Who's on the Trail?

The Canalway Trail User Count 2007

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For the New York State Canal Corporation

New York State Canal Corporation

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Executive Summary

During July and August 2007, 23 volunteers, including members of a local Boy Scout troop, stationed themselves at five locations along the Canalway Trail within the eastern Monroe County Village of Pittsford and the Towns of Brighton and Perinton. On weekday evenings between 6:30 to 7:30 p. m. they counted the number persons using the Canalway Trail. They also indicated whether they were bicycling, walking, in-line skating, jogging, or pushing a baby stroller. In the case of bicyclists, the counters also noted whether they were wearing a helmet. The hour for conducting the counts was chosen to correspond with the time of peak week day traffic.

Over the month that counts were conducted, volunteers generated data from more than 70 counts. This information was used to calculate annual traffic estimates from approximately 100,000 trail users in Genesee Valley Park to nearly 200,000 trail users at Perinton Park and at Lock 33 in Brighton. Estimates were based on a methodology recently developed by Dr. Greg Lindsey of Indiana University. Dr. Lindsey has spent many years conducting infrared counts on multi-use trails in the Indianapolis area in order to develop a process that not only can easily be undertaken by volunteers with a minimum of time expenditure but more importantly yields valid and highly accurate results

The raw count data yielded information on the percentage of types of trail users that were observed during the counting periods. Not attempt was made to predict whether the same proportion of use could be applied on an annual basis. For 2007, 49% of trail users were bicyclists, 38% were walkers, 8% joggers, 3% persons with baby carriages, and 2% in-line skaters. Counters also noted that 63% of all bicyclists counted were wearing helmets.

It is recommended that all further Canalway Trail counts be undertaken using the Lindsey methodology. Counts can be conducted with a minimum of volunteer effort. By adhering to a standardized counting process it aids in comparing data between years and counting locations.

Automated counters should be installed along the trail in rural, suburban and urban locations. Such tools provide accurate and efficient means of counting number of users over a long term and can be used to better determine time of peak hourly week day use and generate more accurate ratios for predicting week day, weekend traffic and monthly trail traffic volume. By obtaining more precise ratios for a range of environments specific to the Canalway Trail, one can obtain more valid trail traffic estimates and apply the Lindsey method to generating trail traffic estimates to a broader range of trail locations.

Introduction

The 2007 Trail User Count was conducted to provide information on the number and types of users at several different locations along the Canalway Trail within eastern Monroe County. These results were not only compared with data obtained from counts conducted in 2006 and in 2005, but also, for the first time, used to estimate weekly, monthly, and even annual trail traffic at the count locations.

Acknowledgments

Parks & Trails New York and the New York State Canal Corporation are grateful for the excellent job and the time and effort of the volunteers who visited the trail on multiple occasions to conduct the user counts. Volunteers included: Special thanks to Monroe Regional Canalway Trail Group member David Schaeffer for his help in organizing the volunteers and Parks & Trails New York intern Jonathan Cmaylo who assisted with the report preparation.

Methodology

Data Collection

Counts were conducted from July 16, 2007 to August 24, 2007. Twenty-three volunteers, recruited by Parks & Trails New York and David Schaeffer, conducted 72 separate counts at five different Canalway Trail locations.

The volunteers were provided a count protocol outlining the steps for conducting the count. See Appendix A.

A counting form (see Appendix B) was developed to standardize data collection. The form was based on the form used for the 2006 Canalway Trail Count. Information requested included: date, time, location, weather, trail surface, and the number and type of trail users. Trail users were separated into categories: bicyclists, walkers, joggers, baby carriages and horses. Bicyclists were further subdivided by those with and without helmets.

Based on the recommendations outlined in *Estimating Urban Trail Traffic: Methods for Existing and Proposed Trails*, data was collected in one-hour intervals at the time of peak week day trail use. Parks & Trails New York and the New York State Canal Corporation pre-determined the hour of peak week day use to be between 6:30 p.m.-7:30 p.m. based on conversations with several individuals who had agreed to be counters and were very familiar with the trail at each of the count locations. The only exception was the Winton Road Bridge location where counts were recorded between 5:15 p.m. and 6:15 p.m. and also between 5:30 p.m. and 6:30 p.m.

As shown in Table One, all week days were counted at least once for all locations. Completed data forms are found in Appendix C. All data entered are available in spreadsheet format in Appendix D.

Table One. Counts by Day of Week

	Monday	Tuesday	Wednesday	Thursday	Friday	Total
Genesee Valley Park	2	2	1	2	5	12
Winton Road	1	1	1	1	1	5
Lock 3 JCC	4	3	3	2	3	15
Schoen Place	4	4	3	2	3	16
Perinton Park	5	6	5	4	4	24

Locations

Parks & Trails New York chose the count locations after consultation with staff at the New York State Canal Corporation. The locations were selected to represent an urban and suburban population. In all locations the trail was located along the Erie Canal. Locations and surrounding environments for the 2007 trail count were

- Genesee Valley Park, City of Rochester – urban, Olmsted-designed park
- Winton Road bridge, Town of Brighton – suburban office parks and shopping centers
- Lock 33 at Edgewood Avenue, Town of Brighton – fitness center, suburban residential neighborhood
- Schoen Place, Village of Pittsford – complex of restaurants and boutique-style shops
- Perinton Park, Town of Perinton – suburban community park at edge of Village of Fairport

Table Two. Distribution of Number of Counts Conducted by Month and Location

	Genesee Valley Park	Winton Road	Lock 33 JCC	Schoen Place	Perinton Park	Total
July	4	4	4	6	10	28
August	8	1	11	11	13	44
Total	12	5	15	17	23	72

As Table Two illustrates, more counts were taken in some locations than others depending on the availability of volunteers. With so few counts from Winton Road, especially during August, the results from this location may not be sufficient to ensure highly valid predictions.

Results

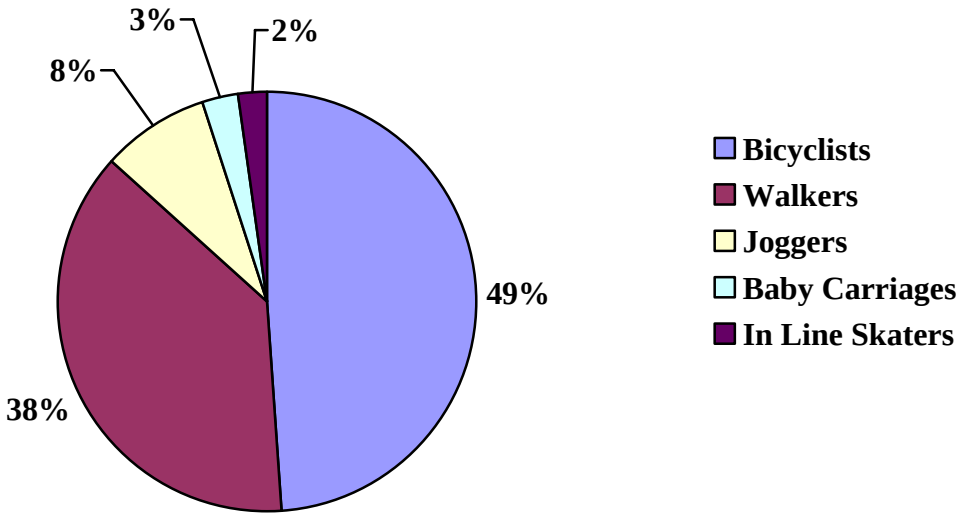
Modes of Use

Table Three represents the different types of trail users based on a sum of all 72 counts from the five survey locations. The pie chart presents this data in terms of percentages of total users counted.

TableThree. Distribution of Total Counts

Bicyclists	Walkers	In Line Skaters	Joggers	Baby Carriages	Wheelchair Users	Total Users
2,960	2,276	133	503	172	3	6,047

Trail Usage as a Percentage of Total Counts



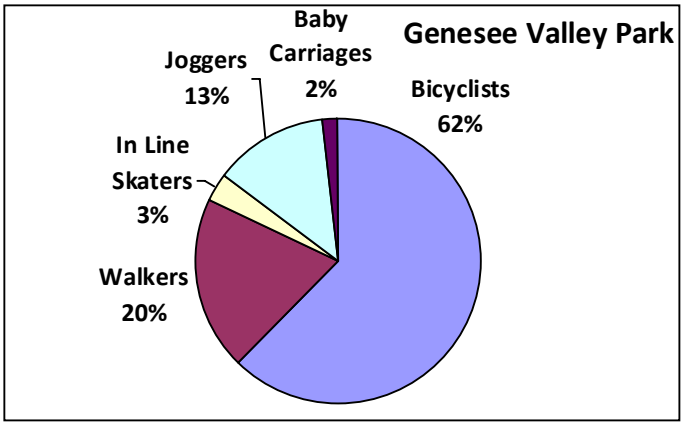
Cyclists represented the greatest number of trail users counted in this survey, followed by walkers, joggers, baby carriages, and in-line skaters. Only three wheelchair users were counted representing less than one percent.

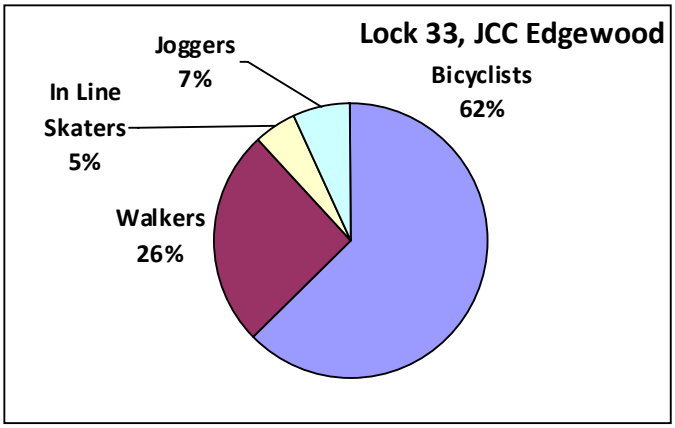
When the data was separated by trail count location, walkers were found to be most numerous at Schoen Place, 53 percent of those counted. This result is consistent with the number of people who frequent the many Schoen Place shops and restaurants and often take a short stroll along the canal while they are there. This result was most likely also influenced by the fact that the counts were conducted during or just after the dinner hour when people are more inclined to walk after eating or walk while waiting for a restaurant table.

In Perinton Park, an almost equal percentage of walkers and cyclists was observed. The location of the park along the trail may attract park visitors who include a walk on the trail as part of other activities associated with their time at the park.

It should be noted, however, that walkers represented only 20 percent of those counted within Genesee Valley Park and only nine percent of those counted at Winton Road. Genesee Valley Park is a much larger park so there is less likelihood that those coming to the park for other activities will even be aware of or in close proximity to the trail. Because of the more commercial nature of the Winton Road Bridge location it too may not attract the same number of walkers. The large number of cyclists may represent through cyclers.

Trail Usage as a Percentage of Total Counts by Location





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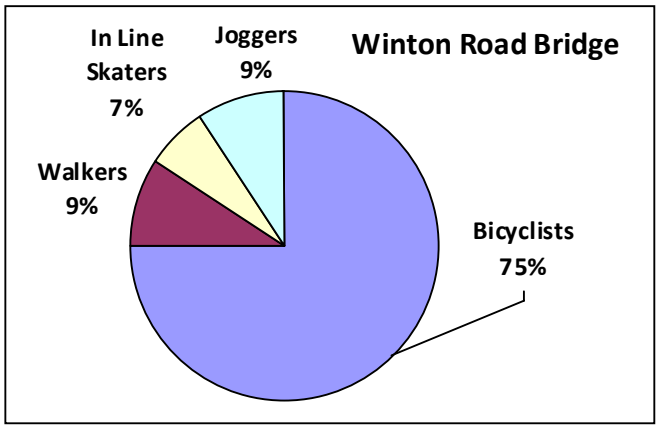
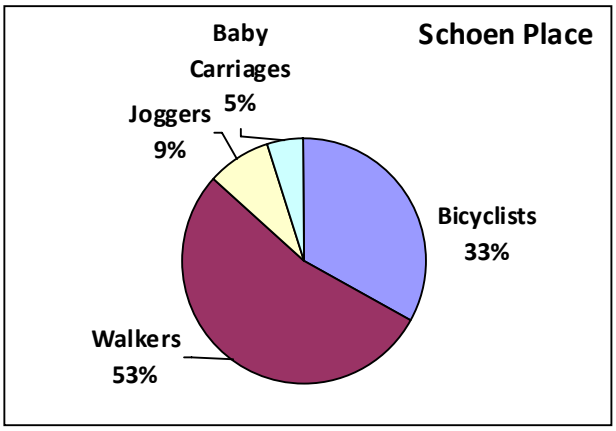
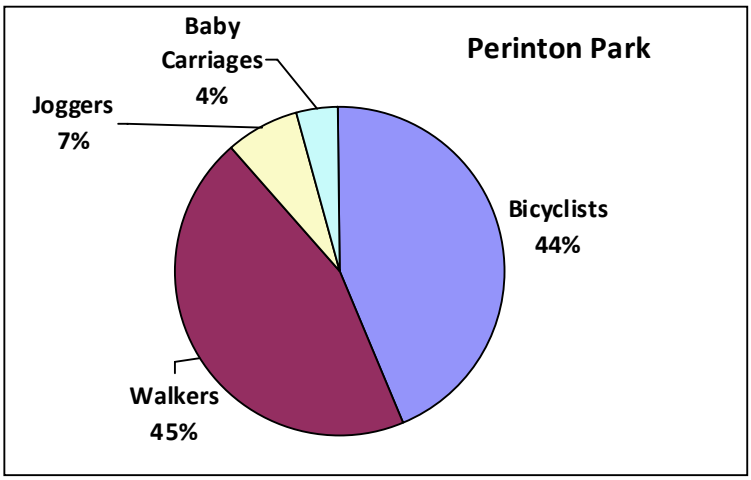
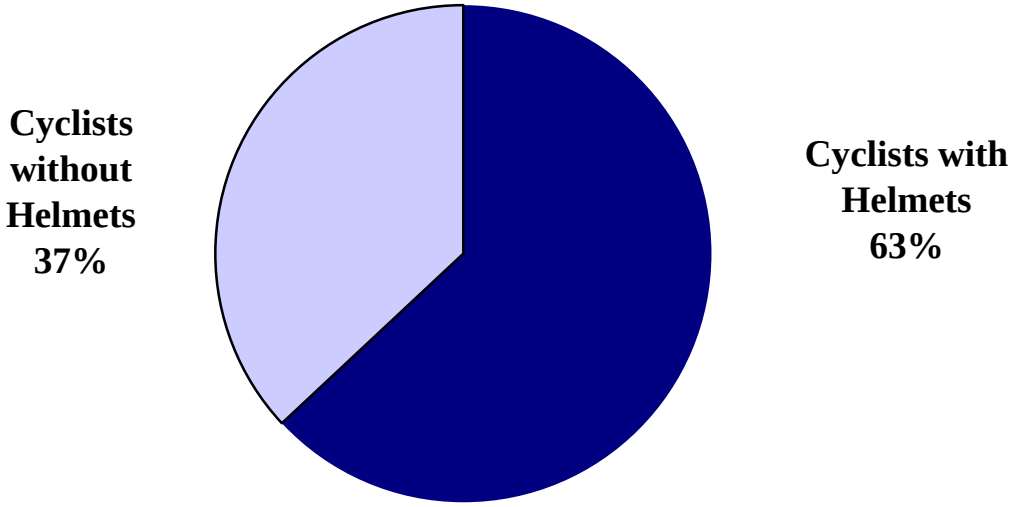




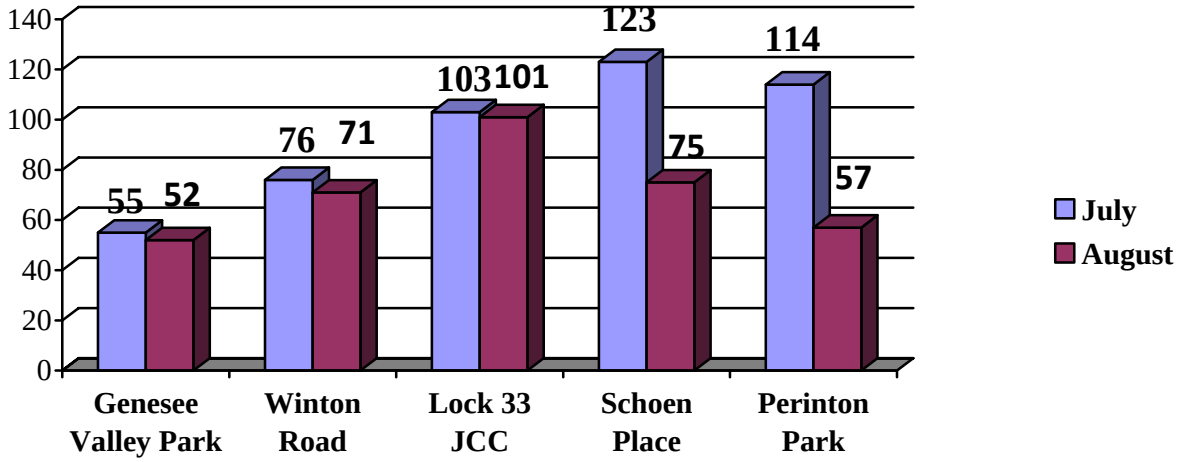


Cyclists' Helmet Usage



While by law adult cyclists are not required to wear helmets, the majority of bicyclists observed in this survey were wearing helmets. Counters were not asked to estimate the age of the persons they counted so there is no indication of how many of these helmets wearers were adults and whether all children 14 and under were wearing helmets as required by law.

Median Peak Hourly Trail Count at Each Location by Month



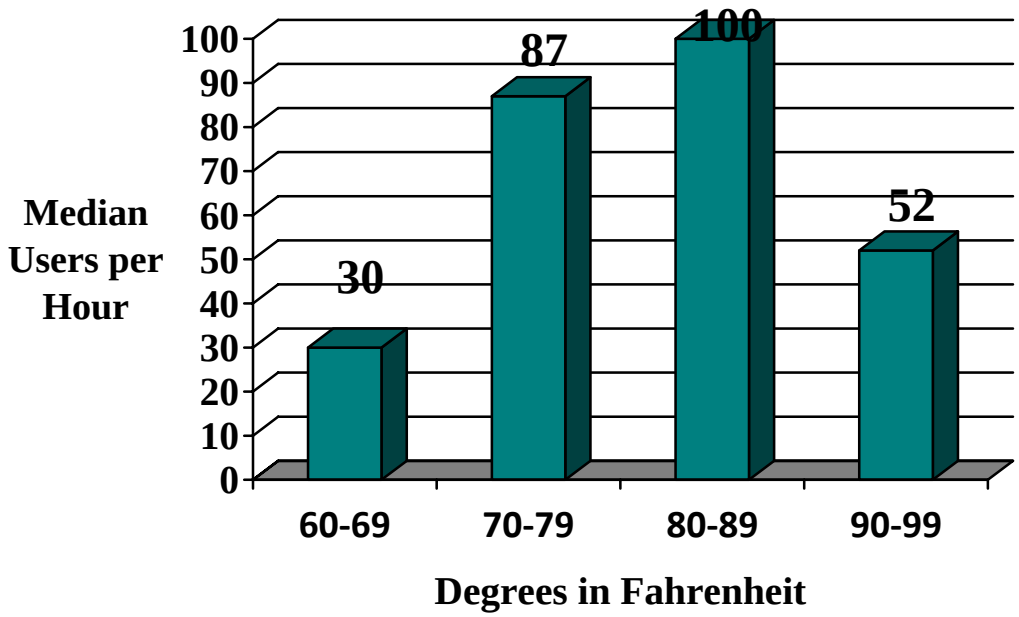
When the median hourly counts were separated by location and by month, it was found that in three locations there was very little difference in counts between the two months. It is unclear why there was such a big drop in the August median hourly counts for Schoen Place and Perinton Park. Median figures were used instead of averages as these were the figures employed as the basis of weekly, monthly, and annual projections. Dr. Lindsey had recommended the use of median values to reduce the influence of wide variations.

Temperature

Counters were asked to record the air temperature to better understand whether temperature may affect trail use. With a mode (greatest frequency) of 75 °F and a median temperature of 78 °F, it appears that temperature conditions were ideal most of the times that counts were taken. The bar graph of median peak hourly trail use per temperature range indicates that trail use declined significantly as temperatures dipped below 70 ºF and rose above 90 ºF. The highest median peak trail use was observed when temperatures were between 80 ºF and 89 ºF.

Median Temperature	78 °F
Mode Temperature	75 °F
Maximum Temperature	95 °F
Minimum Temperature	60 °F

Median Peak Hourly Trail Count by Temperature Range

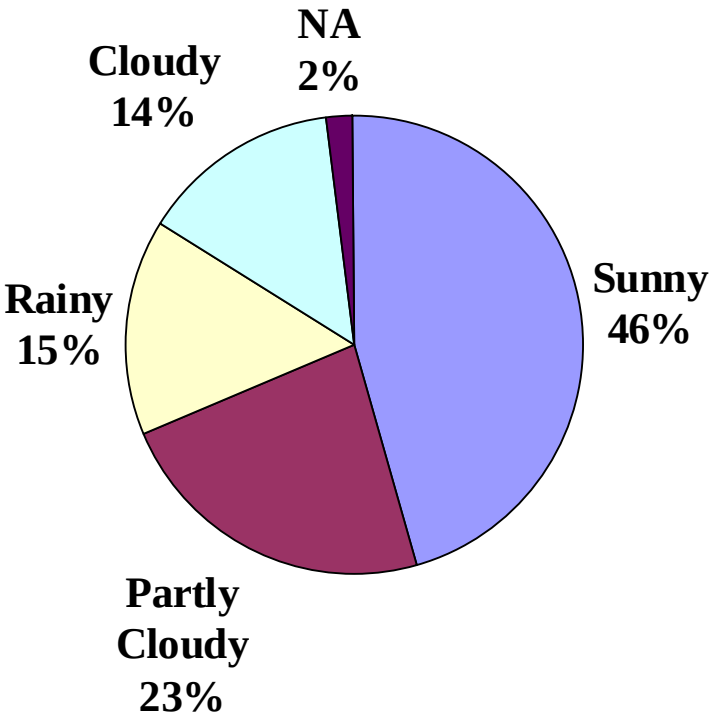


Weather Conditions

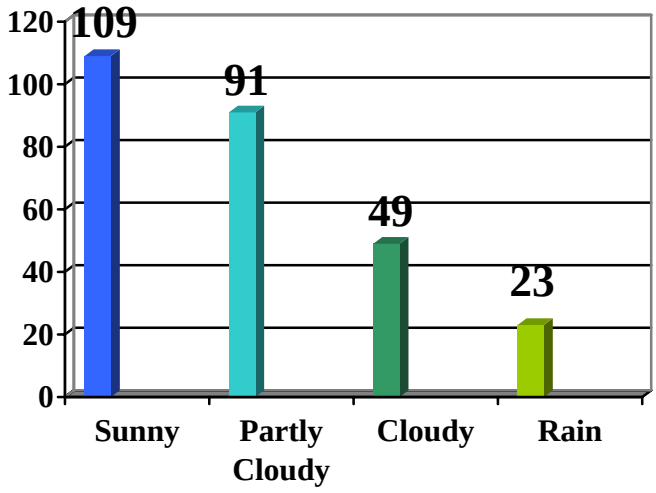
Counters were asked to record the weather during the time they conducted their counts to see if weather had an impact on trail use. Volunteers were given the choice of *sunny*, *cloudy*, *partly cloudy*, and *rain* to most accurately describe the current weather situation at the time of counts were taken**.** As the pie chart on page 12 indicates, the greatest number of surveys were conducted under sunny conditions while only 15 percent were conducted under rainy conditions. Two percent of surveys did not include adequate weather data and were labeled "Not Available."

The graph on page 12 confirms that median peak hourly counts also decreased as weather worsened from sunny to rain.

Percentage Trail Counts Conducted by Weather Condition



Median Peak Hourly Trail Count by Recorded Weather Condition



Trail Usage Comparison

Table Four. Comparison of 2005, 2006, and 2007 Counts

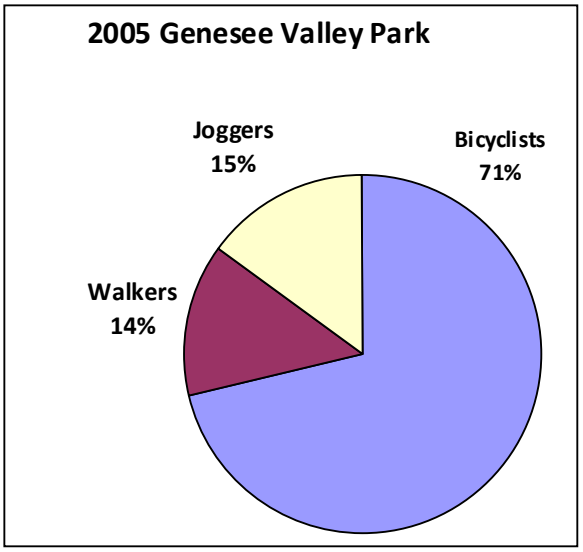
	Percentage of Total Trail Users Counted		
Type of Trail User	**2005**	**2006**	**2007**
Bicyclists	64%	43%	49%
Walkers	24%	36%	37.6%
In Line Skaters	2%	0%	2.2%
Joggers	8%	20%	8.3%
Baby Carriages	2%	2%	2.8%
Wheelchair Users	n/a	0%	0%
Equestrians	0%	0%	0%

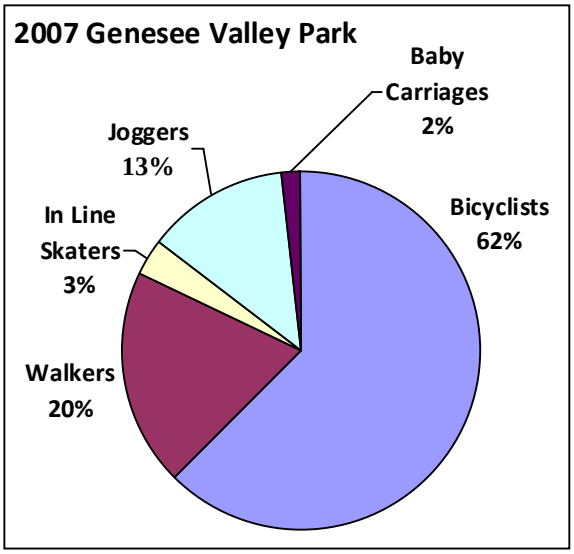
Table Four presents the percentages of each type of trail user as a percentage of total trail users counted in the 2005, 2006, and 2007 surveys. The 2005 survey also took place in Monroe County, while the 2006 survey took place in Herkimer, Montgomery, and Oneida Counties. In 2005, bicyclists represented a clear majority of trail users. In the 2006 and 2007 surveys, cyclists still represented the greatest single percentage of trail users, but they no longer represented the majority of trail users.

Monroe County Comparisons: 2005 and 2007

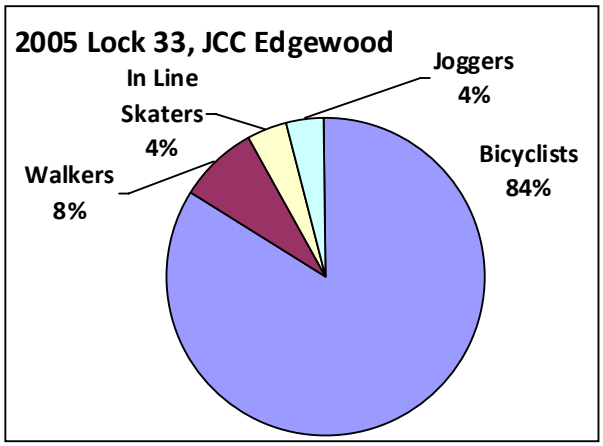
Three of the Monroe County locations surveyed in the 2005 trail count were again surveyed in the 2007 trail count, Genesee Valley Park in the City of Rochester, Lock 33 JCC in Brighton, and Perinton Park in the Town of Perinton. The pie charts on pages 14 and 15 present the percentage of each user group from the 2005 and 2007 counts at these locations.

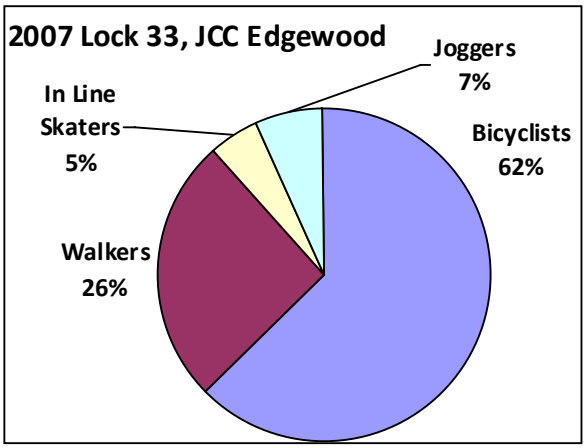
There is presently no data to explain the decrease in percentage bicyclists from 2005 to 2007 at Genesee Valley Park and Lock 33, JCC other than the difference in time when the counts were taken. With two exceptions, the 2005 counts were conducted on Saturdays between the hours of approximately 10:00 a.m. and 11:00 a.m. while the 2007 counts were conducted primarily between 6:30 p.m. and 7:30 pm. on week day evenings. Perhaps more persons use the trails on Saturday for cycling when they have additional free time for a bike ride while during the week they use the trail for a “short walk” after work or dinner.



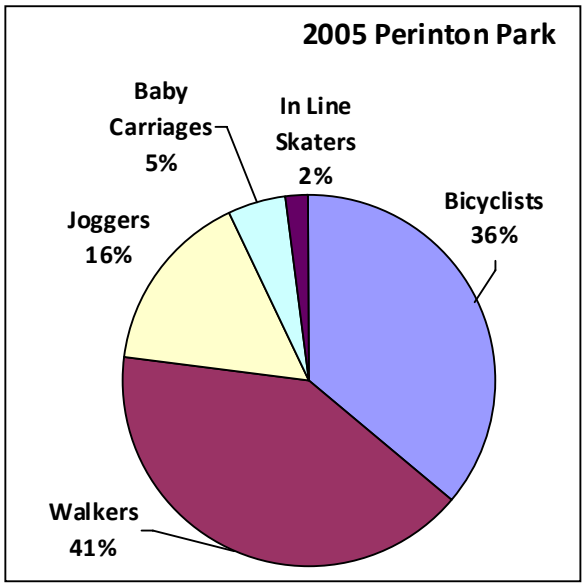


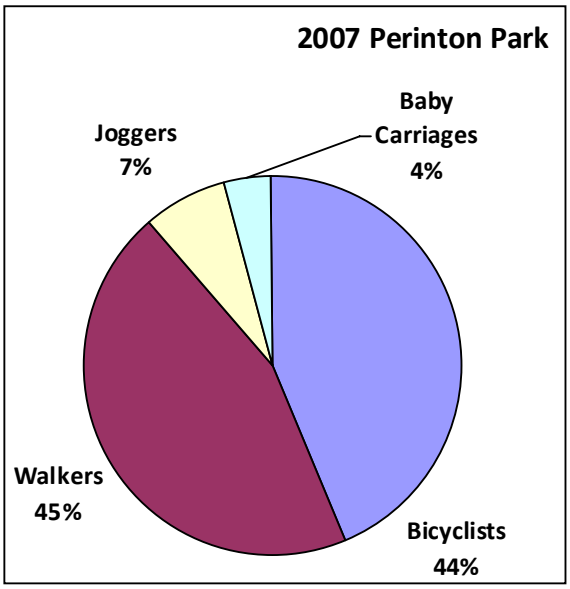
The graphs demonstrate an increase in the percentage of walkers from 2005 to 2007 and a decrease in the number of cyclists. However, it also shows that while there was a slight decrease in the percentage of joggers in 2007, counters found the trail being used by in line skaters and persons pushing baby carriages.





Walkers increased dramatically from 2005 to 2007. The percentage of joggers almost doubled. Most surprising was the 22 percent decrease in bicyclists.





Unlike the other two locations, Perinton Park experienced an increase in percentage cyclists from 2005 to 2007. The percentage of total persons counted that were joggers declined by more than 50 percent from 2005 to 2007. No inline skaters were observed in 2007.

Trail Traffic Estimation

The data taken from the trail counts provide only a snapshot of the number of persons using the trail at a particular day, time and location. Until recently there was no reliable way to use that data to predict weekly, monthly, or annual trail use.

However, Dr. Greg Lindsey of Indiana University has conducted infrared counts 24 hours/day, seven days/week for one to four years on five different multi-use trails, representing 33 miles of trail in the Indianapolis area to perfect a methodology that uses hourly counts to produce estimates of annual trail traffic that are within 20 to 30 percent of actual counts. Lindsey's goal is to develop a procedure that can be undertaken simply and efficiently with a minimum of time investment. He bases that methodology on counts taken during the hour of peak week day use This report uses the step by step process outlined by Lindsey in his 2007 paper, *Estimating urban trail trail: Methods for existing and proposed trails* and personal conversations with Dr. Lindsey to forecast annual trail traffic at each of the five eastern Monroe County locations on the Canalway Trail. (Lindsey, et. al., 2007, Lindsey, personal communication, 2007)

Use of the Lindsey model is based on the assumption that the trail environments in Indianapolis and Rochester are similar enough in the following ways to not overly influence predictions:

- Location - The five eastern Monroe County counting sites were selected because they most closely paralleled the urban-suburban Indianapolis locations that Lindsey used in his work.

- Climate – As shown in Table Four, Rochester's climate is closer to that of Indianapolis than one might first imagine based on the weather charts below. It should be noted that overall average precipitation for Indianapolis is 40 inches, 8 inches more than Rochester (31.9 inches) even though clearly Rochester has more snow than Indianapolis. As also might be expected Rochester's monthly mean temperatures are lower. Rochester's yearly average mean temperature is 47.5 ºF, five degrees lower than the yearly average mean for Indianapolis of 52.5 ºF.

  However, because no information was available on how best to adjust Lindsey's ratios to account for temperature and precipitation differences, it was decided to use Lindsey's ratios as presented in his paper in all trail traffic estimate calculations.

Table Four. Temperature and Precipitation Data for Indianapolis, IN and Rochester, NY

Indianapolis Weather

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Avg. High	34°	38°	50°	64°	74°	82°	85°	84°	77°	65°	51°	38°
Avg. Low	17°	20°	31°	41°	51°	61°	65°	62°	55°	44°	34°	24°
Mean	26°	30°	41°	52°	64°	72°	75°	74°	67°	55°	44°	31°
Avg. Precip.	2.3 in	2.5 in	3.8 in	3.7 in	4.0 in	3.5 in	4.5 in	3.6 in	2.9 in	2.6 in	3.3 in	3.3 in

Rochester Weather

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Avg. High	30°	32°	42°	55°	67°	75°	80°	78°	71°	60°	47°	35°
Avg. Low	16°	16°	25°	35°	46°	54°	58°	57°	51°	41°	34°	22°
Mean	24°	25°	34°	46°	57°	65°	70°	68°	62°	51°	41°	28°
Avg. Precip.	2.1 in	2.1 in	2.3 in	2.6 in	2.7 in	3.0 in	2.7 in	3.4 in	3.0 in	2.4 in	2.9 in	2.7 in

Degrees in Fahrenheit

Extrapolation of Estimated Trail Use from Trail Count Data

Lindsey' paper outlines five steps for calculating estimates of annual trail traffic.

1. **sampling of trail traffic during week day peak hour periods**

All estimates are based on the counts of trail traffic conducted during the one-hour period of peak week day activity. The peak hour was chosen to be 6:30 p.m. to 7:30 p.m. based on conversations with some of the individuals who had agreed to conduct the count and had considerable experience with using and maintaining the trail at the locations to be surveyed. It should be noted that without previously installing infrared counters or having volunteers conduct counts during all hours that the trail is open for use, it is impossible to determine conclusively what the peak hour of usage might be.

At one location, Winton Road, the volunteer counter chose to conduct two counts between 5:15 p.m. and 6:15 p.m. and three counts between 5:30 p.m. and 6:30 p.m. The volunteer counter is a trail adopter along the Winton Road section of trail and therefore has spent many evenings involved in trail maintenance and in hosting trail-centered events for the youth g roup he works with. Based on his prior observations, he concluded that the hour of peak activity was earlier due to persons commuting and taking walks soon after returning home from work.

As recommended by Lindsey, multiple samples were taken at each location. Sample size ranged from 5 counts conducted at Winton Road bridge to 24 counts taken at Perinton Park**.**

2. **Estimate of average week day daily traffic based on Lindsey's grand median peak hour proportion**

Average week day daily traffic is the first calculation that can be generated from the peak hourly counts. Dr. Lindsey recommended using median peak hourly counts as the basis for the calculations to even out any variability. He felt average hourly counts would be overly influenced by very high or very low counts. (Lindsey, personal communication, 2007)

To calculate the average week day daily traffic, the median hourly counts were divided by 0.137, the grand median peak hour proportion presented in Lindsey's 2007 paper. Lindsey arrived at this proportion based on more than one year of 24-hour infrared monitoring of trail traffic volumes at multiple locations in the Indianapolis area. The grand median peak hour proportion of 13.7 percent is the median value of the percentages of total week day daily trail traffic represented by the counts obtained during the hour of peak activity.

Table Five. Average Week Day Daily Traffic Estimates

	Median week day peak hour traffic	Estimated Average week day daily traffic
Genesee Valley Park July	55	398
Genesee Valley Park August	52	380
Winton Road July	76	555
Winton Road August	71	518
Lock 33 JCC July	103	752
Lock 33 JCC August	101	737
Schoen Place July	123	898
Schoen Place August	75	544
Perinton Park July	114	832
Perinton Park August	57	416

3. **Estimate of average weekend daily traffic based on Lindsey's weekend-weekday traffic ratios**

Estimating average weekend daily traffic is based on multiplying the calculated average week day traffic by the grand median weekend-weekday trail traffic ratio of 1.6 as presented in Lindsey's 2007 paper. The grand median weekend-weekday traffic ratio represents the median of ratios of weekend to week day traffic gathered over one year of 24-hour infrared counting from multiple sites in Indianapolis. The ratio of 1.6 indicates that Lindsey's data has shown that weekend traffic is about 60% greater than week day traffic.

Table Six. Estimated Average Weekend Daily Traffic

	Median week day peak hour traffic	Estimated average week day daily traffic	Estimated average weekend daily traffic
Genesee Valley Park July	55	398	636
Genesee Valley Park August	52	380	607
Winton Road July	76	555	888
Winton Road August	71	518	829
Lock 33 JCC July	103	752	1,203
Lock 33 JCC August	101	737	1,180
Schoen Place July	123	898	1,436
Schoen Place August	75	544	870
Perinton Park July	114	832	1,331
Perinton Park August	57	416	666

4. Estimate of monthly traffic for month in which counts were taken

Estimating monthly traffic involves adding together 1) the average week day traffic estimate multiplied by the number of week days in the month in which the counts were taken and 2) the average weekend traffic estimate multiplied by the number of weekend days within the month in which counts were taken. Because data from counts was available for both July and August, it was possible to calculate a monthly traffic estimate for each of these months using information gained directly from the field as shown in Table Seven.

Table Seven. Estimated Monthly Traffic for July and August

	Estimated Monthly traffic July	Estimated Monthly traffic August
Genesee Valley Park	**14,480**	**13,588**
Winton Road	**20,193**	**18,553**
Lock 33 JCC	**27,366**	**26,393**
Schoen Place	**21,009**	**19,468**
Perinton Park	**30,289**	**14,895**

5. Estimate of monthly traffic for months in which counts were not taken

From the data Lindsey obtained from infrared counters located at multiple Indianapolis locations over several years, he calculated monthly traffic ratios that represented the total monthly traffic for each month as a factor of the total monthly traffic for the month of January. Lindsey set January as his baseline and assigned it the value of 1.0. Lindsey's median monthly traffic ratios were used to calculate monthly traffic for all months where counts were not taken, September through June as shown in Table Eight. Because counts were recorded in both July and August, it reduced the number of months of traffic estimates that had to be calculated only from Lindsey's median monthly ratios.

Table Eight. Estimated Monthly Traffic for One Year

	Monthly traffic for July	Monthly traffic for August	Monthly traffic for September	Monthly traffic for October	Monthly traffic for November	Monthly traffic for December	Monthly traffic for January	Monthly traffic for February	Monthly traffic for March	Monthly traffic for April	Monthly traffic for May	Monthly traffic for June
Genesee Valley Park July	**14,480**	**13,588**	13,475	8,246	4,223	2,212	2,011	3,620	5,028	9,855	11,262	12,469
Genesee Valley Park August	**14,480**	**13,588**	12,645	7,738	3,963	2,076	1,887	3,397	4,718	9,248	10,569	11,701
Winton Road July	**20,193**	**18,553**	18,790	11,499	5,890	3,085	2,805	5,048	7,011	13,742	15,705	17,388
Winton Road August	**20,193**	**18,553**	17,265	10,565	5,411	2,835	2,577	4,638	6,442	12,627	14,430	15,976
Lock 33 JCC July	**27,366**	**26,393**	25,466	15,584	7,982	4,181	3,801	6,842	9,502	18,624	21,285	23,566
Lock 33 JCC August	**27,366**	**26,393**	24,560	15,029	7,698	4,032	3,666	6,598	9,164	17,962	20,528	22,727
Schoen Place July	**21,009**	**19,468**	19,550	11,963	6,128	3,210	2,918	5,252	7,295	14,298	16,340	18,091
Schoen Place August	**21,009**	**19,468**	18,116	11,086	5,678	2,974	2,704	4,867	6,760	13,249	15,142	16,764
Perinton Park July	**30,289**	**14,895**	28,186	17,248	8,834	4,627	4,207	7,572	10,517	20,613	23,558	26,082
Perinton Park August	**30,289**	**14,895**	13,861	8,482	4,344	2,276	2,069	3,724	5,172	10,137	11,585	12,826

6. Estimate of annual trail traffic volume

An estimate of annual trail traffic was obtained by summing the estimates for each of the 12 months of the year. Annual estimates were obtained using both the August and July counts as the basis. As would be expected if Lindsey's median monthly ratios do indeed accurately reflect the difference in traffic volumes between July and August for Monroe County, annual predictions showed very little difference whether they were based on July or August counts for all locations with the exception of Perinton Park.

Annual traffic estimates ranged from almost 196,629 for Perinton Park in July to 96,010 for Genesee Valley Park in August. It is impossible to explain the large discrepancy between the Perinton Park predictions based on July and August counts. There was certainly no lack of data. The July numbers were based on 10 separate counts and the August numbers based on 14 separate counts. There was also no special event that would have drawn an unusual number of persons to the trail during July.

Table Nine. Estimated Annual Traffic by Location from July and August Data

	Estimated Annual traffic
Genesee Valley Park July	100,470
Genesee Valley Park August	96,010
Winton Road July	139,709
Winton Road August	131,512
Lock 33 JCC July	190,591
Lock 33 JCC August	185,723
Schoen Place July	145,520
Schoen Place August	137,816
Perinton Park July	196,629
Perinton Park August	119,658

The July and August estimates were similar for each location except Perinton Park. It was decided to average the two estimations with the recognition that the Perinton Park average may be less valid than the other numbers. The estimate for Winton Road reflects only the calculations from July counts because only one counting session was conducted in August at this location.

Table Ten. Average Estimated Annual Traffic by Location

	Average Estimated Annual traffic
Genesee Valley Park	98,240
Winton Road	139,709
Lock 33 JCC	190,591
Schoen Place	145,520
Perinton Park	158,144

7. Estimate of annual visits

Lindsey divided his trail traffic estimates by two to get an estimate of the number of visits. His reasoning is based on his data that indicates that 95 percent or more of all users make return trips and therefore would be counted twice. An assumption that 95percent of users make return trips may be overly conservative when applied to the Canalway Trail.

Table Eleven. Estimated Annual Visits by Location

	Average Estimated Annual traffic	Average annual visits
Genesee Valley Park	98,240	49,120
Winton Road	139,709	69,855
Lock 33 JCC	190,591	95,296
Schoen Place	145,520	72,760
Perinton Park	158,144	79,072

Conclusions

This report represents the first time that trail count data has been used to predict annual trail use. While Lindsey's ratios can be further refined to more accurately reflect the environment and weather conditions specific to the predominately rural, suburban Canalway Trail environment, in order of magnitude the estimates of annual traffic of almost 100,000 to 200,000 persons obtained using Lindsey's Indianapolis-based ratios are relevant enough to predict annual trail traffic with a higher degree of accuracy than any estimates suggested for the Canalway Trail to date.

That the highest traffic figures were found at Lock 33 JCC in Brighton was surprising. Given the number of shops and restaurants and the popularity f Schoen Place in the Village of Pittsford, one might have predicted that this would have been the most heavily trafficked location.

Having a valid estimate of trail traffic volume can be very useful in informing trail design and management decisions such as selection of trail surface and width, erection of stop lights at road and trail intersections and, determination of mowing frequency. Trail counts can also be used to guide trail funding decisions and marketing activities.

Recommendations for Next Steps

Further Counts

It is recommended that all further Canalway Trail counts be undertaken using the Lindsey methodology. Counts can be conducted with a minimum of volunteer effort. By adhering to a standardized counting process it will aid in comparing data between years and counting locations.

Installation of Automated Counters

Automated counters should be installed in rural, suburban and urban locations. Such tools provide accurate and efficient means of counting number of users over a long term and can be used to better determine time of peak hourly week day use and generate more accurate ratios for predicting week day, weekend traffic and monthly trail traffic volume. By obtaining more precise ratios for a range of environments specific to the Canalway Trail, one can obtain more valid trail traffic estimates and apply the Lindsey method to generating trail traffic estimates to a broader range of trail locations.

Gathering of Demographic Data

Gathering information about trail users is equally as important as determining how many are on the trail. Future counting efforts should also collect information on individuals who use the trail. Currently the Canal Corporation's Customer Satisfaction Survey is being used to gather data from trail users on residency, location of use, principal use, and use frequency but no effort has yet been made to correlate counting data with user survey information. Future survey efforts should also collect data on age and gender as well as level of expenditures for food, gas, lodging, trail-related equipment, and any other items purchased as a direct result of using the Canalway Trail.

Appendix A Trail Count Protocol

Who's On the Trail?
Canalway Trail User Count – 2007

Count Protocol

Location

1. Genesee Valley Park – east side of Waldo Nielson Bridge - Drive in on Moore Road
2. Lock 33 – JCC, Edgewood Avenue
3. Schoen Place – east of commercial area – south side of canal
4. Perinton Park, Fairport – Village side of the park

Time

1. Counts must be taken on week days only.
2. At least one count should be taken on each week day, i.e., Monday, Tuesday, Wednesday, Thursday, and Friday.
3. Each count must be taken during the time of peak usage. It has been estimated that this time will be from **6:30 – 7:30 p.m.** If experience indicates that another time is more representative of peak usage, please inform Parks & Trails New York.

Conducting Counts

1. **Counts should be conducted between July 16 and August 24.**
2. Count for one full hour at a time
3. A minimum of 5 counts should be taken at each location. Additional counts will add to the validity of the data.
4. Do not worry if you count someone twice because they pass you going in both directions. The formulas used at the end will take that into consideration.

Personnel Required

1. One person can conduct the counting. If you are counting at a location with significant trail traffic, it may be advisable to have two people conduct counts and average their results.

Conducting the count

1. Use a new sheet each time you count.
2. Make a tick in the boxes for the type of trail user that passes by.
3. Stand where you do not block the trail but can easily observe users as they pass.
4. If possible, send us some pictures of volunteers taking the count and persons using the trail that we can include in publications and presentations.

Returning the Forms

Please mail all forms to:

Canalway Trail User Count 2007
Parks & Trails New York
29 Elk Street
Albany, NY 12207

Or FAX to 518-427-0067

For more information

Contact Kevin Prickett at Parks & Trails New York at 518-434-1583 or kprickett@ptny.org.

Appendix B Trail Count Form

Who's on the Trail?
The Canalway Trail User Count – 2006

Name: _____ **Phone:** _____ **Email:** _____

Date: _____ **Time conducted:** _____ to _____ **Road intersection name:** _____ **Town/Village:** _____

Trail surface: asphalt stone dust **Weather Conditions**: sunny partly cloudy cloudy rain **Approximate temperature:** _____

Make one "tic mark" for each person passing by in either direction engaged in each activity.

User Type	Counts	
Bicyclists	With helmets	Without helmets
Walkers		
In-line skaters		
Joggers		
Equestrians		
Baby carriages/ strollers		
Wheelchair users		

Thanks for you help!!! Please return the form(s) to:
Canalway Trail User Count 2006, Parks & Trails New York, 29 Elk Street, Albany, NY, 12207, FAX 518-434-1583

Appendix C Count Data

Genesee Valley Park, Rochester (Monroe County)

Name	Date	Day	Trail Surface	Weather Conditions	Approx. temp.	Bicyclists	With Helmets	Without helmets	Walkers	In Line Skaters	Joggers	Equestrians	Baby Carriages	Wheelchair users	Total Users
	Time = 6:30pm to 7:30pm		1=asphalt 2= stone dust 3=stonedust/asphalt	1=sunny, 2=partly cloudy, 3=cloudy, 4=rain											
Amer Haroon	8/14/2007	Tuesday	1	1	80	45	19	26	11	2	3	0	2	0	63
Amer Haroon	8/15/2007	Wednesday	1	3	75	62	32	30	17	3	13	0	1	0	96
Amer Haroon	8/17/2007	Friday	1	4	70	28	15	13	5	3	4	0	1	0	41
Amer Haroon	8/23/2007	Thursday	1	2	75	57	25	32	16	2	10	0	0	0	85
Jane Pratt Reynolds	7/20/2007	Friday	1	1	75	27	17	10	29	1	1	0	1	0	59
Keith Kroon	7/20/2007	Friday	1	1	72-68	17	12	5	7	1	25	0	0	0	50
Keith Kroon	7/27/2007	Friday	1	3	73	11	7	4	2	6	6	0	0	0	25
Keith Kroon	7/30/2007	Monday	1	1	75	65	46	19	11	1	11	0	1	0	89
Keith Kroon	8/9/2007	Thursday	1	3	72	15	8	7	9	0	3	0	2	0	29
Keith Kroon	8/21/2007	Tuesday	1	3	64	22	19	3	1	0	8	0	1	0	32
Mike Sorensen	8/24/2007	Friday	1	1	90	26	20	6	3	4	0	0	0	0	33
Robert Torzynski	8/13/2007	Monday	1	1	75	60	35	25	28	0	8	0	2	0	98

Winton Road Bridge, Brighton (Monroe County)

Name	Date	Day	Time_ From	Time_To	Trail Surface	Weather Conditions	Approximate temperature	Bicyclists	With Helmets	Without helmets	Walkers	In Line Skaters	Joggers	Equestrians	Baby Carriages	Wheelchair users	Total Users
					1=asphalt 2= stone dust 3=stonedust/ asphalt	1=sunny, 2=partly cloudy, 3=cloudy, 4=rain											
Andy Rawdon	7/23/2007	Monday	5:30pm	6:30pm	1	4	70-75	29	25	4	2	1	5	0	0	0	37
Andy Rawdon	7/24/2007	Tuesday	5:30pm	6:30pm	1	1	80-85	77	61	16	12	4	12	0	2	0	107
Andy Rawdon	7/26/2007	Thursday	5:15pm	6:15pm	1	1	85-90	71	49	22	6	8	5	0	0	0	90
Andy Rawdon	7/27/2007	Friday	5:30pm	6:30pm	1	3	75-80, 70-75	50	39	11	6	4	2	0	0	0	62
Andy Rawdon	8/1/2007	Wednesday	5:15pm	6:15pm	1	1	90-95	47	38	9	7	8	9	0	0	0	71

Lock 33 JCC, Edgewood Avenue, Brighton (Monroe County)

Name	Date	Day	Trail Surface	Weather Conditions	Approximate temperature	Bicyclists	With Helmets	Without helmets	Walkers	In Line Skaters	Joggers	Equestrians	Baby Carriages	Wheelchair users	Total Users
	Time = 6:30pm to 7:30pm		1=asphalt 2= stone dust 3=stonedust/asphalt	1=sunny, 2=partly cloudy, 3=cloudy, 4=rain											
Ellen McCoy	8/24/2007	Friday	1	1	95	22	19	3	13	4	8	0	0	0	47
Jane Pratt Reynolds	7/16/2007	Monday	1	2	72	66	48	18	26	1	4	0	0	0	97
Mark Johns	8/6/2007	Monday				73	51	22	19	7	2	0	0	0	101
Mark Johns	8/9/2007	Thursday	1	4	75	21	9	12	13	2	4	0	0	0	40
Mark Johns	8/15/2007	Wednesday	1	2	78	63	46	17	29	5	17	0	0	0	114
Mark Johns	8/16/2007	Thursday	1	4	80	36	27	9	8	1	7	0	0	0	52
Richard DeSarra	7/17/2007	Tuesday	1	3	75	21	12	9	22	3	5	0	0	0	51
Richard DeSarra	7/30/2007	Monday	1	1	75	79	51	28	34	6	5	0	0	0	124
Steve Beauvais	7/25/2007	Wednesday	1	1	82	75	52	23	24	7	3	0	0	0	109
Steve Beauvais	8/3/2007	Friday	1	2	88	32	28	4	18	2	3	0	0	0	55
Steve Beauvais	8/8/2007	Wednesday	1	1	85	68	51	17	39	3	3	0	0	0	113
Thomas Detrie	8/7/2007	Tuesday	1	4	75	7	5	2	2	0	4	0	0	0	13
Thomas Detrie	8/8/2007	Wednesday	1	1	75	65	48	17	36	3	4	0	0	0	108
Thomas Detrie	8/13/2007	Monday	1	1	72	95	69	26	31	9	6	0	0	0	141
Thomas Detrie	8/14/2007	Tuesday	1	1	72	122	89	33	32	16	14	0	2	0	186

Schoen Place, Pittsford (Monroe County)

Name	Date	Day	Trail Surface	Weather Conditions	Approximate temperature	Bicyclists	With Helmets	Without helmets	Walkers	In Line Skaters	Joggers	Equestrians	Baby Carriages	Wheelchair users	Total Users
	Time = 6:30pm to 7:30pm		1=asphalt 2= stone dust 3=stonedust/asphalt	1=sunny, 2=partly cloudy, 3=cloudy, 4=rain											
Anthony Demme	7/31/2007	Tuesday	2	1	85	54	31	23	54	1	11	0	7	0	127
Anthony Demme	8/6/2007	Monday	2	2	85	52	36	16	39	0	6	0	1	0	98
Chris Demme	7/30/2007	Monday	2	1	82	37	24	13	67	0	16	0	10	0	130
Dave Schaeffer	8/16/2007	Thursday	1	2	82	25	13	12	31	1	10	0	1	0	68
Dave Schaeffer	8/17/2007	Friday	1	2	70	22	17	5	49	0	0	0	3	1	75
Josh Lockhart	8/7/2007	Tuesday	1	4	80	7	7	0	0	0	4	0	0	0	11
Katie Demme	8/3/2007	Friday	1	2	88	23	8	15	29	0	11	0	3	0	66
linda Demme	8/1/2007	Wednesday	1	1	86	33	15	18	31	0	6	0	4	0	74
Matt Coreoran	8/20/2007	Monday	1	4	60	3	3	0	12	0	5	0	3	0	23
Milly Braylock	8/21/2007	Tuesday	1	3	66	14	11	3	76	0	12	0	0	0	102
Mitchell Breitenbach	8/15/2007	Wednesday	1	2	74	44	29	15	77	0	8	0	3	0	132
Pete Crooker	7/18/2007	Wednesday	3	2	82	65	46	19	59	0	6	0	6	0	136
Pete Crooker	7/19/2007	Thursday	1	4	72	4	4	0	2	0	8	0	0	0	14
Pete Crooker	7/20/2007	Friday	1	1	76	39	19	20	62	0	13	0	9	0	123
Pete Crooker	7/24/2007	Tuesday	1	82	31	31	20	11	78	0	7	0	2	0	118
Sean Coreoran	8/14/2007	Tuesday	1	1	78	35	32	3	130	0	8	0	22	2	197
Tim Hart	8/13/2007	Monday	1	1	78	38	24	14	56	0	7	0	2	0	103

Perinton Park, Perinton (Monroe County)

Name	Date	Day	Trail Surface	Weather Conditions	Approximate temperature	Bicyclists	With Helmets	Without helmets	Walkers	In Line Skaters	Joggers	Equestrians	Baby Carriages	Wheelchair users	Total Users
	Time = 6:30pm to 7:30pm		1=asphalt 2= stone dust 3=stonedust/asphalt	1=sunny, 2=partly cloudy, 3=cloudy, 4=rain											
Milly Braylock	7/16/2007	Monday	1	2	74	50	26	24	49	2	6	0	4	0	111
Milly Braylock	7/17/2007	Tuesday	1	3	78	29	19	10	34	1	5	0	2	0	71
Milly Braylock	7/18/2007	Wednesday	1	1	80	84	46	28	52	0	12	0	3	0	151
Milly Braylock	7/20/2007	Friday	1	1	73	30	13	17	46	0	6	0	0	0	82
Milly Braylock	7/24/2007	Tuesday	1	1	75	65	39	26	50	0	7	0	5	0	127
Milly Braylock	7/25/2007	Wednesday	1	NA	81	67	36	31	59	0	17	0	9	0	152
Milly Braylock	7/26/2007	Thursday	1	2	81	22	11	11	30	0	4	0	0	0	56
Milly Braylock	7/27/2007	Friday	1	3	77	11	8	3	11	0	0	0	1	0	23
Milly Braylock	7/30/2007	Monday	1	1	81	71	46	25	67	0	10	0	7	0	155
Milly Braylock	7/31/2007	Tuesday	1	1	87	50	24	26	49	4	9	0	5	0	117
Milly Braylock	8/1/2007	Wednesday	1	1	88	39	17	22	27	2	7	0	0	0	75
Milly Braylock	8/2/2007	Thursday	1	NA	93	25	11	14	28		3	0	1	0	57
Milly Braylock	8/3/2007	Friday	1	2	88	26	9	17	19	0	4	0	3	0	52
Milly Braylock	8/6/2007	Monday	1	2	85	56	23	33	56	2	6	0	3	0	123
Milly Braylock	8/7/2007	Tuesday	1	4	73	3	1	2	8	0	6	0	0	0	17
Milly Braylock	8/8/2007	Wednesday	1	1	85	47	20	27	43	0	10	0	3	0	103
Milly Braylock	8/9/2007	Thursday	1	3	74	17	9	8	20	3	6	0	1	0	47
Milly Braylock	8/13/2007	Monday	1	1	78	63	39	24	93	0	7	0	11	0	174
Milly Braylock	8/14/2007	Tuesday	1	1	79	45	23	22	72	0	9	0	16	0	142
Milly Braylock	8/15/2007	Wednesday	1	2	78	51	18	33	33	0	11	0	5	0	100
Milly Braylock	8/16/2007	Thursday	1	2	83	18	13	5	35	0	1	0	0	0	54
Milly Braylock	8/17/2007	Friday	1	4	61	9	2	7	19	0	1	0	1	0	30
Milly Braylock	8/20/2007	Monday	1	4	60	2	0	2	6	0	4	0	1	0	13

References

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