# New Orleans Pedestrian and Bicycle Count Report, 2015

## Final Report

***Prepared for:***

Regional Planning Commission for Jefferson, Orleans, Plaquemines, St. Bernard, St. Tammany, and Tangipahoa Parishes and the Louisiana Department of Transportation and Development

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Greater New Orleans Pedestrian & Bicycle Program

PBRI
PEDESTRIAN BICYCLE RESOURCE INITIATIVE

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LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

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# EXECUTIVE SUMMARY

Ten years after the devastation of Hurricane Katrina and subsequent levee failures in 2005, the New Orleans metro area's transportation system has undergone substantial recovery and reconstruction, including substantial investment in expanding bicycle infrastructure in the City of New Orleans from approximately 12.5 miles in 2005 to 98 miles in August, 2015. As a result of this investment in the built environment, as well as efforts by all levels of government and advocacy groups to provide education and encouragement for walking and bicycling, improve safety, and promote more sustainable and healthy modes of transport for the region, New Orleans has emerged as a regional and national leader in active transportation.

As the region has rebuilt its roadways as part of the recovery process, improvements for pedestrians (e.g. ADA-compliant accessibility features and high-visibility crosswalks) have become a default element of project delivery, and opportunities to add or improve bicycle infrastructure is now considered on most major projects.

As a result of this shift toward a more multimodal transportation network—codified by the local, regional, and statewide adoption of Complete Streets policies—the city's active transportation mode share ranks highly among peer cities in the south and nationally.

In order to document and evaluate gains and trends in walking and bicycling, the Pedestrian Bicycle Resource Initiative, a partnership of the Regional Planning Commission and the Merritt C. Becker, Jr. University of New Orleans Transportation Institute, has conducted pedestrian and bicycle counts from 2010-2015 at a variety of locations in Orleans and Jefferson Parishes. During this time, this annual count program has expanded from thirteen locations to fifty-five, plus an additional permanent electronic counter for continuous year-round monitoring and the strategic deployment of temporary electronic counters to collect supplemental data on roads and trails for further evaluation of trends and infrastructure impacts.

The data in this report expands on previous count studies conducted each spring from 2010 through 2014, documenting active transportation demand and its relationship to new facility development in the region. In total, 48 locations were observed during the 2015 count period, including 12 manual count locations which have been observed each year since 2010, nine count sites observed from 2013-2015, 14 locations which were observed in 2014 and 2015, and 13 new 2015 count locations. In addition, this report documents data collected from an electronic count station which has been collecting data on the Jefferson Davis Parkway Trail since May 2010, electronic count data from a new count device installed on the Tammany Trace in May 2014, and limited short-term electronic count data collected on the Mississippi River Trail in Algiers Point, the Wisner Trail, Woldenberg Park, and Baronne Street collected in 2014 and 2015 (see section 1.2 for information on site selection).

**88% Increase in Bicyclists**
**67% Increase in Pedestrians**
**2010-2015**

This report provides data suggesting that investments in the built environment for pedestrians and bicyclists have resulted in citywide increases in the prevalence of active transportation, particularly in areas where these investments have occurred. This report also provides benchmark data for a variety of count locations that can be used to inform investment priorities and evaluate post-intervention outcomes in safety and usage.

Overall, this report demonstrates that walking and bicycling continue to rise in the region. Trends toward increasing numbers of pedestrians and bicyclists at most count locations have continued from year to year. In several locations, dramatic increases in total users have occurred following the installation of new facilities. In others, steady, incremental increases have been documented. In a few locations, pedestrian and/or bicycle activity has decreased or proven to be highly volatile from year to year, potentially indicating relative deficiency in the infrastructure present and need for review of conditions present to evaluate overall safety, improvements to alternate routes which are now more desirable for users, and/or site-specific circumstances deterring active users such as construction. In total, among existing count sites, the number of bicyclists observed has increased by 88% at the 12 core count locations since 2010, while pedestrian activity has increased by 67%.

The most notable gains and highest observed volumes for bicycles have been on major arterial corridors that include dedicated bicycle facilities (i.e. bike lanes). Overall, estimated daily traffic at sites with dedicated bike lanes has increased by 294% over the last six years, compared to a 54% increase at locations that have no bicycle facilities at all. The proportion of cyclists that are female, indicating greater acceptance of bicycling as a means of transportation and typically a more comfortable bicycling environment[1], has increased over previous years, as has helmet use and correct (on-street, with the flow of traffic) travel orientation.

Changes in these indicators have been more pronounced at locations where infrastructure improvements have been made. Among all 2015 count sites, the total number of bicyclists observed was found to be 23-25% greater at count locations with shared or dedicated bike lanes than at sites with no bicycle facility, and the proportion of bicyclists who were female, wore helmets, and who traveled legally was higher at such locations. These travel behaviors and demographic trends are useful indicators of safety and suggest opportunities for spatially targeted education efforts.

1 *Jan Garrard, Susan Handy, and Jennifer Dill, "Women and Cycling," in City Cycling, John Pucher and Ralph Buehler, editors. MIT Press, 2012*

Changes in pedestrian activity, while somewhat more volatile, confirm that New Orleans is a city where walking—whether to work, for errands, to recreation, or purely as exercise—is popular and feasible in many neighborhoods and among a diverse range of demographic groups.

**Total Bicyclists, % of Women, % Helmet Users, and % Traveling Legally: All Higher at Locations with Bike Facilities than Those Without**

PBRI has also collected continuous data via short and long-term electronic monitoring devices in several locations. On the Jefferson Davis Parkway Trail, a multi-use trail connecting several neighborhoods, this data, collected over the last five years, demonstrates an upward trend in overall use of this facility, as well as highly predictable data illustrating temporal distribution of those users. Notably, the trail is well-used even during weeks and months that are extremely hot, very cold, or intensely rainy: in New Orleans, walking and bicycling are year-round activities for many residents.

On the Tammany Trace, 15 months of comparable data provide a baseline for future analysis of user volumes and patterns on this popular, largely recreational facility which provides a direct active transportation connection between several suburban communities in the region. Short term counts on three shared-use facilities and trails in New Orleans expand our understanding of how existing infrastructure in various contexts is being utilized. Finally, a preliminary analysis of changes in user volumes and conditions preceding and following the installation of a new bicycle facility in downtown New Orleans on Baronne Street indicated a rapid 53% increase in bicycle volumes, while documenting positive and negative impacts of the change on the corridor's various users.

This report also updates the US Census Bureau's national American Community Survey Data (2013 and 2014 1-year and 3-year estimates, as data availability permits) to show that even as active transportation investment and activity has surged in many cities, New Orleans retains its position among the top cities nationally for bicycling and as a regional leader for walking. It was also named a "Silver" Bicycle Friendly City by the League of American Bicyclists in 2014 and a "Bronze" Walk Friendly City in 2012. New Orleans' efforts to encourage and facilitate more sustainable, multi-modal transportation options are documented in this report.

However, in order to retain and build upon the progress, successes, and recognition of the last decade of work toward enhancing opportunities for walking and bicycling, the city and region still must increase the availability and quality of its active transportation infrastructure, as well as address current challenges for active users and institutionalize new perspectives on transportation policy and planning. Actions which future research and/or government action should address include:

- Developing an updated, multi-modal transportation master plan that specifically guides the implementation of complete streets policy, prioritizes critical projects, holistically addresses right-of-way function, promotes integrated regional connections, and establishes processes to guide transportation decision-making, infrastructure design, and project evaluation.

- Developing and funding an ongoing program for the collection of multimodal counts and mode-share analysis, including motor vehicles and transit users, as well as integrating the collection of multimodal data as a routine component of project development.

- Conducting in-depth statistical analysis of the impacts of pedestrian and/or bicycling engineering interventions on safety, public health, and economic outcomes.
- Supporting the implementation of the Jefferson Parish Bicycle Plan and facilitate the development of active transportation-focused plans and policies in other parishes and cities within the region.
- Identifying and securing dedicated local, state, and/or federal funding for the continued development of active transportation infrastructure, education, enforcement, encouragement, and evaluation projects and programs.

In summary, the last six years of PBRI's pedestrian and bicycle data collection efforts in partnership with the Regional Planning Commission's Pedestrian and Bicycle Program demonstrate that New Orleans has made significant progress toward becoming a city where people of all backgrounds in neighborhoods throughout the region walk and bike regularly. The investments and policies made over the last decade appear to have encouraged and facilitated increased active transportation use in many communities. New Orleans' bicycle network has steadily developed from a handful of discontiguous corridors into a moderately integrated series of cross-town routes — including a growing off-street trail network — and neighborhood linkages. However, gaps in the network persist. Continued, strategic infrastructure development is needed and more such linkages among existing routes and across key barriers (e.g. bridges, expressways, and across parish lines) are imperative in order to effectively serve all neighborhoods equitably. This region must address the challenge of improving safety, connectivity, and comfort for all users and all modes in order to keep up with peer cities and continue to progress toward becoming a walkable, bikeable city in which to live, work, and play.

# 1.0 INTRODUCTION

Since 2010, the Pedestrian and Bicycle Resource Initiative (PBRI) at the Merritt C. Becker, Jr. University of New Orleans Transportation Institute, in partnership with the New Orleans Regional Planning Commission and the Louisiana Department of Transportation and Development, has overseen a pedestrian and bicycle count program aimed at gauging active transportation use around the New Orleans area. This program has grown over the last six years from thirteen count locations to fifty-five, plus an additional permanent electronic counter for continuous year-round monitoring and the strategic deployment of temporary electronic counters to collect supplemental data on roads and trails for further evaluation of trends and infrastructure impacts.

> **This program has grown over the last five years from thirteen count locations to fifty-five, plus expanded use of several electronic count devices.**

The goals of the count program are:

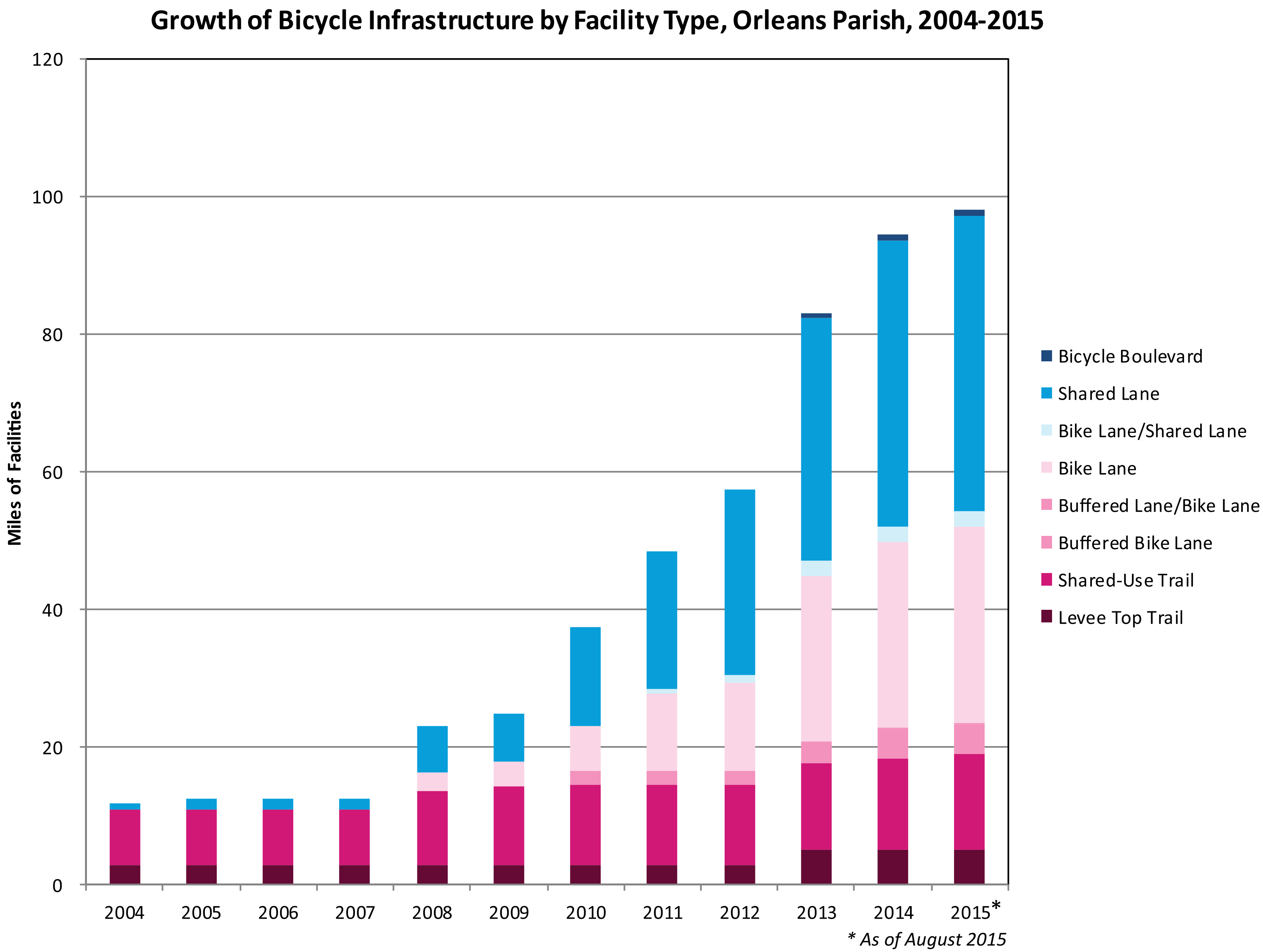
1. To evaluate the impact of recent and planned investments in pedestrian and/or bicycle infrastructure on active transportation trends in the region over time

2. To provide baseline and post-intervention benchmarks by which to evaluate progress toward achieving higher rates of walking and bicycling in our communities

3. To provide insight into user demographics and behaviors that may impact safety outcomes and/or educational campaigns in the region.

The 2015 count study findings support and expand previous years' data, providing a substantial database for evaluating longitudinal trends and supporting continued analysis of infrastructure investments and policy implementation in the region. This report documents the results of the 2015 count program, including 48 manual and six electronic count locations in the New Orleans metropolitan region, and summarizes findings and trends from the last six years

Figure 1: Growth of Bicycle Infrastructure by Facility Type, Orleans Parish, 2004-2015



of this annual program. As in previous reports, this document also makes recommendations for future research and analysis that will allow the New Orleans region to effectively prioritize its efforts to complete its streets and expand and improve its active transportation infrastructure.

### 1.1 Growth of New Orleans' Bicycle Facility Network, 2005-2014

Since Hurricane Katrina in 2005, New Orleans' bicycle infrastructure network has grown from about 12.5 miles to approximately 98 miles as of August 2015 (Figure 1) as the city has taken advantage of opportunities to better accommodate all users while rebuilding its roadways. The types of bicycle facilities implemented have also expanded, including exclusive bike lanes (33.3 miles), shared lanes (42.9 miles), mixed shared and dedicated lanes (2.3 miles), bike boulevards (0.8 miles), and off-street shared-use paths (18.9 miles) as of August 2015. Figures 2 through 5 illustrate the network's growth over time (for full map series see Appendix A).

This expansion of the bicycle network has provided an opportunity to monitor the impact of these investments on both overall active transportation activity as well as specific sites where new facilities have been installed. Approximately 9 miles of new bicycle facilities were installed between July 2014 and August 2015 (Figure 5), including dedicated bike lanes on portions of Baronne St, Camp St, Gentilly Blvd, MacArthur Blvd, N. Galvez St, N. Broad St, O'Keefe Ave, and S. Broad St). The 2015 count study included continued post-intervention counts at several locations where new infrastructure was previously installed, new count locations where future interventions are planned or have been proposed, and sites which expand the general scope of the count program by providing data in neighborhoods where a need for additional data has been identified.

With up to six years of data for some sites, apparent longitudinal trends in usage and behavior become clearer and better substantiated. It is important to continue to periodically collect data from new and existing count locations in order to effectively evaluate demand, the impacts of new facility installation, and shifts in user demographics or behaviors.

**Bikeway Network has grown from 12.5 Miles to 98 Miles**
**(August 2005 - August 2015)**

As a count program matures, methods may be refined in light of new guidance on best practices, and specific count locations may shift from year to year (e.g., as a program expands, it may be appropriate to conduct counts at some locations biennially). However, institutionalization of a consistent, ongoing count program remains the most effective way to monitor long-term change while supporting effective short-term planning, decision-making, and evaluation efforts.

It is also important, as many of the post-hurricane recovery grant programs that have supported infrastructure reconstruction and the expansion of active transportation facilities are winding down, that the region uses these data to inform investment decisions so that new facilities will have maximum impact on the safety, comfort, and frequency of use by pedestrians and bicyclists. Finally, New Orleans must continue to work toward connecting existing facilities into an integrated network that allows multimodal access throughout the region.

Figure 2: Orleans and Jefferson Parish Bicycle Facilities, 2005

**Figure 3: Orleans and Jefferson Parish Bicycle Facilities, 2010**

Figure 4: Orleans and Jefferson Parish Bicycle Facilities, 2014

Figure 5: Orleans and Jefferson Parish Bicycle Facilities, 2015

## 1.2 Count Location Selection

The PBRI count program began in 2010 with thirteen locations in Orleans Parish. Twelve of these locations have continued to be observed annually each subsequent year. Additional count locations have been added each year since 2013 as the scale of the count program has expanded. Site selection is determined each year prior to commencement of the count program through discussion between RPC and UNO Transportation Institute staff of current data needs and upcoming infrastructure projects, in order to identify count program priorities.

Many count locations were selected based on their proximity to existing bicycle facilities, or on corridors where construction projects involving potential pedestrian and/or bicycle improvements are planned. In addition, some count locations at key connection points (e.g., bridges, underpasses, and overpasses that function as "bottlenecks" have been included, as have locations in census tracts with high active transportation mode share or which correspond to high pedestrian or bicycle crash incidence.

**Thirteen New Count Locations in 2015**

In 2015, counts were repeated at 48 locations, including 12 manual count locations which have been observed each year since 2010, nine count sites observed from 2013-2015, 14 locations which were observed in 2014 and 2015, and 13 new 2015 count locations.

New count locations selected include locations where roadway investment has been recently completed or is anticipated, as well as corridors indicated as key bicycle connections in the newly adopted Jefferson Parish Bicycle Master Plan,[2] new "gateway" locations which contribute to the count program's ability to estimate mode share entering and exiting the downtown area, and count sites that help provide a more complete picture of multimodal traffic volumes in downtown neighborhoods. This expansion of the scope of the count study not only provides a more comprehensive view of overall walking and bicycling patterns in the New Orleans area, but also provides needed data for a variety of organizations and agencies working to better understand and improve particular aspects of active transportation in the region.

In addition, this report documents data collected from an electronic count station which has been collecting data on the Jefferson Davis Parkway Trail since May 2010, electronic count data from a new count device installed on the Tammany Trace in May 2014, and limited short-term electronic count data collected on the Mississippi River Trail in Algiers Point, the Wisner Trail, Woldenberg Park, and Baronne Street collected in 2014 and 2015.

Table 1 lists the manual count sites observed in 2015, and Figure 6 maps these locations. For a detailed breakdown of count site characteristics for all 2015 manual count locations, including the type of bicycle facility present (if applicable) and its installation date, please refer to Appendix B .

2 *See* http://norpc.org/assets/pdf-documents/studies-and-plans/JPBMP_Final_2014_04_03.pdf *for more information*

**Figure 6: 2015 Pedestrian and Bicycle Count Locations**

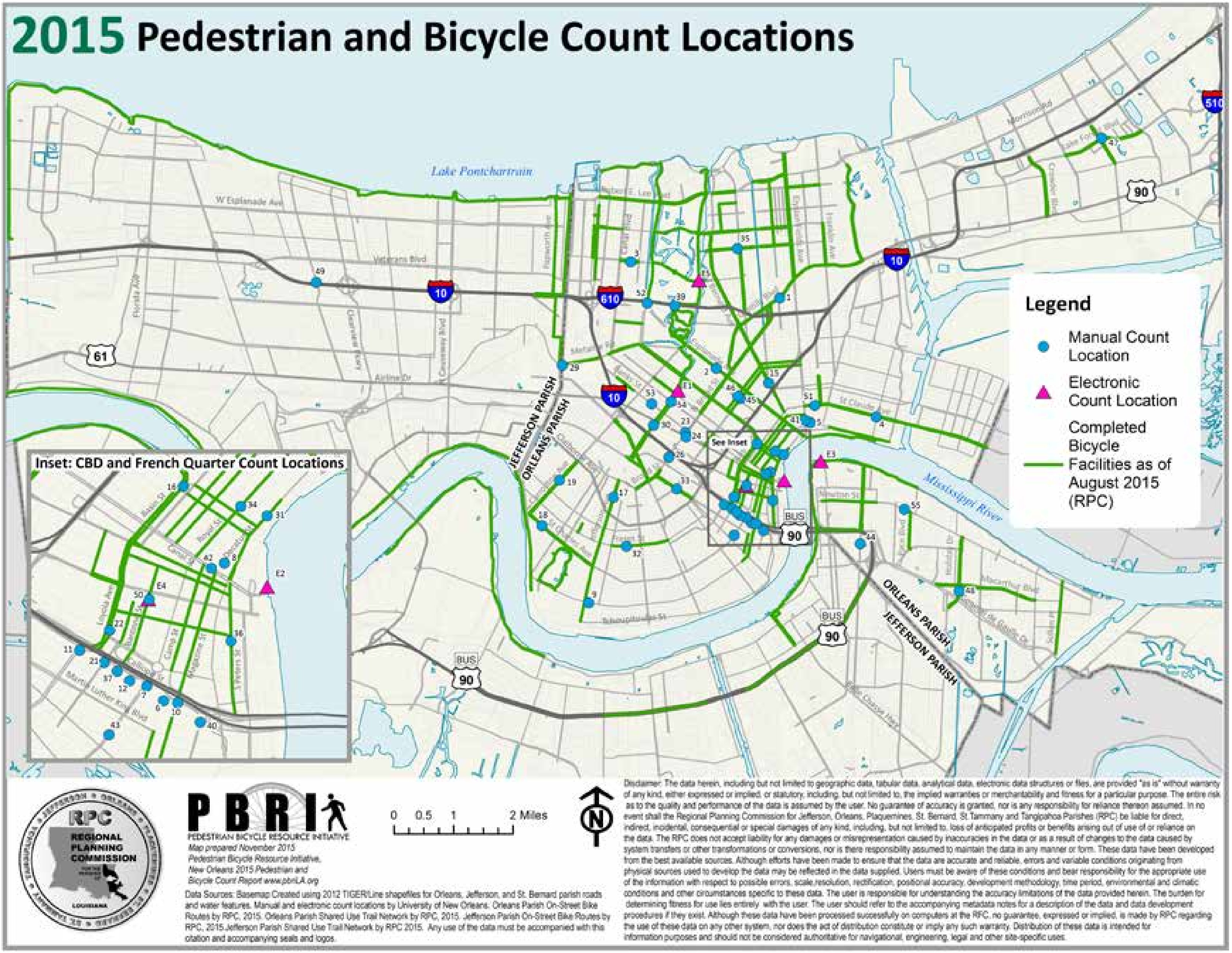


**Table 1: 2015 Manual Count Site Locations**

| # | Site | Boundary Streets | Years Counted 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|
| 40 | Annunciation Street | Erato St & Thalia St | | | | | x | x |
| 53 | Banks Street | S. Telemachus St & S. Cortez St | | | | | | x |
| 50 | Baronne Street (CBD) | Poydras St & Lafayette St | | | | | | x |
| 37 | Baronne Street (Gateway) | Clio St & Calliope St | | | | | x | x |
| 16 | Basin Street | St. Louis St & Toulouse St | | | | x | x | x |
| 27 | Bonnabel Blvd* | I-10 & Hessiod St | | | | | x | |
| 6 | Camp Street (Gateway) | Clio St & Calliope St | x | x | x | x | x | x |
| 42 | Canal Street (CBD) | Magazine St & Camp St | | | | | x | x |
| 54 | Canal Street (Midcity) | Jefferson Davis Pkwy & Jefferson Davis Pkwy Trail | | | | | | x |
| 12 | Carondelet Street (Gateway) | Clio St & Calliope St | x | x | x | x | x | x |
| 28 | Cleary Blvd* | I-10 & Ford St | | | | | x | |
| 8 | Decatur Street | Iberville St & Canal St | x | x | x | x | x | x |
| 31 | Decatur Street (Jackson Square) | St. Peter St & St. Ann St | | | | | x | x |
| 41 | Elysian Fields Avenue | Dauphine St & Royal St | | | | | x | x |
| 2 | Esplanade Avenue | N. White St & N. Dupre St | x | x | x | x | x | x |
| 32 | Freret Street | Valence St & Upperline St | | | | | x | x |
| 55 | General Meyer Avenue | Pace Blvd & Deborah St | | | | | | x |
| 1 | Gentilly Boulevard | St. Denis St & Milton St | x | x | x | x | x | x |
| 39 | Golf Drive | I-610 & Railroad Tracks | | | | | x | x |
| 3 | Harrison Avenue | Gen. Diaz St & Harrison Ct | x | x | x | x | x | x |
| 48 | Holiday Drive | MacArthur Blvd & General Degaulle Dr | | | | | | x |
| 30 | Jeff Davis Parkway Bridge** | Gravier St & Tulane Ave | | | | | x | x |
| 47 | Lake Forest Boulevard | Read Blvd & Deer Park Blvd | | | | | | x |
| 44 | LB Landry Avenue | Wall Blvd & Semes St | | | | | | x |
| 22 | Loyola Avenue | Howard Ave & Julia St | | | | x | x | x |
| 10 | Magazine Street (Gateway) | Erato St & Calliope St | x | x | x | x | x | x |
| 9 | Magazine Street (Uptown) | Arabella St & Joseph St | x | x | x | x | x | x |

| # | Site | Boundary Streets | Years Counted 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|
| 52 | Marconi Drive | I-610 & Railroad Tracks | | | | | | x |
| 33 | Martin Luther King Boulevard | S. Galvez St & S. Johnson St | | | | | x | x |
| 13 | Metairie Hammond Hwy* | Carrollton Ave & Mayan Ln | | x | x | x | x | |
| 29 | Metairie Road | Maryland Dr & Parish Line | | | | | x | x |
| 35 | Mirabeau Avenue | Paris Ave & Perlita St | | | | | x | x |
| 38 | N. Rampart St* | Toulouse St & St. Louis St | | | | | x | |
| 45 | N. Galvez Street | Ursulines St & Governor Nichols St | | | | | | x |
| 46 | N. Miro Street | Ursulines St & Governor Nichols St | | | | | | x |
| 17 | Nashville Avenue | S. Rocheblave St & S. Tonti St | | | | x | x | x |
| 20 | Oretha Castle Haley Blvd* | Clio St & Calliope St | | | | | x | |
| 21 | Pace Boulevard | General Meyer Ave & Lamarque St | | | | | x | x |
| 14 | Papworth Ave* | Veterans Blvd & Raspberry St | | x | x | x | x | |
| 34 | Royal Street (French Quarter) | Toulouse St & St. Peter St | | | | | x | x |
| 5 | Royal Street (Marigny) | Mandeville St & Marigny St | x | x | x | x | x | x |
| 23 | S. Broad Street | Tulane Ave & Banks St | | | | x | x | x |
| 26 | S. Broad Street Overpass | Howard Ave & Euphrosine St | | | | x | x | x |
| 19 | S. Carrollton Avenue | Green St & Birch St | | | | x | x | x |
| 36 | S. Peters Street | Girod St & Julia St | | | | | x | x |
| 11 | Simon Bolivar Avenue (Gateway) | Clio St & Calliope St | x | x | x | x | x | x |
| 15 | St. Bernard Avenue | N. Roman St & N. Derbigny St | | | | x | x | x |
| 7 | St. Charles Avenue (Gateway) | Clio St & Calliope St | x | x | x | x | x | x |
| 43 | St. Charles Avenue (LGD) | Polymnia St & Euterpe St | | | | | | x |
| 18 | St. Charles Avenue (Uptown) | Adams St & Hillary St | | | | x | x | x |
| 25 | St. Claude Ave Bridge* | Industrial Canal & Poland Ave | | | | x | x | |
| 4 | St. Claude Avenue (Bywater) | Pauline St & Independence St | x | x | x | x | x | x |
| 51 | St. Claude Avenue (Marigny) | Mandeville St & Spain St | | | | | | x |
| 49 | Transcontinental Drive | I-10 & Utica St | | | | | | x |
| 24 | Tulane Avenue | S. Dorgenois St & S. Broad St | | | | x | x | x |

* Counts were not conducted at sites 13, 14, 20, 25, 27, 28, or 38 in 2015

**Count includes both roadway and trail users

In addition, an infrared electronic count device was installed on the Jefferson Davis Trail in Mid-City in 2010, collecting continuous data on trail use from June 2010 through May 2015[3]. The Jefferson Davis Trail is located on the median of Jefferson Davis Parkway at Conti Street in the Mid-City neighborhood (see Figure 6 and Table 2 for electronic count locations). 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 intersection with the Lafitte Greenway, a new active transportation facility scheduled for completion in fall 2015.

In June 2014, this device was upgraded with an in-ground loop detector used in combination with the infrared sensor to differentiate pedestrian and cyclist users in cooperation with the Rails-to-Trails Conservancy's Trail Modeling and Assessment Platform (T-MAP) program, a $1.2 million, three-year initiative intended to create new tools for planning and evaluating trails. This more advanced equipment permits an additional layer of analysis of trail use patterns for the most recent year of available data.

An identical counter was placed in St. Tammany Parish, along the Tammany Trace, as part of this partnership. Data from the first 16 months of that device's installation (May 2014 through August 2015) is presented in this document as well.

Finally, this report also documents limited short-term electronic count data collected in 2014 and 2015 for periods ranging from two weeks to three months from Woldenberg Park, the Mississippi River Trail in Algiers Point, the Wisner Trail, and Baronne Street. These counts were exploratory in nature as PBRI evaluated the efficacy and limitations of new electronic count equipment types and sites were selected based on equipment installation specifications and proximity to new or previously unassessed active transportation infrastructure. These data provided preliminary information on typical facility use and, in the case of Baronne Street, provide initial evidence of changes usage before and after installation of a new bicycle facility.

3 *Excluding an approximately 3-month gap in data collection from April-June 2013 as a result of a disruption to the pole to which the device was mounted. In May 2014, the device was replaced without interruption in data collection.*

**Table 2: 2014-2015 Electronic Count Site Locations**

| # | Site | Boundary Streets |
|---|---|---|
| E1 | Jefferson Davis Parkway Trail | Conti St & Lafitte St |
| E2 | Woldenberg Park | Iberville St & Bienville St |
| E3 | Mississippi River Trail | Patterson Dr & Verret St |
| E4 | Baronne Street | Poydras St & Lafayette St |
| E5 | Wisner Trail | Harrison Ave & Mirabeau Ave |
| E6 | Tammany Trace | North of Koop Drive Trailhead |

# 2.0 METHODOLOGY

This section explains the methodologies utilized by PBRI in performing manual and electronic counts and attempts to qualify their accuracy and effectiveness. For detailed methodology information, please see Appendix C.

## 2.1 Manual Counts

Manual counts for this study were completed between March 24th and June 10th of 2015. PBRI recruited student workers from The University of New Orleans, as well as volunteers via outreach to a variety of partner organizations including Bike Easy, Ride New Orleans, and the Tulane University School of Public Health. Students and volunteers were trained by UNO Transportation Institute staff 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 (with minor variations as described in appendix) the Tulane protocol, which reflects adoption of national best practices (most notably the National Bicycle and Pedestrian Documentation Project's guidelines) but is customized to address the specific context of the New Orleans metro area and to meet the needs of the RPC Pedestrian and Bicycle Program.

All counts were mid-block screenline counts, during which two student or volunteer 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.[4] On streets with a neutral ground,[5] each counter tallied 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 pedestrians and bicyclists 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, as well as use of a bike lane where applicable. Wrong way use was defined as on-street bicyclists traveling in the opposite direction of traffic. For copies of the materials used by observers, see Appendix D.

Counts were performed on two days for each site, either on a Tuesday, Wednesday, or Thursday. Each day included counts from 7:00-

*4 In select instances, only one counter was available to conduct the count and observed the entire plane of observation.*

*5 "Neutral ground" is a colloquial phrase for a median separating street traffic; this term is used throughout this report.*

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.[6] 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 E). While temperatures during the 2015 study period were typically warmer than during the preceding year, one or more counts were canceled on thirteen occasions during this year's count program due to rain, impacting the count schedule and total number of count locations completed.

In order to estimate daily, monthly, and yearly volumes of pedestrians and bicyclists at the observed manual count sites, observed user volumes were extrapolated to daily, monthly, and annual estimates 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," descriptive of the majority of 2015 count locations. Estimates for a few low-volume count locations in mostly residential areas may have a higher margin of error as a result. For more information on this extrapolation methodology, please refer to Appendices F and G.[7]

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

Extrapolations for manual counts have not been comprehensively tested for reliability and actual daily traffic volumes may vary based on land uses or user groups that deviate from NBPD's model or circumstances unique to the New Orleans area that impact local travel patterns. 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. During the 2015 study period, expanded use of electronic counters facilitated a preliminary evaluation of the efficacy of the extrapolation technique and adjustment factors used in order to better understand local patterns of use. A comparison of data collected via electronic monitoring over longer count durations to the Estimated Daily Traffic figures calculated based on 8 hours of manual count data clearly suggests that in many contexts, NBPD adjustment factors will tend to overestimate daily usership substantially (with EDT figures of 1.3 - 2.9x greater than observed totals, see Appendix H for additional findings).

While manual count data provides a wealth of information about area trends and user behavior, it should be noted that its utility as a measure of EDT according to this methodology is thus limited. Further analysis, including the anticipated outcomes of the Rails-to-Trails Conservancy's T-MAP project, is needed in order to further refine non-motorized traffic demand modeling and estimated daily traffic totals for future count studies.

*6 See http://bikepeddocumentation.org/ for more information*

*7 The development of this methodology and relevant literature is discussed in greater depth in the 2010 State of Active Transportation Report and the New Orleans Pedestrian and Bicycle Count Report, 2010-2011, available at http://pbriLA.org under "Research + Resources"*

## 2.2 Electronic Counts

As noted 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 recorded trail use continuously (excluding April, May, and June 2013 when the device was temporarily removed due to the dislocation of the city infrastructure on which it was installed). The Eco-Counter uses passive infrared sensor technology to record all users (Figure 7). 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 (Figure 8).

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 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 four years to evaluate accuracy. Overall, this device has been found to provide highly accurate and reliable data.[8]

In June 2014, the original Eco-PYRO sensor was replaced with an Eco-MULTI device, which utilizes an in-ground loop detector used in combination with an infrared sensor to differentiate pedestrian and cyclist users. One month of data was collected with both counters installed in order to ensure data compatibility. The data were found to be slightly higher (about 5% per day) on the new count equipment, likely reflecting the new sensor's more advanced technology, which reduces the device's tendency to undercount trail users traveling side by side. An additional Eco-MULTI sensor is installed on the Tammany Trace, similarly collecting continuous data about bicyclist and pedestrian users on that trail facility.

8 *Greater than 95% total accuracy rate over four tests. Directional accuracy for the Eco-Twin infrared device declined in 2013 for unknown reasons following damage to the installation which forced the device's temporary removal, but total accuracy has remained very high.*

**Figure 7: Infrared Trail Counter Installation (Jefferson Davis Trail)**


*Photo credit: Taylor Marcantel, 2010*

**Figure 8: Detail of Eco-Counter Infrared Sensing Device**

*Photo credit: Taylor Marcantel, 2010*

Figure 9: New Eco-Multi Counter, Jefferson Davis Trail at Conti Street

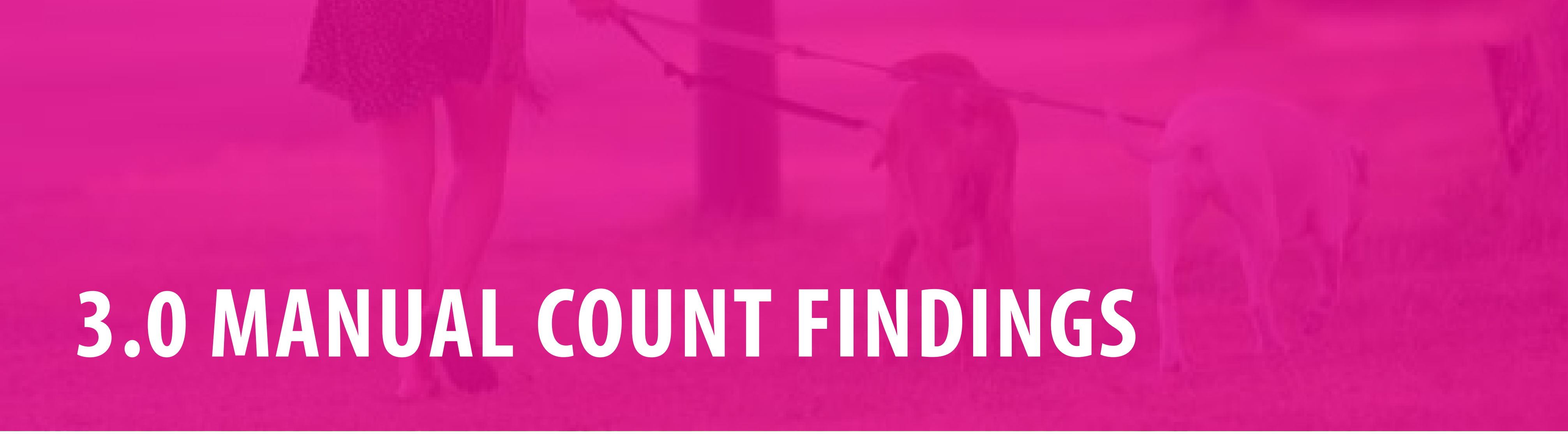
*Photo credit Tara Tolford 2014*

Figure 10: Eco-TUBES Counter Installation, Baronne Street

*Photo credit Tara Tolford 2014*

Recent expansions to PBRI's electronic count collection program in 2014, including the acquisition of the new Jefferson Davis Trail Multi Counter (Figure 9), a second infrared Eco-PYRO, and a new directional on-street bicycle tube counter (Figure 10) have facilitated the collection of additional data at temporary trail, sidewalk, and on-street count locations. The continued strategic deployment of this equipment allows PBRI to conduct data collection in response to immediate planning needs (e.g., by assisting local government agencies with non-motorized data collection in conjunction with project planning or evaluation), as well as enabling continued calibration and reliability testing of manual count extrapolation techniques. Future on-street and trail-based electronic counts at previous and new locations should continue and expand efforts to develop context-specific adjustment factors for regional data.

This report provides an analysis of the fifth year of the continuous stream of data Jefferson Davis Trail data to analyze temporal patterns and variability and understand patterns of use in relation to the first four years of data collected. It also presents data from the Eco-MULTI counter on the Tammany Trace, and short-term data collected using the Eco-PYRO infrared sensors and the pneumatic tube on-street bicycle counter.



# 3.0 MANUAL COUNT FINDINGS

In 2015, 384 hours of manual count data were collected across 48 locations. This section summarizes these data and compares the data to previous findings where applicable. Presented are both total observed counts over a period of eight hours per location, as well as Estimated Daily Traffic (EDT) figures. In addition, this section discusses estimated active transportation mode share, demographic characteristics of users, and behavioral observations (e.g. travel orientation and helmet use).

## 3.1 Observed Count Totals: Existing Count Locations

Since 2010, the total number of bicyclists observed at the twelve original annual count locations has increased by 88% (Figure 11 and Table 3), and the number of pedestrians observed has increased by 67% (Figure 13 and Table 5). Although the number of users observed at some locations has fluctuated somewhat (with slight decreases noted at several locations in 2014), the six years of data now available demonstrate clear upward trends for both pedestrians and bicyclists.

The most dramatic increase in bicycle ridership among these locations was observed on Esplanade Avenue, where observers counted 1,568 bicyclists in 2015—a 346% increase over six years. Since dedicated bicycle lanes were completed in 2013, ridership has more than doubled on this corridor. Total bicyclists observed have also increased dramatically since 2010 on Gentilly Boulevard (259%), St. Claude Avenue (254%), Simon Bolivar Avenue (198%), Magazine Street (Uptown—174%), and Harrison Avenue (152%). Only one of the original twelve count locations (Royal Street at Marigny Street) has experienced an overall decrease in bicyclists over the last five years. The count site's location in a neighborhood with high rates of bicycle commuting, however, suggests that this may be the result of the city's expanded bicycle network which displaced potential riders to other routes with infrastructure improvements for bicyclists.

For pedestrian activity, the strongest increases in observed users among these twelve sites from 2010-2015 occurred at Carondelet Street (174%), St. Claude Avenue (134%), Harrison Avenue (127%), and Esplanade Avenue (119%). Notably, both Harrison Avenue and Esplanade Avenue received significant pedestrian infrastructure improvements during this period. Pedestrian activity decreased overall at only two sites (Simon Bolivar Avenue and Gentilly Boulevard). Importantly, although percentage increases are more dramatic for bicyclists at these locations, overall, total pedestrian user volumes are higher at most of these locations, and there is a much wider range among the 12 sites (Figure 16).

Figure 11: Observed Bicycle Volumes, 2010-2015 Count Locations

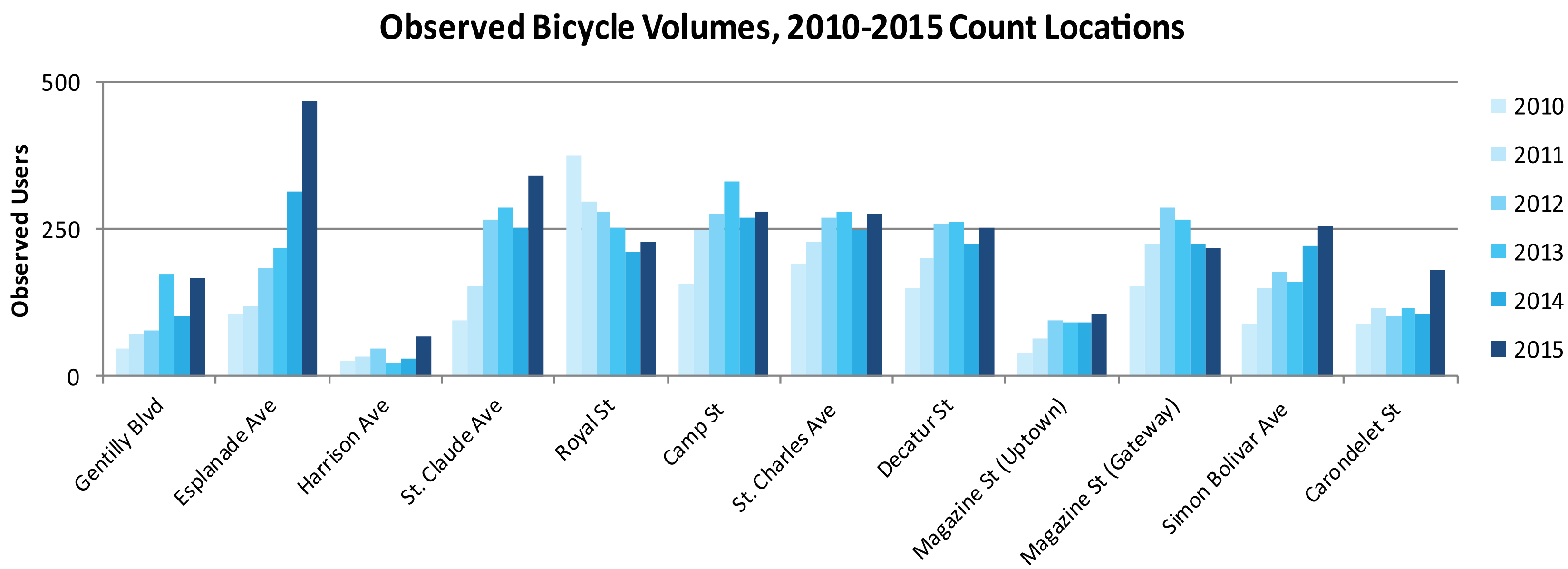



Figure 12: Observed Pedestrian Volumes, 2010-2015 Count Locations

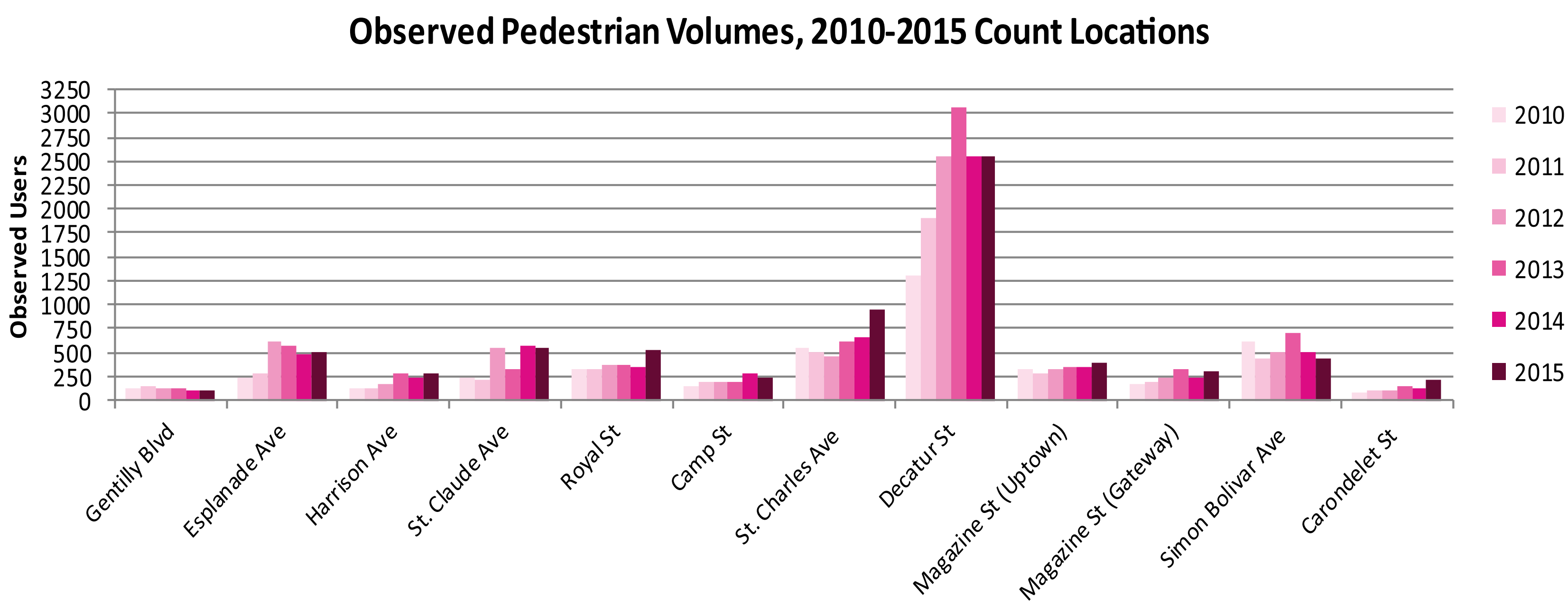


Figure 13: Observed Bicycle Volumes, 2013-2015 Count Locations

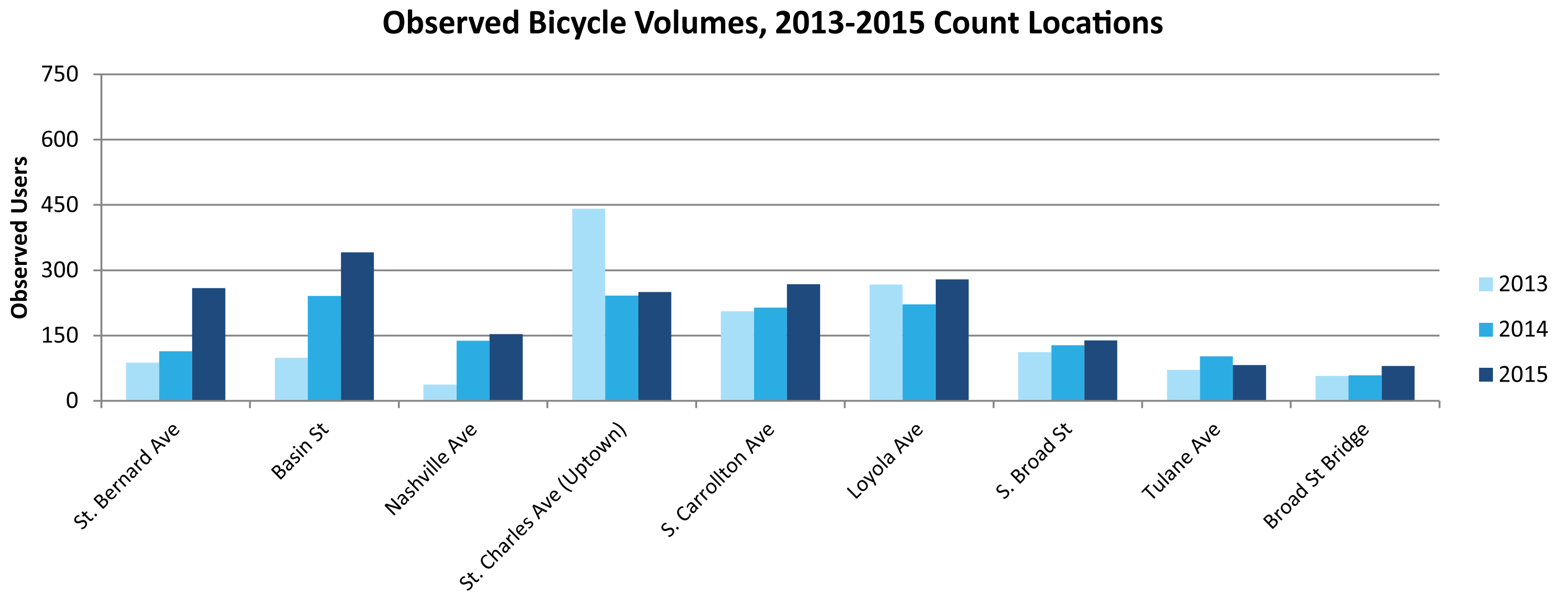



Figure 14: Observed Pedestrian Volumes, 2013-2015 Count Locations

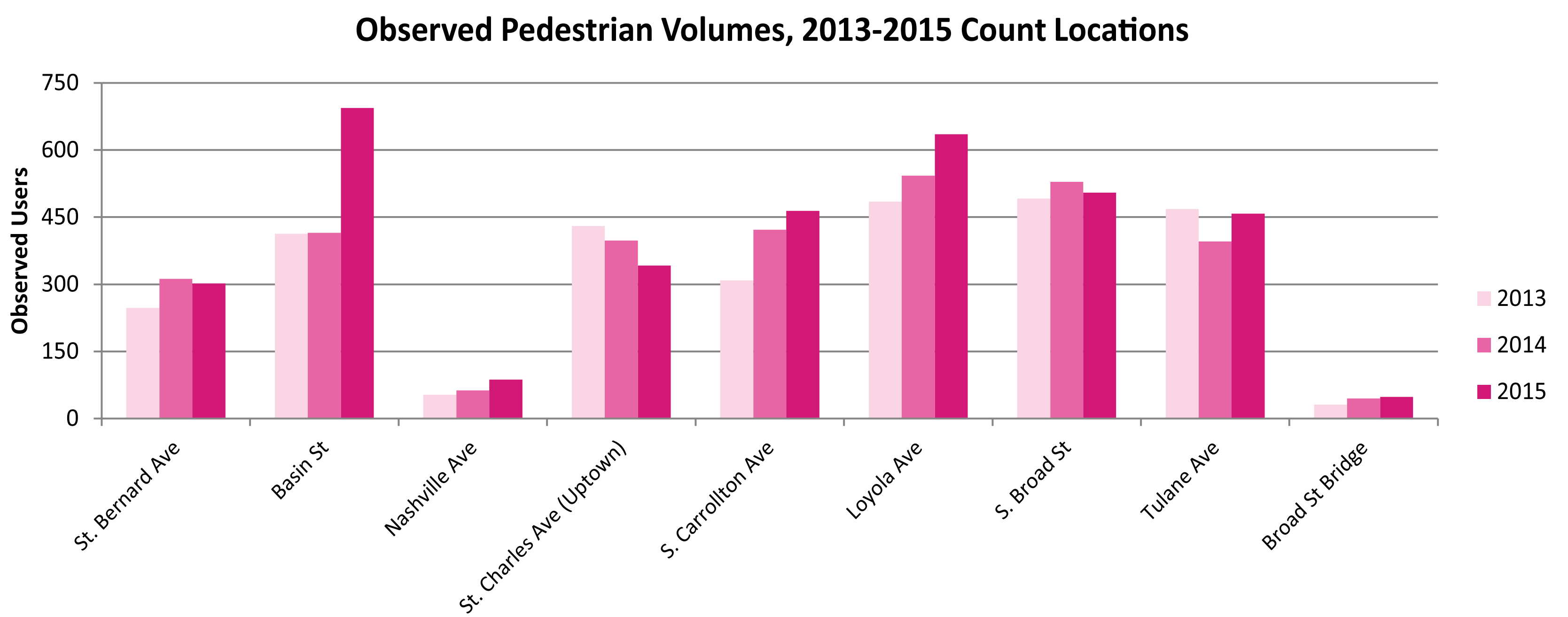


**Table 3: Observed Bicyclist Volumes, 2010-2015 Count Locations**

| Site # | 2010-2015 sites | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | *Change, 2010-2015* # | % |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Gentilly Blvd | 46 | 69 | 76 | 173 | 103 | 165 | *119* | *259%* |
| 2 | Esplanade Ave | 105 | 117 | 185 | 217 | 314 | 468 | *363* | *346%* |
| 3 | Harrison Ave | 27 | 33 | 48 | 23 | 29 | 68 | *41* | *152%* |
| 4 | St. Claude Ave | 96 | 153 | 266 | 287 | 252 | 340 | *244* | *254%* |
| 5 | Royal St | 377 | 295 | 281 | 253 | 212 | 229 | *-148* | *-39%* |
| 6 | Camp St | 157 | 249 | 276 | 332 | 270 | 280 | *123* | *78%* |
| 7 | St. Charles Ave (Gateway) | 191 | 229 | 269 | 281 | 248 | 276 | *85* | *45%* |
| 8 | Decatur St | 150 | 199 | 258 | 262 | 226 | 253 | *103* | *69%* |
| 9 | Magazine St (Uptown) | 38 | 63 | 95 | 92 | 90 | 104 | *66* | *174%* |
| 10 | Magazine St (Gateway) | 153 | 223 | 285 | 266 | 223 | 219 | *66* | *43%* |
| 11 | Simon Bolivar Ave | 86 | 150 | 175 | 161 | 221 | 256 | *170* | *198%* |
| 12 | Carondelet St | 87 | 114 | 103 | 115 | 105 | 179 | *92* | *106%* |
| | **Total** | **1,513** | **1,894** | **2,317** | **2,462** | **2,293** | **2,837** | ***1,324*** | ***88%*** |

**Table 4: Observed Bicyclist Volumes, 2013-2015 Count Locations**

| Site # | 2013-2015 sites | 2013 | 2014 | 2015 | *Change, 2013-2015* # | % |
|---|---|---|---|---|---|---|
| 15 | St. Bernard Ave | 88 | 114 | 259 | *171* | *194%* |
| 16 | Basin St | 99 | 241 | 341 | *242* | *244%* |
| 17 | Nashville Ave | 37 | 138 | 153 | *116* | *314%* |
| 18 | St. Charles Ave (Uptown) | 441 | 242 | 250 | *-191* | *-43%* |
| 19 | S. Carrollton Ave | 206 | 214 | 268 | *62* | *30%* |
| 22 | Loyola Ave | 267 | 222 | 279 | *12* | *4%* |
| 23 | S. Broad St | 112 | 128 | 139 | *27* | *24%* |
| 24 | Tulane Ave | 71 | 102 | 82 | *11* | *15%* |
| 26 | Broad St Bridge | 57 | 59 | 80 | *23* | *40%* |
| | **Total** | **1,378** | **1,460** | **1,851** | ***473*** | ***34%*** |

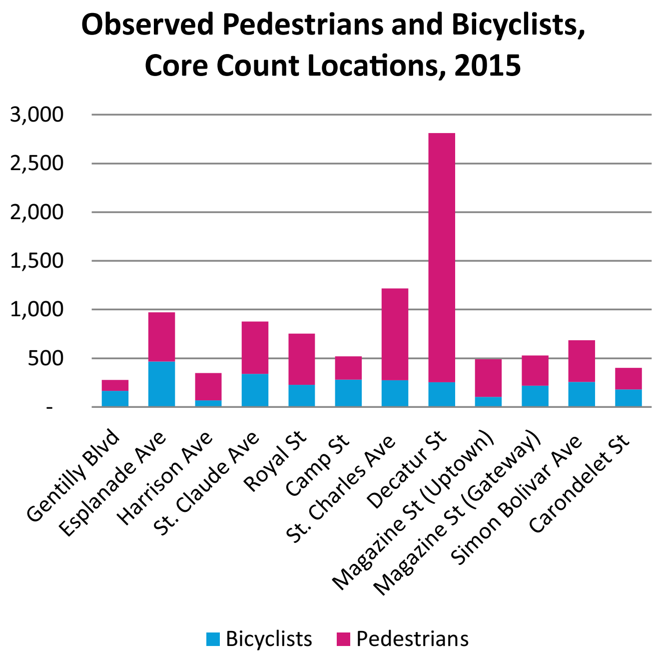
**Table 5: Observed Pedestrian Volumes, 2010-2015 Count Locations**

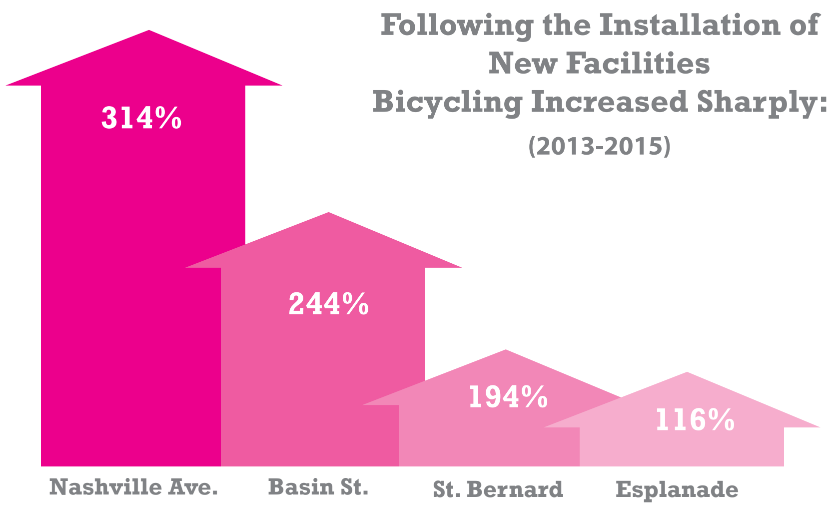
| Site # | 2010-2015 sites | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | *Change, 2010-2015* # | % |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Gentilly Blvd | 126 | 140 | 127 | 121 | 93 | 112 | *-14* | *-11%* |
| 2 | Esplanade Ave | 230 | 289 | 607 | 573 | 490 | 503 | *273* | *119%* |
| 3 | Harrison Ave | 124 | 117 | 164 | 285 | 234 | 282 | *158* | *127%* |
| 4 | St. Claude Ave | 230 | 205 | 536 | 325 | 560 | 538 | *308* | *134%* |
| 5 | Royal St | 324 | 314 | 371 | 376 | 357 | 525 | *201* | *62%* |
| 6 | Camp St | 144 | 183 | 189 | 199 | 287 | 241 | *97* | *67%* |
| 7 | St. Charles Ave | 550 | 501 | 460 | 603 | 659 | 941 | *391* | *71%* |
| 8 | Decatur St | 1,313 | 1,902 | 2,547 | 3,053 | 2,540 | 2,558 | *1,245* | *95%* |
| 9 | Magazine St (Uptown) | 330 | 269 | 321 | 338 | 356 | 385 | *55* | *17%* |
| 10 | Magazine St (Gateway) | 159 | 187 | 229 | 334 | 241 | 309 | *150* | *94%* |
| 11 | Simon Bolivar Ave | 608 | 433 | 494 | 692 | 505 | 430 | *-178* | *-29%* |
| 12 | Carondelet St | 81 | 101 | 92 | 140 | 119 | 222 | *141* | *174%* |
| | **Total** | **4,219** | **4,641** | **6,137** | **7,039** | **6,441** | **7,046** | ***2,827*** | ***67%*** |

**Table 6: Observed Pedestrian Volumes, 2013-2015 Count Locations**

| | 2013-2015 sites | 2013 | 2014 | 2015 | *Change, 2013-2015* # | % |
|---|---|---|---|---|---|---|
| 15 | St. Bernard Ave | 247 | 312 | 302 | *55* | *22%* |
| 16 | Basin St | 413 | 415 | 694 | *281* | *68%* |
| 17 | Nashville Ave | 53 | 63 | 87 | *34* | *64%* |
| 18 | St. Charles Ave (Uptown) | 430 | 398 | 342 | *-88* | *-20%* |
| 19 | S. Carrollton Ave | 309 | 422 | 464 | *155* | *50%* |
| 22 | Loyola Ave | 485 | 543 | 635 | *150* | *31%* |
| 23 | S. Broad St | 492 | 529 | 505 | *13* | *3%* |
| 24 | Tulane Ave | 468 | 396 | 458 | *-10* | *-2%* |
| 26 | Broad St Bridge | 31 | 45 | 48 | *17* | *55%* |
| | **Total** | **2,928** | **3,123** | **3,535** | ***607*** | ***21%*** |

Figure 15: Observed Pedestrians and Bicyclists, Core Count Locations, 2015




Ten additional sites were counted in 2013 and 2014; nine of these were observed again in 2015. Figures 14 and 15 and Tables 4 and 6 show the user counts for each year. Again, these preliminary data suggest a pronounced upward trend in usership, particularly at locations where new facilities have been installed. Over three years, bicycle riders observed increased by 314% on Nashville Avenue, 244% on Basin Street, and 194% on St. Bernard Avenue—all three of which received bicycle facilities between 2013 and 2014. These findings suggest that the addition of dedicated space for bicyclists on the roadways encourages existing riders to modify their routes to take advantage of the new facility, new riders to add bicycle trips, or both. Only one of this set of count locations experienced a decrease in ridership, St. Charles Avenue (Uptown), where the first year of data collected may prove to have been anomalous. Similarly, gains in pedestrian activity were observed at all but two of these sites, with the strongest increases noted on S. Carrollton Avenue (68%), Nashville Avenue (64%), and the Broad Street Bridge—a critical but decidedly uncomfortable connection across an interstate highway—with a 55% gain over three years.

Among count locations which were initiated in 2014 and continued in 2015 (Tables 7 and 8), observed bicyclist totals proved volatile, ranging from steep increases at locations which were under construction immediately prior to or during the 2014 counts (e.g. Pace Blvd, S. Peters Street), to moderate declines (e.g. Freret Street and Annunciation Street). At most of these locations, additional data is needed to identify whether these changes are consistent with overall changing usage patterns, or attributable largely to specific conditions during the observation period. For pedestrians, this set of count locations yielded similarly mixed results, with the sharpest increase observed at Pace Boulevard (again, likely due to construction impacts which limited use in 2014), and declines at five locations.

**Table 7: Observed Bicyclist Volumes, 2014-2015 Count Locations**

| Site # | 2014-2015 sites | 2014 | 2015 | Change, 2014-2015 # | Change, 2014-2015 % |
|---|---|---|---|---|---|
| 21 | Pace Blvd | 22 | 92 | 70 | 318% |
| 29 | Metairie Rd | 24 | 65 | 41 | 171% |
| 30 | Jeff Davis Pkwy Bridge | 289 | 514 | 225 | 78% |
| 31 | Decatur St (Jackson Square) | 556 | 559 | 3 | 1% |
| 32 | Freret St | 178 | 99 | -79 | -44% |
| 33 | MLK Blvd | 85 | 86 | 1 | 1% |
| 34 | Royal St (French Quarter) | 280 | 439 | 159 | 57% |
| 35 | Mirabeau Ave | 17 | 45 | 28 | 165% |
| 36 | S. Peters St | 19 | 59 | 40 | 211% |
| 37 | Baronne St (Gateway) | 102 | 180 | 78 | 76% |
| 39 | Golf Dr | 183 | 257 | 74 | 40% |
| 40 | Annunciation St | 118 | 87 | -31 | -26% |
| 41 | Elysian Fields Ave | 160 | 201 | 41 | 26% |
| 42 | Canal St (CBD) | 230 | 220 | -10 | -4% |
| | **Total** | **2,263** | **2,903** | **640** | **28%** |

**Table 8: Observed Pedestrian Volumes, 2014-2015 Count Locations**

| | 2014-2015 sites | 2014 | 2015 | Change, 2014-2015 # | Change, 2014-2015 % |
|---|---|---|---|---|---|
| 21 | Pace Blvd | 41 | 250 | 209 | 510% |
| 29 | Metairie Road | 62 | 123 | 61 | 98% |
| 30 | Jeff Davis Parkway Bridge | 141 | 211 | 70 | 50% |
| 31 | Decatur St (Jackson Square) | 4,773 | 4,597 | -176 | -4% |
| 32 | Freret St | 601 | 471 | -130 | -22% |
| 33 | MLK Blvd | 122 | 107 | -15 | -12% |
| 34 | Royal St (French Quarter) | 5,249 | 4,803 | -446 | -8% |
| 35 | Mirabeau Ave | 27 | 73 | 46 | 170% |
| 36 | S. Peters St | 545 | 489 | -56 | -10% |
| 37 | Baronne St (Gateway) | 149 | 176 | 27 | 18% |
| 39 | Golf Dr | 66 | 66 | - | 0% |
| 40 | Annunciation St | 130 | 182 | 52 | 40% |
| 41 | Elysian Fields Ave | 281 | 321 | 40 | 14% |
| 42 | Canal St (CBD) | 5,022 | 7,819 | 2,797 | 56% |
| | **Total** | **17,209** | **19,688** | **2,479** | **14%** |

## 3.2 Estimated Daily Traffic, Existing Manual Count Locations

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 9 through 14). This methodology was outlined above and is further elaborated in Appendix F.

Extrapolation of the data to a 24-hour period, while revealing trends parallel to those described above, somewhat reduces the impact of fluctuations observed during the eight hours of count collection on overall percent change, as higher usage rates during peak morning and afternoon hours would not necessarily translate to correspondingly higher rates of use at off peak times. In addition, the formula for extrapolating EDT is impacted by shifting proportions in the ratio of bicyclists to pedestrians. Though limited in precision, this extrapolation provides a useful metric for estimating potential daily demand beyond the eight-hours of morning and afternoon peak-period counts. For bicyclists, an 81% increase in overall EDT across the twelve core count locations was calculated from 2010-2015. For pedestrians, a 53% EDT increase is estimated.

Among the locations where counts were conducted in 2013, 2014, and 2015 only, an overall increase of 21% in estimated daily bicyclists is calculated (notwithstanding the omission of the St. Claude Avenue Bridge count site in 2015), while pedestrian activity was estimated to have increased by 13% overall. Notably, count totals and estimated daily traffic figures have proven volatile at several of the sites within this set; additional observations are needed in order to clearly identify trends.

Among sites counted in 2014 and 2015, bicycle EDT was estimated to have increased 28% overall, ranging from a sharp (419%) increase on Pace Boulevard (following 2014 construction impacts) to a 47% decrease of Freret Street. Pedestrian EDT at this set of locations increased 17% from 2014 to 5015, again with the steepest increase on Pace Boulevard (656%) and the largest decrease on Freret Street (-26%).

As noted in previous count study reports, bicycling trends have been observed to be more stable than pedestrian trends, with fewer rapid gains and decreases in EDT from year to year. However, as the original twelve count sites indicated, both modes have experienced an overall increase at most locations over the 5-year evaluation period, even where fluctuations from year to year exist.

In addition, pedestrian and bicycle volume estimates may be of use for evaluating the needs of users at specific locations that have been identified as of particular use by safety advocates; e.g. critical connections for which non-motorized users have few alternative options (especially bridges, overpasses, and underpasses), inter-parish connections (e.g. St. Claude Avenue and Metairie Road), and major boulevards that link neighborhoods or connect pedestrians to transit routes such as Elysian Fields Avenue, Canal Street, Tulane Avenue, and Broad Street, current trends may be of less importance than potential user demand and need. The estimated 302 bicyclists who use the Broad Street bridge each day, for example, though relatively few compared to other corridors, are poorly served by its existing infrastructure, while low pedestrian counts at a given location along a busy arterial[9] may belie serious safety concerns at an adjacent intersection where pedestrians are involved in crashes disproportionate to their numbers.

9 *See, e.g., Williams Boulevard and Airline Highway, in New Orleans Multi-Tool Pedestrian Safety Study 2006-2010,* http://norpc.org/assets/pdf-documents/studies-and-plans/RPC%20Pedestrian%20and%20Bicycle%20Safety%20Analysis%202006-2010_FINAL.pdf

## Table 9: Bicyclist Estimated Daily Traffic (EDT), 2010-2015 Count Locations

| | | | | | | | | *Change, 2010-2015* | |
|---|---|---|---|---|---|---|---|---|---|
| **Site #** | **2010-2015 sites** | **2010** | **2011** | **2012** | **2013** | **2014** | **2015** | **#** | **%** |
| 1 | Gentilly Blvd | 151 | 217 | 250 | 505 | 312 | 477 | *326* | *216%* |
| 2 | Esplanade Ave | 330 | 332 | 557 | 739 | 1,076 | 1,568 | *1,238* | *375%* |
| 3 | Harrison Ave | 71 | 87 | 150 | 68 | 77 | 195 | *124* | *175%* |
| 4 | St. Claude Ave | 437 | 395 | 824 | 827 | 680 | 974 | *537* | *123%* |
| 5 | Royal St | 1,056 | 901 | 832 | 712 | 596 | 639 | *-417* | *-39%* |
| 6 | Camp St | 598 | 850 | 1,073 | 1,202 | 938 | 1,028 | *430* | *72%* |
| 7 | St. Charles Ave (Gateway) | 665 | 748 | 977 | 953 | 752 | 881 | *216* | *32%* |
| 8 | Decatur St | 490 | 586 | 775 | 754 | 643 | 753 | *263* | *54%* |
| 9 | Magazine St (Uptown) | 121 | 163 | 262 | 263 | 235 | 313 | *192* | *159%* |
| 10 | Magazine St (Gateway) | 471 | 783 | 955 | 857 | 734 | 733 | *262* | *56%* |
| 11 | Simon Bolivar Ave | 332 | 565 | 638 | 579 | 854 | 942 | *610* | *184%* |
| 12 | Carondelet St | 322 | 423 | 376 | 407 | 371 | 639 | *317* | *98%* |
| | **Total** | **5,044** | **6,050** | **7,669** | **7,866** | **7,268** | **9,142** | ***4,098*** | ***81%*** |

## Table 10: Bicyclist Estimated Daily Traffic (EDT), 2013-2015 Count Locations

| | | | | | *Change, 2013-2015* | |
|---|---|---|---|---|---|---|
| | **2013-2015 sites** | **2013** | **2014** | **2015** | **#** | **%** |
| 15 | St. Bernard Ave | 288 | 330 | 781 | *493* | *171%* |
| 16 | Basin St | 322 | 653 | 876 | *554* | *172%* |
| 17 | Nashville Ave | 124 | 400 | 486 | *362* | *292%* |
| 18 | St. Charles Ave (Uptown) | 1,338 | 685 | 715 | *-623* | *-47%* |
| 19 | S. Carrollton Ave | 613 | 650 | 819 | *206* | *34%* |
| 22 | Loyola Ave | 892 | 686 | 968 | *76* | *9%* |
| 23 | S. Broad St | 376 | 433 | 495 | *119* | *32%* |
| 24 | Tulane Ave | 263 | 368 | 291 | *28* | *11%* |
| 26 | Broad St Bridge | 186 | 215 | 302 | *116* | *62%* |
| | **Total** | **4,734** | **4,735** | **5,733** | ***999*** | ***21%*** |

**Table 11: Pedestrian Estimated Daily Traffic (EDT), 2010-2015 Count Locations**

| Site # | 2010-2015 sites | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | *Change, 2010-2015* # | % |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Gentilly Blvd | 412 | 441 | 418 | 353 | 281 | 324 | *-88* | *-21%* |
| 2 | Esplanade Ave | 723 | 819 | 1,828 | 1,951 | 1,679 | 1,686 | *963* | *133%* |
| 3 | Harrison Ave | 325 | 307 | 514 | 844 | 622 | 808 | *483* | *149%* |
| 4 | St. Claude Ave | 1,047 | 529 | 1,661 | 937 | 1,511 | 1,548 | *501* | *48%* |
| 5 | Royal St | 907 | 959 | 1,098 | 1,059 | 1,004 | 1,464 | *557* | *61%* |
| 6 | Camp St | 548 | 624 | 735 | 721 | 997 | 885 | *337* | *61%* |
| 7 | St. Charles Ave | 1,915 | 1,635 | 1,671 | 2,045 | 1,998 | 3,003 | *1,088* | *57%* |
| 8 | Decatur St | 4,289 | 5,600 | 7,650 | 8,782 | 7,232 | 7,614 | *3,325* | *78%* |
| 9 | Magazine St (Uptown) | 1,054 | 696 | 885 | 965 | 931 | 1,158 | *104* | *10%* |
| 10 | Magazine St (Gateway) | 490 | 657 | 767 | 1,076 | 793 | 1,034 | *544* | *111%* |
| 11 | Simon Bolivar Ave | 2,345 | 1,631 | 1,800 | 2,490 | 1,951 | 1,583 | *-762* | *-32%* |
| 12 | Carondelet St | 300 | 375 | 336 | 495 | 421 | 793 | *493* | *164%* |
| | **Total** | **14,355** | **14,273** | **19,363** | **21,718** | **19,420** | **21,900** | ***7,545*** | ***53%*** |

**Table 12: Pedestrian Estimated Daily Traffic (EDT), 2013-2015 Count Locations**

| | 2013-2015 sites | 2013 | 2014 | 2015 | *Change, 2013-2015* # | % |
|---|---|---|---|---|---|---|
| 15 | St. Bernard Ave | 807 | 903 | 911 | *104* | *13%* |
| 16 | Basin St | 1,344 | 1,124 | 1,782 | *438* | *33%* |
| 17 | Nashville Ave | 177 | 182 | 276 | *99* | *56%* |
| 18 | St. Charles Ave (Uptown) | 1,304 | 1,126 | 978 | *-326* | *-25%* |
| 19 | S. Carrollton Ave | 919 | 1,282 | 1,419 | *500* | *54%* |
| 22 | Loyola Ave | 1,620 | 1,678 | 2,202 | *582* | *36%* |
| 23 | S. Broad St | 1,652 | 1,790 | 1,800 | *148* | *9%* |
| 24 | Tulane Ave | 1,731 | 1,430 | 1,627 | *-104* | *-6%* |
| 26 | Broad St Bridge | 99 | 164 | 181 | *82* | *83%* |
| | **Total** | **9,916** | **9,915** | **11,176** | ***1,260*** | ***13%*** |

**Table 13: Bicyclist Estimated Daily Traffic (EDT), 2014-2015 Count Locations**

| Site # | 2014-2015 sites | 2014 | 2015 | Change, 2014-2015 # | Change, 2014-2015 % |
|---|---|---|---|---|---|
| 21 | Pace Blvd | 59 | 306 | 247 | 419% |
| 29 | Metairie Rd | 77 | 206 | 129 | 168% |
| 30 | Jeff Davis Pkwy Bridge | 1,071 | 1,686 | 615 | 57% |
| 31 | Decatur St (Jackson Square) | 1,528 | 1,547 | 19 | 1% |
| 32 | Freret St | 459 | 242 | -217 | -47% |
| 33 | MLK Blvd | 277 | 284 | 7 | 3% |
| 34 | Royal St (French Quarter) | 658 | 1072 | 414 | 63% |
| 35 | Mirabeau Ave | 51 | 179 | 128 | 251% |
| 36 | S. Peters St | 50 | 173 | 123 | 246% |
| 37 | Baronne St (Gateway) | 311 | 565 | 254 | 82% |
| 39 | Golf Dr | 559 | 701 | 142 | 25% |
| 40 | Annunciation St | 352 | 247 | -105 | -30% |
| 41 | Elysian Fields Ave | 483 | 587 | 104 | 22% |
| 42 | Canal St (CBD) | 609 | 584 | -25 | -4% |
| | **Total** | **6,544** | **8,379** | **1835** | **28%** |

**Table 14: Pedestrian Estimated Daily Traffic (EDT), 2014-2015 Count Locations**

| Site # | 2014-2015 sites | 2014 | 2015 | Change, 2014-2015 # | Change, 2014-2015 % |
|---|---|---|---|---|---|
| 21 | Pace Blvd | 110 | 832 | 722 | 656% |
| 29 | Metairie Rd | 199 | 390 | 191 | 96% |
| 30 | Jeff Davis Parkway Bridge | 523 | 692 | 169 | 32% |
| 31 | Decatur St (Jackson Square) | 13,118 | 12,718 | -400 | -3% |
| 32 | Freret St | 1550 | 1151 | -399 | -26% |
| 33 | MLK Blvd | 298 | 353 | 55 | 18% |
| 34 | Royal St (French Quarter) | 12,328 | 11,723 | -605 | -5% |
| 35 | Mirabeau Ave | 81 | 276 | 195 | 241% |
| 36 | S. Peters St | 1,434 | 1,430 | -4 | 0% |
| 37 | Baronne St (Gateway) | 454 | 553 | 99 | 22% |
| 39 | Golf Dr | 202 | 180 | -22 | -11% |
| 40 | Annunciation St | 388 | 517 | 129 | 33% |
| 41 | Elysian Fields Ave | 848 | 938 | 90 | 11% |
| 42 | Canal St (CBD) | 13,297 | 20,770 | 7,473 | 56% |
| | **Total** | **44,830** | **52,523** | **7,693** | **17%** |

## 3.3 Observed Count Totals and EDT: New Count Sites

In 2015, 13 new count sites were added in locations where new facilities exist, where roadway improvements are planned, or where UNO Transportation Institute and RPC staff identified a need for additional data in order to facilitate a more comprehensive understanding of user trends and behaviors throughout the region. Tables 15 and 16 illustrate the observed user volumes as well as estimated daily traffic (EDT) for each of these locations, for bicyclists and pedestrians respectively.

Among these new sites, the highest bicyclist volumes were observed at an additional St. Claude Avenue count location in the Marigny (selected to relate to previous studies conducted by Tulane University), St. Charles Avenue in the Lower Garden District (where no facilities currently exist, but a roadway project is anticipated), on Baronne Street in the CBD (which recently received a road diet and dedicated bicycle lane), and on Canal Street near the Jefferson Davis Parkway Trail. The lowest user volumes were observed in more suburban parts of the region. This includes Holiday Drive, General Meyer Avenue, and LB Landry Avenue in Westbank Orleans Parish, and Lake Forest Avenue in New Orleans East. Although some of these locations are the site of existing or planned bicycle facilities, network connections for bicyclists are still limited in these neighborhoods, likely inhibiting use.

For pedestrians, new count locations with the highest observed user totals include Baronne Street in the CBD, St. Charles Avenue at a commercial section of the Lower Garden District, and St. Claude Avenue in the Marigny, near several businesses and a school. Low volumes were recorded in suburban neighborhoods in New Orleans East and Jefferson Parish, as well as along Marconi Drive (a corridor with limited non-recreational pedestrian attractors).

Looking at all 48 count locations together, the sites with the highest estimated daily bicyclist volumes in 2015 were the Jefferson Davis Parkway Trail Bridge, Esplanade Avenue, Decatur Street at Jackson Square, Royal Street (French Quarter), Camp Street, St. Claude Avenue (Bywater), Loyola Avenue, St. Claude Avenue (Marigny), Simon Bolivar Avenue, and St. Charles Avenue (CBD Gateway) (see Table 17 and Figure 16).

Of these corridors, seven have some kind of bicycle facilities present, indicating that the city's growing bicycle network is serving the needs of many users. The remaining three locations with no bicycle facilities present are on corridors frequently used by commuters to access the CBD, clearly indicating demand for bicycle commuting into New Orleans' downtown that is presently underserved. For pedestrians, seven of the top ten locations were in or adjacent to the French Quarter or CBD, two were along St. Charles Avenue, and one—Broad Street—is home to numerous civic uses, businesses, and a busy transit line (Table 18 and Figure 17). Importantly, of course, not all who commute to work by bicycling or walking are employed in the CBD. Future count efforts should aim to identify and evaluate likely active commute links to additional employment centers.

**Table 15: Observed Total Manual Count Volumes and Estimated Daily Traffic (EDT), Bicycles, 2015 New Count Sites**

| Site # | Count Site | 2015 Observed Volume | *2015 Estimated EDT* |
|---|---|---|---|
| 43 | St. Charles Ave (LGD) | 249 | *716* |
| 44 | LB Landry Ave | 22 | *84* |
| 45 | N. Galvez St | 82 | *290* |
| 46 | N. Miro St | 51 | *199* |
| 47 | Lake Forest Blvd | 31 | *112* |
| 48 | Holiday Dr | 22 | *51* |
| 49 | Transcontinental Dr | 71 | *273* |
| 50 | Baronne St (CBD) | 247 | *719* |
| 51 | St. Claude Ave (Marigny) | 343 | *961* |
| 52 | Marconi Dr | 83 | *251* |
| 53 | Banks St | 53 | *387* |
| 54 | Canal St (Midcity) | 242 | *786* |
| 55 | General Meyer Ave | 26 | *78* |
| | **Total** | **1,522** | ***4,907*** |

**Table 16: Observed Total Manual Count Volumes and Estimated Daily Traffic (EDT), Pedestrians, 2015 New Count Sites**

| Site # | Count Site | 2015 Observed Volume | *2015 Estimated EDT* |
|---|---|---|---|
| 43 | St. Charles Ave (LGD) | 944 | 2,715 |
| 44 | LB Landry Ave | 272 | 1,040 |
| 45 | N. Galvez St | 144 | 510 |
| 46 | N. Miro St | 171 | 667 |
| 47 | Lake Forest Blvd | 94 | 340 |
| 48 | Holiday Dr | 98 | 226 |
| 49 | Transcontinental Dr | 93 | 357 |
| 50 | Baronne St (CBD) | 1,104 | 3,213 |
| 51 | St. Claude Ave (Marigny) | 577 | 1,621 |
| 52 | Marconi Dr | 55 | 167 |
| 53 | Banks St | 193 | 598 |
| 54 | Canal St (Midcity) | 364 | 1,182 |
| 55 | General Meyer Ave | 89 | 268 |
| | **Total** | **4,198** | ***12,904*** |

Figure 16: 2015 Bicycle Estimated Daily Traffic, Manual Counts, Orleans and Jefferson Parishes

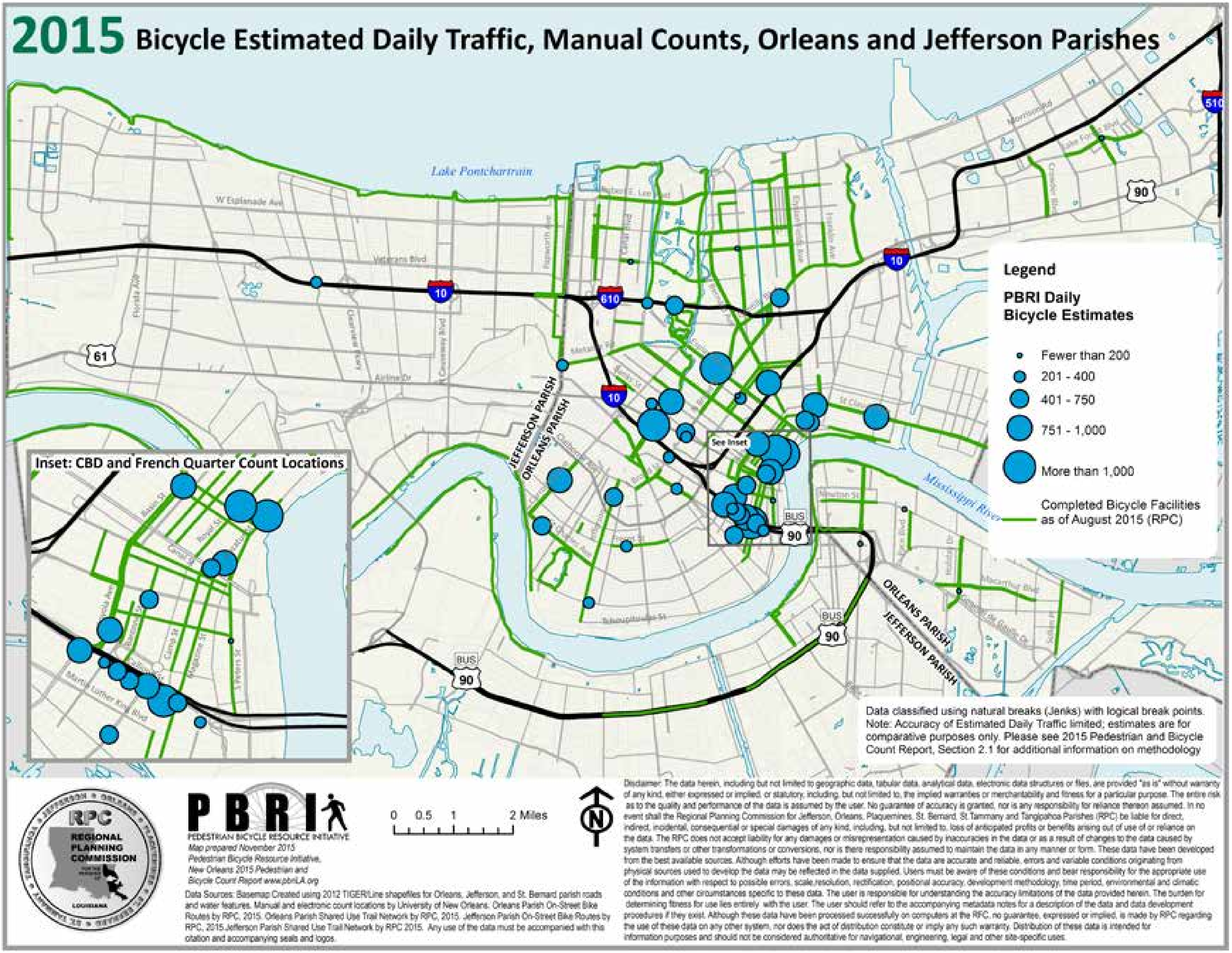


Figure 17: 2015 Pedestrian Estimated Daily Traffic, Manual Counts, Orleans and Jefferson Parishes

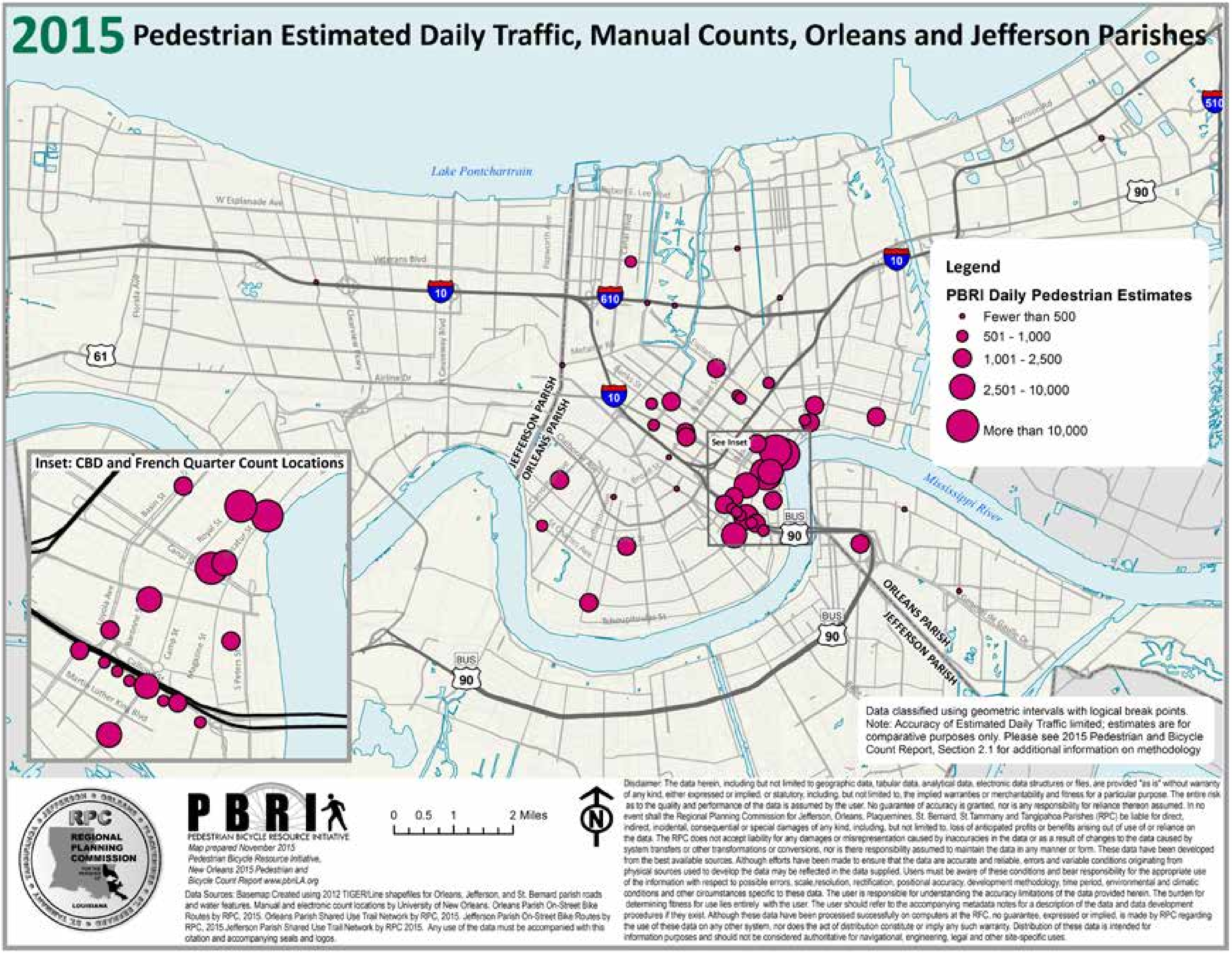


**Table 17: Top Bicycle EDT, All 2015 Count Locations**

| Rank | Count Site | EDT |
|---|---|---|
| 1 | Jeff Davis Pkwy Bridge | 1,686 |
| 2 | Esplanade Ave | 1,568 |
| 3 | Decatur St (Jackson Square) | 1,547 |
| 4 | Royal St (French Quarter) | 1,072 |
| 5 | Camp St (Gateway) | 1,028 |
| 6 | St. Claude Ave (Bywater) | 974 |
| 7 | Loyola Ave | 968 |
| 8 | St. Claude Ave (Marigny) | 961 |
| 9 | Simon Bolivar Ave (Gateway) | 942 |
| 10 | St. Charles Ave (Gateway) | 881 |

**Table 18: Top Pedestrian EDT, All 2015 Count Locations**

| Rank | Count Site | *EDT* |
|---|---|---|
| 1 | Canal St (CBD) | 20,770 |
| 2 | Decatur St (Jackson Square) | 12,718 |
| 3 | Royal St (French Quarter) | 11,723 |
| 4 | Decatur St | 7,614 |
| 5 | Baronne St (CBD) | 3,213 |
| 6 | St. Charles Ave (Gateway) | 3,003 |
| 7 | St. Charles Ave (LGD) | 2,715 |
| 8 | Loyola Ave | 2,202 |
| 9 | Broad St | 1,800 |
| 10 | Basin St | 1,782 |

## 3.4 Commuting Patterns near Manual Count Locations

Utilizing census tract-level data from the American Community Survey 2009-2013 five year estimates, commuting patterns were mapped in Figures 18 and 19.

Active transportation commutes have increased overall citywide from the previous dataset[10] (2008-2012) (see section 5.0 for additional information on citywide and regional trends), but census-tract level patterns remain relatively stable, with strong rates of both walking and bicycling in the downtown neighborhoods surrounding the French Quarter, as well as pockets of strong active commuting in the Lower Garden District, Central City, Mid City, and the uptown University area.

Low rates of active transportation are again found in more suburban, less compact neighborhoods of Gentilly, Lakeview, New Orleans East, Algiers and most of Jefferson Parish. As in previous years analyzed, among the count locations selected for observation, those with high observed volumes tend to be located in or near census tracts with higher rates of active transportation commuting.

*10 Note that due to limited sample sizes, margins of error for census tract-level commute data can be very high (i.e., at the 90% confidence interval, coefficients of variation may be greater than 30%, indicating that data should be used with caution) . Five-year estimates provide estimates at smaller levels of geography by aggregating samples from multiple years to provide a moving average estimate, however, these figures are used for comparative purposes only to illustrate likely trends and do not describe specific numbers of users for any given geography or year.*

In addition, though the relationship between facility construction and overall mode share is complex and correlations between new infrastructure and commute behavior can be difficult to isolate,[11] it is worth noting that, the construction of new bicycle facilities is likely to have a long-term impact on overall mode share. Compared to previous iterations of this study, the number and geographic spread of census tracts reporting at least some bicycle commuters appears to be growing.

The latest ACS estimates indicate that areas in Lakeview, Gentilly, and Algiers where bicycle facilities have been developed which previously reported zero bicycle commuters are now home to a small but growing number. In many tracts where bicycle commuters already existed, their concentration appears to be increasing. To illustrate, in Orleans and Jefferson Parish, 2006-2010 ACS 5-year estimates indicate that there were 192 census tracts with zero estimated bicycle commuters, while 2009-2013 data shows only 159 such tracts.

On the other hand, the number of census tracts estimated to have greater than 5% of commuters traveling by bicycle has increased from 24 in the 2006-2010 period up to 32 from 2009-2013. Although there are myriad economic, demographic, and context-specific factors influencing the decision to bicycle regularly, this trend suggests, as asserted in previous reports, that as the region's bicycle infrastructure network has become more integrated, viability of bicycling for transportation has expanded into new neighborhoods further from the downtown core.

The manual count sites with the highest 2015 bicyclist EDT (Esplanade Avenue, Decatur Street, Royal Street, both St. Claude Avenue sites, and several CBD "gateway" count locations) tend to be within or adjacent to census tracts with high rates (6 to 24%) of 2009-2013 bicycle commuting. One exception is the Jefferson Davis Parkway Bridge, with the highest bicycle EDT but a relatively low rate of commuting in the adjacent census tract. As noted above, this is a critical cross-town connection for users in many uptown and mid-city neighborhoods. Conversely, the lowest bicyclist EDT sites (Holiday Drive, General Meyer Avenue, and LB Landry Avenue in Algiers, and Lake Forest Avenue in New Orleans East) are near census tracts with low rates of commuting by bicycle (zero to 3.5%).

As noted in previous studies, correlations between pedestrian commute mode and observed use are difficult to discern and unpack, as land uses, neighborhood demographics, infrastructure, and tourism may all play a role in pedestrian activity observed. High rates of pedestrian commuting, as well as high observed count totals, are identified in the New Orleans French Quarter and CBD, and near the Universities uptown. Other sites (e.g. St. Claude Avenue in Bywater and Harrison Avenue in Lakeview with high observed numbers of pedestrians relative to the low rates of pedestrian commuting in those census tracts likely reflect non-work pedestrian trips (e.g. shopping, recreation, access to public services and non-CBD employment).

Importantly, while general correlations appear to exist between higher observed rates of use and higher reported rates of active transportation commuting in the American Community Survey, discrepancies may exist as both datasets represent limited sample sizes. This study does not evaluate usership on all possible routes within a neighborhood, and ACS samples for this data are relatively small with high margins of error (i.e., coefficients of variation at the 90% confidence interval greater than 30%), particularly during the first few years after Hurricane Katrina. As five-year estimates are the only dataset available at the census tract level, changes in commute trends may not be quickly reflected in ACS estimates.

*11 See for example: Douma, F. and Cleveland, F. (2008). The Impact of Bicycling Facilities on Commute Mode Share (http://www.lrrb.org/PDF/200833.pdf); Krizek, K., Barnes, G., and Thompson, K. (2009). Analyzing the Effect of Bicycle Facilities on Commute Mode Share over Time, Journal of Urban Planning and Development 135:2.*

Figure 18: Bicycle Commuters by Census Tract, Jefferson and Orleans Parishes, 2009-2013 ACS Estimates

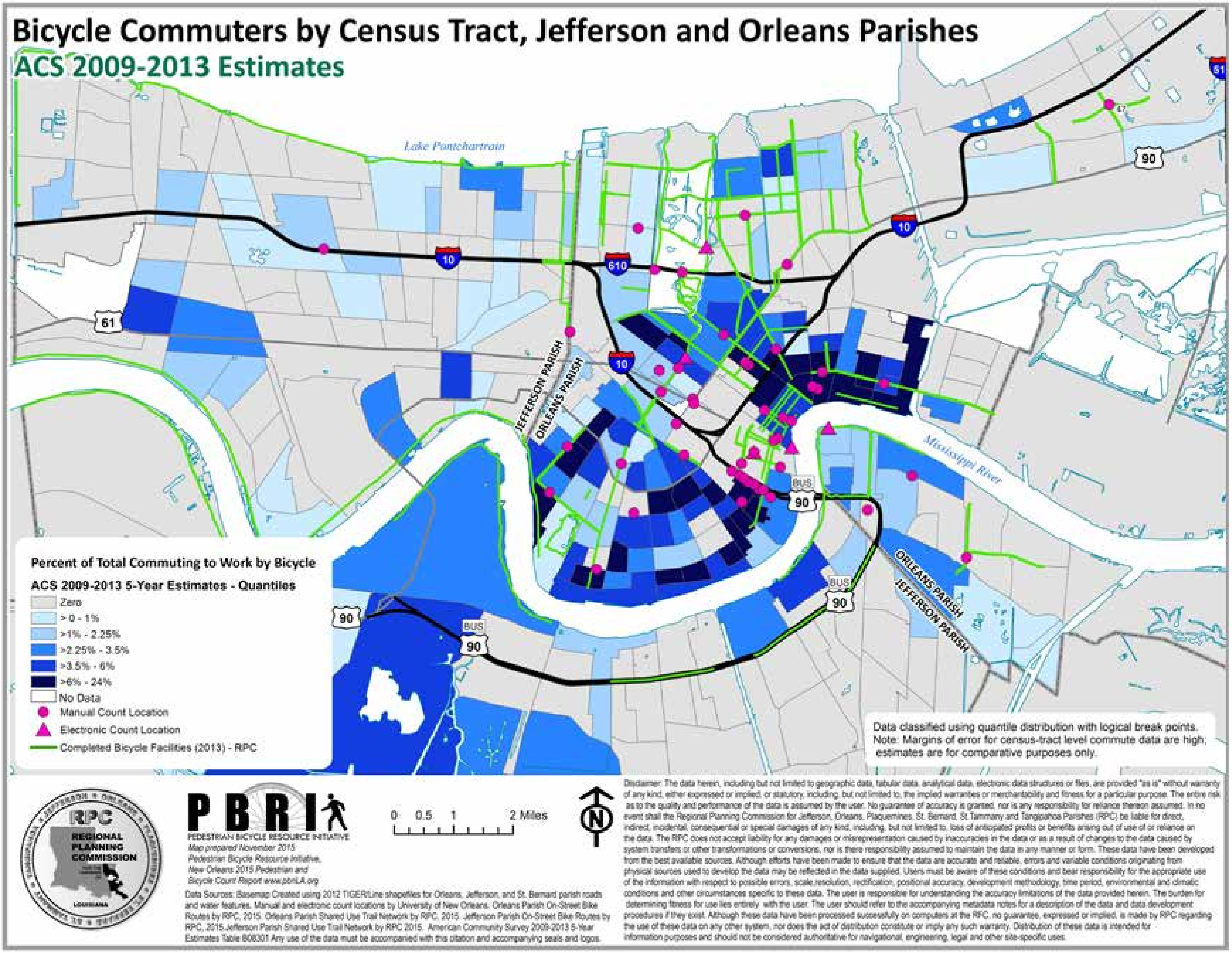


**Figure 19: Pedestrian Commuters by Census Tract, Jefferson and Orleans Parishes, 2009-2013 ACS Estimates**

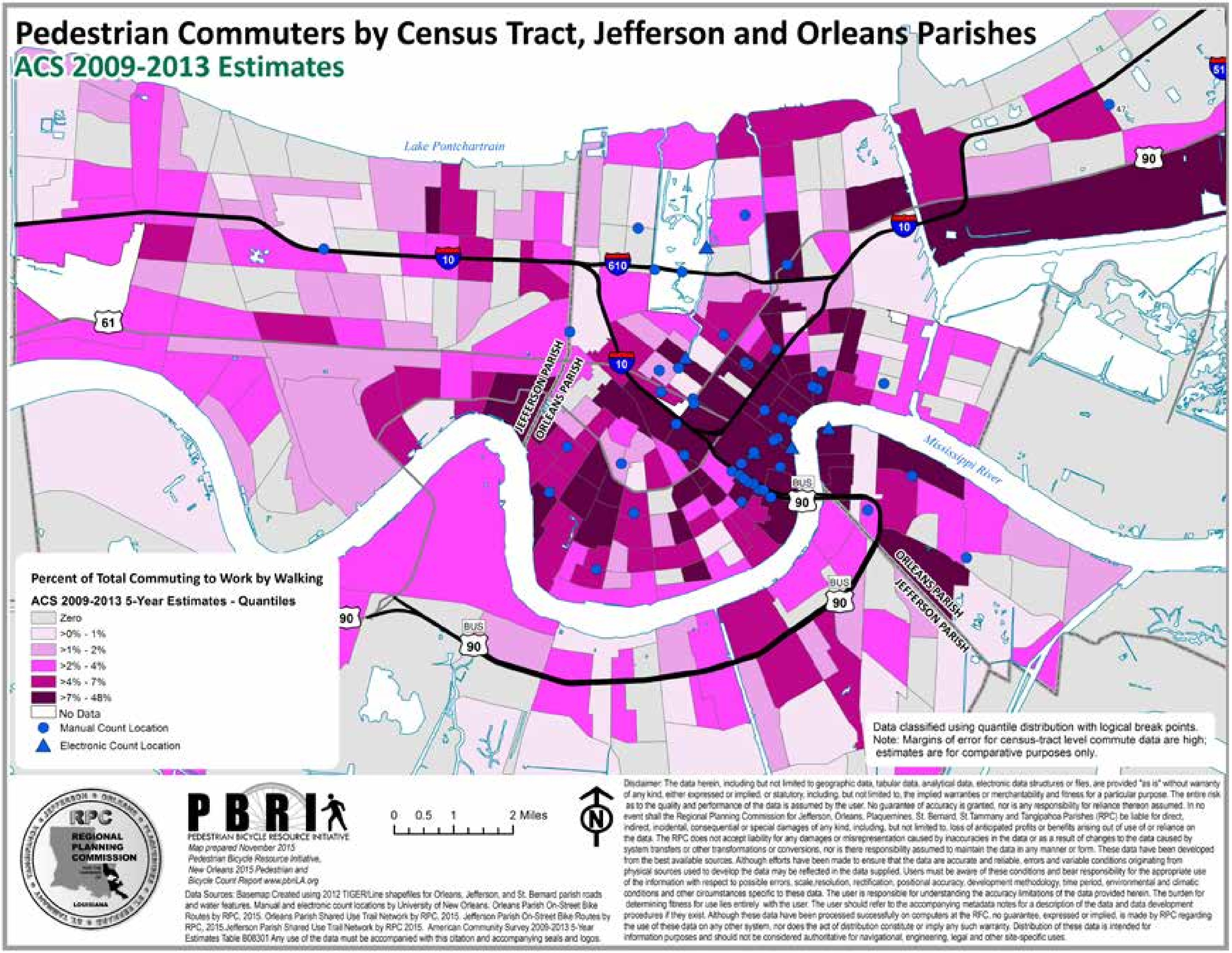


**Table 19: Approximate Active Transportation Mode Share for Select Sites***

| | | 2015 Bicycle EDT | | 2015 Pedestrian EDT | | 2015 Combined Bicycle/Pedestrian EDT | | Motorized Vehicle ADT | | | Total Daily Estimated Traffic Volume (excludes transit) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Site #** | | # | % | # | % | # | % | # | **Year** | % | # |
| 42 | Canal St | 584 | **1.6%** | 20,770 | **56.4%** | 21,354 | **58.0%** | 15,454 | 2013 | **42.0%** | 36,808 |
| 31 | Decatur St (Jackson Square) | 1,547 | **6.2%** | 12,718 | **51.2%** | 14,265 | **57.5%** | 10,562 | 2011 | **42.5%** | 24,827 |
| 6 | Camp St (Gateway) | 1,028 | **15.0%** | 885 | **12.9%** | 1,913 | **27.8%** | 4,960 | 2009 | **72.2%** | 6,873 |
| 11 | Simon Bolivar Ave (Gateway) | 942 | **7.6%** | 1,583 | **12.7%** | 2,525 | **20.2%** | 9,956 | 2008 | **79.8%** | 12,481 |
| 7 | St. Charles Ave (Gateway) | 881 | **3.6%** | 3,003 | **12.2%** | 3,884 | **15.8%** | 20,662 | 2011 | **84.2%** | 24,546 |
| 10 | Magazine St (Gateway) | 733 | **6.1%** | 1,034 | **8.6%** | 1,767 | **14.7%** | 10,287 | 2009 | **85.3%** | 12,054 |
| 41 | Elysian Fields Ave | 587 | **5.6%** | 938 | **9.0%** | 1,525 | **14.6%** | 8,951 | 2012 | **85.4%** | 10,476 |
| 43 | St. Charles Ave (LGD) | 716 | **3.0%** | 2,715 | **11.3%** | 3,431 | **14.2%** | 20,662 | 2011 | **85.8%** | 24,093 |
| 22 | Loyola Ave | 968 | **3.6%** | 2,202 | **8.2%** | 3,170 | **11.9%** | 23,579 | 2009 | **88.2%** | 26,749 |
| 24 | Tulane Ave | 291 | **1.6%** | 1,627 | **8.8%** | 1,918 | **10.3%** | 16,667 | 2013 | **89.7%** | 18,585 |
| 35 | Mirabeau Ave | 179 | **4.0%** | 276 | **6.2%** | 455 | **10.3%** | 3,978 | 2008 | **89.7%** | 4,433 |
| 51 | St. Claude Ave (Marigny) | 961 | **3.8%** | 1,621 | **6.4%** | 2,582 | **10.2%** | 22,750 | 2013 | **89.8%** | 25,332 |
| 4 | St. Claude Ave (Bywater) | 974 | **3.9%** | 1,548 | **6.1%** | 2,522 | **10.0%** | 22,750 | 2013 | **90.0%** | 25,272 |
| 18 | St. Charles Ave (Uptown) | 715 | **3.7%** | 978 | **5.0%** | 1,693 | **8.7%** | 17,839 | 2008 | **91.3%** | 19,532 |
| 33 | MLK Blvd | 284 | **3.4%** | 353 | **4.2%** | 637 | **7.7%** | 7,680 | 2008 | **92.3%** | 8,317 |
| 1 | Gentilly Blvd | 477 | **4.4%** | 324 | **3.0%** | 801 | **7.5%** | 9,950 | 2013 | **92.6%** | 10,751 |
| 19 | S. Carrollton Ave | 819 | **2.7%** | 1,419 | **4.6%** | 2,238 | **7.2%** | 28,653 | 2012 | **92.8%** | 30,891 |
| 23 | S. Broad St | 495 | **1.6%** | 1,800 | **5.6%** | 2,295 | **7.2%** | 29,637 | 2013 | **92.8%** | 31,932 |
| 29 | Metairie Rd | 206 | **1.4%** | 390 | **2.6%** | 596 | **3.9%** | 14,586 | 2013 | **96.1%** | 15,182 |
| 55 | General Meyer Ave | 78 | **0.8%** | 268 | **2.7%** | 346 | **3.5%** | 9,440 | 2013 | **96.5%** | 9,786 |
| 49 | Transcontinental Dr | 273 | **1.3%** | 357 | **1.6%** | 630 | **2.9%** | 21,112 | 2009 | **97.1%** | 21,742 |

** Selected Sites are locations with motor vehicle ADT data available from RPC or DOTD. Where multiple applicable counts are available, the most recent are used.*
*Data Source: http://www.norpc.org/traffic_counts.html; http://www.dotd.la.gov/highways/tatv/default.asp*

## 3.5 Estimating Active Transportation Mode Share

Previous PBRI reports on the findings of the count program[12] examined mode share by comparing active transportation count data with automobile Average Daily Traffic (ADT) data collected by the New Orleans Regional Planning Commission and the Louisiana Department of Transportation and Development at locations proximate to manual count sites. This analysis has been updated to include new count sites as well as more recent automobile count figures from both the Regional Planning Commission and Louisiana Department of Transportation and Development (Table 19). Using this data, we can construct a rough approximation of the mode share of selected facilities.

Notably, transit riders are not accounted for in this analysis. In addition, the pedestrian and bicycle EDT figures have an innate, not fully explored margin of error as noted above, and motor vehicle counts are not necessarily from the same year as pedestrian and bicycle counts. Future data collection efforts should attempt to refine upon this analysis by utilizing updated data from the New Orleans Regional Transit Agency (e.g., the Comprehensive Operations Analysis) in order to more comprehensively capture all road users, including transit riders, and to coordinate the timing and location of future counts in order to provide more accurate estimates. Ideally, automated count equipment for pedestrians and bicyclists should be deployed concurrently with auto count equipment to provide conclusive 24-hour mode share evaluations.

Combining estimated daily traffic for walking and bicycling with automobile ADT reveals that active transportation may account for a substantial percentage of overall daily traffic, particularly at points of entry and exit to the CBD and in downtown neighborhoods. As was observed in previous years, a substantial percentage of commuters into and out of the downtown area also arrive via active transportation, particularly at Camp Street, St. Charles Avenue, and Magazine Street.[13]

Active users—particularly pedestrians—make up a large proportion of total right-of-way users in and near the French Quarter: on Canal Street and on Decatur Street at Jackson Square, these estimates suggest that more than half of all users travel on foot. Pedestrians make up a larger-than-typical share of users on Camp Street, Simon Bolivar Avenue, and St. Charles Avenue (both gateway and LGD locations) as well.

The highest mode share percentages for bicyclists, meanwhile, occurs on Camp Street (15%), Simon Bolivar Avenue (8%), Decatur Street at Jackson Square (6%), Magazine Street (Gateway, 6%) and Elysian Fields Avenue (6%). Low motorized vehicle counts and relatively large numbers of both pedestrians and bicyclists on Elysian Fields Avenue in the Marigny suggest that this corridor—currently six motor vehicle lanes—may be a good target for a future redesign to better accommodate active users, such as by constructing curb extensions to improve visibility and reduce crossing distances for pedestrians, and/or by reducing the number of auto lanes and providing a buffered or protected bicycle lane.

Very low estimated active transportation mode shares are found in Jefferson Parish, Algiers, and on Metairie Road. Each of these count locations represents a main arterial roadway in a land use context that is not conducive to walking and bicycling. Elsewhere, active transportation mode shares (where vehicle count data exists) fail to reach the levels found in and approaching downtown, but tend to be higher than the figures for ACS commute mode share described above, which only capture trips to and from employment.

12 *See "Reports" at www.norpc.org/pedestrian_and_bicycle_program.html*

13 *Simon Bolivar Avenue is also a potential CBD gateway with a high proportion of active users, however observers noted that the majority of foot traffic appeared to be highly localized rather than entering the downtown area*

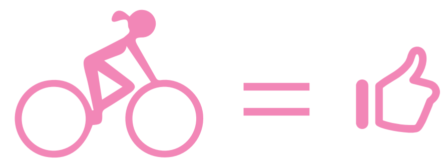
## 3.6 Demographic and Behavioral Characteristics of Users

In addition to counting the total number of pedestrians and bicyclists, the PBRI count study also aims to capture critical information about who is using our streets and sidewalks, and how. This section summarizes the user characteristics of pedestrians and bicyclists observed in 2015, including gender, age category (i.e., adult versus child), race, travel orientation, and helmet use for bicyclists (Tables 20 and 21). Gender, helmet use, and travel orientation are important indicators of bicyclist safety and perceptions toward bicycling, while age group and race illustrate demographic variances in usership and highlight potential opportunities to target future safety and educational campaigns to the groups and neighborhoods that could best benefit from them.

Appendix I breaks down these attributes for pedestrians and bicyclists by count site, highlighting how various characteristics shift dramatically by location.

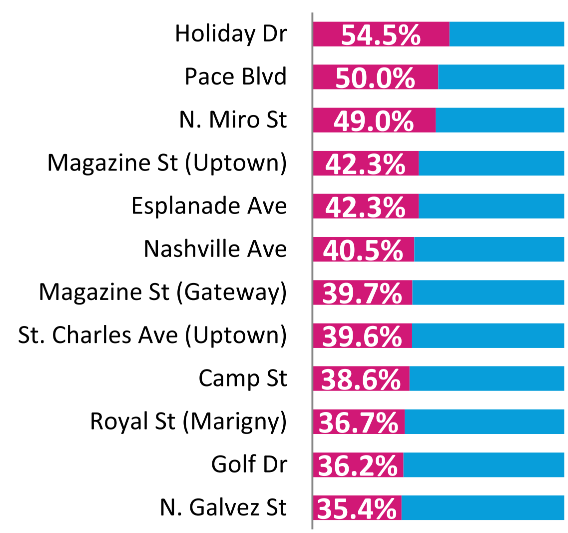
### 3.6.1 Gender

As has been widely documented in the literature and in previous iterations of this report, the proportion of female bicyclists is a strong indicator of the perceived safety and bicycle-friendliness of a location.[14] Higher percentages of women and girls indicate a more comfortable cycling environment for all users. To some extent, this may also be true of high female pedestrian activity in a given area, although less research exists documenting this subject. In the New Orleans region, the percentage of bicyclists who are female observed at the 12 core count locations has increased by 5.2% over the last six years to 32.3%. The proportion of bicyclists observed who are women has increased slightly each year, even as total bicyclist counts have continued to rise, indicating that more and more women and are choosing to bicycle in New Orleans. The percent of cyclists who are female at all 48 2015 count locations is slightly lower, at 30.4%, which likely reflects that several of the new count locations are not yet established bicycle routes and lack adequate infrastructure to be perceived as safe.



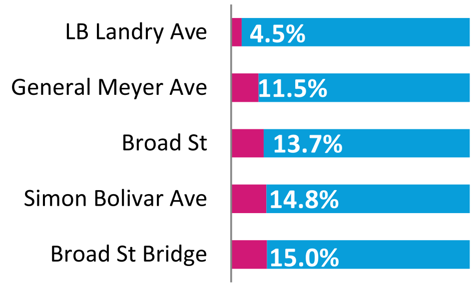
**A higher proportion of female bicyclists indicates a bike-friendly street.**

Sites with the highest female bicyclist percentage (greater than 35%) include:




14 *Garrard, J., Dill, J., Handy, S. (2012). Women and Cycling. In Pucher, J., Buehler, R. (Eds.), City Cycling (211-234). Cambridge, MA: MIT Press*

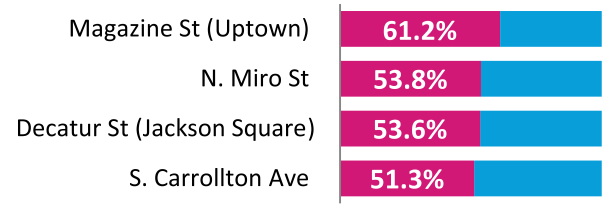
Very low percentages of women bicyclists (less than 15%) were observed at the following locations:



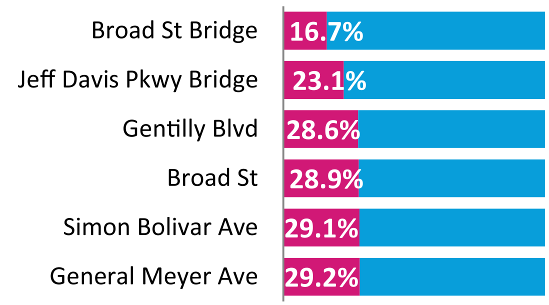

It is important to note that the proportion of female cyclists at some locations (e.g. Holiday Drive, Pace Boulevard) is high, however the total number of cyclists observed is relatively low. As noted above, lack of observed total as well as female cyclists on a specific corridor does not necessarily indicate lack of latent demand for access to these areas. While several of the locations with high shares of female bicyclists do have dedicated bike facilities, it is likely that other factors influence perceived safety and women's willingness to bike or walk in a given location, including land use mix, traffic volumes, and personal safety (as from crime).

Pedestrian patterns have remained relatively stable over time, with the proportion of observed walkers who are female increasing just 2.5% over six years to 42.5%. The percent of female pedestrians at all 48 2015 count sites is slightly higher at 45.4%.

Among pedestrians, the highest proportions of female pedestrians (greater than 50%) were observed at:




Meanwhile the lowest (less than 30%) were documented at the following:




Again, while some of these trends are likely related to facility presence and quality (particularly in instances where pedestrian infrastructure is clearly deficient, such as the Broad Street Overpass), other factors such as commercial activity, tree cover, and the presence of many other pedestrians likely contribute to women's choices whether and where to walk. As noted in previous iterations of this report, the percentages of both female pedestrians and to an even greater degree, female bicyclists observed do not align with the composition of the overall study area, where women make up slightly more than half of the population (Table 22).

**Table 20: Overall Bicyclist Composition, 2010-2015**

| | Percent of Total, Continuing 12 Count Locations, 2010-2015 | | | | | | ***Percentage Point Change, 2010-2015*** | All 2015 Count Sites: Percent of Total |
|---|---|---|---|---|---|---|---|---|
| | **2010** | **2011** | **2012** | **2013** | **2014** | **2015** | | |
| *Gender* | | | | | | | | |
| Male Bicyclists | 72.9% | 72.1% | 72.3% | 69.0% | 68.5% | 67.7% | *-5.2%* | 69.6% |
| Female Bicyclists | 27.1% | 27.9% | 28.0% | 31.1% | 31.5% | 32.3% | *5.2%* | 30.4% |
| *Race* | | | | | | | | |
| White Bicyclists | 70.3% | 72.5% | 73.1% | 73.9% | 74.2% | 69.0% | *-1.3%* | 69.1% |
| Black Bicyclists | 19.3% | 20.5% | 21.7% | 21.5% | 21.9% | 26.1% | *6.9%* | 25.6% |
| Other Bicyclists | 8.7% | 7.0% | 5.2% | 4.6% | 3.9% | 4.9% | *-3.9%* | 5.4% |
| *Age* | | | | | | | | |
| Adult Bicyclists | n/a | 98.7% | 98.4% | 98.1% | 99.3% | 98.6% | *-0.1%* | 98.5% |
| Youth Bicyclists | n/a | 1.3% | 1.6% | 1.5% | 0.7% | 1.4% | *0.1%* | 1.5% |
| Helmet Users | 10.4% | 16.3% | 15.8% | 20.9% | 19.3% | 23.6% | *13.2%* | 22.9% |
| *Travel Orientation:* | | | | | | | | |
| Street - Right Way | 75.5% | 73.9% | 80.2% | 82.1% | 86.7% | 84.3% | *8.9%* | 79.4% |
| Multi-Use Trail | | | n/a | | | | *n/a* | 5.0% |
| Street - Wrong Way | 11.6% | 9.7% | 7.9% | 7.3% | 4.3% | 4.5% | *-7.1%* | 4.4% |
| Sidewalk | 12.6% | 16.1% | 11.6% | 10.4% | 9.0% | 11.1% | *-1.5%* | 9.1% |
| Neutral Ground | 0.4% | 0.3% | 0.3% | 0.2% | 0.0% | 0.0% | *-0.3%* | 2.1% |

*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 21: Overall Pedestrian Composition, 2010-2015**

| | Percent of Total, Continuing 12 Count Locations, 2010-2015 | | | | | | *Percentage Point Change, 2010-2015* | All 2015 Count Sites: Percent of Total |
|---|---|---|---|---|---|---|---|---|
| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | | |
| *Gender* | | | | | | | | |
| Male Pedestrians | 60.0% | 60.3% | 57.6% | 58.1% | 58.2% | 57.5% | *-2.5%* | 54.6% |
| Female Pedestrians | 40.0% | 39.7% | 42.4% | 41.9% | 41.8% | 42.5% | *2.5%* | 45.4% |
| *Race* | | | | | | | | |
| White Pedestrians | 57.1% | 65.5% | 62.0% | 67.0% | 65.1% | 65.4% | *8.3%* | 63.9% |
| Black Pedestrians | 32.0% | 28.1% | 31.2% | 27.6% | 29.4% | 27.8% | *-4.2%* | 27.9% |
| Other Pedestrians | 8.1% | 6.3% | 6.8% | 5.4% | 5.5% | 6.8% | *-1.3%* | 8.2% |
| *Age* | | | | | | | | |
| Adult Pedestrians | n/a | 96.4% | 96.1% | 96.2% | 97.1% | 98.1% | *1.7%* | 96.4% |
| Youth Pedestrians | n/a | 3.6% | 3.9% | 3.8% | 2.9% | 1.9% | *-1.7%* | 3.6% |
| *Travel Orientation:* | | | | | | | | |
| Sidewalk | n/a | 92.6% | 92.9% | 92.7% | 93.1% | 93.1% | *0.6%* | 93.6% |
| Multi-Use Trail | | | | | | | *n/a* | 0.4% |
| Street | n/a | 4.7% | 4.8% | 4.9% | 4.4% | 3.5% | *-1.1%* | 3.1% |
| Neutral Ground | n/a | 2.8% | 2.3% | 2.4% | 2.5% | 3.4% | *0.6%* | 2.9% |

*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.*

### 3.6.2 Race

The general racial characteristics of users, categorized as "black," "white," or "other," assigned by the student observers, are highly subjective and used here for descriptive purposes only. In 2015, approximately 69% of bicyclists at the core continuing count locations were identified as white, 26.1% as black, and 4.9% as other. This reflects a larger share of bicyclists identified as black than in any previous study year. Meanwhile, the percentage of pedestrians identified as white (65%) remained the same as in 2014, with an overall 8.3 percentage point increase in the share of white pedestrians observed since 2010. For both pedestrians and bicyclists, figures for all 48 count locations in 2015 reflect nearly identical compositions.

**Table 22: Demographic Composition of Pedestrians and Bicyclists Relative to Area Population**

| | % of Pedestrians Observed (All 2015 Count Locations) | % of Bicyclists Observed (All 2015 Orleans Parish Count Locations) | ACS 2013 Estimates, Orleans Parish |
|---|---|---|---|
| **Gender** | | | |
| Male | 54.6% | 69.6% | 48.0% |
| Female | 45.4% | 30.4% | 52.0% |
| **Race** | | | |
| Black | 27.9% | 25.6% | 60.3% |
| White | 63.9% | 69.1% | 36.0% |
| Other | 8.2% | 5.4% | 3.7% |

*Source: 2013 ACS 1-year estimates, Table DP05*

As noted in previous count reports, the racial composition of users has been found to principally reflect the demographic makeup of the neighborhood in which counts are conducted, except on corridors that are heavily traveled by bicycle commuters, or areas with high concentrations of tourism activity (e.g. the French Quarter). However, on a regional scale, the racial characteristics of users observed (both pedestrians and bicyclists) during the count study differ substantially from the estimated demographic makeup of Orleans Parish, where all but one of the counts were conducted in 2015 (Table 22), indicating that a) the count locations selected do not fully represent all neighborhoods of the city and b) some racial disparities may exist in terms of access to and/or preference for non-motorized modes of transport.

### 3.6.3 Age

Observers are instructed in techniques for assessing age classification to identify pedestrians and bicyclists who are likely to be 14 years of age or younger, however this remains a subjective determination. As in previous years of data, the percentage of non-motorized users identified as youths remains very small, at 1.5% of bicyclists and 3.6% of pedestrians—a slight increase from 2014 which may reflect the addition of two count locations near schools. Exceptions include Harrison Avenue, where 14.7% of bicyclists were identified as youths, Holiday Drive with 18.2% youths, and General Meyer Avenue with 23.1% (though the total number of bicyclists was very small at the latter two locations)

The highest proportions of youth were observed walking at the two locations near schools, LB Landry Avenue with 43% youths observed and St. Claude Avenue (Marigny) with 23.2% youth pedestrians. Relatively high shares of youths were also observed on General

Meyer Avenue (21.3%), Martin Luther King Boulevard (16.8%), and St. Bernard Avenue (16.6%).

Although youth age 14 and younger represent a clear minority of users, there is a need for improved pedestrian and bicycle infrastructure, especially crossing improvements and protected bikeways that separate users from auto traffic, particularly in the vicinity of schools, in order to encourage young people to engage in healthy habits and facilitate non-motorized modes of transport to and from school.

### 3.6.4 Helmet Use

Although helmet use is not mandatory among adults in Louisiana, helmet use remains an important indicator of bicyclist safety. While in many cities across the world, low helmet use rates actually reflect increased safety due to the normalization of cycling as a mode of transportation, in most U.S. cities, helmet use is perceived as an encouraging indicator of conscientious bicycling habits.

**Over 6 years, observed helmet use has increased from 10% to 24%**

Over the last six years, helmet use in New Orleans has more than doubled from 10.4% in 2010 to 23.6% in 2015 at the 12 core count locations. At all 48 count locations, this figure is slightly lower at 22.9%. These numbers are still well below leading bicycling cities in the United States (e.g., Portland, OR reports 80% helmet use[15]), but reflect an increasing number of safety-conscious bicyclists.

15 *Portland Bureau of Transportation (https://www.portlandoregon.gov/transportation/article/407660)*

The highest rates of helmet use (above 35%) were observed at count locations on Nashville Avenue, Marconi Drive, Golf Drive, Magazine Street (Uptown), and Banks Street. Notably, while in 2014 fewer than 10% of riders were observed wearing helmets at eight count locations, no 2015 count locations reported rates lower than 10%.

However, the following locations, with helmet use rates observed between 10% and 15%, may represent opportunities for future bicycling safety outreach efforts, particularly among children, for whom helmet use is obligatory:

- Canal Street (CBD)
- Tulane Avenue
- Transcontinental Drive
- Elysian Fields Avenue
- General Meyer Avenue
- Royal Street (French Quarter)
- St. Claude Avenue (Bywater)
- Broad Street Bridge
- Royal Street (Marigny)
- Simon Bolivar Avenue
- Decatur Street (Jackson Square)
- Annunciation Street
- Pace Boulevard

### 3.6.5 Travel Orientation

Travel orientation refers to the direction and surface on which pedestrians and bicyclists are traveling. Ideally, pedestrians should travel on sidewalks, and bicyclists should travel on the roadway (unless a separate bicycle or multi-use trail is available, or the user is 14 years or younger) in the direction of traffic. Bicycling in the wrong direction or on the sidewalk or neutral ground, in addition to being illegal, significantly reduces safety for cyclists, drivers, and pedestrians alike.

On the other hand, the presence of bicyclists who use facilities inappropriately, as well as pedestrians observed walking in the street, often indicates gaps or inadequacies in the existing infrastructure in the area. For example, high rates of wrong-way use on a one way street with a bicycle lane suggests demand for paired bicycle accommodation in the opposite direction of travel, and cases where many adults bicycle on the sidewalk may indicate that the roadway is perceived as unsafe or hostile for bicycling.

**In 2015, 84% of bicyclists were observed riding legally, in the direction of traffic.**

Among bicyclists at the core group of count sites, 84.3% of users were observed traveling on-street, in the direction of traffic. This represents a slight decline compared to 2014, but is in line with an overall trend of increasing legal riding, up from 75.5% in 2010. Notably, wrong-way riding in she street has decreased most sharply from 11.6% in 2010 to just 4.5% in 2015. Sidewalk riding has decreased by a much smaller degree from 12.6% to 11.1%.

Among all 48 count locations, the rate of legal bicycle travel (on street in the correct direction or, in the case of the Jefferson Davis Parkway Trail count site, on a designated Multi-Use trail) was nearly identical at 84.4%. These positive shifts indicate that bicyclists' travel habits are becoming safer over time, likely in part due to the Regional Planning Commission's ongoing pedestrian and bicycle safety media campaigns as well as education and outreach efforts conducted by advocacy organizations like Bike Easy.

Corridors with right-way, on-street bicycling rates above 90% in 2015 include:

- Golf Drive
- Nashville Avenue
- Banks Street
- St. Charles Avenue (Uptown)
- Esplanade Avenue
- N. Miro Street
- Decatur Street (Jackson Square)
- Basin Street
- S. Carrollton Avenue
- Royal Street (French Quarter)
- Annunciation Street
- Royal Street (Marigny)
- N. Galvez Street

Conversely, the lowest rates of legal on-street riding (excluding the Jefferson Davis Parkway Trail, where use of both the trail and the roadway is acceptable) were observed on General Meyer Avenue, both Canal Street count locations (where many bicyclists were observed riding in the neutral ground), Transcontinental Drive, and the Broad Street Bridge

Where dedicated bike lanes exist, nearly all bicyclists were observed utilizing them unless preparing for a left turn (e.g. Basin Street) or in cases where the lanes were obstructed by construction, automobiles, or other disruptions (e.g. Baronne Street and Basin Street). Two exceptions include Mirabeau Avenue, where a high proportion of cyclists—several of whom were children—were observed riding on the sidewalk, and on Decatur Street (Jackson Square), where there is a dedicated bike lane on only one side of the roadway, thus this figure excludes all users traveling in the opposite direction (notably, cyclist counts were substantially higher on the side of the roadway with the dedicated facility).

Among pedestrians, travel orientation trends have remained relatively unchanged since this information was first recorded in 2011, with approximately 93% of users at the continuing count locations walking on the sidewalk, 4% walking in the roadway, and 3% walking in the neutral ground where applicable, for both the core 12 count locations as well as the full set of 48 2015 sites.

## 3.7 Impact of Bicycle Facilities on Ridership and Behavior

In order to evaluate the impact of bicycle facilities on ridership and behavior, this report provides a preliminary analysis of the relative changes in the total number of bicyclists observed, helmet use, the proportion of cyclists who are female, and legal, right-way travel at locations with and without bicycle facilities. Figures 20 through 23 illustrate overall differences in these key metrics among 48 count sites either with

1. dedicated bicycle lanes,[16]
2. with marked shared lanes, bike/bus lanes, or some combination of dedicated and shared facility types, or
3. no marked bicycle facilities observed during the 2015 count period.

**23-25% more bicyclists observed at locations with bike lanes than where no facility present**

The total number of bicyclists observed was found to be 23-25% greater at count locations with shared or dedicated bike lanes than at sites with no bicycle facility present (Figure 20).

Thirty-three and 32% of bicyclists were female at locations with bike lanes or shared lanes, respectively, compared to only 27% at locations with no bikeway (Figure 21).

Helmet use was observed at the greatest rates where bike lanes or shared lanes are present (23-24%%), and slightly lower where no facilities have been installed (22%) (Figure 22).

*16 The Jefferson Davis Parkway Bridge count location, which includes a shared-use trail, was included for the purpose of this analysis in the group of sites with dedicated bike lanes*

Finally, while 89-91% of bicyclists traveled legally on roadways where bikeways are present, only 74% of users were observed doing so on roadways with no facility (Figure 23).

Taken together, these figures suggest that not only are there likely to be more bicyclists present where facilities exist, but that those users will tend to practice safer cycling behaviors and are more likely to be female. These figures also closely correspond with those reported for the 2014 counts, except that with citywide increases in the rate of helmet use observed, the usage gap between bikeway and non-bikeway locations appears to be diminishing.

In addition to these findings from the full set of 2015 count sites, PBRI continues to evaluate how these metrics have changed over time at the 12 core count locations observed from 2010-2015 (Table 23), as well as those sites counted from 2013-2015 (Table 24).

Among these two datasets, several new facilities have been added during the life of this count program, providing an opportunity to more clearly identify how infrastructure interventions impact ridership outcomes. Among the six-year, 2010-2015 dataset, a few key patterns emerge. From 2010 to 2015, the total number of bicyclist observed increased by 294% at locations that had dedicated bike lanes by March 2015, by 59% where shared lanes or a mix of facility types have been installed, and by 54% at locations with no bicycle facilities.

The proportion of riders who are female also increased by a much larger margin at locations with dedicated bike lanes—8 percentage points, compared to only a 4 point increase with shared lanes and a 2 point increase where no facilities exist.

As with the full site list, the difference between how many users wear helmets on bikeways and while riding on unmarked streets appears to have decreased as overall helmet use has increased, with a 14% increase at locations with dedicated lanes or shared/mixed facility types, and a 13% increase at sites with no facilities at all.

While the highest rates of right-way on-street travel were observed at sites with dedicated bicycle lanes (89%), it is notable that the increase in the share of legal riders has increased more rapidly most on sites with shared lane markings only (in part attributable to declines in legal travel at one heavily traveled count location with dedicated lanes, St. Claude Avenue).

Among locations counted from 2013-2015, sites were evaluated based on the presence or absence of any type of bicycle facility (all facilities are dedicated bicycle lanes except at Basin Street, which has a combination of dedicated bicycle lanes and an exclusive bike/bus lane).

Sharp gains in ridership were observed at several locations where dedicated bicycle lanes were installed in 2013. However, these increases were offset by declines observed at one location, St. Charles Avenue, for unknown reasons. As a result, only a 36% increase in overall ridership was observed at Bike Facility count sites, compared to a 25% increase at sites with no bikeway.

Similarly, the proportion of bicyclists who are female has increased only slightly overall at this set of sites, with no clear relationship between facility presence or lack thereof. Thanks in part to very high rates of helmet use during the first year of counts on St. Charles Avenue, helmet use decreased overall at bikeway sites in this dataset, while increasing at non-bikeway count locations.

Finally, while strong gains in right-way travel were made at two sites with recently installed bike lanes (St. Bernard Avenue and Basin Street), the overall dataset does not clearly demonstrate a link between facility presence and correct use. Many unknown factors may contribute to the findings from this dataset, including shifting user groups at a given location, the development of additional route

Figure 20: Average Bicyclists Observed (Per Site) by Facility Type, All 2015 Count Locations

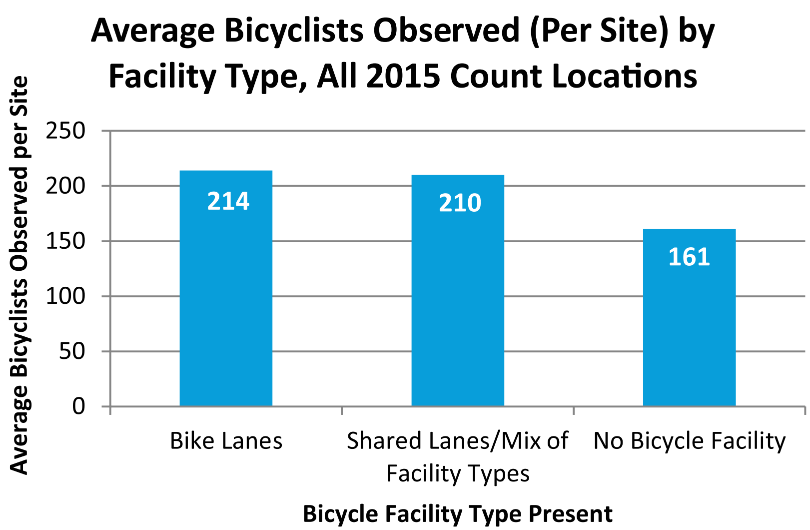



Figure 21: Percent of Bicyclists who are Female by Facility Type, All 2015 Count Locations

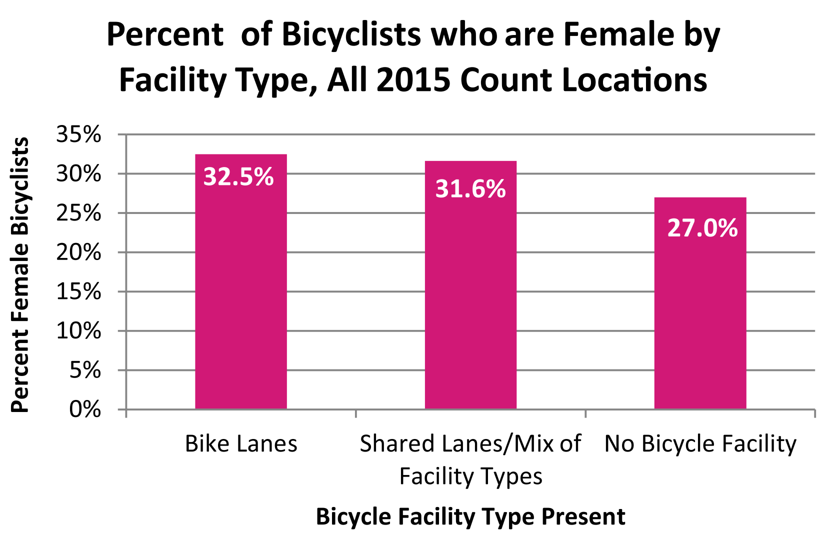



Figure 22: Percent of Bicyclists Wearing Helmets by Facility Type, All 2015 Count Locations

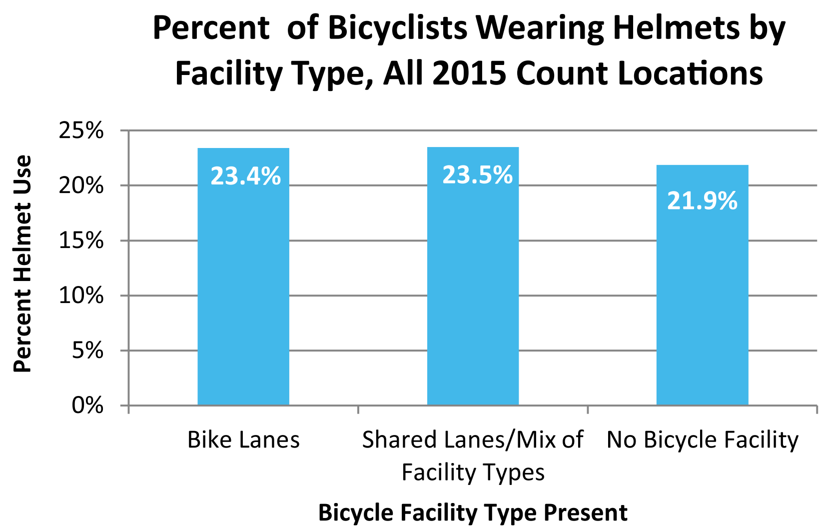
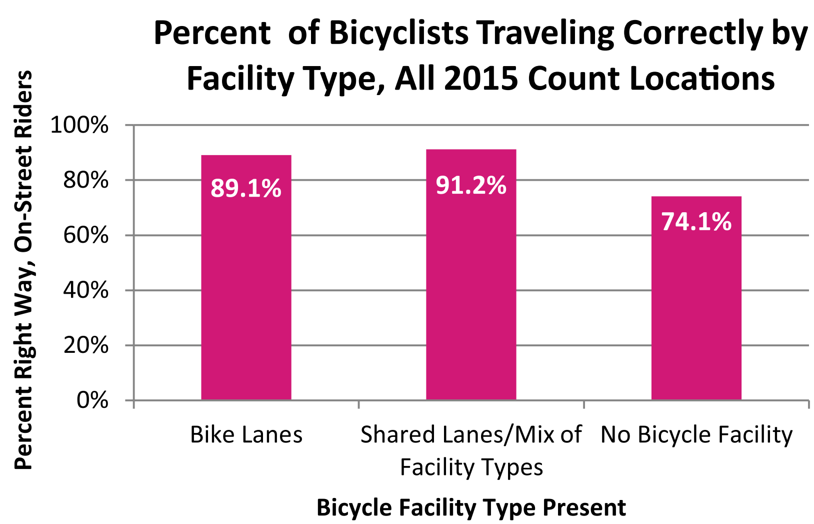



Figure 23: Percent of Bicyclists Traveling Correctly by Facility Type, All 2015 Count Locations



## Table 23: Impact of Facilities on Change in User Behavior and Characteristics, 2010-2015 Count Locations

| | | Change in Bicyclists Observed | | | Change in % of Users who are Female | | | Change in % of Users Wearing Helmets | | | Change in % of Users Traveling the Right Way | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Count Location by Bike Facility Type** | **Year Installed** | **2010 Bicyclists Observed** | **2015 Bicyclists Observed** | **% Change** | **% Female, 2010** | **% Female, 2015** | **Percentage Point Change** | **Helmet Use, 2010** | **Helmet Use, 2015** | **Percentage Point Change** | **% Right Way, 2010** | **% Right Way, 2015** | **Percentage Point Change** |
| Bike Lanes | | | | | | | | | | | | | |
| Gentilly Blvd | 2010 | 46 | 165 | *258.7%* | 8.7% | 24.8% | *16.2%* | 13.0% | 28.5% | *15.5%* | 67.4% | 88% | *21%* |
| St. Claude Ave | 2008 | 96 | 340 | *254.2%* | 25.0% | 29.7% | *4.7%* | 2.1% | 12.4% | *10.3%* | 86.5% | 83% | *-4%* |
| Esplanade Ave | 2013 | 105 | 468 | *345.7%* | 36.2% | 42.3% | *6.1%* | 7.6% | 24.1% | *16.5%* | 82.9% | 95% | *12%* |
| **Total** | | **247** | **973** | ***293.9%*** | **26.7%** | **34.9%** | ***8.2%*** | **6.5%** | **20.8%** | ***14.3%*** | **85.0%** | **89%** | ***4%*** |
| Shared Lane Markings | | | | | | | | | | | | | |
| Harrison Ave | 2014 | 27 | 68 | *151.9%* | 18.5% | 33.8% | *15.3%* | 11.1% | 19.1% | *8.0%* | 77.8% | 77% | *-1%* |
| Magazine St (Gateway) | 2010 | 153 | 219 | *43.1%* | 36.6% | 39.7% | *3.1%* | 9.8% | 25.6% | *15.8%* | 68.6% | 83% | *14%* |
| **Total** | | **180** | **287** | ***59.4%*** | **33.9%** | **38.3%** | ***4.4%*** | **10.0%** | **24.1%** | ***14.1%*** | **70.0%** | **81%** | ***11%*** |
| No Bike Facility | | | | | | | | | | | | | |
| Camp St | | 157 | 280 | *78.3%* | 36.3% | 38.6% | *2.3%* | 11.5% | 31.4% | *19.9%* | 69.4% | 88% | *19%* |
| Simon Bolivar Ave | | 86 | 256 | *197.7%* | 7.0% | 14.8% | *7.9%* | 8.1% | 13.3% | *5.2%* | 57.0% | 68% | *11%* |
| Decatur St | | 150 | 253 | *68.7%* | 26.0% | 22.1% | *-3.9%* | 8.0% | 23.7% | *15.7%* | 83.3% | 89% | *6%* |
| St. Charles Ave | | 191 | 276 | *44.5%* | 29.8% | 33.3% | *3.5%* | 24.6% | 32.2% | *7.6%* | 73.3% | 89% | *16%* |
| Royal St | | 377 | 229 | *-39.3%* | 22.3% | 36.7% | *14.4%* | 6.6% | 12.7% | *6.1%* | 83.0% | 91% | *8%* |
| Carondelet St | | 87 | 179 | *105.7%* | 31.0% | 24.6% | *-6.5%* | 11.5% | 32.4% | *20.9%* | 70.1% | 71% | *1%* |
| Magazine St (Uptown) | | **38** | 104 | *173.7%* | 18.4% | 42.3% | *23.9%* | 7.9% | 38.5% | *30.6%* | 26.3% | 61% | *34%* |
| **Total** | | **1,086** | **1,677** | ***54.4%*** | **25.5%** | **27.8%** | ***2.3%*** | **11.2%** | **23.7%** | ***12.5%*** | **74.3%** | **77%** | ***3%*** |
| ALL SITES | | 1,513 | 2,837 | *87.5%* | 26.7% | 32.3% | *5.2%* | 10.3% | 23.6% | *13.3%* | 75.5% | 84% | *9%* |

options, perceptions of safety (e.g., in some cases, helmet use may decrease when a facility is perceived as safer), and count timing. More years of data are needed before clear patterns can be identified.

As noted in previous iterations of this report, the relationship of the presence or absence of bicycle facilities and increases in pedestrian activity is unclear. Pedestrian activity appears to be far more closecorrelated with land use and other factors, and thus is omitted from this analysis. However, most of the city's bicycle infrastructure improvements have been installed concurrently with moderate improvements in pedestrian accessibility, e.g. curb ramps at intersections and crosswalks, which improve conditions for existing users and support the development of an integrated and accessible pedestrian network throughout the region.

**Table 24: Impact of Facilities on Change in User Behavior and Characteristics, 2013-2015 Count Locations**

| | | Change in Bicyclists Observed | | | Change in % of Users who are Female | | | Change in % of Users Wearing Helmets | | | Change in % of Users Traveling the Right Way | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Count Location by Bike Facility Type** | **Year Installed** | **2013 Bicyclists Observed** | **2015 Bicyclists Observed** | **% Change** | **% Female, 2013** | **% Female, 2015** | **Percentage Point Change** | **Helmet Use, 2013** | **Helmet Use, 2015** | **Percentage Point Change** | **% Right Way, 2013** | **% Right Way, 2015** | **Percentage Point Change** |
| Bike Lanes or Shared Bike/ Bus Lanes | | | | | | | | | | | | | |
| St. Bernard Ave | 2013 | 88 | 259 | *194.3%* | 19.3% | 17.8% | *-1.5%* | 14.8% | 17.8% | *3.0%* | 59.1% | 79.5% | *20.4%* |
| Nashville Ave | 2013 | 37 | 153 | *313.5%* | 35.1% | 40.5% | *5.4%* | 43.2% | 49.0% | *5.8%* | 100.0% | 97.4% | *-2.6%* |
| St. Charles Ave (Uptown) | 2013 | 441 | 250 | *-43.3%* | 41.0% | 39.6% | *-1.4%* | 44.0% | 28.8% | *-15.2%* | 99.1% | 96.0% | *-3.1%* |
| S. Carrollton Ave | 2010 | 206 | 268 | *30.1%* | 27.7% | 34.0% | *6.3%* | 26.2% | 22.0% | *-4.2%* | 90.8% | 92.9% | *2.1%* |
| Loyola Ave | 2012 | 267 | 279 | *4.5%* | 9.7% | 26.5% | *16.8%* | 22.9% | 22.6% | *-0.2%* | 74.9% | 79.9% | *5.0%* |
| Basin St | 2013 | 99 | 341 | *244.4%* | 25.3% | 34.6% | *9.3%* | 23.2% | 33.1% | *9.9%* | 71.7% | 93.8% | *22.1%* |
| **Total** | | **1,138** | **1,550** | ***36.2%*** | **28.3%** | **30.8%** | ***2.5%*** | **32.5%** | **26.1%** | ***-6.5%*** | **87.9%** | **88.2%** | ***0.4%*** |
| No Bike Facility | | | | | | | | | | | | | |
| S. Broad St | | 112 | 139 | *24.1%* | 10.7% | 13.7% | *3.0%* | 8.9% | 15.8% | *6.9%* | 51.8% | 66.9% | *15.1%* |
| Tulane Ave | | 71 | 82 | *15.5%* | 16.9% | 24.4% | *7.5%* | 8.5% | 11.0% | *2.5%* | 43.7% | 61.0% | *17.3%* |
| Broad St Bridge | | 57 | 80 | *40.4%* | 8.8% | 15.0% | *6.2%* | 12.3% | 12.5% | *0.2%* | 70.2% | 50.0% | *-20.2%* |
| **Total** | | **240** | **301** | *25.4%* | **12.1%** | **17.0%** | ***4.9%*** | **9.6%** | **13.6%** | ***4.0%*** | **53.8%** | **60.8%** | ***7.1%*** |
| **ALL SITES** | | 1,378 | **1,851** | **34.3%** | 24.9% | **29.2%** | ***4.4%*** | 26.7% | **25.3%** | ***-1.4%*** | 80.1% | **84.8%** | ***4.7%*** |

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# 4.0 ELECTRONIC COUNT DATA

This section summarizes data retrieved from the Jefferson Davis Trail Eco-Counter from June 2010 through June 2015, as well as the first year of data from a trail counter installed on the Tammany Trace in Mandeville, LA, in May, 2014. It also includes findings from a series of short term, exploratory electronic counter installations on trails in the metro area, as well as a mini-analysis conducted in conjunction with the implementation of a buffered bicycle lane on Baronne Street in New Orleans' CBD. The expansion of New Orleans' capacity for electronic data collection greatly improves our ability to evaluate infrastructure, as well as providing the opportunity for more detailed future analysis of active transportation behaviors that can improve the accuracy of Estimated Daily Traffic estimates derived from manual counts.

## 4.1 Jefferson Davis Trail, 2010-2015

This data represents findings from New Orleans' longest continuously operating active transportation monitor, which provides valuable information about long term trends and the temporal and meteorological variables that impact people who walk and bike. For additional detailed data tables, please refer to Appendix J.

### 4.1.1 Observed Traffic Volumes and Change

Figure 24 shows the monthly average daily traffic volumes observed on the Jefferson Davis Trail from July 2010 through June 2015.[17] Over the last four years, average daily usership has increased from an average of 464 users per day to 641—a 38% total increase (Figure 26). During the 2014-2015 study period, total and average daily usage declined compared to the previous year, though this may be in party attributable to disruptions caused by construction of the Lafitte Greenway, which intersects the Jefferson Davis Trail on the adjacent block, as well as on the Jefferson Davis Trail itself, which underwent crossing improvements and for which a temporary detour was implemented at the highway overpass during this period.

In 2014-2015, user volumes were highest in March, April, May, and October. The lowest volumes were recorded August and December. These patterns generally align with previous years of data, which indicate higher usage in temperate spring and autumn months as well as during special events, e.g. nearby festivals, sporting events, and carnival season.

*17 Due to dislocation and subsequent temporary de-installation of the electronic count device during the months of April and May, 2013, a total usership figure for the third year of the device's operation is not available.*

Figure 24: Jefferson Davis Trail Average Daily Usage by Month, 2010-2015

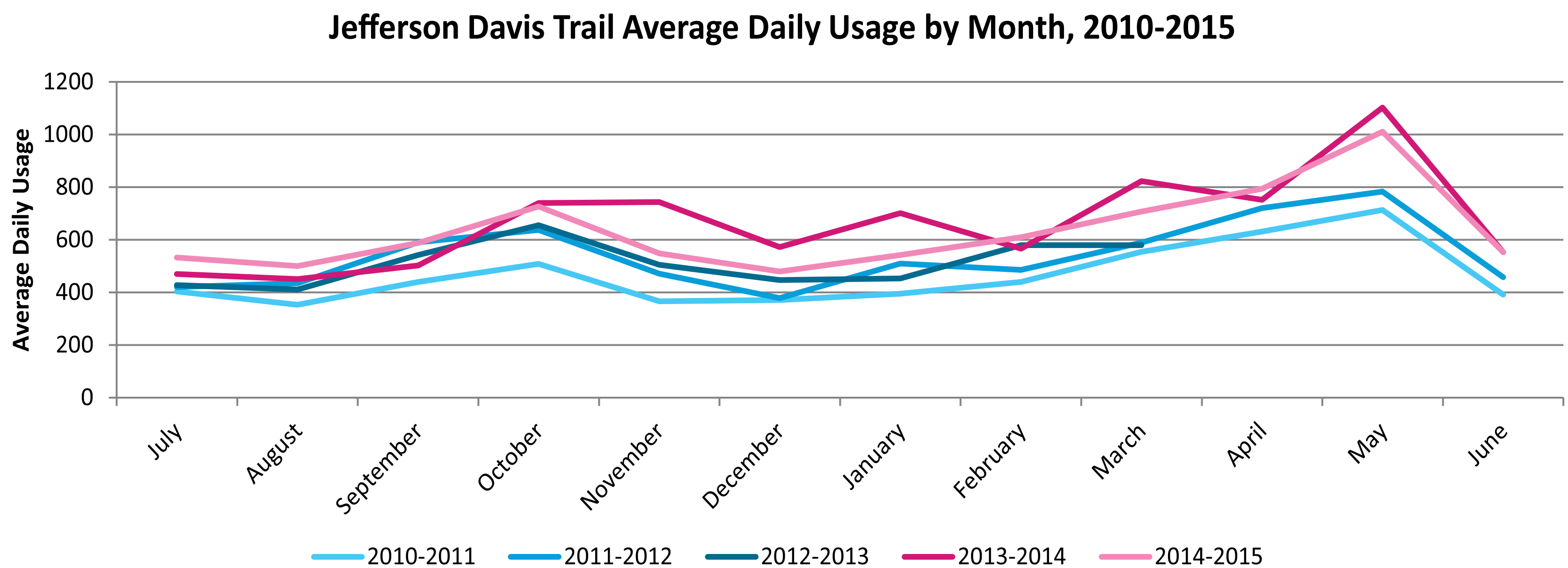
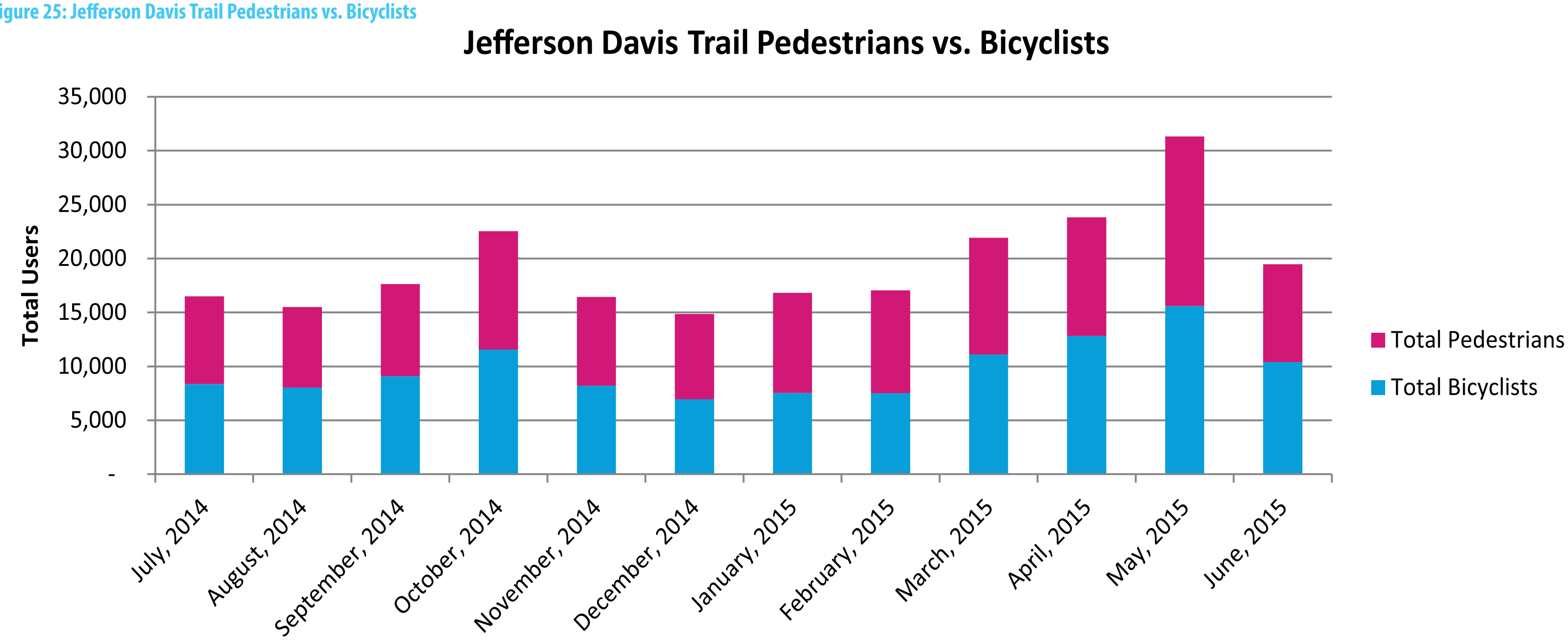



Figure 25: Jefferson Davis Trail Pedestrians vs. Bicyclists

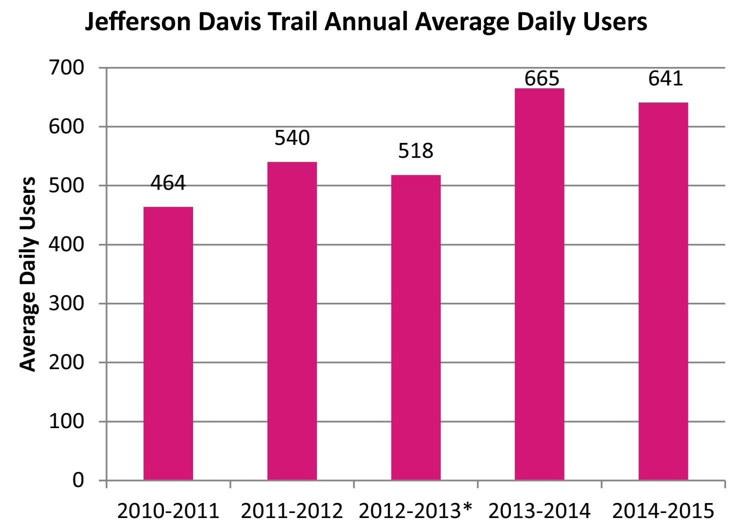


Although this counter only reflects usership on one facility of many in the New Orleans region, strong gains in usership over the last five years are likely indicative of a steady trend toward increased rates of walking and bicycling among New Orleans' population. This count site—now directly connected to the newly completed Lafitte Greenway— should continue to be monitored in order to evaluate not only overall regional trends, but also the impact of the city's expanded and more fully connected trail network.

The new Eco-Multi counter, installed in 2014, permits an additional layer of data analysis, as it differentiates between bicyclists and pedestrians using the trail. During the 2014-2015 count period, usership on the Jefferson Davis Trail was split roughly evenly between both user groups (Figure 25 and Table 25).

The share of bicyclists ranged from 44% to 54%, with a markedly lower percentage of bicyclists during winter months and a higher share the rest of the year (except May, where figures are impacted by several days of festivals with very high pedestrian activity). This suggests that the decision to bicycle, whether for recreation or transportation, may be impacted slightly more by colder temperatures than the decisions of those who walk or run along the trail.

Figure 26: Jefferson Davis Trail Annual Average Daily Users




*Note: 2012-2013 average daily user total includes 2-month data disruption in Spring 2013*

**Table 25: Jefferson Davis Trail: Proportion of Pedestrians vs. Bicyclists**

| | % Bicyclists | % Pedestrians |
|---|---|---|
| July, 2014 | 50.6% | 49.4% |
| August, 2014 | 51.9% | 48.1% |
| September, 2014 | 51.5% | 48.5% |
| October, 2014 | 51.3% | 48.7% |
| November, 2014 | 49.9% | 50.1% |
| December, 2014 | 46.9% | 53.1% |
| January, 2015 | 44.8% | 55.2% |
| February, 2015 | 44.1% | 55.9% |
| March, 2015 | 50.6% | 49.4% |
| April, 2015 | 53.7% | 46.3% |
| May, 2015 | 49.7% | 50.3% |
| June, 2015 | 53.4% | 46.6% |
| 12 Month Total | 50.1% | 49.9% |

### 4.1.2 Trail Use Distribution

Electronic counts by hour, day of the week, and season for all five years of data are presented, allowing evaluation of usage patterns at various levels of detail. The following figures summarize these patterns. Percentages of total usership, rather than absolute totals, are sometimes used in order to more clearly compare the five years of data, as overall usership has increased substantially during this period.

Figure 27 illustrates trail usage by hour at this count location. Hourly patterns of use appear to be highly consistent from year to year with relatively steady use throughout the morning and early afternoon. The highest volume and percentage of users, as in previous years, were in the evening peak hours of 4:00 to 8:00 pm. This usership pattern, lacking pronounced AM and PM peaks and consistent use throughout the day, suggests that this trail serves a variety of users for both recreational and transportation needs, including commuters with non-standard employment hours. Pedestrian and bicyclist user patterns are also similar, with a slightly later, post-commute evening peak for the former user group (Figure 28).

As in previous years, 2014-2015 data also indicates a relatively even distribution of use across each day of the week, with a slight incline leading into the weekend and a Saturday peak, which has become slightly more pronounced compared to previous years (Figure 29).

Figure 27: Jefferson Davis Trail Observed Volumes by Hour of Day

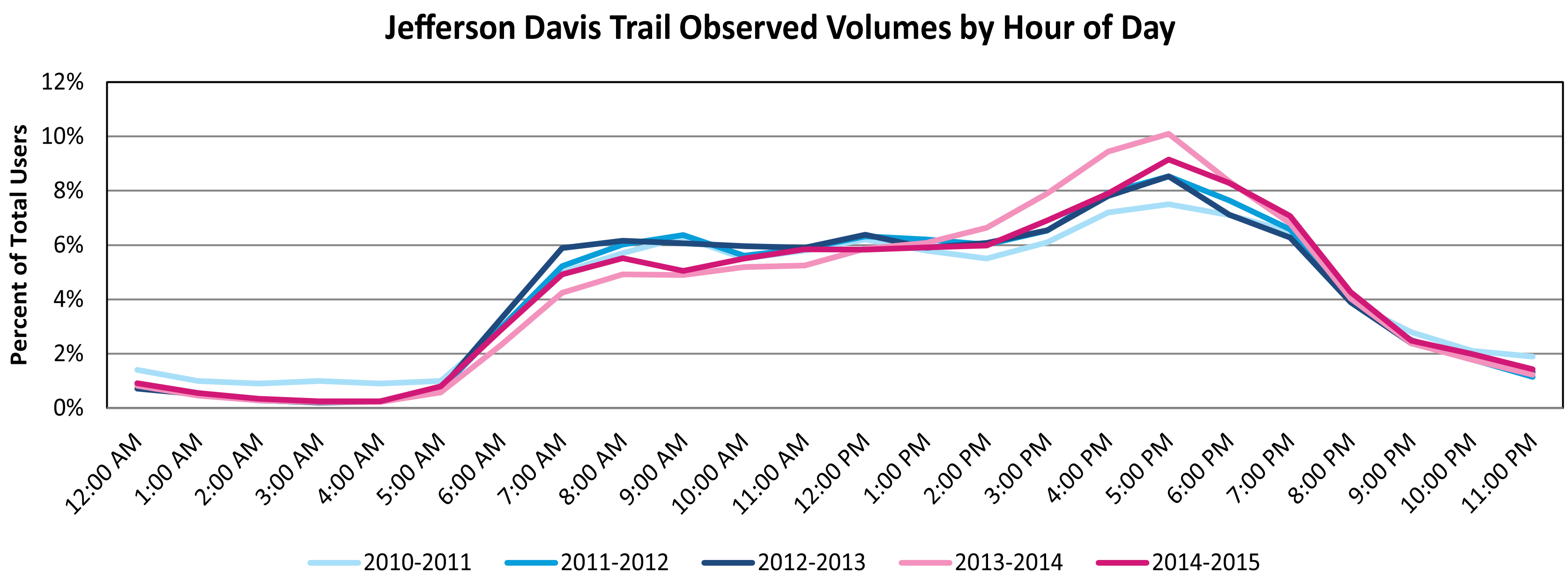


Figure 28: Jefferson Davis Trail Hourly Users, Bicyclists vs. Pedestrians, 2014-2015

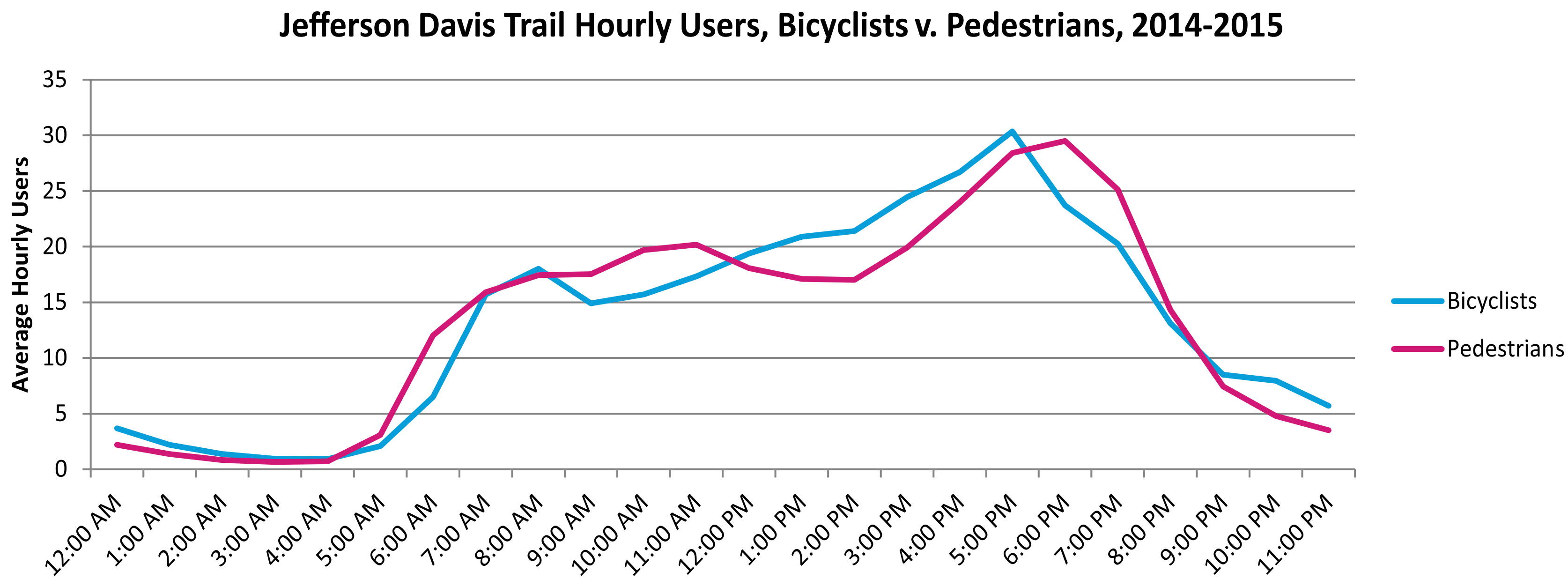



Figure 29: Jefferson Davis Trail Volume by Day of Week

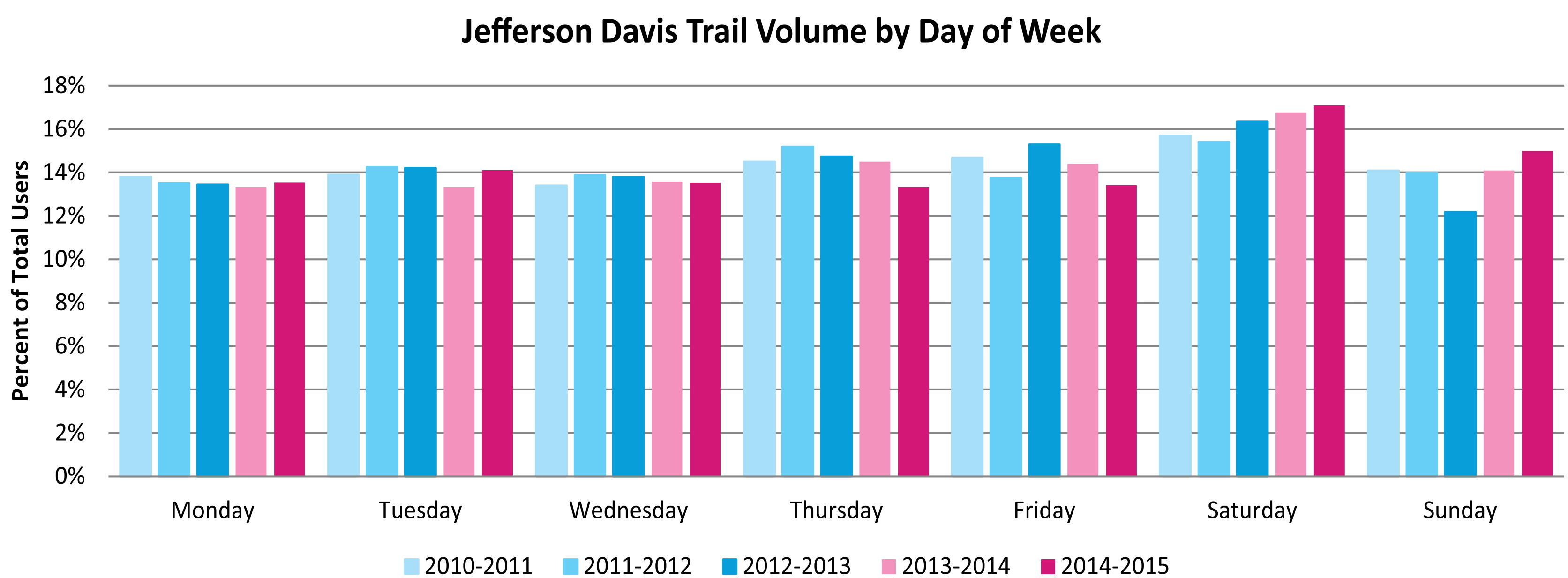
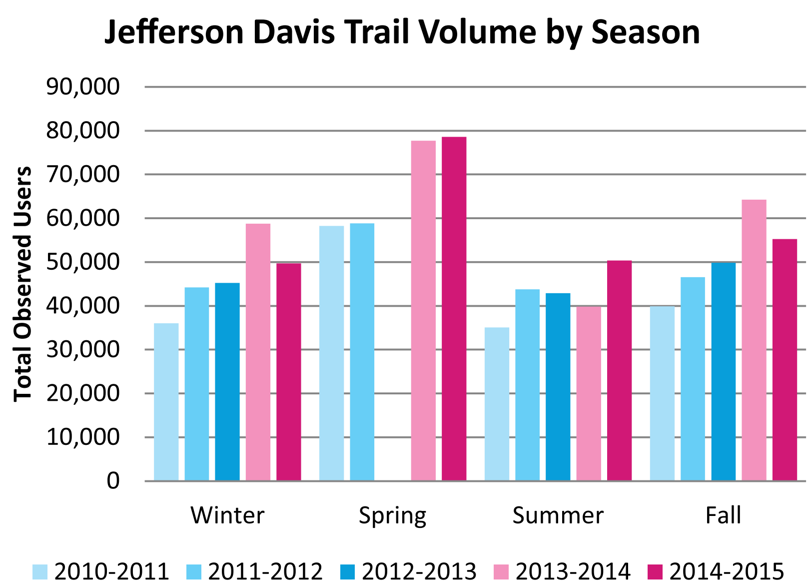


Figure 30 breaks down Jefferson Davis Trail data by season of the year for each year observed. As recorded in previous years, user volumes were highest during spring of 2015 (corresponding with typically mild weather and a variety of festivals, athletic events, and other activities that encourage trail use), with the lowest user volumes recorded during the summer season of 2014.

Usership was greater in the spring and summer of 2014-2015 compared to previous years of data, but decreased slightly compared to the previous year in the fall and winter months (again, potentially related to construction at various points along the trail, including near the count site at Lafitte Street).

Figure 30: Jefferson Davis Trail Volume by Season




### 4.1.3 Meteorological Variables and Traffic Volume

As previously identified in the New Orleans Pedestrian and Bicycle Count Report, 2010-2011, significant correlations appear to exist between temperature, precipitation, and active transportation activity. This section continues to track these relationships between electronic counts at the Jefferson Davis Trail and average daily temperatures and precipitation at the daily and monthly scale. Temperature and precipitation data were obtained from The Weather Underground historical database. Additional data tables are found in Appendix I.

Figures 31 and 32 illustrate the relationship between average temperatures and user volumes at the daily and monthly level. Average daily temperatures are used for this analysis. Daily volumes (Figure 31) follow a similar overall pattern from year to year, though there are several outliers corresponding to special event days. At this level, it is difficult to discern a clear relationship between temperature and usership; trail usage is relatively consistent from a range of 40 degrees Fahrenheit to 90 degrees, with most very-high use days occurring when temperatures range from 55 to 85 degrees. This suggests that use of this facility is not strongly linked to favorable weather conditions; consistent trail use occurs year-round.

At the monthly level (Figure 32) these patterns remain consistent. Usership peaks when temperatures are mild, and dips considerably during the hottest months. Overall, these data indicate that the relationship between temperature and usership of the Jefferson Davis Trail is relatively stable, and that temperature influences, but never substantially precludes, trail use.

Figure 31: Jefferson Davis Trail Temperature and Usership (Daily)

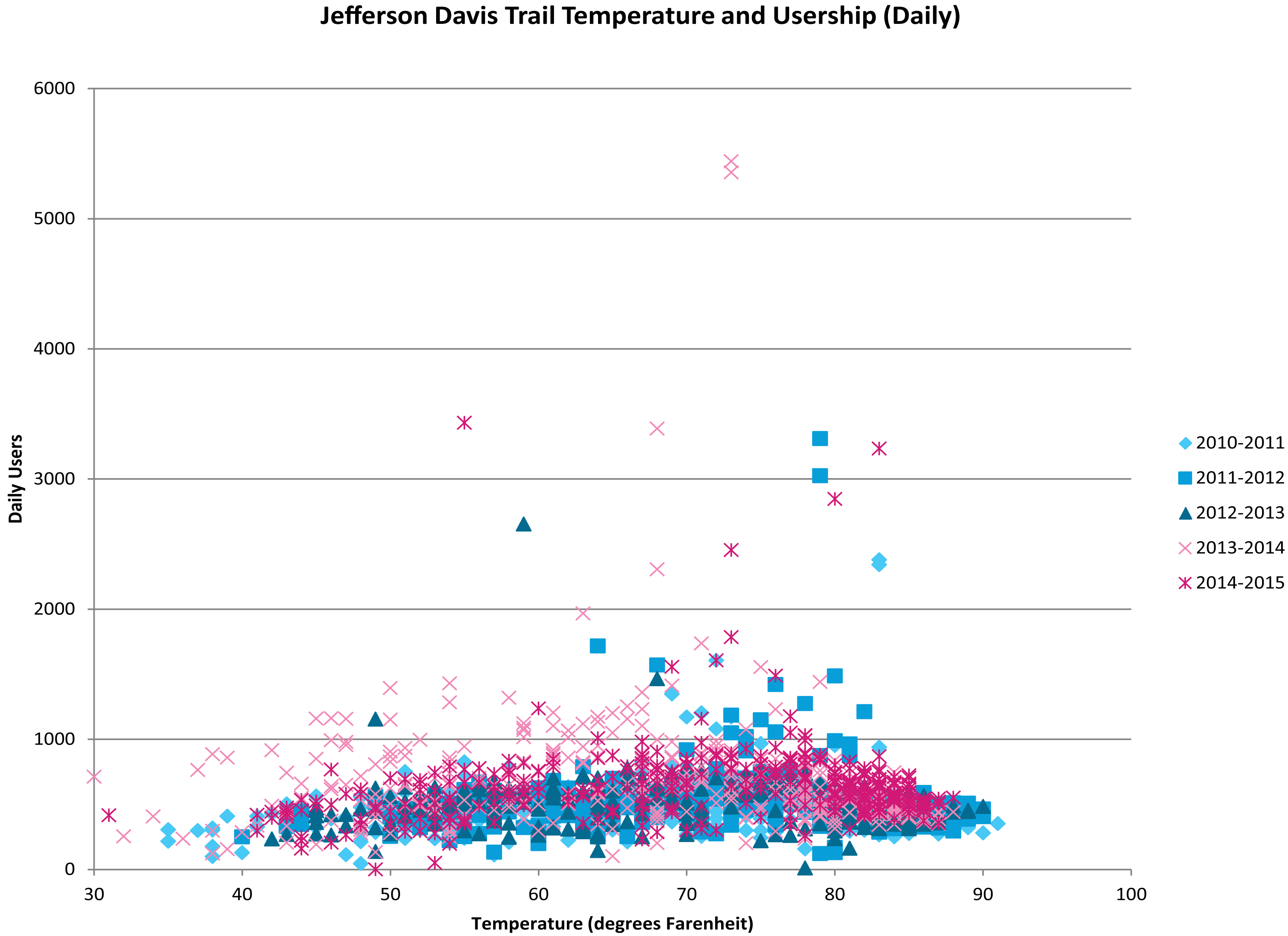
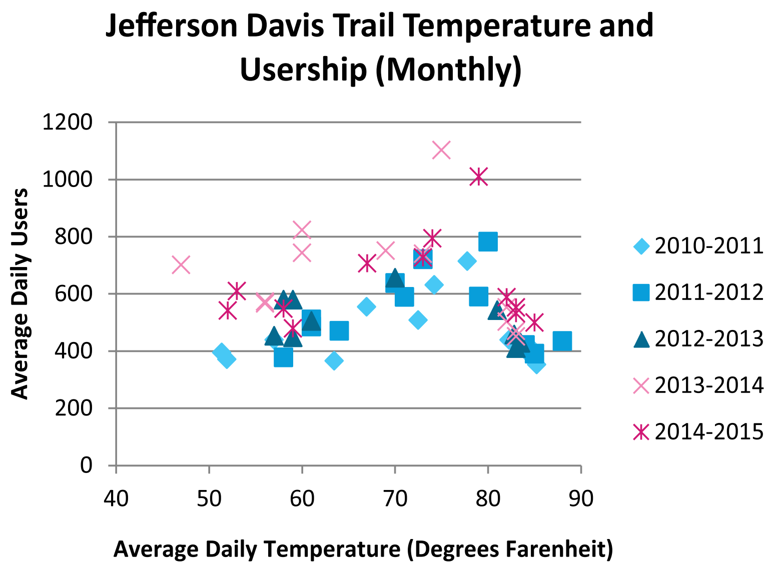


Figure 32: Jefferson Davis Trail Temperature and Usership (Monthly)




Precipitation can also be used as a variable by which to evaluate active transportation facility use. Precipitation in the New Orleans area tends to be highest during the summer months (corresponding with generally lower user counts), although in 2015, the region experienced an unusually rainy spring which may have depressed usership in March and May of this study period (Figure 33). 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 clearer at the daily level, as daily variation in precipitation is high. Unsurprisingly, many people tend to avoid walking and bicycling on rainy days. Figure 34 shows that the days with the highest amount of precipitation tend to fall nearer to the bottom or middle of the range, with the day experiencing the greatest precipitation over the last four years (during Hurricane Isaac in 2012) resulting in zero trail use at all. All of the days in the 2010-2015 life of this study with very high average daily usership (greater than 1500 users) correspond to days with little or no rain. These data indicate that to a greater degree than temperature, precipitation is a critical predictor of trail use.

Overall, findings from the last five years of data collection on this facility indicate stable trends—including overall usership growth—on this critical urban trail facility which links multiple neighborhoods and now, with the completion of the Lafitte Greenway, links these neighborhoods via trail and on-street bicycle facilities network directly to New Orleans' French Quarter and CBD. The trail experiences both recreational and commuter/transportation by a roughly equal number of pedestrians and bicyclists use year-round, although user sensitivities to climatic conditions are apparent. This trail continues to provide valuable insight as an indicator of long-term active transportation trends. Planned future analysis by the Rails to Trails Conservancy—including intercept survey collection in order to better understand user behavior—will further illuminate user patterns and facilitate improved understanding of what factors most impact and support trail use.

Figure 33: Jefferson Davis Trail Precipitation and Average Daily Users by Month

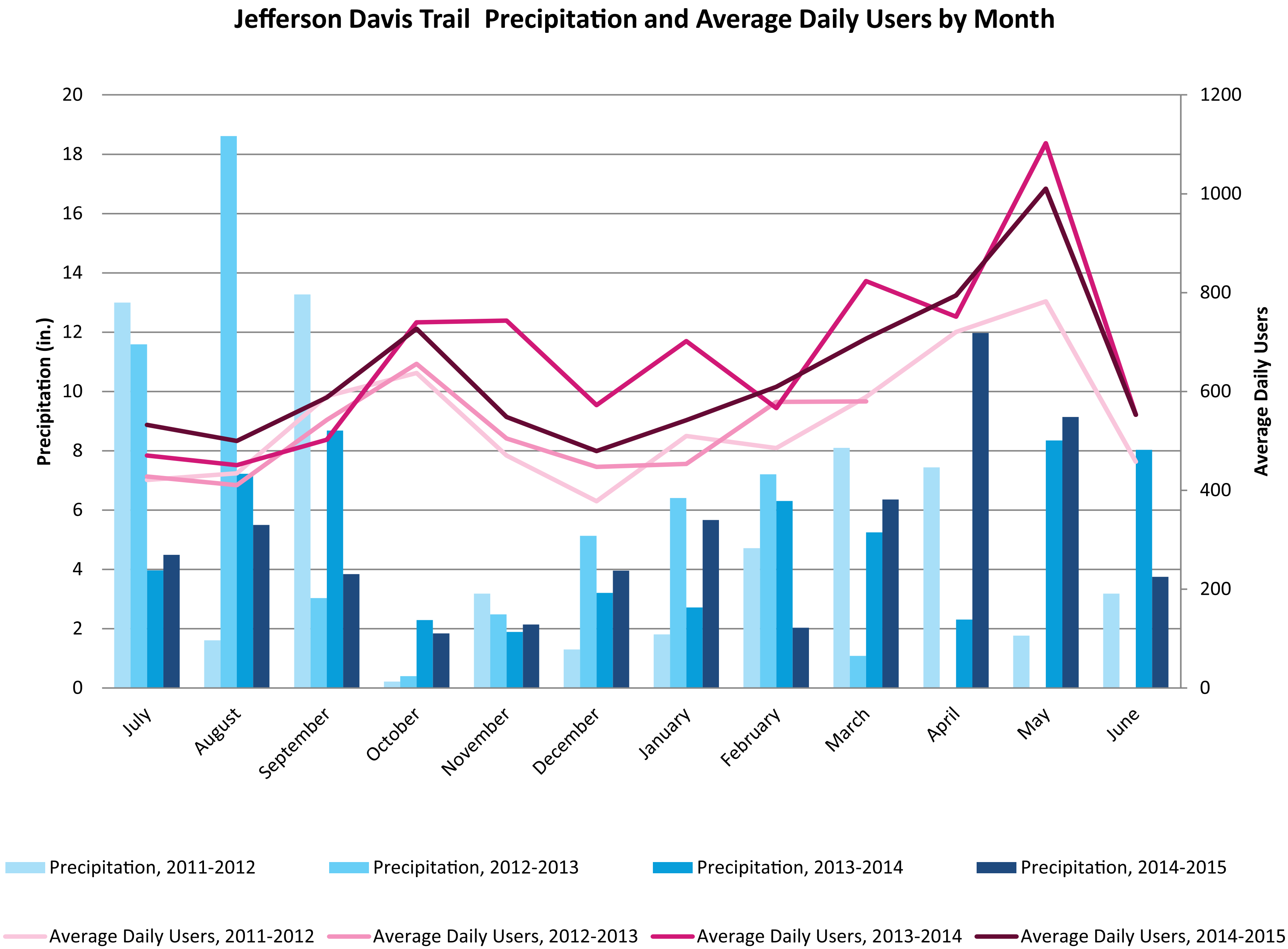


Figure 34: Jefferson Davis Trail Precipitation and Usership (Daily), 2010-2015

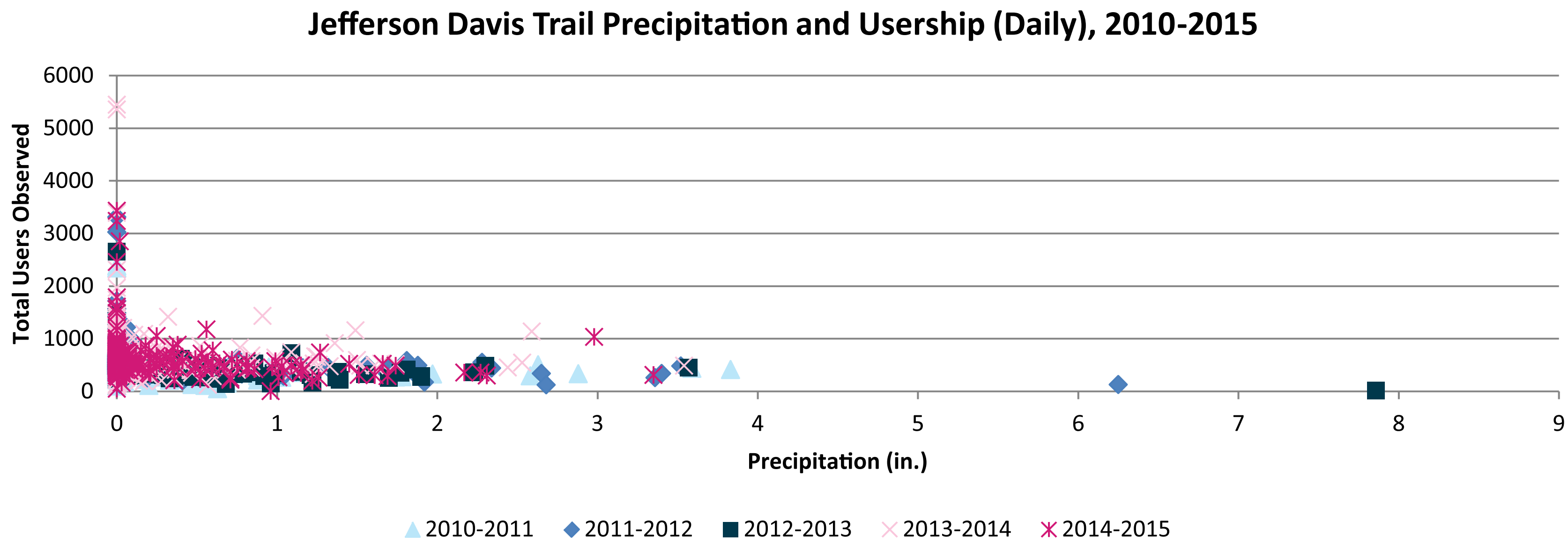
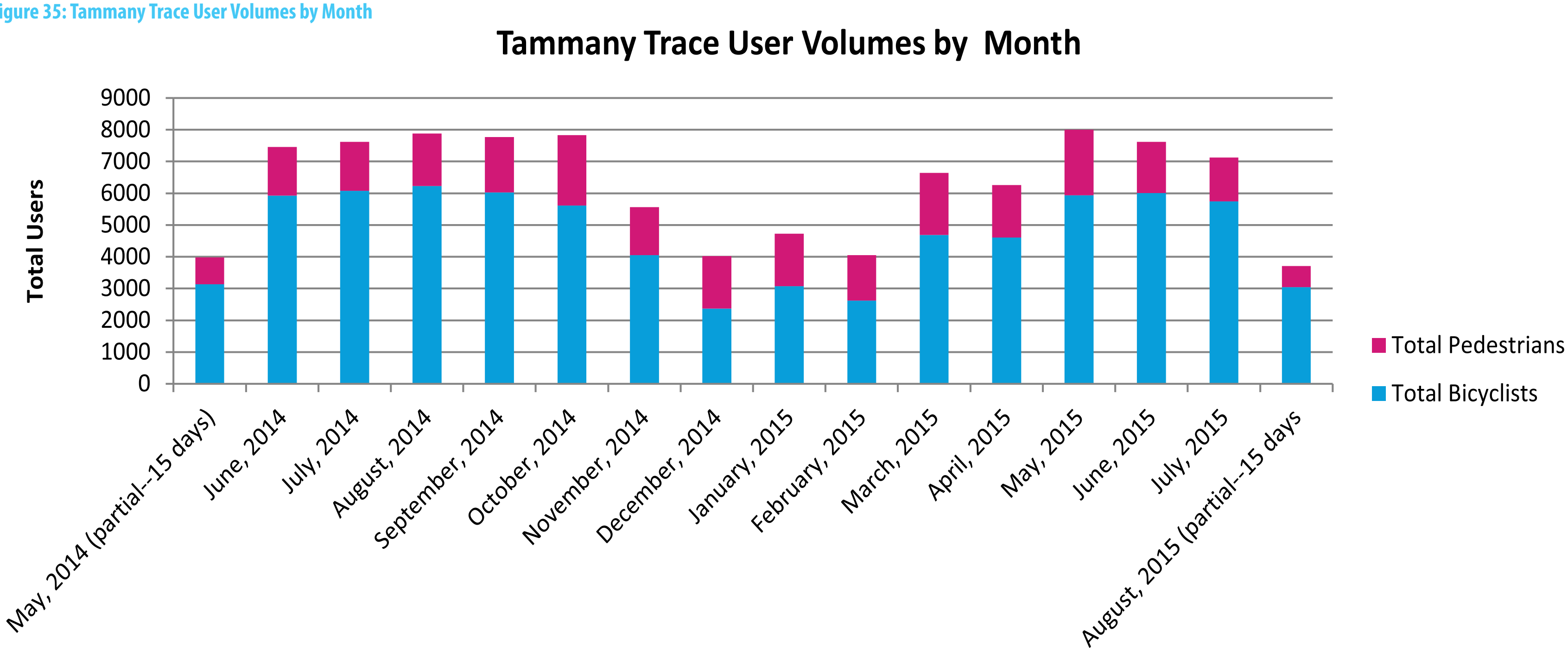



Figure 35: Tammany Trace User Volumes by Month



## 4.2 Tammany Trace, 2014-2015

Installation and calibration of a second Eco-Multi counter was completed on May 17th, 2014, in partnership with the Rails to Trails Conservancy and the Tammany Trace Foundation. The Trace is Louisiana's first and only rail-to-trail conversion project, connecting Slidell, LA to Covington, LA, via a former Illinois Central Railroad corridor. The 31-mile trail spans urban, suburban, and rural portions of St. Tammany Parish, and is accessible to bicyclists, pedestrians, and equestrians. The count device is installed near the Mandeville trail head near the midpoint of the facility. This section documents findings for the first 15 months of the counter's installation, from May 2014 through mid-August, 2015, in order to establish baseline data and overall usership trends.

### 4.2.1 Observed Traffic Volumes

Although a very popular facility, overall user volumes are substantially lower than those recorded on the urban Jefferson Davis Trail, with an average of 214 daily users at this point on the trail during the period of July 2014-June 2015 (Table 26). Monthly volumes ranged from a low of 2,622 in February of 2015 to a high of 6,227 in August, 2014 (Table 27). Unlike the Jefferson Davis Trail, a greater proportion (75%) of trail users are bicyclists, likely reflecting the Trace's rural and suburban context (i.e., greater distances between destinations) as well as its popularity as a facility for longer-distance rides by recreational and/or competitive bicyclists (Figure 35).

### 4.2.2 Trail Use Distribution

The Tammany Trace also experiences somewhat different distribution of users, relative to the Jefferson Davis Trail. Pedestrian users tend to be relatively steady throughout the day, with a peak around mid-day. Bicyclist users peak in the morning hours, then decline through the afternoon and evening. No evening increase in either bicyclists or pedestrians, as seen on the Jefferson Davis Trail, is evident (Figure 36). More tellingly, the breakdown of users by the day of the week clearly reflects this trail's status as primarily a recreational facility. Weekday average daily user counts of approximately 150 on weekdays more than double to 350-400 on weekends (Figure 37). Additional data tables are available in Appendix J.

**Table 26: User Volumes, Tammany Trace v. Jefferson Davis Parkway Trail**

| | Total Users | | | Daily Average Users | | |
|---|---|---|---|---|---|---|
| **July 1 2014 - June 30 2015** | **Total** | **Bicycles** | **Pedestrians** | **Total** | **Bicycles** | **Pedestrians** |
| Tammany Trace | **77,977** | 57,310 | 20,667 | **214** | 157 | 57 |
| Jefferson Davis Parkway Trail | **233,876** | 117,115 | 116,761 | **641** | 321 | 320 |

**Table 27: Tammany Trace User Volumes by Month**

| | Total Bicyclists | Total Pedestrians | Total Users | Average Daily Bicyclists | Average Daily Pedestrians | Average Daily Users | Average Daily Temperature (degrees F) | Total Precipi-tation (in) |
|---|---|---|---|---|---|---|---|---|
| May, 2014 (partial--15 days) | 3,138 | 844 | 3,982 | *209* | *56* | 265 | 74 | 3.25 |
| June, 2014 | 5,928 | 1,526 | 7,454 | *198* | *51* | 248 | 80 | 6.41 |
| July, 2014 | 6,080 | 1,535 | 7,615 | *196* | *50* | 246 | 80 | 7.40 |
| August, 2014 | 6,227 | 1,657 | 7,884 | *201* | *53* | 254 | 82 | 3.47 |
| September, 2014 | 6,027 | 1,742 | 7,769 | *201* | *58* | 259 | 79 | 1.46 |
| October, 2014 | 5,618 | 2,213 | 7,831 | *181* | *71* | 253 | 69 | 2.60 |
| November, 2014 | 4,054 | 1,507 | 5,561 | *135* | *50* | 185 | 54 | 1.59 |
| December, 2014 | 2,373 | 1,645 | 4,018 | *77* | *53* | 130 | 56 | 5.04 |
| January, 2015 | 3,069 | 1,661 | 4,730 | *99* | *54* | 153 | 50 | 5.02 |
| February, 2015 | 2,622 | 1,427 | 4,049 | *94* | *51* | 145 | 50 | 1.68 |
| March, 2015 | 4,689 | 1,951 | 6,640 | *151* | *63* | 214 | 65 | 5.47 |
| April, 2015 | 4,606 | 1,652 | 6,258 | *154* | *55* | 209 | 71 | 10.09 |
| May, 2015 | 5,938 | 2,068 | 8,006 | *192* | *67* | 258 | 75 | 3.95 |
| June, 2015 | 6,007 | 1,609 | 7,616 | *200* | *54* | 254 | 80 | 2.81 |
| July, 2015 | 5,740 | 1,380 | 7,120 | *185* | *45* | 230 | 84 | 2.53 |
| August, 2015 (partial--15 days) | 3,039 | 669 | 3,708 | *203* | *45* | 247 | 84 | 0.68 |
| **15-Month Total** | **75,155** | **25,086** | **100,241** | ***165*** | ***55*** | **220** | **68** | **59.38** |

*Historic weather data from wunderground.com, KASD weather station, Slidell LA*

Figure 36: Tammany Trace User Volumes by Hour of Day

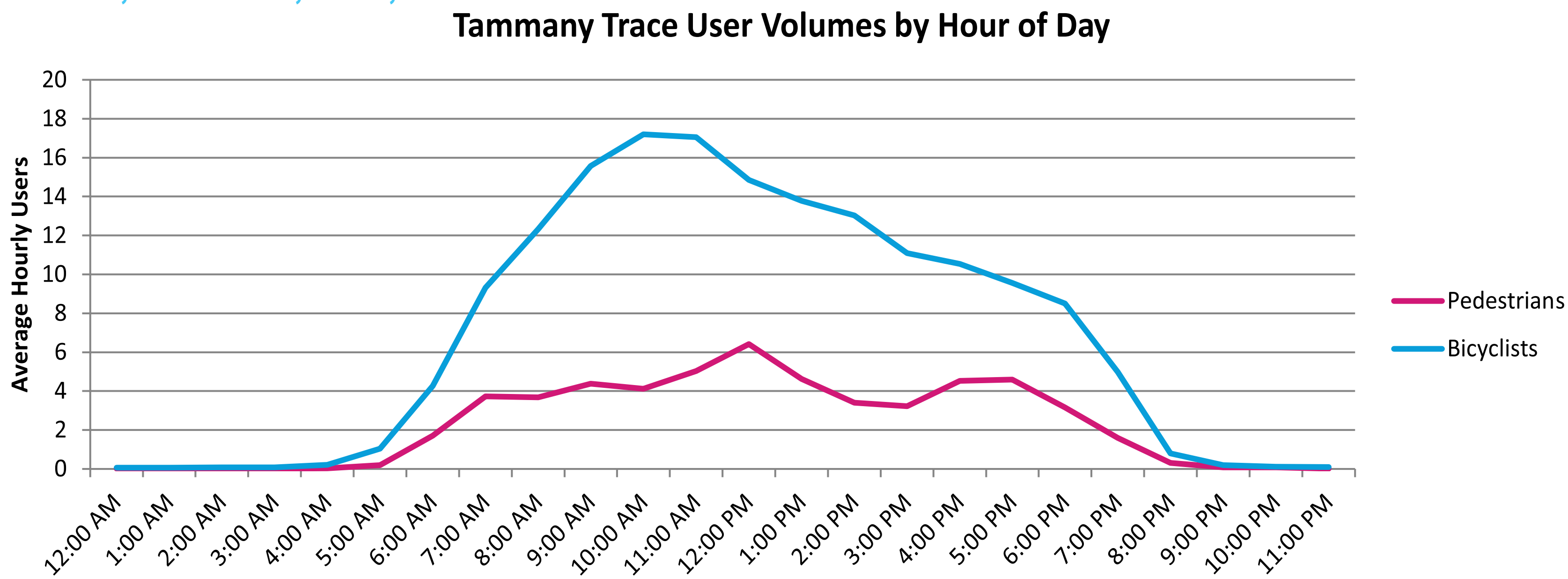
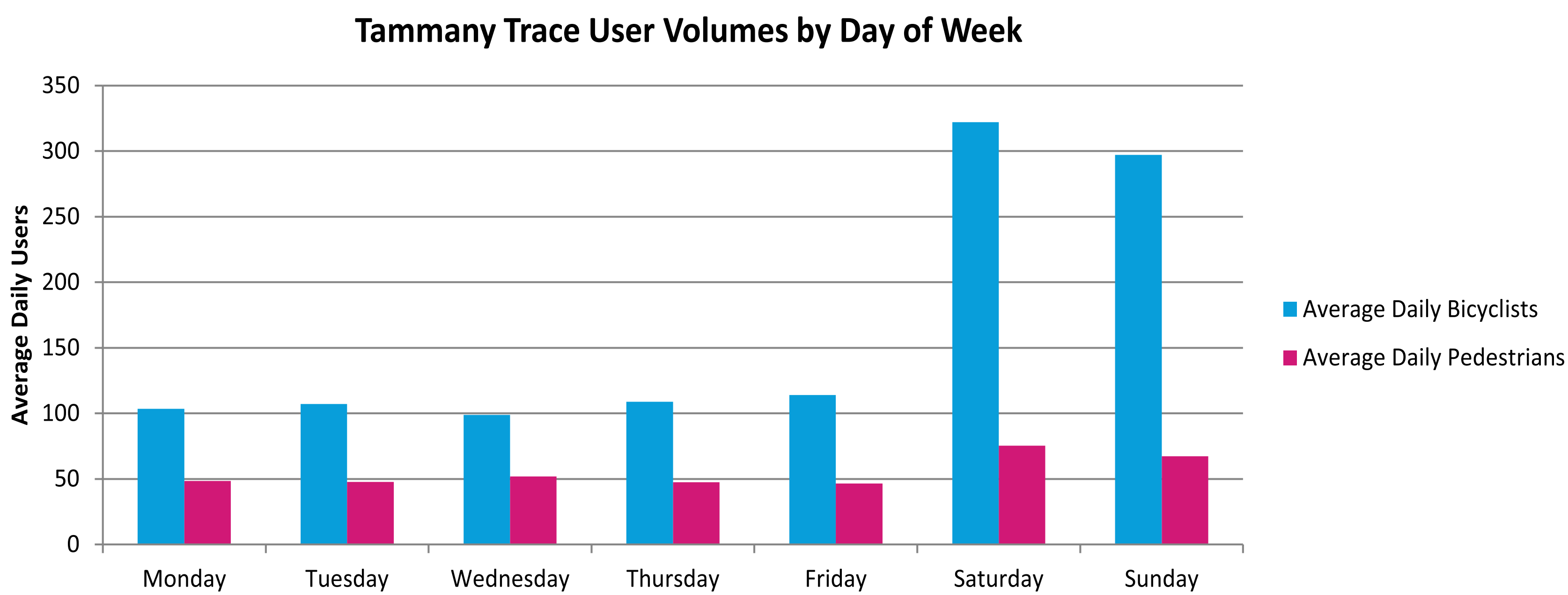



Figure 37: Tammany Trace User Volumes by Day of Week

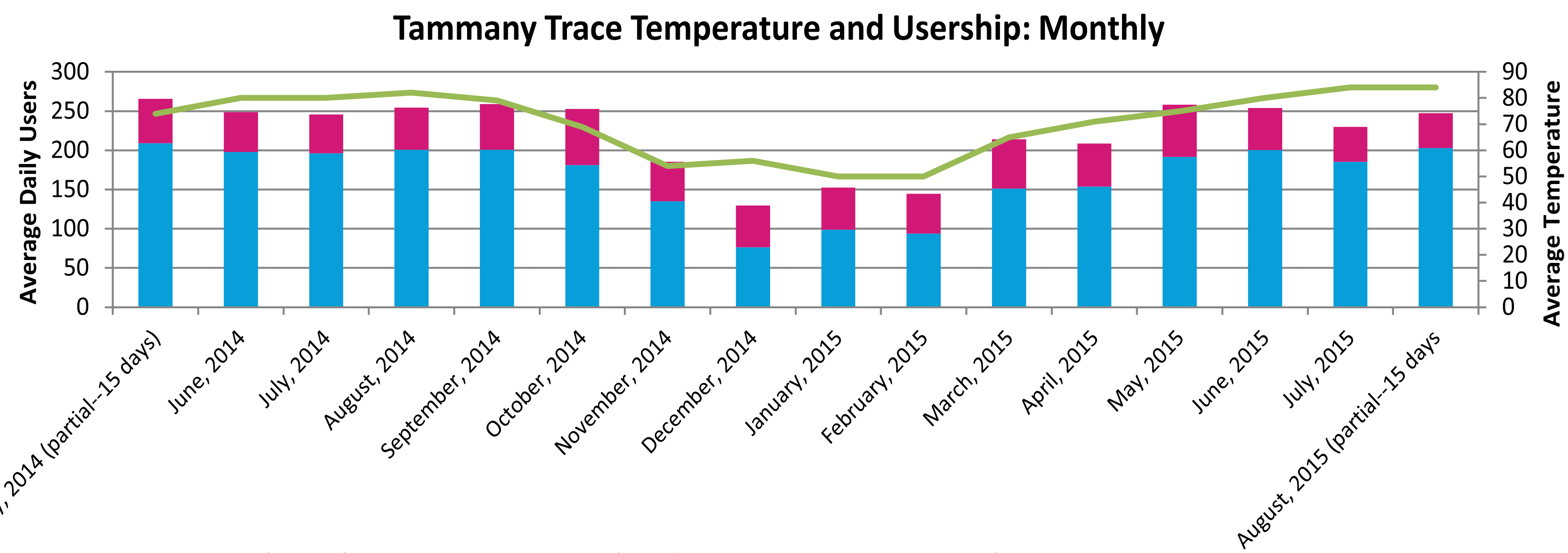


### 4.2.3 Meteorological Variables and Traffic Volume

Over the 15 months of this count device's installation, daily and monthly user counts track familiar patterns as pertains to temperature and precipitation impacts. User volumes dip substantially in the winter months, and less dramatically during the hottest months of the year (Figure 38). At the daily scale, patterns are similar to the Jefferson Davis Trail, with peak use during mild days, and reduced user counts at the extreme ends of the temperature range (Figure 39).

Also similar to the Jefferson Davis trail, precipitation appears to impact usership more dramatically than temperature, with all high-user days occurring during low or no-precipitation days, and very low user counts on the rainiest days (Figure 40). At a monthly scale, however, no clear pattern in the relationship between precipitation over the course of a month and usership is evident (Figure 41).

Figure 38: Tammany Trace Temperature and Usership: Monthly




*Note: Temperature data from The Weather Underground, historic data for Slidell Airport weather station*

Figure 39: Tammany Trace Temperature and Usership: Daily

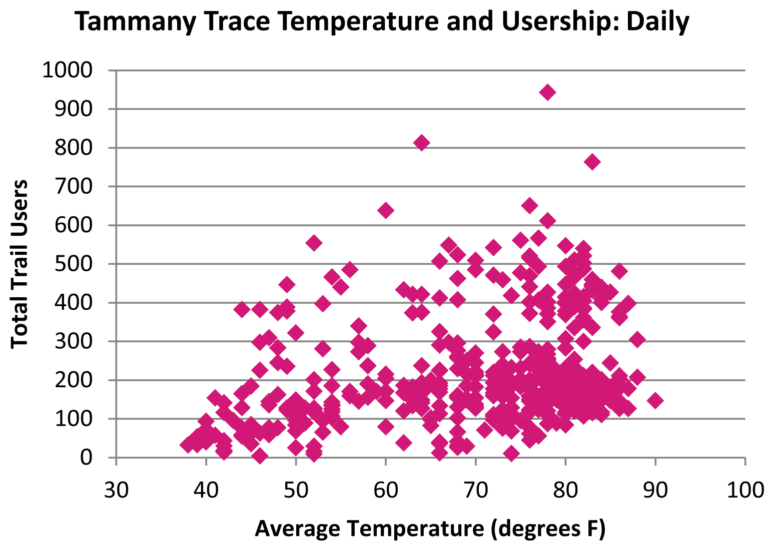



Figure 40: Tammany Trace Precipitation and Usership: Daily

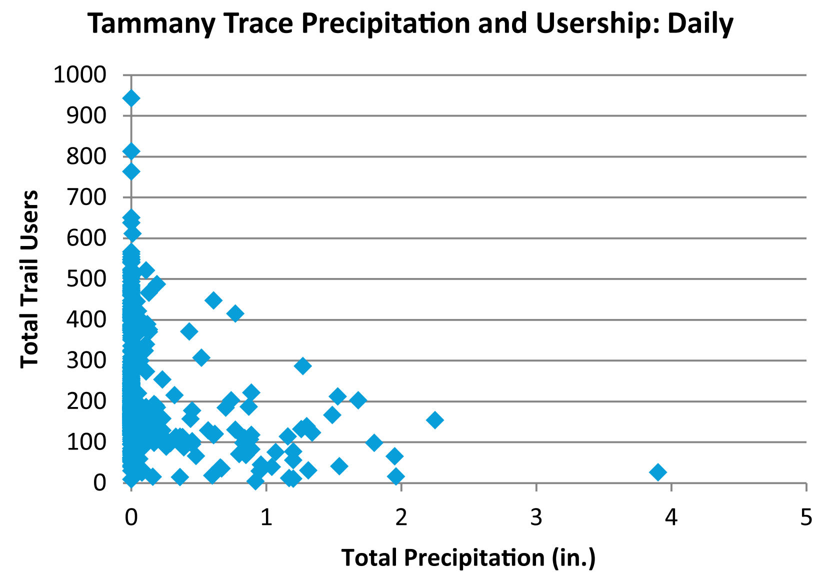
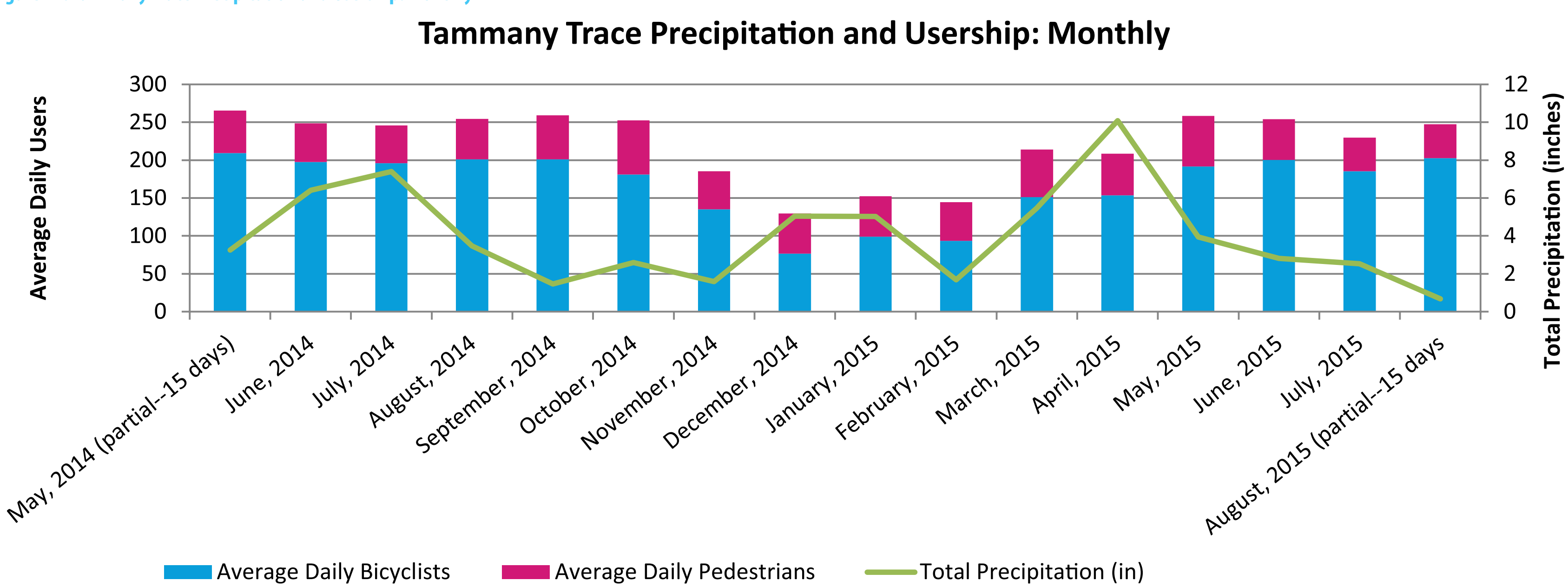



Figure 41: Tammany Trace Precipitation and Usership: Monthly



## 4.3 Short-Term Electronic Trail Counts

Infrared sensors were used during the 2014-2015 study period to conduct exploratory short-term counts on three shared-use facilities in New Orleans: the shared-use path along the Mississippi river in Woldenberg Park in the French Quarter, the new portion of the Mississippi River Trail at Algiers Point, and the Wisner Trail along Bayou St. John in Gentilly. These sensors cannot distinguish between user types, but provide useful data into the usage patterns and total volume of users on off-street facilities.

### 4.3.1 Woldenberg Park

An infrared sensor was installed at Woldenberg Park behind the Audubon Aquarium between Iberville and Bienville Streets in June, 2014, in order to capture estimated pedestrian (and some bicycle) volumes along the riverfront. This site was selected in part to test the capacity of the sensor equipment under very high-volume conditions. It should be noted that manual observations at installation and de-installation for this site reflected an approximately 15-20% undercount of users by the sensor during peak hours; as noted above, this is due to the sensors' inability to detect multiple pedestrians passing simultaneously. Thus, this technology is likely not appropriate for long-term application on facilities as well-traversed as the French Quarter riverfront. Nonetheless, it provides useful preliminary information about typical user volumes and temporal trends. Periodic re-installation at this site is recommended in order to gauge seasonal trends and estimate changes in user volume over time.

The sensor was only operational for two weeks, due to planned renovation of this space, but recorded an average of 2,384 users per day during this period. User volumes in this tourism-heavy area appear to be considerably higher on weekends than on weekdays, and appear to decline during periods with high precipitation (Figure 43). Use of this space is consistent beginning at 6am rising steadily through mid-day to a 1pm peak and then falling to fewer than 50 users per hour only after 9pm (Figure 42).

Figure 42: Woldenberg Park Daily Users by Hour of Day

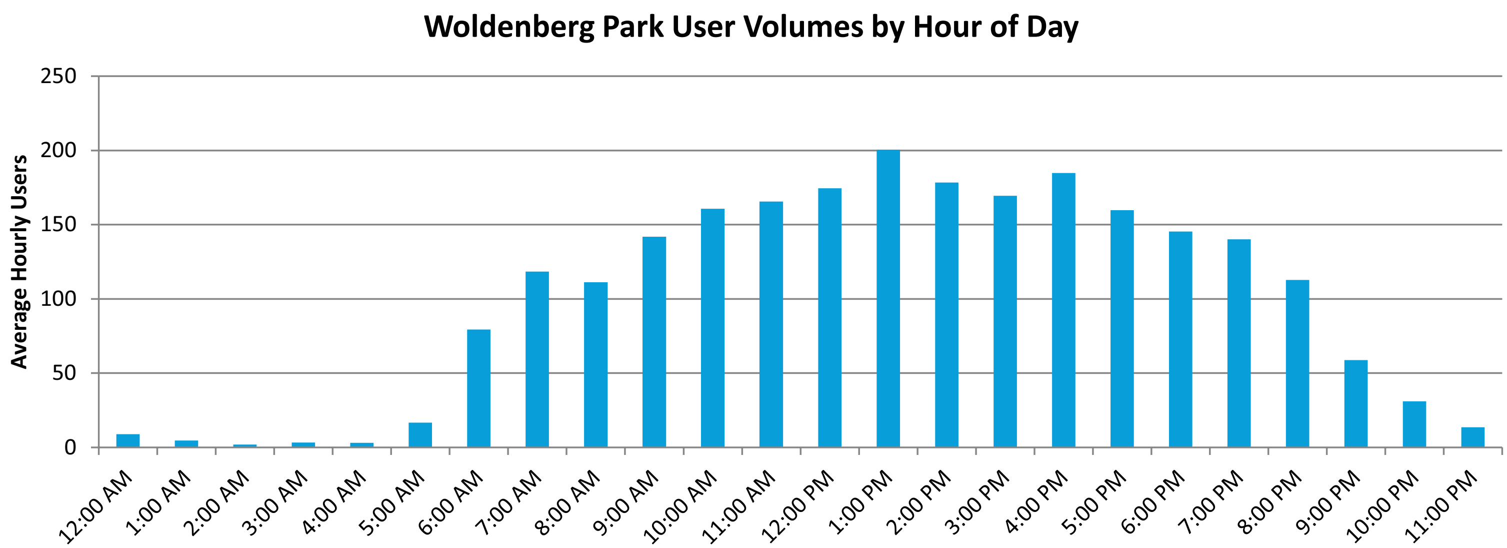
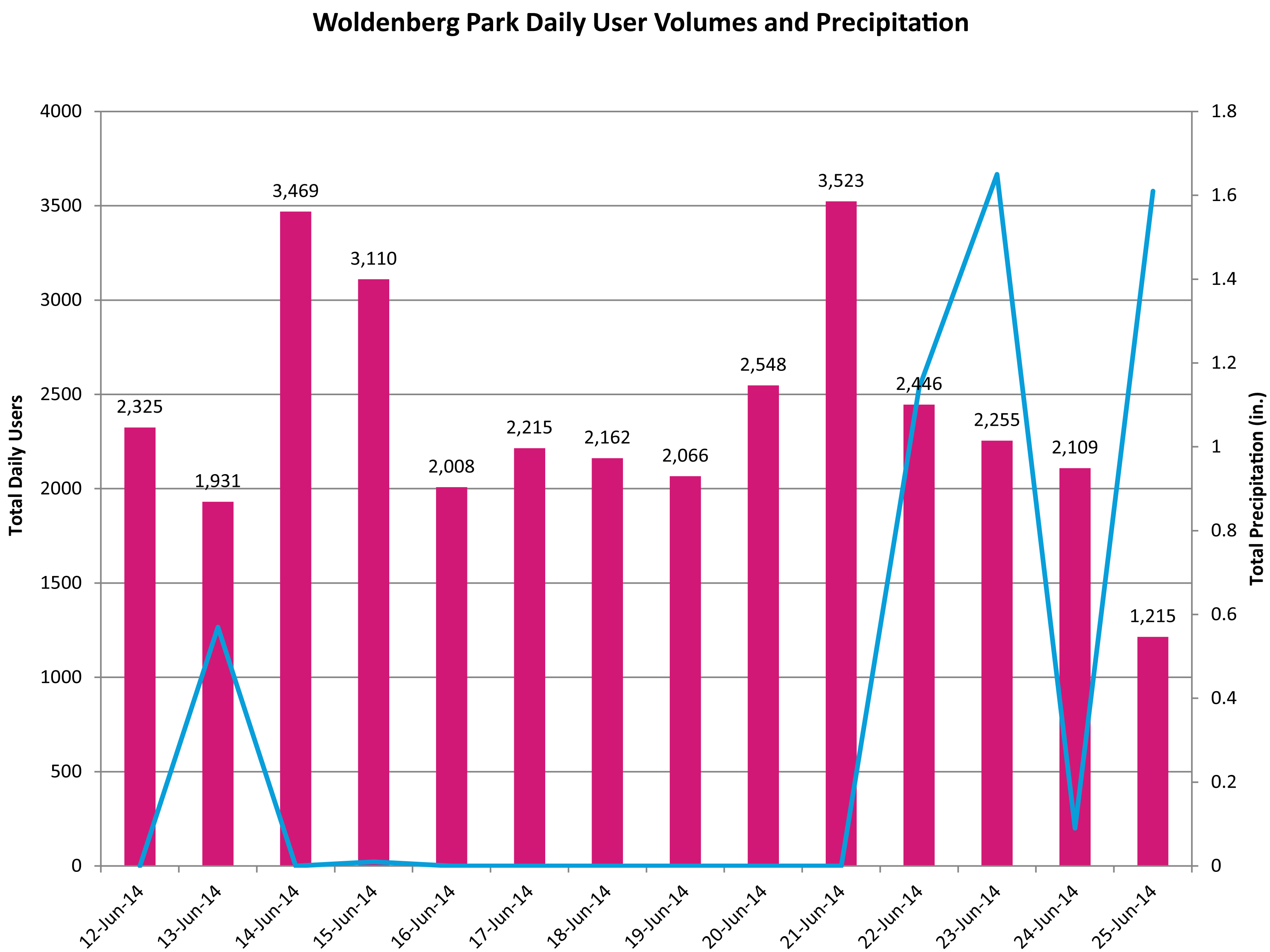


Figure 43: Woldenberg Park Daily User Volumes and Precipitation



### 4.3.2 Mississippi River Trail - Algiers Point

From June to October, 2014, an infrared sensor was placed on the newest portion of the Mississippi River Trail, just downriver from the ferry terminal at Algiers Point. This conventional trail location is well-suited to short- or long-term infrared sensor installation, and data at this location is estimated to be accurate within a 5% margin of error. Figure 44 illustrates the range of total user volumes per day recorded during the observation period, ranging from a low of 107 to a high of 1,077 (on July 4th, when both banks of the Mississippi River are heavily used by spectators of the annual fireworks display). On average, this facility recorded 347 users per day. Notably, this total is lower than the average daily totals recorded by PBRI on the upriver, eastbank Mississippi River Trail in 2010 and 2011[18], which reported average summer season user volumes of 421-486 users per day.

Trail use is higher at this site on weekdays than on weekends (Figure 45), with a Wednesday peak which corresponds to a series of free concerts held nearby on Wednesdays in June, July, and August. This facility also demonstrates strong morning and evening user peaks (Figure 46). Together, this indicates that this trail experiences significant use as a transportation connection, rather than being entirely or predominantly a recreational facility.

Continued monitoring of this site—as well as additional data collection at other points along the Mississippi River Trail system—is recommended in order to better understand user patterns and identify needed connector facilities to improve access to the trail network. In addition, follow-up monitoring is recommended in order to evaluate the impact of reduced ferry service (and implementation of fares) on trail use, as the ferry serves as the primary connection for pedestrians and bicyclists from Algiers to New Orleans' downtown.

18 *See New Orleans Pedestrian and Bicycle Count Report, 2010-2011 (www.pbrila.org)*

### 4.3.3 Wisner Trail

Finally, a sensor was installed for a total of 68 days on the Wisner Trail on Bayou St. John near Harrison Avenue from late June through late August, 2015. This trail, completed in 2008, connects several lakefront and Gentilly neighborhoods to Mid-City, to various on-road bicycle facilities, to the Jefferson Davis Trail, and thus now to the Lafitte Greenway and downtown.

On average, during this observation period, 277 users were recorded per day, for a total of 18,811 users. User counts ranged from a low of 169 to a high of 493 users per day (Figure 47). Trail use throughout the day indicates a mix of recreational and commuter users (including those with non-traditional commute schedules), with morning and afternoon peaks but relatively frequent use throughout mid-day (Figure 48). This is similarly reflected in trail use distribution by day of week (Figure 49), which reflects higher use of around 340 observed users per day on weekends, and 233-276 users per weekday.

In addition, a modified, 4-hour manual count was conducted at this site to identify demographic trends (as well as to ensure accuracy of the count device, see Appendix H for detail) on this trail. In total, 117 users were observed on the trail during the observation periods on July 14th, 2015 (Table 28). Of these, 61.5% were bicyclists and 38.5% were pedestrians. The majority of bicyclists (81%) were white, while only 38% of pedestrians were. A majority of both pedestrians and bicyclists were identified as male. Among bicyclists, 36% were observed wearing helmets, above the regional averages reported in section 3.6.

Additional periodic observations at different times of the year should be made on this trail facility in order to expand upon this preliminary evaluation of trail usership.

Figure 44: Mississippi River Trail Total Daily Users, June 26 - October 8th 2014

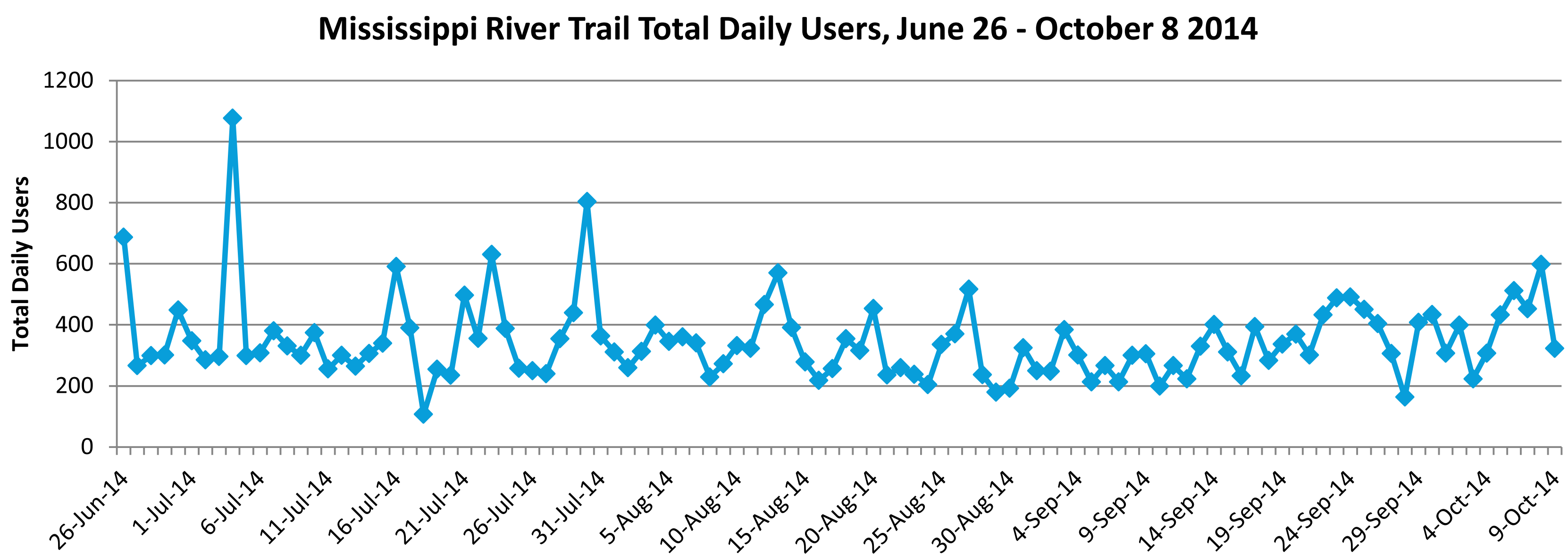



Figure 45: Mississippi River Trail Average Daily Users by Day of Week

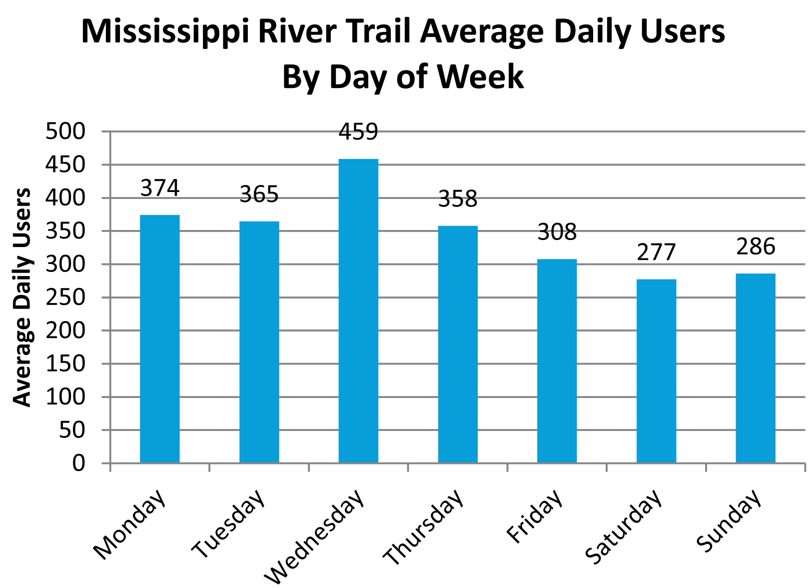



Figure 46: Mississippi River Trail Average Daily Users by Hour of Day

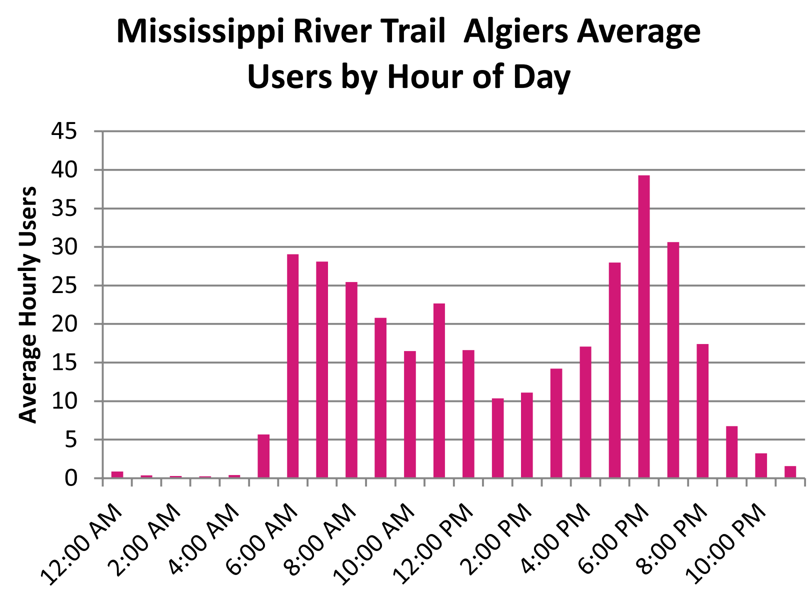


Figure 47: Wisner Trail Total Daily Users, June 20 - August 26 2015

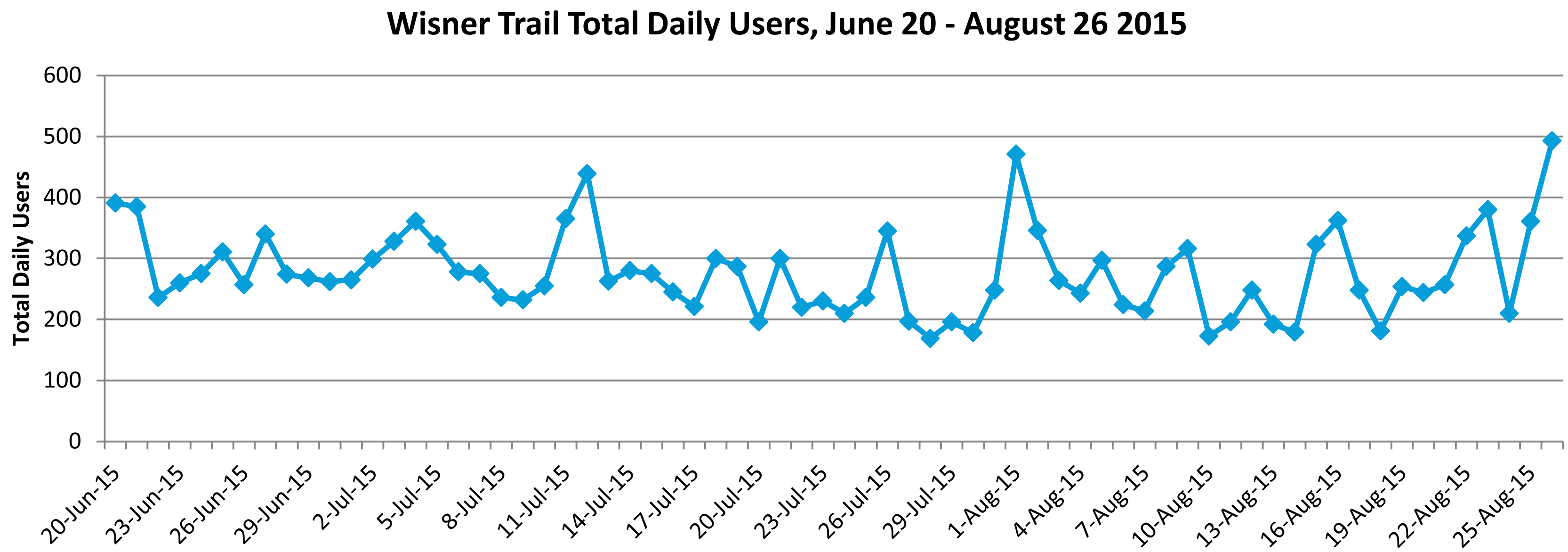



Figure 48: Wisner Trail Average Users by Hour of Day

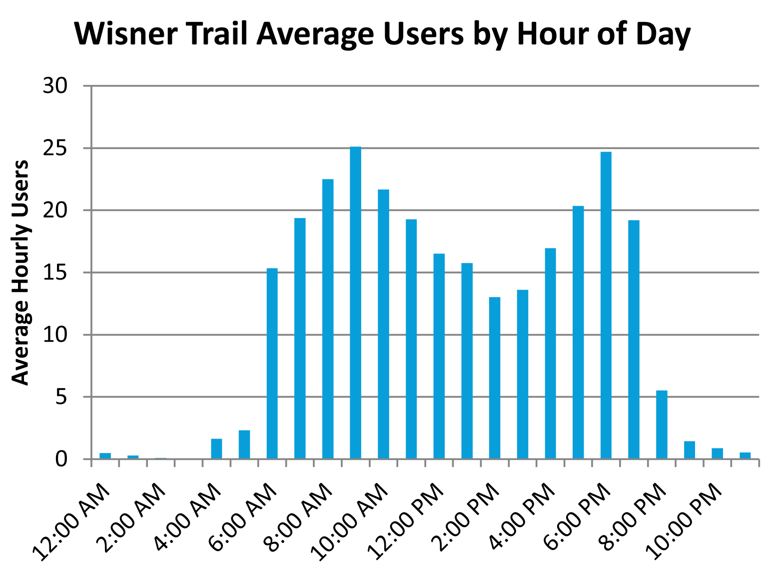



Figure 49: Wisner Trail Average Daily Users by Day of Week

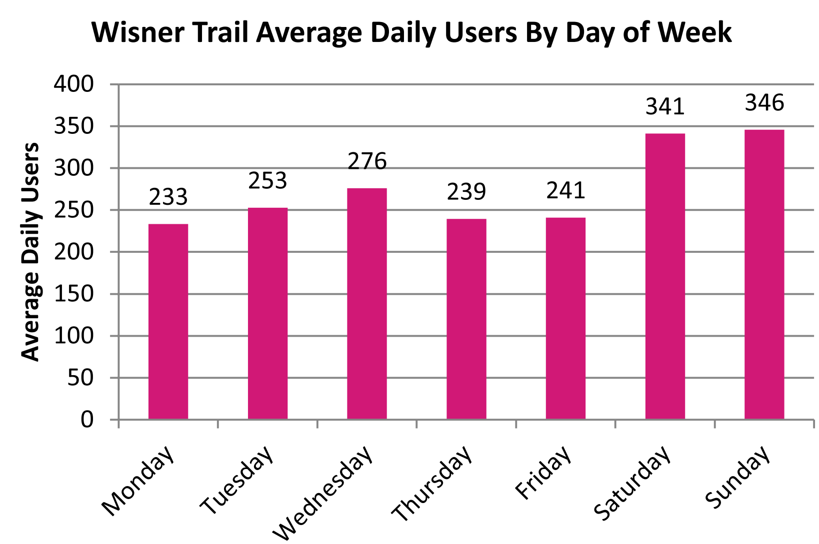


**Table 28: Wisner Trail Manual Count Summary Demographic Statistics**

| | | Bicyclists | | Pedestrians | |
|---|---|---|---|---|---|
| One Four-Hour Count (July 14th, 2015) | | # | % | # | % |
| | AM | 41 | | 34 | |
| Total Observed | PM | 31 | | 11 | |
| **TOTAL** | | **72** | ***61.5%*** | **45** | ***38.5%*** |
| | White | 58 | *80.6%* | 17 | *37.8%* |
| | Black | 13 | *18.1%* | 25 | *55.6%* |
| Race | Other | 1 | *1.4%* | 3 | *6.7%* |
| | Male | 46 | *63.9%* | 27 | *60.0%* |
| Gender | Female | 25 | *34.7%* | 18 | *40.0%* |
| Helmet Users | | 26 | *36.1%* | | |

## 4.4 Baronne Street Pilot Bike Lane: Bicycle and Pedestrian Usage and Observations

In support of the City of New Orleans' efforts to evaluate the outcomes of installing a new dedicated bicycle lane on Baronne Street in downtown New Orleans in late 2014, PBRI also collected count data via automated methods immediately preceding the installation of the bike lane striping, and collected both automated and manual count data several months after installation in order to assess how installation of the facility has impacted overall usage.

### 4.4.1 Pre-Installation Bicycle Data Collection

Electronic count data was collected prior to the restriping of the corridor with a dedicated bicycle lane via pneumatic tube sensors measuring bi-directional bicycle traffic in the right portion of the roadway (tubes are 20' in length, and reached to the edge of the right motor vehicle travel lane). The equipment was installed on October 25th, 2014, between Poydras St and Lafayette St, and remained in place until the tubes became dislodged on November 6th, slightly cutting short the intended 2-week study period.

At the time of equipment installation, each sensor is tested by PBRI staff for accuracy and reliability. Notably, the data reported via this method consistently undercounts the total number of bicyclists in the corridor in two ways:

1. Bicyclists who ride outside of the reach of the tubes (in preparation to make a left turn, for example, or to deliberately avoid riding over the tubes)

2. When a motor vehicle parks directly on top of one or both of the tubes, the device is unable to record bicycle traffic.

**Table 29: Baronne Street, Pre-Installation Raw Eco-Tube Count Data (Oct 25 - Nov 6, 2014)**

| Daily Bicycle Count | Total | Right Way | Wrong Way | Average Temp (° F) | Precipitation (in) | Notes |
|---|---|---|---|---|---|---|
| Saturday, October 25, 2014 | 139 | 132 | 7 | 67 | 0 | partial day--Installed 9am |
| Sunday, October 26, 2014 | 230 | 222 | 8 | 71 | 0 | |
| Monday, October 27, 2014 | 167 | 157 | 10 | 72 | 0 | no counts 5pm-8pm; car parked on tubes |
| Tuesday, October 28, 2014 | 220 | 202 | 18 | 77 | 0 | |
| Wednesday, October 29, 2014 | 243 | 223 | 20 | 75 | 0 | |
| Thursday, October 30, 2014 | 234 | 215 | 19 | 64 | 0 | |
| Friday, October 31, 2014 | 339 | 320 | 19 | 64 | 0 | |
| Saturday, November 01, 2014 | 189 | 183 | 6 | 54 | 0 | |
| Sunday, November 02, 2014 | 150 | 143 | 7 | 56 | 0 | |
| Monday, November 03, 2014 | 86 | 85 | 1 | 59 | 0 | no counts 9am-4pm; car parked on tubes |
| Tuesday, November 04, 2014 | 148 | 131 | 17 | 69 | 0 | no counts 1pm-4pm; car parked on tubes |
| Wednesday, November 05, 2014 | 211 | 190 | 21 | 75 | 0 | no counts 7pm-10pm; car parked on tubes |
| Thursday, November 06, 2014 | 99 | 85 | 14 | 69 | 0.01 | partial day--tubes came up 3pm |
| **Daily Average** | **189** | **176** | **13** | **67** | **0.001** | **Including parking obstruction errors** |
| **Totals** | **2,455** | **2,288** | **167** | | | |

Data is aggregated into 15 minute increments. Evaluation of the data at the quarter-hour level allows the project team to identify gaps in data from the latter circumstance (identified in the "notes" column of Table 29).

On average, during the pre-installation data collection period, a total of 189 users were registered by the counter per day of this data collection period (Table 29). This ranged from a low of 86 bicyclists on Monday, November 3rd (when data collection was obstructed due to a car parking on the equipment for most of the day) to a high of 339 bicyclists recorded on Friday, October 31st (likely related to heavy evening traffic due to Halloween). Of these, 93% of bicyclists observed traveled in the correct direction, with traffic. Temperatures during this period were moderate (54-77 average daily temperature) and precipitation was minimal.

### 4.4.2 Post-Installation Bicycle Data Collection

In March, 2015, approximately 4 months after the installation of the striped bike lane, the electronic count equipment was reinstalled in order to gauge changes in overall bicyclist traffic. The tube counter was in place from March 25th through April 6th. As during the pre-installation collection period, several instances of counter obstruction due to parking on the equipment were identified and noted (Table 30). Overall, an average of 290 bicyclists were recorded per day. Of these, 88% were traveling in the correct direction. Temperatures during this count period were slightly warmer than during the fall study period, with two days of significant precipitation.

### 4.4.3 Change in Bicycle Activity Following Bike Lane Installation

In total, the data indicates an approximate 53% increase in bicycle traffic at this count location following the installation of a dedicated bicycle facility (Table 31). Evaluating usage by day of the week, post-installation averages were higher on each day except for Sunday, when a parking obstruction limited data collection for more than five hours on both Sundays during the study period, and Friday, which experienced unusually high use during the pre-installation study period due to the Halloween holiday (Table 32, Figure 50).

In addition, breaking down the data by typical hourly use allowed exclusion of hours when no activity was recorded due to a parking obstruction. When these portions of the data were excluded from analysis, a 44% increase in overall per-hour bicycle activity is observed (Table 34; Figure 51). Notably, the largest gains in bicycle

**Table 30: Baronne Street, Post-Installation Raw Eco-Tube Data (March 24 - April 6th)**

| Daily Bicycle Count | Total | Right Way | Wrong Way | Average Temp (° F) | Precipitation (in) | Notes |
|---|---|---|---|---|---|---|
| Tuesday, March 24, 2015 | 334 | 287 | 47 | 68 | 0 | Includes early AM hours of April 7th to make 24 hrs |
| Wednesday, March 25, 2015 | 340 | 297 | 43 | 68 | 0 | |
| Thursday, March 26, 2015 | 231 | 187 | 44 | 65 | 0.35 | |
| Friday, March 27, 2015 | 334 | 288 | 46 | 61 | 0 | parked on tubes 10pm-12am |
| Saturday, March 28, 2015 | 298 | 267 | 31 | 60 | 0 | |
| Sunday, March 29, 2015 | 135 | 122 | 13 | 67 | 0 | parked on tubes 10am-6pm |
| Monday, March 30, 2015 | 389 | 339 | 50 | 71 | 0 | |
| Tuesday, March 31, 2015 | 262 | 231 | 31 | 72 | 0 | |
| Wednesday, April 01, 2015 | 378 | 337 | 41 | 73 | 0 | |
| Thursday, April 02, 2015 | 368 | 322 | 46 | 77 | 0 | |
| Friday, April 03, 2015 | 340 | 297 | 43 | 78 | 0 | |
| Saturday, April 04, 2015 | 214 | 199 | 15 | 66 | 0.01 | parked on tubes 6pm-midnight |
| Sunday, April 05, 2015 | 130 | 118 | 12 | 70 | 0.27 | parked on tubes 4pm-8pm |
| Monday, April 06, 2015 | 306 | 268 | 38 | 76 | 0 | parked on tubes 11am |
| **Daily average** | **290** | **254** | **32** | **70** | **0.045** | **Including parking obstruction errors** |
| TOTALS | 4,059 | 3,559 | 450 | | **0.675** | |

## Table 31: Baronne Street Estimated Change in Bicycling Following Bike Lane Installation

| | Pre-Bike Lane | Post-Bike Lane | Change |
|---|---|---|---|
| Rough Daily Average (including parking errors) | 189 | 290 | 53% |
| Adjusted Hourly Users (excluding parking errors) | 9 | 13 | 44% |

## Table 32: Baronne Street Bicycle Average Daily Traffic, by Day of Week

| | Pre-bike lane | Post-bike lane | *% Change* |
|---|---|---|---|
| Sunday* | 190 | 133 | *-30%* |
| Monday | 127 | 348 | *174%* |
| Tuesday | 184 | 298 | *62%* |
| Wednesday | 227 | 359 | *58%* |
| Thursday | 167 | 300 | *80%* |
| Friday** | 339 | 337 | *-1%* |
| Saturday | 164 | 256 | *56%* |
| **Average** | **189** | **290** | ***53%*** |

**Significant Tube obstruction on both Sundays of post-install count period*

***Preinstall period only included one Friday, October 31st (Halloween)*

## Table 33: Baronne Street Bicyclist Travel Orientation

| | | Right Way | | Wrong Way | |
|---|---|---|---|---|---|
| | **Total** | **#** | **%** | **#** | **%** |
| Pre-Bike Lane | 2,455 | 2,288 | 93% | 167 | 7% |
| Post-Bike Lane | 4,059 | 3,559 | 88% | 500 | 12% |

## Table 34: Baronne Street Average Hourly Bicyclists*

| Hour | Pre-Bike Lane | Post-Bike Lane | % Change |
|---|---|---|---|
| 12:00:00 AM | 5 | 6 | 20% |
| 1:00:00 AM | 3 | 3 | 0% |
| 2:00:00 AM | 2 | 3 | 50% |
| 3:00:00 AM | 2 | 3 | 50% |
| 4:00:00 AM | 3 | 2 | -33% |
| 5:00:00 AM | 3 | 4 | 33% |
| 6:00:00 AM | 4 | 4 | 0% |
| 7:00:00 AM | 5 | 9 | 80% |
| 8:00:00 AM | 9 | 13 | 44% |
| 9:00:00 AM | 9 | 13 | 44% |
| 10:00:00 AM | 11 | 15 | 36% |
| 11:00:00 AM | 13 | 17 | 31% |
| 12:00:00 PM | 16 | 24 | 50% |
| 01:00:00 PM | 13 | 24 | 85% |
| 02:00:00 PM | 14 | 26 | 86% |
| 03:00:00 PM | 22 | 23 | 5% |
| 04:00:00 PM | 21 | 25 | 19% |
| 05:00:00 PM | 16 | 33 | 106% |
| 06:00:00 PM | 12 | 24 | 100% |
| 07:00:00 PM | 9 | 15 | 67% |
| 08:00:00 PM | 6 | 10 | 67% |
| 09:00:00 PM | 5 | 9 | 80% |
| 010:00:00 PM | 5 | 8 | 60% |
| 011:00:00 PM | 7 | 9 | 29% |
| **Hourly Average** | **9** | **13** | **44%** |

**Excluding Parking Errors*

Figure 50: Baronne Street Average Daily Bicyclists

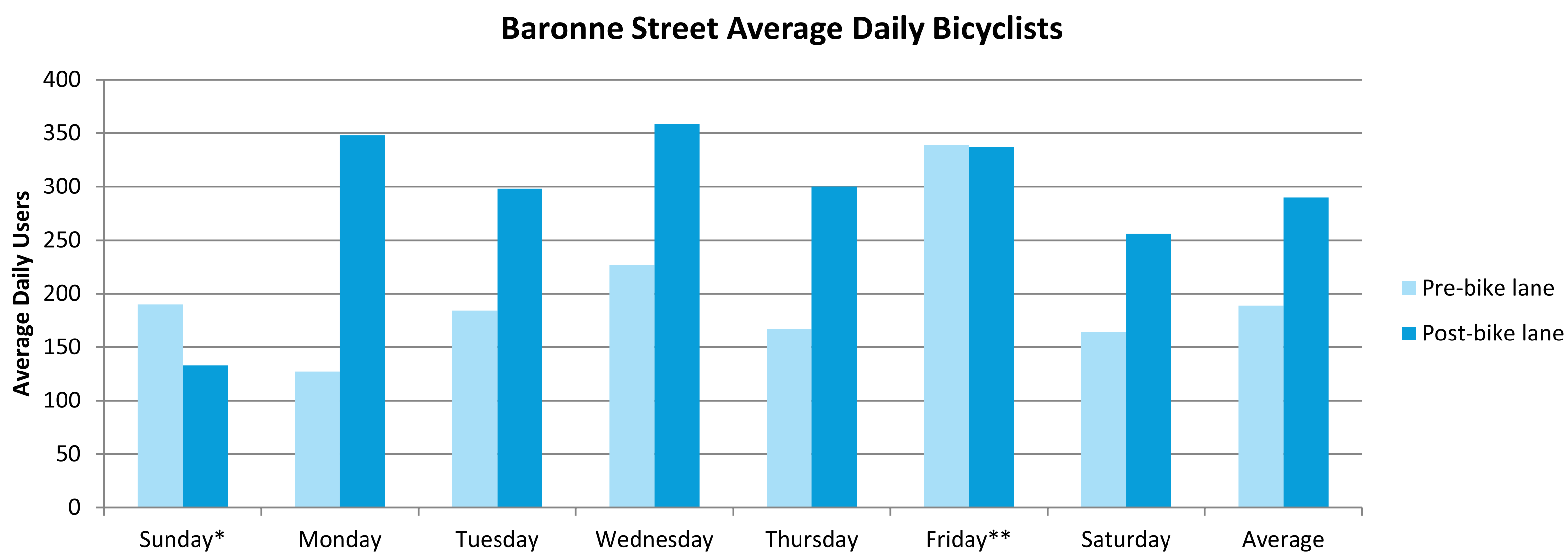
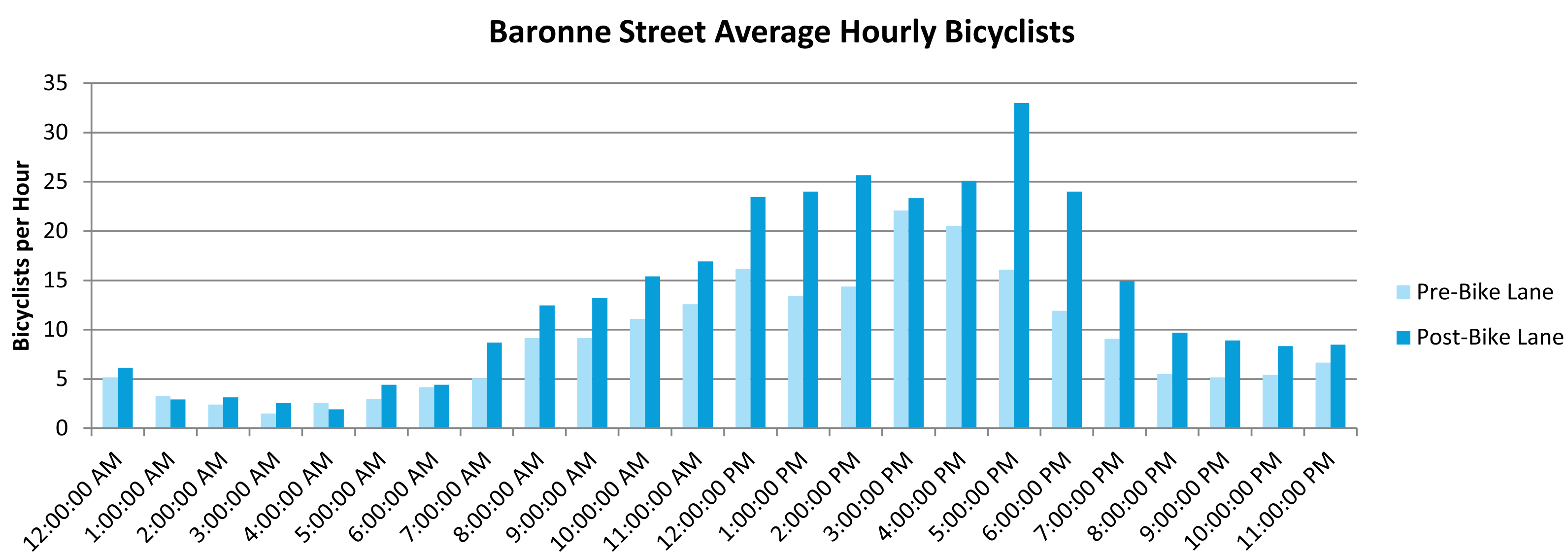



Figure 51: Baronne Street Average Hourly Bicyclists



activity (100% or greater) post-installation were observed during evening peak commute hours. However, increases in average bicycle activity were observed at virtually all hours of the day.

Contrary to previous PBRI findings, which have shown improved rates of legal, right-way riding following the installation of bicycle facilities and as compared to corridors lacking dedicated bicycle facilities, there appear to be a larger proportion of riders traveling in the incorrect direction following the installation of the Baronne St. bike lane: 12% compared to 7% prior to installation (Table 33). This indicates a need for improved enforcement and targeted education along the corridor to ensure correct use of the facility and the safety of all users.

### 4.4.4 Pedestrian Activity

In addition to monitoring bicycle activity on the corridor, PBRI also collected data on pedestrian activity using infrared sensors which count sidewalk users at a given point during both data collection periods. Research has shown that improving bicycle access to a corridor and creating a more complete street tends to improve the overall vitality of the area, leading to economic benefits for nearby businesses; in the absence of quantitative sales data, pedestrian activity may be utilized as a preliminary proxy for economic vitality.

On average, a total of 1,855 users were recorded per day at the installation site during the fall data period, and 1,755 were recorded during the spring data period (Table 35). Though this shows a slight decrease, fluctuations in pedestrian activity are known to be highly impacted by seasonal factors, weathers and contextual factors (e.g. activities occurring nearby), so it is difficult to assess whether the reconfiguration of the street for improved bicycle access has had any significant impact on walking. Long-term monitoring is needed in order to assess seasonal variance and identify any clear trend toward increased or decreased pedestrian activity.

### 4.4.5 Manual Count Observations

Manual observation of users during designated portions of the study period provide a more nuanced view of who is using this new bicycle facility, and how. Table 36 shows the summary results of a manual count conducted in spring 2015. A total of 247 bicyclists and 1,104 pedestrians were observed during the 8-hour count period. Of these, approximately two-thirds of users were observed during the afternoon hours.

The majority (66%) of bicyclists were male, and most (78%) were identified as white. Nearly 90% of bicyclists were seen traveling on the street, in the correct direction, with the remaining 10% observed riding on the sidewalk or against traffic. Notably, 20 riders were observed riding in the street outside of the bike lane: most of these were preparing to dismount the bike or make a left turn, though a few were riding against traffic on the left side of the auto lane, and a few bicyclists appeared to have shifted into the left lane of travel in order to avoid the bicycle counting tubes. Approximately 27% of bicyclists were observed wearing a helmet, exceeding the typical helmet usage rate observed throughout the metro area of 19%.

The demographic characteristics of pedestrians were similar to those of bicyclists. Only a small portion (3%) were observed walking in the street at the point of observation, including a few skateboarders observed using the bike lane.

In addition to observing pedestrians and bicyclists, the team made observations on improper motor vehicle use of the bicycle lane. Critically, during both count days, many motorists using the bike lane were observed travelling at a significantly higher rate of speed than motorists in the left lane of traffic, often clearly above the posted speed limit, creating a dangerous situation not obly for bicyclists legally using the bike lane, but also for crossing pedestrians and for other motorists, not anticipating high-speed traffic passing illegally on the right. Multiple near-miss incidents were observed by the count team at the intersection of Lafayette Street and Baronne Street involving motorists attempting to make right turns from the auto lane and encountering motorists driving in the bike lane on their right.

Obstructions to the bike lane by passenger as well as freight vehicles were also observed (Figures 52 and 53), in both morning and afternoon count periods, forcing bicyclists into the motor vehicle lane or, in the case of delivery vehicles double parked on the left, forcing motorists into the bike lane. This condition was observed even when there was ample curbside parking available on the block to load and unload passengers and freight.

Several passers-by stopped to talk to the manual count observers about the bike lane, and many indicated that improper use of the bike lane by motorists has decreased substantially over the last several months. However, there is clearly a need for increased education and enforcement to ensure a safer environment for all road users.

Importantly, these data indicate only preliminary findings, and are not adjusted for natural variations in active transportation throughout the year or other contextual factors (e.g. construction, special events) which significantly impact bicycling use and route choice. In addition, previous research indicates that usage patterns of new bicycle facilities continue to change rapidly throughout the first year of a facility's existence and beyond as road users of all modes adapt to changes to identify the safest and/or most efficient routes. Continued periodic monitoring is recommended in order to assess the long-term impacts of the construction of this facility on mode share in the corridor.

**Table 35: Baronne Street Average Daily Pedestrians**

| | **Pre-Bike Lane** | | | **Post-Bike Lane** | | | |
|---|---|---|---|---|---|---|---|
| | *Lakeside* | *Riverside* | *Total* | *Lakeside* | *Riverside* | *Total* | *% Change* |
| Sunday | 1,215 | 617 | 1,832 | 873 | 278 | 1,151 | -59.2% |
| Monday | 1,186 | 622 | 1,808 | 1,228 | 487 | 1,715 | -5.4% |
| Tuesday | 1,190 | 675 | 1,865 | 1,366 | 508 | 1,874 | 0.5% |
| Wednesday | 1,210 | 613 | 1,823 | 1,615 | 626 | 2,241 | 18.7% |
| Thursday | 1,161 | 693 | 1,854 | 1,298 | 533 | 1,831 | -1.3% |
| Friday | 1,334 | 772 | 2,106 | 1,433 | 618 | 2,051 | -2.7% |
| Saturday | 1,083 | 744 | 1,826 | 1,014 | 412 | 1,426 | -28.1% |
| **Average Daily Pedestrians** | **1,186** | **669** | **1,855** | **1,261** | **494** | **1,755** | -5.7% |

## Table 36: Baronne Street Manual Count Statistics

Count Dates: March 31st, April 1st, 7-9am; 4-6pm

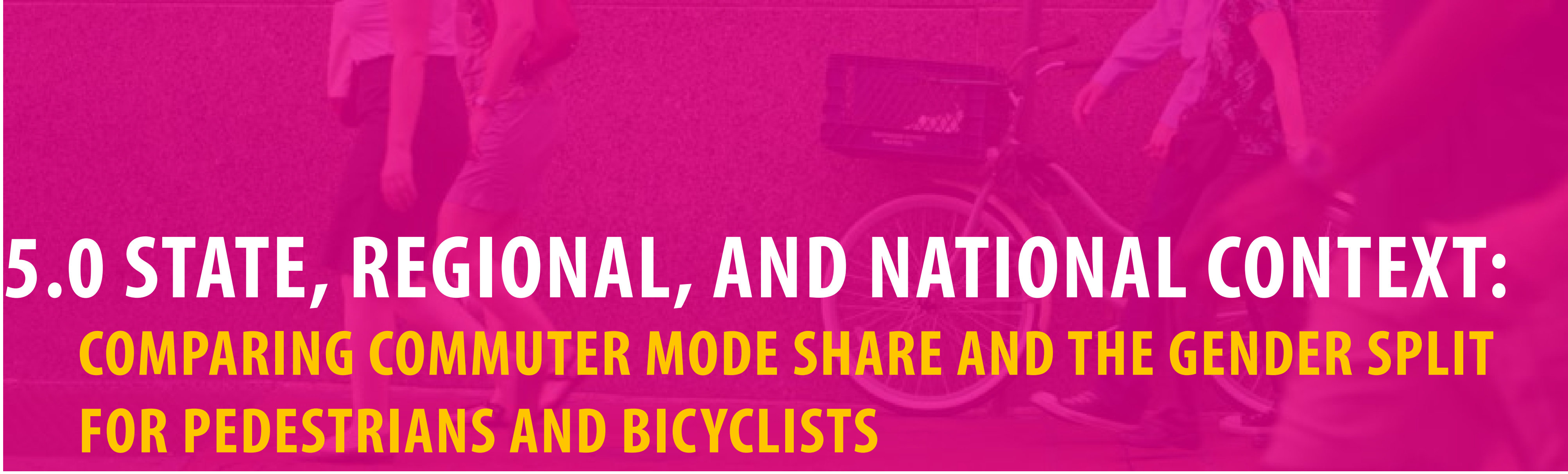
| | Bicyclists | | Pedestrians | |
|---|---|---|---|---|
| | # | % | # | % |
| **Total Observed** | **247** | | **1104** | |
| Morning (7-9am) | 84 | 34.0% | 394 | 35.7% |
| Evening (4-6pm) | 163 | 66.0% | 710 | 64.3% |
| **Gender** | | | | |
| Male | 163 | 66.0% | 676 | 61.2% |
| Female | 84 | 34.0% | 428 | 38.8% |
| **Race** | | | | |
| White | 194 | 78.5% | 750 | 67.9% |
| Black | 42 | 17.0% | 248 | 22.5% |
| Other | 11 | 4.5% | 106 | 9.6% |
| **Travel Orientation** | | | | |
| On-Street: Right Way | 220 | 89.1% | | |
| On-Street: Wrong Way | 14 | 5.7% | 35 | 3.2% |
| Sidewalk | 13 | 5.3% | 1,069 | 96.8% |
| **Bike Lane Use** | | | | |
| In Bike Lane | 214 | 86.6% | | |
| Outside of Bike Lane | 33 | 13.4% | | |
| **Helmet Use** | 66 | 26.7% | | |

Figure 52: Baronne Street Improper Lane Use -- Passenger Vehicles

*Photo credit Tara Tolford 2015*

Figure 53: Baronne Street Improper Lane Use -- Freight Vehicles

*Photo credit Tara Tolford 2015*



# 5.0 STATE, REGIONAL, AND NATIONAL CONTEXT:
## COMPARING COMMUTER MODE SHARE AND THE GENDER SPLIT FOR PEDESTRIANS AND BICYCLISTS

This section provides an update to evaluations of commute data from the U.S. Census and American Community Survey (ACS) found in previous PBRI Pedestrian and Bicycle Count Reports, evaluating New Orleans progress as an active transportation leader relative to its context in the state of Louisiana, the Southern region of the United States, and the nation overall. This report updates this information with 2013 ACS data, as well as recently released 2014 data, where available.[19]

**New Orleans consistently ranks among the top ten large cities in the US for bicycling to work.**

As noted above, rates of female bicyclists are often examined as an indicator of the overall safety, comfort, and popularity of bicycling for a given area.

This section also compares New Orleans' percentages of total and female pedestrian and bicycle commuters respectively to national leaders in active transportation, the South Region (as defined by the U.S. Census), and other cities in Louisiana.

### 5.1 Bicycle Commuting in New Orleans

In recent years, the city of New Orleans has firmly established itself as a regional leader in bicycling. Figure 54 illustrates New Orleans' bicycle commute mode share, relative to the metropolitan region, the state, the South Region, and the nation. Nationally, bicycling to work is on the rise, but New Orleans' rate of bicycling greatly exceeds this trend, with a peak estimate of more than 3.5% in 2013.

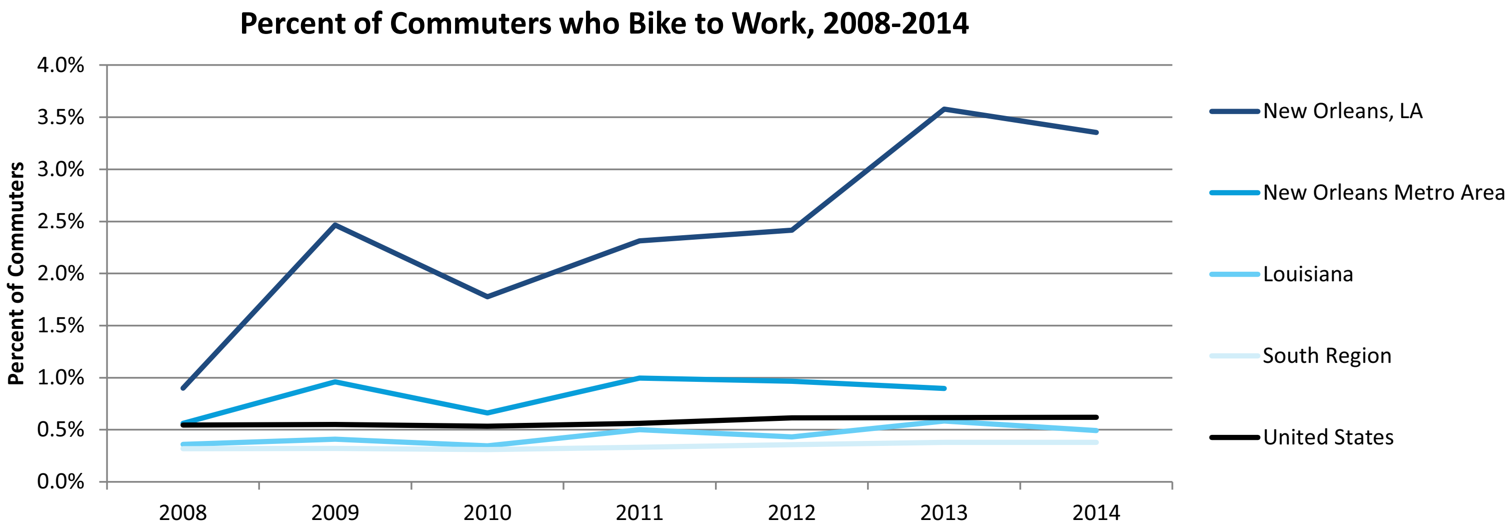
Estimates shift slightly from year to year, however, for the last several years, New Orleans has consistently ranked among the top ten large cities (with a population over 250,000) in the country for its rate of bicycling to work at over 3%.

Bicycle commuting was estimated at 3.58% in 2013 (Table 37), ranking 5th in the country, and slipped only slightly to 3.35% in 2014[20] (Table 38).

19 *2014 ACS estimates were not available at the time of writing for the New Orleans Metropolitan Region (1-year estimates) or for smaller Louisiana cities (3-Year Estimates)*

20 *Note that the difference between the 2013 and 2014 bicycle mode share figure is within the margin of error for the dataset and does not represent a statistically significant change*

Figure 54: Percent of Commuters who Bike to Work, 2008-2014




*Source: American Community Survey 1-year Estimates, Table B08006, 2008-2014*

Both figures reflect a significant jump from the 2012 ACS estimates of 2.42% bicycle mode share. Approximately 29% of bicycle commuters were female in 2013, and 43% in 2014. As noted above, PBRI's own observations identified approximately 31% of bicyclists as female in 2013, and 32% in 2014. Thus, New Orleans continues to maintain a strong position as a national leader in bicycling, even as many cities around the nation have made significantly larger investments in infrastructure, particularly dedicated and/or protected bicycle facility types that are thought to encourage a wider range of potentially interested individuals to bicycle.

The South Region[21] as a whole continues to lag behind other regions of the country for rates of bicycling (Tables 39 and 40). However, within this region, New Orleans remains a clear leader among major cities, behind only Washington, D.C. in 2013 and 2014. New Orleans' estimated rate of women who bike to work is also highly ranked within the region, exceeding all but three other major southern cities in 2013 and one in 2014.

Finally, New Orleans also leads the state of Louisiana by a wide margin. To evaluate New Orleans relative to other cities in Louisiana, three-year aggregate ACS data from 2011-2013 is used. Table 41 summarizes bicycling trends for all cities in Louisiana for which such data is available. As in previous years, New Orleans has the highest estimated bicycle commuter mode share, as well as the highest estimated percentage of female bike commuters of all Louisiana cities. The state's overall rate of bicycle commuting, meanwhile, increased slightly during this reporting period, to just over half of one percent.

*21 Defined by the US Census Bureau as including the states of Delaware, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, West Virginia, Alabama, Kentucky, Mississippi, Tennessee, Arkansas, Louisiana, Oklahoma, Texas, and the District of Columbia*

**Table 37: Top Cities over 250,000 for Bicycle Commuting, 2013**

| Overall Rank | City | Bicycle Mode Share | Percent of bike commuters who are female |
|---|---|---|---|
| 1 | Portland, OR | 5.89% | 34.63% |
| 2 | Washington, DC | 4.54% | 37.05% |
| 3 | San Francisco, CA | 3.85% | 28.20% |
| 4 | Minneapolis, MN | 3.73% | 33.57% |
| 5 | New Orleans, LA | 3.58% | 28.58% |
| | *PBRI Findings, 2013* | *n/a* | *31.10%* |
| 6 | Seattle, WA | 3.47% | 32.63% |
| 7 | Tucson, AZ | 3.38% | 30.76% |
| 8 | Oakland, CA | 2.97% | 31.54% |
| 9 | Honolulu, HI | 2.39% | 29.41% |
| 10 | Philadelphia, PA | 2.26% | 32.96% |
| 11 | Pittsburgh, PA | 2.25% | 38.19% |
| 12 | Sacramento, CA | 2.21% | 26.91% |
| 13 | Denver, CO | 1.98% | 29.14% |
| 14 | Boston, MA | *1.95%* | *23.12%* |
| 15 | Santa Ana, CA | 1.82% | 11.62% |

*Source: U.S. Census Bureau, 2013 American Community Survey 1-yr estimates, Table B08006*

**Table 38: Top Cities over 250,000 for Bicycle Commuting, 2014**

| Overall Rank | City | Bicycle Mode Share | Percent of bike commuters who are female |
|---|---|---|---|
| 1 | Portland, OR | 7.16% | 35.11% |
| 2 | Minneapolis, MN | 4.65% | 32.38% |
| 3 | San Francisco, CA | 4.38% | 31.60% |
| 4 | Washington, DC | 3.89% | 40.75% |
| 5 | Seattle, WA | 3.69% | 23.74% |
| 6 | Oakland, CA | 3.66% | 33.44% |
| 7 | Tucson, AZ | 3.51% | 25.45% |
| 8 | New Orleans, LA | 3.35% | 43.13% |
| | *PBRI Findings, 2014* | *n/a* | *31.50%* |
| 9 | Denver, CO | 2.49% | 40.40% |
| 10 | Boston, MA | 2.41% | 25.75% |
| 11 | Pittsburgh, PA | 2.04% | 32.07% |
| 12 | Honolulu, HI | 1.96% | 28.48% |
| 13 | Philadelphia, PA | 1.92% | 42.72% |
| 14 | Sacramento, CA | 1.91% | 37.71% |
| 15 | Tampa, FL | 1.86% | 22.81% |

*Source: U.S. Census Bureau, 2014 American Community Survey 1-yr estimates, Table B08006*

**Table 39: Regional Bicycle Commuting Statistics, 2013**

| Geography | Bicycle Mode Share | Percent of bike commuters who are female |
|---|---|---|
| **West Region** | **1.13%** | **27.42%** |
| **Midwest Region** | **0.51%** | **29.56%** |
| **Northeast Region** | **0.57%** | **24.38%** |
| **South Region** | **0.38%** | **26.06%** |
| Washington, DC | 4.54% | 37.05% |
| New Orleans, LA | 3.58% | 28.58% |
| *PBRI Findings, 2013* | *n/a* | *31.10%* |
| St. Petersburg, FL | 1.76% | 15.90% |
| Austin, TX | 1.37% | 24.70% |
| Tampa, FL | 1.19% | 21.24% |
| Lexington, KY | 1.10% | 18.51% |
| Miami, FL | 0.99% | 36.17% |
| Durham, NC | 0.94% | 39.81% |
| Houston, TX | 0.84% | 17.06% |
| Atlanta, GA | 0.72% | 24.73% |
| **United States** | **0.62%** | **26.98%** |

*Notes: Selected cities in the South Region represent the 10 highest bicycle commuting rates for cities over 250,000*

*Source: U.S. Census Bureau, 2013 American Community Survey 1-Yr Estimates, Table B08006*

**Table 40: Regional Bicycle Commuting Statistics, 2014**

| Geography | Bicycle Mode Share | Percent of bike commuters who are female |
|---|---|---|
| **West Region** | **1.17%** | **28.21%** |
| **Midwest Region** | **0.50%** | **28.80%** |
| **Northeast Region** | **0.54%** | **29.71%** |
| **South Region** | **0.38%** | **25.01%** |
| Washington, DC | 3.89% | 40.75% |
| New Orleans, LA | 3.35% | 43.13% |
| *PBRI Findings, 2014* | *n/a* | *31.50%* |
| Tampa, FL | 1.86% | 22.81% |
| Austin, TX | 1.34% | 34.90% |
| Miami, FL | 0.93% | 12.13% |
| Lexington, KY | 0.75% | 44.45% |
| Baltimore, MD | 0.73% | 33.72% |
| Durham, NC | 0.70% | 24.07% |
| Atlanta, GA | 0.70% | 11.88% |
| Jacksonville, FL | 0.64% | 20.98% |
| **United States** | **0.62%** | **27.84%** |

*Notes: Selected cities in the South Region represent the 10 highest bicycle commuting rates for cities over 250,000*

*Source: U.S. Census Bureau, 2014 American Community Survey 1-yr Estimates, Table B08006*

**Table 41: Bicycle Commuting in Louisiana, 2011-2013**

| Geography | Bicycle Mode Share | Percent of bike commuters who are female |
|---|---|---|
| **New Orleans** | **2.79%** | **36.73%** |
| Lafayette | 1.09% | 25.34% |
| New Iberia | 1.08% | 0.00% |
| Baton Rouge | 0.81% | 21.37% |
| Kenner | 0.75% | 0.00% |
| Alexandria | 0.65% | 9.01% |
| Metairie | 0.59% | 9.57% |
| Lake Charles | 0.37% | 0.00% |
| Bossier City | 0.36% | 2.61% |
| Monroe | 0.33% | 11.67% |
| Shreveport | 0.27% | 13.56% |
| **Louisiana** | **0.51%** | **26.56%** |
| **South Region** | **0.36%** | **25.02%** |
| **United States** | **0.60%** | **27.07%** |

*Notes: Louisiana cities selected were the only geographies for which data is available*

*Source: U.S. Census Bureau, 2011-2013 American Community Survey 3-year estimates, Table B08006*

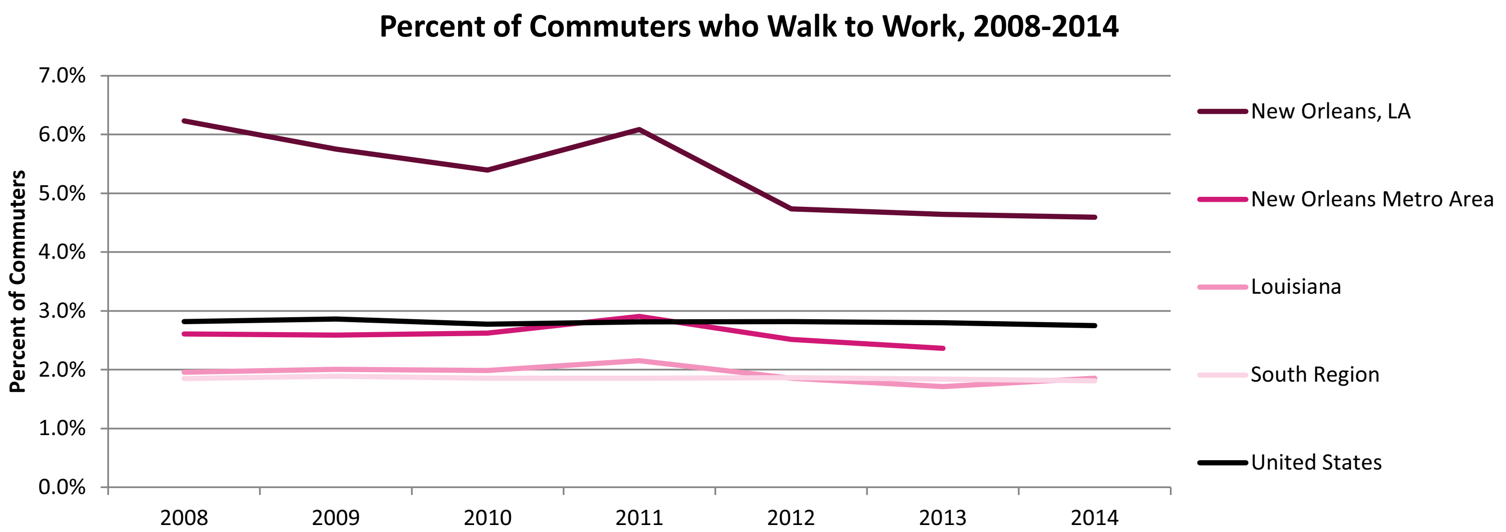
## 5.2 Pedestrian Commuting in New Orleans

This section compares New Orleans' percentages of total and female pedestrian commuters relative to other cities in Louisiana, the South Region, and the United States as a whole to evaluate progress toward becoming a more active city where residents are able and willing to walk to work, as well as to other destinations for daily needs and recreation.

Overall, New Orleans has ranked above national, regional, and state averages for the last five years in the rate of commuters who walk to work (Figure 55). However, this figure has declined slightly during this period. As noted in previous iterations of this report which have observed this trend, increasing rates of walking—to work or other destinations—involves a complex set of policy decisions to ensure not only safe and comfortable infrastructure, but personal safety, a jobs-housing balance that allows people to live near where they work, and other considerations.

In 2013 and 2014, New Orleans' status among cities with populations greater than 250,000 held relatively stable at 19th and 21st place respectively, despite a slight decline in pedestrian commuting to approximately 4.6% (Tables 42 and 43). The percent of pedestrian commuters who are female increased compared to 2012 estimates to 44-45%, a slightly higher percentage than was observed by PBRI's 2013 and 2014 count studies (and which includes non-commute trips).

Figure 55: Percent of Commuters who Walk to Work, 2008-2014




*Source: American Community Survey 1-year Estimates, Table B08006, 2008-2014*

It is important to remember that these estimates are based on small sample sizes and can fluctuate from year to year. Moreover, increasing bicycle commuting and improved transit service may be contributing to the apparent decline in walking to work, particularly among lower income residents, as alternative options become more viable and convenient within the New Orleans region.

Within the South Region,[22] however, New Orleans still ranks relatively high for pedestrian commuting, retaining its position as fourth among major southern cities (Tables 44 and 45). As is the case for bicycling, the South lags behind other regions in overall pedestrian commuters, and New Orleans still significantly exceeds the average for both the South region and the United States as a whole.

Among Louisiana cities, New Orleans once again retained the highest mode share for pedestrian commuting in the state, and an above-average rate of female pedestrians relative to the state as a whole, although four other cities were estimated to have a higher share of female pedestrian commuters. As with bicycling data, state-level comparisons were conducted using 2011-2013 3-Year ACS estimates. Table 46 summarizes the resulting pedestrian commuting patterns in Louisiana. Louisiana's overall rate of pedestrian commuters and female pedestrians, at 1.89% and 44% respectively, is slightly higher than the southern regional average, but again lags behind national averages and represents a slight decrease from 2012 estimates.

22 *Defined by the US Census Bureau as including the states of Delaware, Florida, Georgia , Maryland, North Carolina, South Carolina, Virginia, West Virginia, Alabama, Kentucky, Mississippi, Tennessee, Arkansas, Louisiana, Oklahoma, Texas, and the District of Columbia*

**Table 42: Top Cities over 250,000 for Pedestrian Commuting, 2013**

| Overall Rank | City | Walking Mode Share | Percent of pedestrian commuters who are female |
|---|---|---|---|
| 1 | Boston, MA | 14.50% | 51.96% |
| 2 | Washington, DC | 13.63% | 52.44% |
| 3 | Pittsburgh, PA | 11.25% | 52.56% |
| 4 | San Francisco, CA | 10.91% | 52.93% |
| 5 | New York City, NY | 10.05% | 50.32% |
| 6 | Seattle, WA | 9.07% | 47.31% |
| 7 | Newark, NJ | 8.45% | 40.96% |
| 8 | Honolulu, HI | 8.12% | 54.82% |
| 9 | Philadelphia, PA | 8.06% | 53.71% |
| 10 | Jersey City, NJ | 8.02% | 51.81% |
| 11 | Chicago, IL | 6.75% | 49.68% |
| 12 | Minneapolis, MN | 6.62% | 48.01% |
| 13 | Baltimore, MD | 6.39% | 57.96% |
| 14 | Buffalo, NY | 6.36% | *43.69%* |
| 15 | Portland, OR | 6.10% | 48.06% |
| … | … | … | … |
| 19 | New Orleans, LA | 4.64% | 45.33% |
| | *PBRI Findings, 2013* | *n/a* | *41.90%* |

*Source: U.S. Census Bureau, 2013 American Community Survey, Table B08006*

**Table 43: Top Cities over 250,000 for Pedestrian Commuting, 2014**

| Overall Rank | | Walking Mode Share | Percent of pedestrian commuters who are female |
|---|---|---|---|
| 1 | Boston, MA | 14.31% | 52.85% |
| 2 | Washington, DC | 13.11% | 49.71% |
| 3 | San Francisco, CA | 11.20% | 44.77% |
| 4 | Pittsburgh, PA | 10.89% | 50.75% |
| 5 | New York City, NY | 9.92% | 51.45% |
| 6 | Seattle, WA | 9.77% | 39.22% |
| 7 | Newark, NJ | 9.65% | 36.87% |
| 8 | Jersey City, NJ | 9.37% | 48.65% |
| 9 | Honolulu, HI | 9.07% | 48.77% |
| 10 | Philadelphia, PA | 8.24% | 52.21% |
| 11 | Minneapolis, MN | 7.82% | 50.49% |
| 12 | Chicago, IL | 6.70% | 49.72% |
| 13 | Baltimore, MD | 6.63% | 47.98% |
| 14 | Buffalo, NY | 6.61% | *42.66%* |
| 15 | Cincinnati, OH | 6.43% | 41.99% |
| … | … | … | … |
| 21 | New Orleans, LA | 4.60% | 43.54% |
| | *PBRI Findings, 2014* | *n/a* | *41.80%* |

*Source: U.S. Census Bureau, 2014 American Community Survey, Table B08006*

**Table 44: Regional Pedestrian Commuting Statistics, 2013**

| Geography | Walking Mode Share | Percent of pedestrian commuters who are female |
|---|---|---|
| **West Region** | 2.95% | 43.95% |
| **Northeast Region** | 4.65% | 48.92% |
| **Midwest Region** | 2.68% | 45.15% |
| **South Region** | **1.84%** | **42.24%** |
| Washington, DC | 13.63% | 52.44% |
| Baltimore, MD | 6.39% | 57.96% |
| Miami, FL | 5.37% | 44.49% |
| New Orleans, LA | 4.64% | 45.33% |
| *PBRI Findings, 2013* | *n/a* | *41.90%* |
| Atlanta, GA | 4.24% | 38.10% |
| Durham, NC | 3.92% | 47.73% |
| Lexington, KY | 3.83% | 44.50% |
| Virginia Beach, VA | 2.56% | 34.78% |
| Austin, TX | 2.39% | 42.12% |
| Raleigh, NC | 2.37% | 40.73% |
| **United States** | **2.80%** | **45.31%** |

*Notes: Selected cities in the South Region represent the 10 highest commuting rates for cities over 250,000*

*Source: U.S. Census Bureau, 2013 American Community Survey, Table B08006*

**Table 45: Regional Pedestrian Commuting Statistics, 2014**

| Geography | Walking Mode Share | Percent of pedestrian commuters who are female |
|---|---|---|
| **West Region** | 2.85% | 45.26% |
| **Northeast Region** | 4.65% | 48.92% |
| **Midwest Region** | 2.62% | 45.45% |
| **South Region** | **1.81%** | **43.29%** |
| Washington, DC | 13.11% | 49.71% |
| Baltimore, MD | 6.63% | 47.98% |
| Atlanta, GA | 4.61% | 39.99% |
| New Orleans, LA | 4.60% | 43.54% |
| *PBRI Findings, 2014* | *n/a* | *41.80%* |
| Miami, FL | 4.25% | 54.32% |
| Lexington, KY | 3.71% | 38.70% |
| Virginia Beach, VA | 3.25% | 27.68% |
| Tampa, FL | 2.54% | 47.78% |
| Austin, TX | 2.52% | 53.69% |
| Louisville, KY | 2.44% | 46.96% |
| **United States** | **2.75%** | **45.96%** |

*Notes: Selected cities in the South Region represent the 10 highest commuting rates for cities over 250,000*

*Source: U.S. Census Bureau, 2014 American Community Survey, Table B08006*

**Table 46: Pedestrian Commuting in Louisiana, 2011-2013**

| Geography | Walking Mode Share | Percent of pedestrian commuters who are female |
|---|---|---|
| **New Orleans** | **5.03%** | **45.42%** |
| Baton Rouge | 3.67% | 53.22% |
| Lake Charles | 3.03% | 52.28% |
| Bossier | 2.67% | 23.91% |
| Kenner | 2.51% | 37.89% |
| Lafayette | 2.40% | 48.24% |
| New Iberia | 1.52% | 62.92% |
| Metairie | 1.38% | 41.89% |
| Alexandria | 1.25% | 38.79% |
| Shreveport | 1.16% | 35.70% |
| Monroe | 0.77% | 70.00% |
| **Louisiana** | **1.89%** | **44.03%** |
| | | |
| **South Region** | 1.85% | 42.75% |
| | | |
| **United States** | **2.81%** | **46.03%** |

*Notes: Louisiana cities selected were the only geographies for which data is available*

*Source: U.S. Census Bureau, 2011-2013 American Community Survey 3-year estimates, Table B08006*

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# 6.0 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.

## 6.1 Bicycle Activity in New Orleans

Data from PBRI's six years of manual counts, long-term electronic counters, the American Community Survey, and recent national recognition[23] clearly indicate that bicycling is on the rise in New Orleans. From 2010 to 2015, the number of bicyclists observed at the study's original twelve count locations has increased by 88%. This rapid growth over the last six years strongly suggests that bicycling—whether as a means of transportation to work or other trips, or as a recreational or social activity—is surging in popularity in the region.

Over the last decade, New Orleans has made moderate but impactful investments in bicycle infrastructure that have facilitated this growth. Meanwhile, opportunities for increased cycling elsewhere in the region are developing, including the implementation of Jefferson Parish's new Bicycle Master Plan, as well as regional efforts to expand complete streets policy approaches throughout the region.

Among the core group of 12 count sites, the most dramatic increases in bicycle ridership have been observed among sites that have dedicated bicycle infrastructure, such as Esplanade Avenue, Gentilly Boulevard, and St. Claude Avenue. Among newer count locations, preliminary data suggest a similar upward trend, with the most striking increases occurring on corridors where new facilities have been installed. Ridership remains strong at locations that connect uptown neighborhoods to the CBD. New count locations added in 2014 and 3015 provide the basis for continued analysis of future facility impacts and demonstrating substantial demand for bicycle access in several locations (e.g. St. Charles Avenue, Baronne Street, Elysian Fields Avenue, and Canal Street) which link into the existing bikeway network yet currently lack dedicated facilities.

Encouraging trends in the composition of the region's bicyclists and their behavior have been identified over the course of this count program. More women are bicycling every year, potentially indicating that the perceived safety of the activity is increasing. The share of people of color who are observed bicycling has also increased.

23 *New Orleans was named a League of American Bicyclists' Bronze-level "Bicycle Friendly Community" in 2011 and upgraded to "Silver" status in late 2014*

The rate of helmet use, while still below national leaders, has more than doubled, and the rate of legal, right-way on-street travel has risen. This indicates that regional educational campaigns emphasizing correct travel orientation and safe cyclist behavior have positively affected behavioral change, and that a culture of safer cycling is emerging.

Importantly, the development of the city's bicycle infrastructure network appears to be having an impact on both increasing user volumes and these positive shifts in user characteristics. The data collected consistently suggests that count locations where bikeways have been installed have higher estimated daily bicycle traffic, a larger share of female riders, higher helmet use rates, and higher rates of legal, on-street riding. Over time, changes in these statistics have happened more quickly and profoundly at locations with bikeways compared to those without.

In addition, these changes as observed by PBRI corresponded with New Orleans' emergence as a national bicycling leader, as corroborated by American Community Survey data: shifts in the distribution of bicycle commuters at the census tract level suggest that access to bicycling as a viable and convenient mode of transportation is spreading as the bikeway network expands, and at the citywide scale, bicycling mode share is among the highest in the nation, marking New Orleans as clear leader among other cities in Louisiana and across the South.

## 6.2 Pedestrian Activity in New Orleans

Improvements to the pedestrian infrastructure network have accompanied most state and local road projects over the last decade, in conjunction with the expansion of New Orleans' bicycle network and in response to ADA requirements. Though the relationships between these improvements and observed totals of pedestrians during the six-year course of this program remain somewhat indistinct, it is evident that New Orleans is a city where pedestrian activity is increasing in many locations. Already a regional leader, with continued attention to creating a safe and accessible pedestrian network, New Orleans has the potential to become a vibrant walking city.

Overall among continuing count locations, the number of pedestrians observed has increased by 67% from 2010 to 2015. Several of the most robust increases in observed users among core sites have occurred on corridors which are designed to accommodate all users, e.g., St. Claude Avenue, Harrison Avenue, and Esplanade Avenue. The latter two of these have received significant improvements since count observations began, while increased activity on St. Claude Avenue follows rapid reinvestment in residential and commercial property in the vicinity over the last several years. Gains in pedestrian activity have also been observed at the majority of count locations observed beginning in 2013 or 2014. Pedestrian activity, unsurprisingly, tends to be higher in the downtown core of the city as well as on both established and revitalizing commercial corridors.

At many count locations, there are significantly more pedestrians utilizing the corridor than bicyclists, reminding us that pedestrian improvements are just as important to the overall safety and completeness of our streets as bicycle infrastructure. In and near the French Quarter, active users—and especially pedestrians—make up a very large proportion of all right-of-way users, yet are often allocated a minimal amount of space and poorly accommodated by intersection design and signalization. Required ADA retrofits that have accompanied road reconstruction and resurfacing projects have provided benefits to pedestrians, but additional improvements to signalized and un-signalized intersections as well as sidewalk repairs are recommended in order to maximize the impact of these investments for all users.

New Orleans is not presently a national leader for pedestrian commuting according to the most recent national data, though it continues to rank highly among southern cities and well above national, regional, and state averages for the last six years in the rate of commuters who walk to work. In order to encourage and facilitate more walking—whether to work, to other destinations, or simply to promote more physical activity among residents, the region must proactively plan for safer, more active communities by continuing to address pedestrian safety concerns, cultivating comfortable, interesting streetscapes, and pursuing policies that facilitate vibrant, mixed-use neighborhood corridors where people can live, work, and play.

## 6.3 Electronic Pedestrian and Bicycle Monitoring

The ongoing monitoring of the Jefferson Davis Parkway Trail continues to provide this study with strong, reliable data that indicate a steady overall increase in active transportation over time. Over the last four years, usership (both pedestrians and bicyclists) has increased by 38%. Over the five years of the device's operation, clear and stable temporal trends have been identified. 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 and tends to be higher on weekends, but very seldom declines below about 300 users per day. Hourly patterns of use reveal relatively consistent use throughout daylight hours, with a peak in activity in the late afternoon and early evening.

Predictable relationships exist between weather and usership, with the highest usership occurring on mild days with little or no rainfall. Importantly though, except in very extreme circumstances, inclement weather does not completely inhibit use. Regular trail users appear to exist year-round, regardless of temperature or precipitation, which, along with temporal use patterns indicates a mix of recreational and commuter users for whom this trail serves as a critical connection. New equipment differentiating between pedestrians and bicyclists indicates that this facility is used by roughly equal proportions of each.  With the completion of the new Lafitte Greenway, the Jefferson Davis Parkway Trail's utility as a cross-town route for active users will increase further, and continued gains in usership are predicted.

The expansion of PBRI's electronic count program in 2014 and 2015, with the addition of a permanent multi-modal sensor on the Tammany Trace and the deployment of two movable pedestrian or multi-use trail infrared sensors and one on-street bicycle sensor further enhances our understanding of walking and bicycling patterns at various locations and provides greater insight into overall trends in active transportation use regionwide. On the Tammany Trace, an average of 214 users per day traversed the Mandeville segment of the trail in 2014-2015, approximately 75% of whom were bicyclists. Temporal patterns indicate a largely recreational user base, with substantially higher user counts on weekends.

Preliminary short term counts conducted on three shared-use facilities provide baseline data for future research, and provide insight into the scale of pedestrian activity near a popular tourist destination, the popularity of a new segment of Mississippi River levee trail for commuters as well as visitors, and a seasonal estimate of users—along with their approximate composition—along an established trail that connects bikeways in several more suburban neighborhoods to the city's core.

Finally, automated count equipment supported an evaluation of changes in pedestrian and bicycle activity on a downtown corridor that received a dedicated bicycle lane, and found an approximate

35% increase in bicycle traffic in the months immediately following facility installation, with higher gains during evening peak commute hours. This preliminary data supported local efforts to examine the efficacy of the new facility, though continued monitoring is needed—along with enhanced education and enforcement to ensure safety for all users—to more comprehensively evaluate long-term impacts to traffic level of service, ADT, and safety for all modes.

## 6.4 Evaluating Active Transportation in New Orleans: Policy Implications and Next Steps

Over the last six years, PBRI's count program has expanded in capacity to provide local and regional stakeholders with valuable data for dozens of locations throughout the city, and into neighboring parishes. Meanwhile, the New Orleans region has made significant progress toward becoming a more walkable, bikeable city for all its residents and visitors. Between end of 2010 and August 2015, the city of New Orleans expanded its bicycle infrastructure network by 172%, and as the data in this report indicates, this expansion has been rewarded with increased bicycling and safer cyclist behavior, particularly on corridors where such improvements have occurred.

In recent years, Jefferson Parish adopted a bicycle master plan to guide the development of their own bikeway network, which outlines cyclist priorities and promotes a range of context-sensitive infrastructure solutions well-suited to more suburban areas of the metro area. Meanwhile, the city of New Orleans and the Regional Planning Commission have adopted complete streets policies that have begun to institutionalize consideration of high-quality accommodation for non-motorized road users whenever roadway projects are planned and developed. Efforts are underway to expand such policies to other parishes in the region.

As this report (and those which preceded it) demonstrate, change in who walks and bikes, where they travel, and what behavioral choices they make does not occur evenly, predictably, or instantly. In some cases, when new facilities are constructed, user counts have increased substantially right away, clearly reflecting latent demand for a safer or more convenient route in that area. In other cases, it has taken several years for impacts to be fully realized as residents and commuters adjust their transportation habits in response to new options. In particular, measurable impacts on usership also appear to depend on the development of a contiguous network of linked facilities, creating safer, more comfortable access to various neighborhoods and destinations.

During the six years of the PBRI count program, New Orleans' bicycling network has developed from a series of largely disjointed bike-friendly corridors to a reasonably well-connected series of neighborhood links and cross-town connections, including an expanding off-street trail network. More such connections need to be made; the network is still incomplete and some neighborhoods are better served than others.

National data indicate that New Orleans leads the state, as well as the South region, in active transportation, and is an emerging leader nationally, ranked highly in walking and bicycling mode share. As more and more connections between existing facilities for cyclists are developed, and the region focuses (through the implementation of the Strategic Highway Safety Plan, New Orleans Pedestrian Safety Action Plan) on improving pedestrian safety, New Orleans has the opportunity to maintain and improve its reputation as a walkable, bikeable city.

However, other cities across the south and the nation are significantly outpacing New Orleans in the growth and quality (in terms of dedicated, protected facilities) of their active transportation networks. Enhancing the bikeway network to include more facilities that are separated and protected from automobile traffic is essential to expanding bicycling to new people and improving the safety and comfort of those who are already on the streets.

In addition to infrastructure and policy change, efforts to educate citizens and enforce laws pertaining to pedestrians and bicyclists, and to evaluate regional successes and identify opportunities for future growth contribute to the current state of walking and bicycling in the New Orleans area and should be supported and expanded. This includes regional outreach and informational campaigns, data-focused programs like the Pedestrian Bicycle Resource Initiative, advocacy efforts, and implementation of new advisory bodies (e.g., the City Council's recently formed Pedestrian and Bicycle Safety Advisory Committee) to identify issues and priorities, guide new policy and strategy development, and oversee the implementation of existing complete streets policy.

Decision-making processes regarding the prioritization and placement of future bicycle facilities, as well as improvements to the pedestrian environment, should take quantitative data sources into account, where available. Timely and ongoing collection of multi-modal data to evaluate the effects of individual projects, assess potential demand for various transportation modes, and identify overall trends in usership and behavior is essential to promoting a data-driven planning culture and fostering economically competitive, vibrant communities. Such data collection efforts should be expanded throughout the region in order to more accurately identify network gaps and identify user needs. Critically, the count data collected in this study reflect a limited subset of all current and potential active transportation users in the region, predominantly in Orleans Parish. These findings should not be interpreted to suggest a lack of interest in or opportunity for improving conditions for walking and bicycling elsewhere in the region, where less robust data is currently available.

Importantly, for the last ten years, infrastructure change has been largely undergirded by federally-funded programs aimed at supporting the city's recovery from Hurricane Katrina. Decision-making regarding active transportation investment has been, to a significant degree, influenced by the opportunities presented by (and investment parameters set by) the availability of these funds. As the city and region enter a new, post-recovery phase of planning for the future, it is essential that the positive changes in the built environment continue through institutionalization of processes that support multi-modal planning and engineering. Development of comprehensive, multimodal transportation plans at the local level that emphasize a complete streets policy approach, prioritize projects that will help to equitably expand access for active users and create more cohesive route networks, and integrate multi-modal data in decision-making processes is an essential next step to advancing and prioritizing active transportation goals.

Finally, the identification of dedicated funding sources to support the ongoing improvement of walking, bicycling, and transit, including both infrastructure and non-infrastructure-based strategies, is critical. Advance planning in support of a clearly prioritized multimodal infrastructure plan for active transportation will help ensure that as funding becomes available, jurisdictions can effectively prioritize investments and determine which projects meet criteria established for various funding sources. Only by a strong and fiscally-supported commitment to prioritizing people who walk and bicycle will we advance toward becoming a safer, healthier, more sustainable city, region, and state.

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# APPENDICES

## Appendix A: Bicycle Facility Network Maps, 2005-2015

# 2006 Orleans and Jefferson Parish Bicycle Facilities


0 0.5 1 2 Miles

PEDESTRIAN BICYCLE RESOURCE INITIATIVE

*Map prepared November 2015*
*Pedestrian Bicycle Resource Initiative,*
*New Orleans 2015 Pedestrian and*
*Bicycle Count Report www.pbriLA.org*

Data Sources: Basemap Created using 2012 TIGER/Line shapefiles for Orleans, Jefferson, and St. Bernard parish roads and water features. Orleans Parish On-Street Bike Routes by RPC, 2015. Orleans Parish Shared Use Trail Network by RPC, 2015. Jefferson Parish On-Street Bike Routes by RPC, 2015. Jefferson Parish Shared Use Trail Network by RPC 2015. Any use of the data must be accompanied with this citation and accompanying seals and logos.

Disclaimer: The data herein, including but not limited to geographic data, tabular data, analytical data, electronic data structures or files, are provided "as is" without warranty of any kind, either expressed or implied, or statutory, including, but not limited to, the implied warranties or merchantability and fitness for a particular purpose. The entire risk as to the quality and performance of the data is assumed by the user. No guarantee of accuracy is granted, nor is any responsibility for reliance thereon assumed. In no event shall the Regional Planning Commission for Jefferson, Orleans, Plaquemines, St. Bernard, St.Tammany and Tangipahoa Parishes (RPC) be liable for direct, indirect, incidental, consequential or special damages of any kind, including, but not limited to, loss of anticipated profits or benefits arising out of use of or reliance on the data. The RPC does not accept liability for any damages or misrepresentation caused by inaccuracies in the data or as a result of changes to the data caused by system transfers or other transformations or conversions, nor is there responsibility assumed to maintain the data in any manner or form. These data have been developed from the best available sources. Although efforts have been made to ensure that the data are accurate and reliable, errors and variable conditions originating from physical sources used to develop the data may be reflected in the data supplied. Users must be aware of these conditions and bear responsibility for the appropriate use of the information with respect to possible errors, scale,resolution, rectification, positional accuracy, development methodology, time period, environmental and climatic conditions and other circumstances specific to these data. The user is responsible for understanding the accuracy limitations of the data provided herein. The burden for determining fitness for use lies entirely with the user. The user should refer to the accompanying metadata notes for a description of the data and data development procedures if they exist. Although these data have been processed successfully on computers at the RPC, no guarantee, expressed or implied, is made by RPC regarding the use of these data on any other system, nor does the act of distribution constitute or imply any such warranty. Distribution of these data is intended for information purposes and should not be considered authoritative for navigational, engineering, legal and other site-specific uses.


2007 Orleans and Jefferson Parish Bicycle Facilities
Lake Pontchartrain
Mississippi River
JEFFERSON PARISH
ORLEANS PARISH
See Inset
Inset: CBD and French Quarter Bicycle Facilities
Completed Facilities - RPC
Bike Lane
Bike Lane/Shared Lane
Shared Lane
Bike Boulevard
Bus/Bike Lane
Shared-Use Trail
PBRI
PEDESTRIAN BICYCLE RESOURCE INITIATIVE
0 0.5 1 2 Miles
N
REGIONAL PLANNING COMMISSION
Map prepared November 2015
Pedestrian Bicycle Resource Initiative,
New Orleans 2015 Pedestrian and
Bicycle Count Report www.pbriLA.org
Data Sources: Basemap Created using 2012 TIGER/Line shapefiles for Orleans, Jefferson, and St. Bernard parish roads and water features. Orleans Parish On-Street Bike Routes by RPC, 2015. Orleans Parish Shared Use Trail Network by RPC, 2015. Jefferson Parish On-Street Bike Routes by RPC, 2015. Jefferson Parish Shared Use Trail Network by RPC 2015. Any use of the data must be accompanied with this citation and accompanying seals and logos.
Disclaimer: The data herein, including but not limited to geographic data, tabular data, analytical data, electronic data structures or files, are provided "as is" without warranty of any kind, either expressed or implied, or statutory, including, but not limited to, the implied warranties or merchantability and fitness for a particular purpose. The entire risk as to the quality and performance of the data is assumed by the user. No guarantee of accuracy is granted, nor is any responsibility for reliance thereon assumed. In no event shall the Regional Planning Commission for Jefferson, Orleans, Plaquemines, St. Bernard, St.Tammany and Tangipahoa Parishes (RPC) be liable for direct, indirect, incidental, consequential or special damages of any kind, including, but not limited to, loss of anticipated profits or benefits arising out of use of or reliance on the data. The RPC does not accept liability for any damages or misrepresentation caused by inaccuracies in the data or as a result of changes to the data caused by system transfers or other transformations or conversions, nor is there responsibility assumed to maintain the data in any manner or form. These data have been developed from the best available sources. Although efforts have been made to ensure that the data are accurate and reliable, errors and variable conditions originating from physical sources used to develop the data may be reflected in the data supplied. Users must be aware of these conditions and bear responsibility for the appropriate use of the information with respect to possible errors, scale,resolution, rectification, positional accuracy, development methodology, time period, environmental and climatic conditions and other circumstances specific to these data. The user is responsible for understanding the accuracy limitations of the data provided herein. The burden for determining fitness for use lies entirely with the user. The user should refer to the accompanying metadata notes for a description of the data and data development procedures if they exist. Although these data have been processed successfully on computers at the RPC, no guarantee, expressed or implied, is made by RPC regarding the use of these data on any other system, nor does the act of distribution constitute or imply any such warranty. Distribution of these data is intended for information purposes and should not be considered authoritative for navigational, engineering, legal and other site-specific uses.


2008 Orleans and Jefferson Parish Bicycle Facilities
Lake Pontchartrain
Mississippi River
JEFFERSON PARISH
ORLEANS PARISH
See Inset
Inset: CBD and French Quarter Bicycle Facilities
Completed Facilities - RPC
Bike Lane
Bike Lane/Shared Lane
Shared Lane
Bike Boulevard
Bus/Bike Lane
Shared-Use Trail
West Outfall Canal Trail
Jefferson Lakefront Trail
W Esplanade Ave
Veterans Blvd
Airline Dr
Papworth Ave
17th Street Canal Trail
New Basin Canal Trail
Robert E. Lee Blvd
Wisner Trail
Jefferson Davis Pkwy
St Claude Ave
Chartres St
Eastbank Mississippi River Trail
Westbank Mississippi River Trail
West Bank Expy Trail
Westbank MRT
Tchoupitoulas St
Morrison Rd
Lake Forest Blvd
Crowder Blvd
General de Gaulle Dr
Belle Chasse Hwy
Rampart St
Canal St
Loyola Ave
Camp St
0 0.5 1 2 Miles
N
RPC REGIONAL PLANNING COMMISSION
PBRI PEDESTRIAN BICYCLE RESOURCE INITIATIVE
Map prepared November 2015
Pedestrian Bicycle Resource Initiative,
New Orleans 2015 Pedestrian and
Bicycle Count Report www.pbriLA.org
Data Sources: Basemap Created using 2012 TIGER/Line shapefiles for Orleans, Jefferson, and St. Bernard parish roads and water features. Orleans Parish On-Street Bike Routes by RPC, 2015. Orleans Parish Shared Use Trail Network by RPC, 2015. Jefferson Parish On-Street Bike Routes by RPC, 2015. Jefferson Parish Shared Use Trail Network by RPC 2015. Any use of the data must be accompanied with this citation and accompanying seals and logos.
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2009 Orleans and Jefferson Parish Bicycle Facilities
Lake Pontchartrain
Mississippi River
Completed Facilities - RPC
Bike Lane
Bike Lane/Shared Lane
Shared Lane
Bike Boulevard
Bus/Bike Lane
Shared-Use Trail
Inset: CBD and French Quarter Bicycle Facilities
See Inset
JEFFERSON PARISH
ORLEANS PARISH
Jefferson Lakefront Trail
West Outfall Canal Trail
Eastbank Mississippi River Trail
Westbank Mississippi River Trail
West Bank Expy Trail
Robert E. Lee Blvd
St Claude Ave
Chartres St
Canal St
10
610
510
61
90
BUS 90
PBRI
PEDESTRIAN BICYCLE RESOURCE INITIATIVE
REGIONAL PLANNING COMMISSION
0 0.5 1 2 Miles
N

# 2010 Orleans and Jefferson Parish Bicycle Facilities


PBRI
PEDESTRIAN BICYCLE RESOURCE INITIATIVE

*Map Prepared November 2015*
*Pedestrian Bicycle Resource Initiative,*
*New Orleans 2015 Pedestrian and*
*Bicycle Count Report www.pbriLA.org*

0 0.5 1 2 Miles

N

Data Sources: Basemap Created using 2012 TIGER/Line shapefiles for Orleans, Jefferson, and St. Bernard parish roads and water features. Orleans Parish On-Street Bike Routes by RPC, 2015. Orleans Parish Shared Use Trail Network by RPC, 2015. Jefferson Parish On-Street Bike Routes by RPC, 2015. Jefferson Parish Shared Use Trail Network by RPC 2015. Any use of the data must be accompanied with this citation and accompanying seals and logos.


2011 Orleans and Jefferson Parish Bicycle Facilities
Lake Pontchartrain
Mississippi River
JEFFERSON PARISH
ORLEANS PARISH
See Inset
Inset: CBD and French Quarter Bicycle Facilities
Completed Facilities - RPC
Bike Lane
Bike Lane/Shared Lane
Shared Lane
Bike Boulevard
Bus/Bike Lane
Shared-Use Trail
0 0.5 1 2 Miles
PBRI
PEDESTRIAN BICYCLE RESOURCE INITIATIVE
Map prepared November 2015
Pedestrian Bicycle Resource Initiative,
New Orleans 2015 Pedestrian and
Bicycle Count Report www.pbriLA.org
Data Sources: Basemap Created using 2012 TIGER/Line shapefiles for Orleans, Jefferson, and St. Bernard parish roads and water features. Orleans Parish On-Street Bike Routes by RPC, 2015. Orleans Parish Shared Use Trail Network by RPC, 2015. Jefferson Parish On-Street Bike Routes by RPC, 2015. Jefferson Parish Shared Use Trail Network by RPC 2015. Any use of the data must be accompanied with this citation and accompanying seals and logos.
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2012 Orleans and Jefferson Parish Bicycle Facilities
Lake Pontchartrain
Mississippi River
Completed Facilities - RPC
Bike Lane
Bike Lane/Shared Lane
Shared Lane
Bike Boulevard
Bus/Bike Lane
Shared-Use Trail
Inset: CBD and French Quarter Bicycle Facilities
See Inset
JEFFERSON PARISH
ORLEANS PARISH
Lakeshore Dr
Robert E. Lee Blvd
Jefferson Lakefront Trail
W Esplanade Ave
Veterans Blvd
Airline Dr
Filmore Ave
Gentilly Blvd
St Claude Ave
Chartres St
N Broad St
Jefferson Davis Pkwy
Tchoupitoulas St
Magazine St
Eastbank Mississippi River Trail
Westbank Mississippi River Trail
West Bank Expy Trail
Holiday Dr
Macarthur Blvd
Crowder Blvd
BURGUNDY ST
DAUPHINE ST
ROYAL ST
DECATUR ST
LA SALLE ST
LOYOLA AVE
GRAVIER ST
CAMP ST
0 0.5 1 2 Miles
RPC
REGIONAL PLANNING COMMISSION
PBRI
PEDESTRIAN BICYCLE RESOURCE INITIATIVE
Map prepared November 2015
Pedestrian Bicycle Resource Initiative,
New Orleans 2015 Pedestrian and
Bicycle Count Report www.pbriLA.org
Data Sources: Basemap Created using 2012 TIGER/Line shapefiles for Orleans, Jefferson, and St. Bernard parish roads and water features. Orleans Parish On-Street Bike Routes by RPC, 2015. Orleans Parish Shared Use Trail Network by RPC, 2015. Jefferson Parish On-Street Bike Routes by RPC, 2015. Jefferson Parish Shared Use Trail Network by RPC 2015. Any use of the data must be accompanied with this citation and accompanying seals and logos.
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2013 Orleans and Jefferson Parish Bicycle Facilities
Lake Pontchartrain
Mississippi River
Completed Facilities - RPC
Bike Lane
Bike Lane/Shared Lane
Shared Lane
Bike Boulevard
Bus/Bike Lane
Shared-Use Trail
Inset: CBD and French Quarter Bicycle Facilities
See Inset
JEFFERSON PARISH
ORLEANS PARISH
Lakeshore Dr
Robert E. Lee Blvd
Filmore Ave
Jefferson Lakefront Trail
W Esplanade Ave
Veterans Blvd
Airline Dr
Metairie Rd
Esplanade Ave
N Broad St
St Claude Ave
Chartres St
Carrollton Ave
St Charles Ave
Jefferson Ave
Magazine St
Tchoupitoulas St
Eastbank Mississippi River Trail
Westbank Mississippi River Trail
West Bank Expy Trail
Macarthur Blvd
Lake Forest Blvd
Crowder Blvd
Morrison Rd
Elysian Fields Ave
Franklin Ave
Press Dr
Gentilly Blvd
Paris Ave
Wisner Trail
Papworth Ave
17th Street Canal Trail
New Basin Canal Trail
Marconi Dr
West Outfall Canal Trail
BURGUNDY ST
DAUPHINE ST
ROYAL ST
DECATUR ST
LA SALLE ST
LOYOLA AVE
GRAVIER ST
GIROD ST
CAMP ST
0 0.5 1 2 Miles
N
RPC REGIONAL PLANNING COMMISSION
PBRI PEDESTRIAN BICYCLE RESOURCE INITIATIVE
Map prepared November 2015
Pedestrian Bicycle Resource Initiative,
New Orleans 2015 Pedestrian and
Bicycle Count Report www.pbriLA.org
Data Sources: Basemap Created using 2012 TIGER/Line shapefiles for Orleans, Jefferson, and St. Bernard parish roads and water features. Orleans Parish On-Street Bike Routes by RPC, 2015. Orleans Parish Shared Use Trail Network by RPC, 2015. Jefferson Parish On-Street Bike Routes by RPC, 2015. Jefferson Parish Shared Use Trail Network by RPC 2015. Any use of the data must be accompanied with this citation and accompanying seals and logos.
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2014 Orleans and Jefferson Parish Bicycle Facilities
Lake Pontchartrain
Mississippi River
Inset: CBD and French Quarter Bicycle Facilities
See Inset
JEFFERSON PARISH
ORLEANS PARISH
Completed Facilities - RPC
Bike Lane
Bike Lane/Shared Lane
Shared Lane
Bike Boulevard
Bus/Bike Lane
Shared-Use Trail
0 0.5 1 2 Miles
PBRI
PEDESTRIAN BICYCLE RESOURCE INITIATIVE
Map prepared November 2015
Pedestrian Bicycle Resource Initiative,
New Orleans 2015 Pedestrian and
Bicycle Count Report www.pbriLA.org
Data Sources: Basemap Created using 2012 TIGER/Line shapefiles for Orleans, Jefferson, and St. Bernard parish roads and water features. Orleans Parish On-Street Bike Routes by RPC, 2015. Orleans Parish Shared Use Trail Network by RPC, 2015. Jefferson Parish On-Street Bike Routes by RPC, 2015. Jefferson Parish Shared Use Trail Network by RPC 2015. Any use of the data must be accompanied with this citation and accompanying seals and logos.
REGIONAL PLANNING COMMISSION


2015 Orleans and Jefferson Parish Bicycle Facilities
Completed Facilities - RPC
(through August 2015)
Bike Lane
Bike Lane/Shared Lane
Shared Lane
Bike Boulevard
Bus/Bike Lane
Shared-Use Trail
Inset: CBD and French Quarter Bicycle Facilities
See Inset
Lake Pontchartrain
Mississippi River
JEFFERSON PARISH
ORLEANS PARISH
Lakeshore Dr
Robert E. Lee Blvd
Filmore Ave
Jefferson Lakefront Trail
W Esplanade Ave
Veterans Blvd
Airline Dr
Metairie Rd
Esplanade Ave
St Claude Ave
Chartres St
Newton St
Freret St
St Charles Ave
Magazine St
Macarthur Blvd
Lake Forest Blvd
Crowder Blvd
Eastbank Mississippi River Trail
Westbank Mississippi River Trail
West Bank Expy Trail
BASIN ST
BURGUNDY ST
DAUPHINE ST
ROYAL ST
DECATUR ST
LA SALLE ST
LOYOLA AVE
GRAVIER ST
BARONNE ST
GIROD ST
CAMP ST
S PETERS ST
10
610
510
61
90
BUS 90
PBRI
PEDESTRIAN BICYCLE RESOURCE INITIATIVE
Map prepared November 2015
Pedestrian Bicycle Resource Initiative,
New Orleans 2015 Pedestrian and
Bicycle Count Report www.pbriLA.org
0 0.5 1 2 Miles
N
RPC REGIONAL PLANNING COMMISSION
Data Sources: Basemap Created using 2012 TIGER/Line shapefiles for Orleans, Jefferson, and St. Bernard parish roads and water features. Orleans Parish On-Street Bike Routes by RPC, 2015. Orleans Parish Shared Use Trail Network by RPC, 2015. Jefferson Parish On-Street Bike Routes by RPC, 2015. Jefferson Parish Shared Use Trail Network by RPC 2015. Any use of the data must be accompanied with this citation and accompanying seals and logos.
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## Appendix B: 2015 Manual Count Site Characteristics

**2015 Manual Count Site Characteristics**

| Site # | Site Name | Neighborhood | Facility Type | On-Street Parking | Bicycle Infrastructure Improvements | Year Installed | CBD Gateway |
|---|---|---|---|---|---|---|---|
| 1 | Gentilly Boulevard | Gentilly | 6-Lane, Divided | None | Bike Lanes | 2010 | |
| 2 | Esplanade Avenue | Mid-City | 2-Lane, Divided | Both Sides | Bike Lanes | 2013 | |
| 3 | Harrison Avenue | Lakeview | 4-Lane, Divided | Both Sides | Shared lane markings; Connecting segment with bike lanes | 2014; 2009 | |
| 4 | St. Claude Avenue | Bywater | 4-Lane, Divided | Both Sides | Bike Lanes | 2008 | |
| 5 | Royal Street | Marigny | 1-lane, One-Way | Both Sides | | | |
| 6 | Camp Street (Gateway) | Lower Garden District | 2-Lane, One Way | One Side | Connecting segment with Shared Lane Markings | 2010 | X |
| 7 | St. Charles Avenue (Gateway) | Central City | 6-Lane, Divided | Both Sides | | | X |
| 8 | Decatur Street | French Quarter | 1-lane, One-Way | One Side | Connecting segment with Bike Lane/Shared Lane Marking | 2013 | |
| 9 | Magazine Street (Uptown) | Uptown | 2-Lane | None | | | |
| 10 | Magazine Street (Gateway) | Lower Garden District | 2-Lane, One Way | Both Sides | Shared Lane Markings | 2010 | X |
| 11 | Simon Bolivar Avenue (Gateway) | Central City | 4-Lane, Divided | Both Sides* | Connecting segment with Bike Lane/Shared Lane markings | 2010 | X |
| 12 | Carondelet Street (Gateway) | Central City | 2-Lane, One Way | Both Sides** | | | X |
| 15 | St. Bernard Avenue | Seventh Ward | 2-Lane, Divided | Both Sides | Bike Lanes | 2013 | |
| 16 | Basin Street | Treme/Lafitte | 6-Lane, Divided | Both Sides | Bike Lane/Shared Lane Markings/Shared bike and bus lane | 2013 | |
| 17 | Nashville Avenue | Fountainebleau | 2-Lane, Divided | Both Sides | Bike Lanes | 2013 | |
| 18 | St. Charles Avenue (Uptown) | Uptown | 2-Lane, Divided | Both Sides | Bike Lanes | 2012 | |
| 19 | S. Carrollton Avenue | East Carrollton/Audubon | 2-Lane, Divided | Both Sides | Bike Lanes | 2010 | |
| 21 | Pace Boulevard | Whitney | 2-Lane, Divided | Both Sides | Bike Lanes | 2014 | |
| 22 | Loyola Avenue | CBD | 6-Lane, Divided | One Side | Bike Lanes | 2012 | X |
| 23 | S. Broad Street | Tulane/Gravier | 6-Lane, Divided | Both Sides | | | |
| 24 | Tulane Avenue | Tulane/Gravier | 6-Lane, Divided | Both Sides | | | |
| 26 | S. Broad Street Bridge | Tulane/Gravier | 4-Lane, Divided | None | | | |
| 29 | Metairie Road | Lakewood | 2-Lane | None | Shared Lane Markings | 2014 | |

| Site # | Site Name | Neighborhood | Facility Type | On-Street Parking | Bicycle Infrastructure Improvements | Year Installed | CBD Gateway |
|---|---|---|---|---|---|---|---|
| 30 | Jeff Davis Parkway Bridge | Mid-City | 4-Lane, Divided Bridge | None | Separated Shared-Use Path | 1981 | |
| 31 | Decatur St (Jackson Square) | French Quarter | 2-Lane | None | Shared Lane/Bike Lane | 2013 | |
| 32 | Freret Street | Freret | 2-Lane | Both Sides | Shared Lane Markings | 2014 | |
| 33 | Martin Luther King Boulevard | BW Cooper | 4-Lane, Divided | Both Sides | Bike Lanes | 2013 | |
| 34 | Royal Street (French Quarter) | French Quarter | 1-lane, One-Way | One Side | Shared Lane Markings | 2012 | |
| 35 | Mirabeau Avenue | Filmore | 4-Lane, Divided | Both Sides | Bike Lanes | 2011 | |
| 36 | S. Peters Street | CBD | 2-Lane, One Way | Both Sides | Shared lane Markings | 2014 | |
| 37 | Baronne Street (Gateway) | Central City | 2-Lane, One Way | Both Sides | | 2014 | X |
| 39 | Golf Drive | City Park | 2-lane | None | Shared Lane Markings | 2008 | |
| 40 | Annunciation Street | Lower Garden District | 2-lane | Both Sides | | | X |
| 41 | Elysian Fields Avenue | Marigny | 6-Lane, Divided | Both Sides | | | |
| 42 | Canal Street (CBD) | CBD/French Quarter | 6-Lane, Divided | Both Sides | | | |
| 43 | St. Charles Avenue | Lower Garden District | 4-Lane, Divided | Both Sides | | | |
| 44 | LB Landry Avenue | Whitney | 4-Lane, Divided | Both Sides | | | |
| 45 | N. Galvez Street | Treme/Lafitte | 1-lane, One-Way | One Side | Bike Lane | 2014 | |
| 46 | N. Miro Street | Treme/Lafitte | 2-Lane, One Way | One Side | Shared Lane | 2013 | |
| 47 | Lake Forest Boulevard | West Lake Forest | 2-Lane, Divided | None | Bike Lanes | 2013 | |
| 48 | Holiday Drive | Behrman | 4-Lane, Divided | Both Sides | Bike Lanes | 2012 | |
| 49 | Transcontinental Drive | Jefferson Parish | 2-Lane, Divided | Both Sides | | | |
| 50 | Baronne Street (CBD) | CBD | 1-lane, One-Way | Both Sides | Buffered Bike Lane | 2014 | |
| 51 | St. Claude Avenue | Marigny | 4-Lane, Divided | Both Sides | Bike Lanes | 2008 | |
| 52 | Marconi Drive | City Park | 4-Lane, Divided | None | Shared Lane Markings | 2010 | |
| 53 | Banks Street | Mid-City | 4-Lane, Divided | Both Sides | | | |
| 54 | Canal Street (Midcity) | Mid-City | 6-Lane, Divided | Both Sides | | | |
| 55 | General Meyer Avenue | Behrman | 4-Lane, Divided | Both Sides | | | |

*Notes: CBD is the Central Business 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 C: Manual Count Observation Protocol

**Pedestrian and Bicycle Observation Protocol**

### Rationale

In 2005-2015, the city of New Orleans Department of Public Works and the State of Louisiana Department of Transportation installed nearly 100 miles of bicycle facilities in neighborhoods across New Orleans. We would like to examine the effect of bicycle facilities 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.

*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.*

### 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).

### 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 D: Manual Count Observation Recording Template

**Pedestrian Observation Tally Form**

Observer Name: ______________________________ Intersection: ______________________________

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

| | Street | | | | Neutral Ground | | | | Sidewalk | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Hour** | 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:**

**Bicycle Observation Tally Form**

Observer Name: ______________________ Intersection: ______________________

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

| | Street | | | | | | | | Neutral Ground | | | | Sidewalk | | | | Helmet? |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Hour** | 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:**

## Appendix E: Manual Count Weather Data

| 2015 Manual Count Weather Data | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | Temperature (°F) | | | Precipitation (inches) | Observed Weather Events | Weather Conditions, 2014 Count Dates | |
| # | Site | Count Date | High | Average | Low | | | Average Temperature | Rain? |
| 1 | Gentilly Blvd | 3/31/2015 | 82 | 72 | 61 | 0 | Rain | 69 | |
| | | 4/1/2015 | 81 | 73 | 64 | 0 | | 75 | |
| 2 | Esplanade Ave | 4/8/2015 | 85 | 77 | 69 | 0 | | 58 | Y |
| | | 4/9/2015 | 83 | 78 | 72 | 0 | | 78 | |
| 3 | Harrison Ave | 4/1/2015 | 81 | 73 | 64 | 0 | | 59 | |
| | | 4/2/2015 | 84 | 77 | 69 | 0 | | 62 | |
| 4 | St. Claude Ave | 4/21/2015 | 78 | 71 | 63 | 0 | | 70 | |
| | | 4/22/2015 | 84 | 72 | 59 | 0 | | 73 | |
| 5 | Royal St | 4/8/2015 | 85 | 77 | 69 | 0 | | 62 | Y |
| | | 4/9/2015 | 83 | 78 | 72 | 0 | | 59 | |
| 6 | Camp St (Gateway) | 4/28/2015 | 76 | 69 | 62 | T | Rain | 78 | Y |
| | | 4/29/2015 | 74 | 67 | 59 | 0 | | 66 | |
| 7 | St. Charles Ave (Gateway) | 5/13/2015 | 87 | 80 | 72 | 0 | | 73 | Y |
| | | 5/14/2015 | 87 | 81 | 74 | T | | 65 | |
| 8 | Decatur St | 4/29/2015 | 74 | 67 | 59 | 0 | | 78 | Y |
| | | 4/30/2015 | 81 | 69 | 56 | 0 | | 69 | Y |
| 9 | Magazine St (Uptown) | 4/22/2015 | 84 | 72 | 59 | 0 | | 70 | |
| | | 4/23/2015 | 84 | 77 | 69 | 0 | Fog-Rain | 72 | |
| 10 | Magazine St (Gateway) | 5/5/2015 | 84 | 76 | 68 | 0 | | 80 | Y |
| | | 5/7/2015 | 86 | 79 | 71 | 0 | | 73 | Y |
| 11 | Simon Bolivar Ave (Gateway) | 5/12/2015 | 87 | 82 | 76 | 0 | Rain | 73 | |
| | | 5/13/2015 | 87 | 80 | 72 | 0 | | 79 | |
| 12 | Carondelet St (Gateway) | 4/21/2015 | 78 | 71 | 63 | 0 | | 72 | |
| | | 5/14/2015 | 87 | 81 | 74 | T | | 73 | |
| 15 | St. Bernard Avenue | 3/25/2015 | 77 | 68 | 58 | 0 | Fog | 59 | |
| | | 4/2/2015 | 84 | 77 | 69 | 0 | | 62 | Y |

| # | Site | Count Date | Temperature (°F) | | | Precipitation (inches) | Observed Weather Events | Weather Conditions, 2014 Count Dates | |
|---|---|---|---|---|---|---|---|---|---|
| | | | High | Average | Low | | | Average Temperature | Rain? |
| 16 | Basin St | 3/24/2015 | 73 | 68 | 63 | 0 | | 69 | |
| | | 3/25/2015 | 77 | 68 | 58 | 0 | Fog | 73 | |
| 17 | Nashville Ave | 3/24/2015 | 73 | 68 | 63 | 0 | | 59 | |
| | | 3/25/2015 | 77 | 68 | 58 | 0 | Fog | 53 | |
| 18 | St. Charles Ave (Uptown) | 4/1/2015 | 81 | 73 | 64 | 0 | | 66 | |
| | | 4/2/2015 | 84 | 77 | 69 | 0 | | 54 | Y |
| 19 | S. Carrollton Ave | 5/5/2015 | 84 | 76 | 68 | 0 | | 73 | |
| | | 5/6/2015 | 85 | 77 | 68 | 0 | Rain | 79 | |
| 21 | Pace Blvd | 4/28/2015 | 76 | 69 | 62 | T | Rain | 78 | |
| | | 4/29/2015 | 74 | 67 | 59 | 0 | | 79 | |
| 22 | Loyola Ave | 4/16/2015 | 78 | 74 | 69 | 0 | Rain | 54 | Y |
| | | 4/22/2015 | 84 | 72 | 59 | 0 | | 55 | |
| 23 | S. Broad St | 4/7/2015 | 84 | 78 | 71 | 0 | | 69 | Y |
| | | 4/8/2015 | 85 | 77 | 69 | 0 | | 66 | |
| 24 | Tulane Ave | 5/19/2015 | 87 | 80 | 73 | 0 | | 80 | |
| | | 5/20/2015 | 90 | 82 | 73 | 0 | | 65 | |
| 26 | S. Broad St Bridge | 6/2/2015 | 89 | 81 | 72 | 0 | | 78 | Y |
| | | 6/4/2015 | 90 | 83 | 75 | 0 | | 80 | |
| 29 | Metairie Road | 4/22/2015 | 84 | 72 | 59 | 0 | | 73 | |
| | | 5/12/2015 | 87 | 82 | 76 | 0 | Rain | 69 | Y |
| 30 | Jefferson Davis Pkwy Bridge | 5/5/2015 | 84 | 76 | 68 | 0 | | 62 | Y |
| | | 5/6/2015 | 85 | 77 | 68 | 0 | Rain | 70 | |
| 31 | Decatur St (Jackson Square) | 5/21/2015 | 91 | 80 | 69 | 1 | Rain | 78 | |
| | | 5/28/2015 | 89 | 79 | 69 | T | | 78 | |
| 32 | Freret St | 5/5/2015 | 84 | 76 | 68 | 0 | | 53 | |
| | | 5/6/2015 | 85 | 77 | 68 | 0 | Rain | 55 | |

| # | Site | Count Date | Temperature (°F) High | Temperature (°F) Average | Temperature (°F) Low | Precipitation (inches) | Observed Weather Events | Weather Conditions, 2014 Count Dates: Average Temperature | Weather Conditions, 2014 Count Dates: Rain? |
|---|---|---|---|---|---|---|---|---|---|
| 33 | MLK Blvd | 5/20/2015 | 90 | 82 | 73 | 0 | | 78 | |
| | | 5/21/2015 | 91 | 80 | 69 | 1 | Rain | 79 | |
| 34 | Royal St (French Quarter) | 5/6/2015 | 85 | 77 | 68 | 0 | Rain | 79 | |
| | | 5/7/2015 | 86 | 79 | 71 | 0 | | 78 | |
| 35 | Mirabeau Ave | 5/20/2015 | 90 | 82 | 73 | 0 | | 81 | |
| | | 5/21/2015 | 91 | 80 | 69 | 1 | Rain | 79 | Y |
| 36 | S. Peters St | 5/5/2015 | 84 | 76 | 68 | 0 | | 78 | |
| | | 5/6/2015 | 85 | 77 | 68 | 0 | Rain | 76 | Y |
| 37 | Baronne St (Gateway) | 5/6/2015 | 85 | 77 | 68 | 0 | Rain | 59 | |
| | | 5/7/2015 | 86 | 79 | 71 | 0 | | 72 | |
| 39 | Golf Drive | 5/6/2015 | 85 | 77 | 68 | 0 | Rain | 78 | Y |
| | | 5/7/2015 | 86 | 79 | 71 | 0 | | 81 | |
| 40 | Annunciation St | 6/3/2015 | 89 | 82 | 75 | 0 | | 80 | |
| | | 6/4/2015 | 90 | 83 | 75 | 0 | | 81 | |
| 41 | Elysian Fields Ave | 5/5/2015 | 84 | 76 | 68 | 0 | | 81 | |
| | | 5/6/2015 | 85 | 77 | 68 | 0 | Rain | 76 | Y |
| 42 | Canal St | 5/27/2015 | 84 | 76 | 68 | 0 | Rain | 78 | Y |
| | | 5/28/2015 | 89 | 79 | 69 | T | | 80 | |
| 43 | St. Charles Ave (LGD) | 5/5/2015 | 84 | 76 | 68 | 0 | | | |
| | | 5/6/2015 | 85 | 77 | 68 | 0 | Rain | | |
| 44 | LB Landry Ave | 5/13/2015 | 87 | 80 | 72 | 0 | | | |
| | | 5/14/2015 | 87 | 81 | 74 | T | | | |
| 45 | N. Galvez St | 5/6/2015 | 85 | 77 | 68 | 0 | Rain | | |
| | | 6/4/2015 | 90 | 83 | 75 | 0 | | | |
| 46 | N. Miro St | 5/19/2015 | 87 | 80 | 73 | 0 | | | |
| | | 5/28/2015 | 89 | 79 | 69 | T | | | |

| | | | Temperature (°F) | | | Precipitation (inches) | Observed Weather Events | Weather Conditions, 2014 Count Dates | |
|---|---|---|---|---|---|---|---|---|---|
| # | Site | Count Date | High | Average | Low | | | Average Temperature | Rain? |
| 47 | Lake Forest Blvd | 5/26/2015 | 86 | 76 | 66 | 1 | Fog-Rain | | |
| | | 5/27/2015 | 84 | 76 | 68 | 0 | Rain | | |
| 48 | Holiday Dr | 6/2/2015 | 89 | 81 | 72 | 0 | | | |
| | | 6/3/2015 | 89 | 82 | 75 | 0 | | | |
| 49 | Transcontinental Blvd | 5/6/2015 | 85 | 77 | 68 | 0 | Rain | | |
| | | 5/7/2015 | 86 | 79 | 71 | 0 | | | |
| 50 | Baronne St | 3/31/2015 | 82 | 72 | 61 | 0 | Rain | | |
| | | 4/1/2015 | 81 | 73 | 64 | 0 | | | |
| 51 | St. Claude Ave (Marigny) | 5/12/2015 | 87 | 82 | 76 | 0 | Rain | | |
| | | 5/13/2015 | 87 | 80 | 72 | 0 | | | |
| 52 | Marconi Dr | 5/28/2015 | 89 | 79 | 69 | T | | | |
| | | 6/3/2015 | 89 | 82 | 75 | 0 | | | |
| 53 | Banks St | 6/9/2015 | 83 | 77 | 71 | 0 | Rain | | |
| | | 6/10/2015 | 91 | 80 | 69 | 0 | | | |
| 54 | Canal St (Mid-city) | 6/10/2015 | 91 | 80 | 69 | 0 | | | |
| | | 6/11/2015 | 90 | 83 | 76 | 0 | Rain-Thunder-storm | | |
| 55 | General Meyer Ave | 6/9/2015 | 83 | 77 | 71 | 0 | Rain | | |
| | | 6/10/2015 | 91 | 80 | 69 | 0 | | | |
| *Source: The Weather Undergound (www.wunderground.com)* | | | | | | | | | |
| *Note: Scheduled counts canceled and rescheduled due to rain 13 times* | | | | | | | | | |

## Appendix F: PBRI Extrapolation Methodology

Manual Counts were performed at 55 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, 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 pedestrian and bicycle 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 pedestrian and bicycle 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 pedestrian and bicycle averages, multiply the desired average (daily, weekly, monthly, or annual) by the pedestrian or bicycle percentage observed from the manual counts at that site.

## Appendix G: NBPD Project Count Adjustment Detailed Explanation

**NATIONAL BICYCLE & PEDESTRIAN DOCUMENTATION PROJECT :**
Count Adjustment Factors (March 2009)

Available at http://bikepeddocumentation.org/downloads/

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

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

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 | | | | | October - March | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 6am - 9pm | | | | | 6am - 9pm | | | |
| | ---- PATH------ | | -----PED----- | | | ---- PATH------ | | -----PED----- | |
| | wkdy | wkend | wkdy | wkend | | wkdy | wkend | wkdy | wkend |
| 600 | 2% | 1% | 1% | 1% | 600 | 2% | 1% | 1% | 1% |
| 700 | 4% | 3% | 2% | 1% | 700 | 4% | 2% | 2% | 1% |
| 800 | 7% | 6% | 4% | 3% | 800 | 6% | 6% | 3% | 2% |
| 900 | 9% | 9% | 5% | 3% | 900 | 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 H: Electronic and Manual Count EDT Extrapolation Comparison and Evaluation

In order to better understand the limitations of utilizing the National Bicycle and Pedestrian Documentation Project's short-term count Estimated Daily Traffic (EDT) methodology, data collected using automated counters was extrapolated using the adjustment factors provided in Appendices F & G.

For each of four electronic count locations (Jefferson Davis Trail at Conti St, Tammany Trace north of Koop Dr Tailhead in Mandeville, Wisner Trail at Harrison Avenue, and the Mississippi River Trail in Algiers), two sets of 8-hour data were selected in accordance with manual count methodology (7-9am and 4-6pm on Tuesdays, Wednesdays, or Thursdays with no rain).

This exercise demonstrates that the NBPD methodology, while useful for comparative purposes, tends to substantially overestimate EDT. Tests indicated that extrapolated EDT at these locations was from 136% - 295% greater than data reported by the electronic count equipment for the duration of the study period.

For the Jefferson Davis Trail, Data was selected for April 7th and 8th, 2015, and for May 13th and 14th, 2015. This data was run through the formula developed to estimate daily traffic for pedestrians and bicyclists during the days and months collected, and the resulting figure compared to the actual daily traffic as reported through the continuous monitoring of the multi counter. The formula was found to overestimate EDT relative to the total users observed during the 2014-2015 study period through electronic monitoring by 2-3X (I).

On the Tammany Trace, the same evaluation dates were selected. The figures predicted through extrapolation, while higher than those observed through electronic monitoring, were somewhat more accurate than for the Jefferson Davis Trail (II), suggesting that usage patterns on this facility more closely align with NBPD assumptions used to adjust the data.

For the Wisner Trail and Mississippi River Trail short-term counts (III and IV), the inability of the equipment to differentiate between user types limits the ability to extrapolate data, as bicyclist and pedestrian users are accounted for separately. For the Wisner Trail, a supplementary manual count was conducted. This count indicated that a modest majority (60%) of users were bicyclists at the time of observation. This figure was used to complete the evaluation exercise. For both trails, 1.5- 2.75 times as many users were predicted using NBPD adjustments as were observed by the sensors, which as indicated above, have been found to provide accurate counts with a 5% margin of error or less.

These findings suggest that overall, the NBPD Estimated Daily Traffic calculations may be assumed to overestimate user totals in many instances, sometimes by a factor of 2-3X. Importantly, these test evaluations (due to equipment limitations) were only conducted on shared-use trail facilities. Estimates may be more or less accurate in other contexts (e.g. on-street bicycle facilities) where conditions more closely align with assumptions about user patterns and behavior. On the other hand, these clear discrepancies indicate that improved adjustment factors are needed to allow improved evaluation of mode share, demand, and user exposure rates for safety evaluations. While manual count data provides a wealth of information about area trends and user behavior, its utility as a measure of EDT according to this methodology is limited. A combination of expanded use of electronic monitoring equipment (including sensor types intended for on-street use) and improved identification of context-specific adjustment factors by which to extrapolate daily averages is recommended.

| I. Jefferson Davis Trail Multi Counter | | | | |
|---|---|---|---|---|
| **Test Date1** | **Hour** | **Total** | **Peds** | **Bikes** |
| 4/7/2015 | 7:00am | 55 | 34 | 21 |
| | 8:00am | 71 | 36 | 35 |
| | 4:00pm | 62 | 20 | 42 |
| | 5:00pm | 83 | 29 | 54 |
| **24-hr Sensor Total:** | | **893** | **402** | **491** |
| | | | | |
| 4/8/2015 | 7:00am | 51 | 30 | 21 |
| | 8:00am | 53 | 32 | 21 |
| | 4:00pm | 60 | 26 | 35 |
| | 5:00pm | 83 | 29 | 34 |
| **24-hr Sensor Total:** | | **859** | **419** | **440** |
| ***NBPD EDT:*** | | ***1,793*** | ***848*** | ***945*** |
| ***Actual ADT, 2014-2015*** | | ***641*** | ***320*** | ***321*** |
| *EDT % of ADT* | | *280%* | *265%* | *294%* |
| **Test Date2** | **Hour** | **Total** | **Peds** | **Bikes** |
| 5/13/2015 | 7:00am | 60 | 25 | 35 |
| | 8:00am | 32 | 15 | 17 |
| | 4:00pm | 62 | 27 | 35 |
| | 5:00pm | 76 | 25 | 51 |
| **24-hr Sensor Total:** | | **735** | **320** | **415** |
| | | | | |
| 5/14/2015 | 7:00am | 37 | 13 | 24 |
| | 8:00am | 37 | 11 | 26 |
| | 4:00pm | 48 | 12 | 36 |
| | 5:00pm | 63 | 14 | 49 |
| **24-hr Sensor Total:** | | **775** | **297** | **478** |
| ***NBPD EDT:*** | | ***1,415*** | ***484*** | ***931*** |
| ***Actual ADT, 2014-2015*** | | ***641*** | ***320*** | ***321*** |
| *EDT % of ADT* | | *221%* | *151%* | *290%* |

| II. Tammany Trace Multi Counter | | | | |
|---|---|---|---|---|
| **Test Date 1** | **Hour** | **Total** | **Peds** | **Bikes** |
| 4/7/2015 | 7:00am | 8 | 5 | 3 |
| | 8:00am | 7 | 0 | 7 |
| | 4:00pm | 23 | 6 | 17 |
| | 5:00pm | 19 | 7 | 12 |
| **24-hr Sensor Total:** | | **211** | **60** | **151** |
| | | | | |
| 4/8/2015 | 7:00am | 6 | 2 | 4 |
| | 8:00am | 5 | 0 | 5 |
| | 4:00pm | 27 | 6 | 21 |
| | 5:00pm | 16 | 8 | 8 |
| **24-hr Sensor Total:** | | **285** | **77** | **208** |
| ***NBPD EDT:*** | | ***324*** | ***99*** | ***225*** |
| ***Actual ADT, May 2014- August 2015*** | | ***220*** | ***55*** | ***165*** |
| *EDT % of ADT* | | *147%* | *180%* | *136%* |
| **Test Date 2** | **Hour** | **Total** | **Peds** | **Bikes** |
| 5/13/2015 | 7:00am | 15 | 8 | 7 |
| | 8:00am | 9 | 3 | 6 |
| | 4:00pm | 16 | 1 | 15 |
| | 5:00pm | 9 | 1 | 8 |
| **24-hr Sensor Total:** | | **159** | **38** | **121** |
| | | | | |
| 5/14/2015 | 7:00am | 12 | 2 | 10 |
| | 8:00am | 17 | 1 | 16 |
| | 4:00pm | 16 | 13 | 3 |
| | 5:00pm | 19 | 11 | 8 |
| **24-hr Sensor Total:** | | **185** | **68** | **117** |
| ***NBPD EDT:*** | | ***409*** | ***145*** | ***264*** |
| ***Actual ADT, May 2014- August 2015*** | | ***220*** | ***55*** | ***165*** |
| *EDT % of ADT* | | *186%* | *264%* | *160%* |

## III. Wisner Trail -- Infrared Sensor

| Test Date 1 | Hour | Total Users | Estimated Peds* | Estimated Bikes* |
|---|---|---|---|---|
| 7/14/2015 | 7:00am | 25 | 10 | 15 |
| | 8:00am | 32 | 13 | 19 |
| | 4:00pm | 23 | 9 | 14 |
| | 5:00pm | 25 | 10 | 15 |
| **24-hr Sensor Total:** | | **280** | **112** | **168** |
| | | | | |
| 7/15/2015 | 7:00am | 26 | 10 | 16 |
| | 8:00am | 31 | 12 | 19 |
| | 4:00pm | 11 | 4 | 7 |
| | 5:00pm | 20 | 8 | 12 |
| **24-hr Sensor Total:** | | **275** | 110 | 165 |
| ***NBPD EDT:*** | | ***767*** | **306** | **461** |
| ***Actual ADT, June 20 - August26 2015*** | | ***277*** | n/a | n/a |
| *EDT % of ADT* | | *277%* | | |
| **Test Date 2** | **Hour** | **Total** | **Estimated Peds** | **Estimated Bikes** |
| 8/11/2015 | 7:00am | 12 | 5 | 7 |
| | 8:00am | 9 | 4 | 5 |
| | 4:00pm | 18 | 7 | 11 |
| | 5:00pm | 18 | 7 | 11 |
| **24-hr Sensor Total:** | | **196** | **78** | **118** |
| | | | | |
| 8/12/2015 | 7:00am | 13 | 5 | 8 |
| | 8:00am | 17 | 7 | 10 |
| | 4:00pm | 25 | 10 | 15 |
| | 5:00pm | 30 | 12 | 18 |
| **24-hr Sensor Total:** | | **248** | **99** | **149** |
| ***NBPD EDT:*** | | ***467*** | 184 | 283 |
| ***Actual ADT, June 20 - August26 2015*** | | ***277*** | n/a | n/a |
| *EDT % of ADT* | | *169%* | | |

** Estimates based on 4-hour manual count indicating approximately 60% of users bicycling*

## IV. Mississippi River Trail Algiers -- Infrared Sensor

| Test Date 1 | Hour | Total Users |
|---|---|---|
| 7/2/2014 | 7:00am | 26 |
| | 8:00am | 18 |
| | 4:00pm | 14 |
| | 5:00pm | 15 |
| **24-hr Sensor Total:** | | **285** |
| | | |
| 7/3/2014 | 7:00am | 32 |
| | 8:00am | 21 |
| | 4:00pm | 12 |
| | 5:00pm | 11 |
| **24-hr Sensor Total:** | | **296** |
| ***NBPD EDT:**** | | ***618*** |
| ***Actual ADT, June 26 - Oct 9 2014*** | | ***347*** |
| *EDT % of ADT* | | *178%* |
| **Test Date 2** | **Hour** | **Total** |
| 8/27/2014 | 7:00am | 67 |
| | 8:00am | 25 |
| | 4:00pm | 14 |
| | 5:00pm | 46 |
| **24-hr Sensor Total:** | | **517** |
| | | |
| 8/28/2014 | 7:00am | 16 |
| | 8:00am | 14 |
| | 4:00pm | 10 |
| | 5:00pm | 29 |
| **24-hr Sensor Total:** | | **237** |
| ***NBPD EDT:**** | | ***856*** |
| ***Actual ADT, June 26 - Oct 9 2014*** | | ***347*** |
| *EDT % of ADT* | | *247%* |

**Due to lack of manual observation data, breakdown of users for purposes of utilizing NBPD adjustment factors assumed to be 50% bicyclists, 50% pedestrians*

## Appendix I: Additional Data Tables - Manual Counts

### Bicyclist Composition, by Count Site, 2015

| | | Gender | | Race | | | Age Group | | Helmet Use | Travel Orientation | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Site # | Site | Female | Male | White | Black | Other | Adult | Youth | % | Street-Right Way | Street-Wrong Way | Sidewalk | Neutral Ground | Multi-Use Trail | Bike Lane Use (of on-street riders) |
| 1 | Gentilly Boulevard | 24.8% | 75.2% | 51.5% | 45.5% | 3.0% | 99.4% | 0.6% | 28.5% | 87.9% | 4.8% | 7.3% | 0.0% | | 97.4% |
| 2 | Esplanade Avenue | 42.3% | 57.7% | 80.1% | 15.2% | 4.7% | 99.8% | 0.2% | 24.1% | 94.7% | 0.9% | 4.5% | 0.0% | | 97.1% |
| 3 | Harrison Avenue | 33.8% | 66.2% | 70.6% | 22.1% | 7.4% | 85.3% | 14.7% | 19.1% | 76.5% | 0.0% | 23.5% | 0.0% | | |
| 4 | St. Claude Avenue (Bywater) | 29.7% | 70.3% | 51.5% | 45.6% | 2.9% | 99.1% | 0.9% | 12.4% | 82.9% | 7.6% | 9.4% | 0.0% | | 95.5% |
| 5 | Royal Street (Marigny) | 36.7% | 63.3% | 86.0% | 10.0% | 3.9% | 99.1% | 0.9% | 12.7% | 90.8% | 6.6% | 2.6% | | | |
| 6 | Camp Street (Gateway) | 38.6% | 61.4% | 86.1% | 10.0% | 3.9% | 99.6% | 0.4% | 31.4% | 87.9% | 0.4% | 11.8% | | | |
| 7 | St. Charles Avenue (Gateway) | 33.3% | 66.7% | 80.1% | 18.5% | 1.4% | 100.0% | 0.0% | 32.2% | 88.8% | 2.5% | 8.3% | 0.4% | | |
| 8 | Decatur Street | 22.1% | 77.9% | 68.4% | 22.5% | 9.1% | 97.2% | 2.8% | 23.7% | 88.9% | 2.8% | 8.3% | | | |
| 9 | Magazine Street (Up-town) | 42.3% | 57.7% | 82.7% | 9.6% | 7.7% | 98.1% | 1.9% | 38.5% | 60.6% | 1.0% | 38.5% | | | |
| 10 | Magazine Street (Gate-way) | 39.7% | 60.3% | 72.1% | 19.2% | 8.7% | 98.2% | 1.8% | 25.6% | 82.6% | 5.5% | 11.9% | | | |
| 11 | Simon Bolivar Avenue (Gateway) | 14.8% | 85.2% | 31.6% | 64.1% | 4.3% | 96.9% | 3.1% | 13.3% | 68.4% | 10.9% | 20.3% | 0.0% | | |
| 12 | Carondelet Street (Gateway) | 24.6% | 75.4% | 65.9% | 27.9% | 6.1% | 99.4% | 0.6% | 32.4% | 70.9% | 10.6% | 18.4% | | | |
| 15 | St. Bernard Avenue | 17.8% | 82.2% | 48.3% | 50.2% | 1.5% | 98.1% | 1.9% | 17.8% | 79.5% | 8.9% | 11.2% | 0.4% | | 100.0% |
| 16 | Basin Street | 34.6% | 65.4% | 78.9% | 18.2% | 2.9% | 99.4% | 0.6% | 33.1% | 93.8% | 2.6% | 3.5% | 0.0% | | 89.1% |
| 17 | Nashville Avenue | 40.5% | 59.5% | 90.2% | 5.2% | 4.6% | 100.0% | 0.0% | 49.0% | 97.4% | 1.3% | 1.3% | 0.0% | | 100.0% |
| 18 | St. Charles Avenue (Uptown) | 39.6% | 60.4% | 86.0% | 5.2% | 8.8% | 98.0% | 2.0% | 28.8% | 96.0% | 0.4% | 2.0% | 1.6% | | 99.6% |
| 19 | S. Carrollton Avenue | 34.0% | 66.0% | 70.5% | 24.6% | 4.9% | 97.4% | 2.6% | 22.0% | 92.9% | 3.4% | 3.7% | 0.0% | | 92.2% |
| 21 | Pace Boulevard | 50.0% | 50.0% | 41.3% | 46.7% | 12.0% | 93.5% | 6.5% | 14.1% | 88.0% | 7.6% | 4.3% | 0.0% | | 93.2% |
| 22 | Loyola Avenue | 26.5% | 73.5% | 46.6% | 48.7% | 4.7% | 100.0% | 0.0% | 22.6% | 79.9% | 10.4% | 7.5% | 2.2% | | 95.2% |
| 23 | S. Broad Street | 13.7% | 86.3% | 41.7% | 54.0% | 4.3% | 97.8% | 2.2% | 15.8% | 66.9% | 7.9% | 23.0% | | | |
| 24 | Tulane Avenue | 24.4% | 75.6% | 50.0% | 37.8% | 12.2% | 98.8% | 1.2% | 11.0% | 61.0% | 8.5% | 30.5% | 0.0% | | |
| 26 | Broad Street Bridge | 15.0% | 85.0% | 38.8% | 47.5% | 13.8% | 100.0% | 0.0% | 12.5% | 50.0% | 10.0% | 40.0% | | | |
| 29 | Metairie Road | 24.6% | 75.4% | 75.4% | 18.5% | 6.2% | 89.2% | 10.8% | 33.8% | 69.2% | 1.5% | 29.2% | | | |

| | | Gender | | Race | | | Age Group | | Helmet Use | Travel Orientation | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Site # | Site | Female | Male | White | Black | Other | Adult | Youth | % | Street-Right Way | Street-Wrong Way | Sidewalk | Neutral Ground | Multi-Use Trail | Bike Lane Use (of on-street riders) |
| 30 | Jeff Davis Parkway Bridge | 30.7% | 69.3% | 74.9% | 21.4% | 3.7% | 98.1% | 1.9% | 26.8% | 6.0% | 1.0% | 3.7% | n/a | 89.3% | |
| 31 | Decatur St (Jackson Square) | 28.4% | 71.6% | 80.7% | 15.2% | 4.1% | 99.5% | 0.5% | 13.6% | 94.1% | 2.9% | 3.0% | | | 74.5% |
| 32 | Freret Street | 25.3% | 74.7% | 73.7% | 19.2% | 7.1% | 93.9% | 6.1% | 15.2% | 82.8% | 2.0% | 15.2% | | | |
| 33 | Martin Luther King Boulevard | 18.6% | 81.4% | 41.9% | 47.7% | 10.5% | 100.0% | 0.0% | 20.9% | 84.9% | 10.5% | 4.7% | 0.0% | | 98.8% |
| 34 | Royal Street (French Quarter) | 29.6% | 70.4% | 80.9% | 15.0% | 4.1% | 99.5% | 0.5% | 12.1% | 92.5% | 7.3% | 0.2% | | | |
| 35 | Mirabeau Avenue | 33.3% | 66.7% | 48.9% | 51.1% | 0.0% | 93.3% | 6.7% | 22.2% | 84.4% | 0.0% | 15.6% | 0.0% | | 81.6% |
| 36 | S. Peters Street | 20.3% | 79.7% | 78.0% | 16.9% | 5.1% | 100.0% | 0.0% | 15.3% | 84.7% | 3.4% | 11.9% | | | |
| 37 | Baronne Street (Gateway) | 30.0% | 70.0% | 71.1% | 23.9% | 5.0% | 100.0% | 0.0% | 28.3% | 83.9% | 9.4% | 6.7% | | | |
| 39 | Golf Drive | 36.2% | 63.8% | 90.3% | 5.1% | 4.7% | 99.6% | 0.4% | 39.3% | 99.2% | 0.8% | 0.0% | | | |
| 40 | Annunciation Street | 26.4% | 73.6% | 47.1% | 50.6% | 2.3% | 100.0% | 0.0% | 13.8% | 92.0% | 4.6% | 3.4% | | | |
| 41 | Elysian Fields Avenue | 25.4% | 74.6% | 70.6% | 23.9% | 5.5% | 99.5% | 0.5% | 11.4% | 82.6% | 2.0% | 15.4% | 0.0% | | |
| 42 | Canal Street (CBD) | 17.7% | 82.3% | 56.4% | 27.7% | 15.9% | 99.1% | 0.9% | 10.0% | 47.7% | 0.9% | 21.4% | 30.0% | | |
| 43 | St Charles Avenue (LGD) | 28.9% | 71.1% | 74.3% | 18.1% | 7.6% | 99.2% | 0.8% | 30.5% | 83.1% | 4.8% | 9.6% | 2.4% | | |
| 44 | LB Landry Avenue | 4.5% | 95.5% | 18.2% | 77.3% | 4.5% | 95.5% | 4.5% | 18.2% | 77.3% | 4.5% | 13.6% | 4.5% | | |
| 45 | N. Galvez Street | 35.4% | 64.6% | 43.9% | 50.0% | 6.1% | 97.6% | 2.4% | 26.8% | 90.2% | 9.8% | 0.0% | | | 100.0% |
| 46 | N. Miro Street | 49.0% | 51.0% | 47.1% | 47.1% | 5.9% | 90.2% | 9.8% | 21.6% | 94.1% | 5.9% | 0.0% | | | |
| 47 | Lake Forest Boulevard | 29.0% | 71.0% | 38.7% | 54.8% | 6.5% | 100.0% | 0.0% | 16.1% | 64.5% | 12.9% | 6.5% | 16.1% | | 100.0% |
| 48 | Holiday Drive | 54.5% | 45.5% | 45.5% | 54.5% | 0.0% | 81.8% | 18.2% | 27.3% | 72.7% | 22.7% | 4.5% | 0.0% | | 95.2% |
| 49 | Transcontinental Drive | 28.2% | 71.8% | 64.8% | 35.2% | 0.0% | 95.8% | 4.2% | 11.3% | 49.3% | 4.2% | 46.5% | 0.0% | | |
| 50 | Baronne Street (CBD) | 34.0% | 66.0% | 78.5% | 17.0% | 4.5% | 100.0% | 0.0% | 26.7% | 89.1% | 5.7% | 5.3% | | | 91.5% |
| 51 | St. Claude Avenue (Marigny) | 30.3% | 69.7% | 67.9% | 30.0% | 2.0% | 98.0% | 2.0% | 16.6% | 86.9% | 4.4% | 8.7% | 0.0% | | 95.2% |
| 52 | Marconi Drive | 33.7% | 66.3% | 79.5% | 14.5% | 6.0% | 96.4% | 3.6% | 48.2% | 88.0% | 0.0% | 12.0% | | | |
| 53 | Banks Street | 32.8% | 67.2% | 75.2% | 20.8% | 4.0% | 97.6% | 2.4% | 36.8% | 96.0% | 2.4% | 1.6% | | | |
| 54 | Canal Street (Midcity) | 27.3% | 72.7% | 64.9% | 19.4% | 15.7% | 100.0% | 0.0% | 23.6% | 41.3% | 1.7% | 14.5% | 42.6% | | |
| 55 | General Meyer Avenue | 11.5% | 88.5% | 26.9% | 73.1% | 0.0% | 76.9% | 23.1% | 11.5% | 38.5% | 7.7% | 53.8% | 0.0% | | |
| | **TOTAL ALL SITES** | **30.4%** | **69.6%** | **69.1%** | **25.6%** | **5.4%** | **98.5%** | **1.5%** | **22.9%** | **79.4%** | **4.4%** | **9.1%** | **2.1%** | **5.0%** | |

## Pedestrian Composition, by Count Site, 2015

| | | Gender | | Race | | | Age Group | | Travel Orientation | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Site # | Site | Female | Male | White | Black | Other | Adult | Youth | Sidewalk | Street | Neutral Ground | Multi-Use Trail |
| 1 | Gentilly Boulevard | 28.6% | 71.4% | 4.5% | 91.1% | 4.5% | 90.2% | 9.8% | 89.3% | 8.9% | 1.8% | |
| 2 | Esplanade Avenue | 49.3% | 50.7% | 60.6% | 32.6% | 6.8% | 96.8% | 3.2% | 95.6% | 3.6% | 0.8% | |
| 3 | Harrison Avenue | 47.5% | 52.5% | 81.2% | 14.5% | 4.3% | 94.3% | 5.7% | 71.6% | 9.9% | 18.4% | |
| 4 | St. Claude Avenue (Bywater) | 41.6% | 58.4% | 26.4% | 68.6% | 5.0% | 93.9% | 6.1% | 91.4% | 6.3% | 2.2% | |
| 5 | Royal Street (Marigny) | 39.8% | 60.2% | 79.8% | 13.9% | 6.3% | 97.1% | 2.9% | 88.8% | 11.2% | | |
| 6 | Camp Street (Gateway) | 34.4% | 65.6% | 67.2% | 27.8% | 5.0% | 97.5% | 2.5% | 98.3% | 1.7% | | |
| 7 | St. Charles Avenue (Gateway) | 38.7% | 61.3% | 69.7% | 22.8% | 7.4% | 99.0% | 1.0% | 86.4% | 0.2% | 13.4% | |
| 8 | Decatur Street | 43.4% | 56.6% | 78.8% | 13.3% | 7.9% | 99.7% | 0.3% | 98.6% | 1.4% | | |
| 9 | Magazine Street (Uptown) | 62.1% | 37.9% | 86.8% | 6.2% | 7.0% | 98.7% | 1.3% | 97.9% | 2.1% | | |
| 10 | Magazine Street (Gateway) | 47.2% | 52.8% | 70.9% | 22.0% | 7.1% | 99.7% | 0.3% | 96.8% | 3.2% | | |
| 11 | Simon Bolivar Avenue (Gate-way) | 29.1% | 70.9% | 10.2% | 88.1% | 1.6% | 96.0% | 4.0% | 88.6% | 1.9% | 9.5% | |
| 12 | Carondelet Street (Gateway) | 35.1% | 64.9% | 34.7% | 52.3% | 13.1% | 99.5% | 0.5% | 85.6% | 14.4% | | |
| 15 | St. Bernard Avenue | 31.1% | 68.9% | 5.6% | 93.7% | 0.7% | 83.4% | 16.6% | 94.4% | 4.0% | 1.7% | |
| 16 | Basin Street | 41.9% | 58.1% | 52.9% | 36.3% | 10.8% | 95.4% | 4.6% | 90.5% | 5.8% | 3.7% | |
| 17 | Nashville Avenue | 36.8% | 63.2% | 64.4% | 19.5% | 16.1% | 92.0% | 8.0% | 94.3% | 5.7% | 0.0% | |
| 18 | St. Charles Avenue (Uptown) | 48.0% | 52.0% | 85.1% | 5.6% | 9.4% | 90.9% | 9.1% | 54.4% | 2.3% | 43.3% | |
| 19 | S. Carrollton Avenue | 51.3% | 48.7% | 65.5% | 25.4% | 9.1% | 89.0% | 11.0% | 81.7% | 1.5% | 16.8% | |
| 21 | Pace Boulevard | 47.2% | 52.8% | 36.4% | 54.8% | 8.8% | 90.0% | 10.0% | 79.6% | 13.6% | | |
| 22 | Loyola Avenue | 33.1% | 66.9% | 40.5% | 55.9% | 3.6% | 99.7% | 0.3% | 87.1% | 6.1% | 6.8% | |
| 23 | S. Broad Street | 28.9% | 71.1% | 10.7% | 82.8% | 6.5% | 93.5% | 6.5% | 97.2% | 1.8% | 1.0% | |
| 24 | Tulane Avenue | 34.9% | 65.1% | 25.8% | 65.3% | 9.0% | 98.3% | 1.7% | 92.8% | 7.0% | 0.2% | |
| 26 | Broad Street Bridge | 16.7% | 83.3% | 29.2% | 54.2% | 16.7% | 97.9% | 2.1% | 100.0% | 0.0% | | |
| 29 | Metairie Road | 42.3% | 57.7% | 80.5% | 13.8% | 5.7% | 87.0% | 13.0% | 99.2% | 0.8% | | |
| 30 | Jeff Davis Parkway Bridge | 23.2% | 76.8% | 26.5% | 71.1% | 2.4% | 91.9% | 8.1% | 39.8% | 2.8% | | 57.3% |
| 31 | Decatur St (Jackson Square) | 53.6% | 46.4% | 73.5% | 15.0% | 11.5% | 96.6% | 3.4% | 99.1% | 0.9% | | |
| 32 | Freret Street | 48.0% | 52.0% | 67.3% | 25.7% | 7.0% | 85.8% | 14.2% | 98.1% | 1.9% | | |
| 33 | Martin Luther King Boulevard | 38.3% | 61.7% | 9.3% | 85.0% | 5.6% | 83.2% | 16.8% | 89.7% | 9.3% | 0.9% | |

| | | Gender | | Race | | | Age Group | | Travel Orientation | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Site # | Site | Female | Male | White | Black | Other | Adult | Youth | Sidewalk | Street | Neutral Ground | Multi-Use Trail |
| 34 | Royal Street (French Quarter) | 49.4% | 50.6% | 86.4% | 9.7% | 3.9% | 99.1% | 0.9% | 95.1% | 4.9% | | |
| 35 | Mirabeau Avenue | 42.5% | 57.5% | 56.2% | 41.1% | 2.7% | 93.2% | 6.8% | 97.3% | 2.7% | 0.0% | |
| 36 | S. Peters Street | 39.5% | 60.5% | 57.1% | 23.1% | 19.8% | 99.2% | 0.8% | 96.3% | 3.7% | | |
| 37 | Baronne Street (Gateway) | 36.4% | 63.6% | 46.6% | 48.9% | 4.5% | 98.3% | 1.7% | 93.2% | 6.8% | | |
| 39 | Golf Drive | 42.4% | 57.6% | 93.9% | 1.5% | 4.5% | 100.0% | 0.0% | 45.5% | 54.5% | | |
| 40 | Annunciation Street | 44.5% | 55.5% | 45.1% | 51.1% | 3.8% | 100.0% | 0.0% | 100.0% | 0.0% | | |
| 41 | Elysian Fields Avenue | 41.4% | 58.6% | 65.1% | 28.7% | 6.2% | 98.4% | 1.6% | 87.9% | 3.1% | 9.0% | |
| 42 | Canal Street (CBD) | 48.1% | 51.9% | 61.1% | 27.3% | 11.5% | 97.5% | 2.5% | 96.8% | 1.1% | 2.1% | |
| 43 | St Charles Avenue (LGD) | 37.4% | 62.6% | 69.1% | 25.7% | 5.2% | 98.2% | 1.8% | 83.9% | 3.4% | 12.7% | |
| 44 | LB Landry Avenue | 41.9% | 58.1% | 1.8% | 97.8% | 0.4% | 57.0% | 43.0% | 84.2% | 14.3% | 1.5% | |
| 45 | N. Galvez Street | 41.0% | 59.0% | 31.3% | 68.8% | 0.0% | 97.9% | 2.1% | 98.6% | 1.4% | | |
| 46 | N. Miro Street | 53.8% | 46.2% | 49.1% | 48.5% | 2.3% | 97.7% | 2.3% | 92.4% | 7.6% | | |
| 47 | Lake Forest Boulevard | 42.6% | 57.4% | 39.4% | 47.9% | 12.8% | 83.0% | 17.0% | 62.8% | 11.7% | 25.5% | |
| 48 | Holiday Drive | 43.9% | 56.1% | 35.7% | 64.3% | 0.0% | 100.0% | 0.0% | 98.0% | 2.0% | 0.0% | |
| 49 | Transcontinental Drive | 44.1% | 55.9% | 51.6% | 44.1% | 4.3% | 93.5% | 6.5% | 100.0% | 0.0% | 0.0% | |
| 50 | Baronne Street (CBD) | 38.8% | 61.2% | 67.9% | 22.5% | 9.6% | 98.5% | 1.5% | 96.8% | 3.2% | | |
| 51 | St. Claude Avenue (Marigny) | 42.5% | 57.5% | 43.7% | 52.0% | 4.3% | 76.8% | 23.2% | 89.8% | 4.5% | 5.7% | |
| 52 | Marconi Drive | 41.8% | 58.2% | 76.4% | 14.5% | 9.1% | 96.4% | 3.6% | 100.0% | 0.0% | 0.0% | |
| 53 | Banks Street | 42.0% | 58.0% | 67.4% | 27.5% | 5.2% | 98.4% | 1.6% | 94.8% | 5.2% | | |
| 54 | Canal Street (Midcity) | 44.5% | 55.5% | 63.2% | 29.7% | 7.1% | 100.0% | 0.0% | 89.0% | 0.3% | 10.7% | |
| 55 | General Meyer Avenue | 29.2% | 70.8% | 9.0% | 86.5% | 4.5% | 78.7% | 21.3% | 67.4% | 16.9% | | |
| | **TOTAL ALL SITES** | **45.4%** | **54.6%** | **63.9%** | **27.9%** | **8.2%** | **96.4%** | **3.6%** | **93.6%** | **3.1%** | **3.2%** | |

## Impact of Facilities on Change in Bicyclists Observed, 2010-2015 Count Locations

| | | | Bicyclists Observed | | | |
|---|---|---|---|---|---|---|
| Site # | Count Location by Bike Facility Type | Year Installed | 2010 | 2015 | Total Change, 2010-2015 | % Change in Bicyclists Observed |
| Bike Lanes | | | | | | |
| 1 | Gentilly Blvd | 2010 | 46 | 165 | 119 | *258.7%* |
| 4 | St. Claude Ave | 2008 | 96 | 340 | 244 | *254.2%* |
| 2 | Esplanade Ave | 2013 | 105 | 468 | 363 | *345.7%* |
| | **Total** | | **247** | **973** | **726** | ***293.9%*** |
| Shared Lane Markings | | | | | | |
| 3 | Harrison Ave | 2014 | 27 | 68 | 41 | *151.9%* |
| 10 | Magazine St (Gateway) | 2010 | 153 | 219 | 66 | *43.1%* |
| | **Total** | | **180** | **287** | **107** | **59.4%** |
| No Bike Facility | | | | | | |
| 6 | Camp St (Gateway) | | 157 | 280 | 123 | *78.3%* |
| 8 | Simon Bolivar Ave (Gateway) | | 86 | 256 | 170 | *197.7%* |
| 11 | Decatur St | | 150 | 253 | 103 | *68.7%* |
| 5 | St. Charles Ave (Gateway) | | 191 | 276 | 85 | *44.5%* |
| 7 | Royal St | | 377 | 229 | (148) | *-39.3%* |
| 12 | Carondelet St (Gateway) | | 87 | 179 | 92 | *105.7%* |
| 9 | Magazine St (Uptown) | | 38 | 104 | 66 | *173.7%* |
| | **Total** | | **1,086** | **1,677** | **591** | **54.4%** |
| | **ALL SITES** | | **1,513** | **2,837** | **1,324** | **87.5%** |

## Impact of Facilities on Change in Bicyclists Observed, 2013-2015 Count Locations

| Site # | Count Location by Bike Facility Type | Year Installed | Bicyclists Observed 2013 | Bicyclists Observed 2015 | Total Change, 2013-2015 | % Change in Bicyclists Observed |
|---|---|---|---|---|---|---|
| Bike Lanes | | | | | | |
| 15 | St. Bernard Ave | 2013 | 88 | 259 | 171 | *194.3%* |
| 17 | Nashville Ave | 2013 | 37 | 153 | 116 | *313.5%* |
| 18 | St. Charles Ave (Uptown) | 2013 | 441 | 250 | (191) | *-43.3%* |
| 19 | S. Carrollton Ave | 2010 | 206 | 268 | 62 | *30.1%* |
| 22 | Loyola Ave | 2012 | 267 | 279 | 12 | *4.5%* |
| | **Total** | | **1,039** | **1,209** | **170** | ***16.4%*** |
| Shared Lane Markings/Mix of Facilities | | | | | | |
| 16 | Basin St | 2013 | 99 | 341 | 242 | *244.4%* |
| | **Total** | | **99** | **341** | **242** | ***244.4%*** |
| No Bike Facility | | | | | | |
| 23 | S. Broad St | | 112 | 139 | 27 | *24.1%* |
| 24 | Tulane Ave | | 71 | 82 | 11 | *15.5%* |
| 26 | S. Broad St Bridge | | 57 | 80 | 23 | *40.4%* |
| | **Total** | | **240** | **301** | **61** | ***25.4%*** |
| | **ALL SITES** | | **1,378** | **1,851** | **473** | **34.3%** |

## Impact of Facilities on Helmet Use, 2010-2015 Count Locations

| | | | 2010 | | 2015 | | |
|---|---|---|---|---|---|---|---|
| Site # | Count Location by Bike Facility Type | Year Installed | Total Observed Bicyclists | % Wearing Helmets | Total Observed Bicyclists | % Wearing Helmets | Percentage Point Change, 2010-2015 |
| Bike Lanes | | | | | | | |
| 1 | Gentilly Blvd | 2010 | 46 | 0 | 165 | *29%* | *15.5%* |
| 4 | St. Claude Ave | 2008 | 96 | 0 | 340 | *12%* | *10.3%* |
| 2 | Esplanade Ave | 2013 | 105 | 0 | 468 | *24%* | *16.5%* |
| | **Total** | | **247** | **0** | **973** | ***21%*** | ***14.3%*** |
| Shared Lane Markings | | | | | | | |
| 3 | Harrison Ave | 2014 | 27 | 0 | 68 | *19%* | *8.0%* |
| 10 | Magazine St (Gateway) | 2010 | 153 | 0 | 219 | *26%* | *15.8%* |
| | **Total** | | **180** | **0** | **287** | ***24%*** | ***14.1%*** |
| No Bike Facility | | | | | | | |
| 6 | Camp St (Gateway) | | 157 | 0 | 280 | *31%* | *19.9%* |
| 8 | Simon Bolivar Ave (Gateway) | | 86 | 0 | 256 | *13%* | *5.2%* |
| 11 | Decatur St | | 150 | 0 | 253 | *24%* | *15.7%* |
| 5 | St. Charles Ave (Gateway) | | 191 | 0 | 276 | *32%* | *7.6%* |
| 7 | Royal St | | 377 | 0 | 229 | *13%* | *6.1%* |
| 9 | Carondelet St (Gateway) | | 87 | 0 | 179 | *32%* | *20.9%* |
| 12 | Magazine St (Uptown) | | 38 | 0 | 104 | *39%* | *30.6%* |
| | **Total** | | **1,086** | **0** | **1,677** | ***24%*** | ***12.5%*** |
| | **ALL SITES** | | **1,513** | **0** | **2,837** | **24%** | **13.3%** |

## Impact of Facilities on Helmet Use, 2013-2015 Count Locations

| Site # | Count Location by Bike Facility Type | Year Installed | 2013 Total Observed Bicyclists | 2013 % Wearing Helmets | 2015 Total Observed Bicyclists | 2015 % Wearing Helmets | Percentage Point Change, 2013-2015 |
|---|---|---|---|---|---|---|---|
| Bike Lanes | | | | | | | |
| 15 | St. Bernard Ave | 2013 | 88 | 0 | 259 | *18%* | *3.0%* |
| 17 | Nashville Ave | 2013 | 37 | 0 | 153 | *49%* | *5.8%* |
| 18 | St. Charles Ave (Uptown) | 2013 | 441 | 0 | 250 | *29%* | *-15.2%* |
| 19 | S. Carrollton Ave | 2010 | 206 | 0 | 268 | *22%* | *-4.2%* |
| 22 | Loyola Ave | 2012 | 267 | 0 | 279 | *23%* | *-0.2%* |
| | **Total** | | **1,039** | **0** | **1,209** | ***26%*** | ***-6.5%*** |
| Shared Lane Markings/Mix of Facilities | | | | | | | |
| 16 | Basin St | 2013 | 99 | 0 | 341 | *33%* | *9.9%* |
| | **Total** | | **99** | **0** | **341** | ***33%*** | ***15.9%*** |
| No Bike Facility | | | | | | | |
| 23 | S. Broad St | | 112 | 0 | 139 | *16%* | *6.9%* |
| 24 | Tulane Ave | | 71 | 0 | 82 | *11%* | *2.5%* |
| 26 | S. Broad St Bridge | | 57 | 0 | 80 | *13%* | *0.2%* |
| | **Total** | | **240** | **0** | **301** | ***14%*** | ***4.0%*** |
| | **ALL SITES** | | **1,483** | **0** | **1,851** | **25%** | **-1.4%** |

## Impact of Facilities on Travel Orientation, 2010-2015 Count Locations

| | | | 2010 | | 2015 | | |
|---|---|---|---|---|---|---|---|
| Site # | Count Location by Bike Facility Type | Year Installed | Total Observed Bicyclists | % Right-Way, On Street Cyclists | Total Observed Bicyclists | % Right-Way, On Street Cyclists | Percentage Point Change, 2010-2015 |
| Bike Lanes | | | | | | | |
| 1 | Gentilly Blvd | 2010 | 46 | 1 | 165 | *88%* | *20.5%* |
| 4 | St. Claude Ave | 2008 | 96 | 1 | 340 | *83%* | *-3.6%* |
| 2 | Esplanade Ave | 2013 | 105 | 1 | 468 | *95%* | *11.8%* |
| | **Total** | | **247** | **1** | **973** | ***89%*** | ***4.4%*** |
| Shared Lane Markings | | | | | | | |
| 3 | Harrison Ave | 2014 | 27 | 1 | 68 | *77%* | *-1.3%* |
| 10 | Magazine St (Gateway) | 2010 | 153 | 1 | 219 | *83%* | *14.0%* |
| | **Total** | | **180** | **1** | **287** | ***81%*** | ***11.2%*** |
| No Bike Facility | | | | | | | |
| 6 | Camp St (Gateway) | | 157 | 1 | 280 | *88%* | *18.5%* |
| 8 | Simon Bolivar Ave (Gateway) | | 86 | 1 | 256 | *68%* | *11.4%* |
| 11 | Decatur St | | 150 | 1 | 253 | *89%* | *5.6%* |
| 5 | St. Charles Ave (Gateway) | | 191 | 1 | 276 | *89%* | *15.5%* |
| 7 | Royal St | | 377 | 1 | 229 | *91%* | *7.8%* |
| 9 | Carondelet St (Gateway) | | 87 | 1 | 179 | *71%* | *0.8%* |
| 12 | Magazine St (Uptown) | | 38 | 0 | 104 | *61%* | *34.3%* |
| | **Total** | | **1,086** | **1** | **1,677** | ***77%*** | ***2.6%*** |
| | **ALL SITES** | | **1,513** | **1** | **2,837** | **84%** | **8.8%** |

## Impact of Facilities on Travel Orientation, 2013-2015 Count Locations

| Site # | Count Location by Bike Facility Type | Year Installed | 2013 Total Observed Bicyclists | 2013 % Right-Way, On Street Cyclists | 2015 Total Observed Bicyclists | 2015 % Right-Way, On Street Cyclists | Percentage Point Change, 2013-2015 |
|---|---|---|---|---|---|---|---|
| Bike Lanes | | | | | | | |
| 15 | St. Bernard Ave | 2013 | 88 | 1 | 259 | *80%* | *20.4%* |
| 17 | Nashville Ave | 2013 | 37 | 1 | 153 | *97%* | *-2.6%* |
| 18 | St. Charles Ave (Uptown) | 2013 | 441 | 1 | 250 | *96%* | *-3.1%* |
| 19 | S. Carrollton Ave | 2010 | 206 | 1 | 268 | *93%* | *2.1%* |
| 22 | Loyola Ave | 2012 | 267 | 1 | 279 | *80%* | *5.0%* |
| | **Total** | | **1,039** | **1** | **1,209** | ***88%*** | ***0.4%*** |
| Shared Lane Markings/Mix of Facilities | | | | | | | |
| 16 | Basin St | 2013 | 99 | 1 | 341 | *94%* | *22.1%* |
| | **Total** | | **204** | **1** | **341** | ***94%*** | ***22.2%*** |
| No Bike Facility | | | | | | | |
| 23 | S. Broad St | | 112 | 1 | 139 | *67%* | *15.1%* |
| 24 | Tulane Ave | | 71 | 0 | 82 | *61%* | *17.3%* |
| 26 | S. Broad St Bridge | | 57 | 1 | 80 | *50%* | *-20.2%* |
| | **Total** | | **240** | **1** | **301** | ***61%*** | ***7.1%*** |
| | **ALL SITES** | | **1,483** | **1** | **1,851** | **85%** | **4.7%** |

## Impact of Facilities on Percent of Users who are Female, 2010-2015 Count Locations

| | | | 2010 | | 2015 | | |
|---|---|---|---|---|---|---|---|
| Site # | Count Location by Bike Facility Type | Year Installed | Total Observed Bicyclists | % Female Bicyclists | Total Observed Bicyclists | % Female Bicyclists | Percentage Point Change, 2010-2015 |
| Bike Lanes | | | | | | | |
| 1 | Gentilly Blvd | 2010 | 46 | 0 | 165 | *25%* | *16.2%* |
| 4 | St. Claude Ave | 2008 | 96 | 0 | 340 | *30%* | *4.7%* |
| 2 | Esplanade Ave | 2013 | 105 | 0 | 468 | *42%* | *6.1%* |
| | **Total** | | **247** | **0** | **973** | ***35%*** | ***8.2%*** |
| Shared Lane Markings | | | | | | | |
| 3 | Harrison Ave | 2014 | 27 | 0 | 68 | *34%* | *15.3%* |
| 10 | Magazine St (Gateway) | 2010 | 153 | 0 | 219 | *40%* | *3.1%* |
| | **Total** | | **180** | **0** | **287** | ***38%*** | ***4.4%*** |
| No Bike Facility | | | | | | | |
| 6 | Camp St (Gateway) | | 157 | 0 | 280 | *39%* | *2.3%* |
| 8 | Simon Bolivar Ave (Gateway) | | 86 | 0 | 256 | *15%* | *7.9%* |
| 11 | Decatur St | | 150 | 0 | 253 | *22%* | *-3.9%* |
| 5 | St. Charles Ave (Gateway) | | 191 | 0 | 276 | *33%* | *3.5%* |
| 7 | Royal St | | 377 | 0 | 229 | *37%* | *14.4%* |
| 9 | Carondelet St (Gateway) | | 87 | 0 | 179 | *25%* | *-6.5%* |
| 12 | Magazine St (Uptown) | | 38 | 0 | 104 | *42%* | *23.9%* |
| | **Total** | | **1,086** | **0** | **1,677** | ***28%*** | ***2.3%*** |
| | **ALL SITES** | | **1,513** | **0** | **2,837** | **32%** | **5.2%** |

## Impact of Facilities on Percent of Users who are Female, 2013-2015 Count Locations

| | | | 2013 | | 2015 | | |
|---|---|---|---|---|---|---|---|
| Site # | Count Location by Bike Facility Type | Year Installed | Total Observed Bicyclists | % Female Bicyclists | Total Observed Bicyclists | % Female Bicyclists | Percentage Point Change, 2013-2015 |
| Bike Lanes | | | | | | | |
| 15 | St. Bernard Ave | 2013 | 88 | 0 | 259 | *18%* | *-1.5%* |
| 17 | Nashville Ave | 2013 | 37 | 0 | 153 | *41%* | *5.4%* |
| 18 | St. Charles Ave (Uptown) | 2013 | 441 | 0 | 250 | *40%* | *-1.4%* |
| 19 | S. Carrollton Ave | 2010 | 206 | 0 | 268 | *34%* | *6.3%* |
| 22 | Loyola Ave | 2012 | 267 | 0 | 279 | *27%* | *16.8%* |
| | **Total** | | **1,039** | **0** | **1,209** | ***31%*** | ***2.5%*** |
| Shared Lane Markings/Mix of Facilities | | | | | | | |
| 16 | Basin St | 2013 | 99 | 0 | 341 | *35%* | *9.3%* |
| | **Total** | | **204** | **0** | **341** | ***35%*** | ***9.3%*** |
| No Bike Facility | | | | | | | |
| 23 | S. Broad St | | 112 | 0 | 139 | *14%* | *3.0%* |
| 24 | Tulane Ave | | 71 | 0 | 82 | *24%* | *7.5%* |
| 26 | S. Broad St Bridge | | 57 | 0 | 80 | *15%* | *6.2%* |
| | **Total** | | **240** | **0** | **301** | ***17%*** | ***4.9%*** |
| | **ALL SITES** | | **1,483** | **0** | **1,851** | **29%** | **4.4%** |

## Appendix J: Additional Data Tables - Electronic Counts

### Jefferson Davis Trail User Volumes by Month

| | Total Bicyclists | Total Pedestrians | Total Users | *% of Annual Volume* | Average Daily Bicyclists | Average Daily Pedestrians | Average Daily Users | Average Daily Temperature | Total Precipi-tation (in) |
|---|---|---|---|---|---|---|---|---|---|
| July, 2014 | 8,343 | 8,157 | 16,500 | *7.1%* | *269* | *263* | 532 | 83 | 4 |
| August, 2014 | 8,045 | 7,454 | 15,499 | *6.6%* | *260* | *240* | 500 | 85 | 6 |
| September, 2014 | 9,078 | 8,554 | 17,632 | *7.5%* | *303* | *285* | 588 | 82 | 4 |
| October, 2014 | 11,564 | 10,975 | 22,539 | *9.6%* | *373* | *354* | 727 | 73 | 2 |
| November, 2014 | 8,204 | 8,243 | 16,447 | *7.0%* | *273* | *275* | 548 | 58 | 2 |
| December, 2014 | 6,966 | 7,893 | 14,859 | *6.4%* | *225* | *255* | 479 | 59 | 4 |
| January, 2015 | 7,531 | 9,271 | 16,802 | *7.2%* | *243* | *299* | 542 | 52 | 6 |
| February, 2015 | 7,520 | 9,538 | 17,058 | *7.3%* | *269* | *341* | 609 | 53 | 2 |
| March, 2015 | 11,083 | 10,828 | 21,911 | *9.4%* | *358* | *349* | 707 | 67 | 6 |
| April, 2015 | 12,807 | 11,027 | 23,834 | *10.2%* | *427* | *368* | 794 | 74 | 12 |
| May, 2015 | 15,581 | 15,739 | 31,320 | *13.4%* | *503* | *508* | 1,010 | 79 | 9 |
| June, 2015 | 10,393 | 9,082 | 19,475 | *8.3%* | *335* | *293* | 553 | 83 | 4 |
| **12 Month Total** | 117,115 | 116,761 | 233,876 | *100.0%* | *321* | *320* | **641** | **71** | **61** |

## Jefferson Davis Trail User Volumes by Season

| | Absolute # | *Average Daily Users* | Average Daily Temp | Total Precip. (in) |
|---|---|---|---|---|
| Summer 2010 | 35,099 | *382* | 85 | 24.1 |
| Summer 2011 | 43,776 | *466* | 84 | 30.8 |
| Summer 2012 | 42,875 | *456* | 83 | 31.9 |
| Summer 2013 | 39,832 | *458* | 83 | 20.2 |
| Summer 2014 | 50,382 | 536 | 83 | 19.0 |
| Fall 2010 | 39,921 | 439 | 65 | 3.8 |
| Fall 2011 | 46,550 | 517 | 66 | 4.3 |
| Fall 2012 | 49,880 | 554 | 66 | 7.8 |
| Fall 2013 | 64,280 | 714 | 66 | 6.4 |
| Fall 2014 | 55240 | 621 | 66 | 6.4 |
| Winter 2010-2011 | 36048 | 401 | 56 | 14.4 |
| Winter 2011-2012 | 44,224 | 497 | 63 | 8.3 |
| Winter 2012-2013 | 45,245 | 508 | 57 | 15.8 |
| Winter 2013-2014 | 58,745 | 660 | 53 | 12.6 |
| Winter 2014-2015 | 49,666 | 558 | 56 | 16.2 |
| Spring 2011 | 58,262 | 633 | 77 | 9.1 |
| Spring 2012 | 58,857 | 654 | 78 | 17.8 |
| Spring 2013 | n/a | n/a | n/a | n/a |
| Spring 2014 | 77,705 | 836 | 73 | 16.7 |
| Spring 2015 | 78,588 | 845 | 77 | 24.2 |

## Jefferson Davis Trail Observed Volume by Hour of Day, 2014-2015

| | Bicyclists | Pedestrians | Total Users | *% of Total* | Average Hourly Users |
|---|---|---|---|---|---|
| 12:00 AM | 1,337 | 796 | 2,133 | *0.9%* | 6 |
| 1:00 AM | 801 | 499 | 1300 | *0.6%* | 4 |
| 2:00 AM | 501 | 301 | 802 | *0.3%* | 2 |
| 3:00 AM | 347 | 235 | 582 | *0.2%* | 2 |
| 4:00 AM | 329 | 256 | 585 | *0.3%* | 2 |
| 5:00 AM | 758 | 1,121 | 1,879 | *0.8%* | 5 |
| 6:00 AM | 2,369 | 4,377 | 6,746 | *2.9%* | 18 |
| 7:00 AM | 5,714 | 5,785 | 11,499 | *4.9%* | 32 |
| 8:00 AM | 6,552 | 6,347 | 12,899 | *5.5%* | 35 |
| 9:00 AM | 5,426 | 6,378 | 11,804 | *5.0%* | 32 |
| 10:00 AM | 5,716 | 7,170 | 12,886 | *5.5%* | 35 |
| 11:00 AM | 6,311 | 7,346 | 13,657 | *5.8%* | 37 |
| 12:00 PM | 7,050 | 6,579 | 13,629 | *5.8%* | 37 |
| 01:00 PM | 7,605 | 6,225 | 13,830 | *5.9%* | 38 |
| 02:00 PM | 7,788 | 6,194 | 13,982 | *6.0%* | 38 |
| 03:00 PM | 8,899 | 7,249 | 16,148 | *6.9%* | 44 |
| 04:00 PM | 9,724 | 8,738 | 18,462 | *7.9%* | 51 |
| 05:00 PM | 11,047 | 10,346 | 21,393 | *9.1%* | 59 |
| 06:00 PM | 8,632 | 10,733 | 19,365 | *8.3%* | 53 |
| 07:00 PM | 7,377 | 9,148 | 16,525 | *7.1%* | 45 |
| 08:00 PM | 4,770 | 5,210 | 9,980 | *4.3%* | 27 |
| 09:00 PM | 3,091 | 2,706 | 5,797 | *2.5%* | 16 |
| 010:00 PM | 2,899 | 1,746 | 4,645 | *2.0%* | 13 |
| 011:00 PM | 2,072 | 1,276 | 3,348 | *1.4%* | 9 |
| **12-Month Total** | **117,115** | **116,761** | **233,876** | ***100.0%*** | **27** |

## Jefferson Davis Trail User Volumes, 2010-2015, by Month

| | Total Usage | | | | | | | Average Daily Usage | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Month | 2010-2011 | 2011-2012 | 2012-2013 | 2013-2014 | 2014-2015 | Absolute Change, 2010-2015 | *Percent Change, 2010-2015* | 2010-2011 | 2011-2012 | 2012-2013 | 2013-2014 | 2014-2015 | Absolute Change, 2010-2015 | *Percent Change, 2010-2015* |
| July | 12,506 | 13,053 | 13,273 | 14,581 | 16,500 | 3,994 | *31.9%* | 403 | 421 | 428 | 470 | 532 | 129 | *31.9%* |
| August | 10,945 | 13,471 | 12,719 | 13,978 | 15,499 | 4,554 | *41.6%* | 353 | 435 | 410 | 451 | 500 | 147 | *41.6%* |
| September | 13,191 | 17,719 | 16,278 | 15,071 | 17,632 | 4,441 | *33.7%* | 440 | 591 | 543 | 502 | 588 | 148 | *33.7%* |
| October | 15,755 | 19,752 | 20,330 | 22,936 | 22,539 | 6,784 | *43.1%* | 508 | 637 | 656 | 740 | 727 | 219 | *43.1%* |
| November | 10,975 | 14,117 | 15,146 | 22,303 | 16,447 | 5,472 | *49.9%* | 366 | 471 | 505 | 743 | 548 | 182 | *49.9%* |
| December | 11,502 | 11,715 | 13,867 | 17,748 | 14,859 | 3,357 | *29.2%* | 371 | 378 | 447 | 573 | 479 | 108 | *29.2%* |
| January | 12,245 | 15,806 | 14,057 | 21,752 | 16,802 | 4,557 | *37.2%* | 395 | 510 | 453 | 702 | 542 | 147 | *37.2%* |
| February | 12,301 | 14,080 | 16,215 | 16,987 | 17,058 | 4,757 | *38.7%* | 439 | 486 | 579 | 566 | 609 | 170 | *38.7%* |
| March | 17,188 | 18,256 | 17,978 | 25,517 | 21,911 | 4,723 | *27.5%* | 554 | 589 | 580 | 823 | 707 | 152 | *27.5%* |
| April | 18,946 | 19,449 | n/a | 22,537 | 23,834 | 4,888 | *25.8%* | 632 | 720 | n/a | 751 | 794 | 163 | *25.8%* |
| May | 22,128 | 24,256 | n/a | 34,175 | 31,320 | 9,192 | *41.5%* | 714 | 783 | n/a | 1,102 | 1,010 | 297 | *41.5%* |
| June | 11,733 | 13,740 | n/a | 16,586 | 19,475 | 7,742 | *66.0%* | 391 | 458 | n/a | 553 | 553 | 162 | *41.4%* |
| ***Total*** | ***169,415*** | ***195,414*** | ***n/a*** | ***244,171*** | ***233,876*** | **64,461** | ***38.0%*** | ***464*** | ***540*** | ***n/a*** | ***665*** | ***641*** | **177** | ***38.1%*** |

## Jefferson Davis Trail Observed Volume by Day of Week

| | Bicyclists | Pedestrians | Total Users | % of Total | Average Daily Bicyclists | Average Daily Pedestrians | Average Daily Users |
|---|---|---|---|---|---|---|---|
| Monday | 15,711 | 15,951 | 31,662 | 13.5% | 302 | 307 | 609 |
| Tuesday | 16,332 | 16,666 | 32,998 | 14.1% | 308 | 314 | 623 |
| Wednesday | 15,829 | 15,792 | 31,621 | 13.5% | 304 | 304 | 608 |
| Thursday | 16,048 | 15,141 | 31,189 | 13.3% | 309 | 291 | 600 |
| Friday | 16,208 | 15,177 | 31,385 | 13.4% | 312 | 292 | 604 |
| Saturday | 19,401 | 20,559 | 39,960 | 17.1% | 373 | 395 | 768 |
| Sunday | 17,586 | 17,475 | 35,061 | 15.0% | 338 | 336 | 674 |
| **12 Month Total** | **117,115** | **116,761** | **233,876** | | **321** | **320** | **641** |

## Jefferson Davis Trail Average Daily Temperature and User Volumes

| | 2010-2011 | | 2011-2012 | | 2012-2013 | | 2013-2014 | | 2014-2015 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Month | Average Daily Users | Average Daily Temperature | Average Daily Users | Average Daily Temperature | Average Daily Users | Average Daily Temperature | Average Daily Users | Average Daily Temperature | Average Daily Users | Average Daily Temperature |
| July | 403 | 85 | 421 | 84 | 428 | 84 | 470 | 83 | 532 | 83 |
| August | 353 | 85 | 435 | 88 | 410 | 83 | 451 | 83 | 500 | 85 |
| September | 440 | 82 | 591 | 79 | 543 | 81 | 502 | 82 | 588 | 82 |
| October | 508 | 72 | 637 | 70 | 656 | 70 | 740 | 73 | 727 | 73 |
| November | 366 | 63 | 471 | 64 | 505 | 61 | 743 | 60 | 548 | 58 |
| December | 371 | 52 | 378 | 58 | 447 | 59 | 573 | 56 | 479 | 59 |
| January | 395 | 51 | 510 | 61 | 453 | 57 | 702 | 47 | 542 | 52 |
| February | 439 | 57 | 486 | 61 | 579 | 58 | 566 | 56 | 609 | 53 |
| March | 554 | 67 | 589 | 71 | 580 | 59 | 823 | 60 | 707 | 67 |
| April | 632 | 74 | 720 | 73 | n/a | 68 | 751 | 69 | 794 | 74 |
| May | 714 | 78 | 782 | 80 | n/a | 74 | 1,102 | 75 | 1,010 | 79 |
| June | 391 | 85 | 458 | 83 | n/a | 83 | 553 | 82 | 553 | 83 |

## Tammany Trace User Volume by Day of Week

| | Bicyclists | Pedestrians | Total Users | % of Total | Average Daily Bicyclists | Average Daily Pedestrians | Average Daily Users |
|---|---|---|---|---|---|---|---|
| Monday | 6,723 | 3,156 | 9,879 | 9.86% | 103 | 49 | 152 |
| Tuesday | 6,963 | 3,108 | 10,071 | 10.05% | 107 | 48 | 155 |
| Wednesday | 6,424 | 3,367 | 9,791 | 9.77% | 99 | 52 | 151 |
| Thursday | 7,076 | 3,092 | 10,168 | 10.14% | 109 | 48 | 156 |
| Friday | 7,403 | 3,021 | 10,424 | 10.40% | 114 | 46 | 160 |
| Saturday | 21,257 | 4,967 | 26,224 | 26.16% | 322 | 75 | 397 |
| Sunday | 19,309 | 4,375 | 23,684 | 23.63% | 297 | 67 | 364 |
| **65-Week Total** | **75,155** | **25,086** | **100,241** | 100.00% | **165** | **55** | **220** |

## Tammany Trace Observed Volume by Hour of Day

| Hour | Bicyclists | Pedestrians | Total Users | *% of Total* | Average Hourly Users |
|---|---|---|---|---|---|
| 12:00 AM | 29 | 9 | 38 | *0.04%* | 0.08 |
| 1:00 AM | 33 | 2 | 35 | *0.03%* | 0.08 |
| 2:00 AM | 37 | 6 | 43 | *0.04%* | 0.09 |
| 3:00 AM | 38 | 4 | 42 | *0.04%* | 0.09 |
| 4:00 AM | 96 | 15 | 111 | *0.11%* | 0.24 |
| 5:00 AM | 475 | 92 | 567 | *0.57%* | 1.24 |
| 6:00 AM | 1945 | 781 | 2726 | *2.72%* | 5.98 |
| 7:00 AM | 4,247 | 1,704 | 5,951 | *5.94%* | 13.05 |
| 8:00 AM | 5,618 | 1,681 | 7,299 | *7.28%* | 16.01 |
| 9:00 AM | 7,098 | 2,001 | 9,099 | *9.08%* | 19.95 |
| 10:00 AM | 7,840 | 1,882 | 9,722 | *9.70%* | 21.32 |
| 11:00 AM | 7,775 | 2,294 | 10,069 | *10.04%* | 22.08 |
| 12:00 PM | 6,774 | 2,928 | 9,702 | *9.68%* | 21.28 |
| 01:00 PM | 6,285 | 2,112 | 8,397 | *8.38%* | 18.41 |
| 02:00 PM | 5,942 | 1,555 | 7,497 | *7.48%* | 16.44 |
| 03:00 PM | 5,054 | 1,467 | 6,521 | *6.51%* | 14.30 |
| 04:00 PM | 4,807 | 2,067 | 6,874 | *6.86%* | 15.07 |
| 05:00 PM | 4,358 | 2,097 | 6,455 | *6.44%* | 14.16 |
| 06:00 PM | 3,878 | 1,439 | 5,317 | *5.30%* | 11.66 |
| 07:00 PM | 2,274 | 725 | 2,999 | *2.99%* | 6.58 |
| 08:00 PM | 366 | 144 | 510 | *0.51%* | 1.12 |
| 09:00 PM | 89 | 40 | 129 | *0.13%* | 0.28 |
| 010:00 PM | 53 | 34 | 87 | *0.09%* | 0.19 |
| 011:00 PM | 44 | 7 | 51 | *0.05%* | 0.11 |
| **15-Month Total** | **75,155** | **25,086** | **100,241** | *100.00%* | **219.83** |

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## Tammany Trace User Volumes by Month

| | Total Bicyclists | Total Pedestrians | Total Users | Average Daily Bicyclists | Average Daily Pedestrians | Average Daily Users | Average Daily Temperature | Total Precipitation (in) |
|---|---|---|---|---|---|---|---|---|
| May, 2014 (partial--15 days) | 3,138 | 844 | 3,982 | *209* | *56* | 265 | 74 | 3.25 |
| June, 2014 | 5,928 | 1,526 | 7,454 | *198* | *51* | 248 | 80 | 6.41 |
| July, 2014 | 6,080 | 1,535 | 7,615 | *196* | *50* | 246 | 80 | 7.4 |
| August, 2014 | 6,227 | 1,657 | 7,884 | *201* | *53* | 254 | 82 | 3.47 |
| September, 2014 | 6,027 | 1,742 | 7,769 | *201* | *58* | 259 | 79 | 1.46 |
| October, 2014 | 5,618 | 2,213 | 7,831 | *181* | *71* | 253 | 69 | 2.6 |
| November, 2014 | 4,054 | 1,507 | 5,561 | *135* | *50* | 185 | 54 | 1.59 |
| December, 2014 | 2,373 | 1,645 | 4,018 | *77* | *53* | 130 | 56 | 5.04 |
| January, 2015 | 3,069 | 1,661 | 4,730 | *99* | *54* | 153 | 50 | 5.02 |
| February, 2015 | 2,622 | 1,427 | 4,049 | *94* | *51* | 145 | 50 | 1.68 |
| March, 2015 | 4,689 | 1,951 | 6,640 | *151* | *63* | 214 | 65 | 5.47 |
| April, 2015 | 4,606 | 1,652 | 6,258 | *154* | *55* | 209 | 71 | 10.09 |
| May, 2015 | 5,938 | 2,068 | 8,006 | *192* | *67* | 258 | 75 | 3.95 |
| June, 2015 | 6,007 | 1,609 | 7,616 | *200* | *54* | 254 | 80 | 2.81 |
| July, 2015 | 5,740 | 1,380 | 7,120 | *185* | *45* | 230 | 84 | 2.53 |
| August, 2015 (partial--15 days) | 3,039 | 669 | 3,708 | *203* | *45* | 247 | 84 | 0.68 |
| **15-Month Total** | **75,155** | **25,086** | **100,241** | ***165*** | ***55*** | **220** | **68** | **59.38** |