

Appendices

Additional tables and references are provided in the following appendices to support the information contained in the body of this report:

- *Appendix A.* Numbers of invertebrates collected from samples at the GC-2 pond and impoundment in June 1991, Prudhoe Bay, Alaska.
- *Appendix B.* Numbers of invertebrates collected from samples at the GC-2 pond and impoundment in August 1991, Prudhoe Bay, Alaska.
- *Appendix C.* Numbers of invertebrates collected from samples at the E-Pad pond and impoundment in June 1991, Prudhoe Bay, Alaska.
- *Appendix D.* Numbers of invertebrates collected from samples at the E-Pad pond and impoundment in August 1991, Prudhoe Bay, Alaska.
- *Appendix E.* Numbers of invertebrates collected from samples at the P-Pad pond and impoundment in June 1991, Prudhoe Bay, Alaska.
- *Appendix F.* Numbers of invertebrates collected from samples at the P-Pad pond and impoundment in August 1991, Prudhoe Bay, Alaska.
- *Appendix G.* Biomass values for chironomids and oligochaetes in replicates used for ANOVA (June).
- *Appendix H.* Biomass values for chironomids and oligochaetes in replicates used for ANOVA (August).
- *Appendix I.* References used for invertebrate identification.
- *Appendix J.* Number of chironomid taxa in different functional feeding groups collected from the GC-2 pond and impoundment in June and August 1991, Prudhoe Bay, Alaska.

Appendix A. Numbers of invertebrates collected from samples at the GC-2 pond and impoundment in June 1991, Prudhoe Bay, Alaska.

Water Body: GC-2 Impoundment Habitat: Margin							Water Body: GC-2 Impoundment Habitat: Emergent							Water Body: GC-2 Impoundment Habitat: Center						
Taxa	Replicate				Total	Mean	Taxa	Replicate				Total	Mean	Taxa	Replicate				Total	Mean
	1	2	3	4				1	2	3	4				1	2	3	4		
Ceratopogonidae	0	0	0	0	0	0.0	Ceratopogonidae	0	0	0	0	0	0.0	Ceratopogonidae	0	0	0	0	0	0.0
Chironomidae	151	50	66	60	327	81.8	Chironomidae	87	125	65	64	341	85.3	Chironomidae	72	71	70	158	371	92.8
Dolichopodae	0	0	0	0	0	0.0	Dolichopodae	0	0	0	0	0	0.0	Dolichopodae	0	0	0	0	0	0.0
Dytiscidae	0	0	0	0	0	0.0	Dytiscidae	0	0	0	0	0	0.0	Dytiscidae	0	0	0	0	0	0.0
Empididae	0	0	0	0	0	0.0	Empididae	0	0	0	0	0	0.0	Empididae	0	0	0	0	0	0.0
Gastropoda	2	0	0	0	2	0.5	Gastropoda	2	0	0	0	2	0.5	Gastropoda	0	0	0	0	0	0.0
Muscidae	0	0	0	0	0	0.0	Muscidae	0	0	0	0	0	0.0	Muscidae	0	0	0	0	0	0.0
Oligochaeta	37	39	59	116	251	62.8	Oligochaeta	57	78	67	125	327	81.8	Oligochaeta	10	7	6	4	27	6.8
Plecoptera	0	0	0	0	0	0.0	Plecoptera	0	0	0	0	0	0.0	Plecoptera	5	0	0	0	5	1.3
Tipulidae	0	0	0	0	0	0.0	Tipulidae	0	0	0	0	0	0.0	Tipulidae	0	0	0	0	0	0.0
Tricoptera	0	0	0	0	0	0.0	Tricoptera	0	2	0	0	2	0.5	Tricoptera	1	0	0	0	1	0.3
Total	190	89	125	176	580	145.0	Total	146	205	132	189	672	168.0	Total	88	78	76	162	404	101.0
Water Body: GC-2 Pond Habitat: Margin							Water Body: GC-2 Pond Habitat: Emergent							Water Body: GC-2 Pond Habitat: Center						
Taxa	Replicate				Total	Mean	Taxa	Replicate				Total	Mean	Taxa	Replicate				Total	Mean
	1	2	3	4				1	2	3	4				1	2	3	4		
Ceratopogonidae	0	0	1	0	1	0.3	Ceratopogonidae	0	0	0	0	0	0.0	Ceratopogonidae	0	0	0	0	0	0.0
Chironomidae	11	18	15	16	60	15.0	Chironomidae	55	4	20	4	83	20.8	Chironomidae	184	206	146	147	683	170.8
Dolichopodae	0	0	0	0	0	0.0	Dolichopodae	0	0	0	0	0	0.0	Dolichopodae	0	0	0	0	0	0.0
Dytiscidae	0	0	0	0	0	0.0	Dytiscidae	0	0	0	0	0	0.0	Dytiscidae	0	0	0	0	0	0.0
Empididae	0	0	0	0	0	0.0	Empididae	0	0	0	0	0	0.0	Empididae	0	0	0	0	0	0.0
Gastropoda	0	0	0	0	0	0.0	Gastropoda	2	3	2	2	9	2.3	Gastropoda	0	2	4	0	6	1.5
Muscidae	0	4	0	0	4	1.0	Muscidae	3	0	0	1	4	1.0	Muscidae	0	0	1	5	6	1.5
Oligochaeta	5	17	2	8	32	8.0	Oligochaeta	16	7	5	7	35	8.8	Oligochaeta	7	4	3	5	19	4.8
Plecoptera	0	0	0	0	0	0.0	Plecoptera	2	0	5	0	7	1.8	Plecoptera	0	0	3	0	3	0.8
Tipulidae	0	3	1	0	4	1.0	Tipulidae	2	0	0	0	2	0.5	Tipulidae	0	1	1	1	3	0.8
Tricoptera	0	1	0	0	1	0.3	Tricoptera	0	0	0	0	0	0.0	Tricoptera	0	0	1	0	1	0.3
Total	16	43	19	24	102	25.5	Total	80	14	32	14	140	35.0	Total	191	213	159	158	721	180.3

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Appendix B. Numbers of invertebrates collected from samples at the GC-2 pond and impoundment in August 1991, Prudhoe Bay, Alaska.

Water Body: GC-2 Impoundment Habitat: Margin							Water Body: GC-2 Impoundment Habitat: Emergent							Water Body: GC-2 Impoundment Habitat: Center						
Taxa	Replicate				Total	Mean	Taxa	Replicate				Total	Mean	Taxa	Replicate				Total	Mean
	1	2	3	4				1	2	3	4				1	2	3	4		
Ceratopogonidae	0	0	0	0	0	0.0	Ceratopogonidae	0	0	0	0	0	0.0	Ceratopogonidae	0	0	0	0	0	0.0
Chironomidae	105	91	60	98	354	88.5	Chironomidae	300	60	60	53	473	118.3	Chironomidae	68	136	90	67	361	90.3
Dolichopodae	0	0	0	0	0	0.0	Dolichopodae	0	0	0	0	0	0.0	Dolichopodae	0	0	0	0	0	0.0
Dytiscidae	0	0	0	0	0	0.0	Dytiscidae	0	0	0	0	0	0.0	Dytiscidae	0	0	0	0	0	0.0
Empididae	0	0	0	0	0	0.0	Empididae	0	0	0	0	0	0.0	Empididae	0	0	0	0	0	0.0
Gastropoda	1	5	0	2	8	2.0	Gastropoda	7	2	4	5	18	4.5	Gastropoda	0	3	0	0	3	0.8
Muscidae	0	0	0	0	0	0.0	Muscidae	0	0	0	0	0	0.0	Muscidae	0	0	0	1	1	0.3
Oligochaeta	9	114	25	24	172	43.0	Oligochaeta	70	42	36	86	234	58.5	Oligochaeta	5	12	4	4	25	6.3
Plecoptera	0	0	0	0	0	0.0	Plecoptera	0	0	0	0	0	0.0	Plecoptera	0	0	0	0	0	0.0
Stratiomyidae	0	0	0	0	0	0.0	Stratiomyidae	0	0	0	0	0	0.0	Stratiomyidae	0	0	0	0	0	0.0
Tipulidae	0	0	0	0	0	0.0	Tipulidae	0	0	0	0	0	0.0	Tipulidae	0	0	0	0	0	0.0
Tricoptera	0	0	0	0	0	0.0	Tricoptera	0	0	0	0	0	0.0	Tricoptera	0	0	0	0	0	0.0
Total	115	210	85	124	534	133.5	Total	377	104	100	144	725	181.3	Total	73	151	94	72	390	97.5

Water Body: GC-2 Pond Habitat: Margin							Water Body: GC-2 Pond Habitat: Emergent							Water Body: GC-2 Pond Habitat: Center						
Taxa	Replicate				Total	Mean	Taxa	Replicate				Total	Mean	Taxa	Replicate				Total	Mean
	1	2	3	4				1	2	3	4				1	2	3	4		
Ceratopogonidae	0	0	0	0	0	0.0	Ceratopogonidae	0	0	0	0	0	0.0	Ceratopogonidae	0	0	0	0	0	0.0
Chironomidae	6	6	9	22	43	10.8	Chironomidae	12	36	15	9	72	18.0	Chironomidae	40	36	111	59	246	61.5
Dolichopodae	0	0	1	1	2	0.5	Dolichopodae	0	0	0	0	0	0.0	Dolichopodae	0	0	0	0	0	0.0
Dixidae	1	0	0	0	1	0.3	Dixidae	0	0	0	0	0	0.0	Dixidae	0	0	0	0	0	0.0
Dytiscidae	0	0	0	0	0	0.0	Dytiscidae	0	0	1	0	1	0.3	Dytiscidae	0	0	0	0	0	0.0
Empididae	0	0	0	0	0	0.0	Empididae	0	0	0	0	0	0.0	Empididae	0	0	0	0	0	0.0
Gastropoda	0	0	0	0	0	0.0	Gastropoda	0	3	3	0	6	1.5	Gastropoda	1	0	0	1	2	0.5
Muscidae	16	18	25	31	90	22.5	Muscidae	1	4	0	2	7	1.8	Muscidae	0	1	2	3	6	1.5
Oligochaeta	10	15	21	41	87	21.8	Oligochaeta	15	6	13	12	46	11.5	Oligochaeta	10	9	3	1	23	5.8
Plecoptera	2	1	0	0	3	0.8	Plecoptera	2	1	1	4	8	2.0	Plecoptera	0	0	0	0	0	0.0
Stratiomyidae	0	0	0	0	0	0.0	Stratiomyidae	0	0	0	0	0	0.0	Stratiomyidae	0	0	0	0	0	0.0
Tipulidae	1	1	3	5	10	2.5	Tipulidae	0	1	1	0	2	0.5	Tipulidae	0	0	0	2	2	0.5
Tricoptera	0	0	0	0	0	0.0	Tricoptera	0	0	0	0	0	0.0	Tricoptera	0	0	0	0	0	0.0
Total	36	41	59	100	236	59.0	Total	30	51	34	27	142	35.5	Total	51	46	116	66	279	69.8

Appendix C. Numbers of invertebrates collected from samples at the E-Pad pond and impoundment in June 1991, Prudhoe Bay, Alaska.

Water Body: E Impoundment Habitat: Margin								Water Body: E Impoundment Habitat: Emergent								Water Body: E Impoundment Habitat: Center								
Taxa	Replicate				Total	Mean			Taxa	Replicate				Total	Mean			Taxa	Replicate				Total	Mean
	1	2	3	4						1	2	3	4						1	2	3	4		
Ceratopogonidae	3	0	0	0	3	0.8		Ceratopogonidae	1	0	0	0	1	0.3			Ceratopogonidae	0	0	0	0	0	0.0	
Chironomidae	20	8	6	6	40	10.0		Chironomidae	9	3	0	4	16	4.0			Chironomidae	10	24	24	25	83	20.8	
Dolichopodae	2	0	5	0	7	1.8		Dolichopodae	0	0	0	0	0	0.0			Dolichopodae	0	0	0	0	0	0.0	
Dytiscidae	0	0	1	0	1	0.3		Dytiscidae	1	0	0	0	1	0.3			Dytiscidae	0	0	0	0	0	0.0	
Empididae	0	0	1	0	1	0.3		Empididae	0	1	2	0	3	0.8			Empididae	0	0	0	0	0	0.0	
Gastropoda	0	0	0	0	0	0.0		Gastropoda	1	0	0	0	1	0.3			Gastropoda	1	0	0	0	1	0.3	
Muscidae	0	0	2	2	4	1.0		Muscidae	2	0	0	0	2	0.5			Muscidae	0	0	1	0	1	0.3	
Oligochaeta	102	67	97	82	348	87.0		Oligochaeta	68	46	72	24	210	52.5			Oligochaeta	71	19	54	67	211	52.8	
Plecoptera	0	0	0	0	0	0.0		Plecoptera	0	1	0	0	1	0.3			Plecoptera	0	0	0	0	0	0.0	
Tipulidae	0	2	3	2	7	1.8		Tipulidae	2	2	1	0	5	1.3			Tipulidae	0	0	0	0	0	0.0	
Tricoptera	0	0	0	0	0	0.0		Tricoptera	0	0	0	0	0	0.0			Tricoptera	0	0	0	0	0	0.0	
Total	127	77	115	92	411	102.8		Total	84	53	75	28	240	60.0			Total	82	43	79	92	296	74.0	

Water Body: E Pond Habitat: Margin								Water Body: E Pond Habitat: Emergent								Water Body: E Pond Habitat: Center								
Taxa	Replicate				Total	Mean			Taxa	Replicate				Total	Mean			Taxa	Replicate				Total	Mean
	1	2	3	4						1	2	3	4						1	2	3	4		
Ceratopogonidae	0	0	0	0	0	0.0		Ceratopogonidae	0	0	0	0	0	0.0			Ceratopogonidae	0	0	0	0	0	0.0	
Chironomidae	333	55	229	25	642	160.5		Chironomidae	28	16	60	40	144	36.0			Chironomidae	203	119	64	75	461	115.3	
Dolichopodae	0	0	0	0	0	0.0		Dolichopodae	0	0	0	0	0	0.0			Dolichopodae	0	0	0	0	0	0.0	
Dytiscidae	1	0	0	0	1	0.3		Dytiscidae	0	0	1	0	1	0.3			Dytiscidae	1	0	0	0	1	0.3	
Empididae	0	0	0	0	0	0.0		Empididae	0	0	0	0	0	0.0			Empididae	0	0	0	0	0	0.0	
Gastropoda	0	1	0	0	1	0.3		Gastropoda	0	0	4	1	5	1.3			Gastropoda	0	0	0	0	0	0.0	
Muscidae	5	4	6	0	15	3.8		Muscidae	1	1	1	3	6	1.5			Muscidae	2	2	2	1	7	1.8	
Oligochaeta	51	34	23	22	130	32.5		Oligochaeta	35	32	9	73	149	37.3			Oligochaeta	11	8	1	7	27	6.8	
Plecoptera	1	0	0	0	1	0.3		Plecoptera	2	3	3	1	9	2.3			Plecoptera	1	1	1	0	3	0.8	
Tipulidae	0	0	0	0	0	0.0		Tipulidae	0	0	2	1	3	0.8			Tipulidae	0	0	0	0	0	0.0	
Tricoptera	1	0	0	0	1	0.3		Tricoptera	0	1	0	0	1	0.3			Tricoptera	2	0	1	0	3	0.8	
Total	392	94	258	47	791	197.8		Total	66	53	80	119	318	79.5			Total	220	130	69	83	502	125.5	

Appendix D. Numbers of invertebrates collected from samples at the E-Pad pond and impoundment in August 1991, Prudhoe Bay, Alaska.

Water Body: E Impoundment Habitat: Margin							Water Body: E Impoundment Habitat: Emergent							Water Body: E Impoundment Habitat: Center						
Taxa	Replicate				Total	Mean	Taxa	Replicate				Total	Mean	Taxa	Replicate				Total	Mean
	1	2	3	4				1	2	3	4				1	2	3	4		
Ceratopogonidae	0	0	0	0	0	0.0	Ceratopogonidae	0	0	0	0	0	0.0	Ceratopogonidae	0	0	0	0	0	0.0
Chironomidae	0	8	2	15	25	8.3	Chironomidae	0	14	7	18	39	13.0	Chironomidae	9	18	25	33	85	21.3
Dolichopodae	0	0	0	0	0	0.0	Dolichopodae	0	0	0	0	0	0.0	Dolichopodae	0	0	0	0	0	0.0
Dytiscidae	0	0	0	0	0	0.0	Dytiscidae	0	0	0	0	0	0.0	Dytiscidae	0	0	0	0	0	0.0
Empididae	0	0	0	0	0	0.0	Empididae	0	0	0	0	0	0.0	Empididae	0	0	0	0	0	0.0
Gastropoda	0	0	0	0	0	0.0	Gastropoda	0	0	0	0	0	0.0	Gastropoda	0	0	0	0	0	0.0
Muscidae	0	0	2	1	3	1.0	Muscidae	0	0	2	1	3	1.0	Muscidae	1	0	0	0	1	0.3
Oligochaeta	0	191	158	89	438	146.0	Oligochaeta	0	264	174	55	493	164.3	Oligochaeta	139	181	147	139	606	151.5
Plecoptera	0	0	0	0	0	0.0	Plecoptera	0	0	0	0	0	0.0	Plecoptera	0	0	0	0	0	0.0
Stratiomyidae	0	0	0	0	0	0.0	Stratiomyidae	0	0	0	0	0	0.0	Stratiomyidae	0	0	0	0	0	0.0
Tipulidae	0	4	1	0	5	1.7	Tipulidae	0	2	0	0	2	0.7	Tipulidae	0	0	0	0	0	0.0
Tricoptera	0	0	0	0	0	0.0	Tricoptera	0	0	0	0	0	0.0	Tricoptera	0	0	0	0	0	0.0
Total	0	203	163	105	471	157.0	Total	0	280	183	74	537	179.0	Total	149	199	172	172	692	173.0

Water Body: E Pond Habitat: Margin							Water Body: E Pond Habitat: Emergent							Water Body: E Pond Habitat: Center						
Taxa	Replicate				Total	Mean	Taxa	Replicate				Total	Mean	Taxa	Replicate				Total	Mean
	1	2	3	4				1	2	3	4				1	2	3	4		
Ceratopogonidae	0	0	0	0	0	0.0	Ceratopogonidae	0	0	0	0	0	0.0	Ceratopogonidae	0	0	0	0	0	0.0
Chironomidae	0	2	1	1	4	1.3	Chironomidae	0	78	28	67	173	57.7	Chironomidae	0	36	48	36	120	40.0
Dolichopodae	0	0	0	0	0	0.0	Dolichopodae	0	0	0	0	0	0.0	Dolichopodae	0	0	0	0	0	0.0
Dytiscidae	0	0	0	0	0	0.0	Dytiscidae	0	0	1	0	1	0.3	Dytiscidae	0	0	0	0	0	0.0
Empididae	0	0	0	0	0	0.0	Empididae	0	0	0	0	0	0.0	Empididae	0	0	0	0	0	0.0
Gastropoda	0	0	0	0	0	0.0	Gastropoda	0	1	1	2	4	1.3	Gastropoda	0	0	0	0	0	0.0
Muscidae	0	0	1	1	2	0.7	Muscidae	0	1	0	2	3	1.0	Muscidae	0	0	0	0	0	0.0
Oligochaeta	0	2	0	2	4	1.3	Oligochaeta	0	8	2	16	26	8.7	Oligochaeta	0	9	4	5	18	6.0
Plecoptera	0	0	0	0	0	0.0	Plecoptera	0	9	6	4	19	6.3	Plecoptera	0	0	0	0	0	0.0
Stratiomyidae	0	0	0	0	0	0.0	Stratiomyidae	0	0	0	0	0	0.0	Stratiomyidae	0	0	0	0	0	0.0
Tipulidae	0	0	0	0	0	0.0	Tipulidae	0	0	0	0	0	0.0	Tipulidae	0	0	0	0	0	0.0
Tricoptera	0	0	0	0	0	0.0	Tricoptera	0	1	1	0	2	0.7	Tricoptera	0	0	0	0	0	0.0
Total	0	4	2	4	10	3.3	Total	0	98	39	91	228	76.0	Total	0	45	52	41	138	46.0

Appendix E. Numbers of invertebrates collected from samples at the P-Pad pond and impoundment in June 1991, Prudhoe Bay, Alaska.

Water Body: P Impoundment Habitat: Margin							Water Body: P Impoundment Habitat: Emergent							Water Body: P Impoundment Habitat: Center						
TAXA	Replicate				Total	Mean	TAXA	Replicate				Total	Mean	TAXA	Replicate				Total	Mean
	1	2	3	4				1	2	3	4				1	2	3	4		
Ceratopogonidae	0	0	0	0	0	0.0	Ceratopogonidae	0	0	0	0	0	0.0	Ceratopogonidae	0	0	0	4	4	1.0
Chironomidae	201	85	213	160	659	164.8	Chironomidae	78	127	136	85	426	106.5	Chironomidae	264	326	257	444	1291	322.8
Dolichopodae	0	0	0	0	0	0.0	Dolichopodae	0	0	0	0	0	0.0	Dolichopodae	0	0	0	0	0	0.0
Dytiscidae	0	0	0	0	0	0.0	Dytiscidae	0	1	0	0	1	0.3	Dytiscidae	0	0	0	0	0	0.0
Empididae	0	0	0	0	0	0.0	Empididae	0	0	0	0	0	0.0	Empididae	0	0	0	0	0	0.0
Gastropoda	1	1	2	2	6	1.5	Gastropoda	10	18	17	13	58	14.5	Gastropoda	7	1	0	0	8	2.0
Muscidae	0	0	0	0	0	0.0	Muscidae	6	4	4	1	15	3.8	Muscidae	0	0	4	0	4	1.0
Oligochaeta	9	2	12	3	26	6.5	Oligochaeta	24	93	35	14	166	41.5	Oligochaeta	1	0	7	1	9	2.3
Plecoptera	10	0	1	1	12	3.0	Plecoptera	3	10	0	7	20	5.0	Plecoptera	1	1	1	0	3	0.8
Tipulidae	1	0	0	1	2	0.5	Tipulidae	0	0	0	0	0	0.0	Tipulidae	0	0	0	0	0	0.0
Tricoptera	2	0	0	0	2	0.5	Tricoptera	0	1	0	2	3	0.8	Tricoptera	0	0	0	0	0	0.0
Total	224	88	228	167	707	176.8	Total	121	254	192	122	689	172.3	Total	273	328	269	449	1319	329.8

Water Body: P Pond Habitat: Margin							Water Body: P Pond Habitat: Emergent							Water Body: P Pond Habitat: Center						
TAXA	Replicate				Total	Mean	TAXA	Replicate				Total	Mean	TAXA	Replicate				Total	Mean
	1	2	3	4				1	2	3	4				1	2	3	4		
Ceratopogonidae	0	0	0	0	0	0.0	Ceratopogonidae	0	0	0	0	0	0.0	Ceratopogonidae	0	0	0	0	0	0.0
Chironomidae	130	30	17	35	212	53.0	Chironomidae	41	65	23	44	173	43.3	Chironomidae	160	179	194	208	741	185.3
Dolichopodae	0	0	0	0	0	0.0	Dolichopodae	0	0	0	0	0	0.0	Dolichopodae	0	0	0	0	0	0.0
Dytiscidae	0	0	0	0	0	0.0	Dytiscidae	1	0	0	0	1	0.3	Dytiscidae	0	0	0	0	0	0.0
Empididae	0	0	0	0	0	0.0	Empididae	0	0	0	0	0	0.0	Empididae	0	0	0	0	0	0.0
Gastropoda	12	0	0	0	12	3.0	Gastropoda	5	7	2	2	16	4.0	Gastropoda	5	3	0	0	8	2.0
Muscidae	3	0	2	0	5	1.3	Muscidae	0	1	0	3	4	1.0	Muscidae	3	4	2	1	10	2.5
Oligochaeta	15	14	39	24	92	23.0	Oligochaeta	30	37	11	37	115	28.8	Oligochaeta	19	17	18	14	68	17.0
Plecoptera	1	0	0	0	1	0.3	Plecoptera	28	12	8	14	62	15.5	Plecoptera	5	0	0	1	6	1.5
Tipulidae	1	1	0	0	2	0.5	Tipulidae	1	0	0	0	1	0.3	Tipulidae	0	0	0	0	0	0.0
Tricoptera	5	0	0	0	5	1.3	Tricoptera	0	2	1	0	3	0.8	Tricoptera	0	0	0	0	0	0.0
Total	167	45	58	59	329	82.3	Total	106	124	45	100	375	93.8	Total	192	203	214	224	833	208.3

Appendix F. Numbers of invertebrates collected from samples at the P-Pad pond and impoundment in August 1991, Prudhoe Bay, Alaska.

Water Body: P Impoundment Habitat: Margin							Water Body: P Impoundment Habitat: Emergent							Water Body: P Impoundment Habitat: Center							
Taxa	Replicate				Total	Mean	Taxa	Replicate				Total	Mean	Taxa	Replicate				Total	Mean	
	1	2	3	4				1	2	3	4				1	2	3	4			
Ceratopogonidae	0	0	0	0	0	0.0	Ceratopogonidae	0	0	0	0	0	0.0	Ceratopogonidae	0	0	0	0	0	0	0.0
Chironomidae	0	63	124	101	288	96.0	Chironomidae	0	67	161	154	382	127.3	Chironomidae	0	64	220	78	362	120.7	
Dolichopodae	0	0	0	0	0	0.0	Dolichopodae	0	0	0	0	0	0.0	Dolichopodae	0	0	0	0	0	0	0.0
Dytiscidae	0	0	0	0	0	0.0	Dytiscidae	0	0	0	0	0	0.0	Dytiscidae	0	0	0	0	0	0	0.0
Empididae	0	0	0	0	0	0.0	Empididae	0	0	0	0	0	0.0	Empididae	0	0	0	0	0	0	0.0
Gastropoda	0	1	0	0	1	0.3	Gastropoda	0	4	3	6	13	4.3	Gastropoda	0	0	0	1	1	0.3	
Muscidae	0	1	0	0	1	0.3	Muscidae	0	1	1	0	2	0.7	Muscidae	0	1	0	1	2	0.7	
Oligochaeta	0	5	12	7	24	8.0	Oligochaeta	0	4	6	15	25	8.3	Oligochaeta	0	1	3	8	12	4.0	
Plecoptera	0	1	0	0	1	0.3	Plecoptera	0	2	1	2	5	1.7	Plecoptera	0	0	0	9	9	3.0	
Stratiomyidae	0	0	0	0	0	0.0	Stratiomyidae	0	0	1	0	1	0.3	Stratiomyidae	0	0	0	0	0	0.0	
Tipulidae	0	0	3	0	3	1.0	Tipulidae	0	0	0	0	0	0.0	Tipulidae	0	0	0	0	0	0.0	
Tricoptera	0	0	0	0	0	0.0	Tricoptera	0	0	0	0	0	0.0	Tricoptera	0	0	0	1	1	0.3	
Total	0	71	139	108	318	106.0	Total	0	78	173	177	428	142.7	Total	0	66	223	98	387	129.0	

Water Body: P Pond Habitat: Margin							Water Body: P Pond Habitat: Emergent							Water Body: P Pond Habitat: Center							
Taxa	Replicate				Total	Mean	Taxa	Replicate				Total	Mean	Taxa	Replicate				Total	Mean	
	1	2	3	4				1	2	3	4				1	2	3	4			
Ceratopogonidae	0	2	1	0	3	1.0	Ceratopogonidae	0	0	0	0	0	0.0	Ceratopogonidae	0	0	0	0	0	0	0.0
Chironomidae	0	20	22	10	52	17.3	Chironomidae	0	6	54	95	155	51.7	Chironomidae	0	80	299	219	598	199.3	
Dolichopodae	0	0	0	0	0	0.0	Dolichopodae	0	0	0	0	0	0.0	Dolichopodae	0	0	0	0	0	0	0.0
Dytiscidae	0	0	0	0	0	0.0	Dytiscidae	0	0	0	0	0	0.0	Dytiscidae	0	0	0	0	0	0	0.0
Empididae	0	0	0	0	0	0.0	Empididae	0	0	0	0	0	0.0	Empididae	0	0	0	0	0	0	0.0
Gastropoda	0	1	0	0	1	0.3	Gastropoda	0	2	5	6	13	4.3	Gastropoda	0	2	2	1	5	1.7	
Muscidae	0	2	3	3	8	2.7	Muscidae	0	0	0	5	5	1.7	Muscidae	0	2	3	3	8	2.7	
Oligochaeta	0	17	20	34	71	23.7	Oligochaeta	0	1	3	15	19	6.3	Oligochaeta	0	3	8	6	17	5.7	
Plecoptera	0	1	0	0	1	0.3	Plecoptera	0	6	11	13	30	10.0	Plecoptera	0	0	5	6	11	3.7	
Stratiomyidae	0	0	0	0	0	0.0	Stratiomyidae	0	0	0	0	0	0.0	Stratiomyidae	0	0	0	0	0	0.0	
Tipulidae	0	2	1	0	3	1.0	Tipulidae	0	0	0	0	0	0.0	Tipulidae	0	1	0	1	2	0.7	
Tricoptera	0	0	0	0	0	0.0	Tricoptera	0	0	0	1	1	0.3	Tricoptera	0	0	0	0	0	0.0	
Total	0	45	47	47	139	46.3	Total	0	15	73	135	223	74.3	Total	0	88	317	236	641	213.7	

Appendix G. Biomass values for chironomids and oligochaetes in replicates used for ANOVA (June).

Time Period	Water Body	Site #	Habitat	Chironomid Biomass (mg)	Oligochaete Biomass (mg)
June 21-23, 1991	GC-2 Pond	1	Center	44.3	00.9
June 21-23, 1991	GC-2 Pond	1	Center	29.4	01.7
June 21-23, 1991	GC-2 Pond	1	Center	24.4	00.4
June 21-23, 1991	P Pond	2	Center	28.7	09.7
June 21-23, 1991	P Pond	2	Center	69.9	04.1
June 21-23, 1991	P Pond	2	Center	92.7	02.3
June 21-23, 1991	E Pond	3	Center	06.7	14.3
June 21-23, 1991	E Pond	3	Center	05.8	01.9
June 21-23, 1991	E Pond	3	Center	05.6	05.5
June 21-23, 1991	GC-2 Pond	4	Emergent	03.0	06.7
June 21-23, 1991	GC-2 Pond	4	Emergent	01.8	00.7
June 21-23, 1991	GC-2 Pond	4	Emergent	01.2	02.6
June 21-23, 1991	P Pond	5	Emergent	04.1	19.1
June 21-23, 1991	P Pond	5	Emergent	02.2	09.2
June 21-23, 1991	P Pond	5	Emergent	03.6	10.5
June 21-23, 1991	E Pond	6	Emergent	02.0	11.7
June 21-23, 1991	E Pond	6	Emergent	03.8	05.2
June 21-23, 1991	E Pond	6	Emergent	02.9	24.7
June 21-23, 1991	GC-2 Pond	7	Margin	02.8	09.6
June 21-23, 1991	GC-2 Pond	7	Margin	00.1	00.2
June 21-23, 1991	GC-2 Pond	7	Margin	00.5	04.7
June 21-23, 1991	P Pond	8	Margin	01.8	02.1
June 21-23, 1991	P Pond	8	Margin	04.2	05.9
June 21-23, 1991	P Pond	8	Margin	01.8	04.2
June 21-23, 1991	E Pond	9	Margin	05.5	13.8
June 21-23, 1991	E Pond	9	Margin	14.5	08.8
June 21-23, 1991	E Pond	9	Margin	01.7	02.6
June 21-23, 1991	GC-2 Impoundment	10	Center	43.7	08.0
June 21-23, 1991	GC-2 Impoundment	10	Center	26.4	07.7
June 21-23, 1991	GC-2 Impoundment	10	Center	59.7	04.3
June 21-23, 1991	P Impoundment	11	Center	29.9	00.1
June 21-23, 1991	P Impoundment	11	Center	23.4	01.0
June 21-23, 1991	P Impoundment	11	Center	45.8	00.1
June 21-23, 1991	E Impoundment	12	Center	03.2	03.1
June 21-23, 1991	E Impoundment	12	Center	00.9	07.6
June 21-23, 1991	E Impoundment	12	Center	01.7	17.4
June 21-23, 1991	GC-2 Impoundment	13	Emergent	82.8	57.7
June 21-23, 1991	GC-2 Impoundment	13	Emergent	44.7	53.3
June 21-23, 1991	GC-2 Impoundment	13	Emergent	96.8	28.7
June 21-23, 1991	P Impoundment	14	Emergent	24.4	06.1
June 21-23, 1991	P Impoundment	14	Emergent	19.6	62.0
June 21-23, 1991	P Impoundment	14	Emergent	11.3	23.4
June 21-23, 1991	E Impoundment	15	Emergent	00.1	10.9
June 21-23, 1991	E Impoundment	15	Emergent	00.0	19.9
June 21-23, 1991	E Impoundment	15	Emergent	00.1	07.2
June 21-23, 1991	GC-2 Impoundment	16	Margin	37.3	16.4
June 21-23, 1991	GC-2 Impoundment	16	Margin	53.0	28.9
June 21-23, 1991	GC-2 Impoundment	16	Margin	69.5	78.3
June 21-23, 1991	P Impoundment	17	Margin	17.8	00.7
June 21-23, 1991	P Impoundment	17	Margin	38.1	03.4
June 21-23, 1991	P Impoundment	17	Margin	24.8	01.1
June 21-23, 1991	E Impoundment	18	Margin	00.9	08.4
June 21-23, 1991	E Impoundment	18	Margin	00.3	30.9
June 21-23, 1991	E Impoundment	18	Margin	02.4	23.0
	All Impoundments		Mean	28.1	18.7
	All Ponds		Mean	13.5	06.8
	All Sites		Mean	20.8	12.7

Appendix H. Biomass values for chironomids and oligochaetes in replicates used for ANOVA (August).

Time Period	Water Body	Site #	Habitat	Chironomid Biomass (mg)	Oligochaete Biomass (mg)
August 13-14, 1991	GC-2 Pond	19	Center	10.0	11.7
August 13-14, 1991	GC-2 Pond	19	Center	15.6	00.6
August 13-14, 1991	GC-2 Pond	19	Center	11.2	00.5
August 13-14, 1991	P Pond	20	Center	17.0	00.9
August 13-14, 1991	P Pond	20	Center	24.0	01.0
August 13-14, 1991	P Pond	20	Center	23.1	05.4
August 13-14, 1991	E Pond	21	Center	03.8	01.6
August 13-14, 1991	E Pond	21	Center	05.4	01.9
August 13-14, 1991	E Pond	21	Center	04.0	04.2
August 13-14, 1991	GC-2 Pond	22	Emergent	04.7	04.5
August 13-14, 1991	GC-2 Pond	22	Emergent	02.2	07.8
August 13-14, 1991	GC-2 Pond	22	Emergent	00.8	08.4
August 13-14, 1991	P Pond	23	Emergent	01.4	01.1
August 13-14, 1991	P Pond	23	Emergent	04.2	04.6
August 13-14, 1991	P Pond	23	Emergent	08.3	20.0
August 13-14, 1991	E Pond	24	Emergent	09.2	07.0
August 13-14, 1991	E Pond	24	Emergent	03.5	01.1
August 13-14, 1991	E Pond	24	Emergent	09.1	11.3
August 13-14, 1991	GC-2 Pond	25	Margin	02.4	03.4
August 13-14, 1991	GC-2 Pond	25	Margin	00.8	04.8
August 13-14, 1991	GC-2 Pond	25	Margin	01.8	19.1
August 13-14, 1991	P Pond	26	Margin	04.8	04.6
August 13-14, 1991	P Pond	26	Margin	04.5	02.0
August 13-14, 1991	P Pond	26	Margin	01.9	05.0
August 13-14, 1991	E Pond	27	Margin	00.1	00.1
August 13-14, 1991	E Pond	27	Margin	00.9	00.0
August 13-14, 1991	E Pond	27	Margin	00.2	00.1
August 13-14, 1991	GC-2 Impoundment	28	Center	20.8	31.0
August 13-14, 1991	GC-2 Impoundment	28	Center	112.8	08.4
August 13-14, 1991	GC-2 Impoundment	28	Center	51.4	03.4
August 13-14, 1991	P Impoundment	29	Center	07.3	02.5
August 13-14, 1991	P Impoundment	29	Center	14.8	01.9
August 13-14, 1991	P Impoundment	29	Center	11.6	00.7
August 13-14, 1991	E Impoundment	30	Center	12.6	46.5
August 13-14, 1991	E Impoundment	30	Center	13.7	65.5
August 13-14, 1991	E Impoundment	30	Center	11.7	52.9
August 13-14, 1991	GC-2 Impoundment	31	Emergent	27.7	27.0
August 13-14, 1991	GC-2 Impoundment	31	Emergent	22.8	30.0
August 13-14, 1991	GC-2 Impoundment	31	Emergent	19.6	43.2
August 13-14, 1991	P Impoundment	32	Emergent	10.3	01.2
August 13-14, 1991	P Impoundment	32	Emergent	11.9	10.4
August 13-14, 1991	P Impoundment	32	Emergent	09.0	15.6
August 13-14, 1991	E Impoundment	33	Emergent	04.3	68.8
August 13-14, 1991	E Impoundment	33	Emergent	03.0	65.1
August 13-14, 1991	E Impoundment	33	Emergent	19.8	22.2
August 13-14, 1991	GC-2 Impoundment	34	Margin	59.7	677.3
August 13-14, 1991	GC-2 Impoundment	34	Margin	44.3	16.9
August 13-14, 1991	GC-2 Impoundment	34	Margin	31.9	56.4
August 13-14, 1991	P Impoundment	35	Margin	12.5	07.5
August 13-14, 1991	P Impoundment	35	Margin	16.5	03.6
August 13-14, 1991	P Impoundment	35	Margin	12.8	05.1
August 13-14, 1991	E Impoundment	36	Margin	01.7	74.5
August 13-14, 1991	E Impoundment	36	Margin	00.2	57.3
August 13-14, 1991	E Impoundment	36	Margin	04.1	22.3
	All Impoundments		Mean	21.1	52.5
	All Ponds		Mean	06.5	04.9
	All Sites		Mean	13.8	28.7

Appendix I. References used for invertebrate identification.

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Appendix J. Number of chironomid taxa in different functional feeding groups collected from the GC-2 pond and impoundment in June and August 1991, Prudhoe Bay, Alaska.

Taxa	Feeding Group ¹	Water Body			
		GC-2 Pond		GC-2 Imp.	
		June	Aug	June	Aug
Tanypodinae					
Macropelopini					
<i>Procladius</i>	Predator	39	31	30	14
Pentaneurini					
<i>Thienemannimyia</i>	Predator	16	1		
Tanypodini					
Podonominae					
Podonomini					
<i>Derotanytus</i>	Predator			4	
"Corynoneurini"					
<i>Corynoneura</i>	Collector (gatherer)	11		3	
"Orthoclaadiini" & "Metrocnemini"					
<i>Acricotopus</i>	Collector (gatherer)	14			
<i>Cricotopus intersectus</i> group	Shredder (herbivore)	1			
<i>Cricotopus laricomalis</i> group	Shredder (herbivore)	8		2	
<i>Diplocladius</i>	Collector (gatherer)			1	
<i>Eukiefferiella</i>	Collector (gatherer)	9		2	16
<i>Orthocladinae sp C</i>	Collector (gatherer)			6	31
<i>Orthocladinae sp D</i>	Collector (gatherer)			1	
<i>Parakiefferiella</i>	Collector (gatherer)	1			
<i>Propilocerius</i>	Collector (gatherer)			9	
<i>Psectrocladius</i>	Collector (gatherer)	13			
<i>Psectrocladius sp E</i>	Collector (gatherer)			2	
<i>Psectrocladius sp F</i>	Collector (gatherer)			3	
Chironominae					
Chironomini					
<i>Chironomus sp A</i>	Collector (gatherer)	39		62	9
<i>Chironomus sp B</i>	Collector (gatherer)			70	8
<i>Phaenopsectra</i>	Scraper	1			1
Tanytarsini					
<i>Cladotanytarsus</i>	Collector (gatherer)			2	1
<i>Paratanytarsus</i>	Collector (filterer)	8	1	64	22
<i>Tanytarsus</i>	Collector (filterer)	57	18	8	3
Unidentified		33	7	28	3
	TOTAL COUNTS	250	58	297	108

¹Feeding groups are based on information from Merritt and Cummins (1984) and Butler et al. (1980).

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