New Orleans Pedestrian and Bicycle Count Report, 2012

Final Report

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Contents

List of Tables ii
List of Figures iii
Acknowledgements iv
Executive Summary 1
Introduction 4
Orleans Parish Bicycle Network, 2005-2012 4
Manual Count Site Selection 10
Electronic Count Location 10
Count Observation Methodologies 12
Manual Counts 12
Electronic Counts 13
Manual Count Estimation and Extrapolation Methodology 14
Manual Count Data 16
Observed Count Totals 16
Estimated Daily Traffic for Manual Count Sites, 2010-2012 19
Commuting Patterns near Manual Count Sites 25
Mode Shares for Manual Count Sites 28
Demographic and Behavioral Characteristics 30
Gender 30
Helmet Use 30
Travel Orientation 30
Age 31
Race 31
Electronic Count Data 35
Observed Traffic Volumes 35
Patterns of Use by Hour, Day, Month, and Season 39
Hourly Trends 39
Daily Trends 40
Monthly and Seasonal Trends 41
Meteorological Variables and Traffic Volume 42
Temperature 42
Precipitation 45
State, Regional, and National Context: Comparing the Gender Split for Bicyclist and Pedestrian Commuters 48
Conclusions 52
Bicycle Activity in New Orleans 53
Impact of Bicycle Facilities 53
Pedestrian Activity in New Orleans 55
Jefferson Davis Trail 55
Evaluating Active Transportation in New Orleans: Policy Implications 56
Appendices 57
Appendix A: Manual Count Site Characteristics 58
Appendix B: Manual Count Observation Protocol 59
Appendix C: Manual Count Observation Sheets 61
Appendix D: Manual Count Weather Data 63
Appendix E: PBRI Manual Count Extrapolation Methodology 64
Appendix F: NBPD Project Count Adjustment Worksheet 65
Appendix G: Additional Automatic Count Data Tables 68

List of Tables

Table 1: 2012 Count Site Locations 11
Table 2: Observed Total Manual Count Volumes for Bicycles, 2010-2012 . 17
Table 3: Observed Total Manual Count Volumes for Pedestrians, 2010-2012 18
Table 4: Estimated Daily Bicycle Traffic, 2010-2012 22
Table 5: Estimated Daily Pedestrian Traffic, 2010-2012 23
Table 6: 2012 Bicycle EDT, Ranked 24
Table 7: 2012 Pedestrian EDT, Ranked 24
Table 8: Bicycle and Pedestrian Relative Mode Share, 2010-2012 28
Table 9: Bicyclist Travel Orientation and Helmet Use by Race 31
Table 10: Overall Bicyclist Composition, 2010-2012 32
Table 11: Overall Pedestrian Composition, 2010-2012 32
Table 12: Bicyclist Composition by Count Site, 2012 33
Table 13: Pedestrian Composition by Count Site, 2012 34
Table 14: Jefferson Davis Trail User Volumes, 2010-2012, by Month 37
Table 15: Jefferson Davis Trail Highest User Volume Days, 2011-2012 38
Table 16: Jefferson Davis Trail Lowest User Volume Days, 2011-2012 38
Table 17: Jefferson Davis Trail Observed Volume by Day of Week 40
Table 18: Jefferson Davis Trail Average Daily Temperatures and User Volumes 42
Table 19: Top Cities over 250,000 for Bicycle Commuting, 2010 49
Table 20: Regional Bicycling Commuting Statistics, 2010 49
Table 21: Bicycle Commuting in Louisiana, 2008-2010 50
Table 22: Top Cities over 250,000 for Pedestrian Commuting, 2010 51
Table 23: Regional Pedestrian Commuting Statistics, 2010 52
Table 24: Pedestrian Commuting in Louisiana, 2008-2010 52
Table 25: Comparison of Site Attribute Change by Presence of Bicycle Facilities 54

List of Figures

Figure 1: Orleans Parish Bicycle Facilities, 2005-2010 5
Figure 2: Bicycle Facilities, Orleans Parish, 2011 6
Figure 3: Bicycle Facilities, Orleans Parish, 2012 7
Figure 4: Map of 2012 Count Site Locations 11
Figure 5: Jefferson Davis Trail Eco-Counter at Conti St 13
Figure 6: Detail of Eco-Counter Device 13
Figure 7: Bicyclist Estimated Daily Traffic (EDT), 2012 20
Figure 8: Pedestrian Estimated Daily Traffic (EDT), 2012 21
Figure 10: Percentage of Commuters that Walk to Work by Census Tract, 2006-2010 27
Figure 9: Percentage of Commuters that Bike to Work by Census Tract, 2006-2010 26
Figure 11: Pedestrian and Bicycle Relative Composition, 2012 29
Figure 12: Jefferson Davis Trail Average Daily Usage, 2010-2012 36
Figure 13: Jefferson Davis Trail Observed Volumes by Hour of Day, 2010-2012 39
Figure 14: Jefferson Davis Trail Volume by Day of Week 40
Figure 15: Jefferson Davis Trail Volume by Season 41
Figure 16: Jefferson Davis Trail Volume by Month 41
Figure 17: Jefferson Davis Trail Temperature and Usership (Daily) 43
Figure 18: Jefferson Davis Trail Temperature and Usership (Weekly) 44
Figure 19: Jefferson Davis Trail Temperature and Usership (Monthly) 44
Figure 20: Jefferson Davis Trail Precipitation and Usership (Monthly) 45
Figure 21: Jefferson Davis Trail Precipitation and Usership (Daily) 46
Figure 22: Jefferson Davis Trail Precipitation and Usership (Weekly) 47

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Executive Summary

Since Hurricane Katrina struck in 2005, New Orleans has become recognized as an emerging leader in active transportation, i.e. walking and bicycling. The city was awarded designation as a "Bicycle Friendly Community by the League of American Bicyclists in 2011, and as a "Walk Friendly Community" by the Pedestrian and Bicycle Information Center in 2012. Bicycle facilities have expanded from about eleven miles in 2005, to more than 50 miles in 2012—with many more on the way. Major street and sidewalk improvements are slated for construction in the French Quarter in the near future, and the city's new Complete Streets Ordinance (adopted December, 2011), will ensure that the needs of bicyclists and pedestrians are considered and incorporated in the design and construction of all local street projects moving forward.

The data in this report by the Pedestrian Bicycle Resource Initiative (PBRI) at the Merritt C. Becker, Jr. University of New Orleans Transportation Institute builds on and expands the research conducted in 2010 and 2011 on active transportation demand in New Orleans, and highlights a need for continued investment in expanded and improved infrastructure networks for biking and walking.

This report provides robust preliminary data indicating that these efforts are being rewarded with substantial annual increases in users—both bicyclists and pedestrians—citywide, and particularly in areas with dedicated, high-quality infrastructure for biking and walking. These increases are particularly pronounced in areas that have been directly impacted by new facilities.

Through bicycle and pedestrian count data collected at 16 locations around the city over three years, this report demonstrates that bicycling and walking are on the rise. Trends indicating increased bicycle and pedestrian activity identified in 2011 have continued or accelerated in 2012. Overall, estimated daily traffic (EDT) of bicycles at all observed locations has increased by 54% since 2010, and pedestrian activity has increased by 38%.

Bicycle traffic has continued to increase the most rapidly at the "gateway" sites adjacent to the Pontchartrain Expressway linking the Central Business District (CBD), where several new bicycle facilities were installed in 2010 and 2011, and Uptown. Camp St. and Magazine St, in particular, have experienced dramatic increases (79% and 103%, respectively) in bicycle EDT since 2010.

Among count locations that have or are adjacent to marked bicycle facilities, EDT has increased the most sharply: count sites at these locations experienced a 2010-2012 EDT increase of 89%, compared to only a 29% increase at locations that do not connect to marked facilities.

The two count locations located on street segments with dedicated bike lanes (both of which were installed prior to the first count in 2010), St. Claude Avenue and Gentilly Boulevard, have experienced bicycle EDT increases of 89% and 66% respectively, suggesting that it can take time for the impacts of new facilities to be fully realized.

This study also tracked helmet use and travel orientation as an indicator of safety, and observed demographic trends, particularly the proportions of female cyclists, as an overall indicator of the acceptance of cycling as a mode of transportation. In 2012, female

bicyclists represented 28% of the total, roughly the same as in previous years observed, and in line with national trends.

Helmet use has increased from 10% in 2010, to 16% in 2012, but remains far below national leaders and indicates a stubborn, ongoing safety challenge that must be addressed. These are both areas where New Orleans has room for improvement.

On the other hand, the percentage of bicyclists traveling in the street, in the direction of traffic, has increased to more than 80%, an encouraging trend. However, there remain distinct disparities in travel orientation and helmet use among different demographic groups that suggest the need for safety messaging specifically targeting at-risk communities of cyclists.

Using an automated count device, PBRI also collected continuous data on usage of the Jefferson Davis Parkway Multi-use Trail, to track active transportation trends over time. This analysis shows that overall active transportation demand for this facility in 2011-2012 has increased by 14%, or an average of 70 additional users per day compared to the previous year of data collection.

This dataset also shows us that overall usage trends, e.g. high user volumes recorded in the spring and festival season, and stable, predictable relationships between usership, temperature, and precipitation. It is notable that, contrary to common assumption, active transportation use continues at a steady rate during the hot, rainy summer months: at its peak in May, the trail experienced an average of 738 users per day in 2011-2012. In August, this figure dropped to 435 users per day, but remained well above the month of least use, December, which recorded 378 users per day.

This report also updates national American Community Survey data (2010 1-year estimates) that show that active transportation has surged in many communities across the country: In 2010, New Orleans overall ranking slipped from 6th to 12th place for commuting to work by bicycle among cities with populations over 250,000, and fell from first place to third place among such cities in the South. These figures seem to reflect the more rapid gains that other communities have made, rather than decreasing mode share in New Orleans, however. It should also be noted that due to relatively small sample sizes, these figures tend to shift from year to year. Long-term data, however, still indicates an upward trend in active transportation mode share in New Orleans.

New Orleans remains a leader nationwide—and especially in the South—in terms of bicycle and pedestrian mode share, but these slipping rankings show that if the city is to retain that distinction, it must work harder to make bicycling and walking accessible and safe for more users.

Bicycling and walking are low-cost, healthy alternatives to driving and are an integral part of developing a sustainable, multimodal transportation network in New Orleans. By significantly increasing the availability of dedicated facilities for bicycling and continuing to improve an already robust pedestrian infrastructure network, New Orleans has begun to create a built environment that facilitates and encourages walking and bicycling.

However, more work remains to be done if New Orleans is to maintain and improve its status as a leader in active transportation.

Key issues which need to be addressed toward this goal include improving network continuity, and linking infrastructure to safety improvements:

1. The current bicycle network is not contiguous, lacking key connections between neighborhoods rich in cyclists (e.g. the CBD, French Quarter, Marigny, and Bywater), and neighborhoods rich in new, underutilized bike infrastructure (e.g. Gentilly and Lakeview). In order to see strong user gains in areas outside of the downtown core of the city, connectors such as the planned Lafitte Greenway must be advanced. Moreover, a more network-oriented approach to planning new bicycle and pedestrian facility construction is needed, rather than the ad-hoc, project-by-project method currently in place, in order to ensure that these connections are developed citywide.

2. Safety remains a serious concern: low helmet usage, as well as very high crash rates for both bicyclists and pedestrians (see: *New Orleans Regional Pedestrian and Bicycle Crash Report, 2009-2010*), indicate that facility installation alone is not enough, and, perhaps more critically, that the siting of new facilities has not taken into consideration the corridors and neighborhoods where they are needed the most. More extensive research evaluating specific safety issues in high-crash incidence areas is needed, and plans for the installation of new bicycle and pedestrian infrastructure should prioritize these areas.

Overall, supporters of increased bicycling and walking, as key components of a healthy, active, sustainable, and economically vibrant community, must continue to advocate for not only new facilities and a more complete network, but also for programs and policies that enhance the safety, comfort, and convenience of using active modes of transportation for all users.

Introduction

In 2010 and 2011, the Pedestrian and Bicycle Resource Initiative (PBRI) at the University of New Orleans conducted a series of bicycle and pedestrian counts sites around the New Orleans area. This study continues these counts for a third year at 16 sites, in order to produce a more complete dataset and identify emerging trends. The purpose of the count study is to evaluate the impact of recent investments in bicycle and pedestrian infrastructure on active transportation trends in the region over time. These investments include designated bicycle lanes, shared lane markings, public bicycle parking, and sidewalk improvements. The data and trends presented in this report provide baseline and, in some cases, post-intervention benchmarks by which to evaluate progress in achieving higher rates of bicycling and walking in the community.

This report presents new data from 15 manual and one electronic count locations in the New Orleans metropolitan region, and compares this data to that previously collected in 2010 and 2011. This report essentially represents an update and expansion of the *New Orleans Pedestrian and Bicycle Count Report, 2010-2011*,[1] to include a third year of collected data and analysis. It also provides recommendations for areas of further research and analysis based on the data collected to date, now that basic benchmark information on active transportation has been established.

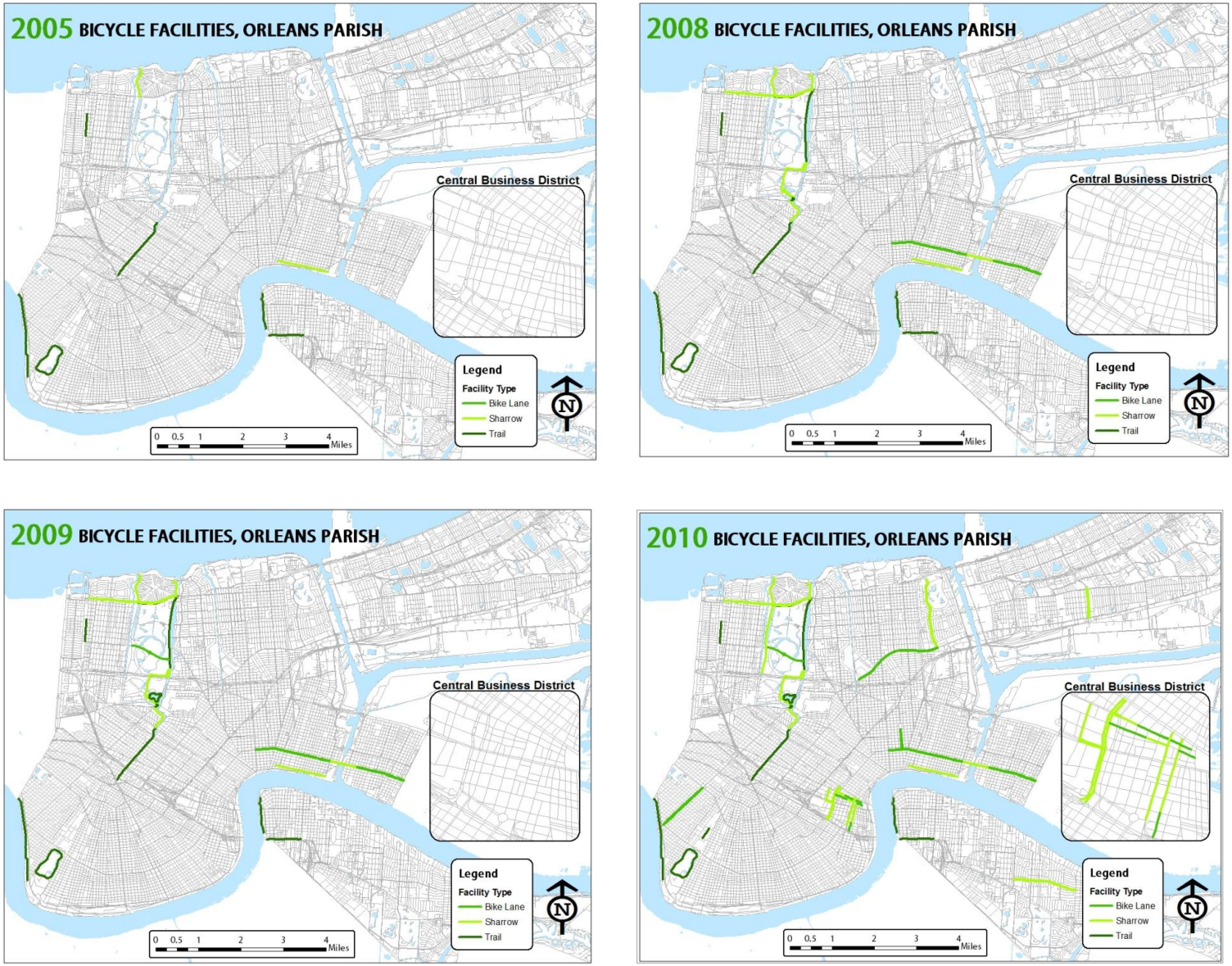
[1] Fields, B. (2012). *Active Transportation Measurement and Benchmarking Development: New Orleans Pedestrian and Bicycle Count Report, 2010-2011*. Gulf Coast Research Center for Evacuation and Transportation Resiliency. Available at: http://transportation.uno.edu/phire-content/assets/files/PBRI-Count%20Report%202010-2011.pdf

Orleans Parish Bicycle Network, 2005-2012

New Orleans has been rapidly expanding its bicycle infrastructure since 2005. This expansion provides the opportunity to monitor the effect of investments in bicycle infrastructure on both specific sites where new facilities have been constructed, as well as the overall street network. Several of the manual count sites, as well as the electronic counter, are located on or near bicycle infrastructure, most of which has been installed since 2005. While off-road shared use trails (e.g. the Jefferson Davis Parkway Trail and the Mississippi River Trail) were present in 2005, on-road bicycle infrastructure has increased rapidly from 2005-2012. Total bicycle facility mileage has grown from about eleven miles in 2005 to approximately 52 miles today. Figures 1 through 6 illustrate the growth of the bicycle facility network since 2005.

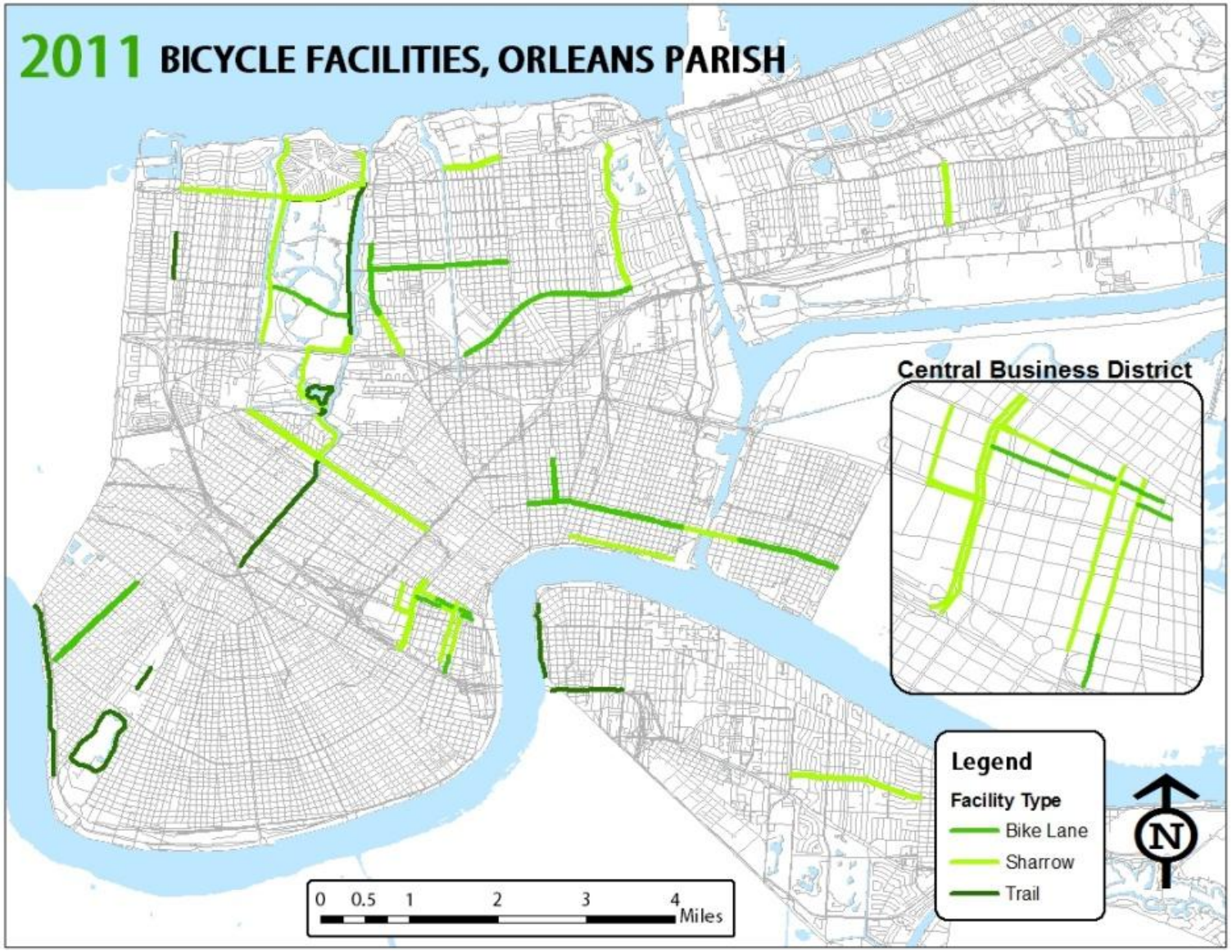
Although approximately 13 miles of new bicycle facilities were installed between April 2011 and April 2012 (when counts were conducted), none of these were located close enough to the current set of count locations to have a direct impact. Several manual count locations, such as at Harrison Avenue and the two Jefferson Parish sites, are located on street segments that have been identified as targets for future bicycle facility installation, but these facilities have not yet been completed. It is important to continue monitoring these sites post-intervention to evaluate the impact of the new facilities on usage, if and when installed. Although the pace of facility expansion appears to have slowed in the last year, several significant new facilities are expected to be constructed in the next 12-18 months. Expanding this count study to measure usage before and after installation at these sites will contribute to our understanding of the impacts of these projects.

Figure 1: Orleans Parish Bicycle Facilities, 2005-2010



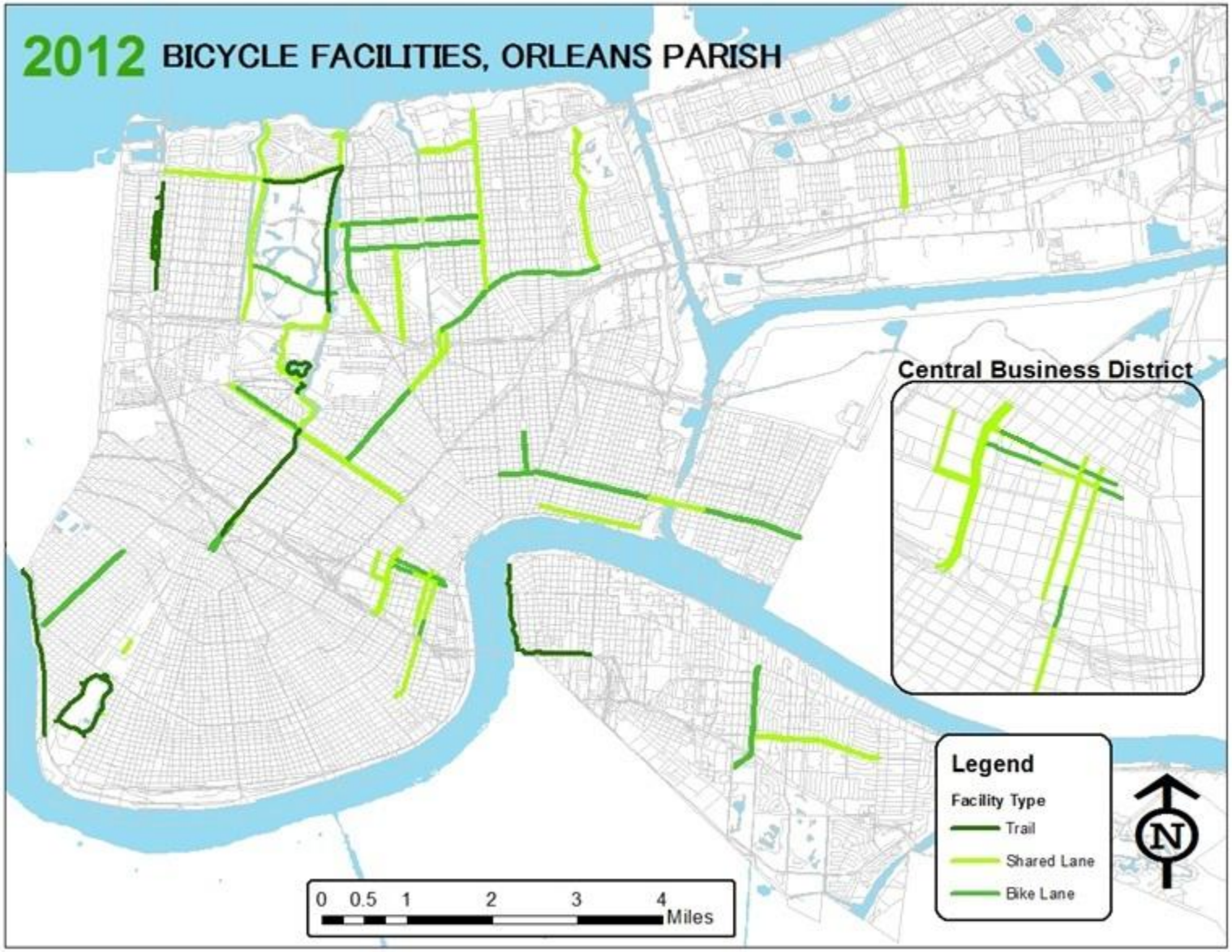
Data Source: Regional Planning Commission | Map Created by Billy Fields, Ph.D.

Figure 2: Bicycle Facilities, Orleans Parish, 2011



Data Source: Regional Planning Commission | Map Created by Billy Fields, Ph.D.

Figure 3: Bicycle Facilities, Orleans Parish, 2012



Data Source: Regional Planning Commission |Map created by author

Manual Count Site Selection

In the spring of 2010, PBRI conducted its first manual counts at 13 sites throughout the City of New Orleans, detailed in PBRI's *2010 State of Active Transportation* report.[2] In April and May of 2011, PBRI replicated these counts, and added counts at two new sites in Jefferson Parish, LA, at Metairie Hammond Highway near Carrollton Avenue, and at Papworth Avenue near Veterans Boulevard. Both of these sites are currently being considered for bicycle improvements, and their inclusion also helps to provide more regional context. In 2012, counts were conducted at the same fifteen sites as 2011, in order to provide a continuous three-year data set and better evaluate year-to-year trends.

Count locations were selected in consideration of a variety of factors, including:

- Proximity to existing or future bicycle facilities, sidewalk improvements or other infrastructure improvements
- Use as a gateway between the Central Business District (CBD) and Uptown New Orleans
- Representation of a specific neighborhood, in order to gain a more holistic understanding of active transportation trends throughout the city.

For a detailed breakdown of count site characteristics, please refer to Appendix A.

Table 1 lists the manual count sites observed in 2011 and 2012, and Figure 7 maps these locations.

[2] Accessible at http://transportation.uno.edu/phire-content/assets/files/PBRI-State%20of%20Active%20Transportation%202010.pdf

Electronic Count Location

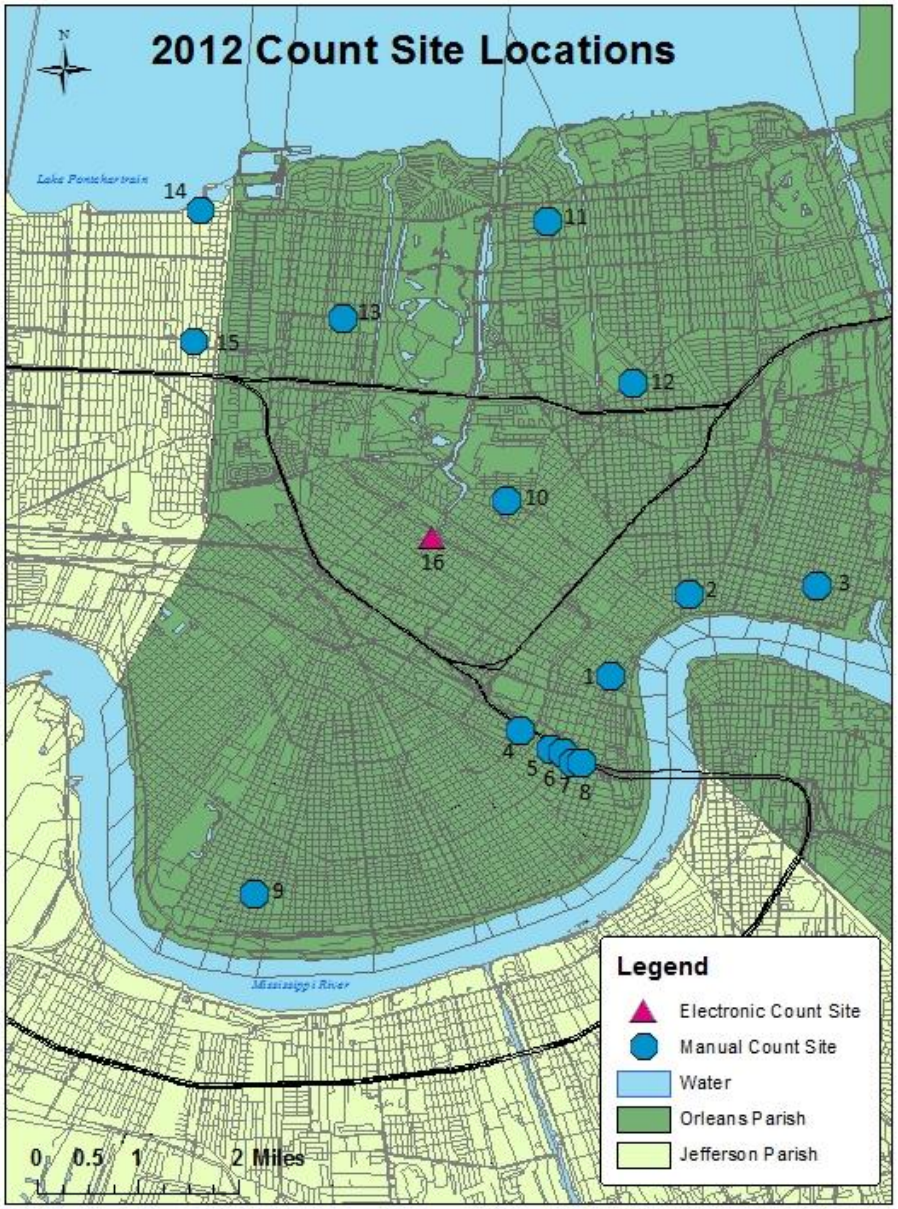
In 2010, PBRI selected two off-street, multi-use trails on which to place electronic count devices (called Eco-Counters): the Jefferson Davis Trail in Mid-City, and the Mississippi River Trail in Uptown. Both electronic counters continuously monitored trail users from June 2010, to May, 2011. In August, 2011, the Mississippi River Trail electronic counter was vandalized and its functional components stolen. Therefore, this report only reflects electronic data collected between June, 2011 and May, 2012 for the Jefferson Davis Trail. For data from the Mississippi River Trail count location, please refer to the *New Orleans Pedestrian and Bicycle Count Report, 2010-2011.*

The Jefferson Davis Trail is located on the median of Jefferson Davis Parkway in the Mid-City neighborhood. This trail was selected for continuous electronic data collection due to its connectivity in linking multiple neighborhoods for commuting, its proximity to recreational facilities, and its future intersection with the proposed Lafitte Greenway. The approximately 1.5 mile facility, which now connects with recently installed bike lanes from the end of the trail to Washington Avenue, serves as an important active transportation connection between neighborhoods that otherwise are physically separated by Interstate 10. In addition to housing playground equipment and neighborhood open space, this site is also located near the recreational amenities of Bayou St. John, City Park, and the Fairgrounds and Race Track. The electronic counter is located at the intersection of Jefferson Davis Trail and Conti St, as shown in Figure 8.

Table 1: 2012 Count Site Locations

#	Site	Boundary Streets
1	Decatur Street	Iberville St & Canal St
2	Royal Street	Mandeville St & Marigny St
3	St. Claude Avenue	Pauline St & Independence St
4	Simon Bolivar Avenue (Gateway)	Clio St & Calliope St
5	Carondelet Street (Gateway)	Clio St & Calliope St
6	St. Charles Avenue (Gateway)	Clio St & Calliope St
7	Camp Street (Gateway)	Clio St & Calliope St
8	Magazine Street (Gateway)	Erato St & Calliope St
9	Magazine Street (Uptown)	Arabella St & Joseph St
10	Esplanade Avenue	N White St & N Dupre St
11	Paris Avenue & Burbank Drive	Intersection
12	Gentilly Boulevard	St. Denis St & Milton St
13	Harrison Avenue	Gen. Diaz & Harrison Ct
14	Metairie Hammond Highway	Carrollton Ave & Seminole Ave
15	Papworth Avenue	Veterans Blvd & Raspberry St
16	Jefferson Davis Trail	Conti St & Lafitte St

Figure 4: Map of 2012 Count Site Locations



Count Observation Methodologies

This section explains the methodologies utilized by PBRI in performing manual and electronic counts and attempts to qualify their accuracy and effectiveness.

Manual Counts

In order to conduct the manual counts, PBRI recruited student workers from The University of New Orleans. Workers were trained by the Tulane School of Public Health (in 2010 and 2011) and by UNO Transportation Institute staff (in 2012) on observation protocol, and were required to satisfactorily perform a practice count to gain certification. The Observation Protocol, Developed by Kathryn Parker, assistant director of the Tulane Prevention Research Center at the Tulane School of Public Health, can be found in Appendix B. PBRI methodology follows that of this protocol, with a few exceptions.

All counts were mid-block screenline counts with the exception of the site at Paris and Burbank, which was an intersection count. Volume was anticipated to be very low at this intersection, so one observer was assigned Paris Avenue and the other Burbank Drive. Aside from this exception, all counters sat in view of each other on opposite sides of the street, creating a visual "plane of observation" for users to cross and be counted. On streets with a neutral ground,[3] each counter counted users on their side of the street and their sidewalk, while one counter was designated to count users on the neutral ground. If there was no neutral ground at the count site, both counters were responsible for counting all users of the street and both sidewalks. In the case of discrepancies, an average was taken.

Counters tallied pedestrians and bicyclists and categorized them by gender, race, and general age group (adult vs. child). Counters also distinguished bicyclists and pedestrians by their travel orientation, i.e. whether they were observed on the street, sidewalk, or neutral ground. For bicyclists, counters also noted helmet usage and right-way vs. wrong-way use. Wrong way use was defined as on-street bicyclists traveling in the opposite direction of traffic. For copies of the tally sheets used by observers, see Appendix C.

Counts were performed on two days for each site, either on a Tuesday, Wednesday, or Thursday. Each day included counts from 7:00-9:00 AM and from 4:00-6:00 PM. These time periods and days of the week are based on recommendations by the National Bicycle and Pedestrian Documentation (NBPD) Project.[4] Counts were generally only performed under reasonably good weather conditions (i.e. no heavy rain), although a few observations took place on days of inclement weather (Appendix D).

[3] "Neutral ground" is a colloquial phrase for a median separating street traffic; this term is used throughout this report.

[4] See http://bikepeddocumentation.org/ for more information

Electronic Counts

As mentioned above, the Jefferson Davis Trail electronic count site was equipped with an automated count device (called an Eco-Counter) that was installed in May 2010, and that has continuously recorded active transportation traffic for two full years. This report provides an analysis of the first two years of this continuous stream of data to analyze temporal patterns and variability and understand patterns of use.

Figure 5: Jefferson Davis Trail Eco-Counter at Conti St

The Eco-Counters use passive infrared sensor technology to record all users. Two directional sensors (IN and OUT) count all users within a distance of 4 meters (approximately 13 feet) and record that information in a data box from which it may be retrieved via infrared or Bluetooth technology. Two key limitations to the Eco-Counters are important to note: its inability to distinguish between types of users (bicyclists vs. pedestrians) and potential undercounting due to parallel movement of users. In addition, PBRI has found that Eco-Counter accuracy is also impacted by hardware sensitivity to extreme heat.[5]

Figure 6: Detail of Eco-Counter Device

In order to address these issues and the possibility of other observational error, PBRI staff calibrated the Jefferson Davis Trail machine upon installation, and has performed periodic calibration checks in the subsequent two years to evaluate accuracy. Overall, this device has been found to provide highly accurate and reliable data.[6]

[5] This was a major limiting factor for the now-defunct Mississippi River Trail counter, as discussed in depth in The *New Orleans Pedestrian and Bicycle Count Report, 2010-2011*

[6] Greater than 95% total and directional accuracy rate over four tests

Manual Count Estimation and Extrapolation Methodology

This section details the methods used to estimate daily, monthly, and yearly volumes of pedestrians and bicyclists at the observed manual count sites. Estimations were not necessary for the electronic count site because it provides a continuous stream of data. The estimations in this report are essentially extrapolations based upon the manual counts performed by PBRI and on temporal patterns of use as suggested by the NBPD Project.

The methodology for extrapolating manual counts to daily, monthly, and annual estimates is based on the methods provided by the National Bicycle and Pedestrian Documentation (NBPD) Project. NBPD methodology classifies count sites as either Multi-use Paths or Pedestrian Districts. Manual Counts are therefore classified as Pedestrian Districts, defined by the NBPD Project as "higher density pedestrian areas with some entertainment uses such as restaurants."

This methodology was previously employed in PBRI's *2010 State of Active Transportation Report* and the *New Orleans Pedestrian and Bicycle Count Report, 2010-2011*.[7] As the latter document summarizes, that methodology includes the following characteristics:

- All count observation periods for a single site are separated into A.M. and P.M. counts. Bicycle and pedestrian counts from both days observed are then averaged together for a combined user average for each time period.

- These averages are used to derive a daily and weekly extrapolation for each time period based on time of the day and day of the week counts were observed.

- Weekly extrapolations for A.M. and P.M. counts are then averaged together for each location in order to form the weekly estimate.

- This weekly estimate is multiplied by 4.33 to get the estimated monthly users. The annual estimate is then extrapolated by multiplying this monthly estimate by the monthly adjustment factor provided by the NBPD methodology.

- Estimated Daily Traffic (EDT) for manual count sites is figured by dividing the annual estimate by 365. To disaggregate bicycle and pedestrian estimates at any point, the estimate is simply multiplied by the respective ratio (bicycle vs. pedestrian) observed at the count site.

For more detailed information regarding this methodology refer to Appendices B, C, E, and F, which include a detailed methodological summary as well as the *NBPD Adjustment Factors* document from which the methodology is derived.

It should be noted that the extrapolation methodology provided by the NBPD Project is based on patterns of use by climate region.

[7] Available at http://www.planning.uno.edu/pbri/research.html

These patterns of use influence how much weight any given count will have depending on: the hour of the day, day of the week, and month of the year. NBPD Project methodology provides three climates to choose from, of which New Orleans is categorized into the "Very hot summer, Mild winter" category. While this climate category is the most appropriate selection available, observed trends of use from the continuous electronic counts did not precisely fit this national formula.

The *New Orleans Pedestrian and Bicycle Count Report, 2010-2011* discusses the divergence between the NBPD Project's patterns of use and the patterns of use observed by Eco-Counters in New Orleans in-depth, and concludes that patterns of use in New Orleans differ from all three climates modeled. Further research is necessary to better understand local patterns of use.

Manual Count Data

This section summarizes the manual count data collected in 2012 and compares this data to that collected in 2010 and 2011, It presents actual total counts (observed over a period of eight hours) as well as Estimated Daily Traffic (EDT) figures, and discusses mode share, commuting patterns, and compositional statistics for bicyclists and pedestrians (i.e. gender, helmet use, travel orientation, age, and race).

Observed Count Totals

Overall, there was a substantial increase in the total number of both bicyclists and pedestrians observed at the count sites in 2012 (Tables 2 and 3). Counters observed 613 more bicyclists (a 35% increase compared to 2011), and 1781 more pedestrians (a 40% increase). This suggests a continuation and possible acceleration of trends indicated in The *New Orleans Pedestrian and Bicycle Count Report, 2010-2011,* which reported an overall 22% increase in the number of cyclists and a 12% increase in the number of pedestrians observed. All but two count sites experienced growth in observed pedestrian or bicycle usage (or both).The first of these sites, Papworth Avenue, has extremely low bicycle and pedestrian traffic, therefore the decreases observed actually represent only minor variance from 2011. The second site with a decrease in both bicycle and pedestrian activity, Carondelet St, experienced user increases from 2010-2011. Though slightly fewer bicyclists and pedestrians were observed in 2012, count totals remain higher than in 2010.

Eleven count sites reported an increase in the number of bicyclists observed. Of these, the Paris and Burbank count site experienced the greatest percentage increase in bicyclists (200%), though volumes remain very low at this location. As in previous years, overall low volumes at this site as well as at the two Metairie sites contribute to high variability, despite little absolute change. The count site at St. Claude Avenue experienced the greatest absolute increase in bicyclists observed, with 113 more than in 2011, a 74% jump. Counts were also markedly higher (in terms of both absolute and percentage change) for bicyclists at Esplanade Avenue, the Magazine Street gateway, and Decatur Street. Less dramatic increases were observed at Harrison Ave, Gentilly Blvd, Magazine St (uptown), Camp St, Simon Bolivar Ave, and St. Charles Ave, indicating a continuation of trends observed in 2011. The sole exception is the Royal St. count site, which has experienced a decline in observed bicycle volume from 2010-2012. This may be attributable to a transfer of bicycle activity to nearby St. Claude Avenue, which has a dedicated bike lane, rather than a real decrease in the rate of bicycling in the Marigny neighborhood.

The bulk of the large overall increase in observed pedestrians comes from three count sites which experienced high volumes: Decatur St, St Claude Ave, and Esplanade Ave. These count sites are all in busy pedestrian-friendly areas, but it is difficult to discern specific causes for the dramatic increase between 2011 and 2012, as no major infrastructure improvements were installed in these areas during this period. The increase at the Decatur St count site may be indicative of the vigorous recovery of Post-Katrina tourism activity in and around the French Quarter. Also of note, though volumes remain relatively low, pedestrian activity at the Paris and Burbank site experienced a 77% increase in 2012, which can likely be attributed to the re-opening of the Lake Area School nearby.

Table 2: Observed Total Manual Count Volumes for Bicycles, 2010-2012

Observed Total Manual Count Volumes, Bicycles, 2010-2012									
	Observed Volume			**Absolute Change**			*Percent Change*		
Site	2010	2011	2012	**2010-2011**	**2011-2012**	**2010-2012**	*2010-2011*	*2011-2012*	*2010-2012*
Harrison Ave***	27	33	48	**6**	**15**	**21**	*22.2%*	*45.5%*	*77.8%*
Metairie Hammond Hwy	n/a	14	13	**n/a**	**-1**	**n/a**	*n/a*	*-7.1%*	*n/a*
Papworth Ave	n/a	6	4	**n/a**	**-2**	**n/a**	*n/a*	*-33.3%*	*n/a*
Gentilly Blvd*	46	69	76	**23**	**7**	**30**	*50.0%*	*10.1%*	*65.2%*
Esplanade Ave	105	117	185	**12**	**68**	**80**	*11.4%*	*58.1%*	*76.2%*
Royal St	377	295	281	**-82**	**-14**	**-96**	*-21.8%*	*-4.7%*	*-25.5%*
St. Claude Ave***	96	153	266	**57**	**113**	**170**	*59.4%*	*73.9%*	*177.1%*
Magazine St (Uptown)	38	63	95	**25**	**32**	**57**	*65.8%*	*50.8%*	*150.0%*
Paris and Burbank	13	10	30	**-3**	**20**	**17**	*-23.1%*	*200.0%*	*130.8%*
Camp St (Gateway)**	157	249	276	**92**	**27**	**119**	*58.6%*	*10.8%*	*75.8%*
Magazine St (Gateway)**	153	223	285	**70**	**62**	**132**	*45.8%*	*27.8%*	*86.3%*
Decatur St	150	199	258	**49**	**59**	**108**	*32.7%*	*29.6%*	*72.0%*
Simon Bolivar Ave (Gateway)**	86	150	175	**64**	**25**	**89**	*74.4%*	*16.7%*	*103.5%*
Carondelet St (Gateway)	87	114	103	**27**	**-11**	**16**	*31.0%*	*-9.6%*	*18.4%*
St. Charles Ave (Gateway)	191	229	269	**38**	**40**	**78**	*19.9%*	*17.5%*	*40.8%*
Total[1]	1430	1751	2364	**321**	**613**	**934**	*22.4%*	*35.0%*	*65.3%*
Notes:	*Bicycle facilities installed before April, 2011 on observed segment of facility								
	**Bicycle facilities installed before April, 2011 on connecting segment of facility								
	***Bicycle facilities already present in 2010, either on observed segment or on connecting segment								
	Observed total volumes represent a total of eight hours of counts per site								

Table 3: Observed Total Manual Count Volumes for Pedestrians, 2010-2012

Observed Total Manual Count Volumes, Pedestrians, 2010-2012									
	Observed Volume			**Absolute Change**			*Percent Change*		
Site	2010	2011	2012	**2010-2011**	**2011-2012**	**2010-2012**	*2010-2011*	*2011-2012*	*2010-2012*
Harrison Ave***	124	117	164	**-7**	**47**	**40**	*-5.6%*	*40.2%*	*32.3%*
Metairie Hammond Hwy	n/a	20	32	**n/a**	**12**	**n/a**	*n/a*	*60.0%*	*n/a*
Papworth Ave	n/a	21	15	**n/a**	**-6**	**n/a**	*n/a*	*-28.6%*	*n/a*
Gentilly Blvd*	126	140	127	**14**	**-13**	**1**	*11.1%*	*-9.3%*	*0.8%*
Esplanade Ave	230	289	607	**59**	**318**	**377**	*25.7%*	*110.0%*	*163.9%*
Royal St	324	314	371	**-10**	**57**	**47**	*-3.1%*	*18.2%*	*14.5%*
St. Claude Ave***	230	205	536	**-25**	**331**	**306**	*-10.9%*	*161.5%*	*133.0%*
Magazine St (Uptown)	330	269	321	**-61**	**52**	**-9**	*-18.5%*	*19.3%*	*-2.7%*
Paris and Burbank	13	43	76	**30**	**33**	**63**	*230.8%*	*76.7%*	*484.6%*
Camp St (Gateway)**	144	183	189	**39**	**6**	**45**	*27.1%*	*3.3%*	*31.3%*
Magazine St (Gateway)**	159	187	229	**28**	**42**	**70**	*17.6%*	*22.5%*	*44.0%*
Decatur St	1,313	1,902	2,547	**589**	**645**	**1234**	*44.9%*	*33.9%*	*94.0%*
Simon Bolivar Ave (Gateway)**	608	433	494	**-175**	**61**	**-114**	*-28.8%*	*14.1%*	*-18.8%*
Carondelet St (Gateway)	81	101	92	**20**	**-9**	**11**	*24.7%*	*-8.9%*	*13.6%*
St. Charles Ave (Gateway)	550	501	460	**-49**	**-41**	**-90**	*-8.9%*	*-8.2%*	*-16.4%*
Total[1]	4002	4479	6260	**477**	**1781**	**2258**	*11.9%*	*39.8%*	*56.4%*
Notes:	*Bicycle facilities installed before April, 2011 on observed segment of facility								
	**Bicycle facilities installed before April, 2011 on connecting segment of facility								
	***Bicycle facilities already present in 2010, either on observed segment or on connecting segment								
	Observed total volumes represent a total of eight hours of counts per site								

Estimated Daily Traffic for Manual Count Sites, 2010-2012

In order to provide context to the numbers and allow for comparison of data with other count studies, count volumes observed by PBRI counters have been extrapolated to Estimated Daily Traffic (EDT) figures (Tables 4 and 5). This methodology was outlined above and is further elaborated in Appendix E.

Extrapolation of the data to a 24-hour period, while revealing trends identical to direct observations, somewhat reduces the impact of fluctuations observed during the eight hours of count collection on overall percent change. For bicycles, an overall 28% EDT increase is calculated from 2011 to 2012, resulting in a 54% total increase from 2010 to 2012. For pedestrians, a 36% EDT increase is documented from 2011-2012—dramatic, relative to the minimal difference in pedestrian activity from 2010-2011—for a total increase of 38% from 2010-2012.

Again, while the observed and estimated numbers of bicyclists has increased at a steady rate at most count sites between 2010 and 2012, the majority of the increase in pedestrian activity is the result of unusually high observed volumes at a few key locations. These sites should continue to be monitored to evaluate whether the increases reflect new patterns of activity, or were the result of extraneous factors (e.g. unusually pleasant weather, specific events or activities taking place nearby, etc).

2012 Estimated Daily Traffic, Ranked

Overall, the top sites for bicyclists in 2012 were the Camp St, St. Charles Ave, and Magazine St gateways to the CBD, followed by count sites in the bicycle-friendly Marigny, Bywater, and French Quarter (Figure 10, Table 6). This is consistent with previously data indicating that bicycle traffic in and out of the CBD is increasing most rapidly, possibly reflecting a greater share of residents using bicycles for their work commute. Suburban count locations, as well as gateway sites in Central City, continue to have lower EDT, while the two Jefferson Parish count locations remain at the bottom of the list.

For pedestrians, the Decatur St count site continues to have the highest EDT, followed by sites located in walkable downtown commercial or mixed-use corridors (Figure 11, Table 7). The lowest pedestrian EDT sites tend to be located, as in previous years, in more suburban Lakeview, Gentilly, and Metairie.

Figure 7: Bicyclist Estimated Daily Traffic (EDT), 2012

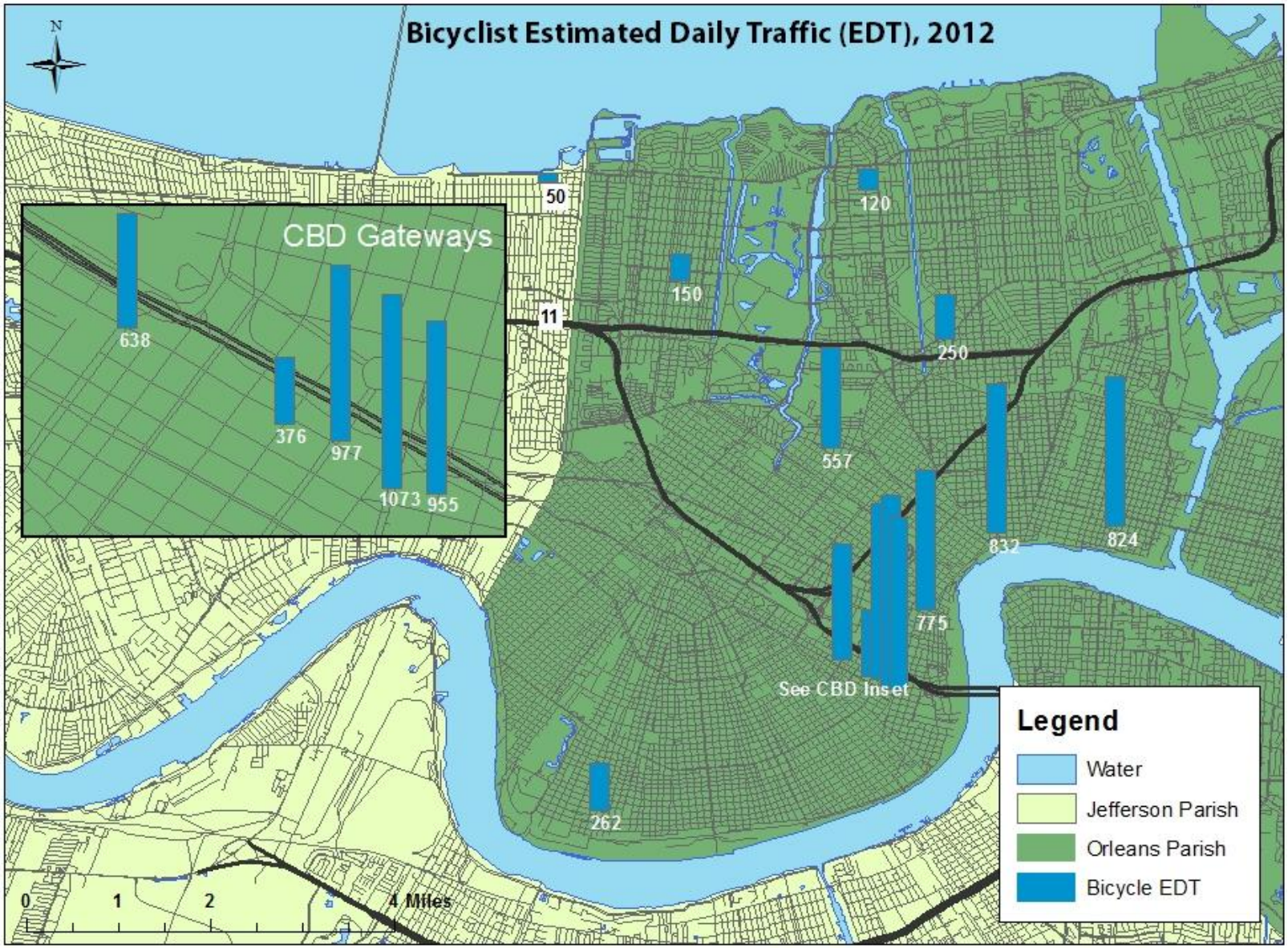


Figure 8: Pedestrian Estimated Daily Traffic (EDT), 2012

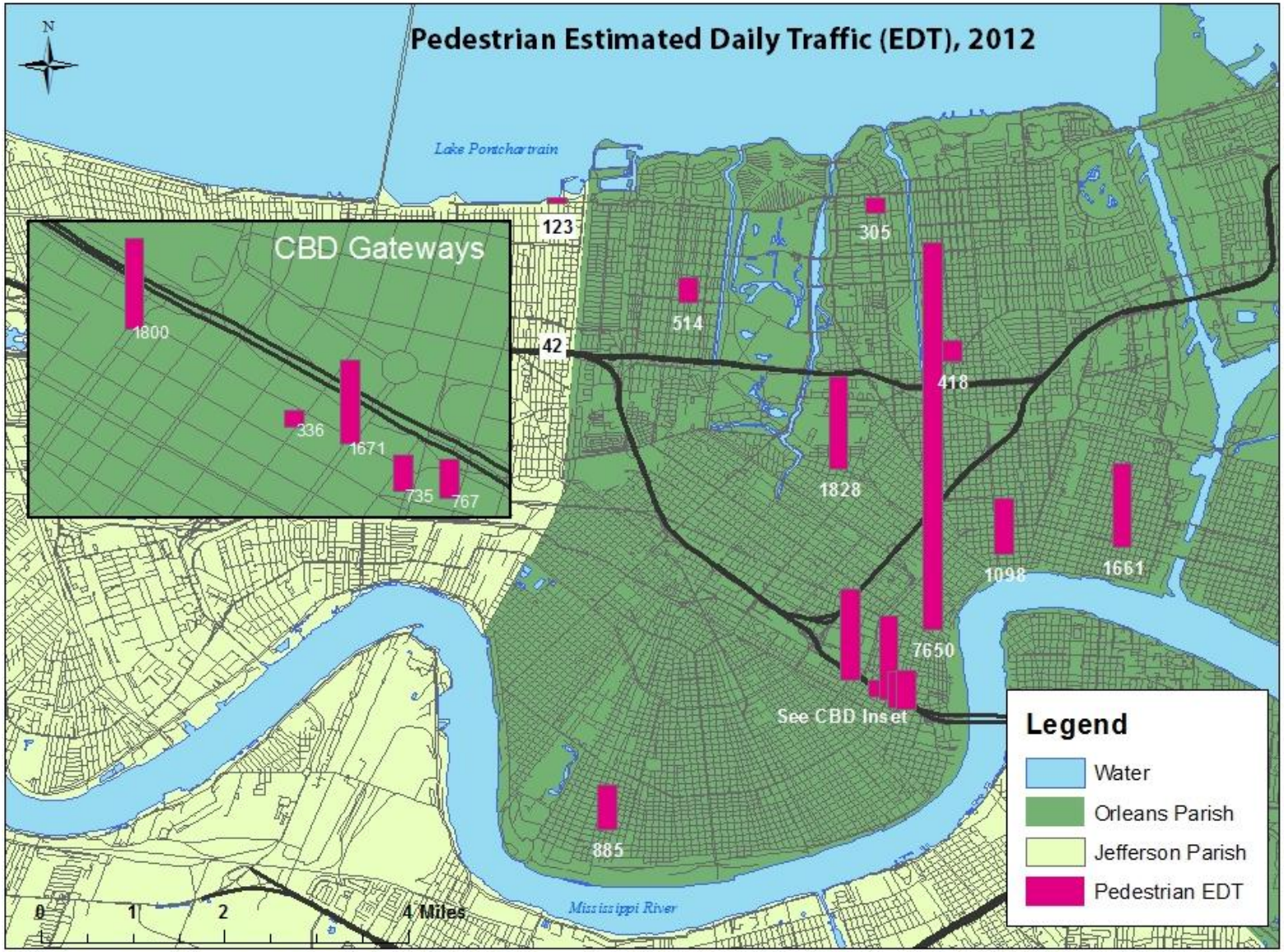


Table 4: Estimated Daily Bicycle Traffic, 2010-2012

Estimated Daily Traffic (EDT), Bicycles, 2010-2012									
	EDT			**Absolute Change**			*Percent Change*		
Site	2010	2011	2012	**2010-2011**	**2011-2012**	**2010-2012**	*2010-2011*	*2011-2012*	*2010-2012*
Harrison Ave***	71	87	150	**16**	**63**	**79**	*22.5%*	*72.4%*	*111.3%*
Metairie Hammond Hwy	n/a	41	50	**n/a**	**9**	**n/a**	*n/a*	*22.0%*	*n/a*
Papworth Ave	n/a	19	11	**n/a**	**-8**	**n/a**	*n/a*	*-42.1%*	*n/a*
Gentilly Blvd*	151	217	250	**66**	**33**	**99**	*43.7%*	*15.2%*	*65.6%*
Esplanade Ave	330	332	557	**2**	**225**	**227**	*0.6%*	*67.8%*	*68.8%*
Royal St	1056	901	832	**-155**	**-69**	**-224**	*-14.7%*	*-7.7%*	*-21.2%*
St. Claude Ave***	437	395	824	**-42**	**429**	**387**	*-9.6%*	*108.6%*	*88.6%*
Magazine St (Uptown)	121	163	262	**42**	**99**	**141**	*34.7%*	*60.7%*	*116.5%*
Paris and Burbank	49	38	120	**-11**	**82**	**71**	*-22.4%*	*215.8%*	*144.9%*
Camp St (Gateway)**	598	850	1073	**252**	**223**	**475**	*42.1%*	*26.2%*	*79.4%*
Magazine St (Gateway)**	471	783	955	**312**	**172**	**484**	*66.2%*	*22.0%*	*102.8%*
Decatur St	490	586	775	**96**	**189**	**285**	*19.6%*	*32.3%*	*58.2%*
Simon Bolivar Ave (Gateway)**	332	565	638	**233**	**73**	**306**	*70.2%*	*12.9%*	*92.2%*
Carondelet St (Gateway)	322	423	376	**101**	**-47**	**54**	*31.4%*	*-11.1%*	*16.8%*
St. Charles Ave (Gateway)	665	748	977	**83**	**229**	**312**	*12.5%*	*30.6%*	*46.9%*
Total	5093	6148	7850	**1055**	**1702**	**2757**	*20.7%*	*27.7%*	*54.1%*
Notes:	*Bicycle facilities installed before April, 2011 on observed segment of facility								
	**Bicycle facilities installed before April, 2011 on connecting segment of facility								
	***Bicycle facilities already present in 2010, either on observed segment or on connecting segment								

Table 5: Estimated Daily Pedestrian Traffic, 2010-2012

Estimated Daily Traffic (EDT), Pedestrians 2010-2012									
	EDT			**Absolute Change**			*Percent Change*		
Site	2010	2011	2012	**2010-2011**	**2011-2012**	**2010-2012**	*2010-2011*	*2010-2011*	*2010-2012*
Harrison Ave***	325	307	514	**-18**	**207**	**189**	*-5.5%*	*67.4%*	*58.2%*
Metairie Hammond Hwy	n/a	58	123	**n/a**	**65**	**n/a**	*n/a*	*112.1%*	*n/a*
Papworth Ave	n/a	66	42	**n/a**	**-24**	**n/a**	*n/a*	*-36.4%*	*n/a*
Gentilly Blvd*	412	441	418	**29**	**-23**	**6**	*7.0%*	*-5.2%*	*1.5%*
Esplanade Ave	723	819	1828	**96**	**1009**	**1105**	*13.3%*	*123.2%*	*152.8%*
Royal St	907	959	1098	**52**	**139**	**191**	*5.7%*	*14.5%*	*21.1%*
St. Claude Ave***	1047	529	1661	**-518**	**1132**	**614**	*-49.5%*	*214.0%*	*58.6%*
Magazine St (Uptown)	1054	696	885	**-358**	**189**	**-169**	*-34.0%*	*27.2%*	*-16.0%*
Paris and Burbank	49	163	305	**114**	**142**	**256**	*232.7%*	*87.1%*	*522.4%*
Camp St (Gateway)**	548	624	735	**76**	**111**	**187**	*13.9%*	*17.8%*	*34.1%*
Magazine St (Gateway)**	490	657	767	**167**	**110**	**277**	*34.1%*	*16.7%*	*56.5%*
Decatur St	4,289	5,600	7,650	**1311**	**2050**	**3361**	*30.6%*	*36.6%*	*78.4%*
Simon Bolivar Ave (Gateway)**	2345	1631	1800	**-714**	**169**	**-545**	*-30.4%*	*10.4%*	*-23.2%*
Carondelet St (Gateway)	300	375	336	**75**	**-39**	**36**	*25.0%*	*-10.4%*	*12.0%*
St. Charles Ave (Gateway)	1915	1635	1671	**-280**	**36**	**-244**	*-14.6%*	*2.2%*	*-12.7%*
Total	14404	14560	19833	**156**	**5273**	**5429**	*1.1%*	*36.2%*	*37.7%*
Notes:	*Bicycle facilities installed before April, 2011 on observed segment of facility								
	**Bicycle facilities installed before April, 2011 on connecting segment of facility								
	***Bicycle facilities already present in 2010, either on observed segment or on connecting segment								

Table 6: 2012 Bicycle EDT, Ranked

2012 Bicycle Estimated Daily Traffic				
		Rank, by EDT		
Count Site	**EDT**	*2012*	*2011*	*2010*
Camp St (Gateway)**	1073	*1*	*2*	*3*
St. Charles Ave (Gateway)	977	*2*	*4*	*2*
Magazine St (Gateway)**	955	*3*	*3*	*5*
Royal St	832	*4*	*1*	*1*
St. Claude Ave***	824	*5*	*8*	*6*
Decatur St	775	*6*	*5*	*4*
Simon Bolivar Ave (Gateway)**	638	*7*	*6*	*7*
Esplanade Ave	557	*8*	*9*	*8*
Carondelet St (Gateway)	376	*9*	*7*	*9*
Magazine St (Uptown)	262	*10*	*11*	*11*
Gentilly Blvd*	250	*11*	*10*	*10*
Harrison Ave***	150	*12*	*12*	*12*
Paris and Burbank	120	*13*	*14*	*13*
Metairie Hammond Hwy	50	*14*	*13*	*n/a*
Papworth Ave	11	*15*	*15*	*n/a*

*Bicycle facilities installed before April, 2011 on observed segment of facility

**Bicycle facilities installed before April, 2011 on connecting segment of facility

***Bicycle facilities already present in 2010, either on observed segment or on connecting segment

Table 7: 2012 Pedestrian EDT, Ranked

2012 Pedestrian Estimated Daily Traffic				
		Rank, by EDT		
Count Site	**EDT**	*2012*	*2011*	*2010*
Decatur St	7650	*1*	*1*	*1*
Esplanade Ave	1828	*2*	*5*	*7*
Simon Bolivar Ave (Gateway)**	1800	*3*	*3*	*2*
St. Charles Ave (Gateway)	1,671	*4*	*2*	*3*
St. Claude Ave***	1661	*5*	*9*	*5*
Royal St	1098	*6*	*4*	*6*
Magazine St (Uptown)	885	*7*	*6*	*4*
Magazine St (Gateway)**	767	*8*	*7*	*9*
Camp St (Gateway)**	735	*9*	*8*	*8*
Harrison Ave***	514	*10*	*12*	*11*
Gentilly Blvd*	418	*11*	*10*	*10*
Carondelet St (Gateway)	336	*12*	*11*	*12*
Paris and Burbank	305	*13*	*13*	*13*
Metairie Hammond Hwy	123	*14*	*15*	*n/a*
Papworth Ave	42	*15*	*14*	*n/a*

*Bicycle facilities installed before April, 2011 on observed segment of facility

**Bicycle facilities installed before April, 2011 on connecting segment of facility

***Bicycle facilities already present in 2010, either on observed segment or on connecting segment

Commuting Patterns near Manual Count Sites

Utilizing census tract-level data from the American Community Survey 2006-2010 five year estimates, commuting patterns were mapped in Figures 12 and 13. As in previous years analyzed, count sites with high observed volumes tend to be located in or near census tracts with high rates of active transportation commuting.

The manual count sites with the highest bicyclist EDT (the CBD gateways of Camp St, St. Charles Ave, and Magazine St, as well as Royal St and St. Claude Ave in the Marigny/Bywater area) are within or adjacent to the census tracts with the highest rates of bicyclist commuting (5% or more). Conversely, the lowest EDT sites (Papworth Ave and Metairie Hammond Hwy in Metairie, followed by Paris and Burbank and Harrison Ave in Gentilly and Lakeview, respectively) are near census tracts with very low rates of commuting by bicycle (zero to 5%).

For pedestrians, correlations between commute mode and observed use are less clearly defined. Land uses, neighborhood demographics, and infrastructure may all play a role in pedestrian activity observed. Although some sites in or adjacent to census tracts with high rates of pedestrian commuting (e.g. Decatur St and St Claude Ave) also represent areas of high observed pedestrian totals, site specific characteristics—e.g. business density amenities or disamenities in the vicinity—may strongly impact use in certain areas. For example, high pedestrian totals observed at Magazine St (Uptown) and on Esplanade Ave likely reflect a high incidence of walking for non-work activities (e.g. shopping and recreation), although few neighborhood residents commute to work on foot.

As in the *New Orleans Pedestrian and Bicycle Count Report, 2010-2011,* it is important to note that that New Orleans' population has changed rapidly during the 2006-2010 period (the latest for which data is available) following Hurricane Katrina. This is compounded by the fact at this geographic scale, sample populations are small and margins of error in ACS estimates are relatively high.

Figure 9: Percentage of Commuters that Bike to Work by Census Tract, 2006-2010

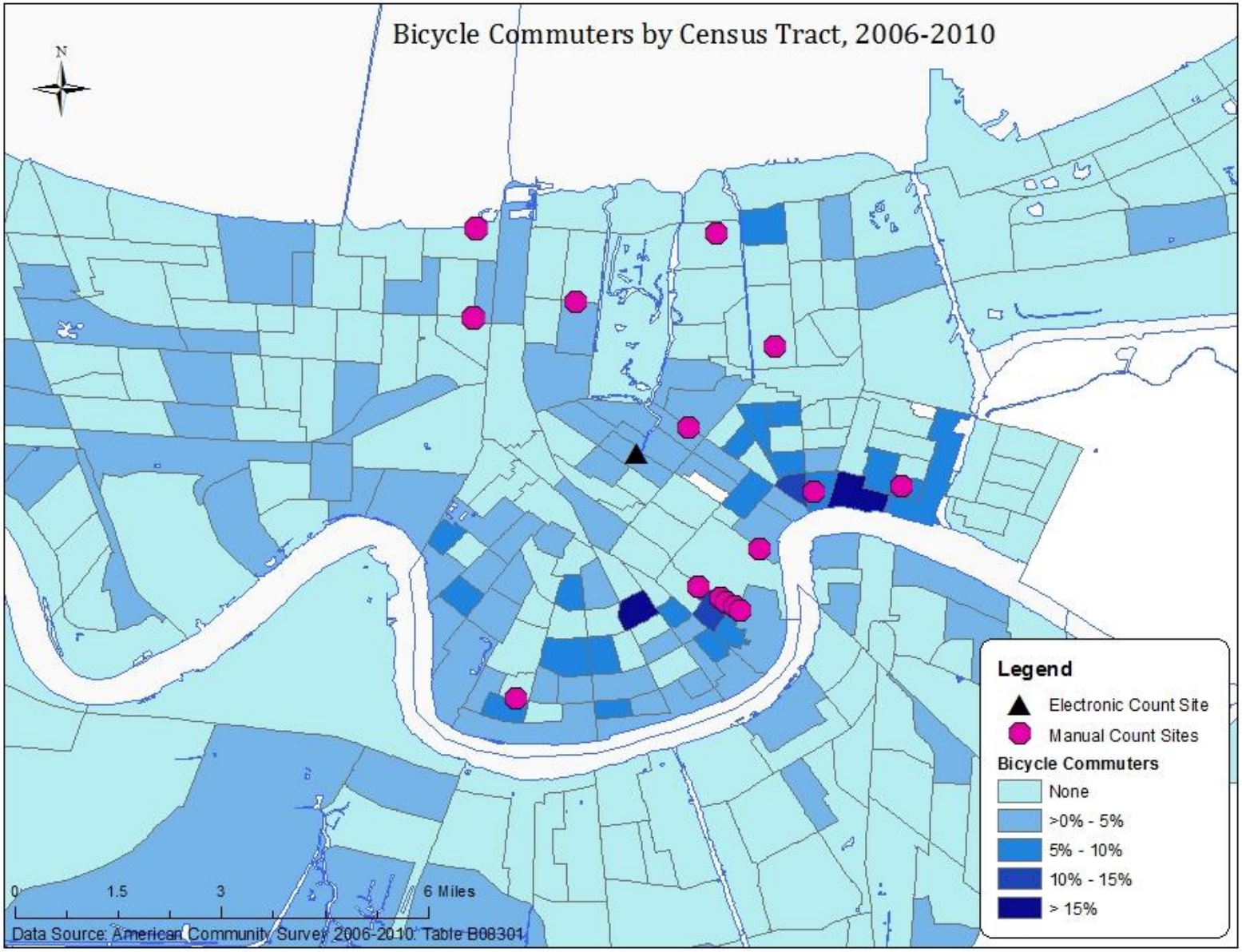
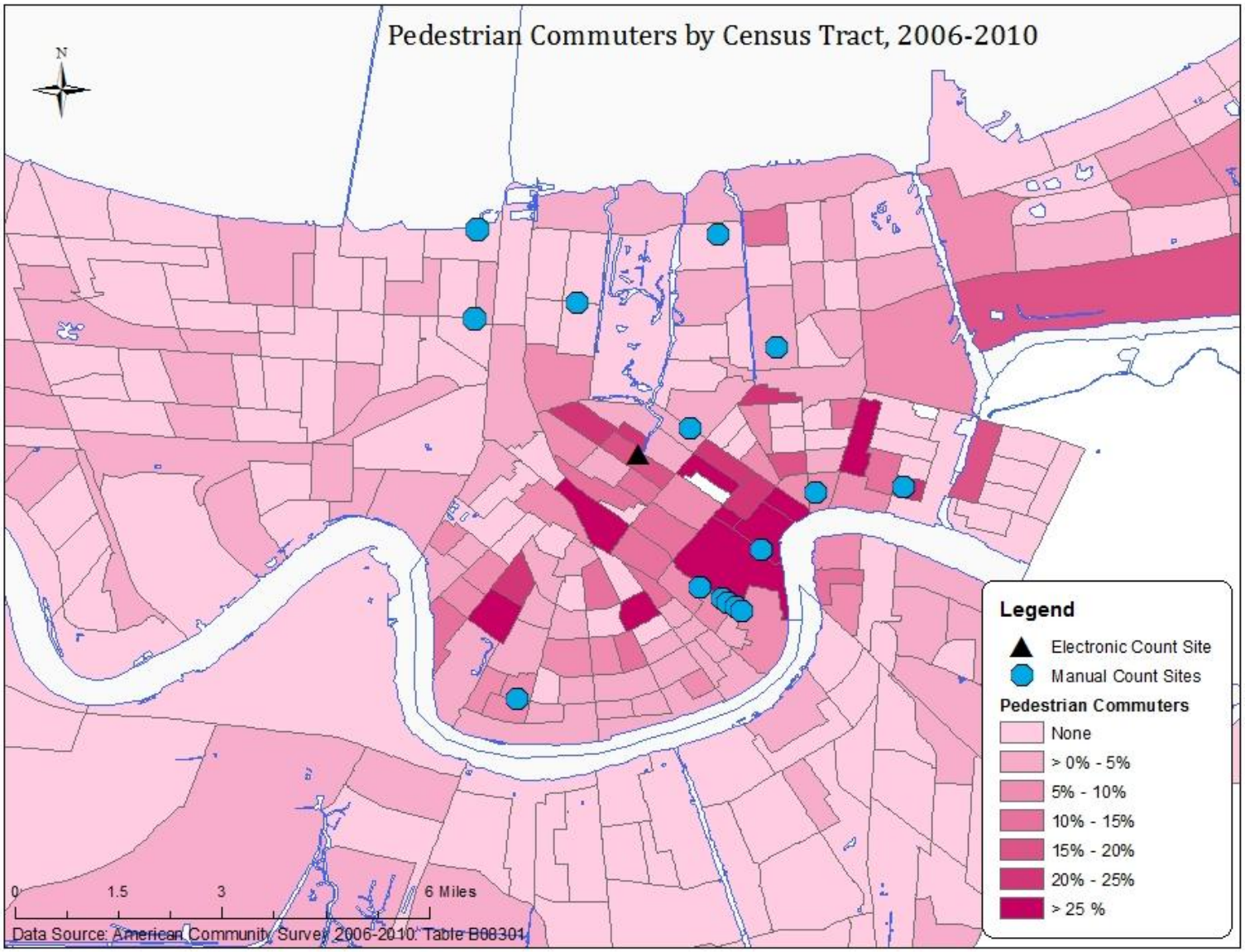


Figure 10: Percentage of Commuters that Walk to Work by Census Tract, 2006-2010



Mode Shares for Manual Count Sites

The *New Orleans Pedestrian and Bicycle Count Report, 2010-2011* examined mode share by comparing active transportation count data with automobile Average Daily Traffic (ADT) data collected by the New Orleans Regional Planning Commission at locations proximate to manual count sites. This analysis revealed high relative active transportation mode shares (ranging from 8% to 23%) at the Camp St, Magazine St, St. Charles Ave, and Simon Bolivar Ave CBD gateways, and low mode shares (around 3%) in locations not adjacent to downtown.

No new automobile counts have been conducted for street segments corresponding to manual count locations since this analysis, therefore this report does not attempt to further evaluate bicycle and pedestrian mode share relative to automobile traffic. Future bicycle and pedestrian data collection efforts should consider coordinating with the RPC to co-locate bicycle-pedestrian and automobile counts, to allow more accurate and comprehensive mode share analysis.

Table 8 shows the relative mode shares for bicyclists and pedestrians in 2010, 2011, and 2012; Figure 14 represents 2012 data graphically. As in previous years, the majority of count sites have a greater share of pedestrians than bicyclists. The exceptions to this in 2012 are the Camp St, Magazine St, and Carondelet St CBD Gateways, which were observed to have a greater number of bicyclists than pedestrians. Sites with very high relative pedestrian mode shares include Decatur St (French Quarter), Esplanade Avenue, and the Magazine St and Harrison Ave retail corridors. These figures are largely consistent with 2010 and 2011 data.

Table 8: Bicycle and Pedestrian Relative Mode Share, 2010-2012

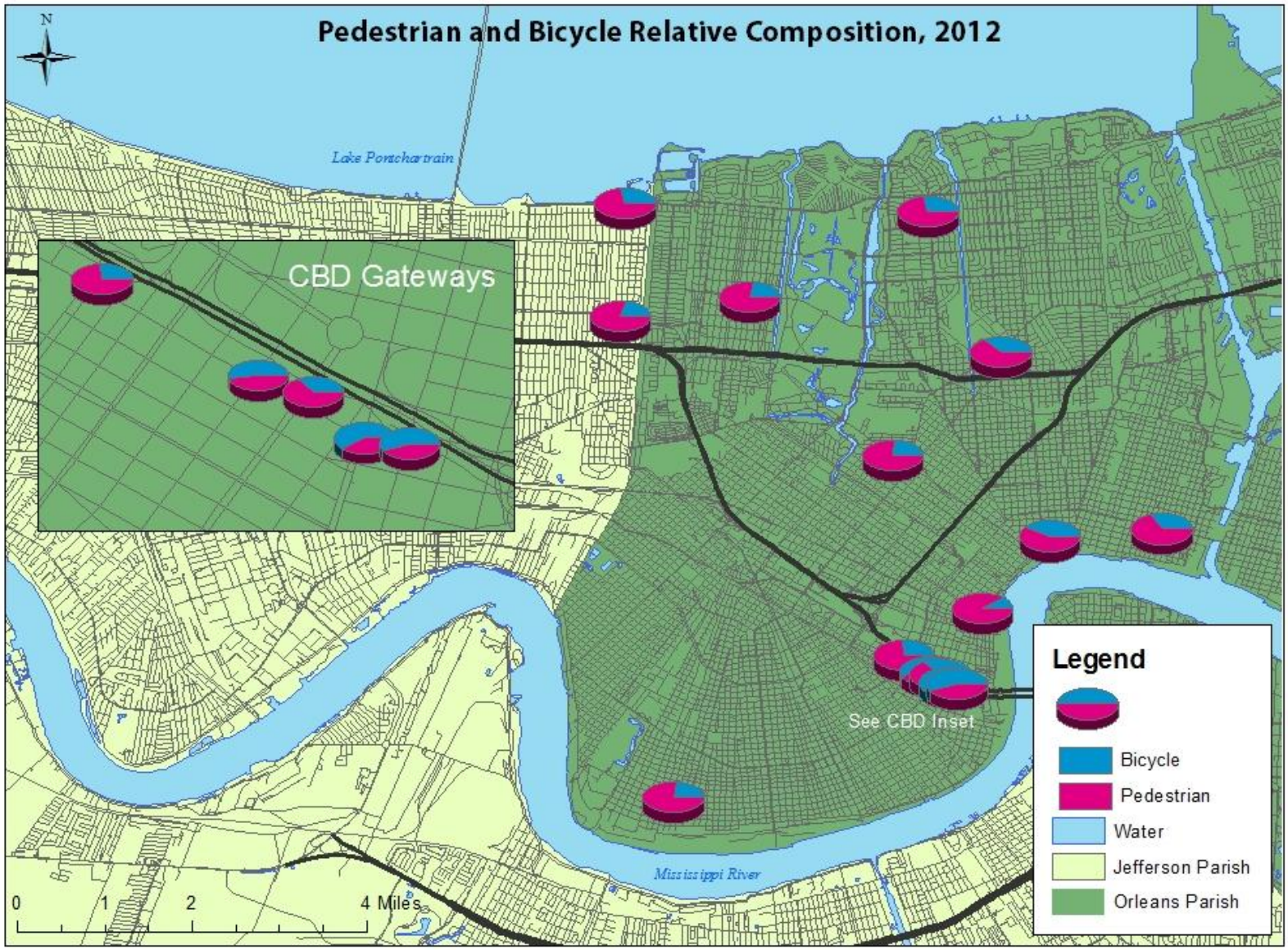
Bicycle and Pedestrian Relative Mode Share, 2010-2012						
	2012		2011		2010	
Site	% Bike	% Ped	% Bike	% Ped	% Bike	% Ped
Camp St (Gateway)**	59%	41%	58%	42%	52%	48%
Magazine St (Gateway)**	55%	45%	54%	46%	49%	51%
Carondelet St (Gateway)	53%	47%	53%	47%	52%	48%
Royal St	43%	57%	48%	52%	54%	46%
Gentilly Blvd*	37%	63%	33%	67%	27%	73%
St. Charles Ave (Gateway)	37%	63%	31%	69%	26%	74%
St. Claude Ave***	33%	67%	43%	57%	29%	71%
Metairie Hammond Hwy	29%	71%	41%	59%	n/a	n/a
Paris and Burbank	28%	72%	19%	81%	50%	50%
Simon Bolivar Ave (Gateway)**	26%	74%	26%	74%	12%	88%
Esplanade Ave	23%	77%	29%	71%	31%	69%
Magazine St (Uptown)	23%	77%	19%	81%	10%	90%
Harrison Ave***	23%	77%	22%	78%	18%	82%
Papworth Ave	21%	79%	22%	78%	n/a	n/a
Decatur St	9%	91%	9%	91%	10%	90%

*Bicycle facilities installed before April, 2011 on observed segment of facility

**Bicycle facilities installed before April, 2011 on connecting segment of facility

***Bicycle facilities already present in 2010, either on observed segment or on connecting segment

Figure 11: Pedestrian and Bicycle Relative Composition, 2012



Demographic and Behavioral Characteristics

This section details the user characteristics of bicyclists and pedestrians observed in 2012. Specifically, it presents data on the gender, bicyclist helmet use, travel orientation of users observed, age category (adult versus child), and race of bicyclists and pedestrians (Tables 10 and 11, respectively). Gender, helmet use, and travel orientation are important indicators of bicyclist safety and perceptions toward bicycling, while age group and race are included to illustrate demographic variances city-wide and to highlight possible avenues of further inquiry.

Tables 12 and 13 break down these attributes by count location, highlighting how various characteristics shift by location.

Gender

Overall, demographic patterns remain stable compared to 2011. As discussed in the *New Orleans Pedestrian and Bicycle Count Report, 2010-2011*, the percentage of female bicyclists is indicative of the perceived safety and bicycle-friendliness of a location, with higher percentages indicating a more comfortable environment for all riders. In 2012, female bicyclists represented 28% of the total, roughly the same as in previous years observed. A slightly greater proportion of pedestrians were female in 2012 (42%) than in 2010 and 2011.

Helmet Use

Helmet use is an important indicator of bicyclist safety. Helmet use actually decreased slightly from 16.3% of bicyclists in 2011 to 15.8% of cyclists in 2012, though it remains much higher than the 10% of cyclists donning helmets recorded in 2010. This figure remains far below national leaders, and indicates an ongoing safety concern. Rider education emphasizing the importance and value of helmet use should be conducted in order to encourage an increase in this figure.

Travel Orientation

Travel orientation describes the direction and surface on which pedestrians and bicyclists are traveling. Bicyclists were sorted into the following categories for travel orientation: Right Way Riders (traveling in the street with the flow of traffic); Wrong Way Riders (traveling in the street against the flow of traffic); Sidewalk Riders; and Neutral Ground (median) Riders. Pedestrians are categorized as traveling on the sidewalk (or, in the case of Papworth Avenue which lacks sidewalks, on the curb), in the street, or on the Neutral Ground.

Encouragingly, the percentage of bicyclists traveling in the street in the direction of traffic has increased by 6.3 percentage points to more than 80%. This is attributable to a slight decrease (1.8%) in wrong-way riders, and a 4.5% decrease in the number of sidewalk riders. This is in line with expectations that as dedicated bicycle facilities increase and public awareness campaigns targeting cyclists are conducted, travel orientation behavior will improve.

As in 2011, about 93% of pedestrians travel on the sidewalk. The only count location where significant pedestrian use of the neutral ground has been observed is St. Charles Avenue, which is popular among joggers.

Age

The vast majority of both bicyclists and pedestrians are adults, except at a few key locations with higher percentages of users identified as youths, e.g. Paris and Burbank (71% of pedestrians) and Harrison Avenue (25% of bicyclists). "Youth" is defined for this purpose as users who appear to be age 14 or younger. Observers are instructed in techniques for assessing age category, however it remains a subjective determination. The Paris and Burbank site, for example, is adjacent to a recently re-opened high school, so it is likely that many of the school-aged pedestrians identified by observers as youths at this site were misclassified and are actually more than 14 years of age.

Race

Racial characteristics of users, categorized as "black," "white," or "other," remain roughly comparable to previous years. These categories, assigned by the student observers, are highly subjective and used here for descriptive purposes only. Among cyclists, about 73% were categorized as white, while a less pronounced majority (62%) of pedestrians were classified as such. This may be, in large part, a result of the specific demographic characteristics of the neighborhoods adjacent to count sites, rather than a true reflection of bicyclist demographics. However, even using these rough estimates, interesting trends emerge. Table 12 highlights these demographic variations by count site.

Interestingly, there are distinct correlations between bicyclist race and travel orientation and helmet use (Table 9). Right-way, on-street ridership among those classified as white is above 87%, whereas for those categorized as black, right-way ridership is only 58%. "Other" bicyclists were observed riding with traffic 74% of the time. More strikingly, while just over 20% of white bicyclists were observed wearing helmets, only 2.3% of black cyclists and 10.5% of "other" cyclists wore helmets. This suggests that there may be cultural or socio-economic factors involved in travel orientation and helmet use which should be considered further, and safety education campaigns specifically targeting at-risk populations may be appropriate.

Table 9: Bicyclist Travel Orientation and Helmet Use by Race

Bicyclist Travel Orientation and Helmet Use by Race			
	White	Black	Other
Right Way	87.2%	58.2%	74.2%
Wrong Way/Sidewalk/Neutral Ground	12.8%	41.8%	25.8%
Helmet Use	20.1%	2.3%	10.5%

Table 10: Overall Bicyclist Composition, 2010-2012

Overall Bicyclist Composition, 2010-2012					
	Percent of Total			*Percentage Point Change*	
	2010	2011	2012	*2010-2011*	*2011-2012*
Male Bicyclists	72.9%	72.1%	72.3%	*-0.8%*	*0.2%*
Female Bicyclists	27.1%	27.9%	28.0%	*0.8%*	*0.1%*
White Bicyclists	70.3%	72.5%	73.1%	*2.2%*	*0.6%*
Black Bicyclists	19.3%	20.5%	21.7%	*1.3%*	*1.1%*
Other Bicyclists	8.7%	7.0%	5.2%	*-1.7%*	*-1.8%*
Adult Bicyclists	n/a	98.7%	98.4%	*n/a*	*-0.3%*
Youth Bicyclists	n/a	1.3%	1.6%	*n/a*	*0.3%*
Helmet Users	10.4%	16.3%	15.8%	*5.9%*	*-0.5%*
Travel Orientation:					
Street - Right Way	75.5%	73.9%	80.2%	*-1.6%*	*6.3%*
Street - Wrong Way	11.6%	9.7%	7.9%	*-1.9%*	*-1.8%*
Sidewalk	12.6%	16.1%	11.6%	*3.5%*	*-4.5%*
Neutral Ground	0.4%	0.3%	0.3%	*-0.1%*	*0.0%*

Notes: in 2010, At Harrison Ave site, race/ethnicity wasn't included in one of the four counts. Adult/Youth data not available for 2010.

Table 11: Overall Pedestrian Composition, 2010-2012

Overall Pedestrian Composition, 2010-2012					
	Percent of Total			*Percentage Point Change*	
	2010	2011	2012	*2010-2011*	*2011-2012*
Male Pedestrians	60.0%	60.3%	57.6%	*0.3%*	*-2.7%*
Female Pedestrians	40.0%	39.7%	42.4%	*-0.3%*	*2.7%*
White Pedestrians	57.1%	65.5%	62.0%	*8.4%*	*-3.5%*
Black Pedestrians	32.0%	28.1%	31.2%	*-3.9%*	*3.1%*
Other Pedestrians	8.1%	6.3%	6.8%	*-1.8%*	*0.4%*
Adult Pedestrians	n/a	96.4%	96.1%	*n/a*	*-0.3%*
Youth Pedestrians	n/a	3.6%	3.9%	*n/a*	*0.3%*
Travel Orientation:					
Sidewalk	n/a	92.6%	92.9%	*n/a*	*0.4%*
Street	n/a	4.7%	4.8%	*n/a*	*0.2%*
Neutral Ground	n/a	2.8%	2.3%	*n/a*	*-0.5%*

Notes: in 2010, race/ethnicity wasn't included in one of the four counts at Harrison Avenue. No data on travel orientation was collected for pedestrians in 2010. Adult/Youth data not available for 2010.

Table 12: Bicyclist Composition by Count Site, 2012

Bicyclist Composition, by Count Site, 2012 (Ordered by EDT)												
	Gender		Race			Age Group		Helmet Use	Travel Orientation			
Site	Female	Male	White	Black	Other	Adult	Youth	%	Street-Right Way	Street-Wrong Way	Sidewalk	Neutral Ground
Camp St (Gateway)**	**35.9%**	64.1%	89.9%	4.0%	6.2%	99.6%	0.4%	20.7%	81.2%	0.0%	18.8%	n/a
St. Charles Ave (Gateway)	29.0%	71.0%	76.2%	20.4%	3.3%	99.6%	0.4%	20.4%	80.3%	2.2%	16.0%	**1.5%**
Magazine St (Gateway)**	31.9%	68.1%	83.5%	10.5%	6.0%	**100.0%**	0.0%	**21.8%**	83.5%	8.8%	7.7%	n/a
Royal St	30.6%	69.4%	89.3%	6.0%	4.6%	**100.0%**	0.0%	7.8%	92.2%	7.8%	0.0%	n/a
St. Claude Ave***	22.2%	80.5%	47.7%	46.6%	5.6%	97.7%	2.3%	7.1%	75.6%	12.8%	10.5%	1.1%
Decatur St	30.6%	69.4%	77.5%	13.2%	9.3%	99.2%	0.8%	10.9%	83.7%	6.6%	9.7%	n/a
Simon Bolivar Ave (Gateway)**	12.0%	88.0%	30.3%	**68.6%**	1.1%	98.9%	1.1%	8.6%	66.9%	18.9%	14.3%	0.0%
Esplanade Ave	31.4%	68.6%	82.7%	14.1%	3.2%	97.3%	2.7%	14.6%	81.6%	10.3%	8.1%	0.0%
Carondelet St (Gateway)	27.2%	72.8%	56.3%	35.9%	7.8%	99.0%	1.0%	10.7%	80.6%	11.7%	7.8%	n/a
Magazine St (Uptown)	31.6%	68.4%	85.3%	9.5%	5.3%	94.7%	5.3%	17.9%	56.8%	4.2%	**38.9%**	n/a
Gentilly Blvd*	19.7%	80.3%	51.3%	44.7%	3.9%	**100.0%**	0.0%	30.3%	84.2%	13.2%	2.6%	0.0%
Harrison Ave***	25.0%	75.0%	83.3%	12.5%	4.2%	75.0%	**25.0%**	37.5%	64.6%	2.1%	33.3%	0.0%
Paris and Burbank	16.7%	83.3%	60.0%	30.0%	**10.0%**	96.7%	3.3%	50.0%	90.0%	3.3%	6.7%	0.0%
Metairie Hammond Hwy	7.7%	92.3%	**100.0%**	0.0%	0.0%	85.7%	14.3%	23.1%	76.9%	**23.1%**	0.0%	n/a
Papworth Ave	0.0%	**100.0%**	**100.0%**	0.0%	0.0%	**100.0%**	0.0%	25.0%	**100.0%**	0.0%	0.0%	n/a

*Bicycle facilities installed before April, 2011 on observed segment of facility
**Bicycle facilities installed before April, 2011 on connecting segment of facility
***Bicycle facilities already present in 2010, either on observed segment or on connecting segment

Highest values in bold

Table 13: Pedestrian Composition by Count Site, 2012

Pedestrian Composition, by Count Site, 2012 (Ordered by EDT)										
	Gender		Race			Age Group		Travel Orientation		
Site	Female	Male	White	Black	Other	Adult	Youth	Sidewalk	Street	Neutral Ground
Decatur St	46.6%	53.4%	75.5%	13.4%	11.1%	99.1%	0.9%	98.3%	1.7%	n/a
Esplanade Ave	48.1%	51.9%	73.5%	22.2%	4.3%	96.0%	4.0%	94.1%	4.6%	1.3%
Simon Bolivar Ave (Gateway)**	24.9%	**75.1%**	8.5%	89.5%	2.0%	94.7%	5.3%	84.2%	8.9%	6.9%
St. Charles Ave (Gateway)	33.0%	67.0%	68.9%	27.0%	4.1%	99.6%	0.4%	88.7%	2.4%	8.9%
St. Claude Ave***	34.7%	65.3%	14.7%	83.2%	2.1%	87.1%	12.9%	85.6%	9.5%	4.9%
Royal St	38.0%	62.0%	79.2%	15.9%	4.9%	98.7%	1.3%	92.5%	7.5%	n/a
Magazine St (Uptown)	60.4%	39.6%	**86.9%**	9.0%	4.0%	97.8%	2.2%	**99.1%**	0.9%	n/a
Magazine St (Gateway)**	39.3%	60.7%	68.1%	25.3%	6.6%	99.6%	0.4%	94.3%	5.7%	n/a
Camp St (Gateway)**	30.7%	69.3%	65.1%	28.0%	6.9%	99.5%	0.5%	97.9%	2.1%	n/a
Harrison Ave***	**57.3%**	42.7%	86.6%	10.4%	3.0%	89.6%	10.4%	78.7%	4.3%	**17.1%**
Gentilly Blvd*	41.7%	58.3%	5.5%	92.1%	2.4%	94.5%	5.5%	89.8%	9.4%	0.8%
Carondelet St (Gateway)	29.3%	70.7%	32.6%	60.9%	6.5%	93.5%	6.5%	94.6%	5.4%	n/a
Paris and Burbank	56.6%	43.4%	6.6%	**93.4%**	0.0%	28.9%	**71.1%**	67.1%	26.3%	6.6%
Metairie Hammond Hwy	37.5%	62.5%	81.3%	12.5%	6.3%	**100.0%**	0.0%	12.5%	**87.5%**	n/a
Papworth Ave	26.7%	73.3%	66.7%	20.0%	**13.3%**	**100.0%**	0.0%	73.3%	26.7%	n/a

*Bicycle facilities installed before April, 2011 on observed segment of facility

**Bicycle facilities installed before April, 2011 on connecting segment of facility

***Bicycle facilities already present in 2010, either on observed segment or on connecting segment

Highest values in bold

Electronic Count Data

This section analyzes count data from the Jefferson Davis Trail Eco-Counter from June 2010 to May 2012. This data was analyzed based on temporal and meteorological variables. For additional detailed data tables, refer to Appendix G. [8]

Observed Traffic Volumes

Table 14 and Figure 15 show the monthly and annual traffic volumes observed on the Jefferson Davis Trail from June 2010 to May 2012. Overall, there was a 14.2% increase in trail usage in the second year of observation, from 169,330 in 2010-2011, to 193,407 in 2011-2012. This breaks down to approximately 70 additional trail users per day.

In both years, user volumes were highest in May, April, October, and March. The lowest volumes were recorded in December, June, July, and August. However, the Eco-Counter observed more users in every month from June 2011 to May 2012 than were recorded the previous year, with the largest increases (greater than 25%) in user volume occurring in September, October, November, and January.

Tables 15 and 16 show the ten days with the highest and lowest user volumes on the trail, respectively. Generally, the highest volume days represent special events in the Bayou St. John area, such as Bayou Boogaloo, Jazzfest, Earth Day Festival, and sporting events such as the Susan G. Komen Race for the Cure. Low-volume days include dates on or near major holidays, as well as several days with relatively low average temperatures or very high levels of precipitation. This is consistent with data recorded in 2010-2011.

Overall, this trail experienced consistent user volumes year-round, with an average use rate of 534 users per day. From this preliminary data, trail usage appears to be increasing over time. This Eco-Counter, now permanently established, should continue to be regularly monitored to see whether this trend continues.

[8] As previously noted, this device in this location has been calibrated and shown to be highly accurate (less than 5% margin of error) However, three days of data collected (April 6, 7, and 8) have been excluded from this analysis due to a failure of the sensor which resulted in extremely high recorded volumes and a skewed in/out ratio. It is suspected that during this period, the sensor was partially or fully obstructed, leading to this inaccuracy.

Figure 12: Jefferson Davis Trail Average Daily Usage, 2010-2012

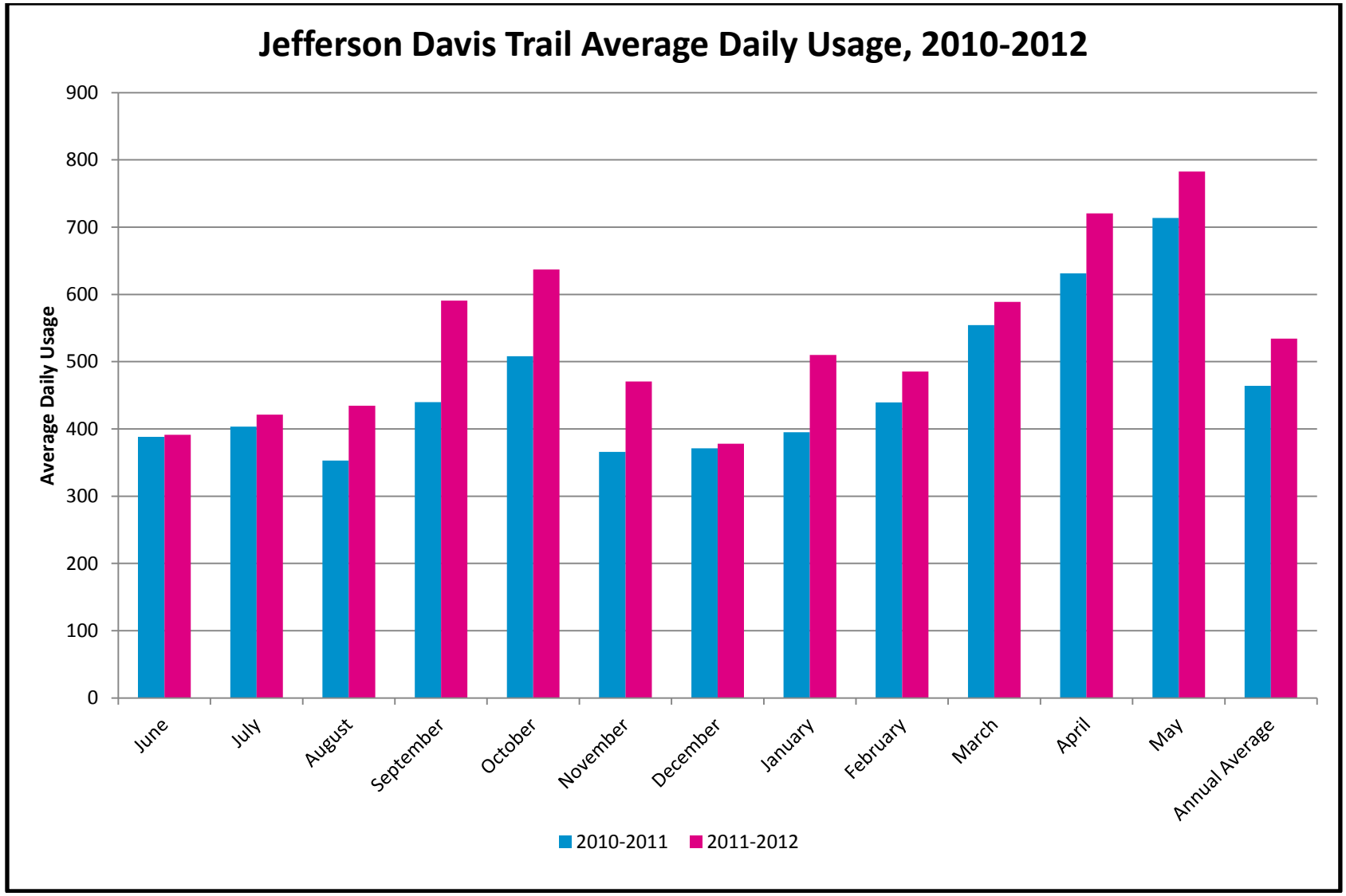


Table 14: Jefferson Davis Trail User Volumes, 2010-2012, by Month

Jefferson Davis Trail User Volumes, 2010-2012, by Month								
	Total Usage				Average Daily Usage			
Month	2010-2011	2011-2012	Absolute Change	*Percent Change*	2010-2011	2011-2012	Absolute Change	*Percent Change*
June	11,648	11,733	85	*0.7%*	388	391	3	*0.7%*
July	12,506	13,053	547	*4.4%*	403	421	18	*4.4%*
August	10,945	13,471	2,526	*23.1%*	353	435	81	*23.1%*
September	13,191	17,719	4,528	*34.3%*	440	591	151	*34.3%*
October	15,755	19,752	3,997	*25.4%*	508	637	129	*25.4%*
November	10,975	14,117	3,142	*28.6%*	366	471	105	*28.6%*
December	11,502	11,715	213	*1.9%*	371	378	7	*1.9%*
January	12,245	15,806	3,561	*29.1%*	395	510	115	*29.1%*
February	12,301	14,080	1,779	*14.5%*	439	486	46	*10.5%*
March	17,188	18,256	1,068	*6.2%*	554	589	34	*6.2%*
April	18,946	19,449	503	*2.7%*	632	720	89	*14.1%*
May	22,128	24,256	2,128	*9.6%*	714	783	69	*9.6%*
Total	**169,330**	**193,407**	**24,077**	***14.2%***	**464**	**534**	**70**	***15.1%***

Table 15: Jefferson Davis Trail Highest User Volume Days, 2011-2012

Jefferson Davis Trail Highest User Volume Days, 2011-2012						
Date	Volume	Event	Average Temp	High Temp	Low Temp	Precipitation
Sunday, May 20, 2012	3310	Bayou Boogaloo	79	88	69	0
Saturday, May 19, 2012	3025	Bayou Boogaloo	79	90	68	0
Saturday, October 22, 2011	1716	Komen Race for the Cure	64	75	53	0
Sunday, April 22, 2012	1570	Earth Day Festival	68	79	56	0
Friday, May 18, 2012	1487	Bayou Boogaloo	80	91	69	0
Saturday, April 28, 2012	1420	Jazzfest	76	85	66	0
Sunday, April 29, 2012	1274	Jazzfest	78	86	70	0
Saturday, May 05, 2012	1212	Jazzfest	82	90	73	0.06
Wednesday, September 07, 2011	1185		73	82	63	0
Thursday, April 05, 2012	1149		75	84	66	0.03

*Excluding three days of April counts with faulty data

Table 16: Jefferson Davis Trail Lowest User Volume Days, 2011-2012

Jefferson Davis Trail Lowest User Volume Days, 2011-2012						
Date	Volume	Event	Average Temp	High Temp	Low Temp	Precipitation
Sunday, December 11, 2011	254		50	54	45	0
Sunday, November 27, 2011	251		55	64	46	0.02
Thursday, December 22, 2011	251		66	75	57	0.19
Sunday, February 12, 2012	250		40	47	33	0
Saturday, December 24, 2011	220	Day before Christmas	54	58	50	0
Monday, December 26, 2011	198	Day after Christmas	60	67	52	0.41
Friday, September 02, 2011	170		80	82	77	1.92
Sunday, December 25, 2011	132	Christmas	57	58	55	0.02
Saturday, September 03, 2011	128		80	84	76	6.25
Sunday, September 04, 2011	121		79	82	75	2.68

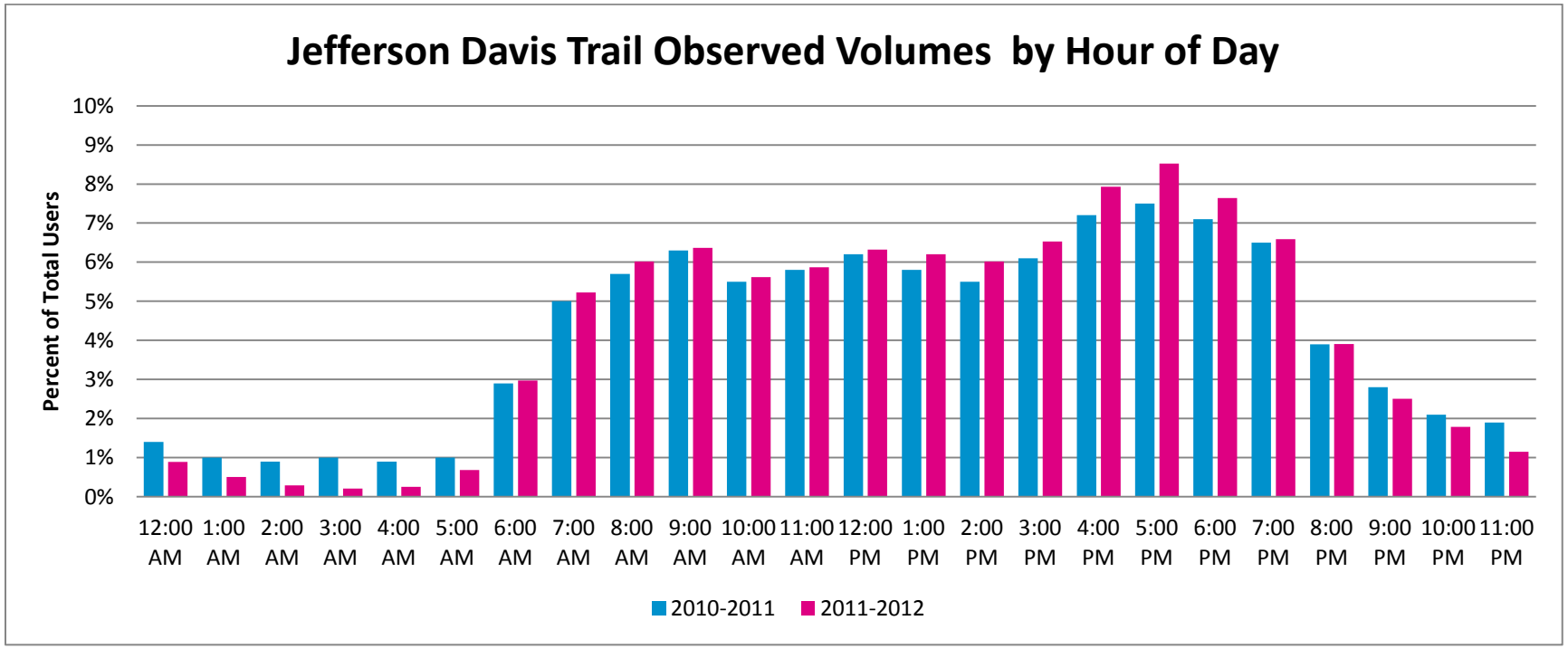
Patterns of Use by Hour, Day, Month, and Season

By breaking down the electronic counts by hour, day of the week, and month for both years of data collected, patterns of use emerge. The following figures summarize these patterns. Percentages of total usership, rather than absolute totals, are used in order to compare the two years of data.

Hourly Trends

Figure 16 breaks down the electronic count data by hour for the Jefferson Davis trail for both years, as a percentage of the total users observed. Hourly patterns of use appear to be relatively stable from year to year. The highest traffic hours are from 4:00PM to 8:00PM, with a slightly more pronounced evening peak present in 2011-2012 than in the preceding year.

Figure 13: Jefferson Davis Trail Observed Volumes by Hour of Day, 2010-2012



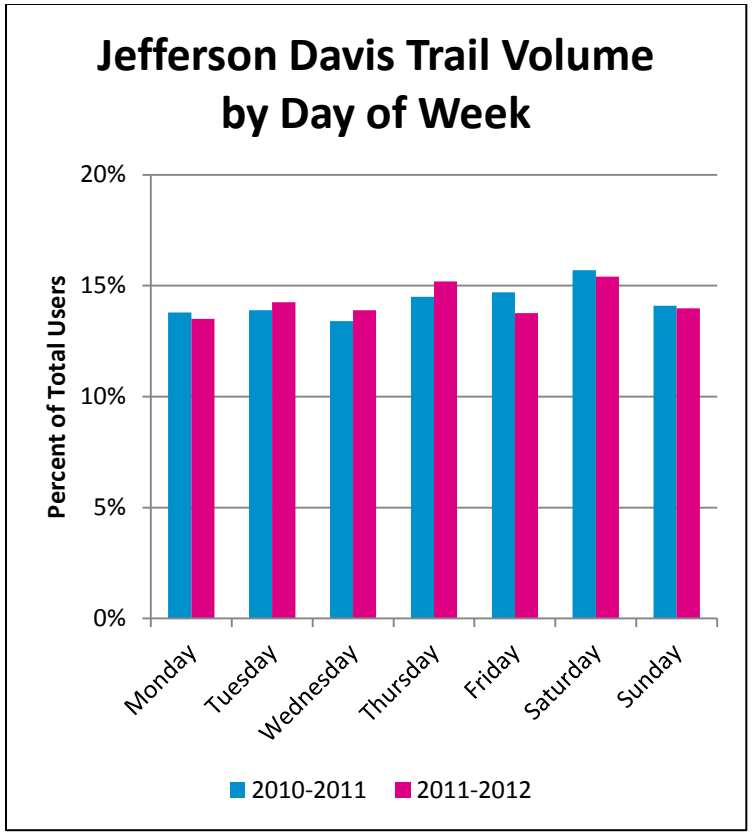
Daily Trends

Figure 17 and Table 17 show usership of the Jefferson Davis Trail by day of the week. As in 2010-2011, usership is split fairly evenly among days, ranging from 502 average daily users on Monday to a high of 584 average daily users on Saturday. However, considering the many special events and festivals that take place near the count site, it is somewhat surprising that the weekend peak is not more pronounced.

Table 17: Jefferson Davis Trail Observed Volume by Day of Week

Jefferson Davis Trail Observed Volume by Day of Week			
	Absolute #	% of Total	Average Daily Users
Monday	26,113	13.5%	502
Tuesday	27,561	14.3%	530
Wednesday	26,866	13.9%	507
Thursday	29,388	15.2%	554
Friday	26,621	13.8%	522
Saturday	29,806	15.4%	584
Sunday	27,052	14.0%	530
Total	**193,407**	**100.0%**	**533**

Figure 14: Jefferson Davis Trail Volume by Day of Week



Monthly and Seasonal Trends

Figures 18 and 19 break down Jefferson Davis Trail data by month of the year and by season for both years observed. Unsurprisingly, user volumes are highest during the fall and spring months. The percentage of annual users increased slightly during fall 2012, and decreased proportionally during spring 2012 relative to the previous year. These trends appear to be fairly stable from year to year, and are likely attributable to a large number of springtime festivals and events in New Orleans, as well as generally pleasant weather (as discussed below).

Figure 15: Jefferson Davis Trail Volume by Season

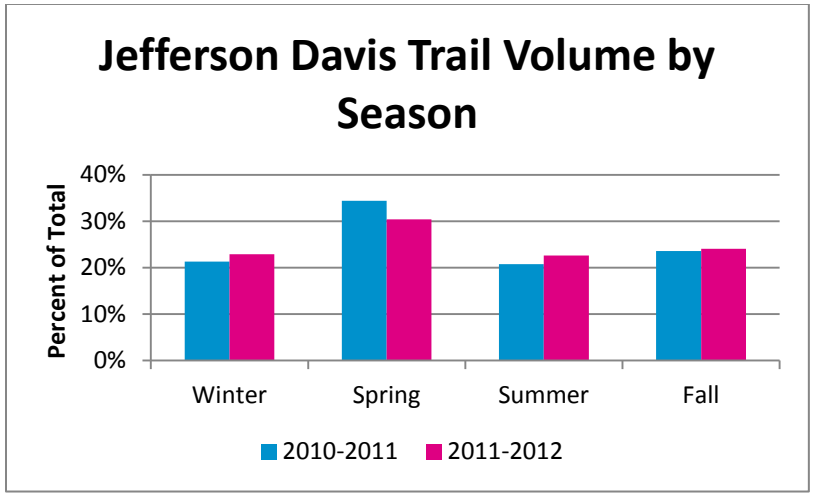
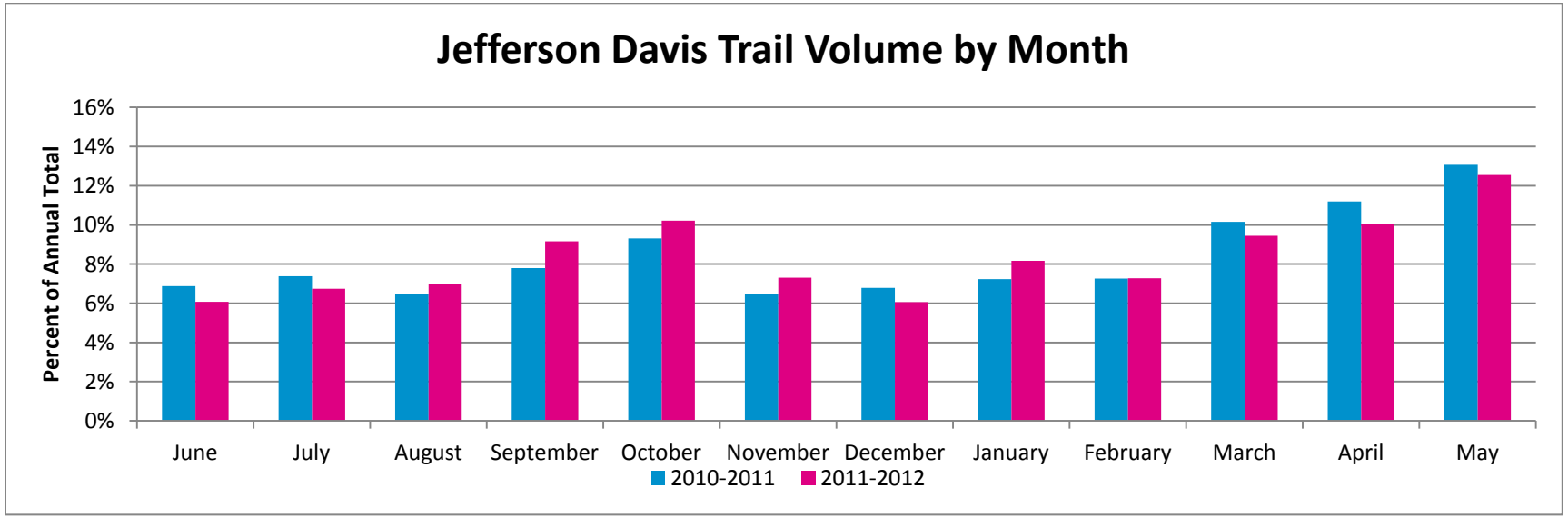


Figure 16: Jefferson Davis Trail Volume by Month



Meteorological Variables and Traffic Volume

As discussed in the *New Orleans Pedestrian and Bicycle Count Report, 2010-2011,* there is understood to be a significant correlation between weather conditions and active transportation activity. This analysis examines the relationship between electronic counts at the Jefferson Davis Trail and average daily temperatures and precipitation at the daily, weekly, and monthly scale. Temperature and precipitation data were obtained from The Weather Underground historical database.[9]

Temperature

Table 18 and Figures 20, 21, and 22 illustrate the relationship between average temperatures and user volumes at the daily, weekly, and monthly level. Average daily temperatures are used for this analysis. Daily volumes (Figure 20) follow a similar overall pattern, though there are several outliers corresponding to special event days which vary by year. At this level, it is difficult to discern a clear relationship between temperature and usership. Weekly analysis (Figure 21) provides a much clearer view of general trends, and shows that, as in 2010-2011, the highest weekly volumes all have average temperatures ranging from approximately 70 to 80 degrees, with only one outlier. Weeks with higher or lower average temperatures are more likely to have lower volumes. Therefore, this range of temperatures can be said to represent a threshold at which user volumes peak and then decline in either direction (higher or lower temperatures).

At the monthly level (Figure 22, Table 18) average temperature is correlated with user volumes as well. Overall, the relationship between temperature and usership of the Jefferson Davis Trail appears to be relatively consistent. For detailed data tables not presented here, see Appendix G.

Table 18: Jefferson Davis Trail Average Daily Temperatures and User Volumes

Jefferson Davis Trail Average Daily Temperature and User Volumes				
	2010-2011		2011-2012	
Month	Average Daily Users	Average Daily Temperature	Average Daily Users	Average Daily Temperature
June	388	84	391	85
July	403	85	421	84
Autust	353	85	435	88
September	440	82	591	79
October	508	72	637	70
November	366	63	471	64
December	371	52	378	58
January	395	51	510	61
February	439	57	486	61
March	554	67	589	71
April	632	74	720	73
May	714	78	782	80

[9] www.wunderground.com

Figure 17: Jefferson Davis Trail Temperature and Usership (Daily)

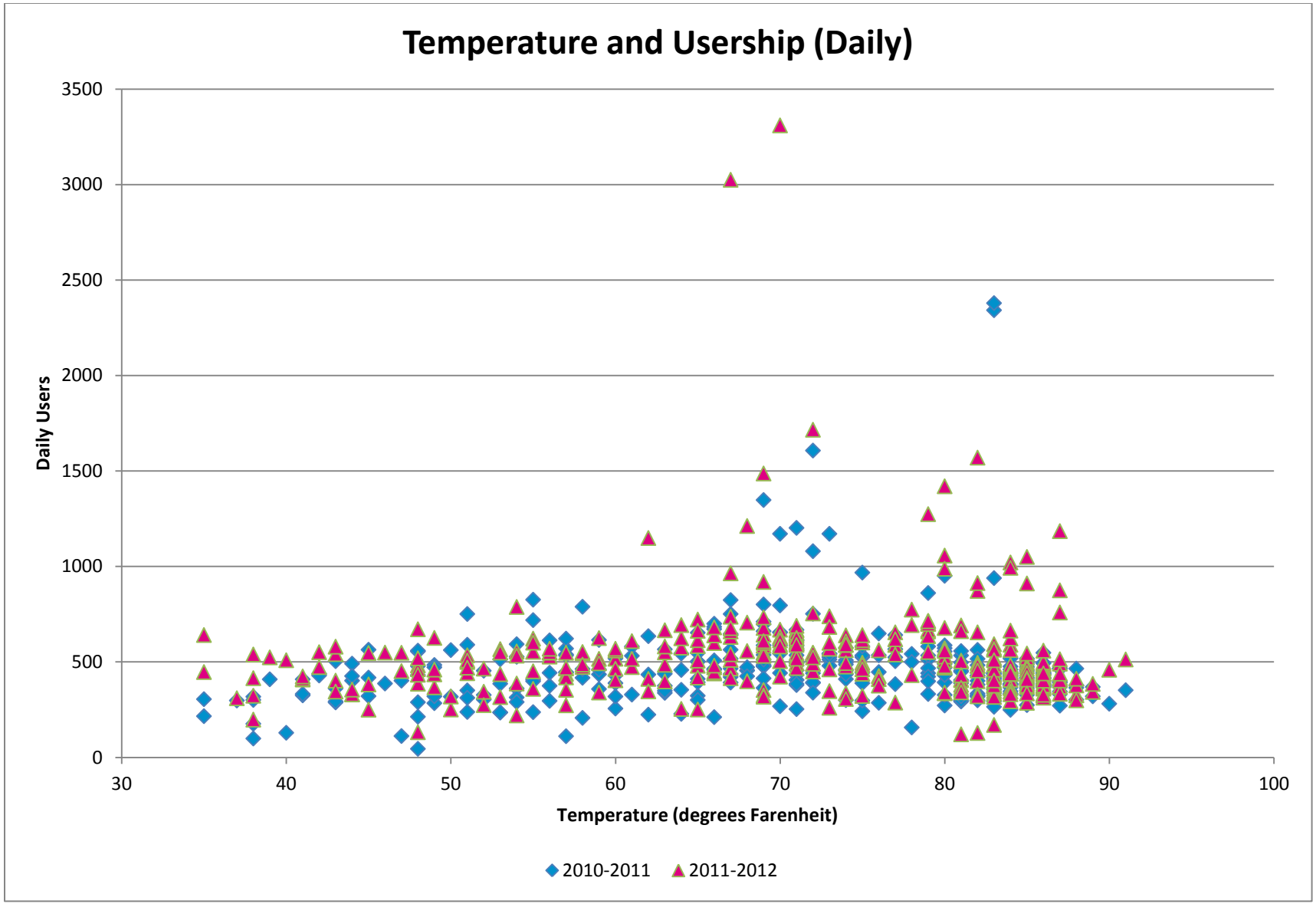


Figure 18: Jefferson Davis Trail Temperature and Usership (Weekly)

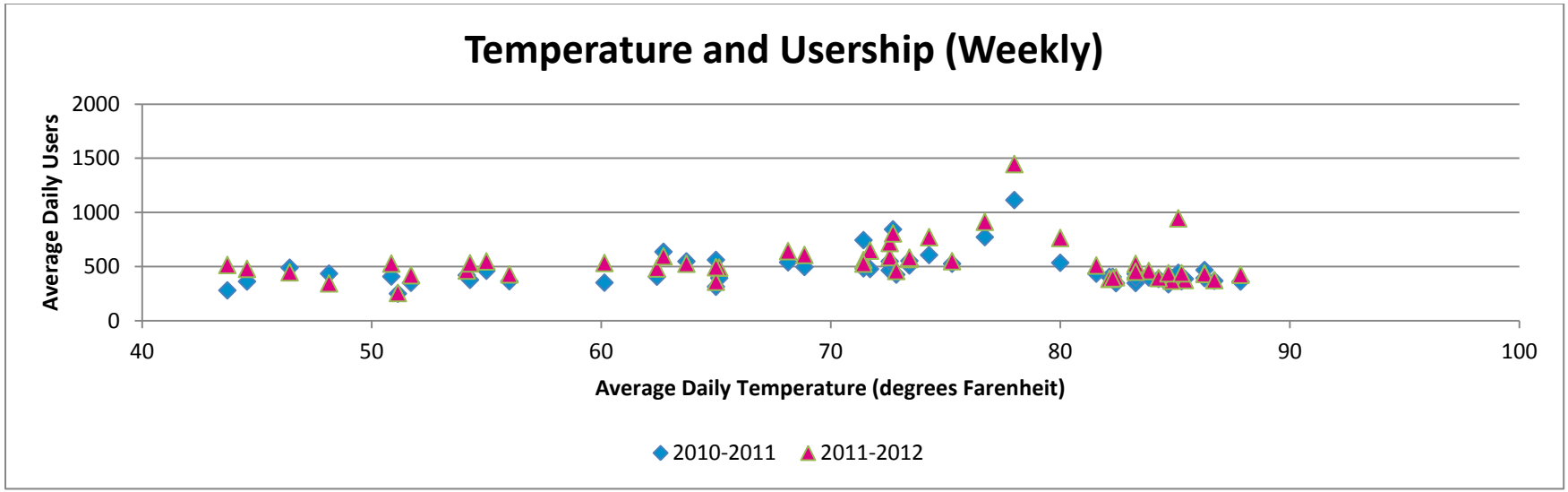
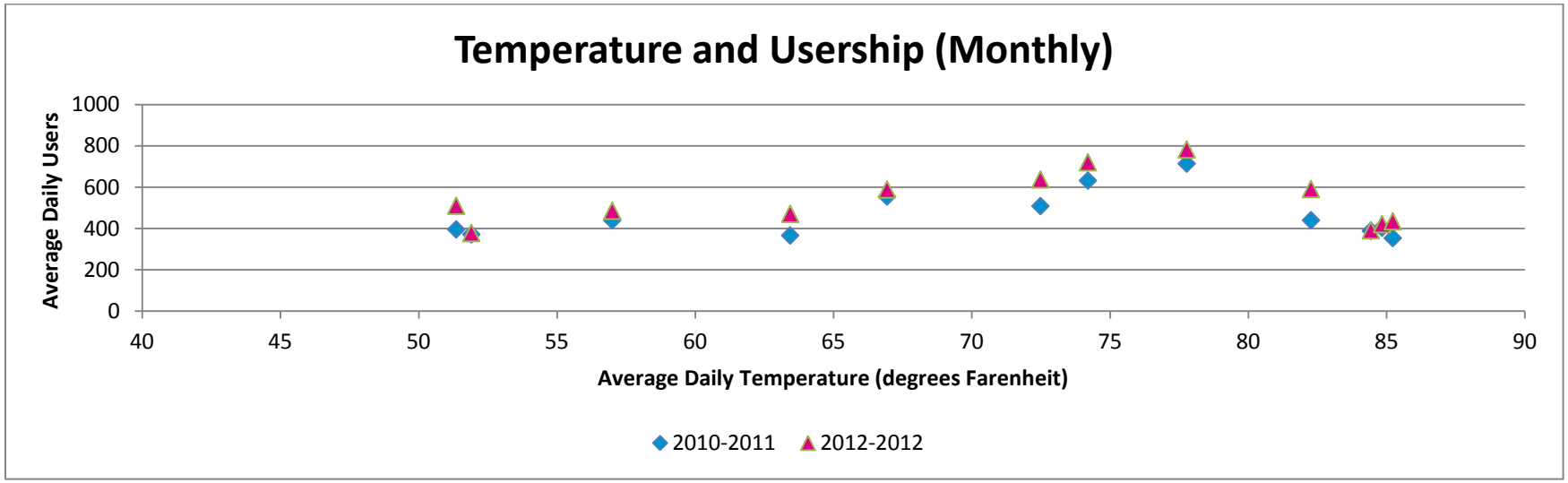


Figure 19: Jefferson Davis Trail Temperature and Usership (Monthly)



Precipitation

Precipitation is another useful variable by which to evaluate active transportation facility use. Precipitation tends to be highest during the summer months and early autumn, months which also experienced the lowest user volumes on the Jefferson Davis Trail in 2011-2012 (Figure 23). However, at the monthly level of analysis, clear correlations between precipitation and user volumes do not emerge.

The relationship between precipitation and user volumes is most apparent at the daily and weekly level. Figures 24 and 25 show that the days and weeks with the highest amount of precipitation tend to fall near the bottom or middle of the range, while almost all of the days and weeks with very high average daily usership correspond to weeks with little or no rain.

Figure 20: Jefferson Davis Trail Precipitation and Usership (Monthly)

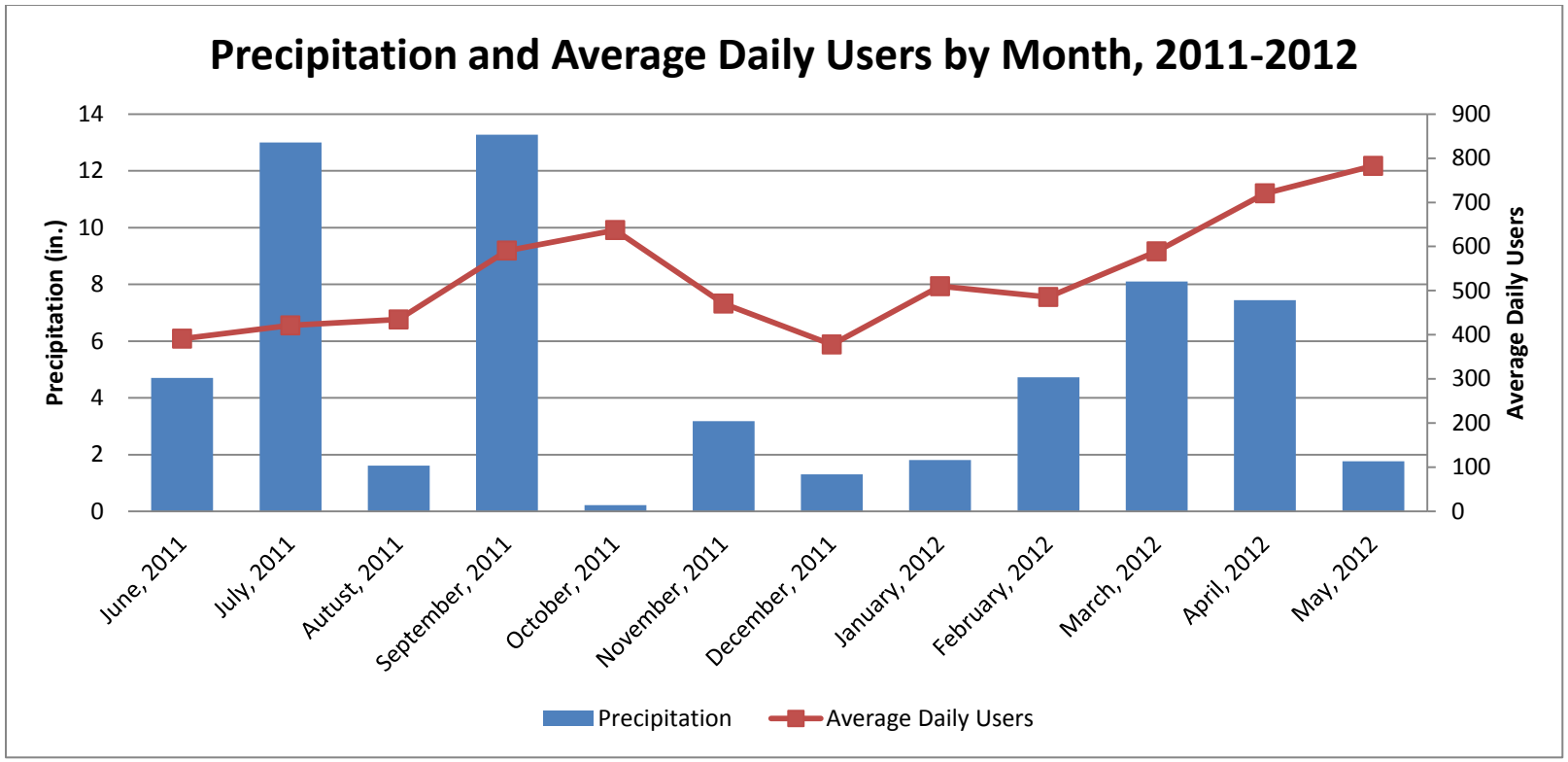


Figure 21: Jefferson Davis Trail Precipitation and Usership (Daily)

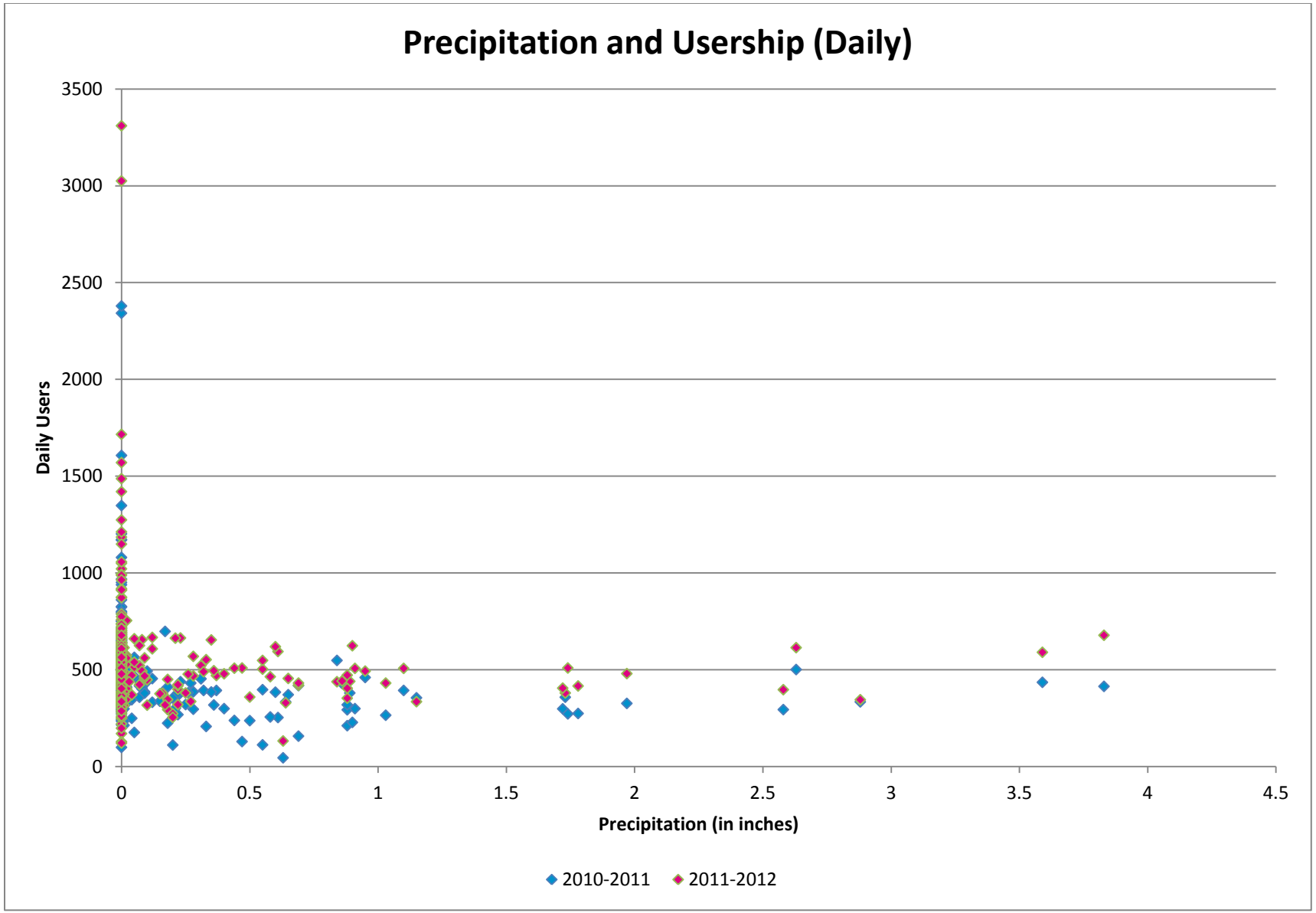
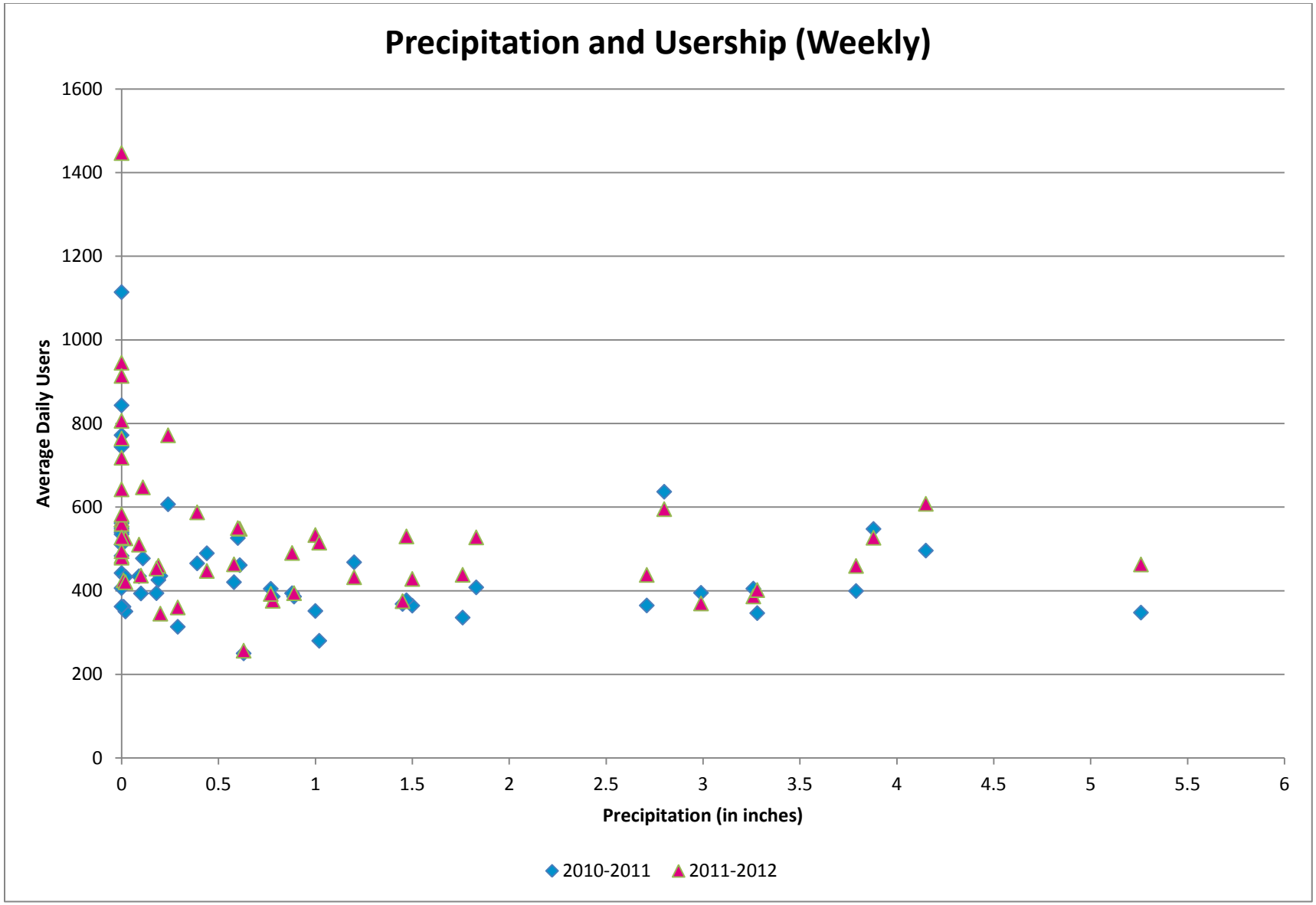


Figure 22: Jefferson Davis Trail Precipitation and Usership (Weekly)



State, Regional, and National Context: Comparing the Gender Split for Bicyclist and Pedestrian Commuters

This section provides an update to portions of the "Urban Comparisons" chapter of the *New Orleans Pedestrian and Bicycle Count Report, 2010-2011*, which looked at commuting data from the U.S. Census and American Community Survey data to provide a regional and national context for the state active transportation in New Orleans. This report updates this information with 2010 ACS data, which provides a more accurate reflection of Post-Katrina New Orleans, as data from the years immediately following that event represents a region in rapid transition.

The 2010-2011 Count Report also evaluated manual and electronic count data by comparing the data to urbanized areas of comparable size and characteristics, which is not replicated here to a lack of new data available from most comparison cities. Future studies should revisit this comparative analysis to evaluate trends and methodologies in measuring active transportation.

As noted above, rates of female bicyclists are often examined as an indicator of overall ease of biking (and to a lesser extent, walking) for a given area. This section compares New Orleans' percentages of total and female bicycle and pedestrian commuters respectively to national leaders in active transportation, the South Region (as defined by the U.S. Census), and other cities in Louisiana.

Comparing Female Bicyclists with National Leaders in Active Transportation

In the 2009 American Community Survey, New Orleans was ranked 6th in overall percentage of bicycle commuters, and 9th in the percentage of female bicyclists, among ten cities with the highest bicycle mode share. In 2010, (the most recent year for which data is available), New Orleans' overall ranking slipped to 12th place for bicycle mode share, and ranks 11th out of the top fifteen cities for bicycle mode share for its percentage of female bicycle commuters, which ACS observes to have dropped to 26% in 2010 (Table 19). Though discouraging, it should be noted that due to sample size these numbers have experienced substantial variation from year to year in all of the top bicycling cities, and should principally be used to evaluate long-term shifts. Between 2000 and 2010, for example, the percentage of commuters who commute by bicycle in New Orleans has increased by 53%, indicating a steady upward trend. PBRI's count data, moreover, indicate that future ACS surveys will likely show a continuation of this trend, and a stabilization of the proportion of bicyclists who are female at around 28% from 2010-2012.

Comparing Female Bicyclists at the Regional Level

Regional figures, as illustrated in Table 20, show that New Orleans had the third highest overall mode share for bicyclists in South Region cities over 250,000, down from a first place ranking in 2009. New Orleans again had the fifth highest rate of female bicyclists among top bicycling cities (over 250,000) in the region. As in 2009, the South Region had both the lowest bicycle mode share and rate of female bicyclists in 2010.

Table 19: Top Cities over 250,000 for Bicycle Commuting, 2010

Top Cities over 250,000 for Bicycle Commuting, 2010			
Overall Rank	City	Bicycle Mode Share	Percent of bike commuters who are female
1	Portland, OR	6.0%	35%
2	Seattle, WA	3.6%	30%
3	San Francisco, CA	3.5%	33%
4	Minneapolis, MN	3.5%	24%
5	Washington, DC	3.1%	32%
6	Tucson, AZ	3.0%	35%
7	Sacramento, CA	2.5%	24%
8	Denver, CO	2.2%	35%
9	Tampa, FL	1.9%	27%
10	Philadelphia, PA	1.8%	42%
11	Oakland, CA	1.8%	32%
12	New Orleans, LA	1.8%	26%
	PBRI Findings, 2012	*n/a*	*28%*
13	Pittsburgh, PA	1.6%	35%
14	Honolulu, HI	1.6%	24%
15	Lincoln, NE	1.6%	14%
Note	Total commuting population excludes those that work at home		
Source	U.S. Census Bureau, 2010 American Community Survey, Table B08006		

Table 20: Regional Bicycling Commuting Statistics, 2010

Regional Bicycling Commuting Statistics, 2010		
Geography	Bicycle Mode Share	Percent of bike commuters who are female
West Region	**1.04%**	**26.86%**
Midwest Region	**0.47%**	**26.86%**
Northeast Region	**0.46%**	**26.53%**
South Region	**0.31%**	**24.95%**
Washington, DC	3.13%	32.14%
Tucson, AZ	2.96%	34.92%
New Orleans, LA	1.78%	25.50%
PBRI Findings, 2012	*n/a*	*28%*
Austin, TX	1.03%	22.09%
Miami, FL	0.94%	20.13%
Virginia Beach, VA	0.80%	21.01%
Lexington-Fayette, KY	0.72%	42.58%
Baltimore	0.70%	18.51%
Raleigh	0.55%	35.28%
Houston	0.46%	18.67%
United States	**0.53%**	**26.00%**
Notes	Selected cities in the South Region represent the 10 highest commuting rates for cities over 250,000	
	Total commuting population excludes those that work at home	
Source	U.S. Census Bureau, 2010 American Community Survey, Table B08006	

Comparing Female Bicyclists at the State Level

To evaluate New Orleans relative to other cities in Louisiana, three-year aggregate ACS data from 2008-2010 is used. Table 21 summarizes bicycling trends in major cities in Louisiana. As in previous years, New Orleans has the highest bicycle commuter mode share. However, Lake Charles, Alexandria, and Kenner—though they had far fewer cyclists—had a much higher proportion of female cyclists. Sample sizes at this level of geography are small, though, which may impact the accuracy of this data.

Overall, during the 2008-2010 period, Louisiana aligned closely with southern regional trends, albeit with a slightly higher mode share for cyclists, and a slightly higher rate of female cyclists that closely matches the national average.

Table 21: Bicycle Commuting in Louisiana, 2008-2010

Bicycle Commuting in Louisiana, 2008-2010		
Geography	Bicycle Mode Share	Percent of bike commuters who are female
New Orleans	**1.85%**	**30.45%**
Lafayette	0.90%	22.22%
Baton Rouge	0.75%	20.80%
Metairie	0.49%	5.36%
Alexandria	0.28%	51.92%
Lake Charles	0.28%	73.81%
Kenner	0.12%	43.24%
Shreveport	0.00%	0.00%
Louisiana	**0.38%**	**26.37%**
South Region	0.33%	24.71%
United States	0.57%	26.67%
Note	Louisiana cities selected were the only geographies with data available	
	Total commuting population excludes those that work at home	
Source	U.S. Census Bureau, 2008-2010 American Community Survey, Table B08006	

Comparing Female Pedestrians with National Leaders in Active Transportation

As in 2009, New Orleans ranked 15th in the share of its population that walks to work among cities with populations greater than 250,000 in 2010 (Table 22). However, the proportion of estimated female pedestrian commuters sharply increased from 31% to 59%, while PBRI count data suggests that female pedestrians make up closer to 40% of the total, as in previous years. This discrepancy highlights the challenges of working with sample data. Analysis of additional years of data is needed to better evaluate long term trends.

Comparing Female Pedestrians at the Regional Level

Given this apparent spike in female pedestrian commuters represented in the ACS data, New Orleans now ranks second among southern cities with high walking rates for its share of female pedestrians, and ranks third overall (as in 2009) for total walking commute mode share, after Greensboro, NC and Baltimore, MD (Table 23). Again, the South Region lags behind the nation in pedestrian commute share as well as proportion of female pedestrians.

Comparing Female Pedestrians at the State Level

As with bicycling data, state-level comparisons were conducted using 2008-2010 3-Year ACS estimates. Table 24 summarizes the resulting pedestrian commuting patterns in Louisiana. New Orleans had the highest mode share for pedestrian commuting in the state, as in previous years, and a moderate rate of female pedestrians relative to other cities. Louisiana's overall rate of pedestrian commuters and female pedestrians is slightly higher than the southern regional average, but still lags behind national rates.

Table 22: Top Cities over 250,000 for Pedestrian Commuting, 2010

Top Cities over 250,000 for Pedestrian Commuting, 2010			
Overall Rank	City	Walking Mode Share	Percent of pedestrian commuters who are female
1	Boston	15.8%	48%
2	Washington, DC	11.8%	49%
3	Pittsburgh	10.8%	49%
4	New York	10.1%	52%
5	San Francisco	9.4%	55%
6	Honolulu	9.2%	51%
7	Seattle	8.6%	48%
8	Philadelphia	8.3%	54%
9	Newark	7.3%	50%
10	Minneapolis	6.7%	48%
11	Buffalo	6.5%	49%
12	Chicago	6.5%	51%
13	Baltimore	6.4%	50%
14	St. Louis	5.5%	53%
15	New Orleans	5.4%	59%
	2012 PBRI Findings	*n/a*	*42%*
Note	Total commuting population excludes those that work at home		
Source	U.S. Census Bureau, 2010 American Community Survey, Table B08006		

Table 23: Regional Pedestrian Commuting Statistics, 2010

Regional Pedestrian Commuting Statistics, 2010		
Geography	Walking Mode Share	Percent of pedestrian commuters who are female
West Region	**2.96%**	**45.34%**
Northeast Region	**4.63%**	**48.78%**
Midwest Region	**2.69%**	**46.79%**
South Region	**1.87%**	**42.27%**
Washington, DC	11.76%	48.67%
Baltimore	6.44%	49.93%
New Orleans	5.40%	59.03%
2012 PBRI Findings	*n/a*	*42.40%*
Atlanta	4.12%	44.10%
Miami	3.75%	45.28%
Lexington-Fayette county	*3.28%*	*41.54%*
Tucson	3.13%	52.41%
Austin	2.96%	46.15%
Greensboro	2.46%	66.37%
San Antonio	2.31%	53.80%
United States	**2.77%**	**45.94%**
Notes	Selected cities in the South Region represent the 10 highest commuting rates for cities over 250,000	
	Total commuting population excludes those that work at home	
Source	U.S. Census Bureau, 2010 American Community Survey, Table B08006	

Table 24: Pedestrian Commuting in Louisiana, 2008-2010

Pedestrian Commuting in Louisiana, 2008-2010		
Geography	Walking Mode Share	Percent of pedestrian commuters who are female
New Orleans	5.49%	46.69%
Baton Rouge	3.64%	50.27%
Shreveport	2.55%	33.07%
Lake Charles	2.50%	71.48%
Metairie	2.23%	33.49%
Lafayette	2.11%	39.17%
Alexandria	1.71%	46.33%
Kenner	1.05%	59.45%
Louisiana	**2.00%**	**44.87%**
South Region	1.95%	42.99%
United States	2.96%	46.32%
Notes	Louisiana cities selected were the only geographies with data available	
	Total commuting population excludes those that work at home	
Source	U.S. Census Bureau, 2008-2010 American Community Survey, Table B08006	

Conclusions

This section synthesizes the trends and data presented in this report and evaluates possible directions for future study, in order to promote New Orleans as a regional and national leader in active transportation.

Bicycle Activity in New Orleans

The total number of observed bicyclists increased by 22% from 2010-2011, and by 35% from 2011- 2012, for a total two-year increase of 65%. When translated into Estimated Daily Traffic (EDT) figures that adjust for temporal variations, an overall 54% increase in bicycle activity is reported. As discussed in the *New Orleans Pedestrian and Bicycle Count Report, 2010-2011,* New Orleans' EDT figures at manual count sites city wide have been relatively low compared to national leaders in active transportation. Based on the data presented in this report, New Orleans may be beginning to gain on some of these well-established bicycling cities.

Notably, in all three years for which data has been collected, high bicycle volumes and large rates of increase from year to year have been observed at sites located near the Central Business District, suggesting that use of bicycles for work trips may be increasing. ACS data for 2011 and 2012, when released, should be evaluated to corroborate these findings.

Helmet use in New Orleans remains very low, at about 16%, indicating an ongoing bicyclist safety issue that requires further attention to encourage helmet use. However, rates of bicyclists travelling in the street in the direction of traffic, rather than against traffic or on the sidewalk or neutral ground, are increasing overall, despite a slight dip in right-way travel in 2011, from about 75% in 2010 to 80% in 2012. Travel orientation should continue to be monitored to evaluate this trend. In addition, further attention should be dedicated to the possible correlation between race and helmet use/travel orientation, as this study found notable discrepancies in these behaviors among different demographic groups.

The percentage of bicyclists that are female remained roughly the same as in previous years observed, at about 28%. Increases in observed total volumes mean that overall, there are more females bicycling in New Orleans each year, however, as a proportion of the total, this figure is somewhat lower than most national leaders in bicycling.

Impact of Bicycle Facilities

Evaluating the impact of new bicycle facilities is complex, and involves an analysis of crash statistics, usage, and a variety of other factors. This section analyzes just one angle of this issue, by looking at the relative change in bicyclist and pedestrian Estimated Daily Traffic, and the percentage change in helmet use, female cyclists, and right-way travel at locations with or adjacent to bicycle facilities, and at locations with no nearby bicycle facilities installed. . These categories are compared in terms of relative change from 2010 to 2011, 2011 to 2012, and 2010 to 2012 in Table 25.

Importantly, no new facilities were installed on or adjacent to these count locations between the 2011 and 2012 counts. As planned facilities are installed near other count sites, we can expect the data to more clearly reflect impacts of infrastructure investment.

Table 25: Comparison of Site Attribute Change by Presence of Bicycle Facilities

Change in Site Statistics by Presence of Bicycle Facilities 2010-2012				
		Bike Facilities Present or Adjacent	No Nearby Bicycle Facilities	All Facilities
Percent Change in Bicyclist EDT	2010-2011	40.60%	5.20%	19.50%
	2011-2012	34.30%	22.20%	27.90%
	2010-2012	**88.80%**	**28.60%**	**52.90%**
Percent Change in Helmet Use	2010-2011	6.60%	5.10%	5.60%
	2011-2012	2.12%	-2.17%	-0.07%
	2010-2012	**8.72%**	**2.95%**	**5.52%**
% Point Change in Female Cyclists	2010-2011	0.70%	2.10%	1.50%
	2011-2012	-1.32%	1.82%	0.26%
	2010-2012	**0.02%**	**3.15%**	**1.60%**
% Change Cyclist Right Way Travel	2010-2011	-0.80%	0.00%	-1.10%
	2011-2012	8.53%	4.53%	6.33%
	2010-2012	**6.90%**	**5.30%**	**5.50%**
Percent Change in Pedestrian EDT	2010-2011	-18.90%	10.90%	0.20%
	2011-2012	40.70%	34.40%	36.20%
	2010-2012	**14.10%**	**49.10%**	**36.50%**

Note: Excludes Metairie Hammond Highway and Papworth Avenue Count statistics, as these were not counted in 2010

Table 25 shows that the sites with bicycle facilities present or adjacent saw their bicycle EDT increase at a much more rapid rate than those with no nearby bicycle facilities from 2010 to 2011, though this trend was less pronounced in 2012, with a 34% increase in EDT at locations with bike facilities, compared to 22% increase in EDT at locations without. Pedestrian EDT increased substantially at all count sites, without a clearly discernable relationship to presence or absence of bicycle facilities.

The relationships between presence of bicycle facilities and compositional characteristics are subtle, and will require more years of data collection to uncover distinct trends. However, it may be noted that between 2010 and 2012, helmet use increased by nearly 9% at locations near bicycle facilities, and by only 3% at locations

without. This may indicate that users of marked bicycle facilities are more cautious overall. Right-way travel also increased by a larger margin in 2012 at locations with bicycle facilities than at those without.

It is notable, however, that at observed locations where dedicated bicycle lanes are in place (St. Claude Ave and Gentilly Blvd), correct use of the bike lane varied. On Gentilly Blvd, 99% of on-street cyclists were in the bike lane, whereas at St. Claude Ave, only 92% of on-street cyclists were observed in the bike lane. During at least one count period, this can be attributed to partial obstruction of the bike lane, which is a common occurrence at this location. At both locations with dedicated bike lanes, wrong way travel persisted: 12% of cyclists on Gentilly Blvd and 13% on St Claude Ave were traveling the wrong direction while using the bike lane. This is consistent with overall wrong-way travel trends, and highlights the need for continuing rider education and enforcement on safe cycling behavior and proper use of facilities.

Pedestrian Activity in New Orleans

Total observed volumes of pedestrians, as well as Estimated Daily Traffic, at PBRI's manual count sites, have also increased from year to year. A modest increase was observed from 2010-2011, followed by a sharp increase (40% more total pedestrians observed) from 2011-2012. In total, the two-year total increase in pedestrian activity at count locations was 56%, which is adjusted to a 38% two-year increase in average EDT.

The percentage of female pedestrians is comparable to previous years, at 42%, and is much higher than the percentage of female bicyclists. This is in line with national trends, including active transportation leaders. Travel orientation is also stable among pedestrians, with about 93% of pedestrians observed traveling on the sidewalk.

Though not analyzed in depth in this report, the effects of land use (i.e. presence and density businesses and shopping or entertainment outlets in the immediate area) appear to have a significant relationship with pedestrian traffic volumes. Future studies should look more closely at the specific characteristics of the built environment surrounding count locations in order to better evaluate the specific attributes that correlate with increased active transportation activity.

Jefferson Davis Trail

As noted above, data collected by the electronic counter at the Jefferson Davis Trail includes both bicycles and pedestrians. On average, the counter recorded 534 users per day—a 15% increase from the first year of data collected.. Average Daily Traffic (ADT) is variable by season with the highest ADT volumes occurring during the spring season and the lowest occurring during the summer. Usership spikes sharply during festivals and sporting events in the Mid-City area. Hourly patterns of use reveal relatively consistent use throughout the day. This data, collected monthly, is a valuable resource for collecting reliable, year-round observations on trail use. Future studies should consider the installation of additional Eco-Counter devices in order to access similar data at other multi-use path locations (e.g. the Wisner Trail) in the New Orleans area.

Evaluating Active Transportation in New Orleans: Policy Implications

Bicycling and walking are low cost, healthy alternatives to driving and are an integral part of developing a sustainable, multimodal transportation network in New Orleans. By significantly increasing the availability of dedicated facilities for bicycling and continuing to improve an already robust pedestrian infrastructure network, New Orleans has begun to create a built environment that facilitates and encourages walking and bicycling.

This report provides robust preliminary data indicating that these efforts are being rewarded with substantial annual increases in users—both bicyclists and pedestrians—citywide, and particularly in areas with dedicated, high-quality infrastructure for biking and walking.

National data show that New Orleans is a clear leader in active transportation in the State of Louisiana, as well as the South region. Nationally, New Orleans is an 'emerging' leader, with relatively strong bicycling and walking mode shares and significant recent recognition from active transportation organizations for its rapid advances since Hurricane Katrina.

However, New Orleans' lead on many peer cities may be slipping, as more and more communities fully embrace active transportation and enhanced livability. More work remains to be done if New Orleans is to maintain and improve its status as a leader in active transportation: The current bicycle network is not contiguous, lacking key connections between neighborhoods rich in bike infrastructure (e.g. the CBD and Gentilly). In order to see strong user gains in areas outside of the downtown core of the city, connectors such as the planned Lafitte Greenway must be advanced.

Moreover, safety remains a serious concern: low helmet usage, as well as very high crash rates for both bicyclists and pedestrians (see: New Orleans Regional Pedestrian and Bicycle Crash Report, 2009-2010), indicate that facility installation alone is not enough. Supporters of increased bicycling and walking, as key components of a healthy, active, sustainable, and economically vibrant community, must continue to advocate for not only new facilities and a more complete network, but also programs and policies that support safety for all users.

Appendices

A. Manual Count Site Characteristics
B. Manual Count Observation Protocol
C. Manual Count Observation Sheets
D. Manual Count Weather Data
E. PBRI Extrapolation Methodology
F. NBPD Project Count Adjustment Worksheet
G. Additional Automatic Count Data Tables

Appendix A: Manual Count Site Characteristics

Manual Count Site Characteristics

Site	Neighborhood	Facility Type	On-Street Parking	Bicycle Infrastructure Improvements	Year Installed	CBD Gateway
Decatur St	CBD/FQ	1-lane, One-Way	One Side			
Royal St	Marigny	1-lane, One-Way	Both Sides			
St. Claude Ave	Bywater	4-Lane, Divided	Both Sides	Bike Lanes	2008	
Simon Bolivar Ave	Central City	4-Lane, Divided	Both Sides*	Connecting segment with sharrows	2010	X
Carondelet St	Central City	2-Lane, One Way	Both Sides**			X
St. Charles Ave	Central City	6-Lane, Divided	Both Sides			X
Camp St	Central City	2-Lane, One Way	One Side	Connecting segment with sharrows	2010	X
Magazine St	Central City/ LGD	2-Lane, One Way	Both Sides	Connecting segment with sharrows	2010	X
Magazine St (Uptown)	Uptown	2-Lane	None			
Esplanade Ave	Mid-City	4-Lane, Divided	Both Sides			
Paris and Burbank	Gentilly	4-Lane, Divided	Both Sides			
Gentilly Blvd	Gentilly	6-Lane, Divided	None	Bike Lanes	2010	
Harrison Ave	Lakeview	4-Lane, Divided	Both Sides	Connecting segment with bike lanes	2009	
Metairie Hammond Hwy	Bucktown	2-Lane	None			
Papworth Ave	Metairie	2-Lane	None			
Notes:	CBD is the Central Business District. FQ is French Quarter. LGD is Lower Garden District. Orleans Parish neighborhood classification derived from Greater New Orleans Community Data Center (GNOCDC, 2002).					
	*Facility terminates into Earhart Blvd as a 2-lane, one-way street with no parking					
	**One side of the block observed on Carondelet has an off-street parking strip immediately perpendicular to the road.					

Appendix B: Manual Count Observation Protocol

Bike Ped Observation Protocol

Rationale

In 2009-2011, the city of New Orleans Department of Public Works and the State of Louisiana Department of Transportation installed approximately fifty miles of bicycle lanes in New Orleans. These bike lanes run through several neighborhoods in New Orleans. We would like to examine the effect of bike lanes on ridership and pedestrian behavior in New Orleans.

Summary

This data collection method was created by Kathryn Parker, MPH. The data collection sheet is based upon examples of other pedestrian and bicycle data collection methods from the United States Department of Transportation.[1] The method is based upon two individuals counting bicycle riders on the street, sidewalk and neutral ground before and after the installation of bike lanes. The counts of pedestrians will also be made. The data can be analyzed to find the number of cyclists by direction of travel, specific location, (i.e. street, sidewalk or neutral ground) gender, race and approximate age.

Observation Areas

Each group of streets will have different observation areas. These areas will be provided on maps we give to you.

Two observers should stand or sit at the designated location as indicated by the observation area maps. One observer should be located at each side of the street, within eyesight of the other observer.

Training and Certification

All observers will read this protocol with the trainer and then practice near the corner of N. Rampart and Canal Streets. Observers will be certified with 80% agreement with the trainer after 30 minutes of observation.

Codes and Recoding

Intersection: Usually, this will be Broad and Lafitte; etc.

Temperature: Observers will leave this section blank. The temperature will be filled out by the project manager using the average hour weather data from www.wunderground.com

Rain: Observers will record if there are any rain showers.

Observer Name: Observers will record their first and last name

Hour: example: 7:00-8:00am will read: 7:00am. Only one hour should be indicated per time slot. If the observer sees that they are running out of room, they may use a time slot for every half hour or less.

Comments: Observers should note if there are any unusual circumstances affecting lane usage, such as cars parked on the bike lane or unsafe riding conditions. It should also be noted if another observer substitutes counting by adding their name and the time they observed under comments (i.e., for a bathroom break).

[1]Schneider, Robert; Patton, Robert; Toole, Jennifer; Raborn, Craig. Pedestrian and Bicycle Data Collection in United States Communities: Quantifying Use, Surveying Users, and Documenting Facility Extent. January 2005. Pedestrian and Bicycle Information Center,

University of North Carolina at Chapel Hill. Sponsored by the Federal Highway Administration.

Observation Procedures

Observers will arrive 10 minutes early to the intersection of the observation area so that they will be ready to observe promptly at the top of the hour. After filling out the top of the form for the intersection, rain, name, day, date and hour; observers will then observe the cyclists and pedestrians at both sides of the street. Observers should imagine a line in the middle of the block as the observation plane. No cyclist or pedestrians will be counted unless they cross that observation plane.

Observers may sit or stand, as long as they have a view of the observation plane on both sides of the street. Both observers will observe all cyclists and pedestrians at all times. One observer will be designated to observe the sidewalk, street, and neutral ground, while the other observer will only observe the sidewalk and street.

As soon as the observers see a cyclist cross the observation plane, they will mark a straight line in the appropriate box. The fifth line in every box will be made diagonally across the previous four lines. Observers will note the gender, race, approximate age and direction the cyclist is riding. Approximate age is indicated by 'adult' or 'child,' i.e. appearance of high school or older as 'adult' and middle school and younger as 'child.' Riding with traffic is denoted as 'Right Way' (RW); riding against traffic is denoted as 'Wrong Way.' (WW) Observers will also count the number of cyclists riding on the sidewalk and neutral ground and mark the appropriate age, race, and gender for the rider.

Observers will also count pedestrians in the same manner on the separate pedestrian form; however they will not note the direction of travel for pedestrians.

For streets with bike lanes, observers will count bikers in the same manner described above; additionally, they will note if the biker is riding in or out of the bike lane. Observers will mark people using the bike lane below the dotted line; those who are riding out of the lane are marked above the dotted line.

Observers should have their UNO identification cards at all times. If at any time there is an unsafe activity, the observers should leave the area, return to UNO and inform the project manager of any situation that interfered with the data collection.

Data collection times will be three days per week. Data will be collected Tuesday, Wednesday, and Thursday from 7-9 AM and 4-6 PM.

Appendix C: Manual Count Observation Sheets

Bicycle Observation Tally Form

Observer Name: _____ Intersection: _____

Day: _____ Date: _____ Temperature: _____ Rain: Y/N

Hour	Street								Neutral Ground				Sidewalk				Helmet?
	Women		Girls		Men		Boys		Women	Girls	Men	Boys	Women	Girls	Men	Boys	
	RW	WW	RW	WW	RW	WW	RW	WW									
	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	
_:_ _	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	
	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	
	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	
_:_ _	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	
	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	
	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	
_:_ _	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	
	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	

Comments:

Pedestrian Observation Tally Form

Observer Name: _____ Intersection: _____

Day: _____ Date: _____ Temperature: _____ Rain: Y/N

Hour	Street				Neutral Ground				Sidewalk			
	Women	Girls	Men	Boys	Women	Girls	Men	Boys	Women	Girls	Men	Boys
	W	W	W	W	W	W	W	W	W	W	W	W
_:_ _	B	B	B	B	B	B	B	B	B	B	B	B
	O	O	O	O	O	O	O	O	O	O	O	O
	W	W	W	W	W	W	W	W	W	W	W	W
_:_ _	B	B	B	B	B	B	B	B	B	B	B	B
	O	O	O	O	O	O	O	O	O	O	O	O
	W	W	W	W	W	W	W	W	W	W	W	W
_:_ _	B	B	B	B	B	B	B	B	B	B	B	B
	O	O	O	O	O	O	O	O	O	O	O	O
	W	W	W	W	W	W	W	W	W	W	W	W
_:_ _	B	B	B	B	B	B	B	B	B	B	B	B
	O	O	O	O	O	O	O	O	O	O	O	O

Comments:

Appendix D: Manual Count Weather Data

2012 Manual Count Weather Data						
		Temperature (°F)			Precip.	Observed Weather Events
Site	Count Date	High	Average	Low	(in)	
Harrison Ave	4/10/2012	84	74	64	0	none
	4/25/2012	84	72	59	0	none
Metairie Hammond Hwy	4/12/2012	79	71	63	0	none
	5/16/2012	86	77	68	0	none
Papworth Ave	4/11/2012	86	76	66	0.04	light drizzle, pm
	4/12/2012	79	71	63	0	none
Gentilly Blvd	4/17/2012	79	71	62	1.01	light drizzle AM, heavy rain PM
	4/19/2012	81	72	63	0	none
Esplanade Ave	4/17/2012	79	71	62	1.01	light drizzle AM, heavy rain PM
	4/18/2012	79	70	60	0	none
Royal St	4/24/2012	76	65	53	0	none
	4/26/2012	85	76	66	0	none
St. Claude Ave	4/24/2012	76	65	53	0	none
	4/25/2012	84	72	59	0	none
Magazine St (Uptown)	5/1/2012	88	79	69	0	none
	5/2/2012	88	81	73	0.12	none
Paris and Burbank	5/1/2012	88	79	69	0	none
	5/3/2012	88	80	72	0	none
Camp St (Gateway)	5/8/2012	88	80	72	0.03	very light rain PM
	5/10/2012	83	76	69	0	none
Magazine St (Gateway)	5/15/2012	85	77	69	0	none
	5/17/2012	89	79	68	0	none
Decatur St	5/8/2012	88	80	72	0.03	very light rain PM
	5/10/2012	83	76	69	0	none
Simon Bolivar Ave (Gateway)	5/15/2012	85	77	69	0	none
	5/17/2012	89	79	68	0	none
Carondelet St (Gateway)	5/22/2012	90	81	71	0	none
	5/23/2012	89	81	72	T	very light rain PM
St. Charles Ave (Gateway)	5/22/2012	90	81	71	0	none
	5/24/2012	88	80	72	0	none
Source: The Weather Undergound						

Appendix E: PBRI Manual Count Extrapolation Methodology

Manual Counts were performed at 15 sites in Orleans and Jefferson Parish, LA. Each count site represents a total of four observation periods: two AM counts (7-9 AM) and two PM counts (4-6 PM). For all sites, with the exception of the Paris and Burbank intersection count, two volunteers observed from opposite sides of the street, creating a "plane" of observation. Observers differentiated between pedestrians and bicyclists and noted gender, race, age group, helmet use, and travel orientation. With the data collected by PBRI student workers, the following extrapolation method, derived from the National Bicycle and Pedestrian Documentation (NBPD) Project, was used to estimate daily, weekly, monthly, and annual traffic volumes of pedestrians and bicyclists.

PBRI Extrapolation Methodology

- Divide counts into AM and PM sessions. There should be two, 2-hour counts for each session.
- Come up with separate bicycle and pedestrian averages for AM and PM sessions. (i.e. for AM bicycle average, add both 2-hour AM bicycle counts and divide by the amount of hours observed, which should be four.)
- Add the bicycle and pedestrian averages together for a total user average. Then, multiply this number by 1.05 (this multiplier accounts for traffic between 11pm and 6am which is rarely manually counted and assumed to make up 5% of all daily volume).
- To calculate the daily volume, note the time (hours) that were observed for AM and PM counts. These should always be 7-9am for AM counts and 4-6pm for PM counts. Also note the month of the year. Use the NBPD Project extrapolation formula to find the corresponding adjustment factors for the time period and month. For our purposes, all manual counts are PED trails and should have been observed on a weekday. Divide total user averages by their appropriate adjustment factor to get the daily user average.
- For weekly volumes, determine the days that the AM and PM counts were observed. They may be the same or different. Use NBPD Project methodology to find the correct adjustment factor(s) for the AM and PM counts. If, for example, one AM count (2 hours) was taken on a Tuesday and the other count (2 hours) was taken on a Thursday, take the average of the two adjustment factors and apply it. Divide the AM and PM session daily user averages by their appropriate adjustment factor to get the weekly averages for AM and PM sessions.
- At this point, average the weekly user averages for the AM and PM sessions together since all unique data attributes have now been accounted for.
- Get the monthly user average by multiplying the combined AM and PM weekly average by 4.33 (the number of weeks in a year).
- In order to get the annual estimate, note the month that the counts were observed. This is done to account for seasonal variation in use. Use NBPD Project methodology to find the respective adjustment factor for the month observed under our climate pattern and divide the monthly user average by this number. NBPD methodology provides 3 climates to choose from. For New Orleans, choose "very hot summer, mild winter." Climate is accounted for because it affects monthly patterns.
- To get monthly or daily averages from the annual estimate above, simply divide by 12 or 365 respectively.
- In order to get individual bicycle and pedestrian averages, multiply the desired average (daily, weekly, monthly, or annual) by the bicycle or pedestrian percentage observed from the manual counts at that site.

Appendix F: NBPD Project Count Adjustment Worksheet

NATIONAL BICYCLE & PEDESTRIAN DOCUMENTATION PROJECT

Count Adjustment Factors

March 2009

While more year-long automatic count data is needed from different parts of the county, especially for pedestrians and on-street bicyclists, enough data now exists to allow us to adjust counts done almost any period on multi-use paths and pedestrian districts to an annual figure.

All percentages in the following tables represent the percentage of the total period (day, week, or month).

How to Use This Data

The factors in the following tables are designed to extrapolate daily, monthly, and annual users based on counts done during any period of a day, month, or year. The factors currently are designed to be used by (a) multi-use pathways (PATH) and (b) higher density pedestrian and entertainment areas (PED).

How Many Counts Can it Be Based On?

Given the variability of bicycle and pedestrian activity, we strongly encourage that all estimates be based on the average of at least two (2) and preferably three (3) counts during the same time period and week, especially for lower volume areas. For example, counts could be done from 2-4pm on consecutive weekdays (Tuesday – Thursday) during the same week, or, in consecutive weeks. Weekday counts should always be done Tuesday through Thursday, and never on a holiday. Weekend counts can be done on either day.

Bicyclists versus Pedestrians

The factors used in these formulas are for combined bicyclist and pedestrian volumes. Once you have calculated your total daily, monthly, or annual volume, you can simply multiple the total by the percent breakdown between bikes and pedestrians based on your original count information.

Start with the Hour Count

Once you have collected your count information and developed an average weekday and weekend count volume for bicyclists and/or pedestrians, pick any one (1) hour period from either of those days.

Adjustment Factor

Your next step is to multiply those counts by 1.05.

Sample #1

Average 1 hour weekday count: 236 bikes/peds x 1.05 = 248

Average 1 hour weekend day count: 540 bikes/peds x 1.05 = 567

1

NBPD Count Adjustment Factors (March 2009)

This adjustment factor is done to reflect the bicyclists/pedestrians who use the facility between 11pm and 6am, or, about 5% of the average daily total. The count formulas are all based on total counts between 6am and 10pm, since many available counts only cover those periods. If you are certain your facility gets virtually no use between those hours, you can forgo this step.

Calculate Daily Weekday and Weekend Daily Total

Identify the weekday and weekend hour your counts are from in Table 1 below. Be sure to use the PATH column for all multi-use paths, and the PED column for all higher density pedestrian areas with some entertainment uses such as restaurants. Be sure to select the correct time of year (April-September, or, October-March) as well.

Sample #2: done in June on a multiuse path (weekday = 4-5pm, weekend day = 12-1pm):

Adjusted weekday hourly count = 248/.07 = 3,542 daily users

Adjusted weekend day hourly count = 567/.1= 5,670 daily users

Calculating Average Weekly Volumes

We need to adjust these figures based on the day of the week. See table 2 below. Find the day of the week your counts were done, and factor them by that percent. If you did multiple counts on different days of the week, then take the average of those factors.

Sample #3: counts were done on a Tuesday and a Saturday.

Adjusted weekday count = 3,542/.13 = 27,246 average weekly users

Adjusted weekend count = 5,670/.18 = 31,500

Add these two figures together, and divide by 2: 27,246+31,500=58,746/2 = 29,373 people

The average weekly volumes for that month are 29,373 people.

Convert to Monthly Volumes

To convert from average weekly volumes to an average monthly volume, multiply the average weekly volume by the average number of weeks in a month (4.33 weeks).

Sample #4: 29,373 x 4.33 = 127,282 people.

This is the average monthly volume for the month the counts were conducted.

Convert to Annual Totals

To convert from the average monthly volume for the month the counts were taken into an annual total, divide the average monthly figure by the factor from Table 3 for the month the counts were conducted. Use the general climate zones described. Some climate zone types are not included.

Sample #5: counts were done in June in a moderate climate zone.

Average monthly volumes = 127,282/.08 = 1,591,037 people.

Based on these sample figures, it is estimated that almost 1.6 million people use the pathway annually.

2

Average Monthly and Daily Figures

To identify the average monthly and daily figures, simply divide the annual figure by 12 (for month) or by 365 (for daily figures).

Monthly average = 1,591,037/12 = 132,586 people

Daily Average = 1,591,037/365 = 4,359 people

Table 1

Hourly Adjustment Factors

Multi-use paths and pedestrian entertainment areas by season

	April - September 6am - 9pm					October - March 6am - 9pm			
	---- PATH------		-----PED-----			---- PATH------		-----PED-----	
	wkdy	wkend	wkdy	wkend		wkdy	wkend	wkdy	wkend
0600	2%	1%	1%	1%	0600	2%	0%	1%	0%
0700	4%	3%	2%	1%	0700	4%	2%	2%	1%
0800	7%	6%	4%	3%	0800	6%	6%	3%	2%
0900	9%	9%	5%	3%	0900	7%	10%	5%	4%
1000	9%	9%	6%	5%	1000	9%	10%	6%	5%
1100	9%	11%	7%	6%	1100	9%	11%	8%	8%
1200	8%	10%	9%	7%	1200	9%	11%	9%	10%
1300	7%	9%	9%	7%	1300	9%	10%	10%	13%
1400	7%	8%	8%	9%	1400	9%	10%	9%	11%
1500	7%	8%	8%	9%	1500	8%	10%	8%	8%
1600	7%	7%	7%	9%	1600	8%	8%	7%	7%
1700	7%	6%	7%	8%	1700	7%	5%	6%	6%
1800	7%	5%	7%	8%	1800	6%	3%	7%	6%
1900	5%	4%	7%	8%	1900	4%	2%	7%	6%
2000	4%	3%	7%	8%	2000	2%	1%	6%	6%
2100	2%	2%	6%	8%	2100	2%	1%	5%	5%

Table 2

Daily Adjustment Factors

Note: Holidays use weekend rates.

MON	14%
TUES	13%
WED	12%
THURS	12%
FRI	14%
SAT	18%
SUN	18%

Table 3

Monthly Adjustment Factors by Climate Area

	Climate Region		
Month	Long Winter Short summer	Moderate Climate	Very hot summer Mild winter
JAN	3%	7%	10%
FEB	3%	7%	12%
MAR	7%	8%	10%
APR	11%	8%	9%
MAY	11%	8%	8%
JUN	12%	8%	8%
JUL	13%	12%	7%
AUG	14%	16%	7%
SEP	11%	8%	6%
OCT	6%	6%	7%
NOV	6%	6%	8%
DEC	3%	6%	8%

Appendix G: Additional Automatic Count Data Tables

Jefferson Davis Trail Observed Volume by Hour of Day			
	Absolute #	*% of Total*	Average Hourly Users
12:00 AM	1,723	*0.9%*	4.7
1:00 AM	972	*0.5%*	2.7
2:00 AM	557	*0.3%*	1.5
3:00 AM	407	*0.2%*	1.1
4:00 AM	490	*0.3%*	1.3
5:00 AM	1,325	*0.7%*	3.7
6:00 AM	5,753	*3.0%*	15.8
7:00 AM	10,109	*5.2%*	27.8
8:00 AM	11,633	*6.0%*	32.0
9:00 AM	12,317	*6.4%*	33.9
10:00 AM	10,858	*5.6%*	29.9
11:00 AM	11,349	*5.9%*	31.3
12:00 PM	12,225	*6.3%*	33.7
1:00 PM	11,998	*6.2%*	33.1
2:00 PM	11,639	*6.0%*	32.1
3:00 PM	12,635	*6.5%*	34.8
4:00 PM	15,333	*7.9%*	42.2
5:00 PM	16,490	*8.5%*	45.4
6:00 PM	14,778	*7.6%*	40.7
7:00 PM	12,736	*6.6%*	35.1
8:00 PM	7,551	*3.9%*	20.8
9:00 PM	4,839	*2.5%*	13.3
10:00 PM	3,461	*1.8%*	9.5
11:00 PM	2,229	*1.2%*	6.1
Total	**193,407**	***100.0%***	**22.2**

*Three days of April data removed due to mechanical problem

Jefferson Davis Trail Observed Volume by Week

Week of	Absolute #	% of Total	Average Daily Users	Average Daily Temp	Total Weekly Precipitation (in)
Wed 01 Jun 2011	2705	1.40%	386	86	0.08
Wed 08 Jun 2011	3052	1.58%	436	83	1.52
Wed 15 Jun 2011	2631	1.37%	376	87	0.06
Wed 22 Jun 2011	2587	1.34%	370	84	2.91
Wed 29 Jun 2011	2811	1.46%	402	87	0.64
Wed 06 Jul 2011	3215	1.67%	459	86	0.97
Wed 13 Jul 2011	2759	1.43%	394	83	2.54
Wed 20 Jul 2011	3026	1.57%	432	83	2.65
Wed 27 Jul 2011	2972	1.54%	425	85	6.33
Wed 03 Aug 2011	2625	1.36%	375	88	0.16
Wed 10 Aug 2011	3066	1.59%	438	87	0.74
Wed 17 Aug 2011	3065	1.59%	438	88	0.03
Wed 24 Aug 2011	3240	1.68%	463	87	0.68
Wed 31 Aug 2011	2747	1.43%	392	80	11.05
Wed 07 Sep 2011	6616	3.44%	945	76	0
Wed 14 Sep 2011	3677	1.91%	525	79	1.69
Wed 21 Sep 2011	3571	1.85%	510	81	0.36
Wed 28 Sep 2011	3990	2.07%	570	73	0.17
Wed 05 Oct 2011	3918	2.03%	560	75	0
Wed 12 Oct 2011	4530	2.35%	647	73	0.2
Wed 19 Oct 2011	5402	2.81%	772	65	0
Wed 26 Oct 2011	4112	2.14%	587	65	0.02
Wed 02 Nov 2011	3732	1.94%	533	67	0.02
Wed 09 Nov 2011	3432	1.78%	490	65	0.2
Wed 16 Nov 2011	3380	1.76%	483	70	2.43

Wed 23 Nov 2011	2520	1.31%	360	58	0.53
Wed 30 Nov 2011	3242	1.68%	463	60	0.38
Wed 07 Dec 2011	2416	1.25%	345	50	0.01
Wed 14 Dec 2011	2942	1.53%	420	62	0.29
Wed 21 Dec 2011	1796	0.93%	257	59	0.62
Wed 28 Dec 2011	2997	1.56%	428	57	0.02
Wed 04 Jan 2012	3709	1.93%	530	64	0.01
Wed 11 Jan 2012	3353	1.74%	479	56	0.28
Wed 18 Jan 2012	3693	1.92%	528	67	0.18
Wed 25 Jan 2012	3837	1.99%	548	61	1.32
Wed 01 Feb 2012	3605	1.87%	515	65	0.66
Wed 08 Feb 2012	3131	1.63%	447	52	1.28
Wed 15 Feb 2012	3461	1.80%	494	62	2.71
Wed 22 Feb 2012	3217	1.67%	460	64	0.07
Wed 29 Feb 2012	4166	2.16%	595	68	0.03
Wed 7 Mar 2012	3687	1.91%	527	69	1.12
Wed 14 Mar 2012	4497	2.34%	642	75	0
Wed 21 Mar 2012	4073	2.12%	582	70	6.79
Wed 28 Mar 2012	4255	2.21%	608	75	2.17
Wed 4 Apr 2012	2870	1.49%	718	73	3.43
Wed 11 Apr 2012	3692	1.92%	527	75	1.37
Wed 18 Apr 2012	5349	2.78%	764	68	0.63
Wed 25 Apr 2012	6396	3.32%	914	76	0
Wed 2 May 2012	5644	2.93%	806	81	0.4
Wed 9 May 2012	3848	2.00%	550	76	0.58
Wed 16 May 2012	10127	5.26%	1447	79	0
Wed 23 May 2012	3172	1.65%	453	82	0

* Week of April 4th only includes 4 days due to mechanical failure; 3 days data excluded

Jefferson Davis Trail Observed Traffic Volumes by Month

	Total Users	*% of Annual Volume*	Average Daily Users	Average Daily Temperature	Total Precipitation (in)
June, 2011	11,733	*6.1%*	391.1	85	4.70
July, 2011	13,053	*6.7%*	421.1	84	13.00
Autust, 2011	13,471	*7.0%*	434.5	88	1.61
September, 2011	17,719	*9.2%*	590.6	79	13.27
October, 2011	19,752	*10.2%*	637.2	70	0.22
November, 2011	14,117	*7.3%*	470.6	64	3.18
December, 2011	11,715	*6.1%*	377.9	58	1.30
January, 2012	15,806	*8.2%*	509.9	61	1.81
February, 2012	14,080	*7.3%*	485.5	61	4.72
March, 2012	18,256	*9.4%*	588.9	71	8.10
April, 2012	19,449	*10.1%*	720.3	73	7.44
May, 2012	24,256	*12.5%*	782.5	80	1.77
Total	**193,407**	***100.0%***	**534.2**	**73**	**61.12**

*Three days of April data removed due to mechanical problem

Jefferson Davis Trail Observed Traffic Volumes by Season

	Total Users	*% of Annual Volume*	Average Daily Users	Average Daily Temp	Total Precip. (in)
Winter	44,224	*22.9%*	497	63	8.3
Spring	58,857	*30.4%*	654	78	17.82
Summer	43,776	*22.6%*	466	84	30.75
Fall	46,550	*24.1%*	517	66	4.25
Total	**193,407**	***100.0%***	**533**	**73**	**61.12**

Spring = June 1-21 2011, + March 20 - May 31 2012
*Three days of April data removed due to mechanical problem