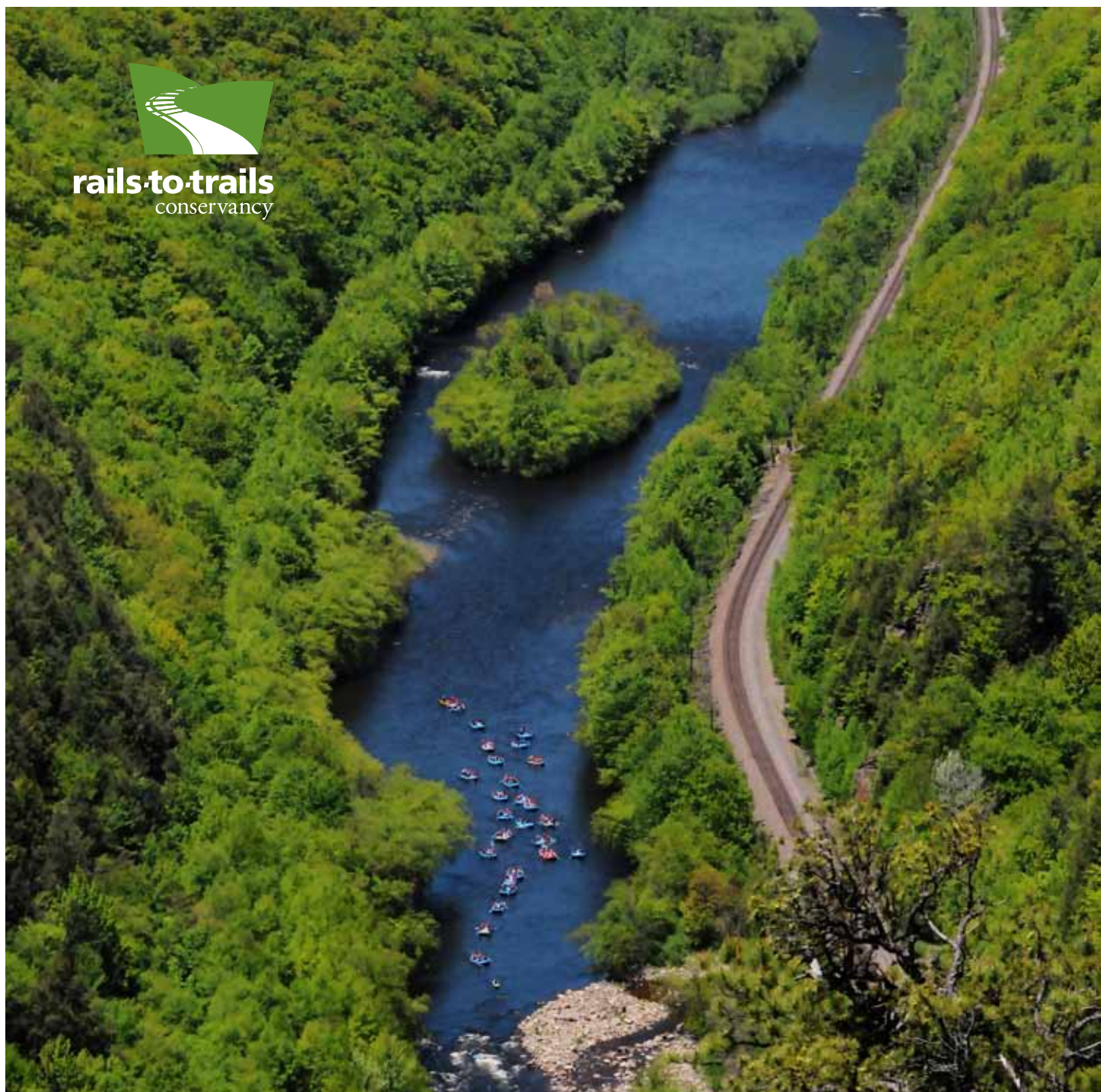




rails-to-trails
conservancy



D & L Trail

2012 User Survey and Economic Impact Analysis

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Our thanks to Cleo Fogal and the Delaware and Lehigh National Heritage Corridor for the photos throughout this report.

D & L Trail 2012 User Survey and Economic Impact Analysis

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Count Analysis and Economic Impact Analysis
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December 2012



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Executive Summary

The D & L Trail is a multi-use trail in eastern Pennsylvania, running north to south from Wilkes-Barre to Bristol, east of Philadelphia. The trail anchors the Delaware and Lehigh National Heritage Corridor (DLNHC), an area encompassing the historic Delaware and Lehigh Canals and overseen by a nonprofit organization dedicated to conserving the cultural and natural resources of a five-county region in the eastern part of the state.

An analysis of data gathered from infrared counters located along the D & L Trail and completed user surveys indicates an estimated 282,796 annual user visits to the trail, resulting in a total economic impact in 2012 of \$19,075,921. Of this, \$16,358,201 is estimated to have been directly injected into the local economy.

During 2012, Rails-to-Trails Conservancy (RTC) conducted a study of the users of the D & L Trail between the boroughs of White Haven and Morrisville, work supported by a grant from the Pennsylvania Department of Conservation and Natural Resources (DCNR). This study utilized a survey methodology previously tested on Pennsylvania trails and documented in RTC's Trail User Survey Workbook. (www.railstotrails.org/resources/documents/resource_docs/UserSurveyMethodology.pdf).

This survey was designed specifically to monitor trail user characteristics and the economic impact of trail visits. At the time of writing, 84 percent of the 165-mile trail is complete. For the purposes of this survey, the trail was reviewed in sections, beginning with White Haven as the northernmost point, and ending with the Morrisville trailhead at State Route 1 (SR 1), 32 miles northeast of Philadelphia.

In all, six unique sections of trail were categorized to initially develop a user count analysis. They were:

- ✱ White Haven to Jim Thorpe
- ✱ Marvin Gardens to Slatington
- ✱ Sand Island and Hugh Moore
- ✱ Lodi
- ✱ Lock 11 to Yardley
- ✱ Morrisville

These sections were further categorized to correlate to the three geographic areas defined by DLNHC as the 'North,' 'Central' and 'South' regions.

Survey forms were available at 18 locations along the trail and during a number of special events. The forms were available from June through October





of 2012. More than 4,500 surveys were distributed and almost 1,000 completed surveys were returned. The completed forms were mailed back to RTC. A total of 862 survey responses were tabulated for this report.

The majority of surveys were completed by people from the South region, defined by the boundaries of the Delaware Canal State Park and ending at Morrisville. While Jim Thorpe, in the North region, and New Hope in the South, derive a similar amount of total economic impact from trail users, twice as many respondents report staying overnight in Jim Thorpe as compared to New Hope and Washington Crossing.

Survey respondents represent 17 states and three countries, the majority being from Pennsylvania (77.5 percent), New Jersey (11.5 percent) and New York (7.0 percent). Residents of 27 counties across the state visited the trail. The majority of the Pennsylvania residents were from Bucks County (23.6 percent), Lehigh County (18.3 percent) and Northampton County (12.2 percent).

The majority of the trail users were 46 years of age and older, in line with the findings of many trail user studies. Ages 46 and younger represent just 19 percent of the respondents. Less than 12 percent reported having young children with them on the trail. The gender split among the survey respondents was 44.5 percent female and 55.5 percent male.

The major activities recorded along the trail were biking (46.9 percent), walking (29.7 percent) and jogging (8.2 percent). Almost 80 percent of the survey respondents believe the trail has influenced the amount and frequency of these activities in their lives. Health is the primary purpose (52.0 percent)

for being on the trail, and 44.4 percent of respondents report spending two hours or more on the trail each visit. Wildlife-viewing (31.6 percent) and bird-watching (19.1 percent) were the most popular secondary activities listed by trail users.

Most respondents reported they were familiar with the trail because they live in the area. 38.5 percent reported finding out about the trail via word of mouth, and 16.1 percent because of driving past the trail. Approximately 21 percent of the survey respondents said they learned about the trail via the internet, through either websites specific to the D & L Trail or more general pages.

Eight questions regarding expenditures while visiting the trail were included on the survey form. “Hard goods” was used to describe items such as bicycles, clothing and accessories, while “soft goods” was applied to items such as food and drinks.



Executive Summary



Most (77.4 percent) of the D & L Trail survey respondents reported buying hard goods associated with their use of the trail and reported spending an average of \$425.12 on hard goods such as clothing, shoes, bicycles and accessories. The majority of respondents (41 percent) also reported making the purchases at locally-owned shops, while 37.2 percent reported purchasing from national and regional chains. Another 21.7 percent made their purchases online.

The purchase of soft goods was reported by 73.6 percent of respondents for an average dollar amount of \$33.49 per visit. These purchases were reported to have been made in conjunction with their trail visit.

Overnight lodging is the third element used to determine overall economic impact. In 2012, more than 14 percent of the survey respondents reported staying overnight in the local area during their trail visit. Of the 69.4 percent of overnight stays that reported paying for accommodation during their

visit, an average expense of \$132.36 per night was calculated, with an average stay of 2.2 nights.

Several questions unique to the D & L Trail were included in the 2012 survey. Among them, trail managers wanted to know if people would be willing to pay for membership in an organization that supports the trail; 64 percent said they would. A question about watered canals showed that 81.2 percent of respondents felt they would visit the trail regardless of whether there was water in the canals or not.

Six sections of the trail were identified and analyzed for predominant use that correlate to the North, Central and South regions of the corridor identified by DLNHC. A large number (74 percent) of respondents listed Tinicum to Washington Crossing as the area they use most often, while 20.4 percent respondents listed White Haven to Jim Thorpe as the section of trail they used most often.

Infrared counters along the trail document the South region of the trail closest to Philadelphia is the most heavily used (45.9 percent of counts) with the North region from White Haven to Palmerton recorded 29.9 percent of total counts. The popularity of the South region can be confirmed by the majority of respondents (74 percent) to the paper survey that indicated the area between Tinicum and Washington Crossing was their favorite.

Historical Perspective

*Excerpted from the DLNHC website; Our Heritage/ Transportation. www.delawareandlehigh.org/index.php/heritage/transportation

"In the early 1800s, two Philadelphia businessmen, Josiah White and Erskine Hazard, oversaw the construction of a lengthy network of locks, canals and towpaths to ship anthracite, further aiding the mining industry's growth.

Together the Lehigh and Delaware Canals created a key part of a grand transportation system stretching from the Appalachians to the Atlantic. These waterways had very different effects on their surrounding lands.

The Lehigh Canal generated a great deal of industrial development in the form of mining and the accompanying advances. It gave rise to many towns and offshoot businesses including timber cutting and sawmills, steel and silk mills, and one of the largest tanneries in the U.S.

Then in 1862, a massive flood destroyed all the dams, locks, canal boats and villages along the Upper Grand Division of the Lehigh Canal (between White Haven and Jim Thorpe). Thus a new era began, as coal shipping shifted to railroads. The Lehigh Valley Railroad, which ran from Mauch Chunk (now Jim Thorpe) to Easton and on to New York City, was the first rail line to have a significant impact.



The Lehigh & Susquehanna Railroad and Reading & Pennsylvania Railroad also moved into the area, creating competition for shipping coal and other goods. Investment by J.P. Morgan, Cornelius Vanderbilt and other entrepreneurs gave railroads leverage to squeeze coal mining operators and the immigrants they employed.

The Delaware Canal, on the other hand, was a means of shipping goods and establishing commerce—an economic and physical link. There was little if any industrial impact on the rural, farm region it flowed

through. Farmers had over-land routes for their dairy products, grains, fruits and vegetables, only occasionally using the Canal. They did not solely depend on it for their transport needs, as did businesses to the north. As a result, most of Bucks County avoided the industrial boom seen in the counties upriver.”



The five-county region of Pennsylvania that traverses the historic Delaware and Lehigh Canals was designated a National Heritage Area by Congress in 1988, with the mission to “restore historic places, conserve green space for public use and preserve and interpret our heritage to enhance life for generations to come.” The nonprofit DLNHC is a joint effort of private groups, citizens, county and municipal governments, the Commonwealth of Pennsylvania and the federal government.



Locational Analysis

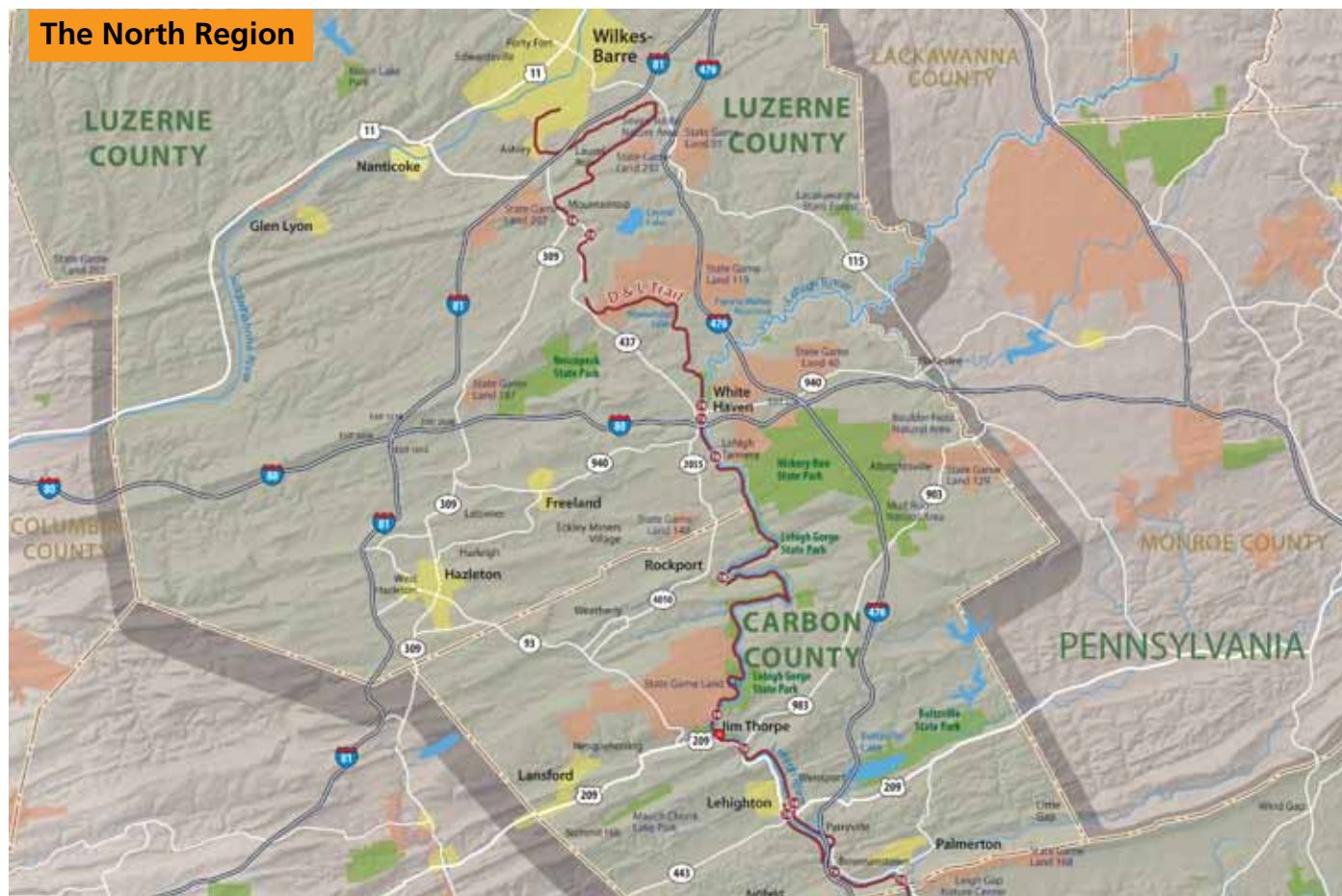


The majority of the D & L Trail is surfaced with crushed limestone, particularly in the North and Central regions. In the South, the Delaware Canal Towpath retains much of its original hard-packed dirt surface. All three regions include areas of asphalt or other hard surface treatment where needed. Most of the longer paved sections are in towns and park areas around Allentown, Easton and Morrisville.

The entirety of the D & L Trail can be separated into three distinct regions. The following three areas are used by the DLNHC for marketing and administrative purposes.

The North region comprises Carbon and Luzerne counties and the area from Wilkes-Barre to Palmerton. The most active section of trail in this region is the very popular tourist town of Jim Thorpe. The trail is anchored by the equally popular Lehigh Gorge State Park.

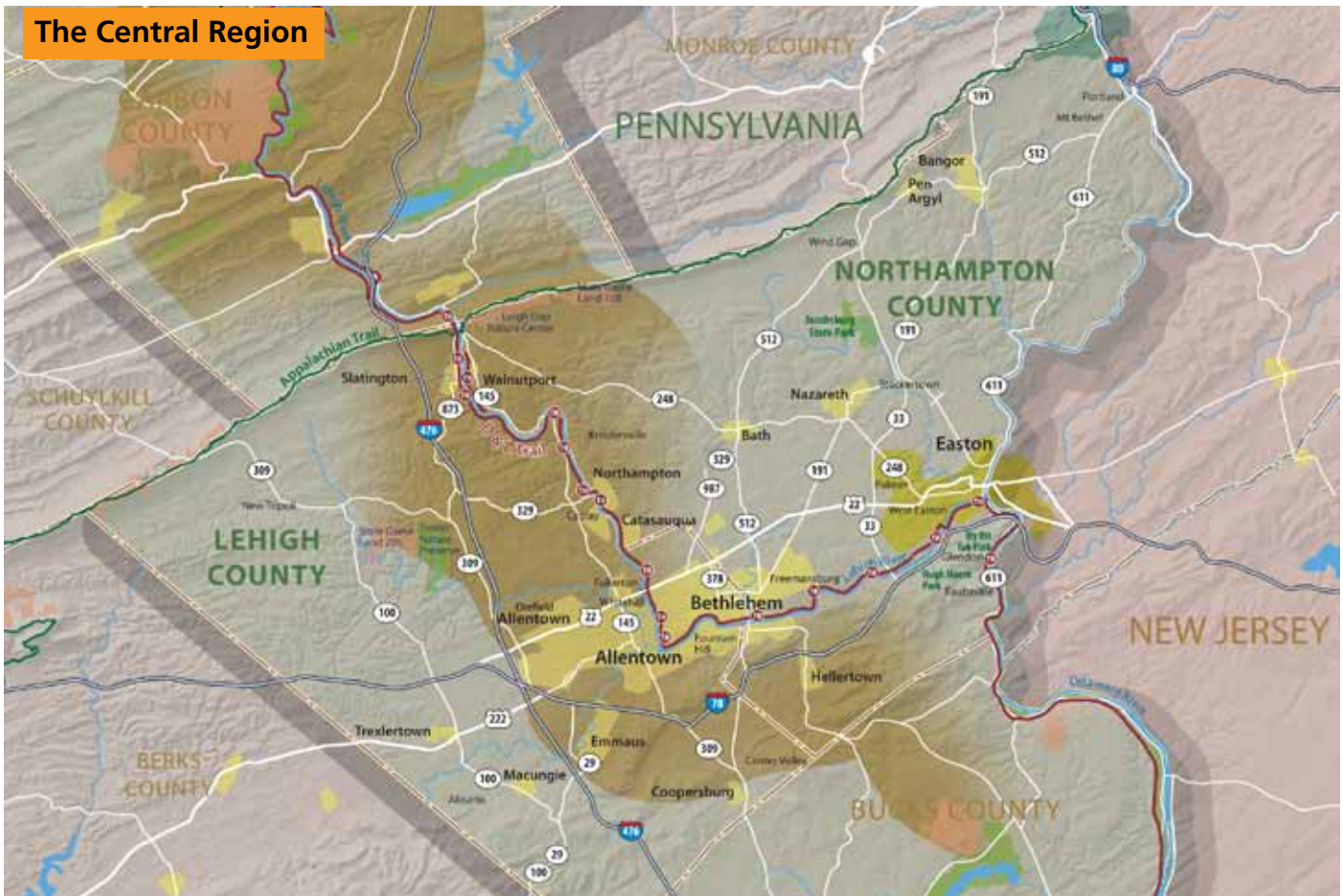
The northern end of the D & L Trail is planned to connect to the Wilkes-Barre/Scranton area via the Black Diamond Trail. Until then, White Haven is a popular starting point for accessing the Lehigh Gorge State Park Trail. This 26-mile trail runs parallel to the Lehigh River and an active railroad corridor. At the bottom of a steep, wooded gorge, this part





of the trail contains the most natural wilderness of the entire D & L Trail. Shuttle service for trail users is available from the southern end of the trail in Jim Thorpe, a very popular tourist destination. Jim Thorpe is home to several outfitters which specialize in rafting expeditions on the Lehigh River as well as providing rental bikes and shuttle services. The area is adjacent to the popular Pocono Mountains resort area, equally attractive to outdoor enthusiasts.

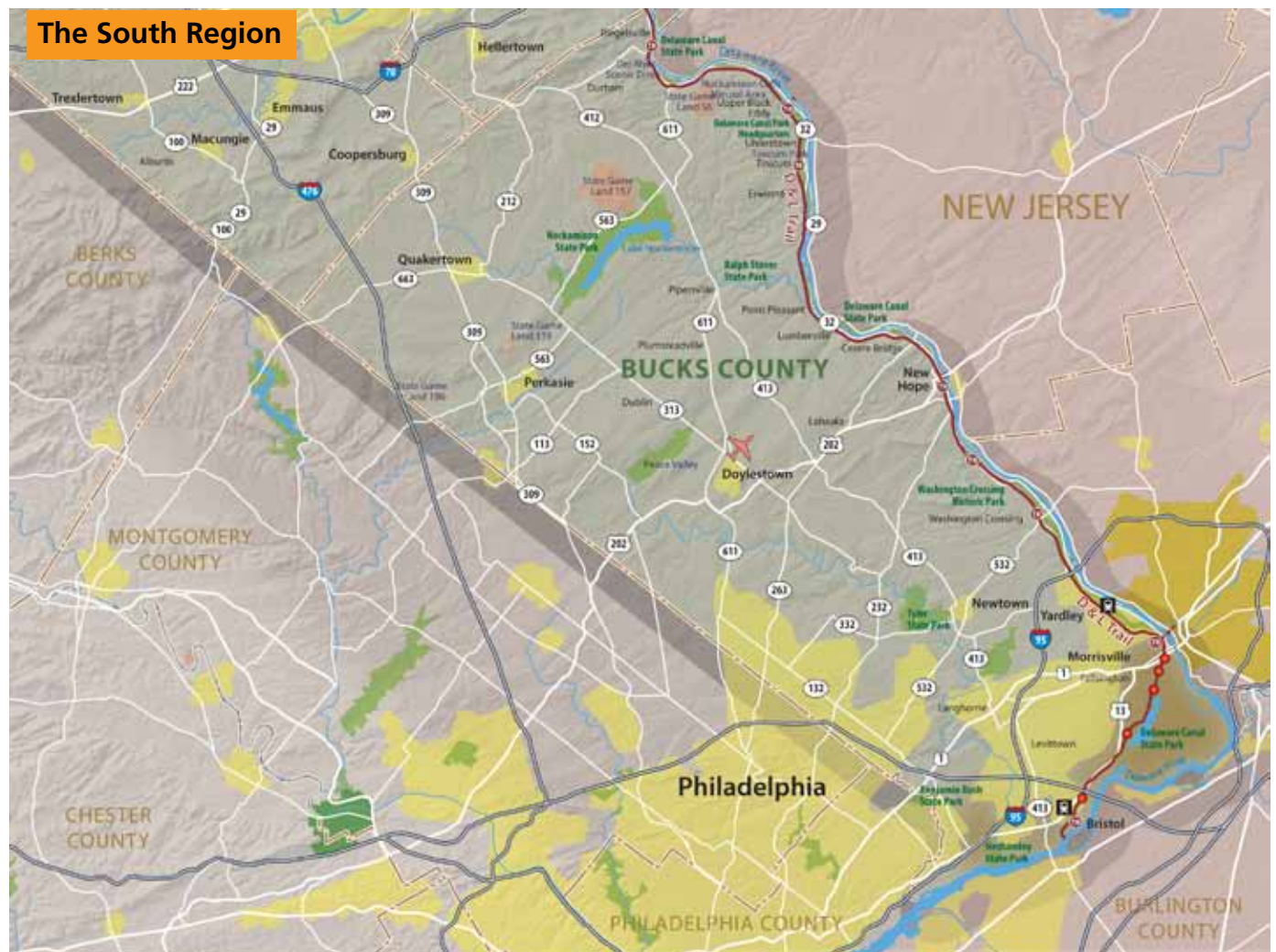
The Central region comprises Lehigh and Northampton counties, more densely populated and industrial than the North region. Here, sections of trail have been developed as land and easements along the historic canal route become available. The cities of Allentown, Bethlehem and Easton are included in this region, which is considered to be the third largest urban area in the state. Public parks and numerous historic sites are connected by the trail in the Central region and include the 520-acre Hugh Moore Park and National Canal Museum.





The South region of the D & L Trail is located completely within the Delaware Canal State Park in Bucks County, and uses the historic canal towpath in its entirety between Easton and Bristol. The Delaware River is the longest free-flowing, undammed river east of the Mississippi. Large sections of the historic locks have been rebuilt along the length of the towpath from the confluence of the Lehigh and Delaware rivers at Easton to the famous location

of Washington's Crossing of the Delaware River near New Hope. This region of the D & L Trail has suffered severe damage over the past few years from flooding. Following each flooding event, the State of Pennsylvania has honored a commitment to rebuilding this unique transportation route through one of the most historic areas in the country. The canal towpath and D & L Trail end in Bristol, just 30 minutes from the center of Philadelphia.



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Demographics

In 2005, The Alliance of National Heritage Areas (ANHA) released a report on Heritage Tourism Spending for the entire Delaware and Lehigh National Heritage Corridor. The report indicated tourists spent \$276 million while visiting the many sites included in the entire Heritage Corridor. www.delawareandlehigh.org/images/library/ANHA_Eco_Imp_Report.pdf

D & L Trail: North Region—White Haven to Palmerton*

	Luzerne County	Carbon County
Population	320,651	65,154
Median Household Income	43,296	49,056
Households	131,052	26,136
Persons Per Household	2.35	2.45
Population Density	360.4	171.1

D & L Trail: Central Region—Slatington to Easton*

	Northampton County	Lehigh County
Population	298,476	352,947
Median Household Income	60,540	54,312
Households	112,111	133,159
Persons Per Household	2.54	2.53
Population Density	805.4	1012.5

D & L Trail: South Region—Easton to Bristol*

	Bucks County
Population	626,854
Median Household Income	76,019
Households	229,955
Persons Per Household	2.68
Population Density	1034.7

Projected Population Growth by County**

	2010	2020	2030
Luzerne County	306,900	297,473	288,847
Carbon County	63,311	67,079	69,340
Northampton County	291,610	316,862	342,081
Lehigh County	336,187	361,437	381,738
Bucks County	643,095	673,124	697,961

*Source: U.S. Census Quick facts 2011.

** Source: Pennsylvania State Data Center, County population projections, PennState University, 2012.

2012 Survey Results



Question 1

What is your ZIP code?

77.5%	Pennsylvania (Bucks County 23.6%; Lehigh County 18.3%; Northampton County 12.2%; Carbon County 7.3%; Luzerne County 3.4%; Other Pa. counties 12.7%)
11.5%	New Jersey
7.0%	New York
4.0%	16 other states and three countries

Question 2

How often, on average, do you use the trail?

6.9%	Daily
9.2%	Once a week
10.7%	Twice a week
18.5%	More than twice a week
4.5%	Once a month
14.1%	A couple of times a month
14.9%	A few times a year
21.1%	This is my first time

Question 3

Please identify your age group.

1.2%	15 and under
4.8%	16–25
10.6%	26–35
12.4%	36–45
26.4%	46–55
27.8%	56–65
16.8%	66 or over

Question 4

Were any children 15 years of age or younger with you on the trail today?

11.7%	Yes
88.3%	No

Question 5

What is your gender?

55.5%	Male
44.5%	Female

Question 6

What is your primary activity on the trail?

29.7%	Walking/hiking
46.9%	Biking
8.2%	Jogging/running
0.1%	Horseback riding
2.2%	Cross-country skiing/snowshoeing
0.1%	Skating
2.7%	Fishing
8.0%	Dog walking
2.2%	Other: boating, photography, bird-watching

Question 7

Has the trail had an influence on the type or frequency of activity you participate in?

79.2%	Yes
20.8%	No

Question 8

How much time do you generally spend on the trail during each visit?

1.3%	Less than 30 minutes
15.8%	30 minutes to 1 hour
38.6%	1 to 2 hours
44.4%	More than 2 hours

Question 9

Would you consider your main use of the trail to be for...

39.6%	Recreation
52.0%	Health and exercise
1.5%	Training
2.5%	Commuting
0.2%	Walking to school
1.5%	Fishing
0.8%	Boating
1.8%	Other

Question 10

During your visit to the trail did you...

2.6%	Fish
1.5%	Go boating
19.1%	Watch birds
31.6%	Watch wildlife
12.3%	Study wildflowers
1.0%	Geocache
12.0%	Visit a historic site
6.8%	Shop
3.6%	Attend an event
9.6%	Other

Question 11

How did you get to the trail?

12.4%	Walk
17.5%	Bicycle
65.2%	Automobile
4.8%	Mass transit

Question 12

How did you find out about the trail?

38.5%	Word of mouth
7.0%	Roadside signage
16.1%	Driving past
4.4%	Newspaper
5.5%	Bike shop
1.6%	Tourist bureau
5.5%	D & L brochure
1.6%	www.explorePATrails.com
3.4%	www.Traillink.com
1.2%	Delawareandlehigh.org
0.3%	Facebook
14.8%	Other: local resident, other web and social media

Question 13

Has your use of the trail influenced your purchase of...

20.7%	Bike
20.2%	Bike supplies
3.9%	Auto accessories (bike rack, etc.)
17.1%	Footwear
15.6%	Clothing
22.6%	Nothing

Question 14

Approximately how much did you spend on the items above in the past year?

The average for those who indicated they had made a purchase and provided a dollar amount was \$425.12 (n=493).

Question 15

Where do you typically purchase most of your trail related "hard goods"?

26.8%	Local national chain
10.4%	Local regional chain
41.0%	Locally-owned store
9.9%	Online national retail
2.1%	Online regional retail
9.7%	Online specialty

Question 16

In conjunction with your most recent trip to the trail, did you purchase any of the following?

21.3%	Beverages
11.8%	Candy/snack foods
8.1%	Sandwiches
5.6%	Ice cream
18.2%	Meals at a restaurant along the trail
6.7%	Bike rental
2.0%	Other
26.4%	None of these

Question 17

Approximately how much did you spend per person on the items above?

The average for those who indicated they had made a purchase and provided a dollar amount was \$33.49 (n=449).

Note: This is an average amount spent per person, per trip.

Question 18

Did your visit to the trail involve an overnight stay in one of the following types of accommodations? (n=124)

29.8%	Motel/hotel
19.4%	Bed-and-Breakfast
21.0%	Friend or relative's home
20.2%	Campground
9.7%	Other

Question 19

How many nights did you stay in conjunction with your visit to the trail?

Average number of nights per stay: 2.2

Question 20

Approximately how much did you spend on over-night accommodations per night?

Average expenditure per night for those who provided an amount was \$132.36 (n=77).

Question 21

In your opinion, the maintenance of the trail is...

43.5%	Excellent
38.9%	Good
10.0%	Fair
7.6%	Poor

Question 22

In your opinion, the safety and security along the trail is...

38.0%	Excellent
46.4%	Good
10.9%	Fair
4.7%	Poor

Question 23

In your opinion, the cleanliness of the trail is...

50.8%	Excellent
40.2%	Good
7.0%	Fair
2.1%	Poor

Question 24

Would you become a paying member of an organization that supports the trail?

64.0%	Yes
36.0%	No

Question 25

Does the canal being watered determine when you visit the towpath?

18.8%	Yes
81.2%	No

Question 26

Which portion of the trail do you use most often?

30.4%	White Haven to Jim Thorpe
20.4%	Jim Thorpe to Allentown
9.3%	Allentown to Easton
8.5%	Easton to Tinicum
17.4%	Tinicum to Washington Crossing
14.0%	Washington Crossing to Bristol

Question 27

Which trail access point do you generally use when you visit the trail? (This question allowed open-ended results. The results were analyzed to reflect the three geographic regions of the trail).

41.4%	Central Region
30.4%	North Region
28.2%	South Region

Question 28

What type of trip do you most often take on the D & L Trail?

83.6%	Loop (out and back)
16.2%	Through trip (one way)

Question 29

Are you familiar with the Delaware and Lehigh National Heritage Corridor?

47.2%	Yes
52.8%	No

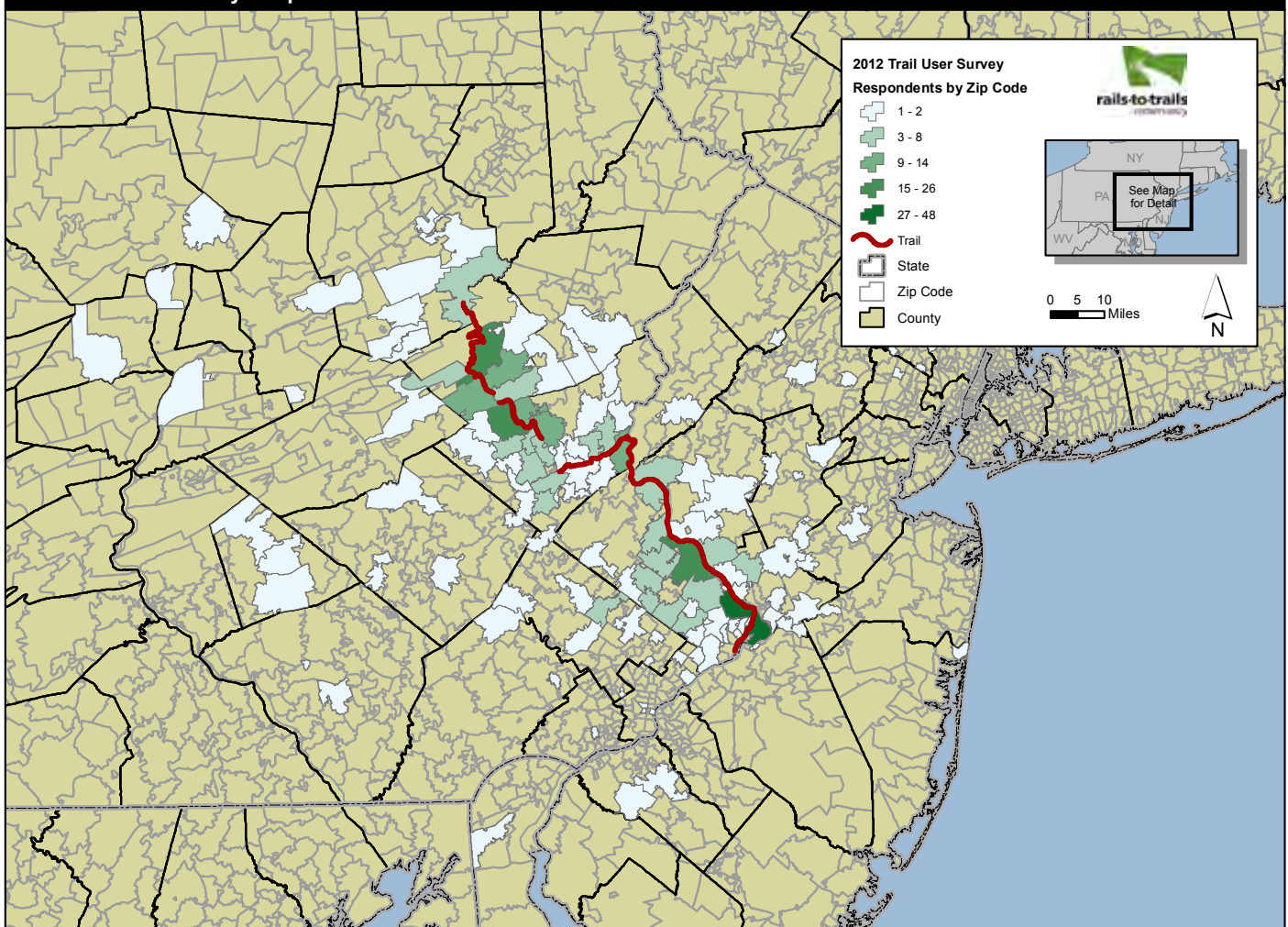




ZIP CODE MAP for D & L Trail Survey Respondents

The home zip codes of survey participants are collected from the paper surveys and compiled via GIS to illustrate the distribution of users over the five month period between June and October.

2012 Trail User Survey Respondents - D&L Trail



Methodology and Analysis

Utilizing RTC's Trail User Survey Workbook template as a starting point, the survey form was refined with input from DLNHC staff. The sample was self-selecting, meaning trail users could pick up survey forms that were available at each of the trail's primary trailheads between White Haven and Morrisville. The survey forms were folded into a postage-paid self-mailer that was addressed to RTC. Survey collection was conducted between the end of May and the end of October, 2012. Approximately 4,500 survey forms were distributed.

For the purpose of this analysis, 862 survey forms were tabulated and analyzed.

Because several questions called for multiple responses, and some survey respondents did not answer all of the questions, the percentages presented in this analysis are based on the total number of responses to each individual question.

(Disclaimer: As a self-selecting survey, the findings are not absolute and no one can predict with any certainty how trail users will act in the future. That said, our findings track very closely with similar surveys and other published reports, as well as anecdotal evidence).

For the purpose of this analysis, the data gathered by the D & L Trail User Survey has been analyzed according to the three distinct regions designated by the Delaware and Lehigh National Heritage Corridor (DLNHC) and described previously in this report: the North, Central and South regions. Each section of the following Comparative Analysis includes an interpretation of the data as a whole, along with a comparison of the three regions.

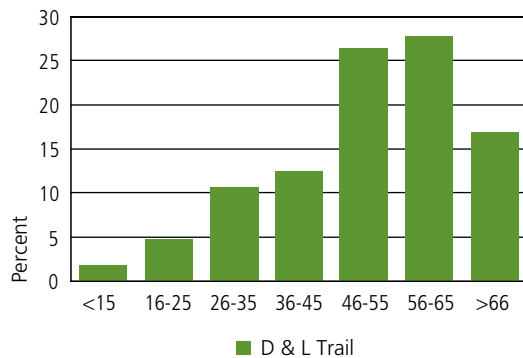


Comparative Analysis

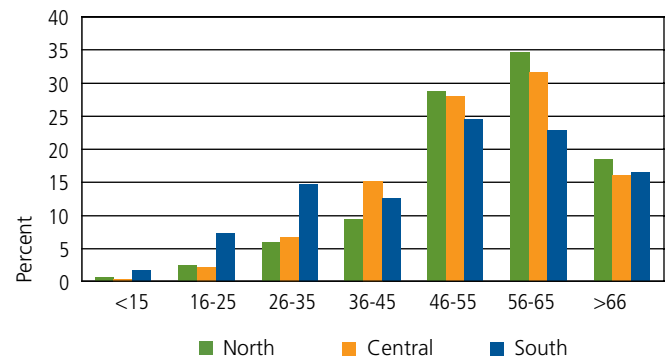
The D & L Trail user survey included a question to identify the users' most frequently used access point along the trail. Each of the access points was given a value to place it in one of the three geographic regions (North, Central or South). These results were then tabulated by region in order to make the following comparisons.

Rail-trail surveys around the country document a higher percentage of users over 45 years of age. Note that in the South region, a younger population represents a significant percentage of trail users.

What is your age group?

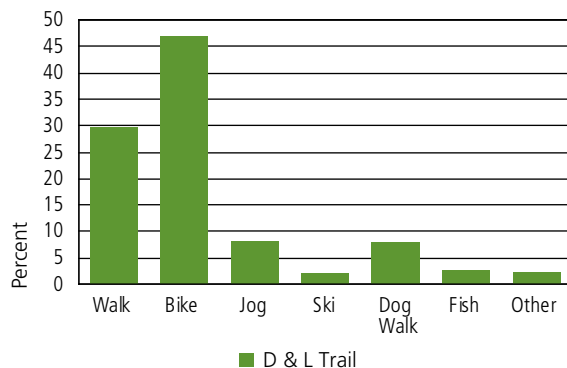


Comparison among regions

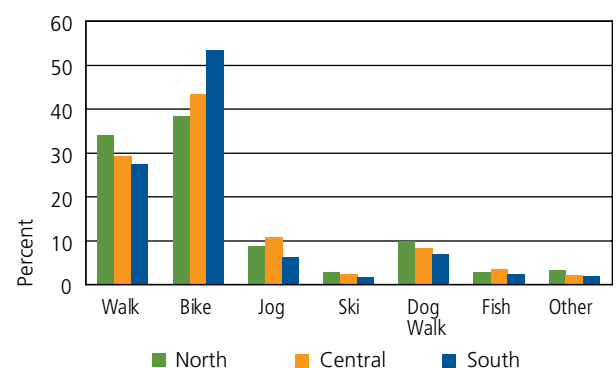


Bicycling is by far the most popular activity on all sections of the trail, followed by walking and dog walking. The "other" category includes Horseback Riding (0.1 Percent), skating and photography.

What is your primary activity?



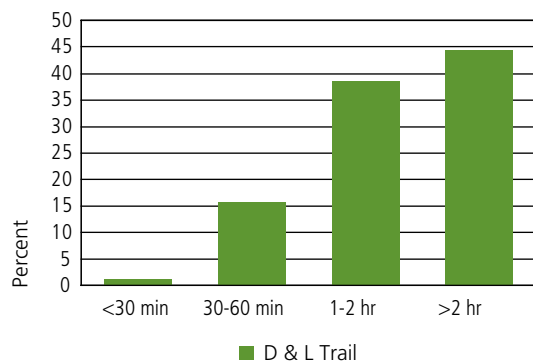
Comparison among regions



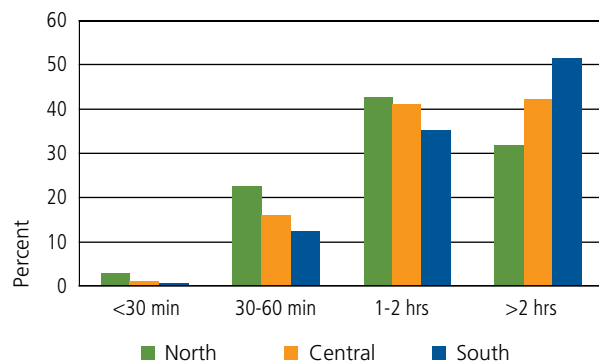


National averages for walking speed are 3 miles per hour, and the average bike speed is 10 miles per hour. With speed of travel in mind, a correlation can be seen between the primary activity (bicycling) and the amount of time spent on the trail. More important to the local economic impact is the fact that the more time a user spends on the trail, the more likely they are to spend money on food or lodging in the vicinity.

How much time did you spend on each trail visit?

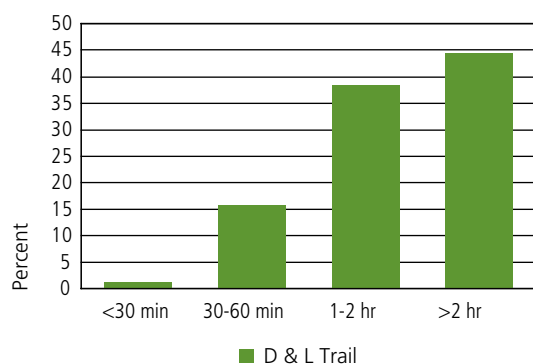


Comparison among regions

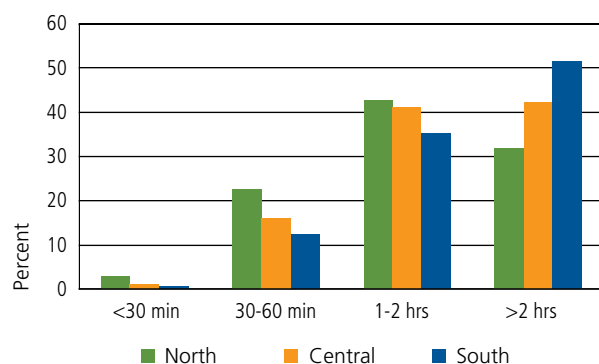


More than 73 percent of respondents reported purchasing some form of “soft” or non-durable goods during their visit to the trail. This is a predictable occurrence for long distance trails, and close to what we would expect to see on the D & L Trail. More interesting is the regional breakdown that documents a greater percentage of people purchasing products in the North region. The town of Jim Thorpe in the North region is a gateway, tourist destination for day trips and overnight trips.

Number of people who purchased “soft goods”



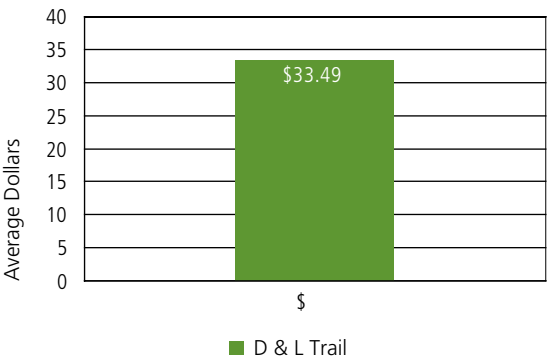
Comparison among regions



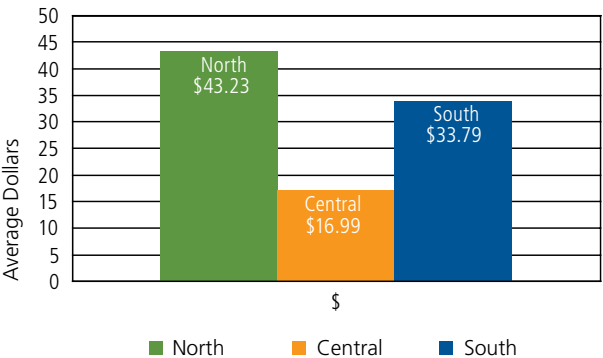


For the purposes of this study, soft good expenditures included bike rentals, which may help account for the high per person dollar amount spent on soft goods. Overall, 6.7 percent of the survey respondents reported spending money on bike rental. A higher amount is being spent in the North region where bike rentals are available at several local businesses. In the North region, 10.8 percent of respondents reported using a bike rental, while 7.2 percent reported a bike rental expenditure in the South region. Respondents in the Central region did not report any expenditure on bike rentals, and reported a lower dollar amount on soft goods overall. Of the choices provided in the survey, beverages and meals were purchased by the majority of users.

Average \$ spent per person on “soft goods”

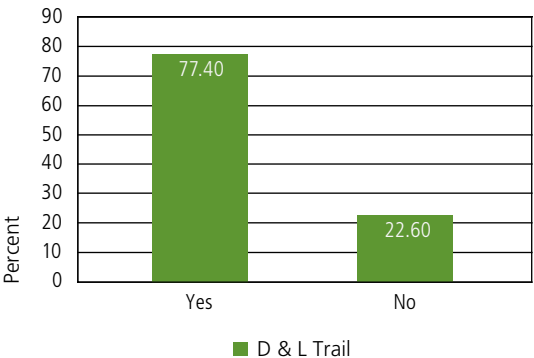


Comparison among regions

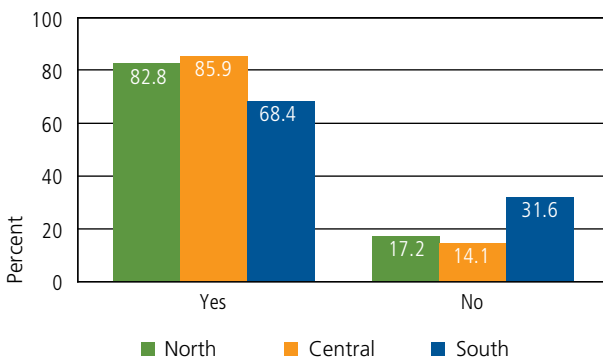


Survey respondents indicated they had purchased a number of supply items, or “hard goods” such as clothing, footwear and bikes because of their use of the trail. The Central region reported a slightly higher percentage of users purchasing items, which may be related to the proximity of the users’ residence to the trail. Most respondents (41 percent) also reported that they purchased goods from locally-owned stores.

Number of people who purchased “hard goods”

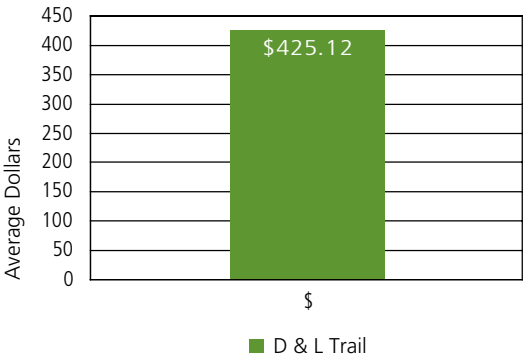


Comparison among regions

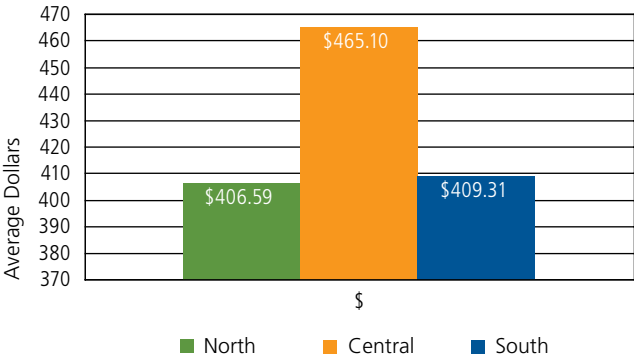


Respondents using the Central region reported greater expenditure on hard goods items. Again, this may be a reflection of the fact that many trail users in this region live close to the trail. Of the three regions, the Central region is the most residential, with densest housing and retail centers.

Average \$ spent on “hard goods” per person?



Comparison among regions



D & L Trail User Estimate

During the summer and fall of 2012, passive infrared counters were placed at eight locations along the D & L Trail between White Haven and Hugh Moore Park. These counters collect data on the number of trail users passing the counter by detecting each user's "heat signature."

Additional infra-red counters of the same make are managed by the staff of the Delaware Canal State Park at various locations along the Delaware Canal Towpath. The raw data from counters located at Lodi, Lock 11, Black Rock and Morrisville was gathered during the summer and fall months and provided by the park's staff for this study.

In order to develop an annual user estimate for the D & L Trail, the data collected from June through October, 2012, was extrapolated to a 12-month estimate using a "User Visit Model" developed by RTC. This model examines data collected using electronic counters at 95 different locations on rail-trails across the United States.

Trail Counter Location	Actual Count	Estimated 12-Month Count*	Adjusted for Passing Multiple Counters	Adjusted for Missing Counts**	Adjusted for Out-&-Back Trips
White Haven	1,246	10,395	8,291	9,950	5,791
Glen Onoko	7,962	66,424	52,982	63,579	37,003
Jim Thorpe	4,298	35,857	28,601	34,321	19,975
Marvin Gardens	1,784	14,883	11,871	14,246	8,291
Nature Center	2,904	24,227	19,324	23,189	13,496
Slatington	7,058	58,882	46,967	56,360	32,802
Sand Island	4,444	37,075	29,572	35,487	20,653
Hugh Moore	3,200	26,696	21,294	25,553	14,872
Lodi	3,652	30,467	24,302	29,162	16,972
Lock 11	10,152	84,694	67,556	81,067	47,181
Black Rock	12,026	100,329	80,026	96,031	55,890
Morrisville	2,124	17,720	14,134	16,961	9,871
Total Estimated Annual Trail User Visits					282,796*

* Annual estimate developed from actual counter data extrapolated using the RTC User Visit Model.

Economic Impact



Non-Consumable, Hard Goods

The economic impact of the D & L Trail is comprised of several elements. From the survey, the percentage of respondents who purchased durable or “hard goods” (bikes, bike equipment, running/walking shoes, etc.) was determined. Most respondents also indicated how much they spent on these types of purchases during the past 12 months.

Has your use of the trail influenced your purchase of...? (check all that apply)

Bike	0.7%
Bike supplies	20.2%
Auto accessories	3.9%
Running/walking/hiking shoes	17.1%
Clothing	15.6%
Nothing	22.6%

Approximately how much did you spend on these items in the past year? (enter dollar amount)

Average hard goods purchase	\$425.12
-----------------------------	----------



Consumable, Soft Goods

The survey determined how much trail users spent on non-durable consumables, or “soft goods” (water, soda, snacks, ice cream, lunches, etc.), while using the trail. The percentage of respondents who made these types of purchases is an important aspect for determining the local economic impact.

In conjunction with your most recent trip to the trail, did you purchase any of the following? (check all that apply)

Beverages	21.3%
Candy/snack foods	11.8%
Sandwiches	8.1%
Ice cream	5.6%
Meals at a restaurant along the trail	18.2%
Bike rental	6.7%
Other	2.0%
None of these	26.4%

Approximately how much did you spend per person on the items above? (enter dollar amount)

Average consumable goods purchase	\$33.49
-----------------------------------	---------



Paul Fogal, Chair, DLNHC, 2011 Annual Report: “Living and working in the vicinity of the Lehigh Gorge, I can’t help but notice the progress of the Corridor and its most visible project. The D & L Trail is becoming an economic driver. On any given day, there are bicyclists, people walking and hiking, paddlers and excursion and freight trains chugging along the Lehigh River and our Trail.”

Lodging

The third factor included in the estimate of trail user economic impact is overnight lodging.

The number of overnight stays and the average amount paid for rooms is determined directly from the survey responses.

Did your visit to the trail involve an overnight stay in one of the following types of accommodations? (circle one response)

Motel/hotel	29.8%
Bed-and-Breakfast	19.4%
Friend or relative’s home	21.0%
Campground	20.2%
Other	9.7%

How many nights did you stay in conjunction with your visit to this trail?

Average	2.2 nights
---------	------------

Approximately how much did you spend on overnight accommodations per night?

Average	\$132.36
---------	----------



D & L Trail Economic Impact Analysis

The following chart takes the data collected from the three categories of soft goods, hard goods and lodging, and extrapolates the purchases on an annual basis. While hard good purchases may not be made on an annual basis, they represent a significant expenditure figure. The purchase of soft goods does represent an annual expenditure because these purchases are made on a per-trip basis by users. Likewise, spending on overnight accommodations can be anticipated to occur year after year.

Annual User Estimate (rounded)						282,796
Category	% Usage	Avg. \$	Avg. Life	Avg. # of trips**	Avg. # of Nights	Total Est. Expenditure
Hard Goods*	77.4%	\$425.12	6 years	5.7		\$2,717,720
Soft Goods	73.6%	\$33.49				\$6,970,537
Accommodations	11.4%	\$132.36			2.2	\$9,387,664

Hard Goods = (% Usage X (Avg. \$ ÷ Avg. Life) X # Users ÷ Avg. Number of Trips)*

In the above example, the calculation would look like this: $((.774 \times (\$425.12 \div 6)) \times (282,796 \div 5.7)) = \$2,717,720$.

Soft Goods = (% Usage X Users Avg. \$ X # Users)

In the above example, the calculation would look like this: $(.736 \times \$33.49 \times 282,796) = \$6,970,537$.

Overnight Accommodations = (% Usage X User Avg. \$ X Avg. # of Nights X # Users)

$(.114 \times \$132.36 \times 2.2 \times 282,796) = \$9,387,664$.

*Major hard good purchases such as a bike may be replaced every five to 10 years. Running shoes may be replaced every couple of months. For the purpose of this analysis, we assumed the average life of a hard good to be six years. To get a figure that is usable on an annual user basis, the hard goods need to be broken down to a per-trip figure.

** This amounts to working the average spending on a hard good down to a per-use depreciation amount.





D & L Trail Economic Impact by Region

Trail Segment	Economic Impact	% Usage	Avg. \$	Avg. # of Nights	Annual User Estimates	Economic Impact \$	Section Totals
White Haven to Jim Thorpe							\$6,092,834
(White Haven, Glen Onoko, Jim Thorpe)	Soft Goods	86.6%	\$42.45		62,768	\$2,307,458	
	Overnight Accommodations	22.1%	\$128.30	2.1	62,768	\$3,785,376	
Jim Thorpe to Allentown							\$1,422,606
(Marvin Gardens, Nature Center, Slatington)	Soft Goods	61.0%	\$17.43		54,589	\$580,406.62	
	Overnight Accommodations	3.80%	\$203.00	2.0	54,589	\$842,199.09	
Allentown to Easton							\$834,093
(Sand Island—Hugh Moore)	Soft Goods	63.6%	\$28.68		35,525	\$647,993.05	
	Overnight Accommodations	4.17%	\$83.75	1.5	35,525	\$186,099.93	
Easton to Lodi							\$333,748
(Lodi)	Soft Goods	74.1%	\$24.21		16,972	\$304,471.06	
	Overnight Accommodations	2.3%	\$75.00	1.0	16,972	\$29,276.70	
New Hope to Washington Crossing							\$5,914,711
(Lock 11 & Black Rock)	Soft Goods	78.4%	\$30.52		103,071	\$2,466,249.91	
	Overnight Accommodations	8.9%	\$178.21	2.1	103,071	\$3,448,461.43	
Morrisville							\$30,549
	Soft Goods	62.4%	\$17.50		1,062	\$11,597.04	
	Overnight Accommodations	7.6%	\$93.43	2.5	1,062	\$18,951.53	
		% Usage	Avg. \$	Avg. Life	Avg. # Trips/ Nights	Annual User Estimate	Economic Impact \$
D & L Trail	Hard Goods	77.4%	\$425.12	6	5.70	282,796	\$2,717,720
D & L Trail	Soft Goods Only	73.6%	\$33.49			282,796	\$6,970,537
D & L Trail	Accommodations	11.4%	132.36		2.2	282,796	\$9,387,664
							\$19,075,921

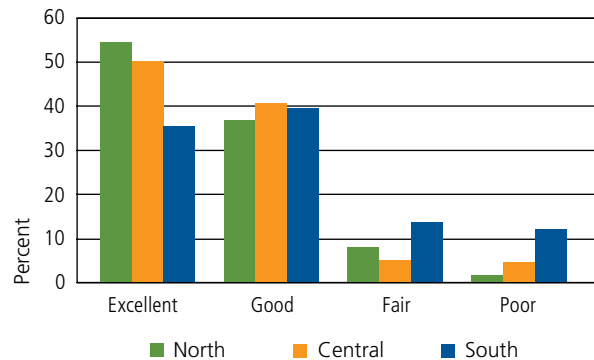
Trail Maintenance, Security and Cleanliness

Questions about trail maintenance, safety and cleanliness are important to trail managers and other area stakeholders who work hard to maintain the condition of the trail. Survey respondents also had an opportunity to make open ended comments. A total of 421 comments were recorded and will be made available to the trail managers along the D & L Trail.

Opinion of trail maintenance



Comparison among regions

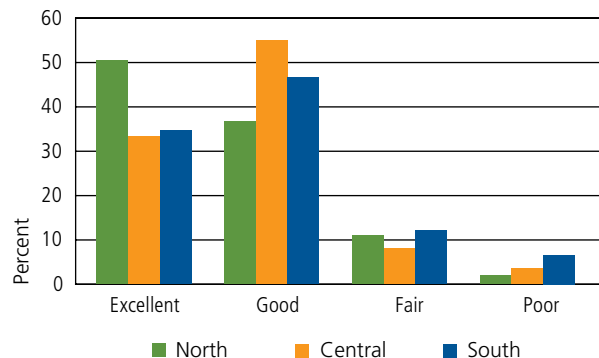


Safety along a long distance trail can sometimes be a perceived, rather than a real, threat. Overall the trail is perceived to be safe but respondents did not place it in the excellent category of maintenance and cleanliness. Note, the North region is the only region that did attain the excellent category for safety. An intercept survey that focused only on safety concerns would need to be used to determine specific areas that might be addressed.

Opinion of safety and security of the trail



Comparison among regions

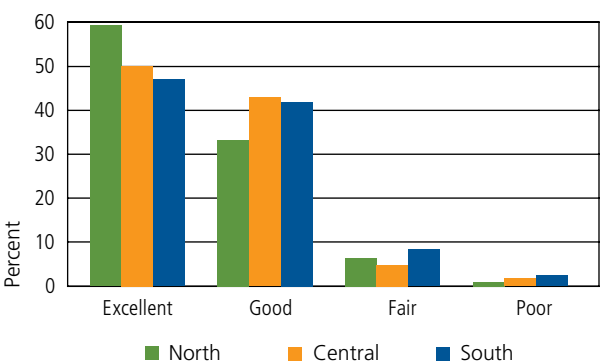




Opinion of trail cleanliness



Comparison among regions



Qualitative Values of the D & L Trail

The following is a sampling of verbatim comments taken from the D & L Trail User Survey forms. A copy of all 421 comments has been tabulated for trail management.

Visiting the trail brings me peace and calm just to sit by the river and reflect.

Would like to see the PA side of the Delaware restored north of New Hope.

Is it possible to include a garbage can at major access points? Picked up a handful of trash - brought it home to throw away. Thanks!!

Loved every minute of this tour. Additional restrooms and vendors would be great along the path.

We were thrilled when trails from Easton to New Hope were improved, then the floods came again! We love going from Easton to New Hope and back on NJ side but damage near Lumberton and just south of Easton make it less attractive.

Trailheads need more signs for rules of bikers vs. hikers, have lots of problems with speeding bikes not yielding to hikers.

It was a breathtaking ride. I enjoyed the scenery, the peace, the quiet, can't wait to do it again. Enjoyed all of the placards along the way telling the history of the canal.

I really enjoyed the section of the trail I rode on and look forward to planning another trip to explore the other areas.

We are very pleased that you were able to water the canal after the Easton flood damage. Sure wish you could repair the towpath south of Ground Hog. Thanks

Maybe more benches as I take my dad and he needs to rest! Thanks!

We recently bought a home and moved to Yardley, PA in large part because of the proximity of the trail. As an avid runner and cyclist, this was a huge selling point!

Nice trail but could use better maintenance like more frequent grass cutting and in some areas tree trimming of branches.

I love these trails. Safe riding, well kept. Sorry the part from Easton south is closed.

I appreciate having a safe, good surfaced path to walk on with or without my lab.

Keep up the good work. Trails are wonderful, makes me glad I live here to have this in my back yard.

This is a great resource. It is a unique opportunity to help others experience nature. Thank you for all the work you do in security this great resource for the future.

We love the trail. It has added so much to the town of Slatington.

We love the trails in the Greater Lehigh Valley, we have rode over 600 miles so far this year, 2012.

Trail influenced where we purchased a home when we moved to PA.

I greatly enjoy my walks. Would be great to have some benches along the way.

Appendix—Trail Counter Data



TRAFx REPORT:

Project: D&L Trail Survey

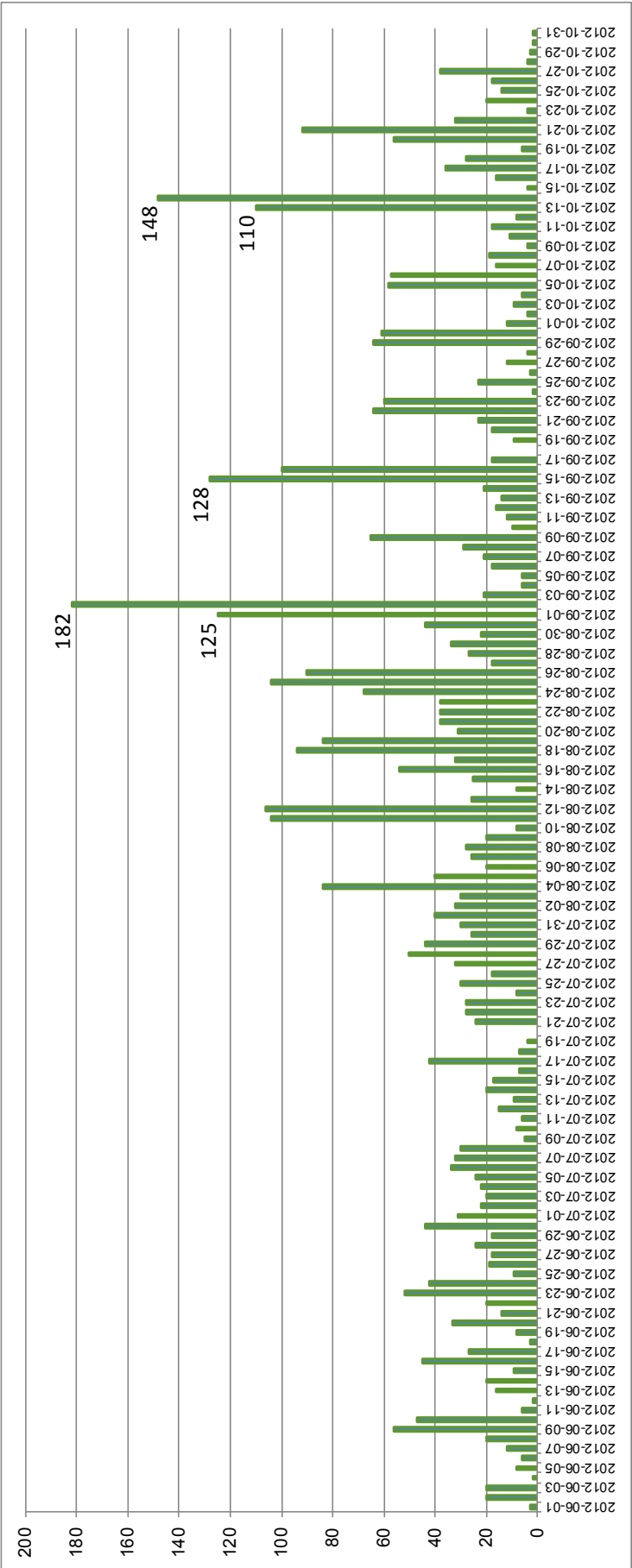
Counter: White Haven June-Oct_2012

Start: 2012-06-01

Finish: 2012-10-31

Location:

Comment: Divide by 2 applied.



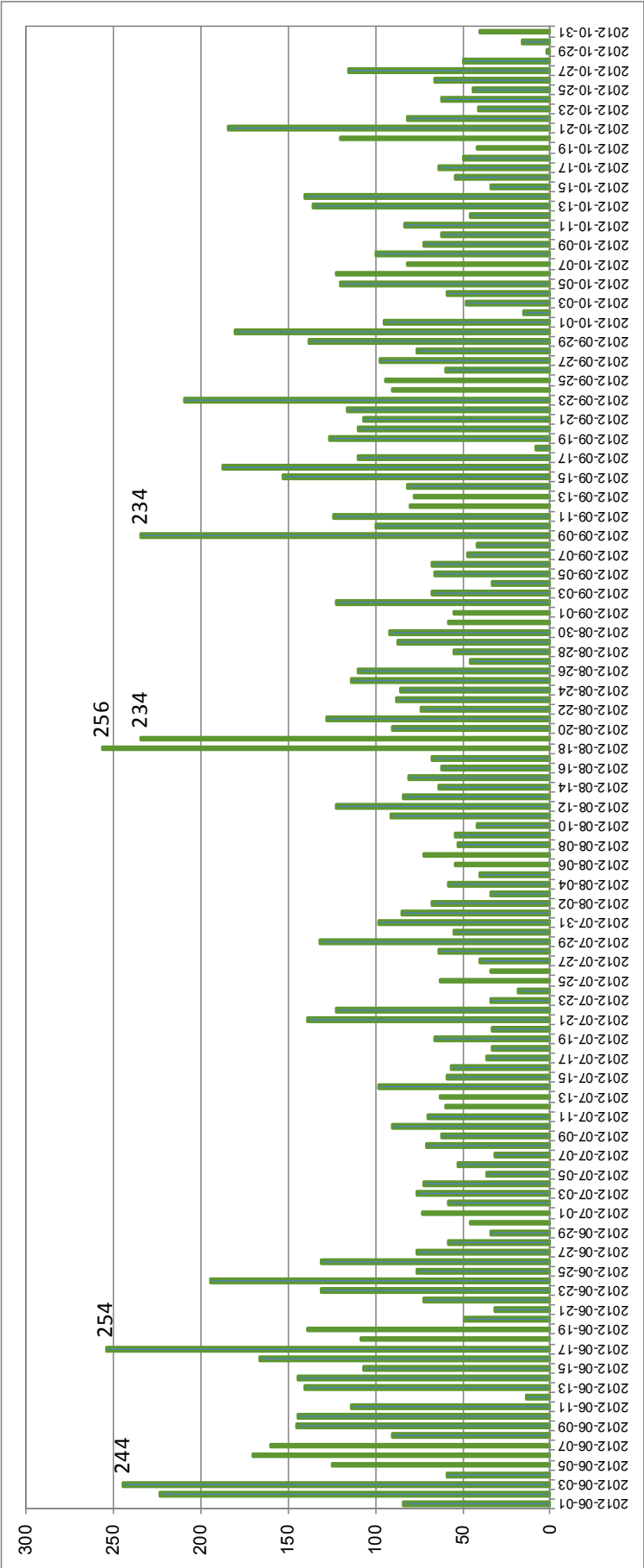
Total Counts:	4,699	Total (1):	4,699
Total Periods:	153	Total (2):	0
Period Length:	1 day	Percentage (1):	100.0
Mean:	30.7	Percentage (2):	0.0
Mode:	20.0	Mean (1):	30.7
Median:	21.0	Mean (2):	0.0
Maximum:	31.0	Max/Min (1):	182 / 0
Minimum:	182	Max/Min (2):	0 / 0
Total Weekday:	1,965		
Total Weekend:	2,734		
Daily Max/Min Weekday:	68 / 0		
Daily Max/Min Weekend:	182 / 4		

FIVE PEAK PERIODS: 2012-09-02 (182), 2012-10-14 (148), 2012-09-15 (128), 2012-09-01 (125), 2012-10-13 (110)

TRAFx REPORT:

Project: D&L Trail Survey Start: 2012-06-01
Counter: Slatington_June-OCT_2012 Finish: 2012-10-31

Location:
Comment: Divide by 2 applied.



Total Counts:	13,482	Total (1):	13,482
Total Periods:	153	Total (2):	0
Period Length:	1 day	Percentage (1):	100.0
Mean:	88.1	Percentage (2):	0.0
Mode:	34.0	Mean (1):	88.1
Median:	76.0	Mean (2):	0.0
Standard Deviation:	51.0	Max/Min (1):	256 / 2
Maximum:	256	Max/Min (2):	0 / 0
Minimum:	2		
Total Weekday:	7,735		
Total Weekend:	5,747		
Daily Max/Min Weekday:	170 / 2		
Daily Max/Min Weekend:	256 / 32		

FIVE PEAK PERIODS: 2012-08-18 (256), 2012-06-17 (254), 2012-06-03 (244), 2012-08-19 (234), 2012-09-09 (234)

TRAFx REPORT:

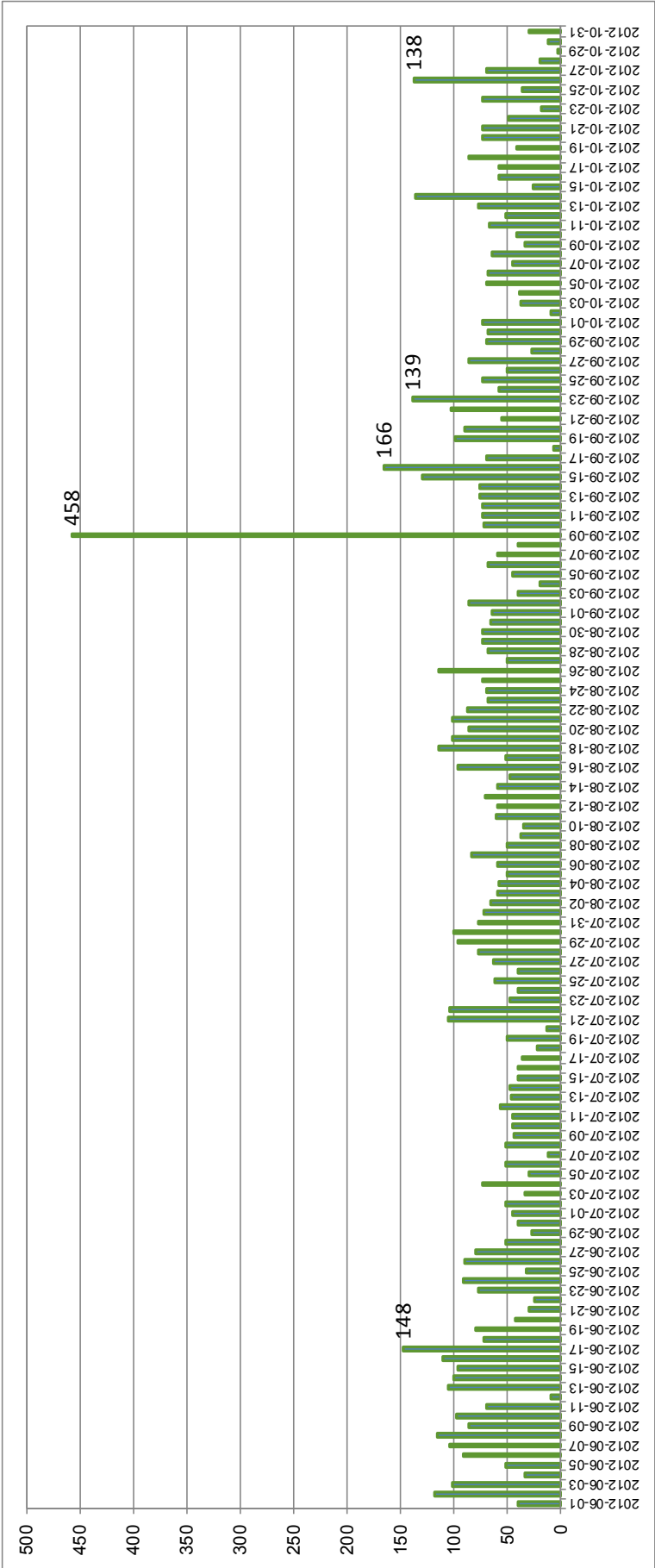
Project: D&L Trail

Counter: Sand Island_June-OCT_2012

Start: 2012-06-01

Finish: 2012-10-31

Location: Divide by 2 applied.



Total Counts:	10,284	Daily Mean Weekday:	57.9	Total (1):	10,284
Total Periods:	153	Daily Mean Weekend:	90.3	Total (2):	0
Period Length:	1 day	Mean Monday	55.3	Percentage (1):	100.0
Mean:	67.2	Mean Tuesday	49.5	Percentage (2):	0.0
Mode:	74.0	Mean Wednesday	62.1	Mean (1):	67.2
Median:	64.0	Mean Thursday	64.5	Mean (2):	0.0
Standard Deviation:	43.8	Mean Friday	58.3	Max/Min (1):	458 / 3
Maximum:	458	Mean Saturday	76.2	Max/Min (2):	0 / 0
Minimum:	3	Mean Sunday	104.4		
Total Weekday:	6,309				
Total Weekend:	3,975				
Daily Max/Min Weekday:	138 / 3				
Daily Max/Min Weekend:	458 / 12				

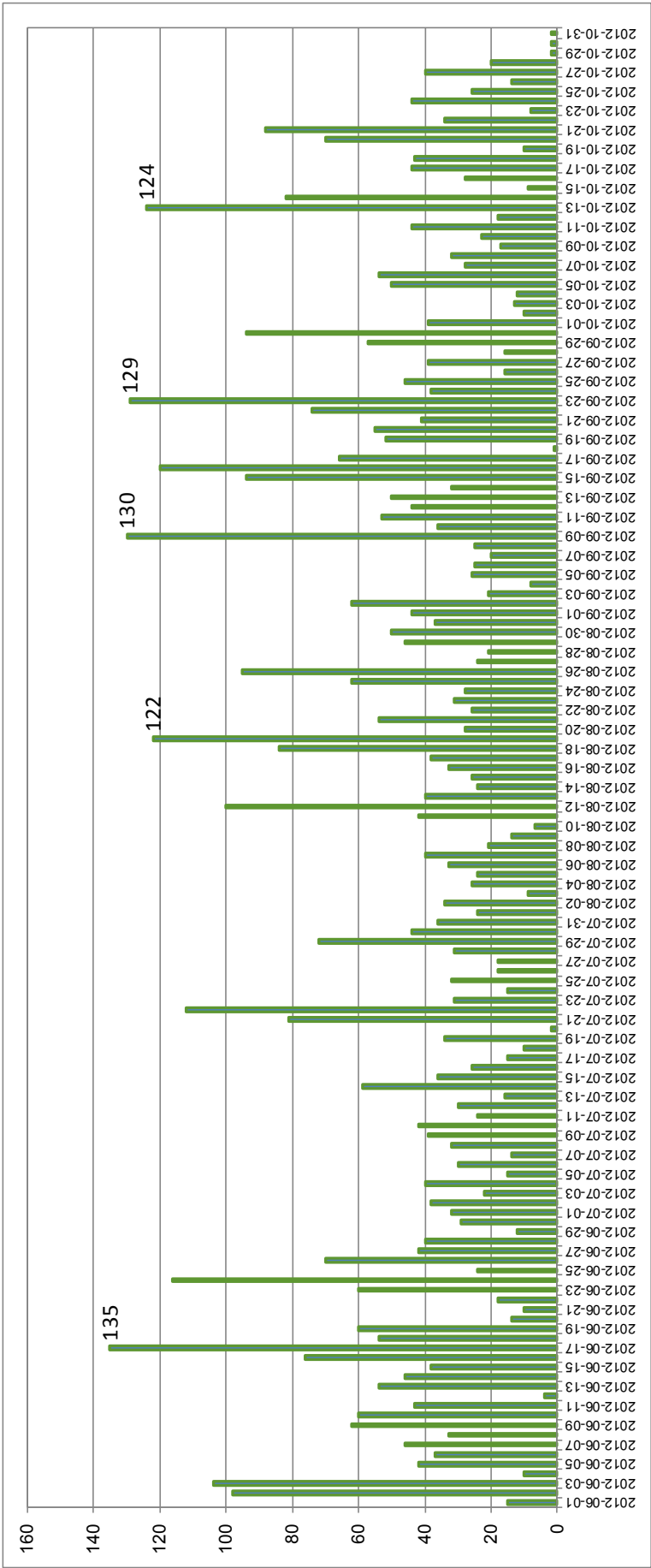
FIVE PEAK PERIODS: 2012-09-09 (458), 2012-09-16 (166), 2012-06-17 (148), 2012-09-23 (139), 2012-10-26 (138)

TRAFx REPORT:

Project: D&L Trail User Survey
Counter: Nature Center_June-OCT_2012

Start: 2012-06-01
Finish: 2012-10-31

Location:
Comment: Divide by 2 applied.

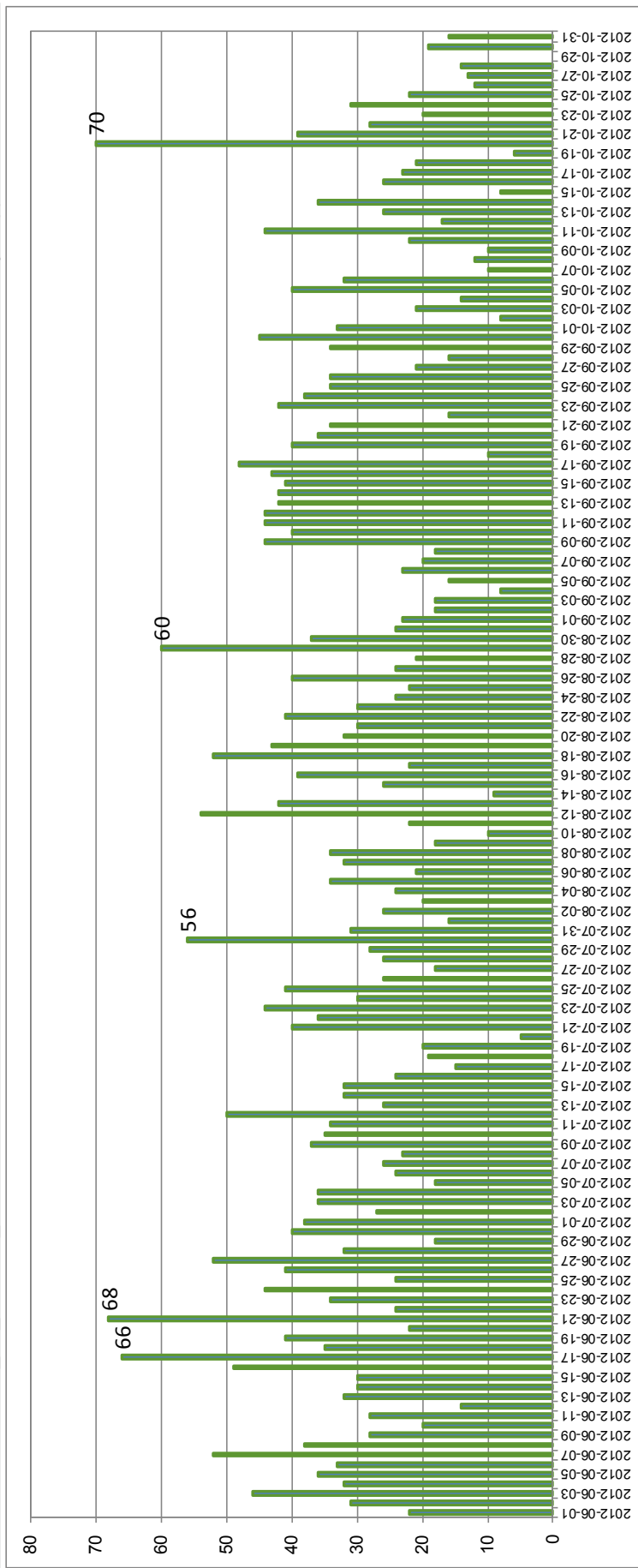


Total Counts:	6,285	Daily Mean Weekday:	29.2	Total (1) :	6,285
Total Periods:	153	Daily Mean Weekend:	70.4	Total (2) :	0
Period Length:	1 day	Mean Monday	32.3	Percentage (1) :	100.0
Mean:	41.1	Mean Tuesday	28.0	Percentage (2) :	0.0
Mode:	24.0	Mean Wednesday	30.0	Mean (1) :	41.1
Median:	34.0	Mean Thursday	33.0	Mean (2) :	0.0
Standard Deviation:	29.5	Mean Friday	22.8	Max/Min (1) :	135 / 1
Maximum:	135	Mean Saturday	59.4	Max/Min (2) :	0 / 0
Minimum:	1	Mean Sunday	81.6		
Total Weekday:	3,186				
Total Weekend:	3,099				
Daily Max/Min Weekday:	70 / 1				
Daily Max/Min Weekend:	135 / 14				

FIVE PEAK PERIODS: 2012-06-17 (135), 2012-09-09 (130), 2012-09-23 (129), 2012-10-13 (124), 2012-08-19 (122)

TRAFx REPORT:

Project: Morrisville_SP_June-Oct_2012 Start: 2012-06-01 Location: Divide by 2 applied.
 Counter: Finish: 2012-10-31



Total Counts:	4,549	Total (1) :	4,549
Total Periods:	153	Total (2) :	0
Period Length:	1 day	Percentage (1) :	100.0
Mean:	29.7	Percentage (2) :	0.0
Mode:	32.0	Mean (1) :	29.7
Median:	30.0	Mean (2) :	0.0
Standard Deviation:	13.0	Max/Min (1) :	70 / 0
Maximum:	70	Max/Min (2) :	0 / 0
Minimum:	0		
Total Weekday:	3,055		
Total Weekend:	1,494		
Daily Max/Min Weekday:	68 / 0		
Daily Max/Min Weekend:	70 / 10		

FIVE PEAK PERIODS: 2012-10-20 (70), 2012-06-21 (68), 2012-06-17 (66), 2012-08-29 (60), 2012-07-30 (56)

TRAFx REPORT:

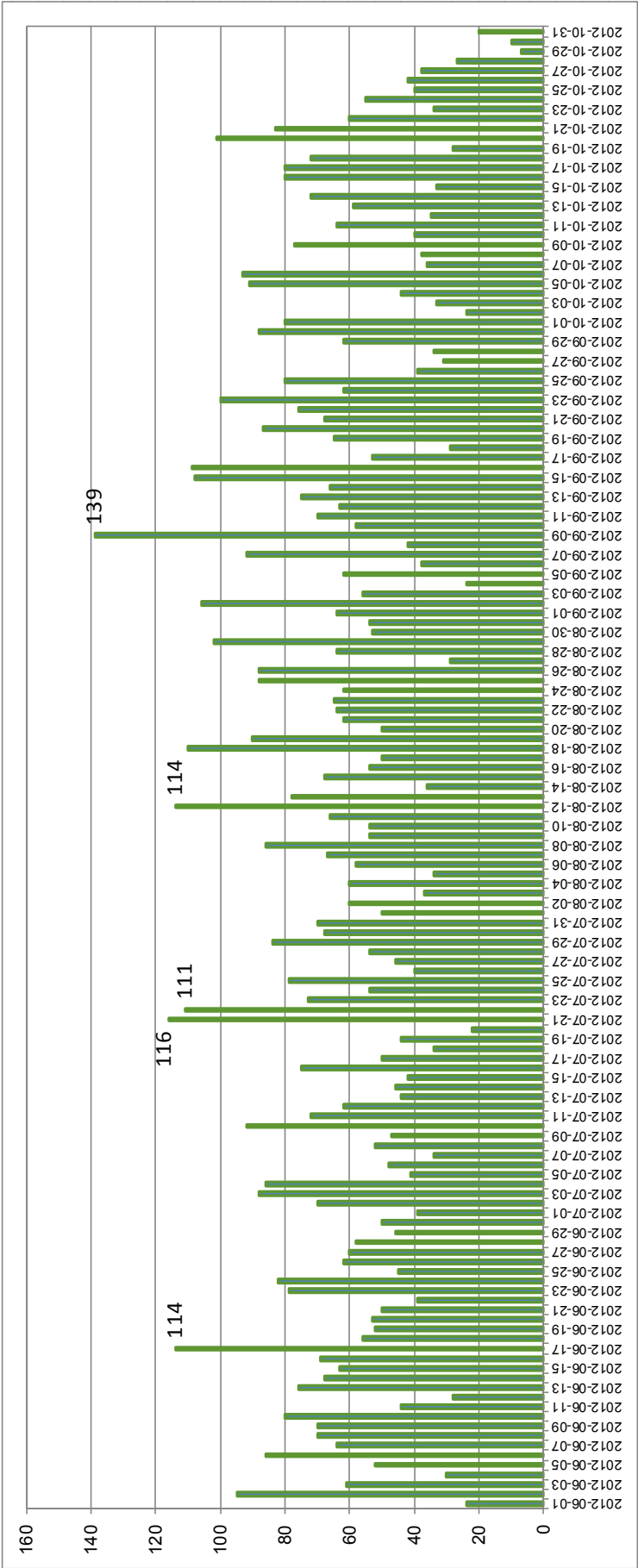
Project: LODI_SP_June-Oct_2012

Counter: 2012-06-01

Start: 2012-06-01

Finish: 2012-10-31

Location: Divide by 2 applied.



Total Counts:	9,358	Total (1) :	9,358
Total Periods:	153	Total (2) :	0
Period Length:	1 day		
Mean:	61.2	Mean (1) :	100.0
Mode:	62.0	Mean (2) :	0.0
Median:	60.0	Max/Min (1) :	61.2
Standard Deviation:	23.9	Max/Min (2) :	0.0
Maximum:	139		139 / 7
Minimum:	7		0 / 0
Total Weekday:	6,027		
Total Weekend:	3,331		
Daily Max/Min Weekday:	102 / 7		
Daily Max/Min Weekend:	139 / 27		

FIVE PEAK PERIODS: 2012-09-09 (139), 2012-07-21 (116), 2012-06-17 (114), 2012-08-12 (114), 2012-07-22 (111)

TRAFx REPORT:

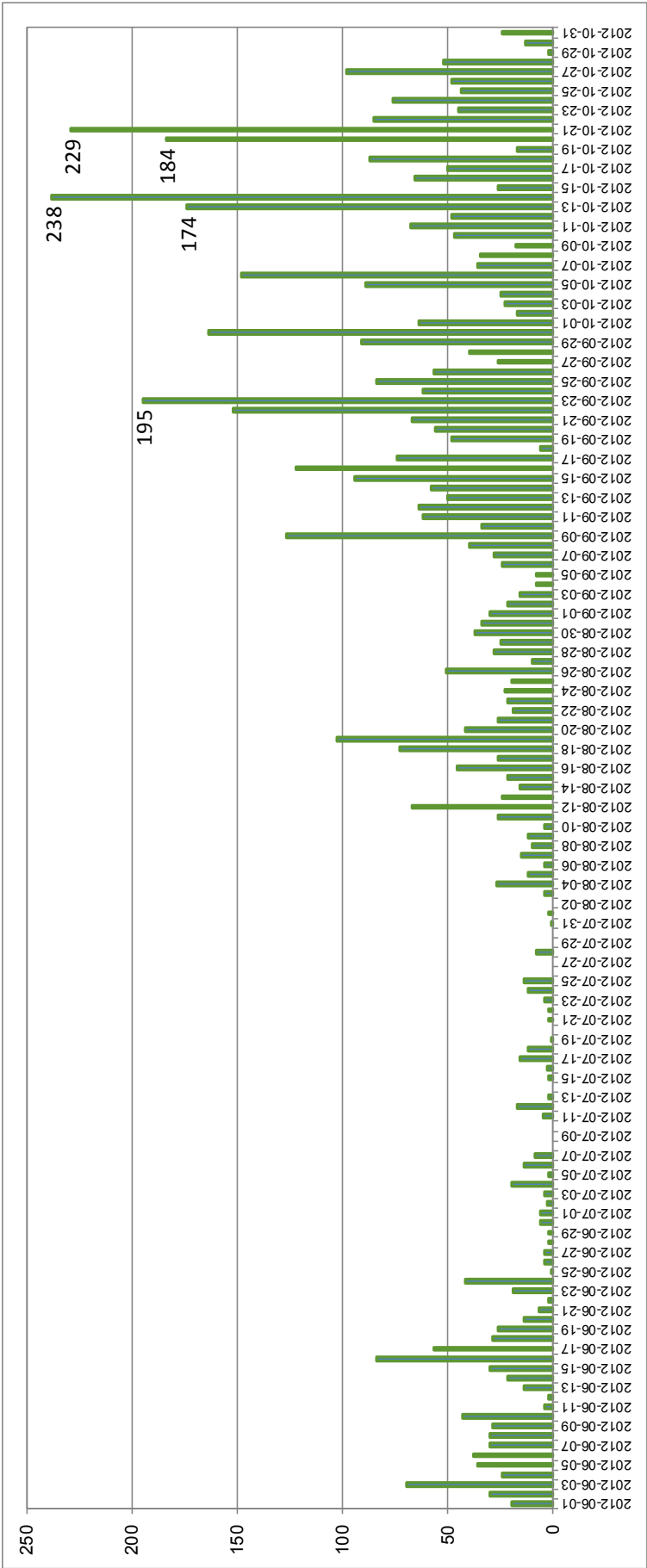
Project: LOCK 7_SP_June-Oct_2012

Counter: 238

Start: 2012-06-01

Finish: 2012-10-31

Location: Divide by 2 applied.



Total Counts:	5,795	Daily Mean Weekday:	25.8	Total (1) :	5,795
Total Periods:	153	Daily Mean Weekend:	67.8	Total (2) :	0
Period Length:	1 day	Mean Monday	24.8	Percentage (1) :	100.0
Mean:	37.9	Mean Tuesday	23.0	Percentage (2) :	0.0
Mode:	2.0	Mean Wednesday	27.2	Mean (1) :	37.9
Median:	24.0	Mean Thursday	27.4	Mean (2) :	0.0
Standard Deviation:	44.8	Mean Friday	26.7	Max/Min (1) :	238 / 0
Maximum:	238	Mean Saturday	61.1	Max/Min (2) :	0 / 0
Minimum:	0	Mean Sunday	74.5		
Total Weekday:	2,811				
Total Weekend:	2,984				
Daily Max/Min Weekday:	89 / 0				
Daily Max/Min Weekend:	238 / 0				

FIVE PEAK PERIODS: 2012-10-14 (238), 2012-10-21 (229), 2012-09-23 (195), 2012-10-20 (184), 2012-10-13 (174)

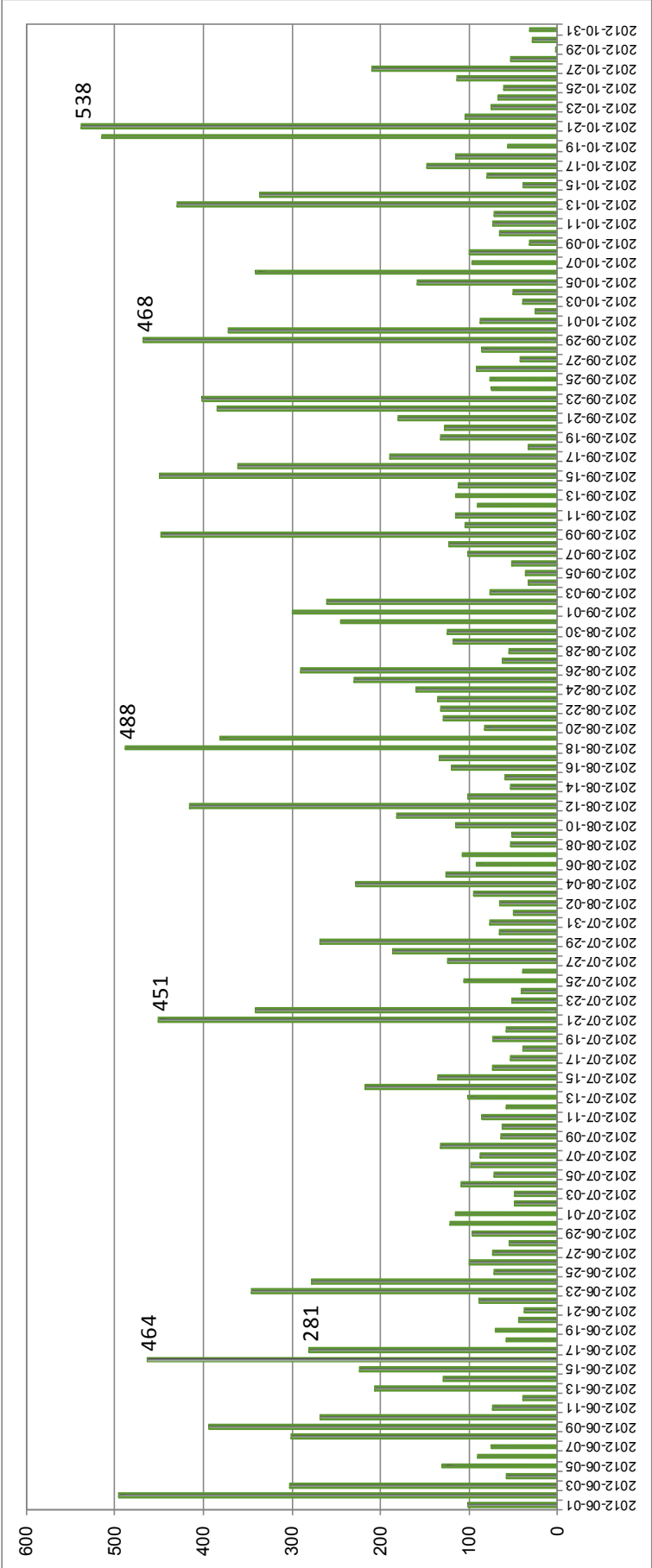
TRAFx REPORT:

Project: LOCK 11_SP_June-OCT_2012

Counter: 2012-06-01

Start: 2012-10-31

Location: Divide by 2 applied.



Total Counts:	22,847	Total (1):	87.4	Total (2):	22,847
Total Periods:	153	Total (1):	302.7	Total (2):	0
Period Length:	1 day	Percentage (1):	76.7	Percentage (2):	0.0
Mean:	149.3	Mean (1):	66.7	Mean (2):	149.3
Mode:	58.0	Mean (2):	85.1	Max/Min (1):	0.0
Median:	101.0	Mean (2):	79.7	Max/Min (2):	538 / 2
Standard Deviation:	127.1				0 / 0
Maximum:	538				
Minimum:	2				
Total Weekday:	9,528				
Total Weekend:	13,319				
Daily Max/Min Weekday:	301 / 2				
Daily Max/Min Weekend:	538 / 54				

FIVE PEAK PERIODS: 2012-10-21 (538), 2012-10-20 (514), 2012-06-02 (496), 2012-08-18 (488), 2012-09-29 (468)

TRAFx REPORT:

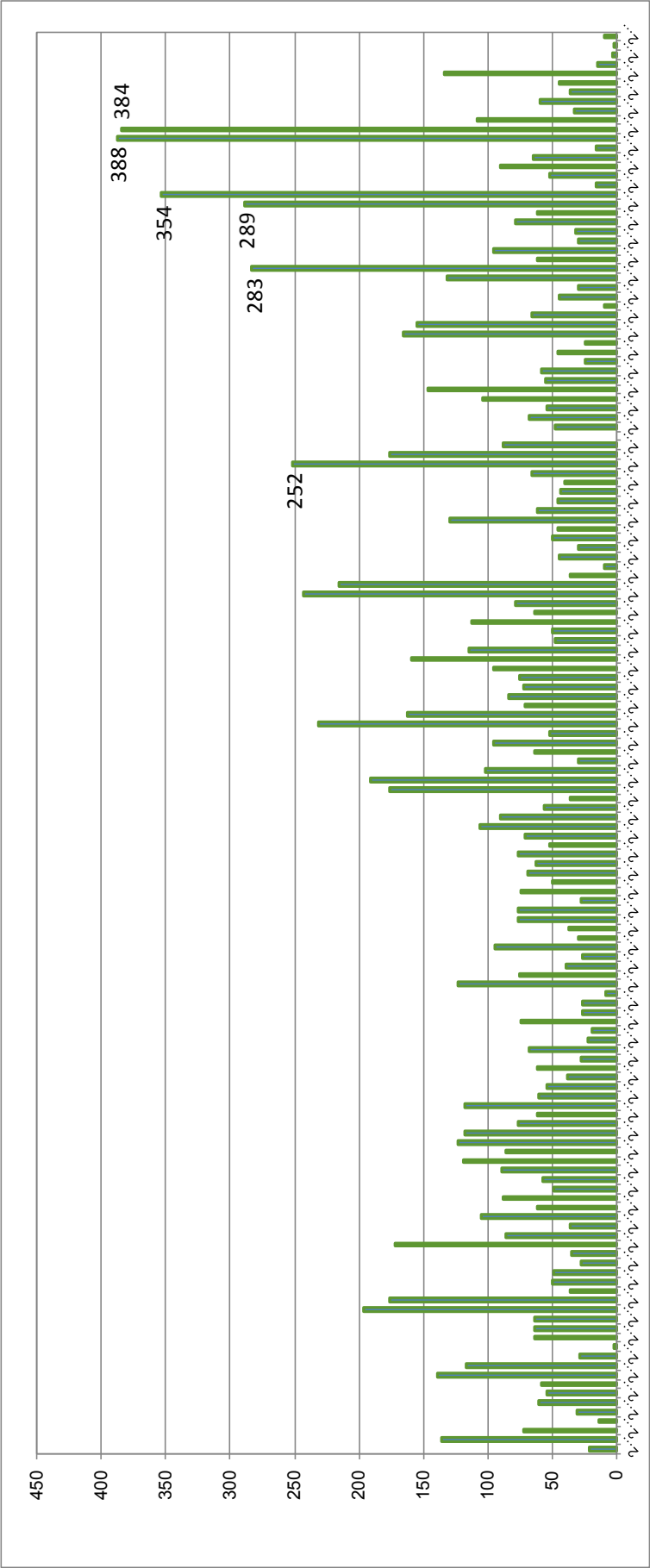
Project: Jim Thorpe_June-Oct_2012

Counter: 127

Start: 2012-06-01

Finish: 2012-10-31

Location: Divide by 2 applied.

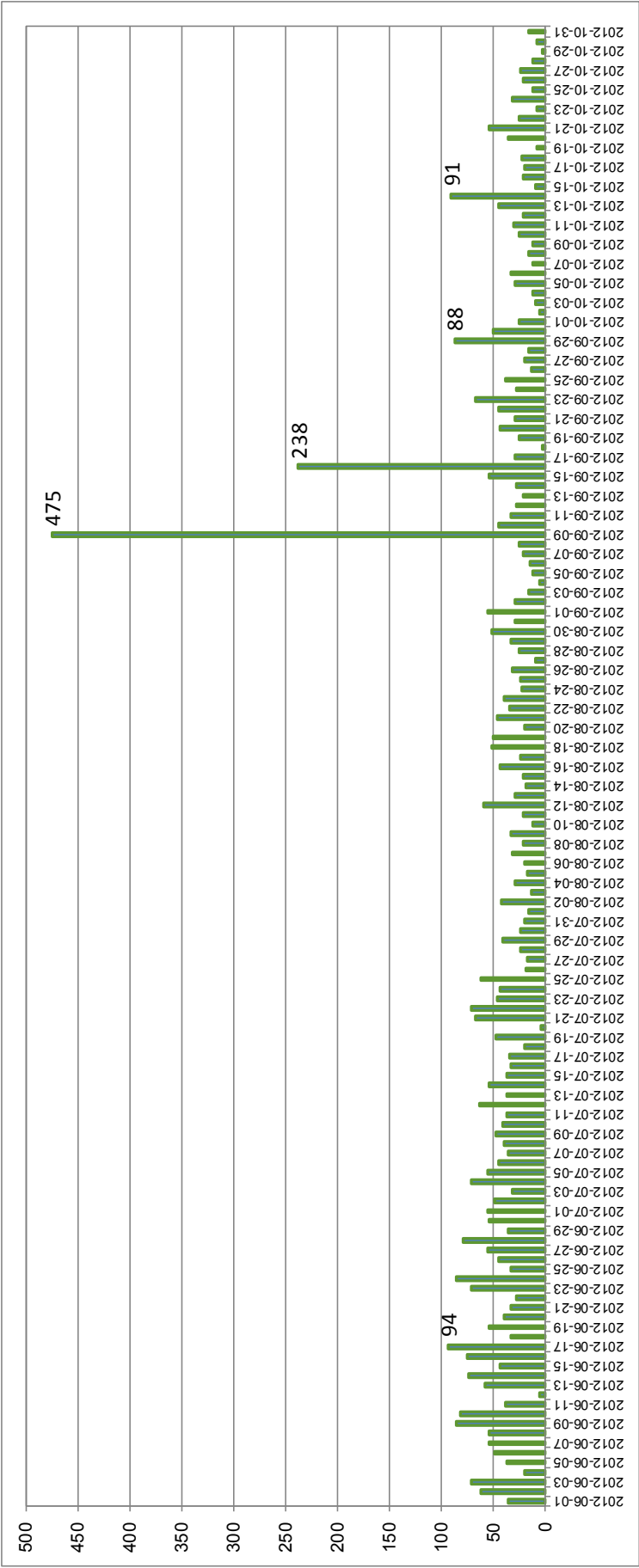


Total Counts:	12,449	Daily Mean Weekday:	54.0	Total (1):	12,449
Total Periods:	153	Daily Mean Weekend:	149.2	Total (2):	0
Period Length:	1 day	Mean Monday	54.4	Percentage (1):	100.0
Mean:	81.4	Mean Tuesday	46.0	Percentage (2):	0.0
Mode:	64.0	Mean Wednesday	59.0	Mean (1):	81.4
Median:	62.0	Mean Thursday	58.1	Mean (2):	0.0
Standard Deviation:	69.4	Mean Friday	52.3	Max/Min (1):	388 / 0
Maximum:	388	Mean Saturday	162.5	Max/Min (2):	0 / 0
Minimum:	0	Mean Sunday	135.7		
Total Weekday:	5,886				
Total Weekend:	6,563				
Daily Max/Min Weekday:	132 / 0				
Daily Max/Min Weekend:	388 / 15				

FIVE PEAK PERIODS: 2012-10-20 (388), 2012-10-21 (384), 2012-10-14 (354), 2012-10-13 (289), 2012-10-06 (283)

TRAFx REPORT:

Project: 2012-06-01
Counter: Hugh Moore_June-OCT_2012
Start: 2012-06-01
Finish: 2012-10-31
Location: Divide by 2 applied.
Comment: Divide by 2 applied.

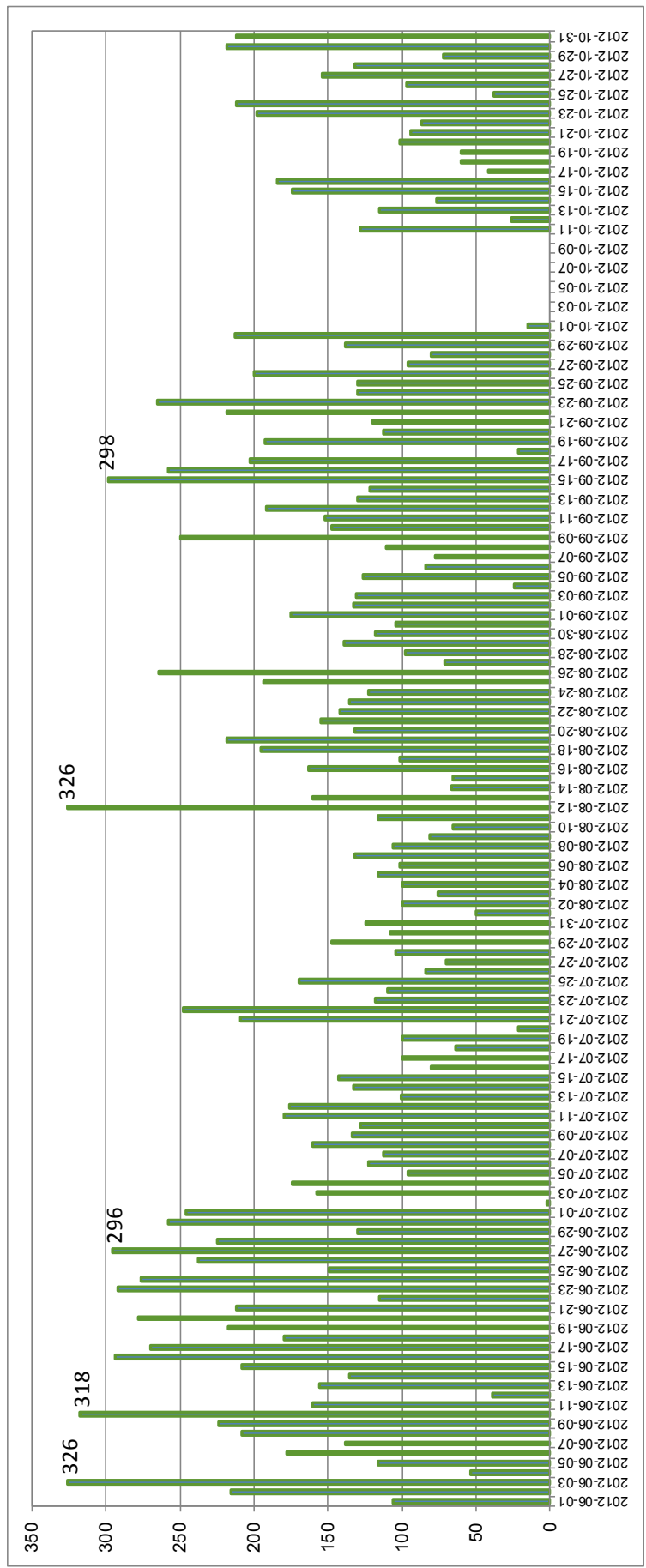


Total Counts:	6,139	Total (1):	6,139
Total Periods:	153	Total (2):	0
Period Length:	1 day	Percentage (1):	100.0
Mean:	40.1	Percentage (2):	0.0
Mode:	22.0	Mean (1):	40.1
Median:	34.0	Mean (2):	0.0
Standard Deviation:	44.0	Max/Min (1):	475 / 3
Maximum:	475	Max/Min (2):	0 / 0
Minimum:	3		
Total Weekday:	3,299		
Total Weekend:	2,840		
Daily Max/Min Weekday:	80 / 3		
Daily Max/Min Weekend:	475 / 12		

FIVE PEAK PERIODS: 2012-09-09 (475), 2012-09-16 (238), 2012-06-17 (94), 2012-10-14 (91), 2012-09-29 (88)

TRAFx REPORT:

Project: Counter: Black Rock_SP_June-Oct_2012_los Start: 2012-06-01 Finish: 2012-10-31 Location: Comment: Divide by 2 applied.



Total Counts:	20,988	Total (1) :	20,988
Total Periods:	144	Total (2) :	0
Period Length:	1 day	Percentage (1) :	100.0
Mean:	145.8	Percentage (2) :	0.0
Mode:	130.0	Mean (1) :	137.2
Median:	132.0	Mean (2) :	0.0
Standard Deviation:	71.0	Max/Min (1) :	326 / 0
Maximum:	326	Max/Min (2) :	0 / 0
Minimum:	2		
Total Weekday:	12,748		
Total Weekend:	8,240		
Daily Max/Min Weekday:	296 / 2		
Daily Max/Min Weekend:	326 / 77		
Daily Mean Weekday:			
Daily Mean Weekend:			
Mean Monday	125.0		
Mean Tuesday	196.2		
Mean Wednesday	114.8		
Mean Thursday	130.6		
Mean Friday	158.8		
Mean Saturday	120.7		
Mean Sunday	101.8		
	179.0		
	213.4		

FIVE PEAK PERIODS: 2012-06-03 (326), 2012-08-12 (326), 2012-06-10 (318), 2012-09-15 (298), 2012-06-27 (296)



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