Control Analysis E2C 2013

The E2C was held on the former Bowater Mersey Lands and adjoining Halifax Water Authority Lands from its inception in 2000 until 2012. With the uncertainty over the continued availability of this location due to the closure of Bowater-Mersey operations it became necessary to look for a new location for the 2013 event.

Finding an area within the Halifax Regional Municipality (HRM) which had public access, covered an area large enough to hold the event **and** had sufficient logging roads/atv trails for safety access was quite a challenge.

Once a possible location to the south of Halifax International Airport had been identified it was first necessary to obtain permissions from the various forestry companies/landowners.   After the decision was made to use this location (in the fall of 2012), the E2C team ALSO had the challenge of producing usable maps and performing the necessary field work to be able to design the course entirely from scratch within the relatively short time frame of 6months, which included 3 months when the ground was snow covered.

For those who have competed in any of the previous E2C events, the most noticeable difference between the 2013 and earlier events would have been the more compact course, with far fewer roads and trails, making the 2013 course favour accurate navigation rather than speed.

Control Analysis

Across all categories, a total of 81 teams started the 8hr event and 71 teams started the 24hr event.   All controls "found" were included in the following analyses, including those found by teams who withdrew from the event or finished over the time limit. Because different tactics are employed in the 8hr and the 24hr events a separate analysis was performed for each event.

Number of hits per Control

As in recent years the 8hr competitors had "unrestricted" access to all 60 controls. The "compactness" of the course compared to previous years is demonstrated in Figure 1 which shows, somewhat surprisingly, that 59 out of the 60 controls were visited at least once by the 8hr competitors. The only control not visited, # 225 (70 point value), was not the most remote or most difficult control. Control #127, visited by 53 teams, was the most "popular" control (as it was in the 24hr event). Located in a small clearing close to the road and relatively close to the Start/Finish, it was an easy find.

In the 24hr event (Figure 2) all controls were found. The "least found" controls - #233 (4 visits) and #124 (5 visits), were both "Distance-Bearing" controls (see below). The least found "regular" control was rather isolated (#175, 6 visits). As in the 8hr event, control #127 was the most popular and was visited by 52 teams.

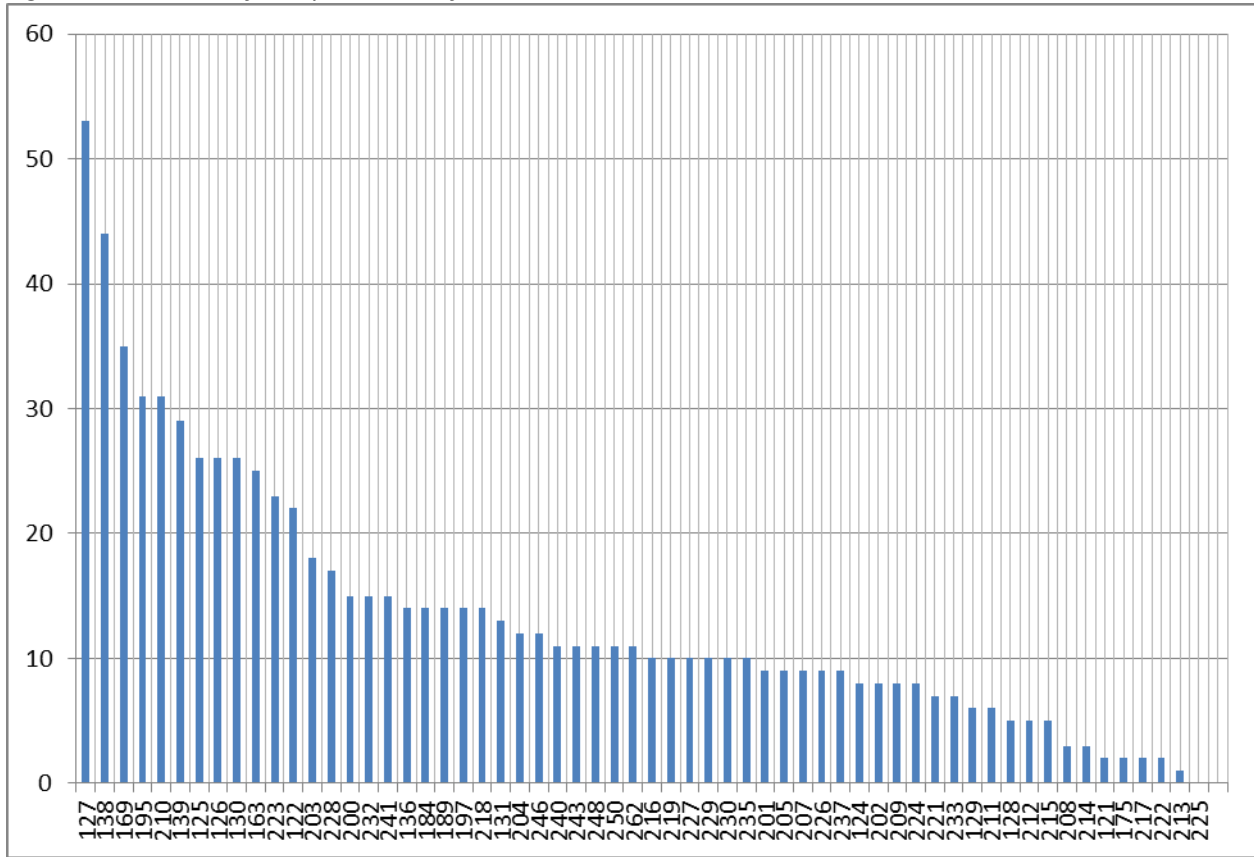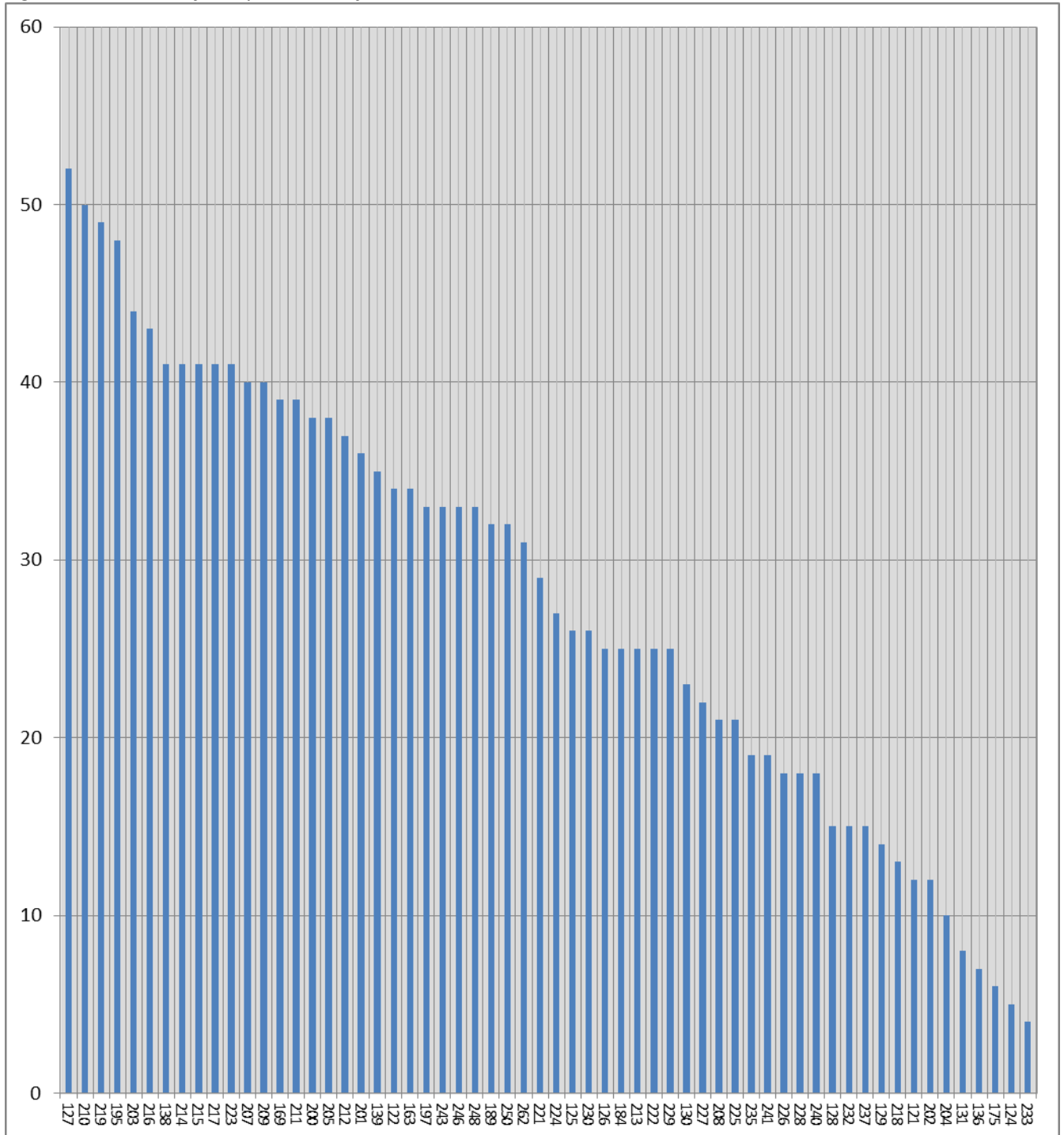*Figure 1 – Number of hits per Control for 8hr event*

Figure 2 – Number of hits per Control for 24hr event

Number of points scored per Control

Teams looking to maximise their score need to balance the chance of finding the control with the point value. Table 1, relating to the 8hr event, and Table 2, relating to the 24hr event, show the 20 controls yielding the most points. This analysis can also give the course setters an indication of how appropriately the point values were assigned. For the 8hr event , control #228 (worth 90 points) was visited by 17 teams and gave up 1530 points, compared to only 530 at the 'most visited' control of #127. Other controls yielding 1000 points or more were #218 - 1400 points (100 point value, visited by 14 teams), #232 – 1200 (80 points, 15 teams), #241 – 1200 (80 points, 15 teams) and #229, 1000 (100 points, 10 teams).

Table 1 – Top 20 scoring Control points visited in 8hr event

Control	Points	Hits	Total Pts
228	90	17	1530
218	100	14	1400
232	80	15	1200
241	80	15	1200
229	100	10	1000
246	80	12	960
210	30	31	930
207	100	9	900
138	20	44	880
240	80	11	880
243	80	11	880
248	80	11	880
250	80	11	880
262	80	11	880
139	30	29	870
209	100	8	800
219	80	10	800
227	80	10	800
235	80	10	800

In the 24hr event, of the 9 controls yielding over 3000 points, seven were located to the east of Burnt Lake. Control #222, which was assessed at the highest point value (150), was located after a tough trek of over 1 km from the nearest trail or nearest control and was found by 25 teams, yielding 3750 points. For those who had time to take a look they would have been rewarded with one of the best views on the entire course!

Table 2 - Top 20 scoring Control points visited in 24hr event

Control	Points	Hits	Total Pts
214	100	41	4100
217	100	41	4100
207	100	40	4000
209	100	40	4000
219	80	49	3920
211	100	39	3900
222	150	25	3750
213	120	25	3000
212	80	37	2960
243	80	33	2640
246	80	33	2640
248	80	33	2640
250	80	32	2560
229	100	25	2500
262	80	31	2480
201	60	36	2160
215	50	41	2050
221	70	29	2030
200	50	38	1900
205	50	38	1900

Analysis by Control grouping

Maximizing points scored also involves selecting a route to collect control "groupings". With the Start/Finish area in a relatively central location this year there were several options with varying risk/reward factors.

The two most obvious "groupings" were the Line-O and the Aerial Photograph controls. Both involved a relatively long trek out to the map/photograph locations. In the 8hr event at least 15 teams attempted the Line-O (or visited the Line-O area) but only a maximum of 8 teams found all the controls. For the 24hr event the numbers were at least 19 teams attempting, with a maximum of 12 finding all the controls.

Table 3 - Hits for Line-O Controls (8hr & 24hr)

Grouping	Control	Value	Hits 8 Hr	Hits 24 Hr
LINE O	202	80	8	12
LINE O	235	80	10	19
LINE O	237	80	9	15
LINE O	240	80	11	18
LINE O	241	80	15	19

The Aerial Photograph area appears to have been an easier challenge, with at least 12 teams visiting the area for the 8hr event and 11 of these finding all the controls. In the 24hr event 33 teams attempted the challenge, with 31 finding all of the controls.

Table 4 - hits for Aerial Photograph Controls (8hr & 24hr)

Grouping	Control	Value	Hits 8 Hr	Hit 24 Hr
AP	243	80	11	33
AP	246	80	12	33
AP	248	80	11	33
AP	250	80	11	32
AP	262	80	11	31

Analysis of the Distance-Bearing Controls indicates that this feature was not well explained/understood by the majority of competitors in either the 8hr or 24hr events. If this type of control is used in future years a more prominent method for marking the reference control will be used, as well as providing a better explanation in the pre-event notes and briefings. Table 5 compares the number of hits for the Distance Bearing controls to the hits for the reference controls.

Table 5 - Analysis of Distance Bearing Control hits compared to Reference Controls (8hr & 24hr)

DB Control	Hits 8 Hr	Hits 24 Hr	Ref Control	Hits 8 Hr	% of Ref	Hits 24 Hr	% of Ref
121	2	12	120	22	10	34	35
124	8	5	130	26	31	23	22
129	6	14	127	53	11	52	27
208	3	21	207	3	100	40	52
233	7	4	228	7	100	18	22

The "route" around the east side of Burnt Lake was recognised by the course designers as a tough challenge given the topography and lack of obvious navigation features. It was not expected that many 8hr teams would attempt this. Looking at controls #211 (6 visits), #212 (5 visits), and #213 (1 visit), it appears that up to 6 teams may have attempted the loop but only one team found all of the controls. For the 24hr event it seems to have been recognised that to score well it was necessary to take on this challenge, with over 40 of the 71 teams reaching either the northernmost or southernmost controls of the loop and a maximum of 25 teams finding all of the controls in the loop.

Table 6 – Hits for Control Groupings East of Burnt Lake (8hr & 24hr)

Grouping	Control	Value	Hits 8 Hr	Hit 24 Hr
EBL	203	40	18	44
EBL	205	50	9	38
EBL	207	100	9	40
EBL	209	100	8	40
EBL	211	100	6	39
EBL	212	80	5	37
EBL	213	120	1	25
EBL	214	100	3	41
EBL	215	50	5	41
EBL	217	100	2	41

For the 8hr event, not surprisingly, the most "popular" group of controls appears to have been the 4-control grouping of #169, #139, #138 and #163 close to the Start/Finish. A maximum of 25 teams found all of these controls. This bias was not so marked in the 24hr event, where the numbers attempting the grouping were similar to those for the East of Burnt Lake grouping.

Table 7- Hits for Control Group Northeast of Start/Finish (8hr & 24hr)

Grouping	Control	Value	Hits 8 Hr	Hit 24 Hr
NESF	138	20	44	41
NESF	139	30	29	35
NESF	163	30	25	34
NESF	169	20	35	39

The remaining groupings are more arbitrarily defined in terms of forming a more or less enclosed group. These are:

West of the entrance road around the Alder Deadwater (ADW)

Grouping	Control	Value	Hits 8 Hr	Hits 24 Hr
ADW	122	10	22	34
ADW	127	10	53	52
ADW	130	10	26	23
ADW	131	20	13	8
ADW	136	40	14	7
ADW	204	50	12	10
ADW	218	100	14	13
ADW	228	90	17	18
ADW	232	80	15	15

The 3 controls enclosed by the road/tracks to the North of Griswold Lake (NGL)

Grouping	Control	Value	Hits 8 Hr	Hits 24 Hr
NGL	125	30	26	26
NGL	126	20	26	25
NGL	175	50	2	6

The 4 controls Northwest of Oswald Lake (NWOL)

Grouping	Control	Value	Hits 8 Hr	Hits 24 Hr
NWOL	128	50	5	15
NWOL	184	30	14	25
NWOL	189	20	14	32
NWOL	195	20	31	48

The 4 Controls to the South of Griswold Lake (SGL)

Grouping	Control	Value	Hits 8 Hr	Hits 24 Hr
SGL	226	70	9	18
SGL	227	80	10	22 1)
SGL	229	100	10	25 2)
SGL	230	70	10	26

The Controls to the West of Burnt Lake (WBL)

Grouping	Control	Value	Hits 8 Hr	Hits 24 Hr
WBL	197	40	14	33
WBL	200	50	15	38
WBL	201	60	9	36
WBL	210	30	31	50
WBL	216	40	10	43
WBL	219	80	10	49
WBL	221	70	7	29
WBL	222	150	2	25
WBL	223	20	23	41
WBL	224	50	8	27
WBL	225	50	0	21

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