANTILE	LEVEL	CONFIDENCE INTERVAL		SIZE
.1000	31.250	.9500	27.273	36.264	.9532
.3000	70.588	.9500	65.079	78.571	.9531
.5000	125.00	.9500	115.15	133.33	.9530
.7000	162.50	.9500	157.50	166.67	.9531
.9000	214.29	.9500	205.56	222.22	.9532

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OKANAGAN RIVER NEAR OLIVER

Statistical Characteristics of Nutrient Loads

Period of Sampling June 1977 to December 1980.

RATIO OF DISSOLVED SILICA TO TOTAL PHOSPHORUS (P)

Arithmetic mean loads and their statistical characteristics determined for

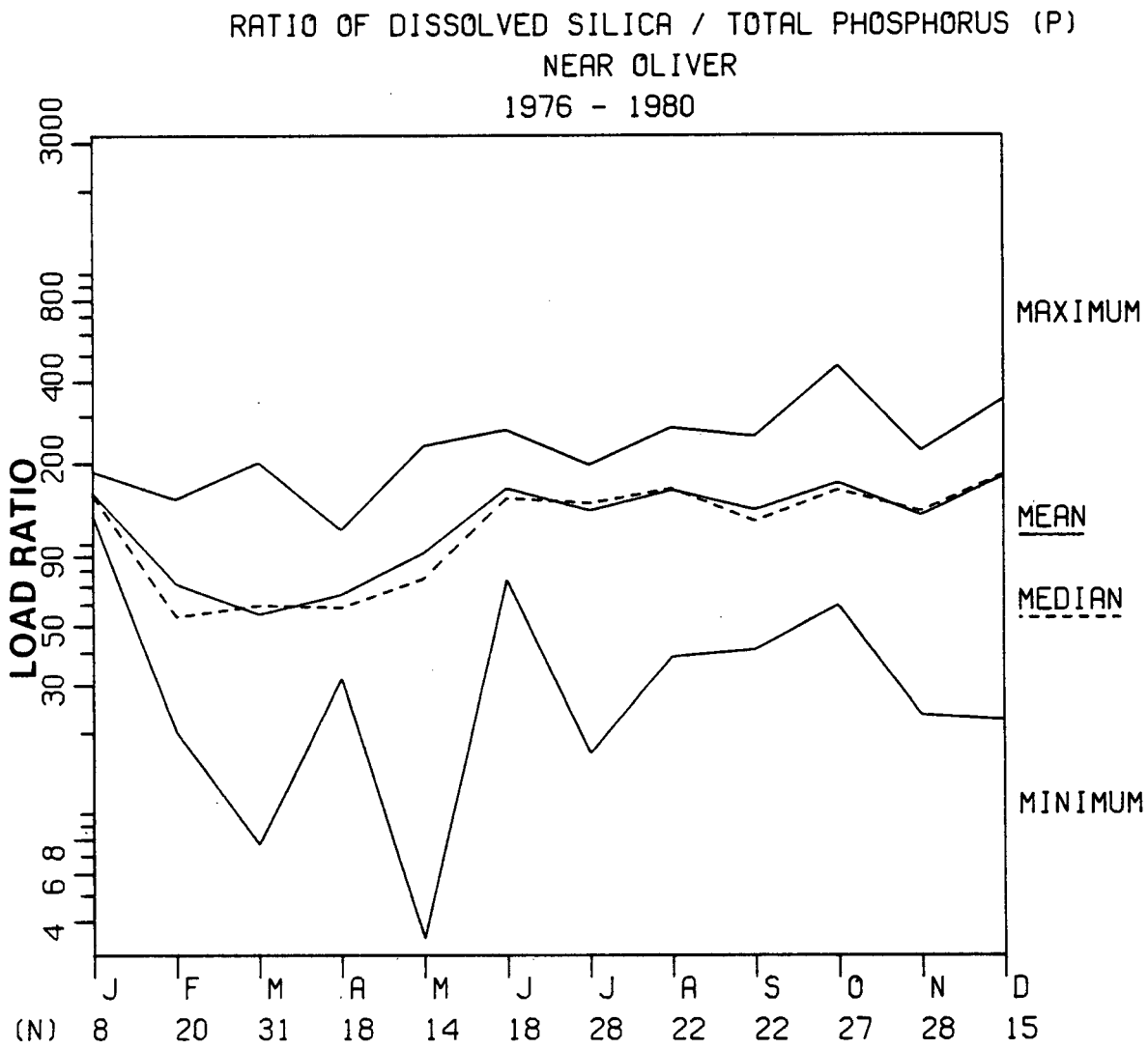
- Individual Months
- All Months
  - Graph of monthly load ranges
- Individual years
- Seasons
  - April to September
  - October to March
  - April to March
- All Years

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF DISSOLVED SILICA / TOTAL PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
1977 JUNE	7	110.6100	219.200	161.040	38.8960	14.7013	± 35.9700
JULY	11	130.0900	196.390	156.000	21.8380	6.5844	± 14.6700
AUGUST	8	160.3300	213.690	179.380	20.8500	7.3716	± 17.4300
OCTOBER	10	114.3900	256.640	184.440	39.4700	12.4815	± 28.2350
NOVEMBER	10	125.1800	207.300	153.940	28.0000	8.8544	± 20.0300
DECEMBER	5	180.5800	342.810	250.130	62.9850	28.1677	± 78.2050
1978 JANUARY	1	128.9700	128.970	128.970			
FEBRUARY	10	20.1860	62.275	42.301	14.1960	4.4892	± 10.1555
MARCH	18	7.6849	76.296	33.382	24.2980	5.7271	± 12.0830
APRIL	9	31.8640	112.740	67.045	26.6760	8.8920	± 20.5050
MAY	10	3.4566	231.310	67.024	75.8840	23.9966	± 54.2850
JUNE	7	73.8850	244.370	147.920	60.0600	22.7005	± 55.5480
JULY	9	111.1100	191.620	151.550	27.5300	9.1767	± 21.1600
AUGUST	6	143.5900	271.520	202.260	51.6160	21.0721	± 54.1700
SEPTEMBER	13	40.9230	250.570	141.280	68.3240	18.9497	± 41.2900
OCTOBER	8	59.6820	146.990	100.760	35.4770	12.5430	± 29.6600
NOVEMBER	11	23.2360	132.260	65.307	37.7880	11.3935	± 25.3860
DECEMBER	6	22.2960	150.850	98.293	57.2310	23.3645	± 60.0585
1979 JANUARY	4	126.9200	173.580	152.150	19.2220	9.6110	± 30.5850
FEBRUARY	7	45.4260	144.090	97.274	38.4820	14.5448	± 35.5880
MARCH	9	50.5850	77.966	65.216	7.9848	2.6616	± 6.1375
APRIL	6	51.2560	62.353	56.048	3.7840	1.5448	± 3.9710
JULY	3	16.7600	32.492	26.949	8.8352	5.1010	± 21.9482
AUGUST	4	38.4340	78.292	62.611	18.7250	9.3625	± 29.7960
SEPTEMBER	4	62.9190	93.857	81.998	13.5790	6.7895	± 21.6040
OCTOBER	5	135.8700	457.410	222.270	133.9200	59.8908	± 166.2860
NOVEMBER	3	164.9600	200.970	188.640	20.5180	11.8461	± 50.9700
DECEMBER	2	193.8500	202.910	198.380	6.4110	4.5333	± 57.6000
1980 JANUARY	3	148.9200	186.600	163.830	20.0300	11.5643	± 49.7600
FEBRUARY	3	82.2220	147.140	109.590	33.6360	19.4197	± 83.5575
MARCH	4	93.7500	200.680	130.380	48.0200	24.0100	± 76.4125
APRIL	3	65.5000	95.522	78.910	15.2650	8.8133	± 37.9210
MAY	4	124.1500	185.420	155.820	29.3620	14.6810	± 46.7200
JUNE	4	109.3700	265.060	184.260	72.6390	36.3195	± 115.5875
JULY	5	77.5460	179.490	114.070	39.0440	17.4610	± 48.4805
AUGUST	4	94.7710	197.570	147.020	42.4520	21.2260	± 67.5505
SEPTEMBER	5	79.9600	206.700	157.620	47.0590	21.0454	± 58.4320
OCTOBER	4	154.8300	251.180	202.470	39.8210	19.9105	± 63.3600
NOVEMBER	4	156.6900	221.500	189.470	30.9960	15.4980	± 49.3200
DECEMBER	2	153.9200	282.280	218.100	90.7600	64.1770	± 815.4199

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF DISSOLVED SILICA / TOTAL PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
- -78-79-80 JANUARY	8	126.9200	186.600	153.630	20.1420	7.1213	± 16.8400
- -78-79-80 FEBRUARY	20	20.1860	147.140	71.636	40.0590	8.9575	± 18.7485
- -78-79-80 MARCH	31	7.6849	200.680	55.140	40.6370	7.2986	± 14.9055
- -78-79-80 APRIL	18	31.8640	112.740	65.357	20.7610	4.8934	± 10.3240
- -78- -80 MAY	14	3.4566	231.310	92.395	76.9320	20.5609	± 44.4170
-77-78- -80 JUNE	18	73.8850	265.060	161.100	54.1850	12.7715	± 26.9450
-77-78-79-80 JULY	28	16.7600	196.390	133.250	47.7390	9.0218	± 18.5150
-77-78-79-80 AUGUST	22	38.4340	271.520	158.500	59.8030	12.7500	± 26.5150
- -78-79-80 SEPTEMBER	22	40.9230	250.570	134.210	61.6140	13.1361	± 27.3150
-77-78-79-80 OCTOBER	27	59.6820	457.410	169.320	77.8640	14.9849	± 30.8000
-77-78-79-80 NOVEMBER	28	23.2360	221.500	127.910	61.2120	11.5680	± 23.7350
-77-78-79-80 DECEMBER	15	22.2960	342.810	178.220	88.1150	22.7512	± 48.7950


RATIO OF DISSOLVED SILICA / TOTAL PHOSPHORUS (P)
NEAR OLIVER
1976 - 1980
LOAD RATIO
3000
800
400
200
90
50
30
8
6
4
MAXIMUM
MEAN
MEDIAN
MINIMUM
J F M A M J J A S O N D
(N) 8 20 31 18 14 18 28 22 22 27 28 15

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF DISSOLVED SILICA / TOTAL PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
1976							
1977 JUN JUL AUG OCT NOV DEC	51	110.6100	342.810	174.760	43.0970	6.0348	± 12.1200
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	108	3.4566	271.520	92.502	66.4600	6.3951	± 12.6775
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC	47	16.7600	457.410	105.240	74.8420	10.9168	± 21.9745
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	45	65.5000	282.280	153.100	53.2960	7.9449	± 16.0150

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF DISSOLVED SILICA / TOTAL PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
			APRIL TO SEPTEMBER				
1976							
1977	26	110.6100	219.200	164.550	27.9560	5.4826	± 11.2900
1978	54	3.4566	271.520	124.500	71.0660	9.6709	± 19.3950
1979	17	16.7600	93.857	58.563	21.1120	5.1204	± 10.8550
1980	25	65.5000	265.060	141.740	51.7660	10.3532	± 21.3700
1976-80	122	3.4566	271.520	127.380	63.0290	5.7064	± 11.3000
			OCTOBER TO MARCH				
1976-77							
1977-78	54	7.6849	342.810	107.170	83.9040	11.4179	± 22.9000
1978-79	45	22.2960	173.580	88.681	42.4490	6.3279	± 12.7510
1979-80	20	82.2220	457.410	170.790	78.2200	17.4905	± 36.6100
1980-81	10	153.9200	282.280	200.400	43.4590	13.7429	± 31.0900
1976-80	129	7.6849	457.410	117.810	76.7650	6.7588	± 13.3700
			APRIL TO MARCH				
1976-80	251	3.4566	457.410	122.460	70.4470	4.4466	± 8.7550

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF DISSOLVED SILICA / TOTAL PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
1976							
1977 JUN JUL AUG OCT NOV DEC							
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC							
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC							
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC							
	251	3.4566	457.410	122.460	70.4470	4.4466	± 8.7550

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OKANAGAN RIVER NEAR OLIVER

Statistical Characteristics of Nutrient Loads

Period of Sampling June 1977 to December 1980.

RATIO OF DISSOLVED SILICA TO TOTAL PHOSPHORUS (P)

Median loads and their statistical characteristics determined for

- Individual Months
- All Months
- Individual years
- Seasons
  - April to September
  - October to March
  - April to March
- All Years

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF DISSOLVED SILICA / TOTAL PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD		NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
1977	JUNE	7	163.690	110.6100	219.2000	0.984
	JULY	11	152.380	140.1600	194.1300	0.961
	AUGUST	8	172.030	160.6300	213.6900	0.961
	OCTOBER	10	191.430	149.3000	217.6900	0.979
	NOVEMBER	10	143.820	126.3500	191.0900	0.979
	DECEMBER	5	258.320		180.5800	0.969
1978	JANUARY	1	128.970			
	FEBRUARY	10	41.524	22.5770	54.1000	0.979
	MARCH	18	25.866	9.0925	54.9800	0.969
	APRIL	9	70.405	40.8700	98.9800	0.961
	MAY	10	19.266	7.5221	152.8700	0.979
	JUNE	7	134.230	73.8850	244.3700	0.984
	JULY	9	163.970	111.6200	173.6800	0.961
	AUGUST	6	190.670	143.5900	271.5200	0.969
	SEPTEMBER	13	135.840	64.9640	207.9200	0.978
	OCTOBER	8	99.138	65.1600	146.9900	0.961
	NOVEMBER	11	53.061	35.6490	121.5600	0.961
	DECEMBER	6	70.431	22.2960	150.8500	0.969
1979	JANUARY	4	152.350			
	FEBRUARY	7	109.520	45.4260	144.0900	0.984
	MARCH	9	65.559	59.5360	74.1070	0.961
	APRIL	6	55.352	51.2560	62.3530	0.969
	JULY	3	31.595			
	AUGUST	4	57.233			
	SEPTEMBER	4	82.258			
	OCTOBER	5	168.720		135.8700	0.969
	NOVEMBER	3	200.000			
	DECEMBER	2	193.850			
1980	JANUARY	3	155.970			
	FEBRUARY	3	99.412			
	MARCH	4	107.800			
	APRIL	3	75.706			
	MAY	4	138.090			
	JUNE	4	138.440			
	JULY	5	106.960		77.5460	0.969
	AUGUST	4	140.140			
	SEPTEMBER	5	162.550		79.9600	0.969
	OCTOBER	4	194.380			
	NOVEMBER	4	170.080			
	DECEMBER	2	153.920			

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF DISSOLVED SILICA / TOTAL PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
- -78-79-80 JANUARY	8	152.350	128.9700	186.6000	0.961
- -78-79-80 FEBRUARY	20	54.100	45.4260	99.4120	0.959
- -78-79-80 MARCH	31	59.536	26.5120	66.0890	0.971
- -78-79-80 APRIL	18	58.601	53.7360	74.1120	0.969
- -78- -80 MAY	14	74.815	12.5000	175.6300	0.965
-77-78- -80 JUNE	18	147.330	110.6100	188.8000	0.969
-77-78-79-80 JULY	28	142.160	113.0900	163.9700	0.964
-77-78-79-80 AUGUST	22	160.630	143.5900	196.5900	0.965
- -78-79-80 SEPTEMBER	22	121.490	88.9590	188.5700	0.965
-77-78-79-80 OCTOBER	27	158.420	143.6800	197.1000	0.964
-77-78-79-80 NOVEMBER	28	132.260	98.3100	163.8600	0.964
-77-78-79-80 DECEMBER	15	180.580	144.1800	258.3201	0.965

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF DISSOLVED SILICA / TOTAL PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
1976					
1977 JUN JUL AUG OCT NOV DEC	51	164.420	157.2600	180.5800	0.951
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	108	70.470	59.6820	99.7930	0.957
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC	47	76.486	62.9190	119.4100	0.960
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	45	154.830	124.1500	175.6300	0.964

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF DISSOLVED SILICA / TOTAL PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
APRIL TO SEPTEMBER					
1976					
1977	26	160.630	150.0000	179.7300	0.971
1978	54	121.300	98.9800	152.8700	0.960
1979	17	57.233	51.2560	76.4860	0.951
1980	25	138.440	106.9600	175.6300	0.957
1976-80	122	134.230	111.1100	150.3600	0.953
OCTOBER TO MARCH					
1976-77					
1977-78	54	70.470	53.0010	143.8200	0.960
1978-79	45	74.107	63.1580	109.5200	0.964
1979-80	20	155.970	135.8700	200.0000	0.959
1980-81	10	194.380	154.8300	251.1800	0.979
1976-80	129	119.410	82.2220	143.6800	0.957
APRIL TO MARCH					
1976-80	251	125.510	109.3700	140.1400	0.957

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF DISSOLVED SILICA / TOTAL PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
1976					
1977 JUN JUL AUG OCT NOV DEC					
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC					
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC					
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC					
	251	125.510	109.3700	140.1400	0.957

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OKANAGAN RIVER NEAR OLIVER

Statistical Characteristics of Nutrient Concentrations

Period of Sampling June 1977 to December 1980.

RATIO OF DISSOLVED SILICA TO TOTAL DISSOLVED PHOSPHORUS (P)

Arithmetic mean concentrations and their statistical characteristics determined for:

- Individual Months
- All Months
  - Graph of monthly concentration ranges
- Individual years
- Seasons
  - April to September
  - October to March
  - April to March
- All Years
  - Histogram of concentration distribution

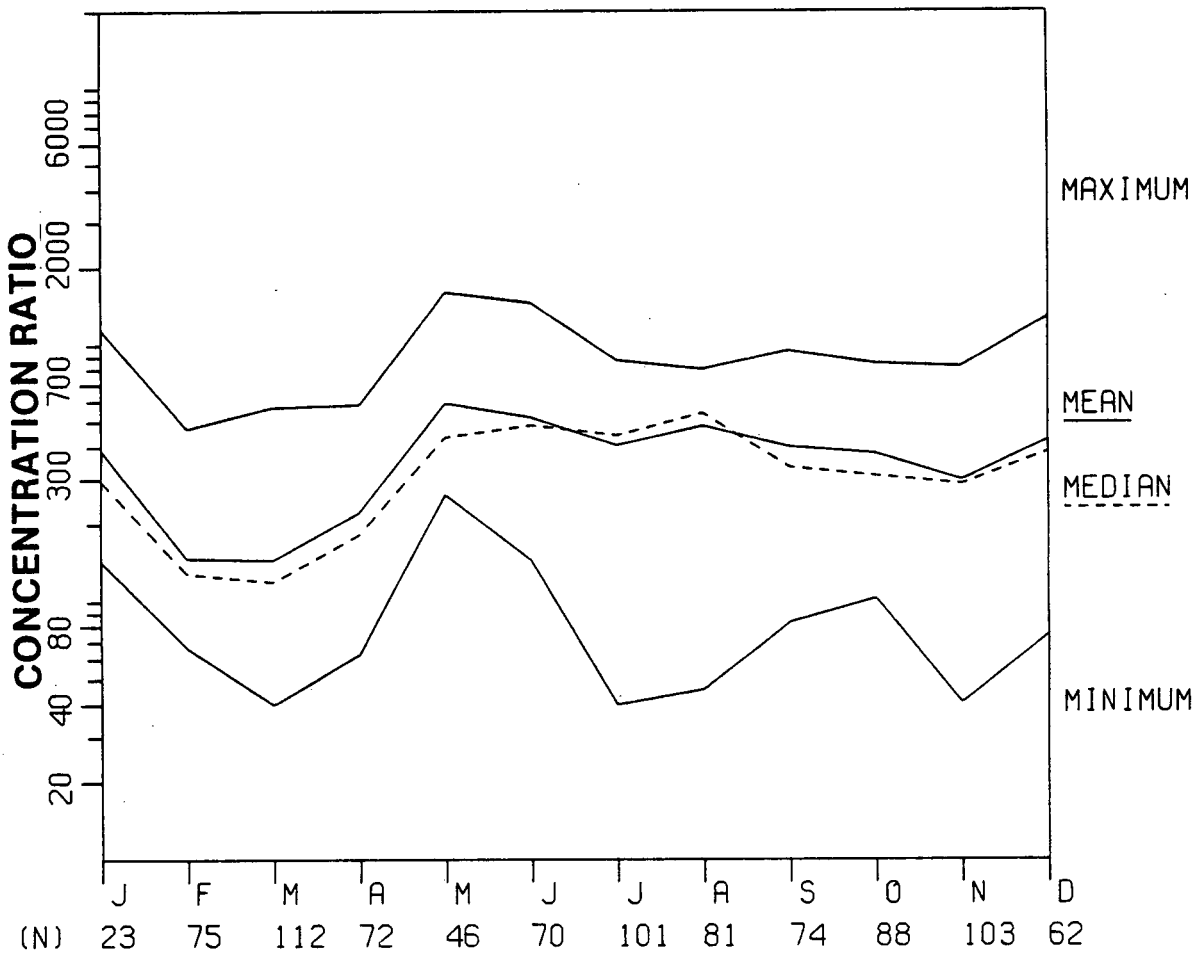
STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF DISSOLVED SILICA / TOTAL DISSOLVED PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
1977 JUNE	29	147.8300	860.000	462.900	151.8300	28.1941	± 57.7500
JULY	42	241.6700	640.000	438.370	140.9800	21.7537	± 43.9351
AUGUST	28	514.2900	800.000	655.070	84.8040	16.0264	± 32.8850
OCTOBER	26	200.0000	850.000	563.560	219.8800	43.1220	± 88.8101
NOVEMBER	27	285.7100	728.570	404.620	94.2200	18.1326	± 37.2749
DECEMBER	10	410.0000	1280.000	732.370	328.1699	103.7764	± 234.7550
1978 JANUARY	1	337.5000	337.500	337.500			
FEBRUARY	44	80.0000	314.290	132.510	51.3490	7.7412	± 15.6100
MARCH	60	40.0000	380.000	109.800	75.9430	9.8042	± 19.6205
APRIL	36	63.1580	583.330	293.810	142.8900	23.8150	± 48.3499
MAY	30	260.0000	1600.000	711.730	308.4199	56.3095	± 115.1649
JUNE	25	247.0600	950.000	641.730	146.2500	29.2500	± 60.3650
JULY	31	337.5000	875.000	567.930	132.6500	23.8246	± 48.6550
AUGUST	24	387.5000	760.000	581.040	99.4050	20.2910	± 41.9750
SEPTEMBER	38	129.1700	950.000	496.560	215.1600	34.9035	± 70.7250
OCTOBER	32	103.3300	387.500	250.500	71.4700	12.6342	± 25.7700
NOVEMBER	48	40.5410	500.000	218.140	101.5600	14.6589	± 29.4900
DECEMBER	32	75.0000	520.000	319.160	111.7200	19.7495	± 40.2800
1979 JANUARY	11	143.3300	247.060	193.570	31.1260	9.3848	± 20.9100
FEBRUARY	19	66.1540	191.300	129.330	45.2040	10.3705	± 21.7900
MARCH	36	75.7580	325.000	131.760	41.7080	6.9513	± 14.1150
APRIL	24	63.1580	135.000	97.272	21.1080	4.3087	± 8.9155
JULY	8	40.0000	51.724	45.601	4.0401	1.4284	± 3.3780
AUGUST	14	45.7630	263.640	156.980	69.4720	18.5672	± 40.1100
SEPTEMBER	16	83.3330	281.820	158.490	65.0530	16.2632	± 34.6650
OCTOBER	17	152.9400	628.570	340.460	139.0900	33.7343	± 71.5150
NOVEMBER	12	190.9100	338.460	266.250	44.5850	12.8706	± 28.3250
DECEMBER	8	323.0801	662.500	453.340	111.2200	39.3222	± 92.9850
1980 JANUARY	11	293.3301	1150.000	587.230	327.4900	98.7419	± 220.0050
FEBRUARY	12	102.3300	470.000	232.780	125.9600	36.3615	± 80.0300
MARCH	16	170.0000	571.430	305.330	116.7400	29.1850	± 62.2100
APRIL	12	146.6700	464.290	256.290	100.7800	29.0927	± 64.0300
MAY	16	294.4399	545.450	362.990	62.5250	15.6312	± 33.3151
JUNE	16	145.4500	1460.000	440.780	378.8799	94.7200	± 201.8899
JULY	20	109.5200	520.000	234.640	125.5100	28.0649	± 58.7449
AUGUST	15	150.0000	533.330	297.540	119.8200	30.9374	± 66.3549
SEPTEMBER	20	193.3300	620.000	410.990	146.3700	32.7293	± 68.5050
OCTOBER	13	231.2500	566.670	356.450	116.4400	32.2946	± 70.3650
NOVEMBER	16	238.8900	820.000	374.870	162.9900	40.7475	± 86.8550
DECEMBER	12	219.0500	800.000	429.940	200.9200	58.0006	± 127.6600

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF DISSOLVED SILICA / TOTAL DISSOLVED PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
- -78-79-80 JANUARY	23	143.3300	1150.000	388.100	296.7400	61.8746	± 128.3149
- -78-79-80 FEBRUARY	75	66.1540	470.000	147.750	76.0620	8.7829	± 17.5000
- -78-79-80 MARCH	112	40.0000	571.430	144.790	99.4370	9.3959	± 18.6200
- -78-79-80 APRIL	72	63.1580	583.330	222.050	140.9100	16.6064	± 33.1150
- -78- -80 MAY	46	260.0000	1600.000	590.430	301.3401	44.4302	± 89.4900
-77-78- -80 JUNE	70	145.4500	1460.000	521.710	237.0500	28.3329	± 56.5200
-77-78-79-80 JULY	101	40.0000	875.000	406.680	203.1100	20.2102	± 40.0950
-77-78-79-80 AUGUST	81	45.7630	800.000	480.840	216.4600	24.0511	± 47.8650
- -78-79-80 SEPTEMBER	74	83.3330	950.000	400.330	218.1300	25.3571	± 50.5350
-77-78-79-80 OCTOBER	88	103.3300	850.000	376.030	194.3000	20.7124	± 41.1649
-77-78-79-80 NOVEMBER	103	40.5410	820.000	296.970	134.8800	13.2901	± 26.3600
-77-78-79-80 DECEMBER	62	75.0000	1280.000	424.560	228.9200	29.0729	± 58.1350

RATIO OF DISSOLVED SILICA / TOTAL DISSOLVED PHOSPHORUS (P)
NEAR OLIVER
1976 - 1980



STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF DISSOLVED SILICA / TOTAL DISSOLVED PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
1976							
1977 JUN JUL AUG OCT NOV DEC	162	147.8300	1280.000	512.830	189.8000	14.9121	± 29.4501
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	401	40.0000	1600.000	348.750	246.9800	12.3336	± 24.2450
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC	165	40.0000	662.500	178.010	116.9800	9.1069	± 17.9850
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	179	102.3300	1460.000	353.300	201.2700	15.0436	± 29.6899

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF DISSOLVED SILICA / TOTAL DISSOLVED PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

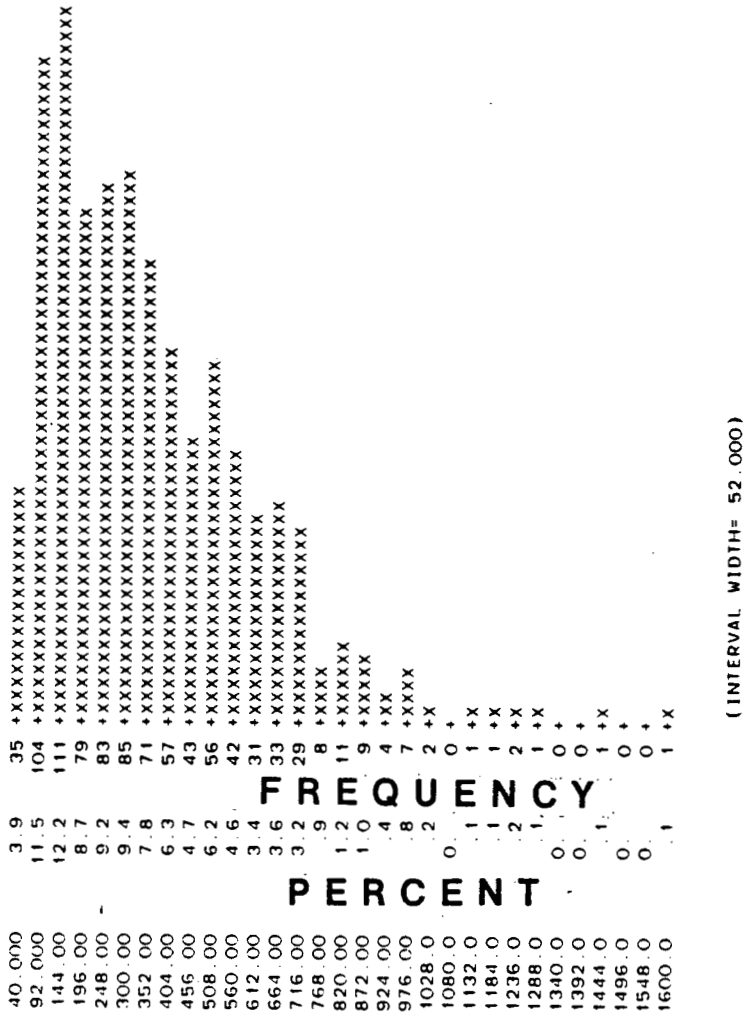
SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
			APRIL TO SEPTEMBER				
1976							
1977	99	147.8300	860.000	506.850	160.4400	16.1248	± 32.0000
1978	184	63.1580	1600.000	534.740	232.7200	17.1563	± 33.8501
1979	62	40.0000	281.820	119.890	62.2150	7.9013	± 15.8000
1980	99	109.5200	1460.000	336.480	197.8100	19.8806	± 39.4500
1976-80	444	40.0000	1600.000	426.380	241.9400	11.4820	± 22.5649
			OCTOBER TO MARCH				
1976-77							
1977-78	168	40.0000	1280.000	271.770	245.9900	18.9785	± 37.4650
1978-79	178	40.5410	520.000	213.650	104.1300	7.8049	± 15.4000
1979-80	76	102.3300	1150.000	351.950	195.1500	22.3852	± 44.5950
1980-81	41	219.0500	820.000	385.150	161.3800	25.2033	± 50.9401
1976-80	463	40.0000	1280.000	272.620	194.8400	9.0550	± 17.7950
			APRIL TO MARCH				
1976-80	907	40.0000	1600.000	347.890	232.1500	7.7084	± 15.1300

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF DISSOLVED SILICA / TOTAL DISSOLVED PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
1976							
1977 JUN JUL AUG OCT NOV DEC							
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC							
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC							
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC							
	907	40.0000	1600.000	347.890	232.1500	7.7084	± 15.1300

DISSOLVED SILICA / TOTAL DISSOLVED PHOSPHORUS (P)

n = 907



CONCENTRATION RATIO

T-2

OKANAGAN RIVER NEAR OLIVER

Statistical Characteristics of Nutrient Concentrations

Period of Sampling June 1977 to December 1980.

RATIO OF DISSOLVED SILICA TO TOTAL DISSOLVED PHOSPHORUS (P)

Median concentrations and their statistical characteristics determined for

- Individual Months
- All Months
- Individual years
- Seasons
  - April to September
  - October to March
  - April to March
- All Years
  - Cumulative distribution of concentration data

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF DISSOLVED SILICA / TOTAL DISSOLVED PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD		NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
1977	JUNE	29	420.000	420.0000	485.7100	0.957
	JULY	42	442.860	350.0000	533.3301	0.956
	AUGUST	28	660.000	600.0000	740.0000	0.964
	OCTOBER	26	566.670	425.0000	720.0000	0.971
	NOVEMBER	27	375.000	358.3301	427.2700	0.964
	DECEMBER	10	587.500	427.2700	1225.0000	0.979
1978	JANUARY	1	337.500			
	FEBRUARY	44	118.750	105.2600	128.5700	0.951
	MARCH	60	87.500	70.0000	112.5000	0.960
	APRIL	36	285.710	200.0000	400.0000	0.953
	MAY	30	666.670	566.6699	866.6699	0.957
	JUNE	25	666.670	542.8601	720.0000	0.957
	JULY	31	520.000	500.0000	625.0000	0.971
	AUGUST	24	583.330	533.3301	650.0000	0.957
	SEPTEMBER	38	500.000	333.3301	633.3301	0.966
	OCTOBER	32	241.670	223.0800	300.0000	0.965
	NOVEMBER	48	200.000	170.0000	223.5300	0.956
	DECEMBER	32	300.000	283.3301	380.0000	0.965
1979	JANUARY	11	195.830	179.1700	233.3300	0.961
	FEBRUARY	19	150.000	87.5000	172.0000	0.959
	MARCH	36	126.090	117.3900	142.8600	0.953
	APRIL	24	96.000	84.8480	111.5400	0.957
	JULY	8	43.860	41.9350	51.7240	0.961
	AUGUST	14	137.500	106.9000	228.5700	0.965
	SEPTEMBER	16	145.830	110.3400	230.7700	0.951
	OCTOBER	17	318.180	243.7500	371.4299	0.951
	NOVEMBER	12	255.560	226.3200	315.3799	0.961
	DECEMBER	8	418.180	350.0000	662.5000	0.961
1980	JANUARY	11	366.670	330.7700	940.0000	0.961
	FEBRUARY	12	158.330	129.4100	361.5400	0.961
	MARCH	16	246.670	228.5700	433.3301	0.951
	APRIL	12	222.220	182.3500	338.8899	0.961
	MAY	16	347.060	317.6499	404.5500	0.951
	JUNE	16	277.780	214.2900	461.1101	0.951
	JULY	20	158.330	131.5800	314.2900	0.959
	AUGUST	15	300.000	163.1600	336.3601	0.965
	SEPTEMBER	20	411.110	292.3101	528.5701	0.959
	OCTOBER	13	316.670	264.2900	485.7100	0.978
	NOVEMBER	16	321.430	264.7100	444.4399	0.951
	DECEMBER	12	342.860	244.4400	685.7100	0.961

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF DISSOLVED SILICA / TOTAL DISSOLVED PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
- -78-79-80 JANUARY	23	293.330	200.0000	338.4600	0.965
- -78-79-80 FEBRUARY	75	128.570	114.2900	150.0000	0.963
- -78-79-80 MARCH	112	119.050	111.1100	133.3300	0.953
- -78-79-80 APRIL	72	182.350	133.3300	222.2200	0.956
- -78- -80 MAY	46	438.100	370.0000	666.6699	0.960
-77-78- -80 JUNE	70	485.710	450.0000	542.8601	0.959
-77-78-79-80 JULY	101	442.860	350.0000	500.0000	0.954
-77-78-79-80 AUGUST	81	540.000	500.0000	600.0000	0.955
- -78-79-80 SEPTEMBER	74	333.330	283.3301	500.0000	0.953
-77-78-79-80 OCTOBER	88	308.330	281.8201	330.0000	0.958
-77-78-79-80 NOVEMBER	103	285.710	247.0600	322.2200	0.952
-77-78-79-80 DECEMBER	62	380.000	323.0801	436.3601	0.957

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF DISSOLVED SILICA / TOTAL DISSOLVED PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
1976					
1977 JUN JUL AUG OCT NOV DEC	162	500.000	450.0000	550.0000	0.951
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	401	291.670	250.0000	320.0000	0.954
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC	165	145.830	132.1400	158.8200	0.957
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	179	316.670	300.0000	332.1399	0.956

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF DISSOLVED SILICA / TOTAL DISSOLVED PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

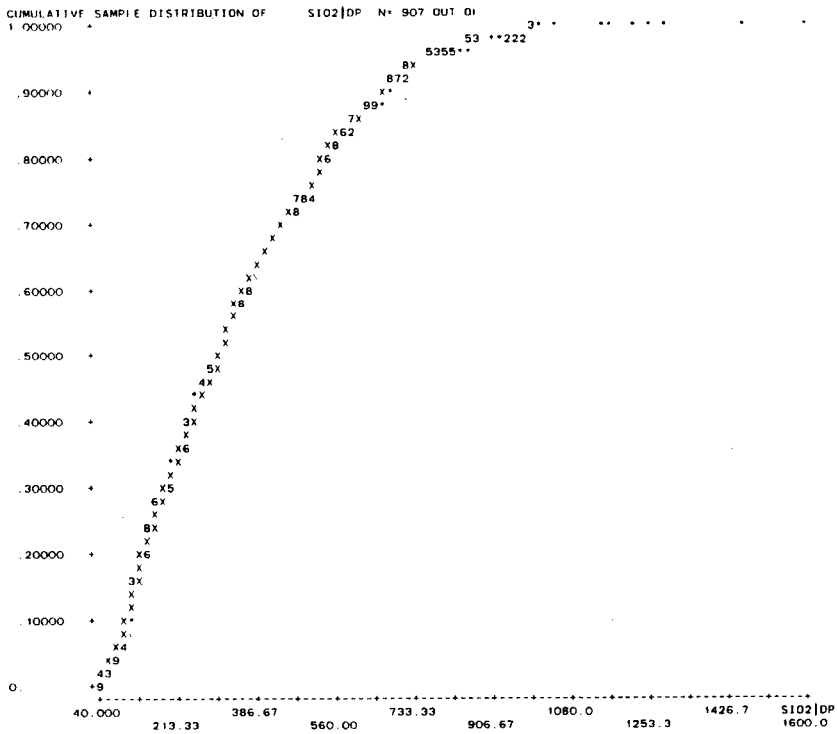
SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
		APRIL TO SEPTEMBER			
1976					
1977	99	533.330	466.6699	560.0000	0.956
1978	184	533.330	512.5000	542.8601	0.954
1979	62	106.900	95.0000	117.8600	0.957
1980	99	315.000	277.7800	338.8899	0.956
1976-80	444	412.500	385.7100	450.0000	0.954
		OCTOBER TO MARCH			
1976-77					
1977-78	168	150.000	128.5700	218.7500	0.955
1978-79	178	189.470	172.0000	208.7000	0.957
1979-80	76	315.380	281.8201	338.4600	0.961
1980-81	41	325.000	300.0000	400.0000	0.956
1976-80	463	225.000	206.2500	246.6700	0.954
		APRIL TO MARCH			
1976-80	907	300.000	283.3301	320.0000	0.954

STATISTICAL CHARACTERISTICS OF NUTRIENT CONCENTRATION FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF DISSOLVED SILICA / TOTAL DISSOLVED PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
1976					
1977 JUN JUL AUG OCT NOV DEC					
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC					
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC					
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC					
	907	300.000	283.3301	320.0000	0.954

DISTRIBUTIONAL ANALYSIS

CUMULATIVE SAMPLE DISTRIBUTION OF SIO2|DP N= 907 OUT OF



PROB	QUANTILE	LEVEL	CONFIDENCE INTERVAL		SIZE
.1000	100.00	.9500	90.000	106.90	.9538
.3000	183.33	.9500	165.00	200.00	.9538
.5000	300.00	.9500	283.33	320.00	.9537
.7000	442.86	.9500	416.67	475.00	.9538
.9000	666.67	.9500	640.00	700.00	.9538

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OKANAGAN RIVER NEAR OLIVER

Statistical Characteristics of Nutrient Loads

Period of Sampling June 1977 to December 1980.

RATIO OF DISSOLVED SILICA TO TOTAL DISSOLVED PHOSPHORUS (P)

Arithmetic mean loads and their statistical characteristics determined for

- Individual Months
- All Months
  - Graph of monthly load ranges
- Individual years
- Seasons
  - April to September
  - October to March
  - April to March
- All Years

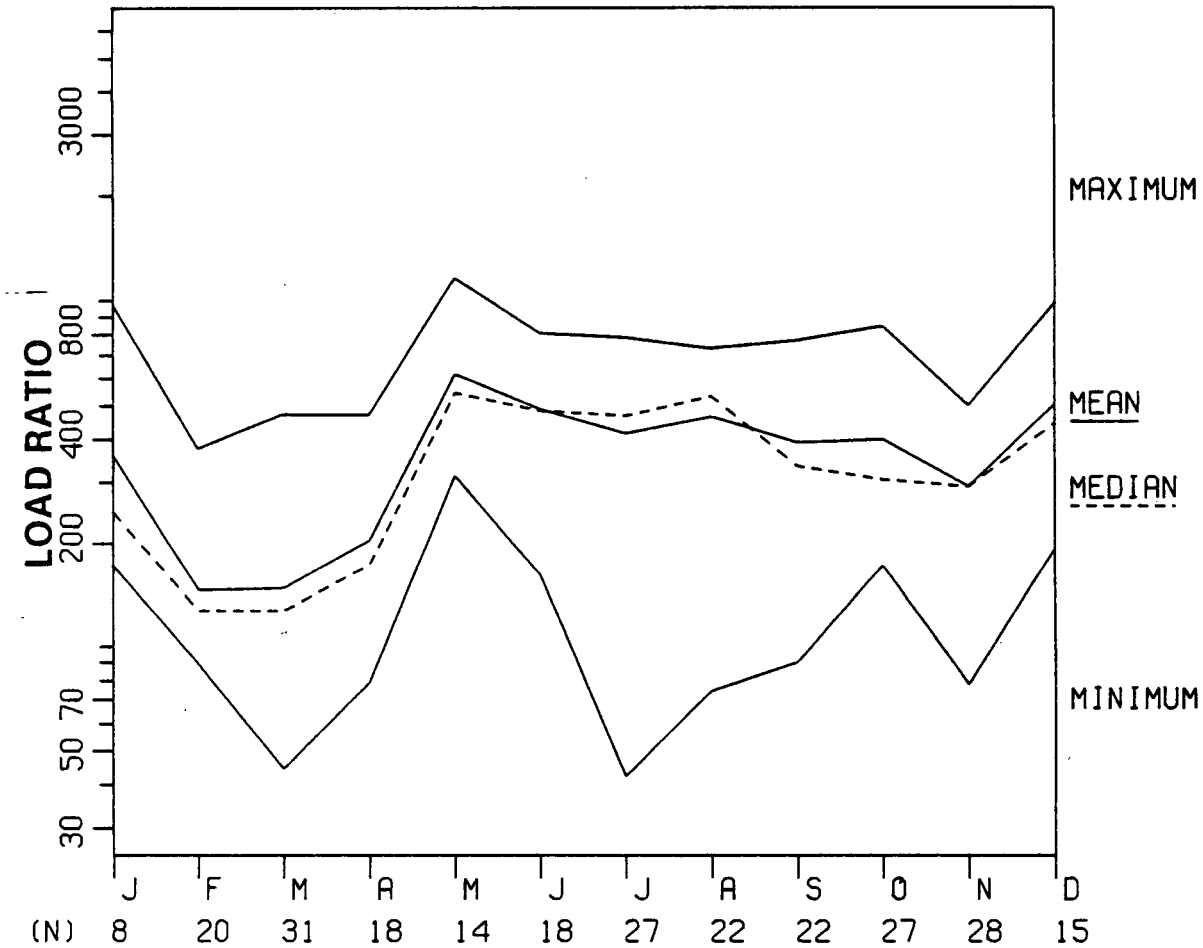
STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF DISSOLVED SILICA / TOTAL DISSOLVED PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
1977 JUNE	7	302.4700	597.120	427.230	108.0900	40.8542	± 99.9700
JULY	11	256.4099	560.550	469.540	88.4870	26.6798	± 59.4500
AUGUST	8	534.5300	732.080	631.790	75.9030	26.8358	± 63.4600
OCTOBER	10	240.3100	847.950	591.460	208.7300	66.0062	± 149.3151
NOVEMBER	10	285.8301	469.780	378.750	55.3790	17.5124	± 39.6151
DECEMBER	5	426.8799	982.530	732.170	255.5300	114.2765	± 317.3101
1978 JANUARY	1	337.8201	337.820	337.820			
FEBRUARY	10	97.5960	221.960	137.500	36.5340	11.5531	± 26.1350
MARCH	18	44.4860	295.040	123.720	69.0800	16.2823	± 34.3520
APRIL	9	103.9200	472.020	261.740	128.8400	42.9467	± 99.0400
MAY	10	322.4099	1168.800	724.160	281.0200	88.8663	± 201.0300
JUNE	7	411.3501	806.980	613.950	141.7000	53.5576	± 131.0500
JULY	9	399.4099	784.310	547.130	120.7000	40.2333	± 92.7799
AUGUST	6	511.2600	681.100	570.320	63.3770	25.8736	± 66.5100
SEPTEMBER	13	166.2700	769.000	469.890	203.3400	56.3963	± 122.8800
OCTOBER	8	171.9300	279.390	234.360	44.3810	15.6911	± 37.1050
NOVEMBER	11	77.5220	322.550	200.630	75.9220	22.8913	± 51.0050
DECEMBER	6	192.7000	476.380	338.790	108.1600	44.1561	± 113.5050
1979 JANUARY	4	171.5400	246.940	208.620	32.3380	16.1690	± 51.4550
FEBRUARY	7	88.6180	167.120	123.320	29.1290	11.0097	± 26.9400
MARCH	9	90.5760	172.500	128.070	26.6760	8.8920	± 20.5050
APRIL	6	79.0700	120.600	95.071	15.4960	6.3262	± 16.2605
JULY	2	42.3250	48.624	45.474	4.4543	3.1497	± 40.0199
AUGUST	4	74.5580	242.290	159.170	74.2870	37.1435	± 118.2084
SEPTEMBER	4	89.9280	205.220	149.860	50.4290	25.2145	± 80.2425
OCTOBER	5	215.5200	546.720	325.000	130.3700	58.3032	± 161.8700
NOVEMBER	3	224.1600	317.480	265.170	47.6800	27.5280	± 118.4451
DECEMBER	2	401.2700	483.800	442.540	58.3520	41.2611	± 524.2744
1980 JANUARY	3	340.2300	976.640	568.170	354.5400	204.6938	± 880.7249
FEBRUARY	3	121.7100	376.600	224.540	134.3900	77.5901	± 333.8347
MARCH	4	225.5200	474.390	297.790	118.1200	59.0600	± 187.9500
APRIL	3	181.8200	366.120	249.110	101.7100	58.7223	± 252.6710
MAY	4	313.0000	386.610	355.410	32.4410	16.2205	± 51.6250
JUNE	4	161.1300	692.230	384.980	235.1200	117.5600	± 374.1313
JULY	5	126.8900	364.960	211.970	94.8090	42.3999	± 117.7220
AUGUST	4	157.6100	348.560	280.300	84.1940	42.0970	± 133.9750
SEPTEMBER	5	244.2400	495.980	382.760	113.6100	50.8079	± 141.0699
OCTOBER	4	242.0000	502.940	340.190	112.8800	56.4400	± 179.6200
NOVEMBER	4	277.9700	501.700	349.930	103.3200	51.6600	± 164.4150
DECEMBER	2	363.7100	662.700	513.210	211.4200	149.4966	± 1899.5500

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF DISSOLVED SILICA / TOTAL DISSOLVED PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
- -78-79-80 JANUARY	8	171.5400	976.640	359.600	260.9600	92.2633	± 218.1649
- -78-79-80 FEBRUARY	20	88.6180	376.600	145.590	63.2660	14.1467	± 29.6100
- -78-79-80 MARCH	31	44.4860	474.390	147.440	88.0520	15.8146	± 32.2950
- -78-79-80 APRIL	18	79.0700	472.020	204.080	124.1500	29.2624	± 61.7400
- -78- -80 MAY	14	313.0000	1168.800	618.810	291.2000	77.8265	± 168.1350
-77-78- -80 JUNE	18	161.1300	806.980	490.450	177.5100	41.8395	± 88.2750
-77-78-79-80 JULY	27	42.3250	784.310	416.290	186.0400	35.8034	± 73.5950
-77-78-79-80 AUGUST	22	74.5580	732.080	465.190	206.7800	44.0856	± 91.6801
- -78-79-80 SEPTEMBER	22	89.9280	769.000	391.900	203.4600	43.3778	± 90.2051
-77-78-79-80 OCTOBER	27	171.9300	847.950	399.080	209.4500	40.3087	± 82.8500
-77-78-79-80 NOVEMBER	28	77.5220	501.700	292.490	106.1900	20.0680	± 41.1800
-77-78-79-80 DECEMBER	15	192.7000	982.530	507.000	238.9600	61.6992	± 132.3351

RATIO OF DISSOLVED SILICA / TOTAL DISSOLVED PHOSPHORUS (P)
NEAR OLIVER
1976 - 1980



STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF DISSOLVED SILICA / TOTAL DISSOLVED PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
1976							
1977 JUN JUL AUG OCT NOV DEC	51	240.3100	982.530	521.030	175.1300	24.5231	± 49.2550
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	108	44.4860	1168.800	355.590	243.2000	23.4019	± 46.3900
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC	46	42.3250	546.720	175.070	106.8500	15.7542	± 31.7300
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	45	121.7100	976.640	336.890	161.3400	24.0511	± 48.4701

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF DISSOLVED SILICA / TOTAL DISSOLVED PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
			APRIL TO SEPTEMBER				
1976							
1977	26	256.4099	732.080	508.070	122.1900	23.9634	± 49.3550
1978	54	103.9200	1168.800	524.990	226.9100	30.8785	± 61.9349
1979	16	42.3250	242.290	118.590	57.6850	14.4212	± 30.7375
1980	25	126.8900	692.230	312.150	132.0300	26.4060	± 54.5000
1976-80	121	42.3250	1168.800	423.640	225.6500	20.5136	± 40.6150
			OCTOBER TO MARCH				
1976-77							
1977-78	54	44.4860	982.530	320.420	254.0900	34.5773	± 69.3500
1978-79	45	77.5220	476.380	199.220	90.0570	13.4249	± 27.0600
1979-80	20	121.7100	976.640	343.740	184.5700	41.2711	± 86.3849
1980-81	10	242.0000	662.700	378.690	133.4900	42.2132	± 95.4950
1976-80	129	44.4860	982.530	286.270	200.4200	17.6460	± 34.9150
			APRIL TO MARCH				
1976-80	250	42.3250	1168.800	352.760	223.4300	14.1310	± 27.8301

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF DISSOLVED SILICA / TOTAL DISSOLVED PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MINIMUM	MAXIMUM	ARITHMETIC MEAN	STANDARD DEVIATION	STANDARD ERROR	95% CONF. INTERVAL
1976							
1977 JUN JUL AUG OCT NOV DEC							
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC							
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC							
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC							
	250	42.3250	1168.800	352.760	223.4300	14.1310	± 27.8301

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OKANAGAN RIVER NEAR OLIVER

Statistical Characteristics of Nutrient Loads

Period of Sampling June 1977 to December 1980.

RATIO OF DISSOLVED SILICA TO TOTAL DISSOLVED PHOSPHORUS (P)

Median loads and their statistical characteristics determined for

- Individual Months
- All Months
- Individual years
- Seasons
  - April to September
  - October to March
  - April to March
- All Years

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF DISSOLVED SILICA / TOTAL DISSOLVED PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
1977 JUNE	7	432.740	302.4700	597.1201	0.984
JULY	11	500.000	417.0701	548.7400	0.961
AUGUST	8	609.430	552.1499	732.0801	0.961
OCTOBER	10	553.040	314.1499	833.3301	0.979
NOVEMBER	10	374.760	308.3701	434.7800	0.979
DECEMBER	5	858.110		426.8799	0.969
1978 JANUARY	1	337.820			
FEBRUARY	10	126.090	100.0000	173.9900	0.979
MARCH	18	121.850	56.3100	165.9500	0.969
APRIL	9	199.580	171.2100	445.1201	0.961
MAY	10	635.290	389.0200	1013.3000	0.979
JUNE	7	624.080	411.3501	806.9800	0.984
JULY	9	527.190	450.3401	688.8000	0.961
AUGUST	6	532.170	511.2600	681.1001	0.969
SEPTEMBER	13	485.810	263.9500	659.3401	0.978
OCTOBER	8	225.690	184.0000	279.3899	0.961
NOVEMBER	11	204.670	152.0900	322.5000	0.961
DECEMBER	6	297.210	192.7000	476.3799	0.969
1979 JANUARY	4	195.880			
FEBRUARY	7	126.340	88.6180	167.1200	0.984
MARCH	9	124.860	110.4300	166.0000	0.961
APRIL	6	87.440	79.0700	120.6000	0.969
JULY	2	42.325			
AUGUST	4	124.660			
SEPTEMBER	4	130.210			
OCTOBER	5	272.520		215.5200	0.969
NOVEMBER	3	253.860			
DECEMBER	2	401.270			
1980 JANUARY	3	387.640			
FEBRUARY	3	175.310			
MARCH	4	245.500			
APRIL	3	199.390			
MAY	4	348.330			
JUNE	4	248.790			
JULY	5	211.250		126.8900	0.969
AUGUST	4	301.480			
SEPTEMBER	5	404.660		244.2400	0.969
OCTOBER	4	305.440			
NOVEMBER	4	292.250			
DECEMBER	2	363.710			

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF DISSOLVED SILICA / TOTAL DISSOLVED PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
- -78-79-80 JANUARY	8	246.940	195.8800	976.6399	0.961
- -78-79-80 FEBRUARY	20	126.340	121.7100	152.2100	0.959
- -78-79-80 MARCH	31	126.900	110.4300	166.0000	0.971
- -78-79-80 APRIL	18	172.640	103.9200	286.3899	0.969
- -78- -80 MAY	14	546.240	373.7100	1005.3999	0.965
-77-78- -80 JUNE	18	484.910	337.0200	624.0801	0.969
-77-78-79-80 JULY	27	468.860	399.4099	527.1899	0.964
-77-78-79-80 AUGUST	22	532.170	313.5300	609.4299	0.965
- -78-79-80 SEPTEMBER	22	333.330	253.2500	542.4399	0.965
-77-78-79-80 OCTOBER	27	305.440	261.2400	533.3301	0.964
-77-78-79-80 NOVEMBER	28	292.250	227.8000	353.5901	0.964
-77-78-79-80 DECEMBER	15	444.680	354.0000	662.7000	0.965

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF DISSOLVED SILICA / TOTAL DISSOLVED PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
1976					
1977 JUN JUL AUG OCT NOV DEC	51	501.890	432.7400	548.7400	0.951
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	108	279.390	221.9600	337.8201	0.957
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC	46	130.210	120.6000	195.1700	0.960
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	45	313.000	248.7900	364.9600	0.964

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF DISSOLVED SILICA / TOTAL DISSOLVED PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
APRIL TO SEPTEMBER					
1976					
1977	26	504.420	432.7400	560.5500	0.971
1978	54	527.190	468.8601	586.9199	0.960
1979	16	89.928	87.2430	174.0700	0.951
1980	25	313.000	217.4200	366.1201	0.957
1976-80	121	431.950	348.5601	491.6699	0.955
OCTOBER TO MARCH					
1976-77					
1977-78	54	221.960	151.4700	367.3501	0.960
1978-79	45	172.500	152.2100	220.1000	0.964
1979-80	20	272.520	245.5000	387.6399	0.959
1980-81	10	310.370	277.9700	502.9399	0.979
1976-80	129	233.430	201.7900	277.9700	0.957
APRIL TO MARCH					
1976-80	250	308.900	272.5200	337.8201	0.950

STATISTICAL CHARACTERISTICS OF NUTRIENT LOAD FOR SPECIFIED SAMPLING PERIOD AND NUMBER OF SAMPLES
OKANAGAN RIVER NEAR OLIVER
RATIO OF DISSOLVED SILICA / TOTAL DISSOLVED PHOSPHORUS (P)
SIMULTANEOUS AND SEQUENTIAL SAMPLING METHODS

SAMPLING PERIOD	NUMBER OF SAMPLES	MEDIAN	CONFIDENCE INTERVAL LOWER	CONFIDENCE INTERVAL UPPER	PROBABILITY LEVEL
1976					
1977 JUN JUL AUG OCT NOV DEC					
1978 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC					
1979 JAN FEB MAR APR JUL AUG SEP OCT NOV DEC					
1980 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC					
	250	308.900	272.5200	337.8201	0.950