A SURVEY OF AVAILABLE PHYSICAL OCEANOGRAPHIC DATA IN THE SOUTHERN INLAND WATERS OF BRITISH COLUMBIA

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A SURVEY OF AVAILABLE PHYSICAL OCEANOGRAPHIC DATA IN THE SOUTHERN INLAND WATERS OF BRITISH COLUMBIA

by

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1. INTRODUCTION

The increasing commercial development and exploitation of British Columbia's southern inland waters is producing a need for coordinated programs of research to evaluate the consequent environmental impacts. The physical oceanography of the area would form a vital part of any such research programs. Oceanographic measurements have been carried out in the Strait of Georgia and its adjoining passages for many years, and a large body of data has been accumulated. The data has been collected by a variety of organizations in Canada and the United States, and is therefore scattered among several locations. This body of data would provide a valuable base for establishing requirements for future studies and for planning measurement programs. Before the data base could be put to use in this fashion, the various data sets need to be located, compiled and appraised so as to identify gaps in coverage and to evaluate their relevance for possible further analysis. This survey is the first step in this process, taken primarily to establish the effort which would be required to make a full compilation and appraisal of the data. The survey provides an initial identification and location of data sets in the Strait of Georgia and adjoining waters, together with a list of references to them. It does not provide a detailed listing and mapping of the data; that remains for the later stages of the compilation.

2. SCOPE OF THE SURVEY

The survey considered data collected in all the waters between Vancouver Island and the mainland, north of the entrance to Puget Sound and east of the entrance to Juan de Fuca Strait (Fig. 1). The following types of data were considered in the survey:

- bottle and CTD data
- current meter data
- drifter data
- water level data
- bathythermograph data
- wind data

Wind data were included in the survey because of the importance of the wind as a driving factor in oceanic circulation.

We believe that all the major Canadian data sets have been included in this survey; however there are some areas where less than complete coverage may have been achieved. The most significant of these is in data collected in the United States. A partial survey of the types and quantities of data available from American sources has been made and included in this report. A more complete listing was not made for two reasons. First, the U.S. National Oceanic and Atmospheric Administration (NOAA) has been working on a compilation of American data for the Puget Sound-Georgia Strait and Juan de Fuca Strait areas. It is not yet complete, but it did not seem desirable to duplicate work which was in progress. Second, if such a survey had been carried out, the effort required to compile the American data and separate Puget Sound data from it would have exceeded the available time and manpower.

We have therefore only included such American data as was easily available (principally water property data catalogued in Collias, 1970) and have included an outline in Section 5 of the sources of U.S. data which we have not included, pending completion of the NOAA catalogue and a possible exchange arrangement.

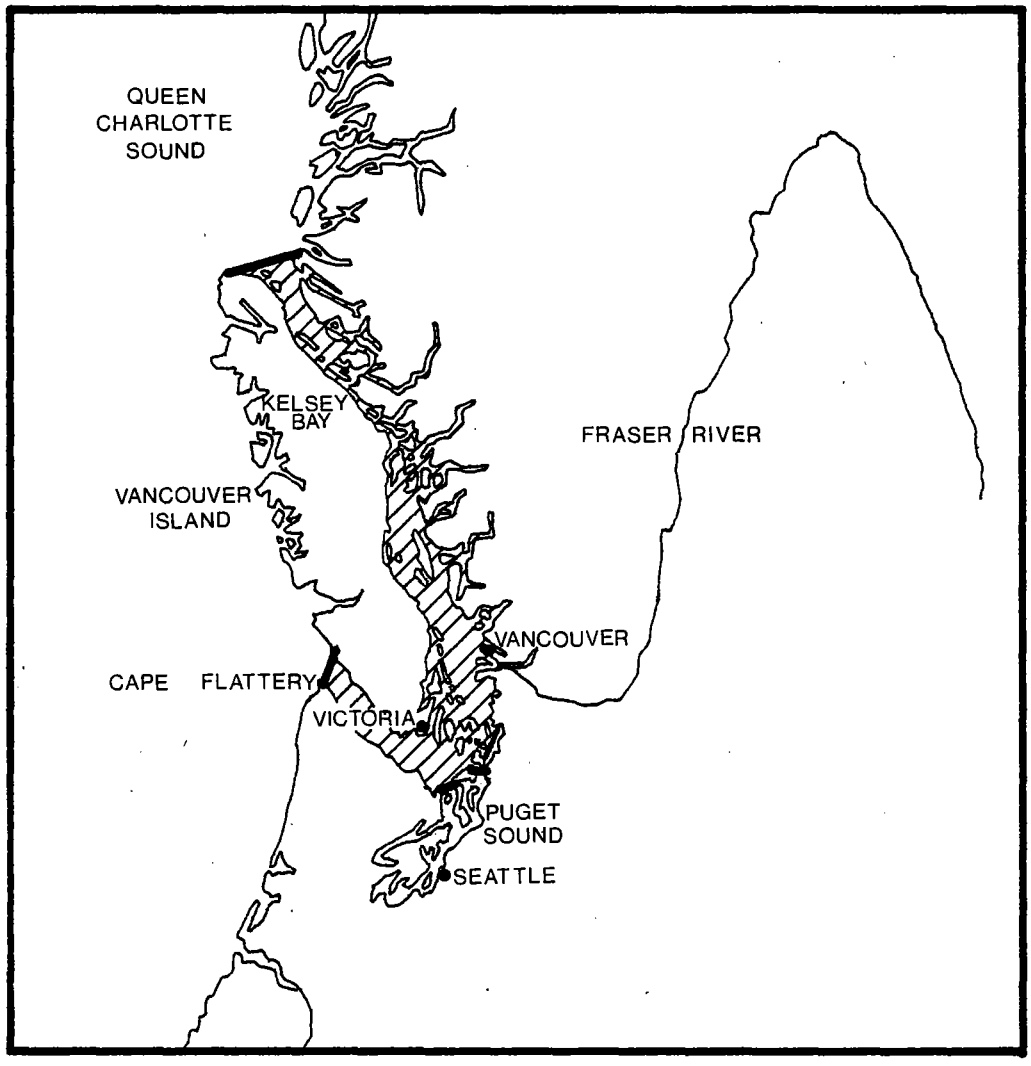

Fig.1 Area of Interest

A quantity of data also exists in the files and reports of engineering and oceanographic consulting companies. Some of this data has been included in the survey, but the remainder has not, either because the data remains proprietary, or because the expenditure of effort and time needed on the company's part to extract the information was considered prohibitive. Special arrangements could perhaps be made in future to meet the second requirement. The majority of this data has been collected since 1970, and is generally localized in near-shore and estaurine areas. It should be kept in mind that some data of this sort may be missing from the survey.

3. ORGANIZATION OF THE SURVEY RESULTS

The information found in the survey is organized in a series of tables located in Section 4. The main body of data is summarized in Table 3. The table is organized by years, with all known data sets taken in a given year listed on the page(s) for that year. Within each year the data is grouped by source institution, and then chronologically as nearly as possible within that grouping. Each data set has been assigned a number of the form yy-kknn where yy is the last two digits of the collection year (e.g. 50 for 1950), kk is a code number corresponding to the source institution and nn is the sequential number for data sets collected by that source in that year. The data set number is listed in column 1 of the table. Column 2 lists the data type, column 3 lists the collecting agency, column 4 lists areas where the data were collected, column 5 lists the approximate number of stations or measurements, column 6 lists the periods during which the measurements were made and column 7 lists references to reports or sources of the data. The names of institutions and agencies in column 3 are listed in abbreviated form; Table 1 in Section 4 is the key to the abbreviations and also lists the institute codes kk contained in the data set numbers. The data types in column 2 are also listed in abbreviated form as follows:

TSBOT: temperature and salinity data collected by bottle cast.

TSCTD: temperature and salinity data collected with a profiling instrument.

DRF : drifter data

CM : current meter data

MET : meteorological data

WL : water level data (not collected by the Hydrographic Service)

BT : temperature data collected with a bathythermograph.

The area abbreviations in column 4 are explained in Table 2 in Section 4. Most of the names of bodies of water listed in

Table 2 may be found on the map (Fig. 2) which follows Table 2. A few minor names which could not be fitted onto the map may be found by referring to hydrographic charts of the area, such as Chart 3001. In order to conserve space in Table 3, the references in column 7 have been assigned number or letter codes. Codes which are numerical, or are combinations of numbers and letters (e.g. 57, 43a) refer to the list of references in Section 7. Those which have letter codes only (e.g. F or Cc) refer to the sources for unprocessed data listed in Table 4 of Section 4.

Water level data collected at permanent or temporary observing stations of the Canadian Hydrographic Service is not in Table 3; it is listed separately in Table 5. The table lists the Hydrographic Service station number and name, the station location (in degrees and minutes of latitude and longitude) and the periods during which observations were made. Part A of Table 5 lists permanent tide gauges; Part B lists temporary gauges.

Oceanographic observations made from regular shore stations (generally lighthouses) are listed in Table 6 of Section 4. The station name, location (in degrees and minutes of latitude and longitude) and the period of observation are listed for each station. A list of references is appended below the table.

Wind data from the observation network of the Atmospheric Environment Service is listed in Table 7 of Section 4. Part A of the table lists stations recording wind mileage by means of automatic anemometers. The table lists the AES station number and name, its location (in degrees and minutes of latitude and longitude) and its period(s) of operation. Part B of the table lists stations at which hourly observations of wind were made. The layout of the table is the same as part A. The data is archived at the Canadian Climate Centre, Downsview, Ontario. Other wind observations made in conjunction with oceanographic measurements are listed in Table 3 as described above.

TABLE 1: LIST OF ABBREVIATIONS FOR INSTITUTIONS AND AGENCIES

01	POG	-	Pacific Oceanographic Group (superseded by IOS)
02	IOUBC	-	Inst. of Oceanography, UBC
03	PBS	-	Pacific Biological Station
04	PEI	-	Pacific Environment Institute
	WVL	-	West Vancouver Labs
05	IOS	-	Institute of Ocean Sciences (Formerly Marine Science Directorate)*
06	CHS	-	Canadian Hydrographic Service (& Tides and Currents, IOS)
07	RR	-	Royal Roads Military College
08	UW	-	University of Washington
09	PMEL	-	Pacific Marine Ecology Labs (Seattle)
10	PNL	-	Pacific Naval Lab (superseded by D.R.E.P.)
11	UVIC	-	University of Victoria
12	DREP	-	Defence Research Establishment Pacific
13	NOAA	-	National Oceanic & Atmospheric Administration (U.S.)
14	IND	-	Industrial Sector
15	EPAUS	-	U.S. Environmental Protection Agency
16	AESL	-	Associated Engineering Services Limited

* Abbreviations corresponding to particular groups and laboratories within IOS may be appended as follows:

IOSOO: IOS, Offshore Oceanography
IOSCZ: IOS, Coastal Zone Oceanography
IOSOC: IOS, Ocean Chemistry
IOSOI: IOS, Ocean Information
IOSOE: IOS, Ocean Ecology.

TABLE 2: LIST OF ABBREVIATIONS FOR BODIES OF WATER

ACT	=	Active Pass
AI	=	All Inlets (most south coast inlets)
ALB	=	Albert Head
ANN	=	Annacis Island
AS	=	All Straits
BAY	=	Baynes Sound
BEL	=	Belize Inlet
BOU	=	Boundary Passage
BRO	=	Brockton Point
BUR	=	Burrard Inlet
BUT	=	Bute Inlet
CHA	=	Chatham Channel
CLO	=	Clover Point
COR	=	Cordova Bay
DEP	=	Departure Bay
DIS	=	Discovery Passage
DOD	=	Dodd Narrows
ESQ	=	Esquimalt
FAL	=	False Narrows
FN	=	First Narrows
FRA	=	Fraser River Area
GEO	=	Georgia Strait
GEP	=	Georgeson passage
HAR	=	Haro Strait
HOL	=	Hole in the Wall
HOM	=	Homfray Channel
HOW	=	Howe Sound
IND	=	Indian Arm
ION	=	Iona Island
JER	=	Jervis Inlet
JF	=	Juan de Fuca Strait
JOH	=	Johnstone Strait
KN	=	Knight Inlet
LAD	=	Ladysmith Harbour
MAC	=	MacCauley Point
MAL	=	Malaspina
MAY	=	Maynes Passage
NAN	=	Nanoose Bay
NEP	=	North East Pacific
NI	=	Northern Inlets (north of Jervis Inlet)
NOR	=	Northumberland Channel
PAC	=	Pacific
PAT	=	Patricia Bay
PEN	=	Pendrell Sound

PLU = Plumper Sound
POR = Portage Inlet
PORM = Port Mellon
PORT = Port Angeles
POW = Powell Lake
PP = Porlier Pass
PUG = Puget Sound and Approaches
QC = Queen Charlotte Strait
ROB = Roberts Bank
RR = Race Rocks Point
SAA = Saanich Inlet
SAN = Sand Heads
SEC = Sechelt
SECN = Second Narrows
SEY = Seymour Narrows
SI = Southern Inlets (Jervis Inlet & South)
SID = Sidney Channel
SOO = Sooke Basin
SQU = Squamish River
SS = Southern Straits
STU = Stuart Channel
STUN = Stuart Narrows
SUR = Surge Narrows
SUT = Sutil Channel
SWA = Swanson Channel
TEX = Texada Island
TO = Toba Inlet
TRI = Trincomali Channel
TRL = Trial Island
VANH = Vancouver Harbour
VIC = Victoria

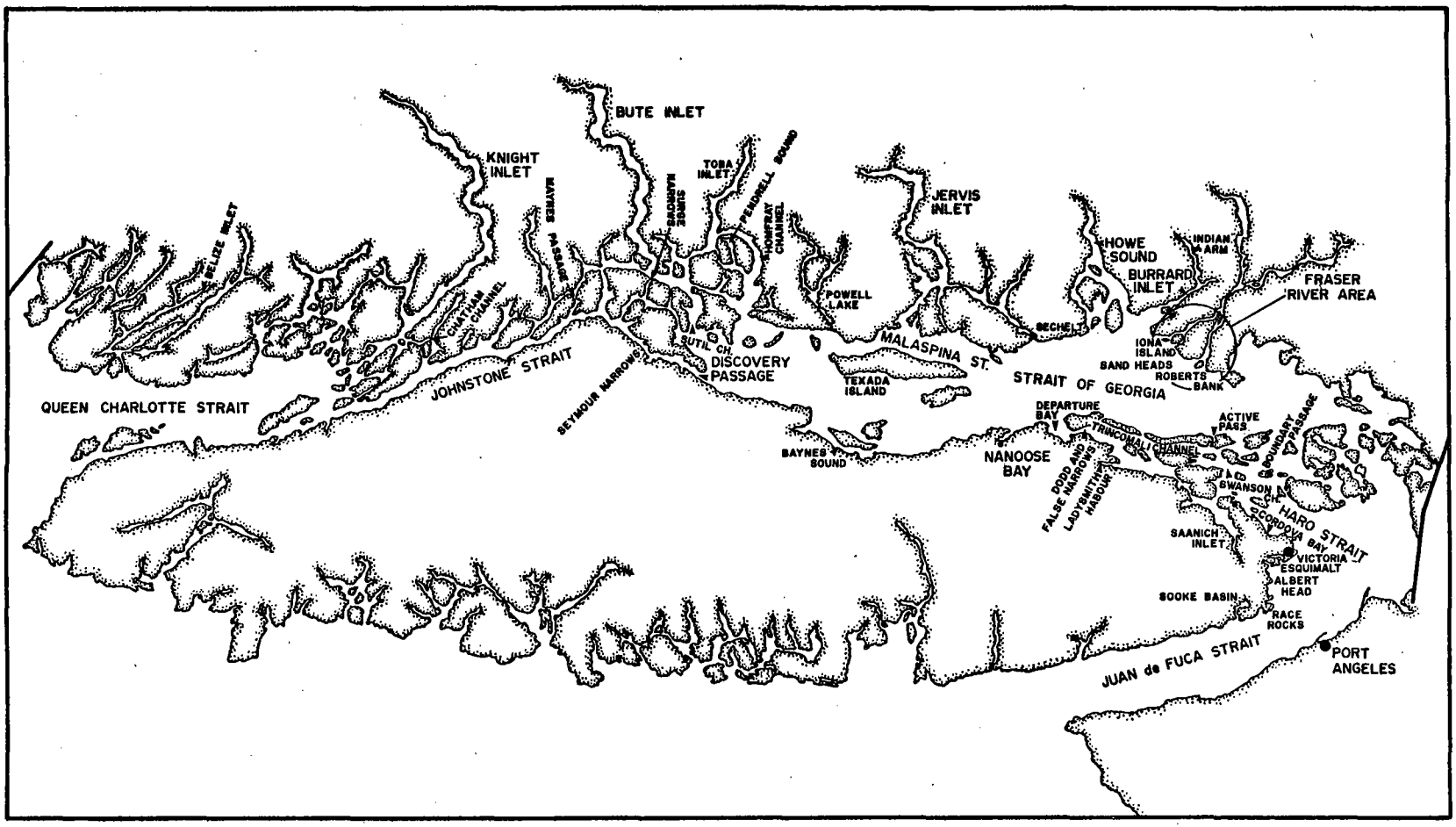

Fig. 2 Place names and bodies of water referred to in the survey.

TABLE 3: SUMMARY OF PHYSICAL OCEANOGRAPHIC DATA, EXCLUDING TIDAL AND SHORE OBSERVING STATIONS 1950 AND BEFORE

Data Set #	Data Type	Institution	Area	Approx. # Stns	Period of Observation	Reference
26-0101	DRF	POG	GEO	25		(189)
30-0101	TSBOT	POG	GEO	15		(159)
31-0101	TSBOT	POG	GEO	15		(159)
32-0101	TSBOT	POG	GEO	15		(159)
32-0801	TSBOT	UW	JF	43	June 26-Sept.24	(36)
33-0801	TSBOT	UW	JF	16	Mar.11-Aug.4	(36)
34-0801	TSBOT	UW	JF	17	Jan.4-Dec.15	(36)
35-0801	TSBOT	UW	JF	14	Jan.12-Dec.7	(36)
36-0801	TSBOT	UW	JF	16	Jan.18-Dec.5	(36)
37-0801	TSBOT	UW	JF	11	Jan.16-Dec.19	(36)
38-0801	TSBOT	UW	JF	32	Jan.15-Dec.10	(36)
39-0801	TSBOT	UW	JF	22	Jan.14-Dec.14	(36)
40-0801	TSBOT	UW	JF	28	Jan.14-Nov.30	(36)
41-0801	TSBOT	UW	JF	24	Jan.11-Dec.6	(36)
42-0801	TSBOT	UW	JF	2	Jan.17-Feb.14	(36)
46-0601	DRF	CHS	SECN	?	May 1-June 1	(Ff)
47-0601	DRF	CHS	SECN FN	?	June 5-18 June 6-23	(Ff)
48-0601	DRF	CHS	ACT	?	July 7-26	(Ff)
49-0101	TSBOT	POG	GEO	64	Dec. 1-8	(160)
49-0601	DRF	CHS	NOR	?	July	(Ff)

49-0801	TSBOT	UW	JF	17	Apr.6-Sept.14	(36)&(12)
50-0101	TSBOT	POG	GEO	72	Jan. 9-17	(160)
				75	Feb. 20-Mar. 3	
				69	May 15-22	
				69	June 19-26	
				69	July 31-Aug. 8	
				69	Sept. 5-15	
				72	Nov. 28-Dec. 5	
50-0601	DRF	CHS	MAC	?	April 5-14	(Ff)

1951

Data Set #	Data Type	Institution	Area	Approx. # Stns	Period of Observation	Reference
51-0101	TSBOT	POG	GEO	28 63	Jan. 8-10 Feb. 14-23	(160)
51-0102	TSBOT	POG	BAY	38	Jan. 9-11	(198)
51-0103	DRF	POG	BAY	3	Feb. 17-18	(198)
51-0104	TSBOT	POG	JF	34 34	Oct. 2-13 Nov. 5-17	(161) &(36)
51-0105	CM	POG	ESQ,JF	17	Oct. 16-19 Oct. 31-Nov. 1 Nov. 20-23	(161)
51-0201	TSBOT MET	IOUBC	NI	51	May 12-Aug. 7 (51/2) Oct. 25-26 (51/3)	(101)
51-0801	TSBOT	UW	JF	1	March 20	(36)

1952

Data Set #	Data Type	Institution	Area	Approx. # Stns	Period of Observation	Reference
52-0101	TSBOT	POG	JF	34	Feb. 28-March 8	(161)
				28	April 16-25	&(36)
				14	May 6-8	
				31	June 3-13	
				25	July 10-17	
				29	August 13-20	
				34	Sept. 23-Oct. 2	
52-0102	CM	POG	JF	5	March 11-24	(161) &
				5	July 2-7	(75)&
				5	Oct. 15-23	(36)
52-0103	CM	POG	ESQ,JF	17	April 29-May 2	(161)&
				6	June 19	(36)
				9	July 14	
				16	Oct. 7-8	
52-0104	TSBOT	POG	GEO	70	Sept. 22-26	(160)
				56	Sept. 29-Oct. 3	
52-0201	TSBOT	IOUBC	JER	3	March 29-31 (52/1)	(102)
	MET		BUT	18	May 26-June 9 (52/2)	
			KN	8	August 4-14 (52/3)	
52-0801	TSBOT	UW	JF	32	Mar.12-Dec.17	(36),13) & (11)

1953

Data Set #	Data Type	Institution	Area	Approx. # Stns	Period of Observation	Reference
53-0101	TSBOT	POG	GEO	100	March 16-April 10	(160)
53-0201	TSBOT MET	IOUBC	QC & SI	200	June 8-July 5(53/2) July 13-Aug.12(53/6) Aug. 19-Sep. 5(53/7)	(104)
53-0202	TSBOT MET	IOUBC	NI & IND BUT & KN	34 16	June 28-July 24(53/4) July 17-July 24(53/5)	(103)
53-0801	TSBOT	UW	JF	108	Jan.27-Dec.9	(36)&(15)

1954

Data Set #	Data Type	Institution	Area	Approx. # Stns	Period of Observation	Reference
54-0101	TSCTD WL,MET BT	POG	STU	13	Nov. 18-19	(196)
54-0201	TSBOT MET	IOUBC	SAA	116*	May 17-29(54/1)	(105)
54-0202	TSBOT MET	IOUBC	JER,PEN, TO,BUT	9	June 6-12(54/2)	(106)
54-0801	TSBOT	UW	JF	100	Jan.13-Nov.18	(36)& (13b)

*Total # of stations for two cruises; 54/1 and 55/1.

1955

Data Set #	Data Type	Institution	Area	Approx. # Stns	Period of Observation	Reference
55-0101	TSCTD WL MET BT	POG	NOR	6	Sept. 8-9	(196)
55-0201	TSBOT MET	IOUBC	SAA	116*	May 2-21(55/1)	(105)
55-0202	TSBOT MET	IOUBC	NI	51	June 28-July 22(55/3)	(107)
55-0801	TSBOT	UW	JF	60	Jan.3-Nov.9	(36)& (13b)

Total # of stations for two cruises; 54/1 and 55/1.

1956

Data Set #	Data Type	Institution	Area	Approx. # Stns	Period of Observation	Reference
56-0201	TSBOT MET	IOUBC	QC	69	May 8-17 (56/1)	(109)
56-0202	TSBOT MET	IOUBC	IND	64	May 21-23 (56/2) Sept. 4-15(56/6) Oct. 1-3(56/7) Nov. 7-9(56/8) Dec. 5-7(56/9)	(110)
56-0203	TSBOT MET	IOUBC	NI JER	51	June 26-July 24(56/4)	(108)
56-0801	TSBOT	UW	JF	13	Feb.28-Dec.6	(36),(37) &(13b)

1957

Data Set #	Data Type	Institution	Area	Approx. # Stns	Period of Observation	Reference
57-0101	TSCTD	POG	NOR	8	July 6-9	(196)
	WL		DIS	12	July 3-5	
	MET		STU	10	July 10-12	
	BT					
57-0102	TSBOT	POG	FRA & BUR	25	Sept. 30-Oct.11	(194)
	BT,MET					
	WL,CM					
57-0201	TSBOT	IOUBC	IND & QC	116	Jan. 24(57/1)	(112)
	MET				April 3-5(57/3)	
					May 22-25(57/5)	
					June 25-26(57/8)	
					August 8-9(57/10)	
					Sept. 10(57/11)	
					Oct. 17(57/13)	
					Nov. 5-8(57/14)	
					Dec. 4(57/16)	
					May 29-June 1(57/6)	
57-0202	TSBOT	IOUBC	AI	220	May 7-18(57/4)	(111)
	MET				June 7-19(57/7)	
					July 18-30(57/9)	
					Sept. 11-25(57/12)	
					Nov. 13-23(57/15)	
57-0801	TSBOT	UW	PUG	26	July 8-10	(37)
57-0801	TSBOT	UW	JF	54	Jan.18-Dec.4	(37),(36) &(13b)

1958

Data Set #	Data Type	Institution	Area	Approx. # Stns	Period of Observation	Reference
58-0101	TSCTD WL MET BT	POG	BAY STU	16 16	Jan. 28-Feb.1 Aug. 7-8	(196)
58-0102	TSBOT BT,MET	POG	AS	5	June 23-July 4	(173)
58-0103	TSBOT BT,MET WL,CM	POG	FRA,BUR	36	Nov. 5-12	(194)
58-0104	TSBOT MET,BT	POG	AS	25	Nov.12-Dec.5	(163)
58-0201	TSBOT MET	IOUBC	IND	70	Jan. 6(58/1) Feb. 3(58/2) March 3(58/4) April 1(58/6) May 5(58/7) June 9(58/10) July 8(58/12) Aug. 5(58/13) Sept. 17(58/14) Nov. 6(58/15) Dec. 15(58/16)	(114)
58-0202	TSBOT MET	IOUBC	NI & JER	37 24 16 35	Feb.11-20(58/3) Mar. 20-27(58/5) May 12-16(58/9) June 9-17(58/11)	(113)

1958 CONTINUED

Data Set #	Data Type	Institution	Area	Approx. # Stns	Period of Observation	Reference
58-0601	DRF	CHS	DIS		April 29-Aug.12	(Ff)
58-0602	DRF	CHS	SEY	1	Aug.7-Sept.5	(Ee)
58-0801	TSBOT	UW	JF	35	Jan.2-Dec.20	(36)&(38)

1959

Data Set #	Data Type	Institution	Area	Approx. # Stns	Period of Observation	Reference
59-0101	TSBOT	POG	AS	31	March 31-April 22	(164)& (36)
59-0102	TSBOT	POG	AS	40	June 8-July 1	(165a)& (36)
59-0103	TSCTD WL,MET BT	POG	STU	25	July 8-12	(196)
59-0104	TSBOT WL,BT MET,CM	POG	FRA,BUR	36	Sept.30-Oct.11	(194)
59-0105	TSBOT BT,MET WL	POG	HOW	5	Oct. 9	(194)
59-0106	TSBOT BT,MET CM	POG	SAA AS	8 23	Nov.16-Nov.18 Nov.16-Dec.11	(86)&(36)
59-0201	TSBOT MET	IOUBC	IND	120	Jan.5(59/1) Feb.23(59/2) March 31(59/3) May 11(59/5) June 19(59/7) July 20(59/8) Aug.25(59/9) Sept.14(59/10) Oct.19(59/11) Nov.16(59/12) Dec.7(59/13)	(116)

1959 CONTINUED

Data Set #	Data Type	Institution	Area	Approx. # Stns	Period of Observation	Reference
59-0202	TSBOT MET	IOUBC	JER BUT KN	9 7 11	May 15-June 7(59/6)	(115)
59-0601	DRF	CHS	FAL	1	April 8-May 7	(Ee)
59-0801	TSBOT	UW	JF	48	Mar.17-Nov.3	(36),(38) &(39)
59-1001	BT	PNL	DIS		Sept.-Oct.	(746)

1960

Data Set #	Data Type	Institution	Area	Approx. # Stns	Period of Observation	Reference
60-0101	TSBOT, MET, BT WL, CM	POG	FRA, BUR	36	Sept.7-16	(194)
60-0102	TSBOT MET, BT WL	POG	HOW	12	Sept.11-12	(194)
60-0103	TSBOT MET, BT WL	POG	MAL	8	Sept.14	(194)
60-0104	TSBOT	POG	AS	10	Oct.17-26	(150)
60-0201	TSBOT MET	IOUBC	IND	225	Jan. 4-7(60/1) Feb.15-17(60/2) March 23-25(60/4) April 19-22(60/6) May 26-28(60/7) June 14-17(60/9) July 25-28(60/12) Sept.6-9(60/16) Oct.3-5(60/18) Oct.31-Nov.3(60/22) Dec.15-17(60/27)	(118)
60-0202	TSBOT MET	IOUBC	JER, SUT, BUT, GEO, HOM	23	March 14-16(60/3) May 31-June 11(60/8) Sept.19-22(60/17) Dec. 12(60/26)	(107)
60-0601	DRF	CHS	RR PP	?	March 16-April 28 July 21-Sept.1	(Ff)

1960 CONTINUED

Data Set #	Data Type	Institution	Area	Approx. # Stns	Period of Observation	Reference
60-0602	DRF	CHS	DOD	1	Aug.17-Sept.1	(Ee)
60-0603	DRF	CHS	CHA	1	Sept.19-Oct.18	(Ee)
60-0801	TSBOT	UW	JF	85	Jan.27-Dec.17	(36)&(39)
60-1001	BT	PNL	DIS		Feb.	(74b)

1961

Data Set #	Data Type	Institution	Area	Approx. # Stns	Period of Observation	Reference
61-0101	TSCTD	POG	BAY	21	May 24-27	(196)
	WL		NOR	18	May 16	
	MET		DIS	11	Oct. 12	
	BT					
61-0102	TSBOT	POG	JF	24	Feb.16-Oct.24	(36), (165c), (165b)& (165d)
61-0201	TSBOT	IOUBC	BUT	4	Jan.15-19(61/1)	(119)
	MET		IND	10	Jan.23-25(61/2)	
			IND	10	Feb.21-23(61/4)	
			BUT	1	March 15-17(61/6)	
			IND	15	March 20-23(61/7)	
			IND	12	April 26-28(61/10)	
			SAA	6	April 30-May 5(61/11)	
			POW	1	May 29-30(61/12)	
			IND	10	June 19-23(61/13)	
			JER	7	June 26-28(61/14)	
			SEC,MAL,BUT	32	July 3-14861/15)	
			IND	8	July 31-Aug.2(61/16)	
			GEO	14	Sept. 5-8(61/20)	
			IND	9	Sept. 25-27(61/21)	
			IND	4	Sept. 29(61/22)	
			SAA	3	Oct. 9-13(61/23)	
			HOW,JER	15	Oct. 31-Nov. 4(61/25)	
			IND	2	Nov. 15-17(61/26)	
			JER	5	Nov. 21-24(61/27)	
61-0601	DRF	CHS	DOD	1	April 11-May 10	(Ee)
61-0602	DRF	CHS	GEP	1	Sept. 3-Oct. 2	(Ee)
61-1001	TSBOT	PNL	AS	11	Nov. 22-24	(80)
61-0801	TSBOT	UW	JF	36	Feb.6-Nov.16	(36)&(39)

1962

Data Set #	Data Type	Institution	Area	Approx. # Stns	Period of Observation	Reference
62-0101	TSBOT	POG	FRA,BUR	45	Feb. 13-23	(194)
	WL,MET			40	Sept. 18-27	
	BT,CM					
62-0102	TSBOT	POG	HOW	12	Feb. 19-20	(194)
	WL,MET			12	Sept. 24-25	
	BT					
62-0103	TSCTD	POG	BAY	20	Aug. 7-8	(196)
	WL		NOR	10	July 17	
	MET		DIS	6	Nov. 6	
	BT		STU	13	July 18-19	
62-0104	TSBOT	POG	JF	25	Jan.15-Mar.26	(36), (165e)& (165f)
62-0201	TSBOT	IOUBC	IND	4	Jan. 10-12(62/1)	(120)
	MET		SAA	20	Jan. 12-20(62/2)	
			JER,SEC	22	March 1-8(62/5)	
			IND	6	March 12-14(62/6)	
			IND	6	April 30-May 2(62/9)	
			JER	23	May 5-11(62/12)	
			BUT,BEL	26	May 14-22(62/14)	
			FRA,GEO	3	June 21-22(62/16)	
			QC	24	June 25-July 10(62/17)	
			NEP	6	July 11-14(62/19)	
			JER,SEC	33	July 17-26(62/20)	
			BUT	10	July 30-Aug.9(62/22)	
			SAA	14	July 30-Aug.10(62/23)	
			SAA	16	Aug. 28-Sept.6(62/24)	
			IND	5	Sept. 11-12(62/25)	
			JER,SEC	37	Oct. 2-12(62/26)	
			IND	7	Oct. 16-17(62/27)	
			IND	7	Nov. 14-15(62/28)	
			JER,SEC	26	Nov. 15-19(62/29)	
			SAA	18	Nov. 22-Dec.5(62/30)	
			IND	7	Dec. 6-7(62/31)	

1962 CONTINUED

Data Set #	Data Type	Institution	Area	Approx. # Stns	Period of Observation	Reference
62-0601	DRF	CHS	SUR	1	May 6-June 4	(Ee)
62-0602	DRF	CHS	MAY	1	July 11-Aug. 9	(Ee)
62-0603	DRF	CHS	HOL	1	Sept. 13-Oct.12	(Ee)
62-0801	TSBOT	UW	JF	13	Jan.24-Sept.15	(36)&(40)

1963

Data Set #	Data Type	Institution	Area	Approx. # Stns	Period of Observation	Reference
63-0101	TSCTD MET WL BT	POG	NOR STU	11 13	July 9-10 July 11	(196)
63-0102	TSBOT MET,WL BT,CM	POG	FRA,BUR	45	Aug. 20-30	(194)
63-0103	TSBOT MET,WL BT	POG	HOW	12	Aug. 25-26	(194)
63-0201	TSBOT MET	IOUBC	IND JER,SEC SAA IND JER,SEC PAC SAA IND JER,SEC IND SAA SI PAC IND IND JER,SEC JF IND SAA IND IND JER,SEC JER,SEC JER,SEC	7 28 14 7 22 8 14 7 23 7 13 30 2 7 8 22 4 7 14 7 7 13 15 15	Jan. 16-17(63/1) Jan. 18-22(63/2) Jan. 29-Feb.11(63/3) Feb. 12-13(63/5) Feb. 14-19(63/6) Feb. 26-March 5(63/7) March 5-15(63/8) March 19-20(63/9) March 21-25(63/9) April 9-10(63/11) April 29-May 10(63/13) May 10-21(63/15) May 7-12(63/16) May 14-15(63/17) May 30-June 13(63/18) May 27-29(63/19) June 5-7(63/20) June 10-11(63/21) June 17-28(63/23) July 9-10(63/24) Aug. 6-7(63/26) Sept. 16-20(63/27) Oct. 21-25(63/29) Nov. 4-8(63/31	(121)

1963 CONTINUED

Data Set #	Data Type	Institution	Area	Approx. # Stns	Period of Observation	Reference
63-0601	CM	CHS	GEO	3	July 20-Sept. 2	(21)
63-0801	TSBOT	UN	JF	12	June 4-14	(36)&(40)

1964

Data Set #	Data Type	Institution	Area	Approx. # Stns	Period of Observation	Reference
64-0101	DRF	POG	COR	?	June 25	(166)& (149a)
64-0102	TSBOT MET,WL BT,CM	POG	FRA,BUR	45	Sept. 22-Oct.20	(194)
64-0103	TSBOT MET,WL BT,CM	POG	HOW	17	Sept. 27-28	(194)
64-0104	TSBOT BT	POG	NAN	4	Dec. 10-Dec. 31 (2 days)	(84)
64-0201	TSBOT MET	IOUBC	AI	9 25 7 8 8	March 17-21(64/12) May 4-8(64/18) May 11-14(64/19) July 13-16(64/26) Oct. 24-30(64/32)	(122)
64-0601	CM	CHS	JF	4	May 7-15	(22)
64-0602	DRF	CHS	PP	?	June 1-July 31	(Ff)
64-0603	DRF	CHS	STUN	1	Sept. 14-Oct.13	(Ee)
64-0801	TSBOT	UW	JF	550	Apr.6-Sept.12	(36)&(41)

1965

Data Set #	Data Type	Institution	Area	Approx. # Stns	Period of Observation	Reference
65-0101	TSBOT BT	POG	NAN	4	Jan. 1-Aug. 11 (18 days)	(84)
65-0102	TSBOT	POG	GEO	15	March-Oct.	(18)
65-0103	TSBOT	POG	STU	13	May 13-14	(196)
65-0104	TSCTD WL,MET BT	POG	HAR,JF	21	May 19-27	(196)
65-0105	TSCTD WL MET BT	POG	NOR NOR	4 12	June 23 May 11-12	(196)
65-0106	TSBOT WL,MET BT,CM	POG	FRA,BUR	45	Aug. 3-13	(194)
65-0107	TSBOT WL,MET BT,CM	POG	HOW	17	Aug. 8-9	(194)
65-0108	TSBOT TSCTD WL,MET BT	POG	VIC,ESQ	11	Aug.-Dec. (monthly)	(195)
65-0201	TSBOT MET	IOUBC	GEO,JF GEO,JF AI SAA SAA JER SAA SAA	12 5 23 8 6 4 5 6	Feb. 8-18(65/4) May 10-16(65/8) May 25-29(65/11) June 22-24(65/15) July 28-30(65/19) Aug. 4-15(65/21) Sept. 22-24(65/24) Dec. 1-2(65/29)	(123)

1965 Continued

Data Set #	Data Type	Institution	Area	Approx. # Stns	Period of Observation	Reference
65-0202	TSBOT MET	IOUBC	SOO	30	Nov. 4 & Dec. 9	(127)
65-0601	DRF CM	CHS	VIC,ESQ	100 1	May 25-June 1 (50 hours)	(199)
65-0602	CM	CHS	SID	1	Sept. 17-Oct. 16	(Ee)
65-0801	TSBOT	UW	JF	20	Jan.12-Dec.28	(36)&(41)

1966

Data Set #	Data Type	Institution	Area	Approx. # Stns	Period of Observation	Reference
66-0101	TSBOT,CTD WL,MET,BT	POG	VIC,ESQ	11	Jan.-Dec.	(195)
66-0102	TSBOT	POG	GEO	8	Jan.-Dec.	(64)
66-0103	TSBOT MET	POG	GEO	8	Feb.-Dec.	(170)
66-0104	CM	POG	SAA	4	June 7-July 26	(82)
66-0105	TSBOT	POG	SAA	16	June-July	(172)
66-0106	TSBOT WL,MET BT,CM	POG	FRA,BUR	45	July 5-14	(194)
66-0107	TSBOT WL,MET BT,CM	POG	HOW	17	July 10-11	(194)
66-0108	TSCTD WL MET BT	POG	DIS	11	Aug. 24-25	(196)

1966 Continued

Data Set #	Data Type	Institution	Area	Approx. # Stns	Period of Observation	Reference
66-0201	TSBOT MET	IOUBC	SOO	140	Jan. 6-29 Feb. 27 April 17 May 2 June 2 July 4 Aug. 2 Sept. 9	(127)
66-0202	TSBOT MET	IOUBC	JER SAA SAA SAA SAA AI BUT SAA SAA	4 3 3 3 11 13 10 7 6	Feb. 7-11(66/4) Feb. 15-25(66/5) March 10-17(66/6) April 11-29(66/8) May 9-13(66/9) May 9-19(66/10) July 17-26(66/15) July 26-29(66/16) Dec. 14-17(66/24)	(124)
66-0203	CM	IOUBC	SOO	3	April 17(cruise 6)	(127)
66-0204	DRF	IOUBC	SOO	4	July 27(cruise 9a)	(127)
66-0205	TSCTD	IOUBC	FRA	35 44 51 50 74	Aug. 20-21 Sept. 17-18 Oct. 22-23 Nov. 12-13 Dec. 7-11	(133)& (100c)
66-0601	CM	CHS	SAA	4	July 6	(23)
66-0801	TSBOT	UW	JF	10	Sept.9-Dec.28	(36)&(42)

1967

Data Set #	Data Type	Institution	Area	Approx. # Stns	Period of Observation	Reference
67-0101	TSBOT MET	POG	GEO	8	Jan.-Dec.	(170)
67-0102	TSBOT,CTD WL,MET,BT	POG	GEO	8	Jan.-Dec.	(65)
67-0103	TCTD	POG	JER	1	Dec.19-Dec.31	(81)
67-0201	TSCTD	IOUBC	FRA	29	Jan. 20-22	(133)&
				48	Feb. 15-17	(100c)
				48	March 10-12	
				50	April 21-23	
				63	May 19-20	
				38	June 5	
				22	July 30	
				42	Aug. 25-28	
				21	Sept. 23	
				19	Nov. 20	
67-0202	TSBOT MET	IOUBC	GEO	5	Feb. 20-22(67/3)	(125)
			SAA	7	April 3-7(67/5)	
			GEO	5	April 25-27(67/8)	
			SI	22	May 15-19(67/10)	
			GEO	3	May 22-23(67/11)	
			SI	14	June 6-14(67/14)	
			JER	6	July 11-13(67/18)	
			GEO	5	July 26-28(67/20)	
			SAA	4	Aug. 1-11(67/21)	
			BUT	2	Aug. 14-20(67/22)	
			JER	12	Sept. 5-9(67/24)	
			BUT	1	Sept. 10-18(67/25)	
			GEO	5	Sept. 25-27(67/26)	
			BUT	2	Oct. 16-21(67/27)	
			GEO	5	Oct. 25-26(67/28)	
			BUT	4	Nov. 27-Dec. 2(67/30)	
			GEO	5	Nov. 27-Dec. 1(67/31)	
			SAA	2	Nov. 27-Dec. 8(67/32)	
67-0203	TSBOT	IOUBC	SOO	2	May 11-June 9(K)	(127)
					Nov. 15-Dec. 15(L)	

1967 Continued

Data Set #	Data Type	Institution	Area	Approx. # Stns	Period of Observation	Reference
67-0301	TSBOT	PBS	VIC,POR	20	April-Dec.	(155)
67-0501	TSBOT	IOS	GEO,JF	120	Dec.	(47)
67-0601	CM	CHS	LAD	3	June 22-July 4	(24)
67-1201	TSCTD MET,CM	DREP	BUT		JULY	(53)

1968

Data Set #	Data Type	Institution	Area	Approx. # Stns	Period of Observation	Reference
68-0101	TCTD	POG	JER	1	Jan.1-June 22	(81)
68-0102	TSBOT CM	POG	SAA	5	May 9-July 2	(83)
68-0201	TSBOT MET	IOUBC	BUT,GEO, SAA,SS, JER	200	Jan.2-Dec.19 (61/1-61/37)	(126)
68-0202	TSCTD	IOUBC	FRA	44 24 36	Jan. 13-14 Feb. 17 March 15-17	(133)& (100c)
68-0301	TSBOT	PBS	VIC,POR	20	Jan.-Dec.	(155)
68-0302	TSCTD MET,BT	PBS	GEO	18	Jan.-Dec.	(66)
68-0303	TSBOT	PBS	SAA	12	May,June,July	(63)
68-0501	TSBOT	IOS	GEO,JF	120	Jan.-Dec.	(47)
68-0601	CM	CHS	GEO	17	April 9-June 20	(Ee)
68-0602	CM	CHS	DEP	1	July 12-28	(25)
68-0603	CM	CHS	MAC	3	Oct.8-Nov.9	(Ee)
68-0604	CM	CHS	FRA		Aug.14-Oct.2	(Ee)*
68-1201	TSCTD MET,CM	DREP	BUT		July	(53)

1969

Data Set #	Data Type	Institution	Area	Approx. # Stns	Period of Observation	Reference
69-0201	TSBOT MET	IOUBC	GEO,SS, SAA,PAC, AI	180	Jan.14-Dec.18 (69/1-69/30)	(128)
69-0601	CM	CHS	GEO	65	March 8-Oct.16	(Ee)
69-0602	CM	CHS	BRO	1	May 16-June 12	(Ee)
69-0603	DRF	CHS	ROB	?	July 1-Aug.31	(Ff)
69-0604	CM	CHS	CLO	1	July 7-Aug.13	(Ee)
69-1201	TSCTD MET,CM	DREP	BUT		July	(53)
69-1401	TSCTD	IND	BUR	5	April 27-June 21 (3 rounds of 2 days each)	(174)

1970

Data Set #	Data Type	Institution	Area	Approx. # Stns	Period of Observation	Reference
70-0201	TSBOT MET	IOUBC	GEO,SAA, JER,AI , BUT	150	Jan.14-Dec.18 (70/2-70/35)	(129)
70-0501	TSTVP	IOSOI	NAN		Feb.,May,Aug,Nov.	(Hh)
70-0601	CM	CHS	GEO	23	March 16-Dec.9	(Ee)
70-0602	CM	CHS	ROB	8	March 17-May 5	(Ee)
70-0603	CM	CHS	TRI	2	March 19-April 20	(Ee)
70-0604	CM	CHS	PLU	3	March 19-May 6	(Ee)
70-0605	CM	CHS	SWA	3	March 23-May 12	(Ee)
70-0606	DRF	CHS	SECN	?	June 1-July 31	(Ff)
70-1101	TSBOT	UVIC	MAC	25	Jan.-Dec.	(10)&(59)

1971

Data Set #	Data Type	Institution	Area	Approx. # Stns	Period of Observation	Reference
71-0201	TSBOT MET	IOUBC	GEO,JER, SI,PAC, HAR	170	Jan.12-Dec.10 (71/1-71/39)	(130)
71-0202	TSCTD	IOUBC	FRA	180 200	Aug. 23-27 Nov. 1-6	(133)& (100c)
71-0203	TSCTD	IOUBC	GEO	10	Nov.	(49a)
71-0204	DRF	IOUBC	FRA		May 28-June 11	(43b)
71-0501	CM	IOS	JOH	1	Nov. 3-10	(1)
71-0502	TSCTD CM	IOSCZ	HOW	3	Nov.11-Dec.31	(17)
71-0601	CM	CHS	RR	2	Nov.24-Dec.31	(Ee)
71-1101	TSBOT	UVIC	MAC	25	Jan.-Dec.	(10)&(59)
71-0602	CM	CHS	PEN	1	July 28-Sept.6	(Ee)*
71-1201	TSCTD MET,CM	DREP	BUT		July	(53)

1972

Data Set #	Data Type	Institution	Area	Approx. # Stns	Period of Observation	Reference
72-0201	TSCTD	IOUBC	FRA	17	Jan. 10-13	(133)&
					Jan. 15-16	(100c)
				160	March 7-10	
					March 29	
				60	Aug. 22-24	
72-0202	TSBOT MET	IOUBC	GEO,SAA, HOW, IND	300	Jan.20-Dec.21 (72/1-72/47)	(131)
72-0301	TSSCT	PBS	SQU	2	April 26-27	(148)
				2	May 16-17	
				1	June 7	
				3	July 12	
72-0302	TSCTD	PBS	SQU	2	June 12	(152)
72-0501	TSCTD CM	IOSCZ	HOW	3	Jan.1-Dec.31	(17)
72-0502	TSCTD	IOS	HOW	11	Feb.22-March 2(72-1)	(16)
					June 19-June 28(72-2)	
72-0601	CM	CHS	RR	2	Jan. 1-18	(Ee)
72-0602	CM	CHS	TRL	2	Jan.18-Feb.17	(Ee)
72-0603	CM	CHS	MAC	1	Jan.19-23	(Ee)
72-0604	CM	CHS	RR	1	Feb.8-Dec.31	(Ee)
72-0605	CM	CHS	GEO	9	March 8-May 4	(Ee)
72-0606	CM	CHS	HOW	4	March 9-May 2	(Ee)
72-0607	CM	CHS	BUR	2	March 21-April 27	(Ee)

1972 CONTINUED

Data Set #	Data Type	Institution	Area	Approx. # Stns	Period of Observation	Reference
72-0608	CM	CHS	PEN	1	Aug.17-Sept.25	(Ee)*
72-1101	TSBOT	UVIC	MAC	25	Jan.-Dec.	(10)&(59)
72-1201	CM, MET, TSCTD	DREP	GEO,KN, BUT	?	July 8-13	(53)

1973

Data Set #	Data Type	Institution	Area	Approx. # Stns	Period of Observation	Reference
73-0201	TSBOT MET	IOUBC	GEO,SI, SAA,JOH, JF,HOW, BUT,IND	500	Jan.15-Dec.15 (73/1-73/50)	(132)
73-0202	TSCTD	IOUBC	FRA	80 80	Feb.26-March 2 March 26-28	(133)& (100c)
73-0203	TSSTD	IOUBC	JF	290	March 6-April 18(73/7)	(135)
73-0204	DRF	IOUBC	HOW		May 8-11,15-18 June 26-29 July 3-6	(19)
73-0205	TSSTD	IOUBC	JF	16 26 24 68 25 11 27 25	June 12(73/22) July 16-17(73/27) Aug. 13-14(73/31) Aug. 28-30(73/30) Sept. 10-11(73/36) Oct. 15-16(73/40) Nov. 5-7(73/44) Dec. 4-5(73/48)	(136)
73-0501	TSCTD CM	IOSCZ	HOW	3	Jan.1-Dec.31	(17)
73-0502	TSCSTD	IOS	JF	22	March 6-April 18	(48)
73-0503	TSTVP	IOSOI	NAN		July-Dec.	(Hh)
73-0601	CM	CHS	RR	1	Jan.1-Jan.19	(Ee)
73-0602	CM	CHS	RR	1	Jan.19-Dec.20	(Ee)
73-0603	CM TSBOT	CHS	JOH	5	Feb.20-April 11	(27)
73-0604	CM	CHS	JOH	5	Feb.20-June 12	(Ee)

1973 Continued

Data Set #	Data Type	Institution	Area	Approx. # Stns	Period of Observation	Reference
73-0605	CM	CHS	JF	10	March 5-Sept. 23	(Ee)
73-0606	CM TSSTD	CHS	JF	5	March 6-April 17	(28)

1974

Data Set #	Data Type	Institution	Area	Approx. # Stns	Period of Observation	Reference
74-0201	TSBOT MET	IOUBC	SAA,SI, GEO,HOW, BUT,KN, VANH	420	Jan.7-Dec.13 (74/1-74/37)	(134)& (48b)
74-0301	TSCTD	PBS	SQU	44	Feb.20-Dec.31	(151)
74-0501	TSCTD CM	IOSCZ	HOW	3	Jan.1-2	(17)
74-0502	TSTVP	IOSOI	NAN		Jan.-Dec.	(Hh)
74-0503	DRF MET	IOSOO	ESQ	10-25	March 23-26	(8)
74-0504	DRF MET	IOSOO	PAT	10-25	March 28-April 2	(9)
74-0505	TSBOT	IOSOC	SAA	15	May 2-3(C-74-001)	(A)
74-0506	TSBOT	IOSOC	PAT	26	May 2-14(Cepex)	(B)
74-0507	THERM DRF MET	IOSCZ IOUBC	PEN		July 8-12	(149b)
75-0508	DRF	IOSCZ	PORM		Sept.23-26	(149b)
74-0601	CM	CHS	HAR	6	Feb.12-March 16	(Ee)
74-0602	CM	CHS	BOU	1	March 4-20	(Ee)
74-0603	CM	CHS	RR	1	March 14-27	(Ee)
74-0604	CM	CHS	IND	1	Dec.5-31	(Ee)

1975

Data Set #	Data Type	Institution	Area	Approx. # Stns	Period of Observation	Reference
75-0201	TSBOT MET	IOUBC	VANH, IND,KN, HOW,BUT, JER,JF,	355	Jan.3-Dec.4 (75/1-75/34)	(137)& (48b)
75-0202	TSBOT MET	IOUBC	GEO	160	Feb.13-July 23	(140)
75-0203	DRF	IOUBC	GEO	7 3	Feb.13-19 July 23	(140)
75-0301	TSCTD	PBS	SQU	44	Jan.1-July 24	(151)
75-0501	TSTVP	IOSOI	NAN		Jan.-Dec.	(Hh)
75-0502	CM TSSTD WL	IOS	JF	13	May 26-28 July 10-15	(60)
75-0601	CM	CHS	IND	1	Jan. 1-5	(Ee)& (48B)
75-0602	CM	CHS	IND	1	Jan.20-March 5	(Ee)& (48B)
75-0603	CM	CHS	SAN	3	Feb.5-May 20	(Ee)
75-0604	CM	CHS	HAR	1	Feb.6-May 14	(Ee)
75-0605	CM	CHS	ALB	1	March 4-27	(Ee)
75-0606	CM	CHS	BOU	2	March 19-May 15	(Ee)
75-0607	CM	CHS	SWA	1	April 13-June 29	(Ee)

1976

Data Set #	Data Type	Institution	Area	Approx. # Stns	Period of Observation	Reference
76-0201	TSBOT MET	IOUBC	HOW,JF, GEO,IND, BUT,JER	80	Jan.6-Dec.8 (76/1-76/21)	(138)
76-0202	TSBOT MET	IOUBC	GEO	210	Jan.16-Sept.18	(140)
76-0203	CM	IOUBC	GEO	8 2 9 3	July 13 July 16 Sept. 17 Sept. 18	(140)
76-0501	TSTVP	IOSOI	NAN		Jan.-Dec.	(Hh)
76-0502	TSBOT	IOSOC	GEO	19	Feb.3-11 (OC-76-IS-001) Ocean Dumping Exp.	(C)
76-0503	TSBOT	IOSOC	GEO	25	Feb. 23-26 (OC-IS-76-002)	(D)
76-0504	TSBOT	IOSOC	SAA	12	April 26(OC-IS-76-003)	(E)
76-0505	TSCTD	IOSCZ	SAA	8	April-Dec.	(35)
76-0506	TSCTD	IOSCZ	HAR	30	April-July Sept.-Dec.	(33)
76-0507	TSBOT	IOSOC	SAA	12	May 10-14(OC-IS-76-004)	(F)
76-0508	TSCSTD	IOS	FRA	21	May 18-Dec. 22	(2)
76-0509	TSBOT	IOSOC	SAA	2	May 31-June 6	(G)
76-0510	BT	IOSOC	SAA	12	May 31-June 6	(G)
76-0511	TSBOT	IOSOC	MAL,SAA, GEO	?	July 12-16 (OC-IS-76-006)	(H)

1976 Continued

Data Set #	Data Type	Institution	Area	Approx. # Stns	Period of Observation	Reference
76-0512	TSBOT MET	IOSOC	SAA	9	Aug. 16-20 (OC-IS-76-007)	(I)
76-0513	TSBOT MET	IOSOC	HOW	27	Nov. 29-Dec. 2 (OC-76-IS-008)	(J)
76-0601	TSBOT,CTD	CHS	DIS,JOH, QC	7	Jan.-Dec.	(29)
76-0602	CM	CHS	FRA	1	April 6-May 11	(Ee)
76-0603	CM	CHS	JOH	2	April 22-June 23	(Ee)
76-0604	CM	CHS	ION	3	May 18-July 18	(Ee)
76-0605	CM	CHS	HAR	8	July 8-Aug.19	(Ee)
76-1301	DRF	NOAA	JF	38	April 5	(168)

1977

Data Set #	Data Type	Institution	Area	Approx. # Stns	Period of Observation	Reference
77-0201	TSBOT MET	IOUBC	GEO,JER, IND,BUT, KN,HOW	85	Jan. 17-Dec. 8 (77/1-77/23)	(139)
77-0501	TSCTD	IOSCZ	HAR	30	Jan.-April	(33)
77-0502	TSCTD	IOSCZ	SAA	8	Jan.-Dec.	(35)
77-0503	TSTVP	IOSOI	NAN		Jan.-Dec.	(Hh)
77-0504	TSCTD	IOSCZ	KN	19	Feb.-Dec.	(34)
77-0505	TSCTD CM	IOSOO	GEO,DIS, JOH,QC	50	March 2-Dec.6 (77-11 to 77-15)	(K)
77-0506	TSCSTD CM	IOS	FRA	3	Aug.1-Dec.15	(2)
77-0507	TSBOT	IOSOC	HOW	5	Sept.12-16 (OC-77-IS-004)	(L)
77-0508	TSBOT	IOSOC	HOW	11	Oct.11-14 (OC-77-IS-005)	(M)
77-0601	TSBOT,CTD	CHS	DIS,JOH, QC	7	Jan.-Dec.	(29)
77-0602	CM	CHS	ANN	2	March 25-April 20	(Ee)
77-0603	CM	CHS	CLO	4	July 28-Nov. 21	(Ee)
77-0604	CM	CHS	FRA	2	Jan.28-May 11	(Ee)*
77-0605	CM	CHS	DIS	8	Feb.1-May 12	(Ee)*
77-0606	CM	CHS	JOH,	30	Jan.29-May 15	(Ee)*

1977 CONTINUED

Data Set #	Data Type	Institution	Area	Approx. # Stns	Period of Observation	Reference
77-1301	DRF	NOAA	JF	38	Feb. 15-17 July 20	(168)
77-1302	DRF	NOAA	JF	77	July 19-23	(55)
77-1601	CM	AESL	ANN	2	March 25-April 15	(7)

1978

Data Set #	Data Type	Institution	Area	Approx. # Stns	Period of Observation	Reference
78-0201	TSBOT MET	IOUBC	GEO, IND, JER, BUT, KN	125	Jan.9-Oct.20 (78/1-78/16)	(141)
78-0202	TSBOT	IOUBC IOS	AS	3 10 9 5	March 13-20(001) Aug. 12-27(004) Sept.11-27(005) Oct.18-26(006)	(142) (169)
78-0501	TSCTD	IOSCZ	SAA	8	Jan.-Dec.	(35)
78-0502	TSCTD	IOSCZ	KN	19	Jan.-Dec.	(34)
78-0503	TSTVP	IOSOI	NAN		Jan.-Dec.	(Hh)
78-0504	TSBOT	IOSOC	GEO	12	March 2-April 2	(N)
78-0505	CM	IOSCZ	FRA	?	Aug. 1-3	(Dd)
78-0601	TSBOT, CTD	CHS	DIS, JOH, QC	7	Jan.-Dec.	(29)
78-0602	CM	CHS	JF	2	Jan.11-April 10	(Ee)*
78-0603	CM	CHS	JOH	30	May 24-June 2	(Ee)*
78-1201	TSCTD MET	DREP	KN, GEO, QC		July	(53)
78-1301	DRF	NOAA	PORT	1000	April 23-30	(56)
78-1302	DRF	NOAA	JF	97	Aug. 22-26	(44)
78-1501	DRF	EPAUS	JF	26	April	(45)
78-1502	DRF	EPAUS	JF	3	Aug. (4 days)	(61)

1979

Data Set #	Data Type	Institution	Area	Approx. # Stns	Period of Observation	Reference
79-0201	TSBOT	IOUBC	AS	4	Jan. 2-7 (007)	(142)
				9	Mar. 30-Apr. 18 (008)	
				7	May 8-17 (009)	(145)
				11	June 9-July 1 (010)	
				6	July 13-19 (011)	
79-0202	TSBOT MET	IOUBC	GEO, IND, JER, FRA	170	Jan. 2-Dec. 10 (79/1-79/22)	(143)
79-0203	BT	IOUBC	AS	7	May 8-17 (009)	(145)
				11	June 9-July 1 (010)	
				6	July 13-19 (011)	
79-0501	TSTVP	IOSOI	NAN		Jan.-Dec.	(Hh)
79-0502	TSCTD	IOSCZ	KN	19	Mar.-Dec.	(34)
79-0503	TSBOT	IOSOC	QC, SAA	?	April 30-May 7 (OC-79-IS-001)	(O)
79-0504	TSSTD	IOSOO	SAA	10	Nov. 26 (79-16)	(P)
79-0505	TSBOT	IOSOC	SAA	6	Dec. 3-7 (OC-79-IS-003)	(Q)
79-0506	TSSTD CM	IOSOO	FN, BUR	6	Dec. 17-21 (79-17)	(R)
79-1501	DRF	EPAUS	JF	3	July (5 days)	(62)

1980

Data Set #	Data Type	Institution	Area	Approx. # Stns	Period of Observation	Reference
80-0201	TSBOT MET	IOUBC	GEO, IND, JER, SAA, HOW, FRA	108	Jan. 15-Dec. 2	(144)
80-0202	TSBOT	IOUBC	AS	10 7 15	Jan. 30-Feb. 9 (012) April 10-17 (013) May 30-June 7 (014)	(145)
80-0203	BT	IOUBC	AS	15	May 30-June 7 (014)	(145)
80-0401	TSBOT	WVL	FRA	3	March-December (2-3 week intervals)	(X)
80-0501	TSTVP	IOSOI	NAN		Jan.-Dec.	(Hh)
80-0502	TSCTD	IOSOE	GEO, BOU-TEX	16	April 15-18 (80-02)	(S)
80-0503	TSCTD	IOSOE	JF	12	June 2-8 (80-05)	(T)
80-0504	TSCTD	IOSOE	GEO	22	June 16-20 (80-06)	(U)
80-0505	TSCTD CM	IOSOO	JF	10	July 21-Aug. 3 (80-13)	(V)
80-0506	TSCTD	IOSOE	JF	1	July 28-Aug. 8 (80-08)	(W)
80-0601	CM	CHS	JF	1	Sept.16-Nov.11	(Ee)*
80-0701	TSSTD	RR	SOO	12	Aug.12-Dec.31 (monthly)	(Gg)
80-1401	TSCTD CM	IND	GEO	6	?	(20)
80-1402	TSCTD CM	IND	GEO	8	?	(49)
80-1403	TSBOT CM	IND	TRI	4	?	(50)

1981

Data Set #	Data Type	Institution	Area	Approx. # Stns	Period of Observation	Reference
81-0201	TSBOT MET	IOUBC	GEO, IND, JER, SAA, SEC, BUT, TO, HOM	700	Jan. 12-Dec. 11 (81/1-81/38)	(146)
81-0202	TSTDCM (Cyclosonde)	IOUBC	GEO	3 3	Mar.-May Oct.-Dec.	(Ii)
81-0401	TSBOT	WVL	FRA	3	January-July (2-3 week intervals)	(X)
81-0501	TSTVP	IOSOI	NAN		Jan.	(Hh)
81-0502	TSCTD	IOSOE	SAA	13	Mar. 23-27 (81-04)	(Y)
81-0503	TSCTD	IOSOE	JF	3	Apr. 28-May 8 (81-05)	(Z)
81-0504	TSCTD	IOSOE	GEO	25	June 29-July 3 (81-06)	(Aa)
81-0505	DRF	IOSOC	GEO	?	June-November	(Cc)
81-0506	TSCTD	IOSOE	JF	3	Sept. 13-18 (81-07)	(Bb)
81-0701	TSSTD	RR	SOO	12	Jan. 1-Dec. 31 (monthly)	(Gg)
81-0702	TSSTD	RR	SOO	14	Feb. 27-July 31 (hourly)	(Gg)
81-0703	MET	RR	SOO	1	Mar. 20-Dec. 31	(Gg)
81-0704	WL	RR	SOO	2	May 20-Dec. 31	(Gg)
81-0705	THERM	RR	SOO	1	June 25-Aug. 2	(Gg)
81-0706	CM	RR	SOO	2	June 25-Nov. 13	(Gg)
81-0707	THERM	RR	ESQ	1	Aug. 10-Nov. 26	Gg)

1982

Data Set #	Data Type	Institution	Area	Approx. # Stns	Period of Observation	Reference
82-0201	TSTDCM (cyclosonde)	IOUBC	GEO	3 4	Jan. Feb.-April	(Ii)
82-0701	TSSTD	RR	SOO	12	Jan. 1-27	(Gg)
82-0702	CM	RR	SOO	2	Jan. 12-Mar. 13	(Gg)
82-0703	MET	RR	SOO	1	Jan. 1-present	(Gg)
82-0704	WL	RR	SOO	1	Jan. 1-present	(Gg)

TABLE 4 REFERENCES TO UNPUBLISHED DATA

(A) C-74-001 Vector Ocean Chemistry IOS
(B) Cepex Ocean Chemistry IOS
(C) OC-76-IS-001 Ocean Chemistry IOS
(D) OC-IS-76-002 Ocean Chemistry IOS
(E) OC-IS-76-003 Ocean Chemistry IOS
(F) OC-IS-76-004 Ocean Chemistry IOS
(G) Ocean Chemistry IOS
(H) OC-IS-76-006 Ocean Chemistry IOS
(I) OC-IS-76-007 Ocean Chemistry IOS
(J) OC-76-IS-008 Vector Ocean Chemistry IOS
(K) 77-11 to 77-15 Offshore Oceanography IOS
(L) OC-77-IS-004 Ocean Chemistry IOS
(M) OC-77-IS-005 Ocean Chemistry IOS
(N) Ocean Chemistry IOS
(O) OC-79-IS-001 Ocean Chemistry IOS
(P) 79-16 Offshore Oceanography IOS
(Q) OC-79-IS-003 Ocean Chemistry IOS
(R) 79-17 Offshore Oceanography IOS
(S) 80-02 Parizeau Ocean Ecology IOS
(T) 80-05 Vector Ocean Ecology IOS
(U) 80-06 Ocean Ecology IOS
(V) 80-13 Offshore Oceanography IOS
(W) 80-08 Vector Ocean Ecology IOS
(X) Dr. M. Waldichuk West Vancouver Labs
(Y) 81-04 Vector Ocean Ecology IOS
(Z) 81-05 Parizeau Ocean Ecology IOS
(Aa) 81-06 Vector Ocean Ecology IOS
(Bb) 81-07 Parizeau Ocean Ecology IOS
(Cc) Study to Develop Methods of Predicting Surface Currents in the Southern Strait of Georgia, B.C. Seakem Oceanography Ltd.
(Dd) IOS Coastal Zone Oceanography
(Ee)*Current data on file IOSTC
(Ff) Drift Pole Measurements W.S. Huggett, IOSTC
(Gg) Royal Roads Military College, Neil Sutherland
(Hh) On File at IOS with R.H. Herlinveaux
(Ii) Cyclosonde measurements, Institute of Oceanography, University of British Columbia, Dr. S. Pond.

* The data sets with (Ee)* as a reference were assumed to have come from Tides and Currents at IOS. They were found listed in a MEDS Index to West Coast Current Meter Moorings.

TABLE 5: LIST OF TIDAL STATIONS
A – PERMANENT

Station	Location	Period of Observation
7020 Sooke	4822 12344	March 3, 1958-present
7120 Victoria	4825 12322	February, 1909-present
7277 Patricia Bay	4839 12327	June 4, 1976-present
7330 Fulford Harbour	4846 12327	Nov., 1952-present
7590 Tsawwassen	4900 12308	Sept. 1, 1967-present
7607 Steveston	4908 12312	1922-1926 January 1-29, 1960 1969-present
7654 New Westminster	4912 12254	June, 1969-present
7735 Vancouver	4917 12307	April 24, 1891 Jan., 1910-Dec., 1923 Jan., 1940-Dec., 1941 1943-present
7795 Point Atkinson	4919 12315	May, 1914-Dec., 1919 Jan., 1921-May, 1922 1927, 1933, 1944-1945 1947-present
8074 Campbell River	5001 12514	Aug.7-Sept. 5, 1958 April 24, 1965-Oct., 1968 Feb., 1972-present
8280 Albert Bay	5035 12656	June, 1948-present
8408 Port Hardy	5043 12729	June 4, 1964-present
8525 Port Renfrew	4833 12425	Feb. 1957-Feb. 1958 1968, 1970-present

TABLE 5: LIST OF TIDAL STATIONS
B - TEMPORARY

Station	Location	Period of Observation
7007 Jordan River	4825 12407	July 30-Oct. 21, 1968
7010 Point no Point	4824 12358	Oct. 14-Nov. 12, 1932
7018 Company Point	4821 12342	April 25-June 6, 1967
7030 Becher Bay	4820 12338	June 20-July 19, 1954
7024 Sooke Basin	4823 12341	June 24-Sept. 30, 1977 Oct. 4-Dec. 2, 1977
7037 Sekiu	4817 12418	May 10, 1973-May 15, 1974
7057 Crescent Bay	4810 12343	May 1-29, 1964
7060 Port Angeles	4808 12326	Feb. 22-July 1, 1973
7080 Pedder Bay	4820 12333	April 1-29, 1964
7082 William Head	4820 12332	July 17-Aug. 15, 1954
7107 Esquimalt Lagoon	4825 12328	Oct.-Dec., 1972 Feb. 9,1976-Dec. 31, 1977 Feb. 12-March 12, 1978 March 30-May 4, 1978 June 10-Dec. 9, 1978 Dec. 29, 1978-Feb. 19, 1979 May 14-Dec. 2, 1979 Jan. 11-March 6, 1980 March 26, 1980-present
7109 Esquimalt Harbour, Seaward Defence		Feb. 9-Sept. 8, 1976 Oct. 1, 1976-Dec. 31, 1977 Feb. 12-March 12, 1978 March 30-May 4, 1978 June 10, 1978-Feb. 19, 1979 May 14-Dec. 2, 1979 Jan. 11-March 6, 1980 March 26, 1980-present
7115 Clover Point	4824 12321	March-October, 1967
7122 Aaron Point	4827 12323	March 8-Aug. 17, 1966
7124 Craigflower	4828 12325	March,1966-Aug., 1969
7125 Portage Inlet	4828 12324	April 15-May 12, 1949 March, 1966-Sept., 1969
7128 McNeil Bay	4826 12318	September, 1975
7130 Oak Bay	4826 12318	July 1-Aug. 31, 1971
7140 Finnerty Cove	4828 12318	May 17-June 15, 1958
7142 Gordon Head	4829 12318	Sept. 7-Oct. 14, 1976
7148 Charles Island	4827 12254	Aug. 1-Sept. 30, 1970
7153 Smith Island	4819 12250	May 23-June 20, 1972
7160 Port Townsend	4808 12246	Aug.1-Nov.30, 1971

TIDE STATIONS - TEMPORARY (CONT'D)

Station	Location	Period of Observation
7193 Cornet Bay	4824 12237	December, 1968
7194 Yokeko Point	4825 12237	Sept.-Oct., 1925
7196 Reservation Bay	4825 12240	Sept.-Oct., 1925
7197 Allan Island	4828 12243	May 19-June 16, 1972
7215 Bellingham	4845 12230	Aug. 6,1934-Aug. 6, 1935
7240 Friday Harbour	4833 12300	Jan. 19,1934-Jan. 19, 1935
7255 Saanichton Bay	4836 12323	Dec. 15,1953-Jan. 9, 1954
7260 Sidney	4839 12324	Aug. 7-Sept. 5, 1912 Jan. 25-Feb. 23, 1954 May 8, 1953-May 12, 1954
7270 Swartz Bay	4841 12324	May 13-June 11, 1963
9280 Brentwood Bay	4835 12328	Feb. 25-March 26, 1954
7282 Tod Inlet	4834 12328	Sept. 10-Oct. 9, 1912
7284 Hall's Boathouse	4830 12333	June-September, 1966
7310 Cowichan Bay	4844 12337	Sept. 12-Oct. 13, 1959
7315 Maple Bay	4849 12337	Sept. 14-Oct. 13, 1959
7320 Burgayne Bay	4827 12331	Sept. 20 & 27, 1959
7344 Monarch Head	4845 12305	September-October, 1976
7345 Narvaez Bay	4846 12306	April 22-May 20, 1965
7350 Bedwell Harbour	4844 12314	April 11-May 10, 1905
7360 Hope Bay	4848 12316	September 1-30, 1918
7370 Samuel Island S.	4848 12312	Sept. 6-Oct. 4, 1961
7407 Ganges Harbour	4851 12330	Aug. 21-Sept. 19, 1915
7414 Village Bay	4851 12319	Aug. 1-30, 1964 May 23-June 21, 1959
7420 Montague Harbour	4853 12323	Aug. 2-31, 1964
7430 Clam Bay	4859 12339	Nov. 10-14, 1923
7435 North Galiano	4859 12335	March 3-April 28, 1972
7437 Porlier Pass	4901 12335	Dec. 13, 1923-Jan. 11,1924
7445 Degnen Bay	4908 12343	Sept. 16-Oct. 15,1958
7450 Crofton	4851 12338	August 1-29, 1960
7455 Chemainus	4855 12342	April 8-May 6, 1961
7460 Ladysmith	4859 12347	June 1, 1954-June 1, 1955
7470 Telegraph Harbour	4858 12340	Feb. 1-March, 1920
7471 Preedy Harbour	4859 12340	April 7-May 5, 1961
7480 Boat Harbour	4906 12347	March-April, 1972

TIDE STATIONS - TEMPORARY (CONT'D)

Station	Location	Period of Observation
7490 False Narrows	4909 12346	Oct. 11-13, 1963
7503 Echo Bay	4845 12254	April 21-May 19, 1972
7505 Patos Island	4847 12258	May 1-Sept. 25, 1968 February 25-28, 1969
7510 Tumbo Channel	4847 12306	April 22-May 21, 1965 April-December, 1968
7515 Samuel Island	4849 12312	Sept. 6-Oct. 4, 1961
7525 Georgina Point	4852 12317	May 31-June 28, 1959
7528 Miners Bay	4851 12318	May 23-June 21, 1959
7532 Whaler Bay	4853 12320	August 2-31, 1964 September-October, 1968
7535 Dionisio Point	4901 12334	June 6-20, 1963
7542 Valdes Island	4903 12337	Sept. 19-Oct. 4, 1963
7550 Silva Bay	4909 12342	Sept. 16-Oct. 15, 1958
7564 Ferndale	4850 12243	Nov., 1967-Nov., 1968
7566 Cherry Point	4851 12245	March 11-April 11, 1973
7570 Blaine	4900 12246	Aug. 3, 1934-Aug. 3, 1935
7577 White Rock	4901 12248	Feb. 19-July 25, 1972
7579 Crescent Beach	4902 12253	Feb. 19-March 2, 1972
7594 Sand Heads	4906 12318	1895-1904
7610 Woodwards Landing	4907 12306	1962-1979
7612 Burr Landing	4908 12302	1954-1961
7625 Sea Island	4911 12312	April-September, 1969
7635 Point Grey	4915 12316	April, 1977-Oct., 1978
7640 Fraser Avenue Bridge	4913 12303	January 1-29, 1960
7657 Port Mann	4913 12249	1956-1971
7662 Chatham Reach	4915 12244	Sept.19, 1912-Jan.31, 1913
7666 Pitt Lake	4926 12231	1956-1978
7670 Port Hammond	4913 12238	1954-1979
7676 Whonnock	4910 12227	1954-1979
7685 Sardis		1911, Feb.13, Apr.30, 1899
7710 False Creek	4916 12308	Dec.26, 1919-Jan.24, 1920
7723 Inner Beacon	4919 12308	Oct.12-19, 1953
7726 Canada Creosoting Co.	4919 12307	Oct.12-19, 1953
7729 North Vancouver	4919 12305	June 9-July 23, 1956
7743 Alberta Pool Elevator	4917 12301	June 17-July 24, 1956

TIDE STATIONS - TEMPORARY (CONT'D)

Station	Location	Period of Observation
7747 Stanovan	4917 12300	Aug.24-Sept.21, 1963
7751 Shellburn	4917 12258	May 1-6, 1954
7755 Port Moody	4917 12252	1964, 1965, 1967
7765 Deep Cove	4920 12257	May 5-July 31, 1963 April 17-May 16, 1964
7771 Buntzen	4922 12253	Sept.6-Oct.5, 1912
7774 Indian Arm Head	4927 12254	May 3-6, 1954
7780 Ambleside	4919 12309	May 4-6, 1954
7805 Camp Latona Beach	4932 12322	June 5-Aug.13, 1973
7810 Squamish	4942 12309	Nov.15-Dec.13, 1926
7811 Squamish	4941 12310	Aug.24-Dec.10, 1917 May 11, 1926-Feb.2, 1927 May 18-Nov.21, 1927 1961
7820 Gibsons Landing	4924 12330	May 26-Oct., 1973
7824 Roberts Creek	4925 12338	March 4-May 14, 1968
7830 Halfmoon Bay	4931 12355	Oct.7-9, 1967
7836 Irvines Landing	4938 12403	Oct.-Dec.8, 1967 April 18-May, 1974
7837 Pender Harbour	4938 12402	June 20-July 18, 1961 April 19-May 17, 1963
7842 Egmont	4945 12356	April 18-May 17, 1963
7847 Storm Bay	4940 12349	April 18-May 17, 1963
7852 Porpoise Bay	4929 12345	Dec.17, 1951-Jan.15, 1952
7860 Malibu (Outer)	5010 12351	May 7-21, 1963
7861 Malibu (Inner)	5010 12351	May 7-21, 1963
7865 Blind Bay	4943 12411	April 18-May 17, 1963
7868 Saltery Bay	4947 12411	Oct.-Dec.12, 1967
7875 Blubber Bay	4948 12437	Sept.3-Oct.9, 1967
7880 Powell River	4952 12433	May, 1965-May, 1966
7885 Lund	4959 12446	Oct.6-Nov.4, 1909
7895 Mitlenatch	4957 12500	Sept.6-Oct.8, 1967 May 6-June 29, 1972
7913 Harmac	4908 12351	Nov.19-Dec.18, 1949
7917 Nanaimo	4910 12356	Aug.6-Sept.4, 1926
7920 Departure Bay	4913 12357	May 1-14, 1968

TIDE STATIONS - TEMPORARY (CONT'D)

Station	Location	Period of Observation
7928 Nanoose Harbour	4916 12408	Oct.22-Nov.16, 1903
7935 Winchelsea Island	4918 12405	April-Dec., 1968
7938 Northwest Bay	4918 12412	Sept., 1967-Jan., 1968
7953 Ford Cove, Hornby Is.	4930 12441	April-Oct., 1968
7955 Denman Island	4932 12449	April 24-May 27, 1971
7960 Union Bay	4935 12453	April 21, 1898-June 6, 1899 Nov., 1899-Jan., 1900
7965 Comox	4940 12455	April 17-June 28, 1969
7980 Squitty Bay	4927 12410	Sept.5-Oct.12, 1967
7990 Texada Mines	4942 12433	May 27, 1958-May 30, 1959
7982 False Bay	4930 12421	Aug.1-Sept.8, 1968
7985 Skerry Bay	4930 12414	May 15-23, 1978
7993 Little River	4944 12455	Sept., 1967-Jan., 1968
8005 Grace Harbour	5003 12445	Nov.13-23, 1922
8006 Okeover Inlet	4959 12442	July 29-Oct.5, 1976
8008 Prideaux Haven	5009 12440	Sept.22-Oct.6, 1967
8020 Head of Toba	5029 12424	May 29-June 2, 1957
8025 Redonda Bay	5016 12459	May 14-June 12, 1953
8035 Heriot Bay	5006 12513	Oct.17, 19, 25, 1946
8037 Gorge Harbour	5006 12459	Oct.11, 1979-Feb.5, 1980
8038 Whaletown	5006 12503	Sept.16,1978-March 17,1979 Oct.12, 1979-Feb.6, 1980
8045 Surge Narrows	5013 12507	May 7-June 4, 1962
8050 Octopus Islands	5017 12513	June 13-July 12, 1923 Sept.1-30, 1962
8055 Florence Cove	5018 12510	Sept.28-Oct.12, 1950 Sept.1-30, 1962
8060 Big Bay	5024 12508	May 20-June 17, 1961 Sept.11-15, 1951
8065 Orford Bay	5036 12452	Aug.20-26, 1957
8069 Waddington Harbour	5056 12451	Sept.13-Oct.12, 1909
8079 Quathiaski Cove	5003 12513	May 8-June 4, 1899 Aug.8, 1923-March 7, 1924 April 29-May 26, 1950
8082 Gowlland Harbour	5004 12514	June 1-August 6, 1951
8087 Duncan Bay	5005 12518	Aug.9-Sept.6, 1958

TIDE STATIONS - TEMPORARY (CONT'D)

Station	Location	Period of Observation
8092 Menzies Bay	5006 12520	May 20, 1920
8095 Bloedel	5007 12523	June 2-July 1, 1945
8105 Seymour Narrows	5008 12521	1943-1950
8107 Nymphe Cove	5008 12522	June, July, Aug., 1900
8110 Brown Bay	5010 12522	May 23, 1945-Jan.1, 1946 Aug.14-25, 1958
8115 Kanish Bay	5015 12519	June 6-8, 1951
8120 Owen Bay	5019 12513	1954, 1955
8127 Hardinge Island	5021 12521	May 25-28, 1948 June 4, 1948
8135 Mermaid Bay	5024 12511	May 20-June 17, 1961 Sept.12-27, 1950
8140 Gomer Island	5027 12516	Sept.29-Oct.14, 1954
8145 Shoal Bay	5028 12522	May 25-Oct.5, 1916 June 13-Aug.7, 1952
8150 Cordero Islands	5026 12529	June 5-July 10, 1952
8155 Blind Channel	5025 12530	July 12-Aug.9, 1962
8162 Sidney Bay	5031 12535	Aug.22-Sept., 1952
8165 Heydon Bay	5035 12534	Sept.22-25, 1957
8180 Chatham Point	5020 12526	May 1, 1958-June 4, 1959
8187 Turn Island	5021 12529	July-August, 1900
8195 Knox Bay	5024 12536	Sept., 1923-Feb., 1924 1952
8210 Billygoat Bay	5024 12552	July 23-Oct.6, 1952 July 24-Aug.22, 1958
8215 Kelsey Bay	5024 12558	July 13-Aug.11, 1916 Jan. 14, 1977 Jan.1-July 1, 1976 March 5, 1978
8220 Whirlpool Rapids	5029 12546	1916
8233 York Island	5027 12559	Nov.1, 1944-Oct.31, 1945
8240 Datum Boulder	5029 12601	Sept. 1900
8245 Port Neville	5030 12605	Sept.11-Oct.10, 1953
8250 Port Harvey	5034 12616	Sept.18-Oct.17, 1960
8254 Warren Islands	5035 12615	June 1-Oct.31, 1917

TIDE STATIONS - TEMPORARY (CONT'D)

Station	Location	Period of Observation
8258 Lagoon Cove	5036 12619	Sept.18-Oct.17, 1960
8262 Potts Lagoon	5034 12627	Aug.24-Sept.24, 1938
8290 Port McNeill	5036 12905	May 10-June 7, 1951
8305 Wahshihlas Bay	5101 12536	Sept.26-28, 1958 May 1977-August 1981
8310 Glendale Cove	5040 12544	June 13-Sept.20, 1917 April 19-Oct.15, 1958
8315 Sargeaunt Passage	5040 12611	May 23-25, 1956 July 3-5, 1956
8317 Kumlah Island	5045 12609	Aug.21-22, 1956
8340 Sunday Harbour	5043 12642	Aug.31-Oct.8, 1951
8345 Scott Cove	5046 12628	July 17-31, 1954 Aug.31-Sept.14, 1954 Sept.19-28, 1954 Oct.1-15, 1954
8350 Emmerson Bay	5050 12646	Sept.26-28, 1955
8360 Carter Pass	5055 12648	Oct.5-7, 1955
8364 Sullivan Bay	5053 12650	April 28-May 28, 1956 Sept.13-Oct.13, 1964
8368 MacKenzie Sound	5056 12646	May 10-11, 1956
8371 Jessie Point	5057 12648	April 27-May 27, 1956
8372 Nepah Lagoon	5057 12648	April 26-May 27, 1956
8376 Grappler Sound	5057 12646	Oct.5-7, 1955
8379 Stuart Narrows	5054 12654	Sept.14-Oct.12, 1964
8381 Stuart Narrows, Drury Inlet	5053 12656	June 1-Oct.10, 1924
8384 Jennis Bay	5055 12701	Sept.15-Oct.13, 1964
8387 Creasy Bay	5058 12704	May 2-28. 1956
8389 Tsibass Lagoon	5058 12702	Sept. 12, 1957
8394 Raynor Group	5053 12714	April 28-June 2, 1950
8396 Blunden Harbour	5054 12717	July 14-Oct.15, 1903
8405 Beaver Harbour	5042 12723	July 29-31, 1942 August 13-14, 1942
8416 Shushartie Bay	5051 12751	July 14-Aug. 12, 1931
8435 Allison Harbour	5103 12730	May 21-23, 1955
8440 Treadwell Bay	5106 12732	May 11-July 10, 1955

TIDE STATIONS - TEMPORARY (CONT'D)

Station	Location	Period of Observation
8446 Bamford Lagoon	5100 12715	Arbitrary 13 days, 1960
8452 Jesus Pocket	5105 12653	May 13-16, 1960
8458 Frederick Sound	5103 12644	May 12-June 9, 1960
8464 Nugent Sound	5105 12715	May 11-June 9, 1960
8470 Johnson Point	5107 12732	Sept.19-Oct.14, 1959 May 12-June 10, 1960
8476 Village Cove	5110 12725	May 9-June 7, 1960
8482 Belize Inlet	5107 12716	May 17-June 16, 1960
8488 Alison Sound	5109 12700	May 10-June 8, 1960
Siwash Bay	5041 12545	Nov. 1977-Dec. 1978
Montague Point	5038 12613	Nov. 1977-June 1981

TABLE 6: LIST OF OCEANOGRAPHIC OBSERVATIONS AT SHORE STATIONS

Station	Location	Period of Observation
Departure Bay	4913 12357	Oct., 1914-July, 1932 June, 1934-present
William Head	4820 12332	Jan., 1921-June, 1940
Ladysmith Harbour	4900 12349	July,1936-June, 1942 Aug., 1949-March, 1957
Entrance Island	4913 12348	June, 1936-present
Cape Mudge	5000 12709	Jan., 1937-present
Race Rocks	4818 12332	May, 1941-present
Texada Island	4942 12433	May, 1953-Oct.,1956
East Point	4847 12303	July, 1953-Feb.,1968
Beaver Point	4846 12322	Nov., 1953-Dec.,1957
Chrome Island	4928 12441	April, 1961-present
Porlier Pass	4901 12335	Feb., 1967-Feb.,1972
Active Pass	4852 12317	Feb., 1967-present
Sisters Island	4929 12426	May, 1968-present
Sheringham Point	4815 12355	May, 1968-present

Data found in References:

30, 68-73, 89, 92-99, 156, 158, 162

TABLE 7: LIST OF WIND OBSERVATION STATIONS
(A) WIND MILEAGE

Station		Location		Period of Observation
1011501	Chemainus Harbour	4856	12342	May, 1971-March, 1973
1016030	Patricia Bay	4839	12326	June, 1941-Dec., 1953
1016641	Race Rocks	4818	12332	July, 1969-present
1017101	Saturna Island Light	4847	12303	March, 1968-present
1017254	Sheringham Point	4823	12355	June, 1972-present
1018610	Victoria, Gonzales Hts	4825	12322	Aug., 1898-June, 1916 March, 1920-Aug., 1936 April, 1938-Oct., 1966
1018620	Victoria International	4839	12326	Jan., 1958-July, 1964
1018655	Victoria Patricia Bay	4839	12326	Jan., 1954-Dec., 1957
102BFHH	Entrance Island	4912	12349	Oct., 1969-present
1020590	Ballenas Light Station	4921	12410	March, 1966-present
1021330	Cape Mudge	5000	12512	Sept., 1978-present
1021480	Chatham Point	5020	12526	Feb., 1960-present
1021830	Comox	4943	12454	Sept., 1944-Sept., 1959
1025C70	Nanaimo-Departure Bay	4913	12357	June, 1974-present
1025370	Nanaimo A.	4904	12352	Dec., 1950-July, 1960
1026170	Pine Island	5059	12744	April, 1971-present
1027403	Sisters Island	4929	12426	Nov., 1975-present
1031110	Bull Harbour	5055	12757	Nov., 1964-present
1045100	Merry Island	4928	12354	June, 1962-present
1047660	Squamish	4942	12309	May, 1965-May, 1966
1047661	Squamish EPS	4942	12309	March, 1979-present
1047662	Squamish FMC Chem.	4941	12310	April, 1971-May, 1976
1100907	Boundary Bay	4905	12300	July, 1968-March, 1970
1105625	North Burnaby	4918	12259	Sept., 1955-April, 1962
1105626	North Burnaby Stanovan	4918	12300	April, 1973-Sept., 1975
1106200	Point Atkinson	4920	12316	Jan., 1968-present
11063L2	Port Moody Centre	4917	12251	Jan., 1970-April, 1973
1107010	Sand Heads Light Stn.	4906	12318	May, 1967-present
1107710	Steveston	4908	12311	Jan., 1923-April, 1941
1107872	Surrey	4902	12249	July, 1954-June, 1955
1108H4F	West Vancouver PEI	4920	12314	Nov., 1972-March, 1976
1108MM7	Vancouver Jericho	4916	12311	Feb., 1975-present
1108290	Tsawwassen Ferry	4900	12308	May, 1961-Aug., 1964 Feb., 1965-May, 1975 Oct., 1975-Nov., 1975 Feb., 1976-present

TABLE 7: LIST OF WIND OBSERVATION STATIONS
(A) WIND MILEAGE (CONT'D)

Station		Location	Period of Observation
1108370	Vancouver A.	4911 12310	Feb., 1936-June, 1961
1108446	Vancouver Harbour	4918 12307	March, 1976-present
1108447	Vancouver Int. A.	4911 12310	July, 1961-Dec., 1966
1108465	Vancouver PMO	4917 12317	Jan., 1915-July, 1936 April, 1938-June, 1942
1108487	Vancouver UBC	4915 12315	April, 1965-present

TABLE 7: LIST OF WIND OBSERVATION STATIONS
B: HOURLY OBSERVATIONS

	Station	Location	Period of Observation
101G100	Saturna Island	4847 12309	June 1980-present
1016030	Patricia Bay A.	4839 12326	June 1941-Dec.1957
1018610	Victoria Gonzales	4825 12319	July 1916-Feb.1920 Sept.1936-March 1938 Nov. 1966-present
1018620	Victoria Intl. A.	4839 12326	Aug.1964-present
1018642	Victoria Marine Rad.	4822 12345	Nov.1967-present
1021261	Campbell River A.	4957 12516	Feb.1967-Dec.1969 March 1979-present
1021480	Chatham Point	5020 12526	June 1958-Jan.1960
1021830	Comox A.	4943 12454	Jan.-Aug. 1944 Oct.1959-present
1025370	Nanaimo	4910 12357	March 1901-July 1941 March 1947-Nov.1950 August 1960-present
1026270	Port Hardy A	5041 12722	Feb.1944-present
1031110	Bull Harbour	5055 12757	Dec.1938-Oct.1964
1045100	Merry Island	4928 12354	June 1942-May 1962
110H447	Vancouver Jericho Beach	4916 12310	Feb.-Sept. 1975
1100907	Boundary Bay	4905 12300	August 1968-March 1970
1180446	Vancouver Harbour	4918 12307	Jan.-March 1976
1108447	Vancouver Intl. A.	4911 12310	Jan.1967-present
1108465	Vancouver PMO	4917 12307	Jan.1930-June 1942

5. SOURCES OF U.S. DATA NOT INCLUDED IN SURVEY

The chief sources of U.S. oceanographic data which may lie within the area of interest of this survey are the Departments of Oceanography and Biology at the University of Washington, the Washington State Department of Ecology (formerly the State Pollution Control Commission), the Washington State Department of Fisheries, Oregon State University, the National Oceanic and Atmospheric Administration (including the Pacific Marine Ecology Laboratory and the National Ocean Survey) the Environmental Protection Agency and several private companies. Data from these sources is currently being compiled by N.O.A.A., as described in Section 2.

A data catalogue for American waters, called STORET, is maintained by the Environmental Protection Agency. A listing for the survey area has been requested, but had not arrived at the time of writing.

Tidal information is available from the Tidal Datum section of the National Ocean Survey in Rockville, Maryland. There are four permanent stations in the survey area, at Port Townsend, Port Angeles, Friday Harbour and Cherry Point which have been recording for the past 5 to 19 years.

Several American wind reporting stations exist along Juan de Fuca Strait and in the San Juan Islands. Data from them is archived at the National Climatic Centre in Ashville, Carolina. A catalogue of station positions and periods of observation has been requested, but had not arrived at the time of writing.

6. ESTIMATE OF FURTHER WORK REQUIRED

This report has presented a survey of the physical oceanographic data available in the southern inland waters of B.C. We feel that the majority of available data (with the exceptions mentioned in Section 2) has been included and will allow an estimate to be made of the time and effort required to make a more detailed compilation. Since the National Oceanic and Atmospheric Administration in the U.S.A. is engaged on a similar task for American data, and there may be a possibility for an exchange of information, the estimate will be based on the quantity of data contained in the present survey.

There are approximately 400 data sets (including tidal, wind and shore stations) in the survey. Including approximately 16500 individual oceanographic stations, current meter moorings, drift measurements and tidal records. (The total number of measurements available in the area has been doubling every 10 years in the last three decades: there were about 3500 measurements to 1959, 9000 to 1969 and 16000 to 1979). These totals do not include the large data set from the Nanoose Range. Temperature and salinity profiles have been measured there regularly since 1970, and presently occupy about 20 2400-foot magnetic tapes.

The quantity of data to be fully catalogued (excluding any American data not in this survey) is approximately 4 1/2 times as great as the quantity included in the recent inventory of data for the Beaufort Sea (90 data sets containing about 3500 individual measurements) Completion of that inventory required approximately 100 man-days, and the expenditure of about $27,000 at present rates. Allowing for the fact that most of the work of locating the data has been completed, construction of a complete catalogue for the Strait of Georgia would probably require 3 to 4 times the effort needed for the Beaufort Sea, which translates to 300 to 400 man-days and about $80,000 to $100,000.

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