

Sampling Scheme for the Cheese Country Trail Study September 28, 2010 (v3)

Our intent is to collect a representative sample of users and use pressure of the Cheese Country Trail along its 48+ mile route from Monroe, WI to Belmont/Mineral Point, WI. This will be achieved through observation and user intercepts. Beginning November 1, 2010 and continuing through October 31, 2011, 1,000 stratified and randomly allocated two hour time slots will be staffed by a local volunteer to collect information on trail conditions, use pressure, and user characteristics.

In total, we plan to collect information using 1000 time slots during the 12 month survey period. We plan to select these time slots randomly. Given our understanding of trail use, we will stratify the selection of time slots by month of year. Periods of heavier use during warm weather (Memorial Day through Labor Day weekends) will be sampled twice as heavily as fall, winter, and spring time periods (November 1, 2010 through May 27, 2011 and September 6 through October 31, 2011).

Trail conditions and use pressure will be recorded using the Observation Report and reflect activities taking place during each two hour time slot. User characteristics will be collected by two intercept attempts conducted during the two hour time slot (selected as the first user to pass at the bottom of each hour). Users who are intercepted will be interviewed (face-to-face) using a standardized survey instrument (titled "Survey Sheet") developed to elicit information on trail use, marketing, trip expenditures, and demographic information. The survey instrument will be administered with each user by an unbiased interviewer (to last no longer than 5 minutes). This approach could yield a maximum of 2,000 sampled users. However, during times of low use, we anticipate there to be null samples (sample times when there are no users present). Using this approach, we hope to obtain 600 to 1,000 total usable intercepts.

Given a general lack of specific trail usage data, we plan to sample segments in equal proportion at pre-determined locations near each of the eight communities along the trail using the set of specific intercept locations found in Appendix A. Thus, at each location, we will have an average of 125 sampled time slots. The exact number will depend on a random allocation process using a random number generator. Time slots will be randomly allocated by day of week and time of day. Given our understanding of typical trail usage, weekends and holidays will be sampled twice as heavily as regular weekdays. Also, two hour time slots will begin and end based on our understanding of typical trail usage and volunteer safety. Generally, these will correspond to the daylight hours in which the trail experiences use pressure. Certainly, summer months will have earlier and later start/end time slots when compared to winter months but the total number of time slots per month is pre-determined as specified above (see Appendices B and C).

Appendix A. Samples Distributed Across Space
(Segments of the Cheese Country Trail System)

The following represents the location and number of samples needed to attain the needed level of survey response.

Intercept Location	Sample Length (miles)	Approx. # of Samples*	Exact Sampling Location
Monroe		125	1
Browntown		125	2
South Wayne		125	3
Gratiot		125	4
Darlington		125	5
Calamine		125	6
Belmont		125	7
Mineral Point		125	8
Total		1,000	

1. Trail head parking lot outside of Monroe
2. Campground parking lot in Browntown
3. Parking lot on Cty N, in South Wayne
4. Campground parking lot by depot in Gratiot
5. Campground parking lot in Darlington
6. Grassy parking lot at trail crossing CtyHwy G
7. Far end of town along street parking area in Belmont
8. Parking area by depot in Mineral Point

* Specific number to be determined through random allocation.

Appendix B. Samples Distributed Across Time

Year	Month	Weekend/Holidays		Weekdays		Study Days per Month	Total # of Time Slots per Month
		Total Days	# of Time Slots	Total Days	# of Time Slots		
2010	November	11	47	19	17	30	65
	December	10	43	21	24	31	67
2011	January	11	47	20	19	31	67
	February	9	39	19	22	28	60
	March	9	39	22	28	31	67
	April	10	43	20	22	30	65
	May	10	49	21	27	31	75
	June	8	69	22	60	30	129
	July	11	95	20	39	31	133
	August	8	69	23	65	31	133
	September	9	46	21	28	30	74
	October	11	47	20	19	31	67
		117	632	247	368	364	1000

Yellow represent months with peak period usage (May 28 through September 5, 2011) stratified for double sampling pressure.

Appendix C. Monthly Calendars with Sampling Time Slots

November 2010- CCT Study Intercepts

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1 Intercept Start 9, 30, 32	2 20	3 10	4 20, 29	5	6 1, 6, 4, 17
7 Daylight Savings ends 20, 19	8	9	10 3, 16	11 Veteran's Day 4, 8, 3, 15, 16, 18, 24	12 26, 18	13 8, 16, 10, 5, 12, 15
14 21, 17, 19	15	16	17 26, 10, 16	18 31, 13	19	20 18, 29, 24, 2, 11, 8, 23, 13
21 1, 17, 30, 23, 14	22	23	24	25 Thanksgiving 29, 15, 28	26 Thanksgiving Holiday 21, 29	27 21, 9, 30, 25, 19
28 23, 21	29 3	30				

December 2010- CCT Study Intercepts

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1 9, 12	2 1, 4	3 25, 5, 6, 15	4 3, 17, 27, 31, 32, 8, 1
5 11, 23, 26, 10	6 9, 28	7 19, 32	8 5, 10	9	10	11 9, 28
12 13, 12, 9, 22, 13, 26	13 1	14	15 25	16	17	18 26, 24
19 3, 22, 12, 1	20	21 Winter begins 23, 5, 13	22	23 19	24 Christmas Eve 7, 4, 21, 28, 16, 15, 9, 5, 20, 4	25 Christmas Day 17, 29
26 2, 25, 18, 11	27 14	28 13	29 32, 28	30	31 New Year's Eve 23, 5	

January 2011- CCT Study Intercepts

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1 New Year's Day 11, 21, 23, 30
2 10, 15, 27	3 30	4 5, 29	5 7, 17	6 6, 30	7 32	8 4, 9, 18, 20, 22, 26
9 11, 21	10	11 5	12 3	13	14	15 11, 13, 23
16 1, 4, 8, 11, 15	17 Martin Luther King Jr. Day 1, 11, 15, 17, 23	18 15	19	20 23	21 13	22 12, 17, 21, 26, 28
23 1, 13, 16, 19, 22, 26	24 28	25	26 20	27	28	29 7, 13, 17, 18, 29
30 11, 31	31 3, 9, 17, 17					

February 2011- CCT Study Intercepts

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1	2	3	4	5
		20	9	18	18	5, 9, 13, 22
6	7	8	9	10	11	12
2, 22	9, 31	7	19	13	5	7, 10, 22, 24, 26, 28, 30
13	14	15	16	17	18	19
10, 13, 14, 15, 22, 23, 24	Valentine's Day 17			10, 11, 12	9	1, 8, 11, 12, 16, 21
20	21	22	23	24	25	26
1, 20, 22	Presidents' Day 16, 20, 26, 29	7, 14, 19	3, 32		10	13, 18, 24
27	28					
2, 19, 24	25					

March 2011- CCT Study Intercepts

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1	2	3	4	5
		15, 32	4, 12, 24		18	6, 12, 26
6	7	8	9	10	11	12
1, 15, 20, 22, 28	31		2, 21, 26	17, 30, 32	7	2, 11, 20, 22, 23, 30
13	14	15	16	17	18	19
Daylight Saving Begins Spring Spring Forward			2, 29	St. Patrick's Day		
7, 16, 22	32, 3, 26			7, 18, 29	30	5, 7, 20
20	21	22	23	24	25	26
Spring Begins			4, 25			
2, 9, 11, 15, 21, 27					2, 17	2, 6, 21, 28
27	28	29	30	31		
1, 11, 15, 17, 21, 24		28	19	19, 30		

April 2011- CCT Study Intercepts

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					1 14	2 5, 17, 23
3 6, 11, 18, 25, 27, 40	4 15, 17	5	6 27, 28	7 6, 13	8 2, 16	9 2, 5, 23, 35, 36
10 7, 14, 16, 24, 28, 33	11 27, 38	12	13 14	14	15	16 2, 15, 25, 32
17 8, 11	18 5	19	20	21	22 Good Friday 1, 8, 12, 20, 24, 27	23 7, 34, 35, 37
24 Easter 18, 23, 25, 29	25 Easter Monday 12, 29	26 12, 37	27 40	28 8, 19, 25	29 18	30 7, 23, 34

May 2011- CCT Study Intercepts

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3	4	5	6	7
8 Mother's Day	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30 Memorial Day	31				

June 2011- CCT Study Intercepts

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19 Father's Day	20	21 Summer Begins	22	23	24	25
26	27	28	29	30		