

APPENDIX E

**FIELD WATER QUALITY
PROFILES
&
FIELD DATA SHEETS**

Physical Water Quality Parameters Summary Table

Table E-1.
2018 RHMP Physical Water Quality Parameters

Harbor	Stratum	Station ID	Depth (m)	Salinity (psu)	DO (mg/L)	Transmission (%)	pH	Turbidity (NTU)	Temperature (°C)
Dana Point Harbor	Shallow	B18-10065	1	33.41	7.17	54.56	7.38	4.32	23.09
	Shallow	B18-10065	2		7.50	74.61	7.38	1.31	23.09
	Shallow	B18-10065	3		8.02	73.41	7.38	1.45	23.09
	Shallow	B18-10065	4		8.31	59.01	7.38	2.94	23.09
	Freshwater-Influenced	B18-10066	1	33.30	7.20	23.53	7.38	9.95	23.02
	Freshwater-Influenced	B18-10066	2		6.89	62.60	7.38	1.33	23.00
	Freshwater-Influenced	B18-10066	3		6.82	62.06	7.38	2.39	22.99
	Freshwater-Influenced	B18-10066	4		7.08	48.90	7.38	2.63	23.02
	Marina	B18-10067	1	33.84	7.50	38.08	7.39	7.00	22.99
	Marina	B18-10067	2		7.34	65.83	7.39	1.00	22.97
	Marina	B18-10067	3		7.43	70.32	7.39	1.49	22.97
	Deep	B18-10068	1	33.89	7.24	25.83	7.39	11.71	23.72
	Deep	B18-10068	2	33.88	7.60	50.04	7.39	2.91	23.71
	Deep	B18-10068	3	33.86	8.05	51.86	7.39	2.54	23.70
	Deep	B18-10068	4	33.86	8.29	50.34	7.39	2.88	23.67
	Deep	B18-10068	5	33.86	4.91	43.42	7.39	3.37	23.63
Oceanside Harbor	Marina	B18-10069	1	33.63	7.21	56.93	8.13	5.08	24.42
	Marina	B18-10069	2	33.70	7.11	46.89	8.14	3.08	24.01
	Marina	B18-10069	3	33.74	6.55	34.66	8.14	4.49	23.73
	Marina	B18-10069	4	33.77	6.62	13.93	8.14	7.08	23.62
	Freshwater-Influenced	B18-10070	1	33.73	7.42	63.24	8.14	1.09	24.05
	Freshwater-Influenced	B18-10070	2	33.73	7.48	62.76	8.15	1.00	24.00
	Freshwater-Influenced	B18-10070	3	33.72	7.18	60.98	8.15	1.04	23.88
	Freshwater-Influenced	B18-10070	4	33.74	6.99	58.33	8.15	1.50	23.64
	Freshwater-Influenced	B18-10070	5	33.79	6.44	51.33	8.15	2.16	23.43
	Freshwater-Influenced	B18-10070	6	33.76	5.67	41.72	8.15	4.35	23.20
	Deep	B18-10071	1	33.80	7.31	26.81	8.08	6.60	23.76
	Deep	B18-10071	2	33.79	7.34	63.30	8.08	1.38	23.75
	Deep	B18-10071	3	33.79	7.24	65.28	8.08	1.25	23.69
	Deep	B18-10071	4	33.81	7.49	66.50	8.08	1.35	23.56
	Deep	B18-10071	5	33.82	7.56	69.09	8.09	1.44	23.50
	Deep	B18-10071	6	33.81	6.94	67.89	8.10	2.01	23.46
	Deep	B18-10071	7	33.79	6.18	53.07	8.10	6.28	23.30
	Marina	B18-10072	1	33.62	7.06	55.96	8.12	2.57	24.54
	Marina	B18-10072	2	33.62	6.76	56.36	8.12	2.34	24.31
	Marina	B18-10072	3	33.63	6.60	52.18	8.12	2.33	23.98
Mission Bay	Shallow	B18-10438 (overdraw)	1	34.15	7.02	52.77	8.04	2.03	25.81
	Shallow	B18-10438 (overdraw)	2	34.15	7.02	65.96	8.04	1.25	25.77
	Shallow	B18-10438 (overdraw)	3	34.08	7.58	65.44	8.04	1.19	25.35
	Shallow	B18-10073	1	33.91	7.70	59.47	8.21	1.65	23.55
	Shallow	B18-10073	2	33.83	8.10	59.37	8.21	1.57	23.36
	Shallow	B18-10073	3	33.70	9.08	60.10	8.22	1.58	22.27
	Shallow	B18-10073	4	33.71	9.21	59.88	8.25	1.78	21.26
	Marina	B18-10074	1	33.88	7.39	54.60	8.18	1.56	23.17
	Marina	B18-10074	2	33.88	7.38	64.45	8.18	1.68	23.05
	Marina	B18-10074	3	33.82	7.24	60.84	8.18	1.76	22.90
	Marina	B18-10074	4	33.86	7.23	63.28	8.19	2.03	22.49
	Marina	B18-10075	1	33.93	6.92	55.86	8.12	1.62	23.09
	Marina	B18-10075	2	33.89	6.73	66.32	8.12	1.43	22.89
	Marina	B18-10075	3	33.83	6.31	68.95	8.13	2.00	22.41
	Freshwater-Influenced	B18-10015	1	35.05	7.33	63.79	8.00	1.23	27.27
	Freshwater-Influenced	B18-10015	2	35.05	7.60	63.83	8.00	1.19	27.13
	Freshwater-Influenced	B18-10015	3	35.09	7.64	70.05	8.00	1.17	26.97
	Shallow	B18-10016	1	33.88	7.56	51.03	8.18	1.20	24.57
	Shallow	B18-10016	2	33.73	7.39	60.60	8.19	1.76	23.91
	Shallow	B18-10016	3	33.88	7.68	49.98	8.21	2.48	22.69
	Shallow	B18-10017	1	35.32	6.17	51.10	7.95	1.66	26.78
	Shallow	B18-10017	2	35.34	6.73	64.76	7.95	1.61	26.79
	Shallow	B18-10017	3	35.32	6.19	67.40	7.95	1.65	26.81
	Deep	B18-10019	1	33.97	8.06	61.01	8.10	1.59	23.45
	Deep	B18-10019	2	33.95	8.08	64.58	8.10	1.68	23.44
	Deep	B18-10019	3	33.93	8.10	62.99	8.10	1.98	23.35
	Deep	B18-10019	4	33.93	8.09	62.78	8.11	2.02	23.33
	Deep	B18-10019	5	33.93	8.10	62.66	8.11	2.10	23.32
	Deep	B18-10019	6	33.93	8.06	62.03	8.11	2.04	23.30
	Deep	B18-10020	1	33.77	8.91	78.65	8.16	0.92	22.00
	Deep	B18-10020	2	33.75	10.47	78.62	8.17	0.93	21.79
	Deep	B18-10020	3	33.71	10.75	78.75	8.18	0.89	21.46
	Deep	B18-10020	4	33.73	10.97	78.59	8.19	1.11	20.76
San Diego Bay - North	Freshwater-Influenced	B18-10076	1	34.18	6.92	61.99	7.99	1.69	23.93
	Freshwater-Influenced	B18-10076	2	34.18	6.92	61.89	7.99	1.60	23.94
	Freshwater-Influenced	B18-10076	3	34.18	6.98	61.51	7.99	1.63	23.93
	Freshwater-Influenced	B18-10076	4	34.19	6.96	61.25	7.99	1.66	23.92
	Freshwater-Influenced	B18-10076	5	34.19	6.90	58.84	8.00	1.87	23.90
	Shallow	B18-10077	1	34.19	6.74	45.75	7.14	2.48	23.83
	Shallow	B18-10077	2	34.19	6.72	53.65	7.17	2.47	23.81
	Shallow	B18-10077	3	34.18	6.70	52.40	7.20	2.61	23.77
	Shallow	B18-10077	4	34.15	6.69	50.43	7.24	2.80	23.68

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Harbor	Stratum	Station ID	Depth (m)	Salinity (psu)	DO (mg/L)	Transmission (%)	pH	Turbidity (NTU)	Temperature (°C)
San Diego Bay - North	Marina	B18-10078	1	33.98	6.96	47.54	8.06	1.88	23.03
	Marina	B18-10078	2	33.96	6.98	58.87	8.06	1.85	23.00
	Marina	B18-10078	3	33.95	7.01	57.69	8.07	2.24	22.87
	Marina	B18-10079	1	34.02	7.40	42.05	8.08	3.41	23.04
	Marina	B18-10079	2	34.03	7.27	57.34	8.07	2.09	23.05
	Marina	B18-10079	3	34.03	7.34	57.91	8.07	2.06	23.02
	Marina	B18-10079	4	33.95	7.74	57.52	8.08	2.11	22.67
	Marina	B18-10079	5	33.85	7.62	51.52	8.09	3.66	21.97
	Marina	B18-10080	1	33.90	7.73	78.60	8.08	0.80	23.68
	Marina	B18-10080	2	33.72	7.05	75.90	8.08	1.08	23.34
	Marina	B18-10080	3	33.68	6.83	60.34	8.09	2.16	22.04
	Marina	B18-10080	4	33.77	5.07	46.40	8.09	3.05	21.44
	Marina	B18-10080	5	33.80	5.65	29.07	8.08	5.33	21.11
	Marina	B18-10081	1	33.82	7.60	73.08	8.01	0.96	23.35
	Marina	B18-10081	2	33.82	7.67	62.88	8.03	1.45	22.44
	Marina	B18-10081	3	33.81	7.07	56.78	8.04	2.05	21.88
	Marina	B18-10082	1	33.97	7.87	78.90	8.11	0.59	23.73
	Marina	B18-10082	2	33.78	8.21	75.61	8.12	0.88	23.39
	Marina	B18-10082	3	33.68	7.65	67.07	8.13	1.41	22.17
	Marina	B18-10082	4	33.84	7.49	60.29	8.14	2.03	21.40
	Marina	B18-10083	1	33.90	7.82	79.09	8.12	0.69	23.04
	Marina	B18-10083	2	33.82	8.13	78.01	8.12	0.85	22.72
	Marina	B18-10083	3	33.84	8.04	71.35	8.13	1.23	22.24
	Marina	B18-10083	4	33.81	7.78	65.71	8.14	1.50	21.83
	Marina	B18-10084	1	33.94	8.06	68.75	8.14	1.14	23.13
	Marina	B18-10084	2	33.94	8.08	68.64	8.14	1.09	23.11
	Marina	B18-10084	3	33.93	8.08	68.42	8.14	1.10	23.08
	Marina	B18-10084	4	33.87	8.11	67.30	8.15	1.31	22.73
	Marina	B18-10084	5	33.80	8.26	63.74	8.15	1.62	21.98
	Marina	B18-10084	6	33.76	7.73	59.45	8.16	2.55	21.44
	Marina	B18-10084	7	33.84	7.56	50.10	8.16	5.34	20.75
	Deep	B18-10112	1	34.15	5.20	70.10	8.00	1.19	23.66
	Deep	B18-10112	2	34.14	5.21	70.26	8.00	1.21	23.63
	Deep	B18-10112	3	34.13	5.17	69.14	8.00	1.29	23.56
	Deep	B18-10112	4	34.14	5.15	68.90	8.00	1.31	23.52
	Deep	B18-10112	5	34.13	5.19	69.06	8.00	1.31	23.51
	Deep	B18-10112	6	34.12	5.34	69.19	8.00	1.39	23.47
	Deep	B18-10112	7	34.10	5.41	67.70	8.00	1.56	23.40
	Deep	B18-10112	8	34.09	5.46	64.73	8.01	1.72	23.32
	Deep	B18-10112	9	34.07	5.50	63.52	8.01	1.86	23.25
	Deep	B18-10112	10	34.06	5.54	62.27	8.01	1.93	23.17
	Deep	B18-10112	11	34.04	5.55	58.18	8.02	2.28	23.07
	Deep	B18-10112	12	34.04	5.55	54.53	8.02	2.47	22.96
	Deep	B18-10113	1	34.15	6.40	69.33	8.00	1.63	23.83
	Deep	B18-10113	2	34.14	6.30	69.20	8.00	1.27	23.79
	Deep	B18-10113	3	34.15	6.29	69.15	8.00	1.29	23.70
	Deep	B18-10113	4	34.15	6.31	69.13	8.00	1.39	23.65
	Deep	B18-10113	5	34.12	6.51	68.38	8.00	1.37	23.54
	Deep	B18-10113	6	34.12	6.53	66.38	8.01	1.47	23.47
	Deep	B18-10113	7	34.10	6.52	65.74	8.01	1.48	23.41
	Deep	B18-10113	8	34.08	6.47	65.39	8.01	1.56	23.32
	Deep	B18-10113	9	34.04	6.50	62.72	8.02	1.83	23.16
	Deep	B18-10113	10	33.99	6.54	57.11	8.02	2.42	22.89
	Industrial/Port	B18-10114	1	34.30	6.73	59.57	8.00	2.58	24.53
	Industrial/Port	B18-10114	2	34.29	6.69	59.67	8.00	1.95	24.53
	Industrial/Port	B18-10114	3	34.28	6.64	59.36	8.00	1.94	24.42
	Industrial/Port	B18-10114	4	34.28	6.61	58.58	8.00	1.96	24.36
	Industrial/Port	B18-10114	5	34.27	6.52	58.29	8.00	1.99	24.31
	Industrial/Port	B18-10114	6	34.24	6.48	58.24	8.00	2.13	24.18
	Industrial/Port	B18-10114	7	34.25	6.48	58.91	8.00	2.11	24.12
	Industrial/Port	B18-10114	8	34.25	6.45	58.87	8.00	2.20	24.12
	Industrial/Port	B18-10114	9	34.23	6.42	58.39	8.00	2.24	24.05
	Industrial/Port	B18-10115	1	34.29	6.32	64.87	7.71	1.84	24.33
	Industrial/Port	B18-10115	2	34.29	6.32	64.84	7.72	1.75	24.32
	Industrial/Port	B18-10115	3	34.29	6.31	64.50	7.73	1.78	24.33
	Industrial/Port	B18-10115	4	34.29	6.33	63.43	7.73	1.89	24.33
	Industrial/Port	B18-10115	5	34.29	6.33	62.52	7.74	2.04	24.33
	Industrial/Port	B18-10115	6	34.29	6.35	61.30	7.75	2.16	24.33
	Industrial/Port	B18-10115	7	34.29	6.35	60.95	7.76	2.20	24.33
	Industrial/Port	B18-10115	8	34.29	6.36	60.85	7.77	2.15	24.33
	Industrial/Port	B18-10115	9	34.29	6.36	61.60	7.78	1.99	24.32
	Industrial/Port	B18-10115	10	34.29	6.33	61.21	7.78	2.18	24.32
	Industrial/Port	B18-10115	11	34.29	6.32	57.06	7.79	2.65	24.31

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Harbor	Stratum	Station ID	Depth (m)	Salinity (psu)	DO (mg/L)	Transmission (%)	pH	Turbidity (NTU)	Temperature (°C)
San Diego Bay - North	Deep	B18-10116	1	34.35	7.03	55.83	7.99	3.10	24.51
	Deep	B18-10116	2	34.34	7.02	55.32	7.99	2.45	24.48
	Deep	B18-10116	3	34.35	7.02	54.53	7.99	2.62	24.47
	Deep	B18-10116	4	34.34	6.95	53.94	7.99	2.61	24.47
	Deep	B18-10116	5	34.34	6.93	54.12	7.99	2.61	24.45
	Deep	B18-10116	6	34.34	6.91	54.37	7.99	2.65	24.44
	Deep	B18-10116	7	34.33	6.89	54.41	7.99	2.66	24.43
	Deep	B18-10116	8	34.33	6.86	54.56	7.99	2.68	24.42
	Deep	B18-10116	9	34.33	6.85	53.97	7.99	2.77	24.41
	Deep	B18-10116	10	34.33	6.86	53.22	7.99	2.89	24.41
	Deep	B18-10116	11	34.33	6.83	52.18	7.99	3.08	24.41
	Deep	B18-10116	12	34.33	6.84	51.39	7.99	3.07	24.41
	Deep	B18-10116-Rep	1	34.34	6.95	54.42	8.01	2.43	24.51
	Deep	B18-10116-Rep	2	34.34	6.92	53.83	8.01	2.42	24.51
	Deep	B18-10116-Rep	3	34.34	6.88	53.62	8.01	2.45	24.48
	Deep	B18-10116-Rep	4	34.33	6.85	53.60	8.01	2.54	24.45
	Deep	B18-10116-Rep	5	34.33	6.84	53.25	8.01	2.58	24.44
	Deep	B18-10116-Rep	6	34.33	6.84	53.59	8.01	2.57	24.43
	Deep	B18-10116-Rep	7	34.33	6.85	53.59	8.01	2.59	24.43
	Deep	B18-10116-Rep	8	34.33	6.81	53.67	8.01	2.63	24.43
	Deep	B18-10116-Rep	9	34.33	6.77	53.63	8.01	2.69	24.42
	Deep	B18-10116-Rep	10	34.33	6.79	52.99	8.01	2.84	24.42
	Deep	B18-10116-Rep	11	34.33	6.78	51.44	8.01	3.06	24.42
	Deep	B18-10117	1	34.03	7.68	62.65	7.17	1.75	22.80
	Deep	B18-10117	2	34.03	7.71	63.26	7.19	1.72	22.78
	Deep	B18-10117	3	34.02	7.72	63.24	7.22	1.77	22.74
	Deep	B18-10117	4	34.01	7.76	62.96	7.26	1.80	22.70
	Deep	B18-10117	5	34.00	7.77	62.93	7.28	1.72	22.66
	Deep	B18-10117	6	34.00	7.75	63.23	7.30	1.81	22.62
	Deep	B18-10117	7	34.00	7.74	63.15	7.33	1.79	22.59
	Deep	B18-10117	8	34.00	7.73	62.87	7.35	1.82	22.57
	Deep	B18-10117	9	34.00	7.72	62.47	7.38	1.98	22.56
	Deep	B18-10117	10	34.00	7.70	61.66	7.40	2.04	22.54
	Deep	B18-10117	11	33.98	7.73	61.27	7.42	2.15	22.52
	Deep	B18-10117	12	33.97	7.72	59.72	7.44	2.30	22.45
	Deep	B18-10117	13	33.98	7.71	57.80	7.46	2.99	22.40
	Deep	B18-10022	1	34.14	6.84	60.99	7.91	1.91	23.46
	Deep	B18-10022	2	34.14	6.85	59.73	7.91	1.97	23.46
	Deep	B18-10022	3	34.14	6.84	58.54	7.92	2.12	23.46
	Deep	B18-10022	4	34.14	6.84	58.53	7.92	2.15	23.46
	Deep	B18-10023	1	33.80	9.53	64.58	8.24	1.37	21.53
	Deep	B18-10023	2	33.78	9.65	68.59	8.24	1.38	21.46
	Deep	B18-10023	3	33.77	9.84	68.70	8.24	1.40	21.37
	Deep	B18-10023	4	33.72	9.94	69.43	8.25	1.37	21.20
	Deep	B18-10023	5	33.76	9.85	71.29	8.25	1.32	21.02
	Deep	B18-10023	6	33.79	9.80	71.08	8.25	1.31	21.11
	Deep	B18-10023	7	33.75	9.91	70.87	8.25	1.28	21.12
	Deep	B18-10023	8	33.76	9.94	71.60	8.26	1.28	21.01
	Deep	B18-10023	9	33.73	10.08	72.00	8.26	1.21	20.98
	Deep	B18-10023	10	33.73	10.16	72.64	8.26	1.44	20.85
	Deep	B18-10023	11	33.73	10.16	71.99	8.27	1.57	20.80
	Deep	B18-10023	12	33.74	10.16	71.68	8.27	1.55	20.79
	Deep	B18-10023	13	33.73	10.16	71.90	8.27	1.51	20.79
	Deep	B18-10023	14	33.73	10.18	71.95	8.27	1.57	20.79
	Deep	B18-10023	15	33.74	10.15	71.26	8.28	1.76	20.79
	Deep	B18-10023	16	33.73	10.15	70.79	8.28	1.94	20.80
	Deep	B18-10024	1	34.18	7.92	58.72	8.11	1.58	24.48
	Deep	B18-10024	2	34.13	7.84	58.77	8.11	1.56	24.48
	Deep	B18-10024	3	34.13	7.75	58.14	8.11	1.70	24.12
	Deep	B18-10024	4	34.16	7.64	56.69	8.11	1.78	24.01
	Deep	B18-10024	5	34.11	7.53	56.26	8.11	1.80	23.78
	Deep	B18-10024	6	34.14	7.49	56.22	8.11	1.84	23.64
	Deep	B18-10024	7	34.13	7.55	56.93	8.11	1.83	23.57
	Deep	B18-10024	8	34.09	7.57	56.97	8.11	1.90	23.46
	Deep	B18-10024	9	33.97	7.60	56.57	8.11	1.90	23.10
	Deep	B18-10024	10	33.87	7.79	58.37	8.12	1.85	22.57
	Deep	B18-10024	11	33.85	7.83	58.38	8.13	2.07	21.81
	Deep	B18-10024	12	33.93	7.80	53.74	8.13	2.70	21.55
	Freshwater-Influenced	B18-10029	1	34.24	6.86	63.15	8.02	1.59	24.55
	Freshwater-Influenced	B18-10029	2	34.24	6.85	63.17	8.02	1.56	24.51
	Freshwater-Influenced	B18-10029	3	34.23	6.86	62.77	8.02	1.53	24.50
	Freshwater-Influenced	B18-10029	4	34.18	6.74	62.63	8.02	1.47	24.33
	Freshwater-Influenced	B18-10029	5	34.17	6.74	63.47	8.02	1.37	24.09
	Freshwater-Influenced	B18-10029	6	34.19	6.68	63.24	8.02	1.38	23.98
	Freshwater-Influenced	B18-10029	7	34.17	6.59	63.21	8.02	1.43	23.88
	Freshwater-Influenced	B18-10029	8	34.16	6.49	63.84	8.02	1.47	23.80
	Freshwater-Influenced	B18-10029	9	34.15	6.19	65.37	8.02	1.48	23.74
	Freshwater-Influenced	B18-10029	10	34.14	6.13	61.29	8.02	2.22	23.63

Table E-1.
2018 RHMP Physical Water Quality Parameters

Harbor	Stratum	Station ID	Depth (m)	Salinity (psu)	DO (mg/L)	Transmission (%)	pH	Turbidity (NTU)	Temperature (°C)
San Diego Bay - North	Deep	B18-10030	1	33.88	8.75	60.81	8.20	1.32	22.05
	Deep	B18-10030	2	33.87	8.84	63.35	8.20	1.32	22.03
	Deep	B18-10030	3	33.81	8.91	63.35	8.20	1.33	21.92
	Deep	B18-10030	4	33.68	8.92	63.91	8.20	1.31	21.51
	Deep	B18-10030	5	33.76	8.90	64.30	8.21	1.34	21.05
	Deep	B18-10030	6	33.79	8.83	64.42	8.21	1.36	20.87
	Deep	B18-10030	7	33.79	8.84	64.60	8.21	1.37	20.76
	Deep	B18-10030	8	33.80	8.81	65.06	8.21	1.39	20.65
	Deep	B18-10030	9	33.78	8.85	65.78	8.21	1.43	20.55
	Deep	B18-10030	10	33.69	9.09	66.44	8.21	1.40	20.19
	Deep	B18-10030	11	33.71	9.33	67.98	8.21	1.30	19.74
	Deep	B18-10030	12	33.60	9.66	68.78	8.22	1.17	19.29
	Deep	B18-10030	13	33.65	9.74	69.98	8.23	1.13	18.68
	Deep	B18-10030	14	33.63	9.75	69.60	8.23	1.13	18.43
	Deep	B18-10030	15	33.65	9.77	69.35	8.23	1.08	18.21
	Deep	B18-10030	16	33.63	9.89	69.39	8.23	1.09	18.08
	Deep	B18-10030	17	33.64	9.87	69.03	8.24	1.11	17.91
	Deep	B18-10030	18	33.63	9.89	68.91	8.24	1.11	17.78
	Deep	B18-10030	19	33.63	9.90	69.40	8.24	1.11	17.57
	Deep	B18-10030	20	33.64	9.87	70.13	8.24	1.08	17.44
San Diego Bay - Central	Shallow	B18-10036	1	34.63	6.69	42.27	7.98	3.70	25.69
	Shallow	B18-10036	2	34.62	6.64	41.68	7.98	3.54	25.74
	Shallow	B18-10036	3	34.62	6.36	41.83	7.98	3.79	25.59
	Shallow	B18-10036	4	34.65	6.26	39.21	7.98	3.89	25.48
	Shallow	B18-10036	5	34.67	6.34	39.72	7.98	3.82	25.47
	Industrial/Port	B18-10119	1	34.33	6.67	64.86	7.91	1.63	24.59
	Industrial/Port	B18-10119	2	34.33	6.69	64.79	7.91	1.60	24.59
	Industrial/Port	B18-10119	3	34.33	6.64	64.45	7.92	1.69	24.59
	Industrial/Port	B18-10119	4	34.33	6.61	64.15	7.92	1.67	24.57
	Industrial/Port	B18-10119	5	34.34	6.60	63.46	7.92	1.73	24.56
	Industrial/Port	B18-10119	6	34.33	6.58	62.77	7.92	1.84	24.56
	Industrial/Port	B18-10119	7	34.32	6.59	61.64	7.93	1.93	24.52
	Industrial/Port	B18-10119	8	34.31	6.57	60.16	7.93	1.91	24.47
	Industrial/Port	B18-10121	1	34.36	6.75	68.00	7.97	1.37	24.67
	Industrial/Port	B18-10121	2	34.36	6.75	67.83	7.97	1.38	24.68
	Industrial/Port	B18-10121	3	34.36	6.76	67.86	7.97	1.39	24.68
	Industrial/Port	B18-10121	4	34.36	6.76	67.35	7.97	1.39	24.68
	Industrial/Port	B18-10121	5	34.36	6.74	67.63	7.97	1.39	24.68
	Industrial/Port	B18-10121	6	34.35	6.62	67.12	7.97	1.49	24.65
	Industrial/Port	B18-10121	7	34.33	6.48	61.98	7.97	1.90	24.58
	Industrial/Port	B18-10121	8	34.31	6.42	54.98	7.97	2.68	24.47
	Industrial/Port	B18-10121	9	34.29	6.42	50.13	7.97	2.98	24.35
	Industrial/Port	B18-10121	10	34.26	6.43	50.42	7.97	2.94	24.18
	Industrial/Port	B18-10123	1	34.39	6.78	68.13	7.99	1.13	24.80
	Industrial/Port	B18-10123	2	34.39	6.78	69.63	7.99	1.15	24.79
	Industrial/Port	B18-10123	3	34.39	6.78	69.44	7.99	1.21	24.79
	Industrial/Port	B18-10123	4	34.38	6.76	69.15	7.99	1.25	24.78
	Industrial/Port	B18-10123	5	34.38	6.76	68.96	7.99	1.25	24.76
	Industrial/Port	B18-10123	6	34.38	6.70	68.66	7.99	1.26	24.77
	Industrial/Port	B18-10123	7	34.37	6.43	68.28	7.99	1.37	24.73
	Industrial/Port	B18-10123	8	34.37	6.41	63.30	7.99	2.04	24.64
	Industrial/Port	B18-10124	1	34.53	6.53	74.47	7.97	1.62	25.04
	Industrial/Port	B18-10124	2	34.51	6.50	74.46	7.97	1.18	25.02
	Industrial/Port	B18-10124	3	34.44	6.44	74.10	7.97	1.18	24.83
	Industrial/Port	B18-10124	4	34.27	6.37	72.27	7.98	1.45	24.31
	Industrial/Port	B18-10124	5	34.19	6.37	67.32	7.98	1.93	23.59
	Industrial/Port	B18-10124	6	34.23	6.37	60.78	7.99	2.33	23.20
	Industrial/Port	B18-10124	7	34.21	6.34	56.59	7.99	2.49	23.04
	Industrial/Port	B18-10124	8	34.20	6.32	54.94	7.99	2.59	22.91
	Industrial/Port	B18-10124	9	34.21	6.30	53.59	7.99	2.69	22.84
	Industrial/Port	B18-10124	10	34.21	6.29	52.22	7.99	2.76	22.84
	Industrial/Port	B18-10124	11	34.18	6.17	51.41	7.99	2.87	22.84
	Industrial/Port	B18-10124	12	32.26	5.41	51.39	7.99	3.09	22.70
	Industrial/Port	B18-10126	1	34.48	6.63	71.12	8.01	2.99	24.91
	Industrial/Port	B18-10126	2	34.39	6.52	71.08	8.02	1.48	24.74
	Industrial/Port	B18-10126	3	34.31	6.46	68.66	8.02	1.60	24.35
	Industrial/Port	B18-10126	4	34.33	6.41	65.80	8.02	1.75	24.02
	Industrial/Port	B18-10126	5	34.30	6.38	63.54	8.02	2.12	23.82
	Industrial/Port	B18-10126	6	34.24	6.48	58.88	8.02	2.58	23.52
	Industrial/Port	B18-10126	7	34.19	6.53	56.23	8.03	2.51	23.12
	Industrial/Port	B18-10126	8	34.20	6.47	56.17	8.03	2.49	22.96
	Industrial/Port	B18-10126	9	34.19	6.39	55.04	8.03	2.53	22.85
	Industrial/Port	B18-10126	10	34.17	6.29	55.34	8.03	2.47	22.73
	Industrial/Port	B18-10126	11	34.17	6.29	57.53	8.02	2.42	22.63
	Industrial/Port	B18-10126	12	34.11	6.12	57.73	8.02	2.30	22.49
	Industrial/Port	B18-10126	13	34.21	6.30	60.19	8.02	2.03	22.07

Table E-1.
2018 RHMP Physical Water Quality Parameters

Harbor	Stratum	Station ID	Depth (m)	Salinity (psu)	DO (mg/L)	Transmission (%)	pH	Turbidity (NTU)	Temperature (°C)
San Diego Bay - Central	Industrial/Port	B18-10127	1	34.56	6.54	67.04	8.00	1.26	25.06
	Industrial/Port	B18-10127	2	34.57	6.49	70.52	8.00	1.22	25.06
	Industrial/Port	B18-10127	3	34.56	6.42	72.07	8.00	1.11	25.04
	Industrial/Port	B18-10127	4	34.52	6.44	73.75	8.00	1.18	24.90
	Industrial/Port	B18-10127	5	34.51	6.40	71.83	8.00	1.35	24.74
	Industrial/Port	B18-10127	6	34.38	6.28	69.24	8.00	1.44	24.48
	Industrial/Port	B18-10127	7	34.32	6.32	67.47	8.01	1.63	24.01
	Industrial/Port	B18-10127	8	34.29	6.31	65.29	8.01	1.72	23.71
	Industrial/Port	B18-10127	9	34.11	6.20	64.02	8.01	1.80	23.33
	Industrial/Port	B18-10127	10	34.15	6.12	61.95	8.02	2.00	22.66
	Industrial/Port	B18-10127	11	34.14	6.05	58.67	8.02	2.30	22.46
	Industrial/Port	B18-10127-Rep	1	34.51	6.45	73.91	8.00	1.37	24.98
	Industrial/Port	B18-10127-Rep	2	34.33	6.42	71.38	8.00	2.45	24.53
	Industrial/Port	B18-10127-Rep	3	34.37	6.42	58.37	8.00	3.63	24.16
	Industrial/Port	B18-10127-Rep	4	34.36	6.40	49.72	8.01	4.32	24.01
	Industrial/Port	B18-10127-Rep	5	34.26	6.39	43.37	8.01	5.06	23.70
	Industrial/Port	B18-10127-Rep	6	34.30	6.38	35.74	8.01	6.52	23.50
	Industrial/Port	B18-10127-Rep	7	34.30	6.38	32.46	8.01	7.16	23.45
	Industrial/Port	B18-10127-Rep	8	34.29	6.38	31.27	8.01	7.43	23.42
	Industrial/Port	B18-10127-Rep	9	34.29	6.36	30.94	8.01	7.67	23.40
	Industrial/Port	B18-10127-Rep	10	34.27	6.29	31.00	8.01	7.62	23.35
	Industrial/Port	B18-10127-Rep	11	34.24	6.31	32.17	8.01	6.79	23.16
	Industrial/Port	B18-10132	1	34.59	6.65	72.44	8.02	1.07	25.22
	Industrial/Port	B18-10132	2	34.54	6.57	72.39	8.03	1.04	25.14
	Industrial/Port	B18-10132	3	34.52	6.52	72.13	8.03	1.17	24.89
	Industrial/Port	B18-10132	4	34.47	6.40	71.53	8.03	1.21	24.70
	Industrial/Port	B18-10132	5	34.31	6.22	70.38	8.03	1.36	24.12
	Industrial/Port	B18-10132	6	34.27	6.12	67.38	8.03	1.63	23.63
	Industrial/Port	B18-10132	7	34.21	6.10	63.03	8.03	1.93	23.25
	Industrial/Port	B18-10132	8	34.22	6.11	60.98	8.03	1.99	23.02
	Industrial/Port	B18-10132	9	34.19	6.14	60.92	8.03	1.99	22.88
	Industrial/Port	B18-10132	10	34.16	6.15	60.76	8.03	2.01	22.66
	Industrial/Port	B18-10132	11	34.15	6.09	59.63	8.03	2.17	22.53
	Industrial/Port	B18-10132	12	34.15	6.07	56.39	8.02	2.43	22.47
	Deep	B18-10133	1	34.56	6.66	68.99	7.84	1.41	25.03
	Deep	B18-10133	2	34.55	6.64	69.64	7.84	1.34	25.02
	Deep	B18-10133	3	34.52	6.64	69.20	7.85	1.45	24.93
	Deep	B18-10133	4	34.44	6.54	67.04	7.86	1.56	24.73
	Deep	B18-10133	5	34.34	6.55	64.59	7.87	1.77	24.31
	Deep	B18-10133	6	34.30	6.45	60.00	7.88	2.15	23.99
	Deep	B18-10133	7	34.11	6.41	57.56	7.89	2.42	23.25
	Deep	B18-10133	8	34.18	6.34	54.48	7.90	2.78	22.86
	Deep	B18-10133	9	34.15	6.33	48.92	7.90	3.37	22.67
	Deep	B18-10133	10	34.16	6.30	43.56	7.91	3.84	22.57
	Deep	B18-10133	11	34.14	6.27	40.98	7.91	4.17	22.47
	Deep	B18-10133	12	34.12	6.25	37.14	7.91	4.87	22.38
	Deep	B18-10133	13	34.14	6.24	31.69	7.92	5.51	22.26
	Industrial/Port	B18-10136	1	34.50	6.48	69.91	7.99	1.15	24.58
	Industrial/Port	B18-10136	2	34.50	6.48	69.84	7.99	1.11	24.57
	Industrial/Port	B18-10136	3	34.50	6.44	69.87	7.99	1.15	24.57
	Industrial/Port	B18-10136	4	34.44	6.30	69.70	7.99	1.26	24.48
	Industrial/Port	B18-10136	5	34.42	6.17	67.32	8.00	1.46	24.31
	Industrial/Port	B18-10136	6	34.33	6.15	65.76	8.00	1.49	23.98
	Industrial/Port	B18-10136	7	34.36	6.17	63.49	8.00	1.70	23.81
	Industrial/Port	B18-10136	8	34.31	6.10	62.17	8.00	1.79	23.74
	Industrial/Port	B18-10136	9	34.27	6.07	57.78	8.00	2.31	23.45
	Industrial/Port	B18-10136	10	34.28	6.06	52.93	8.00	2.64	23.33
	Industrial/Port	B18-10136	11	34.28	6.04	51.63	8.00	2.80	23.30
	Industrial/Port	B18-10137	1	34.58	6.49	65.92	7.93	1.47	24.76
	Industrial/Port	B18-10137	2	34.53	6.47	65.94	7.94	1.43	24.65
	Industrial/Port	B18-10137	3	34.51	6.46	66.10	7.94	1.38	24.56
	Industrial/Port	B18-10137	4	34.50	6.45	66.29	7.95	1.38	24.51
	Industrial/Port	B18-10137	5	34.48	6.41	66.68	7.95	1.38	24.48
	Industrial/Port	B18-10137	6	34.44	6.36	66.38	7.95	1.43	24.37
	Industrial/Port	B18-10137	7	34.39	6.30	65.37	7.96	1.51	24.18
	Industrial/Port	B18-10137	8	34.38	6.26	63.97	7.96	1.65	24.01
	Industrial/Port	B18-10137	9	34.36	6.21	63.03	7.96	1.73	23.88
	Industrial/Port	B18-10137	10	34.31	6.11	61.34	7.96	1.92	23.67
	Industrial/Port	B18-10137	11	34.30	5.97	58.08	7.96	2.28	23.49
	Industrial/Port	B18-10137	12	34.26	5.93	55.32	7.96	2.48	23.32

Table E-1.
2018 RHMP Physical Water Quality Parameters

Harbor	Stratum	Station ID	Depth (m)	Salinity (psu)	DO (mg/L)	Transmission (%)	pH	Turbidity (NTU)	Temperature (°C)
San Diego Bay - Central	Industrial/Port	B18-10139	1	34.52	6.32	66.05	8.01	1.53	24.54
	Industrial/Port	B18-10139	2	34.50	6.31	65.58	8.01	1.50	24.50
	Industrial/Port	B18-10139	3	34.50	6.30	65.03	8.01	1.54	24.48
	Industrial/Port	B18-10139	4	34.49	6.28	65.05	8.01	1.57	24.45
	Industrial/Port	B18-10139	5	34.48	6.26	64.63	8.01	1.73	24.41
	Industrial/Port	B18-10139	6	34.46	6.24	64.08	8.01	1.67	24.36
	Industrial/Port	B18-10139	7	34.42	6.19	63.39	8.01	1.72	24.25
	Industrial/Port	B18-10139	8	34.38	6.17	62.51	8.02	1.84	24.01
	Industrial/Port	B18-10139	9	34.36	6.15	61.40	8.02	1.87	23.86
	Industrial/Port	B18-10139	10	34.33	6.12	60.82	8.02	1.93	23.71
	Industrial/Port	B18-10139	11	34.30	6.09	60.02	8.02	2.02	23.57
	Industrial/Port	B18-10139	12	34.28	6.05	58.09	8.02	2.37	23.42
	Industrial/Port	B18-10139	13	34.29	6.06	52.14	8.02	2.99	23.34
	Industrial/Port	B18-10140	1	34.53	6.33	64.88	8.02	1.56	24.69
	Industrial/Port	B18-10140	2	34.52	6.36	64.70	8.02	1.57	24.66
	Industrial/Port	B18-10140	3	34.53	6.34	63.79	8.02	1.64	24.61
	Industrial/Port	B18-10140	4	34.51	6.29	62.57	8.02	1.73	24.54
	Industrial/Port	B18-10140	5	34.48	6.24	61.82	8.02	1.79	24.42
	Industrial/Port	B18-10140	6	34.43	6.20	61.12	8.02	1.87	24.26
	Industrial/Port	B18-10140	7	34.40	6.17	60.32	8.03	1.96	24.02
	Industrial/Port	B18-10140	8	34.37	6.13	59.37	8.03	2.03	23.87
	Industrial/Port	B18-10140	9	34.33	6.10	58.45	8.03	2.11	23.69
	Industrial/Port	B18-10140	10	34.31	6.07	57.32	8.02	2.22	23.55
	Deep	B18-10141	1	34.47	6.73	61.63	8.04	1.94	24.81
	Deep	B18-10141	2	34.48	6.62	60.85	8.04	1.76	24.78
	Deep	B18-10141	3	34.46	6.51	60.49	8.04	1.74	24.63
	Deep	B18-10141	4	34.41	6.36	60.63	8.04	1.77	24.40
	Deep	B18-10141	5	34.34	6.37	56.65	8.04	2.24	24.03
	Deep	B18-10141	6	34.33	6.34	50.18	8.04	2.74	23.83
	Deep	B18-10141	7	34.34	6.31	47.69	8.04	3.05	23.72
	Deep	B18-10141	8	34.35	6.29	47.14	8.04	3.00	23.71
	Deep	B18-10141	9	34.35	6.29	48.94	8.03	2.94	23.72
	Deep	B18-10141	10	34.35	6.29	49.19	8.03	2.91	23.72
	Deep	B18-10141	11	34.31	6.17	49.87	8.03	2.87	23.68
	Deep	B18-10141	12	34.30	6.11	50.00	8.03	2.76	23.53
	Deep	B18-10141	13	34.30	6.13	49.44	8.02	2.89	23.45
	Industrial/Port	B18-10142	1	34.48	6.27	62.98	8.01	2.10	24.86
	Industrial/Port	B18-10142	2	34.45	6.21	62.22	8.01	1.67	24.71
	Industrial/Port	B18-10142	3	34.47	6.24	60.66	8.01	1.78	24.57
	Industrial/Port	B18-10142	4	34.46	6.25	60.28	8.01	1.79	24.56
	Industrial/Port	B18-10142	5	34.46	6.19	59.84	8.01	1.82	24.49
	Industrial/Port	B18-10142	6	34.45	6.16	59.23	8.01	1.86	24.41
	Industrial/Port	B18-10143	1	34.62	6.62	54.79	7.78	2.26	25.50
	Industrial/Port	B18-10143	2	34.56	6.62	59.23	7.79	1.82	25.35
	Industrial/Port	B18-10143	3	34.57	6.61	60.97	7.80	1.76	25.33
	Industrial/Port	B18-10143	4	34.71	6.58	60.52	7.80	1.92	25.49
	Industrial/Port	B18-10143	5	34.83	6.54	57.02	7.81	2.39	25.70
	Industrial/Port	B18-10143	6	34.94	6.53	51.49	7.81	2.87	26.07
	Industrial/Port	B18-10143	7	34.93	6.52	49.53	7.82	3.45	26.09
	Industrial/Port	B18-10143	8	34.93	6.52	48.22	7.83	3.88	26.09
	Industrial/Port	B18-10143	9	34.93	6.51	48.00	7.83	3.88	26.09
	Industrial/Port	B18-10143	10	34.92	6.51	47.21	7.84	3.90	26.09
	Industrial/Port	B18-10143	11	34.92	6.51	46.12	7.85	3.85	26.07
	Deep	B18-10144	1	34.89	6.63	52.98	7.98	4.67	26.04
	Deep	B18-10144	2	34.90	6.62	52.68	7.98	2.72	26.04
	Deep	B18-10144	3	34.91	6.59	51.32	7.98	2.94	26.04
	Deep	B18-10144	4	34.91	6.58	51.05	7.98	3.05	26.05
	Deep	B18-10144	5	34.91	6.58	50.44	7.98	3.19	26.05
	Deep	B18-10144	6	34.92	6.56	49.85	7.98	3.26	26.05
	Deep	B18-10144	7	34.91	6.56	49.72	7.98	3.35	26.05
	Deep	B18-10144	8	34.92	6.57	49.27	7.98	3.35	26.05
	Deep	B18-10144	9	34.91	6.58	48.34	7.98	3.34	26.04
	Deep	B18-10144	10	34.91	6.56	48.18	7.98	3.34	26.04
	Deep	B18-10144	11	34.91	6.56	48.78	7.98	3.40	26.03
	Freshwater-Influenced	B18-10178	1	34.37	6.01	69.71	7.95	1.19	24.84
	Freshwater-Influenced	B18-10178	2	34.37	5.99	69.55	7.95	1.16	24.84
	Freshwater-Influenced	B18-10178	3	34.37	5.92	69.47	7.95	1.19	24.83
	Freshwater-Influenced	B18-10178	4	34.37	5.75	69.05	7.95	1.25	24.82
	Freshwater-Influenced	B18-10178	5	34.37	5.19	68.21	7.94	1.43	24.81
	Freshwater-Influenced	B18-10178	6	34.36	4.75	65.96	7.93	1.90	24.78
	Freshwater-Influenced	B18-10178	7	34.32	5.24	59.81	7.91	2.69	24.65
	Freshwater-Influenced	B18-10031	1	34.37	6.75	64.37	7.99	1.68	24.75
	Freshwater-Influenced	B18-10031	2	34.37	6.74	63.94	7.99	1.71	24.75
	Freshwater-Influenced	B18-10031	3	34.37	6.73	63.72	7.99	1.74	24.75
	Freshwater-Influenced	B18-10031	4	34.37	6.72	62.94	7.99	1.78	24.75
	Freshwater-Influenced	B18-10031	5	34.37	6.65	62.97	7.99	1.90	24.74
	Freshwater-Influenced	B18-10031	6	34.37	6.64	61.25	7.99	2.33	24.73
	Freshwater-Influenced	B18-10031	7	34.37	6.61	57.68	7.99	2.45	24.73
	Freshwater-Influenced	B18-10031	8	34.37	6.50	56.08	7.99	2.52	24.71
	Freshwater-Influenced	B18-10031	9	34.35	6.16	54.33	7.99	2.76	24.65

Table E-1.
2018 RHMP Physical Water Quality Parameters

Harbor	Stratum	Station ID	Depth (m)	Salinity (psu)	DO (mg/L)	Transmission (%)	pH	Turbidity (NTU)	Temperature (°C)
San Diego Bay - Central	Shallow	B18-10032	1	34.47	7.52	52.40	8.06	2.60	25.01
	Shallow	B18-10032	2	34.47	7.40	51.48	8.06	2.77	24.95
	Shallow	B18-10032	3	34.49	7.36	50.12	8.06	2.97	24.92
	Shallow	B18-10032	4	34.49	7.32	48.77	8.05	3.14	24.92
	Shallow	B18-10032	5	34.50	7.31	47.58	8.05	3.25	24.93
	Shallow	B18-10034	1	34.61	6.96	43.72	8.01	3.62	25.95
	Shallow	B18-10034	2	34.60	6.91	43.53	8.01	3.35	25.93
	Shallow	B18-10034	3	34.53	6.52	42.38	8.01	3.60	25.76
	Shallow	B18-10034	4	34.57	6.44	38.33	8.01	4.24	25.42
	Shallow	B18-10034	5	34.60	6.46	35.49	8.00	4.98	25.33
	Shallow	B18-10035	1	34.60	7.03	37.62	8.03	3.28	25.97
	Shallow	B18-10035	2	34.59	7.06	45.55	8.02	3.26	25.94
	Shallow	B18-10035	3	34.57	6.69	43.20	8.03	3.63	25.71
	Shallow	B18-10035	4	34.62	6.45	41.95	8.02	3.93	25.45
	Shallow	B18-10035	5	34.62	6.40	44.78	8.01	3.77	25.43
San Diego Bay - South	Freshwater-Influenced	B18-10180	1	34.88	6.25	63.98	7.99	1.55	26.77
	Freshwater-Influenced	B18-10180	2	34.88	6.30	64.10	7.99	1.56	26.72
	Freshwater-Influenced	B18-10180	3	34.92	6.31	62.98	8.00	1.68	26.59
	Freshwater-Influenced	B18-10180	4	34.97	6.34	62.31	8.01	1.75	26.57
	Freshwater-Influenced	B18-10180	5	34.97	6.28	62.20	8.01	1.86	26.55
	Freshwater-Influenced	B18-10180	6	34.95	6.26	59.47	8.01	2.15	26.44
	Freshwater-Influenced	B18-10180	7	34.94	6.25	57.85	8.01	2.24	26.39
	Freshwater-Influenced	B18-10180	8	34.93	6.23	57.10	8.01	2.30	26.36
	Freshwater-Influenced	B18-10180	9	34.92	6.18	56.38	8.01	2.36	26.33
	Freshwater-Influenced	B18-10180	10	34.92	5.97	55.25	8.01	2.45	26.28
	Freshwater-Influenced	B18-10180	11	34.92	5.82	53.89	8.01	2.53	26.23
	Freshwater-Influenced	B18-10181	1	34.77	6.28	67.83	7.85	1.30	26.99
	Freshwater-Influenced	B18-10181	2	34.86	6.16	67.38	7.86	1.47	26.88
	Freshwater-Influenced	B18-10181	3	34.87	6.51	62.93	7.88	1.85	26.56
	Freshwater-Influenced	B18-10181	4	34.93	6.51	59.99	7.89	1.91	26.45
	Freshwater-Influenced	B18-10181	5	34.92	6.39	60.05	7.90	2.04	26.40
	Freshwater-Influenced	B18-10181	6	34.91	6.32	58.13	7.90	2.53	26.31
	Freshwater-Influenced	B18-10181	7	34.92	6.32	52.46	7.91	2.93	26.27
	Freshwater-Influenced	B18-10037	1	35.06	6.58	64.38	8.03	1.48	26.95
	Freshwater-Influenced	B18-10037	2	35.06	6.56	63.71	8.03	1.50	26.94
	Freshwater-Influenced	B18-10037	3	35.04	6.54	63.07	8.04	1.55	26.87
	Freshwater-Influenced	B18-10037	4	35.05	6.52	62.83	8.04	1.62	26.79
	Freshwater-Influenced	B18-10037	5	35.06	6.48	62.61	8.04	1.65	26.77
	Freshwater-Influenced	B18-10037	6	35.06	6.45	61.34	8.04	1.83	26.76
	Freshwater-Influenced	B18-10037	7	35.07	6.46	59.25	8.04	1.93	26.76
	Freshwater-Influenced	B18-10037	8	35.07	6.48	58.94	8.03	1.98	26.76
	Freshwater-Influenced	B18-10037	9	35.06	6.41	58.94	8.03	1.93	26.75
	Freshwater-Influenced	B18-10037	10	35.05	6.31	57.30	8.03	2.22	26.67
	Freshwater-Influenced	B18-10037	11	35.05	6.30	49.96	8.03	2.86	26.62
	Shallow	B18-10038	1	34.81	6.95	53.03	8.04	2.32	26.68
	Shallow	B18-10038	2	34.80	6.83	52.47	8.04	2.27	26.66
	Shallow	B18-10038	3	34.81	6.73	51.59	8.04	2.52	26.47
	Shallow	B18-10038	4	34.83	6.71	49.46	8.04	2.80	26.36
	Shallow	B18-10039	1	34.79	6.23	51.30	7.96	2.47	25.84
	Shallow	B18-10039	2	34.79	6.24	49.50	7.96	2.60	25.80
	Shallow	B18-10039	3	34.79	6.24	47.71	7.96	2.80	25.80
	Shallow	B18-10039	4	34.80	6.19	45.94	7.96	3.05	25.78
	Shallow	B18-10039	5	34.79	6.14	44.62	7.96	3.10	25.73
	Shallow	B18-10039	6	34.79	6.08	44.90	7.96	3.09	25.71
	Shallow	B18-10039	7	34.65	6.03	45.54	7.96	3.10	25.70
	Freshwater-Influenced	B18-10040	1	34.87	7.29	65.40	8.07	1.39	28.36
	Shallow	B18-10041	1	35.23	7.31	72.94	8.09	1.29	27.62
	Shallow	B18-10041	2	35.22	7.41	73.29	8.09	10.12	27.59
	Shallow	B18-10041	3	35.22	7.51	72.86	8.09	13.52	27.55
	Shallow	B18-10042	1	35.15	6.78	65.43	8.04	1.37	27.47
	Shallow	B18-10042	2	35.22	6.84	65.50	8.04	1.39	27.52
	Shallow	B18-10042	3	35.25	6.73	65.33	8.04	1.38	27.54
	Shallow	B18-10042	4	35.68	6.57	65.14	8.04	1.56	27.62
	Shallow	B18-10042	5	36.05	6.58	61.99	8.04	1.68	27.83
	Shallow	B18-10043	1	36.11	5.19	69.02	7.65	23.74	28.18
	Shallow	B18-10043	2	36.22	5.24	69.50	7.68	1.69	27.99
	Shallow	B18-10043-Rep	1	36.11	5.24	69.14	7.96	4.47	28.24
	Shallow	B18-10043-Rep	2	36.18	5.44	69.46	7.95	4.50	28.05
	Freshwater-Influenced	B18-10044	1	36.29	7.32	37.08	8.12	11.00	28.97
	Freshwater-Influenced	B18-10044	2	36.27	6.99	38.31	8.12	10.40	28.90
	Freshwater-Influenced	B18-10044	3	36.20	6.32	40.20	8.12	10.10	28.55
	Freshwater-Influenced	B18-10044	4	35.25	4.94	38.16	8.11	3.89	28.05
	Marina	B18-10085	1	35.32	6.72	45.63	7.74	3.09	27.30
	Marina	B18-10085	2	35.32	6.63	43.59	7.76	3.38	27.29
	Marina	B18-10085	3	35.33	6.59	28.40	7.78	4.11	27.26
	Marina	B18-10086	1	35.35	6.42	48.32	7.98	3.05	27.51
	Marina	B18-10086	2	35.35	6.47	48.27	7.98	3.31	27.51
	Marina	B18-10086	3	35.36	6.48	42.82	7.98	3.69	27.51
	Marina	B18-10087	1	35.80	7.01	71.23	8.10	2.84	28.47
	Marina	B18-10087	2	35.80	6.94	71.05	8.10	1.20	28.42
	Marina	B18-10087	3	35.81	6.94	68.83	8.10	1.29	28.33

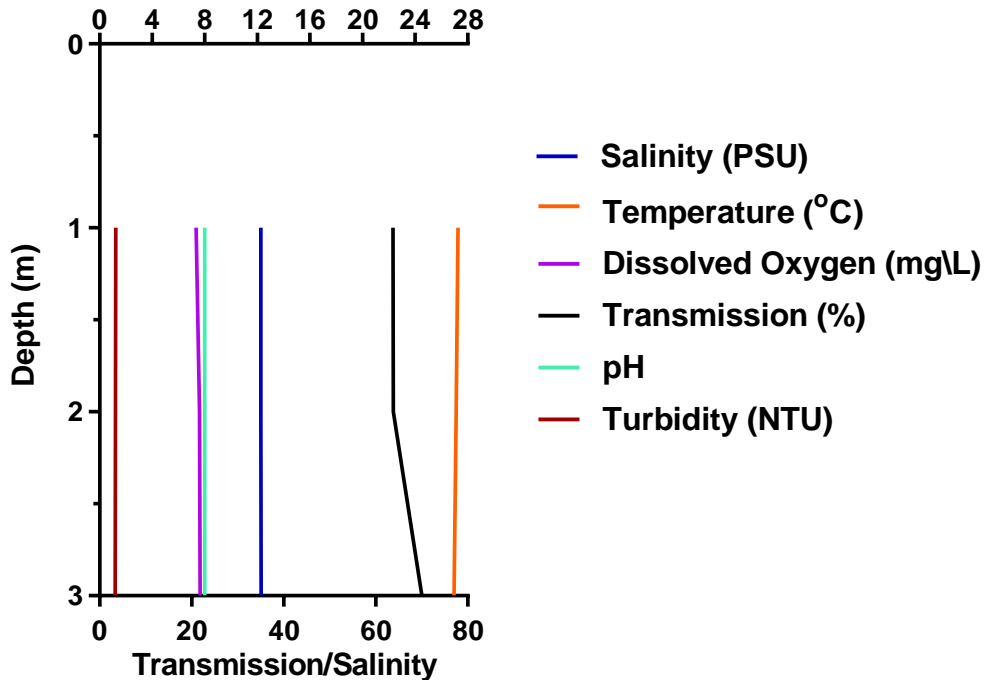
Table E-1.
2018 RHMP Physical Water Quality Parameters

Harbor	Stratum	Station ID	Depth (m)	Salinity (psu)	DO (mg/L)	Transmission (%)	pH	Turbidity (NTU)	Temperature (°C)
San Diego Bay - South	Shallow	B18-10088	1	35.60	7.08	67.84	8.06	1.66	27.68
	Shallow	B18-10088	2	35.72	6.83	66.12	8.06	1.46	27.70
	Shallow	B18-10088	3	35.84	6.79	56.25	8.06	2.33	27.76
	Freshwater-Influenced	B18-10179	1	34.73	6.18	66.64	8.00	1.33	26.97
	Freshwater-Influenced	B18-10179	2	34.83	6.16	64.58	8.02	1.89	26.65
	Freshwater-Influenced	B18-10179	3	34.89	6.17	56.91	8.03	2.37	26.45
	Freshwater-Influenced	B18-10200	1	35.86	7.01	NA	7.97	NA	26.00
	Freshwater-Influenced	B18-10200	2	36.00	8.57	NA	8.02	NA	25.30

CTD Water Column Profiles

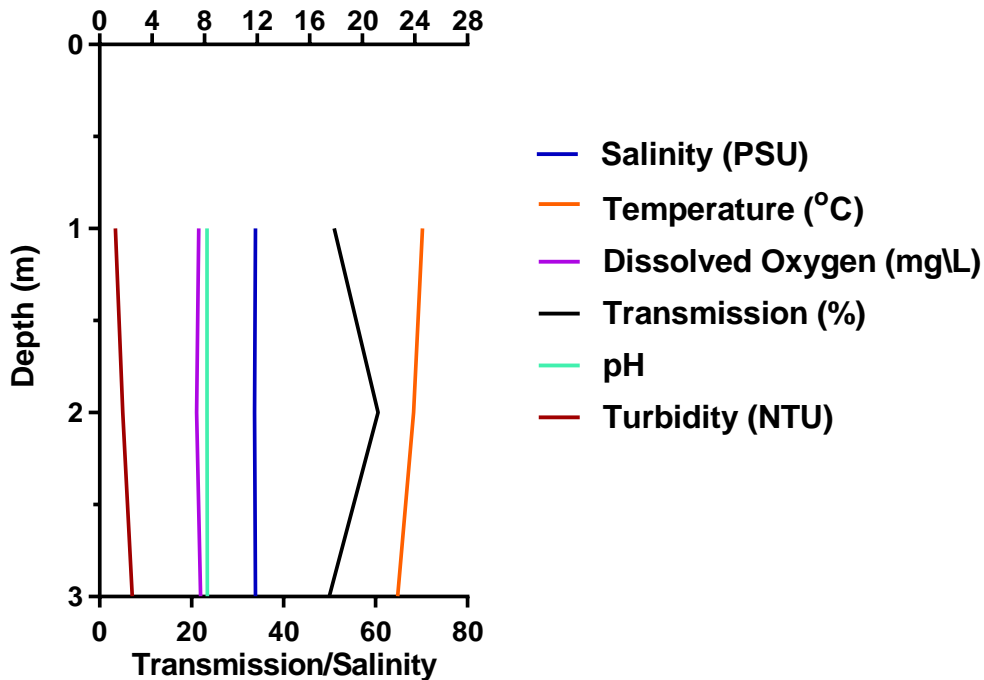
B18-10015

Temperature/DO/pH/Turbidity



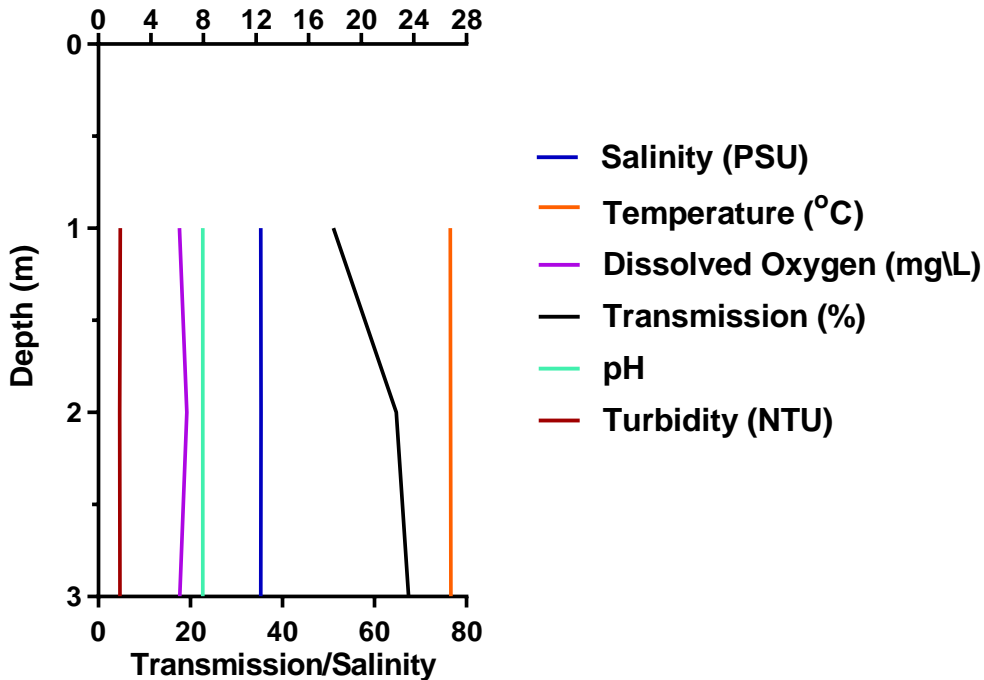
B18-10016

Temperature/DO/pH/Turbidity



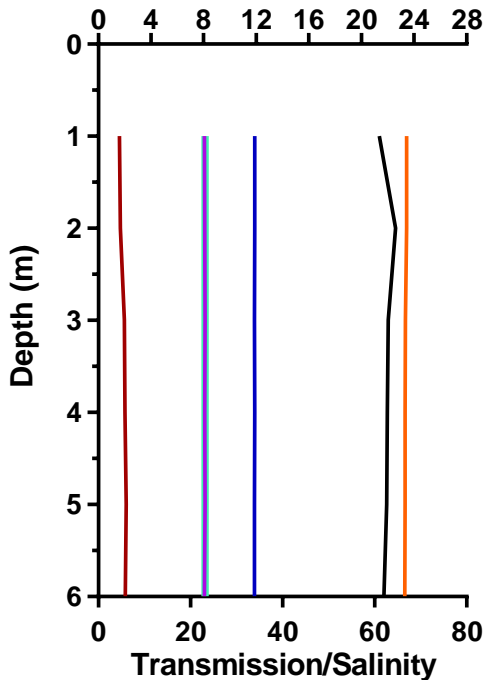
B18-10017

Temperature/DO/pH/Turbidity



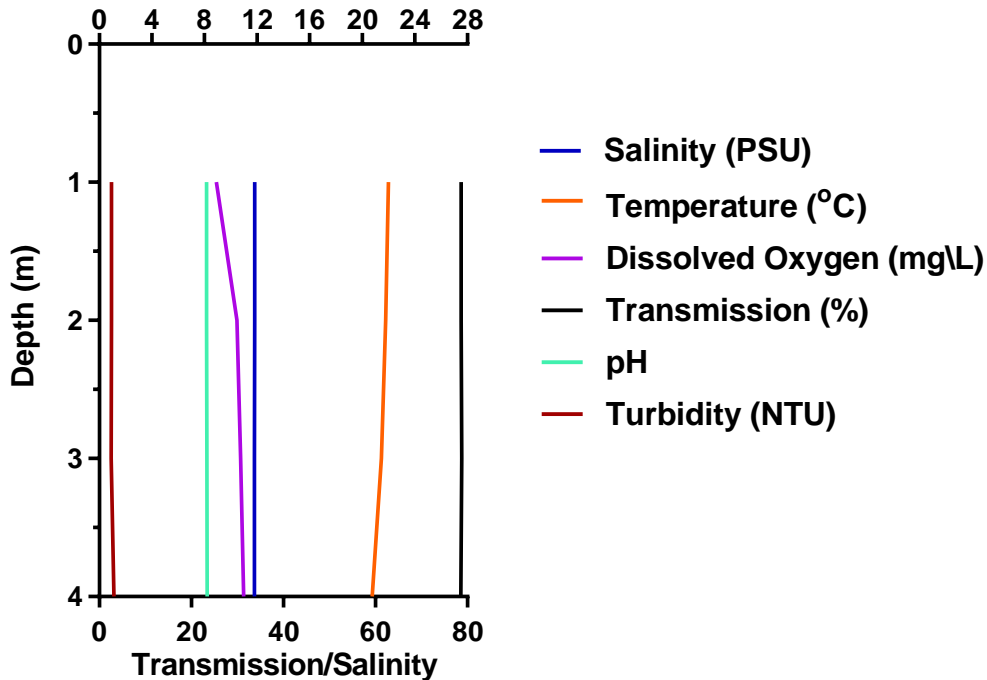
B18-10019

Temperature/DO/pH/Turbidity



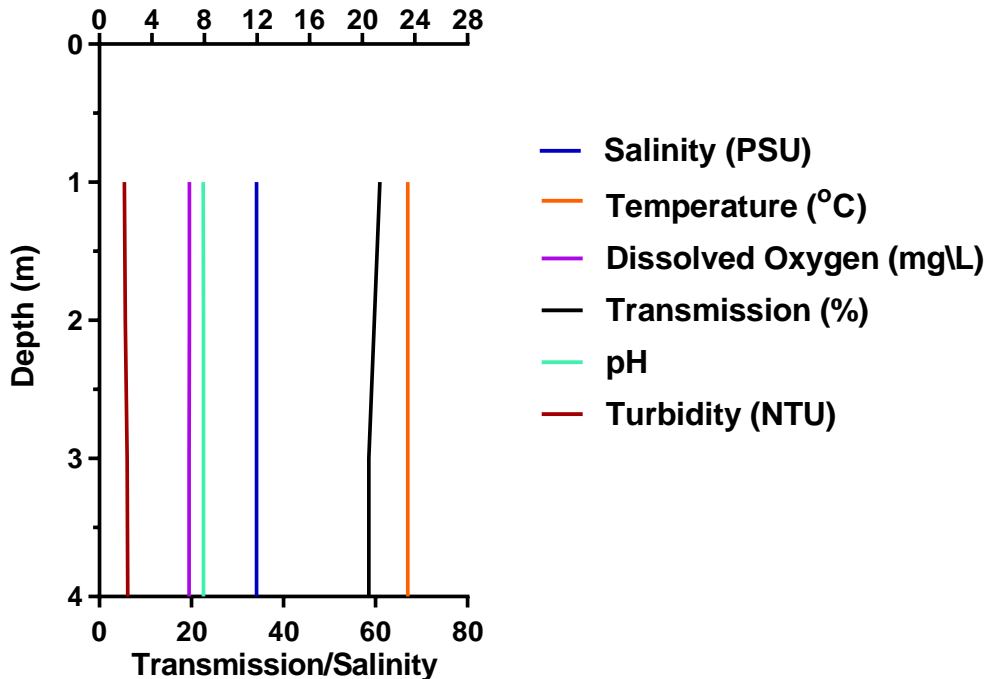
B18-10020

Temperature/DO/pH/Turbidity



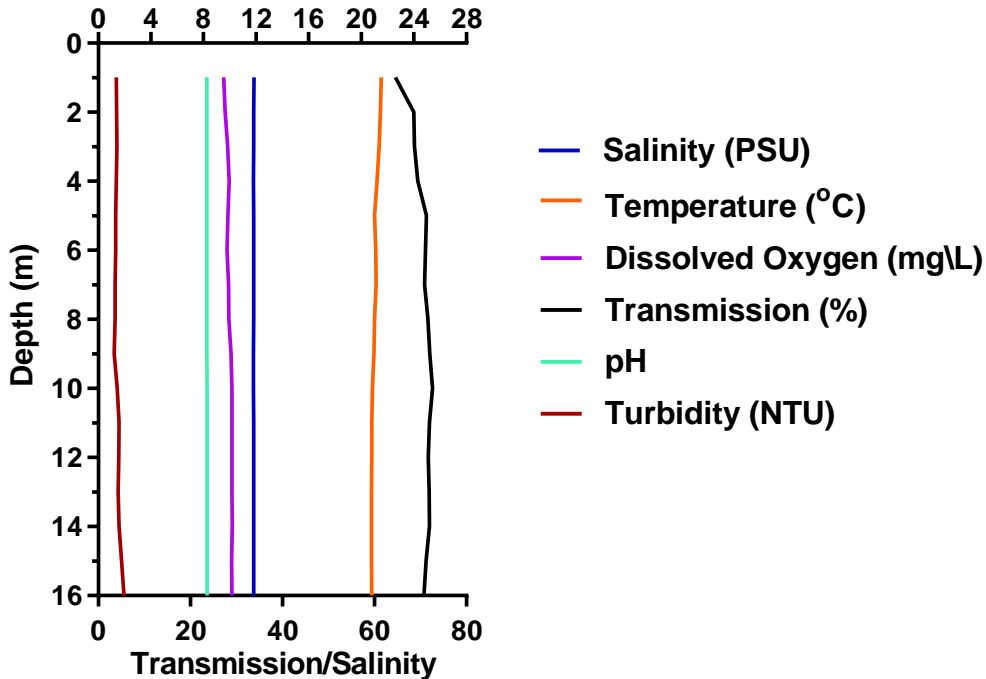
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Temperature/DO/pH/Turbidity



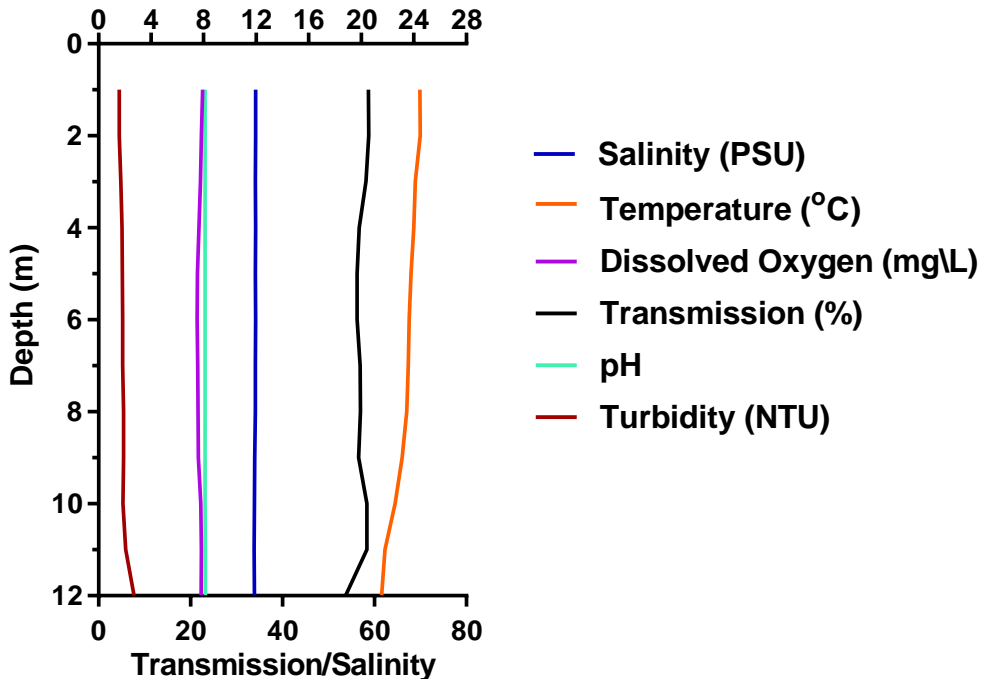
B18-10023

Temperature/DO/pH/Turbidity



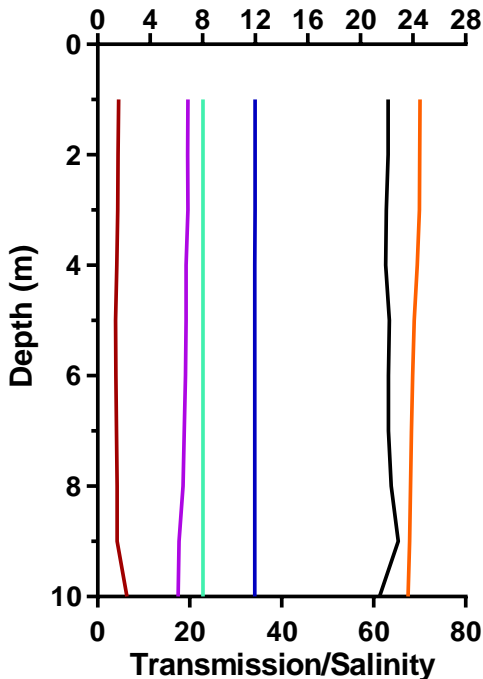
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Temperature/DO/pH/Turbidity



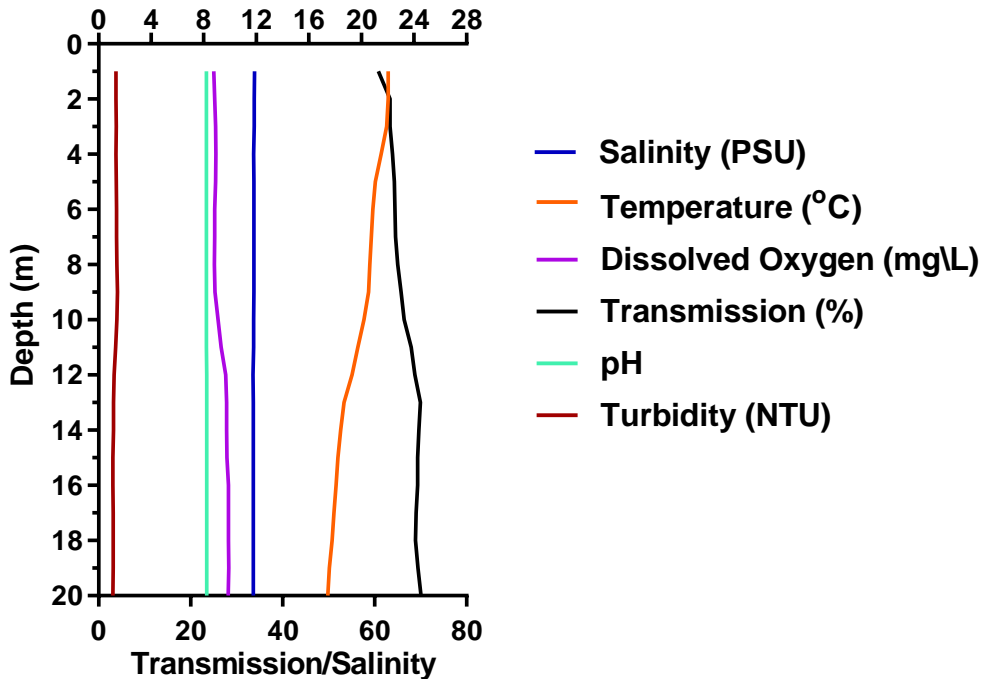
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Temperature/DO/pH/Turbidity



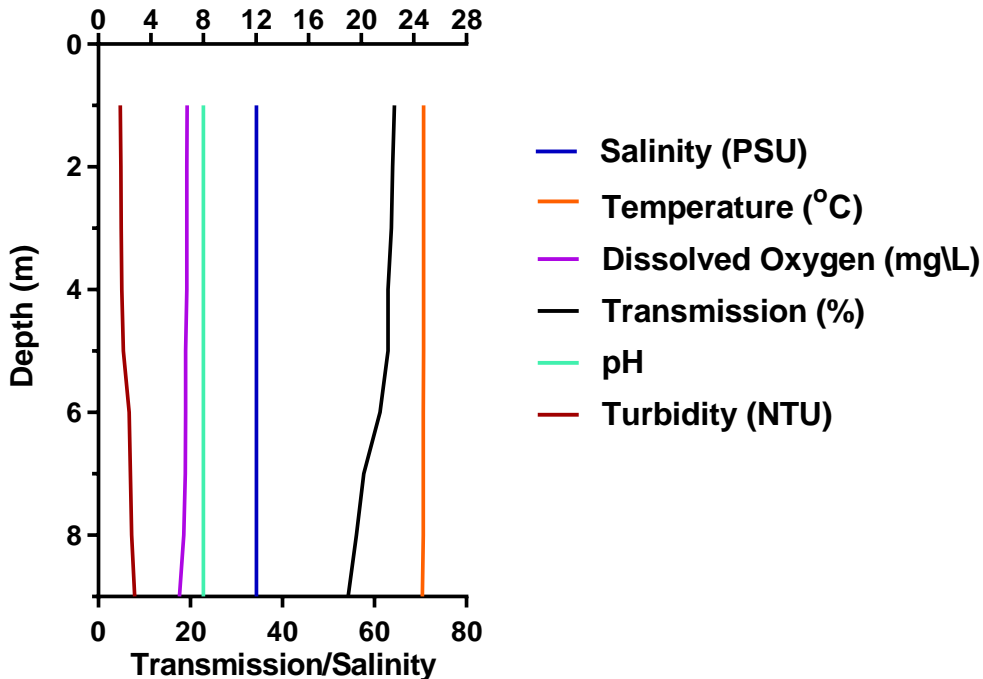
B18-10030

Temperature/DO/pH/Turbidity



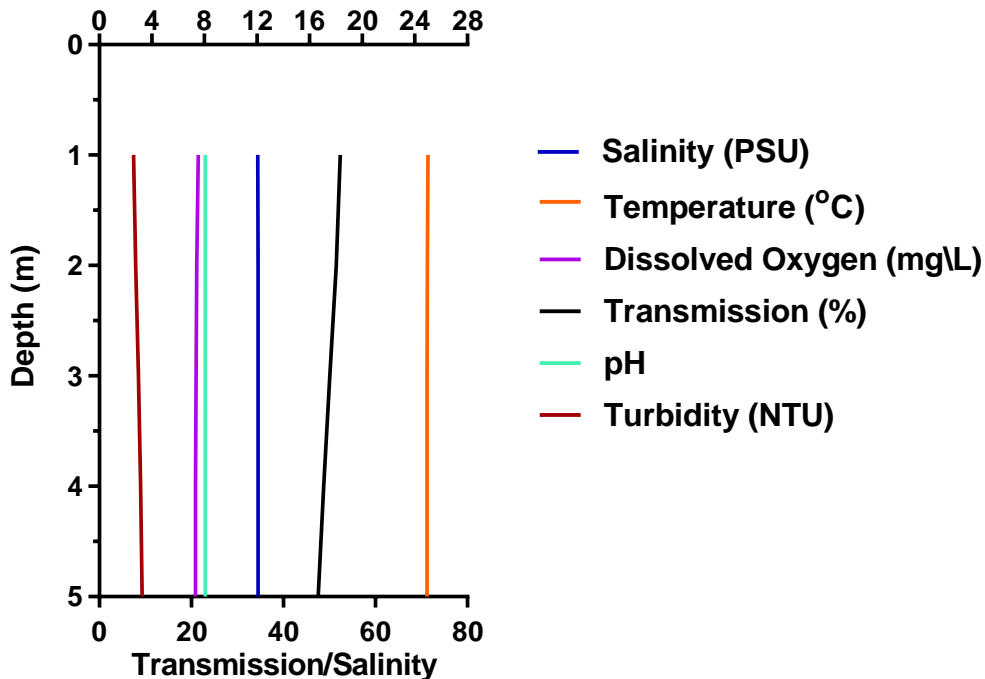
B18-10031

Temperature/DO/pH/Turbidity



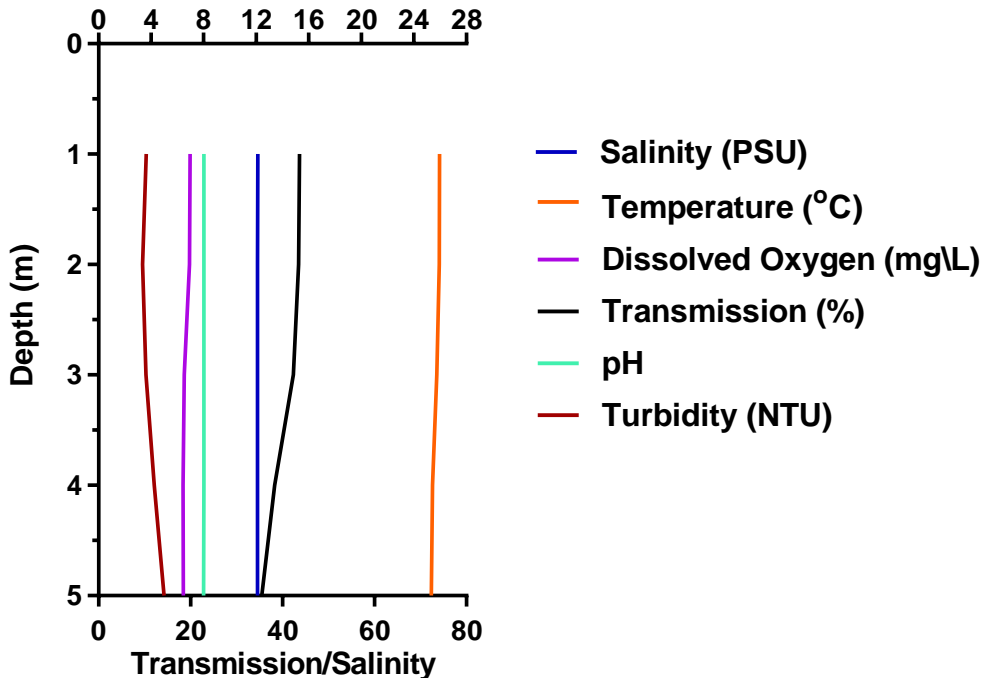
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Temperature/DO/pH/Turbidity



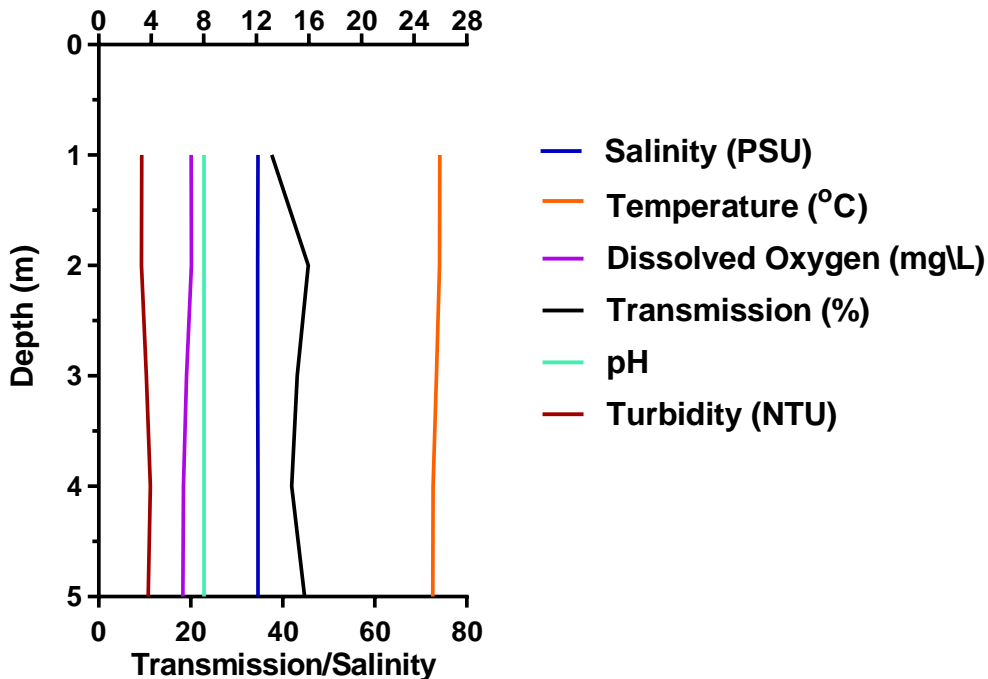
B18-10034

Temperature/DO/pH/Turbidity



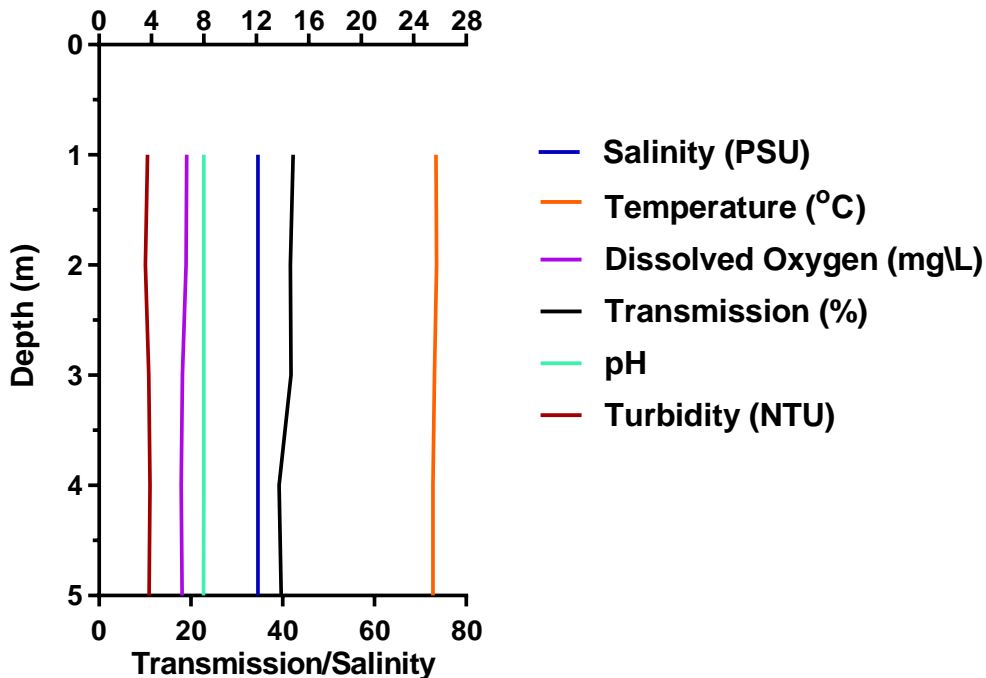
B18-10035

Temperature/DO/pH/Turbidity



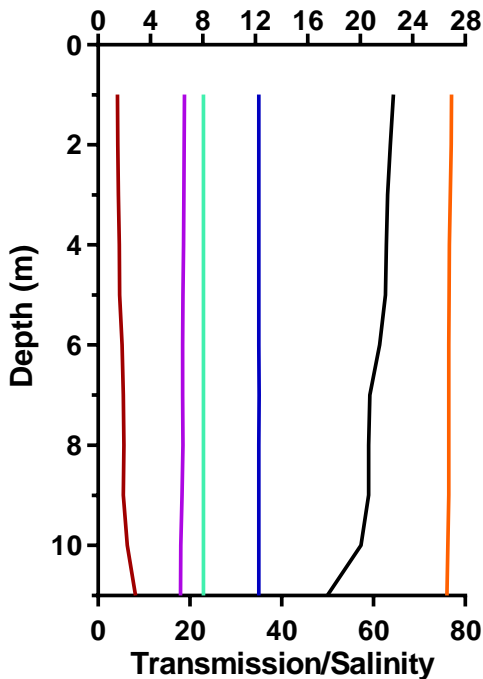
B18-10036

Temperature/DO/pH/Turbidity



B18-10037

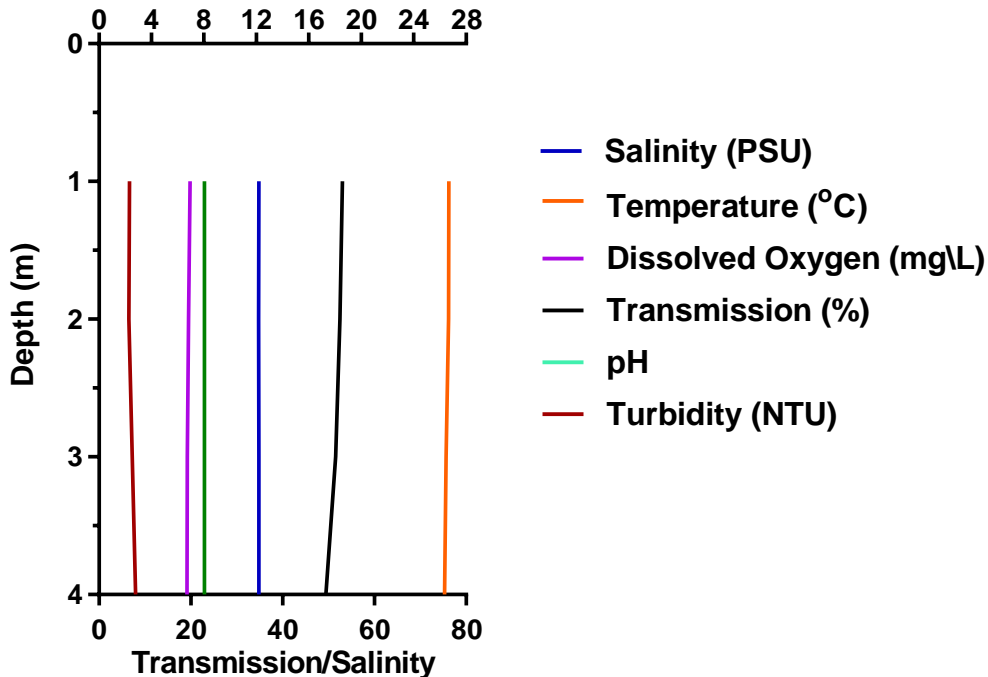
Temperature/DO/pH/Turbidity



- Salinity (PSU)
- Temperature (°C)
- Dissolved Oxygen (mg/L)
- Transmission (%)
- pH
- Turbidity (NTU)

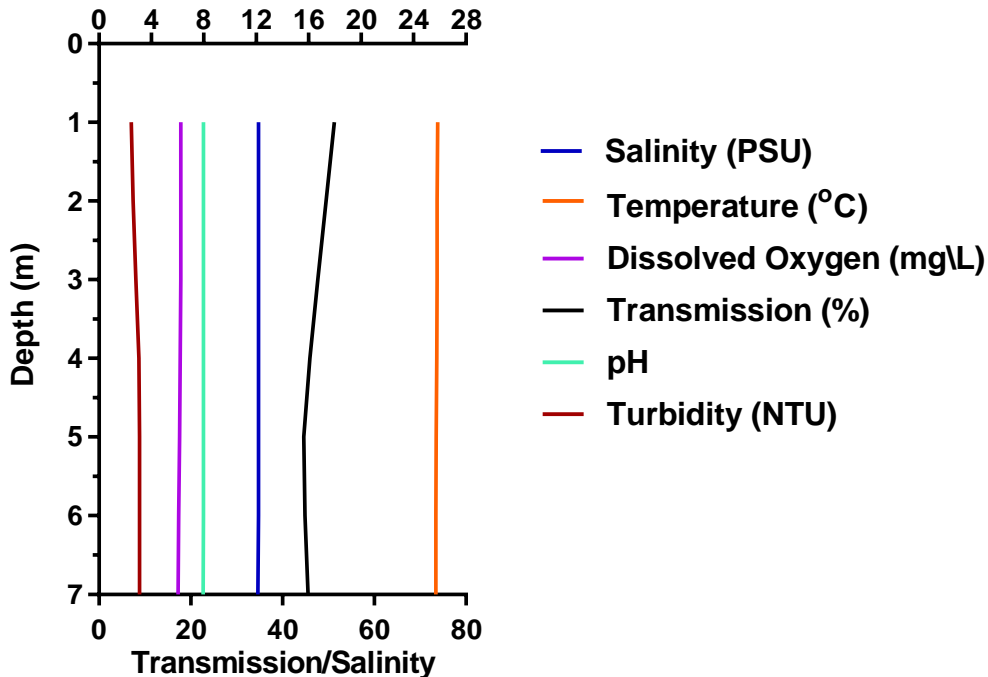
B18-10038

Temperature/DO/pH/Turbidity



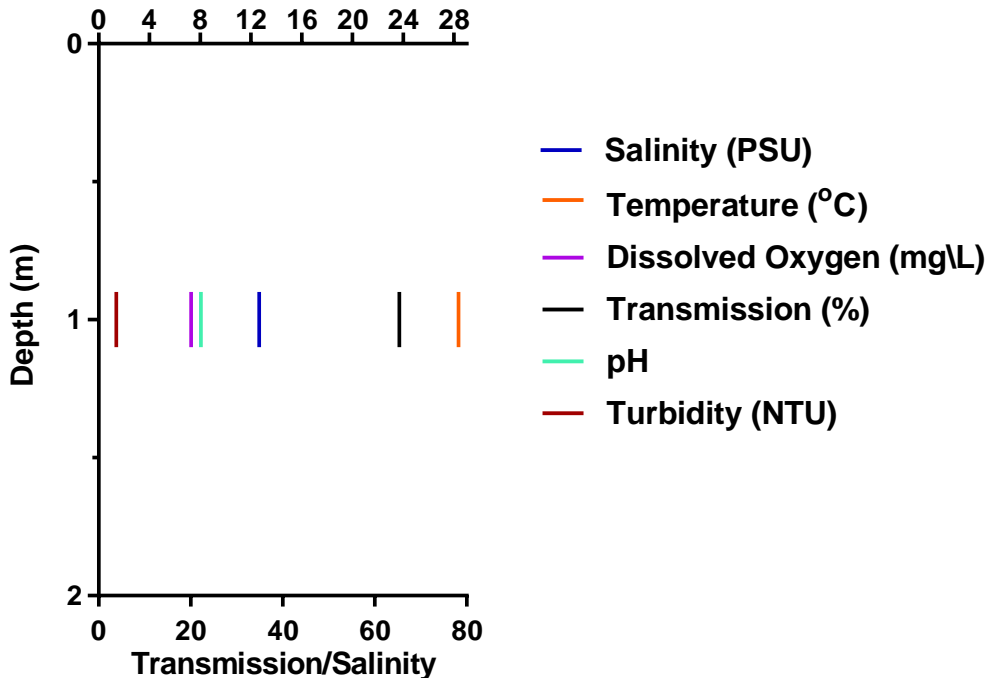
B18-10039

Temperature/DO/pH/Turbidity



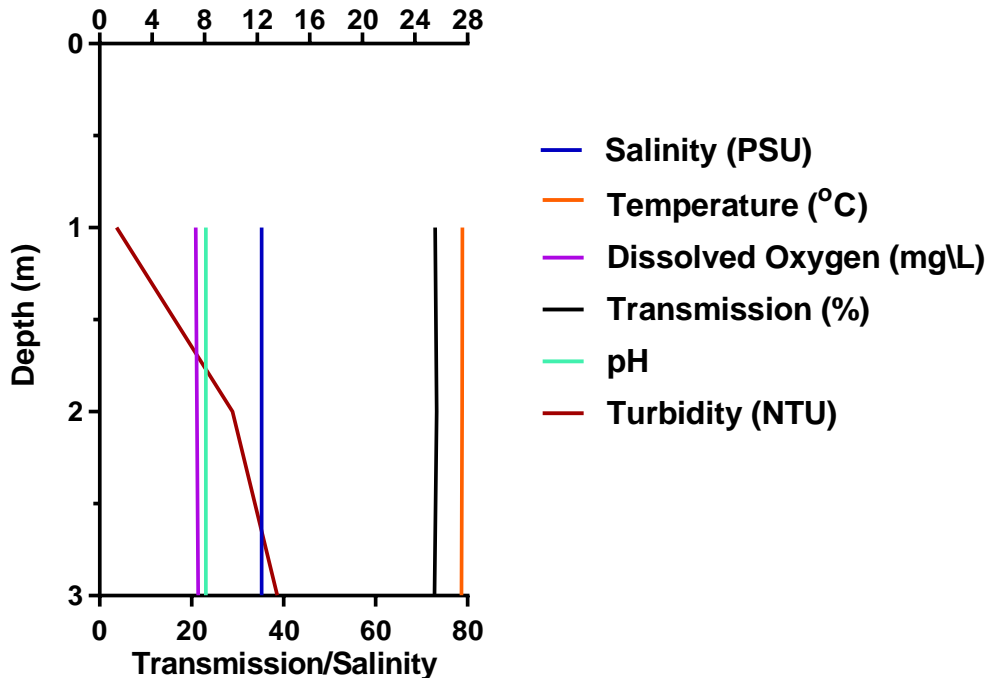
B18-10040

Temperature/DO/pH/Turbidity



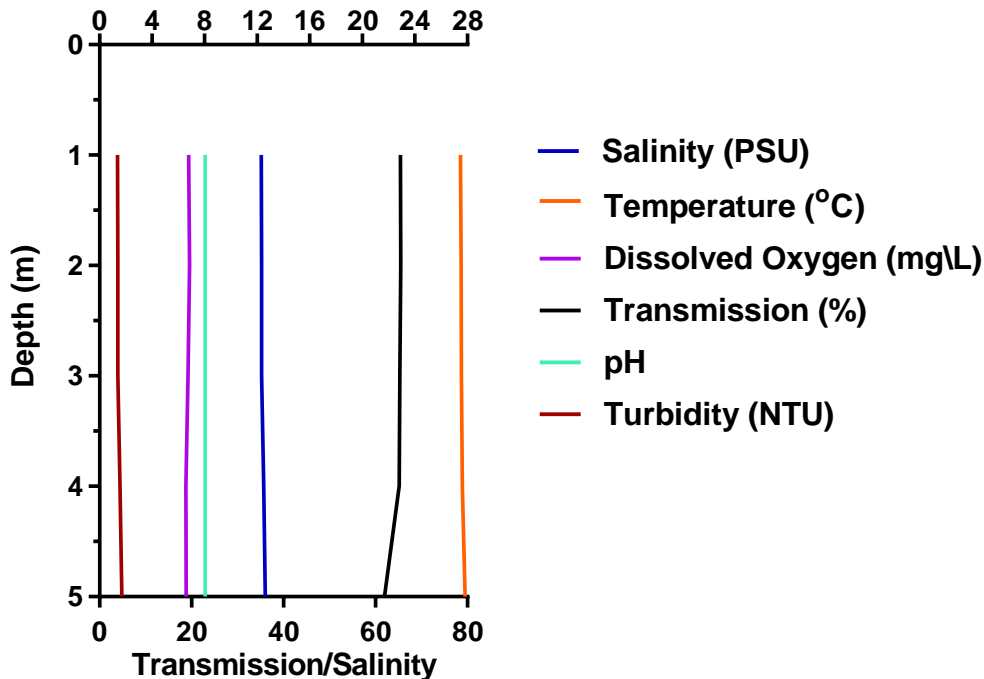
B18-10041

Temperature/DO/pH/Turbidity



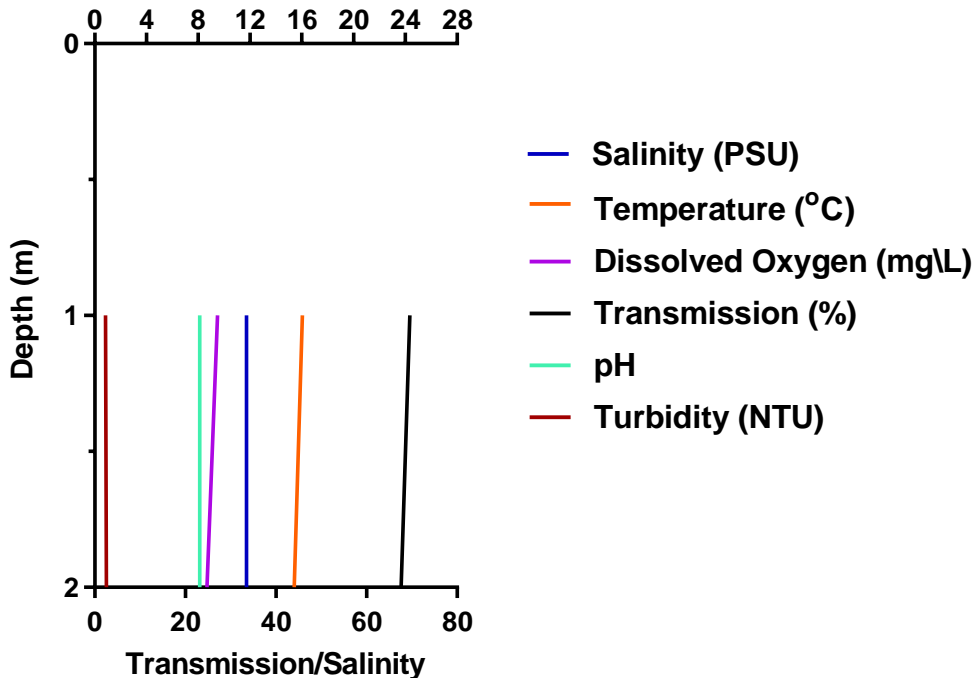
B18-10042

Temperature/DO/pH/Turbidity



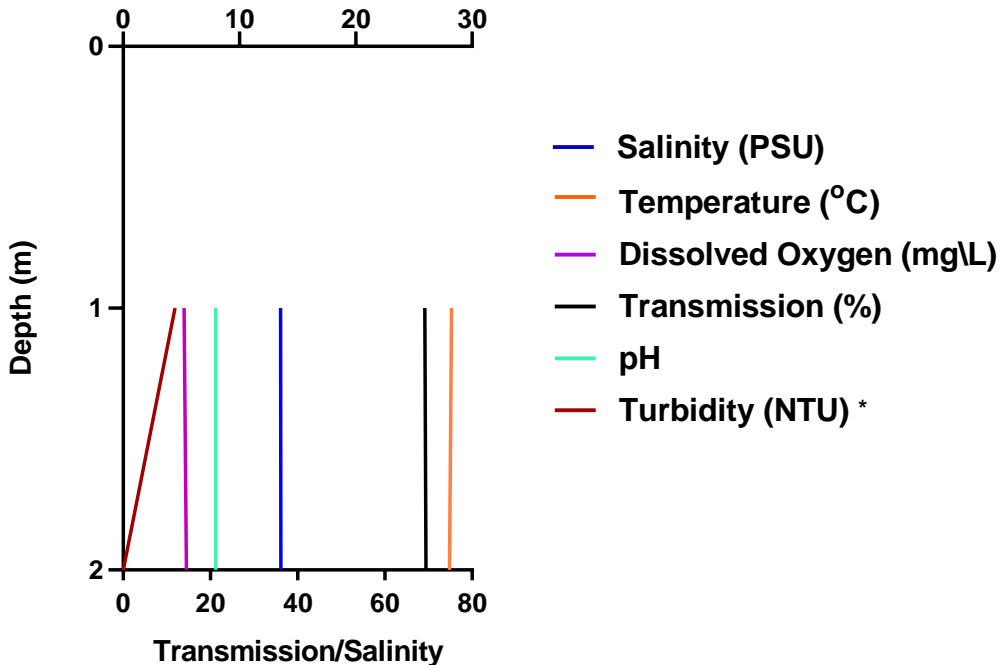
B18-10043

Temperature/DO/pH/Turbidity



B18-10043-REP

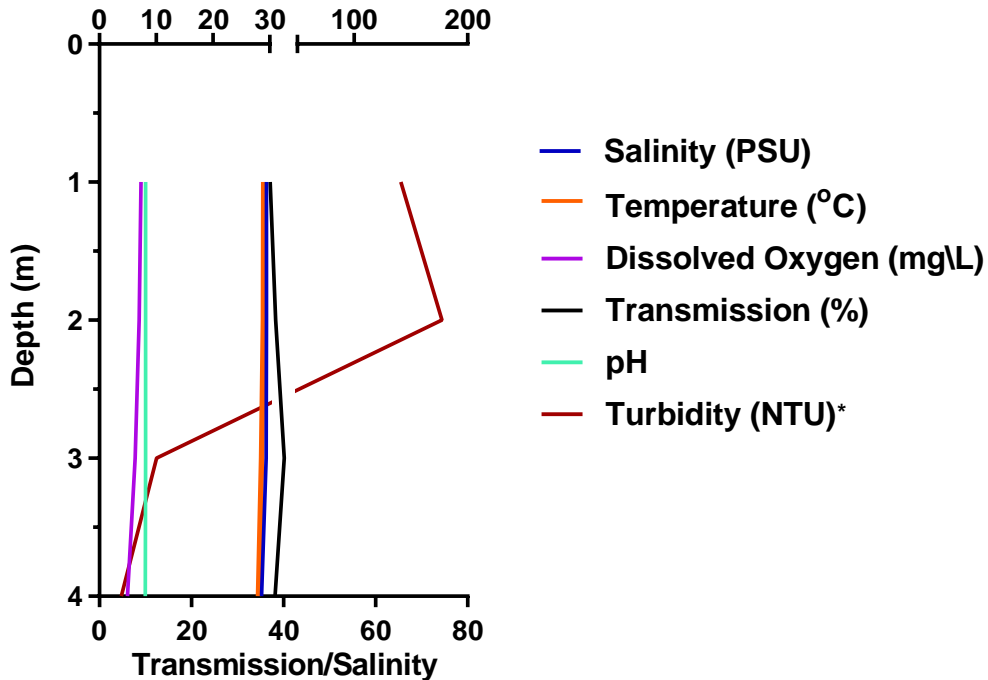
Temperature/DO/pH/Turbidity



*- Error in Turbidity reading at 2.0 m.

B18-10044

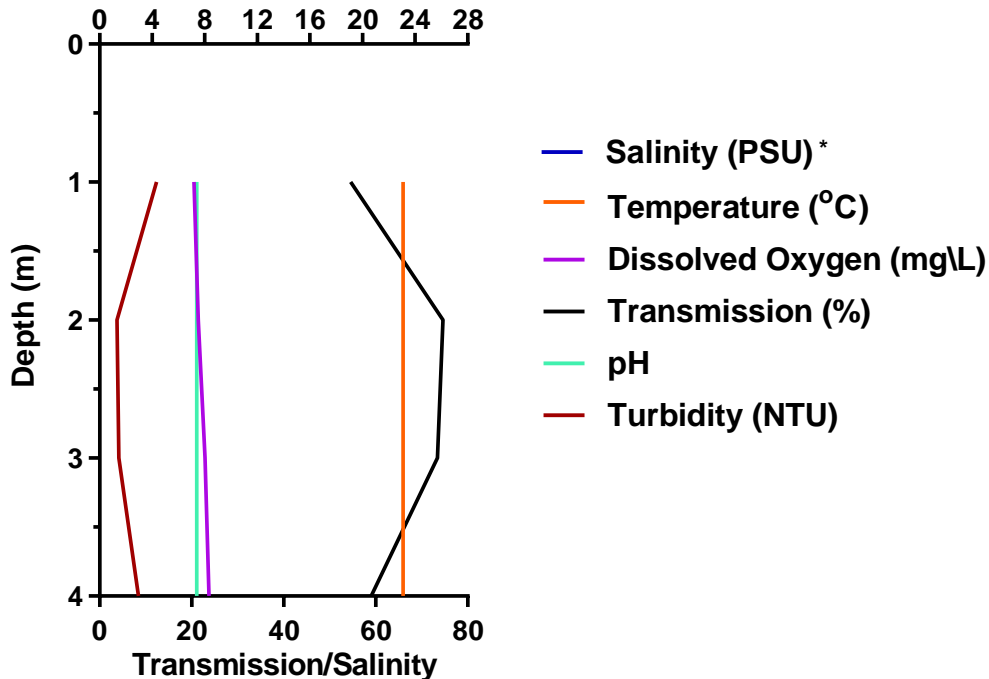
Temperature/DO/pH/Turbidity



*-High turbidity readings at 1.0 and 2.0 meters were likely influenced by sediment stirred up by a nearby barge.

B18-10065

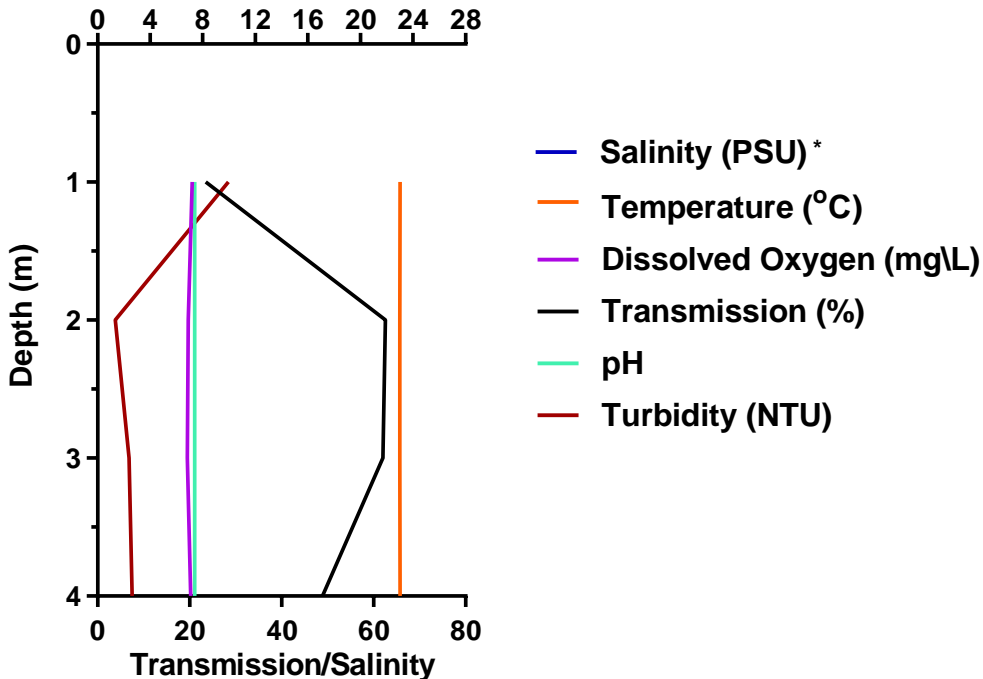
Temperature/DO/pH/Turbidity



*- Data excluded due to unusually low salinity from CTD, likely due to a rain event in Dana Point. The salinity at the surface measured 33.41 PSU according to water quality meter surface readings for this station.

B18-10066

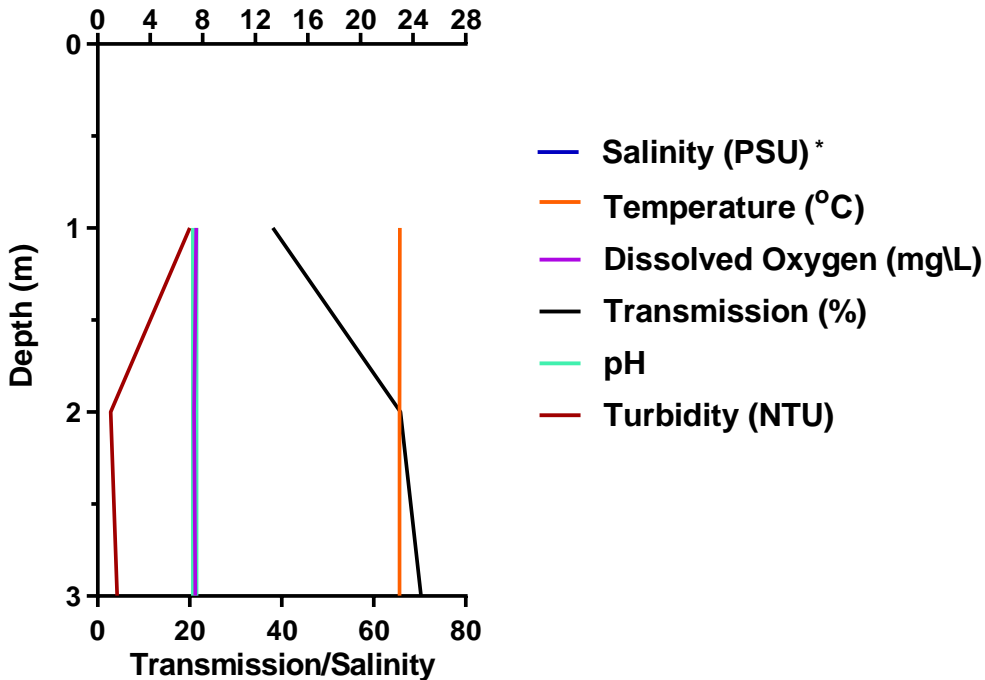
Temperature/DO/pH/Turbidity



*- Data excluded due to unusually low salinity from CTD, likely due to a rain event in Dana Point. The salinity at the surface measured 33.30 PSU according to water quality meter surface readings for this station.

B18-10067

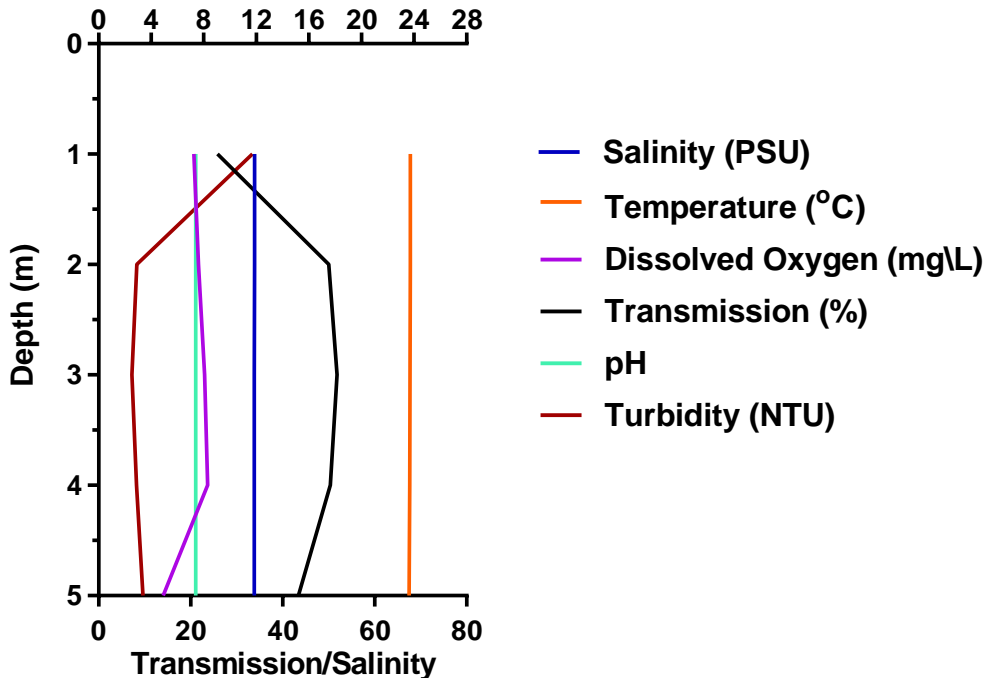
Temperature/DO/pH/Turbidity



*- Data excluded due to unusually low salinity from CTD, likely due to a rain event in Dana Point. The salinity at the surface measured 33.84 PSU according to water quality meter surface readings for this station.

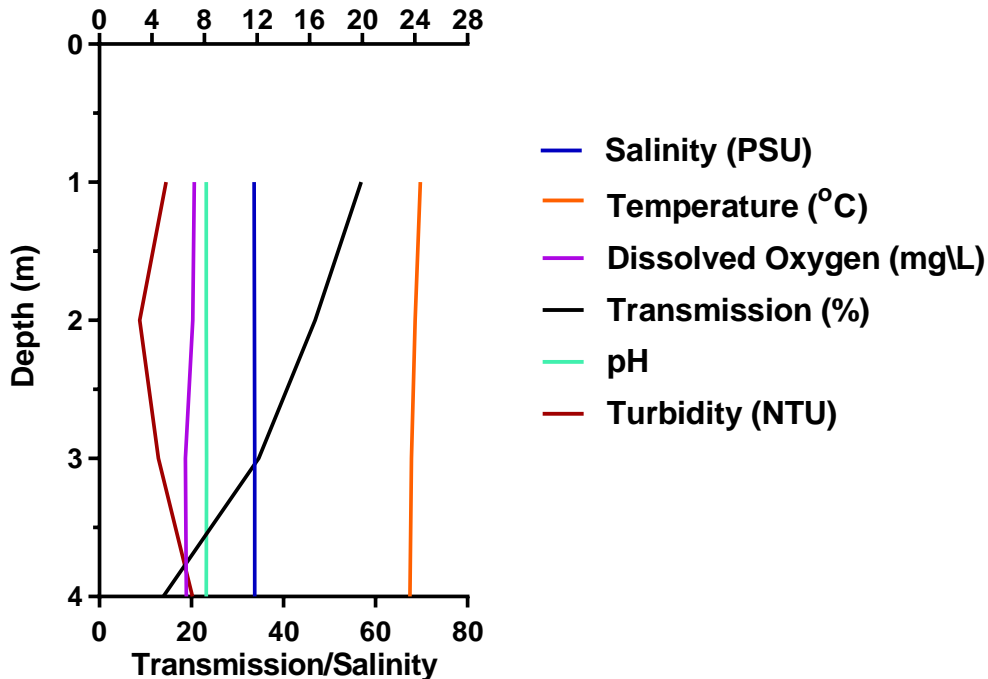
B18-10068

Temperature/DO/pH/Turbidity



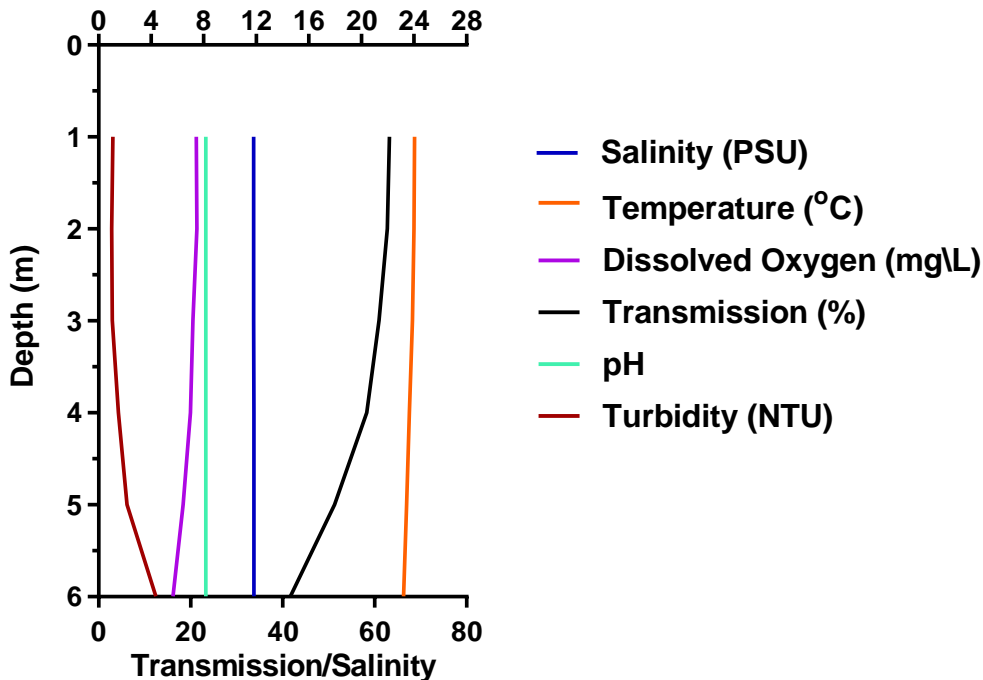
B18-10069

Temperature/DO/pH/Turbidity



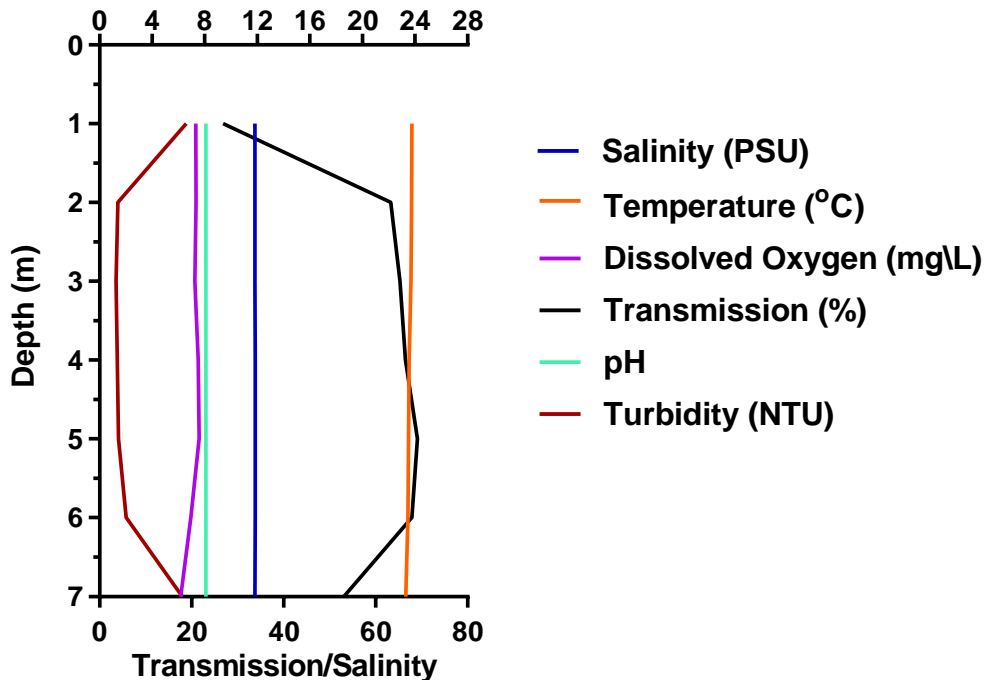
B18-10070

Temperature/DO/pH/Turbidity



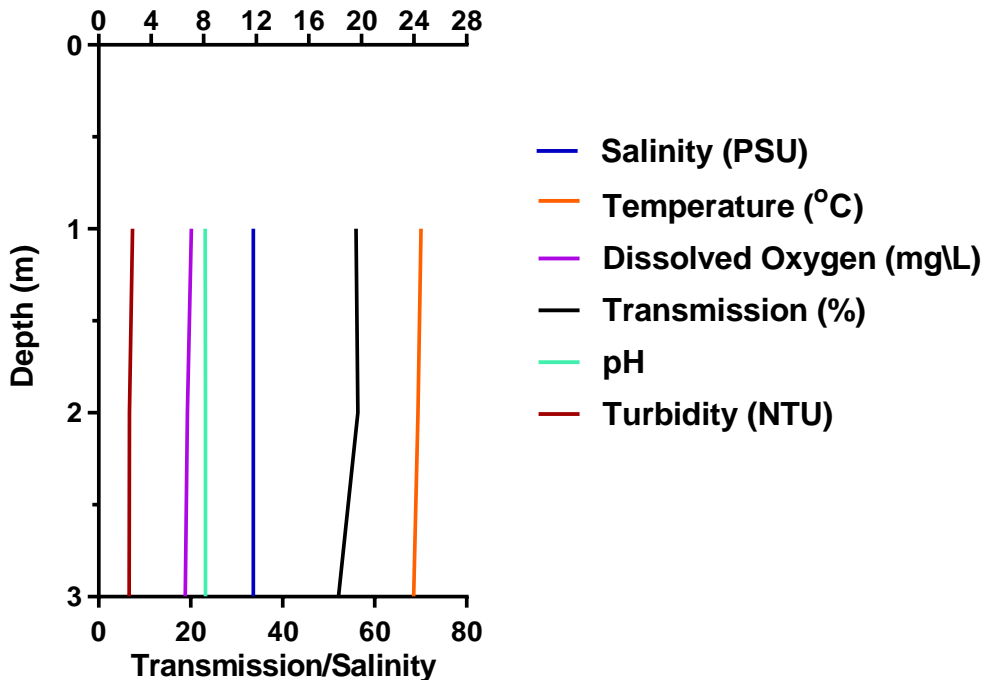
B18-10071

Temperature/DO/pH/Turbidity



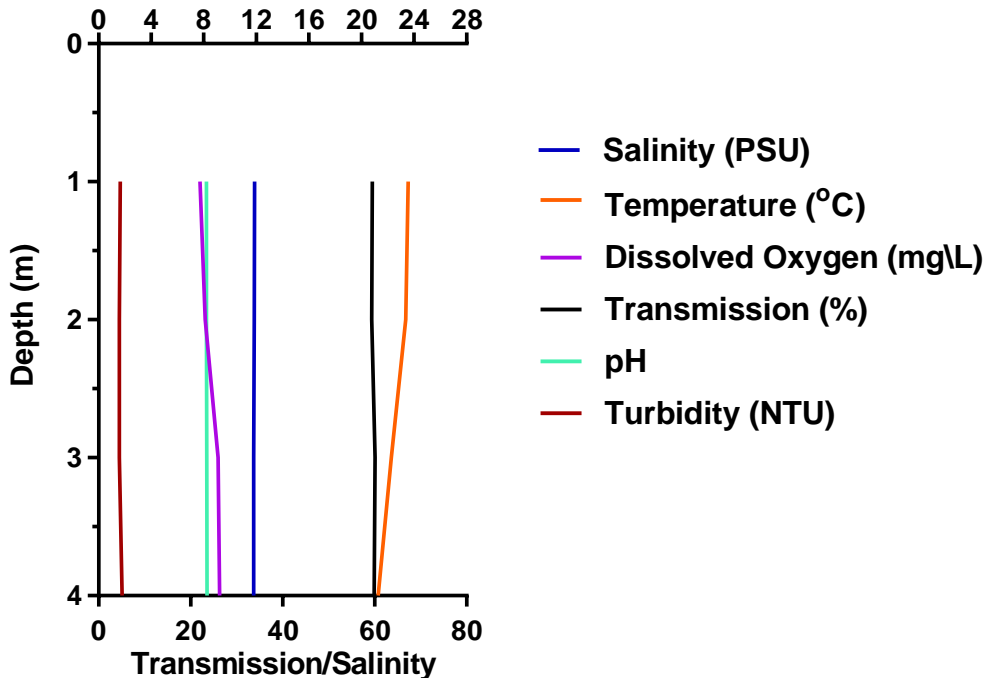
B18-10072

Temperature/DO/pH/Turbidity



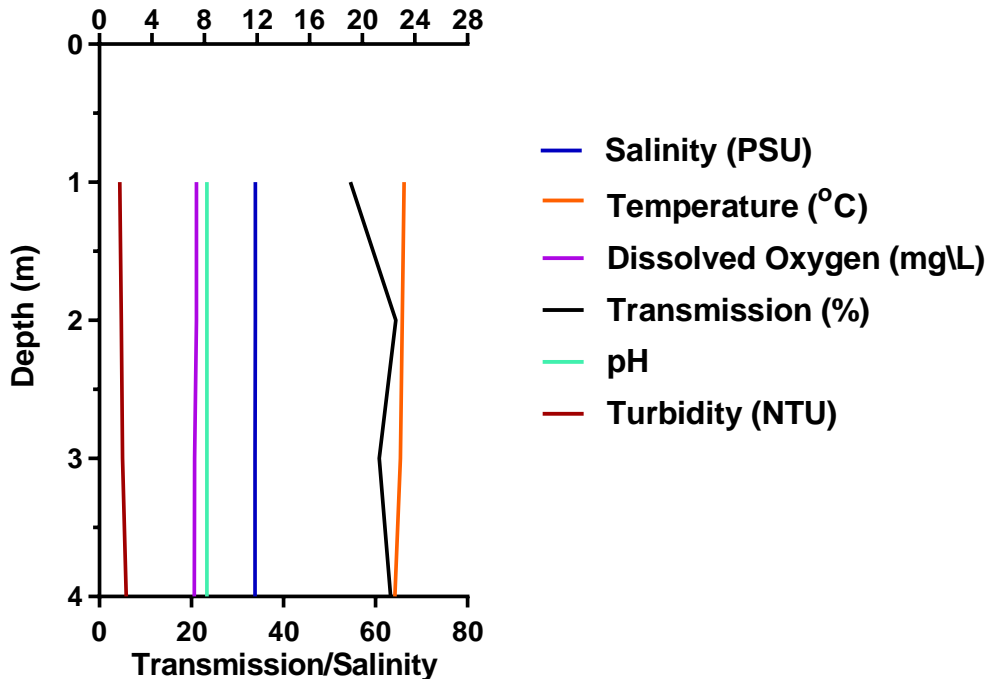
B18-10073

Temperature/DO/pH/Turbidity



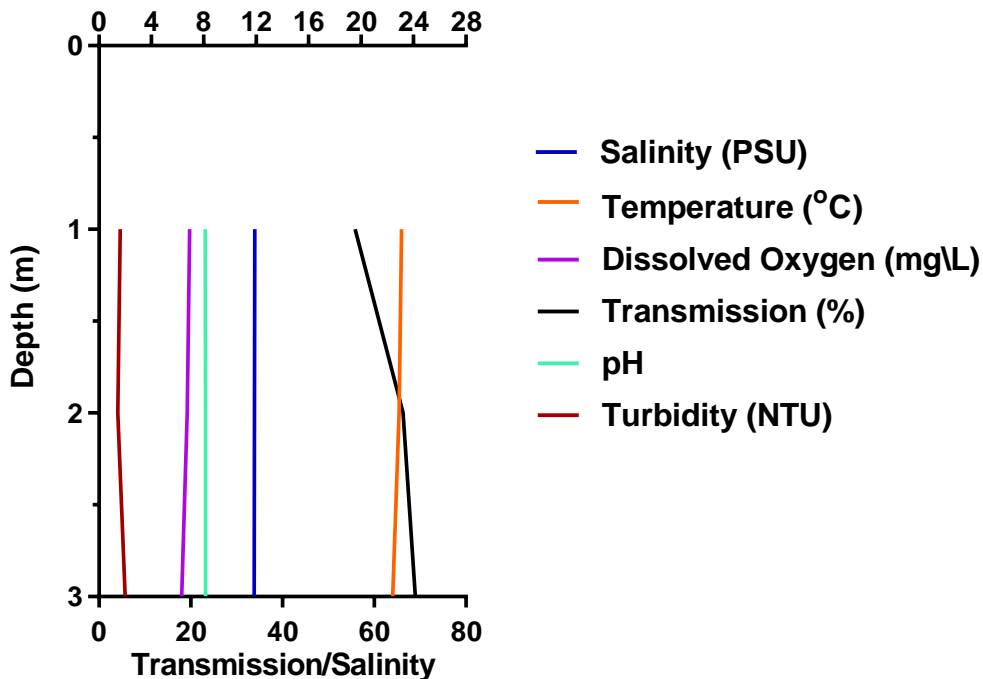
B18-10074

Temperature/DO/pH/Turbidity



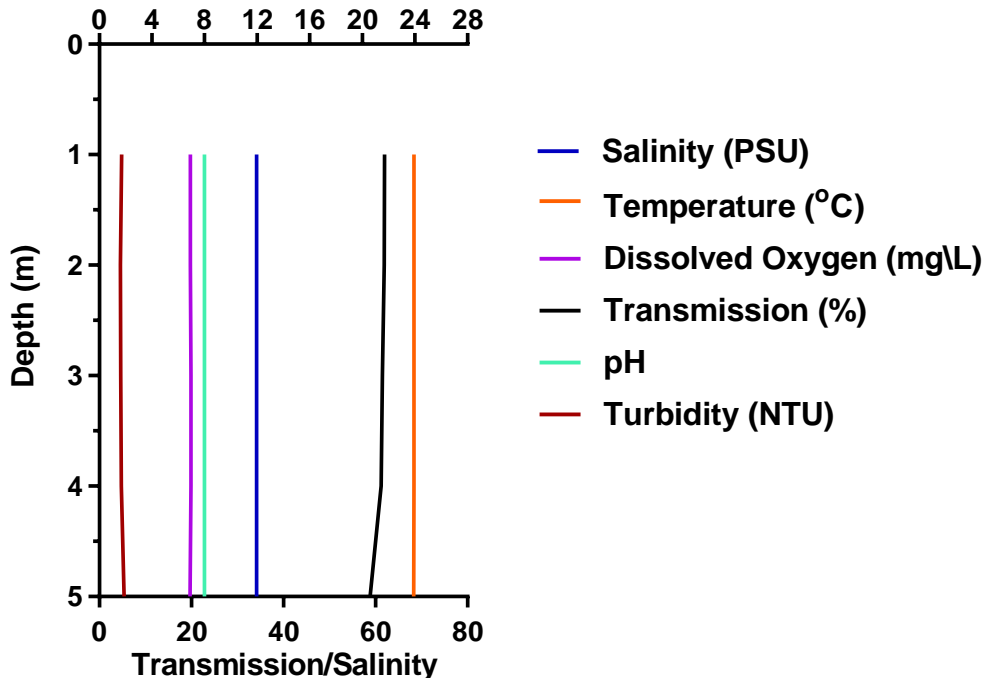
B18-10075

Temperature/DO/pH/Turbidity



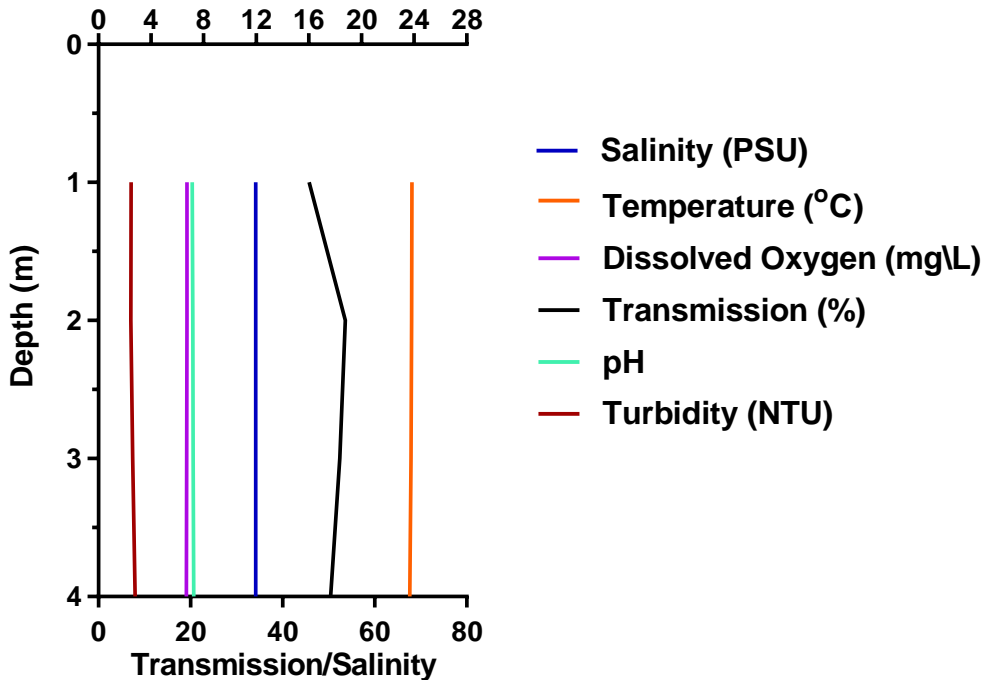
B18-10076

Temperature/DO/pH/Turbidity



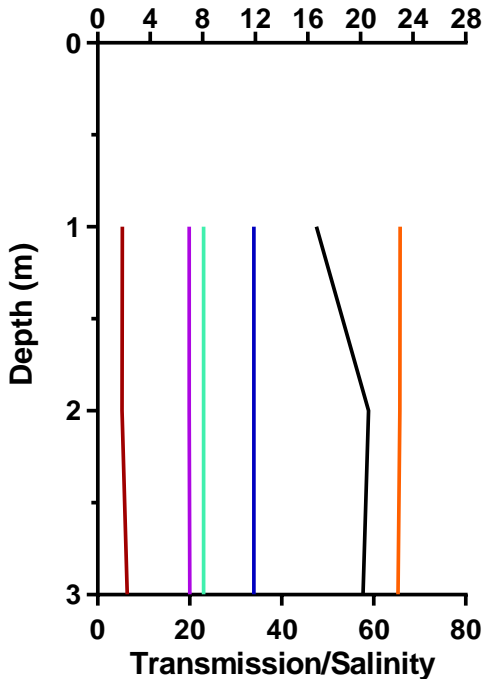
B18-10077

Temperature/DO/pH/Turbidity



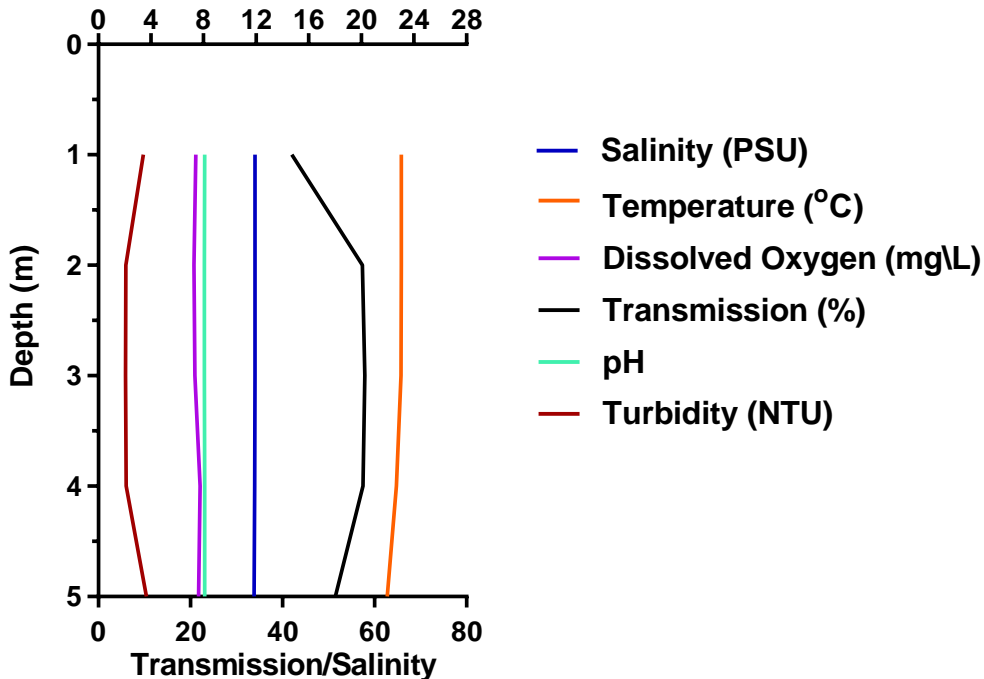
B18-10078

Temperature/DO/pH/Turbidity



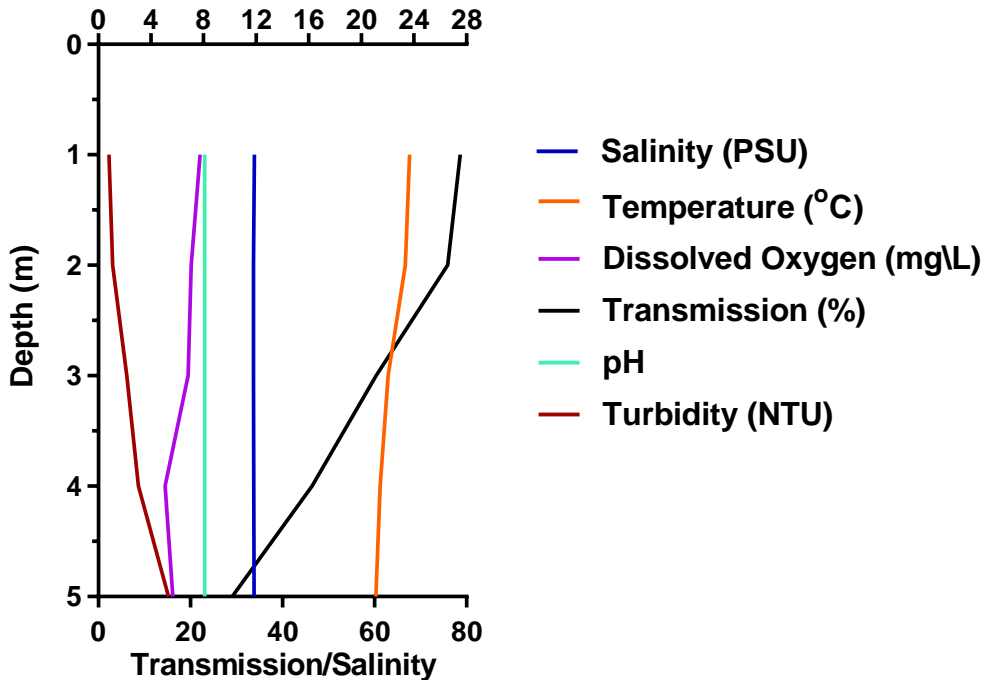
B18-10079

Temperature/DO/pH/Turbidity



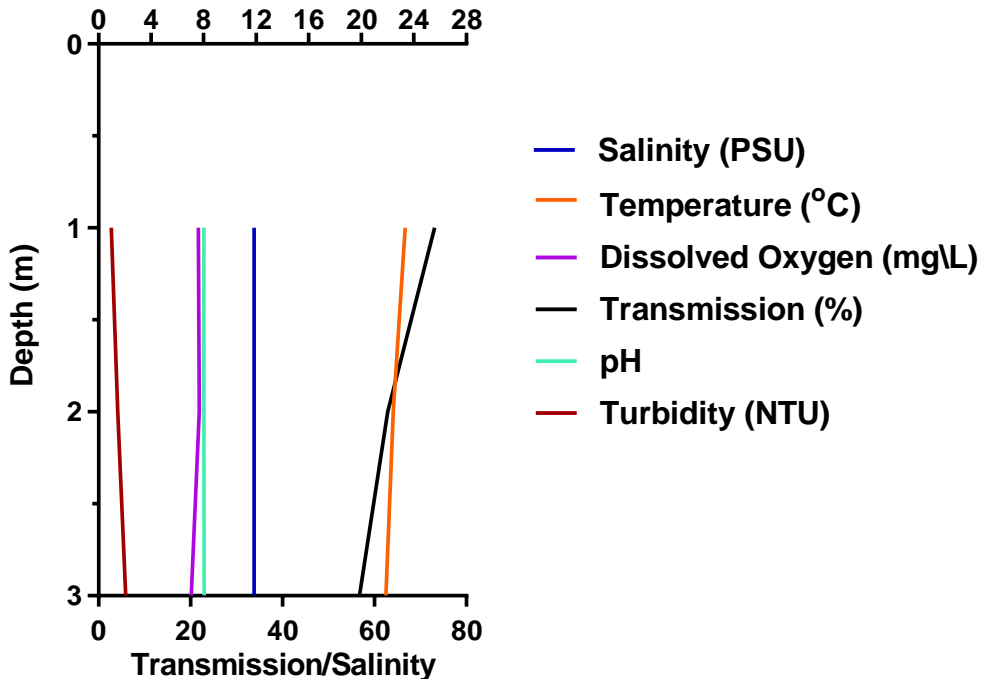
B18-10080

Temperature/DO/pH/Turbidity



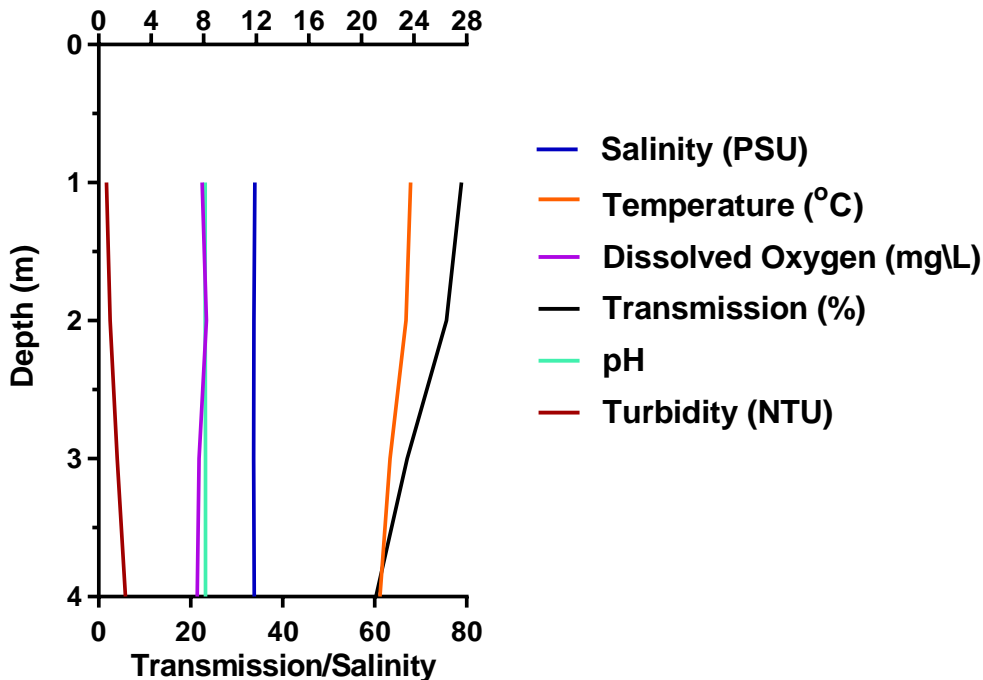
B18-10081

Temperature/DO/pH/Turbidity



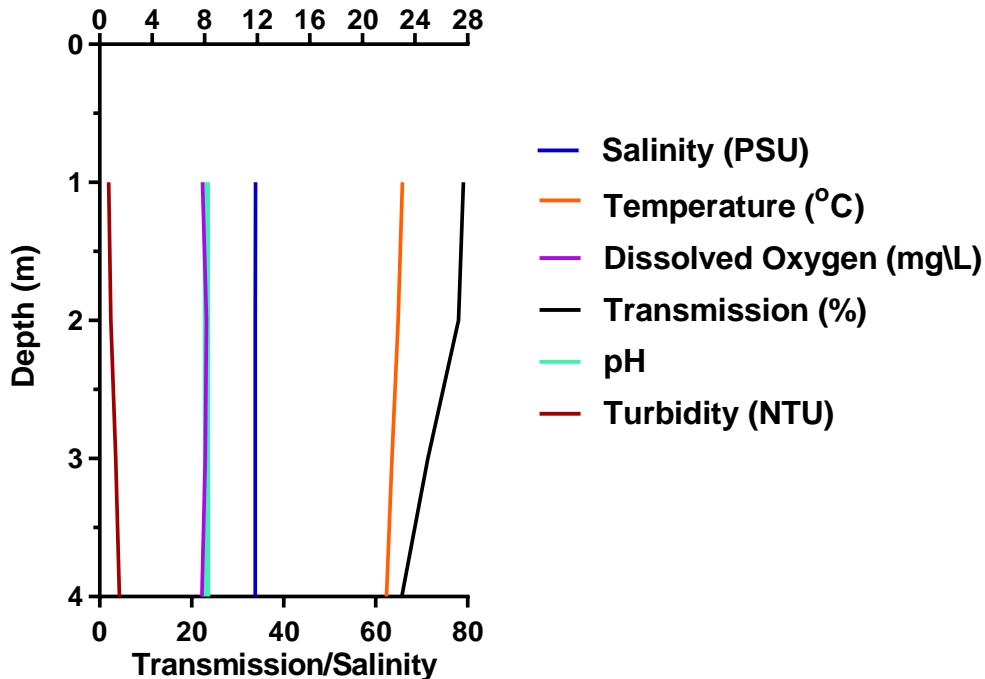
B18-10082

Temperature/DO/pH/Turbidity



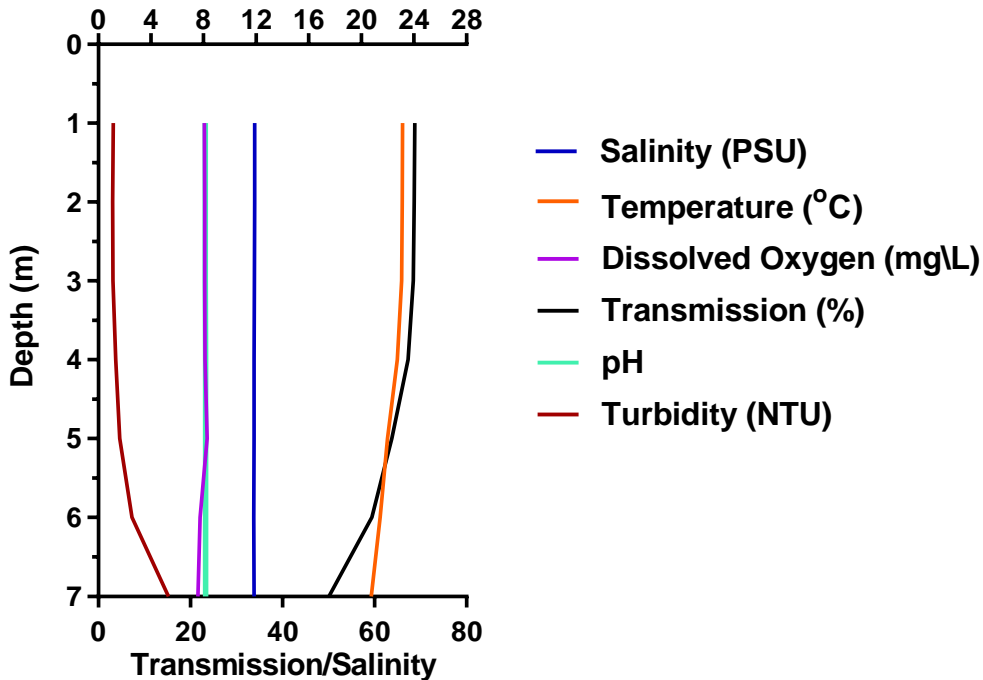
B18-10083

Temperature/DO/pH/Turbidity



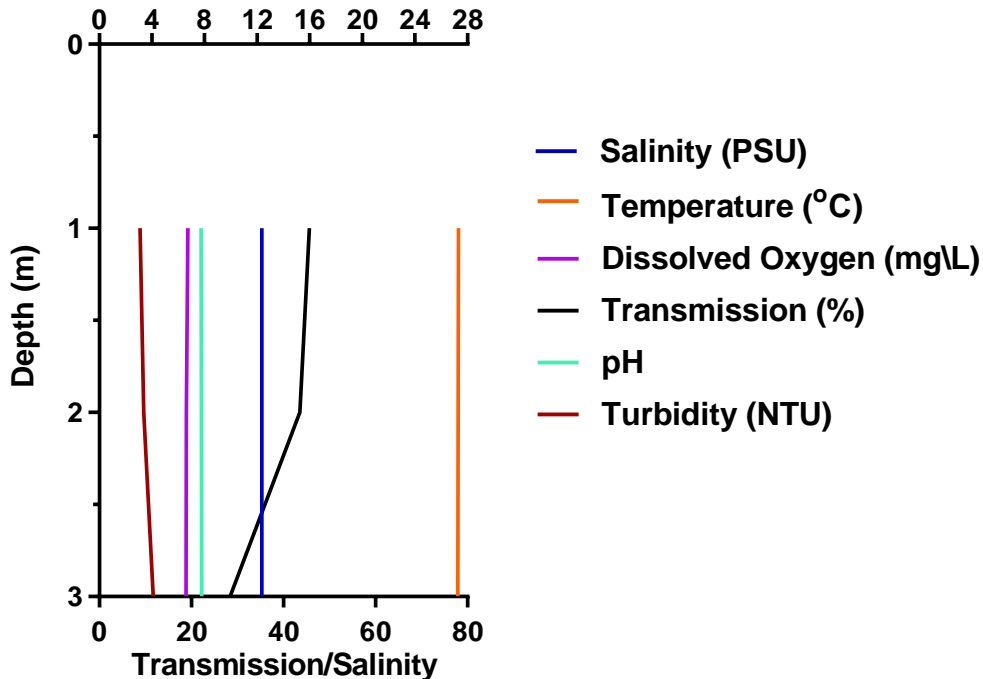
B18-10084

Temperature/DO/pH/Turbidity



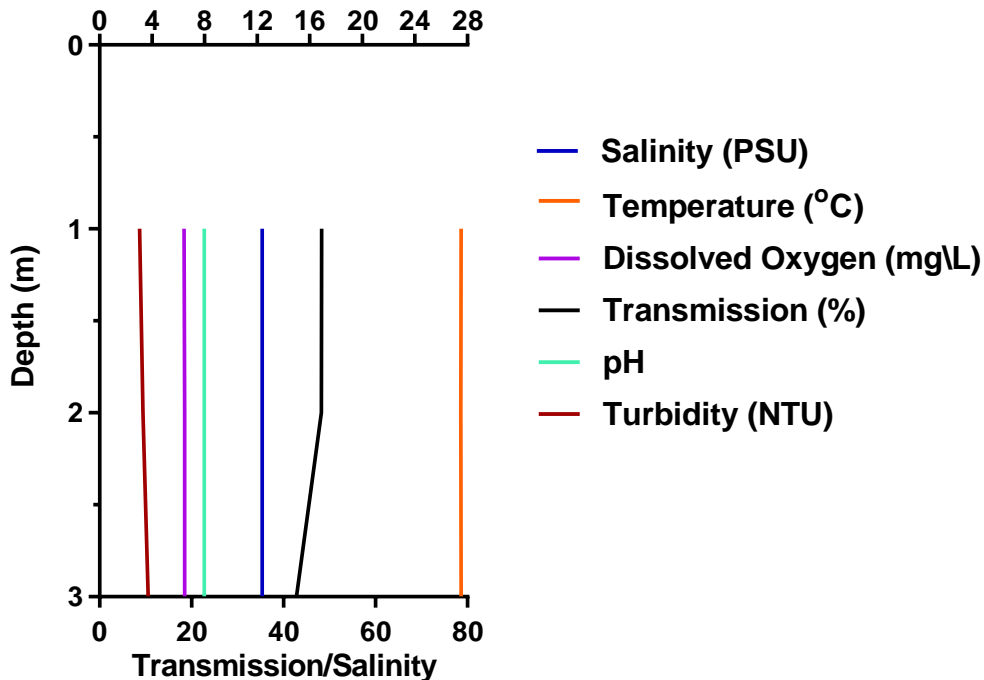
B18-10085

Temperature/DO/pH/Turbidity



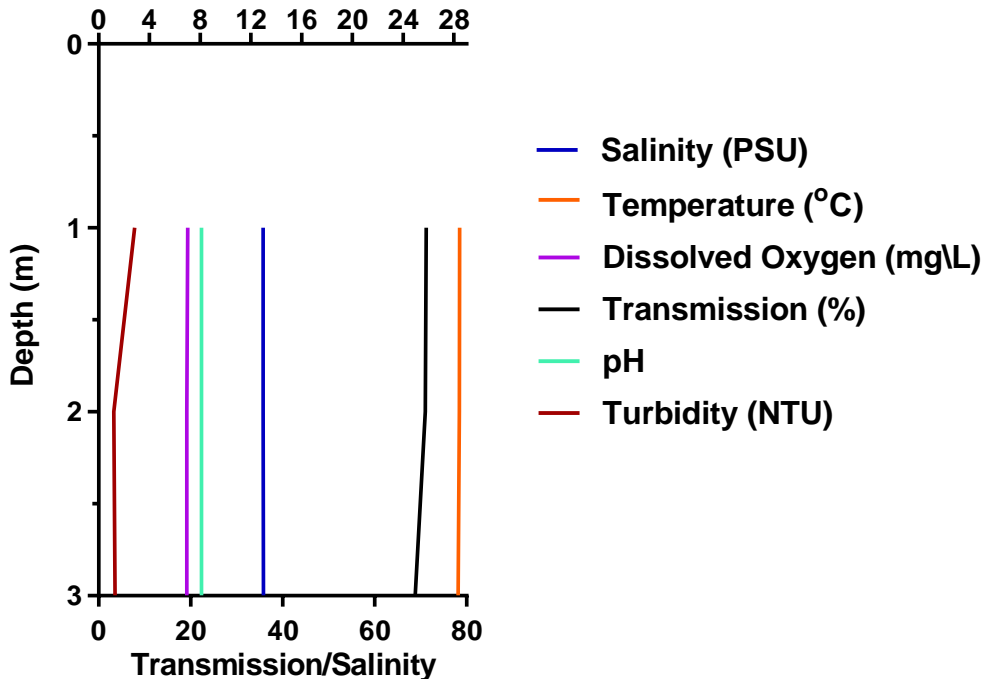
B18-10086

Temperature/DO/pH/Turbidity



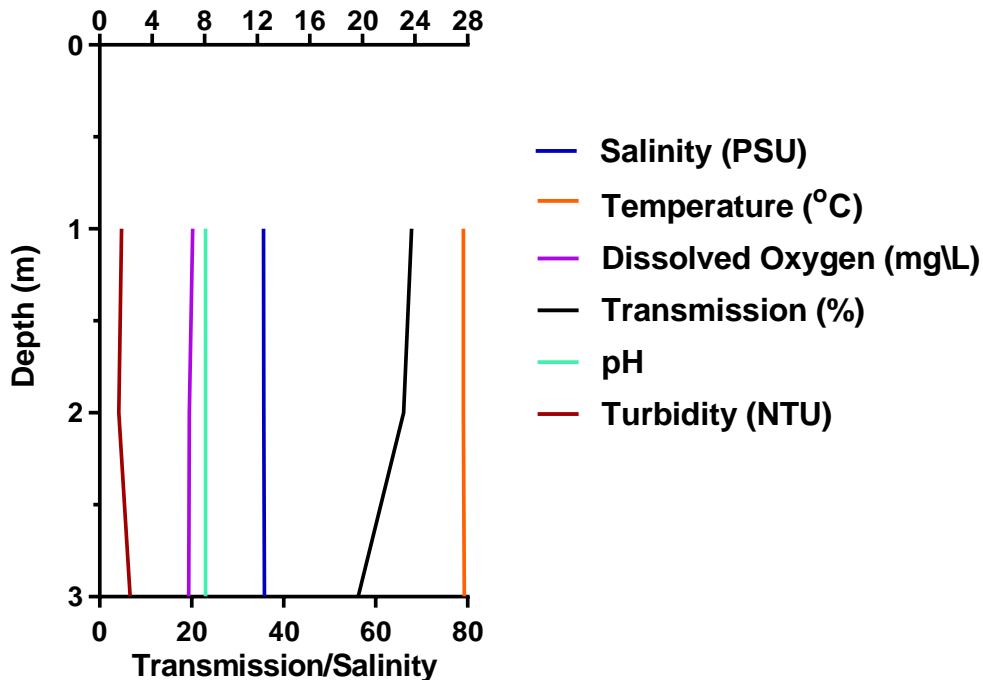
B18-10087

Temperature/DO/pH/Turbidity



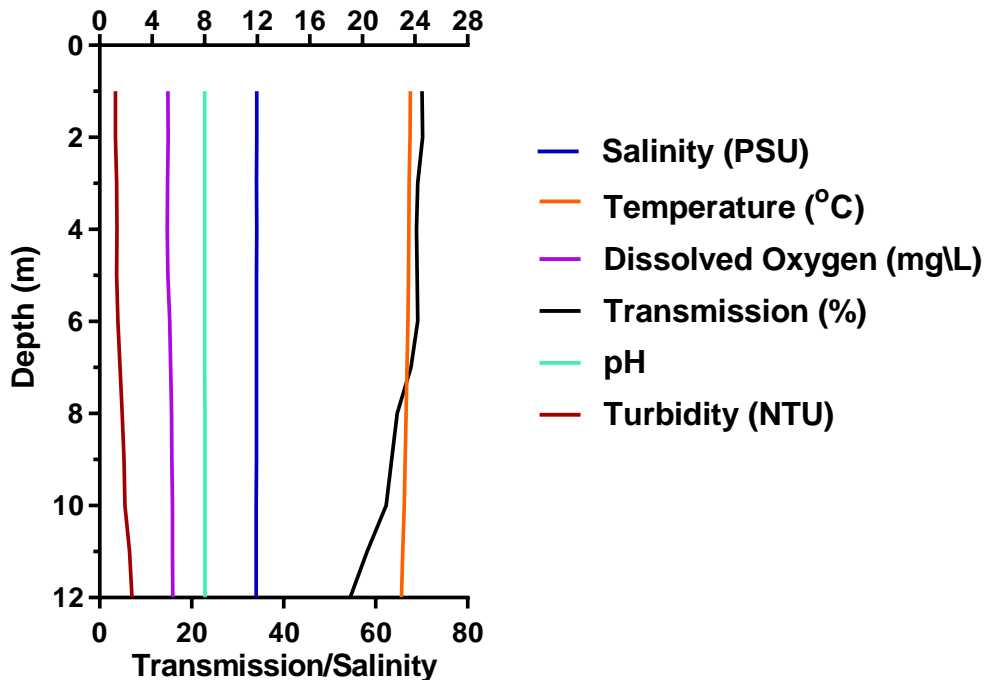
B18-10088

Temperature/DO/pH/Turbidity



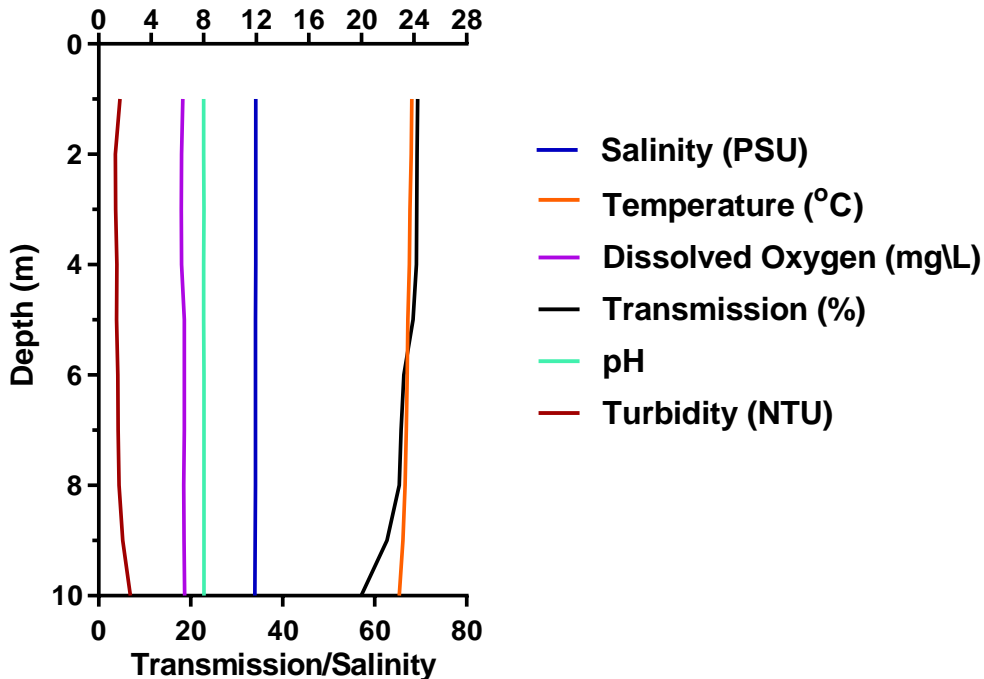
B18-10112

Temperature/DO/pH/Turbidity



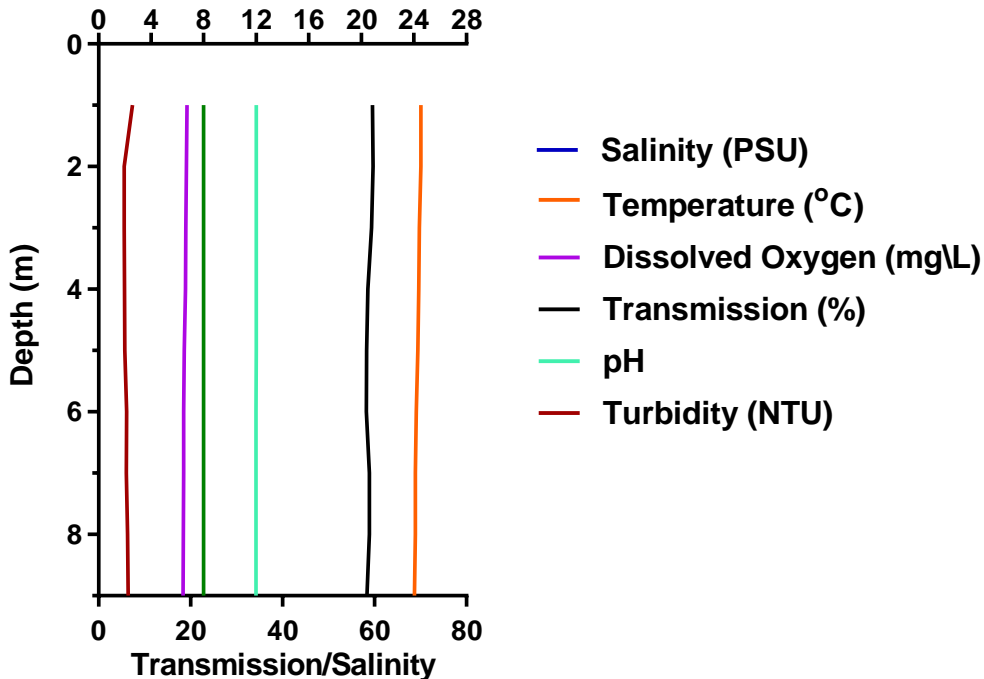
B18-10113

Temperature/DO/pH/Turbidity



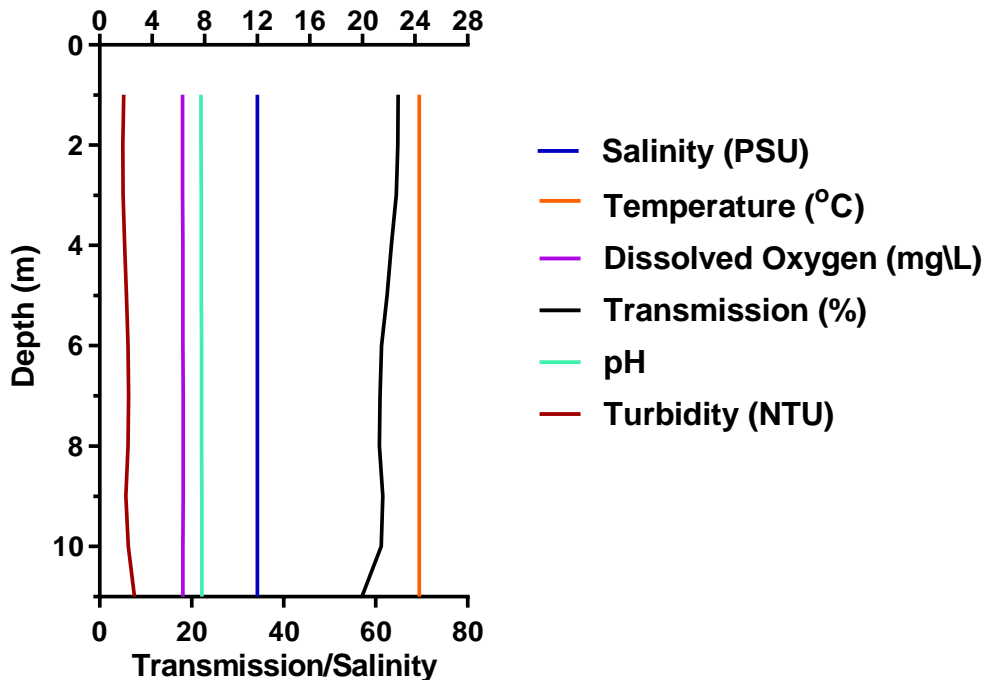
B18-10114

Temperature/DO/pH/Turbidity



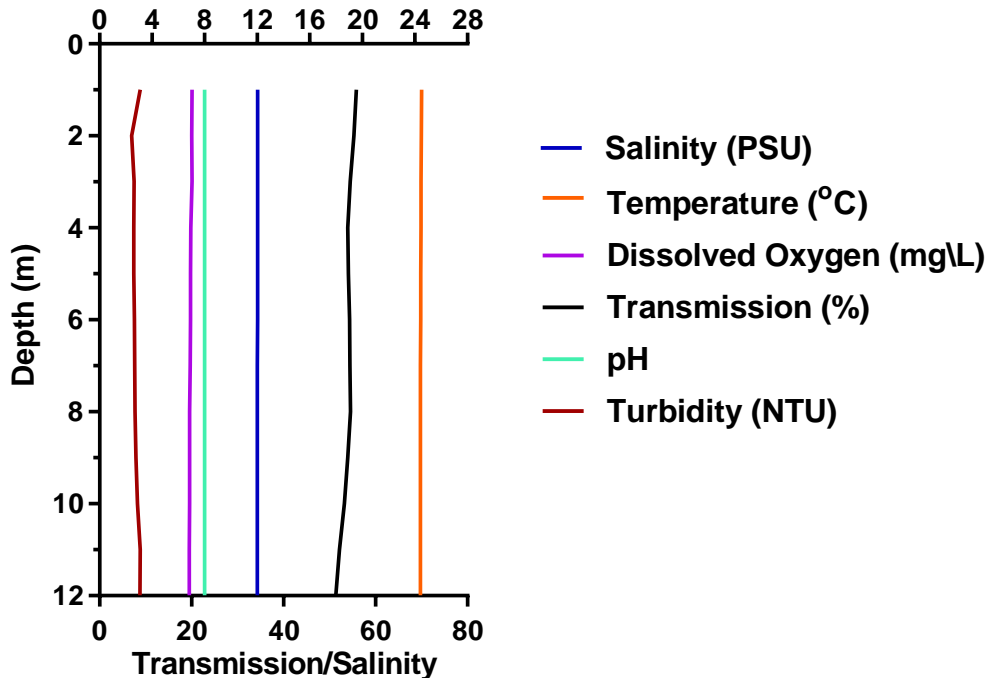
B18-10115

Temperature/DO/pH/Turbidity



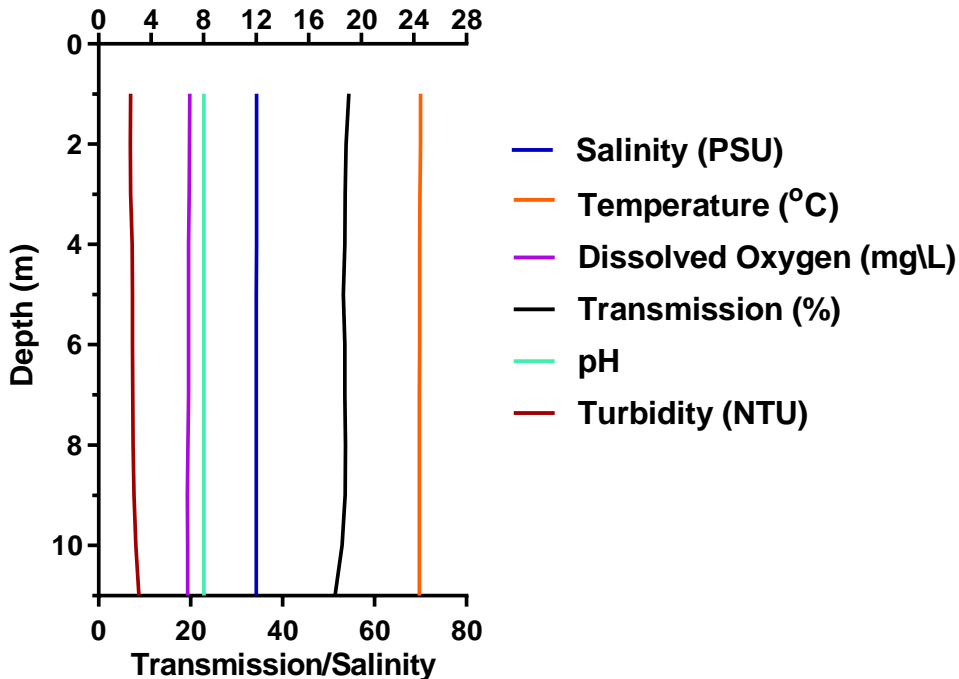
B18-10116

Temperature/DO/pH/Turbidity



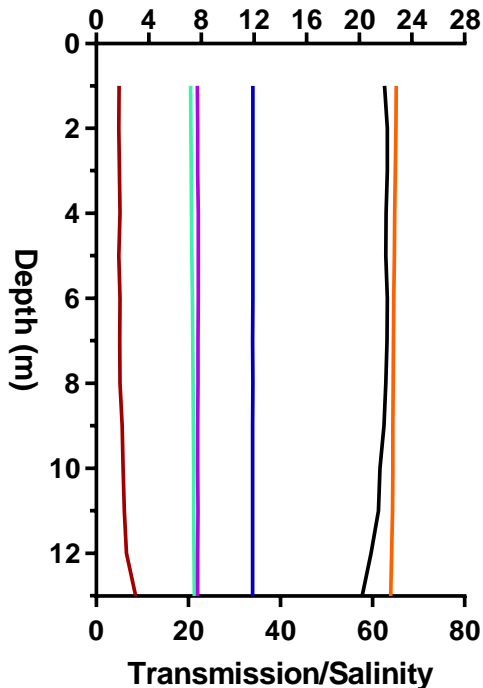
B18-10116-REP

Temperature/DO/pH/Turbidity



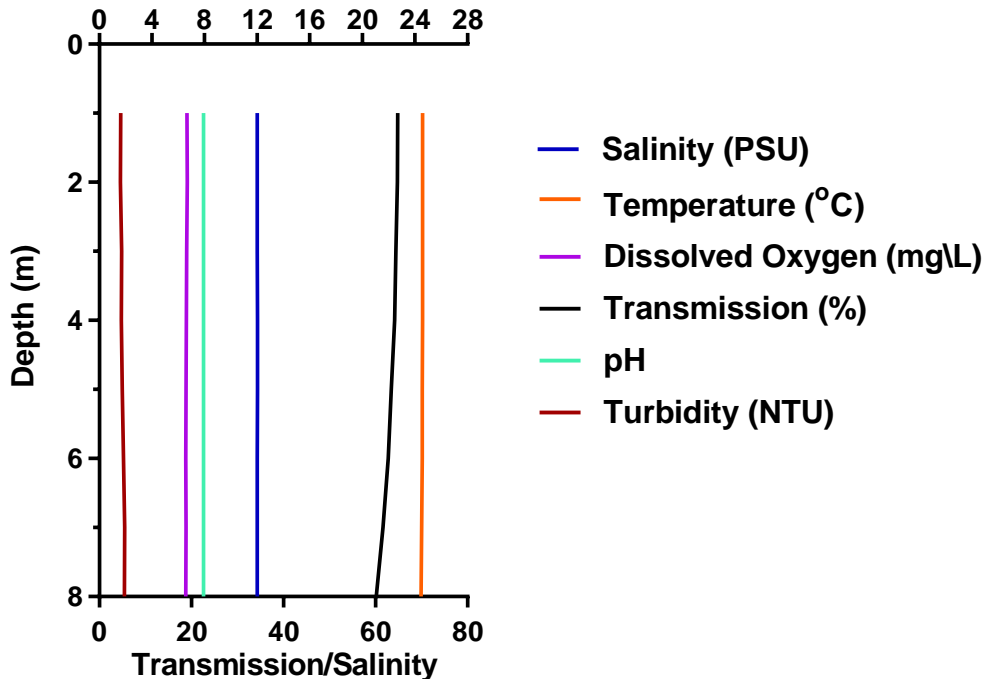
B18-10117

Temperature/DO/pH/Turbidity



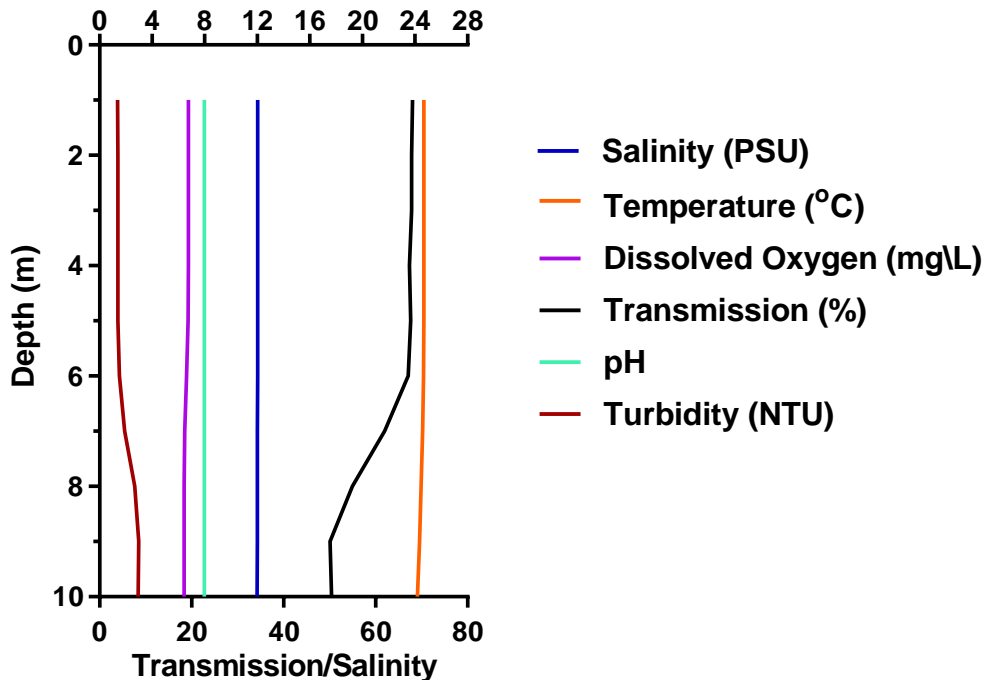
B18-10119

Temperature/DO/pH/Turbidity



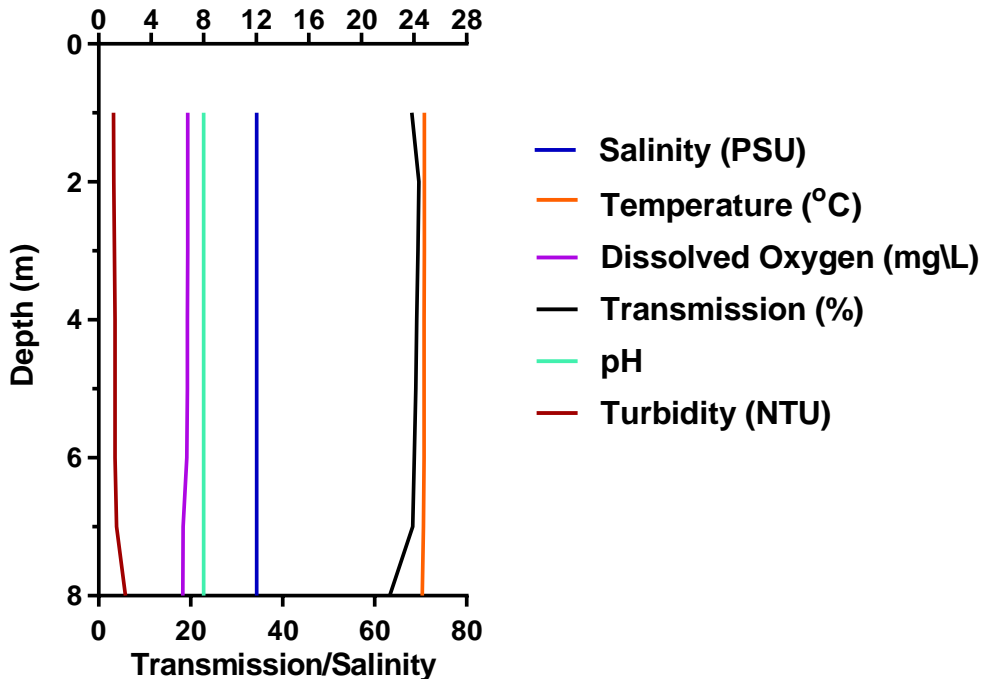
B18-10121

Temperature/DO/pH/Turbidity



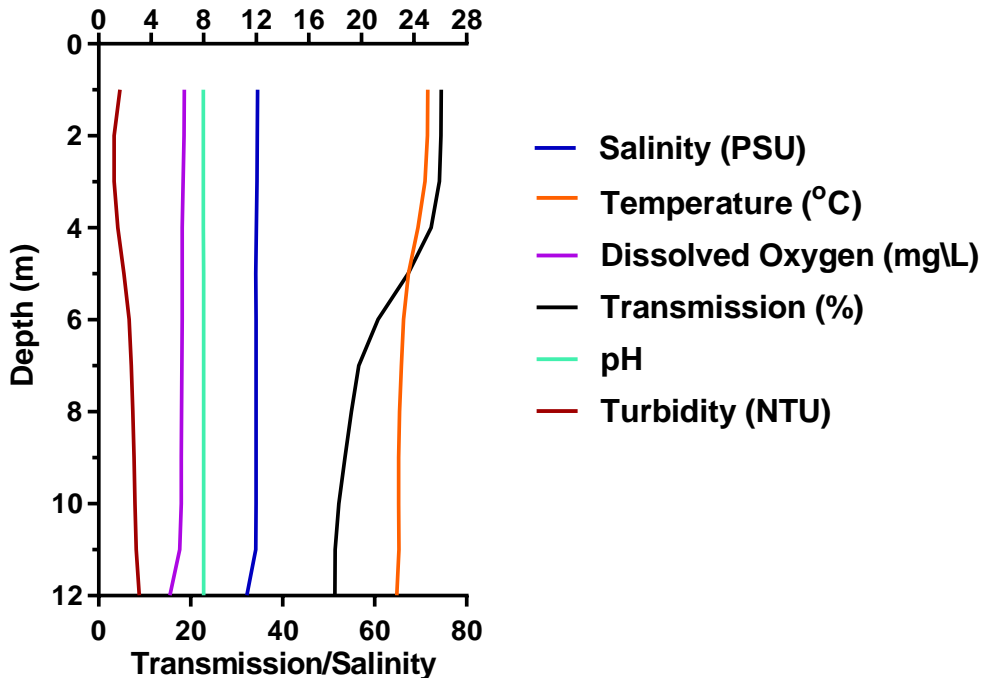
B18-10123

Temperature/DO/pH/Turbidity



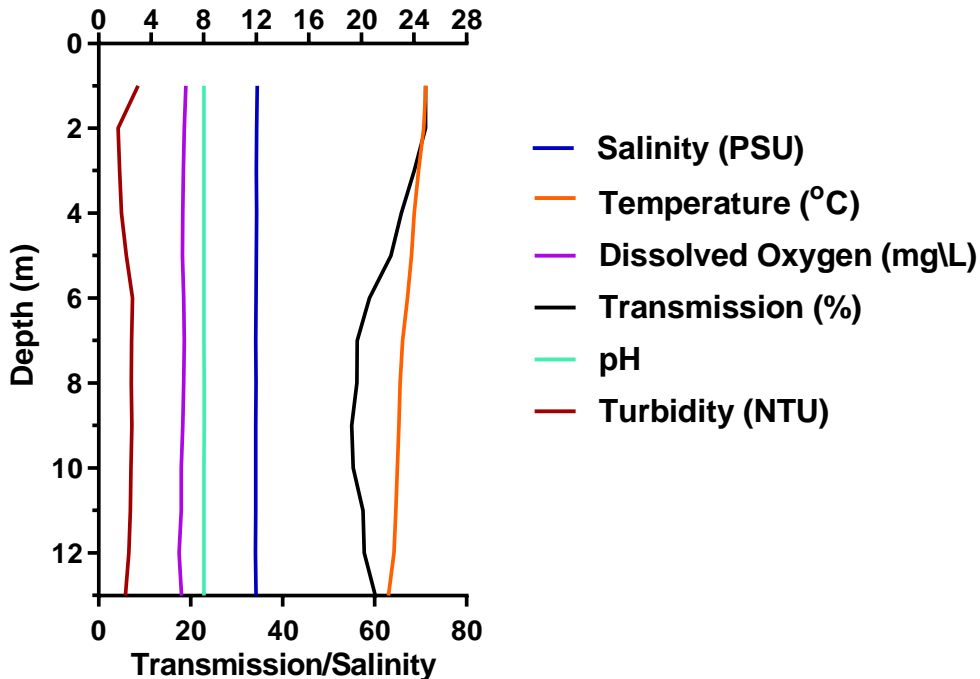
B18-10124

Temperature/DO/pH/Turbidity



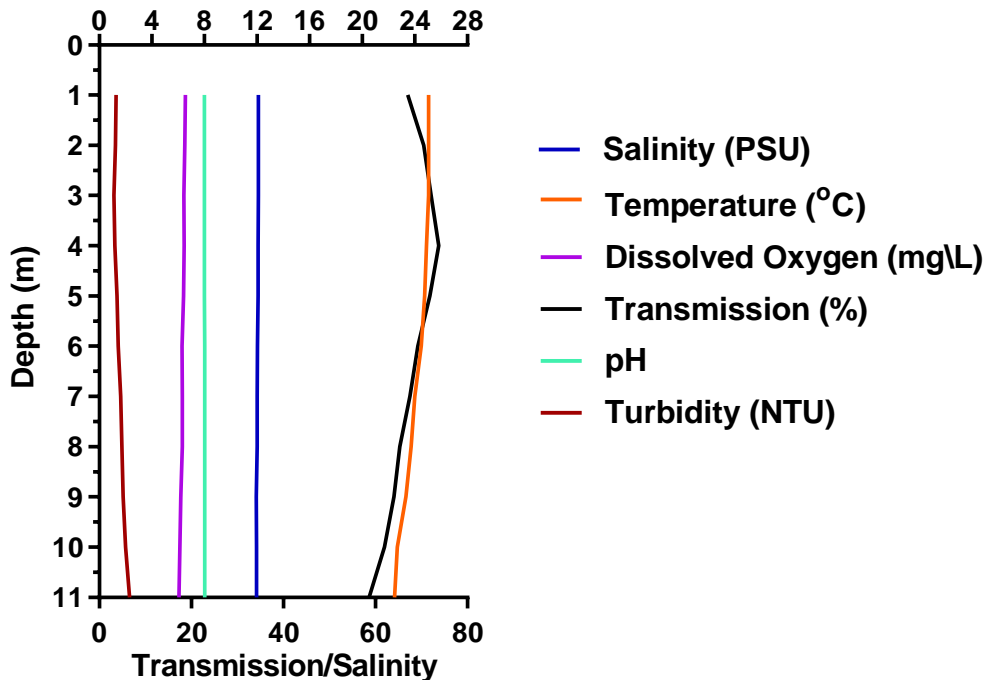
B18-10126

Temperature/DO/pH/Turbidity



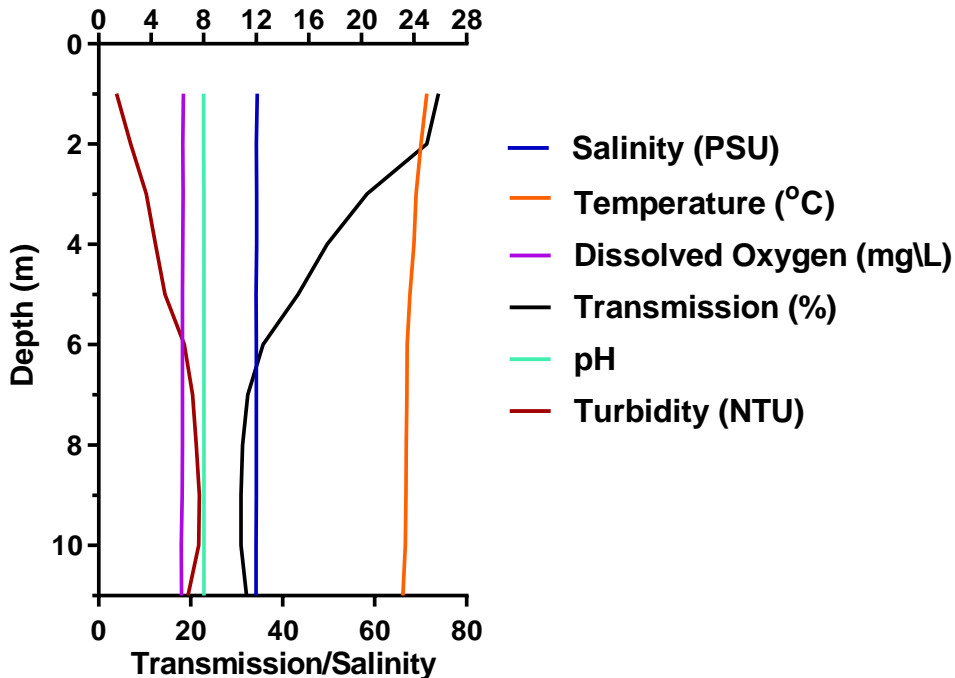
B18-10127

Temperature/DO/pH/Turbidity



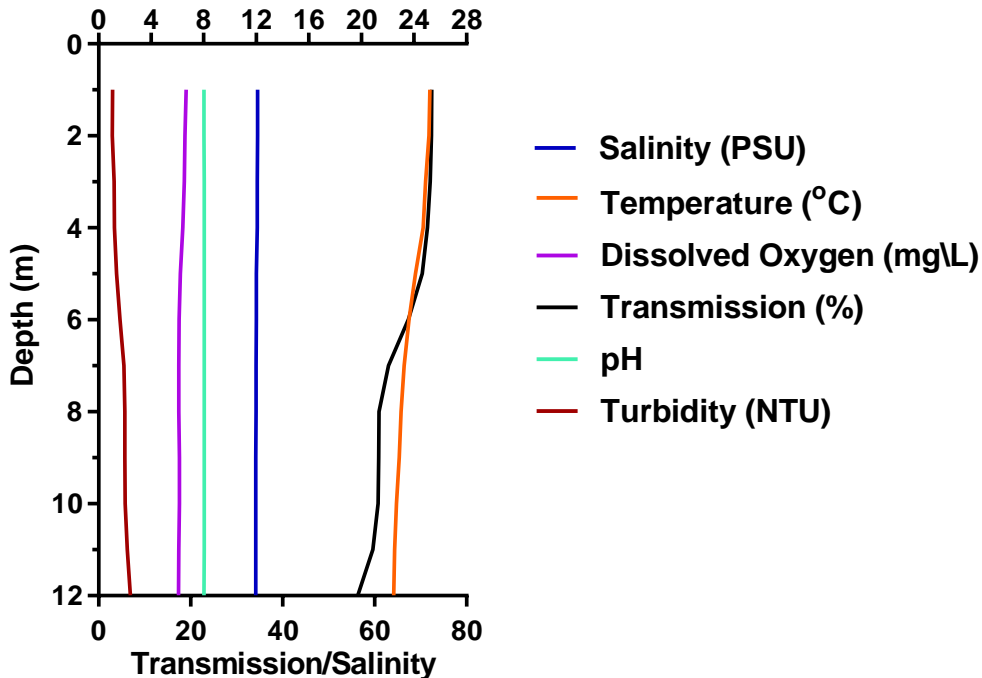
B18-10127-REP

Temperature/DO/pH/Turbidity



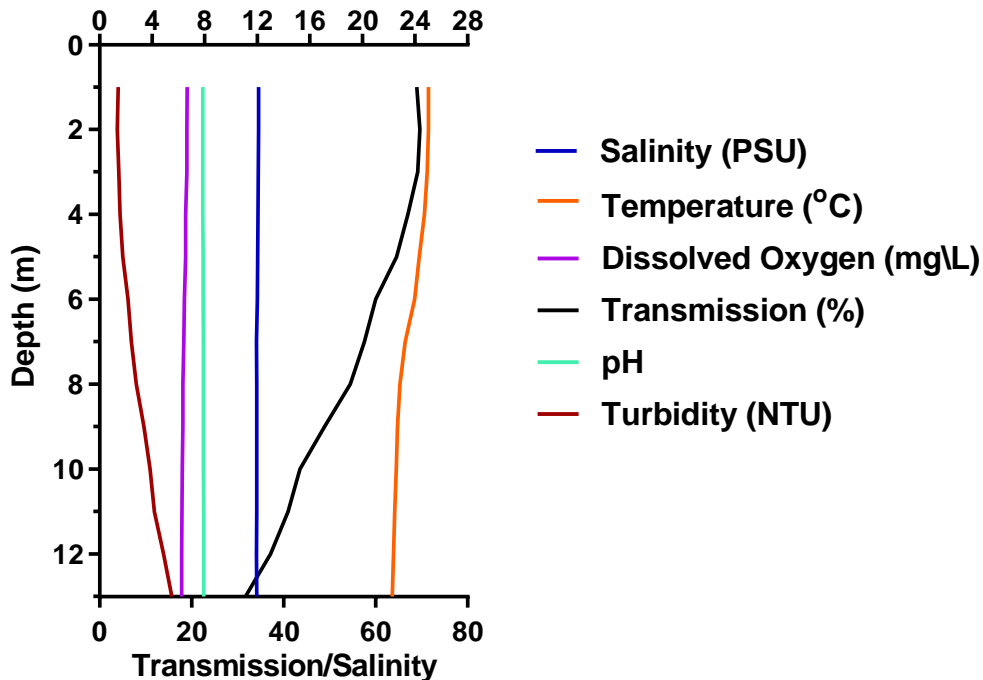
B18-10132

Temperature/DO/pH/Turbidity



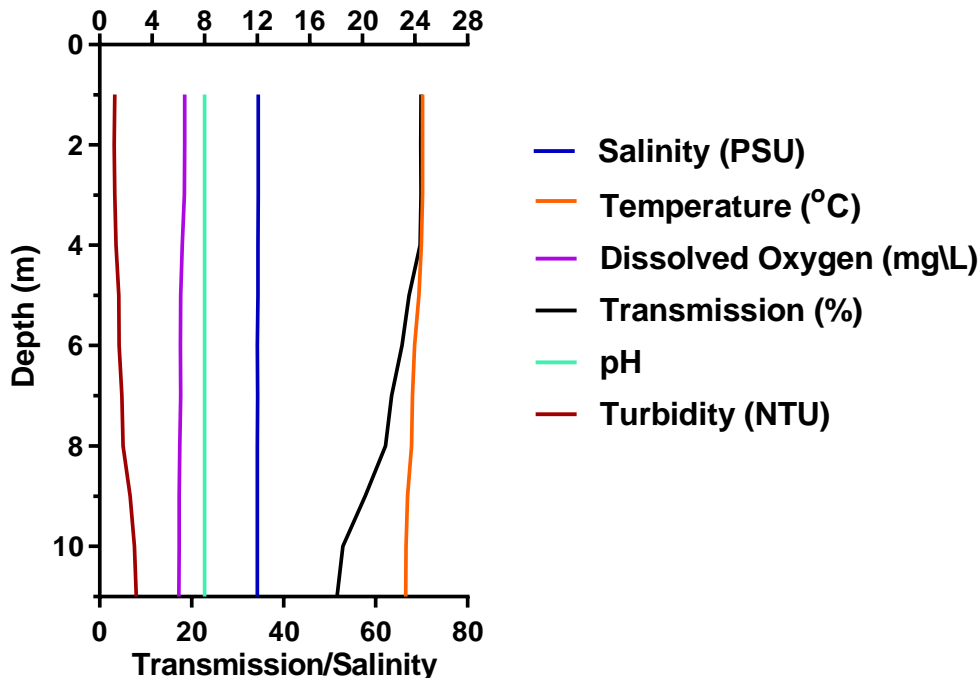
B18-10133

Temperature/DO/pH/Turbidity



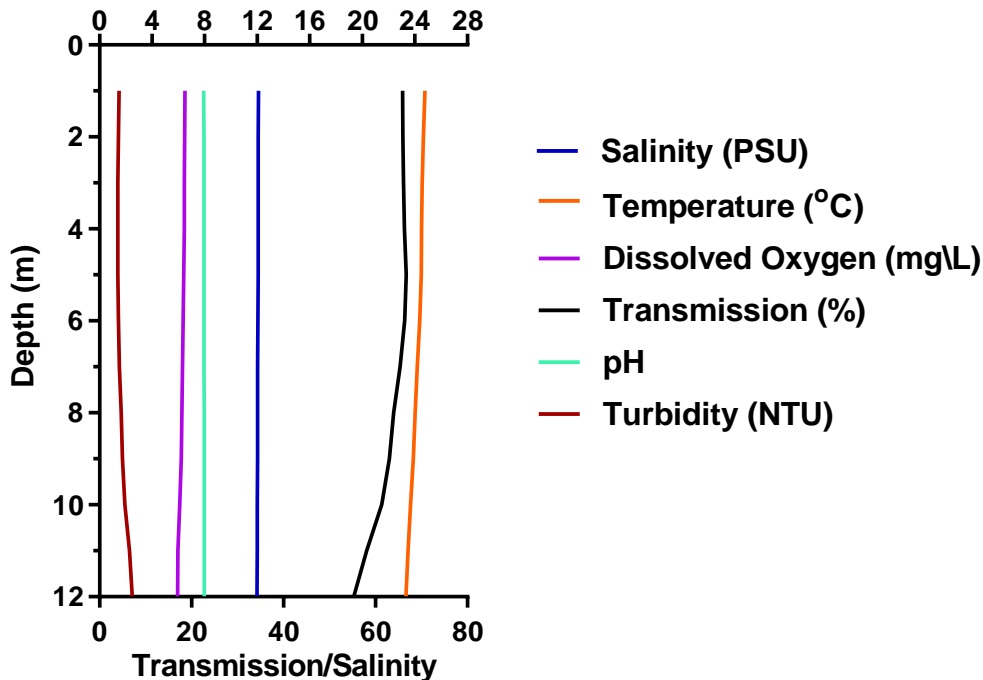
B18-10136

Temperature/DO/pH/Turbidity



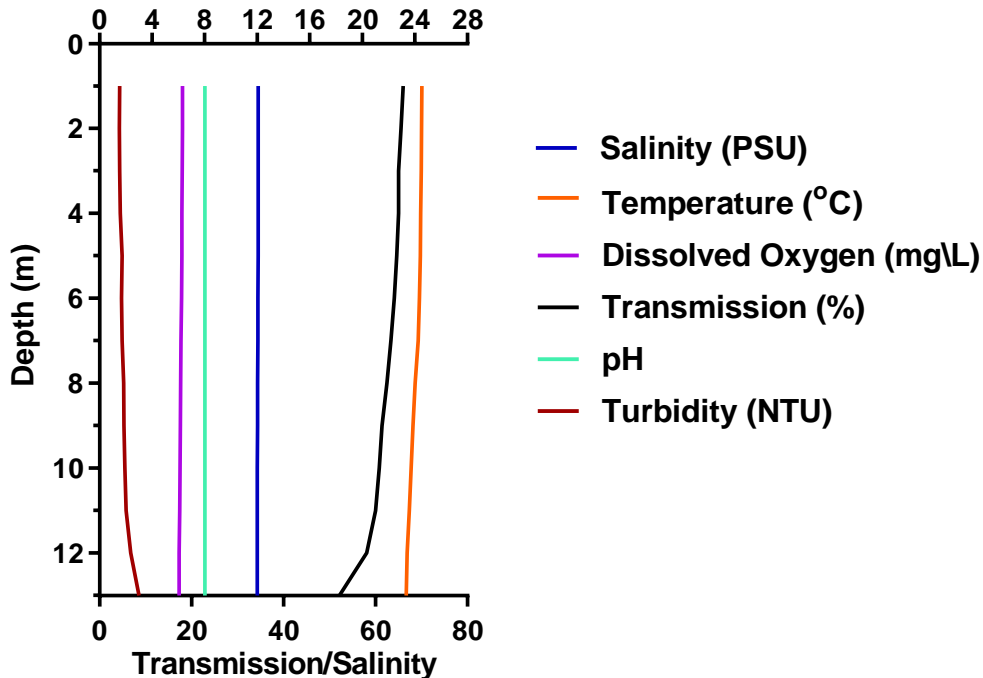
B18-10137

Temperature/DO/pH/Turbidity



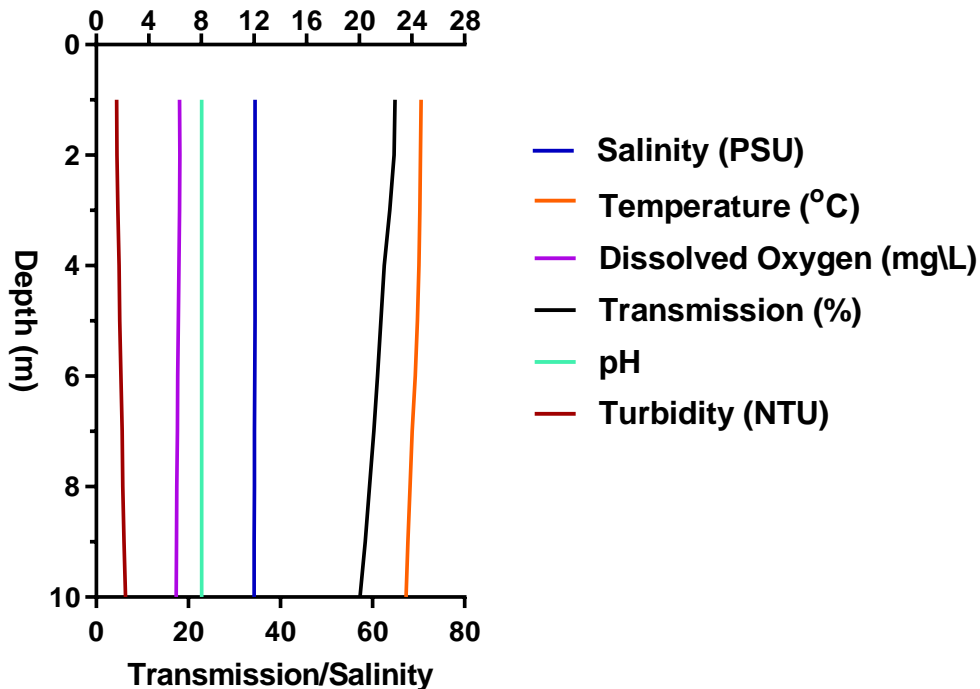
B18-10139

Temperature/DO/pH/Turbidity



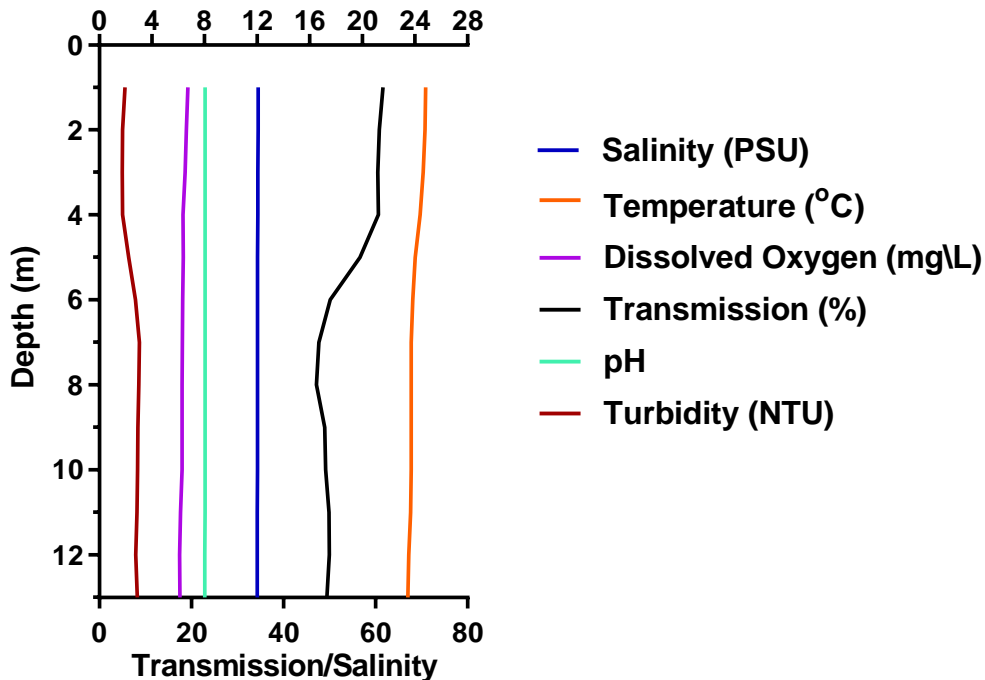
B18-10140

Temperature/DO/pH/Turbidity



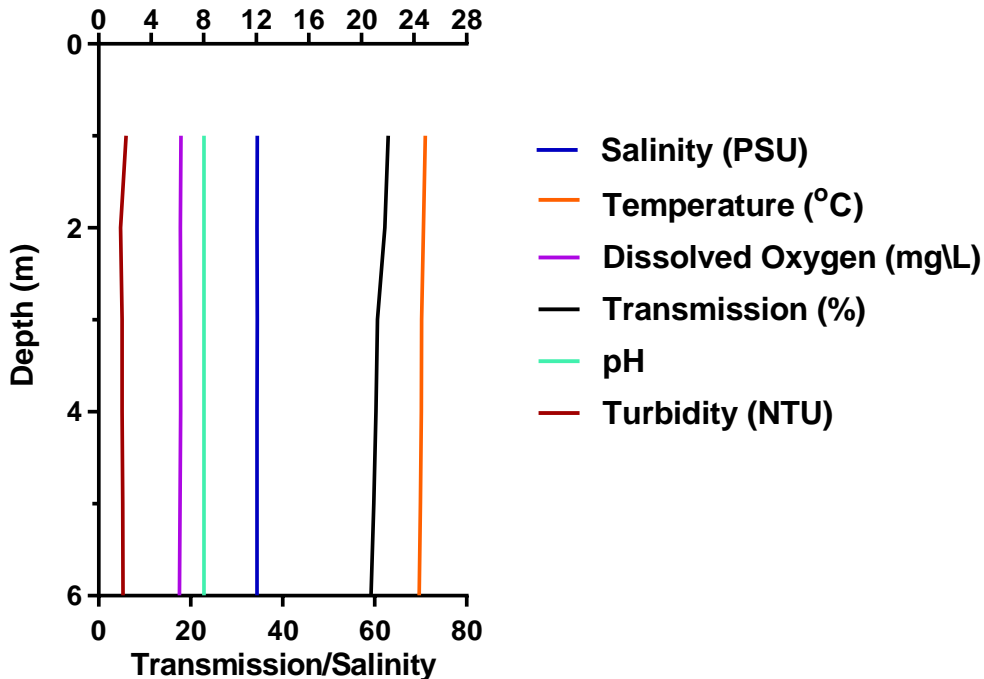
B18-10141

Temperature/DO/pH/Turbidity



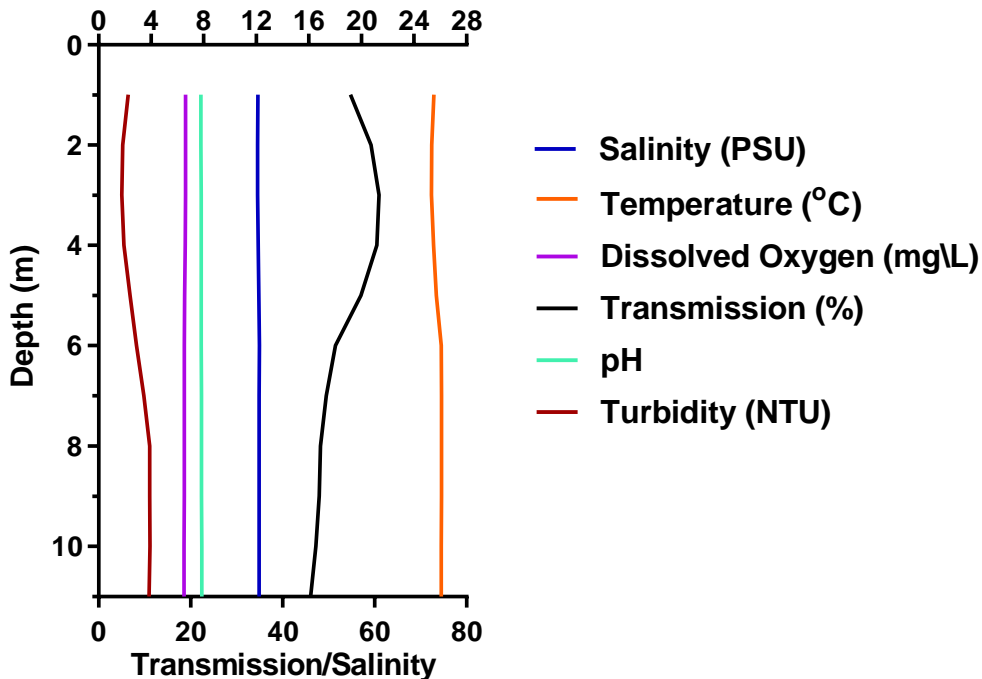
B18-10142

Temperature/DO/pH/Turbidity



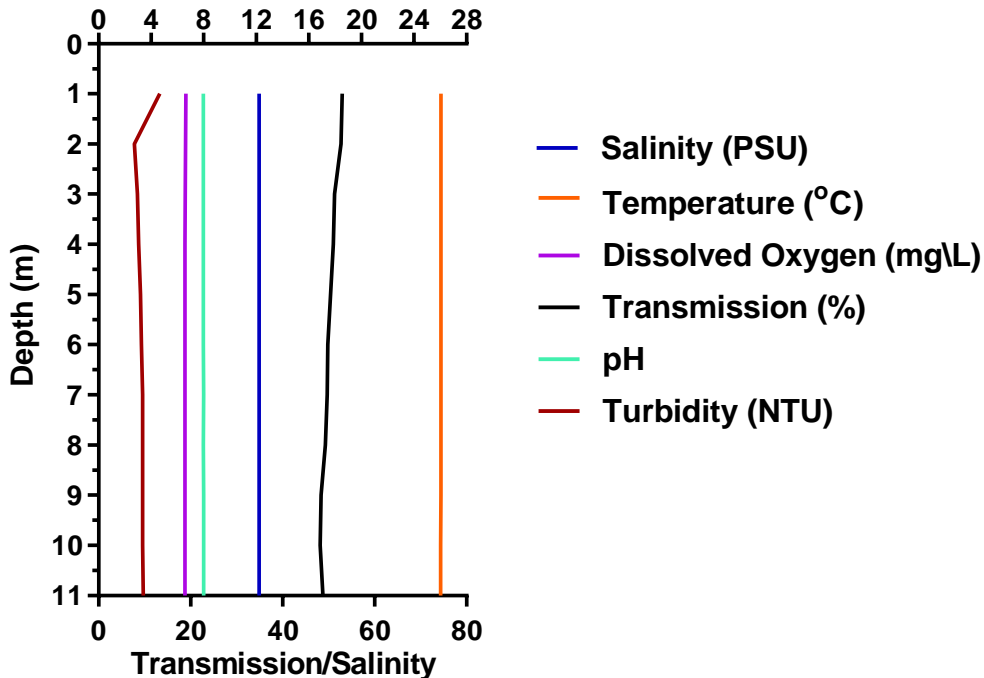
B18-10143

Temperature/DO/pH/Turbidity



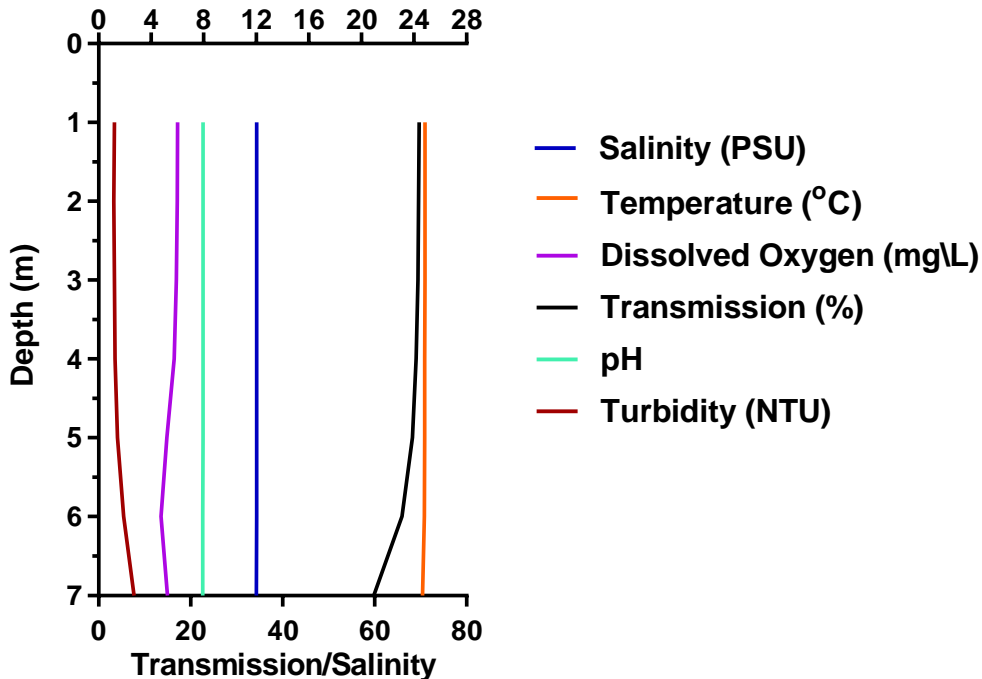
B18-10144

Temperature/DO/pH/Turbidity



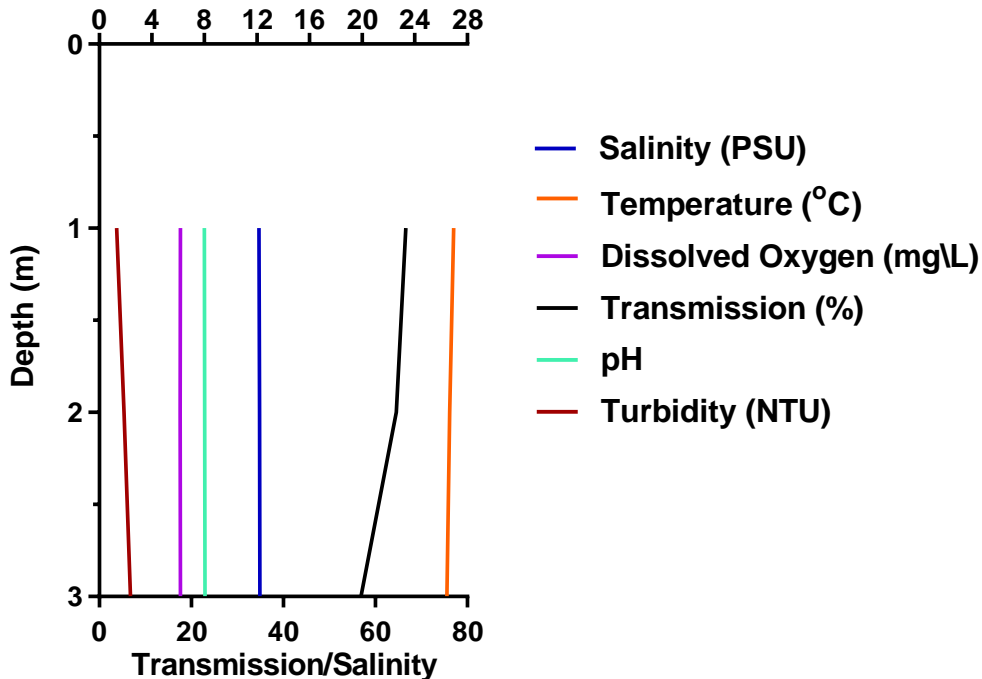
B18-10178

Temperature/DO/pH/Turbidity



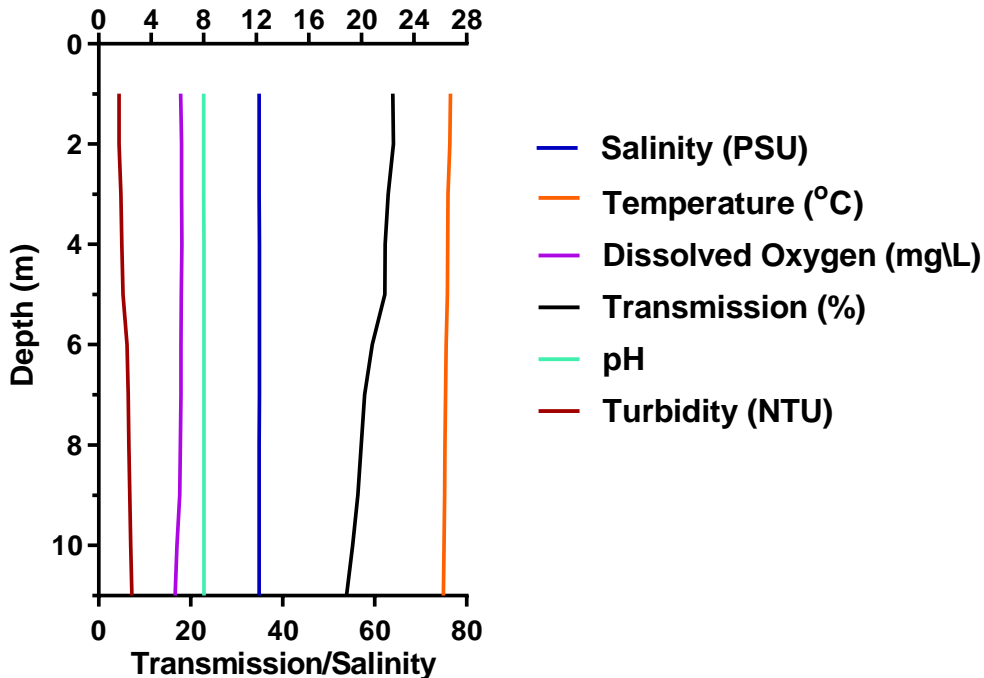
B18-10179

Temperature/DO/pH/Turbidity



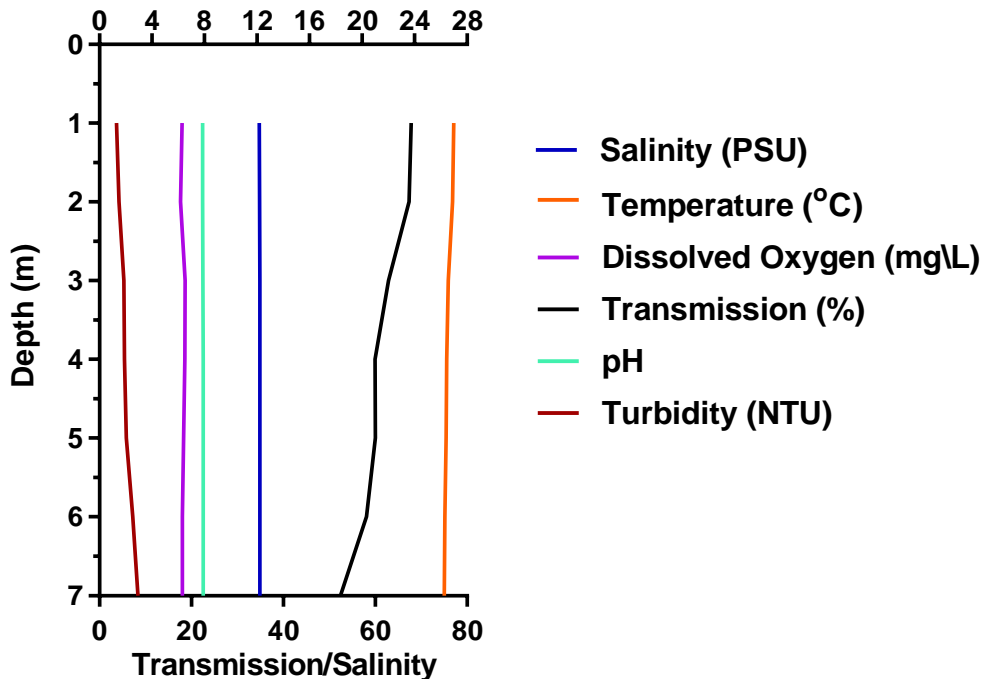
B18-10180

Temperature/DO/pH/Turbidity



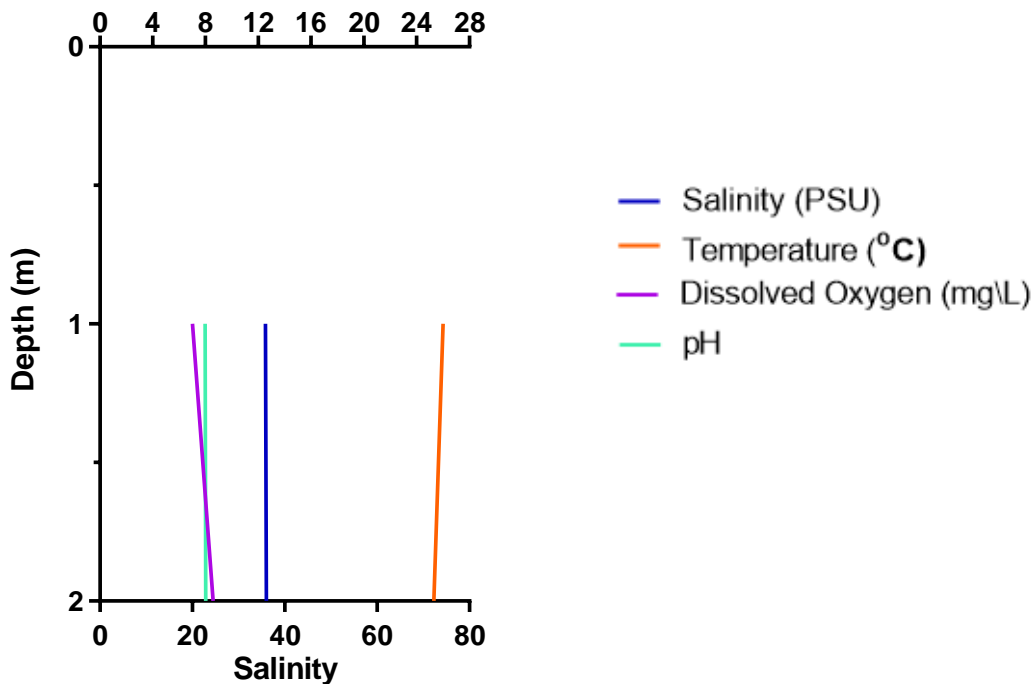
B18-10181

Temperature/DO/pH/Turbidity



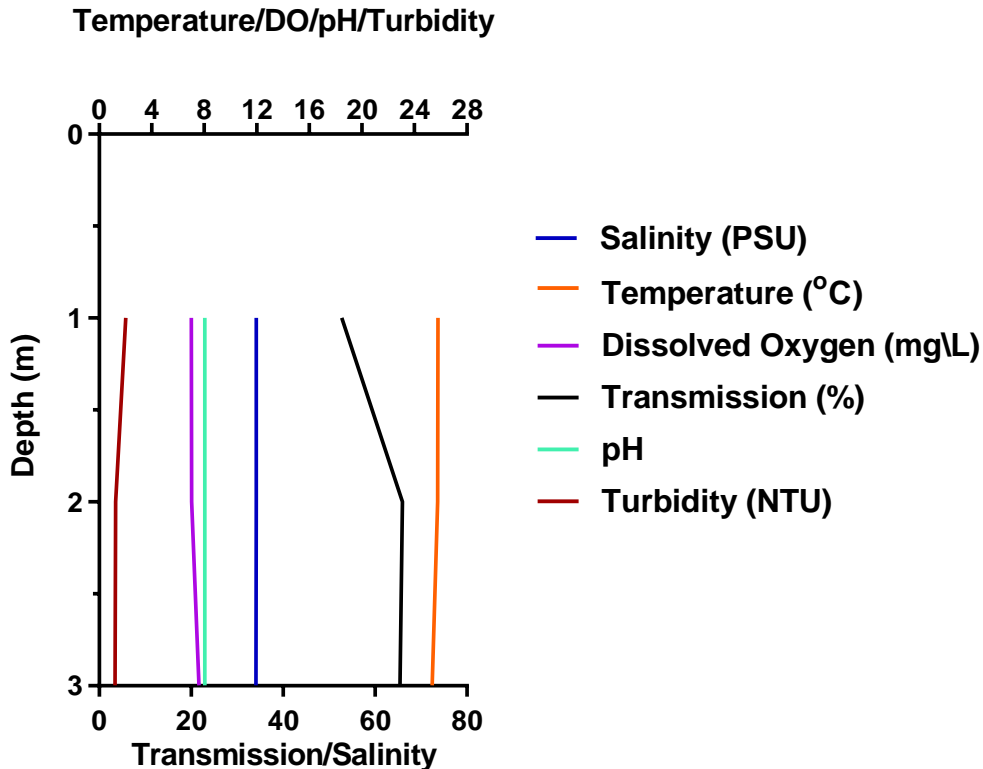
B18-10200

Temperature/DO/pH



CTD was not used for this location due to the shallowness of the site. Water quality data for salinity, temperature, dissolved oxygen, and pH was recorded using hand-held YSI meters.

B18-10438 (overdraw)



Field Data Sheets

CTD Field Data Sheet

Date: 7/10/18

Time: 0849

Station ID: B18-10065

Water Depth: 4.1 m

Tide: 1.1 m

Weather: PC

Odor: None

Floating Material?
(Yes / No) N

Photo Number: —

Visible Turbidity Plume?
(Yes / No) N

Water Color: Green

CTD Data Archived?
(Yes / No) Y

Samples Collected?
(Yes / No) Y

COMMENTS:

45I
pH 7.97
DO 7.17
Temp 22.8
Salin 33.41

BIGHT '18

Abandoned site?	Station Fail Code	
Y or N (If Y explain in comments)	(2)	

Equipment Type	
Core	Van Veen
Petite Ponar	Tandem Van Veen

Station Comments

Water Sample Collection Time: 0855

5.5 L sed
collected

(Check all sample types that apply)

#	Time (hh:mm)	Latitude (DD°MM.mmm)	Longitude (DDD°MM.mmm)	Depth (m)	Distance to target (m)	Grab Fail Code (7)	Penetration (cm)	Composition (3)	Odor (4)	Color (5)	Shell Hash (6) (N/L/M/H)	Infauna (Y/N)	Sed Chem (Y/N)	Grain Size (Y/N)	Sed Tox (Y/N)	Debris (Y/N)
1	0914	33.46065	-117.70089	4.1			N	Silt	N	Light Brn	N	X				N
Grab Event Comments:																
2	0914	33.46065	-117.70089	4.1			15	Silt	N	Light Brn	N		X	X	X	N
Grab Event Comments:																
3	0929	33.46062	-117.70091	4.1			N	Silt	N	Light Brn	N		X	X	X	N
Grab Event Comments:																
4	0929	33.46062	-117.70091	4.1			N	Silt	N	Light Brn	N		X	X	X	N
Grab Event Comments:																
Grab Event Comments:																
Grab Event Comments:																

CTD Field Data Sheet

Date: 7/10/18

Time: 1014

Station ID: B18-10066

Water Depth: 3.7

Tide: 0.86

Weather: PC

Odor: None

Floating Material?
(Yes / No) No

Photo Number: —

Visible Turbidity Plume?
(Yes / No) No

Water Color: Green

CTD Data Archived?
(Yes / No) Y

Samples Collected?
(Yes / No) Y

COMMENTS:

YSI

Temp 22.7

Sal 33.3

pH 7.98

DO 7.20

BIGHT '18

Y or N (If Y explain in comments)

Station Comments

Water Sample Collection Time: 1020

9.0L sed
collected

(Check all sample types that apply)

#	Time (hh:mm)	Latitude (DD°MM.mmm)	Longitude (DDD°MM.mmm)	Depth (m)	Distance to target (m)	Grab Fail Code (7)	Penetration (cm)	Composition (3)	Odor (4)	Color (5)	Shell Hash (6) (N/L/M/H)	Infauna (Y/N)	Sed Chem (Y/N)	Grain Size (Y/N)	Sed Tox (Y/N)	Debris (Y/N)
1	1038	33.460084	-117.693913	3.7			15	Silt	None	Olive	N	X				N
Grab Event Comments:																
2	1038	33.460084	-117.693913	3.7			15	Silt	None	Olive	N		X	X	X	N
Grab Event Comments:																
3	1055	33.460096	-117.693918	3.7			15	"	"	"	N		X	X	X	N
Grab Event Comments:																
4	1055	33.460096	-117.693918	3.7			15	"	"	"	N		X	X	X	N
Grab Event Comments:																
5	1106	33.460099	-117.693874	3.7			15	"	"	"	N		X	X	X	N
Grab Event Comments:																
6	1106	33.460099	-117.693874	3.7			15	"	"	"	N		X	X	X	N
Grab Event Comments:																

CTD Field Data Sheet

Date: 7/10/18

Time: 1139

Station ID: B18-10067

Water Depth: 3.3

Tide: 0.65

Weather: Clear

Odor: No

Floating Material?
(Yes / No) No

Photo Number: _____

Visible Turbidity Plume?
(Yes / No) No

Water Color: Green

CTD Data Archived?
(Yes / No) Y

Samples Collected?
(Yes / No) Y

COMMENTS: _____

YSI

pH 8.02

Temp 23.0

DO 7.50

Sal 33.84

Sp Cond 51520

St Cond 49404

BIGHT '18

Station Fail Code
(2)

Equipment Type	
Core	Van Veen
Petite Ponar	Tandem Van Veen

Station Comments

Water Sample Collection Time: 1136

8.0 Liters Sed
Collected

(Check all sample types that apply)

#	Time (hh:mm)	Latitude (DD°MM.mmm)	Longitude (DDD°MM.mmm)	Depth (m)	Distance to target (m)	Grab Fail Code (7)	Penetration (cm)	Composition (3)	Odor (4)	Color (5)	Shell Hash (6) (N/L/M/H)	Infauna (Y/N)	Sed Chem (Y/N)	Grain Size (Y/N)	Sed Tox (Y/N)	Debris (Y/N)
1	1155	33.458936	-117.699230	3.3	67		15	Silt	None	Gray	N	X				
Grab Event Comments:																
2	1155	33.458936	-117.699230	3.3	67		15	Silt	None	Gray	N		X	X	X	N
Grab Event Comments:																
3	1208	33.458888	-117.699259	3.3	67		15	Silt	None	Olive	N		X	X	X	N
Grab Event Comments:																
4	1208	33.458888	-117.699259	3.3	67		15	Silt	None	Olive	N		X	X	X	N
Grab Event Comments:																
Grab Event Comments:																
Grab Event Comments:																

CTD Field Data Sheet

Date: 7/10/18

Time: 1326

Station ID: B18-10068

Water Depth: 4.8

Tide: 0.51

Weather: Clear

Odor: No

Floating Material?
(Yes / No) No

Photo Number: _____

Visible Turbidity Plume?
(Yes / No) No

Water Color: Green

CTD Data Archived?
(Yes / No) Y

Samples Collected?
(Yes / No) Y

COMMENTS: _____

YST

pH 8.04

DO 7.24

Temp 23.6

Sal 33.9

Sp Cond 51540

BIGHT '18

Station Fail Code
(2)

Equipment Type	
Core	Van Veen
Petite Ponar	Tandem Van Veen

Station Comments

Water Sample Collection Time: 1325

8L sed
collected

(Check all sample types that apply)

#	Time (hh:mm)	Latitude (DD°MM.mmmmm)	Longitude (DDD°MM.mmmmm)	Depth (m)	Distance to target (m)	Grab Fail Code (7)	Penetration (cm)	Composition (3)	Odor (4)	Color (5)	Shell Hash (6) (N/L/M/H)	Infauna (Y/N)	Sed Chem (Y/N)	Grain Size (Y/N)	Sed Tox (Y/N)	Debris (Y/N)
1	1345	33.457611	-117.691385	4.8	22		15	Fire Sand	Humic	Gray	N	X				N
Grab Event Comments:																
2	1345	33.457611	-117.691385	4.8	22		15	"	"	"	"		X	X	X	N
Grab Event Comments:																
3	1355	33.457601	-117.691437	4.8	22		15	"	"	"	"		X	X	X	N
Grab Event Comments:																
4	1355	33.457601	-117.691437	4.8	22		15	"	"	"	"		X	X	X	N
Grab Event Comments:																
Grab Event Comments:																
Grab Event Comments:																

STATION OCCUPATION

Agency Code Wood
 Vessel Name EB
 Latitude 33.457629
 Longitude -117.691396
 Arrival Time 1430
 (hh:mm)
 Depth (m) 4.8

Weather
 Clear ☒ Rain ☐
 Overcast ☐ Thunderstorm ☐
 Partly cloudy ☐ Fog ☐
 Drizzle ☐ Fog & Drizzle ☐
 Hazy ☐ Smoky ☐

Sea State
 Calm ☒
 Choppy ☐
 Rough ☐
 Confused ☐
 Abandoned site? ☐
 Y or N (If Y explain in comments)

Salinity (ppt)

Estuary Sites only

Station ID B18-10068Date 7/10/18

Station Fail Code

(2)

Wind
 Speed (kts) 5
 Direction (4) NW

Swell
 Period (s) 0
 Height (ft) 0
 Direction (1) 0

Nav Type

DGPS ☒
 GPS ☐
 WAAS ☐

Equipment Type

Core ☐ Van Veen ☐
 Petite Ponar ☐ Tandem Van Veen ☐

Station Comments

mid 33.45667 Trawl 1
 -117.69622

TRAWL EVENTS

Trawl Number	Net Position	Deck Time (hh:mm:ss)	Latitude (DD°MM.mmmm)	Longitude (DDD°MM.mmmm)	Depth (m)
1	Net Over	1456	33.45791	-117.69075	4.7
	Start Trawl	1457	33.45793	-117.69150	5.7
	End Trawl	1507	33.45700	-117.69779	7.0
	Net on Deck	1510	33.45705	-117.69820	7.3

Comments:

Trawl failure

Enter Values	
Wire Out (m)	22
Closest Distance to target (m)	22
PT Bottom Time (mm:ss)	—
PT Bottom Temperature (°C)	—
Trawl Fail Code (3)	78

Check all that apply

P/T Sensor Data ☒
 Community Structure ☒
 Tissue Chemistry ☐

net torn

	Net Over	1556	33.45870	-117.70455	6.8
	Start Trawl	1558	33.45823	-117.70322	8.3
	End Trawl	1607	33.45681	-117.69793	7.8
	Net on Deck	1609	33.45684	-117.69784	7.6

Comments:

main channel Alternate Trawl Demo Pt → calling "B18-10068A"

Wire Out (m)	30
Closest Distance to target (m)	
PT Bottom Time (mm:ss)	
PT Bottom Temperature (°C)	
Trawl Fail Code (3)	71

P/T Sensor Data ☒
 Community Structure ☒
 Tissue Chemistry ☐

BIGHT '18 DEMERSAL FISH IDENTIFICATION FORM

Station: Main Channel At + Dame Pt.
B18-10068 → B18-10068A

Page 1 of 1

Date: 7/10/18

Completed by: JR

Trawl Number Failed

Species	N	Diversity Index Exclude Code	Std Length Size Class (cm) Use for up to 10 individuals. Use Size Class sheet for more abundant spp.	FID or Vouch	Weight (kg)		
					Gross	Tare	Net
1 Toungefish	1		11				0.012
2 Sanddab, Pacific	1		10				0.014
3 Shiner Perch	10		6,6,7,7,6,6,7,6,5,6				0.049
4 Northern Anchovy	10		9,6,7,7,5,7,7,7,7,8				0.023
5 Spottin Croaker	1		26				0.310
6 White Perch	1		19				0.151
7 Queenfish	1		15				0.048
8 Barred Sand bass	3		21,19,17				0.404
9 Spotted Sand bass	4		25,20,20,16				0.705
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							

Anomaly Codes: (record as superscript to tally mark): A = ambicoloration B = albinism, D = skeletal deformity, E = copepod eye-parasite (i.e., Phrixocephalus), F = fin erosion, H = Leeches, L = lesion (describe in Comments), M = Monogeneans, O = other anomaly (describe in Comments), P = other external parasite (describe in Comments), T = tumor, multiple occurrences on individual put "-" and #, FID = specimen(s) collected for further identification, #V = Number of specimens collected as species vouchers

Diversity Index Exclude Codes: Blank = No exclusion, In = Infauna, Pl = Pelagic, Pr = Parasite, Nb = New born, SE = Shark egg, Dm = damaged, Xr = met 3 rule exclude

Comments:

QA done at station: (circle) Yes

(No)

BIGHT '18 DEMERSAL FISH SIZE CLASS FORM

Station: Dang Pt. Alt ^{B18-10068A} Trawl Number Page 1 of 1
 Date: 7/10/18 Completed by: VR

Gross weight (kg) Tare Weight (kg) Net weight (kg) 0.333

Size class	N	Species: <u>Shiner Perch</u>	Anomalies
1			
2			
3			
4			
5	<u>6</u>	<u> </u>	
6	<u>32</u>	<u> </u>	
7	<u>7</u>	<u> </u>	
8	<u>1</u>	<u> </u>	
9	<u>1</u>	<u> </u>	
10	<u>6</u>	<u> </u>	
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			

Anomaly Codes (record as superscript to length measurement): A = ambicoloration, B = albinism, D = skeletal deformity, E = copepod eye-parasite (i.e., *Phrixocephalus*), F = fin erosion, H = Leeches, L = lesion (describe in Comments), M = Monogeneans, O = other anomaly (describe in Comments), P = other external parasite (describe in Comments), T = tumor, multiple occurrences on individual put "-" and #

Total Abundance

Comments:

In addition to bracon fish * includes braconum fish

QA done for species: (circle) Yes No

Station: Main Channel At. ^{B18-10068A}
Trawl Number Page 1 of 1
Date: 7/10/18 ^{Dana Pt} Completed by: JR

[illegible]

Total Abundance

[illegible]

QA done for species: (circle) Yes No

BIGHT '18 EPIBENTHIC INVERTEBRATE FORM

Station: B18-10068A

Page 1 of 1

Date: 7/10/18

Completed by: JR

Trawl Number Failed

eDNA

eDNA

	Species	N	Diversity Index Exclude Code	Anomalies	Comments	FID or Vouch	Weight (kg)		
							Gross	Tare	Net
1	<i>Bulla gouldiana</i>	1							0.026
2	<i>Parastichopus parvimanis</i>	1							0.140
3	<i>Calistoma</i> sp	1				X			0.001
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									

Anomaly Codes: B = burnspot, P = External Parasite, O = other anomaly (describe in Comments), W = wasting disease, multiple occurrences on individual put "- and #, FID = specimen(s) collected for further identification, #V = Number of specimens collected as species vouchers
Diversity Index Exclude Codes: Blank = No exclusion, In = Infauna, Pl = Pelagic, Pr = Parasite, Nb = New born, SE = Shark egg, Dm = damaged, Xr = met 3 rule exclude
Comments:

QA done at station: (circle) Yes No

BIGHT '18 TRAWL DEBRIS FORM

Agency:

Wood

Page

of

1

Station:

Mid Channel A1+ - Dana Pt.
~~B18-10068~~

Trawl #:

1

Date:

7/10/18

B18-10068A

☐ CHECK HERE IF NO DEBRIS PRESENT IN SAMPLE

Anthropogenic Debris - include Brand names in Comments if known

Plastic	Count	Comment
Bag		
Bandaïd		
Balloon (mylar/latex)/Ribbon		
Bottle	1	PHOTO
Buoy		
Cap/Lid		
Cigarette box/Wrapper		
Cup		
Filmstrip (movie)		
Fishing Line/Net		
Food Bag/Wrapper		
Polypropylene Rope		
Single use food container		
Toy		
Utensil		
Plastic Piece (unid.)		
Other Plastic (comment req.)		
Glass		
Beer Bottle		
Other Glass Bottle/Jar		
Glass Piece (unid.)		
Other Glass (comment req.)		

Misc. Items/Pieces	Count	Comment
Boat/Ship/Engine Part		
Clothing		
Concrete/Asphalt		
Fiberglass		
Food		
Leather		
Lumber		
Paper		
Rag/Cloth		
Rubber		
Shoe		
Tape		
Tire		
Other Misc. (comment req.)		
Metal	Count	Comment
Drink Can		
Can - other		
Fishing Gear		
Wire		
Metal Piece (unid.)		
Other Metal (comment req.)		

Natural Debris

Marine Origin	Count	Est.*	Comment
Foliose Algae - not kelp			
Gorgonian Sea Fan (dead)			
Kelp Holdfast		L	
Kelp Stipe/Blade			
Other Foliose Algae		L	
Rock			
Seagrass		L	
Other Marine (comment req.)			

Terrestrial Vegetation	Count	Est.*	Comment
Leaves/Seed Pod			
Stick/Branch/Driftwood			
Other Terrestrial (comment req.)			

*For Natural Debris only, if the count is >10 and an exact count cannot be made, leave the "Count" column blank and estimate the amount (M or H)

in the "Est." column

Moderate:

M = 11-100

High:

H = >100

Completed by:

JR

Bight/BOG Fish Bioaccumulation Field Datasheet

Date

7/10/18 - Dana Point

Page 1 of 1

Completed by:

JR

Species	Station	Total Length (mm)	Standard Length (mm)	Weight (g)	Photo (Y/N)	Notes
Spotfin Croaker	Dana Pt.	300	260	310	Y	
White Perch	Main Channel - Alt	230	190	151	Y	
Queenfish	B18-10068A	170	150	48	Y	
WHINER SURFPERCH		112	93	20	Y	
		122	98	24		
		117	94	21		
		116	95	21		
		120	98	22		
		117	95	21		
		110	82	13		
		90	70	9		
		80	60	7		
		96	80	11		
		71	60	6		
		77	63	7		
		69	55	4		
		68	56	5	Y	
BARRED SAND BASS		250	210	190	Y	
		220	190	128		
		200	170	86	Y	
SPOTIED SAND BASS		290	250	314	Y	
		225	195	153		
		230	195	155		
		185	160	83	Y	

Comments:

CTD Field Data Sheet

Date: 07/11/18

Time: 0935

Station ID: B18-10071

Water Depth: 7.7m

Tide: _____

Weather: calm

Odor: NR

Floating Material?
(Yes / No)

Photo Number: —

Visible Turbidity Plume?
(Yes / No)

Water Color: clear

CTD Data Archived?
(Yes / No)

Samples Collected?
(Yes / No) yes

COMMENTS: _____

WQ

33.85 ppt
8.12 pH

51.4885 PC

50.261 C

23.8 °C

7.31 mg/L

BIGHT '18

Y or N (If Y explain in comments)

Water Sample Collection Time: _____

1.4 m to target
1000 set sample time
0930 water

(Check all sample types that apply)

#	Time (hh:mm)	Latitude (DD°MM.mmm)	Longitude (DDD°MM.mmm)	Depth (m)	Distance to target (m)	Grab Fail Code (7)	Penetration (cm)	Composition (3)	Odor (4)	Color (5)	Shell Hash (6) (N/L/MH)	Infauna (Y/N)	Sed Chem (Y/N)	Grain Size (Y/N)	Sed Tox (Y/N)	Debris (Y/N)
1	1000	33.20798	-117.39754	7.8	1.4	NA	15	F.S. silt	N	gray fine	N	y	N	N	N	N
Grab Event Comments:																
2	1000	33.20798	-117.39754	7.8	1.4	NA	15	F.S. silt	N	gray fine	N	N	y	y	y	N
Grab Event Comments:																
3	1008	33.20796	20798 -117.39756	7.6	1.4	NA	15	F.S. silt	N	gray fine	N	.	x	x	x	
Grab Event Comments:																
4	1008	33.200	-117.39756	7.6	1.4	NA	15	F.S. silt	N	gray fine	N		x	x	x	
Grab Event Comments:																
Grab Event Comments:																
Grab Event Comments:																

CTD Field Data Sheet

Date: 7/11/18

Time: 1145

Station ID: B18-10069

Water Depth: 3.7m

Tide: 0.67m, Falling

Weather: Clear

Odor: NO

Floating Material?
(Yes) No

Photo Number: N

Visible Turbidity Plume?
(Yes) / No

Water Color: Clear

CTD Data Archived?
(Yes) / No

Samples Collected?
(Yes) / No

COMMENTS:

WQ meters

7.21 mg/l

51,209 spc

50,580 C

8.05 pH

33.64

24.3°C


STATION OCCUPATION

BIGHT '18

Agency Code	AMEC.
Vessel Name	EB 2
Latitude	33.21276
Longitude	-117.32511
Arrival Time	1145
(hh:mm)	
Depth (m)	3.7 m

Weather

Clear		Rain	
Overcast		Thunderstorm	
Partly cloudy		Fog	
Drizzle		Fog & Drizzle	
Hazy		Smoky	

Sea State	Salinity (ppt)
Calm	
Choppy	Estuary Sites only
Rough	
Confused	
	Abandoned site

Y or N (If Y explain in comments)

Station ID B 18-100

Date 7/11/18

Abandoned site? Y or N (If Y explain in comments)	Station Fail Code (2)	NA
---	---------------------------------	----

Wind
Speed (kts) 0-5
Direction (4) W

Swell	
Period (s)	0
Height (ft)	0
Direction (1)	0

Nav Type	Accuracy
DGPS	0.1m
GPS	3m
WAAS	1m

Equipment Type	
Core	Van Veen
Petite Ponar	Tandem Van Veen

Station Comments

Water Sample Collection Time: 1145

0.67 m, Falling
6L box 0

GRAB EVENTS

#	Time (hh:mm)	Latitude (DD°MM.mmmmm)	Longitude (DDD°MM.mmmmm)	Depth (m)	Distance to target (m)	Grab Fail Code (7)	Penetration (cm)	Composition (3)	Odor (4)	Color (5)	Shell Hash (6) (N/L/M/H)	Infauna (Y/N)	Sed Chem (Y/N)	Grain Size (Y/N)	Sed Tox (Y/N)	Debris (Y/N)
1	1210	33.21281	-117.39514	3.6	23	N	15cm	Silt	N	olive green	N	X				
Grab Event Comments:																
2	1210	33.21281	-117.39514	3.6	23	N	15cm	Silt	N	olive green	N		X	X	X	
Grab Event Comments:																
3	1220	33.21283	-117.39514	3.6	23	N	15cm	Silt	N	olive green			X	X	X	
Grab Event Comments:																
4	1220	33.21283	-117.39514	3.6	23	N	15cm	Silt	N	olive green			X	X	X	
Grab Event Comments:																
Grab Event Comments:																
Grab Event Comments:																

CTD Field Data Sheet

Date: 7/11/18

Time: 1030

Station ID: B18-10070

Water Depth: 6.8

Tide: _____

Weather: clear

Odor: NA

Floating Material?
(Yes / No) N

Photo Number: NA

Visible Turbidity Plume?
(Yes / No) N

Water Color: clear

CTD Data Archived?
(Yes / No) yes

Samples Collected?
(Yes / No) yes

COMMENTS: _____

WQ meters

33.83 ppt

51,445 SPC

30,525

8.07 pH

7.42 m/L

24.2°C

STATION OCCUPATION

BIGHT '18

Agency Code	AMEL
Vessel Name	EB #
Latitude	33.20929
Longitude	-117.39532
Arrival Time	1045
(hh:mm)	
Depth (m)	6.6 m

Weather

Clear		Rain	
Overcast		Thunderstorm	
Partly cloudy		Fog	
Drizzle		Fog & Drizzle	
Hazy		Smoky	

Sea State

Calm

Choppy

Rough

Confused

Salinity (ppt)

Estuary Sites only

Abandoned site

Y or N (if Y explain in comments)

Station ID **B28-10070**

Date 7/11/18




Abandoned site? Y or N (If Y explain in comments)	Station Fail Code (2)	
---	---------------------------------	---

Wind

Speed (kts) 0

Direction (4) 0

Swell	
Period (s)	0
Height (ft)	0
Direction (1)	0

Nav Type	
DGPS	
GPS	
WAAS	

Equipment Type	
Core	Van Veen
Petite Ponar	Tandem Van Veen

Station Comments

Water Sample Collection Time: 1030 ~ 13 Bo 42

7 L tox

GRAB EVENTS

#	Time (hh:mm)	Latitude (DD°MM.mmm)	Longitude (DDD°MM.mmm)	Depth (m)	Distance to target (m)	Grab Fail Code (7)	Penetration (cm)	Composition (3)	Odor (4)	Color (5)	Shell Hash (6) (N/L/M/H)	Infauna (Y/N)	Sed Chem (Y/N)	Grain Size (Y/N)	Sed Tox (Y/N)	Debris (Y/N)
1	1055	33.20932	-117.39533	6.6	16	NA	15	F.g.s	NONE	gray BRN	N	X				
Grab Event Comments:																
2	1055	33.20932	-117.39533	6.6	16	NA	15	F.g.s	NONE	gray BRN	N		X	X	X	
Grab Event Comments:																
3	1110	33.20936	-117.39533	6.6	16	NA	15	F.g.s	NONE	gray BRN	N		X	X	X	
Grab Event Comments:																
4	1110	33.20936	-117.39533	6.6	16	NA1	15	F.g.s	NONE	gray BRN	N		X	X	X	
Grab Event Comments:																
Grab Event Comments:																
Grab Event Comments:																

CTD Field Data Sheet

Date:

07/11/18

Time:

1330

Station ID:

B18-10072

3.2

Water Depth:

0.49 m (Falling)

Tide:

Clear

Weather:

None

Odor:

NO

Floating Material?
(Yes / No)

NA

Photo Number:

NO

Visible Turbidity Plume?
(Yes / No)

Clear

Water Color:

yes

CTD Data Archived?
(Yes / No)

yes

Samples Collected?
(Yes / No)

COMMENTS:

WA

7.06 mg/L DO

24.7°C

8.01 pH

33.74 ppt

51,359 SPL

50,996 C

BIGHT '18

Station Fail Code /
(2)

Equipment Type	
Core	Van Veen
Petite Ponar	Tandem Van Veen

Station Comments

Water Sample Collection Time: 1330

~~7.5~~ 7.5 L

(Check all sample types that apply)

#	Time (hh:mm)	Latitude (DD°MM.mmm)	Longitude (DDD°MM.mmm)	Depth (m)	Distance to target (m)	Grab Fail Code (7)	Penetration (cm)	Composition (3)	Odor (4)	Color (5)	Shell Hash (6) (N/L/M/H)	Infauna (Y/N)	Sed Chem (Y/N)	Grain Size (Y/N)	Sed Tox (Y/N)	Debris (Y/N)
1	1345	33.20430	-117.39135	3.2	10m	NA	14	Silt	N	olive grey	N	Y				
Grab Event Comments:																
2	1345	33.20430	-117.39135	3.2	10m	NA	15	Silt	N	olive grey	N		Y	Y	Y	
Grab Event Comments:																
3	1355	33.20430	-117.39135	3.2	10m	NA	15	Silt	N	O.G.	N		Y	Y	Y	
Grab Event Comments:																
4	1355	33.20430	-117.39135	3.2	10m	NA	15	Silt	N	O.G.	N		Y	Y	Y	
Grab Event Comments:																
Grab Event Comments:																
Grab Event Comments:																

STATION OCCUPATION

BIGHT '18

Agency Code AMEC
 Vessel Name EBD
 Latitude 32.208101
 Longitude -117.39690
 Arrival Time 0640
 (hh:mm)
 Depth (m) 7.4 m

Weather

Clear <input checked="" type="checkbox"/>	Rain <input type="checkbox"/>
Overcast <input type="checkbox"/>	Thunderstorm <input type="checkbox"/>
Partly cloudy <input type="checkbox"/>	Fog <input type="checkbox"/>
Drizzle <input type="checkbox"/>	Fog & Drizzle <input type="checkbox"/>
Hazy <input type="checkbox"/>	Smoky <input type="checkbox"/>

Sea State

Calm <input checked="" type="checkbox"/>
Choppy <input type="checkbox"/>
Rough <input type="checkbox"/>
Confused <input type="checkbox"/>

Salinity (ppt) NA
 Estuary Sites only

Station ID 10071
 Date 7/4/18
 Station Fail Code NA
 (2)

Wind

Speed (kts) 0
 Direction (4) 0

Swell

Period (s) 0
 Height (ft) 0
 Direction (1) 0

Nav Type

DGPS ☐
 GPS ☐
 WAAS ☐

Equipment Type

Core ☐
 Petite Ponar ☐
 Van Veen ☐
 Tandem Van Veen ☐

Station Comments

ocean
Oceanic
28 meter wire
6 minute Trawl. ran out of room.

TRAWL EVENTS

33

Trawl Number	Net Position	Deck Time (hh:mm:ss)	Latitude (DD°MM.mmmm)	Longitude (DDD°MM.mmmm)	Depth (m)
	Net Over	0641	32.20820	-117.39555	6.8
	Start Trawl	0643	32.20807	-117.39694	7.3
	End Trawl	0649	32.20762	-117.40073	7.4
	Net on Deck	0652	32.20744	-117.40166	7.4

Enter Values

Wire Out (m) 28 m
 Closest Distance to target (m) 0
 PT Bottom Time (mm:ss)
 PT Bottom Temperature (°C)
 Trawl Fail Code (3)
 (2)

Check all that apply

P/T Sensor Data ☒
 Community Structure ☐
 Tissue Chemistry ☐

Comments:

Net Over					Wire Out (m)		P/T Sensor Data	
Start Trawl					Closest Distance to target (m)		Community Structure	
End Trawl					PT Bottom Time (mm:ss)		Tissue Chemistry	
Net on Deck					PT Bottom Temperature (°C)			
					Trawl Fail Code (3)			

Comments:

2018 RHMP/ Bight '18 - Bioaccumulation and Plastic Ingestion Special Studies
Field Datasheet

Station: Oceanside 10071

Page 1 of 1

Date: 7/11/18

6-minute Trawl

Completed by: TY

Additional Trawl Coordinates:

Start Trawl

Retrieval

Trawl 2	Net Set	Net on Bottom	Interval 1	Interval 2	Interval 3	Net Retrieval	Net on Board
Time		0643	0645	0648	0649		
Depth (m)		7.3	7.4	7.3	7.4		
Lat (32.xxxxx)		20820	20789	20771	20762		
Long (-117.xxxxx)		39555	39816	40034	40073		

Trawl 3	Net Set	Net on Bottom	Interval 1	Interval 2	Interval 3	Net Retrieval	Net on Board
Time							
Depth (m)							
Lat (32.xxxxx)							
Long (-117.xxxxx)							

Trawl 4	Net Set	Net on Bottom	Interval 1	Interval 2	Interval 3	Net Retrieval	Net on Board
Time							
Depth (m)							
Lat (32.xxxxx)							
Long (-117.xxxxx)							

Trawl 5	Net Set	Net on Bottom	Interval 1	Interval 2	Interval 3	Net Retrieval	Net on Board
Time							
Depth (m)							
Lat (32.xxxxx)							
Long (-117.xxxxx)							

Comments:

BIGHT '18 DEMERSAL FISH IDENTIFICATION FORM

Station: B18-10071

Page 1 of 1

Date: 7/11/18

Completed by: BCS, KS

over 3 lb

Trawl Number 1 Failed

Species	N	Diversity Index Exclude Code	Std Length Size Class (cm) Use for up to 10 individuals. Use Size Class sheet for more abundant spp.	FID or Vouch	Weight (kg) g		
					Gross	Tare	Net
1 Diamond Turbot	1		22	photo	-	-	220
2 California Halibut	2		21, 16	photo	-	-	113, 52
3 Giant kelp Fish	2		19, 3	photo	-	-	46, 49
4 Tongue Fish	1		9	photo	-	-	9
5 Gopher Rock Fish *	1		17	FID + Voucher	-	-	128
6 Queenfish juveniles	4		5.5, 6, 6	photo	-	-	2
7 Slough anchovy	4		7, 8, 8, 8	Vouch photo 1-eDNA	-	-	20
8 Northern anchovy	16		6.6, 5, 4.5, 5.5, 5.5, 6, 6, 5, 4.4, 5.5, 5	photo	-	-	16
9 Deep body anchovy	43		See size class sheet	eDNA Voucher	-	-	690
10 Spot Fin Croaker	59		See size class sheet	photo	-	-	5660
11 Black Surf perch *	1		See Bioaccum sheet	photo	-	-	22
12 Yellow Fin Croaker *	1		See Bioaccum sheet	photo	-	-	47
13 Silver Surf Perch *	9		See Bioaccum	photo	-	-	*
14 White Surf Perch *	9		See Bioaccum	photo	-	-	*
15							
16							
17							
18							
19							

Anomaly Codes: (record as superscript to tally mark): A = ambicoloration, B = albinism, D = skeletal deformity, E = copepod eye-parasite (i.e., Phrixocephalus), F = fin erosion, H = Leeches, L = lesion (describe in Comments), M = Monogeneans, O = other anomaly (describe in Comments), P = other external parasite (describe in Comments), T = tumor, multiple occurrences on individual put "-" and #, FID = specimen(s) collected for further identification, #V = Number of specimens collected as species vouchers

Diversity Index Exclude Codes: Blank = No exclusion, In = Infauna, Pl = Pelagic, Pr = Parasite, Nb = New born, SE = Shark egg, Dm = damaged, Xr = met 3 rule exclude

Comments:

1 isopod in bin - present on Giant kelp Fish

See additional species on Bioaccum sheet, *Gopher Rock Fish* * saved for bioaccum

QA done at station: (circle) Yes

No

BIGHT '18 DEMERSAL FISH SIZE CLASS FORM

Station: B18-10071

Trawl Number 1

Page 2 of 2

Date: 7/11/18 Oceanside

Completed by: Bcs

Gross weight (kg) —

Tare Weight (kg) —

Net weight (kg) 690
9

Size class	N	Species:	Anomalies
1		<u>Deep body Anchovy</u>	
2			
3			
4			
5			
6			
7			
8			
9	<u>1</u>	<u>1</u>	
10	<u>10</u>	<u> </u>	
11	<u>18</u>	<u> </u>	
12	<u>13</u>	<u> </u>	
13	<u>1</u>	<u>1</u>	
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			

Anomaly Codes (record as superscript to length measurement): A = ambicoloration, B = albinism, D = skeletal deformity, E = copepod eye-parasite (i.e., *Phrioxcephalus*), F = fin erosion, H = Leeches, L = lesion (describe in Comments), M = Monogeneans, O = other anomaly (describe in Comments), P = other external parasite (describe in Comments), T = tumor, multiple occurrences on individual put "-" and #

Total Abundance

Comments:

QA done for species: (circle) Yes

No

BIGHT '18 DEMERSAL FISH SIZE CLASS FORM

Station: B18-10071

Trawl Number 1

Page 1 of 2

Date: 7/11/18 Oceanside

Completed by: Bes

Gross weight (kg) -

Tare Weight (kg) -

Net weight (kg) 5.66

Size class	N	Species:	Anomalies
1		<u>Spotfin Croaker</u>	
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13	<u>2</u>	<u> </u>	
14	<u>9</u>	<u> </u>	
15	<u>26</u>	<u> </u>	
16	<u>17</u>	<u> </u>	
17	<u>2</u>	<u> </u>	
18			
19			
20	<u>2</u>	<u> </u>	
21	<u>1</u>	<u> </u>	
22	<u>3</u>	<u> </u>	
23	<u>2</u>	<u> </u>	
24			
25			
26			
27			
28			
29			
30			

Anomaly Codes (record as superscript to length measurement): A = ambicoloration, B = albinism, D = skeletal deformity, E = copepod eye-parasite (i.e., *Phrioxcephalus*), F = fin erosion, H = Leeches, L = lesion (describe in Comments), M = Monogeneans, O = other anomaly (describe in Comments), P = other external parasite (describe in Comments), T = tumor, multiple occurrences on individual put "-" and #

Total Abundance

Comments:

QA done for species: (circle) Yes

No

Station: B18-10071

Page 1 of 1

Date: 7/11/18

Completed by: Bcs

Oceanside

Trawl Number	Failed

Anomaly Codes: B = burnspot, P = External Parasite, O = other anomaly (*describe in Comments*), W = wasting disease, multiple occurrences on individual put “-” and #, FID = specimen(s) collected for further identification, #V = Number of specimens collected as species vouchers
Diversity Index Exclude Codes: Blank = No exclusion, In = Infauna, Pl = Pelagic, Pr = Parasite, Nb = New born, SE = Shark egg, Dm = damaged, Xr = met 3 rule exclude
Comments:

QA done at station: (circle) Yes No

BIGHT '18 TRAWL DEBRIS FORM

Agency: AMECPage 1 of 1Station: B18-10071Trawl #: 1Date: 7/11/18☐ CHECK HERE IF NO DEBRIS PRESENT IN SAMPLE

Anthropogenic Debris - include Brand names in Comments if known

Plastic	Count	Comment
Bag		
Bandaids		
Balloon (mylar/latex)/Ribbon		
Bottle		
Buoy		
Cap/Lid		
Cigarette box/Wrapper		
Cup		
Filmstrip (movie)		
Fishing Line/Net		
Food Bag/Wrapper		
Polypropylene Rope		
Single use food container		
Toy		
Utensil		
Plastic Piece (unid.)		
Other Plastic (comment req.)		
Glass		
Beer Bottle		
Other Glass Bottle/Jar		
Glass Piece (unid.)		
Other Glass (comment req.)		

Misc. Items/Pieces	Count	Comment
Boat/Ship/Engine Part		
Clothing		
Concrete/Asphalt		
Fiberglass		
Food		
Leather		
Lumber		
Paper		
Rag/Cloth		
Rubber		
Shoe		
Tape		
Tire		
Other Misc. (comment req.)		
Metal	Count	Comment
Drink Can		
Can - other		
Fishing Gear		
Wire		
Metal Piece (unid.)		
Other Metal (comment req.)		

Natural Debris

Marine Origin	Count	Est.*	Comment
Foliose Algae - not kelp		M	see photos
Gorgonian Sea Fan (dead)			
Kelp Holdfast	~3		
Kelp Stipe/Blade		M	
Other Foliose Algae			
Rock			
Seagrass			
Other Marine (comment req.)			

Terrestrial Vegetation	Count	Est.*	Comment
Leaves/Seed Pod			
Stick/Branch/Driftwood			
Other Terrestrial (comment req.)			

*For Natural Debris only, if the count is >10 and an exact count cannot be made, leave the "Count" column blank and estimate the amount (M or H) in the "Est." column

Moderate:

M = 11-100

High:

H = >100

Completed by: _____

Bight/BOG Fish Bioaccumulation Field Datasheet

Date

7/11/18 - Oceanside

Page 1 of 1

Completed by:

TH

Species	Station	Total Length (mm)	Standard Length (mm)	Weight (g)	Photo (Y/N)	Notes
Black surf perch	B18-10071	105	90	22	Y	
Yellowfin Croaker		160	140	47	Y	
Shiner surf perch		70	60	4	Y-Batch	
		70	60	5		
		72	60	5		
		70	60	5		
		71	60	5		
		68	60	4		
		69	60	4		
		67	60	3		
		71	60	5	Y	
White surf perch		85	70	8	Y-Batch	
		95	80	12		
		97	80	13		
		93	80	14		
		102	90	11		
		235	190	151		
		220	180	119		
		182	150	70		
		196	160	85	Y	
Grayer Rockfish	✓	192	170	128	Y	

Comments:

CTD Field Data Sheet

Date:

7/12/18

Time:

1335

Station ID:

B18-10015

Water Depth:

3.0

Tide:

2.3

Weather:

Clear

Odor:

None

Floating Material?
(Yes / No)

No
No

Photo Number:

No

Visible Turbidity Plume?
(Yes / No)

Clear

Water Color:

Yes

CTD Data Archived?
(Yes / No)

Yes

Samples Collected?
(Yes / No)

COMMENTS:

WQ YSI

pH 7.90

Temp 27.2

DO 7.33

Sal 35.42

SpCond 53.732

Cond 56086

BIGHT '18

Jed collected 8.0L

(Check all sample types that apply)

#	Time (hh:mm)	Latitude (DD°MM.mmm)	Longitude (DDD°MM.mmm)	Depth (m)	Distance to target (m)	Grab Fail Code (7)	Penetration (cm)	Composition (3)	Odor (4)	Color (5)	Shell Hash (6) (N/L/M/H)	Infauna (Y/N)	Sed Chem (Y/N)	Grain Size (Y/N)	Sed Tox (Y/N)	Debris (Y/N)
1	1400	32.78728	-117.20999	3.0	161*		15	Silt	None	Olive	✓	X				N
Grab Event Comments: * not logistically possible to reach location target 100m, shallow																
2	1400	32.78728	-117.20999	3.0	161		15	Silt	None	Olive	✓		X	X	X	N
Grab Event Comments:																
3	1416	32.78730	-117.21002	3.0	161		15	Silt	None	"	✓		X	X	X	N
Grab Event Comments:																
4	1416	32.78730	-117.21002	3.0	161		15	Silt	None	"	✓		X	X	X	N
Grab Event Comments:																
Grab Event Comments:																
Grab Event Comments:																

CTD Field Data Sheet

Date: 7/12/18

Time: 1200

Station ID: B18-10016

Water Depth: 3.0

Tide: 3.6

Weather: Clear

Odor: NO

Floating Material?
(Yes / No) No

Photo Number: NO

Visible Turbidity Plume?
(Yes / No) No

Water Color: Clear

CTD Data Archived?
(☒ Yes / No) Yes

Samples Collected?
(☒ Yes / No) Yes

COMMENTS:

WD Y5I
pH 8.02
DO 7.56 mg/L
Temp 24.4°C
Sal 34.06 ppt
Sp Cond 51,785
Cond 51,100

BIGHT '18

Abandoned site? Y or N (If Y explain in comments)	Station Fail Code (2)

Water Sample Collection Time: 1200

Sed collected 7.0L

Equipment Type

(Check all sample types that apply)

#	Time (hh:mm)	Latitude (DD°MM.mmmmm)	Longitude (DDD°MM.mmmmm)	Depth (m)	Distance to target (m)	Grab Fail Code (7)	Penetration (cm)	Composition (3)	Odor (4)	Color (5)	Shell Hash (6) (N/L/M/H)	Infauna (Y/N)	Sed Chem (Y/N)	Grain Size (Y/N)	Sed Tox (Y/N)	Debris (Y/N)
1	1215	32.78454	-117.24059	3.0	36		15	Silt	None	Gray	N	X				N
Grab Event Comments:																
2	1215	32.78454	-117.24059	3.0	36		15	Silt	None	Gray	N		X	X	X	N
Grab Event Comments:																
3	1228	32.78456	-117.24061	3.0	36		14	Silt	None	Gray	N		X	X	X	N
Grab Event Comments:																
4	1228	32.78456	-117.24061	3.0	36		14	Silt	None	Gray	N		X	X	X	N
Grab Event Comments:																
Grab Event Comments:																
Grab Event Comments:																

CTD Field Data Sheet

Date:

7/12/15

Time:

1535

Station ID:

B18-10438

Water Depth:

3.3

Tide:

1.7

Weather:

Clear

Odor:

None

Floating Material?
(Yes / No)

No

Photo Number:

Visible Turbidity Plume?
(Yes / No)

No

Water Color:

Clear

CTD Data Archived?
(Yes / No)

Yes

Samples Collected?
(Yes / No)

Yes

COMMENTS:

WQ YSI

pH 7.93

DO 7.02

Temp 25.8°C

Sal 34.56

Sp Cond 52499

Cond 53170

BIGHT '18

Abandoned site? Y or N (If Y explain in comments)	Station Fail Code (2)	

Station Comments

Water Sample Collection Time: 1535

Sed collected 7.5 L

(Check all sample types that apply)

#	Time (hh:mm)	Latitude (DD°MM.mmmmm)	Longitude (DDD°MM.mmmmm)	Depth (m)	Distance to target (m)	Grab Fail Code (7)	Penetration (cm)	Composition (3)	Odor (4)	Color (5)	Shell Hash (6) (N/L/M/H)	Infauna (Y/N)	Sed Chem (Y/N)	Grain Size (Y/N)	Sed Tox (Y/N)	Debris (Y/N)
1	1557	32.76649	-117.21849	3.3			15	Silt	Humic	Olive	N	X				N
Grab Event Comments: <i>surficial algal mat</i>																
2	1557	32.76649	-117.21849	3.3			15	Silt	Humic	Olive	N		X	X	X	N
Grab Event Comments: <i>surficial algal mat</i>																
3	1612	32.76650	-117.21849	3.3			15	Silt	Humic	Olive	N		X	X	X	N
Grab Event Comments: <i>surficial algal mat</i>																
4	1612	32.76650	-117.21849	3.3			15	Silt	Humic	Olive	N		X	X	X	N
Grab Event Comments: <i>surficial algal mat</i>																
Grab Event Comments:.																
Grab Event Comments:																

CTD Field Data Sheet

Date:

7/12/18

Time:

0645

Station ID:

B18-10020

Water Depth:

5.9

Tide:

0.85

Weather:

Prtly Cldy

Odor:

N

Floating Material?
(Yes / No)

N

Photo Number:

N

Visible Turbidity Plume?
(Yes / No)

N

Water Color:

Clear

CTD Data Archived?
(Yes / No)

Y

Samples Collected?
(Yes / No)

Y

COMMENTS:

WQ 15Z

33.78 ppt 5.1

21.8°C Temp

8.91 mg/L DO

8.23 pH

51, 321 SPC

48,312 C.

STATION OCCUPATION

BIGHT '18

Agency Code wood
 Vessel Name EB
 Latitude 32.75807
 Longitude -117.24410
 Arrival Time 06:31
 (hh:mm)
 Depth (m) 5.9

Weather

Clear	<input type="checkbox"/>	Rain	<input type="checkbox"/>
Overcast	<input type="checkbox"/>	Thunderstorm	<input type="checkbox"/>
Partly cloudy	<input checked="" type="checkbox"/>	Fog	<input type="checkbox"/>
Drizzle	<input type="checkbox"/>	Fog & Drizzle	<input type="checkbox"/>
Hazy	<input type="checkbox"/>	Smoky	<input type="checkbox"/>

Sea State

Calm	<input checked="" type="checkbox"/>
Choppy	<input type="checkbox"/>
Rough	<input type="checkbox"/>
Confused	<input type="checkbox"/>

Salinity (ppt)
 Estuary Sites only

Abandoned site? ☐ Station Fail Code
 Y or N (if Y explain in comments) (2)

Station ID B18-10020Date 7/12/18

Wind

Speed (kts) 0
 Direction (4) —

Swell

Period (s) 0
 Height (ft) 0
 Direction (1) 0

Nav Type

DGPS ☐
 GPS ☐
 WAAS ☐

Equipment Type

Core ☐ Van Veen ☐
 Petite Ponar ☐ Tandem Van Veen ☒

Station Comments

Water Sample Collection Time: 0645

Sed collected 6L

GRAB EVENTS

(Check all sample types that apply)

#	Time (hh:mm)	Latitude (DD°MM.mmm)	Longitude (DDD°MM.mmm)	Depth (m)	Distance to target (m)	Grab Fail Code (7)	Penetration (cm)	Composition (3)	Odor (4)	Color (5)	Shell Hash (6) (N/L/M/H)	Infauna (Y/N)	Sed Chem (Y/N)	Grain Size (Y/N)	Sed Tox (Y/N)	Debris (Y/N)
1	0715	32.75812	-117.24439	5.9	35		12	FnJnd	None	Gray	N	X				N
Grab Event Comments:																
2	0715	32.75812	-117.24439	5.9	35		12	FnJnd	None	Gray	N		X	X	X	N
Grab Event Comments:																
3	0730	32.75830	-117.24432	6.2	35		8	"	"	"	N		X	X	X	N
Grab Event Comments:																
4	0730	32.75830	-117.24432	6.2	35		8	"	"	"	N		X	X	X	N
Grab Event Comments:																
Grab Event Comments:																
Grab Event Comments:																

Thin layer
gray on top
then darker

CTD Field Data Sheet

Date: 7/12/18

Time: 1045

Station ID: B18-10073

Water Depth: 3.9

Tide: 4.2

Weather: Clear

Odor: None

Floating Material?
(Yes / No) No

Photo Number: _____

Visible Turbidity Plume?
(Yes / No) No

Water Color: Clear

CTD Data Archived?
(Yes / No) Yes

Samples Collected?
(Yes / No) Yes

COMMENTS: _____

WQ YSZ

7.70 DO m/L

8.08 pH

51,716 SPC

50114C

34.01 PP+

4) 063-0738

23.5°C

BIGHT '18

Station Fail Code
(2)

Sed collected 6.0L

(Check all sample types that apply)

#	Time (hh:mm)	Latitude (DD°MM.mmm)	Longitude (DDD°MM.mmm)	Depth (m)	Distance to target (m)	Grab Fail Code (7)	Penetration (cm)	Composition (3)	Odor (4)	Color (5)	Shell Hash (6) (N/L/W/H)	Infauna (Y/N)	Sed Chem. (Y/N)	Grain Size (Y/N)	Sed Tox (Y/N)	Debris (Y/N)
1	1108	32.78060	-117.24925	3.9	12		12	Silt	None	Gray	N	X				N
Grab Event Comments:																
2	1108	32.78060	-117.24925	3.9	12		12	Silt	None	Gray	N		X	X	X	N
Grab Event Comments:																
3	1121	32.78050	-117.24910	3.9	12		15	Silt	None	Gray	N		X	X	X	N
Grab Event Comments:																
4	1121	32.78050	-117.24910	3.9	12		15	Silt	None	Gray	N		X	X	X	N
Grab Event Comments:																
Grab Event Comments:																
Grab Event Comments:																

CTD Field Data Sheet

Date:

7/12/18

Time:

0935

Station ID:

B18-10074

Water Depth:

3.4

Tide:

4.2

Weather:

Clear

Odor:

None

Floating Material?
(Yes / No)

No

Photo Number:

Visible Turbidity Plume?
(Yes / No)

No

Water Color:

Clear

CTD Data Archived?
(Yes / No)

Yes

Samples Collected?
(Yes / No)

Yes

COMMENTS:

YSI

pH 8.06

Temp 23.3°C

Sal 34.02 ppt

DO 7.39 mg/L

sp Cond 51.871

Cond 49897

BIGHT '18

Abandoned site?	Station Fail Code
Y or N (If Y explain in comments)	(2)

Station Comments

Water Sample Collection Time: 0930

Sed Collected 7.0 L

(Check all sample types that apply)

#	Time (hh:mm)	Latitude (DD°MM.mmm)	Longitude (DDD°MM.mmm)	Depth (m)	Distance to target (m)	Grab Fail Code (7)	Penetration (cm)	Composition (3)	Odor (4)	Color (5)	Shell Hash (6) (N/L/M/H)	Infauna (Y/N)	Sed Chem (Y/N)	Grain Size (Y/N)	Sed Tox (Y/N)	Debris (Y/N)
1	0952	32.77703	-117.24984	3.4	26		15	Silt	None	DK Brn	N	X				N
Grab Event Comments:																
2	0952	32.77703	-117.24984	3.4	26		15	Silt	None	DK Brn	N		X	X	X	N
Grab Event Comments:																
3	1009	32.77706	-117.24984	3.9	26		15	Silt	Humic	Blk	N		X	X	X	N
Grab Event Comments: some eelgrass																
4	1009	32.77706	-117.24984	3.9	26		15	Silt	Humic	Blk	N		X	X	X	N
Grab Event Comments: some eelgrass																
Grab Event Comments:																
Grab Event Comments:																

CTD Field Data Sheet

Date:

7/12/18

Time:

0810

Station ID:

B18-10075

Water Depth:

3.4

Tide:

2.9

Weather:

Partly Cldy
NA

Odor:

Floating Material?
(Yes / No)

No

Photo Number:

Visible Turbidity Plume?
(Yes / No)

No

Water Color:

Clear

CTD Data Archived?
(Yes / No)

Yes

Samples Collected?
(Yes / No)

Yes

COMMENTS:

WQ YSE

6.92 mg/L DO

8.05 pH

23.2°C Temp

51,777 SPC

49872 Col

34.07 P1+

BIGHT '18

Abandoned site?	Station Fail Code
Y or N (If Y explain in comments)	(2)

Station Comments

Water Sample Collection Time: 0810

Sed collected 7.5L

(Check all sample types that apply)

#	Time (hh:mm)	Latitude (DD°MM.mmmmm)	Longitude (DDD°MM.mmmmm)	Depth (m)	Distance to target (m)	Grab Fail Code (7)	Penetration (cm)	Composition (3)	Odor (4)	Color (5)	Shell Hash (6) (N/L/M/H)	Infauna (Y/N)	Sed Chem (Y/N)	Grain Size (Y/N)	Sed Tox (Y/N)	Debris (Y/N)
1	0830	32.76736	-117.23566	3.4	13		15	Silt	Humic	Brn	N	X				N
Grab Event Comments: some eelgrass																
2	0830	32.76736	-117.23566	3.4	13		15	Silt	Humic	Brn	N		X	X	X	N
Grab Event Comments:																
3	0843	32.76729	-117.23563	3.4	13	69	15	"	"	"	"		-	-	-	"
Grab Event Comments: eelgrass too much																
4	0843	32.76729	-117.23563	3.4	13	69	15	"	"	"	"		-	-	-	"
Grab Event Comments: eelgrass too much																
5	0858	32.76738	-117.23581	3.8	13		15	"	None	"	N		X	X	X	N
Grab Event Comments: some eelgrass																
6	0858	32.76738	-117.23581	3.8	13		15	"	None	"	N		X	X	X	N
Grab Event Comments: some eelgrass																

CTD Field Data Sheet

Date:

7/13/18

Time:

0810

Station ID:

B18-10017

Water Depth:

3.1m

Tide:

2.1

Weather:

Overcast

Odor:

None

Floating Material?
(Yes / No)

No

Photo Number:

No

Visible Turbidity Plume?
(Yes / No)

Clear

Water Color:

Yes

CTD Data Archived?
(Yes / No)

Yes

Samples Collected?
(Yes / No)

COMMENTS:

WQ YSI

pH 7.84

DO 6.17 mg/L

Temp 26.8°C

Sal 35.73 ppt

SpCond 54,114

Cond 55948

BIGHT '18

Abandoned site?	Station Fail Code
Y or N (If Y explain in comments)	(2)

GRAB EVENTS

#	Time (hh:mm)	Latitude (DD°MM.mmm)	Longitude (DDD°MM.mmm)	Depth (m)	Distance to target (m)	Grab Fail Code (7)	Penetration (cm)	Composition (3)	Odor (4)	Color (5)	Shell Hash (6) (N/L/M/H)	Infauna (Y/N)	Sed Chem (Y/N)	Grain Size (Y/N)	Sed Tox (Y/N)	Debris (Y/N)
1	0830	32.78439	-117.21531	3.1	10		15	Silt	None	Olive	N	X				N
Grab Event Comments:																
2	0830	32.78439	-117.21531	3.1	10		15	Silt	None	Olive	N		X	X	X	N
Grab Event Comments:																
3	0845	32.78429	-117.21527	3.1	10		15	Silt	None	Olive	N		X	X	X	N
Grab Event Comments:																
4	0845	32.78429	-117.21527	3.1	10		15	Silt	None	Olive	N		X	X	X	N
Grab Event Comments:																
Grab Event Comments:																
Grab Event Comments:																

CTD Field Data Sheet

Date:

7/13/18

Time:

0630

Station ID:

B18-10019

Water Depth:

6.0m

Tide:

-0.28

Weather:

Overcast

Odor:

No

Floating Material?
(Yes / No)

No

Photo Number:

No

Visible Turbidity Plume?
(Yes / No)

No

Water Color:

Clear

CTD Data Archived?
(Yes / No)

Yes

Samples Collected?
(Yes / No)

Yes

COMMENTS:

W Q YSI

8.06 m/L DO

23.5°C Temp

33.2 ppt SAL

59,606 SPC

'49,103 C

8.10 pH

BIGHT '18

Abandoned site?	Station Fail Code
Y or N (If Y explain in comments)	(2)

Water Sample Collection Time: 0630

Sed. Collected 8.0L

(Check all sample types that apply)

#	Time (hh:mm)	Latitude (DD°MM.mmmmm)	Longitude (DDD°MM.mmmmm)	Depth (m)	Distance to target (m)	Grab Fail Code (7)	Penetration (cm)	Composition (3)	Odor (4)	Color (5)	Shell Hash (6) (N/L/M/H)	Infauna (Y/N)	Sed Chem (Y/N)	Grain Size (Y/N)	Sed Tox (Y/N)	Debris (Y/N)
1	0655	32,76815	-117.24181	6.0	34		8	Fn Snd	None	Gray	N	X				N
Grab Event Comments: Sand dollars + Sea Pens																
2	0655	32,76815	-117.24181	6.0	34		8	Fn Snd	None	Gray	N		X	X	X	N
Grab Event Comments:																
3	0710	32,76814	-117.24176	6.0	34		7	"	"	"	N		X	X	X	N
Grab Event Comments:																
4	0710	32,76814	-117.24176	6.0	34	G13	—	"	"	"	N		X	X	X	N
Grab Event Comments:																
5	0725	32,76812	-117.24173	6.0	34		7	"	"	"	N		X	X	X	N
Grab Event Comments:																
6	0725	32,76812	-117.24173	6.0	34		7	"	"	"	N		X	X	X	N
Grab Event Comments:																

STATION OCCUPATION

BIGHT '18

Agency Code	Wood
Vessel Name	EB
Latitude	32.78485
Longitude	-117.24055
Arrival Time	1100
(hh:mm)	
Depth (m)	3.2

Weather	
Clear	<input checked="" type="checkbox"/>
Overcast	<input type="checkbox"/>
Partly cloudy	<input type="checkbox"/>
Drizzle	<input type="checkbox"/>
Hazy	<input type="checkbox"/>
Rain	<input type="checkbox"/>
Thunderstorm	<input type="checkbox"/>
Fog	<input type="checkbox"/>
Fog & Drizzle	<input type="checkbox"/>
Smoky	<input type="checkbox"/>

Sea State	Salinity (ppt)
Calm	<input checked="" type="checkbox"/>
Choppy	<input type="checkbox"/>
Rough	<input type="checkbox"/>
Confused	<input type="checkbox"/>
Estuary Sites only	
Abandoned site?	<input type="checkbox"/>
Y or N (If Y explain in comments)	

Station ID B18-10016

Date 7/13/18

Station Fail Code (2)

Wind
Speed (kts)
Direction (4)

Swell
Period (s)
Height (ft)
Direction (1)

Nav Type
DGPS
GPS
WAAS

Station Comments

--

Equipment Type
Core
Petite Ponar
Van Veen
Tandem Van Veen

TRAWL EVENTS

Trawl Number	Net Position	Deck Time (hh:mm:ss)	Latitude (DD°MM.mmmmm)	Longitude (DDD°MM.mmmmm)	Depth (m)
1	Net Over	1111	32.78436	-117.24068	4.2
	Start Trawl	1113	32.78372	-117.24180	3.9
	End Trawl	1119	32.78107	-117.24440	4.1
	Net on Deck	1121	32.78064	-117.24449	4.6

Enter Values	
Wire Out (m)	15
Closest Distance to target (m)	3m
PT Bottom Time (mm:ss)	07:00
PT Bottom Temperature (°C)	20.8
Trawl Fail Code (3)	

Check all that apply	
P/T Sensor Data	<input checked="" type="checkbox"/>
Community Structure	<input checked="" type="checkbox"/>
Tissue Chemistry	<input checked="" type="checkbox"/>

Comments:

2	Net Over	1257	32.78407	-117.24052	3.0
	Start Trawl	1259	32.78515	-117.24088	3.4
	End Trawl	1301	32.78573	-117.24117	3.5
	Net on Deck	1303	32.78777	-117.24119	3.9

Wire Out (m)	12
Closest Distance to target (m)	
PT Bottom Time (mm:ss)	01:50
PT Bottom Temperature (°C)	22.6
Trawl Fail Code (3)	

P/T Sensor Data	<input checked="" type="checkbox"/>
Community Structure	<input checked="" type="checkbox"/>
Tissue Chemistry	<input checked="" type="checkbox"/>

Comments:

2018 RHMP/ Bight '18 - Bioaccumulation and Plastic Ingestion Special Studies
Field Datasheet

Station: B18-10016

Page 1 of 1

Date: 7/13/18

sail bag

Completed by: TH

3m

15m wire

Additional Trawl Coordinates:

Trawl <i>21</i>	Net Set	Net on Bottom	Interval 1	Interval 2	Interval 3	Net Retrieval	Net on Board
Time		1112	1114			1118	
Depth (m)		3.9 m				4.1	
Lat (32.xxxxx)	78444	78371	78286			78103	
Long (-117.xxxxx)	24068	24181	24280			24445	

2 sec 12m (0.02) 2 sec entangle / cable trawl

Trawl <i>3</i>	<i>500+</i> Net Set	Net on Bottom	Interval 1	Interval 2	Interval 3	Net Retrieval	Net on Board
Time		1259	~				
Depth (m)		3.4					
Lat (32.xxxxx)		78519	78573				
Long (-117.xxxxx)		24086	-117.24117				

Trawl 4	Net Set	Net on Bottom	Interval 1	Interval 2	Interval 3	Net Retrieval	Net on Board
Time							
Depth (m)							
Lat (32.xxxxx)							
Long (-117.xxxxx)							

Trawl 5	Net Set	Net on Bottom	Interval 1	Interval 2	Interval 3	Net Retrieval	Net on Board
Time							
Depth (m)							
Lat (32.xxxxx)							
Long (-117.xxxxx)							

Comments:

4
Round Rays

1 sea urchin

1 yellow fin

1 Sargo

BIGHT '18 DEMERSAL FISH IDENTIFICATION FORM

Station: B18-10016

Page 1 of 1

Date: 7/13/18

Completed by: JR

Trawl Number 1 Failed ☐

	Species	N	Diversity Index Exclude Code	Std Length Size Class (cm) Use for up to 10 individuals. Use Size Class sheet for more abundant spp.	FID or Vouch	Weight (kg)		
						Gross	Tare	Net
1	Spotted Sand Bass	5		26, 25, 21, 23, 9			0.8	1.28
2	Kelp Bass	10		11, 10, 10, 11, 10, 10, 11, 13, 9, 10				0.225
3	CA Halibut	2		16, 19				0.149
4	Shiner Perch	8		7, 7, 7, 7, 6, 7, 7, 8 see bioaccun form				0.550
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								

Anomaly Codes: (record as superscript to tally mark): **A** = ambicoloration, **B** = albinism, **D** = skeletal deformity, **E** = copepod eye-parasite (i.e., Phrioxcephalus), **F** = fin erosion, **H** = Leeches, **L** = lesion (describe in Comments), **M** = Monogeneans, **O** = other anomaly (describe in Comments), **P** = other external parasite (describe in Comments), **T** = tumor, multiple occurrences on individual put "-" and #, **FID** = specimen(s) collected for further identification, **#V** = Number of specimens collected as species vouchers

Diversity Index Exclude Codes: Blank = No exclusion, **In** = Infauna, **Pl** = Pelagic, **Pr** = Parasite, **Nb** = New born, **SE** = Shark egg, **Dm** = damaged, **Xr** = met 3 rule exclude

Comments:

QA done at station: (circle) Yes No

BIGHT '18 DEMERSAL FISH IDENTIFICATION FORM

Station: B18-10016

Page 1 of 1

Date: 7/13/18

Completed by: JR

Trawl Number 2 Failed ☐

	Species	N	Diversity Index Exclude Code	Std Length Size Class (cm) Use for up to 10 individuals. Use Size Class sheet for more abundant spp.	FID or Vouch	Weight (kg)		
						Gross	Tare	Net
1	Kelp Bass	5		13, 14, 11, 12, 11				0.187
2	Pac. Seahorse	1		23				0.062
3	Spotted Sand Bass	3		25, 22, 24				0.834
4	CA Halibut	6		17, 17, 14, 13, 8, 8				0.217
5	Sargo	1		see Bioaccum sheet				
6	Topsmelt	1		see Bioaccum sheet				
7	Slough Anchovy			see Size Class sheet				
8	Shiner Perch	1		7				0.008
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								

Anomaly Codes: (record as superscript to tally mark): **A** = ambicoloration, **B** = albinism, **D** = skeletal deformity, **E** = copepod eye-parasite (i.e., Phrixocephalus), **F** = fin erosion, **H** = Leeches, **L** = lesion (describe in Comments), **M** = Monogeneans, **O** = other anomaly (describe in Comments), **P** = other external parasite (describe in Comments), **T** = tumor, multiple occurrences on individual put "-" and #, **FID** = specimen(s) collected for further identification, **#V** = Number of specimens collected as species vouchers

Diversity Index Exclude Codes: Blank = No exclusion, **In** = Infauna, **Pl** = Pelagic, **Pr** = Parasite, **Nb** = New born, **SE** = Shark egg, **Dm** = damaged, **Xr** = met 3 rule exclude

Comments:

QA done at station: (circle) Yes No

BIGHT '18 EPIBENTHIC INVERTEBRATE FORM

Station: B18-10016

Page 1 of 2

Date: 7/13/18

Completed by: JR

Trawl Number Failed

	Species	N	Diversity Index Exclude Code	Anomalies	Comments	FID or Vouch	Weight (kg)		
							Gross	Tare	Net
1	<i>Leptopecten latiauratus</i>	1				ID	—	—	.002
2	<i>Bulla gouldiana</i>	1				ID	—	—	.009
3	<i>Musculista senhousia</i>	1				—	—	—	.001
4	<i>Mitrella carinata</i>	1				ID	—	—	.001
5	Sponge "A"	n/a				FID	61	15	.046
6	Eelgrass limpet	2				ID	—	—	.001
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									

Anomaly Codes: B = burnspot, P = External Parasite, O = other anomaly (describe in Comments), W = wasting disease, multiple occurrences on individual put "and #", FID = specimen(s) collected for further identification, #V = Number of specimens collected as species vouchers

Diversity Index Exclude Codes: Blank = No exclusion, In = Infauna, Pl = Pelagic, Pr = Parasite, Nb = New born, SE = Shark egg, Dm = damaged, Xr = met 3 rule exclude

Comments:

QA done at station: (circle) Yes No

BIGHT '18 EPIBENTHIC INVERTEBRATE FORM

Station: B18-10016

Page 2 of 2

Date: 13 JULY 2018

Completed by: JR

Trawl Number 2 Failed

	Species	N	Diversity Index Exclude Code	Anomalies	Comments	FID or Vouch	Weight (kg)		
							Gross	Tare	Net
1	<i>Octopus bimaculoides</i>	1				photo only	557	289	.268
2	<i>Leptopoda</i> <i>latiauratus</i>	1				1- EDNA	—	268	.002
3	<i>Kellechia kellechia</i>	1				ID	—	—	.003
4	<i>Bulla gouldiana</i>	1				✓	—	—	.003
5	Tunicate "A"	1				FID	—	—	.005
6	<i>Crassostrea gigas</i>	5				1- ID 1- EDNA	—	—	.020
7	Horse mussel	1			3 <i>C. gigas</i> attached	FID	—	—	.217
8	<i>Trinia solandri</i>	1				FID	—	—	.005
9	Sponge "B"	1				FID	—	—	.002
10	<i>Nassarius tegula</i>	1				ID	—	—	.001
11									
12									
13									
14									
15									
16									
17									
18									
19									

Anomaly Codes: B = burnspot, P = External Parasite, O = other anomaly (describe in Comments), W = wasting disease, multiple occurrences on individual put "and #", FID = specimen(s) collected for further identification, #V = Number of specimens collected as species vouchers
Diversity Index Exclude Codes: Blank = No exclusion, In = Infauna, Pl = Pelagic, Pr = Parasite, Nb = New born, SE = Shark egg, Dm = damaged, Xr = met 3 rule exclude
Comments:

QA done at station: (circle) Yes No

BIGHT '18 TRAWL DEBRIS FORM

Agency:

Wood

Page

1 of 1

Station: B18-10016

Trawl #: 1

Date:

7/13/18

☐ CHECK HERE IF NO DEBRIS PRESENT IN SAMPLE

Anthropogenic Debris - include Brand names in Comments if known	Plastic	Count	Comment
	Bag		
	Bandaidd		
	Balloon (mylar/latex)/Ribbon		
	Bottle		
	Buoy		
	Cap/Lid		
	Cigarette box/Wrapper		
	Cup		
	Filmstrip (movie)		
	Fishing Line/Net		
	Food Bag/Wrapper		
	Polypropylene Rope		
	Single use food container		
	Toy		
	Utensil		
	Plastic Piece (unid.)		
	Other Plastic (comment req.)		
	Glass		
	Beer Bottle		
	Other Glass Bottle/Jar		
	Glass Piece (unid.)		
	Other Glass (comment req)		

Misc. Items/Pieces	Count	Comment
Boat/Ship/Engine Part		
Clothing		
Concrete/Asphalt		
Fiberglass		
Food		
Leather		
Lumber		
Paper		
Rag/Cloth		
Rubber		
Shoe		
Tape		
Tire		
Other Misc. (comment req.)		
Metal	Count	Comment
Drink Can		
Can - other		
Fishing Gear		
Wire		
Metal Piece (unid.)		
Other Metal (comment req.)		

Natural Debris	Marine Origin	Count	Est.*	Comment
	Foliose Algae - not kelp		M	
	Gorgonian Sea Fan (dead)			
	Kelp Holdfast			
	Kelp Stipe/Blade			
	Other Foliose Algae			
	Rock			
	Seagrass		M	loaded with epiphytes
	Other Marine (comment req.)			

Terrestrial Vegetation	Count	Est.*	Comment
Leaves/Seed Pod			
Stick/Branch/Driftwood			
Other Terrestrial (comment req.)			

*For Natural Debris only, if the count is >10 and an exact count cannot be made, leave the "Count" column blank and estimate the amount (M or H)

in the "Est." column

Moderate:

M = 11-100

High:

H = >100

Completed by: JR

BIGHT '18 TRAWL DEMERSAL FISH - QUALITY CONTROL FORM

Station: B18-10016 Trawl #: 2 Agency: WardDate: 7/13/18 Previously Measured by: KSRe-Measured by: JROriginal Gross weight (kg) — Tare Weight (kg) — Net weight (kg) 0.051QC Re-weigh weight (kg) — Tare Weight (kg) — Net weight (kg) 0.049

Size Class	Original Species: <i>Slough Anchovy</i>			Anomalies
	QC Re-ID: <i>Slough Anchovy</i>			
	Re-ID Count	+/-2 mm	Tweener count	
1		1-2		
2		2-3		
3		3-4		
4		4-5		
5		5-6	//	
6	 	6-7	//	
7		7-8		
8		8-9		
9		9-10		
10		10-11		
11		11-12		
12		12-13		
13		13-14		
14		14-15		
15		15-16		
16		16-17		
17		17-18		
18		18-19		
19		19-20		
20		20-21		
21		21-22		
22		22-23		
23		23-24		
24		24-25		
25		25-26		
26		26-27		
27		27-28		
28		28-29		
Total		Total		

Other Species found in sample:			QA/QC Acceptance	Pass	Fail	Initials
			Identification	X		JR
			Count	X		
			Length	X		
			Biomass	X		
Other species Weight (kg)			Pathology	X		
Gross	Tare	Net	Notes:			

Anomaly Codes (record as superscript to length measurement): A = ambicoloration, B = albinism, D = skeletal deformity, E = copepod eye-parasite (i.e., *Phrileocephalus*), F = fin erosion, H = Leeches, L = lesion (describe in Comments), M = Monogeneans, O = other anomaly (describe in Comments), P = other external parasite (describe in Comments), T = tumor. Note multiple occurrences on an individual put "-" and #

STATION OCCUPATION

BIGHT '18

Agency Code	Wood
Vessel Name	EB
Latitude	32.78401
Longitude	-117.21550
Arrival Time	0955
(hh:mm)	
Depth (m)	3.1

Weather	
Clear	<input type="checkbox"/>
Overcast	<input type="checkbox"/>
Partly cloudy	<input checked="" type="checkbox"/>
Drizzle	<input type="checkbox"/>
Hazy	<input type="checkbox"/>
Rain	<input type="checkbox"/>
Thunderstorm	<input type="checkbox"/>
Fog	<input type="checkbox"/>
Fog & Drizzle	<input type="checkbox"/>
Smoky	<input type="checkbox"/>

Sea State	Salinity (ppt)
Calm	<input checked="" type="checkbox"/>
Choppy	<input type="checkbox"/>
Rough	<input type="checkbox"/>
Confused	<input type="checkbox"/>
Estuary Sites only	
Abandoned site? <input type="checkbox"/>	
Y or N (If Y explain in comments)	

Station ID B18-10017

Date 7/13/18

Station Fail Code (2)

Wind	
Speed (kts)	10
Direction (4)	NW

Swell	
Period (s)	0
Height (ft)	0
Direction (1)	0

Nav Type
DGPS
GPS
WAAS

Station Comments

--

Equipment Type	
Core	<input type="checkbox"/>
Petite Ponar	<input type="checkbox"/>
Van Veen	<input type="checkbox"/>
Tandem Van Veen	<input type="checkbox"/>

TRAWL EVENTS

Trawl Number	Net Position	Deck Time (hh:mm:ss)	Latitude (DD°MM.mmm)	Longitude (DDD°MM.mmm)	Depth (m)
1	Net Over	0956	32.78401	-117.21550	3.1
	Start Trawl	0958	32.78327	-117.21520	3.1
	End Trawl	1004	32.78016	-117.21370	4.3
	Net on Deck	1006	32.77968	-117.21328	3.9

Enter Values	
Wire Out (m)	12
Closest Distance to target (m)	53
PT Bottom Time (mm:ss)	06:30
PT Bottom Temperature (°C)	24.6
Trawl Fail Code (3)	

Check all that apply

P/T Sensor Data	<input checked="" type="checkbox"/>
Community Structure	<input checked="" type="checkbox"/>
Tissue Chemistry	<input checked="" type="checkbox"/>

Comments:

Net Over					Wire Out (m)		P/T Sensor Data	
Start Trawl					Closest Distance to target (m)		Community Structure	
End Trawl					PT Bottom Time (mm:ss)		Tissue Chemistry	
Net on Deck					PT Bottom Temperature (°C)			
					Trawl Fail Code (3)			

Comments:

2018 RHMP/ Bight '18 - Bioaccumulation and Plastic Ingestion Special Studies
Field Datasheet

Station: B18-10017

Page 1 of 1

Date: 7/13/18 mission

Trawl
Bay - Fiesta
Island

Completed by: TH

Additional Trawl Coordinates: 0957

Fishing

12 m wire out

Trawl 2	Net Set	Net on Bottom	Interval 1	Interval 2	Interval 3	Net Retrieval	Net on Board
Time			0959	1001	1002	1003	1004
Depth (m)	3	3	3	3	3	4.3	4
Lat (32.xxxxx)	28.7841	28.7838	28.7825	28.7812	28.7807	28.7801	28.7796
Long (-117.xxxxx)	-117.2156	-117.2152	-117.2148	-117.2145	-117.2141	-117.2137	-117.2132

Trawl 3	Net Set	Net on Bottom	Interval 1	Interval 2	Interval 3	Net Retrieval	Net on Board
Time							
Depth (m)							
Lat (32.xxxxx)							
Long (-117.xxxxx)							

Trawl 4	Net Set	Net on Bottom	Interval 1	Interval 2	Interval 3	Net Retrieval	Net on Board
Time							
Depth (m)							
Lat (32.xxxxx)							
Long (-117.xxxxx)							

Trawl 5	Net Set	Net on Bottom	Interval 1	Interval 2	Interval 3	Net Retrieval	Net on Board
Time							
Depth (m)							
Lat (32.xxxxx)							
Long (-117.xxxxx)							

Comments:

BIGHT '18 DEMERSAL FISH IDENTIFICATION FORM

Station: BIF-10017

Page 1 of 1

Date: 7/13/18

Completed by: JR

Trawl Number Failed

	Species	N	Diversity Index Exclude Code	Std Length Size Class (cm) Use for up to 10 individuals. Use Size Class sheet for more abundant spp.	FID or Vouch	Weight (kg)		
						Gross	Tare	Net
* 1	Salema	2		see Bioaccum Sheet				
* 2	Top smelt	1		"				
3	Slough Anchovy			See size class form				
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								

Anomaly Codes: (record as superscript to tally mark): **A** = ambicoloration, **B** = albinism, **D** = skeletal deformity, **E** = copepod eye-parasite (i.e., Phrioxcephalus), **F** = fin erosion, **H** = Leeches, **L** = lesion (describe in Comments), **M** = Monogeneans, **O** = other anomaly (describe in Comments), **P** = other external parasite (describe in Comments), **T** = tumor, multiple occurrences on individual put "-" and #, **FID** = specimen(s) collected for further identification, **#V** = Number of specimens collected as species vouchers

Diversity Index Exclude Codes: Blank = No exclusion, **In** = Infauna, **Pl** = Pelagic, **Pr** = Parasite, **Nb** = New born, **SE** = Shark egg, **Dm** = damaged, **Xr** = met 3 rule exclude

Comments:

QA done at station: (circle) Yes No

QA done for species: (circle) Yes No

BIGHT '18 EPIBENTHIC INVERTEBRATE FORM

Station: B18-10017

Page 1 of 1

Date: 7/13/18

Completed by: JR

Trawl Number 1 Failed

	Species	N	Diversity Index Exclude Code	Anomalies	Comments	FID or Vouch	Weight (kg)		
							Gross	Tare	Net
1	Musculista senhousii	2				1-Formalin 1-EDNA	—	—	.001
2	Epiactis proliferata	1				1-Formalin	—	—	.001
3	Zoobotryon verticillatum	n/a				1-Formalin 1-EDNA	1433	104	6329
4	Bugula californica	n/a				1-Formalin FID	—	—	.061
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									

Anomaly Codes: B = burnspot, P = External Parasite, O = other anomaly (describe in Comments), W = wasting disease, multiple occurrences on individual put “-” and #, FID = specimen(s) collected for further identification, #V = Number of specimens collected as species vouchers

Diversity Index Exclude Codes: Blank = No exclusion, In = Infauna, Pl = Pelagic, Pr = Parasite, Nb = New born, SE = Shark egg, Dm = damaged, Xr = met 3 rule exclude

Comments:

QA done at station: (circle) Yes No

BIGHT '18 TRAWL DEBRIS FORM

Agency:

Wood

Page

of

1

Station:

B18-10017

Trawl #:

1

Date:

7/13/18

☐ CHECK HERE IF NO DEBRIS PRESENT IN SAMPLE

Anthropogenic Debris - include Brand names in Comments if known

Plastic	Count	Comment
Bag		
Bandaïd		
Balloon (mylar/latex)/Ribbon		
Bottle		
Buoy		
Cap/Lid		
Cigarette box/Wrapper		
Cup		
Filmstrip (movie)		
Fishing Line/Net		
Food Bag/Wrapper		
Polypropylene Rope		
Single use food container		
Toy		
Utensil		
Plastic Piece (unid.)		
Other Plastic (comment req.)		
Glass		
Beer Bottle		
Other Glass Bottle/Jar		
Glass Piece (unid.)		
Other Glass (comment req.)		

Misc. Items/Pieces	Count	Comment
Boat/Ship/Engine Part		
Clothing		
Concrete/Asphalt		
Fiberglass		
Food		
Leather		
Lumber		
Paper		
Rag/Cloth		
Rubber		
Shoe		
Tape		
Tire		
Other Misc. (comment req.)		
Metal	Count	Comment
Drink Can		
Can - other		
Fishing Gear		
Wire		
Metal Piece (unid.)		
Other Metal (comment req.)		

Natural Debris

Marine Origin	Count	Est.*	Comment
Foliose Algae - not kelp		M	
Gorgonian Sea Fan (dead)			
Kelp Holdfast			
Kelp Stipe/Blade	6		
Other Foliose Algae			
Rock			
Seagrass		M	
Other Marine (comment req.)			

Terrestrial Vegetation	Count	Est.*	Comment
Leaves/Seed Pod			
Stick/Branch/Driftwood			
Other Terrestrial (comment req.)			

*For Natural Debris only, if the count is >10 and an exact count cannot be made, leave the "Count" column blank and estimate the amount (M or H)

in the "Est." column

Moderate:

M = 11-100

High:

H = >100

Completed by:

JR

STATION OCCUPATION

BIGHT '18

Agency Code Wood
 Vessel Name EB
 Latitude 32.76793
 Longitude -117.24142
 Arrival Time 1435
(hh:mm)
 Depth (m) 8.2

Weather

Clear	<input type="checkbox"/>	Rain	<input type="checkbox"/>
Overcast	<input checked="" type="checkbox"/>	Thunderstorm	<input type="checkbox"/>
Partly cloudy	<input type="checkbox"/>	Fog	<input type="checkbox"/>
Drizzle	<input type="checkbox"/>	Fog & Drizzle	<input type="checkbox"/>
Hazy	<input type="checkbox"/>	Smoky	<input type="checkbox"/>

Sea State

Calm	<input checked="" type="checkbox"/>
Choppy	<input type="checkbox"/>
Rough	<input type="checkbox"/>
Confused	<input type="checkbox"/>

Salinity (ppt)
Estuary Sites only

Abandoned site? ☐ Station Fail Code
Y or N (If Y explain in comments) (2)

Station ID B18-10019Date 7/13/18

Wind

Speed (kts) 10
 Direction (4) NW

Swell

Period (s) 0
 Height (ft) 0
 Direction (1) 0

Nav Type

DGPS	<input checked="" type="checkbox"/>
GPS	<input type="checkbox"/>
WAAS	<input type="checkbox"/>

Station Comments

Equipment Type

Core	<input type="checkbox"/>	Van-Veen	<input type="checkbox"/>
Petite Ponar	<input type="checkbox"/>	Tandem Van-Veen	<input type="checkbox"/>

TRAWL EVENTS

Trawl Number	Net Position	Deck Time (hh:mm:ss)	Latitude (DD°MM.mmmm)	Longitude (DDD°MM.mmmm)	Depth (m)
1	Net Over	1441	32.76854	-117.24065	5.1
	Start Trawl	1443	32.76765	-117.24167	8.0
	End Trawl	1454	32.76273	-117.24393	7.7
	Net on Deck	1456	32.76199	-117.24391	7.9

Enter Values

Wire Out (m) 29
 Closest Distance to target (m)
 PT Bottom Time (mm:ss) 09:30
 PT Bottom Temperature (°C) 21.9
 Trawl Fail Code (3)

Check all that apply

P/T Sensor Data ☒
 Community Structure ☒
 Tissue Chemistry ☒

Comments:

Net Over					Wire Out (m)		P/T Sensor Data	<input type="checkbox"/>
Start Trawl					Closest Distance to target (m)		Community Structure	<input type="checkbox"/>
End Trawl					PT Bottom Time (mm:ss)		Tissue Chemistry	<input type="checkbox"/>
Net on Deck					PT Bottom Temperature (°C)			
					Trawl Fail Code (3)			

Comments:

2018 RHMP/ Bight '18 - Bioaccumulation and Plastic Ingestion Special Studies
Field Datasheet

Station: B18-10019

Page 1 of 1

Date: 7/13/18

Completed by: TH

Additional Trawl Coordinates:

over fishing bottom ~7m dip

Trawl 2	Net Set	Net on Bottom	Interval 1	Interval 2	Interval 3	Net Retrieval	Net on Board
Time		1441	1443	1444	1447		
Depth (m)		5.1	8.0	7.4	7.4		
Lat (32.xxxxx)		76856	76771	76696	76562		
Long (-117.xxxxx)		24058	24162	24224	24281		

**start fishing Trawl 2 per Bldg. GPS crash. end*

Trawl 3	Net Set	Net on Bottom	Interval 1	Interval 2	Interval 3	Net Retrieval	Net on Board
Time			1450	1452		1453	1456
Depth (m)			7.2	7.3		7.7	
Lat (32.xxxxx)			76433	76328		76276	76199
Long (-117.xxxxx)			24319	24377		24392	24391

Trawl 4	Net Set	Net on Bottom	Interval 1	Interval 2	Interval 3	Net Retrieval	Net on Board
Time							
Depth (m)							
Lat (32.xxxxx)							
Long (-117.xxxxx)							

Trawl 5	Net Set	Net on Bottom	Interval 1	Interval 2	Interval 3	Net Retrieval	Net on Board
Time							
Depth (m)							
Lat (32.xxxxx)							
Long (-117.xxxxx)							

Comments:

BIGHT '18 DEMERSAL FISH IDENTIFICATION FORM

Station: B18-10019

Page 1 of

Date: 7/13/18

Completed by: JR

Trawl Number 1 Failed ☐

	Species	N	Diversity Index Exclude Code	Std Length Size Class (cm) Use for up to 10 individuals. Use Size Class sheet for more abundant spp.	FID or Vouch	Weight (kg)		
						Gross	Tare	Net
1	Kelp Pipefish	1		44				0.038
2	Horn Shark	1		23				0.081
3	Pac Seahorse	1		22				0.040
4	Rock Wrasse	4		22, 23, 19, 15				0.580
5	Spotted Turbot	1		11				0.030
6	Spotted Sand Bass	12		31, 24, 23, 20, 24, 17, 21, 15, 20, 20, 20, 20				3.06
7	Barred Sand Bass	3		14, 13, 15 also see Bioaccum sheet				0.159
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								

Anomaly Codes: (record as superscript to tally mark): A = ambicoloration, B = albinism, D = skeletal deformity, E = copepod eye-parasite (i.e., Phrioxcephalus), F = fin erosion, H = Leeches, L = lesion (describe in Comments), M = Monogeneans, O = other anomaly (describe in Comments), P = other external parasite (describe in Comments), T = tumor, multiple occurrences on individual put "-" and #, FID = specimen(s) collected for further identification, #V = Number of specimens collected as species vouchers

Diversity Index Exclude Codes: Blank = No exclusion, In = Infauna, Pl = Pelagic, Pr = Parasite, Nb = New born, SE = Shark egg, Dm = damaged, Xr = met 3 rule exclude

Comments:

Wrasse all females

QA done at station: (circle) Yes No

Station: 618-10019

Page 1 of 1

Date: 13 JULY 2018

Completed by: JR

Trawl Number	Failed
1	
2	
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99	
100	

Species		N	Diversity Index Exclude Code	Anomalies	Comments	FID or Vouch	Weight (kg)		
							Gross	Tare	Net
1	Dendroaster excentricus	618			50+50+50+150+ 184+57+77	FEQNA 1-1D	7.82	.84	6.98
2	Ciona intestinalis	2				FID	—	—	2
3	Zoobotryon verticillatum	n/a				—	470	51	419
4	Bulla gouldiana	1				—	—	—	5
5	Sca per "21"	18			pink/purple	FID	161	95	66
6	Ophio. spiculata	1				—	—	—	1
7	Spiny lobster	1				—	—	—	471
8	Dorid FID					FID	—	—	13
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19	—								

Diversity Index Exclude Codes: Blank = No exclusion, In = Infauna, Pl = Pelagic, Pr = Parasite, Nb = New born, SE = Shark egg, Dm = damaged, Xr = met 3 rule exclude

QA done at station: (circle) Yes No

BIGHT '18 TRAWL DEBRIS FORM

Agency:

Wood

Page

1 of 1

Station: B18-10019

Trawl #: 1

Date:

7/13/18

☐ CHECK HERE IF NO DEBRIS PRESENT IN SAMPLE

Anthropogenic Debris - include Brand names in Comments if known

Plastic	Count	Comment
Bag		
Bandaïd		
Balloon (mylar/latex)/Ribbon		
Bottle		
Buoy		
Cap/Lid		
Cigarette box/Wrapper		
Cup		
Filmstrip (movie)		
Fishing Line/Net		
Food Bag/Wrapper		
Polypropylene Rope		
Single use food container		
Toy		
Utensil		
Plastic Piece (unid.)		
Other Plastic (comment req.)		
Glass		
Beer Bottle		
Other Glass Bottle/Jar		
Glass Piece (unid.)		
Other Glass (comment req.)		

Misc. Items/Pieces	Count	Comment
Boat/Ship/Engine Part		
Clothing		
Concrete/Asphalt		
Fiberglass		
Food		
Leather		
Lumber		
Paper		
Rag/Cloth		
Rubber		
Shoe		
Tape		
Tire		
Other Misc. (comment req.)		
Metal	Count	Comment
Drink Can		
Can - other		
Fishing Gear		
Wire		
Metal Piece (unid.)		
Other Metal (comment req.)		

Natural Debris

Marine Origin	Count	Est.*	Comment
Foliose Algae - not kelp		M	
Gorgonian Sea Fan (dead)			
Kelp Holdfast			
Kelp Stipe/Blade	1		
Other Foliose Algae			
Rock			
Seagrass		M	
Other Marine (comment req.)			

Terrestrial Vegetation	Count	Est.*	Comment
Leaves/Seed Pod			
Stick/Branch/Driftwood			
Other Terrestrial (comment req.)			

*For Natural Debris only, if the count is >10 and an exact count cannot be made, leave the "Count" column blank and estimate the amount (M or H) in the "Est." column

Moderate:

M = 11-100

High:

H = >100

Completed by:

JR

Bight/BOG Fish Bioaccumulation Field Datasheet

Date

7/13/18Page 1 of 2

Completed by:

JR

	Species	Station	Total Length (mm)	Standard Length (mm)	Weight (g)	Photo (Y/N)	Notes
1	Salema	B18-10017	135	120	32	Y	
2	Salema	↓	118	100	18	Y	
3	Topsmelt	↓	110	100	8	Y	
1	Shiner Perch	B18-10016	85	70	9	Y	
2			78	70	9	Y	
3			79	70	9	Y	
4			79	70	8	Y	
5			88	80	11	Y	
6			85	70	10	Y	
7			82	70	8	Y	
8			73	60	7	Y	
9			76	70	7	Y	
10			74	70	6	Y	
11			72	60	6	Y	
12			77	70	7	Y	
13			73	60	6	Y	
14			74	60	6	Y	
15			73	70	7	Y	
16			72	60	5	Y	
17			73	60	6	Y	
18			72	60	5	Y	
19			71	60	4	Y	
20	↓	↓	64	60	2	Y	
1	Sargo	B18-10016	175	150	84	Y	
2	Topsmelt	"	77	70	4	Y	
3	Yellowfin Croaker	"	345	310	504	Y	

Comments:

Bight/BOG Fish Bioaccumulation Field Datasheet

Page 2 of 2

Date _____

Completed by:

[illegible]**Comments:**

Comments:
* Disc width

CTD Field Data Sheet

Date: 7/16/18

Time: 1140

Station ID: BLF-10023

Water Depth: 115.5

Tide: 3.9

Weather: Clear

Odor: None

Floating Material?
(Yes / No) No

Photo Number: _____

Visible Turbidity Plume?
(Yes / No) No

Water Color: Clear

CTD Data Archived?
(Yes / No) Yes

Samples Collected?
(Yes / No) Yes

COMMENTS: Water MS/MSD collected

YSI WQ

pH 8.20

Temp 21.5°C

DO 9.53 mg/L

Sal 33.76 ppt

Sp Cond 51.315 SPC

Cond 47.828

B|GHT '18

STATION OCCUPATION

Agency Code	Wood
Vessel Name	EB
Latitude	32.71746
Longitude	-117.21593
Arrival Time	1131
(hh:mm)	
Depth (m)	155

Weather		
Clear	<input checked="" type="checkbox"/>	Rain
Overcast	<input type="checkbox"/>	Thunderstorm
Partly cloudy	<input type="checkbox"/>	Fog
Drizzle	<input type="checkbox"/>	Fog & Drizzle
Hazy	<input type="checkbox"/>	Smoky

Sea State

Calm	<input checked="" type="checkbox"/>
Choppy	<input type="checkbox"/>
Rough	<input type="checkbox"/>
Confused	<input type="checkbox"/>

Salinity (ppt)

<div></div>

Estuary Sites only


Abandoned site

Y or N (If Y explain in comments)

Station ID **B/E-1002J**

Date 7/16/18

Abandoned site? Y or N (If Y explain in	Station Fail Code (2)	
---	---------------------------------	--

Wind 
Speed (kts) 10
Direction (4) W

Swell	
Period (s)	0
Height (ft)	6
Direction (1)	0

Nav Type	
DGPS	X
GPS	
WAAS	

Station Comments

Water Sample Collection Time: 1140

Sed collected 8.0L

* Water MS/MSD

Equipment Type	
Core	Van Veen
Petite Ponar	Tandem Van Veen

GRAB EVENTS

GRAB EVENTS

(Check all sample types that apply)

#	Time (hh:mm)	Latitude (DD°MM.mmm)	Longitude (DDD°MM.mmm)	Depth (m)	Distance to target (m)	Grab Fail Code (7)	Penetration (cm)	Composition (3)	Odor (4)	Color (5)	Shell Hash (6) (N/L/M/H)	Infauna (Y/N)	Sed Chem (Y/N)	Grain Size (Y/N)	Sed Tox (Y/N)	Debris (Y/N)
1	1215	32.71747	-117.21554	15.5	34	613	-	-	-	-		X				
Grab Event Comments:																
2	1215	32.71747	-117.21554	15.5	34	613	-	-	-	-			X	X	X	
Grab Event Comments:																
3	1221	32.71744	-117.21555	15.5	34	613	-	-	-	-	-	-	-	-	-	
Grab Event Comments:																
4	1221	32.71744	-117.21555	15.5	34	613	-	-	-	-	-	-	-	-	-	
Grab Event Comments:																
5	1230	32.71745	-117.21559	15.7	34		15	Fn Snd	None	Gray	N	X				N
Grab Event Comments:																
6	1230	32.71745	-117.21559	15.7	34		15	Fn Snd	None	Gray	N		X	X	X	N
Grab Event Comments:																

BIGHT '18

STATION OCCUPATION

Abandoned site?	Station Fail Code
Y or N (If Y explain in comments)	(2)

Water Sample Collection Time: 1140

Core		Van Veen	
Petite Ponar		Tandem Van Veen	X

GRAB EVENTS

#	Time (hh:mm)	Latitude (DD°MM.mmmmm)	Longitude (DDD°MM.mmmmm)	Depth (m)	Distance to target (m)	Grab Fail Code (7)	Penetration (cm)	Composition (3)	Odor (4)	Color (5)	Shell Hash (6) (N/L/M/H)	Infauna (Y/N)	Sed Chem (Y/N)	Grain Size (Y/N)	Sed Tox (Y/N)	Debris (Y/N)
7	1243	32.71742	-117.21555	15.7	34		13	FnSnd	None	Gray	N		X	X	X	N
Grab Event Comments:																
8	1243	32.71742	-117.21555	15.7	34		13	FnSnd	None	Gray	N		X	X	X	N
Grab Event Comments:																
Grab Event Comments:																
Grab Event Comments:																
Grab Event Comments:																
Grab Event Comments:																

CTD Field Data Sheet

Date: 7/16/18

Time: 1355

Station ID: B18-10030

Water Depth: 20.6

Tide: 4.6

Weather: Overcast

Odor: None

Floating Material?
(Yes / No) No

Photo Number: NO

Visible Turbidity Plume?
(Yes / No) No

Water Color: Clear

CTD Data Archived?
(Yes / No) (Yes)

Samples Collected?
(Yes / No) (Yes)

COMMENTS: Moist

High current

WQ
~~8.23 mg/L DO~~
~~51.930 SPC~~
~~48,400 C~~
~~33.8 ppt S-L~~
~~8.09 pH~~
Temp

WQ
pH 8.16

Temp 22.1°C

DO 8.75 mg/L

Sal 33.93

Sp Cond 51,557

Cond 48789

$zofz$

Agency Code	Wood
Vessel Name	EB
Latitude	32.68784
Longitude	-117.23027
Arrival Time	1351
(hh:mm)	
Depth (m)	20.6

Clear	<input checked="" type="checkbox"/>	Rain	<input type="checkbox"/>
Overcast	<input type="checkbox"/>	Thunderstorm	<input type="checkbox"/>
Partly cloudy	<input type="checkbox"/>	Fog	<input type="checkbox"/>
Drizzle	<input type="checkbox"/>	Fog & Drizzle	<input type="checkbox"/>
Hazy	<input type="checkbox"/>	Smoky	<input type="checkbox"/>

Calm	X
Choppy	
Rough	
Confused	

Estuary Sites only

Date 7/16/18

Y or N (If Y explain in comments)

(2)

Speed (kts) 10
Direction (4) W

Period (s)	0
Height (ft)	0
Direction (1)	0

DGPS	X
GPS	
WAAS	

Water Sample Collection Time: 1400

Core		Van Veen	
Petite Ponar		Tandem Van Veen	X

(Check all sample types that apply)

#	Time (hh:mm)	Latitude (DD°MM.mmm)	Longitude (DDD°MM.mmm)	Depth (m)	Distance to target (m)	Grab Fail Code (7)	Penetration (cm)	Composition (3)	Odor (4)	Color (5)	Shell Hash (6) (N/L/M/H)	Infauna (Y/N)	Sed Chem (Y/N)	Grain Size (Y/N)	Sed Tox (Y/N)	Debris (Y/N)
7	1450	32.68772	-117.23028	20.8	26	613	8	Fn Snd	None	L+Brn	A		X	X	X	N
Grab Event Comments:																
8	1450	32.68772	-117.23028	20.8	26	613	-	-	-	-	-	-	-	-	-	-
Grab Event Comments:																
9	1500	32.68774	-117.23026	20.6	26		6	Fn Snd	None	L+Brn	M		X	X	X	N
Grab Event Comments:																
10	1500	32.68774	-117.23026	20.6	26		7	Fn Snd	None	L+Brn	M		X	X	X	N
Grab Event Comments:																
11	1507	32.68774	-117.23027	20.8	26		5	Fn Snd	None	L+Brn	H		X	X	X	N
Grab Event Comments: Gray underneath light brown																
12	1507	32.68774	-117.23027	20.8	26		5	Fn Snd	None	L+Brn	H		X	X	X	N
Grab Event Comments: Gray underneath light brown																

CTD Field Data Sheet

Date: 7/16/18

Time: 1000

Station ID: BIF-10078

Water Depth: 3.4

Tide: 1.97

Weather: Overcast

Odor: No

Floating Material?
(Yes / No) No

Photo Number: No

Visible Turbidity Plume?
(Yes / No) No

Water Color: Clear / Green

CTD Data Archived?
(Yes / No) Yes

Samples Collected?
(Yes / No) Yes

COMMENTS: Pile marker #5 in channel to
Quercus cyp Harbor

YSI WQ

pH 8.01
Temp 23.0 °C
DO 6.96 mg/L DO
Sal 34.00 ppt
Sp Cond 51,678 SPC
Cond 49,716 C.

Weather

Clear		Rain	
Overcast	X	Thunderstorm	
Partly cloudy		Fog	
Drizzle		Fog & Drizzle	
Hazy		Smoky	

Sea State

Salinity (ppt)

Station ID **1318-10078**

Date 7/16/18

Calm	X
Choppy	
Rough	
Confused	

Abandoned site?

Y or N (If Y explain in comments)

Station Fail Code

(2)

Wind

Speed (kts) 3
Direction (4) W

Swell

Period (s) 0
Height (ft) 0
Direction (1) 0

Nav Type

DGPS	X
GPS	
WAAS	

Equipment Type

Core		Van Veen	
Petite Ponar		Tandem Van Veen	X

Station Comments

Water Sample Collection Time: 1000

Sed Collected: 8.0L

GRAB EVENTS

(Check all sample types that apply)

GRAB EVENTS

#

Time
(hh:mm)

Latitude
(DD°MM.mmm)

Longitude
(DDD°MM.mmm)

Depth
(m)

Distance to
target (m)

Grab Fail
Code (7)

Penetration
(cm)

Composition
(3)

Odor (4)

Color (5)

Shell
Hash (6)
(N/L/M/H)

Infauna
(Y/N)

Sed Chem
(Y/N)

Grain Size
(Y/N)

Sed Tox
(Y/N)

Debris
(Y/N)

1

1024

32.72304

-117.22373

3.4

35

13

Fn Snd

None

olive

N

X

N

Grab Event Comments:

2

1024

32.72304

-117.22373

3.4

35

13

Fn Snd

None

Olive

N

X

X

X

N

Grab Event Comments:

3

1035

32.72306

-117.22356

4.4

38

15

Silt

None

Olive

N

X

X

X

N

Grab Event Comments:

4

1035

32.72306

-117.22356

4.4

38

15

Silt

None

Olive

N

X

X

X

N

Grab Event Comments:

Grab Event Comments:

Grab Event Comments:

CTD Field Data Sheet

Date: 7/16/08

Time: 0855

Station ID: P18-10079

Water Depth: 5.5

Tide: 0.56

Weather: Overcast

Odor: None

Floating Material?
(Yes / No) No
NO

Photo Number: _____

Visible Turbidity Plume?
(Yes / No) No

Water Color: Clear Green

CTD Data Archived?
(Yes / No) (Yes)

Samples Collected?
(Yes / No) (Yes)

COMMENTS:

Spirit Solar (~100' Boat) white w/ yellow
Flipped / Degassed Start Before
around Water Sample taken.
we let water settle before
sample taken. air cleared.

YSI wa

Temp 23.0°C

DO 7.40 mg/L

pH 8.02

Sal 34.01 ppt

Sp Cond 51696

Cond 49744

(619) 224-2471
Skylar Cove

Weather			
Clear	<input type="checkbox"/>	Rain	<input type="checkbox"/>
Overcast	<input checked="" type="checkbox"/>	Thunderstorm	<input type="checkbox"/>
Partly cloudy	<input type="checkbox"/>	Fog	<input type="checkbox"/>
Drizzle	<input type="checkbox"/>	Fog & Drizzle	<input type="checkbox"/>
Hazy	<input type="checkbox"/>	Smoky	<input type="checkbox"/>

Date 7/16/18

Estuary Sites only

Station Fail Code

Y or N (If Y explain in comments)

(2)

Speed (kts) 0
Direction (4) -

Period (s) _____
Height (ft) _____
Direction (1) _____

DGPS	X
GPS	
WAAS	

Water Sample Collection Time: 0855

Sed collected 8.5L

Equipment Type

Core	
Petite Ponar	

Van Veen

Tandem Van Veen

GRAB EVENTS

(Check all sample types that apply)

GRAB EVENTS														(Check all sample types that apply)		
#	Time (hh:mm)	Latitude (DD°MM.mmm)	Longitude (DDD°MM.mmm)	Depth (m)	Distance to target (m)	Grab Fail Code (7)	Penetration (cm)	Composition (3)	Odor (4)	Color (5)	Shell Hash (6) (N/L/M/H)	Infauna (Y/N)	Sed Chem (Y/N)	Grain Size (Y/N)	Sed Tox (Y/N)	Debris (Y/N)
1	0924	32.72047	-117.22070	5.5	68		15	Silt	None	DK Brn	N	X				N
Grab Event Comments:																
2	0924	32.72047	-117.22070	5.5	68		15	Silt	None	DK Brn	N		X	X	X	N
Grab Event Comments:																
3	0936	32.72044	-117.22080	5.7	68		15	Silt	None	Olive	N		X	X	X	N
Grab Event Comments:																
4	0936	32.72044	-117.22080	5.7	68		15	Silt	None	Olive	N		X	X	X	N
Grab Event Comments:																
Grab Event Comments:																
Grab Event Comments:																

CTD Field Data Sheet

Date: 7/16/18

Time: 0720

Station ID: B18-10117

Water Depth: 13.3

Tide: -0.78

Weather: Overcast

Odor: None

Floating Material?
(Yes / No) No
no

Photo Number: _____

Visible Turbidity Plume?
(Yes / No) No

Water Color: Clear/Green

CTD Data Archived?
(Yes / No) Yes

Samples Collected?
(Yes / No) Yes

COMMENTS: _____

Trimble died
before point taken

~~NBPL~~ Disputed

WQ

22.9°C Temp

~~100~~ 7.68 mg/L DO

48,079 SPC

46,074 C

38.37 ppt

8.02 pH

near NBPL net Boom

STATION OCCUPATION

Agency Code Wood
 Vessel Name EB
 Latitude 32.69188
 Longitude -117.23837
 Arrival Time 0700
 (hh:mm)
 Depth (m) 13.3

Weather
 Clear ☐ Rain ☐
 Overcast ☒ Thunderstorm ☐
 Partly cloudy ☐ Fog ☐
 Drizzle ☐ Fog & Drizzle ☐
 Hazy ☐ Smoky ☐

Sea State
 Calm ☒
 Choppy ☐
 Rough ☐
 Confused ☐
 Abandoned site? ☐
 Y or N (if Y explain in comments)

Salinity (ppt)

Estuary Sites only

Station ID BIF-10117Date 7/16/18Station Fail Code
(2)

Wind
 Speed (kts) 5
 Direction (4) SW

Swell
 Period (s) 0
 Height (ft) 0
 Direction (1) 0

Nav Type

DGPS ☒
 GPS ☐
 WAAS ☐

Equipment Type

Core ☐ Van Veen ☐
 Petite Ponar ☐ Tandem Van Veen ☒

Station Comments

Water Collection: 0720
 Sed Collected 8.0 L.

GRAB EVENTS

(Check all sample types that apply)

#	Time (hh:mm)	Latitude (DD°MM.mmm)	Longitude (DDD°MM.mmm)	Depth (m)	Distance to target (m)	Grab Fail Code (7)	Penetration (cm)	Composition (3)	Odor (4)	Color (5)	Shell Hash (6) (N/L/M/H)	Infauna (Y/N)	Sed Chem (Y/N)	Grain Size (Y/N)	Sed Tox (Y/N)	Debris (Y/N)
1	0739	32.691900	-117.238400	13.3	24		15	Silt	None	Gray	N	X				N
Grab Event Comments: Slight color variation between tandem grabs																
2	0739	32.691900	-117.238400	13.3	24		15	Silt	None	Tan/gray	N		X	X	X	N
Grab Event Comments: light sheen on surface																
3	0752	32.691905	-117.238420	13.3	24		15	Silt	HS	Gray	N		X	X	X	N
Grab Event Comments:																
4	0752	32.691905	-117.238420	13.3	24		15	Silt	HS	Gray	N		X	X	X	N
Grab Event Comments:																
Grab Event Comments:																
Grab Event Comments:																

Code Descriptions for the back of the Bight'18 Grab Form

CTD Field Data Sheet

Date:

7/17/18

Time:

0800

Station ID:

B18-10080

Water Depth:

4.4

Tide:

-0.15 low / Rising

Weather:

overcast

Odor:

N

Floating Material?
(Yes / No)

Photo Number:

N

Visible Turbidity Plume?
(Yes / No)

Water Color:

clear

CTD Data Archived?
(Yes / No)

Samples Collected?
(Yes / No)

COMMENTS:

oil slick C Fuel Dark

W2
temp: 23.7°C

~~DO~~

SPC 51,576

C 50888

DO 7.73 g/L

SAL 33.9

pH: 8.07

Mike / Bay Club Sign
10082

STATION OCCUPATION

BIGHT '18

Agency Code	AMBL
Vessel Name	EB2
Latitude	32.71883
Longitude	-117.22634
Arrival Time (hh:mm)	0800
Depth (m)	4.4m

Weather			
Clear	<input checked="" type="checkbox"/>	Rain	<input type="checkbox"/>
Overcast	<input checked="" type="checkbox"/>	Thunderstorm	<input type="checkbox"/>
Partly cloudy	<input type="checkbox"/>	Fog	<input type="checkbox"/>
Drizzle	<input type="checkbox"/>	Fog & Drizzle	<input checked="" type="checkbox"/>
Hazy	<input type="checkbox"/>	Smoky	<input type="checkbox"/>

Sea State	Salinity (ppt)
Calm	<input checked="" type="checkbox"/>
Choppy	<input type="checkbox"/>
Rough	<input type="checkbox"/>
Confused	<input type="checkbox"/>
Abandoned site? Y or N (If Y explain in comments)	

Station ID	B18-10080
Date	7/17/18
Person	Fuel Dock
Station Fail Code	<input type="checkbox"/>

Wind	
Speed (kts)	0
Direction (4)	0

Swell	
Period (s)	0
Height (ft)	2
Direction (1)	0

Nav Type	
DGPS	<input type="checkbox"/>
GPS	<input type="checkbox"/>
WAAS	<input type="checkbox"/>

Station Comments
Water Sample Collection Time: 0800
Sed: collectu time: 0815
SL

Equipment Type			
Core	<input type="checkbox"/>	Van Veen	<input type="checkbox"/>
Petite Ponar	<input type="checkbox"/>	Tandem Van Veen	<input checked="" type="checkbox"/>

GRAB EVENTS

#	Time (hh:mm)	Latitude (DD°MM.mmm)	Longitude (DDD°MM.mmm)	Depth (m)	Distance to target (m)	Grab Fail Code (7)	Penetration (cm)	Composition (3)	Odor (4)	Color (5)	Shell Hash (6) (N/L/W/H)	Infauna (Y/N)	Sed Chem (Y/N)	Grain Size (Y/N)	Sed Tox (Y/N)	Debris (Y/N)
1	0815	32.71883	-117.22634	4.4	32	/	15	Silt	N	0.9.	N	y	N	N	N	y
Grab Event Comments: v. minor sand																
2	0815	32.71883	-117.22634	4.4	32	/	15	Silt	N	0.9.	N	N	y	y	y	y
Grab Event Comments: v.m.s.																
3	0830	32.71882	-117.22633	4.4	33	G9	13	Silt	N	0.9.	N	N	N	N	N	(H)
Grab Event Comments: Deb. 3 + poor closure/washout																
4	0830	32.71882	-117.22633	4.4	33	/	14	Silt	N	0.9.	N	N	y	y	y	N
Grab Event Comments:																
5	0835	32.71888	-117.22630	4.4	33	/	15	Silt	N	0.9.	N	N	y	y	y	N
Grab Event Comments:																
6	0835	32.71888	-117.22630	4.4	33	/	15	Silt	N	0.9.	N	N	y	y	y	N
Grab Event Comments:																

washed out / bumper
B36, Mike
w/ bumper
in

CTD Field Data Sheet

Date:

7/17/18

Time:

0700

Station ID:

B18-10081

Water Depth:

+3.2 m

Tide:

-0.25 feet / low

Weather:

overcast

Odor:

No

Floating Material?
(Yes / No)

No

Photo Number:

No

Visible Turbidity Plume?
(Yes / No)

No

Water Color:

clear

CTD Data Archived?
(Yes / No)

Samples Collected?
(Yes / No)

COMMENTS:

Shoer on (scum?)

No Rainbow (no color)

WQ

Temp 23.0°C

SPC 51.043

C 49045

DO 7.60 m/L

Sal. 33.6

pH: 7.97

BIGHT '18

#	Time (hh:mm)	Latitude (DD°MM.mmmmm)	Longitude (DDD°MM.mmmmm)	Depth (m)	Distance to target (m)	Grab Fail Code (7)	Penetration (cm)	Composition (3)	Odor (4)	Color (5)	Shell Hash (6) (N/L/M/H)	Infauna (Y/N)	Sed Chem (Y/N)	Grain Size (Y/N)	Sed Tox (Y/N)	Debris (Y/N)
1	0722	32.71821	-117.23048	3.2	19	/	15	silt	N	olive green	N	y	N	N	N	N
Grab Event Comments:																
2	0722	32.71821	-117.23040	3.2	19	/	15	silt w/ minor sand	N	olive green	N	N	y	y	y	N
Grab Event Comments:																
3	0735	32.71818	-117.23051	3.2	19	/	15	silt	N	o.s.	N	N	y	y	y	N
Grab Event Comments:																
4	0735	32.71818	-117.23051	3.2	19	/	15	silt	N	o.s.	N	N	y	y	y	N
Grab Event Comments:																
Grab Event Comments:																
Grab Event Comments:																

CTD Field Data Sheet

Date:

BKS 7/17/18

Time:

0900

Station ID:

B18-10082

Water Depth:

4.2 m

Tide:

+0.94 feet

Weather:

overcast

Odor:

N

Floating Material?
(Yes / No)

N

Photo Number:

N

Visible Turbidity Plume?
(Yes / No)

Water Color:

clear

CTD Data Archived?
(Yes / No)

Samples Collected?
(Yes / No)

COMMENTS:

mid channel C. White Bay Club marker

WQ

Temp 83.6 °C
DO 7.87 mg/L DO
Sal 34.00 ppt
SPL 51,695 SPL
C 50,309
pH 8.03 pH

Bay Club Marina

B18-10082

BIGHT '18

Station Fail Code

Water Sample Collection Time: 0900

Seed collected T_{max}: 0920
S. 54

(Check all sample types that apply)

#	Time (hh:mm)	Latitude (DD°MM.mmm)	Longitude (DDD°MM.mmm)	Depth (m)	Distance to target (m)	Grab Fail Code (7)	Penetration (cm)	Composition (3)	Odor (4)	Color (5)	Shell Hash (6) (N/L/MH)	Infauna (Y/N)	Sed Chem (Y/N)	Grain Size (Y/N)	Sed Tox (Y/N)	Debris (Y/N)
1	0920	32.71643	-117.22662	4.2	65	/	15	Silt	N	O-g-	N	Y	N	N	N	N
Grab Event Comments:																
2	0920	32.71643	-117.22662	4.2	65	/	15	Silt	N	O-g-	N	N	Y	Y	Y	N
Grab Event Comments:																
3	0930	32.71641	-117.22665	4.2	65	/	15	Silt	N	O-g-	N	N	Y	Y	Y	N
Grab Event Comments:																
4	0930	32.71641	-117.22665	4.2	65	/	15	Silt	N	O-g-	N	N	Y	Y	Y	N
Grab Event Comments:																
Grab Event Comments:																
Grab Event Comments:																

CTD Field Data Sheet

Date:

7/17/18

Time:

1000

Station ID:

B18-10083

Water Depth:

4.6 ~~feet~~ meters

Tide:

+1.7 feet

Weather:

overcast

Odor:

N

Floating Material?
(Yes / No)

N

Photo Number:

N

Visible Turbidity Plume?
(Yes / No)

N

Water Color:

clear

CTD Data Archived?
(Yes / No)

y

Samples Collected?
(Yes / No)

y

COMMENTS:

mid-channel of Boat slips

WQ

Temp: 22.9°C

DO: 7.82 mg/L

Sal 33.98 ppt

SPL 51,620

C 49,585

pH 8.06

BIGHT '18

GRAB EVENTS

#	Time (hh:mm)	Latitude (DD°MM.mmmmm)	Longitude (DDD°MM.mmmmm)	Depth (m)	Distance to target (m)	Grab Fail Code (7)	Penetration (cm)	Composition (3)	Odor (4)	Color (5)	Shell Hash (6) (N/L/W/H)	Infauna (Y/N)	Sed Chem (Y/N)	Grain Size (Y/N)	Sed Tox (Y/N)	Debris (Y/N)
1	1020	32.71253	-117.23127	4.7	19	/	15	silt	N	0.5	N	Y	N	N	N	N
Grab Event Comments:																
2	1020	32.71253	-117.23127	4.7	19	/	15	silt	N	0.5	N	Y	Y	Y	Y	N
Grab Event Comments:																
3	1030	32.71253	-117.23126	4.7	19	/	15	silt	N	0.5	N	N	Y	Y	Y	N
Grab Event Comments:																
4	1030	32.71253	-117.23126	4.7	19	/	15	silt	N	0.5	N	N	Y	Y	Y	N
Grab Event Comments:																
Grab Event Comments:																
Grab Event Comments:																

CTD Field Data Sheet

Date:

7/17/18

Time:

1100

Station ID:

B18-10084

Water Depth:

6.7 m

Tide:

+2.361 feet
Rising

Weather:

clear

Odor:

N

Floating Material?
(Yes / No)

N

Photo Number:

Visible Turbidity Plume?
(Yes / No)

Clear

Water Color:

CTD Data Archived?
(Yes / No)

Samples Collected?
(Yes / No)

COMMENTS:

Boat work done in - Cabin (construction)
at Boat nearby. No visible
water impact or shear/debris

WQ

Temp: 23.0°C

SPL: 51,735

C 49,770

PH 8.08 pH

DO 8.06

Sal: 34.04 ppt

BIGHT '18

Water Sample Collection Time: 1100

Sec: collection Time: 1115

See volume 652

(Check all sample types that apply)																
#	Time (hh:mm)	Latitude (DD°MM.mmm)	Longitude (DDD°MM.mmm)	Depth (m)	Distance to target (m)	Grab Fail Code (7)	Penetration (cm)	Composition (3)	Odor (4)	Color (5)	Shell Hash (6) (N/L/M/H)	Infauna (Y/N)	Sed Chem (Y/N)	Grain Size (Y/N)	Sed Tox (Y/N)	Debris (Y/N)
1	1115	32.71201	-117.23277	6.7	65	/	15	Silt	N	0.5	N	Y	N	N	N	N
Grab Event Comments:																
2	1115	32.71201	-117.23277	6.7	65	/	15	Silt	N	0.5	N	N	Y	Y	Y	N
Grab Event Comments:																
3	1125	32.71201	-117.23278	6.7	65	/	15	Silt	N	0.5	N	N	Y	Y	Y	N
Grab Event Comments:																
4	1125	32.71201	-117.23278	6.7	65	/	15	Silt	N	0.5	N	N	Y	Y	Y	N
Grab Event Comments:																
Grab Event Comments:																
Grab Event Comments:																

CTD Field Data Sheet

Date: 7/18/18

Time: 0800

Station ID: B18-10022

Water Depth: 4.2

Tide: +0.55 feet Trough/
slack

Weather: Overcast

Odor: N

Floating Material?
(Yes / No)

Photo Number: N

Visible Turbidity Plume?
(Yes / No)

Water Color: clear

CTD Data Archived?
(Yes / No)

Samples Collected?
(Yes / No)

COMMENTS: USCA Dock area

WQ

Temp: 23.5°C

SAZ 34.25 ppt

SPC 51,994

C 50.445

PH 7.94

DO: 6.84 mg/L

STATION OCCUPATION

BIGHT '18

Agency Code	AMFCC
Vessel Name	FBZ
Latitude	32.72408
Longitude	-117.18307
Arrival Time	0800
(hh:mm)	
Depth (m)	4.2

Weather

Clear	<input type="checkbox"/>	Rain	<input type="checkbox"/>
Overcast	<input checked="" type="checkbox"/>	Thunderstorm	<input type="checkbox"/>
Partly cloudy	<input type="checkbox"/>	Fog	<input type="checkbox"/>
Drizzle	<input type="checkbox"/>	Fog & Drizzle	<input type="checkbox"/>
Hazy	<input type="checkbox"/>	Smoky	<input type="checkbox"/>

Sea State

Calm

Choppy

Rough

Confused

Salinity (ppt)


Estuary Sites only



Abandoned site

Y or N (If Y explain in comments)

Station ID B18 - 10022

Date 07/18/18

Abandoned site? Y or N (If Y explain in comments)	Station Fail Code (2)	
---	---------------------------------	---

Wind 
Speed (kts) _____
Direction (4)  _____

Swell	
Period (s)	9
Height (ft)	0
Direction (1)	0

Nav Type	
DGPS	
GPS	
WAAS	

Station Comments *USCG pier*

Water Sample Collection Time: *0800*

Seed coll. no: 815
Vol: 5.5L _{liters}

Equipment Type	
Core	Van Veen
Petite Ponar	Tandem Van Veen

GRAB EVENTS

(Check all sample types that apply)																
#	Time (hh:mm)	Latitude (DD°MM.mmm)	Longitude (DDD°MM.mmm)	Depth (m)	Distance to target (m)	Grab Fail Code (7)	Penetration (cm)	Composition (3)	Odor (4)	Color (5)	Shell Hash (6) (N/L/M/H)	Infauna (Y/N)	Sed Chem (Y/N)	Grain Size (Y/N)	Sed Tox (Y/N)	Debris (Y/N)
1	0815	32.72408	-117.18307	4.2	11m	N	8cm	F.g.s.	N	gray	N	✓	N	N	N	N
Grab Event Comments: 11cm																
2	0815	32.72408	-117.18307	4.2	11m	N	10cm	F.g.s.	N	gray	N	✓	y	y	y	N
Grab Event Comments:																
3	0825	32.72411	-117.18299	4.2	11m	N	8cm	F.g.s.	N	gray	N	N	y	y	y	N
Grab Event Comments:																
4	0825	32.72411	-117.18299	4.2	11m	N	8cm	F.g.s.	N	gray	N	N	y	y	y	N
Grab Event Comments:																
Grab Event Comments:																
Grab Event Comments:																

CTD Field Data Sheet

Date:

7/18/18

Time:

0900

Station ID:

B18-10076

Water Depth:

5.3 m

Tide:

Overcast

Weather:

Odor:

N

Floating Material?
(Yes / No)

N

Photo Number:

N

Visible Turbidity Plume?
(Yes / No)

Water Color:

clear

CTD Data Archived?
(Yes / No)

Samples Collected?
(Yes / No)

COMMENTS:

Harbor Blvd Anchorage

WQ

SAZ 34.3

pH 7.94 pH

SPC 52,076

C 50986

DO 6.92

Temp 24.0°C

BIGHT '18

Abandoned site? Y or N (If Y explain in comments)	Station Fail Code (2)	

Station Comments

Water Sample Collection Time: 0900

Sed coll. time: 0920

MS/MSD WATR.

~~B14-10076-RFP~~

#	Time (hh:mm)	Latitude (DD°MM.mmm)	Longitude (DDD°MM.mmm)	Depth (m)	Distance to target (m)	Grab Fail Code (7)	Penetration (cm)	Composition (3)	Odor (4)	Color (5)	Shell Hash (6) (N/L/MH)	Infauna (Y/N)	Sed Chem (Y/N)	Grain Size (Y/N)	Sed Tox (Y/N)	Debris (Y/N)
1	0920	32.72654	-117.17651	5.4	30	/	15	silt	N	0.5.	N	y	N	N	N	N
Grab Event Comments:																
2	0920	32.72654	-117.17651	5.4	30	/	15	silt	N	0.5.	N	y	N	N	N	N
Grab Event Comments:																
3	0935	32.72654	-117.17648	5.5	30	/	14	silt	N	0.5.	N	y	N	N	N	N
Grab Event Comments:																
4	0935	32.72654	-117.17648	5.5	30	/	15	silt	N	0.5.	N	N	y	y	y	N
Grab Event Comments:																
Grab Event Comments:																
Grab Event Comments:																

CTD Field Data Sheet

Date:

7/18/18

Time:

0700

Station ID:

B18-10077

Water Depth:

4.

Tide:

Weather:

overcast

Odor:

N

Floating Material?

(Yes / No)

Photo Number:

N

Visible Turbidity Plume?

(Yes / No)

Water Color:

N / clear

CTD Data Archived?

(Yes / No)

Samples Collected?

(Yes / No)

COMMENTS:

WQ

SPL 51,748

C 50,570

Temp 23.8°C

DO 6.74 mg/L

Sal 34.03 ppt

pH

7.84 pH

BIGHT '18

Abandoned site? Y or N (If Y explain in comments)	Station Fail Code (2)	
---	---------------------------------	---

Equipment Type	
Core	Van Veen
Petite Ponar	Tandem Van Veen

GRAB EVENTS															(Check all sample types that apply)			
#	Time (hh:mm)	Latitude (DD°MM.mmmmm)	Longitude (DDD°MM.mmmmm)	Depth (m)	Distance to target (m)	Grab Fail Code (7)	Penetration (cm)	Composition (3)	Odor (4)	Color (5)	Shell Hash (6) (N/L/M/H)	Infauna (Y/N)	Sed Chem (Y/N)	Grain Size (Y/N)	Sed Tox (Y/N)	Debris (Y/N)		
1	0720	32.70496	-117.18335	4.3	28	NA	9	F.g.s	N	gray	N	y	N	N	N	N		
Grab Event Comments: minor water wash-out (~5%) avoided in scoops. w/ plenty of muck.																		
2	0720	32.70496	-117.18335	4.3	28	NA	9	F.g.s	N	gray	N	N	y	y	y	N		
Grab Event Comments:																		
3	0735	32.70497	-117.18337	4.3	28	NA	8	F.g.s	N	gray	N	N	y	y	y	N		
Grab Event Comments:																		
4	0735	32.70497	-117.18337	4.3	28	NA	10	F.g.s	N	gray	N	N	y	y	y	N		
Grab Event Comments:																		
Grab Event Comments:																		
Grab Event Comments:																		

CTD Field Data Sheet

Cruise
Ship Terminal
West

Date:

7/18/18

Time:

1015

Station ID:

B18-10112

WQ

Water Depth:

12.3 m

Temp 23.6°C

Tide:

+1.86 feet Rising

SPL 51,906

Weather:

overcast

C 50.67

Odor:

N

sal 34.23 ppt

Floating Material?
(Yes / No)

N

7.92 pH

Photo Number:

N

DO: 5.2 mg/L

Visible Turbidity Plume?
(Yes / No)

(No)

Water Color:

clear

CTD Data Archived?
(Yes / No)

Samples Collected?
(Yes / No)

COMMENTS:





STATION OCCUPATION

BIGHT '18

Agency Code	AMEC
Vessel Name	EB2
Latitude	32.7162
Longitude	717.176
Arrival Time	1015
(hh:mm)	
Depth (m)	12.3

Weather

Clear		Rain	
Overcast		Thunderstorm	
Partly cloudy		Fog	
Drizzle		Fog & Drizzle	
Hazy		Smoky	

Sea State	
Calm	
Choppy	
Rough	
Confused	

Salinity (ppt)

Estuary Sites only

Station ID **B18-10112**

Date 07/18/18

Abandoned site? Y or N (If Y explain in comments)	Station Fail Code (2)	
---	---------------------------------	---

Wind
Speed (kts) 0-5
Direction (4)

Swell	
Period (s)	6
Height (ft)	2
Direction (1)	0

Nav Type	
DGPS	
GPS	
WAAS	

Equipment Type	
Core	Van Veen
Petite Ponar	Tandem Van Veen

Station Comments Cruise Ship Terminal

Water Sample Collection Time: 1015

~~Net~~ Tux Vol: 8 L

Sec Collec. time: 1030

Rocks/shell wash/wound in Benthic ~~+~~

GRAB EVENTS

(Check all sample types that apply)																
#	Time (hh:mm)	Latitude (DD°MM.mmm)	Longitude (DDD°MM.mmm)	Depth (m)	Distance to target (m)	Grab Fail Code (7)	Penetration (cm)	Composition (3)	Odor (4)	Color (5)	Shell Hash (6) (NL/M/H)	Infaua (Y/N)	Sed Chem (Y/N)	Grain Size (Y/N)	Sed Tox (Y/N)	Debr (Y/N)
1	1030	32.71607	-117.17632	12.3	20	/	15	silt w/	/	0.9.	L	y	N	N	N	N
Grab Event Comments: month open - 1" silt w/ crummed w/ shells sand more sand than grab 2																
2	1030	32.71627	-117.17632	12.3	20	/	15	silt	/	0.9.	L	N	y	y	y	N
Grab Event Comments: same 1" open. 11 CRD sand / minor.																
3	1040	32.71605	-117.17630	12.2	11	/	15	silt	/	0.9.	L	N	y	y	y	N
Grab Event Comments: less than 1" open. same. crummed.																
4	1040	32.71625	-117.17636	12.2	11	/	15	silt	/	0.9.	L	N	y	y	y	N
Grab Event Comments: less than 1" open. same. crummed																
Grab Event Comments:																
Grab Event Comments:																

CTD Field Data Sheet

Date: 07/18/18

Time: 1110

Station ID: B18-10113

Water Depth: 10.9 m

Tide: +2.5^{ft} Rising

Weather: clear

Odor: N

Floating Material?
(Yes / No) /

Photo Number: /

Visible Turbidity Plume?
(Yes / No) clear

Water Color: clear

CTD Data Archived?
(Yes / No) /

Samples Collected?
(Yes / No) /

COMMENTS:

WQ
Temp: 23.8°C
SPL 52,065
C 50815
DO: 6.40 mL
Sal 34.28 ppt
pH 7.92 pH

BIGHT '18

STATION OCCUPATION

Agency Code AMEL
 Vessel Name EB2
 Latitude 32.71614
 Longitude -117.17398
 Arrival Time 1110
 (hh:mm)
 Depth (m) 11.1

Wind
 Speed (kts) 0-5
 Direction (4) 0

Weather

Clear	<input checked="" type="checkbox"/>	Rain	<input type="checkbox"/>
Overcast	<input type="checkbox"/>	Thunderstorm	<input type="checkbox"/>
Partly cloudy	<input type="checkbox"/>	Fog	<input type="checkbox"/>
Drizzle	<input type="checkbox"/>	Fog & Drizzle	<input type="checkbox"/>
Hazy	<input type="checkbox"/>	Smoky	<input type="checkbox"/>

Swell

Period (s) 0
 Height (ft) 0
 Direction (4) 0

Equipment Type

Core ☐
 Petite Ponar ☐
 Van Veen ☐
 Tandem Van Veen ☒

Sea State

Calm	<input type="checkbox"/>
Choppy	<input type="checkbox"/>
Rough	<input type="checkbox"/>
Confused	<input type="checkbox"/>

Salinity (ppt)

 Estuary Sites only

Abandoned site? ☐
 Y or N (If Y explain in comments)

Station ID B18-10113Date 07/18/18Station Fail Code
(2)

Station Comments

Water Sample Collection Time: 1110

Sed collection time: 1130
 Cruise Ship east (south side)

GRAB EVENTS

(Check all sample types that apply)

#	Time (hh:mm)	Latitude (DD°MM.mmm)	Longitude (DDD°MM.mmm)	Depth (m)	Distance to target (m)	Grab Fail Code (7)	Penetration (cm)	Composition (3)	Odor (4)	Color (5)	Shell Hash (6) (N/L/W/H)	Infauna (Y/N)	Sed Chem (Y/N)	Grain Size (Y/N)	Sed Tox (Y/N)	Debris (Y/N)
1	1130	32.71614	-117.17398	11.1	6	/	15	silt	N	o.g.	N	y	N	N	N	N
Grab Event Comments:																
2	1130	32.71614	-117.17398	11.1	6	/	15	silt	N	o.g.	N	N	y	y	y	N
Grab Event Comments:																
3	1140	32.71618	-117.17399	11.1	6	/	15	silt	N	o.g.	N	N	y	y	y	N
Grab Event Comments:																
4	1140	32.71618	-117.17399	11.1	6	/	15	silt	N	o.g.	N	N	y	y	y	N
Grab Event Comments:																
Grab Event Comments:																
Grab Event Comments:																

CTD Field Data Sheet

Date:

7/19/18

Time:

1240

Station ID:

B18-10024 -

N. hutz / Breeding

Water Depth:

12.0 m

Pre

Tide:

+ 3.06 Ft. Rising

Weather:

Clear

WQ

Odor:

N

T

24.6°C

Floating Material?
(Yes / No)

N

Sal

34.27 ppt

Photo Number:

SPC

52072

Visible Turbidity Plume?
(Yes / No)

C

51.697

Water Color:

Clear

DO

7.92 mg/L

PH

8.02 pH

CTD Data Archived?
(Yes / No)

Samples Collected?
(Yes / No)

COMMENTS:

BIGHT '18

Agency Code	AMEC
Vessel Name	EB 2
Latitude	
Longitude	
Arrival Time	1240
(hh:mm)	
Depth (m)	12

Weather	
Clear	Rain
Overcast	Thunderstorm
Partly cloudy	Fog
Drizzle	Fog & Drizzle
Hazy	Smoky

Sea State	Salinity (ppt)
Calm	
Choppy	
Rough	
Confused	

Y or N (If Y explain in comments)

Station ID B18-10027

Date

Abandoned site?	Station Fail Code
Y or N (If Y explain in comments)	(2)

Wind
Speed (kts) 25 W
Direction (4)

Swell

Period (s) _____

Height (ft) _____

Direction (1) _____

Nav Type	
DGPS	
GPS	
WAAS	

Equipment Type	
Core	Van Veen
Petite Ponar	Tandem Van Veen

Station Comments

Water Sample Collection Time: 1240

sed col. time: 1055

6 L top sed

GRAB EVENTS

(Check all sample types that apply)																
#	Time (hh:mm)	Latitude (DD°MM.mmm)	Longitude (DDD°MM.mmm)	Depth (m)	Distance to target (m)	Grab Fail Code (7)	Penetration (cm)	Composition (3)	Odor (4)	Color (5)	Shell Hash (6) (N/L/MH)	Infauna (Y/N)	Sed Chem (Y/N)	Grain Size (Y/N)	Sed Tox (Y/N)	Debris (Y/N)
1	1255	32.71478	-117.18302	12	20	/	15	S.H.	N	8.5.	N	y	N	N	N	N
Grab Event Comments: W/FSS																
2	1255	32.71478	-117.18302	12	20	/	13.5	S.H.	N	0.5	N	N	y	y	y	N
Grab Event Comments: W/FSS minor trash / plastic																
3	1305	32.71479	-117.18303	12	20	/	15	S.H.				N	y	y	y	N
Grab Event Comments: W/FSS																
4	1305	32.71479	-117.18303	12	20	/	15	W/FSS				N	y	y	y	N
Grab Event Comments:																
Grab Event Comments:																
Grab Event Comments:																

CTD Field Data Sheet

Date: 07/19/18

Time: 1110

Station ID: B18-10029

Water Depth: 9.8m

Tide: +2.21 feet

Weather: Clear

Odor: N

Floating Material?
(Yes / No) (No)

Photo Number: N

Visible Turbidity Plume?
(Yes / No) (No)

Water Color: Clear

CTD Data Archived?
(Yes / No) (No)

Samples Collected?
(Yes / No) (No)

COMMENTS:

Payton 3 Base adjacent
Gravity/Windward processing site ~
300 feet E mouth of Swine

WQ
T-24.8°C
SPL-52.27
C-51.903
DO 6.86 mg/L
Sal 34.38
pH 7.91

STATION OCCUPATION

BIGHT '18

Agency Code Am 81
 Vessel Name EB 2
 Latitude 32.70189
 Longitude -117.15893
 Arrival Time 1110
 (hh:mm)
 Depth (m) 9.8m

Weather

Clear	<input checked="" type="checkbox"/>	Rain	<input type="checkbox"/>
Overcast	<input type="checkbox"/>	Thunderstorm	<input type="checkbox"/>
Partly cloudy	<input type="checkbox"/>	Fog	<input type="checkbox"/>
Drizzle	<input type="checkbox"/>	Fog & Drizzle	<input type="checkbox"/>
Hazy	<input type="checkbox"/>	Smoky	<input type="checkbox"/>

Sea State

Calm	<input checked="" type="checkbox"/>
Choppy	<input type="checkbox"/>
Rough	<input type="checkbox"/>
Confused	<input type="checkbox"/>

Salinity (ppt)

Estuary Sites only

Abandoned site? ☐ Station Fail Code ☐

Y or N (If Y explain in comments)

Station ID B18 + 10029Date 07/19/18

Wind

Speed (kts) 5
 Direction (4) 0

Swell

Period (s) 0
 Height (ft) 0
 Direction (1) 0

Nav Type

DGPS ☐
 GPS ☐
 WAAS ☐

Station Comments

Water Sample Collection Time: 1110

Sed col times 1120
TAMT - No AB: Windward

720
Sed vol.
5.5L

Equipment Type

Core ☐ Van Veen ☐
 Petite Ponar ☐ Tandem Van Veen ☒

GRAB EVENTS

#	Time (hh:mm)	Latitude (DD°MM.mmm)	Longitude (DDD°MM.mmm)	Depth (m)	Distance to target (m)	Grab Fail Code (7)	Penetration (cm)	Composition (3)	Odor (4)	Color (5)	Shell Hash (6) (N/L/M/H)	Infauna (Y/N)	Sed Chem (Y/N)	Grain Size (Y/N)	Sed Tox (Y/N)	Debris (Y/N)
1	1120	32.70189	-117.15893	9.8	35	/	15	silt	y (H9)	gray	N	y	N	N	N	N
Grab Event Comments: <u>Anoxic / Leaf Debris, from gutter creek, organic Debris / leaves / seaweed</u>																
2	1120	32.70189	-117.15893	9.8	35	/	15	silt	HS	gray	N	N	y	y	y	N
Grab Event Comments: <u>Anoxic / Debris</u>																
3	1130	32.70189	-117.15893	9.8	35	/	15	silt	HS	gray	N	N	y	y	y	N
Grab Event Comments: <u>Anoxic Debris</u>																
4	1130	32.70189	-117.15893	9.8	35	/	15	silt	HS	gray	N	N	y	y	y	N
Grab Event Comments: <u>Anoxic / Debris</u>																
Grab Event Comments:																
Grab Event Comments:																

(Check all sample types that apply)

Sed process

CTD Field Data Sheet

Date: 07/19/18

Time: 1015

Station ID: B18-10/14

Water Depth: 8.6m

Tide: +1.71 ^{Ft} R.3.14

Weather: clear

Odor: N

Floating Material?
(Yes / No)

Photo Number: N

Visible Turbidity Plume?
(Yes / No)

Water Color: clear

CTD Data Archived?
(Yes / No)

Samples Collected?
(Yes / No)

COMMENTS:

WQ

T 24.6°C

SPC 52,220

~~SL~~ 51,682

DO 6.73 mL

SL 34.38

pH 7.91

BIGHT '18

Water Sample Collection Time: 1015

sed col. time: 1030

(Check all sample types that apply)																
#	Time (hh:mm)	Latitude (DD°MM.mmmmm)	Longitude (DDD°MM.mmmmm)	Depth (m)	Distance to target (m)	Grab Fail Code (7)	Penetration (cm)	Composition (3)	Odor (4)	Color (5)	Shell Hash (6) (NL/MH)	Infaua (Y/N)	Sed Chem (Y/N)	Grain Size (Y/N)	Sed Tox (Y/N)	Debris (Y/N)
1	1030	32.70260	-117.16180	8.6	28	/	15	Silt	/	O.g.	N	Y	N	N	N	N
Grab Event Comments:																
2	1030	32.70260	-117.16180	8.6	28	/	15	Silt	/	O.g.	N	N	Y	Y	Y	N
Grab Event Comments:																
3	1040	32.70262	-117.16177	8.8	28	/	15	Silt	/	O.g.	N	N	Y	Y	Y	N
Grab Event Comments: Leafy / organic debris / detritus / few leaves																
4	1040	32.70262	-117.16177	8.8	28	/	15	Silt	/	O.g.	N	N	Y	Y	Y	N
Grab Event Comments:																
Grab Event Comments:																
Grab Event Comments:																

CTD Field Data Sheet

Date:

07/19/18

Time:

0700

Station ID:

B18-10115

Water Depth:

11.1m

Tide:

Overcast

Weather:

Odor:

Floating Material?
(Yes / No)

Photo Number:

Visible Turbidity Plume?
(Yes / No)

Water Color:

CTD Data Archived?
(Yes / No)

Samples Collected?
(Yes / No)

COMMENTS:

WQ

DO 6.32mg/L

24.3°C temp

50,152 SPC

49,496 C

32.87 sal

7.82 pH

Clear

Cesar Chavez Res/ Ry.

STATION OCCUPATION

BIGHT '18

Agency Code AMEL
 Vessel Name EB2
 Latitude 32.69442
 Longitude -117.1525 7
 Arrival Time 0700
 (hh:mm)
 Depth (m) 11.1m

Weather

Clear	<input type="checkbox"/>	Rain	<input type="checkbox"/>
Overcast	<input checked="" type="checkbox"/>	Thunderstorm	<input type="checkbox"/>
Partly cloudy	<input type="checkbox"/>	Fog	<input type="checkbox"/>
Drizzle	<input type="checkbox"/>	Fog & Drizzle	<input type="checkbox"/>
Hazy	<input type="checkbox"/>	Smoky	<input type="checkbox"/>

Sea State

Calm	<input type="checkbox"/>
Choppy	<input type="checkbox"/>
Rough	<input type="checkbox"/>
Confused	<input type="checkbox"/>

Salinity (ppt)

/
 Estuary Sites only

Abandoned site? ☐ Station Fail Code /
 Y or N (If Y explain in comments) (2)

Station ID B18-10115
 Date 07/19/18

Wind

Speed (kts) 0
 Direction (4) 0

Swell

Period (s) 0
 Height (ft) 0
 Direction (1) 0

Equipment Type

Core ☐
 Petite Ponar ☐
 Van Veen ☐
 Tandem Van Veen ☒

Station Comments

Water Sample Collection Time: 0700

7 Meters

Sed. collection time 0720
Pacific try

Base near over station

(Check all sample types that apply)

GRAB EVENTS

#	Time (hh:mm)	Latitude (DD°MM.mmm)	Longitude (DDD°MM.mmm)	Depth (m)	Distance to target (m)	Grab Fail Code (7)	Penetration (cm)	Composition (3)	Odor (4)	Color (5)	Shell Hash (6) (N/L/M/H)	Infauna (Y/N)	Sed Chem (Y/N)	Grain Size (Y/N)	Sed Tox (Y/N)	Debris (Y/N)
1	0720	32.69442	-117.15254	11.1	37	/	15	Silt	N	0.5	N	y	N	N	N	N
Grab Event Comments:																
1	0720	32.69442	-117.15254	11.1	37	/	15	Silt	N	0.5	N	N	y	y	y	N
Grab Event Comments:																
	0735	32.69442	-117.15251	10.8	37	/	15	Silt	N	0.5	N	N	y	y	y	N
Grab Event Comments:																
	0735	32.69442	-117.15251	10.8	37	/	15	Silt	N	0.5	N	N	y	y	y	y
Grab Event Comments:																
Grab Event Comments:																
Grab Event Comments:																

← Fabric
shard

CTD Field Data Sheet

Date:

07/19/18

Time:

0840

Station ID:

B18-10116

Water Depth:

12.3

Tide:

Weather:

clear

Odor:

N

Floating Material?
(Yes / No)

N

Photo Number:

Visible Turbidity Plume?
(Yes / No)

Clear

Water Color:

CTD Data Archived?
(Yes / No)

Samples Collected?
(Yes / No)

COMMENTS:

WQ

24.5°C

T

53887

SPC

51819

C

7.03 mg/L

DO

7.93%

PH

34.43

SAZ

BIGHT '18

Station Comments

Water Sample Collection Time: 0840

Sed. coll. Time: 0855

Just North of Colorado
Bridge

70X
7L

#	Time (hh:mm)	Latitude (DD°MM.mmm)	Longitude (DDD°MM.mmm)	Depth (m)	Distance to target (m)	Grab Fail Code (7)	Penetration (cm)	Composition (3)	Odor (4)	Color (5) <i>L.A.</i>	Shell Hash (6) (N/L/MH)	Infauna (Y/N)	Sed Chem (Y/N)	Grain Size (Y/N)	Sed Tox (Y/N)	Debris (Y/N)
1	0855	32.69194	-117.15337	12.3	38	/	11.5	F.g.s.	N	Brown	L	y	N	N	N	N
Grab Event Comments:																
2	0855	32.69194	-117.15337	12.3	38	/	12	F.g.s.	N	Brown	L	N	y	y	y	N
Grab Event Comments:																
3	0910	32.69193	-117.15336	12.1	38	/	13	F.g.s.	N	Brown	L	N	y	y	y	N
Grab Event Comments:																
4	0910	32.69193	-117.15336	12.1	38	/	10.5	F.g.s.	N	Brown	L	N	y	y	y	N
Grab Event Comments:																
Grab Event Comments:																
Grab Event Comments:																

CTD Field Data Sheet

Date: ~~07~~ 07/19/18

Time: 0935 - Rep

Station ID: B18-2016 (B18-~~10~~10116 Rep)

Water Depth: + 12.0m

Tide: +1.31 Fax R31m

Weather: Clear

Odor: N

Floating Material?
(Yes/No)

Photo Number:

Visible Turbidity Plume?
(Yes/No)

Water Color:


CTD Data Archived?
(Yes/No)

Samples Collected?
(Yes/No)

COMMENTS:

WQ
Temp 24.7°C
SAL 34.46
DO 6.95 mL
SPL 52,344
C 51,866
PH 7.92

BRIGHT '18

Abandoned site? Y or N (If Y explain in comments)	Station Fail Code (2)	
---	---------------------------------	---

Station Comments - B18-10116-REP.

Water Sample Collection Time: 0935

Self
(Rep) Time: 0945

GRAB EVENTS moved w 10 feet, 12m

#	Time (hh:mm)	Latitude (DD°MM.mmm)	Longitude (DDD°MM.mmm)	Depth (m)	Distance to target (m)	Grab Fail Code (7)	Penetration (cm)	Composition (3)	Odor (4)	Color (5)	Shell Hash (6) (N/L/M/H)	Infauna (Y/N)	Sed Chem (Y/N)	Grain Size (Y/N)	Sed Tox (Y/N)	Debris (Y/N)
1	0945	32.69195	-117.15324	10.5	NA	/	10.5	F.g.s.	N	lt. br.	L	N	y	y	N	N
Grab Event Comments: 32.69189 -117.15319																
2	0945	32.69195	-117.15324	12	NA	/	11.	F.g.s.	N	lt. Br.	L	N	y	y	N	N
Grab Event Comments: 32.69189 -117.15319																
Grab Event Comments: Rep for Chem sed only. Teflon Bag; No tox. No BenR.																
Grab Event Comments:																
Grab Event Comments:																
Grab Event Comments:																

CTD Field Data Sheet

Date: 07/20/18

Time: 0

Station ID: B18-10031

Water Depth: 9.5m

Tide: _____

Weather: _____

Odor: _____

Floating Material?
(Yes / No) _____

Photo Number: _____

Visible Turbidity Plume?
(Yes / No) _____

Water Color: _____

CTD Data Archived?
(Yes / No) _____

Samples Collected?
(Yes / No) _____

COMMENTS: _____

NBSD

Ty ~~AFen~~

concrete Box

WQ

T 24.8°C

SPL 52,407
52,160

C
PH 7.90

DO 6.75 mg/L

SAR 34.52

STATION OCCUPATION

BIGHT '18

Agency Code AMEL
 Vessel Name BBZ
 Latitude 32.68665
 Longitude -117.13354
 Arrival Time 1025
 (hh:mm)
 Depth (m) 9.5

Weather

Clear	<input type="checkbox"/>	Rain	<input type="checkbox"/>
Overcast	<input checked="" type="checkbox"/>	Thunderstorm	<input type="checkbox"/>
Partly cloudy	<input type="checkbox"/>	Fog	<input type="checkbox"/>
Drizzle	<input type="checkbox"/>	Fog & Drizzle	<input type="checkbox"/>
Hazy	<input type="checkbox"/>	Smoky	<input type="checkbox"/>

Sea State

Calm	<input type="checkbox"/>
Choppy	<input type="checkbox"/>
Rough	<input type="checkbox"/>
Confused	<input type="checkbox"/>

Salinity (ppt)
 Estuary Sites only

Abandoned site? ☐ Station Fail Code
 Y or N (If Y explain in comments) (2)

Station ID 1318-10031
 Date 07/20/18

Wind

Speed (kts) 5
 Direction (4)

Swell

Period (s) 0
 Height (ft) 0
 Direction (1) 0

Nav Type

DGPS ☐
 GPS ☐
 WAAS ☐

Station Comments SCORAP Draw on shore (?)

Water Sample Collection Time: 1025

Self coll time: 1035
Cholles mouth - NBSP

8L box

Equipment Type

Core ☐
 Petite Ponar ☐
 Van Veen ☐
 Tandem Van Veen ☒

GRAB EVENTS

#	Time (hh:mm)	Latitude (DD°MM.mmm)	Longitude (DDD°MM.mmm)	Depth (m)	Distance to target (m)	Grab Fail Code (7)	Penetration (cm)	Composition (3)	Odor (4)	Color (5)	Shell Hash (6) (N/L/M/H)	Infaua (Y/N)	Sed Chem (Y/N)	Grain Size (Y/N)	Sed Tox (Y/N)	Debris (Y/N)
1	1035	32.68665	-117.13354	9.4	65	/	15	Silt	N	0.5	L	Y	N	N	N	N
Grab Event Comments: <u>w/FS</u>																
2	1035	32.68665	-117.13354	9.4	65	/	15	Silt	N	0.5	L	N	Y	Y	Y	N
Grab Event Comments: <u>w/FS</u>																
3	1050	32.68665	-117.13355	9.4	65	/	15	Silt	N	0.5	L	N	Y	Y	Y	Y
Grab Event Comments: <u>w/ a few cobbles bigger than golf ball / smaller than apple</u>																
4	1050	32.68665	-117.13355	9.4	65	/	15	Silt	N	0.5	L	N	Y	Y	Y	Y
Grab Event Comments:																
Grab Event Comments:																
Grab Event Comments:																

*Needs trouble pt added
 (Check all sample types that apply)

5.55m
grabbed
10/20/18
BBZ
BBZ
BBZ

CTD Field Data Sheet

Date:

07/20/18

Time:

1350

Station ID:

B18-10032

Water Depth:

5.1 m

Tide:

+ 3.57 feet

Weather:

Clear

Odor:

N

Floating Material?
(Yes / No)

—

Photo Number:

Visible Turbidity Plume?
(Yes / No)

Water Color:

Clear

CTD Data Archived?
(Yes / No)

Samples Collected?
(Yes / No)

COMMENTS:

WQ
RT 25.1°C
SPL 52,835

C 52,881

PH 7.99

DO = 7.52 mg/L

Sal = 34.82 ppt

STATION OCCUPATION

BIGHT '18

Agency Code AMEC
 Vessel Name EBD
 Latitude 32.67526
 Longitude -117.14397
 Arrival Time 1350
 (hh:mm)
 Depth (m) 5.1m

Weather

Clear	<input checked="" type="checkbox"/>	Rain	<input type="checkbox"/>
Overcast	<input type="checkbox"/>	Thunderstorm	<input type="checkbox"/>
Partly cloudy	<input type="checkbox"/>	Fog	<input type="checkbox"/>
Drizzle	<input type="checkbox"/>	Fog & Drizzle	<input type="checkbox"/>
Hazy	<input type="checkbox"/>	Smoky	<input type="checkbox"/>

Sea State

Calm	<input checked="" type="checkbox"/>
Choppy	<input type="checkbox"/>
Rough	<input type="checkbox"/>
Confused	<input type="checkbox"/>

Salinity (ppt)
 Estuary Sites only

Abandoned site? ☐ Station Fail Code
 Y or N (If Y explain in comments) (2)

Station ID B18-10032Date 07/20/18

Wind

Speed (kts) 10
 Direction (4)

Swell

Period (s) 0
 Height (ft) 0
 Direction (1) 0

Nav Type

DGPS ☐
 GPS ☐
 WAAS ☐

Equipment Type

Core ☐ Van Veen ☐
 Petite Ponar ☐ Tandem Van Veen ☒

Station Comments

Water Sample Collection Time: 1350

sed coll. type: 1410-
 open SD Bay Harbor - west side

GRAB EVENTS

(Check all sample types that apply)

#	Time (hh:mm)	Latitude (DD°MM.mmm)	Longitude (DDD°MM.mmm)	Depth (m)	Distance to target (m)	Grab Fail Code (7)	Penetration (cm)	Composition (3)	Odor (4)	Color (5)	Shell Hash (6) (N/L/M/H)	Infauna (Y/N)	Sed Chem (Y/N)	Grain Size (Y/N)	Sed Tox (Y/N)	Debris (Y/N)
1	1410	32.67526	-117.14397	5.2	26	/	12.5	F.g.s	/	Lite	L	y	N	N	N	N
Grab Event Comments: w/Lite towsilt. Brown top. grey below 2cm.																
2	1410	32.67526	-117.14397	5.2	26	/	10	F.g.s	/	Lt.Bm	L	N	y	y	y	N
Grab Event Comments: grey 2cm																
3	1425	32.67530	-117.14397	5.2	26	/	11.5	F.g.s	/	o.g.	L	N	y	y	y	N
Grab Event Comments: w/Lite towsilt. w/Lite below																
4	1425	32.67530	-117.14397	5.2	26	/	11	F.g.s	/	o.g.	L	N	y	y	y	N
Grab Event Comments: w/Lite towsilt. w/Lite below																
Grab Event Comments:																
Grab Event Comments:																
Grab Event Comments:																

CTD Field Data Sheet

Date:

07/20/18

BAE

Time:

0715

Station ID:

10119

WQ

Water Depth:

8.2m

Tide:

+ 2.59 feet. Fully

overcast

Weather:

N

Odor:

Floating Material?
(Yes / No)

—

Photo Number:

Visible Turbidity Plume?
(Yes / No)

clear

Water Color:

CTD Data Archived?
(Yes / No)

Samples Collected?
(Yes / No)

COMMENTS:

BAE shipyard -

24.6°C

T

SPC

51,159

C

50,749

DO

6.67%

Sal

33.6

pH

7.84

STATION OCCUPATION

BIGHT '18

Agency Code AMEC
 Vessel Name EB2
 Latitude 32.69004
 Longitude -117.14301
 Arrival Time 0715
 (hh:mm)
 Depth (m)

Weather

Clear	<input type="checkbox"/>	Rain	<input type="checkbox"/>
Overcast	<input checked="" type="checkbox"/>	Thunderstorm	<input type="checkbox"/>
Partly cloudy	<input type="checkbox"/>	Fog	<input type="checkbox"/>
Drizzle	<input type="checkbox"/>	Fog & Drizzle	<input type="checkbox"/>
Hazy	<input type="checkbox"/>	Smoky	<input type="checkbox"/>

Sea State

Calm	<input checked="" type="checkbox"/>
Choppy	<input type="checkbox"/>
Rough	<input type="checkbox"/>
Confused	<input type="checkbox"/>

Salinity (ppt)
 Estuary Sites only

Abandoned site? ☐ Station Fail Code
 Y or N (If Y explain in comments) (2)

Station ID B18-10119Date 07/20/18

Wind S
 Speed (kts)
 Direction (4)

Swell

Period (s) 0
 Height (ft) 0
 Direction (1) 0

Nav Type

DGPS ☐
 GPS ☐
 WAAS ☐

Equipment Type

Core ☐ Van Veen ☐
 Petite Ponar ☐ Tandem Van Veen ☒

Station Comments

Water Sample Collection Time: 0715Sed collection time: 0740

GRAB EVENTS

(Check all sample types that apply)

#	Time (hh:mm)	Latitude (DD°MM.mmm)	Longitude (DDD°MM.mmm)	Depth (m)	Distance to target (m)	Grab Fail Code (7)	Penetration (cm)	Composition (3)	Odor (4)	Color (5)	Shell Hash (6) (N/L/M/H)	Infauna (Y/N)	Sed Chem (Y/N)	Grain Size (Y/N)	Sed Tox (Y/N)	Debris (Y/N)
1	0730	32.69001	-117.14301	8.9		G17?										
Grab Event Comments: <u>hard grab / poor closure, move to Bay ~50 feet. Sheen / petroleum smell?</u>																
2	0730	32.69001	-117.14301	8.9												
Grab Event Comments: <u>good closure, minor washout in corner.</u>																
3	0740	32.69004	-117.14320	10.1	29		12	M.g.s.		grey	N	Y	N	N	N	N
Grab Event Comments: <u>good closure, minor washout (in corner) w/ F.g.s. & minor silt w/ lt. brown</u>																
4	0740	32.69004	-117.14320	10.1	29		12.5	M.g.s.		grey	N	N	Y	Y	Y	N
Grab Event Comments: <u>much siltier / w. F.g.s. w/ lt. brown</u>																
5	0750	32.69007	-117.14328	10.9	29		14	silt		o.g.	N	N	Y	Y	Y	N
Grab Event Comments: <u>much siltier / w/ minor F.g.s. w/ grey below</u>																
6	0750	32.69007	-117.14328	10.9	29		15	silt		o.g.	N	N	Y	Y	Y	N
Grab Event Comments: <u>much siltier / w/ minor F.g.s. w/ grey below</u>																

U w/ minor F.g.s. w/ grey below
 F.g.s. → end below 5 cm.

CTD Field Data Sheet

Date: 07/20/18

Time: 0820

Station ID: B18-10121

Water Depth: +10.3m

Tide: _____

Weather: overcast

Odor: _____

Floating Material?
(Yes / No) N

Photo Number: _____

Visible Turbidity Plume?
(Yes / No) clear

Water Color: _____

CTD Data Archived?
(Yes / No) _____

Samples Collected?
(Yes / No) _____

COMMENTS: _____

WQ

T 24.2°C

Sal 34.49 sal/pt

SPL 52374

C 52024

DO 6.75

pH: 7.90

BIGHT '18

Abandoned site? Y or N (If Y explain in comments)	Station Fail Code (2)

Station Comments

Water Sample Collection Time: 0820

Sed. collection time: 0840

Depth: 10m

0.09 away from GPS

* photo shop NO 121 out
 action Time: 0820 3/2
 time: 0840 white
 66 ft. Booth

NASSED - west 8L to x

GRAB EVENTS													(Check all sample types that apply)			
#	Time (hh:mm)	Latitude (DD°MM.mmmmm)	Longitude (DDD°MM.mmmmm)	Depth (m)	Distance to target (m)	Grab Fail Code (7)	Penetration (cm)	Composition (3)	Odor (4)	Color (5)	Shell Hash (6) (N/L/M/H)	Infauna (Y/N)	Sed Chem (Y/N)	Grain Size (Y/N)	Sed Tox (Y/N)	Debris (Y/N)
1	0840	32.68750	-117.14076	10.3	47	/	15	silt	0.5	0.9	L	y	N	N	N	N
Grab Event Comments:																
2	0840	32.68750	-117.14076	10.3	47	/	15	silt	0.5	0.9	L	N	y	y	y	N
Grab Event Comments:																
3	0850	32.68749	-117.14077	10.2	47	/	15	silt	/	0.9	L	N	y	y	y	N
Grab Event Comments:																
4	0850	32.68749	-117.14077	10.2	47	/	15	silt	/	0.9	L	N	y	y	y	N
Grab Event Comments:																
Grab Event Comments:																
Grab Event Comments:																

CTD Field Data Sheet

Date: 07/20/18

Time: 0930

Station ID: B18-10123

Water Depth: 9m.

Tide: +1.80 feet slack

Weather: overcast

Odor: N

Odor: _____

Floating Material?
(Yes / No) (No)

Photo Number: —

Visible Turbidity Plume?
(Yes / No) (No)

Water Color: Clear

CTD Data Archived?
(Yes / No) (No)

Samples Collected?
(Yes / No) (No)

COMMENTS: NABISCO-East / ok & pre tip.

WQ

T. 24.9 °C

SPC 52,447

C 53,810

DO 6.78 mg/L

SAL 34.54 ppt

pH: 7.90

STATION OCCUPATION

BIGHT '18

Agency Code APAC
 Vessel Name EB2
 Latitude 32.68549
 Longitude -117.13635
 Arrival Time 0930
 (hh:mm)
 Depth (m) 9.1m

Weather

Clear	<input type="checkbox"/>	Rain	<input type="checkbox"/>
Overcast	<input checked="" type="checkbox"/>	Thunderstorm	<input type="checkbox"/>
Partly cloudy	<input type="checkbox"/>	Fog	<input type="checkbox"/>
Drizzle	<input type="checkbox"/>	Fog & Drizzle	<input type="checkbox"/>
Hazy	<input type="checkbox"/>	Smoky	<input type="checkbox"/>

Sea State

Calm	<input checked="" type="checkbox"/>
Choppy	<input type="checkbox"/>
Rough	<input type="checkbox"/>
Confused	<input type="checkbox"/>

Salinity (ppt)

<input checked="" type="checkbox"/>

Estuary Sites only

Station ID 818-10123Date 07/20/18

Abandoned site?

Station Fail Code

Y or N (If Y explain in comments)

Y Truck point

Station Comments

9L Top

Wind 5
 Speed (kts)
 Direction (4) 0

Swell

Period (s) 0
 Height (ft) 0
 Direction (1) 0

Nav Type

DGPS	<input type="checkbox"/>
GPS	<input type="checkbox"/>
WAAS	<input type="checkbox"/>

Equipment Type

Core	<input type="checkbox"/>	Van Veen	<input type="checkbox"/>
Petite Ponar	<input type="checkbox"/>	Tandem Van Veen	<input checked="" type="checkbox"/>

Water Sample Collection Time: 0730

Self R.E. Steit - cane work adjacent
collection Time: 0935

GRAB EVENTS

#	Time (hh:mm)	Latitude (DD°MM.mmm)	Longitude (DDD°MM.mmm)	Depth (m)	Distance to target (m)	Grab Fail Code (7)	Penetration (cm)	Composition (3)	Odor (4)	Color (5)	Shell Hash (6) (N/L/M/H)	Infauna (Y/N)	Sed Chem (Y/N)	Grain Size (Y/N)	Sed Tox (Y/N)	Debris (Y/N)
1	0935	32.68549	-117.13635	9.1	33	/	15	Silt	N	0.5	L	Y	N	N	N	N
Grab Event Comments: <u>W/analogue F.g.s. c 2+ cm. M.g.s. Lower below 5 cm.</u>																
2	0935	32.68549	-117.13635	9.1	33	/	15	Silt	N	0.5	L	N	Y	Y	Y	N
Grab Event Comments: <u>W/analogue F.g.s. c 2+ cm.</u>																
3	0947	32.68542	-117.13631	8.8	33	/	15	Silt	N	0.5	L	N	Y	Y	Y	N
Grab Event Comments: <u>F.g.s. + M.g.s. Lower 1m</u>																
4	0947	32.68542	-117.13631	8.8	33	/	15	Silt	N	0.5	L	N	Y	Y	Y	N
Grab Event Comments:																
Grab Event Comments:																
Grab Event Comments:																

NABSCO - Egt/ Finger TIP Rte.
 (Check all sample types that apply)

CTD Field Data Sheet

Date: 07/20/18

Time: 1115

Station ID: B18 - 1078

Water Depth: 6.8m

Tide: +2.12' Fast Rising

Weather: overcast

Odor: —

Floating Material?
(Yes / No) (No)

Photo Number: —

Visible Turbidity Plume?
(Yes / No) (No)

Water Color: clear

CTD Data Archived?
(Yes / No) (Yes)

Samples Collected?
(Yes / No) (Yes)

COMMENTS: NBSD - pier Tie-up

WQ

T 24.9°C

SPC 52, 405

C 52, 230

DO 6.01 vs/2

Sal 34.51 ppt

pH 7.85

STATION OCCUPATION

BIGHT '18

Agency Code Armed

Vessel Name

Latitude

Longitude

Arrival Time
(hh:mm)

Depth (m) 6.8

Weather

Clear	<input checked="" type="checkbox"/>	Rain	<input type="checkbox"/>
Overcast	<input checked="" type="checkbox"/>	Thunderstorm	<input type="checkbox"/>
Partly cloudy	<input type="checkbox"/>	Fog	<input type="checkbox"/>
Drizzle	<input type="checkbox"/>	Fog & Drizzle	<input type="checkbox"/>
Hazy	<input type="checkbox"/>	Smoky	<input type="checkbox"/>

Sea State

Calm	<input type="checkbox"/>
Choppy	<input type="checkbox"/>
Rough	<input type="checkbox"/>
Confused	<input type="checkbox"/>

Salinity (ppt)

Estuary Sites only

Abandoned site? ☐ Station Fail Code
(2)

Station ID B18-10178Date 07/20/18

Wind

Speed (kts) 10

Direction (4)

Swell

Period (s) 0

Height (ft) 0

Direction (1) 0

Nav Type

DGPS ☐

GPS ☐

WAAS ☐

Equipment Type

Core ☐

Petite Ponar ☐

Van Veen ☐

Tandem Van Veen ☐

Station Comments

Water Sample Collection Time: 1115

sed collection time
1135 7.5L

NBSD ops p.e.

net
4

to

* needs Trimble pt abet

(Check all sample types that apply)

GRAB EVENTS

#	Time (hh:mm)	Latitude (DD°MM.mmm)	Longitude (DDD°MM.mmm)	Depth (m)	Distance to target (m)	Grab Fail Code (7)	Penetration (cm)	Composition (3)	Odor (4)	Color (5)	Shell Hash (6) (N/L/M/H)	Infauna (Y/N)	Sed Chem (Y/N)	Grain Size (Y/N)	Sed Tox (Y/N)	Debris (Y/N)
1	1135	32.68753	-117.13087	6.8	87	/	15	silt	HS	Black	N	y	N	N	N	N
Grab Event Comments: <u>Hydrogen sulfide / Dark sed / anoxic, v. f.g.s. leaf litter / wood</u>																
2	1135	32.68753	-117.13087	6.8	87	/	15	silt	HS	Black	N	y	N	N	N	N
Grab Event Comments: <u>HS / anoxic v. f.g.s.</u>																
3	1145	32.68752	-117.13087	6.8	87	/	15	silt	HS	Black	N	y	y	y	y	N
Grab Event Comments: <u>v. f.g.s.</u>																
4	1145	32.68752	-117.13087	6.8	87	/	15	silt	HS	Black	N	N	y	y	y	N
Grab Event Comments: <u>v. f.g.s.</u>																
Grab Event Comments: <u> </u>																
Grab Event Comments: <u> </u>																
Grab Event Comments: <u> </u>																

check
1:40

STATION OCCUPATION

BIGHT '18

Agency Code **AMEC/MDD**
 Vessel Name **EARLY BIRD II**
 Latitude **32.72475**
 Longitude **-117.18271**
 Arrival Time **1030**
 (hh:mm)
 Depth (m) **11m**

Weather

Clear	<input checked="" type="checkbox"/>	Rain	<input type="checkbox"/>
Overcast	<input type="checkbox"/>	Thunderstorm	<input type="checkbox"/>
Partly cloudy	<input type="checkbox"/>	Fog	<input type="checkbox"/>
Drizzle	<input type="checkbox"/>	Fog & Drizzle	<input type="checkbox"/>
Hazy	<input type="checkbox"/>	Smoky	<input type="checkbox"/>

Sea State

Calm	<input checked="" type="checkbox"/>
Choppy	<input type="checkbox"/>
Rough	<input type="checkbox"/>
Confused	<input type="checkbox"/>

Salinity (ppt) **NA**
 Estuary Sites only

Station ID **18-10022**Date **7/23/18**
☒ Abandoned site?

Station Fail Code

Y or N (If Y explain in comments)

(2)

Wind

Speed (kts) **0-5**
 Direction (4)

Swell

Period (s) **NA**
 Height (ft) **1**
 Direction (1) **↓**

Nav Type

DGPS ☒
 GPS ☐
 WAAS ☐

Station Comments

BCS, CS, JB, CS, MT
Bob, Danny

Equipment Type

~~Trawl~~ Core ☐ Van Veen ☐
 Petite Ponar ☐ Tandem Van Veen ☐

TRAWL EVENTS

Trawl Number	Net Position	Deck Time (hh:mm:ss)	Latitude (DD°MM.mmm)	Longitude (DDD°MM.mmm)	Depth (m)
1	Net Over	1006	32.72475	117.18271	5.1
	Start Trawl	1012	32.72271	117.18377	11.6
	End Trawl	1022	32.71821	117.18581	12.2
	Net on Deck	1026	32.71795	117.18585	

Enter Values	
Wire Out (m)	42m
Closest Distance to target (m)	<10m
PT Bottom Time (mm:ss)	9:00
PT Bottom Temperature (°C)	18.8
Trawl Fail Code (3)	

Check all that apply	
P/T Sensor Data	<input checked="" type="checkbox"/>
Community Structure	<input type="checkbox"/>
Tissue Chemistry	<input checked="" type="checkbox"/>

Comments:

Net Over					Wire Out (m)		P/T Sensor Data	
Start Trawl					Closest Distance to target (m)		Community Structure	
End Trawl					PT Bottom Time (mm:ss)		Tissue Chemistry	
Net on Deck					PT Bottom Temperature (°C)			
					Trawl Fail Code (3)			

Comments:

BIGHT '18 DEMERSAL FISH IDENTIFICATION FORM

Station: B18-10023

Page 1 of 1

Date: 7/23/2018

Completed by: CCS, BCS, JB,

Trawl Number 1 Failed

Species	N	Diversity Index Exclude Code	Std Length Size Class (cm) Use for up to 10 individuals. Use Size Class sheet for more abundant spp.	FID or Vouch	Weight (kg)		
					Gross	Tare	Net
1 CA. HALIBUT	7		28, 35, 26, 17, 10, 19, 110	PHOTO	226	0.8	1.46
2 SPOTTED SAND BASS*	4		19, 16, 15, 19	Y	441g		441g
3 SPECKLEFIN MIDSHTIPMAN	1		19	(PHOTO)			32g
4 LIZARD FISH	1		22	Y			93g
5 QUEENFISH	47*		SEE SIZE CLASS FORM	Y			3.32
6 CA. HALIBUT	2		10, 7	N			19g
7 Slough Anchovy	38		SEE SIZE CLASS SHEET SEE SLUGGISH SHEET	Y			108g
8 Northern Anchovy			See slugish sheet	Y			7,142g
9 ROUND RAY*	24		SEE SIZE CLASS FORM	Y			5.4kg
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							

Anomaly Codes: (record as superscript to tally mark): A = ambicoloration, B = albinism, D = skeletal deformity, E = copepod eye-parasite (i.e., Phrioxcephalus), F = fin erosion, H = Leeches, L = lesion (describe in Comments), M = Monogeneans, O = other anomaly (describe in Comments), P = other external parasite (describe in Comments), T = tumor, multiple occurrences on individual put "-" and #, FID = specimen(s) collected for further identification, #V = Number of specimens collected as species vouchers

Diversity Index Exclude Codes: Blank = No exclusion, In = Infauna, Pl = Pelagic, Pr = Parasite, Nb = New born, SE = Shark egg, Dm = damaged, Xr = met 3 rule exclude

Comments:

* 2 SAVED FOR BIOACCUM → SEE BOB SHEET (SPOTTED SAND BASS)
 * 15 SAVED (QUEENFISH), 5 ROUND RAYS SAVED - SEE BOB SHEET] NOT INCLUDED IN BIGHT TOTALS

QA done at station: (circle) Yes No

BIGHT '18 DEMERSAL FISH SIZE CLASS FORM

Station: B18-10022

Trawl Number 1

Page 1 of 4

Date: 7/23/18

Completed by: ACS, KS, JB, BES

Gross weight (kg) _____

Tare Weight (kg) scale tare

Net weight (kg) 3.32

Size class	N	Species: <u>queen fish</u>	Anomalies
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12	<u>1</u>	<u>QUEENFISH</u>	<u>1</u>
13	<u>1</u>		<u>1</u>
14			
15	<u>1111</u>	<u>QUEENFISH</u>	<u>4</u>
16	<u>7777</u>	<u>QUEENFISH</u>	<u>10</u>
17	<u>77777777</u>	<u>QUEENFISH</u>	<u>19</u>
18	<u>777777</u>	<u>QUEENFISH</u>	<u>10</u>
19	<u>11</u>	<u>QUEENFISH</u>	<u>2</u>
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			

Anomaly Codes (record as superscript to length measurement): A = ambicoloration, B = albinism, D = skeletal deformity, E = copepod eye-parasite (i.e., Phrioxcephalus), F = fin erosion, H = Leeches, L = lesion (describe in Comments), M = Monogeneans, O = other anomaly (describe in Comments), P = other external parasite (describe in Comments), T = tumor, multiple occurrences on individual put "-and #

Total Abundance 43 47

Comments:

QA done for species: (circle) Yes No

BIGHT '18 DEMERSAL FISH SIZE CLASS FORM

Station: ¹⁰⁰²²
B18-~~10030~~

Trawl Number 1

Page 2 of 4

Date: 7-23-18

Completed by: BCS, MT

Gross weight (kg) ^{Scale tared with bin before recording wt.} Tare Weight (kg) 100g Net weight (kg) 108g

Size class	N	Species: <u>Slough Anchovy</u>	Anomalies
1			
2			
3			
4			
5			
6	35	 	None
7	3	 	
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			

Anomaly Codes (record as superscript to length measurement): A = ambicoloration, B = albinism, D = skeletal deformity, E = copepod eye-parasite (i.e., *Phrioxcephalus*), F = fin erosion, H = Leeches, L = lesion (describe in Comments), M = Monogeneans, O = other anomaly (describe in Comments), P = other external parasite (describe in Comments), T = tumor, multiple occurrences on individual put "-" and #

Total Abundance 38

Comments:

QA done for species: (circle) Yes No

BIGHT '18 DEMERSAL FISH SIZE CLASS FORM

Page 3 of 4

Station: B18-10022

Trawl Number 1

Date: 7/23/2018

Completed by: BLS, MT

Gross weight (kg)

Tare Weight (kg)

Net weight (kg) $\frac{9}{204 + 196}$ (130) (120)

[illegible]

Anomaly Codes (record as superscript to length measurement): **A** = ambicoloration, **B** = albinism, **D** = skeletal deformity, **E** = copepod eye-parasite (i.e., *Phrioxcephalus*), **F** = fin erosion, **H** = Leeches, **L** = lesion (describe in Comments), **M** = Monogeneans, **O** = other anomaly (describe in Comments), **P** = other external parasite (describe in Comments), **T** = tumor, multiple occurrences on individual put "-" and #

Total Abundance	est = 4,500
-----------------	-------------

Total Abundance

est 24,500

Comments:

QA done for species: (circle) Yes

☒ No

~~* NEED TO ADD~~
~~+ WEIGHT FROM BOG~~
PISH
+ 158 + 124 + 40
= TOTAL = 7,142

ALIQUOT DATA

Species:	N	Gross (kg)	Tare (kg)	Net (kg)
Slough Anchovy				
Record Catch gross weights here:	Show calculations here			
	Catch gross wt. - Catch tare wt. = catch Net wt.			
	_____ - _____ = _____			
	(Catch Net wt. / Aliquot net wt.) x # in Aliquot = Abundance			
	_____ x _____ = _____			

All weights are to be recorded in kg.

ALIQUOT DATA

Species:	N	Gross (kg)	Tare (kg)	Net (kg)
NORTHERN ANCHOVY				7142
Record Catch gross weights here:	Show calculations here			
400, 2390, 2870, 1160, 158, 124, 40	Catch gross wt. - Catch tare wt. = catch Net wt.			
→ total net weight = 7142	_____ - _____ = _____			
	(Catch Net wt. / Aliquot net wt.) x # in Aliquot = Abundance			
	7142 / 400g x 252 = 4.500			

All weights are to be recorded in kg.

ALIQUOT DATA

Species:	N	Gross (kg)	Tare (kg)	Net (kg)
Record Catch gross weights here:	Show calculations here			
	Catch gross wt. - Catch tare wt. = catch Net wt.			
	_____ - _____ = _____			
	(Catch Net wt. / Aliquot net wt.) x # in Aliquot = Abundance			
	_____ x _____ = _____			

All weights are to be recorded in kg.

BIGHT '18 DEMERSAL FISH SIZE CLASS FORM

Station: B18-10022

Trawl Number 1

Page 4 of 4

Date: 7/23/2018

Completed by: CCS, KS

Gross weight (kg) 6.22 kg

Tare Weight (kg) 0.82 kg

Net weight (kg) 5.40 kg

Size class	N	Species:	Anomalies
X 26	1	ROUND RAY	
X 28	1		
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16	1		
17			
18			
19	1		
20	(1		
21	11		
22	(11		
23	11		
24	111		
25	11		
26	1		
27	111		
28			
29	1		
30			

Anomaly Codes (record as superscript to length measurement): A = ambicoloration, B = albinism, D = skeletal deformity, E = copepod eye-parasite (i.e., *Phrixecephalus*), F = fin erosion, H = Leeches, L = lesion (describe in Comments), M = Monogeneans, O = other anomaly (describe in Comments), P = other external parasite (describe in Comments), T = tumor, multiple occurrences on individual put "-" and #

Total Abundance

24

Comments:

QA done for species: (circle) Yes

No

BIGHT '18 EPIBENTHIC INVERTEBRATE FORM

Station: B18-10022

Page 1 of 1

Date: 23 JUN 2018

Completed by: MARY T

Trawl Number 1 ☐ Failed ☐

	Species	N	Diversity Index Exclude Code	Anomalies	Comments	FID or Vouch	Weight (kg)		
							Gross	Tare	Net
1	Suberites sp.	1				FID	/	/	547
2	Farfantepenaeus ^{californiensis}	2				photo-1 I-EDNA	/	/	.021
3	Sicyonia penicillata	1				/	/	/	.003
4	Pyrosomella tuberculata	4				/	/	/	.0060
5	Seapen "1"	2				/	/	/	.001
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									

Anomaly Codes: B = burnspot, P = External Parasite, O = other anomaly (describe in Comments), W = wasting disease, multiple occurrences on individual put "- and #, FID = specimen(s) collected for further identification, #V = Number of specimens collected as species vouchers
Diversity Index Exclude Codes: Blank = No exclusion, In = Infauna, Pl = Pelagic, Pr = Parasite, Nb = New born, SE = Shark egg, Dm = damaged, Xr = met 3 rule exclude
Comments:

QA done at station: (circle) Yes

No

BIGHT '18 TRAWL DEBRIS FORM Agency: WOOD/AMECPage 1 of 1Station: B18-10022 Trawl #: 1 Date: 7/23/2018☐ CHECK HERE IF NO DEBRIS PRESENT IN SAMPLE

Anthropogenic Debris - include Brand names in Comments if known

Plastic	Count	Comment
Bag		
Bandaïd		
Balloon (mylar/latex)/Ribbon		
Bottle		
Buoy		
Cap/Lid		
Cigarette box/Wrapper		
Cup		
Filmstrip (movie)		
Fishing Line/Net		
Food Bag/Wrapper		
Polypropylene Rope		
Single use food container		
Toy		
Utensil		
Plastic Piece (unid.)		
Other Plastic (comment req.)		
Glass		
Beer Bottle		
Other Glass Bottle/Jar		
Glass Piece (unid.)		
Other Glass (comment req.)		

Misc. Items/Pieces	Count	Comment
Boat/Ship/Engine Part		
Clothing		
Concrete/Asphalt		
Fiberglass		
Food		
Leather		
Lumber		
Paper		
Rag/Cloth		
Rubber		
Shoe		
Tape		
Tire		
Other Misc. (comment req.)		
Metal	Count	Comment
Drink Can		
Can - other		
Fishing Gear		
Wire		
Metal Piece (unid.)		
Other Metal (comment req.)		

Natural Debris

Marine Origin	Count	Est.*	Comment
Foliose Algae - not kelp			
Gorgonian Sea Fan (dead)			
Kelp Holdfast			
Kelp Stipe/Blade	2		
Other Foliose Algae			
Rock			
Seagrass	2		
Other Marine (comment req.)			

Terrestrial Vegetation	Count	Est.*	Comment
Leaves/Seed Pod			
Stick/Branch/Driftwood			
Other Terrestrial (comment req.)			

*For Natural Debris only, if the count is >10 and an exact count cannot be made, leave the "Count" column blank and estimate the amount (M or H) in the "Est." column

Moderate: **M = 11-100**High: **H = >100**Completed by: CCS

STATION OCCUPATION

BIGHT '18

Agency Code AMEU/WOOD
 Vessel Name EARLY BIRD II
 Latitude
 Longitude
 Arrival Time 0840
(hh:mm)
 Depth (m) 15.6

Weather

Clear	<input checked="" type="checkbox"/>	Rain	<input type="checkbox"/>
Overcast	<input type="checkbox"/>	Thunderstorm	<input type="checkbox"/>
Partly cloudy	<input type="checkbox"/>	Fog	<input type="checkbox"/>
Drizzle	<input type="checkbox"/>	Fog & Drizzle	<input type="checkbox"/>
Hazy	<input type="checkbox"/>	Smoky	<input type="checkbox"/>

Sea State

Calm	<input checked="" type="checkbox"/>
Choppy	<input type="checkbox"/>
Rough	<input type="checkbox"/>
Confused	<input type="checkbox"/>

Salinity (ppt) NA
Estuary Sites only

☒ Abandoned site? Y or N (If Y explain in comments)

Station ID B8-10023
 Date 7/23/18

Station Fail Code NA
(2)

Wind

Speed (kts) 5-7
 Direction (4) W

Swell

Period (s)
 Height (ft)
 Direction (1)

Nav Type

DGPS ☒
 GPS ☐
 WAAS ☐

Equipment Type

Core ☐ Van Veen ☐
 Petite Ponar ☐ Tandem Van Veen ☐

Station Comments

BCS, CS, JB, KS - AMEU/WOOD
Bob, Danny - Sea Venture

TRAWL EVENTS

Trawl Number	Net Position	Deck Time (hh:mm:ss)	Latitude (DD°MM.mmm)	Longitude (DDD°MM.mmm)	Depth (m)
	Net Over	<u>0850</u>	<u>32.71680</u>	<u>-117.21805</u>	<u>15.6</u>
	Start Trawl	<u>0853</u>	<u>32.71718</u>	<u>-117.21580</u>	<u>14.9</u>
	End Trawl	<u>0903</u>	<u>32.71901</u>	<u>-117.21017</u>	<u>16.4</u>
	Net on Deck	<u>0906</u>	<u>32.71920</u>	<u>-117.20982</u>	<u>16.4</u>

Enter Values

Wire Out (m) 60
 Closest Distance to target (m) 430m
 PT Bottom Time (mm:ss) 10:30
 PT Bottom Temperature (°C) 16.5
 Trawl Fail Code (3)

Check all that apply

P/T Sensor Data ☒
 Community Structure ☐
 Tissue Chemistry ☒

Comments:

Net Over					Wire Out (m)		P/T Sensor Data	
Start Trawl					Closest Distance to target (m)		Community Structure	
End Trawl					PT Bottom Time (mm:ss)		Tissue Chemistry	
Net on Deck					PT Bottom Temperature (°C)			
					Trawl Fail Code (3)			

Comments:

BIGHT '18 DEMERSAL FISH IDENTIFICATION FORM

Station: B18-10023

Page 1 of 1

Date: 7/23/2018

Completed by: CES, KS, JB

Trawl Number

Species		N	Diversity Index Exclude Code	Std Length Size Class (cm) Use for up to 10 individuals. Use Size Class sheet for more abundant spp.	FID or Vouch	Weight (kg)		
						Gross	Tare	Net
1	SPOTTED SAND BASS	37		SEE SIZE CLASS FORM	PHOTO			
2	O.A. HALIBUT *	5		20, 19, 19, 15, 13	↓			360g
3	TONGUE FISH	2		9, 10	✓ (PHOTO)			15g
4	SPOTTED TURBOT	1		13, ≡	PHOTO			39g
5	SPOTTED SCORPION FISH	1		17	↓			127g
6	LIZARD FISH	17		13, 11, 12, 10, 12, 11, 11, 11, 11, 11, 11, 11, 11, 11, 11, 11, 11 11, 10, 11, 11, 9	↓			177g
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								

Anomaly Codes: (record as superscript to tally mark): **A** = ambicoloration, **B** = albinism, **D** = skeletal deformity, **E** = copepod eye-parasite (i.e., Phrioxcephalus), **F** = fin erosion, **H** = Leeches, **L** = lesion (*describe in Comments*), **M** = Monogeneans, **O** = other anomaly (*describe in Comments*), **P** = other external parasite (*describe in Comments*), **T** = tumor, multiple occurrences on individual put “-” and #, **FID** = specimen(s) collected for further identification, **#V** = Number of specimens collected as species vouchers

Diversity Index Exclude Codes: Blank = No exclusion, In = Infauna, Pl = Pelagic, Pr = Parasite, Nb = New born, SE = Shark egg, Dm = damaged, Xr = met 3 rule exclude

Comments:

* LARGE HALIBUT KEPT FOR BOG - SEE BOG DATASHEET

QA done at station: (circle) Yes

No

BIGHT '18 DEMERSAL FISH SIZE CLASS FORM

Station: 7/23/2018

Trawl Number 1

Page 1 of 1

Date: 7/23/2018

Completed by: OCS, KS, JB

Gross weight (kg) _____

Tare Weight (kg) _____

Net weight (kg) 4.80 kg

Size class	N	Species:	Anomalies
1		SPOTTED SAND BASS	
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15	###		
16	### III		
17	#####		
18	###		
19			
20	I		
21	I		
22	III		
23	II		
24			
25			
26			
27	I		
28			
29			
30			

Anomaly Codes (record as superscript to length measurement): A = ambicoloration, B = albinism, D = skeletal deformity, E = copepod eye-parasite (i.e., *Phrixocephalus*), F = fin erosion, H = Leeches, L = lesion (describe in Comments), M = Monogeneans, O = other anomaly (describe in Comments), P = other external parasite (describe in Comments), T = tumor, multiple occurrences on individual put "-" and #

Total Abundance 37

Comments:

QA done for species: (circle) Yes

No

BIGHT '18 EPIBENTHIC INVERTEBRATE FORM

Station: B18-10023

Page 1 of 1

Date: 23 JUL 2018

Completed by: MARY T

Failed

Trawl Number 1

	Species	N	Diversity Index Exclude Code	Anomalies	Comments	FID or Vouch	Weight (kg)		
							Gross	Tare	Net
1	<i>Squilla penicillata</i>	2				/	/	/	.11
2	Sea Pen 1	8				/	/	/	.2077
3	<i>Pyrosoma tuberculata</i>	1				/	/	/	.002
4	<i>Loligo opalescens</i>	1				1-ID	/	/	.001
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									

Anomaly Codes: B = burnspot, P = External Parasite, O = other anomaly (describe in Comments), W = wasting disease, multiple occurrences on individual put "- and #, FID = specimen(s) collected for further identification, #V = Number of specimens collected as species vouchers

Diversity Index Exclude Codes: Blank = No exclusion, In = Infauna, Pl = Pelagic, Pr = Parasite, Nb = New born, SE = Shark egg, Dm = damaged, Xr = met 3 rule exclude

Comments:

QA done at station: (circle) Yes

No

BIGHT '18 TRAWL DEBRIS FORM

Agency: AMEC/WAD

Page 1 of 1

Station: P18-10023 Trawl #: 1 Date: 7/23/2018

☐ CHECK HERE IF NO DEBRIS PRESENT IN SAMPLE

Anthropogenic Debris - include Brand names in Comments if known

Plastic	Count	Comment
Bag		
Bandaïd		
Balloon (mylar/latex)/Ribbon		
Bottle		
Buoy		
Cap/Lid		
Cigarette box/Wrapper		
Cup		
Filmstrip (movie)		
Fishing Line/Net		
Food Bag/Wrapper		
Polypropylene Rope		
Single use food container		
Toy		
Utensil		
Plastic Piece (unid.)		
Other Plastic (comment req.)		
Glass		
Beer Bottle		
Other Glass Bottle/Jar		
Glass Piece (unid.)		
Other Glass (comment req.)		

Misc. Items/Pieces	Count	Comment
Boat/Ship/Engine Part		
Clothing		
Concrete/Asphalt		
Fiberglass		
Food		
Leather		
Lumber		
Paper		
Rag/Cloth		
Rubber		
Shoe		
Tape		
Tire		
Other Misc. (comment req.)		
Metal	Count	Comment
Drink Can		
Can - other		
Fishing Gear		
Wire		
Metal Piece (unid.)		
Other Metal (comment req.)		

Natural Debris

Marine Origin	Count	Est.*	Comment
Foliose Algae - not kelp			
Gorgonian Sea Fan (dead)			
Kelp Holdfast			
Kelp Stipe/Blade			
Other Foliose Algae			
Rock			
Seagrass			
Other Marine (comment req.)			

Terrestrial Vegetation	Count	Est.*	Comment
Leaves/Seed Pod			
Stick/Branch/Driftwood			
Other Terrestrial (comment req.)			

***For Natural Debris only**, if the count is >10 and an exact count cannot be made, leave the "Count" column blank and estimate the amount (M or H) in the "Est." column

Moderate: **M = 11-100**

High: **H = >100**

Completed by: _____

STATION OCCUPATION

Agency Code AMEC/WOOD
 Vessel Name EARLY BIRD 11
 Latitude 32.71660
 Longitude -117.18573
 Arrival Time 1315
 (hh:mm)
 Depth (m) 11.8

Weather
 Clear ☒ Rain ☐
 Overcast ☐ Thunderstorm ☐
 Partly cloudy ☐ Fog ☐
 Drizzle ☐ Fog & Drizzle ☐
 Hazy ☐ Smoky ☐

Sea State
 Calm ☒
 Choppy ☐
 Rough ☐
 Confused ☐
 Abandoned site? ☐
 Y or N (If Y explain in comments)

Salinity (ppt)
—
 Estuary Sites only

Station ID B18-10024

Date 7/23/18

Station Fail Code
 (2)

Wind
 Speed (kts) 0-5
 Direction (4) NW

Swell
 Period (s) —
 Height (ft) —
 Direction (1) —

Nav Type
 DGPS ☒
 GPS ☐
 WAAS ☐

Equipment Type
 Core ☐ Van Veen ☐
 Petite Ponar ☐ Tandem Van Veen ☐

Station Comments

BCS, JB, KS, CS, RT
Bob, Danny

TRAWL EVENTS

Trawl Number	Net Position	Deck Time (hh:mm:ss)	Latitude (DD°MM.mmmmm)	Longitude (DDD°MM.mmmmm)	Depth (m)
1	Net Over	1320	32.71660	-117.18573	11.8
	Start Trawl	1322	32.71570	-117.18456	11.6
	End Trawl	1332	32.71294	-117.17915	11.8
	Net on Deck	1335	32.71274	-117.17874	

Enter Values	
Wire Out (m)	<u>42</u>
Closest Distance to target (m)	<u>< 10 m</u>
PT Bottom Time (mm:ss)	<u>10:20</u>
PT Bottom Temperature (°C)	<u>19.3</u>
Trawl Fail Code (3)	

Check all that apply	
P/T Sensor Data	<input checked="" type="checkbox"/>
Community Structure	<input type="checkbox"/>
Tissue Chemistry	<input type="checkbox"/>

Comments:

	Net Position	Deck Time (hh:mm:ss)	Latitude (DD°MM.mmmmm)	Longitude (DDD°MM.mmmmm)	Depth (m)	Enter Values		Check all that apply	
						Wire Out (m)		P/T Sensor Data	<input type="checkbox"/>
						Closest Distance to target (m)		Community Structure	<input type="checkbox"/>
						PT Bottom Time (mm:ss)		Tissue Chemistry	<input type="checkbox"/>
						PT Bottom Temperature (°C)			
	Net Over					Trawl Fail Code (3)			
	Start Trawl								
	End Trawl								
	Net on Deck								

Comments:

BIGHT '18 DEMERSAL FISH IDENTIFICATION FORM

Station: B18-10024

Page 1 of 1

Date: 7/23/2018

Completed by: KS, CCS, BCS, JB

Trawl Number 1 Failed ☐

Species	N	Diversity Index Exclude Code	Std Length Size Class (cm) Use for up to 10 individuals. Use Size Class sheet for more abundant spp.	FID or Vouch	Weight (kg)		
					Gross	Tare	Net
1 SPOTTED SAND BASS	22		SEE SIZE CLASS FORM.	(Photo)			4.08
2 SPECKLEFIN MIDSHIPMAN	2		32, 28				399 grams 266 g
3 ROUND RAY	4		24(14), 27(15), 26(16), 28(16) Total length (disk width)		1.66	0.82	
4 BARRED SAND BASS	1		19				122g
5 OA. HALIBUT	1		16				46g
6 TONGUE FISH	1		14				15g
7 LIZARD FISH	3		23, 10, 10				126g
8 SLOUGH ANCHOVY	1		7				3g
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							

Anomaly Codes: (record as superscript to tally mark): A = ambicoloration, B = albinism, D = skeletal deformity, E = copepod eye-parasite (i.e., Phrioxcephalus), F = fin erosion, H = Leeches, L = lesion (describe in Comments), M = Monogeneans, O = other anomaly (describe in Comments), P = other external parasite (describe in Comments), T = tumor, multiple occurrences on individual put "-" and #, FID = specimen(s) collected for further identification, #V = Number of specimens collected as species vouchers

Diversity Index Exclude Codes: Blank = No exclusion, In = Infauna, Pl = Pelagic, Pr = Parasite, Nb = New born, SE = Shark egg, Dm = damaged, Xr = met 3 rule exclude

Comments:

QA done at station: (circle) Yes

No

BIGHT '18 DEMERSAL FISH SIZE CLASS FORM

Station: B18-10024

Trawl Number 1

Page 1 of 1

Date: 7/23/2018

Completed by: KS, CCS

Gross weight (kg) 4.90

Tare Weight (kg) 0.82

Net weight (kg) 4.08kg

Size class	N	Species: <u>SPOTTED SAND BASS</u>	Anomalies
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15	4		
16	6		
17	2		
18	1		
19	2		
20			
21			
22	1		
23	2		
24			
25			
26	2		
27			
28	2		
29			
30			

Anomaly Codes (record as superscript to length measurement): A = ambicoloration, B = albinism, D = skeletal deformity, E = copepod eye-parasite (i.e., *Phrixecephalus*), F = fin erosion, H = Leeches, L = lesion (describe in Comments), M = Monogeneans, O = other anomaly (describe in Comments), P = other external parasite (describe in Comments), T = tumor, multiple occurrences on individual put "-" and #

Total Abundance

22

Comments:

QA done for species: (circle) Yes

(No)

318-

Page of

Completed by: M4/29 T

Failed

Weight (kg)

Diversity Index Exclude Codes: Blank = No exclusion, In = Infauna, Pl = Pelagic, Pr = Parasite, Nb = New born, SE = Shark egg, Dm = damaged, Xr = met 3 rule exclude

QA done at station: (circle) Yes No

BIGHT '18 TRAWL DEBRIS FORM

Agency: AMEC/WOODPage 1 of 1Station: B18-10029 Trawl #: 1 Date: 7/23/2018☒ CHECK HERE IF NO DEBRIS PRESENT IN SAMPLE

Anthropogenic Debris - include Brand names in Comments if known			
Plastic	Count	Comment	
Bag			
Bandaïd			
Balloon (mylar/latex)/Ribbon			
Bottle			
Buoy			
Cap/Lid			
Cigarette box/Wrapper			
Cup			
Filmstrip (movie)			
Fishing Line/Net			
Food Bag/Wrapper			
Polypropylene Rope			
Single use food container			
Toy			
Utensil			
Plastic Piece (unid.)			
Other Plastic (comment req.)			
Glass			
Beer Bottle			
Other Glass Bottle/Jar			
Glass Piece (unid.)			
Other Glass (comment req.)			

Misc. Items/Pieces	Count	Comment	
Boat/Ship/Engine Part			
Clothing			
Concrete/Asphalt			
Fiberglass			
Food			
Leather			
Lumber			
Paper			
Rag/Cloth			
Rubber			
Shoe			
Tape			
Tire			
Other Misc. (comment req.)			
Metal	Count	Comment	
Drink Can			
Can - other			
Fishing Gear			
Wire			
Metal Piece (unid.)			
Other Metal (comment req.)			

Marine Origin	Count	Est.*	Comment
Foliose Algae - not kelp			
Gorgonian Sea Fan (dead)			
Kelp Holdfast			
Kelp Stipe/Blade			
Other Foliose Algae			
Rock			
Seagrass			
Other Marine (comment req.)			

Terrestrial Vegetation	Count	Est.*	Comment
Leaves/Seed Pod			
Stick/Branch/Driftwood			
Other Terrestrial (comment req.)			

*For Natural Debris only, if the count is >10 and an exact count cannot be made, leave the "Count" column blank and estimate the amount (M or H) in the "Est." column

Moderate: **M = 11-100**
High: **H = >100**

Completed by: ced

STATION OCCUPATION

BIGHT '18

Agency Code AMEC/Wood
 Vessel Name Early Bird II
 Latitude
 Longitude
 Arrival Time
 (hh:mm)
 Depth (m) 20

Weather
 Clear ☒ Rain ☐
 Overcast ☐ Thunderstorm ☐
 Partly cloudy ☐ Fog ☐
 Drizzle ☐ Fog & Drizzle ☐
 Hazy ☐ Smoky ☐

Sea State
 Calm ☒
 Choppy ☐
 Rough ☐
 Confused ☐
 Abandoned site? ☐
 Y or N (If Y explain in comments)

Salinity (ppt)
NA
 Estuary Sites only

Station ID B18-10030
 Date 7.23.18

Station Fail Code
 (2)

Wind
 Speed (kts) calm
 Direction (4) calm

Swell
 Period (s)
 Height (ft)
 Direction (1)

Nav Type
 DGPS ☒
 GPS ☐
 WAAS ☐

Equipment Type
 Core ☐ Van Veen ☐
 Petite Ponar ☐ Tandem Van Veen ☐

Station Comments
BCS, JB, KS, CS - Field crew
Bob & Danny

TRAWL EVENTS

Trawl Number	Net Position	Deck Time (hh:mm:ss)	Latitude (DD°MM.mmm)	Longitude (DDD°MM.mmm)	Depth (m)
1	Net Over	0657	32.68509	117.23006	19
	Start Trawl	0700	32.68768	117.22990	19
	End Trawl	0704	32.22858	117.22853	16
	Net on Deck	0711	32.68979	117.22853	16

Comments: Abandoned trawl due to perceived hang up @ 4min.

Enter Values	
Wire Out (m)	80
Closest Distance to target (m)	
PT Bottom Time (mm:ss)	
PT Bottom Temperature (°C)	
Trawl Fail Code (3)	T4

Check all that apply	
P/T Sensor Data	<input type="checkbox"/>
Community Structure	<input type="checkbox"/>
Tissue Chemistry	<input type="checkbox"/>

Saved 1 Black Croaker & Sad Buss for bioassay

2	Net Over	0723	32.69342	117.73202	16.5
	Start Trawl	0726	32.69127	117.23154	18
	End Trawl	0736	32.68601	117.23005	16.3
	Net on Deck	0739	32.68558	117.22999	18

Comments:

Wire Out (m)	80
Closest Distance to target (m)	
PT Bottom Time (mm:ss)	9:30
PT Bottom Temperature (°C)	13.2
Trawl Fail Code (3)	

P/T Sensor Data	<input type="checkbox"/>
Community Structure	<input type="checkbox"/>
Tissue Chemistry	<input type="checkbox"/>

BIGHT '18 DEMERSAL FISH IDENTIFICATION FORM

Station: B18-10030

Page 1 of 1

Date: 7-23-18

Completed by: CLS, BCS

Trawl Number 2 Failed

	Species	N	Diversity Index Exclude Code	Std Length Size Class (cm) Use for up to 10 individuals. Use Size Class sheet for more abundant spp.	FID or Vouch	Weight (kg)		
						Gross	Tare	Net
1	SCORPION FISH	5	—	23, 14, 14, 13, 14	—			1.60
2	LIZARD FISH	18	—	11, 11, 11, 11, 11, 10, 12, 10, 11, 11, 11, 10, 10*	(PHOTO)			147g
3	SPOTTED TURBOT	1	—	6	—			4g
4	BLACK CROAKER**	—	—	SEE BOG	—			—
5	BARRED SAND BASS	2**	—	16, 18 (3 KEPT FOR BOG SEE DATASHEET)	—			232g
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								

Anomaly Codes: (record as superscript to tally mark): A = ambicoloration, B = albinism, D = skeletal deformity, E = copepod eye-parasite (i.e., Phrioxcephalus), F = fin erosion, H = Leeches, L = lesion (describe in Comments), M = Monogeneans, O = other anomaly (describe in Comments), P = other external parasite (describe in Comments), T = tumor, multiple occurrences on individual put "-" and #, FID = specimen(s) collected for further identification, #V = Number of specimens collected as species vouchers

Diversity Index Exclude Codes: Blank = No exclusion, In = Infauna, Pl = Pelagic, Pr = Parasite, Nb = New born, SE = Shark egg, Dm = damaged, Xr = met 3 rule exclude

Comments:

TRAWL 1 FAILED DUE TO OBSTRUCTION

* Estimated SL, tail was missing

** SEE BOG DATASHEET

*** 3 kept for BOG

See BOG data sheet

QA done at station: (circle) Yes ☒ No ☐

BIGHT '18 EPIBENTHIC INVERTEBRATE FORM

Station: B18-10030

Page 1 of 1

Date: 23 JULY 2018

Completed by: MARY T

Trawl Number 2 ☐ Failed ☐

Species	N	Diversity Index Exclude Code	Anomalies	Comments	FID or Vouch	Weight (kg) (gram)		
						Gross	Tare	Net
1 <i>Palinurus interuptus</i>	2				/	2.44	.9	1.54g
2 <i>Ciona intestinalis</i>	3				/	/	/	7g
3 Sea Pen 1	11				/	/	/	30g
4 <i>Asterina miniata</i>	5				1-ID 1-EDNA	/	/	44g
5 <i>Apostichopus californicus</i>	1				ID	/	/	2g
6 Red gorgonian	n/a				1-EDNA 1-ID	/	/	75g
7 <i>Pyrosomella tuberculata</i>	3				1-EDNA 1-ID	/	/	5g
8 <i>Bugula californica</i>	n/a				/	/	/	15g
9 <i>Bomaleon antennatum</i>	1				/	/	/	6g
10 <i>Pelia tumida</i>	1				FID	/	/	3g
11 Hermit crabs	3				FID	/	/	4g
12 <i>Loligo opalescens</i>	1				Photo Voucher	/	/	1g
13								
14								
15								
16								
17								
18								
19								

Anomaly Codes: B = burnspot, P = External Parasite, O = other anomaly (describe in Comments), W = wasting disease, multiple occurrences on individual put "-"

"and #, FID = specimen(s) collected for further identification, #V = Number of specimens collected as species vouchers

Diversity Index Exclude Codes: Blank = No exclusion, In = Infauna, Pl = Pelagic, Pr = Parasite, Nb = New born, SE = Shark egg, Dm = damaged, Xr = met 3 rule exclude

Comments:

QA done at station: (circle) Yes No

BIGHT'18 TRAWL INVERTEBRATE - QUALITY CONTROL FORMStation: B18-10030Trawl #: 2Agency: AmecDate: 7/23/18Previously Measured by: Mary TamburranRe-Measured by: Kevin Stolzschack**Species #1**Original Species name: Palinurus interaptusQC Re-ID Species name: Palinurus interaptus

Comments/Anomalies	N	QC Re-weigh (kg)		
		Gross	Tare	Net
	2	2.44	0.9	1.54
Other species found in lot				
1	2			1.62
2				
3				

Anomaly Codes: B = burnspot, P = External Parasite, W = wasting disease, O = other anomaly (describe) None**Species #2**Original Species name: Asterias muricataQC Re-ID Species name: Asterias muricata

Comments/Anomalies	N	QC Re-weigh (kg)		
		Gross	Tare	Net
	5			4.4
Other species found in lot	5			4.3
1				
2				
3				

Anomaly Codes: B = burnspot, P = External Parasite, W = wasting disease, O = other anomaly (describe) None**Species #1**

QA/QC Acceptance			
Metric	Pass	Fail	Initials
ID	✓		<u>MS</u>
Count	✓		<u>MS</u>
Biomass	✓		<u>MS</u>
Anomalies	✓		<u>MS</u>

Species #2

QA/QC Acceptance			
Metric	Pass	Fail	Initials
ID	✓		<u>MS</u>
Count	✓		<u>MS</u>
Biomass	✓		<u>MS</u>
Anomalies	✓		<u>MS</u>

Notes:

BIGHT '18 TRAWL DEBRIS FORM

Agency: AMEC / Wood

Page 1 of 1

Station: B18-10030 Trawl #: 1/2 Date: 7/23/2010

See below

CHECK HERE IF NO DEBRIS PRESENT IN SAMPLE

Anthropogenic Debris - include Brand names in Comments if known

Plastic	Count	Comment
Bag		
Bandaaid		
Balloon (mylar/latex)/Ribbon		
Bottle		
Buoy		
Cap/Lid		
Cigarette box/Wrapper		
Cup		
Filmstrip (movie)		
Fishing Line/Net		
Food Bag/Wrapper		
Polypropylene Rope		
Single use food container		
Toy		
Utensil		
Plastic Piece (unid.)		
Other Plastic (comment req.)		
Glass		
Beer Bottle		
Other Glass Bottle/Jar		
Glass Piece (unid.)		
Other Glass (comment req.)		

Misc. Items/Pieces	Count	Comment
Boat/Ship/Engine Part		
Clothing		
Concrete/Asphalt		
Fiberglass		
Food		
Leather		
Lumber		
Paper		
Rag/Cloth		
Rubber		
Shoe		
Tape		
Tire		
Other Misc. (comment req.)		
Metal	Count	Comment
Drink Can		
Can - other		
Fishing Gear		
Wire		
Metal Piece (unid.)		
Other Metal (comment req.)		

Natural Debris

Marine Origin	Count	Est.*	Comment
Foliose Algae - not kelp			
Gorgonian Sea Fan (dead)			
Kelp Holdfast	1		
Kelp Stipe/Blade	>10 + <100		
Other Foliose Algae	1 p-		red algae
Rock			
Seagrass	12		
Other Marine (comment req.)	12		EMPTY TUBES

Terrestrial Vegetation	Count	Est.*	Comment
Leaves/Seed Pod			
Stick/Branch/Driftwood			
Other Terrestrial (comment req.)			

*For Natural Debris only, if the count is >10 and an exact count cannot be made, leave the "Count" column blank and estimate the amount (M or H) in the "Est." column

Moderate:

M = 11-100

High:

H = >100

Completed by: _____

some shell hash

STATION OCCUPATION

BIGHT '18

Agency Code	W26d
Vessel Name	EB
Latitude	32.66518
Longitude	-117.14980
Arrival Time	0710
(hhmm)	
Depth (m)	4.7

Weather	
Clear	<input type="checkbox"/>
Overcast	<input checked="" type="checkbox"/>
Partly cloudy	<input type="checkbox"/>
Drizzle	<input type="checkbox"/>
Hazy	<input type="checkbox"/>
Rain	<input type="checkbox"/>
Thunderstorm	<input type="checkbox"/>
Fog	<input type="checkbox"/>
Fog & Drizzle	<input type="checkbox"/>
Smoky	<input type="checkbox"/>

Sea State		Salinity (ppt)	
Calm	<input checked="" type="checkbox"/>		
Choppy	<input type="checkbox"/>		
Rough	<input type="checkbox"/>		
Confused	<input type="checkbox"/>		
	<input type="checkbox"/>		

Abandoned site? ☐

Y or N (If Y explain in comments)

Station ID 018-10034

Date 7/24/18

Wind
Speed (kts) 5
Direction (4) W

Swell	
Period (s)	0
Height (ft)	0
Direction (1)	0

Nav Type	
DGPS	X
GPS	
WAAS	

Station Comments

Equipment Type	
Core	Van Veen
Petite Ponar	Tandem Van Veen

TRAWL EVENTS

Trawl Number	Net Position	Deck Time (hh:mm:ss)	Latitude (DD°MM.mmmmm)	Longitude (DDD°MM.mmmmm)	Depth (m)
1	Net Over	0711	32.66425	-117.15208	4.5
	Start Trawl	0714	32.66512	-117.15005	4.6
	End Trawl	0724	32.66725	-117.14429	4.7
	Net on Deck	0726	32.66741	-117.14401	4.7

Enter Values	
Wire Out (m)	16
Closest Distance to target (m)	14
PT Bottom Time (mm:ss)	11:30
PT Bottom Temperature (°C)	25.4
Trawl Fail Code (3)	

Check all that apply	
P/T Sensor Data	<input checked="" type="checkbox"/>
Community Structure	<input checked="" type="checkbox"/>
Tissue Chemistry	<input checked="" type="checkbox"/>

Comments:

	Net Over					Wire Out (m)		P/T Sensor Data	
	Start Trawl					Closest Distance to target (m)		Community Structure	
	End Trawl					PT Bottom Time (mm:ss)		Tissue Chemistry	
	Net on Deck					PT Bottom Temperature (°C)			
						Trawl Fail Code (3)			
Comments:									

Comments:

BIGHT '18 DEMERSAL FISH IDENTIFICATION FORM

3.0 1.36
1.9 1.58
2.1
1.25

Station: B18-10034

Page 1 of 1

Date: 7/24/18

Completed by: JR

Trawl Number 1 Failed

Species	N	Diversity Index Exclude Code	Std Length Size Class (cm) Use for up to 10 individuals. Use Size Class sheet for more abundant spp.	FID or Vouch	Weight (kg)		
					Gross	Tare	Net
1 Bat ray	6	WS TL	58, 47, 49, 41, 41, 45 73, 74, 87, 70, 70, 77				11.19
* 2 CA Halibut	9		12, 13, 15, 7, 11, 15, 11, 9, 8				0.22
3 Yellowfin Croaker	1		42				0.049
4 Specklefin Midshipman	2		20, 2				0.085
5 Spotted Turbot	1		16				0.113
6 Barred Sand Bass	4		12, 12, 13, 13				0.168
7 Deep body Anchovy	2		11, 11				0.037
8 Round Ray			see Size Class Form				
* 9 Spotted Sand Bass			see Size Class Form				
10 Black Croaker			see Bioaccum sheet				
11							
12							
13							
14							
15							
16							
17							
18							
19							

Anomaly Codes: (record as superscript to tally mark): A = ambicoloration, B = albinism, D = skeletal deformity, E = copepod eye-parasite (i.e., Phrixocephalus), F = fin erosion, H = Leeches, L = lesion (describe in Comments), M = Monogeneans, O = other anomaly (describe in Comments), P = other external parasite (describe in Comments), T = tumor, multiple occurrences on individual put "-" and #, FID = specimen(s) collected for further identification, #V = Number of specimens collected as species vouchers

Diversity Index Exclude Codes: Blank = No exclusion, In = Infauna, Pl = Pelagic, Pr = Parasite, Nb = New born, SE = Shark egg, Dm = damaged, Xr = met 3 rule exclude

Comments:

* 1 halibut had Isopod parasite, one spotted had internal growth on tail

QA done at station: (circle) Yes No

☒ **Yes**

BIGHT '18 DEMERSAL FISH SIZE CLASS FORM

Station: B18-10034

Trawl Number 1

Page 1 of 1

Date: 7/24/18

Completed by: JR

Gross weight (kg) —

Tare Weight (kg) —

Net weight (kg) 52.7

Size class	N	Species: <u>Round Ray</u>	Anomalies
1	<u>23</u>	^{WS} 14, 14, 13, 10, 11, 13, 11, 19, 16, 9, 19, 20, 16, 13, 13, 18, 11, 18, 11, 14, 17, 16, 10 ^{TL} 24, 25, 23, 15, 18, 23, 18, 34, 27, 14, 34, 35, 27, 23, 23, 31, 19, 32, 20, 25, 31, 28, 16	
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			

Anomaly Codes (record as superscript to length measurement): A = ambicoloration, B = albinism, D = skeletal deformity, E = copepod eye-parasite (i.e., *Phrioxcephalus*), F = fin erosion, H = Leeches, L = lesion (describe in Comments), M = Monogeneans, O = other anomaly (describe in Comments), P = other external parasite (describe in Comments), T = tumor, multiple occurrences on individual put "-" and #

Total Abundance

Comments:

QA done for species: (circle) Yes No

BIGHT '18 DEMERSAL FISH SIZE CLASS FORM

Station: 718-10034

Trawl Number 1

Page 1 of 1

Date: 7/24/18

Completed by: JR

Gross weight (kg) —

Tare Weight (kg) —

Net weight (kg) 1.14

Size class	N	Species: <u>Spotted Sand Bass</u>	Anomalies
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13	<u>1</u>	<u>1</u>	
14	<u>5</u>	<u>+++</u>	
15	<u>5</u>	<u>+++</u>	
16			
17			
18	<u>1</u>	<u>1</u>	
19			
20	<u>1</u>	<u>1</u>	
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			

Anomaly Codes (record as superscript to length measurement): A = ambicoloration, B = albinism, D = skeletal deformity, E = copepod eye-parasite (i.e., *Phrioxcephalus*), F = fin erosion, H = Leeches, L = lesion (describe in Comments), M = Monogeneans, O = other anomaly (describe in Comments), P = other external parasite (describe in Comments), T = tumor, multiple occurrences on individual put "-" and #

Total Abundance

Comments:

QA done for species: (circle) Yes No

Station: B18-10034 **BIG**

Date: 7/29/18

Completed by: _____

[illegible]

Comments:

QA done at station: (circle) Yes No

Agency: *Wood*

Previously Measured by: BI

Re-Measured by: JR

QC Re-weigh weight (kg)	Tare Weight (kg)	Net weight (kg)
		1.08

Size Class	Original Species: <i>Spotted Sand Bass</i>		Anomalies
	QC Re-ID:		
	Re-ID Count	+/- 2 mm	Tweener count
1		1-2	
2		2-3	
3		3-4	
4		4-5	
5		5-6	
6		6-7	
7		7-8	
8		8-9	
9		9-10	
10		10-11	
11		11-12	
12		12-13	
13		13-14	1
14	///	14-15	11
15		15-16	1
16		16-17	
17		17-18	
18		18-19	
19		19-20	
20		20-21	
21		21-22	
22		22-23	
23		23-24	
24		24-25	
25		25-26	
26		26-27	
27		27-28	
28		28-29	
Total		Total	

Other Species found in sample:			QA/QC Acceptance	Pass	Fail	Initials
			Identification	X		
			Count	X		
			Length	X		
			Biomass	X		
Other species Weight (kg)			Pathology			
Gross	Tare	Net	Notes:			

Anomaly Codes (record as superscript to length measurement): **A** = ambicoloration, **B** = albinism, **D** = skeletal deformity, **E** = copepod eye-parasite (i.e., *Phrixocephalus*), **F** = fin erosion, **H** = Leeches, **L** = lesion (describe in Comments), **M** = Monogeneans, **O** = other anomaly (describe in Comments), **P** = other external parasite (describe in Comments), **T** = tumor. Note multiple occurrences on an individual put “-” and #

BIGHT'18 TRAWL DEMERSAL FISH - QUALITY CONTROL FORMStation: B18-10034 Trawl #: 1 Agency: WoodDate: 7/24/18 Previously Measured by: BIRe-Measured by: JROriginal Gross weight (kg) — Tare Weight (kg) — Net weight (kg) 0.018QC Re-weigh weight (kg) X Tare Weight (kg) — Net weight (kg) 0.018

Size Class	Original Species: <i>Slough Anchovy</i>			Anomalies
	QC Re-ID:			
	Re-ID Count	+/- 2 mm	Tweener count	
1		1-2		
2		2-3		
3	I	3-4		
4	II	4-5	II	
5		5-6	III	
6	III	6-7		
7		7-8		
8		8-9		
9		9-10		
10		10-11		
11		11-12		
12		12-13		
13		13-14		
14		14-15		
15		15-16		
16		16-17		
17		17-18		
18		18-19		
19		19-20		
20		20-21		
21		21-22		
22		22-23		
23		23-24		
24		24-25		
25		25-26		
26		26-27		
27		27-28		
28		28-29		
Total		Total		

Other Species found in sample:			QA/QC Acceptance	Pass	Fail	Initials
			Identification	<u>X</u>		
			Count	<u>X</u>		
			Length	<u>X</u>		
			Biomass	<u>X</u>		
Other species Weight (kg)			Pathology			
Gross	Tare	Net	Notes:			

Anomaly Codes (record as superscript to length measurement): A = ambicoloration, B = albinism, D = skeletal deformity, E = copepod eye-parasite (i.e., *Phrixocephalus*), F = fin erosion, H = Leeches, L = lesion (describe in Comments), M = Monogeneans, O = other anomaly (describe in Comments), P = other external parasite (describe in Comments), T = tumor. Note multiple occurrences on an individual put "-" and #

BIGHT '18 TRAWL DEBRIS FORM

Agency: WoodPage 1 of 1Station: B18-10034Trawl #: 1Date: 7/24/18

CHECK HERE IF NO DEBRIS PRESENT IN SAMPLE

Anthropogenic Debris - include Brand names in Comments if known

Plastic	Count	Comment
Bag		
Bandaïd		
Balloon (mylar/latex)/Ribbon		
Bottle		
Buoy		
Cap/Lid		
Cigarette box/Wrapper		
Cup		
Filmstrip (movie)		
Fishing Line/Net		
Food Bag/Wrapper		
Polypropylene Rope		
Single use food container		
Toy		
Utensil		
Plastic Piece (unid.)		
Other Plastic (comment req.)		
Glass		
Beer Bottle		
Other Glass Bottle/Jar		
Glass Piece (unid.)		
Other Glass (comment req.)		

Misc. Items/Pieces	Count	Comment
Boat/Ship/Engine Part		
Clothing		
Concrete/Asphalt		
Fiberglass		
Food		
Leather		
Lumber		
Paper		
Rag/Cloth		
Rubber		
Shoe		
Tape		
Tire		
Other Misc. (comment req.)		
Metal	Count	Comment
Drink Can		
Can - other		
Fishing Gear		
Wire		
Metal Piece (unid.)		
Other Metal (comment req.)		

Natural Debris

Marine Origin	Count	Est.*	Comment
Foliose Algae - not kelp			
Gorgonian Sea Fan (dead)			
Kelp Holdfast			
Kelp Stipe/Blade			
Other Foliose Algae			
Rock			
Seagrass			
Other Marine (comment req.)			

Terrestrial Vegetation	Count	Est.*	Comment
Leaves/Seed Pod			
Stick/Branch/Driftwood			
Other Terrestrial (comment req.)			

*For Natural Debris only, if the count is >10 and an exact count cannot be made, leave the "Count" column blank and estimate the amount (M or H) in the "Est." column

Moderate: **M = 11-100**High: **H = >100**Completed by: JK

STATION OCCUPATION

BIGHT '18

Agency Code 6100d
 Vessel Name EB
 Latitude 32.65847
 Longitude -117.14474
 Arrival Time 0948
 (hh:mm)
 Depth (m) 5.0

Weather

Clear <input checked="" type="checkbox"/>	Rain <input type="checkbox"/>
Overcast <input type="checkbox"/>	Thunderstorm <input type="checkbox"/>
Partly cloudy <input type="checkbox"/>	Fog <input type="checkbox"/>
Drizzle <input type="checkbox"/>	Fog & Drizzle <input type="checkbox"/>
Hazy <input type="checkbox"/>	Smoky <input type="checkbox"/>

Sea State

Calm <input checked="" type="checkbox"/>
Choppy <input type="checkbox"/>
Rough <input type="checkbox"/>
Confused <input type="checkbox"/>

Salinity (ppt)
Estuary Sites only

Abandoned site? ☐
Y or N (If Y explain in comments)

Station ID 018-10034

Date 7/24/18

Station Fail Code
 (2)

Wind

Speed (kts) 5
 Direction (4) NW

Swell

Period (s) 0
 Height (ft) 0
 Direction (1) 0

Nav Type

DGPS ☒
 GPS ☐
 WAAS ☐

Station Comments

Equipment Type

Core ☐ Van Veen ☐
 Petite Ponar ☐ Tandem Van Veen ☐

TRAWL EVENTS

Trawl Number	Net Position	Deck Time (hh:mm:ss)	Latitude (DD°MM.mmmm)	Longitude (DDD°MM.mmmm)	Depth (m)
1	Net Over	0950	32.65807	-117.14705	4.7
	Start Trawl	0951	32.65825	-117.14522	4.9
	End Trawl	1002	32.66088	-117.13961	4.9
	Net on Deck	1004	32.66126	-117.13945	4.9

Enter Values

Wire Out (m) 16
 Closest Distance to target (m) 50
 PT Bottom Time (mm:ss) 11:00
 PT Bottom Temperature (°C) 25.7
 Trawl Fail Code (3)

Check all that apply

P/T Sensor Data ☒
 Community Structure ☒
 Tissue Chemistry ☒

Comments:

	Net Over					Wire Out (m)		P/T Sensor Data	
	Start Trawl					Closest Distance to target (m)		Community Structure	
	End Trawl					PT Bottom Time (mm:ss)		Tissue Chemistry	
	Net on Deck					PT Bottom Temperature (°C)			
						Trawl Fail Code (3)			

Comments:

BIGHT '18 DEMERSAL FISH IDENTIFICATION FORM

Station: B18-10036

Page 1 of 1

Date: 7/24/18

Completed by: JR

Trawl Number 1 Failed ☐

Species	N	Diversity Index Exclude Code	Std Length Size Class (cm) Use for up to 10 individuals. Use Size Class sheet for more abundant spp.	FID or Vouch	Weight (kg)		
					Gross	Tare	Net
1 Barred Sand Bass	7		12, 13, 12, 12, 10, 11, 10				0.213
2 Spotted Sand Bass	2		15, 16				0.178
3 Speckletfin Midshipman	1		22				0.099
4 Slough Anchovy			see Size Class form				
5 Engraulidae *				FID			
6 Black Croaker			see Bioaccum sheet				
7 Yellowfin Croaker			see Bioaccum sheet				
8 Round Ray	4	WS TL	17, 14, 10, 11 30, 25, 16, 17		0.142	0.8	0.062
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							

Anomaly Codes: (record as superscript to tally mark): A = ambicoloration, B = albinism, D = skeletal deformity, E = copepod eye-parasite (i.e., Phrixocephalus), F = fin erosion, H = Leeches, L = lesion (describe in Comments), M = Monogeneans, O = other anomaly (describe in Comments), P = other external parasite (describe in Comments), T = tumor, multiple occurrences on individual put "-" and #, FID = specimen(s) collected for further identification, #V = Number of specimens collected as species vouchers

Diversity Index Exclude Codes: Blank = No exclusion, In = Infauna, Pl = Pelagic, Pr = Parasite, Nb = New born, SE = Shark egg, Dm = damaged, Xr = met 3 rule exclude

Comments:

*possibly Slough Anchovy larvae

QA done at station: (circle) Yes ☒ No

BIGHT '18 DEMERSAL FISH SIZE CLASS FORM

Station: B18-10036

Trawl Number 1

Page 1 of 1

Date: 7/24/18

Completed by: JR

Gross weight (kg) _____ Tare Weight (kg) _____ Net weight (kg) 0.039

Size class	N	Species: <u>Slough Anchovy</u>	Anomalies
1			
2		<u>18*</u>	
3		<u>176*+34*</u>	
4		<u> </u>	
5			
6		<u> </u>	
7		<u>1</u>	
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			

Anomaly Codes (record as superscript to length measurement): A = ambicoloration, B = albinism, D = skeletal deformity, E = copepod eye-parasite (i.e., *Phrioxcephalus*), F = fin erosion, H = Leeches, L = lesion (describe in Comments), M = Monogeneans, O = other anomaly (describe in Comments), P = other external parasite (describe in Comments), T = tumor, multiple occurrences on individual put "-" and #

Comments:

Total Abundance

* Engraulidae? for FID

QA done for species: (circle) Yes

No

Station: B18-10036

Page of

Date: 7/24/18

Completed by: _____

Trawl Number **Failed**

Anomaly Codes: B = burnspot, P = External Parasite, O = other anomaly (describe in Comments), W = wasting disease, multiple occurrences on individual put "- and #, FID = specimen(s) collected for further identification, #V = Number of specimens collected as species vouchers
Diversity Index Exclude Codes: Blank = No exclusion, In = Infauna, Pl = Pelagic, Pr = Parasite, Nb = New born, SE = Shark egg, Dm = damaged, Xr = met 3 rule exclude
Comments:

QA done at station: (circle) Yes No

BIGHT '18 TRAWL DEBRIS FORM

Agency:

Wood

Page 1 of 1

Station: B18-10036

Trawl #:

Date:

7/24/18

☐ CHECK HERE IF NO DEBRIS PRESENT IN SAMPLE

Anthropogenic Debris - Include Brand names in Comments if known

Plastic	Count	Comment
Bag		
Bandaïd		
Balloon (mylar/latex)/Ribbon		
Bottle		
Buoy		
Cap/Lid		
Cigarette box/Wrapper		
Cup		
Filmstrip (movie)		
Fishing Line/Net		
Food Bag/Wrapper		
Polypropylene Rope		
Single use food container		
Toy		
Utensil		
Plastic Piece (unid.)		
Other Plastic (comment req.)		
Glass		
Beer Bottle		
Other Glass Bottle/Jar		
Glass Piece (unid.)		
Other Glass (comment req.)		

Misc. Items/Pieces	Count	Comment
Boat/Ship/Engine Part		
Clothing		
Concrete/Asphalt		
Fiberglass		
Food		
Leather		
Lumber		
Paper		
Rag/Cloth		
Rubber		
Shoe		
Tape		
Tire		
Other Misc. (comment req.)		
Metal	Count	Comment
Drink Can		
Can - other		
Fishing Gear		
Wire		
Metal Piece (unid.)		
Other Metal (comment req.)		

Natural Debris

Marine Origin	Count	Est.*	Comment
Foliose Algae - not kelp			
Gorgonian Sea Fan (dead)			
Kelp Holdfast			
Kelp Stipe/Blade			
Other Foliose Algae		M	red algae
Rock			
Seagrass			
Other Marine (comment req.)			

Terrestrial Vegetation	Count	Est.*	Comment
Leaves/Seed Pod			
Stick/Branch/Driftwood			
Other Terrestrial (comment req.)			

*For Natural Debris only, if the count is >10 and an exact count cannot be made, leave the "Count" column blank and estimate the amount (M or H) in the "Est." column

Moderate: M = 11-100

High: H = >100

Completed by:

JR

STATION OCCUPATION

BIGHT '18

Agency Code Wood
 Vessel Name ER
 Latitude 32.64753
 Longitude -117.11819
 Arrival Time 1254
 (hh:mm)
 Depth (m) 11.4

Weather
 Clear ☒ Rain ☐
 Overcast ☐ Thunderstorm ☐
 Partly cloudy ☐ Fog ☐
 Drizzle ☐ Fog & Drizzle ☐
 Hazy ☐ Smoky ☐

Sea State
 Calm ☒
 Choppy ☐
 Rough ☐
 Confused ☐
 Abandoned site? ☐
 Y or N (If Y explain in comments)

Station ID B5-10037
 Date 7/24/18

Station Fail Code
 (2)

Wind
 Speed (kts) 5
 Direction (4) NW

Swell
 Period (s) 0
 Height (ft) 0
 Direction (1) 0

Nav Type
 DGPS ☒
 GPS ☐
 WAAS ☐

Station Comments

Equipment Type

Core ☐ Van Veen ☐
 Petite Ponar ☐ Tandem Van Veen ☐

TRAWL EVENTS

Trawl Number	Net Position	Deck Time (hh:mm:ss)	Latitude (DD°MM.mmmm)	Longitude (DDD°MM.mmmm)	Depth (m)
1	Net Over	1301	32.64756	-117.10979	4.6
	Start Trawl	1305	32.64870	-117.11269	10.7
	End Trawl	1316	32.64747	-117.11847	11.2
	Net on Deck	1319	32.64700	-117.11985	13.0

Enter Values	
Wire Out (m)	40
Closest Distance to target (m)	68
PT Bottom Time (mm:ss)	09:40
PT Bottom Temperature (°C)	26.5
Trawl Fail Code (3)	

Check all that apply	
P/T Sensor Data	<input checked="" type="checkbox"/>
Community Structure	<input checked="" type="checkbox"/>
Tissue Chemistry	<input checked="" type="checkbox"/>

Comments:

Net Over					Wire Out (m)		P/T Sensor Data	
Start Trawl					Closest Distance to target (m)		Community Structure	
End Trawl					PT Bottom Time (mm:ss)		Tissue Chemistry	
Net on Deck					PT Bottom Temperature (°C)			
					Trawl Fail Code (3)			

Comments:

BIGHT '18 DEMERSAL FISH IDENTIFICATION FORM

Station: B18-10037

Page 1 of 1

Date: 7/24/18

Completed by: JR

Trawl Number 1 Failed ☐

	Species	N	Diversity Index Exclude Code	Std Length Size Class (cm) Use for up to 10 individuals. Use Size Class sheet for more abundant spp.	FID or Vouch	Weight (kg)		
						Gross	Tare	Net
1	Pacific Seahorse	2		21, 6				0.040
2	CA Halibut	1		11				0.021
3	Barred Sand Bass	1		13				0.042
4	Spotted Bay Bass	4		14, 15, 14, 14		1.16	0.86	0.300
5	Round Ray	1	WJ TL	11 19				0.071
6	Slough Anchovy			see Size Class form				
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								

Anomaly Codes: (record as superscript to tally mark): A = ambicoloration, B = albinism, D = skeletal deformity, E = copepod eye-parasite (i.e., Phrioxcephalus), F = fin erosion, H = Leeches, L = lesion (describe in Comments), M = Monogeneans, O = other anomaly (describe in Comments), P = other external parasite (describe in Comments), T = tumor, multiple occurrences on individual put "-" and #, FID = specimen(s) collected for further identification, #V = Number of specimens collected as species vouchers

Diversity Index Exclude Codes: Blank = No exclusion, In = Infauna, Pl = Pelagic, Pr = Parasite, Nb = New born, SE = Shark egg, Dm = damaged, Xr = met 3 rule exclude

Comments:

QA done at station: (circle) Yes No

BIGHT '18 DEMERSAL FISH SIZE CLASS FORM

Station: B18-10037

Trawl Number	1
--------------	---

Page 1 of 1

Date: 7/24/18

Completed by: JTR

Gross weight (kg)

Tare Weight (kg)

Net weight (kg) 0.260

[illegible]

Anomaly Codes (record as superscript to length measurement): **A** = ambicoloration, **B** = albinism, **D** = skeletal deformity, **E** = copepod eye-parasite (i.e., *Phrixocephalus*), **F** = fin erosion, **H** = Leeches, **L** = lesion (describe in Comments), **M** = Monogeneans, **O** = other anomaly (describe in Comments), **P** = other external parasite (describe in Comments), **T** = tumor, multiple occurrences on individual put "-" and #

Total Abundance	260
-----------------	-----

Comments:

see Aliquot data sheet $n = 2880$
for additional $wt = 2.88 \text{ kg}$

QA done for species: (circle) Yes No

ALIUQUOT DATA

Species: <i>Slough Anchovy</i>	N	Gross (kg)	Tare (kg)	Net (kg)
	260			0.260
Record Catch gross weights here:	Show calculations here			
	Catch gross wt. - Catch tare wt. = catch Net wt.			
	<u>0.374</u> - <u>0.086</u> = <u>0.288</u>			
Site B18-10037	(Catch Net wt. / Aliquot net wt.) x # in Aliquot = Abundance			
7/24/18	<u>(0.288)</u> x <u>260</u> = <u>75.28</u>			

All weights are to be recorded in kg.

Comments:

BIGHT '18 TRAWL DEBRIS FORM

Agency:

Wood

Page 1 of 1

Station: B18-10037

Trawl #: 1

Date:

7/24/18

☐ CHECK HERE IF NO DEBRIS PRESENT IN SAMPLE

Anthropogenic Debris - include Brand names in Comments if known

Plastic	Count	Comment
Bag		
Bandaïd		
Balloon (mylar/latex)/Ribbon		
Bottle		
Buoy		
Cap/Lid		
Cigarette box/Wrapper		
Cup		
Filmstrip (movie)		
Fishing Line/Net		
Food Bag/Wrapper		
Polypropylene Rope		
Single use food container		
Toy		
Utensil		
Plastic Piece (unid.)		
Other Plastic (comment req.)		
Glass		
Beer Bottle		
Other Glass Bottle/Jar		
Glass Piece (unid.)		
Other Glass (comment req.)		

Misc. Items/Pieces	Count	Comment
Boat/Ship/Engine Part		
Clothing		
Concrete/Asphalt		
Fiberglass		
Food		
Leather		
Lumber		
Paper		
Rag/Cloth		
Rubber		
Shoe		
Tape		
Tire		
Other Misc. (comment req.)		
Metal	Count	Comment
Drink Can		
Can - other		
Fishing Gear		
Wire		
Metal Piece (unid.)		
Other Metal (comment req.)		

Natural Debris

Marine Origin	Count	Est.*	Comment
Foliose Algae - not kelp		H	red algae
Gorgonian Sea Fan (dead)			
Kelp Holdfast			
Kelp Stipe/Blade			
Other Foliose Algae			
Rock			
Seagrass		H	eelgrass
Other Marine (comment req.)			

Terrestrial Vegetation	Count	Est.*	Comment
Leaves/Seed Pod			
Stick/Branch/Driftwood			
Other Terrestrial (comment req.)			

*For Natural Debris only, if the count is >10 and an exact count cannot be made,

leave the "Count" column blank and estimate the amount (M or H)

in the "Est." column

Moderate:

M = 11-100

High:

H = >100

Completed by:

JR

STATION OCCUPATION

BIGHT '18

Agency Code Wood
 Vessel Name EB
 Latitude 32.64361
 Longitude -117.13969
 Arrival Time 1056
(hh:mm)
 Depth (m) 4.6

Weather

Clear	<input checked="" type="checkbox"/>	Rain	<input type="checkbox"/>
Overcast	<input type="checkbox"/>	Thunderstorm	<input type="checkbox"/>
Partly cloudy	<input type="checkbox"/>	Fog	<input type="checkbox"/>
Drizzle	<input type="checkbox"/>	Fog & Drizzle	<input type="checkbox"/>
Hazy	<input type="checkbox"/>	Smoky	<input type="checkbox"/>

Sea State

Calm	<input checked="" type="checkbox"/>
Choppy	<input type="checkbox"/>
Rough	<input type="checkbox"/>
Confused	<input type="checkbox"/>

Salinity (ppt)
Estuary Sites only

Station ID 85-10039

Date 7/24/18

Abandoned site? ☐ Station Fail Code
Y or N (if Y explain in comments) (2)

Wind

Speed (kts) 5
 Direction (4) ENEW

Swell

Period (s) 0
 Height (ft) 0
 Direction (1) 0

Nav Type

DGPS ☒
 GPS ☐
 WAAS ☐

Equipment Type

Core ☐ Van Veen ☐
 Petite Ponar ☐ Tandem Van Veen ☐

Station Comments

TRAWL EVENTS

Trawl Number	Net Position	Deck Time (hh:mm:ss)	Latitude (DD°MM.mmmm)	Longitude (DDD°MM.mmmm)	Depth (m)
1	Net Over	1058	32.64361	-117.13971	4.6
	Start Trawl	1100	32.64269	-117.13912	4.7
	End Trawl	1107	32.64048	-117.13709	4.6
	Net on Deck	1108	32.64061	-117.13699	4.6

Enter Values

Wire Out (m) 20
 Closest Distance to target (m)
 PT Bottom Time (mm:ss) 07:30
 PT Bottom Temperature (°C) 26.2
 Trawl Fail Code (3)

Check all that apply

P/T Sensor Data ☒
 Community Structure ☒
 Tissue Chemistry ☒

Comments:

	Net Over					Wire Out (m)		P/T Sensor Data	
	Start Trawl					Closest Distance to target (m)		Community Structure	
	End Trawl					PT Bottom Time (mm:ss)		Tissue Chemistry	
	Net on Deck					PT Bottom Temperature (°C)			
						Trawl Fail Code (3)			

Comments:

BIGHT '18 DEMERSAL FISH IDENTIFICATION FORM

Station: BH-10039

Page of

Date: 7/24/18

Completed by: JR

Trawl Number 1 Failed

Species	N	Diversity Index Exclude Code	Std Length Size Class (cm) Use for up to 10 individuals. Use Size Class sheet for more abundant spp.	FID or Vouch	Weight (kg)		
					Gross	Tare	Net
1 CA Halibut	1		12				0.025
2 Black Croaker			see Biodiversity sheet				
3 Spotted Sand Bass	3		22, 15, 16		1.32	0.8	0.052
4 Barred Sand Bass	2		11, 12				0.066
5 Round Ray	7	LS TL	15, 15, 15, 13, 10, 10, 10 27, 26, 26, 24, 17, 15, 17		1.84	0.8	1.04
6 Flough Anchovy			see Size Class Form				
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							

Anomaly Codes: (record as superscript to tally mark): A = ambicoloration, B = albinism, D = skeletal deformity, E = copepod eye-parasite (i.e., Phrixocephalus), F = fin erosion, H = Leeches, L = lesion (describe in Comments), M = Monogeneans, O = other anomaly (describe in Comments), P = other external parasite (describe in Comments), T = tumor, multiple occurrences on individual put "-" and #, FID = specimen(s) collected for further identification, #V = Number of specimens collected as species vouchers

Diversity Index Exclude Codes: Blank = No exclusion, In = Infauna, Pl = Pelagic, Pr = Parasite, Nb = New born, SE = Shark egg, Dm = damaged, Xr = met 3 rule exclude

Comments:

QA done at station: (circle) Yes

No

No.

ALIQOT DATA

Species: <i>Slough Anchovy</i>	N <i>308</i>	Gross (kg) —	Tare (kg) —	Net (kg) <i>0.110</i>
Record Catch gross weights here:	Show calculations here			
	Catch gross wt. - Catch tare wt. = catch Net wt.			
	— - — = <i>0.103</i>			
	(Catch Net wt. / Aliquot net wt.) x # in Aliquot = Abundance			
	<i>0.103</i> x <i>308</i> = <i>258</i>			
	<i>0.110</i>			

All weights are to be recorded in kg.

Comments:

*Site B18-10039**7/24/18*

BIGHT '18 EPIBENTHIC INVERTEBRATE FORM

Station: B18-10039

Page 1 of 1

Date: 7/24/18

Completed by: _____

Trawl Number 1 Failed

	Species	N	Diversity Index Exclude Code	Anomalies	Comments	FID or Vouch	Weight (kg)		
							Gross	Tare	Net
1	Sponges "red"	n/a				/	-	-	6.64
2	Navanax intermis	1				/	/	/	.004
3	Musculista senhousia	8				/	/	/	.006
4	Nassarius tegulus	1				1-EDNA	/	/	.002
5	Hemigrapsis oregonensis	9				/	/	/	.002
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									

Anomaly Codes: B = burnspot, P = External Parasite, O = other anomaly (describe in Comments), W = wasting disease, multiple occurrences on individual put "and #", FID = specimen(s) collected for further identification, #V = Number of specimens collected as species vouchers
Diversity Index Exclude Codes: Blank = No exclusion, In = Infauna, Pl = Pelagic, Pr = Parasite, Nb = New born, SE = Shark egg, Dm = damaged, Xr = met 3 rule exclude
Comments:

QA done at station: (circle) Yes No

BIGHT '18 TRAWL DEBRIS FORM

Agency:

Wood

Page

1 of 1

Station: 018-10039

Trawl #:

1

Date:

7/24/18

☐ CHECK HERE IF NO DEBRIS PRESENT IN SAMPLE

Anthropogenic Debris - include Brand names in Comments if known

Plastic	Count	Comment
Bag		
Bandaïd		
Balloon (mylar/latex)/Ribbon		
Bottle		
Buoy		
Cap/Lid		
Cigarette box/Wrapper		
Cup		
Filmstrip (movie)		
Fishing Line/Net		
Food Bag/Wrapper		
Polypropylene Rope		
Single use food container		
Toy		
Utensil		
Plastic Piece (unid.)		
Other Plastic (comment req.)		
Glass		
Beer Bottle		
Other Glass Bottle/Jar		
Glass Piece (unid.)		
Other Glass (comment req.)		

Misc. Items/Pieces	Count	Comment
Boat/Ship/Engine Part		
Clothing		
Concrete/Asphalt		
Fiberglass		
Food		
Leather		
Lumber		
Paper		
Rag/Cloth		
Rubber		
Shoe		
Tape		
Tire		
Other Misc. (comment req.)		
Metal	Count	Comment
Drink Can		
Can - other		
Fishing Gear		
Wire		
Metal Piece (unid.)		
Other Metal (comment req.)		

Natural Debris

Marine Origin	Count	Est.*	Comment
Foliose Algae - not kelp		H	red algae
Gorgonian Sea Fan (dead)			
Kelp Holdfast			
Kelp Stipe/Blade			
Other Foliose Algae			
Rock			
Seagrass		M	eelgrass
Other Marine (comment req.)	4		empty musculista

Terrestrial Vegetation	Count	Est.*	Comment
Leaves/Seed Pod			
Stick/Branch/Driftwood			
Other Terrestrial (comment req.)			

*For Natural Debris only, if the count is >10 and an exact count cannot be made, leave the "Count" column blank and estimate the amount (M or H) in the "Est." column

Moderate:

M = 11-100

High:

H = >100

Completed by:

JRL

epiphytic bryozoans on red algae

STATION OCCUPATION

BIGHT '18

Agency Code AMEC/WOOD
 Vessel Name EARLY BIRD
 Latitude 32.64283
 Longitude -117.12626
 Arrival Time 0938
 (hh:mm)
 Depth (m) ~~3.2~~ 4.7

Weather

Clear	<input type="checkbox"/>	Rain	<input type="checkbox"/>
Overcast	<input checked="" type="checkbox"/>	Thunderstorm	<input type="checkbox"/>
Partly cloudy	<input type="checkbox"/>	Fog	<input type="checkbox"/>
Drizzle	<input type="checkbox"/>	Fog & Drizzle	<input type="checkbox"/>
Hazy	<input type="checkbox"/>	Smoky	<input type="checkbox"/>

Sea State

Calm	<input checked="" type="checkbox"/>
Choppy	<input type="checkbox"/>
Rough	<input type="checkbox"/>
Confused	<input type="checkbox"/>

Salinity (ppt) NA
 Estuary Sites only

Abandoned site? ☐
 Y or N (if Y explain in comments)

Station ID B18-10038
10038
 Date 7/25/18

Station Fail Code
 (2)

Wind

Speed (kts) 2-3
 Direction (4) NW

Swell

Period (s) 0
 Height (ft) 0
 Direction (1) 0

Nav Type

DGPS ☒
 GPS ☐
 WAAS ☐

Station Comments

KEVIN, COREY, KATE, BILL, MARISA
 MARY T
 DANNY, BOB

Equipment Type

Core ☐ Van Veen ☐
 Petite Ponar ☐ Tandem Van Veen ☐

TRAWL EVENTS

OTTER TRAWL

Trawl Number	Net Position	Deck Time (hh:mm:ss)	Latitude (DD°MM.mmmmm)	Longitude (DDD°MM.mmmmm)	Depth (m)
1	Net Over	0943	32.64140	-117.12563	3.2
	Start Trawl	0945	32.64243	-117.12617	4.7
	End Trawl	0955	32.64735	-117.12915	4.8
	Net on Deck	0957	32.64770	-117.12946	

Enter Values

Wire Out (m) 1520
 Closest Distance to target (m) <10m
 PT Bottom Time (mm:ss) 10:30
 PT Bottom Temperature (°C) 25.7
 Trawl Fail Code (3)

Check all that apply

P/T Sensor Data ☒
 Community Structure ☒
 Tissue Chemistry ☒

Comments:

Net Over					Wire Out (m)		P/T Sensor Data	
Start Trawl					Closest Distance to target (m)		Community Structure	
End Trawl					PT Bottom Time (mm:ss)		Tissue Chemistry	
Net on Deck					PT Bottom Temperature (°C)			
					Trawl Fail Code (3)			

Comments:

BIGHT '18 DEMERSAL FISH IDENTIFICATION FORM

Station: B18-10038

Page 1 of 1

Date: 7/25/2018

Completed by: CCS, KS, MS, KB, BI

Trawl Number 1 Failed ☐

Species	N	Diversity Index Exclude Code	Std Length Size Class (cm) Use for up to 10 individuals. Use Size Class sheet for more abundant spp.	FID or Vouch	Weight (kg)		
					Gross	Tare	Net
1 SPOTTED SAND BASS	7		19, 16, 19, 17, 18, 16, 27	PHOTO	1.94	0.85	1.09
2 BLACK CROAKER			SEE BOG FORM				
3 CA. HALIBUT	1		17	Ni			80g
4 SLOUGH ANCHovy	9		6 (n=8), 7 (n=1)	PHOTO			19g
5 NORTHERN ANCHovy* juveniles	277		SEE SIZE CLASS FORM	PHOTO			34g
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							

Anomaly Codes: (record as superscript to tally mark): A = ambicoloration B = albinism, D = skeletal deformity, E = copepod eye-parasite (i.e., Phrioxcephalus), F = fin erosion, H = Leeches, L = lesion (describe in Comments), M = Monogeneans, O = other anomaly (describe in Comments), P = other external parasite (describe in Comments), T = tumor, multiple occurrences on individual put "-" and #, FID = specimen(s) collected for further identification, #V = Number of specimens collected as species vouchers

Diversity Index Exclude Codes: Blank = No exclusion, In = Infauna, Pl = Pelagic, Pr = Parasite, Nb = New born, SE = Shark egg, Dm = damaged, Xr = met 3 rule exclude

Comments:

* ICHTHOPLANKTON → WILL ID AT LAB

QA done at station: (circle) Yes

No

BIGHT '18 DEMERSAL FISH SIZE CLASS FORM

Station: B18-10038

Trawl Number 1

Page 1 of 1

Date: 7/25/2018

Completed by: CLS, KB, MS, BI

Gross weight (kg) _____

Tare Weight (kg) _____

Net weight (kg) 34g

Size class	N	Species: <u>NORTHERN ANCHOVY (sp → FID)</u>	Anomalies
1			
2	<u>81</u>	<u>8 + 30 + 32 + 11</u>	<u>84 none</u>
3	<u>196</u>	<u>10 + 100 + 76 + 10</u>	<u>none</u>
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			

Anomaly Codes (record as superscript to length measurement): A = ambicoloration, B = albinism, D = skeletal deformity, E = copepod eye-parasite (i.e., *Phrioxcephalus*), F = fin erosion, H = Leeches, L = lesion (describe in Comments), M = Monogeneans, O = other anomaly (describe in Comments), P = other external parasite (describe in Comments), T = tumor, multiple occurrences on individual put "-" and #

Total Abundance

277

Comments:

8(2), 100(3), 140(3), 32(2), 32(2), 10(3)

142g

QA done for species: (circle)

Yes

No

BIGHT '18 EPIBENTHIC INVERTEBRATE FORM

Station: B18-10038

Page 1 of 1

Date: 7/25/2018

Completed by: MT

Trawl Number 1 Failed

	Species	N	Diversity Index Exclude Code	Anomalies	Comments	FID or Vouch	Weight (kg)		
							Gross	Tare	Net
1	Spongy "C" red	n/a				/	/	/	.077
2	Loligo sp	1			same as other Loligo sp - verify	FID	/	/	.001
3	Hemigrapsis oregonensis	2				/	/	/	.001
4	Navanax inermis	1				/	/	/	.011
5	Nassarius tegulus	1				/	/	/	.001
6	Yellow sponge	n/a				/	/	/	.009
7	Bugula californica	n/a			may be epibiotic	FID	/	/	.011
8	Laevicardium submarginatum	1				ID	/	/	.001
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									

Anomaly Codes: B = burnspot, P = External Parasite, O = other anomaly (describe in Comments), W = wasting disease, multiple occurrences on individual put "- and #, FID = specimen(s) collected for further identification, #V = Number of specimens collected as species vouchers
Diversity Index Exclude Codes: Blank = No exclusion, In = Infauna, Pl = Pelagic, Pr = Parasite, Nb = New born, SE = Shark egg, Dm = damaged, Xr = met 3 rule exclude
Comments:

QA done at station: (circle) Yes No

BIGHT '18 TRAWL DEBRIS FORM Agency: AMEC/WOODPage 1 of 1Station: B18-10038 Trawl #: 1 Date: 07/25/2018☐ CHECK HERE IF NO DEBRIS PRESENT IN SAMPLE

Anthropogenic Debris - include Brand names in Comments if known	Plastic	Count	Comment	Misc. Items/Pieces	Count	Comment
	Bag				Boat/Ship/Engine Part	
Bandaidd				Clothing		
Balloon (mylar/latex)/Ribbon				Concrete/Asphalt		
Bottle				Fiberglass		
Buoy				Food		
Cap/Lid				Leather		
Cigarette box/Wrapper				Lumber		
Cup				Paper		
Filmstrip (movie)				Rag/Cloth		
Fishing Line/Net				Rubber		
Food Bag/Wrapper				Shoe		
Polypropylene Rope				Tape		
Single use food container				Tire		
Toy				Other Misc. (comment req.)		
Utensil				Metal	Count	Comment
Plastic Piece (unid.)				Drink Can		
Other Plastic (comment req.)				Can - other		
Glass				Fishing Gear		
Beer Bottle				Wire		
Other Glass Bottle/Jar				Metal Piece (unid.)		
Glass Piece (unid.)				Other Metal (comment req.)		
Other Glass (comment req)						

Natural Debris	Marine Origin	Count	Est.*	Comment	Terrestrial Vegetation	Count	Est.*	Comment
		Foliose Algae - not kelp	>10	M	red algae	Leaves/Seed Pod		
	Gorgonian Sea Fan (dead)				Stick/Branch/Driftwood			
	Kelp Holdfast				Other Terrestrial (comment req.)			
	Kelp Stipe/Blade							
	Other Foliose Algae							
	Rock							
	Seagrass	>10	M					
	Other Marine (comment req.)							

lots of hepaphytes

*For Natural Debris only, if the count is >10 and an exact count cannot be made, leave the "Count" column blank and estimate the amount (M or H) in the "Est." column

Moderate: M = 11-100
High: H = >100

Completed by: CCW

STATION OCCUPATION

BIGHT '18

Agency Code	AMEC/WOOD
Vessel Name	EARLY BIRD II
Latitude	32
Longitude	-117
Arrival Time (hh:mm)	
Depth (m)	2.5

Weather	
Clear	<input type="checkbox"/>
Overcast	<input checked="" type="checkbox"/>
Partly cloudy	<input type="checkbox"/>
Drizzle	<input type="checkbox"/>
Hazy	<input type="checkbox"/>
Rain	<input type="checkbox"/>
Thunderstorm	<input type="checkbox"/>
Fog	<input type="checkbox"/>
Fog & Drizzle	<input type="checkbox"/>
Smoky	<input type="checkbox"/>

Sea State	Salinity (ppt)
Calm	<input checked="" type="checkbox"/>
Choppy	<input type="checkbox"/>
Rough	<input type="checkbox"/>
Confused	<input type="checkbox"/>
	NA Estuary Sites only
Abandoned site? <input type="checkbox"/>	
Y or N (If Y explain in comments)	

Station ID B18-10042

Date 7/25/18

Station Fail Code (2)

Wind
Speed (kts)
Direction (4)

Swell
Period (s)
Height (ft)
Direction (1)

Nav Type
DGPS
GPS
WAAS

Station Comments

KEVIN, KATE, BILL, MARISA, COREY
MARY T.
DANNY, BOB

Equipment Type
Core
Petite Ponar
Van Veen
Tandem Van Veen

TRAWL EVENTS

SP OTTER TRAWL

Trawl Number	Net Position	Deck Time (hh:mm:ss)	Latitude (DD°MM.mmmm)	Longitude (DDD°MM.mmmm)	Depth (m)
1	Net Over	0838	32.42524	-117.11052	2.5
	Start Trawl	0840	32.62567	-117.11086	3.0
	End Trawl	0850	32.63062	-117.11366	3.0
	Net on Deck	0852	32.63113	-117.11395	3.0

Enter Values
Wire Out (m)
Closest Distance to target (m)
PT Bottom Time (mm:ss)
PT Bottom Temperature (°C)
Trawl Fail Code (3)

Check all that apply
P/T Sensor Data
Community Structure
Tissue Chemistry

Comments:

Net Over					Wire Out (m)		P/T Sensor Data	
Start Trawl					Closest Distance to target (m)		Community Structure	
End Trawl					PT Bottom Time (mm:ss)		Tissue Chemistry	
Net on Deck					PT Bottom Temperature (°C)			
					Trawl Fail Code (3)			

Comments:

BIGHT '18 DEMERSAL FISH IDENTIFICATION FORM

Station: B18-10042

Page 1 of 1

Date: 7/25/2018

Completed by: CES/KB/KS/MS/BI

Trawl Number 1 Failed

Species	N	Diversity Index Exclude Code	Std Length Size Class (cm) Use for up to 10 individuals. Use Size Class sheet for more abundant spp.	FID or Vouch	Weight (kg)		
					Gross	Tare	Net
1 ROUND RAYS **	89		23(13), 23(14), 20(17), 24(13), 26(14) 25(14), 24(14), 27(27), 23(14)	PHOTO	2.32	0.85	1.47 ¹³⁰⁹ 150
2 SPOTTED SAND BASS	10*		21, 19, 17, 18, 15, 15, 18, 15, 17 72	PHOTO	2.10	0.85	1.25
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							

Anomaly Codes: (record as superscript to tally mark): A = ambicoloration, B = albinism, D = skeletal deformity, E = copepod eye-parasite (i.e., Phrioxcephalus), F = fin erosion, H = Leeches, L = lesion (describe in Comments), M = Monogeneans, O = other anomaly (describe in Comments), P = other external parasite (describe in Comments), T = tumor, multiple occurrences on individual put "-" and #, FID = specimen(s) collected for further identification, #V = Number of specimens collected as species vouchers

Diversity Index Exclude Codes: Blank = No exclusion, In = Infauna, Pl = Pelagic, Pr = Parasite, Nb = New born, SE = Shark egg, Dm = damaged, Xr = met 3 rule exclude

Comments:

* 2 SPOTTED SB KEPT FOR BIOACCUM → SEE 1306 DATA SHEET. NOT INCLUDED IN TOTAL
BEST spotted (~ 200m away) at 0855

QA done at station: (circle) Yes No

** Round rays = total length (disk width)

BIGHT '18 EPIBENTHIC INVERTEBRATE FORM

Station: B18-10042

Page 1 of 1

Date: 7/25/2018

Completed by: MT

Trawl Number 1 Failed ☐

	Species	N	Diversity Index Exclude Code	Anomalies	Comments	FID or Vouch	Weight (kg)		
							Gross	Tare	Net
1	Navanax inermis	25				/	/	/	.078
2	Musculista senhousia	4				/	/	/	.002
3	Leptopecten latiaurialis	2				/	/	/	.001
4	Yellow sponge	n/a				FID			2.90
5	Leptopecten latiaurialis	2				/	/	/	
6	Musculista senhousia	4				/	/	/	
7	Zoobotryon ^{var. micellatum}	n/a			more in debris pile	1-EDNA 1-ID			.132
8	Shrimp- FID	7				FID	/	/	.001
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									

Anomaly Codes: B = burnspot, P = External Parasite, O = other anomaly (describe in Comments), W = wasting disease, multiple occurrences on individual put "- and #, FID = specimen(s) collected for further identification, #V = Number of specimens collected as species vouchers
Diversity Index Exclude Codes: Blank = No exclusion, In = Infauna, Pl = Pelagic, Pr = Parasite, Nb = New born, SE = Shark egg, Dm = damaged, Xr = met 3 rule exclude
Comments:

QA done at station: (circle) Yes No

BIGHT '18 TRAWL DEBRIS FORM Agency: AMEC/WOOD

Page 1 of 1

Station: B18-10042 Trawl #: 1 Date: 7/25/2018

☐ CHECK HERE IF NO DEBRIS PRESENT IN SAMPLE

Anthropogenic Debris - include Brand names in Comments if known	Plastic	Count	Comment
	Bag		
	Bandaids		
	Balloon (mylar/latex)/Ribbon		
	Bottle		
	Buoy		
	Cap/Lid		
	Cigarette box/Wrapper		
	Cup		
	Filmstrip (movie)		
	Fishing Line/Net		
	Food Bag/Wrapper		
	Polypropylene Rope		
	Single use food container		
	Toy		
	Utensil		
	Plastic Piece (unid.)		
	Other Plastic (comment req.)		
	Glass		
	Beer Bottle		
	Other Glass Bottle/Jar		
	Glass Piece (unid.)		
	Other Glass (comment req.)		

Misc. Items/Pieces	Count	Comment
Boat/Ship/Engine Part		
Clothing		
Concrete/Asphalt		
Fiberglass		
Food		
Leather		
Lumber		
Paper		
Rag/Cloth		
Rubber		
Shoe		
Tape		
Tire		
Other Misc. (comment req.)		
Metal	Count	Comment
Drink Can		
Can - other		
Fishing Gear		
Wire		
Metal Piece (unid.)		
Other Metal (comment req.)		

Natural Debris	Marine Origin	Count	Est.*	Comment
	Foliose Algae - not kelp	> 1000	H	Red algae*
	Gorgonian Sea Fan (dead)			
	Kelp Holdfast			
	Kelp Stipe/Blade			
	Other Foliose Algae			
	Rock			
	Seagrass	> 1000	H	photo, lot of epiphytes on
	Other Marine (comment req.)			

Terrestrial Vegetation	Count	Est.*	Comment
Leaves/Seed Pod			
Stick/Branch/Driftwood			
Other Terrestrial (comment req.)			

*For Natural Debris only, if the count is >10 and an exact count cannot be made, leave the "Count" column blank and estimate the amount (M or H) in the "Est." column
 Moderate: M = 11-100
 High: H = >100

Completed by: CCS

*about 1/4 of eelgrass volume.

Bight/BOG Fish Bioaccumulation Field Datasheet

Date

7-23-18

Page 1 of

Completed by:

BES, CCS

Species	Station	Total Length (mm)	Standard Length* (mm)	Weight (g)	Photo (Y/N)	Notes
Black Croaker	B18-10030	262	230	266	Y	From altered trawl #1
Barred Sand Bass	↓	340	290	476	Y	↓
Black Croaker	B18-10030	236	210	184	Y	From Trawl 2
Barred Sand Bass	↓	200 254	200 220	376	Y	Bight Compliant
↓	↓	235	210	181	↓	↓
OA. HALIBUT	B18-10023	525	450	1.26kg	Y	TRAWL 1
ROUND RAY	B18-10023	345	190	510	Y	TRAWL 1
↓	↓	300	180	310	↓	↓
↓	↓	285	160	230	↓	↓
SPOTTED SAND BASS	B18-10022	345	300	543	Y	TRAWL 1
↓	↓	260	230	271	↓	↓
QUEENFISH	B18-10022	205	190	82	Y	TRAWL 1
		2	210	190		
		3	215	200		
		4	200	180		
		5	195	180		
		6	205	190		
		7	198	180		
		8	204	190		
		9	210	190		
		10	233	210		
		11	193	170		
		12	172	170		

Comments:

+ DISK WIDTH FOR ROUND RAYS

Bight/BOG Fish Bioaccumulation Field Datasheet

Date _____

7/23/2018

Page 2 of

Completed by:

CCS, BCS, KS, JB

[illegible]

NORTHERN

Comments:

Anchor = BATCH WEIGHT

** DISK WIDTH FOR ROUND RAYS

Bight/BOG Fish Bioaccumulation Field Datasheet

Page 1 of 1

Date _____

712418

Completed by:

KS MI

[illegible]

Comments:

Comments:
* Strong Andrey indiv std length: S.S, S.S, S.S, S.S, S, S.S, 4.S, S.S, S, S.S, S.S, S.S, S, S, S.S, S, S.S,
S.S, S, S.S, S, S.S, S.S, S.S, S.S, S, S.S, S.S, S.S,

$dw = dsk$ with

→ plates saved for cDNA

CTD Field Data Sheet

Date:

7/26/18

Time:

0915

Station ID:

B18-10124

Water Depth:

12.3 m

Tide:

+3.38 feet / R03g

Weather:

overcast

Odor:

None

Floating Material?
(Yes / No)

No

Photo Number:

Visible Turbidity Plume?
(Yes / No)

Water Color:

clear

CTD Data Archived?
(Yes / No)

Samples Collected?
(Yes / No)

COMMENTS:

NBSO - prev 2 north side

WL

Temp: 25.0°C

SPC 52927

C 52949

DO 6.53 m/L

pH 7.92

Sal. 34.88

STATION OCCUPATION

BIGHT '18

Agency Code AMEC
 Vessel Name EM2
 Latitude
 Longitude
 Arrival Time 0915
 (hh:mm)
 Depth (m) 12.3

Weather

Clear	<input type="checkbox"/>	Rain	<input type="checkbox"/>
Overcast	<input checked="" type="checkbox"/>	Thunderstorm	<input type="checkbox"/>
Partly cloudy	<input type="checkbox"/>	Fog	<input type="checkbox"/>
Drizzle	<input type="checkbox"/>	Fog & Drizzle	<input type="checkbox"/>
Hazy	<input type="checkbox"/>	Smoky	<input type="checkbox"/>

Sea State

Calm	<input checked="" type="checkbox"/>
Choppy	<input type="checkbox"/>
Rough	<input type="checkbox"/>
Confused	<input type="checkbox"/>

Salinity (ppt)

 Estuary Sites only

Abandoned site? ☐ Station Fail Code
 Y or N (If Y explain in comments) (2)

Station ID B18-10124
 Date 07/26/18

Wind

Speed (kts) 5
 Direction (4)

Swell

Period (s) 0
 Height (ft) 0
 Direction (1) 0

Nav Type

DGPS ☐
 GPS ☒
 WAAS ☐

Station Comments

Water Sample Collection Time: 0915

Sed. collection: 0930
 * 16 fms pt to 20 fms

Equipment Type

Core ☐
 Petite Ponar ☐
 Van Veen ☐
 Tandem Van Veen ☒

GRAB EVENTS

(Check all sample types that apply)

#	Time (hh:mm)	Latitude (DD°MM.mmm)	Longitude (DDD°MM.mmm)	Depth (m)	Distance to target (m)	Grab Fail Code (7)	Penetration (cm)	Composition (3)	Odor (4)	Color (5)	Shell Hash (6) (N/L/M/H)	Infauna (Y/N)	Sed Chem (Y/N)	Grain Size (Y/N)	Sed Tox (Y/N)	Debris (Y/N)
1	0930	32.68433	-117.13126	12.3	00	/	15	silt	/	0.5	L	N	N	N	N	N
Grab Event Comments: color dk. grey below surface. very little s.s.																
2	0930	32.68433	-117.13126	12.3	00	/	15	silt	/	0.5	L	N	Y	Y	Y	N
Grab Event Comments: same.																
3	0945	32.68430	-117.13116	12.3	00	/	15	silt	/	0.5	N	N	Y	Y	Y	N
Grab Event Comments:																
4	0945	32.68430	-117.13116	12.3	00	/	15	silt	/	0.5	N	N	Y	Y	Y	N
Grab Event Comments:																
Grab Event Comments:																
Grab Event Comments:																
Grab Event Comments:																

CTD Field Data Sheet

Date: 07/26/18

Time: 1230

Station ID: B18-10126

Water Depth: 12.6 m

Tide: 2.97 Feet / R3

Weather: clear

Odor: N

Floating Material?
(Yes / No)

Photo Number: —

Visible Turbidity Plume?
(Yes / No)

Water Color: —

CTD Data Archived?
(Yes / No)

Samples Collected?
(Yes / No)

COMMENTS:

WQ

DO 6.63 mg/L

SPL 52,987

C 52,803

PH 7.94

24.9 °C T

Sal. 34.20

NB SD - Pier 3 North →
side,

crane barge passed
north of
pier ~ 5/10
prior to water
sample

BIGHT '18

Station Comments ~~7/10/02~~

Water Sample Collection Time: 1230

Sed. coll. time: 1245

Sed. vol: ~~100~~ 60

#	Time (hh:mm)	Latitude (DD°MM.mmm)	Longitude (DDD°MM.mmm)	Depth (m)	Distance to target (m)	Grab Fail Code (7)	Penetration (cm)	Composition (3)	Odor (4)	Color (5)	Shell Hash (6) (N/L/MH)	Infauna (Y/N)	Sed Chem (Y/N)	Grain Size (Y/N)	Sed Tox (Y/N)	Debris (Y/N)
1	1245	32.68173	-117.13109	12.6		/	15	silt	/	o.g.	L	y	N	N	N	N
Grab Event Comments: w/ fgs. at 1st clay below 2cm, dk gray. at 2cm?																
2	1245	32.68173	-117.13109	12.6		/	15	silt	/	o.g.	L	N	y	y	y	y
Grab Event Comments: same?																
3	1300	32.68182	-117.13101	12.5		/	15	silt	/	o.g.	L	N	y	y	y	N
Grab Event Comments: w/ fgs. + silt clay below 2cm, dk gray at 2cm?																
4	1300	32.68182	-117.13101	12.5		/	15	silt	/	o.g.	L	P	y	y	y	N
Grab Event Comments:																
Grab Event Comments:																
Grab Event Comments:																

CTD Field Data Sheet

Date:

7/28/18

Time:

1025

WQ

Station ID:

B18-10127

Water Depth:

11.3 m

Temp

25.1 °C

Tide:

3.80 feet. high/low

pH

7.94

Weather:

overcast

SPC

53.035

Odor:

No

C

53.84

Floating Material?
(Yes / No)

DO

6.54

Photo Number:

sal.

34.97

Visible Turbidity Plume?
(Yes / No)

clear

Water Color:

CTD Data Archived?
(Yes / No)

Samples Collected?
(Yes / No)

COMMENTS:

South side of pier 4

07/28/18

1040

B18-10127-REP ⇒ B18-20133

w

STATION OCCUPATION

BIGHT '18

Agency Code PMGL
 Vessel Name EB 2
 Latitude 32.67920
 Longitude -117.12836
 Arrival Time 1045 1025
 (hh:mm)
 Depth (m) 11.3

Weather

Clear	<input type="checkbox"/>	Rain	<input type="checkbox"/>
Overcast	<input checked="" type="checkbox"/>	Thunderstorm	<input type="checkbox"/>
Partly cloudy	<input type="checkbox"/>	Fog	<input type="checkbox"/>
Drizzle	<input type="checkbox"/>	Fog & Drizzle	<input type="checkbox"/>
Hazy	<input type="checkbox"/>	Smoky	<input type="checkbox"/>

Sea State

Calm	<input checked="" type="checkbox"/>
Choppy	<input type="checkbox"/>
Rough	<input type="checkbox"/>
Confused	<input type="checkbox"/>

Salinity (ppt) Estuary Sites only

Station ID B18-10127Date 07/26/18

Abandoned site?

Station Fail Code

Y or N (If Y explain in comments)

(2)

Wind

Speed (kts) 10

Direction (4)

Swell

Period (s) 0

Height (ft) 0

Direction (1) 0

Nav Type

DGPS ☐

GPS ☐

WAAS ☐

Station Comments

Water Sample Collection Time: 1045 1025Sed. collection time: 1055

A reel camera.

tyler iPhone photos

62 total

GRAB EVENTS

#	Time (hh:mm)	Latitude (DD°MM.mmm)	Longitude (DDD°MM.mmm)	Depth (m)	Distance to target (m)	Grab Fail Code (7)	Penetration (cm)	Composition (3)	Odor (4)	Color (5)	Shell Hash (6) (N/L/M/H)	Infauna (Y/N)	Sed Chem (Y/N)	Grain Size (Y/N)	Sed Tox (Y/N)	Debris (Y/N)
1	1055	32.67920	-117.12836	11.3	28	/	15	silt	N	0.5	L	y	N	N	N	N
Grab Event Comments: <u>layer of light gray, paint chips? w/ FSS</u>																
2	1055	32.67920	-117.12836	11.3	28	/	15	silt	N	0.5	L	N	y	y	y	N
Grab Event Comments: <u>w/ FSS.</u>																
3	1110	32.67918	-117.12835	11.3	28	/	15	silt	N	0.5	L	N	y	y	y	N
Grab Event Comments: <u>w/ F.S.S. in Deeper</u>																
4	1110	32.67918	-117.12835	11.3	28	/	15	silt	N	0.5	L	N	y	y	y	y
Grab Event Comments: <u>w/ F.S.S. in Deeper</u>																
Grab Event Comments:																
Grab Event Comments:																

Rubber/ Tile?

CTD Field Data Sheet

Date: 7/26/11

Time: 1040

Station ID: B18-20133

Water Depth: 11.3 m

Tide: 3.64 foot tide

Weather: Overcast

Odor: N.

Floating Material?
(Yes / No) No

Photo Number: /

Visible Turbidity Plume?
(Yes / No) No

Water Color: -

CTD Data Archived?
(Yes / No) Yes

Samples Collected?
(Yes / No) Yes

COMMENTS:

Rep. B18-20133

(B18-10127)

WQ

6.45 DO μ L

7.93 pH

34.55 SAL

24.7 °C

53,6092

52,730

BIGHT '18

Abandoned site? **Station Fail Code** /
Y or N (If Y explain in (2)

Station Comments *Rep of B18-10127*

Water Sample Collection Time: 1040

Self collection Time: 1130

* iPhone photo.

3x 4oz Jan + 1 g.s. ziplink, No meifurms.

#	Time (hh:mm)	Latitude (DD°MM.mmm)	Longitude (DDD°MM.mmm)	Depth (m)	Distance to target (m)	Grab Fail Code (7)	Penetration (cm)	Composition (3)	Odor (4)	Color (5)	Shell Hash (6) (N/L/M/H)	Infauna (Y/N)	Sed Chem (Y/N)	Grain Size (Y/N)	Sed Tox (Y/N)	Debris (Y/N)
1	1130	32.67911	-117.12821	11.0	22	/	15	o.s.	o.s.	o.s.	N	N	y	y	N	N
Grab Event Comments:																
2	1130	32.67911	-117.12821	11.0	22	/	15	o.s.	o.s.	o.s.	N	N	y	y	N	N
Grab Event Comments:																
Grab Event Comments:																
Grab Event Comments:																
Grab Event Comments:																
Grab Event Comments:																

CTD Field Data Sheet

Date: 07/26/18

Time: 1330

Station ID: B18-10132

Water Depth: 12.5m

Tide: 2.59 Ft Fully/

Weather: clear

Odor: —

Floating Material?
(Yes/No) —

Photo Number: —

Visible Turbidity Plume?
(Yes/No) —

Water Color: —

CTD Data Archived?
(Yes/No) —

Samples Collected?
(Yes/No) —

COMMENTS: NBSD - south side of pier 7

WQ

6.65 mg/L DO

25.2°C T

53,062 SPL

53195 SC

pH 7.94

SAL 34.99

BIGHT '18

Agency Code	AMEC
Vessel Name	EB2
Latitude	32.67313
Longitude	-117.12693
Arrival Time	1330
(hh:mm)	
Depth (m)	10.2

Weather	
Clear	Rain
Overcast	Thunderstorm
Partly cloudy	Fog
Drizzle	Fog & Drizzle
Hazy	Smoky

Sea State

Calm

Choppy

Rough

Confused

Salinity (ppt)

Estuary Sites only

Abandoned site?

Y or N (If Y explain in comments)

Station ID B18- 10132

Date 07/26/18

Abandoned site? **Station Fail Code** /

Y or N (If Y explain in (2)

Wind
Speed (kts) 10
Direction (4)

Swell	
Period (s)	0
Height (ft)	0
Direction (1)	0

Nav Type	
DGPS	
GPS	
WAAS	

Equipment Type	
Core	Van Veen
Petite Ponar	Tandem Van Veen

Station Comments

Water Sample Collection Time: 1330

sed coll. time 1345

* chem/ tox subs 11/2

minor work / cones

GRAB EVENTS

67313 12693

#	Time (hh:mm)	Latitude (DD°MM.mmmmm)	Longitude (DDD°MM.mmmmm)	Depth (m)	Distance to target (m)	Grab Fail Code (7)	Penetration (cm)	Composition (3)	Odor (4)	Color (5)	Shell Hash (6) (N/L/M/H)	Infauna (Y/N)	Sed Chem (Y/N)	Grain Size (Y/N)	Sed Tox (Y/N)	Debris (Y/N)
1	1345	32.67135	117.12355	14		✓	14	F.g.s.	N	d.g.	N	N	y	y	y	N
Grab Event Comments: Fgs. w/ no stickiness. Next to pier ~10 ft w/ clay below scm w/ Lt. grey, 3/4" closure gap. / m																
8	1345	32.67135	117.12360	14		✓	14	F.g.s.	N	o.s.	N	N	y	y	y	N
Grab Event Comments: 67313 Next to pier ~10 ft cause of poor closure ⇒ w/ clay below scm, w/ Lt grey 3/4" closure gap. 0 gravel																
3	1350	32.67424	117.12074	12.2		✓	9	F.g.s.	N	o.s.	N	(y)	N	N	N	N
Grab Event Comments: Next to pier / ~20 ft No clay, full closure. Benthic #3																
4	1350	32.67424	117.12074	12.2		✓	12	F.g.s.	N	o.g.	N	N	y	y	y	N
Grab Event Comments: Limited wash / small corner. Next to pier ~20 ft. No clay. All small crack closure.																
Grab Event Comments:																
Grab Event Comments:																

CTD Field Data Sheet

Date: 07/26/18

Time: 0725

Station ID: B18-LO133

Water Depth: 12.9m

Tide: _____

Weather: Overcast

Odor: No

Floating Material?
(Yes / No) _____

Photo Number: _____

Visible Turbidity Plume?
(Yes / No) _____

Water Color: Clear

CTD Data Archived?
(Yes / No) _____

Samples Collected?
(Yes / No) _____

COMMENTS: Center channel. NBSD

WQ

pH 7.85

temp: 25.1°C

SPL 51.572

C 51.575

33.90 ppt sal.

6.66 mg/L DO

BIGHT '18

STATION OCCUPATION

Agency Code AMEL
 Vessel Name EB 2
 Latitude 32.67313
 Longitude -117.12943
 Arrival Time 0725
 (hh:mm)
 Depth (m) 12.9m

Weather

Clear		Rain	
Overcast	<input checked="" type="checkbox"/>	Thunderstorm	
Partly cloudy		Fog	
Drizzle		Fog & Drizzle	
Hazy		Smoky	

Sea State

Calm	<input checked="" type="checkbox"/>
Choppy	
Rough	
Confused	

Salinity (ppt)

--

Estuary Sites only

Station ID B18-10133Date 07/28/18

Abandoned site?

Y or N (If Y explain in comments)

Station Fail Code

(2)

Wind

Speed (kts)

5

Direction (4)

Swell

Period (s)

0

Height (ft)

0

Direction (1)

0

Nav Type

DGPS

GPS

WAAS

Equipment Type

Core

Petite Ponar

Van Veen

Tandem Van Veen

Station Comments

Water Sample Collection Time: 0725

sed
coll. time: 0800

needs to be updated

GRAB EVENTS

(Check all sample types that apply)

#	Time (hh:mm)	Latitude (DD°MM.mmm)	Longitude (DDD°MM.mmm)	Depth (m)	Distance to target (m)	Grab Fail Code (7)	Penetration (cm)	Composition (3)	Odor (4)	Color (5)	Shell Hash (6) (N/L/M/H)	Infauna (Y/N)	Sed Chem (Y/N)	Grain Size (Y/N)	Sed Tox (Y/N)	Debris (Y/N)
1	0800	32.67316	-117.12939	12.9	55		5.5	silt w	N	gray	L	N	y	y	y	N
Grab Event Comments: main channel / silt w / sandy clay/mudstone																
2	0800	32.67316	-117.12939	12.9	55		5.5	silt w	N	0.5	L	N	y	y	y	N
Grab Event Comments: main channel / silt w / mudstone clay/mudstone chunks																
3	0820	32.67316	-117.12942	12.9	57	G16	3	silt								
Grab Event Comments: w/ weights w/ mudstone / chunks																
4	0820	32.67316	-117.12942	12.9	55	G16	2.5	silt								
Grab Event Comments: w/ weights w/ mudstone chunks																
5	0830	32.67316	-117.12942	12.9	55		12	figs		0.2	L	y	N	N	N	N
Grab Event Comments: seen on water / sed. Benitic w/ silt & layer of mdyx mudstone pebbles																
6	0830	32.67316	-117.12942	12.9	55		13	figs		0.5	L	N	y	y	y	N
Grab Event Comments: same																
7	0840	32.67320	-117.12939	12.9	55					0.2	L	N	y	y	y	N
Rocky silt w/ figs																
8	0840	32.67320	-117.12939	12.9	55		5			0.5	L	N	y	y	y	N

CTD Field Data Sheet

Date:

07/27/18

Time:

0800

Station ID:

B18-10136

Water Depth:

10.9 m

Tide:

+2.29 Rising

Weather:

Overcast

Odor:

—

Floating Material?
(Yes / No)

Photo Number:

Visible Turbidity Plume?
(Yes / No)

Water Color:

clear

CTD Data Archived?
(Yes / No)

Samples Collected?
(Yes / No)

COMMENTS:

WQ

T 24.6 °C

SPC 52,506

C 52,071

PH 7.90

Sal 34.59

DO 6.48 mg/l

North of M.P.

STATION OCCUPATION

BIGHT '18

Agency Code	AMFC
Vessel Name	EBD
Latitude	32.67088
Longitude	-117.12350
Arrival Time	2022 0800
(hh:mm)	
Depth (m)	10.9 m

Weather					
Clear	<input type="checkbox"/>		Rain	<input type="checkbox"/>	
Overcast	<input checked="" type="checkbox"/>	Thunderstorm	<input type="checkbox"/>	Fog	<input type="checkbox"/>
Partly cloudy	<input type="checkbox"/>		Fog & Drizzle	<input type="checkbox"/>	
Drizzle	<input type="checkbox"/>		Smoky	<input type="checkbox"/>	
Hazy	<input type="checkbox"/>				

Sea State

Calm

Choppy

Rough

Confused

Salinity (ppt)

Estuary Sites only

Abandoned site

Y or N (If Y explain in comments)

Station ID B18-10136

Date 07/27/18

Fail Code

(2)

Wind	5
Speed (kts)	
Direction (4)	↘

Swell	
Period (s)	0
Height (ft)	0
Direction (1)	0

Nav Type	
DGPS	
GPS	
WAAS	

Equipment Type	
Core	Van Veen
Petite Ponar	Tandem Van Veen

Station Comments

Water Sample Collection Time: 0800

sed collection time: 0810

Tox Liters: 6 L

GRAB EVENTS

(Check all sample types that apply)																
#	Time (hh:mm)	Latitude (DD°MM.mmm)	Longitude (DDD°MM.mmm)	Depth (m)	Distance to target (m)	Grab Fail Code (7)	Penetration (cm)	Composition (3)	Odor (4)	Color (5)	Shell Hash (6) (NL/MH)	Infauna (Y/N)	Sed Chem (Y/N)	Grain Size (Y/N)	Sed Tox (Y/N)	Debris (Y/N)
1	0810	32.67028	-117.12350	11.2	15	/	15	silt	/	o.g.	N	Y	N	N	N	N
Grab Event Comments: 4/Minor Fgs w/ DKs ranging below 2cm																
2	0810	32.67028	-117.12350	11.2	15	/	15	silt	/	o.s.	N	N	Y	Y	Y	N
Grab Event Comments: same																
3	0820	32.67030	-117.12352	11.2	15	/	15	silt	/	o.g.	N	N	Y	Y	Y	N
Grab Event Comments:																
4	0820	32.67030	-117.12352	11.2	15	/	15	silt	/	o.g.	N	N	Y	Y	Y	N
Grab Event Comments:																
Grab Event Comments:																
Grab Event Comments:																

CTD Field Data Sheet

Date: 18 07/27/18

Time: 0705

Station ID: B18-10137

Water Depth: 12.2 m.

Tide: +1.63 Feet

Weather: overcast.

Odor: No

Floating Material?
(Yes/No)

Photo Number: —

Visible Turbidity Plume?
(Yes/No)

Water Color: clear

CTD Data Archived?
(Yes/No)

Samples Collected?
(Yes/No)

COMMENTS:

south of mole pier

WQ

T 24.7°C

SPC 52088

C 51,872

Sal 34.29

DO 6.49 mg/L

pH. 7.82

STATION OCCUPATION

BIGHT '18

Agency Code	Amur
Vessel Name	RB 2
Latitude	32.65774
Longitude	-117.2199
Arrival Time	0705
(hh:mm)	
Depth (m)	12.2

Sea State

Calm

Choppy

Rough

Confused

Salinity (ppt)

Estuary Sites only

Abandoned site

Y or N (If Y explain in comments)

Station ID B18-10137

Date 07/27/18

Abandoned site? Y or N (If Y explain in comments)	Station Fail Code (2)	
---	---------------------------------	---

Wind	
Speed (kts)	5
Direction (4)	1

Swell	
Period (s)	0
Height (ft)	0
Direction (1)	0

Nav Type	
DGPS	
GPS	<input checked="" type="checkbox"/>
WAAS	

Equipment Type	
Core	<input type="checkbox"/>
Petite Ponar	<input type="checkbox"/>
Van Veen	<input type="checkbox"/>
Tandem Van Veen	<input checked="" type="checkbox"/>

Station Comments

Water Sample Collection Time: 0705

Sed collection time: 0725

Sed vol: 64 L

GRAB EVENTS

#	Time (hh:mm)	Latitude (DD°MM.mmm)	Longitude (DDD°MM.mmm)	Depth (m)	Distance to target (m)	Grab Fail Code (7)	Penetration (cm)	Composition (3)	Odor (4)	Color (5)	Shell Hash (6) (N/L/M/H)	Infauna (Y/N)	Sed Chem (Y/N)	Grain Size (Y/N)	Sed Tox (Y/N)	Debris (Y/N)
1	0725	32.66776	-117.12199	12.2	9m	/	15	silt.	/	O.g.	N	y	N	N	N	N
Grab Event Comments:																
2	0725	32.66776	-117.12199	12.2	9m	/	15	silt	/	O.g.	N	N	y	y	y	N
Grab Event Comments:																
3	0735	32.66758	-117.12182	12.1	9m	/	15	silt	/	O.g.	N	y	y	y	y	N
Grab Event Comments:																
4	0735	32.66758	-117.12182	12.1	9m	/	15	silt	/	O.g.	N	N	y	y	y	N
Grab Event Comments:																
Grab Event Comments:																
Grab Event Comments:																

CTD Field Data Sheet

Date:

B18-10139

Time:

Station ID:

07/27/18

Water Depth:

Tide:

Weather:

Odor:

Floating Material?
(Yes / No)

Photo Number:

Visible Turbidity Plume?
(Yes / No)

Water Color:

CTD Data Archived?
(Yes / No)

Samples Collected?
(Yes / No)

COMMENTS:

WQ

T 24.6°C

SPL 52,623

C 52,137

DO 6.32

Sal 34.69 sal

pH 7.92

STATION OCCUPATION

BIGHT '18

Agency Code	AMEC
Vessel Name	EB2
Latitude	32.66359
Longitude	-117.1887
Arrival Time	0850
(h:mm)	
Depth (m)	12.6

Weather	
Clear	Rain
Overcast	Thunderstorm
Partly cloudy	Fog
Drizzle	Fog & Drizzle
Hazy	Smoky

Sea State

Salinity (ppt)

Estuary Sites only

Abandoned site

Y or N (If Y explain in comments)

Station ID B18-10139

Date 7/27/18

Fail Code /

(2)

Wind

Speed (kts) 5

Direction (4) ✓

Swell	
Period (s)	0
Height (ft)	0
Direction (1)	0

Nav Type	
DGPS	
GPS	
WAAS	

Equipment Type	
Core	Van Veen
Petite Ponar	Tandem Van Veen

Station Comments

Water Sample Collection Time: 0850

sed collation time: 0905

sed box vol: 6 L

GRAB EVENTS

(Check all sample types that apply)																
#	Time (hh:mm)	Latitude (DD°MM.mmmmm)	Longitude (DDD°MM.mmmmm)	Depth (m)	Distance to target (m)	Grab Fail Code (7)	Penetration (cm)	Composition (3)	Odor (4)	Color (5)	Shell Hash (6) (N/L/M/H)	Infauna (Y/N)	Sed Chem (Y/N)	Grain Size (Y/N)	Sed Tox (Y/N)	Debris (Y/N)
1	0905	32.6635	-117.12270	12.5	77m	/	15	silt	/	o.g.	N	y	N	N	N	N
Grab Event Comments: u.f.g.s. u/low f.g.s dk gray 5cm + deeper																
2	0905	32.6635	-117.12270	12.5	77m	/	15	silt	/	o.g.	N	N	y	y	y	N
Grab Event Comments: w. f.g.s dk gray + 5cm + deeper																
3	0915	32.66315	-117.12285	12.5	77m	/	15	silt	/	o.g.	N	N	y	y	y	N
Grab Event Comments: motored away from ship ~ 20 feet. w. dk srg. 5cm + deeper																
4	0915	32.66315	-117.12285	12.5	77m	/	15	silt	/	o.g.	N	N	y	y	y	N
Grab Event Comments: u/dk gray 5cm + deeper																
Grab Event Comments:																
Grab Event Comments:																

CTD Field Data Sheet

Date: 07/27/18
Time: 0950
Station ID: B18-10140

Water Depth: 10.7m

Tide: _____

Weather: clear

Odor: —

Floating Material?
(Yes / No) —

Photo Number: —

Visible Turbidity Plume?
(Yes / No) clear

Water Color: _____

CTD Data Archived?
(Yes / No) —

Samples Collected?
(Yes / No) —

COMMENTS: S of pier 13 - NBSD

WQ
24.7
T
SPC 52.553
C 52.810
Sal 34.62 ppt
pH 7.92
DO: 6.33
—

BIGHT '18

#	Time (hh:mm)	Latitude (DD°MM.mmm)	Longitude (DDD°MM.mmm)	Depth (m)	Distance to target (m)	Grab Fail Code (7)	Penetration (cm)	Composition (3)	Odor (4)	Color (5)	Shell Hash (6) (N/L/M/H)	Infauna (Y/N)	Sed Chem (Y/N)	Grain Size (Y/N)	Sed Tox (Y/N)	Debris (Y/N)
1	1010	32.66056	-117.12296	10.7	40	/	15	silt	/	O.g.	L	y	N	N	N	y
Grab Event Comments: gravel + mudstone @ Bottom (Lt. Brown), Below 5cm																
2	1010	32.66056	-117.12296	10.7	40	/	15	silt	/	O.g.	L	N	y	y	y	N
Grab Event Comments: same. w/ DK. gray Below 1cm																
3	1025	32.66060	-117.12289	10.6	40	/	15	silt	/	O.g.		N	y	y	y	N
Grab Event Comments: w/ DK. gray below 1cm																
4	1025	32.66060	-117.12289	10.6	40	/	15	silt	/	O.g.		N	y	y	y	N
Grab Event Comments: w/ DK gray below 1cm																
Grab Event Comments:																
Grab Event Comments:																

CTD Field Data Sheet

Date:

07/27/18

Time:

1205

Station ID:

B18-10141

Water Depth:

13.1

Tide:

+ 3.24 feet falling

Weather:

clear

Odor:

/

Floating Material?
(Yes / No)

Photo Number:

/

Visible Turbidity Plume?
(Yes / No)

Water Color:

clear

CTD Data Archived?
(Yes / No)

Samples Collected?
(Yes / No)

COMMENTS:

WQ

T 24.9°C

SPC 52, 959

C 52720

Sal 34.92

pH 7.94

DO 6.73 mL

BIGHT '18

Equipment Type	
Core	Van Veen
Petite Ponar	Tandem Van Veen

#	Time (hh:mm)	Latitude (DD°MM.mmm)	Longitude (DDD°MM.mmm)	Depth (m)	Distance to target (m)	Grab Fail Code (7)	Penetration (cm)	Composition (3)	Odor (4)	Color (5)	Shell Hash (6) (N/L/MH)	Infauna (Y/N)	Sed Chem (Y/N)	Grain Size (Y/N)	Sed Tox (Y/N)	Debris (Y/N)
1	1240	32.66045	-117.12539	13.1	15	/	15	Fgs	✓	lt gray	L	Y	N	N	N	N
Grab Event Comments: coarse = med. 71mm "coarse" some clay w/ med. fgs/clay w/ slight o.g. on top / < 1cm.																
2	1240	32.66045	-117.12539	13.1	15	/	15	mixed	✓	lt gray	L	N	Y	Y	Y	N
Grab Event Comments: 71mm "coarse" some clay, silty sand / fgs / clay w/ slight o.g. on top < 1cm																
3	1250	32.66046	-117.12536	13.0	15	/	15	fgs	✓	gray	L	N	Y	Y	Y	N
Grab Event Comments: coarse (med) + fgs. w/ clay @ bottom less shell hash w/ slight o.g. on top 1cm																
4	1250	32.66046	-117.12536	13.0	15	/	15	fgs	✓	lt gray	L	N	Y	Y	Y	N
Grab Event Comments: coarse (med + fgs) w/ clay @ bottom less shell hash w/ slight o.g. on top 1cm																
Grab Event Comments:																
Grab Event Comments:																

CTD Field Data Sheet

Date:

07/27/18

Time:

1100

Station ID:

B18-10142 - south of Boom/

Water Depth:

6.2 m

North - NCMT →

Tide:

3.83 ft. slack
high

WQ

Weather:

clear

Odor:

—

Floating Material?
(Yes / No)

—

Photo Number:

Visible Turbidity Pume?
(Yes / No)

clear

Water Color:

CTD Data Archived?
(Yes / No)

Samples Collected?
(Yes / No)

COMMENTS:

south of Pier 14 / NBSD
no Pier

T 24.8°C
SPC 52,830
C 52,715
DO 6.27 mg/L
PH 7.39 pH
S.I. 34.93 ppt

STATION OCCUPATION

BIGHT '18

Agency Code	AMEC
Vessel Name	EB 2
Latitude	32.66009
Longitude	-117.11918
Arrival Time	1100
(hh:mm)	
Depth (m)	6.2 m

Weather	
Clear	Rain
Overcast	Thunderstorm
Partly cloudy	Fog
Drizzle	Fog & Drizzle
Hazy	Smoky

Sea State	Salinity (ppt)
Calm	<div style="border: 1px solid black; height: 20px; width: 100%;"></div>
Choppy	<div style="border: 1px solid black; height: 20px; width: 100%;"></div>
Rough	<div style="border: 1px solid black; height: 20px; width: 100%;"></div>
Confused	<div style="border: 1px solid black; height: 20px; width: 100%;"></div>
	<div style="border: 1px solid black; height: 20px; width: 100%;"></div>

Abandoned site?
 Y or N (If Y explain in comments)

Station ID B18-10142

Date 07/27/18

Abandoned site? Y or N (If Y explain in comments)	Station Fail Code (2)	

Wind

Speed (kts) _____

Direction (4) _____

Swell	
Period (s)	0
Height (ft)	0
Direction (1)	0

Nav Type	
DGPS	
GPS	<input checked="" type="checkbox"/>
WAAS	

Equipment Type	
Core	Van Veen
Petite Ponar	Tandem Van Veen

Station Comments

Water Sample Collection Time: 1100

Set 1 collection 1110

Set 10x Volume: 6L

GRAB EVENTS

(Check all sample types that apply)																
#	Time (hh:mm)	Latitude (DD°MM.mmm)	Longitude (DDD°MM.mmm)	Depth (m)	Distance to target (m)	Grab Fail Code (7)	Penetration (cm)	Composition (3)	Odor (4)	Color (5)	Shell Hash (6) (NL/MH)	Infauna (Y/N)	Sed Chem (Y/N)	Grain Size (Y/N)	Sed Tox (Y/N)	Debris (Y/N)
1	1110	32.66009	-117.11918	6.2	12	/	15	silt	/	o.g.	L	y	N	N	N	y
Grab Event Comments: muck/silt. within FGS w/ black below scan																
2	1110	32.66009	-117.11918	6.2	12	/	15	silt	/	o.g.	L	N	y	y	y	N
Grab Event Comments: w. minor FGS. w/ black & w/ dk gray below scan																
3	1120	32.66010	-117.11922	6.2	12	/	15	silt	/	o.g.	L	N	y	y	y	N
Grab Event Comments: w/ minor FGS. w/ dk gray below scan																
4	1120	32.66010	-117.11922	6.2	12	/	15	silt	/	o.g.	L	N	y	y	y	N
Grab Event Comments: w/ dk gray below scan																
Grab Event Comments:																
Grab Event Comments:																

CTD Field Data Sheet

Date: 7/30/18

Time: 1320

Station ID: BL-10034

Water Depth: 4.8

Tide: 4.38

Weather: Clear

Odor: No

Floating Material?
(Yes / No) No

Photo Number: _____

Visible Turbidity Plume?
(Yes / No) No

Water Color: Clear

CTD Data Archived?
(Yes / No) Yes

Samples Collected?
(Yes / No) Yes

COMMENTS:

WQ

26.1°C

T

SPL 53,201

C 54,218

PH 7.93

DO 6.96 mg/L

SAZ 35.06 mT

BIGHT '18

Abandoned site?	Station Fail Code
Y or N (If Y explain in comments)	(2)

Station Comments

Water Sample Collection Time: 1320

Sed Collected: 7.0L

Equipment Type	
Core	Van Veen
Petite Ponar	Tandem Van Veen

(Check all sample types that apply)

#	Time (hh:mm)	Latitude (DD°MM.mmm)	Longitude (DDD°MM.mmm)	Depth (m)	Distance to target (m)	Grab Fail Code (7)	Penetration (cm)	Composition (3)	Odor (4)	Color (5)	Shell Hash (6) (N/L/M/H)	Infauna (Y/N)	Sed Chem (Y/N)	Grain Size (Y/N)	Sed Tox (Y/N)	Debris (Y/N)
1	1337	32.66524	-117.14979	4.7	9.0		15	Silt	None	Olive	N	X				N
Grab Event Comments:																
2	1337	32.66524	-117.14979	4.7	9.0		15	Silt	None	Olive	N		X	X	X	N
Grab Event Comments:																
3	1348	32.66526	-117.14981	4.7	9.0		15	Silt	None	Olive	N		X	X	X	N
Grab Event Comments:																
4	1348	32.66526	-117.14981	4.7	9.0		15	Silt	None	Olive	N		X	X	X	N
Grab Event Comments:																
Grab Event Comments:																
Grab Event Comments:																

CTD Field Data Sheet

Date: 7/30/18

Time: 1230

Station ID: B18-10035

Water Depth: 5.1m

Tide: 4.35

Weather: Clear

Odor: None

Floating Material?
(Yes / No) No

Photo Number: _____

Visible Turbidity Plume?
(Yes / No) No

Water Color: Clear

CTD Data Archived?
(Yes / No) Yes

Samples Collected?
(Yes / No) Yes

COMMENTS:

CTD

pH 7.95

DO 7.03 mg/L

Temp 26.2°C

Sal 35.01






Sp Cond 53,093

Cond 54,089

STATION OCCUPATION

BIGHT '18

Agency Code	Wood
Vessel Name	EB
Latitude	32.66075
Longitude	-117.14543
Arrival Time	1226
(hh:mm)	
Depth (m)	5.1

Weather	
Clear	
Overcast	
Partly cloudy	
Drizzle	
Hazy	

Sea State	Salinity (ppt)
Calm	<div style="border: 1px solid black; height: 40px; width: 100%;"></div> Estuary Sites only
Choppy	
Rough	
Confused	
	<div style="border: 1px solid black; width: 100px; height: 40px; margin: 0 auto;"></div> Abandoned site Y or N (If Y explain in comments)

Station ID **B18-10035**

Date 7/30/18

Abandoned site? Y or N (If Y explain in comments)	Station Fail Code (2)	

Wind
Speed (kts) 10
Direction (4) NW

Swell	
Period (s)	0
Height (ft)	0
Direction (1)	0

Nav Type	
DGPS	X
GPS	
WAAS	

Equipment Type	
Core	Van Veen
Petite Ponar	Tandem Van Veen

Station Comments

Water Sample Collection Time: 1230

Sediment Collected: 7.0L

GRAB EVENTS

(Check all sample types that apply)																
#	Time (hh:mm)	Latitude (DD°MM.mmm)	Longitude (DDD°MM.mmm)	Depth (m)	Distance to target (m)	Grab Fail Code (7)	Penetration (cm)	Composition (3)	Odor (4)	Color (5)	Shell Hash (6) (N/L/M/H)	Infauna (Y/N)	Sed Chem (Y/N)	Grain Size (Y/N)	Sed Tox (Y/N)	Debris (Y/N)
1	1245	32.66074	-117.14543	5.1	6.0		15	Silt	None	Olive	N	X				N
Grab Event Comments:																
2	1245	32.66074	-117.14543	5.1	6.0		15	Silt	None	Olive	N		X	X	X	N
Grab Event Comments:																
3	1258	32.66078	-117.14546	5.1	6.0		15	Silt	None	Olive	N		X	X	X	N
Grab Event Comments:																
4	1258	32.66078	-117.14546	5.1	6.0		15	Silt	None	Olive	N		X	X	X	N
Grab Event Comments:																
Grab Event Comments:																
Grab Event Comments:																

CTD Field Data Sheet

Date: 7/30/18

Time: 1045

Station ID: B18-10036

Water Depth: 4.2

Tide: 4.17

Weather: Clear

Odor: No

Floating Material?
(Yes / No) No

Photo Number: _____

Visible Turbidity Plume?
(Yes / No) No

Water Color: Clear

CTD Data Archived?
(Yes / No) Yes

Samples Collected?
(Yes / No) Yes

COMMENTS:

CTD

pH 7.93

DO 6.69

Temp 25.7°C

Sal 35.05











Sp Cond 53151

Cond 53834

STATION OCCUPATION

BIGHT '18

Agency Code	Wood
Vessel Name	EB
Latitude	32.65816
Longitude	-117.14437
Arrival Time (hh:mm)	1042
Depth (m)	4.7

Weather	
Clear	
Overcast	
Partly cloudy	
Drizzle	
Hazy	
Rain	
Thunderstorm	
Fog	
Fog & Drizzle	
Smoky	

Sea State	Salinity (ppt)
Calm	<input checked="" type="checkbox"/>
Choppy	<input type="checkbox"/>
Rough	<input type="checkbox"/>
Confused	<input type="checkbox"/>
	<input type="checkbox"/>

Estuary Sites only

Abandoned site

Y or N (If Y explain in comments)

Station ID B18-10030

Date 7/30/18

Abandoned site? Y or N (If Y explain in comments)	Station Fail Code (2)	
---	---------------------------------	--

Wind
Speed (kts) 10
Direction (4) NW

Swell	
Period (s)	0
Height (ft)	0
Direction (1)	0

Nav Type	
DGPS	<input checked="" type="checkbox"/>
GPS	<input type="checkbox"/>
WAAS	<input type="checkbox"/>

Equipment Type	
Core	Van Veen
Petite Ponar	Tandem Van Veen

Station Comments

Water Sample Collection Time: 1045

Sed collected: 10L

lots of muscalista

GRAB EVENTS

(Check all sample types that apply)																
#	Time (hh:mm)	Latitude (DD°MM.mmmmm)	Longitude (DDD°MM.mmmmm)	Depth (m)	Distance to target (m)	Grab Fail Code (7)	Penetration (cm)	Composition (3)	Odor (4)	Color (5)	Shell Hash (6) (N/L/M/H)	Infauna (Y/N)	Sed Chem (Y/N)	Grain Size (Y/N)	Sed Tox (Y/N)	Debris (Y/N)
1	1100	32.65816	-117.14435	4.8	24		15	Silt	HS	Olive	L	X				N
Grab Event Comments: black below 1cm, Fine sand below 5cm Black																
2	1100	32.65816	-117.14435	4.8	24		15	Silt	HS	Olive	L		X	X	X	N
Grab Event Comments: black below 1cm Black																
3	1113	32.65816	-117.14435	4.8	24		15	Silt	HS	Olive	L		X	X	X	N
Grab Event Comments: Black																
4	1113	32.65816	-117.14435	4.8	24	611	15	Silt	HS	Olive	L		X	X	X	-
Grab Event Comments: Appears as if we bit into same grab area as 1/2. Reject.																
5	1127	32.65815	-117.14435	4.9	24		15	Silt	HS	Olive	L		X	X	X	N
Grab Event Comments: Black																
6	1127	32.65815	-117.14435	4.9	24		15	Silt	HS	Olive	L		X	X	X	N
Grab Event Comments: BIK																

CTD Field Data Sheet

Date:

7/30/18

Time:

0945

Station ID:

B18-10039

Water Depth:

6.1m

Tide:

3.2

Weather:

Clear

Odor:

— NO

Floating Material?
(Yes / No)

NO
NO

Photo Number:

Visible Turbidity Plume?
(Yes / No)

NO

Water Color:

— clear

CTD Data Archived?
(Yes / No)

NO

Samples Collected?
(Yes / No)

NO

COMMENTS:

off west beach / silver strand

CTD

pH 7.90 pH

DO 6.23 mg/L

Sal 35.18

Temp 25.8

Sp Cond 53,316

Cond 54,178

STATION OCCUPATION

BIGHT '18

Agency Code Wood
 Vessel Name EB
 Latitude 32.64158
 Longitude -117.13904
 Arrival Time 0939
(hh:mm)
 Depth (m) 6.1

Weather

Clear	<input checked="" type="checkbox"/>	Rain	<input type="checkbox"/>
Overcast	<input type="checkbox"/>	Thunderstorm	<input type="checkbox"/>
Partly cloudy	<input type="checkbox"/>	Fog	<input type="checkbox"/>
Drizzle	<input type="checkbox"/>	Fog & Drizzle	<input type="checkbox"/>
Hazy	<input type="checkbox"/>	Smoky	<input type="checkbox"/>

Sea State

Calm	<input checked="" type="checkbox"/>
Choppy	<input type="checkbox"/>
Rough	<input type="checkbox"/>
Confused	<input type="checkbox"/>

Salinity (ppt)
Estuary Sites only

Station ID 018-10039Date 7/30/18Abandoned site? ☐Station Fail Code Y or N (If Y explain in comments)

(2)

Wind

Speed (kts) 10
 Direction (4) NE

Swell

Period (s) 0
 Height (ft) 0
 Direction (1) 0

Nav Type

DGPS ☒
 GPS ☐
 WAAS ☐

Station Comments

Water Sample Collection Time: 0945

Sed Collected 9L

Equipment Type

Core ☐
 Petite Ponar ☐
 Van Veen ☐
 Tandem Van Veen ☒

GRAB EVENTS

(Check all sample types that apply)

#	Time (hh:mm)	Latitude (DD°MM.mmm)	Longitude (DDD°MM.mmm)	Depth (m)	Distance to target (m)	Grab Fail Code (7)	Penetration (cm)	Composition (3)	Odor (4)	Color (5)	Shell Hash (6) (N/L/M/H)	Infauna (Y/N)	Sed Chem (Y/N)	Grain Size (Y/N)	Sed Tox (Y/N)	Debris (Y/N)
1	1000	32.64158	-117.13903	6.1	16		15	Silt	None	Olive gray	N	X				X
Grab Event Comments:																
2	1000	32.64158	-117.13903	6.1	16		15	Silt	None	Olive gray	N		X	X	X	N
Grab Event Comments:																
3	1012	32.64163	-117.13906	6.7	16		15	Silt	None	Olive gray	N		X	X	X	N
Grab Event Comments:																
4	1012	32.64163	-117.13906	6.7	16		15	Silt	None	Olive gray	N		X	X	X	N
Grab Event Comments:																
Grab Event Comments:																
Grab Event Comments:																

plastic bag

CTD Field Data Sheet

Date:

7/30/18

Time:

0725

Station ID:

B18-10143

Water Depth:

11.0

Tide:

0.81

Weather:

clear

Odor:

None

Floating Material?
(Yes / No)

Some foam

Photo Number:

Visible Turbidity Plume?
(Yes / No)

No

Water Color:

Clear

CTD Data Archived?
(Yes / No)

Yes

Samples Collected?
(Yes / No)

Yes

COMMENTS:

WQ

26.1°C

T

SPL 52.917

C

53.983

Sal

34.86

pH

7.92

DO

6.62 mg/L

BIGHT '18

Abandoned site? Y or N (If Y explain in comments)	Station Fail Code (2)	

Station Comments

Water Sample Collection Time: 0720

Sed Vol. Collected 8L

(Check all sample types that apply)

#	Time (hh:mm)	Latitude (DD°MM.mmm)	Longitude (DDD°MM.mmm)	Depth (m)	Distance to target (m)	Grab Fail Code (7)	Penetration (cm)	Composition (3)	Odor (4)	Color (5)	Shell Hash (6) (N/L/M/H)	Infauna (Y/N)	Sed Chem (Y/N)	Grain Size (Y/N)	Sed Tox (Y/N)	Debris (Y/N)
1	0737	32,65747	-117.12303	11.0	18		15	Fn Snd	None	Olive	L	X				N
Grab Event Comments:																
2	0737	32,65747	-117,12303	11.0	18		15	Fn Snd	None	Olive	✓		X	X	X	N
Grab Event Comments:																
3	0749	32,65747	-117.12302	11.0	18		15	Silt	None	olive	L		X	X	X	N
Grab Event Comments:																
4	0749	32.65747	-117.12302	11.0	18		15	Silt	None	Olive	L		X	X	X	N
Grab Event Comments:																
Grab Event Comments:																
Grab Event Comments:																

CTD Field Data Sheet

Date: 7/30/2018

Time: 0825

Station ID: B18-10144

Water Depth: 11.3

Tide: 1.59

Weather: Clear

Odor: NO

Floating Material?
(Yes / No) No

Photo Number: —

Visible Turbidity Plume?
(Yes / No) No

Water Color: Clear

CTD Data Archived?
(Yes / No) Yes

Samples Collected?
(Yes / No) Yes

COMMENTS:

CTD

pH 7.95₁₄

Temp 25.2°C

DO 6.63_{mg/L}

Sal 35.22

Cond 54.384

Sp Cond 53.393

STATION OCCUPATION

BIGHT '18

Agency Code	Wood
Vessel Name	EB
Latitude	32.65118
Longitude	-117.12296
Arrival Time (hh:mm)	0812
Depth (m)	11.3

Weather			
Clear	<input checked="" type="checkbox"/>	Rain	<input type="checkbox"/>
Overcast	<input type="checkbox"/>	Thunderstorm	<input type="checkbox"/>
Partly cloudy	<input type="checkbox"/>	Fog	<input type="checkbox"/>
Drizzle	<input type="checkbox"/>	Fog & Drizzle	<input type="checkbox"/>
Hazy	<input type="checkbox"/>	Smoky	<input type="checkbox"/>

Sea State	Salinity (ppt)
Calm	<input checked="" type="checkbox"/>
Choppy	<input type="checkbox"/>
Rough	<input type="checkbox"/>
Confused	<input type="checkbox"/>
	<input type="checkbox"/>

Abandoned site

Y or N (If Y explain in comments)

Station ID B18-10144

Date 07/30/11

Fail Code

(2)

Wind
Speed (kts) 5
Direction (4) NW

Swell	
Period (s)	0
Height (ft)	0
Direction (1)	0

Nav Type	
DGPS	<input checked="" type="checkbox"/>
GPS	<input type="checkbox"/>
WAAS	<input type="checkbox"/>

Van Veen	<input type="checkbox"/>
n Van Veen	<input checked="" type="checkbox"/>

Station Comments

Water Sample Collection Time: 0825

Sed. Collected: 7L

tug + barge
came through
at 0846
(b/w water
+ sed
collection).
visible
plume
observed.

GRAB EVENTS

(Check all sample types that apply)																
#	Time (hh:mm)	Latitude (DD°MM.mmm)	Longitude (DDD°MM.mmm)	Depth (m)	Distance to target (m)	Grab Fail Code (7)	Penetration (cm)	Composition (3)	Odor (4)	Color (5)	Shell Hash (6) (N/L/M/H)	Infauna (Y/N)	Sed Chem (Y/N)	Grain Size (Y/N)	Sed Tox (Y/N)	Debris (Y/N)
1	0900	32.65158	-117.12234	11.8	61.		15	FnSnd	None	L+Brn	N	X				N
Grab Event Comments:																
2	0900	32.65158	-117.12234	11.8	61.		15/14	FnSnd	None	LTBrn	N		X	X	X	N
Grab Event Comments:																
3	0914	32.65162	-117.12235	11.6	61		15	FnSnd	None	Olive	L		X	X	X	N
Grab Event Comments:																
4	0914	32.65162	-117.12235	11.6	61		15	FnSnd	None	Olive	L		X	X	X	N
Grab Event Comments:																
Grab Event Comments:																
Grab Event Comments:																

CTD Field Data Sheet

Date: 07/31/18

Time: 1020

Station ID: B18-10037

Water Depth: 11.3 m

Tide: +3.22 Feet Rish

Weather: Clear

Odor: /

Floating Material?
(Yes / No) /

Photo Number: /

Visible Turbidity Plume?
(Yes / No) /

Water Color: clear

CTD Data Archived?
(Yes / No) /

Samples Collected?
(Yes / No) /

COMMENTS:

WQ

T 07.1°C

SPC 53.812

C 55.852

SAL 35.50

DO 6.58

pH 7.98

STATION OCCUPATION

BIGHT '18

Agency Code Amel
 Vessel Name B58
 Latitude 32.64698
 Longitude -117.11822
 Arrival Time 1020
 (hh:mm)
 Depth (m) 11.3

Weather

Clear	<input checked="" type="checkbox"/>	Rain	<input type="checkbox"/>
Overcast	<input type="checkbox"/>	Thunderstorm	<input type="checkbox"/>
Partly cloudy	<input type="checkbox"/>	Fog	<input type="checkbox"/>
Drizzle	<input type="checkbox"/>	Fog & Drizzle	<input type="checkbox"/>
Hazy	<input type="checkbox"/>	Smoky	<input type="checkbox"/>

Sea State

Calm	<input checked="" type="checkbox"/>
Choppy	<input type="checkbox"/>
Rough	<input type="checkbox"/>
Confused	<input type="checkbox"/>

Salinity (ppt)

 Estuary Sites only

Abandoned site? ☐ Station Fail Code
 Y or N (If Y explain in comments) (2)

Station ID B18-10037
 Date 07/31/18

Wind

Speed (kts) 5
 Direction (4) 0

Swell

Period (s) 0
 Height (ft) 0
 Direction (1) 0

Nav Type

DGPS ☐
 GPS ☒
 WAAS ☐

Equipment Type

Core ☐ Van Veen ☐
 Petite Ponar ☐ Tandem Van Veen ☒

Station Comments

Water Sample Collection Time: 1020

Sed coll. time: 1035
 Sed tox vol: 8L

Shells, tablet empty

(Check all sample types that apply)

GRAB EVENTS

#	Time (hh:mm)	Latitude (DD°MM.mmm)	Longitude (DDD°MM.mmm)	Depth (m)	Distance to target (m)	Grab Fail Code (7)	Penetration (cm)	Composition (3)	Odor (4)	Color (5)	Shell Hash (6) (NL/MH)	Infauna (Y/N)	Sed Chem (Y/N)	Grain Size (Y/N)	Sed Tox (Y/N)	Debris (Y/N)
1	1035	32.64698	-117.11819	11.3		<input checked="" type="checkbox"/>	15	S: H	<input checked="" type="checkbox"/>	0.9	L	y	N	N	N	N
Grab Event Comments: <u>w/ minor debris (+2 can DK grey)</u>																
2	1039	32.64698	-117.11819	11.3		<input checked="" type="checkbox"/>	15	same	<input checked="" type="checkbox"/>	same	L	N	y	y	y	N
Grab Event Comments:																
3	1040	32.64701	-117.11822	11.3		<input checked="" type="checkbox"/>	15	same	<input checked="" type="checkbox"/>	same	L	N	y	y	y	N
Grab Event Comments:																
4	1040	32.64701	-117.11822	11.3		<input checked="" type="checkbox"/>	15	same	<input checked="" type="checkbox"/>	same	L	N	y	y	y	y
Grab Event Comments:																
Grab Event Comments:																
Grab Event Comments:																

→ plastic
Bag

CTD Field Data Sheet

Date:

07/31/18

Time:

1110

Station ID:

B18 - 10038

mid channel South Bay

Water Depth:

4.8 m

WQ

Tide:

+3.22 R.B.H.

T - 26.7°C

SPC - 53,437

Weather:

clear

C 55,113

Odor:

—

PH 7.97

Floating Material?
(Yes / No)

—

DO 6.95 mg/L

Photo Number:

—

Sal 35.20

Visible Turbidity Plume?
(Yes / No)

—

Water Color:

clear

CTD Data Archived?
(Yes / No)

—

Samples Collected?
(Yes / No)

—

COMMENTS:

—

—

—

STATION OCCUPATION

BIGHT '18

Agency Code Ambo

Vessel Name EB2

Latitude 32.64128

Longitude -117.12624

Arrival Time 1110
(hh:mm)

Depth (m) 4.8m

Weather

Clear ☒ Rain ☐

Overcast ☐ Thunderstorm ☐

Partly cloudy ☐ Fog ☐

Drizzle ☐ Fog & Drizzle ☐

Hazy ☐ Smoky ☐

Sea State

Calm ☐

Choppy ☐

Rough ☐

Confused ☐

Salinity (ppt)
Estuary Sites only

Abandoned site? ☐ Station Fail Code
Y or N (If Y explain in comments) (2)

Station ID B18 - 10038

Date 07/31/18

Wind

Speed (kts) 10

Direction (4) W-

Swell

Period (s) 0

Height (ft) 0

Direction (1) 0

Nav Type

DGPS ☐

GPS ☐

WAAS ☐

Equipment Type

Core ☐ Van Veen ☐

Petite Ponar ☐ Tandem Van Veen ☐

Station Comments

Water Sample Collection Time: 1110

sed collected time: 1125

sed TOX VOL: 7

GRAB EVENTS

#	Time (hh:mm)	Latitude (DD°MM.mmm)	Longitude (DDD°MM.mmm)	Depth (m)	Distance to target (m)	Grab Fail Code (7)	Penetration (cm)	Composition (3)	Odor (4)	Color (5)	Shell Hash (6) (N/L/M/H)	Infauna (Y/N)	Sed Chem (Y/N)	Grain Size (Y/N)	Sed Tox (Y/N)	Debris (Y/N)
1	1125	32.64228	-117.12624	4.8	13	/	12	fine ss	/	0.5	L	y	N	N	N	N
Grab Event Comments: <u>W/ silt @ 1cm, grey below</u>																
2	1125	32.64268	-117.12624	4.8	13	/	11	fine ss	/	0.5	L	N	y	y	y	N
Grab Event Comments: <u>(FSS.) w/ silt @ 1cm, grey below</u>																
3	1135	32.64264	-117.12627	4.8	13	/	11	FSS	/	0.5	L	N	y	y	y	N
Grab Event Comments: <u>w/ minor silt @ 1cm, grey below</u>																
4	1135	32.64264	-117.12627	4.8	13	/	12	FSS	/	0.5	L	N	y	y	y	N
Grab Event Comments: <u>w/ silt @ 1cm, grey below</u>																
Grab Event Comments:																
Grab Event Comments:																

Add to table?

(Check all sample types that apply)

CTD Field Data Sheet

Date: 07/31/18

Time: 1235

Station ID: B18-10041

Water Depth: 3.1 m

Tide: +4.2 m

Weather: a clear

Odor: —

Floating Material?
(Yes / No) (No)

Photo Number: —

Visible Turbidity Plume?
(Yes / No) (No)

Water Color: clear

CTD Data Archived?
(Yes / No) (No)

Samples Collected?
(Yes / No) (No)

COMMENTS: south bay / corals cys

WQ
SPL 54.058
C 56.750
T 27.7°C
pH 8.02 pH
SAL 35.65
DO 7.31 mg/L

BIGHT '18

Agency Code	AMEL
Vessel Name	EB2
Latitude	32.62848
Longitude	-117.10540
Arrival Time	1235
(hh:mm)	
Depth (m)	

Weather	
Clear	Rain
Overcast	Thunderstorm
Partly cloudy	Fog
Drizzle	Fog & Drizzle
Hazy	Smoky

Sea State	Salinity (ppt)
Calm	Estuary Sites only
Choppy	
Rough	
Confused	
	Abandoned site

Y or N (If Y explain in comments)

Station ID B18-10041

Date 07/31/18

Station Fail Code /
(2)

Wind
Speed (kts) 10
Direction (4) 0

Swell	
Period (s)	8
Height (ft)	0
Direction (1)	9

Nav Type	
DGPS	
GPS	
WAAS	

Station Comments

Water Sample Collection Time: 01235
 Sed coll. time: 1250
 Sed box no: 72

Equipment Type	
Core	Van Veen
Petite Ponar	Tandem Van Veen

GRAB EVENTS

#	Time (hh:mm)	Latitude (DD°MM.mmm)	Longitude (DDD°MM.mmm)	Depth (m)	Distance to target (m)	Grab Fail Code (7)	Penetration (cm)	Composition (3)	Odor (4)	Color (5)	Shell Hash (6) (N/L/M/H)	Infauna (Y/N)	Sed Chem (Y/N)	Grain Size (Y/N)	Sed Tox (Y/N)	Debr (Y/N)
1	1250	32.62848	-117.12540	3.1	18	/	13.5	silt	/	o.g.	L	y	N	N	N	N
Grab Event Comments: eelgrass Bed. w/ minor v. f.s.s. dk w/ dk gray below 1cm																
2	1250	32.62848	-117.12540	3.1	18	/	14.5	silt	/	o.g.	L	N	y	y	y	N
Grab Event Comments: eelgrass w/ v. f.s.s. Same																
3	1305	32.62852	-117.12540	3.1	18	/	12	silt	/	o.g.	L	N	y	y	y	N
Grab Event Comments: eelgrass w/ v. f.s.s. w/ dk gray below 1cm																
4	1305	32.62852	-117.12540	3.1	18	/	14	silt	/	o.g.	L	N	y	y	y	N
Grab Event Comments: eelgrass w/ v. f.s.s. w/ dk gray below 1cm																
5	1310	32.62849	-117.12543	3.0	18	/	12	silt	/	o.g.	L	N	y	y	y	N
Grab Event Comments: eelgrass w/ v. f.s.s. w/ dk gm below 1cm																
6	1310	32.62849	-117.12543	3.0	18	/	9	silt	/	o.g.	L	N	y	y	y	N
Grab Event Comments: minor pit - hole washed out w/ v. f.s.s. w/ dk gm below 1cm																

CTD Field Data Sheet

Date: 07/31/18

Time: 0930

Station ID: B18-10179

Water Depth: 3.1 m

Tide: 12.68 Feet Rising

Weather: clear

Odor: No

Floating Material?
(Yes / No) (No)

Photo Number: -

Visible Turbidity Plume?
(Yes / No) (No)

Water Color: clear

CTD Data Archived?
(Yes / No) (No)

Samples Collected?
(Yes / No) (No)

COMMENTS:

WQ

DO: 6.18 mg/L

T 27.1

SPC 53.292

C 55.323

SAZ 35.13

PH 7.95

~540 feet from target

(~100m)

B/c of lack of good tracking.

not bright compliant

West of boom, B/c.

CTD Field Data Sheet

Date: 07/31/18

Time: 0830

Station ID: B18-10180

Water Depth: 11.5m

Tide: +1.87 Feet

Weather: Clear

Odor: —

Floating Material?
(Yes / No)

Photo Number: —

Visible Turbidity Plume?
(Yes / No)

Water Color: Clear

CTD Data Archived?
(Yes / No)

Samples Collected?
(Yes / No)

COMMENTS: sweet water

W9

DO: ~~8.3~~ 6.85

T: 26.9°C

pH: 7.93 pH

SPC: 53,483

C: 55,350

SAL: 35.29 ppt

STATION OCCUPATION

BIGHT '18

Agency Code AMER
 Vessel Name RBT
 Latitude 32.64777
 Longitude -117.11644
 Arrival Time 0850 0630
 (hh:mm)
 Depth (m) 11.5m

Weather

Clear <input checked="" type="checkbox"/>	Rain <input type="checkbox"/>
Overcast <input type="checkbox"/>	Thunderstorm <input type="checkbox"/>
Partly cloudy <input type="checkbox"/>	Fog <input type="checkbox"/>
Drizzle <input type="checkbox"/>	Fog & Drizzle <input type="checkbox"/>
Hazy <input type="checkbox"/>	Smoky <input type="checkbox"/>

Sea State

Calm <input checked="" type="checkbox"/>	<input type="checkbox"/> Estuary Sites only
Choppy <input type="checkbox"/>	
Rough <input type="checkbox"/>	
Confused <input type="checkbox"/>	

Abandoned site? ☐ Station Fail Code ☐
 Y or N (if Y explain in comments) (2)

Station ID B18-10180Date 07/31/18

Wind

Speed (kts) 5
 Direction (4) 0

Swell

Period (s) 0
 Height (ft) 0
 Direction (1) 0

Nav Type

DGPS ☐
 GPS ☐
 WAAS ☐

Equipment Type

Core ☐ Van Veen ☐
 Petite Ponar ☐ Tandem Van Veen ☒

Station Comments

Water Sample Collection Time: 0830

Sed coll: 0845
 Sed trap Vol: 6L

GRAB EVENTS

#	Time (hh:mm)	Latitude (DD°MM.mmm)	Longitude (DDD°MM.mmm)	Depth (m)	Distance to target (m)	Grab Fail Code (7)	Penetration (cm)	Composition (3)	Odor (4)	Color (5)	Shell Hash (6) (N/L/M/H)	Infauna (Y/N)	Sed Chem (Y/N)	Grain Size (Y/N)	Sed Tox (Y/N)	Debris (Y/N)
1	0845	32.64777	-117.11644	11.5		/	14	silt	0.5	0.5		y	N	N	N	N
Grab Event Comments: +2cm gray																
2	0845	32.64777	-117.11644	11.5		/	14	silt	N	0.5		N	y	y	y	N
Grab Event Comments: +2cm gray																
3	0900	32.64779	-117.11644	11.7		/	14	silt	N	0.5		N	y	y	y	N
Grab Event Comments: +2cm gray																
4	0900	32.64779	-117.11644	11.7		/	14	silt	N	0.5		N	y	y	y	N
Grab Event Comments: +2cm gray																
Grab Event Comments:																
Grab Event Comments:																
Grab Event Comments:																

* Net took max

(Check all sample types that apply)

CTD Field Data Sheet

Date: 07/31/18

Time: 0740

Station ID: B18 - 1008 10181

Water Depth: 7.1m

Tide: +

Weather: overcast

Odor: —

Floating Material?
(Yes / No) —

Photo Number: —

Visible Turbidity Plume?
(Yes / No) —

Water Color: clear.

CTD Data Archived?
(Yes / No) —

Samples Collected?
(Yes / No) —

COMMENTS: Sweet water channel.

WQ
T 27.1
SPC 52,750
C 54,767
DO 6.28 ~1/2
pH 7.88
SAZ 34.69

233
3096

BIGHT '18

Abandoned site? Y or N (If Y explain in comments)	Station Fail Code (2)	
---	---------------------------------	---

Station Comments

Water Sample Collection Time: <u>0740</u>
Sed. collection time: <u>0753</u>
Sed. tox: <u>7L</u>

(Check all sample types that apply)

#	Time (hh:mm)	Latitude (DD°MM.mmm)	Longitude (DDD°MM.mmm)	Depth (m)	Distance to target (m)	Grab Fail Code (7)	Penetration (cm)	Composition (3)	Odor (4)	Color (5)	Shell Hash (6) (N/L/M/H)	Infauna (Y/N)	Sed Chem (Y/N)	Grain Size (Y/N)	Sed Tox (Y/N)	Debris (Y/N)
1	0753	32.64819	-117.11340	7.1	SI	/	15	F.g.s.	N	DK grey	L	y	N	N	N	N
Grab Event Comments: w/ silt & sh																
2	0753	32.64819	-117.11340	7.1	SI	/	15	F.g.s.	N	DK grey	L	N	y	y	y	N
Grab Event Comments: w/ silt																
3	0803	32.64819	-117.11340	9.5	SI	/	15	silt	N	DK grey	L	N	y	y	y	N
Grab Event Comments: TBO ↓ moved ~ 30 ft into channel w/ F.g.s.																
4	0803	32.64819	-117.11340	9.5	SI	/	15	silt	N	DK grey	L	N	y	y	y	N
Grab Event Comments: w/ F.g.s.																
Grab Event Comments:																
Grab Event Comments:																

CTD Field Data Sheet

Date: 8/1/18

Time: 1205

Station ID: B18-10042

Water Depth: 5.3

Tide: 4.42

Weather: Clear

Odor: None

Floating Material?
(Yes / No) No

Photo Number: —

Visible Turbidity Plume?
(Yes / No) No

Water Color: Clear

CTD Data Archived?
(Yes / No) Yes

Samples Collected?
(Yes / No) Yes

COMMENTS:

CTD

pH 8.01 pH

DO 6.78 mg/L

Temp 27.5 °C

Sal 35.60 ppt

Sp Cond 53,548

Cond 56,461

STATION OCCUPATION

BIGHT '18

Agency Code	Wood
Vessel Name	ER
Latitude	32.62559
Longitude	-117.11154
Arrival Time	1159
(hh:mm)	
Depth (m)	5.3

Weather	
Clear	<input checked="" type="checkbox"/>
Overcast	<input type="checkbox"/>
Partly cloudy	<input type="checkbox"/>
Drizzle	<input type="checkbox"/>
Hazy	<input type="checkbox"/>

Sea State	Salinity (ppt)
Calm	<div style="border: 1px solid black; height: 40px; width: 100%;"></div> Estuary Sites only
Choppy	
Rough	
Confused	
	Abandoned site

Y or N (If Y explain in comments)

Station ID BH-10042

Date 8/1/18

Abandoned site?	Station Fail Code
Y or N (If Y explain in comments)	(2)

Wind
Speed (kts) 10
Direction (4) W

Swell	
Period (s)	0
Height (ft)	0
Direction (1)	0

Nav Type	
DGPS	X
GPS	
WAAS	

Equipment Type	
Core	Van Veen
Petite Ponar	Tandem Van Veen

Station Comments

Water Sample Collection Time: 1705

Sed Collected 7.0L

★ Needs Transfer Date
Entered

GRAB EVENTS

#	Time (hh:mm)	Latitude (DD°MM.mmmmm)	Longitude (DDD°MM.mmmmm)	Depth (m)	Distance to target (m)	Grab Fail Code (7)	Penetration (cm)	Composition (3)	Odor (4)	Color (5)	Shell Hash (6) (N/L/M/H)	Infauna (Y/N)	Sed Chem (Y/N)	Grain Size (Y/N)	Sed Tox (Y/N)	Debris (Y/N)
1	1215	32.62566	-117.11126	5.3	34		15	Silt	None	Olive	N	X				N
Grab Event Comments:																
2	1215	32.62566	-117.11126	5.3	34		15	Silt	None	Olive	N		X	X	X	N
Grab Event Comments:																
3	1225	32.62560	-117.11125	5.3	34		15	Silt	None	Olive	N		X	X	X	N
Grab Event Comments: Blk below 5cm																
4	1225	32.62560	-117.11125	5.3	34		15	Silt	None	Olive	N		X	X	X	N
Grab Event Comments: Blk below 5cm																
Grab Event Comments:																
Grab Event Comments:																

CTD Field Data Sheet

Date:

8/1/18

Time:

0740

Station ID:

018-10085

Water Depth:

3.0

Tide:

0.63

Weather:

Clear

Odor:

No

Floating Material?
(Yes / No)

No

Photo Number:

Visible Turbidity Plume?
(Yes / No)

~~No~~ Some sed plume from prop wash

Water Color:

Clear-Green

CTD Data Archived?
(Yes / No)

Yes

Samples Collected?
(Yes / No)

Yes

COMMENTS:

None - Michael

CTD

pH 7.8704

DO 6.72 mL

Temp 27.3°C

Sal 35.26 ppt

Sp Cond 53490

Cond 55840

BIGHT '18

Station Comments

Water Sample Collection Time: 0740

Sed Collected SL

(Check all sample types that apply)																
#	Time (hh:mm)	Latitude (DD°MM.mmmmm)	Longitude (DDD°MM.mmmmm)	Depth (m)	Distance to target (m)	Grab Fail Code (7)	Penetration (cm)	Composition (3)	Odor (4)	Color (5)	Shell Hash (6) (N/L/M/H)	Infauna (Y/N)	Sed Chem (Y/N)	Grain Size (Y/N)	Sed Tox (Y/N)	Debris (Y/N)
1	0755	32.62584	-117.13561	3.0	10		15	Silt	None	Olive	N	X				N
Grab Event Comments:																
2	0755	32.62584	-117.13561	3.0	10		15	Silt	None	Olive	N		X	X	X	N
Grab Event Comments:																
3	0805	32.62585	-117.13560	3.0	10		15	Silt	None	Olive	N		X	X	X	N
Grab Event Comments: Some dark gray below 1 cm																
4	0805	32.62585	-117.13560	3.0	10		15	Silt	None	Olive	N		X	X	X	N
Grab Event Comments: Some dark gray below 1 cm																
Grab Event Comments:																
Grab Event Comments:																

CTD Field Data Sheet

Date:

8/1/18

Time:

0830

Station ID:

B18-10086

Water Depth:

3.0

Tide:

1.14

Weather:

Clear

Odor:

No

Floating Material?
(Yes / No)

No

Photo Number:

—

Visible Turbidity Plume?
(Yes / No)

No

Water Color:

Clear / Green

CTD Data Archived?
(Yes / No)

Yes

Samples Collected?
(Yes / No)

Yes

COMMENTS:

CTD

pH 7.93

DO 6.48 mg/L

Sal 35.82 ppt

Temp 27.5°C

Sp Cond 54,285

Cond 56,858

BIGHT '18

Station Fail Code
(2)

Station Comments

Water Sample Collection Time: 0830

Sed Collected 7.0 L

(Check all sample types that apply)

#	Time (hh:mm)	Latitude (DD°MM.mmm)	Longitude (DDD°MM.mmm)	Depth (m)	Distance to target (m)	Grab Fail Code (7)	Penetration (cm)	Composition (3)	Odor (4)	Color (5)	Shell Hash (6) (N/L/MH)	Infauna (Y/N)	Sed Chem (Y/N)	Grain Size (Y/N)	Sed Tox (Y/N)	Debris (Y/N)
1	0843	32.62360	-117.13363	3.0	16		15	Silt	None	Olive	N	X				N
Grab Event Comments:																
2	0843	32.62360	-117.13363	3.0	16		15	Silt	None	Olive	N		X	X	X	N
Grab Event Comments:																
3	0852	32.62352	-117.13361	3.0	16		15	Silt	None	Olive	N		X	X	X	N
Grab Event Comments:																
4	0852	32.62352	-117.13361	3.0	16		15	Silt	None	Olive	N		X	X	X	N
Grab Event Comments:																
Grab Event Comments:																
Grab Event Comments:																

CTD Field Data Sheet

Date: 8/1/18

Time: 1030

Station ID: B18-10087

Water Depth: 3.6

Tide: 3.1

Weather: Clear

Odor: None

Floating Material?
(Yes / No) No

Photo Number: —

Visible Turbidity Plume?
(Yes / No) No

Water Color: Clear

CTD Data Archived?
(Yes / No) Yes

Samples Collected?
(Yes / No) Yes

COMMENTS:

CTD
pH 8.05
DO 7.01 mg/L
Temp 28.5°C
Sal 36.26 ppt
Sp Cond 54897
Cond 58502

BIGHT '18

Abandoned site?	Station Fail Code
Y or N (If Y explain in comments)	(2)

Station Comments

Water Sample Collection Time: 1030

Sed Collected 6.0L

Equipment Type	
Core	Van Veen
Petite Ponar	Tandem Van Veen

(Check all sample types that apply)

#	Time (hh:mm)	Latitude (DD°MM.mmmmm)	Longitude (DDD°MM.mmmmm)	Depth (m)	Distance to target (m)	Grab Fail Code (7)	Penetration (cm)	Composition (3)	Odor (4)	Color (5)	Shell Hash (6) (N/L/MH)	Infauna (Y/N)	Sed Chem (Y/N)	Grain Size (Y/N)	Sed Tox (Y/N)	Debris (Y/N)
1	1043	32.62166	-117.10214	3.6	72		15	Silt	None	Olive	N	X				N
Grab Event Comments: Dark gray below 1cm																
2	1043	32.62166	-117.10214	3.6	72		15	Silt	None	Olive	N		X	X	X	N
Grab Event Comments:																
3	1053	32.62169	-117.10215	3.6	72		15	Silt	None	Olive	N		X	X	X	N
Grab Event Comments:																
4	1053	32.62169	-117.10215	3.6	72		15	Silt	None	Olive	N		X	X	X	N
Grab Event Comments:																
Grab Event Comments:																
Grab Event Comments:																

CTD Field Data Sheet

Date:

8/1/18

Time:

0912

Station ID:

B18-10088

Water Depth:

3.5

Tide:

1.77

Weather:

Clear

Odor:

None

Floating Material?
(Yes / No)

No

Photo Number:

—

Visible Turbidity Plume?
(Yes / No)

No

Water Color:

Clear

CTD Data Archived?
(Yes / No)

Yes

Samples Collected?
(Yes / No)

Yes

COMMENTS:

LTD

pH 8.01 pH

Temp 27.7°C

DO 7.08

Sal 36.03

Sp Cond 54,555

Cond 57319

STATION OCCUPATION

BIGHT '18

Agency Code	Wood
Vessel Name	ES
Latitude	32.62153
Longitude	-117.13615
Arrival Time	0909
(hh:mm)	
Depth (m)	3.5

Weather	
Clear	<input checked="" type="checkbox"/>
Overcast	<input type="checkbox"/>
Partly cloudy	<input type="checkbox"/>
Drizzle	<input type="checkbox"/>
Hazy	<input type="checkbox"/>

Sea State	Salinity (ppt)
Calm	<div style="border: 1px solid black; height: 40px; width: 100%;"></div> Estuary Sites only
Choppy	
Rough	
Confused	
	Abandoned site

Y or N (If Y explain in comments)

Station ID **R18-10088**

Date **8/1/18**

Fail Code

(2)

Wind
Speed (kts) 5.0
Direction (4) W

Swell	
Period (s)	0
Height (ft)	0
Direction (1)	0

Nav Type	
DGPS	<input checked="" type="checkbox"/>
GPS	<input type="checkbox"/>
WAAS	<input type="checkbox"/>

Equipment Type	
Core	Van Veen
Petite Ponar	Tandem Van Veen

Station Comments

Water Sample Collection Time: 0912

Sed Collected 7.0 L

* need triple point

GRAB EVENTS

(Check all sample types that apply)

#	Time (hh:mm)	Latitude (DD°MM.mmm)	Longitude (DDD°MM.mmm)	Depth (m)	Distance to target (m)	Grab Fail Code (7)	Penetration (cm)	Composition (3)	Odor (4)	Color (5)	Shell Hash (6) (N/L/M/H)	Infauna (Y/N)	Sed Chem (Y/N)	Grain Size (Y/N)	Sed Tox (Y/N)	Debris (Y/N)
1	0925	32.62165	-117.13018	3.5	11		15	Silt	None	Gray	N	X				N
Grab Event Comments:																
2	0925	32.62165	-117.13018	3.5	11		15	Silt	None	Gray	N		X	X	X	N
Grab Event Comments:																
3	0937	32.62160	-117.13005	3.6	11		15	Silt	None	Gray	N		X	X	X	N
Grab Event Comments:																
4	0937	32.62160	-117.13005	3.6	11		15	Silt	None	Gray	N		X	X	X	N
Grab Event Comments:																
Grab Event Comments:																
Grab Event Comments:																

CTD Field Data Sheet

Date:

08/14/18

Time:

1330

Station ID:

B18-10040

Water Depth:

6.0 feet

Tide:

+8.2

Weather:

clear

Odor:

—

Floating Material?
(Yes / No)

✓

Photo Number:

Visible Turbidity Plume?
(Yes / No)

clear

Water Color:

CTD Data Archived?
(Yes / No)

Samples Collected?
(Yes / No)

COMMENTS:

Swetlow River mouth

WQ

T 28.4°C

SPL 53055

C 56440

DO 7.29 mg/L

Sal 34.9

pH 7.84

BIGHT '18

Abandoned site? Y or N (If Y explain in comments).	Station Fail Code (2)	
--	---------------------------------	--

Station Comments

Water Sample Collection Time: 1330

Sec collection time: 1400

Tox Vol:

$$\begin{array}{r} 4 \\ 8.5 \\ 4.7 \\ \hline 17.2 \end{array}$$

Equipment Type	
Core	Van Veen
Petite Ponar	Tandem Van Veen

(Check all sample types that apply)

#	Time (hh:mm)	Latitude (DD°MM.mmm)	Longitude (DDD°MM.mmm)	Depth (m)	Distance to target (m)	Grab Fail Code (7)	Penetration (cm)	Composition (3)	Odor (4)	Color (5)	Shell Hash (6) (N/L/M/H)	Infauna (Y/N)	Sed Chem (Y/N)	Grain Size (Y/N)	Sed Tox (Y/N)	Debris (Y/N)
1	1355	32.64174	-117.11712	21.5	240	eelgrass	9.5	eelgrass								
Grab Event Comments: eelgrass & sand 135 feet																
2	1355	32.64174	-117.11712	21.5	135	eelgrass	4	eelgrass								
Grab Event Comments: eelgrass in sand 0.9L																
3	1400	32.64170	-117.11706	SPR	240	✓	11.5	F.g.s.	✓	light brown	N	Y	N	N	N	N
Grab Event Comments: (~1.5m) 4.9g																
4	1400	32.64170	-117.11706	SPR	240	✓	14	F.g.s.		light brown	N	N	Y	Y	Y	N
Grab Event Comments: (~1.5m) 4.9g																
5	1425	32.64178	-117.11715	21.5	240	✓	9	F.g.s.	✓	very, very	N	N	Y	Y	Y	N
Grab Event Comments: 4.9g																
6	1425	32.64178	-117.11715	1.5	240	✓	7	F.g.s.	✓	very, very	N	N	Y	Y	Y	N
Grab Event Comments:																

CTD Field Data Sheet

Date: 08/14/18

Time: 0945

Station ID: B18-10043

Water Depth: 5.5 feet (1.7m)

Tide: 5.5 +2.1

Weather: -31
+2.1

Odor: —

Floating Material?
(Yes / No) (No)

Photo Number: —

Visible Turbidity Plume?
(Yes / No) (No)

Water Color: clear

CTD Data Archived?
(Yes / No) (No)

Samples Collected?
(Yes / No) (No)

COMMENTS:

Just outside 100m radius to the SW
due to shallow depths - intertidal

WQ

WQ

DO 5.19

5.24

28°C Temp

28.3°C

7.76 pH

7.77

35.69 sal

36.14 sal

54, 112 SPC

57713

57, 995

58026

14

STATION OCCUPATION

BIGHT '18

Agency Code AMTC FW
 Vessel Name SEA MEXIC
 Latitude 32.61633
 Longitude -117.10322
 Arrival Time 0930
 (hh:mm)
 Depth (m) 5.5 m

Weather

Clear	<input checked="" type="checkbox"/>	Rain	<input type="checkbox"/>
Overcast	<input type="checkbox"/>	Thunderstorm	<input type="checkbox"/>
Partly cloudy	<input type="checkbox"/>	Fog	<input type="checkbox"/>
Drizzle	<input type="checkbox"/>	Fog & Drizzle	<input type="checkbox"/>
Hazy	<input type="checkbox"/>	Smoky	<input type="checkbox"/>

Sea State

Calm	<input checked="" type="checkbox"/>
Choppy	<input type="checkbox"/>
Rough	<input type="checkbox"/>
Confused	<input type="checkbox"/>

Salinity (ppt) 1
 Estuary Sites only

Abandoned site? ☐ Station Fail Code 1
 Y or N (If Y explain in comments)

Station ID 518-10043Date 08/14/18

Wind 5-10
 Speed (kts)
 Direction (4) W

Swell 0
 Period (s)
 Height (ft) 0
 Direction (1) 0

Nav Type

DGPS	<input type="checkbox"/>
GPS	<input checked="" type="checkbox"/>
WAAS	<input type="checkbox"/>

Equipment Type

Core	<input type="checkbox"/>	Van Veen	<input type="checkbox"/>
Petite Ponar	<input type="checkbox"/>	Tandem Van Veen	<input checked="" type="checkbox"/>

Station Comments

Water Sample Collection Time: 0945, 1015
Sed col. 1030, Sed Rep:
Sed col. ~6L (5.52)
but regrass

GRAB EVENTS

(Check all sample types that apply)																
#	Time (hh:mm)	Latitude (DD°MM.mmm)	Longitude (DDD°MM.mmm)	Depth (m)	Distance to target (m)	Grab Fail Code (7)	Penetration (cm)	Composition (3)	Odor (4)	Color (5)	Shell Hash (6) (N/L/WH)	Infauna (Y/N)	Sed Chem (Y/N)	Grain Size (Y/N)	Sed Tox (Y/N)	Debris (Y/N)
1	1030	32.61633	-117.10322	1.3	>100*	-	10**	silt	none	DKgy	N	y	N	N	N	N
Grab Event Comments: <u>regrass in grab</u>																
2	1030	32.61633	-117.10322	1.3	>100*	-	12	silt	none	DKgy	N	N	y	y	y	N
Grab Event Comments: <u>regrass in grab</u>																
3	1100	32.61629	-117.10324	2.2	>100	-	11	silt	none	DKgy	N	N	y	y	y	N
Grab Event Comments:																
4	1100	32.61629	-117.10324	2.2	>100	-	13**	silt	none	DKgy	N	N	y	y	y	N
Grab Event Comments: <u>#0 slump in grab.</u>																
Grab Event Comments:																
Grab Event Comments:																

* station was collected >100m from target due to shallow conditions + intertidal area.

20043
see sep. dataset

CTD Field Data Sheet

Date:

8/14/2018

Time:

1015

Station ID:

B18-20043 → replicate station for 10043

Water Depth:

5.5 ft

Tide:

+2.1 ft T

W9

Weather:

Sunny + windy

DO ~~5.19~~ 5.24

Odor:

N

TEMP 28°

Floating Material?
(Yes / No)

some algae in sample

pH ~~7.76~~ 7.77

Photo Number:

N/A

sal ~~33.69~~ 36.14

Visible Turbidity Plume?
(Yes / No)

NO

SPC 54,713

Water Color:

Brownish green

Cond. 58,026

CTD Data Archived?
(Yes / No)

Y

Samples Collected?
(Yes / No)

Y

COMMENTS:

BIGHT '18

Abandoned site? Y or N (If Y explain in comments)	Station Fail Code (2)	
---	---------------------------------	---

CTX not to test

Equipment Type	
Core	
Petite Ponar	
Van Veen	
Tandem Van Veen	

(Check all sample types that apply)

#	Time (hh:mm)	Latitude (DD°MM.mmm)	Longitude (DDD°MM.mmm)	Depth (m)	Distance to target (m)	Grab Fail Code (7)	Penetration (cm)	Composition (3)	Odor (4)	Color (5)	Shell Hash (6) (N/L/MH)	Infauna (Y/N)	Sed Chem (Y/N)	Grain Size (Y/N)	Sed Tox (Y/N)	Debris (Y/N)
1	1130	32.61639	-117.10320	2.2		/	11	SH	NO	dk gy	N	YN	Y	Y	N	N
Grab Event Comments:																
2	1130	32.61639	-117.10320	2.2		/	12	SH	NO	dkgy	N	N	Y	Y	N	N
Grab Event Comments:																
Grab Event Comments:																
Grab Event Comments:																
Grab Event Comments:																
Grab Event Comments:																

CTD Field Data Sheet

Date:

8/14/18

Time:

1200

Station ID:

B18-10044

Water Depth:

13.8 feet

Tide:

Rising

Weather:

clear

Odor:

—

Floating Material?
(Yes / No)

—

Photo Number:

—

Visible Turbidity Plume?
(Yes / No)

—

Water Color:

Clear

CTD Data Archived?
(Yes / No)

—

Samples Collected?
(Yes / No)

—

COMMENTS:

Intake Channel of power plant

—

—

WQ

7.32 mg/L

54,930 spc

59,137 C

36.29 ppt

7.92 pH

~~27.7~~

29.0 °C

BIGHT '18

Equipment Type	
Core	Van Veen
Petite Ponar	Tandem Van Veen

#	Time (hh:mm)	Latitude (DD°MM.mmm)	Longitude (DDD°MM.mmm)	Depth (m)	Distance to target (m)	Grab Fail Code (7)	Penetration (cm)	Composition (3)	Odor (4)	Color (5)	Shell Hash (6) (N/L/M/H)	Infauna (Y/N)	Sed Chem (Y/N)	Grain Size (Y/N)	Sed Tox (Y/N)	Debris (Y/N)
1	1210	32.61409	-117.09876	114	290	/	15	silt	/	DK grey	N	Y	N	N	N	N
Grab Event Comments: North of Riprap, 95m o.s. on surface																
2	1210	32.61409	-117.09876	114	/	/	15	silt	/	DK grey	N	N	Y	Y	Y	N
Grab Event Comments: N. of Riprap o.s. on surface																
3	1225	32.61411	-117.09877	4.3	/	/	15	silt	/	DK grey	N	N	Y	Y	Y	N
Grab Event Comments: N. of Riprap o.s. on surface																
4	1225	32.61411	-117.09877	4.3	/	/	15	silt	/	DK grey	N	N	Y	Y	Y	N
Grab Event Comments: o.s. on surface																
Grab Event Comments:																
Grab Event Comments:																

CTD Field Data Sheet

Date: 9/12/18

Time: 1215

Station ID: B18-10200

Water Depth: 6 ft (2m)

Tide: + 5.8 ft.

Weather: Clear

Odor: —

Floating Material? (Yes / No) algae / kelp Debris

Photo Number: —

Visible Turbidity Plume? (Yes / No) —

Water Color: clear/green

CTD Data Archived? (Yes / No) —

Samples Collected? (Yes / No) —

COMMENTS: —

WQ

(1.75)

	Surf	1	2
SAL	34.9	35.86	36.0
pH	7.93	7.97	8.02
SPC	53067	54284	54486 54362
Temp	26.0	26.0	25.3
DO	7.97 6.67	8.31 7.01	9.87 8.57

STATION OCCUPATION

BIGHT '18

Agency Code	AMEC
Vessel Name	EB3
Latitude	32.61784
Longitude	-117.09824
Arrival Time	1215
(hh:mm)	
Depth (m)	2 m

Weather	
Clear	Rain
Overcast	Thunderstorm
Partly cloudy	Fog
Drizzle	Fog & Drizzle
Hazy	Smoky

Sea State

Calm

Choppy

Rough

Confused

Salinity (ppt)

Estuary Sites only

Abandoned site

Y or N (if Y explain in comments)

Station ID **B18-10200**

Date 9/12/18

Abandoned site? Y or N (If Y explain in comments)	Station Fail Code (2)	
---	---------------------------------	--

Wind
Speed (kts) 5-10
Direction (4) West

Swell	
Period (s)	0
Height (ft)	0
Direction (1)	0

Nav Type	
DGPS	
GPS	
WAAS	

Equipment Type	
Core	Van Veen
Petite Ponar	Tandem Van Veen

Station Comments

Water Sample Collection Time: 1215

get
collab

TOX 8L
collected: _____

1325 m/s \sqrt{R}

GRAB EVENTS

(Check all sample types that apply)																
#	Time (hh:mm)	Latitude (DD°MM.mmm)	Longitude (DDD°MM.mmm)	Depth (m)	Distance to target (m)	Grab Fail Code (7)	Penetration (cm)	Composition (3)	Odor (4)	Color (5)	Shell Hash (6) (N/L/MH)	Infauna (Y/N)	Sed Chem (Y/N)	Grain Size (Y/N)	Sed Tox (Y/N)	Debris (Y/N)
1	1240	32.61784	-117.09884	2m	65	/	13	Fg.s	N	Lt BRN	L	J	N	N	N	N
Grab Event Comments: w/ 6 bag / staff 1cm. → DKGm < 1cm																
2	1240	"	"	2m	65	/	10	Fg.s.	N	"	L	N	Y	Y	Y	N
Grab Event Comments:																
3	1255	"	"	2m	64	/	14	Fg.s.	N	"	L	N	Y	Y	Y	N
Grab Event Comments: 5 Feet East																
4	1255	"	"	2m	64	/	11	Fg.s.	N	"	L	N	Y	Y	Y	N
Grab Event Comments: " "																
Grab Event Comments:																
Grab Event Comments:																

Tailgate Safety Meeting Report



Check One:

- ☐ Initial Kickoff Safety Meeting ☒ Regular/Daily Tailgate Safety Meeting ☐ Unscheduled Tailgate Safety Meeting

Date: 7/27/18 Site: RUMP-18

Field Manager: Tyler Hall (print) Site Health and Safety Coordinator: Tyler Hall (print)

Order of Business

Topics Discussed (check all that apply):

- | | |
|--|--|
| <input checked="" type="checkbox"/> Site History/Site Layout | <input type="checkbox"/> Engineering Controls |
| <input checked="" type="checkbox"/> Scope of Work | <input checked="" type="checkbox"/> PPE Required/PPE Used |
| <input type="checkbox"/> Personnel Responsibilities | <input type="checkbox"/> Define PPE Levels, Donning, Doffing Procedures |
| <input type="checkbox"/> Medical Surveillance Requirements | <input checked="" type="checkbox"/> Physical Hazards and Controls (e.g., overhead utility lines) |
| <input type="checkbox"/> Training Requirements | <input checked="" type="checkbox"/> Decontamination Procedures for Personnel and Equipment |
| <input type="checkbox"/> Safe Work Practices | <input checked="" type="checkbox"/> General Emergency Procedures (e.g., locations of air horns and what 1 or 2 blasts indicate) |
| <input type="checkbox"/> Logs, Reports, Recordkeeping | <input checked="" type="checkbox"/> Site/Regional Emergency Procedures (e.g., earthquake response, typhoon response, etc.) |
| <input type="checkbox"/> Sanitation and Illumination | <input type="checkbox"/> Medical Emergency Response Procedures (e.g., exposure control precautions, location of first aid kit, etc.) |
| <input type="checkbox"/> Air Surveillance Type and Frequency | <input type="checkbox"/> Hazardous Materials Spill Procedures |
| <input type="checkbox"/> Monitoring Instruments and Personal Monitoring | <input type="checkbox"/> Applicable SOPs (e.g., Hearing Conservation Program, Safe Driving, etc.) |
| <input type="checkbox"/> Action Levels | <input checked="" type="checkbox"/> Injury/Illness Reporting Procedures |
| <input type="checkbox"/> Accident Reporting Procedures | <input type="checkbox"/> Route to Hospital and Medical Care Provider Visit Guidelines |
| <input type="checkbox"/> Site Control (visitor access, buddy system, work zones, security, communications) | <input type="checkbox"/> Hazard Analysis of Work Tasks (chemical, physical, biological and energy health hazards and effects) |
| <input type="checkbox"/> Discussion of previous "near misses" including work crew suggestions to correct work practices to avoid similar occurrences | |

Safety suggestions by site workers: N/A

Action taken on previous suggestions: N/A

Injuries/accidents/personnel changes since previous meeting: N/A

Tailgate Safety Meeting Report (continued)



Observations of unsafe work practices/conditions that have developed since previous meeting: _____

Location of (or changes in the locations of) evacuation routes/safe refuge areas: _____

Additional comments: talked about slips / trips / Falls.
Sunscreen. Boat Wake, Pinch Points on Boat

Attendee signatures below indicate acknowledgment of the information and willingness to abide by the procedures discussed during this safety meeting.

Name (print)	Company	Signature
Tyler H. H.	AMEC	[Signature]
DARIO DIEHL	SCCWAP	Dario Diehl
Marisa Swiderski	Amec FW/Wood	Marisa Swiderski
Jeremy Burns	AMEC FW/WOOD	[Signature]
MAR-1 TAMBURNO	Merkle & Assoc.	[Signature]
Don Cluck	Seaventures	[Signature]
ROBERT LOHRMAN	SEAVENTURES	[Signature]

Meeting conducted by: Tyler Huff / Bob Lohman (print)
 Signature: [Signature]
 Title: SSHO / Boat Capt
 Time: 0805 7/27/19

Tailgate Safety Meeting Report



Check One:

☒ Initial Kickoff Safety Meeting ☐ Regular/Daily Tailgate Safety Meeting ☐ Unscheduled Tailgate Safety Meeting

Date: 7/10/2018 Site: DANA POINT HARBOR

Field Manager: Chris Stransky Site Health and Safety Coordinator: Tyler Huff
(print) (print)

Order of Business

Topics Discussed (check all that apply):

- | | |
|---|---|
| <input checked="" type="checkbox"/> Site History/Site Layout | <input checked="" type="checkbox"/> Engineering Controls |
| <input checked="" type="checkbox"/> Scope of Work | <input checked="" type="checkbox"/> PPE Required/PPE Used |
| <input checked="" type="checkbox"/> Personnel Responsibilities | <input checked="" type="checkbox"/> Define PPE Levels, Donning, Doffing Procedures |
| <input checked="" type="checkbox"/> Medical Surveillance Requirements | <input checked="" type="checkbox"/> Physical Hazards and Controls (e.g., overhead utility lines) |
| <input checked="" type="checkbox"/> Training Requirements | <input checked="" type="checkbox"/> Decontamination Procedures for Personnel and Equipment |
| <input checked="" type="checkbox"/> Safe Work Practices | <input checked="" type="checkbox"/> General Emergency Procedures (e.g., locations of air horns and what 1 or 2 blasts indicate) |
| <input checked="" type="checkbox"/> Logs, Reports, Recordkeeping | <input checked="" type="checkbox"/> Site/Regional Emergency Procedures (e.g., earthquake response, typhoon response, etc.) |
| <input checked="" type="checkbox"/> Sanitation and Illumination | <input checked="" type="checkbox"/> Medical Emergency Response Procedures (e.g., exposure control precautions, location of first aid kit, etc.) |
| <input checked="" type="checkbox"/> Air Surveillance Type and Frequency | <input checked="" type="checkbox"/> Hazardous Materials Spill Procedures |
| <input checked="" type="checkbox"/> Monitoring Instruments and Personal Monitoring | <input checked="" type="checkbox"/> Applicable SOPs (e.g., Hearing Conservation Program, Safe Driving, etc.) |
| <input checked="" type="checkbox"/> Action Levels | <input checked="" type="checkbox"/> Injury/Illness Reporting Procedures |
| <input checked="" type="checkbox"/> Accident Reporting Procedures | <input checked="" type="checkbox"/> Route to Hospital and Medical Care Provider Visit Guidelines |
| <input checked="" type="checkbox"/> Site Control (visitor access, buddy system, work zones, security, communications) | <input checked="" type="checkbox"/> Hazard Analysis of Work Tasks (chemical, physical, biological and energy health hazards and effects) |
| <input checked="" type="checkbox"/> Discussion of previous "near misses" including work crew suggestions to correct work practices to avoid similar occurrences | |

Safety suggestions by site workers: N/A

Action taken on previous suggestions: N/A

Injuries/accidents/personnel changes since previous meeting: N/A

Tailgate Safety Meeting Report (continued)



amec
foster
wheeler

Observations of unsafe work practices/conditions that have developed since previous meeting: _____

N/A

Location of (or changes in the locations of) evacuation routes/safe refuge areas: NO changes

Additional comments:

talked about Day 1 of Project
Roles/ Boat layout & work Flow

Attendee signatures below indicate acknowledgment of the information and willingness to abide by the procedures discussed during this safety meeting.

Name (print)	Company	Signature
Corey Shively	Wood	[Signature]
MARY TAMBURRO	N/A	[Signature]
Kevin Holcomb	Wood	[Signature]
Chris Strandy	Wood	[Signature]
BOB LOHRMAN	SEAVENTURES	[Signature]
Don Clady	Seaventures	[Signature]
John Rudolph	Wood	[Signature]
Tyler Hill	Wood	[Signature]

Meeting conducted by:

Chris Strandy / Bob Lohman
(print)

Title:

PM/ Capt

Signature:

[Signature]

Time:

0800 7/1/18