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**MEASUREMENT OF LAKE ROOSEVELT BIOTA IN
RELATION TO RESERVOIR OPERATIONS**

**APPENDICIES
1991**

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APPENDIX A

Table A.1 Daily midnight reservoir inflow, outflow, elevation, storage capacity, and water retention time for Lake Roosevelt in January, 1991. Data from CORPs daily summary reports.

JANUARY					
DAY OF MONTH	INFLOW (KCFS)	OUTFLOW (KCFS)	RESERVOIR ELEVATION (FT)	STORAGE CAPACITY (K C F S D)	WATER RETENTION (TIMED)
1	157.4	83.9	1282.2	4277.8	51.0
2	160.2	132.9	1282.9	4305.2	32.4
3	158.2	142.5	1283.3	4320.9	30.3
4	143.0	127.3	1283.7	4336.7	34.1
5	150.8	160.7	1283.5	4328.8	26.9
6	139.4	137.4	1283.5	4328.8	31.5
7	131.8	151.5	1283.0	4309.1	28.4
8	130.2	130.2	1283.0	4309.1	33.1
9	133.6	153.1	1282.5	4289.5	28.0
10	127.0	134.8	1282.3	4281.7	31.8
11	130.0	133.9	1282.2	4277.8	31.9
12	118.7	81.6	1283.2	4317.0	52.9
13	144.1	70.9	1285.0	4388.2	61.9
14	147.5	103.4	1286.1	4432.3	42.9
15	143.6	123.5	1286.6	4452.4	36.1
16	143.1	118.8	1287.2	4416.7	37.2
17	147.6	123.2	1287.8	4501.1	36.5
18	140.3	160.6	1287.3	4480.8	27.9
19	142.7	148.6	1287.0	4468.6	30.1
20	137.7	165.9	1286.3	4440.3	26.8
21	133.0	169.1	1285.4	4404.2	26.0
22	128.9	158.8	1284.7	4376.3	27.6
23	132.8	158.7	1284.0	4348.5	27.4
24	140.1	163.8	1283.4	4324.8	26.4
25	138.2	175.5	1282.5	4289.5	24.4
26	148.0	159.7	1282.2	4277.8	26.8
27	166.0	164.1	1282.2	4277.8	26.1
28	163.5	159.6	1282.3	4281.7	26.8
29	163.9	175.6	1282.0	4270.1	24.3
30	162.9	170.7	1281.8	4262.3	25.0
31	154.8	162.6	1281.6	4254.5	26.2
Mean Totals	143.8	142	1283.9	4342.9	32.2

Table A.2 Daily midnight reservoir inflow, outflow, elevation, storage capacity, and water retention time for Lake Roosevelt in February, 1991. Data from CORPs daily summary reports.

FEBRUARY					
DAY OF MONTH	INFLOW (KCFS)	OUTFLOW (KCFS)	RESERVOIR ELEVATION (FT)	STORAGE CAPACITY (KCFS D)	WATER RETENTION TIME (D)
1	149.5	145.6	1281.7	4258.4	29.2
2	146.5	111.4	1282.6	4293.5	38.5
3	146.7	107.5	1283.6	4332.7	40.3
4	151.5	139.7	1283.9	4344.6	31.1
5	152.5	132.6	1284.4	4364.4	32.9
6	151.3	137.4	1284.8	4380.3	31.9
7	149.0	123.0	1285.4	4404.2	35.8
8	154.3	126.3	1286.1	4432.3	35.1
9	146.5	142.4	1286.2	4436.3	31.2
10	133.6	133.6	1286.2	4436.3	33.2
11	124.3	154.3	1285.5	4408.2	28.6
12	147.2	153.2	1285.3	4400.2	28.7
13	137.5	147.5	1285.1	4392.2	29.8
14	139.3	133.3	1285.2	4396.2	33.0
15	132.9	132.9	1285.2	4396.2	33.1
16	129.0	97.0	1286.0	4428.3	45.7
17	122.6	98.4	1286.6	4452.4	45.2
18	126.3	133.4	1286.4	4444.4	33.3
19	124.6	128.6	1286.3	4444.3	34.6
20	117.3	113.3	1286.4	4444.4	39.2
21	128.5	124.5	1286.5	4448.4	35.7
22	121.3	125.4	1286.4	4444.4	35.4
23	118.6	112.6	1286.6	4452.4	39.5
24	108.8	114.9	1286.4	4444.4	38.7
25	106.2	140.4	1285.6	4412.2	31.4
26	92.7	148.6	1284.2	4356.4	29.3
27	96.9	157.8	1282.6	4293.5	27.2
28	102.1	160.4	1281.1	4235.2	26.4
Mean Totals	130.6	131.3	1285.1	4392.0	34.1

Table A.3 Daily midnight reservoir inflow, outflow, elevation, storage capacity, and water retention time for Lake Roosevelt in March, 1991. Data from CORPs daily summary reports.

MARCH					
DAY OF MONTH	INFLOW (KCFS)	OUTFLOW (KCFS)	RESERVOIR ELEVATION (FT)	STORAGE CAPACITY (KCFSD)	WATER RETENTION TIME (D)
1	97.7	159.1	1279.5	4173.7	26.2
2	93.2	133.2	1278.5	4135.6	31.0
3	116.5	116.5	1278.5	4135.6	35.5
4	118.2	150.5	1277.6	4101.5	27.3
5	117.1	136.0	1277.1	4082.6	30.0
6	105.4	133.4	1276.4	4056.3	30.4
7	113.8	158.7	1275.2	4011.4	25.3
8	115.5	137.9	1274.6	3989.0	28.9
9	110.5	147.6	1273.6	3951.9	26.8
10	125.3	160.4	1272.5	3911.3	24.4
11	129.2	166.4	1271.5	3874.6	23.3
12	132.9	147.5	1271.1	3860.0	26.2
13	125.3	147.1	1270.5	3838.1	26.1
14	124.7	144.5	1269.9	3816.3	26.4
15	118.3	154.5	1268.9	3780.2	24.5
16	113.5	149.5	1267.9	3744.2	25.0
17	140.8	148.0	1267.7	3737.0	25.3
18	120.3	161.4	1266.6	3697.6	22.9
19	121.2	165.7	1265.3	3651.4	22.0
20	125.7	136.3	1265.0	3640.8	26.7
21	116.4	151.7	1264.0	3605.6	23.8
22	119.4	154.3	1263.0	3570.5	23.1
23	127.9	175.0	1261.7	3525.2	20.1
24	116.7	151.3	1260.7	3490.5	23.1
25	134.6	170.8	1259.6	3452.6	20.2
26	133.4	165.9	1258.7	3421.8	20.6
27	122.0	167.9	1257.3	3374.2	20.1
28	121.2	161.6	1256.1	3333.7	20.6
29	113.7	143.9	1255.2	3303.3	23.0
30	114.8	149.7	1254.2	3270.3	21.8
31	108.5	133.3	1253.4	3243.9	24.3
Mean Totals	119.2	151.0	1267.5	3734.9	25.0

Table A.4 Daily midnight reservoir inflow, outflow, elevation, storage capacity, and water retention time for Lake Roosevelt in April, 1991. Data from CORPs daily summary reports.

APRIL					
DAY OF MONTH	INFLOW (KCFS)	OUTFLOW (KCFS)	RESERVOIR ELEVATION (FT)	STORAGE CAPACITY (KCFSD)	WATER RETENTION TIME (D)
1	103.3	146.0	1252.1	3201.2	21.9
2	108.7	150.2	1250.8	3158.8	21.0
3	114.0	157.5	1249.4	3113.7	19.8
4	106.5	146.5	1248.0	3068.9	20.9
5	117.3	143.4	1247.0	3037.2	21.2
6	125.8	156.3	1245.9	2999.4	19.2
7	133.9	128.2	1245.9	3002.6	23.4
8	130.4	163.2	1244.6	2961.9	18.1
9	131.1	171.7	1243.0	2912.4	17.0
10	141.0	169.8	1241.8	2875.6	16.9
11	130.6	158.3	1240.6	2836.1	17.9
12	128.9	158.3	1239.2	2797.0	17.7
13	137.3	163.5	1238.0	2761.2	16.9
14	131.9	156.2	1236.8	2725.8	17.5
15	128.8	150.0	1235.7	2693.6	18.0
16	130.7	161.6	1234.3	2650.3	16.4
17	123.9	148.7	1233.1	2618.8	17.6
18	126.3	163.3	1231.5	2573.5	15.8
19	133.3	162.8	1230.2	2537.2	15.6
20	130.7	153.3	1229.1	2506.8	16.4
21	130.6	139.3	1228.5	2490.3	17.9
22	136.9	161.2	1227.3	2457.6	15.2
23	137.8	155.8	1226.4	2433.4	15.6
24	148.0	157.8	1225.8	2417.3	15.3
25	140.7	150.4	1225.2	2401.3	16.0
26	121.1	153.1	1223.8	2364.4	15.4
27	137.5	158.7	1222.7	2335.7	14.7
28	130.5	147.6	1221.8	2312.5	15.7
29	147.6	141.5	1221.7	2309.9	16.3
30	153.3	127.9	1222.5	2330.5	18.2
Mean Totals	129.9	153.4	1235.4	2696.2	17.7

Table A.5 Daily midnight reservoir inflow, outflow, elevation, storage capacity, and water retention time for Lake Roosevelt in May, 1991. Data from CORPs daily summary reports.

MAY					
DAY OF MONTH	INFLOW (KCFS)	OUTFLOW (KCFS)	RESERVOIR ELEVATION (FT)	STORAGE CAPACITY (KCFSD)	WATER RETENTION TIME (DAYS)
1	155.6	146.8	1222.6	2331.1	15.9
2	151.9	135.3	1223.0	2343.5	17.3
3	151.6	137.6	1223.3	2351.3	17.1
4	142.4	134.9	1223.3	2351.3	17.4
5	140.4	142.0	1223.0	2343.5	16.5
6	148.7	155.4	1222.5	2330.5	15.0
7	148.3	147.3	1222.3	2325.4	15.8
8	150.5	146.9	1222.2	2322.8	15.8
9	157.3	134.3	1222.9	2340.9	17.4
10	161.6	126.7	1224.0	2369.6	18.7
11	159.8	105.8	1225.8	2417.3	22.8
12	163.5	99.2	1227.9	2473.9	24.9
13	171.1	123.4	1229.4	2515.0	20.4
14	171.5	128.9	1230.7	2551.1	19.8
15	178.7	128	1232.3	2596.1	20.3
16	167.8	136.9	1233.1	2618.8	19.1
17	171.8	153.7	1233.4	2627.3	17.1
18	184.9	148.1	1234.4	2656.0	17.9
19	189.2	127.4	1236.4	2714.1	21.3
20	197.1	139.8	1237.8	2755.3	19.7
21	205.4	-142.5	1239.6	2809.0	19.7
22	222.5	151.0	1241.7	2872.6	19.0
23	229.8	163.5	1243.5	2927.8	17.9
24	227.2	164.9	1245.2	2980.6	18.1
25	239.3	155.7	1247.6	3056.2	19.6
26	232.4	168.0	1249.2	3107.3	18.5
27	228.1	173.6	1250.6	3152.4	18.2
28	229.5	186.6	1251.7	3188.1	17.1
29	232.2	185.7	1252.9	3227.4	17.4
30	225.1	178.3	1254.1	3267.0	18.3
31	232.4	170.2	1255.8	3320.3	19.5
Mean Totals	186.1	146.4	1234.9	2685.3	18.5

Table A.6 Daily midnight reservoir inflow, outflow, elevation, storage capacity, and water retention time for Lake Roosevelt in June, 1991. Data from CORPs daily summary reports.

JUNE					
DAY OF MONTH	INFLOW (KCFS)	OUTFLOW (KCFS)	RESERVOIR ELEVATION (FT)	STORAGE CAPACITY (KCFSD)	WATER RETENTION TIME (D)
1	232.4	168.4	1257.6	3384.3	20.1
2	232.5	169.5	1253.6	3250.5	19.2
3	222.7	166.4	1260.0	3466.3	20.8
4	219.0	169.6	1261.2	3507.8	20.7
5	219.4	172.7	1262.3	3546.0	20.5
6	220.3	176.3	1263.3	3581.0	20.3
7	225.4	169.1	1264.7	3630.2	21.5
8	230.9	164.1	1266.5	3694.1	22.5
9	228.0	151.3	1268.4	3762.1	24.9
10	226.8	163.9	1270.0	3820.0	23.3
11	227.8	168.4	1271.5	3874.6	23.0
12	235.6	168.5	1273.2	3937.1	23.4
13	228.5	160.7	1274.9	4000.2	24.9
14	214.8	164.7	1276.1	4045.0	24.6
15	198.4	167.5	1276.8	4071.3	24.3
16	187.4	152.5	1277.5	4097.7	26.9
17	180.1	152.7	1278.0	4116.7	27.0
18	166.1	145.3	1278.4	4131.8	28.4
19	150.1	121.2	1278.9	4150.8	34.2
20	158.8	115.1	1279.9	4189.0	36.4
21	160.2	89.0	1281.5	4250.6	47.8
22	154.9	95.0	1282.8	4293.5	45.2
23	160.4	81.1	1284.5	4368.3	53.9
24	160.0	106.8	1285.7	4416.2	41.4
25	168.4	119.1	1286.8	4460.5	37.5
26	163.6	136.4	1287.3	4480.8	32.9
27	167.8	146.5	1287.7	4497.0	30.7
28	168.3	140.1	1288.3	4521.5	32.3
29	157.9	137.4	1288.5	4529.7	33.0
30	161.0	131.8	1288.9	4546.2	34.5
Mean Totals	194.3	145.7	1275.2	4020.7	29.2

Table A.7 Daily midnight reservoir inflow, outflow, elevation, storage capacity, and water retention time for Lake Roosevelt in July, 1991. Data from CORPs daily summary reports.

JULY					
DAY OF M O N T H	INFLOW (KCFS)	OUTFLOW (KCFS)	RESERVOIR ELEVATION (FT)	STORAGE CAPACITY (KCFSD)	WATER RETENTION (D)IE
1	159.2	148.3	1289.0	4550.3	30.7
2	158.5	139.5	1289.3	4562.6	32.7
3	156.5	137.1	1289.6	4575.0	33.4
4	168.3	159.5	1289.6	4575.0	28.7
5	169.4	156.9	1289.7	4579.2	29.2
6	154.3	159.0	1289.3	4562.6	28.7
7	161.3	153.4	1289.2	4558.5	29.7
8	153.3	143.3	1289.3	4562.6	31.8
9	155.7	140.8	1289.5	4570.9	32.5
10	152.8	150.4	1289.4	4566.8	30.4
11	137.7	151.8	1288.9	4546.2	29.9
12	131.2	159.4	1288.1	4513.4	28.3
13	121.7	143.6	1287.3	4480.8	31.2
14	121.0	92.9	1287.7	4497.0	48.4
15	120.6	137.1	1287.1	4472.7	32.6
16	116.9	110.6	1287.0	4468.6	40.4
17	119.7	122.4	1286.7	4456.5	36.4
18	132.9	132.5	1286.5	4448.4	33.6
19	125.5	121.1	1286.4	4444.4	36.7
20	134.8	94.0	1287.2	4476.7	47.6
21	140.3	97.2	1288.1	4513.4	46.4
22	131.9	139.4	1287.7	4497.0	32.3
23	128.2	137.9	1287.3	4480.8	32.5
24	124.9	106.1	1287.6	4493.0	42.3
25	125.8	111.1	1287.8	4501.1	40.5
26	124.4	99.5	1288.3	4521.5	45.4
27	125.7	113.6	1288.3	4521.5	39.8
28	130.2	99.5	1288.7	4537.9	45.6
29	126.8	116.8	1288.8	4542.0	38.9
30	134.8	117.9	1289.0	4550.3	38.6
31	126.8	126.3	1288.9	4546.2	36.0
Mean Totals	137.8	129.6	1288.3	4521.7	35.8

Table A.8 Daily midnight reservoir inflow, outflow, elevation, storage capacity, and water retention time for Lake Roosevelt in August, 1991. Data from CORPs daily summary reports.

AUGUST					
DAY OF MONTH	INFLOW (KCFS)	OUTFLOW (KCFS)	RESERVOIR ELEVATION (FT)	STORAGE CAPACITY (K C F S D)	WATER RETENTION (TIMED)
1	127.4	116.7	1289.0	4550.3	39.0
2	127.0	116.2	1289.1	4554.4	39.2
3	123.8	99.1	1289.4	4566.8	46.1
4	135.3	119.3	1289.5	4570.9	38.3
5	123.7	129.5	1289.2	4558.5	35.2
6	127.5	127.1	1289.1	4554.4	35.8
7	140.9	132.2	1289.1	4554.4	34.5
8	146.5	164.6	1288.5	4529.7	27.5
9	156.8	160.5	1288.5	4529.7	28.2
10	155.1	157.8	1287.9	4505.2	28.6
11	163.9	148.2	1288.0	4509.3	30.4
12	157.9	153.4	1288.0	4509.3	29.4
13	172.0	155.2	1288.2	4517.5	29.1
14	160.1	141.3	1288.5	4529.7	32.1
15	145.5	153.3	1288.2	4517.5	29.5
16	138.5	135.0	1288.1	4513.4	33.4
17	125.4	100.2	1288.5	4529.7	45.2
18	126.8	97.5	1289.0	4550.3	46.7
19	127.4	125.9	1288.9	4546.2	36.1
20	129.2	97.4	1289.6	4575.0	47.0
21	130.0	118.8	1289.7	4576.2	38.5
22	134.1	131.2	1289.7	4579.2	34.9
23	125.4	124.6	1289.6	4575.0	36.7
24	114.1	126.1	1289.0	4550.3	36.1
25	121.7	119.2	1288.8	4542.0	38.1
26	111.2	121.1	1288.4	4525.6	37.4
27	98.9	104.2	1288.2	4517.5	43.4
28	83.2	114.6	1287.3	4480.8	39.1
29	86.5	111.8	1286.5	4448.4	39.8
30	95.8	107.0	1286.1	4432.3	41.4
31	91.2	86.5	1286.0	4428.3	51.2
Mean Totals	129.1	125.7	1288.5	4529.9	37.0

Table A.9 Daily midnight reservoir inflow, outflow, elevation, storage capacity, and water retention time for Lake Roosevelt in September, 1991. Data from CORPs daily summary reports.

SEPTEMBER					
DAY OF MONTH	INFLOW (KCFS)	OUTFLOW (KCFS)	RESERVOIR ELEVATION (FT)	STORAGE CAPACITY (K C F S D)	WATER RETENTION (TIMED)
1	87.5	64.7	1286.4	4444.4	68.7
2	90.9	80.2	1286.4	4444.4	55.4
3	92.5	95.7	1286.2	4436.3	46.4
4	100.9	112.5	1285.8	4420.2	39.3
5	105.3	82.3	1286.3	4440.3	54.0
6	109.3	78.2	1286.9	4464.6	57.1
7	110.6	77.5	1287.5	4488.9	57.9
8	105.6	54.0	1288.6	4533.8	84.0
9	100.7	84.9	1288.8	4542.0	53.5
10	85.7	89.0	1288.6	4533.8	50.9
11	82.4	82.2	1288.5	4529.7	55.1
12	73.8	81.1	1288.2	4517.5	55.7
13	73.4	84.5	1287.8	4501.1	53.3
14	61.5	59.2	1287.6	4493.0	75.9
15	71.4	52.7	1287.8	4501.1	85.4
16	66.4	84.7	1287.2	4476.7	52.9
17	66.4	81.2	1286.8	4460.5	54.9
18	75.6	78.3	1286.6	4452.4	56.9
19	79.4	73.5	1286.7	4456.5	60.6
20	93.4	78.4	1286.9	4464.6	56.9
21	93.1	80.3	1287.0	4468.6	55.6
22	86.2	69.4	1287.2	4476.7	64.5
23	85.4	84.8	1287.1	4472.7	52.7
24	88.8	77.4	1287.3	4480.8	57.9
25	83.8	92.7	1287.0	4468.6	48.2
26	87.6	74.4	1286.8	4460.5	60.0
27	81.0	79.4	1286.2	4436.3	55.9
28	50.9	63.9	1285.7	4416.2	69.1
29	57.8	51.0	1285.5	4408.2	86.4
30	70.0	91.6	1284.9	4384.2	47.9
Mean Totals	83.9	78.0	1287.0	4469.2	59.1

Table A.10 Daily midnight reservoir inflow, outflow, elevation, storage capacity, and water retention time for Lake Roosevelt in October, 1991. Data from CORPs daily summary reports.

OCTOBER					
DAY OF M O N T H	INFLOW (KCFS)	OUTFLOW (KCFS)	RESERVOIR ELEVATION (FT)	STORAGE CAPACITY (KCFSD)	WATER RETENTION (DME)
1	76.9	91.1	1284.4	4364.4	47.9
2	90.5	94.7	1284.2	4356.4	46.0
3	98.4	92.6	1284.2	4356.2	47.0
4	107.7	77.1	1284.9	4384.2	56.9
5	101.7	64.9	1285.6	4412.2	68.0
6	100.7	51.7	1286.6	4452.4	86.1
7	111.3	80.4	1287.3	4480.8	55.7
8	97.5	75.9	1287.7	4497.0	59.2
9	88.5	89.3	1287.6	4493.0	50.3
10	82.6	76.4	1287.7	4497.0	58.9
11	79.2	72.8	1287.7	4497.0	61.8
12	83.2	55.8	1288.2	4517.5	81.0
13	81.8	48.1	1288.9	4546.2	94.5
14	92.4	83.3	1289.0	4550.3	54.6
15	85.8	84.2	1289.0	4550.3	54.0
16	78.4	101.7	1288.4	4525.6	44.5
17	76.0	99.0	1287.8	4501.1	45.5
18	74.5	93.3	1287.2	4476.7	48.0
19	77.5	67.0	1287.2	4476.7	66.8
20	84.2	49.3	1287.8	4501.1	91.3
21	82.1	79.1	1287.8	4501.1	56.9
22	84.6	97.8	1287.4	4484.8	45.9
23	80.3	104.7	1286.7	4456.5	42.6
24	94.7	94.7	1286.7	4456.5	47.1
25	99.5	91.4	1286.9	4464.6	48.8
26	90.2	92.2	1286.9	4464.6	48.4
27	93.2	70.9	1287.4	4484.8	63.3
28	100.5	120.8	1286.9	4464.6	37.0
29	106.2	110.2	1286.8	4460.5	40.5
30	104.7	110.7	1286.7	4456.5	40.3
31	115.8	105.7	1286.9	4464.6	42.2
Mean Totals	91.0	84.7	1287.0	4470.8	55.8

Table A.11 Daily midnight reservoir inflow, outflow, elevation, storage capacity, and water retention time for Lake Roosevelt in November, 1991. Data from CORPs daily summary reports.

NOVEMBER					
DAY OF MONTH	INFLOW (KCFS)	OUTFLOW (KCFS)	RESERVOIR ELEVATION (FT)	STORAGE CAPACITY (KCFSD)	WATER RETENTION TIME (D)
1	118.5	118.5	1286.9	4464.6	37.7
2	115.5	99.2	1287.3	4480.8	45.2
3	120.4	91.9	1288.0	4509.3	49.1
4	108.0	97.7	1288.3	4521.5	46.3
5	108.2	98.0	1288.5	4529.7	46.2
6	88.5	117.1	1287.8	4501.1	38.4
7	90.3	98.5	1287.6	4493.0	45.6
8	64.4	76.4	1287.4	4484.4	58.7
9	66.9	66.9	1287.4	4484.4	67.0
10	76.9	58.5	1287.8	4501.1	76.9
11	73.7	75.7	1287.8	4501.1	59.5
12	78.4	72.3	1287.9	4505.1	62.3
13	88.3	100.5	1287.6	4493.0	44.7
14	79.9	104.3	1287.0	4468.0	42.8
15	69.2	103.4	1286.2	4436.3	42.9
16	82.3	66.2	1286.6	4452.4	67.3
17	77.7	57.6	1287.1	4472.7	77.7
18	84.5	98.6	1286.7	4456.5	45.2
19	76.1	104.3	1286.0	4428.3	42.5
20	82.5	106.5	1285.4	4404.2	41.4
21	93.1	111.1	1285.0	4388.2	39.5
22	93.4	93.4	1284.3	4360.4	46.7
23	89.0	79.1	1284.5	4368.3	55.2
24	105.8	73.9	1285.3	4400.2	59.5
25	97.7	93.7	1285.4	4404.2	47.0
26	93.7	81.7	1285.7	4416.2	54.1
27	89.7	93.7	1285.0	4388.2	46.8
28	86.0	53.9	1286.4	4444.4	82.5
29	76.7	58.6	1286.9	4464.6	76.2
30	81.6	85.7	1286.8	4460.5	52.0
Mean Totals	88.6	87.9	1286.7	4456.1	53.2

Table A.12 Daily midnight reservoir inflow, outflow, elevation, storage capacity, and water retention time for Lake Roosevelt in December, 1991. Data from CORPs daily summary reports.

DECEMBER					
DAY OF MONTH	INFLOW (KCFS)	OUTFLOW (KCFS)	RESERVOIR ELEVATION (FT)	STORAGE CAPACITY (K C F S D)	WATER RETENTION (TIMED)
1	72.9	81.0	1286.6	4452.4	55.0
2	82.9	78.9	1286.7	4456.5	56.5
3	96.8	86.7	1286.9	4464.6	51.5
4	89.7	81.6	1287.1	4472.7	54.8
5	87.8	75.6	1287.4	4484.8	59.3
6	80.8	80.8	1287.4	4484.8	55.5
7	78.5	76.4	1287.5	4488.9	58.8
8	82.6	52.0	1288.2	4517.5	86.9
9	86.4	74.1	1288.5	4529.7	61.1
10	97.3	84.9	1288.8	4542.0	53.5
11	96.0	102.2	1288.7	4537.9	44.4
12	86.3	106.8	1288.2	4517.5	42.3
13	105.4	107.2	1288.1	4513.4	42.1
14	78.9	95.2	1287.7	4537.9	47.7
15	82.2	105.6	1287.2	4517.5	42.8
16	73.6	124.0	1285.9	4424.2	35.7
17	78.7	114.7	1285.0	4388.2	38.3
18	68.3	119.9	1283.7	4336.7	36.2
19	68.1	111.3	1282.6	4293.5	38.6
20	78.6	113.7	1281.7	4258.4	37.5
21	70.2	85.7	1281.3	4242.9	49.5
22	90.9	87.0	1281.4	4246.8	48.8
23	86.9	94.6	1281.2	4239.0	44.8
24	88.9	75.3	1281.6	4254.5	56.5
25	96.5	59.6	1282.5	4289.5	72.0
26	91.5	87.6	1282.6	4293.5	49.0
27	95.8	80.2	1283.0	4309.1	53.7
28	96.5	86.6	1283.3	4320.9	49.9
29	111.4	81.9	1284.0	4348.5	53.1
30	105.7	87.8	1284.5	4368.3	49.8
31	100.4	88.4	1284.8	4380.3	49.6
Mean Totals	88.6	87.9	1286.7	4456.1	53.2

APPENDIX B

Table B.1 Mean density ($\#/m^3$) values calculated for zooplankton collected in January 1991 at four sampling locations on Lake Roosevelt, WA

	Gifford Mean Density ($\#/m^3$)	Porcupine Bay Mean Density ($\#/m^3$)	Seven Bays Mean Density ($\#/m^3$)	Spring Canyon Mean Density ($\#/m^3$)
Cladocera				
<i>Ceriodaphnia quadrangula</i>				
<i>Daphnia galeata mendotae</i>				
<i>Daphnia retrocurva</i>				
<i>Daphnia schødleri</i>			0.64	
<i>Daphnia thoria</i>				
<i>Megafenestra aurita</i>				
<i>Simocephalus serrulatus</i>				
<i>Alona guttata</i>			0.20	
<i>Alona quadrangularis</i>				
<i>Chydorus sphaericus</i>			2.57	
<i>Eurycerus iameiiatus</i>				
<i>Pleuroxus denticulatus</i>				
<i>Diaphanosoma brachyurum</i>				
<i>Diaphanosoma birgei</i>				
<i>Sida crys taliina</i>				
<i>Macrothrix la ticornis</i>				
<i>Streblocerus serricaudatus</i>				
<i>Bosmina longirostris</i>				
<i>Leptodora kindti</i>				
Eucopepoda				
<i>Leptodiaptomus ashlandi</i>			8.20	
<i>Skistodiaptomus oregonensis</i>				
<i>Epischura nevadensis</i>				
<i>Diacyclops bicuspidatus thomasi</i>			11.87	
<i>Mesocyclops edax</i>				
<i>Bryocamptus</i> spp.				
Total Daphnia spp.			0.64	
Total Cladocera			3.41	
Total Copepoda			17.80	
Total Nauplii			39.99	
Grand Total			61.20	

Table 8.2 Mean density (#/m³) values calculated for zooplankton collected in February 1991 at four sampling locations on Lake Roosevelt, WA

	Gifford Mean Density (#/m³)	Porcupine Bay Mean Density (#/m³)	Seven Bays Mean Density (#/m³)	Spring Canyon Mean Density (#/m³)
Cladocera				
<i>Ceriodaphnia quadranqula</i>				
<i>Daphnia galeata mendotae</i>				
<i>Daphnia re trocurva</i>				
<i>Daphnia schødleri</i>				
<i>Daphnia thora ta</i>				
<i>Megafenestra aurita</i>				
<i>Simocephalus serruia tus</i>				
<i>Aiona gutta ta</i>				
<i>Aiona quadrangularis</i>				
<i>Chydorus sphaericus</i>				
<i>Eurycerus iameiiatus</i>				
<i>Pleuroxus denticulatus</i>				
<i>Diaphanosoma brachyurum</i>				
<i>Diaphanosoma birgei</i>				
<i>Sida crys tallina</i>		9.63		
<i>Macro thrix la ticornis</i>				
<i>S trebiocerus serricaudatus</i>				
<i>Bosmina iongirostris</i>			6.69	
<i>Leptodora kindti</i>				
Eucopepoda				
<i>Leptodiaptomus ashlandi</i>		16.05	110.97	
<i>Skistodiaptomus oregonensis</i>				
<i>Epischura nevadensis</i>			14.34	
<i>Diacyciops bicuspidatus thomasi</i>		80.26	298.64	
<i>Mesocyclop edax</i>				
<i>Bryocamptus spp.</i>				
Total <i>Daphnia</i> spp.		0.00	0.00	
Total Cladocera		9.63	6.69	
Total Copepoda		96.31	1351.78	
Total Nauplii		767.32	1388.51	
Grand Total		873.26	1770.19	

Table B.3 Mean density (#/m³) values calculated for zooplankton collected in March 1991 at four sampling locations on Lake Roosevelt, WA

	Gifford Mean Density (#/m³)	Porcupine Bay Mean Density (#/m³)	Seven Bays Mean Density (#/m³)	Spring Canyon Mean Density (#/m³)
Cladocera				
<i>Ceriodaphnia quadranqula</i>				
<i>Daphnia gaieata men& tae</i>				
<i>Daphnia re trocurva</i>				
<i>Daphnia schødleri</i>				
<i>Daphnia thorata</i>				
<i>Megafenestra aurita</i>				
<i>Simocephalus serraia tus</i>				
<i>Alona gutta ta</i>				
<i>Alona quadrangularis</i>				
<i>Chydorus sphaericus</i>		0.81	0.15	
<i>Eurycerus iameiiatus</i>				
<i>Pieuroxus den ticia tus</i>				
<i>Diaphanosoma brachyurum</i>				
<i>Diaphanosoma birgei</i>				
<i>Sida crys taliina</i>				
<i>Macro thrix la ticornis</i>				
<i>Streblocerus serricaudatus</i>				
<i>Bosmina iongirostris</i>		6.45		
<i>Leptodora kindti</i>				
Flucopepoda				
<i>Leptodiaptomus ashiandi</i>			14.52	
<i>Skistodiaptomus oregonensis</i>				
<i>Epischura nevadensis</i>			2.90	
<i>Diacyclops bicuspidatus thomasi</i>		246.00	12.34	
<i>Mesocyclop edax</i>				
<i>Bryocamptus spp.</i>				
Total <i>Daphnia</i> spp.		0.00	0.00	
Total Cladocera		7.26	0.15	
Total Copepoda		246.00	29.76	
Total Nauplii		365.37	106.56	
Grand Total		618.63	136.47	

Table B.4 Mean density (#/m³) values calculated for zooplankton collected in April 1991 at four sampling locations on Lake Roosevelt, WA

	Gifford Mean Density (#/m ³)	Porcupine Bay Mean Density (#/m ³)	Seven Bays Mean Density (#/m ³)	Spring Canyon Mean Density (#/m ³)
Cladocera				
<i>Ceriodaphnia quadranqula</i>				
<i>Daphnia galeata mendotae</i>				
<i>Daphnia retrocurva</i>				
<i>Daphnia schødleri</i>			6.36	
<i>Daphnia thora ta</i>				
<i>Megafenestra aurita</i>				
<i>Simocephaius serruiatus</i>				
<i>Aiona gutta ta</i>				
<i>Alona quadrangularis</i>				
<i>Chydorus sphaericus</i>			3.22	
<i>Eurycerus lamellatus</i>				
<i>Pieuroxus denticula tus</i>				
<i>Diaphanosoma brachyurum</i>				
<i>Diaphanosoma birgei</i>				
<i>Sida crys taiiina</i>				
<i>Macrothrix iaticornis</i>				
<i>Streblocerus serricaudatus</i>			0.28	
<i>Bosmina iongirostris</i>			4.88	
<i>Leptodora kindti</i>				
Copepoda				
<i>Leptodiaptomus ashiandi</i>			96.69	
<i>Skis todiaptomus</i>				
<i>oregonensis</i>				
<i>Epischura nevadensis</i>			19.34	
<i>Diacyclops bicuspidatus</i>				
<i>thomasi</i>			122.48	
<i>Mesocyclop edax</i>				
<i>Bryocamptus spp.</i>				
Total <i>Daphnia</i> spp.			6.36	
Total Cladocera			14.74	
Total Copepoda			238.51	
Total Nauplii			925.63	
Grand Total			1,178.89	

Table 8.5 Mean density (#/m³) values calculated for zooplankton collected in May 1991 at four sampling locations on Lake Roosevelt, WA

	Gifford Mean Density (#/m³)	Porcupine Bay Mean Density (#/m³)	Seven Bays Mean Density (#/m³)	Spring Canyon Mean Density (#/m³)
Cladocera				
<i>Ceriodaphnia quadranqula</i>				
<i>Daphnia galeata mendotae</i>			0.87	
<i>Daphnia retrocurva</i>				
<i>Daphnia schødleri</i>		0.40	0.52	2.93
<i>Daphnia thorata</i>				
<i>Megafenestra aurita</i>				
<i>Simocephalus serruiatus</i>				
<i>Alona guttata</i>				
<i>Alona quadrangularis</i>				
<i>Chydorus sphaericus</i>	3.87			
<i>Eurycerus iameiiatus</i>				
<i>Pieuroxus denticulatus</i>				
<i>Diaphanosoma brachyurum</i>				0.73
<i>Diaphanosoma birgei</i>				
<i>Sida crys taiiina</i>				
<i>Macrothrix la ticornis</i>				
<i>Streblocerus serricaudatus</i>	0.29			
<i>Bosmina longirostris</i>		7.79	0.35	
<i>Leptodora kindti</i>		0.40	0.17	0.92
Eucopepoda				
<i>Leptodiaptomus ashlandi</i>	6.78	1.32	9.87	6.60
<i>Skistodiaptomus oregonensis</i>				
<i>Epischura nevadensis</i>			5.81	3.67
<i>Diacyclops bicuspidatus thomasi</i>	10.65	77.87	16.26	68.92
<i>Mesocyclops edax</i>				
<i>Bryocamptus spp.</i>	0.97	1.32		
Total <i>Daphnia</i> spp.	0.00	0.40	1.39	2.93
Total Cladocera	4.16	8.58	1.92	4.59
Total Copepoda	18.39	80.51	31.94	79.19
Total Nauplii	240.03	323.36	190.48	109.25
Grand Total	262.58	412.44	224.33	193.03

Table B.6 Mean density (#/m³) values calculated for zooplankton collected in June 1991 at four sampling locations on Lake Roosevelt, WA

	Gifford Mean Density (#/m³)	Porcupine Bay Mean Density (#/m³)	Seven Bays Mean Density (#/m³)	Spring Canyon Mean Density (#/m³)
Cladocera				
<i>Ceriodaphnia quadranqula</i>				
<i>Daphnia galeata mendotae</i>			1. 21	
<i>Daphnia retrocurva</i>		7. 26	12. 10	
<i>Daphnia schødleri</i>			6. 05	
<i>Daphnia thora ta</i>				
<i>Megafenestra aurita</i>				
<i>Simocephaius serrulatus</i>				
<i>Aiona gutta ta</i>				
<i>Aiona quadrangularis</i>				
<i>Chydorus sphaericus</i>		1. 21		
<i>Eurycerus iameliatus</i>				
<i>Pieuroxus denticulatus</i>				
<i>Diaphanosoma brachyurum</i>				
<i>Diaphanosoma birgei</i>				
<i>Sida crystaiiina</i>				
<i>Macro thrix la ticornis</i>				
<i>Streblocerus serricaudatus</i>			0. 15	
<i>Bosmina iongirostris</i>		102. 84	33. 88	
<i>Leptodora kindti</i>		1. 16	0. 44	
Eucopepoda				
<i>Lep todiaptomus ashiandi</i>		0. 73	26. 62	
<i>Skis todiaptomus oregonensis</i>				
<i>Epischura nevadensis</i>			15. 73	
<i>Diacyclops bicuspidatus thomasi</i>		130. 66	204. 46	
<i>Mesocyclop edax</i>		10. 89	2. 42	
<i>Bryocamptus spp.</i>				
Total <i>Daphnia</i> spp.		7.26	19.36	
Total Cladocera		112.47	53.67	
Total Copepoda		142.28	249.23	
Total Nauplii		578.30	365.37	
Grand Total		833.04	668.26	

Table B.7 Mean density (#/m³) values calculated for zooplankton collected in July 1991 at four sampling locations on Lake Roosevelt, WA

	Gifford Mean Density (#/m³)	Porcupine Bay Mean Density (#/m³)	Seven Bays Mean Density (#/m³)	Spring Canyon Mean Density (#/m³)
Cladocera			0.06	
<i>Ceriodaphnia quadranqula</i>				
<i>Daphnia galeata mendotae</i>	8.80	9.68	11.03	56.00
<i>Daphnia retrocurva</i>		90.98	19.20	453.00
<i>Daphnia schødleri</i>	5.87	8.71	6.84	63.00
<i>Daphnia thora ta</i>		1.94	1.33	1.00
<i>Megafenestra aurita</i>				
<i>Simocephalus serrula tus</i>				
<i>Alona guttata</i>				
<i>Aiona quadrangularis</i>				
<i>Chydorus sphaericus</i>		1.94	1.33	
<i>Eurycerus lamellatus</i>				
<i>Pleuroxus denticulatus</i>				
<i>Diaphanosoma brachyurum</i>				
<i>Diaphanosoma birgei</i>				
<i>Sida crys ta llina</i>			0.15	
<i>Macro thrix la ticornis</i>				
<i>Streblocerus serricaudatus</i>				
<i>Bosmina longirostris</i>	38.13	40.65	51.33	29.00
<i>Leptodora kindti</i>	0.13	0.82	0.36	10.00
Eucopepoda				
<i>Leptodiaptomus ashlandi</i>	4.40	16.45	9.13	161.00
<i>Skis todiaptomus ofegonensis</i>				3.00
<i>Epischura nevadensis</i>		2.90	0.13	6.00
<i>Diacyclops bicuspidatus thomasi</i>	104.12	393.92	102.85	468.00
<i>Mesocyclop edax</i>		61.94	5.13	21.00
<i>Bryocamptus spp.</i>				
Total <i>Daphnia</i> spp.	14.66	111.30	38.40	572.00
Total Cladocera	52.92	154.71	91.64	612.00
Total Copepoda	108.52	475.22	117.25	658.00
Total Nauplii	510.33	1,619.24	202.09	1,062.00
Grand Total	671.77	2,249.18	410.98	2,332.00

Table 8.8 Mean density (#/m³) values calculated for zooplankton collected in August 1991 at four sampling locations on Lake Roosevelt, WA

	Gifford Mean Density (#/m³)	Porcupine Bay Mean Density (#/m³)	Seven Bays Mean Density (#/m³)	Spring Canyon Mean Density (#/m³)
Cladocera				
<i>Ceriodaphnia quadranqula</i>				
<i>Daphnia galeata mendotae</i>	57.00	33.73	206.70	63.06
<i>Daphnia re trocurva</i>	3.00	95.32	69.73	65.99
<i>Daphnia schødleri</i>	17.00	36.66	196.14	95.32
<i>Daphnia thorata</i>	1.00		18.48	
<i>Megafenestra aurita</i>				
<i>Simocephalus serrula tus</i>				
<i>Alona gutta ta</i>				
<i>Alona quadrangularis</i>				
<i>Chydorus sphaericus</i>	1.00		2.57	
<i>Eurycerus lamellatus</i>				
<i>Pleuroxus denticula tus</i>				
<i>Diaphanosoma brachyurum</i>				
<i>Diaphanosoma birgei</i>	1.00	3.33		
<i>Sida crys tallina</i>			1.76	
<i>Macrothrix laticornis</i>				
<i>Streblocerus serricaudatus</i>				
<i>Bosmina longirostris</i>		10.27	66.14	73.32
<i>Leptodora kindti</i>	1.00	0.13	0.70	0.53
Eucopepoda				
<i>Leptodiptomus ashlandi</i>	3.00		24.56	52.79
<i>Skistodiptomus oregonensis</i>		19.06		
<i>Epischura nevadensis</i>	1.00	4.40	11.51	4.40
<i>Diacyclops bicuspidatus thomasi</i>	57.00	429.67	301.36	539.66
<i>Mesocyclop edax</i>		48.39	5.57	
<i>Bryocamptus spp.</i>				
Total <i>Daphnia</i> spp.	78.00	165.71	491.05	224.37
Total Cladocera	81.00	179.44	562.21	298.22
Total Copepoda	62.00	501.53	343.01	596.85
Total Nauplii	28.00	1,058.79	575.51	3,482.85
Grand Total	171.00	1739.76	1,470.73	4,377.93

Table B.9 Mean density (#/m³) values calculated for zooplankton collected in September 1991 at four sampling locations on Lake Roosevelt, WA

	Gifford Mean Density (#/m³)	Porcupine Bay Mean Density (#/m³)	Seven Bays Mean Density (#/m³)	Spring Canyon Mean Density (#/m³)
Cladocera				
<i>Ceriodaphnia quadranqula</i>				
<i>Daphnia galeata mendotae</i>	51.08	48.39	51.33	77.72
<i>Daphnia retrocurva</i>	2.24			
<i>Daphnia schödleri</i>	47.78	64.52	145.18	142.25
<i>Daphnia thora ta</i>	1.19		0.18	
<i>Megafenestra aurita</i>				
<i>Simocephalus serrulatus</i>				
<i>Alona guttata</i>				
<i>Alona quadrangularis</i>				
<i>Chydorus sphaericus</i>				
<i>Eutyceus lamellatus</i>				
<i>Pleuroxus denticulatus</i>				
<i>Diaphanosoma brachyurum</i>			5.87	
<i>Diaphanosoma birgei</i>		2.38	1.47	
<i>Sida crystallina</i>	1.85			7.33
<i>Macrothrix laticornis</i>				
<i>Streblocerus serricaudatus</i>				
<i>Bosmina longiros tris</i>	1.32		1.47	
<i>Leptodora kindti</i>	0.13	1.01	0.26	0.09
Copepoda				
<i>Leptodiaptomus ashlandi</i>	7.13	187.71	92.39	195.04
<i>Skistodiaptomus oregonensis</i>				
<i>Epischura nevadensis</i>	2.24	36.66	36.66	60.13
<i>Diacyclops bicuspidatus thomasi</i>	12.67	82.12	121.72	175.98
<i>Mesocyclops edax</i>		96.79	17.60	1.47
<i>Bryocamptus spp.</i>				
Total <i>Daphnia</i> spp.	102.29	112.92	196.68	219.97
Total Cladocera	105.59	113.31	205.75	227.39
Total Copepoda	22.04	403.28	268.36	432.61
Total Nauplii	22.17	768.43	1,063.19	596.85
Grand Total	149.80	1,288.01	1,537.30	1,256.85

Table B.10 mean density (#/m³) values calculated for zooplankton -collected in October 1991 at four sampling locations on Lake Roosevelt, WA

	Gifford Mean Density (#/m³)	Porcupine Bay Mean Density (#/m³)	Seven Bays Mean Density (#/m³)	Spring Canyon Mean Density (#/m³)
Cladocera				
<i>Ceriodaphnia quadranqula</i>				
<i>Daphnia galeata mendotae</i>		16.13	8.80	1.00
<i>Daphnia retrocurva</i>		2.93		
<i>Daphnia schödleri</i>		200.91	99.72	107.00
<i>Daphnia thora ta</i>		0.04		
<i>Megafenestra aurita</i>				
<i>Simocephalus serrulatus</i>				
<i>Alona guttata</i>				
<i>Alona quadrangularis</i>				
<i>Chydorus sphaericus</i>				
<i>Eurycerus lamellatus</i>				
<i>Pleuroxus denticulatus</i>				
<i>Diaphanosoma brachyurum</i>		2.98	4.40	
<i>Diaphanosoma birgei</i>				
<i>Sida crystallina</i>		1.47		
<i>Macrothrix la ticornis</i>				
<i>Streblocerus serricauda tus</i>			5.87	
<i>Bosmina longirostris</i>				4.00
<i>Leptodora kindti</i>		0.18	079	
Eucopepoda				
<i>Leptodiaptomus ashlandi</i>		350.49	225.84	176.00
<i>Skistodiaptomus oregonensis</i>		2.93	41.06	
<i>Epischura nevadensis</i>		32.26	54.26	
<i>Diacyclops bicuspidatus thomasi</i>		46.93	0.04	66.00
<i>Mesocyclop edax</i>		85.05		3.00
<i>Bryocamptus spp.</i>				
Total <i>Daphnia</i> spp.		220.01	109.98	109.00
Total Cladocera		224.63	121.04	113.00
Total Copepoda		517.66	321.20	245.00
Total Nauplii		523.53	695.10	328.00
Grand Total		1,265.82	1,137.35	686.00

Table B.11 Mean density (#/m³) values calculated for zooplankton collected in November 1991 at four sampling locations on Lake Roosevelt, WA

	Gifford Mean Density (#/m³)	Porcupine Bay Mean Density (#/m³)	Seven Bays Mean Density (#/m³)	Spring Canyon Mean Density (#/m³)
Cladocera				
<i>Ceriodaphnia quadranqula</i>				
<i>Daphnia galeata mendotae</i>			2.93	
<i>Daphnia retrocurva</i>				
<i>Daphnia schødleri</i>			483.93	
<i>Daphnia thora ta</i>				
<i>Megafenestra aurita</i>				
<i>Simocephalus serrulatus</i>				
<i>Alona guttata</i>				
<i>Alona quadrangularis</i>				
<i>Chydorus sphaericus</i>				
<i>Eurycerus lamellatus</i>				
<i>Pleuroxus denticuiatus</i>				
<i>Diaphanosoma brachyurum</i>				
<i>Diaphanosoma birgei</i>				
<i>Sida crystallina</i>			2.93	
<i>Macrothrix la ticornis</i>				
<i>Streblocerus serricaudatus</i>				
<i>Bosmina longirostris</i>			2.93	
<i>Leptodora kindti</i>			0.13	
Eucopepoda				
<i>Lepodiaptomus ashlandi</i>			64.52	
<i>Skistodiaptomus oregonensis</i>			1.47	
<i>Epischura nevadensis</i>				
<i>Diaacyclops bicuspidatus thomasi</i>				
<i>Mesocyclops edax</i>			39.59	
<i>Bryocamptus spp.</i>				
Total <i>Daphnia</i> spp.			486.87	
Total Cladocera			492.86	
Total Copepoda			105.59	
Total Nauplii			137.85	
Grand Total			736.30	

Table B.12 Mean density ($\#/m^3$) values calculated for zooplankton collected in December 1991 at four sampling locations on Lake Roosevelt, WA

	Gifford Mean Density ($\#/m^3$)	Porcupine Bay Mean Density ($\#/m^3$)	Seven Bays Mean Density ($\#/m^3$)	Spring Canyon Mean Density ($\#/m^3$)
Cladocera				
<i>Ceriodaphnia quadrangula</i>				
<i>Daphnia galeata mendotae</i>		0.13	0.31	
<i>Daphnia retrocurva</i>				
<i>Daphnia schodleri</i>	2.00	180.38	9.41	29.00
<i>Daphnia thorata</i>				
<i>Megafenestra aurita</i>				
<i>Simocephalus serrulatus</i>				
<i>Alona guttata</i>				
<i>Alona quadrangularis</i>				
<i>Chydorus sphaericus</i>				
<i>Eurycerus lamellatus</i>				
<i>Pleuroxus denticalus</i>				
<i>Diaphanosoma brachyurum</i>				
<i>Diaphanosoma birgei</i>				
<i>Sida crystallina</i>			0.57	3.00
<i>Macrothrix la ticornis</i>				
<i>Streblocerus serricaudatus</i>				
<i>Bosmina longirostris</i>		45.46	0.57	4.00
<i>Leptodora kindti</i>				2.00
Eucopepoda				
<i>Leptodiaptomus ashlandi</i>	1.00	32.26	2.55	43.00
<i>Skistodiaptomus oregonensis</i>				
<i>Epischura nevadensis</i>		24.93		6.00
<i>Diacyclops bicuspidatus thomasi</i>	4.00	98.25	2.73	45.00
<i>Mesocyclops edax</i>				
<i>Bryocamptus</i> spp.				
Total <i>Daphnia</i> spp.	1.60	180.51	9.72	29.00
Total Cladocera	2.00	225.97	10.78	38.00
Total Copepoda	5.50	155.45	5.28	95.00
Total Nauplii	7.60	214.10	3.65	93.00
Grand Total	15.20	595.52	19.80	225.00

Table B.13 Size ranges (mm), mean lengths (mm) and biomass calculations ($\mu\text{g}/\text{m}^3$) for zooplankton collected at four sampling locations in January 1991 on Lake Roosevelt, WA

	Size range (mm)	Mean length (mm)	Biomass ($\mu\text{g}/\text{m}^3$)
Location 2			
<i>Daphnia galeata mendotae</i>			
<i>Daphnia retrocurva</i>			
<i>Daphnia schødleri</i>			
<i>Daphnia thorata</i>			
<i>Leptodora kindti</i>			
Total Biomass			
Location 4			
<i>Daphnia galeata mendotae</i>			
<i>Daphnia retrocurva</i>			
<i>Daphnia schødleri</i>			
<i>Daphnia thorata</i>			
<i>Leptodora kindti</i>			
Total Biomass			
Location 6			
<i>Daphnia galeata mendotae</i>			
<i>Daphnia retrocurva</i>			
<i>Daphnia schødleri</i>	1.04-1.80	1.25	12.75
<i>Daphnia thorata</i>			
<i>Leptodora kindti</i>			
Total Biomass			12.75
Location 9			
<i>Daphnia galeata mendotae</i>			
<i>Daphnia retrocurva</i>			
<i>Daphnia schødleri</i>			
<i>Daphnia thorata</i>			
<i>Leptodora kindti</i>			
Total Biomass			

Table B.14 Size ranges (mm), mean lengths (mm) and biomass calculations ($\mu\text{g}/\text{m}^3$) for zooplankton collected at four sampling locations in February 1991 on Lake Roosevelt, WA

Biomass was not calculated due to lack of Cladocera in sample.

Table B.15 Size ranges (mm), mean lengths (mm) and biomass calculations ($\mu\text{g}/\text{m}^3$) for zooplankton collected at four sampling locations in March 1991 on Lake Roosevelt, WA

Biomass was not calculated due to lack of Cladocera in sample.

1991 on Lake Roosevelt, WA

	Size range (mm)	Mean length (mm)	Biomass ($\mu\text{g}/\text{m}^3$)
Location 2			
<i>Daphnia galeata mendotae</i>			
<i>Daphnia retrocurva</i>			
<i>Daphnia schødleri</i>			
<i>Daphnia thorata</i>			
<i>Leptodora kindti</i>			
Total Biomass			
Location 4			
<i>Daphnia galeata mendotae</i>			
<i>Daphnia retrocurva</i>			
<i>Daphnia schødleri</i>			
<i>Daphnia thorata</i>			
<i>Leptodora kindti</i>			
Total Biomass			
Location 6			
<i>Daphnia galeata mendotae</i>			
<i>Daphnia retrocurva</i>			
<i>Daphnia schødleri</i>	0-66-0.80	0.73	23.41
<i>Daphnia thorata</i>			
<i>Leptodora kindti</i>			
Total Biomass			23.41
Location 9			
<i>Daphnia galeata mendotae</i>			
<i>Daphnia retrocurva</i>			
<i>Daphnia schødleri</i>			
<i>Daphnia thorata</i>			
<i>Leptodora kindti</i>			
Total Biomass			

Table B.17 Size ranges (mm), mean lengths (mm) and biomass calculations ($\mu\text{g}/\text{m}^3$) for zooplankton collected at four sampling locations in May 1991 on Lake Roosevelt, WA

	Size range (mm)	Mean length (mm)	Biomass ($\mu\text{g}/\text{m}^3$)
Location 2			
<i>Daphnia galeata mendotae</i>			
<i>Daphnia retrocurva</i>			
<i>Daphnia schødleri</i>			
<i>Daphnia thora ta</i>			
<i>Leptodora kindti</i>			
Total Biomass			
Location 4			
<i>Daphnia galeata mendotae</i>			
<i>Daphnia retrocurva</i>			
<i>Daphnia schødleri</i>	0.76	0.76	1.70
<i>Daphnia thora ta</i>			
<i>Leptodora kindti</i>	0.92	0.92	0.13
Total Biomass			1.83
Location 6			
<i>Daphnia galeata mendotae</i>	0.58-0.74	0.68	1.53
<i>Daphnia retrocurva</i>			
<i>Daphnia schødleri</i>	0.76-1.22	1.02	5.51
<i>Daphnia thora ta</i>			
<i>Leptodora kindti</i>	0.92	0.92	0.06
Total Biomass			7.10
Location 9			
<i>Daphnia galeata mendotae</i>			
<i>Daphnia retrocurva</i>			
<i>Daphnia schødleri</i>	0.68-1.50	1.21	52.77
<i>Daphnia thora ta</i>			
<i>Leptodora kindti</i>	1.44-1.92	1.75	1.70
Total Biomass			54.47

Table B.18 Size ranges (mm), mean lengths (mm) and biomass calculations ($\mu\text{g}/\text{m}^3$) for zooplankton collected at four sampling locations in June 1991 on Lake Roosevelt, WA

	Size range (mm)	Mean length (mm)	Biomass ($\mu\text{g}/\text{m}^3$)
Location 2			
<i>Daphnia galeata mendotae</i>			
<i>Daphnia retrocurva</i>			
<i>Daphnia schødleri</i>			
<i>Daphnia thorata</i>			
<i>Leptodora kindti</i>			
Total Biomass			
Location 4			
<i>Daphnia galeata mendotae</i>	0.54-1.76	0.98	28.33
<i>Daphnia retrocurva</i>			
<i>Daphnia schødleri</i>			
<i>Daphnia thorata</i>			
<i>Leptodora kindti</i>	2.00-3.40	2.49	5.49
Total Biomass			33.82
Location 6			
<i>Daphnia galeata mendotae</i>	0.70-1.10	0.83	3.50
<i>Daphnia retrocurva</i>	0.50-1.96	0.89	35.03
<i>Daphnia schødleri</i>	0.60-1.60	0.94	49.16
<i>Daphnia thorata</i>			
<i>Leptodora kindti</i>	1.75-3.75	2.50	3.42
Total Biomass			91.11
Location 9			
<i>Daphnia galeata mendotae</i>			
<i>Daphnia retrocurva</i>			
<i>Daphnia schødleri</i>			
<i>Daphnia thorata</i>			
<i>Leptodora kindti</i>			
Total Biomass			

Table B.19 Size ranges (mm), mean lengths (mm) and biomass calculations ($\mu\text{g}/\text{m}^3$) for zooplankton collected at four sampling locations in July 1991 on Lake Roosevelt, WA

	Size range (mm)	Mean length (mm)	Biomass ($\mu\text{g}/\text{m}^3$)
Location 2			
<i>Daphnia galeata mendotae</i>	0.42-1.16	0.65	13.66
<i>Daphnia retrocurva</i>	0.42-1.30	0.65	16.07
<i>Daphnia thorata</i>	10.00	10.00	25.17
<i>Leptodora kindti</i>			
Total Biomass			54.90
Location 4			
<i>Daphnia galeata mendotae</i>	0.78-1.10	0.83	4.69
<i>Daphnia retrocurva</i>	0.56-2.60	1.18	191.36
<i>Daphnia schødleri</i>	0.76-0.84	0.80	1.70
<i>Daphnia thorata</i>			
<i>Leptodora kindti</i>	2.50-10.00	6.27	45.65
Total Biomass			243.40
Location 6			
<i>Daphnia galeata mendotae</i>	0.68-2.08	1.04	57.47
<i>Daphnia retrocurva</i>	0.66-2.40	1.23	153.22
<i>Daphnia schødleri</i>	0.72-2.16	1.04	77.63
<i>Daphnia thorata</i>	0.86-0.90	0.89	13.73
<i>Leptodora kindti</i>	2.10-8.20	4.03	6.04
Total Biomass			308.09
Location 9			
<i>Daphnia galeata mendotae</i>	0.62-2.32	1.48	686.21
<i>Daphnia retrocurva</i>	0.52-2.42	1.66	9,300.18
<i>Daphnia schødleri</i>	0.64-3.30	1.41	1,817.04
<i>Daphnia thorata</i>	0.84-2.40	2.16	99.09
<i>Leptodora kindti</i>	3.00-14.00	9.10	1505.2
Total Biomass			13,407.72

Table 8.20 Size ranges (mm), mean lengths (mm) and biomass calculations ($\mu\text{g}/\text{m}^3$) for zooplankton collected at four sampling locations in August 1991 on Lake Roosevelt, WA

	Size range (mm)	Mean length (mm)	Biomass ($\mu\text{g}/\text{m}^3$)
Location 2			
<i>Daphnia galeata mendotae</i>	0.60-2.00	1.08	24.22
<i>Daphnia retrocurva</i>	0.82-2.00	1.34	0.44
<i>Daphnia schødleri</i>	0.60-2.80	1.09	10.65
<i>Daphnia thorata</i>	0.98-1.80	1.34	0.42
<i>Leptodora kindti</i>	3.00-11.00	6.07	51.06
Total Biomass			86.79
Location 4			
<i>Daphnia galeata mendotae</i>	0.60-3.40	1.46	400.28
<i>Daphnia retrocurva</i>	0.73-3.40	1.62	1,802.83
<i>Daphnia schødleri</i>	0.88-3.48	1.34	911.05
<i>Daphnia thorata</i>			
<i>Leptodora kindti</i>	2.00-7.00	4.08	2.30
Total Biomass			3,116.46
Location 6			
<i>Daphnia galeata mendotae</i>	0.66-2.68	1.40	2,207.25
<i>Daphnia retrocurva</i>	0.60-2.28	1.41	857.17
<i>Daphnia schødleri</i>	0.82-3.20	1.43	5,922.93
<i>Daphnia thorata</i>	0.66-1.60	1.68	973.98
<i>Leptodora kindti</i>	1.20-9.50	4.29	14.15
Total Biomass			9,975.4
Location 9			
<i>Daphnia galeata mendotae</i>	0.66-2.60	1.19	446.07
<i>Daphnia retrocurva</i>	0.46-2.12	1.14	413.07
<i>Daphnia schødleri</i>	0.66-2.60	1.13	1,402.67
<i>Daphnia thorata</i>			
<i>Leptodora kindti</i>	4.50-13.00	7.25	43.48
Total Biomass			2,305.29

Table 8.21 Size ranges (mm), mean lengths (mm) and biomass calculations ($\mu\text{g}/\text{m}^3$) for zooplankton collected at four sampling locations in September 1991 on Lake Roosevelt, WA

	Size range (mm)	Mean length (mm)	Biomass ($\mu\text{g}/\text{m}^3$)
Location 2			
<i>Daphnia galeata mendotae</i>	0.60-1.96	1.00	232.71
<i>Daphnia retrocurva</i>	0.98-2.20	1.44	29.21
<i>Daphnia schødleri</i>	0.70-2.32	1.05	556.84
<i>Daphnia thorata</i>	1.00-1.42	1.22	27.51
<i>Leptodora kindti</i>	2.20	2.20	0.44
Total Biomass			846.71
Location 4			
<i>Daphnia galeata mendotae</i>	0.70-2.50	1.66	799.76
<i>Daphnia retrocurva</i>	0.68-2.30	1.55	2,513.83
<i>Daphnia thorata</i>			
<i>Leptodora kindti</i>	4.00-11.00	5.83	46.30
Total Biomass			3,359.89
Location 6			
<i>Daphnia galeata mendotae</i>	0.66-2.50	1.31	464.80
<i>Daphnia retrocurva</i>			
<i>Daphnia schødleri</i>	0.82-2.48	1.38	3,679.73
<i>Daphnia thorata</i>	0.21-2.24	1.63	8.76
<i>Leptodora kindti</i>	2.50-8.00	4.92	7.58
Total Biomass			4,160.87
Location 9			
<i>Daphnia galeata mendotae</i>	0.92-2.40	1.84	1,674.72
<i>Daphnia retrocurva</i>			
<i>Daphnia schødleri</i>	0.70-2.44	1.38	3,881.19
<i>Daphnia thorata</i>			
<i>Leptodora kindti</i>	3.00-4.50	3.75	1.27
Total Biomass			5,557.18

Table B.22 Size ranges (mm), mean lengths (mm) and biomass calculations ($\mu\text{g}/\text{m}^3$) for zooplankton collected at four sampling locations in October 1991 on Lake Roosevelt, WA

	Size range (mm)	Mean length (mm)	Biomass ($\mu\text{g}/\text{m}^3$)
Location 2			
<i>Daphnia galeata mendotae</i>			
<i>Daphnia retrocurva</i>			
<i>Daphnia schødleri</i>			
<i>Daphnia thora ta</i>			
<i>Leptodora kindti</i>			
Total Biomass			
Location 4			
<i>Daphnia galeata mendotae</i>	0.82-2.18	1.42	179.11
<i>Daphnia retrocurva</i>	1.58	1.58	51.34
<i>Daphnia schødleri</i>	0.80-3.10	1.66	9,651.83
<i>Daphnia thora ta</i>	1.96	1.96	3.10
<i>Leptodora kindti</i>	4.00-7.50	6.25	9.94
Total Biomass			9,895.32
Location 6			
<i>Daphnia galeata mendotae</i>	0.78-1-58	0.97	37.04
<i>Daphnia retrocurva</i>			
<i>Daphnia schødleri</i>	0.78-2.72	1.54	3,820.75
<i>Daphnia thora ta</i>			
<i>Leptodora kindti</i>	3.50-10.00	7.19	69.39
Total Biomass			3,927.18
Location 9			
<i>Daphnia galeata mendotae</i>			
<i>Daphnia retrocurva</i>			
<i>Daphnia schødleri</i>	1.04-2.28	1.47	3,523.26
<i>Daphnia thora ta</i>			
<i>Leptodora kindti</i>			
Total Biomass			3,523.26

Table B.23 Size ranges (mm), mean lengths (mm) and biomass calculations ($\mu\text{g}/\text{m}^3$) for zooplankton collected at four sampling locations in November 1991 on Lake Roosevelt, WA

	Size range (mm)	Mean length (mm)	Biomass ($\mu\text{g}/\text{m}^3$)
Location 2			
<i>Daphnia galeata mendotae</i>			
<i>Daphnia retrocurva</i>			
<i>Daphnia schødleri</i>			
<i>Daphnia thorata</i>			
<i>Leptodora kindti</i>			
Total Biomass			
Location 4			
<i>Daphnia galeata mendotae</i>	1.46	1.46	1.55
<i>Daphnia retrocurva</i>	0.64-1.96	1.13	55.52
<i>Daphnia schødleri</i>			
<i>Daphnia thorata</i>			
<i>Leptodora kindti</i>			
Total Biomass			57.07
Location 6			
<i>Daphnia galeata mendotae</i>	0.96-1.98	1.47	35.56
<i>Daphnia retrocurva</i>	0.66-2.46	1.45	15,174.43
<i>Daphnia thorata</i>			
<i>Leptodora kindti</i>	15.00	15.00	74.31
Total Biomass			15,284.30
Location 9			
<i>Daphnia galeata mendotae</i>			
<i>Daphnia retrocurva</i>			
<i>Daphnia schødleri</i>			
<i>Daphnia thorata</i>			
<i>Leptodora kindti</i>			
Total Biomass			

Table B.24 Size ranges (mm), mean lengths (mm) and biomass calculations ($\mu\text{g}/\text{m}^3$) for zooplankton collected at four sampling locations in December 1991 on Lake Roosevelt, WA

	Size range (mm)	Mean length (mm)	Biomass ($\mu\text{g}/\text{m}^3$)
Location 2			
<i>Daphnia galeata mendotae</i>			
<i>Daphnia retrocurva</i>	0.60-2.50	1.30	44.46
<i>Daphnia schödleri</i>			
<i>Daphnia thorata</i>			
<i>Leptodora kindti</i>			
Total Biomass			44.46
Location 4			
<i>Daphnia galeata mendotae</i>	1.22	1.22	0.98
<i>Daphnia retrocurva</i>	0.80-2.40	1.57	7,338.67
<i>Daphnia schödleri</i>			
<i>Daphnia thorata</i>			
<i>Leptodora kindti</i>			
Total Biomass			7,339.65
Location 6			
<i>Daphnia galeata mendotae</i>	0.64-1.80	1.32	2.84
<i>Daphnia retrocurva</i>	0.60-2.38	1.31	216.01
<i>Daphnia schödleri</i>			
<i>Daphnia thorata</i>			
<i>Leptodora kindti</i>			
Total Biomass			218.85
Location 9			
<i>Daphnia galeata mendotae</i>	0.96-1.40	1.18	0.14
<i>Daphnia retrocurva</i>	0.76-2.42	1.31	662.54
<i>Daphnia schödleri</i>			
<i>Daphnia thorata</i>			
<i>Leptodora kindti</i>			
Total Biomass			662.68

Table 8.25 identification of rotifers collected in January 1991 at four sampling locations on Lake Roosevelt, WA

	Gifford Porcupine Bay	Seven Bays	Spring Canyon
<i>Asplanchna herricki</i>			
<i>Asplanchna priodonta</i>			
<i>Brachionus quadridentata</i>			
<i>Collotheca mutabilis</i>			
<i>Conochilus unicornis</i>			
<i>Epiphanes</i> spp.			
<i>Euchlanis dilatata</i>			
<i>Euchlanis triquetra</i>			
<i>Filinia terminalis</i>			
<i>Kellicottia longispina</i>		*	
<i>Keratella</i> spp.			
<i>Monostyla lunaris</i>			
<i>Notholca</i> spp.			
<i>Pleosoma truncatum</i>			
<i>Polyarthra</i> spp.		*	
<i>Synchaeta pectinata</i>		.	
<i>Testudinella</i> spp.			
<i>Trichocerca</i> spp.			
<i>Trichotria tetractis</i>			

Table B.26 identification of rotifers collected in February 1991 at four sampling locations on Lake Roosevelt, WA

	Gifford Porcupine Bay	Seven Bays	Spring Canyon
<i>Asplanchna herricki</i>			
<i>Asplanchna priodonta</i>			
<i>Brachionus quadridentata</i>		*	
<i>Collotheca mutabilis</i>			
<i>Conochilus unicornis</i>			
<i>Epiphanes</i> spp.			
<i>Euchlanis dilatata</i>			
<i>Euchlanis triquetra</i>			
<i>Filinia terminalis</i>			
<i>Kellicottia longispina</i>		*	
<i>Keratella</i> spp.		*	
<i>Monostyla lunaris</i>			
<i>Notholca</i> spp.			
<i>Pleosoma truncatum</i>			
<i>Polyarthra</i> spp.	•	•	
<i>Synchaeta pectinata</i>	•	•	
<i>Testudinella</i> spp.			
<i>Trichocerca</i> spp.			
<i>Trichotria tetractis</i>			

Table B.27 Identification of rotifers collected in March 1991 at four sampling locations on Lake Roosevelt, WA

	Gifford Porcupine Bay	Seven Bays	Spring Canyon
<i>Asplanchna herricki</i>			
<i>Asplanchna priodonta</i>			
<i>Brachionus quadridenta ta</i>			
<i>Collo theca mu tabilis</i>			
<i>Conochilus unicornis</i>			
<i>Epiphanes</i> spp.			
<i>Euchlanis dilatata</i>			
<i>Euchlanis triquetra</i>			
<i>Filinia terminalis</i>			
<i>Kellicottia longispina</i>		*	
<i>Keratella</i> spp.		*	
<i>Monos tyla lunaris</i>			
<i>Notholca</i> spp.			
<i>Pleosoma trunca tum</i>			
<i>Polyarthra</i> spp.			
<i>Synchae ta pectina ta</i>			
<i>Testudinella</i> spp.			
<i>Trichocerca</i> spp .			
<i>Trichotria tetractis</i>			

	Gifford Porcupine Bay	Seven Bays	Spring Canyon
<i>Asplanchna herricki</i>			
<i>Asplanchna priodonta</i>			
<i>Brachionus quadridentata</i>		*	
<i>Collotheca mutabilis</i>			
<i>Conochilus unicornis</i>			
<i>Epiphanes</i> spp.			
<i>Euchlanis dilatata</i>			
<i>Euchlanis triquetra</i>			
<i>Filinia terminalis</i>			
<i>Kellicottia longispina</i>		.	
<i>Keratella</i> spp.		.	
<i>Monostyla lunaris</i>			
<i>Notholca</i> spp.		.	
<i>Pleosoma truncatum</i>			
<i>Polyarthra</i> spp.			
<i>Synchaeta pectinata</i>		*	
<i>Testudinella</i> spp.		*	
<i>Trichocerca</i> spp.			
<i>Trichotria tetractis</i>			

Table B.29 Identification of rotifers collected in May 1991 at four sampling locations on Lake Roosevelt, WA

	Gifford	Porcupine	Seven	Spring
		Bay	Bays	Canyon
<i>Asplanchna herricki</i>				
<i>Asplanchna priodonta</i>				
<i>Brachionus quadridentata</i>				
<i>Collotheca mutabilis</i>				
<i>Conochilus unicornis</i>				
<i>Epiphanes</i> spp.				
<i>Euchlanis dilatata</i>				
<i>Euchlanis triquetra</i>				
<i>Filinia terminalis</i>	*		*	
<i>Kellicottia longispina</i>	*	*	*	*
<i>Keratella</i> spp.	•	☒	☒	*
<i>Monos tyla lunaris</i>			*	*
<i>Notholca</i> spp.				
<i>Pleosoma truncatum</i>				
<i>Polyarthra</i> spp.	•	☒	*	☒
<i>Synchaeta pectinata</i>	*	•	☒	*
<i>Testudinella</i> spp.		•		
<i>Trichocerca</i> spp.				
<i>Trichotria tetractis</i>				

Table B.30 Identification of rotifers collected in June 1991 at four sampling locations on Lake Roosevelt, WA

	Gifford	Porcupine	Seven	Spring
	Bay	Bay	Bays	Canyon
<i>Asplanchna herricki</i>		•		
<i>Asplanchna priodonta</i>			•	
<i>Brachionus quadridentata</i>				
<i>Collotheca mutabilis</i>				
<i>Conochilus unicornis</i>				
<i>Epiphanes</i> spp.				
<i>Euchlanis dilatata</i>				
<i>Euchlanis triquetra</i>		*		
<i>Filinia terminalis</i>				
<i>Kellicottia longispina</i>		*	*	
<i>Keratella</i> spp.		•	•	
<i>Monostyla lunaris</i>				
<i>Notholca</i> spp.		*		
<i>Pleosoma truncatum</i>				
<i>Polyarthra</i> spp.		*	•	
<i>Synchaeta pectinata</i>		•	•	
<i>Testudinella</i> spp.		*		
<i>Trichocerca</i> spp.				
<i>Trichotria tetractis</i>				

Table B.31 Identification of rotifers collected in July 1991 at four sampling locations on Lake Roosevelt, WA

	Gifford Porcupine Bay	Seven Bays	Spring Canyon
<i>Asplanchna herricki</i>			
<i>Asplanchna priodonta</i>		*	
<i>Brachionus quadridentata</i>			
<i>Collotheca mutabilis</i>			
<i>Conochilus unicornis</i>			
<i>Epiphanes</i> spp.			
<i>Euchlanis dilatata</i>			
<i>Euchlanis triquetra</i>			
<i>Filinia terminalis</i>			
<i>Kellicottia longispina</i>	*	*	
<i>Keratella</i> spp.	*	*	
<i>Monostyla lunaris</i>	*		
<i>Notholca</i> spp.		*	
<i>Pleosoma truncatum</i>		*	
<i>Polyarthra</i> spp.	*	*	
<i>Synchaeta pectinata</i>	*	*	
<i>Testudinella</i> spp.			
<i>Trichocerca</i> spp.			
<i>Trichotria tetractis</i>			

Table B.32 Identification of rotifers collected in August 1991 at four sampling locations on Lake Roosevelt, WA

	Gifford Porcupine Bay	Seven Bays	Spring Canyon
<i>Asplanchna herricki</i>			
<i>Asplanchna priodonta</i>	*	•	
<i>Brachionus quadridentata</i>			
<i>Collo theca mutabilis</i>			
<i>Conochilus unicornis</i>			
<i>Epiphanes</i> spp.			
<i>Euchlanis</i> dilata			
<i>Euchlanis triquetra</i>			
<i>Filinia terminalis</i>			
<i>Kellicottia longispina</i>	*	*	
<i>Keratella</i> spp.	*	•	
<i>Monos tyla lunaris</i>			
<i>Notholca</i> spp.	*	*	
<i>Pleosoma truncatum</i>	*	*	
<i>Polyarthra</i> spp.	*	•	
<i>Synchaeta pectinata</i>	•	☒	
<i>Testudinella</i> spp.			
<i>Trichocerca</i> spp.			
<i>Trichotria tetractis</i>			

~~Leontideus arizonae~~

Euchlanis triquetra

Filinia terminalis

Kellicottia longispina

Keratella spp.

Monostyla lunaris

Notholca spp.

Pleosoma truncatum

Polyarthra spp.

Synchaeta pectinata

Testudinella spp.

Trichocerca spp.

Trichotria tetractis

Table B.34 Identification of rotifers collected in October 1991 at four sampling locations on Lake Roosevelt, WA

	Gifford Porcupine Bay	Seven Bays	Spring Canyon
<i>Asplanchna herricki</i>			
<i>Asplanchna priodonta</i>			
<i>Brachionus quadridentata</i>			
<i>Collotheca mutabilis</i>			
<i>Conochilus unicornis</i>			
<i>Epiphanes</i> spp.		*	
<i>Euchlanis dilatata</i>			
<i>Euchlanis triquetra</i>			
<i>Filinia terminalis</i>			
<i>Kellicottia longispina</i>			
<i>Keratella</i> spp.			
<i>Monostyla lunaris</i>			
<i>Notholca</i> spp.			
<i>Pleosoma truncatum</i>			
<i>Polyarthra</i> spp.		.	
<i>Synchaeta pectinata</i>		*	
<i>Testudinella</i> spp.			
<i>Trichocerca</i> spp.		*	
<i>Trichotria tetractis</i>			

Table B.35 Identification of rotifers collected in November 1991 at four sampling locations on Lake Roosevelt, WA

	Gifford Porcupine Bay	Seven Bays	Spring Canyon
<i>Asplanchna herricki</i>			
<i>Asplanchna priodonta</i>			
<i>Brachionus quadridentata</i>			
<i>Collotheca mutabilis</i>			
<i>Conochilus unicornis</i>			
<i>Epiphanes</i> spp.			
<i>Euchlanis dilatata</i>			
<i>Euchlanis triquetra</i>			
<i>Filinia terminalis</i>			
<i>Kellicottia longispina</i>			
<i>Keratella</i> spp.			
<i>Monos tyla lunaris</i>			
<i>Notholca</i> spp.			
<i>Pleosoma truncatum</i>			
<i>Polyarthra</i> spp.		*	
<i>Synchaeta pectinata</i>			
<i>Testudinella</i> spp.			
<i>Trichocerca</i> spp.			
<i>Trichotria tetractis</i>			

Table 8.36 Identification of rotifers collected in
 December 1991 at four sampling locations on
 Lake Roosevelt, WA

	Gifford Porcupine Bay	Seven Bays	Spring Canyon
<i>Asplanchna herricki</i>			
<i>Asplanchna priodonta</i>			
<i>Brachionus quadridens</i>			
<i>Collotheca mutabilis</i>			
<i>Conochilus unicornis</i>			
<i>Epiphanes</i> spp.			
<i>Euchlanis dilatata</i>			
<i>Euchlanis triquetra</i>			
<i>Filinia terminalis</i>			
<i>Kellicottia longispina</i>			
<i>Keratella</i> spp.			
<i>Monostyla lunaris</i>			
<i>Notholca</i> spp.			
<i>Pleosoma truncatum</i>			
<i>Polyarthra</i> spp.			
<i>Synchaeta pectinata</i>			
<i>Testudinella</i> spp.			
<i>Trichocerca</i> spp.			
<i>Trichotria tetractis</i>			

APPENDIX C

Table C.I Reservoir depths (feet) at which benthic macroinvertebrate samples were taken from Lake Roosevelt in 1991. (NS = No sample, AD = Any Depth)

RESERVOIR ELEVATION	AREA1 1210	AREA2 1211-1240	AREA3 1241-1290	RESERVOIR ELEVATION	AREA1 1210	AREA2 1211-1240	AREA 1241-1290
1290	180	79 - 50	49	1245	235	34 - 5	4
1289	≥ 79	78 - 49	48	1244	≥ 34	33 - 4	3
1288	≥ 78	77 - 48	47	1243	233	32 - 3	2
1287	≥ 77	76 - 47	46	1242	≥ 32	31 - 2	1
1286	≥ 76	75 - 46	45	1241	≥ 31	30 - 1	0
1285	≥ 75	74 - 45	44	1240	≥ 30	29 - 0	NS
1284	≥ 74	73 - 44	43	1239	≥ 29	≤ 28	NS
1283	≥ 73	72 - 43	42	1238	≥ 28	≤ 27'	NS
1282	≥ 72	71 - 42	41	1237	≥ 27	≤ 26	NS
1281	≥ 71	70 - 41	40	1236	≥ 26	≤ 25	NS
1280	≥ 70	69 - 40	39	1235	≥ 25	≤ 24	NS
1279	≥ 69	68 - 39	38	1234	224	≤ 23	NS
1278	≥ 68	67 - 38	37	1233	≥ 23	≤ 22	NS
1277	≥ 67	66 - 37	36	1232	222	≤ 21	Ns
1276	≥ 66	65 - 36	35	1231	≥ 21	≤ 20	NS
1275	≥ 65	64 - 35	34	1230	≥ 20	≤ 19	NS
1274	≥ 64	63 - 34	33	1229	219	≤ 18	his
1273	≥ 63	62 - 33	32	1228	≥ 18	≤ 17	NS
1272	≥ 62	61 - 32	31	1227	217	≤ 16	NS
1271	≥ 61	60 - 31	30	1226	≥ 16	≤ 15	NS
1270	≥ 60	59 - 30	29	1225	≥ 15	≤ 14	NS
1269	≥ 59	58 - 29	28	1224	114	≤ 13	Ns

TABLE C.I Continued

RESERVOIR ELEVATION	AREA1 1210	AREA2 1211-1240	AREA3 1241-1290	RESERVOIR ELEVATION	AREA1 1210	AREA2 1211-1240	AREA 1241-1290
1268	≥ 58	57 - 28	27	1223	≥ 13	≤ 12	NS
1267	≥ 57	56 - 27	26	1222	≥ 12		NS
1266	≥ 56	55 - 26	25	1221	≥ 11	≤ 10	Ns
1265	≥ 55	54 - 25	24	1220	210	19	NS
1264	254	53 - 24	23	1219	29	≤ 8	Ns
1263	253	52 - 23	22	1218	28	57	NS
1262	≥ 52	51 - 22	21	1217	27	≤ 6	NS
1261	≥ 51	50 - 21	20	1216	26	≤ 5	NS
1260	≥ 50	49 - 20	19	1215	25'	14	NS
1259	≥ 49	48 - 19	18	1214	≥ 4	≤ 3	NS
1258	≥ 48	47 - 18	17	1213	≥ 3	≤ 2	Ns
1257	147	46 - 17	16	1212	22	NS	NS
1256	≥ 46	45 - 16	15	1211	≥ 1	NS	Ns
1255	≥ 45	44 - 15	14	1210	AD	Ns	NS
1254	2.44	43 - 14	13	1209	AD	Ns	NS
1253	≥ 43	42 - 13	12	1208	AD	NS	NS
1252	≥ 42	41 - 12	11	1207	AD	Ns	NS
1251	≥ 41	40 - 11	10	1206	AD	Ns	NS
1250	240	39 - 10	9	1205	AD	Ns	NS
1249	≥ 39	38 - 9	8	1204	AD	NS	NS
1248	≥ 38	37 - 8	7	1203	AD	Ns	NS
1247	≥ 37	36 - 7	6	1202	AD	Ns	NS
1246	≥ 36	35 - 6	5	1201	AD	NS	Ns

Table C.2 **Number of benthic macroinvertebrate samples collected each month at each location on Lake Roosevelt in 1991.**

Date	Elevation	Location	Number of Samples Taken		
			Area 1	Area 2	Area 3
7/17/91	7287	2	3	3	3
7/17/91	7287	4	3	3	3
7/18/91	1287	6	3	3	3
7/18/91	7287	9	3	3	3
8/15/91	7288	2	3	3	3
8/15/91	7288	4	3	3	2
8/4/97	7289	6	3	3	3
8/1/91	1289	9	3	3	3
9/10/91	7289	2	3	3	3
9/10/91	7289	4	3	3	3
9/11/91	1289	6	3	3	3
9/11/91	7289	9	3	3	3
7/0/30/91	7287	2	3	3	3
10/30/91	7287	4	0	0	0
7/0/9/97	7288	6	0	0	0
10/9/91	7288	9	3	3	3

Table C.3 Mean monthly density value (#/m²) ± standard deviation of benthic macroinvertebrates at area one at Gifford (index station 2) in 1991.

Number	July	Aug.	Sept.	Oct	Annual
	X ± S.D.	X ± S.D.	X ± S.D.	X ± S.D.	X
Basommatophora (snails)					
Lymnaeidae					
Planorbidae	63 ± 109	21 ± 36	0 ± 0	0 ± 0	21
Physidae					
Pelecypoda (clams)					
Sphaeriidae	21 ± 36	0 ± 0	670 ± 1,066	126 ± 218	204
Diptera (midges)					
Chironomidae pupae	105 ± 96	0 ± 0	849 ± 749	377 ± 854	332
Chironomidae larvae	252 ± 251	1,446 ± 1,195	5,901 ± 2,916	2,699 ± 5,011	2,623
Simuliidae					
Trichoptera (caddisflies)					
Limnephilidae	21 ± 36	0 ± 0	0 ± 0	125 ± 218	37
Oligocheata (worms)					
Lumbriculidae	2,096 ± 1,147	545 ± 181	2,093 ± 1,996	314 ± 545	1,247
Other					

Weight (g)	July	Aug.	Sept.	Oct	Annual
	X ± S.D.	X ± S.D.	X ± S.D.	X ± S.D.	X
Basommatophora (snails)					
Lymnaeidae					
Planorbidae	0.1 ± 0.2	0.0 ± 0.0	0.0 ± 0.0	0.0 ± 0.0	0.0
Physidae					
Pelecypoda (clams)					
Sphaeriidae	0.1 ± 0.2	0.0 ± 0.0	0.0 ± 0.0	0.0 ± 0.0	0.0
Diptera (midges)					
Chironomidae pupae	0.0 ± 0.0	0.0 ± 0.0	0.1 ± 0.0	0.0 ± 0.0	0.0
Chironomidae larvae	0.0 ± 0.0	0.1 ± 0.2	0.3 ± 0.4	0.1 ± 0.2	0.1
Simuliidae					
Trichoptera (caddisflies)					
Limnephilidae	0.0 ± 0.0	0.0 ± 0.0	0.0 ± 0.0	0.1 ± 0.2	0.0
Oligocheata (worms)					
Lumbriculidae	0.4 ± 0.4	0.2 ± 0.2	0.4 ± 0.4	0.0 ± 0.0	0.3
Other					

Table C.4 Mean monthly density value (#/m²) ± standard deviation of benthic macroinvertebrates at area two at Gifford (index station 2) in- 1991.

Number	July	Aug.	Sept.	Oct	Annual
	X ± S.D.	X ± S.D.	X ± S.D.	X ± S.D.	X̄
Basommatophora (snails) Lymnaeidae Planorbidae Physidae	0 ± 0	0 ± 0	63 ± 109	0 ± 0	16
Pelecypoda (clams) Sphaeriidae	94 ± 133	0 ± 0	0 ± 0	0 ± 0	24
Diptera (midges) Chironomidae pupae Chironomidae larvae Simuliidae	283 ± 400 503 ± 823	126 ± 109 1,603 ± 1,963	503 ± 576 2,379 ± 1,826	377 ± 0 1,698 ± 0	332 1,546
Trichoptera (caddisflies) Limnephilidae	0 ± 0	0 ± 0	63 ± 109	0 ± 0	16
Oligocheata (worms) Lumbriculidae	4,088 ± 5,159	31 ± 54	189 ± 189	0 ± 0	1,077
Other					

Weight (g)	July	Aug.	Sept.	Oct	Annual
	X ± S.D.	X ± S.D.	X ± S.D.	X ± S.D.	X̄
Basommatophora (snails) Lymnaeidae Planorbidae Physidae	0.0 ± 0.0	0.0 ± 0.0	0.0 ± 0.0	0.0 ± 0.0	0.0
Pelecypoda (clams) Sphaeriidae	0.0 ± 0.0	0.0 ± 0.0	0.0 ± 0.0	0.0 ± 0.0	0.0
Diptera (midges) Chironomidae pupae Chironomidae larvae Simuliidae	0.0 ± 0.0 0.0 ± 0.0	0.0 ± 0.0 0.2 ± 0.2	0.1 ± 0.2 0.2 ± 0.2	0.0 ± 0.0 0.1 ± 0.0	0.0 0.1
Trichoptera (caddisflies) Limnephilidae	0.0 ± 0.0	0.0 ± 0.0	0.1 ± 0.0	0.0 ± 0.0	0.0
Oligocheata (worms) Lumbriculidae	0.7 ± 0.9	0.0 ± 0.0	0.1 ± 0.2	0.0 ± 0.0	0.2
Other					

Table C.5 Mean monthly density value (#/m²) ± standard deviation of benthic macroinvertebrates at area three at Gifford (index station 2) in 1991.

Number	July	Aug.	Sept.	Oct	Annual
	$\bar{X} \pm S.D.$	$X \pm S.D.$	$\bar{X} \pm S.D.$	$X \pm S.D.$	
Basommatophora (snails)					
Lymnaeidae	0 ± 0	0 ± 0	0 ± 0	1,604 ± 2,268	401
Planorbidae	94 ± 31	42 ± 73	0 ± 0	2,201 ± 3,024	584
Physidae	42 ± 73	0 ± 0	0 ± 0	0 ± 0	10
Pelecypoda (clams)					
Sphaeriidae					
Diptera (midges)					
Chironomidae pupae	157 ± 196	209 ± 310	660 ± 934	849 ± 1,201	469
Chironomidae larvae	765 ± 1,189	1,740 ± 1,868	2,814 ± 3,624	5,566 ± 7,605	2,721
Simuliidae					
Trichoptera (caddisflies)					
Limnephilidae	0 ± 0	0 ± 0	94 ± 133	126 ± 89	55
Oligocheata (worms)					
Lumbriculidae	660 ± 582	1,279 ± 1,358	94 ± 133	314 ± 445	587
Other					

Weight (g)	July	Aug.	Sept.	Oct	Annual
	$\bar{X} \pm S.D.$	$\bar{X} \pm S.D.$	$\bar{X} \pm S.D.$	$\bar{X} \pm S.D.$	
Basommatophora (snails)					
Lymnaeidae	0.0 ± 0.0	0.0 ± 0.0	0.0 ± 0.0	0.1 ± 0.2	0.0
Planorbidae	0.1 ± 0.0	0.1 ± 0.2	0.0 ± 0.0	0.3 ± 0.4	0.1
Physidae	0.0 ± 0.0	0.0 ± 0.0	0.0 ± 0.0	0.0 ± 0.0	0.0
Pelecypoda (clams)					
Sphaeriidae					
Diptera (midges)					
Chironomidae pupae	0.0 ± 0.0	0.1 ± 0.2	0.0 ± 0.0	0.1 ± 0.2	0.1
Chironomidae larvae	0.1 ± 0.2	0.2 ± 0.2	0.3 ± 0.2	0.6 ± 0.8	0.3
Simuliidae					
Trichoptera (caddisflies)					
Limnephilidae	0.0 ± 0.0	0.0 ± 0.0	0.0 ± 0.0	0.1 ± 0.2	0.0
Oligocheata (worms)					
Lumbriculidae	0.2 ± 0.2	0.1 ± 0.2	0.1 ± 0.0	0.1 ± 0.2	0.1
Other					

Table C.6 Mean monthly density value (#/m²) ± standard deviation of benthic macroinvertebrates at area one at Porcupine Bay (index station 4) in 1991.

Number	July	Aug.	Sept.	Oct	Annua X̄
	X ± S.D.	X̄ ± S.D.	X ± S.D.	X̄ ± S.D.	
Basommatophora (snails) Lymnaeidae Planorbidae Physidae					
Pelecypoda (clams) Sphaeridae	0 ± 0	94 ± 163	2,615 ± 1,510		982
Diptera (midges) Chironomidae pupae Chironomidae larvae Simuliidae	94 ± 133 3,396 ± 2,935	377 ± 854 11,415 ± 16,750	84 ± 145 2,620 ± 2,311		185 5,811
Trichoptera (caddisflies) Limnephilidae					
Oligochaeta (worms) Lumbriculidae	472 ± 133	231 ± 238	1,331 ± 862		678
Other					

Weight (g)	July	Aug.	Sept.	Oct	Annua X̄
	X ± S. D.	X ± S. D.	X ± S.D.	X ± S.D.	
Basommatophora (snails) Lymnaeidae Planorbidae Physidae					
Pelecypoda (clams) Sphaeridae	0.0 ± 0.0	0.0 ± 0.0	0.3 ± 0.0		0.1
Diptera (midges) Chironomidae pupae Chironomidae larvae Simuliidae	0.0 ± 0.0 0.4 ± 0.4	0.1 ± 0.2 1.1 ± 0.9	0.1 ± 0.2 0.1 ± 0.0		0.1 0.5
Trichoptera (caddisflies) Limnephilidae					
Oligochaeta (worms) Lumbriculidae	0.3 ± 0.0	0.9 ± 1.3	0.1 ± 1.3		0.7
Other					

Table C.7 Mean monthly density value (#/m²) ± standard deviation of benthic macroinvertebrates at area two at Porcupine Bay (index station 4) in 1991.

Number	July X ± S.D.	Aug. X̄ ± S.D.	Sept. X ± S.D.	Oct X̄ ± S.D.	Annual X̄
Basommatophora (snails)					
Lymnaeidae					
Planorbidae	0 ± 0	0 ± 0	31 ± 44		10
Physidae					
Pelecypoda (clams)					
Sphaeriidae	503 ± 781	0 ± 0	0 ± 0		168
Diptera (midges)					
Chironomidae pupae	189 ± 0	63 ± 109	818 ± 178		356
Chironomidae larvae	1,446 ± 1,105	4,927 ± 3,404	566 ± 445		2,313
Simuliidae					
Trichoptera (caddisflies)					
Limnephilidae	0 ± 0	0 ± 0	63 ± 89		21
Oligocheata (worms)					
Lumbriculidae	2,138 ± 2,462	314 ± 251	1,163 ± 756		1,205
Other					

Weight (g)	July X ± S.D.	Aug. X ± S.D.	Sept. X ± S.D.	Oct X ± S.D.	Annual X
Basommatophora (snails)					
Lymnaeidae					
Planorbidae	0.0 ± 0.0	0.0 ± 0.0	0.0 ± 0.0		0.0
Physidae					
Pelecypoda (clams)					
Sphaeriidae	0.0 ± 0.0	0.0 ± 0.0	0.0 ± 0.0		0.0
Diptera (midges)					
Chironomidae pupae	0.1 ± 0.2	0.0 ± 0.0	0.1 ± 0.0		0.1
Chironomidae larvae	0.7 ± 0.4	0.8 ± 0.6	0.1 ± 0.0		0.5
Simuliidae					
Trichoptera (caddisflies)					
Limnephilidae	0.0 ± 0.0	0.0 ± 0.0	0.0 ± 0.0		0.0
Oligocheata (worms)					
Lumbriculidae	0.5 ± 0.2	0.3 ± 0.4	0.8 ± 0.2		0.5
Other					

Table C.8 Mean monthly density value (#/m²) ± standard deviation of benthic macroinvertebrates at area three at Porcupine Bay (index station 4) in 1991.

Number	July	Aug.	Sept.	Oct	Annual
	$\bar{X} \pm S.D.$	$\bar{X} \pm S.D.$	$\bar{X} \pm S.D.$	$\bar{X} \pm S.D.$	\bar{X}
Basommatophora (snails)					
Lymnaeidae	0 ± 0	272 ± 472	0 ± 0		91
Planorbidae	63 ± 109	42 ± 36	126 ± 218		77
Physidae					
Pelecypoda (clams)					
Sphaeriidae					
Diptera (midges)					
Chironomidae pupae	0 ± 0	126 ± 109	115 ± 127		80
Chironomidae larvae	189 ± 250	3,019 ± 3,660	1,971 ± 2,924		1,726
Simuliidae					
Trichoptera (caddisflies)					
Limnephilidae					
Oligocheata (worms)					
Lumbriculidae	63 ± 109	2,579 ± 1,692	3,522 ± 5,151		2,054
Other					

Weight (g)	July	Aug.	Sept.	Oct	Annual
	$\bar{X} \pm S.D.$	$\bar{X} \pm S.D.$	$\bar{X} \pm S.D.$	$\bar{X} \pm S.D.$	\bar{X}
Basommatophora (snails)					
Lymnaeidae	0.0 ± 0.0	0.5 ± 0.8	0.0 ± 0.0		0.2
Planorbidae	0.1 ± 0.2	0.0 ± 0.0	0.0 ± 0.0		0.0
Physidae					
Pelecypoda (clams)					
Sphaeriidae					
Diptera (midges)					
Chironomidae pupae	0.0 ± 0.0	0.0 ± 0.0	0.0 ± 0.0		0.0
Chironomidae larvae	0.2 ± 0.2	0.6 ± 0.4	0.2 ± 0.4		0.3
Simuliidae					
Trichoptera (caddisflies)					
Limnephilidae					
Oligocheata (worms)					
Lumbriculidae	0.0 ± 0.0	0.6 ± 0.2	0.6 ± 0.6		0.4
Other					

Table C.9 Mean monthly density value (#/m²) ± standard deviation of benthic macroinvertebrates at area one at Seven Bays (index station 6) in 1991.

Number	July	Aug.	Sept.	Oct	Annual
	X ± S.D.	X ± S.D.	X ± S.D.	X ± S.D.	X
Basommatophora (snails)					
Lymnaeidae	0 ± 0	0 ± 0	21 ± 36		7
Planorbidae					
Physidae					
Pelecypoda (clams)					
Sphaeridae	42 ± 73	0 ± 0	0 ± 0		14
Diptera (midges)					
Chironomidae pupae	0 ± 0	503 ± 475	335 ± 428		279
Chironomidae larvae	629 ± 931	1,258 ± 1,113	1,992 ± 1,309		1,293
Simuliidae					
Trichoptera (caddisflies)					
Limnephilidae	0 ± 0	0 ± 0	94 ± 133		31
Oligocheata (worms)					
Lumbriculidae	199 ± 173	566 ± 559	839 ± 346		535
Other					

Weight (g)	July	Aug.	Sept.	Oct	Annual
	X ± S.D.	X ± S.D.	X ± S.D.	X ± S.D.	X
Basommatophora (snails)					
Lymnaeidae	0.0 ± 0.0	0.0 ± 0.0	0.0 ± 0.0		0.0
Planorbidae					
Physidae					
Pelecypoda (clams)					
Sphaeridae	0.0 ± 0.0	0.0 ± 0.0	0.0 ± 0.0		0.0
Diptera (midges)					
Chironomidae pupae	0.0 ± 0.0	0.1 ± 0.0	0.1 ± 0.2		0.1
Chironomidae larvae	0.0 ± 0.0	0.2 ± 0.2	0.3 ± 0.2		0.2
Simuliidae					
Trichoptera (caddisflies)					
Limnephilidae	0.0 ± 0.0	0.0 ± 0.0	0.1 ± 0.2		0.0
Oligocheata (worms)					
Lumbriculidae	0.1 ± 0.2	0.2 ± 0.4	0.1 ± 0.0		0.1
Other					

Table C.10 Mean monthly density value (#/m²) ± standard deviation of benthic macroinvertebrates at area two at Seven Bays (index station 6) in 1991.

Number	July	Aug.	Sept.	Oct	Annual
	$\bar{X} \pm S.D.$	$\bar{X} \pm S.D.$	$\bar{X} \pm S.D.$	$\bar{X} \pm S.D.$	X
Basommatophora (snails) Lymnaeidae Planorbidae Physidae					
Pelecypoda (clams) Sphaeridae					
Diptera (midges) Chironomidae pupae Chironomidae larvae Simuliidae	0 ± 0 314 ± 393	503 ± 475 1,813 ± 995	21 ± 38 566 ± 189		174 898
Trichoptera (caddisflies) Limnephilidae					
Oligocheata (worms) Lumbriculidae	1,195 ± 1,582	818 ± 393	168 ± 158		727
Other					

Weight (g)	July	Aug.	Sept.	Oct	Annual
	$\bar{X} \pm S.D.$	$\bar{X} \pm S.D.$	$\bar{X} \pm S.D.$	$\bar{X} \pm S.D.$	X
Dasommatophora (snails) Lymnaeidae Planorbidae Physidae					
Pelecypoda (clams) Sphaeridae					
Diptera (midges) Chironomidae pupae Chironomidae larvae Simuliidae	0.0 ± 0.0 0.1 ± 0.2	0.3 ± 0.2 0.4 ± 0.2	0.0 ± 0.0 0.1 ± 0.2		0.1 0.2
Trichoptera (caddisflies) Limnephilidae					
Oligocheata (worms) Lumbriculidae	0.9 ± 1.3	0.3 ± 0.2	0.1 ± 0.0		0.4
Other					

Table C.11 Mean monthly density v a l u e (#/m²) ± standard deviation of benthic macroinvertebrates at area three at Seven Bays (index station 6) in 1991.

Number	July	Aug.	Sept.	Oct	Annual
	X ± S.D.	X ± S.D.	X ± S.D.	X ± S.D.	X
Basommatophora (snails) Lymnaeidae Planorbidae Physidae					
Pelecypoda (clams) Sphaeridae					
Diptera (midges) Chironomidae pupae Chironomidae larvae Simuliidae	566 ± 499 2,358 ± 2,231	377 ± 499 4,151 ± 5,242	0 ± 0 2,453 ± 3,469		314 2,987
Trichoptera (caddisflies) Limnephilidae	63 ± 54	0 ± 0	94 ± 133		52
Oligocheata (worms) Lumbriculidae	63 ± 109	94 ± 163	349 ± 1,201		335
Other					

Weight (g)	July	Aug.	Sept.	Oct	Annual
	X ± S.D.	X ± S.D.	X ± S.D.	X ± S.D.	X
Basommatophora (snails) Lymnaeidae Planorbidae Physidae					
Pelecypoda (clams) Sphaeridae					
Diptera (midges) Chironomidae pupae Chironomidae larvae Simuliidae	0.1 ± 0.0 0.1 ± 1.1	0.3 ± 0.2 0.6 ± 0.6	0.0 ± 0.0 0.1 ± 0.2		0.1 0.6
Trichoptera (caddisflies) Limnephilidae	0.1 ± 0.2	0.0 ± 0.0	0.0 ± 0.0		0.0
Oligocheata (worms) Lumbriculidae	0.0 ± 0.0	0.2 ± 0.4	0.2 ± 0.4		0 . 1
Other					

Table C.12 Mean monthly density value (#/m²) ± standard deviation of benthic macroinvertebrates at area one at Spring Canyon (index station 9) in 1991.

Number	July	Aug.	Sept.	Oct	Annual
	$\bar{X} \pm \text{S.D.}$	$\bar{X} \pm \text{S.D.}$	$\bar{X} \pm \text{S.D.}$	$\bar{X} \pm \text{S.D.}$	\bar{X}
Basommatophora (snails)					
Lymnaeidae	0 ± 0	63 ± 109	0 ± 0	0 ± 0	16
Planorbidae	0 ± 0	169 ± 327	0 ± 0	0 ± 0	47
Physidae	63 ± 94	0 ± 0	0 ± 0	63 ± 109	31
Pelecypoda (clams)					
Sphaeriidae	94 ± 94	0 ± 0	314 ± 218	0 ± 0	102
Diptera (midges)					
Chironomidae pupae	0 ± 0	629 ± 931	0 ± 0	0 ± 0	157
Chironomidae larvae	126 ± 218	3,836 ± 6,003	314 ± 393	0 ± 0	1,069
Simuliidae	63 ± 109	0 ± 0	0 ± 0	0 ± 0	16
Trichoptera (caddisflies)					
Limnephilidae	283 ± 490	0 ± 0	0 ± 0	314 ± 545	149
Oligocheata (worms)					
Lumbriculidae	252 ± 436	126 ± 109	744 ± 755	126 ± 216	312
Other					

Weight (g)	July	Aug.	Sept.	Oct	Annual
	$\bar{X} \pm \text{S.D.}$	$\bar{X} \pm \text{S.D.}$	$\bar{X} \pm \text{S.D.}$	$\bar{X} \pm \text{S.D.}$	\bar{X}
Basommatophora (snails)					
Lymnaeidae	0.0 ± 0.0	0.0 ± 0.0	0.0 ± 0.0	0.0 ± 0.0	0.0
Planorbidae	0.1 ± 0.2	0.2 ± 0.2	0.0 ± 0.0	0.0 ± 0.0	0.1
Physidae	2.5 ± 4.3	0.0 ± 0.0	0.0 ± 0.0	0.1 ± 0.2	0.7
Pelecypoda (clams)					
Sphaeriidae	0.1 ± 0.2	0.0 ± 0.0	0.1 ± 0.0	0.0 ± 0.0	0.1
Diptera (midges)					
Chironomidae pupae	0.0 ± 0.0	0.1 ± 0.0	0.0 ± 0.0	0.0 ± 0.0	0.0
Chironomidae larvae	0.1 ± 0.2	0.3 ± 0.4	0.0 ± 0.0	0.0 ± 0.0	0.1
Simuliidae	0.0 ± 0.0	0.0 ± 0.0	0.0 ± 0.0	0.0 ± 0.0	0.0
Trichoptera (caddisflies)					
Limnephilidae	0.4 ± 0.8	0.0 ± 0.0	0.0 ± 0.0	0.1 ± 0.2	0.1
Oligocheata (worms)					
Lumbriculidae	0.2 ± 0.4	0.1 ± 0.2	0.1 ± 0.0	3.6 ± 6.2	1.0
Other					

Table C.13 Mean monthly density value (#/m²) ± standard deviation of benthic macroinvertebrates at area two at Spring Canyon (index station 9) in 1991.

Number	July	Aug.	Sept.	Oct	Annua
	X ± S.D.	X ± S.D.	X ± S.D.	X ± S.D.	X
Basommatophora (snails)					
Lymnaeidae	0 ± 0	0 ± 0	0 ± 0	189 ± 189	47
Pianorbidae	83 ± 109	0 ± 0	252 ± 436	189 ± 189	126
Physidae	0 ± 0	63 ± 109	126 ± 218	0 ± 0	47
Peicypoda (clams)					
Sphaeridae					
Diptera (midges)					
Chironomidae pupae	0 ± 0	63 ± 109	63 ± 109	0 ± 0	31
Chironomidae larvae	629 ± 109	1,111 ± 963	859 ± 1,061	1816 ± 1,105	854
Simuliidae					
Trichoptera (caddisflies)					
Limnephilidae	63 ± 109	0 ± 0	0 ± 0	377 ± 654	110
Oligocheata (worms)					
Lumbriculidae	126 ± 218	0 ± 0	398 ± 535	63 ± 109	147
Other					

Weight (g)	July	Aug.	Sept.	Oct	Annua
	X ± S.D.	X ± S.D.	X ± S.D.	X ± S.D.	X
Basommatophora (snails)					
Lymnaeidae	0.0 ± 0.0	0.0 ± 0.0	0.0 ± 0.0	0.4 ± 0.6	0.1
Pianorbidae	1.9 ± 3.2	0.0 ± 0.0	0.0 ± 0.0	0.0 ± 0.0	0.5
Physidae	0.0 ± 0.0	0.1 ± 0.2	0.1 ± 0.2	0.0 ± 0.0	0.1
Peicypoda (clams)					
Sphaeridae					
Diptera (midges)					
Chironomidae pupae	0.0 ± 0.0	0.0 ± 0.0	0.0 ± 0.0	0.0 ± 0.0	0.0
Chironomidae larvae	0.1 ± 0.0	4.1 ± 6.2	0.0 ± 0.0	0.1 ± 0.0	1.1
Simuliidae					
Trichoptera (caddisflies)					
Limnephilidae	0.3 ± 0.6	0.0 ± 0.0	0.0 ± 0.0	0.2 ± 0.4	0.1
Oligocheata (worms)					
Lumbriculidae	0.9 ± 1.5	0.0 ± 0.0	0.6 ± 0.6	0.0 ± 0.0	0.4
Other					

Table C.14 Mean monthly density value (#/m²) ± standard deviation of benthic macroinvertebrates at area three at Spring Canyon (index station 9) in 1991.

Number	July	Aug.	Sept.	Oct	Annual
	X ± S.D.	X ± S.D.	X ± S.D.	X ± S.D.	X
Basommatophora (snails)					
Lymnaeidae					
Planorbidae	692 ± 892	21 ± 36	21 ± 36	6 ± 11	185
Physidae					
Pelecypoda (clams)					
Sphaeriidae					
Diptera (midges)					
Chironomidae pupae	252 ± 288	189 ± 327	0 ± 0	0 ± 0	110
Chironomidae larvae	4,967 ± 5,424	3,291 ± 5,483	168 ± 192	0 ± 0	2,107
Simuliidae					
Trichoptera (caddisflies)					
Limnephilidae					
Oligochaeta (worms)					
Lumbriculidae	126 ± 218	2,516 ± 4,357	0 ± 0	0 ± 0	660
Other					

Weight (g)	July	Aug.	Sept.	Oct	Annual
	X ± S.D.	X ± S.D.	X ± S.D.	X ± S.D.	X
Basommatophora (snails)					
Lymnaeidae					
Planorbidae	1.6 ± 2.6	0.1 ± 0.2	0.0 ± 0.0	0.0 ± 0.0	0.4
Physidae					
Pelecypoda (clams)					
Sphaeriidae					
Diptera (midges)					
Chironomidae pupae	0.0 ± 0.0	0.1 ± 0.2	0.0 ± 0.0	0.0 ± 0.0	0.0
Chironomidae larvae	0.5 ± 0.6	0.5 ± 0.8	0.1 ± 0.0	0.1 ± 0.0	0.3
Simuliidae					
Trichoptera (caddisflies)					
Limnephilidae					
Oligochaeta (worms)					
Lumbriculidae	0.0 ± 0.0	0.2 ± 0.4	0.0 ± 0.0	0.0 ± 0.0	0.1
Other					

Table C.15 Mean monthly percent composition of benthic macroinvertebrates at area one at Gifford (index station 2) in 1991.

Number	July % by #	Aug. % by #	Sept. % by #	Oct %by#	Annual %
Basommatophora (snails)					
Lymnaeidae					
Planorbidae	2%	1%	0%	0%	0%
Physidae					
Pelecypoda (clams)					
Sphaeridae	1%	0%	7%	3%	5%
Diptera (midges)					
Chironomidae pupae	4%	0%	9%	10%	7%
Chironomidae larvae	10%	72%	62%	75%	59%
Simuliidae					
Trichoptera (caddisflies)					
Limnephiliidae	1%	0%	0%	3%	1%
Oligochaeta (worms)					
Lumbriculiidae	82%	27%	22%	8%	28%
Other					

Weight	July % by wt.	Aug. % by wt.	Sept. % by wt.	Oct % by wt.	Annual %
Basommatophora (snails)					
Lymnaeidae					
Planorbidae	17%	0%	0%	0%	5%
Physidae					
Pelecypoda (clams)					
Sphaeridae	1.7%	0%	0%	0%	5%
Diptera (midges)					
Chironomidae pupae	0%	0%	13%	0%	5%
Chironomidae larvae	0%	33%	38%	50%	26%
Simuliidae					
Trichoptera (caddisflies)					
Limnephiliidae	0%	0%	0%	50%	5%
Oligochaeta (worms)					
Lumbriculiidae	67%	67%	50%	0%	53%
Other					

Table C.16 Mean monthly percent coinposition of benthic macroinvertebrates at area two at Gifford (index station 2) in 1991.

Number	July % by #	Aug. % by #	Sept. % by #	Oct % by #	Annual %
Basommatophora (snails)					
Lymnaeidae					
Planorbidae					
Physidae	0%	0%	2%	0%	1%
Peiacyprida (clams)					
Sphaeriidae	2%	0%	0%	0%	1%
Diptera (midges)					
Chironomidae pupae	6%	7%	16%	18%	11%
Chironomidae larvae	10%	91%	74%	82%	52%
Simuliidae					
Trichoptera (caddisflies)					
Limnephilidae	0%	0%	2%	0%	1%
Oligochaeta (worms)					
Lumbriculidae	82%	2%	%	0%	36%
Other					

Weight	July % by wt.	Aug. % by wt.	Sept. % by wt.	Oct % by wt.	Annual %
Basommatophora (snails)					
Lymnaeidae					
Planorbidae					
Physidae	0%	0%	0%	0%	0%
Peiacyprida (clams)					
Sphaeriidae	0%	0%	0%	0%	0%
Diptera (midges)					
Chironomidae pupae	0%	0%	20%	0%	7%
Chironomidae larvae	0%	100%	40%	100%	33%
Simuliidae					
Trichoptera (caddisflies)					
Limnephilidae	0%	0%	20%	0%	7%
Oligochaeta (worms)					
Lumbriculidae	100%	0%	20%	0%	53%
Other					

Table C.17 Mean monthly percent composition of benthic macroinvertebrates at area three at Gifford (index station 2) in 1991.

Number	July % by #	Aug. % by #	Sept. % by #	Oct % by #	Annua %
Basommatophora (snails)					
Lymnaeidae	0%	0%	0%	15%	8%
Planorbidae	5%	1%	0%	21%	12%
Physidae	2%	0%	0%	0%	0%
Pelecypoda (clams)					
Sphaeriidae					
Diptera (midges)					
Chironomidae pupae	9%	6%	18%	8%	10%
Chironomidae larvae	45%	53%	77%	52%	56%
Simuliidae					
Trichoptera (caddisflies)					
Limnephilidae	0%	0%	3%	1%	1%
Oligochaeta (worms)					
Lumbriculidae	50%	20%	25%	8%	19%
Other					

Weight	July % by wt.	Aug. % by wt.	Sept. % by wt.	Oct % by wt.	Annua %
Basommatophora (snails)					
Lymnaeidae	0%	0%	0%	8%	4%
Planorbidae	25%	20%	0%	23%	19%
Physidae	0%	0%	0%	0%	0%
Pelecypoda (clams)					
Sphaeriidae					
Diptera (midges)					
Chironomidae pupae	0%	20%	0%	8%	8%
Chironomidae larvae	25%	40%	75%	46%	46%
Simuliidae					
Trichoptera (caddisflies)					
Limnephilidae	0%	0%	0%	8%	4%
Oligochaeta (worms)					
Lumbriculidae	50%	20%	25%	8%	19%
Other					

Table C.18 Mean monthly percent composition of benthic macroinvertebrates at area one at Porcupine Bay (index station 4) in 1991.

Number	July % by #	Aug. % by #	Sept. % by #	Oct % by #	Annua %
Basommatophora (snails) Lymnaeidae Planorbidae Physidae					
Peiacyprida (clams) Sphaeriidae	0%	1%	41%		13%
Diptera (midges) Chironomidae pupae Chironomidae larvae Simuliidae	2% 86%	3% 94%	1% 38%		2% 76%
Trichoptera (caddisflies) Limnephiliidae					
Oligochaeta (worms) Lumbricidae	12%	2%	19%		9%
Other					

Weight	July % by wt.	Aug. % by wt.	Sept. % by wt.	Oct % by wt.	Annua %
Basommatophora (snails) Lymnaeidae Planorbidae Physidae					
Peiacyprida (clams) Sphaeriidae	0%	0%	20%		7%
Diptera (midges) Chironomidae pupae Chironomidae larvae Simuliidae	0% 57%	5% 52%	7% 7%		5% 37%
Trichoptera (caddisflies) Limnephiliidae					
Oligochaeta (worms) Lumbricidae	43%	43%	51%		51%
Other					

Table C.20 Mean monthly percent composition of benthic macroinvertebrates at area three at Porcupine Bay (index station 4) in 1991.

Number	July % by #	Aug. % by #	Sept. % by #	Oct % by #	Annual %
Basommatophora (snails)					
Lymnaeidae	0%	5%	0%		2%
Planorbidae	20%	1%	2%		2%
Physidae					
Pelecypoda (clams)					
Sphaeriidae					
Diptera (midges)					
Chironomidae pupae	0%	2%	2%		2%
Chironomidae larvae	60%	50%	34%		43%
Simuliidae					
Trichoptera (caddisflies)					
Limnephilidae					
Oligochaeta (worms)					
Lumbriculiidae	20%	43%	61%		51%
Other					

Weight	July % by wt.	Aug. % by wt.	Sept. % by wt.	Oct % by wt.	Annual %
Basommatophora (snails)					
Lymnaeidae	0%	29%	0%		18%
Planorbidae	33%	0%	0%		4%
Physidae					
Pelecypoda (clams)					
Sphaeriidae					
Diptera (midges)					
Chironomidae pupae	0%	0%	0%		0%
Chironomidae larvae	67%	35%	25%		36%
Simuliidae					
Trichoptera (caddisflies)					
Limnephilidae					
Oligochaeta (worms)					
Lumbriculiidae	0%	35%	75%		43%
Other					

Table C.21 Mean monthly percent composition of benthic macroinvertebrates at area one at Seven Bays (index station 6) in 1991.

Number	July % by #	Aug. % by #	Sept. % by #	Oct %by#	Annua %
Basommatophora (snails)					
Lymnaeidae	0%	0%	1%		0%
Planorbidae					
Physidae					
Pelecypoda (clams)					
Sphaeriidae	5%	0%	0%		1%
Diptera (midges)					
Chironomidae pupae	0%	22%	10%		13%
Chironomidae larvae	72%	54%	61%		60%
Simuliidae					
Trichoptera (caddisflies)					
Limnephilidae	0%	0%	3%		1%
Oligochaeta (worms)					
Lumbriculidae	23%	24%	26%		25%
Other					

Weight	July % by wt.	Aug. % by wt.	Sept. % by wt.	Oct % by wt.	Annual %
Basommatophora (snails)					
Lymnaeidae	0%	0%	0%		0%
Planorbidae					
Physidae					
Pelecypoda (clams)					
Sphaeriidae	0%	0%	0%		0%
Diptera (midges)					
Chironomidae pupae	0%	20%	17%		17%
Chironomidae larvae	0%	40%	50%		42%
Simuliidae					
Trichoptera (caddisflies)					
Limnephilidae	0%	0%	17%		8%
Oligochaeta (worms)					
Lumbriculidae	100%	40%	17%		33%
Other					

Table C.22 Mean monthly percent composition of benthic macroinvertebrates at area two at Seven Bays (index station 6) in 1991.

Number	July % by #	Aug. % by #	Sept. % by #	Oct % by #	Annua %
Basommatophora (snails) Lymnaeidae Planorbidae Physidae					
Pelecypoda (clams) Sphaeridae					
Diptera (midges) Chironomidae pupae Chironomidae larvae Simuliidae	0% 21%	16% 50%	3% 75%		10% 50%
Trichoptera (caddisflies) Limnephilidae					
Oligochaeta (worms) Lumbriculidae	79%	26%	22%		40%
Other					

Weight	July % by wt.	Aug. % by wt.	Sept. % by wt.	Oct % by wt.	Annual %
Basommatophora (snails) Lymnaeidae Planorbidae Physidae					
Pelecypoda (clams) Sphaeridae					
Diptera (midges) Chironomidae pupae Chironomidae larvae Simuliidae	0% 10%	30% 40%	0% 50%		14% 27%
Trichoptera (caddisflies) Limnephilidae					
Oligochaeta (worms) Lumbriculidae	90%	30%	50%		59%
Other					

Table C.23 Mean monthly percent composition of benthic macroinvertebrates at area three at Seven Bays (index station 6) in 1991.

Number	July % by #	Aug. % by #	Sept. % by #	Oct % by #	Annual %
Basommatophora (snails)					
Lymnaeidae					
Planorbidae					
Physidae					
Pelecypoda (clams)					
Sphaeridae					
Diptera (midges)					
Chironomidae pupae	19%	8%	0%		9%
Chironomidae larvae	77%	90%	72%		81%
Simuliidae					
Trichoptera (caddisflies)					
Limnephilidae	2%	0%	3%		1%
Oligocheata (worms)					
Lumbriculidae	2%	2%	25%		9%
Other					

Weight	July % by wt.	Aug. % by wt.	Sept. % by wt.	Oct % by wt.	Annual %
Basommatophora (snails)					
Lymnaeidae					
Planorbidae					
Physidae					
Pelecypoda (clams)					
Sphaeridae					
Diptera (midges)					
Chironomidae pupae	8%	27%	0%		15%
Chironomidae larvae	83%	55%	33%		65%
Simuliidae					
Trichoptera (caddisflies)					
Limnephilidae	8%	0%	0%		4%
Oligocheata (worms)					
Lumbriculidae	0%	18%	67%		15%
Other					

Table C.24 Mean monthly percent composition of benthic macroinvertebrates at area one at Spring Canyon (index station 9) in 1991.

Number	July % by #	Aug. % by #	Sept. % by #	Oct % by #	Annual %
Basommatophora (snails)					
Lymnaeidae	0%	1%	0%	0%	1%
Planorbidae	0%	4%	0%	0%	2%
Physidae	7%	0%	0%	13%	2%
Pelecypoda (clams)					
Sphaeridae	11%	0%	23%	0%	5%
Diptera (midges)					
Chironomidae pupae	0%	13%	0%	0%	8%
Chironomidae larvae	14%	79%	23%	0%	56%
Simuliidae	7%	0%	0%	0%	1%
Trichoptera (caddisflies)					
Limnephilidae	32%	0%	0%	63%	8%
Oligocheata (worms)					
Lumbriculidae	29%	3%	54%	25%	16%
Other					

Weight	July % by wt.	Aug. % by wt.	Sept. % by wt.	Oct % by wt.	Annual %
Basommatophora (snails)					
Lymnaeidae	0%	0%	0%	0%	0%
Planorbidae	0%	29%	0%	0%	3%
Physidae	76X	0%	0%	3%	33%
Pelecypoda (clams)					
Sphaeridae	3%	0%	50%	0%	3%
Diptera (midges)					
Chironomidae pupae	0%	14%	0%	0%	1%
Chironomidae larvae	3%	43%	0%	0%	5%
Simuliidae	0%	0%	0%	0%	0%
Trichoptera (caddisflies)					
Limnephilidae	12%	0%	0%	3%	6%
Oligocheata (worms)					
Lumbriculidae	6%	14%	50%	95%	50%
Other					

Table C.25 Mean monthly percent composition of benthic macroinvertebrates at area two at Spring Canyon (index station 9) in 1991.

Number	July % by #	Aug. % by #	Sept. % by #	Oct % by #	Annual %
Basommatophora (snails)					
Lymnaeidae	0%	0%	0%	12%	3%
Planorbidae	0%	0%	15%	12%	8%
Physidae	0%	5%	7%	0%	5%
Pelecypoda (clams)					
Sphaeriidae					
Diptera (midges)					
Chironomidae pupae	0%	5%	4%	0%	2%
Chironomidae larvae	77%	90%	51%	50%	83%
Simuliidae					
Trichoptera (caddisflies)					
Limnephilidae	8%	0%	0%	23%	8%
Oligocheata (worms)					
Lumbriculidae	15%	0%	23%	4%	11%
Other					

Weight	July % by wt.	Aug. % by wt.	Sept. % by wt.	Oct % by wt.	Annual %
Basommatophora (snails)					
Lymnaeidae	0%	0%	0%	57%	5%
Planorbidae	59%	0%	0%	0%	22%
Physidae	0%	2%	14%	0%	2%
Pelecypoda (clams)					
Sphaeriidae					
Diptera (midges)					
Chironomidae pupae	0%	0%	0%	0%	0%
Chironomidae larvae	3%	98%	0%	14%	49%
Simuliidae					
Trichoptera (caddisflies)					
Limnephilidae	9%	0%	0%	29%	6%
Oligocheata (worms)					
Lumbriculidae	28%	0%	88%	0%	17%
Other					

Table C.26 Mean monthly percent composition of benthic macroinvertebrates at area three at Spring Canyon (index station 9) in 1991.

Number	July % by #	Aug. % by #	Sept. % by #	Oct % by #	Annual %
Basommatophora (snails)					
Lymnaeidae					
Planorbidae	11%	0%	11%	100%	8%
Physidae					
Pelecypoda (clams)					
Sphaeridae					
Diptera (midges)					
Chironomidae pupae	4%	3%	0%	0%	4%
Chironomidae larvae	82%	55%	89%	0%	89%
Simuliidae					
Trichoptera (caddisflies)					
Limnephilidae					
Oligocheata (worms)					
Lumbriculidae	2%	42%	0%	0%	22%
Other					

Wet wt	July % by wt.	Aug. % by wt.	Sept. % by wt.	Oct % by wt.	Annual %
Basommatophora (snails)					
Lymnaeidae					
Planorbidae	78%	11%	0%	100%	58%
Physidae					
Pelecypoda (clams)					
Sphaeridae					
Diptera (midges)					
Chironomidae pupae	0%	11%	0%	0%	3%
Chironomidae larvae	24%	58%	100%	0%	34%
Simuliidae					
Trichoptera (caddisflies)					
Limnephilidae					
Oligocheata (worms)					
Lumbriculidae	0%	22%	0%	0%	8%
Other					

APPENDIX D

Table D.I Total number and percent relative abundance of fish captured during electrofishing surveys at each location on Lake Roosevelt in May, 1991.

Site Number	1		2		3		4		5		6		7		8		9		TOTAL		
Shock Time (min)	190		82		103		44		229		167		130		164		200		1,408		
Species	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	
Bridgellp sucker																					
Longnose sucker									1	0.4%									1	0.0%	
Largescale sucker	532	80.1%	237	74.3%	4	5.0%	1	1.8%	127	49.6%	10	35.7%	31	36.0%	686	84.9%	35	30.7%	1,663	72.0%	
Black crappie									1	0.4%									1	0.0%	
Largemouth bass																					
Smallmouth bass							1	1.8%	1	0.4%			3	3.5%			54	47.4%	59	2.6%	
Piute sculpin			1																1	0.0%	
Carp	29	4.4%	7	2.2%	2	2.5%					1	3.6%			1	0.1%	1	0.9%	41	1.8%	
Peamouth	1	0.2%																	1	0.0%	
Squawfish	6	0.9%	28		61	76.3%	4	7.0%	1	0.4%			1	1.2%	22	2.7%			123	5.3%	
Tench					1	1.3%													1	0.0%	
Burbot	1	0.2%	1												1	0.1%			3	0.1%	
Brown bullhead																					
Walleye	10	1.5%	20	6.3%	9	11.3%	42	73.7%	104	40.6%	12	42.9%	31	36.0%	27	3.3%	8	7.0%	263	11.4%	
Yellow perch	2	0.3%							2	0.8%			1	1.2%					5	0.2%	
Brown trout					1	1.3%			4	1.6%									5	0.2%	
Brook trout																					
Chinook salmon									1	0.4%									1	0.0%	
Kokanee salmon									1	0.4%			2	2.3%			6		9	0.4%	
Lake whitefish	2	0.3%			2	2.5%													4	0.2%	
Mountain whitefish									6	2.3%									6	0.3%	
Rainbow trout	81	12.2%	25	7.8%			9	15.8%	7	2.7%	5	17.9%	17	19.8%	71	8.8%	10	8.8%	225	9.7%	
Totals	664		319		80		57		256		28		86		808		114		2,412		

Table D.2 Total number and percent relative abundance of fish captured during gillnet surveys at each location on Lake Roosevelt in May, 1991.

Site Number	1		2		3		4		5		6		7		8		9		TOTAL	
Soak Time (hrs)	9.5		15		19.5		21.8		0		13		20.5		10		36.5		145.8	
Species	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Bridgellip sucker			1		1	12.5%													2	
Longnose sucker															1	8.3%			1	1.7%
Largescale sucker	3	60.0%	1	11.1%	1	12.5%							3	100%			9	42.9%	17	28.8%
Black crappie																				
Largemouth bass																				
Smallmouth bass															1	8.3%	5	23.8%	6	
Plute sculpin																				
Carp																				
Squawfish											1	16.7%					1	4.8%	2	3.4%
Tench																				
Burbot			1	11.1%															1	1.7%
Brown bullhead																				
Walleye	1	20.0%	4	44.4%	2	25.0%	1	6.3%											8	13.6%
Yellow perch																				
Brown trout																				
Brook trout																				
Chinook salmon																				
Kokanee salmon																				
Lake whitefish	1	20.0%	1	11.1%	4	50.0%	15	93.8%			5	83.3%			10	83.3%			36	61.0%
Mountain whitefish																				
Rainbow trout			1	11.1%													6	28.6%	7	11.9%
Totals	5		9		8		16				6		3		12		21		80	

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Table D.3 Total number and percent relative abundance of fish captured during electrofishing surveys at each location on Lake Roosevelt in August, 1991.

Site Number	1		2		3		4		5		6		7		8		9		TOTAL	
Shock Time (min)	60		20		60		30		50		44		60		40		50		414	
Species	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Bridgelip sucker	3	1.4%			3	1.8%													6	0.4%
Longnose sucker													1	1.6%					1	0.1%
Largescale sucker	84	38.9%	210	50.8%	30	17.9%	20	17.7%	7	19.4%	73	53.3%	18	29.5%	48	17.3%	13	15.1%	503	33.3%
Black crappie																				
Largemouth bass											1	0.7%							1	0.1%
Smallmouth bass					1	0.6%	52	46.0%			6	4.4%	33	54.1%	217	78.3%	64	74.4%	373	24.7%
Plute sculpin	1	0.5%			5	3.0%			4	11.1%	1	0.7%	1	1.6%			2	2.3%	14	0.9%
Carp	1	0.5%			3	1.8%	2	1.8%			9	6.6%	1	1.6%	1	0.4%			17	1.1%
Pearmouth																				
Squawfish	24	11.1%	3	0.7%	4	2.4%	9	8.0%	7	19.4%	10	7.3%	1	1.6%	2	0.7%	1	1.2%	61	4.0%
Tench													1	1.6%					1	0.1%
Burbot	1	0.5%			1	0.6%													2	0.1%
Brown bullhead																	1	1.2%	1	0.1%
Walleye	90	41.7%			56	33.3%	4	3.5%	9	25.0%	29	21.2%	5	8.2%	5	1.8%	5	5.8%	203	13.4%
Yellow perch	1	0.5%	200	48.4%	62	36.9%	30	26.5%	1	2.8%	7	5.1%			3	1.1%			304	20.1%
Brown trout									2	5.6%									2	0.1%
Brook trout					1	0.6%													1	0.1%
Chinook salmon	1	0.5%																	1	0.1%
Kokanee salmon	7	3.2%			1	0.6%													8	0.5%
Lake whitefish																				
Mountain whitefish	3	1.4%																	3	0.2%
Rainbow trout					1	0.6%			6	16.7%	1	0.7%			1	0.4%			9	0.6%
Totals	216		413		168		117		36		137		61		277		86		1,511	

Table D.5 Total number and percent relative abundance of fish captured during electrofishing surveys at each location on Lake Roosevelt in October, 1991.

Site Number	1		2		3		4		5		6		7		8		9		TOTAL	
Shock Time (min)	80		0		0		72		64		63		40		38		60		417	
Species	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Bridgellip sucker	2	0.5%																	2	0.1%
Longnose sucker																				
Largescale sucker	168	41.3%					104	11.5%	17	6.9%	126	39.7%	17	1.0%	95	44.6%	26	24.8%	553	14.2%
Black crappie																				
Largemouth bass									3	1.2%									3	0.1%
Smallmouth bass	151	37.1%					1	0.1%	6	2.4%	5	1.6%	514	30.2%	8	3.8%	44	41.9%	729	18.7%
Plute sculpin									5	2.0%	1	0.3%							6	0.2%
Carp							4	0.4%			7	2.2%	6	0.4%					17	0.4%
Peamouth																				
Squawfish	1	0.2%					1	0.1%	1	0.4%	1	0.3%	2	0.1%	10	4.7%	1	1.0%	17	0.4%
Tench																				
Burbot									1	0.4%	2	0.6%	2	0.1%	6	2.8%			11	0.3%
Brown bullhead																				
Walleye	20	4.9%					127	14.0%	58	23.7%	98	30.9%	48	2.8%	8	3.8%	14	13.3%	373	9.6%
Yellow perch							663	73.3%	143	58.4%	49	15.5%	1113	65.4%	59	27.7%			2,027	52.1%
Brown trout	3	0.7%							3	1.2%									6	0.2%
Brook trout																				
Chinook salmon																				
Kokanee salmon									5	2.0%	5	1.6%			2	0.9%			12	0.3%
Lake whitefish											1	0.3%			2	0.9%			3	0.1%
Mountain whitefish	22	5.4%																	22	0.6%
Rainbow trout	40	9.8%					4	0.4%	3	1.2%	22	6.9%			23	10.8%	20	19.0%	112	2.9%
Totals	407						904		245		317		1702		213		105		3,893	

Table D.6 Total number and percent relative abundance of fish captured during gillnet surveys at each location on Lake Roosevelt in October, 1991.

Site Number	1		2		3		4		5		6		7		8		9		TOTAL	
Soak Time (hrs)	0		0		0		0		0		0		12.8		19		21.3		53.1	
Species	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Bridgellip sucker																				
Longnose sucker																				
Largescale sucker													4	20.0%	9	16.4%			13	16.3%
Black crapple																				
Largemouth bass																				
Smallmouth bass													9	45.0%	1	1.8%	2	40.0%	12	15.0%
Plute sculpin																				
Carp																				
Squawfish															4	7.3%	2	40.0%	6	7.5%
Tench																				
Burbot															1	1.8%			1	1.3%
Brown bullhead																				
Walleye													6	30.0%	15	27.3%	1	20.0%	22	27.5%
Yellow perch															2	3.6%			2	2.5%
Brown trout																				
Brook trout																				
Chinook salmon																				
Kokanee salmon													1	5.0%	1	1.8%			2	2.5%
Lake whitefish															20	36.4%			20	25.0%
Mountain whitefish																				
Rainbow trout															2	3.6%			2	2.5%
Totals	0		0		0		0		0		0		201		55		5		80	

Table D.7 Regression and a - values of fish species collected on Lake Roosevelt in 1991.

Species	Regression	A-value
Kokanee	.965	13 mm
Rainbow		
Native	.924	47 mm
Net-pen	.826	89 mm
Walleye	.825	72 mm

Table D.8 Mean capture length, weight, condition factor, and scale length of kokanee for each age class sampled from Lake Roosevelt in 1991.

Species	Collect. type	Age	N	Capture length	Capture weight	Condition Factor	Scale length
Kokanee							
	Sample	0+	9	75	4	0.91	11
		1+	1	367	504	1.02	55
		2+	7	399	598	0.88	54
		3+	1	466	887	0.88	62
	Creel	1+	1	245	130	0.88	32
		2+	228	340	425	1.08	54
		3+	26	456	998	1.07	72
		4+	3	467	1,147	1.13	81

Table D.9 Mean capture length, weight, condition factor, and scale length of rainbow for each age class sampled from Lake Roosevelt in 1991.

Species	Collect. type	Age	N	Capture length	Capture weight	Condition Factor	Scale length
Native	Sample	0+	2	96	6	0.71	9
		1+	5	223	192	0.93	29
		2+	16	207	101	0.98	26
		3+	7	336	447	1.27	53
		4+	7	434	833	0.97	63
		5+	3	495	1,230	1.02	70
	Creel	3+	3	375	453	0.86	47
		4+	4	431	777	0.98	59
		7+	1	700	3,171	0.92	107
	Net-pen	Sample	0+	39	311	357	1.17
1+			34	369	611	1.16	56
Creel		1+	11	390	674	1.15	57
		2+	1	460	1,020	1.05	80

Table D.10 Mean capture length, weight, condition factor, and scale length of walleye for each age class sampled from Lake Roosevelt in 1991.

Species	Collect. type	Age	N	Capture length	Capture weight	Condition Factor	Scale length
Walleye	Sample	0+	24	129	23	0.79	27
		1+	57	225	99	0.80	46
		2+	90	320	266	0.77	62
		3+	34	375	457	0.83	80
		4+	24	467	889	0.86	96
		5+	12	485	971	0.76	95
		6+	5	500	1,012	0.83	100
		8+	1	725	6,155	1.62	156

APPENDIX E

Table E.1 Continued

DATE	LOC CODE	NUMBER TAGGED	SPECIES	TAG COLOR	NUMBER SERIES
3/21/92	3-NP	1000	R	0	61001-62000
4/25/92	3-NP	1000	R	P	5001-6000
5/23/92	3-NP	1000	R	P	10001-11000
9/24/92	3-NP	1000	R	P	16001-17000
3/17/92	5-HR	971	R	Y	50001-51000
3/17/92	5-HR	961	R	Y	51001-52000
3/17/92	5-HR	1932			
5/15/90	5-TNP	426	R	Y	18576-19000
5/4/88	6-NP	175	R	0	10751-11000
5/4/88	6-NP	996	R	0	11001-12000
5/4/88	6-NP	1171	R		
4/12/89	6-NP	985	R	0	26001-27000
12/21/89	6-NP	496	KAM	B	21001-21500
3/22/90	6-NP	443	R	0	25201-25700
4/17/90	6-NP	474	R	0	33501-33977
5/26/90	6-NP	499	R	0	39001-39500
5/26/90	6-NP	925	KAM	B	55001-55975
7/13/90	6-NP	50	R	0	37501-3755
4/17/91	6-NP	300	R	0	47001-47300
4/17/91	6-NP	1000	R	0	45001-46000
4/17/91	6-NP	1300	R		
4/17/91	6-NP	200	KAM	0	47301-47500
6/6/91	6-NP	50	R	0	46201-46250
6/6/91	6-NP	246	R	0	46326-46710
6/6/91	6-NP	296	R		
6/6/91	6-NP	575	KAM	B	46126-47000
7/13/91	6-NP	190	R	0	46711-46900
7/13/91	6-NP	495	R	0	47501-48000
7/13/91	6-NP	75	R	0	17726-17800

Table E.1 Continued

DATE	LOC CODE	NUMBER TAGGED	SPECIES	TAG COLOR	NUMBER SERIES
7/13/91	6-NP	989	R	0	48001-49000
7/13/91	6-NP	1749	R		
3/20/92	6-NP	999	R	0	62001-63000
4/25/92	6-NP	1000	R	P	4001-5000
5/23/92	6-NP	1000	R	P	9001-10000
6/16/92	6-NP	1000	R	P	14001-15000
3/21/92	L-NP	1000	R	0	60001-61000
4/24/92	L-NP	1000	R	P	6001-7000
5/22/92	L-NP	1000	R	P	8001-9000
6/18/92	L-NP	600	R	P	15001-15700
5/12/90	7-NP	101	R	Y	39501-39650
5/12/90	7-NP	358	R	Y	40001-40400
5/12/90	7-NP	459			
3/20/92	7-NP	998	R	0	64001-65000

Location Code:

0-NP	Northport
1-NP	Kettle Falls
HC-NP/2-NP	Hall Creek
3-NP	Hunters
5-HR	Spokane Tribal Hatchery Release
5-TNP	Tribal Net-Pen
6-NP	Seven Bays
L-NP/6.5-NP	Lincoln
7-NP	Keller Ferry

Table E.2 Number and percent of rainbow trout recovered from a net-pen release of 495 fish tagged and released on 4/13/89 at Northport.

Season Recovered	Total Recovered (#)	Number Recovered Above Grand Coulee		Number Recovered Below Grand Coulee	
		(#)	(%)	(#)	(%)
Spring 89	3	3	100%	-	0%
Summer 89	2	2	100%	-	0%
Spring 90	1	1	100%	-	0%
Total	6	6	100%	-	0%

Table E.3 Number and percent of rainbow trout recovered from a net-pen release of 584 fish tagged and released on 9/27/89 at Kettle Falls.

Season Recovered	Total Recovered (#)	Number Recovered Above Grand Coulee		Number Recovered Below Grand Coulee	
		(#)	(%)	(#)	(%)
Fall 89	1	1	100%	-	0%
Winter 89-90	8	7	88%	1	12%
Spring 90	4	4	100%	-	0%
Summer 90			0%	-	0%
Falls 90			0%	-	0%
Winter 90-91	1	1	100%	-	0%
Total	14	13	93%	1	7%

Table E.4 Number and percent of rainbow trout recovered from a net-pen release of 508 fish tagged and released on 3/27/90 at Kettle Falls.

Season Recovered	Total Recovered (#)	Number Recovered Above Grand Coulee		Number Recovered Below Grand Coulee	
		(#)	(%)	(#)	(%)
Summer 90	1	1	100%		0%
Fall 90	-		0%		0%
Winter 90-91	-		0%		0%
Spring 91	-		0%		0%
Summer 91	-		0%		0%
Fall 91	-		0%		0%
Winter 91-92	1	1	100%		0%
Total	2	2	100%	-	0%

Table E.5 Number and percent of rainbow trout recovered from a net-pen release of 498 fish tagged and released on 4/19/90 at Kettle Falls.

Season Recovered	Total Recovered (#)	Number Recovered Above Grand Coulee		Number Recovered Below Grand Coulee	
		(#)	%	(#)	%
Summer 90	9	7	78%	2	22%
Fall 90	6	5	83%	1	17%
Winter 90-91	1	1	100%		0%
Spring 91	1		0%	1	100%
Summer 91	2		0%	2	100%
Fall 91	1	1	100%		0%
Total	20	14	70%	6	30%

Table E.6 Number and percent of rainbow trout recovered from a net-pen release of 1,000' fish tagged and released on 4/14/91 at Kettle Falls.

Season Recovered	Total Recovered (#)	Number Recovered Above Grand Coulee		Number Recovered Below Grand Coulee	
		(#)	(%)	(#)	(%)
Spring 91	24	19	79%	5	21%
Summer 91	18	13	72%	5	28%
Fall 91	4	4	100%		0%
Winter 91-92	1	1	100%	-	0%
Total	47	37	79%	10	21%

Table E.7 Number and percent of rainbow trout recovered from a net-pen release of 768 fish tagged and released on 3/10/89 at Hunters.

Season Recovered	Total Recovered (#)	Number Recovered Above Grand Coulee		Number Recovered Below Grand Coulee	
		(#)	(%)	(#)	(%)
Summer 89	4	1	25%	3	75%
Fall 89	3	1	33%	2	67%
Total	7	2	29%	5	71%

Table E.8 Number and percent of rainbow trout recovered from a net-pen release of 447 fish tagged and released on 10/7/89 at Hunters.

Season Recovered	Total Recovered (#)	Number Recovered Above Grand Coulee		Number Recovered Below Grand Coulee	
		(#)	(%)	(#)	(%)
Winter 89-90	5	5	100%	-	0%
Spring 90	4	4	100%	-	0%
Summer 90	-	-	0%	-	0%
Fall 90	1	1	100%	-	0%
Total	10	10	100%	-	0%

Table E.9 Number and percent of rainbow trout recovered from a net-pen release of 490 fish tagged and released on 3/29/90 at Hunters.

Season Recovered	Total Recovered (#)	Number Recovered Above Grand Coulee		Number Recovered Below Grand Coulee	
		(#)	(%)	(#)	(%)
Spring 90	2		0%	2	100%
Summer 90	-	-	0%		0%
Fall 90	1	1	100%		0%
Total	3	1	33%	2	67%

Table E.10 Number and percent of rainbow trout recovered from a net-pen release of 498 fish tagged and released on 4/19/90 at Hunters.

Season Recovered	Total Recovered (#)	Number Recovered Above Grand Coulee		Number Recovered Below Grand Coulee	
		(#)	(%)	(#)	(%)
Summer 90	3	2	66%	1	34%
Fall 90	3	3	100%		0%
Winter 90-91	1	1	100%	-	0%
Spring 91	1		0%	1	100%
Summer 91	-	-	0%		0%
Fall 91	1	1	100%		0%
Total	9	7	78%	2	22%

Table E.II Number and percent of rainbow trout recovered from a net-pen release of 492 fish tagged and released on 5/19/90 at Hunters.

Season Recovered	Total Recovered (#)	Number Recovered Above Grand Coulee		Number Recovered Below Grand Coulee	
		(#)	%	(#)	%
Summer 90	2	1	50%	1	50%
Fall 90	2	2	100%	-	0%
Winter 90-91	-		0%	-	0%
Spring 91	2	2	100%	-	0%
Total	6	5	83%	1	17%

Table E.12 Number and percent of rainbow trout recovered from a net-pen release of 366 fish tagged and released on 10/24/90 at Hunters.

Season Recovered	Total Recovered (#)	Number Recovered Above Grand Coulee		Number Recovered Below Grand Coulee	
		(#)	(%)	(#)	(%)
Spring 91	1		0%	1	100%
Summer 91	1		0%	1	100%
Fall 91	2	2	100%	-	0%
Total	4	2	50%	2	50%

Table E.13 Number and percent of rainbow trout recovered from a net-pen release of 1,171 fish tagged and released on 5/4/88 at Seven Bays.

Season Recovered	Total Recovered (#)	Number Recovered Above Grand Coulee		Number Recovered Below Grand Coulee	
		(#)	(%)	(#)	(%)
Spring 88	2	2	100%		0%
Summer 88	36	36	100%		0%
Fall 88	33	33	100%		0%
Winter 88-89	14	14	100%		0%
Spring 89	8	8	100%		0%
Summer 89	1	1	100%		0%
Fall 89	-		0%		0%
Winter 89-90	-		0%	-	0%
Spring 90	-		0%		0%
Summer 90	-		0%		0%
Fall 90	-		0%		0%
Winter 90-91	-		0%	-	0%
Spring 91	1	1	100%		0%
Total	95	95	100%	-	0 %

Table E.14 Number and percent of rainbow trout recovered from a net-pen release of 985 fish tagged and released on 4/12/89 at Seven Bays.

Season Recovered	Total Recovered (#)	Number Recovered Above Grand Coulee		Number Recovered Below Grand Coulee	
		(#)	(%)	(#)	(%)
Spring 89	2	1	50%	1	50%
Summer 89	10	4	40%	6	60%
Fall 89	6	5	83%	1	17%
Winter 89-90	1		0%	1	100%
Spring 90	1	1	100%	-	0%
Total	20	11	55%	9	45%

Table E.15 Number and percent of rainbow trout recovered from a net-pen release of 443 fish tagged and released on 3/22/90 at Seven Bays.

Season Recovered	Total Recovered (#)	Number Recovered Above Grand Coulee		Number Recovered Below Grand Coulee	
		(#)	(%)	(#)	(%)
Spring 90	2	1	50%	1	50%
Total	2	1	50%	1	50%

Table E.16 Number and percent of rainbow trout recovered from a net-pen release of 474 fish tagged and released on 4/17/90 at Seven Bays.

Season Recovered	Total Recovered (#)	Number Recovered. Above Grand Coulee		Number Recovered Below Grand Coulee	
		(#)	%	(#)	(%)
Spring 90	6	3	50%	3	50%
Summer 90	6	4	67%	2	33%
Fall 90	3	3	100%		0%
Winter 90-91	1	1	100%		0%
Spring 91	1		0%	1	100%
Summer 91	-		0%		0%
Fall 91	1	1	100%		0%
Total	18	12	67%	6	33%

Table E.17 Number and percent of rainbow trout recovered from a net-pen release of 499 fish tagged and released on 5/26/90 at Seven Bays.

Season Recovered	Total Recovered (#)	Number Recovered Above Grand Coulee		Number Recovered Below Grand Coulee	
		(#)	(%)	(#)	%
Summer 90	16	13	81%	3	19%
Fall 90	6	4	67%	2	33%
Winter 90-91	-		0%	-	0%
Spring 91	3	2	67%	1	33%
Summer 91	-		0%		0%
Fall 91	3	3	100%		0%
Total	28	22	79%	6	21%

Table E.18 Number and percent of rainbow trout recovered from a net-pen release of 1,300 fish tagged and released on 4/17/91 at Seven Bays.

Season Recovered	Total Recovered (#)	Number Recovered Above Grand Coulee		Number Recovered Below Grand Coulee	
		(#)	(%)	(#)	(%)
Spring 91	5	1	20%	4	80%
Summer 91	11	5	45%	6	55%
Fall 91	3	2	67%	1	33%
Winter 91-92	1		0%	1	100%
Total	20	8	40%	12	60%

Table E.19 Number and percent of rainbow trout recovered from a net-pen release of 296 fish tagged and released on 6/6/91 at Seven Bays.

Season Recovered	Total Recovered (#)	Number Recovered Above Grand Coulee		Number Recovered Below Grand Coulee	
		(#)	(%)	(#)	(%)
Summer 91	12	9	75%	3	25%
Fall 91	13	11	85%	2	15%
Winter 91-92	3	3	100%	-	0%
Total	28	23	82%	5	18%

Table E.20 Number and percent of rainbow trout recovered from a net-pen release of 1,749 fish tagged and released on 7/13/91 at Seven Bays.

Season Recovered	Total Recovered (#)	Number Recovered Above Grand Coulee		Number Recovered Below Grand Coulee	
		(#)	(%)	(#)	%
Summer 91	51	46	90%	5	10%
Fall 91	60	59	98%	1	2%
Winter 91-92	10	10	100%	-	0%
Total	121	115	95%	6	5%

Table E.21 Number and percent of kamloop rainbow trout recovered from a net-pen release of 496 fish tagged and released on 12/21/89 at Seven Bays.

Season Recovered	Total Recovered (#)	Number Recovered Above Grand Coulee		Number Recovered Below Grand Coulee	
		(#)	%	(#)	(%)
Winter 89-90	20	20	100%		0%
Spring 90	7	7	100%		0%
Summer 90			0%		0%
Fall 90		-	0%		0%
Winter 90-91	4	4	100%		0%
Spring 91	4	4	100%		0%
Total	35	35	100%		0%

Table E.22 Number and percent of kamloop rainbow trout recovered from a net-pen release of 925 fish tagged and released on 5/26/90 at Seven Bays.

Season Recovered	Total Recovered (#)	Number Recovered Above Grand Coulee		Number Recovered Below Grand Coulee	
		(#)	(%)	(#)	(%)
Summer 90	19	19	100%		0%
Fall 90	9	7	78%	2	22%
Winter 90-91	13	13	100%		0%
Spring 91	5	5	100%		0%
Summer 91	2	1	50%	1	50%
Fall 91	2	1	50%	1	50%
Total	50	46	92%	4	8%

Table E.23 Number and percent of kamloop rainbow trout recovered from a net-pen release of 200 fish tagged and released on 4/17/91 at Seven Bays.

Season Recovered	Total Recovered (#)	Number Recovered Above Grand Coulee		Number Recovered Below Grand Coulee	
		(#)	(%)	(#)	(%)
Spring 91	2	1	50%	1	50%
Summer 91	1	1	100%	-	0%
Fall 91	2	1	50%	1	50%
Total	5	3	60%	2	40%

Table E.24 Number and percent of kamloop rainbow trout recovered from a net-pen release of 575 fish tagged and released on 6/6/91 at Seven Bays.

Season Recovered	Total Recovered (#)	Number Recovered Above Grand Coulee		Number Recovered Below Grand Coulee	
		(#)	(%)	(#)	(%)
Summer 91	8	8	100%		0%
Fall 91	12	11	92%	1	8%
Winter 91-92	4	4	100%	-	0%
Total	24	23	96%	1	4%

Table E.25 Number and percent of rainbow trout recovered from a net-pen release of 459 fish tagged and released on 5/12/90 at Keller Ferry.

Season Recovered	Total Recovered (#)	Number Recovered Above Grand Coulee		Number Recovered Below Grand Coulee	
		(#)	(%)	(#)	(%)
Summer 90	10	7	70%	3	3%
Fall 90	2	2	100%	-	0%
Winter 90-91	2	2	100%	-	0%
Total	14	11	79%	3	21%

APPENDIX F

Table F.1 Water quality measurements taken with Hydrolab Surveyor II at Porcupine Bay (location 4) in February 1991.

Depth (m)	Temp. (°C)	pH	D.O. (mg/L)	Conduct. mmho/cm	ORP (V)
0	1.96	6.47	12.46	0.116	0.236
3	2.43	6.59	12.50	0.116	0.229
6	2.41	6.65	12.45	0.117	0.227
9	2.42	6.71	12.44	0.119	0.225
12	2.44	6.76	12.48	0.117	0.223
15	2.44	6.79	12.49	0.118	0.222
18	2.43	6.82	12.43	0.119	0.222
21	2.45	6.85	12.26	0.120	0.221
24	2.49	6.88	12.10	0.120	0.221
27	2.51	6.91	11.99	0.119	0.220
30	2.62	6.95	11.83	0.115	0.220
33	2.63	6.96	1.82	0.115	0.219

Table F.2 Water -quality measurements taken with Hydrolab Surveyor II at Seven 'Bays (location 6) in February 1991.

Depth (m)	Temp. (°C)	pH	D.O. (mg/L)	Conduct. mmho/cm	ORP (V)
0	2.30	6.81	16.59	0.143	0.225
3	2.17	6.08	13.40	0.142	0.217
6	2.15	7.01	12.75	0.141	0.209
9	2.15	7.05	12.67	0.142	0.208
12	2.15	7.09	12.66	0.141	0.206
15	2.16	7.13	12.59	0.140	0.205
18	2.18	7.16	12.57	0.139	0.204
21	2.18	7.19	12.57	0.138	0.203
24	2.17	7.22	12.59	0.138	0.203
27	2.18	7.24	12.57	0.138	0.202
30	2.20	7.26	12.48	0.135	0.202
33	2.17	7.29	12.65	0.139	0.201

Table F.3 Water quality measurements taken with Hydrolab Surveyor II at Porcupine Bay (location 4) in March 1991.

Depth (m)	Temp. (°C)	pH	D.O. (mg/L)	Conduct. mmho/cm	ORP (V)
0	4.71	7.49	13.65	0.097	0.247
3	4.62	7.21	12.02	0.097	0.247
6	4.58	7.16	11.91	0.097	0.247
9	4.55	7.13	11.93	0.097	0.247
12	4.57	7.10	11.98	0.097	0.247
15	4.39	7.10	11.96	0.097	0.247
18	4.14	6.84	12.18	0.096	0.277
21	4.07	6.95	11.95	0.094	0.270
24	3.99	6.98	11.95	0.093	0.266
27	4.05	6.98	11.85	0.093	0.263
29	4.04	6.99	11.73	0.095	0.225

Table F.4 Water quality measurements taken with Hydrolab Surveyor II at Seven Bays (location 6) in March 1991.

Depth (m)	Temp. (°C)	PH	D.O. (mg/L)	Conduct. mmho/cm	ORP (V)
0	3.35	7.31	12.47	0.161	0.231
3	3.23	7.27	12.08	0.159	0.229
6	3.27	7.36	11.87	0.160	0.221
12	3.20	7.42	11.81	0.161	0.219
15	3.19	7.44	11.75	0.160	0.218
21	3.17	7.46	11.75	0.160	0.216
24	3.19	7.47	11.74	0.158	0.216
27	3.18	7.48	11.75	0.157	0.215
30	3.17	7.49	11.75	0.155	0.215
33	3.17	7.50	11.68	0.157	0.214

Table F.5 Water quality measurements taken with Hydrolab Surveyor II at Seven Bays (location 6) in April 1991.

Depth (m)	Temp. (°C)	PH	D.O. (mg/L)	Conduct. mmho/cm	ORP (V)
0	7.91	6.47	10.62	0.125	0.236
3	7.62	6.84	10.71	0.143	0.236
6	7.48	6.92	10.70	0.147	0.228
9	7.20	7.00	10.68	0.149	0.226
1-2	7.21	7.12	10.67	0.149	0.223
15	7.18	7.17	10.70	0.150	0.221
18	7.17	7.26	10.63	0.149	0.220
21	7.16	7.27	10.76	0.148	0.219
24	7.16	7.30	10.65	0.148	0.218
27	7.15	7.32	10.65	0.148	0.217
30	7.16	7.33	10.60	0.148	0.217
33	7.14	7.35	10.63	0.149	0.216

Table F.6 Water quality measurements taken with Hydrolab Surveyor II at Kettle Falls (location 1) in May 1991.

Depth (m)	Temp. (°C)	pH	D.O. (mg/L)	Conduct. mmho/cm	ORP (V)
0	8.12	6.54	11.78	0.144	0.204
3	8.10	6.76	11.58	0.144	0.196
6	8.08	6.91	11.44	0.144	0.192
9	8.07	7.03	11.30	0.143	0.190
12	8.07	7.11	11.25	0.143	0.190
15	8.03	7.18	11.21	0.140	0.188
18	8.03	7.23	11.16	0.143	0.187

Table F.7 Water quality measurements taken with Hydrolab Surveyor II at Gifford (location 2) in May 1991.

Depth (m)	Temp. (°C)	PH	D.O. (mg/L)	Conduct. mmho/cm	ORP (V)
0	8.25	6.65	11.74	0.143	0.127
3	8.16	6.85	11.40	0.143	0.122
6	8.11	6.99	11.16	0.144	0.120
9	8.10	7.11	11.16	0.143	0.120
12	8.10	7.17	11.11	0.142	0.119
15	8.10	7.21	11.06	0.143	0.119

Table F.8 Water quality measurements taken with Hydrolab Surveyor II at Hunters (location 3) in May 1991.

Depth (m)	Temp. (°C)	pH	D.O. (mg/L)	Conduct. mmho/cm	ORP (V)
0	8.48	6.18	11.34	0.143	0.226
3	8.23	6.54	11.20	0.143	0.213
6	8.19	6.69	11.09	0.143	0.207
9	8.18	6.82	10.99	0.143	0.207
12	8.16	6.91	11.00	0.143	0.205
15	8.17	6.98	10.96	0.142	0.203
18	8.14	7.04	10.97	0.142	0.203
21	8.13	7.12	10.98	0.142	0.202
24	8.12	7.16	10.96	0.141	0.202
27	8.12	7.12	10.99	0.141	0.201
30	8.11	7.28	10.94	0.142	0.201
33	8.19	7.27	10.94	0.140	0.200

Table F.9 Water quality measurements taken with Hydrolab Surveyor II at Porcupine Bay (location 4) in May 1991.

Depth (m)	Temp. (°C)	pH	D.O. (mg/L)	Conduct. mmho/cm	ORP (V)
0	10.30	6.16	13.10	0.084	0.235
3	10.17	6.26	11.98	0.083	0.227
6	9.18	6.39	11.53	0.083	0.222
9	9.79	6.49	11.39	0.084	0.218

Table F.10 Water quality measurements taken with Hydrolab Surveyor II at Little Falls (location 5) in May 1991.

Depth (m)	Temp. (°C)	pH	D.O. (mg/L)	Conduct. mmho/cm	ORP (V)
0	9.84	5.99	12.23	0.081	0.218
1	9.82	6.36	12.23	0.082	0.210
2	9.81	6.58	11.98	0.082	0.198

Table F.11 Water quality measurements taken with Hydrolab Surveyor II at Seven Bays (location 6) in May 1991.

Depth (m)	Temp. (°C)	PH	D.O. (mg/L)	Conduct. mmholcm	ORP (V)
0	9.45	6.45	12.05	0.135	0.210
3	9.35	6.69	11.96	0.137	0.202
6	8.70	6.94	11.66	0.143	0.197
9	8.55	7.07	11.58	0.143	0.195
12	8.57	7.12	11.49	0.142	0.194
15	8.51	7.18	11.43	0.148	0.193
18	8.39	7.23	11.46	0.148	0.193
21	8.38	7.28	11.52	0.144	0.192
24	8.37	7.3	11.54	0.147	0.192
27	8.34	7.33	11.39	0.145	0.192
30	8.35	7.40	11.39	0.145	0.191
33	8.32	7.42	11.51	0.146	0.192

Table F.12 Water quality measurements taken with Hydrolab Surveyor II at Sanpoil (location 8) in May 1991.

Depth (m)	Temp. (°C)	PH	D.O. (mg/L)	Conduct. mmholcm	ORP (V)
0	11.64	6.93	10.93	0.133	0.191
3	9.79	7.33	11.14	0.131	0.188
6	9.53	7.45	11.10	0.130	0.188
9	9.47	7.52	10.99	0.129	0.188
12	9.45	7.56	11.11	0.128	0.188
15	9.59	7.80	10.96	0.127	0.185
18	9.31	7.78	10.91	0.126	0.186
21	9.18	7.76	10.83	0.128	0.187
24	9.07	7.75	10.80	0.129	0.188
27	9.01	7.73	10.68	0.129	0.188
30	8.88	7.72	10.66	0.131	0.189
33	8.85	7.71	10.58	0.132	0.190

Table F.13 Water quality measurements taken with Hydrolab Surveyor II at Spring Canyon (location 9) in May 1991.

Depth (m)	Temp. (°C)	pH	D.O. (mg/L)	Conduct. mmho/cm	ORP (V)
0	10.65	6.75	11.73	0.132	0.205
3	10.33	7.23	11.69	0.132	0.202
6	9.72	7.32	11.39	0.132	0.205
9	9.45	7.34	11.15	0.132	0.207
12	9.20	7.36	10.99	0.133	0.208
15	9.10	7.37	10.93	0.131	0.209
18	9.00	7.38	10.89	0.133	0.210
21	8.96	7.39	10.87	0.132	0.210
24	8.94	7.41	10.83	0.132	0.210
27	8.93	7.43	10.83	0.133	0.210
30	8.92	7.45	10.83	0.131	0.211
33	8.92	7.47	10.79	0.130	0.210

Table F.14 Water quality measurements taken with Hydrolab Surveyor II at Porcupine Bay (location 4) in June 1991.

Depth (m)	Temp. (°C)	pH	D.O. (mg/L)	Conduct. mmho/cm	ORP (V)
0	10.05	7.86	9.20	0.079	0.162
3	15.97	7.91	10.22	0.080	0.167
6	15.58	7.72	9.66	0.080	0.176
9	15.48	7.63	9.49	0.080	0.181
12	15.05	7.55	9.13	0.079	0.185
15	14.91	7.49	9.05	0.078	0.188
18	14.65	7.45	8.93	0.077	0.190
21	13.60	7.33	8.80	0.075	0.195
24	12.74	7.30	9.23	0.093	0.199
26	12.49	7.30	9.54	0.105	0.199

Table F.15 Water quality measurements taken with Hydrolab Surveyor II at Seven Bays (location 6) in June 1991.

Depth (m)	Temp. (°C)	pH	D.O. (mg/L)	Conduct. mmho/cm	ORP (V)
0	14.94	6.97	11.17	0.112	0.176
3	14.25	7.35	10.84	0.113	0.175
6	13.40	7.43	10.80	0.121	0.178
9	13.21	7.47	10.80	0.122	0.181
12	13.00	7.51	10.77	0.123	0.183
15	12.56	7.55	10.81	0.125	0.187
18	12.46	7.55	10.76	0.125	0.188
21	12.38	7.58	10.75	0.125	0.190
24	12.30	7.58	10.78	0.125	0.191
27	12.23	7.59	10.74	0.125	0.192
30	12.22	7.58	10.73	0.125	0.163
33	12.20	7.62	10.91	0.125	0.163

Table F.16 Water quality measurements taken with Hydrolab Surveyor II at Gifford (location 2) in July 1991.

Depth (m)	Temp. (°C)	pH	D.O. (mg/L)	Conduct. mmho/cm	ORP (V)
0	18.15	7.64	11.09	0.116	0.203
3	17.65	7.88	10.84	0.117	0.206
6	17.09	7.77	10.46	0.117	0.213
9	16.96	7.71	10.39	0.116	0.216
12	16.87	7.69	10.34	0.116	0.217
15	16.84	7.68	10.30	0.116	0.218
18	16.81	7.67	10.27	0.116	0.219
21	16.67	7.67	10.26	0.115	0.219
24	16.60	7.67	10.27	0.115	0.220
27	16.52	7.67	10.29	0.115	0.220
30	16.40	7.67	10.28	0.114	0.220
33	16.20	7.67	10.25	0.114	0.221

Table F.17 Water quality measurements taken with Hydrolab Surveyor II at Porcupine Bay (location 4) in July 1991.

Depth (m)	Temp. (°C)	pH	D.O. (mg/L)	Conduct. mmho/cm	ORP (V)
0	20.70	7.43	10.24	0.090	0.202
3	19.95	7.88	10.32	0.090	0.195
6	19.64	7.78	9.76	0.090	0.199
9	17.97	7.75	8.32	0.089	0.218
12	17.07	7.49	8.18	0.087	0.228
15	16.02	7.42	8.26	0.085	0.231
18	15.23	7.38	8.34	0.077	0.233
21	14.77	7.27	8.24	0.084	0.239
24	13.75	7.22	8.38	0.080	0.241
27	12.67	7.17	8.70	0.097	0.243
30	12.45	7.16	8.71	0.104	0.244
33	12.36	7.16	8.54	0.107	0.244

Table F.18 Water quality measurements taken with Hydrolab Surveyor II at Seven Bays (location 6) in July 1991.

Depth (m)	Temp. (°C)	pH	D.O. (mg/L)	Conduct. mmho/cm	ORP (V)
0	20.77	8.04	10.91	0.113	0.202
3	18.67	8.24	11.58	0.113	0.199
6	17.75	8.18	10.79	0.114	0.207
9	16.93	8.03	10.63	0.115	0.217
12	16.33	7.89	10.50	0.114	0.223
15	16.17	7.80	10.47	0.115	0.224
18	15.76	7.78	10.48	0.115	0.226
21	15.60	7.75	10.42	0.115	0.227
24	15.51	7.86	10.40	0.115	0.225
27	15.41	7.82	10.37	0.114	0.226
30	15.34	7.79	10.39	0.114	0.227
33	14.82	7.73	10.41	0.114	0.229

Table F.19 Water quality measurements taken with Hydrolab Surveyor II at Spring Canyon (location 9) in July 1991.

Depth (m)	Temp. (°C)	pH	D.O. (mg/L)	Conduct. mmho/cm	ORP (V)
0	19.47	6.57	10.27	0.110	0.207
3	19.30	7.40	9.73	0.112	0.198
6	19.21	7.62	9.63	0.113	0.198
9	18.87	7.68	9.43	0.112	0.203
12	18.15	7.68	9.52	0.113	0.207
15	16.90	7.63	9.84	0.114	0.213
18	16.20	7.61	9.94	0.114	0.216
21	15.84	7.58	10.09	0.114	0.218
24	15.45	7.58	10.16	0.115	0.219
27	15.07	7.57	10.23	0.116	0.221
30	14.79	7.56	10.35	0.114	0.222
33	14.64	7.56	10.32	0.115	0.223

Table F.20 Water quality measurements taken with Hydrolab Surveyor II at Kettle Falls (location 1) in August 1991.

Depth (m)	Temp. (°C)	pH	D.O. (mg/L)	Conduct. mmho/cm	ORP (V)
0	17.2	7.80	10.30	0.114	0.082
3	17.20	7.90	10.30	0.115	0.082
6	17.20	7.90	10.30	0.115	0.083
9	17.30	8.00	10.30	0.116	0.084
12	17.10	8.00	10.30	0.115	0.084
15	17.10	8.00	10.20	0.115	0.085
18	17.10	8.00	10.20	0.115	0.085
21	17.10	8.00	10.30	0.114	0.085
24	17.10	8.00	10.20	0.112	0.086
27	17.10	8.10	10.10	0.114	0.087
30	17.10	8.10	10.10	0.114	0.087
33	17.10	8.10	10.10	0.113	0.088

Table F.21 Water quality measurements taken with Hydrolab Surveyor II at Gifford (location 2) in August 1991.

Depth (m)	Temp. (°C)	pH	D.O. (mg/L)	Conduct. mmho/cm	ORP (V)
0	20.78	8.55	10.34	0.120	0.075
3	19.08	8.64	10.70	0.120	0.078
6	18.34	8.52	10.49	0.119	0.083
9	18.04	8.41	10.11	0.119	0.088
12	17.88	8.29	9.99	0.119	0.094
15	17.76	8.24	9.87	0.118	0.097
18	17.69	8.19	9.77	0.119	0.099
21	17.51	8.15	9.73	0.119	0.102
24	17.46	8.11	9.71	0.117	0.103
27	17.41	8.09	9.68	0.117	0.104
30	17.41	8.07	9.65	0.118	0.105
33	17.41	8.06	9.63	0.118	0.106

Table F.22 Water quality measurements taken with Hydrolab Surveyor II at Hunters (location 3) in August 1991.

Depth (m)	Temp. (°C)	pH	D.O. (mg/L)	Conduct. mmho/cm	ORP (V)
0					
3	19.30	8.30-8.40	10.00-9.90	0.120-0.120	0.075-0.077
6	19.30	8.50	9.90	0.120	0.078
9	19.20	8.50	9.80	0.120	0.079
12	18.80	8.40	9.60	0.120	0.083
15	18.30	8.20	9.40	0.120	0.0819
18	18.10	8.10	9.20	0.120	0.092
21	17.80	8.10	9.10	0.120	0.095
24	17.80	8.00	9.10	0.119	0.096
27	17.70	8.00	9.10	0.119	0.096
30	17.70	8.00	9.10	0.118	0.097
33	17.70	8.00	9.10	0.117	0.098

Table F.23 Water quality measurements taken with Hydrolab Surveyor II at Porcupine Bay (location 4) in August 1991.

Depth (m)	Temp. (°C)	pH	D.O. (mg/L)	Conduct. mmho/cm	ORP (V)
3	25.14	7.87	8.26	0.105	0.101
6	21.30	7.99	8.49	0.113	0.107
9	20.15	7.87	7.31	0.112	0.119
12	19.22	7.79	6.99	0.107	0.122
15	18.55	7.75	6.74	0.100	0.125
18	17.76	7.72	6.91	0.095	0.126
21	16.90	7.68	7.13	0.092	0.129
24	15.99	7.66	7.22	0.090	0.131
27	15.33	7.63	6.89	0.087	0.132
30	14.61	7.61	6.67	0.089	0.135

Table F.24 Water quality measurements taken with Hydrolab Surveyor II at Little Falls (location 5) in August 1991.

Depth (m)	Temp. (°C)	pH	D.O. (mg/L)	Conduct. mmho/cm	ORP (V)
0	20.33	7.49	7.12	0.161	0.116
3	7.49	7.55	7.08	0.160	0.117
6	20.23	7.61	7.03	0.159	0.117
9	20.22	7.70	6.94	0.160	0.116

Table F.25 Water quality 'measurements taken with Hydrolab Surveyor II at Seven Bays (location 6) in August 1991.

Depth (m)	Temp. (°C)	pH	D.O. (mg/L)	Conduct. mmho/cm	ORP (V)
0	21.86	7.49	9.01	0.122	0.098
3	21.11	7.98	9.62	0.124	0.090
6	20.84	8.14	9.22	0.124	0.089
9	20.40	8.22	9.28	0.124	0.089
12	19.60	8.22	9.25	0.125	0.093
15	18.92	8.21	9.37	0.124	0.096
18	18.57	8.17	9.34	0.125	0.099
21	18.16	8.13	9.27	0.125	0.105
24	17.72	8.07	9.17	0.125	0.106
27	17.63	8.08	9.17	0.125	0.107
30	17.37	8.06	9.17	0.123	0.108
33	17.21	8.05	9.14	0.124	0.109

Table F.26 Water quality measurements taken with Hydrolab Surveyor II at Keller Ferry (location 7) in August 1991.

Depth (m)	Temp. (°C)	pH	D.O. (mg/L)	Conduct. mmho/cm	ORP (V)
0	22.88	7.80	8.69	0.126	0.121
3	22.03	8.13	8.76	0.126	0.118
6	21.72	8.23	8.60	0.127	0.118
9	20.45	8.25	8.88	0.124	0.122
12	19.36	8.20	8.87	0.124	0.126
15	18.48	8.10	8.58	0.124	0.132
18	18.07	8.04	8.66	0.124	0.134
21	17.65	8.01	8.96	0.124	0.135
24	17.48	7.89	8.84	0.123	0.136
27	17.31	7.96	8.44	0.124	0.139
30	17.21	7.89	8.08	0.125	0.141
33	17.10	7.87	8.08	0.125	0.141

Table F.27 Water quality measurements taken with Hydrolab Surveyor II at Sanpoil (location 8) in August 1991.

Depth (m)	Temp. (°C)	pH	D.O. (mg/L)	Conduct. mmho/cm	ORP (V)
0	23.13	7.98	8.99	0.122	0.121
3	22.33	8.56	8.83	0.122	0.112
6	21.99	8.60	8.72	0.123	0.112
9	21.57	8.61	8.73	0.123	0.113
12	19.06	8.50	9.17	0.124	0.123
15	18.16	8.37	9.25	0.125	0.128
18	18.01	8.29	9.22	0.125	0.130
21	17.83	8.25	9.24	0.125	0.131
24	17.63	8.22	9.25	0.124	0.132
27	17.37	8.19	9.27	0.124	0.134
30	17.07	8.16	9.32	0.124	0.135
33	17.05	8.14	9.31	0.124	0.136

Table F.28 Water quality measurements taken with Hydrolab Surveyor II at Spring Canyon (location 9) in August 1991.

Depth (m)	Temp. (°C)	pH	D.O. (mg/L)	Conduct. mmho/cm	ORP (V)
0	23.00	8.20	8.48	0.122	0.113
3	21.93	8.38	8.75	0.122	0.108
6	21.75	8.45	8.70	0.122	0.107
9	19.84	8.41	9.11	0.123	0.113
12	18.36	8.32	9.37	0.124	0.118
15	18.03	8.26	9.40	0.124	0.121
18	17.97	8.21	9.37	0.123	0.122
21	17.82	8.19	9.39	0.124	0.123
24	17.46	8.17	9.51	0.124	0.124
27	17.00	8.15	9.48	0.124	0.125
30	16.75	8.12	9.51	0.123	0.126
33	16.66	8.10	9.50	0.123	0.127

Table F.29 Water quality measurements taken with Hydrolab Surveyor II at Gifford (location 2) in September 1991.

Depth (m)	Temp. (°C)	pH	D.O. (mg/L)	Conduct. mmho/cm	ORP (V)
0	18.89	6.19	8.95	0.120	0.153
3	18.52	6.70	8.85	0.120	0.142
6	18.45	6.93	8.77	0.120	0.140
9	18.44	7.07	8.73	0.120	0.137
12	18.44	7.20	8.66	0.119	0.137
15	18.41	7.29	8.72	0.119	0.137
18	18.41	7.35	8.58	0.120	0.137
21	18.39	7.41	8.54	0.120	0.137
24	18.39	7.44	8.52	0.119	0.137
27	18.37	7.47	8.50	0.119	0.137
30	18.37	7.50	8.48	0.119	0.138
33	18.35	7.51	8.44	0.119	0.140

Table F.30 Water quality measurements taken with Hydrolab Surveyor II at Porcupine Bay (location 4) in September 1991.

Depth (m)	Temp. (°C)	PH	D.O. (mg/L)	Conduct. mmho/cm	ORP (V)
0	20.90	6.19	7.75	0.141	0.145
3	20.24	6.65	7.36	0.147	0.137
6	20.12	6.77	7.32	0.140	0.134
9	20.11	7.04	7.21	0.140	0.132
12	19.81	7.12	6.61	0.147	0.134
15	19.17	7.13	5.34	0.134	0.137
18	18.97	7.10	5.74	0.124	0.140
21	18.69	7.08	5.09	0.121	0.143
24	18.17	7.07	5.42	0.107	0.145
27	17.84	7.03	4.35	0.103	0.149
30	17.38	6.98	3.66	0.104	0.152
33	16.75	6.93	2.48	0.102	0.156

Table F.31 Water quality measurements taken with Hydrolab Surveyor II at Seven Bays (location 6) in September 1991.

Depth (m)	Temp. (°C)	PH	D.O. (mg/L)	Conduct. mmho/cm	ORP (V)
0	20.03	6.45	8.40	0.120	0.128
3	19.39	6.96	8.38	0.120	0.129
6	19.35	7.14	8.34	0.120	0.126
9	19.24	7.27	8.27	0.120	0.126
12	19.24	7.38	8.27	0.120	0.125
15	19.22	7.47	8.27	0.119	0.125
18	19.16	7.53	8.29	0.119	0.126
21	18.81	7.54	8.32	0.119	0.128
24	18.59	7.53	8.34	0.117	0.130
27	18.55	7.53	8.33	0.118	0.131
30	18.54	7.54	8.31	0.118	0.133
33	18.50	7.54	8.31	0.119	0.134

Table F.32 Water quality measurements taken with Hydrolab Surveyor II at Spring Canyon (location 9) in September 1991.

Depth (m)	Temp. (°C)	PH	D.O. (mg/L)	Conduct. mmho/cm	ORP (V)
0	20.46	6.24	8.12	0.123	0.135
3	20.56	7.14	7.97	0.124	0.126
6	20.55	7.48	7.94	0.124	0.125
9	20.50	7.66	7.46	0.124	0.126
12	20.44	7.75	7.83	0.123	0.127
15	20.36	7.79	7.78	0.123	0.128
18	20.07	7.71	7.59	0.124	0.135
21	19.50	7.67	7.88	0.122	0.138
24	18.95	7.62	7.61	0.121	0.141
27	18.75	7.59	8.11	0.118	0.143
30	18.57	7.57	8.18	0.118	0.145
33	18.52	7.56	8.20	0.118	0.145

Table F.33 Water quality measurements taken with Hydrolab Surveyor II at Kettle Falls (location 1) in October 1991.

Depth (m)	Temp. (°C)	PH	D.O. (mg/L)	Conduct. mmho/cm	ORP (V)
0	9.90	7.15	17.62	0.134	0.207
3	9.99	7.70	17.39	0.134	0.198
6	9.96	7.96	17.22	0.134	0.194
9	9.94	8.08	17.17	0.134	0.192
12	9.92	8.15	17.15	0.134	0.192
15	9.89	8.25	17.10	0.134	0.191
18	9.86	8.32	17.02	0.134	0.191

Table F.34 Water quality measurements taken with Hydrolab Surveyor II at Porcupine Bay (location 4) in October 1991.

Depth (m)	Temp. (°C)	PH	D.O. (mg/L)	Conduct. mmho/cm	ORP (V)
0	17.54	6.19	9.46	0.158	0.175
3	17.17	6.55	9.08	0.159	0.171
6	17.03	6.71	9.05	0.160	0.168
9	17.00	6.84	8.89	0.159	0.166
12	16.95	6.96	8.81	0.159	0.165
15	16.94	7.00	8.79	0.160	0.165
18	16.82	7.05	8.76	0.158	0.164
21	16.80	7.09	8.72	0.159	0.164
24	16.87	7.11	8.61	0.163	0.166
27	15.86	7.13	8.57	0.179	0.167
30	15.51	7.16	8.60	0.191	0.167

Table F.35 Water quality measurements taken with Hydrolab Surveyor II at Little Falls (location 5) in October 1991.

Depth (m)	Temp. (°C)	PH	D.O. (mg/L)	Conduct. mmho/cm	ORP (V)
0	14.33	6.50	9.41	0.181	0.173
3	14.34	6.81	8.32	0.181	0.169

Table F.36 Water quality measurements taken with Hydrolab Surveyor II at Seven Bays (location 6) in October 1991.

Depth (m)	Temp. (°C)	pH	D.O. (mg/L)	Conduct. mmho/cm	ORP (V)
0	17.09	6.22	9.92	0.121	0.104
3	17.30	6.49	9.86	0.122	0.103
6	17.25	6.71	9.80	0.122	0.102
9	17.21	6.83	9.73	0.122	0.102
12	17.19	6.91	9.69	0.121	0.103
15	17.18	6.99	9.63	0.121	0.104
18	17.17	7.04	9.60	0.120	0.105
21	17.16	7.08	9.56	0.121	0.106
24	17.12	7.10	9.57	0.120	0.106
27	17.10	7.13	9.52	0.120	0.108
30	17.06	7.14	9.51	0.119	0.109
33	17.04	7.16	9.52	0.120	0.109

Table F.37 Water quality measurements taken with Hydrolab Surveyor II at Keller Ferry (location 7) in October 1991.

Depth (m)	Temp. (°C)	pH	D.O. (mg/L)	Conduct. mmho/cm	ORP (V)
0	18.00	5.96	9.75	0.121	0.191
3	17.93	6.27	9.59	0.121	0.182
6	17.82	6.46	9.49	0.122	0.176
9	17.78	6.59	9.44	0.121	0.173
12	17.76	6.69	9.39	0.121	0.171
15	17.76	6.78	9.33	0.121	0.170
18	17.75	6.84	9.33	0.120	0.169
21	17.75	6.90	9.28	0.120	0.168
24	17.75	6.95	9.27	0.119	0.167
27	17.75	6.97	9.25	0.121	0.168
30	17.75	7.01	9.22	0.120	0.167
33	17.75	7.04	9.20	0.119	0.167

Table F.38 Water quality measurements taken with Hydrolab Surveyor II at Sanpoil (location 8) in October 1991.

Depth (m)	Temp. (°C)	pH	D.O. (mg/L)	Conduct. mmho/cm	ORP (V)
0	17.89	7.35	9.87	0.122	0.168
3	17.84	7.32	9.57	0.122	0.170
6	17.72	7.30	9.38	0.121	0.170
9	17.70	7.30	9.31	0.121	0.171
12	17.69	7.30	9.37	0.121	0.172
15	17.68	7.31	9.23	0.121	0.172
18	17.67	7.31	9.17	0.121	0.172
21	17.67	7.31	9.17	0.120	0.171
24	17.66	7.32	9.15	0.121	0.171
27	17.65	7.32	9.15	0.121	0.171
30	17.65	7.32	9.12	0.120	0.171
33	17.64	7.33	9.13	0.121	0.171

Table F.39 Water quality measurements taken with Hydrolab Surveyor II at Spring Canyon (location 9) in October 1991.

Depth (m)	Temp. (°C)	PH	D.O. (mg/L)	Conduct. mmho/cm	ORP (V)
0	18.16	6.42	9.33	0.121	0.152
3	18.17	6.62	9.33	0.121	0.149
6	18.11	6.75	9.49	0.121	0.149
9	18.10	6.86	9.19	0.121	0.147
12	18.10	6.94	9.13	0.121	0.147
15	18.10	7.00	9.11	0.121	0.147
18	18.10	7.07	9.11	0.121	0.148
21	18.09	7.12	9.08	0.119	0.149
24	18.08	7.14	9.08	0.120	0.149
27	18.08	7.16	9.05	0.121	0.150
30	18.08	7.20	9.03	0.119	0.150
33	18.07	7.20	9.03	0.120	0.151

Table F.40 Monthly secchi disc readings (m) at each index station on Lake Roosevelt in 1991.

MONTH	LOCATION								
	1	2	3	4	5	6	7	8	9
January						1			
February				1		2.5			
March				1		3			
April						3			
May	3.5	4	4.5	3	3	3.5	3.5	1.75	3 . 5
June				5.5		2			
July		5		4		2.5			5
August	8	5	4.5	2.5	2.5	5	5.5	6.5	8
September		5		5		9			10
October	5			9	4	7	12	9	11
November									
December		6		6		5			8