

TIDES ⁶

During processing, sounding were reduced to MLLW using data from 2 tide gauges. These gauges were operated by a sub-contractor, LCMF, and the data was delivered to the processing ship at the end of every Julian day.

Gauge	Location	Latitude	Longitude
9455869	North Foreland	61.0425	150.1636
9455781	Boulder Point	60.7761	151.2450

Tidal zones for this survey were defined after preliminary survey work in the fall of 1998 (SOL 52-DGNC-8-90028, Task Order #1). The zones used have generally the same shape as the NOAA preliminary zones in the survey area but form a finer mesh. The maximum time difference across any zone boundary in the new scheme was 2 minutes. The following plot shows the area around Sheet E and the tide zone layout. Table of tide zones used in Sheet E processing.

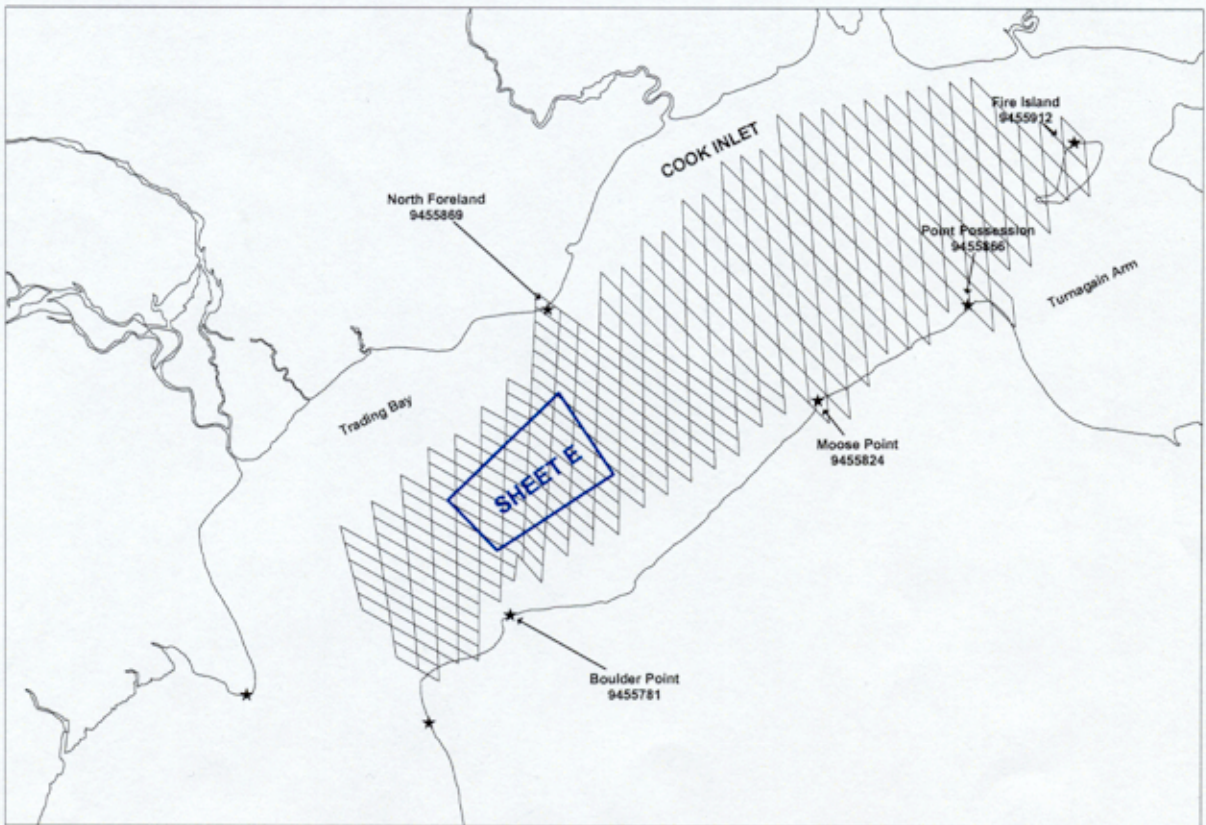


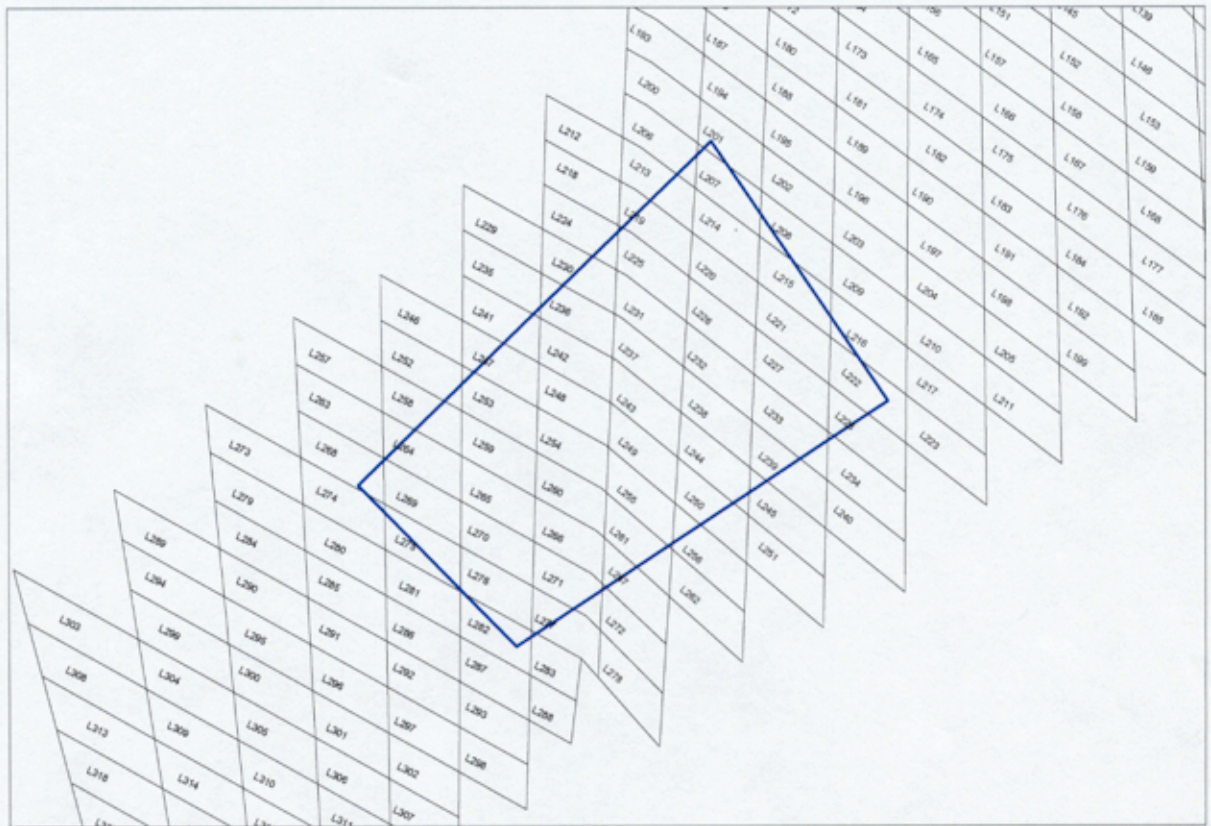
Table of tide zones used in Sheet E processing.

LCM F Zone	Primary Reference		Time mins	Range Ratio	Secondary Reference		Time mins	Range Ratio	LCM F Zone
	Name	Number			Name	Number			
201	N. F'land	9455869	-10	1.011	Boulder	9455781	36	1.023	201
206	N. F'land	9455869	-12	1.000	Boulder	9455781	34	1.011	206
207	N. F'land	9455869	-12	1.011	Boulder	9455781	34	1.023	207
208	N. F'land	9455869	-12	1.023	Boulder	9455781	34	1.034	208

213	N. F'land	9455869	-14	1.000	Boulder	9455781	32	1.011	213
214	N. F'land	9455869	-14	1.011	Boulder	9455781	32	1.023	214
215	N. F'land	9455869	-14	1.023	Boulder	9455781	32	1.034	215
216	N. F'land	9455869	-14	1.034	Boulder	9455781	32	1.046	216
219	N. F'land	9455869	-16	1.000	Boulder	9455781	30	1.011	219
220	N. F'land	9455869	-16	1.011	Boulder	9455781	30	1.023	220
221	N. F'land	9455869	-16	1.023	Boulder	9455781	30	1.034	221
222	Boulder	9455781	30	1.046	N. F'land	9455869	-16	1.034	222
224	N. F'land	9455869	-18	0.990	Boulder	9455781	28	1.000	224
225	N. F'land	9455869	-18	1.000	Boulder	9455781	28	1.011	225
226	N. F'land	9455869	-18	1.011	Boulder	9455781	28	1.023	226
227	Boulder	9455781	28	1.034	N. F'land	9455869	-18	1.023	227
228	Boulder	9455781	28	1.046	N. F'land	9455869	-18	1.034	228
230	N. F'land	9455869	-20	0.990	Boulder	9455781	26	1.000	230
231	N. F'land	9455869	-20	1.000	Boulder	9455781	26	1.011	231
232	Boulder	9455781	26	1.023	N. F'land	9455869	-20	1.011	232
233	Boulder	9455781	26	1.034	N. F'land	9455869	-20	1.023	233
234	Boulder	9455781	26	1.046	N. F'land	9455869	-20	1.034	234
235	N. F'land	9455869	-22	0.980	Boulder	9455781	24	0.990	235
236	N. F'land	9455869	-22	0.990	Boulder	9455781	24	1.000	236
237	Boulder	9455781	24	1.011	N. F'land	9455869	-22	1.000	237
238	Boulder	9455781	24	1.023	N. F'land	9455869	-22	1.011	238
240	Boulder	9455781	24	1.046	N. F'land	9455869	-22	1.034	240
241	N. F'land	9455869	-24	0.980	Boulder	9455781	22	0.990	241
242	Boulder	9455781	22	1.000	N. F'land	9455869	-24	0.990	242
243	Boulder	9455781	22	1.011	N. F'land	9455869	-24	1.000	243
244	Boulder	9455781	22	1.023	N. F'land	9455869	-24	1.011	244
245	Boulder	9455781	22	1.034	N. F'land	9455869	-24	1.023	245
247	Boulder	9455781	20	0.990	N. F'land	9455869	-26	0.980	247
248	Boulder	9455781	20	1.000	N. F'land	9455869	-26	0.990	248
249	Boulder	9455781	20	1.011	N. F'land	9455869	-26	1.000	249
250	Boulder	9455781	20	1.023	N. F'land	9455869	-26	1.011	250
252	Boulder	9455781	18	0.980	N. F'land	9455869	-28	0.970	252
253	Boulder	9455781	18	0.990	N. F'land	9455869	-28	0.980	253
254	Boulder	9455781	18	1.000	N. F'land	9455869	-28	0.990	254
255	Boulder	9455781	18	1.011	N. F'land	9455869	-28	1.000	255
256	Boulder	9455781	18	1.023	N. F'land	9455869	-28	1.011	256
258	Boulder	9455781	16	0.980	N. F'land	9455869	-30	0.970	258
259	Boulder	9455781	16	0.990	N. F'land	9455869	-30	0.980	259
260	Boulder	9455781	16	1.000	N. F'land	9455869	-30	0.990	260
261	Boulder	9455781	16	1.011	N. F'land	9455869	-30	1.000	261
263	Boulder	9455781	14	0.970	N. F'land	9455869	-32	0.960	263
264	Boulder	9455781	14	0.980	N. F'land	9455869	-32	0.970	264
265	Boulder	9455781	14	0.990	N. F'land	9455869	-32	0.980	265
266	Boulder	9455781	14	1.000	N. F'land	9455869	-32	0.990	266
267	Boulder	9455781	14	1.011	N. F'land	9455869	-32	1.000	267
268	Boulder	9455781	12	0.970	N. F'land	9455869	-34	0.960	268
269	Boulder	9455781	12	0.980	N. F'land	9455869	-34	0.970	269
270	Boulder	9455781	12	0.990	N. F'land	9455869	-34	0.980	270

271	Boulder	9455781	12	1.000	N. F'land	9455869	-34	0.990	271
272	Boulder	9455781	12	1.011	N. F'land	9455869	-34	1.000	272
274	Boulder	9455781	10	0.970	N. F'land	9455869	-36	0.960	274
275	Boulder	9455781	10	0.980	N. F'land	9455869	-36	0.970	275
276	Boulder	9455781	10	0.990	N. F'land	9455869	-36	0.980	276
277	Boulder	9455781	10	1.000	N. F'land	9455869	-36	0.990	277
281	Boulder	9455781	8	0.980	N. F'land	9455869	-38	0.970	281
282	Boulder	9455781	8	0.990	N. F'land	9455869	-38	0.980	282
283	Boulder	9455781	8	1.000	N. F'land	9455869	-38	0.990	283

Tide Zones in Sheet E.



Tidal data for a twenty-four hour period was assembled by LCMF and emailed to the Davidson at the end of every day, UTC. A cumulative file for each gauge was updated each day by appending the new data. HPTools (ver. 8.9.5) was used to calculate zoned tidal correctors using CARIS navigation files. The output from HPTools was appended to the project tide file, 1810.tide.

Appendix D - Tides and Water Levels

Abstract of Times of hydrography

YEAR	DAY	START TIME (UTC)	END TIME (UTC)	COMMENTS
1999	228	15:40:45	23:59:59	Patch Test 15:40:45 17:38:49
1999	229	00:00:00	20:15	Engine Problem
1999	230	N/a	N/a	Engine Problem
1999	231	N/a	N/a	Engine Problem
1999	232	09:37:08	23:59:59	Engine Problem/Patch Test
1999	233	00:00:00	23:59:59	W.O.W 13:00 16:33
1999	234	N/a	N/a	Medical Evac
1999	235	00:00:00	23:59:59	
1999	236	00:00:00	23:59:59	
1999	237	00:00:00	23:59:59	
1999	238	00:00:00	23:59:59	
1999	239	00:00:00	23:59:59	
1999	240	00:00:00	23:59:59	W.O.W 1140-1730
1999	241	00:00:00	23:59:59	
1999	242	00:00:00	23:59:59	
1999	243	00:00:00	23:59:59	
1999	244	00:00:00	14:17:34	