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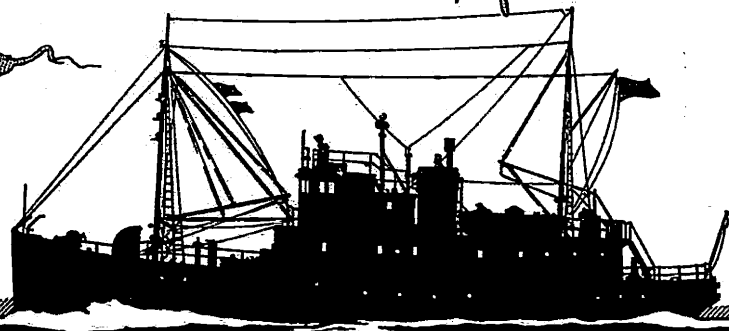
Technical Report No. 46

**PHYSICAL AND CHEMICAL DATA
PUGET SOUND AND APPROACHES**

January-December 1954

Office of Naval Research
Contract N8onr-520/III
Project NR 083 012
Contract Nonr-477(10)
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Contract Nonr-477(01)
Project NR 083-072
Puget Sound Naval Shipyard
Contract No. N251s-6261A
Negotiation 417/54

Reference 56-7
June 1956



SEATTLE 5, WASHINGTON

UNIVERSITY OF WASHINGTON DEPARTMENT OF OCEANOGRAPHY
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PHYSICAL AND CHEMICAL DATA
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by

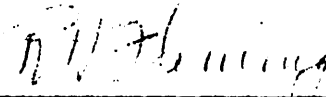
Clifford A. Barnes and Eugene E. Collias

Technical Report No. 46

Office of Naval Research
Contract Nonr-520/III
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June 1956


Richard H. Fleming
Executive Officer

ABSTRACT

This report tabulates physical and chemical observations made at various locations in Puget Sound and its approaches by the University of Washington Department of Oceanography using the research vessels BROWN BEAR and ONCORHYNCHUS. The observations were made at approximately 66 locations at monthly intervals during the period January through December 1954. A detailed monthly survey of Carr Inlet began in February and continued throughout the year. Charts show the position of the stations sampled. Values for temperature, salinity, dissolved oxygen and dissolved inorganic phosphate, as determined using accepted oceanographic procedures, are given at selected depths from the surface to bottom.

INTRODUCTION

This report contains inshore data collected from January through December 1954 by University of Washington personnel aboard the Department of Oceanography research vessel BROWN BEAR and the School of Fisheries research vessel ONCORHYNCHUS. Station location charts are presented before the data for each cruise (see pages 1, 16, 21, 25, 42, 60, 84, 103, 118, 138, 160, 164, 183, 206, 214, 217, 223 and 238). Detailed monthly surveys were made of Carr Inlet for the Puget Sound Naval Shipyard beginning with the BROWN BEAR cruise of February 1954 and continuing throughout the year. BROWN BEAR Cruise 60 (pages 103 to 117) was a time study conducted in Admiralty Inlet in June 1954. Current observations, to be presented in another report, were observed simultaneously with temperature and salinity measurements. Additional inshore data not contained in this report were obtained using the Salinity-Temperature-Depth Recorder (1) and various current meters.

Station Numbering System

The station numbers used on the BROWN BEAR consists of two parts. The first part is the cruise number followed by a number starting with "1" for the first station occupied on that particular cruise and continuing in consecutive order (i.e., 46-1, 46-2, etc.). Stations occupied by the ONCORHYNCHUS are numbered consecutively in a series prefixed by the letter "A".

Sampling Bottles

Water samples were taken with Nansen bottles, enlarged modified $2\frac{1}{2}$ -liter Knudsen bottles and Fjarlie bottles (2).

Determination of Properties

Deep-sea reversing thermometers were used to determine temperature. The depths reported for subsurface observations were calculated from measured wire angle and unprotected reversing thermometer readings as described by LaFond (8). Copenhagen standard sea water was used exclusively as the standard in determination of salinity. Dissolved oxygen was determined by the modified Winkler method described by Thompson and Robinson (3). Soluble inorganic phosphate was determined by the method of Thompson and Robinson (4) except that the color intensity was measured by either a Beckman Spectrophotometer Model DU (5) or an electric eye photometer (6) rather than Nessler tubes. However, Nessler tubes were used on the August cruise of the ONCORIINCHUS (pages 164 to 182). The phosphate data, corrected for salt error, are reported conventionally to the second decimal place in microgram-atoms per liter, although it is realized that the individual determinations may be in error by 5 to 10 percent. Samples for analyses of sulfite waste liquor (SWL) were obtained in Port Susan and Saratoga Passage for the Washington State Department of Fisheries. The samples were analyzed by Department of Fisheries personnel using the method described by Pearl and Benson (9) and a Lumitron colorimeter was used to read the samples. The results of the sulfite waste liquor analysis are reported as parts per million of SWL, using samples from the Everett paper mills as standards, in Appendix A, pages 246 to 253.

Data

The time at which the messenger was dropped on the first cast is listed for the +8 time zone. Positions are given to the nearest 0.1 minute. Depth is reported in fathoms and was obtained aboard the BROWN BEAR with the aid of a Navy NMC echo sounder until May 1954, then by a Navy EDO echo sounder. A Bendix Depth Finder Model DR-3 was used aboard the ONCORHYNCHUS. Weather is reported in the Navy bathythermograph weather code given in H. O. Publication No. 606-c, except in cases where the only weather phenomenon reported is the state of the sky. For the state of the sky the following symbols were used: b., clear sky; b.c., blue sky with detached clouds; c., sky mainly cloudy; and o., sky overcast. Wind velocity is reported in knots. Dry and wet bulb air temperatures are reported in degrees Fahrenheit (°F). The dry bulb reading is listed first, followed by a virgule (/) and then the wet bulb reading.

All data are actual observed values. The maximum depth of sampling was governed by the depth of the water. All clearly questionable data have been excluded.

The presentation of these data in this form does not constitute publication. Subsequent, more rigorous analyses of these data may disclose errors which are not apparent at this time.

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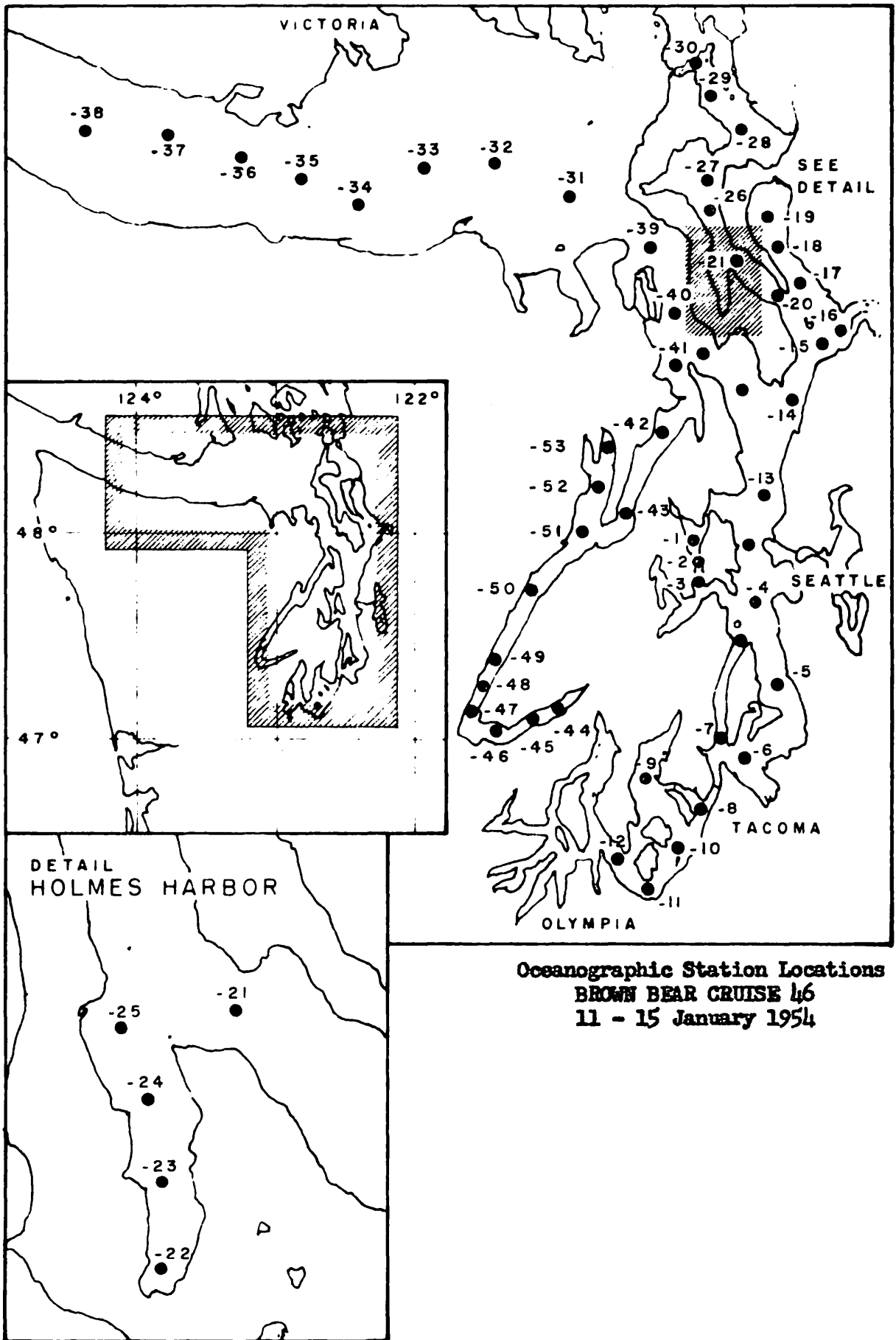
The data contained in this report were obtained and largely processed under Office of Naval Research contracts Nonr-477(01) Project NR 083 072, N8onr-520/III Project NR 083 012 and the processing completed under contract Nonr-477(10) Project NR 083 012. The Carr Inlet Survey was conducted under Contract No. N251s-6261A Negotiation 417/54 with the Puget Sound Naval Shipyard at Bremerton, Washington.

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Oceanographic Station Locations
 BROWN BEAR CRUISE 46
 11 - 15 January 1954

STA 46-1 47° 39.6' N WEATHER b.c. 11 Jan 54 122° 36.0' W WIND N 23 1228 (+8) DEPTH 15 fm 53°/50°F Battle Point				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.24	26.77	0.548	2.61
5	8.27	26.75	0.547	2.57
9	8.62	28.14	0.519	2.75
14	9.06	28.78	0.499	2.80
23	9.07	29.14	0.484	2.80

STA 46-2 47° 37.6' N WEATHER b. 11 Jan 54 122° 35.0' W WIND N 21 1259 (+8) DEPTH 19 fm 54°/53°F Fletcher Bay, South of				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.39	28.03	0.538	2.69
5	8.44	28.07	0.534	2.71
10	8.49	28.27	0.531	2.70
19	8.99	28.71	0.496	2.76
29	9.20	28.87	0.485	2.60

STA 46-3 47° 35.7' N WEATHER b. 11 Jan 54 122° 35.0' W WIND N 23 1342 (+8) DEPTH 32 fm 52°/46°F Gibson				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.81	28.64	0.517	2.70
5	8.86	28.64	0.517	2.65
10	8.83	28.63	0.517	2.77
19	8.86	28.64	0.517	2.76
48	9.01	28.76	0.506	2.69
57	9.06	28.80	0.495	2.64

STA 46-4 47° 33.8' N WEATHER b. 11 Jan 54 122° 26.4' W WIND N 24 1457 (+8) DEPTH 135 fm 55°/50°F Alki Point				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.57	26.96	0.541	2.59
5	8.58	26.98	0.545	2.37
9	8.80	27.38	0.534	2.42
17	9.23	28.62	0.501	2.52
26	9.27	28.78	0.481	2.37
44	9.37	28.95	0.480	2.60
65	9.58	29.29	0.469	2.66
87	9.59	29.32	0.465	2.56
122	9.67	29.48	0.455	2.56
157	9.70	29.58	0.444	2.56
192	9.77	29.72	0.429	2.64

STA 46-5 47° 26.3' N WEATHER b.
 11 Jan 54 122° 23.6' W WIND N 20
 1616 (+8) DEPTH 131 fm 54°/48°F
 Pully Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
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0	9.39	29.11	0.490	2.65
5	9.37	29.12	0.493	2.67
9	9.35	29.12	0.492	2.67
18	9.37	29.12	0.495	2.67
28	9.40	29.12	0.475	2.59
46	9.40	29.16	0.478	2.56
69	9.61	29.36	0.469	2.69
92	9.66	29.43	0.461	2.63
129	9.86	29.57	0.444	2.65
166	9.87	29.70	0.432	2.65
203	9.97	29.84	0.427	2.74

STA 46-6 47° 19.2' N WEATHER b.
 11 Jan 54 122° 28.2' W WIND N 16
 1745 (+8) DEPTH 94 fm 44°/38°F
 Brown Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
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0	9.04	28.13	0.522	2.32
5	9.00	28.12	0.524	2.48
10	9.13	28.44	0.517	2.62
20	9.14	28.95	0.514	2.61
30	9.30	29.03	0.487	2.20
50	9.42	29.14	0.483	2.20
75	9.58	29.32	0.470	2.73
100	9.78	29.54	0.452	2.57
130	9.89	29.61	0.443	2.76
160	9.96	29.79	0.428	2.72

STA 46-7 47° 21.2' N WEATHER b.
 11 Jan 54 122° 32.2' W WIND N 17
 1846 (+8) DEPTH 54 fm 43°/39°F
 Spring Beach

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
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0	9.42	28.99	0.492	2.58
5	9.40	28.99	0.488	2.71
10	9.38	28.97	0.489	2.62
20	9.38	28.97	0.490	2.57
30	9.40	28.97	0.475	2.57
50	9.40	28.99	0.480	2.47
70	9.42	28.99	0.487	2.60
90	9.40	28.99	0.489	2.37

STA 46-8 47° 14.4' N WEATHER b.
 11 Jan 54 122° 34.7' W WIND NxE 16
 1949 (+8) DEPTH 37 fm 43°/39°F
 Day Island

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
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0	9.35	28.88	0.494	2.42
5	9.34	28.88	0.495	2.57
10	9.33	28.88	0.492	2.44
20	9.35	28.91	0.493	2.33
30	9.35	28.91	0.482	2.38
50	9.37	28.90	0.490	2.29

STA 46-9 47° 16.9' N WEATHER b.
 11 Jan 54 122° 42.6' W WIND NxE 20
 2104 (+8) DEPTH 58 fm 42°/38°F
 Green Pt.

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.96	28.72	0.524	2.29
5	8.94	28.73	0.531	2.56
10	8.99	28.73	0.528	--
20	9.20	28.79	0.508	2.37
30	9.27	28.83	0.486	2.43
40	9.28	28.86	0.500	2.46
60	9.32	28.91	0.500	2.79
85	9.40	28.95	0.491	2.70

STA 46-10 47° 11.1' N WEATHER b.
 11 Jan 54 122° 37.8' W WIND NxE 13
 2218 (+8) DEPTH 91 fm 42°/37°F
 Gordon Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.94	28.22	0.517	3.12
5	9.00	28.23	0.513	2.94
10	9.15	28.43	0.501	2.73
20	9.13	28.49	0.505	2.71
30	9.15	28.57	0.493	2.60
50	9.31	28.71	0.489	2.38
75	9.33	28.84	0.492	3.00
100	9.33	28.84	0.490	2.71
130	9.43	28.93	0.486	2.63
160	9.47	28.93	0.482	2.86

STA 46-11 47° 07.0' N WEATHER b.
 11 Jan 54 122° 42.6' W WIND NxE 10
 2320 (+8) DEPTH 35 fm
 Nisqually Reach

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.64	27.41	0.535	2.66
5	8.47	27.28	0.534	2.77
10	8.89	27.87	0.532	2.74
20	9.20	28.36	0.510	2.37
30	9.39	28.77	0.480	2.34
32	9.37	28.83	0.483	2.67
49	9.46	28.89	0.485	2.73

STA 46-12 47° 09.9' N WEATHER b.
 12 Jan 54 122° 47.4' W WIND N 23
 0009 (+8) DEPTH 52 fm 41°/37°F
 Devil's Head

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.81	27.98	0.516	2.75
5	8.78	27.96	0.518	2.78
10	8.79	27.96	0.521	2.80
20	8.93	28.07	0.515	2.57
30	9.17	28.48	0.492	2.54
50	9.36	28.75	0.482	2.54
75	9.47	28.82	0.482	2.80

STA 46-13 47° 44.0' N WEATHER b.c.
 12 Jan 54 122° 25.4' W WIND N 10
 1046 (+8) DEPTH 157 fm 42°/39°F
 Point Jefferson

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	7.76	25.23	0.559	2.17
5	8.10	26.20	0.538	2.37
10	8.62	27.92	0.519	2.54
19	9.20	29.00	0.492	2.54
29	9.22	29.23	0.469	2.53
48	9.35	29.35	0.473	2.36
72	9.49	29.47	0.470	2.66
96	9.16	29.47	0.475	2.43
144	9.31	29.62	0.455	2.59
192	9.34	29.68	0.443	2.57
230	9.37	29.68	0.445	2.70
259	9.36	29.68	0.443	2.61

STA 46-14 47° 53.2' N WEATHER b.
 12 Jan 54 122° 21.6' W WIND NNE 7
 1250 (+8) DEPTH 132 fm 49°/48°F
 Possession Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	6.09	16.74	0.658	1.97
5	9.12	28.48	0.482	2.54
9	8.96	28.82	0.495	2.54
18	8.96	28.97	0.493	2.59
28	9.02	29.23	0.472	2.46
47	8.97	29.34	0.483	2.48
71	8.92	29.43	0.488	2.60
94	8.97	29.49	0.481	2.53
138	9.27	29.59	0.456	2.60
178	9.35	29.63	0.438	2.68
217	9.49	29.70	0.423	2.65

STA 46-15 47° 58.3' N WEATHER b.c.
 12 Jan 54 122° 17.4' W WIND E 2
 1436 (+8) DEPTH 76 fm 41°/36°F
 Port Gardner

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	5.75	15.50	0.650	1.73
5	7.89	23.35	0.567	2.21
10	9.35	28.41	0.460	2.51
20	9.27	29.14	0.471	2.48
30	9.14	29.23	0.470	2.38
50	9.21	29.38	0.464	2.44
80	9.23	29.48	0.465	2.61
110	9.57	29.58	0.389	2.42

STA 46-16 47° 58.1' N WEATHER b.c.
 12 Jan 54 122° 14.6' W WIND Calm
 1518 (+8) DEPTH 56 fm 39°/35°F
 W. end of pipeline

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	6.54	15.14	0.599	1.64
5	8.67	26.22	0.503	----
10	9.40	28.50	0.442	2.56
20	9.42	29.02	0.424	2.39
30	9.47	29.24	0.323	1.55
50	9.37	29.37	0.460	----
75	9.41	29.44	0.434	2.01
100	9.44	29.52	0.404	2.67

STA 46-17 48° 04.2' N WEATHER 10 12 Jan 54 122° 19.8' W WIND SE 1 1648 (+8) DEPTH 67 fm 39°/35°F Camano Head, East of				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	4.32	-----	0.711	1.25
5	9.14	10.72	0.495	2.35
10	9.44	28.60	0.467	2.45
20	9.61	29.23	0.438	2.37
30	9.67	29.37	0.409	2.30
49	9.74	29.52	0.384	2.60
69	10.00	29.66	0.344	2.63
79	10.35	29.77	0.344	2.63
89	10.57	29.95	0.319	2.67
99	10.84	30.20	0.234	2.79
109	11.04	30.44	0.164	3.54
124	11.11	30.53	0.131	4.16

STA 46-18 48° 06.3' N WEATHER c. 12 Jan 54 122° 22.1' W WIND Calm 1745 (+8) DEPTH 68 fm 38°/35°F Port Susan, Middle of				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	4.90	10.70	0.709	1.44
5	8.24	23.59	0.556	2.34
10	9.26	28.20	0.490	2.57
20	9.66	29.10	0.439	2.53
30	9.69	29.35	0.407	2.44
50	9.91	29.50	0.388	2.35
70	10.06	29.61	0.372	2.63
80	10.28	29.76	0.349	2.62
90	10.42	29.88	0.322	2.68
100	10.67	30.03	0.283	2.72
110	10.97	30.38	0.180	3.34
123	11.09	30.52	0.137	4.24

STA 46-19 48° 09.2' N WEATHER c. 12 Jan 54 122° 24.7' W WIND SE 2 1855 (+8) DEPTH 52 fm 37°/34°F Port Susan, Head of				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	5.44	14.16	0.655	1.51
5	9.00	27.13	0.496	2.27
10	9.50	28.65	0.454	2.48
20	9.56	29.23	0.424	2.38
30	9.80	29.36	0.410	2.35
40	9.88	29.44	0.402	2.15
50	9.86	29.47	0.395	2.60
60	9.99	29.57	0.374	2.52
70	10.07	29.62	0.354	2.65
80	10.27	29.76	0.327	2.78

STA 46-20 48° 00.9' N WEATHER b.c. 12 Jan 54 122° 23.0' W WIND Calm 2026 (+8) DEPTH 92 fm 38°/35°F Camano Head, West of				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	6.18	18.22	0.647	1.64
5	8.93	25.82	0.511	2.15
10	9.42	28.62	0.457	2.28
20	9.59	29.18	0.437	2.21
30	9.50	29.39	0.431	2.10
50	9.57	29.52	0.430	2.02
75	9.72	29.62	0.415	2.59
100	9.99	29.69	0.378	2.59
125	10.21	29.77	0.346	2.70
150	10.17	29.77	0.350	2.72

STA 46-21 48° 06.6' N WEATHER c. 12 Jan 54 122° 29.7' W WIND SSE 4 2158 (+8) DEPTH 78 fm 39°/37°F East Point				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	6.94	19.96	0.617	1.94
5	9.37	27.65	0.460	2.39
10	9.62	28.82	0.427	2.50
20	9.70	29.14	0.428	2.54
30	9.85	29.37	0.402	2.36
49	10.00	29.59	0.380	2.49
77	10.09	29.64	0.368	2.77
98	10.16	29.71	0.360	2.82
127	10.25	29.75	0.351	2.88

STA 46-22 48° 01.5' N WEATHER 61 12 Jan 54 122° 31.8' W WIND S 3 0749 (+8) DEPTH 22 fm 38°/37°F Holmes Harbor, Head of				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	5.37	17.45	0.667	1.80
5	8.95	27.02	0.477	2.58
10	9.59	28.54	0.430	2.61
20	9.92	29.18	0.394	2.68
30	10.09	29.39	0.362	2.63
36	10.09	29.45	0.342	2.93

STA 46-23 48° 03.2' N WEATHER 61 13 Jan 54 122° 31.8' W WIND SSE 7 0836 (+8) DEPTH 30 fm 36°/36°F Classic				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	5.76	17.90	0.671	1.81
5	9.12	27.35	0.468	2.49
10	9.49	28.28	0.445	2.56
20	10.02	29.23	0.371	2.70
30	9.98	29.39	0.381	2.24
40	10.03	29.45	0.374	2.57
54	10.06	29.47	0.364	2.99

STA 46-24 48° 04.8' N WEATHER 66 13 Jan 54 122° 32.3' W WIND SE 8 0913 (+8) DEPTH 33 fm 35°/35°F Dines Point				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	6.66	19.42	0.637	1.89
5	8.92	26.27	0.488	2.46
10	9.49	27.98	0.438	2.58
20	9.90	29.15	0.404	2.60
30	9.94	29.33	0.385	2.57
40	9.97	29.41	0.378	2.43
50	10.07	29.49	0.376	2.76

STA 46-25 48° 06.2' N WEATHER 66 13 Jan 54 122° 33.3' W WIND SE 7 0959 (+8) DEPTH 41 fm 35°/35°F Green Bank				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	5.94	18.37	0.657	1.85
5	8.36	25.36	0.508	2.38
10	9.50	28.17	0.436	2.57
20	9.74	29.07	0.420	2.61
30	9.87	29.34	0.390	2.57
40	10.01	29.44	0.375	2.63
50	10.05	29.46	0.376	2.86
60	10.07	29.50	0.365	2.88
76	10.11	29.52	0.363	2.85

STA 46-26 48° 11.1' N WEATHER 66 13 Jan 54 122° 33.1' W WIND SSE 10 1108 (+8) DEPTH 54 fm 36°/36°F Onamak Pt.				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	6.10	18.84	0.642	1.82
5	9.08	26.74	0.448	2.43
10	9.76	28.87	0.417	2.63
20	9.82	29.16	0.412	2.63
30	9.89	29.35	0.394	2.58
50	9.94	29.50	0.386	2.35
70	10.21	29.60	0.362	2.79
90	10.26	29.70	0.344	2.94

STA 46-27 48° 14.0' N WEATHER 66 13 Jan 54 122° 33.1' W WIND SE 10 1145 (+8) DEPTH 46 fm 35°/35°F Demock Pt.				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	5.94	18.31	0.650	1.87
5	8.91	25.82	0.458	2.50
10	9.82	28.66	0.401	2.71
20	9.97	29.21	0.392	2.65
30	10.02	29.35	0.390	2.69
50	10.05	29.49	0.381	2.79
75	10.21	29.62	0.355	2.88

STA 46-28 48° 29.7' N WEATHER 66 13 Jan 54 122° 18.7' W WIND SE 10 1230 (+8) DEPTH 18 fm 35°/35°F Strawberry Pt.				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	7.60	22.72	0.544	2.16
2	7.85	23.08	0.544	2.47
5	8.80	25.68	0.457	2.62
10	9.66	28.10	0.405	2.81
20	10.03	29.21	0.377	2.91

STA 46-29 48° 21.5' N WEATHER 62
 13 Jan 54 122° 33.4' W WIND SE 13
 1327 (+8) DEPTH 7 fm 36°/36°F
 Goat Island

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	7.73	22.86	0.525	2.49
2	8.23	24.31	0.499	2.65
5	9.52	28.01	0.408	----
10	9.91	28.99	0.378	3.00

STA 46-30 48° 24.9' N WEATHER 62
 13 Jan 54 122° 35.9' W WIND SE 15
 1400 (+8) DEPTH 20 fm 38°/38°F
 Dewey

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	6.89	20.86	0.574	2.22
5	7.15	22.70	0.547	2.35
9	7.57	23.55	0.537	2.37
18	8.29	26.21	0.491	2.65
27	8.29	29.91	0.484	2.72

STA 46-31 48° 12.2' N WEATHER b.c.
 13 Jan 54 122° 54.8' W WIND SE 9
 1830 (+8) DEPTH 46 fm 42°/41°F
 Protection Island

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.21	29.74	0.514	2.35
5	8.20	29.73	0.514	2.43
10	8.25	29.75	0.511	2.32
19	8.22	29.78	0.512	2.45
29	8.23	29.85	0.513	2.46
48	8.21	29.87	0.512	2.30
77	8.23	30.11	0.503	2.37

STA 46-32 48° 15.6' N WEATHER c.
 13 Jan 54 123° 04.0' W WIND SE 3
 1941 (+8) DEPTH 93 fm 44°/43°F
 New Dungeness, NE of

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.08	29.97	0.517	1.95
5	8.09	29.96	0.522	2.09
10	8.17	30.07	0.517	2.22
19	8.20	30.26	0.511	2.15
28	8.20	30.29	0.497	1.89
47	8.17	30.34	0.501	1.75
71	8.23	30.30	0.506	2.25
95	8.24	30.44	0.504	2.16
124	8.26	30.66	0.487	2.24
152	8.24	30.93	0.468	2.34

STA 46-33 48° 15.0' N WEATHER c. 13 Jan 54 123° 14.1' W WIND ESE 10 2131 (+8) DEPTH 77 fm 46°/44°F New Dungeness, NW of				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.13	30.22	0.521	2.00
5	8.13	30.21	0.517	2.18
10	8.21	30.26	0.516	2.04
20	8.22	30.36	0.516	2.19
30	8.21	30.38	0.513	1.95
50	8.21	30.48	0.507	2.00
75	8.21	30.56	0.497	2.36
100	8.14	30.82	-----	2.37
130	8.06	31.59	-----	2.62

STA 46-34 48° 11.9 N WEATHER c. 13 Jan 54 123° 22.7 W WIND N 2 2258 (+8) DEPTH 77 fm 46°/43°F Ediz Hook				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.10	30.34	-----	2.07
5	8.14	30.40	0.514	2.18
10	8.15	30.40	0.515	2.31
20	8.20	30.45	0.510	2.22
30	8.22	30.55	0.489	2.06
50	8.09	31.43	0.436	2.17
70	8.01	32.12	0.379	2.47
100	7.99	32.39	0.356	2.63
125	8.03	32.42	0.358	2.69

STA 46-35 48° 14.6' N WEATHER c. 14 Jan 54 123° 32.4' W WIND W 15 0036 (+8) DEPTH 94 fm 46°/44°F Race Rocks				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at-L)	PO ₄ (ug-at/L)
0	8.12	30.60	0.503	2.26
5	8.11	30.60	0.507	2.20
10	8.12	30.60	0.503	2.22
20	8.13	30.66	0.493	2.23
30	8.13	30.74	0.479	2.18
50	8.10	31.35	0.436	2.19
75	8.09	31.54	0.421	2.31
100	8.02	32.42	0.355	2.33
130	7.84	33.04	0.316	2.51
160	7.84	33.04	0.311	2.49

STA 46-36 48° 15.8' N WEATHER 63 14 Jan 54 123° 41.3' W WIND W 24 0208 (+8) DEPTH 99 fm 46°/45°F Beechy Head				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.13	30.65	0.507	2.17
5	8.13	30.64	0.507	2.21
10	8.14	30.63	0.504	2.20
19	8.14	30.64	0.501	2.21
29	8.18	30.73	0.484	2.13
48	8.17	31.04	0.462	2.20
73	8.12	31.53	0.436	2.41
97	7.87	32.53	0.344	2.38
136	7.81	33.29	0.298	2.49
175	7.80	33.27	0.297	2.39

STA 46-37 48° 17.8' N WEATHER 63
 14 Jan 54 123° 52.3' W WIND W 30
 0351 (+8) DEPTH 93 fm 45°/44°F
 Otter Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.22	30.53	0.509	2.07
5	8.23	30.53	0.511	2.10
10	8.24	30.52	0.509	2.12
19	8.25	30.53	0.506	1.99
28	8.41	30.74	0.481	1.96
48	8.30	31.07	0.462	2.04
71	8.13	31.52	0.420	2.18
95	8.02	31.90	0.396	2.23
123	7.72	33.17	0.293	2.60
152	7.58	33.47	0.277	2.54

STA 46-38 48° 18.4' N WEATHER 63
 14 Jan 54 124° 02.6' W WIND WSW 20
 0531 (+8) DEPTH 107 fm 45°/43°F
 Pillar Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.24	30.27	0.529	2.00
5	8.25	30.31	0.531	1.99
10	8.26	30.27	0.533	2.05
19	8.25	30.27	0.530	2.01
28	8.21	30.34	0.511	1.91
47	8.31	30.76	0.482	2.06
71	8.28	31.23	0.454	2.30
95	8.04	31.73	0.403	2.34
133	7.94	33.13	0.318	2.30
171	7.54	33.51	0.273	2.56

STA 46-39 48° 03.2' N WEATHER c.
 14 Jan 54 122° 41.2' W WIND SSE 13
 1209 (+8) DEPTH 65 fm 46°/43°F
 Port Townsend

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.15	29.60	0.519	2.40
5	8.15	29.61	0.523	2.27
10	8.15	29.66	0.521	2.35
20	8.14	29.70	0.522	2.18
30	8.15	29.69	0.514	2.10
50	8.14	29.70	0.516	2.14
75	8.17	30.00	0.514	2.39
100	8.17	30.08	0.511	2.35

STA 46-40 48° 01.7' N WEATHER b.c.
 14 Jan 54 122° 37.2' W WIND S 7
 1330 (+8) DEPTH 75 fm 49°/46°F
 Bush Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.29	28.81	0.523	2.39
5	8.27	28.79	0.527	2.42
10	8.28	28.83	0.522	2.45
20	8.28	28.83	0.524	2.40
30	8.29	29.01	0.523	2.02
50	8.24	29.06	0.522	2.07
75	8.18	29.74	0.516	2.40
100	8.17	29.83	0.516	2.39

STA 46-41 47° 56.2' N WEATHER o.
 14 Jan 54 122° 38.1' W WIND NNW 7
 1452 (+8) DEPTH 67 fm 46°/44°F
 Tala Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	7.43	26.02	0.573	2.28
5	7.64	26.74	0.565	2.38
10	8.20	29.07	0.524	2.45
20	8.27	29.31	0.517	2.40
30	8.30	29.47	0.514	2.06
49	8.26	29.53	0.516	2.04
73	8.26	29.63	0.514	2.45
97	8.22	29.70	0.514	2.36

STA 46-42 47° 50.2' N WEATHER b.c.
 14 Jan 54 122° 34.9' W WIND SSW 16
 1629 (+8) DEPTH 37 fm 47°/43°F
 South Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	7.74	26.24	0.562	2.34
5	7.79	26.41	0.562	2.38
9	7.96	27.82	0.536	2.50
19	8.39	29.36	0.501	2.54
28	8.54	29.49	0.479	2.26
37	8.55	29.50	0.482	2.44
56	8.63	29.54	0.470	2.72

STA 46-43 47° 42.0' N WEATHER b.c.
 14 Jan 54 123° 45.7' W WIND S 20
 1823 (+8) DEPTH 72 fm 42°/39°F
 Hazel Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	7.62	24.98	0.578	2.24
5	7.64	25.17	0.573	2.37
10	8.34	28.29	0.499	2.54
19	8.62	29.27	0.463	2.67
29	9.00	29.59	0.423	2.36
48	9.40	29.79	0.386	2.40
76	9.81	30.12	0.334	3.07
105	9.99	30.26	0.307	3.02

STA 46-44 47° 24.1' N WEATHER 70
 15 Jan 54 122° 55.5' W WIND W 12
 0751 (+8) DEPTH 10 fm 32°/32°F
 Lynch Cove

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	5.37	17.95	0.663	1.95
5	8.69	27.48	0.407	2.75
10	9.46	29.29	0.217	3.37
14	9.60	29.61	0.179	3.56
18	9.68	29.76	0.201	3.42

STA 46-45 47° 22.6' N WEATHER 70
 15 Jan 54 122° 57.8' W WIND SSW 4
 0851 (+8) DEPTH 24 fm 34°/34°F
 Mid Lynch Cove

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	6.76	21.20	0.612	2.23
5	6.90	22.09	0.608	2.31
10	9.28	28.89	0.312	3.12
15	9.56	29.53	0.270	3.33
20	9.68	29.69	0.261	3.32
30	9.75	29.90	0.257	3.16
44	9.76	29.94	0.246	3.32

STA 46-46 47° 21.4' N WEATHER c.
 15 Jan 54 123° 03.7' W WIND S 3
 0928 (+8) DEPTH 25 fm
 Tahuya River

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	6.39	21.67	0.612	2.21
5	8.68	26.56	0.428	2.98
10	9.22	28.74	0.372	2.88
15	9.50	29.40	0.296	3.03
20	9.64	29.62	0.268	3.17
30	9.73	29.81	0.287	3.40
45	9.81	29.97	0.256	3.25

STA 46-47 47° 23.4' N WEATHER C.
 15 Jan 54 123° 07.9' W WIND S 7
 1103 (+8) DEPTH 61 fm 35°/35°F
 Musqueti Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	6.74	21.51	0.600	2.09
5	9.05	28.65	0.428	2.59
10	9.28	29.08	0.392	2.82
20	9.59	29.60	0.355	2.87
30	9.68	29.77	0.346	2.66
40	9.75	29.88	0.363	2.61
60	9.88	30.04	0.316	3.02
80	9.90	30.33	0.241	2.81
100	9.94	30.31	0.178	3.35
117	10.01	30.40	0.157	3.57

STA 46-48 47° 26.1' N WEATHER 70
 15 Jan 54 123° 06.1' W WIND NNE 6
 1150 (+8) DEPTH 61 fm 35°/35°F
 Red Bluff, North of

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	7.59	25.08	0.550	2.49
5	8.74	27.82	0.476	2.63
10	9.15	28.91	0.439	2.64
20	9.49	29.60	0.396	2.76
30	9.64	29.71	0.377	2.64
50	9.77	29.93	0.360	2.59
75	9.90	30.09	0.308	3.14
100	9.92	30.21	0.209	3.37
125	10.06	30.43	0.178	3.88

STA 46-49 47° 28.7' N WEATHER 70
 15 Jan 54 123° 04.0' W WIND NE 12
 1226 (+8) DEPTH 84 fm 35°/35°F
 Eagle Creek

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	7.50	25.37	0.558	2.48
5	8.13	26.75	0.524	2.45
10	9.07	28.72	0.421	2.66
20	9.16	29.40	0.421	2.60
30	9.51	29.64	0.394	2.50
50	9.82	30.00	0.356	2.36
75	9.92	30.13	0.314	3.00
100	9.95	30.27	0.227	3.22
125	10.06	30.44	0.178	3.51
150	10.17	30.49	0.198	3.39

STA 46-50 47° 35.9' N WEATHER o.
 15 Jan 54 123° 57.8' W WIND NE 15
 1351 (+8) DEPTH 96 fm 33°/32°F
 Tekiu Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	7.61	26.65	0.554	2.42
5	7.62	26.70	0.554	2.51
10	8.41	27.57	0.511	2.54
19	8.45	28.28	0.500	2.38
28	9.08	29.41	0.425	2.53
47	9.52	29.79	0.389	2.60
71	9.79	30.02	0.358	2.86
95	10.03	30.28	0.291	2.90
123	10.13	30.43	0.209	3.27
152	10.22	30.52	0.229	3.26

STA 46-51 47° 40.1' N WEATHER o.
 15 Jan 54 122° 52.4' W WIND NE 16
 1457 (+8) DEPTH 75 fm 32°/30°F
 Pleasant Harbor

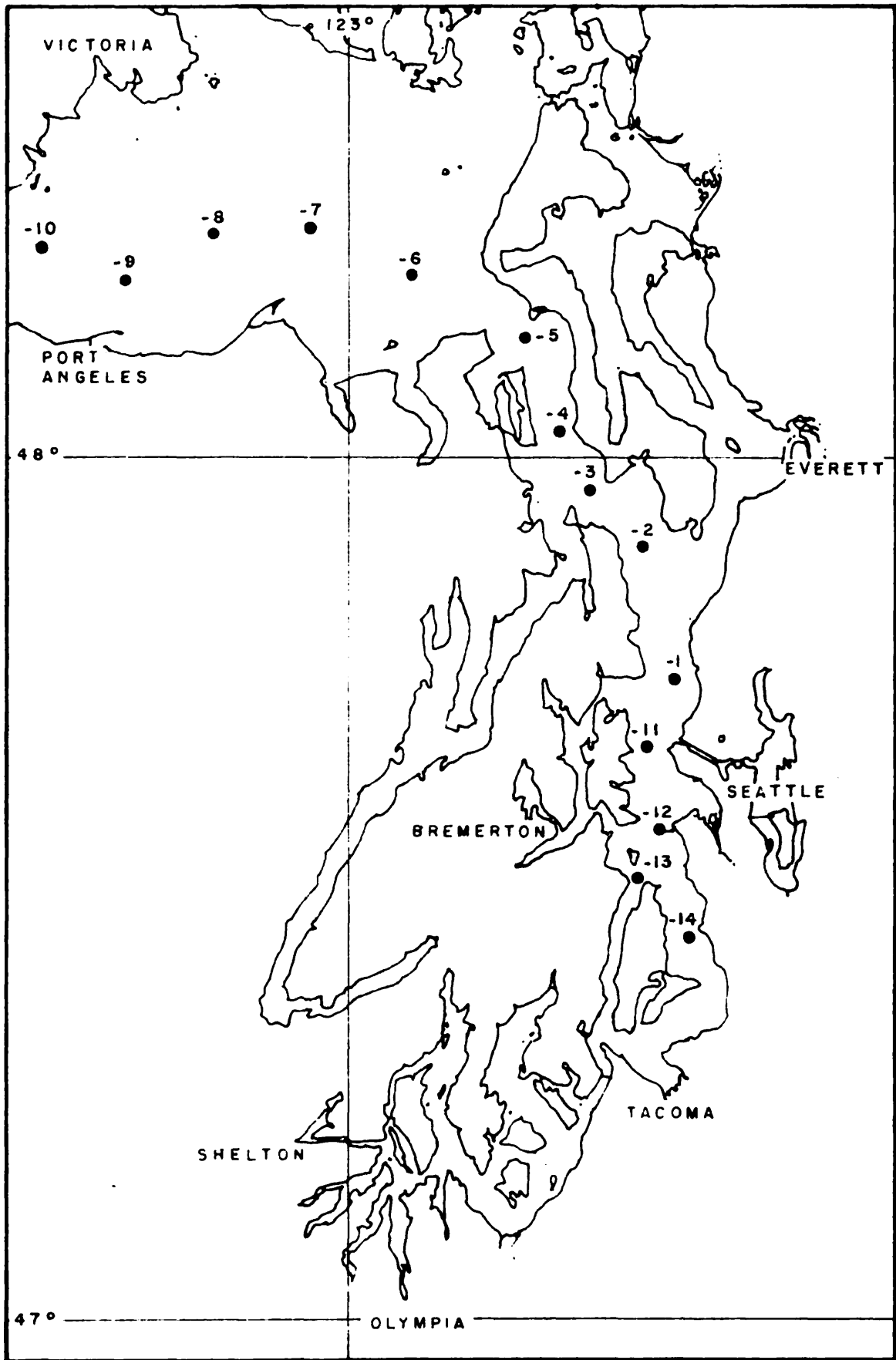
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	7.23	25.91	0.585	2.21
5	7.22	25.96	0.586	2.27
10	7.29	26.74	0.578	2.13
20	8.12	27.97	0.527	2.48
30	8.83	29.21	0.442	2.48
49	9.49	29.84	0.375	2.70
73	9.78	30.08	0.338	2.80
98	10.09	30.33	0.300	2.88
122	10.20	30.48	0.254	3.08

STA 46-52 47° 44.8' N WEATHER o.
 15 Jan 54 122° 49.8' W WIND NE 18
 1611 (+8) DEPTH 108 fm 30°/29°F
 Tabook Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	6.98	25.75	0.604	2.35
5	6.98	25.77	0.608	2.41
9	7.28	25.96	0.596	2.39
19	8.89	29.18	0.466	2.66
28	9.24	29.56	0.421	2.58
47	9.62	29.91	0.371	2.89
70	9.87	30.13	0.342	2.87
94	10.14	30.35	0.301	2.74
115	10.16	30.45	0.268	3.08
135	10.16	30.56	0.226	3.35
144	9.93	30.59	0.204	3.49
154	9.82	30.62	0.190	3.73
163	9.61	30.62	0.159	3.97
173	9.49	30.64	0.143	4.10
197	9.42	30.65	0.121	4.24

STA 16-53 47° 50.0' N WEATHER o.
 15 Jan 54 122° 48.7' W WIND N 20
 1814 (+8) DEPTH 30 fm 29°/28°F
 Dabob Bay, Head of

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	6.44	25.10	0.621	2.45
5	6.99	29.14	0.612	2.79
10	8.86	29.47	0.479	2.84
20	9.07	29.61	0.448	2.85
30	9.26	29.78	0.428	2.89
54	9.66	29.93	0.366	2.89



Oceanographic Station Locations
 BROWN BEAR CRUISE 47
 26 - 27 January 1954

STA 47-1 47° 44.6' N WEATHER b.c.
 26 Jan 54 122° 25.3' W WIND SSW 11
 1054 (+8) DEPTH 155 fm 38°/36°F
 Point Jefferson

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)
0	8.25	28.57	0.528
5	8.37	28.66	0.524
10	8.48	28.94	0.518
19	8.50	28.97	0.507
28	8.44	29.01	0.498
48	8.38	29.08	0.496
71	8.41	29.16	0.493
95	8.46	29.24	0.486
142	8.24	29.34	0.477
191	8.00	29.41	0.493
230	7.85	29.43	0.498
261	7.83	29.48	0.496

STA 47-2 47° 54.3' N WEATHER c.
 26 Jan 54 122° 29.0' W WIND SSE 5
 1231 (+8) DEPTH 110 fm 41°/38°F
 Point No Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)
0	8.39	28.96	0.514
5	8.39	28.98	0.513
10	8.39	28.99	0.511
20	8.37	29.04	0.509
30	8.36	29.06	0.504
50	8.26	29.07	0.507
75	8.22	29.11	0.511
100	7.96	29.26	0.510
188	7.60	29.79	0.503

STA 47-3 47° 57.6' N WEATHER o.
 26 Jan 54 122° 35.1' W WIND S 7
 1327 (+8) DEPTH 60 fm 41°/37°F
 Double Bluff

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)
0	8.02	28.19	0.519
5	8.05	28.91	0.518
10	8.18	28.96	0.511
20	8.22	29.06	0.506
30	8.16	29.10	0.501
50	7.84	29.24	0.503
75	7.73	29.31	0.511
100	7.60	29.70	0.500

STA 47-4 48° 02.3' N WEATHER c.
 26 Jan 54 122° 37.5' W WIND S 10
 1430 (+8) DEPTH 72 fm 40°/37°F
 Bush Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)
0	8.17	28.82	0.518
5	8.16	28.83	0.520
10	8.14	28.85	0.513
19	7.94	28.98	0.513
29	7.84	28.99	0.511
48	7.76	29.17	0.514
72	7.65	29.53	0.504
97	7.57	29.79	0.501

STA 47-5 48° 08.7' N WEATHER o. 26 Jan 54 122° 41.4' W WIND S 18 1526 (+8) DEPTH 63 fm 39°/36°F Port Townsend			
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)
0	7.42	29.06	0.561
5	7.42	29.05	0.526
10	7.49	29.13	0.520
20	7.49	29.15	0.519
29	7.49	29.17	0.516
49	7.49	29.19	0.518
70	7.53	29.33	0.515
93	7.47	30.05	0.497

STA 47-6 48° 12.2' N WEATHER o. 26 Jan 54 122° 52.8' W WIND S 17 1642 (+8) DEPTH 53 fm 39°/37°F Protection Island			
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)
0	7.34	30.26	0.510
5	7.33	30.29	0.507
10	7.34	30.29	0.509
19	7.35	30.29	0.509
29	7.35	30.33	0.504
48	7.36	30.44	0.504
77	7.37	30.61	0.500

STA 47-7 48° 16.0' N WEATHER o. 26 Jan 54 123° 04.1' W WIND S 20 1800 (+8) DEPTH 96 fm 39°/37°F New Dungeness, Northeast of			
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)
0	7.06	30.56	0.528
5	7.05	30.55	0.521
10	7.07	30.55	0.527
19	7.21	30.67	0.514
29	7.32	30.83	0.495
48	7.38	31.11	0.483
72	7.41	31.11	0.480
96	7.46	31.16	0.477
125	7.48	31.17	0.475
153	7.53	31.33	0.458

STA 47-8 48° 15.2' N WEATHER c. 26 Jan 54 123° 13.6' W WIND SSE 12 1916 (+8) DEPTH 77 fm 37°/36°F New Dungeness, Northwest of			
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)
0	7.10	30.65	0.527
5	7.07	30.58	0.525
10	7.11	30.61	0.525
19	7.16	30.73	0.518
29	7.10	30.80	0.509
48	7.40	31.11	0.474
73	7.50	31.22	0.464
97	7.54	31.27	0.462
126	7.61	31.35	0.428

STA 47-9 48° 11.7' N WEATHER c. 26 Jan 54 123° 23.6' W WIND ENE 6 2047 (+8) DEPTH 74 fm 38°/35°F Ediz Hook			
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)
0	7.01	30.49	0.522
5	7.00	30.59	0.523
10	7.00	30.57	0.523
20	7.19	30.65	0.504
30	7.13	30.76	0.491
50	7.43	31.00	0.471
75	7.53	31.33	0.448
100	7.55	31.36	0.448
125	7.58	31.62	0.430

STA 47-10 48° 14.7' N WEATHER c. 26 Jan 54 123° 32.1' W WIND SE 6 2159 (+8) DEPTH 94 fm 38°/35°F Race Rocks			
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)
0	7.05	30.65	0.518
5	7.05	30.65	0.514
10	7.27	30.79	0.490
20	7.28	30.87	0.490
30	7.12	30.91	0.481
50	7.48	31.27	0.450
75	7.49	31.31	0.454
100	7.52	31.33	0.450
130	7.75	32.09	0.392
160	7.83	32.70	0.350

STA 47-11 47° 40.0' N WEATHER b.c. 27 Jan 54 122° 28.2' W WIND SE 7 0648 (+8) DEPTH 126 fm 41°/37°F West Point			
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)
0	8.37	28.93	0.508
5	8.37	28.94	0.508
10	8.45	28.97	0.506
20	8.55	29.01	0.495
29	8.61	29.09	0.486
49	8.58	29.16	0.490
74	8.50	29.20	0.485
98	8.16	29.24	0.487
137	8.10	29.29	0.489
176	8.02	29.35	0.490
216	7.89	29.45	0.479

STA 47-12 47° 34.2' N WEATHER 61 27 Jan 54 122° 26.7' W WIND ESE 13 0807 (+8) DEPTH 136 fm 39°/38°F Alki Point			
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)
0	8.36	28.85	0.517
5	8.35	28.86	0.521
10	8.34	28.87	0.518
20	8.52	28.93	0.504
29	8.61	29.00	0.490
49	8.63	29.14	0.496
73	8.46	29.28	0.486
98	8.20	29.25	0.493
137	8.16	29.32	0.489
176	8.04	29.33	0.494
216	7.96	29.34	0.498

STA 47-13 47° 30.6' N WEATHER 61
 27 Jan 54 122° 29.2' W WIND ESE 13
 0907 (+8) DEPTH 60 fm 39°/38°F
 Point Vashon

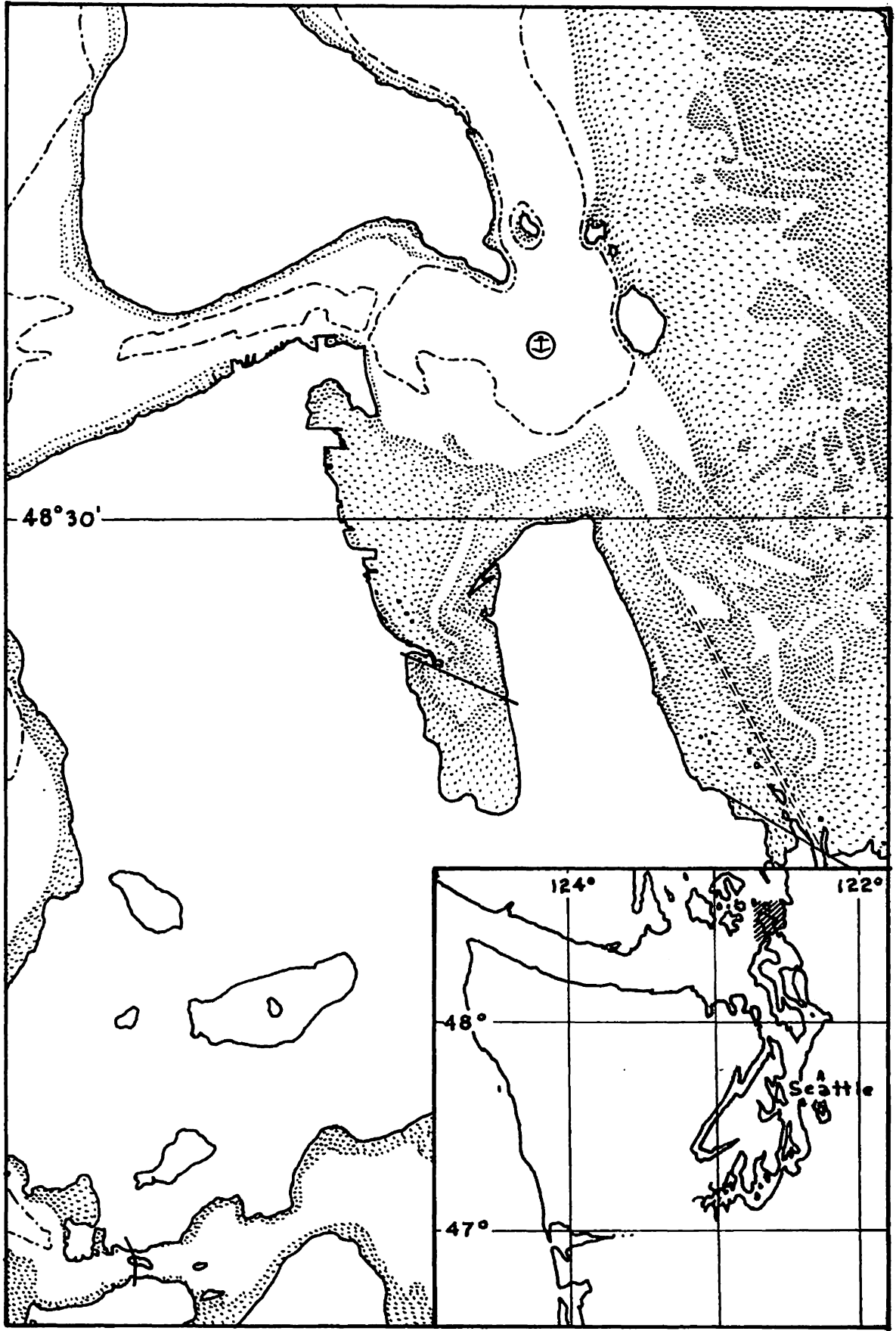
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)
0	8.65	28.87	0.498
5	8.64	28.91	0.498
10	8.69	28.95	0.493
20	8.72	28.97	0.493
30	8.73	29.00	0.489
50	8.84	29.08	0.484
75	8.93	29.09	0.483
100	8.94	29.10	0.482

STA 47-14 47° 26.5' N WEATHER 61
 27 Jan 54 122° 23.7' W WIND ESE 12
 1031 (+8) DEPTH 132 fm 40°/38°F
 Pully Point

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)
0	7.99	28.56	0.531
5	7.97	28.55	0.536
10	7.98	28.56	0.530
20	8.29	28.76	0.517
30	8.47	28.87	0.500
50	8.63	29.28	0.468
75	8.53	29.36	0.469
100	8.69	29.36	0.463
140	8.73	29.42	-----
180	8.36	29.38	0.463
220	8.97	29.46	0.444

40'

122°30'



Oceanographic Station Location
BROWN BEAR CRUISE 48
30 - 31 January 1954

BROWN BEAR CRUISE 48

30 - 31 January 1954

Guemus Channel

LAT. 48° 30.2' N, LONG. 122° 33.6' W

Depth 40 fm

STA 48-1		Time 0919 (+8)	
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)
0	5.72	28.97	0.558
5	6.21	29.33	0.538
10	6.35	29.43	0.522
30	6.47	29.51	0.479
40	6.49	29.55	0.499
60	6.52	29.55	0.509
70	6.53	29.56	0.515
78	6.52	29.61	0.512

STA 48-2		Time 1111 (+8)	
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)
0	6.08	29.23	0.546
5	6.10	29.25	0.542
10	6.42	29.46	0.525
30	6.46	29.51	0.522
40	6.48	29.52	0.505
60	6.48	29.54	0.518
70	6.48	29.58	0.521
78	6.49	29.61	0.516

STA 48-3		Time 1318 (+8)	
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)
0	6.39	29.44	0.527
5	6.44	29.47	0.506
10	6.49	29.54	0.519
30	6.46	29.53	0.513
40	6.43	29.52	0.499
60	6.49	29.58	0.511
70	6.51	29.61	0.513
80	6.55	29.62	0.512

STA 48-4		Time 1525 (+8)	
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)
0	6.38	29.48	0.525
5	6.40	29.57	0.521
10	6.46	29.56	0.521
30	6.45	29.57	0.526
40	6.42	29.56	0.503
60	6.46	29.59	0.514
70	6.56	29.64	0.507
80	6.55	29.66	0.512

STA 48-5		Time 1914 (+8)	
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)
0	6.13	27.83	0.529
5	6.33	29.08	0.527
10	6.41	29.46	0.515
30	6.43	29.53	0.501
40	6.45	29.56	0.517
60	6.46	29.55	0.493
70	6.46	29.59	0.517
80	6.50	29.60	0.546

STA 48-6		Time 2112 (+8)	
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)
0	5.89	26.60	0.565
5	6.20	29.18	0.532
10	6.30	29.38	0.533
30	6.37	29.43	0.525
40	6.38	29.48	0.509
60	6.51	29.56	0.505
70	6.53	29.66	0.511
80	6.50	29.66	0.510

BROWN BEAR CRUISE 48

30 - 31 January 1954

Guemus Channel

LAT. 48° 30.2' N, LONG. 122° 33.6' W

Depth 40 fm

STA 48-7		Time 2112 (+8)	
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)
0	5.88	27.00	0.569
5	6.17	28.68	0.548
10	6.15	28.96	0.545
30	6.40	29.51	0.527
40	6.38	29.33	0.520
60	6.43	29.52	0.519
70	6.50	29.59	0.518
80	6.48	29.59	0.515

STA 48-8		Time 2315 (+8)	
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)
0	6.18	27.99	0.549
5	6.21	28.87	0.541
10	6.31	29.17	0.536
30	6.37	29.41	0.528
40	6.39	29.50	0.522
60	6.40	29.51	0.523
70	6.42	29.52	0.515
80	6.49	29.58	0.514

STA 48-9		Time 0125 (+8)	
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)
0	6.65	29.32	0.515
5	6.64	29.49	0.511
10	6.67	29.50	0.521
30	6.68	29.48	0.505
40	6.65	29.49	0.515
60	6.59	29.51	0.515
70	6.56	29.50	0.518
80	6.54	29.48	0.514

STA 48-10		Time 0322 (+8)	
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)
0	6.54	29.48	0.525
5	6.55	29.51	0.446
10	6.57	29.52	0.411
30	6.61	29.52	0.522
40	6.59	29.52	0.501
60	6.63	29.52	0.515
70	6.59	29.52	0.521
80	6.58	29.52	0.514

STA 48-11		Time 0517 (+8)	
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)
0	6.57	29.52	-----
5	6.55	29.52	0.527
10	6.61	29.52	0.527
30	6.60	29.58	0.520
40	6.57	29.54	0.525
60	6.65	29.58	0.511
70	6.65	29.59	0.520
80	6.65	29.61	0.514

STA 48-12		Time 0712 (+8)	
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)
0	6.56	29.48	0.531
5	6.51	29.48	0.498
10	6.59	29.48	0.518
30	6.54	29.52	0.436
40	6.57	29.75	0.489
60	6.61	29.55	0.467
70	6.63	29.60	0.514
80	6.62	29.60	0.508

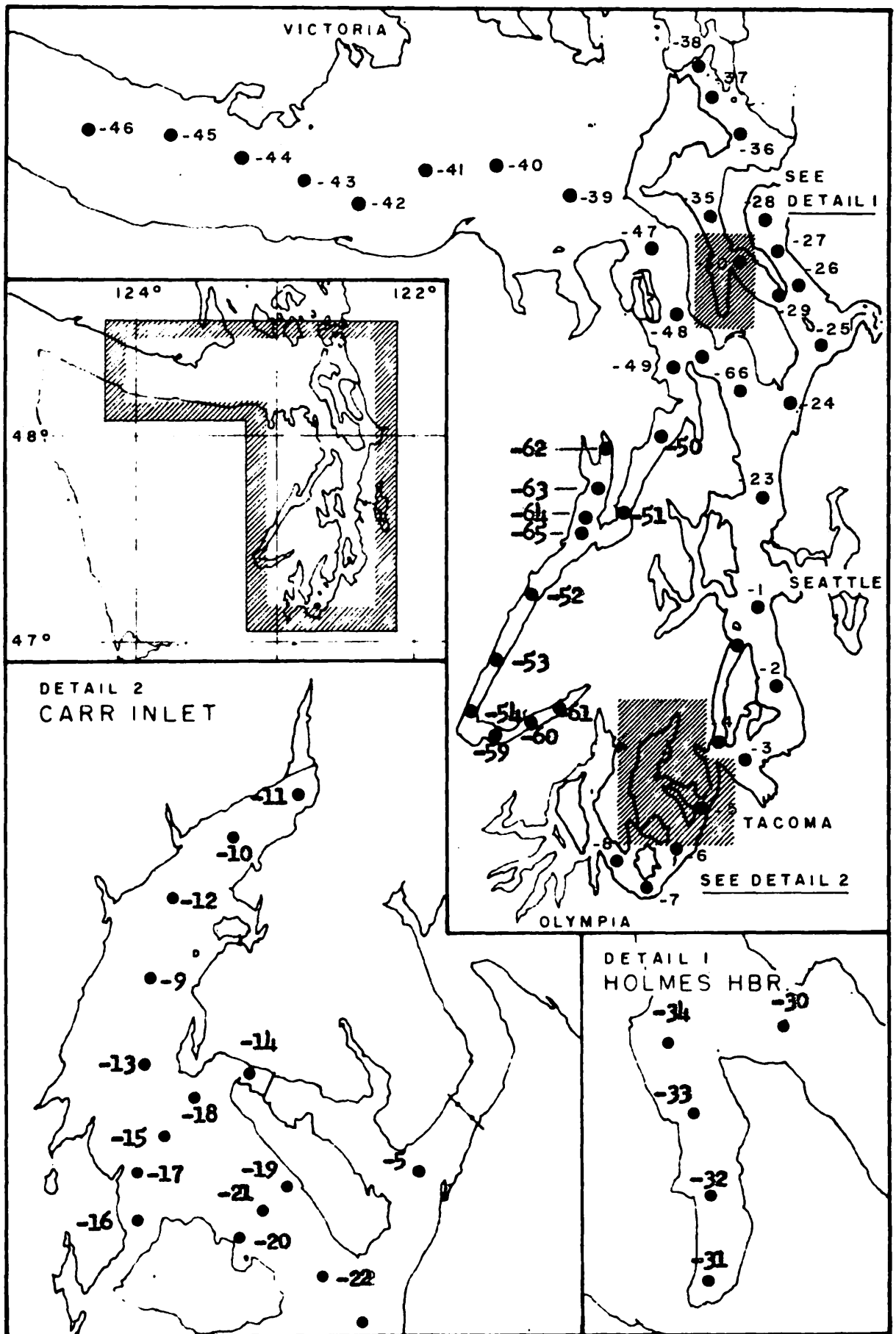
BROWN BEAR CRUISE 48

30 - 31 January 1954
 Guemus Channel
 LAT. 48° 30.2' N, LONG. 122° 33.6' W
 Depth 40 fm

STA 48-13		Time 0915 (+8)	
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)
0	6.56	29.51	0.526
5	6.54	29.52	0.526
10	6.58	29.52	0.521
30	6.58	29.56	0.521
40	6.59	29.59	0.509
60	6.60	29.61	0.518
70	6.61	29.62	0.517
80	6.59	29.63	0.515

STA 48-14		Time 1125 (+8)	
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)
0	6.54	29.43	0.527
5	6.48	29.47	0.527
10	6.52	29.51	0.523
30	6.59	29.56	0.521
40	6.55	29.57	0.515
60	6.59	29.63	0.513
70	6.59	29.64	0.515
73	6.58	29.65	0.513

STA 48-15		Time 1309 (+8)	
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)
0	6.68	29.40	0.527
5	6.52	29.48	0.525
10	6.57	29.52	0.525
30	6.60	29.60	0.525
40	6.57	29.59	0.520
60	6.65	29.68	0.518
70	6.67	29.71	0.520
73	6.65	29.70	0.526



Oceanographic Station Locations
 BROWN BEAR CRUISE 50
 15 - 19 February 1954

50-0

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STA 50-1 47° 34.5' N WEATHER c.
 15 Feb 54 122° 26.6' W WIND SSW 19
 1150 (+8) DEPTH 134 fm 47°/44°F
 Alki Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.11	28.76	0.530	2.28
5	8.12	28.79	0.529	2.28
10	8.10	28.81	0.529	2.34
19	8.09	28.82	0.526	2.11
29	8.07	28.81	0.524	2.18
47	8.09	28.86	0.518	2.10
71	8.02	29.05	0.508	1.92
95	7.84	29.20	0.507	2.38
133	7.74	29.26	0.509	2.38
171	7.69	29.26	0.507	2.42
209	7.69	29.29	0.513	2.46

STA 50-2 47° 26.6' N WEATHER 63
 15 Feb 54 122° 23.2' W WIND S 20
 1330 (+8) DEPTH 130 fm 45°/44°F
 Pully Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.04	28.49	0.551	2.42
5	8.11	28.48	0.551	2.11
10	8.06	28.50	0.552	2.35
20	8.10	28.53	0.545	2.25
29	8.10	28.67	0.534	2.21
49	8.08	29.06	0.509	2.23
73	8.00	29.19	0.507	2.15
98	7.88	29.24	0.506	2.43
137	7.84	29.30	0.504	2.35
176	7.88	29.33	0.502	2.47
216	7.94	29.33	0.503	2.62

STA 50-3 47° 19.4' N WEATHER o.
 15 Feb 54 122° 27.9' W WIND S 16
 1545 (+8) DEPTH 95 fm 47°/45°F
 Brown Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.10	28.71	0.534	2.39
5	8.17	28.69	0.534	2.70
10	8.17	28.75	0.528	2.30
20	8.17	28.81	0.523	2.26
30	8.21	28.85	0.515	2.26
50	8.16	28.98	0.511	2.08
75	8.06	29.21	0.507	2.02
100	7.94	29.27	0.507	2.45
130	8.00	29.32	0.504	2.25
160	8.02	29.34	0.496	2.58

STA 50-4 47° 21.0' N WEATHER o.
 15 Feb 54 122° 32.5' W WIND SSW 15
 1600 (+8) DEPTH 54 fm 48°/45°F
 Spring Beach

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.15	28.74	0.538	2.34
5	8.16	28.73	0.538	2.34
10	8.16	28.82	0.530	2.33
20	8.16	28.87	0.518	2.34
30	8.12	29.03	0.511	2.28
50	8.11	29.02	0.508	2.20
75	8.13	29.12	0.508	2.25
95	8.04	29.20	0.508	2.53

STA 50-5 47° 15.1' N WEATHER o.
 15 Feb 54 122° 34.4' W WIND S 23
 1735 (+8) DEPTH 37 fm 49°/44°F
 Day Island

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.06	28.42	0.538	2.37
5	8.10	28.49	0.538	2.41
10	8.08	28.64	0.525	2.29
20	8.12	28.71	0.527	2.34
30	8.08	28.70	0.525	----
50	8.10	28.68	0.530	2.33

STA 50-6 47° 10.7' N WEATHER 61
 15 Feb 54 122° 37.8' W WIND S 20
 1850 (+8) DEPTH 94 fm 49°/45°F
 Gordon Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.06	28.19	0.546	2.42
5	8.07	28.21	0.538	2.37
10	8.06	28.21	0.539	2.30
19	8.08	28.22	0.535	2.33
28	8.08	28.26	0.527	2.11
47	8.10	28.38	0.526	2.14
71	8.16	28.55	0.522	2.49
95	8.16	28.59	0.518	2.55
123	8.20	28.66	-----	2.46
152	8.16	28.69	0.518	2.41

STA 50-7 47° 07.2' N WEATHER c.
 15 Feb 54 122° 42.2' W WIND SSW 16
 2000 (+8) DEPTH 36 fm 46°/44°F
 Nisqually Reach

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.08	27.75	0.552	2.57
5	8.02	27.71	0.552	2.57
10	8.10	27.92	0.543	2.55
20	8.16	28.32	0.525	2.47
30	8.14	28.33	0.524	2.47
60	8.15	28.30	0.522	2.23

STA 50-8 47° 10.0' N WEATHER 61
 15 Feb 54 122° 47.4' W WIND SSW 10
 2100 (+8) DEPTH 46 fm 46°/44°F
 Devil's Head

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	7.92	27.58	0.549	2.49
5	7.94	27.57	0.548	2.53
10	7.92	27.58	0.549	2.61
20	7.98	27.65	0.545	2.52
30	8.09	27.96	0.542	2.30
50	8.14	28.23	0.517	2.29
75	8.24	28.40	0.525	2.45

STA 50-9 47° 19.0' N WEATHER 63 15 Feb 54 122° 42.5' W WIND SSW 18 2332 (+8) DEPTH 46 fm 46°/44°F Cutts Island, SW of				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	7.82	28.21	0.564	----
5	7.85	28.19	0.561	----
10	7.84	28.19	0.571	----
20	7.94	28.22	0.555	----
30	7.96	28.22	0.554	----
60	8.05	28.30	0.546	----

STA 50-10 47° 21.6' N WEATHER 60 16 Feb 54 122° 39.8' W WIND SSW 15 0006 (+8) DEPTH 14 fm 46°/44°F Elgin, East of				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	7.57	27.30	0.601	2.47
5	7.53	27.30	0.599	2.56
10	7.65	27.71	0.586	2.51
17	7.80	27.96	0.579	2.47
24	7.86	28.15	0.574	2.38

STA 50-11 47° 22.5' N WEATHER 60 16 Feb 54 122° 37.9' W WIND S 15 0037 (+8) DEPTH 7 fm 47°/44°F Wauna				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	7.27	26.32	0.610	2.47
5	7.35	26.62	0.606	2.53
10	7.66	27.69	0.583	2.51

STA 50-12 47° 20.4' N WEATHER 61 16 Feb 54 122° 41.7' W WIND SSW 16 0126 (+8) DEPTH 30 fm 48°/45°F Glencove, East of				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	7.83	28.17	0.577	2.50
5	7.84	28.18	0.574	2.41
10	7.84	28.20	0.573	2.39
20	7.94	28.21	0.569	2.52
30	7.91	28.22	0.556	2.57
50	7.92	28.22	0.562	2.57

STA 50-13 47° 17.1' N WEATHER 61
 16 Feb 54 122° 42.8' W WIND SW 20
 0221 (+8) DEPTH 47 fm 48°/45°F
 Green Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	7.94	28.25	0.554	2.45
5	7.95	28.26	0.558	2.52
10	7.95	28.28	0.556	2.46
20	7.96	28.28	0.555	2.49
29	7.97	28.28	0.551	2.54
39	8.00	28.32	0.542	2.46
59	8.06	28.36	0.541	2.67
81	8.19	28.50	0.509	2.78

STA 50-14 47° 16.7' N WEATHER 65
 16 Feb 54 122° 39.4' W WIND S 19
 0301 (+8) DEPTH 13 fm 45°/44°F
 Warren

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	7.93	28.22	0.554	----
5	7.96	28.22	0.552	----
10	7.95	28.23	0.556	----
20	7.98	28.22	0.551	----

STA 50-15 47° 15.7' N WEATHER 63
 16 Feb 54 122° 41.7' W WIND SSW 20
 0349 (+8) DEPTH 51 fm 45°/45°F
 South Head II

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	7.93	28.25	0.557	2.48
5	7.95	28.24	0.557	2.40
10	7.92	28.24	0.557	2.37
20	7.96	-----	0.556	2.35
30	7.98	28.28	0.546	2.30
39	7.99	28.31	0.547	2.31
59	8.10	28.37	0.525	2.45
84	8.21	28.50	0.515	2.56

STA 50-16 47° 13.9' N WEATHER 60
 16 Feb 54 122° 42.9' W WIND SSW 24
 0451 (+8) DEPTH 12 fm 44°/43°F
 South Head IV

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	7.96	28.29	0.556	----
5	7.97	28.29	0.557	----
10	7.95	28.28	0.556	----
15	8.00	28.29	0.548	----

STA 50-17 47° 14.9' N WEATHER 60
 16 Feb 54 122° 42.7' W WIND S 20
 0523 (+8) DEPTH 16 fm 45°/44°F
 South Head III

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	7.89	28.24	0.552	----
5	7.91	28.24	0.548	----
10	7.92	28.25	0.548	----
18	7.99	28.31	0.542	----

STA 50-18 47° 16.5' N WEATHER 60
 16 Feb 54 122° 41.1' W WIND S 24
 0558 (+8) DEPTH 60 fm 46°/44°F
 South Head I

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	7.92	28.27	0.549	----
5	7.95	28.27	0.549	----
9	7.93	28.27	0.548	----
19	8.00	28.25	0.543	----
28	8.14	28.41	0.518	----
37	8.19	28.50	0.507	----
56	8.26	28.56	0.504	----
75	8.25	28.59	0.498	----

STA 50-19 47° 14.7' N WEATHER c.
 16 Feb 54 122° 38.5' W WIND SSW 20
 0700 (+8) DEPTH 70 fm 47°/44°F
 Still Harbor I

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.02	28.13	0.535	----
5	8.04	28.12	0.537	----
10	8.03	28.18	0.537	----
20	8.06	28.28	0.532	----
30	8.07	28.29	0.529	----
49	8.05	28.29	0.529	----
74	8.10	28.30	0.529	----
92	8.20	28.47	0.505	----
115	8.22	28.62	0.505	----

STA 50-20 47° 13.7' N WEATHER c.
 16 Feb 54 122° 39.7' W WIND S 12
 0741 (+8) DEPTH 35 fm 47°/44°F
 Still Harbor III

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	7.98	28.28	0.541	----
5	7.98	28.27	0.546	----
10	7.96	28.28	0.545	----
20	8.01	28.28	0.541	----
30	8.02	28.32	0.535	----
50	8.12	28.40	0.518	----

STA 50-21 47° 14.2' N WEATHER c. 16 Feb 54 122° 39.2' W WIND S 18 0808 (+8) DEPTH 67 fm 47°/44°F Still Harbor II				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	7.98	28.29	0.548	2.50
5	8.02	28.29	0.547	2.54
10	8.00	28.29	0.542	2.55
20	8.03	28.31	0.538	2.55
30	8.06	28.33	0.525	2.34
49	8.09	28.38	0.526	2.34
74	8.20	28.45	0.515	2.34
98	8.19	28.54	0.508	2.61
117	8.28	28.65	0.494	2.72

STA 50-22 47° 12.8' N WEATHER c. 16 Feb 54 122° 37.3' W WIND S 20 0848 (+8) DEPTH 92 fm 48°/44°F Gibson Point, Southwest of				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.05	28.25	0.532	2.54
5	8.05	28.25	0.536	2.55
10	8.05	28.27	0.532	2.42
20	8.10	28.38	0.522	2.47
30	8.08	28.42	0.522	2.47
50	8.11	28.52	0.514	2.09
75	8.18	28.59	0.512	2.19
99	8.14	28.61	0.510	2.57
129	8.16	28.61	0.512	2.43
158	8.12	28.67	0.511	2.34

STA 50-23 47° 44.6' N WEATHER c. 16 Feb 54 122° 25.4' W WIND SE 15 1250 (+8) DEPTH 154 fm 50°/46°F Point Jefferson				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.02	28.64	0.531	2.39
5	8.06	28.64	0.535	2.50
10	8.04	28.73	0.532	2.47
20	8.06	28.82	0.525	2.26
30	8.05	28.85	0.521	2.25
50	8.05	28.86	0.523	2.14
75	7.90	29.06	0.510	2.30
100	7.77	29.26	0.512	2.40
149	7.74	29.26	0.506	2.27
198	7.76	29.33	0.506	2.29
236	7.69	29.41	0.507	2.37
264	7.63	29.42	0.510	2.37

STA 50-24 47° 53.7' N WEATHER 61 16 Feb 54 122° 21.5' W WIND SE 14 1425 (+8) DEPTH 120 48°/46°F Possession Point				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	7.96	27.87	0.548	2.42
5	7.98	27.92	0.545	2.42
10	8.00	28.35	0.528	2.42
20	8.11	28.66	0.515	2.38
30	8.11	28.78	0.517	2.42
49	8.10	28.81	0.515	2.25
74	8.25	28.88	0.495	2.32
98	8.62	29.20	0.419	2.42
136	8.10	29.23	0.474	2.35
174	7.84	29.25	0.492	2.35
212	7.86	29.33	0.501	2.40

STA 50-25 47° 58.6' N WEATHER 61
 16 Feb 54 122° 17.3' W WIND SE 12
 1530 (+8) DEPTH 72 fm 47°/46°F
 Port Gardner

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.10	28.22	0.503	2.08
5	8.13	28.25	0.507	2.19
10	8.15	28.64	0.509	2.34
20	8.08	28.71	0.527	2.29
30	8.06	28.71	0.523	2.24
50	8.12	28.80	0.517	2.11
75	8.69	29.16	0.439	2.09
100	8.82	29.33	0.396	2.47
125	8.12	29.33	0.464	2.38

STA 50-26 48° 04.1' N WEATHER o.
 16 Feb 54 122° 20.0' W WIND SE 15
 1640 (+8) DEPTH 69 fm 47°/46°F
 Camano Head, East of

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	7.02	20.05	0.622	1.85
5	7.50	24.38	0.578	2.08
10	7.98	28.04	0.528	2.21
20	8.43	28.60	0.488	2.21
30	8.32	28.78	0.490	2.31
50	8.76	29.01	0.424	2.13
70	9.28	29.22	0.381	2.12
90	9.66	29.46	0.345	2.43
110	10.38	29.97	0.219	2.96
124	10.80	30.25	0.102	4.04

STA 50-27 48° 06.4' N WEATHER o.
 16 Feb 54 122° 22.2' W
 1730 (+8) DEPTH 69 fm

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	6.80	20.12	0.646	2.08
5	7.32	23.84	0.589	2.22
10	8.14	28.17	0.512	2.45
20	8.26	28.68	0.501	2.32
29	8.28	28.73	0.493	2.32
48	8.60	28.92	0.440	2.50
66	9.42	29.30	0.348	2.18
83	9.64	29.48	0.337	2.40
95	10.20	29.83	0.255	2.86
130	10.72	30.23	0.115	3.81

STA 50-28 48° 09.3' N WEATHER 61
 16 Feb 54 122° 24.5' W WIND SE 16
 1820 (+8) DEPTH 54 fm 47°/46°F
 Port Susan, Head of

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	6.50	18.48	0.663	2.22
5	7.12	22.68	0.613	2.13
10	7.36	24.36	0.578	2.14
20	8.30	28.58	0.493	2.25
40	8.31	28.71	0.483	2.30
60	9.15	29.08	0.393	2.25
80	9.30	29.26	0.362	2.20
105	9.80	29.49	0.329	2.53

STA 50-29 48° 02.9' N WEATHER 63
 16 Feb 54 122° 22.8' W WIND SE 9
 2000 (+8) DEPTH 95 fm 47°/46°F
 Camano Head, West of

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	7.38	24.24	0.587	2.22
5	7.91	26.89	0.552	2.20
10	8.00	27.76	0.533	2.47
20	8.27	28.48	0.504	2.45
30	8.32	28.60	0.498	2.33
50	8.45	28.89	0.477	2.58
75	8.70	29.06	0.453	2.47
100	9.06	29.30	0.415	2.65
125	8.83	29.33	0.427	2.58
150	8.70	29.33	0.431	2.58

STA 50-30 48° 06.5' N WEATHER 61
 16 Feb 54 122° 29.5' W WIND SE 11
 2110 (+8) DEPTH 77 fm 47°/46°F
 East Point

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	7.67	25.69	0.574	2.42
5	7.74	25.84	0.572	2.32
10	7.88	28.22	0.556	2.36
20	8.62	28.31	0.490	2.46
30	8.80	28.62	0.458	2.22
50	8.86	28.88	0.448	2.27
75	9.04	29.05	0.428	2.44
100	9.11	29.16	0.414	2.64
130	9.18	29.23	0.405	2.65

STA 50-31 48° 01.4' N WEATHER 61
 16 Feb 54 122° 31.8' W
 2230 (+8) DEPTH 19 fm
 Holmes Harbor, Head of

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.98	28.79	0.457	2.62
5	8.98	28.87	0.445	2.66
10	9.00	28.92	-----	2.58
20	9.08	28.94	0.409	2.61
30	9.09	28.95	0.414	2.55
35	9.15	29.01	0.413	2.77

STA 50-32 48° 03.1' N WEATHER c.
 16 Feb 54 122° 31.9' W WIND ESE 7
 2310 (+8) DEPTH 27 fm 47°/46°F
 Classic

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.06	27.18	0.542	2.37
5	8.26	27.61	0.525	2.43
10	8.38	27.96	0.520	2.46
20	8.79	28.57	0.480	2.54
30	8.94	28.84	0.459	2.44
40	9.22	29.06	0.398	2.49
50	9.24	29.11	0.395	2.93

STA 50-33 48° 04.8' N WEATHER 61 16 Feb 54 122° 32.2' W WIND SSE 7 2346 (+8) DEPTH 29 fm 47°/46°F Dines Point				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	7.98	26.88	0.545	2.02
5	8.02	26.95	0.535	2.18
10	8.42	28.18	0.492	2.19
20	8.72	28.54	0.481	2.35
30	8.78	28.67	0.466	2.31
40	9.26	29.12	0.387	2.46
50	9.28	29.09	0.391	2.46

STA 50-34 48° 06.2' N WEATHER 61 17 Feb 54 122° 32.9' W WIND SSE 11 0029 (+8) DEPTH 42 fm 47°/46°F Greenbank				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	7.91	26.67	0.550	2.22
5	7.98	26.84	0.543	2.14
10	8.06	27.02	0.534	2.32
20	8.53	28.27	0.490	2.40
30	8.82	28.69	0.458	2.37
40	9.05	29.00	0.419	2.02
50	9.30	29.16	0.396	2.27
60	9.34	29.22	0.379	2.50
83	9.40	29.23	0.374	2.58

STA 50-35 48° 11.1' N WEATHER 61 17 Feb 54 122° 33.0' W WIND SE 6 0123 (+8) DEPTH 48 fm 47°/46°F Onamac Point				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	7.77	26.11	0.565	2.17
5	7.82	26.18	0.559	2.22
10	7.92	26.52	0.598	2.10
20	8.00	26.77	0.545	2.16
30	8.15	27.15	0.522	2.14
50	8.95	28.92	0.435	2.11
70	9.50	29.21	0.372	2.48
90	9.35	29.25	0.375	2.41

STA 50-36 48° 18.5' N WEATHER 61 17 Feb 54 122° 29.5' W WIND SE 28 0706 (+8) DEPTH 17 fm 47°/45°F Strawberry Point, North of				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	7.39	23.28	0.604	2.25
3	7.48	23.73	0.600	1.95
5	7.82	25.95	0.564	2.19
10	7.98	28.27	0.544	2.26
20	8.76	28.31	0.453	2.39

STA 50-37 48° 21.4' N WEATHER o. 17 Feb 54 122° 33.4' W WIND SE 28 0812 (+8) DEPTH 8 fm 47°/45°F Goat Island				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	6.23	12.57	0.682	1.85
2	6.64	16.00	0.658	1.95
5	7.69	25.16	0.579	2.22
10	8.55	27.84	0.548	2.43

STA 50-38 48° 24.9' N WEATHER c. 17 Feb 54 122° 35.9' W WIND SSE 20 0904 (+8) DEPTH 20 fm 48°/46°F Dewey				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	7.00	22.59	0.606	2.21
5	6.96	22.61	0.606	2.24
10	6.94	22.95	0.605	2.22
20	7.28	25.01	0.565	2.22
30	7.02	28.04	0.550	2.26

STA 50-39 48° 12.8' N WEATHER b.c. 17 Feb 54 122° 51.8' W WIND Sx E 20 1247 (+8) DEPTH 50 fm 51°/46°F Protection Island				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	7.49	30.53	0.509	2.00
5	7.49	30.60	0.505	1.96
10	7.45	30.65	0.506	2.00
20	7.46	30.65	0.509	1.96
29	7.45	30.74	0.504	1.78
49	7.42	30.83	0.505	1.89
68	7.50	30.95	0.492	1.99
83	7.50	31.17	0.474	2.20

STA 50-40 48° 15.9' N WEATHER b.c. 17 Feb 54 123° 03.4' W WIND S 16 1422 (+8) DEPTH 91 fm 50°/46°F New Dungeness, Northeast of				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	7.49	30.76	0.511	1.88
5	7.48	30.80	0.508	1.88
10	7.42	30.80	0.504	1.88
20	7.42	30.90	0.492	1.86
30	7.45	30.94	0.488	1.81
50	7.46	31.05	0.486	2.09
75	7.49	31.15	0.479	1.68
100	7.50	31.33	0.460	2.13
130	7.57	31.56	0.438	1.83
160	7.60	31.75	0.425	2.03

STA 50-41 48° 15.1' N WEATHER b.
 17 Feb 54 123° 13.7' W WIND S 4
 1542 (+8) DEPTH 78 fm 52°/49°F
 New Dungeness, Northwest of

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	7.44	30.51	0.522	1.95
5	7.44	30.51	0.516	2.24
10	7.40	30.51	0.518	2.13
20	7.36	30.54	0.518	1.96
30	7.31	30.67	0.500	1.93
50	7.34	30.87	0.485	1.71
75	7.41	31.07	0.473	1.89
100	7.39	31.09	0.474	2.00
130	7.44	31.21	0.465	1.88

STA 50-42 48° 11.8' N WEATHER b.
 17 Feb 54 123° 23.3' W WIND SW 8
 1658 (+8) DEPTH 75 fm 50°/45°F
 Ediz Hook

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	7.80	30.41	0.538	1.44
5	7.80	30.42	0.536	1.45
10	7.71	30.44	0.536	1.44
20	7.64	30.60	0.532	1.45
30	7.59	30.61	0.524	1.38
50	7.44	30.88	0.500	1.42
74	7.47	31.22	0.472	1.79
98	7.48	31.39	0.459	1.73
123	7.52	31.52	0.442	1.88

STA 50-43 48° 15.1' N WEATHER o.
 17 Feb 54 123° 33.1' W WIND SW 12
 1819 (+8) DEPTH 95 fm 48°/44°F
 Race Rocks

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	7.56	30.70	0.522	1.73
5	7.54	30.78	0.506	1.83
10	7.53	30.77	0.506	1.91
20	7.54	30.80	0.506	1.89
30	7.51	30.82	0.503	1.80
50	7.48	30.96	0.489	1.90
75	7.50	31.09	0.480	1.98
100	7.46	31.15	0.474	2.09
130	7.52	31.53	0.449	2.01
160	7.60	31.93	0.422	2.04

STA 50-44 48° 16.4' N WEATHER 65
 17 Feb 54 123° 41.4' W WIND SW 20
 1950 (+8) DEPTH 103 fm 46°/43°F
 Beechy Head

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.18	29.25	0.574	1.21
5	8.20	29.29	0.559	1.20
10	8.18	30.19	0.553	1.27
19	7.82	30.36	0.537	1.54
28	7.60	30.68	0.505	1.82
47	7.60	30.71	0.503	1.71
60	7.49	30.80	0.493	1.81
65	7.56	30.82	0.501	1.90
90	7.42	30.98	0.475	1.93
130	7.54	31.53	0.440	2.08
150	7.64	31.74	0.427	1.84

STA 50-45 48° 18.0' N WEATHER 61
 17 Feb 54 123° 52.8' W WIND WSW 24
 2130 (+8) DEPTH 95 fm 46°/44°F
 Otter Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	7.94	29.34	0.573	1.28
5	7.96	29.33	0.573	1.26
10	7.90	29.46	0.570	1.34
20	7.68	30.08	0.555	1.54
30	7.44	30.44	0.529	1.78
50	7.75	30.66	0.531	1.54
75	7.70	30.83	0.516	1.66
100	7.68	30.99	0.494	2.02
115	7.54	31.51	0.446	2.02
140	7.76	32.64	0.356	1.89

STA 50-46 48° 18.2' N WEATHER 61
 17 Feb 54 124° 03.2' W WIND WSW 24
 2320 (+8) DEPTH 105 fm 41°/39°F
 Pillar Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	7.82	29.22	0.569	1.32
5	7.83	29.33	0.563	1.35
10	7.82	29.63	0.559	1.41
20	7.96	30.29	0.549	1.45
30	7.94	30.42	0.543	1.52
50	7.31	30.71	0.491	1.68
70	7.36	31.12	0.498	1.79
75	7.34	31.09	0.502	2.13
100	7.50	31.47	0.462	2.10
160	7.76	32.22	0.391	2.13

STA 50-47 48° 08.0' N WEATHER b.c.
 18 Feb 54 122° 41.5' W WIND SW 5
 0615 (+8) DEPTH 62 fm 39°/35°F
 Port Townsend

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	7.59	29.49	0.535	2.07
5	7.62	29.54	0.534	2.21
10	7.60	29.59	0.535	2.24
20	7.58	29.74	0.533	2.16
30	7.54	29.77	0.530	2.19
50	7.54	29.80	0.533	2.03
75	7.56	29.92	0.528	2.29
100	7.54	30.11	0.521	2.28

STA 50-48 48° 02.0' N WEATHER b.c.
 18 Feb 54 122° 37.3' W WIND SSE 8
 0731 (+8) DEPTH 72 fm 40°/38°F
 Bush Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	7.60	29.59	0.532	2.16
5	7.61	29.59	0.522	2.12
10	7.58	29.63	0.509	2.10
20	7.61	29.71	0.411	2.30
30	7.58	29.75	0.522	2.24
50	7.58	29.77	0.522	2.15
80	7.63	29.88	0.480	2.27
110	7.52	30.44	0.502	2.28

STA 50-49 47° 56.3' N WEATHER c. 18 Feb 54 122° 38.4' W 0845 (+8) DEPTH 57 fm Tala Point				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	7.47	28.01	0.544	1.98
5	7.56	28.73	0.533	1.96
10	7.56	29.06	0.529	2.03
20	7.63	29.39	0.522	2.02
30	7.64	29.47	0.515	2.14
50	7.64	29.63	0.513	2.91
75	7.64	29.72	0.516	2.15
100	7.60	29.89	0.512	2.29

STA 50-50 47° 50.2' N WEATHER c. 18 Feb 54 122° 39.6' W WIND SSE 4 1040 (+8) DEPTH 37 fm 42°/40°F South Point				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	7.38	26.20	0.575	2.09
5	7.44	26.44	0.568	2.10
10	7.48	27.47	0.548	2.21
20	7.54	29.04	0.524	2.08
30	7.52	29.59	0.515	1.96
40	7.54	29.70	0.508	2.13
60	7.56	29.99	0.509	2.25

STA 50-51 47° 42.0' N WEATHER c. 18 Feb 54 122° 45.6' W WIND SW 8 1230 (+8) DEPTH 69 fm 43°/40°F Hazel Point				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	7.02	24.16	0.612	1.97
5	7.34	24.88	0.586	2.05
10	7.56	27.48	0.535	2.32
20	7.60	29.03	0.498	2.23
30	7.63	29.14	0.492	2.07
49	7.74	29.44	0.476	2.02
78	7.84	29.62	0.465	2.18
107	7.66	29.65	0.491	2.36

STA 50-52 47° 35.8' N WEATHER 61 18 Feb 54 122° 57.8' W WIND SSW 11 1425 (+8) DEPTH 43°/41°F Tekiu Point				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	7.34	23.08	0.604	1.90
5	7.35	23.22	0.601	1.98
10	7.72	27.36	0.528	2.11
20	8.44	29.33	0.428	2.32
29	8.40	29.42	0.423	2.41
47	9.02	29.69	0.384	2.47
70	9.12	29.77	0.377	2.48
92	9.52	30.02	0.316	2.79
118	9.92	30.25	0.239	2.85
145	10.06	30.36	0.215	2.94

STA 50-53 47° 28.8' N WEATHER 61
 18 Feb 54 123° 03.2' W WIND SSW 7
 1556 (+8) DEPTH 83 fm 40°/39°F
 Eagle Creek

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	7.46	24.99	0.560	2.05
5	7.90	26.59	0.516	2.28
10	8.22	28.56	0.472	2.42
20	8.79	29.24	0.411	2.65
30	9.30	29.55	0.383	2.33
49	9.34	29.69	0.367	2.35
73	9.74	29.90	0.320	2.43
96	9.84	29.88	0.286	2.68
120	10.02	30.36	0.201	2.89
142	10.06	30.36	0.192	2.96

STA 50-54 47° 23.5' N WEATHER 61
 18 Feb 54 123° 07.8' W WIND SW 5
 1710 (+8) DEPTH 60 fm 38°/37°F
 Musqueti Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	6.39	15.90	0.652	1.87
5	8.36	27.90	0.473	2.32
10	8.84	29.03	0.404	2.41
20	9.56	29.58	0.317	2.69
30	9.53	29.65	0.328	2.56
40	9.46	29.70	0.357	2.49
60	9.76	30.11	0.277	3.08
90	9.90	29.86	0.216	2.75
100	9.98	30.23	0.193	3.14
112	9.99	30.29	0.181	3.17

STA 50-59 47° 21.5' N WEATHER 61
 18 Feb 54 123° 03.8' W WIND Calm
 1915 (+8) DEPTH 22 fm 46°/45°F
 Tahuya River

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	5.68	12.76	0.745	0.75
5	8.70	28.22	0.425	2.48
10	9.38	29.32	0.307	2.62
20	9.56	29.55	0.278	2.85
30	9.60	29.68	0.275	2.72
40	9.64	29.71	0.270	2.77

STA 50-60 47° 22.6' N WEATHER 70
 18 Feb 54 122° 59.7' W WIND Calm
 2000 (+8) DEPTH 19 fm 35°/35°F
 Lynch Cove, Middle of

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	6.22	15.84	0.744	0.52
5	8.85	28.30	0.385	2.57
10	9.38	29.23	0.269	3.03
20	9.57	29.53	0.206	3.01
30	9.59	29.64	0.227	2.80
37	9.63	29.70	0.241	3.02

STA 50-61 47° 23.9' N WEATHER 70 18 Feb 54 122° 55.9' W WIND WSW 4 2045 (+8) DEPTH 11 fm 36°/35°F Lynch Cove				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	6.18	12.81	0.775	0.54
5	8.91	27.86	0.348	2.66
10	9.26	28.91	0.219	2.78
14	9.48	29.30	0.205	2.87
18	9.51	29.46	0.154	2.86

STA 50-62 47° 50.0' N WEATHER 61 19 Feb 54 122° 48.7' W WIND SSE 28 0430 (+8) DEPTH 24 fm 46°/44°F Dabob Bay, Head of				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	6.28	22.41	0.647	2.06
5	6.28	22.52	0.650	2.09
10	6.63	23.48	0.634	2.08
20	9.20	29.53	0.424	2.54
30	9.42	29.81	0.348	2.45
40	9.22	29.85	0.358	2.38

STA 50-63 47° 45.2' N WEATHER 61 19 Feb 54 122° 49.9' W WIND S 24 0545 (+8) DEPTH 103 fm 47°/46°F Tabook Point				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	6.88	24.76	0.628	2.10
5	6.88	24.74	0.620	2.21
10	6.90	24.74	0.619	2.21
20	8.63	29.35	0.416	2.54
30	8.94	29.57	0.392	2.43
40	8.94	29.64	0.389	2.45
60	9.18	29.82	0.361	2.54
79	9.04	29.86	0.374	2.72
98	9.34	30.03	0.333	2.64
117	9.82	30.23	0.280	2.78
135	10.13	30.37	0.242	2.94
152	9.80	30.54	0.149	3.51
170	9.72	30.58	0.135	3.59
188	9.62	30.58	0.109	3.88

STA 50-64 47° 41.7' N WEATHER 61 19 Feb 54 122° 51.7' W WIND S 32 0700 (+8) DEPTH 77 fm 47°/47°F Tskutsko Point				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	7.18	25.14	0.592	2.08
5	7.19	25.19	0.594	2.02
10	7.18	25.19	0.593	1.97
20	8.04	28.90	0.465	2.24
30	8.50	29.47	0.418	2.24
49	8.90	29.70	0.386	2.35
73	8.38	29.70	0.421	2.19
97	8.42	29.75	0.408	2.50
124	9.68	30.16	0.297	2.64

STA 50-65 47° 40.3' N WEATHER 61
 19 Feb 54 122° 52.0' W WIND SSW 26
 0751 (+8) DEPTH 77 fm 46°/46°F
 Pleasant Harbor

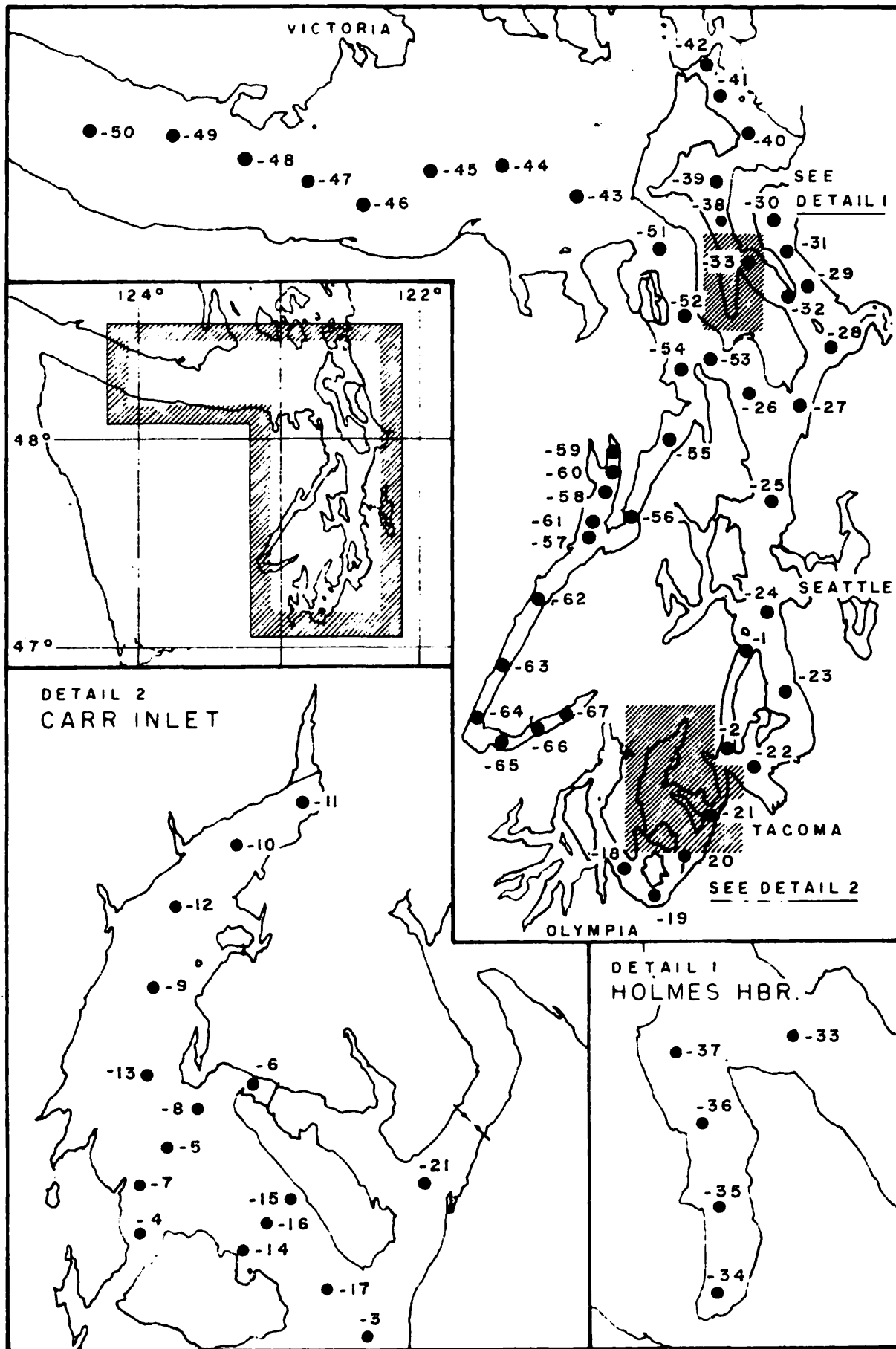
STA 50-66 47° 53.7' N WEATHER 61
 19 Feb 54 122° 28.7' W WIND SxW 30
 1140 (+8) DEPTH 110 fm 47°/46°F
 Point No Point

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
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0	7.32	25.66	0.586	2.02
5	7.28	25.66	0.590	2.04
10	7.29	25.73	0.586	2.03
20	7.98	28.91	0.464	2.17
29	8.50	29.23	0.419	2.18
48	8.32	29.35	0.426	2.08
71	8.20	29.43	0.438	2.35
93	8.20	29.52	0.431	2.52
115	8.66	29.69	0.397	2.54

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
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0	7.89	28.98	0.529	2.24
5	7.92	28.98	0.530	2.26
10	7.88	28.99	0.532	2.32
20	7.90	29.00	0.529	2.34
29	7.86	29.01	0.526	2.25
48	7.86	29.05	0.533	2.21
72	7.88	29.04	0.532	2.21
85	7.86	29.08	0.529	2.24
120	7.82	29.20	0.533	2.30
170	7.76	29.32	0.529	2.14



Oceanographic Station Locations
 BROWN BEAR CRUISE 53
 22 - 26 March 1954

STA 53-1 47° 30.9' N WEATHER b.
 22 Mar 54 122° 28.9' W
 1211 (+8) DEPTH 58 fm
 Point Vashon

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	7.92	28.39	0.560	2.16
5	7.86	28.39	0.561	2.16
10	7.79	28.45	0.548	2.16
20	7.78	28.52	0.547	2.25
30	7.78	28.53	0.545	2.09
50	7.79	28.51	0.545	2.11
75	7.81	28.56	0.545	1.95
100	7.82	28.56	0.542	2.04

STA 53-2 47° 21.1' N WEATHER b.
 22 Mar 54 122° 32.4' W WIND Calm
 1406 (+8) DEPTH 54 fm 54°/48° F
 Spring Beach

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	7.89	28.22	0.556	----
5	7.91	28.23	0.556	----
10	7.90	28.23	0.558	----
20	7.90	28.22	0.556	----
30	7.84	28.22	0.553	----
49	7.86	28.27	0.544	----
69	7.86	28.30	0.551	----
88	7.85	28.39	0.548	----

STA 53-3 47° 11.7' N WEATHER 10
 22 Mar 54 122° 36.1' W WIND Calm
 1530 (+8) DEPTH 77 fm 54°/46° F
 Toliva Shoal

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.40	27.59	0.552	2.13
5	7.89	27.86	0.522	2.51
10	7.86	27.91	0.555	2.51
20	7.84	27.96	0.552	2.08
30	7.84	27.99	0.552	2.40
49	7.87	28.12	0.548	2.08
73	7.86	28.21	0.543	1.99
98	7.86	21.22	0.537	2.26
123	7.86	28.26	0.543	2.24

STA 53-4 47° 14.0' N WEATHER 10
 22 Mar 54 122° 42.9' W WIND Calm
 1650 (+8) DEPTH 9 fm 60°/50° F
 South Head IV

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.38	27.98	0.630	----
5	8.22	27.98	0.616	----
10	8.07	27.98	0.628	----
15	8.00	27.98	0.582	----

STA 53-5 47° 15.6' N WEATHER 10 22 Mar 54 122° 41.6' W WIND N 1 1730 (+8) DEPTH 50 fm 56°/48°F South Head II				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.52	27.91	0.672	2.17
5	8.15	27.93	0.643	2.10
10	7.92	28.01	0.588	2.10
20	7.83	28.05	0.526	2.17
30	7.80	28.11	0.551	2.17
40	7.82	28.15	0.554	2.18
60	7.82	28.13	0.537	2.31
85	7.81	-----	0.541	2.43

STA 53-6 47° 16.8' N WEATHER 10 22 Mar 54 122° 39.4' W WIND Calm 1807 (+8) DEPTH 12 fm 59°/48°F Warren				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.00	28.11	0.596	----
5	8.04	28.10	0.588	----
10	8.08	28.10	0.586	----
15	8.02	28.12	0.575	----
20	8.02	28.10	0.576	----

STA 53-7 47° 14.8' N WEATHER 10 22 Mar 54 122° 42.8' W WIND Calm 1852 (+8) DEPTH 13 fm 53°/45°F South Head III				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.22	27.91	0.670	----
5	8.14	27.95	0.640	----
10	7.90	27.95	0.613	----
20	7.87	28.03	0.572	----

STA 53-8 47° 16.5' N WEATHER 10 22 Mar 54 122° 41.0' W WIND S 1 1933 (+8) DEPTH 55 fm 51°/45°F South Head I				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.00	27.96	0.616	----
5	7.90	28.07	0.578	----
10	7.84	28.07	0.569	----
20	7.82	28.13	0.561	----
30	7.81	28.13	0.555	----
40	7.81	28.15	0.541	----
60	7.82	28.17	0.552	----
80	7.82	28.29	0.548	----

STA 53-9 47° 18.7' N WEATHER b.
 22 Mar 54 122° 42.4' W WIND NNW 5
 2024 (+8) DEPTH 40 fm 49°/45°F
 Cutts Island, Southwest of

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.38	27.82	0.757	1.76
5	8.26	27.87	0.758	1.81
10	7.84	27.96	0.580	2.21
20	7.79	28.11	0.561	2.23
30	7.80	28.11	0.550	2.28
40	7.81	28.14	0.531	2.21
60	7.79	28.21	0.542	2.36

STA 53-10 47° 21.5' N WEATHER 10
 22 Mar 54 122° 40.0' W WIND NNE 6
 2111 (+8) DEPTH 15 fm 46°/42°F
 Elgin, East of

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.64	27.45	0.618	1.85
5	8.00	27.75	0.509	2.01
10	7.92	27.91	0.636	2.10
17	7.76	28.04	0.498	2.23
24	7.76	28.06	0.528	2.14

STA 53-11 47° 22.5' N WEATHER b.
 22 Mar 54 122° 38.0' W WIND NNW 6
 2139 (+8) DEPTH 9 fm 43°/40°F
 Wauna

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0				
0	8.35	27.81	0.652	2.07
5	8.12	27.86	0.644	2.01
10	7.85	27.95	0.561	2.44

STA 53-12 47° 20.3' N WEATHER b.
 22 Mar 54 122° 41.7' W WIND NNW 3
 2229 (+8) DEPTH 30 fm 43°/41°F
 Glencove, East of

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.32	27.66	0.470	1.78
5	7.94	27.80	0.528	1.81
10	7.84	27.94	0.477	2.05
20	7.79	28.06	0.500	2.10
30	7.80	28.10	0.536	2.20
40	7.80	28.10	0.522	2.13
50	7.81	28.17	0.532	2.26

STA 53-13 47° 17.0' N WEATHER b.
 22 Mar 54 122° 42.5' W WIND NNW 1
 2311 (+8) DEPTH 53 fm 45°/42°F
 Green Point

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.28	27.90	0.674	----
5	8.11	27.94	0.634	----
10	7.90	28.00	0.571	----
30	7.83	28.10	0.563	----
40	7.82	28.11	0.520	----
60	7.82	28.21	0.542	----
85	7.85	28.23	0.534	----

STA 53-14 47° 13.6' N WEATHER b.
 23 Mar 54 122° 39.7' W WIND NNW 4
 2400 (+8) DEPTH 30 fm 46°/42°F
 Still Harbor III

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.20	27.95	0.690	----
5	8.08	27.97	0.680	----
10	7.98	27.99	0.598	----
20	7.83	28.06	0.576	----
30	7.80	28.10	0.560	----
50	7.82	28.15	0.552	----

STA 15 47° 14.6' N WEATHER b.
 23 Mar 54 122° 38.4' W WIND E 2
 0038 (+8) DEPTH 67 fm 46°/42°F
 Still Harbor I

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.18	28.01	0.588	
5	8.04	28.03	0.588	
10	7.97	28.03	0.573	
20	7.85	28.06	0.560	
30	7.88	28.12	0.553	
50	7.88	28.13	0.551	
75	7.88	28.19	0.551	
100	7.82	28.22	0.548	
120	7.84	28.33	0.546	

STA 16 47° 14.2' N WEATHER 10
 23 Mar 54 122° 39.3' W WIND Calm
 0017 (+8) DEPTH 65 fm 46°/42°F
 Still Harbor II

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.16	28.00	0.582	2.19
5	8.21	28.01	0.584	2.18
10	8.14	28.05	0.576	2.19
20	7.90	28.09	0.571	2.19
30	7.86	28.11	0.558	2.27
49	7.83	28.18	0.554	2.18
73	7.82	28.21	0.544	2.28
98	7.79	28.26	0.536	2.38
118	7.82	28.30	0.526	----

STA 53-17 47° 12.8' N WEATHER b. 23 Mar 54 122° 37.4' W WIND SSE 5 0203 (+8) DEPTH 88 fm 44°/42°F Gibson Point, Southwest				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	7.76	28.05	0.564	2.13
5	7.88	28.09	0.560	2.13
10	7.85	28.11	0.556	2.18
20	7.83	28.12	0.554	2.17
30	7.86	28.14	0.549	2.12
50	7.86	28.14	0.547	2.12
75	7.90	28.29	0.549	2.07
100	7.86	28.31	0.548	2.14
130	7.86	28.31	0.542	2.13
160	7.84	28.34	0.544	2.06

STA 53-18 47° 09.9' N WEATHER b. 23 Mar 54 122° 47.5' W WIND Calm 0346 (+8) DEPTH 46 fm 40°/39°F Devil's Head				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	7.85	27.44	0.555	2.49
5	7.88	27.44	0.558	2.52
10	7.91	27.53	0.560	2.47
20	7.88	27.76	0.553	2.45
30	7.84	27.87	0.547	2.37
49	7.84	28.05	0.545	2.43
73	7.84	28.08	0.549	2.37

STA 53-19 47° 07.3' N WEATHER b. 23 Mar 54 122° 42.8' W WIND SxW 2 0440 (+8) DEPTH 35 fm 37°/35°F Nisqually Reach				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	7.66	27.06	0.573	2.45
5	7.84	27.80	0.560	2.45
10	7.83	27.94	0.559	2.39
20	7.83	28.22	0.553	2.24
40	7.84	28.25	0.550	2.14
60	7.85	28.24	0.548	2.14

STA 53-20 47° 11.2' N WEATHER b. 23 Mar 54 122° 37.8' W WIND WSW 2 0553 (+8) DEPTH 92 fm 38°/37°F Gordon Point				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	7.72	27.44	0.567	2.33
5	7.84	27.84	0.559	2.52
10	7.88	28.00	0.560	2.50
20	7.89	28.04	0.560	2.45
30	7.84	28.16	0.548	2.38
50	7.85	28.18	0.547	2.38
75	7.87	28.20	0.547	2.45
100	7.85	28.26	0.551	2.54
130	7.85	28.30	0.547	2.34
160	-----	28.31	0.545	2.31

STA 53-21 47° 14.9' N WEATHER 10
 23 Mar 54 122° 34.4' W WIND WSW 2
 0648 (+8) DEPTH 39 fm 48°/45°F
 Day Island

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	7.80	28.36	0.548	2.55
5	7.83	28.39	0.550	2.39
10	7.82	28.40	0.551	2.33
20	7.84	28.40	0.552	2.31
30	7.81	28.43	0.552	2.46
50	7.84	28.46	0.550	2.27

STA 53-22 47° 19.2' N WEATHER 10
 23 Mar 54 122° 27.8' W WIND ESE 5
 0832 (+8) DEPTH 95 fm 47°/46°F
 Brown Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	7.36	23.48	0.600	2.32
5	7.89	27.82	0.578	2.50
10	7.86	28.45	0.560	2.58
20	7.85	28.49	0.550	2.53
30	7.81	28.56	0.548	2.53
50	7.82	28.65	0.540	2.61
75	7.80	28.85	0.547	2.62
100	7.80	29.03	0.522	2.57
130	7.76	29.12	0.523	2.53
160	7.78	29.20	0.518	2.45
174	7.75	29.18	0.522	2.50

STA 53-23 47° 26.5' N WEATHER b.c.
 23 Mar 54 122° 23.7' W WIND Calm
 1011 (+8) DEPTH 130 fm 43°/41°F
 Pully Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.16	28.28	0.578	2.44
5	8.08	28.27	0.578	2.45
10	8.00	28.28	0.578	2.48
20	8.06	28.44	0.559	2.61
30	7.92	28.48	0.553	2.58
50	7.82	28.66	0.537	2.53
75	7.81	28.92	0.528	2.50
100	7.78	29.07	0.519	2.50
140	7.75	29.17	0.516	2.50
180	7.71	29.21	0.515	2.49
220	7.76	29.22	0.510	2.49

STA 53-24 47° 34.6' N WEATHER b.c.
 23 Mar 54 122° 27.0' W WIND SSE 5
 1133 (+8) DEPTH 129 fm 45°/42°F
 Alki Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.18	28.14	0.576	2.29
5	7.92	28.41	0.556	2.22
10	7.86	28.48	0.556	2.19
20	7.84	28.48	0.547	2.21
30	7.85	28.49	0.543	2.18
50	7.86	28.55	0.544	2.16
75	7.79	28.91	0.530	2.10
100	7.74	29.06	0.524	2.09
140	7.70	29.16	0.523	2.09
180	7.68	29.20	0.516	2.06
220	7.73	29.20	0.518	2.08

STA 53-25 47° 44.3' N WEATHER o.
 23 Mar 54 122° 25.4' W WIND Calm
 1312 (+8) DEPTH 152 fm 48°/45°F
 Point Jefferson

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.28	27.57	0.625	2.05
5	8.12	27.77	0.614	2.36
10	8.11	27.83	0.614	2.36
20	7.92	28.29	0.586	2.48
30	7.85	28.50	0.569	2.38
50	7.83	28.60	0.562	2.16
75	7.78	28.83	0.553	2.41
100	7.72	29.00	0.552	2.42
150	7.70	29.14	0.552	2.28
200	7.69	29.25	0.549	2.32
240	7.75	29.23	0.542	2.35
270	7.69	29.31	0.546	2.41

STA 53-26 47° 53.9' N WEATHER c.
 23 Mar 54 122° 28.5' W WIND SxE 6
 1531 (+8) DEPTH 110 fm 51°/46°
 Point No Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.22	26.96	0.586	1.86
5	7.98	27.95	0.554	2.11
10	7.88	28.26	0.552	2.19
20	7.87	28.28	0.544	2.21
30	7.81	28.66	0.537	2.09
50	7.76	28.84	0.532	2.07
75	7.74	29.06	0.523	1.99
94	7.74	29.10	0.528	2.07
122	7.74	29.13	0.530	1.95
150	7.72	29.16	0.529	1.95
178	7.74	29.28	0.512	1.94

STA 53-27 47° 53.6' N WEATHER 10
 23 Mar 54 122° 21.6' W WIND N 4
 1637 (+8) DEPTH 133 fm 51°/46°F
 Possession Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.18	26.42	0.578	1.89
5	7.96	27.83	0.532	2.08
10	7.90	28.10	0.529	1.82
19	7.88	28.26	0.542	2.12
29	7.79	28.58	0.544	2.04
48	7.78	28.77	0.533	2.11
73	7.80	28.87	0.523	2.13
97	7.91	29.03	0.498	2.20
135	7.78	29.09	0.513	2.11
174	7.71	29.15	0.522	2.06
212	7.74	29.22	0.526	2.04

STA 53-28 47° 58.5' N WEATHER 10
 23 Mar 54 122° 17.2' W WIND NNW 8
 1751 (+8) DEPTH 72 fm 52°/48°F
 Port Gardner

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.52	22.16	0.629	1.54
5	7.96	27.79	0.500	2.20
10	7.92	28.30	0.493	2.22
20	7.78	28.49	0.530	2.23
30	7.99	28.60	0.455	2.16
50	7.89	28.77	0.503	2.20
80	8.27	29.10	0.418	2.30
110	8.01	29.14	0.464	2.34
134	7.99	29.15	0.473	2.28

STA 53-29 48° 04.0' N WEATHER o. 23 Mar 54 122° 19.8' W WIND NNE 9 1912 (+8) DEPTH 68 fm 48°/45°F Camano Head, East of				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.71	19.07	0.657	1.48
5	7.94	27.33	0.544	2.17
10	7.92	28.20	0.516	2.30
20	7.94	28.49	0.503	2.25
30	7.92	28.57	0.506	2.20
49	8.17	28.79	0.431	2.25
69	8.29	29.00	0.369	2.09
88	8.80	29.25	0.365	2.54
98	9.24	29.40	0.322	2.62
108	9.64	29.61	0.251	2.98
120	10.08	29.87	0.152	3.74

STA 53-30 48° 09.2' N WEATHER o. 23 Mar 54 122° 24.4' W WIND NNE 11 2038 (+8) DEPTH 52 fm 46°/44°F Port Susan, Head of				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.30	24.00	0.626	1.80
5	7.90	27.30	0.546	2.13
10	7.90	28.18	0.512	2.30
20	8.10	28.54	0.485	2.30
30	8.24	28.70	0.459	2.31
40	8.40	28.77	0.452	2.33
60	8.73	29.09	0.394	2.28
80	8.83	29.13	0.354	2.57
81	8.76	29.07	0.354	2.62

STA 53-31 48° 06.1' N WEATHER o. 23 Mar 54 122° 22.0' W WIND NxE 11 2142 (+8) DEPTH 69 fm 47°/45°F Port Susan, Middle of				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.36	22.75	0.634	1.92
5	7.92	27.70	0.542	2.30
10	7.87	28.05	0.536	2.31
20	8.10	28.61	0.478	2.37
30	8.06	28.68	0.476	2.35
50	8.22	28.86	0.425	2.26
70	8.34	29.04	0.388	2.22
90	9.13	29.29	0.344	2.46
100	9.27	29.36	0.318	2.61
110	9.73	29.62	0.236	3.06
126	10.24	29.92	0.117	3.99

STA 53-32 48° 02.8' N WEATHER c. 23 Mar 54 122° 22.2' W WIND NxE 11 2257 (+8) DEPTH 107 fm 46°/43°F Camano Head, West of				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.50	23.69	0.679	1.41
5	8.34	25.68	0.600	1.93
10	7.96	27.95	0.526	2.19
20	7.92	28.49	0.504	2.26
30	8.08	28.76	0.473	2.30
49	8.13	28.89	0.463	2.23
73	8.16	29.05	0.454	2.23
98	8.12	29.13	0.461	2.34
123	8.06	29.17	0.469	2.30
147	7.98	29.18	0.476	2.29

STA 53-33 48° 06.5' N WEATHER o.
 24 Mar 54 122° 29.4' W WIND NNW 12
 0039 (+8) DEPTH 80 fm 45°/43°F
 East Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.32	24.51	0.656	1.64
5	8.22	27.55	0.524	2.28
10	8.14	27.89	0.515	2.30
20	8.08	28.49	0.496	2.24
30	8.16	28.58	0.490	2.29
50	8.36	29.00	0.452	2.38
75	8.35	29.07	0.445	2.39
100	8.34	29.07	0.446	2.47
130	8.32	29.09	0.445	2.47

STA 53-34 48° 01.4' N WEATHER b.c.
 24 Mar 54 122° 31.8' W WIND NNW 12
 0216 (+8) DEPTH 21 fm 45°/43°F
 Holmes Harbor, Head of

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.82	22.23	0.696	1.43
5	8.84	22.34	0.700	1.42
10	8.20	27.28	0.533	2.22
20	8.32	28.54	0.470	2.42
30	8.45	28.72	0.433	2.54
39	8.50	28.77	0.405	2.82

STA 53-35 48° 03.1' N WEATHER b.c.
 24 Mar 54 122° 31.6' W WIND NNW 13
 0300 (+8) DEPTH 26 fm 46°/44°F
 Classic

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.78	21.94	0.714	1.24
5	8.82	21.96	0.719	1.35
10	8.19	25.48	0.529	2.24
20	8.34	28.48	0.472	2.45
30	8.46	28.67	0.440	2.49
40	8.50	28.75	0.436	2.51
48	8.44	28.82	0.395	2.76

STA 53-36 48° 04.9' N WEATHER c.
 24 Mar 54 122° 32.2' W WIND NNW 15
 0354 (+8) DEPTH 31 fm 46°/44°F
 Dines Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.54	22.41	0.715	1.46
5	8.54	22.74	0.701	1.44
10	8.20	27.56	0.519	2.19
19	8.25	28.35	0.484	2.69
29	8.28	28.59	0.470	2.50
38	8.40	28.71	0.457	2.64
48	8.48	28.68	0.426	2.64

STA 53-37 48° 06.0' N WEATHER c. 24 Mar 54 122° 32.9' W WIND NW 12 0507 (+8) DEPTH 37 fm 46°/44°F Greenbank				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.50	22.61	0.713	1.42
5	8.41	25.61	0.591	2.29
10	8.20	27.59	0.516	2.52
19	8.16	28.31	0.496	2.68
29	8.26	28.55	0.476	2.72
39	8.38	28.67	0.462	2.76
48	8.43	28.88	0.451	2.60
58	8.44	28.87	0.432	2.66
65	8.46	28.88	0.434	2.72

STA 53-38 48° 11.0' N WEATHER c. 24 Mar 54 122° 32.7' W WIND WNW 11 0638 (+8) DEPTH 55 fm 45°/44°F Onamak Point				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.14	23.28	0.624	1.80
5	8.24	27.63	0.499	2.44
10	8.16	27.77	0.495	2.47
19	8.18	28.46	0.493	2.54
29	8.26	28.60	0.476	2.52
48	8.34	28.85	0.455	2.52
72	8.44	28.99	0.439	2.54
96	8.48	29.07	0.425	2.74

STA 53-39 48° 14.1' N WEATHER o. 24 Mar 54 122° 32.9' W WIND Calm 0726 (+8) DEPTH 48 fm 45°/43°F Demock Point				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.28	23.04	0.611	1.76
5	8.30	27.61	0.493	2.35
10	8.20	28.15	0.489	2.38
20	8.34	28.59	0.463	2.39
30	8.40	28.74	0.450	2.41
40	8.45	28.82	0.455	2.37
50	8.49	28.88	0.437	2.51
60	8.54	28.96	0.427	2.62
87	8.49	29.11	0.428	2.65

STA 53-40 48° 18.5' N WEATHER b. 24 Mar 54 122° 29.5' W WIND NNW 4 0842 (+8) DEPTH 17 fm 50°/45°F Strawberry Point				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	7.86	20.63	0.588	1.72
2	8.40	26.45	0.501	2.24
5	8.38	27.97	0.472	2.39
10	8.42	28.33	0.454	2.46
20	8.46	28.71	0.442	2.44

STA 53-41 48° 21.5' N WEATHER o. 24 Mar 54 122° 33.3' W WIND SSE 3 0923 (+8) DEPTH 8 fm 46°/42°F Goat Island				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	6.98	17.47	0.609	1.64
2	8.24	25.92	0.505	2.21
5	8.39	27.67	0.471	2.46
10	8.44	28.56	0.446	2.30

STA 53-42 48° 25.0' N WEATHER o. 24 Mar 54 122° 36.0' W WIND NNE 12 1011 (+8) DEPTH 20 fm 52°/44°F Dewey				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	7.92	26.69	0.537	2.16
5	7.89	27.01	0.533	2.20
10	7.84	27.22	0.534	2.16
20	7.84	27.57	0.528	2.26
30	7.84	27.70	0.527	2.12

STA 53-43 48° 12.4' N WEATHER b.c. 24 Mar 54 122° 53.4' W WIND WxN 10 1422 (+8) DEPTH 49 fm 52°/47°F Protection Island				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	7.74	29.96	0.498	1.96
5	7.73	29.98	0.502	2.00
10	7.70	30.07	0.502	1.99
19	7.68	30.06	0.499	2.08
28	7.66	30.15	0.491	2.00
42	7.66	30.40	0.486	2.00
60	7.58	31.47	0.466	2.00
79	7.56	31.48	0.431	2.00

STA 53-44 48° 15.3' N WEATHER b. 24 Mar 54 123° 02.8' W WIND WNW 10 1538 (+8) DEPTH 94 fm 50°/45°F New Dungeness, Northeast of				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	7.90	29.97	0.526	2.00
5	7.86	29.97	0.525	2.00
10	7.71	29.94	0.530	2.00
20	7.55	30.63	0.482	1.97
30	7.55	30.75	0.472	1.99
50	7.60	30.91	0.462	1.96
75	7.52	31.29	0.442	1.96
100	7.50	31.83	0.407	2.03
130	7.46	32.03	0.391	1.99
160	7.44	32.07	0.388	1.98

STA 53-45 48° 15.1' N WEATHER b.
 24 Mar 54 123° 13.3' W WIND SW 5
 1708 (+8) DEPTH 76 fm 54°/48°F
 New Dungeness, Northwest of

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	7.70	30.13	0.524	2.03
5	7.70	30.16	0.518	1.98
10	7.60	30.20	0.509	1.97
20	7.53	30.65	0.486	1.98
30	7.50	30.75	0.478	1.97
50	7.52	30.98	0.465	1.96
75	7.45	31.29	0.444	1.99
100	7.48	31.26	0.400	2.18
130	7.47	32.31	0.373	2.12

STA 53-46 48° 11.9' N WEATHER b.
 24 Mar 54 123° 23.4' W WIND S 3
 1838 (+8) DEPTH 70 fm 58°/50°F
 Ediz Hook

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.20	30.15	0.538	1.88
5	7.74	30.22	0.519	1.95
10	7.72	30.45	0.504	1.90
20	7.51	30.81	0.479	1.85
30	7.54	31.32	0.448	1.96
50	7.48	32.35	0.381	1.99
75	7.44	33.08	0.323	2.09
100	7.46	33.11	0.314	2.14
125	7.47	33.10	0.316	1.97

STA 53-47 48° 14.8' N WEATHER b.
 24 Mar 54 123° 32.3' W WIND SSW 8
 1956 (+8) DEPTH 95 52°/47°F
 Race Rocks

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	7.74	30.38	0.540	2.03
5	7.64	30.51	0.535	1.99
10	7.52	30.90	0.476	2.11
20	7.50	31.04	0.466	2.04
30	7.50	31.08	0.459	1.99
49	7.52	31.55	0.436	2.04
73	7.52	31.93	0.410	1.98
97	7.53	32.70	0.355	2.09
126	7.39	33.12	0.306	2.08
155	7.17	33.57	0.253	2.23

STA 53-48 48° 15.7' N WEATHER b.
 24 Mar 54 123° 41.3' W WIND Calm
 2123 (+8) DEPTH 100 fm 46°/44°F
 Beechy Head

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	7.74	30.83	0.500	1.92
5	7.77	30.84	0.500	1.95
10	7.78	30.85	0.496	1.89
20	7.60	30.91	0.479	1.91
30	7.57		0.481	1.86
50	7.54	31.37	0.444	1.94
75	7.54	31.91	0.421	1.97
100	7.32	33.07	0.303	2.18
140	7.23	33.59	0.253	2.32
180	7.18	33.64	0.247	2.26

STA 53-49 48° 18.5' N WEATHER b. 24 Mar 54 123° 53.0' W WIND W 4 2255 (+8) DEPTH 100 fm 47°/44°F Otter Point				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	7.98	31.20	0.532	1.77
5	8.06	31.21	0.530	1.79
10	7.96	31.26	0.520	1.88
20	7.58	31.40	0.463	1.90
30	7.53	31.48	0.450	1.99
50	7.56	31.85	0.430	1.91
74	7.58	32.32	0.390	2.04
99	7.40	32.74	0.336	2.21
128	7.32	33.34	0.285	2.21
158	7.06	33.72	0.232	2.42

STA 53-50 48° 19.0' N WEATHER b. 25 Mar 54 124° 03.7' W WIND NNW 3 0009 (+8) DEPTH 106 fm 46°/44°F Pillar Point				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	7.70	30.96	0.502	1.91
5	7.73	30.95	0.502	2.02
10	7.70	30.96	0.500	1.99
20	7.57	30.96	0.489	1.99
30	7.54	31.07	0.472	1.99
50	7.52	31.31	0.456	2.01
75	7.48	31.94	0.405	2.01
100	7.43	33.12	0.310	2.11
140	7.05	33.79	0.226	2.32
180	7.02	33.81	0.224	2.29

STA 53-51 48° 08.2' N WEATHER b. 25 Mar 54 122° 41.5' W WIND SE 13 0808 (+8) DEPTH 66 fm 44°/42°F Port Townsend				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	7.75	29.84	0.516	2.00
5	7.72	29.84	0.514	2.03
10	7.69	30.02	0.502	1.93
20	7.67	30.35	0.496	1.93
30	7.66	30.43	0.489	1.96
50	7.66	30.47	0.484	1.98
75	7.64	30.59	0.479	2.05
100	7.62	30.74	0.474	1.98

STA 53-52 48° 01.9' N WEATHER o. 25 Mar 54 122° 37.6' W WIND SE 12 0935 (+8) DEPTH 46°/43°F Bush Point				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	7.82	28.65	0.547	2.02
5	7.83	28.63	0.548	2.06
10	7.77	28.82	0.544	2.09
19	7.74	28.84	0.544	2.11
29	7.76	28.87	0.537	2.04
48	7.81	29.46	0.526	2.11
87	7.68	30.23	0.494	1.97
105	7.70	30.34	0.495	2.12

STA 53-53 47° 57.5' N WEATHER o. 25 Mar 54 122° 35.0' W WIND SE 12 1057 (+8) DEPTH 60 fm 47°/44°F Double Bluff				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	7.94	28.12	0.562	2.04
5	7.98	28.13	0.565	2.05
10	7.85	28.48	0.524	2.02
20	7.82	28.77	0.534	1.99
30	7.80	28.85	0.470	1.92
49	7.82	28.92	0.527	2.03
74	7.82	29.26	0.522	2.07
98	7.80	29.66	0.508	2.09

STA 53-54 47° 56.3' N WEATHER o. 25 Mar 54 122° 38.2' W WIND SE 3 1146 (+8) DEPTH 62 fm 52°/47°F Tala Point				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.14	28.51	0.569	1.79
5	7.93	28.64	0.560	1.91
10	7.89	28.85	0.554	1.89
20	7.82	29.05	0.538	2.06
30	7.76	29.37	0.522	2.09
49	7.74	29.62	0.512	1.94
74	7.75	29.84	0.501	2.14
98	7.75	30.07	0.497	2.16

STA 53-55 47° 50.0' N WEATHER o. 25 Mar 54 122° 40.0' W WIND SSW 15 1335 (+8) DEPTH 35 56°/48°F South Point				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.16	27.95	0.582	1.59
5	8.16	27.94	0.586	1.62
10	8.01	28.42	0.558	1.76
20	7.87	28.87	0.514	2.00
30	7.78	29.10	0.508	2.06
40	7.73	29.33	0.491	2.12
60	7.68	29.59	0.502	2.14

STA 53-56 47° 41.9' N WEATHER o. 25 Mar 54 122° 45.6' W WIND SSW 19 1530 (+8) DEPTH 68 fm 54°/46°F Hazel Point				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.51	26.04	0.633	0.97
5	8.52	26.19	0.624	1.02
10	8.33	27.38	0.559	1.52
20	8.26	29.04	0.443	2.27
30	8.28	29.22	0.432	2.38
49	8.38	29.35	0.413	2.43
78	8.61	29.59	0.378	2.65
107	8.84	29.70	0.361	2.78

STA 53-57 47° 40.4' N WEATHER o.
 25 Mar 54 122° 52.4' W WIND SxW 24
 1644 (+8) DEPTH 74 fm 54°/47°F
 Pleasant Harbor

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.43	26.15	0.591	1.36
5	8.51	27.14	0.592	1.34
10	8.16	28.26	0.508	1.88
20	8.18	28.86	0.460	2.11
30	8.24	29.19	0.439	2.29
49	8.45	29.43	0.405	2.30
73	8.68	29.60	0.378	2.40
97	8.85	29.76	0.368	2.53
122	9.31	30.01	0.295	2.79

STA 53-58 47° 45.3' N WEATHER o.
 25 Mar 54 122° 49.5' W WIND SSW 27
 1748 (+8) DEPTH 107 fm 53°/46°F
 Tabook Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.44	27.12	0.591	1.46
5	8.49	27.12	0.591	1.38
10	8.44	27.23	0.588	1.45
20	8.19	28.28	0.506	1.96
30	8.14	28.96	0.450	2.22
40	8.22	29.17	0.435	2.27
60	8.50	29.44	0.399	2.36
75	8.57	29.53	0.394	2.52
85	8.92	29.53	0.360	2.52
100	9.08	29.89	0.347	2.46
120	9.68	30.25	0.239	2.86
132	9.82	30.46	0.160	3.76
150	9.82	30.55	0.126	3.56
160	9.78	30.54	0.103	3.78
180	9.76	30.59	0.118	3.85

STA 53-59 47° 50.0' N WEATHER o.
 25 Mar 54 122° 48.6' W WIND S 4
 1924 (+8) DEPTH 28 fm 50°/45°F
 Dabob Bay, Head of

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.50	26.46	0.630	1.00
5	8.43	26.46	0.626	0.98
10	8.42	26.49	0.574	1.00
20	8.35	26.92	0.598	1.34
30	8.22	27.05	0.441	2.53
40	8.43	27.65	0.209	2.11
51	8.54	27.71	0.376	2.46

STA 53-60 47° 47.0' N WEATHER b.c.
 25 Mar 54 122° 48.4' W WIND SW 18
 2118 (+8) DEPTH 82 fm 46°/42°F
 Bolton Peninsula, East of

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.36	26.80	0.614	1.22
5	8.45	26.79	0.612	1.21
10	8.43	26.96	0.602	1.29
20	8.38	27.09	0.585	1.35
29	8.16	28.76	0.468	2.09
39	8.21	29.20	0.431	2.26
59	8.46	29.44	0.399	2.41
78	8.70	29.62	0.373	2.46
98	9.13	29.85	0.326	2.44
117	9.40	30.12	0.276	2.90
137	9.82	30.49	0.158	3.31
150	9.80	30.50	0.145	3.50

STA 53-61 47° 41.8' N WEATHER b.
 25 Mar 54 122° 51.9' W WIND WSW 24
 2240 (+8) DEPTH 80 fm
 Tsakutsko Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.12	28.42	0.497	2.02
5	8.14	28.43	0.496	1.97
10	8.13	28.44	0.502	2.11
20	8.12	28.68	0.475	2.11
29	8.20	29.13	0.440	2.28
39	8.32	29.31	0.426	2.39
59	8.50	29.45	0.395	2.49
78	8.70	29.68	0.378	2.56
98	8.83	29.76	0.374	2.78
117	9.39	30.13	0.269	3.10
148	9.80	30.51	0.131	3.57

STA 53-62 47° 35.9' N WEATHER b.
 26 Mar 54 122° 57.9' W WIND SSW 24
 0104 (+8) DEPTH 95 fm
 Tekiu Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.49	23.80	0.666	0.68
5	8.46	24.33	0.642	0.84
10	8.27	27.20	0.540	1.67
19	8.14	29.01	0.447	2.20
27	8.19	29.15	0.436	2.23
44	8.40	29.43	0.404	2.32
65	8.77	29.57	0.378	2.51
75	8.86	29.64	0.364	2.51
95	9.46	29.91	0.304	2.67
120	9.76	30.15	0.236	2.92

STA 53-63 47° 29.0' N WEATHER b.
 26 Mar 54 123° 03.8' W WIND S 15
 0311 (+8) DEPTH 87 fm
 Eagle Creek

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.13	25.21	0.662	0.73
5	8.22	25.62	0.640	0.93
10	8.06	28.64	0.467	2.18
20	8.19	29.05	0.444	2.28
29	8.48	29.26	0.409	2.40
47	8.79	29.51	0.374	2.51
70	9.42	29.75	0.318	3.00
88	9.60	29.88	0.292	2.70
110	9.84	30.16	0.233	2.90
130	9.92	30.23	0.196	3.01

STA 53-64 47° 23.4' N WEATHER b.
 26 Mar 54 123° 07.7' W WIND SW 5
 0444 (+8) DEPTH 60 fm
 Musqueti Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.28	24.60	0.699	0.49
5	8.48	27.48	0.492	1.74
10	8.12	28.41	0.454	2.19
20	9.07	29.20	0.294	2.71
30	9.20	29.42	0.279	2.76
40	9.32	29.50	0.281	2.74
60	9.69	29.76	0.256	2.90
80	9.80	29.94	0.235	2.99
100	9.88	30.10	0.192	3.10
108	9.90	30.10	0.185	3.12

STA 53-65 47° 21.5' N WEATHER c.
 26 Mar 54 123° 03.8' W
 0545 (+8) DEPTH 24 fm
 Tahuya River

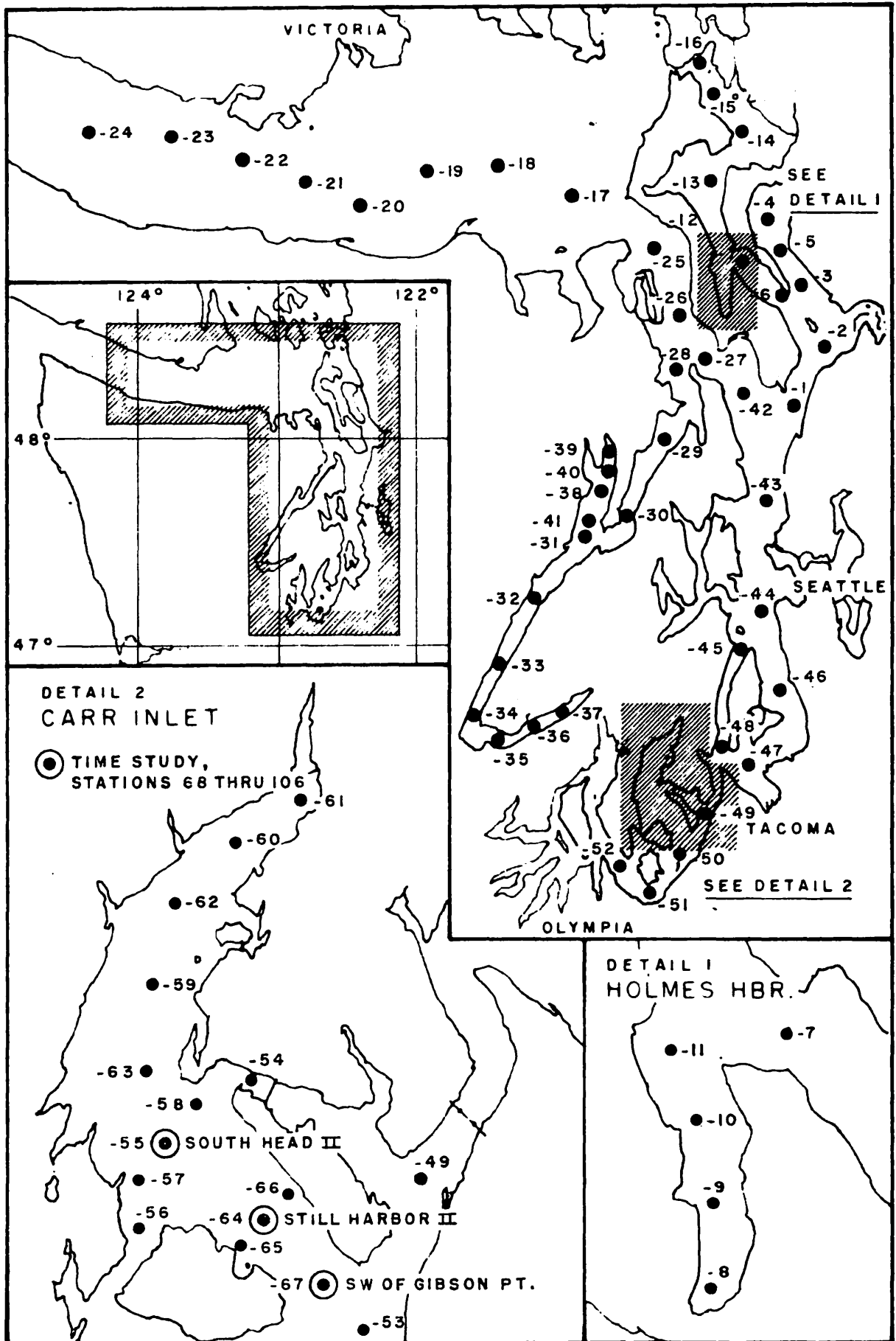
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.80	21.83	0.680	0.47
5	8.77	27.09	0.512	1.66
10	8.78	27.76	0.416	2.02
20	9.02	28.95	0.307	2.55
30	9.10	29.24	0.276	2.70
40	9.36	29.49	0.260	2.78
42	9.48	29.65	0.243	2.89

STA 53-66 47° 22.5' N WEATHER b.c.
 26 Mar 54 122° 59.6' W WIND SW 12
 0638 (+8) DEPTH 23
 Lynch Cove, Middle of

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.96	22.00	0.681	0.35
5	9.00	25.70	0.597	1.22
10	8.99	28.12	0.361	2.36
20	9.11	29.14	0.276	2.72
30	9.20	29.27	0.243	3.02
41	9.29	29.30	0.235	3.06

STA 53-67 47° 23.9' N WEATHER b.c.
 26 Mar 54 122° 55.8' W WIND SW 16
 0717 (+8) DEPTH 11 fm

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.01	21.47	0.688	0.35
5	9.00	21.56	0.690	0.29
10	8.94	27.76	0.362	2.20
14	9.10	28.47	0.254	2.52
18	9.12	28.74	0.221	2.82



Oceanographic Station Locations
 BROWN BEAR CRUISE 55
 19 - 24 April 1954

STA 55-1 47° 53.6' N WEATHER c.
 19 Apr 54 122° 21.2' W WIND SSW 6.5
 1230 (+8) DEPTH 127 fm 50°/48°F
 Possession Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.30	23.17	0.584	1.20
5	8.82	24.74	0.573	1.55
10	8.34	28.09	0.544	1.84
20	8.17	28.63	0.539	2.15
30	8.08	28.73	0.537	2.14
50	7.98	28.82	0.519	2.12
75	7.92	29.11	0.512	2.25
100	7.85	29.17	0.503	2.22
140	7.86	29.23	0.493	2.20
180	7.86	29.39	0.497	2.22
220	7.87	29.45	0.502	2.31

STA 55-2 47° 58.3' N WEATHER c.
 19 Apr 54 122° 17.2' W WIND N 12
 1350 (+8) DEPTH 75 fm 51°/47°F
 Port Gardner

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.18	21.83	0.566	1.30
5	8.36	27.48	0.523	1.92
10	8.31	28.12	0.520	----
20	8.00	28.70	0.524	2.26
30	7.90	28.81	0.490	2.24
50	8.00	28.94	0.446	2.40
75	8.08	29.14	0.399	1.94
100	7.92	29.23	0.428	2.27
125	7.84	29.30	0.433	2.37
138	7.86	29.33	0.472	2.31

STA 55-3 48° 04.4' N WEATHER b.c.
 19 Apr 54 122° 19.6' W WIND NNW 11
 1515 (+8) DEPTH 66 fm 52°/47°F
 Camano Head, East of

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.36	22.39	0.598	1.28
5	8.56	26.74	0.515	2.17
10	8.38	27.40	0.491	2.16
20	8.11	28.53	0.430	2.26
30	8.03	28.81	0.432	2.38
50	8.12	28.95	0.395	2.26
70	8.06	29.13	0.408	2.36
90	8.06	29.20	0.402	2.24
100	8.01	29.24	0.416	2.40
110	8.00	29.30	0.427	2.45
127	8.08	29.34	0.419	2.52

STA 55-4 48° 09.3' N WEATHER b.c.
 19 Apr 54 122° 24.1' W WIND WNW 12
 1645 (+8) DEPTH 44 fm 52°/47°F
 Port Susan, Head of

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.14	22.68	0.592	1.44
5	8.47	25.28	0.558	1.85
10	8.04	28.28	0.491	2.21
20	8.25	28.65	0.392	2.36
30	8.28	28.84	0.392	2.45
39	8.37	28.94	0.368	2.53
59	8.62	29.15	0.330	2.70
78	8.48	29.23	0.321	----
82	8.42	29.29	0.328	3.08

STA 55-5 48° 06.2' N WEATHER c.
 19 Apr 54 122° 21.8' W WIND WNW 11
 1745 (+8) DEPTH 66 fm 57°/50°F
 Port Susan, Middle of

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.20	21.67	0.591	1.18
5	8.64	25.54	0.549	1.81
10	8.25	28.03	0.480	2.24
20	8.22	28.64	0.429	2.58
30	8.16	28.78	0.418	2.51
50	8.60	29.15	0.334	2.54
70	8.60	29.25	0.333	2.81
90	8.82	29.38	0.287	3.01
100	9.02	29.48	0.246	3.39
110	9.25	29.60	0.198	3.71
127	9.15	29.57	0.198	3.98

STA 55-6 48° 02.7' N WEATHER c.
 19 Apr 54 122° 22.2' W WIND NW 12
 1855 (+8) DEPTH 95 fm 49°/45°F
 Gamano Head, West of

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.16	23.39	0.594	1.46
5	9.04	24.27	0.576	1.64
10	8.20	28.01	0.482	2.23
19	7.97	28.82	0.512	2.37
29	7.88	28.91	0.512	2.52
48	7.94	29.00	0.488	2.37
71	7.94	29.11	0.471	2.52
95	7.88	29.14	0.474	2.50
121	7.86	29.24	0.478	2.43
144	7.86	29.29	0.484	2.40

STA 55-7 48° 06.4' N WEATHER c.
 19 Apr 54 122° 29.2' W WIND W 10
 2010 (+8) DEPTH 82 fm 48°/45°F
 East Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.18	24.52	0.599	1.44
5	8.85	25.41	0.566	1.72
10	8.16	28.63	0.444	2.38
20	8.11	28.77	0.438	2.39
30	8.00	28.95	0.441	2.35
50	8.00	29.13	0.443	2.34
75	7.97	29.17	0.449	2.58
100	7.90	29.19	0.459	2.53
130	7.90	29.22	0.454	2.55

STA 55-8 48° 01.5' N WEATHER c.
 19 Apr 54 122° 31.8' W WIND WSW 4
 2130 (+8) DEPTH 22 fm 46°/43°F
 Holmes Harbor, Head of

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.10	23.30	0.642	1.14
5	10.01	23.59	0.622	1.10
10	8.52	28.05	0.481	2.14
20	8.33	28.77	0.328	2.92
30	8.10	28.90	0.382	2.84
43	8.10	28.95	0.384	2.97

STA 55-9 48° 03.2' N WEATHER c.
 19 Apr 54 122° 31.7' W WIND W 8
 2210 (+8) DEPTH 27 fm 46°/44°F
 Classic

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.85	24.07	0.618	1.26
5	9.02	26.06	0.562	1.62
10	8.44	28.09	0.476	2.25
20	8.34	28.72	0.347	3.30
30	8.13	28.85	0.406	2.79
40	8.12	28.94	0.414	2.70
50	8.10	29.03	0.391	3.04

STA 55-10 48° 04.9' N WEATHER b.c.
 19 Apr 54 122° 32.2' W WIND W 3
 2250 (+8) DEPTH 55 fm 46°/44°F
 Dines Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.41	23.89	0.612	1.18
5	9.47	24.25	0.601	1.51
10	8.38	28.07	0.463	2.17
20	8.22	28.62	0.431	2.38
30	8.12	28.80	0.424	2.44
40	8.12	28.90	0.421	2.49
50	8.08	28.98	0.424	2.29

STA 55-11 48° 06.2' N WEATHER c.
 19 Apr 54 122° 33.1' W WIND WSW 3
 2340 (+8) DEPTH 40 fm 46°/44°F
 Greenbank

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.28	24.45	0.588	1.39
5	9.26	24.88	0.583	1.47
10	8.74	26.97	0.515	1.97
20	8.21	28.67	0.434	2.53
30	8.06	28.92	0.425	2.36
40	8.08	28.99	0.424	2.46
50	8.09	29.04	0.415	2.60
60	8.01	29.05	0.417	2.56
73	8.04	29.07	0.416	2.66

STA 55-12 48° 11.0' N WEATHER o.
 20 Apr 54 122° 32.7' W WIND Calm
 0600 (+8) DEPTH 55 fm 44°/43°F
 Onamac Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.82	22.34	0.605	1.50
5	8.64	27.03	0.506	1.97
10	8.36	28.17	0.466	2.29
20	8.18	28.68	0.443	2.51
30	8.11	28.86	0.437	2.54
50	8.05	29.02	0.434	2.50
75	8.00	29.13	0.437	2.55
100	7.93	29.19	0.433	3.22

STA 55-13 48° 13.8' N WEATHER c.
 20 Apr 54 122° 32.9' W WIND Calm
 0700 (+8) DEPTH 48 fm 51°/47°F
 Demock Point

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.72	23.04	0.590	1.65
5	8.68	26.65	0.516	1.94
10	8.31	28.49	0.422	2.66
20	8.21	28.83	0.416	2.46
30	8.12	28.95	0.423	2.74
50	8.07	29.07	0.432	2.59
75	8.04	29.14	0.408	2.70

STA 55-14 48° 18.6' N WEATHER 10
 20 Apr 54 122° 29.6' W WIND Calm
 0815 (+8) DEPTH 15 fm 51°/47°F
 Strawberry Point, North of

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.66	16.49	0.607	1.68
3	8.68	21.44	0.579	1.81
5	8.62	23.01	0.557	1.90
10	8.47	25.26	0.510	2.22
20	8.14	28.58	0.424	2.63

STA 55-15 48° 21.5' N WEATHER 10
 20 Apr 54 122° 33.3' W WIND Calm
 0900 (+8) DEPTH 8.5 fm 48°/46°F
 Goat Island

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.32	12.61	0.650	1.27
2	8.41	23.31	0.548	1.98
5	8.45	25.21	0.512	2.20
10	8.18	28.37	0.433	2.69

STA 55-16 48° 25.0' N WEATHER 10
 20 Apr 54 122° 36.0' W WIND SW 10
 0950 (+8) DEPTH 20 fm 50°/46°F
 Dewey

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.20	23.51	0.550	1.87
5	8.22	25.12	0.533	2.10
10	8.26	25.83	0.535	2.03
19	8.20	27.00	0.522	2.32
29	8.11	27.90	0.522	2.36

STA 55-17 48° 12.4' N WEATHER 10 20 Apr 54 122° 52.8' W WIND WNW 6 1250 (+8) DEPTH 51 fm 53°/49°F Protection Island				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.18	29.73	0.515	2.11
5	8.16	29.71	0.514	2.12
10	8.14	29.73	0.516	2.13
19	8.12	29.77	0.513	2.15
29	8.06	29.81	0.513	2.08
48	8.10	29.90	0.505	2.19
78	8.10	30.02	0.504	2.26
87	7.66	31.65	0.418	2.35

STA 55-18 48° 15.6' N WEATHER b. 20 Apr 54 123° 03.3' W WIND Calm 1415 (+8) DEPTH 92 fm 50°/46°F New Dungeness, Northeast of				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.40	29.85	0.533	1.99
5	8.68	29.91	0.529	2.10
10	8.18	29.92	0.526	2.13
19	8.06	30.02	0.522	2.13
29	8.03	30.08	0.523	2.15
48	7.86	30.66	0.483	2.15
72	7.78	31.26	0.448	2.26
97	7.72	31.28	0.451	2.17
126	7.66	31.86	0.398	2.04
155	7.56	32.29	0.368	2.27

STA 55-19 48° 15.0' N WEATHER b. 20 Apr 54 123° 13.4' W WIND W 10 1535 (+8) DEPTH 75 fm 48°/45°F New Dungeness, Northwest of				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.47	30.36	0.539	2.01
5	7.98	30.44	0.522	1.94
10	7.90	30.62	0.504	2.15
20	7.89	30.62	0.499	2.18
30	7.84	30.65	0.501	2.15
50	7.88	30.80	0.496	2.25
75	7.78	31.08	0.454	2.32
100	7.63	31.58	0.408	2.29
130	7.54	32.25	0.360	2.34

STA 55-20 48° 12.1' N WEATHER b 20 Apr 54 123° 23.5' W WIND W 12 1705 (+8) DEPTH 72 fm 48°/45°F Ediz Hook				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.05	30.47	0.527	2.04
5	8.08	30.47	0.523	2.04
10	7.84	30.69	0.480	2.08
20	7.74	31.17	0.457	2.22
30	7.56	32.16	0.381	2.19
50	7.55	32.51	0.347	2.26
75	7.53	32.97	0.302	2.42
100	7.40	33.42	0.255	2.42
125	7.37	33.43	0.250	2.43

STA 55-21 48° 14.5' N WEATHER b.
 20 Apr 54 123° 32.0' W WIND WSW 8
 1825 (+8) DEPTH 95 fm 49°/46°F
 Race Rocks

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	7.90	30.73	0.517	2.17
5	7.92	30.74	0.515	2.20
10	7.75	31.12	0.482	2.29
20	7.68	31.44	0.445	2.29
30	7.63	31.62	0.429	2.23
50	7.66	31.67	0.420	2.20
75	7.56	32.37	0.380	2.41
100	7.40	33.19	0.286	2.44
130	7.34	33.62	0.234	2.39
160	7.38	33.64	0.237	2.40

STA 55-22 48° 15.5' N WEATHER b.c.
 20 Apr 54 123° 41.2' W WIND WNW 18
 1945 (+8) DEPTH 102 fm 47°/45°F
 Beechy Head

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	7.99	30.94	0.512	2.16
5	8.02	30.98	0.512	2.20
10	7.84	31.13	0.478	2.16
20	7.73	31.36	0.463	2.15
30	7.63	31.49	0.439	2.16
50	7.61	32.08	0.383	2.17
75	7.54	32.55	0.343	2.28
100	7.36	33.33	0.266	2.44
140	7.28	33.75	0.215	2.53
180	7.28	33.73	0.218	2.43

STA 55-23 48° 18.2' N WEATHER b.c.
 20 Apr 54 123° 53.4' W WIND WNW 18
 2125 (+8) DEPTH 95 fm 46°/44°F
 Otter Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	7.80	31.10	0.503	2.21
5	7.84	31.08	0.502	2.20
10	7.84	31.13	0.500	2.22
20	7.80	31.11	0.488	2.24
30	7.75	31.15	0.479	2.24
50	7.70	31.61	0.430	2.24
75	7.55	32.43	0.353	2.37
100	7.42	32.84	0.316	2.38
130	7.22	33.65	0.221	2.54
160	7.08	33.82	0.204	2.55

STA 55-24 48° 18.2' N WEATHER b.c.
 20 Apr 54 124° 03.2' W WIND WNW 12
 2230 (+8) DEPTH 104 fm 46°/44°F
 Pillar Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	7.91	31.15	0.512	2.17
5	7.91	31.13	0.512	2.12
10	7.94	31.13	0.515	2.12
20	7.93	31.22	0.508	2.23
30	7.89	31.20	0.494	2.23
50	7.68	31.70	0.488	2.06
75	7.56	32.69	0.345	2.28
100	7.71	33.33	0.286	2.28
140	7.02	33.82	0.205	2.53
180	7.03	33.84	0.204	2.46

STA 55-25 48° 08.4' N WEATHER b.c. 21 Apr 54 122° 41.5' W WIND SSW 2 0640 (+8) DEPTH 62 fm 44°/42°F Port Townsend				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.02	29.93	0.644	1.96
5	8.05	30.07	0.512	2.10
10	8.05	30.10	0.504	1.99
20	8.06	30.09	0.504	2.10
30	8.00	30.18	0.506	2.07
50	8.06	30.38	0.492	2.17
75	8.02	30.45	0.488	2.22
100	7.93	30.61	0.481	2.18

STA 55-26 48° 02.0' N WEATHER b.c. 21 Apr 54 122° 37.7' W WIND Calm 0810 (+8) DEPTH 62 fm 48°/45°F Bush Point				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.32	28.87	0.533	1.97
5	8.26	28.92	0.531	2.02
15	8.22	29.03	0.528	2.14
25	8.18	29.25	0.522	2.01
45	8.20	29.40	0.518	2.15
75	8.16	29.93	0.508	2.18
105	8.06	30.13	0.499	2.19

STA 55-27 47° 57.6' N WEATHER c. 21 Apr 54 122° 35.0' W WIND Calm 0935 (+8) DEPTH 57 fm 45°/43°F Double Bluff				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.44	25.21	0.566	1.69
5	8.50	28.10	0.535	2.04
10	8.35	28.74	0.526	2.17
20	8.28	29.04	0.520	2.15
30	8.19	29.13	0.518	2.06
50	8.24	29.23	0.511	1.98
75	8.24	29.34	0.511	2.19
100	8.16	29.51	0.511	2.18

STA 55-28 47° 56.2' N WEATHER c. 21 Apr 54 122° 38.2' W WIND NNE 4 1030 (+8) DEPTH 57 fm 49°/46°F Tala Point				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.90	28.98	0.553	1.93
5	8.60	28.97	0.547	1.90
10	8.52	29.00	0.543	2.03
20	8.40	29.25	0.529	2.11
30	8.16	29.43	0.522	2.13
50	8.19	29.56	0.514	2.17
75	8.17	29.72	0.505	2.22
100	8.11	29.69	0.511	2.22

STA 55-29 47° 50.0' N WEATHER b. 21 Apr 54 122° 40.2' W WIND ENE 9 1230 (+8) DEPTH 35 fm 53°/49°F South Point				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.22	28.33	0.582	1.72
5	8.97	28.53	0.592	1.85
10	8.63	28.84	0.541	2.00
20	8.30	29.10	0.521	2.04
30	8.14	29.30	0.507	2.15
40	8.14	29.39	0.498	2.16
60	8.10	29.47	0.495	2.24

STA 55-30 47° 14.9' N WEATHER b. 21 Apr 54 122° 45.7' W WIND NNE 13 1355 (+8) DEPTH 69 fm 57°/52°F Hazel Point				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.67	26.92	0.701	0.82
5	9.28	28.35	0.524	1.90
10	8.56	28.86	0.519	2.13
20	8.50	28.93	0.508	1.96
30	8.34	29.05	0.486	2.10
50	8.34	29.42	0.434	2.15
80	8.36	29.53	0.409	2.17
110	8.40	29.60	0.398	2.12

STA 55-31 47° 40.0' N WEATHER b.c. 21 Apr 54 122° 52.5' W WIND NNE 9 1500 (+8) DEPTH 72 fm 56°/50°F Pleasant Harbor				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.24	26.11	0.692	0.85
5	9.54	27.54	0.654	1.52
10	8.74	28.43	0.520	2.03
20	8.30	29.12	0.461	2.32
30	8.22	29.26	0.428	2.50
50	8.32	29.41	0.403	2.46
75	8.26	29.55	0.419	2.58
100	8.56	29.70	0.372	2.75
125	9.14	29.94	0.270	3.08

STA 55-32 47° 35.6' N WEATHER b.c. 21 Apr 54 122° 57.6' W WIND NE 12 1555 (+8) DEPTH 94 fm 60°/53°F Tekiu Point				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.28	25.34	0.738	0.99
5	9.66	26.92	0.662	0.99
10	8.97	27.85	0.585	1.77
20	8.25	29.13	0.446	2.36
30	8.26	29.30	0.411	2.38
40	8.58	29.43	0.376	2.64
50	8.64	29.52	0.358	2.64
75	8.62	29.63	0.353	2.68
100	8.72	29.73	0.351	2.71
130	9.64	30.04	0.226	3.22
160	9.74	30.10	0.217	3.34

STA 55-33 47° 28.6' N WEATHER b.c.
 21 Apr 54 123° 04.0' W WIND NNE 12
 1715 (+8) DEPTH 83 fm 61°/55°F
 Eagle Creek

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.40	24.60	0.711	1.07
5	10.30	25.46	0.727	1.25
10	8.62	28.68	0.458	2.32
20	8.48	29.21	0.392	2.62
30	8.60	29.37	0.370	2.63
40	8.75	29.44	0.346	2.70
50	8.86	29.52	0.334	2.88
75	9.12	29.71	0.289	2.90
100	9.47	29.88	0.254	3.07
125	9.75	30.03	0.204	3.10
150	9.80	30.10	0.193	3.35

STA 55-34 47° 23.1' N WEATHER b.
 21 Apr 54 123° 08.0' W WIND NNE 16
 1810 (+8) DEPTH 60 fm 60°/54°F
 Musqueti Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.44	23.86	0.757	1.00
5	10.22	25.90	0.692	1.45
10	8.90	28.49	0.455	2.40
20	8.92	29.30	0.326	2.84
30	9.03	29.44	0.295	2.93
40	9.10	29.53	0.288	2.94
60	9.22	29.67	0.283	3.09
80	9.36	29.80	0.257	3.09
100	9.60	29.92	0.221	3.34
112	9.68	29.95	0.205	3.45

STA 55-35 47° 21.5' N WEATHER b.
 21 Apr 54 123° 03.7' W WIND Calm
 1940 (+8) DEPTH 22 fm 56°/51°F
 Tahuya River

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.34	22.25	0.805	0.62
5	9.67	26.85	0.606	1.63
10	9.02	28.37	0.448	2.28
20	9.20	29.24	0.277	2.90
30	9.20	29.52	0.244	3.13
38	9.30	29.59	0.238	3.35

STA 55-36 47° 23.1' N WEATHER b.
 21 Apr 54 122° 58.6' W WIND NNW 4
 2040 (+8) DEPTH 20 fm 54°/50°F
 Lynch Cove, Middle of

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.48	23.30	0.876	0.48
5	10.16	26.20	0.646	1.48
10	9.46	28.15	0.441	2.30
20	9.29	29.30	0.235	2.94
30	9.21	29.47	0.206	3.19
41	9.24	29.49	0.218	3.35

STA 55-37 47° 23.8' N WEATHER b.
 21 Apr 54 122° 55.9' W WIND Calm
 2120 (+8) DEPTH 14 fm 52°/50°F
 Lynch Cove, Head of

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.33	23.22	0.882	0.68
5	10.28	26.65	0.628	1.85
10	9.55	28.22	0.442	2.54
14	9.40	28.86	0.314	2.84
18	9.32	29.32	0.199	3.37

STA 55-38 47° 44.6' N WEATHER 10
 22 Apr 54 122° 49.9' W WIND Calm
 0430 (+8) DEPTH 107 fm 47°/46°F
 Tabook Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.13	27.82	0.724	0.53
5	9.18	28.30	0.597	1.91
10	8.48	28.81	0.501	2.30
20	8.32	29.03	0.448	2.53
30	8.18	29.23	0.439	2.37
40	8.32	29.34	0.417	2.51
60	8.38	29.49	0.392	2.60
80	8.62	29.69	0.353	2.77
100	8.63	29.71	0.356	2.67
120	9.08	29.86	0.285	2.91
140	9.52	30.22	0.208	3.20
160	9.72	30.43	0.125	3.62
180	9.80	30.52	0.089	3.98
194	9.78	30.54	0.081	4.37

STA 55-39 47° 50.0' N WEATHER 10
 22 Apr 54 122° 48.8' W WIND S 2
 0540 (+8) DEPTH 26 fm 48°/47°F
 Dabob Bay, Head of

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.90	27.21	0.667	1.22
5	8.96	27.89	0.585	1.71
10	8.46	28.49	0.490	2.18
20	8.21	29.07	0.425	2.55
30	8.23	29.25	0.393	2.63
40	8.33	29.25	0.379	2.72
46	8.38	29.31	0.372	2.79

STA 55-40 47° 46.8' N WEATHER 10
 22 Apr 54 122° 48.6' W WIND S 6
 0630 (+8) DEPTH 85 fm 47°/45°F
 Bolton Peninsula, East of

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.36	27.13	0.731	0.49
5	10.10	27.21	0.742	0.76
10	8.53	28.61	0.519	2.02
20	8.21	29.05	0.451	2.22
30	8.21	29.22	0.408	2.48
40	8.41	29.36	0.384	2.49
60	8.62	29.54	0.345	2.61
80	8.65	29.68	0.348	2.74
100	8.91	29.79	0.309	2.69
120	9.16	29.96	0.269	2.87
140	9.68	30.33	0.141	2.54
159	9.75	30.48	0.112	3.44

STA 55-41 47° 41.8' N WEATHER 10
 22 Apr 54 122° 51.6' W WIND SW 12
 0740 (+8) DEPTH 80 fm 46°/45°F
 Tskutsko Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.25	26.26	0.738	0.57
5	10.62	26.93	0.767	0.45
10	8.98	28.23	0.562	1.61
20	8.31	29.07	0.474	2.13
30	8.18	29.29	0.439	2.28
40	8.28	29.38	0.433	2.03
60	8.34	29.52	0.419	2.41
80	8.32	29.60	0.410	2.34
100	8.63	29.70	0.366	2.46
120	9.04	29.94	0.294	2.84
147	9.38	30.31	0.161	3.56

STA 55-42 47° 54.0' N WEATHER 10
 22 Apr 54 122° 28.8' W WIND Calm
 1220 (+8) DEPTH 107 fm 50°/48°
 Point No Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.35	25.37	0.568	1.71
5	8.84	27.69	0.548	1.93
10	8.41	28.51	0.531	2.24
20	8.20	28.91	0.523	2.00
30	8.12	28.95	0.524	2.00
50	8.12	29.10	0.515	1.97
75	8.14	29.26	0.515	2.00
100	8.19	29.36	0.513	1.98
130	8.20	29.37	0.513	2.03
160	8.13	29.40	0.513	2.04
190	8.14	29.44	0.515	1.96

STA 55-43 47° 44.1' N WEATHER o.
 22 Apr 54 122° 25.4' W WIND N 10
 1415 (+8) DEPTH 150 fm 51°/48°F
 Point Jefferson

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.12	27.72	0.573	1.85
5	9.04	27.75	0.572	1.92
10	8.72	28.11	0.561	1.86
20	8.34	28.53	0.540	1.95
30	8.20	28.66	0.532	2.20
50	8.02	28.93	0.518	2.17
75	8.02	29.06	0.510	2.17
100	7.99	29.19	0.511	2.12
150	7.92	29.37	0.498	2.21
200	7.88	29.39	0.499	2.17
240	7.88	29.40	0.504	2.31
270	7.88	29.42	0.506	2.13

STA 55-44 47° 33.7' N WEATHER o.
 22 Apr 54 122° 26.4' W WIND N 17
 1550 (+8) DEPTH 135 fm 50°/47°F
 Alki Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.16	27.85	0.575	2.08
5	9.14	27.86	0.579	2.16
9	8.88	28.17	0.568	2.18
19	8.36	28.60	0.538	2.20
28	8.30	28.64	0.540	2.25
47	8.31	28.69	0.535	2.22
70	8.04	28.99	0.516	2.27
93	7.87	29.23	0.511	2.29
130	7.90	29.30	0.507	2.22
167	7.84	29.35	0.511	2.19
204	7.86	29.39	0.510	2.35

STA 55-45 47° 24.9' N WEATHER o.
 22 Apr 54 122° 28.8' W WIND NNE 9
 1655 (+8) DEPTH 58 fm 49°/47°F
 Point Vashon

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.82	28.32	0.567	2.18
5	8.79	28.30	0.569	2.07
10	8.60	28.42	0.550	2.16
20	8.44	28.52	0.546	2.11
30	8.25	28.59	0.534	2.32
50	8.22	28.69	0.526	2.27
75	8.19	28.77	0.527	2.30
100	8.10	28.84	0.525	1.97

STA 55-46 47° 26.6' N WEATHER o.
 22 Apr 54 122° 24.0' W WIND N 6
 1805 (+8) DEPTH 130 fm 51°/47°F
 Pully Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.74	28.51	0.567	2.12
5	8.74	28.52	0.561	2.22
10	8.50	28.57	0.556	2.10
20	8.48	28.59	0.548	2.35
30	8.28	28.69	0.542	2.30
49	8.22	28.69	0.533	2.37
73	8.08	28.89	0.514	2.26
98	7.90	29.15	0.510	2.54
137	7.87	29.34	0.504	2.31
176	7.82	29.37	0.509	2.31
215	7.84	29.38	0.504	2.42

STA 55-47 47° 19.2' N WEATHER o.
 22 Apr 54 122° 28.1' W WIND ENE 4
 1930 (+8) DEPTH 95 fm 51°/47°F
 Brown Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.52	27.38	0.579	2.08
5	8.74	28.48	0.561	2.14
10	8.48	28.56	0.548	2.13
20	8.34	28.61	0.537	2.24
30	8.14	28.74	0.528	2.24
50	8.11	28.79	0.520	2.24
75	7.98	28.97	0.512	2.41
100	7.84	29.27	0.507	2.38
130	7.84	29.37	0.504	2.32
160	7.80	29.37	0.508	2.40

STA 55-48 47° 21.1' N WEATHER c.
 22 Apr 54 122° 32.2' W WIND Calm
 2020 (+8) DEPTH 52 fm 49°/46°F
 Spring Beach

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.44	28.41	0.546	2.14
5	8.44	28.42	0.540	2.02
10	8.35	28.50	0.534	2.18
20	8.32	28.56	0.534	2.10
30	8.24	28.60	0.528	2.38
50	8.28	28.68	0.526	2.34
70	8.28	28.69	0.528	2.34
90	7.97	29.04	0.514	2.34

STA 55-49 47° 14.7' N WEATHER c.
 22 Apr 54 122° 34.4' W WIND S 5
 2125 (+8) DEPTH 37 fm 49°/46°F
 Day Island

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.42	28.48	0.544	2.13
5	8.40	28.52	0.537	2.22
10	8.32	28.63	0.537	2.26
20	8.23	28.73	0.530	2.32
30	8.20	28.73	0.536	2.32
50	8.22	28.77	0.532	----

STA 55-50 47° 11.1' N WEATHER b.c.
 22 Apr 54 122° 38.2' W WIND SW 7
 2220 (+8) DEPTH 92 fm 47°/46°F
 Gordon Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.50	28.26	0.553	2.23
5	8.52	28.26	0.551	2.25
10	8.50	28.27	0.546	2.25
20	8.51	28.27	0.545	2.29
30	8.46	28.26	0.547	2.26
50	8.48	28.33	0.545	2.45
75	8.46	28.42	0.534	2.42
100	8.38	28.48	0.536	2.34
130	8.32	28.53	0.533	2.23
160	8.22	28.68	0.532	2.52

STA 55-51 47° 07.1' N WEATHER b.
 22 Apr 54 122° 42.5' W WIND S 6
 2320 (+8) DEPTH 35 fm 45°/43°F
 Nisqually Reach

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.78	27.99	0.572	2.09
5	8.76	27.99	0.573	2.18
10	8.64	28.11	0.566	2.20
20	8.60	28.17	0.560	2.26
30	8.26	28.39	0.543	2.38
40	8.30	28.46	0.552	2.33
60	8.34	28.48	0.534	2.17

STA 55-52 47° 09.6' N WEATHER b.
 23 Apr 54 122° 47.0' W WIND Calm
 0015 (+8) DEPTH 52 fm 45°/43°F
 Devil's Head

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.21	27.57	0.579	1.89
5	9.00	27.74	0.570	2.16
10	8.88	27.88	0.561	2.27
20	8.58	28.12	0.547	2.29
30	8.49	28.17	0.544	2.34
50	8.41	28.22	0.530	2.38
75	8.46	28.24	0.536	2.41

STA 55-53 47° 11.6' N WEATHER b.
 23 Apr 54 122° 36.0' W WIND Calm
 0140 (+8) DEPTH 80 fm 42°/41°F
 Tolviva Shoal

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.50	28.08	0.554	2.11
5	8.56	28.11	0.549	2.21
10	8.55	28.14	0.548	2.21
20	8.53	28.20	0.542	2.19
30	8.40	28.34	0.540	2.19
50	8.40	28.43	0.532	2.06
75	8.42	28.51	0.530	2.20
100	8.32	28.59	0.532	2.22
125	8.33	28.62	0.525	2.13

STA 55-54 47° 16.7' N WEATHER b.
 23 Apr 54 122° 39.4' W WIND Calm
 0250 (+8) DEPTH 12 fm 41°/41°F
 Warren

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.05	28.16	0.577	----
5	8.66	28.30	0.559	----
10	8.54	28.30	0.553	----
20	8.36	28.37	0.541	----

STA 55-55 47° 15.6' N WEATHER b.
 23 Apr 54 122° 41.8' W WIND SSW 4
 0330 (+8) DEPTH 49 fm 42°/41°F
 South Head II

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.41	28.12	0.593	2.04
5	9.36	28.12	0.587	2.09
10	9.00	28.14	0.569	2.15
20	8.53	28.20	0.548	2.15
30	8.32	28.25	0.545	2.15
40	8.24	28.30	0.536	2.22
60	8.18	28.36	-----	2.34
85	8.18	28.48	0.528	2.34

STA 55-56 47° 13.9' N WEATHER b.
 23 Apr 54 122° 42.8' W WIND SSW 4
 0410 (+8) DEPTH 9 fm -----
 South Head IV

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.04	28.14	0.585	----
5	9.02	28.16	0.587	----
10	9.04	28.16	0.583	----
15	8.56	28.22	0.556	----

STA 55-57 47° 14.8' N WEATHER b.
 23 Apr 54 122° 42.8' W WIND SSW 4
 0440 (+8) DEPTH 14 fm 41°/49°F
 South Head III

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.27	28.12	0.590	----
5	9.18	28.14	0.588	----
10	9.08	28.16	0.578	----
15	8.47	28.20	0.560	----
20	8.08	28.30	0.542	----

STA 55-58 47° 16.4' N WEATHER b.c.
 23 Apr 54 122° 41.1' W WIND SSW 4
 0515 (+8) DEPTH 50 fm 41°/40°F
 South Head I

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.40	28.07	0.603	----
5	9.36	28.07	0.600	----
10	9.33	28.11	0.592	----
20	8.84	28.20	0.574	----
30	8.76	28.20	0.569	----
40	8.70	28.27	0.563	----
60	8.44	28.34	0.542	----
80	8.22	28.46	0.532	----

STA 55-59 47° 18.8' N WEATHER 10
 23 Apr 54 122° 42.4' W WIND Calm
 0555 (+8) DEPTH 40 fm 44°/42°F
 Cutts Island, Southwest of

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.38	28.00	0.611	2.00
5	9.30	28.05	0.597	2.08
10	8.53	28.20	0.562	2.22
20	8.30	28.27	0.544	2.23
30	8.13	28.32	0.538	2.24
40	8.12	28.38	0.531	2.28
60	8.06	28.40	0.524	2.38

STA 55-60 47° 21.5' N WEATHER 10
 23 Apr 54 122° 39.8' W WIND Calm
 0645 (+8) DEPTH 17 fm 41°/41°F
 Elgin, East of

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.78	-----	0.627	2.02
5	9.70	27.89	0.627	1.87
10	8.62	28.14	0.569	2.25
15	8.38	28.23	0.556	2.30
20	8.29	28.24	0.547	2.25
25	8.28	28.26	0.544	2.21

STA 55-61 47° 22.5' N WEATHER 10
 23 Apr 54 122° 38.0' W WIND Calm
 0710 (+8) DEPTH 7 fm 42°/41°F
 Wauna

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.62	27.72	0.609	1.99
3	9.46	27.85	0.596	2.05
6	9.39	27.92	0.595	2.05
10	8.60	28.12	0.573	2.22

STA 55-62 47° 20.2' N WEATHER 41
 23 Apr 54 122° 41.8' W WIND S 1
 0740 (+8) DEPTH 29 fm 41°/40°F
 Glencove, East of

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.48	27.90	0.618	1.95
5	9.44	27.94	0.612	2.02
10	8.67	28.13	0.577	2.14
20	8.31	28.22	0.548	2.21
30	8.13	28.25	0.541	2.28
40	8.12	28.35	0.525	2.24
50	8.15	28.43	0.509	2.47

STA 55-63 47° 16.8' N WEATHER 10
 23 Apr 54 122° 42.4' W WIND Calm
 0825 (+8) DEPTH 60 fm 41°/40°F
 Green Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.40	28.08	0.602	2.00
5	9.28	28.10	0.598	2.03
10	9.08	28.13	0.586	2.05
20	8.62	28.24	0.558	2.16
30	8.42	28.29	0.548	2.23
40	8.42	28.29	0.540	2.20
60	8.06	28.42	0.528	2.28
85	8.16	28.42	0.530	2.35

STA 55-64 47° 14.1' N WEATHER 10
 23 Apr 54 122° 38.8' W WIND SSE 5
 0920 (+8) DEPTH 64 fm 44°/42°F
 Still Harbor II

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.36	27.86	0.603	1.99
5	9.04	28.15	0.581	2.01
10	8.52	28.16	0.555	2.01
20	8.46	-----	0.543	2.18
30	8.34	28.36	0.540	2.27
50	8.30	28.37	0.535	2.27
70	8.34	28.40	0.532	2.25
90	8.06	28.42	0.521	2.34
110	8.19	28.53	0.515	2.38

STA 55-65 47° 13.6' N WEATHER 10 23 Apr 54 122° 39.6' W WIND E 6 0950 (+8) DEPTH 36 fm 46°/44°F Still Harbor III				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.40	28.11	0.587	----
5	9.22	28.12	0.587	----
10	8.78	28.12	0.569	----
20	8.36	28.25	0.549	----
30	8.26	28.34	0.541	----
50	8.21	28.39		----

STA 55-66 47° 14.6' N WEATHER b. 23 Apr 54 122° 38.4' W WIND Calm 1020 (+8) DEPTH 70 fm 46°/44°F Still Harbor I				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.06	28.20	0.579	----
5	8.92	28.20	0.570	----
10	8.72	28.23	0.560	----
20	8.50	28.28	0.547	----
30	8.38	28.34	0.541	----
50	8.38	28.39	0.538	
75	8.37	28.42	0.537	
100	8.24	28.54	0.533	
120	8.25	28.54	0.544	

STA 55-67 47° 12.8' N WEATHER b.b. 23 Apr 54 122° 37.3' W WIND Calm 1100 (+8) DEPTH 89 fm 48°/45°F Gibson Point, Southwest of				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.22	28.18	0.587	2.06
5	8.57	28.19	0.556	2.02
10	8.44	28.25	0.543	2.22
20	8.35	28.32	0.539	2.19
30	8.31	28.38	0.537	2.23
50	8.32	28.46	0.531	2.19
75	8.32	28.47	0.530	----
100	8.26	28.50	0.530	2.14
130	8.28	28.57	0.527	2.14
160	8.24	28.60	0.533	2.19

GIBSON POINT, S.W.

LAT. 47° 12.7'N, LONG. 122° 37.3'W

DEPTH 90 Fathoms
BROWN BEAR CRUISE 55 23-24 APRIL 1954

Depth (m)	Temp (°C)	Salinity (°/oo)	Density (σ_t)
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Sta. 55-70 Time 1246

0	8.80	28.16	21.83
20	8.38	28.34	22.02
50	8.29	28.47	22.15
70	8.20	28.47	22.16
120	8.27	28.55	22.22

Sta. 55-73 Time 1435

0	9.51	28.13	21.70
20	8.48	28.25	21.94
50	8.31	28.40	22.09
70	8.17	28.48	22.16
120	8.28	28.56	22.21

Sta. 55-76 Time 1640

0	10.10	27.50	21.12
20	8.80	28.00	21.70
50	8.48	28.33	22.00
70	8.44	28.39	22.06
120	8.29	28.50	22.17

Sta. 55-79 Time 1839

0	8.84	27.88	21.61
20	8.57	28.31	21.98
50	8.43	28.44	22.10
70	8.36	28.47	22.14
120	8.25	28.54	22.21

Depth (m)	Temp (°C)	Salinity (°/oo)	Density (σ_t)
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Sta. 55-82 Time 2038

0	8.67	28.04	21.75
20	8.50	28.28	21.96
50	8.48	28.31	21.99
70	8.40	28.34	22.02
120	8.41	28.42	22.09

Sta. 55-85 Time 2243

0	8.57	28.21	21.90
20	8.48	28.30	21.98
50	8.42	28.38	22.05
70	8.36	28.42	22.10
120	8.35	28.45	22.12

Sta. 55-88 Time 0052

0	8.54	28.25	21.94
20	8.54	28.28	21.96
50	8.35	28.38	22.06
70	8.30	28.47	22.15
120	8.26	28.48	22.15

Sta. 55-91 Time 0246

0	8.52	28.18	21.88
20	8.52	28.36	22.03
50	8.35	28.43	22.10
70	8.29	28.47	22.15
120	8.30	28.52	22.18

GIBSON POINT, S.W.
(continued)

Depth (m)	Temp (°C)	Salinity (°/oo)	Density (σ_t)
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Sta. 55-94 Time 0443

0	8.48	28.15	21.86
20	8.50	28.35	22.02
50	8.33	28.43	22.10
70	8.31	28.47	22.15
120	8.37	28.58	22.22

Depth (m)	Temp (°C)	Salinity (°/oo)	Density (σ_t)
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Sta. 55-103 Time 1040

0	9.80	28.15	21.67
20	8.50	28.34	22.01
50	8.35	28.39	22.07
70	8.26	28.46	22.14
120	8.29	28.51	22.18

Sta. 55-97 Time 0633

0	8.43	28.14	21.86
20	8.50	28.33	22.00
50	8.46	28.39	22.05
70	8.43	28.42	22.09
120	8.36	28.54	22.19

Sta. 55-106 Time 1240

0	9.90	28.14	21.65
20	8.43	28.38	22.05
50	8.26	28.45	22.13
70	8.25	28.49	22.17
120	8.34	28.54	22.19

Sta. 55-100 Time 0839

0	8.60	28.20	21.89
20	8.52	28.30	21.98
50	8.44	28.40	22.07
70	8.42	28.46	22.12
100	8.29	28.53	22.19

STILL HARBOR II

LAT. 47° 14.1'N, LONG. 122° 39.2'W

DEPTH 65 Fathoms
BROWN BEAR CRUISE 55 23-24 APRIL 1954

Depth (m)	Temp (°C)	Salinity (‰)	Density (σ_t)
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Sta. 55-69 Time 1219

0	9.37	28.08	21.67
5	8.61	28.24	21.92
20	8.43	28.34	22.02
50	8.29	28.39	22.08
70	8.06	28.40	22.12
100	8.15	28.46	22.15

Depth (m)	Temp (°C)	Salinity (‰)	Density (σ_t)
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Sta. 55-81 Time 2010

0	9.54	28.14	21.70
5	9.00	28.16	21.80
20	8.50	28.28	21.96
50	8.36	28.35	22.04
70	8.19	28.38	22.08
100	8.15	28.44	22.13

Sta. 55-72 Time 1406

0	9.72	28.12	21.66
5	9.12	28.16	21.79
20	8.44	28.24	21.95
50	8.26	28.39	22.08
70	8.04	28.41	22.14
100	8.21	28.49	22.17

Sta. 55-84 Time 2212

0	9.86	27.90	21.46
5	9.66	28.10	21.65
20	8.65	28.21	21.90
50	8.38	28.35	22.03
70	8.25	28.38	22.08
100	8.18	28.45	22.14

Sta. 55-75 Time 1605

0	10.45	28.12	21.56
5	9.41	28.12	21.71
20	8.34	28.24	21.96
50	8.22	28.37	22.07
70	8.10	28.40	22.11
100	8.23	28.54	22.21

Sta. 55-87 Time 0012

0	9.44	28.06	21.66
5	8.95	28.11	21.77
20	8.54	28.29	21.97
50	8.37	28.38	22.06
70	8.29	28.40	22.09
100	8.17	28.41	22.11

Sta. 55-78 Time 1812

0	10.34	28.13	21.57
5	9.68	28.15	21.70
20	8.42	28.30	21.99
50	8.28	28.40	22.09
70	8.08	28.42	22.13
100	8.21	28.49	22.17

Sta. 55-90 Time 0219

0	9.54	28.13	21.70
5	9.29	28.16	21.76
20	8.54	28.30	21.98
50	8.37	28.39	22.07
70	8.35	28.45	22.12
100	8.16	28.47	22.16

STILL HARBOR II
(continued)

Depth (m)	Temp (°C)	Salinity (‰)	Density (σ_t)
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Sta. 55-93 Time 0416

0	9.38	28.14	21.72
5	9.38	28.20	21.77
20	8.53	28.24	21.93
50	8.35	28.39	22.07
70	8.19	28.39	22.09
100	8.16	28.48	22.16

Depth (m)	Temp (°C)	Salinity (‰)	Density (σ_t)
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Sta. 55-102 Time 1014

0	9.56	28.15	21.71
5	9.20	28.17	21.78
20	8.44	28.30	21.99
50	8.35	28.37	22.05
70	8.09	28.39	22.10
100	8.15	28.48	22.16

Sta. 55-96 Time 0610

0	9.42	28.18	21.75
5	8.84	28.20	21.86
20	8.40	28.35	22.03
50	8.31	28.39	22.08
70	8.12	28.41	22.12
100	8.20	28.52	22.20

Sta. 55-105 Time 1211

0	9.39	28.10	21.69
5	9.46	28.21	21.77
20	8.55	28.25	21.93
50	8.25	28.37	22.08
70	8.12	28.38	22.10
100	8.15	28.48	22.16

Sta. 55-99 Time 0812

0	9.30	28.08	21.69
5	9.10	28.17	21.80
20	8.40	28.34	22.02
50	8.34	28.40	22.08
70	8.11	28.39	22.10
100	8.17	28.48	22.16

SOUTH HEAD II

LAT. 47° 15.6'N, LONG. 122° 41.8'W

DEPTH 47 Fathoms
BROWN BEAR CRUISE 55 23-24 APRIL 1954

Depth (m)	Temp (°C)	Salinity (‰)	Density (σ_t)
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Sta. 55-68 Time 1148

0	9.60	28.12	21.68
10	8.95	28.23	21.86
20	8.44	28.24	21.94
50	8.15	28.33	22.05
70	8.05	28.39	22.12

Sta. 55-71 Time 1338

0	9.97	28.17	21.66
10	8.83	28.20	21.86
20	8.31	28.27	21.99
50	8.09	28.33	22.06
70	8.05	28.38	22.11

Sta. 55-74 Time 1537

0	9.71	28.12	21.66
10	8.94	28.17	21.83
20	8.37	28.29	21.98
50	8.08	28.35	22.08
70	8.06	28.39	22.10

Sta. 55-77 Time 1740

0	10.43	28.17	21.60
10	8.94	28.18	21.83
20	8.35	28.24	21.95
50	8.07	28.36	22.08
70	8.05	28.40	22.12

Depth (m)	Temp (°C)	Salinity (‰)	Density (σ_t)
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Sta. 55-80 Time 1938

0	10.39	28.19	21.61
10	8.92	28.19	21.84
20	8.37	28.26	21.97
50	8.08	28.33	22.06
70	8.05	28.36	22.10

Sta. 55-83 Time 2140

0	9.66	28.13	21.68
10	8.68	28.18	21.86
20	8.33	28.25	21.97
50	8.08	28.33	22.06
70	8.18	28.42	22.12

Sta. 55-86 Time 2340

0	9.86	28.14	21.65
10	9.65	28.14	21.69
20	8.77	28.19	21.85
50	8.17	28.30	22.03
70	8.09	28.41	22.12

Sta. 55-89 Time 0146

0	9.72	28.16	21.69
10	8.98	28.20	21.83
20	8.57	28.24	21.92
50	8.09	28.38	22.10
70	8.08	28.40	22.11

SOUTH HEAD II
(continued)

Depth (m)	Temp (°C)	Salinity (‰)	Density (σ_t)
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Sta. 55-92 Time 0343

0	9.59	28.16	21.71
10	9.35	28.18	21.76
20	8.89	28.20	21.85
50	8.12	28.38	22.10
70	8.09	28.40	22.11

Depth (m)	Temp (°C)	Salinity (‰)	Density (σ_t)
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Sta. 55-101 Time 0939

0	9.78	28.15	21.67
10	8.76	28.21	21.87
20	8.51	28.24	21.93
50	8.13	28.33	22.05
70	8.14	28.40	22.11

Sta. 55-95 Time 0535

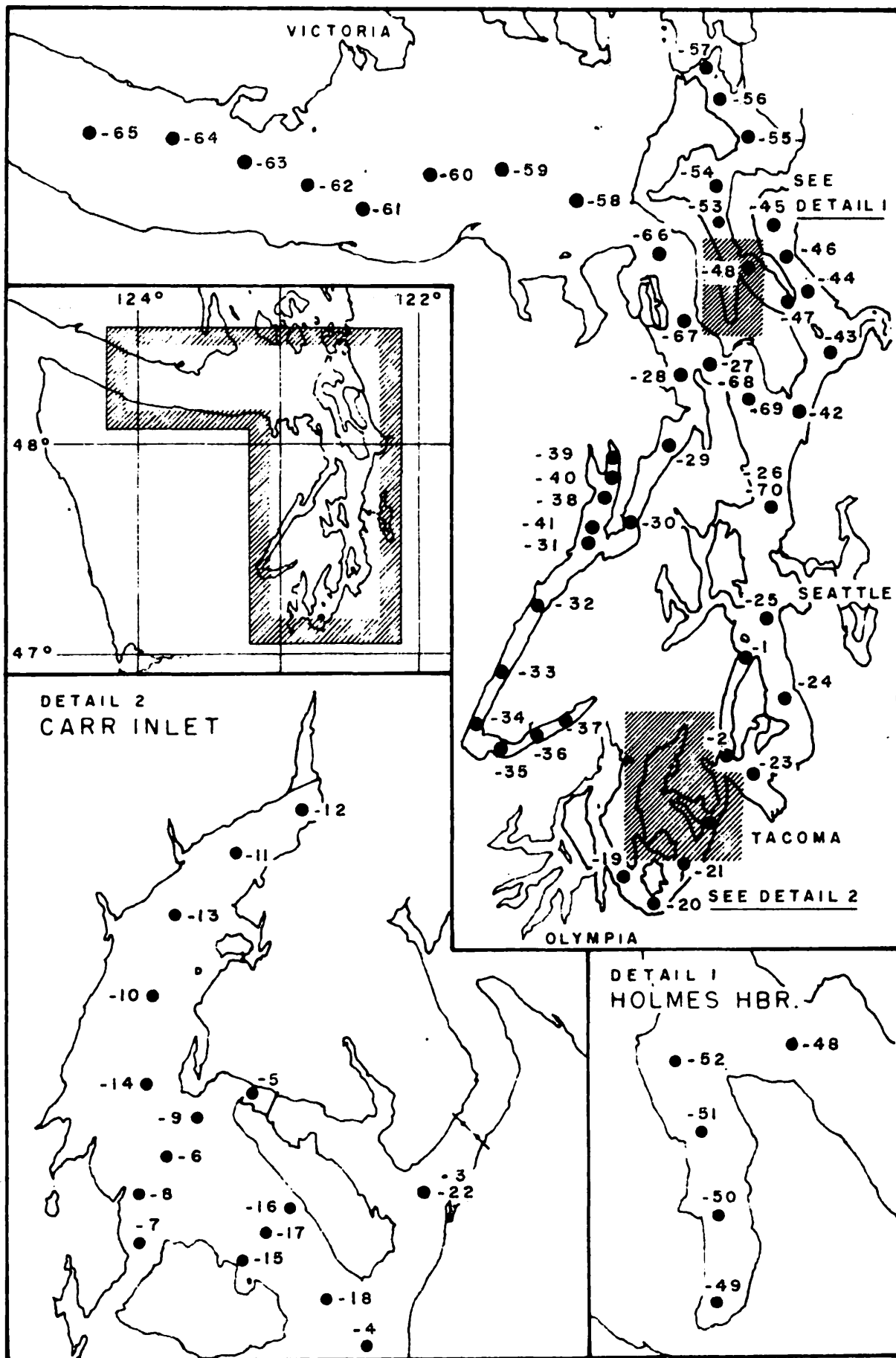
0	9.49	28.13	21.70
10	9.19	28.19	21.79
20	8.68	28.20	21.87
50	8.12	28.34	22.07
70	8.09	28.37	22.09

Sta. 55-104 Time 1139

0	10.22	28.15	21.61
10	8.89	28.19	21.84
20	8.35	28.24	21.95
50	8.25	28.34	22.05
70	8.20	28.40	22.10

Sta. 55-98 Time 0736

0	9.53	28.15	21.71
10	9.11	28.16	21.79
20	8.42	28.24	21.95
50	8.18	28.30	22.02
70	8.08	28.38	22.10



Oceanographic Station Locations
 BROWN BEAR CRUISE 58
 13 - 20 May 1954

STA 58-1 47° 31.8' N WEATHER b.c. 13 May 54 122° 29.3' W WIND NxE 9 1215 (+8) DEPTH 57 fm 54°/50°F Point Vashon				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.53	28.69	0.619	1.61
5	9.10	28.76	0.609	1.66
10	8.80	28.85	0.575	1.63
20	8.70	28.89	0.561	1.72
30	8.60	28.96	0.545	1.81
50	8.49	29.08	0.523	1.80
75	8.38	29.20	0.513	1.99
100	8.39	29.17	0.517	1.93

STA 58-2 47° 21.0' N WEATHER b.c. 13 May 54 122° 32.1' W WIND N 10 1340 (+8) DEPTH 57 fm 58°/51°F Spring Beach				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.15	28.65	0.601	1.72
5	9.00	28.65	0.598	1.65
10	8.86	28.72	0.577	1.62
20	8.81	28.75	0.569	1.76
30	8.68	28.85	0.558	1.73
50	8.56	28.96	0.531	1.94
70	8.46	29.09	0.523	----
95	8.44	29.13	0.518	----

STA 58-3 47° 15.0' N WEATHER b.c. 13 May 54 122° 34.0' W WIND ENE 10 1445 (+8) DEPTH 29 fm 58°/50°F Day Island				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.98	28.67	0.603	1.63
10	8.79	28.87	0.569	1.74
20	8.64	29.00	0.542	1.85
30	8.56	29.08	0.525	1.89
50	8.43	29.14	0.519	2.07

STA 58-4 47° 10.8' N WEATHER b.c. 13 May 54 122° 35.9' W WIND N 10 1530 (+8) DEPTH 77 fm 62°/54°F Toliva Shoal				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.03	27.67	0.750	1.22
5	9.82	27.86	0.729	1.24
10	9.46	28.14	0.679	1.41
20	9.26	28.33	0.606	1.56
30	9.02	28.50	0.639	1.66
49	8.93	28.75	0.564	1.77
74	8.88	28.78	0.575	2.01
98	8.80	28.86	0.553	1.98
123	8.72	28.94	0.547	2.01

STA 58-5 47° 16.7' N WEATHER b. 13 May 54 122° 39.3' W WIND NNE 8 1641 (+8) DEPTH 14 fm 59°/50°F Warren				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.13	28.52	0.626	----
5	9.14	28.50	0.630	----
10	9.01	28.56	0.599	----
20	8.78	28.59	0.561	----

STA 58-6 47° 15.2' N WEATHER b. 13 May 54 122° 41.3' W WIND N 9 1723 (+8) DEPTH 42 fm 62°/53°F South Head II				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.96	28.40	1.21	0.57
5	10.63	28.39	1.30	0.53
10	10.16	28.40	0.887	0.70
20	9.54	28.41	0.697	1.36
30	9.11	28.47	0.603	1.77
40	8.69	28.56	0.544	1.82
50	8.59	28.56	0.523	2.15
70	8.53	28.59	0.503	2.10

STA 58-7 47° 13.8' N WEATHER b. 13 May 54 122° 42.9' W WIND N 8 1754 (+8) DEPTH 9 fm 72°/59°F South Head IV				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.67	28.39	0.951	----
5	10.27	28.40	0.853	----
10	10.21	28.40	0.799	----
15	9.58	28.40	0.739	----

STA 58-8 47° 14.8' N WEATHER b. 13 May 54 122° 42.7' W WIND N 9 1819 (+8) DEPTH 14 fm 61°/53°F South Head III				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.08	28.33	0.911	----
5	10.78	28.34	0.918	----
10	9.86	28.40	0.848	----
15	9.37	28.46	0.705	----
20	9.16	28.45	0.628	----

STA 58-9 47° 16.5' N WEATHER b. 13 May 54 122° 41.1' W WIND N 8 1852 (+8) DEPTH 46 fm 61°/53°F South Head I				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.67	28.18	0.715	----
5	10.01	28.34	0.829	----
10	9.73	28.40	0.769	----
20	9.50	28.43	0.712	----
30	9.30	28.47	0.658	----
40	8.90	28.58	0.580	----
60	8.65	28.60	0.533	----
80	8.70	28.66	0.533	----

STA 58-10 47° 18.7' N WEATHER b. 13 May 54 122° 42.3' W WIND NNE 9 1940 (+8) DEPTH 34 fm 56°/51°F Cutts Island, Southwest of				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.06	28.34	0.955	0.52
5	11.03	28.32	0.954	0.48
10	9.61	28.43	0.753	1.17
20	9.14	28.45	0.629	1.77
30	9.04	28.52	0.597	1.97
40	8.96	28.52	0.583	1.97
60	8.67	28.57	0.529	2.25

STA 58-11 47° 21.5' N WEATHER b. 13 May 54 122° 40.0' W WIND NE 9 2022 (+8) DEPTH 15 fm 55°/49°F Elgin, East of				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.40	28.15	0.842	0.58
5	9.86	28.27	0.756	0.84
10	9.64	28.40	0.741	1.21
15	9.08	28.40	0.615	1.81
20	8.97	28.43	0.589	1.97
25	9.03	28.46	0.585	1.91

STA 58-12 47° 22.5' N WEATHER b. 13 May 54 122° 38.0' W WIND NNE 6 2048 (+8) DEPTH 8 fm 54°/48°F Wauna				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.81	27.92	0.712	1.23
3	9.43	28.29	0.666	1.61
6	9.07	28.31	0.616	1.84
10	8.95	28.38	0.569	2.15

STA 58-13 47° 20.3' N WEATHER b. 13 May 54 122° 41.7' W WIND NE 5 2124 (+8) DEPTH 28 fm 52°/49°F Glencove, East of				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.38	28.04	0.842	0.57
5	10.84	28.16	0.846	0.57
10	9.78	28.36	0.741	1.23
20	9.00	28.40	0.605	1.91
30	8.80	28.50	0.561	2.11
40	8.66	28.49	0.527	2.25
50	8.66	28.58	0.505	2.45

STA 58-14 47° 17.0' N WEATHER b. 13 May 54 122° 42.6' W WIND N 9 2203 (+8) DEPTH 51 fm 52°/49°F Green Point				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.03	28.36	0.788	1.13
5	10.07	28.34	0.778	1.04
10	9.97	28.41	0.795	1.12
20	9.25	28.49	0.652	1.60
30	9.14	28.50	0.619	1.71
40	8.97	28.56	0.587	1.84
60	8.57	28.58	0.522	2.22
85	8.66	28.69	0.527	2.70

STA 58-15 47° 13.6' N WEATHER b.c. 13 May 54 122° 39.8' W WIND N 10 2250 (+8) DEPTH 29 fm 52°/49°F Still Harbor III				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.60	28.22	0.849	----
5	9.58	28.40	0.725	----
10	9.43	28.41	0.683	----
20	9.08	28.41	0.614	----
30	8.69	28.47	0.546	----
50	8.56	28.49	0.510	----

STA 58-16 47° 14.5' N WEATHER b.c. 13 May 54 122° 38.5' W WIND NE 7 2323 (+8) DEPTH 69 fm 51°/48°F Still Harbor I				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.67	28.21	0.741	----
5	9.69	28.20	0.749	----
10	9.15	28.42	0.610	----
20	9.06	28.52	0.593	----
30	8.93	28.58	0.573	----
50	8.81	28.60	0.552	----
75	8.81	28.62	0.545	----
100	8.79	28.77	0.545	----
125	8.78	28.78	0.540	----

STA 58-17 47° 14.0' N WEATHER b.c.
 14 May 54 122° 39.1' W WIND NE 9
 0000 (+8) DEPTH 66 fm 51°/48°F
 Still Harbor II

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
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0	10.16	28.23	0.853	0.95
5	10.34	28.18	0.860	0.84
10	9.59	28.38	0.729	1.22
20	8.85	28.49	0.564	1.80
30	8.70	28.50	0.537	1.89
50	8.56	28.54	0.514	2.02
75	8.57	28.61	0.501	2.23
100	8.73	28.69	0.534	2.13
120	8.69	28.73	0.527	2.27

STA 58-18 47° 12.9' N WEATHER b.
 14 May 54 122° 37.6' W WIND NE 9
 0040 (+8) DEPTH 88 fm 51°/48°F
 Gibson Point, Southwest of

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
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0	9.65	28.06	0.720	1.21
5	9.63	28.09	0.712	1.27
10	9.42	28.30	0.662	1.47
20	9.20	28.41	0.623	1.64
30	9.17	28.50	0.611	1.64
50	8.93	28.53	0.568	1.85
75	8.89	28.59	0.554	1.95
100	8.72	28.62	0.529	2.11
130	8.76	28.72	0.535	2.09
160	8.72	28.77	0.520	----

STA 58-19 47° 10.0' N WEATHER b.
 14 May 54 122° 47.4' W WIND Calm
 0220 (+8) DEPTH 52 fm 47°/46°F
 Devil's Head

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
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0	9.90	26.08	0.683	1.37
5	9.67	28.11	0.660	1.45
10	9.55	28.21	0.642	1.54
20	9.16	28.38	0.588	1.90
30	9.10	28.43	0.585	1.84
50	9.10	28.44	0.582	1.81
75	9.00	28.50	0.570	1.97

STA 58-20 47° 07.2' N WEATHER b.
 14 May 54 122° 42.4' W WIND S 4
 0315 (+8) DEPTH 35 fm 43°/43°F
 Nisqually Reach

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
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0	9.15	16.96	0.686	0.87
5	9.24	28.25	0.622	1.64
10	9.26	28.30	0.618	1.73
20	9.05	28.47	0.589	1.38
40	----	28.60	0.566	1.90
60	8.90	28.62	0.558	2.10

STA 58-21 47° 10.9' N WEATHER b.
 14 May 54 122° 37.8' W WIND NE 5
 0430 (+8) DEPTH 92 fm 48°/46°F
 Gordon Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.42	27.75	0.649	1.56
5	9.46	28.12	0.648	1.56
10	9.40	28.29	0.632	1.62
20	9.20	28.42	0.611	1.73
30	9.12	28.43	0.602	1.64
50	9.05	28.60	0.580	1.83
75	8.94	28.69	0.569	1.88
100	8.86	28.72	0.558	1.97
130	8.80	28.75	0.545	2.03
160	8.72	28.80	0.543	2.06

STA 58-22 47° 15.0' N WEATHER b.
 14 May 54 122° 34.4' W WIND NE 4
 0520 (+8) DEPTH 35 fm 48°/46°F
 Day Island

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.88	28.55	0.575	1.95
5	8.90	28.69	0.573	1.92
10	8.86	28.77	0.557	1.95
20	8.80	28.79	0.549	2.02
30	8.72	28.83	0.552	2.00
50	8.74	28.93	0.539	2.01

STA 58-23 47° 19.1' N WEATHER b.
 14 May 54 122° 28.0' W WIND NE 9
 0630 (+8) DEPTH 95 fm 50°/48°F
 Brown Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.82	26.92	0.612	1.68
5	9.82	28.20	0.612	1.73
10	9.18	28.65	0.565	1.96
20	8.78	28.85	0.537	2.11
30	8.46	28.93	0.518	2.15
50	8.38	29.05	0.502	2.12
75	8.14	29.30	0.484	2.29
100	8.20	29.43	0.480	2.31
130	8.38	29.51	0.482	2.35
160	8.43	29.56	0.480	2.98

STA 58-24 47° 26.4' N WEATHER 10
 14 May 54 122° 23.5' W WIND N 8
 0805 (+8) DEPTH 132 fm 51°/49°F
 Pully Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.50	28.54	0.601	1.77
5	9.44	28.55	0.598	1.75
10	9.04	28.78	0.567	1.93
20	8.79	28.90	0.548	2.01
30	8.61	28.96	0.535	2.03
50	8.31	29.18	0.498	2.20
75	8.22	29.42	0.480	2.25
100	8.30	29.50	0.480	2.22
140	8.43	29.56	0.480	2.20
180	8.53	29.75	0.477	1.79
220	8.54	29.83	0.470	1.84

STA 58-25 47° 33.9' N WEATHER b.
 14 May 54 122° 26.9' W WIND NxE b.
 0930 (+8) DEPTH 127 fm 50°/48°F
 Alki Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.84	28.16	0.641	1.74
5	9.86	28.14	0.646	1.69
10	9.64	28.46	0.604	1.82
20	9.32	28.74	0.583	1.88
29	8.65	29.00	0.535	2.08
48	8.60	29.08	0.522	2.15
73	8.40	29.33	0.497	2.19
97	8.40	29.51	0.484	2.19
136	8.48	29.61	0.478	2.10
175	8.53	29.76	0.474	2.17
213	8.52	29.82	0.471	2.13

STA 58-26 47° 44.1' N WEATHER b.
 14 May 54 122° 25.3' W WIND N 12
 1145 (+8) DEPTH 152 fm 54°/51°F
 Point Jefferson

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.51	25.73	0.691	1.08
5	10.32	26.21	0.685	1.22
9	9.32	28.71	0.589	1.81
19	9.02	28.83	0.570	1.94
28	8.36	29.22	0.500	2.17
47	8.36	29.27	0.496	2.19
71	8.36	29.37	0.489	2.26
94	8.44	29.50	0.489	2.22
115	8.53	29.68	0.482	2.08
153	8.52	29.87	0.474	2.13
184	8.50	30.08	0.461	2.08
208	8.61	30.08	0.472	2.18

STA 58-27 48° 57.2' N WEATHER b.c.
 17 May 54 122° 33.4' W WIND NW 6
 1300 (+8) DEPTH 56 fm 57°/52°F
 Double Bluff

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.51	27.09	0.589	1.37
5	10.22	27.48	0.579	1.47
10	10.03	27.64	0.574	1.51
20	9.72	27.93	0.567	1.55
30	9.01	29.03	0.531	1.73
50	8.70	29.77	0.486	1.94
75	8.70	30.06	0.480	1.81
100	8.67	30.15	0.476	1.78

STA 58-28 48° 56.2' N WEATHER b.c.
 17 May 54 122° 38.3' W WIND N 12
 1355 (+8) DEPTH 57 fm 56°/52°F
 Tala Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.44	28.21	0.649	1.13
5	10.39	28.22	0.655	1.08
10	10.38	28.32	0.650	0.96
20	9.42	29.23	0.589	1.31
30	9.16	29.44	0.548	1.59
50	8.96	29.74	0.515	1.76
75	8.77	30.04	0.488	1.86
100	8.72	30.25	0.477	2.00

STA 58-29 48° 49.9' N WEATHER b.c.
 17 May 54 122° 40.2' W WIND ENE 12
 1535 (+8) DEPTH 38 fm 61°/55°F
 South Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.90	29.21	0.657	1.00
5	9.73	29.23	0.634	1.08
10	9.52	29.27	0.588	1.37
19	9.16	29.38	0.522	1.72
29	8.92	29.71	0.507	1.85
39	8.83	29.90	0.490	1.96
58	8.66	30.11	0.472	2.13

STA 58-30 47° 41.8' N WEATHER b.c.
 17 May 54 122° 45.6' W WIND N 12
 1655 (+8) DEPTH 70 fm 64°/57°F
 Hazel Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.98	28.02	0.869	0.36
5	11.80	28.27	0.833	0.45
10	10.33	28.58	0.727	0.71
19	9.34	29.07	0.546	1.72
29	8.74	29.45	0.482	2.29
49	8.62	29.66	0.429	2.24
78	8.62	29.72	0.435	2.46
107	8.68	29.90	0.454	2.29

STA 58-31 47° 40.1' N WEATHER b.c.
 17 May 54 122° 52.2' W WIND Calm
 1745 (+8) DEPTH 76 fm 67°/59°F
 Pleasant Harbor

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	14.36	26.63	0.765	0.25
5	11.04	27.67	0.895	0.32
10	9.40	28.45	0.648	1.18
20	8.50	29.22	0.426	2.44
30	8.43	29.44	0.371	2.48
50	8.51	29.63	0.373	2.54
75	8.59	29.69	0.405	2.53
100	8.67	29.73	0.426	2.35
125	8.70	29.80	0.416	2.49

STA 58-32 47° 35.6' N WEATHER b.c.
 17 May 54 122° 58.1' W WIND NxE 4
 1850 (+8) DEPTH 93 fm 75°/62°F
 Tekiu Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	14.88	25.50	0.732	0.25
5	12.34	27.12	0.866	0.36
10	9.56	28.45	0.597	1.59
20	8.60	29.20	0.388	2.50
30	8.65	29.46	0.340	2.65
40	8.62	29.57	0.332	2.65
50	8.58	29.61	0.340	2.78
75	8.67	29.71	0.397	2.49
100	8.83	29.83	0.386	2.55
130	8.94	29.89	0.340	2.83
160	9.11	29.93	0.309	2.97

STA 58-33 47° 28.6' N WEATHER b.c.
 17 May 54 123° 04.1' W WIND NxE 5
 2020 (+8) DEPTH 86 fm 64°/57°F
 Eagle Creek

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	14.96	24.87	0.706	0.32
5	12.04	26.86	0.881	0.52
10	9.40	28.63	0.496	2.16
20	8.98	29.39	0.274	2.92
30	8.82	29.48	0.298	2.87
40	8.94	29.62	0.285	2.46
50	8.88	29.65	0.297	2.86
75	8.93	29.74	0.300	2.82
100	9.24	29.87	0.264	3.00
125	9.54	29.97	0.213	3.20
150	9.62	30.00	0.199	3.21

STA 58-34 47° 23.2' N WEATHER b.c.
 17 May 54 123° 07.9' W WIND Calm
 2125 (+8) DEPTH 57 fm 60°/54°F
 Musqueti Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	14.76	24.13	0.692	0.48
5	13.55	25.73	0.777	0.67
10	9.80	28.45	0.469	2.13
20	9.18	29.31	0.266	3.01
30	9.06	29.53	0.235	3.01
40	9.08	29.61	0.253	2.84
60	9.24	29.73	0.236	3.08
80	9.40	29.82	0.223	3.20
100	9.54	29.92	0.214	3.25
106	9.53	29.95	0.200	2.81

STA 58-35 47° 21.6' N WEATHER b.c.
 17 May 54 123° 03.8' W WIND MNW 1
 2245 (+8) DEPTH 22 fm 58°/54°F
 Tahuya River

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	16.66	21.37	0.662	0.86
5	13.40	25.81	0.820	0.81
10	10.86	27.70	0.646	1.92
20	9.28	29.41	0.220	3.14
30	-----	29.56	0.207	3.18
36	9.25	29.68	0.199	3.23

STA 58-36 47° 22.5' N WEATHER b.c.
 17 May 54 122° 59.7' W WIND Calm
 2330 (+8) DEPTH 20 fm 58°/54°F
 Lynch Cove, Middle of

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	16.30	23.78	0.639	1.26
5	13.64	25.23	0.794	1.15
10	10.58	28.19	0.475	2.26
20	9.25	29.38	0.201	2.88
30	9.17	29.53	0.193	3.41
36	9.20	29.60	0.198	-----

STA 58-37 47° 24.0' N WEATHER b.c.
 18 May 54 122° 55.9' W WIND Calm
 0010 (+8) DEPTH 13 fm 57°/53°F
 Lynch Cove, Head of

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	16.68	24.31	0.670	1.27
5	12.14	26.55	0.932	1.16
10	10.17	28.35	0.422	2.53
14	9.46	29.17	0.157	3.86
18	9.23	29.42	0.145	3.85

STA 58-38 47° 44.7' N WEATHER b.
 18 May 54 122° 49.9' W WIND N 3
 0500 (+8) DEPTH 105 fm 53°/52°F
 Tabook Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	14.17	26.08	0.755	0.26
5	11.55	27.80	1.016	0.24
10	9.74	28.51	0.677	0.72
20	8.43	29.14	0.416	2.32
30	8.31	29.34	0.382	2.50
40	8.43	29.46	0.364	2.46
60	8.54	29.61	0.354	2.60
80	8.66	29.71	0.380	2.42
100	8.70	29.78	0.437	2.35
120	8.68	29.80	0.419	2.32
140	9.46	30.18	0.190	3.25
160	9.77	30.42	0.100	3.89
170	9.73	30.45	0.073	4.31
180	9.75	30.48	0.068	4.31
194	9.77	30.49	0.052	4.33

STA 58-39 47° 50.0' N WEATHER b.
 18 May 54 122° 48.7' W WIND Calm
 0630 (+8) DEPTH 28 fm 62°/55°F
 Dabob Bay, Head of

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.09	27.89	0.906	0.36
5	10.92	28.12	0.936	0.36
10	9.22	28.76	0.495	1.99
20	8.34	29.27	0.363	2.55
30	8.31	29.34	0.348	2.65
40	8.48	29.48	0.337	2.74
47	8.48	29.47	0.310	2.88

STA 58-40 47° 46.8' N WEATHER b.
 18 May 54 122° 48.5' W WIND SSW 1
 0740 (+8) DEPTH 85 fm 60°/55°F
 Bolton Peninsula, East of

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	13.34	27.69	0.849	0.25
5	12.97	27.75	0.890	0.44
10	9.70	27.45	0.634	1.16
20	8.44	29.10	0.409	2.40
30	8.32	29.36	0.383	2.45
40	8.44	29.48	0.368	2.50
60	8.62	29.66	0.355	2.69
80	8.72	29.79	0.350	2.64
100	8.73	29.80	0.411	2.36
120	8.86	29.86	0.396	2.64
140	9.37	30.13	0.207	3.17
159	9.68	30.37	0.114	3.83

STA 58-41 47° 41.6' N WEATHER b.c. 18 May 54 122° 51.6' W WIND SW 5 0900 (+8) DEPTH 77 fm 62°/56°F Tskutsko Point				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	13.84	26.68	0.799	0.26
5	10.86	28.11	0.975	0.29
10	9.63	28.63	0.592	1.49
20	8.56	29.27	0.408	2.29
30	8.38	29.43	0.377	2.44
40	8.49	29.54	0.380	2.29
60	8.59	29.64	0.410	2.26
80	8.66	29.71	0.382	2.38
100	8.76	29.77	0.412	2.26
120	8.89	29.92	0.356	2.34
140	9.72	30.41	0.103	3.84

STA 58-42 47° 53.4' N WEATHER b. 18 May 54 122° 21.7' W WIND NW 4 1330 (+8) DEPTH 136 fm 69°/61°F Possession Point				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	13.48	21.04	0.711	0.44
5	9.14	28.12	0.537	1.70
10	9.10	28.59	0.563	1.79
20	8.90	28.87	0.551	1.88
30	8.75	28.90	0.520	1.83
50	8.36	29.02	0.448	1.98
75	8.38	29.29	0.469	2.17
100	8.54	29.57	0.487	2.04
139	8.50	29.73	0.473	2.07
179	8.49	29.82	0.474	2.07
218	8.50	29.83	0.471	2.02

STA 58-43 47° 58.6' N WEATHER b.c. 18 May 54 122° 16.7' W WIND NW 12 1445 (+8) DEPTH 77 fm 66°/58°F Port Gardner				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	13.34	20.41	0.703	0.40
5	9.44	27.49	0.543	1.45
10	8.46	28.70	0.429	1.92
20	8.28	28.87	0.344	1.83
30	8.19	29.00	0.376	1.93
49	8.18	29.14	0.353	2.03
68	8.19	29.34	0.392	2.19
87	8.26	29.43	0.434	1.89
106	8.46	29.63	0.472	2.01
138	8.48	29.76	0.472	2.19

STA 58-44 48° 03.2' N WEATHER b.c. 18 May 54 122° 19.3' W WIND WNW 19 1610 (+8) DEPTH 67 fm 62°/53°F Camano Head, East of				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.64	20.39	0.710	0.46
5	9.21	27.57	0.529	1.62
10	8.53	28.56	0.526	2.01
20	8.32	28.78	0.426	2.18
30	8.18	28.93	-----	2.22
40	8.16	29.03	0.406	2.10
49	8.19	29.02	0.394	2.24
68	8.24	29.22	0.353	2.38
87	8.20	29.33	0.390	2.26
96	8.22	29.41	0.399	2.36
105	8.24	29.40	0.408	2.29
116	8.31	29.52	0.416	2.24

STA 58-45 48° 09.1' N WEATHER c.
 18 May 54 122° 24.1' W WIND WNW 20
 1745 (+8) DEPTH 54 fm 62°/53°F
 Port Susan, Head of

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.10	21.67	0.703	0.51
5	9.14	27.74	0.598	1.26
10	8.25	28.59	0.411	2.26
20	8.28	28.83	0.370	2.42
30	8.37	28.98	0.340	2.15
40	8.50	29.08	0.320	2.19
59	8.42	29.25	0.320	2.57
78	8.41	29.34	0.301	3.33
88	8.42	29.38	0.322	3.17

STA 58-46 48° 05.9' N WEATHER b.c.
 18 May 54 122° 21.6' W WIND WNW 7
 1850 (+8) DEPTH 68 fm 64°/54°F
 Port Susan, Middle of

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	14.92	15.35	0.679	0.26
5	8.96	28.10	0.524	1.60
10	8.31	28.59	0.427	2.20
20	8.26	28.83	0.378	2.29
30	8.38	29.01	0.335	2.39
40	8.53	29.11	0.317	2.04
50	8.41	29.23	0.323	2.49
69	8.31	29.23	0.334	2.58
89	8.17	29.40	0.413	2.22
98	8.19	29.47	0.424	2.21
108	8.28	29.50	0.438	2.08
126	8.30	29.52	0.441	2.34

STA 58-47 48° 02.6' N WEATHER b.
 18 May 54 122° 22.2' W WIND NW 16
 1950 (+8) DEPTH 100 fm 57°/53°F
 Camano Head, West of

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.92	22.66	0.730	0.65
5	10.34	26.26	0.599	1.26
9	9.04	27.83	0.507	1.79
19	8.23	28.83	0.421	2.22
29	8.08	29.02	0.412	2.25
48	8.14	29.23	0.402	2.18
70	8.30	29.39	0.463	2.12
93	8.36	29.49	0.478	2.15
116	8.37	29.58	0.478	1.99
139	8.44	29.70	0.474	2.10

STA 58-48 48° 06.5' N WEATHER b.
 18 May 54 122° 29.2' W WIND NNW 12
 2130 (+8) DEPTH 82 fm 56°/52°F
 East Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.52	23.82	0.631	0.96
5	8.68	28.07	0.488	1.81
10	8.23	28.72	0.429	2.02
19	8.19	28.78	0.423	2.12
28	8.08	28.96	0.424	2.27
47	8.06	29.06	0.432	2.20
69	8.05	29.15	0.437	2.32
91	8.08	29.15	0.435	2.29
114	8.20	29.20	0.458	2.16

STA 58-49 48° 01.6' N WEATHER b. 18 May 54 122° 31.8' W WIND N 1 2300 (+8) DEPTH 22 fm 54°/52°F Holmes Harbor, Head of				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	15.63	18.04	0.618	0.21
5	10.57	26.77	0.706	0.53
10	8.55	28.39	0.487	1.73
20	8.20	28.76	0.316	2.70
30	8.08	28.88	0.312	2.59
39	8.14	28.93	0.215	2.96

STA 58-50 48° 03.1' N WEATHER b. 18 May 54 122° 31.9' W WIND WNW 2 2335 (+8) DEPTH 28 fm 54°/52°F Classic				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	14.59	19.94	0.660	0.35
5	13.16	22.21	0.690	0.42
10	9.48	27.89	0.733	0.62
20	8.19	28.77	0.342	2.44
30	8.09	28.93	0.298	2.69
40	8.07	29.02	0.353	2.55
49	8.06	28.99	0.331	2.91

STA 58-51 48° 04.9' N WEATHER b. 19 May 54 122° 32.2' W WIND W 9 0015 (+8) DEPTH 30 fm 55°/53°F Dines Point				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	13.52	20.86	0.658	0.51
5	11.35	24.63	0.670	0.66
10	9.22	27.97	0.728	0.70
20	8.17	28.76	0.362	2.36
30	8.04	28.88	0.382	2.38
40	8.08	28.95	0.328	2.55
50	8.01	29.01	0.407	2.46

STA 58-52 48° 06.2' N WEATHER b. 19 May 54 122° 33.0' W WIND WxS 6 0100 (+8) DEPTH 42 fm 53°/52°F Greenbank				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.00	22.16	0.646	0.79
5	11.15	24.79	0.653	0.84
10	8.84	27.91	0.516	1.59
20	8.13	28.86	0.409	----
30	8.04	28.90	0.407	2.32
40	8.07	28.97	0.407	2.21
49	8.01	29.01	0.411	2.46
58	8.03	29.03	0.412	2.41
75	8.08	29.10	0.411	2.41

STA 58-53 48° 11.1' N WEATHER c.
 19 May 54 122° 32.8' W WIND SW 4
 0530 (+8) DEPTH 52 fm 52°/50°F
 Onamac Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.86	18.66	0.602	1.15
5	8.56	28.34	0.458	1.99
10	8.32	28.60	0.419	2.13
20	8.12	28.81	0.395	2.36
30	8.02	28.96	0.388	2.42
49	7.98	29.12	0.407	2.32
73	8.10	29.33	0.444	2.35
96	8.14	29.38	0.445	2.46

STA 58-54 48° 13.9' N WEATHER c.
 19 May 54 122° 33.1' W WIND WSW 4
 0610 (+8) DEPTH 47 fm 53°/51°F
 Demock Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.18	22.29	0.594	1.26
5	8.96	28.02	0.467	1.92
10	8.24	28.65	0.383	2.43
20	8.11	28.87	0.388	2.47
30	8.04	28.96	0.386	2.44
50	7.98	29.16	0.400	2.56
73	8.04	29.26	0.434	2.48
83	8.04	29.30	0.434	2.44

STA 58-55 48° 18.5' N WEATHER c.
 19 May 54 122° 29.5' W WIND S 2
 0700 (+8) DEPTH 16 fm 54°/52°F
 Strawberry Point, North of

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.34	10.03	0.614	1.05
2	10.26	22.48	0.509	1.82
5	9.96	24.04	0.472	1.94
10	8.42	28.25	413	2.22
20	8.19	28.68	397	2.48

STA 58-56 48° 21.4' N WEATHER c.
 19 May 54 122° 33.3' W WIND WNW 4
 0745 (+8) DEPTH 11 fm 55°/52°F
 Goat Island

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.59	3.35	0.681	1.03
2	10.16	21.82	0.494	1.77
5	9.15	25.98	0.460	2.05
10	8.31	26.68	0.408	2.35

STA 58-57 48° 25.0' N WEATHER c. 19 May 54 122° 36.0' W WIND WSW 6 0825 (+8) DEPTH 20 fm 58°/52°F Dewey				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.72	16.65	0.583	1.46
5	9.55	25.63	0.532	1.81
10	9.65	26.23	0.530	1.73
20	9.34	27.56	0.498	1.94
30	8.99	27.97	0.494	1.99

STA 58-58 48° 11.3' N WEATHER c. 19 May 54 122° 54.7' W WIND Calm 1250 (+8) DEPTH 53 fm 53°/51°F Protection Island				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.02	30.19	0.480	1.85
5	8.86	30.28	0.475	1.87
10	8.70	30.50	0.465	1.90
20	8.62	30.62	0.454	2.02
29	8.60	30.67	0.451	2.02
48	8.16	31.45	0.402	2.13
67	8.04	31.72	0.382	2.20
85	7.82	32.01	0.354	2.27

STA 58-59 48° 15.7' N WEATHER c. 19 May 54 123° 03.4' W WIND SW 2 1420 (+8) DEPTH 95 fm 59°/54°F New Dungeness, Northeast of				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.64	30.38	0.536	1.92
5	9.24	30.54	0.488	2.02
10	8.66	30.72	0.462	2.00
20	8.62	30.74	0.461	2.07
30	8.60	30.69	0.459	1.97
50	8.00	31.72	0.378	2.10
75	7.75	32.07	0.352	2.24
100	7.45	32.59	0.317	2.33
130	7.28	32.93	0.288	2.37
160	6.96	33.26	0.255	

STA 58-60 48° 14.4' N WEATHER b.c. 19 May 54 123° 15.1' W WIND SW 6 1605 (+8) DEPTH 72 fm 53°/50°F New Dungeness, Northwest of				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.26	30.56	0.509	1.90
5	8.72	30.83	0.471	2.01
10	8.40	31.17	0.436	2.10
20	8.26	31.35	0.422	2.08
30	7.88	31.81	0.381	2.15
49	7.42	32.65	0.310	2.26
74	7.28	32.84	0.292	2.41
98	7.16	32.99	0.280	2.38
127	7.00	33.30	0.251	2.42

STA 58-61 48° 12.2' N WEATHER b.c. 19 May 54 123° 23.5' W WIND WSW 12 1735 (+8) DEPTH 72 fm 52°/52°F Ediz Hook				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.17	30.75	0.509	1.93
5	9.20	30.75	0.505	1.97
10	9.19	30.80	0.504	1.98
20	8.37	31.41	0.432	1.98
30	7.58	32.43	0.343	2.21
49	7.25	32.98	0.286	2.27
73	6.78	33.57	0.230	2.36
97	6.68	33.52	0.222	2.48
122	6.70	33.65	0.222	2.50

STA 58-62 48° 14.9' N WEATHER b.c. 19 May 54 123° 31.9' W WIND W 17 1855 (+8) DEPTH 96 fm 53°/49°F Race Rocks				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.24	31.08	0.506	1.85
5	9.27	31.08	0.508	1.92
10	8.78	31.21	0.489	1.99
20	7.88	32.03	0.373	2.15
30	7.72	32.22	0.355	2.21
50	7.72	32.29	0.350	1.95
74	6.76	33.40	0.227	2.53
98	6.51	33.76	0.202	2.49
128	6.45	33.80	0.195	2.43
157	6.46	33.82	0.199	2.42

STA 58-63 48° 15.8' N WEATHER b.c. 19 May 54 123° 41.6' W WIND W 15 2025 (+8) DEPTH 100 fm 49°/48°F Beechy Head				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.50	31.53	0.469	1.77
5	8.51	31.51	0.469	1.69
10	8.48	31.56	0.459	1.71
20	8.24	31.70	0.422	1.77
30	8.09	31.83	0.406	1.78
50	7.86	32.23	0.367	----
74	7.02	33.25	0.257	2.02
98	6.66	33.77	0.205	2.28
138	6.40	33.87	0.187	2.20
177	6.39	33.89	0.190	----

STA 58-64 48° 17.9' N WEATHER b.c. 19 May 54 123° 52.5' W WIND W 15 2145 (+8) DEPTH 97 fm 50°/49°F Otter Point				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.48	31.72	0.454	2.25
5	8.50	31.75	0.454	1.97
10	8.52	31.74	0.453	1.97
20	8.14	31.77	0.414	2.06
30	8.04	31.88	0.400	2.13
50	7.96	32.05	0.381	1.97
75	7.78	32.22	0.358	2.31
100	7.34	32.77	0.301	2.34
130	6.88	33.51	0.239	2.38
160	6.32	33.89	0.181	2.61

STA 58-65 48° 18.3' N WEATHER b.c. 19 May 54 124° 03.3' W WIND W 16 2300 (+8) DEPTH 103 fm 49°/47°F Pillar Point				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.70	31.48	0.501	1.82
5	8.72	31.49	0.497	1.84
10	8.74	31.49	0.496	1.80
20	8.62	31.55	0.478	1.92
30	8.44	31.61	0.459	1.93
50	7.76	32.34	0.349	2.18
75	7.32	33.17	0.290	2.34
100	7.06	33.40	0.248	2.36
140	6.30	33.89	0.180	2.68
180	6.32	33.88	0.175	2.55

STA 58-66 48° 08.6' N WEATHER o. 20 May 54 122° 41.6' W WIND SxE 2 0700 (+8) DEPTH 62 fm 49°/48°F Port Townsend				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.96	29.89	0.510	1.83
5	8.94	30.03	0.503	1.92
10	8.92	30.12	0.496	1.95
20	8.84	30.18	0.486	1.95
30	8.80	30.24	0.481	1.95
50	8.76	30.39	0.469	1.96
74	8.46	31.11	0.427	2.13
97	8.32	31.22	0.413	2.22

STA 58-67 48° 01.8' N WEATHER c. 20 May 54 122° 37.8' W WIND NNW 6 0850 (+8) DEPTH 62 fm 50°/49°F Bush Point				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.74	28.20	0.614	1.43
5	9.52	28.40	0.591	1.53
10	9.38	28.83	0.561	1.64
20	9.44	28.96	0.568	1.59
29	9.47	29.21	0.575	1.48
48	9.06	29.59	0.510	1.96
77	8.82	30.32	0.470	2.00
105	8.70	30.64	0.453	2.06

STA 58-68 47° 57.0' N WEATHER b.c. 20 May 54 122° 34.3' W WIND Calm 1020 (+8) DEPTH 57 fm 52°/50°F Double Bluff				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.78	26.00	0.728	0.74
5	9.54	27.94	0.619	1.43
10	8.87	28.98	0.532	1.86
20	8.76	29.34	0.519	1.93
30	8.77	29.42	0.501	1.88
50	8.80	29.53	0.498	1.91
74	8.86	29.81	0.490	2.01
98	8.89	29.88	0.488	1.98

STA 58-69 47° 53.7' N WEATHER b.c.
 20 May 54 122° 29.0' W WIND SxE 3
 1140 (+8) DEPTH 97 fm 53°/50°F
 Point No Point

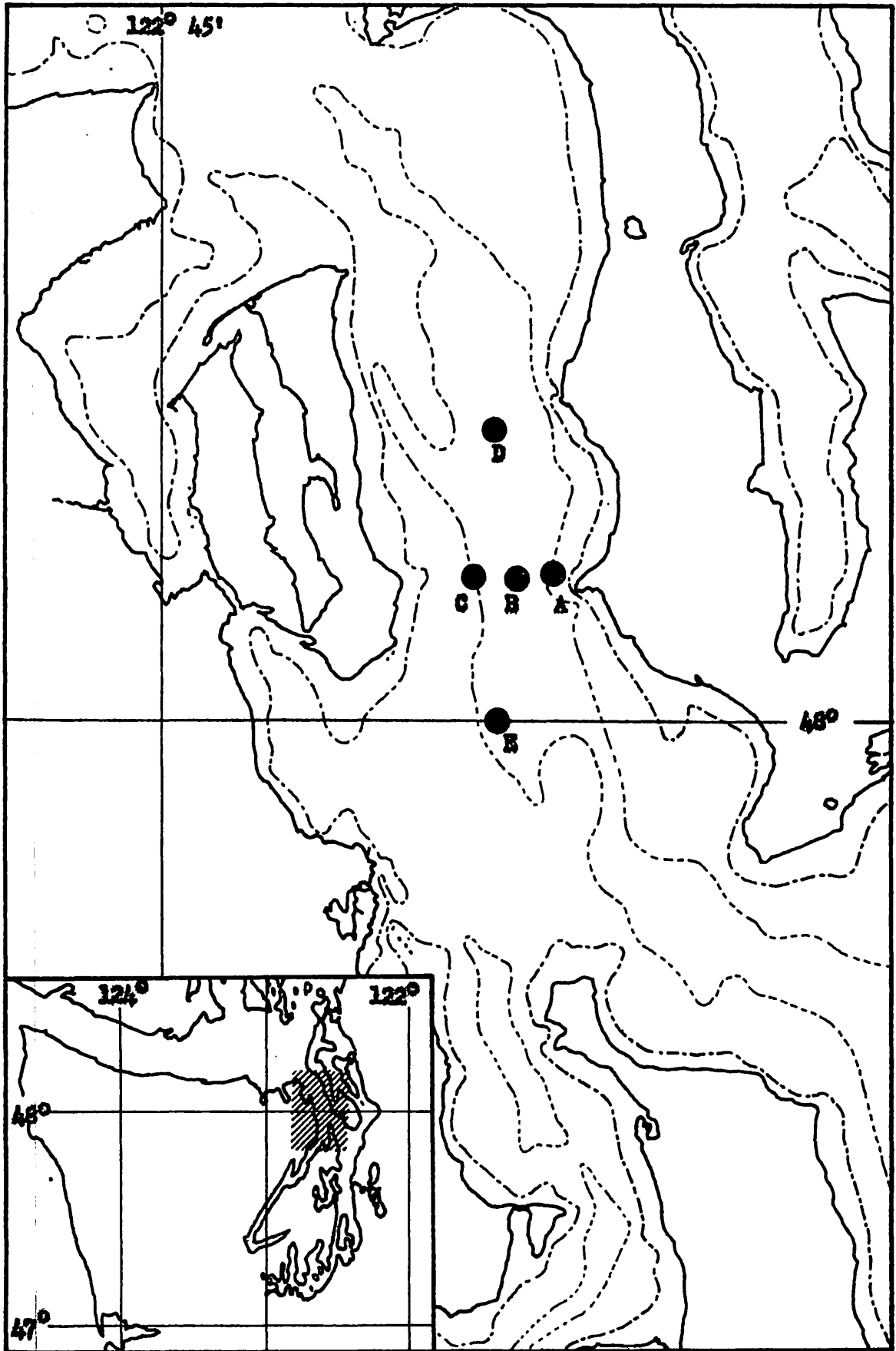
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
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0	12.14	22.00	0.739	0.46
5	9.65	28.19	0.664	1.39
10	9.10	28.76	0.593	1.79
20	8.90	29.05	0.529	1.96
30	8.80	29.14	0.518	1.96
49	8.58	29.32	0.498	2.09
73	8.73	29.62	0.489	2.14
97	8.80	29.76	0.486	2.03
126	8.90	29.94	0.483	2.04
152	8.83	29.98	0.479	2.02
180	8.82	29.99	0.476	2.01

STA 58-70 47° 44.5' N WEATHER o.
 20 May 54 122° 25.4' W WIND NxE 8
 1140 (+8) DEPTH 152 fm 55°/53°F
 Point Jefferson

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
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0	11.26	27.38	0.871	0.53
5	10.56	27.61	0.829	0.74
10	9.84	28.45	0.666	1.44
20	9.08	28.83	0.607	1.86
30	8.82	28.98	0.548	1.92
50	8.50	29.41	0.496	2.08
75	8.56	29.58	0.493	2.15
100	8.63	29.60	0.489	2.12
150	8.66	29.81	0.476	2.13
200	8.62	29.83	0.473	2.19
240	8.63	29.86	0.473	2.15
270	8.61	29.88	0.473	2.22



Time Study in Admiralty Inlet
BROWN BEAR CRUISE 60
1 - 5 June 1954

BROWN BEAR CRUISE 60

ADMIRALTY INLET TIME STUDY

STATION NO. A

LAT. 48° 01.9' N, LONG. 122° 36.9' W

1 - 4 June 1954

Sta No. Time (+8)	1-A 1625 (1 June '54)			2-A 1911			3-A 2122		
Depth (m)	Temp (°C)	Sal (‰)	Density (σ _t)	Temp (°C)	Sal (‰)	Density (σ _t)	Temp (°C)	Sal (‰)	Density (σ _t)
0	8.99	30.49	23.61	9.56	29.79	22.98	9.45	29.28	22.61
10	8.94	30.52	23.66	9.46	29.75	22.96	9.40	29.49	22.77
20	8.96	30.53	23.64	9.42	29.78	23.00	9.33	29.75	23.00
40	8.90	30.59	23.71	9.22	30.12	23.30	9.13	30.17	23.36
70	8.77	30.80	23.89	9.22	30.15	23.32	8.91	30.65	23.76
100	8.76	30.86	23.94	8.91	30.71	23.81	8.83	30.73	23.83

Sta No. Time (+8)	4-A 2332			5-A 0208 (2 June '54)			6-A 0437		
Depth (m)	Temp (°C)	Sal (‰)	Density (σ _t)	Temp (°C)	Sal (‰)	Density (σ _t)	Temp (°C)	Sal (‰)	Density (σ _t)
0	9.36	29.46	22.75	9.33	29.43	22.74	9.36	29.57	22.84
10	9.27	29.70	23.96	9.31	29.46	22.77	-----	29.59	-----
20	9.30	29.70	23.96	9.34	29.48	22.78	9.32	29.64	22.91
40	9.32	29.71	23.97	9.31	29.68	23.94	9.22	29.86	23.10
70	9.00	30.40	23.55	9.36	29.69	23.93	9.02	30.49	23.61
100	8.89	30.64	23.75	9.21	29.60	22.89	8.91	30.64	23.75

Sta No.	7-A 0708			8-A 1037			9-A 1242		
Depth (m)	Temp (°C)	Sal (‰)	Density (σ _t)	Temp (°C)	Sal (‰)	Density (σ _t)	Temp (°C)	Sal (‰)	Density (σ _t)
0	10.28	27.99	21.46	10.98	26.62	20.30	10.31	28.28	21.69
10	9.66	29.23	22.53	9.74	28.79	22.18	10.10	28.51	21.91
20	9.45	29.52	22.80	9.55	29.17	22.50	9.92	28.78	22.14
40	9.29	29.74	22.99	9.32	29.62	22.90	9.48	29.39	22.68
70	9.05	30.38	23.53	9.30	29.76	23.00	9.32	29.75	23.00
100	8.90	30.66	23.77	9.20	29.94	23.16	9.27	29.79	23.02

STATION NO. A (Cont'd)

Sta No. Time (+8)	10-A 1505			11-A 1837			12-A 2058		
Depth (m)	Temp (°C)	Sal (‰)	Density (σ_t)	Temp (°C)	Sal (‰)	Density (σ_t)	Temp (°C)	Sal (‰)	Density (σ_t)
0	10.40	28.61	21.94	8.96	30.67	23.76	9.35	29.83	23.04
10	9.70	29.08	22.41	8.91	30.68	23.78	9.35	29.88	23.08
20	9.55	29.30	22.60	8.91	30.68	23.78	9.18	30.16	23.33
40	9.34	29.66	22.93	8.87	30.73	23.82	9.18	30.17	23.34
70	9.18	30.17	23.34	8.89	30.73	23.82	9.16	30.18	23.34
100	9.17	30.10	23.28	8.84	30.79	23.88	8.99	30.70	23.78

Sta No. Time (+8)	13-A 2306			14-A 0044 (3 June '54)			15-A 0219		
Depth (m)	Temp (°C)	Sal (‰)	Density (σ_t)	Temp (°C)	Sal (‰)	Density (σ_t)	Temp (°C)	Sal (‰)	Density (σ_t)
0	9.54	29.53	22.79	9.51	29.41	22.70	9.41	29.62	22.88
10	9.48	29.59	22.84	9.35	29.67	23.92	9.36	29.71	22.95
20	9.48	29.60	22.85	9.35	29.68	23.92	9.34	29.82	23.05
40	9.37	29.75	22.98	9.33	29.68	23.94	9.35	29.78	23.00
70	9.05	30.43	23.57	9.33	29.81	23.04	9.21	30.22	23.38
100	8.83	30.81	23.90	8.98	30.55	23.66	9.00	30.52	23.64

Sta No. Time (+8)	16-A 0426			17-A 0631			18-A 0805		
Depth (m)	Temp (°C)	Sal (‰)	Density (σ_t)	Temp (°C)	Sal (‰)	Density (σ_t)	Temp (°C)	Sal (‰)	Density (σ_t)
0	9.64	29.03	22.39	9.41	29.70	22.94	9.91	28.41	21.86
10	9.49	29.37	22.67	9.34	29.76	23.00	9.49	29.41	22.70
20	9.45	29.50	22.78	9.36	29.78	23.00	9.42	29.67	22.92
40	9.40	29.69	22.93	9.14	30.22	23.39	9.30	29.82	23.05
70	9.09	30.34	23.48	8.94	30.62	23.74	9.22	30.19	23.35
100	8.95	30.62	23.72	8.91	30.78	23.86	8.95	30.69	23.77

Sta No. Time (+8)	19-A 0937			20-A 1106			21-A 1204		
Depth (m)	Temp (°C)	Sal (‰)	Density (σ_t)	Temp (°C)	Sal (‰)	Density (σ_t)	Temp (°C)	Sal (‰)	Density (σ_t)
0	11.02	25.53	19.46	10.83	26.22	20.02	10.55	26.92	20.60
10	9.56	29.06	22.41	9.69	28.75	22.15	9.81	28.53	21.96
20	9.40	29.56	22.83	9.47	29.28	22.60	9.53	29.15	22.50
40	9.22	29.97	23.19	9.30	29.73	22.98	9.29	29.70	22.96
70	9.19	30.14	23.31	9.26	29.94	23.14	9.33	29.85	23.07
100	9.12	30.23	23.40	9.16	30.17	23.34	9.19	30.07	23.26

STATION NO. A (Cont'd)

Sta No. Time (+8)	22-A 1350			23-A 1639			24-A 1845		
Depth (m)	Temp (°C)	Sal (‰)	Density (σ_t)	Temp (°C)	Sal (‰)	Density (σ_t)	Temp (°C)	Sal (‰)	Density (σ_t)
0	9.77	28.77	22.16	9.75	28.84	22.21	8.85	30.74	23.84
10	9.56	28.97	22.34	9.69	28.94	22.28	8.82	30.75	23.85
20	9.47	29.28	22.60	9.35	29.76	22.99	8.85	30.76	23.86
40	9.41	29.50	22.78	9.21	30.03	23.23	8.77	30.87	23.95
70	9.42	29.65	22.90	9.06	30.43	23.55	8.73	-----	-----
100	9.23	30.00	23.21	9.01	30.43	23.55	8.78	30.95	24.01

Sta No. Time (+8)	25-A 2018			26-A 2204			27-A 2349		
Depth (m)	Temp (°C)	Sal (‰)	Density (σ_t)	Temp (°C)	Sal (‰)	Density (σ_t)	Temp (°C)	Sal (‰)	Density (σ_t)
0	9.05	30.42	23.56	9.44	29.65	22.90	9.91	29.04	22.35
10	8.88	30.73	23.82	9.33	29.95	23.15	9.56	29.18	22.50
20	8.88	30.78	23.86	9.21	30.09	23.27	9.42	29.58	22.84
40	8.79	30.88	23.87	9.12	30.20	23.38	9.31	29.85	23.07
70	8.81	30.90	23.97	9.10	30.30	23.45	8.95	30.56	23.67
100	8.77	30.94	24.00	8.84	30.76	23.86	8.55	30.88	23.98

Sta No. Time (+8)	28-A 0144 (4 June '54)			29-A 0318			30-A 0504		
Depth (m)	Temp (°C)	Sal (‰)	Density (σ_t)	Temp (°C)	Sal (‰)	Density (σ_t)	Temp (°C)	Sal (‰)	Density (σ_t)
0	9.51	29.34	22.64	9.45	29.53	22.80	9.50	29.42	22.71
10	9.45	29.41	22.72	9.43	29.52	22.80	9.45	29.47	22.76
20	9.45	29.54	22.81	9.41	29.53	22.80	9.46	29.51	22.78
40	9.29	29.84	23.06	9.29	29.79	23.02	9.26	29.93	23.13
70	9.23	30.08	23.27	9.12	30.25	23.42	8.98	30.53	23.64
100	8.81	30.78	23.87	8.99	30.50	23.62	8.82	30.80	23.89

Sta No. Time (+8)	31-A 0640			32-A 0815			33-A 1046		
Depth (m)	Temp (°C)	Sal (‰)	Density (σ_t)	Temp (°C)	Sal (‰)	Density (σ_t)	Temp (°C)	Sal (‰)	Density (σ_t)
0	9.42	29.47	22.76	9.52	29.46	22.74	10.29	28.62	21.96
10	9.32	29.71	22.97	9.43	29.51	22.79	9.57	29.21	22.53
20	9.37	29.72	22.96	9.42	29.58	22.84	9.48	29.39	22.68
40	9.32	29.71	22.97	9.26	29.88	23.09	9.32	29.66	22.93
70	8.99	30.46	23.59	9.01	30.54	23.65	9.26	29.91	23.12
100	8.91	30.62	23.74	8.84	30.75	23.85	9.10	30.25	23.42

STATION NO. A (Cont'd)

Sta No. Time (+8)	34-A 1243			35-A 1438			36-A 1600		
Depth (m)	Temp (°C)	Sal (‰)	Density (σ_t)	Temp (°C)	Sal (‰)	Density (σ_t)	Temp (°C)	Sal (‰)	Density (σ_t)
0	10.64	28.51	21.83	9.67	28.97	22.32	10.52	28.92	22.16
10	9.81	28.61	22.03	9.69	29.07	22.41	9.67	29.42	22.68
20	9.57	29.17	22.50	9.60	29.23	22.54	9.67	29.54	22.77
40	9.48	29.41	22.70	9.62	29.33	22.62	9.38	29.58	22.84
70	9.38	29.64	22.89	9.62	29.40	22.68	9.17	30.09	23.27
100	9.15	30.14	23.31	9.16	30.08	23.27	9.09	30.32	23.47

Sta No. Time (+8)	37-A 1757			38-A 1937		
Depth (m)	Temp (°C)	Sal (‰)	Density (σ_t)	Temp (°C)	Sal (‰)	Density (σ_t)
0	9.30	30.13	23.29	8.97	30.66	23.75
10	9.24	30.10	23.28	8.94	30.70	23.80
20	9.18	30.24	23.39	8.94	30.64	23.75
40	9.01	30.49	23.61	8.92	30.68	23.78
70	8.76	30.91	23.98	8.89	30.73	23.82
100	8.69	30.99	24.05	8.86	30.78	23.86

BROWN BEAR CRUISE 60

ADMIRALTY INLET TIME STUDY

STATION NO. B

LAT. 48° 01.9' N, LONG. 122° 38.1' W

1 - 4 June 1954

Sta No. Time (+8)	1-B 1721 (1 June '54)			2-B 1954			3-B 2220		
Depth (m)	Temp (°C)	Sal (‰)	Density (σ_t)	Temp (°C)	Sal (‰)	Density (σ_t)	Temp (°C)	Sal (‰)	Density (σ_t)
0	8.96	30.61	23.71	9.55	29.60	22.83	9.45	29.56	22.83
10	8.92	30.67	23.78	9.33	29.86	23.08	9.39	29.53	22.80
20	9.35	29.81	23.03	9.16	30.18	23.34	9.36	29.74	22.97
40	9.41	29.86	23.07	9.07	30.35	23.49	9.27	29.90	23.11
70	8.95	29.88	23.14	9.08	30.39	23.52	9.24	30.08	23.27
110	8.86	30.82	23.89	8.89	30.71	23.81	9.03	30.82	23.88

Sta No. Time (+8)	4-B 0027			5-B 0309 (2 June '54)			6-B 0519		
Depth (m)	Temp (°C)	Sal (‰)	Density (σ_t)	Temp (°C)	Sal (‰)	Density (σ_t)	Temp (°C)	Sal (‰)	Density (σ_t)
0	9.44	29.37	22.69	9.34	29.52	22.82	9.33	29.67	22.94
10	9.33	29.57	22.86	9.33	29.43	22.74	9.25	29.85	22.09
20	9.33	29.68	22.94	9.37	29.50	22.78	9.22	29.86	23.10
40	9.13	30.14	23.33	9.10	30.28	23.44	9.16	30.04	23.24
70	8.92	30.66	23.77	8.99	30.53	23.64	8.98	30.53	23.64
110	8.86	30.73	23.82	* 8.87	30.72	23.81	8.87	30.72	23.81

* Sample at 105 meters

Sta No. Time (+8)	7-B 0824			8-B 1121			9-B 1359		
Depth (m)	Temp (°C)	Sal (‰)	Density (σ_t)	Temp (°C)	Sal (‰)	Density (σ_t)	Temp (°C)	Sal (‰)	Density (σ_t)
0	10.33	27.69	21.23	9.46	28.06	21.65	10.00	29.09	22.37
10	9.60	28.92	22.30	9.43	29.28	22.61	9.79	29.19	22.48
20	9.46	29.42	22.71	9.40	29.43	22.73	9.39	29.68	22.92
40	9.29	29.88	23.09	9.36	29.52	22.80	9.35	29.75	22.98
70	9.28	29.98	23.17	9.36	29.68	23.92	9.21	30.08	23.27
110	9.03	30.39	23.54	9.12	30.15	23.34	* 9.15	30.16	23.33

* Sample at 85 meters

STATION NO. B (Cont'd)

Sta No. Time (+8)	10-B 1610			11-B 1934			12-B 2137		
Depth (m)	Temp (°C)	Sal (‰)	Density (σ_t)	Temp (°C)	Sal (‰)	Density (σ_t)	Temp (°C)	Sal (‰)	Density (σ_t)
0	9.44	30.00	23.17	9.27	30.52	23.60	9.52	29.61	22.86
10	9.28	30.02	23.21	8.88	30.67	23.78	9.33	29.89	23.10
20	9.11	30.27	23.43	8.86	30.75	23.84	9.31	29.97	23.17
40	9.02	30.47	23.60	8.83	30.81	23.90	9.19	30.13	23.30
70	8.93	30.61	23.73	8.85	30.82	23.91	9.12	30.33	23.47
110	8.91	30.64	23.75	8.82	30.82	23.91	8.98	30.59	23.69

Sta No. Time (+8)	13-B 2351			14-B 0123 (3 June '54)			15-B 0337		
Depth (m)	Temp (°C)	Sal (‰)	Density (σ_t)	Temp (°C)	Sal (‰)	Density (σ_t)	Temp (°C)	Sal (‰)	Density (σ_t)
0	9.60	29.23	22.54	10.78	29.06	22.22	9.54	29.41	22.70
10	9.52	29.30	22.61	9.50	29.28	22.60	9.35	29.79	23.01
20	9.55	29.53	22.77	9.36	29.67	22.92	9.26	30.02	23.21
40	9.23	30.01	23.22	9.16	30.15	23.32	8.96	30.54	23.65
70	9.10	30.33	23.47	8.97	30.58	23.68	8.91	30.72	23.81
110	8.89	30.74	23.83	8.83	30.85	23.93	8.87	30.76	23.84

Sta No. Time (+8)	16-B 0531			17-B 0720			18-B 0849		
Depth (m)	Temp (°C)	Sal (‰)	Density (σ_t)	Temp (°C)	Sal (‰)	Density (σ_t)	Temp (°C)	Sal (‰)	Density (σ_t)
0	9.41	29.64	22.89	9.39	29.76	22.99	10.18	28.18	21.63
10	9.39	29.69	22.93	9.25	29.94	23.16	9.62	29.32	22.62
20	9.02	30.45	23.58	9.26	29.99	23.18	9.60	29.39	22.67
40	8.96	30.60	23.70	9.24	30.03	23.23	9.59	29.49	22.74
70	8.95	30.63	23.72	9.09	30.33	23.47	9.23	30.18	23.34
110	8.88	30.73	23.82	8.90	30.74	23.83	9.10	30.42	23.55

Sta No. Time (+8)	19-B 1026			20-B 1137			21-B 1245		
Depth (m)	Temp (°C)	Sal (‰)	Density (σ_t)	Temp (°C)	Sal (‰)	Density (σ_t)	Temp (°C)	Sal (‰)	Density (σ_t)
0	10.10	27.87	21.36	10.25	27.68	21.24	10.02	28.29	21.75
10	9.49	29.23	22.56	9.65	28.66	21.32	9.61	29.06	22.41
20	9.38	29.65	22.90	9.44	29.53	22.80	9.61	29.17	22.50
40	9.35	29.67	22.92	9.42	29.56	22.83	9.56	29.28	22.58
70	9.38	29.71	22.95	9.46	29.60	22.85	9.49	29.53	22.79
110	9.11	30.23	23.40	9.00	30.48	23.61	9.05	30.43	23.57

STATION NO. B (Cont'd)

Sta No. Time (+8)	22-B 1529			23-B 1755			24-B 1932		
Depth (m)	Temp (°C)	Sal (‰)	Density (σ_t)	Temp (°C)	Sal (‰)	Density (σ_t)	Temp (°C)	Sal (‰)	Density (σ_t)
0	9.45	29.70	22.94	9.09	30.35	23.49	9.30	29.97	22.39
10	9.32	29.76	23.00	9.03	30.40	23.55	9.26	30.01	23.20
20	9.34	29.77	23.01	9.03	30.43	23.57	9.27	30.13	23.29
40	9.26	29.86	23.08	8.93	30.52	23.66	9.20	30.19	23.35
70	9.24	30.10	23.28	8.74	30.91	23.98	8.89	30.78	23.86
110	9.21	30.16	23.33	8.68	31.04	-----	8.65	30.82	23.91

Sta No. Time (+8)	25-B 2101			26-B 2257			27-B 0056		
Depth (m)	Temp (°C)	Sal (‰)	Density (σ_t)	Temp (°C)	Sal (‰)	Density (σ_t)	Temp (°C)	Sal (‰)	Density (σ_t)
0	9.47	29.63	22.87	9.40	29.70	22.94	9.56	29.12	22.46
10	9.25	29.97	23.19	9.30	29.85	23.07	9.45	29.40	22.71
20	9.21	30.15	23.32	9.31	29.86	23.08	9.46	29.71	22.93
40	9.08	30.42	23.55	9.19	30.02	23.22	9.21	30.05	23.24
70	9.03	30.51	23.63	9.08	30.33	23.47	9.08	30.26	23.42
110	8.90	30.67	23.73	8.85	30.73	23.83	8.90	30.54	23.67

Sta No. Time (+8)	28-B 0231 (4 June '54)			29-B 0411			30-B 0553		
Depth (m)	Temp (°C)	Sal (‰)	Density (σ_t)	Temp (°C)	Sal (‰)	Density (σ_t)	Temp (°C)	Sal (‰)	Density (σ_t)
0	9.49	29.30	22.61	9.58	29.05	22.40	9.44	29.48	22.77
10	9.45	29.34	22.66	9.50	29.26	22.58	9.40	29.52	22.80
20	9.46	29.64	22.88	9.26	30.04	23.22	9.35	29.73	22.96
40	9.26	29.98	23.17	9.00	30.00	23.24	9.02	30.38	23.53
70	9.06	30.17	23.36	9.01	30.49	23.61	8.86	30.68	23.78
110	8.89	30.62	23.74	8.85	30.74	23.84	8.83	30.76	23.86

Sta No. Time (+8)	31-B 0718			32-B 0951			33-B 1147		
Depth (m)	Temp (°C)	Sal (‰)	Density (σ_t)	Temp (°C)	Sal (‰)	Density (σ_t)	Temp (°C)	Sal (‰)	Density (σ_t)
0	9.46	29.54	22.80	10.04	28.48	21.90	9.90	28.69	22.07
10	9.25	29.87	23.11	9.75	28.95	22.29	9.49	29.30	22.61
20	9.26	29.92	23.13	9.67	29.08	22.41	9.49	29.39	22.68
40	9.15	30.13	23.30	9.63	29.30	22.60	9.48	29.48	22.75
70	8.90	30.64	23.75	9.30	29.53	22.82	9.46	29.61	22.86
110	8.85	30.73	23.83	9.12	30.21	23.39	9.00	30.46	23.59

STATION NO. B (Cont'd)

Sta No.	34-B			35-B			36-B		
Time (+8)	1330			1512			1706		
Depth (m)	Temp (°C)	Sal (‰)	Density (σ_t)	Temp (°C)	Sal (‰)	Density (σ_t)	Temp (°C)	Sal (‰)	Density (σ_t)
0	10.64	28.57	21.88	9.79	29.40	22.65	9.70	29.47	22.72
10	9.55	29.23	22.54	9.50	29.46	22.74	9.51	29.56	22.82
20	9.60	29.27	22.58	9.26	29.86	23.08	9.51	29.63	22.87
40	9.61	29.43	22.70	9.23	29.96	23.18	9.36	29.81	23.03
70	9.49	29.57	22.83	9.18	30.08	23.27	9.23	30.16	23.33
*100	9.07	30.27	23.43	9.00	30.44	23.58	9.06	30.50	23.61

*Changed from 110 to 100

Sta No.	37-B			38-B			39-B		
Time (+8)	1848			2026			2236		
Depth (m)	Temp (°C)	Sal (‰)	Density (σ_t)	Temp (°C)	Sal (‰)	Density (σ_t)	Temp (°C)	Sal (‰)	Density (σ_t)
0	9.18	30.37	23.50	9.31	30.14	23.30	9.26	30.08	23.25
10	9.17	30.40	23.52	9.25	30.16	23.32	9.22	30.12	23.30
20	9.11	30.44	23.56	9.05	30.38	23.53	9.21	30.17	23.34
40	8.99	30.55	23.66	9.03	30.45	23.58	9.04	30.45	23.58
70	8.73	31.02	24.08	8.87	30.80	23.87	9.04	30.54	23.65
100	8.60	31.18	24.21	8.82	30.85	23.93	8.95	30.67	23.76

Sta No.	40-B			41-B			42-B		
Time (+8)	0129 (5 June '54)			0412			0658		
Depth (m)	Temp (°C)	Sal (‰)	Density (σ_t)	Temp (°C)	Sal (‰)	Density (σ_t)	Temp (°C)	Sal (‰)	Density (σ_t)
0	9.48	29.42	22.71	9.50	29.36	22.66	9.46	29.52	22.79
10	9.41	29.54	22.81	9.49	29.45	22.73	9.38	29.68	22.92
20	9.40	29.64	22.89	9.39	29.71	22.95	9.33	29.83	23.05
40	9.30	29.93	23.13	9.20	30.13	23.30	9.17	30.07	23.26
70	9.17	30.28	23.42	8.96	30.55	23.66	8.95	30.64	23.73
100	8.94	30.65	23.76	8.87	30.74	23.83	8.91	30.71	23.81

Sta No.	43-B			44-B			45-B		
Time (+8)	1027			1400			1629		
Depth (m)	Temp (°C)	Sal (‰)	Density (σ_t)	Temp (°C)	Sal (‰)	Density (σ_t)	Temp (°C)	Sal (‰)	Density (σ_t)
0	10.34	28.54	21.90	11.21	25.43	19.34	9.78	29.31	22.58
10	9.68	29.45	22.70	10.03	28.36	21.03	9.32	29.89	23.10
20	9.48	29.72	22.94	9.49	29.31	22.62	9.32	29.94	23.14
40	9.28	29.97	23.17	9.53	29.52	22.79	9.24	30.07	23.26
70	9.19	30.15	23.32	9.42	29.85	23.06	9.10	30.44	23.56
100	9.07	30.39	23.52	9.01	30.51	23.63	9.06	30.47	23.59

STATION NO. B (Cont'd)

Sta No. Time (+8)	46-B 1910			47-B 2154		
Depth (m)	Temp (°C)	Sal (‰)	Density (σ_t)	Temp (°C)	Sal (‰)	Density (σ_t)
0	9.39	29.88	23.08	9.33	29.91	23.12
10	9.31	30.00	23.19	9.25	30.13	23.30
20	9.26	30.13	23.29	9.23	30.22	23.38
40	9.13	30.40	23.53	9.18	30.27	23.42
70	8.86	30.86	23.92	9.11	30.42	23.55
100	8.84	30.84	23.92	8.94	30.68	23.78

BROWN BEAR CRUISE 60
ADMIRALTY INLET TIME STUDY

STATION NO. C

LAT. 48° 01.9' N, LONG. 122° 39.1' W

1 - 4 June 1954

Sta No.	1-C			2-C			3-C		
Time (+8)	1816 (1 June '54)			2040			2303		
Depth (m)	Temp (°C)	Sal (‰)	Density (σ _t)	Temp (°C)	Sal (‰)	Density (σ _t)	Temp (°C)	Sal (‰)	Density (σ _t)
0	9.42	30.47	23.54	9.40	29.72	23.96	9.79	29.25	22.53
5	9.19	30.56	23.64	9.10	30.24	23.41	9.53	29.52	22.79
10	* 9.32	30.55	23.62	9.49	30.51	23.56	9.47	29.61	22.86
20	* 9.41	29.93	23.12	8.88	30.69	23.79	9.34	29.90	23.11
30	-----	-----	-----	8.88	30.74	23.83	* 9.18	30.13	23.30
40	8.98	30.65	23.74	8.88	30.75	23.84	-----	-----	-----

* Samples at 15 & 25 meters

* Sample at 25 meters

Sta No.	4-C			5-C			6-C		
Time (+8)	0111			0338 (2 June '54)			0624		
Depth (m)	Temp (°C)	Sal (‰)	Density (σ _t)	Temp (°C)	Sal (‰)	Density (σ _t)	Temp (°C)	Sal (‰)	Density (σ _t)
0	9.44	29.24	22.58	9.28	29.97	23.17	9.44	29.60	22.86
5	9.41	29.39	22.70	-----	29.97	-----	9.25	29.89	23.12
10	9.34	29.76	23.00	9.19	29.98	23.19	9.18	30.09	23.27
20	9.28	29.95	23.15	9.11	30.15	23.34	9.11	30.16	23.35
30	9.18	29.52	22.83	9.10	30.16	23.35	8.97	30.56	23.67
40	9.06	30.34	23.48	8.91	30.60	23.72	8.93	30.60	23.72

Sta No.	7-C			8-C		
Time (+8)	0953			1143		
Depth (m)	Temp (°C)	Sal (‰)	Density (σ _t)	Temp (°C)	Sal (‰)	Density (σ _t)
0	10.55	26.99	20.65	10.25	28.26	21.69
5	10.18	28.08	21.55	9.98	28.51	21.92
10	9.83	28.92	22.27	9.86	28.66	22.05
20	9.85	29.05	22.38	9.44	29.24	22.58
30	9.77	29.21	22.50	9.47	29.27	22.59
40	9.47	29.59	22.84	9.35	29.41	22.72

BROWN BEAR CRUISE 60

ADMIRALTY INLET TIME STUDY

STATION NO. D

LAT. $48^{\circ} 03.9' N$, LONG. $122^{\circ} 38.2' W$

1 - 4 June 1954

Sta No. Time (+8)	39-D 2118 (4 June '54)			40-D 0027 (5 June '54)			41-D 0317		
Depth (m)	Temp (°C)	Sal (‰)	Density (σ_t)	Temp (°C)	Sal (‰)	Density (σ_t)	Temp (°C)	Sal (‰)	Density (σ_t)
0	9.03	30.53	23.64	9.31	29.64	22.91	9.48	29.48	22.75
10	8.97	30.62	23.72	9.36	29.78	23.00	9.41	29.73	22.96
20	8.96	30.69	23.77	9.33	29.89	23.10	9.28	30.05	23.23
40	8.87	30.74	23.83	8.92	30.65	23.76	9.12	30.28	23.44
70	8.87	30.85	23.93	8.91	30.74	23.83	8.90	30.73	23.82
100	8.68	31.07	24.12	8.83	30.84	23.92	8.83	30.80	23.89

Sta No. Time (+8)	42-D 0608			43-D 0917			44-D 1256		
Depth (m)	Temp (°C)	Sal (‰)	Density (σ_t)	Temp (°C)	Sal (‰)	Density (σ_t)	Temp (°C)	Sal (‰)	Density (σ_t)
0	9.42	29.65	22.90	9.45	29.89	23.09	10.97	26.26	20.02
10	9.36	29.78	23.00	9.24	30.03	23.23	9.50	29.45	22.73
20	9.32	29.87	23.09	9.25	30.06	23.25	9.50	29.61	22.86
40	9.08	30.37	23.51	9.15	30.25	23.40	9.39	29.74	22.97
70	8.95	30.65	23.74	9.06	30.43	23.55	9.25	30.04	23.24
100	8.92	30.67	23.78	8.97	30.68	23.76	8.97	30.60	23.70

Sta No. Time (+8)	45-D 1545			46-D 1819			47-D 2043		
Depth (m)	Temp (°C)	Sal (‰)	Density (σ_t)	Temp (°C)	Sal (‰)	Density (σ_t)	Temp (°C)	Sal (‰)	Density (σ_t)
0	10.09	28.52	21.92	9.29	30.19	23.33	9.11	30.43	23.55
10	9.96	28.78	22.13	9.09	30.36	23.50	9.08	30.43	23.55
20	9.54	29.57	22.83	9.08	30.51	23.62	9.10	30.43	23.55
40	9.48	29.67	22.90	8.96	30.62	23.72	9.00	30.57	23.68
70	9.37	29.88	23.08	8.94	30.73	23.82	8.77	31.08	24.11
100	9.20	30.12	23.30	8.80	30.89	23.96	8.64	31.13	24.17

STATION NO. D (Cont'd)

Sta No. Time (+8)	48-D 2328		
Depth (m)	Temp (°C)	Sal (‰)	Density (σ_t)
0	9.53	29.79	22.99
10	9.11	30.29	23.44
20	9.12	30.31	23.46
40	9.06	30.42	23.55
70	9.08	30.51	23.62
100	8.84	30.79	23.88

BROWN BEAR CRUISE 60

ADMIRALTY INLET TIME STUDY

STATION NO. E

LAT. 48° 00.0' N, LONG. 122° 38.0' W

1 - 4 June 1954

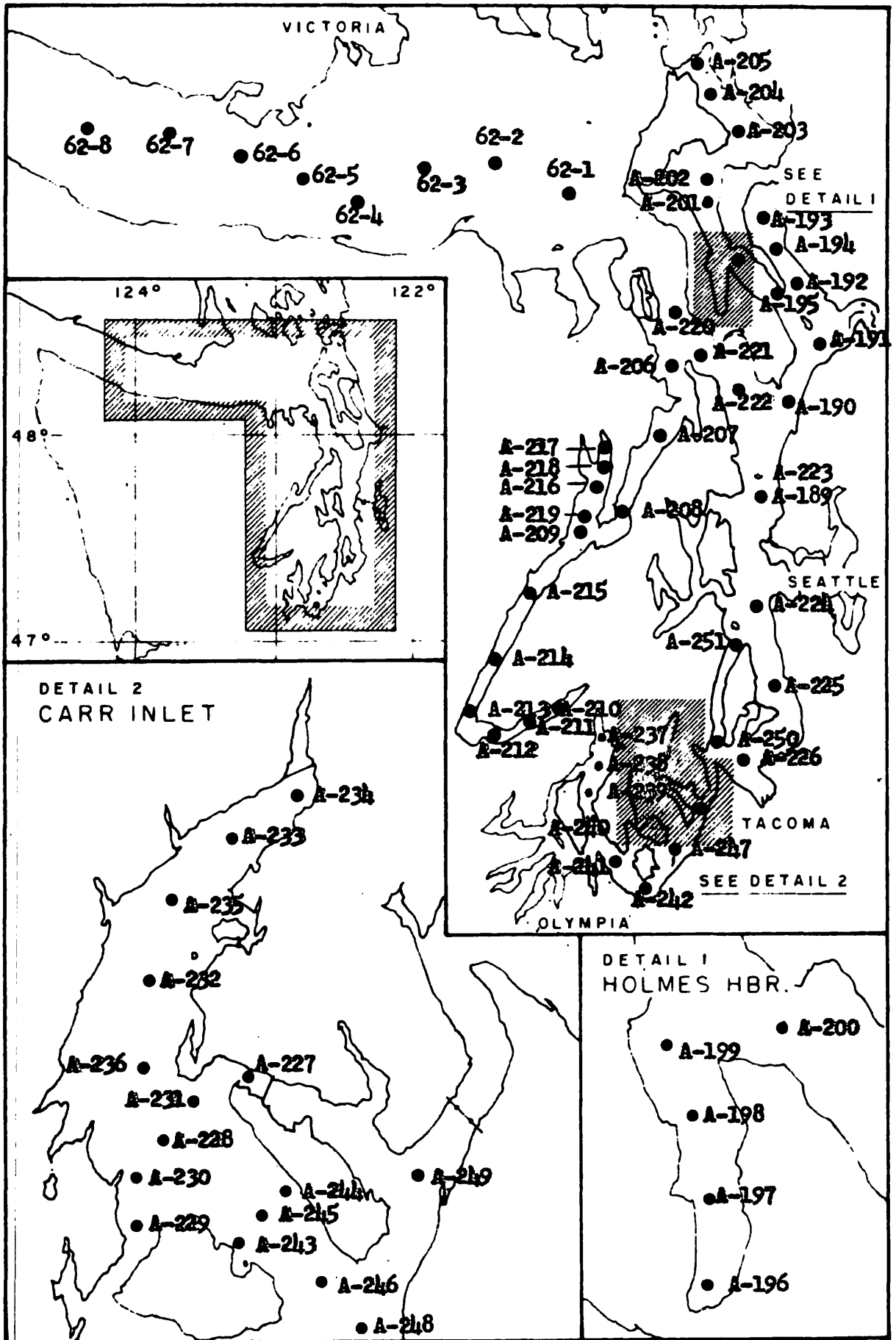
Sta No. Time (+8)	1-E 2338 (4 June '54)			2-E 0227 (5 June '54)			3-E 0512		
Depth (m)	Temp (°C)	Sal (‰)	Density (σ _t)	Temp (°C)	Sal (‰)	Density (σ _t)	Temp (°C)	Sal (‰)	Density (σ _t)
0	9.55	29.09	22.43	9.48	29.45	22.73	9.41	29.70	22.94
10	9.48	29.70	22.92	9.46	29.57	22.83	9.33	29.84	23.06
20	9.47	29.74	22.95	9.46	29.63	22.87	9.31	29.90	23.11
40	9.45	29.83	23.04	9.21	30.03	23.23	9.13	30.25	23.42
80	9.24	30.18	23.34	9.18	30.20	23.36	8.83	30.83	23.91

Sta No. Time (+8)	4-E 0829			5-E 1211			6-E 1443		
Depth (m)	Temp (°C)	Sal (‰)	Density (σ _t)	Temp (°C)	Sal (‰)	Density (σ _t)	Temp (°C)	Sal (‰)	Density (σ _t)
0	9.45	29.65	22.90	10.19	28.17	21.63	10.70	27.01	20.65
10	9.35	29.75	22.98	9.62	29.14	22.47	9.55	29.46	22.72
20	9.34	29.83	23.05	9.56	29.33	22.62	9.52	29.61	22.86
40	9.27	29.97	23.17	9.46	29.62	22.86	9.40	29.79	23.01
80	8.91	30.72	23.81	9.44	29.83	23.04	9.17	30.16	23.33

Sta No. Time (+8)	7-E 1707			8-E 1948			9-E 2241		
Depth (m)	Temp (°C)	Sal (‰)	Density (σ _t)	Temp (°C)	Sal (‰)	Density (σ _t)	Temp (°C)	Sal (‰)	Density (σ _t)
0	10.19	28.27	21.70	9.55	29.67	22.89	9.65	29.40	22.68
10	9.74	29.11	22.44	9.42	29.83	23.04	9.38	29.81	23.03
20	9.70	29.22	22.52	9.43	29.81	23.03	9.35	29.91	23.11
40	9.35	29.82	23.04	9.38	29.86	23.07	9.14	30.29	23.44
80	9.10	30.43	23.55	9.01	30.61	23.71	8.90	30.75	23.84

STATION NO. E (Cont'd)

Sta No. Time (+8)	10-E 0215		
Depth (m)	Temp (°C)	Sal (‰)	Density (σ_t)
0	9.85	28.84	22.99
10	9.71	29.23	22.53
20	9.66	29.23	22.53
40	9.32	29.89	23.10
80	9.20	30.18	23.34



Oceanographic Station Locations
 BROWN BEAR CRUISE 62 and
 ONCORHYNCHUS CRUISE PSS-22
 14 - 24 June 1954

STA 62-1 48° 12.2' N WEATHER c. 15 June 54 122° 51.0' W WIND WSW 24 1635 (+8) DEPTH 53 fm 51°/48°F Protection Island				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.08	30.67	0.482	----
5	9.04	30.67	0.456	----
10	9.03	30.69	0.448	----
20	8.75	31.01	0.412	----
29	8.49	31.55	0.380	----
49	7.83	32.38	0.313	----
68	7.68	32.51	0.248	----
88	7.58	32.65	0.295	----

STA 62-2 48° 15.8' N WEATHER c. 15 June 54 123° 03.3' W WIND WxS 17 1556 (+8) DEPTH 93 fm 51°/48°F New Dungeness, Northeast of				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.36	30.44	0.506	----
5	9.36	30.45	0.494	----
10	9.24	30.56	0.481	----
20	8.90	30.90	0.451	----
22	8.72	31.11	0.419	----
47	8.26	31.75	0.364	----
70	8.01	32.01	0.344	----
94	7.73	32.45	0.345	----
122	7.64	33.50	0.308	----
152	7.56	32.69	0.297	----

STA 62-3 48° 14.6' N WEATHER c. 15 June 54 123° 14.6' W WIND W 19 2043 (+8) DEPTH 78 fm 50°/48°F New Dungeness, Northwest of				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.16	30.84	0.497	----
5	9.14	30.80	0.491	----
10	9.10	30.90	0.475	----
20	8.98	31.03	0.455	----
30	8.91	31.12	0.455	----
50	8.46	31.69	0.423	----
75	8.39	31.70	0.384	----
100	7.72	32.54	0.367	----
130	7.52	33.13	0.272	----

STA 62-4 48° 12.5' N WEATHER c. 15 June 54 123° 23.8' W WIND W 18 2203 (+8) DEPTH 70 fm 50°/47°F Ediz Hook				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.02	31.23	0.479	----
5	8.99	31.23	0.470	----
10	8.94	31.29	0.462	----
20	8.76	31.51	0.430	----
30	8.68	31.66	0.431	----
50	8.25	32.00	0.353	----
75	7.31	33.04	0.275	----
100	7.22	33.16	0.263	----
125	7.08	33.37	0.261	----

STA 62-5 48° 14.4' N WEATHER b.c.
 15 June 54 123° 33.3' W WIND WSW 15
 2330 (+8) DEPTH 93 fm 50°/47°F
 Race Rocks

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.62	31.54	0.345	----
5	8.60	31.49	0.333	----
10	8.56	31.56	0.417	----
20	8.49	31.67	0.412	----
29	8.44	31.77	0.416	----
49	8.14	32.10	0.404	----
73	7.62	32.64	0.306	----
98	7.46	32.92	0.297	----
127	6.88	33.55	0.251	----
157	6.80	33.72	0.227	----

STA 62-6 48° 15.4' N WEATHER o.
 16 June 54 123° 41.4' W WIND WxS 16
 0106 (+8) DEPTH 102 fm 50°/48°F
 Beechy Head

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.90	31.34	0.481	----
5	8.86	31.34	0.459	----
10	8.87	31.34	0.455	----
20	8.90	31.35	0.442	----
30	8.92	31.36	0.442	----
50	8.86	31.41	0.441	----
75	8.04	32.32	0.345	----
100	7.08	31.37	0.253	----
140	6.70	33.79	0.209	----
180	6.63	33.84	0.204	----

STA 62-7 48° 17.9' N WEATHER o.
 16 June 54 123° 52.0' W WIND WSW 14
 0240 (+8) DEPTH 95 fm 50°/48°F
 Otter Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.04	31.27	0.489	----
5	9.04	31.24	0.487	----
10	9.04	31.26	0.483	----
20	8.98	31.27	0.465	----
30	8.94	31.55	0.447	----
50	8.42	31.82	0.387	----
75	7.71	32.64	0.320	----
100	7.06	33.26	0.243	----
130	6.50	33.78	0.193	----
160	6.48	33.84	0.199	----

STA 62-8 48° 18.2' N WEATHER o.
 16 June 54 124° 03.2' W WIND SW 12
 0425 (+8) DEPTH 102 fm 50°/48°F
 Pillar Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.54	31.14	0.522	----
5	9.54	31.14	0.522	----
10	9.52	31.14	0.524	----
20	8.99	31.34	0.466	----
30	8.70	31.55	0.428	----
50	8.35	32.02	0.373	----
75	7.54	32.80	0.294	----
100	7.20	33.26	0.274	----
140	6.62	33.82	0.204	----
180	6.56	33.85	0.211	----

STA 62-9 48° 23.7' N WEATHER c.
 16 June 54 124° 24.9' W WIND SSE 8
 0640 (+8) DEPTH 133 fm 51°/49°F
 Sekiu River, North of

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
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0	10.63	30.40	0.570	----
5	10.62	30.47	0.562	----
10	9.70	31.14	0.520	----
20	9.60	31.18	0.514	----
30	9.60	31.22	0.510	----
50	8.40	32.01	0.415	----
75	7.51	32.93	0.302	----
100	7.25	33.49	0.251	----
140	6.70	33.78	0.212	----
180	6.53	33.84	0.200	----
220	6.54	33.86	0.199	----

STA 62-10 48° 29.0' N WEATHER c.
 16 June 54 124° 44.8' W WIND WSW 8
 0939 (+8) DEPTH 147 fm 54°/50°F
 Tatoosh Island, North of

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
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0	12.78	27.37	0.586	----
5	12.36	28.13	0.586	----
9	12.26	28.94	0.585	----
19	11.67	29.74	0.575	----
28	9.82	31.18	0.570	----
47	8.52	31.94	0.416	----
70	8.20	32.13	0.383	----
93	7.67	32.72	0.333	----
140	7.00	33.58	0.237	----
186	6.53	33.78	0.184	----
232	6.46	33.84	0.195	----

STA A-189 47° 44.7' N WEATHER b.c.
 14 June 54 122° 25.4' W WIND SE 3
 1210 (+8) DEPTH 153 fm
 Point Jefferson

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.72	27.13	0.903	0.66
5	10.79	28.05	0.643	1.10
9	9.93	28.81	0.515	1.94
18	9.65	29.20	0.515	2.23
27	9.48	29.31	0.486	2.04
45	9.20	-----	0.465	2.18
91	9.20	29.92	0.446	2.06
137	9.16	30.04	0.438	2.06
182	9.19	30.15	0.436	2.26
218	9.16	30.23	0.434	2.35
246	9.12	30.25	0.426	2.41

STA A-190 47° 53.5' N WEATHER c.
 14 June 54 122° 19.0' W WIND S 8
 1410 (+8) DEPTH 133 fm
 Possession Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.64	22.75	0.858	0.53
5	10.12	26.43	0.633	1.29
10	9.50	28.05	0.493	1.92
20	9.64	29.00	0.501	2.20
30	9.55	29.15	0.509	2.42
50	8.80	29.43	0.389	2.50
75	8.65	29.59	0.368	2.61
100	8.76	29.73	0.419	2.68
140	9.16	29.99	0.436	3.02
180	9.14	30.17	0.425	2.72
220	9.12	30.18	0.423	2.63

STA A-191 47° 48.8' N WEATHER 61
 14 June 54 122° 17.2' W WIND S 8
 1500 (+8) DEPTH 69 fm
 Port Gardner

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	13.26	18.96	0.800	0.40
5	13.34	27.31	0.603	1.24
10	9.46	28.68	0.486	2.10
20	9.14	29.08	0.432	2.30
30	8.94	29.18	0.405	2.44
40	8.74	29.24	0.375	2.51
50	8.54	29.36	0.342	2.68
70	8.53	29.55	0.372	2.72
90	8.60	29.68	0.399	2.67
110	8.89	29.87	0.426	2.21
125	8.82	29.82	0.429	2.44

STA A-192 48° 03.8' WEATHER 61
 14 June 54 122° 19.6' W WIND SSE 8
 1647 (+8) DEPTH --
 Camano Head, East of

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	13.15	12.45	0.727	2.17
5	9.10	28.37	0.436	2.31
10	9.10	28.75	0.405	2.36
20	8.88	29.00	0.409	2.45
30	8.74	29.07	0.386	2.52
40	8.68	29.14	0.370	2.81
50	8.46	29.25	0.325	2.73
70	8.50	29.44	0.335	2.64
90	8.50	29.58	0.345	2.58
100	8.63	29.70	0.371	2.50
110	----	29.73	0.385	2.58
120	8.77	29.76	0.398	0.45

STA A-193 48° 09.3' N WEATHER 61
 14 June 54 122° 24.3' W WIND SSE 5
 1758 (+8) DEPTH 48 fm
 Port Susan, Head of

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	13.36	12.39	0.734	----
5	9.26	28.12	0.450	1.88
10	8.48	28.70	0.360	----
20	8.46	28.92	0.338	2.42
30	8.53	29.06	0.345	2.42
40	8.43	29.16	0.318	2.60
60	8.43	29.38	0.316	2.68
80	8.26	29.50	0.355	2.68
87	8.34	29.56	0.366	2.62

STA A-194 48° 06.2' N WEATHER 61
 14 June 54 122° 22.0' W WIND SE 5
 1935 (+8) DEPTH 65 fm
 Port Susan, Middle of

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	13.02	13.73	0.717	0.34
5	9.11	28.21	0.436	1.88
10	8.46	28.73	0.359	2.34
20	8.39	28.96	0.340	2.58
30	8.42	29.14	0.319	2.81
40	8.47	29.18	0.318	2.81
50	8.34	29.23	0.322	2.65
70	8.46	29.46	0.365	2.74
90	8.33	29.58	0.383	3.50
100	8.46	29.67	0.391	2.81
110	8.55	29.70	0.379	3.27

STA A-195 48° 02.8' N WEATHER 0.
 14 June 54 122° 22.2' W WIND SE 3
 2054 (+8) DEPTH 90 fm
 Camano Head, West of

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.44	22.38	0.704	0.48
5	9.12	27.92	0.439	2.22
9	8.94	28.56	0.419	2.28
18	8.90	28.90	0.409	2.28
28	9.07	29.17	0.425	2.18
46	8.76	29.30	0.415	2.29
70	8.44	29.49	0.395	2.50
93	8.52	29.70	0.413	2.38
116	8.90	29.90	0.428	2.35
139	8.97	29.42	0.426	2.53

STA A-196 48° 01.5' N WEATHER 65
 15 June 54 122° 31.8' W WIND SE 1.5
 0821 (+8) DEPTH 20 fm
 Holmes Harbor, Middle of

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.92	27.85	0.425	1.81
5	8.43	28.66	0.318	2.80
10	8.27	28.78	0.277	3.00
20	8.20	28.86	0.238	3.15
30	8.24	29.06	0.265	3.08
36	8.27	29.13	0.300	3.06

STA A-197 48° 03.1' N WEATHER 65
15 June 54 122° 31.8' W WIND SE 2
0915 (+8) DEPTH 25 fm
Classic

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.51	27.14	0.496	1.40
5	8.66	28.22	0.386	2.45
10	8.38	28.70	0.338	2.81
20	8.26	28.96	0.314	2.99
30	8.25	29.07	0.311	3.08
40	8.23	29.17	0.293	3.22
45	8.28	29.19	0.298	3.30

STA A-198 48° 06.4' N WEATHER o.
15 June 54 122° 31.6' W WIND SE 1
1008 (+8) DEPTH 28 fm
Dines Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.22	25.91	0.573	1.00
5	8.88	28.24	0.409	2.27
10	8.59	28.62	0.365	2.53
20	8.34	28.87	0.340	2.80
30	8.27	29.04	0.308	2.99
40	8.24	29.12	0.318	3.02
50	8.23	29.18	0.279	3.28

STA A-199 48° 06.2' N WEATHER 61
15 June 54 122° 33.1' W WIND NE 2
1038 (+8) DEPTH 40 fm
Greenbank

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.78	21.20	0.685	0.16
5	10.41	24.60	0.596	0.54
10	9.48	26.83	0.495	1.30
20	8.58	28.92	0.385	2.34
30	8.40	29.14	0.369	2.54
40	8.28	29.19	0.354	2.56
50	8.27	29.22	0.367	2.63
60	8.24	29.23	0.365	2.71
75	8.31	29.24	0.360	2.75

STA A-200 48° 06.3' N WEATHER o.
15 June 54 122° 29.1' W WIND NW 2
1142 (+8) DEPTH 80 fm
East Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.67	19.40	0.680	0.33
5	10.11	25.69	0.551	1.04
10	8.90	28.22	0.412	2.32
20	8.70	28.74	0.424	2.40
30	8.68	29.05	0.393	2.38
50	8.57	28.99	0.407	2.42
75	8.41	29.39	0.396	2.66
100	8.33	29.44	0.395	2.75
125	8.32	29.45	0.395	2.58

STA A-201 48° 10.6' N WEATHER 61 15 June 54 122° 32.5' W WIND --- 1350 (+8) DEPTH 55 fm Onamac Point				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.55	16.74	0.777	0.41
5	10.45	25.10	0.568	0.93
10	9.39	26.99	0.436	1.86
20	8.45	28.76	0.370	2.47
29	8.50	28.94	0.381	2.44
49	8.31	29.16	0.365	2.52
73	8.36	29.45	0.382	2.55
98	8.35	29.51	-----	-----

STA A-202 48° 13.5' N WEATHER c. 15 June 54 122° 33.1' W WIND W 1 1339 (+8) DEPTH 50 fm Demock Point				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.88	21.82	0.726	0.25
5	11.70	22.50	0.698	0.28
10	9.46	26.24	0.486	1.64
20	8.36	28.89	0.355	2.58
29	8.39	29.01	0.372	2.57
49	8.29	29.18	0.371	2.54
69	8.34	29.16	0.373	2.71
88	8.24	29.30	-----	-----

STA A-203 48° 17.4' N WEATHER b.c. 15 June 54 122° 29.3' W WIND NW 2 1427 (+8) DEPTH 15 fm Strawberry Point, North of				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.70	21.35	0.560	0.91
2	9.95	23.80	0.507	1.78
5	9.73	24.79	0.476	1.69
10	8.34	29.01	0.372	2.86
20	8.39	28.96	0.373	3.20

STA A-204 48° 21.5' N WEATHER b.c. 15 June 54 122° 33.3' W WIND --- 1504 (+8) DEPTH --- Goat Island				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.45	22.45	0.564	1.59
2	9.82	24.00	0.516	1.73
5	9.56	25.03	0.480	1.92
10	8.76	27.81	0.397	2.60

STA A-205 48° 25.0' N WEATHER b.c.
 15 June 54 122° 35.4' W WIND SW 10
 1542 (+8) DEPTH 21 fm
 Dewey

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.78	22.90	0.572	1.57
5	9.82	26.31	0.513	1.86
10	9.55	27.66	0.476	2.08
20	9.40	29.60	0.472	2.25
30	9.40	29.75	0.472	2.20

STA A-206 47° 56.0' N WEATHER 61
 16 June 54 122° 38.1' W WIND SE 3
 1327 (+8) DEPTH 64 fm
 Tala Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.73	27.99	0.512	1.64
5	10.86	28.74	0.496	1.63
10	10.38	29.18	0.486	1.70
20	10.10	29.44	0.466	1.74
30	10.08	29.65	0.466	1.87
50	9.48	29.91	0.453	2.05
75	9.36	30.16	0.430	2.05
100	9.30	30.15	0.436	2.05

STA A-207 47° 50.2' N WEATHER o.
 16 June 54 122° 40.1' W WIND NE 8
 1505 (+8) DEPTH 41 fm
 South Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.26	28.60	0.492	2.04
5	10.64	28.82	0.474	2.00
10	10.01	29.40	0.442	2.14
20	9.60	29.83	0.422	2.39
30	9.43	30.08	0.418	2.33
40	9.32	30.19	0.413	2.30
50	9.22	30.34	0.405	2.24

STA A-208 47° 14.9' N WEATHER 51
 16 June 54 122° 45.7' W WIND NW 8
 1634 (+8) DEPTH 68 fm
 Hazel Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.29	27.05	0.528	1.67
5	12.05	27.28	0.519	1.90
10	12.00	27.31	0.520	1.84
20	10.12	28.74	0.419	2.32
30	9.40	29.52	0.384	2.82
50	9.14	29.86	0.386	2.63
80	9.22	29.98	0.397	2.56
110	8.46	30.05	0.400	2.56

STA A-209 47° 40.0' N WEATHER o.
 16 June 54 122° 52.1' W WIND NNE 15
 1730 (+8) DEPTH 71 fm
 Pleasant Harbor

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.46	26.78	0.545	1.75
5	12.43	26.81	0.545	1.81
10	11.38	27.54	0.502	2.26
20	9.06	29.40	0.350	2.96
30	8.78	29.58	0.329	3.28
40	8.84	29.70	0.354	3.06
50	9.22	29.71	0.352	2.85
75	10.30	29.79	0.364	2.87
100	9.12	29.88	0.368	3.11
125	9.11	29.91	0.357	2.89

STA A-210 47° 23.9' N WEATHER b.c.
 17 June 54 122° 55.9' W WIND SW 3
 0814 (+8) DEPTH 10 fm
 Lynch Cove, Head of

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	14.70	22.85	0.535	1.37
5	10.12	28.96	0.198	3.62
10	9.41	29.40	0.069	4.49
14	9.34	29.57	0.075	4.28
18	9.38	29.60	0.079	4.18

STA A-211 47° 24.5' N WEATHER b.c.
 17 June 54 122° 54.4' W WIND SSW 10
 0848 (+8) DEPTH 19 fm
 Lynch Cove, Middle of

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	14.20	24.45	0.559	1.25
5	9.92	28.79	0.273	3.24
10	9.34	29.56	0.109	3.87
20	9.32	29.71	0.137	3.72
30	9.33	29.74	0.146	3.80
34	9.31	29.78	0.138	3.98

STA A-212 47° 21.5' N WEATHER b.c.
 17 June 54 123° 03.8' W WIND SW 8
 0931 (+8) DEPTH 22 fm
 Tahuya River

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	14.08	24.85	0.566	1.28
5	11.91	27.05	0.526	2.04
10	9.44	29.44	0.130	3.64
20	9.38	29.62	0.136	3.64
30	9.34	29.76	0.151	3.68
40	9.28	29.83	0.163	3.80

STA A-213 47° 23.3' N WEATHER b.c.
 17 June 54 123° 07.4' W WIND S 8
 1040 (+8) DEPTH 65 fm
 Musqueti Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.96	25.65	0.568	1.68
5	10.83	25.95	0.496	2.50
9	9.62	29.08	0.258	3.25
19	9.25	29.55	0.175	3.46
28	9.21	29.66	0.185	3.56
37	9.21	29.75	0.189	3.58
56	9.20	29.78	0.196	3.68
74	----	29.86	0.185	3.70
93	9.34	29.90	0.174	3.73
112	9.34	29.88	0.186	3.70

STA A-214 47° 27.4' N WEATHER b.c.
 17 June 54 123° 04.0' W WIND SSW 12
 1151 (+8) DEPTH 85 fm
 Eagle Creek

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.84	27.75	0.525	2.32
5	10.72	27.81	0.529	2.29
10	10.41	28.18	0.481	2.41
20	9.32	29.21	0.280	3.02
30	9.01	29.65	0.240	3.18
40	8.94	29.71	0.261	3.19
50	8.91	29.75	0.274	3.14
75	8.97	29.79	0.266	3.27
100	9.19	29.89	0.231	3.34

STA A-215 47° 36.0' N WEATHER b.c.
 17 June 54 122° 57.1' W WIND SSE 15
 1325 (+8) DEPTH 94 fm
 Tekiu

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.30	27.18	0.557	1.65
5	12.14	27.29	0.584	1.63
10	10.38	28.35	0.436	2.32
20	8.85	29.44	0.286	2.98
30	8.83	29.60	0.334	2.94
40	8.74	29.69	0.315	2.86
50	8.73	29.70	0.334	2.86
75	----	29.75	0.327	2.69
100	8.90	29.87	0.323	2.76

STA A-216 47° 44.5' N WEATHER b.c.
 17 June 54 122° 49.5' W WIND NNE 8
 1453 (+8) DEPTH 105 fm
 Tabook Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	14.67	25.67	0.615	1.14
5	12.48	27.00	0.579	1.43
10	10.20	28.52	0.444	2.33
20	9.02	29.30	0.359	2.76
30	8.68	29.47	0.354	3.05
40	8.60	29.60	0.321	3.19
60	8.70	29.72	0.334	3.00
80	8.75	29.80	0.336	2.96
98	9.17	29.90	0.375	2.76
118	9.10	29.89	0.333	2.73
138	9.22	30.07	0.212	3.73
158	----	30.38	0.078	4.70
167	9.66	30.41	0.052	4.89
177	9.74	30.34	0.040	4.97

STA A-217 47° 50.0' N WEATHER b.c.
 17 June 54 122° 48.7' W WIND NNW 8
 1647 (+8) DEPTH 26 fm
 Dabob Bay, Head of

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
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0	14.31	26.42	0.559	2.48
5	12.13	27.41	0.452	----
10	10.34	28.49	0.320	2.31
20	8.66	29.22	0.291	3.23
30	8.51	29.43	0.276	3.39
40	8.56	29.62	-----	3.46

STA A-218 47° 48.5' N WEATHER b.c.
 17 June 54 122° 48.4' W WIND NW 8
 1715 (+8) DEPTH 87 fm
 Bolton Peninsula, East of

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
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0	14.35	26.35	0.631	0.59
5	11.62	27.57	0.562	1.56
10	10.21	28.61	0.464	2.05
20	8.67	29.33	0.337	2.72
40	8.66	29.71	0.333	2.86
60	8.79	29.80	0.348	2.70
80	9.03	29.85	0.359	2.68
100	9.02	29.90	0.360	2.62
120	9.13	29.95	0.321	2.81
140	9.62	30.07	0.119	2.91

STA A-219 47° 42.0' N WEATHER b.c.
 17 June 54 122° 51.5' W WIND N 12
 1854 (+8) DEPTH 83 fm
 Tsakutsko Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
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0	13.94	26.34	0.610	0.78
5	13.82	26.49	0.616	0.64
10	10.65	28.19	0.485	2.05
20	8.85	29.33	0.344	2.92
40	8.77	29.68	0.350	2.83
60	8.87	29.77	0.356	2.83
80	8.86	29.80	0.351	2.71
100	8.87	29.83	0.340	2.94
120	8.94	29.86	0.324	2.87
150	9.46	29.92	0.212	3.68

STA A-220 48° 01.4' N WEATHER o.
 18 June 54 122° 37.3' W WIND ENE 3
 0803 (+8) DEPTH 68 fm
 Bush Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
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0	9.97	29.36	0.504	1.74
5	9.83	29.40	0.489	1.73
10	9.75	29.43	0.483	1.73
20	9.70	29.54	0.476	1.86
30	9.66	29.65	0.467	1.88
50	9.37	30.18	0.447	2.02
80	9.07	30.79	0.415	2.11
110	9.55	30.75	0.414	2.22

STA A-221 47° 57.3' N WEATHER c. 18 June 54 122° 34.3' W WIND W 2 0835 (+8) DEPTH 60 fm Double Bluff				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.86	23.59	0.689	0.49
5	10.44	28.31	0.572	1.61
10	10.14	28.77	0.531	1.72
20	9.87	29.28	0.486	1.97
30	9.74	29.47	0.478	2.05
50	9.57	29.71	0.463	2.18
75	9.47	29.90	0.447	2.25
100	9.33	30.26	0.434	2.26

STA A-222 47° 54.1' N WEATHER b.c. 18 June 54 122° 27.5' W WIND W 2 1008 (+8) DEPTH 111 fm Point No Point				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.86	25.78	0.678	0.91
5	10.56	28.23	0.599	1.64
10	10.40	28.79	0.576	1.68
20	9.73	29.36	0.488	2.19
30	9.44	29.52	0.457	2.43
50	9.40	29.82	0.441	2.34
75	9.35	29.91	0.442	2.31
100	9.31	29.97	0.434	2.31
145	9.30	29.90	0.428	2.44
190	9.40	30.17	0.429	2.53

STA A 223 47° 44.3' N WEATHER 10 22 June 54 122° 25.5' W WIND SW 2 1300 (+8) DEPTH 156 fm Point Jefferson				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	13.69	24.78	0.766	0.48
5	11.21	28.60	0.650	1.34
10	11.24	28.64	0.647	1.32
20	10.49	29.09	0.545	1.92
30	9.84	29.32	0.494	2.20
50	9.55	29.47	0.480	2.20
100	9.43	29.80	0.455	2.18
150	9.40	29.92	0.436	2.25
200	9.27	30.00	0.422	2.36
240	9.26	30.03	0.432	2.38

STA A-224 47° 34.0' N WEATHER b.c. 22 June 54 122° 26.4' W WIND Calm 1455 (+8) DEPTH 135 fm Alki Point				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.54	28.76	0.584	2.11
5	10.80	29.05	0.550	2.23
10	10.52	29.15	0.531	2.25
20	10.19	29.22	0.502	2.39
30	10.10	29.26	0.495	2.41
50	9.78	29.32	0.481	2.52
75	9.40	29.60	0.462	2.47
100	9.16	29.87	0.440	2.55
140	9.19	29.96	0.432	2.56
180	9.22	30.00	0.429	2.77
220	9.14	30.02	0.426	2.56

STA A-225 47° 26.4' N WEATHER b.c.
 22 June 54 122° 23.5' W WIND NW 3
 1638 (+8) DEPTH 135 fm
 Pully Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	13.89	28.27	0.681	1.30
5	11.69	28.53	0.647	1.52
10	10.68	28.96	0.561	1.82
20	10.13	29.15	0.508	2.00
30	9.96	29.24	0.493	1.99
50	9.79	29.32	0.487	2.11
75	9.35	29.69	0.454	2.19
100	9.27	29.84	0.454	2.28
140	9.14	29.96	0.441	2.29
180	9.17	30.03	0.420	2.42
220	9.22	30.01	0.421	2.42

STA A-226 47° 19.1' N WEATHER b.
 22 June 54 122° 28.2' W WIND NW 4
 1840 (+8) DEPTH 96 fm
 Brown Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.51	28.21	0.587	1.94
5	10.59	28.76	0.568	2.00
10	10.08	29.06	0.521	2.12
20	9.82	29.23	0.495	2.20
30	9.73	29.24	0.490	2.22
50	9.39	29.44	0.470	2.34
75	9.12	29.71	0.453	2.37
100	9.07	29.84	0.441	2.37
130	9.09	29.95	0.434	2.41
160	9.14	30.01	0.417	2.46

STA A-227 47° 16.8' N WEATHER b.c.
 23 June 54 122° 39.4' W WIND Calm
 0617 (+8) DEPTH 12 fm
 Warren

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.86	28.91	0.540	1.67
5	10.78	28.91	0.535	1.69
10	10.65	28.95	0.528	1.87
15	10.67	28.95	0.524	1.87
20	10.64	28.97	0.492	1.87

STA A-228 47° 15.6' N WEATHER c.
 23 June 54 122° 41.5' W WIND NNW 2
 0648 (+8) DEPTH 49 fm
 South Head II

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	13.99	28.54	0.587	1.32
5	11.56	28.73	0.578	1.50
10	10.93	28.81	0.572	1.72
20	10.30	28.91	0.519	1.97
30	10.10	28.96	0.498	2.02
40	9.84	28.97	0.485	2.01
60	9.68	28.99	0.463	2.15
85	9.73	29.10	0.454	2.45

STA A-229 47° 13.8' N WEATHER c. 23 June 54 122° 43.0' W WIND NNE 2 0728 (+8) DEPTH 8 fm South Head IV				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.52	28.83	0.566	1.72
5	11.18	28.84	0.558	1.93
10	11.01	28.86	0.545	1.80
15	11.00	28.88	0.528	----

STA A-230 47° 14.7' N WEATHER c. 23 June 54 122° 42.7' W WIND ENE 1 0745 (+8) DEPTH 12 fm South Head III				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	13.02	28.81	0.591	1.56
5	11.10	28.85	0.559	1.71
10	10.62	28.85	0.531	1.93
15	10.11	28.86	0.500	2.11
20	9.98	28.87	0.479	----

STA A-231 47° 16.4' N WEATHER c. 23 June 54 122° 41.0' W WIND Calm 0823 (+8) DEPTH 50 fm South Head I				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.73	28.92	0.531	1.93
5	10.67	28.94	0.531	1.93
10	10.65	28.91	0.525	1.94
20	10.62	28.95	0.525	1.90
30	10.42	28.98	0.519	1.97
40	10.16	29.02	0.502	2.02
60	9.81	29.08	0.489	2.11
85	9.86	29.14	0.482	2.13

STA A-232 47° 18.7' N WEATHER c. 23 June 54 122° 42.2' W WIND NNE 2 0925 (+8) DEPTH 38 fm Cutts Island, Southwest of				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	15.12	28.04	0.626	0.71
5	10.99	28.68	0.572	1.61
10	10.33	28.78	0.532	1.96
20	10.06	28.85	0.500	2.20
30	10.11	28.97	0.496	2.15
40	9.88	28.97	0.485	2.14
50	9.82	29.00	0.477	2.16
60	9.77	29.02	0.479	2.25

STA A-233 47° 21.5' N WEATHER c.
 23 June 54 122° 39.8' W WIND Calm
 1020 (+8) DEPTH 16 fm
 Elgin, East of

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	15.14	27.78	0.602	1.16
5	10.60	28.73	0.560	1.72
10	10.04	28.82	0.498	2.10
15	9.95	28.85	0.490	2.16
20	9.93	28.87	0.489	2.18
25	9.81	28.90	0.485	2.24

STA A-234 47° 22.4' N WEATHER o.
 23 June 54 122° 38.0' W WIND Calm
 1045 (+8) DEPTH 8 fm
 Wauna

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	13.10	28.11	0.591	1.20
3	10.84	28.69	0.556	1.70
6	10.33	28.79	0.457	2.26
10	10.07	28.84	0.488	2.17

STA A-235 47° 20.5' N WEATHER c.
 23 June 54 122° 41.2' W WIND Calm
 1128 (+8) DEPTH 29 fm
 Glencove, East of

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	16.17	27.87	0.629	1.12
5	10.69	28.72	0.540	1.88
10	10.19	28.81	0.507	2.18
20	10.04	28.91	0.504	2.24
30	9.90	28.96	0.488	2.20
50	9.98	28.95	0.482	2.29

STA A-236 47° 17.1' N WEATHER c.
 23 June 54 122° 42.6' W WIND SSW 2
 1223 (+8) DEPTH 50 fm
 Green Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	14.65	28.29	0.651	1.01
5	11.65	28.76	0.571	1.86
10	11.00	28.84	0.564	1.80
20	10.11	28.90	0.505	2.11
30	10.26	29.00	0.504	2.09
40	10.09	29.00	0.494	2.21
60	9.66	29.03	0.454	2.48
90	9.74	29.13	0.446	2.52

STA A-237 47° 21.3' N WEATHER c.
 23 June 54 122° 49.1' W WIND SE 3
 1538 (+8) DEPTH 6 fm
 Rocky Point

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	17.17	27.50	0.776	0.57
2	14.21	27.87	0.745	0.70
6	12.90	28.14	0.576	1.11
10	11.22	28.43	0.413	2.23

STA A-238 47° 18.4' N WEATHER c.
 23 June 54 122° 49.0' W WIND Calm
 1618 (+8) DEPTH 15 fm
 Dutcher's Cove

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	15.24	28.25	0.825	0.77
5	11.99	28.33	0.671	1.38
10	10.70	28.56	0.425	2.19
15	10.58	28.60	0.427	2.19
20	10.40	28.70	0.470	2.19
25	10.25	28.78	0.455	2.43

STA A-239 47° 16.0' N WEATHER c.
 23 June 54 122° 50.5' W WIND SE 1
 1653 (+8) DEPTH 29 fm
 Herron Island

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	15.04	28.27	0.863	1.04
5	12.19	28.38	0.675	1.27
10	11.36	28.49	0.561	1.78
20	10.60	28.69	0.500	1.99
30	10.37	28.82	0.487	2.11
45	10.21	28.87	0.488	2.31

STA A-240 47° 13.1' N WEATHER b.c.
 23 June 54 122° 49.3' W WIND Calm
 1737 (+8) DEPTH 27 fm
 Whiteman Cove

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	14.04	28.39	0.858	0.99
5	11.86	28.55	0.663	1.42
10	11.15	28.66	0.535	1.87
20	10.65	28.78	0.509	2.08
30	10.44	28.88	0.495	2.14
40	10.25	-----	0.494	2.23

STA A-241 47° 10.1' N WEATHER c. 23 June 54 122° 47.0' W WIND ENE 2 1820 (+8) DEPTH 51 fm Devil's Head				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.92	28.51	0.658	1.33
5	11.66	28.61	0.578	1.65
10	11.51	28.68	0.550	1.67
20	10.79	28.79	0.517	2.06
30	10.58	28.84	0.507	2.02
50	10.31	28.91	0.504	2.09
75	10.25	28.96	0.486	2.16

STA A-242 47° 07.1' N WEATHER c. 23 June 54 122° 45.5' W WIND NE 3 1959 (+8) DEPTH 35 fm Nisqually Reach				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.47	27.90	0.539	1.78
5	10.34	28.77	0.515	2.05
15	10.36	28.97	0.502	2.05
35	10.08	29.10	0.491	2.07
55	10.09	29.07	0.490	2.13

STA A-243 47° 13.7' N WEATHER b. 24 June 54 122° 39.6' W WIND W 2 0619 (+8) DEPTH 35 fm Still Harbor III				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.98	28.74	0.670	0.94
5	11.87	28.80	0.591	1.62
10	11.13	28.82	0.573	1.62
20	10.35	28.84	0.525	1.97
30	9.97	28.92	0.479	2.08
40	9.78	28.91	0.472	2.29
50	9.80	29.02	0.465	2.23

STA A-244 47° 14.4' N WEATHER b.c. 24 June 54 122° 38.6' W WIND W 1 0650 (+8) DEPTH 71 fm Still Harbor I				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.32	28.69	0.601	1.64
5	11.27	28.83	0.562	1.75
10	10.75	28.87	0.533	1.87
20	10.30	29.01	0.492	2.05
30	10.21	29.05	0.488	2.02
50	9.93	29.06	0.472	2.17
75	9.90	29.10	0.471	2.17
100	9.89	29.18	0.471	2.16
125	9.86	29.18	0.459	2.38

STA A-245 47° 13.5' N WEATHER b.c.
 24 June 54 122° 39.1' W WIND Calm
 0716 (+8) DEPTH 68 fm
 Still Harbor II

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.85	28.69	0.594	1.35
5	11.80	28.82	0.650	1.33
10	10.65	28.84	0.597	1.76
20	10.27	28.93	0.508	1.86
30	9.90	28.95	0.488	2.06
50	9.82	29.04	0.479	2.14
75	9.77	29.08	0.462	2.20
100	9.77	29.11	0.458	2.21
120	9.82	29.14	0.455	2.22

STA A-246 47° 12.4' N WEATHER b.c.
 24 June 54 122° 37.3' W WIND W 2
 0756 (+8) DEPTH 89 fm
 Gibson Point, Southwest of

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.74	28.71	0.614	1.45
5	11.20	28.84	0.554	1.73
10	10.83	28.86	0.535	1.75
20	10.58	28.93	0.512	1.86
30	10.30	29.00	0.496	1.93
50	10.24	29.04	0.481	1.99
75	10.10	29.10	0.478	1.96
100	9.98	29.17	0.471	2.03
130	9.92	29.15	0.472	2.06
160	9.89	29.23	0.473	2.04

STA A-247 47° 11.1' N WEATHER b.
 24 June 54 122° 37.4' W WIND Calm
 0903 (+8) DEPTH 92 fm
 Gordon Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.45	27.94	0.551	1.79
5	10.93	28.57	0.533	1.85
10	10.87	28.66	0.528	1.99
20	10.78	28.78	0.519	2.14
30	10.76	28.80	0.515	2.13
50	10.58	28.88	0.512	1.94
75	10.20	29.04	0.493	2.01
100	10.05	29.14	0.482	2.15
130	9.98	29.22	0.466	2.15
160	9.90	29.18	0.485	2.28

STA A-248 47° 11.4' N WEATHER b.
 24 June 54 122° 35.6' W WIND NNW 4
 0938 (+8) DEPTH 75 fm
 Toliva Shoal

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.33	28.22	0.553	1.83
5	10.82	28.69	0.520	1.98
10	10.75	28.71	0.523	1.94
20	10.71	28.73	0.507	2.00
30	10.70	28.78	0.483	2.15
50	10.58	28.82	0.504	2.09
75	10.27	29.00	0.495	2.15
100	10.17	29.06	0.485	2.14
130	10.19	29.10	0.482	2.22

STA A-249 47° 14.4' N WEATHER b.
 23 June 54 122° 34.0' W WIND Calm
 1022 (+8) DEPTH 39 fm
 Day Island

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
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0	9.87	29.25	0.490	2.27
5	9.86	29.28	0.487	2.26
10	9.86	29.27	0.480	2.31
20	9.85	29.31	0.477	2.23
30	9.82	29.26	0.481	2.25
50	9.72	29.33	0.471	2.24

STA A-250 47° 21.1' N WEATHER c.
 23 June 54 122° 32.3' W WIND NNW 8
 1133 (+8) DEPTH 56 fm
 Spring Beach

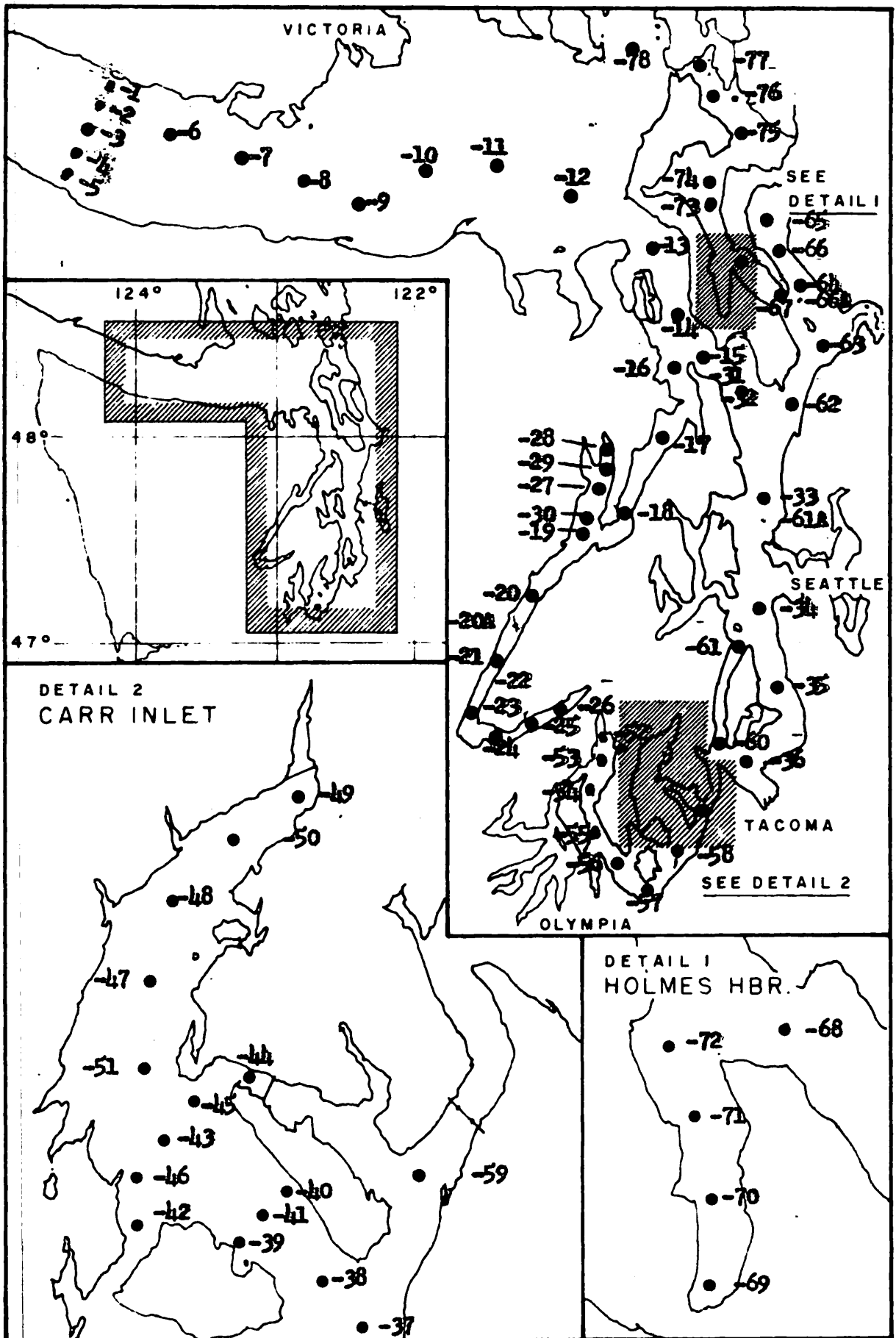
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
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0	12.04	25.92	0.618	1.64
5	11.38	27.32	0.613	1.53
10	10.75	28.90	0.556	2.19
20	10.27	28.99	0.499	----
30	10.16	29.11	0.488	2.17
50	10.03	29.16	0.484	2.20
70	9.93	29.25	0.483	2.20
90	9.82	29.27	0.477	2.11

STA A-251 47° 30.2' N WEATHER b.
 24 June 54 122° 27.6' W WIND NW 8
 1305 (+8) DEPTH 61 fm
 Point Vashon

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
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0	12.03	26.97	0.755	1.00
5	11.28	28.14	0.618	1.38
10	11.00	28.37	0.580	1.54
20	10.41	28.94	0.514	2.03
30	10.04	29.22	0.484	2.11
50	9.92	29.25	0.481	2.12
75	9.69	29.37	0.467	2.18
100	9.60	29.43	0.460	2.32



Oceanographic Station Locations
 BROWN BEAR CRUISE 63
 8 - 12 July 1954

STA 63-1 48° 22.5' N WEATHER 8 July 54 123° 59.7' W WIND WNW 2 0612 (+8) DEPTH 60 fm 51°/50°F Glacier Point				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.89	30.62	0.442	2.14
5	9.78	30.72	0.422	2.17
10	9.80	30.81	0.418	2.17
20	9.18	31.11	0.387	2.22
30	8.84	31.47	0.366	2.45
50	8.59	31.85	0.338	2.70
75	7.59	32.83	0.256	2.62
95	6.91	33.46	0.193	2.55

STA 63-2 48° 20.2' N WEATHER c. 8 July 54 124° 01.5' W WIND Calm 0710 (+8) DEPTH 88 fm 55°/51°F Glacier Point II				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.14	30.62	0.467	2.17
5	9.84	30.80	0.447	2.17
10	9.67	30.86	0.441	2.14
20	9.33	31.15	0.401	2.17
30	8.75	31.56	0.360	2.34
50	8.27	32.17	0.320	2.48
75	7.23	33.25	0.229	2.80
100	6.56	33.76	0.164	2.87
125	----	33.83	0.155	2.70
150	6.25	33.84	0.172	2.75

STA 63-3 48° 18.2' N WEATHER b.c. 8 July 54 124° 03.5' W WIND SSW 6 0819 (+8) DEPTH 103 fm 53°/51°F Pillar Point III				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.14	30.60	0.471	1.98
5	10.02	30.67	0.454	2.12
10	9.84	30.76	0.451	2.14
20	9.42	31.10	0.406	2.16
30	8.46	31.92	0.341	2.36
50	8.25	32.17	0.316	2.53
75	7.41	33.11	0.237	2.62
100	6.72	33.68	0.183	2.20
140	6.38	33.84	0.193	2.62
180	6.30	33.86	0.245	2.52

STA 63-4 48° 16.0' N WEATHER b.c. 8 July 54 124° 05.1' W WIND SSW 3 0918 (+8) DEPTH 97 fm 52°/50°F Pillar Point II				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.06	30.73	0.454	1.85
5	9.74	30.81	0.448	1.89
10	9.49	30.93	0.436	2.14
20	8.53	31.88	0.338	2.14
30	8.15	32.35	0.316	2.46
50	7.60	32.94	0.260	2.58
75	7.04	33.47	0.221	2.49
100	6.83	33.65	0.204	2.36
140	6.60	33.75	0.202	2.63
170	6.34	33.86	0.185	2.67

STA 63-5 48° 13.3' N WEATHER b.c.
 8 July 54 124° 06.3' W WIND Calm
 0958 (+8) DEPTH 64 fm 54°/51° F
 Pillar Point I

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.33	30.61	0.473	2.15
5	9.87	31.08	0.443	2.24
10	9.66	31.36	0.429	2.24
20	8.92	32.02	0.374	2.26
30	8.33	32.49	0.325	2.44
50	7.79	32.80	0.270	2.53
75	7.21	33.32	0.234	2.66
100	6.97	33.46	0.204	2.53

STA 63-6 48° 17.7' N WEATHER b.c.
 8 July 54 123° 51.9' W WIND W 7
 1145 (+8) DEPTH 95 fm 62°/57° F
 Otter Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.55	30.74	0.442	2.04
5	9.61	30.82	0.432	2.12
10	9.37	30.95	0.421	2.08
20	9.18	31.13	0.394	1.85
30	8.88	31.35	0.362	1.95
50	8.62	31.71	0.342	2.30
75	7.23	33.08	0.222	2.13
100	6.44	33.78	0.163	2.55
130	6.32	33.86	0.165	2.68
160	6.26	33.84	0.166	2.70

STA 63-7 48° 16.2' N WEATHER b.c.
 8 July 54 123° 40.7' W WIND SW 2
 1309 (+8) DEPTH 101 fm 58°/55° F
 Beechy Head

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.75	30.13	0.464	1.79
5	10.08	30.21	0.447	2.07
10	9.08	30.97	0.381	2.19
20	8.88	31.27	0.368	2.23
30	8.73	31.38	0.351	2.29
50	8.06	32.30	0.294	2.41
75	6.89	33.44	0.190	2.67
100	6.44	33.80	0.169	2.70
140	6.33	33.83	0.160	2.79
180	6.29	33.86	0.264	2.79

STA 63-8 48° 14.7' N WEATHER b.c.
 8 July 54 123° 33.5' W WIND W 4
 1440 (+8) DEPTH 95 fm 62°/57° F
 Race Rocks

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.99	30.26	0.457	2.10
5	9.78	30.49	0.428	2.13
10	9.45	30.64	0.456	2.07
20	9.26	30.91	0.394	2.13
30	9.09	31.06	0.380	2.15
50	7.84	32.56	0.280	2.53
75	6.92	33.46	0.192	2.63
100	6.52	33.78	0.168	2.43
130	6.43	33.81	0.174	2.67
160	6.38	33.82	0.172	----

STA 63-9 48° 11.9' N WEATHER o. 8 July 54 123° 23.8' W WIND W 7 1655 (+8) DEPTH 70 fm 62°/56°F Ediz Hook				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.96	30.42	0.432	2.19
5	9.28	30.80	0.392	2.18
10	9.54	31.06	0.386	2.18
20	8.63	31.60	0.338	2.24
30	8.09	32.22	0.298	2.36
50	7.30	33.12	0.230	2.54
75	6.91	33.53	0.197	2.54
100	6.74	33.63	0.188	2.69
125	6.63	33.68	0.185	2.68

STA 63-10 48° 14.2' N WEATHER o. 8 July 54 123° 14.2' W WIND W 8 1849 (+8) DEPTH 75 fm 57°/55°F New Dungeness, NW of				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.70	29.92	0.472	2.04
5	10.21	29.95	0.461	2.00
10	9.94	30.02	0.440	2.09
20	9.65	30.18	0.421	2.09
30	9.54	30.37	0.440	2.19
50	8.72	31.46	0.336	2.35
75	8.02	32.07	0.286	2.44
100	7.59	32.71	0.256	2.66
130	6.75	33.52	0.194	2.77

STA 63-11 48° 15.4' N WEATHER o. 8 July 54 123° 03.4' W WIND W 12 2022 (+8) DEPTH 97 fm 54°/52°F New Dungeness, NE of				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.10	30.00	0.475	1.76
5	10.33	30.04	0.460	2.09
10	10.01	30.16	0.437	2.08
20	9.40	30.46	0.404	2.20
30	8.95	31.07	0.362	2.34
50	8.22	32.10	0.303	2.41
75	7.87	32.39	0.272	2.51
100	7.75	32.54	0.262	2.50
130	7.55	32.76	0.250	2.59
160	7.00	33.19	0.214	2.66

STA 63-12 48° 12.3' N WEATHER o. 8 July 54 122° 52.9' W WIND W 12 2139 (+8) DEPTH 52 fm 53°/51°F Protection Island				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.12	29.71	0.436	1.96
5	9.92	29.77	0.445	2.00
10	9.75	29.95	0.427	2.10
20	9.57	30.24	0.412	2.12
30	9.47	30.29	0.398	2.26
50	7.93	32.39	0.266	2.47
70	7.66	32.72	0.253	2.56
85	7.61	32.74	0.250	2.53

STA 63-13 48° 07.9' N WEATHER 50 8 July 54 122° 41.2' W WIND SW 8 2329 (+8) DEPTH 62 fm 54°/51°F Port Townsend				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.54	29.52	0.473	1.85
5	10.54	29.55	0.472	1.90
10	10.45	29.57	0.468	1.88
20	10.50	29.58	0.468	1.83
30	10.46	29.59	0.465	1.80
50	9.67	30.31	0.410	2.02
75	8.86	31.31	0.353	2.33
100	8.42	31.83	0.312	2.34

STA 63-14 48° 02.7' N WEATHER o. 9 July 54 122° 38.0' W WIND NW 8 0110 (+8) DEPTH 70 fm 55°/53°F Bush Point				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.94	28.64	0.584	1.31
5	10.71	29.24	0.499	1.79
10	10.99	29.02	0.469	1.63
20	10.63	29.31	0.440	1.61
40	10.32	29.60	0.385	1.92
70	9.54	30.57	0.376	2.12
100	9.31	30.88	0.480	2.08

STA 63-15 47° 57.4' N WEATHER o. 9 July 54 122° 34.5' W WIND Calm 0311 (+8) DEPTH 60 fm 55°/54°F Double Bluff				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	15.02	19.94	0.646	0.29
5	13.48	26.27	0.584	1.12
10	11.49	28.15	-----	1.57
20	10.91	28.70	0.473	1.73
30	10.50	29.03	0.453	1.84
50	10.14	29.56	0.426	1.99
75	9.98	29.93	0.417	2.01
100	9.55	30.47	0.390	2.07

STA 63-16 47° 56.5' N WEATHER c. 9 July 54 122° 38.3' W WIND S 10 0409 (+8) DEPTH 65 fm 55°/54°F Tala Point				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	13.80	27.87	0.667	0.90
5	12.54	28.44	0.625	1.14
9	11.46	29.23	0.526	1.59
19	10.54	29.46	0.460	1.94
28	10.27	29.86	0.428	2.07
47	9.94	30.02	0.417	2.09
70	9.73	30.29	0.394	2.22
94	9.45	30.65	0.384	2.18

STA 63-17 47° 50.0' N WEATHER c. 9 July 54 122° 40.1' W WIND S 10 0612 (+8) DEPTH 36 fm 55°/53°F South Point				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	14.27	27.10	0.649	0.92
5	13.18	27.98	0.596	1.61
10	11.83	28.99	0.534	1.52
20	10.86	29.51	0.472	1.78
30	10.22	29.77	0.434	1.87
40	10.19	29.87	0.427	1.99
60	9.87	30.08	0.407	2.06

STA 63-18 47° 41.8' N WEATHER c. 9 July 54 122° 45.7' W WIND S 7 0735 (+8) DEPTH 70 fm 57°/54°F Hazel Point				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	13.70	27.13	0.617	1.03
5	11.91	28.68	0.511	1.37
10	11.10	29.00	0.485	1.41
20	10.48	29.47	0.441	1.63
30	10.17	29.61	0.416	1.49
50	9.31	29.74	0.351	1.79
80	9.16	29.81	0.334	2.03
110	9.07	29.80	0.333	2.44

STA 63-19 47° 40.2' N WEATHER c. 9 July 54 122° 52.2' W WIND SW 12 0841 (+8) DEPTH 73 fm 58°/55°F Pleasant Harbor				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	14.01	27.19	0.599	1.15
5	13.66	27.36	0.599	1.26
10	13.47	28.66	0.515	1.71
20	10.15	29.51	0.408	2.10
30	9.72	29.62	0.386	1.91
40	9.46	29.70	0.363	2.37
50	9.33	29.74	0.350	2.52
75	9.00	29.75	0.335	1.81
100	8.92	29.78	0.318	2.81
120	9.00	29.87	0.318	2.83

STA 63-20 47° 35.6' N WEATHER 51 9 July 54 122° 58.2' W WIND SSE 8 1018 (+8) DEPTH 96 fm 57°/55°F Tekiu Point				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	14.38	26.38	0.653	1.05
5	13.04	27.18	0.616	1.31
10	11.60	28.64	0.515	1.60
20	9.68	29.44	0.362	2.45
30	9.20	29.52	0.323	2.59
40	9.10	29.61	0.313	2.73
50	9.16	29.69	0.330	2.62
75	8.92	29.77	0.297	2.56
100	8.98	29.82	0.278	3.12
130	8.99	29.86	0.328	2.77
160	9.04	29.88	0.333	2.73

STA 63-20A 47° 31.9' N WEATHER 51
 9 July 54 123° 01.5' W WIND Calm
 1116 (+8) DEPTH 91 fm 56°/54°F
 Chinom Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	15.96	24.67	0.665	1.05
5	12.93	26.98	0.615	1.32
10	11.51	28.59	0.511	1.71
20	9.93	29.41	0.392	2.30
30	9.16	29.55	0.318	2.14
40	9.13	29.61	0.310	2.88
50	9.04	29.65	0.283	3.00
75	9.03	29.79	0.258	3.08
100	9.06	29.85	0.257	3.26
125	9.02	29.87	0.282	3.19
150	9.04	29.87	0.297	3.04

STA 63-21 47° 28.5' N WEATHER 51
 9 July 54 123° 04.1' W WIND Calm
 1214 (+8) DEPTH 85 fm 57°/56°F
 Eagle Creek

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	15.30	24.49	0.687	1.18
5	12.53	27.83	0.540	1.58
10	11.00	28.73	0.458	2.03
20	9.70	29.34	0.361	2.05
30	9.06	29.49	0.288	2.62
40	9.05	29.57	0.257	2.94
50	9.08	29.61	0.228	2.94
75	9.10	29.79	0.208	2.93
100	9.10	29.83	0.207	3.39
125	9.13	29.87	0.215	3.41
150	9.13	29.88	0.224	3.32

STA 63-22 47° 25.9' N WEATHER 63
 9 July 54 123° 06.2' W WIND Calm
 1256 (+8) DEPTH 72 fm 58°/57°F
 Red Bluff, North of

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	15.93	-----	0.693	1.11
5	11.46	28.14	0.491	1.87
10	10.41	28.89	0.419	2.19
20	9.50	29.33	0.339	2.46
30	9.08	29.43	0.260	2.81
40	9.14	29.49	0.227	3.13
50	9.22	29.54	0.188	2.76
70	9.24	29.73	0.145	3.35
90	9.32	29.79	0.148	3.63
110	9.20	29.04	0.166	3.63
129	9.22	29.85	0.273	3.46

STA 63-23 47° 23.3' N WEATHER 64
 9 July 54 123° 07.8' W WIND Calm
 1418 (+8) DEPTH 62 fm 57°/57°F
 Musqueti Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	15.83	23.12	0.682	1.08
5	11.56	28.12	0.498	1.96
10	10.22	28.95	0.388	2.47
20	9.53	29.27	0.322	2.60
30	9.16	29.39	0.290	2.70
40	9.32	29.49	0.168	3.28
50	9.28	29.61	0.152	3.38
60	9.24	29.67	0.151	3.24
80	9.25	29.74	0.119	3.48
100	9.19	29.84	0.214	3.71
112	9.20	29.81	0.152	3.77

STA 63-24 47° 21.6' N WEATHER 64
 9 July 54 123° 03.5' W WIND Calm
 1617 (+8) DEPTH 19 fm 58°/58°F
 Tahuya River

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	16.24	22.81	0.667	0.90
5	12.64	28.28	0.565	1.95
10	10.13	28.93	0.375	2.61
20	9.57	29.25	0.238	3.17
30	9.44	29.49	0.113	3.79
40	9.47	29.60	0.103	3.99

STA 63-25 47° 22.6' N WEATHER 64
 9 July 54 122° 59.6' W WIND SW 4
 1646 (+8) DEPTH 19 fm 59°/58°F
 Lynch Cove, Middle of

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	17.24	23.93	0.658	1.01
5	11.76	28.35	0.470	2.44
10	10.22	29.05	0.298	3.05
20	9.64	29.45	0.120	3.73
30	9.48	29.52	0.034	4.64
34	9.48	29.58	0.064	4.46

STA 63-26 47° 23.8' N WEATHER 63
 9 July 54 122° 55.8' W WIND SW 6
 1755 (+8) DEPTH 10 fm 59°/58°F
 Lynch Cove

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	17.60	23.93	0.648	0.92
2	17.43	25.17	0.645	0.91
5	11.78	28.48	0.295	2.80
10	10.09	29.18	0.080	4.12
14	9.78	29.29	0.031	4.07
18	9.67	29.42	0.030	4.43

STA 63-27 47° 45.4' N WEATHER 61
 9 July 54 122° 49.6' W WIND SxW 20
 2154 (+8) DEPTH 105 fm 57°/56°F
 Tabook Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	14.49	27.48	0.594	1.00
5	14.47	27.48	0.599	1.04
10	14.39	27.48	0.579	1.02
20	9.90	29.14	0.360	2.42
30	9.68	29.50	0.368	2.46
40	9.25	29.61	0.321	2.65
50	8.88	29.59	0.313	2.79
60	8.78	29.66	0.312	2.74
76	8.75	29.71	0.324	2.85
96	8.78	29.76	0.329	2.78
116	8.99	29.86	0.338	2.80
135	9.16	29.97	0.289	3.08
145	9.22	29.63	0.227	3.51
155	9.43	30.20	0.131	4.93
174	9.62	30.34	0.066	4.43
192	9.59	30.41	0.040	4.63

STA 63-28 47° 58.1' N WEATHER 61
 9 July 54 122° 48.6' W WIND S 19
 2330 (+8) DEPTH 24 fm 58°/57°F
 Dabob Bay, Head of

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
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0	16.08	27.20	0.585	0.83
5	16.05	27.19	0.583	0.83
10	16.06	27.20	0.584	0.82
20	9.03	29.35	0.308	2.81
30	9.00	29.49	0.307	2.71
40	8.89	29.55	0.298	2.96
44	8.84	29.54	0.299	2.96

STA 63-29 47° 46.9' N WEATHER 61
 10 July 54 122° 48.5' W WIND S 20
 0045 (+8) DEPTH 87 fm 57°/57°F
 Bolton Peninsula, East of

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
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0	14.77	27.27	0.613	0.89
5	14.75	27.25	0.612	0.90
10	14.82	27.27	0.609	0.93
20	9.33	29.33	0.333	2.71
30	9.06	29.47	0.330	2.79
40	9.07	29.56	0.324	2.70
60	8.79	29.60	0.304	2.53
80	8.80	29.70	0.312	2.62
100	8.88	29.79	0.323	2.88
120	8.96	29.86	0.338	2.78
140	9.19	30.01	0.264	3.31
160	9.47	30.26	0.101	4.04

STA 63-30 47° 42.1' N WEATHER 61
 10 July 54 122° 51.5' W WIND SSE 20
 0204 (+8) DEPTH 82 fm 57°/56°F
 Tskutsko Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
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0	12.86	26.90	0.580	1.26
5	12.83	26.89	0.580	1.28
10	12.71	27.91	0.569	1.30
20	10.19	29.47	0.421	2.19
29	9.65	29.59	0.381	2.36
39	9.62	29.68	0.378	2.50
59	9.31	29.74	0.355	2.63
78	9.08	29.73	0.345	2.58
98	8.90	29.78	0.321	2.76
117	8.96	29.87	0.333	2.79
152	9.48	30.25	0.104	4.25

STA 63-31 47° 57.1' N WEATHER 60
 10 July 54 122° 34.8' W WIND SE 13
 0603 (+8) DEPTH 60 fm 56°/55°F
 Double Bluff

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
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0	12.97	25.74	0.586	0.89
5	11.86	28.28	0.529	1.53
9	10.31	29.16	0.447	1.85
19	10.11	29.40	0.433	1.85
28	10.04	29.46	0.430	2.06
47	10.02	29.69	0.419	2.07
70	9.90	29.97	0.412	2.06
93	9.81	30.09	0.409	2.23

STA 63-32 47° 54.6' N WEATHER o.
 10 July 54 122° 28.7' W WIND SE 13
 0656 (+8) DEPTH 112 fm 57°/56°F
 Point No Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.44	28.09	0.556	1.52
5	12.43	28.06	0.552	1.55
10	11.31	28.75	0.499	1.88
20	10.39	29.13	0.452	1.99
29	10.24	29.24	0.450	2.04
49	9.94	29.39	0.424	2.09
74	9.91	29.74	0.418	2.11
98	9.92	29.88	0.417	2.05
118	9.87	29.91	0.411	2.13
146	9.73	30.16	0.404	2.08
173	9.74	30.25	0.396	2.13

STA 63-33 47° 44.8' N WEATHER 60
 10 July 54 122° 28.4' W WIND SE 13
 0859 (+8) DEPTH 152 fm 57°/56°F
 Point Jefferson

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.85	28.04	0.547	1.80
4	12.86	28.03	0.490	1.76
8	11.88	28.69	0.509	1.69
16	10.68	29.03	0.464	1.95
24	10.47	29.16	0.449	1.70
40	10.05	29.48	0.367	1.92
60	9.80	29.66	0.398	1.76
80	9.70	29.74	0.401	1.87
121	9.76	29.91	0.396	2.19
162	9.72	29.94	0.379	2.12
194	9.82	30.00	0.351	2.14
270	9.75	30.10	0.392	2.17

STA 63-34 47° 24.2' N WEATHER c.
 10 July 54 122° 26.9' W WIND SxW 14
 1150 (+8) DEPTH 130 fm 57°/55°F
 Alki Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.80	28.69	0.535	2.07
4	11.80	28.68	0.532	1.76
9	11.40	28.92	0.510	1.82
18	10.58	29.14	0.465	1.85
27	10.01	29.14	0.462	1.88
40	10.22	29.31	0.443	1.91
61	9.98	29.48	0.435	1.98
81	9.73	29.67	0.417	1.93
110	9.51	29.79	0.406	2.13
144	9.53	29.83	0.406	2.24
176	9.45	29.87	0.404	2.24

STA 63-35 47° 26.6' N WEATHER o.
 10 July 54 122° 23.6' W WIND S 8
 1441 (+8) DEPTH 132 fm 56°/52°F
 Pully Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	13.66	26.80	0.635	1.60
5	12.55	28.24	0.563	1.72
10	12.22	28.39	0.540	1.78
20	10.65	29.10	0.466	2.00
30	10.36	29.21	0.450	2.01
50	10.09	29.37	0.432	2.04
75	9.96	29.39	0.411	2.05
100	-----	29.74	0.407	1.90
140	-----	29.79	0.407	2.21
180	-----	29.86	0.402	2.31
220	-----	29.88	0.400	2.37

STA 63-36 47° 19.2' N WEATHER c.
 10 July 54 122° 28.0' W WIND SW 8
 1621 (+8) DEPTH 95 fm 62°/57°F
 Brown Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.97	28.40	0.520	1.93
5	11.46	28.57	0.502	1.93
10	10.77	28.99	0.473	2.02
20	10.27	29.14	0.461	2.03
30	10.13	29.32	0.452	2.03
50	9.96	29.48	0.435	2.11
75	9.69	29.70	0.417	2.09
100	9.63	29.78	0.414	2.13
130	9.44	29.80	0.419	2.23
160	9.33	29.85	0.409	2.23

STA 63-37 47° 11.8' N WEATHER c.
 10 July 54 122° 35.9' W WIND SW 8
 1823 (+8) DEPTH 70 fm 60°/55°F
 Salina Shoal

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.76	28.71	0.573	1.59
5	11.75	28.71	0.579	1.58
10	11.67	28.69	0.566	----
20	11.43	28.77	0.537	----
30	11.31	28.80	0.528	----
50	10.95	28.95	0.491	1.76
75	10.88	29.00	0.482	1.96
100	10.74	29.05	0.484	1.89
125	10.62	29.13	0.476	1.96

STA 63-38 47° 12.8' N WEATHER c.
 10 July 54 122° 37.1' W WIND SSW 4
 1858 (+8) DEPTH 87 fm 60°/57°F
 Gibson Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.34	28.86	0.541	1.78
5	11.36	28.84	0.537	1.76
10	11.17	28.90	0.518	1.80
20	11.04	28.91	0.500	1.89
30	10.96	28.94	0.494	1.97
50	10.77	28.97	0.473	1.84
75	10.75	28.98	0.460	2.11
100	10.62	29.02	0.457	2.07
130	10.58	29.02	0.458	2.07
160	10.59	29.11	0.459	2.13

STA 63-39 47° 13.7' N WEATHER c.
 10 July 54 122° 39.9' W WIND Calm
 1944 (+8) DEPTH 31 fm 60°/57°F
 Still Harbor III

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.49	28.86	0.764	0.82
5	11.94	28.86	0.661	1.24
10	11.73	28.89	0.612	1.50
20	10.98	28.93	0.493	1.89
30	10.84	28.93	0.483	1.95
40	10.72	28.95	0.461	2.04
50	10.76	28.96	0.459	2.07

STA 63-40 47° 14.7' N WEATHER c.
 10 July 54 122° 38.7' W WIND WSW 3
 2010 (+8) DEPTH 71 fm 66°/58°F
 Still Harbor I

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.12	28.64	0.621	1.36
5	11.94	28.73	0.545	1.48
10	11.50	28.74	0.573	1.57
20	11.09	28.91	0.502	1.84
30	10.97	28.91	0.483	1.79
50	10.88	28.95	0.475	1.79
75	10.92	28.96	0.472	2.01
100	10.65	29.02	0.460	1.61
125	10.54	29.09	0.417	2.06

STA 63-41 47° 14.1' N WEATHER c.
 10 July 54 122° 39.2' W WIND WSW 3
 2039 (+8) DEPTH 67 fm 58°/56°F
 Still Harbor II

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.38	28.73	0.626	1.18
5	12.12	28.78	0.587	1.14
10	11.59	28.87	0.539	1.72
20	11.24	28.90	0.470	1.85
30	11.04	28.93	0.446	1.90
50	10.78	28.95	0.454	1.92
75	10.78	28.98	0.426	1.97
100	10.54	28.98	0.424	2.17
110	10.47	29.05	0.403	2.44

STA 63-42 47° 13.9' N WEATHER c.
 10 July 54 122° 42.9' W WIND WSW 3
 2146 (+8) DEPTH 9 fm 57°/55°F
 South Head IV

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.97	28.84	0.614	1.44
5	11.92	28.86	0.613	1.56
10	11.46	28.90	0.552	1.71
15	11.28	28.90	-----	1.86

STA 63-43 47° 15.6' N WEATHER c.
 10 July 54 122° 41.8' W WIND WSW 5
 2224 (+8) DEPTH 48 fm 57°/55°F
 South Head II

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	13.08	28.73	0.771	0.58
5	12.73	28.78	0.718	0.80
10	11.99	28.78	0.618	1.36
20	11.34	28.89	0.531	1.80
30	11.02	28.91	0.501	1.89
40	10.80	28.95	0.478	2.01
60	10.84	28.97	0.466	2.03
85	10.62	29.01	0.445	2.18

STA 63-44 47° 16.8' N WEATHER c.
 10 July 54 122° 39.4' W WIND Calm
 1053 (+8) DEPTH 12 fm 56°/55°F
 Warren Island

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.77	28.76	0.709	0.84
5	12.20	28.80	0.629	1.12
10	12.03	28.84	0.621	1.36
15	11.76	28.95	0.576	1.45
20	10.83	29.09	0.399	1.73

STA 63-45 47° 16.3' N WEATHER c.
 10 July 54 122° 41.1' W WIND SW 1
 2319 (+8) DEPTH 51 fm 57°/55°F
 South Head I

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.57	28.69	0.668	0.82
5	12.33	28.70	0.665	1.09
10	12.01	28.77	0.589	1.23
20	11.54	28.91	0.551	1.67
30	11.19	28.89	0.483	1.85
40	11.03	28.91	0.412	1.87
60	10.86	28.95	0.476	2.08
80	10.67	29.02	0.463	1.94

STA 63-46 47° 14.8' N WEATHER c.
 10 July 54 122° 42.5' W Calm
 2358 (+8) DEPTH 14 fm 56°/55°F
 South Head III

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.77	28.83	0.752	0.58
5	12.23	28.87	0.676	1.01
10	12.04	28.89	0.631	1.28
15	11.07	28.96	0.497	1.77
20	10.97	28.91	0.492	1.81

STA 63-47 47° 18.8' N WEATHER c.
 11 July 54 122° 42.4' W WIND Calm
 0148 (+8) DEPTH 37 fm 57°/55°F
 Cutt's Island, SW of

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	13.05	28.77	0.758	0.49
5	12.78	28.78	0.716	0.71
10	12.39	28.80	0.658	1.01
20	11.35	28.93	0.534	1.75
30	11.18	28.95	0.505	1.80
40	10.93	28.95	0.476	1.81
50	10.94	28.96	0.460	1.95
60	10.80	28.98	0.442	1.95

STA 63-48 47° 21.5' N WEATHER c. 11 July 54 122° 40.0' W WIND WSW 8 0134 (+8) DEPTH 14 fm 58°/55°F Egin, East of				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	15.84	28.24	0.669	0.49
5	14.31	28.50	0.703	0.50
10	11.94	28.86	0.641	1.13
15	11.47	28.89	0.571	1.58
20	11.32	28.93	0.547	1.67
25	11.26	28.95	0.524	1.77

STA 63-49 47° 22.5' N WEATHER c. 11 July 54 122° 38.0' W WIND SxW 6 0218 (+8) DEPTH 7 fm 57°/54°F Wauna				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	16.01	28.05	0.649	0.57
3	15.29	28.27	0.682	0.52
6	13.82	28.64	0.694	0.64
10	12.02	28.86	0.600	1.34

STA 63-50 47° 20.5' N WEATHER c. 11 July 54 122° 41.7' W WIND S 8 0259 (+8) DEPTH 28 fm 58°/56°F Glencove, East of				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	15.06	28.48	0.697	0.48
5	13.26	28.73	0.715	0.64
10	12.77	28.80	0.668	0.96
20	11.34	28.93	0.524	1.86
30	11.07	28.97	0.501	1.88
40	11.00	28.97	0.488	1.89
50	10.92	28.98	0.457	2.19

STA 63-51 47° 17.1' N WEATHER c. 11 July 54 122° 42.4' W WIND SxE 4 0344 (+8) DEPTH 52 fm 55°/54°F Green Point				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.93	28.75	0.726	0.68
5	12.92	28.77	0.716	0.78
10	11.95	28.87	0.633	1.31
20	11.24	28.90	0.523	1.86
30	11.06	28.91	0.501	1.89
40	11.02	28.93	0.488	1.92
60	10.95	28.97	0.457	1.95
85	10.64	29.00	-----	2.20

STA 63-52 47° 21.8' N WEATHER c.
 11 July 54 122° 48.9' W WIND WSW 1
 0725 (+8) DEPTH 6 fm 60°/56°F
 Rocky Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	16.06	26.39	0.558	1.19
3	14.54	28.30	0.730	0.89
6	13.87	28.39	0.682	0.99
10	13.29	28.49	0.621	1.28

STA 63-53 47° 18.6' N WEATHER c.
 11 July 54 122° 48.8' W WIND SSW 1
 0768 (+8) DEPTH 14.5 fm 58°/54°F
 Dutcher's Cove

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	13.97	28.40	0.670	1.23
5	13.13	28.49	0.639	1.15
10	12.95	28.53	0.611	1.35
15	12.45	28.60	0.509	1.91
20	11.33	28.69	0.410	2.36
25	10.96	28.81	0.339	-----

STA 63-54 47° 15.8' N WEATHER c.
 11 July 54 122° 51.0' W WIND SSE 3
 0832 (+8) DEPTH 28 fm 58°/54°F
 Heron Island

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.74	28.57	0.606	1.40
5	12.74	28.56	0.612	1.36
10	12.08	28.69	0.536	1.32
15	11.12	28.80	0.456	2.13
25	11.00	28.87	0.457	2.16
35	10.95	28.87	0.451	2.20
45	11.00	28.91	0.448	2.16

STA 63-55 47° 12.9' N WEATHER c.
 11 July 54 122° 49.5' W WIND Calm
 0915 (+8) DEPTH 22 fm 58°/55°F
 Whiteman's Cove

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.82	28.61	0.627	1.31
5	12.62	28.60	0.607	1.44
10	12.45	28.58	0.595	1.41
15	12.46	28.65	0.578	1.55
20	12.36	28.69	0.571	1.52
30	11.45	28.86	0.489	1.90
35	11.29	28.89	0.475	2.08

STA 63-56 47° 10.1' N WEATHER c.
 11 July 54 122° 47.3' W WIND NNW 2
 0953 (+8) DEPTH 47 fm 62°/58°F
 Devil's Head

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.74	28.64	0.545	1.63
5	12.31	28.64	0.543	1.49
10	12.18	28.66	0.539	1.49
20	11.87	28.74	0.522	1.56
30	11.49	28.86	0.504	1.95
50	11.05	28.93	0.480	1.95
75	11.05	28.95	0.472	1.60

STA 63-57 47° 07.2' N WEATHER c.
 11 July 54 122° 42.7' W WIND WNW 5
 1042 (+8) DEPTH 36 fm 67°/59°F
 Nisqually Reach

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.25	28.11	0.554	1.69
5	11.37	28.87	0.517	1.78
10	11.25	28.87	0.506	1.79
20	11.11	28.93	0.487	1.99
40	10.69	29.07	0.460	2.04
60	10.71	29.04	0.464	1.75

STA 63-58 47° 11.0' N WEATHER c.
 11 July 54 122° 37.7' W WIND NE 3
 1157 (+8) DEPTH 91 fm 60°/55°F
 Gordon Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.29	28.29	0.560	1.78
5	11.65	28.72	0.536	1.70
10	11.53	28.80	0.531	1.49
20	11.52	28.84	0.528	1.60
30	11.41	28.86	0.504	1.47
50	11.23	28.87	0.509	1.64
70	11.15	28.93	0.490	1.58
100	10.80	29.02	0.472	1.78
130	10.76	29.03	0.474	1.72
160	10.61	29.07	0.466	1.69

STA 63-59 47° 14.9' N WEATHER c.
 11 July 54 122° 34.4' W WIND Calm
 1256 (+8) DEPTH 34 fm 63°/56°F
 Day's Island

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.08	29.04	0.515	1.75
5	10.79	29.09	0.502	1.89
10	10.46	29.27	0.474	2.08
20	10.37	29.34	0.459	2.04
30	10.21	29.36	0.450	2.02
50	10.11	29.42	0.448	2.03

STA 63-60 47° 21.0' N WEATHER c.
 11 July 54 122° 32.4' W WIND SxE 6
 1445 (+8) DEPTH 104 fm 66°/56°F
 Spring Beach

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.43	29.00	0.507	1.83
5	10.98	29.00	0.501	1.86
10	10.92	29.02	0.499	1.87
20	10.85	29.04	0.486	1.90
30	10.57	29.16	0.469	1.89
50	10.45	29.23	0.459	2.16
70	10.28	29.36	0.446	2.01
90	10.12	29.43	0.443	2.01

STA 63-61 47° 30.6' N WEATHER b.c.
 11 July 54 122° 29.1' W WIND ENE 6
 1445 (+8) DEPTH 58 fm 65°/56°F
 Point Vashon

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.23	28.94	0.516	1.88
5	11.16	28.99	0.501	1.90
10	10.98	29.04	0.487	1.92
20	10.73	29.11	0.475	1.96
30	10.60	29.15	0.465	1.93
50	10.43	29.29	0.457	2.00
75	10.20	29.36	0.448	2.08
100	10.13	29.40	0.446	2.05

STA 63-61A 47° 44.4' N WEATHER b.c.
 11 July 54 122° 25.2' W WIND N 9
 1803 (+8) DEPTH 153 fm 63°/58°F
 Point Jefferson

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	13.32	28.22	0.580	1.56
5	11.72	28.73	0.535	1.75
10	11.35	28.95	0.520	1.86
20	10.89	29.05	0.474	1.91
30	10.68	29.11	0.467	1.83
50	10.37	29.37	0.437	1.92
75	9.94	29.64	0.413	1.98
100	9.86	29.72	0.408	1.96
150	9.75	29.95	0.401	2.13
200	9.64	30.25	0.392	2.10
240	9.64	30.35	0.386	2.17
270	9.59	30.43	0.385	2.17

STA 63-62 47° 53.4' N WEATHER b.c.
 11 July 54 122° 21.4' W WIND NNW 9
 1944 (+8) DEPTH 123 fm 61°/57°F
 Possession Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	15.20	15.88	0.603	0.68
5	12.61	28.17	0.580	1.57
10	12.13	28.47	0.547	1.52
20	11.24	28.78	0.492	1.80
30	10.39	29.09	0.444	1.94
50	9.30	29.31	0.370	2.07
75	9.08	29.51	0.353	2.21
100	9.24	29.69	0.370	1.92
140	9.62	29.87	0.398	2.15
180	9.50	29.99	0.386	2.17
220	9.58	30.26	0.382	2.30

STA 63-63 47° 58.4' N WEATHER b.c. 11 July 54 122° 16.9' W WIND WNW 12 2055 (+8) DEPTH 72 fm 59°/55°F Port Gardner				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	15.09	17.20	0.596	0.12
5	12.06	27.90	0.537	1.41
10	12.37	28.19	0.554	1.52
20	10.74	28.89	0.453	1.87
30	10.12	28.92	0.419	1.94
40	9.86	29.21	0.401	2.07
50	9.65	29.21	0.385	2.11
70	8.92	29.52	0.341	2.25
90	8.73	29.62	0.337	2.43
110	8.82	29.71	0.347	2.52
141	9.51	29.90	0.379	2.30

STA 63-64 48° 03.7' N WEATHER c. 11 July 54 122° 19.5' W WIND NW 12 2220 (+8) DEPTH 65 fm 58°/55°F Camano Head, East of				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	15.17	17.02	0.575	0.43
5	11.91	26.74	0.491	1.41
10	12.06	27.98	0.525	1.39
20	10.97	28.52	0.447	1.72
30	10.23	29.04	0.386	1.85
40	9.95	29.14	0.385	1.94
50	9.58	29.16	0.353	2.12
70	9.08	-----	0.265	2.14
90	8.70	-----	0.315	2.58
110	8.53	-----	0.294	2.47
129	8.76	-----	3.02	2.93

STA 63-65 48° 09.0' N WEATHER c. 12 July 54 122° 24.3' W WIND WNW 12 2358 (+8) DEPTH 54 fm 58°/54°F Port Susan, Head of				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	15.43	13.39	0.571	1.05
5	11.55	26.14	0.538	1.14
10	10.67	28.14	0.443	1.73
20	10.02	28.73	0.403	1.94
30	9.07	28.86	0.369	2.00
40	9.85	29.13	0.405	1.43
60	8.75	29.16	0.311	1.87
80	8.45	29.37	0.310	1.85
95	8.41	29.56	0.332	2.70

STA 63-66 48° 06.1' N WEATHER c. 12 July 54 122° 22.0' W WIND WNW 12 0052 (+8) DEPTH 67 fm 58°/55°F Port Susan, Middle of				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	15.44	15.66	0.587	0.78
5	12.49	27.47	0.571	1.15
10	11.66	27.99	0.512	1.49
20	10.32	28.87	0.432	1.87
30	9.62	28.98	0.399	1.92
40	9.56	28.99	0.389	2.07
50	9.30	29.06	0.374	1.99
70	9.69	29.21	0.311	1.68
90	8.34	29.43	0.324	2.50
110	8.50	29.69	0.322	2.53
122	8.79	29.76	0.288	2.90

STA 63-66A 48° 03.9' N WEATHER c.
 12 July 54 122° 19.4' W WIND WNW 12
 0211 (+8) DEPTH 67 fm 58°/55°F
 Camana Head, East of

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
60	8.98	29.27	0.296	1.98
80	8.46	29.39	0.318	2.29
90	8.56	29.51	0.354	1.92
100	8.48	29.55	0.333	2.18
110	8.58	29.65	0.335	2.19
115	8.57	29.69	0.314	2.22
120	8.70	29.70	0.306	2.18
125	8.72	29.74	0.334	2.42

STA 63-67 48° 02.8' N WEATHER c.
 12 July 54 122° 21.9' W WIND W 10
 0258 (+8) DEPTH 95 fm 56°/53°F
 Camano Head, West of

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	13.79	21.29	0.573	0.80
5	12.45	23.26	0.522	1.45
10	11.41	28.96	0.481	1.21
20	10.20	28.98	0.421	1.90
30	9.94	29.15	0.419	1.88
50	9.74	29.19	0.401	1.57
75	8.82	29.47	0.354	2.07
100	8.86	29.63	0.346	1.88
125	8.83	29.67	0.353	2.29
150	8.84	29.71	0.351	2.23

STA 63-68 48° 06.4' N WEATHER b.c.
 12 July 54 122° 29.4' W WIND WNW 11
 0458 (+8) DEPTH 80 fm 55°/53°F
 East Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	13.22	20.95	0.616	0.33
5	12.42	22.90	0.555	0.81
10	10.96	26.42	0.466	1.57
20	9.84	28.88	0.402	2.03
30	9.42	29.03	0.391	1.56
50	9.13	29.19	0.352	2.03
75	8.76	29.36	0.347	2.33
100	8.78	29.48	0.354	1.98
130	8.78	29.59	0.358	2.27

STA 63-69 48° 01.5' N WEATHER c.
 12 July 54 122° 31.8' W WIND N 5
 0604 (+8) DEPTH 20 fm 55°/53°F
 Holmes Harbor, Head of

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	13.99	20.01	0.634	0.16
5	13.85	20.32	0.643	0.27
10	10.41	27.68	0.423	1.85
20	9.33	28.78	0.359	2.18
30	9.25	28.95	0.335	2.40
35	8.80	28.98	0.288	3.31

STA 63-70 48° 03.1' N WEATHER c.
 12 July 54 122° 31.8' W WIND N 5
 0633 (+8) DEPTH 27 fm 55°/53°F
 Classic

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	13.59	19.49	0.635	0.12
5	13.91	21.15	0.616	0.30
10	11.12	25.66	0.496	1.32
20	9.38	28.96	0.381	2.13
30	9.06	28.97	0.327	2.54
40	8.74	28.98	0.291	2.88
48	8.65	28.95	0.240	3.94

STA 63-71 48° 04.6' N WEATHER b.c.
 12 July 54 122° 32.2' W WIND N 8
 0716 (+8) DEPTH 27 fm 56°/55°F
 Pines Point

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	13.81	18.30	0.647	0.27
5	13.74	19.70	0.639	0.22
10	10.28	27.83	0.496	1.90
20	9.42	28.87	0.367	2.28
30	9.26	29.02	0.359	2.39
40	9.11	29.09	0.343	2.17
50	8.57	29.16	0.226	3.60

STA 63-72 48° 06.1' N WEATHER b.c.
 12 July 54 122° 33.1' W WIND W 9
 0744 (+8) DEPTH 40 fm 56°/54°F
 Green Bank

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	14.21	14.05	0.772	0.15
5	13.62	20.66	0.617	0.64
10	10.05	27.90	0.368	1.87
20	9.50	28.87	0.372	2.22
30	9.19	29.03	0.331	2.58
40	8.85	29.05	0.270	2.90
50	8.69	29.13	0.282	3.21
60	8.56	29.14	0.237	3.27
71	8.53	29.15	-----	4.04

STA 63-73 48° 10.9' N WEATHER b.c.
 12 July 54 122° 32.8' W WIND NNW 8
 0853 (+8) DEPTH 58 fm 62°/57°F
 Onamac Point

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	14.17	14.27	0.814	0.27
5	12.36	22.70	0.541	0.79
10	11.73	25.21	0.495	1.25
20	9.20	28.44	0.345	2.29
30	9.23	28.85	0.367	2.29
50	9.21	29.10	0.368	2.30
75	8.71	29.28	0.325	2.80
100	8.74	29.38	0.323	----

STA 63-74 48° 13.0' N WEATHER b.c.
 12 July 54 122° 33.0' W WIND WSW 4
 0933 (+8) DEPTH 40 fm 61°/56°F
 Demock Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	13.06	18.17	0.615	0.42
5	12.08	23.68	0.515	0.99
10	10.59	25.88	0.428	1.61
20	9.51	28.57	0.377	2.20
30	9.29	28.87	0.281	2.27
50	8.89	29.06	0.332	2.51
70	8.70	29.15	0.319	2.79

STA 63-75 48° 18.5' N WEATHER b.c.
 12 July 54 122° 29.5' W WIND SxE 3
 1043 (+8) DEPTH 14 fm 62°/57°F
 Strawberry Point, North of

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.28	9.90	0.661	0.84
2	12.10	15.79	0.598	0.91
5	11.01	22.45	0.489	1.45
10	10.66	22.47	0.453	1.71
20	9.82	28.40	0.337	2.10

STA 63-76 48° 21.4' N WEATHER b.c.
 12 July 54 122° 33.4' W WIND SW 4
 1137 (+8) DEPTH 7.5 fm 63°/58°F
 Goat Island

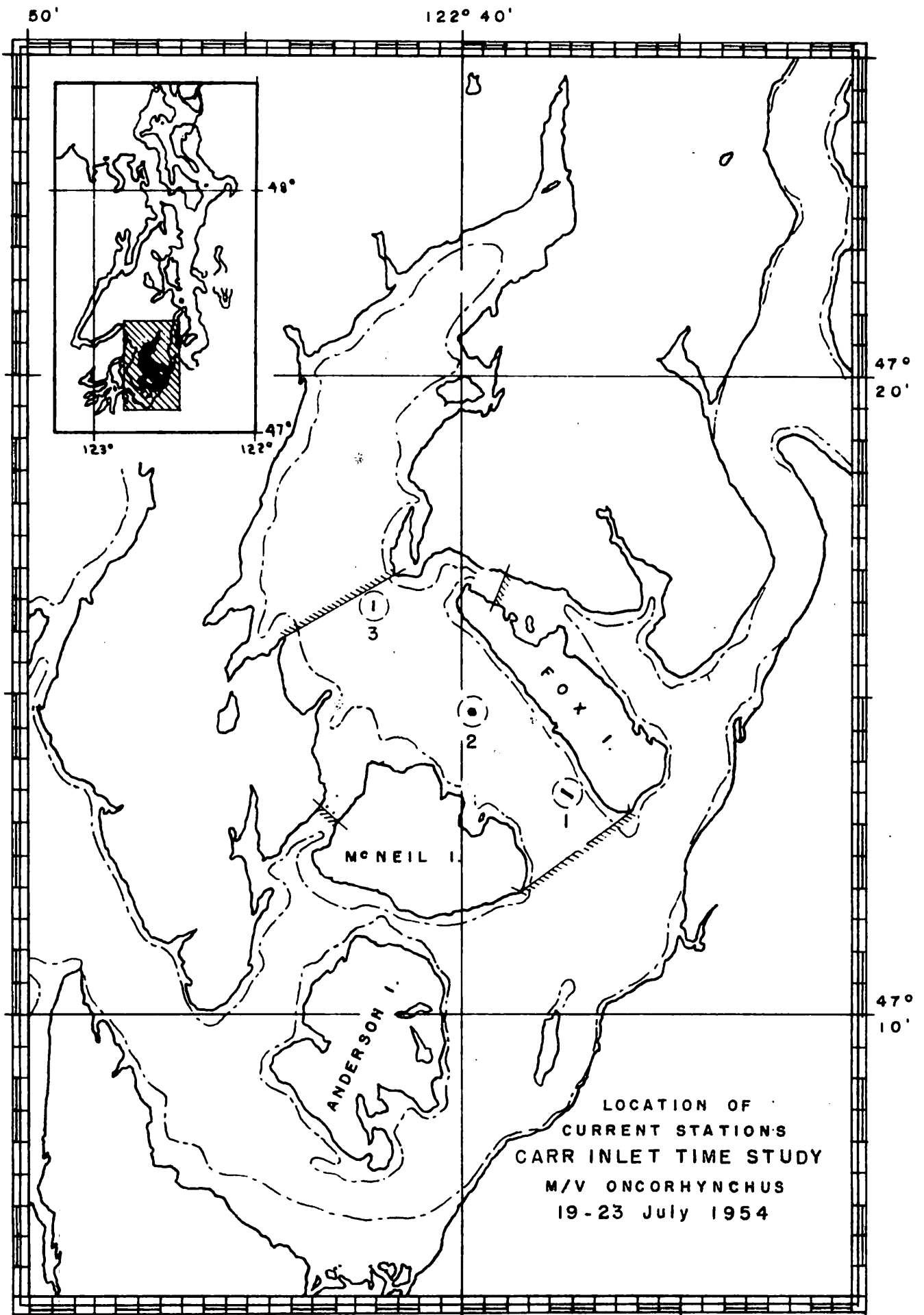
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	14.4	14.18	0.616	1.38
2	14.3	18.87	0.562	1.23
5	10.86	22.75	0.496	1.63
10	10.54	24.18	0.453	1.82

STA 63-77 48° 24.9' N WEATHER b.c.
 12 July 54 122° 35.9' W WIND SW 6
 1224 (+8) DEPTH 20 fm 64°/57°F
 Dewey

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	13.14	22.81	0.670	0.62
5	10.00	23.19	0.517	1.45
10	10.16	27.32	0.451	1.98
15	10.30	27.12	0.474	1.73
25	9.92	27.32	0.449	1.66
30	10.05	-----	0.454	1.95

STA 63-78 48° 27.1' N. WEATHER b.c.
 12 July 54 122° 43.8' W WIND W 4
 1538 (+8) DEPTH 43 fm 60°/55° F
 Lawson Reef, North of

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.16	29.88	0.483	1.84
5	10.13	29.93	0.477	1.89
10	9.90	30.06	0.460	1.84
20	9.86	30.07	0.443	1.92
30	9.78	30.09	0.445	1.94
75	8.75	31.34	0.342	1.94



GARR INLET STATION NO. 1

LAT. 47° 13.5'N, LONG. 122° 37.8'W

20-21 July, 1954

Date	Time	Depth 0 Meters			Depth 20 Meters		
		Temp (°C)	Salinity (‰)	Density (σ_t)	Temp (°C)	Salinity (‰)	Density (σ_t)
20 July	2000	12.88	28.89	21.71	11.45	29.02	22.07
	2100	12.20	28.94	21.88	11.66	29.04	22.05
	2200	12.11	28.93	21.89	11.52	28.99	22.04
	2300	11.84	28.96	21.97	11.40	29.05	22.12
	0000	11.64	28.97	22.02	11.34	29.09	22.16
21 July	0100	11.54	29.02	22.07	11.28	29.07	22.15
	0200	12.66	28.91	21.77	11.31	29.07	22.15
	0300	12.53	28.98	21.85	11.30	29.07	22.15
	0400	12.52	28.96	21.84	11.30	29.07	22.15
	0500	12.62	28.94	21.81	11.25	29.05	22.13
	0600	12.63	28.92	21.80	11.24	29.08	22.17
	0700	12.57	28.95	21.82	11.44	29.07	22.13
	0800	11.96	29.05	22.01	11.31	29.07	22.15
	0900	12.64	28.96	21.83	11.56	29.03	22.06
	1000	12.80	28.93	21.76	11.32	29.08	22.15
	1130	13.20	28.93	21.68	11.34	29.02	22.11
	1240	13.66	28.95	21.61	11.48	29.01	22.07
	1410	14.51	28.93	21.43	11.40	28.99	22.06
	1500	13.44	28.95	21.67	11.28	29.09	22.16
	1600	13.06	28.94	21.71	11.25	29.04	22.12
	1700	12.94	29.13	21.90	11.22	29.04	22.14
	1800	12.99	28.93	21.72	11.62	29.04	22.07
1910	13.04	28.93	21.72	11.84	29.01	22.01	
2015	<u>13.18</u>	<u>28.97</u>	<u>21.72</u>	<u>11.94</u>	<u>29.00</u>	<u>21.98</u>	
	Maximum	14.51	29.13	22.07	11.94	29.09	22.17
	Minimum	11.54	28.89	21.43	11.22	28.99	21.98
	Mean	12.72	28.96	21.80	11.42	29.04	22.11
	Range	2.97	0.24	0.64	0.72	0.10	0.19

GARR INLET STATION NO. 2

LAT. 47° 14.8'N, LONG. 122° 39.8'W

19-20 July, 1954

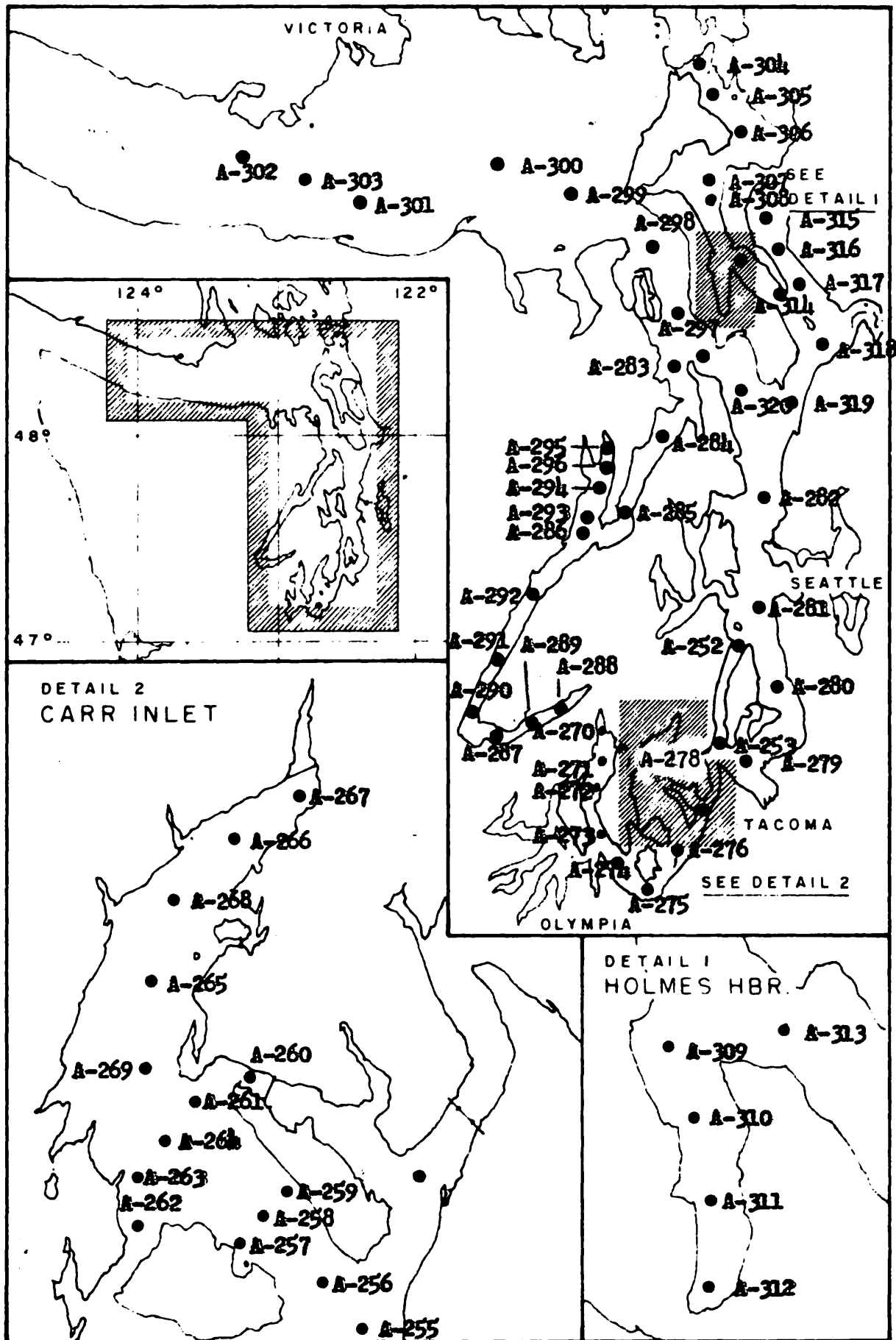
Date	Time	Depth 0 Meters			Depth 20 Meters		
		Temp (°C)	Salinity (‰)	Density (σ_t)	Temp (°C)	Salinity (‰)	Density (σ_t)
19 July	2120	14.02	28.86	21.50	11.36	29.00	22.08
	2245	13.66	28.87	21.55	11.48	28.98	22.04
	0003	13.30	28.91	21.66	11.44	28.97	22.05
	0110	12.98	28.90	21.70	11.68	29.01	22.03
	0206	12.84	28.89	21.73	11.35	28.91	22.00
	0310	12.68	28.96	21.81	11.30	28.98	22.07
	0410	12.70	28.94	21.79	11.25	28.96	22.06
	0505	12.62	28.95	21.82	11.17	29.03	22.13
	0605	12.67	28.96	21.81	11.30	28.99	22.08
	0705	12.61	29.09	21.92	11.18	29.03	22.13
	0823	12.72	28.90	21.76	11.28	29.02	22.11
	0942	12.79	28.94	21.77	11.40	29.07	22.13
	1038	12.74	28.92	21.78	11.35	29.05	22.12
	1232	12.64	28.94	21.81	11.16	29.01	22.12
	1340	12.69	28.93	21.78	11.34	28.98	22.07
	1455	12.55	28.91	21.79	11.44	28.97	22.06
	1600	12.57	28.94	21.81	11.44	28.99	22.05
	1705	12.76	28.94	21.77	11.44	28.98	22.05
	1750	<u>13.01</u>	<u>28.91</u>	<u>21.71</u>	<u>11.38</u>	<u>28.96</u>	<u>22.04</u>
		Maximum	14.02	29.09	21.92	11.68	29.07
	Minimum	12.55	28.86	21.50	11.16	28.91	22.00
	Mean	12.87	28.93	21.75	11.36	28.99	22.08
	Range	1.47	0.23	0.42	0.52	0.16	0.13

CARR INLET STATION No. 3

LAT. 47° 16.4 'N, LONG. 122° 42.1 'W

22-23 July, 1954

Date	Time	Depth 0 Meters			Depth 20 Meters			
		Temp (°C)	Salinity (‰)	Density (σ_t)	Temp (°C)	Salinity (‰)	Density (σ_t)	
22 July	0650	13.80	29.16	21.75	11.52	29.07	22.11	
	0830	14.07	28.79	21.40	11.53	29.04	22.09	
	1000	14.23	28.75	21.36	11.61	29.04	22.07	
	1100	14.84	28.77	21.25	11.52	29.11	22.14	
	1300	15.30	28.78	21.15	11.50	29.01	22.07	
	1435	15.79	28.78	21.04	11.45	29.05	22.10	
	1610	15.77	28.74	21.01	11.42	29.04	22.11	
	1741	-----	28.76	-----	-----	29.03	-----	
	1900	14.61	28.85	21.35	11.41	29.07	22.13	
	2030	15.88	28.76	21.01	11.54	29.05	22.10	
	2200	16.42	28.65	20.81	11.36	29.04	22.11	
	2315	16.84	28.77	20.82	11.64	29.05	22.09	
	23 July	0005	16.36	28.72	20.87	11.51	29.13	22.15
		0100	15.50	-----	-----	11.54	29.07	22.13
0239		14.84	28.85	21.31	11.52	29.06	22.10	
0400		14.26	28.84	21.40	11.50	29.04	22.09	
0525		14.07	28.82	21.43	11.50	29.03	22.08	
0655		<u>13.46</u>	<u>28.92</u>	<u>21.62</u>	<u>11.62</u>	<u>29.03</u>	<u>22.06</u>	
Maximum		16.84	29.16	21.75	11.64	29.13	22.15	
Minimum		13.46	28.65	20.81	11.36	29.01	22.06	
Mean	15.07	28.80	21.21	11.51	29.05	22.10		
Range	3.38	0.51	0.94	0.28	0.12	0.09		



Oceanographic Station Locations
 ONCORHYNCHUS CRUISE PFS-24
 10 - 20 August 1954

STA A-252 47° 30.4' N WEATHER b.c. 10 Aug 54 122° 29.2' W WIND N 3 1322 (+8) DEPTH 57 fm 72°F Point Vashon				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	13.66	28.77	0.538	----
5	12.85	28.96	0.536	----
10	11.95	29.08	0.481	----
19	12.05	29.25	0.442	----
29	11.38	29.26	0.436	----
49	11.41	29.27	0.431	----
74	11.01	29.35	0.400	----
99	10.99	29.39	0.408	----

STA A-253 47° 21.2' N WEATHER b.c. 10 Aug 54 122° 32.3' W WIND NW 4 1503 (+8) DEPTH 55 fm 63°F Spring Beach				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	13.69	28.88	0.527	----
5	12.87	29.02	0.523	----
10	11.96	29.15	0.489	----
20	-----	29.23	0.468	----
30	11.53	29.26	0.456	----
50	11.28	29.35	0.435	----
70	11.03	29.40	0.409	----
90	10.64	29.55	0.400	----

STA A-254 47° 14.5' N WEATHER b.c. 10 Aug 54 122° 34.1' W WIND N 2 1611 (+8) DEPTH 32 fm 63°F Day Island				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.80	29.15	0.456	----
10	11.42	29.25	0.445	----
20	-----	29.30	0.439	----
30	11.25	29.34	0.431	----
50	10.91	29.48	0.413	----

STA A-255 47° 11.4' N WEATHER b.c. 10 Aug 54 122° 32.1' W WIND N 2 1707 (+8) DEPTH 71 fm 64°F Toliva Shoal				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	13.30	28.81	0.664	0.95
5	12.70	28.97	0.556	1.3
10	12.28	29.06	0.511	1.3
20	12.12	29.13	0.503	1.6
30	11.98	29.13	0.493	1.6
50	11.92	29.16	0.488	1.7
75	11.94	29.17	0.491	1.7
100	11.76	29.22	0.466	1.7
125	11.30	29.34	0.441	1.8

STA A-256 47° 12.4' N WEATHER b.c.
 10 Aug 54 122° 37.3' W WIND Calm
 1750 (+8) DEPTH 89 fm 64°F
 Gibson Point, Southwest of

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	13.18	28.99	0.619	1.1
5	12.72	29.03	0.589	1.2
10	12.51	29.06	0.545	1.4
20	12.32	29.10	0.520	1.25
30	12.02	29.14	0.486	2.0
50	11.88	29.18	0.466	1.9
75	11.67	29.18	-----	1.9
100	11.65	29.22	0.446	2.0
130	11.56	29.23	0.424	2.0
160	11.52	29.25	0.437	2.0

STA A-257 47° 13.4' N WEATHER b.c.
 10 Aug 54 122° 39.5' W WIND Calm
 1835 (+8) DEPTH 30 fm 67°F
 Still Harbor III

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	15.74	28.95	0.650	-----
5	13.54	29.03	0.733	-----
10	13.04	29.03	0.638	-----
20	12.19	29.05	0.477	-----
30	11.81	29.06	0.433	-----
40	11.63	29.05	0.396	-----
50	11.60	29.09	0.396	-----

STA A-258 47° 14.1' N WEATHER b.c.
 10 Aug 54 122° 39.1' W WIND NNW 2
 1950 (+8) DEPTH 70 fm 59°F
 Still Harbor II

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	14.76	28.96	0.652	1.0
5	14.74	28.96	0.662	1.0
10	12.96	29.03	0.627	1.2
20	12.32	29.05	0.487	1.6
30	11.87	29.06	0.446	1.8
50	11.55	29.06	0.402	2.0
75	11.57	29.08	0.355	2.0
100	11.50	29.17	0.392	2.0
120	11.50	29.24	0.424	2.2

STA A-259 47° 14.3' N WEATHER o.
 11 Aug 54 122° 38.3' W WIND NW 2
 0716 (+8) DEPTH 66 fm 55°F
 Still Harbor I

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	15.17	28.99	0.718	-----
5	13.00	29.00	0.614	-----
10	12.44	29.04	0.508	-----
20	12.21	29.08	0.466	-----
30	11.93	29.10	0.434	-----
50	11.60	29.13	0.427	-----
74	11.60	29.17	0.426	-----
99	11.57	29.23	0.428	-----
124	11.50	29.26	0.431	-----

STA A-260 47° 16.7' N WEATHER 10 11 Aug 54 122° 39.3' W WIND SW 2 0821 (+8) DEPTH 12 fm 55°F Warren				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.58	29.05	0.574	----
5	12.26	29.08	0.498	----
10	11.97	29.08	0.468	----
15	11.83	29.12	0.451	----
20	11.80	29.12	0.441	----

STA A-261 47° 16.2' N WEATHER 10 11 Aug 54 122° 40.6' W WIND WSW 2 0850 (+8) DEPTH 46 fm 56°F South Head				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	14.49	28.99	0.638	----
5	13.30	29.03	0.543	----
10	12.17	29.05	0.475	----
20	11.82	29.09	0.454	----
30	11.81	29.09	0.444	----
40	11.81	29.09	0.443	----
60	11.66	29.14	0.416	----
80	11.66	29.21	0.434	----

STA A-262 47° 13.5' N WEATHER 10 11 Aug 54 122° 42.5' W WIND SSW 2 0947 (+8) DEPTH 9 fm 58°F South Head IV				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	14.00	28.99	0.669	----
5	13.12	-----	0.577	----
10	12.90	29.03	0.555	----
15	12.45	29.05	0.495	----

STA A-263 47° 14.5' N WEATHER 10 11 Aug 54 122° 42.5' W WIND SSW 2 1011 (+8) DEPTH 11 fm 58°F South Head III				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	16.47	28.86	0.695	----
5	14.00	29.02	0.603	----
10	12.90	29.05	0.558	----
15	12.09	29.03	0.474	----
20	11.76	29.02	0.409	----

STA A-264 47° 15.5' N WEATHER 10 11 Aug 54 122° 41.5' W WIND ESE 2 1045 (+8) DEPTH 49 fm 58°F South Head II				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	15.76	28.83	0.693	0.5
5	13.23	28.98	0.677	0.8
10	12.67	29.02	0.515	1.6
20	12.14	29.03	0.462	1.9
30	11.83	29.05	0.434	2.0
40	11.55	29.06	0.397	2.0
60	11.48	29.11	0.367	2.2
85	11.54	29.18	0.399	2.2

STA A-265 47° 18.4' N WEATHER c. 11 Aug 54 122° 42.2' W WIND SE 2 1126 (+8) DEPTH 35 fm 59°F CUTTS ISLAND, Southwest of				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	17.42	28.58	0.670	<0.5
5	13.23	29.01	0.583	1.3
10	-----	29.05	0.511	1.7
20	12.32	29.05	0.492	1.6
30	12.04	29.06	0.468	1.9
40	11.98	29.07	0.417	1.9
50	11.85	29.08	0.434	1.9
56	11.86	29.10	0.412	2.0

STA A-266 47° 21.2' N WEATHER b.c. 11 Aug 54 122° 40.1' W WIND SSE 3 1241 (+8) DEPTH 14 fm 64°F Elgin, East of				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	17.75	28.44	0.667	----
5	13.33	29.01	0.758	----
10	13.03	29.04	0.507	----
15	12.24	29.06	0.475	----
20	12.03	29.08	0.459	----
25	11.81	29.10	0.439	----

STA A-267 47° 22.3' N WEATHER b.c. 11 Aug 54 122° 38.1' W WIND S 3 1306 (+8) DEPTH 6 fm 66°F Wauna				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	16.28	28.60	0.679	<0.5
2	14.64	28.66	0.698	<0.8
4	12.84	28.96	0.604	0.8
6	12.59	29.01	0.560	1.3
10	12.23	29.02	0.443	2.0

STA A-268 47° 20.3' N WEATHER b.c.
 11 Aug 54 122° 41.3' W WIND SSW 5
 1355 (+8) DEPTH 28 fm 68°F
 Glencove, East of

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	17.58	28.48	0.691	>0.5
5	13.03	29.01	0.651	0.7
10	12.53	29.05	0.498	1.0
20	12.21	29.06	0.464	2.0
30	11.95	29.08	0.449	2.1
40	11.89	29.09	0.449	2.1
50	11.56	29.14	-----	---

STA A-269 47° 17.1' N WEATHER b.c.
 11 Aug 54 122° 42.1' W WIND ESE 3
 1440 (+8) DEPTH 50 fm
 Green Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	15.57	28.90	0.790	<0.5
5	12.77	29.05	0.587	1.4
10	12.42	29.05	0.528	1.6
20	12.01	29.08	0.474	1.6
30	11.90	29.09	0.449	2.0
40	11.82	29.10	0.444	2.3
50	11.65	29.10	0.417	2.3
70	11.53	29.12	0.387	2.2
90	11.50	29.23	0.401	---

STA A-270 47° 21.4' N WEATHER 10
 12 Aug 54 122° 48.6' W WIND Calm
 0642 (+8) DEPTH 6 fm
 Rocky Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	17.58	28.22	0.612	1.1
2	17.54	28.24	0.602	1.15
4	16.24	28.31	0.575	1.5
6	14.13	28.64	0.538	2.4
10	12.94	28.77	0.293	2.6

STA A-271 47° 18.5' N WEATHER o.
 12 Aug 54 122° 48.4' W WIND SSW 2
 0739 (+8) DEPTH 14 fm 57°
 Dutchers Cove

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	16.80	28.40	0.651	0.8
5	13.62	28.78	0.548	1.3
10	12.74	28.83	0.403	1.8
15	12.38	28.90	0.411	2.1
20	12.16	28.97	0.404	2.6
25	12.06	28.99	0.379	2.7

STA A-272 47° 15.6' N WEATHER o. 12 Aug 54 122° 50.6' W WIND Calm 0818 (+8) DEPTH 30 fm 55°F Herron Island				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	15.01	28.68	0.704	1.0
5	14.46	28.74	0.671	1.1
10	12.89	28.94	0.515	1.5
15	12.67	28.95	0.488	1.5
25	12.36	28.97	0.464	1.9
35	12.14	29.01	0.435	2.0
45	12.02	29.05	0.429	1.8

STA A-273 47° 12.6' N WEATHER o. 12 Aug 54 122° 49.4' W WIND Calm 0910 (+8) DEPTH 24 fm Whiteman Cove				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	15.45	28.74	0.711	0.9
5	14.88	28.79	0.669	1.1
10	13.26	28.94	0.525	1.5
15	12.46	29.01	0.476	1.6
20	12.19	29.04	0.462	2.0
30	12.08	29.04	0.451	2.1
40	12.01	29.06	0.436	2.1

STA A-274 47° 10.1' N WEATHER o. 12 Aug 54 122° 47.2' W WIND Calm 0950 (+8) DEPTH 54 fm 57°F Devils Head				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	14.29	28.81	0.636	1.2
5	14.05	28.86	0.617	1.4
10	13.64	28.87	0.575	1.3
20	13.04	28.93	0.515	1.5
30	12.48	29.01	0.490	1.6
50	12.25	29.04	0.475	2.1
75	11.98	29.07	0.449	2.0

STA A-275 47° 07.2' N WEATHER o. 12 Aug 54 122° 42.3' W WIND W 2 1041 (+8) DEPTH 36 fm 57°F Nisqually Reach				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	13.70	28.51	0.589	----
5	13.03	28.97	0.543	----
10	12.59	29.01	0.512	----
20	12.17	29.06	0.474	----
40	12.14	29.09	0.478	----
60	12.10	29.09	0.471	----

STA A-276 47° 10.6' N WEATHER o.
 12 Aug 54 122° 37.4' W WIND Calm
 1137 (+8) DEPTH 94 fm
 Gordon Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	13.80	28.66	0.557	1.0
5	12.69	28.98	0.536	1.5
10	12.59	29.00	0.517	1.3
20	12.59	29.02	0.509	1.5
30	12.42	29.03	0.515	2.3
50	12.05	29.14	0.491	1.8
75	11.84	29.17	0.456	2.2
100	11.77	29.20	0.451	2.2
130	11.55	29.27	0.436	2.1
160	11.53	29.29	0.437	2.2

STA A-277 47° 14.5' N WEATHER o.
 12 Aug 54 122° 34.3' W WIND S 2
 1303 (+8) DEPTH 34 fm 62°F
 Day Island

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.04	29.46	0.417	---
5	11.04	29.46	0.416	---
10	11.02	29.46	0.417	---
20	11.02	29.46	0.415	---
30	10.98	29.47	0.414	---
50	10.93	29.49	0.414	---

STA A-278 47° 18.6' N WEATHER b.c.
 12 Aug 54 122° 33.4' W WIND ESE 3
 1415 (+8) DEPTH 44 68°F
 Point Defiance

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.58	29.12	0.452	---
5	11.52	29.23	0.443	---
10	11.60	29.28	0.435	---
20	11.63	29.29	0.441	---
39	11.54	29.32	0.432	---
59	11.43	29.32	0.432	---

STA A-279 47° 19.2' N WEATHER b.c.
 12 Aug 54 122° 28.0' W WIND NNE 5
 1518 (+8) DEPTH 93 fm
 Brown Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	14.58	27.22	0.529	1.7
5	12.86	28.81	0.501	1.5
10	12.16	29.00	0.471	1.6
20	11.78	29.16	0.447	1.7
30	11.32	29.26	0.425	1.9
50	11.09	29.33	0.408	2.0
75	10.19	29.71	0.363	2.0
100	10.04	29.79	0.356	2.1
130	9.91	29.85	0.345	2.1
160	9.95	29.86	0.348	2.1

STA A-280 47° 26.5' N WEATHER 45
 13 Aug 54 122° 23.1' W WIND Calm
 0724 (+8) DEPTH 130 fm 56°F
 Pully Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	13.02	29.94	0.511	1.5
5	12.23	29.06	0.485	1.7
10	11.91	29.11	0.508	2.0
20	11.92	29.13	0.452	1.5
30	11.77	29.21	0.439	1.6
50	10.35	29.65	0.370	1.9
75	10.18	29.75	0.364	2.0
100	10.05	29.82	0.354	1.9
140	10.04	29.89	0.346	2.0
180	10.17	30.11	0.358	1.8
220	10.25	30.13	0.360	1.9

STA A-281 47° 34.2' N WEATHER 45
 13 Aug 54 122° 26.5' W WIND SW 4
 0848 (+8) DEPTH 134 fm 57°F
 Alki Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	14.18	28.22	0.597	0.8
5	13.45	28.59	0.559	1.1
10	13.45	28.66	0.540	1.2
20	12.26	29.08	0.478	1.5
30	11.90	29.17	0.456	1.5
50	11.34	29.32	0.424	1.7
75	10.38	29.64	0.371	2.0
100	10.12	29.85	0.361	1.9
140	10.20	30.01	0.358	2.0
180	10.19	30.11	0.356	2.0
220	10.22	30.22	0.362	2.0

STA A-282 47° 44.5' N WEATHER 42
 13 Aug 54 122° 24.5' W WIND S 4
 1036 (+8) DEPTH 155 fm 58°F
 Point Jefferson

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	14.36	27.92	0.580	0.8
5	-----	28.62	0.509	1.3
10	12.34	28.92	0.474	1.4
20	11.56	29.20	0.435	1.6
30	11.26	29.32	0.412	1.6
50	10.64	29.56	0.382	2.0
100	10.36	29.93	0.368	2.3
150	10.16	30.23	0.373	2.1
199	10.15	30.32	0.363	1.7
239	10.13	30.32	0.354	1.9
269	10.18	30.34	0.351	2.0

STA A-283 47° 56.1' N WEATHER o.
 16 Aug 54 122° 38.0' W WIND Calm
 1504 (+8) DEPTH 67 fm 63°F
 Tala Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.80	29.64	0.421	1.9
5	11.32	29.66	0.420	2.1
10	11.33	29.68	0.413	2.0
20	11.24	29.73	0.408	1.9
30	10.84	29.94	0.406	1.9
50	10.54	30.14	0.390	1.9
75	10.45	30.22	0.382	1.9
100	10.46	30.26	0.384	1.9

STA A-284 47° 50.1' N WEATHER o.
 16 Aug 54 122° 39.5' W WIND NE 2
 1640 (+8) DEPTH 38 fm 61°F
 South Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.06	29.17	0.424	1.9
5	11.53	29.37	0.410	1.9
10	11.33	29.64	0.393	2.0
20	10.77	29.94	0.384	2.1
30	10.54	30.13	0.376	1.8
40	10.38	30.29	0.392	1.9
60	10.32	-----	0.395	1.9

STA A-285 47° 14.9' N WEATHER o.
 16 Aug 54 122° 45.7' W WIND N 3
 1805 (+8) DEPTH 74 fm 59°
 Hazel Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.96	28.23	0.468	1.4
5	12.66	28.44	0.442	1.6
10	12.13	28.62	0.432	1.6
20	10.44	29.58	0.387	2.3
30	10.29	29.77	0.342	2.1
50	10.24	29.87	0.334	2.4
80	10.33	29.87	0.339	2.2
110	10.48	29.96	0.355	2.2

STA A-286 47° 40.1' N WEATHER 50
 16 Aug 54 122° 52.0' W WIND NW 6
 1902 (+8) DEPTH 82 fm 61°F
 Pleasant Harbor

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	16.96	25.82	-----	0.7
5	12.77	28.49	0.527	2.2
10	11.18	29.17	0.416	2.0
20	10.46	29.39	0.357	2.3
30	10.04	29.62	0.327	2.4
50	10.00	29.77	0.316	2.7
74	9.92	29.86	0.316	2.3
99	9.59	29.87	0.236	2.3
129	9.44	29.88	0.277	2.9

STA A-287 47° 21.5' N WEATHER o.
 17 Aug 54 123° 03.8' W WIND SE 2
 0644 (+8) DEPTH 23 fm 56°F
 Tahuya River

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	16.89	23.60	0.562	1.0
5	13.72	25.95	0.575	1.3
10	10.89	28.94	0.298	3.2
20	9.71	29.37	0.159	3.9
30	9.40	29.53	0.080	3.8
40	9.32	29.67	0.069	4.0
42	9.27	29.68	0.061	3.8

STA A-288 47° 23.9' N WEATHER o. 17 Aug 54 122° 55.9' W WIND SW 1 0803 (+8) DEPTH 11 fm 57°F Lynch Cove, Head of				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	17.84	23.60	0.568	<0.5
2	17.07	24.36	0.574	1.1
4	14.43	26.98	0.602	1.3
6	13.73	27.56	0.578	1.3
10	11.71	28.62	0.374	3.0
14	10.65	28.98	0.122	4.5
18	10.02	29.24	0.030	4.8

STA A-289 47° 22.5' N WEATHER o. 17 Aug 54 122° 59.7' W WIND SSW 1 0832 (+8) DEPTH 19 fm Lynch Cove, Middle of				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	17.73	23.86	0.573	<0.5
5	14.69	27.09	0.587	1.4
10	11.65	28.48	0.334	3.0
20	9.74	29.39	0.017	4.8
30	9.61	29.45	0.017	4.8
35	9.61	29.44	0.015	4.7

STA A-290 47° 23.4' N WEATHER o. 17 Aug 54 123° 07.5' W WIND S 1 0953 (+8) DEPTH 61 fm 66°F Musqueti Point				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	16.76	24.43	0.586	<0.5
5	16.04	25.57	0.604	0.8
10	11.96	28.82	0.557	1.8
20	9.88	29.34	0.087	3.0
30	9.55	29.47	0.076	4.0
40	9.24	29.60	0.145	3.5
50	9.25	29.67	0.123	3.5
60	9.20	29.70	0.127	3.6
80	9.16	29.69	0.130	3.6
100	9.22	29.83	0.130	3.8
111	9.16	29.85	0.127	3.8

STA A-291 47° 28.2' N WEATHER o. 17 Aug 54 122° 04.2' W WIND Calm 1133 (+8) DEPTH 86 fm 62°F Eagle Creek				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	17.13	24.49	0.591	0.6
5	15.61	26.80	0.655	0.8
10	12.20	28.89	0.658	1.1
20	9.73	29.37	0.138	2.6
30	9.33	29.52	0.212	2.9
40	9.27	29.57	0.225	2.9
50	9.17	29.62	0.214	3.4
75	9.15	29.71	0.209	3.4
100	9.12	29.79	0.185	3.7
125	9.10	29.87	0.189	3.0
150	9.14	29.90	0.223	3.0

STA A-292 47° 36.0' N WEATHER c.
17 Aug 54 122° 58.2' W WIND SSW 2
1320 (+8) DEPTH 96 fm 66°F
Tekiu Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	16.82	25.46	0.620	<0.5
5	13.46	28.46	0.733	0.8
10	11.67	29.01	0.551	1.3
20	10.04	29.31	0.285	1.9
30	9.68	29.52	0.292	2.3
-	-	-	-	-
40	9.60	29.61	0.306	2.7
50	9.56	29.68	0.297	2.8
75	9.36	29.76	0.285	3.1
100	9.13	29.78	0.264	3.2
130	9.09	29.86	0.240	3.0
160	9.18	29.88	0.256	3.0

STA A-293 47° 42.1' N WEATHER o.
17 Aug 54 122° 51.4' W WIND SSE 3
1429 (+8) DEPTH 84 fm 65°F
Tskutsko Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	17.11	25.55	0.598	<0.5
5	12.26	28.59	0.521	1.3
10	11.30	29.10	0.451	1.5
20	10.36	29.46	0.342	2.0
30	9.90	29.59	0.316	2.2
-	-	-	-	-
40	9.52	29.68	0.301	2.2
60	9.34	29.70	0.287	3.0
80	8.98	29.71	0.275	2.8
99	8.90	29.73	0.274	2.9
120	9.12	29.86	0.269	3.1
163	9.42	30.22	0.086	3.3

STA A-294 47° 44.3' N WEATHER c.
17 Aug 54 122° 49.5' W WIND SSE 5
1531 (+8) DEPTH 106 fm 66°F
Tabook Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	17.14	26.40	0.650	>0.5
5	13.30	28.71	0.720	1.4
10	-----	28.96	0.558	1.2
20	10.47	29.42	0.354	1.9
30	9.80	29.53	0.307	2.0
-	-	-	-	-
40	9.24	29.61	0.300	2.5
50	9.28	29.69	0.287	2.3
60	9.46	29.73	0.285	2.2
80	9.20	29.75	0.277	2.6
90	8.92	29.78	0.279	2.6
-	-	-	-	-
120	9.06	29.85	0.296	3.8
140	9.33	30.11	0.164	3.0
150	9.40	30.19	0.108	4.2
160	9.44	30.25	0.081	4.0
180	9.55	30.30	0.041	4.6
192	9.56	30.33	0.021	4.4

STA A-295 47° 50.0' N WEATHER c.
17 Aug 54 122° 48.7' W WIND SSE 4
1713 (+8) DEPTH 29 fm 66°F
Dabob Bay, Head of

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	17.25	26.40	0.589	0.8
5	13.86	28.04	0.670	1.1
10	12.56	28.79	0.644	1.3
20	10.84	29.22	0.381	1.9
30	9.83	29.47	0.303	2.3
-	-	-	-	-
40	9.32	29.61	0.281	3.2

STA A-296 47° 47.1' N WEATHER c.
 17 Aug 54 122° 48.2' W WIND S 3
 1746 (+8) DEPTH 85 fm 66°F
 Bolton Peninsula, East of

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	17.32	26.33	0.616	<0.5
5	14.52	28.38	0.742	0.9
10	12.67	28.77	0.705	1.3
20	10.48	29.30	0.348	2.3
30	9.88	29.51	0.304	2.7
40	9.47	29.64	0.303	2.8
60	9.15	29.68	0.272	3.7
80	9.18	29.73	0.272	3.7
100	8.90	29.77	0.261	4.5
120	9.00	29.92	0.230	4.6
140	9.44	30.20	0.106	5.0
156	9.49	30.24	0.074	5.0

STA A-297 47° 49.3' N WEATHER 10
 18 Aug 54 122° 37.1' W WIND ESE 2
 0635 (+8) DEPTH 75 fm 52°F
 Bush Point

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.05	29.78	0.406	1.9
5	10.96	29.82	0.403	2.0
10	10.91	29.79	0.405	2.0
20	10.96	29.82	0.397	2.0
30	10.59	30.10	0.387	2.3
50	10.08	30.59	0.369	2.3
75	10.04	30.61	0.366	2.3
100	10.01	30.72	0.363	2.3

STA A-298 48° 07.3' N WEATHER 46
 18 Aug 54 122° 41.2' W WIND SE 3
 0807 (+8) DEPTH 60 fm 54°F
 Port Townsend

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.38	30.34	0.380	2.1
5	10.06	30.53	0.366	1.9
10	9.90	30.63	0.365	2.2
20	9.64	30.87	0.350	2.3
30	9.49	31.01	0.342	2.3
50	9.24	31.26	0.334	2.3
75	9.16	31.46	0.323	2.5
100	8.86	31.68	0.306	2.3

STA A-299 48° 12.4' N WEATHER 59
 18 Aug 54 122° 52.9' W WIND E 2
 1051 (+8) DEPTH 51 fm 52°F
 Protection Island

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.01	30.21	0.403	2.3
5	9.76	30.64	0.363	2.2
10	9.71	30.90	0.352	2.2
19	9.73	31.06	0.339	2.2
29	8.77	31.69	0.307	2.3
48	8.23	32.28	0.278	2.3
77	7.84	32.63	0.255	2.4

STA A-300 48° 15.6' N WEATHER 59
 18 Aug 54 123° 03.8' W WIND ESE 2
 1212 (+8) DEPTH 93 fm 54°F
 New Dungeness, Northeast of

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.13	30.52	0.387	2.2
5	9.88	30.73	0.366	2.3
10	9.63	30.86	0.348	2.3
17	9.51	31.01	0.340	2.2
27	9.03	31.42	0.316	2.3
46	8.73	31.71	0.302	2.3
71	8.05	32.30	0.272	2.3
95	7.80	32.59	0.253	2.5
124	7.59	32.79	0.243	2.6
153	7.40	33.08	0.227	2.7

STA A-301 48° 12.0' N WEATHER 59
 18 Aug 54 123° 23.5' W WIND Calm
 1441 (+8) DEPTH 73 fm 54°F
 Ediz Hook

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.28	30.61	0.411	2.1
5	9.50	31.05	0.359	1.9
10	9.20	31.37	0.342	2.2
20	8.52	31.92	0.303	2.0
29	8.41	32.01	0.299	1.9
49	8.25	32.25	0.300	2.3
73	8.05	32.48	0.285	2.4
98	7.07	33.31	0.212	2.4
122	6.81	33.57	0.205	2.5

STA A-302 48° 15.7' N WEATHER 44
 19 Aug 54 123° 41.2' W WIND Calm
 0625 (+8) DEPTH 103 fm 54°F
 Beechy Head

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.70	30.90	0.368	2.0
5	9.52	31.05	0.355	2.0
10	9.50	31.08	0.341	1.8
20	8.93	31.51	0.323	2.0
30	8.52	31.93	0.302	2.1
50	8.12	32.67	0.283	2.2
75	7.89	32.58	0.272	2.3
100	7.27	33.15	0.241	2.3
140	6.32	33.84	0.158	2.5
180	6.40	33.86	0.161	2.6

STA A-303 48° 15.0' N WEATHER 44
 19 Aug 54 123° 32.3' W WIND NNW 2
 0744 (+8) DEPTH 97 fm 56°F
 Race Rocks

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.08	27.11	0.381	1.9
5	8.90	31.42	0.334	2.0
9	8.62	31.82	0.306	2.0
20	8.41	32.06	0.295	2.3
30	8.31	32.14	0.292	2.4
50	8.01	32.46	0.267	2.4
75	7.75	32.84	0.253	2.4
100	6.81	33.54	0.197	2.3
130	6.59	33.69	0.184	2.3
160	6.70	33.71	0.182	2.4

STA A-304 48° 24.6' N WEATHER b.c. 19 Aug 54 122° 33.2' W WIND SSW 2 1330 (+8) DEPTH 22 fm 51°F Dewey				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.75	27.03	0.362	2.1
5	10.42	27.23	0.366	2.1
10	10.31	27.71	0.350	2.3
20	10.23	28.04	0.354	2.1
30	10.06	29.03	0.355	1.9

STA A-305 48° 21.4' N WEATHER b.c. 19 Aug 54 122° 33.4' W WIND SSE 5 1414 (+8) DEPTH 7 fm 62°F Goat Island				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.19	18.71	0.471	1.5
2	11.00	27.12	0.339	2.1
5	10.07	27.79	0.311	2.1
10	10.04	28.19	0.298	2.3

STA A-306 48° 18.4' N WEATHER b.c. 19 Aug 54 122° 29.1' W WIND SE 3 1450 (+8) DEPTH 17 fm 62°F Strawberry Point, North of				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	13.03	9.85	0.543	0.8
2	11.86	17.77	0.474	1.5
5	11.36	23.46	0.409	1.9
10	10.57	26.15	0.355	2.1
20	9.59	28.95	0.264	2.6

STA A-307 48° 13.0' N WEATHER b.c. 19 Aug 54 122° 33.0' W WIND S 3 1549 (+8) DEPTH 50 fm 65°F Demock Point				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	13.96	19.74	0.573	1.8
5	10.89	26.29	0.405	2.2
10	10.24	28.59	0.323	2.3
20	10.02	28.86	0.310	2.4
30	9.82	28.99	0.301	2.3
50	9.30	29.26	0.263	2.5
70	9.19	29.36	0.264	2.2
88	9.19	29.45	0.270	---

STA A-308 48° 10.5' N WEATHER c. 19 Aug 54 122° 32.5' W WIND SSE 3 1645 (+8) DEPTH 53 fm Onamac Point				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	13.89	21.18	0.869	>0.5
5	11.16	27.45	0.391	1.9
10	10.46	28.28	0.345	2.2
20	10.25	28.98	0.334	2.2
30	9.85	29.05	0.301	2.6
50	9.40	29.44	0.281	2.6
70	9.30	29.48	0.279	2.4
90	9.33	-----	0.272	2.8

STA A-309 48° 06.1' N WEATHER c. 19 Aug 54 122° 32.6' W WIND SSE 3 1739 (+8) DEPTH 40 fm 63°F Green Bank				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	14.64	20.50	0.741	>0.5
5	11.46	26.41	0.426	1.7
10	10.78	28.31	0.369	2.1
20	10.33	28.89	0.340	2.5
30	9.96	29.03	0.304	2.8
40	9.77	29.11	0.287	3.0
50	9.76	29.13	0.282	2.9
60	9.67	29.23	0.276	3.0
65	9.61	29.23	0.281	2.9

STA A-310 48° 04.4' N WEATHER c. 19 Aug 54 122° 32.2' W WIND SSE 3 1816 (+8) DEPTH 30 fm 63°F Dines Point				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	14.07	21.96	0.878	>0.5
5	13.28	24.36	0.634	0.5
10	10.88	28.15	-----	2.0
20	9.90	28.94	0.383	2.5
30	9.91	29.08	0.308	2.5
40	9.69	29.12	0.308	3.0
50	9.56	29.15	0.286	3.4

STA A-311 48° 03.1' N WEATHER c. 19 Aug 54 122° 31.5' W WIND SSE 3 1841 (+8) DEPTH 27 fm 60°F Classic				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	15.77	21.82	0.641	>0.5
5	11.97	25.16	0.556	0.9
10	11.22	28.14	0.375	1.8
20	9.98	28.18	0.315	2.2
30	9.61	28.97	0.268	2.6
40	9.54	29.10	0.246	3.4
53	9.51	29.16	0.173	4.0

STA A-312 48° 01.5' N WEATHER c. 19 Aug 54 122° 31.8' W WIND SSE 1 1909 (+8) DEPTH 20 fm 60°F Holmes Harbor, Head of				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	17.08	20.99	0.608	0.5
5	13.20	25.41	0.574	1.5
10	11.54	27.56	0.428	2.4
20	9.97	28.77	0.326	2.8
30	9.71	28.96	0.286	3.3
37	9.63	29.00	0.215	3.4

STA A-313 48° 06.3' N WEATHER 63 20 Aug 54 122° 29.6' W WIND Calm 0615 (+8) DEPTH 80 fm 58°F East Point				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	13.78	22.09	0.821	0.5
5	12.01	25.50	0.520	1.2
10	10.85	28.13	0.364	1.7
20	10.10	29.02	0.321	2.3
30	-----	29.16	0.314	2.5
50	9.60	29.36	0.305	2.5
75	9.46	29.49	0.303	2.2
100	9.47	29.50	0.293	2.2
125	9.48	29.61	0.292	2.3

STA A-314 48° 02.6' N WEATHER o. 20 Aug 54 122° 22.5' W WIND WNW 2 0736 (+8) DEPTH 91 fm 59°F Camano Head, West of				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	14.13	23.06	0.684	0.5
5	11.74	27.01	0.462	1.3
10	10.93	27.30	0.360	1.6
20	10.53	29.12	0.322	1.7
30	10.05	29.26	0.304	1.8
50	9.95	29.44	0.275	2.0
75	9.63	29.66	0.301	2.1
100	9.65	29.70	0.298	2.1
125	9.70	29.79	0.306	2.1
150	9.74	29.86	0.324	2.1

STA A-315 48° 08.5' N WEATHER o. 20 Aug 54 122° 23.1' W WIND SW 10 0852 (+8) DEPTH 50 fm 61°F Port Susan, Head of				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	15.46	22.03	0.547	0.9
5	12.51	27.43	0.467	1.4
10	10.41	28.92	0.337	1.9
20	10.00	29.01	0.340	2.2
30	9.65	29.05	0.322	2.4
40	9.23	29.09	0.300	2.4
60	8.93	29.25	0.281	2.8
80	9.07	29.50	0.237	2.9
86	9.07	29.53	0.237	---

STA A-316 48° 08.1' N WEATHER o.
 20 Aug 54 122° 22.1' W WIND WNW 9
 0927 (+8) DEPTH 67 fm 59°F
 Port Susan, Middle of

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	14.70	19.99	0.550	0.8
5	11.83	28.44	0.400	1.5
10	10.51	28.86	0.355	1.8
20	9.96	29.02	0.333	1.9
30	9.62	29.05	0.322	2.0
40	9.39	29.12	0.291	---
50	9.21	29.33	0.237	2.4
70	9.04	29.44	0.229	2.4
90	9.00	29.52	0.239	2.6
110	8.69	29.67	0.245	2.9
123	8.67	29.70	0.219	3.0

STA A-317 48° 04.1' N WEATHER o.
 20 Aug 54 122° 18.4' W WIND WNW 6
 1022 (+8) DEPTH 67 fm 61°F
 Camano Head, East of

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	14.41	22.70	0.641	>0.5
5	12.04	27.27	0.424	1.3
10	11.37	28.60	0.376	1.6
20	10.18	29.00	0.352	1.9
30	10.15	29.10	0.336	2.0
40	10.25	29.23	0.311	1.9
50	9.55	29.23	0.279	2.3
70	9.57	29.48	0.243	2.2
90	9.30	29.54	0.243	2.6
110	8.72	29.58	0.266	2.8
123	8.74	29.66	0.230	3.6

STA A-318 47° 58.5' N WEATHER o.
 20 Aug 54 122° 16.5' W WIND WNW 3
 1118 (+8) DEPTH 69 fm 62°F
 Port Gardner

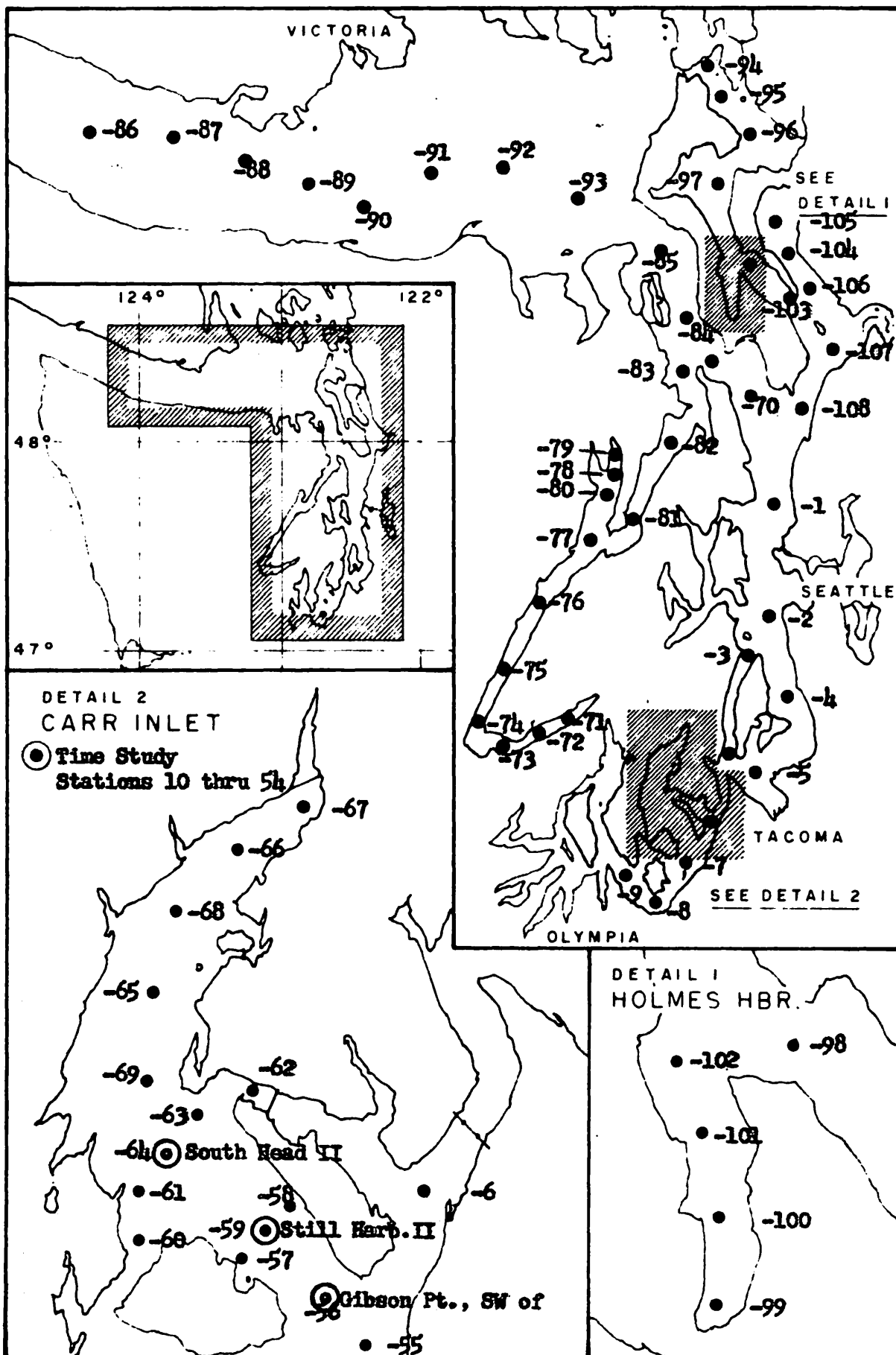
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	14.83	23.06	0.634	>0.5
5	12.10	26.87	0.464	1.3
10	11.26	28.47	0.365	1.8
20	10.71	29.11	0.323	1.9
30	10.66	29.22	0.331	1.9
40	10.38	29.31	0.316	1.9
50	10.45	29.50	0.353	1.9
70	10.08	29.52	0.308	2.0
90	9.98	29.68	0.319	2.2
110	9.99	29.85	0.329	2.3
133	10.00	29.91	0.332	2.4

STA A-319 47° 53.5' N WEATHER o.
 20 Aug 54 122° 20.5' W WIND N 5
 1240 (+8) DEPTH 131 fm 59°F
 Possession Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	13.53	25.81	0.507	1.1
5	11.29	28.79	0.395	1.8
10	11.19	29.15	0.395	1.9
20	11.14	29.37	0.387	1.9
30	11.05	29.51	0.380	2.0
50	10.96	29.62	0.380	1.9
75	10.59	29.79	0.375	2.0
100	10.64	29.92	0.373	2.3
140	10.34	30.04	0.361	2.2
180	10.19	30.09	0.353	2.4
220	10.23	30.10	0.350	2.3

STA A-320 48° 53.5' N WEATHER o.
 20 Aug 54 122° 29.1' W WIND Calm
 1345 (+8) DEPTH 110 fm 62°F
 Point No Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.38	28.39	0.462	---
5	11.77	28.97	0.433	---
10	11.40	29.21	0.420	---
20	11.22	29.50	0.409	---
30	11.14	29.53	0.392	---
50	10.94	29.75	0.387	---
75	10.85	29.91	0.381	---
100	10.72	30.00	0.380	---
130	10.67	30.03	0.378	---
160	10.57	30.10	0.377	---
190	10.48	-----	0.368	---



Oceanographic Station Locations
 BROWN BEAR CRUISE 66
 27 September - 2 October 1954

STA 66-1 47° 44.4' N WEATHER c. 27 Sept 54 122° 25.5' W WIND Calm 1138 (+8) DEPTH 153 fm 56°/53°F Point Jefferson				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.48	-----	0.491	1.93
5	12.40	-----	0.480	1.93
10	12.31	-----	0.478	2.13
20	11.78	-----	0.412	2.24
30	11.28	-----	0.379	2.29
50	11.00	-----	0.364	1.97
75	10.90	-----	0.354	2.07
100	10.82	30.18	0.352	1.89
150	10.70	30.28	0.347	2.50
200	10.62	30.34	0.336	2.50
240	10.57	30.34	0.323	2.53
270	10.54	30.35	0.322	2.57

STA 66-2 47° 33.9' N WEATHER c. 27 Sept 54 122° 26.0' W WIND Calm 1327 (+8) DEPTH 135 fm 56°/54°F Alki Point				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.85	29.79	0.443	2.08
5	11.86	29.79	0.445	2.23
10	11.83	29.82	0.443	2.14
20	11.64	29.86	0.416	2.27
30	11.58	29.85	0.408	2.15
50	11.38	29.93	0.388	2.15
75	11.18	29.98	0.369	2.17
100	10.70	30.23	0.341	2.28
140	10.66	30.30	0.335	2.55
180	10.60	30.32	0.328	2.57
220	10.56	30.35	0.315	2.65

STA 66-3 47° 30.6' N WEATHER c. 27 Sept 54 122° 29.2' W WIND Calm 1414 (+8) DEPTH 58 fm 56°/54°F Point Vashon				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.40	29.87	0.380	2.24
5	11.37	29.86	0.377	2.32
10	11.39	29.89	0.381	2.31
20	11.36	29.86	0.377	2.46
30	11.40	29.88	0.380	2.33
50	11.28	29.89	0.378	2.35
75	11.28	29.91	0.375	2.30
100	11.35	29.92	0.372	2.40

STA 66-4 47° 26.4' N WEATHER c. 27 Sept 54 122° 23.4' W WIND N 12 1537 (+8) DEPTH 130 fm 56°/54°F Pully Point				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.27	29.71	0.562	1.83
5	11.98	29.76	0.503	2.08
10	11.89	29.75	0.482	2.09
20	11.84	29.78	0.472	2.05
30	11.78	29.80	0.449	2.12
50	11.36	29.91	0.383	2.12
75	10.75	30.18	0.341	2.38
100	10.64	30.25	0.337	2.43
140	10.54	30.35	0.326	2.61
180	10.52	30.34	0.326	2.57
220	10.50	30.34	0.323	2.65

STA 66-5 47° 19.0' N WEATHER c. 27 Sept 54 122° 28.3' W WIND NxE 9 1704 (+8) DEPTH 97 fm 57°/53°F Brown Point				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.66	28.38	0.572	1.83
5	12.18	29.40	0.538	1.73
10	11.92	29.56	0.470	1.88
20	11.48	29.75	0.407	2.03
30	11.38	29.82	0.385	2.08
50	11.24	29.94	0.375	2.24
75	10.92	30.07	0.350	2.29
100	10.72	30.19	0.341	2.31
130	10.58	30.32	0.333	2.43
160	10.50	30.31	0.333	2.48

STA 66-6 47° 14.8' N WEATHER c. 27 Sept 54 122° 34.4' W WIND Calm 1829 (+8) DEPTH 40 fm 54°/53°F Day Island				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.42	29.80	0.387	2.13
5	11.42	29.87	0.383	2.14
10	11.44	29.88	0.384	2.19
20	11.42	29.86	0.386	2.22
30	11.42	29.88	0.383	2.31
50	11.35	29.88	0.383	2.30

STA 66-7 47° 11.0' N WEATHER b. 27 Sept 54 122° 37.9' W WIND Calm 1928 (+8) DEPTH 95 fm 54°/53°F Gordon Point				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.25	29.40	0.413	2.07
5	12.27	29.42	0.409	2.11
10	12.13	29.50	0.405	2.17
20	11.98	29.58	0.393	2.11
30	11.92	29.63	0.390	2.10
50	11.76	29.70	0.388	2.36
75	11.70	29.71	0.385	2.26
100	11.69	29.70	0.385	2.33
130	11.69	29.75	0.381	2.46
160	11.61	29.72	0.379	2.53

STA 66-8 47° 07.1' N WEATHER b. 27 Sept 54 122° 41.7' W WIND Calm 2038 (+8) DEPTH 35 fm 53°/52°F Nisqually Reach				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.50	29.41	0.420	2.16
5	12.35	29.43	0.413	2.31
10	12.14	29.55	0.403	2.53
20	12.04	29.59	0.395	2.30
34	12.14	29.56	0.398	2.50
54	12.04	29.56	0.391	2.49

STA 66-9 47° 09.9' N WEATHER b. 27 Sept 54 122° 47.2' W WIND Calm 2138 (+8) DEPTH 52 fm 53°/52°F Devil's Head				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.82	29.34	0.433	2.18
5	12.76	29.38	0.426	2.41
10	12.67	29.41	0.421	2.47
20	12.24	29.55	0.393	2.51
30	12.16	29.57	0.385	2.52
50	12.00	29.60	0.384	2.53
75	11.94	29.58	0.379	2.49

STA 66-55 47° 11.7' N WEATHER b.c. 29 Sept 54 122° 35.9' W WIND SE 2 0521 (+8) DEPTH 80 fm 46°/45°F Toliva Shoal				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.54	29.74	0.388	2.31
5	11.62	29.72	0.387	2.39
10	11.58	29.74	0.384	2.41
20	11.50	29.76	0.385	2.45
30	11.48	29.78	0.385	2.40
50	11.52	29.78	0.385	2.48
75	11.47	29.79	0.384	2.45
100	11.38	29.85	0.382	2.45
125	11.45	29.85	0.377	2.47

STA 66-56 47° 12.7' N WEATHER b.c. 29 Sept 54 122° 37.3' W WIND SSW 2 0607 (+8) DEPTH 90 fm 47°/46°F Gibson Point, Southwest of				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.14	29.52	0.408	2.33
5	11.92	29.61	0.393	2.39
10	11.86	29.63	0.391	2.39
20	11.76	29.65	0.387	2.38
30	11.78	29.67	0.389	2.39
50	11.78	29.67	0.394	2.41
75	11.74	29.70	0.387	2.26
100	11.71	29.70	0.385	2.20
130	11.77	29.69	0.387	2.42
160	11.68	29.72	0.384	2.46

STA 66-57 47° 13.7' N WEATHER 46 29 Sept 54 122° 39.9' W WIND Calm 0652 (+8) DEPTH 40 fm 50°/49°F Still Harbor III				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.78	29.36	0.503	2.08
5	12.58	29.49	0.446	2.16
10	12.21	29.54	0.399	2.33
20	12.01	29.58	0.380	2.38
30	11.85	29.63	0.372	2.43
40	11.73	29.67	0.358	2.55
50	11.66	29.70	0.342	2.51

STA 66-58 47° 14.6' N WEATHER 42
 29 Sept 54 122° 38.4' W WIND Calm
 0724 (+8) DEPTH 72 fm 49°/48°F
 Still Harbor I

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.24	29.42	0.496	1.96
5	12.13	29.54	0.436	2.26
10	11.99	29.61	0.396	2.36
20	11.92	29.63	0.398	2.39
30	11.90	29.67	0.399	2.39
50	11.84	29.69	0.392	2.43
75	11.76	29.67	0.384	2.78
100	11.68	29.69	0.383	2.75
125	11.67	29.78	0.384	2.98

STA 66-59 47° 14.2' N WEATHER 42
 29 Sept 54 122° 39.1' W WIND Calm
 0803 (+8) DEPTH 65 fm 50°/49°F
 Still Harbor II

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.88	29.33	0.507	1.81
5	12.44	29.47	0.442	2.12
10	12.11	29.61	0.409	2.34
20	11.98	29.63	0.407	2.39
30	11.92	29.67	0.400	2.39
50	11.79	29.67	0.387	2.47
75	11.74	29.70	0.386	2.26
100	11.68	29.72	0.383	2.34
120	11.64	29.74	0.365	

STA 66-60 47° 13.8' N WEATHER 42
 29 Sept 54 122° 42.8' W WIND Calm
 0854 (+8) DEPTH 10.5 fm 49°/48°F
 South Head IV

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.46	29.51	0.442	2.25
5	12.41	29.54	0.429	2.26
10	12.36	29.50	0.422	2.27
15	12.17	29.53	0.377	2.50

STA 66-61 47° 14.8' N WEATHER 42
 29 Sept 54 122° 42.8' W WIND Calm
 0918 (+8) DEPTH 12 fm 49°/48°F
 South Head III

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.97	29.34	0.532	1.76
5	12.45	29.46	0.444	2.22
10	12.32	29.51	0.403	2.46
15	12.15	29.52	0.382	2.53
20	11.84	29.58	0.349	2.69

STA 66-62 47° 16.8' N WEATHER 42
 29 Sept 54 122° 39.5' W WIND E 4
 0953 (+8) DEPTH 14 fm 49°/48°F
 Warren

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.01	29.59	0.408	2.29
5	11.98	29.62	0.407	2.33
10	11.98	29.63	0.408	2.43
15	11.89	29.64	0.402	2.43
20	11.82	29.65	0.394	2.48

STA 66-63 47° 16.2' N WEATHER
 29 Sept 54 122° 40.8' W WIND SSE 3
 1026 (+8) DEPTH 62 fm 51°/50°F
 South Head I

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.09	29.58	0.395	2.29
5	11.99	29.61	0.393	2.45
10	11.95	29.61	0.402	2.45
20	11.79	29.63	0.387	2.51
30	11.79	29.64	0.389	2.50
40	11.78	29.68	0.387	2.46
60	11.72	29.70	0.383	2.45
80	11.61	29.75	0.382	2.40

STA 66-64 47° 15.6' N WEATHER 42
 29 Sept 54 122° 41.8' W WIND Calm
 1054 (+8) DEPTH 50 fm 52°/50°F
 South Head II

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.98	29.19	0.610	1.26
5	12.44	29.49	0.422	2.13
10	12.00	29.54	0.363	2.37
20	11.81	29.60	0.370	2.42
30	11.72	29.62	0.357	2.54
40	11.70	29.66	0.350	2.61
60	11.64	29.69	0.351	2.60
85	11.62	29.72	0.356	----

STA 66-65 47° 18.8' N WEATHER b.
 29 Sept 54 122° 42.4' W WIND SW 3
 1136 (+8) DEPTH 41 fm 54°/52°F
 Cutts Island, Southwest of

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.90	29.34	0.612	1.53
5	12.12	29.45	0.321	2.69
10	11.86	29.52	0.288	2.81
20	11.72	29.55	0.307	2.75
30	11.70	29.65	0.303	2.80
40	11.66	29.65	0.276	3.05
50	11.62	29.68	0.303	2.91
60	11.61	29.70	0.300	3.05

STA 66-66 47° 21.6' N WEATHER b.c. 29 Sept 54 122° 40.0' W WIND SW 8 1216 (+8) DEPTH 14 fm 57°/54°F Elgin, East of				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.51	29.25	0.582	1.81
5	11.96	29.42	0.356	2.36
10	11.82	29.50	0.278	2.70
15	11.76	29.55	0.305	2.76
20	11.73	29.59	0.317	2.71
25	11.72	29.61	0.302	2.91

STA 66-67 47° 22.5' N WEATHER b.c. 29 Sept 54 122° 38.0' W WIND Calm 1247 (+8) DEPTH --- 60°/55°F Wauna				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.78	29.25	0.462	2.13
3	12.46	29.38	0.439	2.24
6	11.94	29.45	0.346	2.56
10	11.84	29.49	0.325	2.67

STA 66-68 47° 20.3' N WEATHER b.c. 29 Sept 54 122° 41.6' W WIND Calm 1327 (+8) DEPTH 28 fm 58°/54°F Glencove, East of				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	13.68	29.22	0.698	1.06
5	12.42	29.44	0.487	1.96
10	11.94	29.53	0.352	2.52
20	11.78	29.60	0.323	2.57
30	11.71	29.61	0.304	2.74
40	11.66	29.65	0.311	2.79
50	11.62	29.66	0.297	2.98

STA 66-69 47° 16.9' N WEATHER b.c. 29 Sept 54 122° 42.6' W WIND Calm 1412 (+8) DEPTH --- 53°/49°F Green Point				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	13.14	29.31	0.574	1.62
5	12.05	29.49	0.363	2.53
10	11.86	29.52	0.328	2.64
20	11.78	29.62	0.369	2.51
30	11.73	29.67	0.346	2.60
40	11.68	29.67	0.328	2.59
60	11.66	29.73	0.369	2.10
70	11.67	29.73	0.367	2.47
90	11.70	29.73	0.373	2.49

STA 66-70 47° 54.0' N WEATHER b.c. 29 Sept 54 122° 28.6' W WIND N _x W 6 2032 (+8) DEPTH 104 fm 53°/49°F Point No Point				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.86	28.29	0.501	1.81
5	11.46	29.22	0.418	2.04
10	11.37	29.61	0.387	2.32
20	11.04	29.82	0.377	2.36
30	10.90	29.93	0.374	2.40
49	10.74	30.09	0.361	2.39
74	10.76	30.22	0.364	2.24
98	10.62	30.15	0.364	2.48
143	10.62	30.20	0.359	2.48
187	10.48	30.36	0.353	2.47

STA 66-71 47° 23.7' N WEATHER 11 30 Sept 54 122° 55.7' W WIND Calm 0629 (+8) DEPTH 12 fm 46°/45°F Lynch Cove, Head of				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	14.86	24.94	0.616	1.73
2	15.16	25.14	0.614	1.75
6	12.30	28.49	0.413	3.08
10	10.32	29.40	0.030	5.65
14	9.60	29.60	0.022	5.55
18	9.39	29.67	0.031	5.27

STA 66-72 47° 22.6' N WEATHER 11 30 Sept 54 122° 59.7' W WIND SW 4 0711 (+8) DEPTH 20 fm 47°/45°F Lynch Cove, Middle of				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	13.90	24.98	0.575	2.07
5	11.68	28.42	0.377	3.32
10	10.08	29.36	0.135	4.36
20	9.48	29.70	0.073	4.28
30	9.34	29.79	0.098	4.49
39	9.42	29.81	0.119	4.37

STA 66-73 47° 21.4' N WEATHER 10 30 Sept 54 123° 03.8' W WIND Calm 0750 (+8) DEPTH 46°/45°F Tahuya River				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	13.60	22.18	0.589	1.72
5	11.50	28.54	0.426	3.14
10	9.72	29.57	0.126	3.53
20	9.53	29.68	0.110	4.24
29	9.42	29.83	0.134	4.09
39	9.44	29.86	0.149	4.05

STA 66-74 47° 23.4' N WEATHER 10
 30 Sept 54 123° 07.8' W WIND Calm
 0842 (+8) DEPTH 60 fm 46°/45°F
 Musqueti Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	14.08	24.78	0.620	1.58
5	10.92	29.20	0.233	3.46
10	10.03	29.45	0.159	3.76
20	9.57	29.63	0.107	4.10
30	9.28	29.75	0.126	4.02
40	9.26	29.81	0.150	3.79
50	9.32	29.86	0.189	3.57
60	9.59	29.97	0.217	3.38
80	9.88	30.04	0.242	3.24
100	10.08	30.10	0.273	3.14
110	10.08	30.11	0.265	3.14

STA 66-75 47° 28.5' N WEATHER b.
 30 Sept 54 123° 04.1' W WIND NE 15
 1032 (+8) DEPTH --- 57°/51°F
 Eagle Creek

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	14.25	25.86	0.611	1.52
5	13.70	27.46	0.628	1.94
10	10.26	29.32	0.236	3.37
20	9.46	29.66	0.156	3.75
30	9.25	29.76	0.146	3.76
39	9.26	29.82	0.173	3.66
49	9.46	29.87	0.204	3.30
74	9.94	30.09	0.273	3.00
98	10.08	30.12	0.277	2.97
123	10.16	30.16	0.286	2.98
147	10.16	30.17	0.284	2.98

STA 66-76 47° 35.7' N WEATHER b.
 30 Sept 54 122° 58.2' W WIND ExN 12
 1205 (+8) DEPTH 94 fm 58°/49°F
 Tekiu Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	13.63	27.53	0.615	1.17
5	13.56	29.34	0.620	1.28
10	10.42	29.47	0.307	3.89
19	9.58	29.68	0.207	3.33
29	9.49	29.90	0.208	3.38
39	9.58	29.95	0.226	3.28
48	9.76	30.04	0.244	3.05
72	10.12	30.15	0.283	2.84
96	10.22	30.16	0.291	2.84
125	10.27	30.18	0.294	2.82
154	10.16	30.19	0.284	2.93

STA 66-77 47° 40.0' N WEATHER b.
 30 Sept 54 122° 52.5' W WIND ExN 12
 1318 (+8) DEPTH 74 fm 58°/50°F
 Pleasant Harbor

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.69	28.63	0.613	1.24
5	12.66	28.63	0.612	1.24
10	12.07	28.98	0.538	1.61
20	9.76	29.72	0.238	3.00
30	9.76	29.96	0.248	3.05
39	9.76	29.99	0.249	3.18
49	10.02	30.07	0.268	2.89
74	10.20	30.15	0.288	2.80
98	10.23	30.14	0.292	2.92
128	10.16	30.16	0.269	3.17
136	10.16	30.16	0.266	3.16

STA 66-78 47° 46.6' N WEATHER b.
 30 Sept 54 122° 48.8' W WIND N 11
 1437 (+8) DEPTH 87 fm 59°/49°F
 Bolton Peninsula, East of

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.16	29.40	0.507	1.97
5	11.23	29.40	0.513	1.96
10	10.50	29.52	0.313	2.62
20	9.56	29.79	0.239	2.88
30	9.52	29.85	0.247	3.00
40	9.66	29.91	0.238	2.93
60	9.97	30.10	0.264	2.82
80	10.08	30.13	0.277	2.73
99	10.18	30.16	0.284	2.97
119	10.23	30.18	0.289	2.97
139	10.06	30.19	0.254	3.14
161	9.50	30.22	0.085	4.64

STA 66-79 47° 50.0' N WEATHER b.
 30 Sept 54 122° 48.7' W WIND N 10
 1523 (+8) DEPTH --- 60°/48°F
 Dabob Bay, Head of

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.14	29.55	0.291	2.84
5	9.96	29.60	0.278	2.86
10	9.44	29.69	0.213	3.13
20	9.58	29.87	0.227	3.12
30	9.72	29.95	0.217	3.17
40	9.92	30.02	0.232	3.10

STA 66-80 47° 44.3' N WEATHER b.
 30 Sept 54 122° 49.9' W WIND N 12
 1620 (+8) DEPTH 105 fm 71°/60°F
 Tabook Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.02	29.22	0.588	1.64
5	11.19	29.31	0.547	1.80
10	9.98	29.59	0.253	2.90
20	9.63	29.75	0.237	3.11
30	9.72	29.89	0.247	3.01
40	9.84	29.96	0.248	2.70
59	10.10	30.08	0.269	2.81
74	10.13	30.10	0.282	2.74
94	10.28	30.16	0.296	2.87
114	10.18	30.16	0.278	3.02
133	10.02	30.18	0.247	3.16
143	9.70	30.17	0.186	3.68
153	9.54	30.20	0.109	4.14
173	9.50	30.25	0.023	5.02
198	9.70	30.30	0.020	----

STA 66-81 47° 42.0' N WEATHER b.c.
 30 Sept 54 122° 45.6' W WIND N 9
 1752 (+8) DEPTH 69 fm 60°/52°F
 Hazel Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.58	29.34	0.464	2.18
5	11.32	29.43	0.423	2.19
10	10.80	29.79	0.354	2.52
20	10.50	30.06	0.322	2.61
30	10.46	30.08	0.318	2.67
50	10.40	30.08	0.310	2.70
80	10.43	30.18	0.323	2.76
110	10.45	30.19	0.324	2.77

STA 66-82 47° 50.0' N WEATHER 6 30 Sept 54 122° 39.9' W WIND N 4 1912 (+8) DEPTH 39 fm 53°/48°F South Point				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.20	29.80	0.427	2.43
5	11.19	29.85	0.416	2.43
10	11.08	29.86	0.407	2.48
20	10.76	30.12	0.380	2.52
30	10.61	30.24	0.361	2.68
40	10.47	30.36	0.354	2.58
60	10.31	30.48	0.345	2.60

STA 66-83 47° 56.4' N WEATHER b. 30 Sept 54 122° 38.0' W WIND N x W 7 2017 (+8) DEPTH 64 fm 52°/48°F Tala Point				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.98	30.10	0.413	2.44
5	11.00	30.09	0.412	2.44
10	10.91	30.15	0.405	2.43
20	10.72	30.18	0.393	2.48
30	10.58	30.28	0.373	2.48
50	10.25	30.50	0.350	2.40
75	10.14	30.63	0.347	2.57
99	9.97	30.78	0.337	2.59

STA 66-84 48° 02.3' N WEATHER b. 30 Sept 54 122° 37.9' W WIND N x W 6 2140 (+8) DEPTH 62 fm 52°/48°F Bush Point				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.10	29.49	0.416	2.23
5	11.00	29.76	0.393	2.22
10	10.89	29.84	0.388	2.31
20	10.80	29.92	0.387	2.38
29	10.74	29.99	0.385	2.43
49	10.63	30.13	0.383	2.37
73	10.40	30.31	0.373	2.38
98	9.96	30.73	0.344	2.21

STA 66-85 48° 08.5' N WEATHER b. 30 Sept 54 122° 41.4' W WIND Calm 2236 (+8) DEPTH 55 fm 51°/49°F Port Townsend				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.60	30.09	0.396	2.25
5	10.58	30.20	0.380	2.46
10	10.32	30.40	0.380	2.44
20	10.28	30.43	0.380	2.45
30	10.26	30.45	0.380	2.49
50	10.21	30.52	0.380	2.37
74	9.95	30.72	0.348	2.50
99	9.96	30.76	0.343	2.52

STA 66-86 48° 18.2' N WEATHER b.c.
 1 Oct 54 124° 03.0' W WIND Calm
 0455 (+8) DEPTH 103 fm 48°/47°F
 Pillar Point III

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.27	31.13	0.330	2.39
5	9.20	31.31	0.313	2.43
9	9.10	31.42	0.303	2.50
17	9.02	31.57	0.292	2.43
26	8.89	31.73	0.283	2.51
43	8.34	32.45	0.249	2.62
65	7.35	33.31	0.233	2.28
87	6.87	33.78	0.159	2.68
121	6.85	32.06	0.156	2.92
156	6.78	33.87	0.153	3.04

STA 66-87 48° 17.4' N WEATHER b.c.
 1 Oct 54 123° 52.5' W WIND Calm
 0609 (+8) DEPTH 93 fm 48°/45°F

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.25	31.18	0.337	2.51
5	9.28	31.24	0.322	2.51
10	9.24	31.26	0.320	2.51
19	9.26	31.26	0.316	2.59
28	9.22	31.29	0.312	2.45
47	8.68	31.95	0.267	2.56
71	7.56	33.05	0.207	2.39
95	6.95	33.72	0.181	2.47
123	6.82	33.87	0.152	3.01
151	6.81	33.88	0.150	3.01

STA 66-88 48° 15.7' N WEATHER 10
 1 Oct 54 123° 41.2' W WIND Calm
 0732 (+8) DEPTH 102 fm 50°/48°F
 Beechy Head

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.89	30.67	0.376	2.38
4	9.88	30.71	0.368	2.38
9	9.82	30.86	0.350	2.41
18	9.33	31.21	0.310	2.51
27	8.94	31.62	0.286	2.51
45	8.50	32.19	0.262	2.51
65	7.36	33.29	0.177	2.83
86	7.02	33.64	0.177	2.70
121	6.91	33.85	0.151	2.95
156	6.90	33.86	0.167	3.03

STA 66-89 48° 14.5' N WEATHER 10
 1 Oct 54 123° 32.2' W WIND Calm
 0907 (+8) DEPTH 92 fm 54°/51°F
 Race Rocks

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.65	30.89	0.341	2.47
5	9.54	30.94	0.333	2.42
10	9.41	31.00	0.328	2.36
20	----	31.18	0.314	2.67
30	8.62	31.92	0.269	2.61
49	7.98	32.80	0.234	2.49
74	7.32	33.41	0.186	2.43
98	6.88	33.78	0.166	2.66
128	6.94	33.83	0.157	2.96
157	6.92	33.83	0.159	2.96

STA 66-90 47° 12.0' N WEATHER 10 1 Oct 54 123° 24.0' W WIND Calm 1028 (+8) DEPTH 77 fm 55°/50°F Ediz Hook				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.96	30.67	0.371	2.35
5	9.83	30.71	0.364	2.39
10	9.64	30.91	0.355	2.47
20	9.24	31.47	0.321	2.47
30	8.71	32.02	0.274	2.40
49	8.06	32.67	0.234	2.73
74	7.44	33.37	0.204	2.74
98	7.14	33.64	0.177	2.82
123	7.15	33.70	0.174	2.91

STA 66-91 47° 15.0' N WEATHER 10 1 Oct 54 123° 13.6' W WIND Calm 1154 (+8) DEPTH 77 fm 58°/54°F New Dungeness				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.26	29.87	0.386	2.37
5	9.80	30.45	0.348	2.49
10	9.76	30.71	0.335	2.42
20	9.58	30.98	0.321	2.52
30	9.18	31.28	0.301	2.40
50	8.74	31.78	0.273	2.47
75	8.28	32.31	0.241	2.41
100	7.76	32.91	0.206	2.60
130	7.22	33.58	0.165	2.96

STA 66-92 47° 15.4' N WEATHER b. 1 Oct 54 123° 04.0' W WIND Calm 1320 (+8) DEPTH 93 fm 58°/52°F New Dungeness, Northeast of				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.76	29.23	0.425	2.15
5	10.36	29.52	0.396	2.32
10	10.30	29.56	0.393	2.32
20	10.14	29.82	0.380	2.37
30	9.51	30.92	0.320	2.55
49	8.94	31.74	0.284	2.57
74	8.22	32.45	0.236	2.41
98	7.92	32.76	0.213	2.90
128	7.58	33.18	0.195	2.95
157	7.48	33.29	0.187	2.95

STA 66-93 48° 12.5' N WEATHER b. 1 Oct 54 122° 52.8' W WIND Calm 1437 (+8) DEPTH --- 55°/52°F Protection Island				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.46	30.11	0.376	2.33
5	10.00	30.38	0.354	2.51
10	10.00	30.45	0.352	2.49
20	9.99	30.65	0.345	2.55
30	9.80	30.86	0.337	2.51
50	8.89	31.79	0.279	2.65
70	8.30	32.39	0.241	2.75
85	7.79	32.92	0.210	2.51

STA 66-94 48° 24.9' N WEATHER b. 1 Oct 54 122° 33.4' W WIND WxS 4 1729 (+8) DEPTH 22 fm 55°/51°F Dewey				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.29	29.16	0.361	2.59
5	10.28	29.30	0.360	2.50
10	10.22	29.35	0.361	2.42
20	10.24	29.47	0.361	2.37
30	10.12	29.58	0.363	2.51

STA 66-95 48° 21.2' N WEATHER b. 1 Oct 54 122° 33.0' W WIND W 3 1811 (+8) DEPTH 7 fm 52°/50°F Goat Island				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.59	28.05	0.367	2.65
2	10.50	28.45	0.345	2.63
5	10.41	28.50	0.333	2.73
10	10.29	29.02	0.242	3.12

STA 66-96 48° 18.5' N WEATHER b. 1 Oct 54 122° 29.5' W WIND Calm 1916 (+8) DEPTH 17 fm 50°/47°F Strawberry Point, North of				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.83	26.75	0.356	2.52
5	10.47	28.74	0.282	2.81
10	10.24	29.02	0.244	2.92
20	10.18	29.58	0.222	3.14

STA 66-97 48° 14.1' N WEATHER b. 1 Oct 54 122° 33.2' W WIND Calm 2001 (+8) DEPTH 91 fm 50°/48°F Demock Point				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.16	23.03	0.658	1.24
5	10.54	28.44	0.268	2.87
10	10.05	29.30	0.221	2.92
19	10.23	29.61	0.233	3.75
29	10.14	29.69	0.234	2.72
48	10.25	29.86	0.242	2.63
72	10.18	29.87	0.209	----

STA 66-98 48° 06.3' N WEATHER b. 1 Oct 54 122° 29.0' W WIND Calm 2128 (+8) DEPTH 81 fm 49°/47°F East Point				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.38	24.49	0.932	0.46
5	10.97	28.48	0.344	2.28
10	10.50	29.31	0.258	2.82
20	10.50	29.59	0.259	2.71
29	10.46	29.85	0.264	2.69
49	10.45	29.92	0.264	2.75
74	10.30	30.04	0.268	2.86
98	10.32	30.04	0.268	2.94
128	10.38	30.03	0.272	2.93

STA 66-99 48° 01.5' N WEATHER b. 1 Oct 54 122° 31.8' W WIND Calm 2249 (+8) DEPTH 23 fm 47°/45°F Holmes Harbor, Head of				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	14.02	20.97	0.612	0.27
5	10.94	28.58	0.247	2.81
10	10.14	29.09	0.176	3.21
20	9.76	29.49	0.100	3.58
30	9.94	29.66	0.128	3.70
40	10.10	29.72	0.098	4.65

STA 66-100 48° 03.2' N WEATHER b. 1 Oct 54 122° 32.0' W WIND Calm 2350 (+8) DEPTH 27 fm 46°/45°F Classic				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	14.15	20.61	0.611	0.42
5	11.01	28.23	0.269	2.58
10	10.04	29.15	0.165	3.61
20	9.87	29.52	0.147	3.59
30	9.95	29.64	0.174	3.47
40	10.14	29.79	0.188	3.37
47	10.20	29.78	0.188	3.61

STA 66-101 48° 04.9' N WEATHER b. 2 Oct 54 122° 32.3' W WIND Calm 0005 (+8) DEPTH 28 fm 47°/46°F Dines Point				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	13.50	22.05	0.804	0.32
5	11.52	27.86	0.277	2.62
10	9.98	29.13	0.197	3.31
20	9.86	29.51	0.174	3.40
30	9.94	29.62	0.181	3.48
40	10.14	29.73	0.222	3.11
50	10.12	29.79	0.183	3.60

STA 66-102 48° 06.2' N WEATHER b. 2 Oct 54 122° 33.0' W WIND Calm 0049 (+8) DEPTH 44 fm 48°/47°F Greenbank				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.78	23.33	0.707	0.38
5	11.16	27.98	0.306	2.59
10	10.38	29.18	0.237	2.97
20	10.20	29.56	0.228	2.91
30	10.16	29.71	0.230	3.02
40	10.16	29.77	0.227	3.21
50	10.15	29.89	0.218	3.17
60	10.19	29.82	0.222	3.21
75	10.24	29.85	0.224	3.41

STA 66-103 48° 02.9' N WEATHER b. 2 Oct 54 122° 22.3' W WIND ExS 3 0209 (+8) DEPTH 88 fm 47°/46°F Camano Head, West of				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.48	25.53	0.753	1.64
5	10.84	28.78	0.329	2.58
10	10.72	29.19	0.272	2.59
20	10.74	29.73	0.280	2.67
30	10.77	29.86	0.289	2.63
50	10.58	29.93	0.276	2.62
75	10.58	30.02	0.271	2.58
100	10.51	30.03	0.271	2.69
125	10.42	30.07	0.282	2.78
150	10.46	30.22	0.300	2.80

STA 66-104 48° 06.2' N WEATHER b. 2 Oct 54 122° 22.0' W WIND Calm 0319 (+8) DEPTH 66 fm 46°/46°F Port Susan, Middle of				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.20	25.37	0.466	1.78
5	10.51	29.09	0.235	2.59
10	9.54	29.34	0.194	2.86
20	9.44	29.52	0.193	2.92
30	9.38	29.50	0.191	2.88
40	9.82	29.69	0.207	2.85
50	9.65	29.71	0.205	2.90
70	9.59	29.81	0.218	3.14
90	10.22	30.05	0.265	3.00
110	10.40	30.17	0.261	3.02
120	10.38	30.21	0.237	3.59

STA 66-105 48° 09.0' N WEATHER b. 2 Oct 54 122° 24.3' W WIND Calm 0421 (+8) DEPTH 50 fm 45°/45°F Port Susan, Head of				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.07	25.37	0.470	1.86
5	10.25	29.15	0.229	2.66
10	9.70	29.25	0.206	3.00
20	9.54	29.42	0.189	2.87
30	9.34	29.55	0.190	2.98
40	9.21	29.56	0.192	3.04
60	9.31	29.68	0.207	3.08
80	9.90	29.94	0.236	3.10
93	10.32	30.12	0.246	3.21

STA 66-106 48° 04.1' N WEATHER b.
 2 Oct 54 122° 20.0' W WIND SxE 1
 0529 (+8) DEPTH 67 fm 47°/44°F
 Camano Head, East of

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.58	20.52	0.571	0.98
5	10.98	29.34	0.241	2.55
10	10.93	29.60	0.276	2.55
20	10.94	29.75	0.278	2.40
30	10.80	29.81	0.284	2.61
40	10.40	29.81	0.261	2.65
50	10.50	29.91	0.215	2.64
70	10.02	29.91	0.230	2.93
90	10.28	30.10	0.255	2.92
110	10.39	30.17	0.261	2.94
120	10.38	30.17	0.261	3.49

STA 66-107 47° 58.5' N WEATHER c.
 2 Oct 54 122° 17.4' W WIND Calm
 0648 (+8) DEPTH 73 fm 48°/45°F
 Port Gardner

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.02	22.68	0.463	0.83
5	11.12	29.33	0.305	2.46
10	11.22	29.65	0.318	2.55
20	11.21	29.88	0.353	2.54
30	11.09	29.96	0.344	2.55
40	11.06	30.00	0.354	2.59
50	10.48	29.96	0.182	2.52
70	10.48	30.04	0.214	2.44
90	10.50	30.11	0.212	2.58
110	10.49	30.25	0.288	2.73
133	10.52	30.29	0.311	2.78

STA 66-108 47° 53.8' N WEATHER c.
 2 Oct 54 122° 21.2' W WIND SxE 4
 0758 (+8) DEPTH 128 fm 49°/47°F
 Possession Point

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.62	28.73	0.405	2.12
5	11.45	29.58	0.367	2.44
10	11.41	29.68	0.374	2.21
20	11.32	29.94	0.376	2.45
30	11.19	29.96	0.371	2.51
50	11.08	30.05	0.360	2.49
75	10.86	30.10	0.346	2.54
100	10.76	30.24	0.340	2.50
140	10.64	30.28	0.333	2.68
180	10.58	30.34	0.330	2.68
220	10.54	30.34	0.324	2.77

GIBSON POINT, S.W.

LAT. 47° 12.7'N, LONG. 122° 37.3'W

DEPTH 90 Fathoms
BROWN BEAR CRUISE 66 28-29 SEPTEMBER 1954

Depth (m)	Temp (°C)	Salinity (‰)	Density (σ_t)
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Sta. 66-12 Time 0050

0	13.23	29.34	22.00
10	12.33	29.53	22.32
20	12.04	29.60	22.42
50	11.71	29.70	22.56
70	11.68	29.71	22.57
120	11.68	29.70	22.56

Depth (m)	Temp (°C)	Salinity (‰)	Density (σ_t)
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Sta. 66-24 Time 0842

0	12.18	29.51	22.33
10	11.95	29.65	22.48
20	11.82	29.69	22.53
50	11.74	29.70	22.55
70	11.67	29.72	22.58
100	11.56	29.74	22.62

Sta. 66-15 Time 0247

0	12.34	29.54	22.32
10	12.26	29.56	22.35
20	12.12	29.61	22.42
50	11.81	29.69	22.53
70	11.82	29.70	22.54
120	11.72	29.69	22.55

Sta. 66-27 Time 1044

0	12.00	29.63	22.45
10	11.90	29.67	22.50
20	11.96	29.67	22.49
50	11.72	29.71	22.57
70	11.68	29.72	22.58
120	11.62	29.75	22.62

Sta. 66-18 Time 0447

0	12.70	29.49	22.21
10	12.34	29.54	22.32
20	11.94	29.63	22.46
50	11.77	29.70	22.55
70	11.78	29.75	22.58
120	11.61	29.73	22.60

Sta. 66-30 Time 1247

0	12.92	29.40	22.11
10	12.13	29.61	22.41
20	12.15	29.60	22.40
50	11.82	29.70	22.54
70	11.72	29.77	22.61
120	11.57	29.76	22.63

Sta. 66-21 Time 0645

0	12.63	29.42	22.17
10	12.28	29.52	22.32
20	11.88	29.65	22.49
50	11.75	29.70	22.55
70	11.74	29.70	22.55
120	11.68	29.72	22.58

Sta. 66-33 Time 1514

0	12.07	29.61	22.43
10	12.10	29.61	22.42
20	12.02	29.66	22.46
50	11.76	29.70	22.55
70	11.74	29.70	22.55
120	11.74	29.69	22.54

GIBSON POINT, S.W.
(continued)

Depth (m)	Temp (°C)	Salinity (‰)	Density (σ_t)
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Sta. 66-36 Time 1703

0	12.63	29.48	22.22
10	12.42	29.52	22.29
20	11.87	29.64	22.48
50	11.78	29.68	22.53
70	11.76	29.69	22.54
120	11.58	29.74	22.61

Depth (m)	Temp (°C)	Salinity (‰)	Density (σ_t)
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Sta. 66-48 Time 0045

0	12.80	29.40	22.13
10	12.00	29.65	22.47
20	11.84	29.70	22.53
50	11.67	29.71	22.58
70	11.66	29.73	22.59
120	11.63	29.78	22.63

Sta. 66-39 Time 1857

0	12.66	29.46	22.20
10	11.97	29.63	22.46
20	11.90	29.68	22.51
50	11.70	29.71	22.57
70	11.70	29.71	22.57
120	11.64	29.71	22.56

Sta. 66-51 Time 0244

0	11.94	29.65	22.47
10	11.94	29.68	22.50
20	11.94	29.72	22.53
50	11.74	29.72	22.57
70	11.77	29.72	22.57
120	11.75	29.70	22.55

Sta. 66-42 Time 2053

0	12.51	29.47	22.23
10	11.92	29.66	22.49
20	11.82	29.69	22.53
50	11.68	29.70	22.56
70	11.66	29.71	22.56
120	11.66	29.72	22.57

Sta. 66-54 Time 0444

0	12.20	29.52	22.33
10	11.87	29.67	22.51
20	11.88	29.68	22.52
50	11.74	29.70	22.55
70	11.75	29.71	22.56
120	11.70	29.71	22.57

Sta. 66-45 Time 2251

0	12.06	29.38	22.06
10	11.92	29.63	22.47
20	11.86	29.66	22.50
50	11.80	29.68	22.52
70	11.72	29.67	22.54
120	11.62	29.76	22.63

STILL HARBOR II

LAT. 47° 13.9'N, LONG. 122° 38.9'W

DEPTH 65 Fathoms
BROWN BEAR CRUISE 66 28-29 SEPTEMBER 1954

Depth (m)	Temp (°C)	Salinity (‰)	Density (σ_t)
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Sta. 66-11 Time 0021

0	13.36	29.37	22.00
5	12.56	29.47	22.23
20	11.93	29.64	22.47
50	11.79	29.71	22.55
70	11.80	29.70	22.54
100	11.67	29.70	22.57

Depth (m)	Temp (°C)	Salinity (‰)	Density (σ_t)
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Sta. 66-23 Time 0811

0	12.84	29.36	22.09
5	12.44	29.34	22.15
20	12.06	29.61	22.43
50	11.83	29.70	22.53
70	11.78	29.70	22.54
100	11.68	-	-

Sta. 66-14 Time 0219

0	13.18	29.28	21.96
5	12.94	29.43	22.12
20	11.88	29.64	22.48
50	11.72	29.70	22.56
70	11.70	29.70	22.56
100	11.59	29.69	22.57

Sta. 66-26 Time 1012

0	13.26	29.18	21.87
5	12.38	29.69	22.43
20	12.00	29.63	22.45
50	11.82	29.69	22.53
70	11.76	29.70	22.55
100	11.65	29.70	22.57

Sta. 66-17 Time 0416

0	12.90	29.39	22.10
5	12.44	29.48	22.25
20	11.96	29.66	22.48
50	11.74	29.71	22.56
70	11.74	29.70	22.55
100	11.62	29.71	22.59

Sta. 66-29 Time 1212

0	13.38	29.23	21.89
5	12.58	29.47	22.22
20	12.00	29.65	22.47
50	11.79	29.70	22.54
70	11.74	29.70	22.55
100	11.66	29.70	22.57

Sta. 66-20 Time 0617

0	12.94	29.34	22.05
5	12.60	29.43	22.19
20	12.04	29.61	22.43
50	11.86	29.70	22.53
70	11.75	29.73	22.57
100	11.66	29.72	22.58

Sta. 66-32 Time 1441

0	13.40	29.25	21.90
10	12.18	29.60	22.39
20	11.98	29.65	22.47
50	11.72	29.70	22.56
70	11.70	29.70	22.56
120	11.59	29.74	22.61

STILL HARBOR II
(continued)

Depth (m)	Temp (°C)	Salinity (‰)	Density (σ_t)
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Sta. 66-35 Time 1635

0	13.07	29.38	22.06
5	12.80	29.44	22.16
20	11.99	29.66	22.47
50	11.79	29.69	22.52
70	11.72	29.69	22.53
100	11.67	29.71	22.61

Depth (m)	Temp (°C)	Salinity (‰)	Density (σ_t)
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Sta. 66-47 Time 0016

0	13.14	29.42	22.08
5	12.26	29.54	22.38
20	12.02	29.63	22.45
50	11.76	29.70	22.55
70	11.74	29.70	22.55
100	11.66	29.71	22.58

Sta. 66-38 Time 1827

0	13.50	29.31	21.93
5	13.45	29.33	21.95
20	12.12	29.65	22.45
50	11.83	29.69	22.53
70	11.74	29.69	22.54
100	11.66	29.74	22.60

Sta. 66-50 Time 0215

0	13.36	29.29	21.94
5	12.84	29.43	22.14
20	12.04	29.63	22.44
50	11.73	29.69	22.54
70	11.70	29.71	22.57
100	11.68	29.70	22.56

Sta. 66-41 Time 2022

0	13.42	29.39	22.00
5	12.86	29.36	22.09
20	12.02	29.65	22.47
50	11.76	29.70	22.55
70	11.74	29.70	22.55
100	11.70	29.70	22.56

Sta. 66-53 Time 0416

0	12.74	29.46	22.18
5	12.54	29.50	22.25
20	11.86	29.67	22.51
50	11.72	29.70	22.56
70	11.70	29.71	22.57
100	11.65	29.73	22.59

Sta. 66-44 Time 2220

0	13.16	29.31	21.99
5	12.34	29.34	22.16
20	12.00	29.65	22.47
50	11.78	29.68	22.52
70	11.77	29.70	22.55
100	11.71	29.70	22.56

SOUTH HEAD II

LAT. $47^{\circ} 15.6'N$, LONG. $122^{\circ} 41.8'W$ DEPTH 52 Fathoms
BROWN BEAR CRUISE 66 27-29 SEPTEMBER 1954

Depth (m)	Temp ($^{\circ}C$)	Salinity ($^{\circ}/\infty$)	Density (σ_t)
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Sta. 66-10 Time 2343

0	13.94	29.31	21.76
10	12.00	29.56	22.40
20	11.90	29.62	22.46
50	11.70	29.68	22.54
70	11.69	29.70	22.56

Sta. 66-13 Time 0144

0	13.53	28.91	21.61
10	11.98	29.52	22.37
20	11.92	29.62	22.46
50	11.70	29.70	22.56
70	11.70	29.70	22.56

Sta. 66-16 Time 0340

0	14.26	28.98	21.52
10	12.08	29.52	22.35
20	11.95	29.61	22.45
50	11.72	29.68	22.48
70	11.70	-----	-----

Sta. 66-19 Time 0540

0	12.86	29.34	22.07
10	12.03	29.61	22.43
20	11.94	29.63	22.46
50	11.73	29.67	22.52
70	11.71	29.70	22.56

Depth (m)	Temp ($^{\circ}C$)	Salinity ($^{\circ}/\infty$)	Density (σ_t)
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Sta. 66-22 Time 0733

0	13.93	28.89	21.51
10	11.98	29.59	22.42
20	11.88	29.60	22.45
50	11.74	29.67	22.53
70	11.68	29.69	22.55

Sta. 66-25 Time 0939

0	14.01	28.96	21.56
10	11.88	29.56	22.41
20	11.86	29.61	22.46
50	11.70	29.67	22.54
70	11.66	29.70	22.57

Sta. 66-28 Time 1139

0	13.80	29.00	21.63
10	12.22	29.31	22.17
20	11.94	29.61	22.45
50	11.72	29.69	22.47
70	11.66	29.70	22.57

Sta. 66-31 Time 1408

0	13.60	29.09	21.73
10	12.06	29.56	22.39
20	11.92	29.68	22.50
50	11.68	29.69	22.55
70	11.66	29.71	22.57

SOUTH HEAD II
(continued)

Depth (m)	Temp (°C)	Salinity (°/oo)	Density (σ_t)
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Sta. 66-34 Time 1559

0	14.28	29.22	21.70
10	12.00	29.51	22.36
20	11.98	29.66	22.47
50	11.73	29.69	22.54
70	11.67	29.71	22.58

Sta. 66-37 Time 1753

0	12.15	29.49	22.31
10	12.00	29.60	22.43
20	11.98	29.60	22.43
50	11.74	29.69	22.54
70	11.70	29.69	22.55

Sta. 66-40 Time 1947

0	14.48	29.02	21.50
10	11.99	29.61	22.44
20	11.94	29.61	22.45
50	11.70	29.67	22.54
70	11.66	29.67	22.55

Sta. 66-43 Time 2144

0	13.40	29.23	21.88
10	11.98	29.61	22.44
20	11.92	29.65	22.49
50	11.68	29.68	22.54
70	11.68	29.70	22.56

Depth (m)	Temp (°C)	Salinity (°/oo)	Density (σ_t)
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Sta. 66-46 Time 2341

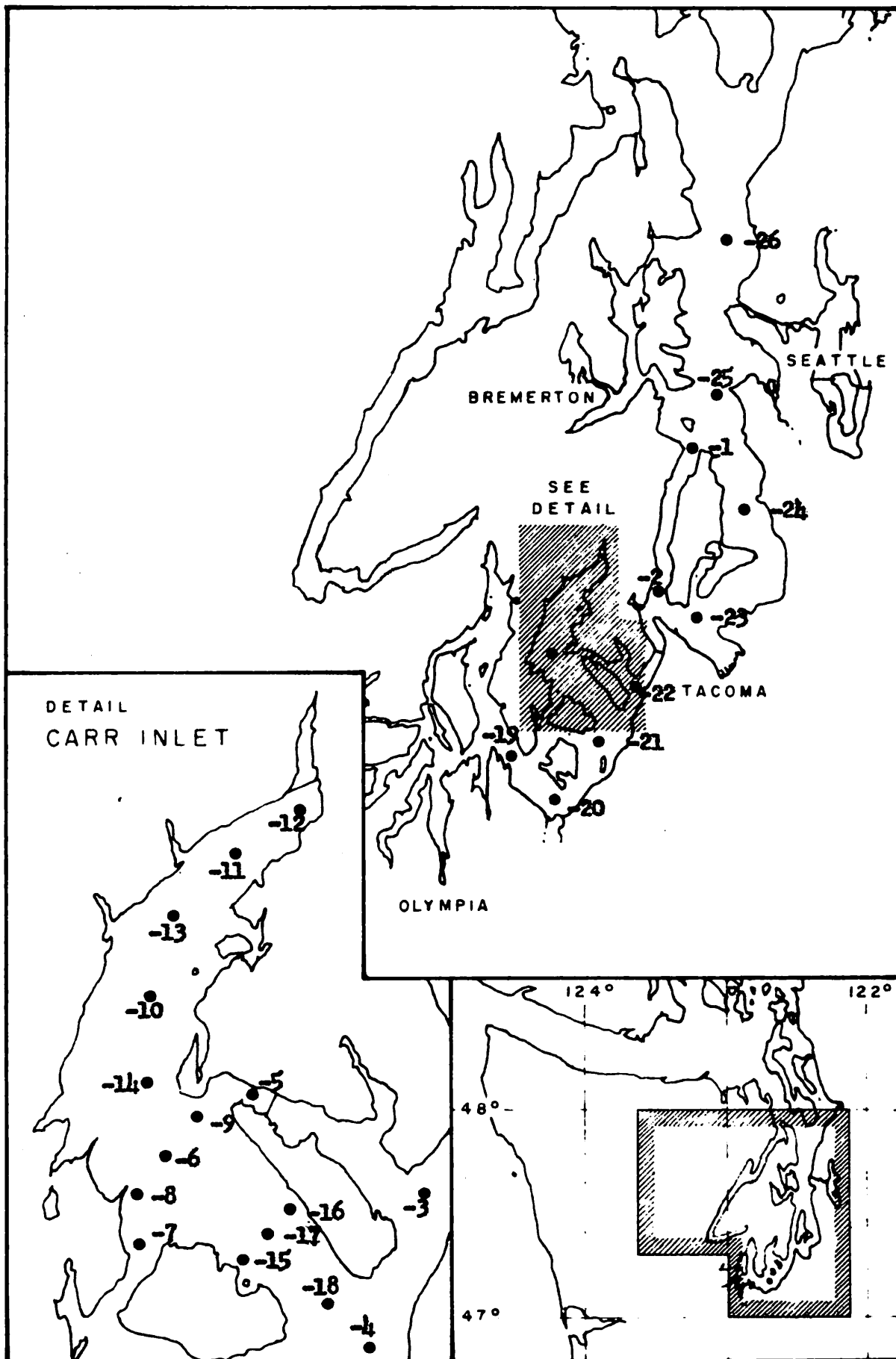
0	14.10	29.02	21.59
10	12.00	29.52	22.37
20	11.94	29.61	22.45
50	11.66	29.69	22.56
70	11.66	29.70	22.57

Sta. 66-49 Time 0142

0	13.72	29.09	21.72
10	11.94	29.56	22.40
20	11.92	29.65	22.48
50	11.66	29.70	22.57
70	11.64	29.70	22.57

Sta. 66-52 Time 0341

0	13.62	29.27	21.87
10	11.95	29.63	22.46
20	11.95	29.69	22.50
50	11.72	29.69	22.55
70	11.67	29.73	22.59



Oceanographic Station Locations
 BROWN BEAR CRUISE 68
 19 - 20 October 1954

J.W. OLSON, JR. - 10/19/54

STA 68-1 47° 30.7' N WEATHER o.
 19 Oct 54 122° 29.5' W WIND SSW 13
 1159 (+8) DEPTH 61 fm 54°/50°F
 Point Vashon

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.05	30.04	0.403	2.32
5	11.02	30.04	0.407	2.38
10	11.04	30.06	0.399	2.38
20	11.04	30.08	0.397	2.40
30	11.06	30.08	0.387	2.28
50	11.06	30.09	0.394	2.06
74	11.03	30.09	0.385	2.13
99	11.01	30.13	0.376	2.48

STA 68-2 47° 21.1' N WEATHER c.
 19 Oct 54 122° 32.4' W WIND SSW 18
 1329 (+8) DEPTH 55 fm 54°/52°F
 Spring Beach

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.24	29.95	0.408	2.36
5	11.24	29.95	0.409	2.32
10	11.11	29.97	0.386	2.34
20	11.06	30.03	0.387	2.37
30	11.04	30.06	0.385	2.30
50	10.88	30.18	0.362	2.33
74	10.81	30.21	0.360	2.34
99	10.76	30.26	0.349	2.43

STA 68-3 47° 15.1' N WEATHER o.
 19 Oct 54 122° 34.1' W WIND SSW 12
 1453 (+8) DEPTH 33 fm 54°/52°F
 Day Island

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.26	29.84	0.408	2.06
10	11.06	29.97	0.390	2.16
19	11.05	30.00	0.385	2.27
28	11.03	30.05	0.379	2.37
47	10.99	30.08	0.373	2.21

STA 68-4 47° 11.9' N WEATHER c.
 19 Oct 54 122° 35.9' W WIND SSW 16
 1554 (+8) DEPTH 70 fm 54°/52°F
 Toliva Shoal

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.50	29.70	0.419	2.23
5	11.50	29.70	0.426	2.37
10	11.44	29.74	0.408	2.38
20	11.42	29.74	0.402	2.15
30	11.43	29.86	0.398	2.02
49	11.40	29.85	0.393	2.10
73	11.26	29.88	0.392	2.06
97	11.24	29.90	0.386	2.38
122	11.12	29.93	0.385	2.37

STA 68-5 47° 16.8' N WEATHER 62 19 Oct 54 122° 39.4' W WIND SxW 2 1712 (+8) DEPTH 12 fm 53°/51°F Warren				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.80	29.66	0.466	2.07
5	11.80	29.66	0.468	2.09
10	11.80	29.66	0.476	2.10
15	11.78	29.65	0.461	2.16
20	11.80	29.63	0.466	2.09

STA 68-6 47° 15.9' N WEATHER 90 19 Oct 54 122° 42.0' W WIND WNW 10 1750 (+8) DEPTH 50 fm 53°/51°F South Head II				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.66	29.70	0.421	2.33
5	11.68	29.70	0.420	2.39
10	11.68	29.72	0.418	2.35
20	11.66	29.73	0.401	2.39
30	11.51	29.77	0.385	2.39
40	11.50	29.84	0.356	2.35
60	11.39	29.85	0.374	2.39
85	11.34	29.88	0.372	2.47

STA 68-7 47° 14.0' N WEATHER o. 19 Oct 54 122° 43.0' W 1831 (+8) DEPTH 10 fm SOUTH HEAD IV				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.70	29.68	0.437	2.33
5	11.69	29.68	0.427	2.36
10	11.68	29.75	0.425	2.40
15	11.50	29.77	0.358	2.53

STA 68-8 47° 14.9' N WEATHER o. 19 Oct 54 122° 42.7' W WIND SSE 3 1900 (+8) DEPTH 11 fm 51°/50°F South Head III				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.64	29.67	0.438	2.33
5	11.67	29.68	0.425	2.39
10	11.65	29.70	0.412	2.39
15	11.42	29.79	0.372	2.51
20	11.43	29.85	0.358	2.51

STA 68-9 47° 16.5' N WEATHER o. 19 Oct 54 122° 41.1' W WIND S 6 1939 (+8) DEPTH 45 fm 52°/51°F South Head I				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.78	29.62	0.460	2.20
5	11.78	29.63	0.458	2.28
10	11.80	29.63	0.453	2.26
20	11.74	29.68	0.432	2.33
30	11.74	29.71	0.404	2.28
40	11.60	29.79	0.397	2.32
60	11.48	29.79	0.394	2.34
80	11.40	29.86	0.388	2.45

STA 68-10 47° 18.6' N WEATHER c. 19 Oct 54 122° 42.5' W WIND S 4 2028 (+8) DEPTH 41 fm 52°/51°F Cutts Island, SW of				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.78	29.65	0.454	2.14
5	11.78	29.64	0.450	2.18
10	11.80	29.65	0.445	2.20
20	11.58	29.77	0.356	2.00
30	11.54	29.81	0.347	2.00
40	11.47	29.82	0.358	2.37
50	11.40	29.89	0.357	2.51
60	11.35	29.86	0.339	2.73

STA 68-11 47° 21.5' N WEATHER c. 19 Oct 54 122° 40.1' W WIND S 2 2115 (+8) DEPTH 17 fm 51°/50°F Elgin, East of				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	12.00	29.43	0.496	2.12
5	12.02	29.45	0.504	2.05
10	12.04	29.47	0.501	2.01
15	11.97	29.49	0.495	2.17
20	11.97	29.51	0.466	2.10
25	11.94	29.55	0.439	2.19

STA 68-12 47° 22.5' N WEATHER b.c. 19 Oct 54 122° 38.0' W WIND Calm 2144 (+8) DEPTH 9 fm 50°/49°F Wauna				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.84	28.96	0.490	2.38
3	12.01	29.13	0.487	2.23
6	12.06	29.18	0.490	2.37
10	11.99	29.38	0.480	2.26

STA 68-13 47° 20.3' N WEATHER b.c.
 19 Oct 54 122° 41.7' W WIND SSW 5
 2224 (+8) DEPTH 30 fm 50°/49°F
 Glencove, East of

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.84	29.54	0.477	2.14
5	11.87	29.58	0.458	2.13
10	11.86	29.60	0.455	2.18
20	11.79	29.63	0.423	2.24
30	11.70	29.67	0.356	2.47
40	11.52	29.76	0.325	2.58
50	11.43	29.83	0.316	2.80

STA 68-14 47° 17.0' N WEATHER b.c.
 19 Oct 54 122° 42.5' W WIND SSW 7
 2310 (+8) DEPTH 57 fm 50°/49°F
 Green Point

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.74	29.62	0.450	2.19
5	11.79	29.64	0.445	2.23
10	11.69	29.68	0.414	2.32
20	11.58	29.76	0.391	2.36
30	11.51	29.77	0.380	2.38
40	11.46	29.80	0.359	2.40
50	11.40	29.84	0.347	2.64
70	11.40	29.86	0.337	2.69
90	11.30	29.86	0.311	3.02

STA 68-15 47° 13.7' N WEATHER b.c.
 19 Oct 54 122° 39.7' W WIND SSE 5
 2359 (+8) DEPTH 32 fm 49°/48°F
 Still Harbor III

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.63	29.68	0.461	2.16
5	11.62	29.67	0.441	2.24
10	11.48	29.80	0.392	2.31
20	11.42	29.81	0.385	2.30
30	11.43	29.81	0.378	2.20
40	11.39	29.85	0.356	2.30
50	11.35	29.85	0.357	2.37

STA 68-16 47° 14.7' N WEATHER b.c.
 20 Oct 54 122° 38.5' W WIND SSE 5
 0030 (+8) DEPTH 70 fm 49°/48°F
 Still Harbor I

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.39	29.62	0.436	2.35
5	11.38	29.62	0.427	2.26
10	11.42	29.62	0.429	2.38
20	11.45	29.71	0.407	2.39
30	11.41	29.81	0.391	2.39
50	11.39	29.84	0.378	2.05
75	11.35	29.87	0.373	2.08
100	11.30	29.91	0.377	2.54
125	11.20	29.92	0.372	2.91

STA 68-17 47° 14.0' N WEATHER b.c.
 20 Oct 54 122° 39.1' W WIND SSE 3
 0111 (+8) DEPTH 67 fm 49°/48°F
 Still Harbor II

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.52	29.64	0.450	2.34
5	11.49	29.69	0.425	2.26
10	11.47	29.73	0.401	2.35
20	11.43	29.79	0.392	2.26
30	11.42	29.84	0.376	2.05
50	11.39	29.84	0.371	2.06
75	11.34	29.86	0.369	2.19
100	11.29	29.88	0.368	2.47
120	11.22	29.88	0.354	----

STA 68-18 47° 12.8' N WEATHER b.c.
 20 Oct 54 122° 37.2' W WIND SSE 3
 0155 (+8) DEPTH 89 fm 50°/48°F
 Gibson Point, S of

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.48	29.70	0.410	2.16
5	11.41	29.71	0.408	2.23
10	11.40	29.74	0.404	2.26
20	11.31	29.84	0.397	2.25
30	11.37	29.83	0.392	2.33
50	11.36	29.84	0.385	1.93
75	11.35	29.84	0.390	2.02
99	11.28	29.87	0.379	2.40
129	11.18	29.91	0.377	2.43
158	11.18	29.94	0.374	2.78

STA 68-19 47° 10.0' N WEATHER b.c.
 20 Oct 54 122° 47.3' W WIND W 2
 0349 (+8) DEPTH 47 fm 48°/48°F
 Devil's Head

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.89	29.54	0.431	2.38
5	11.89	29.53	0.435	2.45
10	11.88	29.53	0.422	2.45
20	11.78	29.60	0.412	2.39
30	11.64	29.70	0.392	2.68
50	11.56	29.68	0.385	2.15
75	11.49	29.77	0.380	2.26

STA 68-20 47° 07.2' N WEATHER b.c.
 20 Oct 54 122° 42.5' W WIND Calm
 0429 (+8) DEPTH 37 fm 48°/47°F
 Nisqually Reach

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.58	29.22	0.464	2.33
5	11.76	29.56	0.428	2.40
10	11.66	29.61	0.420	2.20
20	11.59	29.64	0.410	2.27
40	11.63	29.69	0.401	2.21
60	11.58	29.70	0.398	2.10

STA 68-21 47° 11.0' N WEATHER b.c. 20 Oct 54 122° 37.8' W WIND Calm 0516 (+8) DEPTH 91 fm 48°/47°F Gordon Point				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.48	29.61	0.423	2.35
5	11.46	29.68	0.413	2.39
10	11.50	29.70	0.406	2.40
20	11.46	29.74	0.404	2.15
30	11.46	29.78	0.404	2.01
50	11.35	29.84	0.387	2.11
75	11.30	29.85	0.382	2.15
100	11.28	29.88	0.377	2.46
130	11.18	29.92	0.377	2.55
160	11.12	29.97	0.368	2.55

STA 22 47° 14.9' N WEATHER c. 20 Oct 54 122° 34.4' W WIND WNW 2 0605 (+8) DEPTH 35 fm 48°/47°F Day Island				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.51	29.59	0.424	2.38
5	11.52	29.58	0.415	2.43
10	11.52	29.64	0.408	2.40
20	11.38	29.74	0.399	2.40
30	11.36	29.79	0.394	2.39
50	11.34	29.85	0.387	2.38

STA 68-23 47° 19.1' N WEATHER 61 20 Oct 54 122° 28.2' W WIND WSW 1 0723 (+8) DEPTH 95 fm 49°/48°F Brown Point				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.14	29.23	0.431	2.12
5	11.14	29.78	0.417	2.28
10	11.08	29.96	0.394	2.25
20	11.01	30.06	0.378	2.29
30	10.98	30.10	0.363	2.22
50	10.86	30.18	0.344	2.22
75	10.64	30.37	0.343	2.30
100	10.59	30.37	0.341	2.39
130	10.42	30.44	0.328	2.42
160	10.36	30.46	0.317	2.46

STA 68-24 47° 26.5' N WEATHER 63 20 Oct 54 122° 23.6' W WIND SE 6 0853 (+8) DEPTH 132 fm 50°/48°F Pully Point				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.16	29.61	0.456	2.17
5	11.13	29.67	0.438	2.11
10	11.17	29.80	0.420	2.04
20	11.14	29.95	0.411	2.25
30	11.18	29.99	0.405	2.21
50	11.02	30.08	0.361	2.24
75	10.72	30.26	0.345	2.29
97	10.60	30.35	0.339	2.43
139	10.42	30.45	0.328	2.43
179	10.34	30.50	0.320	2.48
218	10.34	30.51	0.315	2.46

STA 68-25 47° 34.4' N WEATHER 63
 20 Oct 54 122° 26.6' W WIND SxE 6
 1025 (+8) DEPTH 135 fm 52°/51°F
 Alki Point

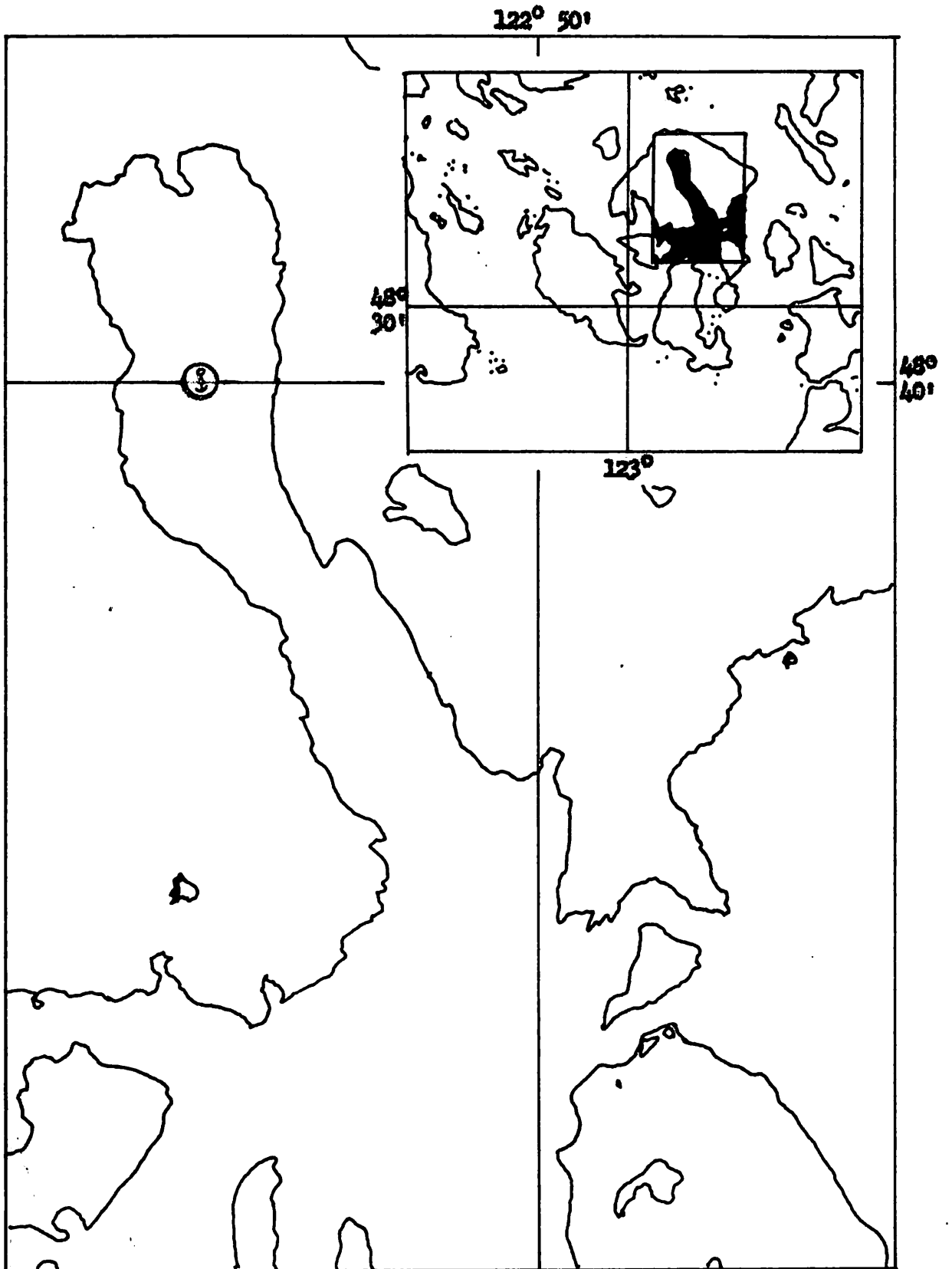
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
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0	11.02	30.01	0.403	2.29
5	11.04	30.01	0.402	2.35
10	11.04	30.02	0.405	2.32
20	11.03	30.04	0.396	2.29
30	11.07	30.03	0.387	2.24
49	11.02	30.04	0.382	2.24
74	10.70	30.27	0.348	2.31
98	10.58	30.39	0.348	2.43
138	10.44	30.39	0.345	2.42
177	10.42	30.45	0.339	2.45
216	10.42	30.47	0.330	2.47

STA 68-26 47° 45.5' N WEATHER 63
 20 Oct 54 122° 25.8' W WIND SE 16
 1205 (+8) DEPTH 159 fm 52°/50°F
 Point Jefferson

Depth (m)	Temp (°/oo)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
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0	10.96	30.08	0.393	2.29
5	10.94	30.09	0.394	2.34
9	10.94	30.11	0.396	2.28
18	10.90	30.13	0.383	2.29
27	10.88	30.13	0.372	2.17
46	10.74	30.21	0.367	2.27
70	10.60	30.28	0.367	2.29
92	10.42	30.28	0.357	2.39
138	10.34	30.31	0.354	2.40
164	10.29	30.37	0.358	2.47
210	10.29	30.38	0.354	2.37
230	----	30.37	0.358	2.47



East Sound Tine Study
BROWN BEAR CRUISE 70
6 - 7 November 1954

BROWN BEAR CRUISE 70

ANCHORED IN EAST SOUND

LAT. 48° 40.0' N, LONG. 122° 53.8' W

6 - 7 November 1954

STA 70-1 Time 0646 (+8)				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.57	29.61	0.492	2.09
3	9.51	29.60	0.494	2.22
10	9.51	29.66	0.483	2.08
15	9.56	29.66	0.485	2.14
25	9.48	30.18	0.471	2.28

STA 70-2 Time 0958 (+8)				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.56	29.57	0.507	2.12
3	9.55	29.59	0.502	2.24
5	9.46	29.61	0.495	2.22
10	9.54	29.66	0.484	2.10
15	9.57	29.69	0.489	2.24
25	9.48	30.19	0.470	2.38

STA 70-3 Time 1227 (+8)				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.72	29.57	0.519	2.23
3	9.60	29.57	0.517	2.05
5	9.64	29.57	0.504	2.26
10	9.59	29.62	0.490	2.42
15	9.62	29.66	0.485	2.29
25	9.52	30.18	0.473	2.66

STA 70-4 Time 1447 (+8)				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.29	29.59	0.577	2.91
3	9.91	29.57	0.539	1.90
5	9.61	29.61	0.528	2.08
10	9.57	29.63	0.492	1.91
15	9.56	29.66	0.483	2.14
20	9.48	30.21	0.455	2.18

STA 70-5 Time 1706 (+8)				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.90	-----	0.561	1.88
3	9.75	-----	0.542	2.16
5	9.64	-----	0.504	2.19
10	9.67	-----	0.491	2.15
15	9.55	-----	0.480	2.19
20	9.47	-----	0.496	2.19

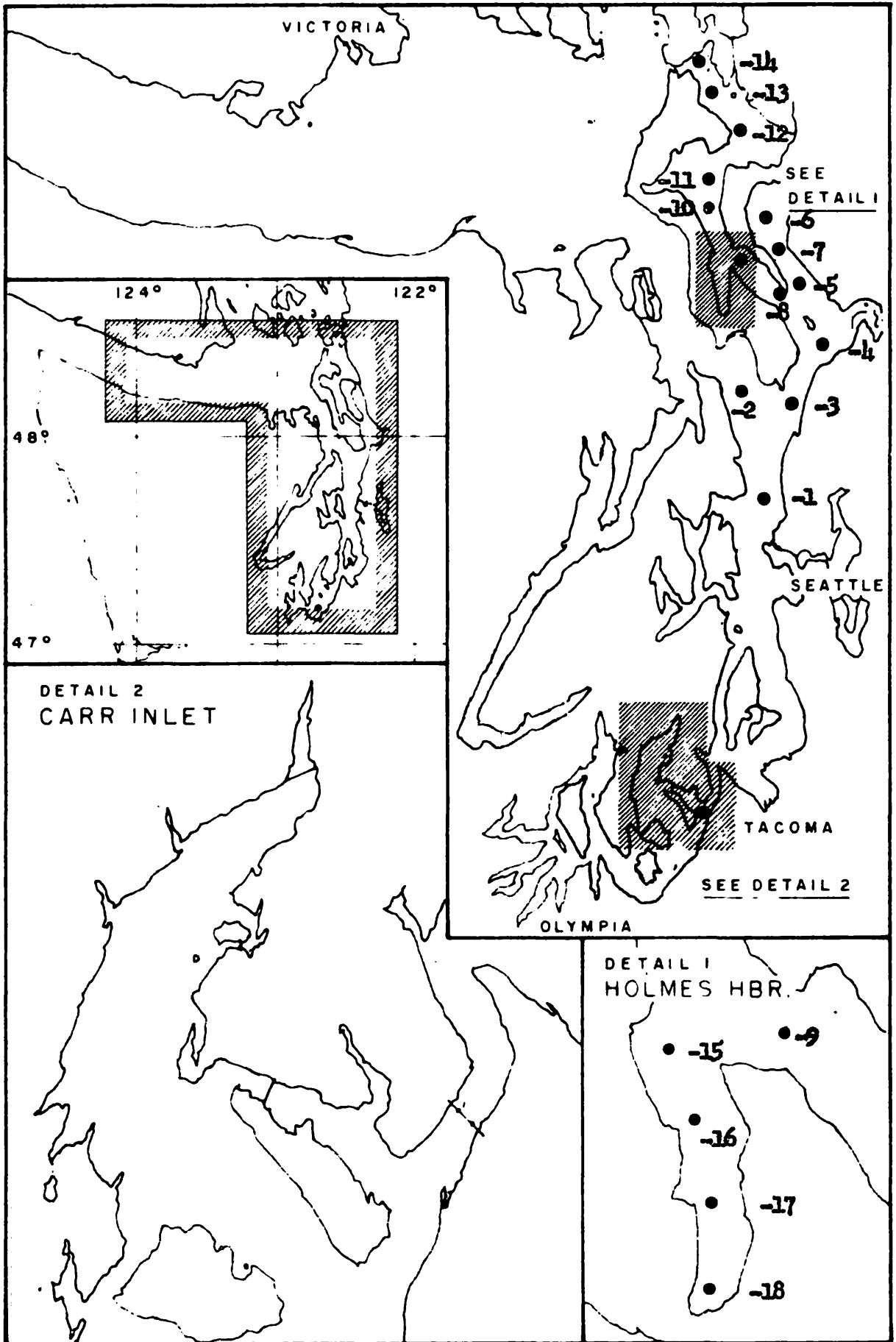
STA 70-6 Time 1910 (+8)				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.74	29.59	0.545	2.10
3	9.71	29.58	0.538	2.08
5	9.65	29.61	0.503	2.05
10	9.58	29.66	0.495	2.17
15	9.56	29.70	0.488	2.32
20	9.50	30.13	0.480	2.42

BROWN BEAR CRUISE 70 (Cont'd)

STA 70-7 Time 2104 (+8)				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.68	29.61	0.529	1.98
3	9.68	29.60	0.528	2.18
5	9.65	29.60	0.511	2.28
10	9.57	30.43	0.483	2.32
15	9.55	29.71	0.480	2.18
20	9.49	30.09	-----	2.48

STA 70-8 Time 0103 (+8)				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.57	29.62	0.538	2.39
3	9.44	29.61	0.529	2.37
5	9.58	29.62	0.531	2.32
10	9.56	29.64	0.494	2.28
15	9.56	29.71	0.493	2.23
20	9.37	30.00	0.465	2.18

STA 70-9 Time 0517 (+8)				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.54	29.68	0.511	2.21
3	9.53	29.67	0.502	2.29
5	9.54	29.69	0.496	2.29
10	9.52	29.69	0.485	2.16
15	9.55	29.76	0.482	2.26
20	9.39	30.21	0.424	2.51



Oceanographic Station Locations
 BROWN BEAR CRUISE 72
 12 - 13 November 1954

STA 72-1 47° 45.1' N WEATHER c.
 12 Nov 54 122° 25.8' W WIND ESE 5
 2051 (+8) DEPTH 157 fm 52°/50°F
 Point Jefferson

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.45	30.08	0.418	2.42
5	10.41	30.08	0.399	2.32
10	10.37	30.15	0.384	1.87
20	10.38	30.13	0.373	2.26
30	10.36	30.22	0.369	2.09
50	10.36	30.25	0.364	1.86
75	10.27	30.26	0.365	1.74
100	10.16	30.33	0.367	2.45
150	10.07	30.30	0.373	2.51
200	9.92	30.33	0.373	2.55
240	9.89	30.35	0.372	2.55
270	9.88	30.39	0.370	2.60

STA 72-2 47° 54.2' N WEATHER c.
 12 Nov 54 122° 29.3' W WIND SE 7
 2210 (+8) DEPTH 117 fm 51°/50°F
 Point No Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.50	29.78	0.402	2.48
5	10.46	29.80	0.405	2.37
10	10.43	29.94	0.392	2.12
20	10.30	30.08	0.376	2.27
30	10.28	30.09	0.376	1.93
50	10.20	30.15	0.377	2.22
75	10.11	30.20	0.376	2.40
100	9.97	30.26	0.380	2.55
125	9.92	30.31	0.380	2.44
155	9.85	30.37	0.376	2.55
185	9.78	30.41	0.376	2.64

STA 72-3 47° 53.6' N WEATHER c.
 13 No 54 122° 21.7' W WIND ESE 10
 0000 (+8) DEPTH 120 fm 51°/48°F
 Possession Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.48	28.13	0.372	2.50
5	10.55	29.23	0.334	2.52
10	10.53	30.00	0.341	2.36
20	10.47	30.10	0.356	2.44
30	10.44	30.15	0.346	2.52
49	10.37	30.22	0.338	2.48
74	10.32	30.26	0.342	2.39
99	10.16	30.27	0.358	2.68
138	10.05	30.32	0.364	2.61
177	9.97	30.37	0.360	2.57
216	9.97	30.39	0.348	2.67

STA 72-4 47° 59.0' N WEATHER c.
 13 Nov 54 122° 17.8' W WIND ESE 15
 0155 (+8) DEPTH 75 fm 50°/48°F
 Port Gardner

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.43	26.08	0.372	2.32
5	10.50	27.90	0.364	2.48
10	10.54	29.71	0.306	2.52
20	10.54	30.00	0.268	2.50
30	10.57	30.13	0.273	2.58
50	10.50	30.16	0.244	2.48
70	10.51	30.22	0.288	2.46
90	10.42	30.29	0.281	2.59
110	10.22	30.35	0.319	2.65
132	10.01	30.37	0.334	2.70

STA 72-5 47° 03.9' N WEATHER o.
 13 Nov 54 122° 20.0' W WIND ESE 16
 0316 (+8) DEPTH 65 fm 49°/47°F
 Camano Head, East of

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.05	21.08	0.504	2.07
5	10.28	25.35	0.462	2.33
10	10.44	28.05	0.357	2.42
20	10.54	29.84	0.296	2.63
30	10.55	30.04	0.276	2.62
50	10.13	30.08	0.189	2.83
70	10.56	30.23	0.221	2.59
90	10.43	30.33	0.214	2.88
110	10.35	30.35	0.241	3.04
113	10.34	30.36	0.238	3.07

STA 72-6 48° 09.1' N WEATHER o.
 13 Nov 54 122° 24.3' W WIND SE 9
 0433 (+8) DEPTH 55 fm 49°/47°F
 Port Susan, Head of

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.26	23.35	0.493	2.22
5	10.29	24.36	0.471	2.14
10	10.31	29.49	0.238	2.41
19	10.08	29.88	0.192	2.75
29	10.30	29.98	0.201	2.84
48	10.23	30.07	0.189	2.84
57	10.36	30.15	0.184	2.99
76	10.39	30.21	0.234	2.98
86	10.41	30.28	0.208	3.16

STA 72-7 48° 06.3' N WEATHER o.
 13 Nov 54 122° 22.3' W WIND SE 11
 0605 (+8) DEPTH 68 fm 50°/47°F
 Port Susan, Middle of

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.35	24.45	0.455	2.37
5	10.43	26.97	0.372	2.42
10	10.50	29.53	0.305	2.51
20	10.14	29.86	0.200	2.75
29	9.93	29.89	0.180	2.65
49	10.14	30.05	0.186	2.80
69	10.44	30.19	0.195	2.60
88	10.41	30.29	0.216	2.82
108	10.37	30.36	0.222	3.04
115	10.37	30.41	0.222	3.04

STA 72-8 48° 03.1' N WEATHER o.
 13 Nov 54 122° 22.8' W WIND SSE 8
 0723 (+8) DEPTH 95 fm 51°/48°F
 Camano Head, West of

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.26	25.85	0.437	2.10
5	10.44	28.91	0.307	2.46
10	10.47	29.97	0.271	2.61
20	10.47	30.09	0.275	2.42
30	10.51	30.17	0.278	2.49
50	10.45	30.24	0.282	2.51
75	10.43	30.27	0.293	2.56
100	10.32	30.34	0.304	2.70
125	10.16	30.36	0.317	2.77
150	10.18	30.35	0.317	2.77

STA 72-9 48° 06.8' N WEATHER c. 13 Nov 54 122° 29.7' W WIND SxW 10 0829 (+8) DEPTH 80 fm 54°/48° F East Point				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.34	26.40	0.465	2.50
5	10.36	26.45	0.454	2.49
10	10.53	29.65	0.287	2.45
19	10.53	29.80	0.284	2.71
28	10.56	29.99	0.276	2.52
47	10.50	30.16	0.281	2.66
71	10.49	30.23	0.282	2.65
95	10.44	30.26	0.281	2.73
125	10.37	30.29	0.285	2.82

STA 72-10 48° 11.5' N WEATHER c. 13 Nov 54 122° 33.2' W WIND SSE 15 0947 (+8) DEPTH 52 fm 51°/48° F Onamac Point				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.30	25.84	0.483	2.47
5	10.31	25.85	0.480	2.40
10	10.39	26.63	0.432	2.44
19	10.54	29.53	0.260	2.66
28	10.48	29.90	0.188	2.78
47	10.51	30.08	0.238	2.61
66	10.54	30.20	0.250	2.48
85	10.46	30.26	0.269	2.65

STA 72-11 48° 14.2' N WEATHER c. 13 Nov 54 122° 33.4' W WIND SE 24 1036 (+8) DEPTH 42 fm 52°/48° F Demock Point				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.29	25.78	0.483	2.34
5	10.26	25.81	0.491	2.41
9	10.27	25.83	0.482	2.38
18	10.48	29.20	0.264	2.64
27	10.50	29.90	0.211	2.71
45	10.50	30.14	0.211	2.60
69	10.54	30.22	0.245	2.74

STA 72-12 48° 18.5' N WEATHER c. 13 Nov 54 122° 29.5' W WIND SE 18 1136 (+8) DEPTH 14 fm 52°/48° F Strawberry Point, North of				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.16	25.14	0.471	2.60
2	10.14	25.17	0.470	2.53
5	10.13	25.25	0.462	2.51
10	10.35	27.65	0.320	2.34
20	10.52	30.01	0.229	3.28

STA 72-13 48° 21.4' N WEATHER o. 13 Nov 54 122° 33.4' W WIND SE 14 1244 (+8) DEPTH 12 fm 53°/49°F Goat Island				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.39	17.03	0.503	2.33
2	9.51	18.26	0.487	2.37
5	10.07	26.00	0.369	2.78
10	10.30	19.21	0.262	3.12

STA 72-14 48° 25.0' N WEATHER o. 13 Nov 54 122° 36.0' W WIND SE 24 1340 (+8) DEPTH 20 fm 54°/50°F Dewey				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.52	28.15	0.397	2.73
5	9.47	28.37	0.387	2.70
10	9.42	28.42	0.381	2.80
20	9.39	28.62	0.385	3.05
30	9.37	28.79	0.385	2.86

STA 72-15 48° 06.4' N WEATHER o. 13 Nov 54 122° 33.2' W WIND SE 16 1648 (+8) DEPTH 40 fm 51°/49°F Greenbank				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.49	27.48	0.437	2.51
5	10.52	27.49	0.436	2.60
10	10.54	28.25	0.376	2.80
20	10.53	29.67	0.281	2.76
30	10.52	29.92	0.263	2.84
40	10.49	30.08	0.260	2.84
50	10.49	30.13	0.266	2.60
60	10.54	30.18	0.267	2.58
81	10.45	30.17	0.268	2.58

STA 72-16 48° 04.8' N WEATHER 60 13 Nov 54 122° 32.1' W WIND SE 12 1801 (+8) DEPTH 30 fm 51°/49°F Dines Point				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.55	27.58	0.431	2.70
5	10.55	28.11	0.394	2.64
10	10.46	29.51	0.291	2.66
20	10.55	29.91	0.263	2.78
30	10.55	30.08	0.253	2.68
40	10.52	30.09	0.238	2.96
50	10.55	30.12	0.246	2.94

STA 72-17 48° 03.1' N WEATHER 60
 13 Nov 54 122° 31.2' W WIND SE 11
 1827 (+8) DEPTH 28 fm 50°/49°F
 Classic

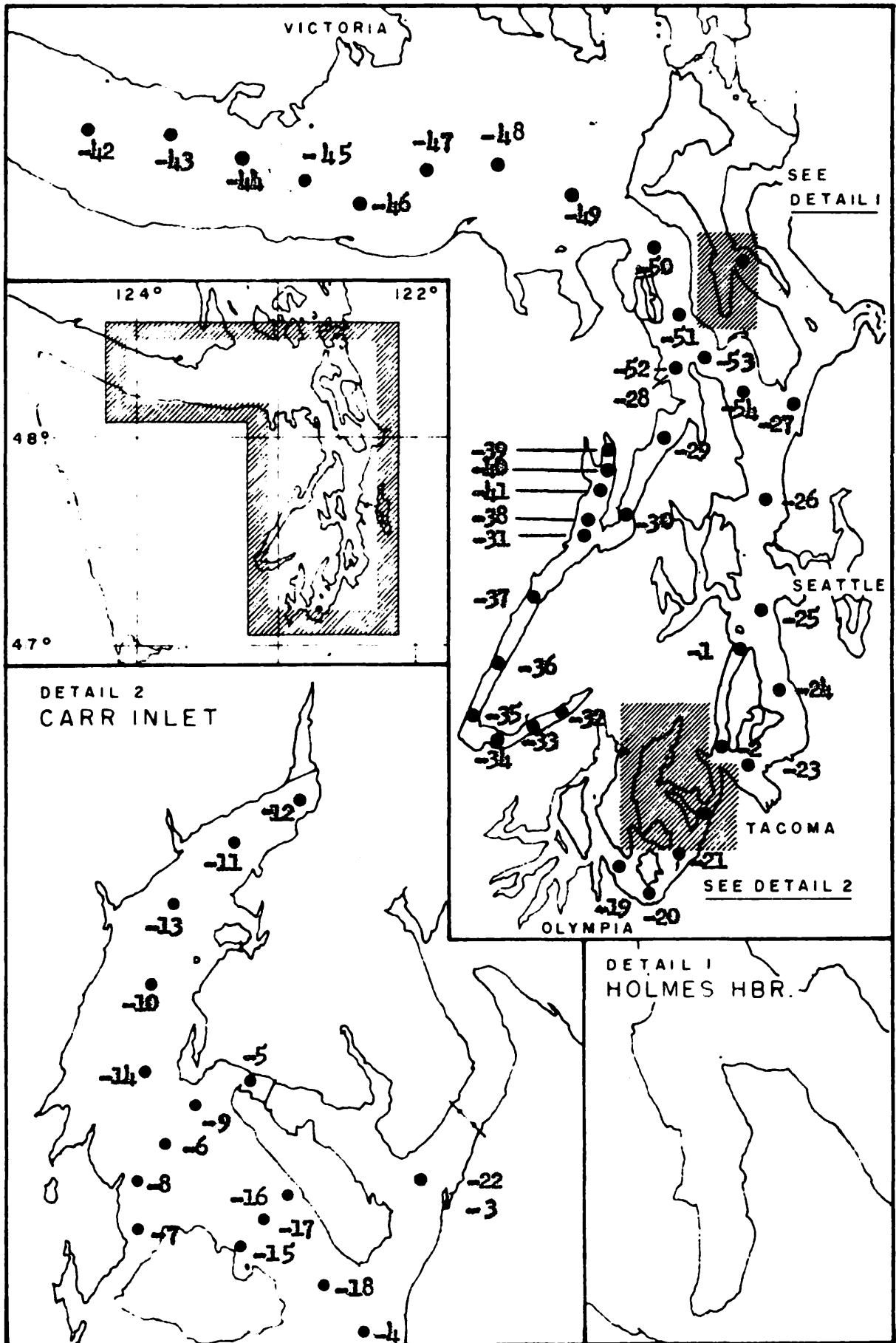
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
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0	10.56	28.18	0.405	2.70
5	10.55	28.23	0.409	2.59
10	10.54	29.47	0.285	2.47
20	10.50	29.98	0.196	3.06
30	10.49	30.00	0.217	2.87
40	10.51	30.10	0.205	2.99
48	10.49	30.14	0.232	3.20

STA 72-18 48° 01.6' N WEATHER 60
 13 Nov 54 122° 31.8' W WIND SE 11
 1917 (+8) DEPTH 22 fm 50°/49°F
 Holmes Harbor, Head of

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
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0	10.51	28.12	0.412	2.71
5	10.60	28.70	0.356	2.75
10	10.55	29.52	0.276	2.75
20	10.58	29.24	0.313	2.90
30	10.54	29.85	0.229	3.71
37	10.49	30.08	0.164	3.60



Oceanographic Station Locations
 BROWN BEAR CRUISE 73
 14 - 18 November 1954

STA 73-1 47° 30.7' N WEATHER c. 15 Nov 54 122° 29.2' W WIND Calm 1203 (+8) DEPTH 56 fm 52°/51°F Point Vashon				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.55	30.05	0.368	2.51
5	10.52	30.06	0.367	2.28
10	10.51	30.06	0.366	2.25
20	10.51	30.06	0.372	2.14
30	10.53	30.06	0.367	2.17
50	10.47	30.11	0.365	2.48
75	10.46	30.10	0.361	2.44
100	10.46	30.09	0.364	2.57

STA 73-2 47° 21.2' N WEATHER c. 15 Nov 54 122° 32.5' W WIND Calm 1345 (+8) DEPTH 55 fm 53°/52°F Spring Beach				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.54	29.98	0.382	2.28
5	10.52	29.97	0.378	2.51
10	10.51	30.00	0.375	2.45
20	10.51	30.00	0.375	2.51
30	10.53	30.02	0.372	2.49
50	10.49	30.03	0.370	2.43
75	10.44	30.09	0.365	2.49
95	10.34	30.17	0.360	2.55

STA 73-3 47° 14.9' N WEATHER c. 15 Nov 54 122° 34.2' W WIND SWxS 8 1510 (+8) DEPTH 35 fm 57°/53°F Day Island				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.65	29.91	0.379	2.43
10	10.62	29.91	0.376	2.51
20	10.64	29.91	0.374	2.45
30	10.63	29.91	0.377	2.64
50	10.66	29.92	0.376	2.69

STA 73-4 47° 11.8' N WEATHER c. 15 Nov 54 122° 34.9' W WIND SE 6 1558 (+8) DEPTH 71 fm 57°/51°F Toliva Shoal				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.81	29.71	0.393	2.65
5	10.78	29.72	0.390	2.63
10	10.78	29.72	0.387	2.48
20	10.76	29.76	0.389	2.33
30	10.75	29.82	0.378	2.68
49	10.68	29.88	0.374	2.64
73	10.65	29.87	0.381	2.66
97	10.62	29.88	0.377	2.66
121	10.59	29.90	0.376	2.66

STA 73-5 47° 16.8' N WEATHER 20 15 Nov 54 122° 39.4' W WIND SSE 4 1702 (+8) DEPTH 12 fm 57°/51° Warren				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.83	29.82	0.376	2.43
5	10.81	29.86	0.375	2.56
10	10.81	29.85	0.371	2.57
15	10.79	29.88	0.373	2.57
20	10.82	29.89	0.375	2.64

STA 73-6 47° 15.7' N WEATHER 20 15 Nov 54 122° 41.8' W WIND SxE 12 1740 (+8) DEPTH 48 fm 55°/51° South Head II				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.95	29.70	0.403	2.68
5	10.93	29.70	0.403	2.68
10	10.93	29.70	0.394	2.56
20	10.91	29.84	0.359	2.66
30	10.90	29.86	0.355	2.65
40	10.90	29.86	0.356	2.64
60	10.77	29.91	0.378	2.59
85	10.68	29.98	0.372	2.75

STA 73-7 47° 14.0' N WEATHER c. 15 Nov 54 122° 43.0' W WIND SxE 20 1827 (+8) DEPTH 8 fm 54°/50° South Head IV				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.84	29.71	0.413	2.68
5	10.86	29.71	0.407	2.61
10	10.88	29.71	0.406	2.65

STA 73-8 47° 14.8' N WEATHER c. 15 Nov 54 122° 42.9' W WIND SxE 16 1903 (+8) DEPTH 12 fm 53°/50° South Head III				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.95	29.69	0.406	2.66
5	10.91	29.74	0.397	2.68
10	10.91	29.76	0.393	2.68
15	10.89	29.76	0.391	2.69
20	10.92	29.76	0.406	-----

STA 73-9 47° 16.4' N WEATHER 63 15 Nov 54 122° 41.4' W WIND S 18 1949 (+8) DEPTH 52 fm 53°/50°F South Head I				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.95	29.75	0.401	----
5	10.95	29.75	0.401	2.65
10	10.95	29.75	0.399	2.66
20	10.93	29.76	0.398	2.66
30	10.91	29.80	0.398	2.70
40	10.84	29.81	0.389	2.53
60	10.85	29.87	0.378	2.55
80	10.74	29.90	0.365	2.70

STA 73-10 47° 18.8' N WEATHER 65 15 Nov 54 122° 42.4' W WIND SxE 20 2034 (+8) DEPTH 40 fm 52°/51°F Cutts Island, Southwest of				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.08	29.58	0.429	2.68
5	11.05	29.57	0.429	2.69
10	11.08	29.67	0.413	2.60
20	11.01	29.83	0.344	2.66
29	10.94	29.86	0.352	2.70
39	10.84	29.87	0.360	2.68
48	10.84	29.87	0.367	2.56
58	10.78	29.88	0.370	2.68

STA 73-11 47° 21.6' N WEATHER 65 15 Nov 54 122° 39.9' W WIND S 22 2122 (+8) DEPTH 16 fm 50°/49°F Elgin, East of				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.03	29.30	0.452	2.68
5	11.04	29.30	0.451	2.66
10	11.02	29.29	0.449	2.58
15	11.18	29.62	0.390	2.63
20	11.21	29.79	0.335	2.76
25	11.00	29.83	0.310	2.99

STA 73-12 47° 22.3' N WEATHER 65 15 Nov 54 122° 38.1' W WIND SxW 18 2158 (+8) DEPTH 9 fm 50°/49°F Wauna				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.06	29.22	0.437	2.75
3	11.05	29.23	0.434	2.68
6	11.06	29.29	0.435	2.46
10	11.06	29.31	0.425	2.56

STA 73-13 47° 20.4' N WEATHER 65
 15 Nov 54 122° 41.7' W WIND SSW 30
 2251 (+8) DEPTH 32 fm 50°/49°F
 Glencove, East of

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
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0	11.05	29.60	0.397	2.78
5	11.06	29.60	0.392	2.58
10	11.04	29.60	0.391	2.53
20	11.03	29.71	0.367	2.86
30	10.97	29.86	0.326	2.96
39	10.89	29.87	0.336	2.78
48	10.84	29.88	0.344	2.74

STA 73-14 47° 17.2' N WEATHER 65
 15 Nov 54 122° 42.2' W WIND S 30
 2351 (+8) DEPTH 57 fm 50°/49°F
 Green Point

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
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0	11.01	29.75	0.395	2.51
5	10.97	29.74	0.396	2.41
10	10.99	29.76	0.393	2.31
19	10.99	29.75	0.397	2.51
28	11.02	29.83	0.387	2.59
37	10.86	29.85	0.366	2.51
46	10.85	29.88	0.369	2.33
65	10.74	29.93	0.371	2.67
81	10.69	29.93	0.373	2.78

STA 73-15 47° 13.7' N WEATHER 65
 16 Nov 54 122° 39.9' W WIND S 24
 0058 (+8) DEPTH 30 fm 48°/48°F
 Still Harbor III

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
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0	10.85	29.79	0.404	2.46
5	10.84	29.83	0.394	2.29
10	10.84	29.84	0.389	2.38
20	10.81	29.85	0.386	2.58
29	10.79	29.88	0.384	2.54
39	10.72	29.88	0.385	2.48
48	10.74	29.90	0.381	2.52

STA 73-16 47° 14.6' N WEATHER 65
 16 Nov 54 122° 38.4' W WIND S 24
 0151 (+8) DEPTH 70 fm 49°/48°F
 Still Harbor I

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
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0	10.84	29.76	0.419	2.01
5	10.81	29.76	0.416	2.20
10	10.84	29.79	0.414	2.13
19	10.83	29.79	0.417	2.36
28	10.87	29.79	0.412	2.43
47	10.82	29.78	0.414	2.38
71	10.73	29.91	0.380	2.35
94	10.63	29.92	0.383	2.47
117	10.60	29.92	0.387	2.58

STA 73-17 47° 14.1' N WEATHER 20 16 Nov 54 122° 39.2' W WIND S 24 0251 (+8) DEPTH 67 fm 49°/49°F Still Harbor II				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.85	29.79	0.403	2.35
5	10.83	29.80	0.407	2.29
10	10.83	29.81	0.403	2.36
20	10.86	29.81	0.406	2.46
29	10.86	29.83	0.402	2.45
48	10.74	29.85	0.388	2.05
73	10.75	29.89	0.386	2.38
97	10.65	29.89	0.384	2.54
117	10.59	29.93	0.380	2.46

STA 73-18 47° 12.7' N WEATHER c. 16 Nov 54 122° 37.3' W WIND S 24 0347 (+8) DEPTH 89 fm 50°/50°F Gibson Point, Southwest of				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.78	29.86	0.402	2.46
5	10.76	29.84	0.401	2.34
10	10.76	29.84	0.397	2.35
19	10.77	29.85	0.399	2.40
29	10.78	29.85	0.396	2.28
48	10.73	29.85	0.400	2.53
72	10.73	29.87	0.385	2.56
96	10.66	29.88	0.388	2.48
125	10.63	29.90	0.385	2.46
154	10.62	29.91	0.385	2.57

STA 73-19 47° 10.2' N WEATHER c. 16 Nov 54 122° 47.5' W WIND S 8 0542 (+8) DEPTH 47 fm 50°/49°F Devils Head				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.91	29.44	0.425	2.43
5	10.92	29.45	0.428	2.38
10	10.93	29.45	0.423	2.34
20	10.95	29.47	0.418	2.29
30	10.95	29.54	0.414	2.32
50	10.86	29.69	0.399	2.60
75	10.83	29.76	0.385	2.60

STA 73-20 47° 07.2' N WEATHER c. 16 Nov 54 122° 42.8' W WIND SSW 8 0648 (+8) DEPTH 34 fm 50°/49°F Nisqually Reach				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.75	29.72	0.406	2.55
5	10.75	29.72	0.406	2.61
10	10.72	29.73	0.398	2.57
20	10.67	29.79	0.394	2.61
39	10.68	29.88	0.388	2.62
59	10.65	29.90	0.382	2.57

STA 73-21 47° 11.3' N WEATHER c.
 16 Nov 54 122° 37.9' W WIND SSW 16
 0759 (+8) DEPTH 92 fm 51°/50°F
 Gordon Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.71	29.64	0.416	2.57
5	10.71	29.65	0.414	2.51
10	10.70	29.67	0.412	2.48
19	10.72	29.73	0.409	2.51
29	10.73	29.75	0.405	2.56
48	10.68	29.79	0.403	2.42
73	10.69	29.85	0.397	2.46
97	10.65	29.84	0.394	2.58
126	10.61	29.85	0.390	2.79
155	10.65	29.86	0.383	2.69

STA 73-22 47° 14.9' N WEATHER o.
 16 Nov 54 122° 34.4' W WIND SW 13
 0859 (+8) DEPTH 32 fm 50°/49°F
 Day Island

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.55	30.00	0.389	2.60
5	10.49	30.04	0.390	2.61
10	10.40	30.09	0.381	2.56
19	10.41	30.09	0.384	2.56
29	10.43	30.09	0.383	2.56
48	10.41	30.09	0.380	2.48

STA 73-23 47° 19.3' N WEATHER o.
 16 Nov 54 122° 27.7' W WIND SxW 15
 1029 (+8) DEPTH 97 fm 54°/50°F
 Brown Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.48	29.71	0.414	2.55
5	10.45	29.70	0.413	2.54
10	10.48	29.88	0.405	2.53
19	10.48	29.99	0.398	2.50
29	10.51	30.02	0.385	2.50
48	10.33	30.18	0.367	2.48
73	10.21	30.29	0.360	2.50
97	10.13	30.29	0.359	2.58
126	10.12	30.31	0.359	2.62
155	10.04	30.31	0.361	2.62

STA 73-24 47° 26.6' N WEATHER c.
 16 Nov 54 122° 23.6' W WIND S 16
 1200 (+8) DEPTH 135 fm 54°/50°F
 Pully Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.49	29.95	0.429	2.37
5	10.48	29.96	0.423	2.36
10	10.48	29.98	0.411	2.32
20	10.48	30.01	0.410	2.24
30	10.50	30.02	0.414	2.24
50	10.41	30.06	0.404	2.18
75	10.44	30.10	0.392	2.41
100	10.29	30.17	0.383	2.56
140	10.14	30.26	0.371	2.56
180	10.10	30.30	0.373	2.60
220	10.09	30.31	0.370	2.60

STA 73-25 47° 34.3' N WEATHER 20
 16 Nov 54 122° 26.3' W WIND S 16
 1321 (+8) DEPTH 130 fm 54°/51°F
 Alki Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.47	30.08	0.404	2.36
5	10.45	30.08	0.404	2.31
10	10.45	30.08	0.402	2.31
19	10.47	30.10	0.401	2.18
28	10.50	-----	0.398	2.18
47	10.40	30.08	0.390	2.23
71	10.37	30.11	0.386	2.14
94	10.29	30.14	0.380	2.54
132	10.10	30.29	0.375	2.61
169	10.06	30.28	0.379	2.61
207	9.96	30.34	0.376	2.74

STA 73-26 47° 45.1' N WEATHER 20
 16 Nov 54 122° 25.6' W WIND S 18
 1454 (+8) DEPTH 156 fm 52°/50°F
 Point Jefferson

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.36	29.29	0.405	2.40
5	10.36	30.00	0.405	2.36
10	10.34	30.14	0.397	2.26
19	10.33	30.15	0.394	2.16
28	10.33	30.17	0.394	2.16
47	10.24	30.24	0.385	2.45
71	10.25	30.23	0.385	-----
95	10.10	30.26	0.385	2.55
130	9.99	30.25	0.384	2.54
168	9.85	30.32	0.388	2.59
184	9.83	30.34	0.391	2.59
222	9.79	30.35	0.394	2.42

STA 73-27 47° 54.2' N WEATHER o.
 16 Nov 54 122° 28.8' W WIND SSE 16
 1628 (+8) DEPTH 112 fm 51°/49°F
 Point No Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.16	30.20	0.409	2.35
5	10.15	30.20	0.408	2.30
10	10.17	30.21	0.403	2.58
20	10.16	30.18	0.404	2.11
30	10.15	30.21	0.396	2.44
50	10.12	30.20	0.398	2.11
75	10.14	30.22	0.398	2.11
93	10.02	30.23	0.397	2.54
120	9.95	30.24	0.404	2.58
148	9.91	-----	0.400	2.58
176	9.87	-----	0.402	2.57

STA 73-28 47° 56.4' N WEATHER 20
 16 Nov 54 122° 37.9' W WIND SSW 17
 1813 (+8) DEPTH 65 fm 50°/49°F
 Tala Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.78	-----	0.442	2.45
5	9.74	-----	0.440	2.44
8	9.73	-----	0.445	2.45
17	9.62	-----	0.421	2.45
25	9.55	-----	0.407	2.65
41	9.50	-----	0.407	2.38
62	9.56	-----	0.405	2.38
82	9.36	30.68	0.405	2.55

STA 73-29 47° 50.0' N WEATHER c.
 16 Nov 54 122° 40.0' W WIND S 20
 2017 (+8) DEPTH 39 fm 50°/49°F
 South Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
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0	9.83	28.29	0.433	2.52
5	9.82	28.44	0.440	2.51
10	9.80	28.77	0.428	2.40
19	9.71	29.69	0.403	2.53
28	9.56	30.26	0.394	2.54
38	9.44	30.53	0.391	2.56
57	9.42	30.63	0.391	2.55

STA 73-30 47° 42.0' N WEATHER c.
 16 Nov 54 122° 45.6' W WIND SE 5
 2202 (+8) DEPTH 72 fm 49°/48°F
 Hazel Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
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0	9.99	27.38	0.397	2.60
5	10.01	27.62	0.379	2.58
10	9.94	29.00	0.365	2.48
20	9.87	30.10	0.324	2.60
19	9.82	30.10	0.337	2.68
29	9.83	30.16	0.332	2.68
48	9.69	30.30	0.360	2.64
77	9.68	30.33	0.363	2.64
107	9.50	30.44	0.375	2.82

STA 73-31 47° 40.1' N WEATHER c.
 16 Nov 54 122° 52.5' W WIND Calm
 2353 (+8) DEPTH 76 fm 47°/46°F
 Pleasant Harbor

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
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0	9.90	26.79	0.406	2.46
5	10.04	28.44	0.353	2.51
10	10.06	29.82	0.274	2.33
20	10.04	30.07	0.278	2.46
30	10.09	30.21	0.268	2.41
50	10.09	30.28	0.270	2.32
75	9.93	30.30	0.307	2.34
100	9.84	30.32	0.323	2.57
130	9.64	30.39	0.361	2.56
131	9.61	30.39	0.357	2.61

STA 73-32 47° 23.9' N WEATHER c.
 17 Nov 54 122° 55.9' W WIND Calm
 0422 (+8) DEPTH 120 fm 47°/47°F
 Lynch Cove, Head of

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
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0	9.78	21.69	0.578	1.98
2	9.91	24.04	0.510	2.21
6	10.05	28.12	0.220	2.90
10	9.96	29.28	0.190	3.44
14	9.90	29.89	0.037	4.03
18	9.98	30.05	0.053	----

STA 73-33 47° 22.7' N WEATHER 20 17 Nov 54 122° 59.8' W WIND S 2 0452 (+8) DEPTH 20 fm 48°/47°F Lynch Cove, Middle of				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.85	24.38	0.484	2.38
5	10.02	28.80	0.179	3.24
10	9.94	29.59	0.103	3.50
20	10.02	30.09	0.144	3.04
30	10.13	30.23	0.185	3.40
31	10.10	30.24	0.193	3.54

STA 73-34 47° 21.6' N WEATHER 20 17 Nov 54 123° 03.9' W WIND SE 6 0540 (+8) DEPTH 25 fm 49°/48°F Tahuya River				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.63	22.75	0.479	2.50
5	10.07	29.62	0.173	3.21
10	10.03	29.96	0.159	3.04
20	10.07	30.09	0.177	3.05
30	10.14	30.24	0.206	3.02
40	10.14	30.32	0.221	3.06

STA 73-35 47° 23.2' N WEATHER 62 17 Nov 54 123° 07.8' W WIND Calm 0615 (+8) DEPTH 58 fm 47°/47°F Musqueti Point				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.73	23.91	0.410	2.62
5	10.02	29.84	0.243	3.00
10	10.00	30.02	0.172	2.96
20	10.08	30.18	0.213	2.74
30	10.15	30.24	0.232	2.64
39	10.16	30.29	0.234	2.60
49	10.20	30.30	0.235	2.59
59	10.13	30.33	0.233	2.78
78	10.14	30.35	0.231	2.92
98	10.11	30.37	0.235	2.96
105	10.11	30.36	0.236	3.01

STA 73-36 47° 28.8' N WEATHER 62 17 Nov 54 123° 03.8' W WIND Calm 0822 (+8) DEPTH 87 fm 48°/47°F Eagle Creek				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.59	22.90	0.422	2.40
5	9.96	29.06	0.252	2.60
10	9.97	29.55	0.238	2.54
20	10.02	30.10	0.220	2.34
30	10.13	30.23	0.247	2.33
40	10.15	30.26	0.259	2.26
50	10.14	30.31	0.264	2.16
75	10.07	30.34	0.274	2.72
100	10.05	30.36	0.283	2.74
125	10.01	30.37	0.293	2.72
150	9.94	30.37	0.309	2.71

STA 73-37 47° 35.8' N WEATHER 62
 17 Nov 54 122° 57.9' W WIND SW 12
 0932 (+8) DEPTH 95 fm 49°/48°F
 Tekiu Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.45	24.96	0.452	2.42
5	9.98	27.76	0.346	2.56
10	10.06	28.63	0.309	2.48
20	10.03	29.89	0.248	2.42
30	10.08	30.18	0.251	2.43
40	10.14	30.25	0.259	2.62
50	10.12	30.29	0.273	2.56
75	9.96	30.35	0.296	2.76
100	9.92	30.36	0.304	2.76
130	9.82	30.37	0.317	2.77
160	9.80	30.38	0.321	2.80
174	9.82	30.39	0.312	2.53

STA 73-38 47° 41.8' N WEATHER 62
 17 Nov 54 122° 51.7' W WIND SxW 10
 1050 (+8) DEPTH 82 fm 48°/47°F
 Tskutsko Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.80	25.75	0.508	2.08
5	10.01	27.20	0.483	2.10
10	10.13	29.34	0.304	2.32
20	10.06	30.11	0.275	2.30
30	10.15	30.26	0.243	2.92
40	10.14	30.26	0.249	2.70
50	10.01	30.32	0.296	2.49
60	9.89	30.34	0.315	2.46
80	9.85	30.33	0.316	2.72
100	9.95	30.35	0.287	2.72
120	9.85	30.35	0.306	2.80
148	9.66	30.37	0.350	2.55

STA 73-39 47° 50.0' N WEATHER 60
 17 Nov 54 122° 48.7' W WIND SxW 12
 1221 (+8) DEPTH 30 fm 49°/48°F
 Dabob Bay, Head of

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.91	24.70	0.565	1.86
5	10.00	25.87	0.563	1.93
10	10.02	26.50	0.559	1.79
20	10.11	30.15	0.186	3.16
30	10.14	30.22	0.187	3.21
40	10.10	30.31	0.217	3.09

STA 73-40 47° 47.0' N WEATHER 60
 17 Nov 54 122° 48.3' W WIND SxW 10
 1257 (+8) DEPTH 85 fm 48°/48°F
 Bolton Peninsula, East of

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.11	26.80	0.542	1.93
5	10.12	26.79	0.536	1.86
10	10.16	26.93	0.538	1.74
20	10.13	29.29	0.211	2.58
30	10.15	30.31	0.224	2.88
40	10.10	30.33	0.241	2.54
59	10.11	30.35	0.264	2.61
79	9.96	30.36	0.280	2.76
118	9.84	30.35	0.302	2.76
138	9.80	30.36	0.312	2.75
156	9.76	30.37	0.323	2.74

STA 73-41 47° 45.0' N WEATHER 64
 17 Nov 54 122° 49.3' W WIND SxW 20
 1355 (+8) DEPTH 106 fm 49°/49°F
 Tabook Point

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	10.12	27.02	0.532	2.03
5	10.09	26.99	0.529	2.00
10	10.12	27.01	0.524	1.94
20	10.11	30.15	0.223	2.79
30	10.16	30.23	0.207	2.84
40	10.13	30.31	0.216	2.41
60	10.09	30.35	0.260	2.28
80	9.96	30.35	0.284	2.72
100	9.93	30.34	0.322	2.52
120	9.87	30.35	0.304	2.66
140	9.83	30.35	0.317	2.66
150	9.81	30.36	0.315	2.69
160	9.80	30.35	0.322	2.55
180	9.74	30.36	0.334	2.67
187	9.71	30.35	0.331	2.52
189	9.70	30.38	0.331	----

STA 73-42 48° 18.0' N WEATHER c.
 18 Nov 54 124° 02.7' W WIND WxS 12
 0303 (+8) DEPTH 105 fm 51°/51°F
 Pillar Point

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.67	30.88	0.559	1.65
5	9.62	30.91	0.496	1.59
10	9.63	30.89	0.494	1.53
20	9.41	31.04	0.481	1.64
30	8.87	31.47	0.433	2.16
50	8.60	31.62	0.365	1.72
75	8.46	31.88	0.343	2.17
100	8.32	32.10	0.322	2.22
140	7.71	32.78	0.276	2.41
180	7.39	33.21	0.246	2.39

STA 73-43 48° 18.2' N WEATHER c.
 18 Nov 54 123° 52.7' W WIND
 0422 (+8) DEPTH 97 fm 52°/52°F
 Otter Point

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.95	30.13	0.545	0.88
5	11.96	30.15	0.539	0.75
10	11.92	30.31	0.538	0.76
20	11.77	30.49	0.529	0.80
30	11.14	31.05	0.490	1.06
50	9.99	31.24	0.435	1.34
75	9.31	31.29	0.415	1.92
100	8.48	31.71	0.361	2.31
130	8.23	32.07	0.328	2.40
160	7.54	33.03	0.265	2.38

STA 73-44 48° 15.6' N WEATHER b.c.
 18 Nov 54 123° 40.6' W WIND NE 4
 0544 (+8) DEPTH 103 fm 52°/52°F
 Beechy Head

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.62	30.31	0.532	0.92
5	11.62	30.31	0.530	0.84
10	11.62	30.39	0.523	0.81
19	10.98	30.91	0.490	1.07
28	9.89	31.11	0.438	1.48
47	9.18	31.22	0.357	2.08
71	8.94	31.34	0.340	2.13
94	8.76	31.41	0.392	2.28
132	8.42	31.73	0.359	2.36
169	7.72	32.85	0.271	2.47

STA 73-45 48° 14.4' N WEATHER c. 18 Nov 54 123° 31.3' W WIND NE 6 0657 (+8) DEPTH 95 fm 51°/51°F Race Rocks				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.13	30.54	0.515	1.16
5	10.94	30.67	0.498	1.20
10	10.80	30.79	0.490	1.26
19	10.29	30.90	0.475	1.41
28	10.25	30.94	0.469	1.50
47	9.74	30.99	0.460	1.60
71	8.74	31.20	0.400	1.99
94	8.65	31.27	0.391	2.38
122	8.47	31.64	0.368	2.44
151	8.40	31.78	0.353	2.43

STA 73-46 48° 12.1' N WEATHER c. 18 Nov 54 123° 23.2' W WIND ESE 7 0751 (+8) DEPTH 72 fm 52°/52° Ediz Hook				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	11.46	30.64	0.523	0.94
5	11.35	30.66	0.513	1.04
10	10.86	30.77	0.495	1.20
19	9.30	31.01	0.441	2.13
28	8.77	31.10	0.413	2.42
48	8.68	31.26	0.396	2.30
72	8.67	31.41	0.394	2.36
95	8.44	31.70	0.363	2.38
119	8.41	31.73	0.365	2.41

STA 73-47 48° 15.1' N WEATHER c. 18 Nov 54 123° 12.9' W WIND Calm 0858 (+8) DEPTH 81 51°/50°F New Dungeness, Northwest of				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.84	31.07	0.441	2.37
5	8.80	31.10	0.422	2.33
10	8.72	31.25	0.415	2.28
20	8.73	31.30	0.404	2.42
30	8.65	31.42	0.389	2.00
50	8.60	31.47	0.390	2.24
75	8.67	31.48	0.385	2.28
100	8.59	31.55	0.390	2.37
130	8.38	31.81	0.351	2.45

STA 73-48 48° 15.7' N WEATHER c. 18 Nov 54 123° 02.4' W WIND ExS 7 1000 (+8) DEPTH 97 fm 52°/51°F New Dungeness, Northeast of				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.75	31.01	0.466	1.85
5	9.57	31.04	0.456	1.99
10	9.34	31.09	0.444	2.00
20	9.05	31.17	0.429	2.22
30	9.08	31.27	0.423	2.18
50	8.95	31.38	0.407	1.76
75	8.77	31.64	0.385	2.16
100	8.45	31.80	0.354	2.37
130	8.39	31.87	0.346	2.40
160	8.31	31.96	0.341	2.62

STA 73-49 48° 12.4' N WEATHER c.
 18 Nov 54 122° 52.4' W WIND SESE 9
 1106 (+8) DEPTH 55 fm 52°/51°F
 Protection Island

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
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0	10.94	30.80	0.503	1.27
5	10.66	30.83	0.491	1.38
10	9.94	31.00	0.474	1.68
20	9.65	31.11	0.466	1.82
30	9.64	31.18	0.454	1.58
50	9.39	31.26	0.438	1.92
70	9.06	31.44	0.420	2.09
85	8.94	31.44	0.417	2.11

STA 73-50 48° 08.3' N WEATHER c.
 18 Nov 54 122° 41.7' W WIND SESE 28
 1223 (+8) DEPTH 61 fm 53°/51°F
 Port Townsend

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
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0	9.43	30.62	0.448	2.48
5	9.40	30.62	0.451	2.40
10	9.39	30.62	0.448	2.27
20	9.41	30.62	0.448	2.41
30	9.43	30.65	0.448	2.40
50	9.30	30.82	0.441	2.28
65	9.18	30.98	0.436	2.28
87	8.97	31.00	0.436	2.29

STA 73-51 48° 02.0' N WEATHER 20
 18 Nov 54 122° 37.3' W WIND ESE 12
 1423 (+8) DEPTH 72 fm 52°/52°F
 Bush Point

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
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0	9.77	29.99	0.456	2.20
5	9.74	30.04	0.448	2.13
10	9.71	30.18	0.441	2.09
20	9.72	30.18	0.440	2.00
30	9.68	30.30	0.442	2.01
50	9.59	30.49	0.438	2.24
75	9.49	30.62	0.440	2.28
100	9.18	30.88	0.433	2.28

STA 73-52 47° 56.4' N WEATHER 20
 18 Nov 54 122° 38.3' W WIND ESE 12
 1536 (+8) DEPTH 67 fm 54°/53°F
 Tala Point

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
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0	9.87	28.58	0.464	2.24
5	9.68	29.64	0.435	2.12
10	9.55	30.38	0.428	2.06
20	9.51	30.47	0.419	2.14
30	9.46	30.55	0.416	2.03
50	9.39	30.65	0.416	2.26
75	9.39	30.71	0.418	2.24
100	9.24	30.81	0.414	2.33

STA 73-53 47° 57.6' N WEATHER 20
 18 Nov 54 122° 34.8' W WIND SE 8
 1622 (+8) DEPTH 60 fm 53°/52°F
 Double Bluff

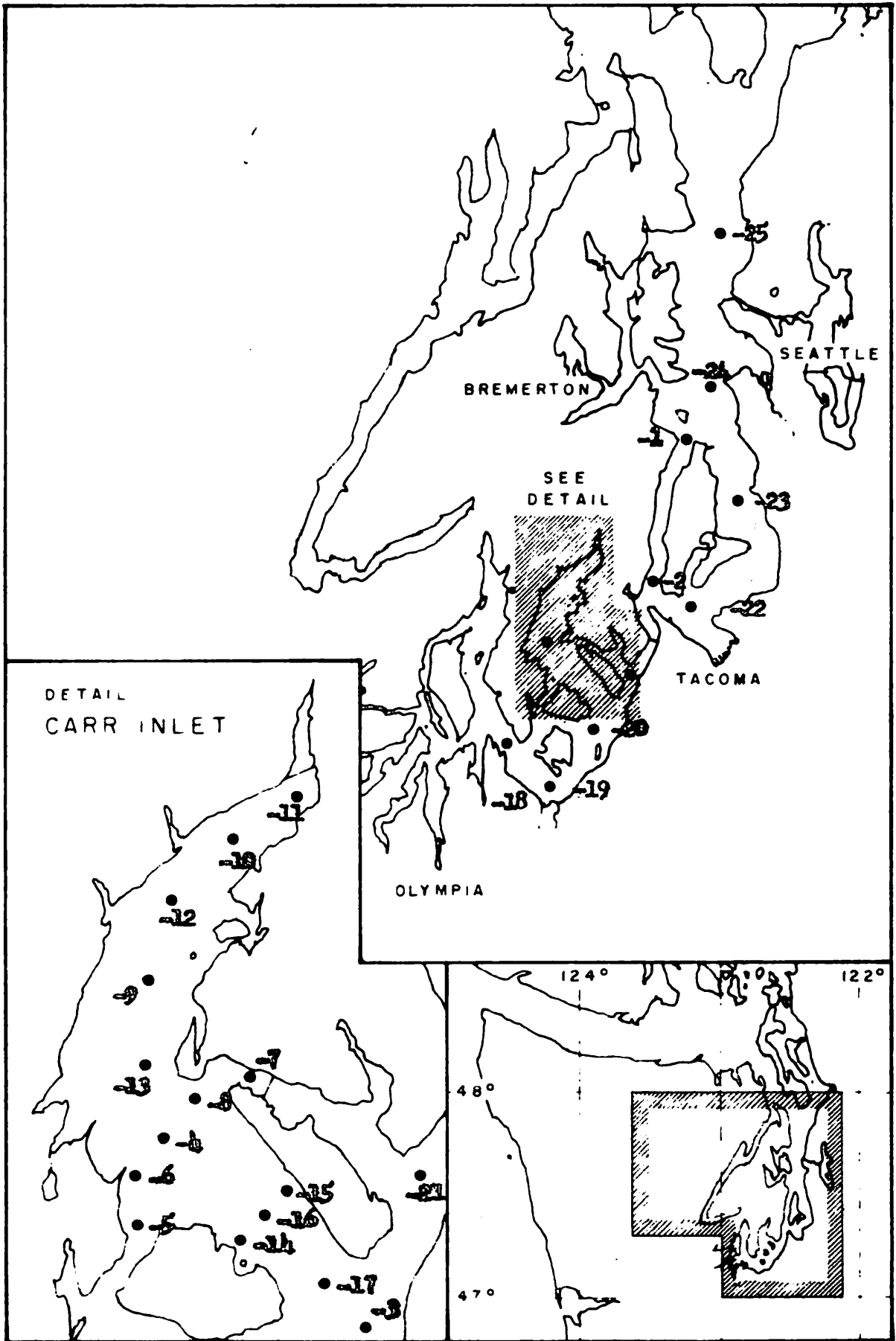
STA 73-54 47° 54.3' N WEATHER 20
 18 Nov 54 122° 28.7' W WIND Calm
 1730 (+8) DEPTH 110 fm 53°/52°F
 Point No Point

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
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0	10.34	29.97	0.428	2.20
5	10.34	29.96	0.427	2.24
10	10.32	29.95	0.423	2.12
20	10.32	30.06	0.418	2.05
30	10.07	30.17	0.414	2.07
50	9.94	30.20	0.421	2.27
75	9.78	30.29	0.426	2.32
100	9.43	30.64	0.426	2.37

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
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0	10.17	30.18	0.416	2.26
10	10.15	30.17	0.417	2.28
19	10.12	30.18	0.413	2.26
47	10.12	30.21	0.410	2.26
94	10.10	30.21	0.405	2.28
122	10.00	30.26	0.415	2.24
151	9.93	30.34	0.413	2.17
188	9.75	30.39	0.413	2.34



Oceanographic Station Locations
 BROWN BEAR CRUISE 77
 13 - 14 December 1954

20KM JW-2L-CH-8 11.12.1954 53

STA 77-1 47° 30.9' N WEATHER c. 13 Dec 54 122° 29.5' W WIND SSW 24 1227 (+8) DEPTH 57 fm 48°/45°F Point Vashon				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.88	29.58	0.426	2.50
5	9.86	29.58	0.429	2.36
10	9.89	29.56	0.429	2.44
19	9.85	29.58	0.428	2.49
28	9.90	29.57	0.424	2.53
47	9.87	29.58	0.424	2.35
70	9.88	29.58	0.425	2.67
93	9.87	29.60	0.427	2.63

STA 77-2 47° 21.3' N WEATHER 51 13 Dec 54 122° 32.1' W WIND SxW 16 1420 (+8) DEPTH 55 fm 46°/44°F Spring Beach				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.96	29.57	0.421	2.63
5	9.92	29.57	0.420	2.45
9	9.91	29.58	0.424	2.37
19	9.89	29.58	0.427	2.45
28	9.90	29.59	0.424	2.67
47	9.88	29.59	0.424	2.68
70	9.88	29.59	0.426	2.65
89	9.87	29.60	0.421	2.71

STA 77-3 47° 11.6' N WEATHER c. 13 Dec 54 122° 35.8' W WIND S 14 1600 (+8) DEPTH 75 fm 48°/46°F Toliva Shoal				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.78	29.37	0.441	2.34
5	9.80	29.39	0.441	2.62
10	9.83	29.41	0.438	2.62
20	9.80	29.43	0.437	2.57
30	9.86	29.43	0.436	2.49
44	9.82	29.44	0.434	2.53
74	9.82	29.44	0.435	2.69
98	9.83	29.49	0.429	2.66
123	9.84	29.50	0.424	2.75

STA 77-4 47° 16.0' N WEATHER c. 13 Dec 54 122° 42.0' W WIND S 12 1713 (+8) DEPTH 50 fm 48°/46°F South Head II				
Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.65	29.39	0.460	2.71
5	9.66	29.39	0.458	2.78
10	9.72	29.39	0.455	2.66
20	9.72	29.41	0.445	2.40
30	9.76	29.41	0.445	2.69
40	9.76	29.43	0.452	2.66
60	9.88	29.44	0.438	2.75
85	9.91	29.48	0.427	2.75

STA 77-5 47° 13.9' N WEATHER c. 13 Dec 54 122° 42.9' W WIND S 4 1800 (+8) DEPTH 9 fm 47°/45°F South Head IV				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.68	29.37	0.459	2.62
5	9.68	29.39	0.458	2.52
10	9.72	29.39	0.455	2.62
15	9.67	29.39	0.459	2.55

STA 77-6 47° 14.8' N WEATHER c. 13 Dec 54 122° 42.5' W WIND S 4 1836 (+8) DEPTH 13 fm 45°/44°F South Head III				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.66	29.42	0.457	2.51
5	9.68	29.42	0.455	2.34
10	9.70	29.42	0.456	2.25
15	9.66	29.42	0.455	2.56
20	9.77	29.43	0.452	2.50

STA 77-7 47° 16.8' N WEATHER c. 13 Dec 54 122° 39.4' W WIND S 3 1918 (+8) DEPTH 12 fm 46°/44°F Warren				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.72	29.39	0.462	2.56
5	9.70	29.39	0.453	2.48
10	9.74	29.39	0.453	2.66
15	9.68	29.39	0.452	2.61
20	9.76	29.43	0.454	2.66

STA 77-8 47° 16.2' N WEATHER b.c. 13 Dec 54 122° 40.9' W WIND S 4 1947 (+8) DEPTH 50 fm 46°/44°F South Head I				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.70	29.43	0.457	2.60
5	9.72	29.43	0.454	2.42
10	9.73	29.42	0.456	2.52
20	9.68	29.42	0.458	2.57
30	9.78	29.42	0.457	2.38
40	9.72	29.42	0.456	2.69
60	9.74	29.41	0.457	2.70
80	9.70	29.40	0.457	2.74

STA 77-9 47° 19.0' N WEATHER b.c. 13 Dec 54 122° 42.5' W WIND S 10 2032 (+8) DEPTH 37 fm 46°/44°F Cutts Island, Southwest of				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.64	29.34	0.473	2.57
5	9.65	29.40	0.472	2.50
10	9.67	29.39	0.473	2.40
20	9.68	29.42	0.464	2.45
30	9.77	29.42	0.462	2.36
40	9.76	29.40	0.457	2.32
50	9.90	29.47	0.436	2.73
60	9.96	29.48	0.408	2.80

STA 77-10 47° 21.5' N WEATHER b.c. 13 Dec 54 122° 39.8' W WIND S 7 2113 (+8) DEPTH 15 fm 45°/44°F Elgin, East of				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.83	28.77	0.523	2.54
5	8.85	28.75	0.522	2.32
10	9.04	28.93	0.517	2.52
15	9.12	29.05	0.507	2.36
20	9.44	29.23	0.483	2.40
25	9.47	29.24	0.478	2.37

STA 77-11 47° 22.4' N WEATHER b.c. 13 Dec 54 122° 38.2' W WIND WSW 4 2138 (+8) DEPTH 8 fm 45°/44°F Wauna				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	8.48	28.11	0.545	2.62
3	8.49	28.09	0.549	2.41
6	8.76	28.32	0.535	2.18
10	8.91	28.77	0.524	2.18

STA 77-12 47° 20.3' N WEATHER b.c. 13 Dec 54 122° 41.7' W WIND SSW 8 2216 (+8) DEPTH 28 fm 45°/44°F Glencove, East of				
Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.40	29.27	0.496	2.34
5	9.39	29.25	0.497	2.29
10	9.43	29.29	0.490	2.28
20	9.52	29.35	0.476	2.38
30	9.69	29.38	0.465	2.08
40	9.63	29.38	0.473	2.31
50	9.70	29.36	0.458	2.65

STA 77-13 47° 17.0' N WEATHER o.
 13 Dec 54 122° 42.5' W WIND SSW 7
 2258 (+8) DEPTH 53 fm 45°/44°F
 Green Point

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.66	29.40	0.467	2.27
5	9.66	29.40	0.465	2.38
10	9.70	29.42	0.466	2.28
20	9.64	29.42	0.445	2.16
30	9.86	29.42	0.440	2.12
40	9.88	29.42	0.435	2.22
50	9.91	29.44	0.431	2.33
70	9.92	29.43	0.427	2.28
90	9.94	29.47	0.415	2.34

STA 77-14 47° 13.7' N WEATHER o.
 13 Dec 54 122° 39.8' W WIND Calm
 2343 (+8) DEPTH 32 fm 45°/43°F
 Still Harbor III

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.72	29.41	0.459	2.39
5	9.69	29.41	0.458	2.33
10	9.72	29.41	0.457	2.29
20	9.66	29.41	0.458	2.30
30	9.75	29.41	0.458	2.29
40	9.69	29.41	0.453	2.42
50	9.71	29.42	0.454	2.69

STA 77-15 47° 14.7' N WEATHER o.
 14 Dec 54 122° 38.6' W WIND ESE 4
 0032 (+8) DEPTH 32 fm 46°/44°F
 Still Harbor I

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.77	29.43	0.455	2.60
5	9.75	29.43	0.457	2.54
10	9.80	29.42	0.454	2.60
20	9.72	29.42	0.455	2.65
30	9.82	29.42	0.453	2.48
50	9.85	29.44	0.440	2.54
75	9.84	29.46	0.435	2.68
93	9.82	29.48	0.441	2.64
118	9.82	29.49	0.435	2.70

STA 77-16 47° 14.2' N WEATHER o.
 14 Dec 54 122° 39.3' W WIND ESE 5
 0120 (+8) DEPTH 67 fm 47°/44°F
 Still Harbor II

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.77	29.43	0.461	2.68
5	9.78	29.42	0.453	2.57
10	9.81	29.43	0.448	2.70
20	9.76	29.43	0.448	2.68
30	9.82	29.44	0.450	2.60
50	9.82	29.44	0.448	2.57
75	9.80	29.44	0.446	2.65
100	9.86	29.45	0.440	2.71
120	9.90	29.46	0.419	----

STA 77-17 47° 12.7' N WEATHER o.
 14 Dec 54 122° 37.3' W WIND S 8
 0230 (+8) DEPTH 90 fm 47°/45°F
 Gibson Point, Southwest of

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.76	29.43	0.454	2.64
5	9.78	29.43	0.452	2.51
10	9.82	29.44	0.453	2.61
20	9.75	29.44	0.452	2.61
30	9.85	29.44	0.448	2.48
50	9.90	29.44	0.441	2.52
75	9.89	29.46	0.437	2.73
100	9.88	29.46	0.429	2.60
130	9.88	29.46	0.435	2.75
160	9.86	29.46	0.435	2.75

STA 77-18 47° 10.0' N WEATHER b.c.
 14 Dec 54 122° 47.2' W WIND SSE 6
 0427 (+8) DEPTH 49 fm 48°/46°F
 Devils Head

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.50	28.93	0.474	2.74
5	9.50	28.93	0.466	2.60
10	9.54	28.94	0.466	2.72
20	9.56	29.10	0.461	2.66
30	9.77	29.19	0.452	2.58
50	9.77	29.28	0.445	2.57
75	9.82	29.33	0.442	2.66

STA 77-19 47° 07.1' N WEATHER b.c.
 14 Dec 54 122° 42.4' W WIND SSE 7
 0536 (+8) DEPTH 35 fm 46°/45°F
 Nisqually Reach

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.76	29.34	0.455	2.74
5	9.77	29.34	0.446	2.70
10	9.82	29.34	0.445	2.70
20	9.74	29.34	0.448	2.66
40	9.90	29.43	0.442	2.65
60	9.85	29.48	0.436	2.65

STA 77-20 47° 11.0' N WEATHER b.
 14 Dec 54 122° 38.1' W WIND S 2
 0636 (+8) DEPTH 92 fm 47°/45°F
 Gordon Point

Depth (m)	Temp (°C)	Sal (°/oo)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.71	29.22	0.455	2.37
5	9.72	29.22	0.453	2.33
10	9.75	29.24	0.452	2.13
19	9.71	29.28	0.449	2.31
29	9.82	29.33	0.448	2.18
48	9.77	29.35	0.448	2.44
72	9.83	29.45	0.449	2.74
97	9.78	29.41	0.449	2.70
126	9.82	29.52	0.440	2.70
155	9.82	29.54	0.439	2.61

STA 77-21 47° 14.8' N WEATHER b.c.
 14 Dec 54 122° 34.4' W WIND S 4
 0738 (+8) DEPTH 32 fm 47°/45°F
 Day Island

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.90	29.69	0.430	2.49
5	9.90	29.69	0.426	2.34
10	9.91	29.69	0.428	1.84
20	9.86	29.69	0.426	1.80
30	9.95	29.69	0.428	----
50	9.90	29.69	0.426	2.11

STA 77-22 47° 19.3' N WEATHER o.
 14 Dec 54 122° 27.9' W WIND SE 16
 0910 (+8) DEPTH 93 fm 50°/46°F
 Brown Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.40	28.61	0.484	1.52
5	9.40	28.69	0.484	1.58
9	9.59	29.04	0.468	2.22
19	9.62	29.43	0.466	2.15
29	9.83	29.60	0.445	2.02
48	9.93	29.70	0.429	2.03
72	10.02	29.80	0.418	2.66
97	10.01	29.92	0.406	2.64
125	10.02	29.96	0.395	2.71
154	10.04	30.00	-----	2.74

STA 77-23 47° 26.4' N WEATHER o.
 14 Dec 54 122° 23.6' W WIND SxW 18
 1034 (+8) DEPTH 132 fm 52°/48°F
 Pully Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.59	29.45	0.468	2.32
5	9.58	29.44	0.473	2.32
10	9.62	29.44	0.471	2.17
20	9.60	29.50	0.467	2.20
30	9.72	29.51	0.461	2.19
50	9.68	29.51	0.458	2.16
75	9.86	29.60	0.443	2.81
100	9.94	29.80	0.413	2.70
140	10.04	30.05	0.393	2.75
180	10.04	30.05	0.389	2.76
220	10.05	30.07	0.390	2.78

STA 77-24 47° 34.2' N WEATHER o.
 14 Dec 54 122° 26.4' W WIND SSE 22
 1150 (+8) DEPTH 137 fm 52°/48°F
 Alki Point

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.80	29.60	0.439	2.63
5	9.82	29.60	0.444	2.58
9	9.84	29.60	0.448	2.74
19	9.80	29.60	0.443	2.63
28	9.88	29.60	0.445	2.41
47	9.85	29.66	0.432	2.37
71	9.86	29.71	0.424	2.52
94	9.90	29.83	0.413	2.71
132	9.94	29.87	0.404	2.76
169	9.95	29.94	0.412	2.81
207	9.97	29.96	0.397	2.82

STA 77-25 47° 45.1' N WEATHER o.
 14 Dec 54 122° 25.2' W WIND SxE 32
 1331 (+8) DEPTH 160 fm 52°/49°F
 Point Jefferson

Depth (m)	Temp (°C)	Sal (‰)	O ₂ (mg-at/L)	PO ₄ (ug-at/L)
0	9.68	29.52	0.461	2.61
5	9.72	29.52	0.456	2.55
9	9.73	29.52	0.461	2.52
19	9.67	29.55	0.457	2.50
28	9.74	29.57	0.450	2.53
46	9.70	29.64	0.438	2.33
70	9.68	29.66	0.447	2.66
93	9.61	29.67	0.433	2.63
139	9.53	29.73	0.422	2.60
184	9.66	29.76	0.424	2.62
222	9.79	29.88	0.402	2.66
250	9.90	29.89	0.385	2.45

APPENDIX A

Results of Sulfite Waste Liquor Determinations
Values Reported in Parts Per Million
of Sulfite Waste Liquor Containing
Ten Percent by Weight of Solids

APPENDIX A

Results of Pearle-Benson Test

(Values in ppm sulfite waste liquor
adjusted to 10% solids by weight)

(T = less than 5 ppm)

STATION 46-14		STATION 46-15		STATION 46-16		STATION 46-17	
Depth (m)	SWL (ppm)	Depth (m)	SWL (ppm)	Depth (m)	SWL (ppm)	Depth (m)	SWL (ppm)
0	7.0	0	7.0	0	11.0	0	11.5
5	T	5	T	5	T	5	T
9	0.0	10	5.0	10	9.5	10	T
18	T	20	5.5	20	16.5	20	T
28	T	30	T	30	82.0	30	T
47	T	50	T	50	0.0	49	7.0
71	T	80	5.0	75	75.0	69	15.0
94	T	110	28.0	100	166.0	79	11.5
138	T					89	9.0
178	T					99	14.0
217	6.0					109	11.5
						124	7.5
STATION 46-18		STATION 46-19		STATION 46-20		STATION 46-21	
Depth (m)	SWL (ppm)	Depth (m)	SWL (ppm)	Depth (m)	SWL (ppm)	Depth (m)	SWL (ppm)
0	11.0	0	9.0	0	T	0	T
5	T	5	T	5	5.0	5	T
10	0.0	10	T	10	T	10	T
20	T	20	T	20	5.5	20	T
30	T	30	T	30	T	30	T
50	5.0	40	5.0	50	T	49	5.0
70	11.5	50	11.0	75	5.0	77	7.5
80	11.5	60	12.5	100	7.0	98	9.0
90	15.0	70	15.5	125	9.0	127	9.0
100	15.5	80	15.0	150	10.5		
110	11.0						
123	9.0						

APPENDIX A

Results of Pearle-Benson Test

STATION 53-27		STATION 53-28		STATION 53-29		STATION 53-30	
Depth (m)	SWL (ppm)	Depth (m)	SWL (ppm)	Depth (m)	SWL (ppm)	Depth (m)	SWL (ppm)
0	0.0	0	7.0	0	0.0	0	0.0
5	T	5	7.0	5	0.0	5	0.0
10	0.0	10	8.6	10	0.0	10	0.0
19	0.0	20	0.0	20	T	20	T
29	0.0	30	10.0	30	T	30	6.0
48	0.0	50	T	49	13.0	40	T
73	0.0	80	13.5	69	24.0	60	6.0
97	T	110	6.2	88	12.0	80	12.0
135	0.0	134	0.0	98	8.0	81	12.0
174	0.0			108	8.5		
212	0.0			120	5.7		
STATION 53-31		STATION 53-32		STATION 53-33		STATION 53-38	
Depth (m)	SWL (ppm)	Depth (m)	SWL (ppm)	Depth (m)	SWL (ppm)	Depth (m)	SWL (ppm)
0	0.0	0	0.0	0	T	0	0.0
5	0.0	5	0.0	5	T	5	T
10	0.0	10	T	10	T	10	T
20	5.0	20	7.2	20	0.0	19	0.0
30	5.0	30	5.0	30	T	29	T
50	5.5	49	T	50	0.0	48	0.0
70	14.0	73	T	75	0.0	72	0.0
90	12.0	98	5.5	100	T	96	5.5
100	12.3	123	0.0	130	T		
110	11.5	147	0.0				
126	T						
STATION 53-40		STATION 55-1		STATION 55-2		STATION 55-3	
Depth (m)	SWL (ppm)	Depth (m)	SWL (ppm)	Depth (m)	SWL (ppm)	Depth (m)	SWL (ppm)
0	0.0	0	0.0	0	T	0	0.0
2	0.0	5	0.0	5	T	5	0.0
5	0.0	10	0.0	10	0.0	10	T
10	T	20	0.0	20	0.0	20	6.5
20	T	30	0.0	30	0.0	30	0.0
		50	0.0	50	0.0	50	T
		75	0.0	75	0.0	70	6.2
		100	0.0	100	0.0	90	T
		140	0.0	125	0.0	100	0.0
		180	0.0	138	0.0	110	0.0
		220	0.0			127	T

APPENDIX A

Results of Pearle-Benson Test

STATION 55-4

Depth (m)	SWL (ppm)
0	0.0
5	0.0
10	0.0
20	T
30	T
39	T
59	T
78	0.0
82	T

STATION 55-5

Depth (m)	SWL (ppm)
0	0.0
5	0.0
10	0.0
20	0.0
30	T
50	0.0
70	T
90	0.0
100	0.0
110	0.0
127	0.0

STATION 55-6

Depth (m)	SWL (ppm)
0	0.0
5	0.0
10	0.0
19	0.0
29	0.0
48	0.0
71	0.0
95	0.0
121	0.0
144	0.0

STATION 55-7

Depth (m)	SWL (ppm)
0	0.0
5	0.0
10	0.0
20	0.0
30	0.0
50	0.0
75	0.0
100	0.0
130	0.0

STATION 55-12

Depth (m)	SWL (ppm)
0	0.0
5	0.0
10	0.0
20	0.0
30	0.0
50	0.0
75	0.0
100	0.0

STATION 55-14

Depth (m)	SWL (ppm)
0	0.0
3	0.0
5	0.0
10	0.0
20	0.0

STATION 55-16

Depth (m)	SWL (ppm)
0	0.0
5	0.0
10	0.0
19	0.0
29	0.0

STATION 58-42

Depth (m)	SWL (ppm)
0	T
5	T
10	0.0
20	0.0
30	0.0
50	T
75	0.0
100	0.0
139	0.0
179	0.0
218	0.0

STATION 58-43

Depth (m)	SWL (ppm)
0	T
5	T
10	T
20	29.5
30	13.5
49	15.5
68	9.0
87	7.0
106	T
138	0.0

STATION 58-44

Depth (m)	SWL (ppm)
0	0.0
5	T
10	T
20	6.2
30	5.9
40	T
49	6.5
68	7.5
87	6.2
96	T
105	T
116	0.0

STATION 58-45

Depth (m)	SWL (ppm)
0	T
5	T
10	T
20	7.5
30	T
40	T
59	7.0
78	T
88	T

STATION 58-47

Depth (m)	SWL (ppm)
0	0.0
5	0.0
9	0.0
19	0.0
29	0.0
48	T
70	0.0
93	0.0
116	0.0
139	0.0

APPENDIX A

Results of Pearle-Benson Test

STATION 58-48

Depth (m)	SWL (ppm)
0	0.0
5	0.0
10	0.0
19	0.0
28	0.0
47	0.0
69	T
91	T
114	0.0

STATION 58-53

Depth (m)	SWL (ppm)
0	0.0
5	T
10	T
20	T
30	T
49	0.0
73	0.0
96	0.0

STATION 58-55

Depth (m)	SWL (ppm)
0	0.0
2	0.0
5	T
10	T
20	0.0

STATION 58-57

Depth (m)	SWL (ppm)
0	0.0
5	0.0
10	0.0
20	0.0
30	0.0

STATION A-190

Depth (m)	SWL (ppm)
0	0.0
5	T
10	T
20	0.0
30	0.0
50	11.5
75	32.8
100	T
140	0.0
180	0.0
220	0.0

STATION A-191

Depth (m)	SWL (ppm)
0	9.0
5	T
10	T
20	9.8
30	11.5
40	32.8
50	32.8
70	11.5
90	6.0
110	T
125	T

STATION A-192

Depth (m)	SWL (ppm)
0	T
5	T
10	T
20	9.1
30	9.1
40	8.9
50	7.0
70	20.0
90	18.9
100	10.5
110	5.5
120	T

STATION A-193

Depth (m)	SWL (ppm)
0	T
5	5.5
10	7.5
20	10.8
30	8.5
40	12.0
60	5.6
80	T
87	T

STATION A-194

Depth (m)	SWL (ppm)
0	T
5	0.0
10	7.0
20	10.0
30	7.0
40	12.5
50	T
70	T
90	T
100	T
110	T

STATION A-195

Depth (m)	SWL (ppm)
0	T
5	T
9	T
18	T
28	T
46	T
70	T
93	T
116	T
139	0.0

STATION A-200

Depth (m)	SWL (ppm)
0	T
5	T
10	T
20	T
30	T
50	T
75	T
100	T
125	T

STATION A-203

Depth (m)	SWL (ppm)
0	T
2	0.0
5	0.0
10	T
20	T

APPENDIX A

Results of Pearle-Benson Test

STATION 63-62		STATION 63-63		STATION 63-64		STATION 63-65	
Depth (m)	SWL (ppm)	Depth (m)	SWL (ppm)	Depth (m)	SWL (ppm)	Depth (m)	SWL (ppm)
0	T	0	T	0	0.0	0	0.0
5	0.0	5	0.0	5	0.0	5	T
10	0.0	10	0.0	10	0.0	10	T
20	0.0	20	T	20	0.0	20	T
30	0.0	30	T	30	T	30	7.4
50	5.0	40	7.1	40	0.0	40	T
75	5.3	50	T	50	T	60	8.9
100	T	70	6.9	70	11.6	80	T
140	0.0	90	6.9	90	13.5	95	5.0
180	0.0	110	5.5	110	T		
220	0.0	141	T	129	T		
STATION 63-66		STATION 63-66A		STATION 63-67		STATION 63-68	
Depth (m)	SWL (ppm)	Depth (m)	SWL (ppm)	Depth (m)	SWL (ppm)	Depth (m)	SWL (ppm)
0	0.0	60	11.6	0	T	0	0.0
5	0.0	80	7.5	5	T	5	T
10	0.0	90	7.5	10	T	10	0.0
20	T	100	5.5	20	T	20	T
30	T	110	T	30	0.0	30	0.0
40	5.2	115	T	50	0.0	50	T
50	6.4	120	7.0	75	T	75	T
70	7.8	125	T	100	T	100	T
90	6.3			125	T	130	T
110	T			150	T		
122	T						
STATION 63-74		STATION 63-75		STATION 63-76		STATION A-304	
Depth (m)	SWL (ppm)	Depth (m)	SWL (ppm)	Depth (m)	SWL (ppm)	Depth (m)	SWL (ppm)
0	T	0	0.0	0	0.0	0	0.0
5	0.0	2	0.0	2	0.0	5	0.0
10	T	5	0.0	5	0.0	10	0.0
20	T	10	0.0	10	T	20	0.0
30	T	20	T			30	0.0
50	T						
70	T						

APPENDIX A

Results of Pearle-Benson Test

STATION A-305		STATION A-306		STATION A-307		STATION A-308	
Depth (m)	SWL (ppm)	Depth (m)	SWL (ppm)	Depth (m)	SWL (ppm)	Depth (m)	SWL (ppm)
0	0.0	0	0.0	0	0.0	0	T
2	T	2	0.0	5	T	5	T
5	T	5	0.0	10	T	10	T
10	T	10	T	20	0.0	20	T
		20	T	30	0.0	30	T
				50	T	50	T
				70	0.0	70	-----
				88	T	90	-----
STATION A-313		STATION A-314		STATION A-315		STATION A-316	
Depth (m)	SWL (ppm)	Depth (m)	SWL (ppm)	Depth (m)	SWL (ppm)	Depth (m)	SWL (ppm)
0	0.0	0	0.0	0	T	0	T
5	0.0	5	T	5	5.5	5	6.2
10	T	10	T	10	T	10	T
20	T	20	6.2	20	T	20	T
30	T	30	10.1	30	T	30	T
50	T	50	11.0	40	7.0	40	7.5
75	T	75	6.2	60	12.0	50	15.5
100	T	100	5.5	80	0.0	70	19.0
125	6.9	125	T	86	19.0	90	15.4
		150	T			110	T
						123	0.0
STATION A-317		STATION A-318		STATION A-319		STATION 66-98	
Depth (m)	SWL (ppm)	Depth (m)	SWL (ppm)	Depth (m)	SWL (ppm)	Depth (m)	SWL (ppm)
0	0.0	0	T	0	T	0	T
5	T	5	5.0	5	T	5	5.7
10	T	10	10.0	10	T	10	7.1
20	T	20	9.0	20	0.0	20	T
30	T	30	9.4	30	0.0	29	T
40	8.5	40	-----	50	0.0	49	T
50	11.5	50	T	75	0.0	74	0.0
70	33.8	70	8.0	100	0.0	98	0.0
90	20.5	90	5.5	140	0.0	128	T
110	7.5	110	T	180	0.0		
123	T	133	0.0	220	0.0		

APPENDIX A

Results of Pearle-Benson Test

STATION 66-103		STATION 66-104		STATION 66-105		STATION 66-106			
Depth (m)	SWL (ppm)	Depth (m)	SWL (ppm)	Depth (m)	SWL (ppm)	Depth (m)	SWL (ppm)		
0	T	0	----	0	7.9	0	T		
5	9.5	5	11.4	5	8.5	5	6.0		
10	9.0	10	14.5	10	6.0	10	8.8		
20	8.8	20	14.9	20	10.5	20	12.1		
30	5.2	30	17.4	30	12.0	30	5.5		
50	T	40	11.8	40	10.5	40	T		
75	T	50	6.2	60	9.5	50	12.5		
100	T	70	5.5	80	T	70	T		
125	T	90	T	93	0.0	90	T		
150	0.0	110	5.0			110	0.0		
		120	T			120	T		
STATION 66-107		STATION 66-108		STATION 72-3		STATION 72-4			
Depth (m)	SWL (ppm)	Depth (m)	SWL (ppm)	Depth (m)	SWL (ppm)	Depth (m)	SWL (ppm)		
0	18.0	0	0.0	0	6.5	0	12.5		
5	5.5	5	0.0	5	T	5	T		
10	T	10	0.0	10	0.0	10	T		
20	0.0	20	0.0	20	0.0	20	11.5		
30	0.0	30	0.0	30	0.0	30	6.9		
40	0.0	50	0.0	49	0.0	50	8.0		
50	23.0	75	0.0	74	0.0	70	T		
70	18.0	100	0.0	99	0.0	90	----		
90	31.2	140	0.0	138	0.0	110	T		
110	T	180	0.0	177	0.0	132	0.0		
133	0.0	220	0.0	216	0.0				
STATION 72-5		STATION 72-6		STATION 72-7		STATION 72-8		STATION 72-9	
Depth (m)	SWL (ppm)	Depth (m)	SWL (ppm)	Depth (m)	SWL (ppm)	Depth (m)	SWL (ppm)	Depth (m)	SWL (ppm)
0	T	0	T	0	6.0	0	6.5	0	T
5	T	5	T	5	T	5	T	5	T
10	T	10	----	10	T	10	T	10	0.0
20	T	19	6.7	20	T	20	T	19	T
30	T	29	5.8	29	T	30	T	28	T
50	T	48	T	49	T	50	T	47	0.0
70	6.2	57	T	69	T	75	0.0	71	0.0
90	6.0	76	----	88	T	100	0.0	95	T
110	T	86	T	108	T	125	0.0	125	T
113	T			115	0.0	150	T		

APPENDIX B

Results of Soluble-Silicate Determinations

From BROWN BEAR CRUISE 63

8 - 12 July 1954

APPENDIX B

Results of Soluble-Silicate Determination

STATION 63-1		STATION 63-3		STATION 63-5		STATION 63-7	
Depth (m)	SiO ₂ -Si (ug-at/L)	Depth (m)	SiO ₂ -Si (ug-at/L)	Depth (m)	SiO ₂ -Si (ug-at/L)	Depth (m)	SiO ₂ -Si (ug-at/L)
0	30	0	30	0	35	0	30
5	30	5	35	5	35	5	35
10	30	10	35	10	40	10	35
20	35	20	35	20	40	20	38
30	--	30	--	30	--	30	--
50	--	50	--	50	--	50	--
75	--	75	--	75	--	75	35
95	--	100	40	100	35	100	40
		140	40			140	40
		180	45			180	45
STATION 63-9		STATION 63-11		STATION 63-13		STATION 63-15	
Depth (m)	SiO ₂ -Si (ug-at/L)	Depth (m)	SiO ₂ -Si (ug-at/L)	Depth (m)	SiO ₂ -Si (ug-at/L)	Depth (m)	SiO ₂ -Si (ug-at/L)
0	40	0	40	0	35	0	30
5	35	5	38	5	35	5	30
10	35	10	35	10	35	10	30
20	--	20	38	20	35	20	35
30	--	30	--	30	--	30	35
50	--	50	--	50	35	50	--
75	45	75	40	75	35	75	--
100	45	100	45	100	35	100	35
125	45	130	40				
		160	43				
STATION 63-17		STATION 63-19		STATION 63-21		STATION 63-23	
Depth (m)	SiO ₂ -Si (ug-at/L)	Depth (m)	SiO ₂ -Si (ug-at/L)	Depth (m)	SiO ₂ -Si (ug-at/L)	Depth (m)	SiO ₂ -Si (ug-at/L)
0	15	0	28	0	28	0	32
5	20	5	18	5	26	5	32
10	28	10	18	10	30	10	42
20	30	20	38	20	37	20	45
30	30	30	38	30	48	30	50
40	--	40	40	40	52	40	65
60	30	50	--	50	--	50	60
		75	50	75	62	60	60
		100	55	100	65	80	70
		120	55	125	65	100	70
				150	68	112	70

APPENDIX B

Results of Soluble-Silicate Determination

STATION 63-25		STATION 63-26		STATION 63-27		STATION 63-28	
Depth (m)	SiO ₂ -Si (ug-at/L)	Depth (m)	SiO ₂ -Si (ug-at/L)	Depth (m)	SiO ₂ -Si (ug-at/L)	Depth (m)	SiO ₂ -Si (ug-at/L)
0	26	0	25	0	15	0	12
5	50	2	23	5	15	5	12
10	50	5	62	10	18	10	12
20	68	10	70	20	37	20	45
30	75	14	70	30	40	30	47
34	75	18	--	40	45	40	55
				50	47	44	55
				60	45		
				76	48		
				96	48		
				116	48		
				135	50		
				145	58		
				155	85		
				174	90		
				192	100		
STATION 63-30		STATION 63-31		STATION 63-32		STATION 63-33	
Depth (m)	SiO ₂ -Si (ug-at/L)	Depth (m)	SiO ₂ -Si (ug-at/L)	Depth (m)	SiO ₂ -Si (ug-at/L)	Depth (m)	SiO ₂ -Si (ug-at/L)
0	20	0	20	0	27	0	38
5	18	5	27	5	30	4	38
10	18	9	37	10	35	8	38
20	36	19	35	20	37	16	38
29	40	28	37	29	35	24	37
39	40	47	35	49	35	40	30
59	45	70	35	74	35	60	35
78	50	93	38	98	37	80	37
98	50			118	37	121	35
117	50			146	35	162	37
152	90			173	35	194	40
						270	40

APPENDIX B

Results of Soluble-Silicate Determination

STATION 63-34		STATION 63-35		STATION 63-36		STATION 63-41	
Depth (m)	SiO ₂ -Si (ug-at/L)	Depth (m)	SiO ₂ -Si (ug-at/L)	Depth (m)	SiO ₂ -Si (ug-at/L)	Depth (m)	SiO ₂ -Si (ug-at/L)
0	38	0	45	0	37	0	28
4	38	5	30	5	37	5	30
9	37	10	37	10	37	10	30
18	37	20	35	20	37	20	37
27	37	30	37	30	37	30	35
40	38	50	37	50	--	50	38
61	38	75	37	75	37	75	38
81	38	100	37	100	37	100	42
110	38	140	38	130	38	110	47
144	38	180	37	160	38		
176	38	220	40				
STATION 63-43		STATION 63-47		STATION 63-48		STATION 63-49	
Depth (m)	SiO ₂ -Si (ug-at/L)	Depth (m)	SiO ₂ -Si (ug-at/L)	Depth (m)	SiO ₂ -Si (ug-at/L)	Depth (m)	SiO ₂ -Si (ug-at/L)
0	12	0	12	0	10	0	10
5	15	5	12	5	10	3	10
10	28	10	18	10	20	6	10
20	32	20	30	15	32	10	25
30	35	30	30	20	32		
40	35	40	38	25	35		
60	37	50	35				
85	47	60	38				
STATION 63-50		STATION 63-51		STATION 63-52		STATION 63-53	
Depth (m)	SiO ₂ -Si (ug-at/L)	Depth (m)	SiO ₂ -Si (ug-at/L)	Depth (m)	SiO ₂ -Si (ug-at/L)	Depth (m)	SiO ₂ -Si (ug-at/L)
0	8	0	15	0	20	0	45
5	12	5	15	3	12	5	15
10	18	10	25	6	12	10	18
20	35	20	37	10	15	15	30
30	35	30	37			20	40
40	37	40	40			25	65
50	40	60	40				
		85	40				

APPENDIX B

Results of Soluble-Silicate Determination

STATION 63-54		STATION 63-55		STATION 63-56		STATION 63-57	
Depth (m)	SiO ₂ -Si (ug-at/L)	Depth (m)	SiO ₂ -Si (ug-at/L)	Depth (m)	SiO ₂ -Si (ug-at/L)	Depth (m)	SiO ₂ -Si (ug-at/L)
0	30	0	20	0	25	0	35
5	25	5	20	5	25	5	32
10	28	10	20	10	--	10	32
15	40	15	22	20	25	20	35
25	40	20	25	30	28	40	35
35	40	30	30	50	30	60	38
45	38	35	40	75	30		
STATION 63-58		STATION 63-59		STATION 63-60		STATION 63-61	
Depth (m)	SiO ₂ -Si (ug-at/L)	Depth (m)	SiO ₂ -Si (ug-at/L)	Depth (m)	SiO ₂ -Si (ug-at/L)	Depth (m)	SiO ₂ -Si (ug-at/L)
0	30	0	35	0	35	0	35
5	28	5	35	5	35	5	37
10	30	10	35	10	35	10	37
20	30	20	35	20	37	20	35
30	30	30	35	30	35	30	35
50	30	50	35	50	35	50	35
70	35			70	35	75	37
100	40			90	37	100	37
130	38						
160	38						
STATION 63-61A		STATION 63-62		STATION 63-63		STATION 63-64	
Depth (m)	SiO ₂ -Si (ug-at/L)	Depth (m)	SiO ₂ -Si (ug-at/L)	Depth (m)	SiO ₂ -Si (ug-at/L)	Depth (m)	SiO ₂ -Si (ug-at/L)
0	37	0	40	0	40	0	35
5	35	5	37	5	28	5	35
10	35	10	38	10	28	10	30
20	35	20	38	20	35	20	30
30	33	30	35	30	37	30	30
50	33	50	37	40	35	40	33
75	--	75	--	50	37	50	33
100	33	100	38	70	45	70	50
150	35	140	37	90	45	90	50
200	40	180	40	110	45	110	50
240	38	220	40	141	40	129	60
270	40						

APPENDIX B

Results of Soluble-Silicate Determination

STATION 63-67		STATION 63-68		STATION 63-69		STATION 63-70	
Depth (m)	SiO ₂ -Si (ug-at/L)	Depth (m)	SiO ₂ -Si (ug-at/L)	Depth (m)	SiO ₂ -Si (ug-at/L)	Depth (m)	SiO ₂ -Si (ug-at/L)
0	30	0	30	0	20	0	20
5	35	5	30	5	28	5	20
10	30	10	35	10	33	10	28
20	--	20	35	20	35	20	38
30	35	30	37	30	45	30	45
50	40	50	40	35	50	40	48
75	--	75	--			48	60
100	40	100	50				
125	45	130	50				
150	50						
STATION 63-71		STATION 63-72		STATION 63-73		STATION 63-74	
Depth (m)	SiO ₂ -Si (ug-at/L)	Depth (m)	SiO ₂ -Si (ug-at/L)	Depth (m)	SiO ₂ -Si (ug-at/L)	Depth (m)	SiO ₂ -Si (ug-at/L)
0	15	0	27	0	30	0	30
5	20	5	25	5	20	5	25
10	30	10	32	10	30	10	30
20	35	20	35	20	40	20	30
30	35	30	42	30	38	30	35
40	35	40	50	50	40	50	35
50	60	50	55	75	45	70	45
		60	55	100	--		
		71	65				
STATION 63-75		STATION 63-76		STATION 63-77			
Depth (m)	SiO ₂ -Si (ug-at/L)	Depth (m)	SiO ₂ -Si (ug-at/L)	Depth (m)	SiO ₂ -Si (ug-at/L)		
0	50	0	45	0	35		
2	42	2	38	5	35		
5	37	5	35	10	35		
10	35	10	40	15	35		
20	35			25	30		
				30	32		

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