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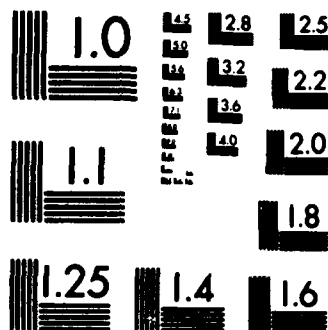
LITERATURE REVIEW OF TIDAL CURRENTS AND MARINE SEDIMENT 1/1
STUDIES IN REGARD. (U) EVANS-HAMILTON INC SEATTLE WA
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LITERATURE REVIEW OF TIDAL CURRENTS AND MARINE SEDIMENT STUDIES IN REGARDS TO THE PROPOSED PHASE II DISPOSAL SITES

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FINAL REPORT

**LITERATURE REVIEW OF
TIDAL CURRENTS AND MARINE SEDIMENT STUDIES
IN REGARDS TO THE PROPOSED PHASE II
DISPOSAL SITES**

by

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Prepared for
Seattle District Corps of Engineers

DECEMBER 1986



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INTRODUCTION

As literature review entailed compiling numerous investigations of tidal currents and marine sediment which pertained specifically to the following areas: Rosario Strait, Strait of Juan de Fuca, Admiralty Inlet, and southern Puget Sound. This review will assist the PSDDA work group in selecting Phase II ZSPs for further consideration.

(Puget Sound Dredged Disposal Analysis)
(Issues of Siting Feasibility)

TIDAL CURRENT DATA

The currents both within and near the ZSPs are presented in three tables (Tables 1, 2, and 3) by geographic area; Rosario Strait, Strait of Juan de Fuca/Admiralty Inlet, and southern Puget Sound. The sites have been numbered consecutively from north to south for ease in identification on the accompanying station maps. Current data presented are in whole tidal days (e.g., one tidal day = 24.84 hours). Sources are listed for measurements not available at the time the tables were compiled.

GRANULOMETRIC DATA

The granulometric tables are divided into three geographic areas (Tables 4, 5, and 6). In each table each sample is identified by a cruise number and station number (see Table 7 for cruise dates and investigator).

Latitude and longitude are tabulated in degrees and minutes, and when known, the sampling device was noted.

The sediment parameters are expressed as percentage gravel, sand, silt, and clay. They are the results of granulometric analyses presented in Roberts (1974). The remaining data tabulated under the comments column pertain to the studies conducted by Shelford et al. (1935) and Harmon and Serwold (1982).

ILLUSTRATION

The station maps (Figs. 1, 3, 5, 7, 9, 11, and 13) show the ZSFs and current stations plotted on NOAA/NOS charts (18421, 18465, and 18448) and Figure B.2 from Cox et al. (1984) at a scale consistent with the marine sediments. Each current site includes a station number (referenced to the tables), the rms speed (centimeters/second; square root of the variance), and the depth (meters) of this speed.

Figures 2, 4, 6, 8, 10, 12, and 14 show the ZSFs and station locations plotted on the surface sediment charts by Roberts (1979). For further references pertaining to these charts see Appendix A.

COMPUTER LITERATURE SEARCH

Four databases (NTIS, ASFA, GEOREF, and OCEANIC) were searched for abstracts concerning marine sediment parameters; the results are in Appendix B.

TABLE 1. Current Meter Data.

Location	Site	Latitude	Longitude	Dates	Tide Days	Investigator	Station Number	Meter Depth (m)	Bottom Depth (m)	Mean Speed (cm/sec)	Net Direction (ϕ True) (cm/sec)	Net Speed (cm/sec)	Peak Speed (cm/sec)	Total Variance (cm ² /sec ²)	ras
Bosporus Strait	1	48 40.4	122 42.3	2/16-3/20 1974	34	Yeager	20	5	86		35	13.99		2530.0	50.3
	1	48 40.4	122 42.3	2/16-3/20 1974	34	Yeager	20	21	86						
	1	48 40.4	122 42.3	2/16-3/20 1974	34	Yeager	20	71	86						
	2	48 39.9	122 42.9	3/04-3/19 1975	14	Yeager	19	5	93		87	10.05		4370.0	66.1
	2	48 39.9	122 42.9	3/04-3/19 1975		Yeager	19	23	93						
	2	48 39.9	122 42.9	3/04-3/19 1975	14	Yeager	19	77	93		100	12.1		3280.0	57.3
	3	48 38.8	122 43.5	3/06-3/23 1974	14	Yeager	15	5	84		245	7.23		5580.0	74.7
	3	48 38.8	122 43.5	3/06-3/23 1974	14	Yeager	15	21	84		252	8.3		4840.0	69.6
	3	48 38.8	122 43.5	3/06-3/23 1974	14	Yeager	15	69	84		221	8.7		3760.0	61.3
	4	48 38.6	122 39.5	9/20-10/2 1964		Keith	25	5			15	1.87			
	4	48 38.6	122 39.5	9/20-10/2 1964		Keith	25	37		Data not processed					
	5	48 38.5	122 39.2	6/21-6/25 1956		Jaffries	10	5			108	19.84			
	6	48 38.6	122 38.8	3/21-4/05 1974	16	Yeager	17	5	55		167	5.8		710.0	26.6
	6	48 38.6	122 38.8	3/21-4/05 1974	16	Yeager	17	21	55		155	11.5		680.0	26.1
	6	48 38.6	122 38.8	3/21-4/05 1974	16	Yeager	17	40	55		148	16.7		640.0	25.3
	7	48 37.3	122 36.7	9/20-10/02 1964	4	Keith	23	5			17	7.50			
	7	48 37.3	122 36.7	9/20-10/02 1964	4	Keith	23	49		Data not processed					
	7	48 37.3	122 36.7	9/20-10/02 1964	4	Keith	23	84			68	13.98			
	8	48 37.5	122 44.8	3/22-3/26 1964	4	Richards	20	5			226	16.17		4020.2	63.5
	8	48 37.5	122 44.8	3/22-3/26 1964	3	Richards	20	37			212	12.79		4587.5	67.7
	9	48 37.5	122 44.1	9/21-9/25 1955	1	Taylor	7	5			135	32.91		3557.1	59.6
	9	48 37.5	122 44.1	9/21-9/25 1955	1	Taylor	7	5			166	40.29		2530.1	50.3
	10	48 36.1	122 38.9	4/24-4/29 1964	3	Hull	22	5			195	17.83			
	10	48 36.1	122 38.9	4/24-4/29 1964		Hull	22	30		Data not processed					
	10	48 36.1	122 38.9	4/24-4/29 1964	3	Hull	22	50			353	84.99			
	11	48 36.0	122 39.0	3/20-4/05 1974	15	Yeager	16	5	62						

TABLE 1. con't. Current Meter Data.

Location	Site	Latitude	Longitude	Dates	Tidal Days	Investigator	Station Number	Meter Depth (m)	Bottom Depth (m)	Mean Speed (cm/sec)	Net Direction (° True)	Net Speed (cm/sec)	Peak Speed (cm/sec)	Total Variance (cm ² /sec ²)	var (cm/sec)
Resortio Strait	11	40.35.0	122.30.0	3/20-4/05 1974	15	Yeager	16	21	62		234	13.4		6230.0	70.3
	11	40.36.0	122.30.0	3/20-4/05 1974	15	Yeager	16	47	62		219	12.4		5200.0	72.7
	12	40.36.9	122.30.4	10/10-10/22 1974	1	Taylor	9	5		Gaps in data					
	13	40.39.7	122.45.2	9/10-9/11 1955	1	Ziskind	10	5		Less than a tidal day					
	14	40.33.6	122.45.2	3/25-3/31 1974	1	Richards	13	5			151	30.96		8307.3	51.6
	14	40.33.6	122.45.2	3/25-3/31 1964	4	Richards	13	5			171	24.03		7073.1	04.1
	14	40.33.6	122.45.2	3/25-3/31 1964	1	Richards	13	37			102	17.75		4557.9	67.5
	14	40.33.6	122.45.2	3/25-3/31 1964	3	Richards	13	37			101	20.91		4000.0	63.2
	14	40.33.6	122.45.2	3/25-3/31 1964	1	Richards	13	61			111	17.61		3930.0	62.6
	14	40.33.6	122.45.2	3/25-3/31 1964	3	Richards	13	61			107	9.44		3950.3	62.0
	15	40.33.6	122.30.6	2/15-3/06 1974	10	Yeager	12	5	119						
	15	40.37.9	122.30.6	2/15-3/06 1974	10	Yeager	12	21	119		121	12.0		7710.0	07.0
	15	40.33.9	122.30.6	2/15-3/06 1974	-	Yeager	12	103	119	Meter lost					
	16	40.33.7	122.30.7	3/72-3/26 1974	4	Richards	17	5			48	29.75		3015.9	54.9
	16	40.33.7	122.30.7	3/72-3/26 1964	1	Richards	17	57			140	3.06		2640.3	51.4
	17	40.32.0	122.33.0	4/23-4/27 1964	3	Hull	10	5		Gaps in data					
	17	40.32.0	122.33.0	4/23-4/27 1964	1	Hull	10	37			123	7.07		06.1	9.3
	17	40.32.0	122.33.0	4/23-4/27 1964	1	Hull	10	37			111	7.26		00.3	9.0
	17	40.32.0	122.33.0	4/23-4/27 1964	1	Hull	10	37			155	5.47		150.1	12.5
	17	40.32.0	122.33.0	4/23-4/27 1964	1	Hull	10	62			24	10.23		144.7	12.0
	18	40.31.9	122.33.7	9/20-10/02 1964	4	Keith	10a	5			176	2.20		60.1	7.0
	18	40.31.9	122.33.7	9/20-10/02 1964	4	Keith	10a	37			200	10.10		400.3	20.2
	18	40.31.9	122.33.7	9/20-10/02 1964	3	Keith	10a	62			190	7.50		360.1	15.0
	19	40.31.5	122.34.1	3/22-3/26 1964	4	Richards	16	2.5			276	26.73			
	19	40.31.5	122.34.1	3/22-3/26 1964	4	Richards	16	7							
	19	40.31.5	122.34.1	3/22-3/26 1964	4	Richards	16	12			76	60.65			

TABLE 1. con't. Current Meter Data.

Location	Site	Latitude	Longitude	Dates	Tidal Days	Investigator	Station Number	Meter Depth (m)	Bottom Depth (m)	Mean Speed (cm/sec)	Net Direction (° True)	Net Speed (cm/sec)	Peak Speed (cm/sec)	Total Variance $\text{m}^2 (\text{cm}^2/\text{sec}^2)$
Rosario Strait	20	48.31.4	122.44.9	2/15-3/04 1974	16	Yeager	8	5	65		197	6.57		7190.0 84.0
	20	48.31.4	122.44.9	2/15-3/04 1974	16	Yeager	8	21	65		181	10.8		6120.0 78.2
	20	48.31.4	122.44.9	2/14-3/04 1974		Yeager	8	50	65	Meter lost				
	21	48.31.3	122.42.1	2/14-3/01 1974	14	Yeager	10	5	39		265	5.5		7050.0 84.0
	21	48.31.3	122.42.1	2/14-3/01 1974		Yeager	10	23	39					
	22	48.30.7	122.43.8	4/27-4/30 1965	2	Munson	105	5			220	2.72		3021.4 55.0
	22	48.30.7	122.43.8	4/27-4/30 1965	2	Munson	105	14			81	2.23		4977.7 70.6
	22	48.30.7	122.43.8	4/27-4/30 1965	2	Munson	105	23			136	2.59		2259.1 47.5
	23	48.30.3	122.42.3	4/27-4/30 1965	2	Munson	106	5			106	7.65		5266.3 72.6
	23	48.30.3	122.42.3	4/27-4/30 1965	2	Munson	106	14		Gaps in data				
	23	48.30.3	122.42.3	4/27-4/30 1965	2	Munson	106	23			158	7.76		2448.1 49.5
	24	48.28.8	122.49.2	9/10-9/26 1974	15	Yeager	4	5	25	Data on file at NOS				
	24	48.28.8	122.49.2	9/10-9/26 1974	15	Yeager	4	10	25	Data on file at NOS				
	24	48.28.8	122.49.1	4/23-4/27 1964	3	Hull	8	4			25	12.76		5865.8 71.2
	24	48.28.8	122.49.1	4/23-4/27 1964	3	Hull	8	13			88	5.28		4155.9 64.5
	24	48.28.8	122.49.1	4/23-4/26 1964	2	Hull	8	21			19	20.22		3734.2 61.1
	25	48.28.9	122.46.5	1/30-2/14 1974	15	Yeager	5	5	40		239	13.72		5120.0 71.6
	25	48.28.9	122.46.5	1/20-2/14 1974	15	Yeager	5	25	40		226	6.8		4750.0 68.9
	26	48.29.2	122.44.5	1/29-2/14 1974	15	Yeager	6	5	121	Data on file at NOS				
	26	48.29.2	122.44.5	1/29-2/14 1974	15	Yeager	6	21	121	Data on file at NOS				
	26	48.29.2	122.44.5	1/29-2/14 1974	15	Yeager	6	106	121	Data on file at NOS				
	27	48.29.0	122.44.0	3/24-3/28 1964	3	Richards	10	2.5			215	23.36		5029.6 70.9
	27	48.29.0	122.44.0	3/24-3/28 1964	1	Richards	10	6			180	23.04		2829.6 54.1
	27	48.29.0	122.44.0	3/24-3/28 1964	1	Richards	10	6			178	30.16		2869.2 53.6
	27	48.29.0	122.44.0	3/24-3/28 1964	4	Richards	10	77			177	11.18		3460.6 58.8
	28	48.29.4	122.42.0	5/03-5/08 1950	1	Boothie	134	5			292	43.43		5576.3 74.7

TABLE 1. con't. Current Meter Data.

Location	Site	Latitude	Longitude	Date	Tide	Investigator	Station Number	Meter Depth (m)	Bottom Depth (m)	Mean Speed (cm/sec)	Net Direction (° True)	Net Speed (cm/sec)	Peak Speed (cm/sec)	Total Variance (cm ² /sec ²)	Peak Variance (cm ² /sec ²)
Rosario Strait	28	48-28.4	122-42.8	5/03-5/08 1950	2	Boothe	13A	5			296	32.85		3854.7	69.4
	29	48-28.7	122-44.2	4/06-4/10 1964	4	Richards	10A	5	Data not processed						
	29	48-28.7	122-44.2	4/06-4/10 1964	3	Richards	10A	45			160	24.28		3778.8	61.4
	29	48-28.7	122-44.2	4/06-4/10 1964	3	Richards	10A	76			183	20.40		1888.4	43.7
	30	48-28.7	122-43.7	3/26-3/28 1964	3	Boothe	12	2.5			130	10.55		5188.6	72.8
	30	48-28.7	122-43.7	3/26-3/28 1964	1	Boothe	12	2.5			177	26.21		2827.8	54.1
	31	48-27.8	122-46.7	3/27-4/29 1964	2	Richards	9	2			225	24.18		2488.8	48.8
	31	48-27.8	122-46.7	3/27-4/29 1964	1	Richards	9	2			216	13.18		2388.1	48.9
	31	48-27.8	122-46.7	3/27-4/29 1964	3	Richards	9	2			202	19.74		2021.0	45.8
	31	48-27.8	122-46.7	3/27-4/29 1964	10	Richards	9	2			213	18.36		1859.2	43.1
	31	48-27.8	122-46.7	3/27-4/29 1964	2	Richards	9	6			185	13.96		2989.2	54.5
	31	48-27.8	122-46.7	3/27-4/29 1964	3	Richards	9	6			228	15.73		1182.1	34.1
	31	48-27.8	122-46.7	3/27-4/29 1964	2	Richards	9	6			226	26.28		2193.7	46.8
	31	48-27.8	122-46.7	3/27-4/29 1964	1	Richards	9	6			241	27.41		2200.1	46.9
	31	48-27.8	122-46.7	3/27-4/29 1964	1	Richards	9	6			212	36.66		4857.4	69.7
	31	48-27.8	122-46.7	3/27-4/29 1964	11	Richards	9	6			270	26.25		1523.9	39.0
	31	48-27.8	122-46.7	3/27-4/21 1964	1	Richards	9	30			199	7.59		1150.1	33.9
	31	48-27.8	122-46.7	3/27-4/21 1964	1	Richards	9	30			155	6.98		462.3	21.5
	31	48-27.8	122-46.7	3/27-4/21 1964	4	Richards	9	30			226	22.34		3126.5	55.9
	31	48-27.8	122-46.7	3/27-4/21 1964	1	Richards	9	30			225	30.63		5120.0	71.6
	31	48-27.8	122-46.7	3/27-4/21 1964	2	Richards	9	30			207	17.21		1773.2	42.1
	32	48-27.5	122-46.8	3/09-4/08 1965	13	Munson	9C	6			186	22.37		3620.6	60.2
	33	48-27.5	122-46.8	3/09-4/08 1965	28	Munson	9	3			137	25.14		3138.3	56.0
	34	48-27.4	122-46.9	1/29-2/26 1974	28	Yeager	9	5	42		200	14.89		4510.0	67.2
	34	48-27.4	122-46.9	1/29-2/26 1974	28	Yeager	9	21	42	Data not processed					
	34	48-27.4	122-46.9	1/29-2/26 1974	28	Yeager	9	32	42	Data not processed					

TABLE 1. con't. Current Meter Data.

Location	Site	Latitude	Longitude	Dates	Tidal Days	Investigator	Station Number	Meter Depth (m)	Bottom Depth (m)	Mean Speed (cm/sec)	Net Direction (° True)	Net Speed (cm/sec)	Peak Speed (cm/sec)	Total Variance (cm ² /sec ²)	rms (cm/sec)
Rosario Strait	34	48.27.1	122.47.0	3/12-4/05 1974	23	Yeager	9	5	37		190	24.10		4940.0	70.3
	34	48.27.1	122.47.0	3/12-4/05 1974	23	Yeager	9	21	37	Data not processed					
	34	48.27.1	122.47.0	3/12-4/05 1974	23	Yeager	9	27	37		165	22.8		3550.0	59.6
	34	48.27.1	122.46.9	9/04-9/24 1975	0	Yeager	9	5	47	Data not processed					
	34	48.27.1	122.46.9	9/03-9/21 1975	18	Yeager	9	21	47		296	22.71		674.0	26.0
	34	48.27.1	122.46.9	9/03-9/21 1975	18	Yeager	9	37	47		166	25.92		2943.1	54.2
	34	48.27.1	122.46.9	9/23-9/28 1975	6	Yeager	9	5	47		206	24.96		4010.6	63.3
	34	48.27.1	122.46.9	9/23-9/28 1975	7	Yeager	9	21	47		186	26.10		2837.5	53.3
	34	48.27.1	122.46.9	9/23-9/28 1975	6	Yeager	9	37	47		155	23.58		1767.5	41.8
	34	48.27.1	122.46.9	10/05-10/16 1975	12	Yeager	9	5	47		184	26.40		4550.0	67.4
	34	48.27.1	122.46.9	10/05-10/16 1975	12	Yeager	9	21	47		174	23.65		4093.9	64.0
	34	48.27.1	122.46.9	10/05-10/16 1975	12	Yeager	9	37	47		187	20.30		3251.4	57.0
	35	48.26.9	122.46.9	2/28-3/11 1974	12	Yeager	9	5	44	Data on file at MOS					
	35	48.26.9	122.46.9	2/28-3/11 1974	12	Yeager	9	21	44	Data on file at MOS					
	35	48.26.9	122.46.9	2/28-3/11 1974	12	Yeager	9	34	44	Data on file at MOS					

TABLE 2. Current Meter Data.

Location	Site	Latitude	Longitude	Dates	Tidal Days	Investigator	Station Number	Meter Depth (m)	Bottom Depth (m)	Mean Speed (cm/sec)	Met Direction (° True)	Met Speed (cm/sec)	Peak Speed (cm/sec)	Total Variance (cm ² /sec ²)	res (cm/sec)
Strait of Juan de Fuca	36	48.09.6	123.24.6	4/20-4/25 1963	5	Keith	1	5		18.7	328			2100	45.8
	36	48.09.6	123.24.6	4/20-4/25 1963	5	Keith	1	42		13.5	302			1600	40.0
	36	48.09.6	123.24.6	4/20-4/25 1963	5	Keith	1	61		18.2	241			1400	37.4
	37	48.11.2	123.17.3	7/20-7/24 1964	5	Hull	68	5		35.5	224			3600	60.0
	37	48.11.2	123.17.3	7/20-7/24 1964	5	Hull	68	39		10.4	271			3200	56.6
	37	48.11.2	123.17.3	7/20-7/24 1964	5	Hull	68	64		11.1	63			2700	52.0
	38	48.08.5	122.23.5	7/4-9/4 1970		Tollerson	1	2-60		All records less than a tidal day					
	39	48.07.7	123.22.6	11/03-11/06 1970		Tollerson	4	10		All records less than a tidal day					
	40	48.07.5	123.22.3	6/07-7/10 1979	32	Ebbesmeyer	1A	5		3.1	160	6.16		460	21.4
	41	48.07.3	123.27.9	5/4-10/4 1970		Tollerson	3	2-13		All records less than a tidal day					
	42	48.08.2	123.17.5	10/21-11/02 1975	14	Yeager	86	5	25	13.3	93	12.24		1944.6	44.1
	42	48.08.2	123.17.5	10/16-10/31 1975	15	Yeager	86	17	25	Data questionable					
	43	48.09.9	122.57.8	3/19-3/23 1965	4	Munson	83	5		338	5.71			589.3	24.3
	43	48.09.9	122.57.8	3/19-3/23 1965	4	Munson	83	23		17	4.46			349.0	18.7
	43	48.09.9	122.57.8	3/19-3/23 1965	4	Munson	83	30		334	5.46			334.0	18.3
	44	48.11.0	122.55.6	10/31-11/09 1975	10	Yeager	81	5	35	43.28	164	11.2		2889.7	53.7
	44	48.11.0	122.55.6	10/31-11/09 1975	9	Yeager	81	27	35	30.34	20	3.7		1365.7	37.0
	45	48.11.4	122.54.8	3/20-3/24 1965	3	Munson	84	5		263	17.60			654.9	25.6
	45	48.11.4	122.54.8	3/20-3/24 1965	3	Munson	84	48		144	3.15			467.7	21.6
	45	48.11.4	122.54.8	3/20-3/24 1965	3	Munson	84	67		108	8.12			205.7	14.3
	46	48.09.3	122.49.3	3/17-3/30 1976	0	Crawford	125	5	27	Meter malfunction					
	46	48.09.3	122.49.3	3/17-3/30 1976	15	Crawford	125	22	27		92	33.87		3681.2	60.7
	47	48.07.0	122.53.8	3/19-3/23 1965	4	Munson	82	5		219	3.46			48.6	7.0
	47	48.07.0	122.53.8	3/19-3/23 1965	4	Munson	82	48		96	3.05			77.7	8.8
	47	48.07.0	122.53.8	3/19-3/23 1965	4	Munson	82	79		33	1.01			24.4	4.9
	48	48.06.9	122.53.8	8/01-8/05 1965	1	Grunewald	92	5		297	6.08			391.9	19.8

TABLE 2. con't. Current Meter Data.

Location	Site	Latitude	Longitude	Dates	Tide	Investigator	Station Number	Meter Depth (m)	Bottom Depth (m)	Mean Speed (cm/sec)	Met Direction (° True)	Met Speed (cm/sec)	Peak Speed (cm/sec)	Total Variance (cm ² /sec ²)	ms
Strait of Juan del Fuca	48	48.06.9	122.53.8	1966 8/01-8/05	3	Grunewald	82	5			295	8.87		232.3	15.2
	49	48.01.4	122.39.5	1966 3/30-4/16	15	Crawford	131	5	26		19	37.10		5467.0	73.8
	49	48.01.4	122.39.5	1976 3/30-4/16	15	Crawford	131	22	26		0	24.87		4672.3	68.4
	50	48.01.6	122.38.9	1976 9/14-11/11	19	Cannon	11	18	60		0	26.69		7125.6	84.4
	50	48.01.6	122.38.9	1977 9/14-11/11	19	Cannon	11	52	60		42	7.85		5437.8	73.7
	51	48.01.4	122.38.3	1977 1/27-3/16	1	Roberts	1	5	100		21	24.69		6075.7	77.9
	51	48.01.4	122.38.3	1942 1/27-3/16	2	Roberts	1	5	100		354	15.26		7087.3	84.2
	51	48.01.4	122.38.3	1942 1/27-3/16	5	Roberts	1	5	100		349	24.48		8758.5	82.2
	51	48.01.4	122.38.3	1942 1/27-3/16	1	Roberts	1	5	100		18	63.91		8245.5	90.8
	51	48.01.4	122.38.3	1942 1/27-3/16	1	Roberts	1	5	100		3	23.81		2550.5	50.5
	51	48.01.4	122.38.3	1942 1/27-3/16	1	Roberts	1	5	100		359	26.08		3751.9	61.2
	51	48.01.4	122.38.3	1942 1/27-3/16	2	Roberts	1	5	100		13	34.24		4450.5	64.8
	51	48.01.4	122.38.3	1942 1/27-3/16	4	Roberts	1	5	100		13	23.63		5705.5	75.5
	51	48.01.4	122.38.3	1942 1/27-3/16	1	Roberts	1	5	100		18	29.11		4990.2	70.6
	51	48.01.4	122.38.3	1942 1/27-3/16	2	Roberts	1	5	100		10	27.24		4166.6	64.5
	51	48.01.3	122.38.2	1942 2/16-3/25	1	Roberts	1	5	100		42	33.59		4824.5	63.4
	51	48.01.3	122.38.2	1943 2/16-3/25	4	Roberts	1	5	100		29	40.54		6700.4	82.4
	51	48.01.3	122.38.2	1943 2/16-3/25	6	Roberts	1	5	100		31	28.46		3973.9	63.8
	51	48.01.3	122.38.2	1943 2/16-3/25	3	Roberts	1	5	100		4	44.89		9372.4	96.5
	51	48.01.3	122.38.2	1943 2/16-3/25	6	Roberts	1	5	100		22	22.35		5190.2	76.1
	51	48.01.3	122.38.2	1943 2/16-3/25	6	Roberts	1	5	100		17	17.50		4387.5	66.3
	51	48.01.3	122.38.2	1943 2/16-3/25	2	Roberts	1	5	100		2	28.22		8833.7	89.6
	51	48.01.6	122.38.2	1943 3/23-4/22	30	Crawford	132	4	100		352	27.09		7036.0	83.9
	51	48.01.6	122.38.2	1976 3/23-4/22	29	Crawford	132	54	100		163	9.04		6149.7	78.4
	51	48.01.6	122.38.0	1976 2/22-3/03	8	Crawford	132	5	107		350	22.15		3000.7	62.4
	51	48.01.6	122.38.0	1977 2/22-3/03	8	Crawford	132	21	107		324	10.97		3599.8	60.0

TABLE 2. con't. Current Meter Data.

Location	Site	Latitude	Longitude	Date	Tide	Investigator	Station Number	Meter Depth (m)	Bottom Depth (m)	Mean Speed (cm/sec)	Net Direction ($^{\circ}$ True)	Net Speed (cm/sec)	Peak Speed (cm/sec)	Total Variance (cm ² /sec ²)
Strait of Juan de Fuca	51	48.01.6	122.30.0	3/03-3/14 1977	10	Crawford	132	5	107		1	21.46		7874.2 00.7
	51	48.01.6	122.30.0	3/03-3/14 1977	10	Crawford	132	21	107		358	12.34		7965.5 09.2
	51	48.01.6	122.30.0	3/15-4/06 1977	22	Crawford	132	5	107		353	21.90		6979.2 03.5
	51	48.01.6	122.30.0	3/15-4/06 1977	22	Crawford	132	21	107		359	12.82		6532.5 00.0
	51	48.01.6	122.30.0	4/06-4/11 1977		Crawford	132	5	107	Data questionable				
	51	48.01.6	122.30.0	4/06-4/11 1977	4	Crawford	132	21	107		355	11.47		6548.3 02.4
	51	48.01.6	122.30.0	3/15-4/11 1977	26	Crawford	132	91	107		177	12.24		4995.1 70.7
	52	48.00.0	122.30.0	6/04-6/06 1954		Collins	46	0	122	Gaps in data				
	52	48.00.0	122.30.0	6/04-6/05 1954		Collins	46	10	122	Less than a tide) day				
	52	48.00.0	122.30.0	6/05/1954		Collins	46	20	122	Less than a tide) day				
	52	48.00.0	122.30.0	6/04-6/05 1954		Collins	46	40	122	Less than a tide) day				
	53	47.59.0	122.30.3	2/06-2/11 1947	1	Crosby	2	5	64		16	24.40		2230.6 47.2
	53	47.59.0	122.30.6	2/09/1950		Collins	7	5	64	Less than a tide) day				
	53	47.59.0	122.30.6	2/09/1950		Collins	7	40	64	Less than a tide) day				
	53	47.59.1	122.30.4	3/01/1950		Collins	8	5	66	Less than a tide) day				
	53	47.59.1	122.30.4	3/01/1950		Collins	8	40	66	Less than a tide) day				
	54	47.59.0	122.37.2	3/29-3/30 1950		Collins	10	5	101	Directions recorded as flood or ebb				
	54	47.59.0	122.37.2	3/29-3/30 1950		Collins	10	66	101	Directions recorded as flood or ebb				

TABLE 3. Current Meter Data.

Location	Site	Latitude	Longitude	Dates	Tide	Investigator	Station Number	Meter Depth (m)	Bottom Depth (m)	Mean Speed (cm/sec)	Net Direction (° True)	Net Speed (cm/sec)	Peak Speed (cm/sec)	Total Variance (cm ² /sec ²)	Rate (cm/sec)
Southern Basin	55	47.12.9	122.37.7	2/10-2/14 1944		Roberts	31	5	156	Gaps in data					
	55	47.13.2	122.37.6	1/31-2/01 1944		Collins	53	0	150	Data not processed					
	55	47.13.2	122.37.6	1/31-2/01 1955		Collins	53	30	150	Data not processed					
	55	47.13.1	122.37.7	3/09-3/24 1978	14	Jeffries	171	6	142		83	4.05		153.3	12.4
	55	47.13.1	122.37.7	3/09-3/24 1978	14	Jeffries	171	22	142		23	4.97		134.5	11.6
	55	47.13.1	122.37.7	3/09-3/24 1978	14	Jeffries	171	127	142		144	1.41		85.8	9.3
	56	47.13.1	122.35.2	11/09/1950	-	Collins	23	5	75	Amount of data less than a tidal day					
	56	47.13.1	122.35.2	11/09/1950	-	Collins	23	25	75	Amount of data less than a tidal day					
	56	47.13.1	122.35.2	11/09/1950	-	Collins	23	50	75	Amount of data less than a tidal day					
	57	47.11.6	122.38.8	3/15-3/20 1947	2	Crosby	16	5	73		19	1.64		56.6	7.5
	59	47.11.0	122.48.7	3/15-3/20 1947	2	Crosby	19	5	33		85	6.53		224.4	15.0
	59	47.10.1	122.47.4	3/27-4/12 1978	15	Jeffries	178	4	86		168	16.76		330.9	18.2
	59	47.10.1	122.47.4	3/27-4/12 1978	15	Jeffries	178	21	86		225	2.72		275.8	16.6
	59	47.10.1	122.47.4	3/27-4/12 1978	15	Jeffries	178	71	86		343	6.92		525.8	22.9
	60	47.09.8	122.47.0	2/24-3/04 1944	-	Roberts	38	4	82	Gaps in data					
	60	47.09.8	122.47.0	1/30-2/04 1945	2	Roberts	38	4	82		123	12.12		273.6	16.5
	60	47.09.8	122.47.0	1/30-2/04 1945	1	Roberts	38	4	82		185	9.69		265.9	16.3
	61	47.08.2	122.46.4		-	CH2N	5			Data not obtained					
	62	47.08.5	122.45.5	5/06-6/02 1977	27	CH2N	4	34	60		337	8.33		281.9	16.8
	62	47.08.5	122.45.5	6/02-6/26 1977	23	CH2N	4	6	60		152	3.12		406.2	20.2
	62	47.08.5	122.45.5	6/26-9/08 1977	72	CH2N	4	6	60		156	4.98		387.8	19.7
	62	47.08.5	122.45.5	6/26-9/08 1977	32	CH2N	4	34	60		313	8.41		234.9	15.3
	62	47.08.5	122.45.5	9/08-10/13 1977	34	CH2N	4	6	60		154	4.41		381.0	19.5
	62	47.08.5	122.45.5	9/08-10/4 1977	26	CH2N	4	34	60		318	9.13		271.0	16.5
	62	47.08.5	122.45.5	10/13-11/28 1977	45	CH2N	4	6	60		165	3.22		460.3	21.4
	62	47.08.5	122.45.5	10/13-11/28 1977	45	CH2N	4	34	60		338	3.84		298.8	17.3
	62	47.08.5	122.45.5	11/28/1977-2/05/1978	69	CH2N	4	6	60		161	4.53		340.3	18.4

TABLE 3. con't. Current Meter Data.

Location	Site	Latitude	Longitude	Dates	Tidal Days	Investigator	Station Number	Meter Depth (m)	Bottom Depth (m)	Mean Speed (cm/sec)	Net Direction ($^{\circ}$ True)	Net Speed (cm/sec)	Peak Speed (cm/sec)	Total Variance (cm ² /sec ²)	Peak Variance (cm ² /sec ²)
		(N)	(W)												
Southern Basin	62	47.00.5	122.45.5	11/28/1971- 2/06/1976	69	CH2M	4	34	60		325	8.98		365.6	1.91
	63	47.00.9	122.44.8	-	-	CH2M	6		9	Data not obtained					
	64	47.07.4	122.45.1	2/07-04/28 1976	79	CH2M	20	18	18		119	7.44		573.3	23.9
	65	47.00.2	122.45.1	-	-	CH2M	7		60	Data not obtained					
	66	47.09.7	122.34.9	3/28-4/13 1976	15	Jeffries	174	22	134		330	2.73		125.7	11.2
	66	47.09.7	122.34.9	3/28-4/13 1976	15	Jeffries	174	119	134		152	5.69		247.6	15.7
	67	47.09.9	122.38.1	-	-	CH2M	22		37	Data not obtained					
	68	47.09.4	122.37.3	2/09-2/14 1945	4	Roberts	308	5	46		5	22.95		552.0	23.5
	69	47.09.1	122.40.2	-	-	CH2M	11		104	Data not obtained					
	70	47.09.1	122.38.2	2/09-2/14 1945	1	Roberts	30A	5	110		350	6.46		347.9	18.6
	70	47.09.1	122.39.2	2/09-2/14 1945	2	Roberts	30A	5	110		14	20.87		450.4	21.2
	70	47.09.3	122.39.4	5/07-6/02 1977	26	CH2M	1	34	134		252	2.34		120.2	11.0
	70	47.09.3	122.39.4	6/02-6/26 1977	23	CH2M	1	6	134		21	7.31		203.7	14.3
	70	47.09.3	122.39.4	6/02-6/26 1977	23	CH2M	1	34	134		250	1.91		117.8	10.8
	70	47.09.3	122.39.4	6/26-8/03 1977	37	CH2M	1	6	134		18	5.88		289.2	17.0
	70	47.09.3	122.39.4	6/26-8/03 1977	37	CH2M	1	34	134		269	1.36		142.7	11.9
	70	47.09.3	122.39.4	8/03-9/09 1977	32	CH2M	1	6	134		14	17.88		1860.7	43.1
	70	47.09.3	122.39.4	8/03-9/09 1977	36	CH2M	1	34	134		298	2.26		88.2	9.4
	70	47.09.3	122.39.4	9/09-10/1 1977	31	CH2M	1	6	134		354	4.80		160.0	13.0
	70	47.09.3	122.39.4	9/09-10/11 1977	31	CH2M	1	34	134		293	2.56		95.5	9.8
	70	47.09.3	122.39.4	10/11-11/29 1977	47	CH2M	1	6	134		8	4.33		216.4	14.7
	70	47.09.3	122.39.4	10/11-11/29 1977	47	CH2M	1	34	134		235	2.88		142.9	12.0
	71	47.09.0	122.38.5	-	-	CH2M	12		73	Data not obtained					
	72	47.08.6	122.37.9	-	-	CH2M	13		46	Data not obtained					

Table 4.

GRANULOMETRIC DATA

ROSARIO STRAIT

CRUISE	STATION	SAMPLE DEVICE	LATITUDE (N)	LONGITUDE (W)	DEPTH (M)	%GRAVEL	%SAND	%SILT	%CLAY	SAND/MUD RATIO	COMMENTS:
SHELFPORD	76	DREDGE	48-40.0	122-42.6							
WH605	148		48-39.8	122-42.2	88	0	65.00	15.50	19.50		MICROSCOPIC EXAMINATION: COARSE FRACTION COBBLE, SHELL FRAGMENTS, LITTLE COARSE SAND
SHELFPORD	83	DREDGE	48-38.3	122-36.5							
WH605	147		48-36.1	122-46.0	53	0	79.00	12.00	9.00		MICROSCOPIC EXAMINATION: MUD/FINE SILT
SHELFPORD	79	DREDGE	48-32.9	122-40.6							
BB262	V21	GRAB	48-37.6	122-35.2	100	99.80	.20	0	0		MICROSCOPIC EXAMINATION: COARSE FRACTION COBBLE, SHELL FRAGMENTS, LITTLE COARSE SAND
BB262	G1	GRAB	48-37.7	122-37.9		5.56	39.87	41.53	13.04	.83	

Table 5.

GRANULOMETRIC DATA

STRAIT OF JUAN DE FUCA AND ADMIRALTY INLET										
CRUISE	STATION	SAMPLE DEVICE	LATITUDE (N)	LONGITUDE (W)	DEPTH (M)	%GRAVEL	%SAND	%SILT	%CLAY	SAND/MUD RATIO
WH605	136		48-10.6	123-28.0	113	0	70.00	18.00	12.00	
WH605	137		48-10.6	123-18.2	72	0	87.00	5.00	8.00	
WH608	138		48-10.6	123-10.8	88	0	81.50	10.50	8.00	
OA035	001		48-08.8	123-20.4		16.81	81.13	.79	1.28	47.42
WH605	140		48-06.4	122-57.3	48	0	69.00	21.00	10.00	
OA386	014	MULTIPLE	48-00.8	122-38.0	120	14.39	75.81	5.08	4.73	9.20
		GRAVCORE								
UV52D	S12		48-01.3	122-37.1	137	45.02	53.69	.74	.55	76.52
UV52A	504		47-59.5	122-29.6	201	99.99	0	0	0	
CH017	H14	GRAVCORE	47-56.1	122-38.0	117	6.94	86.26	4.05	2.75	13.71

Table 6.

GRANULOMETRIC DATA

SOUTHERN PUGET SOUND

CRUISE	STATION	SAMPLE DEVICE	LATITUDE (N)	LONGITUDE (W)	DEPTH (M)	%GRAVEL	%SAND	%SILT	%CLAY	SAND/MUD RATIO	COMMENTS:
CH019	M06	GRAVCORE	47-10.7	122-38.3	179	28.94	51.20	11.77	8.09	4.04	MUD 60% FINE SAND 40%
OA262	O17		47-10.8	122-38.9	163	0	96.43	2.09	1.48	27.01	MUD 80% FINE SAND 20%
MIS82	SCC43	GRAB	47-10.3	122-38.7							MUD 60% FINE SAND 40%
MIS82	SCC44	GRAB	47-10.4	122-39.0							MUD 60% FINE SAND 40%
MIS82	SCC45	GRAB	47-10.5	122-39.9							MUD 60% FINE SAND 40%
MIS82	SCC46	GRAB	47-10.6	122-40.6							MUD 60% FINE SAND 40%
MIS82	SCC47	GRAB	47-10.7	122-40.7							GRAVEL 80% COARSE SAND 20%
MIS82	SCC38	GRAB	47-08.7	122-38.7							FINE SAND 90% COARSE SAND 10%
MIS82	SCC32	GRAB	47-09.1	122-40.7							FINE SAND 70% MUD 30%
MIS82	SCC33	GRAB	47-08.9	122-40.5							FINE SAND 70% MUD 30%
MIS82	SCC34	GRAB	47-08.7	122-39.9							FINE SAND 80% MUD 20%
MIS82	SCC35	GRAB	47-08.1	122-39.4							FINE SAND 80% MUD 20%
MIS82	SCC36	GRAB	47-08.0	122-38.9							
BB259	R10		47-08.5	122-39.8		0	60.27	33.71	6.02	1.52	FINE SAND 50% COARSE SAND 40% GRAVEL 10%
MIS82	SCC25	GRAB	47-08.3	122-40.8							FINE SAND 80% COARSE SAND 10% MUD 10%
MIS82	SCC24	GRAB	47-08.0	122-40.8		.11	83.26	13.62	3.01	5.01	
BB272	R16		47-08.0	122-40.5	132	0	72.39	17.37	10.25	2.62	
CH019	M01	GRAVCORE	47-07.9	122-40.4							
MIS82	SCC28	GRAB	47-07.9	122-41.8							FINE SAND 90% COARSE SAND 10%
MIS82	SCC23	GRAB	47-07.7	122-40.3							FINE SAND 90% COARSE SAND 10%
MIS82	SCC31	GRAB	47-07.6	122-40.0							FINE SAND 90% COARSE SAND 10%
BB272	R15		47-07.7	122-41.1		.17	85.54	10.69	3.60	6.00	
MIS82	SCC22	GRAB	47-07.5	122-40.3							FINE SAND 90% COARSE SAND 10%
BB259	R08		47-07.5	122-40.6	55	.28	98.31	.68	.73	69.92	
MIS82	SCC30	GRAB	47-07.3	122-40.0							FINE SAND 97% COARSE SAND 3%
BB259	R09		47-07.4	122-39.7	37	38.77	51.76	7.02	2.45	9.56	
MIS82	SCC7	GRAB	47-06.9	122-40.8		.09	81.44	17.66	.81	4.42	
MIS82	SCC8	GRAB	47-08.3	122-43.0							FINE SAND 50% COARSE SAND 40% MUD 10%
BB259	R05		47-07.7	122-43.3		0	82.59	14.70	2.71	4.74	
BB259	R04		47-07.2	122-45.2		0	83.23	14.55	2.22	4.96	
OA262	O16		47-07.3	122-45.4		0	79.08	14.81	6.10	3.78	
MIS82	SCC1		47-07.3	122-45.5							FINE SAND 80% MUD 20%
MIS82	SCC2		47-07.7	122-45.2							FINE SAND 75% COARSE SAND 25%
MIS82	SCC3		47-08.0	122-45.0							FINE SAND 80% COARSE SAND 20%
MIS82	SCC4		47-08.4	122-44.7							FINE SAND 80% COARSE SAND 10% MUD 10%
MIS82	SCC5		47-08.7	122-44.3							FINE SAND 85% COARSE SAND 15%
MIS82	SCC6		47-08.9	122-44.6							
HH677	O39		47-10.0	122-47.2	84	0	49.44	37.20	13.36	.98	
OA262	O15		47-10.5	122-47.5	92	.22	59.64	29.36	10.79	1.49	
HH677	O38		47-10.5	122-47.6	86	0	52.77	33.44	13.79	1.12	
HH054	O06		47-10.6	122-48.8	34	12.79	54.91	26.73	5.50		
OA262	O08		47-10.8	122-48.7	34	17.06	62.46	12.42	8.06	3.88	
HH677	O28		47-11.0	122-48.4	44	.44	50.39	35.15	14.03	1.03	
HH677	O37		47-11.2	122-47.7	110	.30	79.10	12.88	7.72	3.85	

Table 7.

	Dates	Investigators
<u>Rosario Straits</u>		
Cruise		
Shelford	July-August 1929	Shelford et al.
WH605	28 March-8 April 1966	IOUBC
BB262	21-22 May 1960	Sternberg
<u>Strait of Juan de Fuca and Admiralty Inlet</u>		
Cruise		
CH017	16 June 1952	Wang
UV52A	17 July 1952	Wang
UV52D	2 August 1952	Wang
OA035	15 May 1965	Sternberg
WH605	28 March-8 April 1966	IOUBC
OA386	17 Feb. 1970	Nichols
<u>Southern Puget Sound</u>		
Cruise		
CH019	11 Sept. 1952	Wang
BB259	2-6 May 1960	Brundage
BB272	14-20 Dec 1960	Brundage
HH054	2-3 May 1963	Lie
OA262	24 Feb.-5 Mar. 1969	
HH677	10 August 1972	Sternberg and Collias
Nis82		Harmon and Serwold

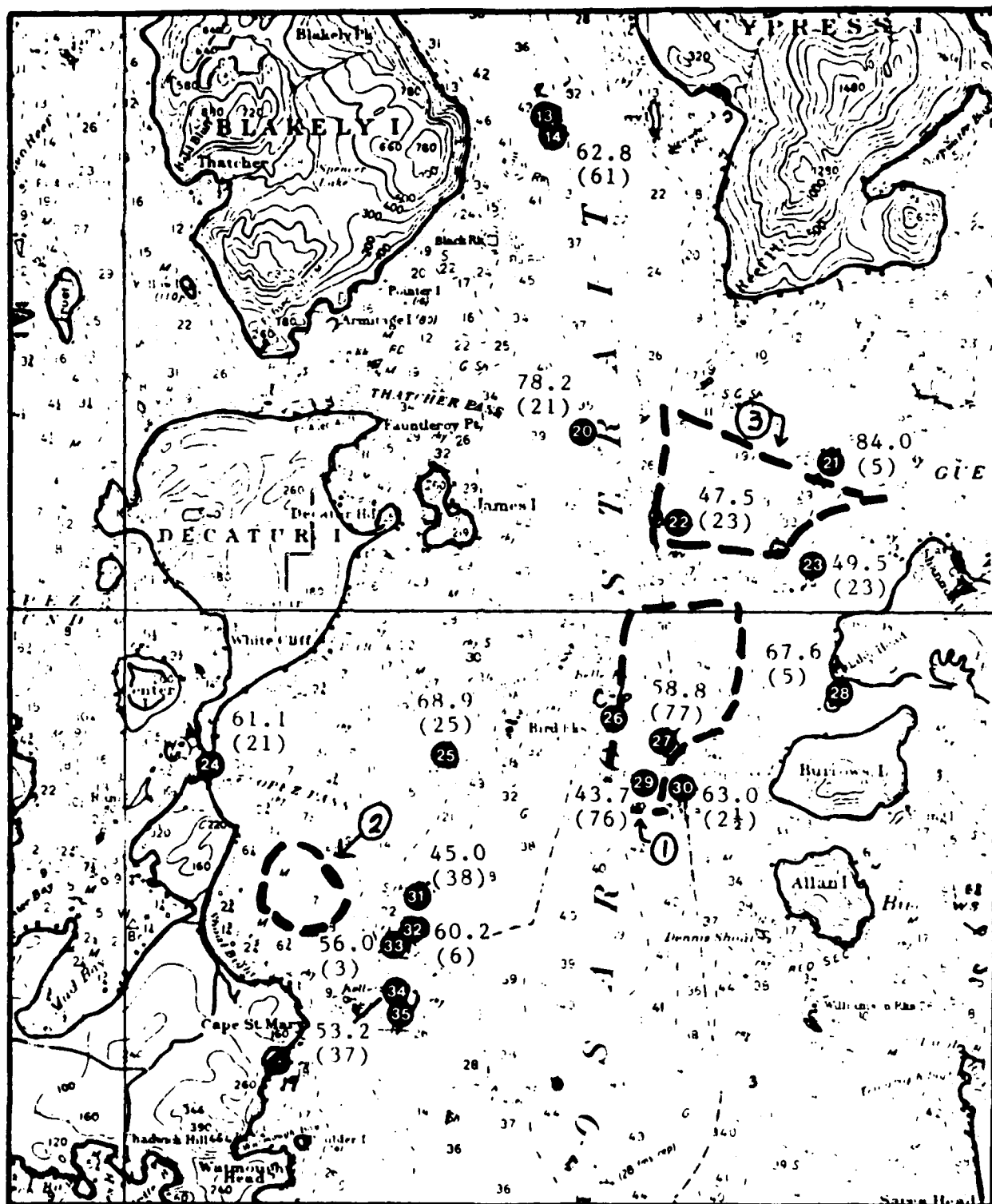


Figure 1. Rosario Strait showing ZSFs 1, 2 and 3. Current meter station locations near the ZSF are marked with a station number (white number), rms speed (cm/s; top number), and depth (m; bottom number in parentheses).

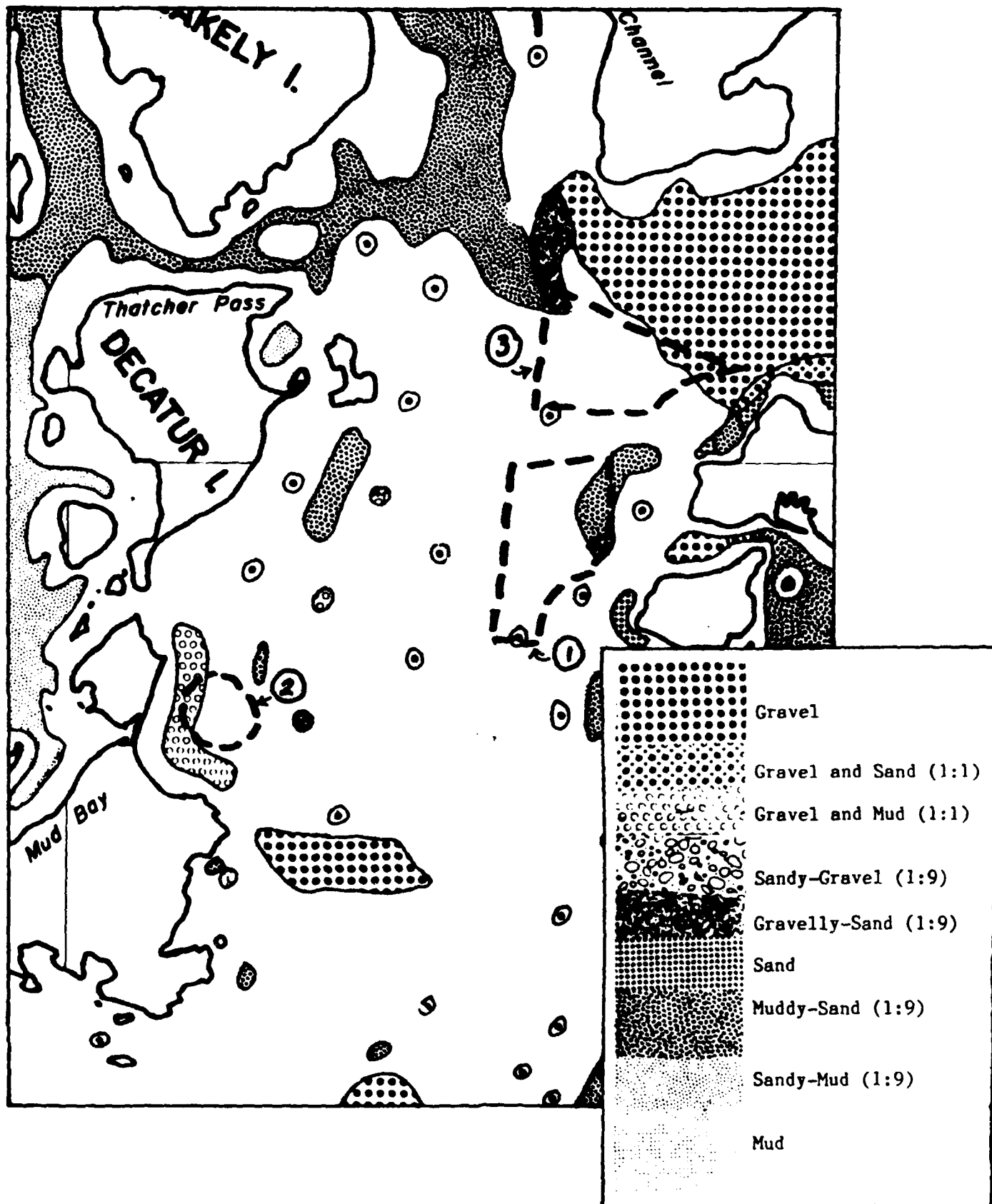


Figure 2. Rosario Strait with ZSF's 1, 2, and 3 plotted on Roberts 1979 surface sediment charts.

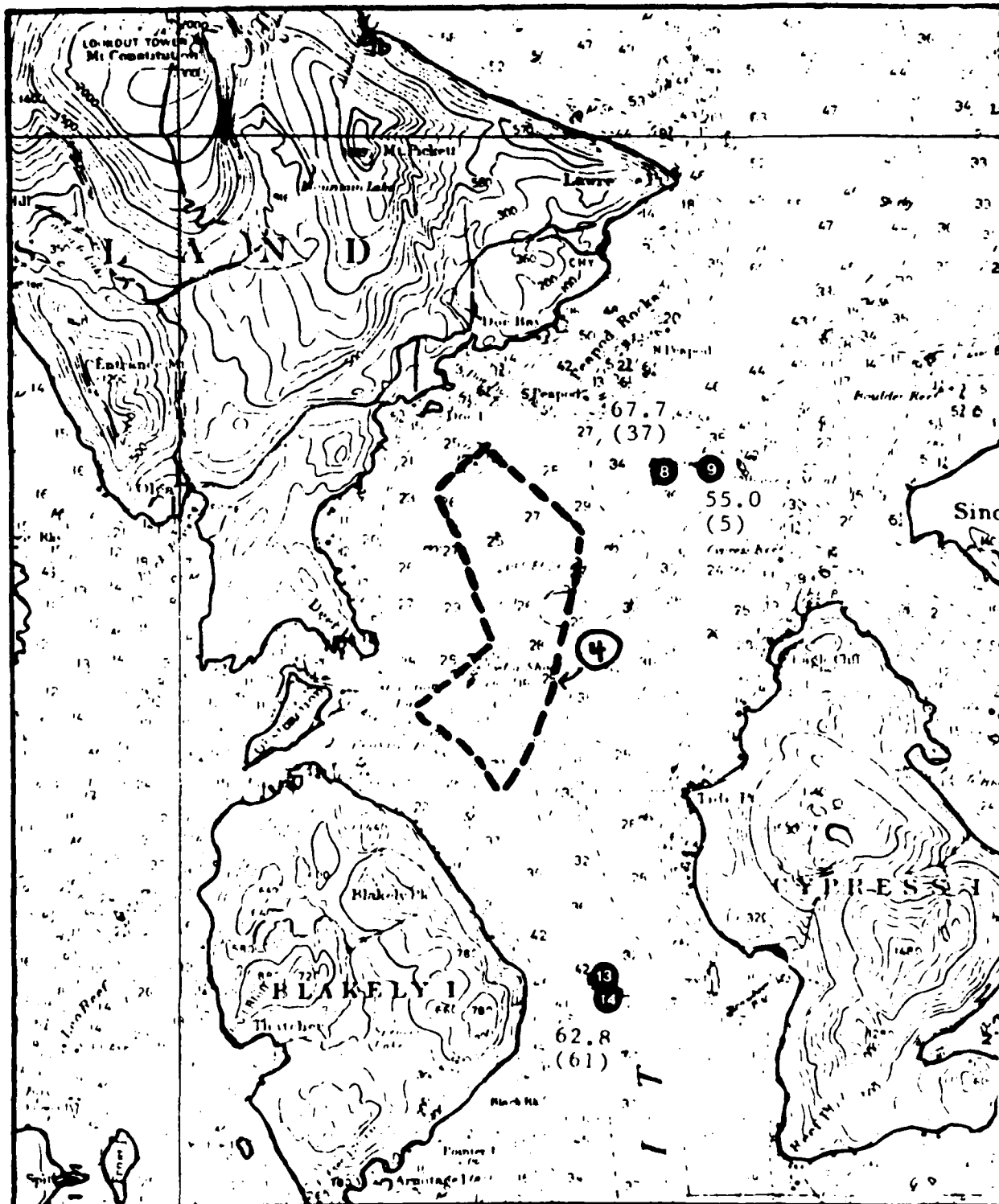


Figure 3. Rosario Strait showing ZSF 4. Current meter station locations near the ZSF are marked with a station number (white number), rms speed (cm/s; top number), and depth (m; bottom number in parentheses).

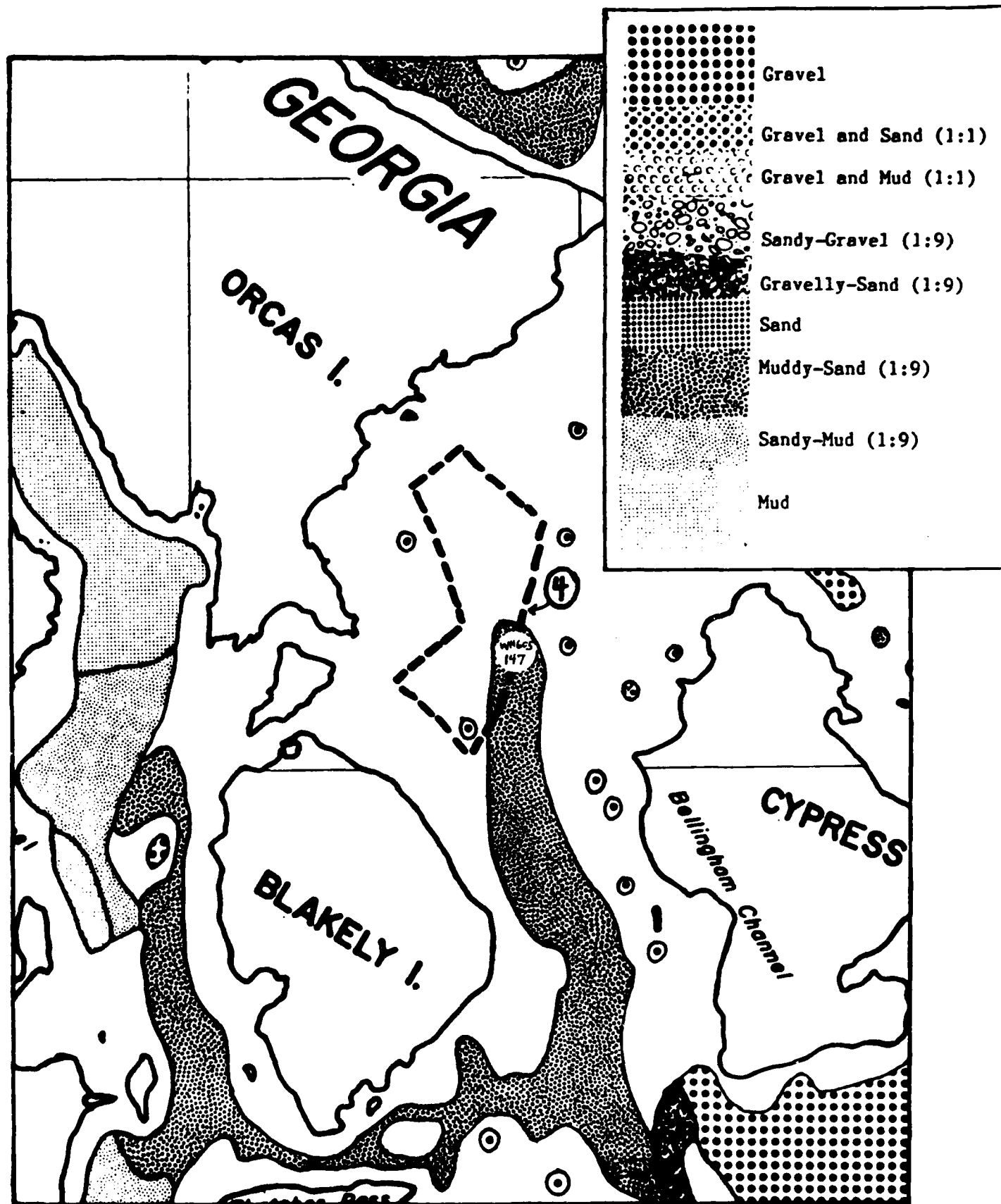


Figure 4. Rosario Strait with ZSF 4 and station location plotted on Roberts 1979 surface sediment charts.

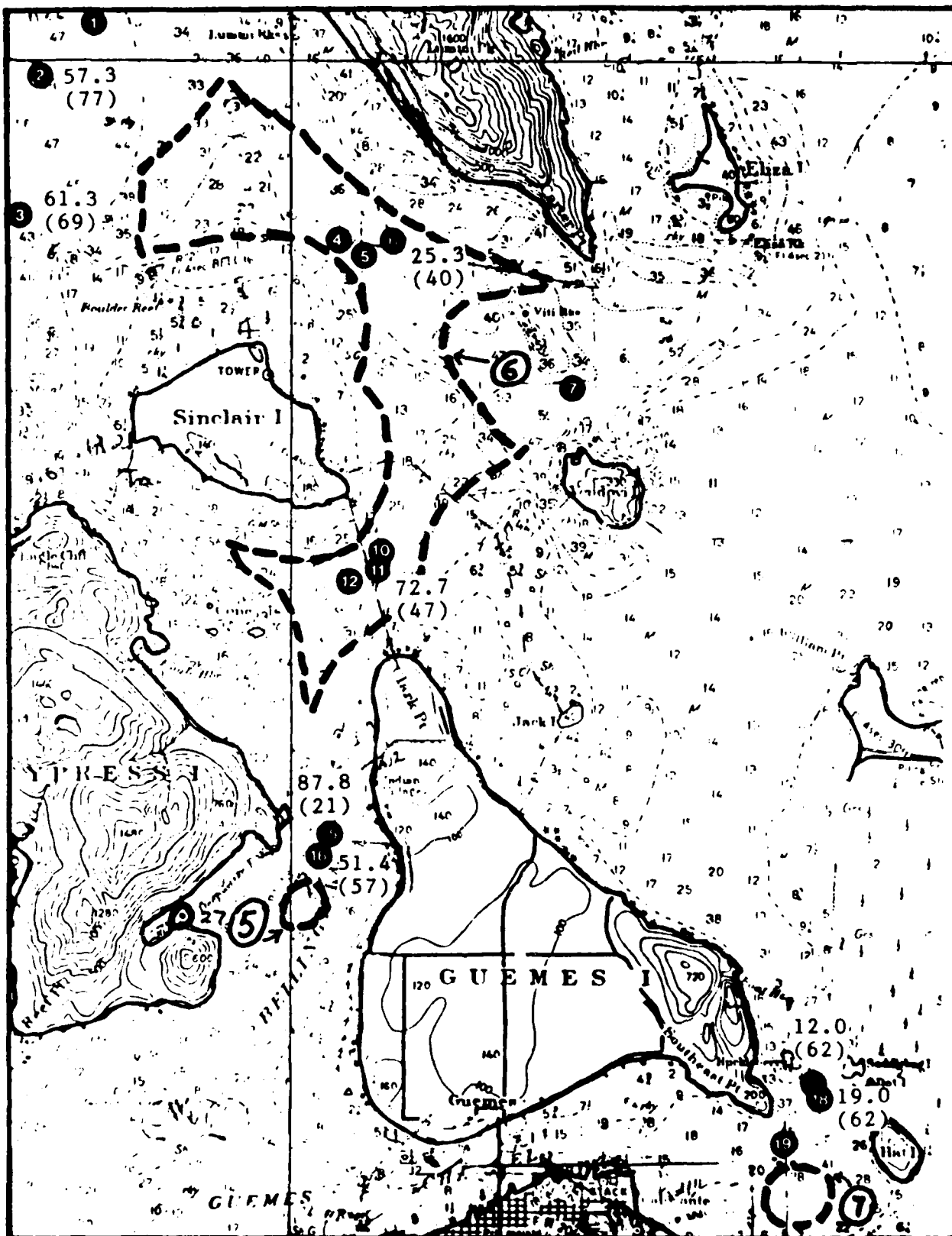


Figure 5. Rosario Strait showing ZSFs 5, 6, and 7. Current meter station locations near the ZSF are marked with a station number (white number), rms speed (cm/s; top number), and depth (m; bottom number in parentheses).

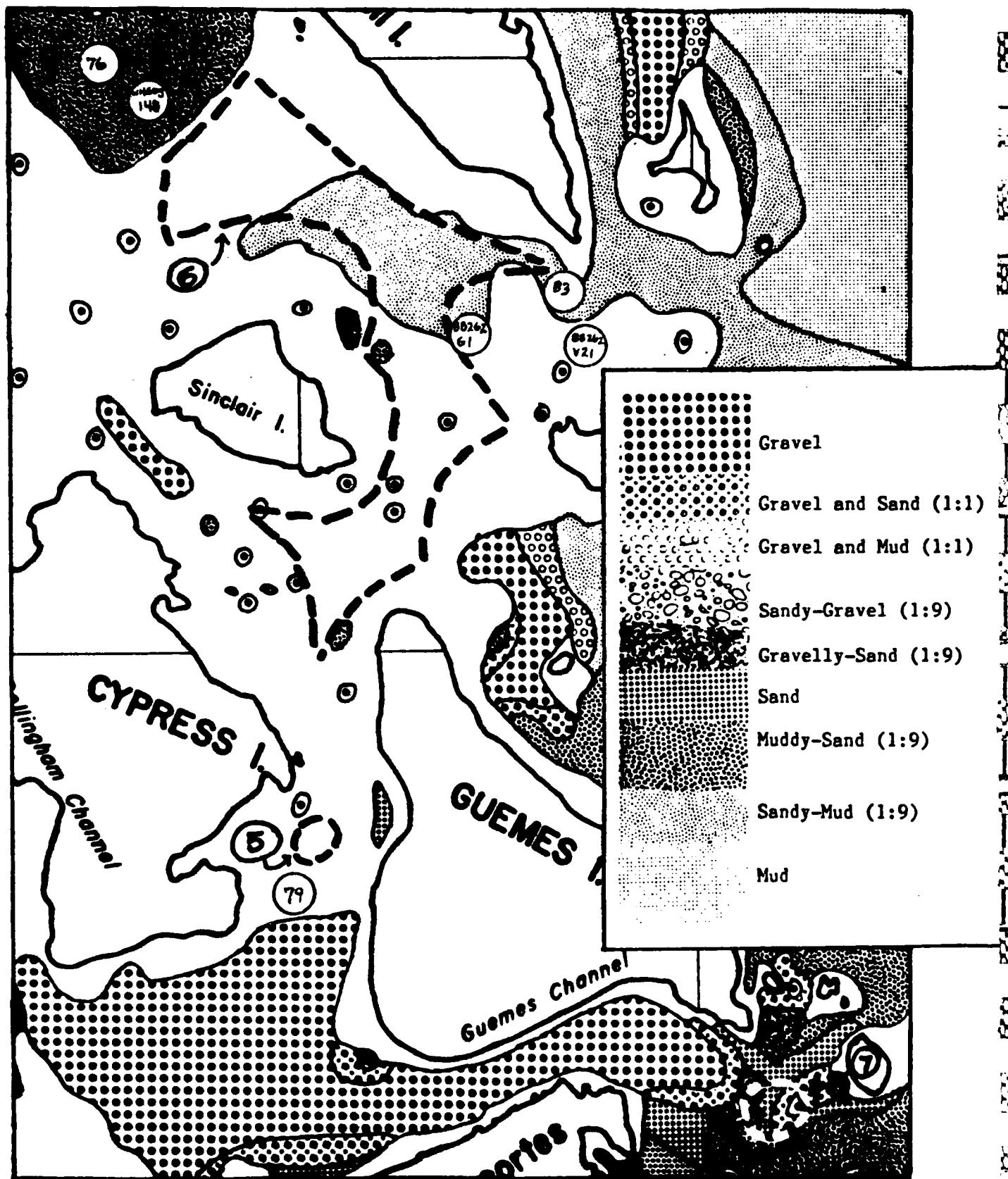


Figure 6. Rosario Strait with ZSF's 5, 6, and 7 and station locations plotted on Roberts 1979 surface sediment charts.

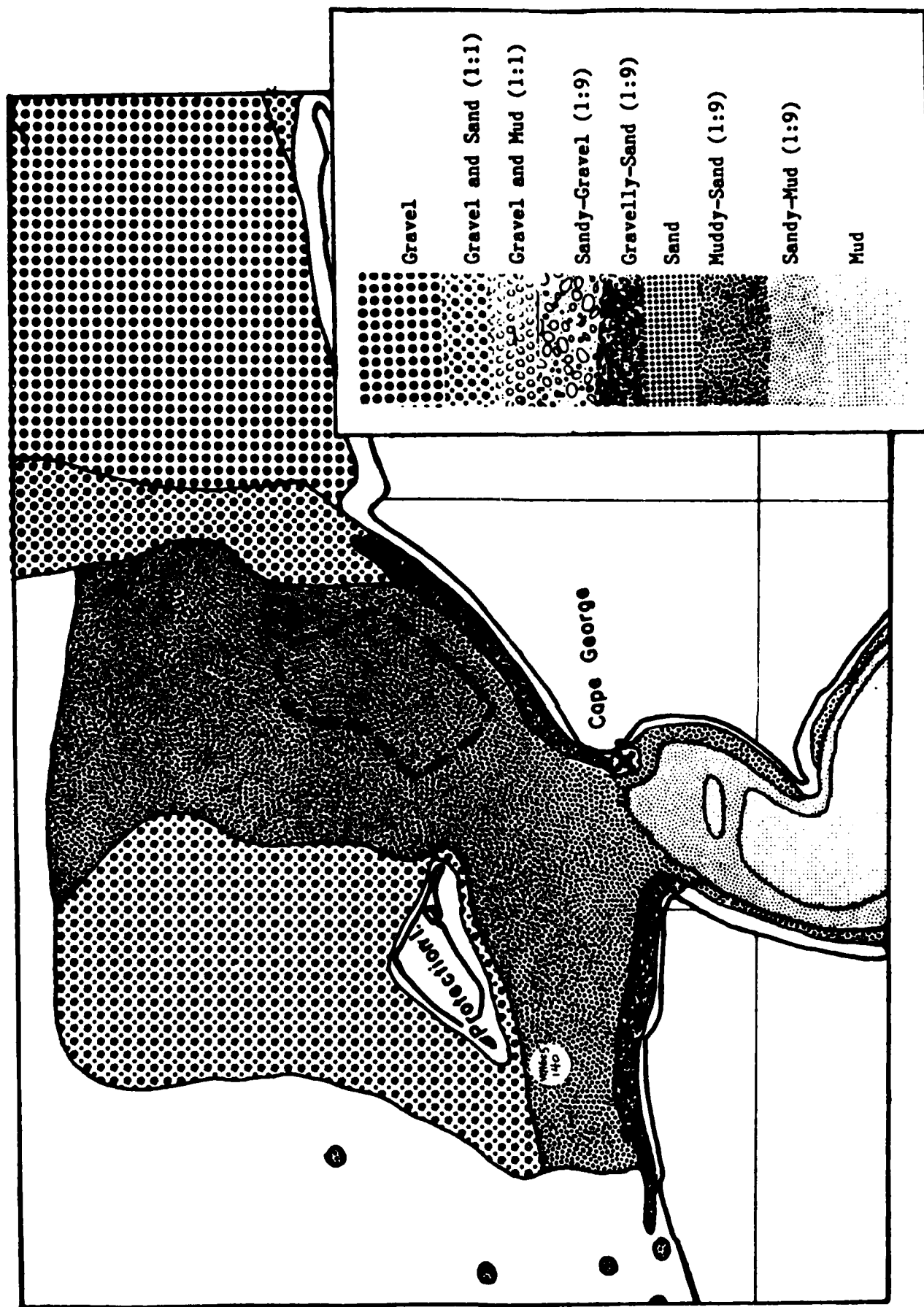
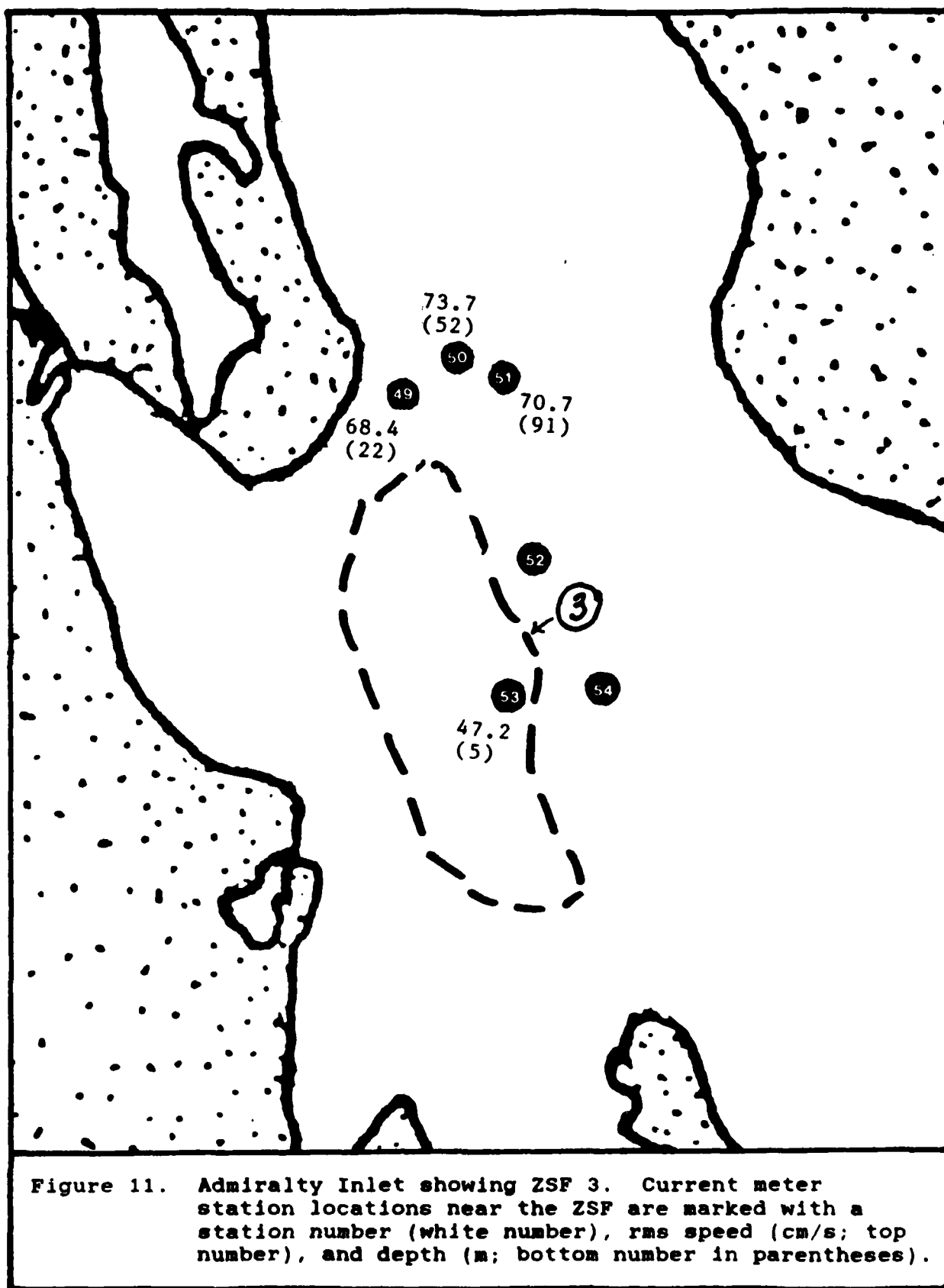


Figure 10. Strait of Juan de Fuca with ZSP 2 and station location plotted on Roberts 1979 surface sediment charts.



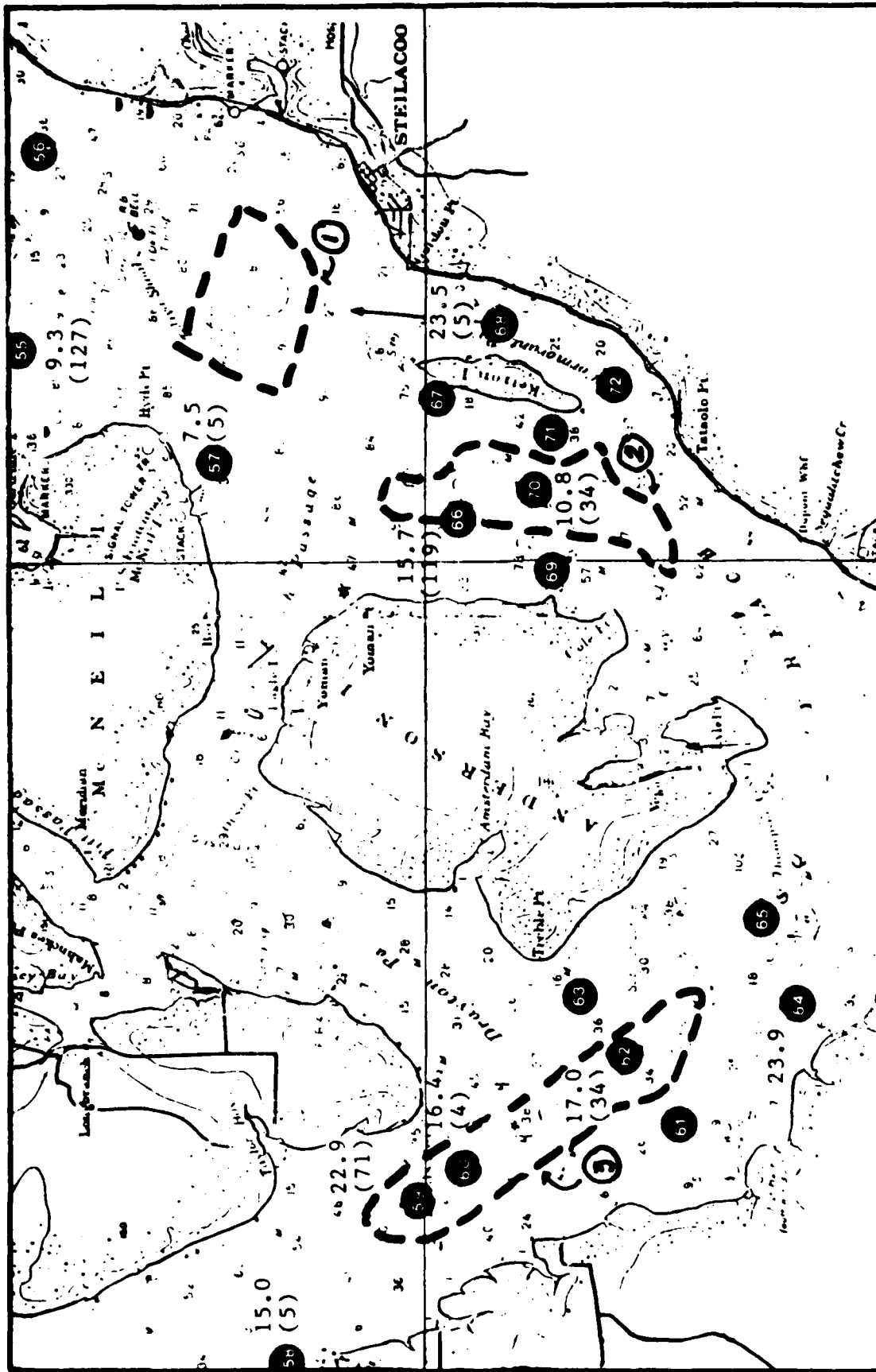


Figure 13. Southern Puget Sound showing ZSFs 1, 2, and 3. Current meter station locations near the ZSF are marked with a station number (white number), rms speed (cm/s; top number), and depth (m; bottom number in parentheses).

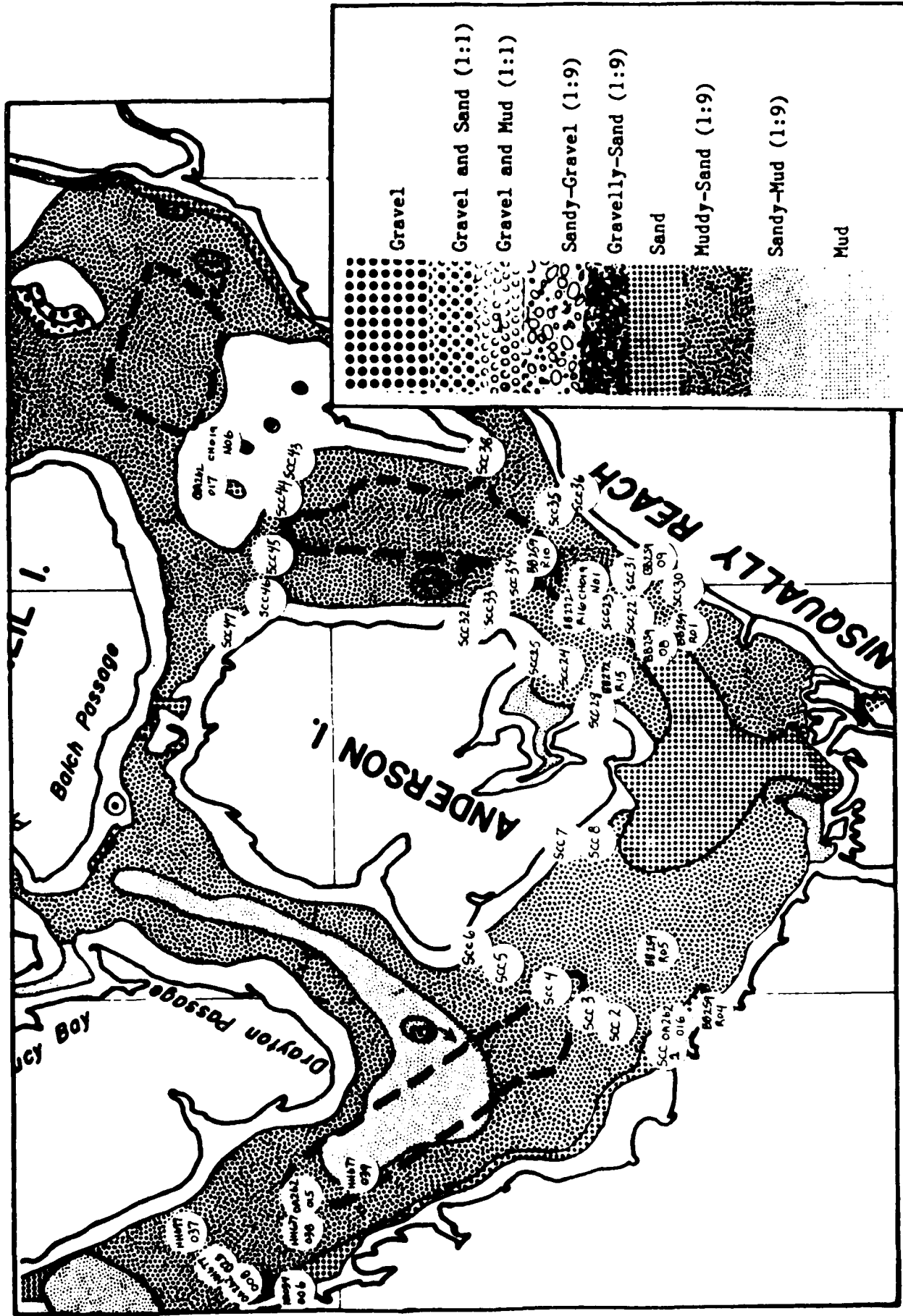


Figure 14. Southern Puget Sound with ZSP's 1, 2, and 3 and station locations plotted on Roberts 1979 surface sediment charts.

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APPENDIX A:

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Nautical Charts

Canadian Hydrographic service Nautical Charts; 3488, 3489, 3422, 3451, 3452, and 3453.

U. S. Department of Commerce, National Oceanic and Atmospheric Administration, National Ocean Survey Charts; 18400, 18421, 18523SC, 18424, 18425, 18427, 18428, 18440, 18441, 18443, 18444, 18445SC, 18446, 18447SC, 18448, 18449, 18450, 18452, 18453, 18456, 18457, 18458, 18461, 18464, 18465, 18467, 18468, 18480, 18484, and 18485.

APPENDIX B
COMPUTOR LITERATURE SEARCH

SAMPLE RECORD

The positions of the key fields are shown in the following sample record.

040466 UCRL-84559
Interaction of Moderately Dense Particle Concentra-
tions in Turbulent Flow
Buckingham, A. C.; Stekhaus, W. J.
Lawrence Livermore National Lab., CA.
Corp. Source Codes: 088147000 9511304
SPONSOR: Department of Energy, Washington, DC.
1981 16p
Country of Publication: United States
CP
NT
12 Jan 1981
19. Aerospace Sciences meeting, St. Louis, MO, USA

Journal Announcement: GRA18113; NSA0600
NTIS prices: PC A02/MF A01
Document Type: Conference proceedings
Languages: English
Report No.: CONF-810106-3
Contract No.: W-7405-ENG-48

Numerical simulations are presented which describe fluctuating gas motions and effects of resulting forces on gas-borne particulates. The effects include the back influence of the particulates on the turbulent gas field that convects them. Force, energy and motion coupling between particles and gas is moderately influential consistent with the modest levels of particle-to-gas mass loading (the order of 0.01 to 0.1), associated with use of erosion suppressing particulate additives. Back influence consists of inertial and volumetric effects as well as modeled acoustical coupling, where appropriate. Preliminary results of complementary wind tunnel experiments, measuring influences of particle loading on turbulent structures, are also presented. (EPA citation 06:009828)

DE
ID
SSH

Descriptors: Aerosols; •Turbulent flow; Convec-
tion; Dusts; Mathematical models; Numerical solution
: Simulation; Theoretical data
Identifiers: ERDA/640410; NTISDE
Section Headings: 200 (Physics--Fluid Mechanics);
468 (Physics--Fluid Mechanics)
(Copyright by National Technical Information Ser-
vice, 1984)

Key to Data Fields

AB	Abstract	LA	Language
AU	Author	NT	Note
CN	Contract Number	PY	Publication Year
CP	Country of Publication	RN	Report Number
CS	Corporate Source	RN	NIS Accession Number
DE	Descriptor	RN	CAS Registry Number
DT	Document Type	SH	Section Heading Code
ID	Identifier	SP	Sponsoring Agency
JA	Announcement	TI	Title

Data present in record depends on output format requested and type of record.

If you have any questions, please call:

Telephone: _____
Topic of search: _____
Searcher: _____
Date: _____

The attached report is the result of a search of the NINTIS database using the DIALOG Information Retrieval Service.

The NTIS (National Technical Information Service) database consists of government-sponsored research, development, and engineering plus analyses prepared by federal agencies, their contractors or grantees. It is the means by which unclassified, publicly available, unlimited distribution reports are made available for sale from such agencies as NASA, DDC, DOE, HUD, DOT, Department of Commerce and other government agencies.

DIALOG File 6: NTIS - 84-88/ISS18 (Copr. NTIS)

1167957 DE86001632/XAB

Chemical and Geochemical Studies off the Coast of
Washington. Progress Report, September 1977-August 1978

Carpenter, R.

Washington Univ., Seattle, Dept. of Oceanography.

Corp. Source Codes: 005042022; 6808000

Sponsor: Department of Energy, Washington, DC.

Report No.: DOE/EV/70024-T3

Aug 78 44p

Portions of this document are illegible in microfiche
products.

Languages: English

NTIS Prices: PC A03/MF A01 Journal Announcement: GRA18605;

NSA0000

Country of Publication: United States

Contract No.: ATO6-71EV70024

This report summarizes progress from September 1977 through August 1978 on a series of marine chemical and geochemical investigations involving both laboratory studies and field studies off the coast of Washington. Most field work has been in Puget Sound or on the Washington continental shelf, slope and the submarine canyons indenting the shelf north of the Columbia River. Our aim is to provide basic data required to characterize underlying chemical and physical processes and their rates which control the distributions, concentrations and ultimate fate of some of the potentially hazardous agents associated with fossil fuel and/or nuclear power production or transportation. The main lines of investigation are: (1) field studies of the uptake and transport by zooplankton fecal pellets of sup 210 Po, sup 210 Pb and other trace inorganic and organic constituents in a well studied part of Puget Sound; (2) studies of the behavior of sup 210 Po and sup 210 Pb in sediments off the coast of Washington and the application of the sup 210 Pb determinations in sediment cores to determine sediment accumulation rates for the past 100 years, the depth of the surface mixed layer, and a mixing coefficient for the surface sediments; (3) studies of the uptake and transfer of sup 210 Po, sup 210 Pb and related elements in the well-defined surf zone ecosystem at Copalis Beach, Washington; and (4) investigations of aliphatic and aromatic hydrocarbons in some of the same samples of organisms and sediment cores whose accumulation histories for the past 100 years we have determined with the lead-210 technique.

Descriptors: *Continental Shelf; *Hydrocarbons; *Sediments; Aquatic Ecosystems; Coastal Waters; Continental Slope; Environmental Transport; Feces; Lead 210; Polonium 210; Radionuclide Migration; Sedimentation; Submarine Canyons; Tracer Techniques; Washington; Zooplankton
Identifiers: ERDA/520302; ERDA/520200; *Radioactive contaminant; North Pacific Ocean; NTISOE

Section Headings 18H (Nuclear Science and Technology--Radioactivity); 77G (Nuclear Science and Technology--Radioactive Wastes and Radioactivity); 68F (Environmental Pollution and Control--Radiation Pollution and Control); 68D (Environmental Pollution and Control--Water Pollution and Control)

Section Headings 18H (Nuclear Science and Technology--Radioactivity); 77G (Nuclear Science and Technology--Radioactive Wastes and Radioactivity); 68F (Environmental Pollution and Control--Radiation Pollution); 68F

Control: 68D (Environmental Pollution and Control--Water Pollution and Control)

DIALOG File 8: NTIS - 84-88/ISS18 (Copr. NTIS)

1135465 P885-193381/XAB

Sedimentation Rates in Puget Sound from (210)Pb Measurements
(Technical memo.)

Lavelle, J. W.; Massoth, G. J.; Grececius, E. A.
National Oceanic and Atmospheric Administration, Seattle.
WA. Pacific Marine Environmental Lab.
Corp. Source Codes: Q31375019
Report No.: NOAA-TM-ERL-PMEL-61
Jan 85 47p

Languages: English

NTIS Prices: PC A03/MF A01 Journal Announcement: GRAISS18
Country of Publication: United States

Sixteen (210)Pb profiles from sites along the axis of the Main Basin of Puget Sound show that bottom sediments are accumulating at rates of 0.26 to 1.20 g/sq cm/yr; these along with seven rates earlier published suggest highest accumulation nearly midway along the length of this tidal current-dominated basin. Bioturbated surface layers of cores have also been found to be as deep as 40 cm, but biologic mixing rates are poorly determined. Individual (210)Pb accumulation rates have a range of from approximately one to five times areal average accumulation rates based on estimates of recent sediment input from riverine and shoreline sources.

Descriptors: *Sedimentation; *Puget Sound; Tidal currents; Radioactive isotopes; Sediments; Accumulation; Isotopic labeling; Rivers; Shores; Profiles

Identifiers: Tracer studies; Lead 210; NTISCOMNOA

Section Headings: 8G (Earth Sciences and Oceanography--Geology and Mineralogy); 8C (Earth Sciences and Oceanography--Dynamic Oceanography); 47E (Ocean Technology and Engineering--Marine Geophysics and Geology); 47B (Ocean Technology, and Engineering--Dynamic Oceanography)

PRINTS

User 008800 14aug86 P133 PR 1125210 5
DIALOG (VERSION 2)

DIALOG FILE 8: NTIS - 64-86/ISS18 (Copr. NTIS)

1125210 PB85-174209-1A8

Initial Evaluation of Alternatives for Development of Sediment Related Criteria for Toxic Contaminants in Marine Waters (Puget Sound). Phase 2. Development and Testing of the Sediment-Water Equilibrium Partitioning Approach (Final report)

[illegible]

PAVLOU, S. P.; WESTON, D. P.;
JRB Associates, Inc.; Bellevue, WA.

Corp. Source Codes 078466000

Sponsor: Environmental Protection Agency, Washington, DC

Report No. EPA/910/9-83/117

20 Apr 84 98D

Languages: English

NTIS Prices PC A05/MF A01 Journal Announcement GRA18514
Country of Publication: United States

Contract No. EPA-68-01-6388; JRB-2-813-03-852-42

With the increased use of our nation's coastal and inland waters, regulatory agencies are frequently confronted with difficult decisions in resolving conflicts between alternative uses of these waters, while at the same time striving to protect overall environmental quality. A significant number of management decisions facing these agencies concern the definition of permissible levels of contaminants in marine sediments. For example, in Commencement Bay the Washington Department of Ecology, and EPA are attempting to identify those areas in which sediment contamination poses the greatest environmental threat, with the ultimate intent of initiating remedial action in these areas. At the Four Mile Rock dredge disposal site, regulatory agencies are confronted with an immediate need to establish a permissible level of contamination for sediments which are to be disposed of at the site.

Descriptors: •Sediments; •Water quality management; •Toxicity; •Puget Sound; •Water pollution, Commencement Bay; •Protection; Ocean environments; Dredging; Solid waste disposal; •Sites; Metals; Mathematical models; Regression analysis; Hydrocarbons; Biphenyl

Identifiers: •Permissible level; •Sediment water interfaces
NTISEPAESA

Section Headings: 6T (Biological Sciences--Toxicology); 7D (Chemistry--Physical and Environmental Pollution and Control--Water Control); 68C (Environmental Pollution and Control--Solid Wastes Pollution and Control); 5T (Biological Sciences--Toxicology); 99A (Chemistry--Analytical Chemistry)

PRINTS

User: 008800 14Aug86 P134 PR 1101823.5
DIALOG (VERSION 2)

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DIALOG File 6: NTIS - 64-86/ISS18 (Copr. NTIS)

1101823 DE85001684/XAB

Hydrocarbon Studies in Puget Sound and off the Washington Coast. Report of Progress, March 1980-February 1981

Carpenter, R.

Washington Univ., Seattle, Dept. of Oceanography.

Corp. Source Codes: 005042022: 5308000

Sponsor: Department of Energy, Washington, DC.

Report No.: DOE/EV/70040-T3

Feb 81 15p

Portions are illegible in microfiche products.

Languages: English

NTIS Prices: PC A02/MF A01 Journal Announcement: GRAI8506;

NSA1000

Country of Publication: United States

Contract No.: AT06-76EV-0040

This report summarizes the past year's progress in studies of the amounts, types and probable origins of aliphatic, aromatic, S- and N-containing hydrocarbons in sediments, organisms and waters of Puget Sound and the Washington coast. We are identifying the relative importance of the various possible sources of these substances, the major pathways by which they are transferred through some parts of the marine food web, their rates of transfer, their possible transformations into other chemical forms, and their ultimate fates. We have found that changes in aliphatic, aromatic and N-containing hydrocarbons are evident with depth in exp 210 pb-dated sediment cores from central Puget Sound. These changes are due both to natural diagenetic processes and to low level inputs of fossil hydrocarbons from a variety of energy related activities. The presence of these hydrocarbons from various chronic sources must be considered and taken into account when assessing potential impacts of any future oil spills or refinery or transshipment terminals proposed for future development. The greatest polynuclear aromatic hydrocarbon fluxes are to central Puget Sound sediments near the major urban areas, rather than in northern Puget Sound near the major refineries. We have found S-containing hydrocarbons in Puget Sound sediments which are largely due to natural sources. In contrast, N-containing hydrocarbons appear largely due to anthropogenic inputs, probably from atmospheric dusts rich in these compounds from combustion processes. The S-containing azarenes are especially enriched in layers of sediment containing coal particles and may turn out to be good indicators of coal dust contamination of sediments. Our studies of the role of zooplankton fecal pellets in the cycling of trace chemicals in the sea have shown that fecal pellets are an important vertical transport agent for hydrocarbons. 5 figures. (ERA citation 10:003354)

Descriptors: Hydrocarbons; Puget Sound; Aquatic Organisms
Biodegradation; Chemical Composition; Coastal Waters;
Combustion Products; Ecological Concentration; Environmental Transport; Feces; Plankton; Pollution Sources; Sediments;
Water Pollution

Identifiers: ERDA/520200; NTISDE

Section Headings: 8A (Earth Sciences and Oceanography--Biological Oceanography); 6F (Biological and Medical Sciences--Environmental Biology); 68D (Environmental

Pollution and Control--Water Pollution and Control); 57H (Medicine and Biology--Ecology); 47D (Ocean Technology and Engineering--Biological Oceanography)

DIALOG File 6: NTIS - 84-86/ISS18 (Copr. NTIS)

1101822 DE85001683/XAB

Hydrocarbon Studies in Puget Sound and off the Washington Coast. Report of Progress, March 1981-May 1982

Carpenter, R.

Washington Univ., Seattle, Dept. of Oceanography.

Corp. Source Codes: 005042022; 6808000

Sponsor: Department of Energy, Washington, DC.

Report No.: DOE/EV/70040-T2

Jun 82 14p

Portions are illegible in microfiche products.

Languages: English

NTIS Prices: PC A02/MF A01 Journal Announcement: GRAI8506;

NSA1000

Country of Publication: United States

Contract No.: AT06-76EV70040

This report summarizes the past year's progress in studies of the amounts, types and probable origins of aliphatic, aromatic, S- and N-containing hydrocarbons in sediments, organisms and waters of Puget Sound and the Washington coast. We are identifying the relative importance of the various possible sources of these substances, the major pathways by which they are transferred through some parts of the marine food web, their rates of transfer, their possible transformations into other chemical forms, and their ultimate fates. We have found that changes in aliphatic, aromatic and N-containing hydrocarbons are evident with depth in exp 210 Pb-dated sediment cores from central Puget Sound. These changes are due both to natural diagenetic processes and to low level inputs of fossil hydrocarbons from a variety of energy related activities. The presence of these hydrocarbons from various chronic sources must be considered and taken into account when assessing potential impacts of any future oil spills or refinery or transshipment terminals proposed for future development. The greatest polynuclear aromatic hydrocarbon fluxes are to central Puget Sound sediments near the major urban areas, rather than in northern Puget Sound near the major refineries. We have found S-containing hydrocarbons in Puget Sound sediments which are largely due to natural sources. In contrast, N-containing hydrocarbons appear largely due to anthropogenic inputs, probably from atmospheric dusts rich in these compounds from combustion processes. The N-containing azarenes are especially enriched in layers of sediment containing coal particles and may turn out to be good indicators of coal dust contamination of sediments. Our studies of the role of zooplankton fecal pellets in the cycling of trace chemicals in the sea have shown that fecal pellets are an important vertical transport agent for hydrocarbons. 4 figures (ERA citation 10 003353)

Descriptors: Hydrocarbons; Puget Sound; Alkanes; Aromatics; Ecological Concentration; Environmental Transport; Feces; Plankton; Pollution Sources; Sediments; Water Pollution

Identifiers: ERDA/520200; NTISDE

Section Headings: 13B (Mechanical, Industrial, Civil, and Marine Engineering--Civil Engineering); 680 (Environmental Pollution and Control--Water Pollution and Control); 97R (Energy--Environmental Studies)

PRINTS

User: 00800 14Aug86 P137 PR 1072458/5
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DIALOG File 6: NTIS - 64-86/ISS18 (Copr. NTIS)

1072458 DE84010949

Bonneville Power Administration Proposed Fiscal Year 1979
 Program Facility Location Supplement, San Juan Islands Area
 Service, 115-KV Submarine Transmission Cable, Final
 Supplement, Final Environmental Impact Statement
 Department of Energy, Washington, DC, Office of Environment
 Corp. Source Codes: 052661195; 9512011
 Sponsor: Department of Energy, Washington, DC.
 Report No.: DOE/EIS-0005-FS

Jan 81 75p

Portions are illegible in microfiche products.

Languages: English

NTIS Prices: PC A04/MF A01 Journal Announcement: GRAI8420;

NSA0900

Country of Publication: United States

A proposal for transmission facilities to serve the San Juan Islands is described. The proposal consists of four subprojects: (1) a 4.5 mile 115-kv submarine cable across Rosario Strait from Fidalgo Substation on Fidalgo Island to the eastern shore of Decatur Island; (2) a 1.5 mile 115-kv underground cable across Decatur Island; (3) a 2.2 mile 115-kv submarine cable across Lopez Sound from the western shore of Decatur Island to the Lopez Substation on the eastern shore of Lopez Island; and (4) replacement of approximately 1000 ft. of double-circuit wood-pole overhead line with two 34.5-kv underground cables on the eastern side of Decatur Island to move the existing terminal structure inland. 34 references, 2 figures. (ERA citation 09:027091)

Descriptors: -Power Transmission Lines; Air Pollution;
 -Environmental Impact Statements; Erosion; Molluscs; Noise
 Pollution; Oil-Filled Cables; Puget Sound; Sedimentation;
 Washington; Water Pollution; Wild Animals

Identifiers: ERDA/530300; ERDA/520500; ERDA/290300;
 ERDA/200300; NTISDE

Section Headings: 13B (Mechanical, Industrial, Civil, and
 Marine Engineering--Civil Engineering); 10A (Energy Conversion
 (Non-propulsive)--Conversion Techniques); 97R (Energy--Environ
 mental Studies); 97G (Energy--Policies, Regulations, and
 Studies); 97E (Energy--Electric Power Transmission); 68H
 (Environmental Pollution and Control--Environmental Impact
 Statements)

DIALOG File 8: NTIS - 84-86/ISS18 (Copr. NTIS)
832417 AD-A035 337.2
Seismic Structure of the Juan de Fuca Ridge: Ocean Bottom

Seismic Structure of the Juan de Fuca Ridge: Ocean Bottom Seismometer Results from the Median Valley
(Technical rept.)

(Technical rept.)
Davis, E. E.; Lister, C. R. B.; Lewis, B. T. R.
Washington Univ., Seattle, Dept. of Oceanography.
Corp. Source Codes: 005042022; 370280
Report No.: TR-356
14 Aug 75 16p

14 Aug 75 16p
Pub. in Jnl. of Geophysical Research, v81 n20 p3541-3555, 10
Jul 76. prepared in cooperation with Massachusetts Inst. of
Tech., Cambridge. Dept. of Earth and Planetary Sciences.
Sponsored in part by Grant NSF-DE573-06593.
Languages: English Document Type: Journal article
NTIS Prices: PC A02 MF A01 Journal Announcement: GRA18113
Country of Publication: United States
Contract No.: N00014-67-A-0103-0014

NO abstract available.
 Descriptors: -Ocean ridges; North Pacific Ocean; Sediments;
 Oceanic crust; Seismic waves; Refraction; Reprints
 Identifiers: Juan de Fuca Ridge; Seismic refraction profiles
 ; NTISDDXR; NTISNSFG
 Section Headings: 8J (Earth Sciences and
 Oceanography--Physical Oceanography); 8K (Earth Sciences and
 Oceanography--Seismology); 47E (Ocean Technology and
 Engineering--Marine Geophysics and Geology); 47G (Ocean
 Technology and Engineering--Hydrography)

DIALOG File 6: NTIS - 64-86/ISS18 (Copr. NTIS)

804143 PB81-103749

Biotic, Water Quality and Hydrologic Characteristics of Skyline Marina in 1978

(Technical completion rept. Ma, 76-Dec 80)

Cardwell, Rick D.; Olsen, Scharleen J.; Carr, Mark I.; Sanborn, Eugene W.

Washington State Dept. of Fisheries, Olympia.

Corp. Source Codes: 060306000

Sponsor: National Marine Fisheries Service, Washington, DC.

Report No.: TR-54; NOAA-80082009

Jun 80 116p

Languages: English

NTIS Prices: PC A06/MF A01 Journal Announcement: GRA18101

Country of Publication: United States

Contract No.: NOAA-NMFS-1.127-R

Fish, zooplankton, and water quality characteristics of Skyline Marina in north Puget Sound were compared to the marina's source water in monthly surveys conducted from March to October 1978. The marina's fish populations were numerically larger, more diverse and rich in species than those in the bay. Surface zooplankton in the marina were less dense and rich in species than those in the bay. The amounts of Skyline Marina water exchanging with the source water were among the lowest of record for Puget Sound marinas. Skyline Marina had warmer temperatures, higher concentrations of dissolved oxygen (D.O.), chlorophyll, ammonia, copper in the sediments and copper and zinc in adult oysters, and lesser concentrations of nitrite-nitrate and ortho-phosphate than Burrows Bay. Water quality was most variable from June through August.

Descriptors: Fishes; Marinas; Water pollution; Puget Sound; Abundance; Zooplankton; Metals; Nutrients; Surveys; Temperature; Oxygen; Dissolved gases; Chlorophylls; Ammonia; Copper; Sediments; Zinc
Identifiers: Clupea harengus; Oncorhynchus; Water quality data; NTISCOMNOA; NTISCOMNF

Section Headings: 8A (Earth Sciences and Oceanography--Biological Oceanography); 6F (Biological and Medical Sciences--Environmental Biology); 68D (Environmental Pollution and Control--Water Pollution and Control); 47D (Ocean Technology and Engineering--Biological Oceanography); 57H (Medicine and Biology--Ecology)

PRINTS

User 008800 14Aug86 P140 PR 769634/5
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DIALOG File 6: NTIS - 64-86/ISS18 (Copr. NTIS)

769634 PNL-3168

Evaluation of an in-Situ X-Ray Fluorescence Analyzer for Inorganic Pollutants in Sediments and Water Columns

Wogman, N. A.

Battelle Pacific Northwest Labs., Richland, WA

Corp. Source Codes 048335000, 9500032

Sponsor: Department of Energy, Washington, DC

Sep 79 61p

Languages: English

NTIS Prices PC A04-MF A01 Journal Announcement GRA18015:

NSA0500

Country of Publication: United States

Contract No. EY-76-C-06-1530

The applicability of an energy dispersive x-ray fluorescence spectrometer for measurement of trace elements in sediments and in water columns from Coast Guard vessels has been investigated. This investigation was conducted in both freshwater and saltwater areas and included Puget Sound, Lake Washington, Lake Union, and the ship canal in the State of Washington. The spectrometer system consisted of a solid cryogen-cooled Si(Li) detector and a e.p. 109 Cd excitation source. Sediments and water columns were viewed through a 0.2 mm Be window. This study showed the feasibility of measuring trace elements at concentrations ranging from 20 to about 100 ppm. Measurements of this sensitivity with a 100 mCi exp 109 Cd source are possible for time intervals as short as 5 minutes. This in-situ measurement capability permits the on-site mapping of pollution and avoids the problem of sediment disturbance which is inherent in the collection of grab samples of the sediment surface. Recommendations for an improved analyzer system included a detector assembly which could be towed, or allow continuous sediment surface analysis thereby recording the average composition of a large area. (ERA citation 05:012530)

Descriptors: *Elements, *Sediments, *X-ray spectrometers; Cadmium 109; Evaluation; Experimental data; Isolated values; Quantitative chemical analysis; Trace amounts; Underwater operations

Identifiers: ERDA/520200; Water pollution detection; NTISDE Section Headings 7D (Chemistry--Physical Chemistry); 68D (Environmental Pollution and Control--Water Pollution and Control); 99A (Chemistry--Analytical Chemistry)

DIALOG

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352 353 354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458 459 460 461 462 463 464 465 466 467 468 469 470 471 472 473 474 475 476 477 478 479 480 481 482 483 484 485 486 487 488 489 490 491 492 493 494 495 496 497 498 499 500 501 502 503 504 505 506 507 508 509 510 511 512 513 514 515 516 517 518 519 520 521 522 523 524 525 526 527 528 529 530 531 532 533 534 535 536 537 538 539 540 541 542 543 544 545 546 547 548 549 550 551 552 553 554 555 556 557 558 559 560 561 562 563 564 565 566 567 568 569 570 571 572 573 574 575 576 577 578 579 580 581 582 583 584 585 586 587 588 589 590 591 592 593 594 595 596 597 598 599 600 601 602 603 604 605 606 607 608 609 610 611 612 613 614 615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632 633 634 635 636 637 638 639 640 641 642 643 644 645 646 647 648 649 650 651 652 653 654 655 656 657 658 659 660 661 662 663 664 665 666 667 668 669 670 671 672 673 674 675 676 677 678 679 680 681 682 683 684 685 686 687 688 689 690 691 692 693 694 695 696 697 698 699 700 701 702 703 704 705 706 707 708 709 710 711 712 713 714 715 716 717 718 719 720 721 722 723 724 725 726 727 728 729 730 731 732 733 734 735 736 737 738 739 740 741 742 743 744 745 746 747 748 749 750 751 752 753 754 755 756 757 758 759 760 761 762 763 764 765 766 767 768 769 770 771 772 773 774 775 776 777 778 779 780 781 782 783 784 785 786 787 788 789 790 791 792 793 794 795 796 797 798 799 800 801 802 803 804 805 806 807 808 809 810 811 812 813 814 815 816 817 818 819 820 821 822 823 824 825 826 827 828 829 830 831 832 833 834 835 836 837 838 839 840 841 842 843 844 845 846 847 848 849 850 851 852 853 854 855 856 857 858 859 860 861 862 863 864 865 866 867 868 869 870 871 872 873 874 875 876 877 878 879 880 881 882 883 884 885 886 887 888 889 890 891 892 893 894 895 896 897 898 899 900 901 902 903 904 905 906 907 908 909 910 911 912 913 914 915 916 917 918 919 920 921 922 923 924 925 926 927 928 929 930 931 932 933 934 935 936 937 938 939 940 941 942 943 944 945 946 947 948 949 950 951 952 953 954 955 956 957 958 959 960 961 962 963 964 965 966 967 968 969 970 971 972 973 974 975 976 977 978 979 980 981 982 983 984 985 986 987 988 989 990 991 992 993 994 995 996 997 998 999 1000

DIALOG File 6: NTIS - 64-86/ISS18 (Copr. NTIS)

692589 AD-A062 095/5

Regional Geological Maps of the Northeast Pacific - Standard
Navy Ocean Area Np-9

(Final rept.)

Morton, William T.; Lowrie, Allen

Naval Oceanographic Office (Nst) Station MS

Corp. Source Codes: 250450

Report No.: N00-RP-16

1978 49p

Languages: English

NTIS Prices: PC A03/MF A01 Journal Announcement: GRA17909
Eleven geophysical and geological maps have been compiled for the central northeast Pacific. These maps are based upon bathymetric, magnetic, seismic reflection, and core sample data from all available sources, and contain an estimated 90 percent of the existing data. Comparison of the maps for the region shows that basement structure controls topography, except near the continental margins where alluvial fans have the dominant influence. Continental margin and abyssal plain deposits flank the actively spreading Gorda and Juan de Fuca Ridges. Interpretations have been deliberately limited so that emphasis could be placed on the criteria used for evaluating data and compiling maps. References have been cited in sufficient number to provide a general reading guide for further study. (Author)

Descriptors: *Oceanographic data; *Bathymetry; *Marine geology; *North Pacific Ocean; *Maps; Ocean bottom topography; Seafloor spreading; Sediments

Identifiers: *Geological maps; Alluvial fans; Gorda Ridge; Juan de Fuca Ridge; NTIS00DXA

Section Headings: 8J (Earth Sciences and Oceanography--Physical Oceanography); 8G (Earth Sciences and Oceanography--Geology and Mineralogy); 88 (Earth Sciences and Oceanography--Cartography); 47E (Ocean Technology and Engineering--Marine Geophysics and Geology); 47G (Ocean Technology and Engineering--Hydrography)

PRINTS

User: 008500 14Aug86 P143 PR 642934/5
DIALOG (VERSION 2)

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DIALOG File 6: NTIS - 64-86/ISS18 (Copr. NTIS)

642934 AD-472 260/9
Oceanographic Survey on Submarine Portion of
Snohomish-Kitsap 230 Kv Line. Part I
(Final rept.)
Babcock, Harold E.; Bader, Richard C.; Barnes, Clifford A
Burt, Wayne V.; Bush, James
Washington Univ Seattle Dept of Oceanography
Corp. Source Codes: 370280
Dec 53 173p
Distribution limitation now removed.
NTIS Prices: PC A08/MF A01 Journal Announcement. GRA17814
Contract No.: N80nr-520(03); Nonr-477(01); NR083 072
This report contains the results of an oceanographic survey
of the area in Puget Sound between President Point and Point
Wells (Richmond Beach), located about 10 miles north of the
city of Seattle. The purpose of the survey was to examine and
report upon all known oceanographic factors that would affect
the laying and subsequent operation of a power cable across
the Sound in the above area. (Author)
Descriptors: Oceanographic data; Puget Sound; Feasibility,
Washington(State); Electric cables; Tides; Oceanographic ships
; Ocean bottom sampling; Marine geology; Ocean bottom
topography; Temperature; Salinity; Sedimentation; Maps; Marine
biology; Ph factor; Ocean currents
Identifiers: NTIS000XD
Section Headings: 8J (Earth Sciences and
Oceanography--Physical Oceanography); 8A (Earth Sciences and
Oceanography--Biological Oceanography); 8G (Earth Sciences and
Oceanography--Geology and Mineralogy); 8C (Earth Sciences and
Oceanography--Dynamic Oceanography)

DIALOG

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 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PRINTS

User: 008800 14aug86 P144 PR 419409 5
DIALOG (VERSION 2)

Item 1 of 18

DIALOG File 8: NTIS - 64-88/ISS18 (Copr. NTIS)

419409 AD-787 772/3

Geology of the Strait of Juan de Fuca

(Technical rept.)

Mayers, Ian R.; Bennett, Jr., Lee C.
Washington Univ Seattle Dept of Oceanography
Corp. Source Codes: 370280

Sponsor: Office of Naval Research, Arlington, Va.; National
Science Foundation, Washington, D.C.

Report No.: TR-309; CONTRIB-725

19 Mar 73 31p

Sponsored in part by Grant NSF-GU-2655.

Pub. in Marine Geology, v15 p89-117 1973.

Document Type: Journal article

NTIS Prices: Reprint Journal Announcement: GRA17426

Contract No.: N00014-67-A-0103-0014; Nonr-477(37);
NR-083-012

The results of interpretation and mapping of this project
have been combined with previously published information in an
attempt to synthesize the geology of the Straits of Juan de
Fuca.

Descriptors: Juan de Fuca Strait; Oceanographic data;
Seismic reflection; Stratigraphy; Tectonics; Bathymetry;
Sedimentation

Identifiers: Pleistocene epoch; NTISD00N; NTISNSF

Section Headings: 8G (Earth Sciences and
Oceanography--Geology and Mineralogy); 8J (Earth Sciences and
Oceanography--Physical Oceanography)

PRINTS

User: 008800 14aug86 P145 PR 391167/5
DIALOG (VERSION 2)

PAGE: 19
Item 1 of 1

DIALOG File 6: NTIS - 64-86/ISS18 (Copr. NTIS)

391167 PB-231 248/6

Oxidation of Organic Matter in Sediments

Pamatmat, Mario M.; Jones, R. Stephen; Sanborn, Herbert;
Bhagwat, Ashok

Washington Univ., Seattle, Dept. of Oceanography.

Corp. Source Codes: 370280

Report No.: W74-06528; EPA-660/3-73-005

Sep 73 116p

Paper copy available GPO \$1.30 as EPI.23:660/3-73-005.

NTIS Prices: PC-GPO/MF A01-NTIS Journal Announcement

GRA17413

Contract No.: EPA-16070-EXZ

Techniques were developed for sampling undisturbed sediment interface, and measuring oxygen uptake by intact sediment cores. dehydrogenase activity of sediment bacteria, and metabolic heat release by benthic organisms. Laboratory experiments were conducted to determine the relationship between oxygen uptake, loss of carbon, and release of silicate, nitrate, ammonia, and phosphate by sediments. The oxygen consumption at 33 stations in Puget Sound was measured each season to provide baseline data for this estuary. The original working hypothesis, that total oxygen uptake represents a measure of total metabolism in the sediment column, appears erroneous, at least in organically rich sediment where anaerobic metabolism may greatly exceed aerobic metabolism.

Descriptors: *Sediments; Biochemical oxygen demand; Organic wastes; Detritus; Aerobic processes; Anaerobic processes; Metabolism; Oxygen consumption; Water pollution; Nutrients; Estuaries; Puget Sound

Identifiers: Sediment water interactions; NTISEPAORM

Section Headings: 13B (Mechanical, Industrial, Civil, and Marine Engineering--Civil Engineering); 68D (Environmental Pollution and Control--Water Pollution and Control)

END

DIALOG
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005829

PRINTS

User: 008800 14Aug86 P146 PR 251268/5
DIALOG (VERSION 2)

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Item 1 of 1

DIALOG File 6: NTIS - 64-86/ISS18 (Copr. NTIS)

251268 AD-734 557

Crustal Magnetization and Sedimentation near Two Small Seamounts West of the Juan de Fuca Ridge, Northeast Pacific
(Technical rept.)

Lister, C. R. B.

Washington Univ. Seattle Dept. of Oceanography
Corp. Source Codes: 370280

Report No. TR-268; CONTRIB-609

2 Apr 71 13c

Revision of report dated 23 Nov 70.

Pub. in: Jnl. of Geophysical Research, v76 n20 p4824-4841, 10 Jul 71.

Document Type: Journal article

NTIS Prices: Reprint: Journal Announcement. GRAI7204

Contract No. N00014-67-A-0103-0014; NR-083-012

A saturation survey of 800 sq km of ridge flank topography was made near 47N, 132W. Echo sounding depths at 12 kHz and total-field magnetic intensity were measured from a surface vessel on a dense track line pattern. Thirteen long gravity cores, three seismic profiles, and two camera stations provided additional data. Two abyssal hills 700 m high are topographically, and magnetically delineated in considerable detail. One is smooth and associated with a negative magnetic anomaly; the other is of complex morphology and is associated with a positive anomaly. Neither anomaly can be due to simple bulk magnetization of the seamounts. The southeast seamount shows massive flows, cliffs, steep pseudomassive faces, and rubble slide in sequence downward from the summit. (Author)

Descriptors: Ocean bottom topography; Pacific Ocean; Terrestrial magnetism; Ocean bottom; Echo ranging; Gravity; Sedimentation; Clay; Carbonates; Ocean bottom sampling; Anomalies; Marine geophysics

Identifiers: Seamounts; Abyssal plains; Juan de Fuca Ridge; North Pacific Ocean; Seismic profiles; NTISN

Section Headings: 8J (Earth Sciences and Oceanography,--Physical Oceanography); 8N (Earth Sciences and Oceanography,--Terrestrial Magnetism); 78H (Ocean Sciences and Engineering,--Physical Oceanography); 64G (Earth Sciences--Geomagnetism)

A SEARCH FROM THE

AQUATIC SCI AND FISHERIES ABS DATABASE

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The attached report is the result of a search of the
AQUATIC SCIENCES AND FISHERIES ABSTRACTS database us-
ing the DIALOG Information Retrieval Service.

AQUATIC SCIENCES AND FISHERIES ABSTRACTS (ASFA) is a
comprehensive database on life sciences of the seas and
inland waters as well as related legal, political, and
social topics. It includes information on aquatic
biology, oceanography, fisheries, and water pollution.
Corresponding to the printed publication, Aquatic Sci-
ences and Fisheries Abstracts, Parts 1 and 2, ASFA
cites primary journals and such other source documents
as books, conference proceedings, and technical re-
search reports.

SAMPLE RECORD

The positions of the key fields are shown in the following
sample record.

TI 1052467 210-02467
Deepwater pipeline tie-in techniques described by
Shell.
.Swank, J. C.
Shell UK Exploration and Production, London, UK
Oil Gas J., 77(32), 81-86, (1979)
LANGUAGES: English
DOC TYPE: Journal Article
JOURNAL ANNOUNCEMENT: 8003
The Shell/Eso Northern North Sea fields of Brent,
Cormorant, and Dunlin are planned to consist initially
of eight structures handling up to 1 million b/d of oil
and 1 billion cu ft of natural gas through 14
pipelines. Several procedures have been developed and
are used by Shell UK Exploration and Production (Expro)
in the connection, or tie-in, of these large-diameter
pipelines to production facilities in approximately 800
ft of water. The procedures include stress analysis in
platform-riser connection designs, survey and
measurement techniques to accurately lay the pipelines
at the required position near the platforms, and tie in
of the riser by both flanges and hyperbaric welding.
DE DESCRIPTORS: pipelines; connections
DE GEOGRAPHIC DESCRIPTORS: ANE, North Sea
ID IDENTIFIERS: riser pipes; design; construction;
welding; natural gas; oil and gas production
SH SECTION HEADING CODES: 2325
(Property of NOAA, 1984.)

Key to Data Fields

AB Abstract	JA Journal Announcement
AU Author	JN Journal Name
CL Conference Location	LA Language
CS Corporate Source	PU Publisher
CT Conference Title	PY Publication Year
CY Conference Year	RN Report Number
DE Descriptor	SH Section Heading Code
DT Document Type	SL Summary Language
EN Environment	TI Title
ID Identifier	

Data present in record depends on output format requested and
type of record.

PRINTS

User: 00800 14aug86 P148: PR 1553559/5
DIALOG (VERSION 2)

Item PAGE: 24
1 of 1

DIALOG File 44: AQUATIC SCIENCE ABSTRACTS - 78-88/MAY

1553559 215-03559

The shape and form of Puget Sound.

Burns, R.

PUGET SOUND BOOKS.

PUBL: WASHINGTON SEA GRANT PROGRAM, UNIV. WASHINGTON

SEATTLE, WA (USA), 1985., 114 pp

LANGUAGES: English

Incl. bibliogr. and index. Price: \$8.95.

DOC TYPE: Bibliography; Book

REPORT NO.: ISBN 0-295-96184-8

JOURNAL ANNOUNCEMENT: 8504

In this book the shape and form of Puget Sound will be examined. Discussion includes the processes responsible for shaping it, present submarine features, and the ongoing changes in its shape and the processes that cause them.

DESCRIPTORS: geomorphology; geochronometry; tectonics; sediment transport

GEOGRAPHIC DESCRIPTORS: INE, Puget Sound

ENVIRONMENT: Marine

SECTION HEADING CODES: 2263; 2109

DIALOG FILE 44: AQUATIC SCIENCE ABSTRACTS - 78-86/MAY

1519754 115-19754

Interlaboratory comparison of a sediment toxicity test.
Ocean Dumping R and D Pacific Region, Department of Fisheries
and Oceans, 1983 - 1984 Sidney, B.C. (Canada) 7 Dec 1984

Mearns, A. J.

Oceans Assess. Div., NOAA, Seattle, WA, USA

Institute of Ocean Sciences, Sidney, B.C. (USA)

CAN. CONTRACT. REP. HYDROGR. OCEAN SCI., no. 20, pp. 31-36 (1985).

LANGUAGES English

SUMMARY / LANGUAGES: English

DOC TYPE: Conference: Journal Article

JOURNAL ANNOUNCEMENT: 8509

Swartz et al. (1985) have proposed for monitoring and assessment a 10-day static sediment toxicity test using the amphipod *Rhepoxynius abronius* (Barnard: Phorocephalidae). The test has been used by five different laboratories to survey for sediment toxicity at several hundred sites in Puget Sound and elsewhere in the U.S. This test is now being used by a sixth laboratory, and it is one of two principal procedures tentatively being used by U.S. EPA as interim criteria for the disposal of dredge material into Puget Sound. During February, 1984, the Swartz et al. (1985) amphipod sediment bioassay was subject to a referred interlaboratory comparison experiment involving five laboratories, four U.S. and one Canadian. This report summarizes some of the results of that experiment, with emphasis on survival, one of three end-points investigated.

DESCRIPTORS: toxicity tests; sediment pollution
TAXONOMIC DESCRIPTORS: ocean dumping; survival; pollution effects; controlled conditions; *Rhepocornus abronius*

ENVIRONMENT · Marine

IDENTIFIERS: test organisms

SECTION HEADING CODES: 1502

PRINTS

User 008311 14aug86 P150 PR 1519717:5
DIALOG (VERSION 2)

Item 1 of 26

DIALOG File 44: AQUATIC SCIENCE ABSTRACTS - 78-88/MAY

1519717 115-19717: 215-07913

Geographic trends in toxicity of Puget Sound sediments.
Ocean Dumping R and D Pacific Region, Department of Fisheries
and Oceans, 1983 - 1984 Sidney, B.C. (Canada) 7 Dec 1984
Long, E.R.

Institute of Ocean Sciences, Sidney, B.C. (Canada)
CAN. CONTRACT. REP. HYDROGR. OCEAN SCI., no. 20, pp. 37-39
(1985).

LANGUAGES: English

DOC TYPE: Conference: Journal Article

JOURNAL ANNOUNCEMENT 8509

DESCRIPTORS: sediment pollution; pollution surveys

GEOGRAPHIC DESCRIPTORS: toxicity tests; pollution dispersio

site surveys; bioassays; INE, Puget Sound; ocean dumping

ENVIRONMENT: Marine

SECTION HEADING CODES 1501: 2443

DIALOG FILE 44: AQUATIC SCIENCE ABSTRACTS - 78-86/MAY

1504345 115-04345

Effects of Puget Sound sediments and their elutriates on the life cycle of *Capitella capitata*.

Chapman, P. M.: Fink, R.

E.V.S. Consult. Ltd., 195 Pemberton Ave., North Vancouver,
B.C., Canada V7P 2R4

BULL. ENVIRON. CONTAM. TOXICOL., vol. 33, no. 4, pp. 451-459

(1984).

LANGUAGES: English

SUMMARY LANGUAGES English

DOC TYPE: Journal Article

DOC TYPE: JOURNAL ARTICLE
JOURNAL ANNOUNCEMENT: 8502

JOURNAL ANNOUNCEMENT: 8302
In the present study, the

In the present study, the authors examined the effects of contaminated marine sediments from Puget Sound, Washington, on a complete life-cycle of *C. capitata* raised from the trochophore larvae stage with exposure to both sediment elutriates and whole sediments. They examined survival at all life cycle stages, abnormalities, growth rate, and time from trochophore larvae to reproduction. The results of this study provide information on the toxic effects of the tested sediments and also provide comparative data regarding sediment bioassays conducted with whole sediments and with elutriates prepared from those sediments.

DESCRIPTORS: sediment pollut

DESCRIPTORS sediment pollution; pollution effects
GEOGRAPHIC DESCRIPTORS INE Puget Sound

TAXONOMIC DESCRIPTORS: Caputella capitata

ECONOMIC DESCRIPTORS Capitalita

BUJABM : INENONIANE

SECTION HEADING CODES: 1504

PRINTS

User: GC5900 14aug86 P152: PR 1460561/5
DIALOG (VERSION 2)

Item 1 of 1
PAGE: 28

DIALOG File 44: AQUATIC SCIENCE ABSTRACTS - 78-86/MAY

1460561 214-12561

Particle transport processes in a small marine bay.
Baker, E. T.; Cannon, G. A.; Gurl, H. C., Jr.
Pac. Mar. Environ. Lab., NOAA, Seattle, WA, USA
J. GEOPHYS. RES. (OCEANS ATMOS.), vol. 88, no. C14, pp.
9661-9669, 1983.

LANGUAGES: English

SUMMARY LANGUAGES: English

Special issue MARSEN - Marine Remote Sensing Experiment.

DOC TYPE: Journal Article

JOURNAL ANNOUNCEMENT: 8411

Particle transport in Elliott Bay, a 20 km super(2) embayment in Puget Sound, Washington, was studied in an integrated program employing shipboard CTD/transmissometer observations, moored sediment traps, and moored transmissometer current meter observations. Surface and bottom high-turbidity layers are present throughout the bay during both summer and winter seasons. Particles added to the surface layer by river input and phytoplankton production are rapidly advected out of the bay and provide only a minor contribution to the local sedimentation rate. The benthic nepheloid layer is maintained not by local resuspension but by particles advected into Elliott Bay with turbid deep water from the adjoining Main Basin of Puget Sound. A severalfold drop in mean current speed as Main Basin water enters Elliott Bay results in increased particle fallout within the benthic nepheloid layer, a high sedimentation rate, and the embayment functioning as a sink for particles from throughout Puget Sound.

DESCRIPTORS: suspended particulate matter; transport processes; sediment transport

GEOGRAPHIC DESCRIPTORS: INE, Puget Sound, Elliott Bay,

ENVIRONMENT: Marine

SECTION HEADING CODES: 2264

DIALOG FILE 44: AQUATIC SCIENCE ABSTRACTS - 78-86/MAY

1458469 214-08469

Surficial geology of the continental shelf, northwestern Vancouver Island.

Bornhold, B.D.; Yorath, C.J.
Pac. Geosci. Cent., Geol. Surv. Canada, Sydney, B.C. V8L
4B2, Canada

MAR. GEOL., vol. 57, no. 1-4, pp. 89-112, (1984).

LANGUAGES: English

SUMMARY LANGUAGES: English

Special issue: Sedimentation on high-latitude continental shelves.

DOC TYPE: Journal Article

JOURNAL ANNOUNCEMENT: 8409

The Vancouver Island continental margin lies along the convergent boundary between the Explorer and Juan de Fuca Plates and the America Plate. Surficial sedimentation reflects both the tectonic and high-latitude settings of the area: predominance of lithic arenites and graywackes, high wave and current energy restricting modern sedimentation to the outer shelf (deeper than 110 m) and resulting in the formation of large oscillation bedforms to depths of 100–110 m trapping of terrigenous sediments in fjords leading to low sediment accumulation rates on the shelf which, in turn, favor the formation of abundant glauconite, gravel lags, and extensive areas of biogenic sediments dominated by molluscs and bryozoa and the presence of Pleistocene glaciomarine sandy muds and muddy sands beneath the mid- and outer shelf.

DESCRIPTORS:	marine	geology:	continental margins:
1. <i>Geological</i>			
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sedimentology

DESCRIPTORS: INE. Canada. British Columbia.
GEOGRAPHIC Vancouver I.

ENVIRONMENT: Marine

SECTION HEADING CODES: 2261

PRINTS

User 008800 14Aug86 P154 PR 1453446/5
DIALOG (VERSION 2)

Item 1 of 1
PAGE: 30

DIALOG File 44: AQUATIC SCIENCE ABSTRACTS - 78-86/MAY

1453446 214-03446

Active hydrothermal vents and sulfide deposits on the southern Juan de Fuca Ridge.

Normark, W.R.; Morton, J.L.; Koski, R.A.; Clague, D.A.;

Delaney, J.R.

U.S. Geol. Surv., 345 Middlefield Rd., Menlo Park, CA 94025,

USA

GEOLOGY, vol. 11, no. 3, pp. 158-163, (1983)

LANGUAGES English

SUMMARY LANGUAGES: English

DOC TYPE: Journal Article

JOURNAL ANNOUNCEMENT: 8404

Massive-sulfide deposits rich in zinc and silver were recovered from the Juan de Fuca Ridge 500 km west of Oregon in September 1981. The samples recovered are composed largely of zinc sulfide, with lesser amounts of iron, lead, and copper sulfide. Most of the deposits occur at a series of hydrothermal vents within a relatively continuous depression in the center of a smooth 1-km-wide valley along the ridge axis. The depression appears to be formed by collapse of a lava lake possibly modified by extensional faulting. The axial valley, floor outside the depression is underlain by fresh, glassy, ferrobasalt sheet and lobate flows.

DESCRIPTORS: sulfide minerals; metalliferous sediments;

hydrothermal springs; hydrothermal deposits

GEOGRAPHIC DESCRIPTORS: INE, Juan de Fuca Ridge

ENVIRONMENT: Marine

SECTION HEADING CODES: 2187

1425562 114-25562: 214-10390

Sediment-water exchange in shallow water estuarine sediments.

Emerson, S.; Jahnke, R.; Heggie, D.
Sch. Oceanogr., Univ. Washington, Seattle, WA 98195, USA
J. MAR. RES., vol. 42, no. 3, pp. 709-730, (1984).

U. MAN. RES., VOL. 42, NO. 1, 1997
 LANGUAGES: English
 SUMMARY LANGUAGES: English
 DOC TYPE: Journal Article
 JOURNAL ANNOUNCEMENT: 8411

Pore water profiles in shallow estuarine sediments of Puget Sound show the characteristics of enhanced interstitial-water transport by animal activity. Using an in situ super(3)H experiment and dissolved silicate profiles the authors evaluate the transport parameter due to animal activity in the surface 20 cm of sediments to be 1.5×10 super(-7) s super(-1) which is in the range of similar parameters determined in other nearshore environments in the U.S. The fluxes of alkalinity, ammonia and silicate across the sediment-water interface due to biological processes are greater than that be one-dimensional molecular diffusion. For the metals Fe, Mn, Cu, Ni and Cd the dominant transport mechanism depends upon the depth at which the metal is released to the pore waters. Probably the most important effect of biological activity, on metal remobilization is the removal of sulfide from the pore waters.

DESCRIPTORS: sediment-water interface; pore water; transport processes; biogeochemistry; estuaries; metals

ENVIRONMENT: Marine
SECTION HEADING CODES: 1482: 2187

SECTION HEADING CODES: 1482: 2187

PRINTS

User: 0088CC 14Aug86 P156: PR 1356730/5
DIALOG (VERSION 2)

Item 1 of 32

DIALOG File 44: AQUATIC SCIENCE ABSTRACTS - 78-86/MAY

1356730 213-06730

Control of clay-mineral stratigraphy by selective transport in Late Pleistocene-Holocene sediments of Northern Cascadia Basin -- Juan de Fuca Abyssal Plain: Implications for studies of clay-mineral provenance.

Carson, B.; Arcaro, N.P.

Dep. Geol. Sci., Lehigh Univ., Bethlehem, PA 18015, USA

J. SEDIMENT. PET., vol. 53, no. 2, pp. 395-406, (1983).

LANGUAGES: English

SUMMARY LANGUAGES: English

DOC TYPE: Journal Article

JOURNAL ANNOUNCEMENT 8309

Previous investigations of Cascadia Basin clay mineralogy indicate a general trend in which montmorillonoids (smectites, 17A) are enriched relative to illite (10 angstrom) and chlorite (7 angstrom) in Holocene lutites, whereas illite and chlorite dominate in Late Pleistocene deposits. The apparent crystallinity of all clay-mineral groups declines from Pleistocene to Holocene. Fifteen samples from 5 cores in Northern Cascadia Basin and Juan de Fuca Abyssal Plain were fractionated into 6 size classes. Semi-quantitative determinations of clay mineralogy and "crystallinity" were made on each of the 90 subsamples. The results indicate a definite size-dependency in clay mineralogy and crystallinity, which is consistent both areally and temporally.

DESCRIPTORS: clay minerals; provenance; sediment transport;

grain size; geological time

GEOGRAPHIC DESCRIPTORS: INE

ENVIRONMENT: Marine

SECTION HEADING CODES: 2264

PRINTS

User: 008800 14aug86 P157: PR 1258412/5
DIALOG (VERSION 2)

Item 1 of 1
PAGE: 33

DIALOG File 4: AQUATIC SCIENCE ABSTRACTS - 78-88/MAY

1258412 212-08412

Sediment Transport Study along a Delta Shoreline.

Scott, J.L.
CH2M HILL, 1500 114th Ave. SE, Bellevue, WA 98004, USA
BULL. ASSOC. ENG. GEOL., vol. 19, no. 2, pp. 101-116
(1982).

LANGUAGES: English

SUMMARY LANGUAGES: English

DOC TYPE: Journal Article

JOURNAL ANNOUNCEMENT 8210

A sediment transport study was conducted along the east shoreline of the Nisqually River Delta, Southern Puget Sound, Washington, to provide baseline data for an Environmental Impact Statement and preliminary design criteria for a forest products exporting wharf. The study was concerned with determining the characteristics of beach and deltaic sediments, the factors affecting sediment transport along the shoreline and on the delta, and the directions and rates of sediment transport. Sediment transport on the beach was determined by interpretation of beach profiles and sediment textural characteristics and by a beach grain tagging experiment. An estimate of sediment movement on the delta platform was obtained from sediment trap data and an historical chart comparison. Results of the study are discussed.

DESCRIPTORS: sediment transport; deltas; surveys; baseline

studies

GEOGRAPHIC DESCRIPTORS: INE, USA, Southern Puget Sound, Nisqually R. Delta

SECTION HEADING CODES: 2264

DIALOG

OF INFORMATION SERVICES

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DIALOG File 44: AQUATIC SCIENCE ABSTRACTS - 78-86/MAY

1054727 210-04727

Organo-sulfur compounds in sediments of the Puget Sound basin.

Bates, T.S.; Carpenter, R.
Pac. Mar. Environ. Lab., Environ. Res. Lab., NOAA, 7600
Sandpoint Way N.E., Bldg. 32, Seattle, WA 98115, USA
Geochim. Cosmochim. Acta, 43(8), 1209-1221, (1979)

LANGUAGES: English

SUMMARY LANGUAGES: English

DOC TYPE: Journal Article

JOURNAL ANNOUNCEMENT: 8007

Sediment samples from a variety of different environments were analyzed for organo-sulfur compounds (OSC) to provide the first characterization of the amounts and types of these compounds in sediments of the greater Puget Sound basin. A gas chromatograph equipped with a sulfur specific flame photometric detector was used to quantify individual OSC. Compositions of OSC mixtures were essentially constant throughout the study area. Dibenzothiophene (DBT), its alkylated homologs, and an unknown compound were the predominant OSC in most samples. Concentrations of total OSC and DBT ranged from 4 to 60 and 0.4 to 2 g/g organic carbon, respectively. The flux of OSC to the sediments at a station in central Puget Sound west of Seattle was approx 140 ng/cm SUP-2 /yr. The profile of total OSC concentration with depth showed three organic sulfur compounds that are apparently created in situ in the vicinity of where hydrogen sulfide production begins. The concentrations of the aromatic OSC were relatively constant with depth. Although several anthropogenic sources of OSC were identified, there was no evidence that OSC from these sources were accumulating in the sediments. The major source of the aromatic OSC in the sediments is apparently atmospheric input from natural sources such as forest fires.

DESCRIPTORS: organic compounds; sulphur; sediment analysis;

gas chromatography

GEOGRAPHIC DESCRIPTORS: INE, Puget Sound

ENVIRONMENT: Marine; Fresh

IDENTIFIERS: vertical profiles; hydrogen sulphide

SECTION HEADING CODES: 2187

0804444 108-04444

Polychlorinated biphenyls in cottids, mussels, and sediment in Southern Puget Sound, Washington.

Mourner, J.: Calambokidis, J.; Musgrove, N.; Drager, B.; Beug, M.W.; Herman, S.G.
Evergreen State Coll., Olympia, WA 98505, USA
Bull. Environ. Contam. Toxicol., 18(5), 588-594, (1977)
LANGUAGES: English

DOC TYPE: Journal Article
JOURNAL ANNOUNCEMENT: 7804

The observed concentrations of PCB in the mussel, *Mytilus edulis*, several species of cottids including *Leptocottus armatus* and *Oligocottus maculosus*, and surface sediments in Southern Puget Sound, WA, USA, are reported. Ten grams of tissue (wet weight) were digested, extracted, and concentrated to a volume appropriate for injection. Sediment samples were freeze-dried, and then Soxhlet-extracted and concentrated. Electron-capture gas chromatography was used to quantitatively determine the PCB present. The 6 sites showing the highest levels were located in harbour areas of the 3 largest urban centres in Southern Puget Sound. The levels of PCB found here are comparable to those found in similar organisms from other coastal and estuarine systems throughout the world.

DESCRIPTORS: polychlorinated biphenyls; sediment pollution
GEOGRAPHIC DESCRIPTORS: USA, Washington, Puget Sound
TAXONOMIC DESCRIPTORS: *Mytilus edulis*; *Cottidae*

ENVIRONMENT: Marine
IDENTIFIERS: PCB:
Oligocottus maculatus: Southern Puget Sound: USA: Washington:
pollution levels: PCBs: fish: sediments: sediment analysis

A SEARCH FROM THE GEOREF DATABASE

SAMPLE RECORD

The positions of the key fields are shown in the following sample record.

AN 1012344 80-48454

TI Manganese and copper geochemistry of interstitial fluids from manganese nodule-rich pelagic sediments of the northeastern equatorial Pacific Ocean

AU Callender, E.; Bowser, C. J.

CS U. S. Geol. Surv., Reston, Va., USA; Univ. Wis., USA

JN PY Am. J. Sci. 280: 10, 1063-1068p., 1980

CD SN CODEN: AJSCAP ISSN: 0002-9599

SF Subfile: B

CP Country of Publ.: United States

DT BL Doc Type: SERIAL Bibliographic Level: ANALYTIC

LA Languages: English

LT LN Latitude: N000000; Longitude: W1800000; E1400000

DE Descriptors: *Pacific Ocean; *nodules; *manganese; *diagenesis; *metals; *sediments; *copper; oceanography; geochemistry; pore water; genesis; secondary structures; sedimentary structures; Equatorial Pacific; Northeast Pacific; remobilization; solubility; desorption; precipitation

SH Section Headings: 07 (MARINE GEOLOGY AND OCEANOGRAPHY)

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Key to Data Fields

AB Abstract	JN Journal Name
AN GEOREF Accession Number	LA Language
AU Author	LN Longitude
BL Bibliographic Level	LT Latitude
BN ISBN	PU Publisher
CL Conference Location	PY Publication Year
CD CODEN	RN Report Number
CP Country of Publication	SF Subfile
CS Corporate Source	SH Section Heading Code
CT Conference Title	SL Summary Language
CY Conference Year	SN ISSN
DE Descriptor	TI Title
DT Document Type	

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AND OCEANOGRAPHY)

PRINTS

User: 008800 14aug86 P162 PR 1338787/5
DIALOG (VERSION 2)

Item 1 of 1
PAGE: 40

DIALOG File 89: GEOF - 1785-1986/AUG (Copr. American Geological Institute)

1338787 85-73996

Horizontal and vertical pore water gradients within the
Sediments of Puget Sound

Miller, L. G.; Murray, J. W.; Devol, A. H.; Massoth, G. J.;
Feely, R. A.

Univ. Wash., Seattle, WA, USA; NOAA, Seattle, USA

American Geophysical Union; 1982 fall meeting

Anonymous

American Geophysical Union, 1982 fall meeting, San

Francisco, CA, United States, Dec. 7-15, 1982

Eos, Transactions, American Geophysical Union 63: 45, 999p.,
1982

Country of Publ.: United States

ISSN: 0096-3941

CODEN: EOSTAU

Subfile: B

Doc Type: SERIAL; CONFERENCE PUBLICATION

Bibliographic Level: ANALYTIC

Languages: English

Descriptors: *Washington; *sediments; *iron; *manganese;

*organic materials; *diagenesis; *oceanography; *marine

sediments; geochemistry; materials; estuaries; pore water;

United States; Puget Sound; Pacific Coast; nutrients;

chemical composition; pH; sampling; advection; migration of

elements; ammonia compound

Section Headings: 07 (MARINE GEOLOGY AND OCEANOGRAPHY); 02

(GEOCHEMISTRY)

DIALOG F110 89: GEOREF - 1785-1986/AUG (Copr. American Geological Institute)

1283161 85-16079

Mixing and cycling of uranium, thorium and 210 Pb in Puget Sound sediments

Carpenter, R.; Peterson, M. L.; Bennett, J. T.; Somayajulu, B. L. K. Univ. Wash., Sch. Oceanogr., Seattle, WA, USA; Bowdoin Coll., USA

Geochimica et Cosmochimica Acta 48: 10, 1949-1953p., 1984

Country of Publ.: International

ISSN: 0016-7037

CODEN: GCACAK 54 REFS.

Subfile: 8

Doc Type: SERIAL Bibliographic Level: ANALYTIC

Languages: English

illus., 4 tables, sketch map

Descriptors: •Washington; •sediments; •uranium; •isotopes;

thorium: •lead : geochemistry : U-238/U-234: ratios: Pb-21:

United States; Puget Sound; Th-232/Th-228; Th-232/Th-230;

cyclic processes: mixing

Section Headings: 02 (GEOCHEMISTRY)

DIALOG File 89: GEOREF - 1785-1988/AUG (Copr. American Geological Institute)

1266202 85-00815

An in situ erosion rate for a fine-grained marine sediment

Lavelle, J. W.; Mofjeld, H. O.; Baker, E. T.

NOAA, Pac. Mar. Environ. Lab., Seattle, WA, USA

JGR, Journal of Geophysical Research, C, Oceans 89 4, 1984

Country of Publ.: United States

ISSN: 0196-2256

43 REFS.

Subfile: B

Doc Type: SERIAL Bibliographic Level: ANALYTIC

Languages: English

illus.: 3 tables

Tidal boundary layer observations, 5 meters from bottom, Puget Sound, Washington.--Modified journal abstract.

Latitude: N471000; N483000 Longitude: W1221000; W1231500

Descriptors: Washington; sedimentation; Pacific Ocean; oceanography; processes; estuarine sedimentation; United States; Puget Sound; North American Pacific; fines; marine

sediments; in situ; erosion; rates; marine transport; theoretical studies; mathematical models

Section Headings: 07 (MARINE GEOLOGY AND OCEANOGRAPHY)

PRINTS

User: 008800 14aug86 P166 PR 1177873/5
DIALOG (VERSION 2)

PAGE: 44
Item 1 of 1

DIALOG File 89: GEOREF - 1785-1986/AUG (Copr. American Geological Institute)

1177873 83-31804

Stratigraphy, sedimentology, and paleogeographic
significance of Spieden Group, San Juan Islands, Washington

Johnson, S. V.

Univ. Wash., Seattle, WA, USA

1981 AAPG annual convention with divisions: SEPM/EMD/DPA

1981 AAPG annual convention with divisions: SEPM/EMD/DPA,

San Francisco, CA, United States, May 31-June 3, 1981

AAPG Bulletin 65: 5, 942p., 1981

Country of Publ.: United States

ISSN: 0149-1423

CODEN: AABUD2

Subfile: B

Doc Type: SERIAL: CONFERENCE PUBLICATION

Bibliographic Level: ANALYTIC

Languages: English

Descriptors: Washington; sedimentary rocks; paleogeograph

y; stratigraphy; Jurassic; lithostratigraphy; San Juan

County; Spieden Bluff Formation; Sentinel Island Formation;

United States; San Juan Islands; Spieden Group; Upper

Jurassic; sandstone; clastic rocks; tuff; pyroclastics and

glasses; siltstone; conglomerate; volcanic rocks; Mesozoic;

Pacific Coast

Section Headings: 12 (STRATIGRAPHY, HISTORICAL GEOLOGY)

DIALOG

INFORMATION SERVICES

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1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050 2051 2052 2053 2054 2055 2056 2057 2058 2059 2060 2061 2062 2063 2064 2065 2066 2067 2068 2069 2070 2071 2072 2073 2074 2075 2076 2077 2078 2079 2080 2081 2082 2083 2084 2085 2086 2087 2088 2089 2090 2091 2092 2093 2094 2095 2096 2097 2098 2099 2100 2101 2102 2103 2104 2105 2106 2107 2108 2109 2110 2111 2112 2113 2114 2115 2116 2117 2118 2119 2120 2121 2122 2123 2124 2125 2126 2127 2128 2129 2130 2131 2132 2133 2134 2135 2136 2137 2138 2139 2140 2141 2142 2143 2144 2145 2146 2147 2148 2149 2150 2151 2152 2153 2154 2155 2156 2157 2158 2159 2160 2161 2162 2163 2164 2165 2166 2167 2168 2169 2170 2171 2172 2173 2174 2175 2176 2177 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DIALOG File 89: GEOREF - 1785-1988/AUG (Copr. American Geological Institute)

1164513 83-21227

**Nitrification and denitrification in marine sediments from
Puget Sound**

Grundmanis, V.; Murray, J. W.
Univ. Wash., Dep. Oceanogr., Seattle, WA, USA
Limnology and Oceanography 22: 5, 804-813p., 1977
Country of Publ.: United States
ISSN: 0024-3590
CODEN: LIOCAH 27 REFS.
Subfile: 8

Doc Type: SERIAL Bibliographic Level: ANALYTIC

Languages: English

illus.: 4 tables, sketch map

Latitude: N474312; N474312 Longitude: W1222436; W1222436

Descriptors: *Washington; *geochemistry; *sediments

Processes: marine sediments; nitrification; distribution;

United States; Puget Sound; denitrification; pore water;

oxidation; Eh; pH

Section Headings: 07 (MARINE GEOLOGY AND OCEANOGRAPHY)

PRINTS

User 008900 14aug86 P168 PR 1112284/5
DIALOG (VERSION 2)

Item 1 of 1 PAGE: 46

DIALOG File 89: GEOREF - 1785-1986/AUG (Copr. American Geological Institute)

1112284 82-33492

The use of 210 Pb in the comparison of sedimentation rates with sediment trap flux for the central basin of Puget Sound

Crececius, E. A.
Mar. Res. Lab., Sequim, WA, USA
AGU/ASLO meeting abstracts

Anonymous

AGU/ASLO joint meeting. San Antonio, Tx, United States.

Feb. 16-19, 1982

Eos. Transactions, American Geophysical Union 63: 3, 82p., 1982

Country of Publ.: United States

ISSN: 0096-3941

CODEN: EOSTAJ

Subfile: B

Doc Type: SERIAL; CONFERENCE PUBLICATION

Bibliographic Level: ANALYTIC

Languages: English

Latitude: N471000; Longitude: W1221000; W1231500

Descriptors: *Washington; *sedimentation; *lead; *isotopes;

*sediments; *sedimentary petrology; sedimentation rates;

geochemistry; Pb-210; United States; Puget Sound; sinks;

flux

Section Headings: 07 (MARINE GEOLOGY AND OCEANOGRAPHY)

DIALOG

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PRINTS

User: 008900 14aug86 P169: PR 1097345/5
DIALOG (VERSION 2)

Item PAGE 47
1 of 1

DIALOG File 89: GEOREF - 1785-1986/AUG (Copr. American Geological Institute)

1097345 82-18518

Sediment transport in the Duwamish Estuary

Edmondson, S. A.

Univ. of Washington, Seattle, WA, USA

110p., 1973

Degree Level: Master's

Country of Publ.: United States

Subfile: B

Doc Type: THESIS Bibliographic Level: MONOGRAPHIC

Languages: English

Descriptors: *Washington; *sedimentation ; engineering

geology; transport ; waterways; marine transport; United

States; Duwamish Estuary; Puget Sound; environment; estuarine

environment

Section Headings: 22 (ENGINEERING & ENVIRONMENTAL GEOLOGY)

PRINTS

User 008800 14Aug86 P171 PR 1086120/5
DIALOG (VERSION 2)

PAGE: 49
Item 1 of 1

DIALOG File 89: GEOREF - 1785-1988/AUG (Copr. American Geological Institute)

1086120 82-07346

The Spieden Group; an anomalous piece of the Cordilleran paleogeographic puzzle

Johnson, S. V.

Univ. Wash., Dep. Geol. Sci., Seattle, WA, USA

Canadian Journal of Earth Sciences=Journal Canadien des

Sciences de la Terre 18: 11, 1694-1707p., 1981

Country of Publ.: Canada

ISSN 0008-4077

CODEN CJESAP 37 REFS.

Subfile: B

Doc Type: SERIAL Bibliographic Level: ANALYTIC

Languages English Summary Languages: French

illus.: 2 tables, strat. col., geol. sketch map

Latitude N483500; N484500 Longitude W1225000; W1231000

Descriptors Washington; paleogeography; sedimentary

rocks; stratigraphy; Mesozoic; clastic rocks; Jurassic;

Cretaceous; lithostratigraphy; San Juan County; Spieden

Group; Spieden Bluff Formation; Sentinel Island Formation;

United States; Spieden Island; Sentinel Island; San Juan

Islands; Upper Jurassic; Lower Cretaceous; Oxfordian;

Kimmeridgian; Valanginian; Hauterivian; sandstone; siltstone;

pyroclastics; breccia; conglomerate; debris flows; marine

environment; Phanerozoic; textures

Section Headings 12 (STRATIGRAPHY, HISTORICAL GEOLOGY)

PRINTS

User 00800 14Aug86 P172 PR 1031213 5
DIALOG (VERSION 2)

Item 1 of 1
PAGE 50

DIALOG File 89: GEOREF - 1785-1986/AUG (Copr American Geological Institute)

1031213 81-17730

Sedimentation rates in Puget Sound and their application to heavy metals pollution

Neviss, A.; Schnell, W. R.
Univ Wash; Seattle, WA, USA

The use, study and management of Puget Sound; a symposium; proceedings

Duxbury, A. C. (chairperson); Bingham, S. (chairperson); Machno, P. (chairperson)

The use, study and management of Puget Sound; a symposium; proceedings. Seattle, WA, United States. March 23-25, 1977
Publ Univ Wash.

81-87p. 1977

Country of Publ: United States

6 REFS.

Subfile B

Doc Type: BOOK; CONFERENCE PUBLICATION

Bibliographic Level: ANALYTIC

Languages: English

illus., table, sketch map

Latitude: N471000; N483000 Longitude: W1221000, W1231500

Descriptors: *Washington; *sedimentation; *sediments;

*absolute age; *metals; *environmental geology; rates;

geochemistry; dates; pollution; interpretation; heavy

metals; United States; Puget Sound; pollutants; Pb-210; age

Section Headings: 22 (ENGINEERING & ENVIRONMENTAL GEOLOGY)

Dialog

TELECOMMUNICATIONS SERVICES, INC.

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PRINTS

User: 008800 14Aug86 P173: PR 1017981/5
DIALOG (VERSION 2)

PAGE: 51
Item 1 of 1

DIALOG File 89: GEOREF - 1785-1986/AUG (Copr. American Geological Institute)

1017981 81-06656

Eocene-Oligocene sedimentation and deformation in the
northern Puget Sound area, Washington

Marcus, K. L.

West. Wash. Univ., Dep. Geol., Bellingham, WA, USA
Northwest Geol. 9, 52-58p., 1980

Country of Publ.: United States

ISSN: 0096-7769

CODEN: NWGYAR 14 REFS.

Subfile: B

Doc Type: SERIAL Bibliographic Level: ANALYTIC

Languages: English

illus.: geol. sketch map, strat. col.

Latitude: N453000; N490000 Longitude: W1165500; W1244500

Descriptors: -Washington; -sedimentation; stratigraphic;

environment; Paleogene; marine environment; United States;

Tertiary; Cenozoic; Eocene; Oligocene; deltas; structural

analysis; transgression

Section Headings: 12 (STRATIGRAPHY, HISTORICAL GEOLOGY)

PRINTS

User: 008800 14Aug86 P174 PR 975895/5
 DIALOG (VERSION 2)

Item 1 of 1
 PAGE: 52

DIALOG File 89: GEOREF - 1785-1986/AUG (Copr. American Geological Institute)

975895 80-17021

Geophysical characteristics of a dredged disposal site in Elliott Bay, Washington

Quinlan, E. A.; Pavlou, S. P.

URS Co., Seattle, Wash., USA

American Geophysical Union; 1979 fall annual meeting, San Francisco, Calif., United States, Dec. 3-7, 1979

Eos (Am. Geophys. Union, Trans.) 60: 46, 848p., 1979

Country of Publ.: United States

ISSN: 0096-3941

CODEN: EOSTAU

Subfile: 8

Doc Type: SERIAL; CONFERENCE PUBLICATION

Bibliographic Level: ANALYTIC

Language: English

Latitude: N473000; N474000 Longitude: W1221500; W1223000

Descriptors: *Washington; *Pacific Coast; *sedimentation; engineering geology; geophysical surveys; transport; waste disposal; surveys; marine transport; King County; Kitsap County; United States; Elliott Bay; Seattle; Puget Sound; dredging; nearshore environment; bays; polychlorinated biphenyls; pollution

Section Headings: 22 (ENGINEERING & ENVIRONMENTAL GEOLOGY)

DIALOG
 INFORMATION SERVICES, INC.

005862

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 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DIALOG File 89: GEOREF - 1785-1988/AUG (Copr. American Geological Institute)

940782 79-25845

Glacial-marine sediments of West Antarctica and Puget Sound

Anderson, J. B.; Balshaw, K.; Cole, M. L.; Domack, E.;
 Harlan, J.; Hokanson, C.; Kurtz, D. D.; Milam, R.; Wright, B.

Rice Univ., Houston, Tex., USA

AAPG-SEPM annual meeting, Houston, Tex., United States,

April 1-4, 1979

Am. Assoc. Pet. Geol., Bull., 63 3, 410-411p., 1979

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Doc Type: SERIAL; CONFERENCE PUBLICATION

Bibliographic Level: ANALYTIC

Languages: English

Latitude: N471000; Longitude: W1221000; W1231500

Descriptors: *Antarctica; *Washington; *paleoclimatology;

*sedimentation; *sediments; stratigraphy; Pleistocene;

environment; environmental analysis; glaciomarine

environment; West Antarctica; United States; Puget Sound;

marine environment; glacial environment; Puget Lowland;

Quaternary; Cenozoic; paleo-oceanography

Section Headings: 24 (SURFICIAL GEOLOGY, QUATERNARY GEOLOGY)

DIALOG File 89: GEOREF - 1785-1986/AUG (Copr. American Geological Institute)

919181 79-00102

Geochemical equilibria in Pleistocene sediments of the Southeast Puget Sound drainage basin

Wildrick, L. L.

Univ. Wash., Seattle, Wash., USA

	1976
unknown	

Degree Level Master's

Degree Level Master's
Country of Publ. United States

Country of
Subfile: B

Doc Type: THESIS Bibliographic Level: MONOGRAPHIC

DOC Type: Thesis
Languages: English

11/15/77

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Latitude: N470000 Longitude: W1225000
 Descriptors: Washington: sediments; sedimentary petrology

biochemistry : phase equilibria: Pierce County, Kitsap
descriptors : washington: sediments : sedimentary, sedimentary

County: Thurston County: Pleistocene: Quaternary:

County: King County; Major County: United States

Section Headings Q2 : (GEOCHEMISTRY)

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Item 1 of 1

DIALOG File 89: GEOREF - 1785-1986/AUG (Copr. American Geological Institute)

827332 77-05216

The erodibility of a fine-grained sediment deposit placed in a tidal channel

Nittrover, C. A.; Sternberg, R. W.
Univ. Wash. Dep. Oceanogr. Seattle, Wash. USA
Geol. Soc. Am. Abstr. Programs 8 3 Cordilleran Section.
72nd annual meeting. 400-401p. 1976
Country of Publ. United States
CODEN: GAAPBC
Subfile: B

Doc Type: SERIAL Bibliographic Level: ANALYTIC
Languages: English
Descriptors: *sediments; *Washington; *clastic sediments;
*erogenous; *sedimentary petrology; *silt; *clay; *sand;
*properties; *consolidation; *cohesiveness; *erodibility;
*experimental studies; *United States; *Dana Passage; *Puget
Sound

Section Headings: 07 (MARINE GEOLOGY AND OCEANOGRAPHY)

User 008800 14Aug86 P178 PR 807265.'5
DIALOG (VERSION 2)

Item 1 of 1
PAGE: 56

807265 76-33511

Organic matter decomposition and bioturbation in Puget Sound sediments

Grundmanis, V.; Murray, J. W.
Univ. Wash., Dep. Oceanogr., Seattle, Wash., USA
Eos (Am. Geophys. Union, Trans.) 57: 3, 15p., 1976
CODEN: EOSTAU
Subfile 8

Doc Type: SERIAL Bibliographic Level: ANALYTIC

Languages: English
 Descriptors: *sedimentation; *sediments; *Washington;
 -continental shelf; diagenesis; United States; geochemistr;
 oceanography; bioturbation; rates; accumulation; organic
 carbon; effects; alkalinity; pH; reduction; sulfate; pore
 water; chemistry; in situ; Puget Sound; organic materials;
 decomposition

Section Headings: 07. (MARINE GEOLOGY AND OCEANOGRAPHY)

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DIALOG File 89: GEOF - 1785-1986/AUG (Copr. American Geological Institute)

763011 75-28785

The fate of a fine-grained dredge spoils deposit in a tidal channel of Puget Sound, Washington

Nittrover, Charles A.; Sternberg, Richard W

Univ. Seattle, Dep. Oceanogr., Seattle, Wash., USA

J. Sediment. Petrol. 45: 1, 160-170p., 1975

CODEN: JSEPAK

Subfile: B

Doc Type: SERIAL Bibliographic Level: ANALYTIC

Languages: English

illus., charts, tables, sketch maps

Descriptors: *Washington; *sedimentation; sedimentary

Petrology; processes; west; Olympia Harbor; Dana Passage;

Puget Sound; deposition; consolidation; currents; tides;

range; spoils deposits; channels; sediments; bottom;

disposal; shallow; low energy; environmental geology; United

States

Section Headings: 24 (SURFICIAL GEOLOGY, QUATERNARY GEOLOGY)

PRINTS

User 008800 14Aug86 P181 PR 240149.5
DIALOG (VERSION 2)

Item 1 of 1
PAGE: 59

DIALOG File 89: GEOREF - 1785-1986/AUG (Copr. American Geological Institute)

240149 59-01172-N

A study of local variability in marine sediments [Wash.]

Bader, Richard George

Pacific Sci. Cong., 8th, Univ. Philippines, 1953, Proc., v.
3, p. 721-732, illus., Quezon, 1958

Subfile N

Descriptors: *Sediments; *Washington; *Submarine Geology;
Petrology; Puget Sound; marine sampling; sediment sampling;
marine sediments; sampling

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SAMPLE RECORD

The positions of the key fields are shown in the following sample record.

79-01734
TI Seavogel als Indikator fuer zeitlich und oertlich begrenzte Meeresverschmutzung im Gebiet von Helgoland (Deutsche Bucht). Sea birds as indicators of accidental marine pollution in the Helgoland area, German Bight.
Vauk, G.
Anstalt Helgoland des Instituts fuer Vogelforschung Vogelwarte Helgoland, Postfach 1220, D 2192 Helgoland, FRG
JN BREMERHAVEN, GER. INSTITUT FUER MEERESFORSCHUNG.
PV VEROFFENTLICHUNGEN 17(1). 95-100. 1978 Coden:
CO VIMBAC
illus. refs.
Eng. abs.
Languages: German
Doc Type: JOURNAL PAPER
Between Jan. and Apr. 1978, 116 dead or moribund sea birds were collected at Helgoland beaches. Some 56 birds, mostly guillemots and kittiwakes, died from an oil pollution of unknown origin and extension. The majority of 60 nonoiled birds, mostly kittiwakes and herring gulls, showed symptoms of poisoning. Methyl parathion could be identified in one of the herring gulls found dead. (AM)
DE Descriptors: Birds; Bioindicators; German Bight; Federal Republic of Germany Coast; Oil pollution; Poisoning
ID Identifiers: methyl; parathion
(Copyright by Cambridge Scientific Abstracts, 1984.)

Key to Data Fields

AB	Abstract	ID	Identifier
AU	Author	JA	Journal Announcement
BN	ISBN	JN	Journal Name
CL	Conference Location	LA	Language
CO	CODEN	PU	Publisher
CS	Corporate Source	PY	Publication Year
CT	Conference Title	SN	ISSN
CY	Conference Year	TC	Treatment Code
DE	Descriptor	TI	Title
DT	Document Type		

Data present in record depends on output format requested and type of record.

DIALOG File 28: OCEANIC ABSTRACTS - 64-86/APR (Copr Cambridge Scientific Abstracts)

84-06450

U. Th and super(210)Pb profiles, mixing and accumulation in Puget Sound sediments

Carpenter, R.; Peterson, M.L.; Soma, a, July, B.L.K.
Sch. Oceanogr., Univ. Washington, Seattle, WA 98191, USA
Spring Meeting, American Geophysical Union Baltimore, MD (USA) 31 May 1983
EOS TRANS. AM. GEOPHYS. UNION VOL. 64, NO. 45, p. 716, 1983

SUMMARY LANGUAGE - ENGLISH; Summary, only.

Languages: ENGLISH

Recent sediment accumulation rates of 70-1200 mg/cm super(210)Pb and mixing coefficients of 0.5-170 cm super(210)Pb are calculated from super(210)Pb activity versus depth profiles in 25 Puget Sound sediment cores, assuming no mixing beneath the surface mixed layer (<15 cm). These accumulation rates are in rough agreement with rates estimated from limited data on riverine sediment discharge and from total thickness of sediments accumulated during the past 13,500 years. To better separate effects of sediment accumulation and mixing on the super(210)Pb profiles, activities of uranium and thorium isotopes and super(210)Pb were determined in eight cores from central Puget Sound. Results of the study are discussed. Pu may trace mixing of these sediments over the super(210)Pb time scale better than excess super(234)Th. super(238)U activities ranged 1.0-1.8 dpm/g, with no clear trends in distribution either horizontally or with depth in cores. Uncertainties of circa 30% can result in calculated excess super(234)Th if the parent super(238)U is assumed constant with depth and not actually measured at each horizon. super(228/232)Th activity ratios are slightly less than or equal to 1.0 in surface sediment horizons containing excess super(234)Th, indicating loss to overlying waters of the more soluble super(228)Ra isotope intermediate between super(232) and super(228)Th. Thus excess super(228)Th decay cannot be used to determine recent accumulation rates in these oxic sediments, as was possible in several anoxic basins.

Descriptors: sediment mixing; lead isotopes; cores; thorium isotopes; uranium isotopes; radioactive tracers; INE. Puget Sound sedimentation

The vertical response of an Ocean Bottom Seismometer; values of the Lopez Island Vertical Transient Tests

Ward, S. J.; Slichter, W. A. Jr.
Mar. Sci. Inst. Univ. California, Santa Barbara, CA 93106
EOS TRANS. AM. GEOPHYS. UNION VOL. 64, NO. 45, p. 53-67, 1983

The vertical response of an Ocean Bottom Seismometer (OBS) is determined by the sediment resistance on relatively short duration tests. The model used in the design of an instrument for the use of an OBS is based on the results of a theoretical input-output analysis of the OBS system. The model is used to predict the response of the OBS to a seismic event. The model is used to predict the response of the OBS to a seismic event. The model is used to predict the response of the OBS to a seismic event.

Vertical transient test data showed that bearing pressure of the instrument in a nonuniform vertical soil profile causes certain instruments to experience a shear modulus higher than the mean

Descriptors: ocean bottom; seismometers; performance assessment; vertical motion; bottom sediments; Lopez Island; Puget Sound; US West Coast; Washington Coast

80-01942

Organo-sulfur compounds in sediments of the Puget Sound basin.

Bates, T. S.; Carpenter, R.
NOAA, Environmental Research Labs., Pacific Marine Environmental Lab., 7600 Sandpoint Wa, NE, Bldg. 32, Seattle, WA 98115

GEOCHIMICA ET COSMOCHEMICA ACTA 43(8), 1209-1221, Aug 1979

CODEN: GCHACX

illus refs.

ISSN 0016-7037

Abs.

Languages: ENGLISH

Doc Type: JOURNAL PAPER

TREATMENT CODES: X (EXPERIMENTAL)

INVESTIGATIVE/OBSERVATION)

Sediment samples from a variety of different environments were analyzed for organo-sulfur compounds (OSC) to provide the first characterization of the amounts and types of these compounds in sediments of the greater Puget Sound basin. A gas chromatograph equipped with a 5 specific flame photometric detector was used to quantify individual OSC. Compositions of OSC mixtures were essentially constant throughout the study area. Dibenzothiophene (DBT), its alkylated homologs, and an unknown compound were the predominant OSC in most samples. Concentrations of total OSC and DBT had ranges of 4-60 and 0.4-2 mug/g organic carbon, respectively. The flux of OSC to the sediments at a station in central Puget Sound W of Seattle was 140 ng/cm²/yr. The profile of total OSC concentration with depth showed 3 organic S compounds that are apparently created in situ in the vicinity of where H₂S production begins. The concentrations of the aromatic OSC were relatively constant with depth. Although several anthropogenic sources of OSC were identified, there was no evidence that OSC from these sources were accumulating in the sediments. The major source of the aromatic OSC in the sediments is apparently atmospheric input from natural sources e.g., forest fires. (AM)

Descriptors: Sediments; Sulfur compounds; Puget Sound; Atmospheric pollutants; Chemical analysis; Organic compounds; Basins

Identifiers: dibenzothiophene