

Chapter 2 Trail Usage

Trail counters have been placed at strategic points along the trail system. The locations of these counters are identified in Map 1-1. A counter registers when any object passes before it. In some cases fluttering leaves make false registrations of use. And the passage of large animals can make a false registration. In addition, even when correctly counting persons, a counter will register twice when the same person goes out and back from a trip; while other users may be going only one way and be registered once. If persons are close together, several persons can be counted as one. As a result of these problems in counting persons, it is necessary to make some adjustments to the raw trail count data.

There were no functioning trail counters on the Montour trail, so usage of that trail, and corresponding total spending related to its use, cannot be determined. Also, the counter at Greenock malfunctioned extensively during the course of the trail season. However, we could use the Buddtown counter to estimate the Greenock counts using a statistical analysis of counts at the two locations from data obtained in 1998. We estimated the following predictive equation for Greenock:

$$\text{Greenock Count} = 0.83 \text{ Buddtown} + 0.0002 \text{ Buddtown}^2, R^2 = .93, N=46$$

The equation fit the 46 observations we had for Greenock in 1998 very well. We used this equation to estimate the Greenock counts from the more reliable Buddtown counts. In order to deal with the "fluttering" leaves problem, we had to throw out very high counts; for example, one day registered 15,000 counts at one site.

A trail use study supervised by Bob McKinley has provided very important validation of counts. His study sought to determine how many different persons were associated with the number of counts registered by the counters. In July-August of 2002, accuracy tests were conducted for the counters at Boston, Buddtown, and Greenock. The actual number of persons and counter counts were recorded for three different days and different times of the day for each site. The number of persons going north was distinguished from the number going south. The empirical relationship between trail counter counts (TN) and the actual number of different persons (AN) was:

$$AN = 0.657 * TN$$

We have used this equation to translate counts to persons across the entire trail system. All the analysis of trail use that follows has been transformed with this equation. So the following data represent the number of actual person visits on the trail, and not trail counts.

4-1. Trail Use by Month and Day of Week

In Chapter 4 we will be combining data on trail use with spending information from the user survey. So in this chapter we report trail use in a manner that will be useful in Chapter 4. The trail counters, when functioning properly, register counts on an hourly

and daily basis when operating. These highly detailed counts were combined into daily averages by month and day of the week for each counter location.

Figure 2-1 shows the mean number of visits per day estimated at each counter location. The average number of visits across all trails was **147 visits per day**. Since there are 11 counter locations and 214 days in the trail season, April 15-November 15, we can use this average for a crude estimate of total seasonal trail use. We must exclude Montour Trail, and we must assume all persons pass by a counter and no person passes two counters. This crude total estimated use is 346,038 (147x11x214) trail visits in the season. A more accurate estimate is calculated below.

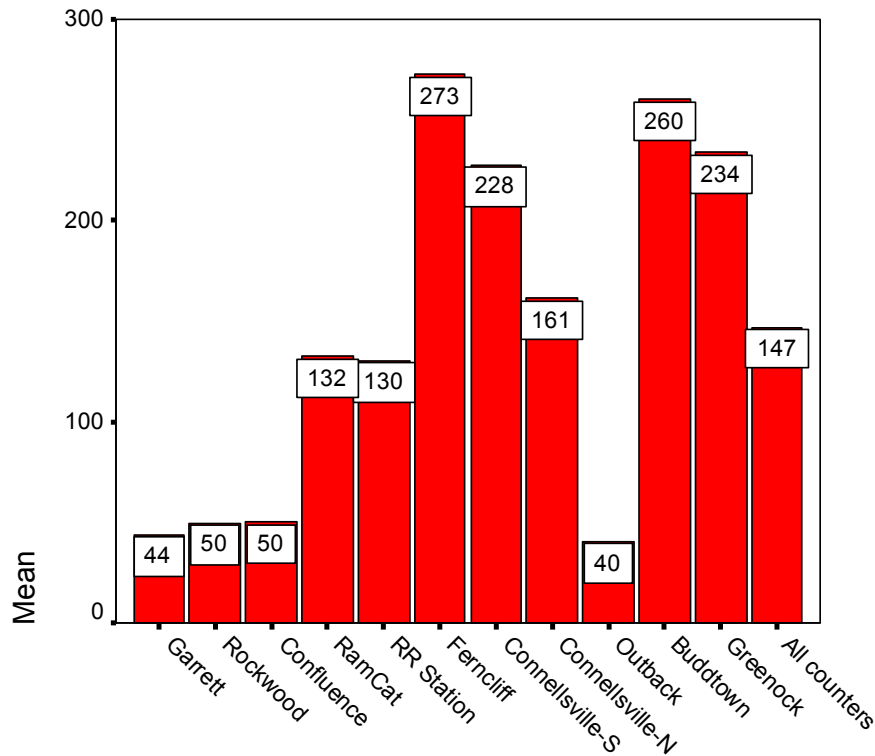


Figure 2-1
Mean Number of Visits per Day in 2002
Trial Season, by Counter Location

Trail use varied significantly across counter locations, as Figure 2-1 shows. Usage was highest at Ferncliff and Buddtown, at 273 and 260 visits per day, respectively. The trail system in and around Ohiopyle is represented by the RamCat, RR Station and Ferncliff counters.

Table 2-1 provides more detail about weekend differences in trail use across counter locations. Clearly Ferncliff is highly used on Saturdays, with an average of 616 visits per day during the trail season.

Table 2-1
Mean Number of Visits per Day in 2002 Trail Season,
by Counter Location and Day of Week

Trail Counter Location	Weekday	Saturday	Sunday	All Days
	1	2	3	4
Garrett	32	62	86	44
Rockwood	38	66	90	50
Confluence	40	76	77	50
RamCat	84	272	240	132
RR Station	88	238	247	130
Ferncliff	167	616	487	273
Connellsville-S	199	341	266	228
Connellsville-N	158	343	179	161
Outback	30	58	75	40
Buddtown	208	366	422	260
Greenock	184	332	387	234
All	103	250	218	147

Trail use varies significantly over the trail season, as Table 2-2 illustrates. Several daily averages had to be estimated due to the lack of counter data. Usage is highest in June and July, with an average of 201 and 199 users per day respectively. Ferncliff and Connellsville-S are very heavily used in June, July and August.

In order to estimate spending, we had to generate a table that showed trail counts by counter location, month and day of the week. This is a complicated table and is shown in Appendix B. We estimated it by taking actual counts by Counter Location and Month, and assuming that the day of week pattern for a location would be the same for all months. For example, if Weekday counts at Garrett were 50% of Saturday counts over the entire trail season, we assume that every Weekday is 50% of Saturday counts for every month. This procedure was necessary since there were too many missing data to establish such a complex table from actual count data.

Appendix B tables were the basis for an estimate of the total number of visits to the trail system. Taking the number of weekdays, Saturdays and Sundays in each month, we can estimate total use. These estimates are shown in Table 2-3. We estimate a total of **347,053 visits** in 2002 to the trail system on which these counters were placed, Montour excluded. Ferncliff, Buddtown and Greenock comprised the highest shares of use; the three combined represented roughly one-half of the trail use.

Table 2-2
Mean Number of Visits per Day in 2002 Trail Season,
by Counter Location and Month

Trail Counter Location	April	May	June	July	August	September	October	November	All Months
	1	2	3	4	5	6	7	8	9
Garrett	13	35	70	67	48	37	30	7	44
Rockwood	51	51	65	71	54	45	30	11	50
Confluence	12(a)	28(a)	50(a)	62	78	49	27	10	50
RamCat	41	93	166	220	180	141	68	24	132
RR Station	44	106	189	250	136	78	64	77	130
Ferncliff	127	194	303	384	300	196	256	362	273
Connellsville-S	98(b)	151	285	414	394	270(c)	60	66	228
Connellsville-N	98	149	209	161	154	180	147	128	161
Outback	20(d)	39	46	42	37	46	19	68	40
Buddtown	131	267	346	300	178	293	227	222	260
Greenock	113	240	314	267	154	263	208	199	234
All	75	139	201	199	135	134	109	113	147

- (a) missing data = .3 x RamCat
- (b) missing data = Connellsville-N
- (c) missing data = 1.5 x Connellsville-N
- (d) mission data = .15 x Buddtown

Table 2-3
 Estimated Total 2002 Trail Season
 Visits, by Trail Counter

Trail Counter Location	Total Use 1	PerCent of Total 2
Garrett	9121	2.6%
Rockwood	10551	3.0%
Confluence	9484	2.7%
RamCat	27883	8.0%
RR Station	27566	7.9%
Fernciff	58616	16.9%
Connellsville-S	51224	14.8%
Connellsville-N	39879	11.5%
Outback	8482	2.4%
Buddtown	55083	15.9%
Greenock	49163	14.2%
Total	347053	100.0%