DAILY SCIENCE LOG BOOK

MISSION NUMBER: IOS 2018-060 (SOG 2018-04)

DATE: From: 11 Sept 2018 To: 28 Sept 2018

VESSEL: Sea Crest

PROJECT(S): SOG Juvenile Salmon Trawl

Book 1 of 1

Water Properties Group
Fisheries and Oceans Canada
Institute of Ocean Sciences
Ocean Sciences Division
North Saanich, BC, Canada

WaterProperties.ca

Captain: Nathan Dobie
First Officer: Terry Mosher
Second Officer: Doug
Third Officer: Gerry Surko
Fishing Master:
Chief Engineer: Cray Krueger

Mission Participants / Agencies:

**** Chief Scientist to complete section below OR cut and tape from cruise plan ****

1st Leg Scientific Personnel: Chief Scientist: Chris Neville

Name	Watch	Cabin	Name	Watch	Cabin
Bryan Recalma					
Colleen Haddad					
Olivia McMillan					
Yeongha Jung					

2nd Leg Scientific Personnel: Chief Scientist:

Name	Watch	Cabin	Name	Watch	Cabin
Catarina Wor					
Jason Parsley					

**** The following 3 pages are VERY IMPORTANT as they document equipment and settings used on board ****

These pages are to be completed by the CTD Technician setting up the equipment, the Watch Leader on board, and the Chief Scientist MUST verify that all relevant sections are completed prior to leaving the vessel. ***Any mid-cruise changes to be noted by watch leader in the notes.***

Data logging computer: _____

Data acquisition program: _____

CTD deck unit make: _____ model: _____ serial number: _____

Primary CTD

Make: Sea Bird model: 25 serial number: 0456

Primary temperature serial number: 5130

Primary conductivity serial number: 3500

Secondary temperature serial number: _____

Secondary conductivity serial number: _____

Transmissometer: _____ Model: _____ s/n: _____

Transmissometer: _____ Model: _____ s/n: _____

Fluorometer: Model _____ Cable gain: _____ s/n: 4185 P, S or NO pump?

Fluorometer: Model _____ Cable gain: _____ s/n: _____ P, S or NO pump?

Oxygen sensor: _____ Model: _____ s/n: 1592 P, S or NO pump?

PAR sensor: _____ Model: _____ s/n: _____ Surface PAR? Y / N

Other sensors: PRESSURE Model 29 s/n: 0668 P, S or NO pump?

Other sensors: _____ s/n: _____ P, S or NO pump?

Other sensors: _____ s/n: _____ P, S or NO pump?

Other sensors: _____ s/n: _____ P, S or NO pump?

Secondary CTD

Make: Sea Bird model: 25 serial number: 1123

Primary temperature serial number: 2968

Primary conductivity serial number: 2173

Secondary temperature serial number: _____

Secondary conductivity serial number: _____

Transmissometer: _____ Model: _____ s/n: _____

Transmissometer: _____ Model: _____ s/n: _____

Fluorometer: Model _____ Cable gain: _____ s/n: 2214 P, S or NO pump?

Fluorometer: Model _____ Cable gain: _____ s/n: _____ P, S or NO pump?

Oxygen sensor: _____ Model: _____ s/n: _____ P, S or NO pump?

PAR sensor: _____ Model: _____ s/n: _____ Surface PAR? Y / N

Other sensors: _____ s/n: _____ P, S or NO pump?

Other sensors: _____ s/n: _____ P, S or NO pump?

Other sensors: _____ s/n: _____ P, S or NO pump?

Other sensors: _____ s/n: _____ P, S or NO pump?

CTD calibration bottle location (height above CTD in metres): _____

This also includes the bottle location above the CTD on non-rosette casts (e.g., W.E. Ricker)

Scientific Equipment Used During Cruise
This sheet allows you to enter all of the equipment used while on board. Please use the separate CTD sheet for entry for SBE 9/16/19/25.

Other CTD units:
RBR Serial Number: _____ Sensors: _____

Others:
_____

Plankton Nets:
Bongo #1 Frame Size: 60 cm Mesh: 250 µm Flowmeter: 6069
Bongo #2 Frame Size: _____ cm Mesh: _____ µm Flowmeter: _____
_____ Frame Size: _____ cm Mesh: _____ µm Flowmeter: _____
_____ Frame Size: _____ cm Mesh: _____ µm Flowmeter: _____

Multinet ☐ BIONESS ☐ Neuston ☐ Others:
_____

_____

Trawl Gear:
Midwater Trawls: SOG ☐ Highseas ☐ Pelagic ☐ Other: _____

Bottom Trawls: Atlantic Western IIA ☐ Yankee 36 Hard & Soft Bottom ☐ Other: _____

American Shrimp Trawl ☐

Notes:
_____

Trawl Doors: USA Jet ☐ Tyburon ☐ _____

Sounders : Wesmar 380 ☐ Others: _____

Acoustics:
Echosounder #1 _____ Frequencies (KHz): 12 ☐ 18 ☐ 38 ☐ 70 ☐ 120 ☐ 200 ☐

Others: _____

Echosounder #2 _____ Frequencies (KHz): 12 ☐ 18 ☐ 38 ☐ 70 ☐ 120 ☐ 200 ☐

Others: _____

Software & Notes:
_____

Other Gear in Operation:

1. _____
2. _____
3. _____
4. _____
5. _____

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month SEPTEMBER | **Year** 2018 | **Vessel** Sea Crest | **Cruise ID** 2018-60

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Positional Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
001	1	11	14:20	BE	SET		49°29.560	124°03.730	226		-			☐☐	
002	↓	↓	15:20	↓	CTD		49°32.402	124°06.396	400	250	-		YJ	☐☐	HYDRAULIC PROB. SPEED ILLEGULAR PAUSED
003	↓	↓	15:45	↓	NET		49°32.703	124°06.872	380	250	-		YJ	☐☐	FM 69290-71730
004	2	↓	16:42	↓	SET		49°36.600	124°11.240	384		-			☐☐	
005	3	↓	17:45	↓	SET		49°39.250	124°12.550	352		-			☐☐	
006	4	↓	18:46	↓	SET		49°39.400	124°16.830	336		-			☐☐	STRONG EBB TIDE
007	↓	↓	19:35	↓	CTD		49°41.966	124°18.867	313	250	-		YJ	☐☐	
008	↓	↓	19:51	↓	NET		49°42.260	124°19.138	317	250	-		YJ	☐☐	FM 71730-74460
009	5	↓	20:33	↓	SET		49°42.470	124°19.600	308		-			☐☐	
010	6	↓	21:46	↓	SET		49°45.200	124°23.600	139		-			☐☐	
011	7	↓	22:53	↓	SET		49°45.830	124°28.730	321		-			☐☐	
012	8	↓	23:50	↓	SET		49°46.580	124°32.850	320		-			☐☐	STRONG TIDE
013	↓	12	00:58	↓	CTD		49°49.571	124°34.585	270	250	-		YJ	☐☑	Vmain = 11.5
014	↓	↓	01:13	↓	NET		49°49.728	124°34.733	273	250	-		YJ	☐☐	FM 74460-76840 END OF DAY
015	9	↓	14:10	↓	SET		49°49.500	124°42.650	122		-			☐☐	
016	↓	↓	15:04	↓	CTD		49°50.520	124°46.461	175	160	-		YJ	☐☐	
017	↓	↓	15:15	↓	NET		49°50.566	124°46.503	173	160	-		YJ	☐☐	FM 76840-78150
018	10	↓	15:40	↓	SET		49°50.160	124°46.120	188		-			☐☐	
019	11	↓	16:40	↓	SET		49°52.008	124°51.020	256		-			☐☐	

Event Type:
BOT = Bottle cast (no CTD)
CTD = Standalone CTD
ROS = CTD in Rosette
SET = Fish Set

LOOP = Sea Water Loop
MOR = Mooring
NET = Plankton Net Haul
DRF = Drifter
____ = _____

Bottle Firing Method:
US = Up / Stop (default)
UN = Up / No stop
DN = Down / No stop

Time Code:
BE = Beginning Time of Cast
BO = Bottom Time of Cast
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RE = Recover Mooring Time

CTD Transmissometer and Fluorometer to be cleaned before each cast -- do not use Ammonia products

Notes: _____

Produced by the Water Properties Group, IOS

WaterProperties.ca
Version: 20 April 2016

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month SEPTEMBER **Year** 2018 **Vessel** Sea Crest **Cruise ID** 2018-60 SOG2018-04

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
020	12	12	18:00	BE	SET		49° 51.530	124° 53.720	245		-			☐☐	
021	↓	↓	18:48	↓	CTD		49°51.076	124°56.772	278	250	-		YJ	☐☐	
022	↓	↓	19:01	↓	NET		49°51.224	124°56.809	288	250	-		YJ	☐☐	FM 78150-80510
023	13	↓	19:50	↓	SET		49°49.400	124°55.610	176		-			☐☐	
024	14	↓	20:47	↓	SET		49°48.200	124°58.380	74		-			☐☐	
025	15	↓	21:53	↓	SET		49°51.910	125°02.590	101		-			☐☐	
026	16	↓	22:58	↓	SET		49°54.330	125°05.240	148		-			☐☐	
027	↓	↓	23:55	↓	CTD		49°57.414	125°05.327	264	250	-		YJ	☐☑	
028	↓	13	00:08	↓	NET		49°57.545	125°05.383	255	240	-		YJ	☐☐	FM 80510-82756 END OF DAY
029	17	↓	14:02	↓	SET		50°18.650	125°19.560	116		-			☐☐	
030	18	↓	14:55	↓	SET		50°18.230	125°19.550	83		-			☐☐	TIDE CHANGE HALF WAY TON SPEED DOWN 3.9 KTS
031	↓	↓	15:41	↓	CTD		50°18.398	125°18.567	120	110	-		YJ	☐☐	
032	↓	↓	15:49	↓	NET		50°18.400	125°18.873	107	90	-		YJ	☐☐	FM 82758-83604
033	19	↓	16:33	↓	SET		50°18.010	125°24.750	205		-			☐☐	
034	20	↓	17:50	↓	SET		50°18.390	125°25.030	209		-			☐☐	
035	21	↓	18:36	↓	SET		50°18.650	125°24.940	220		-			☐☐	
036	↓	↓	19:11	↓	CTD		50°20.551	125°25.062	231	220	-		YJ	☐☐	
037	↓	↓	19:22	↓	NET		50°26.837	125°25.165	238	50*	-		YJ	☐☐	FM 83604-83985 *CS CALL 50
038	22	↓	20:12	↓	SET		50°22.850	125°21.390	168		-			☐☐	

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039	23	13	21:16	BE	SET		50°21.030	125°19.940	65		-			☐☐	
040	↓	↓	22:53	↓	CTD		50°23.011	125°20.647	239	220	-		YJ	☐☑	
041	↓	↓	23:05	↓	NET		50°22.923	125°20.719	247	230	-		YJ	☐☐	FM 83785-86262
042	24	↓	23:28	↓	SET		50°17.160	125°22.165	107		-			☐☐	
043	25	14	00:17	↓	SET		50°18.102	125°19.790	75		-			☐☐	END OF DAY
044	26	↓	15:39	↓	SET		50°20.180	125°07.570	395		-			☐☐	
045	↓	↓	16:22	↓	CTD		50°19.412	125°05.735	337	250	-		YJ	☐☐	STRONG CURRENT FM87580-89418
046	↓	↓	16:34	↓	NET		50°19.562	125°05.964	391	100*	-		YJ	☐☐	END FLIPPED REDONE 100m
047	27	↓	17:34	↓	SET		50°18.890	125°02.180	318		-			☐☐	
048	28	↓	18:25	↓	SET		50°20.180	124°59.790	329		-			☐☐	
049	29	↓	19:26	↓	SET		50°18.350	124°51.690	459		-			☐☐	
050	30	↓	20:42	↓	SET		50°13.970	124°58.610	326		-			☐☐	
051	↓	↓	21:20	↓	CTD		50°15.518	125°00.587	521	250	-		YJ	☐☐	
052	↓	↓	21:34	↓	NET		50°15.530	125°00.672	534	250	-		YJ	☐☐	FM88418-90392
053	31	↓	22:30	↓	SET		50°12.520	125°00.960	499		-			☐☐	
054	32	↓	23:26	↓	SET		50°09.790	125°01.520	437		-			☐☐	
055	33	15	00:18	↓	SET		50°07.450	125°06.435	267		-			☐☐	
056	34	↓	14:33	↓	SET		50°05.546	125°07.740	247		-			☐☐	
057	↓	↓	15:18	↓	CTD		50°04.774	125°08.866	187	170	-		YJ	☐☐	

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058	34	15	15:35	BE	NET		50°05.500	125°08.660	247		-		YJ	☐☐	STRONG TIDE
059	35		16:45		SET		50°01.390	125°06.420	262		-			☐☐	
060	36		18:23		SET		50°00.090	125°02.980	177		-			☐☐	VERY STRONG TIDE AND WIND
061	37		19:48		SET		49°57.060	124°56.340	178		-			☐☐	STRONG CROSS CURRENT
062			21:14		CTD		49°55.616	124°59.799	180	170	-		YJ	☐☐	
063	↓		21:26		NET		49°55.754	125°00.022	211	150	-		YJ	☐☐	FM92762-94530 STRONG CURRENT
064	38		21:58		SET		49°56.730	124°56.740	193		-			☐☐	
065	39	↓	23:28		SET		50°02.140	124°54.040	307		-			☐☐	
066	40	16	00:57		SET		49°59.450	124°51.770	262		-			☐☐	
067			01:15		CTD		49°59.306	124°50.875	256	240	-		YJ	☐☑	
068	↓		01:28		NET		49°59.414	124°50.945	259	250	-		YJ	☐☐	FM94530-96750 END OF DAY
069	41		14:17		SET		49°58.217	124°48.210	151		-			☐☐	BUCKING TIDE
070	42		15:52		SET		49°52.920	124°41.490	133		-			☐☐	STRONG CROSSCURRENT
071			16:38		CTD		49°54.046	124°41.451	155	140	-		YJ	☐☐	VMAIN = 11.1 DOWNLOAD
072	↓		16:47		NET		49°54.716	124°41.570	155	140	-		YJ	☐☐	FM96750-97922
073	43		18:00		SET		49°46.900	124°41.890	202		-			☐☐	
074	44		19:06		SET		49°44.650	124°47.780	258		-			☐☐	
075	45		20:00		CTD		49°42.845	124°49.438	78	65	-		YJ	☐☐	
076	↓	↓	20:07	↓	NET		49°42.749	124°49.386	75	65	-		YJ	☐☐	FM97922-98520

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077	45	16	20:34	BE	SET		49°43.000	124°49.280	86		-			☐☐	
078	46		21:33		SET		49°39.260	124°46.690	104		-			☐☐	
079	47		22:25		SET		49°36.280	124°44.970	85		-			☐☐	
080	48	↓	23:18		SET		49°34.500	124°42.490	63		-			☐☐	
081		17	00:23		CTD		49°34.882	124°43.128	79	70	-		YJ	☐☑	
082	↓		00:29		NET		49°34.835	124°43.177	76	65	-		YJ	☐☐	FM98520-98760 END OF DAY
083	49		14:26		SET		49°37.890	124°41.422	145		-			☐☐	
084			15:14		CTD		49°39.821	124°40.931	159	150	-		YJ	☐☐	
085	↓		15:25		NET		49°39.823	124°40.958	160	150	-		YJ	☐☐	FM98760-99500
086	50		15:54		SET		49°40.740	124°40.680	220		-			☐☐	
087	51		16:49		SET		49°43.200	124°39.360	355		-			☐☐	
088	52		17:51		SET		49°41.320	124°33.630	167		-			☐☐	
089	53		19:21		SET		49°37.510	124°28.180	332		-			☐☐	
090			20:16		CTD		49°35.714	124°25.157	300	250	-		YJ	☐☐	
091	↓		20:28		NET		49°35.686	124°25.235	313	250	-		YJ	☐☐	FM99500-100690
092	54		21:11		SET		49°34.400	124°22.810	342		-			☐☐	
093	55		22:17		SET		49°33.420	124°20.610	350		-			☐☐	
094	56	↓	23:33		SET		49°31.560	124°27.300	149		-			☐☐	
095	↓	18	00:27	↓	CTD		49°29.570	124°28.276	178	165	-		YJ	☐☑	

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Month SEPTEMBER **Year** 2018 **Vessel** Sea Crest **Cruise ID** 2018-60 (SOG2018-04)

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
096	56	18	00:41	BE	NET		49°29.653	124°28.282	176	160	-		YJ	☐☐	FM 690 – 2108 END OF DAY
097	57		14:13		SET		49°26.490	124°20.560	318		-			☐☐	
098			15:02		CTD		49°24.257	124°21.395	339	250	-		YJ	☐☐	
099			15:17		NET		49°24.236	124°21.489	337	250	-		YJ	☐☐	FM 2108-3840
100	58		15:52		SET		49°24.180	124°23.420	312		-			☐☐	
101	59		16:51		SET		49°22.911	124°26.500	115		-			☐☐	
102	60		18:03		SET		49°23.440	124°29.430	110		-			☐☐	
103			18:43		CTD		49°24.559	124°31.612	146	130	-		YJ	☐☐	
104			18:53		NET		49°24.554	124°31.626	144	130	-		YJ	☐☐	FM 03840-04665
105	61		19:14		SET		49°25.040	124°31.980	151		-			☐☐	
106	62		20:15		SET		49°26.015	124°36.140	88		-			☐☐	
107	63		21:14		SET		49°27.890	124°39.080	97		-			☐☐	
108	64		22:18		SET		49°28.050	124°36.440	173		-			☐☐	
109			23:15		CTD		49°29.489	124°32.313	220	210	-		YJ	☐☑	
110			23:28		NET		49°29.429	124°32.306	231	220	-		YJ	☐☐	FM 04665-06190
111	65	19	00:07		SET		49°30.650	124°31.310	177		-			☐☐	END OF DAY
112	66		14:10		SET		49°26.250	124°19.290	330		-			☐☐	
113			14:49		CTD		49°24.486	124°18.734	348	250	-		YJ	☐☐	
114			15:04		NET		49°24.469	124°18.755	348	250	-		YJ	☐☐	FM 06190-07390

Event Type:
BOT = Bottle cast (no CTD)
CTD = Standalone CTD
ROS = CTD in Rosette
SET = Fish Set
LOOP = Sea Water Loop
MOR = Mooring
NET = Plankton Net Haul
DRF = Drifter
____ = _____

Bottle Firing Method:
US = Up / Stop (default)
UN = Up / No stop
DN = Down / No stop

Time Code:
BE = Beginning Time of Cast
BO = Bottom Time of Cast
EN = End Time of Cast
DE = Deployment Time
MR = Messenger Release Time
RE = Recover Mooring Time

CTD Transmissometer and Fluorometer to be cleaned before each cast -- do not use Ammonia products

Notes: _____

Produced by the Water Properties Group, IOS

WaterProperties.ca
Version: 20 April 2016

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month SEPTEMBER **Year** 2018 **Vessel** Sea Crest **Cruise ID** 2018-60 (SOG2018-04)

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
115	67	19	15:42	BE	SET		49°22.420	124°16.810	293		-			☐☐	
116	68		16:47		SET		49°20.650	124°15.070	214		-			☐☐	
117	69		17:48		SET		49°23.030	124°13.040	331		-			☐☐	
118			18:36		CTD		49°24.405	124°09.769	274	240	-		YJ	☐☐	
119	↓		18:49		NET		49°24.517	124°09.850	249	230	-		YJ	☐☐	FM07390-09109
120	70		19:20		SET		49°25.290	124°09.070	109		-			☐☐	
121	71		20:14		SET		49°28.370	124°06.000	385		-			☐☐	
122	72		21:14		SET		49°30.860	124°03.860	177		-			☐☐	
123	73		22:22		SET		49°27.980	124°01.670	165		-			☐☐	
124	73A		23:10		CTD		49°26.078	123°58.648	263	250	-		YJ	☐☐	
125	↓	↓	23:25		NET		49°26.054	123°58.405	261	250	-		YJ	☐☐	FM09109-10868
126	73B	20	01:06*		CTD		49°24.586	123°44.444	171	160	-		YJ	☐☑	DEPTH MISREAD REDONE AFTER NET
127	↓		00:54		NET		49°24.620	123°44.201	171	160	-		YJ	☐☐	FM10868-11980 END OF DAY
128	74		14:15		SET		49°15.490	123°18.200	97		-			☐☐	
129			15:28		CTD		49°13.422	123°18.855	146	130	-		YJ	☐☐	
130	↓		15:37		NET		49°13.423	123°18.879	148	130	-		YJ	☐☐	FM11980-12600
131	75		16:07		SET		49°12.400	123°18.940	135		-			☐☐	
132	76		17:13		SET		49°10.520	123°18.170	89		-			☐☐	CROSS TIDE
133	77	↓	18:07	↓	SET		49°08.488	123°18.170	75		-			☐☐	STRONG TIDE

Event Type:
BOT = Bottle cast (no CTD)
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US = Up / Stop (default)
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DN = Down / No stop

Time Code:
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Notes: _____

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WaterProperties.ca
Version: 20 April 2016

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month SEPTEMBER **Year** 2018 **Vessel** Sea Crest **Cruise ID** 2018-60 (SOG2018-04)

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
134	78	20	20:06	BE	SET		49°01.240	123°15.650	104		-			☐☐	
135			20:48		CTD		49°02.468	123°17.216	107	100	-		YJ	☐☑	
136			20:55		NET		49°02.523	123°17.515	104	90	-		YJ	☐☐	FM 12600–13453
137	79		21:16		SET		49°03.250	123°17.520	64		-			☐☐	END OF DAY
138	80	21	14:18		SET		48°27.390	124°18.810	90		-			☐☐	STRONG CURRENT
139			15:07		CTD		48°26.660	124°18.273	113	100	-		YJ	☐☐	Vmain=10.9 DOWN LOAD
140			15:20		NET		48°26.689	124°18.545	115	100	-		YJ	☐☐	FM 13453–14000 MAY CONTAIN FISH TISSUE
141	81		16:19		SET		48°24.460	124°12.230	136		-			☐☐	STRONG CURRENT
142	82		17:30		SET		48°23.720	124°05.220	87		-			☐☐	
143	83		18:37		SET		48°22.300	123°55.860	80		-			☐☐	
144			19:14		CTD		48°21.136	123°52.672	117	100	-		YJ	☐☐	
145			19:23		NET		48°21.055	123°52.512	118	100	-		YJ	☐☐	FM=14000–14768
146	84		20:05		SET		48°19.640	123°47.340	147		-			☐☐	5MIN TOW DUE TO WHALE SPOTTED
147	85		21:55		CTD		48°18.971	123°29.977	150	50*	-		YJ	☐☑	VARIABLE DEPTH
148			22:02		NET		48°18.926	123°30.064	117	55	-		YJ	☐☐	FM=14768–14978 STRONG CURRENT
149			22:20		SET		48°19.500	123°29.520	70		-			☐☐	STRONG TIDE END OF DAY
150	86	22	14:56		SET		48°48.600	123°04.560	136	170	-			☐☐	
151			15:38		CTD		48°49.666	123°05.561	184	170	-		YJ	☐☐	STRONG CURRENT
152			15:51		NET		48°49.668	123°05.452	183	170	-		YJ	☐☐	FM 14978–16025

Event Type:
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DRF = Drifter
____ = _____

Bottle Firing Method:
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DN = Down / No stop

Time Code:
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DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month SEPTEMBER **Year** 2018 **Vessel** Sea Crest **Cruise ID** 2018-60 (SOG2018-04)

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
153	87	22	16:28	BE	SET		48°49.500	123°08.340	129		-			☐☐	
154	88		17:18		SET		48°51.650	123°11.330	174		-			☐☐	
155	89		18:38		SET		48°55.350	123°21.650	150		-			☐☐	
156	90		19:32		SET		48°57.610	123°26.960	109		-			☐☐	STRONG TIDE
157			20:13		CTD		48°58.470	123°29.538	93	80	-		YJ	☐☑	
158			20:21		NET		48°58.456	123°29.566	92	80	-		YJ	☐☐	FM16025-16425
159	91		20:47		SET		48°59.540	123°31.460	100		-			☐☐	
160	92		21:34		SET		48°02.690	123°34.450	170		-			☐☐	
161	93		22:31		SET		48°05.650	123°35.240	227		-			☐☐	END OF DAY
162	94	23	14:23		SET		49°14.840	123°51.030	271		-			☐☐	
163			15:04		CTD		49°15.887	123°48.531	409	250	-		YJ	☐☐	STRONG WIND/CURRENT
164			15:19		NET		49°15.835	123°48.423	409	100	-		YJ	☐☐	FM16472-16480* FM NOT WORKING
165	95		16:00		SET		49°17.510	123°44.190	273		-			☐☐	
166	96		17:00		SET		49°19.480	123°37.440	269		-			☐☐	
167	97		18:00		SET		49°21.650	123°34.810			-			☐☐	
168			18:48		CTD		49°21.940	123°32.176	158	150	-		YJ	☐☐	
169			19:00		NET		49°21.979	123°32.249	154	140	-		YJ	☐☐	FM16480-16482* SEE NOTES
170	98		19:55		SET		49°23.140	123°25.410	130		-			☐☐	
171	99		20:35		SET		49°24.920	123°25.520	132		-			☐☐	

Event Type:
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CTD Transmissometer and Fluorometer to be cleaned before each cast -- do not use Ammonia products

Notes: BONGO NET THREAD TANGLED IN FLOWMETER GEAR CAUSES MALFUNCTION, THREAD REMOVED
*

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Version: 20 April 2016

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month SEPTEMBER **Year** 2018 **Vessel** Sea Crest **Cruise ID** 2018-60 (SOG2018-04)

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
172	100	23	21:22	BE	SET		49°27.340	123°27.640	118		-			☐☐	
173			21:55		CTD		49°28.888	123°27.623	177	160	-		YJ	☐☐	
174			22:07		NET		49°28.861	123°27.597	174	160	-		YJ	☐☐	FM16488-17225
175	101		23:0		SET		49°25.010	123°25.790	124		-			☐☐	
176	102	24	00:10		ET		49°25.100	123°25.100	129		-			☐☐	
177			00:49		CTD		49°25.286	123°28.165	97	80	-		YJ	☐☑	
178			00:57		NET		49°25.281	123°28.174	96	80	-		YJ	☐☐	FM17225-18060 END OF DAY
179	103		14:12		SET		49°25.810	123°19.900	248		-			☐☐	
180	104		15:19		CTD		49°30.752	123°16.478	232	220	-		YJ	☐☐	
181			15:33		NET		49°30.612	123°16.566	232	220	-		YJ	☐☐	FM18060-20175
182			16:05		SET		49°30.520	123°16.550	233		-			☐☐	
183	105		17:07		SET		49°30.600	123°16.330	230		-			☐☐	
184	106		18:09		SET		49°26.270	123°15.300	239		-			☐☐	
185	107		19:12		SET		49°26.410	123°15.140	237		-			☐☐	
186			19:38		CTD		49°25.500	123°15.238	236	225	-		YJ	☐☐	
187			19:52		NET		49°25.525	123°15.261	236	120*	-		YJ	☐☐	WIRE MISREAD DOWN ONLY TO 120
188	108		20:25		SET		49°24.130	123°16.160	238		-			☐☐	
189	109		21:35		SET		49°20.890	123°20.020	244		-			☐☐	
190			22:13		CTD		49°22.490	123°18.835	239	230	-		YJ	☐☑	DOWN LOAD Vmain = 10.8

Event Type:
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Bottle Firing Method:
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Notes: _____

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Version: 20 April 2016

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month SEPTEMBER **Year** 2018 **Vessel** Sea Crest **Cruise ID** 2018-60 (SOG2018-04)

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
191	109	24	22:27	BE	NET		49° 22.576	123° 18.694	240	230	-		YJ	☐☐	FM 20620-22094
192	110	25	23:24		SET		49° 18.620	123° 20.450	176		-			☐☐	
193	111		00:30		SET		49° 15.720	123° 27.920	236		-			☐☐	END OF DAY
194	112		14:19		SET		49° 20.570	124° 05.720	410		-			☐☐	
195			:		CTD		° .	° .			-			☐☐	
196			:		NET		° .	° .			-			☐☐	
197	113		15:53		SET		49° 19.500	124° 02.900	413		-			☐☐	
198	114		16:41		SET		49° 20.360	124° 00.890	410		-			☐☐	
199	115		17:34		SET		49° 18.610	123° 59.160	415		-			☐☐	
200			:		CTD		° .	° .			-			☐☐	
201			:		NET		° .	° .			-			☐☐	
202	116		18:53		SET		49° 17.500	123° 56.640	403		-			☐☐	
203	117		20:36		SET		49° 20.460	124° 04.360	410		-			☐☐	
204	118		21:50		SET		49° 18.310	124° 04.030	212		-			☐☐	
205	119		22:42		SET		49° 18.820	123° 59.650	415		-			☐☐	
206			:		CTD		° .	° .			-			☐☐	Vmain= 10.9 DOWNLOAD
207			:		NET		° .	° .			-			☐☐	
208	120	26	00:15		SET		49° 17.180	123° 55.570	410		-			☐☐	END OF DAY
209	121		14:16		SET		49° 10.900	123° 45.140	89		-			☐☐	

Event Type:
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SET = Fish Set
LOOP = Sea Water Loop
MOR = Mooring
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DRF = Drifter
____ = _____

Bottle Firing Method:
US = Up / Stop (default)
UN = Up / No stop
DN = Down / No stop

Time Code:
BE = Beginning Time of Cast
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CTD Transmissometer and Fluorometer to be cleaned before each cast -- do not use Ammonia products

Notes: _____

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Version: 20 April 2016

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month SEPTEMBER **Year** 2018 **Vessel** Sea Crest **Cruise ID** 2018-60 SOG2018-04

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
210	121	26	14:55	BE	CTD		49°10.391	123°42.123	153	140	-		OM	☐☐	
211	121		15:13		NET		49°10.212	123°41.440	158	140	-		OM	☐☐	
212	122		16:07		SET		49°10.560	123°41.340	195		-			☐☐	
213	123		17:24		SET		49°11.810	123°38.100	385		-			☐☐	
214	124		18:43		SET		49°13.740	123°33.710	361		-			☐☐	
215	124		19:54		CTD		49°11.523	123°34.402	356	250	-		OM	☐☐	
216	124		20:21		NET		49°11.436	123°34.065	358	250	-		OM	☐☐	
217	125		21:04		SET		49°10.470	123°36.070	338		-			☐☐	
218	126		22:06		SET		49°07.140	123°32.780	296		-			☐☐	
219	127		23:09		SET		49°05.610	123°27.750	327		-			☐☐	
220	127		23:47		CTD		49°04.704	123°25.513	278	250	-		OM	☐☐	
221	127	27	00:10		NET		49°04.642	123°25.393	276	250	-		OM	☐☐	END OF DAY
222	128	27	14:27		SET		48°58.730	123°18.350	184		-			☐☐	
223	128	27	15:35		CTD		48°57.223	123°16.309	160	150	-		OM	☐☐	
224	128	27	15:53		NET		48°56.656	123°15.821	156	140	-		OM	☐☐	160m wire out, angle 30°
225	129	27	17:10		SET		48°47.810	123°21.120	62		-			☐☐	
226	130	27	17:55		SET		48°44.790	123°18.340	103		-			☐☐	
227	131	27	19:10		SET		48°44.780	123°22.790	54		-			☐☐	
228	132	27	:		CTD		48°44.011	123°24.525	74	60	-		OM	☐☐	

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Bottle Firing Method:
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CTD Transmissometer and Fluorometer to be cleaned before each cast -- do not use Ammonia products

Notes: _____

Produced by the Water Properties Group, IOS

WaterProperties.ca
Version: 20 April 2016

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month SEPTEMBER **Year** 2018 **Vessel** Sea Crest **Cruise ID** 2018-60 (SCG2018-04)

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Positional Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
229	131	27	20:02	BE	NET		48°43.950	123°24.555	88	70	-		OM	☐☐	
230	132	27	20:22		SET		48°43.610	123°24.250	90		-			☐☐	
231	133	27	21:14		SET		48°43.140	123°31.260	64		-			☐☐	
232	134	27	22:18		SET		48°43.960	123°32.940	115		-			☐☐	
233	135	27	23:15		SET		48°48.110	123°32.900	141		-			☐☐	
234	135	27	23:48		CTD		48°48.358	123°34.077	122	110	-		OM	☐☐	
235	135	28	00:02		NET		48°48.322	123°33.765	114	100	-		OM	☐☐	
236	136	28	00:30		SET		48°50.810	123°34.730	183		-			☐☐	END OF DAY
237	137	28	14:23		SET		49°22.590	123°33.880	118		-			☐☐	
238	137	28	15:03		CTD		49°23.224	123°36.182	155	140	-		OM	☐☐	
239	137	28	15:18		NET		49°23.207	123°36.140	155	140	-		OM	☐☐	
240	138	28	15:46		SET		49°23.450	123°38.650	174		-			☐☐	
241	139	28	16:43		SET		49°24.550	123°42.970	188		-			☐☐	
242	140	28	17:49		SET		49°25.160	123°50.540	163		-			☐☐	
243	141	28	18:49		SET		49°27.070	123°55.040	224		-			☐☐	
244	141	28	19:31		CTD		49°26.938	123°57.284	203	190	-		OM	☐☐	
245	141	28	19:48		NET		49°26.862	123°57.287	199	190	-		OM	☐☐	
246	142	28	20:18		SET		49°25.377	123°54.560	212		-			☐☐	
247	143	28	21:10	↓	SET		49°21.790	123°53.040	306		-			☐☐	

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CTD Transmissometer and Fluorometer to be cleaned before each cast -- do not use Ammonia products

Notes: _____

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DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

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Month SEPTEMBER	**Year** 2018	**Vessel** Sea Crest	**Cruise ID** 2018-60 (SOG2018-04)

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
248	144	28	22:00	BE	SET		49°21.940	123°49.280	278		-			☐☐	
249	↓	↓	22:48	↓	CTD		49°23.177	123°48.829	181	170	-		OM	☐☐	BATT CHANGED Vmain=13.6 YJ
250			23:03		NET		49°23.168	123°48.680	182	170	-		OM	☐☐	
← END OF SURVEY →							° .	° .			-			☐☐	
			:				° .	° .			-			☐☐	
			:				° .	° .			-			☐☐	
			:				° .	° .			-			☐☐	
			:				° .	° .			-			☐☐	
			:				° .	° .			-			☐☐	
			:				° .	° .			-			☐☐	
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			:				° .	° .			-			☐☐	
			:				° .	° .			-			☐☐	

Event Type:
BOT = Bottle cast (no CTD)
CTD = Standalone CTD
ROS = CTD in Rosette
SET = Fish Set
LOOP = Sea Water Loop
MOR = Mooring
NET = Plankton Net Haul
DRF = Drifter
___ = ___________

Bottle Firing Method:
US = Up / Stop (default)
UN = Up / No stop
DN = Down / No stop

Time Code:
BE = Beginning Time of Cast
BO = Bottom Time of Cast
EN = End Time of Cast
DE = Deployment Time
MR = Messenger Release Time
RE = Recover Mooring Time

CTD Transmissometer and Fluorometer to be cleaned before each cast -- do not use Ammonia products

Notes: ______________________________

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