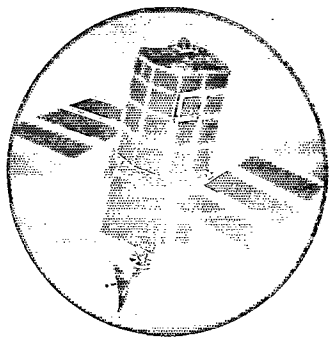
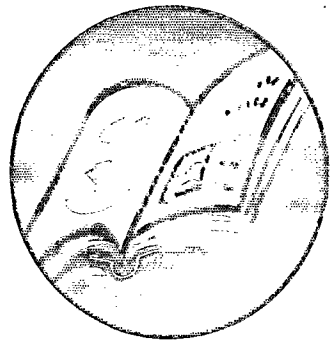
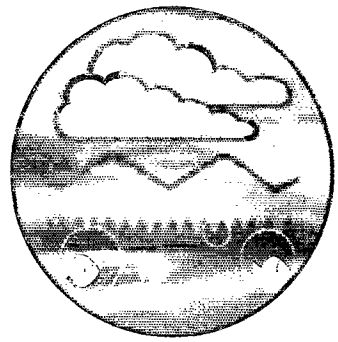
Biological Techniques of Still Water Quality Assessment
2.Method Development

Research and Development

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Biological Techniques of Still Water Quality Assessment
2: Method Development

R&D Project Record E1/012/1

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Research Contractor:
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Statement of use
This report describes the development of a biological assessment method for still waters, particularly canals and ponds. The information on the methodology will be of use to Agency staff involved in monitoring ecological quality and state of the environment assessment. The information will allow active involvement in progression of the development of PSYM both in the provision of data for testing the system and providing a practical insight into the priorities for method development.

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TABLE 1. CANAL SITES SURVEYED

Site no.	Location	Canal	Grid Ref
1	Shipton-on Cherwell	Oxford	SP48121660
2	Oxford	Oxford	SP50300720
3	Kennington	Oxford	SP49500950
4	Reading	Kennet and Avon	SU67707078
5	Thatcham	Kennet and Avon	SU52846633
6	Marsh Benham	Kennet and Avon	SU42006707
7	Little Bedwyn	Kennet and Avon	SU29506637
8	All Cannings	Kennet and Avon	SU07066235
9	Seend	Kennet and Avon	ST94886180
10	Clayden	Oxford	SP45755124
11	Welton	Grand Union	SP59756537
12	Barby	Oxford	SP52537116
13	Barby	Oxford	SP52537116
14	Offchurch	Grand Union	SP35856470
15	Wilmcote	Stratford-upon-Avon	SP16755808
16	Cosgrove	Grand Union	SP78954355
17	Aldbury/Tring	Grand Union	SP95481095
18	Aldbury/Tring	Grand Union	SP95481095
19	Hemel Hempstead	Grand Union	TL1800650
20	Harefield/Denham	Grand Union	TQ05108805
21	Yiewsley	Grand Union	TQ06808005
22	Hartshill	Coventry	SP33139497
23	Hartshill	Coventry	SP33139497
24	Market Bosworth	Ashby	SK38700239
25	Bradley Green	Coventry	SK28350033
26	Kings Bromley	Trent and Mersey	SK11111521
27	Great Bowden	Grand Union	SP73448957
28	Hose	Grantham	SK73202980
29	Redmile	Grantham	SK79603530
30	Stragglethorpe	Grantham	SK63403655
31	Penperlleri	Brecon	SO31500400
32	Llangynidr	Brecon	SO16501960
33	Pelsall Wood	Wyrley Essington	SK01350435
34	Pelsall Wood	Wyrley Essington	SK01350435
35	Brownhills	Wyrley Essington	SK04600445
36	Holland Park, Birmingham	Wyrley Essington	SK04650700
37	Oxley, Wolverhampton	Staffs and Worcs.	SJ90200185
38	Ettingshall, Wolverhampton	Birmingham	SO93759645
39	Sandwell, Birmingham, South	Birmingham	SP02058888
40	Sandwell, Birmingham, North	Birmingham	SP01908900
41	Stone Cross, West Bromwich	Birmingham	SP00509450
42	Ocker Hill, West Bromwich	Birmingham	SO97809410
43	Ocker Hill, West Bromwich	Birmingham	SO97809415
44	Brockmoor, Dudley	Stourbridge	SO90808770
45	Caunsall	Staffs and Worcs.	SO85608115
46	Victoria Park, London	Regents	TQ34008380
47	Horsenden Hill, Perevale	Grand Union	TQ13808400
48	Fleet	Basingstoke	SU83405358
49	North Warnborough	Basingstoke	SU72935180
50	North Warnborough	Basingstoke	SU72705180
51	Crookham Wharf	Basingstoke	SU78305170
52	Bedworth, Coventry	Coventry	SP37208685
53	Leicester	Grand Union	SK56900105

TABLE 1. CANAL SITES SURVEYED (CONTINUED)

Site no.	Location	Canal	Grid Ref
54	Loughborough	Grand Union	SK52852090
55	Loughborough	Grand Union	SK52852090
56	Burton-under-Needwood	Trent and Mersey	SK20301843
57	Lapworth	Grand Union	SP19327200
58	Willoughby	Oxford	SP52306820
59	Muston	Grantham	SK80508690
60	Welshpool	Shropshire Union	SJ24150893
61	Wern	Shropshire Union	SJ25181425
62	Queens Head	Shropshire Union	SJ34002690
63	Ouston, Ellesmere	Shropshire Union	SJ38483295
64	Platt Lane, Whixall	Shropshire Union	SJ51103670
65	Whitchurch	Shropshire Union	SJ52454145
66	Whitchurch	Shropshire Union	SJ52454145
67	Market Drayton	Shropshire Union	SJ67833525
68	Audlem	Shropshire Union	SJ64904625
69	Wenbury	Shropshire Union	SJ60704870
70	Hurlston Junction, Nantwich	Shropshire Union	SJ61955505
71	Church Minshall	Shropshire Union (Middlewich)	SJ67056085
72	Congleton	Trent and Mersey	SJ85856135
73	Church Lawton, Alsager	Trent and Mersey	SJ82005565
74	Stone	Trent and Mersey	SJ91583195
75	Acton Trussell	Staffs and Worcs	SJ93501835
76	Wychnor, Alrewas	Trent and Mersey	SK18351608
77	Wychnor, Alrewas	Trent and Mersey	SK18351608
78	Outward, Taunton	Taunton and Bridgewater	ST30302830
79	Bankland, Taunton	Taunton and Bridgewater	ST30802945
80	Huntworth, North Petherton	Taunton and Bridgewater	ST31803440
81	Eelmoor, Farnborough	Basingstoke	SU84005290
82	Ash Vale	Basingstoke	SU89445335
83	Ash Vale	Basingstoke	SU89445335

TABLE 2. ABBREVIATIONS OF CANAL ENVIRONMENTAL VARIABLE NAMES USED IN CORRELATION TABLES

Abbreviation	Description of variable
%ALG_50	Filamentous algae cover (%) along 50m bank length
%ALG_SA	Filamentous algae cover (%) in the sampling area
%AQUA_50	Aquatic plant cover (%) along 50m bank length
%AQUA_SA	Aquatic plant cover (%) in the sampling area
%BOULDER	Substrate at edge: % boulders and cobbles
%COARSE	Substrate at edge: % coarse detritus
%CONC	Bank type: concrete (%)
%EARTH	Bank type: earth (%)
%FINE	Substrate at edge: % fine detritus
%FLOA_50	Floating plant cover (%) along 50m bank length
%FLOA_SA	Floating plant cover (%) in the sampling area
%GRAVEL	Substrate at edge: % gravel
%HAR_EXS	Bank type: total hard bank excluding stone (%)
%HAR_INS	Bank type: total hard bank including stone (%)
%MARG_50	Marginal emergent plant cover (%) along 50m bank length
%MARG_SA	Marginal emergent plant cover (%) in the sampling area
%METAL	Bank type: metal piling (%)
%OTHER_B	Bank type: other, brick (%)
%OTHER_S	Bank type: other, stone or concrete blocks (%)
%PEBBLES	Substrate at edge: % pebbles
%SAND	Substrate at edge: % sand
%SHADE_B	% of bank edge overhung
%SHADE_W	% of water area overhung
%SILT	Substrate at edge: % silt/clay
%VEGB_50	Length of bank vegetated (%) along 50m bank length
%VEGB_SA	% bank vegetated in the sampling area
%VEG_50	Total vegetation cover (%) along 50m bank length
%VEG_50_	Total vegetation cover (%) including algae along 50m bank length
%VEG_SA	Total vegetation cover (%) in the sampling area
%VEG_SA_	Total vegetation cover (%) including algae in the sampling area
%WOOD	Bank type: wood (%)
ADS	Air dried solid (%) (from BW sediment quality database)
AL	Aluminium (mg/l, analysed by Oxford Brookes)
ALK	Alkalinity (Meq/l, analysed by Pond Action)
ALTITUDE	Altitude
ANTIMONY	Sediment antimony concentration (mg/kg, from BW sediment quality database)
AROMA	Sediment aromatic hydrocarbons concentration (mg/kg, from BW sediment quality database)
ARSENIC	Sediment arsenic concentration (mg/kg, from BW sediment quality database)
ASPT	ASPT score
AV BORON	Sediment boron concentration (mg/kg, from BW sediment quality database)
AV_BOUL	Substrate average: % boulders and cobbles
AV_COAR	Substrate average: % coarse detritus
AV_FINE	Substrate average: % fine detritus
AV_GRAV	Substrate average: % gravel
AV_PEBB	Substrate average: % pebbles
AV_SAND	Substrate average: % sand

TABLE 2. ABBREVIATIONS OF CANAL ENVIRONMENTAL VARIABLE NAMES USED IN CORRELATION TABLES (CONTINUED)

Abbreviation	Description of variable
AV_SILT	Substrate average: % silt/clay
BARIUM	Sediment barium concentration (mg/kg, from BW sediment quality database)
BERYLLIUM	Sediment beryllium concentration (mg/kg, from BW sediment quality database)
BGRASS100	Land cover 0-100m far bank: % all grassland
BGRASS5	Land cover 0-5m far bank: % all grassland
BINT_AG100	Land cover 0-100m far bank: % intensive agriculture
BINT_AG5	Land cover 0-5m far bank: % intensive agriculture
BINT_ALL100	Land cover 0-100m far bank: % total intensive
BINT_ALL5	Land cover 0-5m far bank: % total intensive
BMWP	BMWP score
BOATS	Boat traffic (movements/yr)
BORON	Sediment boron concentration (mg/kg, from BW sediment quality database)
BSEMI_N100	Land cover 0-100m far bank: % seminatural
BSEMI_N5	Land cover 0-5m far bank: % seminatural
BURBAN100	Land cover 0-100m far bank: % urban
BURBAN5	Land cover 0-5m far bank: % urban
BWATER100	Land cover 0-100m far bank: % waterbodies
BWATER5	Land cover 0-5m far bank: % waterbodies
B_ANGLE	Angle of bank
CA	Calcium (mg/l, analysed by Oxford Brookes)
CADMIUM	Sediment cadmium concentration (mg/kg, from BW sediment quality database)
CHE_QUAL	Chemical water quality class (Environment Agency data)
CHLORIDE	Chloride (mg/l, analysed by Pond Action)
CHROMIUM	Sediment chromium concentration (mg/kg, from BW sediment quality database)
COBALT	Sediment cobalt concentration (mg/kg, from BW sediment quality database)
COND	Conductivity (microS/cm, analysed by Pond Action)
COPPER	Sediment copper concentration (mg/kg, from BW sediment quality database)
CU	Copper (mg/l, analysed by Oxford Brookes)
CYANIDE	Sediment cyanide concentration (mg/kg, from BW sediment quality database)
DEPTH_1	Water depth 1m from the canal edge
DEPTH_2	Water depth 2m from the canal edge
DEPTH_3	Water depth 3m from the canal edge
DEPTH_AV	Average water depth 1 m - 3 m from the canal edge
DEPTH_ED	Water depth at the canal edge
DR	Sediment quality class (A-C, from BW sediment quality database)
EASTING	Easting
FE	Iron (mg/l, analysed by Oxford Brookes)
FLOW	Average flow (Ml/day)
F_AMPHIP	Number of Amphipoda families
F_BIVALV	Number of Bivalvia families
F_CM	Number of Crustacea + Mollusca families
F_COLEOP	Number of Coleoptera families
F_DECAPO	Number of Decapoda families
F_DETR	Number of detritivore families
F_DHEMIP	Number of detritivore Hemiptera families
F_DIPT	Number of Diptera families
F_EMO	Number of Ephemeroptera + Megaloptera + Odonata families
F_EPHEME	Number of Ephemeroptera families

TABLE 2. ABBREVIATIONS OF CANAL ENVIRONMENTAL VARIABLE NAMES USED IN CORRELATION TABLES (CONTINUED)

Abbreviation	Description of variable
F_EPT	Number of Ephemeroptera + Plecoptera + Trichoptera families
F_ETO	Number of Ephemeroptera + Trichoptera + Odonata families
F_GASTRO	Number of Gastropod families
F_HEMIPT	Number of Hemiptera families
F_HERB	Number of herbivore families
F_HIRUDI	Number of Hirudinea families
F_HTR	Number of Hirudinea + Tricladida families
F_ISOPOD	Number of Isopoda families
F_OM	Number of Odonata + Megaloptera families
F_ODONAT	Number of Odonata families
F_OLIGO	Number of Oligochaeta families
F_PHEMIP	Number of predatory Hemiptera families
F_PRED	Number of predator families
F_TRICHO	Number of Trichoptera families
F_TRICLA	Number of Tricladida families
GRASS100	Land cover 5-100m sample side: % all grassland
GRASS5	Land cover 0-5m sample side: % all grassland
INT_AG100	Land cover 5-100m sample side: % intensive agriculture
INT_AG5	Land cover 0-5m sample side: % intensive agriculture
INT_ALL100	Land cover 5-100m sample side: % total intensive
INT_ALL5	Land cover 0-5m sample side: % total intensive
INV_N.FA	Number of invertebrate families
INV_N.OR	Number of invertebrate orders
INV_N.SP	Number of invertebrate species
INV_SRI	Invertebrate Species Rarity Index
INV_SRS	Invertebrate Species Rarity Score
K	Potassium (mg/l, analysed by Pond Action)
LEAD	Sediment lead concentration (mg/kg, from BW sediment quality database)
LON	Loss on ignition (mg/kg, from BW sediment quality database)
MERCURY	Sediment mercury concentration (mg/kg, from BW sediment quality database)
MG	Magnesium (mg/l, analysed by Oxford Brookes)
MOLYBDENUM	Sediment molybdenum concentration (mg/kg, from BW sediment quality database)
NA	Sodium (mg/l, analysed by Oxford Brookes)
NI	Nickel (mg/l, analysed by Oxford Brookes)
NICKEL	Sediment nickel concentration (mg/kg, from BW sediment quality database)
NORTHING	Northing
ORG	Sediment organic matter content (mg/kg, from BW sediment quality database)
PB	Lead (mg/l, analysed by Oxford Brookes)
PH	pH (analysed by Pond Action)
PHENOL	Sediment phenol concentration (mg/kg, from BW sediment quality database)
SECCHI	Turbidity (Secchi disk depth cm)
SED_1	Sediment depth 1m from the canal edge
SED_2	Sediment depth 2m from the canal edge
SED_3	Sediment depth 3m from the canal edge
SED_QUAL	Sediment Quality class
SED_TOT	Average sediment depth 1 m - 3 m from the canal edge
SELENUIM	Sediment selenium concentration (mg/kg, from BW sediment quality database)
SEMI_N100	Land cover 5-100m sample side: % seminatural
SEMI_N5	Land cover 0-5m sample side: % seminatural

TABLE 2. ABBREVIATIONS OF CANAL ENVIRONMENTAL VARIABLE NAMES USED IN CORRELATION TABLES (CONTINUED)

Abbreviation	Description of variable
SILVER	Sediment silver concentration (mg/kg, from BW sediment quality database)
SRP	Soluble reactive phosphorus (mg/l, analysed by Pond Action)
SS	Suspended solids (mg/l, analysed by Pond Action)
S_AMPH	Number of Amphipoda species
S_ARAN	Number of Araneae species
S_BAET	Number of Baetidae species
S_BIVALV	Number of Bivalvia species
S_CM	Number of Crustacea + Mollusca species
S_COEN	Number of Coenagrionidae species
S_COLE	Number of Coleoptera species
S_DECA	Number of Decapoda species
S_DHEMIP	Number of detritivore Hemiptera species
S_EPHE	Number of Ephemeroptera species
S_EPT	Number of Ephemeroptera + Plecoptera + Trichoptera species
S_ETO	Number of Ephemeroptera + Trichoptera + Odonata species
S_GAST	Number of Gastropoda species
S_HALIP	Number of Haliplidae species
S_HEMI	Number of Hemiptera species
S_HIRU	Number of Hirudinea species
S_HTR	Number of Hirudinea + Tricladida species
S_HYDR	Number of Hydrophilidae species
S_ISOP	Number of Isopoda species
S_LEPID	Number of Lepidoptera species
S_LEPT	Number of Leptoceridae species
S_LIMN	Number of Limnephilidae species
S_MEGA	Number of Megaloptera species
S_ODON	Number of Odonata species
S_PHEMIP	Number of predatory Hemiptera species
S_PLAN	Number of Planorbidae species
S_SM_DY	Number of small Dytiscidae species
S_TRIC	Number of Tricladida species
S_TRICH	Number of Trichoptera species
THALLIUM	Sediment thallium concentration (mg/kg, from BW sediment quality database)
TIN	Sediment tin concentration (mg/kg, from BW sediment quality database)
TN	Total nitrogen (mg/l, analysed by Pond Action)
TON	Total oxidised nitrogen (mg/l, analysed by Pond Action)
TOTAL_D1	Sediment + water depth 1m from the canal edge
TOTAL_D2	Sediment + water depth 2m from the canal edge
TOTAL_D3	Sediment + water depth 3m from the canal edge
TOT_DAV	Average sediment + water depth 1 m - 3 m from the canal edge
TP	Total phosphorus (mg/l, analysed by Pond Action)
TPSED	Sediment total phosphorus concentration (mg/kg, from BW sediment quality database)
TUNGSTEN	Sediment tungsten concentration (mg/kg, from BW sediment quality database)
URBAN100	Land cover 5-100m sample side: % urban
URBAN5	Land cover 0-5m sample side: % urban
VANADIUM	Sediment vanadium (mg/kg, from BW sediment quality database)
WATER100	Land cover 5-100m sample side: % waterbodies
WATER5	Land cover 0-5m sample side: % waterbodies
WIDTH	Canal width
ZINC	Sediment zinc concentration (mg/kg, from BW sediment quality database)
ZN	Zinc (mg/l, analysed by Oxford Brookes)

TABLE 3. CANAL PHYSICAL AND CHEMICAL DATA

	CANAL SITE										
VARIABLE	1	2	3	4	5	6	7	8	9	10	11
EASTING	44812	45030	49500	46770	45284	44200	42950	40706	39488	44575	45975
NORTHING	21660	20750	20960	17078	16633	16707	16637	16235	16180	25124	26537
ALTITUDE	63	64	64	42	68	90	120	126	53	115	112
FLOW	0	0	0.025	0.125	0.125	0.2	0.111	0.125	0.025	0.04	0.033
SECCHI	120	50	90	100	90	180	100	50	50	100	20
%SHADE_B	10	0	0	0	3	0	0	0	5	0	2
%SHADE_W	0	0	0	0	0	0	0	0	0	0	0
%SHADE_B	2.5	0	30	30	3	2.5	0	1.5	2.5	10	1.5
%SHADE_W	0	0	17.5	7.5	0.5	1	0	0	0	2.5	0
%VEGB_SA	75	10	50	100	90	95	95	100	100	0.05	12
%MARG_SA	40	0.1	5	20	8	15	4	25	35	0.001	3
%AQUA_SA	0.1	0	0	0	0	1	0.5	0	0	0	0.01
%FLOA_SA	0.1	0	0	0	0	0	0	0	0	0	0
%ALG_SA	0.1	0	0	0	0	0	0	0	0	0	0
%VEG_SA	40.2	0.1	5	20	8	16	4.5	25	35	0.001	3.01
%VEG_SA_	40.3	0.1	5	20	8	16	4.5	25	35	0.001	3.01
%VEGB_50	67.5	5	45	95	95	87.5	100	100	100	4.025	6
%MARG_50	32.5	0.005	7.5	17.5	8	10	4	23.5	32.5	20	1.5
%AQUA_50	0.05	0	0	0	0	1	0.5	0	0	0	0.01
%FLOA_50	0.05	0	0	0	0	0	0	0	0	0	0
%ALG_50	0.05	0	0	0	0	0	0	0	0	0	0
%VEG_50	32.6	0.005	7.5	17.5	8	11	4.5	23.5	32.5	20	1.51
%VEG_50_	32.65	0.005	7.5	17.5	8	11	4.5	23.5	32.5	20	1.51
%EARTH	100	0	100	100	100	100	100	100	100	0	0
%CONC	0	100	0	0	0	0	0	0	0	100	0
%METAL	0	0	0	0	0	0	0	0	0	0	0
%WOOD	0	0	0	0	0	0	0	0	0	0	25
%OTHER_S	0	0	0	0	0	0	0	0	0	0	75
%OTHER_B	0	0	0	0	0	0	0	0	0	0	0
%HAR_EXS	0	100	0	0	0	0	0	0	0	100	25
%HAR_INS	0	100	0	0	0	0	0	0	0	100	100
GRASS5	50	25	50	0	43	30	60	80	45	0	0
WATER5	0	0	0	0	0	0	0	0	0	0	0
SEMI_N5	25	25	10	70	45	45	30	10	10	70	82
URBAN5	0	0	0	0	0	0	10	0	45	0	0
INT_AG5	50	25	50	0	43	30	60	80	45	0	0
INT_ALL5	75	75	90	30	55	55	70	90	90	30	18
GRASS100	25	12.5	25	0	21.5	75	105	40	42.5	0	100
WATER100	0	0	0	0	0	0	0	0	0	0	0
SEMI_N100	32.5	12.5	55	85	72.5	72.5	27.5	55	45	70	41
URBAN100	30	50	0	0	0	0	5	0	22.5	0	0
INT_AG100	25	12.5	25	0	21.5	15	67.5	40	32.5	15	50
INT_ALL100	67.5	87.5	45	15	27.5	27.5	72.5	45	55	30	59
BGRASS5	90	0	21	40	65	79	90	0	60	95	0
BWATER5	5	20	25	40	0	1	0	0	0	0	0
BSEMI_N5	10	90	100	50	3	21	5	5	30	5	5
BURBAN5	0	10	0	10	31	0	5	0	10	0	0
BINT_AG5	90	0	0	40	65	79	90	95	60	95	95
BINT_ALL5	90	10	0	50	97	79	95	95	70	95	95
BGRASS100	55	0	45.5	35	32.5	77	62.5	0	75	47.5	50
BWATER100	2.5	10	15	20	0	0.5	5	0	0	0	0
BSEMI_N100	10	45	100	75	2.5	40.5	12.5	2.5	20	2.5	2.5
BURBAN100	35	55	0	5	64.5	0	12.5	0	5	0	0

TABLE 3. CANAL PHYSICAL AND CHEMICAL DATA (CONTINUED)

	CANAL SITE										
VARIABLE	1	2	3	4	5	6	7	8	9	10	11
BINT_AG100	55	0	0	20	32.5	59.5	75	97.5	75	97.5	97.5
BINT_ALL100	45	50	0	0	49	20	40	50	45	50	50
%BOULDER	5	0	10	0	0	0	0	0	0	10	36
%PEBBLES	10	0	5	12	10	10	0	0	15	60	30
%GRAVEL	5	0	10	63	2	2	1	0	20	20	20
%SAND	25	3	20	14	18	10	5	2	20	5	10
%SILT	50	94	54	3	70	76	85	92	10	5	2
%COARSE	3	1	1	4	0	1	4	3	20	0	1
%FINE	2	2	1	4	0	1	5	3	15	0	1
AV_BOUL	2.5	0	5	0	0	0	0	0	0	10	18
AV_PEBB	5	0	7.5	12	10	10	0	0	7.5	31	15
AV_GRAV	2.5	0	17.5	63	2	2	1	0	10	11	10
AV_SAND	15	3	24	14	18	10	5	2	11	5	5
AV_SILT	70	94	11.5	3	70	76	85	92	52	41.5	49
AV_COAR	3	1	33	4	0	1	4	3	11	0.5	1.5
AV_FINE	2	2	1.5	4	0	1	5	3	8.5	1	1.5
B_ANGLE	15	90	80	35	80	45	45	45	50	90	90
DEPTH_ED	15	80	25	0.25	0.4	0.2	0.15	0.1	0.2	0.7	0.3
DEPTH_1	0.25	1	1	0.75	1	0.8	0.4	0.3	0.7	0.8	0.3
DEPTH_2	0.4	1.1	1.3	1.1	1.3	1.6	0.7	0.6	0.6	0.9	0.8
DEPTH_3	0.8	1.3	1.7	1.7	1.7	1.8	0.9	0.9	1	1.2	0.8
DEPTH_AV	0.483	1.133	1.333	1.183	1.333	1.4	0.667	0.6	0.767	0.967	0.633
SED_1	0.02	0.2	0	0	0	0	0	0.3	0	0	0
SED_2	0.1	0.3	0	0	0.1	0.15	0.5	1.2	1.15	0.6	0.1
SED_3	0.25	0.5	0.1	0.1			0.6	1.5	1.5	0.8	0.6
SED_TOT	0.123	0.333	0.033	0.033	0.1	0.15	0.367	0.3	0.883	0.467	0.233
TOTAL_D1	0.27	1.2	1	0.75	1	0.8	0.4	0.6	0.7	0.8	0.3
TOTAL_D2	0.5	1.4	1.3	1.1	1.4	1.75	1.2	1.8	1.75	1.5	0.9
TOTAL_D3	1.05	1.8	1.8	1.8			1.5	2.4	2.5	2	1.4
TOT_DAV	0.607	1.467	1.367	1.217	1.4	1.75	1.033	1.6	1.65	1.433	0.867
WIDTH	11.5	9	13	18	14	11	9	10	12	11	11
CHE_QUAL	5	2	4	6	5	6	3	2	2	3	3
SED_QUAL	3	2	2	3	2	3	3	3	1	3	2
FLOW	2	2	2	170	170	170	170	20	20	2	
BOATS	3.5	2.5	2	4	4	4	4	2	3.5	6	11.5
AL	0.0674	0.0919	0.0732	0.118	0.0898			0.1628	0.0998	0.1319	0.1004
ALK	4.82	5.60	4.82	4.83	4.78	5.01	2.70	2.94	3.78	1.63	2.36
AMM	0.14	0.23	0.12	0.10	0.03	0.10	0.33	0.00	0.00	0.02	0.21
CA	115	112.2	114.9	107.9	107.4	105.5	72.41	73.51	78.59	61.1	88.15
CHLORIDE	65.67	88.90	65.54	28.30	25.09	21.49	26.16	26.70	42.45	44.32	95.57
COND	550	620	550	400	400	355	232	280	377	330	600
CU		0.0147		0.017	0.0142	0.0174	0.0125	0.015	0.0117	0.014	0.0132
K	9.8	12.2	8.6	3.5	3.0	1.7	2.7	4.2	8.6	5.5	14.8
MG	9.603	6.38	7.033	2.72	2.318	1.724	2.067	2.749	6.188	7.524	9.72
NI		0.0179	0.0169	0.0246	0.0157		0.0147	0.0206		0.0218	0.0229
PH	8.0	8.4	8.5	8.3	8.0	8.0	7.6	7.5	7.7	7.6	7.8
SRP	0.548	1.116	0.625	0.298	0.271	0.102	0.033	0.032	0.062	0.118	0.497
SS	26.67	39.33	50.67	11.33	25.33	6.67	34.67	46.67	90.67	57.33	104.67
TN	5.94	7.19	5.66	3.99	10.37	6.27	5.03	9.41	7.34	8.43	12.29
TON	4.5	4.9	3.7	3.0	3.5	3.2	2.0	0.2	0.4	3.1	4.6
TP	0.600	1.374	0.870	0.392	1.563	0.554	0.425	1.931	1.476	1.248	2.195
ZN	0.1766	0.0315	0.0407	0.0461	0.0369	0.0329	0.0283	0.0446	0.035	0.1344	0.0146

TABLE 3. CANAL PHYSICAL AND CHEMICAL DATA (CONTINUED)

	CANAL SITE										
VARIABLE	1	2	3	4	5	6	7	8	9	10	11
NA	42.29	49.09	85.01	15.61	13.12	10.44	8.72	10	27.56	19.58	70.07
K	11.7	8.385	11.75	3.191	4.168	3.865	4.158	4.726	7.961	6.321	14.21
ADS	75.3	25.4	30.3	24.5	24.5	27.7	32.1	24	35.4	41.6	48.5
LON	4	16	13	26	26	14	10	12	13	10	9
ORG	3	10	12	13	13	12	9	10	8	7	5
pH	7.3	7.3	7.2	7.1	7.1	7	7	6.9	7.1	7.2	7.2
ANTIMONY	0	0	0	0	0	0	0	0	0	5.8	0
ARSENIC	18.6	14.8	12	5	5	5	5	5	9.96	28.2	12.5
BARIUM	39.8	168	119	77.1	77.1	39.6	27.4	32.6	74.3	65.3	117
BERYLLIUM	0.7	1.1	1	0.5	0.5	0.3	0.3	0.5	0.7	1.4	0.7
BORON	12.1	60.4	55.5	16.7	16.7	12	7.8	40.9	36	41.4	22
AV BORON	1.27	6.79	6.26	4.02	4.02	2.12	1.73	3.34	2.6	2.38	2.52
CADMUIM	0	1	1	0	0	0	0	0	0	0	0
CHROMIUM	25	60	49	25	25	25	9	19	22	60	44
COBALT	3	11	11	6	6	3	3	4	10	15	9
COPPER	9	103	61	72	72	19	15	11	20	24	46
CYANIDE	0	0	0	0	0	0	0	0	0	0	0
AROMA	2	4	2	13	13	8	7	6	104	8	3
TPSED	0.3	1.26	1.21	0.37	0.37	0.23	0.18	0.26	0.47	0.65	0.78
PHENOL	0.63	FAR	FAR	FAR	FAR	FAR	FAR	FAR	FAR	2.92	2.65
LEAD	26	127	62	57	57	39	24	25	47	30	50
MERCURY	0.2	0.5	0.4	0.5	0.5	0.1	0.1	0.1	0.3	0.7	0.2
MOLYBDENUM	0	2.2	1.7	0	0	0	0	0	0	2	0
NICKEL	14	23	20	23	23	17	12	8	26	30	66
SELENIUM	0	0.6	0.5	2.1	2.1	1.2	1	0.6	0.7	0.2	0.4
SILVER	0	1.7	2.6	3.1	3.1	0	0	1.9	0	0	2.8
TIN	17.8	23.7	15.9	10.4	10.4	3.4	3.2	8.3	11.1	17.2	17.7
THALLIUM	0	0	0	0	0	0	0	0	0	0	0
TUNGSTEN	0	0	0	0	0	0	0	0	0	0	0
VANADIUM	28.6	44.1	40.3	11	11	8.8	7.3	15.5	35.2	86.7	53.9
ZINC	88	399	249	209	209	107	62	77	130	194	163

TABLE 3. CANAL PHYSICAL AND CHEMICAL DATA (CONTINUED)

	CANAL SITE										
VARIABLE	12	13	14	15	16	17	18	19	20	21	22
EASTING	45253	45253	43585	41675	47895	49548	49548	50180	50510	50680	43313
NORTHING	27116	27116	26470	25808	24355	21095	21095	20650	18805	18005	29497
ALTITUDE	97	97	56	70	73	119	119	97	37	30	300
FLOW	0.125	0.125	0.05	0.02	0.04	0.02	0.02	0.022	0.045	0	0.05
SECCHI	15	15	22	18	40	38	38	62	60	52	18
%SHADE_B	0	25	10	1	10	0	50	2	50	0	0
%SHADE_W	0	5	30	0.5	2	0	15	0.1	10	0	0
%SHADE_B	20	12.5	55	20.5	22.5	25	25	1	17.5	7.5	20
%SHADE_W	10	2.5	55	12.75	6.5	7.5	7.5	0.05	1.75	1.5	15
%VEGB_SA	4	25	0	50	100	20	15	10	30	0	0
%MARG_SA	0.5	15	0	4	3	0.5	5	0.1	10	0	0
%AQUA_SA	0	0	0	0	0	0	0	0	0	0	0
%FLOA_SA	0	0	0	0	0	0	0	0	0	0	0
%ALG_SA	0	0	0	0	0	0	0	0	0	0	0
%VEG_SA	0.5	15	0	4	3	0.5	5	0.1	10	0	0
%VEG_SA_	0.5	15	0	4	3	0.5	5	0.1	10	0	0
%VEGB_50	14.5	14.5	0	35	51	8.5	8.5	22.5	2.5	2.5	12.5
%MARG_50	7.75	7.75	0	3	0.75	2.75	2.525	0.525	1.5	1	2.5
%AQUA_50	0	0	0	0	0	0	0	0	5	0	0
%FLOA_50	0	0	0	0	0	0	0	0	0	0	0
%ALG_50	0	0	0	0	0	0	0	0	0	0	0
%VEG_50	7.75	7.75	0	3	0.75	2.75	2.525	0.525	6.5	1	2.5
%VEG_50_	7.75	7.75	0	3	0.75	2.75	2.525	0.525	6.5	1	2.5
%EARTH	0	70	0	100	10	0	100	0	30	0	0
%CONC	100	30	0	0	0	100	0	100	70	0	0
%METAL	0	0	100	0	0	0	0	0	0	100	100
%WOOD	0	0	0	0	0	0	0	0	0	0	0
%OTHER_S	0	0	0	0	90	0	0	0	0	0	0
%OTHER_B	0	0	0	0	0	0	0	0	0	0	0
%HAR_EXS	100	30	100	0	0	100	0	100	70	100	100
%HAR_INS	100	30	100	0	90	100	0	100	70	100	100
GRASS5	0	0	50	40	65	40	0	0	29	70	40
WATER5	0	0	0	0	0	0	0	10	0	0	0
SEMI_N5	75	50	25	40	20	50	100	85	51	20	50
URBAN5	0	0	0	0	0	0	0	0	0	0	0
INT_AG5	0	50	50	40	65	40	0	0	29	50	40
INT_ALL5	25	50	75	60	80	50	0	15	49	80	50
GRASS100	0	0	25	60	52.5	20	83	80	14.5	35	75
WATER100	0	0	0	0	0	0	0	5	0	0	0
SEMI_N100	62.5	62.5	62.5	50	50	27.5	58.5	52.5	75.5	40	47.5
URBAN100	0	0	0	0	0	0	0	0	0	20	0
INT_AG100	25	25	25	40	42.5	67.5	41.5	40	14.5	25	47.5
INT_ALL100	37.5	37.5	37.5	50	50	72.5	41.5	47.5	24.5	60	52.5
BGRASS5	0	0	12	90	97	0	40	15	0	80	100
BWATER5	0	0	22	0	0	0	0	20	80	0	0
BSEMI_N5	0	0	88	10	3	100	50	70	100	18	0
BURBAN5	0	0	0	0	0	0	10	0	0	0	0
BINT_AG5	100	100	12	90	97	0	40	15	0	80	100
BINT_ALL5	100	100	12	90	97	0	50	30	0	82	100
BGRASS100	0	0	51	85	93.5	42.5	62.5	57.5	0	40	100
BWATER100	0	0	11	0	0	0	0	10	75	0	0
BSEMI_N100	0	0	49	15	6.5	57.5	32.5	35	100	9	0
BURBAN100	50	50	0	0	0	0	5	0	0	50	0

TABLE 3. CANAL PHYSICAL AND CHEMICAL DATA (CONTINUED)

	CANAL SITE										
VARIABLE	12	13	14	15	16	17	18	19	20	21	22
BINT_AG100	50	50	51	85	93.5	42.5	62.5	57.5	0	40	100
BINT_ALL100	50	50	45	40	45	42.5	42.5	50	0	50	50
%BOULDER	0	0	0	0	0	0	0	0	5	20	0
%PEBBLES	0	0	0	0	2	29	40	40	42	35	0
%GRAVEL	0	0	10	2	25	34	50	30	21	20	11
%SAND	0	0	10	0	10	9	10	30	12	10	2
%SILT	100	100	40	83	60	9	0	0	16	10	76
%COARSE	0	0	20	10	1	9	0	0	2	0	6
%FINE	0	0	20	5	2	10	0	0	2	5	5
AV_BOUL	0	0	0	0	0	0	0	0	5	10	0
AV_PEBB	0	0	0	0	1	17	20	22.5	42	21.5	0
AV_GRAV	0	0	10	2	13	18	29	17.5	21	13.5	6
AV_SAND	0	0	10	0	6	4.5	6	17.5	12	7.5	1
AV_SILT	100	100	40	83	75	44.5	40	42.5	16	40	85
AV_COAR	0	0	20	10	3	9.5	2.5	0	2	2.5	4.5
AV_FINE	0	0	20	5	2	6.5	2.5	0	2	5	3.5
B_ANGLE	60	20	90	60	70	90	15	90	30	90	90
DEPTH_ED	0.3	0.05	0.8	0.2	0.5	0.7	0.5	0.7	0.1	0.5	0.9
DEPTH_1	1	0.5	0.8	0.5	0.8	0.7	0.2	0.8	0.5	0.6	1
DEPTH_2	1.6	0.55	0.9	0.6	1	1	0.6	1	1	0.9	1.2
DEPTH_3	1.8	0.8	1.3	1	1.4	0.8	0.9	1	1.2	1.2	1.2
DEPTH_AV	1.467	0.617	1	0.7	1.067	0.833	0.567	0.933	0.9	0.9	1.133
SED_1	0	0	0	0.1	0	0	0	0	0	0	0.4
SED_2	0	0.05	0.1	0.2	0.3	0	0	0	0	0	0.6
SED_3	0.1	0.8	0.2	0.4	0.5	0.7	0.4	0.05	0.05	0	0.6
SED_TOT	0.033	0.283	0.1	0.233	0.267	0.233	0.133	0.017	0.017	0	0.533
TOTAL_D1	1	0.5	0.8	0.6	0.8	0.7	0.2	0.8	0.5	0.6	1.4
TOTAL_D2	1.6	0.6	1	0.8	1.3	1	0.6	1	1	0.9	1.8
TOTAL_D3	1.9	1.6	1.5	1.4	1.9	1.5	1.3	1.05	1.25	1.2	1.8
TOT_DAV	1.5	0.9	1.1	0.933	1.333	1.067	0.7	0.95	0.917	0.9	1.667
WIDTH	9	9	10	11	11	12	11	12	12	10	10
CHE_QUAL	5	5	2	3	3	4	4	2	4	3	4
SED_QUAL	3	3	2	2	3	3	3	1	1	1	2
FLOW			6	5	5	6	6	6	6	6	5
BOATS	9.5	9.5	6	5.5	10	5.5	5.5	5.5	4	3.5	6.5
AL	0.0725	0.0725	0.0721	0.1346	0.3935	0.0785	0.0785	0.0625		0.069	0.2819
ALK	3.60	3.60	3.14	2.84	4.04	3.28	3.28	4.42	5.18	4.97	4.58
AMM	0.02	0.02	0.00	0.00	0.00	0.42	0.42	0.88	0.00	0.15	0.02
CA	114.3	114.3	103.9	59.15	107.7	84.86	84.86	95.19	117.7	116.6	75.16
CHLORIDE	72.61	72.61	104.65	80.22	62.74	27.36	27.36	67.81	94.37	84.89	66.74
COND	580	580	630	450	500	319	319	500	700	700	339
CU			0.0121	0.0143	0.0285	0.0143	0.0143	0.0127		0.0131	0.0233
K	10.7	10.7	10.8	8.8	9.2	2.5	2.5	10.5	17.6	13.5	10.8
MG	15.35	15.35	16.85	20.25	8.149	1.821	1.821	2.539	4.257	3.971	21.69
NI			0.0187	0.0152	0.0561	0.0157	0.0157			0.0141	0.0409
PH	7.8	7.8	7.6	7.5	7.5	7.3	7.3	7.4	7.6	7.5	7.7
SRP	0.029	0.029	0.033	0.031	0.021	0.034	0.034	2.367	3.967	3.055	0.030
SS	120.67	120.67	56.67	151.33	96.67	62.00	62.00	11.33	38.67	20.00	44.00
TN	7.04	7.04	3.65	6.51	3.36	6.39	6.39	13.50	16.97	13.64	3.80
TON	2.4	2.4	0.0	0.0	0.4	3.8	3.8	8.5	14.0	10.4	2.6
TP	0.944	0.944	0.692	1.400	0.221	0.174	0.174	3.830	5.925	4.547	0.107
ZN	0.0413	0.0413	0.0614	0.0664	0.065	0.0354	0.0354	0.0495	0.0516	0.0592	0.0328

TABLE 3. CANAL PHYSICAL AND CHEMICAL DATA (CONTINUED)

	CANAL SITE										
VARIABLE	12	13	14	15	16	17	18	19	20	21	22
NA	38.48	38.48	60.47	44.17	40.61	12.71	12.71	53.56	87.58	71.29	43.43
K	9.823	9.823	10.02	7.935	8.559	3.986	3.986	11.56	16.86	13.26	9.911
ADS	40.1	40.1	40.9	35.3	39.7	33.5	33.5	20.7	32.5	32.5	34.4
LON	8	8	9	13	8	13	13	20	13	13	8
ORG	5	5	4	8	4	11	11	18	7	7	6
pH	7.3	7.3	7.3	7	7.2	7.2	7.2	7.2	7.3	7.3	7.1
ANTIMONY	0	0	0	7.2	0	0	0	5.1	11.2	11.2	6.6
ARSENIC	19.5	19.5	9.77	14.6	22.8	5	5	10.6	18.3	18.3	27.5
BARIUM	137	137	89.7	147	144	82.5	82.5	188	197	197	1650
BERYLLIUM	1.3	1.3	1.3	1.5	1.2	0.5	0.5	0.8	1.1	1.1	1.1
BORON	55.9	55.9	61.4	62.9	33.2	27.1	27.1	27.5	40.3	40.3	31.5
AV BORON	2.21	2.21	3.8	5.22	1.68	9.83	9.83	7.65	6.87	6.87	3.75
CADMUIM	0	0	1	1	0	0	0	3	47	47	1
CHROMIUM	61	61	45	39	46	19	19	54	135	135	111
COBALT	20	20	11	13	13	6	6	8	15	15	16
COPPER	28	28	32	44	30	47	47	215	303	303	81
CYANIDE	0	0	0	0	0	0	0	0	0	0	0
AROMA	2	2	8	5	3	42	42	55	10	10	5
TPSED	0.18	0.18	0.14	0.28	0.34	0.32	0.32	0.82	1.22	1.22	0.26
PHENOL	1.61	1.61	1.99	4.51	1.1	FAR	FAR	FAR	2.36	2.36	4.17
LEAD	36	36	40	49	61	123	123	409	388	388	72
MERCURY	0.2	0.2	0.2	0.1	0.2	0.1	0.1	1.4	2.4	2.4	0.1
MOLYBDENUM	0	0	1.5	2.3	0	0	0	0	0	0	0
NICKEL	44	44	33	46	47	15	15	25	109	109	29
SELENIUM	0.4	0.4	0.7	0.4	0.4	1.2	1.2	1.5	2.6	2.6	0.9
SILVER	0	0	0	0	4.9	0	0	17.9	8.9	8.9	0
TIN	14.7	14.7	12	13	10.3	6.2	6.2	25	54.7	54.7	16.3
THALLIUM	0	0	0	0	0	0	0	0	0	0	0
TUNGSTEN	0	0	0	0	0	0	0	0	0	0	0
VANADIUM	81	81	57	49.5	68.4	17.7	17.7	23.9	55.3	55.3	55.7
ZINC	160	160	145	198	170	168	168	538	815	815	343

TABLE 3. CANAL PHYSICAL AND CHEMICAL DATA (CONTINUED)

	CANAL SITE										
VARIABLE	23	24	25	26	27	28	29	30	31	32	33
EASTING	43313	43870	42835	41111	47344	47320	47960	46340	33130	31650	40135
NORTHING	29497	30239	30033	31521	28957	32980	33530	33655	20400	21950	30435
ALTITUDE	300	300	225	70	104	48	40	30	105	105	150
FLOW	0.05	0.083	0.05	0.06	0.043	0	0	0	0.067	0.05	0.067
SECCHI	18	25	40	33	50	120	120	170	60	70	200
%SHADE_B	50	0	0	0	0	0	0	0	0	0	0
%SHADE_W	20	0	0	0	0	0	0	0	0	5	0
%SHADE_B	20	0	0	48.5	4	0	30	0	47.5	50.5	0
%SHADE_W	20	0	0	20.25	0.5	0	7.5	0	45	40	0
%VEGB_SA	25	0	100	10	90	100	70	95	40	50	0
%MARG_SA	5	30	12	3	35	1	12	25	8	20	0
%AQUA_SA	10	3	0	0	25	0	10	20	0	0	0.1
%FLOA_SA	0	0	0	0.01	0.5	0	0	0.01	0	0	1
%ALG_SA	0	0	0	0	0	80	5	5	0	0	5
%VEG_SA	15	33	12	3.01	60.5	1	22	45.01	8	20	1.1
%VEG_SA_	15	33	12	3.01	60.5	81	27	50.01	8	20	6.1
%VEGB_50	0	50	50	0.5	75	100	80	97.5	19	20	50
%MARG_50	0	21	6	2	21.5	0.6	16	30	2.75	3	10
%AQUA_50	0	1.5	0	0	25	0	5	20	0	0	0.05
%FLOA_50	0	0	0	0.005	0.5	0	0	0.005	0.05	0	3.5
%ALG_50	0	0	0	0	0	80	2.5	2.5	0	0	5
%VEG_50	0	22.5	6	2.005	47	0.6	21	50.005	2.8	3	13.55
%VEG_50_	0	22.5	6	2.005	47	80.6	23.5	52.505	2.8	3	18.55
%EARTH	100	100	50	30	100	100	100	100	100	100	0
%CONC	0	0	0	0	0	0	0	0	0	0	0
%METAL	0	0	0	0	0	0	0	0	0	0	0
%WOOD	0	0	0	0	0	0	0	0	0	0	0
%OTHER_S	0	0	50	70	0	0	0	0	0	0	0
%OTHER_B	0	0	0	0	0	0	0	0	0	0	100
%HAR_EXS	0	0	0	0	0	0	0	0	0	0	100
%HAR_INS	0	0	50	70	0	0	0	0	0	0	100
GRASS5	55	50	30	25	0	90	65	0	60	55	65
WATER5	0	0	0	0	0	0	0	0	0	5	0
SEMI_N5	45	40	50	60	60	25	35	50	30	30	0
URBAN5	0	0	0	0	0	0	0	50	10	5	0
INT_AG5	55	50	30	25	0	75	65	0	60	55	65
INT_ALL5	55	60	50	40	40	75	65	50	70	70	100
GRASS100	67.5	115	15	33.5	45	105	72.5	30	100	27.5	82.5
WATER100	0	0	0	0	0	0	0	0	0	2.5	0
SEMI_N100	47.5	25	40	74	57.5	32.5	47.5	45	30	63	15
URBAN100	0	0	0	0	0	0	0	25	5	4.5	0
INT_AG100	47.5	70	50	12.5	22.5	67.5	52.5	15	65	27.5	57.5
INT_ALL100	52.5	75	60	26	42.5	67.5	52.5	55	70	37	85
BGRASS5	100	100	0	0	95	100	100	0	0	80	50
BWATER5	0	0	0	0	0	0	0	0	0	3	0
BSEMI_N5	0	0	0	10	5	0	0	2	70	18	48
BURBAN5	0	0	0	0	0	0	0	0	30	2	2
BINT_AG5	100	100	100	90	95	100	100	98	0	80	50
BINT_ALL5	100	100	100	90	95	100	100	98	30	82	52
BGRASS100	100	100	0	0	97.5	100	97.5	47.5	50	85	47.5
BWATER100	0	0	0	0	0	0	0	0	0	1.5	0
BSEMI_N100	0	0	0	5	2.5	0	2.5	3.5	35	11.5	74
BURBAN100	0	0	0	0	0	0	0	0	15	3.5	1

TABLE 3. CANAL PHYSICAL AND CHEMICAL DATA (CONTINUED)

	CANAL SITE										
VARIABLE	23	24	25	26	27	28	29	30	31	32	33
BINT_AG100	100	100	100	95	97.5	100	97.5	96.5	50	85	25
BINT_ALL100	50	50	50	50	50	50	47.5	47.5	50	47.5	0
%BOULDER	0	0	0	0	0	0	0	0	5	0	0
%PEBBLES	0	0	0	6	0	0	0	10	20	5	5
%GRAVEL	40	0	30	65	0	0	0	20	20	30	2
%SAND	20	0	40	20	0	0	0	10	20	30	2
%SILT	30	70	20	5	90	80	90	58	30	30	71
%COARSE	5	25	5	2	5	10	5	1	2	2	10
%FINE	5	5	5	2	5	10	5	1	3	3	10
AV_BOUL	0	0	0	0	0	0	0	0	2.5	0	0
AV_PEBB	0	0	0	5.5	0	0	0	10	10	5	3
AV_GRAV	20	0	15.5	33.5	0	0	0	20	10	25	1.5
AV_SAND	10	0	22.5	11.5	0	0	0	10	10.5	25	1.5
AV_SILT	62	80	55	45	92.5	85	92.5	58	59.5	40	80.5
AV_COAR	4	15	3.5	2.5	3	5	4	1	3.5	2	7
AV_FINE	4	5	3.5	2	4.5	10	3.5	1	4	3	6.5
B_ANGLE	20	20	90	20	20	65	30	40		65	90
DEPTH_ED	0.1			0.2	0.4	0.3	0.1	0.3		0.2	1
DEPTH_1	0.3	0.5	0.7	0.4	0.3	0.4	0.2	0.4	0.3	0.4	1
DEPTH_2	0.5	0.6	1	0.8	0.8	1.5	0.4	1	0.6	0.7	1
DEPTH_3	0.8	0.8	1.2	1	1	1.8	0.8	1.5	0.9	1	1.2
DEPTH_AV	0.533	0.633	0.967	0.733	0.7	1.233	0.467	0.967	0.6	0.7	1.067
SED_1	0	1	0	0	0.1	1	0.8	0	0	0	0.3
SED_2	0.5	1.2	0	0	0.2	0.6	1	0	0	0.2	0.5
SED_3	0.5	1.2	0.2	0	0.4	0.8	1.2	0.3	0.1	0.2	0.7
SED_TOT	0.333	1.133	0.067	0	0.233	0.8	0.3	0.1	0.033	0.133	0.5
TOTAL_D1	0.3	1.5	0.7	0.4	0.4	1.4	1	0.4	0.3	0.4	1.3
TOTAL_D2	1	1.8	1	0.8	1	2.1	1.4	1	0.6	0.9	1.5
TOTAL_D3	1.3	2	1.4	1	1.4	2.6	2	1.8	1	1.2	1.9
TOT_DAV	0.867	1.767	1.033	0.733	0.933	2.033	1.467	1.067	0.633	0.833	1.567
WIDTH	10	9	10	10.5	10	10	11	10	9	9	12
CHE_QUAL	4	3	3	3	2	5	5	3	2	4	4
SED_QUAL	2	3	2	1	1	3	3	3	2	3	1
FLOW	5		5	11		16	16	16	10	10	
BOATS	6.5	3.5	5.5	9.5		0.1	0.1	0.1	3.5	4	1.5
AL	0.2819	0.0634	0.1159	0.1264	0.3104	0.0652	0.3408	0.1722	0.0668	0.0976	0.0797
ALK	4.58	3.50	2.80	2.48	3.12	3.66	2.68	2.74	1.88	1.49	6.00
AMM	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.00
CA	75.16	96.96	100.5	60.17	106.1	108	88	493.4	33.32	30.15	104.4
CHLORIDE	66.74	82.09	83.29	53.79		128.14	59.67	265.76	13.35	11.61	91.70
COND	339	650	630	385	1420	690	443	2090	180	148	900
CU	0.0233	0.0169	0.0185	0.0152	0.0243	0.0125	0.0301	0.0233	0.0141	0.0143	
K	10.8	11.7	9.3	10.0	10.5	13.3	5.5	4.8	2.5	1.8	18.5
MG	21.69	25.74	36.98	13.53	13.96	18.18	9.77	97.78	5.153	2.616	61.9
NI	0.0409		0.0262	0.0177	0.0495	0.017	0.0398	0.0148			0.0299
PH	7.7	7.4	7.6	7.3	7.3	7.5	7.7	7.8	7.6	7.5	8.1
SRP	0.030	0.062	0.034	0.043	0.012	0.105	0.062	0.016	0.027	0.012	0.027
SS	44.00	60.00	41.33	93.33	18.67	8.00	4.67	10.00	48.67	171.33	6.67
TN	3.80	1.40	2.03	4.13	1.61	2.07	1.65	1.16	1.89	1.70	0.45
TON	2.6	0.0	1.0	1.1	0.0	0.0	0.0	0.0	0.9	0.9	0.0
TP	0.107	0.117	0.078	0.557	0.075	0.233	0.285	0.048	0.062	0.039	0.032
ZN	0.0328	0.0861	0.0411	0.1415	0.053	0.0623	0.09	0.0379	0.0609	0.1053	0.187

TABLE 3. CANAL PHYSICAL AND CHEMICAL DATA (CONTINUED)

	CANAL SITE										
VARIABLE	23	24	25	26	27	28	29	30	31	32	33
NA	43.43	43.24	52.76	33.41	355.6	56	26.57	121.2	7.703	7.767	86.39
K	9.911	11.43	10.96	8.976	13.6	11.18	6.444	7.142	4.291	3.785	17.71
ADS	34.4	27.6	49.7	27.3	59.1	25.3	20.8	35.6	21.9	31.8	23.7
LON	8	13	12	18	8	15	16	13	20	15	18
ORG	6	10	8	14	4	12	13	12	17	11	14
pH	7.1	7.1	7.3	7.3	6.9	7.2	7.2	7.3	7	7.2	7.2
ANTIMONY	6.6	0	6	6.7	15.2	0	0	0	0	0	9.4
ARSENIC	27.5	13.6	16.7	17.2	146	14.8	16.7	28.5	11.3	6.05	53.5
BARIUM	1650	183	710	285	87.2	84.2	69.5	223	219	143	165
BERYLLIUM	1.1	1.1	1.8	1.4	2.8	1.4	1.3	1.4	1.1	0.7	2
BORON	31.5	10.3	28.4	34.9	41.8	84.5	52.8	62.8	22	12.7	32.3
AV BORON	3.75	5.28	5.15	5.87	1.58	5.64	4.63	5.55	2.48	1.63	11.3
CADMUIM	1	0	2	2	0	0	0	0	0	0	13
CHROMIUM	111	37	36	33	81	48	42	40	39	25	106
COBALT	16	10	35	18	48	16	13	14	14	9	32
COPPER	81	37	96	82	26	28	24	35	32	17	1692
CYANIDE	0	0	0	0	0	0	0	0	1.8	0	0.6
AROMA	5	7	28	34	3	30	11	13	15	6	34
TPSED	0.26	0.18	0.48	0.34	0.57	0.23	0.16	0.42	0.21	0.12	0.3
PHENOL	4.17	FAR	3.79	FAR	2.45	FAR	FAR	FAR	FAR	FAR	FAR
LEAD	72	169	71	354	47	46	49	37	65	38	383
MERCURY	0.1	0.3	0.3	0.4	0.1	0.1	0.1	0.1	0.2	0.1	0.4
MOLYBDENUM	0	0	0	1.1	0	1.3	0	2.9	1	0	1.4
NICKEL	29	30	67	6	71	30	29	33	39	22	683
SELENIUM	0.9	0.6	1.1	1.7	0.5	0.6	0.7	2.5	1.1	0.6	2.4
SILVER	0	0	0	0	0	0	0	0	1.5	1.7	3.6
TIN	16.3	10.7	11.1	25.1	39.1	18.7	10.5	15.1	13.8	8	36.2
THALLIUM	0	0	0	0	0	0	0	0	0	0	0
TUNGSTEN	0	0	0	0	0	0	0	0	0	0	0
VANADIUM	55.7	42.7	28.4	32.8	213	62.7	60.4	58.7	44.7	23.1	39.6
ZINC	343	192	422	632	251	120	95	132	215	113	2883

TABLE 3. CANAL PHYSICAL AND CHEMICAL DATA (CONTINUED)

	CANAL SITE									
VARIABLE	34	35	36	37	38	39	40	41	42	43
EASTING	40135	40460	40465	39020	39375	40205	40190	40050	39780	39780
NORTHING	30435	30445	30700	30185	29645	28888	28900	29450	29410	29415
ALTITUDE	150	148	147	120	150	170	170	120	124	124
FLOW	0.067	0.067	0.029		0	0.04	0.05	0	0.067	0.067
SECCHI	200	200	200	50	100	60	40	75	70	70
%SHADE_B	0	0	50	0	0	0	0	0	0	0
%SHADE_W	0	0	20	0	0	0	0	0	0	0
%SHADE_B	0	1.5	37.5	0	0	0	1.5	0	20	20
%SHADE_W	0	0	11.5	0	0	0	0.5	0	5	5
%VEGB_SA	100	100	3	0	30	0.5	50	25	100	0
%MARG_SA	25	20	0.1	0	25	0.1	15	3	60	0
%AQUA_SA	0.5	12	30	0	20	1	0.1	20	0.1	0
%FLOA_SA	6	2	1	0	1	0	0	0	0.01	0.01
%ALG_SA	1	50	70	0	25	1	0.1	5	0	0
%VEG_SA	31.5	34	31.1	0	46	1.1	15.1	23	60.11	0.01
%VEG_SA_	32.5	84	101.1	0	71	2.1	15.2	28	60.11	0.01
%VEGB_50	50	50	11.5	0	65	0.75	25	25	72.5	0
%MARG_50	10	10	0.05	0	20	0.003	5	3	25	0
%AQUA_50	0.25	12	15	0	20	2	0.1	20	0.1	0
%FLOA_50	3	1	0.5	0	1	0	0	0	0.01	0.01
%ALG_50	1	50	35	0	25	1	0.1	5	0	0
%VEG_50	13.25	23	15.55	0	41	2.003	5.1	23	25.11	0.01
%VEG_50_	14.25	73	50.55	0	66	3.003	5.2	28	25.11	0.01
%EARTH	100	80	0	0	0	0	0	0	0	0
%CONC	0	20	0	0	0	100	100	0	0	0
%METAL	0	0	0	100	0	0	0	0	100	100
%WOOD	0	0	0	0	0	0	0	0	0	0
%OTHER_S	0	0	0	0	0	0	0	0	0	0
%OTHER_B	0	0	100	0	100	0	0	100	0	0
%HAR_EXS	0	20	100	100	100	100	100	100	100	100
%HAR_INS	0	20	100	100	100	100	100	100	100	100
GRASS5	50	45	67	0	30	30	70	20	20	20
WATER5	0	20	0	0	0	0	0	0	0	0
SEMI_N5	30	40	14	50	30	30	70	65	0	0
URBAN5	0	0	0	0	0	40	10	5	40	40
INT_AG5	50	45	58	0	30	30	0	20	20	20
INT_ALL5	70	60	86	50	70	70	30	35	100	100
GRASS100	90	32.5	33.5	0	15	15	35	10	30	30
WATER100	0	10	0	0	0	0.5	0	0	0	0
SEMI_N100	15	45	32	65	55	64.5	85	50	40	40
URBAN100	0	0	25	0	10	20	5	5	30	30
INT_AG100	57.5	27.5	29	0	15	15	0	10	10	10
INT_ALL100	85	55	68	35	45	35	15	50	60	60
BGRASS5	45	30	32	40	0	20	0	0	0	0
BWATER5	0	0	1	0	0	10	20	0	0	0
BSEMI_N5	100	100	66	40	70	80	80	55	0	0
BURBAN5	0	0	2	20	30	0	15	45	100	100
BINT_AG5	0	0	32	40	0	20	0	0	0	0
BINT_ALL5	0	0	34	60	30	20	20	45	100	100
BGRASS100	47.5	15	16	20	0	10	11	15	0	0
BWATER100	0	0	0.5	0	0	5.5	10	0	0	0
BSEMI_N100	74	85	33	20	35	90	74	60	0	0
BURBAN100	1	15	51	60	65	0	12.5	22.5	100	100

TABLE 3. CANAL PHYSICAL AND CHEMICAL DATA (CONTINUED)

	CANAL SITE									
VARIABLE	34	35	36	37	38	39	40	41	42	43
BINT_AG100	25	0	16	20	0	10	11	15	0	0
BINT_ALL100	26	15	50	50	50	0	16	17.5	50	50
%BOULDER	0	0	5	0	0	0	0	0	2	2
%PEBBLES	5	5	5	20	0	1	0	0	2	2
%GRAVEL	2	5	10	30	0	2	0	1	0	0
%SAND	2	5	10	25	0	2	0	5	0	0
%SILT	71	75	63	20	60	90	90	90	92	92
%COARSE	10	5	2	2	10	2	5	2	2	2
%FINE	10	5	5	3	30	3	5	2	2	2
AV_BOUL	0	0	2.5	0	0	0	0	0	2	2
AV_PEBB	3	5	2.5	10	0	1	0	0	2	2
AV_GRAV	1.5	5	5	35	0	2	0	1	0	0
AV_SAND	1.5	5	10	27.5	0	2	0	5	0	0
AV_SILT	80.5	75	73	17.5	60	90	90	90	92	92
AV_COAR	7	5	2	6	10	2	5	2	2	2
AV_FINE	6.5	5	5	4	30	3	5	2	2	2
B_ANGLE	40	45	90	90	55	80	90	90	5	90
DEPTH_ED	0.2	0.2	0.6	1	0.5	0.9	1	0.65	0.5	0.6
DEPTH_1	0.45	0.55	0.8	1	0.5	0.9	1	1	0.6	0.6
DEPTH_2	1	0.6	1	1.2	0.5	1	1.2	1.1	0.7	0.7
DEPTH_3	1	1.1	1.2	1.4	0.5	1.2	1.2		0.7	0.7
DEPTH_AV	0.817	0.75	1	1.2	0.5	1.033	1.133	1.2	0.667	0.667
SED_1	0.15	0	0.1	0	0	0.6	0.6	0.2	0.2	0.2
SED_2	0.1	0.1	0.2	0.05	0.5	0.9	0.8	0.2	0.3	0.3
SED_3	0.3	0.1	0.4	0.2	0.5	1.2	1		0.7	0.7
SED_TOT	0.183	0.067	0.233	0.083	0.333	0.9	0.8	0.3	0.4	0.4
TOTAL_D1	0.6	0.55	0.9	1	0.5	1.5	1.6	1.2	0.8	0.8
TOTAL_D2	1.1	0.7	1.2	1.25	1	1.9	2	1.3	1	1
TOTAL_D3	1.3	1.2	1.6	1.6	1	2.4	2.2		1.4	1.4
TOT_DAV	1	0.817	1.233	1.283	0.833	1.933	1.933	1.25	1.067	1.067
WIDTH	12	11	15	11	11	12	11	9	12	12
CHE_QUAL	4	4	5	3	1	2	1	2	1	1
SED_QUAL	1	1	2	2	1	1	1	1	1	1
FLOW				1.5	2	2	2	2	2	2
BOATS	1.5	1.5	1.5	11	4.5	4.5	4.5	0.75	0.5	0.5
AL	0.0797	0.0795	0.0848	0.0963		0.1237	0.1237	0.0907	0.1048	0.1048
ALK	6.00	6.05	1.54	4.19	10.26	2.98	2.98	2.70	3.81	3.81
AMM	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
CA	104.4	100.7	54.39	87.39	172.9	64.57	64.57	52.45	79.41	79.41
CHLORIDE	91.70	99.31	40.84	133.75	113.72	75.55	75.55	90.37	81.29	81.29
COND	900	900	352	800	1220	550	550	600	650	650
CU		0.0166	0.0639	0.0368		0.0163	0.0163	0.0165	0.0935	0.0935
K	18.5	19.5	5.5	20.6	19.8	12.8	12.8	16.7	17.3	17.3
MG	61.9	64.44	10.98	18.15	86.31	18.07	18.07	30.29	31.88	31.88
NI	0.0299	0.0255	0.0192	0.0278		0.0269	0.0269	0.0209	0.017	0.017
PH	8.1	8.1	8.6	7.5	7.3	7.7	7.7	7.8	7.6	7.6
SRP	0.027	0.053	0.015	4.820	0.057	0.173	0.173	0.181	0.054	0.054
SS	6.67	6.67	2.67	12.00	6.00	19.33	19.33	15.33	18.00	18.00
TN	0.45	1.31	1.07	18.98	0.78	2.36	2.36	0.98	1.91	1.91
TON	0.0	0.0	0.0	15.7	0.2	0.7	0.7	0.2	0.2	0.2
TP	0.032	0.030	0.054	6.419	0.132	0.590	0.590	0.243	0.117	0.117
ZN	0.187	0.1899	0.1887	0.1629	0.0817	0.2481	0.2481	0.1504	0.1743	0.1743

TABLE 3. CANAL PHYSICAL AND CHEMICAL DATA (CONTINUED)

	CANAL SITE									
VARIABLE	34	35	36	37	38	39	40	41	42	43
NA	86.39	87.91	29.65	117.7	122.8	46.97	46.97	69.85	62.57	62.57
K	17.71	18.39	9.846	20.77	23.43	12.11	12.11	14.49	15.08	15.08
ADS	23.7	30.3	30.3	18	38.5	29.1	29.1	38.7	21.3	21.3
LON	18	20	20	11	19	24	24	17	15	15
ORG	14	15	15	6	19	19	19	14	15	15
pH	7.2	6.9	6.9	7.1	7.1	7.2	7.2	7	6.8	6.8
ANTIMONY	9.4	0	0	7.1	11.3	17.9	17.9	8.5	8.7	8.7
ARSENIC	53.5	15.4	15.4	30.1	41.4	60.6	60.6	48.4	30.5	30.5
BARIUM	165	172	172	213	185	378	378	120	183	183
BERYLLIUM	2	2	2	1.5	1.4	1.6	1.6	1.3	0.8	0.8
BORON	32.3	36	36	54.9	84.3	39.8	39.8	42.5	44.8	44.8
AV BORON	11.3	6.08	6.08	2.85	9.36	12.2	12.2	7.78	21.1	21.1
CADMUIM	13	3	3	0	19	35	35	17	9	9
CHROMIUM	106	47	47	53	125	496	496	69	54	54
COBALT	32	17	17	15	34	20	20	29	83	83
COPPER	1692	134	134	87	433	1283	1283	517	408	408
CYANIDE	0.6	0.8	0.8	0	0	0.8	0.8	0	0.5	0.5
AROMA	34	42	42	16	39	61	61	45	33	33
TPSED	0.3	0.2	0.2	0.24	0.71	5.76	5.76	4.03	0.26	0.26
PHENOL	FAR	FAR	FAR	FAR	0.57	3.88	3.88	1.35	4.28	4.28
LEAD	383	241	241	155	2052	995	995	1009	160	160
MERCURY	0.4	0.2	0.2	2.3	1	3	3	0.3	0.2	0.2
MOLYBDENUM	1.4	3	3	2.3	8.5	6.4	6.4	3.6	6.9	6.9
NICKEL	683	103	103	38	98	138	138	156	177	177
SELENIUM	2.4	1.2	1.2	0.4	0.7	1.8	1.8	1.6	1.1	1.1
SILVER	3.6	0	0	2	5.9	17.9	17.9	0	7.3	7.3
TIN	36.2	22.3	22.3	24	108	83.8	83.8	30.5	27.1	27.1
THALLIUM	0	0	0	0	0	0	0	0	0	0
TUNGSTEN	0	0	0	0	0	0	0	0	0	0
VANADIUM	39.6	35.9	35.9	56.9	64.7	63.3	63.3	39	27.7	27.7
ZINC	2883	928	928	477	8856	5964	5964	3285	2443	2443

TABLE 3. CANAL PHYSICAL AND CHEMICAL DATA (CONTINUED)

	CANAL SITE										
VARIABLE	44	45	46	47	48	49	50	51	52	53	54
EASTING	39080	38560	53580	51380	48340	47293	47270	47830	43720	45690	45285
NORTHING	28770	28115	18320	18400	15358	15180	15180	15170	28685	30105	32090
ALTITUDE	109	48	12	30	80	75	75	70	100	57	40
FLOW	0.04	0.059	0.04	0	0.025	0.02	0	0.025			0.067
SECCHI	85	38	85	40	75	72	250	73	53	150	30
%SHADE_B	0	50	0	0	1	0	0	100	40	0	0
%SHADE_W	0	40	0	0	1	0	0	60	5	0	0
%SHADE_B	25	57.5	2.5	17.5	20.5	0	2.5	35	57.5	35.5	2.5
%SHADE_W	5	60	1	5	8	0	2.5	25	7.5	30.025	1
%VEGB_SA	100	5	0	0	40	0	80	80	50	100	0
%MARG_SA	15	1	0	0	2	0	10	30	8	30	0
%AQUA_SA	30	0	0.01	5	2	60	80	8	0	50	0
%FLOA_SA	0.8	0	0	0	2	0	3	1	0	0	0
%ALG_SA	2	0.01	0.5	0	0	0.1	2	0	1	0	0.05
%VEG_SA	45.8	1	0.01	5	6	60	93	39	8	80	0
%VEG_SA_	47.8	1.01	0.51	5	6	60.1	95	39	9	80	0.05
%VEGB_50	65	22.5	0	0	30	0	30	87.5	26	61.5	17.5
%MARG_50	12.5	1	0	0	1.75	0	6.5	22.5	5	22.5	4
%AQUA_50	15	0	0.005	3.5	2	60	80	4	0	50	0
%FLOA_50	0.8	0	0	0	2	0	3	0	0	0	0.25
%ALG_50	2	0.01	0.5	0	0	0.1	2	0	1	0	0.05
%VEG_50	28.3	1	0.005	3.5	5.75	60	89.5	26.5	5	72.5	4.25
%VEG_50_	30.3	1.01	0.505	3.5	5.75	60.1	91.5	26.5	6	72.5	4.3
%EARTH	0	30	0	0	50	0	100	65	50	100	0
%CONC	100	0	100	100	0	0	0	0	50	0	100
%METAL	0	0	0	0	0	100	0	0	0	0	0
%WOOD	0	0	0	0	0	0	0	0	0	0	0
%OTHER_S	0	70	0	0	50	0	0	35	0	0	0
%OTHER_B	0	0	0	0	0	0	0	0	0	0	0
%HAR_EXS	100	0	100	100	0	100	0	0	50	0	100
%HAR_INS	100	70	100	100	50	100	0	35	50	0	100
GRASS5	75	15	20	0	25	60	50	0	0	0	30
WATER5	0	0	0	0	0	0	0	0	0	0	0
SEMI_N5	0	70	0	60	75	20	20	60	80	70	20
URBAN5	10	0	40	0	0	0	0	0	0	30	10
INT_AG5	75	15	20	0	0	60	50	0	0	0	30
INT_ALL5	100	30	100	40	25	80	80	40	20	30	80
GRASS100	37.5	7.5	10	0	12.5	130	40	0	25	0	15
WATER100	0	0	0	0	0	0	0	0	0	0	0
SEMI_N100	17.5	85	5	75	87.5	10	47.5	80	77.5	85	22.5
URBAN100	37.5	0	65	5	0	0	0	0	0	15	42.5
INT_AG100	37.5	7.5	10	0	0	80	25	0	12.5	0	15
INT_ALL100	82.5	15	95	25	12.5	90	52.5	20	22.5	15	77.5
BGRASS5	0	85	0	85	0	0	35	73	0	0	95
BWATER5	0	5	0	0	0	0	0	2	0	0	0
BSEMI_N5	0	15	0	15	100	0	5	27	15	0	0
BURBAN5	100	0	100	0	0	100	60	0	3	100	5
BINT_AG5	0	85	0	85	0	0	35	73	80	0	95
BINT_ALL5	100	85	100	85	0	100	95	73	85	100	100
BGRASS100	0	67.5	0	42.5	0	50	65	36.5	30	0	57.5
BWATER100	0	2.5	0	0	0	0	0	1	0	0	0
BSEMI_N100	0	32.5	0	7.5	100	0	5	18.5	10	7.5	0
BURBAN100	100	0	100	50	0	50	30	45	19	92.5	42.5

TABLE 3. CANAL PHYSICAL AND CHEMICAL DATA (CONTINUED)

	CANAL SITE										
VARIABLE	44	45	46	47	48	49	50	51	52	53	54
BINT_AG100	0	67.5	0	42.5	0	50	65	36.5	70	0	57.5
BINT_ALL100	50	25	50	50	0	50	47.5	45	47.5	42.5	50
%BOULDER	0	0	0	3	5	30	0	0	0	10	0
%PEBBLES	0	0	1	3	25	30	7	0	1	20	0
%GRAVEL	0	5	1	30	25	15	10	2	1	20	0
%SAND	0	70	0	30	25	10	10	3	0	15	4
%SILT	92	20	95	20	10	10	65	75	89	30	90
%COARSE	4	2	1	9	5	2	3	15	3	2	3
%FINE	4	3	2	5	5	3	5	5	6	3	3
AV_BOUL	0	0	0	3	2.5	20	0	0	0	5	0
AV_PEBB	0	0	1	3	12.5	20	7	0	1	10	0
AV_GRAV	0	5	1	30	15	12.5	10	2	1	12.5	0
AV_SAND	0	70	0	30	15	10	10	3	0	10	4
AV_SILT	92	20	95	20	15	32.5	65	75	89	55	90
AV_COAR	4	2	1	9	27.5	2	3	15	3	1	3
AV_FINE	4	3	2	5	12.5	3	5	5	6	6.5	3
B_ANGLE	90	90	90	90	80	90	30	70	80	25	90
DEPTH_ED	0.7	0.2	0.5	0.65	0.2	0.7	0.1	0.4	0.22	0.1	1
DEPTH_1	0.7	0.3	1.2	0.72	0.4	0.95	0.5	0.65	0.85	0.35	1.3
DEPTH_2	0.9	0.4	1.6	1.05	0.8	0.9	0.65	0.97	1	0.6	1.5
DEPTH_3	1	0.8		1.3	1	1.1	0.85	1.4	1.7	1	
DEPTH_AV	0.867	0.5	1.6	1.023	0.733	0.983	0.667	1.007	1.183	0.65	1.5
SED_1	0.2	0	0.3	0	0	0.1	0.25	0.15	0	0	0.05
SED_2	0.3	0		0.1	0.15	0.3	0.4	0.25	0.2	0.2	0.3
SED_3	0.6	0.2		0.3	0.3	0.5	0.5			0.2	
SED_TOT	0.367	0.067		0.133	0.15	0.3	0.383	0.25	0.2	0.133	0.3
TOTAL_D1	0.9	0.3	1.5	0.72	0.4	1.05	0.75	0.8	0.85	0.35	1.35
TOTAL_D2	1.2	0.4	1.9	1.15	0.95	1.2	1.05	1.22	1.2	0.8	1.8
TOTAL_D3	1.6	1		1.6	1.3	1.6	1.35	1.4		1.2	
TOT_DAV	1.233	0.567	1.7	1.157	0.883	1.283	1.05	1.14	1.025	0.783	1.8
WIDTH	10.5	10	12	14	11	9	10	11	12	14	10.5
CHE_QUAL	4	3	4	2	6	6	6	6	3	5	3
SED_QUAL	1	1	2	2					2	2	2
FLOW	2	7								55	55
BOATS	2.5	6.5	3	3	0.08	0.2	0.2	0.08	6.5	5	5
AL	0.0763	0.0642	0.0587		0.3079	0.1306	0.1306		0.0719	0.1144	
ALK	3.06	4.37	3.68	4.86	4.59	4.74	4.74	4.18	3.02	3.38	3.82
AMM	0.00	0.00	0.26	0.12	0.11	0.02	0.02	0.05	0.00	0.09	0.00
CA	86.11	79.41	83.4	102.4	100.2	116.7	116.7	100.4	79.07	121.1	107.7
CHLORIDE	103.18	126.94	95.30	77.55	22.96	19.62	19.62	21.62	79.95	95.30	137.22
COND	650	720	520	590	349	385	385	320	520	700	780
CU	0.0617	0.0166			0.0256	0.0171	0.0171	0.0118	0.0122	0.0174	
K	13.3	19.8	22.0	21.2	5.9	4.8	4.8	4.9	24.8	20.0	32.4
MG	30.1	22.08	10.2	5.76	3	2.072	2.072	2.381	22.71	26.61	24.5
NI		0.0297	0.0223	0.0181	0.0497	0.0241	0.0241		0.0164	0.0283	0.0184
PH	8.2	7.6	7.8	8.0	7.6	7.3	7.3	7.7	7.5	7.7	7.7
SRP	0.027	0.580	0.000	0.570	0.000	0.000	0.000	0.000	0.000	1.960	0.000
SS	8.00	50.67	27.33	76.67	5.33	8.00	8.00	14.67	138.67	6.00	17.33
TN	0.57	6.45	2.24	5.67	2.24	7.47	7.47	2.67	11.10	10.28	13.88
TON	0.0	4.2	0.3	4.0	1.6	6.7	6.7	2.0	9.2	9.5	11.1
TP	0.045	2.603	0.210	1.758	0.101	0.069	0.069	0.020	1.311	2.534	1.776
ZN	0.1352	0.1907	0.0308	0.0648	0.0678	0.0766	0.0766	0.0494	0.0618	0.0578	0.0745

TABLE 3. CANAL PHYSICAL AND CHEMICAL DATA (CONTINUED)

	CANAL SITE										
VARIABLE	44	45	46	47	48	49	50	51	52	53	54
NA	57.44	109	70.36	63.96	11.02	10.24	10.24	10.4	56.69	74.55	116.4
K	12.93	18.32	13.21	13.19	4.359	4.618	4.618	4.488	14.68	11.61	19.09
ADS	26.6	20.1	19.1	32.5	24.5	24.5	24.5	24.5	39.2		43.5
LON	33	27	20	13	26	26	26	26	10		8
ORG	43	24	16	7	13	13	13	13	9		6
pH	6.8	7.3	7.1	7.3	7.1	7.1	7.1	7.1	7.2	8	7.3
ANTIMONY	10.1	0	12.5	11.2	0	0	0	0	0		0
ARSENIC	40.9	14.5	43.8	18.3	5	5	5	5	11.8	15.9	10.4
BARIUM	413	371	313	197	77.1	77.1	77.1	77.1	411		279
BERYLLIUM	1.7	1.7	1.8	1.1	0.5	0.5	0.5	0.5	1.3		0.9
BORON	35	54.7	34.5	40.3	16.7	16.7	16.7	16.7	40		28.4
AV BORON	9.3	22.3	1.05	6.87	4.02	4.02	4.02	4.02	6.3	3.73	3.63
CADMUIM	14	10	7	47	0	0	0	0	0	2.25	2
CHROMIUM	87	262	93	135	25	25	25	25	41	38.4	61
COBALT	24	18	18	15	6	6	6	6	13		7
COPPER	380	257	370	303	72	72	72	72	93	49.7	57
CYANIDE	2.4	0	0	0	0	0	0	0	0		0
AROMA	47	24	5	10	13	13	13	13	43		18
TPSED	0.97	1.48	1.12	1.22	0.37	0.37	0.37	0.37	0.4		0.47
PHENOL	FAR	FAR	3.24	2.36	FAR	FAR	FAR	FAR	FAR	1	3.06
LEAD	917	570	687	388	57	57	57	57	106	72.8	82
MERCURY	0.8	1.3	1.9	2.4	0.5	0.5	0.5	0.5	0.3		0.3
MOLYBDENUM	7.6	0	1.2	0	0	0	0	0	0		0
NICKEL	70	354	72	109	23	23	23	23	42	34.7	26
SELENIUM	1.8	2	7.4	2.6	2.1	2.1	2.1	2.1	1.5		1.1
SILVER	0	2.6	5.6	8.9	3.1	3.1	3.1	3.1	0		0
TIN	41.2	35.3	48.5	54.7	10.4	10.4	10.4	10.4	13.6		20.3
THALLIUM	0	0	0	0	0	0	0	0	0		0
TUNGSTEN	0	0	0	0	0	0	0	0	0		0
VANADIUM	86.4	34.2	81.6	55.3	11	11	11	11	39.8		30.3
ZINC	7507	1705	1638	815	209	209	209	209	299	230	211

TABLE 3. CANAL PHYSICAL AND CHEMICAL DATA (CONTINUED)

	CANAL SITE										
VARIABLE	55	56	57	58	59	60	61	62	63	64	65
EASTING	45285	42030	41932	45230	48110	32415	32518	33400	33848	35110	35245
NORTHING	32090	31843	27200	26820	33675	30893	31425	32690	33295	33670	34145
ALTITUDE	40	50	102	100	48	80	67	90	90	95	95
FLOW	0.06	0.083	0.083		0.01	0.02	0.01	0	0.04		0.033
SECCHI	30	30	28	20	200	130	150	60	40	35	30
%SHADE_B	30	0	15	0	0	30	60	0	0	20	3
%SHADE_W	10	0	0	0	0	2	15	0	0	2	1
%SHADE_B	2.5	4	0	0	35	20	40	0	0	15	1
%SHADE_W	1	1	2.5	0	7.5	2.5	10	0	0	2.5	0.25
%VEGB_SA	50	90	50	80	60	100	100	100	0	20	30
%MARG_SA	20	5	15	10	3	10	8	30	0	1	10
%AQUA_SA	0	0.05	0.01	0	70	40	2	0.01	0	0	0
%FLOA_SA	0	0	0	0	1	0.01	5	0.01	0	0	0
%ALG_SA	0.05	0.05	0	2	10	0.1	0.1	0	0.1	0	0.01
%VEG_SA	20	5.05	15.01	10	74	50.01	15	30.02	0	1	10
%VEG_SA_	20.05	5.1	15.01	12	84	50.11	15.1	30.02	0.1	1	10.01
%VEGB_50	0	90	0	87.5	40	97.5	100	50	20	14	0
%MARG_50	0	3.5	7.5	14	4	7.5	6.5	15	2.5	0	5
%AQUA_50	0	0	0	0	70	40	2	0.01	0	0	0
%FLOA_50	0	0	0	0	1	0.05	6.5	0.01	0	0	0
%ALG_50	0.05	0.05	0	1	10	0.1	0.1	0	0.1	0	0.01
%VEG_50	0	3.5	7.5	14	75	47.55	15	15.02	2.5	0	5
%VEG_50_	0.05	3.55	7.5	15	85	47.65	15.1	15.02	2.6	0	5.01
%EARTH	0	0	0	50	100	50	50	100	0	10	100
%CONC	0	0	0	0	0	0	0	0	0	0	0
%METAL	100	0	100	0	0	0	0	0	100	0	0
%WOOD	0	0	0	0	0	0	0	0	0	0	0
%OTHER_S	0	100	0	50	0	50	50	0	0	90	0
%OTHER_B	0	0	0	0	0	0	0	0	0	0	0
%HAR_EXS	100	0	100	0	0	0	0	0	100	0	0
%HAR_INS	100	100	100	50	0	50	50	0	100	90	0
GRASS5	3	60	30	70	60	15	0	90	50	0	85
WATER5	0	0	0	0	0	0	0	0	0	0	0
SEMI_N5	25	30	60	20	40	75	90	30	40	100	100
URBAN5	72	0	0	0	0	0	0	0	0	0	0
INT_AG5	3	60	30	70	60	15	0	70	50	0	0
INT_ALL5	75	70	40	80	60	25	10	70	60	0	0
GRASS100	31.5	100	55	35	30	92.5	70	95	25	0	67.5
WATER100	0	0	0	0	0	0	0	0	0	0	0
SEMI_N100	22.5	30	60	25	50	45	60	15	35	70	77.5
URBAN100	41	0	0	0	0	0	0	10	0	30	0
INT_AG100	16.5	65	35	70	50	50	35	60	60	0	12.5
INT_ALL100	77.5	70	40	75	50	55	40	85	65	30	22.5
BGRASS5	20	0	93	0	30	100	70	95	0	0	85
BWATER5	0	0	2	0	0	0	0	5	0	0	0
BSEMI_N5	0	20	7	5	5	0	10	5	20	0	10
BURBAN5	80	80	0	0	0	0	20	0	15	0	10
BINT_AG5	20	0	93	95	95	100	70	95	65	0	80
BINT_ALL5	100	80	93	95	95	100	90	95	80	0	90
BGRASS100	57.5	36	69	0	15	100	85	70	0	44	92.5
BWATER100	0	0	1	0	0	0	0	2.5	0	0	0
BSEMI_N100	0	21.5	6	2.5	2.5	0	5	5	10	6	5
BURBAN100	42.5	42.5	0	0	0	0	10	25	7.5	0	5

TABLE 3. CANAL PHYSICAL AND CHEMICAL DATA (CONTINUED)

	CANAL SITE										
VARIABLE	55	56	57	58	59	60	61	62	63	64	65
BINT_AG100	57.5	36	94	97.5	97.5	100	85	70	82.5	44	90
BINT_ALL100	50	38.5	47.5	50	50	50	50	47.5	50	44	50
%BOULDER	0	10	0	0	0	5	0	0	0	0	0
%PEBBLES	0	23	0	1	0	20	0	0	0	0	0
%GRAVEL	0	23	2	1	0	20	5	0	0	0	0
%SAND	4	23	66	1	0	35	40	0	0	85	81
%SILT	90	11	16	91	90	10	40	95	95	10	10
%COARSE	3	2	11	3	5	5	10	2	2	3	5
%FINE	3	8	5	3	5	5	5	3	3	2	4
AV_BOUL	0	10	0	0	0	2.5	0	0	0	0	0
AV_PEBB	0	23	0	1	0	10	0	0	0	0	0
AV_GRAV	0	23	2	1	0	10	2.5	0	0	0	0
AV_SAND	4	23	66	1	0	17.5	20	0	0	85	81
AV_SILT	90	11	16	91	90	51.5	57.5	95	95	10	10
AV_COAR	3	2	11	3	5	4.5	12.5	2	2	3	5
AV_FINE	3	8	5	3	5	4	7.5	3	3	2	4
B_ANGLE	90	85	90	30	50	30	80	40	90	25	10
DEPTH_ED	0.1	0.5	0.4	0.3		0.25	0.8	0.2	0.7	0.25	0.1
DEPTH_1	1	0.6	0.4	0.48	0.4	0.6	1	0.7	0.8	0.3	0.3
DEPTH_2	1.4	0.9	0.55	0.8	0.4	0.7	1.3	1.2	1.1	0.5	0.4
DEPTH_3	1.4	1.2	0.8	1.2	0.5	1		1.4	1.5	0.7	0.7
DEPTH_AV	1.267	0.9	0.583	0.827	0.433	0.767	1.4	1.1	1.133	0.5	0.467
SED_1	0	0	0	0	0.8	0	0.3	0.3	0.2	0	0
SED_2	0.3	0.1	0	0	1	0.2	0.4	0.3	0.2	0.05	0.2
SED_3	0.3	0.2	0.05	0.2	1.2	0.1		0.5	0.5	0.1	0.1
SED_TOT	0.2	0.1	0.017	0.067	0.3	0.1	0.35	0.367	0.3	0.05	0.1
TOTAL_D1	1	0.6	0.4	0.48	1.2	0.6	1.3	1	1	0.3	0.3
TOTAL_D2	1.7	1	0.55	0.8	1.4	0.9	1.7	1.5	1.3	0.55	0.6
TOTAL_D3	1.7	1.4	0.85	1.4	1.7	1.1		1.9	2	0.8	0.8
TOT_DAV	1.467	1	0.6	0.893	1.433	0.867	1.7	1.467	1.433	0.55	0.567
WIDTH	10.5	10	13	9	9	10.5	11	10.5	10	11	11
CHE_QUAL	3	5	2	5	5	6	4	3	6	5	6
SED_QUAL	2	2	2	2	3	2	2	2	2	2	3
FLOW	55	11	4		16	5			45	45	45
BOATS	5	8	5	9.5						14.5	14.5
AL		0.177	0.0861	0.1475		0.066	0.0714		0.0902	0.0676	0.0561
ALK	3.82	3.62	2.26	2.83	2.69	1.42	1.14	2.36	0.72	0.74	2.92
AMM	0.00	0.00	0.23	0.10	0.00	0.00	0.10	0.14	0.00	0.00	0.00
CA	107.7	120.7	43.73	102.4	83.37	20.18	15.76	49.97	13.62	14.19	13.98
CHLORIDE	137.22	117.60	56.60	76.62	59.27	20.16	19.49	25.90	16.69	16.69	16.69
COND	780	800	385	570	332	135	120	232	95	93	500
CU		0.02	0.0135								
K	32.4	23.2	14.8	17.6	8.5	4.0	3.6	6.6	1.8	2.4	2.3
MG	24.5	29.9	20.43	16.73	9.02	4.115	4.333	6.55	1.367	1.349	1.295
NI	0.0184	0.0299	0.0182	0.0127	0.014						
PH	7.7	7.8	8.6	7.9	7.8	7.5	7.2	7.1	7.2	7.1	7.7
SRP	0.000	0.160	0.120	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SS	17.33	88.67	30.00	95.33	15.33	14.00	15.33	24.67	65.33	92.67	28.00
TN	13.88	11.91	7.92	3.80	0.53	1.74	0.59	1.23	1.56	1.53	1.46
TON	11.1	8.5	5.8	2.9	0.5	1.3	0.0	0.1	1.1	1.0	0.9
TP	1.776	2.097	2.024	0.060	0.071	0.014	0.083	0.027	0.027	0.021	0.027
ZN	0.0745	0.0828	0.0651	0.2819	0.0977	0.2264	0.1693	0.0652	0.1576	0.1202	0.1041

TABLE 3. CANAL PHYSICAL AND CHEMICAL DATA (CONTINUED)

	CANAL SITE										
VARIABLE	55	56	57	58	59	60	61	62	63	64	65
NA	116.4	86.87	38.06	41.79	24.66	11.51	10.71	11.57	8.949	8.568	8.354
K	19.09	8.319	8.796	9.043	6.329	3.897	3.53	4.563	3.136	2.988	3.196
ADS	43.5	39.7	31.6	40.1	27.1	47.8	25.8	34.3	46.9	50.6	54.7
LON	8	13	13	8	15	9	15	23	10	8	6
ORG	6	11	1	5	10	7	14	22	9	5	5
pH	7.3	7.5	7.3	7.3	7.2	7.1	6.4	6.9	6.8	7.1	6.9
ANTIMONY	0	0	0	0	9.1	0	6.8	0	5.5	0	0
ARSENIC	10.4	11.2	10.9	19.5	23.7	11.2	13.4	19.1	7.18	6.57	5.02
BARIUM	279	492	211	137	85.6	336	153	146	79.4	133	244
BERYLLIUM	0.9	1	1.4	1.3	1.4	0.7	1	0.6	0.7	0.6	0.5
BORON	28.4	37.2	46.3	55.9	52.7	14.5	16.2	14.4	7.8	12.5	11.6
AV BORON	3.63	6.07	7.05	2.21	4.34	1.51	4.21	3.03	0.72	0.79	0.46
CADMUIM	2	5	2	0	0	2	3	0	0	0	0
CHROMIUM	61	39	46	61	48	25	37	20	24	22	15
COBALT	7	27	13	20	14	16	19	12	11	7	6
COPPER	57	115	141	28	24	30	54	27	23	20	14
CYANIDE	0	0	0	0	0	0	0.7	0	0	0	0.7
AROMA	18	19	21	2	9	24	17	14	12	4	3
TPSED	0.47	1	0.56	0.18	0.22	0.13	0.2	0.19	0.14	0.12	0.09
PHENOL	3.06	FAR	3.35	1.61	FAR	FAR	FAR	FAR	FAR	FAR	FAR
LEAD	82	341	114	36	54	114	128	92	49	33	20
MERCURY	0.3	0.3	0.4	0.2	0.1	0.2	0.2	0.2	0.1	0.1	0.1
MOLYBDENUM	0	1	0	0	0	0	0	0	0	0	0
NICKEL	26	30	79	44	32	33	42	20	28	23	15
SELENIUM	1.1	1.6	1	0.4	0.6	0.4	0.6	0.8	0.4	0.4	0.2
SILVER	0	0	1.5	0	0	0	0	0	0	0	0
TIN	20.3	15.8	15.6	14.7	19.1	15.4	15.6	10.7	7.6	8.2	3
THALLIUM	0	0	0	0	0	0	0	0	0	0	0
TUNGSTEN	0	0	0	0	0	0	0	0	0	0	0
VANADIUM	30.3	22	40.4	81	70.4	22.5	33.3	18	17.1	17.4	12.8
ZINC	211	607	651	160	112	541	670	148	247	212	143

TABLE 3. CANAL PHYSICAL AND CHEMICAL DATA (CONTINUED)

	CANAL SITE										
VARIABLE	66	67	68	69	70	71	72	73	74	75	76
EASTING	35245	36783	36490	36070	36195	36705	38585	38200	39158	39355	41835
NORTHING	34145	33525	34625	34870	35505	36085	36135	35565	33195	31835	31608
ALTITUDE	95	90	55	75	118	30	120	107	85	78	55
FLOW	0.033	0.022	0.04	0.05	0.014		0	0			0.05
SECCHI	30	35	26	22	20	12	20	11	26	18	80
%SHADE_B	0	0	0	0	0	10	0	20	0	0	20
%SHADE_W	0	0	0	0	0	0.1	0	5	0	0	3
%SHADE_B	1.5	0	0	0	0	1.5	22.5	7.5	20	0	2.5
%SHADE_W	0.5	0	0	0	0	0.05	12.5	1.5	2.5	0	0.5
%VEGB_SA	0	99	95	20	0	5	50	25	100	25	90
%MARG_SA	0	1	20	5	0.05	1	12	3	8	5	25
%AQUA_SA	0	0	0	0	0	0	0	4	0	0	2
%FLOA_SA	0	0.01	0	0	0	0	0	1	0	0	2
%ALG_SA	0.1	0	0	0	0	1	0	0	0.5	0	0.5
%VEG_SA	0	1.01	20	5	0.05	1	12	8	8	5	29
%VEG_SA_	0.1	1.01	20	5	0.05	2	12	8	8.5	5	29.5
%VEGB_50	15	69.5	52.5	20	0	5	40	13	75	2.5	65
%MARG_50	0		10.5	2.75	0.05	1	11	1.525	12.5	0.5	16
%AQUA_50	0	0	0	0	0	0	1	2.5	0	0	1.5
%FLOA_50	0	0.01	0	0	0	0	0	0.5	0	0	1.5
%ALG_50	0.055	0.005	0	0.005	0	1	0	0	0.275	0	0.5
%VEG_50	0	0.01	10.5	2.75	0.05	1	12	4.525	12.5	0.5	19
%VEG_50_	0.055	0.015	10.5	2.755	0.05	2	12	4.525	12.775	0.5	19.5
%EARTH	0	10	100	100	0	0	100	100	10	0	75
%CONC	0	0	0	0	0	0	0	0	0	0	0
%METAL	100	0	0	0	100	100	0	0	0	0	25
%WOOD	0	0	0	0	0	0	0	0	0	0	0
%OTHER_S	0	90	0	0	0	0	0	0	90	100	0
%OTHER_B	0	0	0	0	0	0	0	0	0	0	0
%HAR_EXS	100	0	0	0	100	100	0	0	0	0	25
%HAR_INS	100	90	0	0	100	100	0	0	90	100	25
GRASS5	25	60	80	50	0	0	40	60	60	0	65
WATER5	0	0	0	0	0	0	0	0	0	0	0
SEMI_N5	55	30	10	50	90	90	40	40	25	70	20
URBAN5	0	0	0	0	0	0	0	0	15	0	0
INT_AG5	25	60	80	50	0	0	40	60	60	0	65
INT_ALL5	45	70	90	50	10	10	60	60	75	30	80
GRASS100	97.5	30	40	25	0	95	60	80	30	0	82.5
WATER100	0	0	0	0	0	0	0	0	0	0	0
SEMI_N100	77.5	25	50	62.5	75	47.5	50	50	62.5	35	35
URBAN100	0	40	0	0	0	0	0	0	7.5	50	0
INT_AG100	12.5	30	40	25	20	47.5	40	40	30	0	57.5
INT_ALL100	22.5	75	50	37.5	25	52.5	50	50	37.5	65	65
BGRASS5	100	82	95	90	90	32	98	100	0	89	95
BWATER5	0	0	0	0	0	0	0	0	0	0	0
BSEMI_N5	0	18	0	0	0	5	2	0	90	6	5
BURBAN5	0	0	5	10	10	63	0	0	10	5	0
BINT_AG5	100	82	95	90	90	32	98	100	0	89	95
BINT_ALL5	100	82	100	100	100	95	98	100	10	94	95
BGRASS100	50	41	77.5	95	45	66	95	72.5	0	44.5	95.5
BWATER100	0	0	0	0	0	0	0	0	0	0	0
BSEMI_N100	0	11.5	7.5	0	50	2.5	5	5	50	3	3.5
BURBAN100	0	30	15	5	5	31.5	0	22.5	5	52.5	1

TABLE 3. CANAL PHYSICAL AND CHEMICAL DATA (CONTINUED)

	CANAL SITE										
VARIABLE	66	67	68	69	70	71	72	73	74	75	76
BINT_AG100	50	58.5	77.5	95	45	66	95	72.5	45	44.5	95.5
BINT_ALL100	0	47.5	42.5	50	0	50	46	45	45	50	49
%BOULDER	0	0	0	0	0	0	0	10	15	0	0
%PEBBLES	0	0	0	0	0	0	0	10	20	20	5
%GRAVEL	0	5	0	0	0	0	0	5	20	25	10
%SAND	81	70	20	75	15	15	5	20	20	25	30
%SILT	10	20	75	20	80	77	89	47	20	20	50
%COARSE	5	3	3	3	3	5	4	5	2	5	2
%FINE	4	2	2	2	2	3	2	3	3	5	3
AV_BOUL	0	0	0	0	0	0	0	5	15	0	0
AV_PEBB	0	0	0	0	0	0	0	5	20	10	5
AV_GRAV	0	5	0	0	0	0	0	2.5	20	12.5	10
AV_SAND	81	70	20	75	15	15	5	15	20	35	30
AV_SILT	10	20	75	20	80	77	89	63.5	20	33	50
AV_COAR	5	3	3	3	3	5	4	5	2	4	2
AV_FINE	4	2	2	2	2	3	2	4	3	5.5	3
B_ANGLE	90	25	30	20	90	90	30	15	80	90	80
DEPTH_ED	0.5	0.2	0.3	0.1	0.6	0.4	0.2	0.1	0.2	0.4	0.4
DEPTH_1	0.6	0.5	0.6	0.3	0.9	0.6	0.3	0.4	0.6	0.4	0.6
DEPTH_2	1	0.9	1	0.4	1.2	0.7	0.6	0.6	0.9	0.5	0.9
DEPTH_3	1.3	1.3	1.3	0.5	1.3	1	1	1	1	1	1
DEPTH_AV	0.967	0.9	0.967	0.4	1.133	0.767	0.633	0.667	0.833	0.633	0.833
SED_1	0	0	0.4	0	0	0.1	0	0.1	0	0	0
SED_2	0.2	0.05	0.3	0	0.05	0.3	0	0.4	0	0	0.1
SED_3	0.1	0.05	0.5	0.1	0.05	0.3	0.1	0.7	0.2	0	0.15
SED_TOT	0.1	0.033	0.4	0.033	0.033	0.233	0.033	0.4	0.067	0	0.083
TOTAL_D1	0.6	0.5	1	0.3	0.9	0.7	0.3	0.5	0.6	0.4	0.6
TOTAL_D2	1.2	0.95	1.3	0.4	1.25	1	0.6	1	0.9	0.5	1
TOTAL_D3	1.4	1.35	1.8	0.6	1.35	1.3	1.1	1.7	1.2	1	1.15
TOT_DAV	1.067	0.933	1.367	0.433	1.167	1	0.667	1.067	0.9	0.633	0.917
WIDTH	11	12.5	10	12	9	10	12	9	10	11	11.5
CHE_QUAL	6	4	5	5	5	2	3	4	3	4	5
SED_QUAL	3	3	2	3	2	2	3	1	2	3	2
FLOW	45	16	16	45	45	12	12	23	6	6	11
BOATS	14.5	10.5	11	14.5	13	13.5	6	8.5	8.5	9	8
AL	0.0561		0.0745	0.0674	0.059	0.2267	0.1699			0.0599	
ALK	2.92	0.72	3.44	3.90	0.83	0.88	2.59	1.50	3.50	2.49	3.91
AMM	0.00	0.09	0.22	0.00	0.02	0.00	0.00	0.00	0.00	0.10	0.00
CA	13.98	72.53	66.76	14.61	15.3	47.47	42.46	58.65	60.63	66.86	121.9
CHLORIDE	16.69	112.79	109.85	16.69	18.15	83.02	54.73	40.31	50.86	126.01	119.73
COND	500	93	620	600	101	100	462	309	1100	350	800
CU						0.036					0.0139
K	2.3	26.0	28.4	2.9	2.6	18.8	8.8	10.6	10.0	18.8	18.4
MG	1.295	14.4	14.26	1.529	1.731	10.12	6.47	15.27	11.68	18.61	30.26
NI		0.0205	0.0251			0.016	0.014	0.0141		0.0179	
PH	7.7	7.1	8.3	8.7	7.2	7.3	8.7	7.4	7.5	7.5	8.1
SRP	0.000	1.890	0.580	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SS	28.00	44.67	54.67	280.67	149.33	167.33	125.33	109.33	158.67	118.67	24.67
TN	1.46	12.74	15.24	1.95	1.29	10.46	3.44	2.58	2.88	5.30	10.52
TON	0.9	10.6	13.6	1.1	1.0	8.7	1.9	1.8	2.0	4.0	9.6
TP	0.027	3.167	1.868	0.185	0.063	1.656	0.314	0.062	0.192	1.425	1.379
ZN	0.1041	0.0349	0.2264	0.1131	0.0819	0.1668	0.1317	0.1069	0.0783	0.0804	0.0488

TABLE 3. CANAL PHYSICAL AND CHEMICAL DATA (CONTINUED)

	CANAL SITE										
VARIABLE	66	67	68	69	70	71	72	73	74	75	76
NA	8.354	95.22	98.28	8.725	8.147	65.86	29.95	313.9	28.06	107.9	91.24
K	3.196	15.13	17.08	3.64	3.276	10.41	5.512	8.925	6.63	14.66	10.82
ADS	54.7	62.9	52.3	52.5	39.1	53.3	42.4	26.6	35.6	80.4	26.9
LON	6	5	5	6	11	6	6	17	12	2	18
ORG	5	4	3	5	9	4	6	12	8	2	15
pH	6.9	8.4	7	7	6.8	6.9	7.1	7	7.5	7.4	7.6
ANTIMONY	0	0	0	0	5.7	0	0	14.9	0	0	0
ARSENIC	5.02	5	5.3	7.16	11.2	6.7	15.2	88.4	15.2	3.07	16.4
BARIUM	244	159	320	147	237	161	118	270	261	63.1	767
BERYLLIUM	0.5	0.5	1.1	0.5	0.9	0.8	0.8	1.7	1.1	0.3	1.4
BORON	11.6	13.8	25	10.2	13.9	31	16.5	66	27.7	9.3	74
AV BORON	0.46	1.67	4.21	1.11	1.32	2.76	1.23	6.39	2.45	1.31	15.4
CADMUIM	0	0	1	0	0	0	0	192	4	0	5
CHROMIUM	15	26	37	19	34	32	23	48	31	11	53
COBALT	6	5	7	7	12	9	9	89	19	3	31
COPPER	14	23	34	18	32	26	67	85	60	13	161
CYANIDE	0.7	0	0	0	0	0	0	0.9	0	0	0
AROMA	3	4	4	4	4	5	6	50	26	11	21
TPSED	0.09	0.25	0.87	0.11	0.22	0.56	0.15	0.48	0.36	0.13	1.31
PHENOL	FAR	3.41	3.57	FAR	FAR	4.74	3.67	4.17	FAR	0.94	FAR
LEAD	20	28	26	27	51	23	56	308	227	12	605
MERCURY	0.1	0.3	0.1	0.1	0.1	0.1	0.5	0.9	0.5	0	0.5
MOLYBDENUM	0	0	0	0	0	0	0	3.6	1.2	0	1.5
NICKEL	15	32	76	18	29	52	24	107	46	12	40
SELENIUM	0.2	0.2	0.2	0.2	0.4	0.2	0.4	87.8	1.3	0	1.8
SILVER	0	2.3	0	0	0	0	0	0	1.9	4.2	0
TIN	3	2.9	5.3	7.2	9.8	8.8	8.8	50.6	14.2	3.1	24.4
THALLIUM	0	0	0	0	0	0	0	0	0	0	0
TUNGSTEN	0	0	0	0	0	0	0	0	0	0	0
VANADIUM	12.8	20.1	30.3	15.9	27.2	22	22.1	57.4	33.5	10.1	40.9
ZINC	143	128	240	198	417	165	169	1039	600	109	694

TABLE 3. CANAL PHYSICAL AND CHEMICAL DATA (CONTINUED)

	CANAL SITE						
VARIABLE	77	78	79	80	81	82	83
EASTING	41835	33030	33080	33180	48400	48944	48944
NORTHING	31608	12830	12945	13440	15290	15335	15335
ALTITUDE	55	17	13	12	80	70	70
FLOW	0.05	0.056	0.029	0.033	0.033		
SECCHI	80	150	130	200	180	180	180
%SHADE_B	0	10	0	0	0	0	0
%SHADE_W	0	5	0	0	0	0	0
%SHADE_B	2.5	5	12.5	0	40	25	25
%SHADE_W	0.5	2.5	6	0	25	5	5
%VEGB_SA	1	80	100	100	99	0	50
%MARG_SA	0.1	20	25	20	15	0	3
%AQUA_SA	1	6	10	10	10	52	52
%FLOA_SA	0	0.5	0.5	0.01	2	0	0
%ALG_SA	0.5	2	0.5	50	0.1	0	0
%VEG_SA	1.1	26.5	35.5	30.01	27	52	55
%VEG_SA_	1.6	28.5	36	80.01	27.1	52	55
%VEGB_50	30	40	55	100	74.5	25	50
%MARG_50	0.1	25	16.5	20	12.5	2.5	4
%AQUA_50	1.5	5	10	20	10	52	52
%FLOA_50	0.25	0.3	0.5	0.01	2	0	0
%ALG_50	0.5	2	0.5	50	0.05	0	0
%VEG_50	1.85	30.3	27	40.01	24.5	54.5	56
%VEG_50_	2.35	32.3	27.5	90.01	24.55	54.5	56
%EARTH	0	100	100	100	100	0	100
%CONC	0	0	0	0	0	0	0
%METAL	100	0	0	0	0	100	0
%WOOD	0	0	0	0	0	0	0
%OTHER_S	0	0	0	0	0	0	0
%OTHER_B	0	0	0	0	0	0	0
%HAR_EXS	100	0	0	0	0	100	0
%HAR_INS	100	0	0	0	0	100	0
GRASS5	65	0	90	30	10	10	10
WATER5	0	0	0	0	0	0	0
SEMI_N5	20	100	20	20	70	10	10
URBAN5	0	0	0	50	0	60	60
INT_AG5	65	0	80	30	0	0	0
INT_ALL5	80	0	80	80	30	90	90
GRASS100	82.5	0	45	75	5	5	5
WATER100	0	0	0	0	0	0	0
SEMI_N100	35	70	60	30	85	55	55
URBAN100	0	30	0	25	0	30	30
INT_AG100	57.5	0	40	45	0	0	0
INT_ALL100	65	30	40	70	15	45	45
BGRASS5	95	98	0	0	80	0	0
BWATER5	0	0	0	0	0	0	0
BSEMI_N5	5	2	20	20	10	0	0
BURBAN5	0	0	80	80	10	100	100
BINT_AG5	95	98	0	0	80	0	0
BINT_ALL5	95	98	80	80	90	100	100
BGRASS100	95.5	49	17.5	50	40	0	0
BWATER100	0	0	0	0	0	0	0
BSEMI_N100	3.5	1	25	10	55	50	50
BURBAN100	1	50	40	40	5	50	50

TABLE 3. CANAL PHYSICAL AND CHEMICAL DATA (CONTINUED)

	CANAL SITE						
VARIABLE	77	78	79	80	81	82	83
BINT_AG100	95.5	49	35	50	40	0	0
BINT_ALL100	49	50	35	50	0	0	0
%BOULDER	0	0	0	0	0	0	0
%PEBBLES	5	5	4	0	0	0	0
%GRAVEL	10	15	5	1	45	0	0
%SAND	30	20	15	6	25	5	5
%SILT	50	55	70	88	25	85	85
%COARSE	2	2	3	2	2	5	5
%FINE	3	3	3	3	3	5	5
AV_BOUL	0	0	0	0	0	0	0
AV_PEBB	5	5	2	0	0	0	0
AV_GRAV	10	15	2.5	1	45	0	0
AV_SAND	30	20	10	6	25	5	5
AV_SILT	50	55	80	88	25	85	85
AV_COAR	2	2	2	2	2	5	5
AV_FINE	3	3	3.5	3	3	5	5
B_ANGLE	90	20	40	50	50	90	35
DEPTH_ED	0.5	0.5	0.2	0.25	0.1	0.7	0.1
DEPTH_1	0.6	0.3	0.5	0.6	0.5	0.7	0.3
DEPTH_2	0.9	0.5	0.7	0.9	0.9	0.9	0.8
DEPTH_3	1	0.7	1	1.1	1.1	1.4	1.4
DEPTH_AV	0.833	0.5	0.733	0.867	0.833	1	0.833
SED_1	0	0.1	0.05	0.1	0	0.1	0
SED_2	0.1	0.4	0.2	0.3	0.1	0.3	0.25
SED_3	0.15	0.5	0.3	0.7	0.35	0.5	0.5
SED_TOT	0.083	0.333	0.183	0.367	0.15	0.3	0.25
TOTAL_D1	0.6	0.4	0.55	0.7	0.5	0.8	0.3
TOTAL_D2	1	0.9	0.9	1.2	1	1.2	1.05
TOTAL_D3	1.15	1.2	1.3	1.8	1.45	1.9	1.9
TOT_DAV	0.917	0.833	0.917	1.233	0.983	1.3	1.083
WIDTH	11.5	8	11	13	13.5	15	15
CHE_QUAL	5	5	5	3	6	6	6
SED_QUAL	2	3	3	3			
FLOW	11	12	12	12			
BOATS	8	0.25	0.25	0.25	0.4	0.4	0.4
AL		0.1103					
ALK	3.91	3.41	3.94	3.86	3.76	3.14	3.14
AMM	0.00	0.00	0.03	0.00	0.17	0.04	0.04
CA	121.9	79.29	81.5	76.4	95.33	64.16	64.16
CHLORIDE	119.73	31.90	32.04	35.91	22.96	28.16	28.16
COND	800	680	385	358	362	275	275
CU	0.0139		0.0132				
K	18.4	6.9	6.9	6.4	5.4	6.5	6.5
MG	30.26	13.66	14.11	13.92	1.78	2.512	2.512
NI		0.0123					
PH	8.1	7.9	7.8	7.9	8.3	7.6	7.6
SRP	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SS	24.67	20.67	14.67	10.67	18.00	13.33	13.33
TN	10.52	6.21	6.30	4.22	2.06	0.90	0.90
TON	9.6	5.6	5.6	3.8	1.1	0.0	0.0
TP	1.379	0.303	0.300	0.168	0.059	0.039	0.039
ZN	0.0488	0.1683	0.0313	0.0423	0.0291	0.0552	0.0552

TABLE 3. CANAL PHYSICAL AND CHEMICAL DATA (CONTINUED)

	CANAL SITE						
VARIABLE	77	78	79	80	81	82	83
NA	91.24	16.53	16.42	17.85	10.51	14.77	14.77
K	10.82	4.854	4.311	4.268	4.166	4.895	4.895
ADS	26.9	30.8	30.8	29.8	24.5	32.5	32.5
LON	18	10	10	11	26	13	13
ORG	15	7	7	8	13	7	7
pH	7.6	7.6	7.6	7.2	7.1	7.3	7.3
ANTIMONY	0	10.4	10.4	5.3	0	11.2	11.2
ARSENIC	16.4	9.64	9.64	8.05	5	18.3	18.3
BARIUM	767	224	224	214	77.1	197	197
BERYLLIUM	1.4	0.8	0.8	0.8	0.5	1.1	1.1
BORON	74	27.7	27.7	30.1	16.7	40.3	40.3
AV BORON	15.4	2.62	2.62	3.35	4.02	6.87	6.87
CADMUIM	5	0	0	0	0	47	47
CHROMIUM	53	45	45	43	25	135	135
COBALT	31	8	8	8	6	15	15
COPPER	161	24	24	23	72	303	303
CYANIDE	0	0	0	0	0	0	0
AROMA	21	5	5	2	13	10	10
TPSED	1.31	0.29	0.29	0.32	0.37	1.22	1.22
PHENOL	FAR	FAR	FAR	FAR	FAR	2.36	2.36
LEAD	605	30	30	29	57	388	388
MERCURY	0.5	0.1	0.1	0.1	0.5	2.4	2.4
MOLYBDENUM	1.5	0	0	0	0	0	0
NICKEL	40	20	20	22	23	109	109
SELENIUM	1.8	1.4	1.4	1.5	2.1	2.6	2.6
SILVER	0	0	0	0	3.1	8.9	8.9
TIN	24.4	7.6	7.6	7.1	10.4	54.7	54.7
THALLIUM	0	0	0	0	0	0	0
TUNGSTEN	0	0	0	0	0	0	0
VANADIUM	40.9	19	19	18.9	11	55.3	55.3
ZINC	694	112	112	103	209	815	815

TABLE 4. CANAL INVERTEBRATE DATA (NUMBERS PER THREE MINUTE SAMPLE)

	SITES												
Species	1	2	3	4	5	6	7	8	9	10	11	12	13
Polycelis nigra	0	0	0	0	0	0	0	0	0	0	0	0	0
Polycelis tenuis	0	0	0	0	0	0	0	0	3	0	0	0	0
Dugesia lugubris	0	0	0	0	0	0	0	0	0	0	0	0	0
Dugesia polychroa	0	0	0	0	0	0	0	0	3	0	0	0	0
Dugesia tigrina	0	0	1	0	0	0	0	0	0	0	0	0	0
Dendrocoelum lacteum	0	0	0	0	0	0	0	0	1	0	0	0	0
Theodoxus fluviatilis	1	0	0	16	0	5	0	0	0	1	0	0	0
Viviparus viviparus	1	0	1	0	0	0	0	0	0	30	3	1	11
Valvata cristata	9	0	1	0	0	0	4	0	0	0	0	0	0
Valvata piscinalis	0	0	2	0	0	0	0	0	0	2	0	0	1
Potamopyrgus antipodarum	3	0	0	10	3	0	1	1	0	3	1	1	37
Bithynia leachi	52	8	4	5	0	26	0	4	6	0	20	0	5
Bithynia tentaculata	32	1	9	7	2	30	1	9	3	0	4	0	8
Physa acuta	6	0	0	0	0	0	0	0	1	3	0	0	6
Physa fontinalis	0	0	1	0	0	0	0	0	2	0	0	0	0
Lymnaea auricularia	0	0	0	0	0	0	2	0	0	0	0	0	0
Lymnaea palustris	0	0	1	0	2	0	0	0	8	0	0	0	13
Lymnaea peregra	2	0	10	8	0	0	0	0	0	0	2	0	15
Lymnaea stagnalis	1	0	0	5	0	0	0	1	0	0	1	0	3
Lymnaea truncatula	0	0	1	0	0	1	0	0	0	0	0	0	0
Planorbis carinatus	28	0	0	0	0	0	2	2	1	0	0	0	8
Planorbis planorbis	0	0	0	0	0	0	0	0	0	0	0	0	0
Anisus vortex	76	0	10	0	1	8	1	25	5	0	60	0	2
Bathyomphalus contortus	6	0	0	0	0	0	0	0	0	0	0	0	0
Gyraulus albus	0	1	1	0	0	6	1	0	1	0	1	0	2
Armiger crista	0	1	5	0	0	0	1	0	1	1	0	0	0
Hippeutis complanatus	2	0	3	0	0	0	0	1	23	0	0	0	0
Planorbarius corneus	0	0	1	0	0	0	0	1	0	0	0	0	0
Ancylus fluviatilis	0	0	0	2	0	0	0	0	0	0	0	0	0
Ferrissia wautieri	0	0	0	0	0	0	0	0	0	0	0	0	0
Acroloxus lacustris	28	0	5	0	5	2	0	0	0	1	1	0	1
Anodonta cygnaea	0	0	0	0	0	0	3	7	1	0	0	0	0
Unio pictorum	0	0	0	3	0	0	2	0	0	0	0	0	0
Unio tumidus	0	0	0	0	0	0	0	0	0	0	0	0	0
Anodonta anatina	1	0	0	1	1	0	1	0	1	0	0	0	0
Sphaerium corneum	40	2	1	16	1	18	1	17	3	0	0	0	4
Sphaerium lacustre	0	0	0	0	0	0	0	0	0	0	0	0	0
Sphaerium rivicola	1	0	0	0	0	0	0	0	0	0	0	0	0
Dreissena polymorpha	0	0	1	0	0	0	0	0	0	0	0	2	2
Piscicola geometra	1	0	3	0	0	0	0	0	0	2	0	0	0
Theromyzon tessulatum	0	0	0	0	0	0	0	0	0	0	0	0	0
Hemiclepsis marginata	0	0	0	0	0	0	0	2	0	0	0	0	0
Glossiphonia complanata	2	1	0	0	0	0	0	2	0	0	2	0	0
Glossiphonia heteroclita	0	0	0	0	0	0	0	0	3	0	2	0	0
Helobdella stagnalis	1	0	0	0	0	0	5	10	3	0	0	0	0
Haemopis sanguisuga	0	0	0	0	0	0	0	0	0	0	0	0	0
Erpobdella octoculata	5	0	0	4	1	0	0	0	5	0	1	0	0
Erpobdella testacea	0	0	0	0	0	0	0	0	0	0	0	0	0
Argyroneta aquatica	0	0	0	0	0	0	0	0	0	0	0	0	0
Pacifastacus leniusculus	0	0	0	0	1	0	0	0	0	0	0	0	0
Austropotamobius pallipes	0	0	0	0	0	0	0	0	0	0	0	0	0
Asellus aquaticus	240	4	15	0	23	3	33	140	61	3	7	12	49

TABLE 4. CANAL INVERTEBRATE DATA (NUMBERS PER THREE MINUTE SAMPLE) (CONTINUED)

	SITES												
Species	1	2	3	4	5	6	7	8	9	10	11	12	13
Asellus meridianus	0	0	0	0	0	0	0	0	0	0	0	0	0
Corophium curvispinum	9	6	0	0	0	0	0	0	0	0	0	2	0
Crangonyx pseudogracilis	160	17	35	0	48	0	19	30	10	0	7	3	7
Gammarus tigrinus	0	0	0	0	0	0	0	0	0	0	0	0	0
Gammarus pulex	0	2	0	5	350	14	0	0	0	0	0	0	0
Baetis fuscatus	0	0	0	0	0	1	0	0	0	0	0	0	0
Baetis vernus	0	0	0	0	0	21	0	0	0	0	0	0	0
Centroptilum luteolum	0	4	0	0	3	14	1	0	0	0	0	0	0
Cloeon dipterum	0	0	0	0	1	5	2	0	3	0	0	0	0
Cloeon simile	0	0	0	0	0	0	0	0	0	0	0	0	0
Paraleptophlebia submarginata	0	0	0	0	0	5	0	0	0	0	0	0	0
Habrophlebia fusca	0	3	0	0	0	0	0	0	0	0	0	0	0
Ephemera danica	0	0	0	5	2	7	0	0	0	0	0	0	0
Ephemera vulgata	13	5	1	13	0	5	0	0	0	0	0	0	0
Ephemerella ignita	0	129	0	0	0	0	0	0	0	0	0	0	0
Caenis horaria	0	0	0	1	1	0	69	0	0	1	0	8	14
Caenis luctuosa	92	336	144	3	2	10	0	0	0	0	0	0	0
Caenis macrura	0	0	0	0	0	1	0	0	0	0	0	0	0
Caenis robusta	8	0	0	0	0	0	0	0	0	0	0	0	0
Platycnemis pennipes	34	0	6	0	0	0	0	0	1	10	0	1	21
Ischnura elegans	10	52	199	0	5	2	19	1	38	1	0	0	0
Enallagma cyathigerum	0	0	0	0	0	0	0	0	0	0	0	0	0
Coenagrion puella	0	0	0	0	0	0	0	0	0	0	0	0	0
Erythromma najas	0	0	0	0	0	0	0	0	6	0	0	0	0
Lestes sponsa	0	0	0	0	0	0	0	0	0	0	0	0	0
Calopteryx splendens	0	0	2	20	6	6	0	0	0	0	0	0	0
Brachytron pratense	0	0	0	0	0	0	0	0	0	0	0	0	0
Aeshna cyanea	0	0	0	0	0	0	0	0	0	0	0	0	0
Aeshna grandis	0	0	0	0	0	0	0	0	0	0	0	0	0
Anax imperator	0	0	0	0	0	0	0	0	0	0	0	0	0
Orthetrum cancellatum	0	0	0	0	0	0	0	0	0	0	0	0	0
Libellula quadrimaculata	0	0	0	0	0	0	0	0	0	0	0	0	0
Sympetrum striolatum	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydrometra stagnorum	1	0	1	0	0	0	0	0	0	0	0	0	0
Velia caprai	0	0	0	1	0	0	0	0	0	0	0	0	0
Microvelia reticulata	0	0	0	0	0	0	0	0	0	0	0	0	0
Gerris argentatus	0	0	0	0	0	0	0	0	0	0	0	0	0
Gerris lacustris	0	0	1	3	0	0	0	0	1	0	0	0	0
Gerris odontogaster	2	0	0	1	0	0	0	0	2	0	0	0	0
Nepa cinerea	0	0	0	0	0	0	0	0	0	0	0	0	0
Ranatra linearis	0	0	0	0	0	0	0	0	0	0	0	0	0
Ilyocoris cimicoides	0	0	0	0	0	0	0	0	0	0	0	0	0
Aphelocheirus aestivalis	0	0	0	6	0	0	0	0	0	0	0	0	0
Notonecta glauca	1	0	0	0	0	0	1	0	0	0	0	0	0
Notonecta marmorea	1	0	0	0	0	0	0	0	0	0	0	0	0
Plea leachi	0	0	0	1	0	0	0	0	0	0	0	0	0
Micronecta scholtzi	0	0	0	0	0	0	0	0	0	0	0	0	0
Micronecta poweri	0	0	0	0	0	0	0	0	0	0	0	0	0
Cymatia coleoptrata	0	0	0	0	0	0	0	0	0	0	0	0	0
Sigara dorsalis	1	1	13	0	0	0	0	0	0	0	0	0	0
Sigara distincta	0	0	0	0	0	0	0	0	1	0	0	0	0
Sigara falleni	1	2	9	0	0	0	0	0	1	0	0	0	0

TABLE 4. CANAL INVERTEBRATE DATA (NUMBERS PER THREE MINUTE SAMPLE) (CONTINUED)

	SITES												
Species	1	2	3	4	5	6	7	8	9	10	11	12	13
Sigara fossarum	0	0	2	0	0	0	0	0	0	0	0	0	0
Sigara concinna	0	0	0	0	0	0	0	0	0	0	0	0	0
Haliplus confinis	0	0	0	0	0	0	0	0	0	0	0	0	0
Haliplus flavicollis	0	0	0	0	0	0	0	0	0	2	0	0	0
Haliplus fluviatilis	3	0	2	0	0	0	0	0	0	0	0	0	0
Haliplus immaculatus	0	1	0	0	0	0	0	0	0	0	0	0	0
Haliplus lineatocollis	0	0	2	0	0	0	0	0	0	0	0	0	0
Haliplus lineolatus	0	0	0	0	0	0	0	0	0	0	0	0	0
Haliplus ruficollis	0	0	1	0	0	0	0	0	0	0	0	0	0
Haliplus wehnckei	0	0	0	0	0	0	0	0	0	0	0	0	0
Noterus clavicornis	3	0	0	0	0	0	0	3	8	0	0	0	4
Nebrioporus depressus	0	0	2	1	0	4	0	0	0	0	0	0	0
Stictotarsus duodecimpustulatus	0	0	0	0	0	0	0	0	0	0	0	0	0
Laccophilus hyalinus	6	0	1	0	1	0	0	0	1	4	0	1	10
Laccophilus minutus	4	0	0	0	2	0	0	0	0	0	0	0	6
Hyphydrus ovatus	1	0	0	0	0	0	0	1	0	0	0	0	0
Hygrotus inaequalis	0	0	0	0	0	0	0	0	0	0	0	0	0
Hygrotus versicolor	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydroporus nigrita	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydroporus palustris	2	0	0	0	0	0	0	0	0	0	0	0	0
Hydroporus tesselatus	0	0	0	0	0	0	0	0	0	0	0	0	0
Graptodytes pictus	0	0	0	0	0	0	0	0	0	0	0	0	0
Platambus maculatus	0	0	1	0	0	0	0	0	0	0	0	0	0
Agabus paludosus	0	0	0	0	1	0	0	0	0	0	0	0	0
Ilybius ater	0	0	0	0	0	0	0	0	0	0	0	0	0
Ilybius fenestratus	0	0	0	0	0	0	0	0	0	0	0	0	0
Ilybius fuliginosus	0	0	0	0	0	0	0	0	0	0	0	0	0
Ilybius quadriguttatus	0	0	0	0	0	0	0	0	0	0	0	0	0
Dytiscus marginalis	0	0	0	0	0	0	0	2	0	0	0	0	0
Suphrodytes dorsalis	0	0	0	1	0	0	0	0	0	0	0	0	0
Gyrinus distinctus	0	0	0	0	0	0	0	0	0	0	0	0	3
Gyrinus substriatus	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydrochus angustatus	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydrochus elongatus	0	0	0	0	0	0	0	0	0	0	0	0	0
Helophorus grandis	0	0	1	0	0	0	0	0	0	0	0	0	0
Helophorus brevipalpis	0	32	6	0	0	0	0	0	0	0	0	0	1
Helophorus minutus	0	0	0	0	0	0	0	0	0	0	0	0	0
Helophorus obscurus	0	0	0	0	0	0	0	0	0	0	0	0	0
Coelostoma orbiculare	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydrobius fuscipes	0	0	0	0	0	0	0	0	0	0	1	0	0
Anacaena bipustulata	0	0	0	1	0	0	0	0	0	0	0	0	0
Anacaena globulus	0	0	0	0	0	0	0	0	0	0	0	0	1
Anacaena limbata	1	0	0	0	0	0	0	1	23	0	0	0	2
Anacaena lutescens	0	0	0	0	0	0	0	0	0	0	0	0	0
Laccobius biguttatus	0	0	0	0	0	0	0	0	0	0	0	0	0
Laccobius minutus	0	0	0	0	0	0	0	0	0	0	0	0	0
Laccobius bipunctatus	2	1	0	0	1	0	0	1	23	0	0	0	1
Laccobius sinuatus	0	0	0	0	0	0	0	0	1	0	0	0	0
Laccobius striatulus	0	0	0	0	0	0	0	0	0	0	0	0	1
Helochares lividus	0	0	0	0	1	0	0	0	0	0	0	0	0
Helochares punctatus	0	0	0	0	0	0	0	0	0	0	0	0	0
Enochrus melanocephalus	0	0	0	0	0	0	0	0	0	0	0	0	0

TABLE 4. CANAL INVERTEBRATE DATA (NUMBERS PER THREE MINUTE SAMPLE) (CONTINUED)

	SITES												
Species	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**
Enochrus testaceus	0	0	0	0	0	0	0	0	0	0	0	0	0
Ochthebius minimus	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydraena testacea	0	0	0	0	0	0	0	0	2	0	0	0	0
Helichus substriatus	0	0	0	0	0	0	0	0	0	0	0	0	0
Dryops luridus	0	0	0	0	0	0	0	0	0	0	0	0	0
Elmis aenea	0	2	0	0	0	4	0	0	0	0	0	0	0
Oulimnius major	0	0	0	0	0	0	1	0	0	0	0	0	0
Oulimnius tuberculatus	0	57	4	0	0	1	1	0	0	0	0	0	2
Heterocerus fenestratus	0	0	0	0	1	0	0	0	0	0	0	0	0
Sialis lutaria	5	1	2	1	4	21	0	1	0	0	0	0	1
Agraylea multipunctata	0	0	0	0	0	0	0	0	0	0	0	0	0
Agraylea sexmaculata	0	0	0	0	0	0	0	0	0	0	0	0	0
Lype phaeopa	0	0	1	0	0	1	0	0	0	0	0	0	0
Lype reducta	0	0	0	0	1	4	0	0	0	0	0	1	0
Tinodes waeneri	0	2	0	0	0	0	1	0	0	0	0	0	0
Ecnomus tenellus	0	0	0	0	0	0	0	0	0	0	0	0	0
Neuroclepsis bimaculata	0	0	0	0	0	4	0	0	0	0	0	0	0
Cyrnus flavidus	0	0	0	0	0	0	0	0	0	0	0	0	0
Cyrnus trimaculatus	0	3	18	0	2	37	3	0	0	0	0	0	0
Holocentropus picicornis	0	0	0	0	0	0	0	0	0	0	0	0	0
Plectrocnemia conspersa	0	0	0	0	0	6	0	0	0	0	0	0	0
Hydropsyche pellucidula	0	3	0	0	0	2	0	0	0	0	0	0	0
Hydropsyche siltalai	0	3	0	0	0	0	0	0	0	0	0	0	0
Agrypnia varia	0	0	0	0	0	0	0	0	0	0	0	0	0
Phryganea bipunctata	0	0	1	0	0	0	0	0	0	0	0	0	0
Halesus digitatus	0	0	0	0	0	0	0	0	0	0	0	0	0
Halesus radiatus	6	0	2	10	0	4	0	0	0	0	0	0	2
Potamophylax latipennis	0	0	0	0	0	0	0	0	0	0	0	0	0
Chaetopteryx villosa	0	0	0	0	0	0	0	0	0	0	0	0	0
Anabolia nervosa	4	0	3	3	3	1	1	0	0	1	0	0	0
Glyphotaelius pellucidus	0	0	0	0	0	0	0	0	0	0	0	0	0
Limnephilus decipiens	0	0	0	0	0	0	0	0	0	0	0	0	0
Limnephilus flavicornis	0	0	0	0	0	0	0	4	0	0	0	0	0
Limnephilus lunatus	9	0	14	1	21	14	22	8	2	4	0	0	11
Limnephilus marmoratus	0	0	0	6	0	0	0	0	0	0	0	0	0
Limnephilus rhombicus	0	0	0	1	0	1	1	0	0	0	0	0	0
Limnephilus vittatus	0	0	0	0	0	0	0	0	0	0	0	0	0
Goera pilosa	0	7	0	0	0	2	0	0	0	0	0	0	0
Beraea pullata	0	0	0	0	0	0	0	0	0	0	0	0	0
Beraeodes minutus	0	0	0	0	0	0	0	0	0	0	0	0	0
Sericostoma personatum	0	0	0	0	0	2	1	0	0	0	0	0	0
Molanna angustata	5	0	2	2	0	6	0	0	0	0	0	0	0
Oecetis testacea	0	0	0	0	2	1	0	0	0	0	0	0	0
Ceractea senilis	0	0	0	0	0	0	0	0	0	0	0	0	0
Athripsodes aterrimus	7	0	7	0	10	12	12	0	4	0	0	0	12
Athripsodes cinereus	0	99	3	8	0	16	0	0	0	0	0	0	0
Ceraclea dissimilis	0	10	1	0	1	0	0	0	0	0	0	0	0
Leptocerus tineiformis	0	0	0	0	0	0	0	0	0	0	0	0	0
Mystacides azurea	0	0	0	2	0	6	0	0	0	0	0	0	0
Mystacides longicornis	2	2	1	0	1	0	0	0	0	0	0	0	0
Triaenodes bicolor	0	0	0	0	0	0	0	0	0	0	0	0	0
Oecetis lacustris	0	0	0	0	0	0	2	0	0	0	0	0	0

TABLE 4. CANAL INVERTEBRATE DATA (NUMBERS PER THREE MINUTE SAMPLE) (CONTINUED)

	SITES												
Species	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**
Oecetis ochracea	0	0	0	0	0	0	0	0	0	0	0	0	0
Nymphula nymphaeata	0	0	0	0	0	0	0	0	0	0	0	0	0
Cataclysta lemnata	0	0	0	0	0	0	0	0	0	0	0	0	0
Paraponyx stratiotata	0	0	0	0	0	0	0	0	0	0	0	0	0
Tipulidae	1	0	1	0	0	0	0	1	1	0	0	0	5
Psychodidae	0	0	0	0	0	0	0	0	0	0	0	0	0
Ptychopteridae	0	0	0	0	0	0	0	0	0	0	0	0	0
Dixidae	0	0	0	0	0	0	0	0	0	0	0	0	0
Chaoboridae	0	0	0	0	0	0	0	4	0	0	0	0	0
Ceratopogonidae	3	0	0	4	2	0	0	2	30	3	0	0	3
Chironomidae	73	6	94	15	37	0	0	37	650	72	1	0	8
Stratiomyidae	1	0	0	0	0	0	0	0	0	0	0	0	0
Sciomyzidae	0	0	0	0	0	0	0	0	0	0	0	0	0
Muscidae	0	0	0	0	0	0	0	1	0	0	0	0	0
Oligochaeta	45	0	2	7	6	0	30	1	1500	140	0	0	39

TABLE 4. CANAL INVERTEBRATE DATA (NUMBERS PER THREE MINUTE SAMPLE) (CONTINUED)

	SITES													
Species	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**
Polycelis nigra	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Polycelis tenuis	0	0	0	0	0	3	0	10	0	2	6	0	0	9
Dugesia lugubris	0	0	0	0	0	0	0	0	0	0	0	0	2	0
Dugesia polychroa	0	0	7	0	0	0	0	0	0	0	0	0	2	0
Dugesia tigrina	0	1	0	0	0	0	0	0	0	1	0	0	0	3
Dendrocoelum lacteum	0	1	0	0	0	0	0	0	0	2	0	0	0	0
Theodoxus fluviatilis	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Viviparus viviparus	0	0	17	0	0	0	5	6	1	5	4	0	1	2
Valvata cristata	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Valvata piscinalis	0	0	2	0	1	0	4	0	0	3	0	0	0	0
Potamopyrgus antipodarum	1	1	0	0	16	0	0	0	0	0	0	0	0	0
Bithynia leachi	0	7	32	0	18	0	19	0	0	29	15	16	2	7
Bithynia tentaculata	0	5	261	0	7	0	10	0	1	113	2	23	127	1
Physa acuta	0	1	35	0	1	0	1	0	0	0	0	0	4	0
Physa fontinalis	0	0	0	0	0	0	0	0	0	0	0	25	0	1
Lymnaea auricularia	0	0	0	0	0	0	0	0	0	0	1	0	0	0
Lymnaea palustris	0	0	0	0	1	0	2	0	0	0	0	0	0	0
Lymnaea peregra	0	0	1	0	2	0	7	0	0	8	2	2	1	0
Lymnaea stagnalis	0	0	0	0	0	0	0	0	0	0	0	0	2	1
Lymnaea truncatula	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Planorbis carinatus	0	0	0	0	0	1	2	0	0	1	3	14	0	1
Planorbis planorbis	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Anisus vortex	0	0	0	0	0	0	14	0	0	0	19	40	0	30
Bathyomphalus contortus	0	0	4	0	2	0	0	0	0	0	0	0	0	0
Gyraulus albus	0	0	0	0	0	0	6	0	0	0	0	0	0	1
Armiger crista	0	0	0	0	1	0	0	0	0	0	0	0	0	1
Hippeutis complanatus	0	0	193	0	0	0	0	0	0	0	14	0	0	3
Planorbarius corneus	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Ancylus fluviatilis	0	0	0	0	2	0	1	0	0	0	0	0	0	0
Ferrissia wautieri	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Acroloxus lacustris	0	0	0	0	0	0	2	0	0	2	3	0	0	3
Anodonta cygnaea	0	0	1	0	0	0	2	0	1	0	0	0	0	0
Unio pictorum	0	0	2	0	2	0	0	0	1	1	0	0	0	0
Unio tumidus	1	0	0	1	0	0	0	0	0	0	0	0	0	0
Anodonta anatina	0	0	5	0	0	0	2	2	3	3	0	0	0	0
Sphaerium corneum	0	2	27	0	0	0	21	5	1	53	8	6	6	15
Sphaerium lacustre	0	0	1	0	0	0	0	0	0	0	0	2	0	1
Sphaerium rivicola	0	0	2	0	0	0	0	0	0	1	0	0	0	0
Dreissena polymorpha	0	0	3	0	0	0	1	0	0	0	0	0	0	0
Piscicola geometra	0	0	2	0	0	0	0	0	0	0	0	0	0	1
Theromyzon tessulatum	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hemiclepsis marginata	0	0	1	0	1	0	0	0	0	4	0	0	0	0
Glossiphonia complanata	0	0	0	2	2	0	3	1	0	10	0	0	0	4
Glossiphonia heteroclita	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Helobdella stagnalis	0	0	0	4	2	0	4	0	0	0	1	1	0	2
Haemopis sanguisuga	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Erpobdella octoculata	0	0	0	0	1	0	4	0	0	5	7	0	0	46
Erpobdella testacea	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Argyroneta aquatica	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pacifastacus leniusculus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Austropotamobius pallipes	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Asellus aquaticus	5	39	55	0	2	7	14	1	1	47	151	1	185	15

TABLE 4. CANAL INVERTEBRATE DATA (NUMBERS PER THREE MINUTE SAMPLE) (CONTINUED)

	SITES													
Species	14	15	16	17	18	19	20	21	22	23	24	25	26	27
Asellus meridianus	0	0	0	0	0	0	0	0	0	0	1	0	0	0
Corophium curvispinum	1413	359	69	0	0	0	0	3	0	4	0	0	26	0
Crangonyx pseudogracilis	1	29	68	0	5	0	10	4	0	19	238	0	11	15
Gammarus tigrinus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gammarus pulex	0	8	0	0	1	0	0	0	1	0	0	0	0	0
Baetis fuscatus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Baetis vernus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Centroptilum luteolum	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cloeon dipterum	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cloeon simile	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Paraleptophlebia submarginata	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Habrophlebia fusca	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ephemera danica	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ephemera vulgata	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ephemerella ignita	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Caenis horaria	0	0	0	16	0	0	70	0	0	0	1	0	0	0
Caenis luctuosa	0	0	0	112	84	0	0	60	0	0	0	0	12	0
Caenis macrura	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Caenis robusta	0	0	0	0	0	0	2	0	0	0	0	0	0	0
Platycnemis pennipes	0	0	1	0	1	0	0	0	0	0	0	0	0	0
Ischnura elegans	0	0	8	2	0	1	0	0	0	48	2	0	16	4
Enallagma cyathigerum	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Coenagrion puella	0	0	0	0	0	0	0	0	0	0	0	2	0	0
Erythromma najas	0	0	0	0	0	0	0	0	0	0	2	0	0	0
Lestes sponsa	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Calopteryx splendens	0	0	0	0	0	0	0	0	0	0	1	0	0	0
Brachytron pratense	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Aeshna cyanea	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Aeshna grandis	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Anax imperator	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Orthetrum cancellatum	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Libellula quadrimaculata	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sympetrum striolatum	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydrometra stagnorum	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Velia caprai	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Microvelia reticulata	0	0	0	0	0	0	0	0	0	0	3	0	0	0
Gerris argentatus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gerris lacustris	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Gerris odontogaster	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nepa cinerea	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Ranatra linearis	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ilyocoris cimicoides	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Aphelocheirus aestivalis	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Notonecta glauca	0	0	0	0	0	0	0	0	0	0	0	0	2	0
Notonecta marmorea	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Plea leachi	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Micronecta scholtzi	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Micronecta poweri	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cymatia coleoptrata	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sigara dorsalis	0	4	1	0	0	1	0	0	0	4	0	0	0	0
Sigara distincta	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sigara falleni	0	0	1	0	0	0	0	0	0	1	0	0	0	0

TABLE 4. CANAL INVERTEBRATE DATA (NUMBERS PER THREE MINUTE SAMPLE) (CONTINUED)

	SITES													
Species	14	15	16	17	18	19	20	21	22	23	24	25	26	27
Sigara fossarum	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sigara concinna	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Haliplus confinis	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Haliplus flavicollis	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Haliplus fluviatilis	0	0	1	0	1	0	0	0	0	0	0	0	0	0
Haliplus immaculatus	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Haliplus lineatocollis	0	0	1	0	1	0	0	0	0	0	0	0	0	0
Haliplus lineolatus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Haliplus ruficollis	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Haliplus wehnckei	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Noterus clavicornis	0	0	0	0	0	0	0	0	0	0	0	2	0	9
Nebrioporus depressus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stictotarsus duodecimpustulatus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Laccophilus hyalinus	0	0	3	0	1	0	0	0	0	0	2	0	0	3
Laccophilus minutus	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Hyphydrus ovatus	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Hygrotus inaequalis	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Hygrotus versicolor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydroporus nigrita	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydroporus palustris	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydroporus tesselatus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Graptodytes pictus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Platambus maculatus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Agabus paludosus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ilybius ater	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ilybius fenestratus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ilybius fuliginosus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ilybius quadriguttatus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dytiscus marginalis	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Suphrodytes dorsalis	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gyrinus distinctus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gyrinus substriatus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydrochus angustatus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydrochus elongatus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Helophorus grandis	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Helophorus brevipalpis	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Helophorus minutus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Helophorus obscurus	2	0	0	0	0	0	0	0	0	0	0	0	0	0
Coelostoma orbiculare	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydrobius fuscipes	0	0	0	0	0	0	1	0	0	0	0	0	0	1
Anacaena bipustulata	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Anacaena globulus	0	0	0	0	0	0	0	0	0	0	6	0	0	0
Anacaena limbata	0	0	0	0	0	0	0	0	0	0	9	0	0	19
Anacaena lutescens	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Laccobius biguttatus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Laccobius minutus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Laccobius bipunctatus	0	1	0	0	0	0	0	0	0	0	4	0	0	1
Laccobius sinuatus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Laccobius striatulus	2	0	0	0	3	0	0	0	0	0	0	0	0	0
Helochares lividus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Helochares punctatus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Enochrus melanocephalus	0	0	0	0	0	0	0	0	0	0	0	0	0	0

TABLE 4. CANAL INVERTEBRATE DATA (NUMBERS PER THREE MINUTE SAMPLE) (CONTINUED)

	SITES													
Species	14	15	16	17	18	19	20	21	22	23	24	25	26	27
Enochrus testaceus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ochthebius minimus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydraena testacea	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Helichus substriatus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dryops luridus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Elmis aenea	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oulimnius major	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oulimnius tuberculatus	2	0	1	0	0	0	2	0	0	0	0	0	0	0
Heterocerus fenestratus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sialis lutaria	0	0	0	0	0	0	0	0	0	0	10	0	0	4
Agraylea multipunctata	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Agraylea sexmaculata	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lype phaeopa	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lype reducta	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tinodes waeneri	2	0	0	0	0	0	0	1	0	0	0	0	0	0
Ecnomus tenellus	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Neuroclepsis bimaculata	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cyrnus flavidus	0	0	0	0	0	0	0	0	0	0	1	0	0	0
Cyrnus trimaculatus	3	0	0	1	1	0	2	19	0	0	0	0	0	0
Holocentropus picicornis	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Plectrocnemia conspersa	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydropsyche pellucidula	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydropsyche siltalai	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Agrypnia varia	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phryganea bipunctata	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Halesus digitatus	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Halesus radiatus	0	3	0	0	2	0	4	0	0	0	0	0	37	0
Potamophylax latipennis	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chaetopteryx villosa	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Anabolia nervosa	6	10	4	0	2	0	47	0	0	0	0	0	13	0
Glyphotaelius pellucidus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Limnephilus decipiens	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Limnephilus flavicornis	0	0	0	0	0	0	0	0	0	0	0	1	1	3
Limnephilus lunatus	0	4	2	0	0	0	2	0	0	4	2	3	36	0
Limnephilus marmoratus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Limnephilus rhombicus	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Limnephilus vittatus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Goera pilosa	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Beraea pullata	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Beraeodes minutus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sericostoma personatum	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Molanna angustata	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oecetis testacea	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ceractea senilis	0	0	0	0	0	0	4	0	0	0	0	0	0	0
Athripsodes aterrimus	0	0	0	0	4	0	0	0	0	1	2	3	0	4
Athripsodes cinereus	0	0	0	0	2	0	0	0	0	0	0	0	0	0
Ceraclea dissimilis	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Leptocerus tineiformis	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mystacides azurea	0	0	0	0	4	0	0	0	0	0	0	0	0	0
Mystacides longicornis	0	0	0	0	0	0	6	0	0	0	0	0	0	0
Triaenodes bicolor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oecetis lacustris	0	0	0	0	0	0	0	1	0	0	0	0	0	0

TABLE 4. CANAL INVERTEBRATE DATA (NUMBERS PER THREE MINUTE SAMPLE) (CONTINUED)

	SITES													
Species	14	15	16	17	18	19	20	21	22	23	24	25	26	27
Oecetis ochracea	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nymphula nymphaeata	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cataclysta lemnata	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Paraponyx stratiotata	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tipulidae	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Psychodidae	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Ptychopteridae	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Dixidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chaoboridae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ceratopogonidae	2	17	7	3	0	0	1	5	0	0	20	0	5	3
Chironomidae	6	450	200	84	30	300	2	120	42	274	210	0	230	44
Stratiomyidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sciomyzidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Muscidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oligochaeta	15	265	430	32	8	0	1	200	6	50	1370	0	230	27

TABLE 4. CANAL INVERTEBRATE DATA (NUMBERS PER THREE MINUTE SAMPLE) (CONTINUED)

	SITES													
Species	**28**	**29**	**30**	**31**	**32**	**33**	**34**	**35**	**36**	**37**	**38**	**39**	**40**	**41**
Polycelis nigra	0	15	0	0	0	0	0	0	0	0	0	0	0	0
Polycelis tenuis	0	40	1	0	1	0	72	0	0	0	7	0	0	0
Dugesia lugubris	0	2	0	0	0	0	0	0	0	0	0	0	0	0
Dugesia polychroa	0	0	0	0	0	0	1	0	0	0	1	0	0	0
Dugesia tigrina	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dendrocoelum lacteum	0	11	1	0	0	0	0	0	0	0	3	0	0	0
Theodoxus fluviatilis	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Viviparus viviparus	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Valvata cristata	15	14	0	0	0	0	0	0	1	0	0	0	0	0
Valvata piscinalis	0	24	0	1	0	4	1	3	0	0	0	0	0	0
Potamopyrgus antipodarum	0	0	460	0	0	0	0	13	12	0	0	0	0	0
Bithynia leachi	13	57	0	0	0	0	8	32	0	0	0	0	0	0
Bithynia tentaculata	108	45	0	36	6	1	19	39	0	33	0	0	28	18
Physa acuta	0	0	37	11	4	0	0	0	0	21	0	0	0	0
Physa fontinalis	11	13	0	0	0	0	0	0	55	4	0	0	0	1
Lymnaea auricularia	0	0	0	0	0	0	0	0	0	0	2	0	0	3
Lymnaea palustris	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Lymnaea peregra	35	10	0	0	1	25	1	8	0	8	149	103	0	1000
Lymnaea stagnalis	8	9	0	1	1	0	0	1	0	0	0	0	0	5
Lymnaea truncatula	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Planorbis carinatus	4	2	0	3	1	0	8	0	0	6	0	0	0	0
Planorbis planorbis	0	0	0	0	0	0	2	0	0	1	0	0	0	1
Anisus vortex	540	193	0	16	0	0	75	28	0	2	0	0	1	2
Bathyomphalus contortus	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Gyraulus albus	0	71	0	0	0	1	0	21	0	0	0	0	0	2
Armiger crista	1	2	120	0	0	0	1	8	6	0	0	0	0	0
Hippeutis complanatus	15	145	0	0	0	0	9	3	0	5	0	0	6	0
Planorbarius corneus	6	0	0	0	0	0	0	0	0	0	2	0	0	0
Ancylus fluviatilis	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ferrissia wautieri	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Acroloxus lacustris	13	7	0	0	0	0	0	0	0	0	0	0	0	0
Anodonta cygnaea	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Unio pictorum	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Unio tumidus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Anodonta anatina	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Sphaerium corneum	21	63	0	42	1	0	2	54	0	1	0	1	13	0
Sphaerium lacustre	1	7	0	0	0	0	0	0	0	0	0	0	0	1
Sphaerium rivicola	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dreissena polymorpha	0	0	0	0	0	0	0	0	4	0	0	0	0	0
Piscicola geometra	0	0	2	0	0	0	0	0	0	0	0	0	0	1
Theromyzon tessulatum	0	0	0	0	0	0	0	0	0	0	1	0	0	0
Hemiclepsis marginata	0	6	0	0	0	0	0	0	0	0	0	0	1	0
Glossiphonia complanata	0	0	0	0	1	0	0	0	0	0	5	3	0	0
Glossiphonia heteroclita	0	7	0	0	0	0	0	1	0	0	15	1	0	1
Helobdella stagnalis	0	77	1	0	0	0	0	0	0	1	0	0	0	0
Haemopis sanguisuga	0	0	0	0	0	0	1	0	0	0	0	2	0	0
Erpobdella octoculata	2	10	0	0	0	1	0	1	0	3	58	69	0	1
Erpobdella testacea	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Argyroneta aquatica	1	0	0	0	0	0	1	0	0	0	0	0	0	0
Pacifastacus leniusculus	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Austropotamobius pallipes	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Asellus aquaticus	520	364	114	401	168	1	42	51	33	0	221	14	75	100

TABLE 4. CANAL INVERTEBRATE DATA (NUMBERS PER THREE MINUTE SAMPLE) (CONTINUED)

	SITES													
Species	**28**	**29**	**30**	**31**	**32**	**33**	**34**	**35**	**36**	**37**	**38**	**39**	**40**	**41**
Asellus meridianus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Corophium curvispinum	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crangonyx pseudogracilis	27	139	0	27	12	1	227	21	7	0	0	0	0	0
Gammarus tigrinus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gammarus pulex	0	0	1	0	33	0	0	0	0	0	0	0	0	0
Baetis fuscatus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Baetis vernus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Centroptilum luteolum	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cloeon dipterum	7	11	24	0	0	3	7	6	2	0	0	0	0	0
Cloeon simile	0	0	0	0	0	0	5	2	0	0	0	0	0	0
Paraleptophlebia submarginata	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Habrophlebia fusca	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ephemera danica	0	0	0	0	16	0	0	0	0	0	0	0	0	0
Ephemera vulgata	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ephemerella ignita	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Caenis horaria	0	0	0	0	0	9	17	19	14	0	0	0	0	0
Caenis luctuosa	0	0	1	0	0	0	0	6	0	0	0	0	0	0
Caenis macrura	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Caenis robusta	0	0	0	0	0	0	0	21	0	0	0	0	0	0
Platycnemis pennipes	0	0	0	2	0	0	0	0	0	0	0	0	0	0
Ischnura elegans	36	30	44	7	0	7	8	48	9	5	0	6	14	47
Enallagma cyathigerum	0	1	0	0	0	4	4	0	4	0	0	1	3	11
Coenagrion puella	28	11	0	1	0	0	0	0	0	0	0	0	0	0
Erythromma najas	0	0	0	0	0	2	3	0	0	0	0	0	0	0
Lestes sponsa	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Calopteryx splendens	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Brachytron pratense	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Aeshna cyanea	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Aeshna grandis	0	0	0	0	0	0	0	1	0	0	0	0	1	2
Anax imperator	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Orthetrum cancellatum	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Libellula quadrimaculata	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sympetrum striolatum	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Hydrometra stagnorum	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Velia caprai	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Microvelia reticulata	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Gerris argentatus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gerris lacustris	1	6	0	0	0	0	0	0	0	0	0	0	0	0
Gerris odontogaster	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nepa cinerea	10	0	0	0	0	0	0	0	0	0	0	0	0	0
Ranatra linearis	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Ilyocoris cimicoides	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Aphelocheirus aestivalis	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Notonecta glauca	0	9	0	0	0	0	0	0	0	0	0	0	0	0
Notonecta marmorea	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Plea leachi	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Micronecta scholtzi	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Micronecta poweri	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cymatia coleoptrata	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Sigara dorsalis	1	5	1	0	0	0	0	0	0	0	0	0	0	0
Sigara distincta	0	2	0	0	0	0	0	0	0	0	0	0	0	0
Sigara falleni	0	3	2	0	0	0	0	0	0	0	0	0	0	0

TABLE 4. CANAL INVERTEBRATE DATA (NUMBERS PER THREE MINUTE SAMPLE) (CONTINUED)

	SITES													
Species	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Sigara fossarum	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Sigara concinna	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Haliplus confinis	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Haliplus flavicollis	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Haliplus fluviatilis	0	0	0	5	0	0	0	0	0	0	0	0	0	0
Haliplus immaculatus	27	1	1	0	0	0	1	1	0	1	0	0	0	0
Haliplus lineatocollis	1	0	0	0	0	0	0	0	0	3	0	0	0	0
Haliplus lineolatus	0	4	0	14	0	2	0	0	0	0	0	0	0	0
Haliplus ruficollis	1	0	0	2	0	0	1	0	0	0	0	0	0	0
Haliplus wehnckei	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Noterus clavicornis	63	13	0	0	0	0	7	0	0	0	0	0	0	0
Nebrioporus depressus	0	1	7	0	0	0	0	0	0	0	0	0	0	0
Stictotarsus duodecimpustulatus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Laccophilus hyalinus	0	1	0	0	0	0	0	0	0	0	0	0	0	19
Laccophilus minutus	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Hyphydrus ovatus	2	5	0	0	0	0	0	0	0	0	0	0	0	0
Hygrotus inaequalis	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Hygrotus versicolor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydroporus nigrita	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Hydroporus palustris	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Hydroporus tesselatus	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Graptodytes pictus	0	4	14	0	0	0	0	0	0	0	0	0	0	0
Platambus maculatus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Agabus paludosus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ilybius ater	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Ilybius fenestratus	0	19	0	0	0	0	0	0	0	0	0	0	0	0
Ilybius fuliginosus	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Ilybius quadriguttatus	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Dytiscus marginalis	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Suphrodytes dorsalis	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gyrinus distinctus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gyrinus substriatus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydrochus angustatus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydrochus elongatus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Helophorus grandis	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Helophorus brevipalpis	3	0	0	0	0	0	1	0	0	0	0	0	0	0
Helophorus minutus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Helophorus obscurus	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Coelostoma orbiculare	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Hydrobius fuscipes	1	0	0	0	0	0	2	0	0	0	0	0	0	0
Anacaena bipustulata	3	0	0	0	0	0	0	0	0	0	0	0	0	0
Anacaena globulus	1	0	0	0	1	0	0	0	0	0	0	0	0	0
Anacaena limbata	53	11	3	1	0	0	0	0	0	0	0	0	0	0
Anacaena lutescens	0	0	0	0	0	0	5	0	0	0	0	0	0	0
Laccobius biguttatus	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Laccobius minutus	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Laccobius bipunctatus	0	0	0	0	0	0	4	0	0	0	0	0	0	0
Laccobius sinuatus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Laccobius striatulus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Helochares lividus	0	0	0	0	0	0	3	0	0	0	0	0	0	0
Helochares punctatus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Enochrus melanocephalus	0	0	1	0	0	0	0	1	0	0	0	0	0	0

TABLE 4. CANAL INVERTEBRATE DATA (NUMBERS PER THREE MINUTE SAMPLE) (CONTINUED)

	SITES													
Species	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Enochrus testaceus	0	1	0	0	0	0	0	0	0	1	0	0	0	0
Ochthebius minimus	1	0	0	0	0	0	5	0	0	0	0	0	0	0
Hydraena testacea	15	0	0	0	0	0	1	0	0	0	0	0	0	0
Helichus substriatus	0	0	0	2	0	0	0	0	0	0	0	0	0	0
Dryops luridus	0	0	0	0	0	0	4	0	0	0	0	0	0	0
Elmis aenea	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oulimnius major	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oulimnius tuberculatus	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Heterocerus fenestratus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sialis lutaria	0	119	2	1	2	6	3	0	0	0	0	0	0	0
Agraylea multipunctata	0	1	0	0	0	0	0	0	8	0	0	0	0	2
Agraylea sexmaculata	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Lype phaeopa	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lype reducta	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tinodes waeneri	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ecnomus tenellus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Neuroclepsis bimaculata	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cyrnus flavidus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cyrnus trimaculatus	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Holocentropus picicornis	0	3	0	0	0	0	1	0	0	0	0	0	0	0
Plectrocnemia conspersa	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydropsyche pellucidula	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydropsyche siltalai	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Agrypnia varia	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phryganea bipunctata	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Halesus digitatus	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Halesus radiatus	0	0	0	5	0	0	0	0	0	0	0	0	0	0
Potamophylax latipennis	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Chaetopteryx villosa	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Anabolia nervosa	0	0	0	18	244	0	0	0	0	0	0	0	0	0
Glyphotaelius pellucidus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Limnephilus decipiens	0	6	10	0	0	0	0	0	0	0	0	0	0	0
Limnephilus flavicornis	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Limnephilus lunatus	16	20	3	17	94	1	5	19	0	0	0	0	0	0
Limnephilus marmoratus	0	0	2	0	0	0	1	0	0	0	0	0	0	0
Limnephilus rhombicus	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Limnephilus vittatus	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Goera pilosa	0	0	0	0	2	0	0	0	0	0	0	0	0	0
Beraea pullata	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Beraeodes minutus	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Sericostoma personatum	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Molanna angustata	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oecetis testacea	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ceractea senilis	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Athripsodes aterrimus	2	5	24	3	5	0	0	0	0	0	0	0	0	0
Athripsodes cinereus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ceraclea dissimilis	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Leptocerus tineiformis	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mystacides azurea	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Mystacides longicornis	0	1	0	0	3	0	0	0	0	0	0	0	0	0
Triaenodes bicolor	19	21	0	0	0	0	1	1	0	0	0	0	0	0
Oecetis lacustris	0	0	0	0	0	0	0	0	0	0	0	0	0	0

TABLE 4. CANAL INVERTEBRATE DATA (NUMBERS PER THREE MINUTE SAMPLE) (CONTINUED)

	SITES													
Species	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Oecetis ochracea	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Nymphula nymphaeata	3	2	0	0	0	2	2	0	0	0	0	0	0	0
Cataclysta lemnata	0	2	0	0	0	0	0	4	0	0	0	0	0	0
Paraponyx stratiotata	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tipulidae	0	800	0	0	0	0	0	0	0	0	0	0	0	0
Psychodidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ptychopteridae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dixidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chaoboridae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ceratopogonidae	0	8	8	0	0	0	0	0	7	0	0	0	0	1
Chironomidae	0	815	510	0	0	0	0	0	42	26	0	3601	0	5
Stratiomyidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sciomyzidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Muscidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oligochaeta	0	200	13	0	0	0	0	0	44	18	0	5	4000	2

TABLE 4. CANAL INVERTEBRATE DATA (NUMBERS PER THREE MINUTE SAMPLE) (CONTINUED)

	SITES													
Species	**42**	**43**	**44**	**45**	**46**	**47**	**48**	**49**	**50**	**51**	**52**	**53**	**54**	**55**
Polycelis nigra	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Polycelis tenuis	0	0	2	0	0	1	0	4	0	1	0	0	0	2
Dugesia lugubris	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dugesia polychroa	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Dugesia tigrina	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Dendrocoelum lacteum	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Theodoxus fluviatilis	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Viviparus viviparus	0	0	0	0	1	7	0	0	0	3	8	0	2	0
Valvata cristata	0	0	0	0	0	0	0	0	0	0	2	2	0	0
Valvata piscinalis	0	0	1	0	0	1	1	0	0	0	0	5	1	0
Potamopyrgus antipodarum	0	0	0	0	0	0	7	0	0	6	2	0	0	4
Bithynia leachi	0	0	112	0	6	0	0	0	0	0	21	12	1	31
Bithynia tentaculata	13	0	75	7	1	4	18	0	1	92	28	75	3	25
Physa acuta	1	0	0	0	0	0	11	0	0	3	3	0	0	0
Physa fontinalis	4	0	1	0	0	0	0	0	0	0	20	1	0	0
Lymnaea auricularia	2	0	0	0	0	0	0	0	0	0	0	0	0	0
Lymnaea palustris	0	0	0	0	0	0	0	0	0	0	0	3	0	0
Lymnaea peregra	5	1	9	1	1	2	3	0	0	0	40	28	0	5
Lymnaea stagnalis	2	0	17	0	0	0	7	1	0	7	2	1	0	0
Lymnaea truncatula	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Planorbis carinatus	8	0	42	0	0	0	3	0	3	1	1	1	0	0
Planorbis planorbis	4	0	0	0	0	0	0	0	0	0	0	0	0	0
Anisus vortex	65	0	50	0	0	0	3	0	7	70	17	104	0	9
Bathyomphalus contortus	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Gyraulus albus	2	0	2	0	0	0	1	1	0	83	4	1	0	0
Armiger crista	0	0	0	0	0	0	0	2	0	0	0	0	0	0
Hippeutis complanatus	2	0	6	0	1	0	5	0	0	0	0	20	0	0
Planorbarius corneus	10	0	11	0	0	0	0	0	0	0	1	1	0	0
Ancylus fluviatilis	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ferrissia wautieri	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Acroloxus lacustris	0	0	15	0	0	0	2	3	1	3	0	0	2	2
Anodonta cygnaea	0	0	0	0	4	0	0	0	0	4	0	0	3	2
Unio pictorum	0	0	0	0	2	0	0	0	0	0	0	0	2	1
Unio tumidus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Anodonta anatina	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Sphaerium corneum	30	0	3500	2	3	1	11	1	0	40	29	68	7	3
Sphaerium lacustre	0	0	0	0	0	1	0	0	0	1	0	0	0	1
Sphaerium rivicola	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dreissena polymorpha	0	0	0	0	0	7	0	0	0	0	0	0	0	0
Piscicola geometra	0	0	1	0	0	3	1	0	0	0	0	1	0	2
Theromyzon tessulatum	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Hemiclepsis marginata	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Glossiphonia complanata	2	0	2	0	0	3	1	0	4	0	0	7	0	0
Glossiphonia heteroclita	4	0	4	0	0	0	0	0	0	0	1	0	0	0
Helobdella stagnalis	4	0	1	0	2	0	1	0	0	1	1	0	0	1
Haemopis sanguisuga	1	0	0	0	0	0	0	0	0	1	0	0	0	0
Erpobdella octoculata	4	1	21	1	0	3	0	2	1	10	0	6	1	1
Erpobdella testacea	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Argyroneta aquatica	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pacifastacus leniusculus	0	0	0	0	0	0	2	0	0	0	0	0	0	0
Austropotamobius pallipes	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Asellus aquaticus	49	1	280	13	2	85	185	142	111	256	50	318	0	221

TABLE 4. CANAL INVERTEBRATE DATA (NUMBERS PER THREE MINUTE SAMPLE) (CONTINUED)

	SITES													
Species	42	43	44	45	46	47	48	49	50	51	52	53	54	55
Asellus meridianus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Corophium curvispinum	0	0	0	14	0	0	0	0	0	0	0	0	4	3
Crangonyx pseudogracilis	1	0	1	0	0	0	104	10	160	67	5	36	0	55
Gammarus tigrinus	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Gammarus pulex	0	0	0	0	0	0	0	2	160	0	0	1	1	0
Baetis fuscatus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Baetis vernus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Centroptilum luteolum	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cloeon dipterum	0	0	0	0	0	0	3	19	52	0	0	0	0	0
Cloeon simile	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Paraleptophlebia submarginata	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Habrophlebia fusca	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ephemera danica	0	0	0	0	0	0	11	0	0	1	0	0	0	0
Ephemera vulgata	0	0	0	0	0	0	10	0	0	0	0	0	0	0
Ephemerella ignita	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Caenis horaria	0	0	0	0	2	0	113	195	6	66	0	0	0	0
Caenis luctuosa	0	0	0	0	0	0	0	0	0	0	0	0	37	94
Caenis macrura	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Caenis robusta	0	0	16	0	0	0	0	0	0	0	0	0	0	0
Platycnemis pennipes	0	0	0	0	0	0	0	0	0	0	33	0	0	0
Ischnura elegans	4	2	17	0	0	3	20	2	5	14	7	28	0	0
Enallagma cyathigerum	0	0	0	0	0	1	0	9	0	1	0	0	0	0
Coenagrion puella	0	0	4	0	0	0	2	2	11	6	0	0	0	0
Erythromma najas	0	0	0	0	0	0	6	0	0	2	0	0	0	0
Lestes sponsa	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Calopteryx splendens	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Brachytron pratense	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Aeshna cyanea	0	0	0	0	0	0	0	0	0	2	0	0	0	0
Aeshna grandis	12	0	2	0	0	0	0	0	0	2	0	0	0	0
Anax imperator	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Orthetrum cancellatum	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Libellula quadrimaculata	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sympetrum striolatum	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydrometra stagnorum	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Velia caprai	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Microvelia reticulata	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gerris argentatus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gerris lacustris	0	0	0	0	0	0	11	1	1	3	0	0	0	2
Gerris odontogaster	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nepa cinerea	1	0	0	1	0	0	3	0	0	0	0	1	0	0
Ranatra linearis	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Ilyocoris cimicoides	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Aphelocheirus aestivalis	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Notonecta glauca	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Notonecta marmorea	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Plea leachi	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Micronecta scholtzi	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Micronecta poweri	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cymatia coleoptrata	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sigara dorsalis	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Sigara distincta	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Sigara falleni	0	0	1	0	0	0	0	0	0	0	0	0	0	0

TABLE 4. CANAL INVERTEBRATE DATA (NUMBERS PER THREE MINUTE SAMPLE) (CONTINUED)

	SITES													
Species	42	43	44	45	46	47	48	49	50	51	52	53	54	55
Sigara fossarum	0	0	0	0	0	0	0	0	1	0	1	0	0	0
Sigara concinna	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Haliplus confinis	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Haliplus flavicollis	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Haliplus fluviatilis	0	0	0	0	0	0	0	0	0	1	1	0	0	0
Haliplus immaculatus	0	0	3	0	0	0	0	0	0	0	0	0	0	0
Haliplus lineatocollis	0	0	0	1	0	0	0	1	3	0	0	0	0	0
Haliplus lineolatus	0	0	0	0	0	0	0	0	0	0	0	7	0	0
Haliplus ruficollis	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Haliplus wehnckei	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Noterus clavicornis	2	0	2	0	0	0	0	0	0	0	1	1	0	0
Nebrioporus depressus	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Stictotarsus duodecimpustulatus	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Laccophilus hyalinus	0	0	0	0	0	0	2	1	0	47	3	2	0	0
Laccophilus minutus	0	0	0	0	0	0	0	0	2	0	0	0	0	0
Hyphydrus ovatus	6	0	1	0	0	0	0	0	0	1	0	0	0	0
Hygrotus inaequalis	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hygrotus versicolor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydroporus nigrita	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydroporus palustris	0	0	0	0	0	0	0	0	3	0	0	0	0	0
Hydroporus tesselatus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Graptodytes pictus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Platambus maculatus	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Agabus paludosus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ilybius ater	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ilybius fenestratus	0	0	0	0	0	0	5	0	0	5	0	0	0	0
Ilybius fuliginosus	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Ilybius quadriguttatus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dytiscus marginalis	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Suphrodytes dorsalis	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gyrinus distinctus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gyrinus substriatus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydrochus angustatus	0	0	0	0	0	0	2	0	0	0	0	0	0	0
Hydrochus elongatus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Helophorus grandis	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Helophorus brevipalpis	0	0	0	0	0	0	0	0	0	5	0	0	0	0
Helophorus minutus	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Helophorus obscurus	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Coelostoma orbiculare	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydrobius fuscipes	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Anacaena bipustulata	0	0	0	0	0	0	0	0	0	7	0	0	0	0
Anacaena globulus	0	0	0	0	0	0	2	0	5	0	0	0	0	0
Anacaena limbata	0	0	0	0	0	0	3	0	13	9	0	1	0	0
Anacaena lutescens	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Laccobius biguttatus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Laccobius minutus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Laccobius bipunctatus	0	0	0	0	0	0	8	0	1	2	0	0	0	0
Laccobius sinuatus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Laccobius striatulus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Helochares lividus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Helochares punctatus	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Enochrus melanocephalus	0	0	0	0	0	0	0	0	0	0	0	0	0	0

TABLE 4. CANAL INVERTEBRATE DATA (NUMBERS PER THREE MINUTE SAMPLE) (CONTINUED)

	SITES													
Species	42	43	44	45	46	47	48	49	50	51	52	53	54	55
Enochrus testaceus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ochthebius minimus	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Hydraena testacea	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Helichus substriatus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dryops luridus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Elmis aenea	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oulimnius major	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oulimnius tuberculatus	0	0	0	0	0	0	4	0	0	0	0	0	0	0
Heterocerus fenestratus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sialis lutaria	0	0	0	0	0	0	0	1	22	5	0	5	0	0
Agraylea multipunctata	0	0	3	0	1	0	0	0	0	0	0	0	0	0
Agraylea sexmaculata	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lype phaeopa	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lype reducta	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tinodes waeneri	0	0	0	0	0	0	0	0	0	0	0	0	6	0
Ecnomus tenellus	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Neuroclepsis bimaculata	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cyrnus flavidus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cyrnus trimaculatus	0	0	0	0	0	3	0	0	0	0	1	0	0	0
Holocentropus picicornis	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Plectrocnemia conspersa	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydropsyche pellucidula	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydropsyche siltalai	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Agrypnia varia	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phryganea bipunctata	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Halesus digitatus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Halesus radiatus	0	0	0	0	0	0	0	0	0	5	0	0	0	0
Potamophylax latipennis	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chaetopteryx villosa	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Anabolia nervosa	0	0	0	0	0	0	80	3	4	57	0	0	0	0
Glyphotaelius pellucidus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Limnephilus decipiens	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Limnephilus flavicornis	14	0	2	0	0	0	0	0	0	0	0	0	0	0
Limnephilus lunatus	0	0	0	2	0	0	18	0	14	29	0	0	0	0
Limnephilus marmoratus	0	0	0	0	0	0	0	0	0	4	0	0	0	0
Limnephilus rhombicus	0	0	0	0	0	0	0	0	3	1	0	0	0	0
Limnephilus vittatus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Goera pilosa	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Beraea pullata	0	0	0	0	0	0	0	0	0	2	0	0	0	0
Beraeodes minutus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sericostoma personatum	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Molanna angustata	0	0	0	0	0	0	0	0	0	2	0	0	0	0
Oecetis testacea	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ceractea senilis	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Athripsodes aterrimus	0	0	4	0	0	0	5	76	8	10	0	2	0	0
Athripsodes cinereus	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Ceraclea dissimilis	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Leptocerus tineiformis	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mystacides azurea	0	0	0	0	0	0	2	0	1	1	0	0	0	0
Mystacides longicornis	0	0	0	0	0	1	1	0	0	0	0	0	0	0
Triaenodes bicolor	0	0	3	0	0	0	0	0	0	0	0	0	0	0
Oecetis lacustris	0	0	0	0	0	0	0	0	0	0	0	0	0	0

TABLE 4. CANAL INVERTEBRATE DATA (NUMBERS PER THREE MINUTE SAMPLE) (CONTINUED)

	SITES													
Species	42	43	44	45	46	47	48	49	50	51	52	53	54	55
Oecetis ochracea	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nymphula nymphaeata	0	0	0	0	0	0	0	0	0	4	0	0	0	0
Cataclysta lemnata	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Paraponyx stratiotata	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tipulidae	0	0	0	0	0	0	0	0	1	0	0	0	0	2
Psychodidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ptychopteridae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dixidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chaoboridae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ceratopogonidae	1	0	5	0	0	1	0	0	1	0	0	0	0	3
Chironomidae	13	15	47	1	6	20	0	0	1	0	37	0	27	21
Stratiomyidae	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Sciomyzidae	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Muscidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oligochaeta	19	74	15	1	57	40	0	0	4	0	10	0	9	42

TABLE 4. CANAL INVERTEBRATE DATA (NUMBERS PER THREE MINUTE SAMPLE) (CONTINUED)

	SITES													
Species	56	57	58	59	60	61	62	63	64	65	66	67	68	69
Polycelis nigra	0	0	0	20	0	28	0	0	0	0	0	0	0	0
Polycelis tenuis	0	4	0	138	11	16	0	0	0	0	0	1	0	0
Dugesia lugubris	0	0	0	0	0	3	0	0	0	0	0	0	0	0
Dugesia polychroa	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dugesia tigrina	0	0	0	0	0	0	0	0	3	0	0	0	0	0
Dendrocoelum lacteum	0	0	0	6	0	0	0	0	0	0	0	1	0	0
Theodoxus fluviatilis	0	2	0	0	0	0	0	0	0	0	0	0	0	0
Viviparus viviparus	0	0	4	0	9	0	0	0	5	0	0	0	2	0
Valvata cristata	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Valvata piscinalis	1	1	0	7	0	0	0	0	0	0	0	2	0	0
Potamopyrgus antipodarum	1	28	8	1	0	0	0	0	0	0	0	0	0	2
Bithynia leachi	0	0	0	13	4	57	0	0	4	0	0	2	30	0
Bithynia tentaculata	2	18	4	34	8	58	0	0	20	4	0	3	21	11
Physa acuta	0	1	4	0	1	0	1	0	1	0	0	0	0	0
Physa fontinalis	0	0	0	7	0	1	0	0	0	0	0	0	0	0
Lymnaea auricularia	0	0	0	2	0	0	0	0	0	0	0	0	0	0
Lymnaea palustris	1	0	0	0	0	1	0	0	0	2	0	0	0	0
Lymnaea peregra	32	24	2	11	4	500	0	0	9	1	0	3	2	1
Lymnaea stagnalis	1	13	0	1	10	1	0	0	0	0	0	0	0	0
Lymnaea truncatula	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Planorbis carinatus	0	3	0	0	2	94	0	0	4	0	0	0	0	0
Planorbis planorbis	0	0	0	0	0	1	0	0	2	0	0	0	0	0
Anisus vortex	1	64	0	63	5	506	0	0	0	0	0	0	0	0
Bathyomphalus contortus	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Gyraulus albus	0	8	0	70	1	135	0	0	0	0	0	0	0	0
Armiger crista	0	1	1	4	0	0	0	0	1	0	0	0	0	0
Hippeutis complanatus	0	0	0	22	6	3	0	0	0	0	0	0	0	0
Planorbarius corneus	0	0	0	0	0	2	0	0	0	0	0	0	0	0
Ancylus fluviatilis	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ferrissia wautieri	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Acroloxus lacustris	1	1	0	0	0	0	0	0	2	0	0	0	0	0
Anodonta cygnaea	0	1	0	0	1	0	0	0	0	0	1	0	0	0
Unio pictorum	1	0	1	0	0	0	0	0	0	0	0	0	1	0
Unio tumidus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Anodonta anatina	0	0	0	0	0	0	0	0	2	0	0	0	0	0
Sphaerium corneum	4	108	6	40	61	51	0	0	6	0	0	1	5	1
Sphaerium lacustre	0	0	0	9	0	1	2	0	0	3	0	0	0	1
Sphaerium rivicola	0	0	1	0	0	0	0	0	0	0	1	0	0	0
Dreissena polymorpha	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Piscicola geometra	0	2	1	17	0	0	0	0	0	0	0	1	3	0
Theromyzon tessulatum	0	0	0	0	0	2	0	0	0	0	0	0	0	0
Hemiclepsis marginata	0	0	0	4	0	1	0	0	0	0	0	0	0	0
Glossiphonia complanata	1	2	0	4	0	7	0	0	0	0	0	0	1	1
Glossiphonia heteroclita	0	0	0	8	0	10	0	0	0	0	0	0	0	0
Helobdella stagnalis	0	1	0	4	3	18	0	0	0	0	0	0	0	0
Haemopis sanguisuga	0	1	0	0	1	0	0	0	0	0	0	0	0	0
Erpobdella octoculata	0	10	0	9	8	144	1	0	0	0	0	1	2	1
Erpobdella testacea	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Argyroneta aquatica	0	0	0	0	7	0	0	0	0	0	0	0	0	0
Pacifastacus leniusculus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Austropotamobius pallipes	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Asellus aquaticus	5	493	18	804	146	50	0	2	70	9	3	37	16	4

TABLE 4. CANAL INVERTEBRATE DATA (NUMBERS PER THREE MINUTE SAMPLE) (CONTINUED)

	SITES													
Species	56	57	58	59	60	61	62	63	64	65	66	67	68	69
Asellus meridianus	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Corophium curvispinum	19	10	10	0	0	0	0	0	0	0	0	3	1	0
Crangonyx pseudogracilis	1	60	7	55	183	50	0	1	25	10	0	25	29	13
Gammarus tigrinus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gammarus pulex	0	0	0	0	0	0	0	0	0	2	0	0	0	0
Baetis fuscatus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Baetis vernus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Centroptilum luteolum	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cloeon dipterum	0	0	0	95	0	0	0	1	0	0	0	0	0	0
Cloeon simile	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Paraleptophlebia submarginata	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Habrophlebia fusca	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ephemera danica	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ephemera vulgata	0	0	0	0	0	0	0	1	0	3	2	0	0	1
Ephemerella ignita	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Caenis horaria	5	0	3	0	9	0	0	0	0	0	0	0	0	0
Caenis luctuosa	9	54	0	0	0	0	0	0	0	0	0	11	1	0
Caenis macrura	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Caenis robusta	0	0	0	92	13	0	0	0	0	0	0	0	0	0
Platycnemis pennipes	0	0	33	0	1	0	0	0	0	0	0	0	0	0
Ischnura elegans	32	4	1	50	22	2	0	0	0	0	1	3	0	0
Enallagma cyathigerum	0	0	0	5	1	0	0	0	0	0	0	0	0	0
Coenagrion puella	0	0	0	1	0	1	0	0	0	0	0	0	0	0
Erythromma najas	0	0	0	2	0	0	0	0	0	0	0	0	0	0
Lestes sponsa	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Calopteryx splendens	5	0	0	0	0	0	0	0	2	0	0	0	0	0
Brachytron pratense	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Aeshna cyanea	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Aeshna grandis	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Anax imperator	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Orthetrum cancellatum	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Libellula quadrimaculata	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sympetrum striolatum	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydrometra stagnorum	0	1	0	1	0	1	0	0	0	0	0	0	0	0
Velia caprai	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Microvelia reticulata	0	0	0	6	0	0	0	0	0	0	0	0	0	0
Gerris argentatus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gerris lacustris	0	0	0	1	2	4	0	0	1	0	0	1	0	0
Gerris odontogaster	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nepa cinerea	0	1	0	0	0	0	0	0	0	0	0	0	0	1
Ranatra linearis	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Ilyocoris cimicoides	0	0	0	3	0	0	0	0	0	0	0	0	0	0
Aphelocheirus aestivalis	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Notonecta glauca	0	0	0	12	0	1	0	0	0	0	0	0	0	0
Notonecta marmorea	0	2	0	0	0	1	0	0	0	0	0	0	0	0
Plea leachi	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Micronecta scholtzi	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Micronecta poweri	0	7	0	0	0	0	0	0	0	0	0	0	0	0
Cymatia coleoptrata	0	0	0	45	0	0	0	0	0	0	0	0	0	0
Sigara dorsalis	0	0	0	22	1	0	0	0	1	0	0	0	0	0
Sigara distincta	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sigara falleni	0	0	0	1	1	1	0	0	0	0	0	0	0	0

TABLE 4. CANAL INVERTEBRATE DATA (NUMBERS PER THREE MINUTE SAMPLE) (CONTINUED)

	SITES													
Species	56	57	58	59	60	61	62	63	64	65	66	67	68	69
Sigara fossarum	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Sigara concinna	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Haliplus confinis	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Haliplus flavicollis	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Haliplus fluviatilis	1	0	0	3	1	13	0	0	2	2	0	0	0	0
Haliplus immaculatus	0	0	0	24	0	0	0	0	0	0	0	0	0	0
Haliplus lineatocollis	0	0	0	1	0	0	0	0	0	0	0	0	0	1
Haliplus lineolatus	0	0	0	2	1	9	0	0	0	0	0	0	0	0
Haliplus ruficollis	0	0	0	3	0	0	0	0	0	0	0	0	0	0
Haliplus wehnckei	0	0	0	2	0	0	0	0	0	0	0	0	0	0
Noterus clavicornis	0	2	0	2	2	1	0	0	0	0	0	0	1	0
Nebrioporus depressus	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Stictotarsus duodecimpustulatus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Laccophilus hyalinus	0	1	0	24	6	0	0	0	4	2	0	0	3	0
Laccophilus minutus	0	0	0	1	0	1	0	0	1	0	0	0	0	0
Hyphydrus ovatus	0	0	0	4	2	18	0	0	0	0	0	0	0	0
Hygrotus inaequalis	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Hygrotus versicolor	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Hydroporus nigrita	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydroporus palustris	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Hydroporus tesselatus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Graptodytes pictus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Platambus maculatus	0	0	0	0	0	0	0	0	1	0	0	0	0	8
Agabus paludosus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ilybius ater	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ilybius fenestratus	0	0	0	0	3	0	0	0	0	0	0	0	0	0
Ilybius fuliginosus	1	0	0	0	0	0	0	0	0	0	0	2	0	0
Ilybius quadriguttatus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dytiscus marginalis	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Suphrodytes dorsalis	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gyrinus distinctus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gyrinus substriatus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydrochus angustatus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydrochus elongatus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Helophorus grandis	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Helophorus brevipalpis	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Helophorus minutus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Helophorus obscurus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coelostoma orbiculare	0	0	0	0	0	2	0	0	0	0	0	0	0	0
Hydrobius fuscipes	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Anacaena bipustulata	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Anacaena globulus	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Anacaena limbata	0	8	0	6	3	1	0	0	0	0	0	0	0	0
Anacaena lutescens	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Laccobius biguttatus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Laccobius minutus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Laccobius bipunctatus	0	1	0	3	0	0	0	0	0	0	0	0	4	0
Laccobius sinuatus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Laccobius striatulus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Helochares lividus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Helochares punctatus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Enochrus melanocephalus	0	0	0	2	0	0	0	0	0	0	0	0	0	0

TABLE 4. CANAL INVERTEBRATE DATA (NUMBERS PER THREE MINUTE SAMPLE) (CONTINUED)

	SITES													
Species	56	57	58	59	60	61	62	63	64	65	66	67	68	69
Enochrus testaceus	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Ochthebius minimus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydraena testacea	0	9	0	0	0	0	0	0	0	0	0	0	0	0
Helichus substriatus	0	0	0	0	7	0	0	0	0	0	0	0	0	0
Dryops luridus	0	0	0	1	0	1	0	0	0	0	0	0	0	1
Elmis aenea	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oulimnius major	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oulimnius tuberculatus	0	0	0	0	0	0	0	0	7	0	0	0	1	0
Heterocerus fenestratus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sialis lutaria	0	0	0	8	19	1	0	0	0	0	0	0	0	0
Agraylea multipunctata	0	1	0	1	0	0	0	0	0	0	0	0	0	0
Agraylea sexmaculata	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lype phaeopa	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lype reducta	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tinodes waeneri	0	0	0	0	0	0	0	23	0	0	10	0	0	0
Ecnomus tenellus	0	0	1	0	0	0	0	2	0	2	0	0	0	0
Neuroclepsis bimaculata	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cyrnus flavidus	0	0	0	0	2	0	0	0	0	0	0	0	0	0
Cyrnus trimaculatus	0	0	0	0	0	0	0	0	1	2	2	2	0	0
Holocentropus picicornis	0	0	0	22	0	0	0	0	0	0	0	0	0	0
Plectrocnemia conspersa	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydropsyche pellucidula	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydropsyche siltalai	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Agrypnia varia	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phryganea bipunctata	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Halesus digitatus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Halesus radiatus	0	1	0	0	0	0	0	0	1	3	0	2	1	8
Potamophylax latipennis	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chaetopteryx villosa	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Anabolia nervosa	0	2	0	0	1	0	0	0	1	12	0	0	0	27
Glyphotaelius pellucidus	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Limnephilus decipiens	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Limnephilus flavicornis	0	0	0	0	0	10	0	0	0	0	0	0	0	0
Limnephilus lunatus	4	0	1	22	7	3	0	0	5	5	0	3	2	2
Limnephilus marmoratus	0	0	0	0	6	0	0	0	0	0	0	0	0	0
Limnephilus rhombicus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Limnephilus vittatus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Goera pilosa	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Beraea pullata	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Beraeodes minutus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sericostoma personatum	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Molanna angustata	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oecetis testacea	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ceractea senilis	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Athripsodes aterrimus	0	5	0	39	47	0	0	0	0	0	0	0	1	1
Athripsodes cinereus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ceraclea dissimilis	0	0	0	0	0	0	0	0	2	0	1	0	0	0
Leptocerus tineiformis	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mystacides azurea	0	0	0	0	2	0	0	0	3	0	0	0	0	0
Mystacides longicornis	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Triaenodes bicolor	0	0	0	29	9	1	0	0	0	0	0	0	0	0
Oecetis lacustris	0	0	0	2	0	0	0	0	0	0	0	0	3	0

TABLE 4. CANAL INVERTEBRATE DATA (NUMBERS PER THREE MINUTE SAMPLE) (CONTINUED)

	SITES													
Species	56	57	58	59	60	61	62	63	64	65	66	67	68	69
Oecetis ochracea	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nymphula nymphaeata	0	0	0	4	1	1	0	0	0	0	0	0	0	0
Cataclysta lemnata	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Paraponyx stratiotata	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tipulidae	0	2	0	0	0	0	0	0	0	0	0	0	1	0
Psychodidae	0	0	0	0	0	1	0	0	0	0	0	0	1	0
Ptychopteridae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dixidae	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Chaoboridae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ceratopogonidae	0	0	0	45	0	1	0	0	1	0	0	0	1	0
Chironomidae	0	140	0	740	0	6	2	8	16	37	0	60	51	11
Stratiomyidae	0	1	0	0	0	0	0	0	0	0	0	0	1	0
Sciomyzidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Muscidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oligochaeta	0	112	0	540	0	17	37	1	10	45	0	105	44	5

TABLE 4. CANAL INVERTEBRATE DATA (NUMBERS PER THREE MINUTE SAMPLE) (CONTINUED)

	SITES													
Species	70	71	72	73	74	75	76	77	78	79	80	81	82	83
Polycelis nigra	0	0	0	0	0	0	0	0	0	0	0	2	0	0
Polycelis tenuis	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Dugesia lugubris	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dugesia polychroa	0	0	0	0	0	0	1	0	0	0	0	1	0	0
Dugesia tigrina	0	0	0	0	0	0	0	0	0	0	0	0	2	0
Dendrocoelum lacteum	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Theodoxus fluviatilis	0	0	0	0	0	0	0	0	2	0	0	0	0	0
Viviparus viviparus	1	0	0	0	1	4	0	0	0	0	0	0	0	0
Valvata cristata	0	0	0	0	0	0	0	0	0	3	0	0	0	0
Valvata piscinalis	0	0	0	0	0	0	1	0	6	12	1	0	3	0
Potamopyrgus antipodarum	0	0	0	0	20	6	15	0	0	0	0	0	0	5
Bithynia leachi	0	0	1	0	0	23	41	0	0	2	3	0	0	0
Bithynia tentaculata	0	31	24	9	0	60	74	0	124	47	12	48	4	16
Physa acuta	0	9	0	0	12	0	0	0	1	0	7	5	1	9
Physa fontinalis	0	1	0	0	10	0	3	0	0	0	0	4	0	0
Lymnaea auricularia	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Lymnaea palustris	0	0	0	0	0	0	0	0	2	0	1	0	0	0
Lymnaea peregra	0	0	2	1	1	1	3	1	20	27	7	0	0	6
Lymnaea stagnalis	0	0	1	0	0	1	1	0	0	0	0	22	1	26
Lymnaea truncatula	0	0	1	0	1	0	0	0	0	0	0	0	0	0
Planorbis carinatus	0	0	0	0	0	0	0	0	3	1	4	18	0	12
Planorbis planorbis	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Anisus vortex	0	0	4	0	0	0	2	0	12	16	34	77	1	126
Bathyomphalus contortus	0	0	0	0	0	0	0	0	0	1	0	0	0	1
Gyraulus albus	0	0	0	0	0	0	1	0	6	28	6	25	14	42
Armiger crista	0	0	0	0	0	0	1	0	0	1	0	0	5	13
Hippeutis complanatus	0	0	0	0	0	0	0	0	0	20	0	1	6	6
Planorbarius corneus	0	0	0	0	0	1	1	0	0	0	0	0	0	0
Ancylus fluviatilis	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ferrissia wautieri	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Acroloxus lacustris	0	0	3	0	1	0	2	0	0	7	2	5	0	1
Anodonta cygnaea	0	0	0	0	0	3	0	0	0	2	0	0	0	0
Unio pictorum	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Unio tumidus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Anodonta anatina	0	0	0	1	0	0	1	0	0	0	0	0	0	0
Sphaerium corneum	0	14	30	7	0	3	21	1	20	0	3	23	2	8
Sphaerium lacustre	0	1	0	0	0	0	0	0	0	6	1	2	2	3
Sphaerium rivicola	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dreissena polymorpha	0	69	0	0	0	0	0	0	0	0	0	0	0	0
Piscicola geometra	0	2	0	0	0	1	0	0	0	0	0	4	2	7
Theromyzon tessulatum	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hemiclepsis marginata	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Glossiphonia complanata	0	0	0	5	0	1	1	0	0	0	0	0	0	0
Glossiphonia heteroclita	0	1	4	0	0	0	0	1	0	0	0	0	0	0
Helobdella stagnalis	0	0	0	0	0	0	0	0	0	1	0	1	0	0
Haemopis sanguisuga	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Erpobdella octoculata	0	2	0	18	2	2	3	1	2	0	1	0	0	0
Erpobdella testacea	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Argyroneta aquatica	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pacifastacus leniusculus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Austropotamobius pallipes	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Asellus aquaticus	0	50	122	50	30	81	220	3	78	502	51	180	173	310

TABLE 4. CANAL INVERTEBRATE DATA (NUMBERS PER THREE MINUTE SAMPLE) (CONTINUED)

	SITES													
Species	70	71	72	73	74	75	76	77	78	79	80	81	82	83
Asellus meridianus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Corophium curvispinum	0	8	11	0	3	18	0	0	0	0	0	0	0	0
Crangonyx pseudogracilis	0	52	49	9	25	93	200	0	32	9	0	117	50	450
Gammarus tigrinus	0	0	0	0	0	3	0	0	0	0	0	0	0	0
Gammarus pulex	0	0	0	0	0	0	4	0	0	0	0	0	0	0
Baetis fuscatus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Baetis vernus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Centroptilum luteolum	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cloeon dipterum	0	0	0	0	0	0	0	0	1	0	0	1	2	70
Cloeon simile	0	0	0	0	0	0	0	0	2	0	0	0	0	0
Paraleptophlebia submarginata	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Habrophlebia fusca	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ephemera danica	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ephemera vulgata	1	0	0	0	0	0	0	0	0	0	0	1	0	1
Ephemerella ignita	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Caenis horaria	0	0	0	0	1	0	0	0	45	14	0	83	235	52
Caenis luctuosa	0	0	0	0	0	0	0	1	0	2	0	1	2	0
Caenis macrura	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Caenis robusta	0	0	0	0	0	0	0	0	5	7	0	0	8	20
Platycnemis pennipes	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ischnura elegans	0	7	12	1	33	0	81	0	122	109	8	34	7	78
Enallagma cyathigerum	0	0	0	0	0	0	0	0	10	0	0	1	68	100
Coenagrion puella	0	0	0	0	0	0	0	0	0	0	0	3	1	3
Erythromma najas	0	0	0	0	0	0	0	0	0	0	0	1	6	4
Lestes sponsa	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Calopteryx splendens	0	0	0	0	0	0	21	0	0	1	0	0	0	0
Brachytron pratense	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Aeshna cyanea	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Aeshna grandis	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Anax imperator	0	0	0	0	0	0	0	0	0	0	0	2	0	0
Orthetrum cancellatum	0	0	0	0	0	0	0	0	0	1	0	0	0	2
Libellula quadrimaculata	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Sympetrum striolatum	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Hydrometra stagnorum	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Velia caprai	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Microvelia reticulata	0	0	0	0	0	0	0	0	7	0	0	1	0	0
Gerris argentatus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gerris lacustris	0	0	1	0	0	1	0	0	5	0	0	0	0	1
Gerris odontogaster	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nepa cinerea	0	0	0	0	0	0	0	0	2	1	1	2	0	0
Ranatra linearis	0	0	0	0	0	0	1	0	1	1	0	1	0	0
Ilyocoris cimicoides	0	0	0	0	0	0	0	0	0	0	1	0	0	1
Aphelocheirus aestivalis	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Notonecta glauca	0	0	0	0	0	0	0	0	3	0	0	1	0	0
Notonecta marmorea	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Plea leachi	0	0	0	0	0	0	0	0	0	1	0	0	0	2
Micronecta scholtzi	0	0	0	0	0	0	0	0	2	0	0	0	0	5
Micronecta poweri	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cymatia coleoptrata	0	0	0	0	0	0	0	0	0	0	0	0	1	13
Sigara dorsalis	0	0	0	0	1	0	1	0	3	6	0	0	1	2
Sigara distincta	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Sigara falleni	0	0	0	1	0	0	0	0	9	4	0	1	0	0

TABLE 4. CANAL INVERTEBRATE DATA (NUMBERS PER THREE MINUTE SAMPLE) (CONTINUED)

	SITES													
Species	70	71	72	73	74	75	76	77	78	79	80	81	82	83
Sigara fossarum	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sigara concinna	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Haliplus confinis	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Haliplus flavicollis	0	0	0	0	0	0	0	0	2	10	1	2	0	7
Haliplus fluviatilis	0	0	0	4	1	0	1	0	0	3	0	1	0	1
Haliplus immaculatus	0	0	0	0	0	0	0	0	0	1	0	1	0	5
Haliplus lineatocollis	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Haliplus lineolatus	0	0	0	0	0	0	0	0	0	0	0	0	4	14
Haliplus ruficollis	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Haliplus wehnckei	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Noterus clavicornis	0	0	0	0	1	0	0	0	0	3	1	3	0	2
Nebrioporus depressus	0	0	0	1	1	0	0	1	0	1	0	0	0	0
Stictotarsus duodecimpustulatus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Laccophilus hyalinus	0	0	9	0	1	1	2	0	58	140	9	5	0	13
Laccophilus minutus	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Hyphydrus ovatus	0	0	0	0	0	0	0	0	0	1	0	0	0	3
Hygrotus inaequalis	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hygrotus versicolor	0	0	0	0	0	0	0	0	2	2	0	0	0	0
Hydroporus nigrita	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydroporus palustris	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydroporus tesselatus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Graptodytes pictus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Platambus maculatus	0	0	0	0	1	0	1	0	0	0	0	0	0	0
Agabus paludosus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ilybius ater	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ilybius fenestratus	0	0	0	0	0	0	0	0	0	0	0	10	0	5
Ilybius fuliginosus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ilybius quadriguttatus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dytiscus marginalis	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Suphrodytes dorsalis	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gyrinus distinctus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gyrinus substriatus	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Hydrochus angustatus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydrochus elongatus	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Helophorus grandis	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Helophorus brevipalpis	0	0	0	1	0	0	0	0	2	2	0	2	0	1
Helophorus minutus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Helophorus obscurus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coelostoma orbiculare	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Hydrobius fuscipes	0	0	0	0	0	0	0	0	0	0	1	0	0	0
Anacaena bipustulata	0	0	0	0	0	0	0	0	0	2	1	0	0	0
Anacaena globulus	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Anacaena limbata	0	1	0	0	0	0	0	0	0	1	0	19	0	18
Anacaena lutescens	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Laccobius biguttatus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Laccobius minutus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Laccobius bipunctatus	0	0	8	0	0	0	0	0	0	1	0	8	0	1
Laccobius sinuatus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Laccobius striatulus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Helochares lividus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Helochares punctatus	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Enochrus melanocephalus	0	0	0	0	0	0	0	0	0	0	0	0	0	1

TABLE 4. CANAL INVERTEBRATE DATA (NUMBERS PER THREE MINUTE SAMPLE) (CONTINUED)

	SITES													
Species	70	71	72	73	74	75	76	77	78	79	80	81	82	83
Enochrus testaceus	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Ochthebius minimus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydraena testacea	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Helichus substriatus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dryops luridus	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Elmis aenea	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oulimnius major	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oulimnius tuberculatus	0	1	0	0	0	0	0	0	6	0	0	1	0	0
Heterocerus fenestratus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sialis lutaria	0	0	0	0	0	0	0	0	14	1	1	8	0	11
Agraylea multipunctata	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Agraylea sexmaculata	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lype phaeopa	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lype reducta	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tinodes waeneri	1	0	0	0	0	0	0	8	0	0	0	0	0	0
Ecnomus tenellus	2	0	0	1	0	0	0	0	0	0	0	0	0	0
Neuroclepsis bimaculata	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cyrnus flavidus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cyrnus trimaculatus	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Holocentropus picicornis	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Plectrocnemia conspersa	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydropsyche pellucidula	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydropsyche siltalai	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Agrypnia varia	0	0	0	0	0	0	0	0	0	0	0	0	1	5
Phryganea bipunctata	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Halesus digitatus	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Halesus radiatus	0	0	2	0	0	0	2	0	0	0	0	1	0	0
Potamophylax latipennis	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chaetopteryx villosa	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Anabolia nervosa	1	0	20	0	1	0	0	0	0	0	0	16	2	4
Glyphotaelius pellucidus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Limnephilus decipiens	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Limnephilus flavicornis	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Limnephilus lunatus	0	2	36	5	4	1	0	0	9	19	1	12	7	34
Limnephilus marmoratus	0	0	0	0	0	0	1	0	1	0	0	1	6	8
Limnephilus rhombicus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Limnephilus vittatus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Goera pilosa	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Beraea pullata	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Beraeodes minutus	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Sericostoma personatum	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Molanna angustata	0	0	0	0	0	0	0	0	0	0	0	0	2	0
Oecetis testacea	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ceractea senilis	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Athripsodes aterrimus	0	0	19	0	1	0	8	0	3	0	0	16	8	33
Athripsodes cinereus	0	0	0	0	0	0	2	1	0	0	0	0	1	1
Ceraclea dissimilis	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Leptocerus tineiformis	0	0	0	0	0	0	0	0	0	0	0	0	38	29
Mystacides azurea	0	0	0	0	0	0	0	0	0	0	1	0	5	0
Mystacides longicornis	0	0	0	0	0	0	0	0	2	0	0	5	66	79
Triaenodes bicolor	0	0	0	0	0	0	0	0	1	0	0	6	26	73
Oecetis lacustris	0	0	0	0	0	0	0	0	1	2	0	4	0	2

TABLE 4. CANAL INVERTEBRATE DATA (NUMBERS PER THREE MINUTE SAMPLE) (CONTINUED)

	SITES													
Species	70	71	72	73	74	75	76	77	78	79	80	81	82	83
Oecetis ochracea	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nymphula nymphaeata	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cataclysta lemnata	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Paraponyx stratiotata	0	0	0	0	0	0	0	0	0	0	1	0	1	0
Tipulidae	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Psychodidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ptychopteridae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dixidae	0	0	0	0	0	0	0	0	0	0	1	0	0	0
Chaoboridae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ceratopogonidae	0	5	0	20	0	0	1	0	0	2	0	90	0	0
Chironomidae	5	60	38	170	56	80	36	11	0	185	3	140	0	0
Stratiomyidae	0	0	0	0	0	0	0	0	0	0	1	0	0	0
Sciomyzidae	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Muscidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oligochaeta	8	50	60	1700	6	15	12	1	0	11	1	190	0	0

TABLE 5. CORRELATIONS BETWEEN CANAL ENVIRONMENTAL AND BIOLOGICAL VARIABLES

Key:

r_s = Spearmans coefficient of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLES							
METRIC		EASTING	NORTHING	ALTITUDE	FLOW	SECCHI	%SHADE_B	%SHADE_W	%VEGB_SA
INV_N.SP	r_s	0.2228	-0.2938	-0.2945	-0.0378	0.4686	0.1842	0.0753	0.5759
	p	0.0429	0.0070	0.0069	0.7507	0.0000	0.0956	0.4989	0.0000
INV_N.FA	r_s	0.2160	-0.2648	-0.3440	-0.0380	0.3945	0.2629	0.1269	0.5583
	p	0.0498	0.0156	0.0015	0.7498	0.0002	0.0163	0.2530	0.0000
INV_N.OR	r_s	0.1471	-0.1665	-0.2898	-0.1183	0.3832	0.1849	0.0743	0.4820
	p	0.1846	0.1325	0.0079	0.3190	0.0003	0.0943	0.5045	0.0000
INV_SRS	r_s	0.2352	-0.3118	-0.2680	-0.0120	0.4819	0.1748	0.0741	0.5855
	p	0.0324	0.0041	0.0143	0.9198	0.0000	0.1139	0.5056	0.0000
INV_SRI	r_s	0.1234	-0.1994	-0.0053	-0.0086	0.1911	0.1045	0.0560	0.1863
	p	0.2665	0.0708	0.9624	0.9426	0.0836	0.3470	0.6150	0.0917
S_TRIC	r_s	0.1918	-0.0076	-0.1313	-0.2384	0.1642	0.1482	0.1510	0.1704
	p	0.0824	0.9457	0.2366	0.0423	0.1380	0.1811	0.1729	0.1236
S_GAST	r_s	0.1795	-0.1964	-0.1367	0.0649	0.3514	0.1930	0.0646	0.5242
	p	0.1045	0.0751	0.2177	0.5855	0.0011	0.0805	0.5617	0.0000
S_BIVALV	r_s	0.2280	-0.1086	-0.3659	0.1315	-0.1066	0.2342	0.1366	0.1697
	p	0.0381	0.3285	0.0007	0.2674	0.3376	0.0331	0.2182	0.1251
S_HIRU	r_s	0.1622	0.0085	-0.0470	-0.2452	0.1657	0.1454	0.0018	0.2919
	p	0.1430	0.9395	0.6729	0.0365	0.1344	0.1898	0.9871	0.0074
S_ARAN	r_s	-0.0741	0.1468	0.0135	-0.0823	0.2319	0.0178	0.0068	0.2689
	p	0.5056	0.1853	0.9037	0.4888	0.0349	0.8730	0.9511	0.0140
S_DECA	r_s	0.1174	-0.1268	0.0623	0.0428	0.0776	0.1651	0.1102	0.0083
	p	0.2905	0.2533	0.5761	0.7192	0.4859	0.1359	0.3215	0.9407
S_ISOP	r_s	0.0735	-0.0202	0.0014	0.0394	0.1006	0.1105	0.0993	0.0407
	p	0.5092	0.8560	0.9898	0.7407	0.3657	0.3201	0.3718	0.7150
S_AMPH	r_s	0.0657	0.0691	-0.2555	0.0964	-0.3017	0.2367	0.2154	0.1247
	p	0.5552	0.5350	0.0197	0.4173	0.0056	0.0312	0.0505	0.2612
S_EPHE	r_s	0.2661	-0.3054	-0.2423	0.0919	0.4754	-0.1170	-0.1612	0.1229
	p	0.0150	0.0050	0.0273	0.4392	0.0000	0.2921	0.1455	0.2683
S_ODON	r_s	0.2053	-0.3079	0.0546	-0.0626	0.5452	-0.0700	-0.1373	0.3186
	p	0.0627	0.0046	0.6240	0.5987	0.0000	0.5292	0.2159	0.0033
S_HEMI	r_s	0.0967	-0.1364	-0.3617	-0.2795	0.3193	0.2171	0.1301	0.4293
	p	0.3847	0.2187	0.0008	0.0166	0.0033	0.0487	0.2412	0.0001
S_COLE	r_s	0.0789	-0.2150	-0.2607	-0.0646	0.4026	0.1287	0.0372	0.5375
	p	0.4785	0.0510	0.0173	0.5874	0.0002	0.2463	0.7384	0.0000
S_MEGA	r_s	0.0840	-0.3531	-0.1942	0.0334	0.5280	-0.0914	-0.0829	0.3255
	p	0.4501	0.0011	0.0785	0.7788	0.0000	0.4112	0.4560	0.0027
S_TRICH	r_s	0.1690	-0.2193	-0.2474	-0.0911	0.3280	0.0585	0.0731	0.2349
	p	0.1267	0.0464	0.0242	0.4434	0.0025	0.5992	0.5115	0.0326
S_LEPID	r_s	-0.0026	0.0798	-0.1006	-0.1398	0.4859	0.0065	0.0148	0.2372
	p	0.9817	0.4731	0.3657	0.2380	0.0000	0.9536	0.8946	0.0308
S_PLAN	r_s	0.1378	-0.3030	0.0056	-0.0192	0.5295	0.0784	-0.0289	0.4990
	p	0.2142	0.0054	0.9599	0.8716	0.0000	0.4811	0.7953	0.0000
S_BAET	r_s	0.1864	-0.2209	-0.0834	0.0061	0.5793	-0.1314	-0.1686	0.1458
	p	0.0916	0.0447	0.4533	0.9594	0.0000	0.2364	0.1275	0.1885
S_COEN	r_s	0.1518	-0.2369	0.0853	-0.1757	0.5327	-0.0954	-0.1385	0.2266
	p	0.1707	0.0311	0.4433	0.1371	0.0000	0.3909	0.2119	0.0394
S_HALIP	r_s	0.0917	-0.1204	-0.2312	-0.2608	0.5010	0.0633	0.0849	0.2971
	p	0.4099	0.2781	0.0355	0.0259	0.0000	0.5694	0.4452	0.0064
S_HYDR	r_s	0.1363	-0.2315	-0.2128	-0.0972	0.2693	0.1028	0.0170	0.3870
	p	0.2194	0.0352	0.0534	0.4133	0.0138	0.3552	0.8788	0.0003
S_LIMN	r_s	-0.0037	-0.1612	-0.1267	0.0995	0.1983	0.1146	0.1256	0.4180
	p	0.9733	0.1455	0.2536	0.4023	0.0724	0.3023	0.2580	0.0001

TABLE 5. CORRELATIONS BETWEEN CANAL ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficient of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLES							
METRIC		EASTING	NORTHING	ALTITUDE	FLOW	SECCHI	%SHADE_B	%SHADE_W	%VEGB_SA
S_LEPT	r_s	0.2634	-0.3372	-0.2598	-0.1050	0.5312	0.0398	0.0098	0.2767
	p	0.0161	0.0018	0.0177	0.3767	0.0000	0.7212	0.9298	0.0113
S_SM_DY	r_s	0.1026	-0.1144	-0.2500	-0.1465	0.3578	0.1161	-0.0104	0.4751
	p	0.3559	0.3029	0.0226	0.2161	0.0009	0.2959	0.9256	0.0000
S_CM	r_s	0.2412	-0.1708	-0.2295	0.1016	0.2176	0.2838	0.1541	0.5119
	p	0.0280	0.1225	0.0369	0.3926	0.0482	0.0093	0.1642	0.0000
S_HTR	r_s	0.2093	-0.0007	-0.0872	-0.2830	0.1868	0.1660	0.0573	0.3037
	p	0.0575	0.9947	0.4334	0.0153	0.0909	0.1336	0.6069	0.0053
S_PHEMIP	r_s	0.0721	-0.1712	-0.3317	-0.1007	0.3217	0.1264	0.0318	0.3491
	p	0.5174	0.1217	0.0022	0.3966	0.0030	0.2549	0.7753	0.0012
S_DHEMIP	r_s	0.0495	-0.0391	-0.2606	-0.4101	0.2583	0.2253	0.1725	0.3320
	p	0.6569	0.7258	0.0173	0.0003	0.0184	0.0405	0.1189	0.0022
S_EPT	r_s	0.1782	-0.2493	-0.2460	-0.0350	0.4080	-0.0029	-0.0009	0.2216
	p	0.1070	0.0230	0.0250	0.7690	0.0001	0.9796	0.9939	0.0441
S_ETO	r_s	0.2059	-0.3036	-0.1809	-0.0411	0.5084	-0.0152	-0.0367	0.3027
	p	0.0619	0.0053	0.1016	0.7300	0.0000	0.8918	0.7418	0.0054
F_TRICLA	r_s	0.1961	-0.0224	-0.1208	-0.2369	0.1604	0.1520	0.1543	0.1748
	p	0.0756	0.8408	0.2766	0.0436	0.1474	0.1702	0.1638	0.1140
F_GASTRO	r_s	0.2947	-0.2608	-0.1393	0.1821	0.2267	0.3015	0.1752	0.3557
	p	0.0068	0.0172	0.2092	0.1231	0.0393	0.0056	0.1132	0.0010
F_BIVALV	r_s	0.1064	-0.0991	-0.3002	0.2104	-0.2269	0.3116	0.2043	0.1171
	p	0.3386	0.3729	0.0058	0.0739	0.0391	0.0041	0.0639	0.2917
F_HIRUDI	r_s	0.1368	0.0534	-0.1193	-0.2373	0.1522	0.0982	-0.0354	0.2549
	p	0.2176	0.6317	0.2828	0.0432	0.1696	0.3770	0.7509	0.0201
F_DECAPO	r_s	0.1174	-0.1268	0.0623	0.0428	0.0776	0.1651	0.1102	0.0083
	p	0.2905	0.2533	0.5761	0.7192	0.4859	0.1359	0.3215	0.9407
F_ISOPOD	r_s	0.0194	-0.1049	-0.0223	0.0336	0.0982	0.1890	0.1699	0.0959
	p	0.8617	0.3454	0.8411	0.7776	0.3774	0.0870	0.1247	0.3882
F_AMPHIP	r_s	0.0657	0.0691	-0.2555	0.0964	-0.3017	0.2367	0.2154	0.1247
	p	0.5552	0.5350	0.0197	0.4173	0.0056	0.0312	0.0505	0.2612
F_EPHEME	r_s	0.2971	-0.2676	-0.2189	0.0588	0.4616	-0.1342	-0.1731	0.0638
	p	0.0064	0.0144	0.0467	0.6212	0.0000	0.2265	0.1176	0.5666
F_ODONAT	r_s	0.1464	-0.2626	0.0712	0.0530	0.3800	-0.0389	-0.1519	0.4285
	p	0.1866	0.0165	0.5226	0.6559	0.0004	0.7268	0.1704	0.0001
F_HEMIPT	r_s	0.0716	-0.1209	-0.3505	-0.2405	0.3006	0.2195	0.1367	0.4351
	p	0.5198	0.2761	0.0012	0.0404	0.0058	0.0461	0.2177	0.0000
F_COLEOP	r_s	-0.0014	-0.1579	-0.2676	-0.0496	0.3496	0.1837	0.0973	0.5509
	p	0.9901	0.1540	0.0145	0.6769	0.0012	0.0964	0.3813	0.0000
F_TRICHO	r_s	0.1502	-0.1343	-0.1891	-0.1378	0.2569	0.0396	0.0442	0.0898
	p	0.1753	0.2261	0.0869	0.2449	0.0191	0.7220	0.6916	0.4194
F_LEPID	r_s	-0.0082	0.0749	-0.0957	-0.1340	0.4876	0.0098	0.0179	0.2385
	p	0.9417	0.5010	0.3894	0.2584	0.0000	0.9299	0.8726	0.0299
F_DIPT	r_s	0.0464	-0.0008	-0.2647	-0.1696	-0.0637	0.1909	0.0472	0.1537
	p	0.6769	0.9945	0.0156	0.1514	0.5672	0.0839	0.6716	0.1653
F_OLIGO	r_s	-0.0599	0.1969	-0.1015	-0.0784	-0.2381	0.1266	0.0549	-0.0654
	p	0.5906	0.0744	0.3610	0.5097	0.0302	0.2540	0.6224	0.5568
F_PHEMIP	r_s	0.0796	-0.1511	-0.3257	-0.1007	0.3221	0.1176	0.0350	0.3417
	p	0.4744	0.1727	0.0027	0.3967	0.0030	0.2899	0.7535	0.0016
F_DHEMIP	r_s	0.0330	-0.0415	-0.2389	-0.3995	0.2550	0.2390	0.1942	0.3384
	p	0.7673	0.7096	0.0296	0.0005	0.0200	0.0295	0.0785	0.0018

TABLE 5. CORRELATIONS BETWEEN CANAL ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficient of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLES							
METRIC		EASTING	NORTHING	ALTITUDE	FLOW	SECCHI	%SHADE_B	%SHADE_W	%VEGB_SA
F_CM	r_s	0.2574	-0.2063	-0.2276	0.2100	0.0789	0.3769	0.2540	0.3636
	p	0.0188	0.0613	0.0385	0.0746	0.4786	0.0004	0.0205	0.0007
F_HTR	r_s	0.1807	0.0304	-0.1409	-0.2945	0.1914	0.1340	0.0375	0.2862
	p	0.1021	0.7851	0.2038	0.0114	0.0831	0.2271	0.7363	0.0087
F_EPT	r_s	0.2391	-0.2298	-0.2182	-0.0751	0.4056	-0.0342	-0.0384	0.0940
	p	0.0295	0.0366	0.0475	0.5278	0.0001	0.7588	0.7306	0.3979
F_ETO	r_s	0.2369	-0.2973	-0.1529	-0.0656	0.4765	-0.0417	-0.0860	0.2253
	p	0.0310	0.0063	0.1675	0.5813	0.0000	0.7084	0.4393	0.0406
F_OM	r_s	0.1362	-0.3510	-0.0249	0.0616	0.5222	-0.0681	-0.1458	0.4726
	p	0.2195	0.0011	0.8231	0.6046	0.0000	0.5408	0.1885	0.0000
F_EMO	r_s	0.2380	-0.3869	-0.1153	0.0669	0.6122	-0.1280	-0.1909	0.3688
	p	0.0302	0.0003	0.2991	0.5737	0.0000	0.2487	0.0839	0.0006
F_PRED	r_s	0.1265	-0.1812	-0.2851	-0.1300	0.3474	0.2320	0.0994	0.5563
	p	0.2545	0.1011	0.0090	0.2730	0.0013	0.0348	0.3712	0.0000
F_DETR	r_s	0.1817	-0.2530	-0.3206	0.0154	0.2200	0.3317	0.2237	0.4167
	p	0.1002	0.0210	0.0031	0.8973	0.0457	0.0022	0.0420	0.0001
F_HERB	r_s	0.2040	-0.2664	-0.3177	-0.0321	0.3962	0.3445	0.2150	0.4409
	p	0.0644	0.0149	0.0034	0.7872	0.0002	0.0014	0.0510	0.0000
BMWP	r_s	0.2382	-0.2970	-0.3186	-0.0226	0.4068	0.1789	0.0763	0.4798
	p	0.0301	0.0064	0.0033	0.8493	0.0001	0.1056	0.4929	0.0000
ASPT	r_s	0.1685	-0.2153	-0.1220	0.0443	0.1835	-0.1122	-0.0728	0.0416
	p	0.1278	0.0506	0.2717	0.7098	0.0968	0.3125	0.5128	0.7090

TABLE 5. CORRELATIONS BETWEEN CANAL ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficient of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLES							
METRIC		%MARG_SA	%AQUA_SA	FLOA_SA	%ALG_SA	%VEG_SA	VEG_SA	VEGB_50	MARG_50
INV_N.SP	r_s	0.5217	0.4067	0.3266	0.0653	0.6126	0.6054	0.5112	0.4545
	p	0.0000	0.0001	0.0026	0.5574	0.0000	0.0000	0.0000	0.0000
INV_N.FA	r_s	0.5173	0.3722	0.3235	0.0624	0.5757	0.5571	0.4789	0.4444
	p	0.0000	0.0005	0.0029	0.5752	0.0000	0.0000	0.0000	0.0000
INV_N.OR	r_s	0.4107	0.3754	0.3934	0.1235	0.5352	0.5213	0.4923	0.4260
	p	0.0001	0.0005	0.0002	0.2660	0.0000	0.0000	0.0000	0.0001
INV_SRS	r_s	0.5217	0.4102	0.3267	0.0903	0.6125	0.6147	0.5321	0.4631
	p	0.0000	0.0001	0.0026	0.4169	0.0000	0.0000	0.0000	0.0000
INV_SRI	r_s	0.1867	0.1661	0.1117	0.1298	0.1918	0.2164	0.2378	0.2015
	p	0.0910	0.1334	0.3146	0.2423	0.0825	0.0494	0.0304	0.0695
S_TRIC	r_s	0.1978	0.3259	0.2980	0.0161	0.3452	0.2771	0.1581	0.0881
	p	0.0731	0.0026	0.0062	0.8854	0.0014	0.0112	0.1533	0.4314
S_GAST	r_s	0.4995	0.3122	0.2132	0.0871	0.5123	0.5324	0.4331	0.4433
	p	0.0000	0.0041	0.0529	0.4336	0.0000	0.0000	0.0000	0.0000
S_BIVALV	r_s	0.1016	-0.0446	-0.1402	-0.1042	0.0542	0.0665	0.1480	-0.0268
	p	0.3608	0.6887	0.2062	0.3486	0.6265	0.5503	0.1819	0.8114
S_HIRU	r_s	0.3686	0.4328	0.2536	0.1023	0.4709	0.4089	0.2020	0.2420
	p	0.0006	0.0000	0.0207	0.3575	0.0000	0.0001	0.0670	0.0285
S_ARAN	r_s	0.0608	0.0722	0.1558	0.2414	0.0849	0.2291	0.2240	0.0000
	p	0.5848	0.5165	0.1596	0.0279	0.4452	0.0372	0.0417	1.0000
S_DECA	r_s	-0.0589	0.0214	0.1201	0.0870	0.0258	0.0634	0.1000	-0.0204
	p	0.5968	0.8477	0.2797	0.4341	0.8166	0.5690	0.3685	0.8560
S_ISOP	r_s	0.1371	0.2763	0.1276	0.1803	0.2691	0.2735	0.1253	0.0872
	p	0.2164	0.0114	0.2504	0.1028	0.0139	0.0124	0.2589	0.4359
S_AMPH	r_s	0.1248	-0.1920	-0.0967	-0.1357	0.0560	0.0227	-0.0194	0.0279
	p	0.2609	0.0821	0.3847	0.2214	0.6150	0.8389	0.8619	0.8035
S_EPHE	r_s	0.0523	0.2309	0.2018	0.1547	0.2258	0.2361	0.2212	0.1944
	p	0.6388	0.0357	0.0673	0.1625	0.0401	0.0316	0.0445	0.0801
S_ODON	r_s	0.2344	0.5771	0.3658	0.2547	0.5369	0.5307	0.4246	0.3654
	p	0.0329	0.0000	0.0007	0.0202	0.0000	0.0000	0.0001	0.0007
S_HEMI	r_s	0.3289	0.3647	0.3067	0.0876	0.4412	0.4386	0.3633	0.2877
	p	0.0024	0.0007	0.0048	0.4312	0.0000	0.0000	0.0007	0.0088
S_COLE	r_s	0.4679	0.2992	0.2983	0.0679	0.4969	0.4973	0.4951	0.4618
	p	0.0000	0.0060	0.0062	0.5421	0.0000	0.0000	0.0000	0.0000
S_MEGA	r_s	0.4088	0.3900	0.2972	0.1188	0.5125	0.4719	0.4241	0.4656
	p	0.0001	0.0003	0.0064	0.2846	0.0000	0.0000	0.0001	0.0000
S_TRICH	r_s	0.1775	0.1603	0.1182	-0.1029	0.2937	0.2685	0.2473	0.1905
	p	0.1084	0.1477	0.2874	0.3547	0.0070	0.0141	0.0242	0.0864
S_LEPID	r_s	0.0657	0.3600	0.3747	0.3952	0.2613	0.3879	0.3515	0.1709
	p	0.5549	0.0008	0.0005	0.0002	0.0170	0.0003	0.0011	0.1248
S_PLAN	r_s	0.4751	0.4700	0.2966	0.1498	0.5914	0.6047	0.4525	0.4090
	p	0.0000	0.0000	0.0065	0.1764	0.0000	0.0000	0.0000	0.0001
S_BAET	r_s	-0.0108	0.3761	0.2619	0.2929	0.2632	0.3433	0.2701	0.1138
	p	0.9230	0.0005	0.0168	0.0072	0.0162	0.0015	0.0135	0.3089
S_COEN	r_s	0.1030	0.6111	0.4146	0.3059	0.4726	0.4977	0.3326	0.2192
	p	0.3542	0.0000	0.0001	0.0049	0.0000	0.0000	0.0021	0.0478
S_HALIP	r_s	0.1130	0.3617	0.3598	0.2732	0.3236	0.3530	0.2588	0.1597
	p	0.3093	0.0008	0.0008	0.0125	0.0028	0.0011	0.0182	0.1517
S_HYDR	r_s	0.4579	0.2316	0.2976	-0.0196	0.4274	0.4468	0.3565	0.3981
	p	0.0000	0.0352	0.0063	0.8607	0.0001	0.0000	0.0009	0.0002
S_LIMN	r_s	0.3724	0.0202	0.1332	-0.1842	0.3239	0.2870	0.3513	0.3442
	p	0.0005	0.8565	0.2298	0.0955	0.0028	0.0085	0.0011	0.0015

TABLE 5. CORRELATIONS BETWEEN CANAL ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficient of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLES							
METRIC		%MARG_SA	%AQUA_SA	FLOA_SA	%ALG_SA	%VEG_SA	VEG_SA	VEGB_50	MARG_50
S_LEPT	r_s	0.2225	0.3788	0.1895	0.0352	0.4355	0.4419	0.3381	0.2237
	p	0.0432	0.0004	0.0863	0.7519	0.0000	0.0000	0.0018	0.0433
S_SM_DY	r_s	0.4737	0.3815	0.2635	0.1499	0.5483	0.5102	0.4516	0.5439
	p	0.0000	0.0004	0.0161	0.1763	0.0000	0.0000	0.0000	0.0000
S_CM	r_s	0.4733	0.2210	0.1246	0.0287	0.4520	0.4649	0.3960	0.3449
	p	0.0000	0.0446	0.2616	0.7969	0.0000	0.0000	0.0002	0.0015
S_HTR	r_s	0.3830	0.4477	0.3240	0.0675	0.5034	0.4212	0.2112	0.2265
	p	0.0004	0.0000	0.0028	0.5440	0.0000	0.0001	0.0553	0.0407
S_PHEMIP	r_s	0.3333	0.3623	0.2779	0.0305	0.4447	0.4582	0.3231	0.2837
	p	0.0021	0.0008	0.0110	0.7840	0.0000	0.0000	0.0029	0.0098
S_DHEMIP	r_s	0.1800	0.2574	0.2316	0.1997	0.2912	0.2803	0.2753	0.1865
	p	0.1034	0.0188	0.0352	0.0703	0.0076	0.0103	0.0118	0.0934
S_EPT	r_s	0.1577	0.1913	0.1676	-0.0130	0.2966	0.2870	0.2490	0.2075
	p	0.1544	0.0833	0.1300	0.9070	0.0065	0.0085	0.0232	0.0614
S_ETO	r_s	0.2363	0.3216	0.2526	0.0581	0.4210	0.4109	0.3546	0.3066
	p	0.0315	0.0030	0.0213	0.6018	0.0001	0.0001	0.0010	0.0051
F_TRICLA	r_s	0.2084	0.3284	0.2870	0.0122	0.3511	0.2819	0.1635	0.0942
	p	0.0586	0.0024	0.0085	0.9131	0.0011	0.0098	0.1396	0.3998
F_GASTRO	r_s	0.3644	0.1978	0.1149	0.0116	0.3515	0.3668	0.2801	0.3231
	p	0.0007	0.0731	0.3009	0.9171	0.0011	0.0006	0.0103	0.0031
F_BIVALV	r_s	0.1081	-0.1603	-0.1777	-0.1844	-0.0255	-0.0507	0.0461	-0.0513
	p	0.3305	0.1478	0.1080	0.0951	0.8188	0.6490	0.6791	0.6471
F_HIRUDI	r_s	0.3328	0.4649	0.2508	0.1038	0.4685	0.4075	0.1542	0.1888
	p	0.0021	0.0000	0.0222	0.3505	0.0000	0.0001	0.1639	0.0894
F_DECAPO	r_s	-0.0589	0.0214	0.1201	0.0870	0.0258	0.0634	0.1000	-0.0204
	p	0.5968	0.8477	0.2797	0.4341	0.8166	0.5690	0.3685	0.8560
F_ISOPOD	r_s	0.1130	0.2082	0.1076	0.1740	0.1982	0.2098	0.1206	0.0446
	p	0.3090	0.0589	0.3331	0.1156	0.0725	0.0570	0.2774	0.6909
F_AMPHIP	r_s	0.1248	-0.1920	-0.0967	-0.1357	0.0560	0.0227	-0.0194	0.0279
	p	0.2609	0.0821	0.3847	0.2214	0.6150	0.8389	0.8619	0.8035
F_EPHEME	r_s	0.0119	0.2181	0.1972	0.1621	0.2054	0.2243	0.1929	0.1764
	p	0.9152	0.0476	0.0740	0.1433	0.0625	0.0415	0.0807	0.1130
F_ODONAT	r_s	0.3655	0.3664	0.1987	0.1181	0.4341	0.4024	0.4866	0.4697
	p	0.0007	0.0007	0.0718	0.2878	0.0000	0.0002	0.0000	0.0000
F_HEMIPT	r_s	0.3509	0.3515	0.3040	0.0883	0.4452	0.4498	0.3583	0.2951
	p	0.0011	0.0011	0.0052	0.4273	0.0000	0.0000	0.0009	0.0071
F_COLEOP	r_s	0.4773	0.2586	0.2975	0.0579	0.4798	0.4809	0.4651	0.4574
	p	0.0000	0.0182	0.0063	0.6029	0.0000	0.0000	0.0000	0.0000
F_TRICHO	r_s	0.0840	0.2055	0.0596	-0.0460	0.2381	0.2174	0.1500	0.0974
	p	0.4502	0.0624	0.5926	0.6793	0.0302	0.0484	0.1759	0.3841
F_LEPID	r_s	0.0640	0.3594	0.3828	0.3930	0.2620	0.3902	0.3507	0.1680
	p	0.5654	0.0008	0.0004	0.0002	0.0167	0.0003	0.0012	0.1314
F_DIPT	r_s	0.2532	-0.0217	0.1235	-0.0379	0.1545	0.1050	0.0347	0.1957
	p	0.0209	0.8454	0.2662	0.7337	0.1632	0.3448	0.7555	0.0781
F_OLIGO	r_s	0.0050	-0.1855	-0.0621	-0.0650	-0.1349	-0.1875	-0.1572	-0.0306
	p	0.9642	0.0931	0.5770	0.5591	0.2241	0.0896	0.1557	0.7848
F_PHEMIP	r_s	0.3240	0.3675	0.2736	0.0380	0.4388	0.4580	0.3170	0.2722
	p	0.0028	0.0006	0.0123	0.7328	0.0000	0.0000	0.0035	0.0134
F_DHEMIP	r_s	0.1671	0.2463	0.2363	0.1995	0.2938	0.2958	0.2749	0.1697
	p	0.1312	0.0248	0.0315	0.0706	0.0070	0.0066	0.0119	0.1275

TABLE 5. CORRELATIONS BETWEEN CANAL ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficient of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLES							
METRIC		%MARG_SA	%AQUA_SA	FLOA_SA	%ALG_SA	%VEG_SA	VEG_SA	VEGB_50	MARG_50
F_CM	r_s	0.3677	0.0880	0.0426	-0.0522	0.3177	0.3206	0.2600	0.2447
	p	0.0006	0.4288	0.7022	0.6392	0.0034	0.0031	0.0176	0.0267
F_HTR	r_s	0.3593	0.4848	0.3193	0.0963	0.5087	0.4317	0.2027	0.1959
	p	0.0009	0.0000	0.0033	0.3865	0.0000	0.0000	0.0661	0.0778
F_EPT	r_s	0.0613	0.2586	0.1648	0.0618	0.2630	0.2596	0.1988	0.1554
	p	0.5817	0.0182	0.1366	0.5790	0.0163	0.0178	0.0716	0.1633
F_ETO	r_s	0.1809	0.3559	0.2350	0.1058	0.3827	0.3703	0.3361	0.2997
	p	0.1016	0.0010	0.0325	0.3413	0.0004	0.0006	0.0019	0.0062
F_OM	r_s	0.4548	0.4456	0.2956	0.1642	0.5554	0.5166	0.5544	0.5620
	p	0.0000	0.0000	0.0067	0.1379	0.0000	0.0000	0.0000	0.0000
F_EMO	r_s	0.3171	0.4375	0.3244	0.2073	0.4977	0.4867	0.4958	0.4827
	p	0.0035	0.0000	0.0028	0.0601	0.0000	0.0000	0.0000	0.0000
F_PRED	r_s	0.5802	0.4191	0.3448	0.0648	0.6483	0.6077	0.4530	0.4644
	p	0.0000	0.0001	0.0014	0.5607	0.0000	0.0000	0.0000	0.0000
F_DETR	r_s	0.4549	0.1716	0.2109	-0.0469	0.4270	0.3818	0.3430	0.3551
	p	0.0000	0.1209	0.0557	0.6740	0.0001	0.0004	0.0015	0.0011
F_HERB	r_s	0.3968	0.2481	0.3082	0.0624	0.4378	0.4359	0.3790	0.3977
	p	0.0002	0.0237	0.0046	0.5750	0.0000	0.0000	0.0004	0.0002
BMWP	r_s	0.4423	0.3729	0.2717	0.0128	0.5321	0.5015	0.4588	0.4153
	p	0.0000	0.0005	0.0130	0.9082	0.0000	0.0000	0.0000	0.0001
ASPT	r_s	-0.0029	0.0583	-0.0033	-0.0663	0.0917	0.0916	0.1667	0.1239
	p	0.9792	0.6008	0.9765	0.5513	0.4098	0.4102	0.1321	0.2674

TABLE 5. CORRELATIONS BETWEEN CANAL ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficient of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLES							
METRIC		%AQUA_50	FLOA_50	%ALG_50	%VEG_50	%VEG_50	%EARTH	%CONC	%METAL
INV_N.SP	r_s	0.3975	0.2395	0.0486	0.5382	0.5421	0.5753	-0.2403	-0.2900
	p	0.0002	0.0292	0.6628	0.0000	0.0000	0.0000	0.0287	0.0078
INV_N.FA	r_s	0.3471	0.2255	0.0515	0.5012	0.4905	0.5534	-0.2124	-0.2780
	p	0.0013	0.0404	0.6439	0.0000	0.0000	0.0000	0.0539	0.0110
INV_N.OR	r_s	0.3496	0.2978	0.1369	0.4961	0.4821	0.5253	-0.2759	-0.2564
	p	0.0012	0.0063	0.2170	0.0000	0.0000	0.0000	0.0116	0.0193
INV_SRS	r_s	0.4034	0.2402	0.0702	0.5463	0.5590	0.5724	-0.2317	-0.3012
	p	0.0002	0.0287	0.5283	0.0000	0.0000	0.0000	0.0351	0.0057
INV_SRI	r_s	0.2092	0.0950	0.0935	0.2229	0.2543	0.1684	0.0685	-0.0563
	p	0.0577	0.3930	0.4005	0.0428	0.0203	0.1281	0.5385	0.6132
S_TRIC	r_s	0.2429	0.2231	0.0249	0.1935	0.1372	0.1406	-0.1726	-0.0316
	p	0.0269	0.0427	0.8234	0.0796	0.2161	0.2049	0.1187	0.7765
S_GAST	r_s	0.3133	0.1572	0.0653	0.4606	0.4909	0.4059	-0.1191	-0.2953
	p	0.0039	0.1559	0.5574	0.0000	0.0000	0.0001	0.2834	0.0067
S_BIVALV	r_s	-0.0740	-0.1616	-0.1105	-0.0335	-0.0204	0.1711	-0.0721	-0.0197
	p	0.5062	0.1444	0.3202	0.7640	0.8549	0.1219	0.5172	0.8598
S_HIRU	r_s	0.4114	0.1996	0.1109	0.3414	0.3056	0.0753	-0.0449	-0.0798
	p	0.0001	0.0705	0.3182	0.0016	0.0050	0.4988	0.6868	0.4731
S_ARAN	r_s	0.0697	0.1488	0.2440	0.0404	0.2021	0.1484	-0.0906	-0.0945
	p	0.5312	0.1793	0.0262	0.7167	0.0669	0.1805	0.4154	0.3954
S_DECA	r_s	0.0139	0.1032	0.0666	0.0611	0.0869	0.0075	-0.1053	-0.1098
	p	0.9006	0.3532	0.5496	0.5834	0.4348	0.9461	0.3436	0.3230
S_ISOP	r_s	0.2647	0.0623	0.1834	0.2029	0.2181	0.1733	-0.1397	-0.1243
	p	0.0156	0.5759	0.0970	0.0658	0.0476	0.1171	0.2079	0.2627
S_AMPH	r_s	-0.2463	-0.1082	-0.1289	-0.0557	-0.0910	0.1702	-0.2400	0.0009
	p	0.0248	0.3302	0.2456	0.6171	0.4134	0.1240	0.0288	0.9936
S_EPHE	r_s	0.2303	0.1562	0.1510	0.3257	0.3279	0.2005	-0.0073	-0.1192
	p	0.0362	0.1584	0.1730	0.0027	0.0025	0.0691	0.9475	0.2832
S_ODON	r_s	0.5302	0.2974	0.2294	0.5927	0.5948	0.2301	-0.0229	-0.2415
	p	0.0000	0.0063	0.0370	0.0000	0.0000	0.0364	0.8372	0.0279
S_HEMI	r_s	0.3099	0.2184	0.0853	0.3650	0.3689	0.4306	-0.2614	-0.1753
	p	0.0044	0.0473	0.4434	0.0007	0.0006	0.0000	0.0170	0.1129
S_COLE	r_s	0.3189	0.2419	0.0580	0.5003	0.5094	0.5978	-0.2681	-0.2744
	p	0.0033	0.0276	0.6025	0.0000	0.0000	0.0000	0.0143	0.0121
S_MEGA	r_s	0.3967	0.2691	0.0981	0.5500	0.4909	0.5279	-0.2082	-0.2829
	p	0.0002	0.0139	0.3778	0.0000	0.0000	0.0000	0.0589	0.0096
S_TRICH	r_s	0.2080	0.0477	-0.1093	0.2924	0.2658	0.5194	-0.2457	-0.1712
	p	0.0591	0.6684	0.3254	0.0073	0.0152	0.0000	0.0252	0.1217
S_LEPID	r_s	0.3623	0.2915	0.3952	0.3074	0.4215	0.1478	-0.1072	-0.1007
	p	0.0008	0.0075	0.0002	0.0047	0.0001	0.1825	0.3347	0.3649
S_PLAN	r_s	0.4694	0.2384	0.1288	0.5279	0.5556	0.3460	-0.1102	-0.1903
	p	0.0000	0.0300	0.2460	0.0000	0.0000	0.0014	0.3215	0.0848
S_BAET	r_s	0.3705	0.2329	0.2769	0.3324	0.4040	0.2515	-0.1316	-0.0856
	p	0.0006	0.0341	0.0113	0.0021	0.0002	0.0218	0.2355	0.4414
S_COEN	r_s	0.5697	0.3411	0.2881	0.5098	0.5397	0.1578	-0.0569	-0.1762
	p	0.0000	0.0016	0.0083	0.0000	0.0000	0.1542	0.6092	0.1111
S_HALIP	r_s	0.3823	0.3503	0.2695	0.3627	0.3953	0.3593	-0.1318	-0.2217
	p	0.0004	0.0012	0.0138	0.0008	0.0002	0.0009	0.2351	0.0440
S_HYDR	r_s	0.2697	0.2170	-0.0348	0.3994	0.4245	0.5725	-0.2381	-0.1921
	p	0.0137	0.0488	0.7549	0.0002	0.0001	0.0000	0.0302	0.0818
S_LIMN	r_s	0.0641	0.0514	-0.1767	0.2959	0.2591	0.6038	-0.3687	-0.2854
	p	0.5651	0.6445	0.1101	0.0066	0.0180	0.0000	0.0006	0.0089

TABLE 5. CORRELATIONS BETWEEN CANAL ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficient of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLES							
METRIC		%AQUA_50	%FLOA_50	%ALG_50	%VEG_50	%VEG_50	%EARTH	%CONC	%METAL
S_LEPT	r_s	0.4021	0.1534	0.0142	0.4266	0.4335	0.4725	-0.1674	-0.1852
	p	0.0002	0.1661	0.8984	0.0001	0.0000	0.0000	0.1304	0.0937
S_SM_DY	r_s	0.3885	0.1984	0.1199	0.6064	0.5755	0.4923	-0.2370	-0.2590
	p	0.0003	0.0722	0.2804	0.0000	0.0000	0.0000	0.0310	0.0181
S_CM	r_s	0.2068	0.0698	0.0039	0.3444	0.3697	0.3952	-0.1530	-0.2348
	p	0.0607	0.5309	0.9723	0.0014	0.0006	0.0002	0.1673	0.0326
S_HTR	r_s	0.4041	0.2453	0.0796	0.3318	0.2772	0.1332	-0.1165	-0.0750
	p	0.0002	0.0254	0.4743	0.0022	0.0112	0.2300	0.2941	0.5006
S_PHEMIP	r_s	0.3188	0.1930	0.0425	0.3668	0.3832	0.4145	-0.3821	-0.0845
	p	0.0033	0.0805	0.7026	0.0006	0.0004	0.0001	0.0004	0.4474
S_DHEMIP	r_s	0.2014	0.2034	0.1751	0.2544	0.2519	0.3153	-0.0526	-0.1934
	p	0.0679	0.0652	0.1134	0.0203	0.0216	0.0037	0.6366	0.0797
S_EPT	r_s	0.2286	0.1032	-0.0181	0.3229	0.3092	0.4638	-0.1932	-0.1741
	p	0.0376	0.3532	0.8708	0.0029	0.0045	0.0000	0.0802	0.1155
S_ETO	r_s	0.3465	0.1751	0.0448	0.4571	0.4452	0.4742	-0.1606	-0.2564
	p	0.0013	0.1133	0.6877	0.0000	0.0000	0.0000	0.1469	0.0193
F_TRICLA	r_s	0.2430	0.2124	0.0216	0.1944	0.1380	0.1394	-0.1688	-0.0246
	p	0.0269	0.0538	0.8461	0.0782	0.2134	0.2087	0.1271	0.8251
F_GASTRO	r_s	0.1651	0.0515	-0.0114	0.3166	0.3337	0.3404	-0.0773	-0.3351
	p	0.1359	0.6437	0.9189	0.0035	0.0020	0.0016	0.4875	0.0020
F_BIVALV	r_s	-0.1901	-0.1976	-0.1984	-0.1239	-0.1440	0.0872	-0.0257	0.0059
	p	0.0853	0.0734	0.0722	0.2645	0.1940	0.4330	0.8173	0.9578
F_HIRUDI	r_s	0.4409	0.1881	0.1198	0.3186	0.2885	0.0425	-0.0790	-0.0170
	p	0.0000	0.0886	0.2805	0.0033	0.0082	0.7026	0.4779	0.8789
F_DECAPO	r_s	0.0139	0.1032	0.0666	0.0611	0.0869	0.0075	-0.1053	-0.1098
	p	0.9006	0.3532	0.5496	0.5834	0.4348	0.9461	0.3436	0.3230
F_ISOPOD	r_s	0.2020	0.0311	0.1801	0.1282	0.1534	0.1039	-0.1219	-0.1022
	p	0.0671	0.7799	0.1032	0.2481	0.1661	0.3501	0.2724	0.3580
F_AMPHIP	r_s	-0.2463	-0.1082	-0.1289	-0.0557	-0.0910	0.1702	-0.2400	0.0009
	p	0.0248	0.3302	0.2456	0.6171	0.4134	0.1240	0.0288	0.9936
F_EPHEME	r_s	0.2075	0.1467	0.1591	0.3120	0.3197	0.1968	-0.0411	-0.0921
	p	0.0597	0.1857	0.1508	0.0041	0.0032	0.0745	0.7124	0.4078
F_ODONAT	r_s	0.3056	0.1305	0.0912	0.4852	0.4649	0.2740	0.0177	-0.2660
	p	0.0050	0.2395	0.4124	0.0000	0.0000	0.0122	0.8739	0.0151
F_HEMIPT	r_s	0.2982	0.2095	0.0908	0.3601	0.3702	0.4479	-0.3001	-0.1655
	p	0.0062	0.0573	0.4142	0.0008	0.0006	0.0000	0.0058	0.1348
F_COLEOP	r_s	0.2915	0.2384	0.0594	0.4816	0.4899	0.5861	-0.2355	-0.2808
	p	0.0075	0.0300	0.5936	0.0000	0.0000	0.0000	0.0321	0.0101
F_TRICHO	r_s	0.2298	-0.0118	-0.0577	0.2303	0.2077	0.3667	-0.1727	-0.0261
	p	0.0367	0.9158	0.6044	0.0362	0.0595	0.0006	0.1184	0.8145
F_LEPID	r_s	0.3621	0.2986	0.3933	0.3078	0.4235	0.1444	-0.1064	-0.0997
	p	0.0008	0.0061	0.0002	0.0046	0.0001	0.1928	0.3385	0.3698
F_DIPT	r_s	-0.0027	0.1088	-0.0527	0.1335	0.0820	0.1510	-0.0148	0.0034
	p	0.9804	0.3273	0.6361	0.2290	0.4609	0.1731	0.8941	0.9757
F_OLIGO	r_s	-0.1602	-0.0356	-0.0508	-0.1476	-0.2036	0.0368	0.0249	0.1070
	p	0.1479	0.7495	0.6481	0.1831	0.0649	0.7413	0.8234	0.3357
F_PHEMIP	r_s	0.3231	0.1863	0.0508	0.3567	0.3788	0.4109	-0.3825	-0.0812
	p	0.0029	0.0917	0.6482	0.0009	0.0004	0.0001	0.0004	0.4658
F_DHEMIP	r_s	0.1960	0.2078	0.1747	0.2537	0.2649	0.3038	-0.0683	-0.1648
	p	0.0757	0.0594	0.1143	0.0206	0.0155	0.0052	0.5393	0.1366

TABLE 5. CORRELATIONS BETWEEN CANAL ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficient of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLES							
METRIC		%AQUA_50	FLOA_50	%ALG_50	%VEG_50	%VEG_50	%EARTH	%CONC	%METAL
F_CM	r_s	0.0468	-0.0136	-0.0758	0.2164	0.2242	0.3533	-0.1395	-0.2934
	p	0.6746	0.9032	0.4961	0.0494	0.0416	0.0011	0.2085	0.0071
F_HTR	r_s	0.4256	0.2424	0.1137	0.3228	0.2751	0.1263	-0.1543	-0.0395
	p	0.0001	0.0273	0.3060	0.0029	0.0118	0.2550	0.1636	0.7228
F_EPT	r_s	0.2696	0.0941	0.0509	0.3145	0.3025	0.3424	-0.1537	-0.0646
	p	0.0137	0.3973	0.6475	0.0038	0.0054	0.0015	0.1653	0.5621
F_ETO	r_s	0.3438	0.1523	0.0843	0.4454	0.4287	0.3824	-0.1345	-0.1486
	p	0.0015	0.1694	0.4488	0.0000	0.0001	0.0004	0.2255	0.1801
F_OM	r_s	0.4026	0.2314	0.1356	0.6139	0.5739	0.4230	-0.0634	-0.3229
	p	0.0002	0.0353	0.2218	0.0000	0.0000	0.0001	0.5690	0.0029
F_EMO	r_s	0.3984	0.2573	0.1860	0.5968	0.5771	0.3845	-0.0642	-0.2745
	p	0.0002	0.0189	0.0922	0.0000	0.0000	0.0003	0.5641	0.0120
F_PRED	r_s	0.3881	0.2543	0.0611	0.5267	0.4994	0.5790	-0.2779	-0.2270
	p	0.0003	0.0203	0.5833	0.0000	0.0000	0.0000	0.0110	0.0390
F_DETR	r_s	0.1670	0.1143	-0.0711	0.3543	0.3083	0.5346	-0.2228	-0.2452
	p	0.1313	0.3037	0.5228	0.0010	0.0046	0.0000	0.0429	0.0255
F_HERB	r_s	0.2567	0.2146	0.0429	0.4451	0.4408	0.5091	-0.1797	-0.2686
	p	0.0191	0.0514	0.7003	0.0000	0.0000	0.0000	0.1041	0.0141
BMWP	r_s	0.3374	0.1815	-0.0002	0.4840	0.4577	0.5543	-0.2302	-0.2711
	p	0.0018	0.1006	0.9989	0.0000	0.0000	0.0000	0.0363	0.0132
ASPT	r_s	0.0379	-0.0501	-0.0890	0.1839	0.1720	0.2204	-0.1126	-0.0272
	p	0.7334	0.6526	0.4238	0.0961	0.1201	0.0452	0.3109	0.8073

TABLE 5. CORRELATIONS BETWEEN CANAL ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficient of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLES							
METRIC		%WOOD	%OTHER_S	%OTHER_B	%HAR_EXS	%HAR_INS	GRASS5	WATER5	SEMI_N5
INV_N.SP	r_s	-0.1061	0.0120	-0.1738	-0.5322	-0.5753	-0.0298	-0.1047	-0.0658
	p	0.3399	0.9140	0.1160	0.0000	0.0000	0.7890	0.3462	0.5546
INV_N.FA	r_s	-0.1177	0.0234	-0.1987	-0.5166	-0.5534	-0.0015	-0.1328	-0.0772
	p	0.2893	0.8340	0.0718	0.0000	0.0000	0.9893	0.2313	0.4877
INV_N.OR	r_s	-0.1603	0.0701	-0.1515	-0.5189	-0.5253	0.0901	-0.1426	-0.1238
	p	0.1477	0.5288	0.1716	0.0000	0.0000	0.4177	0.1986	0.2647
INV_SRS	r_s	-0.0945	0.0282	-0.1644	-0.5329	-0.5724	-0.0233	-0.0637	-0.0576
	p	0.3953	0.8003	0.1374	0.0000	0.0000	0.8341	0.5670	0.6049
INV_SRI	r_s	0.0023	-0.1314	-0.1114	-0.0613	-0.1684	-0.1379	0.1351	0.1806
	p	0.9833	0.2365	0.3158	0.5821	0.1281	0.2139	0.2233	0.1022
S_TRIC	r_s	-0.0827	0.1063	-0.0245	-0.1745	-0.1406	-0.0260	0.0614	-0.0367
	p	0.4574	0.3388	0.8263	0.1145	0.2049	0.8155	0.5814	0.7417
S_GAST	r_s	0.0624	0.1040	-0.0884	-0.4036	-0.4059	-0.0974	-0.0615	-0.0206
	p	0.5750	0.3493	0.4270	0.0002	0.0001	0.3812	0.5807	0.8532
S_BIVALV	r_s	-0.1764	0.0564	-0.2044	-0.1957	-0.1711	0.0695	-0.1907	-0.1297
	p	0.1106	0.6123	0.0638	0.0762	0.1219	0.5323	0.0842	0.2424
S_HIRU	r_s	0.1063	0.0310	0.0181	-0.0818	-0.0753	-0.1220	-0.1091	-0.0071
	p	0.3386	0.7806	0.8713	0.4622	0.4988	0.2720	0.3263	0.9490
S_ARAN	r_s	-0.0214	0.0603	-0.0436	-0.1657	-0.1484	0.0951	-0.0375	0.0122
	p	0.8478	0.5884	0.6957	0.1345	0.1805	0.3924	0.7365	0.9131
S_DECA	r_s	-0.0248	0.1575	0.2120	-0.0735	-0.0075	0.1409	-0.0436	-0.0459
	p	0.8235	0.1549	0.0543	0.5089	0.9461	0.2039	0.6957	0.6801
S_ISOP	r_s	0.0180	0.0761	0.0367	-0.1972	-0.1733	0.1447	0.0316	-0.0792
	p	0.8716	0.4938	0.7418	0.0740	0.1171	0.1918	0.7768	0.4769
S_AMPH	r_s	-0.0272	0.1949	-0.1937	-0.2790	-0.1702	0.1635	-0.0397	-0.0849
	p	0.8074	0.0775	0.0793	0.0106	0.1240	0.1397	0.7218	0.4452
S_EPHE	r_s	-0.1252	-0.1163	-0.0245	-0.1352	-0.2005	0.0947	0.0447	-0.1377
	p	0.2594	0.2949	0.8258	0.2228	0.0691	0.3947	0.6881	0.2146
S_ODON	r_s	-0.1493	-0.0228	0.0881	-0.1968	-0.2301	0.0531	-0.0774	-0.1149
	p	0.1780	0.8378	0.4283	0.0746	0.0364	0.6337	0.4867	0.3009
S_HEMI	r_s	-0.1096	0.0902	-0.2233	-0.4525	-0.4306	-0.0577	-0.0797	0.0220
	p	0.3239	0.4175	0.0424	0.0000	0.0000	0.6044	0.4738	0.8432
S_COLE	r_s	-0.0791	-0.0069	-0.2063	-0.5461	-0.5978	-0.0227	-0.1238	-0.0049
	p	0.4770	0.9507	0.0613	0.0000	0.0000	0.8383	0.2649	0.9651
S_MEGA	r_s	-0.0788	-0.1594	-0.0416	-0.4160	-0.5279	-0.0493	-0.0049	-0.0587
	p	0.4789	0.1501	0.7090	0.0001	0.0000	0.6577	0.9647	0.5982
S_TRICH	r_s	-0.1695	-0.0430	-0.2153	-0.4542	-0.5194	0.0551	-0.0051	0.0158
	p	0.1256	0.6995	0.0507	0.0000	0.0000	0.6209	0.9635	0.8873
S_LEPID	r_s	-0.0431	0.0567	0.0759	-0.1457	-0.1478	0.0558	0.1168	-0.0632
	p	0.6987	0.6104	0.4953	0.1887	0.1825	0.6166	0.2930	0.5703
S_PLAN	r_s	0.0165	-0.0581	-0.0144	-0.2698	-0.3460	-0.0505	0.0117	-0.0896
	p	0.8826	0.6019	0.8974	0.0136	0.0014	0.6505	0.9161	0.4208
S_BAET	r_s	-0.0637	-0.2098	0.1082	-0.1335	-0.2515	0.1120	0.0644	-0.1605
	p	0.5672	0.0570	0.3303	0.2289	0.0218	0.3136	0.5629	0.1472
S_COEN	r_s	-0.1406	-0.0230	0.1309	-0.1355	-0.1578	0.0731	-0.0802	-0.1258
	p	0.2048	0.8366	0.2381	0.2219	0.1542	0.5111	0.4711	0.2573
S_HALIP	r_s	-0.1007	0.0606	-0.1206	-0.3625	-0.3593	0.0426	-0.0771	-0.0271
	p	0.3650	0.5862	0.2776	0.0008	0.0009	0.7024	0.4884	0.8076
S_HYDR	r_s	0.0396	-0.1689	-0.2116	-0.4372	-0.5725	-0.0697	-0.0145	-0.0184
	p	0.7225	0.1269	0.0548	0.0000	0.0000	0.5312	0.8968	0.8691
S_LIMN	r_s	-0.1394	0.1774	-0.2311	-0.6479	-0.6038	0.0161	0.0024	0.0738
	p	0.2087	0.1087	0.0355	0.0000	0.0000	0.8853	0.9826	0.5072

TABLE 5. CORRELATIONS BETWEEN CANAL ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficient of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLES							
METRIC		%WOOD	%OTHER_S	%OTHER_B	%HAR_EXS	%HAR_INS	GRASS5	WATER5	SEMI_N5
S_LEPT	r_s	-0.1231	-0.1456	-0.1107	-0.3563	-0.4725	0.0419	-0.0027	-0.0797
	p	0.2674	0.1891	0.3191	0.0009	0.0000	0.7068	0.9807	0.4736
S_SM_DY	r_s	-0.1108	-0.0029	-0.1016	-0.4580	-0.4923	-0.0963	-0.1943	0.0899
	p	0.3186	0.9795	0.3607	0.0000	0.0000	0.3865	0.0784	0.4188
S_CM	r_s	-0.0023	0.1414	-0.1636	-0.4206	-0.3952	-0.0298	-0.0972	-0.0718
	p	0.9835	0.2022	0.1395	0.0001	0.0002	0.7890	0.3820	0.5190
S_HTR	r_s	0.0586	0.0691	-0.0131	-0.1516	-0.1332	-0.1150	-0.0548	-0.0237
	p	0.5985	0.5347	0.9061	0.1712	0.2300	0.3006	0.6225	0.8312
S_PHEMIP	r_s	-0.0902	0.1026	-0.1838	-0.4484	-0.4145	-0.1053	-0.1581	0.0486
	p	0.4174	0.3561	0.0962	0.0000	0.0001	0.3433	0.1533	0.6626
S_DHEMIP	r_s	-0.0770	-0.0203	-0.1569	-0.2813	-0.3153	0.0982	0.0145	-0.1047
	p	0.4890	0.8554	0.1566	0.0100	0.0037	0.3770	0.8967	0.3461
S_EPT	r_s	-0.1714	-0.0691	-0.1581	-0.3927	-0.4638	0.1000	0.0414	-0.0352
	p	0.1212	0.5347	0.1533	0.0002	0.0000	0.3684	0.7101	0.7521
S_ETO	r_s	-0.1829	-0.0596	-0.0873	-0.4059	-0.4742	0.1004	0.0311	-0.0490
	p	0.0979	0.5924	0.4327	0.0001	0.0000	0.3666	0.7800	0.6597
F_TRICLA	r_s	-0.0828	0.0872	-0.0204	-0.1644	-0.1394	-0.0235	0.0645	-0.0498
	p	0.4569	0.4330	0.8547	0.1374	0.2087	0.8327	0.5621	0.6545
F_GASTRO	r_s	0.1048	0.2097	-0.0807	-0.3951	-0.3404	-0.1087	-0.0929	0.0416
	p	0.3456	0.0571	0.4683	0.0002	0.0016	0.3278	0.4036	0.7088
F_BIVALV	r_s	-0.1857	0.0906	-0.1723	-0.1357	-0.0872	0.1365	-0.1680	-0.1184
	p	0.0928	0.4156	0.1193	0.2212	0.4330	0.2186	0.1290	0.2864
F_HIRUDI	r_s	0.0671	0.0466	0.0024	-0.0658	-0.0425	-0.1332	-0.0879	-0.0342
	p	0.5466	0.6754	0.9825	0.5547	0.7026	0.2301	0.4294	0.7592
F_DECAPO	r_s	-0.0248	0.1575	0.2120	-0.0735	-0.0075	0.1409	-0.0436	-0.0459
	p	0.8235	0.1549	0.0543	0.5089	0.9461	0.2039	0.6957	0.6801
F_ISOPOD	r_s	0.0308	0.1303	0.0628	-0.1548	-0.1039	0.1077	0.0540	-0.0925
	p	0.7820	0.2404	0.5727	0.1624	0.3501	0.3324	0.6275	0.4054
F_AMPHIP	r_s	-0.0272	0.1949	-0.1937	-0.2790	-0.1702	0.1635	-0.0397	-0.0849
	p	0.8074	0.0775	0.0793	0.0106	0.1240	0.1397	0.7218	0.4452
F_EPHEME	r_s	-0.1268	-0.1394	0.0075	-0.1183	-0.1968	0.0975	0.0187	-0.1671
	p	0.2534	0.2087	0.9467	0.2867	0.0745	0.3806	0.8669	0.1310
F_ODONAT	r_s	-0.1549	0.0120	-0.0276	-0.2516	-0.2740	0.0231	-0.0190	-0.0762
	p	0.1621	0.9145	0.8047	0.0218	0.0122	0.8360	0.8648	0.4934
F_HEMIPT	r_s	-0.1103	0.1107	-0.2248	-0.4776	-0.4479	-0.0610	-0.1074	0.0498
	p	0.3208	0.3190	0.0411	0.0000	0.0000	0.5839	0.3337	0.6547
F_COLEOP	r_s	-0.0726	0.0037	-0.2243	-0.5382	-0.5861	-0.0588	-0.1027	0.0442
	p	0.5142	0.9733	0.0415	0.0000	0.0000	0.5976	0.3557	0.6913
F_TRICHO	r_s	-0.1730	-0.1635	-0.1654	-0.2564	-0.3667	0.1276	0.0461	-0.0603
	p	0.1179	0.1396	0.1352	0.0193	0.0007	0.2504	0.6789	0.5881
F_LEPID	r_s	-0.0432	0.0597	0.0780	-0.1435	-0.1444	0.0509	0.1192	-0.0632
	p	0.6984	0.5918	0.4836	0.1954	0.1928	0.6479	0.2829	0.5701
F_DIPT	r_s	-0.0358	-0.1756	-0.0704	-0.0502	-0.1510	0.0624	-0.1880	-0.1380
	p	0.7483	0.1124	0.5270	0.6525	0.1731	0.5755	0.0887	0.2134
F_OLIGO	r_s	-0.1731	-0.1571	-0.1046	0.0335	-0.0368	0.0906	-0.3036	-0.0406
	p	0.1175	0.1560	0.3464	0.7639	0.7413	0.4152	0.0053	0.7155
F_PHEMIP	r_s	-0.0903	0.1047	-0.1840	-0.4461	-0.4109	-0.1052	-0.1583	0.0532
	p	0.4169	0.3463	0.0959	0.0000	0.0001	0.3441	0.1528	0.6330
F_DHEMIP	r_s	-0.0788	0.0000	-0.1606	-0.2761	-0.3038	0.0815	-0.0016	-0.0955
	p	0.4789	1.0000	0.1471	0.0115	0.0052	0.4637	0.9882	0.3905

TABLE 5. CORRELATIONS BETWEEN CANAL ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficient of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLES							
METRIC		%WOOD	%OTHER_S	%OTHER_B	%HAR_EXS	%HAR_INS	GRASS5	WATER5	SEMI_N5
F_CM	r_s	0.0070	0.2392	-0.1257	-0.4388	-0.3533	0.0080	-0.0939	-0.0315
	p	0.9500	0.0294	0.2573	0.0000	0.0011	0.9429	0.3984	0.7772
F_HTR	r_s	0.0165	0.0584	0.0024	-0.1466	-0.1263	-0.0863	-0.0276	-0.0681
	p	0.8821	0.6000	0.9828	0.1859	0.2551	0.4379	0.8043	0.5405
F_EPT	r_s	-0.1724	-0.1660	-0.0867	-0.2353	-0.3424	0.1291	0.0463	-0.1090
	p	0.1190	0.1338	0.4360	0.0322	0.0015	0.2446	0.6776	0.3265
F_ETO	r_s	-0.1843	-0.1316	-0.0701	-0.2876	-0.3824	0.1319	0.0325	-0.1241
	p	0.0953	0.2355	0.5288	0.0084	0.0004	0.2344	0.7707	0.2637
F_OM	r_s	-0.1528	-0.0602	-0.0292	-0.3570	-0.4230	-0.0054	-0.0123	-0.0852
	p	0.1678	0.5885	0.7933	0.0009	0.0001	0.9612	0.9123	0.4436
F_EMO	r_s	-0.1762	-0.1002	-0.0024	-0.3046	-0.3845	0.0584	0.0019	-0.1421
	p	0.1112	0.3677	0.9829	0.0051	0.0003	0.6002	0.9867	0.2000
F_PRED	r_s	-0.1109	-0.0629	-0.1682	-0.5027	-0.5790	0.0023	-0.1512	-0.0773
	p	0.3184	0.5721	0.1285	0.0000	0.0000	0.9835	0.1725	0.4872
F_DETR	r_s	-0.1087	-0.0029	-0.1755	-0.4862	-0.5346	0.0440	-0.0902	-0.0820
	p	0.3282	0.9796	0.1126	0.0000	0.0000	0.6928	0.4174	0.4609
F_HERB	r_s	-0.0926	-0.0062	-0.1109	-0.4484	-0.5091	-0.0492	-0.1193	-0.0288
	p	0.4050	0.9557	0.3184	0.0000	0.0000	0.6589	0.2826	0.7958
BMWP	r_s	-0.1383	0.0246	-0.2020	-0.5224	-0.5543	0.0327	-0.0796	-0.0798
	p	0.2125	0.8249	0.0671	0.0000	0.0000	0.7690	0.4746	0.4735
ASPT	r_s	-0.1429	-0.0686	-0.1174	-0.1771	-0.2204	0.1095	0.0774	-0.0582
	p	0.1975	0.5378	0.2905	0.1093	0.0452	0.3246	0.4867	0.6013

TABLE 5. CORRELATIONS BETWEEN CANAL ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficient of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLES						
METRIC		URBAN5	INT_AG5	INT_ALL5	GRASS100	WATER100	SEMI_N100	URBAN100
INV_N.SP	r_s	0.0073	0.0450	0.0658	-0.0015	-0.1602	0.1116	-0.0510
	p	0.9481	0.6864	0.5546	0.9895	0.1479	0.3153	0.6469
INV_N.FA	r_s	-0.0541	0.0897	0.0772	-0.0048	-0.1885	0.0820	-0.0583
	p	0.6268	0.4202	0.4877	0.9659	0.0879	0.4611	0.6008
INV_N.OR	r_s	-0.0491	0.1447	0.1238	0.1023	-0.1930	-0.0292	-0.0584
	p	0.6592	0.1919	0.2647	0.3572	0.0805	0.7932	0.6000
INV_SRS	r_s	0.0184	0.0443	0.0576	0.0081	-0.1264	0.1019	-0.0654
	p	0.8690	0.6910	0.6049	0.9418	0.2549	0.3591	0.5572
INV_SRI	r_s	0.0153	-0.1371	-0.1806	-0.0187	0.1511	0.1898	-0.2374
	p	0.8909	0.2165	0.1022	0.8664	0.1727	0.0858	0.0307
S_TRIC	r_s	0.0348	-0.0134	0.0367	0.0867	0.0136	-0.0363	0.0453
	p	0.7548	0.9041	0.7417	0.4356	0.9030	0.7449	0.6841
S_GAST	r_s	0.0593	0.0002	0.0206	-0.0134	-0.1326	0.0686	-0.0279
	p	0.5945	0.9984	0.8532	0.9046	0.2322	0.5376	0.8022
S_BIVALV	r_s	-0.0009	0.1269	0.1297	0.0202	-0.2049	-0.0615	0.0109
	p	0.9936	0.2529	0.2424	0.8559	0.0631	0.5807	0.9219
S_HIRU	r_s	0.1246	-0.0761	0.0071	-0.0305	-0.0208	-0.0154	0.1027
	p	0.2617	0.4941	0.9490	0.7844	0.8518	0.8900	0.3554
S_ARAN	r_s	-0.1044	0.0999	-0.0122	0.2686	-0.0436	-0.1888	-0.1411
	p	0.3477	0.3689	0.9131	0.0141	0.6958	0.0874	0.2034
S_DECA	r_s	-0.1213	0.0799	0.0459	-0.0753	-0.0506	0.0294	-0.0519
	p	0.2747	0.4727	0.6801	0.4987	0.6495	0.7920	0.6412
S_ISOP	r_s	0.0055	0.1470	0.0792	0.2368	0.0367	-0.0332	-0.0503
	p	0.9606	0.1849	0.4769	0.0311	0.7419	0.7657	0.6516
S_AMPH	r_s	-0.1278	0.1780	0.0849	0.1187	-0.1149	-0.1202	-0.0039
	p	0.2496	0.1075	0.4452	0.2850	0.3008	0.2792	0.9719
S_EPHE	r_s	-0.0707	0.0804	0.1377	-0.1083	-0.0220	-0.0435	-0.0319
	p	0.5255	0.4702	0.2146	0.3298	0.8432	0.6962	0.7750
S_ODON	r_s	0.1082	0.0271	0.1149	0.0585	-0.0404	0.0326	-0.0478
	p	0.3302	0.8077	0.3009	0.5996	0.7170	0.7699	0.6679
S_HEMI	r_s	0.0590	-0.0699	-0.0220	-0.0267	-0.1241	0.1008	0.0902
	p	0.5964	0.5298	0.8432	0.8103	0.2637	0.3646	0.4173
S_COLE	r_s	-0.0379	0.0530	0.0049	0.0045	-0.1811	0.1652	-0.1484
	p	0.7335	0.6342	0.9651	0.9678	0.1013	0.1356	0.1806
S_MEGA	r_s	-0.0188	0.0427	0.0587	0.0171	-0.0430	0.0303	-0.0650
	p	0.8661	0.7016	0.5982	0.8784	0.6996	0.7854	0.5596
S_TRICH	r_s	-0.1316	0.0509	-0.0158	-0.0389	-0.0877	0.1869	-0.1289
	p	0.2356	0.6474	0.8873	0.7271	0.4307	0.0907	0.2456
S_LEPID	r_s	-0.0195	0.0726	0.0632	0.1793	0.0818	-0.1397	-0.1363
	p	0.8614	0.5144	0.5703	0.1049	0.4623	0.2079	0.2193
S_PLAN	r_s	0.1383	-0.0169	0.0896	0.0406	-0.0578	-0.0069	0.0194
	p	0.2126	0.8793	0.4208	0.7157	0.6040	0.9508	0.8619
S_BAET	r_s	0.0310	0.0885	0.1605	0.0518	0.0255	-0.1264	0.0293
	p	0.7809	0.4261	0.1472	0.6418	0.8190	0.2550	0.7924
S_COEN	r_s	0.1392	0.0218	0.1258	0.1248	-0.0136	-0.0397	0.0035
	p	0.2093	0.8450	0.2573	0.2611	0.9027	0.7215	0.9748
S_HALIP	r_s	-0.0219	0.0178	0.0271	0.0420	-0.1175	0.0748	-0.1142
	p	0.8443	0.8731	0.8076	0.7063	0.2903	0.5014	0.3038
S_HYDR	r_s	-0.0684	0.0043	0.0184	0.0242	-0.0637	0.1264	-0.1991
	p	0.5392	0.9690	0.8691	0.8282	0.5672	0.2549	0.0711
S_LIMN	r_s	-0.0782	0.0257	-0.0738	-0.0009	-0.0663	0.2536	-0.2044
	p	0.4825	0.8174	0.5072	0.9936	0.5518	0.0207	0.0638

TABLE 5. CORRELATIONS BETWEEN CANAL ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficient of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLES						
METRIC		URBAN5	INT_AG5	INT_ALL5	GRASS100	WATER100	SEMI_N100	URBAN100
S_LEPT	r_s	-0.0391	0.0735	0.0797	-0.0161	-0.0628	0.0945	-0.0238
	p	0.7257	0.5092	0.4736	0.8849	0.5727	0.3957	0.8310
S_SM_DY	r_s	-0.0395	-0.0385	-0.0899	-0.0781	-0.2257	0.2172	-0.0946
	p	0.7229	0.7297	0.4188	0.4831	0.0402	0.0486	0.3948
S_CM	r_s	0.0464	0.0748	0.0718	0.0285	-0.1628	0.0171	-0.0255
	p	0.6772	0.5015	0.5190	0.7980	0.1413	0.8781	0.8191
S_HTR	r_s	0.1186	-0.0715	0.0237	0.0111	0.0081	-0.0289	0.1057
	p	0.2856	0.5209	0.8312	0.9206	0.9424	0.7952	0.3417
S_PHEMIP	r_s	0.0239	-0.0954	-0.0486	-0.0823	-0.1837	0.1302	0.0561
	p	0.8304	0.3908	0.6626	0.4597	0.0964	0.2408	0.6142
S_DHEMIP	r_s	0.0493	0.0766	0.1047	0.0677	-0.0250	-0.0166	0.0907
	p	0.6578	0.4914	0.3461	0.5428	0.8222	0.8819	0.4148
S_EPT	r_s	-0.1379	0.0890	0.0352	-0.0551	-0.0476	0.1201	-0.1161
	p	0.2139	0.4238	0.7521	0.6205	0.6690	0.2796	0.2959
S_ETO	r_s	-0.0917	0.0869	0.0490	-0.0107	-0.0407	0.1074	-0.1131
	p	0.4098	0.4345	0.6597	0.9237	0.7146	0.3339	0.3087
F_TRICLA	r_s	0.0459	-0.0122	0.0498	0.0851	0.0163	-0.0493	0.0600
	p	0.6803	0.9126	0.6545	0.4444	0.8836	0.6580	0.5899
F_GASTRO	r_s	-0.0329	-0.0004	-0.0416	-0.0647	-0.1608	0.1079	-0.0731
	p	0.7676	0.9971	0.7088	0.5613	0.1464	0.3317	0.5111
F_BIVALV	r_s	-0.1194	0.2027	0.1184	0.0416	-0.1731	-0.0289	-0.0211
	p	0.2824	0.0661	0.2864	0.7090	0.1176	0.7954	0.8499
F_HIRUDI	r_s	0.1715	-0.0901	0.0342	-0.0648	0.0001	-0.0503	0.1618
	p	0.1210	0.4179	0.7592	0.5608	0.9992	0.6518	0.1439
F_DECAPO	r_s	-0.1213	0.0799	0.0459	-0.0753	-0.0506	0.0294	-0.0519
	p	0.2747	0.4727	0.6801	0.4987	0.6495	0.7920	0.6412
F_ISOPOD	r_s	0.0541	0.0986	0.0925	0.2111	0.0628	0.0185	0.0056
	p	0.6271	0.3750	0.4054	0.0554	0.5728	0.8684	0.9596
F_AMPHIP	r_s	-0.1278	0.1780	0.0849	0.1187	-0.1149	-0.1202	-0.0039
	p	0.2496	0.1075	0.4452	0.2850	0.3008	0.2792	0.9719
F_EPHEME	r_s	-0.0490	0.0800	0.1671	-0.1168	-0.0458	-0.0569	-0.0069
	p	0.6600	0.4720	0.1310	0.2930	0.6812	0.6091	0.9504
F_ODONAT	r_s	0.0938	0.0373	0.0762	0.0569	-0.0240	0.0696	-0.0696
	p	0.3992	0.7378	0.4934	0.6096	0.8294	0.5320	0.5321
F_HEMIPT	r_s	0.0310	-0.0748	-0.0498	-0.0253	-0.1489	0.1234	0.0618
	p	0.7809	0.5014	0.6547	0.8203	0.1792	0.2663	0.5790
F_COLEOP	r_s	-0.0633	0.0203	-0.0442	-0.0051	-0.1630	0.1900	-0.1617
	p	0.5694	0.8554	0.6913	0.9632	0.1410	0.0853	0.1442
F_TRICHO	r_s	-0.1442	0.1327	0.0603	0.0498	-0.0442	0.0553	-0.1200
	p	0.1934	0.2317	0.5881	0.6548	0.6914	0.6192	0.2800
F_LEPID	r_s	-0.0171	0.0670	0.0632	0.1776	0.0839	-0.1403	-0.1346
	p	0.8778	0.5470	0.5701	0.1082	0.4507	0.2058	0.2251
F_DIPT	r_s	-0.0710	0.1605	0.1380	-0.0006	-0.1834	-0.0217	-0.0121
	p	0.5235	0.1471	0.2134	0.9959	0.0971	0.8454	0.9137
F_OLIGO	r_s	0.0302	0.0851	0.0406	-0.0800	-0.2331	0.0539	0.0516
	p	0.7867	0.4444	0.7155	0.4720	0.0339	0.6287	0.6430
F_PHEMIP	r_s	0.0148	-0.0926	-0.0532	-0.0796	-0.1839	0.1248	0.0515
	p	0.8945	0.4052	0.6330	0.4746	0.0960	0.2608	0.6441
F_DHEMIP	r_s	0.0629	0.0373	0.0955	0.0570	-0.0401	0.0176	0.0910
	p	0.5722	0.7379	0.3905	0.6086	0.7187	0.8747	0.4135

TABLE 5. CORRELATIONS BETWEEN CANAL ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficient of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLES						
METRIC		URBAN5	INT_AG5	INT_ALL5	GRASS100	WATER100	SEMI_N100	URBAN100
F_CM	r_s	-0.0685	0.1173	0.0315	-0.0042	-0.1594	0.0473	-0.0431
	p	0.5383	0.2911	0.7772	0.9701	0.1501	0.6709	0.6989
F_HTR	r_s	0.1438	-0.0468	0.0681	0.0114	0.0162	-0.0818	0.1447
	p	0.1947	0.6745	0.5405	0.9188	0.8842	0.4625	0.1918
F_EPT	r_s	-0.1245	0.1168	0.1090	-0.0376	-0.0438	0.0304	-0.0926
	p	0.2621	0.2929	0.3265	0.7360	0.6942	0.7852	0.4050
F_ETO	r_s	-0.0880	0.1365	0.1241	0.0172	-0.0481	0.0160	-0.0920
	p	0.4286	0.2184	0.2637	0.8772	0.6659	0.8860	0.4083
F_OM	r_s	0.0640	0.0501	0.0852	0.0528	-0.0343	0.0504	-0.0774
	p	0.5653	0.6532	0.4436	0.6356	0.7584	0.6512	0.4867
F_EMO	r_s	0.0265	0.0881	0.1421	-0.0080	-0.0514	-0.0071	-0.0512
	p	0.8121	0.4284	0.2000	0.9425	0.6444	0.9489	0.6455
F_PRED	r_s	0.0051	0.0793	0.0773	0.0364	-0.1741	0.0805	-0.0105
	p	0.9638	0.4761	0.4872	0.7441	0.1155	0.4696	0.9246
F_DETR	r_s	-0.1248	0.1302	0.0820	-0.0383	-0.1601	0.1122	-0.0820
	p	0.2609	0.2406	0.4609	0.7307	0.1483	0.3126	0.4612
F_HERB	r_s	-0.0769	0.0381	0.0288	-0.0933	-0.1848	0.1906	-0.1191
	p	0.4896	0.7324	0.7958	0.4017	0.0944	0.0844	0.2833
BMWP	r_s	-0.0686	0.0987	0.0798	0.0022	-0.1539	0.0852	-0.0570
	p	0.5380	0.3748	0.4735	0.9842	0.1648	0.4437	0.6087
ASPT	r_s	-0.1741	0.0974	0.0582	-0.0448	-0.0211	0.0572	-0.1710
	p	0.1155	0.3810	0.6013	0.6878	0.8499	0.6073	0.1222

TABLE 5. CORRELATIONS BETWEEN CANAL ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficient of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLES						
METRIC		INT_AG100	INT_ALL100	BGRASS5	BWATER5	BSEMI_N5	BURBAN5	BINT_AG5
INV_N.SP	r_s	-0.0642	-0.1115	0.0686	-0.0196	-0.0270	0.0150	-0.0389
	p	0.5642	0.3158	0.5378	0.8601	0.8085	0.8931	0.7270
INV_N.FA	r_s	-0.0343	-0.0819	0.1366	-0.0057	-0.0611	-0.0285	0.0266
	p	0.7579	0.4616	0.2183	0.9594	0.5830	0.7979	0.8113
INV_N.OR	r_s	0.0639	0.0292	0.1624	-0.0744	-0.0681	-0.0293	0.0564
	p	0.5658	0.7932	0.1423	0.5036	0.5404	0.7926	0.6127
INV_SRS	r_s	-0.0436	-0.1018	0.0436	-0.0278	-0.0069	-0.0004	-0.0381
	p	0.6953	0.3596	0.6957	0.8028	0.9505	0.9969	0.7321
INV_SRI	r_s	0.0525	-0.1902	-0.0381	0.0164	0.1643	-0.1550	0.0379
	p	0.6372	0.0850	0.7324	0.8833	0.1377	0.1617	0.7337
S_TRIC	r_s	0.0294	0.0363	0.1185	-0.1244	-0.0549	-0.1402	0.0443
	p	0.7917	0.7449	0.2858	0.2626	0.6220	0.2061	0.6911
S_GAST	r_s	-0.0342	-0.0682	-0.0545	-0.1043	-0.0401	0.0326	-0.0584
	p	0.7588	0.5401	0.6248	0.3482	0.7187	0.7696	0.6002
S_BIVALV	r_s	0.0368	0.0615	0.2732	-0.0158	-0.2557	-0.0667	0.2187
	p	0.7414	0.5807	0.0125	0.8871	0.0196	0.5491	0.0470
S_HIRU	r_s	-0.0594	0.0151	0.0538	-0.1104	-0.0454	0.0870	-0.0285
	p	0.5936	0.8919	0.6290	0.3206	0.6838	0.4340	0.7984
S_ARAN	r_s	0.2460	0.1888	0.2161	-0.0939	-0.0534	-0.1711	0.1162
	p	0.0250	0.0874	0.0498	0.3983	0.6317	0.1220	0.2954
S_DECA	r_s	-0.0035	-0.0294	-0.1171	0.0085	0.1133	-0.0229	-0.0608
	p	0.9747	0.7920	0.2918	0.9390	0.3077	0.8369	0.5852
S_ISOP	r_s	0.1431	0.0324	-0.0318	-0.1332	-0.0917	-0.1065	0.0813
	p	0.1970	0.7714	0.7752	0.2298	0.4099	0.3378	0.4652
S_AMPH	r_s	0.1107	0.1202	0.1101	-0.0448	-0.0828	0.0281	0.0962
	p	0.3192	0.2792	0.3216	0.6876	0.4568	0.8011	0.3870
S_EPHE	r_s	-0.0405	0.0435	-0.0560	0.0945	0.1556	0.0622	-0.1662
	p	0.7159	0.6962	0.6148	0.3955	0.1601	0.5762	0.1332
S_ODON	r_s	-0.0056	-0.0328	-0.0962	-0.0804	0.0745	0.0973	-0.1907
	p	0.9598	0.7683	0.3872	0.4700	0.5034	0.3815	0.0843
S_HEMI	r_s	-0.1246	-0.1008	0.1537	0.0210	-0.1679	0.0067	0.0506
	p	0.2615	0.3646	0.1654	0.8509	0.1291	0.9518	0.6499
S_COLE	r_s	-0.0201	-0.1648	0.0239	-0.0557	0.0029	0.0213	-0.0315
	p	0.8567	0.1366	0.8305	0.6169	0.9793	0.8486	0.7771
S_MEGA	r_s	0.0139	-0.0303	-0.0213	0.0989	0.0238	0.0652	-0.0243
	p	0.9010	0.7854	0.8483	0.3738	0.8311	0.5579	0.8274
S_TRICH	r_s	-0.0537	-0.1869	0.1432	0.1306	0.0038	-0.1231	0.0458
	p	0.6294	0.0907	0.1964	0.2391	0.9727	0.2676	0.6811
S_LEPID	r_s	0.1963	0.1397	0.1182	-0.1118	0.0247	-0.0693	0.0057
	p	0.0754	0.2079	0.2872	0.3143	0.8245	0.5335	0.9593
S_PLAN	r_s	-0.0243	0.0074	-0.1377	-0.0856	-0.0075	0.1427	-0.1843
	p	0.8271	0.9468	0.2144	0.4417	0.9466	0.1981	0.0954
S_BAET	r_s	0.0345	0.1264	-0.0122	-0.0872	0.0820	0.0695	-0.1024
	p	0.7568	0.2550	0.9128	0.4331	0.4613	0.5325	0.3571
S_COEN	r_s	0.0236	0.0394	-0.0268	-0.1044	0.0802	0.0690	-0.1412
	p	0.8322	0.7233	0.8100	0.3478	0.4708	0.5351	0.2028
S_HALIP	r_s	-0.0030	-0.0743	-0.0263	-0.1236	0.0597	0.1403	-0.1915
	p	0.9784	0.5047	0.8133	0.2656	0.5919	0.2059	0.0829
S_HYDR	r_s	-0.0037	-0.1261	0.0483	0.0434	0.0556	-0.0447	0.0168
	p	0.9734	0.2562	0.6644	0.6970	0.6179	0.6882	0.8799
S_LIMN	r_s	-0.0412	-0.2536	0.1370	0.0683	-0.0244	-0.1288	0.1132
	p	0.7118	0.0207	0.2169	0.5397	0.8268	0.2460	0.3081

TABLE 5. CORRELATIONS BETWEEN CANAL ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficient of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLES						
METRIC		INT_AG100	INT_ALL100	BGRASS5	BWATER5	BSEMI_N5	BURBAN5	BINT_AG5
S_LEPT	r_s	-0.0225	-0.0945	0.0999	0.0855	-0.0135	-0.0127	-0.0655
	p	0.8403	0.3957	0.3688	0.4421	0.9034	0.9094	0.5566
S_SM_DY	r_s	-0.1005	-0.2172	0.0809	-0.1021	-0.1549	-0.0186	0.1034
	p	0.3658	0.0486	0.4671	0.3583	0.1621	0.8672	0.3523
S_CM	r_s	0.0204	-0.0168	0.0233	-0.0878	-0.1059	0.0024	0.0124
	p	0.8550	0.8799	0.8343	0.4298	0.3406	0.9825	0.9112
S_HTR	r_s	-0.0476	0.0287	0.0761	-0.1366	-0.0370	-0.0019	-0.0201
	p	0.6691	0.7971	0.4944	0.2182	0.7400	0.9863	0.8571
S_PHEMIP	r_s	-0.1403	-0.1302	0.1763	-0.0028	-0.1755	0.0336	0.0333
	p	0.2059	0.2408	0.1108	0.9800	0.1125	0.7629	0.7653
S_DHEMIP	r_s	0.0065	0.0166	0.1042	-0.0293	-0.1353	-0.0322	0.0752
	p	0.9534	0.8819	0.3486	0.7924	0.2226	0.7724	0.4992
S_EPT	r_s	-0.0362	-0.1201	0.0752	0.1204	0.0731	-0.0703	-0.0454
	p	0.7456	0.2796	0.4995	0.2785	0.5112	0.5277	0.6833
S_ETO	r_s	-0.0223	-0.1074	0.0418	0.1024	0.1145	-0.0422	-0.0892
	p	0.8416	0.3336	0.7077	0.3570	0.3025	0.7047	0.4224
F_TRICLA	r_s	0.0295	0.0493	0.1264	-0.1209	-0.0554	-0.1357	0.0363
	p	0.7909	0.6580	0.2548	0.2761	0.6189	0.2212	0.7443
F_GASTRO	r_s	-0.0294	-0.1076	-0.0102	-0.0448	-0.0317	-0.0969	0.0382
	p	0.7920	0.3330	0.9273	0.6879	0.7759	0.3834	0.7318
F_BIVALV	r_s	0.0243	0.0289	0.2473	0.0691	-0.1404	-0.1456	0.1702
	p	0.8273	0.7954	0.0242	0.5350	0.2054	0.1889	0.1239
F_HIRUDI	r_s	-0.1122	0.0501	0.1337	-0.0928	-0.1015	0.1089	-0.0148
	p	0.3125	0.6531	0.2282	0.4043	0.3610	0.3271	0.8941
F_DECAPO	r_s	-0.0035	-0.0294	-0.1171	0.0085	0.1133	-0.0229	-0.0608
	p	0.9747	0.7920	0.2918	0.9390	0.3077	0.8369	0.5852
F_ISOPOD	r_s	0.0487	-0.0194	-0.0998	-0.1128	-0.0424	-0.0464	-0.0118
	p	0.6620	0.8615	0.3693	0.3098	0.7034	0.6772	0.9155
F_AMPHIP	r_s	0.1107	0.1202	0.1101	-0.0448	-0.0828	0.0281	0.0962
	p	0.3192	0.2792	0.3216	0.6876	0.4568	0.8011	0.3870
F_EPHEME	r_s	-0.0558	0.0569	-0.0342	0.0887	0.1137	0.0591	-0.1196
	p	0.6165	0.6091	0.7587	0.4254	0.3060	0.5959	0.2814
F_ODONAT	r_s	-0.0020	-0.0696	-0.0983	-0.0485	0.0529	0.0675	-0.1312
	p	0.9856	0.5320	0.3767	0.6630	0.6348	0.5442	0.2370
F_HEMIPT	r_s	-0.1252	-0.1234	0.1750	0.0019	-0.1714	0.0163	0.0508
	p	0.2593	0.2663	0.1135	0.9862	0.1212	0.8838	0.6485
F_COLEOP	r_s	-0.0266	-0.1896	0.0591	-0.0747	-0.0279	0.0234	-0.0039
	p	0.8112	0.0861	0.5959	0.5019	0.8026	0.8339	0.9718
F_TRICHO	r_s	0.0580	-0.0553	0.1719	0.1619	0.0343	-0.1232	0.0046
	p	0.6023	0.6192	0.1202	0.1436	0.7584	0.2673	0.9673
F_LEPID	r_s	0.1934	0.1403	0.1121	-0.1110	0.0309	-0.0660	-0.0015
	p	0.0798	0.2058	0.3131	0.3180	0.7816	0.5533	0.9892
F_DIPT	r_s	0.0352	0.0217	0.0922	0.0273	-0.0499	-0.0334	0.0931
	p	0.7518	0.8454	0.4069	0.8068	0.6542	0.7646	0.4027
F_OLIGO	r_s	-0.0562	-0.0539	0.1956	-0.0081	-0.0468	0.0235	0.1098
	p	0.6139	0.6287	0.0764	0.9424	0.6746	0.8331	0.3232
F_PHEMIP	r_s	-0.1356	-0.1248	0.1833	-0.0021	-0.1938	0.0253	0.0425
	p	0.2218	0.2608	0.0972	0.9850	0.0792	0.8203	0.7032
F_DHEMIP	r_s	-0.0299	-0.0176	0.0826	-0.0757	-0.1486	0.0237	0.0372
	p	0.7886	0.8747	0.4581	0.4964	0.1800	0.8318	0.7381

TABLE 5. CORRELATIONS BETWEEN CANAL ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficient of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLES						
METRIC		INT_AG100	INT_ALL100	BGRASS5	BWATER5	BSEMI_N5	BURBAN5	BINT_AG5
F_CM	r_s	0.0226	-0.0473	0.0604	-0.0386	-0.0808	-0.0947	0.0774
	p	0.8391	0.6712	0.5878	0.7288	0.4678	0.3945	0.4870
F_HTR	r_s	-0.0472	0.0816	0.1638	-0.1339	-0.0780	0.0186	-0.0050
	p	0.6719	0.4633	0.1390	0.2277	0.4835	0.8677	0.9640
F_EPT	r_s	-0.0008	-0.0304	0.0909	0.1419	0.0937	-0.0546	-0.0606
	p	0.9941	0.7852	0.4136	0.2007	0.3995	0.6238	0.5861
F_ETO	r_s	0.0331	-0.0160	0.0520	0.0964	0.1149	-0.0345	-0.0903
	p	0.7665	0.8860	0.6403	0.3862	0.3010	0.7566	0.4169
F_OM	r_s	0.0108	-0.0504	-0.0986	-0.0015	0.0573	0.0836	-0.1104
	p	0.9229	0.6512	0.3753	0.9896	0.6068	0.4523	0.3203
F_EMO	r_s	-0.0017	0.0071	-0.1129	0.0312	0.1235	0.0927	-0.1515
	p	0.9876	0.9489	0.3095	0.7792	0.2660	0.4044	0.1717
F_PRED	r_s	-0.0351	-0.0805	0.1336	-0.0837	-0.1119	0.0296	0.0289
	p	0.7531	0.4696	0.2284	0.4520	0.3140	0.7902	0.7955
F_DETR	r_s	-0.0478	-0.1121	0.1275	0.0952	-0.0298	-0.0757	0.0847
	p	0.6676	0.3129	0.2506	0.3918	0.7889	0.4962	0.4462
F_HERB	r_s	-0.0858	-0.1904	0.0750	0.0411	0.0268	-0.0399	0.0054
	p	0.4404	0.0847	0.5003	0.7124	0.8103	0.7205	0.9616
BMWP	r_s	-0.0352	-0.0851	0.1468	0.0476	-0.0459	-0.0449	0.0143
	p	0.7521	0.4442	0.1853	0.6694	0.6803	0.6866	0.8979
ASPT	r_s	0.0463	-0.0572	0.0325	0.0863	0.0508	-0.0500	-0.0456
	p	0.6777	0.6074	0.7706	0.4380	0.6483	0.6537	0.6823

TABLE 5. CORRELATIONS BETWEEN CANAL ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficient of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLES						
METRIC		BINT_ALL5	BGRASS100	BWATER100	BSEMI_N100	BURBAN100	BINT_AG100	INT_ALL100
INV_N.SP	r_s	0.0113	0.0847	-0.0110	0.0634	-0.0444	-0.0044	-0.1817
	p	0.9193	0.4467	0.9213	0.5690	0.6901	0.9688	0.1002
INV_N.FA	r_s	0.0433	0.1312	-0.0029	-0.0008	-0.0334	0.0377	-0.1375
	p	0.6977	0.2370	0.9793	0.9944	0.7647	0.7350	0.2150
INV_N.OR	r_s	0.0608	0.1789	-0.0674	-0.0289	-0.0638	0.1122	-0.0906
	p	0.5853	0.1055	0.5450	0.7951	0.5669	0.3123	0.4151
INV_SRS	r_s	-0.0009	0.0527	-0.0108	0.0781	-0.0515	-0.0181	-0.1933
	p	0.9933	0.6363	0.9229	0.4830	0.6440	0.8708	0.0800
INV_SRI	r_s	-0.1198	-0.0431	0.0311	0.2245	-0.2323	-0.0007	-0.2145
	p	0.2806	0.6988	0.7799	0.0413	0.0346	0.9948	0.0515
S_TRIC	r_s	0.0244	0.1778	-0.1442	-0.0383	-0.1710	0.1492	0.0600
	p	0.8268	0.1079	0.1934	0.7309	0.1223	0.1784	0.5901
S_GAST	r_s	0.0194	-0.0331	-0.0954	0.0022	-0.0158	-0.0240	-0.0935
	p	0.8618	0.7662	0.3912	0.9840	0.8875	0.8294	0.4002
S_BIVALV	r_s	0.2331	0.1919	0.0323	-0.2183	-0.0112	0.1304	0.0013
	p	0.0339	0.0822	0.7722	0.0474	0.9198	0.2399	0.9908
S_HIRU	r_s	0.0952	0.0308	-0.1256	-0.0606	0.0761	0.0042	0.0075
	p	0.3918	0.7823	0.2578	0.5860	0.4940	0.9699	0.9463
S_ARAN	r_s	0.0574	0.2156	-0.0974	-0.0867	-0.1727	0.1499	0.0568
	p	0.6062	0.0503	0.3808	0.4358	0.1185	0.1761	0.6101
S_DECA	r_s	-0.1048	-0.2221	0.0000	0.0496	0.0313	-0.1130	0.0272
	p	0.3457	0.0436	1.0000	0.6562	0.7788	0.3091	0.8070
S_ISOP	r_s	0.0863	0.0326	-0.1253	-0.1962	-0.1446	0.2074	0.1607
	p	0.4377	0.7697	0.2592	0.0755	0.1921	0.0599	0.1467
S_AMPH	r_s	0.0923	0.1782	-0.0522	-0.1302	0.0632	0.1757	0.0803
	p	0.4064	0.1070	0.6395	0.2407	0.5701	0.1122	0.4707
S_EPHE	r_s	-0.1174	-0.1870	0.1295	0.2625	0.0986	-0.2632	-0.3269
	p	0.2905	0.0905	0.2433	0.0165	0.3751	0.0162	0.0026
S_ODON	r_s	-0.0606	-0.1259	-0.0905	0.1674	0.0290	-0.1904	-0.2236
	p	0.5860	0.2568	0.4159	0.1303	0.7948	0.0847	0.0421
S_HEMI	r_s	0.1293	0.1809	0.0258	-0.0426	-0.0791	0.0873	-0.0746
	p	0.2441	0.1018	0.8168	0.7023	0.4774	0.4323	0.5025
S_COLE	r_s	-0.0271	0.0952	-0.0637	0.0627	-0.0509	0.0254	-0.1439
	p	0.8079	0.3920	0.5671	0.5731	0.6480	0.8197	0.1944
S_MEGA	r_s	0.0016	0.0482	0.0747	0.0438	0.0415	-0.0245	-0.0454
	p	0.9884	0.6654	0.5023	0.6939	0.7098	0.8258	0.6836
S_TRICH	r_s	-0.0375	0.1066	0.1666	0.1691	-0.1654	0.0378	-0.2847
	p	0.7364	0.3376	0.1321	0.1265	0.1351	0.7344	0.0091
S_LEPID	r_s	-0.0127	0.1109	-0.1218	0.0537	-0.0789	0.0423	-0.0470
	p	0.9094	0.3183	0.2728	0.6300	0.4783	0.7044	0.6730
S_PLAN	r_s	-0.0114	-0.0623	-0.0556	0.0525	0.0390	-0.1058	-0.0820
	p	0.9183	0.5756	0.6173	0.6371	0.7265	0.3410	0.4614
S_BAET	r_s	-0.0620	-0.0661	-0.0244	0.1889	0.0617	-0.1304	-0.1896
	p	0.5776	0.5527	0.8269	0.0872	0.5796	0.2400	0.0860
S_COEN	r_s	-0.0362	-0.0743	-0.1021	0.1444	-0.0017	-0.1215	-0.1304
	p	0.7455	0.5043	0.3583	0.1927	0.9876	0.2737	0.2401
S_HALIP	r_s	-0.0808	0.0442	-0.1473	0.1734	-0.0022	-0.0989	-0.1729
	p	0.4680	0.6914	0.1839	0.1169	0.9842	0.3737	0.1181
S_HYDR	r_s	-0.0235	0.0979	0.0147	0.0611	-0.0769	0.0332	-0.0920
	p	0.8329	0.3786	0.8953	0.5834	0.4895	0.7656	0.4079
S_LIMN	r_s	-0.0111	0.1805	0.0957	0.1232	-0.2922	0.1990	-0.2663
	p	0.9205	0.1025	0.3895	0.2672	0.0074	0.0713	0.0149

TABLE 5. CORRELATIONS BETWEEN CANAL ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficient of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLES						
METRIC		BINT_ALL5	BGRASS100	BWATER100	BSEMI_N100	BURBAN100	BINT_AG100	INT_ALL100
S_LEPT	r_s	-0.0212	0.0767	0.1112	0.1429	-0.0277	-0.1113	-0.2707
	p	0.8490	0.4906	0.3169	0.1974	0.8034	0.3163	0.0133
S_SM_DY	r_s	0.1134	0.0985	-0.1309	-0.0969	-0.0231	0.0914	-0.0998
	p	0.3074	0.3759	0.2384	0.3833	0.8354	0.4113	0.3691
S_CM	r_s	0.0885	0.0356	-0.0649	-0.0683	-0.0396	0.0404	-0.0732
	p	0.4261	0.7492	0.5599	0.5397	0.7220	0.7172	0.5107
S_HTR	r_s	0.0644	0.0832	-0.1580	-0.0370	-0.0139	0.0494	-0.0043
	p	0.5628	0.4547	0.1537	0.7400	0.9004	0.6572	0.9692
S_PHEMIP	r_s	0.1334	0.1626	0.0152	-0.0627	-0.0497	0.0658	-0.0848
	p	0.2291	0.1420	0.8912	0.5736	0.6553	0.5542	0.4458
S_DHEMIP	r_s	0.1004	0.1606	-0.0475	-0.0462	-0.0819	0.1016	-0.0214
	p	0.3664	0.1471	0.6699	0.6784	0.4614	0.3609	0.8476
S_EPT	r_s	-0.0961	0.0142	0.1569	0.2317	-0.0966	-0.0716	-0.3337
	p	0.3873	0.8987	0.1565	0.0351	0.3851	0.5203	0.0021
S_ETO	r_s	-0.1306	-0.0073	0.1346	0.2525	-0.0913	-0.1004	-0.3438
	p	0.2394	0.9479	0.2252	0.0213	0.4117	0.3666	0.0015
F_TRICLA	r_s	0.0239	0.1881	-0.1409	-0.0316	-0.1603	0.1350	0.0465
	p	0.8302	0.0886	0.2040	0.7767	0.1477	0.2237	0.6767
F_GASTRO	r_s	-0.0013	-0.0220	-0.0355	-0.0106	-0.0998	0.0464	-0.0779
	p	0.9907	0.8436	0.7500	0.9242	0.3696	0.6771	0.4837
F_BIVALV	r_s	0.0984	0.1410	0.1020	-0.1479	0.0211	0.0204	-0.0815
	p	0.3759	0.2036	0.3588	0.1821	0.8497	0.8551	0.4640
F_HIRUDI	r_s	0.1519	0.0714	-0.1071	-0.0700	0.1488	-0.0296	-0.0214
	p	0.1703	0.5215	0.3352	0.5296	0.1794	0.7902	0.8480
F_DECAPO	r_s	-0.1048	-0.2221	0.0000	0.0496	0.0313	-0.1130	0.0272
	p	0.3457	0.0436	1.0000	0.6562	0.7788	0.3091	0.8070
F_ISOPOD	r_s	0.0335	0.0010	-0.1019	-0.1328	-0.0687	0.1120	0.1003
	p	0.7637	0.9930	0.3593	0.2315	0.5371	0.3136	0.3670
F_AMPHIP	r_s	0.0923	0.1782	-0.0522	-0.1302	0.0632	0.1757	0.0803
	p	0.4064	0.1070	0.6395	0.2407	0.5701	0.1122	0.4707
F_EPHEME	r_s	-0.0749	-0.1748	0.1212	0.2157	0.1021	-0.2226	-0.2730
	p	0.5011	0.1140	0.2751	0.0502	0.3584	0.0431	0.0125
F_ODONAT	r_s	-0.0480	-0.1115	-0.0512	0.1084	0.0152	-0.1239	-0.2031
	p	0.6663	0.3156	0.6460	0.3292	0.8915	0.2644	0.0656
F_HEMIPT	r_s	0.1265	0.2014	0.0114	-0.0636	-0.0772	0.1070	-0.0605
	p	0.2544	0.0679	0.9184	0.5677	0.4881	0.3356	0.5870
F_COLEOP	r_s	0.0104	0.1190	-0.0931	0.0277	-0.0215	0.0374	-0.1092
	p	0.9258	0.2841	0.4025	0.8033	0.8472	0.7372	0.3255
F_TRICHO	r_s	-0.0639	0.1390	0.2064	0.1609	-0.1017	-0.0139	-0.2694
	p	0.5659	0.2102	0.0612	0.1463	0.3602	0.9007	0.0138
F_LEPID	r_s	-0.0188	0.1052	-0.1210	0.0582	-0.0745	0.0364	-0.0469
	p	0.8660	0.3437	0.2761	0.6015	0.5031	0.7437	0.6738
F_DIPT	r_s	0.0283	0.1619	-0.0116	-0.1290	-0.0519	0.1738	0.1240
	p	0.7995	0.1437	0.9171	0.2450	0.6414	0.1160	0.2639
F_OLIGO	r_s	0.0264	0.1686	0.0118	-0.0965	-0.0341	0.1607	0.0573
	p	0.8124	0.1277	0.9157	0.3856	0.7594	0.1467	0.6070
F_PHEMIP	r_s	0.1491	0.1669	0.0166	-0.0790	-0.0523	0.0719	-0.0721
	p	0.1784	0.1315	0.8813	0.4780	0.6389	0.5185	0.5174
F_DHEMIP	r_s	0.0998	0.1456	-0.0935	-0.0358	-0.0545	0.0875	-0.0336
	p	0.3693	0.1891	0.4003	0.7478	0.6243	0.4318	0.7628

TABLE 5. CORRELATIONS BETWEEN CANAL ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficient of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLES						
METRIC		BINT_ALL5	BGRASS100	BWATER100	BSEMI_N100	BURBAN100	BINT_AG100	INT_ALL100
F_CM	r_s	0.0455	0.0341	-0.0183	-0.0669	-0.0628	0.0720	-0.0714
	p	0.6827	0.7595	0.8693	0.5479	0.5729	0.5178	0.5212
F_HTR	r_s	0.1025	0.1563	-0.1531	-0.0458	0.0305	0.0395	-0.0151
	p	0.3567	0.1583	0.1670	0.6813	0.7840	0.7226	0.8923
F_EPT	r_s	-0.0930	-0.0017	0.1843	0.2336	-0.0289	-0.1259	-0.3290
	p	0.4029	0.9878	0.0953	0.0335	0.7956	0.2569	0.0024
F_ETO	r_s	-0.1144	-0.0303	0.1368	0.2386	-0.0278	-0.1374	-0.3434
	p	0.3030	0.7855	0.2174	0.0298	0.8031	0.2156	0.0015
F_OM	r_s	-0.0417	-0.0734	-0.0143	0.0937	0.0356	-0.1008	-0.1570
	p	0.7083	0.5096	0.8982	0.3993	0.7491	0.3646	0.1564
F_EMO	r_s	-0.0895	-0.1622	0.0468	0.1900	0.0722	-0.1850	-0.2448
	p	0.4209	0.1430	0.6745	0.0853	0.5168	0.0941	0.0257
F_PRED	r_s	0.0913	0.1719	-0.0965	-0.0724	0.0011	0.0801	-0.0513
	p	0.4115	0.1201	0.3855	0.5154	0.9923	0.4718	0.6451
F_DETR	r_s	-0.0092	0.1346	0.1159	-0.0012	-0.0889	0.1078	-0.1005
	p	0.9344	0.2252	0.2966	0.9914	0.4243	0.3320	0.3659
F_HERB	r_s	-0.0566	0.0712	0.0435	0.0968	-0.0920	0.0260	-0.1691
	p	0.6111	0.5227	0.6963	0.3838	0.4082	0.8154	0.1265
BMWP	r_s	0.0159	0.1325	0.0625	0.0530	-0.0554	0.0097	-0.2101
	p	0.8866	0.2325	0.5748	0.6344	0.6190	0.9309	0.0566
ASPT	r_s	-0.0739	-0.0254	0.1152	0.2102	-0.0403	-0.1410	-0.3381
	p	0.5067	0.8199	0.2996	0.0565	0.7178	0.2036	0.0018

TABLE 5. CORRELATIONS BETWEEN CANAL ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficient of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLES						
METRIC		%BOULDER	%PEBBLES	%GRAVEL	%SAND	%SILT	%COARSE	%FINE
INV_N.SP	r_s	-0.0146	0.0091	0.0187	0.0374	0.0185	0.1568	0.0917
	p	0.8959	0.9351	0.8670	0.7373	0.8680	0.1568	0.4095
INV_N.FA	r_s	-0.0064	0.0078	0.0202	0.0756	0.0051	0.1344	0.0572
	p	0.9540	0.9443	0.8562	0.4970	0.9632	0.2256	0.6077
INV_N.OR	r_s	-0.0392	-0.0425	0.0072	0.0733	-0.0274	0.1905	0.1114
	p	0.7250	0.7029	0.9485	0.5099	0.8061	0.0845	0.3162
INV_SRS	r_s	-0.0015	0.0352	0.0344	0.0150	0.0210	0.1647	0.1162
	p	0.9894	0.7520	0.7573	0.8929	0.8507	0.1367	0.2954
INV_SRI	r_s	-0.1884	-0.0030	-0.0275	-0.1403	0.0558	0.2444	0.1910
	p	0.0882	0.9789	0.8050	0.2057	0.6163	0.0260	0.0838
S_TRIC	r_s	-0.1046	-0.1306	0.0836	0.0489	-0.1268	0.2816	0.2518
	p	0.3466	0.2392	0.4527	0.6609	0.2534	0.0099	0.0217
S_GAST	r_s	0.1115	0.0593	0.0247	-0.0544	0.0370	0.0791	0.0608
	p	0.3156	0.5945	0.8246	0.6252	0.7401	0.4771	0.5852
S_BIVALV	r_s	-0.1071	-0.2153	-0.0070	0.1158	0.0531	0.2526	0.1607
	p	0.3354	0.0506	0.9499	0.2973	0.6334	0.0212	0.1468
S_HIRU	r_s	0.0612	0.0255	0.0232	-0.0177	0.0016	0.2543	0.1700
	p	0.5825	0.8190	0.8352	0.8741	0.9889	0.0203	0.1244
S_ARAN	r_s	0.0430	0.0544	-0.0275	-0.0597	-0.0256	0.2368	0.2593
	p	0.6995	0.6254	0.8049	0.5921	0.8181	0.0311	0.0179
S_DECA	r_s	0.1336	0.1659	0.0612	0.0248	0.0129	-0.0811	-0.0048
	p	0.2285	0.1340	0.5827	0.8238	0.9076	0.4660	0.9656
S_ISOP	r_s	0.0851	-0.1110	-0.1337	-0.0782	0.0707	0.0836	0.0620
	p	0.4446	0.3179	0.2281	0.4825	0.5253	0.4526	0.5778
S_AMPH	r_s	0.0369	0.0329	0.0706	0.1290	-0.0688	-0.0369	-0.0523
	p	0.7403	0.7677	0.5259	0.2452	0.5365	0.7406	0.6386
S_EPHE	r_s	0.0245	0.2060	0.0546	0.0119	-0.0442	-0.0569	0.0272
	p	0.8263	0.0617	0.6236	0.9150	0.6914	0.6097	0.8074
S_ODON	r_s	0.1104	0.0861	0.0077	-0.1489	0.0993	0.1798	0.2390
	p	0.3205	0.4391	0.9452	0.1791	0.3717	0.1039	0.0295
S_HEMI	r_s	-0.0255	-0.0791	0.0479	0.1824	-0.1083	0.1985	0.1081
	p	0.8191	0.4773	0.6673	0.0989	0.3296	0.0720	0.3307
S_COLE	r_s	0.0244	0.0237	-0.0337	0.0641	0.0016	0.1005	0.0428
	p	0.8267	0.8319	0.7622	0.5648	0.9888	0.3658	0.7007
S_MEGA	r_s	0.0007	0.0633	0.0120	-0.0626	0.1055	-0.0270	-0.0060
	p	0.9947	0.5698	0.9146	0.5738	0.3427	0.8084	0.9571
S_TRICH	r_s	-0.0336	0.0034	0.0721	0.2480	-0.1666	0.0855	-0.0195
	p	0.7629	0.9760	0.5169	0.0238	0.1322	0.4421	0.8608
S_LEPID	r_s	-0.1254	-0.1382	-0.1581	-0.1863	0.1467	0.3802	0.3805
	p	0.2587	0.2126	0.1534	0.0917	0.1856	0.0004	0.0004
S_PLAN	r_s	0.0148	0.0040	-0.0711	-0.1122	0.1257	0.1301	0.1616
	p	0.8947	0.9714	0.5229	0.3127	0.2576	0.2411	0.1445
S_BAET	r_s	-0.1147	0.0648	-0.0572	-0.1620	0.1463	0.0493	0.2000
	p	0.3016	0.5608	0.6073	0.1434	0.1868	0.6581	0.0698
S_COEN	r_s	0.0806	0.0259	0.0201	-0.1025	0.0758	0.3070	0.3670
	p	0.4691	0.8160	0.8567	0.3565	0.4957	0.0048	0.0006
S_HALIP	r_s	0.1436	0.1401	0.0876	0.0926	-0.1053	0.0154	0.1038
	p	0.1954	0.2065	0.4312	0.4048	0.3432	0.8903	0.3503
S_HYDR	r_s	-0.0348	-0.0467	-0.0661	-0.0718	0.0703	0.2213	0.1006
	p	0.7545	0.6751	0.5527	0.5187	0.5278	0.0444	0.3653
S_LIMN	r_s	-0.0617	0.0224	0.1717	0.3094	-0.2405	0.0913	-0.0842
	p	0.5793	0.8407	0.1205	0.0044	0.0285	0.4116	0.4493

TABLE 5. CORRELATIONS BETWEEN CANAL ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficient of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLES						
METRIC		%BOULDER	%PEBBLES	%GRAVEL	%SAND	%SILT	%COARSE	%FINE
S_LEPT	r_s	0.0357	0.1054	0.0910	0.1663	-0.1245	0.0420	0.0686
	p	0.7489	0.3430	0.4135	0.1329	0.2623	0.7063	0.5380
S_SM_DY	r_s	0.0183	0.0528	-0.0571	0.0240	0.0261	0.0135	-0.0778
	p	0.8693	0.6355	0.6081	0.8298	0.8147	0.9034	0.4844
S_CM	r_s	0.0606	-0.0079	0.0118	-0.0382	0.0712	0.1117	0.0778
	p	0.5860	0.9432	0.9157	0.7320	0.5226	0.3147	0.4847
S_HTR	r_s	0.0270	0.0160	0.0989	0.0206	-0.0768	0.2750	0.1921
	p	0.8085	0.8858	0.3739	0.8537	0.4902	0.0119	0.0819
S_PHEMIP	r_s	-0.0417	-0.1368	0.0167	0.1859	-0.1202	0.2740	0.1745
	p	0.7081	0.2174	0.8807	0.0924	0.2792	0.0122	0.1145
S_DHEMIP	r_s	0.0098	0.0058	0.0252	0.0868	0.0017	0.0395	0.0179
	p	0.9300	0.9588	0.8210	0.4354	0.9879	0.7233	0.8725
S_EPT	r_s	-0.0225	0.0745	0.0705	0.2015	-0.1505	0.0540	0.0008
	p	0.8399	0.5033	0.5265	0.0678	0.1744	0.6279	0.9942
S_ETO	r_s	0.0125	0.1166	0.0875	0.1348	-0.1223	0.0957	0.0671
	p	0.9109	0.2936	0.4316	0.2243	0.2705	0.3897	0.5469
F_TRICLA	r_s	-0.1005	-0.1310	0.0787	0.0462	-0.1221	0.2831	0.2565
	p	0.3662	0.2379	0.4795	0.6785	0.2714	0.0095	0.0192
F_GASTRO	r_s	0.1471	0.1500	0.1474	0.0036	-0.0763	-0.0317	-0.0314
	p	0.1845	0.1758	0.1837	0.9742	0.4927	0.7763	0.7783
F_BIVALV	r_s	0.0069	-0.0279	0.0665	0.2038	-0.0414	0.1278	0.0535
	p	0.9503	0.8020	0.5501	0.0646	0.7103	0.2498	0.6313
F_HIRUDI	r_s	0.0702	0.0177	0.0299	0.0589	0.0029	0.2308	0.1198
	p	0.5285	0.8736	0.7881	0.5971	0.9793	0.0358	0.2807
F_DECAPO	r_s	0.1336	0.1659	0.0612	0.0248	0.0129	-0.0811	-0.0048
	p	0.2285	0.1340	0.5827	0.8238	0.9076	0.4660	0.9656
F_ISOPOD	r_s	0.1455	-0.0454	-0.0526	0.0313	0.0263	-0.0158	-0.0070
	p	0.1893	0.6837	0.6369	0.7790	0.8137	0.8874	0.9502
F_AMPHIP	r_s	0.0369	0.0329	0.0706	0.1290	-0.0688	-0.0369	-0.0523
	p	0.7403	0.7677	0.5259	0.2452	0.5365	0.7406	0.6386
F_EPHEME	r_s	0.0015	0.1435	-0.0003	-0.0210	0.0003	-0.0773	-0.0041
	p	0.9895	0.1956	0.9979	0.8502	0.9976	0.4873	0.9708
F_ODONAT	r_s	0.1252	0.1435	0.0466	-0.0843	0.0783	-0.0079	0.0194
	p	0.2595	0.1955	0.6759	0.4484	0.4818	0.9437	0.8619
F_HEMIPT	r_s	-0.0303	-0.1091	0.0323	0.1868	-0.1155	0.2266	0.1369
	p	0.7859	0.3264	0.7722	0.0909	0.2983	0.0394	0.2172
F_COLEOP	r_s	0.0540	0.0326	-0.0218	0.1135	-0.0352	0.0940	0.0228
	p	0.6280	0.7697	0.8452	0.3071	0.7519	0.3980	0.8380
F_TRICHO	r_s	-0.0068	-0.0198	-0.0445	0.1692	-0.0935	0.1821	0.0886
	p	0.9517	0.8586	0.6898	0.1263	0.4006	0.0995	0.4258
F_LEPID	r_s	-0.1245	-0.1355	-0.1546	-0.1821	0.1434	0.3812	0.3812
	p	0.2620	0.2219	0.1630	0.0994	0.1961	0.0004	0.0004
F_DIPT	r_s	-0.0628	-0.1039	-0.0641	-0.0167	0.0742	-0.0348	-0.1573
	p	0.5729	0.3500	0.5649	0.8810	0.5049	0.7548	0.1554
F_OLIGO	r_s	-0.1332	-0.1744	-0.0646	-0.0156	0.0972	-0.0468	-0.1567
	p	0.2301	0.1148	0.5618	0.8885	0.3820	0.6746	0.1570
F_PHEMIP	r_s	-0.0400	-0.1522	0.0021	0.1734	-0.1059	0.2646	0.1651
	p	0.7194	0.1696	0.9847	0.1170	0.3408	0.0157	0.1358
F_DHEMIP	r_s	-0.0096	-0.0299	-0.0054	0.0905	0.0016	0.0713	0.0588
	p	0.9314	0.7882	0.9611	0.4160	0.9886	0.5217	0.5974

TABLE 5. CORRELATIONS BETWEEN CANAL ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficient of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLES						
METRIC		%BOULDER	%PEBBLES	%GRAVEL	%SAND	%SILT	%COARSE	%FINE
F_CM	r_s	0.1087	0.1189	0.1205	0.0514	-0.0489	0.0026	-0.0119
	p	0.3281	0.2844	0.2777	0.6447	0.6607	0.9813	0.9147
F_HTR	r_s	0.0036	-0.0299	0.0776	0.0597	-0.0644	0.3024	0.2157
	p	0.9745	0.7885	0.4854	0.5916	0.5629	0.0055	0.0502
F_EPT	r_s	0.0029	0.0576	-0.0025	0.1092	-0.0731	0.0965	0.0816
	p	0.9790	0.6051	0.9819	0.3258	0.5116	0.3853	0.4636
F_ETO	r_s	0.0522	0.1213	0.0271	0.0593	-0.0560	0.0996	0.1070
	p	0.6394	0.2747	0.8077	0.5945	0.6150	0.3704	0.3356
F_OM	r_s	0.0829	0.1395	0.0416	-0.1033	0.1118	-0.0225	0.0163
	p	0.4563	0.2083	0.7088	0.3529	0.3142	0.8397	0.8836
F_EMO	r_s	0.0683	0.1779	0.0318	-0.0997	0.0818	-0.0481	0.0365
	p	0.5398	0.1076	0.7751	0.3699	0.4621	0.6658	0.7433
F_PRED	r_s	0.0037	-0.0141	0.0132	0.0872	-0.0190	0.1659	0.0663
	p	0.9736	0.8993	0.9059	0.4329	0.8649	0.1340	0.5516
F_DETR	r_s	-0.0670	-0.0347	-0.0218	0.0830	0.0503	0.0354	-0.0680
	p	0.5474	0.7558	0.8449	0.4555	0.6518	0.7507	0.5414
F_HERB	r_s	0.0069	0.0490	0.0494	0.0684	-0.0233	0.0280	-0.0417
	p	0.9504	0.6603	0.6574	0.5388	0.8342	0.8018	0.7081
BMWP	r_s	0.0178	0.0542	0.0537	0.1258	-0.0523	0.0932	0.0294
	p	0.8729	0.6268	0.6299	0.2570	0.6386	0.4019	0.7921
ASPT	r_s	0.0510	0.0934	0.0057	0.1223	-0.1104	0.0433	0.0607
	p	0.6473	0.4011	0.9595	0.2708	0.3203	0.6976	0.5856

TABLE 5. CORRELATIONS BETWEEN CANAL ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficient of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLES							
METRIC		AV_BOUL	AV_PEBB	AV_GRAV	AV_SAND	AV_SILT	AV_COAR	AV_FINE	ANGLE
INV_N.SP	r_s	-0.0188	0.0149	0.0398	0.0327	-0.0032	0.1813	0.1202	-0.4699
	p	0.8663	0.8937	0.7209	0.7693	0.9768	0.1010	0.2792	0.0000
INV_N.FA	r_s	-0.0096	0.0119	0.0435	0.0789	-0.0255	0.1535	0.0739	-0.4623
	p	0.9314	0.9153	0.6960	0.4781	0.8190	0.1660	0.5067	0.0000
INV_N.OR	r_s	-0.0467	-0.0412	0.0315	0.0697	-0.0387	0.2081	0.1085	-0.4343
	p	0.6750	0.7113	0.7774	0.5311	0.7283	0.0590	0.3288	0.0000
INV_SRS	r_s	-0.0058	0.0405	0.0527	0.0062	0.0028	0.1917	0.1448	-0.4735
	p	0.9585	0.7161	0.6362	0.9558	0.9798	0.0825	0.1915	0.0000
INV_SRI	r_s	-0.1897	-0.0141	-0.0597	-0.1734	0.1198	0.2136	0.1822	-0.1442
	p	0.0859	0.8992	0.5922	0.1169	0.2805	0.0525	0.0992	0.1963
S_TRIC	r_s	-0.1052	-0.1276	0.0837	-0.0010	-0.0940	0.3221	0.2008	-0.1165
	p	0.3441	0.2504	0.4520	0.9925	0.3978	0.0030	0.0688	0.2972
S_GAST	r_s	0.1094	0.0551	0.0328	-0.0754	0.0447	0.1162	0.1118	-0.3981
	p	0.3247	0.6209	0.7683	0.4984	0.6879	0.2956	0.3142	0.0002
S_BIVALV	r_s	-0.1010	-0.2189	-0.0237	0.1110	0.0196	0.2487	0.0997	-0.1166
	p	0.3637	0.0468	0.8313	0.3178	0.8604	0.0234	0.3700	0.2967
S_HIRU	r_s	0.0634	0.0036	0.0108	-0.0484	0.0301	0.2319	0.2185	-0.1775
	p	0.5693	0.9741	0.9226	0.6638	0.7869	0.0349	0.0472	0.1106
S_ARAN	r_s	0.0374	0.0372	-0.0564	-0.0975	0.0472	0.1782	0.2165	-0.1085
	p	0.7372	0.7384	0.6127	0.3803	0.6719	0.1070	0.0494	0.3320
S_DECA	r_s	0.1238	0.1609	0.0431	0.0342	-0.0082	-0.0522	0.0308	0.0381
	p	0.2648	0.1463	0.6986	0.7586	0.9412	0.6395	0.7819	0.7342
S_ISOP	r_s	0.0850	-0.1145	-0.1336	-0.0956	0.0835	0.0186	0.0527	-0.1886
	p	0.4447	0.3027	0.2285	0.3898	0.4528	0.8674	0.6362	0.0897
S_AMPH	r_s	0.0299	0.0343	0.0801	0.1442	-0.0987	-0.0338	-0.0162	-0.2294
	p	0.7881	0.7585	0.4717	0.1933	0.3748	0.7614	0.8841	0.0382
S_EPHE	r_s	0.0236	0.2285	0.0959	0.0485	-0.0822	-0.0363	0.0131	-0.1149
	p	0.8324	0.0378	0.3887	0.6634	0.4599	0.7443	0.9067	0.3039
S_ODON	r_s	0.1070	0.0805	0.0070	-0.1680	0.1371	0.2079	0.2586	-0.1420
	p	0.3357	0.4693	0.9496	0.1289	0.2164	0.0592	0.0183	0.2033
S_HEMI	r_s	-0.0372	-0.0815	0.0615	0.1468	-0.1145	0.1891	0.1257	-0.3855
	p	0.7386	0.4637	0.5808	0.1854	0.3026	0.0868	0.2574	0.0003
S_COLE	r_s	0.0162	0.0213	-0.0052	0.0695	-0.0372	0.1389	0.1017	-0.4506
	p	0.8843	0.8488	0.9628	0.5324	0.7384	0.2106	0.3602	0.0000
S_MEGA	r_s	-0.0089	0.0729	0.0391	-0.0594	0.1048	-0.0548	0.0038	-0.3270
	p	0.9367	0.5127	0.7257	0.5940	0.3456	0.6228	0.9731	0.0027
S_TRICH	r_s	-0.0356	0.0275	0.1151	0.2769	-0.2406	0.1776	-0.0311	-0.3521
	p	0.7491	0.8054	0.3002	0.0113	0.0284	0.1082	0.7805	0.0012
S_LEPID	r_s	-0.1284	-0.1491	-0.1751	-0.2149	0.1958	0.3304	0.3371	-0.0460
	p	0.2473	0.1785	0.1133	0.0511	0.0761	0.0023	0.0018	0.6812
S_PLAN	r_s	0.0072	-0.0130	-0.0730	-0.1459	0.1477	0.1490	0.2090	-0.2615
	p	0.9487	0.9074	0.5121	0.1880	0.1828	0.1789	0.0579	0.0176
S_BAET	r_s	-0.1177	0.0687	-0.0422	-0.1273	0.1458	0.0018	0.1705	-0.0367
	p	0.2894	0.5374	0.7049	0.2516	0.1884	0.9873	0.1233	0.7434
S_COEN	r_s	0.0795	0.0131	0.0142	-0.1273	0.1235	0.2923	0.3639	-0.0294
	p	0.4750	0.9067	0.8989	0.2516	0.2661	0.0073	0.0007	0.7929
S_HALIP	r_s	0.1398	0.1288	0.1177	0.0842	-0.1295	0.1435	0.1837	-0.2293
	p	0.2073	0.2457	0.2895	0.4490	0.2432	0.1955	0.0965	0.0383
S_HYDR	r_s	-0.0443	-0.0580	-0.0508	-0.0769	0.0598	0.2348	0.1538	-0.4192
	p	0.6907	0.6022	0.6481	0.4893	0.5913	0.0326	0.1650	0.0001
S_LIMN	r_s	-0.0626	0.0435	0.1957	0.3220	-0.2941	0.1498	-0.0969	-0.5017
	p	0.5741	0.6965	0.0762	0.0030	0.0070	0.1764	0.3833	0.0000

TABLE 5. CORRELATIONS BETWEEN CANAL ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficient of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLES							
METRIC		AV_BOUL	AV_PEBB	AV_GRAV	AV_SAND	AV_SILT	AV_COAR	AV_FINE	ANGLE
S_LEPT	r_s	0.0323	0.1231	0.1244	0.1795	-0.1626	0.0919	0.0715	-0.2562
	p	0.7720	0.2677	0.2626	0.1044	0.1419	0.4086	0.5205	0.0202
S_SM_DY	r_s	0.0101	0.0598	-0.0278	0.0388	0.0150	-0.0172	-0.0402	-0.4443
	p	0.9277	0.5914	0.8027	0.7278	0.8929	0.8776	0.7185	0.0000
S_CM	r_s	0.0588	-0.0116	0.0133	-0.0588	0.0661	0.1480	0.1142	-0.3862
	p	0.5976	0.9173	0.9047	0.5977	0.5527	0.1818	0.3039	0.0003
S_HTR	r_s	0.0278	-0.0011	0.0915	-0.0223	-0.0375	0.2807	0.2172	-0.2249
	p	0.8028	0.9923	0.4109	0.8416	0.7363	0.0101	0.0486	0.0422
S_PHEMIP	r_s	-0.0512	-0.1392	0.0245	0.1618	-0.1413	0.2308	0.1975	-0.3798
	p	0.6454	0.2094	0.8259	0.1439	0.2026	0.0358	0.0735	0.0004
S_DHEMIP	r_s	0.0009	0.0035	0.0432	0.0484	0.0205	0.0772	-0.0149	-0.2793
	p	0.9937	0.9752	0.6982	0.6641	0.8539	0.4877	0.8938	0.0110
S_EPT	r_s	-0.0252	0.0987	0.1144	0.2327	-0.2174	0.1289	-0.0093	-0.3091
	p	0.8209	0.3748	0.3032	0.0342	0.0483	0.2454	0.9335	0.0047
S_ETO	r_s	0.0114	0.1365	0.1240	0.1550	-0.1616	0.1580	0.0641	-0.3225
	p	0.9186	0.2184	0.2642	0.1618	0.1445	0.1537	0.5650	0.0031
F_TRICLA	r_s	-0.1010	-0.1282	0.0801	-0.0010	-0.0957	0.3211	0.2032	-0.1081
	p	0.3636	0.2480	0.4719	0.9925	0.3892	0.0031	0.0654	0.3336
F_GASTRO	r_s	0.1505	0.1521	0.1530	-0.0027	-0.0712	0.0357	0.0011	-0.3283
	p	0.1744	0.1697	0.1674	0.9809	0.5226	0.7484	0.9921	0.0026
F_BIVALV	r_s	0.0106	-0.0308	0.0600	0.2140	-0.0999	0.1820	0.0322	-0.1097
	p	0.9243	0.7820	0.5901	0.0521	0.3687	0.0996	0.7727	0.3263
F_HIRUDI	r_s	0.0728	-0.0012	0.0282	0.0515	-0.0046	0.2057	0.1646	-0.1379
	p	0.5129	0.9915	0.8005	0.6438	0.9671	0.0621	0.1370	0.2165
F_DECAPO	r_s	0.1238	0.1609	0.0431	0.0342	-0.0082	-0.0522	0.0308	0.0381
	p	0.2648	0.1463	0.6986	0.7586	0.9412	0.6395	0.7819	0.7342
F_ISOPOD	r_s	0.1455	-0.0495	-0.0525	0.0107	0.0321	-0.0882	-0.0186	-0.1442
	p	0.1894	0.6567	0.6372	0.9232	0.7735	0.4276	0.8671	0.1961
F_AMPHIP	r_s	0.0299	0.0343	0.0801	0.1442	-0.0987	-0.0338	-0.0162	-0.2294
	p	0.7881	0.7585	0.4717	0.1933	0.3748	0.7614	0.8841	0.0382
F_EPHEME	r_s	-0.0021	0.1651	0.0447	0.0241	-0.0500	-0.0315	-0.0177	-0.0869
	p	0.9852	0.1357	0.6883	0.8291	0.6535	0.7776	0.8740	0.4375
F_ODONAT	r_s	0.1205	0.1490	0.0504	-0.1026	0.1152	0.0392	0.0435	-0.2467
	p	0.2781	0.1788	0.6506	0.3558	0.2996	0.7252	0.6959	0.0255
F_HEMIPT	r_s	-0.0411	-0.1095	0.0467	0.1561	-0.1324	0.1990	0.1553	-0.4128
	p	0.7121	0.3243	0.6749	0.1588	0.2329	0.0713	0.1609	0.0001
F_COLEOP	r_s	0.0472	0.0243	0.0040	0.1162	-0.0705	0.1227	0.0885	-0.4784
	p	0.6721	0.8275	0.9714	0.2954	0.5266	0.2692	0.4264	0.0000
F_TRICHO	r_s	-0.0068	-0.0004	0.0019	0.2076	-0.1748	0.2520	0.0717	-0.2192
	p	0.9514	0.9973	0.9866	0.0597	0.1140	0.0215	0.5196	0.0479
F_LEPID	r_s	-0.1276	-0.1465	-0.1718	-0.2110	0.1915	0.3325	0.3410	-0.0419
	p	0.2503	0.1863	0.1203	0.0555	0.0829	0.0021	0.0016	0.7085
F_DIPT	r_s	-0.0596	-0.1087	-0.0547	-0.0002	0.0871	-0.0398	-0.1820	-0.1490
	p	0.5923	0.3280	0.6233	0.9987	0.4336	0.7210	0.0997	0.1816
F_OLIGO	r_s	-0.1270	-0.1703	-0.0425	0.0312	0.0455	-0.0062	-0.1810	-0.0659
	p	0.2527	0.1239	0.7031	0.7792	0.6829	0.9559	0.1015	0.5561
F_PHEMIP	r_s	-0.0495	-0.1528	0.0126	0.1523	-0.1321	0.2222	0.1856	-0.3838
	p	0.6566	0.1680	0.9097	0.1694	0.2338	0.0435	0.0930	0.0004
F_DHEMIP	r_s	-0.0170	-0.0311	0.0114	0.0556	0.0096	0.0865	0.0339	-0.2823
	p	0.8790	0.7804	0.9185	0.6175	0.9315	0.4370	0.7612	0.0102

TABLE 5. CORRELATIONS BETWEEN CANAL ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficient of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLES							
METRIC		AV_BOUL	AV_PEBB	AV_GRAV	AV_SAND	AV_SILT	AV_COAR	AV_FINE	ANGLE
F_CM	r_s	0.1089	0.1192	0.1193	-0.0496	-0.0576	0.0453	0.0218	-0.3528
	p	0.3269	0.2830	0.2826	0.6559	0.6049	0.6843	0.8450	0.0012
F_HTR	r_s	0.0048	-0.0429	0.0789	0.0331	-0.0557	0.3028	0.2225	-0.1711
	p	0.9659	0.6999	0.4786	0.7666	0.6170	0.0054	0.0432	0.1244
F_EPT	r_s	0.0002	0.0782	0.0479	0.1542	-0.1540	0.1642	0.0671	-0.1857
	p	0.9983	0.4821	0.6674	0.1639	0.1646	0.1379	0.5469	0.0948
F_ETO	r_s	0.0489	0.1374	0.0677	0.0878	-0.1003	0.1556	0.1050	-0.2400
	p	0.6608	0.2156	0.5432	0.4299	0.3670	0.1600	0.3447	0.0299
F_OM	r_s	0.0760	0.1483	0.0566	-0.1142	0.1407	-0.0046	0.0379	-0.3202
	p	0.4945	0.1810	0.6113	0.3038	0.2045	0.9668	0.7340	0.0034
F_EMO	r_s	0.0607	0.1921	0.0603	-0.0914	0.0862	-0.0189	0.0549	-0.2602
	p	0.5859	0.0818	0.5883	0.4112	0.4386	0.8655	0.6218	0.0182
F_PRED	r_s	-0.0020	-0.0131	0.0380	0.0827	-0.0335	0.1589	0.0936	-0.5235
	p	0.9857	0.9066	0.7334	0.4573	0.7634	0.1513	0.3999	0.0000
F_DETR	r_s	-0.0714	-0.0274	0.0054	0.1077	-0.0090	0.0774	-0.0671	-0.4494
	p	0.5212	0.8060	0.9617	0.3325	0.9354	0.4866	0.5466	0.0000
F_HERB	r_s	0.0051	0.0508	0.0747	0.0877	-0.0614	0.1102	-0.0180	-0.4012
	p	0.9637	0.6482	0.5018	0.4304	0.5815	0.3212	0.8719	0.0002
BMWP	r_s	0.0136	0.0680	0.0859	0.1325	-0.0947	0.1310	0.0437	-0.4520
	p	0.9030	0.5415	0.4399	0.2326	0.3947	0.2378	0.6948	0.0000
ASPT	r_s	0.0444	0.1166	0.0386	0.1475	-0.1671	0.0999	0.0589	-0.1326
	p	0.6899	0.2937	0.7290	0.1833	0.1311	0.3687	0.5967	0.2352

TABLE 5. CORRELATIONS BETWEEN CANAL ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficient of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLES							
METRIC		DEPTH_ED	DEPTH_1	DEPTH_2	DEPTH_3	DEPTH_MX	DEPTH_AV	SED_1	SED_2
INV_N.SP	r_s	-0.3018	-0.3256	-0.2278	-0.0720	-0.0171	-0.2017	0.0711	0.1291
	p	0.0069	0.0027	0.0384	0.5283	0.9498	0.0675	0.5233	0.2476
INV_N.FA	r_s	-0.2997	-0.2961	-0.2371	-0.0645	0.0396	-0.2002	0.0487	0.1284
	p	0.0073	0.0066	0.0309	0.5720	0.8844	0.0696	0.6620	0.2501
INV_N.OR	r_s	-0.2609	-0.2816	-0.2640	-0.0959	-0.1904	-0.2129	0.1334	0.1307
	p	0.0202	0.0099	0.0159	0.4007	0.4800	0.0533	0.2293	0.2419
INV_SRS	r_s	-0.3105	-0.3342	-0.2326	-0.0532	-0.0193	-0.2017	0.0286	0.1107
	p	0.0054	0.0020	0.0343	0.6413	0.9434	0.0674	0.7977	0.3222
INV_SRI	r_s	-0.1058	-0.1521	-0.0632	0.0780	-0.0365	-0.0624	-0.1428	-0.0203
	p	0.3535	0.1697	0.5704	0.4942	0.8931	0.5752	0.1978	0.8563
S_TRIC	r_s	-0.1393	-0.1347	-0.1470	-0.1023	-0.3059	-0.1339	-0.0386	0.1333
	p	0.2207	0.2246	0.1847	0.3696	0.2492	0.2275	0.7287	0.2324
S_GAST	r_s	-0.2331	-0.3070	-0.2469	-0.1513	-0.0624	-0.2210	0.0047	0.0736
	p	0.0387	0.0048	0.0245	0.1831	0.8184	0.0447	0.9663	0.5112
S_BIVALV	r_s	-0.1427	-0.0037	0.0280	0.1083	-0.0822	0.0741	-0.0065	0.1113
	p	0.2098	0.9738	0.8017	0.3419	0.7621	0.5054	0.9533	0.3194
S_HIRU	r_s	-0.0554	-0.2254	-0.2630	-0.2661	-0.2458	-0.2566	0.1557	0.2549
	p	0.6279	0.0405	0.0163	0.0178	0.3587	0.0192	0.1598	0.0208
S_ARAN	r_s	-0.0892	-0.0895	0.1070	0.0645	-0.3962	0.0512	0.1332	0.0638
	p	0.4345	0.4212	0.3355	0.5720	0.1287	0.6455	0.2301	0.5688
S_DECA	r_s	-0.0025	0.0484	0.0827	0.1240	0.1864	0.0811	-0.0950	-0.1113
	p	0.9822	0.6637	0.4576	0.2761	0.4894	0.4663	0.3931	0.3196
S_ISOP	r_s	-0.1793	-0.2868	-0.3808	-0.2767	-0.0828	-0.3488	0.1915	0.2433
	p	0.1139	0.0086	0.0004	0.0136	0.7603	0.0012	0.0829	0.0276
S_AMPH	r_s	-0.2293	-0.2141	-0.2284	-0.0094	0.2253	-0.1644	-0.1674	-0.1511
	p	0.0421	0.0520	0.0378	0.9345	0.4016	0.1376	0.1304	0.1755
S_EPHE	r_s	-0.0685	0.0216	0.1036	0.2099	0.2793	0.1117	-0.0496	-0.0635
	p	0.5483	0.8464	0.3511	0.0634	0.2948	0.3147	0.6563	0.5707
S_ODON	r_s	0.0733	-0.0045	-0.0440	0.0574	-0.0420	0.0096	0.2388	0.2830
	p	0.5209	0.9679	0.6929	0.6153	0.8772	0.9310	0.0297	0.0100
S_HEMI	r_s	-0.2299	-0.3325	-0.3282	-0.1858	0.0000	-0.2759	0.0572	0.1487
	p	0.0415	0.0021	0.0024	0.1012	1.0000	0.0116	0.6077	0.1825
S_COLE	r_s	-0.2963	-0.3663	-0.2696	-0.1262	-0.5067	-0.2589	0.1018	0.0784
	p	0.0080	0.0007	0.0137	0.2679	0.0452	0.0181	0.3600	0.4837
S_MEGA	r_s	-0.1364	-0.1493	-0.0973	-0.0242	-0.0141	-0.0958	0.2121	0.1527
	p	0.2308	0.1780	0.3813	0.8321	0.9585	0.3889	0.0542	0.1707
S_TRICH	r_s	-0.2408	-0.3175	-0.1735	0.0449	-0.0940	-0.1626	-0.1276	-0.1512
	p	0.0326	0.0034	0.1167	0.6941	0.7292	0.1420	0.2503	0.1751
S_LEPID	r_s	-0.0036	-0.0168	-0.0047	0.0425	-0.3107	0.0305	0.3646	0.2815
	p	0.9749	0.8799	0.9667	0.7100	0.2415	0.7841	0.0007	0.0104
S_PLAN	r_s	-0.1204	-0.2108	-0.1771	-0.1503	-0.3659	-0.1660	0.1415	0.2139
	p	0.2906	0.0557	0.1093	0.1860	0.1634	0.1336	0.2020	0.0537
S_BAET	r_s	-0.1100	-0.0319	0.0392	0.1424	0.1295	0.0536	0.1712	0.2538
	p	0.3346	0.7748	0.7247	0.2107	0.6325	0.6305	0.1218	0.0214
S_COEN	r_s	0.0864	-0.0208	-0.0287	0.0135	-0.2025	0.0013	0.3458	0.3765
	p	0.4492	0.8523	0.7970	0.9057	0.4520	0.9908	0.0014	0.0005
S_HALIP	r_s	-0.0814	-0.2429	-0.1605	-0.0266	-0.5094	-0.1365	0.0786	0.0613
	p	0.4755	0.0269	0.1471	0.8161	0.0439	0.2186	0.4798	0.5844
S_HYDR	r_s	-0.3001	-0.3721	-0.2596	-0.1386	-0.4292	-0.2721	0.1909	0.1075
	p	0.0072	0.0005	0.0178	0.2230	0.0971	0.0128	0.0839	0.3364
S_LIMN	r_s	-0.4313	-0.4498	-0.2972	-0.0651	-0.0815	-0.2856	-0.2114	-0.2145
	p	0.0001	0.0000	0.0064	0.5686	0.7641	0.0089	0.0551	0.0530

TABLE 5. CORRELATIONS BETWEEN CANAL ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficient of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLES							
METRIC		DEPTH_ED	DEPTH_1	DEPTH_2	DEPTH_3	DEPTH_MX	DEPTH_AV	SED_1	SED_2
S_LEPT	r_s	-0.1320	-0.2330	-0.1087	0.0054	-0.0174	-0.1207	-0.0063	0.0076
	p	0.2461	0.0340	0.3279	0.9622	0.9491	0.2771	0.9552	0.9459
S_SM_DY	r_s	-0.2237	-0.2709	-0.2288	-0.1259	0.2115	-0.2036	0.1037	0.0658
	p	0.0475	0.0132	0.0374	0.2688	0.4317	0.0649	0.3508	0.5568
S_CM	r_s	-0.2701	-0.2912	-0.2329	-0.1015	-0.1040	-0.1976	-0.0273	0.0846
	p	0.0161	0.0076	0.0341	0.3734	0.7014	0.0734	0.8065	0.4498
S_HTR	r_s	-0.1228	-0.2563	-0.2751	-0.2538	-0.3972	-0.2705	0.0916	0.2129
	p	0.2808	0.0193	0.0118	0.0240	0.1277	0.0134	0.4100	0.0549
S_PHEMIP	r_s	-0.2660	-0.3784	-0.3538	-0.2342	-0.0928	-0.3131	0.0571	0.1312
	p	0.0178	0.0004	0.0010	0.0377	0.7324	0.0039	0.6080	0.2401
S_DHEMIP	r_s	-0.0616	-0.1525	-0.2034	-0.1215	-0.0633	-0.1573	0.1057	0.2118
	p	0.5894	0.1688	0.0651	0.2863	0.8158	0.1557	0.3414	0.0561
S_EPT	r_s	-0.2044	-0.2579	-0.1245	0.0764	-0.0403	-0.1150	-0.1168	-0.1561
	p	0.0707	0.0186	0.2623	0.5033	0.8821	0.3006	0.2931	0.1614
S_ETO	r_s	-0.1583	-0.2245	-0.1171	0.0765	0.0545	-0.0983	-0.0410	-0.0524
	p	0.1634	0.0413	0.2919	0.5030	0.8411	0.3767	0.7126	0.6402
F_TRICLA	r_s	-0.1396	-0.1317	-0.1445	-0.0919	-0.3059	-0.1305	-0.0507	0.1325
	p	0.2200	0.2352	0.1925	0.4207	0.2492	0.2396	0.6493	0.2353
F_GASTRO	r_s	-0.2232	-0.3199	-0.2324	-0.0718	0.2485	-0.2057	-0.1707	-0.0444
	p	0.0480	0.0032	0.0345	0.5297	0.3533	0.0621	0.1229	0.6923
F_BIVALV	r_s	-0.1048	0.0315	0.0065	0.1009	-0.0356	0.0562	-0.1058	-0.0138
	p	0.3578	0.7776	0.9536	0.3762	0.8960	0.6141	0.3411	0.9021
F_HIRUDI	r_s	-0.0472	-0.1731	-0.2203	-0.1626	-0.1993	-0.1931	0.1263	0.1965
	p	0.6796	0.1176	0.0453	0.1523	0.4593	0.0803	0.2551	0.0768
F_DECAPO	r_s	-0.0025	0.0484	0.0827	0.1240	0.1864	0.0811	-0.0950	-0.1113
	p	0.9822	0.6637	0.4576	0.2761	0.4894	0.4663	0.3931	0.3196
F_ISOPOD	r_s	-0.1793	-0.2804	-0.3301	-0.1877	-0.0828	-0.2886	0.0600	0.1381
	p	0.1139	0.0102	0.0023	0.0976	0.7603	0.0081	0.5901	0.2161
F_AMPHIP	r_s	-0.2293	-0.2141	-0.2284	-0.0094	0.2253	-0.1644	-0.1674	-0.1511
	p	0.0421	0.0520	0.0378	0.9345	0.4016	0.1376	0.1304	0.1755
F_EPHEME	r_s	-0.0488	0.0365	0.1207	0.2332	0.3304	0.1322	-0.0106	-0.0319
	p	0.6691	0.7434	0.2772	0.0386	0.2114	0.2335	0.9242	0.7763
F_ODONAT	r_s	0.0023	-0.0261	-0.0632	0.0833	0.2140	-0.0062	0.0117	0.1200
	p	0.9842	0.8146	0.5705	0.4653	0.4261	0.9554	0.9163	0.2831
F_HEMIPT	r_s	-0.2794	-0.3598	-0.3586	-0.2287	-0.0317	-0.3083	0.0568	0.1427
	p	0.0127	0.0008	0.0009	0.0427	0.9074	0.0046	0.6098	0.2010
F_COLEOP	r_s	-0.3076	-0.3720	-0.2872	-0.1408	-0.5918	-0.2732	0.0712	0.0653
	p	0.0058	0.0005	0.0085	0.2160	0.0157	0.0125	0.5223	0.5600
F_TRICHO	r_s	-0.1073	-0.1911	-0.1305	0.0775	-0.0597	-0.1019	-0.0842	-0.0955
	p	0.3468	0.0835	0.2395	0.4971	0.8261	0.3595	0.4490	0.3934
F_LEPID	r_s	0.0034	-0.0090	0.0030	0.0489	-0.3107	0.0386	0.3607	0.2775
	p	0.9765	0.9360	0.9786	0.6686	0.2415	0.7291	0.0008	0.0116
F_DIPT	r_s	-0.0772	-0.0195	-0.0942	-0.1575	0.0055	-0.0980	0.1949	0.0845
	p	0.4987	0.8611	0.3972	0.1656	0.9838	0.3780	0.0775	0.4505
F_OLIGO	r_s	-0.0218	0.0513	-0.0485	-0.1457	-0.0849	-0.0433	0.1121	0.0258
	p	0.8487	0.6448	0.6631	0.2001	0.7546	0.6976	0.3128	0.8182
F_PHEMIP	r_s	-0.2635	-0.3858	-0.3503	-0.2332	-0.1134	-0.3134	0.0691	0.1280
	p	0.0190	0.0003	0.0012	0.0386	0.6759	0.0039	0.5349	0.2516
F_DHEMIP	r_s	-0.0948	-0.1536	-0.1990	-0.1253	-0.0878	-0.1496	0.1069	0.2148
	p	0.4058	0.1657	0.0714	0.2711	0.7466	0.1772	0.3359	0.0526

TABLE 5. CORRELATIONS BETWEEN CANAL ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficient of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLES							
METRIC		DEPTH_ED	DEPTH_1	DEPTH_2	DEPTH_3	DEPTH_MX	DEPTH_AV	SED_1	SED_2
F_CM	r_s	-0.2836	-0.3273	-0.2651	-0.0528	0.2294	-0.2213	-0.1948	-0.0543
	p	0.0113	0.0025	0.0154	0.6438	0.3926	0.0444	0.0776	0.6282
F_HTR	r_s	-0.1213	-0.2068	-0.2500	-0.1859	-0.3805	-0.2243	0.0755	0.2137
	p	0.2869	0.0606	0.0226	0.1010	0.1459	0.0415	0.4976	0.0538
F_EPT	r_s	-0.1035	-0.1302	-0.0489	0.1485	0.0957	-0.0237	-0.0582	-0.0749
	p	0.3638	0.2408	0.6606	0.1915	0.7244	0.8318	0.6013	0.5039
F_ETO	r_s	-0.0864	-0.1460	-0.0946	0.1247	0.1910	-0.0561	-0.0466	-0.0151
	p	0.4490	0.1879	0.3951	0.2735	0.4786	0.6143	0.6755	0.8929
F_OM	r_s	-0.0439	-0.0691	-0.0849	0.0468	0.1421	-0.0404	0.1165	0.1723
	p	0.7011	0.5345	0.4453	0.6821	0.5996	0.7170	0.2943	0.1217
F_EMO	r_s	-0.0532	-0.0434	-0.0091	0.1388	0.3021	0.0255	0.0914	0.1172
	p	0.6415	0.6967	0.9353	0.2225	0.2555	0.8190	0.4112	0.2945
F_PRED	r_s	-0.3358	-0.3517	-0.3327	-0.2023	-0.1933	-0.3050	0.1121	0.1778
	p	0.0025	0.0011	0.0021	0.0738	0.4732	0.0050	0.3130	0.1100
F_DETR	r_s	-0.3112	-0.2745	-0.2577	-0.0964	0.1247	-0.2201	0.0272	0.0750
	p	0.0053	0.0120	0.0187	0.3980	0.6454	0.0455	0.8069	0.5031
F_HERB	r_s	-0.2399	-0.2696	-0.2279	-0.0553	0.1133	-0.1865	0.0158	0.0496
	p	0.0332	0.0137	0.0382	0.6281	0.6761	0.0914	0.8870	0.6581
BMWP	r_s	-0.2596	-0.2878	-0.2189	-0.0108	0.1644	-0.1767	-0.0293	0.0626
	p	0.0209	0.0083	0.0468	0.9245	0.5428	0.1101	0.7925	0.5762
ASPT	r_s	-0.0332	-0.0405	0.0566	0.2506	0.2556	0.0785	-0.2135	-0.2038
	p	0.7712	0.7159	0.6111	0.0259	0.3394	0.4806	0.0526	0.0663

TABLE 5. CORRELATIONS BETWEEN CANAL ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficient of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLES							
METRIC		SED_3	SED_TOT	TOTAL_D1	TOTAL_D2	TOTAL_D3	TOT_DAV	WIDTH	CHE_QUAL
INV_N.SP	r_s	0.1315	0.0754	-0.1634	-0.0398	0.0331	-0.0455	0.1368	0.3201
	p	0.2606	0.5009	0.1399	0.7206	0.7767	0.6828	0.2176	0.0032
INV_N.FA	r_s	0.1274	0.0669	-0.1539	-0.0403	0.0468	-0.0427	0.1282	0.3270
	p	0.2759	0.5504	0.1647	0.7176	0.6880	0.7015	0.2480	0.0025
INV_N.OR	r_s	0.1225	0.0670	-0.1012	-0.0428	0.0731	-0.0256	0.1370	0.2693
	p	0.2950	0.5499	0.3625	0.7006	0.5302	0.8182	0.2170	0.0138
INV_SRS	r_s	0.1156	0.0549	-0.1866	-0.0598	0.0317	-0.0692	0.1200	0.3359
	p	0.3235	0.6243	0.0912	0.5911	0.7858	0.5341	0.2798	0.0019
INV_SRI	r_s	0.0703	-0.0192	-0.1380	-0.0210	0.1252	-0.0351	0.0550	0.1697
	p	0.5492	0.8641	0.2134	0.8506	0.2814	0.7528	0.6214	0.1251
S_TRIC	r_s	0.0039	0.0006	-0.0540	0.0194	-0.0100	-0.0162	0.0929	-0.0081
	p	0.9734	0.9954	0.6277	0.8622	0.9320	0.8843	0.4035	0.9418
S_GAST	r_s	0.1146	0.0396	-0.1751	-0.0939	-0.0138	-0.1186	0.1815	0.1452
	p	0.3275	0.7238	0.1134	0.3985	0.9059	0.2856	0.1005	0.1904
S_BIVALV	r_s	-0.0087	-0.0061	-0.0054	0.1277	0.1086	0.1108	0.0803	0.1442
	p	0.9409	0.9565	0.9610	0.2498	0.3503	0.3187	0.4704	0.1932
S_HIRU	r_s	0.2472	0.2173	-0.0788	0.0001	0.0086	-0.0391	0.1795	-0.1438
	p	0.0325	0.0499	0.4790	0.9993	0.9409	0.7256	0.1045	0.1946
S_ARAN	r_s	0.0063	0.0564	0.0636	0.0610	-0.0046	0.0270	-0.0137	0.1525
	p	0.9571	0.6150	0.5681	0.5841	0.9683	0.8089	0.9025	0.1688
S_DECA	r_s	-0.0363	-0.0923	-0.0071	-0.0283	-0.0154	-0.0235	0.1071	0.2202
	p	0.7569	0.4097	0.9494	0.7993	0.8947	0.8330	0.3350	0.0454
S_ISOP	r_s	0.1993	0.1513	-0.0683	-0.0550	-0.0179	-0.0722	-0.1375	-0.0079
	p	0.0866	0.1749	0.5395	0.6215	0.8781	0.5163	0.2151	0.9437
S_AMPH	r_s	-0.2845	-0.2428	-0.2490	-0.3050	-0.2478	-0.2688	-0.1896	0.1442
	p	0.0134	0.0279	0.0232	0.0050	0.0309	0.0140	0.0860	0.1933
S_EPHE	r_s	-0.0383	-0.0634	0.0055	0.0565	0.0887	0.0672	0.0762	0.6073
	p	0.7441	0.5716	0.9605	0.6116	0.4461	0.5463	0.4937	0.0000
S_ODON	r_s	0.3256	0.2693	0.1515	0.2011	0.2829	0.2052	0.1566	0.2046
	p	0.0044	0.0144	0.1716	0.0683	0.0133	0.0627	0.1575	0.0636
S_HEMI	r_s	0.0546	0.0554	-0.1822	-0.1350	-0.0319	-0.1228	0.1509	0.2526
	p	0.6419	0.6211	0.0993	0.2238	0.7845	0.2686	0.1732	0.0212
S_COLE	r_s	0.1500	0.0682	-0.1703	-0.0848	0.0341	-0.0720	0.0187	0.2630
	p	0.1991	0.5426	0.1238	0.4462	0.7703	0.5178	0.8669	0.0163
S_MEGA	r_s	0.1872	0.1192	-0.0021	0.0781	0.1287	0.0990	-0.0372	0.2879
	p	0.1078	0.2862	0.9847	0.4830	0.2680	0.3734	0.7384	0.0083
S_TRICH	r_s	-0.1796	-0.2073	-0.2544	-0.1779	-0.1169	-0.1656	0.0169	0.4864
	p	0.1230	0.0617	0.0203	0.1076	0.3147	0.1345	0.8796	0.0000
S_LEPID	r_s	0.2059	0.2033	0.2340	0.1960	0.1713	0.1971	0.1062	0.2307
	p	0.0764	0.0669	0.0333	0.0757	0.1390	0.0741	0.3393	0.0359
S_PLAN	r_s	0.2334	0.1778	-0.0580	0.0498	0.0748	0.0108	0.1440	0.0892
	p	0.0439	0.1100	0.6026	0.6548	0.5209	0.9225	0.1939	0.4228
S_BAET	r_s	0.3073	0.2453	0.1079	0.2267	0.2738	0.2244	0.0164	0.3490
	p	0.0073	0.0264	0.3317	0.0393	0.0167	0.0414	0.8828	0.0012
S_COEN	r_s	0.3768	0.3517	0.1808	0.2465	0.2829	0.2418	0.1202	0.1064
	p	0.0009	0.0012	0.1018	0.0247	0.0133	0.0276	0.2790	0.3385
S_HALIP	r_s	0.0536	0.0311	-0.1124	-0.0846	-0.0031	-0.0906	0.0579	0.3371
	p	0.6482	0.7817	0.3117	0.4469	0.9785	0.4153	0.6030	0.0018
S_HYDR	r_s	0.2197	0.1260	-0.1410	-0.0614	0.1108	-0.0230	0.0448	0.1146
	p	0.0582	0.2592	0.2035	0.5815	0.3405	0.8362	0.6875	0.3024
S_LIMN	r_s	-0.2285	-0.2536	-0.4336	-0.3247	-0.2254	-0.3115	0.0535	0.3417
	p	0.0487	0.0215	0.0000	0.0027	0.0502	0.0041	0.6309	0.0016

TABLE 5. CORRELATIONS BETWEEN CANAL ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficient of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLES							
METRIC		SED_3	SED_TOT	TOTAL_D1	TOTAL_D2	TOTAL_D3	TOT_DAV	WIDTH	CHE_QUAL
S_LEPT	r_s	0.0456	-0.0026	-0.1275	-0.0443	-0.0067	-0.0545	0.1277	0.5237
	p	0.6976	0.9817	0.2509	0.6912	0.9540	0.6244	0.2500	0.0000
S_SM_DY	r_s	0.1149	0.0487	-0.1066	-0.0515	0.0187	-0.0429	0.0402	0.3311
	p	0.3263	0.6639	0.3373	0.6439	0.8725	0.7001	0.7180	0.0022
S_CM	r_s	0.0673	0.0075	-0.1739	-0.0795	-0.0098	-0.1052	0.1328	0.1611
	p	0.5659	0.9468	0.1159	0.4752	0.9330	0.3440	0.2314	0.1457
S_HTR	r_s	0.1674	0.1424	-0.1221	-0.0384	-0.0253	-0.0786	0.2077	-0.1288
	p	0.1512	0.2020	0.2714	0.7300	0.8280	0.4802	0.0596	0.2459
S_PHEMIP	r_s	0.0203	0.0230	-0.2075	-0.1347	-0.0814	-0.1426	0.1996	0.3119
	p	0.8630	0.8372	0.0598	0.2245	0.4843	0.1983	0.0704	0.0041
S_DHEMIP	r_s	0.1581	0.1510	-0.0303	-0.0195	0.0680	0.0011	0.0048	0.1389
	p	0.1755	0.1756	0.7858	0.8613	0.5593	0.9921	0.9655	0.2104
S_EPT	r_s	-0.1695	-0.1981	-0.2132	-0.1547	-0.0969	-0.1414	0.0397	0.5727
	p	0.1461	0.0745	0.0529	0.1625	0.4053	0.2022	0.7219	0.0000
S_ETO	r_s	-0.0419	-0.0864	-0.1468	-0.0709	0.0056	-0.0615	0.0689	0.5186
	p	0.7211	0.4403	0.1853	0.5241	0.9615	0.5805	0.5359	0.0000
F_TRICLA	r_s	0.0072	0.0058	-0.0620	0.0168	-0.0041	-0.0196	0.1029	-0.0098
	p	0.9509	0.9590	0.5779	0.8803	0.9720	0.8606	0.3548	0.9297
F_GASTRO	r_s	0.0415	-0.0667	-0.2755	-0.1626	-0.0543	-0.2030	0.1424	0.2200
	p	0.7235	0.5516	0.0117	0.1419	0.6413	0.0657	0.1991	0.0456
F_BIVALV	r_s	-0.1460	-0.1257	-0.0549	0.0164	-0.0144	0.0012	0.0448	0.1188
	p	0.2113	0.2604	0.6223	0.8829	0.9016	0.9913	0.6876	0.2847
F_HIRUDI	r_s	0.1354	0.1605	-0.0678	-0.0387	-0.0238	-0.0638	0.1721	-0.0912
	p	0.2467	0.1497	0.5423	0.7283	0.8385	0.5664	0.1197	0.4123
F_DECAPO	r_s	-0.0363	-0.0923	-0.0071	-0.0283	-0.0154	-0.0235	0.1071	0.2202
	p	0.7569	0.4097	0.9494	0.7993	0.8947	0.8330	0.3350	0.0454
F_ISOPOD	r_s	0.0795	0.0723	-0.2095	-0.1738	-0.1274	-0.1953	-0.0335	-0.0148
	p	0.4980	0.5183	0.0573	0.1161	0.2729	0.0769	0.7639	0.8940
F_AMPHIP	r_s	-0.2845	-0.2428	-0.2490	-0.3050	-0.2478	-0.2688	-0.1896	0.1442
	p	0.0134	0.0279	0.0232	0.0050	0.0309	0.0140	0.0860	0.1933
F_EPHEME	r_s	-0.0023	-0.0289	0.0494	0.1127	0.1432	0.1202	0.0506	0.6009
	p	0.9843	0.7969	0.6572	0.3104	0.2170	0.2790	0.6497	0.0000
F_ODONAT	r_s	0.1937	0.1104	0.0225	0.0868	0.1959	0.0945	0.1699	0.0834
	p	0.0959	0.3233	0.8398	0.4350	0.0900	0.3953	0.1246	0.4535
F_HEMIPT	r_s	0.0280	0.0381	-0.1974	-0.1604	-0.0878	-0.1583	0.1636	0.2703
	p	0.8116	0.7343	0.0737	0.1473	0.4508	0.1530	0.1395	0.0134
F_COLEOP	r_s	0.1227	0.0614	-0.2111	-0.1354	-0.0095	-0.1255	0.0477	0.2635
	p	0.2943	0.5835	0.0554	0.2223	0.9350	0.2582	0.6686	0.0161
F_TRICHO	r_s	-0.1424	-0.1615	-0.1338	-0.0909	-0.0441	-0.0710	-0.0361	0.4104
	p	0.2228	0.1472	0.2277	0.4138	0.7049	0.5239	0.7463	0.0001
F_LEPID	r_s	0.2011	0.2030	0.2322	0.1939	0.1664	0.1944	0.1068	0.2298
	p	0.0837	0.0674	0.0346	0.0791	0.1509	0.0783	0.3367	0.0366
F_DIPT	r_s	0.1851	0.1172	0.0818	0.0601	0.1555	0.1196	0.0816	-0.2115
	p	0.1120	0.2945	0.4625	0.5896	0.1798	0.2814	0.4635	0.0549
F_OLIGO	r_s	0.1034	0.0624	0.0958	0.0613	0.0838	0.0938	0.1136	-0.2646
	p	0.3774	0.5776	0.3892	0.5817	0.4717	0.3991	0.3066	0.0156
F_PHEMIP	r_s	0.0138	0.0178	-0.2015	-0.1368	-0.0885	-0.1455	0.1916	0.3179
	p	0.9067	0.8738	0.0677	0.2174	0.4470	0.1892	0.0828	0.0034
F_DHEMIP	r_s	0.1503	0.1606	-0.0395	-0.0380	0.0349	-0.0192	0.0394	0.1686
	p	0.1980	0.1496	0.7229	0.7333	0.7649	0.8635	0.7239	0.1275

TABLE 5. CORRELATIONS BETWEEN CANAL ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficient of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLES							
METRIC		SED_3	SED_TOT	TOTAL_D1	TOTAL_D2	TOTAL_D3	TOT_DAV	WIDTH	CHE_QUAL
F_CM	r_s	-0.0573	-0.1331	-0.3024	-0.2096	-0.1233	-0.2422	0.0915	0.2561
	p	0.6255	0.2332	0.0055	0.0572	0.2886	0.0274	0.4106	0.0194
F_HTR	r_s	0.1144	0.1318	-0.0925	-0.0326	-0.0245	-0.0689	0.1864	-0.0915
	p	0.3286	0.2380	0.4056	0.7696	0.8338	0.5361	0.0916	0.4109
F_EPT	r_s	-0.0794	-0.1127	-0.0833	-0.0262	0.0416	-0.0085	0.0137	0.5660
	p	0.4984	0.3134	0.4538	0.8140	0.7214	0.9393	0.9019	0.0000
F_ETO	r_s	0.0188	-0.0452	-0.0877	-0.0174	0.0989	0.0033	0.0385	0.5093
	p	0.8730	0.6871	0.4302	0.8758	0.3952	0.9761	0.7299	0.0000
F_OM	r_s	0.2530	0.1565	0.0298	0.1097	0.2195	0.1249	0.0925	0.1757
	p	0.0285	0.1603	0.7894	0.3233	0.0568	0.2604	0.4055	0.1122
F_EMO	r_s	0.1840	0.1108	0.0420	0.1286	0.2282	0.1434	0.0643	0.4276
	p	0.1140	0.3218	0.7064	0.2467	0.0475	0.1958	0.5637	0.0001
F_PRED	r_s	0.1704	0.1162	-0.1655	-0.0763	0.0231	-0.0704	0.1547	0.1923
	p	0.1438	0.2986	0.1350	0.4933	0.8431	0.5270	0.1626	0.0815
F_DETR	r_s	0.0832	0.0169	-0.1649	-0.0678	0.0167	-0.0572	-0.0181	0.2835
	p	0.4777	0.8802	0.1363	0.5427	0.8859	0.6076	0.8712	0.0094
F_HERB	r_s	0.1191	0.0302	-0.1611	-0.0708	0.0573	-0.0631	0.1620	0.2894
	p	0.3090	0.7880	0.1457	0.5250	0.6233	0.5709	0.1434	0.0080
BMWP	r_s	0.0407	-0.0003	-0.1863	-0.0747	0.0050	-0.0745	0.0781	0.4267
	p	0.7287	0.9978	0.0917	0.5021	0.9659	0.5034	0.4826	0.0001
ASPT	r_s	-0.2365	-0.2300	-0.1036	-0.0680	-0.0053	-0.0450	-0.1066	0.6025
	p	0.0410	0.0376	0.3512	0.5413	0.9639	0.6862	0.3375	0.0000

TABLE 5. CORRELATIONS BETWEEN CANAL ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficient of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLES						
METRIC		SED_QUAL	FLOW	BOATS	ADS	AL	ALK	AMM
INV_N.SP	r_s	0.2352	0.1235	-0.5012	-0.1851	0.1530	0.1477	0.0804
	p	0.0408	0.3431	0.0000	0.0959	0.2312	0.1828	0.4698
INV_N.FA	r_s	0.2477	0.1281	-0.4161	-0.1241	0.1431	0.1617	0.0831
	p	0.0310	0.3251	0.0002	0.2666	0.2631	0.1443	0.4554
INV_N.OR	r_s	0.2277	0.1276	-0.4461	-0.1992	0.1037	0.0821	-0.0147
	p	0.0479	0.3271	0.0000	0.0728	0.4186	0.4604	0.8951
INV_SRS	r_s	0.2329	0.1224	-0.5135	-0.1878	0.1582	0.1603	0.0829
	p	0.0429	0.3475	0.0000	0.0911	0.2157	0.1477	0.4563
INV_SRI	r_s	0.0870	0.1413	-0.2216	-0.0169	-0.0210	-0.0393	0.0171
	p	0.4546	0.2774	0.0527	0.8800	0.8705	0.7241	0.8784
S_TRIC	r_s	-0.1355	-0.0688	-0.2043	-0.0851	0.1894	-0.0023	-0.0841
	p	0.2430	0.5985	0.0747	0.4473	0.1371	0.9837	0.4497
S_GAST	r_s	0.1342	-0.0757	-0.3259	-0.0964	0.0989	0.0693	0.0113
	p	0.2477	0.5620	0.0038	0.3891	0.4406	0.5338	0.9196
S_BIVALV	r_s	0.1483	0.2487	0.0364	0.1516	0.0671	0.1489	0.0605
	p	0.2012	0.0533	0.7534	0.1739	0.6014	0.1790	0.5872
S_HIRU	r_s	-0.1163	-0.2434	-0.1985	-0.0152	0.2332	0.0231	0.0697
	p	0.3170	0.0587	0.0835	0.8921	0.0659	0.8358	0.5311
S_ARAN	r_s	-0.0264	-0.0158	-0.2041	-0.0714	-0.2029	0.0256	-0.1743
	p	0.8210	0.9039	0.0750	0.5239	0.1107	0.8183	0.1150
S_DECA	r_s	-0.0396	0.2102	-0.0975	-0.0957	0.1575	0.0141	0.1026
	p	0.7343	0.1039	0.3988	0.3923	0.2176	0.8994	0.3562
S_ISOP	r_s	0.0271	-0.0797	-0.1722	-0.0229	-0.0105	-0.0266	-0.1729
	p	0.8165	0.5417	0.1343	0.8379	0.9352	0.8116	0.1179
S_AMPH	r_s	0.1764	0.1649	0.1940	0.2623	0.1630	0.0130	0.0414
	p	0.1274	0.2042	0.0909	0.0173	0.2018	0.9068	0.7105
S_EPHE	r_s	0.2648	0.3174	-0.4360	-0.1440	-0.0771	0.2911	0.2211
	p	0.0208	0.0127	0.0001	0.1968	0.5481	0.0076	0.0446
S_ODON	r_s	-0.0586	-0.1680	-0.5820	-0.3450	0.2234	0.0870	-0.0067
	p	0.6153	0.1955	0.0000	0.0015	0.0784	0.4344	0.9523
S_HEMI	r_s	0.2099	0.0675	-0.3494	-0.1657	0.0513	0.0163	0.0583
	p	0.0688	0.6051	0.0018	0.1367	0.6896	0.8837	0.6007
S_COLE	r_s	0.2691	0.0805	-0.4080	-0.2053	0.0405	0.0799	-0.0153
	p	0.0187	0.5375	0.0002	0.0643	0.7524	0.4730	0.8908
S_MEGA	r_s	0.2936	0.1859	-0.5392	-0.3258	0.0667	0.1723	0.0723
	p	0.0101	0.1513	0.0000	0.0028	0.6037	0.1193	0.5162
S_TRICH	r_s	0.3695	0.2805	-0.3052	-0.1059	-0.0536	0.0087	0.1252
	p	0.0010	0.0286	0.0069	0.3436	0.6765	0.9376	0.2594
S_LEPID	r_s	0.0157	0.0905	-0.4343	-0.2649	-0.1164	0.0467	-0.1392
	p	0.8931	0.4879	0.0001	0.0162	0.3636	0.6749	0.2094
S_PLAN	r_s	0.0133	-0.1483	-0.5229	-0.2640	0.0593	0.0967	0.0263
	p	0.9096	0.2542	0.0000	0.0165	0.6442	0.3845	0.8137
S_BAET	r_s	0.0705	0.3797	-0.5720	-0.3220	0.1665	0.1980	0.0215
	p	0.5449	0.0025	0.0000	0.0032	0.1922	0.0727	0.8469
S_COEN	r_s	-0.1229	-0.1994	-0.6243	-0.4019	0.2678	0.0206	-0.0651
	p	0.2901	0.1234	0.0000	0.0002	0.0338	0.8531	0.5587
S_HALIP	r_s	0.0937	-0.0989	-0.3459	-0.2640	-0.0557	0.1241	-0.0879
	p	0.4209	0.4483	0.0021	0.0165	0.6649	0.2635	0.4296
S_HYDR	r_s	0.1904	0.0680	-0.4496	-0.2396	0.1015	0.1055	0.0559
	p	0.0994	0.6028	0.0000	0.0302	0.4285	0.3423	0.6157
S_LIMN	r_s	0.3584	0.2069	-0.1499	-0.0219	0.0947	-0.0986	0.0170
	p	0.0015	0.1096	0.1933	0.8451	0.4603	0.3750	0.8788

TABLE 5. CORRELATIONS BETWEEN CANAL ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficient of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLES						
METRIC		SED_QUAL	FLOW	BOATS	ADS	AL	ALK	AMM
S_LEPT	r_s	0.2773	0.1843	-0.4871	-0.2247	-0.0462	0.2353	0.2009
	p	0.0153	0.1552	0.0000	0.0424	0.7194	0.0322	0.0686
S_SM_DY	r_s	0.3135	0.1295	-0.3157	-0.0602	0.0703	-0.0088	-0.0056
	p	0.0058	0.3200	0.0052	0.5913	0.5843	0.9367	0.9597
S_CM	r_s	0.1647	0.0150	-0.2347	-0.0107	0.1502	0.0900	0.0254
	p	0.1550	0.9084	0.0399	0.9243	0.2401	0.4186	0.8196
S_HTR	r_s	-0.1707	-0.2431	-0.2326	-0.0512	0.2827	0.0258	0.0280
	p	0.1404	0.0590	0.0418	0.6475	0.0248	0.8166	0.8015
S_PHEMIP	r_s	0.2556	0.1840	-0.3607	-0.1447	0.0502	0.0197	0.1173
	p	0.0258	0.1558	0.0013	0.1945	0.6962	0.8597	0.2908
S_DHEMIP	r_s	0.0719	-0.1267	-0.2261	-0.1000	0.0035	0.0065	-0.0709
	p	0.5371	0.3307	0.0480	0.3712	0.9780	0.9533	0.5240
S_EPT	r_s	0.3671	0.3165	-0.3809	-0.1281	-0.0738	0.0931	0.1576
	p	0.0011	0.0130	0.0006	0.2514	0.5652	0.4024	0.1548
S_ETO	r_s	0.2938	0.2273	-0.4912	-0.2083	0.0184	0.1087	0.1268
	p	0.0100	0.0781	0.0000	0.0604	0.8864	0.3279	0.2534
F_TRICLA	r_s	-0.1387	-0.0771	-0.2133	-0.0722	0.1881	0.0175	-0.0806
	p	0.2321	0.5547	0.0625	0.5195	0.1398	0.8754	0.4690
F_GASTRO	r_s	0.2296	-0.0421	-0.1819	0.0075	0.1516	0.0887	0.0589
	p	0.0460	0.7472	0.1134	0.9467	0.2355	0.4253	0.5969
F_BIVALV	r_s	0.0852	0.1740	0.1556	0.1534	-0.0139	0.1616	0.0786
	p	0.4642	0.1799	0.1766	0.1688	0.9137	0.1445	0.4802
F_HIRUDI	r_s	-0.1361	-0.2345	-0.1790	0.0384	0.2069	0.0450	0.0618
	p	0.2410	0.0689	0.1192	0.7322	0.1037	0.6862	0.5792
F_DECAPO	r_s	-0.0396	0.2102	-0.0975	-0.0957	0.1575	0.0141	0.1026
	p	0.7343	0.1039	0.3988	0.3923	0.2176	0.8994	0.3562
F_ISOPOD	r_s	-0.0810	-0.1246	-0.1673	0.0277	0.0734	0.0068	-0.1225
	p	0.4868	0.3385	0.1457	0.8048	0.5676	0.9514	0.2699
F_AMPHIP	r_s	0.1764	0.1649	0.1940	0.2623	0.1630	0.0130	0.0414
	p	0.1274	0.2042	0.0909	0.0173	0.2018	0.9068	0.7105
F_EPHEME	r_s	0.2685	0.3464	-0.4427	-0.1644	-0.0754	0.2650	0.2166
	p	0.0190	0.0062	0.0001	0.1400	0.5568	0.0155	0.0492
F_ODONAT	r_s	0.0165	-0.1664	-0.3551	-0.2010	0.2408	0.0567	0.0442
	p	0.8875	0.1998	0.0015	0.0702	0.0573	0.6107	0.6919
F_HEMIPT	r_s	0.2248	0.1048	-0.3198	-0.1585	0.0393	0.0092	0.0506
	p	0.0509	0.4216	0.0046	0.1551	0.7597	0.9340	0.6496
F_COLEOP	r_s	0.2354	0.0816	-0.3129	-0.1324	0.0044	0.0594	-0.0456
	p	0.0406	0.5317	0.0056	0.2358	0.9727	0.5938	0.6825
F_TRICHO	r_s	0.2831	0.3114	-0.2687	-0.0575	-0.1913	0.0513	0.1046
	p	0.0132	0.0146	0.0181	0.6082	0.1332	0.6451	0.3465
F_LEPID	r_s	0.0099	0.0888	-0.4332	-0.2609	-0.1278	0.0519	-0.1368
	p	0.9321	0.4962	0.0001	0.0179	0.3183	0.6411	0.2176
F_DIPT	r_s	0.0296	-0.0181	-0.0033	0.0424	0.0964	-0.0703	-0.0009
	p	0.7993	0.8899	0.9775	0.7055	0.4524	0.5276	0.9936
F_OLIGO	r_s	0.0400	-0.0126	0.2102	0.0987	0.0371	-0.1664	-0.0921
	p	0.7312	0.9233	0.0665	0.3777	0.7729	0.1327	0.4076
F_PHEMIP	r_s	0.2643	0.1801	-0.3560	-0.1492	0.0468	0.0137	0.1135
	p	0.0211	0.1648	0.0015	0.1810	0.7159	0.9024	0.3070
F_DHEMIP	r_s	0.0553	-0.1170	-0.2017	-0.0973	-0.0384	-0.0085	-0.0734
	p	0.6354	0.3690	0.0785	0.3845	0.7648	0.9391	0.5095

TABLE 5. CORRELATIONS BETWEEN CANAL ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficient of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLES						
METRIC		SED QUAL	FLOW	BOATS	ADS	AL	ALK	AMM
F_CM	r_s	0.2306	0.0768	-0.0892	0.0984	0.1649	0.0732	0.0666
	p	0.0450	0.5561	0.4406	0.3789	0.1964	0.5110	0.5499
F_HTR	r_s	-0.1892	-0.2360	-0.2387	-0.0206	0.2690	0.0617	-0.0011
	p	0.1016	0.0671	0.0365	0.8542	0.0330	0.5792	0.9923
F_EPT	r_s	0.3070	0.3542	-0.4138	-0.1320	-0.1200	0.1535	0.1674
	p	0.0070	0.0051	0.0002	0.2371	0.3489	0.1659	0.1303
F_ETO	r_s	0.2822	0.2540	-0.4839	-0.1765	-0.0230	0.1381	0.1637
	p	0.0135	0.0482	0.0000	0.1127	0.8582	0.2131	0.1391
F_OM	r_s	0.1318	-0.0641	-0.5051	-0.3031	0.2254	0.1237	0.0482
	p	0.2566	0.6238	0.0000	0.0056	0.0756	0.2652	0.6654
F_EMO	r_s	0.2423	0.1356	-0.5889	-0.3003	0.1579	0.1949	0.1451
	p	0.0350	0.2976	0.0000	0.0061	0.2164	0.0775	0.1907
F_PRED	r_s	0.1827	0.0950	-0.4090	-0.1553	0.1326	0.0915	0.0231
	p	0.1143	0.4665	0.0002	0.1637	0.3001	0.4108	0.8357
F_DETR	r_s	0.2755	0.1885	-0.2559	-0.0476	0.1029	0.0651	0.1211
	p	0.0160	0.1457	0.0247	0.6708	0.4222	0.5587	0.2754
F_HERB	r_s	0.2520	0.0831	-0.3507	-0.1257	0.1003	0.0752	0.0439
	p	0.0281	0.5246	0.0018	0.2604	0.4342	0.4990	0.6933
BMWP	r_s	0.3027	0.1864	-0.4143	-0.1213	0.1289	0.1869	0.1485
	p	0.0079	0.1502	0.0002	0.2778	0.3140	0.0907	0.1802
ASPT	r_s	0.3526	0.3853	-0.1983	0.0330	-0.1601	0.1457	0.2113
	p	0.0018	0.0022	0.0839	0.7684	0.2102	0.1886	0.0552

TABLE 5. CORRELATIONS BETWEEN CANAL ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficient of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLES							
METRIC		ANTIMONY	AROMA	ARSENIC	AV_BORON	BARIUM	BERYLLIUM	BORON	CA
INV_N.SP	r_s	-0.1045	-0.1030	-0.1461	-0.0036	-0.3237	-0.1214	-0.0141	0.2161
	p	0.3501	0.3573	0.1875	0.9744	0.0030	0.2771	0.8998	0.0512
INV_N.FA	r_s	-0.1462	-0.1631	-0.1604	-0.0362	-0.3034	-0.1191	-0.0048	0.2412
	p	0.1901	0.1431	0.1475	0.7450	0.0056	0.2863	0.9660	0.0291
INV_N.OR	r_s	-0.1510	-0.0835	-0.1407	0.0314	-0.2630	-0.0774	-0.0189	0.1490
	p	0.1758	0.4555	0.2044	0.7779	0.0170	0.4896	0.8660	0.1816
INV_SRS	r_s	-0.1160	-0.0988	-0.1265	-0.0167	-0.3326	-0.1109	-0.0020	0.2406
	p	0.2992	0.3773	0.2544	0.8811	0.0023	0.3211	0.9857	0.0295
INV_SRI	r_s	0.0365	0.0160	-0.0130	-0.0493	-0.2044	-0.0057	0.0562	0.0318
	p	0.7445	0.8868	0.9073	0.6578	0.0654	0.9593	0.6162	0.7766
S_TRIC	r_s	0.1336	0.0674	0.0943	0.1430	-0.0176	0.1141	0.1090	0.0996
	p	0.2315	0.5474	0.3965	0.1970	0.8753	0.3072	0.3299	0.3733
S_GAST	r_s	-0.0356	-0.0433	0.0455	0.0088	-0.1950	0.0456	0.0918	0.1899
	p	0.7508	0.6990	0.6830	0.9372	0.0792	0.6844	0.4123	0.0875
S_BIVALV	r_s	-0.0454	-0.2830	-0.0740	-0.1907	0.0076	-0.1015	-0.0245	0.0972
	p	0.6852	0.0100	0.5063	0.0842	0.9457	0.3644	0.8268	0.3848
S_HIRU	r_s	0.1221	0.2080	0.1320	0.2552	-0.0801	0.0209	0.1191	0.1373
	p	0.2746	0.0607	0.2342	0.0199	0.4746	0.8524	0.2865	0.2188
S_ARAN	r_s	-0.0187	0.1869	0.0783	0.0391	0.0137	0.1146	0.0384	0.0247
	p	0.8674	0.0927	0.4817	0.7257	0.9026	0.3055	0.7317	0.8257
S_DECA	r_s	-0.1741	0.0024	-0.0977	-0.0176	-0.1687	-0.0229	-0.0096	0.0443
	p	0.1177	0.9830	0.3798	0.8744	0.1297	0.8385	0.9320	0.6930
S_ISOP	r_s	0.0771	-0.1024	0.1056	0.0818	-0.0222	0.1620	0.0967	0.0307
	p	0.4909	0.3599	0.3422	0.4623	0.8432	0.1459	0.3875	0.7841
S_AMPH	r_s	-0.4167	-0.2597	-0.2999	-0.1970	-0.1190	-0.1760	-0.0814	0.1472
	p	0.0001	0.0184	0.0059	0.0742	0.2868	0.1138	0.4671	0.1869
S_EPHE	r_s	-0.1795	-0.0708	-0.3058	-0.0316	-0.2737	-0.2383	-0.2171	0.2605
	p	0.1067	0.5276	0.0049	0.7767	0.0128	0.0311	0.0501	0.0181
S_ODON	r_s	0.1207	0.2123	0.1371	0.2188	-0.2026	0.1015	0.0755	0.1419
	p	0.2802	0.0555	0.2165	0.0469	0.0679	0.3641	0.5004	0.2036
S_HEMI	r_s	-0.0529	-0.0665	-0.1238	-0.0094	-0.1201	-0.1463	-0.0148	0.0348
	p	0.6370	0.5525	0.2649	0.9328	0.2826	0.1898	0.8953	0.7561
S_COLE	r_s	-0.1665	-0.1245	-0.1442	-0.0626	-0.3341	-0.0800	0.0479	0.1689
	p	0.1350	0.2651	0.1934	0.5743	0.0022	0.4747	0.6694	0.1292
S_MEGA	r_s	-0.0667	-0.2218	-0.1460	-0.0899	-0.3219	-0.1654	-0.1316	0.2642
	p	0.5515	0.0452	0.1878	0.4189	0.0032	0.1375	0.2385	0.0164
S_TRICH	r_s	-0.2351	-0.2186	-0.3645	-0.0979	-0.3162	-0.2675	-0.2064	0.0287
	p	0.0335	0.0485	0.0007	0.3787	0.0038	0.0151	0.0628	0.7979
S_LEPID	r_s	0.0947	0.1296	0.0967	0.1391	-0.1010	0.1710	0.0567	-0.0162
	p	0.3972	0.2459	0.3845	0.2099	0.3664	0.1244	0.6130	0.8848
S_PLAN	r_s	0.0786	0.0689	0.0788	0.0917	-0.2386	0.0553	0.1018	0.1762
	p	0.4828	0.5387	0.4786	0.4094	0.0309	0.6218	0.3628	0.1133
S_BAET	r_s	-0.0563	0.1225	-0.1426	0.0756	-0.3689	-0.0580	-0.0517	0.1790
	p	0.6156	0.2731	0.1984	0.4972	0.0006	0.6045	0.6445	0.1075
S_COEN	r_s	0.1991	0.2919	0.1359	0.2632	-0.1377	0.1237	0.0519	0.0254
	p	0.0729	0.0078	0.2206	0.0162	0.2172	0.2682	0.6436	0.8210
S_HALIP	r_s	0.0497	0.0298	0.0534	0.0824	-0.0386	0.1013	0.0908	0.1378
	p	0.6577	0.7907	0.6314	0.4591	0.7303	0.3649	0.4172	0.2171
S_HYDR	r_s	-0.0922	-0.1487	-0.1239	0.0010	-0.3720	-0.0584	0.1009	0.1660
	p	0.4098	0.1823	0.2643	0.9928	0.0006	0.6022	0.3672	0.1361
S_LIMN	r_s	-0.2524	-0.1958	-0.3389	-0.2021	-0.2803	-0.2512	-0.2466	-0.0882
	p	0.0222	0.0778	0.0024	0.0669	0.0107	0.0228	0.0255	0.4305

TABLE 5. CORRELATIONS BETWEEN CANAL ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficient of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLES							
METRIC		ANTIMONY	AROMA	ARSENIC AV	BORON	BARIUM	BERYLLIUM	BORON	CA
S_LEPT	r_s	-0.1476	-0.0949	-0.2825	0.0639	-0.2649	-0.2312	-0.1606	0.2167
	p	0.1858	0.3965	0.0097	0.5658	0.0162	0.0366	0.1495	0.0505
S_SM_DY	r_s	-0.1247	-0.1057	-0.0730	-0.0907	-0.3095	-0.1099	0.0118	0.1655
	p	0.2642	0.3444	0.5120	0.4149	0.0047	0.3259	0.9161	0.1373
S_CM	r_s	-0.1082	-0.1331	-0.0088	-0.0475	-0.1755	-0.0041	0.0745	0.2205
	p	0.3332	0.2332	0.9372	0.6698	0.1147	0.9708	0.5060	0.0465
S_HTR	r_s	0.1482	0.2027	0.1381	0.2866	-0.0684	0.0574	0.1423	0.1572
	p	0.1840	0.0678	0.2131	0.0086	0.5414	0.6087	0.2023	0.1584
S_PHEMIP	r_s	-0.0703	-0.1248	-0.2394	-0.0771	-0.2445	-0.2539	-0.1469	0.0109
	p	0.5303	0.2640	0.0293	0.4885	0.0269	0.0214	0.1879	0.9227
S_DHEMIP	r_s	0.0493	-0.0086	0.1092	0.0534	0.0578	0.0343	0.1694	0.0307
	p	0.6597	0.9387	0.3260	0.6313	0.6062	0.7595	0.1282	0.7841
S_EPT	r_s	-0.2475	-0.1760	-0.3885	-0.0885	-0.3243	-0.2756	-0.2477	0.0835
	p	0.0250	0.1136	0.0003	0.4264	0.0030	0.0122	0.0248	0.4560
S_ETO	r_s	-0.1870	-0.0775	-0.2829	-0.0133	-0.3510	-0.2015	-0.1911	0.1253
	p	0.0925	0.4889	0.0096	0.9049	0.0012	0.0695	0.0855	0.2620
F_TRICLA	r_s	0.1242	0.0612	0.0901	0.1405	-0.0177	0.1073	0.1103	0.1164
	p	0.2664	0.5848	0.4178	0.2052	0.8743	0.3373	0.3237	0.2979
F_GASTRO	r_s	-0.1176	-0.1551	-0.0055	-0.0728	-0.1811	0.0261	0.0410	0.2216
	p	0.2927	0.1641	0.9608	0.5133	0.1035	0.8159	0.7147	0.0454
F_BIVALV	r_s	-0.1367	-0.2445	-0.1282	-0.1612	0.0617	-0.1308	-0.0228	0.0974
	p	0.2206	0.0268	0.2481	0.1455	0.5818	0.2414	0.8392	0.3839
F_HIRUDI	r_s	0.1097	0.1710	0.1487	0.2188	-0.0081	0.0504	0.0917	0.1478
	p	0.3264	0.1244	0.1797	0.0469	0.9426	0.6531	0.4128	0.1851
F_DECAPO	r_s	-0.1741	0.0024	-0.0977	-0.0176	-0.1687	-0.0229	-0.0096	0.0443
	p	0.1177	0.9830	0.3798	0.8744	0.1297	0.8385	0.9320	0.6930
F_ISOPOD	r_s	0.0720	-0.0793	0.0827	0.0661	0.0079	0.1393	0.1356	0.0228
	p	0.5203	0.4791	0.4573	0.5530	0.9437	0.2120	0.2245	0.8392
F_AMPHIP	r_s	-0.4167	-0.2597	-0.2999	-0.1970	-0.1190	-0.1760	-0.0814	0.1472
	p	0.0001	0.0184	0.0059	0.0742	0.2868	0.1138	0.4671	0.1869
F_EPHEME	r_s	-0.2136	-0.0897	-0.2920	-0.0425	-0.3190	-0.2170	-0.2048	0.2575
	p	0.0540	0.4230	0.0074	0.7028	0.0035	0.0502	0.0649	0.0195
F_ODONAT	r_s	-0.0300	0.1256	0.1123	0.1116	-0.1636	0.0521	0.1033	0.1664
	p	0.7887	0.2610	0.3122	0.3154	0.1419	0.6423	0.3560	0.1350
F_HEMIPT	r_s	-0.0808	-0.0811	-0.1749	-0.0365	-0.1406	-0.1803	-0.0596	0.0121
	p	0.4708	0.4688	0.1137	0.7435	0.2078	0.1050	0.5946	0.9139
F_COLEOP	r_s	-0.1326	-0.1299	-0.1276	-0.0824	-0.2630	-0.0609	0.0383	0.1150
	p	0.2350	0.2446	0.2503	0.4587	0.0170	0.5868	0.7326	0.3035
F_TRICHO	r_s	-0.1984	-0.2278	-0.2922	-0.0782	-0.2941	-0.2054	-0.1742	0.0608
	p	0.0740	0.0396	0.0074	0.4823	0.0073	0.0642	0.1175	0.5872
F_LEPID	r_s	0.0997	0.1317	0.0959	0.1395	-0.0953	0.1703	0.0522	-0.0174
	p	0.3727	0.2381	0.3886	0.2085	0.3944	0.1261	0.6415	0.8768
F_DIPT	r_s	-0.0072	-0.1221	0.0082	0.0216	-0.1381	0.0217	0.1304	-0.0032
	p	0.9489	0.2743	0.9412	0.8466	0.2159	0.8465	0.2428	0.9771
F_OLIGO	r_s	0.0450	-0.0270	0.0456	-0.0094	0.0229	0.0104	0.0333	-0.2116
	p	0.6881	0.8098	0.6825	0.9326	0.8378	0.9262	0.7666	0.0563
F_PHEMIP	r_s	-0.0705	-0.1362	-0.2314	-0.0717	-0.2383	-0.2458	-0.1422	0.0146
	p	0.5289	0.2224	0.0353	0.5193	0.0311	0.0261	0.2025	0.8965
F_DHEMIP	r_s	0.0544	0.0120	0.0789	0.0623	0.0674	0.0158	0.1489	-0.0093
	p	0.6276	0.9150	0.4785	0.5761	0.5474	0.8876	0.1817	0.9338

TABLE 5. CORRELATIONS BETWEEN CANAL ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficient of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLES							
METRIC		ANTIMONY	AROMA	ARSENIC AV	BORON	BARIUM	BERYLLIUM	BORON	CA
F_CM	r_s	-0.2322	-0.2107	-0.1383	-0.1374	-0.1764	-0.0695	-0.0119	0.2065
	p	0.0358	0.0575	0.2126	0.2155	0.1129	0.5350	0.9154	0.0627
F_HTR	r_s	0.1478	0.1652	0.1616	0.2509	-0.0262	0.0989	0.1413	0.1762
	p	0.1853	0.1381	0.1444	0.0221	0.8153	0.3767	0.2053	0.1133
F_EPT	r_s	-0.2302	-0.1799	-0.3366	-0.0641	-0.3622	-0.2399	-0.2147	0.1552
	p	0.0375	0.1058	0.0019	0.5645	0.0008	0.0299	0.0527	0.1638
F_ETO	r_s	-0.2104	-0.1080	-0.2531	-0.0293	-0.3737	-0.1872	-0.1492	0.1850
	p	0.0578	0.3342	0.0210	0.7927	0.0005	0.0922	0.1811	0.0962
F_OM	r_s	-0.0488	0.0114	0.0300	0.0557	-0.2623	-0.0207	0.0336	0.2485
	p	0.6632	0.9192	0.7881	0.6168	0.0173	0.8536	0.7643	0.0243
F_EMO	r_s	-0.1552	-0.0293	-0.1354	0.0135	-0.3594	-0.1190	-0.0785	0.2895
	p	0.1637	0.7937	0.2222	0.9037	0.0009	0.2872	0.4833	0.0083
F_PRED	r_s	-0.0733	-0.0701	-0.1238	0.0477	-0.2371	-0.1199	0.0243	0.1730
	p	0.5128	0.5313	0.2649	0.6687	0.0320	0.2834	0.8287	0.1202
F_DETR	r_s	-0.2474	-0.2996	-0.2568	-0.1576	-0.3805	-0.1846	-0.0432	0.1286
	p	0.0251	0.0063	0.0191	0.1547	0.0004	0.0969	0.6998	0.2494
F_HERB	r_s	-0.1400	-0.1703	-0.1281	-0.0457	-0.3403	-0.0498	0.0470	0.1169
	p	0.2097	0.1260	0.2484	0.6819	0.0018	0.6571	0.6749	0.2956
BMWP	r_s	-0.2056	-0.2173	-0.2161	-0.0838	-0.3234	-0.1895	-0.0912	0.2530
	p	0.0639	0.0499	0.0497	0.4512	0.0030	0.0881	0.4149	0.0219
ASPT	r_s	-0.3270	-0.2986	-0.3930	-0.2246	-0.3130	-0.3166	-0.2811	0.1609
	p	0.0027	0.0064	0.0002	0.0412	0.0042	0.0038	0.0105	0.1487

TABLE 5. CORRELATIONS BETWEEN CANAL ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficient of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLES					
METRIC		CADMIUM	CHLORIDE	CHROMIUM	COBALT	COND	COPPER
INV_N.SP	r_s	-0.1756	-0.1895	-0.1122	-0.1846	-0.0847	-0.1496
	p	0.1122	0.0882	0.3124	0.0969	0.4462	0.1770
INV_N.FA	r_s	-0.1937	-0.1539	-0.1101	-0.2059	-0.0725	-0.1891
	p	0.0794	0.1675	0.3218	0.0634	0.5146	0.0868
INV_N.OR	r_s	-0.1807	-0.1556	-0.1508	-0.1641	-0.1001	-0.1367
	p	0.1022	0.1628	0.1734	0.1406	0.3681	0.2178
INV_SRS	r_s	-0.1876	-0.1862	-0.0982	-0.1564	-0.0674	-0.1449
	p	0.0894	0.0940	0.3770	0.1607	0.5451	0.1911
INV_SRI	r_s	-0.1955	-0.2194	0.0311	-0.0021	-0.1413	-0.1151
	p	0.0766	0.0477	0.7800	0.9853	0.2027	0.3003
S_TRIC	r_s	0.1004	0.0037	0.1209	0.0668	-0.0623	0.0739
	p	0.3664	0.9739	0.2762	0.5512	0.5761	0.5068
S_GAST	r_s	-0.0908	0.0246	0.0121	0.0242	0.0600	-0.0703
	p	0.4144	0.8264	0.9135	0.8292	0.5898	0.5275
S_BIVALV	r_s	-0.0089	0.0073	0.0464	-0.1377	-0.1294	-0.1570
	p	0.9364	0.9479	0.6773	0.2175	0.2436	0.1562
S_HIRU	r_s	0.1396	0.2169	0.0801	0.0492	0.0839	0.1296
	p	0.2082	0.0503	0.4717	0.6609	0.4508	0.2430
S_ARAN	r_s	0.0658	0.0741	0.0418	0.1705	0.0674	0.0229
	p	0.5547	0.5082	0.7073	0.1256	0.5450	0.8371
S_DECA	r_s	-0.1019	-0.1304	-0.0412	-0.0396	-0.0810	0.0399
	p	0.3594	0.2430	0.7118	0.7242	0.4664	0.7200
S_ISOP	r_s	0.0864	0.0432	0.1141	0.1252	0.0616	-0.0272
	p	0.4375	0.6997	0.3045	0.2623	0.5800	0.8071
S_AMPH	r_s	-0.1473	0.0988	-0.1993	-0.2751	0.0165	-0.2215
	p	0.1838	0.3773	0.0709	0.0124	0.8824	0.0442
S_EPHE	r_s	-0.1402	-0.2529	-0.1645	-0.3201	-0.0535	-0.0621
	p	0.2062	0.0219	0.1372	0.0034	0.6309	0.5768
S_ODON	r_s	0.0085	-0.1986	0.1068	0.1197	-0.0651	0.1493
	p	0.9395	0.0736	0.3365	0.2841	0.5589	0.1780
S_HEMI	r_s	-0.1393	-0.1775	-0.1272	-0.1912	-0.1474	-0.1537
	p	0.2091	0.1107	0.2519	0.0853	0.1837	0.1652
S_COLE	r_s	-0.2844	-0.2090	-0.1840	-0.1471	-0.0274	-0.2336
	p	0.0092	0.0595	0.0960	0.1871	0.8055	0.0335
S_MEGA	r_s	-0.2700	-0.3087	-0.1289	-0.2132	-0.0809	-0.2059
	p	0.0136	0.0048	0.2455	0.0545	0.4674	0.0618
S_TRICH	r_s	-0.2165	-0.4469	-0.3372	-0.3621	-0.2737	-0.2084
	p	0.0493	0.0000	0.0018	0.0008	0.0123	0.0586
S_LEPID	r_s	0.0737	-0.0410	0.0883	0.1494	-0.0515	0.0310
	p	0.5081	0.7146	0.4272	0.1803	0.6437	0.7810
S_PLAN	r_s	-0.0532	-0.0581	0.0508	0.0453	0.0331	0.0050
	p	0.6330	0.6040	0.6484	0.6860	0.7663	0.9642
S_BAET	r_s	-0.1204	-0.1754	-0.0826	-0.1624	-0.0437	-0.0078
	p	0.2784	0.1151	0.4579	0.1450	0.6946	0.9442
S_COEN	r_s	0.0780	-0.1883	0.1037	0.1208	-0.0857	0.2076
	p	0.4833	0.0902	0.3509	0.2797	0.4412	0.0597
S_HALIP	r_s	-0.0437	-0.1522	0.0431	0.0423	0.0105	-0.0033
	p	0.6950	0.1724	0.6987	0.7059	0.9250	0.9767
S_HYDR	r_s	-0.2700	-0.1317	-0.1243	-0.1591	-0.0241	-0.1754
	p	0.0136	0.2383	0.2630	0.1535	0.8290	0.1127
S_LIMN	r_s	-0.2683	-0.4064	-0.3930	-0.2945	-0.2776	-0.2709
	p	0.0142	0.0002	0.0002	0.0072	0.0110	0.0132

TABLE 5. CORRELATIONS BETWEEN CANAL ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficient of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLES					
METRIC		CADMIUM	CHLORIDE	CHROMIUM	COBALT	COND	COPPER
S_LEPT	r_s	-0.1251	-0.3440	-0.1790	-0.2790	-0.1212	-0.0762
	p	0.2597	0.0016	0.1054	0.0111	0.2749	0.4938
S_SM_DY	r_s	-0.2597	-0.2153	-0.1903	-0.1262	-0.0353	-0.2345
	p	0.0177	0.0521	0.0848	0.2585	0.7513	0.0329
S_CM	r_s	-0.0987	0.0505	0.0070	-0.0420	0.0273	-0.1247
	p	0.3746	0.6525	0.9500	0.7082	0.8064	0.2614
S_HTR	r_s	0.1640	0.2006	0.0945	0.0554	0.0562	0.1494
	p	0.1386	0.0707	0.3956	0.6210	0.6141	0.1775
S_PHEMIP	r_s	-0.2061	-0.2145	-0.1731	-0.2605	-0.2019	-0.2020
	p	0.0615	0.0529	0.1176	0.0181	0.0671	0.0670
S_DHEMIP	r_s	-0.0011	-0.0929	0.0208	0.0165	-0.0580	-0.0868
	p	0.9924	0.4063	0.8520	0.8830	0.6023	0.4350
S_EPT	r_s	-0.2200	-0.4323	-0.3266	-0.3819	-0.2246	-0.1803
	p	0.0456	0.0001	0.0026	0.0004	0.0412	0.1028
S_ETO	r_s	-0.1978	-0.4196	-0.2546	-0.2829	-0.1921	-0.1193
	p	0.0731	0.0001	0.0202	0.0100	0.0820	0.2826
F_TRICLA	r_s	0.1005	0.0160	0.1292	0.0593	-0.0475	0.0784
	p	0.3660	0.8864	0.2445	0.5967	0.6696	0.4810
F_GASTRO	r_s	-0.1661	-0.0206	0.0319	-0.0552	0.0130	-0.1050
	p	0.1335	0.8545	0.7746	0.6226	0.9068	0.3447
F_BIVALV	r_s	0.0257	0.0464	-0.0122	-0.1601	-0.0963	-0.1195
	p	0.8179	0.6786	0.9131	0.1509	0.3863	0.2820
F_HIRUDI	r_s	0.1845	0.2832	0.1213	0.0608	0.1341	0.1635
	p	0.0950	0.0099	0.2747	0.5872	0.2268	0.1397
F_DECAPO	r_s	-0.1019	-0.1304	-0.0412	-0.0396	-0.0810	0.0399
	p	0.3594	0.2430	0.7118	0.7242	0.4664	0.7200
F_ISOPOD	r_s	0.1791	0.0336	0.1352	0.1586	0.0748	0.0291
	p	0.1053	0.7642	0.2231	0.1546	0.5016	0.7936
F_AMPHIP	r_s	-0.1473	0.0988	-0.1993	-0.2751	0.0165	-0.2215
	p	0.1838	0.3773	0.0709	0.0124	0.8824	0.0442
F_EPHEME	r_s	-0.1706	-0.2597	-0.1671	-0.3291	-0.0597	-0.0693
	p	0.1231	0.0185	0.1311	0.0025	0.5918	0.5338
F_ODONAT	r_s	-0.0750	-0.1352	0.0204	0.0979	-0.0282	0.0316
	p	0.5005	0.2260	0.8545	0.3813	0.8000	0.7770
F_HEMIPT	r_s	-0.1675	-0.1942	-0.1676	-0.2150	-0.1528	-0.1754
	p	0.1300	0.0804	0.1298	0.0524	0.1677	0.1128
F_COLEOP	r_s	-0.2473	-0.1865	-0.1768	-0.1128	-0.0050	-0.2394
	p	0.0242	0.0933	0.1099	0.3130	0.9643	0.0293
F_TRICHO	r_s	-0.1523	-0.3679	-0.2539	-0.3031	-0.2163	-0.1877
	p	0.1691	0.0007	0.0205	0.0056	0.0495	0.0893
F_LEPID	r_s	0.0788	-0.0408	0.0899	0.1515	-0.0512	0.0364
	p	0.4787	0.7157	0.4191	0.1742	0.6458	0.7442
F_DIPT	r_s	-0.1006	0.0325	-0.0422	-0.1072	-0.0435	-0.1571
	p	0.3657	0.7721	0.7046	0.3378	0.6960	0.1560
F_OLIGO	r_s	-0.0493	0.0589	-0.0572	-0.0713	-0.0943	-0.0855
	p	0.6578	0.5992	0.6074	0.5246	0.3963	0.4424
F_PHEMIP	r_s	-0.2015	-0.2052	-0.1635	-0.2540	-0.1955	-0.1973
	p	0.0678	0.0645	0.1396	0.0213	0.0766	0.0738
F_DHEMIP	r_s	0.0219	-0.1223	0.0064	0.0261	-0.0734	-0.0591
	p	0.8440	0.2739	0.9543	0.8157	0.5095	0.5958

TABLE 5. CORRELATIONS BETWEEN CANAL ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficient of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLES					
METRIC		**CADMIUM**	**CHLORIDE**	**CHROMIUM**	**COBALT**	**COND**	**COPPER**
F_CM	r_s	-0.1690	-0.0075	-0.0590	-0.1623	-0.0346	-0.1825
	p	0.1266	0.9464	0.5965	0.1452	0.7562	0.0987
F_HTR	r_s	0.1927	0.2442	0.1501	0.0799	0.0971	0.1675
	p	0.0810	0.0271	0.1757	0.4753	0.3826	0.1300
F_EPT	r_s	-0.1870	-0.3740	-0.2540	-0.3570	-0.1767	-0.1495
	p	0.0905	0.0005	0.0205	0.0010	0.1101	0.1774
F_ETO	r_s	-0.2081	-0.3706	-0.2163	-0.2736	-0.1654	-0.1359
	p	0.0590	0.0006	0.0496	0.0129	0.1351	0.2205
F_OM	r_s	-0.1732	-0.2246	-0.0355	-0.0042	-0.0425	-0.0566
	p	0.1174	0.0425	0.7498	0.9700	0.7027	0.6115
F_EMO	r_s	-0.2275	-0.3051	-0.1240	-0.1652	-0.0745	-0.0906
	p	0.0386	0.0053	0.2642	0.1380	0.5033	0.4154
F_PRED	r_s	-0.1482	-0.1295	-0.1374	-0.1709	-0.0488	-0.1484
	p	0.1812	0.2463	0.2154	0.1248	0.6613	0.1805
F_DETR	r_s	-0.2797	-0.2425	-0.2219	-0.3139	-0.1558	-0.3084
	p	0.0104	0.0281	0.0438	0.0041	0.1595	0.0046
F_HERB	r_s	-0.2353	-0.2323	-0.1230	-0.1845	-0.1290	-0.2005
	p	0.0322	0.0358	0.2679	0.0970	0.2451	0.0692
BMWP	r_s	-0.2290	-0.2456	-0.1601	-0.2645	-0.1062	-0.1999
	p	0.0373	0.0262	0.1481	0.0164	0.3391	0.0700
ASPT	r_s	-0.2713	-0.4282	-0.2916	-0.3489	-0.1547	-0.2346
	p	0.0131	0.0001	0.0075	0.0013	0.1627	0.0328

TABLE 5. CORRELATIONS BETWEEN CANAL ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficient of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLES					
METRIC		CU	CYANIDE	EA_AMN	EA_AMN_Z	EA_BOD	EA_TON
INV_N.SP	r_s	0.0009	-0.1436	-0.2854	-0.1051	-0.1598	-0.0255
	p	0.9951	0.1979	0.0131	0.3629	0.1569	0.8223
INV_N.FA	r_s	-0.0034	-0.1707	-0.2634	-0.0818	-0.1574	0.0587
	p	0.9815	0.1252	0.0224	0.4792	0.1633	0.6052
INV_N.OR	r_s	-0.0114	-0.1108	-0.3104	-0.1072	-0.1230	-0.0016
	p	0.9378	0.3218	0.0067	0.3534	0.2771	0.9891
INV_SRS	r_s	-0.0148	-0.1218	-0.3070	-0.1400	-0.1951	-0.0530
	p	0.9194	0.2756	0.0074	0.2246	0.0829	0.6405
INV_SRI	r_s	-0.3450	0.0594	-0.2683	-0.2376	-0.1786	-0.2150
	p	0.0152	0.5958	0.0200	0.0375	0.1130	0.0555
S_TRIC	r_s	0.0377	-0.1157	-0.0909	0.0043	-0.0055	-0.1719
	p	0.7970	0.3006	0.4379	0.9702	0.9614	0.1274
S_GAST	r_s	0.0247	-0.1170	-0.1623	-0.0451	-0.0601	-0.0125
	p	0.8661	0.2952	0.1640	0.6971	0.5964	0.9123
S_BIVALV	r_s	-0.0534	-0.2110	-0.0777	0.0150	-0.1022	0.1481
	p	0.7156	0.0570	0.5074	0.8967	0.3669	0.1899
S_HIRU	r_s	0.2031	-0.0278	0.0460	0.2331	0.2244	-0.0067
	p	0.1616	0.8039	0.6952	0.0414	0.0454	0.9532
S_ARAN	r_s	-0.1991	0.0670	-0.1887	-0.1585	-0.1354	-0.0313
	p	0.1701	0.5498	0.1050	0.1685	0.2312	0.7825
S_DECA	r_s	0.1747	0.0547	-0.2207	-0.1843	-0.0882	-0.1230
	p	0.2300	0.6252	0.0570	0.1086	0.4366	0.2772
S_ISOP	r_s	-0.0757	0.0741	-0.0935	0.0016	-0.0325	-0.1286
	p	0.6051	0.5082	0.4251	0.9889	0.7744	0.2555
S_AMPH	r_s	-0.0568	-0.2165	-0.2311	-0.1696	-0.1584	0.3263
	p	0.6984	0.0507	0.0461	0.1404	0.1604	0.0031
S_EPHE	r_s	-0.0924	-0.1011	-0.3189	-0.1950	-0.2740	0.0517
	p	0.5280	0.3662	0.0053	0.0893	0.0139	0.6490
S_ODON	r_s	0.1467	0.2158	-0.2538	-0.0758	-0.0552	-0.3355
	p	0.3144	0.0515	0.0280	0.5126	0.6268	0.0023
S_HEMI	r_s	-0.0116	-0.1475	-0.1321	-0.0264	-0.0991	0.0578
	p	0.9368	0.1861	0.2586	0.8195	0.3816	0.6104
S_COLE	r_s	-0.0529	-0.1040	-0.2545	-0.1135	-0.2525	-0.0070
	p	0.7179	0.3522	0.0275	0.3259	0.0239	0.9507
S_MEGA	r_s	0.0431	-0.0485	-0.2815	-0.1727	-0.3122	-0.0919
	p	0.7687	0.6652	0.0144	0.1330	0.0048	0.4173
S_TRICH	r_s	-0.1653	-0.1469	-0.3845	-0.3443	-0.2705	-0.0240
	p	0.2565	0.1880	0.0007	0.0022	0.0152	0.8330
S_LEPID	r_s	-0.1058	0.1788	-0.1940	-0.1038	-0.2159	-0.1631
	p	0.4692	0.1080	0.0954	0.3692	0.0544	0.1483
S_PLAN	r_s	0.0100	0.0156	-0.0804	0.0062	-0.0535	-0.1811
	p	0.9458	0.8891	0.4931	0.9572	0.6377	0.1080
S_BAET	r_s	0.0389	0.0371	-0.1874	-0.0796	-0.1468	-0.1823
	p	0.7907	0.7405	0.1075	0.4914	0.1937	0.1056
S_COEN	r_s	0.1942	0.2625	-0.2071	-0.0329	-0.0163	-0.3464
	p	0.1811	0.0172	0.0747	0.7767	0.8859	0.0016
S_HALIP	r_s	0.0894	0.1047	-0.2139	-0.1492	-0.3116	0.0143
	p	0.5412	0.3492	0.0654	0.1953	0.0049	0.9001
S_HYDR	r_s	-0.1176	-0.0931	-0.2594	-0.0729	-0.1332	-0.0423
	p	0.4211	0.4055	0.0246	0.5286	0.2387	0.7092
S_LIMN	r_s	-0.0866	-0.1504	-0.3335	-0.3465	-0.2546	-0.0461
	p	0.5543	0.1774	0.0035	0.0020	0.0226	0.6845

TABLE 5. CORRELATIONS BETWEEN CANAL ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficient of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLES					
METRIC		CU	CYANIDE	EA_AMN	EA_AMN_Z	EA_BOD	EA_TON
S_LEPT	r_s	-0.0642	-0.1443	-0.3436	-0.2167	-0.2186	-0.0123
	p	0.6613	0.1959	0.0025	0.0584	0.0514	0.9140
S_SM_DY	r_s	0.0127	-0.1548	-0.2373	-0.1510	-0.2392	0.0441
	p	0.9310	0.1650	0.0403	0.1898	0.0326	0.6977
S_CM	r_s	0.0122	-0.1803	-0.1606	-0.0412	-0.0810	0.0661
	p	0.9337	0.1049	0.1687	0.7221	0.4749	0.5602
S_HTR	r_s	0.1747	-0.0711	-0.0073	0.1981	0.1974	-0.0637
	p	0.2299	0.5254	0.9504	0.0841	0.0793	0.5743
S_PHEMIP	r_s	-0.0432	-0.2349	-0.1682	-0.0294	-0.1841	0.0568
	p	0.7680	0.0337	0.1492	0.7997	0.1022	0.6165
S_DHEMIP	r_s	0.0116	0.0024	-0.0088	0.0089	-0.0262	0.0111
	p	0.9367	0.9829	0.9403	0.9389	0.8178	0.9221
S_EPT	r_s	-0.1537	-0.1184	-0.4090	-0.3379	-0.3005	-0.0179
	p	0.2919	0.2892	0.0003	0.0027	0.0068	0.8751
S_ETO	r_s	-0.0855	-0.0319	-0.3999	-0.3024	-0.2492	-0.1111
	p	0.5590	0.7758	0.0004	0.0075	0.0258	0.3267
F_TRICLA	r_s	0.0363	-0.1201	-0.0967	0.0005	-0.0006	-0.1712
	p	0.8043	0.2826	0.4090	0.9964	0.9956	0.1290
F_GASTRO	r_s	-0.0475	-0.2207	-0.2355	-0.1586	-0.1382	0.1153
	p	0.7461	0.0463	0.0420	0.1683	0.2216	0.3085
F_BIVALV	r_s	-0.1261	-0.1344	-0.0038	0.0509	-0.0385	0.1911
	p	0.3881	0.2285	0.9740	0.6600	0.7349	0.0895
F_HIRUDI	r_s	0.2258	-0.0482	0.0215	0.2698	0.1813	0.0837
	p	0.1188	0.6669	0.8549	0.0177	0.1076	0.4603
F_DECAPO	r_s	0.1747	0.0547	-0.2207	-0.1843	-0.0882	-0.1230
	p	0.2300	0.6252	0.0570	0.1086	0.4366	0.2772
F_ISOPOD	r_s	-0.1114	0.1268	-0.0766	-0.0058	-0.0576	-0.1192
	p	0.4460	0.2564	0.5138	0.9602	0.6121	0.2922
F_AMPHIP	r_s	-0.0568	-0.2165	-0.2311	-0.1696	-0.1584	0.3263
	p	0.6984	0.0507	0.0461	0.1404	0.1604	0.0031
F_EPHEME	r_s	-0.0767	-0.0930	-0.3174	-0.2096	-0.2948	0.0410
	p	0.6005	0.4059	0.0055	0.0673	0.0079	0.7180
F_ODONAT	r_s	0.1127	0.1303	-0.1307	0.0132	0.0834	-0.1986
	p	0.4406	0.2433	0.2638	0.9094	0.4621	0.0773
F_HEMIPT	r_s	-0.0326	-0.1655	-0.1340	-0.0453	-0.1249	0.0681
	p	0.8238	0.1374	0.2518	0.6957	0.2695	0.5484
F_COLEOP	r_s	-0.0407	-0.0713	-0.2506	-0.1103	-0.2450	0.0234
	p	0.7813	0.5242	0.0301	0.3397	0.0285	0.8366
F_TRICHO	r_s	-0.1662	-0.0395	-0.3547	-0.3337	-0.2386	-0.0267
	p	0.2539	0.7249	0.0018	0.0030	0.0330	0.8145
F_LEPID	r_s	-0.1160	0.1834	-0.1898	-0.1071	-0.2185	-0.1619
	p	0.4273	0.0991	0.1028	0.3537	0.0515	0.1513
F_DIPT	r_s	0.0615	-0.1295	0.0896	0.2306	0.2037	0.1074
	p	0.6748	0.2463	0.4445	0.0436	0.0700	0.3430
F_OLIGO	r_s	0.1071	-0.0735	0.1783	0.2451	0.3255	0.1246
	p	0.4640	0.5117	0.1259	0.0317	0.0032	0.2706
F_PHEMIP	r_s	-0.0218	-0.2346	-0.1725	-0.0325	-0.1903	0.0720
	p	0.8816	0.0339	0.1390	0.7792	0.0910	0.5258
F_DHEMIP	r_s	-0.0282	0.0182	-0.0308	-0.0491	-0.0698	-0.0195
	p	0.8475	0.8708	0.7930	0.6713	0.5381	0.8639

TABLE 5. CORRELATIONS BETWEEN CANAL ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficient of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLES					
METRIC		CU	CYANIDE	EA_AMN	EA_AMN_Z	EA_BOD	EA_TON
F_CM	r_s	-0.0888	-0.2518	-0.2551	-0.1662	-0.1488	0.1659
	p	0.5439	0.0225	0.0272	0.1485	0.1877	0.1414
F_HTR	r_s	0.1878	-0.0918	-0.0215	0.2106	0.1480	-0.0211
	p	0.1963	0.4119	0.8550	0.0660	0.1902	0.8524
F_EPT	r_s	-0.1231	-0.0643	-0.4098	-0.3365	-0.3106	-0.0296
	p	0.3994	0.5658	0.0003	0.0028	0.0050	0.7944
F_ETO	r_s	-0.0831	-0.0114	-0.4054	-0.3002	-0.2419	-0.0957
	p	0.5705	0.9190	0.0003	0.0080	0.0306	0.3986
F_OM	r_s	0.1162	0.0923	-0.2093	-0.0613	-0.0797	-0.1889
	p	0.4267	0.4093	0.0716	0.5966	0.4822	0.0933
F_EMO	r_s	0.0684	0.0268	-0.3286	-0.1558	-0.2000	-0.1293
	p	0.6407	0.8108	0.0040	0.1759	0.0753	0.2531
F_PRED	r_s	0.0270	-0.1130	-0.2037	-0.0130	-0.0271	-0.0046
	p	0.8540	0.3122	0.0796	0.9104	0.8117	0.9676
F_DETR	r_s	-0.0756	-0.2178	-0.1999	-0.0883	-0.1389	0.0573
	p	0.6055	0.0493	0.0855	0.4450	0.2192	0.6139
F_HERB	r_s	-0.0302	-0.1420	-0.2495	-0.1241	-0.1552	0.0069
	p	0.8370	0.2031	0.0308	0.2822	0.1693	0.9513
BMWP	r_s	-0.0195	-0.1876	-0.3129	-0.1666	-0.2110	0.0564
	p	0.8940	0.0915	0.0063	0.1476	0.0603	0.6190
ASPT	r_s	-0.1773	-0.0770	-0.4777	-0.4965	-0.4213	0.0051
	p	0.2229	0.4915	0.0000	0.0000	0.0001	0.9641

TABLE 5. CORRELATIONS BETWEEN CANAL ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficient of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLES					
METRIC		FE	K	LEAD	LON	MERCURY	MG
INV_N.SP	r_s	0.7072	-0.1949	-0.1540	0.0849	-0.0569	-0.1176
	p	0.0047	0.0793	0.1646	0.4484	0.6114	0.2926
INV_N.FA	r_s	0.6111	-0.1611	-0.2000	0.0224	-0.0625	-0.1075
	p	0.0203	0.1457	0.0698	0.8414	0.5768	0.3363
INV_N.OR	r_s	0.6215	-0.1845	-0.1432	0.1016	-0.0074	-0.0778
	p	0.0177	0.0950	0.1964	0.3640	0.9476	0.4871
INV_SRS	r_s	0.7115	-0.1957	-0.1592	0.0937	-0.0529	-0.1003
	p	0.0043	0.0781	0.1506	0.4026	0.6368	0.3700
INV_SRI	r_s	0.1925	-0.2392	-0.1255	0.0365	-0.0723	-0.1441
	p	0.5097	0.0304	0.2584	0.7446	0.5187	0.1966
S_TRIC	r_s	0.5563	0.0266	0.1479	0.1501	0.1075	0.0367
	p	0.0389	0.8126	0.1821	0.1785	0.3363	0.7434
S_GAST	r_s	0.6282	0.0564	-0.0434	-0.0257	-0.0415	0.1272
	p	0.0161	0.6148	0.6965	0.8189	0.7111	0.2550
S_BIVALV	r_s	0.2330	0.0985	-0.1698	-0.2885	-0.0832	-0.0932
	p	0.4228	0.3756	0.1249	0.0086	0.4574	0.4051
S_HIRU	r_s	0.5171	0.2779	0.1649	0.0482	0.1005	0.1977
	p	0.0583	0.0115	0.1363	0.6673	0.3689	0.0750
S_ARAN	r_s	0.1724	0.0412	0.0431	0.0303	-0.0658	0.0961
	p	0.5557	0.7135	0.6986	0.7868	0.5570	0.3906
S_DECA	r_s		-0.0975	-0.0388	0.1694	0.0610	-0.0885
	p		0.3807	0.7279	0.1282	0.5861	0.4291
S_ISOP	r_s		0.0778	-0.0238	-0.0077	-0.0300	0.1320
	p		0.4874	0.8306	0.9450	0.7893	0.2371
S_AMPH	r_s	0.2175	0.1086	-0.2759	-0.2940	-0.1664	-0.0011
	p	0.4551	0.3285	0.0116	0.0073	0.1350	0.9919
S_EPHE	r_s	-0.2585	-0.3041	-0.1009	0.1915	0.0476	-0.3116
	p	0.3721	0.0055	0.3643	0.0849	0.6710	0.0044
S_ODON	r_s	0.6469	-0.0779	0.1500	0.3524	0.2035	0.0132
	p	0.0124	0.4865	0.1760	0.0012	0.0667	0.9067
S_HEMI	r_s	0.5797	-0.2018	-0.1404	0.0542	-0.0395	-0.0902
	p	0.0298	0.0673	0.2055	0.6289	0.7244	0.4202
S_COLE	r_s	0.5716	-0.2386	-0.2533	0.0680	-0.1020	-0.1075
	p	0.0327	0.0309	0.0209	0.5438	0.3619	0.3363
S_MEGA	r_s	0.6275	-0.2862	-0.2049	0.2037	-0.1085	-0.1557
	p	0.0163	0.0092	0.0632	0.0664	0.3319	0.1625
S_TRICH	r_s	0.1888	-0.5146	-0.2388	0.1146	-0.0382	-0.4802
	p	0.5179	0.0000	0.0297	0.3055	0.7330	0.0000
S_LEPID	r_s	0.6296	-0.0476	0.0586	0.1814	-0.0864	0.0523
	p	0.0158	0.6708	0.5989	0.1029	0.4404	0.6410
S_PLAN	r_s	0.6346	0.0243	0.0250	0.1401	0.0020	0.0742
	p	0.0148	0.8283	0.8224	0.2092	0.9854	0.5077
S_BAET	r_s	0.1515	-0.1873	-0.0727	0.3255	-0.0355	-0.1540
	p	0.6052	0.0919	0.5134	0.0028	0.7517	0.1671
S_COEN	r_s	0.6698	-0.0522	0.1908	0.3859	0.2323	0.0056
	p	0.0088	0.6414	0.0840	0.0003	0.0357	0.9599
S_HALIP	r_s	0.5066	-0.1541	0.0500	0.1785	0.0741	-0.0927
	p	0.0645	0.1670	0.6538	0.1087	0.5081	0.4073
S_HYDR	r_s	0.4740	-0.1388	-0.2507	0.0944	-0.1082	-0.0599
	p	0.0869	0.2138	0.0222	0.3990	0.3332	0.5929
S_LIMN	r_s	0.2017	-0.4537	-0.3272	0.0096	-0.0981	-0.3255
	p	0.4894	0.0000	0.0025	0.9317	0.3807	0.0028

TABLE 5. CORRELATIONS BETWEEN CANAL ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficient of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLES					
METRIC		FE	K	LEAD	LON	MERCURY	MG
S_LEPT	r_s	0.2117	-0.3723	-0.0783	0.2219	0.0081	-0.3673
	p	0.4676	0.0006	0.4816	0.0452	0.9427	0.0007
S_SM_DY	r_s	0.6342	-0.2486	-0.2318	0.0116	-0.1162	-0.0544
	p	0.0148	0.0243	0.0350	0.9177	0.2984	0.6276
S_CM	r_s	0.6247	0.0873	-0.0983	-0.1299	-0.0965	0.1014
	p	0.0169	0.4327	0.3768	0.2447	0.3883	0.3646
S_HTR	r_s	0.5390	0.2571	0.1939	0.1045	0.1277	0.1912
	p	0.0467	0.0197	0.0791	0.3503	0.2529	0.0854
S_PHEMIP	r_s	0.5001	-0.1701	-0.2065	0.0199	-0.0804	-0.1194
	p	0.0686	0.1242	0.0610	0.8595	0.4727	0.2851
S_DHEMIP	r_s	0.4640	-0.1514	-0.0290	0.0113	-0.0576	-0.0392
	p	0.0946	0.1746	0.7948	0.9194	0.6072	0.7267
S_EPT	r_s	0.0101	-0.4970	-0.2179	0.1511	-0.0345	-0.4608
	p	0.9726	0.0000	0.0478	0.1754	0.7586	0.0000
S_ETO	r_s	0.3285	-0.4476	-0.1423	0.2401	0.0251	-0.3860
	p	0.2515	0.0000	0.1995	0.0298	0.8229	0.0003
F_TRICLA	r_s	0.5036	0.0388	0.1443	0.1419	0.1140	0.0452
	p	0.0664	0.7294	0.1931	0.2036	0.3078	0.6869
F_GASTRO	r_s	0.4440	0.0059	-0.0999	-0.0795	-0.0081	0.0429
	p	0.1117	0.9579	0.3688	0.4776	0.9426	0.7019
F_BIVALV	r_s	0.0694	0.1585	-0.1349	-0.2722	-0.0376	-0.0666
	p	0.8135	0.1525	0.2241	0.0134	0.7377	0.5520
F_HIRUDI	r_s	0.3125	0.3483	0.1689	0.0253	0.1701	0.2469
	p	0.2767	0.0013	0.1269	0.8213	0.1265	0.0253
F_DECAPO	r_s		-0.0975	-0.0388	0.1694	0.0610	-0.0885
	p		0.3807	0.7279	0.1282	0.5861	0.4291
F_ISOPOD	r_s		0.0890	-0.0408	-0.0298	0.0091	0.1167
	p		0.4263	0.7142	0.7903	0.9354	0.2963
F_AMPHIP	r_s	0.2175	0.1086	-0.2759	-0.2940	-0.1664	-0.0011
	p	0.4551	0.3285	0.0116	0.0073	0.1350	0.9919
F_EPHEME	r_s	-0.4251	-0.2939	-0.1235	0.2171	0.0620	-0.3203
	p	0.1297	0.0074	0.2658	0.0501	0.5799	0.0033
F_ODONAT	r_s	0.5685	-0.0688	0.0550	0.1737	0.1141	0.0722
	p	0.0339	0.5390	0.6215	0.1186	0.3072	0.5193
F_HEMIPT	r_s	0.5194	-0.1903	-0.1659	0.0410	-0.0625	-0.0962
	p	0.0570	0.0848	0.1339	0.7143	0.5770	0.3900
F_COLEOP	r_s	0.4905	-0.1918	-0.2653	-0.0093	-0.1194	-0.0860
	p	0.0749	0.0824	0.0153	0.9337	0.2854	0.4422
F_TRICHO	r_s	0.0612	-0.4232	-0.1986	0.0599	-0.0635	-0.4259
	p	0.8355	0.0001	0.0718	0.5930	0.5709	0.0001
F_LEPID	r_s	0.6275	-0.0461	0.0623	0.1807	-0.0817	0.0537
	p	0.0163	0.6808	0.5757	0.1042	0.4653	0.6320
F_DIPT	r_s	0.4043	0.0172	-0.1339	-0.0954	-0.1021	-0.0328
	p	0.1516	0.8783	0.2274	0.3940	0.3614	0.7701
F_OLIGO	r_s	0.0433	0.0378	-0.0461	-0.1624	-0.0743	-0.0092
	p	0.8832	0.7357	0.6793	0.1448	0.5071	0.9348
F_PHEMIP	r_s	0.5039	-0.1653	-0.2035	0.0179	-0.0887	-0.1127
	p	0.0662	0.1354	0.0650	0.8734	0.4279	0.3136
F_DHEMIP	r_s	0.3588	-0.1710	-0.0090	0.0191	-0.0349	-0.0581
	p	0.2077	0.1244	0.9353	0.8648	0.7555	0.6041

TABLE 5. CORRELATIONS BETWEEN CANAL ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficient of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLES					
METRIC		FE	K	LEAD	LON	MERCURY	MG
F_CM	r_s	0.4336	0.0413	-0.1827	-0.1739	-0.0979	0.0091
	p	0.1214	0.7106	0.0984	0.1182	0.3816	0.9357
F_HTR	r_s	0.4620	0.2860	0.1930	0.0977	0.1740	0.2321
	p	0.0963	0.0092	0.0805	0.3825	0.1179	0.0359
F_EPT	r_s	-0.1969	-0.4213	-0.1916	0.1632	-0.0124	-0.4283
	p	0.4998	0.0001	0.0827	0.1428	0.9116	0.0001
F_ETO	r_s	0.1162	-0.4061	-0.1566	0.1990	0.0166	-0.3463
	p	0.6925	0.0002	0.1574	0.0730	0.8821	0.0014
F_OM	r_s	0.6847	-0.1757	-0.0453	0.2316	0.0407	0.0000
	p	0.0069	0.1144	0.6841	0.0363	0.7163	0.9998
F_EMO	r_s	0.4457	-0.2987	-0.1033	0.2780	0.0357	-0.1687
	p	0.1102	0.0064	0.3528	0.0115	0.7498	0.1298
F_PRED	r_s	0.5635	-0.1294	-0.1471	0.0472	-0.0705	-0.0356
	p	0.0358	0.2466	0.1845	0.6736	0.5292	0.7510
F_DETR	r_s	0.5194	-0.2680	-0.3291	-0.0500	-0.1790	-0.2472
	p	0.0570	0.0149	0.0024	0.6554	0.1076	0.0252
F_HERB	r_s	0.5410	-0.2500	-0.2282	0.0394	-0.0858	-0.1854
	p	0.0457	0.0235	0.0380	0.7254	0.4436	0.0953
BMWP	r_s	0.5475	-0.2705	-0.2140	0.0493	-0.0403	-0.2074
	p	0.0427	0.0134	0.0520	0.6599	0.7196	0.0615
ASPT	r_s	-0.1556	-0.4863	-0.2831	-0.0139	-0.1061	-0.4553
	p	0.5952	0.0000	0.0095	0.9012	0.3426	0.0000

TABLE 5. CORRELATIONS BETWEEN CANAL ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficient of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLES					
METRIC		MOLYBDENUM	NA	NI	NICKEL	ORG	PB
INV_N.SP	r_s	-0.2002	-0.1624	-0.0304	-0.1633	-0.0687	0.5798
	p	0.0713	0.1450	0.8289	0.1401	0.5395	0.2278
INV_N.FA	r_s	-0.2320	-0.1122	-0.0341	-0.1687	-0.1480	0.6471
	p	0.0359	0.3154	0.8082	0.1274	0.1844	0.1649
INV_N.OR	r_s	-0.1761	-0.1151	-0.0910	-0.1494	-0.0423	0.6471
	p	0.1136	0.3033	0.5171	0.1777	0.7062	0.1649
INV_SRS	r_s	-0.1927	-0.1711	-0.0290	-0.1450	-0.0588	0.6377
	p	0.0828	0.1244	0.8368	0.1910	0.5998	0.1731
INV_SRI	r_s	-0.1523	-0.2136	-0.0668	0.0149	-0.0146	0.4638
	p	0.1719	0.0540	0.6345	0.8937	0.8967	0.3542
S_TRIC	r_s	-0.0658	0.0637	0.0905	0.0534	0.0642	0.1471
	p	0.5567	0.5696	0.5195	0.6315	0.5669	0.7810
S_GAST	r_s	-0.0942	0.0152	0.1131	-0.0251	-0.0836	0.5798
	p	0.4000	0.8919	0.4200	0.8215	0.4551	0.2278
S_BIVALV	r_s	-0.4089	0.0359	0.0342	-0.1011	-0.3858	0.0000
	p	0.0001	0.7488	0.8082	0.3629	0.0003	1.0000
S_HIRU	r_s	-0.0296	0.2768	0.1233	0.1962	-0.0157	0.1324
	p	0.7915	0.0118	0.3792	0.0755	0.8887	0.8026
S_ARAN	r_s	0.0887	0.0274	0.0583	0.1052	0.0564	
	p	0.4282	0.8066	0.6785	0.3439	0.6147	
S_DECA	r_s	-0.0243	-0.1292	-0.0747	-0.0035	0.0839	0.1328
	p	0.8282	0.2475	0.5948	0.9748	0.4534	0.8019
S_ISOP	r_s	0.0260	0.0281	-0.1144	0.1558	-0.0232	
	p	0.8165	0.8022	0.4147	0.1595	0.8358	
S_AMPH	r_s	-0.2219	0.0563	-0.1703	-0.1965	-0.4172	0.1050
	p	0.0451	0.6155	0.2229	0.0750	0.0001	0.8430
S_EPHE	r_s	-0.1457	-0.2813	-0.1344	-0.2672	0.0551	0.3773
	p	0.1914	0.0105	0.3374	0.0146	0.6227	0.4609
S_ODON	r_s	0.0915	-0.1619	0.2019	0.1165	0.2666	0.6176
	p	0.4138	0.1461	0.1472	0.2941	0.0155	0.1913
S_HEMI	r_s	-0.1740	-0.1421	-0.1154	-0.2370	-0.0458	0.3189
	p	0.1180	0.2029	0.4105	0.0310	0.6830	0.5379
S_COLE	r_s	-0.1148	-0.1793	0.0212	-0.1347	-0.0791	0.5882
	p	0.3045	0.1070	0.8801	0.2248	0.4801	0.2194
S_MEGA	r_s	-0.1876	-0.2609	0.0603	-0.2433	0.1182	0.2100
	p	0.0914	0.0179	0.6682	0.0267	0.2904	0.6896
S_TRICH	r_s	-0.2350	-0.4464	-0.3208	-0.3199	-0.0619	0.5852
	p	0.0336	0.0000	0.0192	0.0032	0.5807	0.2224
S_LEPID	r_s	-0.0051	-0.0762	0.1486	0.1348	0.1717	0.3985
	p	0.9640	0.4963	0.2884	0.2243	0.1229	0.4339
S_PLAN	r_s	-0.0047	-0.0577	0.1622	0.0160	0.0920	0.4638
	p	0.9664	0.6065	0.2458	0.8860	0.4112	0.3542
S_BAET	r_s	-0.0089	-0.2057	-0.0515	-0.0751	0.2275	0.4201
	p	0.9370	0.0637	0.7144	0.5000	0.0398	0.4069
S_COEN	r_s	0.1028	-0.1519	0.1623	0.1537	0.2901	0.4926
	p	0.3579	0.1730	0.2457	0.1654	0.0082	0.3209
S_HALIP	r_s	0.0492	-0.0986	0.1705	-0.0141	0.1063	0.9701
	p	0.6605	0.3780	0.2221	0.8991	0.3417	0.0013
S_HYDR	r_s	-0.1117	-0.0977	-0.0528	-0.0993	-0.0759	0.2156
	p	0.3177	0.3825	0.7072	0.3717	0.4978	0.6816
S_LIMN	r_s	-0.2236	-0.4002	-0.1266	-0.2882	-0.1048	0.8924
	p	0.0434	0.0002	0.3663	0.0082	0.3488	0.0168

TABLE 5. CORRELATIONS BETWEEN CANAL ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficient of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLES					
METRIC		MOLYBDENUM	NA	NI	NICKEL	ORG	PB
S_LEPT	r_s	-0.2422	-0.3419	-0.1192	-0.2373	0.0563	0.1819
	p	0.0284	0.0017	0.3952	0.0308	0.6157	0.7302
S_SM_DY	r_s	-0.1603	-0.1478	-0.0605	-0.1642	-0.0793	0.6568
	p	0.1502	0.1850	0.6671	0.1381	0.4786	0.1565
S_CM	r_s	-0.2053	0.0342	0.0498	-0.0696	-0.2079	0.9276
	p	0.0643	0.7602	0.7232	0.5319	0.0609	0.0077
S_HTR	r_s	-0.0108	0.2715	0.1158	0.1695	0.0251	0.1739
	p	0.9234	0.0136	0.4091	0.1256	0.8226	0.7417
S_PHEMIP	r_s	-0.3281	-0.2051	-0.0100	-0.2822	-0.0897	0.1618
	p	0.0026	0.0646	0.9433	0.0098	0.4229	0.7595
S_DHEMIP	r_s	0.0620	-0.0505	-0.2162	-0.0931	0.0162	0.4540
	p	0.5802	0.6523	0.1201	0.4028	0.8850	0.3658
S_EPT	r_s	-0.2161	-0.4453	-0.2790	-0.3386	-0.0202	0.5636
	p	0.0511	0.0000	0.0431	0.0017	0.8573	0.2441
S_ETO	r_s	-0.1527	-0.4202	-0.1825	-0.2619	0.0693	0.6377
	p	0.1708	0.0001	0.1910	0.0168	0.5363	0.1731
F_TRICLA	r_s	-0.0638	0.0784	0.1046	0.0670	0.0531	0.0448
	p	0.5693	0.4841	0.4559	0.5471	0.6356	0.9329
F_GASTRO	r_s	-0.1751	-0.0349	0.0881	-0.0862	-0.1910	0.7202
	p	0.1156	0.7558	0.5304	0.4386	0.0856	0.1065
F_BIVALV	r_s	-0.2983	0.0839	-0.0324	-0.1111	-0.3636	0.0000
	p	0.0065	0.4535	0.8176	0.3172	0.0008	1.0000
F_HIRUDI	r_s	0.0053	0.3553	0.1271	0.2517	-0.0776	0.2572
	p	0.9625	0.0011	0.3643	0.0217	0.4886	0.6226
F_DECAPO	r_s	-0.0243	-0.1292	-0.0747	-0.0035	0.0839	0.1328
	p	0.8282	0.2475	0.5948	0.9748	0.4534	0.8019
F_ISOPOD	r_s	0.0912	0.0554	-0.0257	0.1895	-0.0347	
	p	0.4153	0.6211	0.8551	0.0861	0.7569	
F_AMPHIP	r_s	-0.2219	0.0563	-0.1703	-0.1965	-0.4172	0.1050
	p	0.0451	0.6155	0.2229	0.0750	0.0001	0.8430
F_EPHEME	r_s	-0.1278	-0.2906	-0.1432	-0.2646	0.0720	0.3773
	p	0.2524	0.0081	0.3064	0.0156	0.5205	0.4609
F_ODONAT	r_s	0.1153	-0.0888	0.0997	0.0178	0.1576	0.7314
	p	0.3025	0.4277	0.4777	0.8730	0.1572	0.0985
F_HEMIPT	r_s	-0.2112	-0.1688	-0.0992	-0.2601	-0.0571	0.2353
	p	0.0569	0.1295	0.4796	0.0176	0.6101	0.6536
F_COLEOP	r_s	-0.1310	-0.1318	0.0281	-0.0970	-0.1401	0.4478
	p	0.2409	0.2377	0.8416	0.3828	0.2094	0.3732
F_TRICHO	r_s	-0.2121	-0.3417	-0.3206	-0.2222	-0.1019	0.2464
	p	0.0557	0.0017	0.0193	0.0435	0.3625	0.6379
F_LEPID	r_s	-0.0018	-0.0748	0.1421	0.1381	0.1705	0.3985
	p	0.9871	0.5040	0.3100	0.2132	0.1256	0.4339
F_DIPT	r_s	-0.0795	0.0806	-0.1256	-0.0697	-0.1508	0.2941
	p	0.4779	0.4718	0.3700	0.5311	0.1762	0.5715
F_OLIGO	r_s	0.0151	0.0906	-0.1921	-0.0511	-0.1081	-0.1328
	p	0.8929	0.4182	0.1681	0.6465	0.3338	0.8019
F_PHEMIP	r_s	-0.3206	-0.1977	-0.0132	-0.2791	-0.0863	0.0896
	p	0.0033	0.0751	0.9254	0.0106	0.4410	0.8660
F_DHEMIP	r_s	0.0546	-0.0888	-0.2309	-0.0628	0.0163	0.3961
	p	0.6260	0.4275	0.0962	0.5726	0.8842	0.4370

TABLE 5. CORRELATIONS BETWEEN CANAL ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficient of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLES					
METRIC		MOLYBDENUM	NA	NI	NICKEL	ORG	PB
F_CM	r_s	-0.2592	-0.0267	-0.0368	-0.1752	-0.2941	0.5224
	p	0.0187	0.8119	0.7934	0.1132	0.0073	0.2876
F_HTR	r_s	0.0074	0.3265	0.1501	0.2242	-0.0114	0.0313
	p	0.9475	0.0028	0.2833	0.0416	0.9190	0.9530
F_EPT	r_s	-0.1991	-0.3716	-0.2565	-0.2627	-0.0179	0.3135
	p	0.0730	0.0006	0.0637	0.0164	0.8732	0.5452
F_ETO	r_s	-0.1342	-0.3634	-0.2031	-0.2313	0.0314	0.5147
	p	0.2293	0.0008	0.1448	0.0354	0.7792	0.2961
F_OM	r_s	0.0214	-0.1791	0.1014	-0.0831	0.1836	0.6324
	p	0.8489	0.1074	0.4700	0.4551	0.0987	0.1779
F_EMO	r_s	-0.0450	-0.3007	0.0128	-0.2000	0.1715	0.6377
	p	0.6882	0.0061	0.9274	0.0698	0.1233	0.1731
F_PRED	r_s	-0.1608	-0.0593	-0.1066	-0.1405	-0.0803	0.2353
	p	0.1490	0.5964	0.4475	0.2050	0.4734	0.6536
F_DETR	r_s	-0.2594	-0.2066	-0.2308	-0.2688	-0.2224	0.6471
	p	0.0186	0.0625	0.0963	0.0140	0.0446	0.1649
F_HERB	r_s	-0.1514	-0.2007	-0.0902	-0.1419	-0.1252	0.9276
	p	0.1746	0.0706	0.5207	0.2008	0.2624	0.0077
BMWP	r_s	-0.2527	-0.2146	-0.0704	-0.2377	-0.1388	0.5147
	p	0.0220	0.0529	0.6167	0.0305	0.2136	0.2961
ASPT	r_s	-0.2676	-0.4441	-0.1883	-0.3292	-0.1533	0.2319
	p	0.0151	0.0000	0.1770	0.0024	0.1691	0.6584

TABLE 5. CORRELATIONS BETWEEN CANAL ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficient of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLES					
METRIC		PH	PHENOL	SED_PH	SELENUIM	SILVER	SRP
INV_N.SP	r_s	0.2325	0.1654	0.0836	0.1078	-0.0370	-0.0655
	p	0.0344	0.1350	0.4522	0.3351	0.7414	0.5564
INV_N.FA	r_s	0.2691	0.1339	0.1145	0.0626	-0.0674	-0.0699
	p	0.0139	0.2274	0.3026	0.5763	0.5471	0.5301
INV_N.OR	r_s	0.1703	0.2684	0.0957	0.1111	-0.0398	-0.1257
	p	0.1238	0.0142	0.3896	0.3205	0.7228	0.2576
INV_SRS	r_s	0.2551	0.1571	0.0979	0.1174	-0.0226	-0.0803
	p	0.0200	0.1562	0.3785	0.2933	0.8404	0.4705
INV_SRI	r_s	0.0733	0.0366	-0.0276	0.0568	-0.0063	-0.1749
	p	0.5103	0.7426	0.8046	0.6123	0.9550	0.1138
S_TRIC	r_s	0.0434	0.0437	-0.1228	0.0943	0.0810	-0.0631
	p	0.6967	0.6947	0.2686	0.3996	0.4692	0.5710
S_GAST	r_s	0.2007	0.0081	0.1448	-0.0038	-0.0891	0.0295
	p	0.0689	0.9418	0.1916	0.9728	0.4259	0.7916
S_BIVALV	r_s	0.2044	-0.2280	0.1026	-0.0067	-0.0796	-0.0972
	p	0.0638	0.0382	0.3558	0.9525	0.4774	0.3821
S_HIRU	r_s	0.0060	-0.2158	0.0012	0.0483	0.1311	0.0930
	p	0.9570	0.0501	0.9914	0.6668	0.2404	0.4028
S_ARAN	r_s	0.0027	0.1575	-0.0244	-0.0234	-0.0246	-0.0222
	p	0.9804	0.1550	0.8268	0.8347	0.8266	0.8421
S_DECA	r_s	0.1806	0.0484	-0.0715	0.0852	0.0241	-0.0750
	p	0.1023	0.6641	0.5207	0.4468	0.8299	0.5005
S_ISOP	r_s	0.1312	-0.0587	0.0965	-0.0069	0.0013	-0.0164
	p	0.2371	0.5981	0.3853	0.9511	0.9906	0.8830
S_AMPH	r_s	0.2834	-0.1567	0.0435	-0.2055	-0.1243	-0.0522
	p	0.0094	0.1571	0.6963	0.0640	0.2660	0.6394
S_EPHE	r_s	0.3345	0.3318	0.1220	0.2583	0.0188	-0.0691
	p	0.0020	0.0022	0.2720	0.0191	0.8671	0.5346
S_ODON	r_s	0.1858	0.1881	-0.0204	0.2831	0.1169	-0.0449
	p	0.0927	0.0886	0.8548	0.0100	0.2955	0.6869
S_HEMI	r_s	0.1317	0.1984	0.0757	0.0503	-0.0337	-0.1731
	p	0.2353	0.0722	0.4962	0.6534	0.7639	0.1176
S_COLE	r_s	0.1552	0.2496	0.0457	0.0116	-0.0597	-0.0824
	p	0.1611	0.0229	0.6817	0.9174	0.5942	0.4587
S_MEGA	r_s	0.1695	0.2789	0.0383	0.1276	0.0632	-0.0674
	p	0.1255	0.0107	0.7309	0.2534	0.5728	0.5450
S_TRICH	r_s	0.1937	0.3062	0.0268	0.1188	-0.0396	-0.1136
	p	0.0793	0.0049	0.8097	0.2879	0.7238	0.3067
S_LEPID	r_s	0.0738	0.2419	-0.0508	0.1022	-0.0206	-0.1609
	p	0.5075	0.0276	0.6482	0.3609	0.8546	0.1461
S_PLAN	r_s	0.1379	0.1139	-0.0174	0.0764	0.0235	0.0034
	p	0.2138	0.3052	0.8761	0.4953	0.8340	0.9757
S_BAET	r_s	0.2018	0.3591	-0.0716	0.2933	0.0567	-0.0910
	p	0.0673	0.0009	0.5203	0.0075	0.6127	0.4133
S_COEN	r_s	0.1011	0.2248	-0.0666	0.3362	0.1822	-0.0898
	p	0.3632	0.0411	0.5498	0.0020	0.1014	0.4194
S_HALIP	r_s	0.0929	0.3120	0.0330	0.1669	0.0338	-0.1971
	p	0.4035	0.0041	0.7670	0.1339	0.7631	0.0741
S_HYDR	r_s	0.1573	0.1541	-0.0355	-0.0040	-0.0005	0.0057
	p	0.1556	0.1643	0.7498	0.9718	0.9963	0.9590
S_LIMN	r_s	0.0662	0.2103	0.0046	0.0022	-0.0229	-0.1305
	p	0.5523	0.0563	0.9668	0.9841	0.8381	0.2395

TABLE 5. CORRELATIONS BETWEEN CANAL ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficient of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLES					
METRIC		PH	PHENOL	SED PH	SELENIUM	SILVER	SRP
S_LEPT	r_s	0.3005	0.3303	0.0816	0.2382	0.0188	-0.0625
	p	0.0058	0.0023	0.4632	0.0312	0.8666	0.5745
S_SM_DY	r_s	0.1408	0.0962	0.0842	0.0190	-0.1430	-0.1665
	p	0.2043	0.3871	0.4489	0.8656	0.2000	0.1325
S_CM	r_s	0.2032	-0.0770	0.1892	-0.0498	-0.1114	-0.0158
	p	0.0654	0.4890	0.0867	0.6566	0.3190	0.8874
S_HTR	r_s	0.0455	-0.1568	-0.0514	0.0919	0.1587	0.0801
	p	0.6829	0.1570	0.6444	0.4116	0.1543	0.4719
S_PHEMIP	r_s	0.1398	0.1291	0.0801	0.0082	-0.0249	-0.1551
	p	0.2075	0.2447	0.4715	0.9419	0.8240	0.1615
S_DHEMIP	r_s	0.0714	0.2074	0.0306	0.0104	-0.0900	-0.1431
	p	0.5212	0.0599	0.7837	0.9264	0.4215	0.1968
S_EPT	r_s	0.2663	0.3673	0.0567	0.1661	-0.0411	-0.1174
	p	0.0150	0.0006	0.6109	0.1359	0.7137	0.2905
S_ETO	r_s	0.2898	0.3800	0.0387	0.2203	-0.0154	-0.0779
	p	0.0079	0.0004	0.7284	0.0467	0.8911	0.4839
F_TRICLA	r_s	0.0424	0.0305	-0.1114	0.0967	0.0951	-0.0605
	p	0.7034	0.7841	0.3160	0.3873	0.3954	0.5872
F_GASTRO	r_s	0.2651	-0.0588	0.2430	0.0280	-0.0623	-0.0189
	p	0.0154	0.5976	0.0269	0.8025	0.5783	0.8653
F_BIVALV	r_s	0.2187	-0.2038	0.1329	-0.0178	-0.0462	0.0105
	p	0.0470	0.0646	0.2309	0.8739	0.6801	0.9246
F_HIRUDI	r_s	0.0971	-0.2768	0.0700	0.0710	0.1579	0.0665
	p	0.3826	0.0113	0.5296	0.5263	0.1566	0.5505
F_DECAPO	r_s	0.1806	0.0484	-0.0715	0.0852	0.0241	-0.0750
	p	0.1023	0.6641	0.5207	0.4468	0.8299	0.5005
F_ISOPOD	r_s	0.1738	-0.1406	0.1222	0.0466	0.0731	-0.0030
	p	0.1161	0.2050	0.2711	0.6774	0.5142	0.9785
F_AMPHIP	r_s	0.2834	-0.1567	0.0435	-0.2055	-0.1243	-0.0522
	p	0.0094	0.1571	0.6963	0.0640	0.2660	0.6394
F_EPHEME	r_s	0.3374	0.3333	0.0821	0.2350	0.0337	-0.0966
	p	0.0018	0.0021	0.4605	0.0336	0.7640	0.3852
F_ODONAT	r_s	0.1923	0.1147	0.0208	0.1150	-0.0290	0.1061
	p	0.0816	0.3017	0.8519	0.3036	0.7957	0.3399
F_HEMIPT	r_s	0.1222	0.2038	0.0566	0.0229	-0.0473	-0.1916
	p	0.2710	0.0646	0.6112	0.8383	0.6730	0.0826
F_COLEOP	r_s	0.1753	0.2104	0.0389	-0.0389	-0.0942	-0.0944
	p	0.1129	0.0563	0.7267	0.7284	0.4000	0.3957
F_TRICHO	r_s	0.1961	0.2748	-0.0314	0.1094	-0.0935	-0.0861
	p	0.0755	0.0119	0.7782	0.3278	0.4034	0.4391
F_LEPID	r_s	0.0738	0.2411	-0.0527	0.1054	-0.0169	-0.1665
	p	0.5072	0.0281	0.6362	0.3460	0.8801	0.1324
F_DIPT	r_s	0.0198	-0.0540	-0.1082	-0.0991	-0.2027	0.0869
	p	0.8590	0.6276	0.3301	0.3759	0.0677	0.4349
F_OLIGO	r_s	-0.0719	-0.0420	-0.1396	-0.0955	-0.1707	0.0091
	p	0.5181	0.7062	0.2081	0.3935	0.1252	0.9346
F_PHEMIP	r_s	0.1411	0.1252	0.0745	0.0039	-0.0241	-0.1541
	p	0.2032	0.2595	0.5033	0.9720	0.8295	0.1642
F_DHEMIP	r_s	0.0486	0.2055	-0.0219	0.0251	-0.0657	-0.2027
	p	0.6627	0.0623	0.8440	0.8231	0.5578	0.0661

TABLE 5. CORRELATIONS BETWEEN CANAL ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficient of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLES					
METRIC		PH	PHENOL	SED_PH	SELENUIM	SILVER	SRP
F_CM	r_s	0.2945	-0.0986	0.2414	-0.0454	-0.1055	-0.0523
	p	0.0069	0.3754	0.0279	0.6854	0.3455	0.6386
F_HTR	r_s	0.0737	-0.1864	0.0168	0.0974	0.1692	0.0463
	p	0.5080	0.0916	0.8804	0.3839	0.1285	0.6779
F_EPT	r_s	0.2827	0.3423	0.0102	0.1969	-0.0244	-0.1206
	p	0.0096	0.0015	0.9270	0.0762	0.8278	0.2774
F_ETO	r_s	0.3001	0.3508	0.0332	0.2025	-0.0491	-0.0796
	p	0.0058	0.0011	0.7658	0.0681	0.6613	0.4744
F_OM	r_s	0.2241	0.2175	0.0284	0.1513	0.0044	0.0433
	p	0.0417	0.0482	0.7985	0.1747	0.9685	0.6977
F_EMO	r_s	0.3106	0.3442	0.0638	0.2158	0.0016	-0.0252
	p	0.0043	0.0014	0.5666	0.0515	0.9886	0.8212
F_PRED	r_s	0.1766	0.1482	0.0436	0.0669	-0.0647	-0.0430
	p	0.1102	0.1812	0.6958	0.5503	0.5638	0.6993
F_DETR	r_s	0.2577	0.1284	0.0007	-0.0559	-0.1454	-0.0981
	p	0.0187	0.2473	0.9951	0.6177	0.1926	0.3777
F_HERB	r_s	0.2511	0.1733	0.0204	0.0473	-0.0906	-0.0993
	p	0.0220	0.1172	0.8545	0.6730	0.4181	0.3719
BMWP	r_s	0.3017	0.1890	0.1304	0.0918	-0.0672	-0.0739
	p	0.0056	0.0870	0.2401	0.4121	0.5485	0.5070
ASPT	r_s	0.2018	0.2593	0.0437	0.0398	-0.0954	-0.1432
	p	0.0673	0.0179	0.6949	0.7226	0.3939	0.1966

TABLE 5. CORRELATIONS BETWEEN CANAL ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficient of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLES					
METRIC		SS	TIN	TN	TON	TP	TPSED
INV_N.SP	r_s	-0.3029	-0.0843	-0.1074	-0.0967	-0.1178	0.0041
	p	0.0054	0.4512	0.3338	0.3844	0.2890	0.9707
INV_N.FA	r_s	-0.2407	-0.1129	-0.0231	-0.0102	-0.0620	0.0183
	p	0.0284	0.3126	0.8355	0.9272	0.5780	0.8707
INV_N.OR	r_s	-0.2257	-0.1038	-0.1302	-0.1280	-0.1449	-0.0191
	p	0.0402	0.3532	0.2406	0.2490	0.1913	0.8645
INV_SRS	r_s	-0.3176	-0.0768	-0.1407	-0.1247	-0.1608	-0.0295
	p	0.0034	0.4930	0.2045	0.2614	0.1465	0.7922
INV_SRI	r_s	-0.1525	-0.0263	-0.2669	-0.2639	-0.2758	-0.1186
	p	0.1687	0.8142	0.0147	0.0159	0.0116	0.2887
S_TRIC	r_s	-0.2056	0.1820	-0.2074	-0.2327	-0.1289	0.0995
	p	0.0622	0.1018	0.0599	0.0343	0.2454	0.3740
S_GAST	r_s	-0.2040	0.0490	-0.0390	-0.0567	0.0234	0.0086
	p	0.0643	0.6621	0.7265	0.6108	0.8336	0.9386
S_BIVALV	r_s	0.0820	-0.0317	0.1618	0.1544	0.1169	0.0457
	p	0.4613	0.7774	0.1438	0.1635	0.2926	0.6835
S_HIRU	r_s	-0.2066	0.2023	0.0040	0.0294	0.1195	0.2988
	p	0.0610	0.0684	0.9715	0.7922	0.2818	0.0064
S_ARAN	r_s	-0.2318	0.1126	-0.1927	-0.1919	-0.1981	-0.1552
	p	0.0350	0.3139	0.0810	0.0822	0.0727	0.1639
S_DECA	r_s	-0.1292	-0.0443	-0.0364	-0.0377	-0.0916	-0.0886
	p	0.2445	0.6929	0.7439	0.7351	0.4102	0.4288
S_ISOP	r_s	0.0224	0.0862	-0.1624	-0.1933	-0.0650	-0.0062
	p	0.8410	0.4411	0.1424	0.0799	0.5594	0.9557
S_AMPH	r_s	0.2636	-0.2475	0.3504	0.2875	0.2251	-0.1380
	p	0.0161	0.0250	0.0012	0.0084	0.0408	0.2164
S_EPHE	r_s	-0.3214	-0.1501	-0.0758	0.0320	-0.2287	-0.0232
	p	0.0030	0.1785	0.4960	0.7738	0.0376	0.8361
S_ODON	r_s	-0.4373	0.1616	-0.3216	-0.3010	-0.3075	0.1220
	p	0.0000	0.1468	0.0030	0.0057	0.0047	0.2751
S_HEMI	r_s	-0.2476	-0.0784	-0.1280	-0.0584	-0.1248	-0.0136
	p	0.0240	0.4837	0.2488	0.5997	0.2609	0.9035
S_COLE	r_s	-0.2312	-0.1603	-0.1092	-0.1257	-0.1247	-0.0740
	p	0.0355	0.1504	0.3257	0.2577	0.2612	0.5088
S_MEGA	r_s	-0.3585	-0.1442	-0.1659	-0.1120	-0.2255	-0.1234
	p	0.0009	0.1960	0.1338	0.3132	0.0404	0.2692
S_TRICH	r_s	-0.0895	-0.2828	-0.1858	-0.0978	-0.2957	-0.1388
	p	0.4212	0.0100	0.0927	0.3788	0.0066	0.2136
S_LEPID	r_s	-0.4442	0.1102	-0.4046	-0.3607	-0.3627	-0.1839
	p	0.0000	0.3244	0.0001	0.0008	0.0008	0.0982
S_PLAN	r_s	-0.4152	0.1130	-0.1824	-0.2059	-0.1208	0.0311
	p	0.0001	0.3122	0.0989	0.0619	0.2766	0.7818
S_BAET	r_s	-0.4629	-0.0586	-0.2422	-0.2510	-0.2774	-0.0763
	p	0.0000	0.6011	0.0274	0.0221	0.0111	0.4959
S_COEN	r_s	-0.4814	0.1961	-0.3614	-0.3368	-0.3265	0.1339
	p	0.0000	0.0774	0.0008	0.0019	0.0026	0.2303
S_HALIP	r_s	-0.3248	0.0768	-0.2329	-0.1103	-0.3008	0.0369
	p	0.0027	0.4927	0.0341	0.3211	0.0057	0.7419
S_HYDR	r_s	-0.1937	-0.0901	-0.0820	-0.1814	-0.0659	-0.0963
	p	0.0794	0.4208	0.4612	0.1007	0.5537	0.3895
S_LIMN	r_s	0.0487	-0.3388	-0.1358	-0.1352	-0.2313	-0.1920
	p	0.6617	0.0019	0.2209	0.2231	0.0354	0.0840

TABLE 5. CORRELATIONS BETWEEN CANAL ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficient of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLES					
METRIC		SS	TIN	TN	TON	TP	TPSED
S_LEPT	r_s	-0.3447	-0.1463	-0.1413	-0.0124	-0.2512	0.0141
	p	0.0014	0.1896	0.2026	0.9111	0.0220	0.9003
S_SM_DY	r_s	-0.2372	-0.1688	-0.1038	-0.0553	-0.1294	-0.0370
	p	0.0309	0.1295	0.3502	0.6192	0.2437	0.7412
S_CM	r_s	-0.1136	0.0014	0.0469	0.0166	0.0815	-0.0050
	p	0.3067	0.9899	0.6739	0.8815	0.4638	0.9644
S_HTR	r_s	-0.2204	0.2335	-0.0394	-0.0471	0.0731	0.2921
	p	0.0453	0.0348	0.7234	0.6723	0.5116	0.0077
S_PHEMIP	r_s	-0.2691	-0.1475	-0.0905	0.0070	-0.0720	-0.1032
	p	0.0139	0.1861	0.4161	0.9499	0.5180	0.3560
S_DHEMIP	r_s	-0.1140	0.0613	-0.1518	-0.1458	-0.1673	0.0389
	p	0.3046	0.5844	0.1708	0.1886	0.1306	0.7284
S_EPT	r_s	-0.1753	-0.2833	-0.1861	-0.0741	-0.3225	-0.1450
	p	0.1129	0.0099	0.0922	0.5053	0.0029	0.1938
S_ETO	r_s	-0.2715	-0.1917	-0.2509	-0.1530	-0.3571	-0.0862
	p	0.0130	0.0845	0.0222	0.1672	0.0009	0.4413
F_TRICLA	r_s	-0.2100	0.1781	-0.1985	-0.2261	-0.1288	0.1122
	p	0.0568	0.1093	0.0720	0.0399	0.2459	0.3157
F_GASTRO	r_s	-0.0614	0.0013	0.0566	0.0730	0.0240	0.0458
	p	0.5814	0.9905	0.6112	0.5118	0.8296	0.6828
F_BIVALV	r_s	0.1903	-0.0778	0.3128	0.2941	0.2281	0.0466
	p	0.0848	0.4870	0.0040	0.0070	0.0381	0.6775
F_HIRUDI	r_s	-0.2061	0.2269	0.0158	0.0955	0.1058	0.3423
	p	0.0615	0.0404	0.8870	0.3907	0.3411	0.0016
F_DECAPO	r_s	-0.1292	-0.0443	-0.0364	-0.0377	-0.0916	-0.0886
	p	0.2445	0.6929	0.7439	0.7351	0.4102	0.4288
F_ISOPOD	r_s	0.0243	0.0980	-0.0680	-0.1315	-0.0243	0.0802
	p	0.8275	0.3811	0.5415	0.2360	0.8275	0.4739
F_AMPHIP	r_s	0.2636	-0.2475	0.3504	0.2875	0.2251	-0.1380
	p	0.0161	0.0250	0.0012	0.0084	0.0408	0.2164
F_EPHEME	r_s	-0.3202	-0.1482	-0.1119	-0.0083	-0.2595	-0.0300
	p	0.0032	0.1841	0.3139	0.9406	0.0179	0.7889
F_ODONAT	r_s	-0.2408	0.0549	-0.1131	-0.1417	-0.1239	0.0927
	p	0.0283	0.6244	0.3086	0.2013	0.2645	0.4077
F_HEMIPT	r_s	-0.2319	-0.1207	-0.1028	-0.0254	-0.1091	-0.0591
	p	0.0349	0.2802	0.3551	0.8195	0.3260	0.5980
F_COLEOP	r_s	-0.1679	-0.1651	-0.0667	-0.0692	-0.0926	-0.0778
	p	0.1291	0.1382	0.5493	0.5343	0.4050	0.4870
F_TRICHO	r_s	-0.0906	-0.2324	-0.2248	-0.1065	-0.3191	-0.1760
	p	0.4154	0.0357	0.0410	0.3378	0.0033	0.1138
F_LEPID	r_s	-0.4421	0.1142	-0.4057	-0.3586	-0.3679	-0.1800
	p	0.0000	0.3070	0.0001	0.0009	0.0006	0.1055
F_DIPT	r_s	0.1015	-0.0288	0.1869	0.0511	0.2498	0.1215
	p	0.3613	0.7973	0.0907	0.6462	0.0227	0.2768
F_OLIGO	r_s	0.2796	-0.0620	0.1486	0.0790	0.2485	0.0379
	p	0.0105	0.5802	0.1799	0.4777	0.0235	0.7355
F_PHEMIP	r_s	-0.2754	-0.1442	-0.0973	0.0075	-0.0788	-0.1130
	p	0.0117	0.1962	0.3816	0.9466	0.4790	0.3122
F_DHEMIP	r_s	-0.0989	0.0620	-0.1606	-0.1601	-0.1931	0.0304
	p	0.3735	0.5802	0.1469	0.1483	0.0803	0.7860

TABLE 5. CORRELATIONS BETWEEN CANAL ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficient of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLES					
METRIC		SS	TIN	TN	TON	TP	TPSED
F_CM	r_s	0.0422	-0.0973	0.1777	0.1606	0.1091	-0.0223
	p	0.7048	0.3843	0.1081	0.1470	0.3261	0.8426
F_HTR	r_s	-0.2457	0.2515	-0.0641	-0.0378	0.0418	0.3120
	p	0.0252	0.0226	0.5648	0.7343	0.7075	0.0043
F_EPT	r_s	-0.2271	-0.2299	-0.2251	-0.0986	-0.3535	-0.1387
	p	0.0390	0.0377	0.0408	0.3750	0.0010	0.2140
F_ETO	r_s	-0.2778	-0.1829	-0.2403	-0.1363	-0.3639	-0.1043
	p	0.0110	0.1001	0.0287	0.2193	0.0007	0.3510
F_OM	r_s	-0.3394	-0.0164	-0.1576	-0.1583	-0.1942	0.0210
	p	0.0017	0.8838	0.1546	0.1529	0.0785	0.8518
F_EMO	r_s	-0.4162	-0.1028	-0.1857	-0.1341	-0.2846	-0.0223
	p	0.0001	0.3582	0.0928	0.2268	0.0091	0.8423
F_PRED	r_s	-0.2333	-0.0903	-0.0314	-0.0400	-0.0317	0.0281
	p	0.0338	0.4200	0.7783	0.7197	0.7760	0.8018
F_DETR	r_s	-0.0291	-0.2283	0.0322	-0.0053	-0.0355	-0.0800
	p	0.7941	0.0391	0.7729	0.9619	0.7498	0.4750
F_HERB	r_s	-0.1508	-0.1180	-0.0766	-0.0987	-0.1010	-0.0085
	p	0.1735	0.2910	0.4915	0.3748	0.3637	0.9399
BMWP	r_s	-0.2429	-0.1687	-0.0627	0.0011	-0.1505	-0.0241
	p	0.0269	0.1297	0.5733	0.9923	0.1743	0.8299
ASPT	r_s	-0.0742	-0.3350	-0.1335	-0.0149	-0.3440	-0.2572
	p	0.5052	0.0021	0.2288	0.8933	0.0015	0.0197

TABLE 5. CORRELATIONS BETWEEN CANAL ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficient of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLES		
METRIC		VANADIUM	ZINC	ZN
INV_N.SP	r_s	-0.0625	-0.2167	-0.1475
	p	0.5770	0.0490	0.1860
INV_N.FA	r_s	-0.0432	-0.2405	-0.1510
	p	0.6997	0.0285	0.1757
INV_N.OR	r_s	-0.0622	-0.1991	-0.1094
	p	0.5789	0.0711	0.3280
INV_SRS	r_s	-0.0430	-0.2273	-0.1424
	p	0.7014	0.0388	0.2018
INV_SRI	r_s	0.1186	-0.1585	-0.0629
	p	0.2884	0.1523	0.5744
S_TRIC	r_s	0.2028	0.0732	-0.0824
	p	0.0676	0.5110	0.4619
S_GAST	r_s	0.0969	-0.1145	-0.0754
	p	0.3863	0.3026	0.5009
S_BIVALV	r_s	0.0215	-0.1668	-0.2187
	p	0.8479	0.1319	0.0484
S_HIRU	r_s	0.1352	0.1089	0.0739
	p	0.2260	0.3272	0.5096
S_ARAN	r_s	0.0522	0.0553	0.1715
	p	0.6416	0.6198	0.1233
S_DECA	r_s	-0.0754	-0.0106	0.1100
	p	0.5009	0.9244	0.3251
S_ISOP	r_s	0.1985	-0.0345	0.0642
	p	0.0738	0.7572	0.5665
S_AMPH	r_s	-0.1249	-0.2625	-0.0470
	p	0.2636	0.0165	0.6751
S_EPHE	r_s	-0.2894	-0.1520	-0.1146
	p	0.0084	0.1702	0.3052
S_ODON	r_s	0.0921	0.0795	0.1089
	p	0.4108	0.4749	0.3300
S_HEMI	r_s	-0.0822	-0.2006	-0.1035
	p	0.4628	0.0690	0.3546
S_COLE	r_s	-0.0398	-0.2722	-0.1065
	p	0.7227	0.0128	0.3409
S_MEGA	r_s	-0.1508	-0.2788	-0.1321
	p	0.1762	0.0107	0.2367
S_TRICH	r_s	-0.2574	-0.2623	-0.1490
	p	0.0196	0.0166	0.1817
S_LEPID	r_s	0.0757	0.0152	0.1931
	p	0.4989	0.8913	0.0822
S_PLAN	r_s	0.0799	-0.0341	-0.0728
	p	0.4757	0.7596	0.5156
S_BAET	r_s	-0.1689	-0.1280	-0.0487
	p	0.1294	0.2487	0.6637
S_COEN	r_s	0.0603	0.1222	0.1718
	p	0.5904	0.2710	0.1227
S_HALIP	r_s	0.0964	0.0122	0.0596
	p	0.3891	0.9126	0.5945
S_HYDR	r_s	-0.0028	-0.2831	-0.1225
	p	0.9801	0.0095	0.2728
S_LIMN	r_s	-0.2886	-0.2857	-0.0694
	p	0.0086	0.0089	0.5356

TABLE 5. CORRELATIONS BETWEEN CANAL ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficient of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLES		
METRIC		VANADIUM	ZINC	ZN
S_LEPT	r_s	-0.2082	-0.1631	-0.2001
	p	0.0605	0.1408	0.0714
S_SM_DY	r_s	-0.0613	-0.2573	-0.0510
	p	0.5846	0.0189	0.6490
S_CM	r_s	0.0905	-0.1738	-0.1263
	p	0.4187	0.1161	0.2584
S_HTR	r_s	0.1610	0.1213	0.0297
	p	0.1483	0.2748	0.7914
S_PHEMIP	r_s	-0.2249	-0.2482	-0.0652
	p	0.0422	0.0237	0.5608
S_DHEMIP	r_s	0.1566	-0.0944	-0.0666
	p	0.1601	0.3960	0.5519
S_EPT	r_s	-0.3087	-0.2456	-0.1276
	p	0.0048	0.0252	0.2533
S_ETO	r_s	-0.2291	-0.1957	-0.0843
	p	0.0385	0.0762	0.4515
F_TRICLA	r_s	0.2025	0.0747	-0.1002
	p	0.0681	0.5020	0.3705
F_GASTRO	r_s	0.1125	-0.1650	-0.1284
	p	0.3141	0.1361	0.2502
F_BIVALV	r_s	-0.0478	-0.1150	-0.1551
	p	0.6699	0.3005	0.1641
F_HIRUDI	r_s	0.1271	0.1522	0.1292
	p	0.2553	0.1696	0.2475
F_DECAPO	r_s	-0.0754	-0.0106	0.1100
	p	0.5009	0.9244	0.3251
F_ISOPOD	r_s	0.1475	0.0447	0.0356
	p	0.1861	0.6883	0.7507
F_AMPHIP	r_s	-0.1249	-0.2625	-0.0470
	p	0.2636	0.0165	0.6751
F_EPHEME	r_s	-0.2608	-0.1597	-0.1007
	p	0.0179	0.1491	0.3680
F_ODONAT	r_s	0.0773	-0.0085	0.0093
	p	0.4903	0.9392	0.9342
F_HEMIPT	r_s	-0.1398	-0.2153	-0.0847
	p	0.2103	0.0506	0.4495
F_COLEOP	r_s	-0.0360	-0.2388	-0.0317
	p	0.7485	0.0297	0.7774
F_TRICHO	r_s	-0.1787	-0.2204	-0.1250
	p	0.1082	0.0453	0.2631
F_LEPID	r_s	0.0711	0.0230	0.1935
	p	0.5256	0.8365	0.0815
F_DIPT	r_s	0.0891	-0.1365	-0.0849
	p	0.4260	0.2184	0.4482
F_OLIGO	r_s	0.0430	-0.0300	-0.0224
	p	0.7011	0.7880	0.8419
F_PHEMIP	r_s	-0.2194	-0.2433	-0.0556
	p	0.0477	0.0266	0.6200
F_DHEMIP	r_s	0.1196	-0.0559	-0.0510
	p	0.2846	0.6159	0.6492

TABLE 5. CORRELATIONS BETWEEN CANAL ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficient of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLES		
METRIC		VANADIUM	ZINC	ZN
F_CM	r_s	0.0149	-0.2320	-0.1254
	p	0.8947	0.0348	0.2618
F_HTR	r_s	0.1887	0.1468	0.0487
	p	0.0895	0.1854	0.6637
F_EPT	r_s	-0.2528	-0.2192	-0.1144
	p	0.0219	0.0464	0.3060
F_ETO	r_s	-0.1845	-0.2140	-0.1071
	p	0.0971	0.0521	0.3381
F_OM	r_s	-0.0030	-0.1229	-0.0359
	p	0.9783	0.2684	0.7486
F_EMO	r_s	-0.1328	-0.1803	-0.0791
	p	0.2342	0.1029	0.4800
F_PRED	r_s	-0.0529	-0.1911	-0.1225
	p	0.6368	0.0835	0.2728
F_DETR	r_s	-0.0957	-0.3319	-0.1509
	p	0.3925	0.0022	0.1758
F_HERB	r_s	0.0039	-0.2292	-0.0986
	p	0.9723	0.0371	0.3779
BMWP	r_s	-0.1063	-0.2650	-0.1779
	p	0.3419	0.0155	0.1099
ASPT	r_s	-0.2894	-0.2623	-0.1207
	p	0.0084	0.0166	0.2799

TABLE 6. POND SITES SURVEYED

Site Code	Site name	Location	County	Grid ref
EUDO	Eudon Burnell	Glazely, Nr. Bridgenorth	Shropshire	SO698895
EV2A	Eversley Site 2a	Yately	Hampshire & IOW	SU813617
FCSM	Friars Court Farm Small	Oxford	Oxfordshire	SP293004
FIRL	Firlands (sewage)	Aldermaston, Reading	Berkshire	SU464166
HAFA	Harriots Farm Pond	Albrighton, Telford	Shropshire	SJ834048
HAYT	Haythog Farm Pond	Crick, Northampton	Northants.	SP457273
KEWG	Kew Gardens Pond	Kew	Greater London	TQ181765
KINN	Kinnersley Manor	Salfords	Surrey	TQ263462
LARK	Larkings Barn	Cocking	West Sussex	SU893178
LIMB	Limbo Farm Pond	Petworth	West Sussex	SU968244
LLCO	Llandeilo Common (Painscastle)	Painscastle	Wales: Powys	SO132485
MPLA	Milton Pools A	Tetsworth	Oxfordshire	SP655030
NAZE	Nazeing Whitehouse Pond	Nazeing	Essex	TL414065
PAPA	Patshull Park Hotel Golf Club	Pattingham	Staffs.	SO801997
RACA	Ravens Causeway	Wormsley	Hereford & Worcs.	SO436477
REDD	Reddings Large	Flaxley	Gloucestershire	SO695138
RSPO	Ruscombe Pond	Reading	Berkshire	SU798765
SCFA	Scarlett's Farm Pond	Twyford	Berkshire	SU812779
TICK	Tickford Field Pond	Newport Pagnell	Buckinghamshire	SP888434
WRTO	Wroxton Top	Wroxton	Oxfordshire	SP417413

Note: this list refers only to the 20 Environment Agency pond sites surveyed for the current project. The remaining ponds have been derived from Pond Action's National Pond Survey and ROPA data sets.

TABLE 7. ABBREVIATIONS OF POND ENVIRONMENTAL VARIABLE NAMES USED IN CORRELATION TABLES

Abbreviation	Description of variable
AGE	Age
AL	Aluminium (mg/l, analysed by Oxford Brookes)
ALGAE%	Vegetation cover: % algae (excluding-charophytes)
ALK	Alkalinity (Meq/l, analysed by Pond Action)
ALLGRASS100	Land cover % within 100m: total grassland
ALLGRASS_C	Land cover % catchment area: total grassland
ALLIMP100	Land cover % within 100m: total improved
ALLIMPAG100	Land cover % within 100m: total agriculturally improved
ALLIMPAG_C	Land cover % catchment area: total agriculturally improved
ALLIMP_C	Land cover % catchment area: total improved
ALLS`NAT100	Land cover % within 100m: total semi-natural land use
ALLS`NAT_C	Land cover % catchment area: total semi-natural land use
ALLURB100	Land cover % within 100m: total urban
ALLURB_C	Land cover % catchment area: total urban
ALLWD&SC100	Land cover % within 100m: total wood and scrub
ALLWDS_C	Land cover % catchment area: total wood and scrub
ALLWET100	Land cover % within 100m: total wetland
ALLWET_C	Land cover % catchment area: total wetland
ALTITUDE	Altitude
AMM	Ammonia (mg/l, analysed by Pond Action)
AQ_EX	Number of aquatic exotic species
AQ_N.TX	Number of aquatic plant species
AQ_SRI	Species Rarity Index for aquatic plant species
AQ_SRS	Species Rarity Score for aquatic plant species
AQ_TI	Aquatic plant Trophic Ranking Score (TRS): index i.e. score/number of species
ARABL100	Land cover % within 100m: arable
AREA	Pond area
ASPT	ASPT score
BASE_CL	Pond base: clay, silt
BASE_GRA	Pond base: gravel, sand
BASE_PT	Pond base: peat
BASE_ROC	Pond base: rock
BASE_STO	Pond base: stone blocks
BMWP	BMWP score
BOG100	Land cover % within 100m: bog
BUILD100	Land cover % within 100m: buildings
CA	Calcium (mg/l, analysed by Oxford Brookes)
CL	Chloride (mg/l, analysed by Pond Action)
CMT_CLAY	Catchment geology: clay
CMT_IG	Catchment geology: igneous and metamorphic
CMT_LST	Catchment geology: limestone
COND	Conductivity (microS/cm, analysed by Pond Action)
CONIF100	Land cover % within 100m: coniferous woodland
CONNECT	Adjacent waterbodies: number permanently connected
CTM_SST	Catchment geology: sandstone

TABLE 7. ABBREVIATIONS OF POND ENVIRONMENTAL VARIABLE NAMES USED IN CORRELATION TABLES (CONTINUED)

Abbreviation	Description of variable
CU	Copper (mg/l, analysed by Oxford Brookes)
C_ARABL	Land cover % catchment area: arable
C_BOG	Land cover % catchment area: bog
C_BUILD	Land cover % catchment area: buildings
C_CONIF	Land cover % catchment area: coniferous woodland
C_DECID	Land cover % catchment area: deciduous woodland
C_HEATH	Land cover % catchment area: heath
C_IMPRG	Land cover % catchment area: improved grassland
C_MARSH	Land cover % catchment area: marsh
C_PARKS	Land cover % catchment area: parks and gardens
C_PATH	Land cover % catchment area: paths and tracks
C_RANKG	Land cover % catchment area: rank vegetation
C_ROADS	Land cover % catchment area: roads
C_ROCK	Land cover % catchment area: rock, stone, gravel
C_SCRUB	Land cover % catchment area: scrub and hedge
C_SIZE	Estimated catchment size (ha)
C_S_IMPRG	Land cover % catchment area: semi-improved grassland
C_UNIMPG	Land cover % catchment area: unimproved grassland
DECID100	Land cover % within 100m: deciduous woodland
DRAW_%	Drawdown area (% water remaining)
DRAW_CM	Drawdown height
EASTING	Easting
EMG`PLT%	Vegetation cover: % emergent plants
EX_SP	Total number of exotic species
FE	Iron (mg/l, analysed by Oxford Brookes)
FISH	Fish present
FLT_EX	Number of floating exotic species
FLT_N.TX	Number of floating plant species
FLT_SRI	Species Rarity Index for floating plant species
FLT_SRS	Species Rarity Score for floating plant species
FLT`PLT%	Vegetation cover: % floating-leaved plants
FL`PLAIN	Landscape connectivity: proximity to floodplain (ranked)
FRE_SP	Number of free-floating plant species
F_AMPHIP	Number of Amphipoda families
F_BIVALV	Number of Bivalvia families
F_CM	Number of Crustacea + Mollusca families
F_COLEOP	Number of Coleoptera families
F_DECAPO	Number of Decapoda families
F_DETR	Number of detritivore families
F_DHEMIP	Number of detritivore Hemiptera families
F_DIPTER	Number of Diptera families
F_EPHEME	Number of Ephemeroptera families
F_EMO	Number of Ephemeroptera + Megaloptera + Odonata families
F_EPT	Number of Ephemeroptera + Plecoptera + Trichoptera families
F_ETO	Number of Ephemeroptera + Trichoptera + Odonata families
F_GASTRO	Number of Gastropoda families
F_HEMIPT	Number of Hemiptera families
F_HERB	Number of herbivore families

TABLE 7. ABBREVIATIONS OF POND ENVIRONMENTAL VARIABLE NAMES USED IN CORRELATION TABLES (CONTINUED)

Abbreviation	Description of variable
F_HIRUDI	Number of Hirudinea families
F_HTR	Number of Hirudinea + Tricladida families
F_ISOPOD	Number of Isopoda families
F_OM	Number of Odonata + Megaloptera families
F_NEUROP	Number of Neuroptera families
F_ODONAT	Number of Odonata families
F_PHEMIP	Number of predatory Hemiptera families
F_PLECOP	Number of Plecoptera families
F_PRED	Number of predator families
F_TRICHO	Number of Trichoptera families
F_TRICLA	Number of Tricladida families
F`FL/AQ	Free-floating plants/aquatic plants
F`FL/SU	Free-floating plants/submerged plants
GRAZ&TRAMP	% of pond margin grazed or trampled
GRAZED%	% of pond margin grazed
G_LIV_01	Pond grazed by livestock (yes/no)
HEATH100	Land cover % within 100m: heath
IMPRG100	Land cover % within 100m: improved grassland
INFL_VOL	Inflow volume
INV_N.FA	Number of invertebrate families
INV_N.OR	Number of invertebrate orders
INV_N.SP	Number of invertebrate species
INV_SRI	Invertebrate Species Rarity Index
INV_SRS	Invertebrate Species Rarity Score
ISOLATIO	Landscape connectivity: isolation (ranked)
K	Potassium (mg/l, analysed by Pond Action)
MARG_N.TX	Number of marginal plant species
MARG_SRI	Species Rarity Index for marginal plant species
MARG_SRS	Species Rarity Score for marginal plant species
MARSH100	Land cover % within 100m: marsh
MG	Magnesium (mg/l, analysed by Oxford Brookes)
MG_EX	Number of marginal exotic species
M_COMPLX	Pond margin complexity ranking
NA	Sodium (mg/l, analysed by Oxford Brookes)
NCONNECT	Adjacent waterbodies: number not connected
NI	Nickel (mg/l, analysed by Oxford Brookes)
NORTHING	Northing
PARKS100	Land cover % within 100m: parks and gardens
PATHS100	Land cover % within 100m: paths and tracks
PERM	Permanence (ranked)
PH	pH (analysed by Pond Action)
PL_N.TX	Number of all wetland plant species
PL_SRI	Species Rarity Index for all wetland plant species
PL_SRS	Species Rarity Score for all wetland plant species

TABLE 7. ABBREVIATIONS OF POND ENVIRONMENTAL VARIABLE NAMES USED IN CORRELATION TABLES (CONTINUED)

Abbreviation	Description of variable
POL/GW	Overall Pollution Rating/% groundwater input
POL/GW+SF	Overall Pollution Rating/% groundwater+spring+flush input
POL_AGR`OFF	Pollution runoff: agriculture (ranked)
POL_DUCK	Pollution: ducks (ranked)
POL_FISH	Pollution: fish stocking and management (ranked)
POL_OVER	Overall Pollution Rating (ranked)
POL_ROAD	Pollution runoff: road (ranked)
POL_STR	Pollution input: stream (ranked)
POL_URBA	Pollution runoff: urban (ranked)
PONDS100	Land cover % within 100m: ponds and Lakes
POT_SP	Number of Potamogeton species
RANKG100	Land cover % within 100m: rank vegetation
ROADS100	Land cover % within 100m: roads
ROCK100	Land cover % within 100m: rock, stone, gravel
SCRUB100	Land cover % within 100m: scrub and hedge
SED_BOLD	Sediment: % boulders
SED_DEBR	Sediment: % coarse debris
SED_GRAV	Sediment: % gravel
SED_LEAV	Sediment: % leaves
SED_OOZE	Sediment: % clay and silt
SED_PEAT	Sediment: % peat
SED_PEBS	Sediment: % pebbles
SED_SAND	Sediment: % sand
SHADE_%	Shade: % of pond area overhung
SHADE_MR	Shade % of pond margin overhung
SILT_DPT	Silt depth (average)
SRP	Soluble reactive phosphorus (mg/l, analysed by Pond Action)
SS	Suspended solids (mg/l, analysed by Pond Action)
STREAM100	Land cover % within 100m: streams and ditches
SUB/FLO	Submerged plants/floating plants
SUB_EX	Number of submerged exotic species
SUB_N.TX	Number of submerged plant species
SUB_SRI	Species Rarity Index for submerged plant species
SUB_SRS	Species Rarity Score for submerged plant species
SUB`PLT%	Vegetation cover: % submerged plants
S_AMPH	Number of Amphipoda species
S_ARAN	Number of Araneae species
S_BAET	Number of Baetidae species
S_BIVALV	Number of Bivalve species
S_CM	Number of Crustacea + Mollusca species
S_COEN	Number of Coenagrionidae species
S_COLE	Number of Coleoptera species
S_DECA	Number of Decapoda species
S_DHEMIP	Number of detritivore Hemiptera species
S_DIPT	Number of Diptera species
S_EPHE	Number of Ephemeroptera species
S_EPT	Number of Ephemeroptera + Plecoptera + Trichoptera species
S_ETO	Number of Ephemeroptera + Trichoptera + Odonata species

TABLE 7. ABBREVIATIONS OF POND ENVIRONMENTAL VARIABLE NAMES USED IN CORRELATION TABLES (CONTINUED)

Abbreviation	Description of variable
S_GAST	Number of Gastropoda species
S_HALIP	Number of Haliplidae species
S_HEMI	Number of Hemiptera species
S_HIRU	Number of Hirudinea species
S_HTR	Number of Hirudinea + Tricladida species
S_HYDR	Number of Hydrophilidae species
S_ISOP	Number of Isopoda species
S_LEPID	Number of Lepidoptera species
S_LEPT	Number of Leptoceridae species
S_LIMN	Number of Limnephilidae species
S_MEGA	Number of Megaloptera species
S_NEUR	Number of Neuroptera species
S_ODON	Number of Odonata species
S_PHEMIP	Number of predatory Hemiptera species
S_PLAN	Number of Planorbidae species
S_PLEC	Number of Plecoptera species
S_SM_DY	Number of small Dytiscidae species
S_TRIC	Number of Tricladida species
S_TRICH	Number of Trichoptera species
SIMPG100	Land cover % within 100m: semi-improved grassland
TCONNECT	Adjacent waterbodies: number seasonally connected
TN	Total nitrogen (mg/l, analysed by Pond Action)
TON	Total oxidised nitrogen (mg/l, analysed by Pond Action)
TOT_PLT%	Vegetation cover: % total plants
TP	Total phosphorus (mg/l, analysed by Pond Action)
TRAD_WET	Landscape connectivity: proximity to traditional wetlands (ranked)
TURBID	Water turbidity (ranked)
UNIMPG100	Land cover % within 100m: unimproved grassland
WS_FLOOD	Water Source: % flood
WS_FLSP	Water Source: % flush+spring
WS_GSF	Water Source: % groundwater+spring+flush
WS_GWTR	Water Source: % groundwater
WS_PPT	Water Source: % precipitation
WS_STR	Water Source: % stream or ditch
WS_SWTR	Water Source: % surfacewater
WTR_DEPT	Water depth (average)
ZN	Zinc (mg/l, analysed by Oxford Brookes)

TABLE 8. POND PHYSICAL AND CHEMICAL DATA

Note: this list refers only to the 20 Environment Agency pond sites surveyed for the current project. The remaining ponds have been derived from Pond Action's National Pond Survey and ROPA data sets.

	SITES											
VARIABLE	EUDO	EV2A	FCSM	FIRL	HAFA	HAYT	KEWG	KINN	LARK	LIMB	LLCO	MPLA
EASTING	3698	4812	4293	4464	3834	4457	5181	5263	4893	4968	3132	4655
NORTHING	2895	1617	2004	1166	3048	2273	1765	1462	1178	1244	2485	2030
ALTITUDE	122.5	53	68	92	122	110	6	52.5	67.5	50	440	102.5
CTM_SST	20	85	80	55	45	35	0	50	20	0	0	80
CMT_CLAY	80	10	15	40	50	60	100	50	0	100	0	20
CMT_LST	0	5	5	5	5	5	0	0	80	0	0	0
CMT_IG	0	0	0	0	0	0	0	0	0	0	100	0
BASE_CL	100	0	0	40	90	35	0	0	100	100	0	0
BASE_GRA	0	100	100	60	10	65	0	100	0	0	0	100
BASE_ROC	0	0	0	0	0	0	0	0	0	0	0	0
BASE_PT	0	0	0	0	0	0	0	0	0	0	100	0
BASE_STO	0	0	0	0	0	0	0	0	0	0	0	0
AREA	220	7500	27	280	800	150	1120	210	120	30	3000	914
M_COMPLX	2.5	4	3	3	2	3.5	3	3	2	3	8.5	2
AGE	2.5	2	1	3	2	2	2	2	3	2	4	2
SHADE_%	20	10	0	50	70	20	3	95	35	7	0	19
SHADE_MR	22	70	0	65	90	15	10	98	60	15	0	62
WTR_DEPT	54	250	41	18	27	20	85	17	2	13	10	98
SILT_DPT	24.2	50	9	60	52	56	10	88	36.6	51	14	16
DRAW_CM	20	14	70	45	35	50	3	30	55	60	30	nd
DRAW_%	90	85	90	45	25	27.5	100	50	5	39	5	100
PERM	1.5	1	1	3.5	1.5	1	1	2	3.5	3	3	1
CONNECT	0	0	0	0	1	0	0	0	0	0	0	0
TCONNECT	0	0	1	0	0	0	0	0	0	1	1	0
NCONNECT	0	2	0	0	0	0	1	1	0	0	0	1
SED_LEAV	5	2	3	45	10	30	5	10	33	10	1	3
SED_DEBR	5	6	5	30	5	30	10	45	33	10	15	5
SED_OOZE	90	87	92	25	80	40	85	45	34	80	84	92
SED_SAND	0	2	0	0	5	0	0	0	0	0	0	0
SED_GRAV	0	3	0	0	0	0	0	0	0	0	0	0
SED_PEBS	0	0	0	0	0	0	0	0	0	0	0	0
SED_BOLD	0	0	0	0	0	0	0	0	0	0	0	0
SED_PEAT	0	0	0	0	0	0	0	0	0	0	0	0
WS_GWTR	0	94	95	0	0	42	0	80	0	0	0	90
WS_SWTR	95	3	3	40	15	53	50	15	95	35	97	8
WS_PPT	5	3	2	5	5	5	10	5	5	5	3	2
WS_STR	0	0	0	55	80	0	40	0	0	60	0	0
WS_FLOOD	0	0	0	0	0	0	0	0	0	0	0	0
WS_FLSP	0	0	0	0	0	0	0	0	0	0	0	0
WS_GSF	0	94	95	0	0	42	0	80	0	0	0	90
INFL_VOL	0	0	0	1	2	1	3	0	0	1	0	0
G_LIV_01	0	0	0	2	0	0	0	0	0	0	1	0
GRAZED%	0	0	0	100	0	0	0	0	0	0	100	0
GRAZ&TRAMP	0	0	0	2	0	0	1.5	0	0	0	1.5	0
FISH	3	3.5	2	0	1	1	3	1.5	0	0	0	5
FL`PLAIN	0	2	2.25	0	0	0	2	2	0	0	0	0

TABLE 8. POND PHYSICAL AND CHEMICAL DATA (CONTINUED)

	SITES											
VARIABLE	EUDO	EV2A	FCSM	FIRL	HAFA	HAYT	KEWG	KINN	LARK	LIMB	LLCO	MPLA
ISOLATIO	0	2	2.5	0	3	1	2	4	0	0	1	1
TRAD_WET	0	2	2	0	1	0.5	2	3	0	0	1	0
C_SIZE	3	2	2	3	2	3	3	3	3	3	5	3
DECID100	0	25	0	15	0	0	0	25	8	1	0	0
CONIF100	0	0	0	1	0	0	0	0	0	0	0	0
SCRUB100	4	15	0	3	5	15	0	5	5	5	0	0
HEATH100	0	0	0	0	0	0	0	0	0	0	100	0
BOG100	0	0	0	0	0	0	0	0	0	0	0	0
MARSH100	0	0	5	0	0	0	0	0	0	0	0	0
RANKG100	5	0	0	0	0	0	0	0	2	20	0	0
UNIMPG100	0	25	46	0	0	0	0	0	0	0	0	0
S`IMPG100	0	0	0	71	0	0	0	0	0	0	0	0
IMPRG100	20	0	32	0	70	82	0	50	12	73	0	51
ARABL100	47	0	0	0	20	0	0	0	70	0	0	0
PARKS100	20	0	0	5	2	0	100	5	0	0	0	22
BUILD100	2	0	0	2	2	0	0	2	0	1	0	0
ROADS100	2	0	0	0	1	1	0	5	3	0	0	16
ROCK100	0	0	0	0	0	2	0	0	0	0	0	0
PATHS100	0	0	0	3	0	0	0	0	0	0	0	0
PONDS100	0	30	15	0	0	0	0	0	0	0	0	0
STREAM100	0	5	17	0	0	0	0	8	0	0	0	11
ALLWD&SC100	4	40	0	19	5	15	0	30	13	6	0	0
ALLGRASS100	25	25	78	71	70	82	0	50	14	93	0	51
ALLWET100	0	34	22	0	0	0	0	8	0	0	0	11
ALLS`NAT100	9	99	68	19	5	17	0	38	15	26	100	11
ALLIMPAG100	67	0	32	0	90	82	0	50	82	73	0	51
ALLURB100	24	0	0	7	5	1	100	12	3	1	0	38
ALLIMP100	91	1	32	10	95	83	100	62	85	74	0	89
C_DECID	0	35	0	2	10	0	2	5	0	0	0	0
C_CONIF	0	0	0	0	0	0	0	0	0	0	0	0
C_SCRUB	2	20	0	0	5	8	0	2	2	0	0	0
C_HEATH	0	0	0	0	0	0	0	0	0	0	100	0
C_BOG	0	0	0	0	0	0	0	0	0	0	0	0
C_MARSH	0	0	0	0	0	0	0	0	0	0	0	0
C_RANKG	0	0	21	0	0	2	0	0	1	75	0	0
C_UNIMPG	0	45	0	0	0	0	0	0	0	0	0	0
C_S_IMPRG	0	0	0	70	85	0	0	0	0	0	0	0
C_IMPRG	0	0	79	0	0	90	0	81	0	20	0	0
C_ARABL	98	0	0	0	0	0	0	0	95	0	0	0
C_PARKS	2	0	0	20	0	0	100	5	0	0	0	0
C_BUILD	0	0	0	3	0	0	0	2	0	5	0	0
C_ROADS	0	0	0	0	10	0	0	5	2	0	0	0
C_ROCK	0	0	0	0	0	0	0	0	0	0	0	0
C_PATH	0	2	0	5	0	0	0	0	0	0	0	0
ALLWDS_C	2	53	0	0	5	8	0	7	2	0	0	0
ALLGRASS_C	0	42	100	72	85	92	0	81	1	95	0	0

TABLE 8. POND PHYSICAL AND CHEMICAL DATA (CONTINUED)

	SITES											
VARIABLE	EUDO	EV2A	FCSM	FIRL	HAFA	HAYT	KEWG	KINN	LARK	LIMB	LLCO	MPLA
ALLWET_C	0	0	0	0	0	0	0	0	0	0	0	0
ALLS`NAT_C	2	95	21	0	5	10	0	7	3	75	100	0
ALLIMPAG_C	96	0	79	0	0	90	0	81	95	20	0	0
ALLURB_C	2	0	0	23	10	0	100	12	2	5	0	0
ALLIMP_C	98	5	79	28	10	90	100	93	97	25	0	0
POL_STR	0	0	0	4.5	4	0	1.5	0	0	4.5	0	0
POL_ROAD	0	0	0	1.5	5	0	0	1.5	1	0	0	0
POL_AGR`OFF	4	1	3	2	2.5	3.5	2	2.5	4	3	0	0
POL_URBA	2	0	0	0	0	0	0	0	0	3	0	0
POL_DUCK	0	0	0	0	2.5	0	0	0	0	0	0	0
POL_FISH	2	0	0	0	0	0	0	0	0	0	0	4
POL_OVER	7	1	3	8.5	8	4	3	4	6	8.5	1	2
POL/GW	7	0.06	0.15	8.5	8	2.32	3	0.8	6	8.5	1	0
POL/GW+SF	7	0.06	0.15	8.5	8	2.32	3	0.8	6	8.5	1	0
SUB`PLT%	0	10	43	1	0	0	1	0.5	0	0	10	0
FLT`PLT%	5	3.5	1	20	0	2	20	50	0.5	0.5	0	0
EMG`PLT%	30	20	16	8	0	85	2	25	77	85	50	2
TOT_PLT%	33	75	60	29	0	87	22	75	77	90	60	2
ALGAE%	30	0	0	0	0	0	5	0	0	5	0	0
TURBID	3	2	2.5	3	3	2	1	1	2.5	3	4	4
AL	0.091	0.1	nd	0.102	0.227	0.289	0.079	0.078	nd	nd	0.554	0.066
ALK	2.575	0.693	14.56	2.375	4.54	2.22	4.005	4.635	4.29	6.968	0.05	13.84
AMM	0.404	1.362	0.813	2.107	2.057	3.371	1.043	0.292	0.161	3.817	0.122	0.638
CA	53.75	31.65	91.3	45.3	83	130.4	52.52	99.66	82.19	99.22	1.818	57.35
CL	47.65	34.1	57.26	50.59	53.39	56.06	66.47	68.08	30.77	124.3	10.41	61.67
COND	415	125	468.5	408.5	782.5	683.5	533.5	680	378	605	38	364.5
FE	0.3	0.653	0.138	1.987	0.275	0.451	nd	0.124	0.21	2.966	0.411	0.095
K	4.2	5.9	6	22	26.8	3.8	11.8	10.4	4.4	100	0.6	24
MG	6.244	0.662	3.81	6.309	16.51	16.86	5.488	11.3	4.856	14.7	0.634	4.472
NA	13.64	15.37	33.95	29.41	27.44	26.57	42.09	57.89	10.87	72.41	6.168	25.14
PH	7.55	7.4	8	6.45	7.1	5.65	7.85	7.2	7.2	6.9	4.7	7.65
SRP	0.05	0.335	0.022	1.657	0.787	1.209	1.066	0.055	0.101	3.339	0.045	0.025
SS	72	68	8.667	8.667	39.33	421.5	12	13.33	8.667	64	20.67	38
TN	1.53	5.25	1.29	6.18	18.81	16.55	4.26	1.965	1.86	15.74	1.26	0.405
TON	0.799	0.055	0.154	1.1	2.104	0	0.413	0.013	0.041	0.025	0.106	0.039
TP	0.017	0.485	0.039	1.756	1.092	2.712	1.452	0.186	0.113	5.399	0.066	0.03
ZN	0.167	0.108	0.069	0.086	0.181	0.265	0.21	0.18	0.255	0.197	0.278	0.178

TABLE 8. POND PHYSICAL AND CHEMICAL DATA (CONTINUED)

	SITES							
VARIABLE	NAZE	PAPA	RACA	REDD	RSPO	SCFA	TICK	WRTO
EASTING	5414	3801	3436	3695	4798	4812	4888	4417
NORTHING	2065	2997	2477	3138	1765	1779	2434	2413
ALTITUDE	77.5	80	175	29	48	57	60	127.5
CTM_SST	0	25	75	70	60	30	10	20
CMT_CLAY	100	75	25	30	40	70	45	0
CMT_LST	0	0	0	0	0	0	45	80
CMT_IG	0	0	0	0	0	0	0	0
BASE_CL	100	100	65	0	0	100	100	100
BASE_GRA	0	0	35	100	100	0	0	0
BASE_ROC	0	0	0	0	0	0	0	0
BASE_PT	0	0	0	0	0	0	0	0
BASE_STO	0	0	0	0	0	0	5	0
AREA	120	84	5500	3500	412	600	270	2119
M_COMPLX	1	2.5	5.5	4	3	4	3	3
AGE	3	2	3	1.5	3	3	3	3
SHADE_%	35	0	15	0.5	20	5	0	1
SHADE_MR	35	0	45	5	32	15	0	38
WTR_DEPT	54.4	40	35	172	17	126	31	113
SILT_DPT	20	14	87	7	41	22	10.4	40
DRAW_CM	87.5	7.5	45	52.5	60	25	35	20
DRAW_%	45	96.5	77.5	92.5	77.5	90	80	100
PERM	1.5	1.5	1	1	2	1	1.5	1
CONNECT	0	1	0	0	0	0	0	2
TCONNECT	2	2	0	0	0	1	0	0
NCONNECT	0	0	1	1	1	0	1	0
SED_LEAV	5	5	8	1	3	2	10	3
SED_DEBR	8	5	18	1	4	2	30	5
SED_OOZE	87	70	70	81	91	96	58	90
SED_SAND	0	20	5	12	1	0	2	2
SED_GRAV	0	0	0	5	1	0	0	0
SED_PEBS	0	0	0	0	0	0	0	0
SED_BOLD	0	0	0	0	0	0	0	0
SED_PEAT	0	0	0	0	0	0	0	0
WS_GWTR	0	0	30	95	65	0	60	0
WS_SWTR	80	45	65	2.5	30	75	10	15
WS_PPT	5	5	5	2.5	5	5	5	5
WS_STR	15	50	0	0	0	20	0	45
WS_FLOOD	0	0	0	0	0	0	0	0
WS_FLSP	0	0	0	0	0	0	25	25
WS_GSF	0	0	30	95	65	0	85	25
INFL_VOL	1	2	1.5	0	0	1	2	3
G_LIV_01	0	0	0	0	0	0	0	0
GRAZED%	0	0	30	0	0	0	0	0
GRAZ&TRAMP	0	0.5	0.5	0	0	1	0	0
FISH	1	0	2	3.5	0	0	2	3
FL`PLAIN	0	0	0	0	0	0	0	0

TABLE 8. POND PHYSICAL AND CHEMICAL DATA (CONTINUED)

	SITES							
VARIABLE	NAZE	PAPA	RACA	REDD	RSPO	SCFA	TICK	WRTO
ISOLATIO	3	3	1	1	2	1	1.5	3.5
TRAD_WET	2	1.5	2	0	1	1	0.5	2
C_SIZE	3	3.5	4	3	2.5	4	2	4
DECID100	0	25	10	0	4	10	0	30
CONIF100	0	0	0	0	0	0	0	0
SCRUB100	0	0	10	3	8	3	8	20
HEATH100	0	0	0	0	0	0	0	0
BOG100	0	0	0	0	0	0	0	0
MARSH100	0	0	0	0	0	0	0	0
RANKG100	14	5	0	5	0	0	0	0
UNIMPG100	0	0	0	0	0	0	0	0
S`IMPG100	0	0	60	0	12	85	0	0
IMPRG100	0	62	16	82	5	0	92	40
ARABL100	0	5	0	8	0	0	0	0
PARKS100	33	0	0	0	14	0	0	0
BUILD100	33	0	2	1	19	1	0	0
ROADS100	5	2	1	1	38	1	0	0
ROCK100	0	0	0	0	0	0	0	0
PATHS100	0	1	0	0	0	0	0	0
PONDS100	15	0	1	0	0	0	0	10
STREAM100	0	0	0	0	0	0	0	10
ALLWD&SC100	0	25	20	3	12	13	8	50
ALLGRASS100	14	67	76	87	17	85	92	40
ALLWET100	15	0	1	0	0	0	0	10
ALLS`NAT100	29	30	21	8	12	13	8	60
ALLIMPAG100	0	67	16	90	5	0	92	40
ALLURB100	71	2	3	2	71	2	0	0
ALLIMP100	71	70	19	92	76	2	92	40
C_DECID	10	5	17	0	5	10	0	17
C_CONIF	0	0	0	0	0	0	0	0
C_SCRUB	0	5	10	3	0	3	8	0
C_HEATH	0	0	0	0	0	0	0	0
C_BOG	0	0	0	0	0	0	0	0
C_MARSH	30	0	0	0	0	0	0	0
C_RANKG	20	0	0	97	0	0	0	0
C_UNIMPG	0	0	0	0	0	0	0	0
C_S_IMPRG	0	0	60	0	20	87	0	100
C_IMPRG	0	88	17	0	0	0	92	0
C_ARABL	0	0	0	0	0	0	0	0
C_PARKS	28	0	0	0	15	0	0	0
C_BUILD	10	0	2	0	15	0	0	0
C_ROADS	2	1	1	0	50	0	0	0
C_ROCK	0	0	0	0	0	0	0	0
C_PATH	0	1	0	0	0	0	0	0
ALLWDS_C	10	10	20	3	0	13	8	0
ALLGRASS_C	20	88	77	97	20	87	92	100

TABLE 8. POND PHYSICAL AND CHEMICAL DATA (CONTINUED)

	SITES							
VARIABLE	NAZE	PAPA	RACA	REDD	RSPO	SCFA	TICK	WRTO
ALLWET_C	30	0	0	0	0	0	0	0
ALLS`NAT_C	60	10	20	100	0	13	8	0
ALLIMPAG_C	0	88	17	0	0	0	92	0
ALLURB_C	40	1	3	0	80	0	0	0
ALLIMP_C	40	90	20	0	80	0	92	0
POL_STR	0	2.5	0	0	0	0	0	2.5
POL_ROAD	3	0	0.5	0	4	0	0	0
POL_AGR`OFF	2	3.5	2.5	0	3	2.5	2.3	2
POL_URBA	0	0	0	0	2	0	0	0
POL_DUCK	0	0	0	2	0	3	0	0
POL_FISH	0	0	0	3	0	0	0	2
POL_OVER	4.5	6	4.5	3	7	4	3.5	3.5
POL/GW	4.5	6	3.15	0.15	2.45	4	1.4	3.5
POL/GW+SF	4.5	6	3.15	0.15	2.45	4	0.525	2.625
SUB`PLT%	30	1	12	41	8	0	0	2
FLT`PLT%	0	5	0	0	4	0	60	0
EMG`PLT%	30	9	7	7	24	0.5	0	20
TOT_PLT%	60	24	19	48	42	0.5	90	22
ALGAE%	0.5	10	0	0	0	0	0	0
TURBID	2.5	2	3	4	2	4	3	2.5
AL	0.534	0.116	0.148	0.115	0.092	0.111	nd	0.097
ALK	6.2	3.97	3.325	4.138	5.42	5.935	8.035	16.89
AMM	0.76	0.361	0.649	0.089	0.036	13.28	1.383	0.417
CA	180	95.81	70.58	37.73	123.2	82.72	172.8	97.52
CL	49	38.44	22.43	20.29	239.5	36.51	147.9	25.76
COND	1226	568.5	341	391	810	530.5	1192	398.5
FE	0.95	0.101	0.357	nd	0.36	2.07	0.082	0.362
K_PA	11	4.7	5.3	3.2	7.4	40	12.4	2.8
MG	7.34	19.74	4.274	33.78	5.176	13.93	10.56	3.884
NA	29.66	10.8	10.27	10.54	144.3	20.47	83.31	8.435
PH	8.2	7.15	7.25	8.45	7.3	7.1	6.9	7.75
SRP	0.033	0.051	0.145	0.011	0.041	0.127	0.217	0.046
SS	31	25.33	12	9.333	12	28	42.67	9.333
TN	2.35	12.24	1.71	1.245	1.215	3.12	3.855	1.485
TON	0.05	2.08	0.175	0.547	0.138	0.566	0.214	0.479
TP	1.5	0.069	0.246	0.022	0.006	0.231	0.452	0.083
ZN	0.068	0.137	0.167	0.153	0.265	0.355	0.011	0.219

TABLE 9. POND INVERTEBRATE DATA (NUMBERS PER THREE MINUTE SAMPLE)

	SITES									
SPECIES	EUDO	EV2A	FCSM	FIRL	HAFA	HAYT	KEWG	KINN	LARK	LIMB
Polycelis nigra	0	0	0	0	0	0	0	0	0	0
Polycelis tenuis	336	0	0	0	0	0	0	0	0	0
Dugesia polychroa	4	4	0	0	0	0	0	0	0	0
Dugesia tigrina	0	430	0	0	0	0	0	0	0	0
Dendrocoelum lacteum	0	0	0	0	0	0	0	0	0	0
Valvata cristata	0	0	0	0	0	0	0	0	0	0
Potamopyrgus antipodarum	0	226	0	0	0	0	1625	0	0	0
Bithynia tentaculata	0	0	0	0	0	0	0	0	0	0
Physa acuta	952	2	0	0	0	0	7	0	0	0
Physa fontinalis	0	0	0	0	0	0	1	0	0	0
Lymnaea auricularia	0	2	0	0	0	0	0	0	0	0
Lymnaea palustris	0	0	0	0	0	0	0	0	0	0
Lymnaea peregra	0	0	1	0	0	121	2	11	0	0
Lymnaea stagnalis	0	62	0	0	0	0	0	21	0	0
Lymnaea truncatula	0	7	0	0	0	0	0	0	0	0
Planorbis carinatus	0	0	12	0	0	0	0	0	0	0
Planorbis planorbis	0	0	0	0	0	0	0	0	0	0
Anisus leucostoma	0	0	0	0	0	2400	0	0	0	0
Anisus vortex	0	0	0	0	0	0	0	0	0	0
Bathyomphalus contortus	0	0	0	0	0	0	0	7	0	0
Gyraulus albus	1	157	1	0	0	0	0	2	0	0
Gyraulus laevis	0	0	0	0	0	0	0	0	0	0
Armiger crista	1880	0	0	0	0	0	6	0	1	0
Planorbarius corneus	1	0	0	0	0	0	0	4	0	0
Ferrissia wautieri	0	0	0	0	0	0	0	0	0	0
Acroloxus lacustris	0	0	0	0	0	0	0	0	0	0
Sphaerium corneum	23	0	0	0	0	0	0	0	0	0
Sphaerium lacustre	3	0	0	0	0	0	0	0	0	0
Piscicola geometra	0	0	0	0	0	0	0	0	0	0
Theromyzon tessulatum	0	0	0	0	0	0	14	0	0	0
Glossiphonia complanata	0	0	0	0	0	0	0	0	0	0
Glossiphonia heteroclita	0	0	0	0	0	0	0	0	0	0
Helobdella stagnalis	128	0	0	0	0	0	0	0	0	0
Erpobdella octoculata	1	0	0	0	0	29	9	0	0	0
Argyroneta aquatica	0	0	0	0	0	0	0	0	0	0
Asellus aquaticus	0	0	1	0	0	2707	94	2	0	0
Asellus meridianus	5	0	0	0	0	0	0	0	0	0
Crangonyx pseudogracilis	106	1748	8	0	0	751	48	10	4	0
Gammarus pulex	0	0	0	0	0	0	0	0	0	0
Cloeon dipterum	44	7	0	0	0	2	43	0	6	0
Caenis horaria	0	25	4	0	0	0	0	0	0	0
Caenis luctuosa	0	0	1	0	0	0	0	0	0	0
Caenis robusta	0	11	0	0	0	0	0	0	0	0
Pyrrhosoma nymphula	0	0	0	0	0	0	0	0	0	0
Ischnura elegans	0	92	1	0	0	0	7	0	0	0
Enallagma cyathigerum	0	3	0	0	0	0	0	0	0	0
Coenagrion puella	0	0	4	0	0	0	2	0	0	0
Coenagrion puella/pulchellum	0	3	0	0	0	0	0	0	0	0
Erythromma najas	0	3	0	0	0	0	0	0	0	0
Aeshna cyanea	14	0	0	0	0	0	0	1	0	0
Anax imperator	0	0	0	0	0	0	0	0	0	0

TABLE 9. POND INVERTEBRATE DATA (NUMBERS PER THREE MINUTE SAMPLE) (CONTINUED)

	SITES									
SPECIES	EUDO	EV2A	FCSM	FIRL	HAFA	HAYT	KEWG	KINN	LARK	LIMB
Orthetrum cancellatum	0	7	0	0	0	0	0	0	0	0
Sympetrum striolatum	0	0	0	0	0	0	1	0	0	0
Hydrometra stagnorum	5	0	0	0	0	0	0	3	0	0
Velia caprai	1	0	0	0	0	0	0	0	0	0
Microvelia reticulata	0	23	0	0	0	0	0	0	0	0
Gerris lacustris	21	0	0	0	0	0	1	3	0	0
Gerris odontogaster	0	0	0	0	0	0	0	0	0	0
Gerris thoracicus	0	0	0	0	0	1	0	0	0	0
Nepa cinerea	0	0	1	0	0	0	0	0	0	0
Ranatra linearis	0	1	0	0	0	0	0	0	0	0
Ilyocoris cimicoides	0	20	0	0	0	0	0	0	0	0
Notonecta glauca	45	1	0	0	0	0	0	0	0	0
Notonecta maculata	0	0	0	0	0	0	1	0	0	0
Notonecta marmorea	2	3	0	0	0	0	4	0	0	0
Plea leachi	0	2	0	0	0	0	0	0	0	0
Cymatia coleoptrata	0	0	0	0	0	0	2	0	0	0
Callicorixa praeusta	9	0	0	0	0	0	0	0	0	0
Corixa panzeri	0	0	0	0	0	0	2	0	0	0
Corixa punctata	173	0	0	0	0	0	0	0	21	0
Hesperocorixa linnei	0	0	0	0	0	0	0	0	3	0
Hesperocorixa moesta	0	0	0	0	0	0	0	0	0	0
Hesperocorixa sahlbergi	7	0	0	0	0	9	0	0	64	0
Sigara dorsalis	19	2	4	0	0	0	0	0	1	0
Sigara distincta	63	1	0	0	0	0	0	0	0	0
Sigara falleni	24	3	1	0	0	0	1	0	0	0
Sigara fossarum	17	0	0	0	0	0	0	0	0	0
Sigara lateralis	36	0	4	0	8	0	0	0	0	0
Sigara nigrolineata	6	0	0	0	1	0	0	0	7	0
Sigara concinna	1	0	0	0	0	0	0	0	0	0
Sigara limitata	1	0	0	0	0	0	0	0	0	0
Haliplus confinis	0	3	0	0	0	0	0	0	0	0
Haliplus flavicollis	0	37	0	0	0	0	0	0	0	0
Haliplus fluviatilis	0	0	0	0	0	0	0	7	0	0
Haliplus immaculatus	0	3	0	0	0	0	2	0	0	0
Haliplus lineatocollis	0	1	0	0	0	1	3	0	0	1
Haliplus lineolatus	0	8	0	0	0	0	0	0	0	0
Haliplus ruficollis	0	1	4	1	0	5	0	1	0	0
Haliplus wehnckei	0	1	0	0	0	0	0	0	0	0
Hygrobia hermanni	0	0	0	0	0	0	0	0	0	0
Noterus clavicornis	0	30	0	0	0	0	0	0	0	0
Laccophilus hyalinus	0	0	0	0	0	0	0	0	0	0
Laccophilus minutus	20	3	0	0	0	0	3	0	3	0
Hyphydrus ovatus	2	1	0	0	0	0	2	1	0	0
Hydroglyphus geminus	0	0	0	0	0	0	0	0	0	0
Hygrotus inaequalis	3	0	0	0	0	1	4	0	13	0
Coelambus impressopunctatus	1	0	0	0	0	0	0	0	0	0
Hydroporus angustatus	0	0	0	1	0	3	0	0	17	2
Hydroporus erythrocephalus	0	0	0	0	0	0	0	0	0	0
Hydroporus incognitus	0	1	0	0	0	0	0	0	3	0
Hydroporus memnonius	0	0	0	1	0	0	0	0	0	1
Hydroporus nigrita	0	0	0	0	0	0	0	0	0	1
Hydroporus obscurus	0	0	0	0	0	0	0	0	0	0

TABLE 9. POND INVERTEBRATE DATA (NUMBERS PER THREE MINUTE SAMPLE) (CONTINUED)

	SITES									
SPECIES	EUDO	EV2A	FCSM	FIRL	HAFA	HAYT	KEWG	KINN	LARK	LIMB
Hydroporus palustris	8	0	4	0	0	0	0	26	5	12
Hydroporus planus	0	0	4	0	0	5	0	0	1	1
Hydroporus pubescens	0	0	0	0	0	2	0	1	0	0
Hydroporus striola	0	0	0	0	0	0	0	0	0	1
Hydroporus tesselatus	0	0	0	0	0	2	0	0	1	0
Hydroporus tristis	0	0	0	0	0	0	0	0	0	0
Hydroporus umbrosus	0	0	0	0	0	0	0	0	0	0
Agabus bipustulatus	6	2	0	1	0	31	0	4	16	3
Agabus chalconatus	0	0	0	0	0	2	0	0	0	0
Agabus melanarius	0	0	0	0	0	0	0	0	0	0
Agabus nebulosus	3	0	0	1	0	0	0	0	1	0
Agabus sturmii	1	0	0	0	0	1	0	23	1	0
Ilybius aenescens	0	0	0	0	0	0	0	0	0	0
Ilybius ater	2	0	0	0	0	10	0	0	28	1
Ilybius fenestratus	0	10	0	0	0	0	0	0	0	0
Ilybius fuliginosus	8	1	0	0	0	0	0	0	1	0
Rhantus exsoletus	0	0	0	0	0	0	0	0	0	0
Rhantus grapii	0	0	0	0	0	0	0	0	0	0
Rhantus suturalis	0	0	0	0	0	0	0	0	0	0
Colymbetes fuscus	4	0	0	0	0	33	0	0	0	1
Hydaticus seminiger	0	0	0	0	0	0	0	0	2	0
Acilius sulcatus	2	0	0	0	1	0	0	0	0	0
Dytiscus marginalis	0	0	0	0	0	1	0	0	0	0
Dytiscus semisulcatus	0	0	0	0	0	0	0	0	0	0
Suphrodytes dorsalis	0	0	0	0	0	3	0	0	28	0
Gyrinus marinus	0	2	0	0	0	0	0	0	0	0
Gyrinus substriatus	8	0	0	0	0	0	0	0	0	0
Hydrochus elongatus	0	0	0	0	0	0	0	0	0	0
Helophorus aequalis	0	0	0	0	0	0	0	0	0	1
Helophorus grandis	0	0	0	0	0	0	0	0	0	0
Helophorus brevipalpis	49	0	0	0	0	25	0	1	2	3
Helophorus flavipes	0	0	0	0	0	0	0	0	0	0
Helophorus minutus	1	0	0	0	0	0	0	0	0	0
Coelostoma orbiculare	0	0	0	0	0	0	0	0	0	0
Hydrobius fuscipes	0	1	0	1	0	3	0	7	2	2
Anacaena bipustulata	0	5	1	0	0	0	0	0	0	0
Anacaena globulus	0	0	0	0	0	0	0	0	0	6
Anacaena limbata	0	1	0	1	0	2	0	0	0	0
Anacaena lutescens	0	1	0	0	0	13	0	0	0	0
Laccobius minutus	1	3	12	0	0	0	0	0	0	0
Laccobius bipunctatus	2	0	0	0	0	0	0	0	0	1
Laccobius striatulus	0	0	1	0	0	0	0	0	0	0
Helochares lividus	6	3	16	0	0	0	0	1	0	9
Enochrus coarctatus	0	0	0	0	0	0	0	0	1	1
Enochrus testaceus	0	6	0	0	0	0	0	0	0	0
Cymbiodyta marginella	0	0	0	0	0	0	0	0	0	0
Cercyon convexiusculus	0	0	0	0	0	4	0	0	0	0
Ochthebius minimus	0	0	1	0	0	0	0	2	0	2
Hydraena riparia	0	0	0	0	0	0	0	2	0	1
Hydraena testacea	0	0	0	0	0	0	0	4	0	2
Limnebius nitidus	0	0	0	0	0	0	0	0	1	0
Dryops luridus	0	0	0	0	0	0	0	0	0	0

TABLE 9. POND INVERTEBRATE DATA (NUMBERS PER THREE MINUTE SAMPLE) (CONTINUED)

	SITES									
SPECIES	EUDO	EV2A	FCSM	FIRL	HAFA	HAYT	KEWG	KINN	LARK	LIMB
Elmis aenea	0	0	0	0	0	0	0	0	0	0
Sialis lutaria	8	9	1	0	0	0	0	0	0	0
Agraylea multipunctata	0	37	0	0	0	0	0	0	0	0
Tinodes waeneri	0	0	0	0	0	0	0	0	0	0
Cyrnus flavidus	0	0	0	0	0	0	0	0	0	0
Holocentropus dubius	0	0	0	0	0	0	0	0	0	0
Holocentropus picicornis	0	0	0	0	0	0	0	0	0	0
Phryganea bipunctata	0	0	0	0	0	0	0	0	0	0
Anabolia nervosa	0	0	1	0	0	0	0	0	0	0
Limnephilus lunatus	0	0	0	0	0	0	0	0	0	0
Molanna angustata	0	2	0	0	0	0	0	0	0	0
Athripsodes aterrimus	0	10	0	0	0	0	0	0	0	0
Athripsodes cinereus	0	5	0	0	0	0	0	0	0	0
Leptocerus tineiformis	0	70	0	0	0	0	0	0	0	0
Mystacides longicornis	0	34	0	0	0	0	8	0	0	0
Triaenodes bicolor	0	1	0	0	0	0	0	0	0	0
Oecetis lacustris	0	0	0	0	0	0	1	0	0	0

TABLE 9. POND INVERTEBRATE DATA (NUMBERS PER THREE MINUTE SAMPLE) (CONTINUED)

	SITES									
SPECIES	LLCO	MPLA	NAZE	PAPA	RACA	REDD	RSPO	SCFA	TICK	WRTO
Polycelis nigra	0	1	0	3	0	0	11	0	0	0
Polycelis tenuis	0	0	0	0	0	0	0	0	0	0
Dugesia polychroa	0	0	0	0	0	0	0	0	0	1
Dugesia tigrina	0	0	0	0	0	0	0	0	0	0
Dendrocoelum lacteum	0	0	0	0	0	0	1	0	0	1
Valvata cristata	0	0	0	0	0	0	24	0	0	0
Potamopyrgus antipodarum	0	15	0	11	0	0	0	0	0	0
Bithynia tentaculata	0	0	0	0	0	0	0	0	0	3
Physa acuta	0	0	0	0	0	0	0	0	0	0
Physa fontinalis	0	0	0	0	0	0	0	0	0	0
Lymnaea auricularia	0	0	0	0	0	1	0	0	0	0
Lymnaea palustris	0	0	0	0	3	0	0	0	0	0
Lymnaea peregra	0	5	0	304	1	10	4	0	5900	170
Lymnaea stagnalis	0	2	0	0	0	0	7	0	0	25
Lymnaea truncatula	0	0	0	0	0	0	0	0	0	0
Planorbis carinatus	0	0	0	0	0	0	0	0	0	0
Planorbis planorbis	0	0	0	0	0	0	8	0	0	0
Anisus leucostoma	0	0	0	0	0	0	0	0	0	0
Anisus vortex	0	0	0	0	0	0	0	0	0	20
Bathyomphalus contortus	0	0	0	0	0	0	0	0	0	0
Gyraulus albus	0	7	0	7	0	0	0	0	0	27
Gyraulus laevis	0	0	0	0	0	7	0	0	0	0
Armiger crista	0	0	8	0	0	0	12	0	0	0
Planorbarius corneus	0	0	0	0	0	0	1	0	0	0
Ferrissia wautieri	0	0	0	0	0	0	2	0	0	0
Acroloxus lacustris	0	0	0	0	2	0	0	0	0	4
Sphaerium corneum	0	0	0	0	0	0	0	0	0	0
Sphaerium lacustre	0	0	0	0	0	0	0	0	0	0
Piscicola geometra	0	1	0	0	0	0	0	0	0	0
Theromyzon tessulatum	0	0	0	2	0	1	0	0	2	4
Glossiphonia complanata	0	0	0	1	0	0	0	0	7	0
Glossiphonia heteroclita	0	0	0	4	0	0	0	0	1	5
Helobdella stagnalis	0	2	0	0	0	12	1	0	4	9
Erpobdella octoculata	0	0	0	0	0	0	0	0	17	27
Argyroneta aquatica	0	0	0	0	0	25	0	0	0	0
Asellus aquaticus	0	40	0	188	0	0	2	0	251	0
Asellus meridianus	0	0	0	0	0	0	0	1	0	7
Crangonyx pseudogracilis	0	32	9	104	0	132	5	0	7	0
Gammarus pulex	0	0	0	2	0	0	0	0	0	135
Cloeon dipterum	0	30	1	0	8	0	45	0	0	260
Caenis horaria	0	0	0	0	0	0	0	0	0	16
Caenis luctuosa	0	0	0	0	0	0	0	0	0	0
Caenis robusta	0	1	0	0	0	0	1	0	0	2
Pyrrhosoma nymphula	0	0	0	0	0	0	4	0	0	9
Ischnura elegans	0	1	0	0	0	0	0	0	3	0
Enallagma cyathigerum	0	0	0	0	0	0	0	0	0	0
Coenagrion puella	0	0	0	0	0	1	0	0	0	5
Coenagrion puella/pulchellum	0	0	0	0	0	0	0	0	0	0
Erythromma najas	0	0	0	0	0	1	0	0	0	2
Aeshna cyanea	0	0	13	0	0	0	11	0	0	0
Anax imperator	0	0	0	0	0	1	14	0	0	0

TABLE 9. POND INVERTEBRATE DATA (NUMBERS PER THREE MINUTE SAMPLE) (CONTINUED)

	SITES									
SPECIES	LLCO	MPLA	NAZE	PAPA	RACA	REDD	RSPO	SCFA	TICK	WRTO
Orthetrum cancellatum	0	0	0	0	0	5	0	0	0	0
Sympetrum striolatum	0	0	0	0	0	0	0	0	0	0
Hydrometra stagnorum	0	0	2	0	0	0	0	0	1	0
Velia caprai	0	0	0	0	0	0	0	0	0	0
Microvelia reticulata	0	0	0	0	0	2	0	0	0	1
Gerris lacustris	0	0	15	1	1	0	0	0	0	0
Gerris odontogaster	0	0	0	0	0	0	1	0	0	0
Gerris thoracicus	0	0	0	0	0	0	0	0	0	0
Nepa cinerea	0	1	0	0	0	3	1	0	1	1
Ranatra linearis	0	1	0	0	0	1	1	0	0	0
Ilyocoris cimicoides	0	0	0	0	0	160	0	0	0	0
Notonecta glauca	0	0	19	17	1	1	11	0	1	0
Notonecta maculata	0	0	0	0	0	0	0	0	0	0
Notonecta marmorea	0	0	1	2	0	0	0	0	0	0
Plea leachi	0	0	1	0	1	10	1	0	1	0
Cymatia coleoptrata	0	0	0	0	0	0	0	0	0	0
Callicorixa praeusta	0	0	0	0	2	0	1	0	0	0
Corixa panzeri	0	0	0	0	0	0	0	0	0	0
Corixa punctata	0	0	2	1	0	0	1	0	0	0
Hesperocorixa linnei	0	0	32	0	0	0	0	0	0	0
Hesperocorixa moesta	0	0	0	0	0	0	1	0	0	0
Hesperocorixa sahlbergi	0	0	1	0	0	0	30	2	0	0
Sigara dorsalis	0	0	12	0	0	0	0	0	5	3
Sigara distincta	1	0	0	0	2	0	0	0	0	0
Sigara falleni	0	2	0	0	2	0	0	0	0	1
Sigara fossarum	0	1	0	0	0	0	0	0	0	0
Sigara lateralis	0	0	0	0	0	0	0	0	1	0
Sigara nigrolineata	0	0	0	0	0	0	0	1	0	0
Sigara concinna	0	0	0	0	0	0	0	0	0	0
Sigara limitata	0	0	0	0	0	0	0	0	0	0
Haliplus confinis	0	0	0	0	0	0	0	0	0	0
Haliplus flavicollis	0	0	0	0	0	0	10	0	0	0
Haliplus fluviatilis	0	1	0	0	0	0	0	0	0	0
Haliplus immaculatus	0	0	1	9	0	0	0	2	1	0
Haliplus lineatocollis	0	0	0	0	0	0	52	1	2	0
Haliplus lineolatus	0	0	0	0	0	0	0	0	0	0
Haliplus ruficollis	0	0	2	1	2	0	11	1	1	2
Haliplus wehnckei	0	0	0	2	0	0	0	0	0	0
Hygrobia hermanni	0	0	0	0	0	0	4	0	0	0
Noterus clavicornis	0	0	0	0	2	5	7	0	4	0
Laccophilus hyalinus	0	3	0	0	0	0	0	0	0	0
Laccophilus minutus	0	0	20	0	2	0	4	0	1	0
Hyphydrus ovatus	0	0	1	0	0	2	2	0	0	0
Hydroglyphus geminus	0	0	0	0	0	0	0	1	0	0
Hygrotus inaequalis	0	0	48	2	1	0	0	1	4	0
Coelambus impressopunctatus	0	0	0	0	0	0	0	0	0	0
Hydroporus angustatus	0	0	1	0	0	0	0	0	0	0
Hydroporus erythrocephalus	15	0	0	0	0	0	32	0	0	0
Hydroporus incognitus	0	0	1	0	0	0	0	0	0	0
Hydroporus memnonius	0	0	0	0	0	0	0	0	0	0
Hydroporus nigrita	0	0	0	0	0	0	0	0	0	0
Hydroporus obscurus	5	0	0	0	0	0	0	0	0	0

TABLE 9. POND INVERTEBRATE DATA (NUMBERS PER THREE MINUTE SAMPLE) (CONTINUED)

	SITES									
SPECIES	LLCO	MPLA	NAZE	PAPA	RACA	REDD	RSPO	SCFA	TICK	WRTO
Hydroporus palustris	0	0	0	0	0	0	4	0	1	0
Hydroporus planus	0	0	0	0	0	0	0	0	0	0
Hydroporus pubescens	33	0	0	0	0	0	0	0	0	0
Hydroporus striola	0	0	0	0	0	0	0	0	0	0
Hydroporus tesselatus	0	0	0	0	0	0	0	0	0	0
Hydroporus tristis	6	0	0	0	0	0	0	0	0	0
Hydroporus umbrosus	9	0	0	0	0	0	0	0	0	0
Agabus bipustulatus	4	0	4	2	0	0	2	0	2	0
Agabus chalconatus	0	0	0	0	0	0	0	0	0	0
Agabus melanarius	1	0	0	0	0	0	0	0	0	0
Agabus nebulosus	0	0	0	0	0	0	0	0	1	0
Agabus sturmii	0	0	5	3	0	1	3	0	0	0
Ilybius aenescens	2	0	0	0	0	0	0	0	0	0
Ilybius ater	0	0	3	0	0	0	0	0	8	0
Ilybius fenestratus	0	6	0	0	0	0	0	0	0	0
Ilybius fuliginosus	0	1	0	0	0	0	0	0	0	2
Rhantus exsoletus	1	0	0	0	0	0	0	0	0	0
Rhantus grapii	0	0	0	0	0	0	1	0	0	0
Rhantus suturalis	8	0	0	0	0	0	0	0	0	0
Colymbetes fuscus	0	0	1	1	0	1	1	0	0	0
Hydaticus seminiger	0	0	0	0	0	0	1	0	0	0
Acilius sulcatus	0	0	0	0	0	0	4	0	0	0
Dytiscus marginalis	0	0	0	0	0	0	1	0	1	0
Dytiscus semisulcatus	0	0	0	0	0	1	0	0	0	0
Suphrodytes dorsalis	0	0	0	1	2	0	2	0	0	0
Gyrinus marinus	0	0	0	0	0	0	0	0	0	0
Gyrinus substriatus	0	0	0	0	0	0	0	0	0	0
Hydrochus elongatus	0	0	0	0	0	0	1	0	0	0
Helophorus aequalis	1	0	0	0	0	0	0	1	1	0
Helophorus grandis	0	0	0	0	0	0	0	0	1	0
Helophorus brevipalpis	0	0	1	0	0	2	0	0	37	38
Helophorus flavipes	1	0	0	0	0	0	0	0	0	0
Helophorus minutus	0	0	1	0	0	0	0	1	2	0
Coelostoma orbiculare	0	0	0	0	1	0	0	0	0	0
Hydrobius fuscipes	0	0	24	0	0	0	0	1	16	0
Anacaena bipustulata	0	0	0	0	0	0	8	0	0	0
Anacaena globulus	0	1	4	0	0	0	0	1	0	2
Anacaena limbata	0	0	53	0	0	2	0	0	0	0
Anacaena lutescens	0	0	0	0	0	0	1	0	0	0
Laccobius minutus	0	0	0	0	1	1	0	0	0	0
Laccobius bipunctatus	0	0	0	0	0	0	0	0	5	0
Laccobius striatulus	0	0	0	0	0	0	0	0	0	0
Helochares lividus	0	0	15	1	0	0	0	0	0	0
Enochrus coarctatus	0	0	0	0	0	0	0	0	0	0
Enochrus testaceus	0	0	0	0	0	0	0	0	0	0
Cymbiodyta marginella	0	0	22	0	0	0	0	0	1	0
Cercyon convexiusculus	0	0	11	0	0	0	0	0	0	0
Ochthebius minimus	0	0	180	1	0	0	0	10	1	0
Hydraena riparia	0	0	0	0	0	0	0	1	0	0
Hydraena testacea	0	0	36	0	0	0	0	1	0	0
Limnebius nitidus	0	0	2	0	0	0	0	2	0	0
Dryops luridus	0	0	0	0	0	0	1	0	0	0

TABLE 9. POND INVERTEBRATE DATA (NUMBERS PER THREE MINUTE SAMPLE) (CONTINUED)

	SITES									
SPECIES	LLCO	MPLA	NAZE	PAPA	RACA	REDD	RSPO	SCFA	TICK	WRTO
Elmis aenea	0	0	0	0	0	0	0	0	0	1
Sialis lutaria	0	0	0	0	0	2	1	0	0	20
Agraylea multipunctata	0	0	0	0	0	0	0	0	0	0
Tinodes waeneri	0	0	0	0	0	0	0	0	0	1
Cymus flavidus	0	0	0	0	0	0	0	0	0	18
Holocentropus dubius	0	0	0	0	0	0	0	0	0	6
Holocentropus picicornis	0	0	0	0	0	0	0	0	0	1
Phryganea bipunctata	0	0	0	0	0	1	0	0	0	1
Anabolia nervosa	0	0	0	0	0	0	0	0	0	1
Limnephilus lunatus	0	0	0	0	0	0	0	0	0	3
Molanna angustata	0	0	0	0	0	0	0	0	0	0
Athripsodes aterrimus	0	0	0	0	0	3	0	0	0	6
Athripsodes cinereus	0	0	0	0	0	0	0	0	0	0
Leptocerus tineiformis	0	0	0	0	0	0	0	0	0	0
Mystacides longicornis	0	0	0	0	0	19	0	0	0	1
Triaenodes bicolor	0	0	0	0	0	1	5	0	0	0
Oecetis lacustris	0	0	0	0	0	0	0	0	0	0

TABLE 10. POND PLANT DATA

	SITES									
SPECIES	EUDO	FIRL	HAFA	HAYT	KEWG	KINN	LARK	LIMB	NAZE	PAPA
AQUATIC PLANTS										
Callitriche stagnalis agg.	0	1	0	0	0	1	0	0	0	0
Callitriche sp.	0	1	0	0	0	0	0	0	1	1
Ceratophyllum demersum	0	0	0	0	1	0	0	0	1	0
Elodea nuttallii	0	0	0	0	0	1	0	0	0	0
Juncus bulbosus	0	0	0	0	0	0	0	0	0	0
Menyanthes trifoliata	0	0	0	0	0	0	0	0	0	0
Myriophyllum aquaticum	0	0	0	0	0	0	0	0	0	0
Myriophyllum spicatum	0	0	0	0	0	0	0	0	0	0
Potamogeton berchtoldii	0	0	0	0	0	0	0	0	0	0
Potamogeton crispus	0	0	0	0	0	0	0	0	0	0
Potamogeton obtusifolius	0	0	0	0	0	0	0	0	0	0
Potamogeton pusillus	0	0	0	0	0	0	0	0	0	0
Ranunculus sp.	0	1	0	0	0	0	0	0	0	0
Fontinalis antipyretica	0	0	0	0	0	0	0	0	0	0
Sphagnum sp.	0	0	0	0	0	0	0	0	0	0
Chara sp.	0	0	0	0	0	0	0	0	0	0
FLOATING-LEAVED PLANTS										
Lemna gibba	0	0	0	0	0	0	0	0	0	0
Lemna minor	1	1	0	1	1	1	1	1	1	1
Lemna minuscula	0	0	0	0	1	0	0	0	0	0
Lemna trisulca	0	0	0	1	0	0	0	0	1	0
Nymphaea alba	0	0	0	0	0	0	0	0	1	0
Nuphar lutea	0	0	0	0	0	0	0	0	0	0
Nuphar exotic	0	0	0	0	1	0	0	0	0	0
Potamogeton natans	0	0	0	0	0	1	0	0	0	0
Riccia fluitans	0	0	0	0	0	0	0	0	0	0
EMERGENT PLANTS										
Agrostis stolonifera	1	1	1	1	0	0	0	0	1	1
Alisma lanceolatum	0	0	0	0	0	0	0	0	0	0
Alisma plantago-aquatica	1	0	1	0	1	0	0	0	1	0
Angelica sylvestris	0	0	0	0	0	0	0	0	0	0
Apium nodiflorum	0	0	0	0	0	0	0	0	1	0
Berula erecta	0	0	0	0	0	0	0	0	0	0
Bidens tripartita	0	0	0	0	0	0	0	0	0	0
Butomus umbellatus	1	0	0	0	0	0	0	0	0	0
Caltha palustris	0	0	0	0	0	0	0	0	0	0
Cardamine pratensis	0	0	0	0	1	0	0	0	0	1
Carex otrubae	0	0	0	0	0	0	0	0	1	0
Carex pendula	0	0	0	0	1	1	0	0	0	0
Carex riparia	0	0	0	0	1	0	0	0	0	0
Carex sp.	0	0	0	0	1	0	0	0	0	0
Cirsium palustre	0	0	0	0	0	0	0	0	0	0
Cyperus longus	0	0	0	0	1	0	0	0	0	0
Deschampsia caespitosa	0	0	0	0	0	0	0	0	0	0
Eleocharis palustris	0	0	0	0	0	0	0	0	0	0
Equisetum palustre	0	0	0	0	0	0	0	0	0	0
Epilobium hirsutum	1	1	0	0	1	0	1	0	1	0
Epilobium obscurum	0	0	0	0	0	0	0	0	0	1
Epilobium parviflorum	0	0	0	0	0	0	0	0	0	0
Erica tetralix	0	0	0	0	0	0	0	0	0	0

TABLE 10. POND PLANT DATA (CONTINUED)

				SITES						
SPECIES	EUDO	FIRL	HAFA	HAYT	KEWG	KINN	LARK	LIMB	NAZE	PAPA
EMERGENT PLANTS										
Eriophorum angustifolium	0	0	0	0	0	0	0	0	0	0
Eupatorium cannabinum	0	0	0	0	0	0	0	0	0	0
Filipendula ulmaria	0	0	0	0	0	0	0	0	0	0
Galium palustre	0	0	0	0	0	0	0	0	0	0
Glyceria declinata	0	0	0	0	0	0	0	0	0	0
Glyceria fluitans	0	0	0	1	0	0	0	0	0	1
Glyceria maxima	0	0	0	0	0	0	0	0	0	0
Glyceria plicata	1	0	0	0	0	0	0	0	0	0
Hypericum tetrapterum	0	0	0	0	0	0	0	0	0	0
Iris pseudacorus	0	0	0	1	0	1	0	0	1	0
Iris sp.	0	0	0	0	1	0	0	0	0	0
Juncus acutiflorus	0	0	0	0	0	0	0	0	0	0
Juncus articulatus	0	0	0	0	0	0	0	0	0	0
Juncus bufonis agg.	0	0	0	0	0	0	0	0	0	0
Juncus conglomeratus	0	0	0	0	0	0	0	0	0	0
Juncus inflexus	0	0	0	0	0	0	1	0	1	0
Juncus effusus	1	0	0	1	0	0	1	1	1	1
Lotus pedunculatus	0	0	0	0	0	0	0	0	0	0
Lycopus europaeus	0	0	0	0	1	0	0	0	1	0
Lysimachia nummularia	0	0	0	0	0	1	0	0	0	0
Lysimachia vulgaris	0	0	0	0	0	0	0	0	0	0
Lythrum salicaria	0	0	0	0	0	0	0	0	0	0
Mentha aquatica	0	0	0	0	1	0	0	0	0	0
Mimulus guttatus	0	0	0	0	1	0	0	0	0	0
Molinia caerulea	0	0	0	0	0	0	0	0	0	0
Montia fontana	0	0	0	0	0	0	0	0	0	1
Myosotis laxa	0	0	0	0	0	0	0	0	0	0
Myosotis scorpioides	0	0	0	0	1	1	0	0	0	1
Nasturtium officinale	1	0	0	0	0	0	0	0	0	0
Nasturtium officinale agg.	0	0	0	0	0	0	0	0	1	0
Oenanthe aquatica	0	0	0	0	0	0	0	0	0	0
Petasites hybridus	0	0	0	0	1	0	0	0	1	0
Phalaris arundinacea	0	0	0	0	0	1	0	0	0	0
Polygonum amphibium	0	0	0	0	0	0	0	0	1	0
Polygonum hydropiper	0	0	0	0	0	1	0	1	0	0
Polygonum lapathifolium	0	0	0	0	0	0	0	0	0	0
Polygonum persicaria	0	0	0	0	1	0	0	0	1	0
Ranunculus flammula	0	0	0	0	0	0	0	0	0	0
Ranunculus lingua	0	0	0	0	0	0	0	0	0	0
Ranunculus sceleratus	0	0	1	0	0	0	0	0	1	0
Rorippa amphibia	0	0	0	0	0	0	0	0	0	0
Rorippa palustris	0	0	0	0	0	0	0	0	1	0
Schoenoplectus lacustris	0	0	0	0	0	0	0	0	0	0
Scrophularia auriculata	0	0	0	0	0	0	0	0	1	0
Scutellaria galericulata	0	0	0	0	0	0	0	0	0	0
Solanum dulcamara	1	1	0	1	0	1	1	1	1	0
Sparganium erectum	0	0	0	1	0	0	1	0	0	0
Symphytum officinale	0	0	0	0	0	0	0	0	0	0
Tricophorum cespitosum	0	0	0	0	0	0	0	0	0	0
Typha latifolia	0	0	0	0	0	0	1	1	1	0
Veronica anagallis-aquatica	0	0	0	0	0	0	0	0	1	0
Veronica beccabunga	0	0	0	1	0	0	0	0	0	1
Veronica catenata	0	0	0	0	0	0	0	0	0	0

TABLE 10. POND PLANT DATA (CONTINUED)

SPECIES	SITES									
	RACA	REDD	RSPO	SCFA	TICK	FCSM	MPLA	WRTO	EV2A	LLCO
Callitriche stagnalis agg.	0	0	1	0	0	0	0	0	0	0
Callitriche sp.	0	0	0	1	1	0	0	0	0	0
Ceratophyllum demersum	0	1	0	0	0	0	0	0	0	0
Elodea nuttallii	0	1	1	0	0	0	0	0	1	0
Juncus bulbosus	0	0	0	0	0	0	0	0	1	0
Menyanthes trifoliata	0	1	0	0	0	0	0	0	0	0
Myriophyllum aquaticum	0	1	0	0	0	0	0	0	0	0
Myriophyllum spicatum	0	0	0	0	0	0	0	1	0	0
Potamogeton berchtoldii	0	0	0	0	0	1	0	0	0	0
Potamogeton crispus	0	0	1	0	0	0	0	0	0	0
Potamogeton obtusifolius	1	0	0	0	0	0	0	0	0	0
Potamogeton pusillus	0	1	0	0	0	0	0	0	0	0
Ranunculus sp.	0	1	1	0	0	0	0	0	0	0
Fontinalis antipyretica	0	0	1	0	0	0	0	0	0	0
Sphagnum sp.	0	0	0	0	0	0	0	0	0	1
Chara sp.	0	1	0	0	0	1	0	1	0	0
FLOATING-LEAVED PLANTS										
Lemna gibba	0	0	0	0	1	0	0	0	0	0
Lemna minor	1	0	1	0	1	1	0	0	0	0
Lemna minuscula	0	0	0	0	0	1	0	0	0	0
Lemna trisulca	0	0	1	0	0	0	0	0	0	0
Nymphaea alba	0	1	0	0	0	0	0	0	0	0
Nuphar lutea	0	0	1	0	0	0	0	0	0	0
Nuphar exotic	0	0	1	0	0	0	0	0	0	0
Potamogeton natans	0	0	1	0	1	0	0	0	1	0
Riccia fluitans	0	0	1	0	0	0	0	0	0	0
EMERGENT PLANTS										
Agrostis stolonifera	1	1	1	0	1	0	0	0	1	0
Alisma lanceolatum	0	1	0	0	0	0	0	0	0	0
Alisma plantago-aquatica	1	1	1	0	0	0	0	0	1	0
Angelica sylvestris	1	0	0	0	0	0	0	0	1	0
Apium nodiflorum	0	1	0	0	1	0	0	0	1	0
Berula erecta	0	1	0	0	0	0	0	0	0	0
Bidens tripartita	0	0	0	0	0	0	0	0	1	0
Butomus umbellatus	0	0	0	0	0	0	0	0	0	0
Caltha palustris	0	1	0	0	0	0	0	0	0	0
Cardamine pratensis	0	0	0	0	0	0	0	0	0	0
Carex otrubae	1	1	0	0	0	0	0	0	0	0
Carex pendula	0	0	0	0	0	0	0	0	0	0
Carex riparia	0	0	0	0	0	0	0	0	0	0
Carex sp.	0	0	0	0	0	0	0	0	0	0
Cirsium palustre	1	0	0	0	0	0	0	0	0	0
Cyperus longus	0	0	0	0	0	0	0	0	0	0
Deschampsia caespitosa	1	0	0	0	0	0	0	0	0	0
Eleocharis palustris	0	1	0	0	0	1	0	0	1	0
Equisetum palustre	0	0	0	0	0	0	1	0	1	0
Epilobium hirsutum	1	1	1	1	1	1	1	1	1	0
Epilobium obscurum	1	0	0	0	0	0	0	0	0	0
Epilobium parviflorum	0	0	0	0	0	0	0	1	0	0
Erica tetralix	0	0	0	0	0	0	0	0	0	1

TABLE 10. POND PLANT DATA (CONTINUED)

				SITES						
SPECIES	RACA	REDD	RSPO	SCFA	TICK	FCSM	MPLA	WRTO	EV2A	LLCO
EMERGENT PLANTS										
Eriophorum angustifolium	0	0	0	0	0	0	0	0	0	1
Eupatorium cannabinum	0	0	0	0	0	1	0	0	0	0
Filipendula ulmaria	1	0	0	0	0	0	0	0	1	0
Galium palustre	0	1	1	0	0	0	0	0	0	0
Glyceria declinata	0	0	0	0	0	0	0	0	0	1
Glyceria fluitans	0	0	1	0	0	0	0	0	1	0
Glyceria maxima	0	0	0	0	0	0	0	1	0	0
Glyceria plicata	0	0	0	0	1	0	0	0	0	0
Hypericum tetrapterum	0	0	0	0	0	0	0	0	1	0
Iris pseudacorus	1	1	1	0	0	0	1	0	0	0
Iris sp.	0	0	0	0	0	0	0	0	0	0
Juncus acutiflorus	0	1	0	1	0	0	0	0	1	0
Juncus articulatus	1	0	1	0	0	1	0	0	1	0
Juncus bufonis agg.	0	0	0	0	0	0	0	0	0	1
Juncus conglomeratus	0	0	0	0	0	0	0	0	1	0
Juncus inflexus	0	1	0	0	1	1	0	0	0	0
Juncus effusus	1	0	1	1	1	0	1	1	1	1
Lotus pedunculatus	1	0	0	0	0	0	0	0	1	0
Lycopus europaeus	0	0	1	1	0	0	1	0	1	0
Lysimachia nummularia	1	0	0	0	0	0	0	0	0	0
Lysimachia vulgaris	0	0	0	0	0	0	0	0	1	0
Lythrum salicaria	0	0	1	0	0	0	0	0	0	0
Mentha aquatica	1	1	1	0	0	1	0	1	1	0
Mimulus guttatus	0	0	0	0	0	0	0	0	0	0
Molinia caerulea	0	0	0	0	0	0	0	0	0	1
Montia fontana	1	0	0	0	0	0	0	0	0	0
Myosotis laxa	0	1	0	0	0	0	0	0	0	0
Myosotis scorpioides	1	0	1	0	0	0	0	0	1	0
Nasturtium officinale	0	0	0	0	0	0	0	0	0	0
Nasturtium officinale agg.	0	1	0	0	0	0	0	0	0	0
Oenanthe aquatica	0	0	1	0	0	0	0	0	0	0
Petasites hybridus	0	0	0	0	0	0	0	0	0	0
Phalaris arundinacea	0	0	0	0	0	0	0	0	0	0
Polygonum amphibium	1	0	1	0	0	0	0	0	1	0
Polygonum hydropiper	1	0	0	0	0	0	0	0	1	0
Polygonum lapathifolium	0	0	0	0	0	0	0	0	1	0
Polygonum persicaria	1	0	0	1	0	0	0	0	0	0
Ranunculus flammula	0	0	0	0	0	0	0	0	1	0
Ranunculus lingua	1	1	0	0	0	0	0	0	0	0
Ranunculus sceleratus	1	1	1	1	1	0	0	0	1	0
Rorippa amphibia	0	0	1	0	0	0	0	0	0	0
Rorippa palustris	0	0	0	0	0	0	0	0	1	0
Schoenoplectus lacustris	0	0	0	0	1	1	0	0	0	0
Scrophularia auriculata	0	0	0	0	1	1	0	1	0	0
Scutellaria galericulata	1	0	0	0	0	0	0	0	0	0
Solanum dulcamara	1	1	1	1	0	0	1	1	1	0
Sparganium erectum	1	0	0	0	1	0	0	1	1	0
Symphytum officinale	0	0	1	0	0	0	0	0	0	0
Tricophorum cespitosum	0	0	0	0	0	0	0	0	0	1
Typha latifolia	1	1	1	0	0	1	1	0	1	0
Veronica anagallis-aquatica	0	0	0	0	0	0	0	0	0	0
Veronica beccabunga	0	1	0	0	0	0	0	1	1	0
Veronica catenata	0	1	0	0	0	0	0	0	0	0

TABLE 11. CORRELATIONS BETWEEN POND ENVIRONMENTAL AND BIOLOGICAL VARIABLES

Key:

r_s = Spearmans coefficeint of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLE						
POTENTIAL METRIC		EASTING	NORTHING	ALTITUDE	CTM_SST	CMT_CLAY	CMT_LST	CMT_IG
INV_N.SP	r_s	0.0268	-0.1116	-0.1723	0.0911	-0.1059	0.1865	-0.0159
	p	0.7717	0.2251	0.0599	0.3223	0.2498	0.0414	0.8631
INV_N.FA	r_s	-0.1063	0.0395	-0.0354	0.2454	-0.2811	0.2487	-0.0375
	p	0.2480	0.6687	0.7013	0.0069	0.0019	0.0062	0.6841
INV_N.OR	r_s	-0.0797	0.0836	0.0108	0.2015	-0.2488	0.2740	-0.0917
	p	0.3871	0.3640	0.9065	0.0273	0.0061	0.0025	0.3191
INV_SRS	r_s	0.0718	-0.1869	-0.2287	0.0660	-0.0579	0.0960	0.0241
	p	0.4360	0.0410	0.0120	0.4740	0.5298	0.2971	0.7943
INV_SRI	r_s	0.1445	-0.2793	-0.1532	0.0073	0.0467	-0.2097	0.1515
	p	0.1152	0.0020	0.0947	0.9365	0.6126	0.0215	0.0987
S_TRIC	r_s	0.0665	0.1409	0.0504	0.1523	-0.1729	0.2042	-0.0387
	p	0.4703	0.1249	0.5848	0.0967	0.0590	0.0253	0.6745
S_GAST	r_s	-0.0154	0.1044	-0.2013	0.0613	-0.0725	0.2574	-0.0530
	p	0.8672	0.2564	0.0275	0.5060	0.4312	0.0045	0.5654
S_BIVALV	r_s	0.0074	-0.1919	0.1058	0.0917	0.1161	-0.1476	-0.1042
	p	0.9363	0.0358	0.2502	0.3193	0.2067	0.1077	0.2573
S_HIRU	r_s	-0.2016	0.2667	0.0376	-0.0145	-0.0693	0.1318	0.1026
	p	0.0272	0.0032	0.6839	0.8747	0.4519	0.1514	0.2647
S_ARAN	r_s	-0.1351	-0.0910	-0.0541	0.1925	-0.1493	-0.0068	-0.0829
	p	0.1412	0.3228	0.5570	0.0352	0.1037	0.9409	0.3678
S_DECA	r_s	-0.0225	0.1125	0.0847	-0.0375	-0.1371	0.1595	-0.0228
	p	0.8073	0.2213	0.3577	0.6847	0.1353	0.0819	0.8047
S_ISOP	r_s	-0.0362	0.0179	-0.3153	0.0182	0.0537	0.1521	-0.0479
	p	0.6946	0.8458	0.0005	0.8432	0.5604	0.0973	0.6038
S_AMPH	r_s	-0.0339	0.0987	-0.0154	-0.0503	-0.0254	0.1879	-0.0555
	p	0.7134	0.2833	0.8677	0.5857	0.7828	0.0399	0.5474
S_EPHE	r_s	0.0207	0.0259	0.0529	0.1127	-0.2576	0.2923	0.0085
	p	0.8223	0.7787	0.5658	0.2203	0.0045	0.0012	0.9264
S_PLEC	r_s	-0.0398	0.2148	0.0699	-0.0472	-0.2723	0.3419	-0.0519
	p	0.6657	0.0185	0.4481	0.6090	0.0026	0.0001	0.5737
S_ODON	r_s	-0.0056	-0.1645	0.0889	0.3821	-0.3475	-0.0479	0.0253
	p	0.9514	0.0725	0.3341	0.0000	0.0001	0.6038	0.7842
S_HEMI	r_s	-0.1404	-0.0476	0.0152	0.2486	-0.1153	-0.0238	-0.0363
	p	0.1261	0.6059	0.8689	0.0062	0.2097	0.7961	0.6937
S_COLE	r_s	0.2441	-0.2690	-0.2544	-0.1669	0.1749	-0.0097	0.0913
	p	0.0072	0.0030	0.0050	0.0685	0.0561	0.9161	0.3213
S_MEGA	r_s	-0.0262	-0.1237	-0.0337	0.2829	-0.1968	0.1324	-0.1766
	p	0.7761	0.1784	0.7149	0.0017	0.0312	0.1495	0.0537
S_TRICH	r_s	-0.1442	0.0353	0.0586	0.1491	-0.3582	0.3336	-0.0487
	p	0.1161	0.7023	0.5249	0.1040	0.0001	0.0002	0.5970
S_LYMN	r_s	-0.1179	0.0234	-0.0718	0.0433	-0.1367	0.2604	-0.0764
	p	0.1998	0.7997	0.4358	0.6385	0.1365	0.0041	0.4067
S_PLAN	r_s	0.0710	0.1205	-0.1912	0.0008	0.0520	0.1539	-0.0501
	p	0.4409	0.1897	0.0365	0.9931	0.5727	0.0933	0.5866
S_BAET	r_s	0.0387	-0.0228	0.1187	0.0338	-0.1269	0.1889	-0.0187
	p	0.6749	0.8045	0.1967	0.7142	0.1671	0.0388	0.8394

TABLE 11. CORRELATIONS BETWEEN POND ENVIRONMENTAL AND BIOLOGICAL VARIABLES

Key:

r_s = Spearmans coefficeint of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLE						
POTENTIAL METRIC		EASTING	NORTHING	ALTITUDE	CTM_SST	CMT_CLAY	CMT_LST	CMT_IG
S_COEN	r_s	-0.0195	-0.0136	0.1045	0.3282	-0.4325	0.1663	0.1118
	p	0.8323	0.8825	0.2562	0.0003	0.0000	0.0695	0.2242
S_HALIP	r_s	0.1278	-0.0069	-0.1394	0.0004	0.0202	0.2896	-0.0097
	p	0.1644	0.9405	0.1288	0.9964	0.8263	0.0013	0.9159
S_HYDR	r_s	0.2399	-0.2566	-0.1504	-0.1718	0.0860	0.0651	0.0537
	p	0.0083	0.0047	0.1010	0.0607	0.3503	0.4802	0.5603
S_LIMN	r_s	-0.0589	0.0805	0.0932	-0.0459	-0.1945	0.3638	-0.0965
	p	0.5231	0.3824	0.3114	0.6183	0.0333	0.0000	0.2942
S_LEPT	r_s	-0.1182	0.0319	-0.0071	0.0871	-0.2698	0.3090	0.0309
	p	0.1986	0.7294	0.9385	0.3440	0.0029	0.0006	0.7373
S_SM_DY	r_s	0.1634	-0.2489	-0.2665	-0.2260	0.2213	-0.1375	0.1501
	p	0.0745	0.0061	0.0033	0.0131	0.0152	0.1342	0.1018
S_CM	r_s	-0.0342	0.0856	-0.2037	0.0526	-0.0412	0.2475	-0.0717
	p	0.7109	0.3527	0.0256	0.5680	0.6554	0.0064	0.4367
S_HTR	r_s	-0.1399	0.2621	0.0416	0.0395	-0.1116	0.1799	0.0639
	p	0.1275	0.0038	0.6522	0.6685	0.2249	0.0492	0.4883
S_PHEMIP	r_s	-0.1153	-0.0739	0.0078	0.3688	-0.1696	-0.0731	-0.0735
	p	0.2099	0.4224	0.9328	0.0000	0.0641	0.4277	0.4252
S_DHEMIP	r_s	-0.0636	-0.0430	0.0085	0.1093	-0.0654	0.0469	-0.0009
	p	0.4898	0.6411	0.9267	0.2347	0.4777	0.6110	0.9918
S_EPT	r_s	-0.0853	0.0443	0.0606	0.1471	-0.3490	0.3595	-0.0377
	p	0.3545	0.6312	0.5111	0.1090	0.0001	0.0001	0.6826
S_ETO	r_s	-0.0663	-0.0659	0.1153	0.3121	-0.4176	0.1727	-0.0072
	p	0.4721	0.4748	0.2099	0.0005	0.0000	0.0592	0.9377
F_TRICLA	r_s	0.0505	0.1537	0.0671	0.1270	-0.1590	0.1998	-0.0515
	p	0.5837	0.0938	0.4667	0.1670	0.0829	0.0287	0.5764
F_GASTRO	r_s	-0.0386	0.1664	-0.2083	0.0928	-0.1301	0.2947	-0.0211
	p	0.6752	0.0692	0.0224	0.3135	0.1567	0.0011	0.8190
F_BIVALV	r_s	0.0054	-0.1913	0.1041	0.0862	0.1210	-0.1528	-0.1045
	p	0.9534	0.0363	0.2578	0.3495	0.1880	0.0957	0.2559
F_HIRUDI	r_s	-0.1662	0.2610	0.0150	-0.0321	-0.0568	0.1533	0.1083
	p	0.0696	0.0040	0.8705	0.7281	0.5379	0.0946	0.2389
F_ARANEA	r_s	-0.1351	-0.0910	-0.0541	0.1925	-0.1493	-0.0068	-0.0829
	p	0.1412	0.3228	0.5570	0.0352	0.1037	0.9409	0.3678
F_DECAPO	r_s	-0.0225	0.1125	0.0847	-0.0375	-0.1371	0.1595	-0.0228
	p	0.8073	0.2213	0.3577	0.6847	0.1353	0.0819	0.8047
F_ISOPOD	r_s	-0.0089	0.0720	-0.2856	0.0046	0.0621	0.1543	-0.1307
	p	0.9229	0.4348	0.0016	0.9599	0.5002	0.0924	0.1548
F_AMPHIP	r_s	-0.0339	0.0987	-0.0154	-0.0503	-0.0254	0.1879	-0.0555
	p	0.7134	0.2833	0.8677	0.5857	0.7828	0.0399	0.5474
F_EPHEME	r_s	0.0107	0.0296	0.0507	0.1081	-0.2363	0.2647	0.0332
	p	0.9074	0.7479	0.5825	0.2401	0.0094	0.0035	0.7186
F_PLECOP	r_s	-0.0403	0.2161	0.0698	-0.0475	-0.2732	0.3422	-0.0519
	p	0.6618	0.0178	0.4485	0.6067	0.0025	0.0001	0.5736
F_ODONAT	r_s	0.0041	-0.1856	0.0956	0.3809	-0.2663	-0.1668	-0.0213
	p	0.9645	0.0424	0.2990	0.0000	0.0033	0.0687	0.8171

TABLE 11. CORRELATIONS BETWEEN POND ENVIRONMENTAL AND BIOLOGICAL VARIABLES

Key:

r_s = Spearmans coefficeint of rank correlation; p = significance level (p <0.001 underlined)

POTENTIAL METRIC		VARIABLE EASTING	NORTHING	ALTITUDE	CTM_SST	CMT_CLAY	CMT_LST	CMT_IG
F_HEMIPT	r_s	-0.1505	0.0182	0.0149	0.3644	-0.1818	-0.0221	-0.0534
	p	0.1009	0.8434	0.8718	0.0000	0.0469	0.8103	0.5622
F_COLEOP	r_s	0.0918	-0.1685	-0.1063	0.0192	0.0518	0.0901	-0.0337
	p	0.3188	0.0658	0.2480	0.8354	0.5741	0.3276	0.7145
F_TRICHO	r_s	-0.1508	0.0411	0.1075	0.1196	-0.3745	0.3445	-0.0221
	p	0.1002	0.6562	0.2424	0.1934	0.0000	0.0001	0.8108
F_PHEMIP	r_s	-0.1150	-0.0576	-0.0308	0.3457	-0.1649	-0.0356	-0.0656
	p	0.2110	0.5320	0.7382	0.0001	0.0719	0.6995	0.4764
F_DHEMIP	r_s	-0.1842	0.2069	0.1671	0.2365	-0.1966	0.0978	0.0089
	p	0.0440	0.0233	0.0681	0.0093	0.0314	0.2881	0.9229
F_CM	r_s	-0.0555	0.1290	-0.2008	0.0520	-0.0763	0.2705	-0.0519
	p	0.5471	0.1604	0.0279	0.5725	0.4076	0.0028	0.5735
F_HTR	r_s	-0.1079	0.2597	0.0380	0.0379	-0.1121	0.2002	0.0509
	p	0.2406	0.0042	0.6805	0.6812	0.2228	0.0284	0.5809
F_EPT	r_s	-0.0845	0.0613	0.0986	0.1258	-0.3606	0.3622	-0.0033
	p	0.3591	0.5060	0.2838	0.1708	0.0001	0.0000	0.9713
F_ETO	r_s	-0.0695	-0.0531	0.1416	0.2978	-0.4134	0.1769	-0.0104
	p	0.4509	0.5649	0.1229	0.0010	0.0000	0.0533	0.9103
F_OM	r_s	-0.0141	-0.1891	0.0767	0.4136	-0.2990	-0.0846	-0.0727
	p	0.8786	0.0386	0.4051	0.0000	0.0009	0.3585	0.4302
F_EMO	r_s	-0.0165	-0.1380	0.0781	0.3826	-0.3482	0.0471	-0.0425
	p	0.8584	0.1328	0.3967	0.0000	0.0001	0.6097	0.6449
F_PRED	r_s	-0.1294	0.0299	-0.0029	0.2811	-0.2645	0.1441	-0.0366
	p	0.1591	0.7460	0.9754	0.0019	0.0035	0.1163	0.6912
F_DETR	r_s	-0.1243	0.1180	-0.0252	0.1032	-0.2183	0.3321	-0.0556
	p	0.1762	0.1993	0.7845	0.2620	0.0166	0.0002	0.5462
F_HERB	r_s	-0.0433	0.1122	-0.0446	0.0827	-0.2284	0.4037	-0.0441
	p	0.6383	0.2226	0.6284	0.3694	0.0121	0.0000	0.6325
BMWP	r_s	-0.1001	0.0333	0.0261	0.2741	-0.3319	0.2320	-0.0434
	p	0.2765	0.7178	0.7770	0.0024	0.0002	0.0108	0.6381
ASPT	r_s	-0.0451	-0.1639	0.2104	0.2589	-0.3836	0.0050	-0.0142
	p	0.6250	0.0737	0.0211	0.0043	0.0000	0.9569	0.8776
PL_N.TX	r_s	0.0576	-0.0756	-0.1569	0.1271	-0.0947	-0.0330	0.0937
	p	0.5005	0.3767	0.0651	0.1360	0.2673	0.6998	0.2726
MARG_N.TX	r_s	0.0449	-0.0930	-0.1648	0.1339	-0.0740	-0.0547	0.0856
	p	0.5994	0.2762	0.0525	0.1161	0.3866	0.5222	0.3163
SUB_N.TX	r_s	0.0427	-0.0474	-0.0942	0.0844	-0.1690	0.0993	0.0899
	p	0.6177	0.5791	0.2700	0.3232	0.0468	0.2449	0.2925
FLT_N.TX	r_s	0.1915	0.0989	-0.0179	-0.0169	0.0748	-0.1108	0.1163
	p	0.0239	0.2467	0.8343	0.8433	0.3816	0.1942	0.1728
AQ_N.TX	r_s	0.1182	0.0018	-0.0875	0.0451	-0.0935	0.0331	0.0940
	p	0.1657	0.9829	0.3060	0.5979	0.2739	0.6993	0.2708

TABLE 11. CORRELATIONS BETWEEN POND ENVIRONMENTAL AND BIOLOGICAL VARIABLES

Key:

r_s = Spearmans coefficeint of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLE						
POTENTIAL METRIC		EASTING	NORTHING	ALTITUDE	CTM_SST	CMT_CLAY	CMT_LST	CMT_IG
FRE_SP	r_s	0.1929	0.0898	-0.0993	-0.2167	0.1885	0.0338	0.0733
	p	0.0229	0.2930	0.2447	0.0104	0.0263	0.6930	0.3909
POT_SP	r_s	-0.0058	0.0501	0.0849	0.1596	-0.2153	0.1391	0.0791
	p	0.9462	0.5583	0.3205	0.0606	0.0109	0.1025	0.3545
PL_SRS	r_s	0.0415	-0.0740	-0.1697	0.1213	-0.1151	-0.0103	0.1078
	p	0.6280	0.3867	0.0458	0.1549	0.1771	0.9042	0.2066
MARG_SRS	r_s	0.0179	-0.0966	-0.1786	0.1390	-0.0888	-0.0665	0.1171
	p	0.8347	0.2578	0.0354	0.1028	0.2984	0.4364	0.1696
SUB_SRS	r_s	0.0478	-0.0126	-0.0866	0.0755	-0.2005	0.1725	0.0889
	p	0.5760	0.8831	0.3105	0.3770	0.0179	0.0423	0.2981
FLT_SRS	r_s	0.1727	0.0868	-0.0006	0.0084	0.0614	-0.1443	0.1212
	p	0.0421	0.3097	0.9941	0.9217	0.4730	0.0902	0.1553
AQ_SRS	r_s	0.1030	0.0136	-0.0806	0.0491	-0.1364	0.1015	0.0870
	p	0.2277	0.8736	0.3455	0.5660	0.1094	0.2345	0.3084
PL_SRI	r_s	-0.0669	0.0740	-0.1020	0.0372	-0.2179	0.1519	0.2029
	p	0.4337	0.3866	0.2322	0.6641	0.0100	0.0742	0.0166
MARG_SRI	r_s	-0.1180	0.0229	-0.1766	0.0543	-0.1034	-0.0440	0.2516
	p	0.1665	0.7894	0.0375	0.5256	0.2260	0.6069	0.0028
SUB_SRI	r_s	0.0528	0.1227	-0.0247	0.0514	-0.2163	0.2701	0.0967
	p	0.5371	0.1500	0.7731	0.5480	0.0105	0.0013	0.2575
FLT_SRI	r_s	0.0367	0.0659	0.0544	0.0538	0.0245	-0.1831	0.1245
	p	0.6681	0.4409	0.5246	0.5294	0.7748	0.0310	0.1443
AQ_SRI	r_s	0.0260	0.0680	-0.0228	0.0688	-0.2307	0.2551	0.0699
	p	0.7611	0.4266	0.7903	0.4210	0.0063	0.0024	0.4135
AQ_TI	r_s	0.1267	0.0621	-0.1367	-0.1711	0.1421	0.1950	-0.0943
	p	0.1372	0.4677	0.1087	0.0440	0.0952	0.0214	0.2696
SUB_EX	r_s	-0.0043	0.0083	0.0000	0.0462	-0.1294	0.1547	0.0203
	p	0.9603	0.9228	0.9998	0.5893	0.1289	0.0690	0.8123
FLT_EX	r_s	0.1480	-0.0003	-0.1317	-0.0389	0.1039	-0.0277	0.0875
	p	0.0821	0.9974	0.1222	0.6495	0.2236	0.7464	0.3059
AQ_EX	r_s	0.1128	0.0094	-0.0793	-0.0013	-0.0134	0.0925	0.0150
	p	0.1863	0.9130	0.3531	0.9883	0.8754	0.2790	0.8612
MG_EX	r_s	-0.0018	0.1062	-0.1226	-0.1737	0.3109	-0.1016	0.0823
	p	0.9832	0.2133	0.1507	0.0409	0.0002	0.2339	0.3357
EX_SP	r_s	0.0945	0.0588	-0.0628	-0.0843	0.1064	0.0571	-0.0026
	p	0.2684	0.4915	0.4628	0.3238	0.2126	0.5042	0.9762
FFL/AQ	r_s	0.0965	0.0798	-0.0253	-0.2253	0.2212	-0.0101	-0.0357
	p	0.2585	0.3501	0.7675	0.0077	0.0089	0.9064	0.6765
FFL/SU	r_s	0.0948	0.1055	-0.0609	-0.0923	0.0869	0.0172	0.0259
	p	0.2670	0.2165	0.4764	0.2796	0.3093	0.8407	0.7625
SUB/FLO	r_s	-0.0343	0.0277	0.0310	0.1508	-0.1829	0.0391	0.0234
	p	0.6889	0.7465	0.7169	0.0763	0.0312	0.6479	0.7848

TABLE 11. CORRELATIONS BETWEEN POND ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficeint of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLE							
POTENTIAL METRIC		BASE_CL	BASE_GRA	BASE_ROC	BASE_PT	BASE_STO	AREA	M_COMPLX	AGE
INV_N.SP	r_s	-0.0657	0.0767	0.1214	-0.1568	0.0803	0.2148	0.1643	-0.2244
	p	0.4760	0.4048	0.1864	0.0872	0.3831	0.0185	0.0754	0.0179
INV_N.FA	r_s	-0.2092	0.1251	0.2306	-0.1269	0.1227	0.3212	0.1179	-0.2579
	p	0.0219	0.1735	0.0113	0.1673	0.1817	0.0003	0.2034	0.0063
INV_N.OR	r_s	-0.2335	0.1641	0.2140	-0.1439	0.0720	0.2407	0.0064	-0.3168
	p	0.0103	0.0733	0.0189	0.1169	0.4347	0.0081	0.9451	0.0007
INV_SRS	r_s	-0.0229	0.0670	0.0547	-0.1582	0.0543	0.1856	0.1695	-0.1829
	p	0.8041	0.4673	0.5527	0.0844	0.5560	0.0425	0.0666	0.0547
INV_SRI	r_s	0.0168	0.0226	-0.1488	0.0212	-0.0151	0.0055	0.1246	0.0370
	p	0.8553	0.8066	0.1049	0.8181	0.8699	0.9522	0.1788	0.6996
S_TRIC	r_s	-0.1362	0.1499	0.0860	-0.0986	-0.0105	0.2107	0.0600	-0.0391
	p	0.1379	0.1022	0.3505	0.2842	0.9092	0.0209	0.5188	0.6839
S_GAST	r_s	-0.2161	0.1338	0.1982	-0.0820	0.0063	0.1431	-0.0325	-0.2567
	p	0.0178	0.1450	0.0300	0.3732	0.9451	0.1188	0.7270	0.0065
S_BIVALV	r_s	-0.1241	0.2046	0.0077	-0.0961	-0.0778	-0.0551	0.0961	-0.1740
	p	0.1767	0.0250	0.9331	0.2966	0.3985	0.5499	0.3007	0.0678
S_HIRU	r_s	-0.0344	-0.0205	0.2146	-0.1874	0.1642	0.2490	0.0585	0.0250
	p	0.7089	0.8244	0.0186	0.0404	0.0732	0.0061	0.5288	0.7946
S_ARAN	r_s	-0.1775	0.0645	0.0740	0.2994	-0.0619	0.2534	0.2670	0.0811
	p	0.0524	0.4840	0.4220	0.0009	0.5019	0.0052	0.0035	0.3976
S_DECA	r_s	0.0983	-0.0744	-0.0305	-0.0210	-0.0170	0.0754	-0.0193	0.0489
	p	0.2853	0.4192	0.7408	0.8197	0.8536	0.4129	0.8358	0.6102
S_ISOP	r_s	-0.0373	0.0364	0.0504	-0.0898	0.0086	0.0227	0.0164	-0.2767
	p	0.6858	0.6932	0.5845	0.3294	0.9258	0.8057	0.8599	0.0033
S_AMPH	r_s	-0.1021	0.0895	0.0554	-0.1010	0.0562	-0.1437	-0.2473	-0.2365
	p	0.2671	0.3308	0.5476	0.2724	0.5420	0.1174	0.0069	0.0125
S_EPHE	r_s	0.0292	-0.0711	0.1993	-0.1591	-0.0365	0.3122	-0.0265	-0.1672
	p	0.7516	0.4401	0.0291	0.0827	0.6926	0.0005	0.7758	0.0794
S_PLEC	r_s	0.0804	-0.1692	0.0614	-0.0478	0.1954	-0.0790	-0.2536	-0.0613
	p	0.3825	0.0646	0.5056	0.6040	0.0324	0.3909	0.0056	0.5227
S_ODON	r_s	-0.3060	0.1685	0.0880	0.1009	0.0548	0.1736	0.1087	-0.0648
	p	0.0007	0.0659	0.3392	0.2728	0.5521	0.0579	0.2412	0.4991
S_HEMI	r_s	-0.0512	0.1089	0.0196	-0.1353	0.0389	0.2963	0.1237	-0.2023
	p	0.5786	0.2363	0.8317	0.1406	0.6730	0.0010	0.1822	0.0332
S_COLE	r_s	0.1441	-0.0237	-0.0708	-0.1490	0.0757	-0.1001	0.1703	-0.0496
	p	0.1165	0.7970	0.4425	0.1043	0.4113	0.2768	0.0652	0.6054
S_MEGA	r_s	-0.1872	0.1640	0.1054	0.0777	0.0039	0.1586	0.0836	-0.2501
	p	0.0406	0.0735	0.2518	0.3987	0.9666	0.0837	0.3681	0.0081
S_TRICH	r_s	-0.1255	-0.0342	0.3127	-0.1000	0.0756	0.3927	0.1110	-0.2269
	p	0.1720	0.7110	0.0005	0.2771	0.4118	0.0000	0.2316	0.0166
S_LYMN	r_s	-0.3123	0.2014	0.2302	-0.0560	0.0967	0.1116	-0.0473	-0.3505
	p	0.0005	0.0274	0.0114	0.5437	0.2933	0.2248	0.6111	0.0002
S_PLAN	r_s	-0.1524	0.1221	0.1266	-0.0404	-0.0384	0.0722	-0.0102	-0.1168
	p	0.0967	0.1841	0.1683	0.6610	0.6768	0.4334	0.9123	0.2220
S_BAET	r_s	0.0961	-0.0969	0.1268	-0.1947	-0.0361	0.2014	-0.0311	-0.1841
	p	0.2962	0.2926	0.1676	0.0331	0.6953	0.0274	0.7385	0.0531

TABLE 11. CORRELATIONS BETWEEN POND ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficeint of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLE							
POTENTIAL METRIC		BASE_CL	BASE_GRA	BASE_ROC	BASE_PT	BASE_STO	AREA	M_COMPLX	AGE
S_COEN	r_s	-0.3054	0.1470	0.1577	0.0180	0.0751	0.2613	0.0485	-0.0910
	p	0.0007	0.1091	0.0855	0.8455	0.4148	0.0039	0.6023	0.3422
S_HALIP	r_s	-0.0068	0.0562	0.1140	-0.1910	0.0810	0.1465	0.0564	-0.1798
	p	0.9409	0.5419	0.2149	0.0367	0.3794	0.1102	0.5439	0.0590
S_HYDR	r_s	0.2175	-0.1340	-0.0306	-0.1004	0.0298	-0.0991	0.0802	-0.0155
	p	0.0170	0.1446	0.7403	0.2752	0.7469	0.2813	0.3879	0.8716
S_LIMN	r_s	-0.0027	-0.0530	0.2426	-0.0823	0.0501	0.1695	-0.0080	-0.1364
	p	0.9764	0.5656	0.0076	0.3716	0.5871	0.0642	0.9315	0.1535
S_LEPT	r_s	-0.1632	-0.0433	0.3247	-0.0829	0.0735	0.5091	0.2465	-0.1681
	p	0.0750	0.6389	0.0003	0.3680	0.4251	0.0000	0.0071	0.0778
S_SM_DY	r_s	0.1317	-0.0711	-0.0821	-0.1000	0.0565	-0.1253	0.2188	0.0809
	p	0.1515	0.4401	0.3728	0.2771	0.5402	0.1727	0.0173	0.3984
S_CM	r_s	-0.2023	0.1354	0.1883	-0.0822	-0.0002	0.1042	-0.0523	-0.2981
	p	0.0267	0.1405	0.0394	0.3719	0.9979	0.2573	0.5739	0.0015
S_HTR	r_s	-0.0789	0.0429	0.2054	-0.1931	0.1398	0.2577	0.0521	-0.0141
	p	0.3918	0.6418	0.0244	0.0346	0.1278	0.0045	0.5756	0.8835
S_PHEMIP	r_s	-0.1867	0.1888	-0.0178	-0.0844	0.1361	0.2422	0.0878	-0.2494
	p	0.0412	0.0389	0.8468	0.3593	0.1382	0.0077	0.3445	0.0083
S_DHEMIP	r_s	0.0804	0.0178	0.0654	-0.1314	-0.1068	0.2838	0.1081	-0.1213
	p	0.3828	0.8467	0.4782	0.1526	0.2456	0.0017	0.2440	0.2048
S_EPT	r_s	-0.0533	-0.0595	0.2889	-0.1670	0.0483	0.3729	0.0381	-0.2392
	p	0.5632	0.5184	0.0014	0.0683	0.6006	0.0000	0.6819	0.0115
S_ETO	r_s	-0.2154	0.0583	0.2428	-0.0067	0.0222	0.3351	0.0780	-0.1862
	p	0.0181	0.5268	0.0075	0.9419	0.8096	0.0002	0.4010	0.0504
F_TRICLA	r_s	-0.1215	0.1300	0.0836	-0.0944	-0.0169	0.1972	0.0260	-0.0405
	p	0.1861	0.1570	0.3639	0.3053	0.8549	0.0309	0.7799	0.6731
F_GASTRO	r_s	-0.2330	0.1269	0.2229	-0.0914	0.0164	0.1828	0.0060	-0.2093
	p	0.0104	0.1673	0.0144	0.3206	0.8593	0.0457	0.9484	0.0275
F_BIVALV	r_s	-0.1287	0.2054	0.0155	-0.0963	-0.0780	-0.0707	0.0957	-0.1792
	p	0.1611	0.0244	0.8662	0.2952	0.3971	0.4426	0.3028	0.0599
F_HIRUDI	r_s	-0.0351	-0.0034	0.1908	-0.1809	0.0963	0.2557	0.0279	-0.0040
	p	0.7038	0.9709	0.0368	0.0480	0.2953	0.0048	0.7643	0.9671
F_ARANEA	r_s	-0.1775	0.0645	0.0740	0.2994	-0.0619	0.2534	0.2670	0.0811
	p	0.0524	0.4840	0.4220	0.0009	0.5019	0.0052	0.0035	0.3976
F_DECAPO	r_s	0.0983	-0.0744	-0.0305	-0.0210	-0.0170	0.0754	-0.0193	0.0489
	p	0.2853	0.4192	0.7408	0.8197	0.8536	0.4129	0.8358	0.6102
F_ISOPOD	r_s	-0.0628	0.0373	0.0559	-0.0770	0.0312	0.0000	-0.0110	-0.2873
	p	0.4953	0.6858	0.5442	0.4030	0.7353	1.0000	0.9058	0.0022
F_AMPHIP	r_s	-0.1021	0.0895	0.0554	-0.1010	0.0562	-0.1437	-0.2473	-0.2365
	p	0.2671	0.3308	0.5476	0.2724	0.5420	0.1174	0.0069	0.0125
F_EPHEME	r_s	0.0220	-0.0697	0.2038	-0.1652	-0.0251	0.2922	-0.0236	-0.1612
	p	0.8113	0.4496	0.0256	0.0713	0.7857	0.0012	0.7994	0.0911
F_PLECOP	r_s	0.0792	-0.1693	0.0625	-0.0478	0.1974	-0.0771	-0.2533	-0.0584
	p	0.3896	0.0646	0.4979	0.6040	0.0307	0.4029	0.0057	0.5427
F_ODONAT	r_s	-0.3263	0.2037	0.0610	0.1104	0.0962	0.0893	0.1091	-0.0483
	p	0.0003	0.0256	0.5083	0.2299	0.2957	0.3320	0.2395	0.6145

TABLE 11. CORRELATIONS BETWEEN POND ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficeint of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLE							
POTENTIAL METRIC		BASE_CL	BASE_GRA	BASE_ROC	BASE_PT	BASE_STO	AREA	M_COMPLX	AGE
F_HEMIPT	r_s	-0.1727	0.1552	0.0019	-0.0635	0.1815	0.2696	0.1043	-0.2243
	p	0.0593	0.0905	0.9833	0.4911	0.0473	0.0029	0.2610	0.0180
F_COLEOP	r_s	0.0364	0.0755	0.0099	-0.2247	0.1651	0.0454	0.2280	-0.1354
	p	0.6933	0.4122	0.9143	0.0136	0.0716	0.6223	0.0130	0.1564
F_TRICHO	r_s	-0.1233	-0.0414	0.3390	-0.0872	0.0800	0.4017	0.1142	-0.1886
	p	0.1797	0.6534	0.0002	0.3437	0.3848	0.0000	0.2180	0.0475
F_PHEMIP	r_s	-0.1816	0.1748	-0.0118	-0.0848	0.1590	0.2815	0.1110	-0.2355
	p	0.0472	0.0562	0.8982	0.3574	0.0827	0.0018	0.2313	0.0128
F_DHEMIP	r_s	-0.0444	0.0374	-0.0076	-0.0070	0.0805	0.2185	0.0333	-0.1828
	p	0.6300	0.6848	0.9344	0.9397	0.3819	0.0165	0.7201	0.0548
F_CM	r_s	-0.2003	0.1211	0.2031	-0.1077	0.0018	0.0889	-0.0475	-0.3005
	p	0.0283	0.1876	0.0261	0.2415	0.9847	0.3342	0.6093	0.0014
F_HTR	r_s	-0.0890	0.0665	0.1715	-0.1763	0.0702	0.2646	0.0254	-0.0393
	p	0.3339	0.4708	0.0610	0.0541	0.4462	0.0035	0.7847	0.6825
F_EPT	r_s	-0.0504	-0.0709	0.3040	-0.1643	0.0628	0.3725	0.0336	-0.1966
	p	0.5842	0.4416	0.0007	0.0730	0.4957	0.0000	0.7183	0.0386
F_ETO	r_s	-0.2261	0.0726	0.2649	-0.0321	0.0595	0.3385	0.0829	-0.1748
	p	0.0130	0.4305	0.0035	0.7280	0.5184	0.0002	0.3720	0.0665
F_OM	r_s	-0.3436	0.2264	0.1014	0.1178	0.0769	0.1317	0.1168	-0.1365
	p	0.0001	0.0129	0.2705	0.2001	0.4035	0.1516	0.2078	0.1530
F_EMO	r_s	-0.2585	0.1463	0.1713	0.0372	0.0412	0.2378	0.0897	-0.1722
	p	0.0044	0.1109	0.0615	0.6870	0.6552	0.0089	0.3342	0.0707
F_PRED	r_s	-0.2331	0.1523	0.1701	-0.0848	0.1537	0.3130	0.1487	-0.2182
	p	0.0104	0.0968	0.0633	0.3574	0.0937	0.0005	0.1081	0.0214
F_DETR	r_s	-0.1688	0.0676	0.2591	-0.1749	0.1103	0.2017	-0.0298	-0.3566
	p	0.0653	0.4635	0.0043	0.0561	0.2304	0.0271	0.7488	0.0001
F_HERB	r_s	-0.1521	0.0560	0.2724	-0.1791	0.0951	0.2400	0.0179	-0.2838
	p	0.0973	0.5436	0.0026	0.0503	0.3013	0.0083	0.8472	0.0025
BMWP	r_s	-0.2301	0.1167	0.2488	-0.1011	0.1243	0.3383	0.1009	-0.2358
	p	0.0114	0.2045	0.0061	0.2717	0.1761	0.0002	0.2770	0.0127
ASPT	r_s	-0.1001	-0.0217	0.1284	0.1067	0.0651	0.2528	0.1304	0.0441
	p	0.2766	0.8140	0.1623	0.2463	0.4801	0.0053	0.1594	0.6456
PL_N.TX	r_s	-0.0796	0.1029	0.0055	-0.0791	0.0888	0.3277	0.3598	-0.0119
	p	0.3518	0.2281	0.9486	0.3547	0.2986	0.0001	0.0000	0.8936
MARG_N.TX	r_s	-0.0706	0.1053	-0.0489	-0.0438	0.0789	0.3506	0.3865	-0.0190
	p	0.4088	0.2175	0.5676	0.6084	0.3562	0.0000	0.0000	0.8305
SUB_N.TX	r_s	-0.1207	0.0908	0.1528	-0.0739	0.0469	0.2110	0.2672	0.0025
	p	0.1569	0.2879	0.0725	0.3873	0.5839	0.0126	0.0015	0.9773
FLT_N.TX	r_s	0.0185	0.0084	0.0009	-0.1570	0.1245	-0.0003	0.0770	0.1841
	p	0.8292	0.9219	0.9912	0.0649	0.1443	0.9977	0.3692	0.0368
AQ_N.TX	r_s	-0.0932	0.0762	0.1298	-0.1236	0.0849	0.1642	0.1998	0.0733
	p	0.2753	0.3724	0.1277	0.1472	0.3205	0.0535	0.0188	0.4091

TABLE 11. CORRELATIONS BETWEEN POND ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficeint of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLE							
POTENTIAL METRIC		BASE_CL	BASE_GRA	BASE_ROC	BASE_PT	BASE_STO	AREA	M_COMPLX	AGE
FRE_SP	r_s	0.1062	-0.0455	-0.0478	-0.1620	0.0508	-0.0976	0.0456	0.1190
	p	0.2134	0.5948	0.5765	0.0567	0.5525	0.2529	0.5956	0.1792
POT_SP	r_s	-0.0579	-0.0082	0.1681	-0.0144	0.0996	0.1803	0.1083	-0.0641
	p	0.4984	0.9234	0.0479	0.8662	0.2432	0.0336	0.2062	0.4703
PL_SRS	r_s	-0.0842	0.0957	0.0267	-0.0537	0.0730	0.3579	0.3859	0.0078
	p	0.3241	0.2624	0.7546	0.5297	0.3931	0.0000	0.0000	0.9305
MARG_SRS	r_s	-0.0748	0.1023	-0.0467	-0.0195	0.0711	0.3772	0.4313	0.0143
	p	0.3816	0.2306	0.5848	0.8201	0.4057	0.0000	0.0000	0.8720
SUB_SRS	r_s	-0.1290	0.0865	0.1690	-0.0744	0.0380	0.2430	0.2530	-0.0134
	p	0.1302	0.3114	0.0467	0.3843	0.6571	0.0040	0.0028	0.8801
FLT_SRS	r_s	0.0364	-0.0246	-0.0074	-0.0949	0.1219	-0.0049	0.0989	0.2141
	p	0.6706	0.7739	0.9312	0.2664	0.1530	0.9540	0.2483	0.0148
AQ_SRS	r_s	-0.0994	0.0626	0.1574	-0.0902	0.0776	0.1935	0.2097	0.0514
	p	0.2445	0.4641	0.0643	0.2912	0.3638	0.0225	0.0136	0.5627
PL_SRI	r_s	-0.0380	-0.0341	0.1435	0.0851	-0.0209	0.3790	0.3243	0.1103
	p	0.6573	0.6901	0.0919	0.3191	0.8073	0.0000	0.0001	0.2135
MARG_SRI	r_s	-0.0331	-0.0052	0.0263	0.1725	-0.0507	0.3846	0.4393	0.1679
	p	0.6991	0.9518	0.7590	0.0423	0.5531	0.0000	0.0000	0.0571
SUB_SRI	r_s	-0.0777	0.0393	0.1030	-0.1016	0.0213	0.2853	0.1711	-0.0924
	p	0.3632	0.6458	0.2276	0.2341	0.8031	0.0007	0.0448	0.2976
FLT_SRI	r_s	0.1126	-0.1161	-0.0379	0.0343	0.0843	-0.0765	0.1596	0.2217
	p	0.1869	0.1733	0.6577	0.6883	0.3241	0.3708	0.0616	0.0116
AQ_SRI	r_s	-0.0249	-0.0075	0.1022	-0.0187	0.0253	0.2561	0.2044	-0.0888
	p	0.7709	0.9306	0.2314	0.8270	0.7673	0.0023	0.0162	0.3167
AQ_TI	r_s	0.1234	-0.0674	-0.0493	-0.1620	0.0294	-0.0568	-0.1657	-0.2267
	p	0.1477	0.4304	0.5640	0.0568	0.7313	0.5068	0.0522	0.0098
SUB_EX	r_s	-0.1587	0.1349	0.1392	-0.1157	0.0066	0.1340	-0.0460	-0.0780
	p	0.0621	0.1134	0.1021	0.1750	0.9390	0.1158	0.5923	0.3797
FLT_EX	r_s	-0.1004	0.0937	-0.0337	-0.0942	0.0348	-0.0867	-0.0742	0.0492
	p	0.2397	0.2725	0.6936	0.2699	0.6844	0.3104	0.3872	0.5796
AQ_EX	r_s	-0.1754	0.1664	0.0604	-0.1443	-0.0089	0.0659	-0.0954	-0.0501
	p	0.0389	0.0502	0.4799	0.0901	0.9175	0.4411	0.2655	0.5726
MG_EX	r_s	0.0453	-0.0954	-0.0049	0.0130	-0.0705	-0.0317	0.0781	0.0550
	p	0.5967	0.2639	0.9547	0.8792	0.4099	0.7107	0.3626	0.5359
EX_SP	r_s	-0.1300	0.1112	0.0345	-0.0988	-0.0284	0.0218	-0.0638	0.0004
	p	0.1273	0.1924	0.6868	0.2470	0.7399	0.7986	0.4570	0.9964
FFL/AQ	r_s	0.1766	-0.1099	-0.1012	-0.0955	0.0063	-0.1889	-0.0010	0.0911
	p	0.0375	0.1978	0.2358	0.2633	0.9413	0.0259	0.9906	0.3045
FFL/SU	r_s	0.0683	-0.0030	-0.0376	-0.1780	0.0767	-0.0166	0.1135	0.1176
	p	0.4244	0.9718	0.6603	0.0361	0.3696	0.8463	0.1849	0.1844
SUB/FLO	r_s	-0.0654	0.0269	0.0865	0.0033	0.0592	0.1329	0.2582	0.0146
	p	0.4445	0.7528	0.3110	0.9691	0.4890	0.1189	0.0022	0.8693

TABLE 11. CORRELATIONS BETWEEN POND ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficeint of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLE							
POTENTIAL METRIC		SHADE_%	SHADE_MR	WTR_DEPT	SILT_DPT	DRAW_CM	DRAW_%	PERM	CONNECT
INV_N.SP	r_s	-0.1817	-0.1844	0.3329	-0.0360	-0.0144	0.0830	-0.2982	0.1780
	p	0.0470	0.0447	0.0002	0.6964	0.8783	0.3738	0.0010	0.0518
INV_N.FA	r_s	-0.2305	-0.1826	0.4798	-0.0293	-0.1032	0.2993	-0.4784	0.2874
	p	0.0113	0.0468	0.0000	0.7509	0.2725	0.0010	0.0000	0.0015
INV_N.OR	r_s	-0.2081	-0.1767	0.4685	-0.1209	-0.1250	0.2980	-0.4711	0.2270
	p	0.0226	0.0545	0.0000	0.1884	0.1833	0.0011	0.0000	0.0126
INV_SRS	r_s	-0.1414	-0.1804	0.2676	-0.0496	-0.0268	0.0271	-0.2178	0.1271
	p	0.1235	0.0496	0.0031	0.5908	0.7763	0.7715	0.0174	0.1667
INV_SRI	r_s	-0.0371	-0.1376	-0.0719	-0.0380	-0.0129	-0.1568	0.1034	-0.1005
	p	0.6875	0.1356	0.4351	0.6806	0.8912	0.0914	0.2629	0.2746
S_TRIC	r_s	-0.0301	0.0268	0.3433	0.0089	-0.1086	0.1631	-0.2528	0.1731
	p	0.7440	0.7727	0.0001	0.9233	0.2480	0.0789	0.0055	0.0587
S_GAST	r_s	-0.0860	-0.0686	0.4348	-0.1401	0.1342	0.1986	-0.2779	0.2252
	p	0.3502	0.4582	0.0000	0.1269	0.1527	0.0318	0.0022	0.0134
S_BIVALV	r_s	-0.0602	-0.0547	0.0044	-0.1161	-0.1579	-0.0415	-0.0526	-0.2551
	p	0.5133	0.5550	0.9620	0.2068	0.0918	0.6568	0.5700	0.0049
S_HIRU	r_s	-0.1315	-0.1059	0.3001	-0.0667	0.0682	0.1569	-0.2972	0.2571
	p	0.1524	0.2516	0.0009	0.4693	0.4688	0.0911	0.0010	0.0046
S_ARAN	r_s	-0.2218	-0.2324	0.0593	0.0032	-0.1630	0.1779	-0.1351	0.0470
	p	0.0149	0.0110	0.5197	0.9723	0.0818	0.0551	0.1428	0.6104
S_DECA	r_s	0.0213	-0.0847	0.1416	0.0106	-0.0466	0.1486	-0.0782	0.1521
	p	0.8178	0.3596	0.1229	0.9086	0.6209	0.1098	0.3977	0.0973
S_ISOP	r_s	-0.1031	-0.1394	0.2624	-0.1245	0.1892	0.1520	-0.2003	0.2448
	p	0.2625	0.1306	0.0038	0.1756	0.0428	0.1019	0.0290	0.0070
S_AMPH	r_s	-0.1031	-0.1205	0.2927	-0.2111	0.1246	0.1556	-0.1871	0.1492
	p	0.2624	0.1918	0.0012	0.0207	0.1847	0.0938	0.0416	0.1038
S_EPHE	r_s	-0.1841	-0.0618	0.3289	0.0737	-0.0490	0.1755	-0.4181	0.1653
	p	0.0442	0.5042	0.0002	0.4238	0.6030	0.0584	0.0000	0.0712
S_PLEC	r_s	0.0096	-0.0444	0.0500	0.0011	0.0527	0.0226	-0.1047	0.2571
	p	0.9174	0.6318	0.5876	0.9903	0.5756	0.8090	0.2571	0.0046
S_ODON	r_s	-0.1404	-0.0938	0.2711	0.1154	-0.3290	0.3792	-0.3763	0.1282
	p	0.1262	0.3103	0.0027	0.2094	0.0003	0.0000	0.0000	0.1629
S_HEMI	r_s	-0.2233	-0.1871	0.3405	0.0897	-0.1144	0.1670	-0.4727	0.0960
	p	0.0142	0.0416	0.0001	0.3301	0.2234	0.0718	0.0000	0.2972
S_COLE	r_s	-0.0270	-0.1229	-0.0808	-0.0573	0.1136	-0.2995	0.1421	-0.1197
	p	0.7693	0.1830	0.3803	0.5343	0.2268	0.0010	0.1231	0.1927
S_MEGA	r_s	-0.1708	-0.1584	0.1944	-0.0347	-0.1393	0.1785	-0.1649	0.1480
	p	0.0622	0.0854	0.0333	0.7071	0.1376	0.0542	0.0730	0.1067
S_TRICH	r_s	-0.1677	-0.1264	0.4043	-0.0168	-0.1755	0.2605	-0.3410	0.3570
	p	0.0672	0.1706	0.0000	0.8554	0.0607	0.0046	0.0001	0.0001
S_LYMN	r_s	-0.1258	-0.1330	0.3504	-0.2468	-0.0360	0.2026	-0.2572	0.1214
	p	0.1711	0.1492	0.0001	0.0066	0.7026	0.0285	0.0047	0.1867
S_PLAN	r_s	-0.0183	-0.0095	0.3245	-0.0805	0.1892	0.0969	-0.1581	0.2159
	p	0.8424	0.9180	0.0003	0.3822	0.0429	0.2989	0.0860	0.0179
S_BAET	r_s	-0.1353	-0.0706	0.1996	0.0450	-0.1109	0.0839	-0.3471	0.0690
	p	0.1407	0.4456	0.0288	0.6254	0.2382	0.3687	0.0001	0.4537

TABLE 11. CORRELATIONS BETWEEN POND ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficeint of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLE							
POTENTIAL METRIC		SHADE_%	SHADE_MR	WTR_DEPT	SILT_DPT	DRAW_CM	DRAW_%	PERM	CONNECT
S_COEN	r_s	-0.1886	-0.1029	0.3827	0.1027	-0.2128	0.4085	-0.4642	0.1813
	p	0.0391	0.2656	0.0000	0.2644	0.0224	0.0000	0.0000	0.0475
S_HALIP	r_s	-0.1769	-0.1433	0.2890	-0.0353	0.1239	0.1408	-0.3009	0.0787
	p	0.0533	0.1201	0.0014	0.7015	0.1872	0.1299	0.0009	0.3927
S_HYDR	r_s	-0.0217	-0.1055	-0.0428	-0.0696	0.0847	-0.1893	0.0946	-0.0346
	p	0.8141	0.2536	0.6423	0.4498	0.3679	0.0410	0.3061	0.7077
S_LIMN	r_s	-0.0468	-0.0753	0.1363	-0.0431	-0.0376	0.0823	-0.1312	0.3414
	p	0.6117	0.4160	0.1376	0.6400	0.6897	0.3776	0.1549	0.0001
S_LEPT	r_s	-0.2234	-0.1051	0.4378	0.0033	-0.1551	0.2893	-0.3596	0.1966
	p	0.0142	0.2553	0.0000	0.9712	0.0978	0.0016	0.0001	0.0314
S_SM_DY	r_s	0.0260	-0.0802	-0.2191	-0.0547	0.1418	-0.4041	0.3062	-0.1628
	p	0.7784	0.3858	0.0162	0.5532	0.1306	0.0000	0.0007	0.0756
S_CM	r_s	-0.1200	-0.1189	0.4354	-0.1586	0.1378	0.2150	-0.3019	0.2310
	p	0.1918	0.1978	0.0000	0.0836	0.1418	0.0199	0.0008	0.0111
S_HTR	r_s	-0.1350	-0.1062	0.3572	-0.0796	0.0340	0.1824	-0.3060	0.2595
	p	0.1416	0.2502	0.0001	0.3873	0.7182	0.0490	0.0007	0.0042
S_PHEMIP	r_s	-0.1499	-0.1473	0.3726	0.1271	-0.2506	0.2533	-0.4448	0.0959
	p	0.1022	0.1100	0.0000	0.1667	0.0069	0.0059	0.0000	0.2974
S_DHEMIP	r_s	-0.2114	-0.1461	0.2627	0.0428	0.0411	0.0690	-0.4111	0.0865
	p	0.0205	0.1128	0.0037	0.6426	0.6625	0.4596	0.0000	0.3474
S_EPT	r_s	-0.1755	-0.1087	0.3912	0.0084	-0.1302	0.2388	-0.4157	0.2887
	p	0.0553	0.2394	0.0000	0.9271	0.1656	0.0095	0.0000	0.0014
S_ETO	r_s	-0.2216	-0.1370	0.3950	0.0769	-0.2661	0.3859	-0.4704	0.2683
	p	0.0150	0.1374	0.0000	0.4039	0.0040	0.0000	0.0000	0.0030
F_TRICLA	r_s	-0.0373	0.0288	0.3272	-0.0016	-0.1192	0.1623	-0.2422	0.1587
	p	0.6862	0.7562	0.0003	0.9861	0.2043	0.0803	0.0080	0.0833
F_GASTRO	r_s	-0.0857	-0.0447	0.4387	-0.1214	0.1501	0.1855	-0.2877	0.2481
	p	0.3521	0.6289	0.0000	0.1865	0.1093	0.0453	0.0015	0.0063
F_BIVALV	r_s	-0.0609	-0.0561	0.0027	-0.1196	-0.1638	-0.0481	-0.0420	-0.2570
	p	0.5089	0.5443	0.9767	0.1932	0.0802	0.6066	0.6504	0.0046
F_HIRUDI	r_s	-0.1048	-0.0741	0.3195	-0.0580	0.0769	0.1811	-0.3174	0.1849
	p	0.2546	0.4231	0.0004	0.5292	0.4141	0.0506	0.0004	0.0432
F_ARANEA	r_s	-0.2218	-0.2324	0.0593	0.0032	-0.1630	0.1779	-0.1351	0.0470
	p	0.0149	0.0110	0.5197	0.9723	0.0818	0.0551	0.1428	0.6104
F_DECAPO	r_s	0.0213	-0.0847	0.1416	0.0106	-0.0466	0.1486	-0.0782	0.1521
	p	0.8178	0.3596	0.1229	0.9086	0.6209	0.1098	0.3977	0.0973
F_ISOPOD	r_s	-0.1194	-0.1211	0.2460	-0.1460	0.1977	0.1370	-0.1806	0.2217
	p	0.1940	0.1896	0.0068	0.1116	0.0342	0.1408	0.0494	0.0150
F_AMPHIP	r_s	-0.1031	-0.1205	0.2927	-0.2111	0.1246	0.1556	-0.1871	0.1492
	p	0.2624	0.1918	0.0012	0.0207	0.1847	0.0938	0.0416	0.1038
F_EPHEME	r_s	-0.1682	-0.0560	0.3201	0.0640	-0.0519	0.1742	-0.4155	0.1552
	p	0.0664	0.5455	0.0004	0.4875	0.5814	0.0603	0.0000	0.0906
F_PLECOP	r_s	0.0085	-0.0441	0.0518	0.0036	0.0530	0.0237	-0.1041	0.2564
	p	0.9269	0.6343	0.5744	0.9688	0.5740	0.7998	0.2598	0.0047
F_ODONAT	r_s	-0.0895	-0.0756	0.1699	0.0744	-0.3386	0.3427	-0.3192	0.0878
	p	0.3311	0.4137	0.0635	0.4191	0.0002	0.0002	0.0004	0.3401

TABLE 11. CORRELATIONS BETWEEN POND ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficeint of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLE							
POTENTIAL METRIC		SHADE_%	SHADE_MR	WTR_DEPT	SILT_DPT	DRAW_CM	DRAW_%	PERM	CONNECT
F_HEMIPT	r_s	-0.1354	-0.1055	0.3883	0.1493	-0.2136	0.2545	-0.4772	0.1299
	p	0.1403	0.2536	0.0000	0.1035	0.0219	0.0056	0.0000	0.1574
F_COLEOP	r_s	-0.1740	-0.1712	0.0694	-0.0606	0.0257	-0.0836	-0.0521	0.0081
	p	0.0573	0.0627	0.4516	0.5111	0.7853	0.3705	0.5736	0.9301
F_TRICHO	r_s	-0.1752	-0.1482	0.3835	-0.0199	-0.1811	0.2632	-0.3395	0.3971
	p	0.0556	0.1078	0.0000	0.8294	0.0527	0.0041	0.0002	0.0000
F_PHEMIP	r_s	-0.1528	-0.1381	0.3810	0.1091	-0.2137	0.2436	-0.4483	0.0979
	p	0.0957	0.1343	0.0000	0.2357	0.0219	0.0081	0.0000	0.2874
F_DHEMIP	r_s	-0.1932	-0.0811	0.2771	0.1219	-0.1137	0.2408	-0.4565	0.1537
	p	0.0345	0.3806	0.0022	0.1846	0.2263	0.0089	0.0000	0.0937
F_CM	r_s	-0.1365	-0.1236	0.4409	-0.1725	0.1622	0.1830	-0.3000	0.2360
	p	0.1371	0.1804	0.0000	0.0595	0.0834	0.0483	0.0009	0.0095
F_HTR	r_s	-0.1046	-0.0626	0.3714	-0.0669	0.0136	0.1973	-0.3259	0.1952
	p	0.2556	0.4990	0.0000	0.4676	0.8851	0.0330	0.0003	0.0326
F_EPT	r_s	-0.1708	-0.1084	0.3852	0.0142	-0.1429	0.2486	-0.4254	0.3234
	p	0.0622	0.2405	0.0000	0.8778	0.1275	0.0069	0.0000	0.0003
F_ETO	r_s	-0.1984	-0.1183	0.3943	0.0636	-0.2880	0.3841	-0.4893	0.2920
	p	0.0298	0.2000	0.0000	0.4903	0.0018	0.0000	0.0000	0.0012
F_OM	r_s	-0.1457	-0.1281	0.2120	0.0491	-0.3281	0.3489	-0.3269	0.1307
	p	0.1123	0.1650	0.0201	0.5943	0.0003	0.0001	0.0003	0.1548
F_EMO	r_s	-0.1865	-0.1201	0.3057	0.0752	-0.2879	0.3522	-0.4256	0.1873
	p	0.0414	0.1934	0.0007	0.4142	0.0018	0.0001	0.0000	0.0405
F_PRED	r_s	-0.2309	-0.1849	0.4639	0.0081	-0.1550	0.2943	-0.4755	0.2605
	p	0.0112	0.0441	0.0000	0.9296	0.0981	0.0013	0.0000	0.0041
F_DETR	r_s	-0.1959	-0.1520	0.4492	-0.1456	-0.0080	0.2170	-0.3952	0.3302
	p	0.0320	0.0989	0.0000	0.1125	0.9323	0.0187	0.0000	0.0002
F_HERB	r_s	-0.1588	-0.1105	0.4144	-0.1023	0.0075	0.2079	-0.3848	0.3343
	p	0.0832	0.2315	0.0000	0.2661	0.9366	0.0245	0.0000	0.0002
BMWP	r_s	-0.2240	-0.1634	0.4686	0.0134	-0.1484	0.3195	-0.4915	0.3024
	p	0.0139	0.0757	0.0000	0.8847	0.1134	0.0004	0.0000	0.0008
ASPT	r_s	-0.1067	-0.0945	0.0847	0.1528	-0.3485	0.1993	-0.2025	0.1648
	p	0.2463	0.3065	0.3575	0.0957	0.0001	0.0313	0.0272	0.0721
PL_N.TX	r_s	-0.1233	-0.1599	0.2052	-0.0099	0.0243	0.0249	-0.1871	0.0463
	p	0.1482	0.0600	0.0154	0.9075	0.7807	0.7740	0.0274	0.5887
MARG_N.TX	r_s	-0.1125	-0.1539	0.1856	0.0028	0.0189	-0.0016	-0.1655	0.0196
	p	0.1873	0.0705	0.0287	0.9734	0.8285	0.9851	0.0516	0.8185
SUB_N.TX	r_s	-0.2076	-0.2197	0.2073	-0.1246	0.0040	0.1114	-0.1536	0.1457
	p	0.0142	0.0094	0.0144	0.1438	0.9633	0.1967	0.0710	0.0869
FLT_N.TX	r_s	0.0581	-0.0037	0.1219	0.1470	0.0509	0.0649	-0.1568	-0.0735
	p	0.4971	0.9658	0.1528	0.0842	0.5589	0.4528	0.0652	0.3899
AQ_N.TX	r_s	-0.1360	-0.1660	0.2164	-0.0657	0.0148	0.1173	-0.1906	0.0719
	p	0.1105	0.0508	0.0105	0.4424	0.8655	0.1740	0.0246	0.4002

TABLE 11. CORRELATIONS BETWEEN POND ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:
r_s = Spearmans coefficeint of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLE							
POTENTIAL METRIC		SHADE_%	SHADE_MR	WTR_DEPT	SILT_DPT	DRAW_CM	DRAW_%	PERM	CONNECT
FRE_SP	r_s	0.1615	0.0834	0.0068	0.0921	0.1114	-0.0578	0.0134	-0.0759
	p	0.0575	0.3291	0.9364	0.2806	0.2001	0.5037	0.8754	0.3745
POT_SP	r_s	-0.1850	-0.1254	0.2673	0.1150	0.0260	0.1563	-0.3463	0.0590
	p	0.0293	0.1412	0.0015	0.1777	0.7659	0.0692	0.0000	0.4904
PL_SRS	r_s	-0.1532	-0.1864	0.2041	-0.0278	0.0146	0.0372	-0.2038	0.0725
	p	0.0717	0.0280	0.0160	0.7455	0.8675	0.6671	0.0161	0.3966
MARG_SRS	r_s	-0.1242	-0.1683	0.1693	-0.0076	0.0097	-0.0105	-0.1563	0.0244
	p	0.1452	0.0477	0.0463	0.9289	0.9111	0.9030	0.0661	0.7755
SUB_SRS	r_s	-0.2520	-0.2336	0.2564	-0.1418	0.0285	0.1522	-0.2409	0.1648
	p	0.0028	0.0057	0.0023	0.0960	0.7437	0.0768	0.0043	0.0525
FLT_SRS	r_s	0.0328	-0.0420	0.0899	0.1573	0.0234	0.0649	-0.1435	-0.0350
	p	0.7018	0.6235	0.2925	0.0645	0.7881	0.4530	0.0920	0.6826
AQ_SRS	r_s	-0.1980	-0.2078	0.2434	-0.0925	0.0235	0.1457	-0.2504	0.1170
	p	0.0194	0.0141	0.0039	0.2787	0.7872	0.0906	0.0029	0.1702
PL_SRI	r_s	-0.2838	-0.2451	0.2613	-0.0879	0.0074	0.1738	-0.3044	0.1742
	p	0.0007	0.0036	0.0019	0.3037	0.9322	0.0430	0.0003	0.0403
MARG_SRI	r_s	-0.1478	-0.1855	0.1330	0.0038	0.0041	0.0388	-0.1453	0.0292
	p	0.0824	0.0288	0.1185	0.9644	0.9625	0.6536	0.0879	0.7327
SUB_SRI	r_s	-0.2336	-0.1262	0.3854	-0.0874	0.0586	0.2647	-0.4132	0.1069
	p	0.0056	0.1387	0.0000	0.3065	0.5014	0.0018	0.0000	0.2105
FLT_SRI	r_s	-0.0053	-0.1330	-0.0924	0.1644	0.0312	0.0076	-0.0078	0.0128
	p	0.9507	0.1185	0.2794	0.0531	0.7201	0.9301	0.9273	0.8808
AQ_SRI	r_s	-0.2979	-0.2222	0.3085	-0.0756	0.0321	0.2264	-0.3995	0.1841
	p	0.0004	0.0086	0.0002	0.3764	0.7125	0.0080	0.0000	0.0300
AQ_TI	r_s	0.0376	0.0071	0.2003	0.0290	0.2271	0.0251	-0.1466	-0.1149
	p	0.6605	0.9339	0.0181	0.7350	0.0083	0.7716	0.0850	0.1781
SUB_EX	r_s	-0.0541	-0.0403	0.1955	-0.0133	0.0124	0.1124	-0.1672	0.0123
	p	0.5273	0.6374	0.0211	0.8764	0.8865	0.1925	0.0492	0.8860
FLT_EX	r_s	0.0226	0.0548	0.1692	0.0191	0.0598	0.0955	-0.0521	-0.0377
	p	0.7921	0.5220	0.0464	0.8230	0.4923	0.2687	0.5426	0.6593
AQ_EX	r_s	-0.0586	-0.0085	0.2662	-0.0273	0.0264	0.1891	-0.1609	-0.0302
	p	0.4932	0.9208	0.0015	0.7501	0.7619	0.0274	0.0584	0.7244
MG_EX	r_s	0.0707	-0.0126	0.1121	-0.0725	-0.0020	-0.0356	-0.0494	-0.1124
	p	0.4084	0.8827	0.1887	0.3964	0.9813	0.6806	0.5640	0.1876
EX_SP	r_s	-0.0430	-0.0310	0.2497	-0.0757	0.0159	0.1620	-0.1562	-0.0649
	p	0.6153	0.7171	0.0030	0.3755	0.8554	0.0595	0.0664	0.4476
FFL/AQ	r_s	0.2238	0.1141	-0.1866	0.1015	0.1227	-0.1466	0.1704	-0.1474
	p	0.0081	0.1810	0.0279	0.2346	0.1580	0.0886	0.0449	0.0834
FFL/SU	r_s	0.2125	0.1511	-0.0354	0.0338	0.0711	-0.0007	0.0550	-0.1381
	p	0.0120	0.0759	0.6788	0.6928	0.4140	0.9933	0.5200	0.1049
SUB/FLO	r_s	-0.0841	-0.1450	0.0349	0.0203	-0.0016	0.1113	-0.0162	0.0689
	p	0.3248	0.0886	0.6830	0.8126	0.9855	0.1972	0.8503	0.4203

TABLE 11. CORRELATIONS BETWEEN POND ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficeint of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLE						
POTENTIAL METRIC		T CONNECT	N CONNECT	SED_LEAV	SED_DEBR	SED_OOZE	SED_SAND	SED_GRAV
INV_N.SP	r_s	0.2099	0.2599	-0.2599	-0.1820	0.3046	0.0211	0.2644
	p	0.0214	0.0042	0.0042	0.0466	0.0007	0.8194	0.0035
INV_N.FA	r_s	0.1337	0.2385	-0.3674	-0.2702	0.3623	0.0872	0.2011
	p	0.1454	0.0087	0.0000	0.0028	0.0000	0.3435	0.0276
INV_N.OR	r_s	0.1399	0.2477	-0.2959	-0.2393	0.3323	0.0027	0.1033
	p	0.1276	0.0064	0.0010	0.0085	0.0002	0.9769	0.2616
INV_SRS	r_s	0.2333	0.3137	-0.2008	-0.1283	0.2193	0.0556	0.3120
	p	0.0103	0.0005	0.0279	0.1627	0.0161	0.5464	0.0005
INV_SRI	r_s	0.2178	0.2657	0.0117	0.0566	-0.1317	0.0934	0.2159
	p	0.0169	0.0034	0.8987	0.5394	0.1516	0.3104	0.0179
S_TRIC	r_s	0.0785	0.0412	-0.0393	-0.0505	0.1470	0.0339	0.0806
	p	0.3941	0.6553	0.6700	0.5836	0.1090	0.7130	0.3815
S_GAST	r_s	0.0666	0.1826	-0.2362	-0.2468	0.3428	-0.0564	0.2463
	p	0.4700	0.0460	0.0094	0.0066	0.0001	0.5405	0.0067
S_BIVALV	r_s	0.0684	0.0481	-0.1773	-0.0537	0.1451	-0.1137	-0.1696
	p	0.4580	0.6016	0.0527	0.5600	0.1138	0.2164	0.0641
S_HIRU	r_s	0.0947	-0.0476	-0.1297	-0.1959	0.2475	0.0704	0.0518
	p	0.3033	0.6055	0.1580	0.0320	0.0064	0.4449	0.5740
S_ARAN	r_s	-0.0090	0.0984	-0.1887	-0.1277	-0.1338	0.0381	0.0238
	p	0.9219	0.2852	0.0390	0.1647	0.1452	0.6795	0.7963
S_DECA	r_s	-0.0580	-0.0774	-0.0347	-0.0401	0.0928	-0.0621	-0.0371
	p	0.5292	0.4006	0.7064	0.6635	0.3134	0.5006	0.6874
S_ISOP	r_s	0.1090	0.2008	-0.0918	-0.1574	0.2041	-0.0628	0.0475
	p	0.2360	0.0279	0.3188	0.0861	0.0253	0.4958	0.6065
S_AMPH	r_s	0.0201	0.1222	-0.1975	-0.2056	0.2463	0.0091	0.0125
	p	0.8274	0.1837	0.0306	0.0243	0.0067	0.9213	0.8922
S_EPHE	r_s	0.1169	0.2139	-0.4025	-0.2886	0.4032	-0.0049	0.1001
	p	0.2036	0.0190	0.0000	0.0014	0.0000	0.9580	0.2766
S_PLEC	r_s	0.0281	-0.0335	0.0445	-0.0046	0.0755	-0.1412	-0.0844
	p	0.7610	0.7168	0.6290	0.9601	0.4124	0.1240	0.3594
S_ODON	r_s	0.0435	0.2286	-0.1800	-0.0193	0.0048	0.0189	0.0690
	p	0.6372	0.0120	0.0491	0.8347	0.9582	0.8376	0.4537
S_HEMI	r_s	0.1982	0.1597	-0.3825	-0.2451	0.3348	0.1991	0.1734
	p	0.0300	0.0815	0.0000	0.0070	0.0002	0.0293	0.0582
S_COLE	r_s	0.1908	0.2195	0.0154	0.0386	0.0837	-0.0886	0.2093
	p	0.0369	0.0160	0.8672	0.6755	0.3636	0.3358	0.0217
S_MEGA	r_s	0.0660	0.2234	-0.2758	-0.1999	0.1957	0.0562	0.1786
	p	0.4739	0.0142	0.0023	0.0286	0.0321	0.5424	0.0510
S_TRICH	r_s	0.1058	0.1535	-0.2071	-0.0944	0.1691	0.0674	0.0533
	p	0.2501	0.0942	0.0233	0.3051	0.0648	0.4645	0.5633
S_LYMN	r_s	0.0576	0.2723	-0.1797	-0.1720	0.2143	0.0667	0.1902
	p	0.5319	0.0026	0.0496	0.0603	0.0187	0.4693	0.0375
S_PLAN	r_s	0.0602	0.0460	-0.1919	-0.1960	0.3280	-0.1733	0.2050
	p	0.5137	0.6175	0.0357	0.0319	0.0003	0.0583	0.0247
S_BAET	r_s	0.1237	0.1775	-0.3011	-0.2029	0.3345	-0.0281	0.0678
	p	0.1784	0.0524	0.0008	0.0262	0.0002	0.7608	0.4621

TABLE 11. CORRELATIONS BETWEEN POND ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficeint of rank correlation; p = significance level (p <0.001 underlined)

POTENTIAL METRIC		VARIABLE T CONNECT	N CONNECT	SED_LEAV	SED_DEBR	SED_OOZE	SED_SAND	SED_GRAV
S_COEN	r_s	0.0472	0.2398	-0.2237	-0.0677	0.0824	0.0515	0.0903
	p	0.6088	0.0083	0.0140	0.4626	0.3709	0.5765	0.3265
S_HALIP	r_s	0.1390	0.1121	-0.2980	-0.3242	0.4226	-0.0819	0.2024
	p	0.1300	0.2227	0.0009	0.0003	0.0000	0.3738	0.0266
S_HYDR	r_s	0.1488	0.1229	-0.0177	0.0096	0.1110	-0.1612	0.0581
	p	0.1047	0.1812	0.8479	0.9173	0.2273	0.0786	0.5282
S_LIMN	r_s	0.0476	0.0404	0.0253	-0.0794	0.1400	-0.1022	-0.0671
	p	0.6054	0.6610	0.7842	0.3889	0.1271	0.2667	0.4663
S_LEPT	r_s	0.0883	0.1802	-0.3145	-0.2155	0.2452	0.1038	0.1585
	p	0.3375	0.0489	0.0005	0.0181	0.0070	0.2594	0.0838
S_SM_DY	r_s	0.1784	0.2080	0.1649	0.2329	-0.0958	-0.0997	0.1458
	p	0.0512	0.0227	0.0718	0.0105	0.2980	0.2785	0.1120
S_CM	r_s	0.0830	0.1971	-0.2698	-0.2840	0.3683	-0.0734	0.1815
	p	0.3673	0.0310	0.0029	0.0017	0.0000	0.4257	0.0473
S_HTR	r_s	0.0933	-0.0015	-0.1375	-0.1838	0.2667	0.0556	0.0777
	p	0.3109	0.9871	0.1342	0.0445	0.0032	0.5467	0.3987
S_PHEMIP	r_s	0.1724	0.1985	-0.2462	-0.1005	0.1318	0.2451	0.1553
	p	0.0597	0.0298	0.0067	0.2748	0.1512	0.0070	0.0904
S_DHEMIP	r_s	0.1819	0.0970	-0.4240	-0.3437	0.4629	0.0765	0.1160
	p	0.0468	0.2917	0.0000	0.0001	0.0000	0.4060	0.2071
S_EPT	r_s	0.0940	0.2118	-0.3156	-0.1889	0.3074	0.0270	0.0951
	p	0.3071	0.0202	0.0004	0.0388	0.0006	0.7700	0.3013
S_ETO	r_s	0.0543	0.2439	-0.3076	-0.1475	0.1877	0.0294	0.0814
	p	0.5559	0.0073	0.0006	0.1080	0.0400	0.7496	0.3769
F_TRICLA	r_s	0.0639	0.0129	-0.0291	-0.0452	0.1464	0.0072	0.0399
	p	0.4878	0.8890	0.7524	0.6239	0.1106	0.9376	0.6653
F_GASTRO	r_s	0.0061	0.1858	-0.2213	-0.2581	0.3068	0.0146	0.3076
	p	0.9474	0.0422	0.0151	0.0044	0.0007	0.8741	0.0006
F_BIVALV	r_s	0.0768	0.0512	-0.1756	-0.0429	0.1384	-0.1212	-0.1700
	p	0.4045	0.5789	0.0551	0.6417	0.1317	0.1874	0.0633
F_HIRUDI	r_s	0.0437	-0.0227	-0.1140	-0.1942	0.2612	-0.0110	0.0455
	p	0.6357	0.8055	0.2149	0.0335	0.0040	0.9048	0.6216
F_ARANEA	r_s	-0.0090	0.0984	-0.1887	-0.1277	-0.1338	0.0381	0.0238
	p	0.9219	0.2852	0.0390	0.1647	0.1452	0.6795	0.7963
F_DECAPO	r_s	-0.0580	-0.0774	-0.0347	-0.0401	0.0928	-0.0621	-0.0371
	p	0.5292	0.4006	0.7064	0.6635	0.3134	0.5006	0.6874
F_ISOPOD	r_s	0.0837	0.1967	-0.0662	-0.1553	0.2163	-0.1335	0.0349
	p	0.3632	0.0313	0.4723	0.0904	0.0177	0.1460	0.7048
F_AMPHIP	r_s	0.0201	0.1222	-0.1975	-0.2056	0.2463	0.0091	0.0125
	p	0.8274	0.1837	0.0306	0.0243	0.0067	0.9213	0.8922
F_EPHEME	r_s	0.1162	0.2182	-0.3914	-0.2794	0.3922	0.0067	0.1151
	p	0.2064	0.0167	0.0000	0.0020	0.0000	0.9418	0.2105
F_PLECOP	r_s	0.0294	-0.0352	0.0432	-0.0061	0.0772	-0.1412	-0.0844
	p	0.7499	0.7025	0.6397	0.9474	0.4020	0.1240	0.3594
F_ODONAT	r_s	0.0512	0.1943	-0.1280	0.0039	-0.0272	0.0297	0.0759
	p	0.5787	0.0334	0.1636	0.9662	0.7683	0.7475	0.4098

TABLE 11. CORRELATIONS BETWEEN POND ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficeint of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLE						
POTENTIAL METRIC		T CONNECT	N CONNECT	SED_LEAV	SED_DEBR	SED_OOZE	SED_SAND	SED_GRAV
F_HEMIPT	r_s	0.1229	0.1532	-0.2493	-0.1229	0.1599	0.2722	0.1817
	p	0.1813	0.0948	0.0060	0.1810	0.0810	0.0026	0.0470
F_COLEOP	r_s	0.1815	0.1867	-0.2095	-0.1093	0.2945	0.0138	0.2082
	p	0.0473	0.0412	0.0216	0.2347	0.0011	0.8809	0.0225
F_TRICHO	r_s	0.1077	0.1539	-0.2190	-0.1220	0.1830	0.0820	0.0369
	p	0.2415	0.0934	0.0163	0.1843	0.0454	0.3730	0.6887
F_PHEMIP	r_s	0.1373	0.1925	-0.2522	-0.1271	0.1438	0.2651	0.1698
	p	0.1347	0.0351	0.0055	0.1667	0.1172	0.0034	0.0637
F_DHEMIP	r_s	0.1420	0.0601	-0.3025	-0.1845	0.3417	0.0781	0.0304
	p	0.1219	0.5146	0.0008	0.0437	0.0001	0.3966	0.7414
F_CM	r_s	0.0649	0.2140	-0.2653	-0.2913	0.3590	-0.0430	0.1887
	p	0.4813	0.0189	0.0034	0.0012	0.0001	0.6409	0.0391
F_HTR	r_s	0.0593	0.0090	-0.1061	-0.1675	0.2621	-0.0080	0.0550
	p	0.5197	0.9219	0.2487	0.0674	0.0038	0.9307	0.5510
F_EPT	r_s	0.1037	0.2098	-0.3223	-0.2045	0.3185	0.0454	0.0917
	p	0.2597	0.0215	0.0003	0.0250	0.0004	0.6222	0.3192
F_ETO	r_s	0.0790	0.2401	-0.3036	-0.1603	0.2151	0.0623	0.0993
	p	0.3912	0.0083	0.0007	0.0802	0.0183	0.4990	0.2804
F_OM	r_s	0.0689	0.2400	-0.2078	-0.0698	0.0559	0.0456	0.1279
	p	0.4547	0.0083	0.0228	0.4485	0.5445	0.6211	0.1639
F_EMO	r_s	0.0981	0.2845	-0.3342	-0.1720	0.2013	0.0521	0.1486
	p	0.2864	0.0016	0.0002	0.0604	0.0275	0.5717	0.1053
F_PRED	r_s	0.1164	0.2405	-0.3157	-0.2008	0.2798	0.1695	0.2033
	p	0.2055	0.0082	0.0004	0.0278	0.0020	0.0642	0.0259
F_DETR	r_s	0.1042	0.2293	-0.3467	-0.3145	0.4315	-0.0029	0.1453
	p	0.2575	0.0118	0.0001	0.0005	0.0000	0.9748	0.1134
F_HERB	r_s	0.1020	0.2028	-0.3346	-0.3259	0.4517	-0.0189	0.2337
	p	0.2676	0.0263	0.0002	0.0003	0.0000	0.8376	0.0102
BMWP	r_s	0.1193	0.2303	-0.3489	-0.2332	0.3234	0.0932	0.1806
	p	0.1945	0.0114	0.0001	0.0104	0.0003	0.3113	0.0484
ASPT	r_s	0.0438	0.1042	-0.0942	-0.0058	-0.0762	0.1337	-0.0356
	p	0.6347	0.2574	0.3062	0.9498	0.4084	0.1455	0.6994
PL_N.TX	r_s	0.1810	0.3732	-0.0865	-0.1184	0.0733	0.1239	0.2635
	p	0.0330	0.0000	0.3116	0.1650	0.3909	0.1463	0.0017
MARG_N.TX	r_s	0.1924	0.3763	-0.0912	-0.1217	0.0577	0.1428	0.2521
	p	0.0233	0.0000	0.2858	0.1534	0.5002	0.0936	0.0028
SUB_N.TX	r_s	0.1238	0.2835	-0.1116	-0.1376	0.0964	0.0181	0.2568
	p	0.1465	0.0007	0.1911	0.1064	0.2592	0.8321	0.0023
FLT_N.TX	r_s	-0.0310	0.0581	0.1658	0.1577	-0.0507	-0.0449	0.0685
	p	0.7171	0.4970	0.0511	0.0637	0.5531	0.5995	0.4233
AQ_N.TX	r_s	0.0664	0.2249	-0.0189	-0.0611	0.0581	0.0134	0.2126
	p	0.4371	0.0078	0.8248	0.4750	0.4973	0.8760	0.0120

TABLE 11. CORRELATIONS BETWEEN POND ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficeint of rank correlation; p = significance level (p <0.001 underlined)

POTENTIAL METRIC		VARIABLE T CONNECT	N CONNECT	SED_LEAV	SED_DEBR	SED_OOZE	SED_SAND	SED_GRAV
FRE_SP	r_s	-0.1005	-0.0037	0.2828	0.2158	-0.0725	-0.1617	-0.0547
	p	0.2394	0.9657	0.0007	0.0107	0.3961	0.0572	0.5223
POT_SP	r_s	0.0331	0.1886	-0.1975	-0.1290	0.1911	0.0110	0.1574
	p	0.6988	0.0262	0.0198	0.1302	0.0243	0.8975	0.0642
PL_SRS	r_s	0.1613	0.3741	-0.1142	-0.1464	0.0742	0.1418	0.2858
	p	0.0578	0.0000	0.1807	0.0855	0.3851	0.0959	0.0006
MARG_SRS	r_s	0.1783	0.3774	-0.0960	-0.1230	0.0382	0.1675	0.2667
	p	0.0358	0.0000	0.2607	0.1491	0.6551	0.0487	0.0015
SUB_SRS	r_s	0.1219	0.2829	-0.1752	-0.2050	0.1540	0.0302	0.2664
	p	0.1529	0.0007	0.0391	0.0155	0.0702	0.7242	0.0015
FLT_SRS	r_s	-0.0063	0.0630	0.1377	0.1556	-0.0610	-0.0408	0.0564
	p	0.9412	0.4614	0.1060	0.0674	0.4756	0.6331	0.5096
AQ_SRS	r_s	0.0902	0.2401	-0.0974	-0.1321	0.1082	0.0287	0.2233
	p	0.2911	0.0044	0.2540	0.1210	0.2048	0.7369	0.0082
PL_SRI	r_s	0.0182	0.2162	-0.2242	-0.2339	0.1349	0.1042	0.2372
	p	0.8319	0.0106	0.0080	0.0056	0.1134	0.2220	0.0049
MARG_SRI	r_s	-0.0031	0.2398	-0.1081	-0.1086	-0.0196	0.1404	0.1955
	p	0.9710	0.0045	0.2053	0.2032	0.8190	0.0992	0.0211
SUB_SRI	r_s	0.0579	0.1649	-0.2396	-0.2703	0.2643	-0.0148	0.1999
	p	0.4984	0.0524	0.0045	0.0013	0.0017	0.8625	0.0183
FLT_SRI	r_s	0.0102	0.0433	0.0932	0.1551	-0.1097	-0.0542	0.0241
	p	0.9047	0.6125	0.2751	0.0683	0.1987	0.5265	0.7782
AQ_SRI	r_s	0.1012	0.2227	-0.2577	-0.2800	0.2370	0.0272	0.2189
	p	0.2357	0.0084	0.0022	0.0008	0.0050	0.7510	0.0096
AQ_TI	r_s	-0.0698	0.0219	0.0991	-0.0348	0.1338	-0.1846	0.0611
	p	0.4142	0.7983	0.2456	0.6843	0.1164	0.0296	0.4752
SUB_EX	r_s	-0.0136	0.1738	-0.1000	-0.0773	0.1694	-0.0704	0.0937
	p	0.8736	0.0407	0.2413	0.3658	0.0462	0.4103	0.2728
FLT_EX	r_s	-0.1038	-0.0273	-0.0055	0.0031	0.0640	-0.0140	0.0258
	p	0.2241	0.7494	0.9484	0.9714	0.4539	0.8701	0.7634
AQ_EX	r_s	-0.0748	0.1141	-0.0711	-0.0461	0.1601	-0.1096	0.0629
	p	0.3815	0.1811	0.4056	0.5901	0.0597	0.1991	0.4617
MG_EX	r_s	-0.1002	0.1057	0.0885	0.0925	-0.0163	-0.0764	0.0852
	p	0.2405	0.2155	0.3004	0.2786	0.8493	0.3714	0.3185
EX_SP	r_s	-0.1057	0.1042	-0.0267	-0.0091	0.1385	-0.1481	0.0875
	p	0.2157	0.2224	0.7555	0.9152	0.1039	0.0819	0.3056
FFL/AQ	r_s	-0.1548	-0.1385	0.3454	0.2799	-0.1616	-0.2268	-0.2108
	p	0.0687	0.1040	0.0000	0.0008	0.0573	0.0073	0.0127
FFL/SU	r_s	-0.0730	-0.0286	0.2416	0.2034	-0.0814	-0.1458	-0.1162
	p	0.3931	0.7385	0.0042	0.0163	0.3409	0.0869	0.1732
SUB/FLO	r_s	0.0699	0.1195	0.0029	0.0419	-0.0348	-0.0679	0.1345
	p	0.4133	0.1611	0.9731	0.6242	0.6841	0.4269	0.1145

TABLE 11. CORRELATIONS BETWEEN POND ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficeint of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLE							
POTENTIAL METRIC		SED_PEBS	SED_BOLD	SED_PEAT	WS_GWTR	WS_SWTR	WS_PPT	WS_STR	WS_FLOOD
INV_N.SP	r_s	0.0193	0.0177	-0.1109	0.1253	-0.1291	-0.0184	0.0072	0.1938
	p	0.8342	0.8475	0.2278	0.1729	0.1598	0.8417	0.9379	0.0340
INV_N.FA	r_s	0.0291	0.0155	-0.0811	0.2051	-0.3340	-0.1406	0.1389	0.1499
	p	0.7523	0.8667	0.3785	0.0246	0.0002	0.1255	0.1302	0.1022
INV_N.OR	r_s	0.0320	-0.0160	-0.0731	0.2659	-0.3386	-0.1588	0.0877	0.0966
	p	0.7288	0.8622	0.4276	0.0033	0.0002	0.0832	0.3410	0.2941
INV_SRS	r_s	0.0479	0.0613	-0.0904	0.1121	-0.0659	0.0107	-0.0399	0.2273
	p	0.6032	0.5059	0.3264	0.2228	0.4743	0.9073	0.6654	0.0125
INV_SRI	r_s	0.0264	0.1377	0.0922	0.0422	0.1016	0.0482	-0.1592	0.2055
	p	0.7750	0.1337	0.3167	0.6472	0.2694	0.6011	0.0825	0.0243
S_TRIC	r_s	0.0250	-0.0107	-0.1146	0.1661	-0.2181	-0.1032	0.0126	0.0146
	p	0.7864	0.9078	0.2128	0.0698	0.0167	0.2621	0.8914	0.8738
S_GAST	r_s	-0.0110	-0.0069	-0.0747	0.2703	-0.2867	-0.1190	0.0441	0.2104
	p	0.9050	0.9400	0.4173	0.0028	0.0015	0.1953	0.6327	0.0211
S_BIVALV	r_s	0.0062	-0.0282	-0.0671	0.1593	0.0173	-0.0671	-0.1934	-0.0961
	p	0.9466	0.7594	0.4667	0.0822	0.8513	0.4666	0.0343	0.2967
S_HIRU	r_s	-0.0173	0.1728	-0.1300	0.0519	-0.1183	-0.0643	0.1588	0.1789
	p	0.8513	0.0592	0.1571	0.5737	0.1982	0.4853	0.0831	0.0505
S_ARAN	r_s	0.0467	0.0059	0.4804	0.1579	-0.1368	-0.1044	-0.0063	0.0510
	p	0.6124	0.9494	0.0000	0.0850	0.1363	0.2564	0.9454	0.5804
S_DECA	r_s	-0.0210	-0.0276	-0.0147	-0.0838	-0.0093	0.0509	0.1572	-0.0210
	p	0.8197	0.7647	0.8736	0.3630	0.9198	0.5806	0.0865	0.8197
S_ISOP	r_s	-0.0199	0.0737	-0.1135	0.0821	-0.0896	-0.1345	0.0951	0.1525
	p	0.8291	0.4234	0.2170	0.3729	0.3306	0.1431	0.3016	0.0962
S_AMPH	r_s	-0.0418	0.0394	-0.1180	0.1601	-0.2475	-0.1770	0.0619	0.1936
	p	0.6506	0.6691	0.1994	0.0806	0.0064	0.0531	0.5020	0.0341
S_EPHE	r_s	-0.0988	0.0314	-0.0372	0.0366	-0.1063	0.0103	0.0134	0.1978
	p	0.2831	0.7337	0.6863	0.6912	0.2480	0.9109	0.8849	0.0304
S_PLEC	r_s	-0.0478	-0.0628	-0.0334	-0.1458	-0.0882	-0.0470	0.0696	-0.0478
	p	0.6041	0.4956	0.7174	0.1120	0.3380	0.6103	0.4499	0.6041
S_ODON	r_s	0.0633	0.0319	0.1182	0.2261	-0.2385	-0.0919	-0.0040	0.0466
	p	0.4923	0.7297	0.1983	0.0130	0.0087	0.3183	0.9650	0.6131
S_HEMI	r_s	0.0567	0.0981	-0.1321	0.1057	-0.1395	-0.1451	0.0322	0.0690
	p	0.5384	0.2866	0.1504	0.2505	0.1285	0.1139	0.7268	0.4540
S_COLE	r_s	0.0016	-0.0159	-0.0979	-0.0206	0.1745	0.1436	-0.1579	0.1687
	p	0.9863	0.8631	0.2873	0.8229	0.0566	0.1176	0.0850	0.0654
S_MEGA	r_s	0.0777	0.0040	0.0578	0.2221	-0.3250	-0.1795	0.0286	0.0777
	p	0.3988	0.9653	0.5304	0.0148	0.0003	0.0498	0.7567	0.3988
S_TRICH	r_s	-0.0466	-0.1226	-0.0531	0.0142	-0.2408	-0.0147	0.1403	-0.0685
	p	0.6130	0.1824	0.5644	0.8775	0.0081	0.8732	0.1265	0.4573
S_LYMN	r_s	-0.0371	-0.0845	-0.0469	0.3408	-0.3575	-0.2174	0.0187	0.0757
	p	0.6874	0.3591	0.6113	0.0001	0.0001	0.0171	0.8397	0.4115
S_PLAN	r_s	-0.0360	-0.0208	-0.0604	0.1910	-0.1568	-0.0344	0.0101	0.2167
	p	0.6961	0.8219	0.5126	0.0367	0.0873	0.7088	0.9126	0.0174
S_BAET	r_s	-0.0486	0.0510	-0.0821	-0.0185	-0.0079	0.0797	0.0284	0.1745
	p	0.5983	0.5802	0.3724	0.8412	0.9320	0.3868	0.7580	0.0566

TABLE 11. CORRELATIONS BETWEEN POND ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficeint of rank correlation; p = significance level (p <0.001 underlined)

POTENTIAL METRIC		VARIABLE SED_PEBS	SED_BOLD	SED_PEAT	WS_GWTR	WS_SWTR	WS_PPT	WS_STR	WS_FLOOD
S_COEN	r_s	-0.0186	0.0309	0.0508	0.2352	-0.2946	-0.1015	0.0232	0.0675
	p	0.8398	0.7375	0.5818	0.0097	0.0011	0.2702	0.8011	0.4636
S_HALIP	r_s	-0.0584	-0.0306	-0.1130	0.1028	-0.1424	0.0276	0.1342	0.1566
	p	0.5266	0.7404	0.2191	0.2637	0.1208	0.7644	0.1439	0.0876
S_HYDR	r_s	0.0265	-0.0239	-0.0590	-0.0432	0.1203	0.0841	-0.1709	0.0935
	p	0.7735	0.7954	0.5218	0.6397	0.1906	0.3610	0.0620	0.3097
S_LIMN	r_s	-0.0048	-0.1289	-0.0058	-0.0175	-0.1574	0.0184	0.0859	-0.0488
	p	0.9586	0.1607	0.9499	0.8496	0.0861	0.8422	0.3508	0.5968
S_LEPT	r_s	-0.0114	-0.0129	-0.0068	0.0380	-0.1575	0.0759	0.1043	-0.0085
	p	0.9015	0.8891	0.9417	0.6800	0.0859	0.4099	0.2567	0.9265
S_SM_DY	r_s	-0.0097	0.0288	-0.1044	-0.1366	0.3644	0.2260	-0.2224	0.1983
	p	0.9166	0.7546	0.2566	0.1369	0.0000	0.0131	0.0146	0.0299
S_CM	r_s	-0.0355	0.0274	-0.0721	0.2631	-0.2781	-0.1595	0.0479	0.2215
	p	0.7002	0.7666	0.4342	0.0037	0.0021	0.0817	0.6037	0.0151
S_HTR	r_s	-0.0089	0.1355	-0.1461	0.1182	-0.1858	-0.0976	0.1186	0.1465
	p	0.9236	0.1401	0.1114	0.1987	0.0422	0.2887	0.1971	0.1105
S_PHEMIP	r_s	0.1055	-0.0131	-0.1138	0.2078	-0.2663	-0.1408	0.0146	-0.0094
	p	0.2513	0.8874	0.2160	0.0228	0.0033	0.1252	0.8738	0.9187
S_DHEMIP	r_s	0.0162	0.1412	-0.1026	0.0203	-0.0007	-0.1149	0.0251	0.1025
	p	0.8604	0.1240	0.2649	0.8258	0.9942	0.2113	0.7856	0.2653
S_EPT	r_s	-0.0849	-0.0503	-0.0728	0.0341	-0.2076	-0.0217	0.0752	0.0773
	p	0.3565	0.5851	0.4292	0.7116	0.0229	0.8137	0.4141	0.4014
S_ETO	r_s	-0.0041	-0.0087	0.0405	0.1456	-0.2594	-0.0585	0.0414	0.0481
	p	0.9649	0.9251	0.6608	0.1126	0.0042	0.5256	0.6533	0.6021
F_TRICLA	r_s	0.0280	-0.0269	-0.1151	0.1492	-0.1910	-0.0852	0.0166	-0.0239
	p	0.7616	0.7702	0.2106	0.1038	0.0367	0.3546	0.8574	0.7959
F_GASTRO	r_s	0.0549	0.0281	-0.0743	0.2408	-0.2892	-0.1007	0.0749	0.2226
	p	0.5515	0.7602	0.4197	0.0081	0.0014	0.2738	0.4161	0.0146
F_BIVALV	r_s	0.0116	-0.0373	-0.0673	0.1602	0.0183	-0.0675	-0.1894	-0.0963
	p	0.9000	0.6862	0.4654	0.0806	0.8431	0.4638	0.0382	0.2952
F_HIRUDI	r_s	-0.0089	0.1617	-0.1253	0.0484	-0.0915	-0.0842	0.1229	0.1902
	p	0.9231	0.0776	0.1726	0.5998	0.3205	0.3608	0.1810	0.0375
F_ARANEA	r_s	0.0467	0.0059	0.4804	0.1579	-0.1368	-0.1044	-0.0063	0.0510
	p	0.6124	0.9494	0.0000	0.0850	0.1363	0.2564	0.9454	0.5804
F_DECAPO	r_s	-0.0210	-0.0276	-0.0147	-0.0838	-0.0093	0.0509	0.1572	-0.0210
	p	0.8197	0.7647	0.8736	0.3630	0.9198	0.5806	0.0865	0.8197
F_ISOPOD	r_s	0.0034	0.0277	-0.1123	0.1071	-0.0625	-0.0792	0.0717	0.0811
	p	0.9708	0.7640	0.2221	0.2444	0.4979	0.3901	0.4362	0.3787
F_AMPHIP	r_s	-0.0418	0.0394	-0.1180	0.1601	-0.2475	-0.1770	0.0619	0.1936
	p	0.6506	0.6691	0.1994	0.0806	0.0064	0.0531	0.5020	0.0341
F_EPHEME	r_s	-0.0977	0.0540	-0.0449	0.0354	-0.0916	0.0245	0.0225	0.2359
	p	0.2885	0.5578	0.6259	0.7010	0.3199	0.7905	0.8074	0.0095
F_PLECOP	r_s	-0.0478	-0.0628	-0.0334	-0.1473	-0.0876	-0.0450	0.0671	-0.0478
	p	0.6040	0.4956	0.7173	0.1084	0.3415	0.6257	0.4664	0.6040
F_ODONAT	r_s	0.1414	-0.0096	0.1214	0.2527	-0.2418	-0.1167	-0.0061	0.0155
	p	0.1233	0.9171	0.1867	0.0054	0.0078	0.2043	0.9472	0.8669

TABLE 11. CORRELATIONS BETWEEN POND ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficeint of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLE							
POTENTIAL METRIC		SED_PEBS	SED_BOLD	SED_PEAT	WS_GWTR	WS_SWTR	WS_PPT	WS_STR	WS_FLOOD
F_HEMIPT	r_s	0.1008	-0.0226	-0.0997	0.1995	-0.2986	-0.1517	0.0981	0.0168
	p	0.2734	0.8064	0.2786	0.0289	0.0009	0.0981	0.2865	0.8552
F_COLEOP	r_s	-0.0537	0.0764	-0.1999	0.0496	-0.0418	0.0699	-0.0065	0.2577
	p	0.5602	0.4071	0.0286	0.5904	0.6506	0.4480	0.9439	0.0045
F_TRICHO	r_s	-0.0293	-0.1345	-0.0391	0.0066	-0.2501	-0.0331	0.1564	-0.0812
	p	0.7511	0.1431	0.6717	0.9427	0.0059	0.7195	0.0881	0.3780
F_PHEMIP	r_s	0.0987	-0.0307	-0.1048	0.2002	-0.2808	-0.1344	0.0426	-0.0011
	p	0.2835	0.7388	0.2549	0.0283	0.0019	0.1434	0.6442	0.9908
F_DHEMIP	r_s	-0.0096	0.0419	-0.0743	0.1231	-0.1961	-0.1239	0.1841	-0.0052
	p	0.9171	0.6492	0.4198	0.1806	0.0319	0.1777	0.0441	0.9547
F_CM	r_s	0.0059	0.0586	-0.1000	0.2250	-0.2679	-0.1577	0.0675	0.2310
	p	0.9491	0.5252	0.2771	0.0135	0.0031	0.0855	0.4641	0.0111
F_HTR	r_s	0.0093	0.1061	-0.1424	0.1206	-0.1613	-0.1070	0.0914	0.1145
	p	0.9194	0.2488	0.1207	0.1893	0.0784	0.2447	0.3208	0.2130
F_EPT	r_s	-0.0704	-0.0429	-0.0691	0.0168	-0.2062	-0.0175	0.0960	0.0920
	p	0.4447	0.6414	0.4533	0.8554	0.0238	0.8494	0.2970	0.3179
F_ETO	r_s	0.0383	-0.0445	0.0203	0.1532	-0.2861	-0.0761	0.0733	0.0522
	p	0.6780	0.6291	0.8261	0.0949	0.0015	0.4088	0.4261	0.5714
F_OM	r_s	0.1461	-0.0091	0.1120	0.2921	-0.3189	-0.1655	0.0032	0.0387
	p	0.1114	0.9210	0.2231	0.0012	0.0004	0.0709	0.9720	0.6747
F_EMO	r_s	0.0713	0.0186	0.0715	0.2344	-0.2894	-0.1196	0.0185	0.1267
	p	0.4389	0.8403	0.4380	0.0100	0.0013	0.1931	0.8410	0.1678
F_PRED	r_s	0.0657	0.0286	-0.0938	0.2153	-0.3289	-0.1493	0.1213	0.1204
	p	0.4761	0.7566	0.3084	0.0182	0.0002	0.1036	0.1870	0.1902
F_DETR	r_s	-0.0493	0.0066	-0.1188	0.1510	-0.3192	-0.1349	0.1457	0.1530
	p	0.5925	0.9431	0.1963	0.0996	0.0004	0.1420	0.1123	0.0952
F_HERB	r_s	-0.0045	-0.0234	-0.1129	0.1524	-0.3128	-0.0634	0.1666	0.1442
	p	0.9614	0.8001	0.2196	0.0966	0.0005	0.4916	0.0690	0.1161
BMWP	r_s	0.0461	-0.0216	-0.0671	0.1894	-0.3331	-0.1384	0.1349	0.1001
	p	0.6170	0.8145	0.4666	0.0382	0.0002	0.1317	0.1418	0.2767
ASPT	r_s	0.0503	-0.1440	0.2153	-0.0396	-0.1446	0.0290	0.1151	-0.1114
	p	0.5856	0.1166	0.0182	0.6676	0.1152	0.7528	0.2108	0.2258
PL_N.TX	r_s	-0.0458	0.1173	0.0651	0.1631	-0.0391	-0.0005	-0.1275	0.2777
	p	0.5922	0.1692	0.4465	0.0551	0.6478	0.9955	0.1347	0.0009
MARG_N.TX	r_s	-0.0331	0.0862	0.0799	0.1613	-0.0161	-0.0270	-0.1292	0.2452
	p	0.6988	0.3133	0.3497	0.0579	0.8512	0.7526	0.1296	0.0036
SUB_N.TX	r_s	-0.0223	0.1653	0.1262	0.1214	-0.0849	0.0634	-0.0771	0.2468
	p	0.7947	0.0518	0.1387	0.1546	0.3202	0.4585	0.3671	0.0034
FLT_N.TX	r_s	-0.1053	0.1492	-0.1084	0.0512	0.0545	0.1219	-0.1462	0.2922
	p	0.2172	0.0796	0.2040	0.5492	0.5243	0.1528	0.0859	0.0005
AQ_N.TX	r_s	-0.0443	0.1531	0.0498	0.1301	-0.0641	0.0892	-0.1052	0.2732
	p	0.6043	0.0719	0.5601	0.1269	0.4535	0.2964	0.2176	0.0011

TABLE 11. CORRELATIONS BETWEEN POND ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficeint of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLE							
POTENTIAL METRIC		SED_PEBS	SED_BOLD	SED_PEAT	WS_GWTR	WS_SWTR	WS_PPT	WS_STR	WS_FLOOD
FRE_SP	r_s	-0.1358	0.0181	-0.1120	-0.0425	0.1412	0.1352	-0.1105	0.1972
	p	0.1110	0.8324	0.1891	0.6191	0.0973	0.1125	0.1955	0.0200
POT_SP	r_s	-0.0448	0.1000	0.0356	0.1509	-0.1619	-0.0188	-0.0827	0.1558
	p	0.6002	0.2413	0.6774	0.0761	0.0569	0.8262	0.3331	0.0670
PL_SRS	r_s	-0.0363	0.1490	0.1072	0.1713	-0.0403	0.0048	-0.1302	0.2875
	p	0.6716	0.0800	0.2093	0.0438	0.6374	0.9554	0.1265	0.0006
MARG_SRS	r_s	-0.0260	0.1152	0.1102	0.1638	-0.0037	-0.0146	-0.1371	0.2452
	p	0.7614	0.1768	0.1967	0.0541	0.9659	0.8647	0.1076	0.0036
SUB_SRS	r_s	-0.0103	0.1770	0.1425	0.1575	-0.1225	0.0278	-0.0800	0.2522
	p	0.9045	0.0372	0.0941	0.0640	0.1509	0.7453	0.3492	0.0027
FLT_SRS	r_s	-0.1174	0.1787	-0.0643	0.0379	0.0566	0.1318	-0.1504	0.3112
	p	0.1687	0.0354	0.4518	0.6582	0.5078	0.1218	0.0772	0.0002
AQ_SRS	r_s	-0.0435	0.1647	0.0940	0.1609	-0.0968	0.0573	-0.1085	0.2786
	p	0.6110	0.0527	0.2709	0.0585	0.2568	0.5028	0.2035	0.0009
PL_SRI	r_s	-0.0330	0.2485	0.2011	0.1167	-0.0208	0.0236	-0.0908	0.2698
	p	0.6997	0.0032	0.0176	0.1714	0.8081	0.7825	0.2879	0.0013
MARG_SRI	r_s	-0.0874	0.2018	0.2327	0.0994	0.0967	0.0341	-0.1442	0.2086
	p	0.3064	0.0172	0.0058	0.2446	0.2575	0.6900	0.0903	0.0137
SUB_SRI	r_s	0.0361	0.1728	0.0644	0.1445	-0.1257	0.0296	-0.0715	0.1857
	p	0.6728	0.0419	0.4516	0.0896	0.1403	0.7296	0.4027	0.0286
FLT_SRI	r_s	-0.1330	0.2321	0.0278	-0.0526	0.1515	0.1763	-0.1649	0.3002
	p	0.1184	0.0060	0.7456	0.5389	0.0750	0.0379	0.0525	0.0003
AQ_SRI	r_s	0.0038	0.1923	0.1274	0.1461	-0.1290	0.0112	-0.0670	0.2543
	p	0.9648	0.0233	0.1352	0.0862	0.1301	0.8962	0.4333	0.0025
AQ_TI	r_s	-0.0089	-0.1400	-0.1545	-0.0138	0.0498	0.0748	-0.0074	0.0918
	p	0.9170	0.1003	0.0694	0.8720	0.5607	0.3816	0.9313	0.2826
SUB_EX	r_s	-0.1118	0.0692	-0.0809	0.2012	-0.1796	-0.1501	-0.1833	0.2120
	p	0.1899	0.4180	0.3437	0.0176	0.0344	0.0777	0.0308	0.0122
FLT_EX	r_s	-0.0669	0.0162	-0.0659	0.1357	-0.1096	-0.0431	-0.0545	0.1235
	p	0.4342	0.8496	0.4408	0.1111	0.1989	0.6141	0.5243	0.1474
AQ_EX	r_s	-0.1132	0.0256	-0.1009	0.2135	-0.1844	-0.1034	-0.1441	0.1821
	p	0.1844	0.7648	0.2372	0.0116	0.0298	0.2258	0.0905	0.0319
MG_EX	r_s	-0.0555	0.2294	-0.0608	-0.0647	0.1771	0.0862	-0.1501	0.3099
	p	0.5166	0.0066	0.4771	0.4495	0.0370	0.3132	0.0778	0.0002
EX_SP	r_s	-0.1012	0.0944	-0.1116	0.1385	-0.0748	-0.0637	-0.1983	0.2342
	p	0.2358	0.2689	0.1910	0.1039	0.3813	0.4559	0.0193	0.0055
FFL/AQ	r_s	-0.0821	-0.1153	-0.0949	-0.1425	0.2451	0.1656	-0.0777	-0.0125
	p	0.3365	0.1766	0.2663	0.0943	0.0036	0.0513	0.3633	0.8839
FFL/SU	r_s	-0.0148	-0.0465	-0.0851	-0.0151	0.1048	0.1651	-0.1329	0.0708
	p	0.8627	0.5869	0.3191	0.8603	0.2197	0.0520	0.1189	0.4074
SUB/FLO	r_s	-0.0676	0.1520	0.0897	-0.0153	0.0262	0.0943	-0.0708	0.0873
	p	0.4288	0.0741	0.2935	0.8586	0.7593	0.2693	0.4078	0.3070

TABLE 11. CORRELATIONS BETWEEN POND ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficeint of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLE							
POTENTIAL METRIC		WS_FLSP	WS_GSF	INFL_VOL	G_LIV_01	GRAZED%	GRAZ&TRAMP	FISH	FL_PLAIN
INV_N.SP	r_s	0.0930	0.1414	0.0885	0.0020	0.0446	-0.0154	0.3244	0.2418
	p	0.3123	0.1234	0.3366	0.9828	0.6297	0.8672	0.0004	0.0092
INV_N.FA	r_s	0.1450	0.2450	0.2314	-0.1163	-0.0480	-0.0291	0.4764	0.1867
	p	0.1142	0.0070	0.0110	0.2060	0.6045	0.7527	0.0000	0.0458
INV_N.OR	r_s	0.1142	0.2903	0.1791	-0.1484	-0.0649	-0.0759	0.4627	0.1939
	p	0.2143	0.0013	0.0504	0.1058	0.4834	0.4098	0.0000	0.0379
INV_SRS	r_s	0.0374	0.1099	0.0072	0.0792	0.1039	0.0327	0.2190	0.2192
	p	0.6848	0.2320	0.9381	0.3898	0.2608	0.7229	0.0182	0.0186
INV_SRI	r_s	-0.1395	-0.0081	-0.2221	0.1694	0.1320	0.1551	-0.1908	0.0291
	p	0.1286	0.9304	0.0148	0.0644	0.1524	0.0908	0.0402	0.7577
S_TRIC	r_s	0.0904	0.1971	0.0674	-0.1754	-0.1058	-0.1043	0.3093	0.0014
	p	0.3260	0.0309	0.4643	0.0554	0.2522	0.2569	0.0007	0.9883
S_GAST	r_s	0.0525	0.2866	0.1017	-0.1124	-0.1485	-0.1216	0.3749	0.4081
	p	0.5689	0.0015	0.2691	0.2217	0.1071	0.1858	0.0000	0.0000
S_BIVALV	r_s	-0.1457	0.1119	-0.2599	-0.1185	0.0538	0.0117	0.0429	0.1181
	p	0.1123	0.2236	0.0042	0.1973	0.5613	0.8992	0.6475	0.2087
S_HIRU	r_s	0.1086	0.0623	0.2210	-0.1161	-0.1678	-0.0195	0.3786	0.0975
	p	0.2379	0.4991	0.0153	0.2067	0.0681	0.8324	0.0000	0.2997
S_ARAN	r_s	0.0617	0.1485	0.1090	0.0290	0.0629	0.0814	-0.0226	-0.0691
	p	0.5033	0.1055	0.2362	0.7528	0.4969	0.3767	0.8098	0.4628
S_DECA	r_s	-0.0319	-0.0916	0.0751	-0.0479	-0.0809	-0.1023	0.0200	-0.0537
	p	0.7296	0.3196	0.4150	0.6032	0.3817	0.2663	0.8310	0.5688
S_ISOP	r_s	0.1023	0.1128	0.1729	-0.0515	-0.0379	-0.0057	0.2041	0.3521
	p	0.2660	0.2201	0.0589	0.5764	0.6825	0.9503	0.0280	0.0001
S_AMPH	r_s	0.0736	0.2118	0.0969	-0.1422	-0.1935	-0.1298	0.2732	0.2369
	p	0.4241	0.0202	0.2923	0.1212	0.0350	0.1578	0.0030	0.0108
S_EPHE	r_s	0.0763	0.0418	0.1314	-0.1164	-0.1050	-0.0754	0.3605	0.1741
	p	0.4076	0.6502	0.1525	0.2056	0.2556	0.4131	0.0001	0.0628
S_PLEC	r_s	0.2107	-0.0121	0.2557	-0.0150	0.1655	-0.0411	0.0604	-0.1222
	p	0.0209	0.8956	0.0048	0.8705	0.0721	0.6562	0.5198	0.1933
S_ODON	r_s	0.0849	0.2380	0.1259	-0.0801	0.1004	0.1235	0.2580	0.0346
	p	0.3563	0.0088	0.1705	0.3844	0.2772	0.1790	0.0052	0.7135
S_HEMI	r_s	0.0637	0.1091	0.1271	-0.0926	-0.0018	0.1239	0.4379	0.1002
	p	0.4894	0.2357	0.1667	0.3144	0.9845	0.1775	0.0000	0.2868
S_COLE	r_s	-0.0291	-0.0550	-0.1785	0.1566	0.1576	-0.0251	-0.1189	0.1322
	p	0.7526	0.5507	0.0511	0.0876	0.0870	0.7852	0.2038	0.1590
S_MEGA	r_s	0.0905	0.2610	0.0486	-0.0050	0.1128	0.0516	0.1630	0.0788
	p	0.3254	0.0040	0.5983	0.9565	0.2219	0.5758	0.0804	0.4026
S_TRICH	r_s	0.2205	0.1148	0.3207	-0.0530	-0.0109	-0.0697	0.3638	0.0021
	p	0.0155	0.2118	0.0004	0.5656	0.9065	0.4494	0.0001	0.9822
S_LYMN	r_s	0.0128	0.3607	0.0292	-0.0963	-0.1759	-0.1478	0.2460	0.3627
	p	0.8895	0.0001	0.7517	0.2952	0.0557	0.1071	0.0078	0.0001
S_PLAN	r_s	0.0106	0.1817	0.0298	-0.0581	-0.0946	-0.1130	0.2620	0.3542
	p	0.9084	0.0470	0.7465	0.5286	0.3061	0.2191	0.0045	0.0001
S_BAET	r_s	0.0003	-0.0441	0.0371	-0.0848	-0.1179	-0.0352	0.2319	0.1695
	p	0.9977	0.6321	0.6876	0.3574	0.2017	0.7027	0.0122	0.0701

TABLE 11. CORRELATIONS BETWEEN POND ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficeint of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLE							
POTENTIAL METRIC		WS_FLSP	WS_GSF	INFL_VOL	G_LIV_01	GRAZED%	GRAZ&TRAMP	FISH	FL`PLAIN
S_COEN	r_s	0.1216	0.2631	0.2014	-0.1254	0.0027	0.0769	0.3833	0.0787
	p	0.1858	0.0037	0.0274	0.1723	0.9766	0.4037	0.0000	0.4032
S_HALIP	r_s	0.0520	0.0868	0.0822	-0.0530	-0.1102	-0.1367	0.2369	0.2739
	p	0.5724	0.3461	0.3722	0.5651	0.2328	0.1365	0.0104	0.0031
S_HYDR	r_s	0.0533	-0.0359	-0.1462	0.1034	0.1273	-0.0133	-0.0824	0.0536
	p	0.5630	0.6968	0.1110	0.2613	0.1677	0.8854	0.3789	0.5698
S_LIMN	r_s	0.1789	0.0820	0.2596	0.0803	0.0897	-0.0502	0.1535	0.0037
	p	0.0506	0.3733	0.0042	0.3833	0.3320	0.5861	0.0999	0.9683
S_LEPT	r_s	0.1776	0.0899	0.2229	-0.0978	-0.1121	-0.0715	0.4388	0.0723
	p	0.0523	0.3289	0.0144	0.2878	0.2249	0.4377	0.0000	0.4428
S_SM_DY	r_s	-0.0561	-0.1662	-0.1783	0.2451	0.2511	0.0618	-0.2289	0.1539
	p	0.5429	0.0696	0.0514	0.0070	0.0059	0.5024	0.0135	0.1006
S_CM	r_s	0.0532	0.2843	0.1042	-0.1380	-0.1548	-0.1117	0.3773	0.4253
	p	0.5637	0.0017	0.2575	0.1329	0.0927	0.2245	0.0000	0.0000
S_HTR	r_s	0.1216	0.1421	0.1866	-0.1552	-0.1699	-0.0522	0.4064	0.0954
	p	0.1857	0.1216	0.0413	0.0906	0.0648	0.5713	0.0000	0.3107
S_PHEMIP	r_s	0.1280	0.2404	0.1241	-0.1997	-0.0421	0.0659	0.4118	0.0283
	p	0.1634	0.0082	0.1769	0.0288	0.6493	0.4743	0.0000	0.7644
S_DHEMIP	r_s	0.0065	-0.0058	0.0969	0.0289	0.0580	0.1592	0.3773	0.1437
	p	0.9437	0.9496	0.2925	0.7540	0.5308	0.0825	0.0000	0.1255
S_EPT	r_s	0.1784	0.1104	0.2428	-0.0918	-0.0705	-0.0855	0.4065	0.0750
	p	0.0512	0.2300	0.0075	0.3186	0.4461	0.3534	0.0000	0.4255
S_ETO	r_s	0.1382	0.1912	0.2211	-0.1004	0.0629	0.0460	0.4023	0.0483
	p	0.1323	0.0364	0.0152	0.2754	0.4970	0.6176	0.0000	0.6079
F_TRICLA	r_s	0.0709	0.1639	0.0636	-0.1621	-0.1042	-0.1184	0.2907	-0.0177
	p	0.4417	0.0737	0.4899	0.0769	0.2596	0.1976	0.0015	0.8513
F_GASTRO	r_s	0.0452	0.2613	0.1425	-0.0880	-0.1209	-0.0844	0.3868	0.3201
	p	0.6237	0.0039	0.1206	0.3391	0.1904	0.3593	0.0000	0.0005
F_BIVALV	r_s	-0.1461	0.1117	-0.2596	-0.1136	0.0591	0.0083	0.0284	0.1278
	p	0.1113	0.2245	0.0042	0.2168	0.5232	0.9280	0.7619	0.1734
F_HIRUDI	r_s	0.0982	0.0646	0.1673	-0.1610	-0.2131	-0.0631	0.3946	0.0956
	p	0.2860	0.4835	0.0678	0.0789	0.0200	0.4937	0.0000	0.3094
F_ARANEA	r_s	0.0617	0.1485	0.1090	0.0290	0.0629	0.0814	-0.0226	-0.0691
	p	0.5033	0.1055	0.2362	0.7528	0.4969	0.3767	0.8098	0.4628
F_DECAPO	r_s	-0.0319	-0.0916	0.0751	-0.0479	-0.0809	-0.1023	0.0200	-0.0537
	p	0.7296	0.3196	0.4150	0.6032	0.3817	0.2663	0.8310	0.5688
F_ISOPOD	r_s	0.0714	0.1047	0.1534	-0.0700	-0.0146	-0.0189	0.1906	0.3182
	p	0.4382	0.2552	0.0943	0.4472	0.8749	0.8374	0.0405	0.0005
F_AMPHIP	r_s	0.0736	0.2118	0.0969	-0.1422	-0.1935	-0.1298	0.2732	0.2369
	p	0.4241	0.0202	0.2923	0.1212	0.0350	0.1578	0.0030	0.0108
F_EPHEME	r_s	0.0526	0.0319	0.1177	-0.1102	-0.1122	-0.0544	0.3521	0.1835
	p	0.5681	0.7296	0.2006	0.2307	0.2246	0.5550	0.0001	0.0496
F_PLECOP	r_s	0.2131	-0.0120	0.2556	-0.0143	0.1660	-0.0422	0.0619	-0.1222
	p	0.0194	0.8965	0.0048	0.8772	0.0712	0.6473	0.5093	0.1933
F_ODONAT	r_s	0.0525	0.2456	0.0607	-0.0711	0.1310	0.1153	0.1986	0.0166
	p	0.5690	0.0068	0.5099	0.4401	0.1556	0.2100	0.0325	0.8604

TABLE 11. CORRELATIONS BETWEEN POND ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficeint of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLE							
POTENTIAL METRIC		WS_FLSP	WS_GSF	INFL_VOL	G_LIV_01	GRAZED%	GRAZ&TRAMP	FISH	FL_PLAIN
F_HEMIPT	r_s	0.1452	0.2236	0.1814	-0.1627	-0.0574	0.0647	0.4385	-0.0055
	p	0.1135	0.0141	0.0474	0.0757	0.5353	0.4823	0.0000	0.9538
F_COLEOP	r_s	-0.0592	0.0146	-0.0443	0.0956	0.1090	0.0536	0.0361	0.1955
	p	0.5205	0.8742	0.6309	0.2987	0.2380	0.5613	0.7007	0.0362
F_TRICHO	r_s	0.2505	0.1179	0.3407	-0.0298	-0.0122	-0.0806	0.3295	-0.0100
	p	0.0058	0.1996	0.0001	0.7466	0.8953	0.3816	0.0003	0.9152
F_PHEMIP	r_s	0.1428	0.2324	0.1378	-0.1722	-0.0442	0.0600	0.4331	0.0153
	p	0.1198	0.0106	0.1333	0.0600	0.6332	0.5152	0.0000	0.8713
F_DHEMIP	r_s	0.0702	0.1086	0.2467	-0.1189	-0.0682	0.0445	0.2967	0.1410
	p	0.4459	0.2379	0.0066	0.1959	0.4612	0.6295	0.0012	0.1330
F_CM	r_s	0.0604	0.2574	0.1425	-0.1249	-0.1327	-0.0867	0.3758	0.3823
	p	0.5125	0.0045	0.1205	0.1741	0.1502	0.3462	0.0000	0.0000
F_HTR	r_s	0.0922	0.1353	0.1331	-0.1939	-0.1988	-0.0968	0.4051	0.0672
	p	0.3166	0.1406	0.1474	0.0339	0.0302	0.2928	0.0000	0.4758
F_EPT	r_s	0.1931	0.0980	0.2632	-0.0785	-0.0695	-0.0781	0.3909	0.0711
	p	0.0346	0.2871	0.0037	0.3941	0.4523	0.3968	0.0000	0.4500
F_ETO	r_s	0.1710	0.2069	0.2330	-0.1004	0.0413	0.0151	0.4102	0.0581
	p	0.0618	0.0234	0.0104	0.2751	0.6560	0.8701	0.0000	0.5376
F_OM	r_s	0.0715	0.2992	0.0674	-0.0547	0.1489	0.1159	0.2230	0.0422
	p	0.4375	0.0009	0.4648	0.5526	0.1059	0.2074	0.0161	0.6546
F_EMO	r_s	0.0818	0.2425	0.1195	-0.0889	0.0896	0.0764	0.3191	0.0987
	p	0.3742	0.0076	0.1937	0.3340	0.3324	0.4066	0.0005	0.2939
F_PRED	r_s	0.1845	0.2637	0.2212	-0.1165	-0.0209	0.0255	0.4688	0.1334
	p	0.0437	0.0036	0.0152	0.2050	0.8211	0.7821	0.0000	0.1552
F_DETR	r_s	0.1184	0.2036	0.2446	-0.0934	-0.1200	-0.1230	0.4364	0.2928
	p	0.1978	0.0257	0.0071	0.3105	0.1937	0.1807	0.0000	0.0015
F_HERB	r_s	0.1013	0.1906	0.2383	-0.0614	-0.0932	-0.1110	0.3874	0.2863
	p	0.2712	0.0370	0.0088	0.5056	0.3133	0.2274	0.0000	0.0019
BMWP	r_s	0.1554	0.2344	0.2372	-0.1086	-0.0150	-0.0137	0.4787	0.1168
	p	0.0902	0.0100	0.0091	0.2378	0.8714	0.8819	0.0000	0.2140
ASPT	r_s	0.1243	0.0104	0.2054	0.0845	0.2281	0.0986	0.1168	-0.2516
	p	0.1762	0.9106	0.0244	0.3588	0.0126	0.2840	0.2116	0.0067
PL_N.TX	r_s	-0.0557	0.1216	-0.0931	0.1721	0.2465	0.1674	0.0930	0.1913
	p	0.5151	0.1539	0.2759	0.0428	0.0034	0.0489	0.2924	0.0280
MARG_N.TX	r_s	-0.0788	0.1107	-0.1102	0.1502	0.2291	0.1621	0.0839	0.2037
	p	0.3568	0.1944	0.1966	0.0776	0.0067	0.0567	0.3424	0.0192
SUB_N.TX	r_s	0.0499	0.1238	-0.0251	0.2327	0.2630	0.1352	0.0503	0.1313
	p	0.5593	0.1464	0.7690	0.0058	0.0018	0.1125	0.5701	0.1336
FLT_N.TX	r_s	0.0075	0.0501	-0.1015	0.0475	0.1009	0.1618	0.1006	0.0157
	p	0.9305	0.5579	0.2347	0.5783	0.2374	0.0570	0.2546	0.8581
AQ_N.TX	r_s	0.0303	0.1254	-0.0623	0.1914	0.2389	0.1660	0.0909	0.0812
	p	0.7229	0.1413	0.4666	0.0240	0.0046	0.0508	0.3036	0.3545

TABLE 11. CORRELATIONS BETWEEN POND ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficeint of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLE							
POTENTIAL METRIC		WS_FLSP	WS_GSF	INFL_VOL	G_LIV_01	GRAZED%	GRAZ&TRAMP	FISH	FL`PLAIN
FRE_SP	r_s	-0.0212	-0.0352	-0.0873	0.0468	0.0231	-0.0060	0.0185	0.1173
	p	0.8042	0.6804	0.3066	0.5842	0.7877	0.9443	0.8349	0.1803
POT_SP	r_s	0.0526	0.1296	-0.0315	-0.0448	-0.0001	-0.0206	0.1520	0.0474
	p	0.5383	0.1284	0.7127	0.6005	0.9991	0.8099	0.0844	0.5895
PL_SRS	r_s	-0.0578	0.1252	-0.0971	0.2074	0.2511	0.1756	0.0953	0.1845
	p	0.4989	0.1418	0.2553	0.0143	0.0029	0.0387	0.2807	0.0342
MARG_SRS	r_s	-0.0796	0.1109	-0.1214	0.1861	0.2410	0.1856	0.0724	0.1896
	p	0.3519	0.1938	0.1545	0.0283	0.0043	0.0287	0.4133	0.0295
SUB_SRS	r_s	0.0527	0.1580	-0.0233	0.2150	0.2157	0.1202	0.1071	0.1612
	p	0.5381	0.0633	0.7851	0.0110	0.0108	0.1586	0.2252	0.0648
FLT_SRS	r_s	0.0128	0.0353	-0.0823	0.0695	0.1230	0.1748	0.0505	0.0134
	p	0.8807	0.6800	0.3354	0.4164	0.1491	0.0396	0.5685	0.8785
AQ_SRS	r_s	0.0366	0.1514	-0.0537	0.1921	0.2109	0.1427	0.1067	0.1164
	p	0.6691	0.0753	0.5304	0.0235	0.0127	0.0938	0.2269	0.1838
PL_SRI	r_s	0.0439	0.0920	-0.0315	0.2426	0.1427	0.1523	0.2010	0.1153
	p	0.6075	0.2815	0.7126	0.0040	0.0939	0.0734	0.0218	0.1878
MARG_SRI	r_s	-0.0389	0.0523	-0.1076	0.2661	0.1553	0.1879	0.1059	0.0794
	p	0.6496	0.5412	0.2073	0.0015	0.0680	0.0268	0.2303	0.3656
SUB_SRI	r_s	0.0319	0.1502	-0.0337	0.0663	0.0280	0.0412	0.2794	0.2167
	p	0.7093	0.0776	0.6937	0.4384	0.7434	0.6304	0.0013	0.0125
FLT_SRI	r_s	0.0034	-0.0702	-0.0793	0.1054	0.1461	0.0832	-0.1133	0.0619
	p	0.9682	0.4117	0.3534	0.2168	0.0862	0.3303	0.1993	0.4810
AQ_SRI	r_s	0.0462	0.1363	-0.0067	0.1225	0.0722	0.0442	0.2110	0.2379
	p	0.5888	0.1097	0.9374	0.1508	0.3983	0.6053	0.0160	0.0060
AQ_TI	r_s	-0.0565	-0.0343	-0.0376	-0.1281	-0.1869	-0.2395	0.2114	0.1831
	p	0.5088	0.6887	0.6605	0.1328	0.0276	0.0045	0.0158	0.0356
SUB_EX	r_s	0.1725	0.2803	-0.0099	-0.1554	-0.0448	-0.0641	0.1859	0.1135
	p	0.0423	0.0008	0.9084	0.0677	0.6002	0.4535	0.0342	0.1950
FLT_EX	r_s	0.0220	0.1557	-0.0121	0.0598	-0.0089	0.1470	0.1081	0.0814
	p	0.7968	0.0673	0.8878	0.4843	0.9167	0.0842	0.2208	0.3533
AQ_EX	r_s	0.0975	0.2611	-0.0014	-0.0458	-0.0280	0.0220	0.2178	0.1356
	p	0.2537	0.0019	0.9870	0.5926	0.7434	0.7974	0.0128	0.1211
MG_EX	r_s	-0.0788	-0.0739	-0.2155	-0.0062	0.0440	0.2295	0.0378	0.1346
	p	0.3563	0.3870	0.0108	0.9422	0.6070	0.0066	0.6692	0.1239
EX_SP	r_s	0.0603	0.1790	-0.0930	-0.0322	-0.0196	0.0432	0.2023	0.1467
	p	0.4807	0.0350	0.2761	0.7071	0.8185	0.6135	0.0210	0.0932
F`FL/AQ	r_s	-0.0596	-0.1537	-0.0959	-0.0286	-0.0913	-0.1995	-0.1096	0.0541
	p	0.4861	0.0708	0.2616	0.7381	0.2852	0.0185	0.2147	0.5379
F`FL/SU	r_s	0.0240	0.0027	-0.1146	0.0158	0.0302	-0.1159	-0.0337	0.0771
	p	0.7789	0.9750	0.1793	0.8539	0.7240	0.1744	0.7032	0.3795
SUB/FLO	r_s	0.0134	-0.0056	0.0033	0.1567	0.2325	0.0672	-0.0074	0.0615
	p	0.8755	0.9476	0.9688	0.0654	0.0059	0.4317	0.9337	0.4835

TABLE 11. CORRELATIONS BETWEEN POND ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficeint of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLE							
POTENTIAL METRIC		ISOLATIO	TRAD_WET	C_SIZE	DECID100	CONIF100	SCRUB100	HEATH100	BOG100
INV_N.SP	r_s	0.3957	0.3547	0.0307	0.0081	-0.0624	0.1648	-0.0774	0.0157
	p	0.0000	0.0001	0.7425	0.9299	0.4981	0.0720	0.4010	0.8649
INV_N.FA	r_s	0.4187	0.3237	0.1130	0.0667	0.0024	0.1277	-0.0752	0.0045
	p	0.0000	0.0004	0.2252	0.4689	0.9790	0.1645	0.4146	0.9609
INV_N.OR	r_s	0.3891	0.2946	0.0360	0.0955	-0.0506	0.0894	-0.1434	-0.0683
	p	0.0000	0.0014	0.7000	0.2994	0.5834	0.3315	0.1183	0.4588
INV_SRS	r_s	0.3781	0.3410	0.0248	0.0177	-0.0820	0.1918	-0.0118	0.0665
	p	0.0000	0.0002	0.7907	0.8475	0.3735	0.0358	0.8983	0.4704
INV_SRI	r_s	0.0690	0.0728	0.0956	-0.0170	-0.0040	0.1076	0.1258	0.2068
	p	0.4635	0.4397	0.3050	0.8535	0.9657	0.2422	0.1710	0.0234
S_TRIC	r_s	0.1635	0.1328	0.0468	0.0576	-0.0155	0.1352	-0.1279	-0.0114
	p	0.0808	0.1572	0.6162	0.5320	0.8663	0.1409	0.1640	0.9018
S_GAST	r_s	0.3882	0.4042	-0.0381	0.0118	-0.1538	0.0541	-0.2804	-0.1001
	p	0.0000	0.0000	0.6837	0.8984	0.0935	0.5571	0.0019	0.2767
S_BIVALV	r_s	-0.0923	-0.0983	-0.1531	-0.0417	-0.0353	0.0379	-0.0192	-0.0961
	p	0.3264	0.2961	0.0993	0.6508	0.7018	0.6812	0.8352	0.2967
S_HIRU	r_s	0.1293	0.1031	0.2069	-0.0287	-0.0106	-0.0701	-0.0834	0.0220
	p	0.1684	0.2729	0.0252	0.7556	0.9082	0.4467	0.3652	0.8117
S_ARAN	r_s	0.1807	0.1373	0.1278	-0.1184	0.0061	-0.0900	0.2767	0.1784
	p	0.0533	0.1433	0.1697	0.1978	0.9469	0.3285	0.0022	0.0513
S_DECA	r_s	0.0954	0.0773	0.1170	0.0687	-0.0261	-0.1155	-0.0443	-0.0210
	p	0.3106	0.4117	0.2090	0.4559	0.7774	0.2089	0.6309	0.8197
S_ISOP	r_s	0.4095	0.3679	-0.1315	0.0591	-0.1459	-0.0902	-0.2472	-0.1614
	p	0.0000	0.0001	0.1577	0.5217	0.1119	0.3272	0.0065	0.0782
S_AMPH	r_s	0.2067	0.2218	-0.1420	-0.0139	-0.2155	0.1337	-0.2390	-0.1010
	p	0.0267	0.0172	0.1267	0.8801	0.0181	0.1456	0.0086	0.2725
S_EPHE	r_s	0.3196	0.2574	0.0706	0.0540	0.0886	0.1377	-0.1488	-0.0179
	p	0.0005	0.0055	0.4492	0.5581	0.3360	0.1335	0.1049	0.8460
S_PLEC	r_s	0.0688	0.0416	0.0490	0.2440	-0.0593	0.0851	-0.1008	-0.0478
	p	0.4649	0.6591	0.5996	0.0072	0.5199	0.3557	0.2735	0.6041
S_ODON	r_s	0.2625	0.1583	0.0682	0.1162	0.1166	0.1573	0.2477	0.1778
	p	0.0046	0.0911	0.4650	0.2061	0.2047	0.0863	0.0064	0.0520
S_HEMI	r_s	0.2265	0.1081	0.0946	-0.0444	0.1078	0.0918	0.0682	0.0449
	p	0.0149	0.2504	0.3102	0.6300	0.2412	0.3189	0.4594	0.6263
S_COLE	r_s	0.1442	0.2056	-0.0563	-0.0454	-0.1588	0.1826	-0.0436	0.0788
	p	0.1242	0.0275	0.5468	0.6223	0.0832	0.0459	0.6360	0.3923
S_MEGA	r_s	0.3120	0.1801	0.0124	0.1595	-0.0248	0.0916	0.0165	-0.0701
	p	0.0007	0.0541	0.8946	0.0819	0.7883	0.3197	0.8584	0.4469
S_TRICH	r_s	0.3216	0.2257	0.1029	0.1567	0.1301	0.0354	0.0179	0.0303
	p	0.0005	0.0153	0.2695	0.0874	0.1566	0.7011	0.8464	0.7424
S_LYMN	r_s	0.3651	0.3609	-0.1295	-0.0374	-0.0986	0.1759	-0.1468	-0.0766
	p	0.0001	0.0001	0.1641	0.6847	0.2842	0.0547	0.1095	0.4058
S_PLAN	r_s	0.3126	0.3216	0.0092	0.0323	-0.1837	-0.0248	-0.2944	-0.0934
	p	0.0007	0.0005	0.9213	0.7261	0.0446	0.7884	0.0011	0.3104
S_BAET	r_s	0.2998	0.2567	0.0618	-0.0289	0.1002	0.1609	-0.1107	-0.0467
	p	0.0011	0.0056	0.5081	0.7537	0.2761	0.0792	0.2286	0.6122

TABLE 11. CORRELATIONS BETWEEN POND ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficeint of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLE							
POTENTIAL METRIC		ISOLATIO	TRAD_WET	C_SIZE	DECID100	CONIF100	SCRUB100	HEATH100	BOG100
S_COEN	r_s	0.2716	0.1825	0.0879	0.1116	0.0758	0.1500	0.1120	0.1402
	p	0.0033	0.0509	0.3460	0.2250	0.4107	0.1020	0.2233	0.1267
S_HALIP	r_s	0.2728	0.2493	0.0831	0.1127	-0.1543	-0.0372	-0.3194	-0.1690
	p	0.0032	0.0072	0.3730	0.2205	0.0924	0.6865	0.0004	0.0650
S_HYDR	r_s	0.1031	0.1491	-0.1232	0.0094	-0.1551	0.2035	-0.0187	0.1266
	p	0.2728	0.1117	0.1858	0.9191	0.0907	0.0258	0.8393	0.1682
S_LIMN	r_s	0.2464	0.1731	0.0678	0.2514	-0.1307	0.0038	-0.0719	-0.0118
	p	0.0079	0.0644	0.4675	0.0056	0.1548	0.9673	0.4355	0.8980
S_LEPT	r_s	0.2700	0.2456	0.1776	0.0357	0.0892	0.0688	-0.0243	0.0906
	p	0.0035	0.0082	0.0554	0.6989	0.3326	0.4551	0.7923	0.3248
S_SM_DY	r_s	0.0771	0.1867	-0.0293	-0.1316	-0.0989	0.0991	0.0830	0.1236
	p	0.4126	0.0457	0.7537	0.1518	0.2827	0.2813	0.3673	0.1787
S_CM	r_s	0.4055	0.4037	-0.0643	0.0111	-0.1826	0.0415	-0.2950	-0.1389
	p	0.0000	0.0000	0.4913	0.9041	0.0459	0.6524	0.0011	0.1303
S_HTR	r_s	0.1689	0.1360	0.1518	-0.0218	-0.0287	-0.0022	-0.1161	0.0033
	p	0.0712	0.1473	0.1024	0.8128	0.7556	0.9813	0.2065	0.9711
S_PHEMIP	r_s	0.2256	0.0757	0.0128	0.0132	0.1987	0.1607	0.1396	0.0712
	p	0.0153	0.4215	0.8915	0.8862	0.0296	0.0795	0.1284	0.4394
S_DHEMIP	r_s	0.1905	0.1274	0.1276	-0.0267	-0.0397	0.0142	-0.0194	0.0333
	p	0.0414	0.1749	0.1705	0.7721	0.6671	0.8780	0.8336	0.7180
S_EPT	r_s	0.3406	0.2470	0.0959	0.1049	0.1140	0.0884	-0.0814	-0.0168
	p	0.0002	0.0078	0.3036	0.2543	0.2151	0.3371	0.3766	0.8555
S_ETO	r_s	0.3574	0.2262	0.0994	0.1700	0.1455	0.1550	0.1017	0.1132
	p	0.0001	0.0151	0.2862	0.0634	0.1128	0.0909	0.2691	0.2183
F_TRICLA	r_s	0.1404	0.1073	0.0483	0.0677	-0.0121	0.1045	-0.1346	-0.0256
	p	0.1344	0.2536	0.6048	0.4627	0.8955	0.2560	0.1427	0.7814
F_GASTRO	r_s	0.3631	0.3744	0.0297	0.0395	-0.1495	0.1035	-0.2679	-0.0795
	p	0.0001	0.0000	0.7502	0.6685	0.1031	0.2607	0.0031	0.3882
F_BIVALV	r_s	-0.0868	-0.0936	-0.1685	-0.0439	-0.0310	0.0407	-0.0201	-0.0963
	p	0.3565	0.3198	0.0694	0.6340	0.7369	0.6589	0.8274	0.2952
F_HIRUDI	r_s	0.0957	0.0857	0.1697	-0.0232	-0.0483	-0.0650	-0.1238	-0.0078
	p	0.3088	0.3623	0.0674	0.8016	0.6002	0.4808	0.1780	0.9323
F_ARANEA	r_s	0.1807	0.1373	0.1278	-0.1184	0.0061	-0.0900	0.2767	0.1784
	p	0.0533	0.1433	0.1697	0.1978	0.9469	0.3285	0.0022	0.0513
F_DECAPO	r_s	0.0954	0.0773	0.1170	0.0687	-0.0261	-0.1155	-0.0443	-0.0210
	p	0.3106	0.4117	0.2090	0.4559	0.7774	0.2089	0.6309	0.8197
F_ISOPOD	r_s	0.3557	0.3268	-0.0965	0.0751	-0.1352	-0.0541	-0.2909	-0.1595
	p	0.0001	0.0004	0.3005	0.4151	0.1409	0.5570	0.0013	0.0819
F_AMPHIP	r_s	0.2067	0.2218	-0.1420	-0.0139	-0.2155	0.1337	-0.2390	-0.1010
	p	0.0267	0.0172	0.1267	0.8801	0.0181	0.1456	0.0086	0.2725
F_EPHEME	r_s	0.3102	0.2541	0.0873	0.0286	0.1020	0.1282	-0.1396	-0.0141
	p	0.0007	0.0061	0.3491	0.7568	0.2674	0.1628	0.1283	0.8787
F_PLECOP	r_s	0.0668	0.0391	0.0499	0.2451	-0.0593	0.0837	-0.1008	-0.0478
	p	0.4784	0.6783	0.5930	0.0070	0.5198	0.3632	0.2734	0.6040
F_ODONAT	r_s	0.2090	0.1180	0.0316	0.1189	0.1241	0.1061	0.2525	0.2035
	p	0.0250	0.2093	0.7348	0.1960	0.1770	0.2487	0.0054	0.0258

TABLE 11. CORRELATIONS BETWEEN POND ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficeint of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLE							
POTENTIAL METRIC		ISOLATIO	TRAD_WET	C_SIZE	DECID100	CONIF100	SCRUB100	HEATH100	BOG100
F_HEMIPT	r_s	0.2071	0.0643	0.0941	0.0158	0.1664	0.1390	0.1303	0.0886
	p	0.0264	0.4947	0.3127	0.8639	0.0693	0.1301	0.1561	0.3358
F_COLEOP	r_s	0.2318	0.2446	0.0706	-0.0143	-0.0995	0.2562	-0.0738	-0.0980
	p	0.0127	0.0084	0.4493	0.8768	0.2798	0.0047	0.4229	0.2867
F_TRICHO	r_s	0.3535	0.2641	0.1222	0.1650	0.1335	0.0288	0.0248	0.0519
	p	0.0001	0.0043	0.1894	0.0716	0.1459	0.7552	0.7883	0.5732
F_PHEMIP	r_s	0.2125	0.0658	0.0235	0.0195	0.1564	0.1824	0.1195	0.0807
	p	0.0226	0.4845	0.8018	0.8328	0.0880	0.0461	0.1937	0.3808
F_DHEMIP	r_s	0.1935	0.1562	0.2344	0.0087	0.0404	-0.1231	0.0336	-0.0009
	p	0.0382	0.0956	0.0110	0.9247	0.6612	0.1804	0.7158	0.9925
F_CM	r_s	0.3879	0.3871	-0.0492	0.0260	-0.1834	0.0896	-0.3016	-0.1326
	p	0.0000	0.0000	0.5982	0.7783	0.0449	0.3302	0.0008	0.1488
F_HTR	r_s	0.1401	0.1084	0.1243	0.0104	-0.0464	0.0075	-0.1524	-0.0246
	p	0.1355	0.2488	0.1818	0.9099	0.6147	0.9350	0.0965	0.7901
F_EPT	r_s	0.3677	0.2794	0.1243	0.1101	0.1291	0.0904	-0.0739	0.0023
	p	0.0001	0.0025	0.1818	0.2312	0.1599	0.3263	0.4224	0.9802
F_ETO	r_s	0.3800	0.2619	0.1238	0.1716	0.1705	0.1270	0.0841	0.1224
	p	0.0000	0.0047	0.1835	0.0610	0.0627	0.1668	0.3614	0.1829
F_OM	r_s	0.2849	0.1637	0.0326	0.1530	0.0914	0.1271	0.2148	0.1503
	p	0.0020	0.0804	0.7273	0.0953	0.3210	0.1666	0.0185	0.1013
F_EMO	r_s	0.3627	0.2336	0.0702	0.1422	0.1289	0.1480	0.1208	0.1029
	p	0.0001	0.0120	0.4522	0.1214	0.1604	0.1066	0.1887	0.2636
F_PRED	r_s	0.3819	0.2711	0.1040	0.0669	0.0528	0.1540	0.0183	0.0564
	p	0.0000	0.0034	0.2645	0.4678	0.5669	0.0931	0.8428	0.5409
F_DETR	r_s	0.4465	0.3879	0.0594	0.0337	-0.0588	0.1071	-0.2230	-0.0815
	p	0.0000	0.0000	0.5249	0.7151	0.5235	0.2445	0.0144	0.3760
F_HERB	r_s	0.4533	0.4240	0.1051	0.0585	-0.0994	0.0968	-0.2268	-0.0673
	p	0.0000	0.0000	0.2596	0.5257	0.2802	0.2928	0.0128	0.4655
BMWP	r_s	0.4070	0.2986	0.1335	0.1058	0.0723	0.1251	-0.0268	0.0311
	p	0.0000	0.0012	0.1512	0.2501	0.4328	0.1735	0.7715	0.7358
ASPT	r_s	0.1392	0.0335	0.1795	0.1889	0.2544	0.0671	0.3240	0.2862
	p	0.1378	0.7224	0.0528	0.0388	0.0051	0.4664	0.0003	0.0015
PL_N.TX	r_s	0.4091	0.3216	0.1044	0.0082	-0.0559	0.1099	0.1995	0.1890
	p	0.0000	0.0002	0.2247	0.9237	0.5136	0.1977	0.0186	0.0259
MARG_N.TX	r_s	0.3935	0.3338	0.0994	0.0045	-0.0428	0.1143	0.2043	0.1878
	p	0.0000	0.0001	0.2479	0.9585	0.6166	0.1802	0.0159	0.0269
SUB_N.TX	r_s	0.3820	0.2459	0.1123	0.0254	-0.0555	0.0359	0.1592	0.1502
	p	0.0000	0.0045	0.1914	0.7662	0.5165	0.6748	0.0612	0.0777
FLT_N.TX	r_s	0.0437	0.0060	0.0641	0.0330	-0.0837	0.0714	0.0361	0.0871
	p	0.6189	0.9459	0.4571	0.7001	0.3272	0.4034	0.6730	0.3082
AQ_N.TX	r_s	0.2943	0.1696	0.0826	0.0265	-0.0866	0.0468	0.1247	0.1462
	p	0.0006	0.0519	0.3371	0.7569	0.3108	0.5840	0.1436	0.0858

TABLE 11. CORRELATIONS BETWEEN POND ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficeint of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLE							
POTENTIAL METRIC		ISOLATIO	TRAD_WET	C_SIZE	DECID100	CONIF100	SCRUB100	HEATH100	BOG100
FRE_SP	r_s	-0.0147	0.0791	-0.0151	0.0452	-0.2298	0.0483	-0.1633	-0.0370
	p	0.8670	0.3671	0.8606	0.5974	0.0065	0.5719	0.0548	0.6653
POT_SP	r_s	0.2227	0.1390	0.0433	-0.0107	0.0844	0.0664	0.0809	0.1488
	p	0.0103	0.1118	0.6152	0.9006	0.3232	0.4375	0.3438	0.0803
PL_SRS	r_s	0.4316	0.3371	0.1222	-0.0015	-0.0792	0.1042	0.2066	0.1955
	p	0.0000	0.0001	0.1550	0.9861	0.3543	0.2224	0.0147	0.0211
MARG_SRS	r_s	0.3937	0.3331	0.1168	-0.0142	-0.0573	0.1026	0.2341	0.2067
	p	0.0000	0.0001	0.1742	0.8680	0.5032	0.2292	0.0055	0.0146
SUB_SRS	r_s	0.4225	0.3054	0.1096	0.0418	-0.1023	0.0556	0.1070	0.1406
	p	0.0000	0.0004	0.2022	0.6252	0.2307	0.5155	0.2101	0.0987
FLT_SRS	r_s	0.0794	0.0255	0.0732	0.0094	-0.0261	0.0519	0.0867	0.1276
	p	0.3652	0.7720	0.3953	0.9125	0.7600	0.5443	0.3104	0.1343
AQ_SRS	r_s	0.3625	0.2397	0.0858	0.0303	-0.0995	0.0620	0.1041	0.1365
	p	0.0000	0.0056	0.3191	0.7231	0.2440	0.4681	0.2224	0.1091
PL_SRI	r_s	0.3547	0.2928	0.1779	-0.0067	-0.1674	0.0056	0.1495	0.1853
	p	0.0000	0.0007	0.0375	0.9380	0.0489	0.9477	0.0790	0.0290
MARG_SRI	r_s	0.2088	0.1895	0.1792	-0.0659	-0.1603	-0.0516	0.2098	0.2387
	p	0.0163	0.0295	0.0362	0.4411	0.0595	0.5464	0.0132	0.0046
SUB_SRI	r_s	0.3432	0.3492	0.1126	0.1068	-0.1761	0.1117	-0.0503	0.0252
	p	0.0001	0.0000	0.1903	0.2109	0.0381	0.1904	0.5568	0.7682
FLT_SRI	r_s	0.0842	0.0173	0.1073	-0.0540	0.0488	-0.0081	0.1716	0.1473
	p	0.3370	0.8438	0.2122	0.5280	0.5687	0.9250	0.0434	0.0836
AQ_SRI	r_s	0.4279	0.3889	0.1055	0.0488	-0.1179	0.0942	0.0289	0.0826
	p	0.0000	0.0000	0.2197	0.5682	0.1667	0.2702	0.7355	0.3339
AQ_TI	r_s	0.0011	0.0231	-0.1314	0.0066	-0.2328	-0.0790	-0.2936	-0.1655
	p	0.9900	0.7924	0.1258	0.9388	0.0058	0.3555	0.0005	0.0516
SUB_EX	r_s	0.1112	0.0474	-0.0649	0.0724	-0.1516	0.0097	-0.0574	-0.0349
	p	0.2043	0.5894	0.4514	0.3970	0.0749	0.9098	0.5019	0.6831
FLT_EX	r_s	-0.0405	0.0402	-0.1043	0.0288	-0.1234	0.0016	-0.1037	-0.0942
	p	0.6444	0.6472	0.2252	0.7364	0.1477	0.9853	0.2242	0.2699
AQ_EX	r_s	0.0387	0.0567	-0.1210	0.0283	-0.1890	-0.0076	-0.1088	-0.0790
	p	0.6595	0.5187	0.1590	0.7408	0.0258	0.9292	0.2022	0.3551
MG_EX	r_s	-0.0326	-0.0324	-0.0327	-0.0319	-0.1139	0.0689	-0.1215	-0.0869
	p	0.7102	0.7123	0.7045	0.7091	0.1819	0.4203	0.1541	0.3090
EX_SP	r_s	0.0040	0.0118	-0.1299	0.0064	-0.2090	0.0068	-0.1427	-0.1001
	p	0.9638	0.8936	0.1303	0.9400	0.0135	0.9371	0.0938	0.2409
FFL/AQ	r_s	-0.1862	-0.0270	-0.0353	-0.0249	-0.2096	-0.0539	-0.1869	-0.0831
	p	0.0326	0.7584	0.6826	0.7710	0.0133	0.5287	0.0276	0.3310
FFL/SU	r_s	-0.0117	0.0784	-0.0541	0.0741	-0.1602	0.0156	-0.0835	-0.0114
	p	0.8940	0.3714	0.5302	0.3862	0.0596	0.8554	0.3287	0.8940
SUB/FLO	r_s	0.1605	0.0646	0.1630	-0.0069	0.0443	0.0219	0.1433	0.0536
	p	0.0661	0.4619	0.0570	0.9354	0.6047	0.7981	0.0925	0.5311

TABLE 11. CORRELATIONS BETWEEN POND ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficeint of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLE						
POTENTIAL METRIC		MARSH100	RANKG100	UNIMPG100	S`IMPG100	IMPRG100	ARABL100	PARKS100
INV_N.SP	r_s	0.0832	-0.0117	0.3067	-0.0158	-0.1277	-0.0674	-0.0987
	p	0.3663	0.8995	0.0007	0.8637	0.1645	0.4645	0.2835
INV_N.FA	r_s	0.1210	0.0281	0.2725	-0.0179	-0.0636	-0.1097	-0.0611
	p	0.1880	0.7610	0.0026	0.8461	0.4901	0.2328	0.5076
INV_N.OR	r_s	0.1423	0.0494	0.2480	-0.0338	-0.0220	-0.1334	-0.0032
	p	0.1211	0.5921	0.0063	0.7139	0.8113	0.1463	0.9722
INV_SRS	r_s	0.0866	-0.0304	0.2836	-0.0076	-0.1623	-0.1036	-0.1561
	p	0.3468	0.7415	0.0017	0.9344	0.0765	0.2601	0.0887
INV_SRI	r_s	0.0711	-0.0494	0.0756	0.0138	-0.1199	-0.1450	-0.3110
	p	0.4400	0.5921	0.4120	0.8811	0.1920	0.1140	0.0005
S_TRIC	r_s	-0.0581	0.0579	0.0853	-0.0730	0.0647	-0.0237	0.1495
	p	0.5288	0.5296	0.3543	0.4284	0.4828	0.7971	0.1032
S_GAST	r_s	0.0799	-0.0305	0.2119	-0.0119	0.0925	0.0052	-0.0079
	p	0.3859	0.7411	0.0201	0.8970	0.3152	0.9555	0.9316
S_BIVALV	r_s	0.0031	0.1026	0.1651	-0.0534	0.0216	-0.0701	0.0472
	p	0.9732	0.2649	0.0716	0.5621	0.8150	0.4466	0.6087
S_HIRU	r_s	-0.0279	0.0747	0.0056	0.0737	0.0967	0.0241	0.0417
	p	0.7624	0.4173	0.9518	0.4235	0.2934	0.7938	0.6508
S_ARAN	r_s	0.3511	0.0075	-0.1458	-0.0446	-0.0083	-0.0969	-0.1355
	p	0.0001	0.9354	0.1121	0.6284	0.9283	0.2924	0.1400
S_DECA	r_s	-0.0371	-0.0511	-0.0566	-0.0466	0.1142	-0.0443	0.1819
	p	0.6875	0.5791	0.5392	0.6132	0.2144	0.6309	0.0467
S_ISOP	r_s	0.1297	0.1034	0.1240	-0.0281	0.0412	0.0348	0.0451
	p	0.1581	0.2610	0.1773	0.7610	0.6554	0.7058	0.6250
S_AMPH	r_s	0.1320	0.1145	0.2232	-0.1235	0.1440	0.0780	-0.0233
	p	0.1506	0.2131	0.0143	0.1790	0.1166	0.3970	0.8004
S_EPHE	r_s	0.0370	0.0275	0.1593	0.0709	-0.0944	-0.2182	0.0267
	p	0.6883	0.7658	0.0823	0.4414	0.3050	0.0166	0.7723
S_PLEC	r_s	0.1553	-0.1163	0.1187	0.0672	-0.0995	-0.1008	-0.1237
	p	0.0904	0.2059	0.1968	0.4657	0.2797	0.2735	0.1781
S_ODON	r_s	0.2276	-0.0320	0.1135	-0.0582	-0.3022	-0.2632	-0.1429
	p	0.0124	0.7290	0.2171	0.5281	0.0008	0.0037	0.1194
S_HEMI	r_s	-0.0110	0.0649	0.2964	-0.0551	-0.0921	-0.1420	-0.0578
	p	0.9053	0.4812	0.0010	0.5502	0.3173	0.1218	0.5305
S_COLE	r_s	0.0045	-0.0276	0.2033	-0.0136	-0.1529	0.0240	-0.1717
	p	0.9612	0.7650	0.0259	0.8825	0.0955	0.7943	0.0608
S_MEGA	r_s	0.1813	-0.0337	0.3103	-0.0742	-0.2233	-0.0581	-0.2081
	p	0.0475	0.7151	0.0006	0.4204	0.0142	0.5281	0.0226
S_TRICH	r_s	0.0733	-0.0256	0.1610	0.0815	-0.1301	-0.0995	-0.0545
	p	0.4261	0.7816	0.0789	0.3762	0.1567	0.2797	0.5546
S_LYMN	r_s	0.1270	-0.0728	0.2951	0.0572	0.0673	-0.0571	-0.0776
	p	0.1669	0.4297	0.0011	0.5347	0.4651	0.5353	0.3997
S_PLAN	r_s	0.0719	0.0649	0.1193	0.0142	0.0896	0.0480	0.0447
	p	0.4352	0.4815	0.1942	0.8776	0.3306	0.6027	0.6277
S_BAET	r_s	0.0093	0.0320	0.1859	0.1107	-0.1258	-0.1531	0.0453
	p	0.9200	0.7287	0.0420	0.2288	0.1709	0.0951	0.6231

TABLE 11. CORRELATIONS BETWEEN POND ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficeint of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLE						
POTENTIAL METRIC		MARSH100	RANKG100	UNIMPG100	SIMPG100	IMPRG100	ARABL100	PARKS100
S_COEN	r_s	0.1674	0.0351	0.1126	-0.0260	-0.2098	-0.2199	-0.1468
	p	0.0677	0.7035	0.2210	0.7780	0.0215	0.0158	0.1095
S_HALIP	r_s	0.0142	-0.0425	0.2909	0.1004	0.0104	-0.0630	0.0352
	p	0.8773	0.6447	0.0013	0.2752	0.9101	0.4942	0.7029
S_HYDR	r_s	0.0515	-0.0039	0.1586	-0.0816	-0.1605	0.0291	-0.2123
	p	0.5766	0.9663	0.0836	0.3759	0.0798	0.7522	0.0199
S_LIMN	r_s	0.1264	0.0225	0.1296	0.1176	-0.1269	-0.0048	-0.0452
	p	0.1689	0.8075	0.1582	0.2010	0.1671	0.9587	0.6239
S_LEPT	r_s	0.0127	0.0299	0.1294	0.1027	-0.0640	-0.1197	0.0044
	p	0.8902	0.7457	0.1591	0.2645	0.4876	0.1930	0.9621
S_SM_DY	r_s	-0.0271	-0.0667	0.0922	0.0356	-0.1864	0.0181	-0.1335
	p	0.7693	0.4691	0.3167	0.6998	0.0415	0.8441	0.1461
S_CM	r_s	0.1247	0.0325	0.2304	-0.0364	0.1089	0.0188	0.0026
	p	0.1749	0.7247	0.0114	0.6933	0.2364	0.8382	0.9777
S_HTR	r_s	-0.0451	0.0631	0.0634	0.0262	0.1032	0.0159	0.0799
	p	0.6251	0.4938	0.4912	0.7767	0.2618	0.8632	0.3858
S_PHEMIP	r_s	0.0096	0.1279	0.1749	-0.0391	-0.0828	-0.1385	-0.0964
	p	0.9168	0.1637	0.0561	0.6716	0.3687	0.1315	0.2948
S_DHEMIP	r_s	-0.0053	-0.0158	0.3228	-0.0587	-0.0844	-0.1354	-0.0101
	p	0.9546	0.8638	0.0003	0.5242	0.3594	0.1403	0.9126
S_EPT	r_s	0.0753	-0.0087	0.2023	0.1003	-0.1366	-0.1651	0.0084
	p	0.4136	0.9250	0.0267	0.2756	0.1369	0.0715	0.9271
S_ETO	r_s	0.1809	-0.0349	0.2030	0.0043	-0.2818	-0.2634	-0.1041
	p	0.0480	0.7049	0.0262	0.9626	0.0018	0.0037	0.2578
F_TRICLA	r_s	-0.0732	0.0568	0.0733	-0.0643	0.0866	-0.0276	0.1481
	p	0.4270	0.5376	0.4260	0.4854	0.3471	0.7648	0.1065
F_GASTRO	r_s	0.0539	-0.0356	0.2122	-0.0724	0.0664	0.0139	-0.0406
	p	0.5588	0.6992	0.0200	0.4321	0.4710	0.8806	0.6594
F_BIVALV	r_s	0.0122	0.1050	0.1788	-0.0527	0.0132	-0.0824	0.0455
	p	0.8946	0.2535	0.0507	0.5677	0.8864	0.3710	0.6220
F_HIRUDI	r_s	-0.0039	0.1003	0.0171	0.0724	0.0861	0.0285	0.0950
	p	0.9660	0.2758	0.8533	0.4320	0.3500	0.7573	0.3021
F_ARANEA	r_s	0.3511	0.0075	0.1458	-0.0446	-0.0083	-0.0969	-0.1355
	p	0.0001	0.9354	0.1121	0.6284	0.9283	0.2924	0.1400
F_DECAPO	r_s	-0.0371	-0.0511	0.0566	-0.0466	0.1142	-0.0443	0.1819
	p	0.6875	0.5791	0.5392	0.6132	0.2144	0.6309	0.0467
F_ISOPOD	r_s	0.0901	0.0269	0.1107	-0.0395	0.0590	-0.0253	0.0512
	p	0.3280	0.7709	0.2285	0.6681	0.5221	0.7842	0.5790
F_AMPHIP	r_s	0.1320	0.1145	0.2232	-0.1235	0.1440	0.0780	-0.0233
	p	0.1506	0.2131	0.0143	0.1790	0.1166	0.3970	0.8004
F_EPHEME	r_s	0.0330	0.0472	0.1445	0.0931	-0.0955	-0.2236	0.0386
	p	0.7201	0.6090	0.1152	0.3117	0.2994	0.0141	0.6754
F_PLECOP	r_s	0.1519	-0.1163	0.1174	0.0687	-0.0990	-0.1008	-0.1238
	p	0.0977	0.2058	0.2017	0.4560	0.2820	0.2734	0.1781
F_ODONAT	r_s	0.1996	-0.0861	0.0907	-0.0516	-0.2817	-0.2455	-0.1251
	p	0.0289	0.3500	0.3244	0.5759	0.0018	0.0069	0.1733

TABLE 11. CORRELATIONS BETWEEN POND ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficeint of rank correlation; p = significance level (p <0.001 underlined)

POTENTIAL METRIC		VARIABLE MARSH100	RANKG100	UNIMPG100	S`IMPG100	IMPRG100	ARABL100	PARKS100
F_HEMIPT	r_s	0.0343	0.1360	0.1070	-0.0151	-0.0393	-0.1073	-0.0695
	p	0.7099	0.1387	0.2448	0.8698	0.6697	0.2433	0.4505
F_COLEOP	r_s	0.0783	-0.0245	0.3488	0.0600	-0.0774	-0.0262	-0.1478
	p	0.3954	0.7905	0.0001	0.5154	0.4007	0.7761	0.1072
F_TRICHO	r_s	0.0987	-0.0347	0.1707	0.0767	-0.1269	-0.0788	-0.0574
	p	0.2833	0.7068	0.0623	0.4052	0.1672	0.3921	0.5337
F_PHEMIP	r_s	0.0208	0.1205	0.1497	-0.0336	-0.0529	-0.1233	-0.0973
	p	0.8213	0.1897	0.1028	0.7159	0.5664	0.1796	0.2906
F_DHEMIP	r_s	0.1027	-0.0141	0.0120	0.0367	0.0280	-0.1410	0.1088
	p	0.2643	0.8789	0.8963	0.6909	0.7611	0.1244	0.2368
F_CM	r_s	0.1095	0.0320	0.2702	-0.0904	0.0891	0.0046	-0.0144
	p	0.2340	0.7283	0.0028	0.3263	0.3332	0.9605	0.8760
F_HTR	r_s	-0.0413	0.0859	0.0416	0.0173	0.1067	-0.0024	0.1309
	p	0.6543	0.3506	0.6516	0.8509	0.2462	0.9793	0.1541
F_EPT	r_s	0.0861	-0.0022	0.1928	0.1059	-0.1381	-0.1630	0.0090
	p	0.3498	0.9808	0.0349	0.2498	0.1325	0.0752	0.9219
F_ETO	r_s	0.1657	-0.0383	0.1805	0.0402	-0.2519	-0.2576	-0.0855
	p	0.0705	0.6776	0.0485	0.6631	0.0055	0.0045	0.3534
F_OM	r_s	0.2286	-0.0823	0.1930	-0.0685	-0.3188	-0.2214	-0.1788
	p	0.0120	0.3714	0.0347	0.4573	0.0004	0.0151	0.0507
F_EMO	r_s	0.2080	-0.0453	0.2146	-0.0315	-0.2874	-0.2758	-0.1369
	p	0.0226	0.6230	0.0186	0.7324	0.0015	0.0023	0.1360
F_PRED	r_s	0.1235	0.0526	0.2517	-0.0004	-0.0912	-0.1216	-0.0712
	p	0.1789	0.5683	0.0055	0.9969	0.3218	0.1860	0.4395
F_DETR	r_s	0.1092	0.0275	0.2823	-0.0439	0.0389	-0.0378	-0.0053
	p	0.2349	0.7659	0.0018	0.6344	0.6730	0.6820	0.9538
F_HERB	r_s	0.0748	-0.0414	0.2815	0.0128	0.0022	-0.0409	-0.0116
	p	0.4168	0.6535	0.0018	0.8900	0.9811	0.6575	0.9002
BMWP	r_s	0.1185	0.0191	0.2544	-0.0124	-0.1096	-0.1463	-0.0645
	p	0.1972	0.8360	0.0051	0.8926	0.2335	0.1107	0.4843
ASPT	r_s	0.1047	-0.1264	0.0341	0.0199	-0.2888	-0.2369	-0.1140
	p	0.2551	0.1688	0.7118	0.8296	0.0014	0.0092	0.2151
PL_N.TX	r_s	0.1792	-0.0784	0.3264	0.0801	-0.2197	-0.1780	-0.2723
	p	0.0348	0.3591	0.0001	0.3486	0.0094	0.0360	0.0012
MARG_N.TX	r_s	0.2130	-0.0488	0.3032	0.0855	-0.1926	-0.1367	-0.3056
	p	0.0118	0.5680	0.0003	0.3168	0.0231	0.1086	0.0003
SUB_N.TX	r_s	0.0822	-0.1694	0.3104	0.0636	-0.2922	-0.2592	-0.1203
	p	0.3360	0.0463	0.0002	0.4571	0.0005	0.0021	0.1585
FLT_N.TX	r_s	0.0330	0.0442	0.1017	0.0565	-0.1498	-0.1117	-0.0070
	p	0.6996	0.6050	0.2335	0.5085	0.0783	0.1905	0.9350
AQ_N.TX	r_s	0.0416	-0.1032	0.2691	0.0488	-0.2617	-0.2439	-0.0917
	p	0.6264	0.2265	0.0014	0.5687	0.0019	0.0038	0.2828

TABLE 11. CORRELATIONS BETWEEN POND ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficeint of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLE						
POTENTIAL METRIC		MARSH100	RANKG100	UNIMPG100	S`IMPG100	IMPRG100	ARABL100	PARKS100
FRE_SP	r_s	0.0431	0.0453	0.0862	0.0608	0.0348	0.0532	0.0306
	p	0.6142	0.5967	0.3127	0.4774	0.6839	0.5343	0.7210
POT_SP	r_s	0.2012	-0.0847	0.2829	0.0060	-0.1670	-0.1641	-0.1684
	p	0.0175	0.3215	0.0007	0.9444	0.0495	0.0536	0.0476
PL_SRS	r_s	0.1929	-0.0950	0.3339	0.0577	-0.2356	-0.1923	-0.2795
	p	0.0229	0.2661	0.0001	0.4996	0.0052	0.0233	0.0009
MARG_SRS	r_s	0.2198	-0.0639	0.2894	0.0713	-0.2050	-0.1463	-0.3136
	p	0.0093	0.4548	0.0006	0.4044	0.0155	0.0857	0.0002
SUB_SRS	r_s	0.1455	-0.1623	0.3468	0.0233	-0.2759	-0.2492	-0.1346
	p	0.0873	0.0563	0.0000	0.7853	0.0010	0.0031	0.1142
FLT_SRS	r_s	0.0752	0.0212	0.0925	0.0574	-0.1782	-0.1161	-0.0406
	p	0.3789	0.8045	0.2786	0.5019	0.0359	0.1734	0.6349
AQ_SRS	r_s	0.1167	-0.1256	0.3140	0.0250	-0.2617	-0.2408	-0.1342
	p	0.1712	0.1407	0.0002	0.7705	0.0019	0.0043	0.1154
PL_SRI	r_s	0.1934	-0.1423	0.2246	-0.0201	-0.2435	-0.2229	-0.1989
	p	0.0225	0.0947	0.0078	0.8143	0.0039	0.0083	0.0189
MARG_SRI	r_s	0.1722	-0.0926	0.1013	0.0528	-0.2096	-0.1481	-0.1883
	p	0.0427	0.2784	0.2356	0.5371	0.0133	0.0818	0.0264
SUB_SRI	r_s	0.2097	-0.0778	0.3215	-0.0075	-0.2087	-0.1820	-0.1327
	p	0.0132	0.3626	0.0001	0.9301	0.0137	0.0320	0.1195
FLT_SRI	r_s	0.1509	-0.0413	0.0779	0.0735	-0.1797	-0.0311	-0.1628
	p	0.0762	0.6291	0.3621	0.3901	0.0343	0.7161	0.0556
AQ_SRI	r_s	0.2589	-0.1498	0.3466	-0.0404	-0.1845	-0.2046	-0.2404
	p	0.0021	0.0784	0.0000	0.6368	0.0297	0.0157	0.0044
AQ_TI	r_s	-0.0260	-0.0002	0.0229	0.1329	0.1907	0.0438	0.1121
	p	0.7612	0.9980	0.7890	0.1189	0.0245	0.6086	0.1889
SUB_EX	r_s	0.0741	-0.0326	0.1053	0.1069	-0.0769	-0.1942	0.0018
	p	0.3857	0.7035	0.2173	0.2103	0.3682	0.0220	0.9830
FLT_EX	r_s	0.0526	0.0413	0.0715	0.1316	-0.0955	-0.0432	0.1051
	p	0.5386	0.6292	0.4026	0.1225	0.2633	0.6136	0.2182
AQ_EX	r_s	0.0522	-0.0039	0.1419	0.0916	-0.0757	-0.1637	0.0722
	p	0.5420	0.9638	0.0958	0.2837	0.3760	0.0542	0.3985
MG_EX	r_s	0.0804	0.2271	0.1283	0.0830	-0.1580	-0.1043	0.0885
	p	0.3466	0.0072	0.1321	0.3314	0.0631	0.2218	0.3003
EX_SP	r_s	0.0598	0.0978	0.1664	0.1070	-0.1073	-0.1515	0.1253
	p	0.4845	0.2522	0.0503	0.2100	0.2086	0.0750	0.1418
FFL/AQ	r_s	0.0108	0.0222	-0.0833	0.0569	0.2260	0.2321	0.0069
	p	0.8992	0.7955	0.3295	0.5056	0.0075	0.0060	0.9357
FFL/SU	r_s	0.0137	-0.0024	0.0020	0.1413	-0.0302	0.0780	0.0180
	p	0.8724	0.9777	0.9812	0.0970	0.7244	0.3616	0.8330
SUB/FLO	r_s	0.0795	-0.1385	0.1971	0.0427	-0.2369	-0.0766	-0.0548
	p	0.3525	0.1039	0.0201	0.6176	0.0050	0.3700	0.5214

TABLE 11. CORRELATIONS BETWEEN POND ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficeint of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLE						
POTENTIAL METRIC		**BUILD100**	**ROADS100**	**ROCK100**	**PATHS100**	**PONDS100**	**STREAM100**	**ALLWD&SC100**
INV_N.SP	r_s	-0.0320	-0.1100	0.0686	0.0655	0.2624	0.0794	0.0906
	p	0.7288	0.2317	0.4568	0.4772	0.0038	0.3887	0.3253
INV_N.FA	r_s	-0.0064	-0.0852	0.0937	0.0640	0.3145	0.1236	0.1436
	p	0.9446	0.3551	0.3085	0.4872	0.0005	0.1788	0.1177
INV_N.OR	r_s	-0.0410	-0.0677	0.0970	0.0966	0.3267	0.2464	0.1459
	p	0.6566	0.4625	0.2922	0.2939	0.0003	0.0067	0.1117
INV_SRS	r_s	-0.0477	-0.1110	0.0680	0.0510	0.2139	0.0953	0.0949
	p	0.6048	0.2274	0.4603	0.5800	0.0190	0.3004	0.3024
INV_SRI	r_s	-0.1105	-0.0572	0.0509	-0.0188	-0.0139	0.1135	-0.0129
	p	0.2295	0.5351	0.5807	0.8386	0.8802	0.2172	0.8892
S_TRIC	r_s	0.1034	0.0547	0.0289	0.0992	0.1872	0.1700	0.1086
	p	0.2611	0.5530	0.7537	0.2813	0.0406	0.0633	0.2375
S_GAST	r_s	-0.0625	-0.0129	0.1137	0.0290	0.2108	0.2942	0.0296
	p	0.4976	0.8884	0.2164	0.7535	0.0208	0.0011	0.7485
S_BIVALV	r_s	0.1333	0.0388	0.0386	0.1813	0.1466	0.0657	-0.0075
	p	0.1468	0.6742	0.6754	0.0475	0.1101	0.4762	0.9355
S_HIRU	r_s	-0.0911	-0.0364	0.1114	0.0372	0.0498	0.1067	-0.0589
	p	0.3226	0.6929	0.2258	0.6865	0.5892	0.2463	0.5225
S_ARAN	r_s	-0.0678	-0.0400	-0.0695	-0.0834	0.1053	-0.0207	-0.1056
	p	0.4616	0.6648	0.4508	0.3650	0.2525	0.8227	0.2512
S_DECA	r_s	-0.0511	-0.0675	-0.0191	-0.0408	0.1445	0.1743	0.0305
	p	0.5793	0.4640	0.8359	0.6583	0.1154	0.0569	0.7412
S_ISOP	r_s	-0.1242	-0.0186	0.1073	0.0798	0.1687	0.1439	-0.0129
	p	0.1764	0.8402	0.2433	0.3861	0.0655	0.1170	0.8891
S_AMPH	r_s	-0.0921	-0.0169	0.1971	0.0268	0.0824	0.2961	-0.0212
	p	0.3173	0.8543	0.0310	0.7711	0.3710	0.0010	0.8181
S_EPHE	r_s	0.0015	0.0799	0.1213	0.0740	0.3640	0.1213	0.1234
	p	0.9870	0.3859	0.1870	0.4218	0.0000	0.1868	0.1793
S_PLEC	r_s	-0.1163	-0.0900	-0.0435	0.1317	-0.0320	-0.0145	0.2405
	p	0.2061	0.3281	0.6374	0.1517	0.7283	0.8748	0.0082
S_ODON	r_s	-0.0515	-0.1069	0.0289	0.0027	0.1573	0.0069	0.2786
	p	0.5765	0.2452	0.7539	0.9766	0.0861	0.9404	0.0021
S_HEMI	r_s	0.1352	-0.0441	-0.0121	0.1199	0.2875	-0.0864	0.0592
	p	0.1410	0.6325	0.8959	0.1920	0.0015	0.3481	0.5209
S_COLE	r_s	-0.0422	-0.0852	0.0397	-0.0051	-0.0030	-0.0435	0.0045
	p	0.6471	0.3548	0.6670	0.9557	0.9743	0.6374	0.9610
S_MEGA	r_s	-0.0545	-0.1188	0.0438	0.0070	0.1783	0.0923	0.2221
	p	0.5545	0.1963	0.6349	0.9391	0.0514	0.3158	0.0148
S_TRICH	r_s	0.0038	-0.1506	-0.0112	0.0520	0.2803	0.0823	0.1960
	p	0.9668	0.1005	0.9037	0.5730	0.0019	0.3718	0.0319
S_LYMN	r_s	-0.0330	-0.0385	0.1585	-0.0102	0.2796	0.3535	0.0559
	p	0.7205	0.6766	0.0839	0.9124	0.0020	0.0001	0.5446
S_PLAN	r_s	-0.0243	0.0476	0.0594	0.0418	0.1246	0.2421	-0.0067
	p	0.7923	0.6054	0.5195	0.6504	0.1750	0.0077	0.9418
S_BAET	r_s	0.0353	0.1324	0.0760	0.0440	0.3646	0.0598	0.0914
	p	0.7016	0.1495	0.4096	0.6331	0.0000	0.5166	0.3209

TABLE 11. CORRELATIONS BETWEEN POND ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficeint of rank correlation; p = significance level (p <0.001 underlined)

POTENTIAL METRIC		VARIABLE BUILD100	ROADS100	ROCK100	PATHS100	PONDS100	STREAM100	ALLWD&SC100
S_COEN	r_s	-0.0893	-0.0915	0.0714	0.0634	0.2309	0.0731	0.2576
	p	0.3319	0.3201	0.4383	0.4912	0.0112	0.4278	0.0045
S_HALIP	r_s	0.0177	-0.0420	0.2127	0.0630	0.1752	0.0523	0.0846
	p	0.8475	0.6490	0.0197	0.4944	0.0556	0.5703	0.3580
S_HYDR	r_s	-0.1554	-0.1953	0.0150	-0.0402	-0.0219	-0.0081	0.0626
	p	0.0902	0.0325	0.8707	0.6631	0.8122	0.9300	0.4970
S_LIMN	r_s	-0.1171	-0.1793	0.0381	0.1467	0.1334	0.0792	0.2300
	p	0.2027	0.0501	0.6798	0.1098	0.1462	0.3898	0.0115
S_LEPT	r_s	0.1820	-0.0416	0.0155	0.0349	0.2830	0.0595	0.0726
	p	0.0467	0.6523	0.8665	0.7048	0.0017	0.5184	0.4308
S_SM_DY	r_s	-0.0767	-0.0537	0.0013	-0.0291	-0.0968	-0.0923	-0.1050
	p	0.4048	0.5604	0.9892	0.7527	0.2930	0.3160	0.2536
S_CM	r_s	-0.0738	-0.0126	0.1476	0.0875	0.2347	0.3099	0.0104
	p	0.4232	0.8916	0.1076	0.3418	0.0099	0.0006	0.9100
S_HTR	r_s	-0.0331	-0.0301	0.0876	0.0646	0.1103	0.1566	-0.0257
	p	0.7193	0.7443	0.3413	0.4836	0.2305	0.0876	0.7809
S_PHEMIP	r_s	0.1414	-0.0855	-0.0114	0.1034	0.2696	-0.0629	0.1698
	p	0.1234	0.3530	0.9019	0.2612	0.0029	0.4952	0.0637
S_DHEMIP	r_s	0.0704	-0.0048	0.0190	0.1160	0.2436	-0.0529	-0.0105
	p	0.4450	0.9588	0.8367	0.2071	0.0073	0.5657	0.9097
S_EPT	r_s	-0.0033	-0.0319	0.0355	0.0817	0.3299	0.1052	0.1727
	p	0.9714	0.7293	0.7004	0.3752	0.0002	0.2530	0.0592
S_ETO	r_s	-0.0576	-0.1413	0.0538	0.0573	0.2961	0.0454	0.3066
	p	0.5317	0.1236	0.5597	0.5340	0.0010	0.6227	0.0007
F_TRICLA	r_s	0.0958	0.0407	0.0284	0.0996	0.1929	0.1943	0.1047
	p	0.2979	0.6590	0.7583	0.2790	0.0348	0.0334	0.2552
F_GASTRO	r_s	-0.0957	-0.0365	0.1618	0.0279	0.1777	0.2158	0.0738
	p	0.2985	0.6924	0.0774	0.7625	0.0522	0.0179	0.4228
F_BIVALV	r_s	0.1301	0.0211	0.0272	0.1812	0.1585	0.0724	-0.0091
	p	0.1566	0.8192	0.7677	0.0476	0.0838	0.4322	0.9214
F_HIRUDI	r_s	-0.1185	-0.0490	0.0854	0.0221	0.0475	0.1291	-0.0742
	p	0.1975	0.5948	0.3539	0.8109	0.6067	0.1598	0.4209
F_ARANEA	r_s	-0.0678	-0.0400	-0.0695	-0.0834	0.1053	-0.0207	-0.1056
	p	0.4616	0.6648	0.4508	0.3650	0.2525	0.8227	0.2512
F_DECAPO	r_s	-0.0511	-0.0675	-0.0191	-0.0408	0.1445	0.1743	0.0305
	p	0.5793	0.4640	0.8359	0.6583	0.1154	0.0569	0.7412
F_ISOPOD	r_s	-0.1734	-0.0186	0.1474	0.0346	0.1164	0.1864	0.0215
	p	0.0583	0.8399	0.1081	0.7075	0.2054	0.0415	0.8161
F_AMPHIP	r_s	-0.0921	-0.0169	0.1971	0.0268	0.0824	0.2961	-0.0212
	p	0.3173	0.8543	0.0310	0.7711	0.3710	0.0010	0.8181
F_EPHEME	r_s	0.0179	0.1232	0.1089	0.0559	0.3553	0.1084	0.1020
	p	0.8463	0.1800	0.2364	0.5446	0.0001	0.2388	0.2675
F_PLECOP	r_s	-0.1163	-0.0921	-0.0435	0.1336	-0.0313	-0.0138	0.2416
	p	0.2060	0.3172	0.6373	0.1458	0.7343	0.8811	0.0078
F_ODONAT	r_s	-0.0656	-0.0949	0.0001	-0.0937	0.0667	-0.0230	0.2527
	p	0.4767	0.3025	0.9993	0.3088	0.4691	0.8031	0.0054

TABLE 11. CORRELATIONS BETWEEN POND ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficeint of rank correlation; p = significance level (p <0.001 underlined)

POTENTIAL METRIC		VARIABLE BUILD100	ROADS100	ROCK100	PATHS100	PONDS100	STREAM100	ALLWD&SC100
F_HEMIPT	r_s	0.1426	-0.0312	-0.0135	0.0565	0.2519	-0.0996	0.1549
	p	0.1203	0.7348	0.8840	0.5402	0.0055	0.2791	0.0911
F_COLEOP	r_s	0.0598	0.0105	0.0437	0.0360	0.1302	0.0194	0.0610
	p	0.5166	0.9090	0.6357	0.6966	0.1564	0.8339	0.5080
F_TRICHO	r_s	-0.0205	-0.1670	0.0124	0.0444	0.2821	0.0918	0.1929
	p	0.8242	0.0683	0.8934	0.6300	0.0018	0.3188	0.0348
F_PHEMIP	r_s	0.1385	-0.0789	0.0067	0.0764	0.2467	-0.0741	0.1748
	p	0.1313	0.3917	0.9418	0.4068	0.0066	0.4212	0.0562
F_DHEMIP	r_s	0.0198	0.1123	-0.0276	0.0686	0.2073	-0.0052	-0.0056
	p	0.8304	0.2221	0.7648	0.4569	0.0231	0.9551	0.9515
F_CM	r_s	-0.1068	-0.0316	0.2136	0.1003	0.2204	0.2843	0.0357
	p	0.2457	0.7318	0.0191	0.2758	0.0156	0.0016	0.6984
F_HTR	r_s	-0.0346	-0.0161	0.0712	0.0597	0.1287	0.1927	-0.0065
	p	0.7077	0.8613	0.4394	0.5170	0.1613	0.0350	0.9437
F_EPT	r_s	-0.0110	-0.0176	0.0454	0.0745	0.3307	0.1028	0.1743
	p	0.9049	0.8491	0.6222	0.4189	0.0002	0.2638	0.0569
F_ETO	r_s	-0.0530	-0.1105	0.0492	0.0132	0.3004	0.0619	0.2851
	p	0.5652	0.2297	0.5936	0.8858	0.0009	0.5016	0.0016
F_OM	r_s	-0.0751	-0.1254	0.0207	-0.0764	0.1238	0.0147	0.2887
	p	0.4152	0.1724	0.8221	0.4071	0.1778	0.8737	0.0014
F_EMO	r_s	-0.0575	-0.0510	0.0746	-0.0259	0.2578	0.0483	0.2760
	p	0.5329	0.5798	0.4181	0.7790	0.0045	0.6005	0.0023
F_PRED	r_s	0.0311	-0.0965	0.0772	0.0449	0.2775	0.0776	0.1654
	p	0.7357	0.2944	0.4017	0.6266	0.0022	0.3995	0.0710
F_DETR	r_s	-0.0938	-0.0422	0.1739	0.0807	0.3166	0.2370	0.0814
	p	0.3083	0.6471	0.0575	0.3806	0.0004	0.0092	0.3766
F_HERB	r_s	-0.0715	-0.0447	0.1555	0.0485	0.3200	0.1971	0.1011
	p	0.4376	0.6281	0.0899	0.5986	0.0004	0.0310	0.2718
BMWP	r_s	-0.0061	-0.1097	0.0624	0.0363	0.3220	0.1047	0.1900
	p	0.9472	0.2329	0.4982	0.6942	0.0003	0.2552	0.0377
ASPT	r_s	0.0356	-0.1641	-0.0652	-0.0121	0.1452	-0.0894	0.2701
	p	0.6998	0.0734	0.4795	0.8957	0.1136	0.3313	0.0029
PL_N.TX	r_s	-0.1245	-0.1767	-0.0578	0.0246	0.1822	0.0020	0.0867
	p	0.1442	0.0375	0.4990	0.7736	0.0318	0.9812	0.3102
MARG_N.TX	r_s	-0.1304	-0.1936	-0.0843	0.0177	0.1872	0.0320	0.0718
	p	0.1260	0.0224	0.3239	0.8360	0.0273	0.7083	0.4007
SUB_N.TX	r_s	-0.1273	-0.1108	-0.0361	0.0050	0.1775	-0.0230	0.1062
	p	0.1352	0.1943	0.6729	0.9536	0.0365	0.7881	0.2135
FLT_N.TX	r_s	0.0055	-0.0055	0.0419	0.1292	-0.1204	-0.0901	0.0649
	p	0.9491	0.9489	0.6240	0.1295	0.1579	0.2918	0.4477
AQ_N.TX	r_s	-0.0852	-0.0911	-0.0159	0.0456	0.0972	-0.0571	0.1035
	p	0.3189	0.2862	0.8524	0.5942	0.2551	0.5044	0.2253

TABLE 11. CORRELATIONS BETWEEN POND ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficeint of rank correlation; p = significance level (p <0.001 underlined)

POTENTIAL METRIC		VARIABLE BUILD100	ROADS100	ROCK100	PATHS100	PONDS100	STREAM100	ALLWD&SC100
FRE_SP	r_s	0.0305	-0.0469	-0.0811	0.1123	-0.1550	-0.0376	0.0209
	p	0.7217	0.5837	0.3428	0.1883	0.0685	0.6602	0.8069
POT_SP	r_s	-0.0426	-0.0417	0.0466	0.0213	0.2154	0.0473	0.1012
	p	0.6186	0.6258	0.5860	0.8037	0.0109	0.5800	0.2360
PL_SRS	r_s	-0.1303	-0.1856	-0.0488	0.0102	0.1902	0.0020	0.0750
	p	0.1263	0.0287	0.5685	0.9056	0.0249	0.9817	0.3802
MARG_SRS	r_s	-0.1291	-0.1982	-0.0810	0.0043	0.1682	0.0236	0.0450
	p	0.1298	0.0193	0.3435	0.9598	0.0477	0.7830	0.5985
SUB_SRS	r_s	-0.1512	-0.1147	-0.0006	-0.0015	0.2252	0.0192	0.1123
	p	0.0757	0.1786	0.9944	0.9863	0.0077	0.8221	0.1881
FLT_SRS	r_s	-0.0171	-0.0174	0.0245	0.0960	-0.1109	-0.0962	0.0551
	p	0.8418	0.8386	0.7749	0.2612	0.1938	0.2598	0.5197
AQ_SRS	r_s	-0.1209	-0.1087	0.0054	0.0132	0.1579	-0.0165	0.1123
	p	0.1563	0.2028	0.9493	0.8773	0.0634	0.8475	0.1881
PL_SRI	r_s	-0.1358	-0.1459	-0.0046	-0.0416	0.1420	0.0462	0.0131
	p	0.1110	0.0866	0.9571	0.6271	0.0953	0.5891	0.8783
MARG_SRI	r_s	-0.0669	-0.1199	-0.0270	-0.0177	-0.0217	-0.0267	-0.0898
	p	0.4337	0.1597	0.7528	0.8362	0.7997	0.7551	0.2934
SUB_SRI	r_s	-0.1469	-0.1192	0.0302	0.0512	0.2598	0.1439	0.1236
	p	0.0844	0.1624	0.7241	0.5493	0.0020	0.0909	0.1471
FLT_SRI	r_s	-0.0845	-0.0828	-0.0275	-0.0383	-0.1449	-0.1742	0.0255
	p	0.3229	0.3323	0.7481	0.6541	0.0887	0.0403	0.7660
AQ_SRI	r_s	-0.1893	-0.1360	-0.0064	-0.0398	0.3196	0.1518	0.1044
	p	0.0257	0.1103	0.9401	0.6421	0.0001	0.0744	0.2213
AQ_TI	r_s	0.0989	0.0969	-0.0224	0.1190	0.0211	0.0517	-0.0827
	p	0.2466	0.2567	0.7940	0.1631	0.8057	0.5458	0.3332
SUB_EX	r_s	0.0460	0.0599	0.0400	0.1368	0.0248	0.0686	0.0877
	p	0.5907	0.4837	0.6399	0.1083	0.7720	0.4223	0.3043
FLT_EX	r_s	0.0794	0.0706	-0.0059	0.1463	-0.0571	0.0496	-0.0044
	p	0.3527	0.4091	0.9448	0.0857	0.5040	0.5620	0.9595
AQ_EX	r_s	0.0675	0.0639	-0.0077	0.1556	-0.0104	0.1015	0.0253
	p	0.4296	0.4551	0.9279	0.0673	0.9035	0.2343	0.7675
MG_EX	r_s	0.1207	0.1547	0.0085	0.1344	-0.0473	-0.0130	-0.0393
	p	0.1570	0.0690	0.9209	0.1147	0.5805	0.8795	0.6459
EX_SP	r_s	0.1305	0.1080	-0.0302	0.1471	-0.0325	0.0800	0.0001
	p	0.1257	0.2057	0.7239	0.0840	0.7039	0.3494	0.9995
FFL/AQ	r_s	0.0402	-0.0495	-0.0782	0.0186	-0.2412	-0.0278	-0.0925
	p	0.6381	0.5626	0.3604	0.8282	0.0042	0.7456	0.2787
FFL/SU	r_s	-0.0810	-0.1158	-0.1203	0.0229	-0.1690	0.0400	0.0427
	p	0.3432	0.1746	0.1585	0.7891	0.0468	0.6402	0.6176
SUB/FLO	r_s	-0.1461	-0.1325	0.0066	-0.0052	-0.0202	-0.1817	0.1186
	p	0.0862	0.1200	0.9387	0.9512	0.8134	0.0323	0.1644

TABLE 11. CORRELATIONS BETWEEN POND ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficeint of rank correlation; p = significance level (p <0.001 underlined)

POTENTIAL METRIC		VARIABLE ALLGRASS100	ALLWET100	ALLSNAT100	ALLIMPAG100	ALLURB100	ALLIMP100
INV_N.SP	r_s	0.0287	0.1896	0.1909	-0.1622	-0.0442	-0.1407
	p	0.7554	0.0381	0.0368	0.0767	0.6316	0.1254
INV_N.FA	r_s	0.0093	0.2715	0.1502	-0.1417	-0.0117	-0.1048
	p	0.9200	0.0027	0.1016	0.1226	0.8994	0.2548
INV_N.OR	r_s	-0.0093	0.3054	0.1134	-0.1192	-0.0108	-0.0666
	p	0.9194	0.0007	0.2173	0.1947	0.9070	0.4697
INV_SRS	r_s	-0.0038	0.1721	0.2585	-0.2009	-0.0841	-0.2114
	p	0.9669	0.0602	0.0044	0.0278	0.3613	0.0205
INV_SRI	r_s	-0.0312	0.0852	0.2814	-0.1576	-0.1856	-0.2703
	p	0.7348	0.3547	0.0019	0.0857	0.0425	0.0028
S_TRIC	r_s	-0.0555	0.0758	-0.0498	0.0225	0.1464	0.0866
	p	0.5470	0.4108	0.5894	0.8076	0.1106	0.3467
S_GAST	r_s	0.1318	0.2377	-0.0670	0.0683	0.0549	0.1054
	p	0.1513	0.0089	0.4674	0.4584	0.5516	0.2519
S_BIVALV	r_s	0.0412	0.0299	0.0871	-0.0407	0.0361	-0.0556
	p	0.6552	0.7457	0.3443	0.6590	0.6952	0.5461
S_HIRU	r_s	0.1153	-0.0104	-0.0830	0.0692	0.0489	0.1178
	p	0.2100	0.9104	0.3676	0.4526	0.5955	0.2001
S_ARAN	r_s	-0.1314	0.2608	0.1478	-0.0628	-0.1205	-0.1329
	p	0.1527	0.0040	0.1071	0.4956	0.1898	0.1479
S_DECA	r_s	0.0213	-0.0761	-0.0547	0.0870	0.1354	0.0733
	p	0.8170	0.4087	0.5533	0.3450	0.1403	0.4262
S_ISOP	r_s	0.0751	0.1236	-0.1041	0.0466	0.0472	0.1176
	p	0.4147	0.1785	0.2576	0.6131	0.6089	0.2010
S_AMPH	r_s	0.1408	0.1779	-0.0498	0.1553	0.0038	0.1023
	p	0.1250	0.0519	0.5893	0.0903	0.9670	0.2661
S_EPHE	r_s	0.0055	0.2564	0.1193	-0.1861	0.0767	-0.1041
	p	0.9524	0.0047	0.1943	0.0419	0.4052	0.2578
S_PLEC	r_s	-0.1240	0.0704	0.1433	-0.1270	-0.1405	-0.1391
	p	0.1772	0.4447	0.1185	0.1669	0.1259	0.1298
S_ODON	r_s	-0.2816	0.3033	0.3973	-0.3753	-0.0872	-0.3705
	p	0.0018	0.0008	0.0000	0.0000	0.3435	0.0000
S_HEMI	r_s	0.0442	0.1746	0.1789	-0.1981	-0.0217	-0.1472
	p	0.6317	0.0565	0.0505	0.0301	0.8144	0.1086
S_COLE	r_s	0.0641	-0.0170	0.1692	-0.1052	-0.0830	-0.1355
	p	0.4869	0.8540	0.0648	0.2529	0.3672	0.1399
S_MEGA	r_s	-0.1220	0.2459	0.2877	-0.2433	-0.1970	-0.2761
	p	0.1844	0.0068	0.0014	0.0074	0.0310	0.0023
S_TRICH	r_s	-0.1188	0.2213	0.1511	-0.1908	-0.0680	-0.1267
	p	0.1964	0.0151	0.0995	0.0368	0.4606	0.1678
S_LYMN	r_s	0.1579	0.3312	0.0514	0.0159	-0.0077	-0.0221
	p	0.0849	0.0002	0.5769	0.8632	0.9338	0.8102
S_PLAN	r_s	0.1378	0.1241	-0.0936	0.0707	0.0989	0.1226
	p	0.1333	0.1768	0.3092	0.4428	0.2825	0.1824
S_BAET	r_s	0.0084	0.2044	0.1353	-0.2024	0.0986	-0.1202
	p	0.9277	0.0251	0.1406	0.0266	0.2839	0.1908

TABLE 11. CORRELATIONS BETWEEN POND ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:
r_s = Spearmans coefficeint of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLE					
POTENTIAL METRIC		ALLGRASS100	ALLWET100	ALLSNAT100	ALLIMPAG100	ALLURB100	ALLIMP100
S_COEN	r_s	-0.1841	0.3411	0.2570	-0.2794	-0.0654	-0.2353
	p	0.0441	0.0001	0.0046	0.0020	0.4781	0.0097
S_HALIP	r_s	0.2494	0.0679	-0.0144	-0.0569	0.0791	0.0000
	p	0.0060	0.4612	0.8756	0.5374	0.3904	0.9998
S_HYDR	r_s	-0.0026	0.0065	0.1915	-0.1024	-0.1807	-0.1536
	p	0.9774	0.9440	0.0362	0.2656	0.0482	0.0939
S_LIMN	r_s	-0.1092	0.1597	0.1705	-0.1675	-0.1518	-0.1542
	p	0.2350	0.0814	0.0626	0.0674	0.0978	0.0926
S_LEPT	r_s	-0.0097	0.2142	0.0614	-0.1421	0.0764	-0.0448
	p	0.9166	0.0188	0.5056	0.1216	0.4067	0.6271
S_SM_DY	r_s	0.0108	-0.0826	0.1336	-0.1100	-0.0611	-0.1131
	p	0.9065	0.3700	0.1456	0.2318	0.5077	0.2187
S_CM	r_s	0.1371	0.2475	-0.0588	0.0805	0.0535	0.1030
	p	0.1355	0.0064	0.5238	0.3820	0.5615	0.2627
S_HTR	r_s	0.0884	0.0163	-0.0888	0.0700	0.0804	0.1313
	p	0.3370	0.8599	0.3347	0.4477	0.3829	0.1528
S_PHEMIP	r_s	-0.0313	0.1928	0.1826	-0.1825	-0.0443	-0.1462
	p	0.7343	0.0349	0.0459	0.0460	0.6309	0.1110
S_DHEMIP	r_s	0.0780	0.1468	0.1520	-0.1793	-0.0073	-0.1345
	p	0.3969	0.1095	0.0975	0.0501	0.9369	0.1431
S_EPT	r_s	-0.0456	0.2464	0.1601	-0.2262	0.0195	-0.1335
	p	0.6211	0.0067	0.0807	0.0130	0.8325	0.1462
S_ETO	r_s	-0.2176	0.3285	0.3645	-0.3755	-0.0899	-0.3292
	p	0.0169	0.0002	0.0000	0.0000	0.3290	0.0002
F_TRICLA	r_s	-0.0396	0.0677	-0.0531	0.0349	0.1287	0.0901
	p	0.6675	0.4625	0.5647	0.7054	0.1613	0.3275
F_GASTRO	r_s	0.0864	0.2223	-0.0446	0.0624	0.0220	0.0895
	p	0.3481	0.0147	0.6284	0.4987	0.8113	0.3309
F_BIVALV	r_s	0.0496	0.0421	0.0954	-0.0502	0.0236	-0.0645
	p	0.5907	0.6480	0.3002	0.5862	0.7981	0.4841
F_HIRUDI	r_s	0.1027	-0.0141	-0.1126	0.0625	0.0692	0.1396
	p	0.2642	0.8787	0.2207	0.4978	0.4524	0.1284
F_ARANEA	r_s	-0.1314	0.2608	0.1478	-0.0628	-0.1205	-0.1329
	p	0.1527	0.0040	0.1071	0.4956	0.1898	0.1479
F_DECAPO	r_s	0.0213	-0.0761	-0.0547	0.0870	0.1354	0.0733
	p	0.8170	0.4087	0.5533	0.3450	0.1403	0.4262
F_ISOPOD	r_s	0.0687	0.1081	-0.0961	0.0587	0.0220	0.1057
	p	0.4561	0.2399	0.2962	0.5243	0.8115	0.2508
F_AMPHIP	r_s	0.1408	0.1779	-0.0498	0.1553	0.0038	0.1023
	p	0.1250	0.0519	0.5893	0.0903	0.9670	0.2661
F_EPHEME	r_s	0.0164	0.2499	0.1160	-0.1907	0.1086	-0.1031
	p	0.8591	0.0059	0.2071	0.0369	0.2377	0.2624
F_PLECOP	r_s	-0.1244	0.0679	0.1431	-0.1266	-0.1420	-0.1389
	p	0.1758	0.4611	0.1189	0.1683	0.1218	0.1304
F_ODONAT	r_s	-0.2685	0.2293	0.3901	-0.3519	-0.0785	-0.3642
	p	0.0030	0.0118	0.0000	0.0001	0.3939	0.0000

TABLE 11. CORRELATIONS BETWEEN POND ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficeint of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLE					
POTENTIAL METRIC		ALLGRASS100	ALLWET100	ALLSNAT100	ALLIMPAG100	ALLURB100	ALLIMP100
F_HEMIPT	r_s	-0.0125	0.1915	0.1303	-0.1381	-0.0001	-0.0984
	p	0.8921	0.0362	0.1561	0.1324	0.9991	0.2850
F_COLEOP	r_s	0.1662	0.0555	0.1340	-0.0976	-0.0170	-0.1179
	p	0.0697	0.5469	0.1445	0.2887	0.8539	0.1995
F_TRICHO	r_s	-0.1180	0.2433	0.1549	-0.1773	-0.0865	-0.1289
	p	0.1994	0.0074	0.0911	0.0527	0.3476	0.1604
F_PHEMIP	r_s	-0.0160	0.1769	0.1494	-0.1496	-0.0354	-0.1125
	p	0.8622	0.0532	0.1034	0.1029	0.7008	0.2211
F_DHEMIP	r_s	-0.0246	0.1633	-0.0113	-0.0805	0.1086	0.0076
	p	0.7899	0.0748	0.9026	0.3822	0.2376	0.9340
F_CM	r_s	0.1164	0.2473	-0.0386	0.0748	0.0242	0.0881
	p	0.2056	0.0065	0.6754	0.4169	0.7935	0.3385
F_HTR	r_s	0.0629	0.0220	-0.1014	0.0595	0.1034	0.1387
	p	0.4948	0.8118	0.2704	0.5185	0.2612	0.1310
F_EPT	r_s	-0.0539	0.2577	0.1590	-0.2225	0.0225	-0.1336
	p	0.5591	0.0045	0.0829	0.0146	0.8074	0.1458
F_ETO	r_s	-0.1872	0.3296	0.3393	-0.3490	-0.0645	-0.3068
	p	0.0406	0.0002	0.0002	0.0001	0.4837	0.0007
F_OM	r_s	-0.2680	0.2846	0.4292	-0.3827	-0.1360	-0.4041
	p	0.0031	0.0016	0.0000	0.0000	0.1386	0.0000
F_EMO	r_s	-0.2114	0.3338	0.3929	-0.3804	-0.0754	-0.3669
	p	0.0205	0.0002	0.0000	0.0000	0.4134	0.0000
F_PRED	r_s	-0.0062	0.2394	0.1852	-0.1741	-0.0151	-0.1419
	p	0.9467	0.0085	0.0428	0.0572	0.8697	0.1220
F_DETR	r_s	0.0628	0.2913	0.0351	-0.0079	0.0107	0.0193
	p	0.4959	0.0012	0.7037	0.9314	0.9075	0.8343
F_HERB	r_s	0.0526	0.2802	0.0389	-0.0455	0.0180	-0.0001
	p	0.5680	0.0019	0.6728	0.6219	0.8454	0.9990
BMWP	r_s	-0.0453	0.2893	0.2051	-0.1989	-0.0293	-0.1606
	p	0.6228	0.0014	0.0246	0.0294	0.7510	0.0797
ASPT	r_s	-0.2970	0.2066	0.4134	-0.3600	-0.1390	-0.4009
	p	0.0010	0.0236	0.0000	0.0001	0.1299	0.0000
PL_N.TX	r_s	0.0317	0.2465	0.3820	-0.3142	-0.1786	-0.3703
	p	0.7112	0.0034	0.0000	0.0002	0.0354	0.0000
MARG_N.TX	r_s	0.0378	0.2766	0.3653	-0.2730	-0.1978	-0.3548
	p	0.6586	0.0010	0.0000	0.0011	0.0196	0.0000
SUB_N.TX	r_s	-0.0480	0.1749	0.3839	-0.3906	-0.1204	-0.3928
	p	0.5746	0.0394	0.0000	0.0000	0.1580	0.0000
FLT_N.TX	r_s	0.0359	-0.0879	0.1163	-0.2079	0.0385	-0.0992
	p	0.6751	0.3035	0.1728	0.0140	0.6525	0.2455
AQ_N.TX	r_s	-0.0193	0.0829	0.3331	-0.3648	-0.0763	-0.3244
	p	0.8217	0.3320	0.0001	0.0000	0.3722	0.0001

TABLE 11. CORRELATIONS BETWEEN POND ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficeint of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLE					
POTENTIAL METRIC		ALLGRASS100	ALLWET100	ALLS`NAT100	ALLIMPAG100	ALLURB100	ALLIMP100
FRE_SP	r_s	0.1174	-0.1130	-0.0793	0.0271	0.0509	0.1056
	p	0.1688	0.1854	0.3532	0.7513	0.5516	0.2160
POT_SP	r_s	0.0200	0.2860	0.2748	-0.2382	-0.1233	-0.2668
	p	0.8150	0.0006	0.0011	0.0048	0.1483	0.0015
PL_SRS	r_s	0.0135	0.2611	0.4104	-0.3325	-0.1956	-0.3931
	p	0.8749	0.0019	0.0000	0.0001	0.0210	0.0000
MARG_SRS	r_s	0.0183	0.2712	0.3817	-0.2828	-0.2090	-0.3700
	p	0.8308	0.0012	0.0000	0.0007	0.0135	0.0000
SUB_SRS	r_s	-0.0479	0.2349	0.3823	-0.3757	-0.1390	-0.3746
	p	0.5758	0.0054	0.0000	0.0000	0.1028	0.0000
FLT_SRS	r_s	0.0087	-0.0516	0.1628	-0.2349	0.0081	-0.1444
	p	0.9194	0.5465	0.0555	0.0054	0.9248	0.0900
AQ_SRS	r_s	-0.0263	0.1687	0.3694	-0.3656	-0.1224	-0.3490
	p	0.7587	0.0471	0.0000	0.0000	0.1513	0.0000
PL_SRI	r_s	-0.0759	0.2271	0.3745	-0.3244	-0.1987	-0.3447
	p	0.3743	0.0072	0.0000	0.0001	0.0190	0.0000
MARG_SRI	r_s	-0.0516	0.1332	0.2833	-0.2506	-0.1438	-0.2804
	p	0.5461	0.1181	0.0007	0.0029	0.0913	0.0008
SUB_SRI	r_s	-0.0223	0.2650	0.2356	-0.2880	-0.1375	-0.2187
	p	0.7948	0.0016	0.0052	0.0006	0.1065	0.0097
FLT_SRI	r_s	0.0044	-0.0160	0.1896	-0.1910	-0.1038	-0.1946
	p	0.9594	0.8521	0.0254	0.0243	0.2239	0.0217
AQ_SRI	r_s	-0.0075	0.3580	0.3375	-0.2800	-0.2211	-0.3060
	p	0.9298	0.0000	0.0000	0.0008	0.0089	0.0002
AQ_TI	r_s	0.2241	-0.0469	-0.2562	0.1270	0.1635	0.2519
	p	0.0080	0.5839	0.0023	0.1364	0.0545	0.0028
SUB_EX	r_s	0.0153	0.0597	0.1108	-0.1564	0.0662	-0.0973
	p	0.8585	0.4852	0.1942	0.0659	0.4391	0.2546
FLT_EX	r_s	0.0313	-0.0815	-0.0745	-0.0885	0.1755	0.0837
	p	0.7144	0.3399	0.3836	0.3002	0.0388	0.3270
AQ_EX	r_s	0.0388	-0.0089	0.0098	-0.1354	0.1411	0.0068
	p	0.6499	0.9174	0.9090	0.1120	0.0977	0.9366
MG_EX	r_s	0.0293	-0.0236	0.0579	-0.1856	0.1420	-0.0485
	p	0.7320	0.7832	0.4984	0.0287	0.0954	0.5708
EX_SP	r_s	0.0469	-0.0229	0.0251	-0.1588	0.1751	-0.0041
	p	0.5839	0.7893	0.7694	0.0619	0.0392	0.9622
FFL/AQ	r_s	0.1656	-0.1682	-0.2726	0.2787	0.0299	0.2871
	p	0.0513	0.0477	0.0012	0.0009	0.7265	0.0006
FFL/SU	r_s	0.0678	-0.0888	-0.0710	0.0083	-0.0435	0.0715
	p	0.4277	0.2987	0.4060	0.9232	0.6108	0.4031
SUB/FLO	r_s	-0.0646	0.0210	0.2123	-0.2548	-0.0879	-0.2522
	p	0.4497	0.8064	0.0121	0.0025	0.3032	0.0027

TABLE 11. CORRELATIONS BETWEEN POND ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficeint of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLE							
POTENTIAL METRIC		C_DECID	C_CONIF	C_SCRUB	C_HEATH	C_BOG	C_MARSH	C_RANKG	C_UNIMPG
INV_N.SP	r_s	0.0495	-0.1705	0.1257	-0.1163	-0.0031	0.0552	0.0445	0.3285
	p	0.5912	0.0660	0.1770	0.2117	0.9738	0.5542	0.6340	0.0003
INV_N.FA	r_s	0.1180	-0.0881	0.1400	-0.0957	-0.0123	0.0714	0.0259	0.2796
	p	0.1991	0.3448	0.1321	0.3046	0.8956	0.4443	0.7818	0.0023
INV_N.OR	r_s	0.1254	-0.1360	0.0997	-0.1778	-0.0379	0.0536	0.0481	0.2556
	p	0.1725	0.1437	0.2849	0.0552	0.6852	0.5658	0.6064	0.0054
INV_SRS	r_s	0.0399	-0.1815	0.1455	-0.0584	0.0086	0.0396	0.0080	0.3258
	p	0.6652	0.0502	0.1175	0.5313	0.9270	0.6720	0.9315	0.0003
INV_SRI	r_s	-0.0566	-0.0503	0.1009	0.1429	0.0655	0.0052	-0.0139	0.1635
	p	0.5393	0.5905	0.2792	0.1243	0.4827	0.9552	0.8817	0.0782
S_TRIC	r_s	0.0697	-0.1938	0.0349	-0.1727	-0.0255	-0.0325	0.0182	0.0614
	p	0.4493	0.0363	0.7086	0.0627	0.7850	0.7283	0.8457	0.5111
S_GAST	r_s	0.0770	-0.1830	0.0512	-0.2918	-0.1422	0.0546	0.0579	0.2182
	p	0.4030	0.0483	0.5832	0.0014	0.1261	0.5586	0.5353	0.0181
S_BIVALV	r_s	-0.0161	-0.1113	0.0182	0.0119	-0.0667	-0.1322	0.0093	0.1576
	p	0.8615	0.2322	0.8458	0.8989	0.4750	0.1552	0.9205	0.0896
S_HIRU	r_s	0.0380	-0.1678	-0.0222	-0.1184	0.0321	-0.0535	0.0821	0.0153
	p	0.6803	0.0706	0.8123	0.2035	0.7312	0.5666	0.3791	0.8695
S_ARAN	r_s	-0.1664	0.0133	-0.0389	0.3167	0.1264	0.1689	-0.0430	-0.1375
	p	0.0694	0.8864	0.6768	0.0005	0.1744	0.0688	0.6456	0.1393
S_DECA	r_s	0.0258	-0.0251	-0.0855	-0.0419	-0.0151	-0.0299	-0.0503	-0.0549
	p	0.7795	0.7879	0.3591	0.6536	0.8720	0.7493	0.5902	0.5567
S_ISOP	r_s	0.0611	-0.2327	-0.0871	-0.2160	-0.1142	0.0820	0.1268	0.1276
	p	0.5074	0.0116	0.3503	0.0193	0.2202	0.3794	0.1732	0.1704
S_AMPH	r_s	0.0536	-0.1383	0.0949	-0.2129	-0.1155	0.0694	0.0287	0.1778
	p	0.5613	0.1371	0.3085	0.0212	0.2151	0.4574	0.7590	0.0551
S_EPHE	r_s	0.0628	0.0215	0.1921	-0.1880	0.0166	0.0347	-0.0099	0.1841
	p	0.4953	0.8183	0.0380	0.0424	0.8588	0.7105	0.9153	0.0469
S_PLEC	r_s	0.2727	0.1016	0.0929	-0.0954	-0.0343	0.0892	-0.1144	0.1159
	p	0.0026	0.2759	0.3192	0.3064	0.7138	0.3389	0.2192	0.2133
S_ODON	r_s	0.1619	0.2049	0.0948	0.2984	0.1406	0.1383	-0.0380	0.0919
	p	0.0773	0.0267	0.3094	0.0011	0.1306	0.1371	0.6838	0.3245
S_HEMI	r_s	-0.0103	0.0593	0.1262	0.0521	0.0000	-0.0103	-0.0351	0.3204
	p	0.9112	0.5252	0.1751	0.5767	1.0000	0.9122	0.7073	0.0004
S_COLE	r_s	-0.0435	-0.2212	0.0866	-0.0841	0.0463	0.0324	0.1198	0.2348
	p	0.6372	0.0165	0.3530	0.3672	0.6198	0.7288	0.1981	0.0108
S_MEGA	r_s	0.1241	0.0659	0.0956	0.0197	-0.0536	0.1425	-0.0069	0.3719
	p	0.1770	0.4800	0.3053	0.8332	0.5659	0.1255	0.9415	0.0000
S_TRICH	r_s	0.1481	-0.0512	0.1304	-0.0749	0.0507	0.0478	0.0122	0.2015
	p	0.1065	0.5839	0.1610	0.4223	0.5873	0.6092	0.8963	0.0294
S_LYMN	r_s	0.0142	-0.0614	0.1117	-0.2059	-0.0808	0.0447	-0.0062	0.3275
	p	0.8776	0.5107	0.2306	0.0259	0.3862	0.6326	0.9471	0.0003
S_PLAN	r_s	0.0853	-0.2215	-0.0235	-0.2699	-0.1171	0.0587	0.1652	0.1055
	p	0.3544	0.0164	0.8016	0.0032	0.2085	0.5294	0.0751	0.2576
S_BAET	r_s	-0.0023	0.0835	0.1353	-0.1841	0.0184	0.0204	0.0197	0.1884
	p	0.9798	0.3708	0.1457	0.0470	0.8440	0.8276	0.8330	0.0420

TABLE 11. CORRELATIONS BETWEEN POND ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficeint of rank correlation; p = significance level (p <0.001 underlined)

POTENTIAL METRIC		VARIABLE C_DECID	C_CONIF	C_SCRUB	C_HEATH	C_BOG	C_MARSH	C_RANKG	C_UNIMPG
S_COEN	r_s	0.1571	0.1125	0.1430	0.1271	0.1265	0.0790	0.0444	0.1015
	p	0.0867	0.2273	0.1240	0.1722	0.1741	0.3971	0.6346	0.2763
S_HALIP	r_s	0.1184	-0.1579	0.0401	-0.3032	-0.1543	0.0374	0.0619	0.3054
	p	0.1976	0.0891	0.6679	0.0009	0.0968	0.6885	0.5070	0.0008
S_HYDR	r_s	0.0173	-0.1802	0.0826	-0.0463	0.0203	0.0632	0.1084	0.1883
	p	0.8509	0.0518	0.3758	0.6201	0.8283	0.4984	0.2447	0.0420
S_LIMN	r_s	0.2746	-0.1216	0.0780	-0.1382	-0.0114	0.0489	0.0963	0.1417
	p	0.0024	0.1915	0.4034	0.1374	0.9026	0.6003	0.3015	0.1274
S_LEPT	r_s	-0.0111	-0.0965	0.1759	-0.0969	0.0851	-0.0037	-0.0241	0.1970
	p	0.9041	0.3007	0.0578	0.2986	0.3618	0.9685	0.7964	0.0333
S_SM_DY	r_s	-0.1523	-0.2207	-0.0142	-0.0024	0.1072	0.0262	0.0913	0.1066
	p	0.0969	0.0168	0.8795	0.9792	0.2501	0.7795	0.3274	0.2529
S_CM	r_s	0.0767	-0.2117	0.0422	-0.2936	-0.1651	0.0646	0.0678	0.2268
	p	0.4053	0.0219	0.6511	0.0013	0.0752	0.4889	0.4680	0.0139
S_HTR	r_s	0.0419	-0.2015	0.0038	-0.1517	0.0067	-0.0590	0.0683	0.0738
	p	0.6492	0.0294	0.9673	0.1025	0.9433	0.5276	0.4644	0.4292
S_PHEMIP	r_s	0.0430	0.1179	0.1678	0.1110	0.0192	0.0097	0.0423	0.2060
	p	0.6413	0.2056	0.0706	0.2336	0.8374	0.9175	0.6507	0.0259
S_DHEMIP	r_s	0.0024	-0.0360	0.0700	-0.0129	-0.0062	0.0044	-0.0938	0.3394
	p	0.9794	0.7000	0.4532	0.8901	0.9468	0.9624	0.3144	0.0002
S_EPT	r_s	0.1113	0.0095	0.1656	-0.1682	0.0266	0.0454	0.0225	0.2500
	p	0.2263	0.9191	0.0744	0.0699	0.7758	0.6272	0.8094	0.0066
S_ETO	r_s	0.1926	0.1109	0.1638	0.0980	0.1176	0.1054	-0.0265	0.2246
	p	0.0351	0.2340	0.0776	0.2933	0.2066	0.2581	0.7763	0.0149
F_TRICLA	r_s	0.0643	-0.1947	-0.0053	-0.1842	-0.0190	-0.0477	-0.0032	0.0450
	p	0.4851	0.0354	0.9550	0.0468	0.8391	0.6099	0.9727	0.6299
F_GASTRO	r_s	0.0981	-0.1626	0.0951	-0.2651	-0.1404	0.0381	0.0144	0.2113
	p	0.2865	0.0798	0.3077	0.0039	0.1312	0.6836	0.8775	0.0222
F_BIVALV	r_s	-0.0187	-0.1116	0.0200	0.0120	-0.0669	-0.1326	0.0141	0.1707
	p	0.8395	0.2309	0.8302	0.8974	0.4737	0.1541	0.8800	0.0658
F_HIRUDI	r_s	0.0256	-0.1925	-0.0366	-0.1672	-0.0019	-0.0671	0.1295	-0.0109
	p	0.7811	0.0375	0.6955	0.0715	0.9836	0.4722	0.1641	0.9076
F_ARANEA	r_s	-0.1664	0.0133	-0.0389	0.3167	0.1264	0.1689	-0.0430	-0.1375
	p	0.0694	0.8864	0.6768	0.0005	0.1744	0.0688	0.6456	0.1393
F_DECAPO	r_s	0.0258	-0.0251	-0.0855	-0.0419	-0.0151	-0.0299	-0.0503	-0.0549
	p	0.7795	0.7879	0.3591	0.6536	0.8720	0.7493	0.5902	0.5567
F_ISOPOD	r_s	0.0786	-0.2368	-0.0896	-0.2615	-0.1127	0.0445	-0.0084	0.1348
	p	0.3933	0.0102	0.3368	0.0044	0.2262	0.6335	0.9287	0.1472
F_AMPHIP	r_s	0.0536	-0.1383	0.0949	-0.2129	-0.1155	0.0694	0.0287	0.1778
	p	0.5613	0.1371	0.3085	0.0212	0.2151	0.4574	0.7590	0.0551
F_EPHEME	r_s	0.0427	0.0328	0.1733	-0.1794	0.0302	0.0294	0.0071	0.1688
	p	0.6434	0.7254	0.0617	0.0529	0.7466	0.7528	0.9394	0.0688
F_PLECOP	r_s	0.2739	0.1029	0.0913	-0.0954	-0.0343	0.0840	-0.1145	0.1144
	p	0.0025	0.2694	0.3276	0.3063	0.7137	0.3678	0.2192	0.2193
F_ODONAT	r_s	0.1767	0.1965	0.0437	0.3179	0.1431	0.1506	-0.0338	0.0584
	p	0.0536	0.0337	0.6397	0.0005	0.1237	0.1051	0.7175	0.5319

TABLE 11. CORRELATIONS BETWEEN POND ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficeint of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLE							
POTENTIAL METRIC		C_DECID	C_CONIF	C_SCRUB	C_HEATH	C_BOG	C_MARSH	C_RANKG	C_UNIMPG
F_HEMIPT	r_s	0.0670	0.1304	0.1459	0.0932	0.0495	0.0315	0.0742	0.1264
	p	0.4669	0.1611	0.1164	0.3174	0.5962	0.7358	0.4267	0.1744
F_COLEOP	r_s	0.0628	-0.1560	0.2729	-0.0602	-0.1008	0.0317	-0.0037	0.3687
	p	0.4954	0.0930	0.0029	0.5190	0.2794	0.7347	0.9688	0.0000
F_TRICHO	r_s	0.1413	-0.0516	0.1277	-0.0730	0.0868	0.0941	0.0253	0.2107
	p	0.1237	0.5802	0.1699	0.4343	0.3519	0.3131	0.7864	0.0226
F_PHEMIP	r_s	0.0482	0.0901	0.1794	0.0888	0.0283	0.0047	0.0432	0.1775
	p	0.6012	0.3340	0.0529	0.3413	0.7619	0.9600	0.6438	0.0556
F_DHEMIP	r_s	0.0768	0.1192	0.0103	0.0031	0.0714	0.0569	0.0088	0.0053
	p	0.4043	0.2006	0.9122	0.9732	0.4441	0.5422	0.9247	0.9548
F_CM	r_s	0.0806	-0.2078	0.0681	-0.2912	-0.1731	0.0406	0.0108	0.2539
	p	0.3816	0.0245	0.4656	0.0014	0.0620	0.6639	0.9080	0.0057
F_HTR	r_s	0.0468	-0.2249	-0.0290	-0.2006	-0.0157	-0.0748	0.0769	0.0402
	p	0.6118	0.0148	0.7561	0.0301	0.8662	0.4229	0.4098	0.6668
F_EPT	r_s	0.1127	0.0186	0.1605	-0.1618	0.0608	0.0720	0.0344	0.2356
	p	0.2204	0.8425	0.0838	0.0814	0.5148	0.4407	0.7129	0.0105
F_ETO	r_s	0.1949	0.0873	0.1446	0.0612	0.1328	0.1290	0.0043	0.1953
	p	0.0329	0.3493	0.1198	0.5120	0.1536	0.1658	0.9634	0.0349
F_OM	r_s	0.1902	0.1856	0.0689	0.2717	0.1111	0.1758	-0.0333	0.1835
	p	0.0375	0.0451	0.4604	0.0030	0.2331	0.0580	0.7215	0.0477
F_EMO	r_s	0.1756	0.1639	0.1268	0.1521	0.1014	0.1638	-0.0290	0.2226
	p	0.0551	0.0775	0.1732	0.1017	0.2767	0.0775	0.7561	0.0158
F_PRED	r_s	0.1021	-0.0408	0.1300	-0.0131	0.0273	0.0732	0.0388	0.2635
	p	0.2671	0.6621	0.1625	0.8889	0.7703	0.4328	0.6777	0.0041
F_DETR	r_s	0.1022	-0.1127	0.1331	-0.2448	-0.0550	0.0341	0.0261	0.2882
	p	0.2669	0.2263	0.1525	0.0078	0.5558	0.7152	0.7802	0.0016
F_HERB	r_s	0.1425	-0.1029	0.1313	-0.2465	-0.0719	0.0525	0.0348	0.2717
	p	0.1206	0.2694	0.1582	0.0074	0.4412	0.5741	0.7094	0.0030
BMWP	r_s	0.1541	-0.0281	0.1372	-0.0408	0.0218	0.1033	0.0219	0.2623
	p	0.0928	0.7634	0.1403	0.6627	0.8158	0.2679	0.8146	0.0043
ASPT	r_s	0.1407	0.2136	0.0999	0.3244	0.2233	0.1110	-0.1322	0.0646
	p	0.1254	0.0208	0.2839	0.0004	0.0155	0.2334	0.1553	0.4888
PL_N.TX	r_s	0.0068	0.0659	0.1052	0.1714	0.1058	0.0975	-0.0080	0.3818
	p	0.9370	0.4443	0.2211	0.0452	0.2184	0.2571	0.9265	0.0000
MARG_N.TX	r_s	0.0084	0.0907	0.1261	0.1652	0.1090	0.1290	-0.0022	0.3593
	p	0.9219	0.2918	0.1420	0.0538	0.2047	0.1329	0.9797	0.0000
SUB_N.TX	r_s	-0.0375	0.0245	0.0117	0.1933	0.0828	0.0208	-0.0389	0.3350
	p	0.6608	0.7759	0.8925	0.0236	0.3363	0.8094	0.6517	0.0001
FLT_N.TX	r_s	0.0678	-0.0044	0.0386	0.0087	0.0430	0.0293	0.1203	0.1030
	p	0.4280	0.9589	0.6543	0.9201	0.6182	0.7336	0.1613	0.2309
AQ_N.TX	r_s	-0.0086	-0.0077	0.0220	0.1459	0.0795	0.0070	0.0178	0.2922
	p	0.9197	0.9285	0.7990	0.0889	0.3560	0.9353	0.8360	0.0005

TABLE 11. CORRELATIONS BETWEEN POND ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficeint of rank correlation; p = significance level (p <0.001 underlined)

POTENTIAL METRIC		VARIABLE C_DECID	C_CONIF	C_SCRUB	C_HEATH	C_BOG	C_MARSH	C_RANKG	C_UNIMPG
FRE_SP	r_s	0.0927	-0.1359	0.0209	-0.2184	-0.0285	-0.0266	0.1476	0.0300
	p	0.2777	0.1133	0.8083	0.0103	0.7413	0.7576	0.0852	0.7275
POT_SP	r_s	-0.0860	0.1180	0.0550	0.0522	0.1178	0.0967	-0.0086	0.2990
	p	0.3141	0.1695	0.5230	0.5446	0.1705	0.2609	0.9204	0.0004
PL_SRS	r_s	-0.0098	0.0356	0.1218	0.1939	0.1072	0.1116	-0.0293	0.3944
	p	0.9089	0.6798	0.1561	0.0232	0.2122	0.1943	0.7337	0.0000
MARG_SRS	r_s	-0.0142	0.0649	0.1345	0.2083	0.1268	0.1312	-0.0224	0.3537
	p	0.8683	0.4511	0.1172	0.0146	0.1397	0.1266	0.7954	0.0000
SUB_SRS	r_s	-0.0124	-0.0134	0.0359	0.1421	0.0575	0.0761	-0.0292	0.3550
	p	0.8848	0.8764	0.6767	0.0977	0.5047	0.3767	0.7345	0.0000
FLT_SRS	r_s	0.0470	0.0547	0.0246	0.0847	0.1047	0.0675	0.0968	0.0998
	p	0.5830	0.5252	0.7757	0.3249	0.2235	0.4334	0.2607	0.2457
AQ_SRS	r_s	-0.0009	-0.0123	0.0422	0.1341	0.0679	0.0775	-0.0004	0.3309
	p	0.9913	0.8869	0.6247	0.1183	0.4308	0.3680	0.9959	0.0001
PL_SRI	r_s	-0.0329	-0.1075	0.1224	0.1959	0.0982	0.1420	-0.0992	0.2592
	p	0.7008	0.2110	0.1543	0.0218	0.2536	0.0980	0.2489	0.0022
MARG_SRI	r_s	-0.0549	-0.1267	0.1134	0.2282	0.1587	0.1178	-0.0957	0.1803
	p	0.5206	0.1400	0.1872	0.0073	0.0639	0.1704	0.2660	0.0350
SUB_SRI	r_s	0.0797	-0.0151	0.0843	-0.0514	-0.0505	0.1266	0.0186	0.2914
	p	0.3508	0.8612	0.3272	0.5505	0.5575	0.1404	0.8295	0.0006
FLT_SRI	r_s	-0.0376	0.1986	-0.0025	0.2066	0.1958	0.1157	0.0400	0.0661
	p	0.6606	0.0200	0.9765	0.0154	0.0218	0.1780	0.6428	0.4430
AQ_SRI	r_s	-0.0025	0.0468	0.0993	0.0674	0.0243	0.1641	-0.0287	0.3215
	p	0.9768	0.5875	0.2485	0.4342	0.7781	0.0554	0.7392	0.0001
AQ_TI	r_s	-0.0302	-0.0495	-0.0602	-0.3248	-0.1545	-0.0128	0.0569	-0.0165
	p	0.7242	0.5654	0.4843	0.0001	0.0715	0.8821	0.5088	0.8484
SUB_EX	r_s	0.0652	-0.0648	0.0270	-0.0788	-0.0806	-0.0952	0.0382	0.1491
	p	0.4455	0.4518	0.7539	0.3600	0.3491	0.2686	0.6575	0.0821
FLT_EX	r_s	0.0843	-0.0356	-0.0824	-0.0875	-0.0670	-0.0499	0.1184	0.0390
	p	0.3240	0.6799	0.3382	0.3092	0.4369	0.5627	0.1681	0.6512
AQ_EX	r_s	0.0460	-0.0940	-0.0528	-0.1195	-0.1011	-0.1248	0.0766	0.1295
	p	0.5912	0.2744	0.5402	0.1644	0.2399	0.1463	0.3738	0.1315
MG_EX	r_s	-0.0381	-0.1027	0.0762	-0.1150	-0.0618	0.0331	0.0730	0.1913
	p	0.6562	0.2322	0.3760	0.1809	0.4734	0.7012	0.3963	0.0252
EX_SP	r_s	0.0194	-0.1172	-0.0229	-0.1500	-0.1120	-0.0988	0.1106	0.1660
	p	0.8202	0.1726	0.7908	0.0802	0.1927	0.2507	0.1981	0.0526
FFL/AQ	r_s	0.0019	-0.1191	-0.0489	-0.2578	-0.0340	-0.0348	0.0959	-0.1634
	p	0.9824	0.1659	0.5706	0.0024	0.6932	0.6865	0.2650	0.0564
FFL/SU	r_s	0.1214	-0.0866	-0.0168	-0.1626	0.0091	-0.0475	0.0839	-0.0393
	p	0.1546	0.3142	0.8453	0.0576	0.9156	0.5813	0.3300	0.6484
SUB/FLO	r_s	0.0071	0.1735	0.0476	0.1650	0.1238	0.0066	-0.0160	0.1837
	p	0.9342	0.0426	0.5805	0.0541	0.1495	0.9390	0.8529	0.0317

TABLE 11. CORRELATIONS BETWEEN POND ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficcint of rank correlation; p = significance level (p <0.001 underlined)

POTENTIAL METRIC		VARIABLE C_S_IMPRG	C_IMPRG	C_ARABL	C_PARKS	C_BUILD	C_ROADS	C_ROCK	C_PATH
INV_N.SP	r_s	-0.0735	-0.1159	-0.1446	-0.0387	-0.1394	-0.0286	-0.0526	0.0110
	p	0.4311	0.2135	0.1199	0.6787	0.1337	0.7592	0.5729	0.9064
INV_N.FA	r_s	-0.0469	-0.0606	-0.1277	-0.0375	-0.1624	-0.0089	0.0217	0.0501
	p	0.6158	0.5162	0.1702	0.6882	0.0802	0.9240	0.8166	0.5915
INV_N.OR	r_s	-0.0597	-0.0762	-0.1526	0.0240	-0.1802	-0.0378	0.0073	0.0395
	p	0.5225	0.4144	0.1005	0.7977	0.0519	0.6857	0.9374	0.6721
INV_SRS	r_s	-0.0701	-0.1778	-0.1753	-0.0816	-0.1427	-0.0150	-0.0507	0.0008
	p	0.4526	0.0551	0.0587	0.3819	0.1248	0.8723	0.5871	0.9931
INV_SRI	r_s	-0.0357	-0.1716	-0.1366	-0.1833	-0.1243	-0.0188	-0.0217	0.0272
	p	0.7022	0.0643	0.1420	0.0479	0.1818	0.8409	0.8165	0.7710
S_TRIC	r_s	-0.0220	0.0111	-0.0476	0.2487	0.0997	0.1446	-0.0944	0.1078
	p	0.8141	0.9059	0.6105	0.0068	0.2848	0.1199	0.3113	0.2473
S_GAST	r_s	0.0226	0.0441	-0.0875	0.0540	-0.0997	0.0346	0.0354	0.0251
	p	0.8091	0.6365	0.3479	0.5635	0.2848	0.7113	0.7049	0.7886
S_BIVALV	r_s	-0.1074	-0.0219	-0.0076	-0.0397	-0.1136	0.0651	-0.0542	0.0196
	p	0.2489	0.8143	0.9350	0.6705	0.2226	0.4855	0.5615	0.8335
S_HIRU	r_s	0.0600	0.1167	-0.0077	0.0960	-0.0026	0.0271	-0.0150	-0.0473
	p	0.5207	0.2102	0.9340	0.3032	0.9780	0.7721	0.8723	0.6123
S_ARAN	r_s	-0.1193	-0.0836	-0.1341	-0.0551	-0.1481	-0.0658	-0.0446	-0.1141
	p	0.2002	0.3704	0.1495	0.5549	0.1111	0.4810	0.6332	0.2206
S_DECA	r_s	0.1764	-0.0456	-0.0368	0.2299	-0.0407	-0.0514	-0.0122	-0.0313
	p	0.0571	0.6257	0.6935	0.0127	0.6633	0.5817	0.8958	0.7373
S_ISOP	r_s	-0.0299	0.1364	-0.0549	0.0321	-0.0430	-0.0200	0.0673	-0.0079
	p	0.7489	0.1426	0.5564	0.7309	0.6451	0.8302	0.4710	0.9328
S_AMPH	r_s	-0.1395	0.1151	0.0772	0.0776	-0.1146	0.0541	0.2284	0.0987
	p	0.1336	0.2167	0.4083	0.4057	0.2186	0.5622	0.0133	0.2899
S_EPHE	r_s	0.0977	-0.1787	-0.1612	0.0513	-0.0143	0.0606	0.0419	0.1282
	p	0.2947	0.0539	0.0826	0.5827	0.8788	0.5164	0.6536	0.1683
S_PLEC	r_s	-0.0252	-0.1037	0.0284	-0.0897	-0.0925	-0.0366	-0.0279	-0.0713
	p	0.7877	0.2660	0.7615	0.3363	0.3210	0.6949	0.7656	0.4450
S_ODON	r_s	-0.0963	-0.2464	-0.2793	-0.1706	-0.2280	-0.1077	0.1131	0.0590
	p	0.3019	0.0074	0.0023	0.0659	0.0134	0.2476	0.2247	0.5271
S_HEMI	r_s	-0.1582	-0.0580	-0.1369	-0.0373	-0.0124	0.0546	-0.1065	0.0564
	p	0.0886	0.5344	0.1409	0.6896	0.8947	0.5585	0.2533	0.5455
S_COLE	r_s	-0.1059	-0.0854	-0.0403	-0.0971	-0.0816	-0.0671	-0.0938	-0.0901
	p	0.2558	0.3597	0.6659	0.2976	0.3820	0.4720	0.3145	0.3341
S_MEGA	r_s	-0.1218	-0.1827	-0.0581	-0.1983	-0.2554	-0.2182	-0.0023	0.0587
	p	0.1908	0.0486	0.5341	0.0321	0.0055	0.0181	0.9808	0.5299
S_TRICH	r_s	0.0597	-0.1231	-0.1135	-0.0835	-0.1884	-0.1361	0.0103	0.0721
	p	0.5223	0.1860	0.2232	0.3705	0.0419	0.1434	0.9119	0.4399
S_LYMN	r_s	0.0387	0.0285	-0.1448	-0.0283	-0.1022	0.0019	0.1055	0.0510
	p	0.6790	0.7601	0.1194	0.7623	0.2729	0.9842	0.2576	0.5852
S_PLAN	r_s	0.0560	0.0206	-0.0573	0.0960	-0.0401	0.0859	-0.0440	-0.0350
	p	0.5488	0.8257	0.5395	0.3031	0.6678	0.3570	0.6376	0.7082
S_BAET	r_s	0.0853	-0.1461	-0.1236	0.1029	0.0318	0.0682	-0.0268	0.0498
	p	0.3607	0.1159	0.1844	0.2694	0.7335	0.4648	0.7744	0.5941

TABLE 11. CORRELATIONS BETWEEN POND ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficeint of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLE							
POTENTIAL METRIC		C_S_IMPRG	C_IMPRG	C_ARABL	C_PARKS	C_BUILD	C_ROADS	C_ROCK	C_PATH
S_COEN	r_s	-0.0209	-0.1987	-0.2525	-0.1692	-0.2461	-0.0680	0.1332	0.1801
	p	0.8233	0.0317	0.0060	0.0682	0.0075	0.4663	0.1521	0.0520
S_HALIP	r_s	0.0759	0.0179	-0.0469	0.0786	-0.0069	0.0255	0.1194	0.0694
	p	0.4157	0.8484	0.6159	0.3993	0.9411	0.7849	0.1996	0.4570
S_HYDR	r_s	-0.1825	-0.0417	-0.0388	-0.1591	-0.1302	-0.1782	-0.0367	-0.1495
	p	0.0490	0.6552	0.6776	0.0866	0.1617	0.0545	0.6948	0.1076
S_LIMN	r_s	0.0705	-0.0571	-0.0096	-0.1073	-0.1188	-0.1017	0.0311	-0.0248
	p	0.4503	0.5405	0.9185	0.2498	0.2020	0.2753	0.7395	0.7910
S_LEPT	r_s	0.0980	-0.1246	-0.1373	-0.0099	-0.0735	-0.0197	0.0299	0.1106
	p	0.2931	0.1807	0.1398	0.9154	0.4313	0.8331	0.7491	0.2354
S_SM_DY	r_s	-0.0490	-0.0937	-0.0387	-0.0610	-0.0608	-0.1128	-0.1471	-0.1199
	p	0.5996	0.3147	0.6789	0.5133	0.5146	0.2261	0.1134	0.1979
S_CM	r_s	-0.0169	0.0659	-0.0644	0.0642	-0.1137	0.0467	0.0726	0.0569
	p	0.8564	0.4804	0.4902	0.4917	0.2224	0.6170	0.4370	0.5424
S_HTR	r_s	0.0287	0.0942	-0.0165	0.1479	0.0067	0.0395	-0.0450	0.0105
	p	0.7589	0.3126	0.8600	0.1116	0.9427	0.6728	0.6299	0.9108
S_PHEMIP	r_s	-0.1721	-0.0039	-0.1555	-0.1107	-0.0663	-0.0396	-0.0889	0.0929
	p	0.0636	0.9665	0.0942	0.2349	0.4773	0.6714	0.3403	0.3191
S_DHEMIP	r_s	-0.0939	-0.0980	-0.1204	0.0153	0.0238	0.1127	-0.0731	0.0068
	p	0.3140	0.2933	0.1962	0.8698	0.7990	0.2264	0.4332	0.9419
S_EPT	r_s	0.0716	-0.1785	-0.1429	-0.0183	-0.1266	-0.0594	0.0045	0.0832
	p	0.4429	0.0542	0.1244	0.8444	0.1739	0.5244	0.9615	0.3727
S_ETO	r_s	-0.0184	-0.2564	-0.2674	-0.1445	-0.2311	-0.1256	0.0896	0.0832
	p	0.8435	0.0053	0.0036	0.1200	0.0122	0.1771	0.3369	0.3725
F_TRICLA	r_s	-0.0038	0.0058	-0.0624	0.2558	0.0927	0.1426	-0.0949	0.0865
	p	0.9678	0.9506	0.5037	0.0054	0.3200	0.1250	0.3090	0.3539
F_GASTRO	r_s	-0.0166	0.0362	-0.0585	0.0241	-0.1326	0.0425	0.0938	0.0649
	p	0.8587	0.6985	0.5310	0.7962	0.1541	0.6492	0.3144	0.4870
F_BIVALV	r_s	-0.1092	-0.0290	-0.0210	-0.0515	-0.1197	0.0557	-0.0544	0.0164
	p	0.2412	0.7564	0.8218	0.5815	0.1988	0.5510	0.5604	0.8609
F_HIRUDI	r_s	0.0635	0.0967	0.0296	0.1312	-0.0335	-0.0121	-0.0008	-0.0618
	p	0.4961	0.2998	0.7517	0.1585	0.7202	0.8969	0.9932	0.5081
F_ARANEA	r_s	-0.1193	-0.0836	-0.1341	-0.0551	-0.1481	-0.0658	-0.0446	-0.1141
	p	0.2002	0.3704	0.1495	0.5549	0.1111	0.4810	0.6332	0.2206
F_DECAPO	r_s	0.1764	-0.0456	-0.0368	0.2299	-0.0407	-0.0514	-0.0122	-0.0313
	p	0.0571	0.6257	0.6935	0.0127	0.6633	0.5817	0.8958	0.7373
F_ISOPOD	r_s	-0.0367	0.0901	-0.0881	0.0513	-0.0723	-0.0535	0.0932	-0.0566
	p	0.6945	0.3338	0.3450	0.5828	0.4384	0.5670	0.3173	0.5444
F_AMPHIP	r_s	-0.1395	0.1151	0.0772	0.0776	-0.1146	0.0541	0.2284	0.0987
	p	0.1336	0.2167	0.4083	0.4057	0.2186	0.5622	0.0133	0.2899
F_EPHEME	r_s	0.1130	-0.1775	-0.1680	0.0584	0.0016	0.0950	0.0174	0.1212
	p	0.2251	0.0556	0.0702	0.5316	0.9864	0.3081	0.8526	0.1929
F_PLECOP	r_s	-0.0244	-0.1037	0.0293	-0.0897	-0.0926	-0.0393	-0.0279	-0.0713
	p	0.7937	0.2659	0.7536	0.3363	0.3209	0.6740	0.7655	0.4449
F_ODONAT	r_s	-0.1069	-0.2216	-0.2485	-0.1229	-0.2104	-0.1204	0.0724	-0.0662
	p	0.2514	0.0163	0.0069	0.1867	0.0228	0.1961	0.4378	0.4784

TABLE 11. CORRELATIONS BETWEEN POND ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficeint of rank correlation; p = significance level (p <0.001 underlined)

POTENTIAL METRIC		VARIABLE C_S_IMPRG	C_IMPRG	C_ARABL	C_PARKS	C_BUILD	C_ROADS	C_ROCK	C_PATH
F_HEMIPT	r_s	-0.1155	0.0330	-0.1210	-0.0816	-0.0167	0.0208	-0.1134	0.0541
	p	0.2150	0.7241	0.1936	0.3815	0.8578	0.8242	0.2236	0.5625
F_COLEOP	r_s	-0.0013	-0.0119	-0.0343	-0.1688	-0.1195	0.1167	-0.0237	-0.0022
	p	0.9886	0.8991	0.7136	0.0688	0.1994	0.2101	0.8001	0.9816
F_TRICHO	r_s	0.0613	-0.1153	-0.0787	-0.0672	-0.1731	-0.1364	0.0364	0.0707
	p	0.5117	0.2157	0.3987	0.4718	0.0620	0.1424	0.6967	0.4485
F_PHEMIP	r_s	-0.1531	0.0296	-0.1410	-0.0967	-0.0366	-0.0196	-0.0873	0.0529
	p	0.0993	0.7513	0.1295	0.2997	0.6953	0.8336	0.3493	0.5711
F_DHEMIP	r_s	0.0560	-0.0143	-0.0994	0.0027	0.0192	0.1325	-0.1222	-0.0013
	p	0.5487	0.8780	0.2864	0.9767	0.8369	0.1543	0.1892	0.9889
F_CM	r_s	-0.0623	0.0620	-0.0462	0.0455	-0.1557	0.0382	0.1578	0.0887
	p	0.5044	0.5068	0.6211	0.6263	0.0936	0.6825	0.0892	0.3418
F_HTR	r_s	0.0359	0.0733	-0.0132	0.1995	0.0047	0.0405	-0.0443	-0.0008
	p	0.7007	0.4320	0.8873	0.0310	0.9602	0.6645	0.6351	0.9933
F_EPT	r_s	0.0839	-0.1759	-0.1188	0.0037	-0.1024	-0.0362	0.0115	0.0872
	p	0.3683	0.0578	0.2022	0.9687	0.2721	0.6982	0.9024	0.3501
F_ETO	r_s	0.0217	-0.2409	-0.2330	-0.0877	-0.1997	-0.1033	0.0551	0.0492
	p	0.8160	0.0089	0.0115	0.3473	0.0308	0.2675	0.5550	0.5982
F_OM	r_s	-0.1322	-0.2526	-0.2245	-0.1714	-0.2641	-0.1739	0.0603	-0.0334
	p	0.1555	0.0060	0.0149	0.0647	0.0040	0.0608	0.5181	0.7207
F_EMO	r_s	-0.0646	-0.2694	-0.2498	-0.1223	-0.2150	-0.0969	0.0544	0.0452
	p	0.4889	0.0033	0.0066	0.1888	0.0199	0.2987	0.5599	0.6286
F_PRED	r_s	-0.0411	-0.0673	-0.1546	-0.0369	-0.1513	-0.0315	0.0188	0.0446
	p	0.6603	0.4710	0.0961	0.6929	0.1034	0.7358	0.8403	0.6327
F_DETR	r_s	-0.0415	-0.0082	-0.0213	0.0280	-0.1517	0.0224	0.0982	0.1176
	p	0.6569	0.9297	0.8199	0.7647	0.1026	0.8103	0.2923	0.2069
F_HERB	r_s	0.0209	-0.0246	-0.0352	0.0433	-0.1122	0.0582	0.0514	0.0791
	p	0.8233	0.7927	0.7066	0.6428	0.2283	0.5333	0.5821	0.3968
BMWP	r_s	-0.0368	-0.1001	-0.1588	-0.0427	-0.1774	-0.0395	0.0117	0.0482
	p	0.6938	0.2828	0.0872	0.6478	0.0558	0.6724	0.9005	0.6060
ASPT	r_s	0.0153	-0.2638	-0.2189	-0.1436	-0.1415	-0.1522	0.0083	0.0082
	p	0.8700	0.0041	0.0177	0.1223	0.1281	0.1013	0.9288	0.9302
PL_N.TX	r_s	0.0172	-0.1905	-0.2475	-0.2086	-0.1546	-0.0283	-0.0391	-0.0078
	p	0.8415	0.0258	0.0036	0.0144	0.0713	0.7426	0.6505	0.9275
MARG_N.TX	r_s	0.0209	-0.1701	-0.2216	-0.2575	-0.1733	-0.0586	-0.0335	-0.0172
	p	0.8081	0.0469	0.0093	0.0024	0.0428	0.4964	0.6972	0.8415
SUB_N.TX	r_s	0.0329	-0.2549	-0.2803	-0.0120	-0.1121	0.0233	-0.0427	0.0430
	p	0.7026	0.0026	0.0009	0.8891	0.1922	0.7871	0.6203	0.6177
FLT_N.TX	r_s	0.0203	-0.0575	-0.1584	0.0305	0.0044	0.1529	-0.0077	0.0081
	p	0.8138	0.5046	0.0644	0.7233	0.9596	0.0744	0.9287	0.9247
AQ_N.TX	r_s	0.0119	-0.2075	-0.2797	0.0136	-0.0864	0.0766	-0.0533	0.0193
	p	0.8904	0.0150	0.0009	0.8742	0.3155	0.3739	0.5361	0.8228

TABLE 11. CORRELATIONS BETWEEN POND ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficeint of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLE							
POTENTIAL METRIC		C_S_IMPRG	C_IMPRG	C_ARABL	C_PARKS	C_BUILD	C_ROADS	C_ROCK	C_PATH
FRE_SP	r_s	0.0041	0.1557	0.0111	0.0535	0.0902	0.1937	-0.1151	-0.0638
	p	0.9618	0.0693	0.8978	0.5343	0.2945	0.0233	0.1804	0.4586
POT_SP	r_s	-0.0342	-0.1646	-0.1709	0.0017	-0.0231	0.0473	0.0310	0.1387
	p	0.6914	0.0546	0.0459	0.9839	0.7888	0.5829	0.7191	0.1061
PL_SRS	r_s	0.0047	-0.2108	-0.2572	-0.2097	-0.1614	-0.0261	-0.0283	0.0034
	p	0.9564	0.0134	0.0024	0.0139	0.0595	0.7619	0.7429	0.9687
MARG_SRS	r_s	0.0126	-0.1775	-0.2241	-0.2682	-0.1778	-0.0692	-0.0240	-0.0124
	p	0.8838	0.0379	0.0085	0.0015	0.0376	0.4216	0.7807	0.8858
SUB_SRS	r_s	0.0106	-0.2535	-0.2563	-0.0134	-0.1204	0.0467	0.0071	0.0544
	p	0.9018	0.0028	0.0025	0.8769	0.1611	0.5883	0.9344	0.5274
FLT_SRS	r_s	0.0226	-0.0843	-0.1759	0.0067	-0.0150	0.1360	-0.0181	-0.0103
	p	0.7935	0.3273	0.0398	0.9380	0.8615	0.1131	0.8335	0.9051
AQ_SRS	r_s	-0.0044	-0.2245	-0.2720	-0.0103	-0.1077	0.0695	-0.0129	0.0170
	p	0.9595	0.0083	0.0013	0.9045	0.2102	0.4198	0.8812	0.8438
PL_SRI	r_s	0.0113	-0.2222	-0.2362	-0.0977	-0.1611	-0.0082	0.0518	0.0701
	p	0.8959	0.0091	0.0055	0.2562	0.0601	0.9245	0.5480	0.4158
MARG_SRI	r_s	0.0507	-0.1459	-0.1752	-0.1883	-0.1429	-0.0568	0.0529	0.0189
	p	0.5562	0.0889	0.0406	0.0275	0.0958	0.5099	0.5390	0.8269
SUB_SRI	r_s	0.0191	-0.2046	-0.1810	-0.0141	-0.0980	0.0937	0.1199	0.1733
	p	0.8246	0.0165	0.0343	0.8702	0.2547	0.2763	0.1627	0.0428
FLT_SRI	r_s	0.0369	-0.0742	-0.1468	-0.1017	-0.0620	0.0232	0.0177	-0.0471
	p	0.6684	0.3889	0.0869	0.2370	0.4719	0.7878	0.8377	0.5843
AQ_SRI	r_s	-0.0078	-0.1838	-0.2364	-0.0805	-0.1156	0.0406	0.0618	0.1225
	p	0.9283	0.0316	0.0054	0.3497	0.1787	0.6380	0.4731	0.1539
AQ_TI	r_s	0.0786	0.1843	-0.0131	0.1962	0.1339	0.1597	-0.0735	-0.0218
	p	0.3614	0.0311	0.8795	0.0216	0.1189	0.0623	0.3935	0.8006
SUB_EX	r_s	0.0236	-0.1733	-0.1470	0.0819	-0.0016	0.0969	-0.0806	0.0949
	p	0.7842	0.0428	0.0864	0.3412	0.9849	0.2599	0.3491	0.2701
FLT_EX	r_s	0.0720	-0.0329	0.0087	0.0178	0.0853	0.2522	-0.0670	-0.0206
	p	0.4034	0.7023	0.9198	0.8361	0.3215	0.0029	0.4369	0.8108
AQ_EX	r_s	0.0122	-0.1335	-0.1214	0.0635	0.0297	0.2203	-0.1011	0.0274
	p	0.8871	0.1200	0.1578	0.4613	0.7301	0.0097	0.2399	0.7507
MG_EX	r_s	0.0602	-0.1754	-0.0622	0.1667	0.0560	0.1621	-0.0618	0.1235
	p	0.4849	0.0404	0.4700	0.0515	0.5161	0.0584	0.4734	0.1504
EX_SP	r_s	0.0297	-0.1569	-0.0950	0.1534	0.0555	0.2079	-0.1120	0.0451
	p	0.7306	0.0671	0.2694	0.0735	0.5195	0.0148	0.1927	0.6006
FFL/AQ	r_s	0.0076	0.3181	0.1477	0.0305	0.0735	0.0950	-0.0765	-0.1611
	p	0.9295	0.0002	0.0849	0.7234	0.3931	0.2694	0.3740	0.0600
FFL/SU	r_s	0.0948	0.0367	0.0323	0.0479	-0.0399	0.1011	-0.0667	-0.0836
	p	0.2704	0.6701	0.7083	0.5785	0.6437	0.2398	0.4389	0.3312
SUB/FLO	r_s	0.0215	-0.1618	-0.1365	-0.0671	-0.1100	-0.0457	0.0611	0.0307
	p	0.8034	0.0589	0.1117	0.4359	0.2006	0.5956	0.4781	0.7213

TABLE 11. CORRELATIONS BETWEEN POND ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficeint of rank correlation; p = significance level (p <0.001 underlined)

POTENTIAL METRIC		VARIABLE ALLWDS_C	ALLGRASS_C	ALLWET_C	ALLS_NAT_C	ALLIMPAG_C	ALLURB_C	ALLIMP_C
INV_N.SP	r_s	0.0972	0.0973	0.0517	0.1721	-0.1568	-0.0603	-0.1375
	p	0.2911	0.2903	0.5752	0.0602	0.0873	0.5128	0.1343
INV_N.FA	r_s	0.1468	0.0657	0.0585	0.0855	-0.1523	-0.0366	-0.1049
	p	0.1096	0.4757	0.5255	0.3531	0.0967	0.6916	0.2544
INV_N.OR	r_s	0.1277	0.0518	0.0273	0.0571	-0.1751	-0.0201	-0.0944
	p	0.1644	0.5744	0.7669	0.5355	0.0558	0.8272	0.3052
INV_SRS	r_s	0.1107	0.0616	0.0462	0.2515	-0.2083	-0.0925	-0.2004
	p	0.2285	0.5036	0.6166	0.0056	0.0224	0.3152	0.0282
INV_SRI	r_s	0.0521	-0.0150	0.0419	0.3318	-0.1837	-0.2008	-0.2562
	p	0.5718	0.8708	0.6496	0.0002	0.0446	0.0279	0.0047
S_TRIC	r_s	-0.0109	-0.0350	-0.0391	-0.1489	-0.0362	0.2613	0.1579
	p	0.9061	0.7043	0.6715	0.1046	0.6943	0.0039	0.0851
S_GAST	r_s	0.0193	0.1601	-0.0153	-0.0516	-0.0540	0.0358	0.0283
	p	0.8345	0.0807	0.8681	0.5754	0.5579	0.6981	0.7592
S_BIVALV	r_s	0.0387	0.0190	-0.1518	0.1188	0.0035	-0.0169	-0.0804
	p	0.6745	0.8371	0.0978	0.1961	0.9701	0.8550	0.3828
S_HIRU	r_s	-0.0312	0.0318	-0.0412	-0.1714	0.0588	0.0826	0.1446
	p	0.7355	0.7304	0.6554	0.0613	0.5232	0.3697	0.1150
S_ARAN	r_s	-0.1213	-0.1876	0.2165	0.0973	-0.1264	-0.0636	-0.1133
	p	0.1868	0.0402	0.0175	0.2904	0.1689	0.4903	0.2177
S_DECA	r_s	-0.1201	0.0486	-0.0332	-0.1448	-0.0555	0.1609	0.0841
	p	0.1912	0.5984	0.7186	0.1145	0.5471	0.0792	0.3613
S_ISOP	r_s	-0.0407	0.1407	0.0248	-0.1102	0.0482	0.0229	0.0905
	p	0.6593	0.1252	0.7877	0.2310	0.6008	0.8043	0.3254
S_AMPH	r_s	-0.0332	0.0968	0.0055	-0.1186	0.1200	0.0327	0.1203
	p	0.7187	0.2927	0.9529	0.1969	0.1919	0.7227	0.1906
S_EPHE	r_s	0.1300	0.0408	0.0321	0.0228	-0.2277	0.0630	-0.0994
	p	0.1570	0.6584	0.7276	0.8052	0.0124	0.4940	0.2799
S_PLEC	r_s	0.2633	-0.1189	0.0683	0.1448	-0.0549	-0.0820	-0.1012
	p	0.0037	0.1959	0.4583	0.1146	0.5513	0.3735	0.2716
S_ODON	r_s	0.2872	-0.1984	0.1890	0.3044	-0.3506	-0.1723	-0.3469
	p	0.0015	0.0298	0.0387	0.0007	0.0001	0.0599	0.0001
S_HEMI	r_s	0.1204	0.0454	-0.0099	0.1272	-0.1105	-0.0279	-0.0895
	p	0.1904	0.6221	0.9144	0.1662	0.2295	0.7623	0.3312
S_COLE	r_s	0.0083	0.1064	0.0546	0.2189	-0.0458	-0.1126	-0.1350
	p	0.9280	0.2473	0.5534	0.0163	0.6195	0.2209	0.1414
S_MEGA	r_s	0.1978	0.0527	0.1152	0.3419	-0.2196	-0.2656	-0.3207
	p	0.0303	0.5673	0.2101	0.0001	0.0160	0.0034	0.0004
S_TRICH	r_s	0.1876	0.0596	0.0738	0.1745	-0.1971	-0.1263	-0.1949
	p	0.0402	0.5177	0.4229	0.0567	0.0309	0.1693	0.0329
S_LYMN	r_s	0.0417	0.2404	0.0046	0.0962	-0.1043	-0.0593	-0.1052
	p	0.6512	0.0082	0.9599	0.2957	0.2568	0.5198	0.2527
S_PLAN	r_s	-0.0023	0.1103	-0.0018	-0.0853	-0.0479	0.0850	0.0450
	p	0.9802	0.2305	0.9848	0.3542	0.6031	0.3563	0.6254
S_BAET	r_s	0.1058	0.0697	0.0241	0.0329	-0.1754	0.1242	-0.0495
	p	0.2501	0.4495	0.7939	0.7211	0.0553	0.1764	0.5913

TABLE 11. CORRELATIONS BETWEEN POND ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficeint of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLE						
POTENTIAL METRIC		ALLWDS_C	ALLGRASS_C	ALLWET_C	ALLSNAT_C	ALLIMPAG_C	ALLURB_C	ALLIMP_C
S_COEN	r_s	0.2448	-0.0795	0.1299	0.1763	-0.2989	-0.1394	-0.2456
	p	0.0070	0.3883	0.1572	0.0541	0.0009	0.1290	0.0068
S_HALIP	r_s	0.0989	0.2513	-0.0342	-0.0049	-0.0645	0.0370	-0.0140
	p	0.2827	0.0056	0.7108	0.9578	0.4841	0.6885	0.8797
S_HYDR	r_s	0.0725	0.0644	0.0742	0.2632	-0.0226	-0.1978	-0.1498
	p	0.4314	0.4845	0.4207	0.0037	0.8063	0.0303	0.1024
S_LIMN	r_s	0.2699	0.0175	0.0447	0.1712	-0.1090	-0.1389	-0.1949
	p	0.0029	0.8495	0.6281	0.0615	0.2361	0.1303	0.0329
S_LEPT	r_s	0.0354	0.0974	0.0411	0.0521	-0.1963	-0.0044	-0.1056
	p	0.7011	0.2900	0.6554	0.5721	0.0317	0.9622	0.2511
S_SM_DY	r_s	-0.1308	0.0629	0.0753	0.1723	-0.0320	-0.0878	-0.1119
	p	0.1546	0.4951	0.4138	0.0599	0.7288	0.3401	0.2236
S_CM	r_s	0.0041	0.1526	-0.0174	-0.0638	-0.0151	0.0462	0.0490
	p	0.9646	0.0962	0.8508	0.4890	0.8696	0.6165	0.5953
S_HTR	r_s	-0.0323	0.0339	-0.0563	-0.1688	0.0350	0.1296	0.1591
	p	0.7263	0.7133	0.5417	0.0654	0.7040	0.1584	0.0827
S_PHEMIP	r_s	0.2087	0.0396	0.0185	0.1842	-0.0992	-0.1088	-0.1350
	p	0.0222	0.6675	0.8411	0.0440	0.2812	0.2369	0.1415
S_DHEMIP	r_s	0.0492	0.0423	0.0014	0.0637	-0.1179	0.0431	-0.0544
	p	0.5940	0.6463	0.9883	0.4897	0.1996	0.6402	0.5553
S_EPT	r_s	0.1760	0.0708	0.0532	0.1392	-0.2491	-0.0474	-0.1886
	p	0.0545	0.4424	0.5640	0.1295	0.0061	0.6068	0.0391
S_ETO	r_s	0.3056	-0.0824	0.1521	0.3087	-0.3744	-0.1702	-0.3529
	p	0.0007	0.3711	0.0973	0.0006	0.0000	0.0631	0.0001
F_TRICLA	r_s	-0.0319	-0.0309	-0.0502	-0.1662	-0.0349	0.2536	0.1593
	p	0.7292	0.7375	0.5864	0.0697	0.7050	0.0052	0.0823
F_GASTRO	r_s	0.0396	0.1035	-0.0305	-0.0688	-0.0513	0.0245	0.0410
	p	0.6678	0.2608	0.7411	0.4552	0.5777	0.7905	0.6566
F_BIVALV	r_s	0.0367	0.0302	-0.1523	0.1294	-0.0128	-0.0297	-0.0963
	p	0.6907	0.7432	0.0968	0.1589	0.8892	0.7473	0.2954
F_HIRUDI	r_s	-0.0744	0.0045	-0.0728	-0.2152	0.0460	0.0759	0.1461
	p	0.4195	0.9609	0.4295	0.0182	0.6181	0.4099	0.1114
F_ARANEA	r_s	-0.1213	-0.1876	0.2165	0.0973	-0.1264	-0.0636	-0.1133
	p	0.1868	0.0402	0.0175	0.2904	0.1689	0.4903	0.2177
F_DECAPO	r_s	-0.1201	0.0486	-0.0332	-0.1448	-0.0555	0.1609	0.0841
	p	0.1912	0.5984	0.7186	0.1145	0.5471	0.0792	0.3613
F_ISOPOD	r_s	-0.0201	0.1007	-0.0087	-0.1017	0.0188	-0.0040	0.0621
	p	0.8277	0.2740	0.9249	0.2690	0.8384	0.9658	0.5002
F_AMPHIP	r_s	-0.0332	0.0968	0.0055	-0.1186	0.1200	0.0327	0.1203
	p	0.7187	0.2927	0.9529	0.1969	0.1919	0.7227	0.1906
F_EPHEME	r_s	0.1098	0.0415	0.0325	0.0082	-0.2319	0.0902	-0.0897
	p	0.2325	0.6528	0.7243	0.9288	0.0108	0.3274	0.3302
F_PLECOP	r_s	0.2647	-0.1197	0.0637	0.1455	-0.0543	-0.0840	-0.1020
	p	0.0035	0.1930	0.4894	0.1129	0.5556	0.3619	0.2677
F_ODONAT	r_s	0.2971	-0.2187	0.1992	0.3326	-0.3177	-0.1720	-0.3456
	p	0.0010	0.0164	0.0292	0.0002	0.0004	0.0603	0.0001

TABLE 11. CORRELATIONS BETWEEN POND ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficeint of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLE						
POTENTIAL METRIC		ALLWDS_C	ALLGRASS_C	ALLWET_C	ALLS`NAT_C	ALLIMPAG_C	ALLURB_C	ALLIMP_C
F_HEMIPT	r_s	0.2087	0.0204	0.0532	0.1087	-0.0562	-0.0454	-0.0731
	p	0.0221	0.8253	0.5640	0.2374	0.5421	0.6228	0.4278
F_COLEOP	r_s	0.1482	0.1978	-0.0164	0.1617	-0.0456	-0.0700	-0.1282
	p	0.1063	0.0303	0.8590	0.0777	0.6210	0.4472	0.1628
F_TRICHO	r_s	0.1662	0.0699	0.1303	0.1609	-0.1813	-0.1138	-0.1741
	p	0.0697	0.4483	0.1560	0.0791	0.0475	0.2158	0.0571
F_PHEMIP	r_s	0.2105	0.0423	0.0202	0.1562	-0.0685	-0.0814	-0.0999
	p	0.0210	0.6461	0.8265	0.0885	0.4575	0.3767	0.2777
F_DHEMIP	r_s	0.1100	-0.0467	0.0798	-0.0806	-0.0607	0.0684	0.0140
	p	0.2316	0.6126	0.3863	0.3812	0.5099	0.4582	0.8798
F_CM	r_s	-0.0045	0.1264	-0.0447	-0.0868	-0.0119	0.0319	0.0577
	p	0.9609	0.1691	0.6279	0.3457	0.8977	0.7294	0.5312
F_HTR	r_s	-0.0650	-0.0012	-0.0816	-0.2198	0.0153	0.1527	0.1717
	p	0.4804	0.9897	0.3756	0.0159	0.8682	0.0960	0.0609
F_EPT	r_s	0.1654	0.0624	0.0913	0.1141	-0.2410	-0.0163	-0.1630
	p	0.0709	0.4984	0.3216	0.2146	0.0080	0.8602	0.0753
F_ETO	r_s	0.2839	-0.0670	0.1764	0.2624	-0.3503	-0.1273	-0.3170
	p	0.0017	0.4675	0.0540	0.0038	0.0001	0.1658	0.0004
F_OM	r_s	0.3148	-0.1640	0.2114	0.3978	-0.3455	-0.2319	-0.3994
	p	0.0005	0.0734	0.0205	0.0000	0.0001	0.0108	0.0000
F_EMO	r_s	0.2961	-0.1122	0.1932	0.3234	-0.3698	-0.1514	-0.3553
	p	0.0010	0.2225	0.0345	0.0003	0.0000	0.0988	0.0001
F_PRED	r_s	0.1464	0.0712	0.0828	0.1227	-0.1635	-0.0470	-0.1264
	p	0.1106	0.4396	0.3688	0.1819	0.0743	0.6101	0.1689
F_DETR	r_s	0.1183	0.0873	0.0018	-0.0250	-0.0562	0.0057	-0.0070
	p	0.1981	0.3432	0.9845	0.7860	0.5419	0.9504	0.9397
F_HERB	r_s	0.1378	0.0964	0.0151	-0.0170	-0.0911	0.0340	-0.0022
	p	0.1333	0.2948	0.8703	0.8540	0.3223	0.7123	0.9810
BMWP	r_s	0.1911	0.0327	0.1018	0.1379	-0.2087	-0.0598	-0.1636
	p	0.0366	0.7232	0.2684	0.1330	0.0222	0.5162	0.0741
ASPT	r_s	0.2391	-0.1414	0.2051	0.3763	-0.3221	-0.1687	-0.3839
	p	0.0085	0.1236	0.0246	0.0000	0.0003	0.0654	0.0000
PL_N.TX	r_s	0.0968	0.1385	0.1400	0.4008	-0.3457	-0.1607	-0.3539
	p	0.2572	0.1041	0.1002	0.0000	0.0000	0.0589	0.0000
MARG_N.TX	r_s	0.0980	0.1441	0.1695	0.4013	-0.3075	-0.2058	-0.3609
	p	0.2511	0.0906	0.0461	0.0000	0.0002	0.0151	0.0000
SUB_N.TX	r_s	0.0448	0.0477	0.0613	0.3209	-0.4063	-0.0303	-0.2948
	p	0.6009	0.5774	0.4733	0.0001	0.0000	0.7236	0.0004
FLT_N.TX	r_s	0.0749	0.0656	0.0466	0.0911	-0.1750	0.0891	-0.0425
	p	0.3809	0.4431	0.5861	0.2861	0.0394	0.2972	0.6196
AQ_N.TX	r_s	0.0606	0.0579	0.0464	0.2799	-0.3716	0.0228	-0.2267
	p	0.4783	0.4985	0.5879	0.0008	0.0000	0.7904	0.0073

TABLE 11. CORRELATIONS BETWEEN POND ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:
r_s = Spearmans coefficeint of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLE						
POTENTIAL METRIC		ALLWDS_C	ALLGRASS_C	ALLWET_C	ALLSNAT_C	ALLIMPAG_C	ALLURB_C	ALLIMP_C
FRE_SP	r_s	0.0236	0.1179	-0.0355	-0.1202	0.1042	0.1754	0.2051
	p	0.7823	0.1667	0.6784	0.1589	0.2220	0.0389	0.0154
POT_SP	r_s	0.0284	0.0818	0.1454	0.2034	-0.2472	-0.0157	-0.1706
	p	0.7403	0.3386	0.0877	0.0163	0.0033	0.8542	0.0446
PL_SRS	r_s	0.0860	0.1199	0.1534	0.4138	-0.3631	-0.1645	-0.3640
	p	0.3143	0.1599	0.0714	0.0000	0.0000	0.0530	0.0000
MARG_SRS	r_s	0.0774	0.1230	0.1795	0.4093	-0.3106	-0.2226	-0.3709
	p	0.3651	0.1493	0.0345	0.0000	0.0002	0.0084	0.0000
SUB_SRS	r_s	0.0479	0.0593	0.0995	0.3047	-0.3923	-0.0150	-0.2666
	p	0.5755	0.4881	0.2438	0.0003	0.0000	0.8611	0.0015
FLT_SRS	r_s	0.0771	0.0407	0.1095	0.1436	-0.2039	0.0577	-0.0870
	p	0.3667	0.6340	0.1995	0.0918	0.0160	0.5002	0.3082
AQ_SRS	r_s	0.0674	0.0652	0.1053	0.3068	-0.3772	0.0023	-0.2422
	p	0.4305	0.4456	0.2174	0.0002	0.0000	0.9782	0.0041
PL_SRI	r_s	0.0046	-0.0080	0.1763	0.2694	-0.3229	-0.0999	-0.2434
	p	0.9575	0.9259	0.0379	0.0013	0.0001	0.2418	0.0039
MARG_SRI	r_s	-0.0265	0.0044	0.1800	0.2474	-0.2216	-0.1800	-0.2480
	p	0.7565	0.9591	0.0340	0.0033	0.0088	0.0340	0.0032
SUB_SRI	r_s	0.0596	0.0909	0.0958	0.1528	-0.2986	0.0041	-0.1378
	p	0.4860	0.2871	0.2617	0.0726	0.0004	0.9617	0.1058
FLT_SRI	r_s	0.0671	0.0360	0.1944	0.1960	-0.1378	-0.0965	-0.1403
	p	0.4327	0.6737	0.0219	0.0208	0.1056	0.2583	0.0995
AQ_SRI	r_s	0.0449	0.1063	0.1635	0.2485	-0.2905	-0.0647	-0.1950
	p	0.5998	0.2132	0.0544	0.0032	0.0005	0.4491	0.0214
AQ_TI	r_s	-0.1060	0.1904	-0.0806	-0.2680	0.1114	0.2243	0.2774
	p	0.2144	0.0247	0.3456	0.0014	0.1917	0.0080	0.0009
SUB_EX	r_s	0.0926	-0.0574	-0.1244	0.0800	-0.2424	0.0543	-0.1066
	p	0.2784	0.5020	0.1446	0.3491	0.0040	0.5253	0.2116
FLT_EX	r_s	0.0005	0.0183	-0.0733	-0.0789	-0.0407	0.2365	0.1369
	p	0.9950	0.8307	0.3912	0.3559	0.6345	0.0051	0.1081
AQ_EX	r_s	0.0291	-0.0165	-0.1592	0.0010	-0.1984	0.1770	0.0054
	p	0.7338	0.8467	0.0611	0.9905	0.0192	0.0371	0.9493
MG_EX	r_s	-0.0130	-0.0251	0.0047	0.0204	-0.1486	0.2047	0.0451
	p	0.8794	0.7693	0.9563	0.8118	0.0808	0.0156	0.5979
EX_SP	r_s	0.0144	-0.0160	-0.1401	0.0039	-0.1845	0.2235	0.0275
	p	0.8668	0.8519	0.1000	0.9640	0.0296	0.0082	0.7483
FFL/AQ	r_s	-0.0820	0.1300	-0.0469	-0.2713	0.3517	0.0915	0.3278
	p	0.3373	0.1271	0.5838	0.0012	0.0000	0.2839	0.0001
FFL/SU	r_s	0.0272	0.0797	-0.0406	-0.0988	0.0226	0.0352	0.0936
	p	0.7506	0.3512	0.6349	0.2474	0.7919	0.6810	0.2730
SUB/FLO	r_s	0.1633	0.0156	0.0660	0.2335	-0.2266	-0.1171	-0.2368
	p	0.0547	0.8555	0.4403	0.0057	0.0073	0.1697	0.0050

TABLE 11. CORRELATIONS BETWEEN POND ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficeint of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLE						
POTENTIAL METRIC		POL_STR	POL_ROAD	POL_AGR`OFF	POL_URBA	POL_DUCK	POL_FISH	POL_OVER
INV_N.SP	r_s	-0.0188	-0.1066	-0.0698	0.0082	-0.3263	0.0725	-0.2640
	p	0.8389	0.2465	0.4488	0.9295	0.0003	0.4315	0.0039
INV_N.FA	r_s	0.0587	-0.0836	-0.0926	0.0231	-0.2615	0.2296	-0.2080
	p	0.5241	0.3643	0.3145	0.8020	0.0039	0.0116	0.0238
INV_N.OR	r_s	0.0664	-0.0962	-0.0978	0.0181	-0.2196	0.2402	-0.2044
	p	0.4712	0.2958	0.2881	0.8445	0.0160	0.0082	0.0264
INV_SRS	r_s	-0.0487	-0.0936	-0.1149	-0.0246	-0.3354	0.0257	-0.3156
	p	0.5974	0.3091	0.2115	0.7896	0.0002	0.7809	0.0005
INV_SRI	r_s	-0.1141	-0.0683	-0.0953	-0.1712	-0.2247	-0.1339	-0.2422
	p	0.2145	0.4586	0.3003	0.0616	0.0136	0.1447	0.0082
S_TRIC	r_s	0.0443	0.0320	0.0813	0.0964	-0.1137	0.1405	0.0407
	p	0.6309	0.7283	0.3775	0.2951	0.2164	0.1258	0.6613
S_GAST	r_s	0.0986	-0.0929	-0.0390	0.0381	-0.2697	0.1574	-0.1184
	p	0.2839	0.3131	0.6722	0.6796	0.0029	0.0860	0.2015
S_BIVALV	r_s	-0.0443	0.0647	-0.1001	0.0144	-0.1119	-0.0176	-0.1494
	p	0.6307	0.4826	0.2766	0.8760	0.2238	0.8487	0.1063
S_HIRU	r_s	0.0983	-0.0654	0.0781	0.0609	-0.1220	0.2189	0.0641
	p	0.2853	0.4782	0.3962	0.5087	0.1844	0.0163	0.4903
S_ARAN	r_s	-0.1473	-0.0611	-0.1625	-0.1109	0.1280	0.0384	-0.1574
	p	0.1083	0.5071	0.0762	0.2278	0.1637	0.6772	0.0886
S_DECA	r_s	0.1481	-0.0500	0.0640	-0.0305	-0.0245	0.2096	0.0369
	p	0.1065	0.5876	0.4875	0.7408	0.7907	0.0216	0.6917
S_ISOP	r_s	0.0635	-0.0976	-0.0024	0.0995	-0.1015	0.1217	-0.0642
	p	0.4909	0.2891	0.9794	0.2795	0.2701	0.1856	0.4895
S_AMPH	r_s	0.1815	-0.0599	0.0352	-0.0313	-0.2392	0.0953	-0.0015
	p	0.0472	0.5160	0.7026	0.7344	0.0085	0.3002	0.9870
S_EPHE	r_s	0.0760	0.0589	-0.0203	0.0523	-0.1105	0.2220	-0.0902
	p	0.4093	0.5229	0.8262	0.5706	0.2295	0.0148	0.3314
S_PLEC	r_s	0.0559	0.0449	-0.0763	-0.0694	-0.0557	-0.0786	-0.0996
	p	0.5440	0.6264	0.4078	0.4515	0.5458	0.3936	0.2834
S_ODON	r_s	-0.0858	-0.1271	-0.4261	-0.0786	-0.2523	0.1138	-0.4569
	p	0.3513	0.1666	0.0000	0.3938	0.0054	0.2160	0.0000
S_HEMI	r_s	-0.0606	-0.0271	-0.0236	0.0159	-0.1522	0.1301	-0.1412
	p	0.5106	0.7685	0.7983	0.8632	0.0971	0.1568	0.1273
S_COLE	r_s	-0.1187	-0.1079	-0.0046	-0.0332	-0.3206	-0.1639	-0.2174
	p	0.1967	0.2409	0.9599	0.7187	0.0004	0.0736	0.0180
S_MEGA	r_s	-0.0190	-0.2081	-0.1869	-0.1183	-0.1324	-0.0235	-0.3266
	p	0.8371	0.0225	0.0410	0.1980	0.1493	0.7993	0.0003
S_TRICH	r_s	0.1148	-0.1077	-0.0726	-0.0812	-0.1317	0.1845	-0.2112
	p	0.2118	0.2415	0.4305	0.3778	0.1517	0.0437	0.0217
S_LYMN	r_s	0.1794	-0.0898	-0.1781	-0.0341	-0.2215	0.0652	-0.1879
	p	0.0500	0.3294	0.0516	0.7118	0.0150	0.4793	0.0415
S_PLAN	r_s	0.0272	-0.0183	-0.0281	0.0793	-0.2341	0.1790	-0.0854
	p	0.7682	0.8423	0.7602	0.3893	0.0101	0.0505	0.3577
S_BAET	r_s	0.1022	0.1111	0.0049	0.0364	-0.0503	0.1369	-0.0322
	p	0.2665	0.2269	0.9578	0.6932	0.5850	0.1358	0.7294

TABLE 11. CORRELATIONS BETWEEN POND ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficeint of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLE						
POTENTIAL METRIC		POL_STR	POL_ROAD	POL_AGR`OFF	POL_URBA	POL_DUCK	POL_FISH	POL_OVER
S_COEN	r_s	-0.0534	-0.0958	-0.2937	-0.0743	-0.2042	0.1812	-0.3552
	p	0.5626	0.2981	0.0011	0.4202	0.0252	0.0476	0.0001
S_HALIP	r_s	0.0501	-0.0550	0.0168	0.0669	-0.1201	0.0144	-0.0576
	p	0.5872	0.5506	0.8559	0.4679	0.1915	0.8762	0.5359
S_HYDR	r_s	-0.0397	-0.1755	-0.0546	-0.0427	-0.2584	-0.0917	-0.2492
	p	0.6665	0.0552	0.5534	0.6435	0.0044	0.3191	0.0065
S_LIMN	r_s	0.1353	-0.0544	-0.1448	-0.0553	-0.1751	0.0105	-0.2209
	p	0.1407	0.5554	0.1146	0.5487	0.0557	0.9096	0.0162
S_LEPT	r_s	0.0746	-0.0260	0.0241	-0.0367	-0.0318	0.2460	-0.0924
	p	0.4179	0.7784	0.7942	0.6904	0.7305	0.0068	0.3198
S_SM_DY	r_s	-0.2060	-0.1447	0.0568	-0.0324	-0.3099	-0.2204	-0.2070
	p	0.0240	0.1147	0.5375	0.7250	0.0006	0.0156	0.0245
S_CM	r_s	0.1260	-0.0824	-0.0290	0.0572	-0.2696	0.1532	-0.1122
	p	0.1702	0.3708	0.7535	0.5347	0.0029	0.0949	0.2264
S_HTR	r_s	0.0988	-0.0671	0.0849	0.0685	-0.1379	0.2129	0.0502
	p	0.2828	0.4666	0.3568	0.4571	0.1331	0.0196	0.5894
S_PHEMIP	r_s	-0.0317	-0.1135	-0.0893	-0.0247	-0.2121	0.2139	-0.2016
	p	0.7313	0.2171	0.3322	0.7887	0.0201	0.0190	0.0286
S_DHEMIP	r_s	-0.0857	0.0564	0.0194	0.0327	-0.0777	0.0337	-0.0853
	p	0.3522	0.5406	0.8331	0.7228	0.3987	0.7152	0.3582
S_EPT	r_s	0.0978	-0.0513	-0.0718	-0.0380	-0.1223	0.2271	-0.1758
	p	0.2879	0.5780	0.4357	0.6802	0.1833	0.0126	0.0568
S_ETO	r_s	-0.0211	-0.1231	-0.3312	-0.0913	-0.2409	0.1952	-0.4178
	p	0.8192	0.1804	0.0002	0.3215	0.0081	0.0326	0.0000
F_TRICLA	r_s	0.0392	0.0458	0.0843	0.1143	-0.1067	0.1682	0.0435
	p	0.6708	0.6196	0.3601	0.2140	0.2460	0.0663	0.6398
F_GASTRO	r_s	0.0515	-0.0974	-0.0291	-0.0072	-0.2821	0.1379	-0.1185
	p	0.5765	0.2899	0.7521	0.9379	0.0018	0.1330	0.2013
F_BIVALV	r_s	-0.0398	0.0541	-0.1151	0.0110	-0.1122	-0.0205	-0.1620
	p	0.6657	0.5573	0.2108	0.9051	0.2225	0.8239	0.0797
F_HIRUDI	r_s	0.0700	-0.0837	0.0544	0.0752	-0.1199	0.2563	0.0723
	p	0.4473	0.3631	0.5554	0.4144	0.1920	0.0047	0.4366
F_ARANEA	r_s	-0.1473	-0.0611	-0.1625	-0.1109	0.1280	0.0384	-0.1574
	p	0.1083	0.5071	0.0762	0.2278	0.1637	0.6772	0.0886
F_DECAPO	r_s	0.1481	-0.0500	0.0640	-0.0305	-0.0245	0.2096	0.0369
	p	0.1065	0.5876	0.4875	0.7408	0.7907	0.0216	0.6917
F_ISOPOD	r_s	0.0263	-0.1088	-0.0491	0.1128	-0.0862	0.1013	-0.0910
	p	0.7757	0.2368	0.5944	0.2202	0.3494	0.2710	0.3270
F_AMPHIP	r_s	0.1815	-0.0599	0.0352	-0.0313	-0.2392	0.0953	-0.0015
	p	0.0472	0.5160	0.7026	0.7344	0.0085	0.3002	0.9870
F_EPHEME	r_s	0.0651	0.0870	-0.0139	0.0640	-0.1092	0.2308	-0.0728
	p	0.4800	0.3448	0.8798	0.4872	0.2353	0.0112	0.4331
F_PLECOP	r_s	0.0536	0.0431	-0.0749	-0.0694	-0.0557	-0.0786	-0.1007
	p	0.5611	0.6406	0.4160	0.4514	0.5458	0.3935	0.2779
F_ODONAT	r_s	-0.1176	-0.1343	-0.4532	-0.0763	-0.2387	0.0998	-0.4499
	p	0.2007	0.1436	0.0000	0.4072	0.0086	0.2782	0.0000

TABLE 11. CORRELATIONS BETWEEN POND ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficeint of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLE						
POTENTIAL METRIC		POL_STR	POL_ROAD	POL_AGR_OFF	POL_URBA	POL_DUCK	POL_FISH	POL_OVER
F_HEMIPT	r_s	-0.0358	-0.0537	-0.0185	0.0157	-0.1704	0.2407	-0.1124
	p	0.6979	0.5605	0.8410	0.8645	0.0628	0.0081	0.2257
F_COLEOP	r_s	0.0008	0.0753	-0.0399	-0.0334	-0.2817	-0.0996	-0.1475
	p	0.9927	0.4134	0.6656	0.7176	0.0018	0.2790	0.1109
F_TRICHO	r_s	0.1447	-0.1076	-0.0652	-0.0910	-0.1374	0.1861	-0.1938
	p	0.1149	0.2423	0.4790	0.3228	0.1345	0.0418	0.0355
F_PHEMIP	r_s	-0.0387	-0.0934	-0.0499	-0.0100	-0.2056	0.2288	-0.1638
	p	0.6745	0.3101	0.5886	0.9134	0.0243	0.0120	0.0763
F_DHEMIP	r_s	0.0365	0.0787	0.0095	0.0652	0.0297	0.0924	0.0201
	p	0.6926	0.3929	0.9181	0.4792	0.7473	0.3158	0.8289
F_CM	r_s	0.1219	-0.0957	-0.0278	0.0260	-0.2818	0.1226	-0.1167
	p	0.1848	0.2983	0.7632	0.7780	0.0018	0.1821	0.2083
F_HTR	r_s	0.0692	-0.0489	0.0699	0.1128	-0.1319	0.2587	0.0598
	p	0.4524	0.5960	0.4482	0.2199	0.1509	0.0043	0.5200
F_EPT	r_s	0.1192	-0.0296	-0.0522	-0.0308	-0.1321	0.2379	-0.1518
	p	0.1946	0.7480	0.5716	0.7388	0.1505	0.0089	0.1007
F_ETO	r_s	0.0130	-0.0977	-0.2890	-0.0776	-0.2349	0.2309	-0.3645
	p	0.8884	0.2882	0.0014	0.3996	0.0098	0.0112	0.0001
F_OM	r_s	-0.1034	-0.1822	-0.4465	-0.0961	-0.2442	0.0744	-0.4915
	p	0.2609	0.0464	0.0000	0.2962	0.0072	0.4190	0.0000
F_EMO	r_s	-0.0592	-0.1026	-0.3620	-0.0581	-0.2374	0.1521	-0.4228
	p	0.5208	0.2649	0.0000	0.5285	0.0090	0.0973	0.0000
F_PRED	r_s	0.0318	-0.1010	-0.1138	0.0132	-0.2387	0.2192	-0.2215
	p	0.7301	0.2725	0.2157	0.8859	0.0086	0.0162	0.0159
F_DETR	r_s	0.1735	-0.0520	-0.0098	0.0580	-0.2935	0.1822	-0.1158
	p	0.0581	0.5725	0.9154	0.5295	0.0011	0.0464	0.2117
F_HERB	r_s	0.1691	-0.0132	-0.0088	0.0455	-0.2537	0.1297	-0.1124
	p	0.0648	0.8865	0.9244	0.6219	0.0052	0.1580	0.2254
BMWP	r_s	0.0436	-0.0810	-0.1430	-0.0096	-0.2598	0.2592	-0.2500
	p	0.6365	0.3791	0.1191	0.9172	0.0042	0.0043	0.0063
ASPT	r_s	0.0159	-0.0544	-0.2311	-0.1580	-0.1227	0.0882	-0.3024
	p	0.8635	0.5551	0.0111	0.0848	0.1817	0.3383	0.0009
PL_N.TX	r_s	-0.1801	-0.1490	-0.3337	-0.2883	-0.2774	-0.1086	-0.4719
	p	0.0339	0.0800	0.0001	0.0006	0.0009	0.2033	0.0000
MARG_N.TX	r_s	-0.1499	-0.1766	-0.3103	-0.3078	-0.2573	-0.0904	-0.4610
	p	0.0782	0.0376	0.0002	0.0002	0.0022	0.2899	0.0000
SUB_N.TX	r_s	-0.1882	-0.0623	-0.3531	-0.1552	-0.1942	-0.1275	-0.3944
	p	0.0265	0.4661	0.0000	0.0681	0.0220	0.1347	0.0000
FLT_N.TX	r_s	-0.2015	0.0202	-0.1197	-0.1550	-0.3356	-0.0668	-0.1692
	p	0.0174	0.8131	0.1605	0.0684	0.0001	0.4347	0.0481
AQ_N.TX	r_s	-0.2302	-0.0243	-0.3262	-0.1780	-0.2575	-0.0972	-0.3649
	p	0.0064	0.7760	0.0001	0.0361	0.0022	0.2552	0.0000

TABLE 11. CORRELATIONS BETWEEN POND ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficeint of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLE						
POTENTIAL METRIC		POL_STR	POL_ROAD	POL_AGR`OFF	POL_URBA	POL_DUCK	POL_FISH	POL_OVER
FRE_SP	r_s	-0.0788	0.0501	0.0702	-0.1315	-0.3046	-0.0651	0.0254
	p	0.3562	0.5578	0.4115	0.1228	0.0003	0.4466	0.7680
POT_SP	r_s	-0.1145	-0.0401	-0.1982	-0.1718	-0.1338	-0.0463	-0.2800
	p	0.1797	0.6393	0.0193	0.0431	0.1163	0.5883	0.0009
PL_SRS	r_s	-0.1977	-0.1504	-0.3542	-0.2799	-0.2741	-0.1052	-0.4865
	p	0.0197	0.0771	0.0000	0.0008	0.0011	0.2178	0.0000
MARG_SRS	r_s	-0.1681	-0.1907	-0.3154	-0.3018	-0.2669	-0.0889	-0.4704
	p	0.0479	0.0246	0.0002	0.0003	0.0015	0.2978	0.0000
SUB_SRS	r_s	-0.1617	-0.0506	-0.3652	-0.1596	-0.2018	-0.1094	-0.3927
	p	0.0572	0.5541	0.0000	0.0605	0.0172	0.1999	0.0000
FLT_SRS	r_s	-0.2062	0.0045	-0.1532	-0.1687	-0.3366	-0.0872	-0.2100
	p	0.0149	0.9580	0.0718	0.0471	0.0001	0.3076	0.0138
AQ_SRS	r_s	-0.2065	-0.0387	-0.3605	-0.1835	-0.2528	-0.1041	-0.3924
	p	0.0147	0.6513	0.0000	0.0306	0.0027	0.2227	0.0000
PL_SRI	r_s	-0.2075	-0.1165	-0.3113	-0.1210	-0.1910	-0.0072	-0.3534
	p	0.0143	0.1720	0.0002	0.1558	0.0243	0.9326	0.0000
MARG_SRI	r_s	-0.2294	-0.1631	-0.2224	-0.1105	-0.2133	-0.0137	-0.3031
	p	0.0066	0.0551	0.0085	0.1953	0.0117	0.8729	0.0003
SUB_SRI	r_s	-0.0640	-0.0325	-0.2887	-0.1817	-0.2140	-0.0655	-0.2801
	p	0.4538	0.7038	0.0006	0.0323	0.0114	0.4436	0.0009
FLT_SRI	r_s	-0.2324	-0.1273	-0.1138	-0.1933	-0.3343	-0.1803	-0.2454
	p	0.0059	0.1352	0.1821	0.0226	0.0001	0.0336	0.0038
AQ_SRI	r_s	-0.0804	-0.0859	-0.3126	-0.1941	-0.1965	-0.1042	-0.3402
	p	0.3470	0.3148	0.0002	0.0221	0.0204	0.2224	0.0000
AQ_TI	r_s	0.0157	0.0586	0.1246	0.0409	-0.1007	0.0397	0.2028
	p	0.8547	0.4933	0.1437	0.6324	0.2384	0.6429	0.0175
SUB_EX	r_s	-0.0904	0.0179	-0.1498	-0.0051	-0.0276	-0.0246	-0.1851
	p	0.2900	0.8344	0.0784	0.9524	0.7474	0.7741	0.0304
FLT_EX	r_s	0.0739	0.1725	0.0012	-0.0509	-0.1299	-0.0406	0.0922
	p	0.3875	0.0423	0.9889	0.5516	0.1273	0.6352	0.2839
AQ_EX	r_s	-0.0352	0.1251	-0.1485	-0.0293	-0.0879	-0.0149	-0.0833
	p	0.6804	0.1424	0.0811	0.7319	0.3036	0.8616	0.3330
MG_EX	r_s	-0.0774	0.1374	-0.0480	0.0284	-0.0431	-0.0320	-0.0472
	p	0.3650	0.1067	0.5748	0.7399	0.6144	0.7084	0.5843
EX_SP	r_s	-0.0641	0.1401	-0.1494	0.0437	-0.0708	0.0100	-0.0848
	p	0.4538	0.1000	0.0792	0.6092	0.4074	0.9072	0.3244
F`FL/AQ	r_s	-0.0355	-0.0166	0.2636	-0.1072	-0.2280	-0.0271	0.1838
	p	0.6785	0.8459	0.0017	0.2091	0.0069	0.7519	0.0315
F`FL/SU	r_s	-0.1489	-0.0169	-0.0086	-0.1722	-0.2683	-0.0634	-0.0530
	p	0.0802	0.8430	0.9198	0.0427	0.0014	0.4583	0.5388
SUB/FLO	r_s	-0.1959	-0.1363	-0.2160	-0.1253	-0.2341	-0.1711	-0.2683
	p	0.0208	0.1096	0.0107	0.1416	0.0055	0.0440	0.0015

TABLE 11. CORRELATIONS BETWEEN POND ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficeint of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLE							
POTENTIAL METRIC		POL/GW	POL/GW+SF	SUB_PLT%	FLT_PLT%	EMG_PLT%	TOT_PLT%	ALGAE%	TURBID
INV_N.SP	r_s	-0.2449	-0.2417	0.3944	0.1428	0.0879	0.2312	0.0124	-0.2422
	p	0.0070	0.0078	0.0000	0.1230	0.3419	0.0114	0.8962	0.0080
INV_N.FA	r_s	-0.2537	-0.2670	0.3641	0.1514	-0.0471	0.1300	-0.0102	-0.1888
	p	0.0052	0.0032	0.0000	0.1018	0.6112	0.1587	0.9139	0.0398
INV_N.OR	r_s	-0.2859	-0.2969	0.3420	0.0660	-0.0950	0.0837	0.0186	-0.2149
	p	0.0016	0.0010	0.0001	0.4774	0.3040	0.3654	0.8441	0.0189
INV_SRS	r_s	-0.2737	-0.2574	0.3713	0.0831	0.1205	0.2166	0.0043	-0.2433
	p	0.0025	0.0045	0.0000	0.3711	0.1918	0.0180	0.9638	0.0077
INV_SRI	r_s	-0.2155	-0.1716	0.0984	-0.0725	0.1804	0.1004	0.0128	-0.0304
	p	0.0181	0.0609	0.2851	0.4350	0.0496	0.2774	0.8922	0.7429
S_TRIC	r_s	-0.0902	-0.1162	0.2557	0.1406	-0.0103	0.1944	-0.0274	-0.1599
	p	0.3274	0.2063	0.0048	0.1289	0.9117	0.0341	0.7720	0.0824
S_GAST	r_s	-0.2061	-0.2201	0.2796	0.1302	0.1179	0.1986	-0.0584	-0.1968
	p	0.0239	0.0157	0.0020	0.1598	0.2016	0.0304	0.5371	0.0319
S_BIVALV	r_s	-0.1873	-0.1608	0.1495	-0.0935	-0.0106	0.0083	0.3068	-0.0839
	p	0.0405	0.0793	0.1031	0.3140	0.9090	0.9286	0.0009	0.3642
S_HIRU	r_s	0.0263	0.0236	0.0335	0.1598	-0.0618	0.0937	-0.1262	-0.0082
	p	0.7753	0.7979	0.7165	0.0839	0.5044	0.3107	0.1810	0.9292
S_ARAN	r_s	-0.1823	-0.1831	0.2125	-0.0197	-0.0516	0.0228	-0.0633	-0.0603
	p	0.0463	0.0454	0.0198	0.8325	0.5771	0.8060	0.5032	0.5147
S_DECA	r_s	0.0716	0.0795	-0.0067	0.1339	-0.0831	0.0188	-0.0431	0.0370
	p	0.4374	0.3881	0.9424	0.1484	0.3687	0.8395	0.6487	0.6891
S_ISOP	r_s	-0.0867	-0.1125	0.1085	0.0897	-0.1105	-0.0016	-0.1638	-0.0210
	p	0.3465	0.2212	0.2381	0.3343	0.2316	0.9860	0.0816	0.8207
S_AMPH	r_s	-0.0568	-0.1106	0.0570	0.0357	-0.1175	0.0109	0.0685	-0.0261
	p	0.5378	0.2290	0.5366	0.7014	0.2031	0.9063	0.4690	0.7780
S_EPHE	r_s	-0.0726	-0.0591	0.1988	-0.0274	-0.0873	-0.0546	0.1508	-0.1322
	p	0.4308	0.5211	0.0295	0.7681	0.3450	0.5552	0.1092	0.1518
S_PLEC	r_s	-0.0012	-0.0620	0.2473	-0.0376	-0.0894	0.1066	-0.0874	-0.1601
	p	0.9899	0.5014	0.0065	0.6857	0.3336	0.2486	0.3550	0.0820
S_ODON	r_s	-0.4365	-0.4303	0.3299	0.2639	0.0548	0.1138	-0.0307	-0.2231
	p	0.0000	0.0000	0.0002	0.0039	0.5537	0.2179	0.7455	0.0147
S_HEMI	r_s	-0.1386	-0.1230	0.2246	0.0749	-0.1426	-0.0624	0.1544	-0.0988
	p	0.1311	0.1806	0.0137	0.4201	0.1219	0.5002	0.1010	0.2853
S_COLE	r_s	-0.1423	-0.1156	0.2273	0.0807	0.3069	0.3187	0.0156	-0.1857
	p	0.1211	0.2086	0.0125	0.3850	0.0007	0.0004	0.8692	0.0431
S_MEGA	r_s	-0.3708	-0.3905	0.2398	0.0023	-0.0012	0.0191	0.0358	-0.1293
	p	0.0000	0.0000	0.0083	0.9805	0.9895	0.8368	0.7050	0.1611
S_TRICH	r_s	-0.1898	-0.2296	0.3084	0.0184	-0.0996	0.0700	-0.0748	-0.1537
	p	0.0379	0.0116	0.0006	0.8431	0.2812	0.4494	0.4291	0.0952
S_LYMN	r_s	-0.2747	-0.2959	0.2271	0.0638	0.0473	0.1035	0.0345	-0.1377
	p	0.0024	0.0010	0.0126	0.4928	0.6098	0.2627	0.7156	0.1353
S_PLAN	r_s	-0.1610	-0.1571	0.2683	0.1766	0.2077	0.2837	-0.0568	-0.1677
	p	0.0790	0.0867	0.0031	0.0557	0.0234	0.0018	0.5481	0.0683
S_BAET	r_s	0.0059	0.0330	0.1322	-0.0635	-0.0087	-0.0637	0.2264	-0.1279
	p	0.9488	0.7203	0.1500	0.4945	0.9249	0.4911	0.0155	0.1656

TABLE 11. CORRELATIONS BETWEEN POND ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficeint of rank correlation; p = significance level (p <0.001 underlined)

POTENTIAL METRIC		VARIABLE POL/GW	POL/GW+SF	SUB`PLT%	FLT`PLT%	EMG`PLT%	TOT_PLT%	ALGAE%	TURBID
S_COEN	r_s	-0.3726	-0.3721	0.3192	0.2436	0.0113	0.1182	-0.0292	-0.1796
	p	0.0000	0.0000	0.0004	0.0078	0.9030	0.2005	0.7574	0.0506
S_HALIP	r_s	-0.0673	-0.0591	0.2800	0.0959	-0.0585	0.0502	0.1481	-0.1546
	p	0.4650	0.5216	0.0020	0.3018	0.5272	0.5876	0.1158	0.0931
S_HYDR	r_s	-0.1503	-0.1545	0.2146	0.0303	0.2600	0.3023	-0.0647	-0.1324
	p	0.1013	0.0921	0.0186	0.7443	0.0043	0.0008	0.4943	0.1512
S_LIMN	r_s	-0.1835	-0.2353	0.2765	-0.0544	0.0093	0.0637	-0.1381	-0.1427
	p	0.0449	0.0097	0.0022	0.5582	0.9202	0.4914	0.1429	0.1217
S_LEPT	r_s	-0.0901	-0.0946	0.2389	0.0248	-0.1349	-0.0179	0.0631	-0.1260
	p	0.3278	0.3041	0.0086	0.7901	0.1435	0.8466	0.5049	0.1720
S_SM_DY	r_s	-0.0836	-0.0560	0.1181	0.0803	0.3814	0.3387	-0.0674	-0.1100
	p	0.3643	0.5436	0.1988	0.3871	0.0000	0.0002	0.4762	0.2338
S_CM	r_s	-0.1937	-0.2140	0.2637	0.1103	0.0369	0.1391	-0.0040	-0.1716
	p	0.0340	0.0189	0.0036	0.2345	0.6901	0.1314	0.9665	0.0621
S_HTR	r_s	-0.0286	-0.0449	0.1201	0.1794	-0.0523	0.1523	-0.1196	-0.0613
	p	0.7566	0.6266	0.1913	0.0519	0.5718	0.0983	0.2049	0.5080
S_PHEMIP	r_s	-0.2492	-0.2459	0.2172	0.1768	-0.1145	0.0121	0.0567	-0.1062
	p	0.0061	0.0068	0.0172	0.0555	0.2151	0.8964	0.5489	0.2505
S_DHEMIP	r_s	-0.0409	-0.0163	0.2011	-0.0352	-0.1356	-0.1123	0.2009	-0.0982
	p	0.6574	0.8597	0.0276	0.7052	0.1414	0.2238	0.0321	0.2881
S_EPT	r_s	-0.1673	-0.1950	0.3065	-0.0063	-0.0811	0.0378	0.0261	-0.1296
	p	0.0679	0.0328	0.0007	0.9457	0.3806	0.6830	0.7826	0.1602
S_ETO	r_s	-0.3908	-0.3983	0.3784	0.1522	-0.0289	0.0765	-0.0300	-0.2214
	p	0.0000	0.0000	0.0000	0.0998	0.7552	0.4082	0.7511	0.0155
F_TRICLA	r_s	-0.0827	-0.0954	0.2500	0.1240	-0.0141	0.1918	-0.0018	-0.1623
	p	0.3691	0.2998	0.0059	0.1808	0.8792	0.0367	0.9848	0.0778
F_GASTRO	r_s	-0.2072	-0.2214	0.2911	0.1234	0.0893	0.1870	-0.0549	-0.2320
	p	0.0231	0.0151	0.0013	0.1829	0.3340	0.0417	0.5616	0.0111
F_BIVALV	r_s	-0.1950	-0.1683	0.1534	-0.0926	0.0004	0.0182	0.2947	-0.0965
	p	0.0328	0.0661	0.0943	0.3187	0.9970	0.8444	0.0015	0.2966
F_HIRUDI	r_s	0.0266	0.0162	-0.0196	0.1869	-0.0875	0.0747	-0.0870	0.0008
	p	0.7727	0.8604	0.8317	0.0427	0.3441	0.4194	0.3576	0.9933
F_ARANEA	r_s	-0.1823	-0.1831	0.2125	-0.0197	-0.0516	0.0228	-0.0633	-0.0603
	p	0.0463	0.0454	0.0198	0.8325	0.5771	0.8060	0.5032	0.5147
F_DECAPO	r_s	0.0716	0.0795	-0.0067	0.1339	-0.0831	0.0188	-0.0431	0.0370
	p	0.4374	0.3881	0.9424	0.1484	0.3687	0.8395	0.6487	0.6891
F_ISOPOD	r_s	-0.1224	-0.1280	0.1226	0.0658	-0.0947	0.0175	-0.1390	-0.0729
	p	0.1829	0.1636	0.1821	0.4790	0.3058	0.8505	0.1401	0.4306
F_AMPHIP	r_s	-0.0568	-0.1106	0.0570	0.0357	-0.1175	0.0109	0.0685	-0.0261
	p	0.5378	0.2290	0.5366	0.7014	0.2031	0.9063	0.4690	0.7780
F_EPHEME	r_s	-0.0598	-0.0415	0.1926	-0.0250	-0.0700	-0.0552	0.1511	-0.1144
	p	0.5163	0.6525	0.0351	0.7885	0.4495	0.5513	0.1087	0.2152
F_PLECOP	r_s	-0.0018	-0.0633	0.2487	-0.0358	-0.0903	0.1086	-0.0874	-0.1611
	p	0.9844	0.4923	0.0062	0.7004	0.3287	0.2399	0.3550	0.0801
F_ODONAT	r_s	-0.4509	-0.4409	0.3103	0.2746	0.1135	0.1553	0.0017	-0.1750
	p	0.0000	0.0000	0.0006	0.0026	0.2191	0.0918	0.9860	0.0570

TABLE 11. CORRELATIONS BETWEEN POND ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficeint of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLE							
POTENTIAL METRIC		POL/GW	POL/GW+SF	SUB_PLT%	FLT_PLT%	EMG_PLT%	TOT_PLT%	ALGAE%	TURBID
F_HEMIPT	r_s	-0.1770	-0.1711	0.1870	0.1871	-0.1225	-0.0043	-0.0086	-0.0765
	p	0.0531	0.0618	0.0408	0.0424	0.1844	0.9634	0.9280	0.4081
F_COLEOP	r_s	-0.1202	-0.0987	0.3148	0.0418	0.1667	0.2068	-0.0176	-0.1530
	p	0.1910	0.2834	0.0005	0.6534	0.0700	0.0241	0.8524	0.0967
F_TRICHO	r_s	-0.1598	-0.2073	0.2680	0.0086	-0.0870	0.0464	-0.0596	-0.1588
	p	0.0813	0.0231	0.0031	0.9263	0.3466	0.6162	0.5287	0.0845
F_PHEMIP	r_s	-0.2200	-0.2151	0.2171	0.1593	-0.1289	0.0126	0.0217	-0.1105
	p	0.0158	0.0183	0.0172	0.0849	0.1624	0.8920	0.8185	0.2314
F_DHEMIP	r_s	-0.0178	0.0013	0.0269	0.0509	-0.1504	-0.1410	0.0853	0.0000
	p	0.8468	0.9886	0.7706	0.5838	0.1026	0.1262	0.3671	1.0000
F_CM	r_s	-0.1888	-0.2157	0.2654	0.0909	-0.0181	0.1203	0.0277	-0.2022
	p	0.0389	0.0180	0.0034	0.3276	0.8449	0.1924	0.7698	0.0274
F_HTR	r_s	-0.0369	-0.0474	0.1075	0.1756	-0.0699	0.1361	-0.0635	-0.0663
	p	0.6888	0.6070	0.2425	0.0572	0.4502	0.1399	0.5020	0.4740
F_EPT	r_s	-0.1277	-0.1584	0.2777	0.0036	-0.0766	0.0209	0.0373	-0.1408
	p	0.1645	0.0839	0.0021	0.9693	0.4078	0.8213	0.6938	0.1267
F_ETO	r_s	-0.3491	-0.3619	0.3552	0.1381	-0.0135	0.0738	0.0077	-0.2046
	p	0.0001	0.0000	0.0001	0.1360	0.8843	0.4250	0.9355	0.0256
F_OM	r_s	-0.5086	-0.5074	0.3462	0.2249	0.0980	0.1337	0.0110	-0.1971
	p	0.0000	0.0000	0.0001	0.0144	0.2890	0.1471	0.9078	0.0317
F_EMO	r_s	-0.4277	-0.4206	0.3495	0.1608	0.0353	0.0678	0.0550	-0.1995
	p	0.0000	0.0000	0.0001	0.0819	0.7030	0.4635	0.5611	0.0296
F_PRED	r_s	-0.2686	-0.2854	0.3114	0.2282	-0.0447	0.1298	-0.0236	-0.1430
	p	0.0030	0.0016	0.0005	0.0129	0.6296	0.1595	0.8031	0.1209
F_DETR	r_s	-0.1584	-0.1875	0.3020	0.0520	-0.0350	0.0935	0.0289	-0.2091
	p	0.0839	0.0404	0.0008	0.5762	0.7052	0.3117	0.7601	0.0225
F_HERB	r_s	-0.1424	-0.1623	0.3706	0.0670	0.0021	0.1272	0.0068	-0.2657
	p	0.1207	0.0765	0.0000	0.4710	0.9820	0.1681	0.9429	0.0035
BMWP	r_s	-0.2867	-0.2994	0.3628	0.1616	-0.0487	0.1172	-0.0155	-0.1998
	p	0.0015	0.0009	0.0000	0.0803	0.5990	0.2042	0.8703	0.0294
ASPT	r_s	-0.2105	-0.2176	0.2228	0.0348	-0.0326	-0.0148	-0.0177	-0.0802
	p	0.0210	0.0170	0.0144	0.7085	0.7247	0.8731	0.8520	0.3856
PL_N.TX	r_s	-0.3893	-0.3572	0.3333	0.0385	0.2271	0.0990	-0.0265	-0.1510
	p	0.0000	0.0000	0.0001	0.6541	0.0072	0.2464	0.7624	0.0770
MARG_N.TX	r_s	-0.3819	-0.3422	0.2410	-0.0093	0.2256	0.0463	-0.0040	-0.1251
	p	0.0000	0.0000	0.0043	0.9139	0.0076	0.5882	0.9631	0.1438
SUB_N.TX	r_s	-0.3204	-0.3187	0.5670	0.0022	0.1411	0.1620	-0.0787	-0.1824
	p	0.0001	0.0001	0.0000	0.9799	0.0975	0.0568	0.3681	0.0322
FLT_N.TX	r_s	-0.1363	-0.1401	0.1770	0.4402	0.2356	0.2800	-0.0692	-0.0859
	p	0.1097	0.0999	0.0371	0.0000	0.0052	0.0008	0.4286	0.3166
AQ_N.TX	r_s	-0.3031	-0.3024	0.4994	0.1671	0.1862	0.2453	-0.0741	-0.1746
	p	0.0003	0.0003	0.0000	0.0502	0.0282	0.0036	0.3966	0.0406

TABLE 11. CORRELATIONS BETWEEN POND ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficeint of rank correlation; p = significance level (p <0.001 underlined)

POTENTIAL METRIC		VARIABLE POL/GW	POL/GW+SF	SUB`PLT%	FLT`PLT%	EMG`PLT%	TOT_PLT%	ALGAE%	TURBID
FRE_SP	r_s	0.0434	0.0209	0.0534	0.3390	0.2851	0.3020	-0.0353	-0.1016
	p	0.6116	0.8073	0.5323	0.0000	0.0007	0.0003	0.6864	0.2356
POT_SP	r_s	-0.2590	-0.2429	0.3133	0.1937	0.0281	0.1202	0.0508	-0.1341
	p	0.0021	0.0040	0.0002	0.0228	0.7428	0.1588	0.5612	0.1169
PL_SRS	r_s	-0.4006	-0.3659	0.3596	0.0151	0.2240	0.0983	-0.0205	-0.1708
	p	0.0000	0.0000	0.0000	0.8605	0.0080	0.2497	0.8145	0.0452
MARG_SRS	r_s	-0.3883	-0.3471	0.2451	-0.0213	0.2353	0.0506	-0.0134	-0.1316
	p	0.0000	0.0000	0.0036	0.8039	0.0053	0.5545	0.8782	0.1238
SUB_SRS	r_s	-0.3268	-0.3257	0.5921	-0.0003	0.1267	0.1591	-0.0149	-0.2201
	p	0.0001	0.0001	0.0000	0.9970	0.1371	0.0613	0.8651	0.0095
FLT_SRS	r_s	-0.1543	-0.1554	0.1619	0.4404	0.2431	0.2635	-0.0822	-0.0976
	p	0.0697	0.0677	0.0569	0.0000	0.0039	0.0017	0.3468	0.2546
AQ_SRS	r_s	-0.3268	-0.3234	0.5288	0.1263	0.1777	0.2254	-0.0167	-0.2137
	p	0.0001	0.0001	0.0000	0.1399	0.0363	0.0076	0.8483	0.0118
PL_SRI	r_s	-0.2766	-0.2527	0.3879	-0.0243	0.1047	0.0939	-0.0187	-0.1706
	p	0.0010	0.0027	0.0000	0.7776	0.2201	0.2714	0.8304	0.0454
MARG_SRI	r_s	-0.2428	-0.2048	0.1724	-0.0090	0.1787	0.0719	-0.0598	-0.0556
	p	0.0040	0.0156	0.0424	0.9167	0.0353	0.4004	0.4942	0.5174
SUB_SRI	r_s	-0.2324	-0.2293	0.4694	0.0855	-0.0186	0.0667	0.1689	-0.2408
	p	0.0059	0.0066	0.0000	0.3186	0.8284	0.4352	0.0520	0.0044
FLT_SRI	r_s	-0.1341	-0.1252	0.0520	0.3919	0.2688	0.1603	-0.1086	-0.0644
	p	0.1154	0.1420	0.5434	0.0000	0.0014	0.0595	0.2135	0.4532
AQ_SRI	r_s	-0.2631	-0.2505	0.4292	0.0211	0.0305	0.0478	0.1341	-0.2285
	p	0.0018	0.0029	0.0000	0.8056	0.7218	0.5764	0.1239	0.0070
AQ_TI	r_s	0.1571	0.1522	0.1260	0.1567	0.0203	0.1461	0.0727	-0.0312
	p	0.0648	0.0737	0.1394	0.0664	0.8122	0.0861	0.4058	0.7166
SUB_EX	r_s	-0.2438	-0.3030	0.3911	0.0712	-0.0354	0.1488	-0.1474	0.0083
	p	0.0038	0.0003	0.0000	0.4069	0.6791	0.0804	0.0905	0.9234
FLT_EX	r_s	0.0184	-0.0078	0.1383	0.2577	0.1213	0.2206	-0.1019	-0.0768
	p	0.8296	0.9276	0.1046	0.0023	0.1549	0.0091	0.2432	0.3708
AQ_EX	r_s	-0.1726	-0.2165	0.3690	0.1928	0.0240	0.2419	-0.1438	-0.0621
	p	0.0421	0.0105	0.0000	0.0235	0.7792	0.0041	0.0986	0.4696
MG_EX	r_s	-0.0007	0.0008	0.1658	0.0700	0.1692	0.2160	0.0508	-0.0459
	p	0.9930	0.9927	0.0511	0.4143	0.0465	0.0107	0.5612	0.5930
EX_SP	r_s	-0.1363	-0.1756	0.3656	0.1744	0.0767	0.2737	-0.0939	-0.0615
	p	0.1095	0.0387	0.0000	0.0408	0.3696	0.0011	0.2823	0.4738
FFL/AQ	r_s	0.1923	0.1768	-0.1927	0.2874	0.2501	0.2324	0.0313	-0.0492
	p	0.0233	0.0373	0.0230	0.0006	0.0030	0.0059	0.7210	0.5665
FFL/SU	r_s	-0.0368	-0.0593	0.0541	0.2994	0.1564	0.2085	0.0267	-0.0663
	p	0.6673	0.4881	0.5272	0.0004	0.0660	0.0138	0.7604	0.4399
SUB/FLO	r_s	-0.1928	-0.1973	0.3324	0.1470	0.1398	0.0658	-0.1583	-0.1070
	p	0.0230	0.0199	0.0001	0.0853	0.1007	0.4415	0.0688	0.2114

TABLE 11. CORRELATIONS BETWEEN POND ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficeint of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLE									
POTENTIAL METRIC		AL	ALK	AMM	CA	CL	COND	CU	FE	K	MG
INV_N.SP	r_s	-0.3752	-0.0142	-0.3493	0.0196	0.0291	-0.0144	-0.1642	-0.1677	-0.1539	-0.0476
	p	0.0094	0.8881	0.0018	0.8451	0.8015	0.8850	0.4037	0.2083	0.1816	0.6788
INV_N.FA	r_s	-0.3947	0.0666	-0.2686	-0.0371	-0.0306	-0.0785	-0.1756	-0.2382	-0.1476	-0.1125
	p	0.0060	0.5104	0.0182	0.7112	0.7918	0.4306	0.3715	0.0718	0.2003	0.3266
INV_N.OR	r_s	-0.4138	0.0885	-0.1621	0.0006	-0.0579	-0.0707	-0.1830	-0.1903	-0.1111	-0.1680
	p	0.0038	0.3814	0.1590	0.9953	0.6167	0.4776	0.3512	0.1525	0.3359	0.1414
INV_SRS	r_s	-0.3519	-0.1298	-0.3741	-0.0243	0.0332	-0.0440	-0.1809	-0.1499	-0.1907	-0.0532
	p	0.0153	0.1980	0.0008	0.8083	0.7742	0.6588	0.3571	0.2613	0.0966	0.6434
INV_SRI	r_s	0.0411	-0.3226	-0.1911	-0.1540	0.0807	-0.1264	-0.2778	0.0310	-0.1871	0.0058
	p	0.7837	0.0011	0.0959	0.1223	0.4856	0.2033	0.1523	0.8171	0.1032	0.9599
S_TRIC	r_s	-0.2182	0.0539	0.0358	-0.0713	0.0262	-0.0722	0.0118	0.0008	0.0341	-0.1879
	p	0.1407	0.5940	0.7571	0.4764	0.8211	0.4685	0.9525	0.9952	0.7687	0.0995
S_GAST	r_s	-0.4621	0.3662	-0.2503	0.2992	0.2522	0.1880	-0.1754	-0.3529	0.0178	0.1170
	p	0.0011	0.0002	0.0281	0.0022	0.0269	0.0572	0.3721	0.0066	0.8781	0.3078
S_BIVALV	r_s	0.0222	-0.1649	0.1021	-0.0969	-0.1222	-0.0668	0.2431	0.0187	-0.0701	-0.0250
	p	0.8820	0.1011	0.3769	0.3324	0.2897	0.5023	0.2126	0.8892	0.5446	0.8278
S_HIRU	r_s	-0.1005	0.2825	-0.1165	0.0817	0.1370	0.0712	-0.0080	-0.1271	-0.0277	0.0686
	p	0.5016	0.0044	0.3132	0.4141	0.2349	0.4750	0.9679	0.3417	0.8110	0.5509
S_ARAN	r_s	0.0449	-0.0791	-0.0360	-0.1607	-0.1733	-0.0570	0.2277	-0.1057	-0.1973	-0.0919
	p	0.7643	0.4340	0.7559	0.1066	0.1317	0.5674	0.2439	0.4298	0.0854	0.4236
S_DECA	r_s	-0.0870	0.1201	0.0000	-0.0084	-0.0052	-0.0466			0.0206	0.0228
	p	0.5610	0.2339	1.0000	0.9328	0.9645	0.6400			0.8585	0.8431
S_ISOP	r_s	-0.3881	0.2611	-0.0586	0.2304	0.3370	0.2000	-0.2901	-0.2358	0.1018	0.2238
	p	0.0070	0.0087	0.6130	0.0198	0.0027	0.0428	0.1343	0.0747	0.3785	0.0489
S_AMPH	r_s	-0.4093	0.2400	-0.1406	0.2802	0.2100	0.2110	-0.2097	-0.5585	0.0589	0.1999
	p	0.0043	0.0162	0.2226	0.0043	0.0667	0.0324	0.2841	0.0000	0.6107	0.0794
S_EPHE	r_s	-0.3355	-0.0094	-0.2314	0.0025	-0.1663	-0.1698	-0.2344	-0.1206	-0.0679	-0.1640
	p	0.0211	0.9260	0.0429	0.9804	0.1484	0.0864	0.2298	0.3673	0.5577	0.1515
S_PLEC	r_s	-0.1593	0.0863	-0.0044	0.1537	-0.1163	0.0429	-0.2266	-0.2625	-0.0625	-0.0998
	p	0.2847	0.3933	0.9694	0.1230	0.3138	0.6669	0.2462	0.0465	0.5892	0.3846
S_ODON	r_s	-0.1184	-0.2944	-0.2772	-0.3440	-0.3048	-0.3572	-0.4160	-0.1604	-0.2957	-0.2605
	p	0.4281	0.0029	0.0147	0.0004	0.0070	0.0002	0.0277	0.2291	0.0090	0.0213
S_HEMI	r_s	-0.2024	-0.1816	-0.2696	-0.2176	-0.1774	-0.1600	0.0804	-0.0318	-0.1831	-0.1493
	p	0.1724	0.0706	0.0177	0.0280	0.1226	0.1064	0.6841	0.8125	0.1110	0.1921
S_COLE	r_s	-0.1685	-0.1046	-0.3133	0.1273	0.1062	0.1399	-0.1494	0.0109	-0.1464	0.0604
	p	0.2574	0.3005	0.0055	0.2023	0.3581	0.1586	0.4479	0.9352	0.2040	0.5993
S_MEGA	r_s	-0.3140	-0.0500	-0.2141	-0.0444	-0.1560	-0.1478	-0.1550	-0.0516	-0.1356	-0.1511
	p	0.0316	0.6215	0.0616	0.6580	0.1754	0.1363	0.4311	0.7004	0.2397	0.1867
S_TRICH	r_s	-0.1378	-0.1360	-0.0758	-0.1761	-0.2607	-0.3063	-0.0954	0.0246	-0.1262	-0.3056
	p	0.3557	0.1773	0.5125	0.0766	0.0220	0.0016	0.6293	0.8543	0.2742	0.0065
S_LYMN	r_s	-0.3565	0.2067	-0.2682	0.2108	0.1256	0.1107	-0.1802	-0.3238	0.0052	0.0715
	p	0.0139	0.0390	0.0183	0.0334	0.2764	0.2658	0.3589	0.0131	0.9643	0.5341
S_PLAN	r_s	-0.3987	0.3685	-0.2433	0.3265	0.2802	0.2520	-0.1096	-0.3242	-0.0082	0.1530
	p	0.0055	0.0002	0.0330	0.0008	0.0136	0.0102	0.5788	0.0130	0.9437	0.1810
S_BAET	r_s	-0.2622	-0.0545	-0.2884	-0.0221	-0.1918	-0.1343	-0.0859	-0.0847	-0.1323	-0.1497
	p	0.0750	0.5901	0.0110	0.8259	0.0948	0.1763	0.6637	0.5273	0.2515	0.1907

TABLE 11. CORRELATIONS BETWEEN POND ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficeint of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLE									
POTENTIAL METRIC		AL	ALK	AMM	CA	CL	COND	CU	FE	K	MG
S_COEN	r_s	-0.1179	-0.1676	-0.1934	-0.2455	-0.2627	-0.2851	-0.4134	-0.1366	-0.2329	-0.2339
	p	0.4301	0.0957	0.0920	0.0129	0.0210	0.0035	0.0288	0.3066	0.0415	0.0393
S_HALIP	r_s	-0.2648	0.2784	-0.1364	0.2438	0.1607	0.1880	-0.2850	-0.1371	0.0496	0.0248
	p	0.0721	0.0050	0.2368	0.0136	0.1626	0.0573	0.1416	0.3046	0.6684	0.8297
S_HYDR	r_s	-0.0503	-0.1219	-0.2350	0.1167	0.0573	0.0795	-0.0748	-0.0112	-0.0940	-0.0162
	p	0.7369	0.2268	0.0396	0.2428	0.6203	0.4247	0.7053	0.9333	0.4160	0.8884
S_LIMN	r_s	-0.0638	-0.0011	-0.0468	0.0203	-0.1575	-0.1158	-0.1266	-0.1740	-0.0145	-0.2493
	p	0.6699	0.9915	0.6860	0.8394	0.1713	0.2440	0.5210	0.1916	0.9006	0.0277
S_LEPT	r_s	-0.1908	-0.1323	-0.0383	-0.1728	-0.2108	-0.2631	0.0487	0.1068	-0.0910	-0.2066
	p	0.1988	0.1893	0.7409	0.0824	0.0657	0.0073	0.8057	0.4249	0.4311	0.0695
S_SM_DY	r_s	-0.1314	-0.1222	-0.2975	0.0451	0.1225	0.0665	0.0460	0.0799	-0.1209	0.1571
	p	0.3786	0.2258	0.0086	0.6527	0.2884	0.5046	0.8161	0.5512	0.2951	0.1695
S_CM	r_s	-0.4840	0.3603	-0.2216	0.3199	0.2895	0.2213	-0.1710	-0.4272	0.0406	0.1713
	p	0.0006	0.0002	0.0528	0.0010	0.0107	0.0246	0.3842	0.0008	0.7258	0.1338
S_HTR	r_s	-0.1788	0.2648	-0.0765	0.0659	0.1507	0.0553	-0.0239	-0.1065	0.0008	0.0118
	p	0.2291	0.0078	0.5085	0.5102	0.1907	0.5789	0.9039	0.4260	0.9946	0.9184
S_PHEMIP	r_s	-0.2373	-0.2494	-0.0923	-0.2472	-0.1190	-0.1772	-0.0177	-0.1378	-0.1079	-0.0345
	p	0.1082	0.0123	0.4245	0.0122	0.3025	0.0734	0.9288	0.3024	0.3503	0.7645
S_DHEMIP	r_s	-0.1501	-0.0686	-0.3139	-0.1390	-0.1710	-0.1220	0.0437	0.0490	-0.1268	-0.2696
	p	0.3140	0.4978	0.0054	0.1635	0.1371	0.2196	0.8253	0.7151	0.2719	0.0170
S_EPT	r_s	-0.2423	-0.0620	-0.1835	-0.1191	-0.2528	-0.2808	-0.2262	-0.0293	-0.1049	-0.2563
	p	0.1008	0.5403	0.1102	0.2332	0.0265	0.0041	0.2471	0.8273	0.3637	0.0235
S_ETO	r_s	-0.1938	-0.2257	-0.2448	-0.3023	-0.3512	-0.4081	-0.3875	-0.0877	-0.2545	-0.3653
	p	0.1919	0.0240	0.0319	0.0020	0.0017	0.0000	0.0416	0.5126	0.0255	0.0010
F_TRICLA	r_s	-0.1736	0.0599	0.0595	-0.0766	0.0022	-0.0729	0.1274	-0.0104	0.0175	-0.2147
	p	0.2431	0.5538	0.6070	0.4441	0.9851	0.4644	0.5181	0.9380	0.8802	0.0591
F_GASTRO	r_s	-0.5016	0.3412	-0.2146	0.2649	0.2099	0.1659	-0.1915	-0.3220	0.0054	0.0850
	p	0.0003	0.0005	0.0609	0.0071	0.0669	0.0939	0.3291	0.0137	0.9627	0.4595
F_BIVALV	r_s	0.0257	-0.1628	0.1007	-0.0954	-0.1250	-0.0653	0.2431	0.0203	-0.0701	-0.0278
	p	0.8640	0.1055	0.3836	0.3404	0.2787	0.5120	0.2126	0.8798	0.5445	0.8092
F_HIRUDI	r_s	-0.1425	0.3158	-0.0700	0.0984	0.2223	0.0964	-0.0506	-0.1162	0.0364	0.0700
	p	0.3394	0.0014	0.5454	0.3250	0.0519	0.3329	0.7982	0.3848	0.7531	0.5426
F_ARANEA	r_s	0.0449	-0.0791	-0.0360	-0.1607	-0.1733	-0.0570	0.2277	-0.1057	-0.1973	-0.0919
	p	0.7643	0.4340	0.7559	0.1066	0.1317	0.5674	0.2439	0.4298	0.0854	0.4236
F_DECAPO	r_s	-0.0870	0.1201	0.0000	-0.0084	-0.0052	-0.0466			0.0206	0.0228
	p	0.5610	0.2339	1.0000	0.9328	0.9645	0.6400			0.8585	0.8431
F_ISOPOD	r_s	-0.3741	0.2947	-0.0068	0.2500	0.3423	0.2292	-0.2309	-0.1903	0.0865	0.1586
	p	0.0096	0.0029	0.9532	0.0113	0.0023	0.0198	0.2372	0.1525	0.4544	0.1655
F_AMPHIP	r_s	-0.4093	0.2400	-0.1406	0.2802	0.2100	0.2110	-0.2097	-0.5585	0.0589	0.1999
	p	0.0043	0.0162	0.2226	0.0043	0.0667	0.0324	0.2841	0.0000	0.6107	0.0794
F_EPHEME	r_s	-0.3381	-0.0079	-0.2712	0.0003	-0.1534	-0.1644	-0.2425	-0.1075	-0.0658	-0.1317
	p	0.0201	0.9380	0.0171	0.9974	0.1829	0.0970	0.2138	0.4217	0.5696	0.2504
F_PLECOP	r_s	-0.1593	0.0835	-0.0013	0.1519	-0.1172	0.0418	-0.2190	-0.2625	-0.0592	-0.0988
	p	0.2847	0.4091	0.9909	0.1275	0.3102	0.6752	0.2630	0.0465	0.6088	0.3894
F_ODONAT	r_s	-0.1125	-0.2514	-0.2956	-0.3485	-0.2836	-0.3285	-0.4114	-0.1460	-0.3316	-0.2648
	p	0.4515	0.0116	0.0090	0.0003	0.0125	0.0007	0.0296	0.2740	0.0032	0.0191

TABLE 11. CORRELATIONS BETWEEN POND ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficeint of rank correlation; p = significance level (p <0.001 underlined)

POTENTIAL METRIC		VARIABLE NA	NI	PH	SRP	SS	TN	TON	TP	ZN
INV_N.SP	r_s	0.0467	0.3235	0.1933	-0.1222	-0.2632	-0.1524	-0.0193	-0.2590	-0.2370
	p	0.6851	0.3957	0.0504	0.2897	0.0207	0.1859	0.8677	0.0229	0.0367
INV_N.FA	r_s	-0.0562	0.2011	0.3731	-0.1765	-0.2872	-0.1145	0.1417	-0.2953	-0.2194
	p	0.6251	0.6039	0.0001	0.1248	0.0113	0.3216	0.2191	0.0091	0.0536
INV_N.OR	r_s	-0.0902	-0.2248	0.3906	-0.2365	-0.2142	-0.0436	0.1963	-0.2598	-0.2110
	p	0.4324	0.5608	0.0000	0.0384	0.0614	0.7066	0.0870	0.0225	0.0637
INV_SRS	r_s	0.0457	0.2973	0.0883	-0.1266	-0.2390	-0.2093	-0.1102	-0.2752	-0.1928
	p	0.6911	0.4372	0.3753	0.2724	0.0363	0.0678	0.3402	0.0154	0.0909
INV_SRI	r_s	0.0675	0.1224	-0.2383	-0.0597	-0.0597	-0.3410	-0.3471	-0.1819	0.2358
	p	0.5573	0.7537	0.0154	0.6061	0.6063	0.0024	0.0020	0.1134	0.0377
S_TRIC	r_s	-0.0597	-0.3030	0.1863	-0.1072	-0.0124	0.0683	0.2221	-0.1366	-0.0891
	p	0.6038	0.4280	0.0596	0.3534	0.9150	0.5550	0.0523	0.2363	0.4378
S_GAST	r_s	0.2457	0.1624	0.4511	-0.1967	-0.1886	0.0289	0.0760	-0.1703	-0.1022
	p	0.0301	0.6763	0.0000	0.0863	0.1004	0.8029	0.5114	0.1388	0.3731
S_BIVALV	r_s	-0.1307	-0.5029	-0.0800	0.0437	0.1606	-0.0020	0.0207	-0.0106	-0.2776
	p	0.2539	0.1676	0.4216	0.7056	0.1629	0.9861	0.8585	0.9268	0.0139
S_HIRU	r_s	0.0771	0.0000	0.3027	-0.0350	-0.1304	0.2000	0.1748	0.0029	-0.0556
	p	0.5024	1.0000	0.0019	0.7622	0.2585	0.0812	0.1285	0.9801	0.6285
S_ARAN	r_s	-0.0972	-0.2873	-0.0443	-0.1450	-0.1844	-0.1875	0.1417	-0.1384	-0.1154
	p	0.3971	0.4534	0.6568	0.2084	0.1085	0.1025	0.2190	0.2299	0.3143
S_DECA	r_s	-0.0278		0.1450	-0.0206	0.0362	-0.1497	0.0052	0.0129	-0.0228
	p	0.8088		0.1441	0.8585	0.7549	0.1938	0.9645	0.9113	0.8431
S_ISOP	r_s	0.3230	0.2129	0.1381	-0.1220	0.0259	0.1488	0.2638	-0.1566	0.0446
	p	0.0039	0.5824	0.1643	0.2907	0.8232	0.1964	0.0205	0.1737	0.6983
S_AMPH	r_s	0.1930	-0.3180	0.3377	-0.1405	-0.1834	0.1240	0.1257	-0.1435	-0.1314
	p	0.0905	0.4043	0.0005	0.2229	0.1103	0.2827	0.2759	0.2131	0.2515
S_EPHE	r_s	-0.1027	0.3610	0.4089	-0.1003	-0.2914	-0.1247	-0.0307	-0.1553	-0.0843
	p	0.3709	0.3398	0.0000	0.3856	0.0101	0.2799	0.7910	0.1774	0.4631
S_PLEC	r_s	-0.1207		0.1147	-0.0648	-0.1559	0.0594	0.1225	-0.0245	-0.0724
	p	0.2926		0.2485	0.5754	0.1758	0.6081	0.2884	0.8322	0.5288
S_ODON	r_s	-0.2063	0.7235	0.0507	-0.1620	-0.2343	-0.2910	0.0549	-0.2321	-0.1640
	p	0.0700	0.0276	0.6108	0.1593	0.0403	0.0102	0.6351	0.0422	0.1514
S_HEMI	r_s	-0.2177	0.0573	0.2278	-0.0860	-0.2037	-0.2026	-0.0878	-0.2144	-0.1563
	p	0.0556	0.8836	0.0206	0.4571	0.0756	0.0772	0.4475	0.0612	0.1719
S_COLE	r_s	0.1326	0.2425	-0.1454	0.0026	-0.1048	-0.1594	-0.2736	-0.1341	-0.0848
	p	0.2472	0.5296	0.1427	0.9820	0.3643	0.1662	0.0161	0.2450	0.4605
S_MEGA	r_s	-0.1671	-0.3180	0.0801	-0.2829	-0.3041	-0.1993	0.0497	-0.4062	-0.2777
	p	0.1438	0.4043	0.4210	0.0127	0.0072	0.0823	0.6679	0.0002	0.0138
S_TRICH	r_s	-0.2831	0.6549	0.2079	-0.0617	-0.2548	-0.1368	0.1679	-0.2381	-0.1265
	p	0.0120	0.0556	0.0351	0.5940	0.0253	0.2354	0.1444	0.0371	0.2698
S_LYMN	r_s	0.0732	0.5048	0.3191	-0.2292	-0.2477	-0.0673	0.0396	-0.2425	-0.1173
	p	0.5243	0.1658	0.0010	0.0450	0.0299	0.5610	0.7323	0.0336	0.3065
S_PLAN	r_s	0.2714	0.0091	0.3780	-0.1923	-0.1447	0.0274	0.0211	-0.1402	-0.1046
	p	0.0162	0.9816	0.0001	0.0939	0.2092	0.8129	0.8552	0.2240	0.3623
S_BAET	r_s	-0.1556	-0.0543	0.3157	-0.1285	-0.3331	-0.2144	-0.1078	-0.1670	-0.0970
	p	0.1737	0.8896	0.0012	0.2653	0.0031	0.0611	0.3509	0.1466	0.3983

TABLE 11. CORRELATIONS BETWEEN POND ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficeint of rank correlation; p = significance level (p <0.001 underlined)

POTENTIAL METRIC		VARIABLE NA	NI	PH	SRP	SS	TN	TON	TP	ZN
S_COEN	r_s	-0.1698	0.8409	0.2244	-0.1324	-0.1932	-0.2049	0.1074	-0.1759	-0.0673
	p	0.1372	0.0045	0.0227	0.2512	0.0924	0.0739	0.3526	0.1260	0.5585
S_HALIP	r_s	0.1264	0.1901	0.2756	-0.0429	-0.1687	0.1496	-0.0081	-0.0218	-0.2070
	p	0.2702	0.6243	0.0048	0.7111	0.1426	0.1941	0.9445	0.8511	0.0691
S_HYDR	r_s	0.1344	0.1563	-0.1079	-0.0127	-0.0682	-0.1922	-0.1747	-0.1847	-0.1352
	p	0.2406	0.6880	0.2778	0.9128	0.5554	0.0940	0.1287	0.1079	0.2380
S_LIMN	r_s	-0.2235	0.4499	0.0543	-0.0976	-0.2496	-0.0099	0.1805	-0.1745	-0.1470
	p	0.0492	0.2243	0.5862	0.3985	0.0286	0.9322	0.1162	0.1292	0.1989
S_LEPT	r_s	-0.2188	0.3065	0.2532	0.0241	-0.1538	-0.1009	0.0366	-0.1751	-0.0432
	p	0.0543	0.4224	0.0099	0.8353	0.1819	0.3825	0.7518	0.1277	0.7071
S_SM_DY	r_s	0.1512	0.3670	-0.2771	0.0340	-0.0587	-0.1094	-0.2870	-0.0810	0.0109
	p	0.1865	0.3313	0.0046	0.7693	0.6124	0.3436	0.0114	0.4838	0.9247
S_CM	r_s	0.2767	0.1063	0.4304	-0.1872	-0.1600	0.0620	0.1317	-0.1811	-0.1211
	p	0.0142	0.7856	0.0000	0.1030	0.1645	0.5923	0.2537	0.1150	0.2911
S_HTR	r_s	0.0728	-0.1948	0.3211	-0.0612	-0.1051	0.1850	0.2144	-0.0479	-0.0870
	p	0.5266	0.6155	0.0009	0.5967	0.3628	0.1072	0.0611	0.6791	0.4491
S_PHEMIP	r_s	-0.1671	0.1940	0.1886	0.0029	-0.0798	-0.2504	0.0020	-0.1907	-0.1385
	p	0.1438	0.6170	0.0564	0.9802	0.4900	0.0280	0.9865	0.0966	0.2264
S_DHEMIP	r_s	-0.1534	-0.0550	0.2048	-0.1209	-0.2393	-0.0547	-0.1158	-0.1386	-0.1584
	p	0.1798	0.8881	0.0380	0.2948	0.0361	0.6367	0.3159	0.2292	0.1660
S_EPT	r_s	-0.2571	0.5984	0.3241	-0.1190	-0.3202	-0.1694	0.0708	-0.2547	-0.1239
	p	0.0230	0.0887	0.0008	0.3028	0.0045	0.1408	0.5409	0.0254	0.2800
S_ETO	r_s	-0.2938	0.7737	0.2136	-0.1687	-0.3419	-0.2656	0.0890	-0.2877	-0.1631
	p	0.0090	0.0144	0.0303	0.1424	0.0023	0.0196	0.4414	0.0112	0.1538
F_TRICLA	r_s	-0.0727	-0.3030	0.1873	-0.1335	0.0205	0.0613	0.2250	-0.1501	-0.0718
	p	0.5271	0.4280	0.0582	0.2472	0.8597	0.5962	0.0492	0.1925	0.5320
F_GASTRO	r_s	0.1947	0.1652	0.4681	-0.1736	-0.2021	0.0450	0.0615	-0.1576	-0.0755
	p	0.0876	0.6709	0.0000	0.1312	0.0779	0.6976	0.5949	0.1710	0.5110
F_BIVALV	r_s	-0.1314	-0.5029	-0.0816	0.0447	0.1566	-0.0010	0.0163	-0.0051	-0.2821
	p	0.2514	0.1676	0.4127	0.6993	0.1737	0.9930	0.8884	0.9650	0.0123
F_HIRUDI	r_s	0.1652	-0.4257	0.3119	0.0112	-0.0565	0.1706	0.1478	0.0187	-0.0234
	p	0.1485	0.2533	0.0013	0.9229	0.6256	0.1381	0.1995	0.8720	0.8392
F_ARANEA	r_s	-0.0972	-0.2873	-0.0443	-0.1450	-0.1844	-0.1875	0.1417	-0.1384	-0.1154
	p	0.3971	0.4534	0.6568	0.2084	0.1085	0.1025	0.2190	0.2299	0.3143
F_DECAPO	r_s	-0.0278		0.1450	-0.0206	0.0362	-0.1497	0.0052	0.0129	-0.0228
	p	0.8088		0.1441	0.8585	0.7549	0.1938	0.9645	0.9113	0.8431
F_ISOPOD	r_s	0.2944	0.0000	0.2170	-0.1693	0.0526	0.1866	0.2169	-0.0989	0.0000
	p	0.0089	1.0000	0.0277	0.1410	0.6499	0.1042	0.0582	0.3923	1.0000
F_AMPHIP	r_s	0.1930	-0.3180	0.3377	-0.1405	-0.1834	0.1240	0.1257	-0.1435	-0.1314
	p	0.0905	0.4043	0.0005	0.2229	0.1103	0.2827	0.2759	0.2131	0.2515
F_EPHEME	r_s	-0.0939	0.3386	0.3996	-0.1265	-0.3124	-0.1414	-0.0446	-0.1876	-0.0706
	p	0.4135	0.3727	0.0000	0.2731	0.0057	0.2199	0.7003	0.1022	0.5388
F_PLECOP	r_s	-0.1221		0.1140	-0.0606	-0.1542	0.0606	0.1211	-0.0198	-0.0721
	p	0.2871		0.2515	0.6008	0.1807	0.6008	0.2940	0.8646	0.5306
F_ODONAT	r_s	-0.2298	0.6774	0.0007	-0.1752	-0.2386	-0.2786	0.0476	-0.2576	-0.1668
	p	0.0429	0.0450	0.9941	0.1276	0.0367	0.0141	0.6813	0.0237	0.1444

TABLE 11. CORRELATIONS BETWEEN POND ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficeint of rank correlation; p = significance level (p <0.001 underlined)

POTENTIAL METRIC		VARIABLE AL	ALK	AMM	CA	CL	COND	CU	FE	K	MG
F_HEMIPT	r_s	-0.1747	-0.1690	-0.1185	-0.2020	-0.1507	-0.1431	0.0560	-0.1429	-0.1238	-0.0666
	p	0.2401	0.0927	0.3045	0.0418	0.1909	0.1494	0.7772	0.2845	0.2834	0.5625
F_COLEOP	r_s	-0.1979	-0.0422	-0.2411	0.1201	0.0768	0.1103	-0.2203	-0.0568	-0.1152	-0.0165
	p	0.1823	0.6767	0.0346	0.2292	0.5065	0.2674	0.2599	0.6720	0.3184	0.8857
F_TRICHO	r_s	-0.1640	-0.1263	-0.1377	-0.1702	-0.2786	-0.3055	-0.1301	0.0301	-0.1682	-0.3173
	p	0.2708	0.2105	0.2324	0.0873	0.0141	0.0017	0.5092	0.8225	0.1437	0.0046
F_PHEMIP	r_s	-0.2533	-0.2077	-0.0881	-0.2042	-0.0983	-0.1402	0.0274	-0.1403	-0.0744	-0.0189
	p	0.0858	0.0381	0.4459	0.0395	0.3951	0.1577	0.8899	0.2936	0.5202	0.8695
F_DHEMIP	r_s	0.1659	0.0834	-0.0901	-0.1090	-0.2375	-0.1262	0.2190	-0.1312	-0.2126	-0.2718
	p	0.2652	0.4092	0.4359	0.2757	0.0376	0.2040	0.2630	0.3262	0.0634	0.0161
F_CM	r_s	-0.5084	0.3438	-0.1881	0.3049	0.2715	0.2200	-0.2033	-0.4324	0.0366	0.1589
	p	0.0003	0.0005	0.1013	0.0018	0.0169	0.0256	0.2994	0.0007	0.7523	0.1646
F_HTR	r_s	-0.1847	0.2640	-0.0261	0.0478	0.1753	0.0510	0.0580	-0.0965	0.0263	-0.0359
	p	0.2139	0.0080	0.8219	0.6335	0.1274	0.6086	0.7693	0.4714	0.8207	0.7551
F_EPT	r_s	-0.2841	-0.0583	-0.2347	-0.1026	-0.2574	-0.2683	-0.2754	-0.0356	-0.1283	-0.2545
	p	0.0529	0.5642	0.0399	0.3050	0.0238	0.0061	0.1560	0.7910	0.2662	0.0246
F_ETO	r_s	-0.2391	-0.1809	-0.3093	-0.2739	-0.3377	-0.3868	-0.3861	-0.0873	-0.2831	-0.3565
	p	0.1055	0.0717	0.0062	0.0053	0.0027	0.0001	0.0424	0.5147	0.0126	0.0014
F_OM	r_s	-0.1736	-0.2235	-0.3267	-0.3128	-0.2939	-0.3320	-0.4149	-0.1281	-0.3244	-0.2850
	p	0.2431	0.0254	0.0037	0.0014	0.0095	0.0006	0.0281	0.3381	0.0040	0.0114
F_EMO	r_s	-0.2707	-0.1855	-0.3567	-0.2511	-0.2996	-0.3411	-0.4155	-0.1395	-0.2895	-0.2689
	p	0.0658	0.0646	0.0015	0.0109	0.0081	0.0004	0.0279	0.2962	0.0107	0.0173
F_PRED	r_s	-0.3445	-0.0303	-0.2626	-0.1359	-0.0564	-0.1252	-0.1141	-0.1790	-0.1810	-0.1039
	p	0.0177	0.7644	0.0211	0.1734	0.6261	0.2078	0.5631	0.1787	0.1152	0.3655
F_DETR	r_s	-0.4545	0.1687	-0.2632	0.1720	0.0343	0.0488	-0.2240	-0.3530	-0.1270	-0.0749
	p	0.0013	0.0933	0.0207	0.0839	0.7669	0.6247	0.2519	0.0066	0.2710	0.5145
F_HERB	r_s	-0.4326	0.2268	-0.2544	0.2041	0.0449	0.0802	-0.2705	-0.2914	-0.1009	-0.1063
	p	0.0024	0.0232	0.0255	0.0397	0.6980	0.4205	0.1638	0.0265	0.3826	0.3543
BMWP	r_s	-0.3479	-0.0031	-0.2687	-0.1081	-0.1238	-0.1693	-0.2976	-0.1831	-0.1841	-0.1934
	p	0.0166	0.9756	0.0181	0.2796	0.2833	0.0873	0.1241	0.1688	0.1089	0.0897
ASPT	r_s	0.0774	-0.4491	-0.1258	-0.4872	-0.5310	-0.5415	-0.2085	0.0388	-0.2193	-0.4231
	p	0.6050	0.0000	0.2757	0.0000	0.0000	0.0000	0.2870	0.7723	0.0553	0.0001
PL_N.TX	r_s	-0.1443	-0.1578	-0.3139	-0.0998	-0.1051	-0.1918	-0.3541	0.0129	-0.1989	-0.0667
	p	0.3225	0.1062	0.0046	0.3042	0.3536	0.0457	0.0595	0.9220	0.0770	0.5541
MARG_N.TX	r_s	-0.1306	-0.1808	-0.2522	-0.1156	-0.1286	-0.2213	-0.2637	0.0417	-0.1645	-0.0581
	p	0.3710	0.0636	0.0240	0.2335	0.2556	0.0207	0.1669	0.7518	0.1448	0.6063
SUB_N.TX	r_s	-0.1642	-0.0742	-0.4479	-0.0679	-0.1349	-0.1151	-0.4151	0.0142	-0.3141	-0.1214
	p	0.2596	0.4495	0.0000	0.4850	0.2327	0.2332	0.0251	0.9143	0.0046	0.2802
FLT_N.TX	r_s	-0.0597	0.0150	-0.1558	0.0701	0.1913	0.0746	-0.4329	-0.0868	0.1089	0.1359
	p	0.6834	0.8783	0.1674	0.4707	0.0892	0.4409	0.0190	0.5097	0.3364	0.2264
AQ_N.TX	r_s	-0.2081	-0.0528	-0.3785	-0.0296	-0.0240	-0.0528	-0.4246	-0.0199	-0.1780	-0.0353
	p	0.1513	0.5912	0.0005	0.7609	0.8329	0.5855	0.0217	0.8797	0.1142	0.7547

TABLE 11. CORRELATIONS BETWEEN POND ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficeint of rank correlation; p = significance level (p <0.001 underlined)

		VARIABLE									
POTENTIAL METRIC		AL	ALK	AMM	CA	CL	COND	CU	FE	K	MG
FRE_SP	r_s	-0.2474	0.1354	-0.1147	0.2465	0.2880	0.2348	-0.1312	-0.1985	0.1295	0.1477
	p	0.0866	0.1664	0.3111	0.0101	0.0096	0.0140	0.4974	0.1284	0.2523	0.1884
POT_SP	r_s	0.0635	-0.0206	-0.1448	-0.1228	-0.1734	-0.2205	-0.1907	0.0257	-0.1733	-0.1585
	p	0.6647	0.8340	0.2001	0.2053	0.1239	0.0212	0.3217	0.8456	0.1242	0.1576
PL_SRS	r_s	-0.1698	-0.1605	-0.3381	-0.1227	-0.1045	-0.2003	-0.3341	0.0423	-0.2268	-0.0981
	p	0.2435	0.1002	0.0022	0.2057	0.3563	0.0368	0.0765	0.7482	0.0431	0.3835
MARG_SRS	r_s	-0.1172	-0.2151	-0.2738	-0.1544	-0.1392	-0.2451	-0.2517	0.0530	-0.1844	-0.0891
	p	0.4226	0.0268	0.0140	0.1107	0.2181	0.0102	0.1878	0.6874	0.1016	0.4290
SUB_SRS	r_s	-0.1999	0.0052	-0.4371	-0.0274	-0.1111	-0.0877	-0.4023	-0.0041	-0.3102	-0.1389
	p	0.1684	0.9578	0.0001	0.7784	0.3266	0.3644	0.0305	0.9751	0.0051	0.2162
FLT_SRS	r_s	-0.0032	-0.0477	-0.1649	0.0113	0.1411	0.0292	-0.4290	-0.0914	0.0348	0.0967
	p	0.9823	0.6273	0.1437	0.9077	0.2119	0.7629	0.0202	0.4875	0.7589	0.3903
AQ_SRS	r_s	-0.2141	-0.0097	-0.4036	-0.0105	-0.0348	-0.0470	-0.4220	-0.0270	-0.2292	-0.0799
	p	0.1397	0.9216	0.0002	0.9140	0.7594	0.6276	0.0226	0.8375	0.0409	0.4782
PL_SRI	r_s	-0.1243	-0.0555	-0.3834	-0.1827	-0.0948	-0.1990	-0.2203	0.0029	-0.3013	-0.2369
	p	0.3949	0.5717	0.0004	0.0584	0.4029	0.0380	0.2507	0.9825	0.0066	0.0332
MARG_SRI	r_s	0.0201	-0.1622	-0.2871	-0.2484	-0.0175	-0.2303	-0.1152	0.0213	-0.1554	-0.1312
	p	0.8910	0.0968	0.0098	0.0095	0.8775	0.0160	0.5516	0.8719	0.1687	0.2429
SUB_SRI	r_s	-0.1608	0.1868	-0.1189	0.0904	-0.0378	-0.0084	-0.2640	0.0313	-0.1135	-0.1278
	p	0.2697	0.0552	0.2936	0.3522	0.7389	0.9309	0.1664	0.8125	0.3162	0.2555
FLT_SRI	r_s	0.0608	-0.1526	-0.3087	-0.0918	-0.0233	-0.0646	-0.2007	-0.0387	-0.1906	0.0280
	p	0.6781	0.1183	0.0053	0.3448	0.8376	0.5045	0.2966	0.7689	0.0904	0.8040
AQ_SRI	r_s	-0.1382	0.0706	-0.2593	-0.0160	-0.1175	-0.1128	-0.1832	0.0458	-0.2858	-0.1990
	p	0.3438	0.4719	0.0202	0.8698	0.2991	0.2430	0.3415	0.7282	0.0102	0.0748
AQ_TI	r_s	-0.2937	0.2986	-0.0525	0.3591	0.2564	0.2884	-0.0198	-0.1177	0.0804	0.1289
	p	0.0406	0.0019	0.6436	0.0001	0.0217	0.0024	0.9189	0.3704	0.4782	0.2516
SUB_EX	r_s	-0.0622	0.0828	-0.2249	0.0940	0.0344	-0.0009	-0.3149	-0.1704	-0.0307	0.0344
	p	0.6713	0.3991	0.0449	0.3331	0.7620	0.9924	0.0961	0.1929	0.7868	0.7605
FLT_EX	r_s	-0.1626	0.1583	-0.0006	0.1556	0.2051	0.1958	-0.5117	-0.2026	0.1824	0.1127
	p	0.2644	0.1051	0.9954	0.1077	0.0680	0.0413	0.0045	0.1205	0.1054	0.3165
AQ_EX	r_s	-0.1091	0.1332	-0.0964	0.1315	0.1429	0.1017	-0.4479	-0.2299	0.0976	0.0348
	p	0.4554	0.1734	0.3947	0.1749	0.2061	0.2926	0.0148	0.0772	0.3890	0.7576
MG_EX	r_s	-0.1187	-0.0231	0.0172	0.1145	0.2236	0.0556	-0.0497	-0.0944	0.0913	0.2721
	p	0.4167	0.8138	0.8797	0.2379	0.0462	0.5660	0.7977	0.4729	0.4203	0.0140
EX_SP	r_s	-0.0891	0.1056	-0.0747	0.1284	0.2019	0.0986	-0.3818	-0.1728	0.1193	0.0947
	p	0.5429	0.2813	0.5099	0.1852	0.0725	0.3076	0.0410	0.1868	0.2919	0.4004
FFL/AQ	r_s	-0.1341	0.1480	0.0322	0.2368	0.2439	0.2446	0.3432	-0.1804	0.1118	0.1337
	p	0.3583	0.1301	0.7766	0.0136	0.0292	0.0104	0.0684	0.1677	0.3236	0.2342
FFL/SU	r_s	-0.1060	0.1688	-0.0145	0.2510	0.1957	0.2487	-0.0498	-0.2515	0.1348	0.1036
	p	0.4687	0.0837	0.8987	0.0088	0.0819	0.0091	0.7976	0.0526	0.2331	0.3573
SUB/FLO	r_s	0.0172	-0.1294	-0.4105	-0.0759	-0.2155	-0.0956	-0.2323	-0.0581	-0.3185	-0.1215
	p	0.9066	0.1860	0.0002	0.4349	0.0549	0.3228	0.2253	0.6592	0.0040	0.2799

TABLE 11. CORRELATIONS BETWEEN POND ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficeint of rank correlation; p = significance level (p <0.001 underlined)

POTENTIAL METRIC		VARIABLE NA	NI	PH	SRP	SS	TN	TON	TP	ZN
F_HEMIPT	r_s	-0.1777	-0.0135	0.2651	0.0126	-0.1091	-0.2378	0.0073	-0.1901	-0.1059
	p	0.1197	0.9726	0.0068	0.9133	0.3449	0.0373	0.9495	0.0977	0.3563
F_COLEOP	r_s	0.0417	0.2916	0.0503	-0.0526	-0.2207	-0.0518	-0.1436	-0.0699	-0.2953
	p	0.7170	0.4465	0.6141	0.6497	0.0538	0.6547	0.2129	0.5458	0.0087
F_TRICHO	r_s	-0.3178	0.5786	0.2061	-0.1064	-0.2945	-0.1411	0.2147	-0.2779	-0.1245
	p	0.0046	0.1026	0.0367	0.3569	0.0093	0.2210	0.0608	0.0144	0.2775
F_PHEMIP	r_s	-0.1324	0.0753	0.2302	0.0264	-0.0888	-0.2301	-0.0021	-0.1669	-0.1329
	p	0.2477	0.8474	0.0193	0.8196	0.4424	0.0441	0.9855	0.1468	0.2460
F_DHEMIP	r_s	-0.2344		0.2778	-0.0077	-0.0719	-0.0584	-0.0201	-0.0508	0.0392
	p	0.0389		0.0045	0.9473	0.5345	0.6138	0.8622	0.6611	0.7332
F_CM	r_s	0.2522	0.0617	0.4353	-0.1727	-0.1706	0.0858	0.1365	-0.1664	-0.1179
	p	0.0259	0.8747	0.0000	0.1331	0.1380	0.4580	0.2364	0.1480	0.3038
F_HTR	r_s	0.0895	-0.3678	0.3250	-0.0629	-0.0198	0.1405	0.2002	-0.0718	-0.0418
	p	0.4360	0.3301	0.0008	0.5869	0.8641	0.2230	0.0809	0.5352	0.7162
F_EPT	r_s	-0.2719	0.5180	0.3326	-0.1400	-0.3572	-0.1672	0.0989	-0.2740	-0.1193
	p	0.0160	0.1531	0.0006	0.2245	0.0014	0.1460	0.3923	0.0159	0.2980
F_ETO	r_s	-0.3201	0.6509	0.2387	-0.2033	-0.3806	-0.2590	0.1116	-0.3396	-0.1692
	p	0.0043	0.0576	0.0152	0.0761	0.0006	0.0229	0.3338	0.0025	0.1386
F_OM	r_s	-0.2560	0.5607	0.0373	-0.2476	-0.3065	-0.2919	0.0671	-0.3568	-0.2288
	p	0.0237	0.1163	0.7080	0.0299	0.0067	0.0100	0.5622	0.0014	0.0439
F_EMO	r_s	-0.2372	0.4396	0.1750	-0.2422	-0.3708	-0.2870	0.0425	-0.3602	-0.2125
	p	0.0365	0.2365	0.0770	0.0338	0.0009	0.0114	0.7134	0.0013	0.0618
F_PRED	r_s	-0.0859	0.1580	0.2739	-0.1416	-0.2497	-0.1823	0.1278	-0.3071	-0.1968
	p	0.4547	0.6847	0.0051	0.2193	0.0285	0.1126	0.2679	0.0066	0.0842
F_DETR	r_s	-0.0176	0.0223	0.4516	-0.2355	-0.2715	-0.0030	0.1775	-0.3004	-0.1575
	p	0.8782	0.9545	0.0000	0.0393	0.0169	0.9792	0.1226	0.0079	0.1684
F_HERB	r_s	-0.0179	0.2680	0.4378	-0.1786	-0.3274	-0.0123	0.0942	-0.2457	-0.1312
	p	0.8761	0.4857	0.0000	0.1203	0.0037	0.9154	0.4153	0.0312	0.2521
BMWP	r_s	-0.1362	0.3760	0.3574	-0.1797	-0.3064	-0.1719	0.1263	-0.3077	-0.1953
	p	0.2344	0.3186	0.0002	0.1178	0.0067	0.1350	0.2736	0.0065	0.0866
ASPT	r_s	-0.4748	0.5159	-0.1238	-0.0761	-0.2694	-0.2680	0.0647	-0.2048	-0.1196
	p	0.0000	0.1551	0.2128	0.5109	0.0178	0.0184	0.5760	0.0739	0.2969
PL_N.TX	r_s	-0.1056	0.4584	-0.0251	-0.0659	-0.2426	-0.1992	-0.1072	-0.1589	-0.1456
	p	0.3481	0.1562	0.7954	0.5615	0.0301	0.0764	0.3440	0.1591	0.1946
MARG_N.TX	r_s	-0.1171	0.4176	-0.0310	0.0043	-0.2150	-0.2673	-0.1549	-0.1260	-0.1090
	p	0.2977	0.2012	0.7486	0.9699	0.0554	0.0166	0.1699	0.2653	0.3326
SUB_N.TX	r_s	-0.1468	0.4684	-0.0104	-0.3349	-0.3583	-0.0225	0.1251	-0.3093	-0.2619
	p	0.1909	0.1462	0.9148	0.0024	0.0011	0.8431	0.2689	0.0052	0.0182
FLT_N.TX	r_s	0.2008	0.0540	0.0268	0.0783	-0.0732	-0.0243	-0.1902	0.1215	-0.0952
	p	0.0723	0.8747	0.7821	0.4902	0.5188	0.8309	0.0910	0.2828	0.3978
AQ_N.TX	r_s	-0.0386	0.3837	0.0175	-0.2296	-0.2837	-0.0037	0.0487	-0.1718	-0.2448
	p	0.7325	0.2441	0.8571	0.0405	0.0108	0.9739	0.6677	0.1276	0.0276

TABLE 11. CORRELATIONS BETWEEN POND ENVIRONMENTAL AND BIOLOGICAL VARIABLES (CONTINUED)

Key:

r_s = Spearmans coefficeint of rank correlation; p = significance level (p <0.001 underlined)

POTENTIAL METRIC		VARIABLE NA	NI	PH	SRP	SS	TN	TON	TP	ZN
FRE_SP	r_s	0.2571	-0.0241	0.0610	0.0790	-0.0197	0.0794	-0.0948	0.1017	-0.0500
	p	0.0205	0.9440	0.5289	0.4861	0.8620	0.4839	0.4029	0.3693	0.6577
POT_SP	r_s	-0.2108	-0.1133	0.1840	-0.1231	-0.2404	-0.1510	0.0632	-0.2274	-0.1437
	p	0.0588	0.7401	0.0554	0.2766	0.0317	0.1811	0.5777	0.0425	0.2005
PL_SRS	r_s	-0.1250	0.4051	-0.0227	-0.0957	-0.2571	-0.2055	-0.1111	-0.1873	-0.1676
	p	0.2662	0.2165	0.8146	0.3985	0.0213	0.0674	0.3264	0.0962	0.1349
MARG_SRS	r_s	-0.1335	0.3979	-0.0584	0.0038	-0.2132	-0.2952	-0.1691	-0.1482	-0.1115
	p	0.2348	0.2256	0.5461	0.9731	0.0576	0.0079	0.1338	0.1896	0.3215
SUB_SRS	r_s	-0.1341	0.1788	0.0912	-0.3513	-0.4023	-0.0622	0.1092	-0.3199	-0.2953
	p	0.2326	0.5988	0.3457	0.0014	0.0002	0.5833	0.3348	0.0038	0.0074
FLT_SRS	r_s	0.1463	0.1708	-0.0456	0.0708	-0.1146	-0.0643	-0.1680	0.0998	-0.0533
	p	0.1926	0.6156	0.6376	0.5323	0.3115	0.5711	0.1364	0.3785	0.6366
AQ_SRS	r_s	-0.0696	0.1881	0.0764	-0.2700	-0.3669	-0.0554	0.0517	-0.2090	-0.2673
	p	0.5371	0.5797	0.4298	0.0154	0.0008	0.6254	0.6486	0.0628	0.0159
PL_SRI	r_s	-0.1540	-0.1102	0.0885	-0.2427	-0.3600	-0.2022	0.0124	-0.2948	-0.2471
	p	0.1698	0.7471	0.3604	0.0301	0.0010	0.0720	0.9133	0.0079	0.0262
MARG_SRI	r_s	-0.0549	0.0578	-0.0429	-0.0247	-0.1790	-0.2832	-0.0922	-0.2159	-0.1543
	p	0.6263	0.8660	0.6580	0.8276	0.1121	0.0109	0.4160	0.0545	0.1691
SUB_SRI	r_s	-0.0640	-0.4294	0.3292	-0.0678	-0.3839	-0.1782	-0.0312	-0.1674	-0.2646
	p	0.5704	0.1875	0.0005	0.5499	0.0004	0.1137	0.7832	0.1379	0.0170
FLT_SRI	r_s	-0.0268	0.3000	-0.2053	0.0186	-0.2346	-0.2070	-0.1974	-0.0415	0.0698
	p	0.8124	0.3701	0.0322	0.8696	0.0362	0.0655	0.0792	0.7149	0.5359
AQ_SRI	r_s	-0.1695	-0.4089	0.1878	-0.2107	-0.4614	-0.1874	-0.0226	-0.2354	-0.2393
	p	0.1302	0.2118	0.0506	0.0607	0.0000	0.0959	0.8424	0.0355	0.0314
AQ_TI	r_s	0.2125	-0.4324	0.2913	-0.0187	-0.1127	0.1581	-0.0315	0.1273	-0.0509
	p	0.0569	0.1841	0.0021	0.8691	0.3195	0.1612	0.7813	0.2606	0.6519
SUB_EX	r_s	0.0454	-0.1049	0.1607	-0.2287	-0.0820	0.2173	0.1492	-0.1259	-0.0776
	p	0.6875	0.7589	0.0951	0.0413	0.4699	0.0528	0.1865	0.2659	0.4908
FLT_EX	r_s	0.2678	-0.3671	0.1856	0.0472	-0.0415	0.1411	0.2162	0.0358	-0.0944
	p	0.0156	0.2668	0.0534	0.6777	0.7147	0.2118	0.0541	0.7528	0.4021
AQ_EX	r_s	0.1947	-0.3518	0.2389	-0.1560	-0.0556	0.2667	0.2365	-0.0322	-0.1695
	p	0.0816	0.2887	0.0124	0.1670	0.6240	0.0168	0.0347	0.7767	0.1303
MG_EX	r_s	0.2302	-0.3671	0.0935	0.0944	-0.0296	-0.0168	-0.0015	-0.0372	-0.0774
	p	0.0387	0.2668	0.3337	0.4051	0.7941	0.8826	0.9897	0.7431	0.4921
EX_SP	r_s	0.2395	-0.5416	0.2195	-0.1132	-0.0329	0.2158	0.1658	-0.0638	-0.2084
	p	0.0313	0.0853	0.0218	0.3174	0.7723	0.0546	0.1417	0.5739	0.0620
FFL/AQ	r_s	0.2098	-0.2365	-0.0473	0.1429	0.0938	0.0264	-0.1651	0.1361	0.0968
	p	0.0601	0.4839	0.6255	0.2062	0.4077	0.8162	0.1433	0.2287	0.3898
FFL/SU	r_s	0.2004	0.0859	0.0634	0.1454	-0.0509	0.0015	-0.0340	0.0082	-0.0775
	p	0.0729	0.8018	0.5123	0.1981	0.6539	0.9897	0.7644	0.9426	0.4915
SUB/FLO	r_s	-0.1972	0.5489	-0.0460	-0.1929	-0.3760	-0.2026	0.0031	-0.2867	-0.2179
	p	0.0776	0.0803	0.6351	0.0864	0.0006	0.0715	0.9782	0.0099	0.0507