

## Appendix A: Survey Methods

The Oregon Trails Survey was designed to be the most accurate and comprehensive survey of trail users in Oregon to date. Instead of using lists of known trail users (such as individuals who registered All Terrain Vehicles or snowmobiles), which tend to overrepresent more dedicated users, the survey was conducted through telephone screening of a random sample of Oregon households, both listed and unlisted numbers. As a result, all levels of trail usage are proportionately represented. Only households without a telephone or with no land line (only a cell phone) had no possibility of inclusion in the sample.

Based on earlier surveys, it was initially projected that as many as 80% of Oregon households had a trail user. The actual percentage was much lower. The proportions of non-motorized trail users, non-motorized boaters, and motorized trail users were unknown, but the first group was known to be much larger than the others since it includes hikers, bicyclists, and individuals who walk for pleasure. Through a complex series of branching questions, the screener was designed to determine if anyone in the household had used Oregon trails in the past year and to select a respondent. If anyone in the household had used a motorized trail, believed to be the smallest category, they were interviewed about that use. That is, they were selected into the sample “with certainty” as motorized trail users. If there were no motorized trail users in the household but someone had used a non-motorized watercraft, they were interviewed about that use. They were selected “with certainty” about non-motorized trail use. If neither user type was found in the household but there was a non-motorized trail user, they were interviewed about that use. Once the quota of non-motorized trail users was met, no further interviewing of that group was conducted.

Through extensive pretesting and revision, the screener was refined and shortened to meet the scientific needs of the research without confusing or angering (most) respondents. The results can be found in Appendix B.

### Weights

When reporting on individual trail use types, no weights are required. However, because more motorized and non-motorized water users were interviewed than their proportion in the population (so we would have enough to conduct finer-scale analyses), weights must be applied when combining user groups. Similarly, fewer non-motorized trail users were interviewed than their proportion in the population. If weights are not used when combining user groups, the resulting percentages would over-represent the views of motorized trail users and non-motorized boaters, and under-represent the views of non-motorized trail users.

Respondents selected with certainty were asked for their trail use of the usage categories they were not questioned about. For example, motorized users were asked if they also were involved in non-motorized trail use and non-motorized boating. These figures were used to determine point estimates for the number of overall trail users.

The following information was used to determine accurate proportions of trail users in the general population:

TABLE A1: Population Point Estimates of Trail Users									
	Total Rs <sup>1</sup>	No Trail Use	MTU Only	NMB Only	NMT Only	MTU and NMB	MTU and NMT	NMB and NMT	All 3
	A	B	C	D	E	F	G	H	I
1 No Trail Use in Past Year	1648	1648	0	0	0	0	0	0	0
2 Interviewed as Motorized Trail User (MTU)	136	0	25	0	0	6	46	0	59
3 Interviewed as Non-Motorized Boater (NMB)	184	0	0	11	0	3	0	160	10
4 Interviewed as Non-Motorized Trail User (NMT)	326	0	0	0	262	0	9	46	9
5 Over Quota NMT <sup>2</sup>	215	0	0	0	173		6	30	6
6 Non-response to question about other trail use <sup>3</sup>	16	0	1	0	2	0	2	6	3
7 Totals	2525	1648	26	11	437	9	63	243	87
8 Percentages <sup>4</sup>	100%	65.3%	1.0%	0.5%	17.3%	0.4%	2.5%	9.6%	3.4%
9 Percentages excluding non-users <sup>5</sup>	100%	N/A	3.0%	1.3%	49.9%	1.1%	7.2%	27.7%	9.9%
	Total Rs	No Trail Use	MTU Only	NMB Only	NMT Only	MTU and NMB	MTU and NMT	NMB and NMT	All 3

<sup>1</sup> Numbers are from the initial sample only. This was the only sample from which accurate point estimates of usage types could be calculated. Additional screening from an unrelated survey was used to increase the numbers of motorized trail users and non-motorized boaters.

<sup>2</sup> These 215 cases were screened in after the quota of NMT had been met, so they were not interviewed. They have been allocated proportionately to the categories based on the respondents who were interviewed.

<sup>3</sup> These respondents did not answer the question on other trail use. They have been allocated proportionately to the categories based on the respondents who did answer that question.

<sup>4</sup> This row generalizes to all Oregon households with telephones. For example, 65.3% of Oregon households do not have an adult who used Oregon trails in the past year.

<sup>5</sup> This row generalizes to Oregon households with at least one trail user. For example, 3.0% of trail user households in the past year were exclusively motorized trail users.

By adding different combinations of the proportions in Row 8, the total number of telephone households in Oregon that contain each type of trail user can be calculated as follows:

	Total Rs	No Trail Use	MTU Only	NMB Only	NMT Only	MTU and NMB	MTU and NMT	NMB and NMT	All 3
	A	B	C	D	E	F	G	H	I
10 Row 8 percentages from above table	100%	65.3%	1.0%	0.5%	17.3%	0.4%	2.5%	9.6%	3.4%
11 Occupied Households	1,333,723	870,479	13,788	6,031	230,932	4,954	33,302	128,273	45,964
12 Any Motorized Trail Use	7.3%		1.0%			0.4%	2.5%		3.4%
13 Any Non-Motorized Boat Use	13.9%			0.5%		0.4%		9.6%	3.4%
14 Any Non-Motorized Trail Use	32.8%				17.3%		2.5%	9.6%	3.4%
	Total Rs	No Trail Use	MTU Only	NMB Only	NMT Only	MTU and NMB	MTU and NMT	NMB and NMT	All 3

Using these numbers, weights were calculated as follows:

Telephone households in Oregon with...	Population Proportion	Survey Proportion	Weight	
15 ...any motorized trail use	98,007 <sup>6</sup>	.136	.255	<b>.534</b>
16 ...any non-motorized boat use	185,222	.257	.322	<b>.797</b>
17 ...any non-motorized trail use	438,471	.608	.423	<b>1.435</b>

Such weights should be applied only when the responses are combined to generalize to all trail users. When generalizing about each trail user type, no weights are necessary.

<sup>6</sup> This column is the product of the number of occupied households (Table cell 11A) and the percentages of the three usage types (Tables cells 12A, 13A, and 14A).