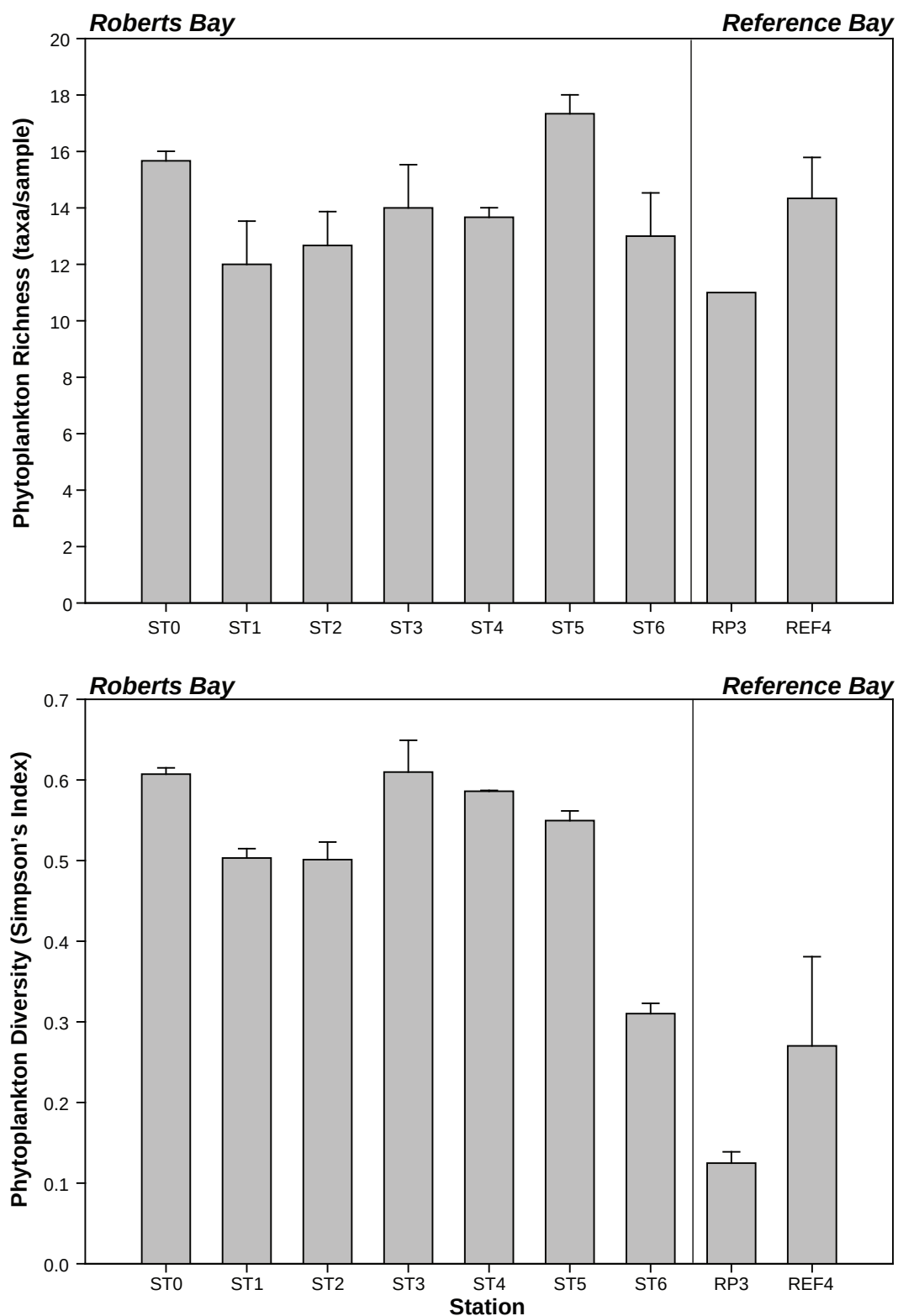




Notes: Error bars represent standard error of the mean.

Despite annual differences in sample collection location, sampling date, and sampling methodologies (e.g., discrete samples in 2006 and 2009 vs. depth-integrated samples in 2007), phytoplankton biomass was consistently low ($<1.5 \mu\text{g chl } a/\text{L}$) in both Roberts Bay and Hope Bay between 2006 and 2009. Figure 3.7-5 shows the historical phytoplankton biomass trends in Roberts and Hope bays.

Taxonomic analysis of marine phytoplankton in 2007 revealed an assemblage dominated (in terms of biomass) by cyanobacteria and dinoflagellates in Roberts Bay, and by diatoms, chlorophytes, chrysophytes, cryptomonads, and dinoflagellates in Hope Bay. The phytoplankton assemblage in Roberts Bay in 2009 was dominated (in terms of biomass) by dinoflagellates, chrysophytes, and diatoms. Unlike 2007, cyanobacteria and chlorophytes made up negligible proportions of phytoplankton biomass in 2009.

3.8 ZOOPLANKTON

Zooplankton are heterotrophic plankton that prey upon phytoplankton and other organisms, and provide an important food source to higher trophic levels such as fish. Zooplankton samples were collected from seven sites in Roberts Bay and two sites in Reference Bay in August, 2009. Complete results of zooplankton taxonomic analysis are provided in Appendix 3.8-1.

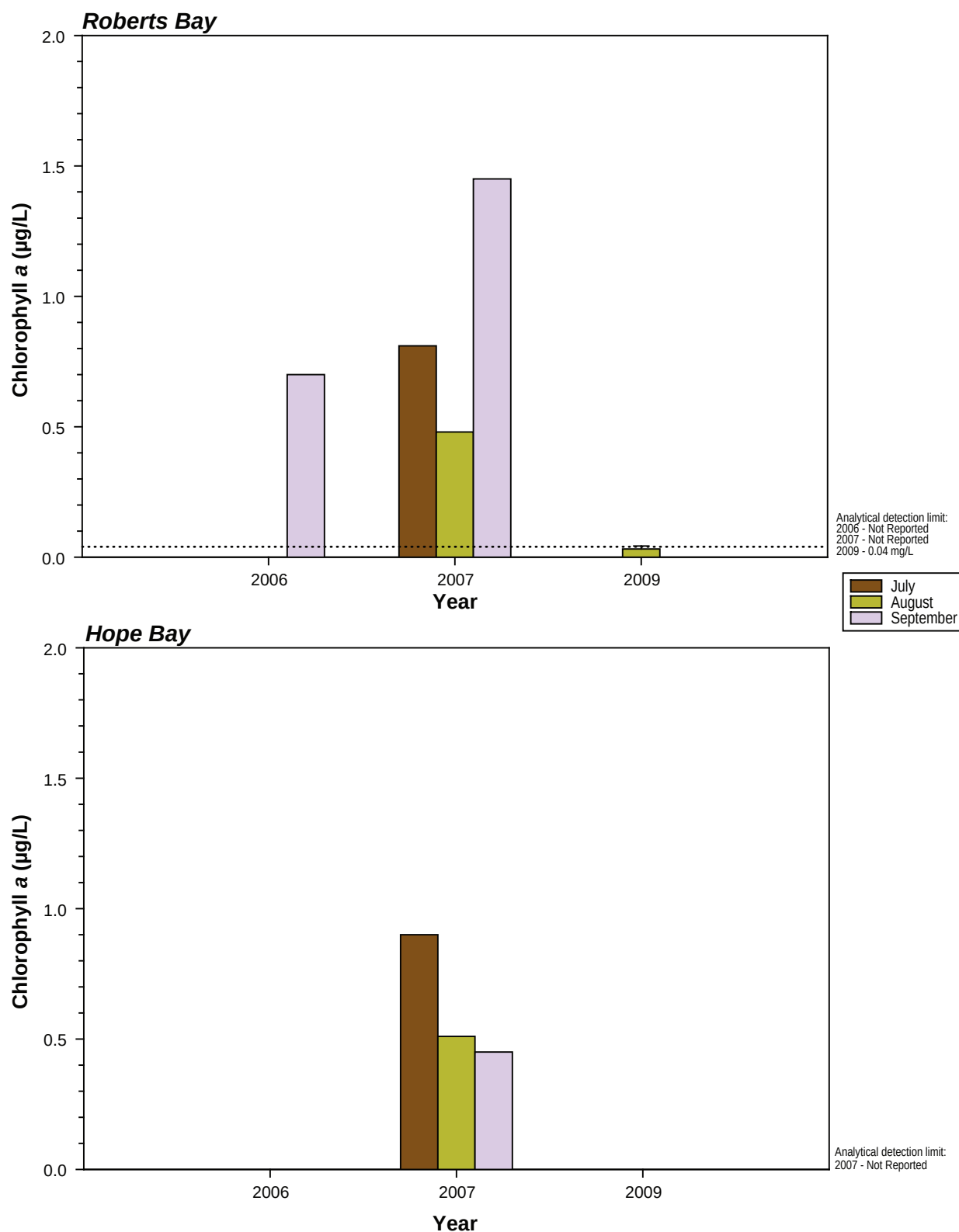
Zooplankton abundance ranged from 8,388 organisms/ m^3 at site ST0 (in the eastern basin of Roberts Bay) to 16,529 organisms/ m^3 at site ST1 (in the western basin on Roberts Bay). Abundance levels at the Reference Bay sites were within the range of Roberts Bay sites (Figure 3.8-1).

At the near-shore sites of Roberts and Reference bays (ST0, ST1, ST2, ST3, and RP3), the zooplankton assemblage was dominated by calanoid copepods (82%; average of near-shore sites) and cladocerans (16%). At the sites located further offshore (ST4, ST5, ST6, REF4), calanoid copepods remained the dominant taxa (80%; average of offshore sites); however, larvaceans (pelagic tunicates) replaced cladocerans as the second most abundant taxa (11%), with polychaetes, cladocerans, cyclopoid copepods, and other taxa accounting for the remaining 9% of the zooplankton community (Figure 3.8-2).

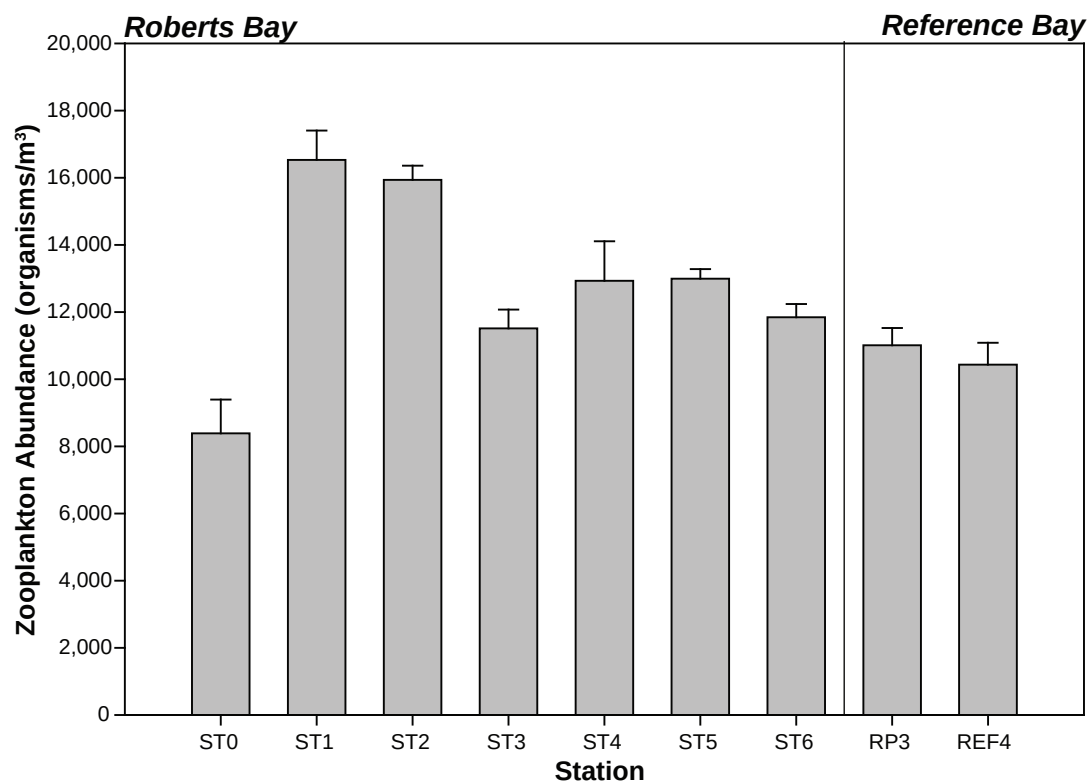
Zooplankton taxa richness ranged from 16 at ST0 and ST2 to 24 at ST5. Richness levels were lower in the near-shore Roberts Bay sites (16 to 17 taxa) than in the offshore Roberts Bay and Reference Bay sites (23 to 24 taxa). Simpson's diversity index was similar among sites, ranging from 0.57 at ST3 to 0.73 at ST5 (Figure 3.8-3).

3.8.1 Historical Trends in Zooplankton

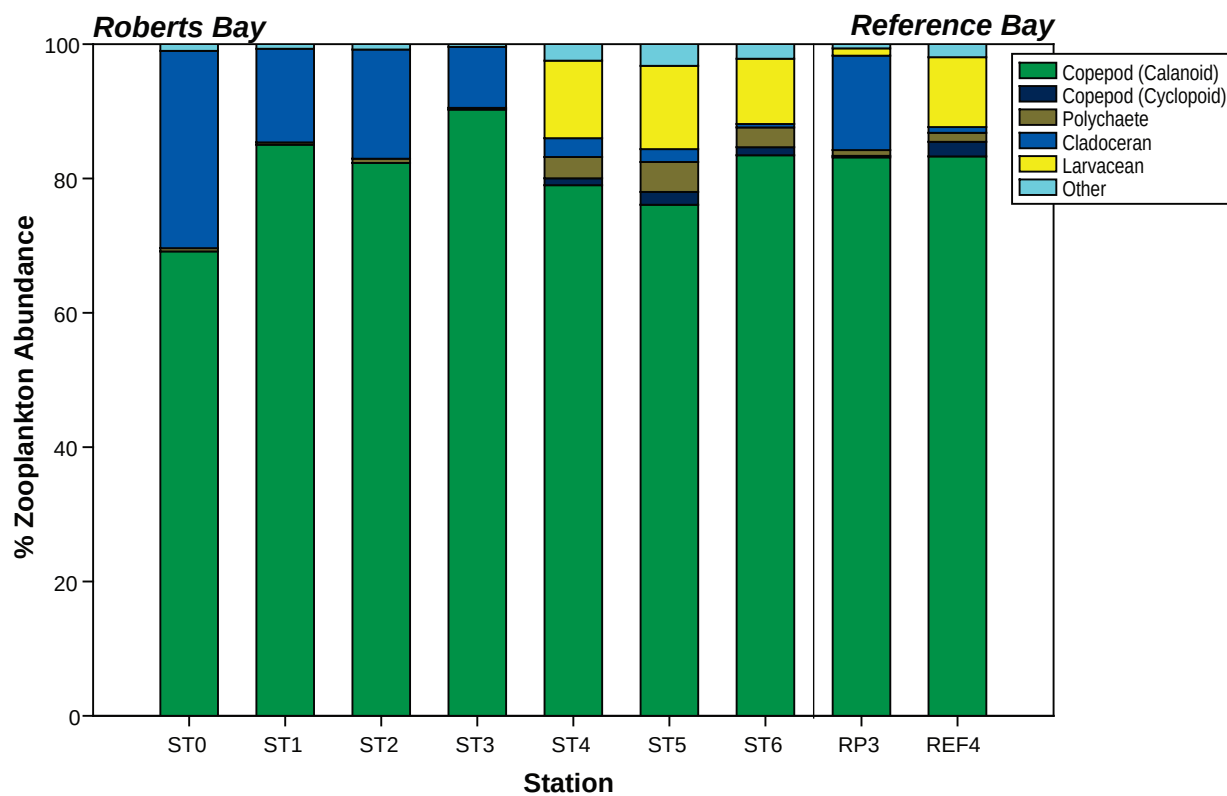
Marine zooplankton samples were collected in 2007 from Hope Bay. No zooplankton samples were collected from Hope Bay in 2009, so no annual comparisons can be made. 2009 was the first year that zooplankton samples were collected from Roberts Bay and Reference Bay.

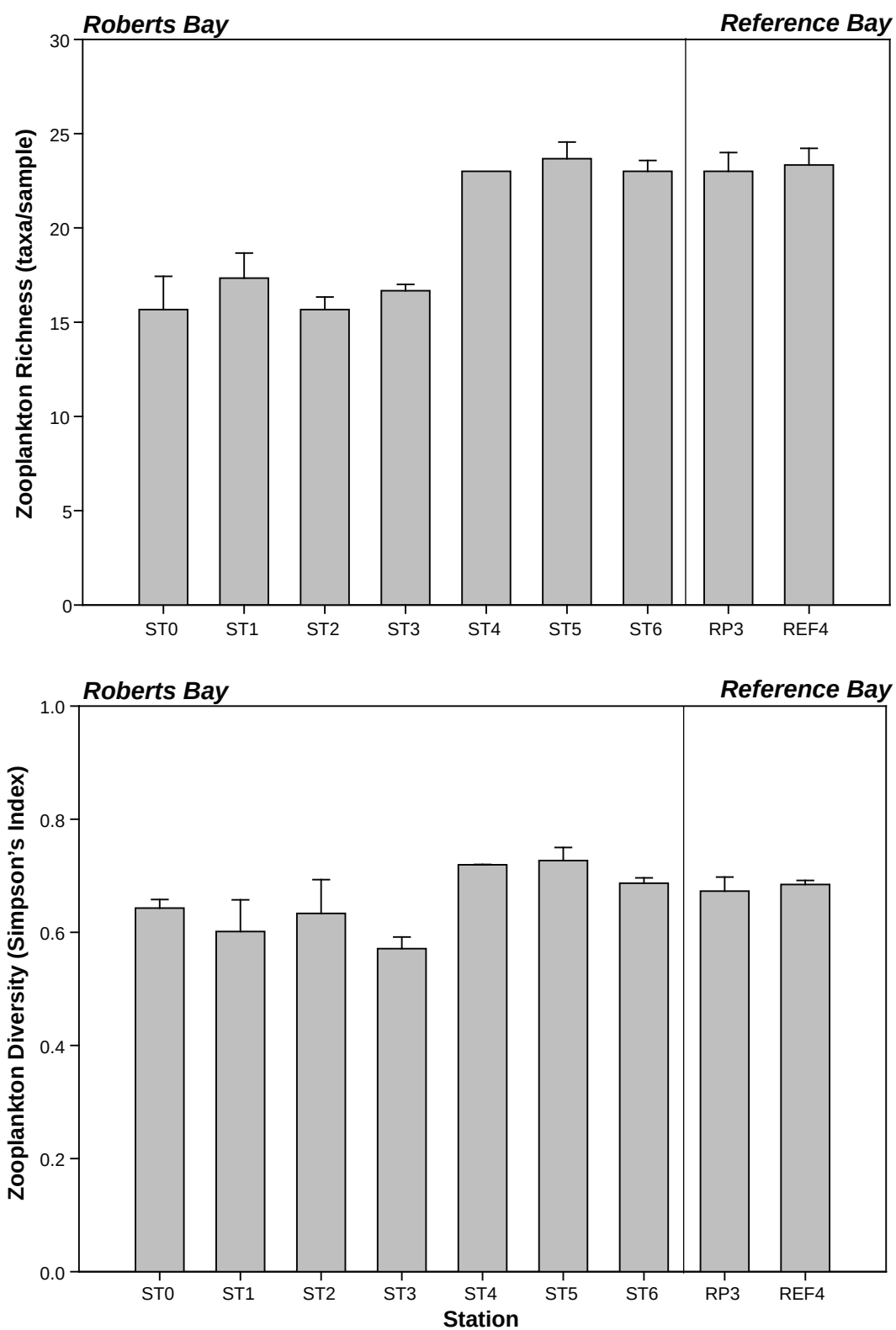


Notes: Error bars represent standard error of the mean of multiple sampling sites.
Dotted line represents analytical detection limit for 2009.
Only a subset of sites sampled in 2009 (ST0, ST1, ST2, and ST3) are plotted here; these sites were selected because they are comparable to historical sampling locations.



Notes: Error bars represent standard error of the mean.





3.9 BENTHOS

Benthic macroinvertebrates (benthos or macrobenthos) are organisms greater than 0.5 mm in size that live on or in the sediment (i.e., benthic zone) and are ecologically important as food sources for fish. Because of their close association with the sediment and their limited mobility, benthos are useful indicators of sediment quality and local environmental conditions. Benthos samples were collected from 11 sites in Roberts Bay and 3 sites in Reference Bay in August, 2009. Complete results of benthos taxonomic analysis are provided in Appendix 3.9-1.

Benthos density was highly variable among sites, ranging from an average of 288 organisms/m² at site ST9 to 40,100 organisms/m² at site RTF1 (Figure 3.9-1). There was generally a high degree of variability among replicates samples. Some sites with the lowest benthos densities (e.g., ST7, ST8, ST2, ST9) were located in the Glenn Outflow receiving environment. Areas located near the mouths of rivers are generally susceptible to riverine sediment loading, which may negatively affect benthos density. Increased sedimentation has commonly been linked to decreased benthos density in aquatic systems (e.g., Martin and Neely 2001; Donohue and Irvine 2004). Within each bay, there was no obvious relationship between sample depth and benthos density.

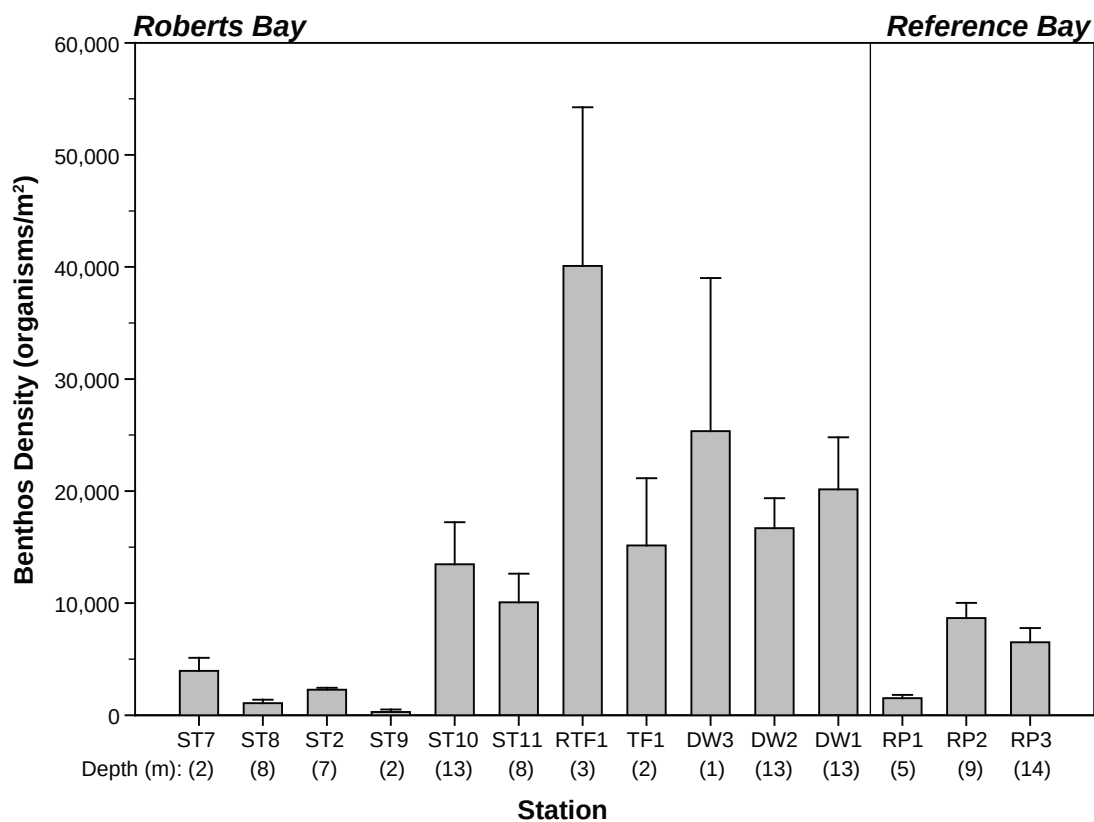
Nematodes were extremely abundant in some benthos samples (>40,000 nematodes/m²), but nematode densities could not be accurately quantified because of the large number of these organisms and because nematodes typically belong to the meiobenthos size class (i.e., 0.032 mm to 0.5 mm in size), which would have passed through the sieve used to collect macrobenthos samples. Sites RTF1 and DW3 in Roberts Bay and site RP1 in Reference Bay contained particularly high densities of nematodes. Nematode counts were considered qualitative and were not included in the calculations of benthos density, richness, or diversity.

The benthos taxonomic assemblage was variable among sites (Figure 3.9-2). Harpacticoid copepods dominated the benthos community at sites ST7, RTF1, TF1, and DW3 in Roberts Bay and site RP1 in Reference Bay, making up between 45% and 96% of the benthos assemblage. The sediment at these sites consisted predominantly of sand. Nematodes were also abundant at most of these sandy, harpacticoid-dominated sites.

Polychaete worms were the most abundant benthic invertebrates at sites ST11, DW2, DW1 in Roberts Bay and RP2 and RP3 in Reference Bay, making up between 36% and 76% of the benthos assemblage. Bivalves dominated the benthos community at sites ST8 (64%) and ST2 (73%) in Roberts Bay, and were abundant in several sites within both Roberts and Reference Bays. Cumaceans and amphipods were also commonly found in benthos samples.

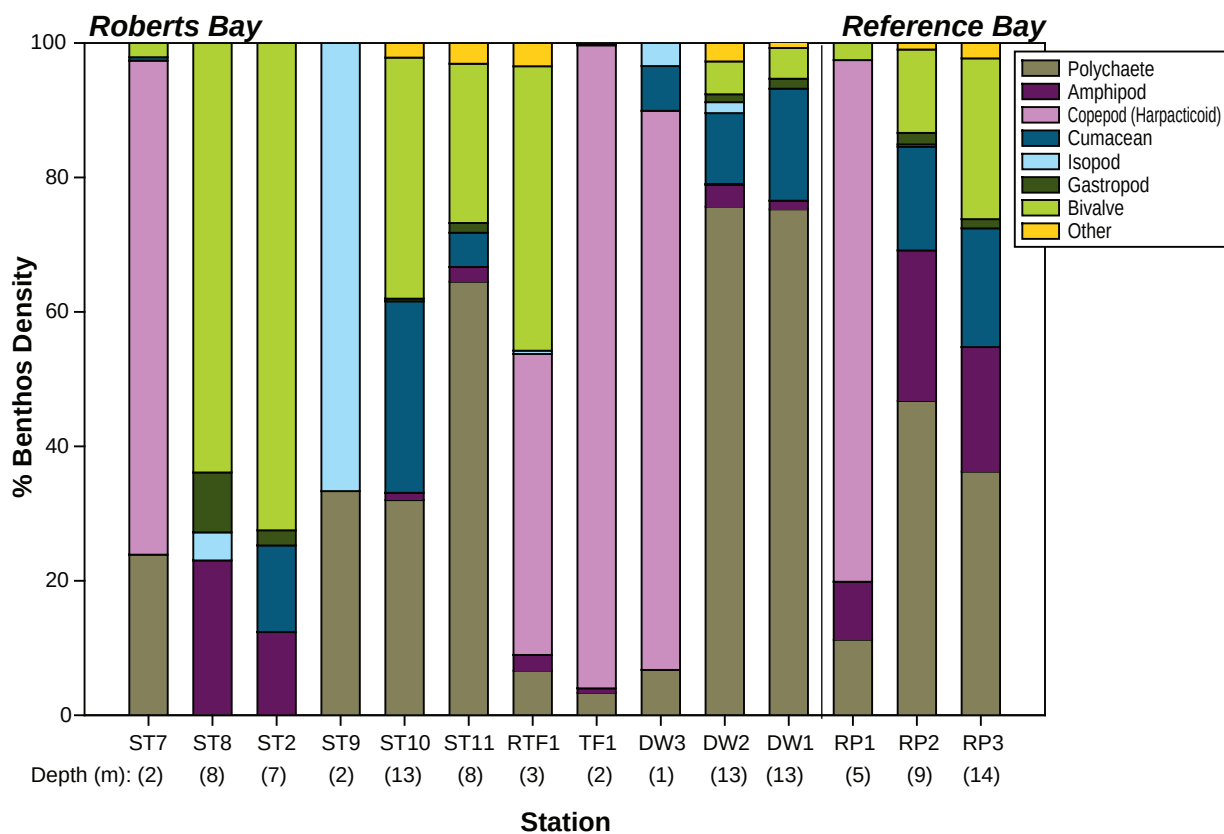
Site ST9 along the western shore of Roberts Bay was notable for having very low numbers of benthic invertebrates. Out of three replicate samples collected at this site, two replicates each contained a single isopod (*Saduria entomon*), and one replicate contained nine polychaetes (all *Nephtys neotena*).

Average benthos richness ranged from a single taxon at site ST9 to 22 taxa at site DW2. Taxa richness was highly variable, with no apparent spatial trends. Simpson's diversity ranged from 0 at site ST9 to 0.84 at Reference Bay sites RP2 and RP3. Simpson's diversity was particularly low at sites ST9, RTF1, TF1, DW3, and RP1, ranging from 0 to 0.39, while diversity levels at the remaining sites were ≥0.63 (Figure 3.9-3). With the exception of the benthos-poor site ST9, the least diverse sites were all characterized as having sandy substrates dominated by harpacticoid copepods (i.e., ST7, RTF1, TF1, DW3, and RP1).

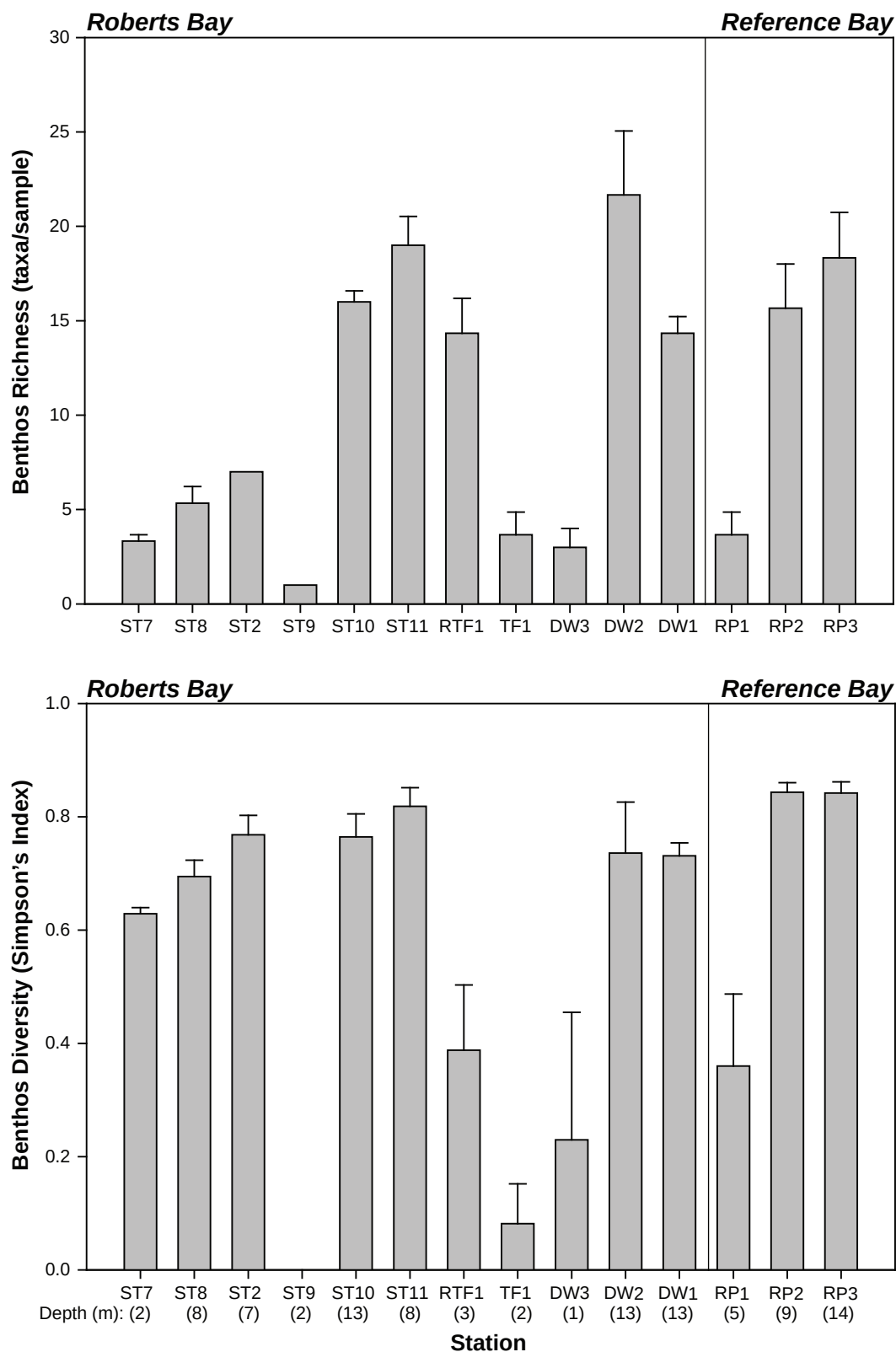


Notes: Error bars represent standard error of the mean.
Numbers in parentheses indicate sampling depths in metres.

Figure 3.9-1



Note: Numbers in parentheses indicate sampling depths in metres.



Notes: Error bars represent standard error of the mean.
Numbers in parentheses indicate sampling depths in metres.

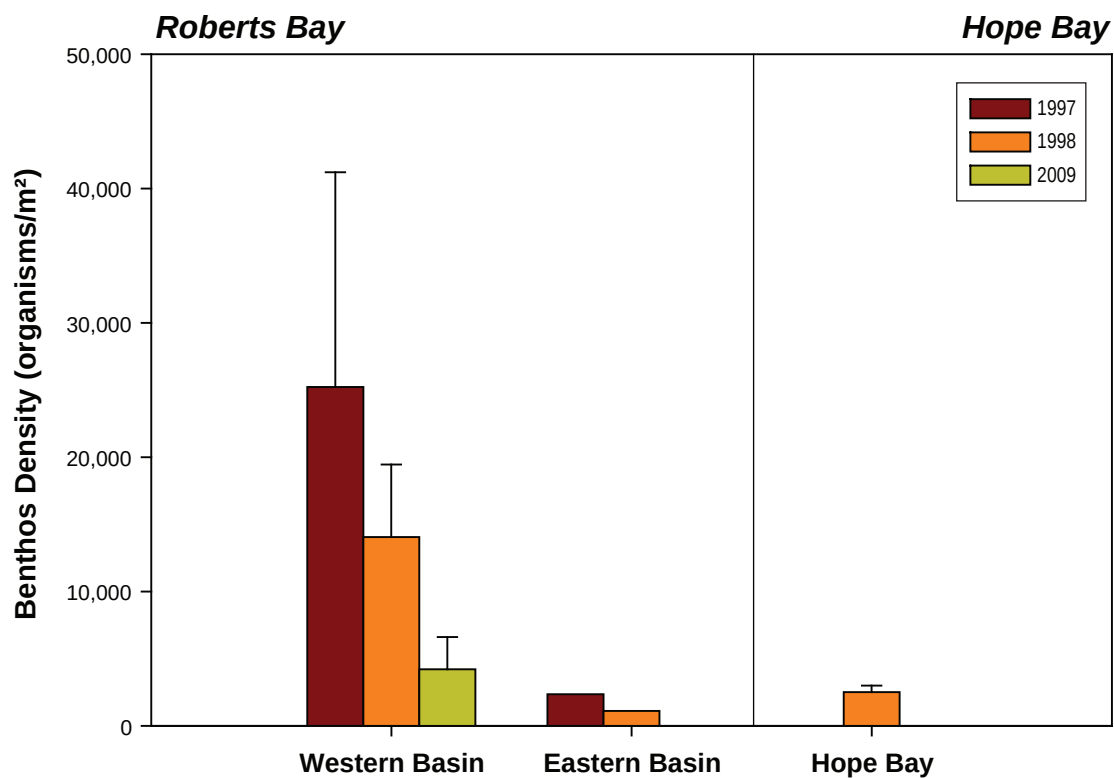
Figure 3.9-3

3.9.1 Historical Trends in Benthos

Prior to 2009, marine benthos samples were collected from Roberts Bay in 1997, 1998, and 2009, and Hope Bay in 1998. A sampling attempt was made in 2000 using an Ekman sampler, but the sediment was reported to be too hard-packed to collect an adequate benthos sample. Figure 2.3-4 shows the historical benthos sampling locations, and Table 2.3-5 presents the methodological details of historical benthos sampling.

Figure 3.9-4 shows the mean benthos density in Roberts and Hope bays from 1997 to 2009. The standard error associated with each mean is high as a result of the high degree of variability among sites sampled each year. Benthos density in the eastern basin of Roberts Bay was lower than the average density in the western basin in both 1997 and 1998. Within the western basin, average benthos density was lower in 2009 than in previous years; however, annual trends should be interpreted with caution because of the high degree of within-year variability.

Taxonomic results reveal that several benthos taxa were commonly found in samples collected from Roberts Bay during 1997, 1998, and 2009. These recurring groups included: polychaetes, bivalves, amphipods, and cumaceans. Nematodes, isopods, harpacticoid copepods, and other taxa were also found in benthos samples from Roberts Bay, but these groups were less widespread. In Hope Bay, the most numerous taxa observed in samples from 1998 included nematodes, polychaetes, and dipterans.



Notes: Error bars represent standard error of the mean of multiple sampling sites.
Only a subset of sites sampled in 2009 (ST7, ST8, ST2, ST9, and ST10) are plotted here;
these sites were selected because they are comparable to historical sampling locations.

Figure 3.9-4

References

References

- Ahern, F., J. M. Eckert, and N. C. Payne. 1985. Speciation of chromium in sea water. *Analytical Chimica Acta* 175:147–51.
- CCME. 1999. Canadian water quality guidelines for the protection of aquatic life: Chromium — Hexavalent chromium and trivalent chromium. In: Canadian environmental quality guidelines, 1999. Winnipeg, MB: Canadian Council of Ministers of the Environment.
- CCME. 2002. Canadian sediment quality guidelines for the protection of aquatic life. Summary tables. Update 2002. Winnipeg, MB: Canadian Council of Ministers of the Environment.
- CCME. 2007. Canadian water quality guidelines for the protection of aquatic life: Summary table. Updated December, 2007. In: Canadian environmental quality guidelines, 1999. Winnipeg, MB: Canadian Council of Ministers of the Environment.
- Donohue, I. and K. Irvine. 2004. Seasonal patterns of sediment loading and benthic invertebrate community dynamics in Lake Tanganyika, Africa. *Freshwater Biology* 49:320–31.
- Martin, D. C. and R. K. Neely. 2001. Benthic macroinvertebrate response to sedimentation in a *Typha angustifolia* L. wetland *Wetlands Ecology and Management* 9:441–54.
- Mason, R. P., K. R. Rolffhus, and W. F. Fitzgerald. 1995. Methylated and elemental mercury cycling in surface and deep ocean waters of the North Atlantic. *Water, Air, and Soil Pollution* 80:665–77.
- Mason, R. P., K. R. Rolffhus, and W. F. Fitzgerald. 1998. Mercury in the North Atlantic. *Marine Chemistry* 61 (1–2): 37–53.
- Parsons, T. R., M. Takahashi, and B. Hargrave. 1984. *Biological Oceanographic Processes*. Oxford, UK: Pergamon Press.

Appendix 3.2-1

Winter Marine CTD Data for Roberts and Reference Bays,
Hope Bay Belt Project, 2009

Appendix 3.2-1. Winter Marine CTD Data for Roberts and Reference Bays, Hope Bay Belt Project, 2009

Station Date Parameter Unit	WT0					WT1					WT2				
	April 28, 2009					April 28, 2009					April 28, 2009				
	Conductivity (µS/cm)	Temperature (°C)	Turbidity (NTU)	Depth (m)	Salinity	Conductivity (µS/cm)	Temperature (°C)	Turbidity (NTU)	Depth (m)	Salinity	Conductivity (µS/cm)	Temperature (°C)	Turbidity (NTU)	Depth (m)	Salinity
	11.2565	-0.0925	576.9351	0.3431	12.5077	21.7488	-1.2935	1.678	1.8106	26.5972	21.915	-1.0106	2.1925	0.3768	26.5676
	14.921	-0.2871	141.8918	0.6518	17.0729	21.7388	-1.24	0.2336	2.1445	26.5359	21.8143	-0.9586	1.4567	0.9349	26.3883
	15.3347	-0.4399	12.2645	0.8065	17.6756	21.7516	-1.2502	0.1924	2.1524	26.5622	21.7653	-0.8484	0.357	1.5224	26.2268
	15.331	-0.5464	7.5428	0.7872	17.7333	21.7507	-1.2727	0.1924	2.1887	26.581	21.7525	-0.8737	0.6186	1.5945	26.2321
	15.3276	-0.6437	9.2968	0.824	17.7864	21.747	-1.2717	0.1983	2.3801	26.5751	21.7284	-0.8447	0.548	1.6531	26.1749
	15.2841	-0.714	7.2956	0.8553	17.7731	21.7518	-1.274	0.1983	2.5903	26.5834	21.7402	-0.8394	0.2101	2.3838	26.1855
	15.2266	-0.7552	6.78	0.8696	17.7249	21.7528	-1.2848	0.196	2.7888	26.5942	21.7282	-0.8256	0.1889	3.1171	26.1574
	15.2039	-0.7832	9.7947	0.8919	17.7128	21.7415	-1.2857	0.1877	2.9984	26.5798	21.7428	-0.8233	0.1866	4.0766	26.1742
	15.1784	-0.8041	7.1143	0.9091	17.6929	21.74	-1.2847	0.1995	3.4387	26.5767	21.7404	-0.7867	0.1889	4.8745	26.1388
	15.1505	-0.821	8.5281	0.9313	17.6676	21.7378	-1.2842	0.196	3.9994	26.573	21.7636	-0.8106	0.2278	5.7221	26.1895
	15.1135	-0.8354	7.79	0.939	17.6292	21.7481	-1.29	0.1889	4.5188	26.5917	21.7601	-0.8047	0.276	6.6684	26.1793
	15.0927	-0.8487	7.8288	0.9535	17.6107	21.7504	-1.2709	0.1936	5.058	26.5775	21.7725	-0.8283	0.2548	7.5269	26.2158
	15.0639	-0.861	7.5004	0.9275	17.5815	21.7575	-1.2765	0.1948	5.605	26.5916	21.7853	-0.8238	0.3243	8.1506	26.2284
	15.179	-0.8706	7.5722	0.905	17.7328	21.7604	-1.2838	0.2019	5.9708	26.6018	21.7753	-0.8719	0.3514	8.7559	26.2569
	15.6487	-0.8794	10.4916	0.9081	18.3339	21.7709	-1.2827	0.2748	6.2469	26.6148	21.7818	-0.8311	0.3596	9.3657	26.2295
	16.1575	-0.8922	5.7688	0.9381	18.9896	21.7701	-1.2858	0.1983	6.4059	26.6163	21.7927	-0.8455	0.3773	9.7278	26.2563
	21.2963	-0.9035	3.0577	1.1004	25.6573	21.7702	-1.2783	0.1901	6.4667	26.6098					
	21.7541	-0.9131	3.0177	1.4324	26.2686										
	21.7728	-0.9416	0.4149	1.7299	26.3181										
	21.7596	-0.9821	0.4138	1.9334	26.3361										
	21.7481	-1.01	0.3879	2.1918	26.3452										
	21.7494	-1.0276	0.382	2.3497	26.3624										
	21.7465	-1.0386	0.3572	2.532	26.368										
	21.7438	-1.0488	0.3184	2.8068	26.3734										
	21.7466	-1.0589	0.289	3.0649	26.3858										
	21.7556	-1.0673	0.2878	3.1725	26.405										
	21.757	-1.0765	0.2901	3.2157	26.415										
	21.7476	-1.0846	0.2819	3.2355	26.4096										
	21.7495	-1.0885	0.2831	3.2715	26.4156										

Appendix 3.2-1. Winter Marine CTD Data for Roberts and Reference Bays, Hope Bay Belt Project, 2009

Station Date Parameter Unit	WT3					WT4					WT5				
	May 7, 2009					April 30, 2009					May 7, 2009				
	Conductivity (µS/cm)	Temperature (°C)	Turbidity (NTU)	Depth (m)	Salinity	Conductivity (µS/cm)	Temperature (°C)	Turbidity (NTU)	Depth (m)	Salinity	Conductivity (µS/cm)	Temperature (°C)	Turbidity (NTU)	Depth (m)	Salinity
	21.7695	-0.959	0.462	1.2053	26.3292	21.7512	-1.5115	0.183	1.7445	26.7958	21.7575	-1.3647	0.9988	1.448	26.6725
	21.8002	-0.9502	0.9847	1.6582	26.3619	21.737	-1.5136	0.1583	2.3872	26.7781	21.7855	-1.3691	0.176	1.9255	26.7137
	21.796	-0.938	0.5538	2.2684	26.3453	21.7538	-1.5148	0.1465	3.3301	26.8013	21.7881	-1.3648	0.1665	3.1756	26.7127
	21.8003	-0.9078	1.1448	2.9019	26.3243	21.7528	-1.5156	0.1501	4.0346	26.8004	21.7823	-1.3559	0.1783	4.6515	26.6963
	21.7995	-0.9122	0.3537	3.4881	26.3267	21.759	-1.5163	0.1524	4.6995	26.809	21.7956	-1.3489	0.1689	5.9842	26.7071
	21.8022	-0.9154	0.1771	4.1174	26.3328	21.7564	-1.5166	0.1548	5.3296	26.8055	21.7908	-1.3243	0.1642	7.2653	26.678
	21.8072	-0.9162	0.1618	4.7964	26.3397	21.7559	-1.5142	0.1559	6.0446	26.8022	21.7965	-1.279	0.1736	8.4339	26.6445
	21.8188	-0.913	0.1607	5.5432	26.3518	21.7654	-1.5118	0.1465	6.7176	26.8125	21.8126	-1.1526	0.1701	9.5472	26.553
	21.8161	-0.907	0.1736	6.118	26.3427	21.7584	-1.5105	0.1665	7.3944	26.8017	21.8973	-0.9627	0.1677	10.7452	26.4966
	21.8238	-0.8949	0.1665	6.7341	26.342	21.7577	-1.5064	0.1489	7.938	26.7966	22.2829	-0.6859	0.1783	12.0137	26.7593
	21.8377	-0.8765	0.183	7.3049	26.3439	21.765	-1.4986	0.1536	8.5849	26.7992	22.4229	-0.6832	0.1642	13.2075	26.9403
	21.8181	-0.8815	0.2148	7.9097	26.3221	21.7656	-1.4791	0.1571	9.268	26.782	22.4397	-0.692	0.1665	14.4612	26.9696
	21.8086	-0.8514	0.2937	8.4504	26.2831	21.7725	-1.4228	0.1501	10.0007	26.7403	22.4761	-0.6715	0.1654	15.7203	26.9983
	21.8052	-0.8283	0.3066	8.8777	26.2582	21.7932	-1.2928	0.1595	10.5794	26.6513	22.5156	-0.6874	0.2407	17.0135	27.0639
	21.8075	-0.7871	0.3337	9.4161	26.225	21.8702	-1.079	0.1583	11.2139	26.5633	22.5553	-0.6871	0.1936	18.2947	27.1152
	21.8266	-0.8712	0.3525	9.9243	26.3232	22.1599	-0.9398	0.1583	11.9941	26.823	22.5783	-0.6836	0.176	19.507	27.1417
	21.8229	-0.8718	0.3514	10.3332	26.3187	22.3677	-0.9492	0.1936	12.7067	27.1064	22.6042	-0.6842	0.1359	20.6902	27.1757
	21.8206	-0.8783	0.349	10.7118	26.3212	22.3083	-0.9563	0.2101	13.495	27.0337	22.6236	-0.6904	0.123	21.9349	27.2062
	21.8453	-0.864	0.3608	11.1358	26.3411	22.3382	-0.9288	0.1618	14.2527	27.0481	22.6375	-0.6994	0.11	23.0725	27.2319
	21.8315	-0.851	0.3808	11.5835	26.3113	22.4037	-0.8812	0.1701	15.1239	27.0915	22.637	-0.716	0.143	24.0823	27.2458
	21.8675	-0.7673	0.3761	12.2576	26.2852	22.4726	-0.8772	0.2054	15.9573	27.1785	22.647	-0.726	0.0983	25.1867	27.2674
	21.9517	-0.5739	0.3678	12.7975	26.2269	22.4821	-0.9016	0.196	16.6987	27.2128	22.64	-0.7382	0.1006	26.3551	27.2687
	22.1661	-0.3951	0.3266	13.4375	26.3508	22.493	-0.9136	0.1795	17.4408	27.2377	22.652	-0.742	0.0994	27.4315	27.2872
	22.3128	-0.3129	0.2136	13.9933	26.4696	22.5007	-0.921	0.1818	18.2761	27.2542	22.6604	-0.7442	0.103	28.6567	27.2998
	22.415	-0.2599	0.3184	14.5256	26.5556	22.4945	-0.9245	0.2207	19.0029	27.2489	22.668	-0.7466	0.1006	29.863	27.3114
	22.4434	-0.21	0.3984	14.9225	26.5486	22.5165	-0.9177	0.2254	19.9089	27.2714	22.6731	-0.7449	0.1195	31.0447	27.3158
	22.4593	-0.2062	0.5209	15.3826	26.5656	22.5565	-0.9131	0.2572	20.6989	27.3198	22.6817	-0.7485	0.103	32.2218	27.3298
	22.458	-0.2141	0.4714	15.4158	26.5709	22.5613	-0.9215	0.2631	21.2964	27.3334	22.6861	-0.7513	0.1042	33.2571	27.3377
	22.4673	-0.2146	0.4738	15.4182	26.5834	22.5761	-0.921	0.2784	21.8134	27.3523	22.6916	-0.7508	0.1112	34.4303	27.3439
	22.4481	-0.2484	3.5168	15.4871	26.588	22.5898	-0.9405	0.2125	22.5524	27.3878	22.6957	-0.7562	0.1195	35.7181	27.3535
						22.5935	-0.9529	0.176	23.2617	27.4037	22.7024	-0.7592	0.1371	36.9721	27.3644
						22.5988	-0.9428	0.2207	23.9795	27.4012	22.7076	-0.7632	0.1501	38.133	27.3743
						22.6091	-0.9404	0.2654	24.5872	27.4123	22.7143	-0.7648	0.1442	39.3587	27.3839
						22.6144	-0.9515	0.2819	25.2742	27.4291	22.7227	-0.7623	0.1736	40.6969	27.392
						22.6216	-0.9528	0.2384	26.0779	27.4395	22.7247	-0.7632	0.1936	41.9175	27.3949
						22.6281	-0.9642	0.2278	26.6883	27.4581	22.7273	-0.7629	0.1936	43.1204	27.3974
						22.6333	-0.9612	0.196	27.2732	27.4619	22.7305	-0.7642	0.1913	44.1117	27.4023
						22.6413	-0.9798	0.2042	27.9844	27.4893	22.7362	-0.7601	0.1877	45.1824	27.4056
						22.6432	-0.9832	0.2325	28.453	27.4946	22.7376	-0.7616	0.176	46.2592	27.4081
						22.6417	-0.99	0.2348	29.0773	27.4985	22.7444	-0.7679	0.1842	47.2781	27.4223
						22.6551	-0.9931	0.2066	29.779	27.5189	22.7481	-0.7685	0.1642	47.8892	27.4275
						22.6614	-0.9896	0.1736	30.2865	27.5238	22.7458	-0.7701	0.1866	49.0374	27.4252
						22.6671	-0.9895	0.163	30.9467	27.5309	22.7575	-0.7661	0.2325	50.2425	27.4363
						22.674	-0.989	0.1642	31.7417	27.5391	22.7555	-0.7667	0.2478	51.364	27.4338
						22.6794	-1.002	0.1312	32.4272	27.5579	22.7643	-0.7664	0.2642	52.604	27.4445
						22.6823	-0.9981	0.1677	33.3325	27.5577	22.7723	-0.7642	0.2737	53.8432	27.4523
						22.6756	-1.0041	0.1854	33.7266	27.5541	22.7718	-0.7603	0.3549	55.0385	27.4475
						22.6818	-1.0115	0.1842	34.0899	27.5689	22.7725	-0.7538	0.3043	56.0577	27.442
						22.6786	-1.0233	0.183	34.8933	27.5752	22.7767	-0.7626	0.2584	57.04	27.455
						22.6877	-1.0221	0.2113	35.6147	27.5857	22.7711	-0.755	0.2289	57.9535	27.4403
						22.6865	-1.0378	0.1771	36.2026	27.5982	22.7821	-0.7537	0.2972	58.6918	27.4531
						22.6908	-1.0368	0.2054	36.8561	27.6028	22.7806	-0.7572	0.3726	58.9626	27.4543
						22.6878	-1.0417	0.2372	37.4308	27.6029					
						22.6996	-1.0259	0.256	38.1674	27.6037					
						22.6955	-1.0313	0.2784	38.7257	27.6029					
						22.7014	-1.0293	0.2537	39.3535	27.6085					
						22.7002	-1.0459	0.2301	39.9408	27.6219					
						22.7044	-1.0359	0.2172	40.4679	27.6181					
						22.7036	-1.0432	0.2172	41.0196	27.6234					
						22.7035	-1.0366	0.2125	41.5359	27.617					
						22.7018	-1.0387	0.1983	42.0526	27.6163					
						22.6952	-1.0345	0.223	42.6361	27.6034					
						22.6949	-1.0406	0.2242	43.0204	27.6085					
						22.6983	-1.0353	0.269	43.6441	27.6078					
						22.6994	-1.053	0.2972	44.0155	27.6252					
						22.7038	-1.0577	0.2772	44.5759	27.6352					
						22.6981	-1.0512	0.2913	45.2137	27.6213					
						22.6988	-1.0587	0.3066	45.6762	27.6289					
						22.7004	-1.0561	0.3066	46.1312	27.6283					

Appendix 3.2-1. Winter Marine CTD Data for Roberts and Reference Bays, Hope Bay Belt Project, 2009

Station	WT6					WT7					WT8				
Date	April 30, 2009					May 7, 2009					May 7, 2009				
Parameter	Conductivity	Temperature	Turbidity	Depth	Salinity	Conductivity	Temperature	Turbidity	Depth	Salinity	Conductivity	Temperature	Turbidity	Depth	Salinity
Unit	(µS/cm)	(°C)	(NTU)	(m)		(µS/cm)	(°C)	(NTU)	(m)		(µS/cm)	(°C)	(NTU)	(m)	
	21.7652	-1.2492	0.1406	1.781	26.5795	22.7964	-1.3806	0.3102	1.9994	26.7431	21.7331	-1.4359	0.183	2.0116	26.7033
	21.7663	-1.2536	0.143	2.3549	26.5847	22.7989	-1.3766	0.1795	2.0587	26.7394	21.7393	-1.4247	0.1771	3.3058	26.701
	21.7699	-1.2626	0.1454	3.1789	26.5971	22.7994	-1.3654	0.1583	3.1644	26.7294	21.762	-1.4091	0.163	4.5855	26.7167
	21.7662	-1.2527	0.1501	3.8381	26.583	22.7986	-1.3327	0.1583	4.2783	26.7124	21.8144	-1.3995	0.1583	5.7992	26.7777
	21.7757	-1.2321	0.1383	4.5801	26.5769	22.7957	-1.2757	0.1595	5.3513	26.6926	21.801	-1.3944	0.1665	7.0166	26.7545
	21.7705	-1.2194	0.1501	5.3171	26.5583	22.7945	-1.2438	0.1571	6.6805	26.7165	21.7986	-1.3792	0.1583	8.2287	26.7371
	21.7812	-1.2353	0.1383	6.2128	26.5864	22.7975	-1.1893	0.1571	7.8456	26.7529	21.8043	-1.343	0.1489	9.3805	26.7117
	21.7726	-1.2184	0.1477	6.2652	26.5598	22.7904	-1.1546	0.1607	8.9344	26.7437	21.8076	-1.2324	0.1642	10.5345	26.6166
	21.7751	-1.2144	0.1348	6.7992	26.5593	22.7922	-1.0901	0.1536	10.1872	26.7376	21.997	-1.0511	0.1724	11.6397	26.7066
	21.7787	-1.2155	0.1383	7.4463	26.5647	22.7852	-1.0182	0.1583	11.4317	26.7452	22.1315	-0.9086	0.1771	12.7609	26.7574
	21.7785	-1.2002	0.1406	7.9984	26.5506	22.786	-0.8674	0.1642	12.6841	26.7042	22.347	-0.905	0.1783	14.0141	27.0385
	21.7793	-1.1942	0.1418	8.5978	26.546	22.7888	-0.7334	0.1877	13.9833	26.9115	22.3022	-0.8994	0.1771	15.1661	26.9736
	21.785	-1.1586	0.1512	9.3346	26.5215	22.7858	-0.707	0.1924	15.3024	26.9977	22.362	-0.8874	0.1748	16.3185	27.0413
	21.7899	-1.1044	0.1477	9.9949	26.4798	22.7901	-0.723	0.196	16.666	27.0816	22.379	-0.8764	0.183	17.5352	27.0532
	21.8389	-0.969	0.1418	10.6358	26.4249	22.7876	-0.7312	0.1724	17.8841	27.0819	22.4368	-0.8529	0.1689	18.6712	27.1079
	22.0472	-0.7591	0.1618	11.3271	26.5146	22.7816	-0.7282	0.1689	18.8827	27.1281	22.4703	-0.817	0.1689	19.7169	27.1193
	22.128	-0.6562	0.2089	12.1077	26.5299	22.7783	-0.7394	0.2019	19.8188	27.1623	22.5476	-0.7928	0.1724	20.705	27.199
	22.3282	-0.582	0.203	12.7734	26.7264	22.7684	-0.7541	0.2254	20.766	27.1791	22.5643	-0.8121	0.2042	21.8972	27.238
	22.4052	-0.5861	0.1713	13.6143	26.8305	22.7803	-0.7718	0.2431	22.0039	27.2533	22.5704	-0.8362	0.183	22.9142	27.2672
	22.4184	-0.6136	0.1677	14.4118	26.8717	22.7732	-0.7957	0.2054	23.4897	27.2755	22.5583	-0.8553	0.1818	23.9558	27.2679
	22.421	-0.6092	0.1559	15.2299	26.8709	22.7677	-0.8049	0.2089	24.9472	27.2701	22.5722	-0.8534	0.1642	24.9606	27.2841
	22.4309	-0.5903	0.1618	16.077	26.8666	22.767	-0.7892	0.1665	26.3648	27.2943	22.5943	-0.8513	0.1665	25.8667	27.3109
	22.5286	-0.5688	0.1913	16.8248	26.975	22.7658	-0.7872	0.2113	27.6667	27.3224	22.5874	-0.8478	0.163	26.8068	27.2982
	22.5399	-0.5774	0.2089	17.6534	26.9971	22.7602	-0.7906	0.1983	29.0472	27.3552	22.6021	-0.8311	0.1724	27.5967	27.302
	22.5584	-0.5773	0.1948	18.3456	27.0208	22.761	-0.7915	0.1924	30.3299	27.365	22.6415	-0.8218	0.2301	28.3602	27.3452
	22.5926	-0.5779	0.1489	19.0655	27.0659	22.7516	-0.7941	0.203	31.7191	27.3811	22.6483	-0.8174	0.2937	29.2469	27.3498
	22.6086	-0.5798	0.1159	19.8101	27.0882	22.754	-0.7978	0.1983	33.2101	27.3917	22.6638	-0.8194	0.3349	30.0922	27.3717
	22.6115	-0.5797	0.1006	20.6618	27.0914	22.7509	-0.8008	0.1783	34.0958	27.3988	22.6686	-0.8219	0.3172	30.8567	27.3799
	22.6242	-0.5807	0.0971	21.5881	27.1085	22.7484	-0.802	0.1842	35.3799	27.4058	22.683	-0.8273	0.3113	31.6698	27.4034
	22.6275	-0.5783	0.0865	22.5366	27.1102	22.7405	-0.8052	0.1807	36.8382	27.4118	22.6786	-0.8263	0.3149	32.2856	27.3964
	22.6327	-0.5771	0.0912	23.434	27.1155	22.7393	-0.8072	0.1818	38.1563	27.4304	22.682	-0.8307	0.2913	33.0468	27.4045
	22.6395	-0.5888	0.0783	24.2126	27.1344	22.7317	-0.8087	0.183	39.5783	27.4306	22.6879	-0.8344	0.3396	33.08	27.4157
	22.6411	-0.5954	0.0735	25.0069	27.1421	22.7282	-0.8106	0.1724	41.0219	27.4431	22.6881	-0.8427	0.3019	33.1728	27.4235
	22.6416	-0.6117	0.0724	25.8156	27.157	22.7195	-0.8131	0.1818	42.4419	27.4492	22.6858	-0.8653	0.309	33.4842	27.4408
	22.6378	-0.6173	0.0947	26.53	27.1566	22.7199	-0.8145	0.1866	43.6699	27.46					
	22.6399	-0.6324	0.0735	27.2998	27.1726	22.7066	-0.8176	0.1795	45.0154	27.4637					
	22.644	-0.6284	0.0724	28.0743	27.1739	22.7037	-0.8204	0.1713	46.4008	27.4759					
	22.6468	-0.6305	0.0818	28.8396	27.1792	22.6988	-0.8194	0.2007	47.1726	27.4778					
	22.6477	-0.6377	0.0783	29.6292	27.1864	22.6951	-0.8185	0.1983	47.3399	27.481					
	22.6558	-0.6344	0.0806	30.4083	27.1937	22.689	-0.8189	0.1818	47.5798	27.4781					
	22.6603	-0.6363	0.0747	31.1711	27.2009	22.678	-0.82	0.2113	48.8305	27.4908					
	22.6663	-0.6338	0.0912	31.925	27.2062	22.6707	-0.822	0.2172	50.0685	27.491					
	22.6736	-0.6287	0.083	32.8051	27.2106	22.6477	-0.8244	0.223	51.3664	27.4999					
	22.6824	-0.6386	0.0841	33.5867	27.2307	22.6245	-0.8261	0.2148	52.6606	27.5025					
	22.6815	-0.6335	0.0888	34.2861	27.2246	22.5948	-0.8274	0.2066	54.0738	27.5038					
	22.691	-0.6385	0.0924	35.0717	27.2412	22.6047	-0.8291	0.2501	55.4017	27.5118					
	22.6936	-0.636	0.103	35.8376	27.2419	22.6036	-0.8288	0.2042	56.669	27.5203					
	22.6973	-0.6238	0.11	36.584	27.2355	22.559	-0.8294	0.2042	58.028	27.5045					
	22.7116	-0.6316	0.1206	37.3727	27.2607	22.5559	-0.831	0.2019	59.3921	27.5183					
	22.7056	-0.6486	0.1265	38.234	27.2679	22.5372	-0.8314	0.2219	60.6347	27.5224					
	22.7117	-0.6451	0.1348	38.9491	27.2724	22.4997	-0.832	0.2219	61.9261	27.5301					
	22.7157	-0.6407	0.1477	39.6989	27.2732	22.5046	-0.8323	0.236	63.1018	27.5332					
	22.7244	-0.6445	0.1359	40.3917	27.2877	22.4512	-0.833	0.236	64.3314	27.5275					
	22.7246	-0.6391	0.1371	41.0552	27.2828	22.3673	-0.8338	0.2407	65.4856	27.5315					
	22.7255	-0.64	0.1418	41.7882	27.2845	22.119	-0.8353	0.2442	66.6762	27.5286					
	22.7293	-0.6438	0.1383	42.5348	27.2925	22.0481	-0.8355	0.2513	67.8673	27.5271					
	22.7274	-0.6388	0.1348	43.2112	27.285	21.9936	-0.837	0.2419	69.175	27.537					
	22.7243	-0.6518	0.1395	43.982	27.2923	21.9544	-0.8369	0.2336	70.3552	27.534					
	22.7305	-0.6514	0.1477	44.2958	27.3	21.9376	-0.8381	0.2313	71.3999	27.5438					
	22.7354	-0.6498	0.143	44.9075	27.3046	21.8733	-0.839	0.2054	72.439	27.5402					
	22.7372	-0.6477	0.1583	45.6089	27.3048	21.8335	-0.8399	0.2219	73.5611	27.5421					
	22.7468	-0.654	0.1524	46.4583	27.3226	21.8098	-0.8406	0.2278	74.6912	27.546					
	22.7383	-0.6277	0.2336	47.1784	27.2874	21.8001	-0.843	0.2395	75.7254	27.5486					
	22.7419	-0.6402	0.1489	47.6576	27.303	21.7997	-0.8469	0.2348	76.5878	27.5511					
	22.7462	-0.6233	0.163	48.3079	27.2931	21.7997	-0.842	0.2301	76.893	27.5431					
	22.7529	-0.16753	0.1677	49.022	27.2944										
	22.7512	-0.6324	0.1818	49.734	27.3072										
	22.7484	-0.6298	0.2219	50.3726	27.3008										
	22.754	-0.6135	0.1854	51.0153	27.2931										
	22.7599	-0.6256	0.2042	51.6594	27.3115										
	22.762	-0.6282	0.2019	52.3006	27.3162										
	22.7614	-0.6253	0.2136	52.8702	27.3126										
	22.7644	-0.6316	0.2019	53.5239	27.3219										
	22.7673	-0.6385	0.1995	54.1043	27.3317										
	22.7732	-0.6286	0.1971	54.6061	27.3302										
	22.7734	-0.6238	0.2148	55.1798	27.3257										
	22.775	-0.6197	0.2183	55.9008	27.3238										
	22.7746	-0.6113	0.1889	56.6055	27.3153										
	22.7807	-0.6182	0.1854	57.1852	27.3294										
	22.7766	-0.6117	0.1842	57.7504	27.3177										

Appendix 3.2-1. Winter Marine CTD Data for Roberts and Reference Bays, Hope Bay Belt Project, 2009

Station	WT9					WT10					WT6				
	May 7, 2009					May 7, 2009					May 7, 2009				
	Conductivity (μS/cm)	Temperature (°C)	Turbidity (NTU)	Depth (m)	Salinity	Conductivity (μS/cm)	Temperature (°C)	Turbidity (NTU)	Depth (m)	Salinity	Conductivity (μS/cm)	Temperature (°C)	Turbidity (NTU)	Depth (m)	Salinity
Date	Parameter	Unit													
	21.7857	-1.4319	0.4255	2.0778	26.7704	21.8418	-1.4198	0.6633	1.2128	26.8352	21.8153	-1.4106	0.3584	1.7324	26.791
	21.785	-1.431	0.1501	2.0808	26.7686	21.789	-1.4101	0.1512	2.3347	26.755	21.7898	-1.4024	0.1595	2.5512	26.749
	21.7807	-1.4292	0.1536	2.7549	26.7608	21.7897	-1.4061	0.1559	3.6053	26.7516	21.7911	-1.3955	0.1489	3.9454	26.7439
	21.7884	-1.4271	0.1454	3.6504	26.7687	21.7893	-1.4003	0.1595	4.8486	26.7453	21.7908	-1.3818	0.1618	5.3401	26.7304
	21.7894	-1.4245	0.1583	4.6214	26.7673	21.7943	-1.3891	0.1595	6.0611	26.7414	21.7987	-1.3533	0.1607	6.79	26.7147
	21.7897	-1.4195	0.1607	5.6216	26.7627	21.8036	-1.3697	0.1512	7.2525	26.7358	21.7999	-1.2847	0.1548	8.2519	26.6542
	21.7906	-1.4085	0.1512	6.5534	26.7536	21.8056	-1.3242	0.1548	8.4193	26.6971	21.8372	-1.084	0.143	9.6875	26.5247
	21.7912	-1.3812	0.1501	7.6928	26.7293	21.8067	-1.1844	0.1501	9.6334	26.5732	22.1926	-0.7606	0.1548	11.2094	26.7073
	21.7974	-1.3103	0.1454	8.6488	26.6735	21.9016	-0.8215	0.1465	10.9031	26.378	22.4101	-0.7228	0.1677	12.6106	26.9591
	21.8412	-1.143	0.1559	9.6003	26.5825	22.4007	-0.6867	0.1724	12.1012	26.9147	22.4382	-0.709	0.1665	14.0076	26.983
	22.1402	-0.9535	0.1677	10.6687	26.81	22.4548	-0.7062	0.1654	13.3697	27.0027	22.4907	-0.7159	0.2466	15.4691	27.0575
	22.2128	-0.8407	0.1677	11.4185	26.8049	22.4505	-0.7327	0.1654	14.5665	27.0201	22.5278	-0.7294	0.203	16.8333	27.1178
	22.3637	-0.7855	0.1936	12.28	26.9542	22.5012	-0.7301	0.1595	15.7293	27.0839	22.5872	-0.7255	0.1665	18.305	27.1918
	22.362	-0.7892	0.1936	13.1239	26.9549	22.5419	-0.7506	0.1924	16.9402	27.1553	22.6182	-0.7326	0.1053	19.8523	27.2382
	22.3979	-0.7608	0.1818	13.9609	26.9764	22.5317	-0.7543	0.1854	18.3321	27.1445	22.626	-0.7435	0.0947	21.3933	27.2575
	22.436	-0.7563	0.2113	14.7652	27.0221	22.5782	-0.7389	0.1583	19.6984	27.1913	22.6389	-0.7624	0.0865	22.9456	27.2908
	22.464	-0.7565	0.2089	15.7467	27.0586	22.6146	-0.7384	0.1324	21.0282	27.2381	22.6393	-0.7787	0.0841	24.3598	27.3054
	22.4904	-0.7651	0.1901	16.7998	27.1006	22.631	-0.7496	0.123	22.3746	27.2691	22.6351	-0.7904	0.09	25.76	27.3097
	22.5141	-0.7613	0.1948	17.7632	27.128	22.6363	-0.7663	0.11	23.9817	27.2904	22.6422	-0.7956	0.1042	27.0724	27.3231
	22.5524	-0.7718	0.236	18.7346	27.1874	22.6441	-0.7808	0.1112	25.4429	27.313	22.6506	-0.7968	0.09	28.519	27.3345
	22.5581	-0.7742	0.2077	19.547	27.1967	22.6488	-0.7909	0.11	26.8274	27.3277	22.6625	-0.7968	0.0936	29.7447	27.3495
	22.578	-0.7848	0.2242	20.4003	27.232	22.6624	-0.7951	0.1089	28.3146	27.3488	22.6716	-0.7965	0.0924	31.1019	27.3606
	22.5952	-0.7888	0.2442	21.3474	27.2579	22.6619	-0.7968	0.1136	29.6884	27.3488	22.681	-0.8001	0.0947	32.5159	27.3755
	22.6004	-0.8014	0.2384	22.3379	27.2756	22.6782	-0.7996	0.1183	31.0556	27.3722	22.6883	-0.8052	0.1053	33.8945	27.3891
	22.6268	-0.805	0.2525	23.3835	27.3132	22.6823	-0.8016	0.1218	32.4157	27.3787	22.6982	-0.8103	0.1195	35.5009	27.4061
	22.639	-0.8081	0.2525	24.3614	27.3317	22.6921	-0.8047	0.1383	33.4293	27.394	22.7077	-0.8152	0.1301	36.9905	27.4223
	22.645	-0.8205	0.2631	25.3146	27.3504	22.698	-0.8092	0.1559	34.6094	27.4052	22.7127	-0.8205	0.1336	38.4204	27.433
	22.6485	-0.8215	0.2642	26.2907	27.3554	22.7028	-0.8166	0.1924	36.116	27.4175	22.7177	-0.82	0.1607	39.8257	27.4383
	22.6614	-0.8183	0.2548	27.2992	27.369	22.7075	-0.8194	0.2183	37.5869	27.4254	22.7179	-0.8227	0.1465	41.1809	27.4404
	22.6651	-0.8312	0.2713	28.2729	27.3852	22.7182	-0.8233	0.1924	39.0452	27.4424	22.7229	-0.825	0.1583	42.5349	27.4484
	22.6657	-0.8325	0.2619	29.3916	27.3865	22.7262	-0.8225	0.1748	40.4123	27.4516	22.7298	-0.8218	0.1465	43.7144	27.4539
	22.6798	-0.8342	0.2513	30.7841	27.406	22.7303	-0.8228	0.1842	41.8049	27.4565	22.7343	-0.8255	0.163	44.9632	27.4627
	22.691	-0.8399	0.2419	32.1524	27.4252	22.7334	-0.8236	0.1795	43.3166	27.4606	22.7362	-0.8285	0.1618	46.0858	27.4673
	22.6974	-0.8506	0.2101	33.3864	27.4427	22.7337	-0.8232	0.1889	44.6974	27.4598	22.7389	-0.8317	0.1713	47.141	27.4733
	22.6992	-0.8483	0.2125	34.5509	27.4424	22.7405	-0.8258	0.362	46.1271	27.4705	22.7355	-0.8213	0.1548	47.3696	27.4591
	22.7064	-0.8511	0.2313	35.7868	27.4538	22.7499	-0.8267	0.196	47.2617	27.4832	22.7392	-0.8224	0.1642	47.3713	27.4651
	22.7196	-0.8594	0.236	36.9771	27.4782	22.7506	-0.8285	0.2042	48.3592	27.4851	22.7353	-0.8218	0.163	47.372	27.4593
	22.7229	-0.8617	0.2289	38.1282	27.4842	22.7558	-0.83	0.2089	49.7086	27.4928	22.7312	-0.8223	0.1713	47.3748	27.4544
	22.7231	-0.8643	0.2254	39.1464	27.4862	22.7586	-0.8313	0.2289	50.979	27.4969	22.7414	-0.8206	0.1771	47.4104	27.4664
	22.722	-0.8713	0.2054	40.0872	27.4906	22.7604	-0.8329	0.216	52.3345	27.5	22.7439	-0.8216	0.1665	48.0315	27.4702
	22.727	-0.8666	0.2077	41.1013	27.4925	22.7622	-0.8353	0.2183	53.6562	27.504	22.7524	-0.8217	0.1807	49.373	27.4809
	22.7296	-0.8719	0.2195	41.9952	27.5004	22.7694	-0.8371	0.2042	55.0007	27.5145	22.7564	-0.8246	0.1724	50.8302	27.4879
	22.7326	-0.8692	0.2254	42.9591	27.5013	22.7705	-0.8367	0.2525	56.2305	27.5148	22.7622	-0.827	0.1818	52.3325	27.497
	22.7362	-0.8704	0.2372	43.8066	27.5067	22.7775	-0.8376	0.2701	57.3462	27.5243	22.7581	-0.8287	0.1948	53.7193	27.4925
	22.7407	-0.8719	0.2254	44.6929	27.5136	22.7742	-0.8402	0.2148	58.4715	27.5219	22.7638	-0.8304	0.1913	55.0691	27.5008
	22.7447	-0.8791	0.2466	45.441	27.5251	22.7774	-0.8418	0.2195	59.6809	27.5268	22.7688	-0.8325	0.1913	56.3913	27.5087
	22.7432	-0.8805	0.2242	46.1426	27.524	22.7799	-0.8443	0.2489	60.6929	27.532	22.7732	-0.8328	0.2007	57.5725	27.5141
	22.7429	-0.8706	0.2513	46.5557	27.5144	22.779	-0.8448	0.2419	61.7799	27.5306	22.7745	-0.8377	0.2148	58.8853	27.5197
	22.7461	-0.872	0.3184	46.7307	27.5197	22.7837	-0.844	0.2595	62.9423	27.5355	22.7789	-0.8397	0.2089	60.2101	27.5267
						22.7848	-0.8428	0.2831	64.1171	27.5353	22.7808	-0.8406	0.2278	61.3196	27.5294
						22.7858	-0.8473	0.3007	65.2002	27.5401	22.7825	-0.8465	0.2089	62.4711	27.5364
						22.788	-0.847	0.3219	66.2596	27.5421	22.7807	-0.8426	0.223	63.3143	27.5301
						22.7867	-0.8503	0.3313	67.1858	27.5429	22.786	-0.8448	0.2584	64.1881	27.5386
						22.7886	-0.8533	0.3208	67.731	27.548	22.7809	-0.843	0.2784	64.9154	27.5298
						22.7866	-0.8508	0.3208	67.8298	27.543	22.7865	-0.8539	0.3255	65.4538	27.547
						22.7891	-0.8537	0.4526	68.0489	27.5488	22.7791	-0.8497	0.5162	65.5746	27.5333
											22.7905	-0.8461	0.3196	65.6015	27.5449
											22.7821	-0.8478	0.3066	65.6532	27.5355
											22.7841	-0.8477	0.3196	65.8434	27.5379

Appendix 3.2-1. Winter Marine CTD Data for Roberts and Reference Bays, Hope Bay Belt Project, 2009

Station	WT11					REFW				
	May 7, 2009					April 29, 2009				
	Conductivity	Temperature	Turbidity	Depth	Salinity	Conductivity	Temperature	Turbidity	Depth	Salinity
Date	(µS/cm)	(°C)	(NTU)	(m)		(µS/cm)	(°C)	(NTU)	(m)	
Parameter										
Unit										
	21.7982	-1.4239	1.1342	1.5293	26.7801	21.6837	-1.4404	0.6162	1.4638	26.6413
	21.7974	-1.4222	0.6151	2.0244	26.7773	21.6912	-1.4336	1.1601	2.0218	26.6449
	21.7965	-1.4195	0.1771	2.0303	26.7737	21.691	-1.4321	0.2336	2.0246	26.6434
	21.7898	-1.4211	0.163	2.0353	26.7661	21.6938	-1.4256	0.2113	2.2149	26.6412
	21.7953	-1.4174	0.1689	2.5992	26.7699	21.7048	-1.4167	0.2019	2.865	26.6477
	21.7948	-1.4136	0.1501	3.7079	26.7652	21.7174	-1.4068	0.1971	3.5522	26.6554
	21.7967	-1.4023	0.1501	4.9966	26.7569	21.7281	-1.4076	0.1818	4.2355	26.6702
	21.8077	-1.3849	0.1536	6.0854	26.7556	21.7266	-1.4077	0.183	4.9577	26.6679
	21.8412	-1.3971	0.1583	7.2715	26.8109	21.728	-1.3991	0.1736	5.716	26.6616
	21.8015	-1.3995	0.2584	8.3783	26.7591	21.7378	-1.381	0.1713	6.4745	26.6581
	21.8076	-1.3579	0.2395	9.3846	26.7295	21.7489	-1.3532	0.1689	7.2355	26.6478
	21.8286	-1.2677	0.2619	10.3704	26.6763	21.7751	-1.3288	0.1795	7.9568	26.6607
	21.9447	-1.0982	0.2784	11.372	26.6793	21.8006	-1.3045	0.1689	8.5308	26.6728
	22.1041	-0.9163	0.2725	12.528	26.7281	21.8276	-1.2827	0.1795	8.9881	26.6891
	22.2884	-0.7912	0.2454	13.648	26.8594	21.8408	-1.2673	0.196	9.7257	26.6926
	22.4407	-0.7482	0.2854	14.5882	27.0211	21.8644	-1.2475	0.1724	10.3427	26.706
	22.469	-0.751	0.309	15.7104	27.0604	21.8841	-1.228	0.1795	11.0642	26.7145
	22.5014	-0.7751	0.3431	16.8323	27.1241	21.9017	-1.1993	0.1665	11.7624	26.712
	22.5197	-0.7997	0.2419	18.0608	27.1699	21.9647	-1.1508	0.1783	12.4698	26.7522
	22.5341	-0.8067	0.2843	18.9943	27.1947	22.0028	-1.1194	0.1665	13.1803	26.7744
	22.5609	-0.8051	0.2913	20.0411	27.228	22.0242	-1.0841	0.1748	13.8722	26.7711
	22.5906	-0.8126	0.2431	20.9812	27.2735	22.1064	-1.0245	0.1689	14.5489	26.8266
	22.5917	-0.8128	0.2772	21.8564	27.2747	22.1976	-0.9859	0.1713	15.2732	26.9126
	22.604	-0.823	0.2901	22.8181	27.2996	22.2358	-0.9633	0.1771	15.9627	26.9426
	22.6204	-0.8244	0.2584	23.7642	27.3222	22.2947	-0.9444	0.1818	16.647	27.0032
	22.6334	-0.829	0.2254	24.7634	27.343	22.3277	-0.9229	0.1842	17.3026	27.0273
	22.6402	-0.8442	0.2313	25.9334	27.3652	22.3667	-0.9103	0.1559	17.9235	27.0673
	22.6461	-0.8404	0.2183	26.8757	27.3691	22.3759	-0.9017	0.1689	18.4862	27.0714
	22.6537	-0.856	0.2101	27.9844	27.3927	22.4151	-0.8892	0.183	19.0515	27.1118
	22.6666	-0.8492	0.2607	29.1511	27.403	22.4597	-0.8894	0.256	19.6921	27.1707
	22.6734	-0.8563	0.2172	30.2649	27.4178	22.4837	-0.8877	0.2348	20.3494	27.2004
	22.6782	-0.8609	0.2077	31.4656	27.4277	22.522	-0.8862	0.2266	21.022	27.2494
	22.6863	-0.868	0.2301	32.2397	27.4445	22.5303	-0.891	0.2325	21.626	27.2644
	22.6856	-0.8807	0.2478	33.1511	27.4548	22.5389	-0.8943	0.223	22.2049	27.2785
	22.6981	-0.8741	0.2537	33.7975	27.465	22.5535	-0.8981	0.2336	22.7457	27.3011
	22.6951	-0.8809	0.2419	34.6524	27.4667	22.5557	-0.9036	0.2384	23.2638	27.3087
	22.7043	-0.8765	0.256	35.6787	27.4744	22.5617	-0.8955	0.223	23.8003	27.3089
	22.7062	-0.8815	0.2384	36.6324	27.4809	22.5603	-0.8878	0.2289	24.3078	27.2998
	22.7071	-0.8789	0.2325	37.5421	27.4793	22.5622	-0.8949	0.2419	24.755	27.3087
	22.7112	-0.8764	0.2172	38.275	27.4821	22.5727	-0.8898	0.223	25.195	27.3177
	22.7093	-0.8752	0.2595	38.9241	27.478	22.5904	-0.8816	0.2431	25.7432	27.3334
	22.7107	-0.8715	0.2254	39.3718	27.4763	22.6184	-0.887	0.2513	26.3768	27.375
						22.6562	-0.8973	0.2207	26.9803	27.4341
						22.671	-0.9046	0.2183	27.541	27.4601
						22.6712	-0.897	0.2254	28.0669	27.4532
						22.6766	-0.9028	0.2101	28.5248	27.4654
						22.6736	-0.9053	0.2313	28.9953	27.4635
						22.6703	-0.8989	0.2525	29.4153	27.4531
						22.6802	-0.8966	0.2348	29.8388	27.4638
						22.6737	-0.8971	0.2454	30.3259	27.4554
						22.6767	-0.9067	0.2395	30.8223	27.4679
						22.6788	-0.9149	0.2219	31.4116	27.4778
						22.6872	-0.9285	0.2242	32.0515	27.5011
						22.6858	-0.9154	0.2066	32.6447	27.4869
						22.6886	-0.9183	0.196	32.9523	27.4932

Appendix 3.2-2

Winter Marine CTD Data for Hope Bay, Hope Bay Belt Project,
2009

Appendix 3.2-2. Winter Marine CTD Data for Hope Bay, Hope Bay Belt Project, 2009

Station Date Parameter Unit	HB1					HB2					HB4				
	May 2, 2009					May 2, 2009					May 2, 2009				
	Conductivity (µS/cm)	Temperature (°C)	Turbidity (NTU)	Depth (m)	Salinity	Conductivity (µS/cm)	Temperature (°C)	Turbidity (NTU)	Depth (m)	Salinity	Conductivity (µS/cm)	Temperature (°C)	Turbidity (NTU)	Depth (m)	Salinity
	22.2894	-1.4944	2.03	0.5194	27.5062	21.7799	-1.439	2.6575	1.3345	26.7693	21.8647	-1.4224	24.2505	0.8057	26.8685
	22.2393	-1.49	2.123	0.6968	27.4343	21.7951	-1.4389	0.143	2.0223	26.7893	21.7936	-1.4108	0.1195	1.9523	26.762
	22.1984	-1.4867	2.143	0.9238	27.3762	21.794	-1.4385	0.1465	2.0259	26.7873	21.7968	-1.4099	0.123	2.6751	26.765
	22.1745	-1.4801	1.7028	1.0918	27.3377	21.7961	-1.4391	0.1477	2.0261	26.7909	21.7974	-1.4087	0.1195	3.6467	26.7644
	22.1075	-1.4718	2.03	1.2483	27.2398	21.7931	-1.4391	0.1406	2.0367	26.7868	21.8012	-1.4021	0.1242	4.7242	26.763
	22.0083	-1.4602	1.8099	1.3943	27.0954	21.7946	-1.4369	0.1607	2.043	26.7868	21.7982	-1.3972	0.1183	5.8498	26.7539
	22.0051	-1.4601	1.8417	1.6814	27.091	21.7871	-1.4382	0.1454	2.3958	26.7778	21.8061	-1.3865	0.1206	6.8894	26.7544
	22.0272	-1.4916	1.7628	1.7192	27.1494	21.8002	-1.4374	0.1454	2.7971	26.7944	21.803	-1.3701	0.1265	8.0722	26.7349
	22.0274	-1.483	1.8688	1.7252	27.1419	21.7951	-1.4369	0.1501	3.1279	26.7868	21.8038	-1.3177	0.1206	9.0911	26.6885
	22.0238	-1.4776	1.8746	1.7255	27.132	21.7986	-1.438	0.143	3.5097	26.7923	21.814	-1.1766	0.1289	10.1904	26.5758
	22.0567	-1.4778	1.9818	1.7276	27.1765	21.799	-1.4365	0.1395	3.7899	26.7914	21.8859	-0.8843	0.1218	11.2097	26.4124
	22.0141	-1.4693	2.0971	1.7324	27.1114	21.7996	-1.4375	0.1406	4.073	26.793	22.3136	-0.7681	0.1736	12.3282	26.8726
	22.0161	-1.4684	1.9582	1.7325	27.1133	21.7989	-1.4378	0.1465	4.3878	26.7922	22.3535	-0.7419	0.1995	13.4135	26.9013
	22.0136	-1.4664	2.3008	1.734	27.1082	21.7949	-1.438	0.1406	4.6912	26.7869	22.3824	-0.6973	0.123	14.4317	26.8989
	22.0257	-1.4721	2.4267	1.7344	27.1296	21.7987	-1.4375	0.1454	5.0203	26.7912	22.4462	-0.6603	0.1583	15.4012	26.9493
	22.0122	-1.4647	2.5656	1.7352	27.1047	21.7989	-1.4359	0.1501	5.2868	26.79	22.4882	-0.63	0.1301	16.324	26.9769
	22.0124	-1.4673	2.0053	1.7365	27.1074	21.7977	-1.4357	0.1512	5.618	26.788	22.5332	-0.6148	0.1277	17.317	27.0218
	22.0116	-1.4604	1.7346	1.7365	27.1	21.8035	-1.436	0.1442	5.8684	26.796	22.5739	-0.6161	0.1512	18.2095	27.076
	22.007	-1.4626	2.2266	1.7368	27.0958	21.7968	-1.435	0.1642	6.1294	26.7859	22.5924	-0.6316	0.1877	19.1526	27.1137
	22.0483	-1.4765	1.598	1.7379	27.1641	21.798	-1.4336	0.1477	6.3254	26.7861	22.5983	-0.6417	0.1713	20.1194	27.13
	22.0025	-1.4603	1.9076	1.7384	27.0875	21.8041	-1.4312	0.1571	6.5956	26.792	22.6299	-0.6455	0.176	21.1405	27.1744
	22.0094	-1.4612	1.8511	1.7386	27.0978	21.8016	-1.4334	0.1501	6.8866	26.7905	22.6483	-0.6499	0.1724	22.0068	27.2021
	22.0174	-1.4589	1.7404	1.7392	27.1065	21.7959	-1.4334	0.1548	7.0716	26.7827	22.6574	-0.6571	0.1913	22.6713	27.2203
	22.009	-1.4605	1.9594	1.7396	27.0966	21.8051	-1.4316	0.1489	7.27	26.7934	22.6688	-0.6715	0.203	23.4367	27.2478
	22.011	-1.4594	1.8735	1.7398	27.0983	21.8004	-1.4293	0.1524	7.4353	26.7848	22.674	-0.6845	0.196	24.4752	27.2659
	22.0127	-1.4636	2.0865	1.74	27.1044	21.804	-1.428	0.1501	7.6416	26.7884	22.6861	-0.6915	0.1889	25.3123	27.2876
	22.0129	-1.4601	2.1395	1.7409	27.1015	21.8078	-1.4296	0.1489	7.8258	26.7949	22.6863	-0.7015	0.1913	26.3363	27.2964
	22.0189	-1.4594	1.9359	1.7415	27.1089	21.8081	-1.4296	0.1548	7.9188	26.7953	22.684	-0.7104	0.1901	27.1987	27.301
						21.8072	-1.4327	0.1465	7.9302	26.7968	22.6971	-0.7205	0.1877	28.131	27.3269
						21.8068	-1.4338	0.1489	7.9304	26.7973	22.7004	-0.7302	0.1818	29.06	27.3395
						21.7996	-1.4347	0.1559	7.9336	26.7885	22.707	-0.7367	0.2313	29.9005	27.3537
						21.804	-1.4311	0.1559	7.9347	26.791	22.7004	-0.7449	0.2384	30.7648	27.3519
											22.7105	-0.7484	0.2125	31.7428	27.368
											22.7114	-0.7546	0.2077	32.7497	27.3743
											22.716	-0.7611	0.2301	33.8081	27.3857
											22.7139	-0.7647	0.2537	34.6871	27.3857
											22.7188	-0.7684	0.3066	35.6338	27.3951
											22.7189	-0.7713	0.2949	36.3812	27.3974
											22.7259	-0.7726	0.3172	37.1962	27.4074
											22.7278	-0.7754	0.3137	38.0931	27.4121
											22.7324	-0.7775	0.2949	39.0137	27.4196
											22.7305	-0.7773	0.3208	39.5316	27.4165
											22.7343	-0.7792	0.3184	40.4673	27.4228
											22.7369	-0.7806	0.3149	41.1901	27.4272
											22.7412	-0.783	0.3196	41.9576	27.4346
											22.7386	-0.7843	0.3031	42.7121	27.432
											22.743	-0.7844	0.3313	43.4379	27.4374
											22.751	-0.785	0.3313	44.2372	27.4482
											22.7501	-0.7865	0.3455	45.0511	27.4479
											22.7534	-0.7871	0.3667	45.8287	27.4525
											22.751	-0.7868	0.3608	46.5576	27.4487
											22.7509	-0.7849	0.3714	47.2402	27.4464
											22.7534	-0.786	0.3926	47.9789	27.4503
											22.758	-0.7859	0.382	48.5278	27.4561
											22.7547	-0.7856	0.3855	49.0031	27.4512
											22.7645	-0.7841	0.3702	49.8239	27.4623

Appendix 3.2-2. Winter Marine CTD Data for Hope Bay, Hope Bay Belt Project, 2009

Station Date Parameter Unit	HB7					HB10					HB11				
	May 2, 2009					May 2, 2009					May 2, 2009				
	Conductivity (µS/cm)	Temperature (°C)	Turbidity (NTU)	Depth (m)	Salinity	Conductivity (µS/cm)	Temperature (°C)	Turbidity (NTU)	Depth (m)	Salinity	Conductivity (µS/cm)	Temperature (°C)	Turbidity (NTU)	Depth (m)	Salinity
21.7629	-1.4203	121.2596	0.4648	26.7301	21.7417	-1.4112	1.4567	1.1084	26.6931	21.7975	-1.3786	0.9341	0.9916	26.7388	
21.7913	-1.3935	0.6209	1.8043	26.7435	21.779	-1.4014	0.11	1.8767	26.7339	21.7834	-1.3528	0.5315	1.7999	26.6964	
21.7905	-1.4077	0.1395	1.9165	26.7552	21.7813	-1.3915	0.1089	1.9112	26.7283	21.7832	-1.3502	0.1042	2.2983	26.6935	
21.7989	-1.4051	0.1465	1.9171	26.7639	21.781	-1.4001	0.103	1.9426	26.7356	21.7831	-1.346	0.1089	3.2679	26.6891	
21.7905	-1.4098	0.1395	1.9182	26.757	21.7794	-1.3914	0.103	1.9525	26.7255	21.7867	-1.3416	0.1089	4.163	26.6895	
21.7978	-1.3986	0.1265	1.9189	26.7567	21.7856	-1.4039	0.1348	1.9581	26.7451	21.7933	-1.3175	0.1042	5.1109	26.6764	
21.8016	-1.3956	0.1312	1.9217	26.7591	21.784	-1.3902	0.1077	2.6101	26.7303	21.7973	-1.2451	0.1042	6.2083	26.6166	
21.7933	-1.4123	0.1312	2.0182	26.763	21.7885	-1.3797	0.1053	3.6878	26.7263	21.8994	-1.0926	0.103	7.2886	26.6161	
21.7955	-1.412	0.1348	2.5418	26.7653	21.7903	-1.3755	0.1053	4.7544	26.7245	21.9799	-0.9738	0.1006	8.2881	26.6169	
21.7939	-1.4123	0.1265	3.0692	26.7631	21.7951	-1.3579	0.1112	5.8118	26.7145	22.1117	-0.8886	0.1042	9.1336	26.7152	
21.793	-1.4107	0.1324	3.5424	26.7604	21.794	-1.3305	0.1124	6.8357	26.688	22.165	-0.8445	0.1006	10.0383	26.746	
21.7942	-1.4085	0.1312	4.0589	26.7596	21.7975	-1.2535	0.1112	7.8224	26.6234	22.2066	-0.8193	0.11	11.0503	26.7779	
21.7966	-1.4062	0.1277	4.6247	26.7605	21.8354	-1.0659	0.11	8.9602	26.5067	22.278	-0.7662	0.1018	11.863	26.8242	
21.7971	-1.3991	0.1348	5.1657	26.7545	22.0709	-0.9057	0.1018	10.0002	26.6761	22.3268	-0.7337	0.1501	12.7507	26.8592	
21.8034	-1.3895	0.1406	5.7036	26.7541	22.2095	-0.8873	0.0971	11.0478	26.8423	22.3749	-0.7069	0.1536	13.7259	26.8981	
21.8071	-1.3884	0.1395	6.2062	26.7578	22.2216	-0.8751	0.1018	12.0672	26.8469	22.4026	-0.696	0.1807	14.6888	26.9242	
21.8123	-1.3834	0.1418	6.699	26.76	22.2476	-0.8573	0.0947	13.1371	26.8648	22.4301	-0.6852	0.1524	15.7052	26.9502	
21.8177	-1.3874	0.1406	7.2256	26.7706	22.2731	-0.8296	0.1089	14.2456	26.8731	22.4533	-0.6669	0.123	16.6204	26.9639	
21.8185	-1.3865	0.1442	7.6562	26.7707	22.3066	-0.7925	0.1112	15.0228	26.8837	22.4816	-0.6374	0.1312	17.5358	26.9742	
21.8175	-1.3809	0.1524	8.0991	26.7641	22.3381	-0.7655	0.1253	15.8246	26.9009	22.5444	-0.6313	0.1406	18.4791	27.0507	
21.8135	-1.363	0.1512	8.5235	26.7424	22.3654	-0.7299	0.1218	16.7105	26.9045	22.5788	-0.6384	0.1489	19.4321	27.1017	
21.8338	-1.3435	0.1465	9.2187	26.7517	22.4275	-0.6892	0.1195	17.6423	26.9494	22.5898	-0.6486	0.1418	20.4925	27.1248	
21.8493	-1.3183	0.1571	9.7154	26.7497	22.4936	-0.663	0.1395	18.4044	27.0125	22.6082	-0.6533	0.1477	21.5247	27.1527	
21.8564	-1.2881	0.1701	10.0931	26.7319	22.5362	-0.6485	0.1665	19.3508	27.055	22.6307	-0.649	0.1489	22.5286	27.178	
21.8981	-1.2494	0.1713	10.6098	26.7526	22.5636	-0.6503	0.1736	20.2801	27.092	22.6518	-0.6516	0.1748	23.3625	27.2074	
21.9142	-1.189	0.1736	11.0156	26.7199	22.5959	-0.6494	0.1866	21.3689	27.1332	22.6506	-0.6601	0.1607	24.2334	27.2133	
21.9612	-1.1172	0.1948	11.4362	26.718	22.6123	-0.6529	0.2113	22.1684	27.1574	22.6642	-0.6661	0.1713	25.3303	27.2359	
22.0303	-1.0261	0.2419	12.0414	26.7284	22.6289	-0.6582	0.1724	23.1472	27.1835	22.6676	-0.6689	0.1901	26.0392	27.2424	
22.1107	-0.9804	0.3561	12.5766	26.7938	22.6515	-0.6656	0.2254	24.0446	27.2193	22.6771	-0.6718	0.1807	26.962	27.2572	
22.1769	-0.9403	0.3643	13.2478	26.8455	22.6612	-0.6728	0.2019	24.8231	27.2382	22.6826	-0.6803	0.196	27.7216	27.2717	
22.2308	-0.9226	0.4161	13.5848	26.9007	22.6754	-0.6782	0.2089	25.452	27.2615	22.6847	-0.6916	0.1783	28.636	27.2842	
22.2229	-0.9216	0.3325	13.8033	26.8893	22.6734	-0.6845	0.2183	26.1052	27.2642	22.696	-0.7049	0.1559	29.4588	27.3107	
22.2177	-0.9279	0.3631	13.8058	26.888	22.681	-0.694	0.223	26.7779	27.2825	22.7031	-0.7157	0.1477	30.2957	27.3294	
22.2136	-0.9443	0.3184	13.8169	26.8972	22.6911	-0.6984	0.2336	27.6056	27.2992	22.7087	-0.7202	0.216	31.2167	27.3403	
					22.6973	-0.7109	0.2466	28.4706	27.3183	22.7079	-0.7247	0.1395	32.1471	27.3429	
					22.6939	-0.7165	0.196	29.4319	27.3185	22.7098	-0.7296	0.1418	33.1124	27.3493	
					22.6982	-0.7239	0.1971	30.3246	27.3303	22.7083	-0.7325	0.1489	33.971	27.3494	
					22.7054	-0.7327	0.1971	31.085	27.3474	22.7124	-0.7381	0.1242	34.8666	27.3595	
					22.7048	-0.7401	0.1713	31.9911	27.3528	22.7172	-0.7361	0.1336	35.7427	27.3636	
					22.7095	-0.7468	0.1913	32.8337	27.3647	22.7233	-0.733	0.1312	36.6973	27.3682	
					22.7127	-0.7482	0.1477	33.5857	27.3698	22.7255	-0.7424	0.1418	37.5041	27.3794	
					22.713	-0.7496	0.1736	34.3295	27.371	22.7252	-0.7437	0.1383	38.3223	27.3797	
					22.721	-0.7537	0.1618	35.0719	27.385	22.7237	-0.7431	0.1548	39.2707	27.3766	
					22.7198	-0.7532	0.1771	35.9407	27.3824	22.7338	-0.7422	0.1689	40.1245	27.3888	
					22.7194	-0.7557	0.1901	36.625	27.3839	22.732	-0.7425	0.1713	40.9542	27.3862	
					22.7238	-0.7569	0.1971	37.3988	27.3902	22.7349	-0.7477	0.1807	41.7778	27.3943	
					22.7259	-0.7599	0.1983	38.1719	27.3954	22.7347	-0.7448	0.1677	42.6305	27.3909	
					22.7305	-0.7582	0.196	39.1298	27.3995	22.7373	-0.7445	0.1736	43.5505	27.3937	
					22.7275	-0.7464	0.1983	39.8431	27.3843	22.7416	-0.7397	0.1771	44.5504	27.3945	
					22.7335	-0.7519	0.1971	40.306	27.397	22.7531	-0.7473	0.203	45.5068	27.416	
					22.7368	-0.7273	0.1948	41.088	27.3787	22.7547	-0.7445	0.2125	46.468	27.415	
					22.7671	-0.7357	0.2113	41.8724	27.4258	22.7517	-0.7467	0.2325	47.2097	27.4126	
										22.7582	-0.7398	0.1948	47.953	27.4146	
										22.7596	-0.7359	0.2077	48.8649	27.4125	
										22.7628	-0.7343	0.2019	49.6667	27.4148	
										22.7681	-0.7329	0.2136	50.5084	27.4201	
										22.766	-0.7257	0.2125	51.1303	27.4105	
										22.7757	-0.7165	0.2266	52.094	27.4144	
										22.7759	-0.7066	0.2266	52.8188	27.4053	
										22.7714	-0.6673	0.2125	53.4154	27.3633	
										22.7833	-0.5974	0.196	54.2726	27.3154	
										22.7974	-0.6079	0.2289	54.9804	27.3431	

Appendix 3.2-2. Winter Marine CTD Data for Hope Bay, Hope Bay Belt Project, 2009

Station Date Parameter Unit	HB12					HB3					HB5				
	May 2, 2009					May 6, 2009					May 6, 2009				
	Conductivity (µS/cm)	Temperature (°C)	Turbidity (NTU)	Depth (m)	Salinity	Conductivity (µS/cm)	Temperature (°C)	Turbidity (NTU)	Depth (m)	Salinity	Conductivity (µS/cm)	Temperature (°C)	Turbidity (NTU)	Depth (m)	Salinity
	21.8393	-1.2072	0.8999	0.2986	26.6418	21.8054	-1.2903	4.4433	0.5173	26.6707	21.7788	-1.3916	1.0471	1.1181	26.7254
	21.8364	-1.1903	0.3914	0.6273	26.6227	21.7509	-1.2517	0.588	1.0578	26.5631	21.8092	-1.3796		2.1278	26.7548
	21.7576	-1.1509	0.2843	1.1856	26.4825	21.8283	-1.2599	0.6998	1.4993	26.6735	21.814	-1.3714	0.1183	2.1656	26.7539
	21.7808	-1.121	0.1171	1.7013	26.4866	21.8055	-1.2536	0.1277	1.9957	26.6372	21.8165	-1.3983	0.1065	2.3481	26.7813
	21.777	-1.1324	0.1454	2.3438	26.4914	21.8086	-1.242	0.1265	3.0967	26.6304	21.7914	-1.4126	0.103	2.9109	26.7602
	21.7839	-1.1212	0.1077	2.9582	26.4902	21.8145	-1.2355	0.1265	4.2031	26.632	21.7887	-1.4155	0.1077	3.5234	26.7588
	21.7846	-1.1353	0.1171	3.4153	26.5035	21.8167	-1.2266	0.1242	5.3946	26.6264	21.7918	-1.417	0.1112	4.1232	26.764
	21.7858	-1.1168	0.1112	4.1328	26.4883	21.8146	-1.2265	0.1253	6.5862	26.6228	21.7945	-1.4169	0.1159	4.7633	26.7672
	21.8021	-1.0874	0.1042	4.9559	26.4835	21.8249	-1.2	0.1277	7.7153	26.6123	21.7922	-1.4183	0.1218	5.524	26.765
	21.802	-1.0377	0.11	5.5762	26.4392	21.8184	-1.1504	0.1277	8.8309	26.559	21.7986	-1.4211	0.1301	5.9991	26.7758
	21.8177	-0.9386	0.1147	6.2181	26.3726	21.8378	-1.0106	0.1654	9.9834	26.4605	21.7988	-1.4217	0.1359	6.5076	26.7764
	21.9393	-0.7958	0.11	6.958	26.4071	21.9836	-0.7446	0.1736	11.2108	26.4183	21.8003	-1.4219	0.1359	7.0362	26.7784
	22.1044	-0.6782	0.1053	7.6246	26.5205	22.2662	-0.7304	0.1866	12.4086	26.7766	21.8023	-1.4192	0.1489	7.4627	26.7784
	22.1489	-0.6662	0.1053	8.1785	26.5681	22.2761	-0.5833	0.2148	13.4785	26.659	21.8053	-1.4188	0.1348	8.2204	26.7816
	22.1586	-0.6053	0.09	9.1212	26.5267	22.4248	-0.5174	0.2513	14.5849	26.7946	21.7992	-1.413	0.1359	8.6745	26.7679
	22.2004	-0.5864	0.0877	9.7107	26.5646	22.4567	-0.4723	0.2913	15.5987	26.7959	21.8076	-1.3966	0.1348	9.2533	26.7642
	22.2112	-0.5958	0.1006	10.1763	26.5866	22.5158	-0.4604	0.2537	16.7123	26.8619	21.8102	-1.3724	0.1442	9.8221	26.7457
	22.2302	-0.5597	0.1136	10.7993	26.5796	22.5477	-0.4562	0.1877	17.9033	26.8993	21.8193	-1.3251	0.1406	10.3352	26.7152
	22.2634	-0.5134	0.1277	11.3848	26.582	22.5696	-0.4715	0.2195	19.1177	26.9408	21.886	-1.2035	0.1607	10.745	26.6953
	22.2928	-0.4997	0.2207	11.9774	26.6079	22.6019	-0.4772	0.1783	20.1793	26.9875	22.0124	-1.1739	0.176	11.2077	26.8371
	22.3281	-0.4754	0.2254	12.7536	26.6322	22.6289	-0.494	0.1771	21.1958	27.0373	22.0194	-1.1642	0.1642	11.6272	26.8375
	22.3478	-0.4427	0.2348	13.4289	26.6289	22.6455	-0.506	0.1971	22.2413	27.0692	22.0152	-1.1475	0.183	12.0186	26.8167
	22.3725	-0.4005	0.2183	14.2322	26.6235	22.6653	-0.5105	0.236	23.3163	27.0985	22.0174	-1.1022	0.1559	12.3276	26.7789
	22.3959	-0.3347	0.1889	14.8854	26.596	22.6711	-0.536	0.216	24.3844	27.1285	22.1326	-1.027	0.1889	12.6594	26.8645
	22.4088	-0.3394	0.223	15.631	26.6166	22.6853	-0.5529	0.2395	25.2182	27.1618	22.1386	-1.0314	0.1971	12.9662	26.8762
	22.4127	-0.3604	0.2419	16.0791	26.6398	22.6901	-0.5585	0.236	26.486	27.1724	22.1316	-1.0107	0.1783	13.297	26.8483
	22.4222	-0.3594	0.2866	16.3797	26.6511	22.6988	-0.5738	0.2325	27.6857	27.1969	22.2316	-0.9611	0.1771	13.5557	26.9363
	22.4312	-0.3826	0.2595	16.7933	26.6829	22.71	-0.5785	0.2384	28.8673	27.2153	22.2217	-0.995	0.223	13.6784	26.9535
	22.4462	-0.3831	0.2501	17.3085	26.7027	22.708	-0.583	0.2584	30.0095	27.2162	22.1699	-0.9913	0.4444	13.7724	26.8815
	22.4494	-0.3868	0.2172	17.7425	26.7099	22.7081	-0.607	0.276	31.103	27.2373					
	22.482	-0.3613	0.2019	18.1801	26.7297	22.7149	-0.6058	0.2901	32.0686	27.2447					
	22.5064	-0.3281	0.2113	18.5366	26.7319	22.7209	-0.6077	0.2984	33.1115	27.2536					
	22.5363	-0.3297	0.2101	19.0367	26.772	22.726	-0.6178	0.3102	34.1763	27.2689					
	22.58	-0.3201	0.2737	19.4925	26.82	22.7229	-0.6048	0.2796	35.3024	27.2525					
	22.6054	-0.333	0.2843	20.0227	26.8643	22.7314	-0.6095	0.2984	36.4133	27.2674					
	22.6113	-0.328	0.2666	20.5186	26.8672	22.7371	-0.609	0.316	37.495	27.2739					
	22.632	-0.3365	0.2501	21.2558	26.9012	22.7372	-0.6091	0.3184	38.599	27.2735					
	22.6571	-0.3626	0.2501	22.0511	26.9567	22.7469	-0.5965	0.3443	39.623	27.2743					
	22.6535	-0.3617	0.2242	22.5949	26.9508	22.7455	-0.5917	0.4067	40.5704	27.2677					
	22.6743	-0.3866	0.2419	23.3907	26.9997	22.7503	-0.6055	0.4079	41.4401	27.2861					
	22.6803	-0.3918	0.2725	23.9617	27.0119	22.7515	-0.5939	0.4196	42.2065	27.2768					
	22.6834	-0.3905	0.2478	24.5924	27.0144	22.755	-0.6009	0.3702	42.9951	27.2872					
	22.6954	-0.3789	0.2442	25.2563	27.0194	22.7584	-0.5914	0.389	43.7864	27.2827					
	22.7054	-0.3633	0.2431	25.8219	27.0183	22.7546	-0.5943	0.4361	44.58	27.28					
	22.7014	-0.3898	0.2584	26.3548	27.0364	22.7583	-0.593	0.4302	45.3388	27.2831					
	22.7026	-0.4012	0.256	26.8158	27.0479	22.7669	-0.5984	0.4255	46.0472	27.299					
	22.7057	-0.4049	0.223	27.4014	27.0549	22.7632	-0.5829	0.4467	46.7101	27.2798					
	22.711	-0.4074	0.2619	28.1032	27.0637	22.7647	-0.5888	0.4655	47.227	27.2869					
	22.724	-0.409	0.2666	28.6052	27.0819	22.7627	-0.5729	0.535	48.0895	27.2694					
	22.7169	-0.4178	0.2619	29.1665	27.0801	22.7648	-0.5575	0.555	48.9528	27.2579					
	22.7233	-0.3982	0.2584	29.7217	27.0708	22.7739	-0.5508	0.5056	49.7756	27.2633					
	22.7223	-0.4071	0.2407	30.1723	27.077	22.7773	-0.5544	0.6209	50.4374	27.2707					
	22.7245	-0.4229	0.2348	30.6928	27.0939	22.7804	-0.5578	0.8446	51.0582	27.2775					
	22.7291	-0.4455	0.2384	31.2303	27.1198	22.7719	-0.5495	0.9706	51.4041	27.2878					
	22.7276	-0.4606	0.2419	31.7637	27.131	22.7809	-0.4803	0.9117	51.4771	27.2082					
	22.7224	-0.4567	0.2984	32.2934	27.1205	22.7856	-0.4416	1.3732	51.843	27.1795					
	22.7228	-0.4365	0.2419	32.8822	27.1026										
	22.7217	-0.4369	0.1983	33.3756	27.1013										
	22.7282	-0.4413	0.1983	34.0447	27.1134										
	22.7258	-0.4456	0.2207	34.7287	27.1138										
	22.7294	-0.4337	0.1936	35.4308	27.1074										
	22.7338	-0.4283	0.2278	36.0634	27.1108										
	22.7401	-0.4302	0.1736	36.7486	27.1177										
	22.7469	-0.4214	0.1842	37.2962	27.1183										
	22.7468	-0.4415	0.1842	37.8016	27.1359										
	22.7483	-0.4605	0.1701	38.226	27.1547										
	22.7513	-0.4444	0.1783	38.8101	27.1439										
	22.7473	-0.435	0.183	39.4802	27.1299										
	22.7487	-0.4148	0.1818	40.0389	27.1133										
	22.7529	-0.4104	0.1854	40.6189	27.1146										
	22.7598	-0.4148	0.2089	41.0711	27.1274										
	22.7543	-0.4276	0.1736	41.4356	27.1315										
	22.7554	-0.3843	0.1913	41.8888	27.0939										
	22.7618	-0.3921	0.1713	42.4321	27.109										
	22.7585	-0.376	0.1866	42.7627	27.0901										
	22.7604	-0.4049	0.1724	43.0276	27.1183										
	22.7803	-0.3909	0.1795	43.5059	27.1314										
	22.7687	-0.3384	0.1854	43.8321	27.0693										
	22.7698	-0.3678	0.183	44.1347	27.0969										
	22.7681	-0.384	0.2101	44.4437	27.1089										
	22.777	-0.3827	0.2325	44.9458	27.1191										
	22.7851	-0.3552	0.2513	45.4593	27.1049										
	22.7732	-0.3746	0.2336	45.9538	27.1064										
	22.7745	-0.3607	0.2478	46.4599	27.0954										
	22.777	-0.3433	0.2819	46.8123	27.083										
	22.795														

Appendix 3.2-2. Winter Marine CTD Data for Hope Bay, Hope Bay Belt Project, 2009

Station Date Parameter Unit	HB6					HB8					HB9				
	May 6, 2009					May 6, 2009					May 6, 2009				
	Conductivity (µS/cm)	Temperature (°C)	Turbidity (NTU)	Depth (m)	Salinity	Conductivity (µS/cm)	Temperature (°C)	Turbidity (NTU)	Depth (m)	Salinity	Conductivity (µS/cm)	Temperature (°C)	Turbidity (NTU)	Depth (m)	Salinity
	22.7156	-0.8521	0.6221	39.3967	27.4651	21.7984	-1.4822	0.1301	2.2597	26.8326	22.7	-0.8384	0.2678	34.9638	27.4343
	22.7263	-0.8513	0.5786	39.2538	27.4785	21.8025	-1.4825	0.1218	2.6024	26.8381	22.7012	-0.8427	0.2113	34.3308	27.4401
	22.7271	-0.8463	0.5527	39.0116	27.4753	21.7962	-1.4846	0.123	3.429	26.8312	22.7024	-0.8386	0.2301	33.4357	27.4384
	22.7271	-0.8478	0.4667	38.5005	27.4769	21.802	-1.4811	0.1312	3.9715	26.8355	22.6946	-0.8278	0.236	32.3364	27.4189
	22.7269	-0.8396	0.3973	37.7674	27.4695	21.8031	-1.4835	0.1242	4.6912	26.8388	22.6958	-0.8208	0.362	31.5484	27.4145
	22.717	-0.8355	0.3455	37.0137	27.453	21.8021	-1.4794	0.1277	5.7183	26.8333	22.7028	-0.8142	0.2772	30.7026	27.4182
	22.7199	-0.8342	0.3419	36.16	27.4561	21.8085	-1.473	0.1242	6.7257	26.8355	22.6966	-0.8082	0.2949	29.6788	27.4051
	22.7176	-0.8255	0.3667	35.306	27.4456	21.8034	-1.4538	0.1265	7.6893	26.8109	22.6936	-0.8044	0.2772	28.6518	27.3981
	22.715	-0.8228	0.3561	34.4445	27.4401	21.8094	-1.4016	0.1253	8.6305	26.7715	22.6861	-0.7889	0.2478	27.6046	27.3747
	22.7129	-0.8162	0.3384	33.6298	27.4318	21.8326	-1.2398	0.123	9.586	26.6571	22.6788	-0.7731	0.2513	26.4703	27.3514
	22.7119	-0.8147	0.2843	32.6858	27.4296	22.107	-1.0392	0.1159	10.5945	26.8426	22.6695	-0.7621	0.2748	25.4709	27.3296
	22.7066	-0.8075	0.2537	31.9	27.4165	22.2324	-0.9775	0.0994	11.7065	26.953	22.6549	-0.7386	0.2819	24.5697	27.2895
	22.7034	-0.8088	0.2466	31.076	27.4138	22.2565	-0.9636	0.1089	12.6549	26.972	22.6415	-0.7283	0.2737	23.5674	27.263
	22.6988	-0.8038	0.2466	30.2799	27.4036	22.2774	-0.9257	0.1171	13.5412	26.9652	22.6329	-0.711	0.3102	22.7144	27.2365
	22.6948	-0.7958	0.2525	29.4823	27.3915	22.3517	-0.877	0.1289	14.3902	27.0194	22.6311	-0.7026	0.3313	22.0862	27.2269
	22.694	-0.7793	0.2407	28.6435	27.3758	22.3707	-0.847	0.1242	15.2167	27.0171	22.6203	-0.6971	0.3266	21.5852	27.2079
	22.6889	-0.7726	0.2348	27.7738	27.3635	22.4461	-0.816	0.1289	16.3102	27.0883	22.6137	-0.6867	0.3137	20.8758	27.1903
	22.6818	-0.772	0.2454	27.014	27.3539	22.489	-0.7987	0.1512	17.2672	27.1287	22.5955	-0.6717	0.316	20.1296	27.1533
	22.6751	-0.7589	0.2525	26.2457	27.3336	22.5482	-0.784	0.1583	18.5261	27.1929	22.5674	-0.6701	0.3007	19.3669	27.1152
	22.6663	-0.7521	0.2548	25.3561	27.3164	22.5846	-0.7902	0.1795	19.69	27.246	22.5055	-0.6763	0.2748	18.4628	27.0399
	22.6623	-0.7379	0.2737	24.5563	27.2986	22.6156	-0.8058	0.1901	20.8539	27.3005	22.4872	-0.6916	0.2913	17.6648	27.03
	22.6496	-0.7228	0.2513	23.8041	27.2686	22.6164	-0.8119	0.203	21.9396	27.3065	22.4442	-0.7203	0.3196	16.7566	26.9996
	22.6509	-0.7185	0.2548	23.1584	27.2668	22.6502	-0.829	0.1948	22.9755	27.366	22.4059	-0.7426	0.2607	15.9587	26.9696
	22.6456	-0.7124	0.236	22.4316	27.2547	22.663	-0.8343	0.196	24.0287	27.3874	22.3765	-0.7789	0.2266	15.1535	26.9638
	22.6399	-0.7039	0.2125	21.7052	27.2399	22.6725	-0.8486	0.196	25.104	27.4123	22.3563	-0.7984	0.2489	14.2162	26.9551
	22.6189	-0.6888	0.1983	20.9858	27.1991	22.6794	-0.8638	0.2148	26.1898	27.4347	22.3132	-0.8209	0.2125	13.398	26.9188
	22.6035	-0.6746	0.2219	20.1129	27.1664	22.6863	-0.8691	0.2101	27.2409	27.4482	22.2502	-0.8475	0.2019	12.556	26.8598
	22.5841	-0.6636	0.2042	19.2693	27.1314	22.6851	-0.8766	0.2089	28.1775	27.4529	22.2279	-0.8782	0.1936	11.7521	26.8582
	22.5517	-0.6618	0.2113	18.3157	27.0877	22.6946	-0.8796	0.2537	29.206	27.4677	22.1988	-0.9143	0.1771	10.9922	26.8523
	22.5151	-0.6739	0.2395	17.4316	27.0509	22.6961	-0.8868	0.2489	30.4303	27.4757	22.1661	-0.9566	0.1677	10.4446	26.847
	22.4725	-0.6869	0.2395	16.6819	27.007	22.6949	-0.9274	0.2301	31.6979	27.5105	22.1094	-0.9843	0.1277	9.8877	26.797
	22.4166	-0.7138	0.2642	15.9056	26.9579	22.6988	-0.9404	0.2301	32.3594	27.5272	22.1337	-1.008	0.1147	9.237	26.8507
	22.3962	-0.7467	0.3149	15.1583	26.9609	22.6967	-0.9751	0.2454	33.231	27.5558	22.041	-1.034	0.1065	8.7383	26.7513
	22.3534	-0.7759	0.236	14.3506	26.9309	22.7007	-0.9646	0.2548	34.087	27.5511	21.9289	-1.1289	0.103	8.061	26.6873
	22.3498	-0.7796	0.2442	13.529	26.9446	22.7043	-1.0004	0.2678	34.6887	27.5884	21.9056	-1.2117	0.0983	7.3752	26.7306
	22.3241	-0.81	0.2278	12.7176	26.9237	22.6802	-1.0077	0.2843	35.3076	27.5627	21.8194	-1.2943	0.1089	6.7725	26.6896
	22.2261	-0.8441	0.2419	11.8748	26.8253						21.8007	-1.3724	0.11	5.8197	26.7351
	22.1248	-0.9396	0.2101	11.0353	26.7769						21.7895	-1.4082	0.1053	4.8129	26.7527
	22.0336	-1.061	0.203	10.2328	26.7647						21.7886	-1.4234	0.11	3.9508	26.7656
	21.9755	-1.1521	0.1783	9.4055	26.7694						21.7895	-1.4297	0.1077	3.0186	26.7729
	21.8418	-1.2606	0.1383	8.5856	26.6885						21.7831	-1.4343	0.11	2.1507	26.769
	21.8332	-1.3398	0.1324	7.8676	26.7483						21.7882	-1.4367	0.1465	2.2014	26.7779
	21.8673	-1.3499	0.1301	7.297	26.8032						21.6558	-1.4445	0.8375	1.1963	26.6077
	21.8949	-1.3324	0.1359	6.979	26.8246										
	21.8921	-1.3215	0.1312	6.7916	26.8113										
	21.8906	-1.3182	0.1324	6.6581	26.8064										
	21.8747	-1.3254	0.1359	6.1338	26.7918										
	21.8662	-1.3375	0.1265	5.9276	26.7914										
	21.839	-1.354	0.1124	5.2481	26.7702										
	21.8189	-1.3786	0.1124	4.746	26.7655										
	21.8087	-1.3989	0.1089	4.1631	26.7705										
	21.7928	-1.4195	0.1053	3.4731	26.768										
	21.7985	-1.4247	0.1265	2.4906	26.7808										
	21.803	-1.4208	0.1042	2.1645	26.7835										
	21.8147	-1.4208	0.9611	1.5493	26.7995										

Appendix 3.2-2. Winter Marine CTD Data for Hope Bay, Hope Bay Belt Project, 2009

Station Date Parameter Unit	HB13					HB14					HB15				
	May 6, 2009					May 6, 2009					May 6, 2009				
	Conductivity (µS/cm)	Temperature (°C)	Turbidity (NTU)	Depth (m)	Salinity	Conductivity (µS/cm)	Temperature (°C)	Turbidity (NTU)	Depth (m)	Salinity	Conductivity (µS/cm)	Temperature (°C)	Turbidity (NTU)	Depth (m)	Salinity
	21.657	-1.4263	0.6586	1.3775	26.593	21.666	-1.4391	0.8069	0.817	26.6168	21.7962	-1.4038	0.9305	1.8289	26.7592
	21.8006	-1.4164	0.1077	2.0589	26.7764	21.794	-1.3979	0.5986	1.5795	26.7512	21.7846	-1.3967	0.1348	2.1638	26.7371
	21.7868	-1.4102	0.0983	2.7881	26.752	21.7867	-1.3848	0.1018	2.8628	26.7289	21.7879	-1.3809	0.1147	2.5178	26.7273
	21.7859	-1.3938	0.1042	3.8064	26.7355	21.7963	-1.3477	0.1018	4.3323	26.7078	21.8219	-1.3583	0.1171	3.6362	26.7519
	21.7845	-1.3579	0.2772	4.9377	26.7008	21.8428	-1.3068	0.0959	5.6512	26.7327	21.8132	-1.343	0.1183	4.983	26.7259
	21.7918	-1.2659	0.0983	6.0094	26.6278	21.818	-1.3585	0.0983	6.868	26.7452	21.8155	-1.2948	0.1583	6.2006	26.6852
	21.9041	-1.0206	0.1042	7.2175	26.5586	21.81	-1.2916	0.1006	8.2322	26.6739	21.8427	-1.1161	0.143	7.4658	26.5615
	22.1212	-0.9687	0.0959	8.289	26.7995	21.841	-1.0539	0.1006	9.4835	26.5032	22.0628	-0.9523	0.1454	8.8152	26.7074
	22.1497	-0.939	0.0959	9.1094	26.8104	22.1952	-0.9127	0.0959	10.9613	26.8462	22.1992	-0.8941	0.1336	10.1186	26.8352
	22.1787	-0.9044	0.0971	10.1744	26.8173	22.2581	-0.8663	0.0994	12.2934	26.8871	22.2594	-0.8743	0.123	11.2063	26.8966
	22.2404	-0.8583	0.0959	11.3566	26.857	22.3046	-0.8068	0.11	13.6111	26.8947	22.2674	-0.8678	0.1418	12.3204	26.9007
	22.3013	-0.8266	0.0994	12.5473	26.9085	22.3767	-0.7727	0.1183	15.027	26.9585	22.2776	-0.8523	0.1171	13.5764	26.8997
	22.3254	-0.797	0.0983	13.6194	26.9133	22.4395	-0.7387	0.1277	16.3479	27.0101	22.3306	-0.7926	0.1124	15.0409	26.9155
	22.3898	-0.7551	0.1018	14.6857	26.9602	22.4758	-0.7186	0.1265	17.7647	27.0392	22.4066	-0.7381	0.1501	16.5425	26.9661
	22.4411	-0.7337	0.1324	15.7718	27.0081	22.5133	-0.7055	0.1336	18.9424	27.0761	22.4971	-0.707	0.1289	17.9724	27.0566
	22.4718	-0.7194	0.1348	16.8891	27.035	22.5524	-0.6992	0.1548	20.1815	27.1213	22.5241	-0.6911	0.1465	19.3178	27.0773
	22.4982	-0.7075	0.1477	18.179	27.0584	22.5749	-0.7013	0.1559	21.3277	27.1522	22.5976	-0.6798	0.1607	20.7191	27.163
	22.5173	-0.6958	0.1477	19.4435	27.0725	22.6342	-0.7098	0.1818	22.6723	27.2373	22.624	-0.7085	0.2442	22.1428	27.2229
	22.5714	-0.7023	0.1536	20.7193	27.1487	22.6593	-0.7225	0.2089	24.0994	27.2809	22.6542	-0.7193	0.1559	23.4885	27.2718
	22.6064	-0.712	0.1665	21.8454	27.2029	22.6713	-0.7356	0.1913	25.5213	27.3079	22.6686	-0.7329	0.1866	24.836	27.3023
	22.6438	-0.7198	0.1866	22.9296	27.2587	22.6862	-0.7483	0.1889	26.8895	27.3384	22.6776	-0.7448	0.1713	26.169	27.3242
	22.6561	-0.7266	0.2066	24.0453	27.2805	22.6949	-0.7618	0.176	28.3147	27.3613	22.6827	-0.757	0.176	27.4391	27.3413
	22.6647	-0.7286	0.1889	25.0066	27.2932	22.6954	-0.7713	0.1771	29.7022	27.3699	22.6927	-0.7691	0.1795	29.0015	27.3647
	22.672	-0.7374	0.2019	25.8315	27.3104	22.701	-0.7782	0.1689	31.0636	27.3829	22.6982	-0.7799	0.1771	30.2739	27.381
	22.6743	-0.7477	0.2089	26.8712	27.3222	22.7024	-0.7861	0.1654	32.5017	27.3912	22.7002	-0.7856	0.1677	31.4519	27.3883
	22.6889	-0.7581	0.1889	27.8973	27.3503	22.7111	-0.7902	0.1618	33.6799	27.4058	22.7043	-0.7938	0.1571	32.597	27.4006
	22.6859	-0.7684	0.1783	29.1252	27.355	22.7106	-0.795	0.1724	35.0243	27.4087	22.7121	-0.7983	0.1512	33.6762	27.4143
	22.6973	-0.7762	0.163	30.2249	27.3766	22.7169	-0.8008	0.1665	36.3442	27.4217	22.7117	-0.802	0.1548	34.8678	27.4167
	22.7054	-0.7873	0.1571	31.3272	27.3968	22.7204	-0.8079	0.1618	37.6919	27.4321	22.7168	-0.8051	0.143	35.9827	27.4256
	22.709	-0.7915	0.1548	32.525	27.4048	22.7244	-0.8124	0.1948	39.0545	27.4406	22.7231	-0.8077	0.1924	37.1464	27.4358
	22.7017	-0.7989	0.1618	33.679	27.4012	22.7282	-0.817	0.1818	40.5263	27.4491	22.728	-0.8141	0.2113	38.2583	27.4474
	22.7145	-0.8048	0.1689	35.068	27.4228	22.7349	-0.8209	0.1948	41.921	27.4609	22.7248	-0.8187	0.2007	39.4552	27.4469
	22.7193	-0.8085	0.2207	36.433	27.4318	22.7431	-0.8194	0.2089	43.0829	27.4697	22.7355	-0.8192	0.1783	40.665	27.4608
	22.7236	-0.812	0.2242	37.7453	27.4399	22.7455	-0.8216	0.1948	44.2952	27.4743	22.7369	-0.822	0.1736	41.8542	27.4645
	22.7322	-0.8172	0.2642	39.0697	27.4554	22.7538	-0.8232	0.1842	45.5036	27.4861	22.7417	-0.8233	0.2136	43.0791	27.4714
	22.7284	-0.8222	0.2019	40.5798	27.4542	22.753	-0.8266	0.1877	46.681	27.4875	22.7455	-0.8251	0.2384	44.2048	27.4775
	22.7333	-0.8245	0.2113	41.9223	27.4621	22.7512	-0.8263	0.1701	47.3016	27.4845	22.7472	-0.8247	0.2242	45.4206	27.4787
	22.7352	-0.8281	0.2183	43.1489	27.4671	22.7565	-0.8293	0.176	47.8594	27.4939	22.7524	-0.8291	0.2101	46.6292	27.489
	22.7447	-0.8303	0.1736	44.3495	27.4811	22.7563	-0.8292	0.1548	49.07	27.4929	22.7606	-0.8292	0.1995	47.8138	27.4993
	22.7429	-0.8347	0.1783	45.5271	27.4821	22.759	-0.8308	0.1442	50.3196	27.4974	22.765	-0.8318	0.203	49.1203	27.5068
	22.7508	-0.8341	0.1654	46.5906	27.4914	22.7704	-0.8313	0.163	51.5583	27.5121	22.7709	-0.8305	0.2066	50.3758	27.5127
	22.7492	-0.8395	0.163	47.3842	27.4939	22.7669	-0.8341	0.1489	52.6772	27.5095	22.7663	-0.8328	0.2219	51.7117	27.5081
	22.7525	-0.8388	0.183	48.4671	27.497	22.7714	-0.8357	0.1571	53.9112	27.5164	22.7704	-0.8336	0.2219	53.0521	27.5136
	22.7542	-0.8382	0.1783	48.8015	27.4985	22.7748	-0.8362	0.1654	55.0328	27.5207	22.7771	-0.834	0.2407	54.3234	27.5221
	22.7547	-0.837	0.183	49.1688	27.4979	22.7754	-0.8359	0.1607	56.0668	27.5206	22.782	-0.8365	0.2478	55.571	27.5303
	22.7573	-0.8367	0.1701	49.339	27.5009	22.7773	-0.838	0.1818	57.21	27.5246	22.7804	-0.8373	0.2525	56.7705	27.5282
	22.7499	-0.8361	0.1736	49.5402	27.4907	22.7737	-0.8384	0.3455	58.4328	27.5195	22.7771	-0.8397	0.2584	57.9697	27.5254
	22.755	-0.8336	0.1713	49.6245	27.4949	22.784	-0.8428	0.2395	59.5492	27.5365	22.7852	-0.8414	0.2972	59.1136	27.537
						22.7901	-0.8439	0.2348	60.7198	27.545	22.7819	-0.8412	0.2654	60.1353	27.532
						22.7906	-0.8445	0.2819	61.8554	27.5457	22.789	-0.8415	0.2925	61.1748	27.5411
						22.7895	-0.8463	0.2172	62.9348	27.5452	22.7979	-0.8416	0.3172	62.3328	27.5523
						22.7937	-0.8473	0.2348	63.9635	27.5511	22.7944	-0.8437	0.3337	63.5232	27.5491
						22.7945	-0.8479	0.2725	64.9873	27.5523	22.7886	-0.845	0.3113	64.6698	27.542
						22.7983	-0.8487	0.2819	66.0522	27.5574	22.7992	-0.8449	0.316	65.829	27.5553
						22.8016	-0.849	0.3208	67.1834	27.5614	22.7954	-0.845	0.309	66.7952	27.5499
						22.7975	-0.8511	0.309	68.0632	27.5575	22.7959	-0.8477	0.3266	67.7691	27.5525
						22.8005	-0.8529	0.3419	68.9183	27.5627	22.8052	-0.8507	0.3384	68.7664	27.567
						22.8053	-0.8534	0.4032	69.5742	27.5692	22.804	-0.8494	0.362	69.7225	27.5637
						22.8012	-0.8529	0.4291	70.1853	27.5629	22.8022	-0.8509	0.3514	70.6685	27.5622
						22.8045	-0.856	0.4903	70.2769	27.5701	22.8015	-0.8558	0.3596	71.6385	27.5653
						22.8019	-0.8519	0.4573	70.2893	27.563	22.7998	-0.8556	0.3914	72.4287	27.5625
						22.8017	-0.8564	0.4538	70.2936	27.5668	22.8008	-0.8618	0.389	73.2473	27.5689
						22.7985	-0.8519	0.5173	70.4861	27.5583	22.8041	-0.8591	0.409	73.8282	27.5706
											22.8035	-0.8578	0.3808	74.2976	27.5683
											22.8042	-0.8539	0.3996	74.797	27.5655
											22.8048	-0.8541	0.3914	75.3977	27.5661
											22.8067	-0.8548	0.4126	75.9751	27.5689
											22.8067	-0.8535	0.4079	76.5321	27.5675
											22.8122	-0.8537	0.4291	77.2306	27.5745
											22.8047	-0.8532	0.4396	77.6015	27.564

Appendix 3.2-3

Summer Marine CTD Data for Roberts and Reference Bays,
Hope Bay Belt Project, 2009

Appendix 3.2-3. Summer Marine CTD Data for Roberts and Reference Bays, Hope Bay Belt Project, 2009

Station Date Parameter Unit	ST0					ST1					ST2				
	August 14, 2009					August 14, 2009					August 14, 2009				
	Conductivity (μS/cm)	Temperature (°C)	Turbidity (NTU)	Depth (m)	Salinity	Conductivity (μS/cm)	Temperature (°C)	Turbidity (NTU)	Depth (m)	Salinity	Conductivity (μS/cm)	Temperature (°C)	Turbidity (NTU)	Depth (m)	Salinity
	17.4576	11.5046	2.0336	0.13	14.2506	18.635	10.2767	1.8087	0.1185	15.819	18.6575	10.1321	1.5321	0.5045	15.9028
	17.8922	11.6405	1.5803	0.4301	14.5836	18.628	10.4743	1.5674	0.3642	15.7271	18.8003	10.1006	1.4979	1.0177	16.0493
	18.1761	10.938	1.5603	0.8902	15.1196	18.6847	10.5499	1.6086	0.8313	15.7466	18.7974	10.0741	1.5709	1.5124	16.0582
	18.3449	10.3646	1.5462	1.4197	15.5133	18.629	10.3165	1.5015	1.1533	15.796	18.9019	10.0163	1.1165	2.1218	16.1811
	18.4183	9.7162	1.5156	2.1659	15.8616	18.8262	10.2138	1.4579	1.6648	16.0233	18.7757	9.5292	1.0965	2.8012	16.2813
	18.5786	9.5051	1.412	2.7501	16.106	18.7935	10.1556	1.1413	1.8475	16.0185	18.969	9.054	1.053	3.4499	16.6837
	18.8674	9.2574	1.2484	3.3915	16.4922	18.9131	9.6277	0.9694	2.5917	16.3664	19.1251	8.7834	0.9317	4.2065	16.9616
						19.0075	9.0537	0.9152	3.4222	16.7208	19.2844	8.4876	0.9976	5.0524	17.2589
						19.1196	8.8156	0.9294	4.2683	16.9408	19.5664	8.2933	1.2519	5.8608	17.6307
						19.5079	8.6072	0.8446	5.1201	17.418	20.4578	8.1123	1.5533	6.9115	18.6041
						19.772	8.2903	0.7481	5.3769	17.8346	21.1571	7.3306	2.1348	7.1594	19.7366

Appendix 3.2-3. Summer Marine CTD Data for Roberts and Reference Bays, Hope Bay Belt Project, 2009

Station Date Parameter Unit	ST3					ST4					ST5				
	August 14, 2009					August 14, 2009					August 14, 2009				
	Conductivity (μS/cm)	Temperature (°C)	Turbidity (NTU)	Depth (m)	Salinity	Conductivity (μS/cm)	Temperature (°C)	Turbidity (NTU)	Depth (m)	Salinity	Conductivity (μS/cm)	Temperature (°C)	Turbidity (NTU)	Depth (m)	Salinity
	18.4204	10.069	1.8228	0.3226	15.7101	17.9367	9.7298	1.7993	0.7394	15.405	18.3541	10.0173	1.5215	0.6778	15.6708
	18.424	10.0575	1.8523	0.3361	15.7185	17.9577	9.4431	1.7546	0.9419	15.548	18.2857	9.9436	1.5862	1.4993	15.6389
	18.438	10.0186	1.7134	0.5639	15.7483	18.0376	9.3017	1.7663	1.1538	15.6849	18.3171	9.6073	1.1919	2.0867	15.8144
	18.397	9.8157	1.5768	0.879	15.7983	18.1566	9.2293	1.3225	1.3214	15.8295	18.546	9.2983	1.1671	2.8637	16.1681
	18.4331	9.5757	1.4614	1.2675	15.9377	18.6454	9.1837	1.2025	1.7102	16.3149	18.6312	9.1369	1.033	3.592	16.3223
	18.5014	9.2063	1.392	1.6324	16.1675	18.7241	9.1523	1.1471	2.2098	16.4042	18.7535	9.0225	0.8858	4.4612	16.4915
	18.6386	8.97	1.3802	1.9695	16.4063	18.7639	9.1362	0.8999	2.6878	16.4495	18.7975	8.9977	0.9305	4.9536	16.5451
	18.7256	8.9022	1.2366	2.045	16.521	18.916	9.049	0.9435	3.3815	16.6352	19.8534	8.7653	0.6892	5.8179	17.6757
	18.7428	8.8877	1.1777	2.0505	16.5444	19.1927	8.8005	0.6362	4.2297	17.0187	20.3308	8.2265	0.6774	6.3335	18.4183
	18.7573	8.8755	1.2472	2.0616	16.5639	19.7065	8.4053	0.6668	4.9647	17.7123	21.282	7.7387	0.5527	6.9787	19.6324
	18.7463	8.8681	1.2107	2.0623	16.5568	19.7521	8.1607	0.7257	5.6063	17.8806	21.9742	6.9324	0.5256	7.9217	20.8094
	18.8051	8.8782	1.1318	2.3291	16.6086	20.2512	7.9902	0.6939	6.2658	18.4634	22.3299	5.5978	0.4444	8.944	22.024
	18.9866	8.8878	0.834	2.892	16.7787	20.5443	7.7524	0.5538	6.8958	18.883	22.6906	4.3091	0.4255	9.7892	23.2974
	19.1256	8.8489	0.9564	3.4738	16.931	21.6554	7.1499	0.7434	8.009	20.3508	22.7433	3.174	0.3102	10.4649	24.1834
	19.2629	8.6684	0.8517	4.3242	17.1503	22.5907	5.6273	0.3537	9.2609	22.286	22.7632	2.5175	0.3043	11.554	24.706
	19.4002	8.3893	0.6798	4.7838	17.4203	22.7001	3.756	0.3525	10.2878	23.7045	22.8186	2.0429	0.2854	12.3809	25.1437
	19.6191	8.2337	0.7952	5.7431	17.7125	22.7406	2.7777	0.269	10.7991	24.4796	22.8958	1.7012	0.3678	13.1883	25.5112
	20.0028	8.0751	0.8587	6.7143	18.1722	22.8011	2.2935	0.2854	11.6203	24.9255	22.9403	1.304	0.2972	14.1149	25.8906
	21.7117	7.3962	0.8175	7.6177	20.2642	22.8644	1.7912	0.5115	12.7696	25.4004	22.9205	1.0291	0.2878	14.924	26.0948
	22.3489	6.1838	0.6892	8.5105	21.6663	22.9064	1.4304	0.3055	13.5791	25.7449	22.9435	0.8334	0.2407	16.11	26.288
	22.6855	4.8416	0.5915	9.4885	22.9201	22.91	1.1414	0.4032	14.3232	25.9881	22.8711	0.6907	0.2478	17.0037	26.3177
	22.8231	3.3515	0.5009	10.2272	24.1436	22.925	0.9598	0.369	15.1664	26.1585	22.7844	0.4352	0.1913	18.4424	26.4257
						22.9383	0.7836	0.5126	15.7424	26.3239	22.7561	0.2667	0.1901	19.5195	26.5343
						22.8737	0.6171	0.3843	16.8916	26.3838	22.7383	0.1319	0.1654	20.6236	26.6278
						22.8231	0.4358	0.4914	18.3048	26.4744	22.7046	-0.0175	0.2548	21.9451	26.7142
						22.773	0.2425	0.3408	19.0532	26.5771	22.6981	-0.1251	0.1501	22.6357	26.7998
						22.7455	0.0797	0.8811	20.2042	26.6828	22.6988	-0.2087	0.1654	23.7569	26.8738
						22.7061	-0.0331	0.3372	21.3806	26.7301	22.6926	-0.2389	0.1948	24.8676	26.8918
						22.7162	-0.1284	0.163	22.1384	26.8263	22.7049	-0.3025	0.1065	25.6257	26.9637
						22.7106	-0.1889	0.1807	22.481	26.8722	22.7246	-0.3396	0.0841	26.6871	27.0218
						22.7057	-0.2199	0.2654	22.9684	26.893	22.7627	-0.3621	0.09	27.6391	27.091
						22.697	-0.2478	0.1677	23.9182	26.9058	22.7711	-0.3392	0.1218	28.7517	27.0809
						22.705	-0.3271	0.183	25.0131	26.986	22.7746	-0.3566	0.1536	29.4431	27.1006
						22.7184	-0.3727	0.1406	25.8918	27.0435	22.7579	-0.423	0.2101	30.5947	27.1375
						22.7218	-0.4043	0.1924	26.7214	27.0758	22.7662	-0.4614	0.4514	32.0761	27.182
						22.7335	-0.4348	0.2172	27.7671	27.1177	22.7612	-0.4843	0.4891	33.1704	27.1955
						22.7355	-0.4643	0.2407	28.7911	27.1462	22.7519	-0.521	0.4032	34.9024	27.2153
						22.7436	-0.5037	0.2548	29.6096	27.1917	22.7598	-0.5837	0.1654	37.038	27.2811
						22.7426	-0.5309	0.2454	30.9437	27.2142	22.7726	-0.5718	0.1948	38.2622	27.2865
						22.7487	-0.5639	0.3266	32.6986	27.2509	22.7825	-0.6025	0.2901	39.1238	27.3267
						22.7483	-0.6127	0.1689	33.4008	27.294	22.7684	-0.6184	0.216	39.7135	27.3223
						22.7666	-0.6345	0.2819	35.4144	27.3367	22.7748	-0.6054	0.1913	40.7683	27.3184
						22.7774	-0.642	0.1913	37.0251	27.3569	22.7809	-0.6165	0.2419	41.9255	27.3359
						22.7723	-0.6442	0.1901	38.9007	27.3512	22.7685	-0.619	0.3255	43.2882	27.3211
						22.7821	-0.6725	0.2572	40.7024	27.3888	22.7814	-0.6239	0.2313	44.1164	27.342
						22.7811	-0.6937	0.2089	42.1966	27.4059	22.7777	-0.6312	0.2172	45.209	27.3432
						22.7729	-0.6926	0.1795	43.8477	27.3933	22.776	-0.6379	0.2843	46.5795	27.3463
						22.7846	-0.7008	0.3302	45.1566	27.4155	22.7852	-0.6651	0.2548	47.7011	27.3826
						22.805	-0.7031	0.2595	46.261	27.4438	22.7915	-0.6812	0.2254	48.8575	27.4048
						22.8032	-0.6931	0.289	46.1947	27.4324	22.7918	-0.6962	0.1901	49.8218	27.4183
						22.8056	-0.69	0.2466	45.8463	27.4328	22.787	-0.6964	0.2183	51.1455	27.4115
						22.8105	-0.6862	0.3396	45.7763	27.4359	22.7938	-0.7138	0.3761	52.4028	27.4356
						22.8401	-0.6966	0.2572	45.8036	27.4844	22.8036	-0.726	0.369	53.2582	27.4591
						22.8147	-0.696	0.3337	45.7321	27.4504	22.7967	-0.7183	0.2348	54.1374	27.4426
						22.8052	-0.6769	0.256	45.6518	27.4206	22.8076	-0.711	0.3349	54.6578	27.4501
						22.848	-0.6925	0.2289	45.6533	27.4911	22.799	-0.7168	0.4502	55.4702	27.4436
						22.8375	-0.6767	0.2372	45.6612	27.4629	22.8028	-0.7244	0.4479	56.4389	27.455
						22.8571	-0.665	0.4055	45.6957	27.4781	22.8091	-0.7362	0.4502	57.0259	27.4738
						22.8695	-0.6601	0.2172	45.7015	27.4899	22.8061	-0.7281	0.4832	57.6893	27.462
						22.8557	-0.6264	0.2901	45.7006	27.4412	22.8124	-0.7045	0.4785	58.5563	27.4485
											22.8037	-0.7131	0.4279	59.2516	27.4444
											22.8075	-0.7257	0.6951	60.1091	27.4604
											22.8077	-0.7349	0.6056	60.8847	27.4688
											22.8029	-0.7175	0.6939	61.962	27.446
											22.7997	-0.7438	0.6857	62.9591	27.4651
											22.8041	-0.7561	0.5774	63.5225	27.4819
											22.8109	-0.7478	0.681	64.4253	27.4829
											22.8047	-0.7538	0.668	65.157	27.4797
											22.8159	-0.7675	0.6716	65.8501	27.5066

Appendix 3.2-3. Summer Marine CTD Data for Roberts and Reference Bays, Hope Bay Belt Project, 2009

Station Date Parameter Unit	ST6					RP3					REFO				
	August 14, 2009					August 17, 2009					August 17, 2009				
	Conductivity (μS/cm)	Temperature (°C)	Turbidity (NTU)	Depth (m)	Salinity	Conductivity (μS/cm)	Temperature (°C)	Turbidity (NTU)	Depth (m)	Salinity	Conductivity (μS/cm)	Temperature (°C)	Turbidity (NTU)	Depth (m)	Salinity
	18.852	10.3766	-0.1913	0.7288	15.9759	15.8105	10.7953	0.7316	0.2953	13.0433	18.9542	10.1474	0.5868	0.3772	16.1719
	18.7941	9.9272	0.7481	1.1136	16.1204	15.84	10.6791	0.6857	0.5959	13.1111	19.3425	9.9612	0.5727	0.765	16.6182
	18.7822	9.7179	0.9564	1.6271	16.2026	18.009	9.9791	0.5762	1.4276	15.3663	19.4037	9.7648	0.5633	1.3721	16.7661
	18.8027	9.5619	1.0129	2.6286	16.292	18.8893	9.4353	0.5774	2.2536	16.4317	19.5245	9.6683	0.588	1.9237	16.9252
	18.8476	9.4273	0.8552	3.1955	16.3956	19.1142	9.354	0.5491	3.3356	16.6825	19.5338	9.6844	0.5538	2.5181	16.9261
	18.9146	9.3155	0.907	3.758	16.5103	19.1616	9.2573	0.6021	4.3166	16.7725	19.562	9.6582	0.5338	2.9168	16.965
	18.9687	9.187	0.7916	4.1178	16.6212	19.1907	9.0565	0.7693	5.2459	16.8946	19.6471	9.6767	0.4856	3.3282	17.0367
	19.0294	9.1198	0.7481	4.4779	16.7104	19.3739	8.5948	0.7928	6.2551	17.2934	19.6916	9.7131	0.4785	3.7563	17.0615
	19.9402	9.0155	0.5915	5.2825	17.6357	19.7545	8.2364	0.8152	7.2177	17.8441	19.7074	9.6477	0.4644	4.2858	17.1073
	20.2554	8.5286	0.6186	5.8556	18.1875	20.6408	7.378	0.7646	8.218	19.1846	19.6578	9.5601	0.5126	4.7875	17.1018
	20.9932	8.1214	0.6398	6.4835	19.1315	22.243	5.9617	0.7116	9.2377	21.6953	19.6797	9.4002	0.5221	5.2775	17.1987
	22.0175	7.2467	0.6103	7.5538	20.6655	22.828	4.8806	0.3855	10.1423	23.0504	19.8171	9.1733	0.4679	6.0003	17.4396
	22.306	6.061	0.4373	8.742	21.699	22.9007	2.9787	0.3855	11.1053	24.5144	20.0661	9.1475	0.575	6.6608	17.6914
	22.7075	4.5433	0.3419	10.0554	23.1515	22.9072	2.2667	0.548	12.028	25.0735	20.2949	8.9252	0.5432	7.4417	18.0233
	22.7553	3.513	0.3678	10.8155	23.9454	22.9187	1.8345	0.4196	12.7846	25.4315	21.8788	8.1994	0.5362	8.2367	19.9704
	22.8093	2.5667	0.2878	12.485	24.7222	22.9032	1.5423	0.409	13.582	25.6493	22.1998	6.5468	0.5974	9.0836	21.2804
	22.8906	1.7132	0.3525	13.3668	25.495						22.3923	5.2544	0.5362	9.9613	22.3181
	22.911	1.3775	0.309	14.3458	25.7936						22.448	4.3234	0.5291	10.78	23.0146
	22.9169	1.2109	0.3196	15.2126	25.9384						22.5393	3.3734	0.548	11.5578	23.7985
	22.9071	1.0157	0.2878	16.4482	26.0887						22.5901	2.9813	0.502	12.3726	24.1482
	22.8957	0.8161	0.276	17.4381	26.2421						22.6593	2.4739	0.4432	13.1064	24.6155
	22.8805	0.725	0.2701	18.1825	26.2999						22.6538	2.0956	0.4538	13.5377	24.9032
	22.8698	0.6644	0.2466	18.9549	26.3375						22.6374	1.7254	0.4267	14.3666	25.1763
	22.8387	0.5208	0.1724	19.7431	26.4206						22.6851	1.619	0.4255	15.1447	25.3195
	22.7936	0.3959	0.2313	20.6873	26.4701						22.7075	1.4118	0.4138	15.9219	25.5143
	22.7875	0.3497	0.2843	21.4095	26.5018						22.7338	1.0668	0.475	16.5994	25.8301
	22.7676	0.3085	0.2172	22.0642	26.5117						22.7609	0.8693	0.4726	16.9289	26.0285
	22.7393	0.1953	0.236	22.9684	26.573						22.7132	0.9129	0.5279	17.7165	25.9321
	22.7112	0.0486	0.196	24.0759	26.6638						22.7114	0.7362	0.4196	18.599	26.0776
	22.7265	-0.0338	0.1807	24.8218	26.7552						22.7183	0.6371	0.4161	19.4939	26.1695
	22.7246	-0.0597	0.2042	26.4087	26.7747						22.7331	0.6314	0.5209	20.4117	26.1925
	22.7406	-0.1238	0.2207	27.1087	26.8512						22.7328	0.4648	0.3808	21.2932	26.3336
	22.7277	-0.2106	0.1571	28.5936	26.9104						22.762	0.4741	0.2242	21.9892	26.3622
	22.7665	-0.2527	0.2313	29.8438	26.9973						22.7506	0.3737	0.4691	22.7148	26.4336
	22.7668	-0.2632	0.3361	30.5511	27.0068						22.7511	0.3144	0.2831	23.644	26.4848
	22.7628	-0.3051	0.3796	31.5117	27.0384						22.7529	0.1444	0.2419	24.5798	26.6338
	22.7749	-0.3387	0.2819	32.4116	27.0834						22.7394	0.0385	0.2607	25.5177	26.7083
	22.7723	-0.373	0.2725	33.1633	27.1103						22.7602	-0.0236	0.289	26.3037	26.789
	22.7857	-0.4002	0.2984	34.1824	27.1516						22.7555	-0.105	0.2537	26.9953	26.8541
	22.7805	-0.3928	0.1913	34.9535	27.1378						22.7451	-0.1763	0.2666	27.9541	26.9029
	22.7796	-0.3719	0.3608	35.5999	27.1177						22.754	-0.1553	0.2454	28.8154	26.8955
	22.7956	-0.4048	0.3278	36.5905	27.1674						22.7529	-0.18	0.2572	29.7346	26.9154
	22.7827	-0.4228	0.2866	37.1331	27.1665						22.7542	-0.2587	0.2537	30.7808	26.9864
	22.781	-0.4154	0.2654	38.2059	27.157						22.7648	-0.2888	0.296	31.7646	27.0262
	22.795	-0.3733	0.2548	38.6357	27.1374						22.7491	-0.3655	0.2466	32.8745	27.0735
	22.7955	-0.4513	0.2678	39.8598	27.2073						22.7524	-0.3657	0.3655	33.9693	27.0774
	22.8049	-0.47	0.3019	40.087	27.2363						22.7593	-0.4128	0.2219	35.2569	27.1278
	22.7846	-0.444	0.2466	41.3697	27.1857						22.7622	-0.4121	0.2984	36.3849	27.1305
	22.7924	-0.4801	0.1512	42.322	27.2278						22.7643	-0.4568	0.2254	37.5743	27.1726
	22.7992	-0.5033	0.2301	43.5861	27.2569						22.7655	-0.4671	0.2442	38.852	27.1827
	22.7818	-0.5191	0.1971	45.1382	27.2476						22.773	-0.4804	0.2701	40.0092	27.2039
	22.7999	-0.5392	0.1913	46.3536	27.2888						22.7785	-0.5057	0.2949	41.0338	27.2333
	22.786	-0.5572	0.3149	47.5822	27.2862						22.7923	-0.4984	0.2984	41.7031	27.2444
	22.7975	-0.5691	0.269	48.6273	27.3114						22.783	-0.5266	0.2854	42.0329	27.2575
	22.7924	-0.5407	0.3184	49.5456	27.2785						22.7823	-0.4796	0.296	43.153	27.2138
	22.7988	-0.5552	0.3443	50.6345	27.2996						22.7823	-0.5246	0.2901	44.5255	27.2535
	22.7897	-0.5769	0.2654	51.5834	27.3066						22.7916	-0.515	0.2796	45.6508	27.2563
	22.7993	-0.5856	0.5409	52.9533	27.3264						22.7818	-0.5826	0.3302	46.6935	27.3039
	22.7888	-0.5977	0.3302	54.1935	27.3229						22.7913	-0.5796	0.3066	47.685	27.3132
	22.7978	-0.6241	0.3349	55.7771	27.3579						22.7915	-0.5862	0.2784	48.4525	27.319
	22.8062	-0.6131	0.3419	56.4509	27.3585						22.7931	-0.5991	0.2937	49.6664	27.3321
	22.7926	-0.6249	0.3973	57.7447	27.3507						22.7914	-0.6102	0.3007	50.9383	27.3393
	22.7969	-0.633	0.4573	58.8178	27.3631						22.791	-0.6195	0.3266	52.4263	27.3464
	22.7987	-0.6507	0.4644	59.701	27.381						22.7895	-0.6251	0.3372	53.8934	27.3487
	22.7995	-0.643	0.3761	60.8093	27.3745						22.7962	-0.6229	0.3055	55.1099	27.3549
	22.8072	-0.6349	0.5432	61.6727	27.3769						22.8015	-0.6291	0.3478	56.501	27.3669</

Appendix 3.2-3. Summer Marine CTD Data for Roberts and Reference Bays, Hope Bay Belt Project, 2009

Station Date Parameter Unit	REF1					REF2					REF3				
	August 17, 2009					August 17, 2009					August 17, 2009				
	Conductivity ($\mu\text{S/cm}$)	Temperature ($^{\circ}\text{C}$)	Turbidity (NTU)	Depth (m)	Salinity	Conductivity ($\mu\text{S/cm}$)	Temperature ($^{\circ}\text{C}$)	Turbidity (NTU)	Depth (m)	Salinity	Conductivity ($\mu\text{S/cm}$)	Temperature ($^{\circ}\text{C}$)	Turbidity (NTU)	Depth (m)	Salinity
	17.7801	9.4436	0.661	0.2253	15.3806	18.6043	9.4817	0.6139	0.4124	16.1414	16.7951	9.8268	2.0371	0.5461	14.3031
	18.0092	9.5924	0.6504	0.3191	15.5321	18.7321	9.373	0.595	0.9726	16.3114	18.1927	9.8266	0.6256	1.4173	15.6026
	18.5767	9.549	0.6162	0.7713	16.0851	18.9192	9.2819	0.6151	1.6227	16.5307	18.981	9.318	0.5903	2.5665	16.5727
	18.9543	9.3346	0.6056	1.4961	16.5398	18.9971	9.1629	0.5903	2.3641	16.66	19.1959	8.9343	0.6139	3.4364	16.9581
	19.0672	9.2206	0.6221	2.2594	16.7001	19.048	9.0129	0.608	3.1485	16.7788	19.3097	8.7644	0.6162	4.313	17.1492
	19.1242	9.1235	0.595	2.9923	16.7999	19.1708	8.943	0.5774	4.1158	16.9297	19.3564	8.6767	0.6056	5.053	17.2369
	19.2407	9.0682	0.6021	3.7913	16.9375	19.1336	8.8381	0.5856	4.9625	16.9435	19.3762	8.5152	0.7151	5.7253	17.3347
	19.2861	9.0487	0.6009	4.6562	16.9901	19.332	8.7805	0.595	5.8787	17.1626	19.5769	8.2771	0.6668	6.46	17.649
	19.6292	8.9265	0.5326	5.5495	17.3792	19.556	8.5774	0.661	6.8555	17.4791	19.7105	8.0214	0.6492	7.1865	17.91
	19.7315	8.9439	0.6315	6.5628	17.4692	19.918	8.2784	0.5786	7.8018	17.9836	19.9391	7.7343	0.5797	7.8837	18.2859
	20.1397	8.4351	0.5633	7.7522	18.1216	21.398	7.1831	0.5326	8.6435	20.0671	21.6852	7.0981	0.5574	8.7853	20.4118
	22.1068	7.0995	0.535	8.999	20.8452	22.145	5.9951	0.4773	9.493	21.5694	22.3838	5.5237	0.4349	9.7313	22.1305
	22.3555	5.7597	0.5562	10.0371	21.9456	22.4524	4.9815	0.4455	10.3522	22.5671	22.5981	4.1404	0.8517	10.6338	23.3125
	22.5125	4.4721	0.4667	11.2249	22.983	22.588	3.4743	0.3714	11.2398	23.7809	22.6605	2.8737	0.3572	11.5555	24.3121
	22.611	2.7783	0.4043	12.4115	24.3258	22.6669	2.5897	0.3467	12.2028	24.5358	22.6698	2.0556	0.2854	12.5657	24.9544
	22.6485	1.9172	0.4161	13.8158	25.0373	22.6881	2.0582	0.4279	13.2445	24.974	22.7299	1.5092	0.2748	13.6111	25.4637
	22.6609	1.3365	0.3784	14.9892	25.5188	22.7036	1.4584	0.3266	14.3019	25.4723	22.7422	1.1257	0.3372	14.4897	25.7928
	22.7052	0.9215	0.495	16.1981	25.9156	22.7212	0.8954	0.3937	15.5481	25.9577	22.7373	0.8518	0.3278	15.4019	26.0144
	22.7271	0.5681	0.2701	17.5186	26.2401	22.7388	0.5253	0.3631	16.7458	26.2917	22.7339	0.5867	0.5668	16.35	26.2334
	22.7334	0.2984	0.349	18.7265	26.4784	22.7457	0.3146	0.2619	17.883	26.4805	22.7458	0.4202	0.455	17.286	26.3902
	22.7308	0.167	0.2878	19.9531	26.5881	22.7223	0.1456	0.3019	18.9634	26.5963	22.7358	0.3031	0.3137	18.1213	26.4776
	22.7386	0.1348	0.2713	21.1746	26.6254	22.7223	-0.025	0.2725	20.088	26.7444	22.7266	0.2338	0.3596	19.0767	26.5252
	22.7308	-0.0033	0.3149	22.2178	26.7353	22.7077	-0.1372	0.2737	21.276	26.8235	22.7091	0.1265	0.2548	19.9286	26.5955
	22.737	-0.083	0.2725	22.8074	26.8129	22.7025	-0.2297	0.3137	22.5007	26.8978	22.714	0.0401	0.2796	20.8967	26.6764
						22.7062	-0.287	0.2996	23.7393	26.9526	22.7014	-0.0422	0.2796	21.6576	26.7318
						22.7157	-0.3369	0.3278	24.9662	27.0086	22.689	-0.1668	0.2854	22.558	26.8246
						22.712	-0.3636	0.3808	26.1419	27.027	22.6801	-0.2063	0.2266	23.6085	26.8475
						22.7025	-0.4048	0.2772	27.3129	27.0507	22.6561	-0.3176	0.2631	24.9981	26.914
						22.7074	-0.4221	0.3019	28.4649	27.0719	22.66	-0.3723	0.362	26.5732	26.9668
						22.708	-0.4539	0.3066	29.5621	27.1006	22.6666	-0.4338	0.289	28.1684	27.0293
						22.6948	-0.4597	0.3137	30.6064	27.088	22.6688	-0.4939	0.3549	29.9273	27.0849
						22.6943	-0.4933	0.2666	31.7915	27.1168	22.6652	-0.5175	0.296	31.693	27.1005
						22.6914	-0.5418	0.2607	33.0392	27.1558	22.6968	-0.5521	0.316	33.5596	27.1718
						22.693	-0.5506	0.5044	34.2648	27.1652	22.7039	-0.559	0.3572	35.0173	27.1866
						22.6928	-0.5797	0.2854	35.6311	27.1903	22.6717	-0.5967	0.3572	36.802	27.1773
						22.6933	-0.6013	0.3266	36.9916	27.2097	22.6774	-0.6095	0.3408	38.4484	27.1954
						22.7031	-0.5984	0.3831	38.1498	27.2194	22.6831	-0.636	0.2854	40.2912	27.2258
						22.7007	-0.6174	0.3678	39.4047	27.2327	22.6797	-0.6663	0.3043	42.3204	27.2476
						22.7065	-0.6173	0.4467	40.546	27.2396	22.6881	-0.669	0.2784	44.3024	27.2601
						22.7105	-0.6095	0.4008	41.5889	27.2373	22.692	-0.6857	0.3255	46.3605	27.2793
						22.7088	-0.6289	0.4267	42.9263	27.2518	22.6942	-0.6947	0.2501	48.6969	27.2892
						22.7123	-0.6449	0.5103	44.5254	27.2701	22.7038	-0.7027	0.3172	50.5816	27.3079
						22.7169	-0.6578	0.7445	46.0618	27.2869	22.7062	-0.6989	0.3219	52.4277	27.3067
						22.7137	-0.6517	0.595	47.4495	27.2765	22.7076	-0.7085	0.362	54.3741	27.3162
						22.7121	-0.6508	0.6151	48.8918	27.2728	22.7163	-0.7131	0.6245	56.1353	27.331
						22.722	-0.6525	0.6939	50.3171	27.2867	22.7183	-0.7024	0.6857	57.8339	27.323
						22.7217	-0.6636	0.6409	51.8242	27.2955	22.7206	-0.7106	0.8811	59.9531	27.3324
						22.7252	-0.666	0.721	53.2348	27.3017	22.7234	-0.7099	0.8752	62.0335	27.3344
						22.7192	-0.6776	0.7387	54.6894	27.3035	22.7284	-0.7136	0.9812	63.9519	27.3432
						22.725	-0.684	0.8599	56.2042	27.316					
						22.7278	-0.6757	1.0836	57.5898	27.3115					
						22.7304	-0.6803	0.9141	58.9221	27.3184					
						22.724	-0.689	1.0483	60.541	27.317					

Appendix 3.2-3. Summer Marine CTD Data for Roberts and Reference Bays, Hope Bay Belt Project, 2009

Station Date Parameter Unit	REF4					REF5					REF6				
	August 17, 2009					August 17, 2009					August 17, 2009				
	Conductivity (μS/cm)	Temperature (°C)	Turbidity (NTU)	Depth (m)	Salinity	Conductivity (μS/cm)	Temperature (°C)	Turbidity (NTU)	Depth (m)	Salinity	Conductivity (μS/cm)	Temperature (°C)	Turbidity (NTU)	Depth (m)	Salinity
	16.3067	9.653	0.7528	0.3528	13.9185	15.6536	8.4692	0.7481	0.4352	13.763	15.9042	8.3158	0.7952	0.2506	14.0634
	16.4574	9.9741	0.8752	0.3772	13.934	16.7085	9.3687	0.7657	0.6293	14.4049	16.662	9.4762	0.7469	0.291	14.3185
	16.6321	10.0298	0.8587	0.3917	14.0733	17.0429	9.5076	0.6951	0.9829	14.6618	16.6828	9.7298	0.7457	0.3268	14.2374
	16.6687	9.9861	0.7893	0.4166	14.1239	18.8531	9.3604	0.5997	1.8417	16.4318	16.6625	9.8977	0.7492	0.3441	14.1527
	17.7432	9.8479	0.6056	1.1232	15.1745	18.9578	9.195	0.6209	2.8176	16.6074	16.8414	9.8415	0.6704	0.8934	14.3401
	19.0069	9.4645	0.5997	1.9735	16.5298	19.0345	9.0444	0.6151	3.7814	16.7509	18.6995	9.5259	0.6245	1.5454	16.2111
	19.0976	9.2126	0.5997	3.0258	16.7327	19.0998	8.8685	0.628	4.8491	16.8965	18.926	9.2116	0.6186	2.279	16.5695
	19.1757	9.0655	0.5939	4.1163	16.8763	19.1878	8.6024	0.6174	5.9736	17.1088	18.8588	9.0901	0.5986	2.9585	16.5614
	19.3056	8.8575	0.6115	5.1767	17.1002	19.6336	8.2874	0.7704	7.0704	17.6994	19.0692	8.9634	0.6233	3.899	16.8223
	19.365	8.6066	0.6433	6.2817	17.2789	21.1771	7.18	0.6716	8.3294	19.8427	19.1829	8.9345	0.6362	4.8343	16.9452
	19.4899	8.1226	0.5703	7.3945	17.6405	22.4961	5.6425	0.4785	9.5555	22.1738	19.2048	8.7641	0.6339	5.8101	17.0474
	21.2588	7.3172	0.5892	8.4095	19.8476	22.7155	4.0582	0.4161	10.5593	23.5038	19.4381	8.3845	0.6162	6.7937	17.4593
	22.3614	6.1148	0.4302	9.204	21.7233	22.8437	2.9917	0.3902	11.095	24.4378	20.3971	7.8827	0.6468	7.7736	18.6653
	22.4198	5.1074	0.5326	9.5165	22.4467	22.7933	2.5616	0.3537	11.6175	24.7075	22.1131	6.4152	0.7175	8.8234	21.2713
	22.5259	4.3185	0.4655	10.2732	23.1057	22.7992	2.2563	0.2878	11.8647	24.9523	22.4836	5.203	0.5397	9.8706	22.4522
	22.7423	3.3845	0.2301	11.4709	24.025	22.769	2.1148	0.555	12.1634	25.0272	22.8301	3.9283	0.3467	11.058	23.7274
	22.7848	2.4091	0.3055	12.7268	24.8152	22.7855	1.6615	0.2949	13.1692	25.4088	22.7817	2.7093	0.3514	12.2693	24.5798
	22.7772	1.6242	0.3078	14.0846	25.4282	22.7853	1.3637	0.276	14.1776	25.6502	22.7982	2.0444	0.2925	13.3887	25.1176
	22.7747	1.1743	0.3149	15.4759	25.7923	22.7991	1.0653	0.3113	15.4202	25.9132	22.8166	1.5641	0.2807	14.6001	25.5249
	22.806	0.851	0.3243	16.8053	26.1005	22.7902	0.7788	0.3102	16.6241	26.1415	22.826	1.1253	0.3678	15.6874	25.8966
	22.7608	0.6797	0.2701	18.2881	26.1876	22.7303	0.531	0.2666	17.8862	26.2755	22.8014	0.8573	0.5126	16.8485	26.0894
	22.7001	0.4473	0.2113	19.6548	26.3079	22.7193	0.3097	0.2513	19.1006	26.4505	22.7718	0.6488	0.5668	17.9138	26.2278
	22.6507	0.1652	0.2219	21.1036	26.4865	22.7159	0.1853	0.3172	20.1525	26.553	22.7565	0.498	0.5185	19.0141	26.3363
	22.641	-0.067	0.2077	22.6715	26.6752	22.6591	0.0364	0.2819	21.7206	26.6087	22.7572	0.3441	0.5032	20.0522	26.4688
	22.6589	-0.1893	0.2172	24.2649	26.8047	22.6387	-0.1521	0.2278	23.3935	26.7463	22.7271	0.2347	0.5892	20.9957	26.5242
	22.6744	-0.2527	0.1971	25.9102	26.8798	22.6578	-0.281	0.2631	25.1188	26.8838	22.6812	0.088	0.3973	22.184	26.592
	22.6717	-0.3063	0.2548	27.5136	26.923	22.6615	-0.3811	0.2996	26.8522	26.9765	22.6578	-0.0388	0.3278	23.3606	26.6719
	22.6696	-0.3861	0.3302	29.2155	26.9902	22.6675	-0.4294	0.3702	28.4653	27.0263	22.6526	-0.1607	0.2489	24.7284	26.7712
	22.6645	-0.4697	0.3467	30.9643	27.0572	22.6693	-0.4785	0.2584	30.2184	27.0717	22.6614	-0.2586	0.3007	25.9643	26.8682
	22.6747	-0.5117	0.3196	32.3983	27.1073	22.6603	-0.5125	0.2678	31.9022	27.0894	22.6664	-0.2791	0.3055	27.2174	26.8922
	22.66	-0.5304	0.3337	33.9725	27.104	22.6637	-0.5572	0.2984	33.5135	27.1331	22.6669	-0.334	0.3219	28.5421	26.9407
	22.6689	-0.5599	0.3443	35.6617	27.1412	22.6691	-0.5864	0.2878	35.2443	27.1655	22.6681	-0.3693	0.3561	30.001	26.9729
	22.6654	-0.5763	0.2784	37.5943	27.1504	22.6658	-0.6191	0.296	36.9578	27.1897	22.6717	-0.3743	0.4267	31.3687	26.9814
	22.6816	-0.6033	0.3043	39.5105	27.1948	22.6763	-0.6434	0.3007	38.7301	27.2244	22.6756	-0.4016	0.389	32.5446	27.0102
	22.6802	-0.6355	0.2584	41.3902	27.221	22.6801	-0.6657	0.3467	40.3664	27.2486					
	22.6809	-0.6479	0.3372	43.403	27.2321	22.6871	-0.6859	0.3561	41.92	27.2753					
	22.683	-0.6706	0.2219	44.9658	27.2545	22.6977	-0.6905	0.3867	42.058	27.2932					
	22.6845	-0.6847	0.2784	46.7954	27.2683										
	22.6956	-0.6886	0.316	48.882	27.2853										
	22.6953	-0.7009	0.3996	50.8008	27.295										
	22.7008	-0.6999	0.3855	52.7774	27.3004										
	22.7073	-0.7115	0.4338	54.801	27.3184										
	22.7149	-0.7131	0.5703	56.5222	27.3289										
	22.7128	-0.7128	0.7316	58.5613	27.3248										
	22.7247	-0.7236	0.8517	59.5176	27.3498										

Appendix 3.2-3. Summer Marine CTD Data for Roberts and Reference Bays, Hope Bay Belt Project, 2009

Station Date Parameter Unit	REF7				
	August 17, 2009				
	Conductivity (μS/cm)	Temperature (°C)	Turbidity (NTU)	Depth (m)	Salinity
	15.6364	9.7067	0.7245	0.4768	13.2785
	15.6352	9.7598	0.7351	0.6086	13.2578
	16.1676	9.7485	0.7033	1.1094	13.753
	17.4596	9.5032	0.6033	1.5342	15.0539
	18.7543	9.1974	0.6221	2.2435	16.4123
	18.9828	9.0669	0.5997	2.9968	16.691
	19.084	8.9878	0.6162	3.9345	16.8251
	19.0996	8.9967	0.6139	4.7965	16.8355
	19.18	8.8437	0.661	5.82	16.9854
	19.6303	8.4238	0.6633	6.8688	17.628
	20.091	7.7183	0.6986	7.7928	18.4464
	22.094	6.8911	0.5962	8.7248	20.9583
	22.5878	5.4339	0.482	9.6379	22.4112
	22.858	3.8917	0.409	10.6587	23.7858
	22.8377	2.9426	0.3019	11.7925	24.4677
	22.845	2.2493	0.382	12.8981	25.0122

Appendix 3.3-1

Winter Marine Dissolved Oxygen Concentrations, Hope Bay
Belt Project, 2009

Appendix 3.3-1. Winter Marine Dissolved Oxygen Concentrations, Hope Bay Belt Project, 2009

Station Date Parameter	WT1			WT2			WT4			WT6		
	April 28, 2009			April 28, 2009			April 30, 2009			April 30, 2009		
	Depth	Dissolved Oxygen	Dissolved Oxygen Saturation	Depth	Dissolved Oxygen	Dissolved Oxygen Saturation	Depth	Dissolved Oxygen	Dissolved Oxygen Saturation	Depth	Dissolved Oxygen	Dissolved Oxygen Saturation
	(m)	(mg/L)	(%)	(m)	(mg/L)	(%)	(m)	(mg/L)	(%)	(m)	(mg/L)	(%)
	2	11.38	90.8	2	10.78	86.0	2	9.71	77.3	2	9.67	76.7
	2.5	11.40	90.9	3	10.79	86.1	3	9.87	78.4	3	9.72	77.2
	3	11.40	90.9	4	10.80	86.1	4	9.92	78.7	4	9.85	78.2
	3.5	11.44	91.5	5	10.81	86.2	5	9.95	78.9	5	9.80	77.7
	4	11.44	91.3	6	10.84	86.5	6	9.92	78.7	6	9.89	78.3
	4.5	11.44	91.2	7	10.80	86.5	7	9.95	78.9	7	9.83	77.9
	5	11.48	91.7	8	10.90	87.2	8	9.97	79.1	8	9.86	78.1
	5.5	11.54	92.1	9	10.88	87.0	9	9.95	79.0	9	9.91	78.5
	6	11.59	92.6	10	11.06	88.4	10	10.00	79.4	10	9.91	78.7
	6.5	11.74	93.7	10.5	11.22	89.4	11	9.81	78.2	11	9.96	79.1
	7	11.84	94.4				12	8.69	70.0	12	9.67	76.8
							13	8.66	69.9	13	9.05	73.2
							14	8.72	70.4	14	8.66	70.1
							15	8.74	70.3	15	8.75	70.5
							16	8.54	68.9	16	8.77	70.7
							17	8.48	68.6	17	8.67	70.1
							18	8.53	68.8	18	8.66	70.0
							19	8.51	68.9	19	8.71	70.4
							20	8.51	68.7	20	8.79	71.1
							21	8.49	68.5	21	8.80	71.1
							22	8.48	68.5	22	8.78	70.9
							23	8.49	68.6	23	8.76	70.8
							24	8.38	67.6	24	8.75	70.8
							25	8.30	67.0	25	8.71	70.4
							26	8.32	67.1	26	8.69	70.3
							27	8.29	66.9	27	8.64	69.6
							28	8.26	66.5	28	8.54	69.0
							29	8.16	65.7	29	8.55	68.9
										29.5	8.56	68.7

Appendix 3.3-1. Winter Marine Dissolved Oxygen Concentrations, Hope Bay Belt Project, 2009

Station Date Parameter	REFW			HB1			HB2			HB4		
	April 29, 2009			May 3, 2009			May 3, 2009			May 3, 2009		
	Depth	Dissolved Oxygen	Dissolved Oxygen Saturation	Depth	Dissolved Oxygen	Dissolved Oxygen Saturation	Depth	Dissolved Oxygen	Dissolved Oxygen Saturation	Depth	Dissolved Oxygen	Dissolved Oxygen Saturation
	(m)	(mg/L)	(%)	(m)	(mg/L)	(%)	(m)	(mg/L)	(%)	(m)	(mg/L)	(%)
	2	13.25	104.9	2	11.42	91.0	2	10.75	85.7	2	10.52	84.2
	3	13.34	105.8	2.25	11.51	92.0	3	10.69	85.5	3	10.57	84.3
	4	13.49	106.9				4	10.86	86.8	4	10.85	86.8
	5	13.49	106.8				5	11.00	87.9	5	10.70	85.7
	6	13.51	107.2				6	10.97	87.6	6	10.74	85.9
	7	13.44	106.7				7	10.99	87.8	7	10.65	85.3
	8	13.45	106.7				8	11.06	88.3	8	10.78	86.4
	9	13.40	106.5				9	11.16	89.8	9	10.87	87.2
	10	13.39	106.2							10	10.90	87.0
	11	13.33	106.1							11	10.78	86.3
	12	13.28	105.7							12	10.13	82.2
	13	13.22	105.4							13	10.04	81.6
	14	13.06	104.3							14	9.98	81.1
	15	12.87	103.3							15	9.84	80.1
	16	12.79	102.7							16	9.85	80.3
	17	12.73	102.3							17	9.75	79.4
	18	12.67	101.8							18	9.71	79.2
	19	12.61	101.4							19	9.67	78.7
	20	12.31	99.0							20	9.66	78.8
	21	12.27	98.8							21	9.59	78.1
	22	12.22	98.4							22	9.59	78.2
	23	12.17	98.0							23	9.57	78.0
	24	12.17	97.9							24	9.53	77.6
	25	12.29	98.9							25	9.54	77.6
	26	12.29	99.3							26	9.55	77.5
	27	12.37	99.9							27	9.58	77.7
	28	12.37	99.9							28	9.53	77.4
	29	12.44	100.1							29	9.38	76.2

Appendix 3.3-1. Winter Marine Dissolved Oxygen Concentrations, Hope Bay Belt Project, 2009

Station Date Parameter	HB7			HB11			HB12			HB10		
	May 3, 2009			May 2, 2009			May 3, 2009			May 4, 2009		
	Dissolved Depth (m)	Dissolved Oxygen (mg/L)	Dissolved Oxygen Saturation (%)	Dissolved Depth (m)	Dissolved Oxygen (mg/L)	Dissolved Oxygen Saturation (%)	Dissolved Depth (m)	Dissolved Oxygen (mg/L)	Dissolved Oxygen Saturation (%)	Dissolved Depth (m)	Dissolved Oxygen (mg/L)	Dissolved Oxygen Saturation (%)
	2	10.56	84.4	2	10.5	83.9	2	10.31	82.4	2	10.95	87.5
	3	10.64	85.1	3	10.5	83.9	3	10.33	82.4	3	11.05	88.3
	4	10.62	84.7	4	10.8	86.2	4	10.44	83.3	4	11.18	89.3
	5	10.71	85.6	5	10.8	86.3	5	10.35	82.7	5	11.06	88.3
	6	10.73	85.6	6	10.8	86.2	6	10.44	83.5	6	11.14	88.8
	7	10.69	85.4	7	10.9	86.5	7	10.44	83.5	7	11.12	88.7
	8	10.73	85.7	8	10.7	86.0	8	10.49	84.1	8	11.25	89.9
	9	10.72	85.7	9	10.6	85.1	9	10.10	81.7	9	10.68	86.1
	10	10.73	85.7	10	10.4	83.9	10	10.16	82.0	10	10.57	85.3
	11	10.38	83.3	11	10.6	85.3	11	9.96	81.0	11	10.51	85.2
	12	10.15	82.1	12	10.2	82.6	12	9.94	80.3	12	10.38	84.1
	13	10.09	81.8	13	10.2	82.6	13	9.99	80.9	13	10.55	85.4
	14	9.87	80.3	14	10.1	82.3	14	9.72	78.9	14	10.51	84.9
	15	9.75	78.8	15	10.3	83.0	15	9.69	78.6	15	10.40	84.1
	16	9.05	73.5	16	10.0	81.1	16	9.73	79.1	16	10.40	84.4
				17	10.0	81.1	17	9.69	78.7	17	10.38	84.1
				18	9.9	80.6	18	9.65	78.4	18	10.30	83.7
				19	9.8	79.9	19	9.60	78.0	19	10.14	82.5
				20	9.8	79.7	20	9.47	77.1	20	10.06	81.8
				21	9.8	79.7	21	9.44	76.9	21	10.03	81.7
				22	9.8	79.4	22	9.45	76.9	22	9.91	80.8
				23	9.7	79.0	23	9.40	76.5	23	9.84	80.2
				24	9.7	79.1	24	9.39	76.4	24	10.03	81.3
				25	9.8	79.2	25	9.40	76.1	25	10.03	81.5
				26	9.7	79.0	26	9.45	76.8	26	10.01	81.6
				27	9.8	79.4	27	9.48	77.0	27	10.05	81.7
				28	9.8	79.1	28	9.39	76.3	28	10.08	81.8
				29	9.8	79.1	29	9.37	76.2	29	10.11	82.0

Appendix 3.3-2

Summer Marine Dissolved Oxygen Concentrations, Hope Bay
Belt Project, 2009

Appendix 3.3-2. Summer Marine Dissolved Oxygen Concentrations, Hope Bay Belt Project, 2009

Station Date Parameter	ST0			ST2			ST3			ST4			ST5		
	Aug 14, 2009			Aug 14, 2009			Aug 14, 2009			Aug 14, 2009			Aug 14, 2009		
	Dissolved Dissolved Oxygen			Dissolved Dissolved Oxygen			Dissolved Dissolved Oxygen			Dissolved Dissolved Oxygen			Dissolved Dissolved Oxygen		
	Depth	Oxygen	Saturation	Depth	Oxygen	Saturation	Depth	Oxygen	Saturation	Depth	Oxygen	Saturation	Depth	Oxygen	Saturation
	(m)	(mg/L)	(%)	(m)	(mg/L)	(%)	(m)	(mg/L)	(%)	(m)	(mg/L)	(%)	(m)	(mg/L)	(%)
	0	10.21	109.6	0	10.62	109.7	0	10.63	110.0	0	11.51	118.4	0	10.23	107.0
	1	10.50	108.4	1	10.52	108.5	1	10.54	107.3	1	11.60	117.2	1	10.42	107.3
	2	10.54	106.7	2	10.56	108.5	2	10.56	106.1	2	11.53	116.4	2	10.44	106.2
	3	10.48	105.4	3	10.74	107.6	3	10.52	105.4	3	11.56	115.9	3	10.47	105.3
				4	10.66	105.8	4	10.63	105.4	4	11.62	115.8	4	10.43	104.9
				5	10.77	106.2	5	10.73	105.8	5	11.83	116.2	5	10.44	104.6
				6	11.25	110.5	6	10.82	106.2	6	11.96	116.6	6	10.99	107.4
				7	11.65	111.0	7	11.55	110.5	7	12.24	117.6	7	11.50	110.2
				8	13.12	118.9	8	12.51	114.2	8	13.22	121.4	8	11.92	112.3
							9	13.06	114.0	9	13.91	121.4	9	12.38	112.5
							10	13.40	113.0	10	14.18	120.4	10	13.12	113.9
										11	14.11	117.4	11	13.37	112.8
										12	14.19	117.1	12	13.44	112.2
										13	14.30	117.5	13	13.55	111.9
										14	14.34	117.0	14	13.78	112.3
										15	14.47	117.6	15	14.01	114.0
										16	14.31	115.5	16	14.08	114.2
										17	14.24	114.2	17	14.04	112.9
										18	14.20	113.1	18	13.79	110.5
										19	13.88	110.6	19	13.57	108.6
										20	13.49	106.9	20	13.19	104.6
										21	13.08	103.9	21	12.92	102.5
										22	12.79	100.8	22	12.64	99.9
										23	12.47	98.5	23	12.52	99.0
										24	12.10	95.4	24	12.31	97.0
										25	11.86	93.5	25	11.84	93.5
										26	11.50	90.6	26	11.28	89.0

Appendix 3.3-2. Summer Marine Dissolved Oxygen Concentrations, Hope Bay Belt Project, 2009

Station Date Parameter	ST6			RP3			REF4		
	Aug 14, 2009			Aug 17, 2009			Aug 17, 2009		
	Dissolved Dissolved Oxygen			Dissolved Dissolved Oxygen			Dissolved Dissolved Oxygen		
	Depth (m)	Oxygen (mg/L)	Saturation (%)	Depth (m)	Oxygen (mg/L)	Saturation (%)	Depth (m)	Oxygen (mg/L)	Saturation (%)
	0	10.60	104.6	0	9.74	100.8	0	10.19	104.4
	1	10.17	104.2	1	9.71	100.5	1	10.09	103.6
	2	10.32	103.8	2	9.76	100.7	2	10.04	102.2
	3	10.32	103.7	3	9.89	101.5	3	10.21	103.0
	4	10.32	103.3	4	10.48	104.8	4	10.29	103.0
	5	10.35	103.3	5	10.65	104.8	5	10.40	103.6
	6	10.83	105.7	6	10.84	105.5	6	10.69	104.7
	7	11.57	110.3	7	11.79	110.0	7	11.88	109.6
	8	12.48	113.3	8	12.41	111.5	8	12.34	109.4
	9	12.82	112.8	9	12.54	110.5	9	12.43	108.6
	10	13.18	112.9	10	12.77	110.3	10	12.46	106.4
	11	13.20	111.5	11	12.92	109.6	11	12.57	105.8
	12	13.40	110.9	12	13.18	110.0	12	12.71	105.4
	13	13.43	110.7				13	12.91	105.9
	14	13.54	110.6				14	12.83	104.5
	15	13.60	110.9				15	12.75	102.7
	16	13.61	110.0				16	12.60	101.2
	17	13.66	110.3				17	12.52	100.2
	18	13.70	110.2				18	12.17	97.0
	19	13.59	109.1				19	12.07	95.5
	20	13.66	109.0				20	11.90	94.4
	21	13.14	104.7				21	11.86	93.8
	22	12.73	100.9				22	11.59	92.0
	23	12.38	97.8				23	11.50	90.7
	24	12.14	95.8				24	11.13	88.2
	25	12.02	94.8				25	10.76	84.7
	26	11.65	91.8				26	10.60	83.7

Appendix 3.5-1

Winter Marine Water Quality, Hope Bay Belt Project, 2009

Appendix 3.5-1. Winter Marine Water Quality, Hope Bay Belt Project, 2009

Station Date Sampled Replicate Depth ALS Sample ID	Station			WT0	WT1	WT1	WT2	WT2	WT4	WT4	WT4	WT4	
	Units	Realized Detection Limits ^a	CCME Guidelines for the Protection of Aquatic Life (Marine) ^b	30-APR-09	28-APR-09	28-APR-09	28-APR-09	28-APR-09	30-APR-09	30-APR-09	30-APR-09	30-APR-09	
				1	1	2	1	1	1	2	1	1	
				4	4	4	4	9	4	4	11	19	
				L758568-16	L758317-1	L758317-2	L758317-3	L758317-4	L758568-1	L758568-2	L758568-3	L758568-4	
Physical Tests													
Conductivity	µS/cm	2	7.0 - 8.7	41100	41000	40900	40900	41000	41400	41200	41500	41900	
Hardness (as CaCO3)	mg/L	3.1		5000	5040	5130	5100	5030	5150	5190	5060	5090	
pH	pH	0.1		7.68	7.46	7.61	7.64	7.66	7.66	7.67	7.63	7.65	
Total Suspended Solids	mg/L	3		24.7	15.3	15.3	8	11.3	<3.0	12	4.7	6	
Turbidity	NTU	0.1		3.65	0.37	0.27	0.22	0.23	0.16	0.16	0.33	0.17	
Anions and Nutrients													
Ammonia as N	mg/L	0.005	3.6	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	
Bromide (Br)	mg/L	0.05		53.5	34	32.9	34.4	33.4	50.8	53.7	53.1	53.9	
Chloride (Cl)	mg/L	0.5		14800	15100	14900	14900	15000	15200	14900	14900	15100	
Fluoride (F)	mg/L	0.4		0.61	<0.40	<0.40	<0.40	<0.40	0.61	0.6	0.59	0.59	
Nitrate+Nitrite-N	mg/L	0.006		0.0506	0.0522	0.052	0.0515	0.0519	0.0485	0.0492	0.0485	0.0745	
Nitrate-N	mg/L	0.006		0.0506	0.0495	0.0494	0.0492	0.0491	0.0485	0.0492	0.0485	0.0745	
Nitrite-N	mg/L	0.002		<0.0020	0.0027	0.0026	0.0023	0.0028	<0.0020	<0.0020	<0.0020	<0.0020	
Ortho Phosphate as P	mg/L	0.001		0.036	0.0358	0.038	0.0363	0.0366	0.0364	0.0363	0.0376	0.0425	
Total Phosphate as P	mg/L	0.002		0.0439	0.0333	0.034	0.0376	0.0362	0.0395	0.0365	0.0346	0.0371	
Silicate (as SiO2)	mg/L	0.005		1.32	1.3	1.34	1.31	1.27	1.31	1.29	1.35	1.61	
Sulfate	mg/L	0.5	2080	2130	2100	2090	2110	2120	2080	2080	2120		
Organic / Inorganic Carbon													
Total Organic Carbon	mg/L	0.5		0.93	0.83	0.85	0.87	0.89	1	0.88	0.91	0.8	
Total Metals													
Aluminum (Al)	mg/L	0.005	0.0125	0.0338	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	
Antimony (Sb)	mg/L	0.01		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	
Arsenic (As)	mg/L	0.0002		0.00079	0.00098	0.00091	0.00091	0.00096	0.00093	0.00087	0.00084	0.00093	
Barium (Ba)	mg/L	0.005		0.0091	0.0113	0.0098	0.0096	0.0102	0.0095	0.0088	0.0097	0.0098	
Beryllium (Be)	mg/L	0.05		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	
Bismuth (Bi)	mg/L	0.05		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	
Boron (B)	mg/L	1		3.2	3.4	3.5	3.3	3.6	3.5	3.4	3.5	3.4	
Cadmium (Cd)	mg/L	0.00002		0.000052	0.000054	0.000052	0.000051	0.00005	0.000051	0.000053	0.000052	0.000055	
Calcium (Ca)	mg/L	0.5		327	341	339	346	345	343	353	330	343	
Chromium (Cr)	mg/L	0.05		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	
Cobalt (Co)	mg/L	0.00005	0.000062	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050		
Copper (Cu)	mg/L	0.00005	0.000584	0.000485	0.000503	0.00474*	0.000485	0.00049	0.000477	0.000451	0.000393		
Iron (Fe)	mg/L	0.005	0.054	<0.0050	0.0063	0.0059	0.0061	<0.0050	<0.0050	0.005	0.0058		
Lead (Pb)	mg/L	0.00005	0.000077	0.000094	0.000129	0.00013	<0.000050	<0.000050	<0.000050	0.000062	0.000076		
Lithium (Li)	mg/L	0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50		
Magnesium (Mg)	mg/L	1	988	1040	1030	1050	1050	1060	1090	1040	1050		
Manganese (Mn)	mg/L	0.00005	0.00173	0.000867	0.000871	0.000984	0.000964	0.000991	0.00104	0.00102	0.00121		
Mercury (Hg)	mg/L	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000031	<0.000010		
Molybdenum (Mo)	mg/L	0.005	0.0087	0.0109	0.0115	0.0104	0.0107	0.0087	0.0081	0.0089	0.0089		
Nickel (Ni)	mg/L	0.00005	0.000619	0.00051	0.000493	0.000487	0.000489	0.000474	0.000508	0.000507	0.000513		
Phosphorus (P)	mg/L	3	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0		
Potassium (K)	mg/L	20	282	309	304	304	308	320	321	306	316		
Selenium (Se)	mg/L	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050		
Silicon (Si)	mg/L	0.5	0.57	0.55	0.56	0.55	0.55	0.57	0.56	0.58	0.69		
Silver (Ag)	mg/L	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010		
Sodium (Na)	mg/L	20	8080	9150	9040	9090	9150	9180	9270	8760	8980		
Strontium (Sr)	mg/L	0.01	4.48	5.85	5.91	5.6	5.83	4.85	4.78	4.81	4.88		
Thallium (Tl)	mg/L	0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010		
Tin (Sn)	mg/L	0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010		
Titanium (Ti)	mg/L	0.1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10		
Uranium (U)	mg/L	0.00005	0.00207	0.00183	0.0016	0.00185	0.00191	0.00184	0.00197	0.00181	0.00178		
Vanadium (V)	mg/L	0.1	<0.10	<0.10	<0.10	<0.20	<0.20	<0.10	<0.10	<0.10	<0.10		
Zinc (Zn)	mg/L	0.0005	0.00059	<0.00050	0.0007	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050		
Dissolved Metals													
Aluminum (Al)	mg/L	0.005	0.0125	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	
Antimony (Sb)	mg/L	0.01		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	
Arsenic (As)	mg/L	0.0002		0.00092	0.00096	0.00089	0.00095	0.00094	0.00093	0.00087	0.00092	0.00091	
Barium (Ba)	mg/L	0.005		0.0093	0.0096	0.0095	0.0089	0.0098	0.0099	0.0091	0.0107	0.0099	
Beryllium (Be)	mg/L	0.05		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	
Bismuth (Bi)	mg/L	0.05		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	
Boron (B)	mg/L	1		3.3	3.6	3.3	3.4	3.7	3.5	3.3	3.9	3.3	
Cadmium (Cd)	mg/L	0.00002		0.000056	0.000048	0.000049	0.000051	0.00005	0.00005	0.000053	0.000052	0.000051	
Calcium (Ca)	mg/L	0.5		333	341	342	343	328	339	342	332	334	
Chromium (Cr)	mg/L	0.05		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	
Cobalt (Co)	mg/L	0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050		
Copper (Cu)	mg/L	0.00005	0.000506	0.000442	0.000365	0.000371	0.000349	0.000363	0.000376	0.000346	0.000311		
Iron (Fe)	mg/L	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050		
Lead (Pb)	mg/L	0.00005	<0.000050	0.000078	0.000128	0.000138	<0.000050	0.000076	0.000052	0.000052	0.000076		
Lithium (Li)	mg/L	0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50		
Magnesium (Mg)	mg/L	1	1010	1020	1040	1030	1020	1050	1050	1030	1030		
Manganese (Mn)	mg/L	0.00005	0.000883	0.000955	0.000917	0.000913	0.00092	0.000914	0.000935	0.0009	0.000983		
Mercury (Hg)	mg/L	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010		
Molybdenum (Mo)	mg/L	0.005	0.0085	0.0107	0.0095	0.0101	0.0088	0.0085	0.0093	0.0095	0.0077		
Nickel (Ni)	mg/L	0.00005	0.000583	0.000496	0.000485	0.000495	0.000492	0.000491	0.000516	0.000529	0.000448		
Phosphorus (P)	mg/L	3	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0		
Potassium (K)	mg/L	20	290	305	308	310	298	313	314	304	304		
Selenium (Se)	mg/L	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050		
Silicon (Si)	mg/L	0.5	0.56	0.53									

Appendix 3.5-1. Winter Marine Water Quality, Hope Bay Belt Project, 2009

Station Date Sampled Replicate Depth ALS Sample ID				WT4	WT6	WT6	WT6	WT6	WT6	REF-W	REF-W	REF-W
				30-APR-09	30-APR-09	30-APR-09	30-APR-09	30-APR-09	30-APR-09	30-APR-09	30-APR-09	30-APR-09
				1	1	1	1	2	1	1	1	1
				40	4	12	20	20	50	4	4	10
	Units	Limits ^a	Aquatic Life (Marine) ^b	L758568-5	L758568-6	L758568-7	L758568-8	L758568-9	L758568-10	L758568-11	L758568-12	L758568-13
Physical Tests												
Conductivity	µS/cm	2	7.0 - 8.7	42700	41400	41200	42100	42300	42600	41400	41500	41400
Hardness (as CaCO3)	mg/L	3.1		5200	4960	4810	4940	5130	5130	4970	4960	5100
pH	pH	0.1		7.66	7.61	7.66	7.64	7.65	7.67	7.66	7.66	7.66
Total Suspended Solids	mg/L	3		4	11.3	6	<3.0	3.3	10	7.3	11.3	6
Turbidity	NTU	0.1		0.27	0.15	0.22	0.22	0.2	0.16	0.32	0.21	0.16
Anions and Nutrients												
Ammonia as N	mg/L	0.005	3.6	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Bromide (Br)	mg/L	0.05		55.8	48.8	52.9	55.1	52	55.8	49.6	50	53.3
Chloride (Cl)	mg/L	0.5		15500	14800	14800	15100	15000	15300	14500	14800	14900
Fluoride (F)	mg/L	0.4		0.63	0.61	0.59	0.61	0.58	0.62	0.59	0.6	0.6
Nitrate+Nitrite-N	mg/L	0.006		0.0919	0.0571	0.0529	0.0762	0.076	0.0879	0.0663	0.0653	0.0664
Nitrate-N	mg/L	0.006		0.0919	0.0571	0.0529	0.0762	0.076	0.0879	0.0663	0.0653	0.0664
Nitrite-N	mg/L	0.002		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Ortho Phosphate as P	mg/L	0.001		0.0451	0.0389	0.0391	0.0419	0.044	0.0436	0.0407	0.0408	0.0405
Total Phosphate as P	mg/L	0.002		0.0449	0.0379	0.0378	0.0441	0.0429	0.0435	0.0414	0.041	0.0404
Silicate (as SiO2)	mg/L	0.005		2.01	1.37	1.39	1.62	1.65	1.84	1.69	1.63	1.58
Sulfate	mg/L	0.5	2170	2060	2080	2120	2100	2150	2030	2070	2080	
Organic / Inorganic Carbon												
Total Organic Carbon	mg/L	0.5		0.75	0.95	0.7	0.82	0.71	0.68	0.86	0.78	0.85
Total Metals												
Aluminum (Al)	mg/L	0.005	0.0125	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Antimony (Sb)	mg/L	0.01		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Arsenic (As)	mg/L	0.0002		0.00093	0.00091	0.00088	0.00099	0.00098	0.00097	0.00088	0.00087	0.00096
Barium (Ba)	mg/L	0.005		0.0091	0.0089	0.0097	0.0105	0.0097	0.0107	0.0096	0.0094	0.0099
Beryllium (Be)	mg/L	0.05		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Bismuth (Bi)	mg/L	0.05		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Boron (B)	mg/L	1		3.4	3.2	3.3	3.4	3.4	3.8	3.3	3.2	3.4
Cadmium (Cd)	mg/L	0.00002		0.000057	0.000054	0.000053	0.000051	0.000055	0.000058	0.000056	0.000054	0.000056
Calcium (Ca)	mg/L	0.5		340	330	335	339	337	347	328	335	337
Chromium (Cr)	mg/L	0.05		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Cobalt (Co)	mg/L	0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	
Copper (Cu)	mg/L	0.00005	0.000384	0.00044	0.00042	0.00034	0.000397	0.000347	0.000414	0.000397	0.000403	
Iron (Fe)	mg/L	0.005	0.0108	<0.0050	<0.0050	0.0056	0.0059	0.0085	<0.0050	<0.0050	<0.0050	
Lead (Pb)	mg/L	0.00005	0.000058	<0.000050	<0.000050	0.00008	0.000108	0.000145	0.000054	0.000309	0.00009	
Lithium (Li)	mg/L	0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
Magnesium (Mg)	mg/L	1	1060	973	1010	1000	1050	1020	980	993	1030	
Manganese (Mn)	mg/L	0.00005	0.00235	0.00101	0.00106	0.00112	0.0012	0.00193	0.00123	0.00123	0.00119	
Mercury (Hg)	mg/L	0.00001	0.000096	0.000095	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000012	
Molybdenum (Mo)	mg/L	0.005	0.0087	0.0094	0.0085	0.0094	0.0094	0.0094	0.0081	0.0082	0.0085	
Nickel (Ni)	mg/L	0.00005	0.000495	0.000495	0.000473	0.000443	0.000492	0.000476	0.000505	0.000493	0.000498	
Phosphorus (P)	mg/L	3	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	
Potassium (K)	mg/L	20	315	291	288	297	309	297	299	292	307	
Selenium (Se)	mg/L	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
Silicon (Si)	mg/L	0.5	0.85	0.61	0.57	0.7	0.7	0.82	0.74	0.67	0.69	
Silver (Ag)	mg/L	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	
Sodium (Na)	mg/L	20	8970	8290	8260	8470	8840	8550	8970	8310	8880	
Strontium (Sr)	mg/L	0.01	4.77	4.59	4.67	4.86	4.81	5.22	4.73	4.46	4.67	
Thallium (Tl)	mg/L	0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	
Tin (Sn)	mg/L	0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	
Titanium (Ti)	mg/L	0.1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	
Uranium (U)	mg/L	0.00005	0.00169	0.00165	0.00212	0.00168	0.00185	0.00204	0.00193	0.00166	0.00183	
Vanadium (V)	mg/L	0.1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	
Zinc (Zn)	mg/L	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
Dissolved Metals												
Aluminum (Al)	mg/L	0.005	0.0125	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Antimony (Sb)	mg/L	0.01		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Arsenic (As)	mg/L	0.0002		0.00094	0.00095	0.00085	0.00096	0.001	0.00094	0.0009	0.0009	0.00085
Barium (Ba)	mg/L	0.005		0.0068	0.0098	0.0095	0.0099	0.0097	0.0092	0.0104	0.0095	0.0101
Beryllium (Be)	mg/L	0.05		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Bismuth (Bi)	mg/L	0.05		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Boron (B)	mg/L	1		2.5	3.3	3.3	3.4	3.4	3.3	3.7	3.3	3.5
Cadmium (Cd)	mg/L	0.00002		0.000055	0.000051	0.00005	0.000054	0.000056	0.000058	0.000054	0.000055	0.000054
Calcium (Ca)	mg/L	0.5		338	331	318	343	331	345	335	337	339
Chromium (Cr)	mg/L	0.05		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Cobalt (Co)	mg/L	0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	
Copper (Cu)	mg/L	0.00005	0.000292	0.000358	0.000361	0.000302	0.000283	0.000428	0.000361	0.000435	0.000365	
Iron (Fe)	mg/L	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	
Lead (Pb)	mg/L	0.00005	<0.000050	<0.000050	0.000052	<0.000050	0.000071	0.000135	0.000077	0.000055	<0.000050	
Lithium (Li)	mg/L	0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
Magnesium (Mg)	mg/L	1	1060	1000	975	992	1040	1040	1000	1000	1030	
Manganese (Mn)	mg/L	0.00005	0.00191	0.000927	0.000871	0.000998	0.000973	0.00177	0.00111	0.0012	0.00122	
Mercury (Hg)	mg/L	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000015	<0.000010	<0.000010	
Molybdenum (Mo)	mg/L	0.005	<0.0050	0.0091	0.009	0.0096	0.0091	0.0086	0.01	0.0087	0.0091	
Nickel (Ni)	mg/L	0.00005	0.000465	0.000505	0.000519	0.000517	0.000495	0.000544	0.000508	0.000568	0.000536	
Phosphorus (P)	mg/L	3	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	
Potassium (K)	mg/L	20	318	293	280	298	306	298	310	290	312	
Selenium (Se)	mg/L	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
Silicon (Si)	mg/L	0.5	0.82	0.58	0.56	0.7	0.74	0.8	0.73	0.71	0.68	
Silver (Ag)	mg/L	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	
Sodium (Na)	mg/L	20	9020	8360	7980	8460	8780	8560	9300	8360	8990	
Strontium (Sr)	mg/L	0.01	3.52	4.73	4.75	4.81	4.75	4.75	5.07	4.5	5.01	
Thallium (Tl)	mg/L	0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	

Appendix 3.5-1. Winter Marine Water Quality, Hope Bay Belt Project, 2009

Station Date Sampled Replicate Depth ALS Sample ID	Realized Detection Limits ^a		CCME Guidelines for the Protection of Aquatic Life (Marine) ^b	REF-W	REF-W			HB1	HB2	HB2	HB4	HB4
				30-APR-09	30-APR-09	28-APR-09	28-APR-09	03-MAY-09	03-MAY-09	03-MAY-09	03-MAY-09	03-MAY-09
				1	1	Equipment	Travel	1	1	1	1	1
	18	28	Blank	Blank	2.25	4	8	4	11			
	Units	Limits ^a		L758568-14	L758568-15	L758317-5	L758317-6	L759154-1	L759154-2	L759154-3	L759154-4	L759154-5
Physical Tests												
Conductivity	µS/cm	2	7.0 - 8.7	41700	42100	<2.0	<2.0	41400	40700	40600	39500	40900
Hardness (as CaCO3)	mg/L	3.1		5000	5110	<1.0	<1.0	5250	5070	5340	5300	5080
pH	pH	0.1		7.67	7.63	5.9	5.93	7.73	7.76	7.77	7.77	7.76
Total Suspended Solids	mg/L	3		3.3	8.7	<3.0	<3.0	3.3	7.3	6.7	8.7	11.3
Turbidity	NTU	0.1		0.2	0.23	<0.10	<0.10	0.74	0.26	0.26	0.4	0.36
Anions and Nutrients												
Ammonia as N	mg/L	0.005	3.6	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Bromide (Br)	mg/L	0.05		49	54.4	<0.050	<0.050	<1.0	<1.0	<1.0	<1.0	<1.0
Chloride (Cl)	mg/L	0.5		14400	15000	<0.50	<0.50	15200	14900	14900	14600	15200
Fluoride (F)	mg/L	0.4		0.57	0.6	<0.020	<0.020	0.61	0.59	0.59	0.58	0.6
Nitrate+Nitrite-N	mg/L	0.006		0.0756	0.0838	<0.0060	<0.0060	0.0511	0.0613	0.0639	0.0607	0.0636
Nitrate-N	mg/L	0.006		0.0756	0.0838	<0.0060	<0.0060	0.0511	0.0613	0.0639	0.0607	0.0636
Nitrite-N	mg/L	0.002		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Ortho Phosphate as P	mg/L	0.001		0.0432	0.0427	<0.0010	<0.0010	0.0358	0.0372	0.0383	0.0368	0.0376
Total Phosphate as P	mg/L	0.002		0.04	0.0431	<0.0020	<0.0020	0.0451	0.0355	0.029	0.0344	0.0439
Silicate (as SiO2)	mg/L	0.005		1.65	1.7	<0.0050	<0.0050	1.26	1.32	1.36	1.3	1.41
Sulfate	mg/L	0.5	2010	2100	<0.50	<0.50	2150	2120	2100	2060	2150	
Organic / Inorganic Carbon												
Total Organic Carbon	mg/L	0.5		0.82	0.79	<0.50	<0.50	0.85	0.88	1	0.79	0.7
Total Metals												
Aluminum (Al)	mg/L	0.005	0.0125	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Antimony (Sb)	mg/L	0.01		<0.010	<0.010	<0.00010	<0.00010	<0.010	<0.010	<0.010	<0.010	<0.010
Arsenic (As)	mg/L	0.0002		0.0009	0.00094	<0.00020	<0.00020	0.00089	0.00083	0.00091	0.00093	0.00077
Barium (Ba)	mg/L	0.005		0.0092	0.0096	<0.000050	<0.000050	0.0098	0.0102	0.01	0.0102	0.0094
Beryllium (Be)	mg/L	0.05		<0.050	<0.050	<0.00050	<0.00050	<0.050	<0.050	<0.050	<0.050	<0.050
Bismuth (Bi)	mg/L	0.05		<0.050	<0.050	<0.00050	<0.00050	<0.050	<0.050	<0.050	<0.050	<0.050
Boron (B)	mg/L	1		3.5	3.3	<0.010	<0.010	3.3	3.3	3.3	3.3	3.5
Cadmium (Cd)	mg/L	0.00002		0.000052	0.000056	<0.000020	<0.000020	0.000051	0.000054	0.000049	0.000051	0.00005
Calcium (Ca)	mg/L	0.5		334	341	<0.050	<0.050	348	316	330	335	327
Chromium (Cr)	mg/L	0.05		<0.050	<0.050	<0.00050	<0.00050	<0.050	0.057	0.068	0.072	0.077
Cobalt (Co)	mg/L	0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	
Copper (Cu)	mg/L	0.00005	0.000366	0.000375	0.000073	<0.000050	0.000432	0.000378	0.000319	0.000389	0.000317	
Iron (Fe)	mg/L	0.005	0.0053	0.0087	<0.0050	<0.0050	0.0135	<0.0050	<0.0050	<0.0050	<0.0050	
Lead (Pb)	mg/L	0.00005	<0.000050	0.000065	<0.000050	<0.000050	0.000805	0.000073	<0.000050	<0.000050	0.000159	
Lithium (Li)	mg/L	0.5	<0.50	<0.50	<0.0050	<0.0050	<0.50	<0.50	<0.50	<0.50	<0.50	
Magnesium (Mg)	mg/L	1	1040	1060	<0.10	<0.10	1110	1010	1070	1080	1050	
Manganese (Mn)	mg/L	0.00005	0.00141	0.00163	<0.000050	<0.000050	0.00158	0.000933	0.000932	0.000892	0.00088	
Mercury (Hg)	mg/L	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	
Molybdenum (Mo)	mg/L	0.005	0.0085	0.0085	<0.000050	<0.000050	0.0102	0.01	0.0117	0.0113	0.0122	
Nickel (Ni)	mg/L	0.00005	0.000505	0.000543	<0.000050	<0.000050	0.000592	0.000548	0.000533	0.000566	0.000537	
Phosphorus (P)	mg/L	3	<3.0	<3.0	<0.30	<0.30	<3.0	<3.0	<3.0	<3.0	<3.0	
Potassium (K)	mg/L	20	305	312	<2.0	<2.0	315	295	309	302	293	
Selenium (Se)	mg/L	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
Silicon (Si)	mg/L	0.5	0.74	0.77	<0.050	<0.050	0.56	0.67	0.62	0.56	0.68	
Silver (Ag)	mg/L	0.001	<0.0010	<0.0010	<0.000010	<0.000010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	
Sodium (Na)	mg/L	20	8820	9080	<2.0	<2.0	8330	7760	7980	7820	7560	
Strontium (Sr)	mg/L	0.01	4.82	4.67	<0.00010	<0.00010	5.41	5.45	5.39	5.38	5.64	
Thallium (Tl)	mg/L	0.01	<0.010	<0.010	<0.00010	<0.00010	<0.010	<0.010	<0.010	<0.010	<0.010	
Tin (Sn)	mg/L	0.01	<0.010	<0.010	<0.00010	<0.00010	<0.010	<0.010	<0.010	<0.010	<0.010	
Titanium (Ti)	mg/L	0.1	<0.10	<0.10	<0.010	<0.010	<0.10	<0.10	<0.10	<0.10	<0.10	
Uranium (U)	mg/L	0.00005	0.00182	0.00212	<0.000050	<0.000050	0.00134	0.00179	0.00143	0.00174	0.00136	
Vanadium (V)	mg/L	0.1	<0.10	<0.10	<0.0010	<0.0010	<0.10	<0.10	<0.10	<0.10	<0.10	
Zinc (Zn)	mg/L	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	0.00199	<0.00050	<0.00050	<0.00050	<0.00050	
Dissolved Metals												
Aluminum (Al)	mg/L	0.005	0.0125	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Antimony (Sb)	mg/L	0.01		<0.010	<0.010	<0.00010	<0.00010	<0.010	<0.010	<0.010	<0.010	<0.010
Arsenic (As)	mg/L	0.0002		0.00088	0.00093	<0.00020	<0.00020	0.00089	0.0009	0.00093	0.00084	0.0009
Barium (Ba)	mg/L	0.005		0.0087	0.0096	<0.000050	<0.000050	0.0104	0.0104	0.0107	0.0105	0.0105
Beryllium (Be)	mg/L	0.05		<0.050	<0.050	<0.00050	<0.00050	<0.050	<0.050	<0.050	<0.050	<0.050
Bismuth (Bi)	mg/L	0.05		<0.050	<0.050	<0.00050	<0.00050	<0.050	<0.050	<0.050	<0.050	<0.050
Boron (B)	mg/L	1		3.2	3.4	<0.010	<0.010	3.3	3.2	3.2	3.4	3.5
Cadmium (Cd)	mg/L	0.00002		0.000055	0.000055	<0.000020	<0.000020	0.000054	0.000052	0.000051	0.000049	0.00005
Calcium (Ca)	mg/L	0.5		326	335	<0.050	<0.050	330	318	335	331	321
Chromium (Cr)	mg/L	0.05		<0.050	<0.050	<0.00050	<0.00050	<0.050	0.063	0.068	0.077	0.077
Cobalt (Co)	mg/L	0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	
Copper (Cu)	mg/L	0.00005	0.000372	0.000345	0.000063	<0.000050	0.000355	0.000333	0.000297	0.000338	0.000329	
Iron (Fe)	mg/L	0.005	<0.0050	<0.0050	<0.0050	<0.0050	0.0069	0.0051	0.0066	0.0061	<0.0050	
Lead (Pb)	mg/L	0.00005	<0.000050	<0.000050	<0.000050	<0.000050	0.000429	<0.000050	<0.000050	0.000076	0.00011	
Lithium (Li)	mg/L	0.5	<0.50	<0.50	<0.0050	<0.0050	<0.50	<0.50	<0.50	<0.50	<0.50	
Magnesium (Mg)	mg/L	1	1020	1040	<0.10	<0.10	1070	1040	1090	1090	1040	
Manganese (Mn)	mg/L	0.00005	0.00123	0.00143	<0.000050	<0.000050	0.00143	0.000917	0.000948	0.000838	0.000879	
Mercury (Hg)	mg/L	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	
Molybdenum (Mo)	mg/L	0.005	0.0077	0.0098	<0.000050	<0.000050	0.0096	0.0105	0.012	0.0124	0.0119	
Nickel (Ni)	mg/L	0.00005	0.000536	0.000526	<0.000050	<0.000050	0.000542	0.000497	0.000539	0.000478	0.000495	
Phosphorus (P)	mg/L	3	<3.0	<3.0	<0.30	<0.30	<3.0	<3.0	<3.0	<3.0	<3.0	
Potassium (K)	mg/L	20	304	306	<2.0							

Station Date Sampled Replicate Depth			HB4	HB4	HB4	HB7	HB7	HB7	HB7	HB7	HB10	HB10
	Realized Detection	CCME Guidelines for the Protection of	03-MAY-09 2 11	03-MAY-09 1 19	03-MAY-09 1 40	03-MAY-09 1 4	03-MAY-09 1 9	03-MAY-09 1 14	03-MAY-09 2 14	03-MAY-09 1 4	03-MAY-09 1 8	
	Units	Limits ^a Aquatic Life (Marine) ^b	L759154-6	L759154-7	L759154-8	L759154-9	L759154-10	L759238-1	L759238-2	L761772-4	L761772-3	
Physical Tests												
Conductivity	µS/cm	2	40800	40900	41300	39400	39200	40300	40400	39500	40800	
Hardness (as CaCO3)	mg/L	3.1	5220	5080	5460	5050	5210	5460	5030	4950		
pH	pH	0.1	7.75	7.75	7.74	7.76	7.75	7.67	7.68	7.69	7.68	
Total Suspended Solids	mg/L	3	5.3	7.3	14.7	3.3	<3.0	6.7	12.7	8.7	11.3	
Turbidity	NTU	0.1	0.36	0.21	0.25	0.2	0.22	0.25	0.26	-	-	
Anions and Nutrients												
Ammonia as N	mg/L	0.005	<0.0050	<0.0050	<0.0050	<0.0050	0.0127	<0.0050	<0.0050	<0.0050	<0.0050	
Bromide (Br)	mg/L	0.05	57.4	59	54.9	55.7	56.9	56.5	56.8	53.6	50.8	
Chloride (Cl)	mg/L	0.5	14900	15100	14200	14400	14500	14700	14700	14400	14000	
Fluoride (F)	mg/L	0.4	0.72	0.7	0.67	0.68	0.67	0.7	0.69	0.54	0.57	
Nitrate+Nitrite-N	mg/L	0.006	0.0604	0.0767	0.0883	0.061	0.0614	0.0742	0.073	0.06	0.0638	
Nitrate-N	mg/L	0.006	0.0604	0.0767	0.0883	0.061	0.0614	0.0742	0.073	0.06	0.0638	
Nitrite-N	mg/L	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	
Ortho Phosphate as P	mg/L	0.001	0.0375	0.0443	0.0451	0.0363	0.036	0.0399	0.0399	0.0362	0.0371	
Total Phosphate as P	mg/L	0.002	0.0365	0.0418	0.0419	0.0406	0.03	0.0423	0.016	0.0345	0.0368	
Silicate (as SiO2)	mg/L	0.005	1.35	1.62	1.99	1.29	1.32	1.55	1.52	1.39	1.39	
Sulfate	mg/L	0.5	2090	2110	1990	2010	2030	2060	2060	2020	1960	
Organic / Inorganic Carbon												
Total Organic Carbon	mg/L	0.5	1.06	0.68	0.77	0.96	0.88	0.82	0.9	0.87	0.93	
Total Metals												
Aluminum (Al)	mg/L	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	
Antimony (Sb)	mg/L	0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	
Arsenic (As)	mg/L	0.0002	0.00092	0.0009	0.00107	0.00099	0.00089	0.00092	0.00084	0.00114	0.00109	
Barium (Ba)	mg/L	0.005	0.0106	0.0109	0.0104	0.0106	0.0097	0.0095	0.011	0.0111	0.0122	
Beryllium (Be)	mg/L	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	
Bismuth (Bi)	mg/L	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	
Boron (B)	mg/L	1	3.0	3.5	3.6	3.5	3.2	3.1	3.4	3.4	3.4	
Cadmium (Cd)	mg/L	0.00002	0.000055	0.000058	0.000056	0.000052	0.000053	0.000055	0.000057	0.000058	0.000053	
Calcium (Ca)	mg/L	0.5	342	327	331	331	333	316	338	320	329	
Chromium (Cr)	mg/L	0.05	0.056 ^c	0.066	0.078	0.078	0.077	<0.050	<0.050	0.058	0.059	
Cobalt (Co)	mg/L	0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	
Copper (Cu)	mg/L	0.00005	0.000324	0.000302	0.000381	0.00038	0.000366	0.000355	0.00036	0		

Appendix 3.5-1. Winter Marine Water Quality, Hope Bay Belt Project, 2009

Station Date Sampled Replicate Depth ALS Sample ID				HB10	HB10	HB10	HB12	HB12	HB12	HB12	HB12		
	Realized Detection Limits ^a Units	CCME Guidelines for the Protection of Aquatic Life (Marine) ^b	03-MAY-09	03-MAY-09	03-MAY-09	03-MAY-09	03-MAY-09	03-MAY-09	03-MAY-09	03-MAY-09	03-MAY-09	03-MAY-09	03-MAY-09
			2	1	1	1	2	1	1	1	Field Blank	Travel Blank	
			8	16	36	4	4	8	15	40			
L761772-1L761772-2L761772-5L759238-3L759238-4L759238-5L759238-6L759238-7L759238-8L759238-9													
Physical Tests													
Conductivity	µS/cm	2		40500	40800	41800	40100	39100	38900	39000	41200	-	<2.0
Hardness (as CaCO3)	mg/L	3.1	7.0 - 8.7	5070	5020	5170	5300	5400	5040	5200	5260	<1.0	<1.0
pH	pH	0.1		7.55	7.58	7.58	7.68	7.7	7.72	7.66	7.66	-	5.52
Total Suspended Solids	mg/L	3		8.7	8.7	16	5.3	12	6	6	10	-	<3.0
Turbidity	NTU	0.1		-	-	-	0.18	0.23	1.17	0.32	0.19	-	<0.10
Anions and Nutrients													
Ammonia as N	mg/L	0.005		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0074	<0.0050	-	<0.0050
Bromide (Br)	mg/L	0.05		54	54.6	55.6	59.1	56.3	57.2	58	60.5	-	<0.050
Chloride (Cl)	mg/L	0.5		14700	14800	14900	15000	14300	14400	14700	15500	-	<0.50
Fluoride (F)	mg/L	0.4		0.57	0.59	0.58	0.71	0.67	0.68	0.7	0.72	-	<0.020
Nitrate+Nitrite-N	mg/L	0.006		0.0696	0.0759	0.0853	0.0606	0.0593	0.0597	0.0673	0.0874	-	-
Nitrate-N	mg/L	0.006	3.6	0.0696	0.0759	0.0853	0.0606	0.0593	0.0597	0.0673	0.0874	-	-
Nitrite-N	mg/L	0.002		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	-	-
Ortho Phosphate as P	mg/L	0.001		0.0377	0.0394	0.0437	0.0384	0.0379	0.0365	0.0383	0.0439	-	<0.0010
Total Phosphate as P	mg/L	0.002		0.037	0.0384	0.0408	0.0386	0.0373	0.0331	0.0272	0.0431	-	<0.0020
Silicate (as SiO2)	mg/L	0.005		1.39	1.52	1.81	1.46	1.38	1.36	1.44	1.87	-	<0.0050
Sulfate	mg/L	0.5		2060	2070	2080	2100	2000	2020	2060	2160	-	<0.50
Organic / Inorganic Carbon													
Total Organic Carbon	mg/L	0.5		1.01	0.74	0.75	0.89	0.87	0.85	0.73	0.69	<0.50	<0.50
Total Metals													
Aluminum (Al)	mg/L	0.005		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Antimony (Sb)	mg/L	0.01		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.00010	<0.00010
Arsenic (As)	mg/L	0.0002	0.0125	0.00115	0.00121	0.00116	0.00098	0.00091	0.00104	0.00122	0.00118	<0.00020	<0.00020
Barium (Ba)	mg/L	0.005		0.0106	0.0112	0.011	0.0104	0.0098	0.0107	0.0098	0.0094	<0.000050	<0.000050
Beryllium (Be)	mg/L	0.05		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.00050	<0.00050
Bismuth (Bi)	mg/L	0.05		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.00050	<0.00050
Boron (B)	mg/L	1		3.4	3.5	3.5	3.5	3.2	3.5	3.3	3.4	<0.010	<0.010
Cadmium (Cd)	mg/L	0.00002	0.00012	0.000049	0.000048	0.000054	0.000054	0.000053	0.000054	0.000055	0.000056	<0.000020	<0.000020
Calcium (Ca)	mg/L	0.5		321	323	324	324	324	320	323	320	<0.050	<0.050
Chromium (Cr)	mg/L	0.05		0.056	0.059	0.062	0.077	0.079	0.081	0.082	0.079	<0.00050	<0.00050
Cobalt (Co)	mg/L	0.00005		<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Copper (Cu)	mg/L	0.00005		0.000362	0.000348	0.000296	0.00037	0.000344	0.000358	0.00034	0.000324	<0.000050	<0.000050
Iron (Fe)	mg/L	0.005		0.0051	0.0053	0.0086	0.0066	0.0056	0.0075	0.0084	0.0109	<0.00050	<0.00050
Lead (Pb)	mg/L	0.00005		0.000096	0.000108	0.000919	0.00239	<0.000050	0.00151	0.000696	0.000151	<0.000050	<0.000050
Lithium (Li)	mg/L	0.5		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.0050	<0.0050
Magnesium (Mg)	mg/L	1		1020	1020	1020	1060	1050	1040	1040	1050	<0.10	<0.10
Manganese (Mn)	mg/L	0.00005		0.00103	0.000976	0.00171	0.000996	0.000944	0.000948	0.000943	0.00178	<0.000050	<0.000050
Mercury (Hg)	mg/L	0.00001	0.000016 ^d	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Molybdenum (Mo)	mg/L	0.005		0.0122	0.0114	0.0107	0.0105	0.0114	0.0101	0.011	0.0117	<0.000050	<0.000050
Nickel (Ni)	mg/L	0.00005		0.000491	0.000501	0.000501	0.000472	0.000482	0.000451	0.000462	0.000447	<0.000050	<0.000050
Phosphorus (P)	mg/L	3		<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Potassium (K)	mg/L	20		292	296	295	293	309	297	298	304	<2.0	<2.0
Selenium (Se)	mg/L	0.0005		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Silicon (Si)	mg/L	0.5		0.58	0.58	0.73	0.59	0.57	0.6	0.79	0.97	<0.050	<0.050
Silver (Ag)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.000010	<0.000010
Sodium (Na)	mg/L	20		8280	8420	8380	7290	7630	7460	7540	7780	<2.0	<2.0
Strontium (Sr)	mg/L	0.01		5.89	5.67	5.48	5.29	5.1	5.31	5.03	5.05	<0.00010	<0.00010
Thallium (Tl)	mg/L	0.01		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.00010	<0.00010
Tin (Sn)	mg/L	0.01		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.00010	<0.00010
Titanium (Ti)	mg/L	0.1		<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.010	<0.010
Uranium (U)	mg/L	0.00005		0.00185	0.00195	0.00168	0.00123	0.00137	0.00122	0.0013	0.00132	<0.000050	<0.000050
Vanadium (V)	mg/L	0.1		<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.0010	<0.0010
Zinc (Zn)	mg/L	0.0005		<0.00050	<0.00050	<0.00050	0.00082	<0.00050	0.00075	<0.00050	<0.00050	<0.00050	<0.00050
Dissolved Metals													
Aluminum (Al)	mg/L	0.005		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Antimony (Sb)	mg/L	0.01		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.00010	<0.00010
Arsenic (As)	mg/L	0.0002	0.0125	0.00111	0.00122	0.00118	0.00078	0.00085	0.00106	0.00112	0.00104	<0.00020	<0.00020
Barium (Ba)	mg/L	0.005		0.0106	0.0106	0.0106	0.01	0.0102	0.01	0.01	0.0108	<0.000050	<0.000050
Beryllium (Be)	mg/L	0.05		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.00050	<0.00050
Bismuth (Bi)	mg/L	0.05		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.00050	<0.00050
Boron (B)	mg/L	1		3.4	3.4	3.5	3.4	3.4	3.5	3.5	3.4	<0.010	<0.010
Cadmium (Cd)	mg/L	0.00002	0.00012	0.000049	0.000049	0.000051	0.000056	0.000055	0.000051	0.000051	0.000054	<0.000020	<0.000020
Calcium (Ca)	mg/L	0.5		323	324	332	335	339	317	325	328	<0.050	<0.050
Chromium (Cr)	mg/L	0.05		0.056	0.057	0.059	0.077	0.074	0.079	0.08	0.078	<0.00050	<0.00050
Cobalt (Co)	mg/L	0.00005		<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Copper (Cu)	mg/L	0.00005		0.000319	0.000279	0.00047	0.000318	0.000335	0.000332	0.000285	0.000282	<0.000050	<0.000050
Iron (Fe)	mg/L	0.005		<0.0050	<0.0050	<0.0050	<0.0050	0.0063	0.0072	0.0068	0.0068	<0.00050	<0.00050
Lead (Pb)	mg/L	0.00005		0.000008	0.000076	0.000879	0.000619	<0.000050	0.00117	0.000054	0.000071	<0.000050	<0.000050
Lithium (Li)	mg/L	0.5		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.0050	<0.0050
Magnesium (Mg)	mg/L	1		1040	1020	1060	1080	1110					

Appendix 3.5-2

Summer Marine Water Quality, Hope Bay Belt Project, 2009

Appendix 3.5-2. Summer Marine Water Quality, Hope Bay Belt Project, 2009

Station Date Sampled Replicate Depth (m) ALS Sample ID			CCME Guidelines for the Protection of Aquatic Life (Marine) ^b	ST0	ST0	ST1	ST1	ST2	ST2	ST3
	Units	Realized Detection Limits ^a		15-AUG-09	15-AUG-09	15-AUG-09	15-AUG-09	15-AUG-09	15-AUG-09	15-AUG-09
				1	2	1	2	1	1	1
				1	1	1	1	1	4	1
				L806584-5	L806584-6	L806584-25	L806584-24	L806584-11	L806584-16	L806584-10
Physical Tests										
pH	pH	0.1	7.0 - 8.7	7.85	7.85	7.82	7.81	7.8	7.82	7.83
Total Suspended Solids	mg/L	3		5.8	5.8	4.4	3.8	5.1	4.4	3.8
Turbidity	NTU	0.1		0.6	0.57	0.74	0.73	0.48	0.36	0.46
Anions and Nutrients										
Ammonia as N	mg/L	0.005		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0056	<0.0050
Bromide (Br)	mg/L	5		36.5	36.3	39.6	41.9	37.9	44	38.3
Chloride (Cl)	mg/L	50		9710	9610	9560	9590	9920	10400	9570
Fluoride (F)	mg/L	0.75		<0.75	<0.75	<0.75	<0.75	<0.75	<0.75	<0.75
Nitrate+Nitrite-N	mg/L	0.006		<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060
Nitrate-N	mg/L	0.006	3.6	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060
Nitrite-N	mg/L	0.002		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Ortho Phosphate as P	mg/L	0.001		0.0164	0.0162	0.0158	0.0164	0.017	0.0198	0.0157
Total Phosphate as P	mg/L	0.002		0.021	0.0165	0.0156	0.0191	0.0171	0.0195	0.0165
Silicate (as SiO ₂)	mg/L	0.025		0.627	0.631	0.741	0.736	0.66	0.681	0.646
Sulfate	mg/L	50		1290	1280	1280	1280	1320	1400	1280
Organic / Inorganic Carbon										
Total Organic Carbon	mg/L	0.5		1.19	1.04	1.13	1.05	0.9	1.13	0.99
Total Metals										
Aluminum (Al)	mg/L	0.005		0.011	0.0093	0.0218	0.0156	0.0058	0.0053	0.0077
Antimony (Sb)	mg/L	0.005-0.01		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Arsenic (As)	mg/L	0.0002	0.0125	0.00057	0.00067	0.0006	0.00085	0.00056	0.00058	0.00056
Barium (Ba)	mg/L	0.005		0.008	0.0078	0.0076	0.0085	0.0077	0.0083	0.0072
Beryllium (Be)	mg/L	0.025-0.05		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Bismuth (Bi)	mg/L	0.025-0.05		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Boron (B)	mg/L	1		2.4	2.3	2.2	2.4	2.3	2.4	2.2
Cadmium (Cd)	mg/L	0.00002	0.00012	0.000021	0.000022	0.000022	0.000023	0.000023	0.000023	0.000021
Calcium (Ca)	mg/L	0.5		208	200	193	196	202	208	197
Chromium (Cr)	mg/L	0.025-0.05	0.056 ^c	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Cobalt (Co)	mg/L	0.00005		<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Copper (Cu)	mg/L	0.00005		0.000378	0.000354	0.000547	0.000472	0.000444	0.000374	0.000361
Iron (Fe)	mg/L	0.005		0.014	0.0126	0.0295	0.0218	0.0107	0.0083	0.0098
Lead (Pb)	mg/L	0.00005		<0.000050	<0.000050	0.000062	<0.000050	<0.000050	<0.000050	<0.000050
Lithium (Li)	mg/L	0.025-0.05		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Magnesium (Mg)	mg/L	1		643	634	612	618	643	668	621
Manganese (Mn)	mg/L	0.00005		0.00129	0.00124	0.00137	0.00128	0.00113	0.001	0.00103
Mercury (Hg)	mg/L	0.00001	0.000016 ^d	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Molybdenum (Mo)	mg/L	0.005		0.0053	<0.0050	<0.0050	<0.0050	<0.0050	0.0055	<0.0050
Nickel (Ni)	mg/L	0.00005		0.00039	0.000326	0.000419	0.000419	0.000372	0.000392	0.000308
Phosphorus (P)	mg/L	3		<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Potassium (K)	mg/L	20		197	183	178	183	186	200	181
Selenium (Se)	mg/L	0.0005		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Silicon (Si)	mg/L	0.5		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Silver (Ag)	mg/L	0.0005-0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Sodium (Na)	mg/L	20		5350	5000	4870	4970	4910	5120	4810
Strontium (Sr)	mg/L	0.01		3.75	3.7	3.79	3.83	3.69	4.05	3.61
Thallium (Tl)	mg/L	0.005-0.01		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Tin (Sn)	mg/L	0.005-0.01		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Titanium (Ti)	mg/L	0.1		<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Uranium (U)	mg/L	0.00005		0.00136	0.00134	0.00132	0.00122	0.00142	0.00139	0.00124
Vanadium (V)	mg/L	0.05-0.1		<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Zinc (Zn)	mg/L	0.0005		0.00064	<0.00050	0.00077	<0.00050	<0.00050	<0.00050	<0.00050
Dissolved Metals										
Aluminum (Al)	mg/L	0.005		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Antimony (Sb)	mg/L	0.005-0.01		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Arsenic (As)	mg/L	0.0002	0.0125	0.00055	0.00051	0.00072	0.00071	0.00057	0.0006	0.00058
Barium (Ba)	mg/L	0.005		0.0077	0.0074	0.0077	0.0068	0.0079	0.0083	0.0076
Beryllium (Be)	mg/L	0.025-0.05		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Bismuth (Bi)	mg/L	0.025-0.05		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Boron (B)	mg/L	1		2.2	2.3	2.2	2.2	2.4	2.5	2.3
Cadmium (Cd)	mg/L	0.00002	0.00012	0.000023	0.000023	0.000022	0.00005	0.000022	0.000026	0.000021
Calcium (Ca)	mg/L	0.5		210	211	190	195	214	211	205
Chromium (Cr)	mg/L	0.025-0.05	0.056 ^c	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Cobalt (Co)	mg/L	0.00005		<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Copper (Cu)	mg/L	0.00005		0.000339	0.000367	0.000403	0.00044	0.00036	0.000366	0.000367
Iron (Fe)	mg/L	0.005		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Lead (Pb)	mg/L	0.00005		<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Lithium (Li)	mg/L	0.025-0.05		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Magnesium (Mg)	mg/L	1		664	673	605	623	662	676	640
Manganese (Mn)	mg/L	0.00005		0.000613	0.000668	0.000491	0.00081	0.000405	0.000241	0.000493
Mercury (Hg)	mg/L	0.00001	0.000016 ^d	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Molybdenum (Mo)	mg/L	0.005		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0052
Nickel (Ni)	mg/L	0.00005		0.000379	0.000417	0.000379	0.000449	0.000381	0.000384	0.00036
Phosphorus (P)	mg/L	3		<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Potassium (K)	mg/L	20		197	194	177	181	202	203	185
Selenium (Se)	mg/L	0.0005		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Silicon (Si)	mg/L	0.5		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Silver (Ag)	mg/L	0.0005-0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Sodium (Na)	mg/L	20		5330	5290	4860	4930	5250	5190	4930
Strontium (Sr)	mg/L	0.01		3.66	3.75	3.7	3.76	3.86	4.12	3.66
Thallium (Tl)	mg/L	0.005-0.01		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Tin (Sn)	mg/L	0.005-0.01		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Titanium (Ti)	mg/L	0.1		<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Uranium (U)	mg/L	0.00005		0.00136	0.00136	0.00129	0.00144	0.00144	0.00149	0.00141
Vanadium (V)	mg/L	0.05-0.1		<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Zinc (Zn)	mg/L	0.0005		<0.00050	<0.00050	0.00059	0.00068	<0.0010	<0.0010	<0.00050

a) Seawater samples were diluted by 100x due to elemental matrix interferences (primarily from Sodium); therefore, the reported sample detection limits for certain elements were 100x higher than Method Detection Limits.

b) Canadian water quality guidelines for the protection of aquatic/marine/estuarine life, Council of Ministers of the Environment (CCME 2007)

c) Guideline refers to inorganic mercury

d) Guideline refers to trivalent chromium (Cr(III)), interim guideline for hexavalent chromium (Cr(VI)) is 0.0015 mg/L

Grey blocks indicates concentrations that are higher than CCME water quality guidelines

Appendix 3.5-2. Summer Marine Water Quality, Hope Bay Belt Project, 2009

Station Date Sampled Replicate Depth (m) ALS Sample ID				ST3 15-AUG-09 1 4 L806584-8	ST3 15-AUG-09 2 4 L806584-7	ST3 15-AUG-09 1 9 L806584-9	ST4 15-AUG-09 1 1 L806584-18	ST4 15-AUG-09 2 2 L806584-17	ST4 15-AUG-09 1 6 L806584-22	ST4 15-AUG-09 1 14 L806584-23
	Units	Realized Detection Limits ^a	CCME Guidelines for the Protection of Aquatic Life (Marine) ^b							
Physical Tests										
pH	pH	0.1	7.0 - 8.7	7.77	7.84	7.8	7.8	7.8	7.84	7.82
Total Suspended Solids	mg/L	3		3.8	3.8	3.8	3.1	4.4	5.1	7.8
Turbidity	NTU	0.1		0.47	0.5	0.3	0.53	0.52	0.38	0.39
Anions and Nutrients										
Ammonia as N	mg/L	0.005		<0.0050	<0.0050	0.0169	<0.0050	<0.0050	<0.0050	0.0054
Bromide (Br)	mg/L	5		31.9	39.1	46.5	39.6	36.1	43.4	59.5
Chloride (Cl)	mg/L	50		9560	9730	11800	9590	9380	10500	14800
Fluoride (F)	mg/L	0.75		<0.75	<0.75	<0.75	<0.75	<0.75	<0.75	<0.75
Nitrate+Nitrite-N	mg/L	0.006		<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060
Nitrate-N	mg/L	0.006	3.6	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060
Nitrite-N	mg/L	0.002		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Ortho Phosphate as P	mg/L	0.001		0.0162	0.0157	0.0243	0.0185	0.0154	0.0184	0.0182
Total Phosphate as P	mg/L	0.002		0.0165	0.017	0.0245	0.0151	0.016	0.0177	0.0309
Silicate (as SiO ₂)	mg/L	0.025		0.676	0.666	0.669	0.66	0.629	0.659	1.15
Sulfate	mg/L	50		1260	1300	1590	1280	1250	1410	2010
Organic / Inorganic Carbon										
Total Organic Carbon	mg/L	0.5		0.93	1.06	0.84	1.13	1.11	0.87	1.13
Total Metals										
Aluminum (Al)	mg/L	0.005		0.0072	0.0065	<0.0050	0.0085	0.0085	0.0051	<0.0050
Antimony (Sb)	mg/L	0.005-0.01		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Arsenic (As)	mg/L	0.0002	0.0125	0.00054	0.00088	0.00079	0.00068	0.00063	0.00058	0.001
Barium (Ba)	mg/L	0.005		0.0077	0.0077	0.0085	0.0073	0.0077	0.0086	0.0102
Beryllium (Be)	mg/L	0.025-0.05		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Bismuth (Bi)	mg/L	0.025-0.05		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Boron (B)	mg/L	1		2.2	2.3	2.8	2.3	2.2	2.4	3.2
Cadmium (Cd)	mg/L	0.00002	0.00012	0.000021	0.000021	0.000028	0.00002	0.000021	0.000022	0.000034
Calcium (Ca)	mg/L	0.5		203	195	248	186	221	294	
Chromium (Cr)	mg/L	0.025-0.05	0.056 ^c	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Cobalt (Co)	mg/L	0.00005		<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Copper (Cu)	mg/L	0.00005		0.000358	0.000342	0.000373	0.000414	0.000393	0.000401	0.000341
Iron (Fe)	mg/L	0.005		0.0104	0.0109	0.0063	0.0115	0.0128	0.0099	<0.0050
Lead (Pb)	mg/L	0.00005		<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Lithium (Li)	mg/L	0.025-0.05		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Magnesium (Mg)	mg/L	1		651	619	779	610	609	689	918
Manganese (Mn)	mg/L	0.00005		0.00108	0.00106	0.00102	0.00102	0.0011	0.000953	0.001
Mercury (Hg)	mg/L	0.00001	0.000016 ^d	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Molybdenum (Mo)	mg/L	0.005		<0.0050	<0.0050	0.0062	<0.0050	<0.0050	0.0053	0.0069
Nickel (Ni)	mg/L	0.00005		0.000329	0.00031	0.000408	0.000416	0.000359	0.000362	0.000423
Phosphorus (P)	mg/L	3		<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Potassium (K)	mg/L	20		193	180	230	188	186	201	277
Selenium (Se)	mg/L	0.0005		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00078	0.00078
Silicon (Si)	mg/L	0.5		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.51
Silver (Ag)	mg/L	0.0005-0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Sodium (Na)	mg/L	20		5130	4870	6150	4720	4680	5400	7900
Strontium (Sr)	mg/L	0.01		3.63	3.73	4.4	3.81	3.65	3.94	5.27
Thallium (Tl)	mg/L	0.005-0.01		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Tin (Sn)	mg/L	0.005-0.01		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Titanium (Ti)	mg/L	0.1		<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Uranium (U)	mg/L	0.00005		0.00134	0.00132	0.0016	0.00121	0.00132	0.00138	0.00199
Vanadium (V)	mg/L	0.05-0.1		<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Zinc (Zn)	mg/L	0.0005		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Dissolved Metals										
Aluminum (Al)	mg/L	0.005		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Antimony (Sb)	mg/L	0.005-0.01		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Arsenic (As)	mg/L	0.0002	0.0125	0.00053	0.00054	0.00074	0.00058	0.00055	0.00074	0.00083
Barium (Ba)	mg/L	0.005		0.0074	0.0078	0.0088	0.0069	0.0076	0.0085	0.0109
Beryllium (Be)	mg/L	0.025-0.05		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Bismuth (Bi)	mg/L	0.025-0.05		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Boron (B)	mg/L	1		2.2	2.3	2.8	2.1	2.5	2.5	3.5
Cadmium (Cd)	mg/L	0.00002	0.00012	0.000021	0.000023	0.000026	0.000022	0.000022	0.000024	0.000036
Calcium (Ca)	mg/L	0.5		210	204	242	189	200	224	313
Chromium (Cr)	mg/L	0.025-0.05	0.056 ^c	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Cobalt (Co)	mg/L	0.00005		<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Copper (Cu)	mg/L	0.00005		0.000358	0.000359	0.000368	0.000335	0.000348	0.000317	0.000257
Iron (Fe)	mg/L	0.005		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Lead (Pb)	mg/L	0.00005		<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Lithium (Li)	mg/L	0.025-0.05		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Magnesium (Mg)	mg/L	1		665	646	758	622	646	689	967
Manganese (Mn)	mg/L	0.00005		0.000459	0.000434	0.000178	0.000576	0.000562	0.000413	0.0006
Mercury (Hg)	mg/L	0.00001	0.000016 ^d	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Molybdenum (Mo)	mg/L	0.005		<0.0050	<0.0050	0.0058	<0.0050	<0.0050	0.0053	0.0082
Nickel (Ni)	mg/L	0.00005		0.000369	0.000406	0.000412	0.000367	0.000369	0.000352	0.000377
Phosphorus (P)	mg/L	3		<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Potassium (K)	mg/L	20		193	187	223	189	197	204	289
Selenium (Se)	mg/L	0.0005		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.0005	0.00059
Silicon (Si)	mg/L	0.5		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.5
Silver (Ag)	mg/L	0.0005-0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Sodium (Na)	mg/L	20		5190	5060	5980	4740	5000	5530	8300
Strontium (Sr)	mg/L	0.01		3.58	3.68	4.49	3.6	3.75	3.96	5.59
Thallium (Tl)	mg/L	0.005-0.01		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Tin (Sn)	mg/L	0.005-0.01		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Titanium (Ti)	mg/L	0.1		<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Uranium (U)	mg/L	0.00005		0.00142	0.00139	0.00167	0.00124	0.00125	0.00148	0.00158
Vanadium (V)	mg/L	0.05-0.1		<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Zinc (Zn)	mg/L	0.0005		<0.00050	<0.00050	<0.00050	<0.0010	<0.0010	<0.00050	<0.00050

Appendix 3.5-2. Summer Marine Water Quality, Hope Bay Belt Project, 2009

Station Date Sampled Replicate Depth (m) ALS Sample ID				ST4 15-AUG-09 1 30 L806584-19	ST5 15-AUG-09 1 1 L806584-12	ST5 15-AUG-09 2 1 L806584-14	ST5 15-AUG-09 1 5 L806584-15	ST5 15-AUG-09 1 13 L806584-13	ST5 15-AUG-09 1 40 L806584-21	ST6 15-AUG-09 1 1 L806584-20
	Units	Realized Detection Limits ^a	CCME Guidelines for the Protection of Aquatic Life (Marine) ^b							
Physical Tests										
pH	pH	0.1	7.0 - 8.7	7.77	7.8	7.8	7.79	7.8	7.71	7.82
Total Suspended Solids	mg/L	3		6.4	4.4	4.4	3.8	5.8	9.8	6.4
Turbidity	NTU	0.1		0.19	0.41	0.43	0.36	0.25	0.29	0.38
Anions and Nutrients										
Ammonia as N	mg/L	0.005		<0.0050	<0.0050	<0.0050	<0.0050	0.0079	0.008	<0.0050
Bromide (Br)	mg/L	5		59.8	37.8	40.2	40.4	58.9	63.9	38
Chloride (Cl)	mg/L	50		15500	9670	9560	9640	14800	15700	9450
Fluoride (F)	mg/L	0.75		<0.75	<0.75	<0.75	<0.75	0.76	0.97	<0.75
Nitrate+Nitrite-N	mg/L	0.006		<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	0.0728	<0.0060
Nitrate-N	mg/L	0.006	3.6	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	0.0728	<0.0060
Nitrite-N	mg/L	0.002		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Ortho Phosphate as P	mg/L	0.001		0.0365	0.0158	0.015	0.016	0.033	0.0461	0.0152
Total Phosphate as P	mg/L	0.002		0.0322	0.0159	0.0154	0.0164	0.0332	0.0427	0.0156
Silicate (as SiO ₂)	mg/L	0.025		1.32	0.662	0.629	0.646	1.16	1.98	0.639
Sulfate	mg/L	50		2090	1290	1270	1290	2000	2130	1260
Organic / Inorganic Carbon										
Total Organic Carbon	mg/L	0.5		0.8	0.91	1.05	1.08	0.82	0.7	0.97
Total Metals										
Aluminum (Al)	mg/L	0.005		<0.0050	<0.0050	0.0077	0.0067	<0.0050	<0.0050	0.005
Antimony (Sb)	mg/L	0.005-0.01		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Arsenic (As)	mg/L	0.0002	0.0125	0.00094	0.00059	0.00058	0.00067	0.0009	0.00137	0.00064
Barium (Ba)	mg/L	0.005		0.0107	0.0071	0.0074	0.0076	0.0105	0.011	0.0072
Beryllium (Be)	mg/L	0.025-0.05		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Bismuth (Bi)	mg/L	0.025-0.05		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Boron (B)	mg/L	1		3.5	2.2	2.2	2.3	3.4	3.5	2.1
Cadmium (Cd)	mg/L	0.00002	0.00012	0.000028	0.000022	0.000021	0.00002	0.000036	0.000068	0.000021
Calcium (Ca)	mg/L	0.5		318	205	204	314	330	330	187
Chromium (Cr)	mg/L	0.025-0.05	0.056 ^c	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Cobalt (Co)	mg/L	0.00005		<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Copper (Cu)	mg/L	0.00005		0.000306	0.000383	0.000429	0.000396	0.000359	0.000338	0.000577
Iron (Fe)	mg/L	0.005		<0.0050	0.0095	0.0121	0.0103	<0.0050	<0.0050	0.0118
Lead (Pb)	mg/L	0.00005		<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Lithium (Li)	mg/L	0.025-0.05		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Magnesium (Mg)	mg/L	1		1020	623	633	621	982	1020	593
Manganese (Mn)	mg/L	0.00005		0.000935	0.00114	0.00114	0.00112	0.00151	0.00108	
Mercury (Hg)	mg/L	0.00001	0.000016 ^d	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Molybdenum (Mo)	mg/L	0.005		0.008	<0.0050	<0.0050	<0.0050	0.0076	0.0081	<0.0050
Nickel (Ni)	mg/L	0.00005		0.000379	0.000384	0.000374	0.000383	0.000405	0.00055	0.000472
Phosphorus (P)	mg/L	3		<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Potassium (K)	mg/L	20		312	187	196	187	306	306	175
Selenium (Se)	mg/L	0.0005		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Silicon (Si)	mg/L	0.5		0.62	<0.50	<0.50	<0.50	0.51	0.87	<0.50
Silver (Ag)	mg/L	0.0005-0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Sodium (Na)	mg/L	20		8510	4920	5020	4780	8080	8550	4550
Strontium (Sr)	mg/L	0.01		5.68	3.71	3.67	3.76	5.58	5.86	3.55
Thallium (Tl)	mg/L	0.005-0.01		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Tin (Sn)	mg/L	0.005-0.01		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Titanium (Ti)	mg/L	0.1		<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Uranium (U)	mg/L	0.00005		0.00212	0.00127	0.00127	0.00134	0.00194	0.00183	0.00119
Vanadium (V)	mg/L	0.05-0.1		<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Zinc (Zn)	mg/L	0.0005		<0.00050	0.00057	<0.00050	<0.00050	0.00061	<0.00050	0.00059
Dissolved Metals										
Aluminum (Al)	mg/L	0.005		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Antimony (Sb)	mg/L	0.005-0.01		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Arsenic (As)	mg/L	0.0002	0.0125	0.0011	0.0005	0.00049	0.00054	0.00082	0.00107	0.00055
Barium (Ba)	mg/L	0.005		0.0107	0.0075	0.0071	0.0077	0.0143	0.0114	0.0078
Beryllium (Be)	mg/L	0.025-0.05		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Bismuth (Bi)	mg/L	0.025-0.05		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Boron (B)	mg/L	1		3.4	2.3	2.2	2.3	3.4	3.6	2.1
Cadmium (Cd)	mg/L	0.00002	0.00012	0.00003	0.000022	0.000021	0.000022	0.000035	0.000071	0.000022
Calcium (Ca)	mg/L	0.5		325	195	193	191	292	327	199
Chromium (Cr)	mg/L	0.025-0.05	0.056 ^c	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Cobalt (Co)	mg/L	0.00005		<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Copper (Cu)	mg/L	0.00005		0.000267	0.00037	0.00037	0.000356	0.000281	0.000251	0.000338
Iron (Fe)	mg/L	0.005		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Lead (Pb)	mg/L	0.00005		<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Lithium (Li)	mg/L	0.025-0.05		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Magnesium (Mg)	mg/L	1		1040	616	612	614	920	1010	621
Manganese (Mn)	mg/L	0.00005		0.000849	0.000517	0.000511	0.000424	0.000552	0.00125	0.000579
Mercury (Hg)	mg/L	0.00001	0.000016 ^d	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Molybdenum (Mo)	mg/L	0.005		0.0074	<0.0050	<0.0050	<0.0050	0.0076	0.0082	<0.0050
Nickel (Ni)	mg/L	0.00005		0.000371	0.000377	0.000356	0.000374	0.0004	0.000525	0.000331
Phosphorus (P)	mg/L	3		<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Potassium (K)	mg/L	20		324	183	187	185	275	298	185
Selenium (Se)	mg/L	0.0005		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Silicon (Si)	mg/L	0.5		0.6	<0.50	<0.50	<0.50	<0.50	0.86	<0.50
Silver (Ag)	mg/L	0.0005-0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Sodium (Na)	mg/L	20		8760	4680	4790	4710	7540	8390	4870
Strontium (Sr)	mg/L	0.01		5.56	3.77	3.68	3.73	5.42	6.05	3.7
Thallium (Tl)	mg/L	0.005-0.01		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Tin (Sn)	mg/L	0.005-0.01		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Titanium (Ti)	mg/L	0.1		<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Uranium (U)	mg/L	0.00005		0.00154	0.00141	0.00134	0.00139	0.00179	0.00177	0.00136
Vanadium (V)	mg/L	0.05-0.1		<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Zinc (Zn)	mg/L	0.0005		<0.00050	<0.0010	<0.00050	<0.00050	<0.00050	0.00053	<0.00050

Appendix 3.5-2. Summer Marine Water Quality, Hope Bay Belt Project, 2009

Station Date Sampled Replicate Depth (m) ALS Sample ID				ST6 15-AUG-09 2 1 L806584-1	ST6 15-AUG-09 1 6 L806584-2	ST6 15-AUG-09 1 14 L806584-4	ST6 15-AUG-09 1 40 L806584-3	RP3 18-AUG-09 1 1 L807739-1	RP3 18-AUG-09 1 5 L807739-2	RP3 18-AUG-09 1 12 L807739-3
	Units	Realized Detection Limits ^a	CCME Guidelines for the Protection of Aquatic Life (Marine) ^b							
Physical Tests										
pH	pH	0.1	7.0 - 8.7	7.77	7.8	7.81	7.69	7.75	7.73	7.57
Total Suspended Solids	mg/L	3		5.8	5.8	6.4	10.4	3.8	5.8	3.8
Turbidity	NTU	0.1		0.42	0.41	0.24	0.23	0.47	0.42	0.28
Anions and Nutrients										
Ammonia as N	mg/L	0.005		<0.0050	<0.0050	<0.0050	0.0079	0.0073	0.0061	<0.0050
Bromide (Br)	mg/L	5		35.2	39.7	57.7	60.8	31.6	35.7	57.2
Chloride (Cl)	mg/L	50		9790	9680	14500	15400	8990	10100	15800
Fluoride (F)	mg/L	0.75		0.76	<0.75	0.85	0.83	<0.75	<0.75	0.79
Nitrate+Nitrite-N	mg/L	0.006		<0.0060	<0.0060	<0.0060	0.0769	<0.0060	<0.0060	0.0943
Nitrate-N	mg/L	0.006	3.6	<0.0060	<0.0060	<0.0060	0.0769	<0.0060	<0.0060	0.0943
Nitrite-N	mg/L	0.002		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Ortho Phosphate as P	mg/L	0.001		0.0157	0.0157	0.0311	0.0458	0.0126	0.0158	0.0466
Total Phosphate as P	mg/L	0.002		0.0161	0.0172	0.0321	0.0437	0.0136	0.0167	0.0514
Silicate (as SiO ₂)	mg/L	0.025		0.669	0.72	1.2	1.95	0.594	0.665	2.02
Sulfate	mg/L	50		1310	1290	1960	2100	1190	1350	2160
Organic / Inorganic Carbon										
Total Organic Carbon	mg/L	0.5		1.21	1.15	1.19	0.97	1.27	1.09	0.69
Total Metals										
Aluminum (Al)	mg/L	0.005		0.0051	0.0064	<0.0050	<0.0050	0.0065	0.0057	<0.0050
Antimony (Sb)	mg/L	0.005-0.01		<0.010	<0.010	<0.010	<0.010	<0.0050	<0.0050	<0.010
Arsenic (As)	mg/L	0.0002	0.0125	0.00054	0.0005	0.00074	0.00101	0.00042	0.00048	0.001
Barium (Ba)	mg/L	0.005		0.0084	0.0076	0.0108	0.0112	0.0083	0.0083	0.0113
Beryllium (Be)	mg/L	0.025-0.05		<0.050	<0.050	<0.050	<0.050	<0.025	<0.025	<0.050
Bismuth (Bi)	mg/L	0.025-0.05		<0.050	<0.050	<0.050	<0.050	<0.025	<0.025	<0.050
Boron (B)	mg/L	1		2.3	2.2	3.4	3.6	1.87	2.11	3.4
Cadmium (Cd)	mg/L	0.00002	0.00012	0.000021	0.000022	0.000036	0.000066	0.00002	0.000021	0.000057
Calcium (Ca)	mg/L	0.5		216	204	320	340	222	263	
Chromium (Cr)	mg/L	0.025-0.05	0.056 ^c	<0.050	<0.050	<0.050	<0.050	<0.025	<0.025	<0.050
Cobalt (Co)	mg/L	0.00005		<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Copper (Cu)	mg/L	0.00005		0.000394	0.000362	0.000298	0.000284	0.00051	0.000368	0.000297
Iron (Fe)	mg/L	0.005		0.0083	0.0084	<0.0050	<0.0050	0.0145	0.0086	0.0055
Lead (Pb)	mg/L	0.00005		<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Lithium (Li)	mg/L	0.025-0.05		<0.50	<0.50	<0.50	<0.50	<0.25	<0.25	<0.50
Magnesium (Mg)	mg/L	1		686	634	987	1040	465	702	864
Manganese (Mn)	mg/L	0.00005		0.00105	0.00106	0.00108	0.00131	0.00119	0.00109	0.00158
Mercury (Hg)	mg/L	0.00001	0.000016 ^d	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Molybdenum (Mo)	mg/L	0.005		<0.0050	<0.0050	0.0076	0.0074	0.0056	0.0064	0.01
Nickel (Ni)	mg/L	0.00005		0.000353	0.00033	0.000373	0.00047	0.000336	0.000393	0.000433
Phosphorus (P)	mg/L	3		<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Potassium (K)	mg/L	20		203	193	293	311	134	197	246
Selenium (Se)	mg/L	0.0005		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Silicon (Si)	mg/L	0.5		<0.50	<0.50	0.53	0.86	<0.50	<0.50	0.71
Silver (Ag)	mg/L	0.0005-0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.00050	<0.00050	<0.0010
Sodium (Na)	mg/L	20		5510	5240	8670	9200	3940	5640	7480
Strontium (Sr)	mg/L	0.01		3.88	3.66	5.67	5.87	3.63	4.05	6
Thallium (Tl)	mg/L	0.005-0.01		<0.010	<0.010	<0.010	<0.010	<0.0050	<0.0050	<0.010
Tin (Sn)	mg/L	0.005-0.01		<0.010	<0.010	<0.010	<0.010	<0.0050	<0.0050	<0.010
Titanium (Ti)	mg/L	0.1		<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Uranium (U)	mg/L	0.00005		0.00129	0.00135	0.00194	0.00214	0.0012	0.00135	0.00205
Vanadium (V)	mg/L	0.05-0.1		<0.10	<0.10	<0.10	<0.10	<0.050	<0.050	<0.10
Zinc (Zn)	mg/L	0.0005		<0.00050	<0.00050	<0.00050	<0.00050	0.00052	<0.00050	<0.00050
Dissolved Metals										
Aluminum (Al)	mg/L	0.005		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Antimony (Sb)	mg/L	0.005-0.01		<0.010	<0.010	<0.010	<0.010	<0.0050	<0.0050	<0.010
Arsenic (As)	mg/L	0.0002	0.0125	0.00055	0.00052	0.00078	0.00119	0.00045	0.00051	0.00092
Barium (Ba)	mg/L	0.005		0.0084	0.0082	0.0116	0.0121	0.0074	0.0085	0.0112
Beryllium (Be)	mg/L	0.025-0.05		<0.050	<0.050	<0.050	<0.050	<0.025	<0.025	<0.050
Bismuth (Bi)	mg/L	0.025-0.05		<0.050	<0.050	<0.050	<0.050	<0.025	<0.025	<0.050
Boron (B)	mg/L	1		2.4	2.3	3.5	3.6	1.81	2.18	3.3
Cadmium (Cd)	mg/L	0.00002	0.00012	0.000023	0.000024	0.000037	0.000067	0.000021	0.000025	0.000057
Calcium (Ca)	mg/L	0.5		214	207	329	339	153	221	280
Chromium (Cr)	mg/L	0.025-0.05	0.056 ^c	<0.050	<0.050	<0.050	<0.050	<0.025	<0.025	<0.050
Cobalt (Co)	mg/L	0.00005		<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Copper (Cu)	mg/L	0.00005		0.000353	0.000362	0.00034	0.000326	0.000407	0.000277	0.000228
Iron (Fe)	mg/L	0.005		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Lead (Pb)	mg/L	0.00005		<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000020
Lithium (Li)	mg/L	0.025-0.05		<0.50	<0.50	<0.50	<0.50	<0.25	<0.25	<0.50
Magnesium (Mg)	mg/L	1		674	645	992	1040	480	698	873
Manganese (Mn)	mg/L	0.00005		0.000529	0.000517	0.000624	0.00109	0.00027	0.000105	0.00092
Mercury (Hg)	mg/L	0.00001	0.000016 ^d	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Molybdenum (Mo)	mg/L	0.005		<0.0050	<0.0050	0.0073	0.0085	0.0053	0.007	0.0083
Nickel (Ni)	mg/L	0.00005		0.000399	0.000402	0.000458	0.000548	<0.00050	<0.00050	<0.00050
Phosphorus (P)	mg/L	3		<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Potassium (K)	mg/L	20		197	191	296	308	137	199	244
Selenium (Se)	mg/L	0.0005		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Silicon (Si)	mg/L	0.5		<0.50	<0.50	0.52	0.86	<0.50	<0.50	0.74
Silver (Ag)	mg/L	0.0005-0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.00050	<0.00050	<0.0010
Sodium (Na)	mg/L	20		5390	5230	8730	9100	4020	5650	7470
Strontium (Sr)	mg/L	0.01		3.86	3.68	5.72	5.96	3.57	4.19	6.09
Thallium (Tl)	mg/L	0.005-0.01		<0.010	<0.010	<0.010	<0.010	<0.0050	<0.0050	<0.010
Tin (Sn)	mg/L	0.005-0.01		<0.010	<0.010	<0.010	<0.010	<0.0050	<0.0050	<0.010
Titanium (Ti)	mg/L	0.1		<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Uranium (U)	mg/L	0.00005		0.00143	0.0014	0.00197	0.00206	0.00112	0.00112	0.0015
Vanadium (V)	mg/L	0.05-0.1		<0.10	<0.10	<0.10	<0.10	<0.050	<0.050	<0.10
Zinc (Zn)	mg/L	0.0005		<0.0010	<0.0020	<0.0010	<0.0010	0.00079	<0.00050	0.00066

Appendix 3.5-2. Summer Marine Water Quality, Hope Bay Belt Project, 2009

Station Date Sampled Replicate Depth (m) ALS Sample ID	Units	Realized Detection Limits ^a	CCME Guidelines for the Protection of Aquatic Life (Marine) ^b	REF-4	REF-4	REF-4	REF-4	REF-4
				18-AUG-09	18-AUG-09	18-AUG-09	18-AUG-09	18-AUG-09
				1	6	2	14	1
				L807739-5	L807739-6	L807739-4	L807739-7	L807739-8
Physical Tests								
pH	pH	0.1	7.0 - 8.7	7.63	7.65	7.6	7.71	7.69
Total Suspended Solids	mg/L	3		5.8	3.8	5.1	5.1	5.8
Turbidity	NTU	0.1		0.71	0.63	0.61	0.28	0.32
Anions and Nutrients								
Ammonia as N	mg/L	0.005		0.0088	0.0071	<0.0050	0.0085	<0.0050
Bromide (Br)	mg/L	5		28.1	28.4	27.5	54.2	52.8
Chloride (Cl)	mg/L	50		7900	8090	8170	15100	14600
Fluoride (F)	mg/L	0.75		<0.75	<0.75	<0.75	<0.75	0.79
Nitrate+Nitrite-N	mg/L	0.006		<0.0060	<0.0060	<0.0060	<0.0060	<0.0060
Nitrate-N	mg/L	0.006	3.6	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060
Nitrite-N	mg/L	0.002		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Ortho Phosphate as P	mg/L	0.001		0.0105	0.0096	0.0108	0.0304	0.0294
Total Phosphate as P	mg/L	0.002		0.0134	0.0124	0.0133	0.0298	0.0291
Silicate (as SiO ₂)	mg/L	0.025		0.543	0.515	0.566	1.24	1.06
Sulfate	mg/L	50		1040	1070	1080	2050	1980
Organic / Inorganic Carbon								
Total Organic Carbon	mg/L	0.5		1.64	1.73	1.56	1	1.04
Total Metals								
Aluminum (Al)	mg/L	0.005		0.0106	0.0073	0.0073	<0.0050	<0.0050
Antimony (Sb)	mg/L	0.005-0.01		<0.0050	<0.0050	<0.0050	<0.010	<0.010
Arsenic (As)	mg/L	0.0002	0.0125	0.00049	0.00116	0.00045	0.00086	0.00068
Barium (Ba)	mg/L	0.005		0.0069	0.0064	0.007	0.0107	0.0102
Beryllium (Be)	mg/L	0.025-0.05		<0.025	<0.025	<0.025	<0.050	<0.050
Bismuth (Bi)	mg/L	0.025-0.05		<0.025	<0.025	<0.025	<0.050	<0.050
Boron (B)	mg/L	1		1.82	1.66	1.82	3.2	3.1
Cadmium (Cd)	mg/L	0.00002	0.00012	0.00002	<0.000020	<0.000020	0.000038	0.000034
Calcium (Ca)	mg/L	0.5		134	137	137	242	239
Chromium (Cr)	mg/L	0.025-0.05	0.056 ^c	<0.025	<0.025	<0.025	<0.050	<0.050
Cobalt (Co)	mg/L	0.00005		<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Copper (Cu)	mg/L	0.00005		0.000503	0.000432	0.000403	0.000304	0.000327
Iron (Fe)	mg/L	0.005		0.0245	0.0207	0.0178	<0.0050	0.005
Lead (Pb)	mg/L	0.00005		<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Lithium (Li)	mg/L	0.025-0.05		<0.25	<0.25	<0.25	<0.50	<0.50
Magnesium (Mg)	mg/L	1		430	444	449	787	780
Manganese (Mn)	mg/L	0.00005		0.00123	0.00121	0.0012	0.00102	0.00101
Mercury (Hg)	mg/L	0.00001	0.000016 ^d	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Molybdenum (Mo)	mg/L	0.005		0.0051	0.0038	0.0047	0.0089	0.0075
Nickel (Ni)	mg/L	0.00005		0.000327	0.000316	0.000338	0.000373	0.00036
Phosphorus (P)	mg/L	3		<3.0	<3.0	<3.0	<3.0	<3.0
Potassium (K)	mg/L	20		124	126	127	225	221
Selenium (Se)	mg/L	0.0005		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Silicon (Si)	mg/L	0.5		<0.50	<0.50	<0.50	<0.50	<0.50
Silver (Ag)	mg/L	0.0005-0.001		<0.00050	<0.00050	<0.00050	<0.0010	<0.0010
Sodium (Na)	mg/L	20		3580	3670	3700	6840	6430
Strontium (Sr)	mg/L	0.01		3.27	2.98	3.34	5.72	5.49
Thallium (Tl)	mg/L	0.005-0.01		<0.0050	<0.0050	<0.0050	<0.010	<0.010
Tin (Sn)	mg/L	0.005-0.01		<0.0050	<0.0050	<0.0050	<0.010	<0.010
Titanium (Ti)	mg/L	0.1		<0.10	<0.10	<0.10	<0.10	<0.10
Uranium (U)	mg/L	0.00005		0.00106	0.00108	0.00101	0.002	0.00181
Vanadium (V)	mg/L	0.05-0.1		<0.050	<0.050	<0.050	<0.10	<0.10
Zinc (Zn)	mg/L	0.0005		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Dissolved Metals								
Aluminum (Al)	mg/L	0.005		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Antimony (Sb)	mg/L	0.005-0.01		<0.0050	<0.0050	<0.0050	<0.010	<0.010
Arsenic (As)	mg/L	0.0002	0.0125	0.00035	0.00041	0.0004	0.00089	0.00074
Barium (Ba)	mg/L	0.005		0.0065	0.0064	0.0075	0.0108	0.0102
Beryllium (Be)	mg/L	0.025-0.05		<0.025	<0.025	<0.025	<0.050	<0.050
Bismuth (Bi)	mg/L	0.025-0.05		<0.025	<0.025	<0.025	<0.050	<0.050
Boron (B)	mg/L	1		1.6	1.69	1.86	3.2	3.2
Cadmium (Cd)	mg/L	0.00002	0.00012	<0.000020	0.000023	<0.000020	0.000036	0.000035
Calcium (Ca)	mg/L	0.5		136	137	142	260	242
Chromium (Cr)	mg/L	0.025-0.05	0.056 ^c	<0.025	<0.025	<0.025	<0.050	<0.050
Cobalt (Co)	mg/L	0.00005		<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Copper (Cu)	mg/L	0.00005		0.000351	0.000329	0.000321	0.000218	0.000243
Iron (Fe)	mg/L	0.005		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Lead (Pb)	mg/L	0.00005		<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Lithium (Li)	mg/L	0.025-0.05		<0.25	<0.25	<0.25	<0.50	<0.50
Magnesium (Mg)	mg/L	1		440	447	458	834	786
Manganese (Mn)	mg/L	0.00005		0.000446	0.000293	0.000297	0.000403	0.000483
Mercury (Hg)	mg/L	0.00001	0.000016 ^d	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Molybdenum (Mo)	mg/L	0.005		0.0041	0.0049	0.0056	0.0097	0.0079
Nickel (Ni)	mg/L	0.00005		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Phosphorus (P)	mg/L	3		<3.0	<3.0	<3.0	<3.0	<3.0
Potassium (K)	mg/L	20		124	128	129	233	220
Selenium (Se)	mg/L	0.0005		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Silicon (Si)	mg/L	0.5		<0.50	<0.50	<0.50	<0.50	<0.50
Silver (Ag)	mg/L	0.0005-0.001		<0.00050	<0.00050	<0.00050	<0.0010	<0.0010
Sodium (Na)	mg/L	20		3620	3700	3790	7160	6460
Strontium (Sr)	mg/L	0.01		2.96	3.01	3.47	5.84	5.54
Thallium (Tl)	mg/L	0.005-0.01		<0.0050	<0.0050	<0.0050	<0.010	<0.010
Tin (Sn)	mg/L	0.005-0.01		<0.0050	<0.0050	<0.0050	<0.010	<0.010
Titanium (Ti)	mg/L	0.1		<0.10	<0.10	<0.10	<0.10	<0.10
Uranium (U)	mg/L	0.00005		0.000929	0.000998	0.00101	0.00126	0.00127
Vanadium (V)	mg/L	0.05-0.1		<0.050	<0.050	<0.050	<0.10	<0.10
Zinc (Zn)	mg/L	0.0005		0.00053	0.00071	<0.00050	0.00064	<0.00050

Appendix 3.6-1

Marine Sediment Quality, Hope Bay Belt Project, 2009

Appendix 3.6-1. Marine Sediment Quality, Hope Bay Belt Project, 2009

Station			CCME Guidelines for the Protection of Aquatic Life ^a		ST7 16-Aug-09 1	ST7 16-Aug-09 2	ST7 16-Aug-09 3	ST8 16-Aug-09 1	ST8 16-Aug-09 2	ST8 16-Aug-09 3
Date Sampled					2	2	2	8	8	8
Replicate					L808890-13	L808890-14	L808890-15	L808890-10	L808890-11	L808890-12
Depth										
ALS Sample ID	Units	RDL ^b	ISQG ^c	PEL ^d						
Physical Tests										
% Moisture	%	0.1			18	23.1	19.6	35.5	39.5	37.4
pH	pH	0.1			7.52	7.9	7.92	7.68	7.8	7.88
Particle Size										
% Gravel (>2 mm)	%	1			<1.0	<1.0	<1.0	<1.0	2	3
% Sand (2.0 mm - 0.063 mm)	%	1			97	96	97	36	36	41
% Silt (0.063 mm - 4mm)	%	1			1	3	2	40	39	36
% Clay (<4 mm)	%	1			1	1	1	24	23	19
Leachable Anions & Nutrients										
Total Nitrogen by LECO	%	0.02			<0.020	0.025	0.023	0.08	0.086	0.108
Organic / Inorganic Carbon										
Total Organic Carbon	%	0.1			<0.10	<0.10	<0.10	0.46	0.48	0.63
Plant Available Nutrients										
Available Ammonium-N	mg/kg	0.8			<0.80	1.24	0.97	6.49	29.3	17.3
Available Nitrate-N	mg/kg	2			<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Nitrite-N	mg/kg	0.4			<0.40	<0.40	<0.40	<0.40	<0.40	<0.40
Available Phosphate-P	mg/kg	1			3.6	19.5	7.5	20.6	22.8	23.7
Metals										
Aluminum (Al)	mg/kg	50			4690	4590	4650	12500	12700	12300
Antimony (Sb)	mg/kg	10			<10	<10	<10	<10	<10	<10
Arsenic (As)	mg/kg	0.5	7.24	41.6	3.62	2.36	3.49	3.39	3.41	3.83
Barium (Ba)	mg/kg	1			9.8	11.3	9.6	63.6	64.8	61.7
Beryllium (Be)	mg/kg	0.5			<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Bismuth (Bi)	mg/kg	20			<20	<20	<20	<20	<20	<20
Cadmium (Cd)	mg/kg	0.1	0.7	4.2	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Calcium (Ca)	mg/kg	50			2880	2810	2710	7240	6620	7290
Chromium (Cr)	mg/kg	2	52.3	160	23.7	22.6	19.8	35.7	36	34.4
Cobalt (Co)	mg/kg	2			5.8	5.5	5.4	7.7	7.6	7.2
Copper (Cu)	mg/kg	1	18.7	108	11.7	9.7	9.7	19.3	19.1	18.4
Iron (Fe)	mg/kg	50			18000	15200	13500	19900	20000	19700
Lead (Pb)	mg/kg	2	30.2	112	2.7	2.5	2.2	5.2	5.4	5.2
Lithium (Li)	mg/kg	2			7.4	7.8	7.7	25.4	25.5	24.6
Magnesium (Mg)	mg/kg	50			3820	3760	3840	9900	9900	9560
Manganese (Mn)	mg/kg	1			126	115	114	220	223	220
Mercury (Hg)	mg/kg	0.005	0.13	0.7	<0.0050	<0.0050	<0.0050	0.0076	0.0076	0.0066
Molybdenum (Mo)	mg/kg	0.2			0.22	0.26	0.27	0.81	0.74	0.63
Nickel (Ni)	mg/kg	5			10.7	10.4	10.7	17.6	17.8	17.1
Phosphorus (P)	mg/kg	50			379	432	342	712	719	726
Potassium (K)	mg/kg	200			560	650	590	3990	4030	3860
Selenium (Se)	mg/kg	0.5			<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Silver (Ag)	mg/kg	0.1			<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Sodium (Na)	mg/kg	200			1050	1400	1230	6010	5710	5300
Strontium (Sr)	mg/kg	0.5			11.3	11.4	11.2	36.6	36.4	41.9
Sulfur (S)-Total	mg/kg	100			560	450	440	820	720	610
Thallium (Tl)	mg/kg	0.5			<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Tin (Sn)	mg/kg	5			<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Titanium (Ti)	mg/kg	1			539	476	463	873	876	869
Vanadium (V)	mg/kg	2			47.8	37.8	33.3	46.4	46.3	45.6
Zinc (Zn)	mg/kg	1	124	271	14.2	13.7	13.5	37.1	37.2	35.5
Hydrocarbons										
EPH10-19	mg/kg	200			-	-	-	-	-	-
EPH19-32	mg/kg	200			-	-	-	-	-	-
LEPH	mg/kg	200			-	-	-	-	-	-
HEPH	mg/kg	200			-	-	-	-	-	-
Polycyclic Aromatic Hydrocarbons										
Acenaphthene	mg/kg	0.005	0.007	0.089	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Acenaphthylene	mg/kg	0.005	0.006	0.128	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Anthracene	mg/kg	0.004	0.047	0.245	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040
Benzo(a)anthracene	mg/kg	0.01	0.075	0.693	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(a)pyrene	mg/kg	0.01	0.089	0.763	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(b)fluoranthene	mg/kg	0.01			<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(g,h,i)perylene	mg/kg	0.01			<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(k)fluoranthene	mg/kg	0.01			<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Chrysene	mg/kg	0.01	0.108	0.846	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Dibenz(a,h)anthracene	mg/kg	0.005	0.006	0.135	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Fluoranthene	mg/kg	0.01	0.113	1.494	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Fluorene	mg/kg	0.01	0.021	0.144	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Indeno(1,2,3-c,d)pyrene	mg/kg	0.01			<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
2-Methylnaphthalene	mg/kg	0.01	0.020	0.201	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Naphthalene	mg/kg	0.01	0.035	0.391	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Phenanthrene	mg/kg	0.01	0.087	0.544	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Pyrene	mg/kg	0.01	0.153	1.398	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Total PAHs	mg/kg	0.04			<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
d10-Acenaphthene (SS)	%	-			107	108	117	101	118	105
d12-Chrysene (SS)	%	-			88	87	102	94	103	101
d8-Naphthalene (SS)	%	-			95	93	112	106	111	110
d10-Phenanthrene (SS)	%	-			93	93	105	103	107	106

a) Canadian sediment quality guidelines for the protection of marine aquatic life, Council of Ministers of the Environment (CCME 2002)

b) RDL - Realized Detection Limit

c) ISQG - Canadian Interim Sediment Quality Guidelines

d) PEL - Probable Effects Level

Grey blocks indicate values that are higher than ISQG

Appendix 3.6-1. Marine Sediment Quality, Hope Bay Belt Project, 2009

Station Date Sampled Replicate Depth			CCME Guidelines for the Protection of Aquatic Life ^a		ST2 16-Aug-09 1 7	ST2 16-Aug-09 2 7	ST2 16-Aug-09 3 7	ST9 16-Aug-09 1 2	ST9 16-Aug-09 2 2	ST9 16-Aug-09 3 2
ALS Sample ID	Units	RDL ^b	ISQG ^c	PEL ^d	L808890-16	L808890-17	L808890-18	L808890-7	L808890-8	L808890-9
Physical Tests										
% Moisture	%	0.1			35.7	37.4	29.9	30.9	22.8	26.9
pH	pH	0.1			7.91	7.81	8	7.77	7.61	8
Particle Size										
% Gravel (>2 mm)	%	1			3	<1.0	1	4	3	3
% Sand (2.0 mm - 0.063 mm)	%	1			42	42	37	41	55	55
% Silt (0.063 mm - 4mm)	%	1			35	33	39	25	21	18
% Clay (<4 mm)	%	1			20	25	24	30	22	24
Leachable Anions & Nutrients										
Total Nitrogen by LECO	%	0.02			0.077	0.091	0.083	0.062	0.051	0.039
Organic / Inorganic Carbon										
Total Organic Carbon	%	0.1			0.45	0.48	0.22	0.36	0.24	0.21
Plant Available Nutrients										
Available Ammonium-N	mg/kg	0.8			7.4	7.12	6.94	1.24	1.51	1.09
Available Nitrate-N	mg/kg	2			<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Nitrite-N	mg/kg	0.4			<0.40	<0.40	<0.40	<0.40	<0.40	<0.40
Available Phosphate-P	mg/kg	1			17.8	18.9	18.7	9	8.6	20.4
Metals										
Aluminum (Al)	mg/kg	50			12200	13800	12700	16500	12100	14300
Antimony (Sb)	mg/kg	10			<10	<10	<10	<10	<10	<10
Arsenic (As)	mg/kg	0.5	7.24	41.6	2.76	3.34	2.59	4.67	3.4	3.92
Barium (Ba)	mg/kg	1			58.5	68.4	61.9	83.7	54.6	67.9
Beryllium (Be)	mg/kg	0.5			<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Bismuth (Bi)	mg/kg	20			<20	<20	<20	<20	<20	<20
Cadmium (Cd)	mg/kg	0.1	0.7	4.2	<0.10	<0.10	<0.10	0.11	<0.10	<0.10
Calcium (Ca)	mg/kg	50			5860	5440	6170	6520	4270	6460
Chromium (Cr)	mg/kg	2	52.3	160	35.4	39.9	35.7	44.2	33.4	40
Cobalt (Co)	mg/kg	2			7.3	8	7.9	9.8	8	9.3
Copper (Cu)	mg/kg	1	18.7	108	16.6	19	17.4	22.4	17.2	28.5
Iron (Fe)	mg/kg	50			19400	21200	19800	24000	19100	22300
Lead (Pb)	mg/kg	2	30.2	112	5	5.7	5.1	6.4	4.4	5.4
Lithium (Li)	mg/kg	2			24.1	28	25.1	33.3	23.7	28.7
Magnesium (Mg)	mg/kg	50			9430	10600	9870	12500	9540	11600
Manganese (Mn)	mg/kg	1			216	237	233	265	216	275
Mercury (Hg)	mg/kg	0.005	0.13	0.7	0.0075	0.0081	0.0066	<0.0050	<0.0050	<0.0050
Molybdenum (Mo)	mg/kg	0.2			0.96	1.13	1.12	1.24	0.87	0.85
Nickel (Ni)	mg/kg	5			17.2	19.2	18.9	23.2	19.5	22.5
Phosphorus (P)	mg/kg	50			663	658	663	519	428	465
Potassium (K)	mg/kg	200			3690	4430	3870	5110	3360	4090
Selenium (Se)	mg/kg	0.5			<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Silver (Ag)	mg/kg	0.1			<0.10	<0.10	<0.10	0.11	<0.10	<0.10
Sodium (Na)	mg/kg	200			4850	5410	4960	4240	2720	2920
Strontium (Sr)	mg/kg	0.5			31.1	29.5	35.2	34.9	21	26.3
Sulfur (S)-Total	mg/kg	100			550	710	650	1370	1280	1080
Thallium (Tl)	mg/kg	0.5			<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Tin (Sn)	mg/kg	5			<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Titanium (Ti)	mg/kg	1			862	985	905	1030	804	891
Vanadium (V)	mg/kg	2			46.4	51.5	48.4	54	42.3	49.7
Zinc (Zn)	mg/kg	1	124	271	35.7	40.4	37.4	48.6	36.9	44.1
Hydrocarbons										
EPH10-19	mg/kg	200			-	-	-	-	-	-
EPH19-32	mg/kg	200			-	-	-	-	-	-
LEPH	mg/kg	200			-	-	-	-	-	-
HEPH	mg/kg	200			-	-	-	-	-	-
Polycyclic Aromatic Hydrocarbons										
Acenaphthene	mg/kg	0.005	0.007	0.089	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Acenaphthylene	mg/kg	0.005	0.006	0.128	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Anthracene	mg/kg	0.004	0.047	0.245	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040
Benz(a)anthracene	mg/kg	0.01	0.075	0.693	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(a)pyrene	mg/kg	0.01	0.089	0.763	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(b)fluoranthene	mg/kg	0.01			<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(g,h,i)perylene	mg/kg	0.01			<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(k)fluoranthene	mg/kg	0.01			<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Chrysene	mg/kg	0.01	0.108	0.846	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Dibenz(a,h)anthracene	mg/kg	0.005	0.006	0.135	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Fluoranthene	mg/kg	0.01	0.113	1.494	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Fluorene	mg/kg	0.01	0.021	0.144	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Indeno(1,2,3-c,d)pyrene	mg/kg	0.01			<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
2-Methylnaphthalene	mg/kg	0.01	0.020	0.201	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Naphthalene	mg/kg	0.01	0.035	0.391	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Phenanthrene	mg/kg	0.01	0.087	0.544	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Pyrene	mg/kg	0.01	0.153	1.398	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Total PAHs	mg/kg	0.04			<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
d10-Acenaphthene (SS)	%	-			88	82	89	105	102	111
d12-Chrysene (SS)	%	-			93	103	94	104	103	98
d8-Naphthalene (SS)	%	-			87	79	89	113	118	116
d10-Phenanthrene (SS)	%	-			101	102	100	107	107	104

a) Canadian sediment quality guidelines for the protection of marine aquatic life, Council of Minist

b) RDL - Realized Detection Limit

c) ISQG - Canadian Interim Sediment Quality Guidelines

d) PEL - Probable Effects Level

Grey blocks indicate values that are higher than ISQG

Appendix 3.6-1. Marine Sediment Quality, Hope Bay Belt Project, 2009

Station Date Sampled Replicate Depth			CCME Guidelines for the Protection of Aquatic Life ^a		ST10 16-Aug-09 1 13	ST10 16-Aug-09 2 13	ST10 16-Aug-09 3 13	ST11 16-Aug-09 1 8	ST11 16-Aug-09 2 8	ST11 16-Aug-09 3 8
ALS Sample ID	Units	RDL ^b	ISQG ^c	PEL ^d	L808890-1	L808890-2	L808890-3	L808890-4	L808890-5	L808890-6
Physical Tests										
% Moisture	%	0.1			44.4	41.6	44.2	28.9	26	24.4
pH	pH	0.1			7.39	7.43	7.51	7.48	7.75	7.8
Particle Size										
% Gravel (>2 mm)	%	1			<1.0	<1.0	1	1	10	5
% Sand (2.0 mm - 0.063 mm)	%	1			5	6	7	73	72	70
% Silt (0.063 mm - 4mm)	%	1			48	48	46	15	9	12
% Clay (<4 mm)	%	1			46	45	45	11	8	13
Leachable Anions & Nutrients										
Total Nitrogen by LECO	%	0.02			0.111	0.111	0.112	0.021	0.132	0.067
Organic / Inorganic Carbon										
Total Organic Carbon	%	0.1			0.62	0.57	0.58	<0.10	0.75	0.36
Plant Available Nutrients										
Available Ammonium-N	mg/kg	0.8			3.27	8.19	8.59	2.53	3.89	5.22
Available Nitrate-N	mg/kg	2			<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Nitrite-N	mg/kg	0.4			<0.40	<0.40	<0.40	<0.40	<0.40	<0.40
Available Phosphate-P	mg/kg	1			12.1	14.1	16.8	17.4	21.3	22.8
Metals										
Aluminum (Al)	mg/kg	50			22300	21100	21200	8780	7770	9010
Antimony (Sb)	mg/kg	10			<10	<10	<10	<10	<10	<10
Arsenic (As)	mg/kg	0.5	7.24	41.6	4.55	4.52	4.24	2.8	2.65	2.53
Barium (Ba)	mg/kg	1			116	109	110	36.8	32.5	37.9
Beryllium (Be)	mg/kg	0.5			0.62	0.59	0.58	<0.50	<0.50	<0.50
Bismuth (Bi)	mg/kg	20			<20	<20	<20	<20	<20	<20
Cadmium (Cd)	mg/kg	0.1	0.7	4.2	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Calcium (Ca)	mg/kg	50			7340	6790	6480	3250	4330	3930
Chromium (Cr)	mg/kg	2	52.3	160	59.3	56.5	57.6	28.2	23.2	26
Cobalt (Co)	mg/kg	2			12.2	11.5	11.7	5.7	5.5	5.6
Copper (Cu)	mg/kg	1	18.7	108	28.1	27.4	27.8	12.1	11.5	11.2
Iron (Fe)	mg/kg	50			30600	29400	29600	14200	13200	14800
Lead (Pb)	mg/kg	2	30.2	112	9.7	8.2	8.4	3.2	3.1	3.4
Lithium (Li)	mg/kg	2			44.7	42.6	43.4	17.1	14.9	17.2
Magnesium (Mg)	mg/kg	50			16900	16100	16300	7360	6290	7090
Manganese (Mn)	mg/kg	1			348	333	334	152	153	169
Mercury (Hg)	mg/kg	0.005	0.13	0.7	0.0116	0.0102	0.0102	<0.0050	0.006	0.0064
Molybdenum (Mo)	mg/kg	0.2			2.43	2.22	2.54	1.1	0.83	0.81
Nickel (Ni)	mg/kg	5			28.9	27.2	28	15.8	12.4	13.9
Phosphorus (P)	mg/kg	50			736	726	724	417	476	461
Potassium (K)	mg/kg	200			7320	6960	7000	2400	2030	2480
Selenium (Se)	mg/kg	0.5			<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Silver (Ag)	mg/kg	0.1			0.15	0.13	0.13	<0.10	<0.10	<0.10
Sodium (Na)	mg/kg	200			9310	9020	8370	4080	3290	4010
Strontium (Sr)	mg/kg	0.5			45.8	41.8	39.7	18.6	21.5	20.1
Sulfur (S)-Total	mg/kg	100			980	1120	1120	1210	710	1020
Thallium (Tl)	mg/kg	0.5			<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Tin (Sn)	mg/kg	5			<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Titanium (Ti)	mg/kg	1			1400	1340	1350	593	548	644
Vanadium (V)	mg/kg	2			73.5	70.9	71.8	32.8	31.6	35.2
Zinc (Zn)	mg/kg	1	124	271	64.6	61.4	63.1	26	22.7	26.1
Hydrocarbons										
EPH10-19	mg/kg	200			-	-	-	-	-	-
EPH19-32	mg/kg	200			-	-	-	-	-	-
LEPH	mg/kg	200			-	-	-	-	-	-
HEPH	mg/kg	200			-	-	-	-	-	-
Polycyclic Aromatic Hydrocarbons										
Acenaphthene	mg/kg	0.005	0.007	0.089	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Acenaphthylene	mg/kg	0.005	0.006	0.128	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Anthracene	mg/kg	0.004	0.047	0.245	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040
Benz(a)anthracene	mg/kg	0.01	0.075	0.693	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(a)pyrene	mg/kg	0.01	0.089	0.763	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(b)fluoranthene	mg/kg	0.01			<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(g,h,i)perylene	mg/kg	0.01			<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(k)fluoranthene	mg/kg	0.01			<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Chrysene	mg/kg	0.01	0.108	0.846	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Dibenz(a,h)anthracene	mg/kg	0.005	0.006	0.135	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Fluoranthene	mg/kg	0.01	0.113	1.494	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Fluorene	mg/kg	0.01	0.021	0.144	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Indeno(1,2,3-c,d)pyrene	mg/kg	0.01			<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
2-Methylnaphthalene	mg/kg	0.01	0.020	0.201	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Naphthalene	mg/kg	0.01	0.035	0.391	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Phenanthrene	mg/kg	0.01	0.087	0.544	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Pyrene	mg/kg	0.01	0.153	1.398	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Total PAHs	mg/kg	0.04			<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
d10-Acenaphthene (SS)	%	-			103	103	111	118	105	114
d12-Chrysene (SS)	%	-			82	86	112	97	88	92
d8-Naphthalene (SS)	%	-			94	106	111	103	109	101
d10-Phenanthrene (SS)	%	-			89	95	118	101	95	96

a) Canadian sediment quality guidelines for the protection of marine aquatic life, Council of Minist

b) RDL - Realized Detection Limit

c) ISQG - Canadian Interim Sediment Quality Guidelines

d) PEL - Probable Effects Level

Grey blocks indicate values that are higher than ISQG

Appendix 3.6-1. Marine Sediment Quality, Hope Bay Belt Project, 2009

Station			CCME Guidelines for the Protection of Aquatic Life ^a		RTF1 17-Aug-09 1 3	RTF1 17-Aug-09 2 3	RTF1 17-Aug-09 3 3	DW3 17-Aug-09 1 1	DW3 17-Aug-09 2 1	DW3 17-Aug-09 3 1
Date Sampled										
Replicate										
Depth										
ALS Sample ID	Units	RDL ^b	ISQG ^c	PEL ^d	L808851-19	L808851-20	L808851-21	L808851-7	L808851-8	L808851-9
Physical Tests										
% Moisture	%	0.1			24.8	18.7	23.6	18.7	18.5	18.7
pH	pH	0.1			8.25	8.4	7.73	7.33	7.26	7.5
Particle Size										
% Gravel (>2 mm)	%	1			<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
% Sand (2.0 mm - 0.063 mm)	%	1			95	98	99	98	98	99
% Silt (0.063 mm - 4mm)	%	1			3	1	1	1	1	1
% Clay (<4 mm)	%	1			2	1	1	1	1	<1.0
Leachable Anions & Nutrients										
Total Nitrogen by LECO	%	0.02			0.042	0.039	0.026	0.021	<0.020	0.024
Organic / Inorganic Carbon										
Total Organic Carbon	%	0.1			0.16	0.11	<0.10	<0.10	<0.10	<0.10
Plant Available Nutrients										
Available Ammonium-N	mg/kg	0.8			2.37	1.33	1.1	0.86	<0.80	<0.80
Available Nitrate-N	mg/kg	2			<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Nitrite-N	mg/kg	0.4			<0.40	<0.40	<0.40	<0.40	<0.40	<0.40
Available Phosphate-P	mg/kg	1			18.1	12.3	6.1	2.5	3.5	3.1
Metals										
Aluminum (Al)	mg/kg	50			5070	4830	5840	4070	3770	3820
Antimony (Sb)	mg/kg	10			<10	<10	<10	<10	<10	<10
Arsenic (As)	mg/kg	0.5	7.24	41.6	0.64	2.46	0.72	0.66	0.84	0.59
Barium (Ba)	mg/kg	1			13	10	11.8	12.8	10.9	7.8
Beryllium (Be)	mg/kg	0.5			<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Bismuth (Bi)	mg/kg	20			<20	<20	<20	<20	<20	<20
Cadmium (Cd)	mg/kg	0.1	0.7	4.2	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Calcium (Ca)	mg/kg	50			2130	2080	2620	2060	1830	1820
Chromium (Cr)	mg/kg	2	52.3	160	16.1	14.5	18	13.5	11.7	11.2
Cobalt (Co)	mg/kg	2			3.5	3.7	4.5	3.1	2.9	2.8
Copper (Cu)	mg/kg	1	18.7	108	8.2	8.3	10	5.5	5.4	4.7
Iron (Fe)	mg/kg	50			9350	9070	11200	7720	6670	6820
Lead (Pb)	mg/kg	2	30.2	112	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Lithium (Li)	mg/kg	2			9.3	8.5	10	6.7	6.5	6.5
Magnesium (Mg)	mg/kg	50			4170	4150	4870	2830	2660	2770
Manganese (Mn)	mg/kg	1			104	103	126	80.4	72.8	73.9
Mercury (Hg)	mg/kg	0.005	0.13	0.7	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Molybdenum (Mo)	mg/kg	0.2			0.31	0.25	0.25	0.3	0.27	0.34
Nickel (Ni)	mg/kg	5			10.1	9.7	12.2	7.3	6.6	7
Phosphorus (P)	mg/kg	50			302	253	265	364	313	304
Potassium (K)	mg/kg	200			840	740	790	550	520	540
Selenium (Se)	mg/kg	0.5			<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Silver (Ag)	mg/kg	0.1			<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Sodium (Na)	mg/kg	200			1680	2370	1500	1280	990	1610
Strontium (Sr)	mg/kg	0.5			10.1	9.41	10.6	9.2	8.51	8.48
Sulfur (S)-Total	mg/kg	100			520	450	430	570	480	480
Thallium (Tl)	mg/kg	0.5			<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Tin (Sn)	mg/kg	5			<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Titanium (Ti)	mg/kg	1			313	279	431	366	329	320
Vanadium (V)	mg/kg	2			18.7	17	23.7	16.5	14.1	14.1
Zinc (Zn)	mg/kg	1	124	271	15.4	14.9	17.1	10.7	10.5	10.1
Hydrocarbons										
EPH10-19	mg/kg	200			<200	<200	<200	<200	<200	<200
EPH19-32	mg/kg	200			<200	<200	<200	<200	<200	<200
LEPH	mg/kg	200			<200	<200	<200	<200	<200	<200
HEPH	mg/kg	200			<200	<200	<200	<200	<200	<200
Polycyclic Aromatic Hydrocarbons										
Acenaphthene	mg/kg	0.005	0.007	0.089	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Acenaphthylene	mg/kg	0.005	0.006	0.128	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Anthracene	mg/kg	0.004	0.047	0.245	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040
Benz(a)anthracene	mg/kg	0.01	0.075	0.693	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(a)pyrene	mg/kg	0.01	0.089	0.763	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(b)fluoranthene	mg/kg	0.01			<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(g,h,i)perylene	mg/kg	0.01			<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(k)fluoranthene	mg/kg	0.01			<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Chrysene	mg/kg	0.01	0.108	0.846	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Dibenz(a,h)anthracene	mg/kg	0.005	0.006	0.135	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Fluoranthene	mg/kg	0.01	0.113	1.494	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Fluorene	mg/kg	0.01	0.021	0.144	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Indeno(1,2,3-c,d)pyrene	mg/kg	0.01			<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
2-Methylnaphthalene	mg/kg	0.01	0.020	0.201	0.015	<0.010	<0.010	<0.010	<0.010	<0.010
Naphthalene	mg/kg	0.01	0.035	0.391	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Phenanthrene	mg/kg	0.01	0.087	0.544	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Pyrene	mg/kg	0.01	0.153	1.398	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Total PAHs	mg/kg	0.04			<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
d10-Acenaphthene (SS)	%	-			107	118	104	98	104	113
d12-Chrysene (SS)	%	-			86	92	104	84	96	96
d8-Naphthalene (SS)	%	-			96	106	100	95	97	118
d10-Phenanthrene (SS)	%	-			93	99	109	92	102	104

a) Canadian sediment quality guidelines for the protection of marine aquatic life, Council of Minist

b) RDL - Realized Detection Limit

c) ISQG - Canadian Interim Sediment Quality Guidelines

d) PEL - Probable Effects Level

Grey blocks indicate values that are higher than ISQG

Appendix 3.6-1. Marine Sediment Quality, Hope Bay Belt Project, 2009

Station			CCME Guidelines for the Protection of Aquatic Life ^a		DW2 17-Aug-09 1 13	DW2 17-Aug-09 2 13	DW2 17-Aug-09 3 13	DW1 17-Aug-09 1 13	DW1 17-Aug-09 2 13	DW1 17-Aug-09 3 13
Date Sampled										
Replicate										
Depth										
ALS Sample ID	Units	RDL ^b	ISQG ^c	PEL ^d	L808851-4	L808851-5	L808851-6	L808851-1	L808851-2	L808851-3
Physical Tests										
% Moisture	%	0.1			35.5	37.2	36.3	38.9	44.9	43
pH	pH	0.1			7.66	7.79	7.6	7.45	7.6	7.47
Particle Size										
% Gravel (>2 mm)	%	1			<1.0	1	<1.0	4	<1.0	<1.0
% Sand (2.0 mm - 0.063 mm)	%	1			47	57	57	44	33	37
% Silt (0.063 mm - 4mm)	%	1			26	22	22	29	31	30
% Clay (<4 mm)	%	1			27	21	21	24	36	33
Leachable Anions & Nutrients										
Total Nitrogen by LECO	%	0.02			0.082	0.086	0.072	0.141	0.113	0.098
Organic / Inorganic Carbon										
Total Organic Carbon	%	0.1			0.45	0.4	0.38	0.83	0.62	0.63
Plant Available Nutrients										
Available Ammonium-N	mg/kg	0.8			2.58	2.41	4.4	42.5	4.4	5.23
Available Nitrate-N	mg/kg	2			<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Nitrite-N	mg/kg	0.4			<0.40	<0.40	<0.40	<0.40	<0.40	<0.40
Available Phosphate-P	mg/kg	1			20	20.3	24	26.7	21.9	20.9
Metals										
Aluminum (Al)	mg/kg	50			14000	11500	12200	13200	17300	15600
Antimony (Sb)	mg/kg	10			<10	<10	<10	<10	<10	<10
Arsenic (As)	mg/kg	0.5	7.24	41.6	3.26	2.37	2.49	3.1	3.52	2.81
Barium (Ba)	mg/kg	1			70	56.9	58.7	64.9	90.3	79.2
Beryllium (Be)	mg/kg	0.5			<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Bismuth (Bi)	mg/kg	20			<20	<20	<20	<20	<20	<20
Cadmium (Cd)	mg/kg	0.1	0.7	4.2	<0.10	<0.10	<0.10	<0.10	0.23	<0.10
Calcium (Ca)	mg/kg	50			4980	4260	4420	4570	6380	5060
Chromium (Cr)	mg/kg	2	52.3	160	39.7	32.9	35.3	37.5	47.6	44.5
Cobalt (Co)	mg/kg	2			7.8	6.6	7	7.5	9.5	8.8
Copper (Cu)	mg/kg	1	18.7	108	16.1	12.8	13.7	15.1	19.9	17.5
Iron (Fe)	mg/kg	50			19800	16800	17400	19000	23800	21900
Lead (Pb)	mg/kg	2	30.2	112	5.1	4.4	4.5	5.8	6.5	5.6
Lithium (Li)	mg/kg	2			27.9	23.3	24.9	26.1	35.1	31.2
Magnesium (Mg)	mg/kg	50			10700	8940	9370	10200	13400	12100
Manganese (Mn)	mg/kg	1			223	189	197	210	267	247
Mercury (Hg)	mg/kg	0.005	0.13	0.7	0.008	0.0073	0.0081	0.0112	0.0114	0.0099
Molybdenum (Mo)	mg/kg	0.2			1.33	1.05	1.19	1.22	1.47	1.32
Nickel (Ni)	mg/kg	5			18.8	16.3	16.6	18.5	22.7	21.3
Phosphorus (P)	mg/kg	50			608	536	546	600	682	611
Potassium (K)	mg/kg	200			4550	3700	3970	4170	5860	5140
Selenium (Se)	mg/kg	0.5			<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Silver (Ag)	mg/kg	0.1			<0.10	<0.10	<0.10	0.11	0.11	0.1
Sodium (Na)	mg/kg	200			6990	6430	6170	6590	9980	8010
Strontium (Sr)	mg/kg	0.5			28.7	23.9	24.8	26.5	37.1	30.1
Sulfur (S)-Total	mg/kg	100			1060	810	840	1570	1170	1060
Thallium (Tl)	mg/kg	0.5			<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Tin (Sn)	mg/kg	5			<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Titanium (Ti)	mg/kg	1			924	781	831	879	1100	1020
Vanadium (V)	mg/kg	2			47.1	39.4	41.3	45	56.9	51.8
Zinc (Zn)	mg/kg	1	124	271	42.2	34.9	36	40.2	52.4	47
Hydrocarbons										
EPH10-19	mg/kg	200			<200	<200	<200	<200	<200	<200
EPH19-32	mg/kg	200			<200	<200	<200	<200	<200	<200
LEPH	mg/kg	200			<200	<200	<200	<200	<200	<200
HEPH	mg/kg	200			<200	<200	<200	<200	<200	<200
Polycyclic Aromatic Hydrocarbons										
Acenaphthene	mg/kg	0.005	0.007	0.089	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Acenaphthylene	mg/kg	0.005	0.006	0.128	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Anthracene	mg/kg	0.004	0.047	0.245	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040
Benz(a)anthracene	mg/kg	0.01	0.075	0.693	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(a)pyrene	mg/kg	0.01	0.089	0.763	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(b)fluoranthene	mg/kg	0.01			<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(g,h,i)perylene	mg/kg	0.01			<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(k)fluoranthene	mg/kg	0.01			<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Chrysene	mg/kg	0.01	0.108	0.846	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Dibenz(a,h)anthracene	mg/kg	0.005	0.006	0.135	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Fluoranthene	mg/kg	0.01	0.113	1.494	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Fluorene	mg/kg	0.01	0.021	0.144	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Indeno(1,2,3-c,d)pyrene	mg/kg	0.01			<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
2-Methylnaphthalene	mg/kg	0.01	0.020	0.201	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Naphthalene	mg/kg	0.01	0.035	0.391	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Phenanthrene	mg/kg	0.01	0.087	0.544	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Pyrene	mg/kg	0.01	0.153	1.398	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Total PAHs	mg/kg	0.04			<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
d10-Acenaphthene (SS)	%	-			101	104	107	78	87	99
d12-Chrysene (SS)	%	-			99	97	97	85	87	104
d8-Naphthalene (SS)	%	-			94	97	103	77	82	98
d10-Phenanthrene (SS)	%	-			106	103	105	88	92	109

a) Canadian sediment quality guidelines for the protection of marine aquatic life, Council of Minist

b) RDL - Realized Detection Limit

c) ISQG - Canadian Interim Sediment Quality Guidelines

d) PEL - Probable Effects Level

Grey blocks indicate values that are higher than ISQG

Appendix 3.6-1. Marine Sediment Quality, Hope Bay Belt Project, 2009

Station			CCME Guidelines for the Protection of Aquatic Life ^a		TF1 16-Aug-09 1 2	TF1 16-Aug-09 2 2	TF1 16-Aug-09 3 2	RP1 17-Aug-09 1 5	RP1 17-Aug-09 2 5	RP1 17-Aug-09 3 5
Date Sampled					L808890-19	L808890-20	L808890-21	L808851-10	L808851-11	L808851-12
Replicate										
Depth										
ALS Sample ID	Units	RDL ^b	ISQG ^c	PEL ^d						
Physical Tests										
% Moisture	%	0.1			18.3	20.4	19.1	17.9	18.1	25.2
pH	pH	0.1			7.12	7.35	7.25	7.76	7.9	8.05
Particle Size										
% Gravel (>2 mm)	%	1			<1.0	<1.0	<1.0	<1.0	1	2
% Sand (2.0 mm - 0.063 mm)	%	1			99	98	99	86	80	80
% Silt (0.063 mm - 4mm)	%	1			1	1	<1.0	11	17	14
% Clay (<4 mm)	%	1			1	1	1	3	3	4
Leachable Anions & Nutrients										
Total Nitrogen by LECO	%	0.02			0.021	<0.020	0.024	0.044	0.044	0.046
Organic / Inorganic Carbon										
Total Organic Carbon	%	0.1			<0.10	<0.10	<0.10	0.18	0.23	0.19
Plant Available Nutrients										
Available Ammonium-N	mg/kg	0.8			0.82	0.81	<0.80	1.71	1.54	1.02
Available Nitrate-N	mg/kg	2			<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Nitrite-N	mg/kg	0.4			<0.40	<0.40	<0.40	<0.40	<0.40	<0.40
Available Phosphate-P	mg/kg	1			2.6	3	3.1	11.1	11.6	9.7
Metals										
Aluminum (Al)	mg/kg	50			4530	4650	4170	4510	4310	4830
Antimony (Sb)	mg/kg	10			<10	<10	<10	<10	<10	<10
Arsenic (As)	mg/kg	0.5	7.24	41.6	1.13	1.07	1.38	0.54	0.58	0.69
Barium (Ba)	mg/kg	1			13.9	16.7	17.9	16.3	16.6	18.1
Beryllium (Be)	mg/kg	0.5			<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Bismuth (Bi)	mg/kg	20			<20	<20	<20	<20	<20	<20
Cadmium (Cd)	mg/kg	0.1	0.7	4.2	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Calcium (Ca)	mg/kg	50			2510	2770	2530	2300	3150	2460
Chromium (Cr)	mg/kg	2	52.3	160	22.5	24	19.3	9.1	8.5	10.6
Cobalt (Co)	mg/kg	2			4.8	5	5	2.5	2.2	2.7
Copper (Cu)	mg/kg	1	18.7	108	8.5	7.9	7.5	4.6	4.8	5.3
Iron (Fe)	mg/kg	50			15900	17800	15600	6420	6240	6900
Lead (Pb)	mg/kg	2	30.2	112	3.1	3.2	2.7	<2.0	<2.0	<2.0
Lithium (Li)	mg/kg	2			7.2	7.2	6.7	10.8	10.4	11.4
Magnesium (Mg)	mg/kg	50			3370	3390	3390	3200	3190	3550
Manganese (Mn)	mg/kg	1			113	121	113	79.7	75.6	83.5
Mercury (Hg)	mg/kg	0.005	0.13	0.7	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Molybdenum (Mo)	mg/kg	0.2			0.3	0.37	0.37	0.41	0.3	0.3
Nickel (Ni)	mg/kg	5			9.6	9.7	9.6	5.1	<5.0	5.7
Phosphorus (P)	mg/kg	50			411	488	466	417	444	415
Potassium (K)	mg/kg	200			530	530	480	1100	1090	1230
Selenium (Se)	mg/kg	0.5			<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Silver (Ag)	mg/kg	0.1			<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Sodium (Na)	mg/kg	200			1360	1190	1140	1570	2490	2120
Strontium (Sr)	mg/kg	0.5			10.9	11.9	9.75	12	16.5	13.2
Sulfur (S)-Total	mg/kg	100			590	590	810	490	540	630
Thallium (Tl)	mg/kg	0.5			<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Tin (Sn)	mg/kg	5			<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Titanium (Ti)	mg/kg	1			542	595	496	362	350	404
Vanadium (V)	mg/kg	2			41.3	47.7	38.1	14.3	14	15.6
Zinc (Zn)	mg/kg	1	124	271	12.9	14.2	13.3	14.9	14.4	15.7
Hydrocarbons										
EPH10-19	mg/kg	200			-	-	-	<200	<200	<200
EPH19-32	mg/kg	200			-	-	-	<200	<200	<200
LEPH	mg/kg	200			-	-	-	<200	<200	<200
HEPH	mg/kg	200			-	-	-	<200	<200	<200
Polycyclic Aromatic Hydrocarbons										
Acenaphthene	mg/kg	0.005	0.007	0.089	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Acenaphthylene	mg/kg	0.005	0.006	0.128	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Anthracene	mg/kg	0.004	0.047	0.245	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040
Benzo(a)anthracene	mg/kg	0.01	0.075	0.693	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(a)pyrene	mg/kg	0.01	0.089	0.763	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(b)fluoranthene	mg/kg	0.01			<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(g,h,i)perylene	mg/kg	0.01			<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(k)fluoranthene	mg/kg	0.01			<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Chrysene	mg/kg	0.01	0.108	0.846	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Dibenz(a,h)anthracene	mg/kg	0.005	0.006	0.135	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Fluoranthene	mg/kg	0.01	0.113	1.494	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Fluorene	mg/kg	0.01	0.021	0.144	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Indeno(1,2,3-c,d)pyrene	mg/kg	0.01			<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
2-Methylnaphthalene	mg/kg	0.01	0.020	0.201	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Naphthalene	mg/kg	0.01	0.035	0.391	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Phenanthrene	mg/kg	0.01	0.087	0.544	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Pyrene	mg/kg	0.01	0.153	1.398	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Total PAHs	mg/kg	0.04			<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
d10-Acenaphthene (SS)	%	-			95	95	107	116	118	114
d12-Chrysene (SS)	%	-			97	96	101	86	104	86
d8-Naphthalene (SS)	%	-			94	93	104	104	122	102
d10-Phenanthrene (SS)	%	-			102	98	105	94	112	96

a) Canadian sediment quality guidelines for the protection of marine aquatic life, Council of Minist

b) RDL - Realized Detection Limit

c) ISQG - Canadian Interim Sediment Quality Guidelines

d) PEL - Probable Effects Level

Grey blocks indicate values that are higher than ISQG

Appendix 3.6-1. Marine Sediment Quality, Hope Bay Belt Project, 2009

Station			CCME Guidelines for the Protection of Aquatic Life ^a		RP2 17-Aug-09 1 9	RP2 17-Aug-09 2 9	RP2 17-Aug-09 3 9	RP3 17-Aug-09 1 14	RP3 17-Aug-09 2 14	RP3 17-Aug-09 3 14
Date Sampled					L808851-13	L808851-14	L808851-15	L808851-16	L808851-17	L808851-18
Replicate										
Depth										
ALS Sample ID	Units	RDL ^b	ISQG ^c	PEL ^d						
Physical Tests										
% Moisture	%	0.1			43.2	45.5	44.9	47.2	52.8	48.7
pH	pH	0.1			7.52	7.55	7.56	7.7	7.44	7.43
Particle Size										
% Gravel (>2 mm)	%	1			<1.0	<1.0	<1.0	<1.0	<1.0	2
% Sand (2.0 mm - 0.063 mm)	%	1			19	26	21	6	14	9
% Silt (0.063 mm - 4mm)	%	1			55	48	55	60	55	56
% Clay (<4 mm)	%	1			26	26	25	34	31	33
Leachable Anions & Nutrients										
Total Nitrogen by LECO	%	0.02			0.135	0.898	0.113	0.147	0.145	0.148
Organic / Inorganic Carbon										
Total Organic Carbon	%	0.1			0.75	0.83	0.68	0.86	0.81	0.81
Plant Available Nutrients										
Available Ammonium-N	mg/kg	0.8			5.32	8.78	5.47	5.91	6.76	18.9
Available Nitrate-N	mg/kg	2			<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Nitrite-N	mg/kg	0.4			<0.40	<0.40	<0.40	<0.40	<0.40	<0.40
Available Phosphate-P	mg/kg	1			25.9	26.5	24.6	26.8	28.8	30.9
Metals										
Aluminum (Al)	mg/kg	50			14900	15300	14300	17200	15500	17300
Antimony (Sb)	mg/kg	10			<10	<10	<10	<10	<10	<10
Arsenic (As)	mg/kg	0.5	7.24	41.6	3.13	2.96	3.22	2.77	3.32	2.34
Barium (Ba)	mg/kg	1			77	74.3	70.3	86.8	77.6	87.5
Beryllium (Be)	mg/kg	0.5			<0.50	<0.50	<0.50	<0.50	<0.50	0.53
Bismuth (Bi)	mg/kg	20			<20	<20	<20	<20	<20	<20
Cadmium (Cd)	mg/kg	0.1	0.7	4.2	<0.10	<0.10	0.1	<0.10	<0.10	<0.10
Calcium (Ca)	mg/kg	50			5880	6390	8180	8100	6030	6670
Chromium (Cr)	mg/kg	2	52.3	160	38.2	40.6	37.9	46.5	42.8	48.6
Cobalt (Co)	mg/kg	2			7.4	7.6	7.1	8.4	8	8.7
Copper (Cu)	mg/kg	1	18.7	108	16.4	16.5	15.5	18.9	17.7	19.4
Iron (Fe)	mg/kg	50			21300	21500	20000	23500	22000	24400
Lead (Pb)	mg/kg	2	30.2	112	6	6.2	5.9	6.7	6.6	6.6
Lithium (Li)	mg/kg	2			30.1	30.9	29.1	34.8	32.1	35.3
Magnesium (Mg)	mg/kg	50			11100	11300	10600	12800	12200	13300
Manganese (Mn)	mg/kg	1			235	242	225	264	246	272
Mercury (Hg)	mg/kg	0.005	0.13	0.7	0.0118	0.0118	0.0119	0.0138	0.0135	0.0141
Molybdenum (Mo)	mg/kg	0.2			1.27	1.38	1.32	1.58	1.5	1.35
Nickel (Ni)	mg/kg	5			18.7	19	17.8	21.2	20.1	21.8
Phosphorus (P)	mg/kg	50			893	852	903	813	842	878
Potassium (K)	mg/kg	200			4770	4980	4630	5700	5140	5680
Selenium (Se)	mg/kg	0.5			<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Silver (Ag)	mg/kg	0.1			<0.10	<0.10	<0.10	0.11	0.11	0.1
Sodium (Na)	mg/kg	200			7630	7930	7540	10600	10700	11000
Strontium (Sr)	mg/kg	0.5			36.5	38.1	48.9	48.9	39.8	42.4
Sulfur (S)-Total	mg/kg	100			840	980	950	1150	1050	1060
Thallium (Tl)	mg/kg	0.5			<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Tin (Sn)	mg/kg	5			<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Titanium (Ti)	mg/kg	1			1030	1070	979	1130	1020	1130
Vanadium (V)	mg/kg	2			50.5	51.5	47	57.3	53.2	58.5
Zinc (Zn)	mg/kg	1	124	271	44.6	46	42.6	50.9	48.4	53.4
Hydrocarbons										
EPH10-19	mg/kg	200			<200	<200	<200	<200	<220	<200
EPH19-32	mg/kg	200			<200	<200	<200	<200	<220	<200
LEPH	mg/kg	200			<200	<200	<200	<200	<220	<200
HEPH	mg/kg	200			<200	<200	<200	<200	<220	<200
Polycyclic Aromatic Hydrocarbons										
Acenaphthene	mg/kg	0.005	0.007	0.089	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Acenaphthylene	mg/kg	0.005	0.006	0.128	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Anthracene	mg/kg	0.004	0.047	0.245	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040
Benzo(a)anthracene	mg/kg	0.01	0.075	0.693	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(a)pyrene	mg/kg	0.01	0.089	0.763	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(b)fluoranthene	mg/kg	0.01			<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(g,h,i)perylene	mg/kg	0.01			<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(k)fluoranthene	mg/kg	0.01			<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Chrysene	mg/kg	0.01	0.108	0.846	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Dibenz(a,h)anthracene	mg/kg	0.005	0.006	0.135	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Fluoranthene	mg/kg	0.01	0.113	1.494	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Fluorene	mg/kg	0.01	0.021	0.144	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Indeno(1,2,3-c,d)pyrene	mg/kg	0.01			<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
2-Methylnaphthalene	mg/kg	0.01	0.020	0.201	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Naphthalene	mg/kg	0.01	0.035	0.391	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Phenanthrene	mg/kg	0.01	0.087	0.544	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Pyrene	mg/kg	0.01	0.153	1.398	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Total PAHs	mg/kg	0.04			<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
d10-Acenaphthene (SS)	%	-			110	114	110	110	101	102
d12-Chrysene (SS)	%	-			89	88	93	93	90	95
d8-Naphthalene (SS)	%	-			101	99	98	96	90	109
d10-Phenanthrene (SS)	%	-			96	94	100	99	95	100

a) Canadian sediment quality guidelines for the protection of marine aquatic life, Council of Minist

b) RDL - Realized Detection Limit

c) ISQG - Canadian Interim Sediment Quality Guidelines

d) PEL - Probable Effects Level

Grey blocks indicate values that are higher than ISQG

Appendix 3.7-1

Marine Phytoplankton Biomass (as Chlorophyll *a*), Hope Bay
Belt Project, 2009

Appendix 3.7-1. Marine Phytoplankton Biomass (as Chlorophyll *a*), Hope Bay Belt Project, 2009

Station ID		ST0	ST0	ST0	ST1	ST1	ST1	ST2	ST2	ST2
Depth		1 m	1 m	1 m	1 m	1 m	1 m	1 m	1 m	1 m
Replicate		1	2	3	1	2	3	1	2	3
Date Sampled	DL	15-Aug-09	15-Aug-09	15-Aug-09	15-Aug-09	15-Aug-09	15-Aug-09	15-Aug-09	15-Aug-09	15-Aug-09
Chlorophyll <i>a</i> (µg/L)	0.04	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
Station ID		ST2	ST2	ST2	ST3	ST3	ST3	ST3	ST3	ST3
Depth		4 m	4 m	4 m	1 m	1 m	1 m	4 m	4 m	4 m
Replicate		1	2	3	1	2	3	1	2	3
Date Sampled	DL	15-Aug-09	15-Aug-09	15-Aug-09	15-Aug-09	15-Aug-09	15-Aug-09	15-Aug-09	15-Aug-09	15-Aug-09
Chlorophyll <i>a</i> (µg/L)	0.04	0.051	0.087	0.192	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
Station ID		ST3	ST3	ST3	ST4	ST4	ST4	ST4	ST4	ST4
Depth		9 m	9 m	9 m	1 m	1 m	1 m	6 m	6 m	6 m
Replicate		1	2	3	1	2	3	1	2	3
Date Sampled	DL	15-Aug-09	15-Aug-09	15-Aug-09	15-Aug-09	15-Aug-09	15-Aug-09	15-Aug-09	15-Aug-09	15-Aug-09
Chlorophyll <i>a</i> (µg/L)	0.04	0.049	0.041	0.046	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
Station ID		ST4	ST4	ST4	ST4	ST4	ST4	ST5	ST5	ST5
Depth		14 m	14 m	14 m	30 m	30 m	30 m	1 m	1 m	1 m
Replicate		1	2	3	1	2	3	1	2	3
Date Sampled	DL	15-Aug-09	15-Aug-09	15-Aug-09	15-Aug-09	15-Aug-09	15-Aug-09	15-Aug-09	15-Aug-09	15-Aug-09
Chlorophyll <i>a</i> (µg/L)	0.04	<0.040	0.043	0.043	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
Station ID		ST5	ST5	ST5	ST5	ST5	ST5	ST5	ST5	ST5
Depth		5 m	5 m	5 m	13 m	13 m	13 m	40 m	40 m	40 m
Replicate		1	2	3	1	2	3	1	2	3
Date Sampled	DL	15-Aug-09	15-Aug-09	15-Aug-09	15-Aug-09	15-Aug-09	15-Aug-09	15-Aug-09	15-Aug-09	15-Aug-09
Chlorophyll <i>a</i> (µg/L)	0.04	<0.040	<0.040	<0.040	<0.040	<0.040	0.045	<0.040	0.049	0.045
Station ID		ST6	ST6	ST6	ST6	ST6	ST6	ST6	ST6	ST6
Depth		1 m	1 m	1 m	6 m	6 m	6 m	14 m	14 m	14 m
Replicate		1	2	3	1	2	3	1	2	3
Date Sampled	DL	15-Aug-09	15-Aug-09	15-Aug-09	15-Aug-09	15-Aug-09	15-Aug-09	15-Aug-09	15-Aug-09	15-Aug-09
Chlorophyll <i>a</i> (µg/L)	0.04	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
Station ID		ST6	ST6	ST6	RP3	RP3	RP3	RP3	RP3	RP3
Depth		40 m	40 m	40 m	1 m	1 m	1 m	5 m	5 m	5 m
Replicate		1	2	3	1	2	3	1	2	3
Date Sampled	DL	15-Aug-09	15-Aug-09	15-Aug-09	18-Aug-09	18-Aug-09	18-Aug-09	18-Aug-09	18-Aug-09	18-Aug-09
Chlorophyll <i>a</i> (µg/L)	0.04	<0.040	0.057	0.041	0.041	0.041	0.053	<0.040	<0.040	<0.040
Station ID		RP3	RP3	RP3	REF4	REF4	REF4	REF4	REF4	REF4
Depth		12 m	12 m	12 m	1 m	1 m	1 m	6 m	6 m	6 m
Replicate		1	2	3	1	2	3	1	2	3
Date Sampled	DL	18-Aug-09	18-Aug-09	18-Aug-09	18-Aug-09	18-Aug-09	18-Aug-09	18-Aug-09	18-Aug-09	18-Aug-09
Chlorophyll <i>a</i> (µg/L)	0.04	<0.040	<0.040	<0.040	<0.040	0.112	0.085	0.163	0.115	0.086
Station ID		REF4	REF4	REF4	REF4	REF4	REF4			
Depth		14 m	14 m	14 m	40 m	40 m	40 m			
Replicate		1	2	3	1	2	3			
Date Sampled	DL	18-Aug-09	18-Aug-09	18-Aug-09	18-Aug-09	18-Aug-09	18-Aug-09			
Chlorophyll <i>a</i> (µg/L)	0.04	0.045	0.050	0.064	0.186	0.168	0.194			

Appendix 3.7-2

Marine Phytoplankton Taxonomy (as Abundance), Hope Bay
Belt Project, 2009

Appendix 3.7-2. Marine Phytoplankton Taxonomy (as Abundance), Hope Bay Belt Project, 2009

Station Date Replicate	Trophic Category	ST0 Aug 14 2009 1	ST0 Aug 14 2009 2	ST0 Aug 14 2009 3	ST1 Aug 14 2009 1	ST1 Aug 14 2009 2
Abundance (cells/L)						
Bacillariophyta - Diatoms						
<i>Asterionella formosa</i>	a	0	0	0	0	0
<i>Chaetoceros compressus</i>	a	0	0	7630	1696	0
<i>Chaetoceros curvisetus</i>	a	0	0	0	0	0
<i>Chaetoceros decipiens</i>	a	0	0	0	848	0
<i>Cylindrotheca closterium</i>	a	0	0	2543	0	0
<i>Fragilariopsis cylindrus</i>	a	0	0	0	0	0
<i>Lymnophora abbreviata</i>	a	0	0	0	0	0
<i>Lymnophora hyalina</i>	a	0	0	0	0	0
<i>Melosira varians</i>	a	0	0	848	3391	0
<i>Navicula</i> spp.	a	848	848	0	0	0
<i>Pseudo-nitzschia</i> cf. <i>delicatissima</i>	a	1696	1696	1696	0	3391
<i>Rhizosolenia chunii</i>	a	0	0	0	0	0
<i>Synedra ulna</i>	a	848	3391	3391	1696	0
<i>Thalassionema nitzschoides</i>	a	0	0	0	0	0
Total Diatom Abundance		3391	5935	16108	7630	3391
Pyrrhophyta - Dinoflagellates						
<i>Alexandrium</i> cf. <i>ostenfeldii</i>	a	117	194	39	39	272
<i>Ceratium arcticum</i>	a	78	155	78	0	0
<i>Ceratium lineatum</i>	a	0	39	0	0	0
<i>Cochlodinium</i> cf. <i>citron</i>	h	0	0	0	0	0
<i>Dinophysis acuminata</i>	m	0	78	0	117	0
<i>Dinophysis acuta</i>	m	311	388	155	0	78
<i>Gymnodinium</i> sp. (medium)	a	0	0	0	0	848
<i>Gymnodinium</i> sp. (small)	a	848	0	0	0	0
<i>Gyrodinium estuariale</i>	h	0	39	0	117	0
<i>Gyrodinium</i> sp.	h	2543	2543	1696	4239	1696
<i>Katodinium glaucum</i>	h	2543	1696	1696	2543	848
<i>Protoceratium reticulatum</i>	a	0	0	0	0	0
<i>Protoperdinium pellucidum</i>	h	848	848	0	848	0
Total Dinoflagellate Abundance		7287	5980	3663	7902	3741
Cryptophyta						
Cryptomonads (large)	m	0	0	0	0	0
Cryptomonads (small)	m	68672	68672	91562	45781	45781
Total Cryptomonad Abundance		68672	68672	91562	45781	45781
Cyanophyta - Cyanobacteria						
<i>Nodularia</i> sp.	a	4239	1696	3391	3391	0
<i>Oscillatoria</i> sp.	a	1696	0	1696	848	848
Total Cyanobacteria Abundance		5935	1696	5087	4239	848
Others						
<i>Dinobryon balticum</i>	m	72063	71215	93258	139039	82237
<i>Ebria tripartita</i>	h	2543	1696	1696	848	848
<i>Myrionecta rubra</i>	m	0	0	848	0	0
<i>Scenedesmus</i> sp.	a	0	0	0	0	0
Total Other Abundance		74606	72911	95801	139887	83084
Total Phytoplankton Abundance		159891	155193	212222	205439	136845
Trophic Category						
Autotrophic		10368	8019	21312	11908	5359
Heterotrophic		8478	6821	5087	8595	3391
Mixotrophic		141045	140353	185824	184937	128095
Autotrophic %		6.5	5.2	10.0	5.8	3.9
Heterotrophic %		5.3	4.4	2.4	4.2	2.5
Mixotrophic %		88.2	90.4	87.6	90.0	93.6

Notes: a = autotrophic, m = mixotrophic, h = heterotrophic

Appendix 3.7-2. Marine Phytoplankton Taxonomy (as Abundance), Hope Bay Belt Project, 2009

Station Date Replicate	Trophic Category	ST1 Aug 14 2009 3	ST2 Aug 14 2009 1	ST2 Aug 14 2009 2	ST2 Aug 14 2009 3	ST3 Aug 14 2009 1
Abundance (cells/L)						
Bacillariophyta - Diatoms						
<i>Asterionella formosa</i>	a	0	0	0	0	0
<i>Chaetoceros compressus</i>	a	0	0	0	0	0
<i>Chaetoceros curvisetus</i>	a	0	0	0	0	0
<i>Chaetoceros decipiens</i>	a	3391	1696	0	0	0
<i>Cylindrotheca closterium</i>	a	0	0	0	848	848
<i>Fragilariopsis cylindrus</i>	a	0	0	0	0	0
<i>Lymnophora abbreviata</i>	a	0	0	0	848	1696
<i>Lymnophora hyalina</i>	a	0	0	0	0	0
<i>Melosira varians</i>	a	0	0	0	0	1696
<i>Navicula</i> spp.	a	0	848	0	0	0
<i>Pseudo-nitzschia</i> cf. <i>delicatissima</i>	a	0	0	848	848	0
<i>Rhizosolenia chunii</i>	a	0	0	0	0	0
<i>Synedra ulna</i>	a	848	848	0	848	1696
<i>Thalassionema nitzschioides</i>	a	848	0	0	0	0
Total Diatom Abundance		5087	3391	848	3391	5935
Pyrrhophyta - Dinoflagellates						
<i>Alexandrium</i> cf. <i>ostensfeldii</i>	a	39	233	311	272	78
<i>Ceratium arcticum</i>	a	39	0	78	39	0
<i>Ceratium lineatum</i>	a	0	0	0	0	0
<i>Cochlodinium</i> cf. <i>citron</i>	h	0	233	0	0	0
<i>Dinophysis acuminata</i>	m	0	0	0	39	0
<i>Dinophysis acuta</i>	m	39	117	350	78	0
<i>Gymnodinium</i> sp. (medium)	a	0	0	0	1696	0
<i>Gymnodinium</i> sp. (small)	a	0	0	0	0	2543
<i>Gyrodinium estuariale</i>	h	0	0	0	0	848
<i>Gyrodinium</i> sp.	h	848	1696	2543	0	2543
<i>Katodinium glaucum</i>	h	0	848	0	848	0
<i>Protoceratium reticulatum</i>	a	0	0	0	0	0
<i>Protoperidinium pellucidum</i>	h	0	0	0	848	0
Total Dinoflagellate Abundance		964	3126	3281	3818	6012
Cryptophyta						
Cryptomonads (large)	m	0	0	0	0	0
Cryptomonads (small)	m	22891	45781	45781	45781	45781
Total Cryptomonad Abundance		22891	45781	45781	45781	45781
Cyanophyta - Cyanobacteria						
<i>Nodularia</i> sp.	a	0	1696	848	0	4239
<i>Oscillatoria</i> sp.	a	848	0	848	848	0
Total Cyanobacteria Abundance		848	1696	1696	848	4239
Others						
<i>Dinobryon balticum</i>	m	61042	80541	121235	92410	42390
<i>Ebria tripartita</i>	h	848	848	1696	1696	848
<i>Myrionecta rubra</i>	m	0	0	1696	0	1696
<i>Scenedesmus</i> sp.	a	0	0	0	0	0
Total Other Abundance		61889	81389	124627	94106	44933
Total Phytoplankton Abundance		91679	135383	176232	147944	106900
Trophic Category						
Autotrophic		6012	5320	2932	6245	12795
Heterotrophic		1696	3624	4239	3391	4239
Mixotrophic		83971	126439	169062	138308	89867
Autotrophic %		6.6	3.9	1.7	4.2	12.0
Heterotrophic %		1.8	2.7	2.4	2.3	4.0
Mixotrophic %		91.6	93.4	95.9	93.5	84.1

Appendix 3.7-2. Marine Phytoplankton Taxonomy (as Abundance), Hope Bay Belt Project, 2009

Station Date	Trophic Category	ST3 Aug 14 2009	ST3 Aug 14 2009	ST4 Aug 14 2009	ST4 Aug 14 2009	ST4 Aug 14 2009
Replicate		2	3	1	2	3
Abundance (cells/L)						
Bacillariophyta - Diatoms						
<i>Asterionella formosa</i>	a	0	0	0	0	0
<i>Chaetoceros compressus</i>	a	6782	0	0	0	0
<i>Chaetoceros curvisetus</i>	a	0	0	0	0	0
<i>Chaetoceros decipiens</i>	a	3391	0	0	0	1696
<i>Cylindrotheca closterium</i>	a	0	0	0	0	848
<i>Fragilariopsis cylindrus</i>	a	0	0	848	0	0
<i>Lycmophora abbreviata</i>	a	0	0	848	0	0
<i>Lycmophora hyalina</i>	a	1696	0	0	848	0
<i>Melosira varians</i>	a	0	0	0	0	0
<i>Navicula</i> spp.	a	1696	0	0	0	0
<i>Pseudo-nitzschia</i> cf. <i>delicatissima</i>	a	848	848	2543	1696	0
<i>Rhizosolenia chunii</i>	a	0	0	0	0	0
<i>Synedra ulna</i>	a	1696	848	848	2543	1696
<i>Thalassionema nitzschioides</i>	a	0	0	0	0	0
Total Diatom Abundance		16108	1696	5087	5087	4239
Pyrrhophyta - Dinoflagellates						
<i>Alexandrium</i> cf. <i>ostensfeldii</i>	a	78	117	78	78	117
<i>Ceratium arcticum</i>	a	78	39	0	0	0
<i>Ceratium lineatum</i>	a	0	0	0	0	0
<i>Cochlodinium</i> cf. <i>citron</i>	h	0	0	0	0	0
<i>Dinophysis acuminata</i>	m	0	0	78	78	0
<i>Dinophysis acuta</i>	m	0	155	0	155	117
<i>Gymnodinium</i> sp. (medium)	a	0	0	0	0	0
<i>Gymnodinium</i> sp. (small)	a	848	848	0	0	848
<i>Gyrodinium estuariale</i>	h	78	0	0	0	117
<i>Gyrodinium</i> sp.	h	1696	3391	2543	2543	4239
<i>Katodinium glaucum</i>	h	3391	0	1696	1696	0
<i>Protoceratium reticulatum</i>	a	0	0	0	0	0
<i>Protoperidinium pellucidum</i>	h	848	0	0	848	848
Total Dinoflagellate Abundance		7015	4550	4394	5397	6284
Cryptophyta						
Cryptomonads (large)	m	0	0	0	0	0
Cryptomonads (small)	m	68672	22891	68672	68672	91562
Total Cryptomonad Abundance		68672	22891	68672	68672	91562
Cyanophyta - Cyanobacteria						
<i>Nodularia</i> sp.	a	0	2543	4239	5087	3391
<i>Oscillatoria</i> sp.	a	848	1696	1696	848	1696
Total Cyanobacteria Abundance		848	4239	5935	5935	5087
Others						
<i>Dinobryon balticum</i>	m	61889	62737	91562	83084	83084
<i>Ebria tripartita</i>	h	848	1696	1696	0	1696
<i>Myrionecta rubra</i>	m	0	0	848	0	0
<i>Scenedesmus</i> sp.	a	0	0	0	0	0
Total Other Abundance		62737	64433	94106	83084	84780
Total Phytoplankton Abundance		155380	97808	178193	168175	191952
Trophic Category						
Autotrophic		17959	6938	11099	11099	10290
Heterotrophic		6860	5087	5935	5087	6899
Mixotrophic		130561	85783	161160	151989	174763
Autotrophic %		11.6	7.1	6.2	6.6	5.4
Heterotrophic %		4.4	5.2	3.3	3.0	3.6
Mixotrophic %		84.0	87.7	90.4	90.4	91.0

Appendix 3.7-2. Marine Phytoplankton Taxonomy (as Abundance), Hope Bay Belt Project, 2009

Station Date Replicate	Trophic Category	ST5 Aug 14 2009 1	ST5 Aug 14 2009 2	ST5 Aug 14 2009 3	ST6 Aug 14 2009 1	ST6 Aug 14 2009 2
Abundance (cells/L)						
Bacillariophyta - Diatoms						
<i>Asterionella formosa</i>	a	0	0	0	848	0
<i>Chaetoceros compressus</i>	a	0	0	0	0	0
<i>Chaetoceros curvisetus</i>	a	0	0	0	1696	0
<i>Chaetoceros decipiens</i>	a	0	0	78	0	0
<i>Cylindrotheca closterium</i>	a	0	2543	848	0	0
<i>Fragilariopsis cylindrus</i>	a	0	1696	0	0	0
<i>Lycmophora abbreviata</i>	a	1696	0	1696	0	0
<i>Lycmophora hyalina</i>	a	0	117	0	0	0
<i>Melosira varians</i>	a	0	0	0	0	0
<i>Navicula</i> spp.	a	1696	0	0	0	0
<i>Pseudo-nitzschia</i> cf. <i>delicatissima</i>	a	2543	848	0	0	0
<i>Rhizosolenia chunii</i>	a	0	0	0	0	0
<i>Synedra ulna</i>	a	848	4239	848	0	848
<i>Thalassionema nitzschioides</i>	a	0	0	0	0	0
Total Diatom Abundance		6782	9442	3469	2543	848
Pyrrhophyta - Dinoflagellates						
<i>Alexandrium</i> cf. <i>ostensfeldii</i>	a	39	78	78	117	350
<i>Ceratium arcticum</i>	a	0	39	0	0	0
<i>Ceratium lineatum</i>	a	0	0	0	0	0
<i>Cochlodinium</i> cf. <i>citron</i>	h	0	0	0	0	0
<i>Dinophysis acuminata</i>	m	117	78	0	0	78
<i>Dinophysis acuta</i>	m	78	78	78	272	272
<i>Gymnodinium</i> sp. (medium)	a	78	0	39	0	0
<i>Gymnodinium</i> sp. (small)	a	0	848	0	0	0
<i>Gyrodinium estuariale</i>	h	0	0	39	39	78
<i>Gyrodinium</i> sp.	h	3391	848	848	0	1696
<i>Katodinium glaucum</i>	h	1696	0	1696	0	0
<i>Protoceratium reticulatum</i>	a	78	0	0	155	155
<i>Protoperdinium pellucidum</i>	h	848	848	848	0	0
Total Dinoflagellate Abundance		6323	2815	3624	583	2628
Cryptophyta						
Cryptomonads (large)	m	0	0	0	0	0
Cryptomonads (small)	m	68672	45781	68672	45781	45781
Total Cryptomonad Abundance		68672	45781	68672	45781	45781
Cyanophyta - Cyanobacteria						
<i>Nodularia</i> sp.	a	2543	2543	5935	0	0
<i>Oscillatoria</i> sp.	a	848	6782	2543	4239	848
Total Cyanobacteria Abundance		3391	9326	8478	4239	848
Others						
<i>Dinobryon balticum</i>	m	114453	130561	107671	230602	262818
<i>Ebria tripartita</i>	h	848	2543	1696	848	848
<i>Myrionecta rubra</i>	m	848	848	0	848	1696
<i>Scenedesmus</i> sp.	a	0	0	0	0	0
Total Other Abundance		116149	133952	109366	232297	265361
Total Phytoplankton Abundance		201317	201317	193609	285443	315466
Trophic Category						
Autotrophic		10368	19732	12063	7054	2200
Heterotrophic		6782	4239	5126	887	2621
Mixotrophic		184167	177346	176420	277502	310644
Autotrophic %		5.1	9.8	6.2	2.5	0.7
Heterotrophic %		3.4	2.1	2.6	0.3	0.8
Mixotrophic %		91.5	88.1	91.1	97.2	98.5

Appendix 3.7-2. Marine Phytoplankton Taxonomy (as Abundance), Hope Bay Belt Project, 2009

Station Date Replicate	Trophic Category	ST6 Aug 14 2009 3	RP3 Aug 14 2009 1	RP3 Aug 14 2009 2	RP3 Aug 14 2009 3	REF4 Aug 14 2009 1	REF4 Aug 14 2009 2	REF4 Aug 14 2009 3
Abundance (cells/L)								
Bacillariophyta - Diatoms								
<i>Asterionella formosa</i>	a	1696	0	0	0	848	848	0
<i>Chaetoceros compressus</i>	a	0	0	0	0	0	0	0
<i>Chaetoceros curvisetus</i>	a	848	0	0	0	0	0	0
<i>Chaetoceros decipiens</i>	a	78	0	0	0	0	0	0
<i>Cylindrotheca closterium</i>	a	0	0	848	0	0	1696	0
<i>Fragilariopsis cylindrus</i>	a	0	848	1696	0	0	0	0
<i>Lycmophora abbreviata</i>	a	0	1696	0	848	848	0	0
<i>Lycmophora hyalina</i>	a	0	0	0	0	0	0	0
<i>Melosira varians</i>	a	0	0	0	0	0	0	0
<i>Navicula</i> spp.	a	0	0	848	0	2543	2543	4239
<i>Pseudo-nitzschia</i> cf. <i>delicatissima</i>	a	848	0	3391	0	1696	0	848
<i>Rhizosolenia chunii</i>	a	0	1696	0	0	0	0	0
<i>Synedra ulna</i>	a	848	848	848	2543	848	1696	848
<i>Thalassionema nitzschioides</i>	a	0	0	0	0	0	0	0
Total Diatom Abundance		4317	5087	7630	3391	6782	6782	5935
Pyrrhophyta - Dinoflagellates								
<i>Alexandrium</i> cf. <i>ostenfeldii</i>	a	194	39	39	194	0	0	78
<i>Ceratium arcticum</i>	a	39	0	0	0	0	0	0
<i>Ceratium lineatum</i>	a	0	0	39	0	0	0	0
<i>Cochlodinium</i> cf. <i>citron</i>	h	0	0	0	0	0	0	0
<i>Dinophysis acuminata</i>	m	0	0	78	78	78	155	155
<i>Dinophysis acuta</i>	m	0	78	117	39	0	0	78
<i>Gymnodinium</i> sp. (medium)	a	0	0	0	0	0	0	0
<i>Gymnodinium</i> sp. (small)	a	0	848	0	0	2543	0	0
<i>Gyrodinium estuariale</i>	h	0	0	0	0	0	78	0
<i>Gyrodinium</i> sp.	h	1696	848	2543	0	0	848	0
<i>Katodinium glaucum</i>	h	0	0	0	0	0	0	0
<i>Protoceratium reticulatum</i>	a	233	0	350	272	583	505	583
<i>Protoperidinium pellucidum</i>	h	117	0	848	848	0	78	0
Total Dinoflagellate Abundance		2278	1812	4013	1430	3204	1663	893
Cryptophyta								
Cryptomonads (large)	m	0	8478	0	0	0	0	0
Cryptomonads (small)	m	45781	68672	114453	160234	183125	160234	137344
Total Cryptomonad Abundance		45781	77150	114453	160234	183125	160234	137344
Cyanophyta - Cyanobacteria								
<i>Nodularia</i> sp.	a	848	1696	848	848	0	0	0
<i>Oscillatoria</i> sp.	a	848	1696	848	848	848	848	1696
Total Cyanobacteria Abundance		1696	3391	1696	1696	848	848	1696
Others								
<i>Dinobryon balticum</i>	m	236536	0	1696	1696	0	0	1696
<i>Ebria tripartita</i>	h	1696	848	848	848	0	0	0
<i>Myrionecta rubra</i>	m	848	0	0	0	848	0	1696
<i>Scenedesmus</i> sp.	a	0	8478	0	0	0	0	0
Total Other Abundance		239080	9326	2543	2543	848	0	3391
Total Phytoplankton Abundance		293151	96766	130335	169295	194806	169528	149258
Trophic Category								
Autotrophic		6478	17843	9753	5553	10756	8135	8290
Heterotrophic		3508	1696	4239	1696	0	1003	0
Mixotrophic		283165	77227	116343	162046	184050	160390	140968
Autotrophic %		2.2	18.4	7.5	3.3	5.5	4.8	5.6
Heterotrophic %		1.2	1.8	3.3	1.0	0.0	0.6	0.0
Mixotrophic %		96.6	79.8	89.3	95.7	94.5	94.6	94.4

Appendix 3.7-3

Marine Phytoplankton Taxonomy (as Carbon Biomass),
Hope Bay Belt Project, 2009

Appendix 3.7-3. Marine Phytoplankton Taxonomy (as Carbon Biomass), Hope Bay Belt Project, 2009

Station Date Replicate	Trophic Category	ST0 Aug 14 2009 1	ST0 Aug 14 2009 2	ST0 Aug 14 2009 3	ST1 Aug 14 2009 1	ST1 Aug 14 2009 2
Biomass (pg C/L)						
Bacillariophyta - Diatoms						
<i>Asterionella formosa</i>	a	0	0	0	0	0
<i>Chaetoceros compressus</i>	a	0	0	747760	166169	0
<i>Chaetoceros curvisetus</i>	a	0	0	0	0	0
<i>Chaetoceros decipiens</i>	a	0	0	0	280622	0
<i>Cylindrotheca closterium</i>	a	0	0	63585	0	0
<i>Fragilariopsis cylindrus</i>	a	0	0	0	0	0
<i>Lymnophora abbreviata</i>	a	0	0	0	0	0
<i>Lymnophora hyalina</i>	a	0	0	0	0	0
<i>Melosira varians</i>	a	0	0	549374	2197498	0
<i>Navicula</i> spp.	a	63585	63585	0	0	0
<i>Pseudo-nitzschia</i> cf. <i>delicatissima</i>	a	47477	47477	47477	0	94954
<i>Rhizosolenia chunii</i>	a	0	0	0	0	0
<i>Synedra ulna</i>	a	98345	393379	393379	196690	0
<i>Thalassionema nitzschioides</i>	a	0	0	0	0	0
Total Diatom Biomass		209407	504441	1801575	2840978	94954
Pyrrhophyta - Dinoflagellates						
<i>Alexandrium</i> cf. <i>ostenfeldii</i>	a	377141	628568	125714	125714	879995
<i>Ceratium arcticum</i>	a	939920	1879840	939920	0	0
<i>Ceratium lineatum</i>	a	0	127228	0	0	0
<i>Cochlodinium</i> cf. <i>citron</i>	h	0	0	0	0	0
<i>Dinophysis acuminata</i>	m	0	117441	0	176162	0
<i>Dinophysis acuta</i>	m	1426386	1782982	713193	0	356596
<i>Gymnodinium</i> sp. (medium)	a	0	0	0	0	639241
<i>Gymnodinium</i> sp. (small)	a	166169	0	0	0	0
<i>Gyrodinium estuariale</i>	h	0	184823	0	554468	0
<i>Gyrodinium</i> sp.	h	134800	134800	89867	224667	89867
<i>Katodinium glaucum</i>	h	1800727	1200485	1200485	1800727	600242
<i>Protoceratium reticulatum</i>	a	0	0	0	0	0
<i>Protoperidinium pellucidum</i>	h	89402	89402	0	89402	0
Total Dinoflagellate Biomass		4934544	6145569	3069178	2971140	2565942
Cryptophyta						
Large cryptomonads	m	0	0	0	0	0
Small cryptomonads	m	755390	755390	1007186	503593	503593
Total Cryptophyta Biomass		755390	755390	1007186	503593	503593
Cyanophyta - Cyanobacteria						
<i>Nodularia</i> sp.	a	42390	16956	33912	33912	0
<i>Oscillatoria</i> sp.	a	16956	0	16956	8478	8478
Total Cyanobacteria Biomass		59346	16956	50868	42390	8478
Others						
<i>Dinobryon balticum</i>	m	1008882	997013	1305612	1946549	1151312
<i>Ebria tripartita</i>	h	2609528	1739686	1739686	869843	869843
<i>Myrionecta rubra</i>	m	0	0	861365	0	0
<i>Scenedesmus</i> sp.	a	0	0	0	0	0
Total Others Biomass		3618410	2736698	3906662	2816392	2021155
Total Phytoplankton Biomass		9577097	10159055	9835470	9174492	5194122
Trophic Category						
Autotrophic		1751982	3157034	2918077	3009081	1622668
Heterotrophic		4634457	3349195	3030037	3539107	1559952
Mixotrophic		3190657	3652826	3887356	2626304	2011502
Autotrophic %		18.3	31.1	29.7	32.8	31.2
Heterotrophic %		48.4	33.0	30.8	38.6	30.0
Mixotrophic %		33.3	36.0	39.5	28.6	38.7

Notes: a = autotrophic, m = mixotrophic, h = heterotrophic

Appendix 3.7-3. Marine Phytoplankton Taxonomy (as Carbon Biomass), Hope Bay Belt Project, 2009

Station Date Replicate	Trophic Category	ST1 Aug 14 2009 3	ST2 Aug 14 2009 1	ST2 Aug 14 2009 2	ST2 Aug 14 2009 3	ST3 Aug 14 2009 1
Biomass (pg C/L)						
Bacillariophyta - Diatoms						
<i>Asterionella formosa</i>	a	0	0	0	0	0
<i>Chaetoceros compressus</i>	a	0	0	0	0	0
<i>Chaetoceros curvisetus</i>	a	0	0	0	0	0
<i>Chaetoceros decipiens</i>	a	1122487	561244	0	0	0
<i>Cylindrotheca closterium</i>	a	0	0	0	21195	21195
<i>Fragilariopsis cylindrus</i>	a	0	0	0	0	0
<i>Lymnophora abbreviata</i>	a	0	0	0	284861	569722
<i>Lymnophora hyalina</i>	a	0	0	0	0	0
<i>Melosira varians</i>	a	0	0	0	0	1098749
<i>Navicula</i> spp.	a	0	63585	0	0	0
<i>Pseudo-nitzschia</i> cf. <i>delicatissima</i>	a	0	0	23738	23738	0
<i>Rhizosolenia chunii</i>	a	0	0	0	0	0
<i>Synedra ulna</i>	a	98345	98345	0	98345	196690
<i>Thalassionema nitzschioides</i>	a	59346	0	0	0	0
Total Diatom Biomass		1280178	723173	23738	428139	1886355
Pyrrhophyta - Dinoflagellates						
<i>Alexandrium</i> cf. <i>ostensfeldii</i>	a	125714	754282	1005709	879995	251427
<i>Ceratium arcticum</i>	a	469960	0	939920	469960	0
<i>Ceratium lineatum</i>	a	0	0	0	0	0
<i>Cochlodinium</i> cf. <i>citron</i>	h	0	452056	0	0	0
<i>Dinophysis acuminata</i>	m	0	0	0	58721	0
<i>Dinophysis acuta</i>	m	178298	534895	1604684	356596	0
<i>Gymnodinium</i> sp. (medium)	a	0	0	0	1278482	0
<i>Gymnodinium</i> sp. (small)	a	0	0	0	0	498506
<i>Gyrodinium estuariale</i>	h	0	0	0	0	4034680
<i>Gyrodinium</i> sp.	h	44933	89867	134800	0	134800
<i>Katodinium glaucum</i>	h	0	600242	0	600242	0
<i>Protoceratium reticulatum</i>	a	0	0	0	0	0
<i>Protoperidinium pellucidum</i>	h	0	0	0	89402	0
Total Dinoflagellate Biomass		818905	2431342	3685113	3733399	4919414
Cryptophyta						
Large cryptomonads	m	0	0	0	0	0
Small cryptomonads	m	251797	503593	503593	503593	503593
Total Cryptophyta Biomass		251797	503593	503593	503593	503593
Cyanophyta - Cyanobacteria						
<i>Nodularia</i> sp.	a	0	16956	8478	0	42390
<i>Oscillatoria</i> sp.	a	8478	0	8478	8478	0
Total Cyanobacteria Biomass		8478	16956	16956	8478	42390
Others						
<i>Dinobryon balticum</i>	m	854582	1127574	1697296	1293743	593460
<i>Ebria tripartita</i>	h	869843	869843	1739686	1739686	869843
<i>Myrionecta rubra</i>	m	0	0	1722730	0	1722730
<i>Scenedesmus</i> sp.	a	0	0	0	0	0
Total Others Biomass		1724425	1997417	5159711	3033428	3186032
Total Phytoplankton Biomass		4083783	5672481	9389112	7707038	10537785
Trophic Category						
Autotrophic		1884330	1494411	1986324	3065055	2678679
Heterotrophic		914776	2012008	1874486	2429330	5039323
Mixotrophic		1284677	2166062	5528302	2212653	2819783
Autotrophic %		46.1	26.3	21.2	39.8	25.4
Heterotrophic %		22.4	35.5	20.0	31.5	47.8
Mixotrophic %		31.5	38.2	58.9	28.7	26.8

Appendix 3.7-3. Marine Phytoplankton Taxonomy (as Carbon Biomass), Hope Bay Belt Project, 2009

Station Date Replicate	Trophic Category	ST3 Aug 14 2009 2	ST3 Aug 14 2009 3	ST4 Aug 14 2009 1	ST4 Aug 14 2009 2	ST4 Aug 14 2009 3
Biomass (pg C/L)						
Bacillariophyta - Diatoms						
<i>Asterionella formosa</i>	a	0	0	0	0	0
<i>Chaetoceros compressus</i>	a	664675	0	0	0	0
<i>Chaetoceros curvisetus</i>	a	0	0	0	0	0
<i>Chaetoceros decipiens</i>	a	1122487	0	0	0	561244
<i>Cylindrotheca closterium</i>	a	0	0	0	0	21195
<i>Fragilariopsis cylindrus</i>	a	0	0	240775	0	0
<i>Lycmophora abbreviata</i>	a	0	0	284861	0	0
<i>Lycmophora hyalina</i>	a	569722	0	0	284861	0
<i>Melosira varians</i>	a	0	0	0	0	0
<i>Navicula</i> spp.	a	127170	0	0	0	0
<i>Pseudo-nitzschia</i> cf. <i>delicatissima</i>	a	23738	23738	71215	47477	0
<i>Rhizosolenia chunii</i>	a	0	0	0	0	0
<i>Synedra ulna</i>	a	196690	98345	98345	295034	196690
<i>Thalassionema nitzschioides</i>	a	0	0	0	0	0
Total Diatom Biomass		2704482	122083	695196	627372	779128
Pyrrhophyta - Dinoflagellates						
<i>Alexandrium</i> cf. <i>ostenfeldii</i>	a	251427	377141	251427	251427	377141
<i>Ceratium arcticum</i>	a	939920	469960	0	0	0
<i>Ceratium lineatum</i>	a	0	0	0	0	0
<i>Cochlodinium</i> cf. <i>citron</i>	h	0	0	0	0	0
<i>Dinophysis acuminata</i>	m	0	0	117441	117441	0
<i>Dinophysis acuta</i>	m	0	713193	0	713193	534895
<i>Gymnodinium</i> sp. (medium)	a	0	0	0	0	0
<i>Gymnodinium</i> sp. (small)	a	166169	166169	0	0	166169
<i>Gyrodinium estuariale</i>	h	369645	0	0	0	554468
<i>Gyrodinium</i> sp.	h	89867	179734	134800	134800	224667
<i>Katodinium glaucum</i>	h	2400970	0	1200485	1200485	0
<i>Protoceratium reticulatum</i>	a	0	0	0	0	0
<i>Protoperdinium pellucidum</i>	h	89402	0	0	89402	89402
Total Dinoflagellate Biomass		4307400	1906196	1704154	2506748	1946741
Cryptophyta						
Large cryptomonads	m	0	0	0	0	0
Small cryptomonads	m	755390	251797	755390	755390	1007186
Total Cryptophyta Biomass		755390	251797	755390	755390	1007186
Cyanophyta - Cyanobacteria						
<i>Nodularia</i> sp.	a	0	25434	42390	50868	33912
<i>Oscillatoria</i> sp.	a	8478	16956	16956	8478	16956
Total Cyanobacteria Biomass		8478	42390	59346	59346	50868
Others						
<i>Dinobryon balticum</i>	m	866452	878321	1281874	1163182	1163182
<i>Ebria tripartita</i>	h	869843	1739686	1739686	0	1739686
<i>Myrionecta rubra</i>	m	0	0	861365	0	0
<i>Scenedesmus</i> sp.	a	0	0	0	0	0
Total Others Biomass		1736294	2618006	3882924	1163182	2902867
Total Phytoplankton Biomass		9512044	4940472	7097010	5112037	6686791
Trophic Category						
Autotrophic		4070476	1177743	1005969	938145	1373306
Heterotrophic		3819726	1919419	3074971	1424687	2608222
Mixotrophic		1621841	1843310	3016070	2749206	2705263
Autotrophic %		42.8	23.8	14.2	18.4	20.5
Heterotrophic %		40.2	38.9	43.3	27.9	39.0
Mixotrophic %		17.1	37.3	42.5	53.8	40.5

Appendix 3.7-3. Marine Phytoplankton Taxonomy (as Carbon Biomass), Hope Bay Belt Project, 2009

Station Date Replicate	Trophic Category	ST5 Aug 14 2009 1	ST5 Aug 14 2009 2	ST5 Aug 14 2009 3	ST6 Aug 14 2009 1	ST6 Aug 14 2009 2
Biomass (pg C/L)						
Bacillariophyta - Diatoms						
<i>Asterionella formosa</i>	a	0	0	0	22891	0
<i>Chaetoceros compressus</i>	a	0	0	0	0	0
<i>Chaetoceros curvisetus</i>	a	0	0	0	240775	0
<i>Chaetoceros decipiens</i>	a	0	0	25710	0	0
<i>Cylindrotheca closterium</i>	a	0	63585	21195	0	0
<i>Fragilariopsis cylindrus</i>	a	0	481550	0	0	0
<i>Lycmophora abbreviata</i>	a	569722	0	569722	0	0
<i>Lycmophora hyalina</i>	a	0	39147	0	0	0
<i>Melosira varians</i>	a	0	0	0	0	0
<i>Navicula</i> spp.	a	127170	0	0	0	0
<i>Pseudo-nitzschia</i> cf. <i>delicatissima</i>	a	71215	23738	0	0	0
<i>Rhizosolenia chunii</i>	a	0	0	0	0	0
<i>Synedra ulna</i>	a	98345	491724	98345	0	98345
<i>Thalassionema nitzschioides</i>	a	0	0	0	0	0
Total Diatom Biomass		866452	1099745	714971	263666	98345
Pyrrhophyta - Dinoflagellates						
<i>Alexandrium</i> cf. <i>ostenfeldii</i>	a	125714	251427	251427	377141	1131423
<i>Ceratium arcticum</i>	a	0	469960	0	0	0
<i>Ceratium lineatum</i>	a	0	0	0	0	0
<i>Cochlodinium</i> cf. <i>citron</i>	h	0	0	0	0	0
<i>Dinophysis acuminata</i>	m	176162	117441	0	0	117441
<i>Dinophysis acuta</i>	m	356596	356596	356596	1248087	1248087
<i>Gymnodinium</i> sp. (medium)	a	58565	0	29283	0	0
<i>Gymnodinium</i> sp. (small)	a	0	166169	0	0	0
<i>Gyrodinium estuariale</i>	h	0	0	184823	184823	369645
<i>Gyrodinium</i> sp.	h	179734	44933	44933	0	89867
<i>Katodinium glaucum</i>	h	1200485	0	1200485	0	0
<i>Protoceratium reticulatum</i>	a	396986	0	0	793973	793973
<i>Protoperdinium pellucidum</i>	h	89402	89402	89402	0	0
Total Dinoflagellate Biomass		2583644	1495929	2156949	2604024	3750437
Cryptophyta						
Large cryptomonads	m	0	0	0	0	0
Small cryptomonads	m	755390	503593	755390	503593	503593
Total Cryptophyta Biomass		755390	503593	755390	503593	503593
Cyanophyta - Cyanobacteria						
<i>Nodularia</i> sp.	a	25434	25434	59346	0	0
<i>Oscillatoria</i> sp.	a	8478	67824	25434	42390	8478
Total Cyanobacteria Biomass		33912	93258	84780	42390	8478
Others						
<i>Dinobryon balticum</i>	m	1602342	1827857	1507388	3228422	3679452
<i>Ebria tripartita</i>	h	869843	2609528	1739686	869843	869843
<i>Myrionecta rubra</i>	m	861365	861365	0	861365	1722730
<i>Scenedesmus</i> sp.	a	0	0	0	0	0
Total Others Biomass		3333550	5298750	3247074	4959630	6272024
Total Phytoplankton Biomass		7572947	8491275	6959164	8373303	10632877
Trophic Category						
Autotrophic		1481629	2080559	1080461	1477169	2032218
Heterotrophic		2339463	2743863	3259328	1054666	1329355
Mixotrophic		3751855	3666853	2619375	5841468	7271304
Autotrophic %		19.6	24.5	15.5	17.6	19.1
Heterotrophic %		30.9	32.3	46.8	12.6	12.5
Mixotrophic %		49.5	43.2	37.6	69.8	68.4

Appendix 3.7-3. Marine Phytoplankton Taxonomy (as Carbon Biomass), Hope Bay Belt Project, 2009

Station	Trophic Category	ST6	RP3	RP3	RP3	REF4	REF4	REF4
Date		Aug 14 2009	Aug 14 2009	Aug 14 2009	Aug 14 2009	Aug 14 2009	Aug 14 2009	Aug 14 2009
Replicate		3	1	2	3	1	2	3
Biomass (pg C/L)								
Bacillariophyta - Diatoms								
Asterionella formosa	a	45781	0	0	0	22891	22891	0
Chaetoceros compressus	a	0	0	0	0	0	0	0
Chaetoceros curvisetus	a	120388	0	0	0	0	0	0
Chaetoceros decipiens	a	25710	0	0	0	0	0	0
Cylindrotheca closterium	a	0	0	21195	0	0	42390	0
Fragilariopsis cylindrus	a	0	240775	481550	0	0	0	0
Lycmophora abbreviata	a	0	569722	0	284861	284861	0	0
Lycmophora hyalina	a	0	0	0	0	0	0	0
Melosira varians	a	0	0	0	0	0	0	0
Navicula spp.	a	0	0	63585	0	190755	190755	317925
Pseudo-nitzschia cf. delicatissima	a	23738	0	94954	0	47477	0	23738
Rhizosolenia chunii	a	0	261122	0	0	0	0	0
Synedra ulna	a	98345	98345	98345	295034	98345	196690	98345
Thalassionema nitzschioides	a	0	0	0	0	0	0	0
Total Diatom Biomass		313962	1169964	759629	579895	644328	452725	440008
Pyrrhophyta - Dinoflagellates								
Alexandrium cf. ostenfeldii	a	628568	125714	125714	628568	0	0	251427
Ceratium arcticum	a	469960	0	0	0	0	0	0
Ceratium lineatum	a	0	0	127228	0	0	0	0
Cochlodinium cf. citron	h	0	0	0	0	0	0	0
Dinophysis acuminata	m	0	0	117441	117441	117441	234883	234883
Dinophysis acuta	m	0	356596	534895	178298	0	0	356596
Gymnodinium sp. (medium)	a	0	0	0	0	0	0	0
Gymnodinium sp. (small)	a	0	166169	0	0	498506	0	0
Gyrodinium estuariale	h	0	0	0	0	0	369645	0
Gyrodinium sp.	h	89867	44933	134800	0	0	44933	0
Katodinium glaucum	h	0	0	0	0	0	0	0
Protoceratium reticulatum	a	1190959	0	1786438	1389452	2977397	2580411	2977397
Protoperidinium pellucidum	h	268205	0	89402	89402	0	178803	0
Total Dinoflagellate Biomass		2647559	693412	2915918	2403162	3593345	3408676	3820304
Cryptophyta								
Large cryptomonads	m	0	279774	0	0	0	0	0
Small cryptomonads	m	503593	755390	1258983	1762576	2014373	1762576	1510780
Total Cryptophyta Biomass		503593	1035164	1258983	1762576	2014373	1762576	1510780
Cyanophyta - Cyanobacteria								
Nodularia sp.	a	8478	16956	8478	8478	0	0	0
Oscillatoria sp.	a	8478	16956	8478	8478	8478	8478	16956
Total Cyanobacteria Biomass		16956	33912	16956	16956	8478	8478	16956
Others								
Dinobryon balticum	m	3311507	0	23738	23738	0	0	23738
Ebria tripartita	h	1739686	869843	869843	869843	0	0	0
Myrionecta rubra	m	861365	0	0	0	861365	0	1722730
Scenedesmus sp.	a	0	211950	0	0	0	0	0
Total Others Biomass		5912557	1081793	893581	893581	861365	0	1746468
Total Phytoplankton Biomass		9394627	4014245	5845067	5656170	7121889	5632455	7534516
Trophic Category								
Autotrophic		2620405	1707708	2815965	2614872	4128710	3041614	3685789
Heterotrophic		2097757	914776	1094045	959244	0	593382	0
Mixotrophic		4676465	1391760	1935057	2082054	2993179	1997459	3848727
Autotrophic %		27.9	42.5	48.2	46.2	58.0	54.0	48.9
Heterotrophic %		22.3	22.8	18.7	17.0	0.0	10.5	0.0
Mixotrophic %		49.8	34.7	33.1	36.8	42.0	35.5	51.1

Appendix 3.8-1

Marine Zooplankton Taxonomy, Hope Bay Belt Project, 2009

Appendix 3.8-1. Marine Zooplankton Taxonomy, Hope Bay Belt Project, 2009

Units are: organisms/m³

Location	ST0			ST1			ST2			ST3			ST4				
Date	10-Aug-09	2	3	10-Aug-09	2	3	10-Aug-09	2	3	10-Aug-09	2	3	10-Aug-09	2	3		
Replicate	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3		
Species/group	Stage																
CNIDARIA																	
<i>Aeginopsis laurentii</i>	L																
<i>Aeginopsis laurentii</i>	juv																
<i>Aeginopsis laurentii</i>	A																
<i>Aglantha digitale</i>	L	2.9		16.4	3.6	15.5	17.4						0.1	0.3	3.0		
<i>Aglantha digitale</i>	juv	0.4	3.1	8.2	7.3	31.0	1.7		4.4	1.5	5.0	6.8	25.6	3.3	1.5		
<i>Aglantha digitale</i>	A																
<i>Euphysa flammea</i>																	
<i>Halitholus cirratus</i>		0.2															
<i>Rathkea octopunctata</i>																	
<i>Obelia</i> sp.		1.4															
<i>Sarsia tubulosa</i>																	
<i>Cyanea capillata</i>		0.1															
CTENOPHORA	damaged																
<i>Mertensia ovum</i>		7.2	24.7	17.7	27.8	47.4	26.3	10.5	19.8	8.8	8.9	23.6	17.7	0.1	0.2		
POLYCHAETA	L*	5.8	61.8	24.2	32.7	31.0	77.5	26.1	198.4	30.7	13.4	38.7	20.5	0.5	9.8		
Polychaeta	juv	11.5	6.2	14.5	18.0	12.7	6.2	13.9	19.8	11.7	4.5	3.4	5.5	423.1	425.6		
CLADOCERA																	
<i>Podon leuckarti</i>	F	72.2	170.1	177.1	114.5	145.7	48.0	104.6	215.0	161.0	118.9	185.1	95.4	51.3	49.1		
<i>Evadne nordmanni</i>	F	1443.2	2628.3	2898.7	1962.9	2003.5	2634.5	1742.6	2480.3	3073.5	877.2	639.6	1227.1	333.3	212.8		
COPEPODA																	
Calanoida	nauplius	43.3	15.5	80.5	16.4	36.4	18.6	52.3	49.6	58.5	44.6	84.2	27.3	115.4	65.5		
<i>Acartia longiremis</i>	M	187.6	201.0	193.2	245.4	273.2	278.9	487.9	463.0	526.9	475.7	420.8	300.0	179.5	163.7		
<i>Acartia longiremis</i>	F	129.9	154.6	322.1	179.9	255.0	186.0	313.7	231.5	204.9	267.6	151.5	300.0	346.2	605.7		
<i>Acartia longiremis</i>	V	230.9	463.8	418.7	1635.7	1821.3	945.3	714.5	711.0	731.8	579.8	622.8	586.3	1025.6	458.4		
<i>Acartia longiremis</i>	IV	389.7	773.0	805.2	1308.6	728.5	1022.8	2439.6	1653.5	2341.7	1784.0	1026.7	1090.8	641.0	834.9		
<i>Acartia longiremis</i>	III	2020.5	1700.7	2254.5	5888.7	3642.7	4494.2	4530.7	2480.3	3658.9	3716.8	2524.7	3408.7	1666.6	1031.4		
<i>Acartia longiremis</i>	II	577.3	927.6	644.2	1962.9	1274.9	1549.7	1568.3	1653.5	1024.5	1189.4	1514.8	1227.1	282.0	278.3		
<i>Acartia longiremis</i>	I	43.3	309.2	48.3	147.2	182.1	619.9	122.0	181.9	87.8	89.2	67.3	122.7	102.6	81.9		
<i>Calanus</i> sp.	IV																
<i>Calanus</i> sp.	III	0.4		3.2	9.8	14.6	6.2	1.7	14.9	11.7	3.0	5.0	4.1	6.4	3.3		
<i>Calanus</i> sp.	II	2.9	12.4	1.6	8.2	12.7	7.7	3.5	49.6	4.4	1.5	1.7	2.7	2.6	4.9		
<i>Calanus</i> sp.	I	1.4															
<i>Centropages abdominalis</i>	M	40.4	54.1	69.2	55.6	78.3	91.4	38.3	215.0	190.3	61.0	82.5	62.7	128.2	68.8		
<i>Centropages abdominalis</i>	F	34.6	29.4	64.4	22.9	21.9	32.5	27.9	43.0	29.3	28.2	23.6	32.7	64.1	54.0		
<i>Centropages abdominalis</i>	V	202.1	97.4	306.0	212.6	382.5	371.9	853.9	1570.9	863.5	579.8	858.4	504.5	179.5	196.5		
<i>Centropages abdominalis</i>	IV	86.6	139.1	193.2	98.1	200.3	155.0	540.2	727.6	570.8	446.0	420.8	327.2	76.9	49.1		
<i>Centropages abdominalis</i>	III	86.6	30.9	112.7	212.6	218.6	186.0	226.5	231.5	219.5	237.9	286.1	231.8	12.8	49.1		
<i>Centropages abdominalis</i>	II	43.3	30.9	32.2	49.1	72.9	170.5	69.7	66.1	87.8	133.8	168.3	81.8	51.3	16.4		
<i>Centropages abdominalis</i>	I			32.2	16.4	1.8											
<i>Limnocalanus macrurus</i>	M																
<i>Limnocalanus macrurus</i>	V																
<i>Eurytemora herdmanni</i>	M																
<i>Eurytemora herdmanni</i>	F	4.3	23.2	33.8	1.6	9.1	3.1	1.7		1.5	1.5		2.7	12.8	14.8		
<i>Eurytemora herdmanni</i>	V	1.6															
<i>Eurytemora herdmanni</i>	IV	1.6															
<i>Eurytemora herdmanni</i>	III	3.1	32.2	16.4	3.6	4.6			16.5		1.5			25.6	32.7		
<i>Eurytemora herdmanni</i>	II																
<i>Pseudocalanus minutus</i>	M	28.9	15.5	3.2		18.2	15.5		6.6			16.8					
<i>Pseudocalanus minutus</i>	F	173.2	139.1	225.5	670.7	382.5	480.4	435.6	1174.0	1317.2	267.6	185.1	204.5	833.3	1015.0		
<i>Pseudocalanidae</i>	V	3.1	4.8	3.3	36.4	15.5	15.5	1.7	33.1	58.5	14.9	16.8	13.6	25.6	16.4		
<i>Pseudocalanidae</i>	IV	28.9	30.9	16.1	11.5	109.3	155.0	87.1	198.4	102.4	178.4	134.7	95.4	256.4	278.3		
<i>Pseudocalanidae</i>	III	303.1	201.0	338.2	1145.0	1274.9	480.4	156.8	380.3	161.0	862.3	774.3	477.2	1666.6	1964.5		
<i>Pseudocalanidae</i>	II	144.3	231.9	289.9	490.7	728.5	248.0	139.4	132.3	58.5	297.3	218.8	136.3	1410.2	1309.7		
<i>Pseudocalanidae</i>	I			16.1	16.4	182.1			14.6			14.9	1183.1				
<i>Tortanus discaudatus</i>	M			3.3	3.3	3.6	4.6			1.7			5.1				
<i>Tortanus discaudatus</i>	F			1.6													
<i>Tortanus discaudatus</i>	V	17.3	23.2	17.7	163.6	1092.8	186.0	88.9	231.5	263.4	89.2	101.0	122.7	76.9	98.2		
<i>Tortanus discaudatus</i>	IV	33.2	26.3	38.6	130.9	1457.1	124.0	139.4	248.0	351.3	118.9	218.8	95.4	51.3	81.9		
<i>Tortanus discaudatus</i>	III	72.2	24.7	22.5	26.2	910.7	62.0	36.6	132.3	175.6	44.6	50.5	95.4	12.8	16.4		
<i>Tortanus discaudatus</i>	II	28.9	10.8	48.3	14.7	12.7	7.7	69.7	33.1	29.3	44.6	33.7	1.4	44.4	44.4		
<i>Tortanus discaudatus</i>	I	4.6	48.3	4.9	7.3	3.1	3.1	52.3	16.5	14.6	14.9		1.4	12.8	14.8		
Aetididae	IV	1.3															
Aetididae	III	1.3															
Aetididae	II	0.2															
<i>Derjuginia tolli</i>	V																
Harpacticoida	cop	3.1															
<i>Harpacticus</i> sp.	F	3.1	3.1														
<i>Tisbe furcata</i>	F																
Cyclopoida																	
<i>Oithona similis</i>	M													12.8			
<i>Oithona similis</i>	F													38.5	65.5	118.3	
<i>Oithona similis</i>	V													102.6	32.7	14.8	
<i>Oncaea borealis</i>	F													16.4			
CIRRIPEDIA	nauplius																
Cirripedia	cypris	3.1			3.3	1.8	4.6	1.7	3.3	7.3	1.5	1.7	1.4	294.9	229.2		
ISOPODA		5.9															
AMPHIPODA																	
<i>Hyperia galba</i>																	
<i>Gammarellus homari</i>	juv																
EUPHAUSIACEA	calyptopis																
Euphausiacea	furcilia			1.6			0.2			1.5			1.3	0.5			
DECAPODA																	
Hippolytidae	zoea																
Brachyura	zoea	21.6	38.7	29.0	4.1	2.9	3.4	3.5	10.3	23.4	3.7	10.3	4.4	0.1	4.6		
MOLLUSCA																	
Bivalvia	veliger	1.5	16.1	49.1	14.6	27.9	1.5	22.7	13.2	10.2	4.5	5.0	2.7	3.8	3.3		
Gastropoda	veliger	0.1															
<i>Limacina helicina</i>	veliger	8.7	37.1	35.4	9.8	16.4	20.1	27.9	74.4	117.1	1.3	18.5	12.3	6.5	8.9		
ECHINODERMATA	pluteus	1.4															
CHAETOGNATHA																	
<i>Sagitta elegans</i>		0.2			0.2			0.2			0.1			9.0	5.4		
LARVACEA																	
<i>Fritillaria borealis</i>		1.5													1025.6	1637.1	1774.7
<i>Oikopleura vanhoefeni</i>														14.1	9.8	13.3	
FISH																	
<i>Clupea pallasii</i>	L	0.1	0.2	0.2	0.3	1.8	0.9	1.9	2.1	1.9	1.6	2.2	2.2	1.0	2.6		
<i>Liparus</i> sp.	L																
Gadidae	L																
Pleuronectidae	L	0.1															
		0.3															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															
		0.2															

Appendix 3.8-1. Marine Zooplankton Taxonomy, Hope Bay Belt Project, 2009

Location Date Replicate Species/group Stage	ST5 10-Aug-09			ST6 10-Aug-09			REF4 10-Aug-09			RP3 10-Aug-09		
	1	2	3	1	2	3	1	2	3	1	2	3
Cnidaria												
<i>Aeginopsis laurentii</i>	L	15.3									1.4	
<i>Aeginopsis laurentii</i>	juv	0.2	1.6	3.2	4.6	3.3		1.3			0.1	
<i>Aeginopsis laurentii</i>	A	0.2					0.3	0.3	0.3			
<i>Agathidium digitale</i>	L	1.5	11.4		31.0	16.3						
<i>Agathidium digitale</i>	juv	7.6	0.2	9.7	62.0	4.9	3.8	2.9	0.9	0.3	0.3	0.3
<i>Agathidium digitale</i>	A				0.2							
<i>Euphyas flammea</i>			0.2						0.1			
<i>Halimolobos cinctus</i>												
<i>Rathkea octopunctata</i>										0.3		
<i>Obelia</i> sp.												
<i>Sarsia tubulosa</i>												
<i>Cyanea capillata</i>											0.2	
CTENOPHORA	damaged											
<i>Mertensia ovum</i>		3.0	4.6	6.5	4.8	0.5	4.9	5.0	2.9	0.6	0.4	0.5
POLYCHAETA	L*	909.1	336.2	163.0	321.8	170.5	195.8	113.5	100.7	88.1	28.6	151.1
<i>Polychaeta</i>	juv	90.9	107.0	130.4	80.5	124.0	146.9	26.5	71.9	18.9	16.9	9.5
CLADOCERA												
<i>Podon leuckarti</i>	F	10.6	7.6	8.2	3.2	62.0	8.2		2.9	13.8	351.4	954.6
<i>Evadne nordmanni</i>	F	242.4	229.2	244.6	19.3	77.5	17.9	50.4	158.2	40.3	754.9	1511.4
COPEPODA												
<i>Calanoida</i>	nauplius	197.0	275.1	179.3	64.4	186.0	228.4	63.0	115.0	113.3	182.2	127.3
<i>Acartia longiremis</i>	M	166.7	320.9	358.7	144.8	93.0	130.5	63.0	100.7	151.0	208.2	183.0
<i>Acartia longiremis</i>	F	394.0	489.0	538.0	257.5	526.9	277.4	428.7	445.8	289.4	312.4	461.4
<i>Acartia longiremis</i>	V	424.3	382.0	440.2	531.0	635.4	815.8	630.4	417.0	402.7	1041.2	636.4
<i>Acartia longiremis</i>	IV	1212.2	916.9	896.7	1045.9	790.4	979.0	1260.8	790.9	1006.7	1431.6	715.9
<i>Acartia longiremis</i>	III	1363.7	2292.2	3097.6	1770.0	1859.7	1794.9	756.5	1150.4	1384.2	1822.1	1113.6
<i>Acartia longiremis</i>	II	242.4	412.6	407.6	1287.3	217.0	261.1	138.7	302.0	264.3	286.3	222.7
<i>Acartia longiremis</i>	I	30.3	122.3	65.2	32.2	31.0	65.3		28.8	37.8	13.0	8.0
<i>Calanus</i> sp.	IV	1.5			3.2							0.2
<i>Calanus</i> sp.	III	10.6	4.6	3.3	0.2	3.1	6.5	5.0	5.8	6.3	13.0	6.4
<i>Calanus</i> sp.	II	1.5		1.6	3.2	1.5	3.3	1.3	2.9	2.5		0.3
<i>Calanus</i> sp.	I		15.3									
<i>Centropages abdominalis</i>	M	71.2	152.8	66.8	160.9	124.0	277.4	214.3	201.3	75.5	169.2	79.5
<i>Centropages abdominalis</i>	F	65.2	91.7	40.8	112.6	93.0	130.5	201.7	186.9	138.4	78.1	79.5
<i>Centropages abdominalis</i>	V	90.9	91.7	130.4	144.8	62.0	65.3	37.8	14.4	37.8		8.0
<i>Centropages abdominalis</i>	IV	60.6	30.6	32.6	16.1	15.5	32.6	12.6	43.1	12.6		14.4
<i>Centropages abdominalis</i>	III	45.5	30.6	97.8	16.1			25.2		12.6	13.0	28.8
<i>Centropages abdominalis</i>	II		30.6	48.9						12.6		14.4
<i>Centropages abdominalis</i>	I	15.2										
<i>Limnocalanus macrurus</i>	M											1.6
<i>Limnocalanus macrurus</i>	V											1.6
<i>Eurytemora herdmanni</i>	M	15.2	15.3								65.1	23.9
<i>Eurytemora herdmanni</i>	F		15.3		16.1		3.3				7.8	31.8
<i>Eurytemora herdmanni</i>	V			32.6								
<i>Eurytemora herdmanni</i>	IV		30.6								13.0	14.4
<i>Eurytemora herdmanni</i>	III	30.3	30.6	32.6	16.1		16.3	63.0	143.8	100.7	26.0	23.9
<i>Eurytemora herdmanni</i>	II										26.0	8.0
<i>Eurytemora herdmanni</i>	I											8.0
<i>Pseudocalanus minutus</i>	M	1.5		16.3						1.3		8.0
<i>Pseudocalanus minutus</i>	F	727.3	748.8	1027.1	965.4	836.8	1468.5	1512.9	1581.8	755.0	1041.2	636.4
<i>Pseudocalanidae</i>	V					31.0	0.0	12.6	14.4	12.6	13.0	23.9
<i>Pseudocalanidae</i>	IV	197.0	244.5	293.5	193.1	387.4	97.9	264.8	719.0	276.8	39.0	55.7
<i>Pseudocalanidae</i>	III	1060.7	1833.8	1304.3	2413.6	1084.8	979.0	1891.1	1725.6	1761.7	1561.8	2147.7
<i>Pseudocalanidae</i>	II	1363.7	916.9	978.2	1126.4	1239.8	1142.2	516.9	1294.2	629.2	780.9	715.9
<i>Pseudocalanidae</i>	I	363.7	916.9	342.4	337.9	929.8	391.6	302.6	172.6	163.6	247.3	47.7
<i>Tortanus discaudatus</i>	M	4.5	1.5	81.5	17.7	10.8	11.4	16.4	44.6	28.9	15.6	8.0
<i>Tortanus discaudatus</i>	F							1.3	1.4	3.8		1.4
<i>Tortanus discaudatus</i>	V	39.4	107.0	114.1	177.0	155.0	97.9	100.9	100.7	62.9	26.0	9.5
<i>Tortanus discaudatus</i>	IV	45.5	107.0	16.3	48.3	77.5	65.3	25.2	14.4	12.6		1.4
<i>Tortanus discaudatus</i>	III		30.6	32.6		15.5			14.4			1.6
<i>Tortanus discaudatus</i>	II	15.2	30.6									14.4
<i>Tortanus discaudatus</i>	I			16.3								
<i>Aetideidae</i>	IV			0.8		0.2		13.9	5.8	7.6	1.3	1.6
<i>Aetideidae</i>	III	1.5						3.8	71.9	6.3	1.3	1.6
<i>Aetideidae</i>	II									12.6		0.1
<i>Dejuginia tolli</i>	V						0.2					
Harpacticoida	cop											
<i>Harpacticus</i> sp.	F											1.6
<i>Tisbe furcata</i>	F	1.5	15.3	1.6			1.6					2.9
Cyclopoida												
<i>Oithona similis</i>	M	45.5		16.3	16.1			12.6	43.1	12.6		
<i>Oithona similis</i>	F	257.6	213.9	179.3	160.9	108.5	81.6	138.7	244.5	113.3	65.1	
<i>Oithona similis</i>	V	15.2	15.3		48.3	15.5		25.2	28.8	37.8		
<i>Oncaea borealis</i>	F									25.2	13.0	
CIRRIPEDIA	nauplius	439.4	366.8	326.1	144.8	248.0	146.9	113.5	201.3	188.8	78.1	
Cirripedia	cypris	1.5	1.5	1.6	1.6	1.5	3.3	12.6		1.3		14.4
ISOPODA						0.2					13.0	
AMPHIPODA												
<i>Hyperia galba</i>					0.2			0.1				
<i>Gammarus homari</i>	juv											
EUPHAUSIACEA	calyptopis											
<i>Euphausiacea</i>	furcilia		1.5	0.2	3.2	1.5	0.0	0.3			0.1	
DECAPODA												
Hippolytidae	zoea		0.2	0.2	0.5	0.2	1.5	0.8	0.4	0.8	0.3	0.2
Brachyura	zoea	2.1	3.1	3.3	0.2	1.5	1.3	0.1	1.9	1.5	3.8	2.9
MOLLUSCA												
<i>Bivalvia</i>	veliger	15.2	16.8	0.0	1.6	3.1	6.5	25.2	14.4	1.3	39.0	1.6
<i>Gastropoda</i>	veliger		0.2	0.2	1.6				0.3	0.1		7.2
<i>Limacina helicina</i>	veliger	15.2	3.1				1.6	8.8		3.8	13.0	4.8
ECHINODERMATA	pluteus				16.1							1.4
CHAETOGNATHA												
<i>Sagitta elegans</i>		9.1	3.8	2.6	20.9	11.0	14.7	4.3	5.9	4.4	10.4	4.3
LARVACEA												2.2
<i>Fritillaria borealis</i>		2121.3	1375.3	1304.3	836.7	1084.8	1468.5	1512.9	862.8	880.8	221.3	55.7
<i>Oikopleura vanhoeffeni</i>		10.6	12.2	8.2	27.4	8.7	21.2	1.0	1.6	1.4	0.5	86.5
FISH												
<i>Clupea pallasii</i>	L	0.3	0.6	0.8	0.2	0.3	0.2		0.1	0.1	2.0	0.5
<i>Liparus</i> sp.	L		0.2									0.9
Gadidae	L											
Pleuronectidae	L											
Total		12455.9	13418.5	13104.0	12624.2	11423.6	11488.4	10619.8	11453.8	9219.9	11046.0	10090.4
												11885.1

sect), I to V = first through fifth copepodite stages, zoea = first
ilia = middle stage of euphausiids.

Appendix 3.9-1

Marine Benthos Taxonomy, Hope Bay Belt Project, 2009

Units are: organism/m²

Units are: organism/m²

Notes: Teleostei eggs and larvae and calanoid copepods were not included in benthos counts as these are not benthic organisms.

Nematode counts were considered qualitative and were not included in benthos counts.

Appendix 3.9-1. Marine Benthos Taxonomy, Hope Bay Belt Project, 2009

Station ID	RTF1	RTF1	RTF1	TF1	TF1	TF1	ST2	ST2	ST2	ST7	ST7	ST7	ST8	ST8	ST8	ST9	ST9
Sampling Date (m-d-y)	Aug-17-09	Aug-17-09	Aug-17-09	Aug-16-09	Aug-16-09	Aug-16-09	Aug-16-09	Aug-16-09	Aug-16-09	Aug-16-09	Aug-16-09	Aug-16-09	Aug-16-09	Aug-16-09	Aug-16-09	Aug-16-09	Aug-16-09
Replicate	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2
Sampling Depth	3 m	3 m	3 m	2 m	2 m	2 m	7 m	7 m	7 m	2 m	2 m	2 m	8 m	8 m	8 m	2 m	2 m
TAXA																	
NEMERTEA																	
<i>Anopla Indet.</i>																	
<i>Heteronemertea Indet.</i>																	
<i>Nemertea Indet.</i>	1336.5	864.8															
ANNELIDA																	
<i>Polychaeta Errantia</i>																	
<i>Eteone longa</i>		157.2															
<i>Eteone</i> sp.																	
<i>Eulalia nr. bilineata</i>																	
<i>Harmothoe imbricata</i> Cmplx.	235.8	157.2															
<i>Hesionidae Indet.</i>																	
<i>Lumbrineridae Indet.</i>																	
<i>Lumbrineris</i> sp.																	
<i>Naineris quadricuspida</i>																	
<i>Nephtys ciliata</i>																	
<i>Nephtys nr. neotena</i>			235.8		157.2												
<i>Nereimyra</i> sp.	157.2	78.6															
<i>Pholoe</i> sp.		393.1	78.6														
<i>Polynoidae Indet.</i>					78.6												
<i>Sigalionidae Indet.</i>		78.6															
<i>Sthenelais</i> sp.																	
<i>Polychaeta Sedentaria</i>																	
<i>Amastigos acutus</i>	78.6		78.6														
<i>Ampharete</i> sp.																	
<i>Aphelochaeta</i> sp.																	
<i>Articida</i> sp.			78.6														
<i>Brada villosa</i>																	
<i>Capitellidae Indet.</i>																	
<i>Cirratulidae Indet.</i>			471.7														
<i>Cirratulus</i> sp.										78.6	78.6						
<i>Euclymeninae Indet.</i>																	
<i>Flabelligeridae Indet.</i>																	
<i>Leitoscoloplos</i> sp.																	
<i>Levensenia gracilis</i>																	
<i>Malacoceros</i> sp.	157.2	786.2	78.6														
<i>Mediomastus</i> sp.			235.8														
<i>Orbinidae</i>			78.6														
<i>Paraonidae Indet.</i>																	
<i>Pectinaria granulata</i>																	
<i>Pectinaria</i> sp.																	
<i>Prionospio</i> sp.					78.6												
<i>Sabellidae Indet.</i>																	
<i>Scalibregma</i> sp.																	
<i>Scolecopsis</i> sp.																	
<i>Spio</i> sp.	864.8	393.1	628.9							393.1	1100.6	1022.0					
<i>Spionidae Indet.</i>																	
<i>Terebellides stroemi</i>					78.6												
<i>Travisia forbesii</i>																	
<i>Oligochaeta</i>																	
<i>Oligochaeta Indet.</i>	2201.3	707.5	78.6														
ARTHROPODA																	
<i>Amphipoda</i>																	
<i>Boeckosimus affinis</i>	1965.4	471.7			78.6												
<i>Corophium</i> sp.		78.6															
<i>Gammaracanthus loricated</i>																	
<i>Guernea nordenskioldi</i>																	
<i>Haploops</i> sp.																	
<i>Lagunogammarus setosus</i>	157.2	78.6															
<i>Monoculodes</i> sp.																	
<i>Monoculopsis</i> sp.	628.9	393.1															
<i>Oedicerotidae Indet.</i>																	
<i>Pontoporeia femorata</i>							157.2	628.9					157.2		864.8		
<i>Protomedea</i> sp.																	
<i>Stenothoidae</i>																	
<i>Copepoda</i>																	
<i>Harpacticoida</i>	30110.1	707.5	15959.1	16981.1	3459.1	24292.5				1179.2	4088.1	3537.7					
Ostracoda																	
<i>Ostracoda Indet.</i>																	
Cumacea																	
<i>Diastylis rathkei</i>							393.1	235.8	235.8			78.6					
<i>Diastylis</i> sp.						78.6											
<i>Leucon</i> sp.																	
Tanaidacea																	
<i>Tanaidacea Indet.</i>																	
Isopoda																	
<i>Isopoda Indet.</i>																	
<i>Saduria entomon</i>	550.3	235.8		78.6		78.6								78.6		78.6	78.6
MOLLUSCA																	
<i>Gastropoda</i>																	
<i>Alvania</i> sp.																	
<i>Cyllichna</i> sp.							78.6		78.6					78.6	235.8		
<i>Gastropoda Indet.</i>																	
Bivalvia																	
<i>Astarte borealis</i>							628.9	550.3	1179.2				235.8	235.8	78.6		
<i>Axinopsida orbiculata</i>																	
<i>Clinocardium ciliatum</i>																	
<i>Cyrtodaria kuriana</i>																	
<i>Hiatella arctica</i>							471.7	235.8	707.5							157.2	
<i>Lyonsia</i> sp.																	
<i>Macoma balthica</i>	28223.3	29245.3	314.5				157.2	78.6	78.6			314.5					
<i>Macoma calcarea</i>								235.8	78.6				471.7	157.2	78.6		
<i>Macoma</i> sp.													78.6				
<i>Musculus niger</i>																	
<i>Musculus</i> sp.																	
<i>Mya truncata</i>																	
<i>Portlandia arctica</i>							235.8	157.2	235.8					78.6	157.2		
<i>Serripes groenlandicus</i>																	
<i>Tellina</i> sp.																	
<i>Thyasira</i> sp.																	
<i>Yoldiella</i> sp.																	
ECHINODERMATA																	
<i>Holothuroidea</i>																	
<i>Holothuroidea Indet.</i>																	
<i>Asteroidea</i>																	
<i>Asteroidea Indet.</i>																	
<i>Ophiuroidea</i>																	
<i>Ophiura</i> sp.																	
UROCHORDATA																	
<i>Ascidacea</i>																	
<i>Rhizomogula globularis</i>		78.6															
Other:																	
<i>Teleostei</i> eggs	57232.7	5817.6	471.7														
<i>Teleostei</i> larvae	3144.7	471.7															
<i>Calanoid</i> copepod			78.6														
Nematoda (counts <50/estimates >50)	134434.0	19654.1	53459.1	7861.6	628.9	12578.6				1022.0	3223.3	2908.8					
TOTAL	66666.7	35298.7	18317.6	17059.7	3930.8	24449.7	2122.6	2122.6	2594.3	1650.9	5267.3	4952.8	943.4	628.9	1650.9	78.6	78.6

Appendix 3.9-1. Marine Benthos Taxonomy, Hope Bay Belt Project, 2009

Station ID	ST9	ST10	ST10	ST10	ST11	ST11	ST11
Sampling Date (m-d-y)	Aug-16-09	Aug-16-09	Aug-16-09	Aug-16-09	Aug-16-09	Aug-16-09	Aug-16-09
Replicate	3	1	2	3	1	2	3
Sampling Depth	2 m	13 m	13 m	13 m	8 m	8 m	8 m
TAXA							
NEMERTEA							
<i>Anopla Indet.</i>		157.2	78.6				
<i>Heteronemertea Indet.</i>		78.6				235.8	78.6
<i>Nemertea Indet.</i>				157.2			
ANNELIDA							
<i>Polychaeta Errantia</i>							
<i>Eteone longa</i>							
<i>Eteone</i> sp.							
<i>Eulalia</i> nr. <i>billineata</i>					78.6		
<i>Harmothoe imbricata</i> Cmplx.							78.6
<i>Hesionidae</i> Indet.							
<i>Lumbrineridae</i> Indet.						78.6	
<i>Lumbrineris</i> sp.							
<i>Naineris quadricuspida</i>							
<i>Nephtys ciliata</i>			78.6				
<i>Nephtys</i> nr. <i>neotena</i>	707.5	314.5	157.2		1493.7	2908.8	6289.3
<i>Nereimyxa</i> sp.							
<i>Pholoe</i> sp.				78.6	393.1	314.5	707.5
<i>Polynoidae</i> Indet.							
<i>Sigalionidae</i> Indet.							
<i>Sthenelais</i> sp.							78.6
<i>Polychaeta Sedentaria</i>							
<i>Amastigos acutus</i>							
<i>Ampharete</i> sp.							
<i>Aphelocheato</i> sp.						393.1	
<i>Aricidea</i> sp.							
<i>Brada villosa</i>							
<i>Capitellidae</i> Indet.						78.6	
<i>Cirratulus</i> sp.		157.2			235.8		
<i>Euclymeniniae</i> Indet.							78.6
<i>Flabelligeridae</i> Indet.							
<i>Leitoscoloplos</i> sp.		78.6	78.6	157.2	1493.7	1650.9	3066.0
<i>Levinsemia gracilis</i>		7625.8	1179.2	4088.1			
<i>Malacoceros</i> sp.							
<i>Mediomastus</i> sp.		78.6					
<i>Orbiidae</i>							
<i>Paraonidae</i> Indet.						78.6	
<i>Pectinaria granulata</i>							157.2
<i>Pectinaria</i> sp.			78.6				
<i>Prionospio</i> sp.						78.6	
<i>Sabellidae</i> Indet.							
<i>Scalibregma</i> sp.						157.2	
<i>Scolelepis</i> sp.							
<i>Spio</i> sp.							
<i>Spionidae</i> Indet.							
<i>Terebellides stroemi</i>							
<i>Travisia forbesii</i>							
<i>Oligochaeta</i>							
<i>Oligochaeta</i> Indet.							
ARTHROPODA							
<i>Amphipoda</i>							
<i>Boeckosimus affinis</i>							
<i>Corophium</i> sp.							
<i>Gammaracanthus loricatus</i>							
<i>Guerneia nordenskioldi</i>							
<i>Haploops</i> sp.							
<i>Lagunogammarus setosus</i>							
<i>Monoculodes</i> sp.						78.6	
<i>Monoculopsis</i> sp.							
<i>Oedicerotidae</i> Indet.							
<i>Pontoporeia femorata</i>		235.8	78.6	78.6		393.1	157.2
<i>Protomedea</i> sp.							78.6
<i>Stenothoidae</i>		78.6					
Copepoda							
<i>Haracticoida</i>							
Ostracoda							
<i>Ostracoda</i> Indet.							
Cumacea							
<i>Diastylis rathkeii</i>		7861.6	1965.4	2515.7	235.8	393.1	471.7
<i>Diastylis</i> sp.					235.8		
<i>Leucon</i> sp.							
Tanaidacea							
<i>Tanaidacea</i> Indet.		157.2		78.6	78.6	235.8	235.8
Isopoda							
<i>Isopoda</i> Indet.							
<i>Saduria entomon</i>							
MOLLUSCA							
<i>Gastropoda</i>							
<i>Alvania</i> sp.					78.6		
<i>Cyllichna</i> sp.						235.8	78.6
<i>Gastropoda</i> Indet.				157.2			
Bivalvia							
<i>Astarte borealis</i>		235.8	1022.0	471.7	393.1	235.8	1886.8
<i>Axinoopsis orbiculata</i>			78.6	157.2			
<i>Clinocardium ciliatum</i>							
<i>Cyrtodaria kurrana</i>							
<i>Hiatella arctica</i>					157.2	157.2	
<i>Lyonsia</i> sp.		78.6					
<i>Macoma balthica</i>					235.8	235.8	550.3
<i>Macoma calcarea</i>		157.2	157.2	157.2	157.2	78.6	550.3
<i>Macoma</i> sp.		157.2					
<i>Musculus niger</i>							
<i>Musculus</i> sp.			78.6	393.1			
<i>Mya truncata</i>					78.6	235.8	
<i>Portlandia arctica</i>		2279.9	1415.1	3852.2	393.1	1100.6	157.2
<i>Serripes groenlandicus</i>			78.6		157.2		78.6
<i>Tellina</i> sp.							
<i>Thyasira</i> sp.					78.6		
<i>Yoldiella</i> sp.		471.7	628.9	550.3			
ECHINODERMATA							
<i>Holothuroidea</i>							
<i>Holothuroidea</i> Indet.			78.6			78.6	
Asteroidea							
<i>Asteroidea</i> Indet.							
Ophiuroidea							
<i>Ophiura</i> sp.				78.6			
UROCHORDATA							
Ascidacea							
<i>Rhizomogula globularis</i>							
Other:							
Teleostei eggs							
Teleostei larvae							
Calanoid copepod					78.6	157.2	
Nematoda (counts <50/estimates >50)							
TOTAL	707.5	20204.4	7232.7	12971.7	5974.8	9434.0	14779.9