

## Monitoring of Chinese White Dolphins in Southwest Lantau Waters

23<sup>rd</sup> Monthly Progress Report (February 2017)

submitted to Environmental Project Office for the HZMB HKLR, HZMB HKBCF and TM-CLKL – Investigation

Submitted by

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### 1. Introduction

- 1.1. In March 2015, Hong Kong Cetacean Research Project (HKCRP) was appointed by the Environmental Project Office for the HZMB Hong Kong Projects to undertake a monitoring study of Chinese White Dolphins in Southwest Lantau (SWL) waters.
- 1.2. The objectives of the monitoring study are to quantify the abundance and density of Chinese White Dolphins in SWL waters, to identify individuals during the monitoring surveys, and to analyze their range use and movement patterns in Hong Kong and the wider Pearl River Estuary waters.
- 1.3. The monitoring study will supplement the on-going EM&A monitoring results of the HZMB Hong Kong Projects in North and West Lantau waters, and provide a more complete picture of dolphin usage and movements between different survey areas in western Hong Kong waters.
- 1.4. The present report is the 23<sup>rd</sup> monthly progress report under this dolphin monitoring study submitted to the Environmental Project Office, summarizing the survey findings during the month of February 2017.

### 2. Monitoring Methodology

#### 2.1. Vessel-based Line-transect Survey

- 2.1.1. According to the requirement of the technical proposal submitted to the Environmental Project Office, dolphin monitoring programme should cover all transect lines in SWL

survey area (see Figure 1) once per month upon instruction. The co-ordinates of all transect lines conducted during the dolphin monitoring survey are shown in Table 1.

Table 1. Co-ordinates of transect lines in SWL survey area (corresponding to transect line layout as shown in Figure 1)

Line #		Northing	Easting		Line #		Northing	Easting
SWL001	1	806180	802510		SWL007	13	807380	808520
	2	804250	802510			14	805600	808520
SWL002	3	806710	803480			15	804400	808520
	4	803450	803480			16	803000	808520
SWL003	5	807270	804500			17	802100	808520
	6	802690	804500			18	800470	808520
SWL004	7	807590	805450		SWL008	19	807380	809550
	8	802295	805450			20	805050	809550
SWL005	9	808490	806500			21	804400	809550
	10	801410	806500			22	800470	809550
SWL006	11	808500	807430		SWL009	23	807380	810550
	12	801250	807430			24	800470	810550
					SWL010	25	809410	811510
						26	801470	811510

- 2.1.2. The HKCRP survey team used standard line-transect methods (Buckland et al. 2001) to conduct the systematic vessel surveys, and followed the same technique of data collection that has been adopted over the last 18 years of marine mammal monitoring surveys in Hong Kong developed by HKCRP (see Hung 2014). For each monitoring vessel survey, a 15-m inboard vessel with an open upper deck (about 4.5 m above water surface) was used to make observations from the flying bridge area.
- 2.1.3. Two experienced observers from HKCRP (a data recorder and a primary observer) made up the on-effort survey team, and the survey vessel transited different transect lines at a constant speed of 13-15 km per hour. The data recorder searched with unaided eyes and

filled out the datasheets, while the primary observer searched for dolphins and porpoises continuously through 7 x 50 *Fujinon* marine binoculars. Both observers searched the sea ahead of the vessel, between 270° and 90° (in relation to the bow, which is defined as 0°). One to two additional experienced observer was available on the boat to work in shift (i.e. rotate every 30 minutes) in order to minimize fatigue of the survey team members. All observers were experienced in small cetacean survey techniques and identifying local cetacean species.

- 2.1.4. During on-effort survey periods, the survey team recorded effort data including time, position (latitude and longitude), weather conditions (Beaufort sea state and visibility), and distance traveled in each series (a continuous period of search effort) with the assistance of a handheld GPS (*Garmin eTrex Legend*).
- 2.1.5. Data including time, position and vessel speed were also automatically and continuously logged by handheld GPS throughout the entire survey for subsequent review.
- 2.1.6. When dolphins were sighted, the survey team would end the survey effort, and immediately record the initial sighting distance and angle of the dolphin group from the survey vessel, as well as the sighting time and position. Then the research vessel was diverted from its course to approach the animals for species identification, group size estimation, assessment of group composition, and behavioural observations. The perpendicular distance (PSD) of the dolphin group to the transect line was later calculated from the initial sighting distance and angle.
- 2.1.7. Survey effort being conducted along the parallel transect lines that were perpendicular to the coastlines (as indicated in Figure 1) was labeled as “primary” survey effort, while the survey effort conducted along the connecting lines between parallel lines as well as the section around the Soko Islands was labeled as “secondary” survey effort. Both primary and secondary survey effort were presented as on-effort survey effort in this report.
- 2.1.8. Encounter rates of Chinese White Dolphins (number of on-effort sightings per 100 km of survey effort and number of dolphins from all on-effort sightings per 100 km of survey effort) were calculated in SWL survey area in relation to the amount of survey effort conducted during each month of monitoring survey. Only data collected under Beaufort 3 or below condition would be used for encounter rate analysis. Dolphin encounter rates were calculated using the combined survey effort from both primary and secondary lines for comparison to the historical data collected by HKCRP in this survey area. For the historical data, the encounter rates were calculated by pooling all relevant survey effort and dolphin sightings to calculate a single index.

## 2.2. Photo-identification Work

- 2.2.1. When a group of Chinese White Dolphins were sighted during the line-transect survey, the survey team would end effort and approach the group slowly from the side and behind to take photographs of them. Every attempt was made to photograph every dolphin in the group, and even photograph both sides of the dolphins, since the colouration and markings on both sides may not be symmetrical.
- 2.2.2. A professional digital camera (*Canon EOS 7D* model), equipped with long telephoto lenses (100-400 mm zoom), were available on board for researchers to take sharp, close-up photographs of dolphins as they surfaced. The images were shot at the highest available resolution and stored on Compact Flash memory cards for downloading onto a computer.
- 2.2.3. All digital images taken in the field were first examined, and those containing potentially identifiable individuals were sorted out. These photographs would then be examined in greater detail, and were carefully compared to the existing Chinese White Dolphin photo-identification catalogue maintained by HKCRP since 1995. For individual dolphins that are not readily identifiable from the catalogue but have distinct features on their bodies, they will be placed in a pool of “potential new individuals”, with decision being made at the end of each year on whether any of them should be incorporated into the photo-ID catalogue.
- 2.2.4. Chinese White Dolphins can be identified by their natural markings, such as nicks, cuts, scars and deformities on their dorsal fin and body, and their unique spotting patterns were also used as secondary identifying features (Jefferson 2000).
- 2.2.5. All photographs of each individual were then compiled and arranged in chronological order, with data including the date and location first identified (initial sighting), re-sightings, associated dolphins, distinctive features, and age classes entered into a computer database.

## 3. Monitoring Results

### 3.1. Vessel-based Line-transect Survey

- 3.1.1. One set of systematic line-transect vessel survey was conducted under the present monitoring study on February 8<sup>th</sup> to cover all transect lines in SWL survey area once.

The route and track log of this survey are presented in Figure 2 and Appendix I respectively.

- 3.1.2. In addition, three line-transect surveys were also conducted under the AFCD long-term marine mammal monitoring programme in SWL survey area on February 1<sup>st</sup> (with lines no. SWL002, SWL004, SWL006, SWL008 and SWL010 covered), February 13<sup>th</sup> (with lines no. SWL003, SWL005 and SWL007 covered) and February 17<sup>th</sup> (with lines no. SWL001, SWL007 and SWL009 covered). Such monitoring data were also incorporated into the present study for various analyses.
- 3.1.3. For the present study alone, a total of 70.00 km of survey effort was collected from 10:11 to 15:10 (i.e. 4 hours and 59 minutes of survey time) on February 8<sup>th</sup>, with 90.2% of the total survey effort being conducted under favourable weather conditions (i.e. Beaufort Sea State 3 or below with good visibility) (Appendix II). The total survey effort conducted on primary and secondary lines were 54.07 km and 15.93 km respectively.
- 3.1.4. For the combined monitoring dataset from both the present study and AFCD monitoring study, a total of 156.95 km of survey effort was collected in SWL waters in February 2017.
- 3.1.5. During this monitoring month, four groups of seven Chinese White Dolphins were sighted from two of the three AFCD monitoring surveys, but none from the survey of the present study (Appendix III). Three of the four dolphin groups were sighted during on-effort search, and none of the dolphin groups was associated with any operating fishing vessel.
- 3.1.6. Notably, ten groups of 26 finless porpoises were also sighted in SWL survey area during the surveys conducted in February (with one group of a single porpoise sighted during the survey from the present study).
- 3.1.7. Distribution of the four dolphin sightings made in February 2017 is shown in Figure 3. Three of the four groups were sighted toward the northeastern end of the SWL survey area near Chi Ma Wan Peninsula and Siu A Chau, while the other group was sighted near Fan Lau (Figure 3). On the contrary, they were absent from the southern portions of the survey area during this monitoring month, where finless porpoises occurred frequently (Figure 3).
- 3.1.8. Encounter rates of Chinese White Dolphins deduced from the survey effort and on-effort sighting data made under favourable conditions (Beaufort 3 or below) in February 2017

are shown in Table 2. Comparison of encounter rates was also made to the one deduced in winter months (December-February) in the past decade (2005-14), as well as in February 2016 under the present study (Table 2).

Table 2. Overall dolphin encounter rates (sightings per 100 km of survey effort) from the present monitoring survey and combined database with AFCD monitoring survey conducted in February 2017 (primary lines only, as well as both primary lines and secondary lines were used) in SWL survey area in comparison to the ones deduced during winter months (December-February 2005-14) in the past decade

	<b>Encounter rate (STG)</b> (no. of on-effort dolphin sightings per 100 km of survey effort)		<b>Encounter rate (ANI)</b> (no. of dolphins from all on-effort sightings per 100 km of survey effort)	
	Primary Lines Only	Both Primary and Secondary Lines	Primary Lines Only	Both Primary and Secondary Lines
<b>HYD-HZMB data (February 2017)</b>	0.0	0.0	0.0	0.0
<b>Combined data (February 2017)</b>	3.19	2.16	6.38	4.32
<b>Combined data (February 2016)</b>	1.11	3.79	3.32	7.58
<b>Historical Data (Winter 2005-14)</b>		3.32		10.88

- 3.1.9. From the combined data of HYD-HZMB and AFCD monitoring surveys, the overall encounter rates based on both the number of dolphin sightings (ER(STG)) and total number of dolphins (ER(ANI)) deduced in February 2017 in SWL waters was lower than the ones deduced in February 2016 as well as the ones during the winter months of 2005-14 (Table 2).
- 3.1.10. The average group size of Chinese White Dolphins sighted during SWL monitoring surveys in February 2017 was 1.8 animal per group. This was much lower than the average group size recorded in winter months of 2005-14 (3.3). All four groups were very small with only 1-2 animals per group (see Appendix III).

### 3.2. Photo-identification Work

- 3.2.1. Attempts were made to photograph the dolphins sighted during all SWL surveys conducted in February 2017.
- 3.2.2. Among the seven dolphins sighted during this month's surveys, two individual dolphins (WL62 and WL91) were identified and re-sighted three times in total (Appendices IV and V). None of them was accompanied by any young calves.

3.2.3. Notably, the locations where the two individuals were re-sighted were well within their past home ranges in Southwest and West Lantau waters.

#### 4. References

Buckland, S. T., Anderson, D. R., Burnham, K. P., Laake, J. L., Borchers, D. L., and Thomas, L. 2001. Introduction to distance sampling: estimating abundance of biological populations. Oxford University Press, London.

Hung, S. K. 2014. Monitoring of Marine Mammals in Hong Kong waters: final report (2013-14). An unpublished report submitted to the Agriculture, Fisheries and Conservation Department, 231 pp.

Jefferson, T. A. 2000. Population biology of the Indo-Pacific hump-backed dolphin in Hong Kong waters. Wildlife Monographs 144:1-65.




Figure 1. Survey Lines and associated coordinates in Southwest Lantau survey area




Figure 2. Survey Route on February 8<sup>th</sup>, 2017 (note: red dots represent the tracked positions of survey boat logged continuously by GPS throughout the course of the survey)




Figure 3. Distribution of Chinese White Dolphin sightings during February 2017 monitoring surveys in Southwest Lantau survey area, with identified individuals indicated for their corresponding sightings (red dot: HYD-HZMB sighting; yellow dot: AFCD sighting)

## Appendix I. Track Log of SW Lantau Survey on February 8th, 2017

Date & Time	EFFORT	Position	Leg Length	Leg Time	Leg Speed
8/2/2017 10:11	ON	N22.22385 E113.93726			
8/2/2017 10:12	ON	N22.22362 E113.93690	45 m	0:00:12	14 kph
8/2/2017 10:12	ON	N22.22308 E113.93663	66 m	0:00:17	14 kph
8/2/2017 10:12	ON	N22.22253 E113.93663	62 m	0:00:16	14 kph
8/2/2017 10:12	ON	N22.22191 E113.93666	69 m	0:00:17	15 kph
8/2/2017 10:13	ON	N22.22122 E113.93667	77 m	0:00:19	15 kph
8/2/2017 10:13	ON	N22.22068 E113.93673	61 m	0:00:15	15 kph
8/2/2017 10:13	ON	N22.22010 E113.93677	64 m	0:00:16	14 kph
8/2/2017 10:13	ON	N22.21965 E113.93681	51 m	0:00:13	14 kph
8/2/2017 10:14	ON	N22.21919 E113.93682	51 m	0:00:13	14 kph
8/2/2017 10:14	ON	N22.21884 E113.93681	39 m	0:00:10	14 kph
8/2/2017 10:14	ON	N22.21836 E113.93687	54 m	0:00:14	14 kph
8/2/2017 10:14	ON	N22.21786 E113.93702	57 m	0:00:15	14 kph
8/2/2017 10:15	ON	N22.21742 E113.93712	50 m	0:00:13	14 kph
8/2/2017 10:15	ON	N22.21697 E113.93711	51 m	0:00:13	14 kph
8/2/2017 10:15	ON	N22.21655 E113.93715	46 m	0:00:12	14 kph
8/2/2017 10:15	ON	N22.21596 E113.93719	67 m	0:00:17	14 kph
8/2/2017 10:15	ON	N22.21542 E113.93717	59 m	0:00:15	14 kph
8/2/2017 10:16	ON	N22.21497 E113.93717	51 m	0:00:13	14 kph
8/2/2017 10:16	ON	N22.21451 E113.93716	51 m	0:00:13	14 kph
8/2/2017 10:16	ON	N22.21394 E113.93710	64 m	0:00:16	14 kph
8/2/2017 10:16	ON	N22.21349 E113.93705	51 m	0:00:13	14 kph
8/2/2017 10:17	ON	N22.21304 E113.93706	50 m	0:00:13	14 kph
8/2/2017 10:17	ON	N22.21255 E113.93709	55 m	0:00:14	14 kph
8/2/2017 10:17	ON	N22.21205 E113.93709	55 m	0:00:14	14 kph
8/2/2017 10:17	ON	N22.21152 E113.93710	59 m	0:00:15	14 kph
8/2/2017 10:18	ON	N22.21110 E113.93708	47 m	0:00:12	14 kph
8/2/2017 10:18	ON	N22.21064 E113.93708	51 m	0:00:13	14 kph
8/2/2017 10:18	ON	N22.21011 E113.93707	59 m	0:00:15	14 kph
8/2/2017 10:18	ON	N22.20976 E113.93704	39 m	0:00:10	14 kph
8/2/2017 10:18	ON	N22.20926 E113.93701	55 m	0:00:14	14 kph
8/2/2017 10:19	ON	N22.20881 E113.93697	51 m	0:00:13	14 kph
8/2/2017 10:19	ON	N22.20829 E113.93696	58 m	0:00:15	14 kph
8/2/2017 10:19	ON	N22.20783 E113.93698	51 m	0:00:13	14 kph
8/2/2017 10:19	ON	N22.20740 E113.93699	47 m	0:00:12	14 kph
8/2/2017 10:20	ON	N22.20684 E113.93695	63 m	0:00:16	14 kph
8/2/2017 10:20	ON	N22.20642 E113.93692	47 m	0:00:12	14 kph
8/2/2017 10:20	ON	N22.20600 E113.93689	47 m	0:00:12	14 kph
8/2/2017 10:20	ON	N22.20551 E113.93685	55 m	0:00:14	14 kph
8/2/2017 10:20	ON	N22.20502 E113.93681	55 m	0:00:14	14 kph
8/2/2017 10:21	ON	N22.20452 E113.93675	56 m	0:00:14	14 kph
8/2/2017 10:21	ON	N22.20395 E113.93671	63 m	0:00:16	14 kph
8/2/2017 10:21	ON	N22.20353 E113.93667	47 m	0:00:12	14 kph
8/2/2017 10:21	ON	N22.20303 E113.93662	55 m	0:00:14	14 kph
8/2/2017 10:22	ON	N22.20255 E113.93659	55 m	0:00:14	14 kph
8/2/2017 10:22	ON	N22.20205 E113.93657	55 m	0:00:14	14 kph
8/2/2017 10:22	ON	N22.20152 E113.93652	59 m	0:00:15	14 kph
8/2/2017 10:22	ON	N22.20121 E113.93652	35 m	0:00:09	14 kph
8/2/2017 10:22	ON	N22.20090 E113.93652	35 m	0:00:09	14 kph
8/2/2017 10:23	ON	N22.20037 E113.93649	59 m	0:00:15	14 kph
8/2/2017 10:23	ON	N22.20003 E113.93644	39 m	0:00:10	14 kph
8/2/2017 10:23	ON	N22.19962 E113.93645	46 m	0:00:12	14 kph
8/2/2017 10:23	ON	N22.19927 E113.93647	38 m	0:00:10	14 kph
8/2/2017 10:23	ON	N22.19896 E113.93650	35 m	0:00:09	14 kph
8/2/2017 10:23	ON	N22.19850 E113.93652	51 m	0:00:13	14 kph
8/2/2017 10:24	ON	N22.19807 E113.93653	48 m	0:00:12	14 kph
8/2/2017 10:24	ON	N22.19746 E113.93650	68 m	0:00:17	14 kph
8/2/2017 10:24	ON	N22.19700 E113.93646	51 m	0:00:13	14 kph
8/2/2017 10:24	ON	N22.19658 E113.93638	47 m	0:00:12	14 kph
8/2/2017 10:25	ON	N22.19610 E113.93639	54 m	0:00:14	14 kph
8/2/2017 10:25	ON	N22.19572 E113.93643	42 m	0:00:11	14 kph
8/2/2017 10:25	ON	N22.19518 E113.93644	60 m	0:00:15	14 kph
8/2/2017 10:25	ON	N22.19462 E113.93639	63 m	0:00:16	14 kph
8/2/2017 10:25	ON	N22.19427 E113.93636	39 m	0:00:10	14 kph

## Appendix I. (cont'd)

Date & Time	EFFORT	Position	Leg Length	Leg Time	Leg Speed
8/2/2017 10:26	ON	N22.19385 E113.93635	47 m	0:00:12	14 kph
8/2/2017 10:26	ON	N22.19343 E113.93629	47 m	0:00:12	14 kph
8/2/2017 10:26	ON	N22.19312 E113.93629	35 m	0:00:09	14 kph
8/2/2017 10:26	ON	N22.19271 E113.93632	45 m	0:00:12	14 kph
8/2/2017 10:26	ON	N22.19233 E113.93632	43 m	0:00:11	14 kph
8/2/2017 10:27	ON	N22.19196 E113.93635	41 m	0:00:11	13 kph
8/2/2017 10:27	ON	N22.19159 E113.93639	42 m	0:00:11	14 kph
8/2/2017 10:27	ON	N22.19123 E113.93642	40 m	0:00:10	14 kph
8/2/2017 10:27	ON	N22.19074 E113.93643	55 m	0:00:14	14 kph
8/2/2017 10:27	ON	N22.19036 E113.93645	42 m	0:00:11	14 kph
8/2/2017 10:28	ON	N22.18999 E113.93646	42 m	0:00:11	14 kph
8/2/2017 10:28	ON	N22.18965 E113.93647	37 m	0:00:10	13 kph
8/2/2017 10:28	ON	N22.18938 E113.93649	30 m	0:00:08	13 kph
8/2/2017 10:28	ON	N22.18898 E113.93657	45 m	0:00:12	14 kph
8/2/2017 10:28	ON	N22.18860 E113.93663	43 m	0:00:11	14 kph
8/2/2017 10:28	ON	N22.18809 E113.93669	56 m	0:00:14	15 kph
8/2/2017 10:29	ON	N22.18770 E113.93673	44 m	0:00:11	14 kph
8/2/2017 10:29	ON	N22.18721 E113.93682	55 m	0:00:14	14 kph
8/2/2017 10:29	ON	N22.18685 E113.93685	40 m	0:00:10	14 kph
8/2/2017 10:29	ON	N22.18649 E113.93689	40 m	0:00:10	14 kph
8/2/2017 10:29	ON	N22.18611 E113.93695	43 m	0:00:11	14 kph
8/2/2017 10:29	ON	N22.18597 E113.93696	16 m	0:00:04	14 kph
8/2/2017 10:30	ON	N22.18562 E113.93700	39 m	0:00:10	14 kph
8/2/2017 10:30	ON	N22.18519 E113.93705	48 m	0:00:12	14 kph
8/2/2017 10:30	ON	N22.18477 E113.93714	47 m	0:00:12	14 kph
8/2/2017 10:30	ON	N22.18427 E113.93722	57 m	0:00:14	15 kph
8/2/2017 10:30	ON	N22.18383 E113.93727	49 m	0:00:12	15 kph
8/2/2017 10:31	ON	N22.18344 E113.93728	44 m	0:00:11	14 kph
8/2/2017 10:31	ON	N22.18305 E113.93729	43 m	0:00:11	14 kph
8/2/2017 10:31	ON	N22.18271 E113.93734	39 m	0:00:10	14 kph
8/2/2017 10:31	ON	N22.18267 E113.93735	4 m	0:00:01	15 kph
8/2/2017 10:31	ON	N22.18231 E113.93738	40 m	0:00:10	15 kph
8/2/2017 10:31	ON	N22.18217 E113.93740	16 m	0:00:04	14 kph
8/2/2017 10:31	ON	N22.18182 E113.93745	39 m	0:00:10	14 kph
8/2/2017 10:32	ON	N22.18144 E113.93751	43 m	0:00:11	14 kph
8/2/2017 10:32	ON	N22.18105 E113.93757	43 m	0:00:11	14 kph
8/2/2017 10:32	ON	N22.18085 E113.93759	23 m	0:00:06	14 kph
8/2/2017 10:32	ON	N22.18047 E113.93765	42 m	0:00:11	14 kph
8/2/2017 10:32	ON	N22.18012 E113.93771	40 m	0:00:10	14 kph
8/2/2017 10:32	ON	N22.18005 E113.93772	8 m	0:00:02	14 kph
8/2/2017 10:32	ON	N22.17984 E113.93774	23 m	0:00:06	14 kph
8/2/2017 10:33	ON	N22.17937 E113.93774	53 m	0:00:13	15 kph
8/2/2017 10:33	ON	N22.17909 E113.93775	31 m	0:00:08	14 kph
8/2/2017 10:33	ON	N22.17874 E113.93776	39 m	0:00:10	14 kph
8/2/2017 10:33	ON	N22.17831 E113.93780	47 m	0:00:12	14 kph
8/2/2017 10:33	ON	N22.17821 E113.93781	12 m	0:00:03	14 kph
8/2/2017 10:33	ON	N22.17785 E113.93783	40 m	0:00:10	14 kph
8/2/2017 10:33	ON	N22.17752 E113.93784	36 m	0:00:09	15 kph
8/2/2017 10:34	ON	N22.17720 E113.93785	36 m	0:00:09	14 kph
8/2/2017 10:34	ON	N22.17688 E113.93787	36 m	0:00:09	14 kph
8/2/2017 10:34	ON	N22.17655 E113.93789	36 m	0:00:09	15 kph
8/2/2017 10:34	ON	N22.17630 E113.93789	28 m	0:00:07	14 kph
8/2/2017 10:34	ON	N22.17616 E113.93789	16 m	0:00:04	14 kph
8/2/2017 10:34	ON	N22.17577 E113.93788	43 m	0:00:11	14 kph
8/2/2017 10:34	ON	N22.17540 E113.93787	41 m	0:00:10	15 kph
8/2/2017 10:35	ON	N22.17509 E113.93785	35 m	0:00:09	14 kph
8/2/2017 10:35	ON	N22.17462 E113.93784	52 m	0:00:13	14 kph
8/2/2017 10:35	ON	N22.17436 E113.93784	29 m	0:00:07	15 kph
8/2/2017 10:35	ON	N22.17411 E113.93784	27 m	0:00:07	14 kph
8/2/2017 10:35	ON	N22.17376 E113.93782	39 m	0:00:10	14 kph
8/2/2017 10:35	ON	N22.17328 E113.93778	53 m	0:00:13	15 kph
8/2/2017 10:35	ON	N22.17321 E113.93778	8 m	0:00:02	15 kph
8/2/2017 10:36	ON	N22.17289 E113.93774	35 m	0:00:09	14 kph
8/2/2017 10:36	ON	N22.17282 E113.93773	8 m	0:00:02	14 kph

## Appendix I. (cont'd)

Date & Time	EFFORT	Position	Leg Length	Leg Time	Leg Speed
8/2/2017 10:36	ON	N22.17265 E113.93772	20 m	0:00:05	14 kph
8/2/2017 10:36	ON	N22.17226 E113.93770	43 m	0:00:11	14 kph
8/2/2017 10:36	ON	N22.17183 E113.93768	48 m	0:00:12	14 kph
8/2/2017 10:36	ON	N22.17139 E113.93768	48 m	0:00:12	14 kph
8/2/2017 10:36	ON	N22.17099 E113.93768	45 m	0:00:11	15 kph
8/2/2017 10:37	ON	N22.17066 E113.93766	36 m	0:00:09	15 kph
8/2/2017 10:37	ON	N22.17023 E113.93761	48 m	0:00:12	14 kph
8/2/2017 10:37	ON	N22.16991 E113.93755	37 m	0:00:09	15 kph
8/2/2017 10:37	ON	N22.16958 E113.93749	37 m	0:00:09	15 kph
8/2/2017 10:37	ON	N22.16933 E113.93744	28 m	0:00:07	14 kph
8/2/2017 10:37	ON	N22.16912 E113.93740	24 m	0:00:06	15 kph
8/2/2017 10:37	ON	N22.16883 E113.93733	32 m	0:00:08	15 kph
8/2/2017 10:38	ON	N22.16844 E113.93729	44 m	0:00:11	14 kph
8/2/2017 10:38	ON	N22.16804 E113.93730	44 m	0:00:11	14 kph
8/2/2017 10:38	ON	N22.16768 E113.93731	40 m	0:00:10	14 kph
8/2/2017 10:38	ON	N22.16732 E113.93729	40 m	0:00:10	14 kph
8/2/2017 10:38	ON	N22.16699 E113.93727	37 m	0:00:09	15 kph
8/2/2017 10:39	ON	N22.16663 E113.93720	40 m	0:00:10	15 kph
8/2/2017 10:39	ON	N22.16624 E113.93714	44 m	0:00:11	15 kph
8/2/2017 10:39	ON	N22.16584 E113.93713	44 m	0:00:11	14 kph
8/2/2017 10:39	ON	N22.16545 E113.93714	44 m	0:00:11	14 kph
8/2/2017 10:39	ON	N22.16516 E113.93711	32 m	0:00:08	15 kph
8/2/2017 10:39	ON	N22.16484 E113.93706	36 m	0:00:09	14 kph
8/2/2017 10:39	ON	N22.16474 E113.93705	12 m	0:00:03	14 kph
8/2/2017 10:40	ON	N22.16431 E113.93696	49 m	0:00:12	15 kph
8/2/2017 10:40	ON	N22.16398 E113.93689	37 m	0:00:09	15 kph
8/2/2017 10:40	ON	N22.16355 E113.93677	50 m	0:00:12	15 kph
8/2/2017 10:40	ON	N22.16327 E113.93669	32 m	0:00:08	15 kph
8/2/2017 10:40	ON	N22.16295 E113.93666	35 m	0:00:09	14 kph
8/2/2017 10:40	ON	N22.16277 E113.93665	20 m	0:00:05	14 kph
8/2/2017 10:40	ON	N22.16262 E113.93665	16 m	0:00:04	15 kph
8/2/2017 10:41	ON	N22.16230 E113.93661	37 m	0:00:09	15 kph
8/2/2017 10:41	ON	N22.16197 E113.93658	37 m	0:00:09	15 kph
8/2/2017 10:41	ON	N22.16160 E113.93653	41 m	0:00:10	15 kph
8/2/2017 10:41	ON	N22.16157 E113.93653	4 m	0:00:01	15 kph
8/2/2017 10:41	ON	N22.16129 E113.93648	32 m	0:00:08	14 kph
8/2/2017 10:41	ON	N22.16099 E113.93645	33 m	0:00:08	15 kph
8/2/2017 10:41	ON	N22.16096 E113.93645	4 m	0:00:01	14 kph
8/2/2017 10:41	ON	N22.16059 E113.93641	41 m	0:00:10	15 kph
8/2/2017 10:41	ON	N22.16031 E113.93638	32 m	0:00:08	14 kph
8/2/2017 10:42	ON	N22.15995 E113.93634	40 m	0:00:10	14 kph
8/2/2017 10:42	ON	N22.15956 E113.93637	44 m	0:00:11	14 kph
8/2/2017 10:42	ON	N22.15921 E113.93645	39 m	0:00:10	14 kph
8/2/2017 10:42	ON	N22.15907 E113.93647	16 m	0:00:04	14 kph
8/2/2017 10:42	ON	N22.15872 E113.93653	40 m	0:00:10	14 kph
8/2/2017 10:42	ON	N22.15837 E113.93659	40 m	0:00:10	14 kph
8/2/2017 10:43	ON	N22.15805 E113.93664	36 m	0:00:09	14 kph
8/2/2017 10:43	ON	N22.15770 E113.93670	40 m	0:00:10	14 kph
8/2/2017 10:43	ON	N22.15737 E113.93673	36 m	0:00:09	14 kph
8/2/2017 10:43	ON	N22.15705 E113.93675	36 m	0:00:09	14 kph
8/2/2017 10:43	ON	N22.15684 E113.93676	24 m	0:00:06	14 kph
8/2/2017 10:43	ON	N22.15670 E113.93677	16 m	0:00:04	14 kph
8/2/2017 10:43	ON	N22.15627 E113.93681	48 m	0:00:12	14 kph
8/2/2017 10:44	ON	N22.15591 E113.93683	40 m	0:00:10	14 kph
8/2/2017 10:44	ON	N22.15572 E113.93685	20 m	0:00:05	15 kph
8/2/2017 10:44	ON	N22.15530 E113.93688	48 m	0:00:12	14 kph
8/2/2017 10:44	ON	N22.15490 E113.93686	45 m	0:00:11	15 kph
8/2/2017 10:44	ON	N22.15446 E113.93683	49 m	0:00:12	15 kph
8/2/2017 10:44	ON	N22.15399 E113.93678	53 m	0:00:13	15 kph
8/2/2017 10:45	ON	N22.15363 E113.93673	41 m	0:00:10	15 kph
8/2/2017 10:45	ON	N22.15316 E113.93663	53 m	0:00:13	15 kph
8/2/2017 10:45	ON	N22.15284 E113.93655	37 m	0:00:09	15 kph
8/2/2017 10:45	ON	N22.15259 E113.93649	28 m	0:00:07	15 kph
8/2/2017 10:45	ON	N22.15231 E113.93642	32 m	0:00:08	15 kph

## Appendix I. (cont'd)

Date & Time	EFFORT	Position	Leg Length	Leg Time	Leg Speed
8/2/2017 10:45	ON	N22.15192 E113.93635	43 m	0:00:11	14 kph
8/2/2017 10:46	ON	N22.15158 E113.93623	40 m	0:00:10	14 kph
8/2/2017 10:46	ON	N22.15130 E113.93594	43 m	0:00:11	14 kph
8/2/2017 10:46	ON	N22.15116 E113.93568	32 m	0:00:08	14 kph
8/2/2017 10:46	ON	N22.15083 E113.93525	58 m	0:00:14	15 kph
8/2/2017 10:46	ON	N22.15053 E113.93502	40 m	0:00:10	15 kph
8/2/2017 10:46	ON	N22.15022 E113.93473	46 m	0:00:11	15 kph
8/2/2017 10:47	ON	N22.14994 E113.93441	45 m	0:00:11	15 kph
8/2/2017 10:47	ON	N22.14959 E113.93412	49 m	0:00:12	15 kph
8/2/2017 10:47	ON	N22.14926 E113.93375	53 m	0:00:13	15 kph
8/2/2017 10:47	ON	N22.14901 E113.93345	41 m	0:00:10	15 kph
8/2/2017 10:47	ON	N22.14858 E113.93307	62 m	0:00:15	15 kph
8/2/2017 10:48	ON	N22.14824 E113.93284	45 m	0:00:11	15 kph
8/2/2017 10:48	ON	N22.14799 E113.93269	32 m	0:00:08	15 kph
8/2/2017 10:48	ON	N22.14771 E113.93243	41 m	0:00:10	15 kph
8/2/2017 10:48	ON	N22.14740 E113.93204	53 m	0:00:13	15 kph
8/2/2017 10:48	ON	N22.14707 E113.93165	54 m	0:00:13	15 kph
8/2/2017 10:49	ON	N22.14677 E113.93144	40 m	0:00:10	15 kph
8/2/2017 10:49	ON	N22.14649 E113.93124	36 m	0:00:09	15 kph
8/2/2017 10:49	ON	N22.14610 E113.93095	53 m	0:00:13	15 kph
8/2/2017 10:49	ON	N22.14575 E113.93077	44 m	0:00:11	14 kph
8/2/2017 10:49	ON	N22.14535 E113.93057	49 m	0:00:12	15 kph
8/2/2017 10:49	ON	N22.14497 E113.93031	50 m	0:00:12	15 kph
8/2/2017 10:50	ON	N22.14458 E113.92994	58 m	0:00:14	15 kph
8/2/2017 10:50	ON	N22.14431 E113.92961	45 m	0:00:11	15 kph
8/2/2017 10:50	ON	N22.14402 E113.92930	45 m	0:00:11	15 kph
8/2/2017 10:50	ON	N22.14371 E113.92903	45 m	0:00:11	15 kph
8/2/2017 10:50	ON	N22.14349 E113.92860	50 m	0:00:13	14 kph
8/2/2017 10:51	ON	N22.14361 E113.92811	53 m	0:00:14	14 kph
8/2/2017 10:51	ON	N22.14388 E113.92764	57 m	0:00:15	14 kph
8/2/2017 10:51	ON	N22.14430 E113.92751	49 m	0:00:14	13 kph
8/2/2017 10:51	ON	N22.14463 E113.92752	37 m	0:00:10	13 kph
8/2/2017 10:52	ON	N22.14497 E113.92755	38 m	0:00:10	14 kph
8/2/2017 10:52	ON	N22.14539 E113.92760	46 m	0:00:12	14 kph
8/2/2017 10:52	ON	N22.14591 E113.92762	59 m	0:00:15	14 kph
8/2/2017 10:52	ON	N22.14619 E113.92764	31 m	0:00:08	14 kph
8/2/2017 10:52	ON	N22.14650 E113.92767	34 m	0:00:09	14 kph
8/2/2017 10:52	ON	N22.14685 E113.92767	39 m	0:00:10	14 kph
8/2/2017 10:53	ON	N22.14709 E113.92767	27 m	0:00:07	14 kph
8/2/2017 10:53	ON	N22.14723 E113.92767	16 m	0:00:04	14 kph
8/2/2017 10:53	ON	N22.14772 E113.92772	54 m	0:00:14	14 kph
8/2/2017 10:53	ON	N22.14806 E113.92778	39 m	0:00:10	14 kph
8/2/2017 10:53	ON	N22.14849 E113.92782	47 m	0:00:12	14 kph
8/2/2017 10:53	ON	N22.14884 E113.92786	39 m	0:00:10	14 kph
8/2/2017 10:54	ON	N22.14915 E113.92791	35 m	0:00:09	14 kph
8/2/2017 10:54	ON	N22.14946 E113.92799	36 m	0:00:09	14 kph
8/2/2017 10:54	ON	N22.14960 E113.92801	15 m	0:00:04	14 kph
8/2/2017 10:54	ON	N22.14995 E113.92802	40 m	0:00:10	14 kph
8/2/2017 10:54	ON	N22.15027 E113.92804	35 m	0:00:09	14 kph
8/2/2017 10:54	ON	N22.15069 E113.92808	47 m	0:00:12	14 kph
8/2/2017 10:54	ON	N22.15101 E113.92811	36 m	0:00:09	14 kph
8/2/2017 10:55	ON	N22.15136 E113.92815	39 m	0:00:10	14 kph
8/2/2017 10:55	ON	N22.15172 E113.92817	40 m	0:00:10	14 kph
8/2/2017 10:55	ON	N22.15215 E113.92819	48 m	0:00:12	14 kph
8/2/2017 10:55	ON	N22.15257 E113.92822	47 m	0:00:12	14 kph
8/2/2017 10:55	ON	N22.15298 E113.92822	45 m	0:00:11	15 kph
8/2/2017 10:55	ON	N22.15327 E113.92820	32 m	0:00:08	15 kph
8/2/2017 10:56	ON	N22.15378 E113.92814	57 m	0:00:14	15 kph
8/2/2017 10:56	ON	N22.15420 E113.92815	47 m	0:00:12	14 kph
8/2/2017 10:56	ON	N22.15461 E113.92823	47 m	0:00:12	14 kph
8/2/2017 10:56	ON	N22.15491 E113.92832	35 m	0:00:09	14 kph
8/2/2017 10:56	ON	N22.15531 E113.92838	45 m	0:00:11	15 kph
8/2/2017 10:57	ON	N22.15569 E113.92846	43 m	0:00:11	14 kph
8/2/2017 10:57	ON	N22.15612 E113.92853	49 m	0:00:12	15 kph

## Appendix I. (cont'd)

Date & Time	EFFORT	Position	Leg Length	Leg Time	Leg Speed
8/2/2017 10:57	ON	N22.15645 E113.92855	37 m	0:00:09	15 kph
8/2/2017 10:57	ON	N22.15684 E113.92857	44 m	0:00:11	14 kph
8/2/2017 10:57	ON	N22.15691 E113.92858	8 m	0:00:02	15 kph
8/2/2017 10:57	ON	N22.15705 E113.92858	16 m	0:00:04	14 kph
8/2/2017 10:57	ON	N22.15741 E113.92860	40 m	0:00:10	14 kph
8/2/2017 10:58	ON	N22.15777 E113.92862	40 m	0:00:10	14 kph
8/2/2017 10:58	ON	N22.15821 E113.92863	48 m	0:00:12	15 kph
8/2/2017 10:58	ON	N22.15864 E113.92861	49 m	0:00:12	15 kph
8/2/2017 10:58	ON	N22.15908 E113.92858	48 m	0:00:12	15 kph
8/2/2017 10:58	ON	N22.15940 E113.92858	36 m	0:00:09	14 kph
8/2/2017 10:58	ON	N22.15972 E113.92860	35 m	0:00:09	14 kph
8/2/2017 10:59	ON	N22.16019 E113.92863	53 m	0:00:13	15 kph
8/2/2017 10:59	ON	N22.16063 E113.92864	49 m	0:00:12	15 kph
8/2/2017 10:59	ON	N22.16111 E113.92864	53 m	0:00:13	15 kph
8/2/2017 10:59	ON	N22.16163 E113.92861	57 m	0:00:14	15 kph
8/2/2017 11:00	ON	N22.16211 E113.92857	53 m	0:00:13	15 kph
8/2/2017 11:00	ON	N22.16250 E113.92856	44 m	0:00:11	14 kph
8/2/2017 11:00	ON	N22.16294 E113.92851	50 m	0:00:12	15 kph
8/2/2017 11:00	ON	N22.16327 E113.92847	37 m	0:00:09	15 kph
8/2/2017 11:00	ON	N22.16371 E113.92843	49 m	0:00:12	15 kph
8/2/2017 11:00	ON	N22.16412 E113.92840	46 m	0:00:11	15 kph
8/2/2017 11:01	ON	N22.16452 E113.92838	45 m	0:00:11	15 kph
8/2/2017 11:01	ON	N22.16492 E113.92836	44 m	0:00:11	15 kph
8/2/2017 11:01	ON	N22.16536 E113.92837	49 m	0:00:12	15 kph
8/2/2017 11:01	ON	N22.16587 E113.92837	57 m	0:00:14	15 kph
8/2/2017 11:01	ON	N22.16627 E113.92834	45 m	0:00:11	15 kph
8/2/2017 11:02	ON	N22.16656 E113.92833	32 m	0:00:08	14 kph
8/2/2017 11:02	ON	N22.16696 E113.92833	45 m	0:00:11	15 kph
8/2/2017 11:02	ON	N22.16754 E113.92830	65 m	0:00:16	15 kph
8/2/2017 11:02	ON	N22.16787 E113.92828	36 m	0:00:09	15 kph
8/2/2017 11:02	ON	N22.16830 E113.92826	47 m	0:00:12	14 kph
8/2/2017 11:03	ON	N22.16869 E113.92824	44 m	0:00:11	14 kph
8/2/2017 11:03	ON	N22.16923 E113.92820	61 m	0:00:15	15 kph
8/2/2017 11:03	ON	N22.16973 E113.92821	56 m	0:00:14	14 kph
8/2/2017 11:03	ON	N22.17021 E113.92825	53 m	0:00:13	15 kph
8/2/2017 11:03	ON	N22.17057 E113.92824	40 m	0:00:10	15 kph
8/2/2017 11:04	ON	N22.17100 E113.92815	49 m	0:00:12	15 kph
8/2/2017 11:04	ON	N22.17136 E113.92812	39 m	0:00:10	14 kph
8/2/2017 11:04	ON	N22.17174 E113.92817	43 m	0:00:11	14 kph
8/2/2017 11:04	ON	N22.17216 E113.92826	47 m	0:00:12	14 kph
8/2/2017 11:04	ON	N22.17252 E113.92826	39 m	0:00:10	14 kph
8/2/2017 11:05	ON	N22.17291 E113.92823	44 m	0:00:11	14 kph
8/2/2017 11:05	ON	N22.17323 E113.92822	35 m	0:00:09	14 kph
8/2/2017 11:05	ON	N22.17359 E113.92824	40 m	0:00:10	14 kph
8/2/2017 11:05	ON	N22.17410 E113.92824	57 m	0:00:14	15 kph
8/2/2017 11:05	ON	N22.17460 E113.92821	56 m	0:00:14	14 kph
8/2/2017 11:06	ON	N22.17507 E113.92816	52 m	0:00:13	14 kph
8/2/2017 11:06	ON	N22.17551 E113.92809	50 m	0:00:12	15 kph
8/2/2017 11:06	ON	N22.17590 E113.92804	43 m	0:00:11	14 kph
8/2/2017 11:06	ON	N22.17637 E113.92805	53 m	0:00:13	15 kph
8/2/2017 11:06	ON	N22.17687 E113.92810	56 m	0:00:14	14 kph
8/2/2017 11:07	ON	N22.17727 E113.92809	44 m	0:00:11	14 kph
8/2/2017 11:07	ON	N22.17777 E113.92808	56 m	0:00:14	14 kph
8/2/2017 11:07	ON	N22.17828 E113.92810	57 m	0:00:14	15 kph
8/2/2017 11:07	ON	N22.17882 E113.92806	61 m	0:00:15	15 kph
8/2/2017 11:07	ON	N22.17926 E113.92801	49 m	0:00:12	15 kph
8/2/2017 11:08	ON	N22.17966 E113.92803	45 m	0:00:11	15 kph
8/2/2017 11:08	ON	N22.18010 E113.92807	49 m	0:00:12	15 kph
8/2/2017 11:08	ON	N22.18041 E113.92812	35 m	0:00:09	14 kph
8/2/2017 11:08	ON	N22.18077 E113.92814	39 m	0:00:10	14 kph
8/2/2017 11:08	ON	N22.18117 E113.92813	45 m	0:00:11	15 kph
8/2/2017 11:09	ON	N22.18160 E113.92816	48 m	0:00:12	14 kph
8/2/2017 11:09	ON	N22.18193 E113.92817	37 m	0:00:09	15 kph
8/2/2017 11:09	ON	N22.18244 E113.92816	57 m	0:00:14	15 kph

## Appendix I. (cont'd)

Date & Time	EFFORT	Position	Leg Length	Leg Time	Leg Speed
8/2/2017 11:09	ON	N22.18281 E113.92815	41 m	0:00:10	15 kph
8/2/2017 11:09	ON	N22.18328 E113.92817	52 m	0:00:13	14 kph
8/2/2017 11:10	ON	N22.18387 E113.92818	66 m	0:00:16	15 kph
8/2/2017 11:10	ON	N22.18442 E113.92819	61 m	0:00:15	15 kph
8/2/2017 11:10	ON	N22.18494 E113.92822	57 m	0:00:14	15 kph
8/2/2017 11:10	ON	N22.18545 E113.92825	57 m	0:00:14	15 kph
8/2/2017 11:11	ON	N22.18589 E113.92828	49 m	0:00:12	15 kph
8/2/2017 11:11	ON	N22.18619 E113.92827	33 m	0:00:08	15 kph
8/2/2017 11:11	ON	N22.18675 E113.92830	62 m	0:00:15	15 kph
8/2/2017 11:11	ON	N22.18722 E113.92831	53 m	0:00:13	15 kph
8/2/2017 11:11	ON	N22.18762 E113.92830	45 m	0:00:11	15 kph
8/2/2017 11:11	ON	N22.18806 E113.92830	48 m	0:00:12	15 kph
8/2/2017 11:12	ON	N22.18860 E113.92831	61 m	0:00:15	15 kph
8/2/2017 11:12	ON	N22.18915 E113.92826	62 m	0:00:15	15 kph
8/2/2017 11:12	ON	N22.18973 E113.92820	65 m	0:00:16	15 kph
8/2/2017 11:13	ON	N22.19028 E113.92823	61 m	0:00:15	15 kph
8/2/2017 11:13	ON	N22.19084 E113.92821	62 m	0:00:15	15 kph
8/2/2017 11:13	ON	N22.19139 E113.92822	62 m	0:00:15	15 kph
8/2/2017 11:13	ON	N22.19194 E113.92827	61 m	0:00:15	15 kph
8/2/2017 11:13	ON	N22.19242 E113.92825	53 m	0:00:13	15 kph
8/2/2017 11:14	ON	N22.19299 E113.92825	64 m	0:00:16	14 kph
8/2/2017 11:14	ON	N22.19350 E113.92828	57 m	0:00:14	15 kph
8/2/2017 11:14	ON	N22.19408 E113.92815	65 m	0:00:16	15 kph
8/2/2017 11:14	ON	N22.19458 E113.92811	56 m	0:00:14	14 kph
8/2/2017 11:15	ON	N22.19521 E113.92812	70 m	0:00:17	15 kph
8/2/2017 11:15	ON	N22.19591 E113.92808	78 m	0:00:19	15 kph
8/2/2017 11:15	ON	N22.19654 E113.92806	70 m	0:00:17	15 kph
8/2/2017 11:16	ON	N22.19709 E113.92805	61 m	0:00:15	15 kph
8/2/2017 11:16	ON	N22.19763 E113.92802	61 m	0:00:15	15 kph
8/2/2017 11:16	ON	N22.19825 E113.92802	69 m	0:00:17	15 kph
8/2/2017 11:16	ON	N22.19892 E113.92803	74 m	0:00:18	15 kph
8/2/2017 11:17	ON	N22.19944 E113.92799	58 m	0:00:14	15 kph
8/2/2017 11:17	ON	N22.20003 E113.92793	66 m	0:00:16	15 kph
8/2/2017 11:17	ON	N22.20072 E113.92783	78 m	0:00:19	15 kph
8/2/2017 11:18	ON	N22.20131 E113.92777	66 m	0:00:16	15 kph
8/2/2017 11:18	ON	N22.20190 E113.92774	65 m	0:00:16	15 kph
8/2/2017 11:18	ON	N22.20240 E113.92768	57 m	0:00:14	15 kph
8/2/2017 11:18	ON	N22.20291 E113.92762	57 m	0:00:14	15 kph
8/2/2017 11:19	ON	N22.20355 E113.92754	71 m	0:00:17	15 kph
8/2/2017 11:19	ON	N22.20414 E113.92734	69 m	0:00:17	15 kph
8/2/2017 11:19	ON	N22.20441 E113.92697	48 m	0:00:13	13 kph
8/2/2017 11:19	ON	N22.20434 E113.92643	56 m	0:00:15	13 kph
8/2/2017 11:20	ON	N22.20437 E113.92580	65 m	0:00:16	15 kph
8/2/2017 11:20	ON	N22.20442 E113.92533	49 m	0:00:12	15 kph
8/2/2017 11:20	ON	N22.20439 E113.92478	56 m	0:00:14	15 kph
8/2/2017 11:20	ON	N22.20439 E113.92425	55 m	0:00:14	14 kph
8/2/2017 11:20	ON	N22.20444 E113.92375	52 m	0:00:13	14 kph
8/2/2017 11:21	ON	N22.20441 E113.92329	48 m	0:00:12	14 kph
8/2/2017 11:21	ON	N22.20439 E113.92283	47 m	0:00:12	14 kph
8/2/2017 11:21	ON	N22.20438 E113.92232	52 m	0:00:13	14 kph
8/2/2017 11:21	ON	N22.20435 E113.92166	68 m	0:00:17	14 kph
8/2/2017 11:22	ON	N22.20433 E113.92105	63 m	0:00:16	14 kph
8/2/2017 11:22	ON	N22.20434 E113.92057	49 m	0:00:12	15 kph
8/2/2017 11:22	ON	N22.20431 E113.91998	61 m	0:00:15	15 kph
8/2/2017 11:22	ON	N22.20423 E113.91929	72 m	0:00:18	14 kph
8/2/2017 11:23	ON	N22.20415 E113.91876	55 m	0:00:14	14 kph
8/2/2017 11:23	ON	N22.20391 E113.91814	69 m	0:00:18	14 kph
8/2/2017 11:23	ON	N22.20356 E113.91793	45 m	0:00:12	13 kph
8/2/2017 11:23	ON	N22.20313 E113.91784	48 m	0:00:12	14 kph
8/2/2017 11:23	ON	N22.20270 E113.91774	49 m	0:00:12	15 kph
8/2/2017 11:24	ON	N22.20230 E113.91771	46 m	0:00:11	15 kph
8/2/2017 11:24	ON	N22.20226 E113.91771	4 m	0:00:01	14 kph
8/2/2017 11:24	ON	N22.20190 E113.91763	41 m	0:00:10	15 kph
8/2/2017 11:24	ON	N22.20149 E113.91756	46 m	0:00:11	15 kph

## Appendix I. (cont'd)

Date & Time	EFFORT	Position	Leg Length	Leg Time	Leg Speed
8/2/2017 11:24	ON	N22.20109 E113.91749	45 m	0:00:11	15 kph
8/2/2017 11:24	ON	N22.20065 E113.91737	50 m	0:00:12	15 kph
8/2/2017 11:25	ON	N22.20029 E113.91728	42 m	0:00:10	15 kph
8/2/2017 11:25	ON	N22.19997 E113.91718	37 m	0:00:09	15 kph
8/2/2017 11:25	ON	N22.19956 E113.91707	46 m	0:00:11	15 kph
8/2/2017 11:25	ON	N22.19945 E113.91705	12 m	0:00:03	15 kph
8/2/2017 11:25	ON	N22.19909 E113.91696	42 m	0:00:10	15 kph
8/2/2017 11:25	ON	N22.19872 E113.91687	42 m	0:00:10	15 kph
8/2/2017 11:26	ON	N22.19828 E113.91677	50 m	0:00:12	15 kph
8/2/2017 11:26	ON	N22.19791 E113.91666	43 m	0:00:10	15 kph
8/2/2017 11:26	ON	N22.19751 E113.91654	46 m	0:00:11	15 kph
8/2/2017 11:26	ON	N22.19702 E113.91646	55 m	0:00:13	15 kph
8/2/2017 11:26	ON	N22.19658 E113.91640	50 m	0:00:12	15 kph
8/2/2017 11:26	ON	N22.19617 E113.91632	46 m	0:00:11	15 kph
8/2/2017 11:27	ON	N22.19580 E113.91634	41 m	0:00:10	15 kph
8/2/2017 11:27	ON	N22.19540 E113.91638	45 m	0:00:11	15 kph
8/2/2017 11:27	ON	N22.19495 E113.91640	49 m	0:00:12	15 kph
8/2/2017 11:27	ON	N22.19451 E113.91641	50 m	0:00:12	15 kph
8/2/2017 11:27	ON	N22.19407 E113.91649	49 m	0:00:12	15 kph
8/2/2017 11:28	ON	N22.19371 E113.91654	40 m	0:00:10	15 kph
8/2/2017 11:28	ON	N22.19327 E113.91662	50 m	0:00:12	15 kph
8/2/2017 11:28	ON	N22.19284 E113.91673	49 m	0:00:12	15 kph
8/2/2017 11:28	ON	N22.19249 E113.91683	41 m	0:00:10	15 kph
8/2/2017 11:28	ON	N22.19210 E113.91694	45 m	0:00:11	15 kph
8/2/2017 11:29	ON	N22.19170 E113.91706	46 m	0:00:11	15 kph
8/2/2017 11:29	ON	N22.19120 E113.91720	58 m	0:00:14	15 kph
8/2/2017 11:29	ON	N22.19081 E113.91732	45 m	0:00:11	15 kph
8/2/2017 11:29	ON	N22.19047 E113.91745	41 m	0:00:10	15 kph
8/2/2017 11:29	ON	N22.19011 E113.91754	41 m	0:00:10	15 kph
8/2/2017 11:29	ON	N22.18967 E113.91761	50 m	0:00:12	15 kph
8/2/2017 11:30	ON	N22.18919 E113.91771	54 m	0:00:13	15 kph
8/2/2017 11:30	ON	N22.18876 E113.91784	50 m	0:00:12	15 kph
8/2/2017 11:30	ON	N22.18835 E113.91793	46 m	0:00:11	15 kph
8/2/2017 11:30	ON	N22.18792 E113.91803	50 m	0:00:12	15 kph
8/2/2017 11:30	ON	N22.18745 E113.91816	53 m	0:00:13	15 kph
8/2/2017 11:31	ON	N22.18687 E113.91832	67 m	0:00:16	15 kph
8/2/2017 11:31	ON	N22.18648 E113.91842	45 m	0:00:11	15 kph
8/2/2017 11:31	ON	N22.18598 E113.91864	61 m	0:00:15	15 kph
8/2/2017 11:31	ON	N22.18569 E113.91879	35 m	0:00:09	14 kph
8/2/2017 11:31	ON	N22.18541 E113.91896	36 m	0:00:09	14 kph
8/2/2017 11:32	ON	N22.18497 E113.91925	58 m	0:00:14	15 kph
8/2/2017 11:32	ON	N22.18457 E113.91953	53 m	0:00:13	15 kph
8/2/2017 11:32	ON	N22.18427 E113.91975	40 m	0:00:10	14 kph
8/2/2017 11:32	ON	N22.18393 E113.92003	48 m	0:00:12	14 kph
8/2/2017 11:32	ON	N22.18359 E113.92032	48 m	0:00:12	14 kph
8/2/2017 11:33	ON	N22.18326 E113.92062	48 m	0:00:12	14 kph
8/2/2017 11:33	ON	N22.18292 E113.92081	43 m	0:00:11	14 kph
8/2/2017 11:33	ON	N22.18258 E113.92096	41 m	0:00:10	15 kph
8/2/2017 11:33	ON	N22.18214 E113.92115	53 m	0:00:13	15 kph
8/2/2017 11:33	ON	N22.18165 E113.92133	58 m	0:00:14	15 kph
8/2/2017 11:34	ON	N22.18110 E113.92148	62 m	0:00:15	15 kph
8/2/2017 11:34	OFF	N22.18066 E113.92160	51 m	0:00:12	15 kph
8/2/2017 11:34	OFF	N22.18017 E113.92167	54 m	0:00:13	15 kph
8/2/2017 11:34	OFF	N22.17969 E113.92169	54 m	0:00:15	13 kph
8/2/2017 11:35	OFF	N22.17934 E113.92168	39 m	0:00:19	7 kph
8/2/2017 11:35	OFF	N22.17913 E113.92166	24 m	0:00:18	5 kph
8/2/2017 11:35	OFF	N22.17899 E113.92166	15 m	0:00:15	4 kph
8/2/2017 11:36	OFF	N22.17890 E113.92165	10 m	0:00:14	3 kph
8/2/2017 11:36	OFF	N22.17881 E113.92164	10 m	0:00:17	2 kph
8/2/2017 11:36	OFF	N22.17876 E113.92164	6 m	0:00:13	2 kph
8/2/2017 11:36	OFF	N22.17872 E113.92164	4 m	0:00:13	1.2 kph
8/2/2017 11:36	OFF	N22.17869 E113.92165	3 m	0:00:11	1.1 kph
8/2/2017 11:37	OFF	N22.17863 E113.92167	8 m	0:00:13	2 kph
8/2/2017 11:37	OFF	N22.17855 E113.92167	9 m	0:00:15	2 kph

## Appendix I. (cont'd)

Date & Time	EFFORT	Position	Leg Length	Leg Time	Leg Speed
8/2/2017 11:37	OFF	N22.17848 E113.92167	7 m	0:00:15	2 kph
8/2/2017 11:37	OFF	N22.17844 E113.92166	5 m	0:00:15	1.1 kph
8/2/2017 11:38	OFF	N22.17841 E113.92165	4 m	0:00:13	1.1 kph
8/2/2017 11:38	OFF	N22.17839 E113.92163	3 m	0:00:15	0.7 kph
8/2/2017 11:38	OFF	N22.17836 E113.92160	4 m	0:00:15	1.0 kph
8/2/2017 11:38	OFF	N22.17834 E113.92159	2 m	0:00:14	0.6 kph
8/2/2017 11:39	OFF	N22.17833 E113.92155	4 m	0:00:13	1.0 kph
8/2/2017 11:39	OFF	N22.17832 E113.92153	3 m	0:00:13	0.7 kph
8/2/2017 11:39	OFF	N22.17831 E113.92151	3 m	0:00:09	1.2 kph
8/2/2017 11:39	OFF	N22.17829 E113.92148	3 m	0:00:14	0.9 kph
8/2/2017 11:39	OFF	N22.17827 E113.92146	3 m	0:00:13	0.9 kph
8/2/2017 11:40	OFF	N22.17825 E113.92143	3 m	0:00:13	0.9 kph
8/2/2017 11:40	OFF	N22.17823 E113.92141	3 m	0:00:14	0.8 kph
8/2/2017 11:40	OFF	N22.17820 E113.92138	5 m	0:00:15	1.1 kph
8/2/2017 11:40	OFF	N22.17818 E113.92137	3 m	0:00:06	2 kph
8/2/2017 11:40	ON	N22.17805 E113.92133	16 m	0:00:08	7 kph
8/2/2017 11:41	ON	N22.17767 E113.92107	49 m	0:00:14	13 kph
8/2/2017 11:41	ON	N22.17747 E113.92056	57 m	0:00:15	14 kph
8/2/2017 11:41	ON	N22.17735 E113.91996	63 m	0:00:16	14 kph
8/2/2017 11:41	ON	N22.17716 E113.91942	60 m	0:00:15	14 kph
8/2/2017 11:42	ON	N22.17695 E113.91894	55 m	0:00:14	14 kph
8/2/2017 11:42	ON	N22.17671 E113.91850	51 m	0:00:13	14 kph
8/2/2017 11:42	ON	N22.17644 E113.91818	45 m	0:00:12	14 kph
8/2/2017 11:42	ON	N22.17605 E113.91806	46 m	0:00:12	14 kph
8/2/2017 11:42	ON	N22.17573 E113.91809	35 m	0:00:09	14 kph
8/2/2017 11:43	ON	N22.17524 E113.91822	57 m	0:00:14	15 kph
8/2/2017 11:43	ON	N22.17493 E113.91831	36 m	0:00:09	14 kph
8/2/2017 11:43	ON	N22.17455 E113.91843	44 m	0:00:11	14 kph
8/2/2017 11:43	ON	N22.17424 E113.91856	36 m	0:00:09	15 kph
8/2/2017 11:43	ON	N22.17393 E113.91867	36 m	0:00:09	15 kph
8/2/2017 11:43	ON	N22.17358 E113.91880	41 m	0:00:10	15 kph
8/2/2017 11:43	ON	N22.17325 E113.91896	40 m	0:00:10	14 kph
8/2/2017 11:44	ON	N22.17312 E113.91901	16 m	0:00:04	14 kph
8/2/2017 11:44	ON	N22.17280 E113.91908	36 m	0:00:09	14 kph
8/2/2017 11:44	ON	N22.17265 E113.91908	16 m	0:00:04	14 kph
8/2/2017 11:44	ON	N22.17221 E113.91909	49 m	0:00:12	15 kph
8/2/2017 11:44	ON	N22.17199 E113.91908	25 m	0:00:06	15 kph
8/2/2017 11:44	ON	N22.17184 E113.91906	17 m	0:00:04	15 kph
8/2/2017 11:44	ON	N22.17136 E113.91899	54 m	0:00:13	15 kph
8/2/2017 11:45	ON	N22.17103 E113.91896	37 m	0:00:09	15 kph
8/2/2017 11:45	ON	N22.17069 E113.91895	37 m	0:00:09	15 kph
8/2/2017 11:45	ON	N22.17036 E113.91893	37 m	0:00:09	15 kph
8/2/2017 11:45	ON	N22.16984 E113.91892	58 m	0:00:14	15 kph
8/2/2017 11:45	ON	N22.16955 E113.91893	33 m	0:00:08	15 kph
8/2/2017 11:45	ON	N22.16918 E113.91896	41 m	0:00:10	15 kph
8/2/2017 11:46	ON	N22.16881 E113.91899	42 m	0:00:10	15 kph
8/2/2017 11:46	ON	N22.16862 E113.91900	21 m	0:00:05	15 kph
8/2/2017 11:46	ON	N22.16825 E113.91897	41 m	0:00:10	15 kph
8/2/2017 11:46	ON	N22.16792 E113.91893	37 m	0:00:09	15 kph
8/2/2017 11:46	ON	N22.16758 E113.91888	38 m	0:00:09	15 kph
8/2/2017 11:46	ON	N22.16729 E113.91884	33 m	0:00:08	15 kph
8/2/2017 11:46	ON	N22.16725 E113.91885	4 m	0:00:01	14 kph
8/2/2017 11:46	ON	N22.16681 E113.91887	49 m	0:00:12	15 kph
8/2/2017 11:47	ON	N22.16644 E113.91887	42 m	0:00:10	15 kph
8/2/2017 11:47	ON	N22.16636 E113.91886	8 m	0:00:02	15 kph
8/2/2017 11:47	ON	N22.16621 E113.91886	17 m	0:00:04	15 kph
8/2/2017 11:47	ON	N22.16580 E113.91888	46 m	0:00:11	15 kph
8/2/2017 11:47	ON	N22.16539 E113.91885	46 m	0:00:11	15 kph
8/2/2017 11:47	ON	N22.16501 E113.91883	42 m	0:00:10	15 kph
8/2/2017 11:47	ON	N22.16468 E113.91881	37 m	0:00:09	15 kph
8/2/2017 11:48	ON	N22.16424 E113.91877	50 m	0:00:12	15 kph
8/2/2017 11:48	ON	N22.16379 E113.91873	49 m	0:00:12	15 kph
8/2/2017 11:48	ON	N22.16350 E113.91872	33 m	0:00:08	15 kph
8/2/2017 11:48	ON	N22.16317 E113.91869	37 m	0:00:09	15 kph

## Appendix I. (cont'd)

Date & Time	EFFORT	Position	Leg Length	Leg Time	Leg Speed
8/2/2017 11:48	ON	N22.16285 E113.91860	36 m	0:00:09	15 kph
8/2/2017 11:48	ON	N22.16243 E113.91846	49 m	0:00:12	15 kph
8/2/2017 11:49	ON	N22.16203 E113.91841	45 m	0:00:11	15 kph
8/2/2017 11:49	ON	N22.16170 E113.91844	37 m	0:00:09	15 kph
8/2/2017 11:49	ON	N22.16122 E113.91842	53 m	0:00:13	15 kph
8/2/2017 11:49	ON	N22.16078 E113.91834	50 m	0:00:12	15 kph
8/2/2017 11:49	ON	N22.16041 E113.91830	41 m	0:00:10	15 kph
8/2/2017 11:49	ON	N22.16009 E113.91832	36 m	0:00:09	15 kph
8/2/2017 11:50	ON	N22.15972 E113.91834	41 m	0:00:10	15 kph
8/2/2017 11:50	ON	N22.15921 E113.91829	57 m	0:00:14	15 kph
8/2/2017 11:50	ON	N22.15884 E113.91822	41 m	0:00:10	15 kph
8/2/2017 11:50	ON	N22.15851 E113.91816	37 m	0:00:09	15 kph
8/2/2017 11:50	ON	N22.15823 E113.91817	32 m	0:00:08	14 kph
8/2/2017 11:50	ON	N22.15801 E113.91819	24 m	0:00:06	14 kph
8/2/2017 11:51	ON	N22.15737 E113.91817	72 m	0:00:17	15 kph
8/2/2017 11:51	ON	N22.15684 E113.91813	59 m	0:00:14	15 kph
8/2/2017 11:51	ON	N22.15635 E113.91815	55 m	0:00:13	15 kph
8/2/2017 11:51	ON	N22.15617 E113.91816	21 m	0:00:05	15 kph
8/2/2017 11:51	ON	N22.15564 E113.91816	59 m	0:00:14	15 kph
8/2/2017 11:52	ON	N22.15505 E113.91808	66 m	0:00:16	15 kph
8/2/2017 11:52	ON	N22.15460 E113.91803	50 m	0:00:12	15 kph
8/2/2017 11:52	ON	N22.15411 E113.91800	55 m	0:00:13	15 kph
8/2/2017 11:52	ON	N22.15362 E113.91795	54 m	0:00:13	15 kph
8/2/2017 11:53	ON	N22.15321 E113.91795	46 m	0:00:11	15 kph
8/2/2017 11:53	ON	N22.15279 E113.91796	46 m	0:00:11	15 kph
8/2/2017 11:53	ON	N22.15245 E113.91796	38 m	0:00:09	15 kph
8/2/2017 11:53	ON	N22.15215 E113.91796	33 m	0:00:08	15 kph
8/2/2017 11:53	ON	N22.15178 E113.91797	41 m	0:00:10	15 kph
8/2/2017 11:53	ON	N22.15149 E113.91798	32 m	0:00:08	15 kph
8/2/2017 11:53	ON	N22.15115 E113.91798	37 m	0:00:09	15 kph
8/2/2017 11:53	ON	N22.15112 E113.91798	4 m	0:00:01	15 kph
8/2/2017 11:54	ON	N22.15090 E113.91799	24 m	0:00:06	15 kph
8/2/2017 11:54	ON	N22.15053 E113.91798	41 m	0:00:10	15 kph
8/2/2017 11:54	ON	N22.15013 E113.91797	45 m	0:00:11	15 kph
8/2/2017 11:54	ON	N22.14975 E113.91794	42 m	0:00:10	15 kph
8/2/2017 11:54	ON	N22.14946 E113.91796	32 m	0:00:08	14 kph
8/2/2017 11:54	ON	N22.14899 E113.91804	53 m	0:00:13	15 kph
8/2/2017 11:55	ON	N22.14862 E113.91805	41 m	0:00:10	15 kph
8/2/2017 11:55	ON	N22.14825 E113.91805	41 m	0:00:10	15 kph
8/2/2017 11:55	ON	N22.14807 E113.91806	20 m	0:00:05	15 kph
8/2/2017 11:55	ON	N22.14767 E113.91812	45 m	0:00:11	15 kph
8/2/2017 11:55	ON	N22.14722 E113.91813	50 m	0:00:12	15 kph
8/2/2017 11:55	ON	N22.14677 E113.91814	50 m	0:00:12	15 kph
8/2/2017 11:56	ON	N22.14621 E113.91824	63 m	0:00:15	15 kph
8/2/2017 11:56	ON	N22.14580 E113.91830	46 m	0:00:11	15 kph
8/2/2017 11:56	ON	N22.14539 E113.91826	46 m	0:00:11	15 kph
8/2/2017 11:56	ON	N22.14511 E113.91817	32 m	0:00:08	15 kph
8/2/2017 11:56	ON	N22.14475 E113.91811	40 m	0:00:10	15 kph
8/2/2017 11:57	ON	N22.14434 E113.91811	46 m	0:00:11	15 kph
8/2/2017 11:57	ON	N22.14396 E113.91811	42 m	0:00:10	15 kph
8/2/2017 11:57	ON	N22.14366 E113.91807	33 m	0:00:08	15 kph
8/2/2017 11:57	ON	N22.14333 E113.91802	38 m	0:00:09	15 kph
8/2/2017 11:57	ON	N22.14287 E113.91801	51 m	0:00:12	15 kph
8/2/2017 11:57	ON	N22.14241 E113.91796	51 m	0:00:12	15 kph
8/2/2017 11:57	ON	N22.14234 E113.91794	8 m	0:00:02	15 kph
8/2/2017 11:57	ON	N22.14219 E113.91789	17 m	0:00:04	15 kph
8/2/2017 11:58	ON	N22.14177 E113.91769	51 m	0:00:12	15 kph
8/2/2017 11:58	ON	N22.14152 E113.91737	44 m	0:00:11	14 kph
8/2/2017 11:58	ON	N22.14137 E113.91680	61 m	0:00:15	15 kph
8/2/2017 11:58	ON	N22.14134 E113.91620	63 m	0:00:15	15 kph
8/2/2017 11:59	ON	N22.14142 E113.91563	59 m	0:00:14	15 kph
8/2/2017 11:59	ON	N22.14147 E113.91502	63 m	0:00:15	15 kph
8/2/2017 11:59	ON	N22.14150 E113.91487	16 m	0:00:04	15 kph
8/2/2017 11:59	ON	N22.14162 E113.91425	65 m	0:00:15	16 kph

## Appendix I. (cont'd)

Date & Time	EFFORT	Position	Leg Length	Leg Time	Leg Speed
8/2/2017 11:59	ON	N22.14168 E113.91368	59 m	0:00:14	15 kph
8/2/2017 12:00	ON	N22.14167 E113.91308	62 m	0:00:15	15 kph
8/2/2017 12:00	ON	N22.14169 E113.91248	62 m	0:00:15	15 kph
8/2/2017 12:00	ON	N22.14176 E113.91176	75 m	0:00:18	15 kph
8/2/2017 12:00	ON	N22.14188 E113.91116	63 m	0:00:15	15 kph
8/2/2017 12:01	ON	N22.14204 E113.91051	70 m	0:00:17	15 kph
8/2/2017 12:01	ON	N22.14217 E113.90997	57 m	0:00:14	15 kph
8/2/2017 12:01	ON	N22.14231 E113.90929	73 m	0:00:18	15 kph
8/2/2017 12:02	ON	N22.14222 E113.90871	60 m	0:00:15	14 kph
8/2/2017 12:02	ON	N22.14214 E113.90807	67 m	0:00:16	15 kph
8/2/2017 12:02	ON	N22.14220 E113.90753	57 m	0:00:15	14 kph
8/2/2017 12:02	ON	N22.14255 E113.90733	43 m	0:00:13	12 kph
8/2/2017 12:02	ON	N22.14296 E113.90734	46 m	0:00:12	14 kph
8/2/2017 12:03	ON	N22.14342 E113.90737	51 m	0:00:13	14 kph
8/2/2017 12:03	ON	N22.14392 E113.90742	56 m	0:00:14	14 kph
8/2/2017 12:03	ON	N22.14434 E113.90746	47 m	0:00:12	14 kph
8/2/2017 12:03	ON	N22.14482 E113.90753	54 m	0:00:14	14 kph
8/2/2017 12:04	ON	N22.14527 E113.90747	50 m	0:00:13	14 kph
8/2/2017 12:04	ON	N22.14572 E113.90740	50 m	0:00:13	14 kph
8/2/2017 12:04	ON	N22.14613 E113.90733	47 m	0:00:12	14 kph
8/2/2017 12:04	ON	N22.14658 E113.90727	51 m	0:00:13	14 kph
8/2/2017 12:04	ON	N22.14714 E113.90725	62 m	0:00:16	14 kph
8/2/2017 12:05	ON	N22.14763 E113.90729	55 m	0:00:14	14 kph
8/2/2017 12:05	ON	N22.14802 E113.90736	44 m	0:00:11	14 kph
8/2/2017 12:05	ON	N22.14830 E113.90740	31 m	0:00:08	14 kph
8/2/2017 12:05	ON	N22.14869 E113.90746	44 m	0:00:11	14 kph
8/2/2017 12:05	ON	N22.14883 E113.90749	16 m	0:00:04	14 kph
8/2/2017 12:05	ON	N22.14900 E113.90753	20 m	0:00:05	14 kph
8/2/2017 12:06	ON	N22.14943 E113.90768	51 m	0:00:13	14 kph
8/2/2017 12:06	ON	N22.14990 E113.90788	56 m	0:00:14	14 kph
8/2/2017 12:06	ON	N22.15032 E113.90794	47 m	0:00:12	14 kph
8/2/2017 12:06	ON	N22.15078 E113.90792	52 m	0:00:13	14 kph
8/2/2017 12:06	ON	N22.15114 E113.90789	39 m	0:00:10	14 kph
8/2/2017 12:07	ON	N22.15153 E113.90790	44 m	0:00:11	14 kph
8/2/2017 12:07	ON	N22.15200 E113.90786	52 m	0:00:13	14 kph
8/2/2017 12:07	ON	N22.15246 E113.90779	52 m	0:00:13	14 kph
8/2/2017 12:07	ON	N22.15292 E113.90774	52 m	0:00:13	14 kph
8/2/2017 12:07	ON	N22.15343 E113.90777	57 m	0:00:14	15 kph
8/2/2017 12:08	ON	N22.15391 E113.90782	53 m	0:00:13	15 kph
8/2/2017 12:08	ON	N22.15446 E113.90780	61 m	0:00:15	15 kph
8/2/2017 12:08	ON	N22.15502 E113.90776	63 m	0:00:15	15 kph
8/2/2017 12:08	ON	N22.15528 E113.90775	29 m	0:00:07	15 kph
8/2/2017 12:08	ON	N22.15576 E113.90771	54 m	0:00:13	15 kph
8/2/2017 12:09	ON	N22.15606 E113.90740	46 m	0:00:13	13 kph
8/2/2017 12:09	ON	N22.15607 E113.90694	48 m	0:00:13	13 kph
8/2/2017 12:09	ON	N22.15594 E113.90626	71 m	0:00:18	14 kph
8/2/2017 12:09	ON	N22.15584 E113.90564	66 m	0:00:16	15 kph
8/2/2017 12:10	ON	N22.15572 E113.90498	69 m	0:00:17	15 kph
8/2/2017 12:10	ON	N22.15559 E113.90440	62 m	0:00:15	15 kph
8/2/2017 12:10	ON	N22.15544 E113.90379	65 m	0:00:16	15 kph
8/2/2017 12:11	ON	N22.15536 E113.90325	57 m	0:00:14	15 kph
8/2/2017 12:11	ON	N22.15539 E113.90275	51 m	0:00:13	14 kph
8/2/2017 12:11	ON	N22.15560 E113.90222	60 m	0:00:16	13 kph
8/2/2017 12:11	ON	N22.15594 E113.90171	65 m	0:00:17	14 kph
8/2/2017 12:12	ON	N22.15639 E113.90108	82 m	0:00:21	14 kph
8/2/2017 12:12	ON	N22.15672 E113.90052	68 m	0:00:18	14 kph
8/2/2017 12:12	ON	N22.15711 E113.89999	69 m	0:00:18	14 kph
8/2/2017 12:12	ON	N22.15738 E113.89961	50 m	0:00:13	14 kph
8/2/2017 12:13	ON	N22.15773 E113.89922	56 m	0:00:15	13 kph
8/2/2017 12:13	ON	N22.15816 E113.89885	61 m	0:00:16	14 kph
8/2/2017 12:13	ON	N22.15866 E113.89851	66 m	0:00:17	14 kph
8/2/2017 12:14	ON	N22.15928 E113.89819	76 m	0:00:20	14 kph
8/2/2017 12:14	ON	N22.15981 E113.89802	61 m	0:00:16	14 kph
8/2/2017 12:14	ON	N22.16048 E113.89801	75 m	0:00:20	14 kph

## Appendix I. (cont'd)

Date & Time	EFFORT	Position	Leg Length	Leg Time	Leg Speed
8/2/2017 12:15	ON	N22.16110 E113.89822	72 m	0:00:19	14 kph
8/2/2017 12:15	ON	N22.16163 E113.89855	69 m	0:00:18	14 kph
8/2/2017 12:15	ON	N22.16225 E113.89905	86 m	0:00:22	14 kph
8/2/2017 12:15	ON	N22.16269 E113.89949	66 m	0:00:17	14 kph
8/2/2017 12:16	ON	N22.16313 E113.89995	68 m	0:00:17	14 kph
8/2/2017 12:16	ON	N22.16359 E113.90046	73 m	0:00:18	15 kph
8/2/2017 12:16	ON	N22.16408 E113.90110	86 m	0:00:21	15 kph
8/2/2017 12:17	ON	N22.16452 E113.90172	80 m	0:00:19	15 kph
8/2/2017 12:17	ON	N22.16490 E113.90232	76 m	0:00:18	15 kph
8/2/2017 12:17	ON	N22.16537 E113.90301	88 m	0:00:21	15 kph
8/2/2017 12:18	ON	N22.16588 E113.90367	89 m	0:00:21	15 kph
8/2/2017 12:18	ON	N22.16650 E113.90458	116 m	0:00:28	15 kph
8/2/2017 12:19	ON	N22.16700 E113.90532	95 m	0:00:23	15 kph
8/2/2017 12:19	ON	N22.16746 E113.90600	87 m	0:00:21	15 kph
8/2/2017 12:19	ON	N22.16798 E113.90668	91 m	0:00:22	15 kph
8/2/2017 12:20	ON	N22.16846 E113.90718	74 m	0:00:18	15 kph
8/2/2017 12:20	ON	N22.16901 E113.90766	78 m	0:00:19	15 kph
8/2/2017 12:20	ON	N22.16964 E113.90795	77 m	0:00:19	15 kph
8/2/2017 12:21	ON	N22.17029 E113.90807	73 m	0:00:18	15 kph
8/2/2017 12:21	ON	N22.17080 E113.90806	57 m	0:00:14	15 kph
8/2/2017 12:21	ON	N22.17124 E113.90807	49 m	0:00:12	15 kph
8/2/2017 12:21	ON	N22.17172 E113.90812	53 m	0:00:13	15 kph
8/2/2017 12:21	ON	N22.17215 E113.90825	50 m	0:00:12	15 kph
8/2/2017 12:22	ON	N22.17265 E113.90839	57 m	0:00:14	15 kph
8/2/2017 12:22	ON	N22.17309 E113.90847	49 m	0:00:12	15 kph
8/2/2017 12:22	ON	N22.17374 E113.90842	73 m	0:00:18	15 kph
8/2/2017 12:22	ON	N22.17441 E113.90827	76 m	0:00:19	14 kph
8/2/2017 12:23	ON	N22.17491 E113.90812	57 m	0:00:14	15 kph
8/2/2017 12:23	ON	N22.17547 E113.90788	68 m	0:00:17	14 kph
8/2/2017 12:23	ON	N22.17603 E113.90753	72 m	0:00:18	14 kph
8/2/2017 12:24	ON	N22.17657 E113.90707	76 m	0:00:19	14 kph
8/2/2017 12:24	ON	N22.17707 E113.90651	80 m	0:00:20	14 kph
8/2/2017 12:24	ON	N22.17747 E113.90589	77 m	0:00:19	15 kph
8/2/2017 12:25	ON	N22.17786 E113.90522	82 m	0:00:20	15 kph
8/2/2017 12:25	ON	N22.17829 E113.90472	71 m	0:00:18	14 kph
8/2/2017 12:25	ON	N22.17880 E113.90440	65 m	0:00:16	15 kph
8/2/2017 12:25	ON	N22.17939 E113.90425	68 m	0:00:17	14 kph
8/2/2017 12:26	ON	N22.18004 E113.90415	73 m	0:00:18	15 kph
8/2/2017 12:26	ON	N22.18080 E113.90410	85 m	0:00:21	15 kph
8/2/2017 12:26	ON	N22.18160 E113.90410	89 m	0:00:22	15 kph
8/2/2017 12:27	ON	N22.18254 E113.90418	105 m	0:00:26	15 kph
8/2/2017 12:27	ON	N22.18333 E113.90426	89 m	0:00:22	15 kph
8/2/2017 12:28	ON	N22.18421 E113.90437	98 m	0:00:24	15 kph
8/2/2017 12:28	ON	N22.18486 E113.90442	73 m	0:00:18	15 kph
8/2/2017 12:28	ON	N22.18552 E113.90448	73 m	0:00:18	15 kph
8/2/2017 12:28	ON	N22.18617 E113.90453	73 m	0:00:18	15 kph
8/2/2017 12:29	ON	N22.18698 E113.90463	90 m	0:00:22	15 kph
8/2/2017 12:29	ON	N22.18766 E113.90482	78 m	0:00:19	15 kph
8/2/2017 12:29	ON	N22.18826 E113.90503	70 m	0:00:17	15 kph
8/2/2017 12:30	ON	N22.18860 E113.90519	41 m	0:00:10	15 kph
8/2/2017 12:30	ON	N22.18900 E113.90546	53 m	0:00:13	15 kph
8/2/2017 12:30	ON	N22.18938 E113.90589	61 m	0:00:15	15 kph
8/2/2017 12:30	ON	N22.18961 E113.90620	41 m	0:00:10	15 kph
8/2/2017 12:30	ON	N22.18982 E113.90652	40 m	0:00:10	14 kph
8/2/2017 12:31	ON	N22.19000 E113.90693	47 m	0:00:12	14 kph
8/2/2017 12:31	ON	N22.19013 E113.90729	39 m	0:00:10	14 kph
8/2/2017 12:31	ON	N22.19025 E113.90776	51 m	0:00:13	14 kph
8/2/2017 12:31	ON	N22.19037 E113.90799	27 m	0:00:07	14 kph
8/2/2017 12:31	ON	N22.19048 E113.90807	15 m	0:00:04	13 kph
8/2/2017 12:31	ON	N22.19092 E113.90813	49 m	0:00:13	14 kph
8/2/2017 12:32	ON	N22.19143 E113.90803	57 m	0:00:14	15 kph
8/2/2017 12:32	ON	N22.19201 E113.90790	67 m	0:00:16	15 kph
8/2/2017 12:32	ON	N22.19256 E113.90779	62 m	0:00:15	15 kph
8/2/2017 12:32	ON	N22.19304 E113.90777	53 m	0:00:13	15 kph

## Appendix I. (cont'd)

Date & Time	EFFORT	Position	Leg Length	Leg Time	Leg Speed
8/2/2017 12:33	ON	N22.19352 E113.90780	54 m	0:00:13	15 kph
8/2/2017 12:33	ON	N22.19400 E113.90784	54 m	0:00:13	15 kph
8/2/2017 12:33	ON	N22.19460 E113.90784	66 m	0:00:16	15 kph
8/2/2017 12:33	ON	N22.19516 E113.90784	62 m	0:00:15	15 kph
8/2/2017 12:34	ON	N22.19578 E113.90787	70 m	0:00:17	15 kph
8/2/2017 12:34	ON	N22.19649 E113.90785	79 m	0:00:19	15 kph
8/2/2017 12:34	ON	N22.19707 E113.90778	66 m	0:00:16	15 kph
8/2/2017 12:34	ON	N22.19774 E113.90768	75 m	0:00:18	15 kph
8/2/2017 12:35	ON	N22.19833 E113.90763	66 m	0:00:16	15 kph
8/2/2017 12:35	ON	N22.19897 E113.90765	71 m	0:00:17	15 kph
8/2/2017 12:35	ON	N22.19959 E113.90772	70 m	0:00:17	15 kph
8/2/2017 12:36	ON	N22.20014 E113.90784	62 m	0:00:15	15 kph
8/2/2017 12:36	ON	N22.20068 E113.90799	62 m	0:00:15	15 kph
8/2/2017 12:36	ON	N22.20121 E113.90805	59 m	0:00:15	14 kph
8/2/2017 12:36	ON	N22.20182 E113.90794	69 m	0:00:17	15 kph
8/2/2017 12:37	ON	N22.20224 E113.90783	48 m	0:00:12	14 kph
8/2/2017 12:37	ON	N22.20277 E113.90770	61 m	0:00:15	15 kph
8/2/2017 12:37	ON	N22.20327 E113.90764	55 m	0:00:14	14 kph
8/2/2017 12:37	ON	N22.20374 E113.90761	53 m	0:00:13	15 kph
8/2/2017 12:38	ON	N22.20427 E113.90762	59 m	0:00:15	14 kph
8/2/2017 12:38	ON	N22.20474 E113.90768	52 m	0:00:13	14 kph
8/2/2017 12:38	ON	N22.20537 E113.90784	72 m	0:00:18	14 kph
8/2/2017 12:38	ON	N22.20591 E113.90786	60 m	0:00:16	13 kph
8/2/2017 12:39	ON	N22.20634 E113.90762	54 m	0:00:14	14 kph
8/2/2017 12:39	ON	N22.20680 E113.90711	74 m	0:00:19	14 kph
8/2/2017 12:39	ON	N22.20715 E113.90654	70 m	0:00:18	14 kph
8/2/2017 12:39	ON	N22.20754 E113.90590	78 m	0:00:20	14 kph
8/2/2017 12:40	ON	N22.20795 E113.90530	77 m	0:00:20	14 kph
8/2/2017 12:40	ON	N22.20832 E113.90475	70 m	0:00:18	14 kph
8/2/2017 12:40	ON	N22.20877 E113.90403	89 m	0:00:23	14 kph
8/2/2017 12:41	ON	N22.20908 E113.90352	63 m	0:00:16	14 kph
8/2/2017 12:41	ON	N22.20941 E113.90291	73 m	0:00:19	14 kph
8/2/2017 12:41	ON	N22.20980 E113.90224	82 m	0:00:21	14 kph
8/2/2017 12:42	ON	N22.21013 E113.90172	65 m	0:00:16	15 kph
8/2/2017 12:42	ON	N22.21044 E113.90119	64 m	0:00:16	14 kph
8/2/2017 12:42	ON	N22.21082 E113.90058	75 m	0:00:19	14 kph
8/2/2017 12:43	ON	N22.21121 E113.89998	76 m	0:00:19	14 kph
8/2/2017 12:43	ON	N22.21160 E113.89947	68 m	0:00:17	14 kph
8/2/2017 12:43	ON	N22.21213 E113.89886	86 m	0:00:21	15 kph
8/2/2017 12:44	ON	N22.21259 E113.89838	71 m	0:00:18	14 kph
8/2/2017 12:44	ON	N22.21305 E113.89787	74 m	0:00:18	15 kph
8/2/2017 12:44	ON	N22.21332 E113.89731	64 m	0:00:17	14 kph
8/2/2017 12:44	ON	N22.21312 E113.89695	44 m	0:00:13	12 kph
8/2/2017 12:44	ON	N22.21280 E113.89683	37 m	0:00:10	13 kph
8/2/2017 12:45	ON	N22.21235 E113.89677	51 m	0:00:13	14 kph
8/2/2017 12:45	ON	N22.21188 E113.89678	52 m	0:00:13	15 kph
8/2/2017 12:45	ON	N22.21133 E113.89679	61 m	0:00:15	15 kph
8/2/2017 12:45	ON	N22.21100 E113.89680	36 m	0:00:09	15 kph
8/2/2017 12:46	ON	N22.21053 E113.89682	53 m	0:00:13	15 kph
8/2/2017 12:46	ON	N22.21005 E113.89682	53 m	0:00:13	15 kph
8/2/2017 12:46	ON	N22.20966 E113.89684	44 m	0:00:11	14 kph
8/2/2017 12:46	ON	N22.20909 E113.89685	64 m	0:00:16	14 kph
8/2/2017 12:46	ON	N22.20856 E113.89687	60 m	0:00:15	14 kph
8/2/2017 12:47	ON	N22.20802 E113.89686	60 m	0:00:15	14 kph
8/2/2017 12:47	ON	N22.20746 E113.89686	63 m	0:00:16	14 kph
8/2/2017 12:47	ON	N22.20692 E113.89693	60 m	0:00:15	14 kph
8/2/2017 12:47	ON	N22.20639 E113.89698	59 m	0:00:15	14 kph
8/2/2017 12:48	ON	N22.20579 E113.89706	67 m	0:00:17	14 kph
8/2/2017 12:48	ON	N22.20527 E113.89712	59 m	0:00:15	14 kph
8/2/2017 12:48	ON	N22.20481 E113.89716	51 m	0:00:13	14 kph
8/2/2017 12:48	ON	N22.20438 E113.89724	48 m	0:00:12	14 kph
8/2/2017 12:49	ON	N22.20400 E113.89727	43 m	0:00:11	14 kph
8/2/2017 12:49	ON	N22.20361 E113.89725	43 m	0:00:11	14 kph
8/2/2017 12:49	ON	N22.20316 E113.89727	50 m	0:00:13	14 kph

## Appendix I. (cont'd)

Date & Time	EFFORT	Position	Leg Length	Leg Time	Leg Speed
8/2/2017 12:49	ON	N22.20281 E113.89729	39 m	0:00:10	14 kph
8/2/2017 12:49	ON	N22.20243 E113.89729	43 m	0:00:11	14 kph
8/2/2017 12:49	ON	N22.20232 E113.89728	12 m	0:00:03	14 kph
8/2/2017 12:49	ON	N22.20219 E113.89727	15 m	0:00:04	14 kph
8/2/2017 12:50	ON	N22.20174 E113.89723	50 m	0:00:13	14 kph
8/2/2017 12:50	ON	N22.20131 E113.89724	47 m	0:00:12	14 kph
8/2/2017 12:50	ON	N22.20096 E113.89725	39 m	0:00:10	14 kph
8/2/2017 12:50	ON	N22.20053 E113.89724	48 m	0:00:12	14 kph
8/2/2017 12:50	ON	N22.20004 E113.89722	54 m	0:00:14	14 kph
8/2/2017 12:51	ON	N22.19966 E113.89721	43 m	0:00:11	14 kph
8/2/2017 12:51	ON	N22.19924 E113.89723	47 m	0:00:12	14 kph
8/2/2017 12:51	ON	N22.19885 E113.89725	43 m	0:00:11	14 kph
8/2/2017 12:51	ON	N22.19836 E113.89723	55 m	0:00:14	14 kph
8/2/2017 12:51	ON	N22.19794 E113.89727	47 m	0:00:12	14 kph
8/2/2017 12:52	ON	N22.19752 E113.89732	47 m	0:00:12	14 kph
8/2/2017 12:52	ON	N22.19710 E113.89736	47 m	0:00:12	14 kph
8/2/2017 12:52	ON	N22.19660 E113.89736	55 m	0:00:14	14 kph
8/2/2017 12:52	ON	N22.19625 E113.89737	39 m	0:00:10	14 kph
8/2/2017 12:52	ON	N22.19586 E113.89741	43 m	0:00:11	14 kph
8/2/2017 12:53	ON	N22.19540 E113.89743	51 m	0:00:13	14 kph
8/2/2017 12:53	ON	N22.19497 E113.89742	48 m	0:00:12	14 kph
8/2/2017 12:53	ON	N22.19452 E113.89738	51 m	0:00:13	14 kph
8/2/2017 12:53	ON	N22.19404 E113.89733	53 m	0:00:14	14 kph
8/2/2017 12:54	ON	N22.19362 E113.89733	47 m	0:00:12	14 kph
8/2/2017 12:54	ON	N22.19303 E113.89722	66 m	0:00:17	14 kph
8/2/2017 12:54	ON	N22.19262 E113.89711	47 m	0:00:12	14 kph
8/2/2017 12:54	ON	N22.19206 E113.89703	63 m	0:00:16	14 kph
8/2/2017 12:54	ON	N22.19163 E113.89706	48 m	0:00:12	14 kph
8/2/2017 12:55	ON	N22.19102 E113.89711	68 m	0:00:17	14 kph
8/2/2017 12:55	ON	N22.19044 E113.89716	65 m	0:00:16	15 kph
8/2/2017 12:55	ON	N22.18987 E113.89728	64 m	0:00:16	14 kph
8/2/2017 12:56	ON	N22.18938 E113.89733	56 m	0:00:14	14 kph
8/2/2017 12:56	ON	N22.18891 E113.89734	52 m	0:00:13	15 kph
8/2/2017 12:56	ON	N22.18822 E113.89724	77 m	0:00:19	15 kph
8/2/2017 12:56	ON	N22.18757 E113.89719	73 m	0:00:18	15 kph
8/2/2017 12:57	ON	N22.18692 E113.89717	72 m	0:00:18	14 kph
8/2/2017 12:57	ON	N22.18631 E113.89717	68 m	0:00:17	14 kph
8/2/2017 12:57	ON	N22.18568 E113.89720	71 m	0:00:18	14 kph
8/2/2017 12:58	ON	N22.18503 E113.89727	73 m	0:00:18	15 kph
8/2/2017 12:58	ON	N22.18432 E113.89732	79 m	0:00:20	14 kph
8/2/2017 12:58	ON	N22.18375 E113.89740	64 m	0:00:16	14 kph
8/2/2017 12:58	ON	N22.18329 E113.89740	52 m	0:00:13	14 kph
8/2/2017 12:59	ON	N22.18276 E113.89738	59 m	0:00:15	14 kph
8/2/2017 12:59	ON	N22.18223 E113.89741	59 m	0:00:15	14 kph
8/2/2017 12:59	ON	N22.18176 E113.89740	52 m	0:00:13	14 kph
8/2/2017 12:59	ON	N22.18129 E113.89740	52 m	0:00:13	14 kph
8/2/2017 13:00	ON	N22.18078 E113.89743	57 m	0:00:14	15 kph
8/2/2017 13:00	ON	N22.18035 E113.89742	49 m	0:00:12	15 kph
8/2/2017 13:00	ON	N22.17991 E113.89741	49 m	0:00:12	15 kph
8/2/2017 13:00	ON	N22.17947 E113.89741	48 m	0:00:12	14 kph
8/2/2017 13:00	ON	N22.17911 E113.89739	41 m	0:00:10	15 kph
8/2/2017 13:01	ON	N22.17842 E113.89735	77 m	0:00:19	15 kph
8/2/2017 13:01	ON	N22.17798 E113.89728	49 m	0:00:12	15 kph
8/2/2017 13:01	ON	N22.17739 E113.89724	66 m	0:00:16	15 kph
8/2/2017 13:01	ON	N22.17688 E113.89722	57 m	0:00:14	15 kph
8/2/2017 13:02	ON	N22.17633 E113.89718	61 m	0:00:15	15 kph
8/2/2017 13:02	ON	N22.17581 E113.89719	58 m	0:00:14	15 kph
8/2/2017 13:02	ON	N22.17537 E113.89719	49 m	0:00:12	15 kph
8/2/2017 13:02	ON	N22.17475 E113.89719	70 m	0:00:17	15 kph
8/2/2017 13:02	ON	N22.17431 E113.89716	49 m	0:00:12	15 kph
8/2/2017 13:03	ON	N22.17370 E113.89704	69 m	0:00:17	15 kph
8/2/2017 13:03	ON	N22.17294 E113.89684	86 m	0:00:21	15 kph
8/2/2017 13:03	ON	N22.17227 E113.89666	77 m	0:00:19	15 kph
8/2/2017 13:04	ON	N22.17162 E113.89655	74 m	0:00:18	15 kph

## Appendix I. (cont'd)

Date & Time	EFFORT	Position	Leg Length	Leg Time	Leg Speed
8/2/2017 13:04	ON	N22.17100 E113.89660	69 m	0:00:17	15 kph
8/2/2017 13:04	ON	N22.17032 E113.89678	78 m	0:00:19	15 kph
8/2/2017 13:05	ON	N22.16972 E113.89696	70 m	0:00:17	15 kph
8/2/2017 13:05	ON	N22.16901 E113.89706	79 m	0:00:19	15 kph
8/2/2017 13:05	ON	N22.16827 E113.89717	83 m	0:00:20	15 kph
8/2/2017 13:06	ON	N22.16754 E113.89732	83 m	0:00:20	15 kph
8/2/2017 13:06	ON	N22.16673 E113.89737	90 m	0:00:22	15 kph
8/2/2017 13:06	ON	N22.16604 E113.89733	77 m	0:00:19	15 kph
8/2/2017 13:07	ON	N22.16541 E113.89736	70 m	0:00:17	15 kph
8/2/2017 13:07	ON	N22.16478 E113.89740	69 m	0:00:17	15 kph
8/2/2017 13:07	ON	N22.16409 E113.89742	77 m	0:00:19	15 kph
8/2/2017 13:08	ON	N22.16315 E113.89754	106 m	0:00:26	15 kph
8/2/2017 13:08	ON	N22.16249 E113.89758	73 m	0:00:18	15 kph
8/2/2017 13:08	ON	N22.16187 E113.89756	69 m	0:00:17	15 kph
8/2/2017 13:08	ON	N22.16120 E113.89753	74 m	0:00:18	15 kph
8/2/2017 13:09	ON	N22.16064 E113.89747	62 m	0:00:15	15 kph
8/2/2017 13:09	ON	N22.16009 E113.89746	61 m	0:00:15	15 kph
8/2/2017 13:09	ON	N22.15948 E113.89744	68 m	0:00:17	14 kph
8/2/2017 13:09	ON	N22.15904 E113.89737	49 m	0:00:12	15 kph
8/2/2017 13:10	ON	N22.15861 E113.89730	48 m	0:00:12	14 kph
8/2/2017 13:10	ON	N22.15811 E113.89724	56 m	0:00:14	14 kph
8/2/2017 13:10	ON	N22.15768 E113.89722	48 m	0:00:12	15 kph
8/2/2017 13:10	ON	N22.15731 E113.89720	40 m	0:00:10	15 kph
8/2/2017 13:11	ON	N22.15680 E113.89717	57 m	0:00:14	15 kph
8/2/2017 13:11	ON	N22.15644 E113.89712	41 m	0:00:10	15 kph
8/2/2017 13:11	ON	N22.15615 E113.89705	33 m	0:00:08	15 kph
8/2/2017 13:11	ON	N22.15579 E113.89701	41 m	0:00:10	15 kph
8/2/2017 13:11	ON	N22.15571 E113.89701	8 m	0:00:02	14 kph
8/2/2017 13:11	ON	N22.15525 E113.89699	52 m	0:00:13	14 kph
8/2/2017 13:11	ON	N22.15489 E113.89698	40 m	0:00:10	14 kph
8/2/2017 13:12	ON	N22.15450 E113.89692	44 m	0:00:11	14 kph
8/2/2017 13:12	ON	N22.15418 E113.89688	36 m	0:00:09	14 kph
8/2/2017 13:12	ON	N22.15375 E113.89680	48 m	0:00:12	14 kph
8/2/2017 13:12	ON	N22.15328 E113.89676	53 m	0:00:13	15 kph
8/2/2017 13:12	ON	N22.15293 E113.89677	39 m	0:00:10	14 kph
8/2/2017 13:12	ON	N22.15264 E113.89686	33 m	0:00:09	13 kph
8/2/2017 13:13	ON	N22.15223 E113.89705	50 m	0:00:13	14 kph
8/2/2017 13:13	ON	N22.15188 E113.89714	40 m	0:00:10	14 kph
8/2/2017 13:13	ON	N22.15153 E113.89722	40 m	0:00:10	14 kph
8/2/2017 13:13	ON	N22.15107 E113.89728	52 m	0:00:13	14 kph
8/2/2017 13:13	ON	N22.15067 E113.89724	44 m	0:00:11	15 kph
8/2/2017 13:14	ON	N22.15032 E113.89723	40 m	0:00:10	14 kph
8/2/2017 13:14	ON	N22.15004 E113.89720	31 m	0:00:08	14 kph
8/2/2017 13:14	ON	N22.14992 E113.89714	15 m	0:00:04	13 kph
8/2/2017 13:14	ON	N22.14963 E113.89676	50 m	0:00:14	13 kph
8/2/2017 13:14	ON	N22.14957 E113.89630	49 m	0:00:13	14 kph
8/2/2017 13:14	ON	N22.14957 E113.89569	62 m	0:00:16	14 kph
8/2/2017 13:15	ON	N22.14950 E113.89513	59 m	0:00:15	14 kph
8/2/2017 13:15	ON	N22.14949 E113.89462	53 m	0:00:14	14 kph
8/2/2017 13:15	ON	N22.14968 E113.89410	57 m	0:00:15	14 kph
8/2/2017 13:15	ON	N22.14978 E113.89364	49 m	0:00:13	14 kph
8/2/2017 13:16	ON	N22.14982 E113.89315	50 m	0:00:13	14 kph
8/2/2017 13:16	ON	N22.15003 E113.89261	61 m	0:00:16	14 kph
8/2/2017 13:16	ON	N22.15033 E113.89214	59 m	0:00:15	14 kph
8/2/2017 13:16	ON	N22.15060 E113.89162	61 m	0:00:16	14 kph
8/2/2017 13:17	ON	N22.15066 E113.89104	61 m	0:00:16	14 kph
8/2/2017 13:17	ON	N22.15079 E113.89037	70 m	0:00:18	14 kph
8/2/2017 13:17	ON	N22.15104 E113.88968	77 m	0:00:20	14 kph
8/2/2017 13:18	ON	N22.15123 E113.88907	66 m	0:00:17	14 kph
8/2/2017 13:18	ON	N22.15141 E113.88855	58 m	0:00:15	14 kph
8/2/2017 13:18	ON	N22.15182 E113.88835	50 m	0:00:15	12 kph
8/2/2017 13:18	ON	N22.15211 E113.88835	33 m	0:00:09	13 kph
8/2/2017 13:18	ON	N22.15256 E113.88838	49 m	0:00:13	14 kph
8/2/2017 13:19	ON	N22.15294 E113.88839	42 m	0:00:11	14 kph

## Appendix I. (cont'd)

Date & Time	EFFORT	Position	Leg Length	Leg Time	Leg Speed
8/2/2017 13:19	ON	N22.15324 E113.88836	34 m	0:00:09	14 kph
8/2/2017 13:19	ON	N22.15375 E113.88835	57 m	0:00:15	14 kph
8/2/2017 13:19	ON	N22.15395 E113.88838	23 m	0:00:06	14 kph
8/2/2017 13:19	ON	N22.15429 E113.88843	38 m	0:00:10	14 kph
8/2/2017 13:20	ON	N22.15466 E113.88849	42 m	0:00:11	14 kph
8/2/2017 13:20	ON	N22.15506 E113.88858	46 m	0:00:12	14 kph
8/2/2017 13:20	ON	N22.15540 E113.88862	38 m	0:00:10	14 kph
8/2/2017 13:20	ON	N22.15578 E113.88865	42 m	0:00:11	14 kph
8/2/2017 13:20	ON	N22.15626 E113.88872	54 m	0:00:14	14 kph
8/2/2017 13:21	ON	N22.15669 E113.88886	50 m	0:00:13	14 kph
8/2/2017 13:21	ON	N22.15708 E113.88900	46 m	0:00:12	14 kph
8/2/2017 13:21	ON	N22.15745 E113.88900	41 m	0:00:11	13 kph
8/2/2017 13:21	ON	N22.15798 E113.88897	60 m	0:00:16	14 kph
8/2/2017 13:21	ON	N22.15850 E113.88899	58 m	0:00:15	14 kph
8/2/2017 13:22	ON	N22.15895 E113.88898	50 m	0:00:13	14 kph
8/2/2017 13:22	ON	N22.15957 E113.88897	69 m	0:00:18	14 kph
8/2/2017 13:22	ON	N22.16015 E113.88902	65 m	0:00:17	14 kph
8/2/2017 13:23	ON	N22.16074 E113.88902	65 m	0:00:17	14 kph
8/2/2017 13:23	ON	N22.16133 E113.88902	66 m	0:00:17	14 kph
8/2/2017 13:23	ON	N22.16188 E113.88900	62 m	0:00:16	14 kph
8/2/2017 13:23	ON	N22.16244 E113.88900	62 m	0:00:16	14 kph
8/2/2017 13:24	ON	N22.16328 E113.88899	93 m	0:00:24	14 kph
8/2/2017 13:24	ON	N22.16383 E113.88897	61 m	0:00:16	14 kph
8/2/2017 13:24	ON	N22.16455 E113.88898	80 m	0:00:21	14 kph
8/2/2017 13:25	ON	N22.16511 E113.88897	62 m	0:00:16	14 kph
8/2/2017 13:25	ON	N22.16575 E113.88887	72 m	0:00:19	14 kph
8/2/2017 13:25	ON	N22.16637 E113.88882	70 m	0:00:18	14 kph
8/2/2017 13:25	ON	N22.16692 E113.88886	61 m	0:00:16	14 kph
8/2/2017 13:26	ON	N22.16762 E113.88888	78 m	0:00:20	14 kph
8/2/2017 13:26	ON	N22.16825 E113.88885	70 m	0:00:18	14 kph
8/2/2017 13:26	ON	N22.16892 E113.88882	75 m	0:00:19	14 kph
8/2/2017 13:27	ON	N22.16955 E113.88882	70 m	0:00:18	14 kph
8/2/2017 13:27	ON	N22.17015 E113.88881	66 m	0:00:17	14 kph
8/2/2017 13:27	ON	N22.17072 E113.88878	63 m	0:00:16	14 kph
8/2/2017 13:28	ON	N22.17143 E113.88878	79 m	0:00:20	14 kph
8/2/2017 13:28	ON	N22.17199 E113.88880	63 m	0:00:16	14 kph
8/2/2017 13:28	ON	N22.17255 E113.88881	62 m	0:00:16	14 kph
8/2/2017 13:28	ON	N22.17318 E113.88883	71 m	0:00:18	14 kph
8/2/2017 13:29	ON	N22.17378 E113.88883	66 m	0:00:17	14 kph
8/2/2017 13:29	ON	N22.17427 E113.88882	55 m	0:00:14	14 kph
8/2/2017 13:29	ON	N22.17480 E113.88882	59 m	0:00:15	14 kph
8/2/2017 13:29	ON	N22.17522 E113.88882	47 m	0:00:12	14 kph
8/2/2017 13:30	ON	N22.17590 E113.88878	76 m	0:00:19	14 kph
8/2/2017 13:30	ON	N22.17632 E113.88874	47 m	0:00:12	14 kph
8/2/2017 13:30	ON	N22.17685 E113.88872	59 m	0:00:15	14 kph
8/2/2017 13:30	ON	N22.17727 E113.88873	47 m	0:00:12	14 kph
8/2/2017 13:31	ON	N22.17773 E113.88874	51 m	0:00:13	14 kph
8/2/2017 13:31	ON	N22.17822 E113.88879	56 m	0:00:14	14 kph
8/2/2017 13:31	ON	N22.17872 E113.88880	55 m	0:00:14	14 kph
8/2/2017 13:31	ON	N22.17914 E113.88882	46 m	0:00:12	14 kph
8/2/2017 13:31	ON	N22.17955 E113.88888	47 m	0:00:12	14 kph
8/2/2017 13:32	ON	N22.18008 E113.88892	59 m	0:00:15	14 kph
8/2/2017 13:32	ON	N22.18061 E113.88897	59 m	0:00:15	14 kph
8/2/2017 13:32	ON	N22.18110 E113.88901	54 m	0:00:14	14 kph
8/2/2017 13:32	ON	N22.18162 E113.88906	58 m	0:00:15	14 kph
8/2/2017 13:33	ON	N22.18212 E113.88909	55 m	0:00:14	14 kph
8/2/2017 13:33	ON	N22.18269 E113.88912	64 m	0:00:16	14 kph
8/2/2017 13:33	ON	N22.18338 E113.88917	76 m	0:00:19	14 kph
8/2/2017 13:34	ON	N22.18391 E113.88920	60 m	0:00:15	14 kph
8/2/2017 13:34	ON	N22.18452 E113.88921	68 m	0:00:17	14 kph
8/2/2017 13:34	ON	N22.18520 E113.88916	76 m	0:00:19	14 kph
8/2/2017 13:34	ON	N22.18585 E113.88918	72 m	0:00:18	14 kph
8/2/2017 13:35	ON	N22.18652 E113.88922	76 m	0:00:19	14 kph
8/2/2017 13:35	ON	N22.18710 E113.88923	64 m	0:00:16	14 kph

## Appendix I. (cont'd)

Date & Time	EFFORT	Position	Leg Length	Leg Time	Leg Speed
8/2/2017 13:35	ON	N22.18764 E113.88921	61 m	0:00:15	15 kph
8/2/2017 13:36	ON	N22.18829 E113.88913	72 m	0:00:18	14 kph
8/2/2017 13:36	ON	N22.18898 E113.88907	77 m	0:00:19	15 kph
8/2/2017 13:36	ON	N22.18966 E113.88903	77 m	0:00:19	15 kph
8/2/2017 13:36	ON	N22.19031 E113.88899	72 m	0:00:18	14 kph
8/2/2017 13:37	ON	N22.19092 E113.88889	68 m	0:00:17	14 kph
8/2/2017 13:37	ON	N22.19149 E113.88881	65 m	0:00:16	15 kph
8/2/2017 13:37	ON	N22.19211 E113.88879	68 m	0:00:17	15 kph
8/2/2017 13:38	ON	N22.19265 E113.88878	60 m	0:00:15	15 kph
8/2/2017 13:38	ON	N22.19319 E113.88877	60 m	0:00:15	14 kph
8/2/2017 13:38	ON	N22.19366 E113.88874	52 m	0:00:13	14 kph
8/2/2017 13:38	ON	N22.19423 E113.88869	64 m	0:00:16	14 kph
8/2/2017 13:39	ON	N22.19484 E113.88870	68 m	0:00:17	14 kph
8/2/2017 13:39	ON	N22.19543 E113.88877	66 m	0:00:16	15 kph
8/2/2017 13:39	ON	N22.19604 E113.88881	69 m	0:00:17	15 kph
8/2/2017 13:39	ON	N22.19651 E113.88882	52 m	0:00:13	15 kph
8/2/2017 13:40	ON	N22.19709 E113.88887	65 m	0:00:16	15 kph
8/2/2017 13:40	ON	N22.19764 E113.88889	61 m	0:00:15	15 kph
8/2/2017 13:40	ON	N22.19826 E113.88888	69 m	0:00:17	15 kph
8/2/2017 13:40	ON	N22.19888 E113.88887	69 m	0:00:17	15 kph
8/2/2017 13:41	ON	N22.19942 E113.88888	61 m	0:00:15	15 kph
8/2/2017 13:41	ON	N22.20000 E113.88887	65 m	0:00:16	15 kph
8/2/2017 13:41	ON	N22.20064 E113.88869	73 m	0:00:18	15 kph
8/2/2017 13:42	ON	N22.20127 E113.88866	71 m	0:00:18	14 kph
8/2/2017 13:42	ON	N22.20192 E113.88865	73 m	0:00:18	15 kph
8/2/2017 13:42	ON	N22.20247 E113.88868	60 m	0:00:15	14 kph
8/2/2017 13:42	ON	N22.20312 E113.88864	73 m	0:00:18	15 kph
8/2/2017 13:43	ON	N22.20378 E113.88863	73 m	0:00:18	15 kph
8/2/2017 13:43	ON	N22.20450 E113.88864	81 m	0:00:20	15 kph
8/2/2017 13:43	ON	N22.20520 E113.88870	77 m	0:00:19	15 kph
8/2/2017 13:44	ON	N22.20577 E113.88870	64 m	0:00:16	14 kph
8/2/2017 13:44	ON	N22.20638 E113.88875	68 m	0:00:17	14 kph
8/2/2017 13:44	ON	N22.20693 E113.88876	61 m	0:00:15	15 kph
8/2/2017 13:44	ON	N22.20753 E113.88864	68 m	0:00:17	14 kph
8/2/2017 13:45	ON	N22.20821 E113.88835	82 m	0:00:20	15 kph
8/2/2017 13:45	ON	N22.20880 E113.88833	66 m	0:00:17	14 kph
8/2/2017 13:45	ON	N22.20942 E113.88837	69 m	0:00:17	15 kph
8/2/2017 13:46	ON	N22.21014 E113.88833	81 m	0:00:20	15 kph
8/2/2017 13:46	ON	N22.21084 E113.88832	78 m	0:00:19	15 kph
8/2/2017 13:46	ON	N22.21151 E113.88834	74 m	0:00:18	15 kph
8/2/2017 13:47	ON	N22.21225 E113.88824	84 m	0:00:21	14 kph
8/2/2017 13:47	ON	N22.21259 E113.88784	56 m	0:00:15	13 kph
8/2/2017 13:47	ON	N22.21258 E113.88721	65 m	0:00:17	14 kph
8/2/2017 13:47	ON	N22.21242 E113.88660	66 m	0:00:17	14 kph
8/2/2017 13:48	ON	N22.21218 E113.88605	62 m	0:00:16	14 kph
8/2/2017 13:48	ON	N22.21202 E113.88563	47 m	0:00:12	14 kph
8/2/2017 13:48	ON	N22.21184 E113.88522	48 m	0:00:12	14 kph
8/2/2017 13:48	ON	N22.21161 E113.88474	55 m	0:00:14	14 kph
8/2/2017 13:49	ON	N22.21130 E113.88409	76 m	0:00:19	14 kph
8/2/2017 13:49	ON	N22.21096 E113.88341	79 m	0:00:20	14 kph
8/2/2017 13:49	ON	N22.21069 E113.88283	67 m	0:00:17	14 kph
8/2/2017 13:50	ON	N22.21040 E113.88235	59 m	0:00:15	14 kph
8/2/2017 13:50	ON	N22.21006 E113.88172	75 m	0:00:19	14 kph
8/2/2017 13:50	ON	N22.20986 E113.88127	51 m	0:00:13	14 kph
8/2/2017 13:50	ON	N22.20954 E113.88072	67 m	0:00:17	14 kph
8/2/2017 13:51	ON	N22.20923 E113.88013	70 m	0:00:18	14 kph
8/2/2017 13:51	ON	N22.20892 E113.87963	62 m	0:00:16	14 kph
8/2/2017 13:51	ON	N22.20854 E113.87919	62 m	0:00:16	14 kph
8/2/2017 13:51	ON	N22.20812 E113.87891	55 m	0:00:15	13 kph
8/2/2017 13:52	ON	N22.20766 E113.87887	52 m	0:00:14	13 kph
8/2/2017 13:52	ON	N22.20717 E113.87899	56 m	0:00:15	13 kph
8/2/2017 13:52	ON	N22.20676 E113.87904	46 m	0:00:12	14 kph
8/2/2017 13:52	ON	N22.20632 E113.87905	49 m	0:00:13	14 kph
8/2/2017 13:53	ON	N22.20578 E113.87904	61 m	0:00:16	14 kph

## Appendix I. (cont'd)

Date & Time	EFFORT	Position	Leg Length	Leg Time	Leg Speed
8/2/2017 13:53	ON	N22.20533 E113.87899	50 m	0:00:13	14 kph
8/2/2017 13:53	ON	N22.20482 E113.87894	57 m	0:00:15	14 kph
8/2/2017 13:53	ON	N22.20427 E113.87886	61 m	0:00:16	14 kph
8/2/2017 13:54	ON	N22.20376 E113.87877	58 m	0:00:15	14 kph
8/2/2017 13:54	ON	N22.20331 E113.87873	50 m	0:00:13	14 kph
8/2/2017 13:54	ON	N22.20279 E113.87870	58 m	0:00:15	14 kph
8/2/2017 13:54	ON	N22.20224 E113.87870	62 m	0:00:16	14 kph
8/2/2017 13:55	ON	N22.20165 E113.87869	65 m	0:00:17	14 kph
8/2/2017 13:55	ON	N22.20110 E113.87872	62 m	0:00:16	14 kph
8/2/2017 13:55	ON	N22.20058 E113.87875	58 m	0:00:15	14 kph
8/2/2017 13:55	ON	N22.20012 E113.87874	51 m	0:00:13	14 kph
8/2/2017 13:56	ON	N22.19973 E113.87872	43 m	0:00:11	14 kph
8/2/2017 13:56	ON	N22.19935 E113.87868	43 m	0:00:11	14 kph
8/2/2017 13:56	ON	N22.19893 E113.87865	47 m	0:00:12	14 kph
8/2/2017 13:56	ON	N22.19848 E113.87861	51 m	0:00:13	14 kph
8/2/2017 13:56	ON	N22.19795 E113.87859	59 m	0:00:15	14 kph
8/2/2017 13:57	ON	N22.19746 E113.87857	55 m	0:00:14	14 kph
8/2/2017 13:57	ON	N22.19697 E113.87857	55 m	0:00:14	14 kph
8/2/2017 13:57	ON	N22.19654 E113.87856	47 m	0:00:12	14 kph
8/2/2017 13:57	ON	N22.19608 E113.87853	51 m	0:00:13	14 kph
8/2/2017 13:57	ON	N22.19562 E113.87852	51 m	0:00:13	14 kph
8/2/2017 13:58	ON	N22.19513 E113.87852	55 m	0:00:14	14 kph
8/2/2017 13:58	ON	N22.19452 E113.87849	68 m	0:00:17	14 kph
8/2/2017 13:58	ON	N22.19392 E113.87844	67 m	0:00:17	14 kph
8/2/2017 13:59	ON	N22.19336 E113.87843	62 m	0:00:16	14 kph
8/2/2017 13:59	ON	N22.19284 E113.87843	58 m	0:00:15	14 kph
8/2/2017 13:59	ON	N22.19231 E113.87847	60 m	0:00:15	14 kph
8/2/2017 13:59	ON	N22.19166 E113.87847	71 m	0:00:18	14 kph
8/2/2017 14:00	ON	N22.19110 E113.87846	63 m	0:00:16	14 kph
8/2/2017 14:00	ON	N22.19056 E113.87849	59 m	0:00:15	14 kph
8/2/2017 14:00	ON	N22.19006 E113.87850	56 m	0:00:14	14 kph
8/2/2017 14:00	ON	N22.18945 E113.87848	68 m	0:00:17	14 kph
8/2/2017 14:01	ON	N22.18884 E113.87845	68 m	0:00:17	14 kph
8/2/2017 14:01	ON	N22.18816 E113.87847	76 m	0:00:19	14 kph
8/2/2017 14:01	ON	N22.18770 E113.87847	51 m	0:00:13	14 kph
8/2/2017 14:01	ON	N22.18712 E113.87845	64 m	0:00:16	14 kph
8/2/2017 14:02	ON	N22.18654 E113.87840	65 m	0:00:16	15 kph
8/2/2017 14:02	ON	N22.18601 E113.87840	59 m	0:00:15	14 kph
8/2/2017 14:02	ON	N22.18547 E113.87840	60 m	0:00:15	14 kph
8/2/2017 14:02	ON	N22.18493 E113.87841	60 m	0:00:15	14 kph
8/2/2017 14:03	ON	N22.18447 E113.87841	52 m	0:00:13	14 kph
8/2/2017 14:03	ON	N22.18392 E113.87843	61 m	0:00:15	15 kph
8/2/2017 14:03	ON	N22.18342 E113.87845	56 m	0:00:14	14 kph
8/2/2017 14:03	ON	N22.18280 E113.87847	69 m	0:00:17	15 kph
8/2/2017 14:04	ON	N22.18240 E113.87849	44 m	0:00:11	14 kph
8/2/2017 14:04	ON	N22.18182 E113.87848	65 m	0:00:16	15 kph
8/2/2017 14:04	ON	N22.18124 E113.87847	65 m	0:00:16	15 kph
8/2/2017 14:04	ON	N22.18070 E113.87845	60 m	0:00:15	14 kph
8/2/2017 14:05	ON	N22.18019 E113.87844	56 m	0:00:14	14 kph
8/2/2017 14:05	ON	N22.17960 E113.87845	66 m	0:00:16	15 kph
8/2/2017 14:05	ON	N22.17897 E113.87847	70 m	0:00:17	15 kph
8/2/2017 14:06	ON	N22.17824 E113.87844	81 m	0:00:20	15 kph
8/2/2017 14:06	ON	N22.17759 E113.87841	73 m	0:00:18	15 kph
8/2/2017 14:06	ON	N22.17701 E113.87835	65 m	0:00:16	15 kph
8/2/2017 14:06	ON	N22.17640 E113.87826	69 m	0:00:17	15 kph
8/2/2017 14:07	ON	N22.17589 E113.87823	57 m	0:00:14	15 kph
8/2/2017 14:07	ON	N22.17527 E113.87819	69 m	0:00:17	15 kph
8/2/2017 14:07	ON	N22.17473 E113.87817	61 m	0:00:15	15 kph
8/2/2017 14:07	ON	N22.17425 E113.87816	53 m	0:00:13	15 kph
8/2/2017 14:08	ON	N22.17371 E113.87813	61 m	0:00:15	15 kph
8/2/2017 14:08	ON	N22.17317 E113.87810	60 m	0:00:15	15 kph
8/2/2017 14:08	ON	N22.17262 E113.87805	61 m	0:00:15	15 kph
8/2/2017 14:08	ON	N22.17201 E113.87799	68 m	0:00:17	15 kph
8/2/2017 14:09	ON	N22.17144 E113.87795	64 m	0:00:16	14 kph

## Appendix I. (cont'd)

Date & Time	EFFORT	Position	Leg Length	Leg Time	Leg Speed
8/2/2017 14:09	ON	N22.17093 E113.87791	56 m	0:00:14	15 kph
8/2/2017 14:09	ON	N22.17045 E113.87787	53 m	0:00:13	15 kph
8/2/2017 14:09	ON	N22.16998 E113.87783	53 m	0:00:13	15 kph
8/2/2017 14:10	ON	N22.16937 E113.87778	68 m	0:00:17	14 kph
8/2/2017 14:10	ON	N22.16868 E113.87776	76 m	0:00:19	14 kph
8/2/2017 14:10	ON	N22.16803 E113.87774	73 m	0:00:18	15 kph
8/2/2017 14:11	ON	N22.16745 E113.87770	65 m	0:00:16	15 kph
8/2/2017 14:11	ON	N22.16683 E113.87770	68 m	0:00:17	14 kph
8/2/2017 14:11	ON	N22.16636 E113.87770	53 m	0:00:13	15 kph
8/2/2017 14:11	ON	N22.16585 E113.87770	57 m	0:00:14	15 kph
8/2/2017 14:12	ON	N22.16526 E113.87767	65 m	0:00:16	15 kph
8/2/2017 14:12	ON	N22.16479 E113.87764	53 m	0:00:13	15 kph
8/2/2017 14:12	ON	N22.16428 E113.87764	56 m	0:00:14	15 kph
8/2/2017 14:12	ON	N22.16379 E113.87770	55 m	0:00:14	14 kph
8/2/2017 14:12	ON	N22.16337 E113.87774	47 m	0:00:12	14 kph
8/2/2017 14:13	ON	N22.16291 E113.87779	52 m	0:00:13	14 kph
8/2/2017 14:13	ON	N22.16244 E113.87783	52 m	0:00:13	14 kph
8/2/2017 14:13	ON	N22.16194 E113.87790	56 m	0:00:14	14 kph
8/2/2017 14:13	ON	N22.16152 E113.87796	47 m	0:00:12	14 kph
8/2/2017 14:13	ON	N22.16106 E113.87802	52 m	0:00:13	14 kph
8/2/2017 14:14	ON	N22.16064 E113.87806	47 m	0:00:12	14 kph
8/2/2017 14:14	ON	N22.16029 E113.87810	40 m	0:00:10	14 kph
8/2/2017 14:14	ON	N22.15993 E113.87814	40 m	0:00:10	14 kph
8/2/2017 14:14	ON	N22.15956 E113.87803	42 m	0:00:12	13 kph
8/2/2017 14:14	ON	N22.15950 E113.87764	41 m	0:00:13	11 kph
8/2/2017 14:15	ON	N22.15975 E113.87717	56 m	0:00:15	13 kph
8/2/2017 14:15	ON	N22.15990 E113.87665	57 m	0:00:14	15 kph
8/2/2017 14:15	ON	N22.16013 E113.87613	59 m	0:00:15	14 kph
8/2/2017 14:15	ON	N22.16045 E113.87569	57 m	0:00:14	15 kph
8/2/2017 14:16	ON	N22.16073 E113.87519	60 m	0:00:15	14 kph
8/2/2017 14:16	ON	N22.16094 E113.87469	57 m	0:00:14	15 kph
8/2/2017 14:16	ON	N22.16122 E113.87399	78 m	0:00:19	15 kph
8/2/2017 14:16	ON	N22.16147 E113.87333	74 m	0:00:18	15 kph
8/2/2017 14:17	ON	N22.16171 E113.87278	62 m	0:00:15	15 kph
8/2/2017 14:17	ON	N22.16197 E113.87222	66 m	0:00:16	15 kph
8/2/2017 14:17	ON	N22.16222 E113.87162	67 m	0:00:16	15 kph
8/2/2017 14:18	ON	N22.16239 E113.87101	66 m	0:00:16	15 kph
8/2/2017 14:18	ON	N22.16247 E113.87050	54 m	0:00:13	15 kph
8/2/2017 14:18	ON	N22.16260 E113.86987	67 m	0:00:16	15 kph
8/2/2017 14:18	ON	N22.16280 E113.86928	64 m	0:00:16	14 kph
8/2/2017 14:19	ON	N22.16317 E113.86902	49 m	0:00:14	13 kph
8/2/2017 14:19	ON	N22.16369 E113.86912	59 m	0:00:16	13 kph
8/2/2017 14:19	ON	N22.16416 E113.86928	55 m	0:00:14	14 kph
8/2/2017 14:19	ON	N22.16475 E113.86944	68 m	0:00:17	14 kph
8/2/2017 14:20	ON	N22.16520 E113.86952	51 m	0:00:13	14 kph
8/2/2017 14:20	ON	N22.16576 E113.86963	64 m	0:00:16	14 kph
8/2/2017 14:20	ON	N22.16630 E113.86969	60 m	0:00:15	14 kph
8/2/2017 14:20	ON	N22.16694 E113.86981	72 m	0:00:18	14 kph
8/2/2017 14:21	ON	N22.16745 E113.86995	59 m	0:00:15	14 kph
8/2/2017 14:21	ON	N22.16805 E113.87008	68 m	0:00:17	14 kph
8/2/2017 14:21	ON	N22.16858 E113.87013	60 m	0:00:15	14 kph
8/2/2017 14:21	ON	N22.16927 E113.87010	76 m	0:00:19	14 kph
8/2/2017 14:22	ON	N22.17001 E113.87010	83 m	0:00:21	14 kph
8/2/2017 14:22	ON	N22.17059 E113.87011	64 m	0:00:16	14 kph
8/2/2017 14:22	ON	N22.17098 E113.87003	44 m	0:00:11	14 kph
8/2/2017 14:23	ON	N22.17158 E113.86991	68 m	0:00:17	14 kph
8/2/2017 14:23	ON	N22.17222 E113.86983	72 m	0:00:18	14 kph
8/2/2017 14:23	ON	N22.17275 E113.86974	60 m	0:00:15	14 kph
8/2/2017 14:23	ON	N22.17334 E113.86956	68 m	0:00:17	14 kph
8/2/2017 14:24	ON	N22.17415 E113.86932	93 m	0:00:23	15 kph
8/2/2017 14:24	ON	N22.17478 E113.86918	72 m	0:00:18	14 kph
8/2/2017 14:24	ON	N22.17534 E113.86903	64 m	0:00:16	15 kph
8/2/2017 14:25	ON	N22.17584 E113.86898	56 m	0:00:14	14 kph
8/2/2017 14:25	ON	N22.17644 E113.86905	67 m	0:00:17	14 kph

## Appendix I. (cont'd)

Date & Time	EFFORT	Position	Leg Length	Leg Time	Leg Speed
8/2/2017 14:25	ON	N22.17693 E113.86914	55 m	0:00:14	14 kph
8/2/2017 14:25	ON	N22.17761 E113.86917	76 m	0:00:19	14 kph
8/2/2017 14:26	ON	N22.17822 E113.86920	68 m	0:00:17	14 kph
8/2/2017 14:26	ON	N22.17890 E113.86916	75 m	0:00:19	14 kph
8/2/2017 14:26	ON	N22.17951 E113.86914	68 m	0:00:17	14 kph
8/2/2017 14:26	ON	N22.18001 E113.86916	56 m	0:00:14	14 kph
8/2/2017 14:27	ON	N22.18044 E113.86918	49 m	0:00:12	15 kph
8/2/2017 14:27	ON	N22.18109 E113.86918	72 m	0:00:18	14 kph
8/2/2017 14:27	ON	N22.18173 E113.86918	71 m	0:00:18	14 kph
8/2/2017 14:28	ON	N22.18224 E113.86922	57 m	0:00:14	15 kph
8/2/2017 14:28	ON	N22.18280 E113.86924	63 m	0:00:16	14 kph
8/2/2017 14:28	ON	N22.18337 E113.86921	64 m	0:00:16	14 kph
8/2/2017 14:28	ON	N22.18402 E113.86922	72 m	0:00:18	14 kph
8/2/2017 14:29	ON	N22.18466 E113.86920	72 m	0:00:18	14 kph
8/2/2017 14:29	ON	N22.18530 E113.86912	71 m	0:00:18	14 kph
8/2/2017 14:29	ON	N22.18609 E113.86907	88 m	0:00:22	14 kph
8/2/2017 14:30	ON	N22.18679 E113.86892	80 m	0:00:20	14 kph
8/2/2017 14:30	ON	N22.18750 E113.86890	79 m	0:00:20	14 kph
8/2/2017 14:30	ON	N22.18818 E113.86893	76 m	0:00:19	14 kph
8/2/2017 14:31	ON	N22.18882 E113.86886	72 m	0:00:18	14 kph
8/2/2017 14:31	ON	N22.18943 E113.86879	68 m	0:00:17	14 kph
8/2/2017 14:31	ON	N22.19004 E113.86874	68 m	0:00:17	14 kph
8/2/2017 14:31	ON	N22.19069 E113.86869	73 m	0:00:18	15 kph
8/2/2017 14:32	ON	N22.19130 E113.86870	68 m	0:00:17	14 kph
8/2/2017 14:32	ON	N22.19184 E113.86868	61 m	0:00:15	15 kph
8/2/2017 14:32	ON	N22.19260 E113.86871	84 m	0:00:21	14 kph
8/2/2017 14:33	ON	N22.19311 E113.86876	56 m	0:00:14	15 kph
8/2/2017 14:33	ON	N22.19376 E113.86876	73 m	0:00:18	15 kph
8/2/2017 14:33	ON	N22.19431 E113.86877	60 m	0:00:15	15 kph
8/2/2017 14:33	ON	N22.19492 E113.86881	69 m	0:00:17	15 kph
8/2/2017 14:34	ON	N22.19546 E113.86887	60 m	0:00:15	14 kph
8/2/2017 14:34	ON	N22.19604 E113.86892	65 m	0:00:16	15 kph
8/2/2017 14:34	ON	N22.19665 E113.86891	68 m	0:00:17	14 kph
8/2/2017 14:34	ON	N22.19724 E113.86888	65 m	0:00:16	15 kph
8/2/2017 14:35	ON	N22.19781 E113.86885	64 m	0:00:16	14 kph
8/2/2017 14:35	ON	N22.19846 E113.86888	72 m	0:00:18	14 kph
8/2/2017 14:35	ON	N22.19910 E113.86878	72 m	0:00:18	14 kph
8/2/2017 14:36	ON	N22.19979 E113.86845	84 m	0:00:21	14 kph
8/2/2017 14:36	ON	N22.20019 E113.86793	70 m	0:00:18	14 kph
8/2/2017 14:36	ON	N22.20042 E113.86733	66 m	0:00:16	15 kph
8/2/2017 14:37	ON	N22.20058 E113.86663	74 m	0:00:18	15 kph
8/2/2017 14:37	ON	N22.20067 E113.86592	75 m	0:00:18	15 kph
8/2/2017 14:37	ON	N22.20075 E113.86513	82 m	0:00:19	15 kph
8/2/2017 14:37	ON	N22.20085 E113.86443	73 m	0:00:17	15 kph
8/2/2017 14:38	ON	N22.20094 E113.86377	69 m	0:00:16	15 kph
8/2/2017 14:38	ON	N22.20107 E113.86303	77 m	0:00:18	15 kph
8/2/2017 14:38	ON	N22.20124 E113.86230	78 m	0:00:18	16 kph
8/2/2017 14:39	ON	N22.20143 E113.86153	83 m	0:00:19	16 kph
8/2/2017 14:39	ON	N22.20154 E113.86076	80 m	0:00:19	15 kph
8/2/2017 14:39	ON	N22.20152 E113.86012	65 m	0:00:15	16 kph
8/2/2017 14:40	ON	N22.20138 E113.85936	80 m	0:00:19	15 kph
8/2/2017 14:40	ON	N22.20111 E113.85892	55 m	0:00:14	14 kph
8/2/2017 14:40	ON	N22.20070 E113.85885	45 m	0:00:13	13 kph
8/2/2017 14:40	ON	N22.20020 E113.85896	58 m	0:00:15	14 kph
8/2/2017 14:40	ON	N22.19974 E113.85906	51 m	0:00:13	14 kph
8/2/2017 14:41	ON	N22.19921 E113.85913	60 m	0:00:15	14 kph
8/2/2017 14:41	ON	N22.19871 E113.85916	56 m	0:00:14	14 kph
8/2/2017 14:41	ON	N22.19820 E113.85919	56 m	0:00:14	14 kph
8/2/2017 14:41	ON	N22.19781 E113.85917	44 m	0:00:11	14 kph
8/2/2017 14:42	ON	N22.19723 E113.85916	65 m	0:00:16	15 kph
8/2/2017 14:42	ON	N22.19676 E113.85916	52 m	0:00:13	14 kph
8/2/2017 14:42	ON	N22.19621 E113.85915	61 m	0:00:15	15 kph
8/2/2017 14:42	ON	N22.19570 E113.85913	56 m	0:00:14	15 kph
8/2/2017 14:43	ON	N22.19523 E113.85913	52 m	0:00:13	14 kph

## Appendix I. (cont'd)

Date & Time	EFFORT	Position	Leg Length	Leg Time	Leg Speed
8/2/2017 14:43	ON	N22.19447 E113.85913	84 m	0:00:21	14 kph
8/2/2017 14:43	ON	N22.19401 E113.85910	51 m	0:00:13	14 kph
8/2/2017 14:43	ON	N22.19350 E113.85906	57 m	0:00:14	15 kph
8/2/2017 14:44	ON	N22.19297 E113.85902	60 m	0:00:15	14 kph
8/2/2017 14:44	ON	N22.19246 E113.85898	56 m	0:00:14	15 kph
8/2/2017 14:44	ON	N22.19203 E113.85893	48 m	0:00:12	14 kph
8/2/2017 14:44	ON	N22.19153 E113.85888	56 m	0:00:14	14 kph
8/2/2017 14:44	ON	N22.19107 E113.85882	52 m	0:00:13	14 kph
8/2/2017 14:45	ON	N22.19053 E113.85882	60 m	0:00:15	14 kph
8/2/2017 14:45	ON	N22.19007 E113.85887	51 m	0:00:13	14 kph
8/2/2017 14:45	ON	N22.18957 E113.85890	56 m	0:00:14	14 kph
8/2/2017 14:45	ON	N22.18891 E113.85888	73 m	0:00:18	15 kph
8/2/2017 14:46	ON	N22.18848 E113.85885	49 m	0:00:12	15 kph
8/2/2017 14:46	ON	N22.18790 E113.85883	65 m	0:00:16	15 kph
8/2/2017 14:46	ON	N22.18727 E113.85880	70 m	0:00:17	15 kph
8/2/2017 14:46	ON	N22.18669 E113.85878	65 m	0:00:16	15 kph
8/2/2017 14:47	ON	N22.18622 E113.85882	52 m	0:00:13	14 kph
8/2/2017 14:47	ON	N22.18572 E113.85883	56 m	0:00:14	14 kph
8/2/2017 14:47	ON	N22.18528 E113.85881	48 m	0:00:12	15 kph
8/2/2017 14:47	ON	N22.18485 E113.85879	48 m	0:00:12	14 kph
8/2/2017 14:48	ON	N22.18419 E113.85882	73 m	0:00:18	15 kph
8/2/2017 14:48	ON	N22.18358 E113.85886	68 m	0:00:17	14 kph
8/2/2017 14:48	ON	N22.18301 E113.85891	64 m	0:00:16	14 kph
8/2/2017 14:48	ON	N22.18248 E113.85890	59 m	0:00:15	14 kph
8/2/2017 14:49	ON	N22.18180 E113.85883	76 m	0:00:19	14 kph
8/2/2017 14:49	ON	N22.18123 E113.85877	63 m	0:00:16	14 kph
8/2/2017 14:49	ON	N22.18077 E113.85875	51 m	0:00:13	14 kph
8/2/2017 14:50	ON	N22.18022 E113.85869	62 m	0:00:16	14 kph
8/2/2017 14:50	ON	N22.17982 E113.85857	46 m	0:00:12	14 kph
8/2/2017 14:50	ON	N22.17935 E113.85843	54 m	0:00:14	14 kph
8/2/2017 14:50	ON	N22.17890 E113.85840	50 m	0:00:13	14 kph
8/2/2017 14:50	ON	N22.17836 E113.85831	61 m	0:00:16	14 kph
8/2/2017 14:51	ON	N22.17785 E113.85816	59 m	0:00:15	14 kph
8/2/2017 14:51	ON	N22.17735 E113.85801	58 m	0:00:15	14 kph
8/2/2017 14:51	ON	N22.17696 E113.85789	45 m	0:00:12	14 kph
8/2/2017 14:51	ON	N22.17648 E113.85773	56 m	0:00:15	13 kph
8/2/2017 14:52	ON	N22.17604 E113.85754	52 m	0:00:14	13 kph
8/2/2017 14:52	ON	N22.17573 E113.85741	37 m	0:00:10	13 kph
8/2/2017 14:52	ON	N22.17542 E113.85733	36 m	0:00:10	13 kph
8/2/2017 14:52	ON	N22.17496 E113.85729	51 m	0:00:14	13 kph
8/2/2017 14:52	ON	N22.17462 E113.85734	38 m	0:00:11	13 kph
8/2/2017 14:53	ON	N22.17422 E113.85750	47 m	0:00:14	12 kph
8/2/2017 14:53	ON	N22.17382 E113.85768	48 m	0:00:14	12 kph
8/2/2017 14:53	ON	N22.17339 E113.85787	52 m	0:00:15	12 kph
8/2/2017 14:53	ON	N22.17296 E113.85803	51 m	0:00:15	12 kph
8/2/2017 14:54	ON	N22.17246 E113.85827	60 m	0:00:17	13 kph
8/2/2017 14:54	ON	N22.17202 E113.85846	54 m	0:00:15	13 kph
8/2/2017 14:54	ON	N22.17149 E113.85864	61 m	0:00:17	13 kph
8/2/2017 14:54	ON	N22.17109 E113.85884	49 m	0:00:14	13 kph
8/2/2017 14:55	ON	N22.17068 E113.85909	53 m	0:00:15	13 kph
8/2/2017 14:55	ON	N22.17026 E113.85919	48 m	0:00:14	12 kph
8/2/2017 14:55	ON	N22.16992 E113.85895	44 m	0:00:14	11 kph
8/2/2017 14:55	ON	N22.16990 E113.85851	46 m	0:00:14	12 kph
8/2/2017 14:56	ON	N22.17025 E113.85803	62 m	0:00:17	13 kph
8/2/2017 14:56	ON	N22.17085 E113.85743	91 m	0:00:23	14 kph
8/2/2017 14:56	ON	N22.17122 E113.85707	56 m	0:00:14	14 kph
8/2/2017 14:56	ON	N22.17166 E113.85667	64 m	0:00:16	14 kph
8/2/2017 14:57	ON	N22.17220 E113.85617	80 m	0:00:20	14 kph
8/2/2017 14:57	ON	N22.17267 E113.85570	72 m	0:00:18	14 kph
8/2/2017 14:57	ON	N22.17319 E113.85517	79 m	0:00:20	14 kph
8/2/2017 14:58	ON	N22.17360 E113.85476	62 m	0:00:16	14 kph
8/2/2017 14:58	ON	N22.17410 E113.85419	82 m	0:00:21	14 kph
8/2/2017 14:58	ON	N22.17454 E113.85360	78 m	0:00:20	14 kph
8/2/2017 14:59	ON	N22.17491 E113.85300	74 m	0:00:19	14 kph

## Appendix I. (cont'd)

Date & Time	EFFORT	Position	Leg Length	Leg Time	Leg Speed
8/2/2017 14:59	ON	N22.17519 E113.85244	66 m	0:00:17	14 kph
8/2/2017 14:59	ON	N22.17538 E113.85187	62 m	0:00:16	14 kph
8/2/2017 15:00	ON	N22.17552 E113.85122	69 m	0:00:18	14 kph
8/2/2017 15:00	ON	N22.17556 E113.85062	62 m	0:00:16	14 kph
8/2/2017 15:00	ON	N22.17554 E113.84995	70 m	0:00:18	14 kph
8/2/2017 15:00	ON	N22.17570 E113.84947	52 m	0:00:15	13 kph
8/2/2017 15:01	ON	N22.17609 E113.84932	46 m	0:00:14	12 kph
8/2/2017 15:01	ON	N22.17662 E113.84925	59 m	0:00:16	13 kph
8/2/2017 15:01	ON	N22.17716 E113.84924	60 m	0:00:16	13 kph
8/2/2017 15:01	ON	N22.17776 E113.84935	68 m	0:00:18	14 kph
8/2/2017 15:02	ON	N22.17836 E113.84942	67 m	0:00:17	14 kph
8/2/2017 15:02	ON	N22.17900 E113.84953	72 m	0:00:18	14 kph
8/2/2017 15:02	ON	N22.17964 E113.84954	71 m	0:00:18	14 kph
8/2/2017 15:03	ON	N22.18026 E113.84953	69 m	0:00:18	14 kph
8/2/2017 15:03	ON	N22.18072 E113.84951	51 m	0:00:14	13 kph
8/2/2017 15:03	ON	N22.18120 E113.84945	54 m	0:00:15	13 kph
8/2/2017 15:03	ON	N22.18167 E113.84947	53 m	0:00:15	13 kph
8/2/2017 15:04	ON	N22.18221 E113.84954	60 m	0:00:17	13 kph
8/2/2017 15:04	ON	N22.18273 E113.84957	58 m	0:00:16	13 kph
8/2/2017 15:04	ON	N22.18335 E113.84962	69 m	0:00:19	13 kph
8/2/2017 15:05	ON	N22.18392 E113.84966	65 m	0:00:18	13 kph
8/2/2017 15:05	ON	N22.18438 E113.84969	51 m	0:00:14	13 kph
8/2/2017 15:05	ON	N22.18490 E113.84967	58 m	0:00:16	13 kph
8/2/2017 15:05	ON	N22.18549 E113.84962	66 m	0:00:18	13 kph
8/2/2017 15:06	ON	N22.18602 E113.84962	58 m	0:00:16	13 kph
8/2/2017 15:06	ON	N22.18650 E113.84961	54 m	0:00:15	13 kph
8/2/2017 15:06	ON	N22.18697 E113.84959	51 m	0:00:14	13 kph
8/2/2017 15:06	ON	N22.18750 E113.84956	59 m	0:00:16	13 kph
8/2/2017 15:07	ON	N22.18789 E113.84953	44 m	0:00:12	13 kph
8/2/2017 15:07	ON	N22.18838 E113.84950	55 m	0:00:15	13 kph
8/2/2017 15:07	ON	N22.18884 E113.84950	51 m	0:00:14	13 kph
8/2/2017 15:07	ON	N22.18933 E113.84946	55 m	0:00:15	13 kph
8/2/2017 15:08	ON	N22.18979 E113.84942	51 m	0:00:14	13 kph
8/2/2017 15:08	ON	N22.19025 E113.84938	52 m	0:00:14	13 kph
8/2/2017 15:08	ON	N22.19081 E113.84937	62 m	0:00:17	13 kph
8/2/2017 15:08	ON	N22.19137 E113.84933	63 m	0:00:17	13 kph
8/2/2017 15:09	ON	N22.19179 E113.84928	47 m	0:00:13	13 kph
8/2/2017 15:09	ON	N22.19222 E113.84921	48 m	0:00:13	13 kph
8/2/2017 15:09	ON	N22.19265 E113.84915	48 m	0:00:13	13 kph
8/2/2017 15:09	ON	N22.19310 E113.84912	51 m	0:00:14	13 kph
8/2/2017 15:09	ON	N22.19365 E113.84906	62 m	0:00:17	13 kph
8/2/2017 15:10	ON	N22.19404 E113.84919	46 m	0:00:14	12 kph

## Appendix II. Survey Effort Database in SWL (February 2017)

(Abbreviations: BEAU = Beaufort Sea State; P = Primary Line Effort; S = Secondary Line Effort)

DATE	AREA	BEAU	EFFORT	SEASON	VESSEL	TYPE	P/S
1-Feb-17	SW LANTAU	2	25.25	WINTER	STANDARD36826	HKCRP	P
1-Feb-17	SW LANTAU	3	0.66	WINTER	STANDARD36826	HKCRP	P
1-Feb-17	SW LANTAU	2	10.14	WINTER	STANDARD36826	HKCRP	S
1-Feb-17	SW LANTAU	3	0.83	WINTER	STANDARD36826	HKCRP	S
8-Feb-17	SW LANTAU	2	25.13	WINTER	STANDARD36826	HYD-HZMB	P
8-Feb-17	SW LANTAU	3	23.23	WINTER	STANDARD36826	HYD-HZMB	P
8-Feb-17	SW LANTAU	4	5.71	WINTER	STANDARD36826	HYD-HZMB	P
8-Feb-17	SW LANTAU	2	8.46	WINTER	STANDARD36826	HYD-HZMB	S
8-Feb-17	SW LANTAU	3	6.31	WINTER	STANDARD36826	HYD-HZMB	S
8-Feb-17	SW LANTAU	4	1.16	WINTER	STANDARD36826	HYD-HZMB	S
13-Feb-17	SW LANTAU	3	7.09	WINTER	STANDARD36826	HKCRP	P
13-Feb-17	SW LANTAU	4	5.74	WINTER	STANDARD36826	HKCRP	P
13-Feb-17	SW LANTAU	5	0.40	WINTER	STANDARD36826	HKCRP	P
13-Feb-17	SW LANTAU	3	5.60	WINTER	STANDARD36826	HKCRP	S
13-Feb-17	SW LANTAU	4	4.17	WINTER	STANDARD36826	HKCRP	S
13-Feb-17	SW LANTAU	5	1.00	WINTER	STANDARD36826	HKCRP	S
17-Feb-17	SW LANTAU	1	2.78	WINTER	STANDARD36826	HKCRP	P
17-Feb-17	SW LANTAU	2	8.55	WINTER	STANDARD36826	HKCRP	P
17-Feb-17	SW LANTAU	3	1.35	WINTER	STANDARD36826	HKCRP	P
17-Feb-17	SW LANTAU	1	3.74	WINTER	STANDARD36826	HKCRP	S
17-Feb-17	SW LANTAU	2	9.65	WINTER	STANDARD36826	HKCRP	S

### **Appendix III. Chinese White Dolphin Sighting Database in SWL (February 2017)**

(Abbreviations: STG# = Sighting Number; HRD SZ = Dolphin Herd Size; BEAU = Beaufort Sea State; PSD = Perpendicular Distance; ND = Not Determined; BOAT ASSOC. = Fishing Boat Association P/S: Sighting Made on Primary/Secondary Lines)

DATE	STG #	TIME	HRD SZ	AREA	BEAU	PSD	EFFORT	TYPE	NORTHING	EASTING	SEASON	BOAT ASSOC.	P/S
1-Feb-17	6	1444	2	SW LANTAU	2	1105	ON	HKCRP	805658	810592	WINTER	NONE	P
1-Feb-17	7	1541	2	SW LANTAU	2	176	ON	HKCRP	805612	811530	WINTER	NONE	P
17-Feb-17	8	1145	1	SW LANTAU	3	ND	OFF	HKCRP	806184	802322	WINTER	NONE	
17-Feb-17	11	1308	2	SW LANTAU	2	1005	ON	HKCRP	807068	808542	WINTER	NONE	P

**Appendix IV. Individual dolphins identified during HYD-HZMB and AFCD monitoring surveys in SWL waters in February 2017**

ID#	DATE	STG#	TYPE	AREA
WL62	01/02/17	6	HKCRP	SW LANTAU
	01/02/17	7	HKCRP	SW LANTAU
WL91	01/02/17	6	HKCRP	SW LANTAU



Appendix V. Photographs of Identified Individual Dolphins in February 2017 in SWL waters