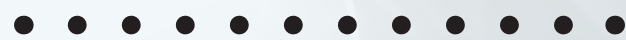


March 2021

2020
North Central Texas



Bicycle and Pedestrian Traffic Count Report



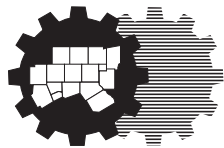
North Central Texas
Council of Governments

What is NCTCOG?

The **North Central Texas Council of Governments** (NCTCOG) is a voluntary association of, by, and for **local governments** within the 16-county North Central Texas Region. The agency was established by state enabling legislation in 1966 to assist local governments in **planning** for common needs, **cooperating** for mutual benefit, and **coordinating** for sound regional development. Its purpose is to strengthen both the individual and collective power of local governments, and to help them recognize regional opportunities, resolve regional problems, eliminate unnecessary duplication, and make joint regional decisions – as well as to develop the means to implement those decisions.

North Central Texas is a 16-county **metropolitan region** centered around Dallas and Fort Worth. The region has a population of more than 7 million (which is larger than 38 states), and an area of approximately 12,800 square miles (which is larger than nine states). NCTCOG has 229 member governments, including all 16 counties, 169 cities, 19 independent school districts, and 25 special districts.

NCTCOG's **structure** is relatively simple. An elected or appointed public official from each member government makes up the **General Assembly** which annually elects NCTCOG's **Executive Board**. The Executive Board is composed of 17 locally elected officials and one ex-officio non-voting member of the legislature. The Executive Board is the policy-making body for all activities undertaken by NCTCOG, including program activities and decisions, regional plans, and fiscal and budgetary policies. The Board is supported by policy development, technical advisory and study **committees** – and a professional staff led by **R. Michael Eastland**, Executive Director.



NCTCOG's offices are located in Arlington in the Centerpoint Two Building at 616 Six Flags Drive (approximately one-half mile south of the main entrance to Six Flags Over Texas).

North Central Texas Council of Governments
P. O. Box 5888
Arlington, Texas 76005-5888
(817) 640-3300

NCTCOG's Department of Transportation

Since 1974 NCTCOG has served as the Metropolitan Planning Organization (MPO) for transportation for the Dallas-Fort Worth area. NCTCOG's Department of Transportation is responsible for the regional planning process for all modes of transportation. The department provides technical support and staff assistance to the Regional Transportation Council and its technical committees, which compose the MPO policy-making structure. In addition, the department provides technical assistance to the local governments of North Central Texas in planning, coordinating, and implementing transportation decisions.

Prepared in cooperation with the Federal Highway Administration, US Department of Transportation, and the Texas Department of Transportation.

"The contents of this report reflect the views of the authors who are responsible for the opinions, findings, and conclusions presented herein. The contents do not necessarily reflect the views or policies of the Federal Highway Administration, the Federal Transit Administration, or the Texas Department of Transportation."

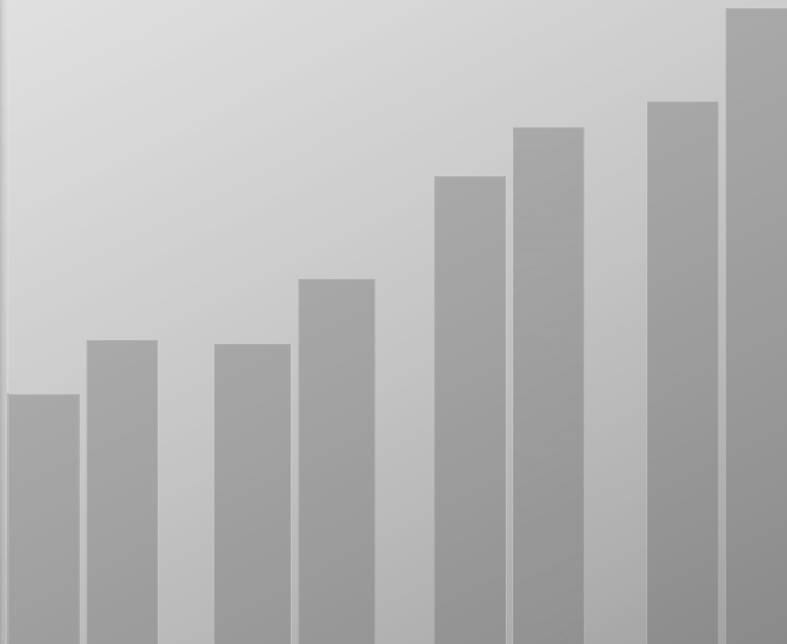


2020

North Central Texas



Bicycle and Pedestrian Traffic Count Report



March 2021



North Central Texas
Council of Governments

NCTCOG Executive Board 2020-2021

President
Ray Smith
Mayor, Town of Prosper

Vice President
David Sweet
County Judge, Rockwall County

Secretary-Treasurer
Kelly Allen Gray
Councilmember, City of Fort Worth

Past President
J.D. Clark
County Judge, Wise County

Director
Alfonso Campos
County Judge, Erath County

Director
Gary L. Caplinger
Mayor Pro Tem, City of Allen

Director
Rick Carmona
Mayor, City of Terrell

Director
Tammy Dana-Bashian
Mayor, City of Rowlett

Director
Bill Heidemann
Mayor, City of Corinth

Director
Chris Hill
County Judge, Collin County

Director
Clay Lewis Jenkins
County Judge, Dallas County

Director
Lee M. Kleinman
Councilmember, City of Dallas

Director
Bobbie Mitchell
Commissioner, Denton County

Director
Andrew Piel
Councilmember, City of Arlington

Director
Kayci Prince
Mayor Pro Tem, City of Plano

Director
John Ryan
Councilmember, City of Denton

Director
B. Glen Whitley
County Judge, Tarrant County

Ex Officio, Non-Voting Member
Yvonne Davis
Member of the Texas Legislature

Executive Director
R. Michael Eastland

Regional Transportation Council 2020-2021

Roger Harmon, Chair
County Judge, Johnson County

Theresa Daniel, Ph.D., Vice Chair
Commissioner, Dallas County

Ann Zadeh, Secretary
Councilmember, City of Fort Worth

Tennell Atkins
Councilmember, City of Dallas

Richard E. Aubin
Councilmember, City of Garland

Dennis Bailey
Commissioner, Rockwall County

Mohamed "Mo" Bur, P.E.
District Engineer, Texas Department
of Transportation, Dallas District

Dianne Costa
Board Member, Denton County Transportation
Authority

Jeff Davis
Chair, Trinity Metro

Pat Deen
County Judge, Parker County

Rudy Durham
Mayor, City of Lewisville

Andy Eads
County Judge, Denton County

Kevin Falconer
Mayor, City of Carrollton

Gary Fickes
Commissioner, Tarrant County

George Fuller
Mayor, City of McKinney

Barry L. Gordon
Mayor, City of Duncanville

Rick Grady
Councilmember, City of Plano

Lane Grayson
Commissioner, Ellis County

Mojoy Haddad
Board Member, North Texas Tollway
Authority

Ivan Hughes
Councilmember, Town of Addison

Clay Lewis Jenkins
County Judge, Dallas County

Ron Jensen
Mayor, City of Grand Prairie

Carl L. Johnson, P.E.
District Engineer, Texas Department
of Transportation, Fort Worth District

Jungus Jordan
Mayor Pro Tem, City of Fort Worth

John Keating
Councilmember, City of Frisco

Mike Leyman
Councilmember, City of Mansfield

B. Adam McGough
Deputy Mayor Pro Tem, City of Dallas

William Meadows
Board Member, Dallas Fort Worth
International Airport

Allan E. Meagher
Councilmember, City of Irving

Cara Mendelsohn
Councilmember, City of Dallas

Robert Miklos
Mayor Pro Tem, City of Mesquite

Cary Moon
Councilmember, City of Fort Worth

Ignacio T. Nuñez, M.D.
Councilmember, City of Arlington

Philip J. Ritter
Citizen Representative, City of Dallas

John Ryan
Councilmember, City of Denton

Chris Schulmeister
Councilmember, City of Allen

Casey Thomas II
Councilmember, City of Dallas

Jeremy Tompkins
Mayor Pro Tem, City of Euless

T. Oscar Trevino, Jr., P.E.
Mayor, City of North Richland Hills

William Tsao, P.E.
Citizen Representative, City of Dallas

Paul N. Wageman
Chair, Dallas Area Rapid Transit

Duncan Webb
Commissioner, Collin County

B. Glen Whitley
County Judge, Tarrant County

W. Jeff Williams, P.E.
Mayor, City of Arlington

Michael Morris, P.E.
Director of Transportation, NCTCOG

Surface Transportation Technical Committee

Brian Moen, Chair
Assistant Director of Transportation,
City of Frisco

Table of Contents

Introduction	1
Mode Share Split	3
Average Traffic Counts.....	5
Sample Week Data	14
Impacts of COVID-19 on Trail Usage	17
Summary	27
Limitations of Data	27

List of Exhibits

Exhibit 1: Counters by City (2020).....	1
Exhibit 2: Bicycle and Pedestrian Count Stations in the North Central Texas Region (2020).....	2
Exhibit 3: Regional Mode Share Split of Count Stations in the North Central Texas Region (2020).....	3
Exhibit 4: Mode Share Split by Count Station (2020).....	4
Exhibit 5: Annual Average Daily Bicycle and Pedestrian Traffic (2020)	6
Exhibit 6: Allen Total Traffic by Month (2020)	7
Exhibit 7: Dallas Total Traffic by Month (2020)	8
Exhibit 8: Denton Total Traffic by Month (2020).....	9
Exhibit 9: Fort Worth Total Traffic by Month (2020)	10
Exhibit 10: Irving Total Traffic by Month (2020)	11
Exhibit 11: North Richland Hills Total Traffic by Month (2020)	12
Exhibit 12: Plano Total Traffic by Month (2020).....	13
Exhibit 13: Total Daily Traffic During the Week of September 13, 2020 (Exceedances of 1,000)	15
Exhibit 14: Total Daily Traffic During the Week of September 13, 2020 (Less than 1,000).....	16
Exhibit 15: Selected Bike and Pedestrian Count Sites.....	20
Exhibit 16: Monthly Trail Usage (Percent Change 2019 vs 2020).....	21

Exhibit 17: Daily Average Trail Volumes (May 2019 vs May 2020).....22

Exhibit 18: Full Week Trail Volumes by Location (Percent Change May 2019 vs May 2020)23

Exhibit 19: Day of Week (Percent Change May 2019 vs May 2020)24

Exhibit 20: Mode Share (May 2019 vs May 2020)25

Exhibit 21: Hourly Profile: (Percent Change May 2019 vs May 2020).....26

Introduction

The objective of the North Central Texas Council of Governments' (NCTCOG) annual bicycle and pedestrian traffic count report is to provide regional stakeholders and the public a better understanding of travel behavior and how much activity is occurring on shared-use paths throughout the region.

Thirty-six count stations are installed across the Dallas-Fort Worth region, spread across four counties. Three agencies in addition to NCTCOG now locally own and maintain bicycle and pedestrian count equipment (Irving, Plano, Dallas), with Irving being a new addition to this year's report. Additionally, three new Dallas count stations are also highlighted in the report this year including Glendale Park South Loop Trail, Northaven Trail at St. Jude's Drive, and Trinity Strand Trail at Turtle Creek Plaza. Throughout 2020 several count stations did not collect sufficient data for reporting purposes. Of the 36, 19 count stations are included in this report focused on transportation purposes.

In 2021, the Denton County Transportation Authority will install four counters along the A-train Rail Trail in Denton County,

expanding upon the existing data collection sites along the corridor. These count stations will be featured in the 2021 report.

Exhibit 1 identifies the number of count stations per agency included in this report, while Exhibit 2 identifies the location of existing shared-use path corridors with equipment collecting data. The permanent equipment utilizes inductive loop and passive-infrared sensor technology to distinguish bicyclists from pedestrians, as well as their direction of travel.

Exhibit 1: Counters by City (2020)

Agency	Number of Counters Featured in the Annual Report
City of Allen	1
City of Dallas	10
City of Denton	1
City of Fort Worth	0
City of Irving	1
City of North Richland Hills	1
City of Plano	3
Tarrant Regional Water District (Fort Worth)	2
Total	19

Exhibit 2:

Bicycle and Pedestrian Count Stations in the North Central Texas Region (2020)

Legend

Count Stations Featured in the Annual Report

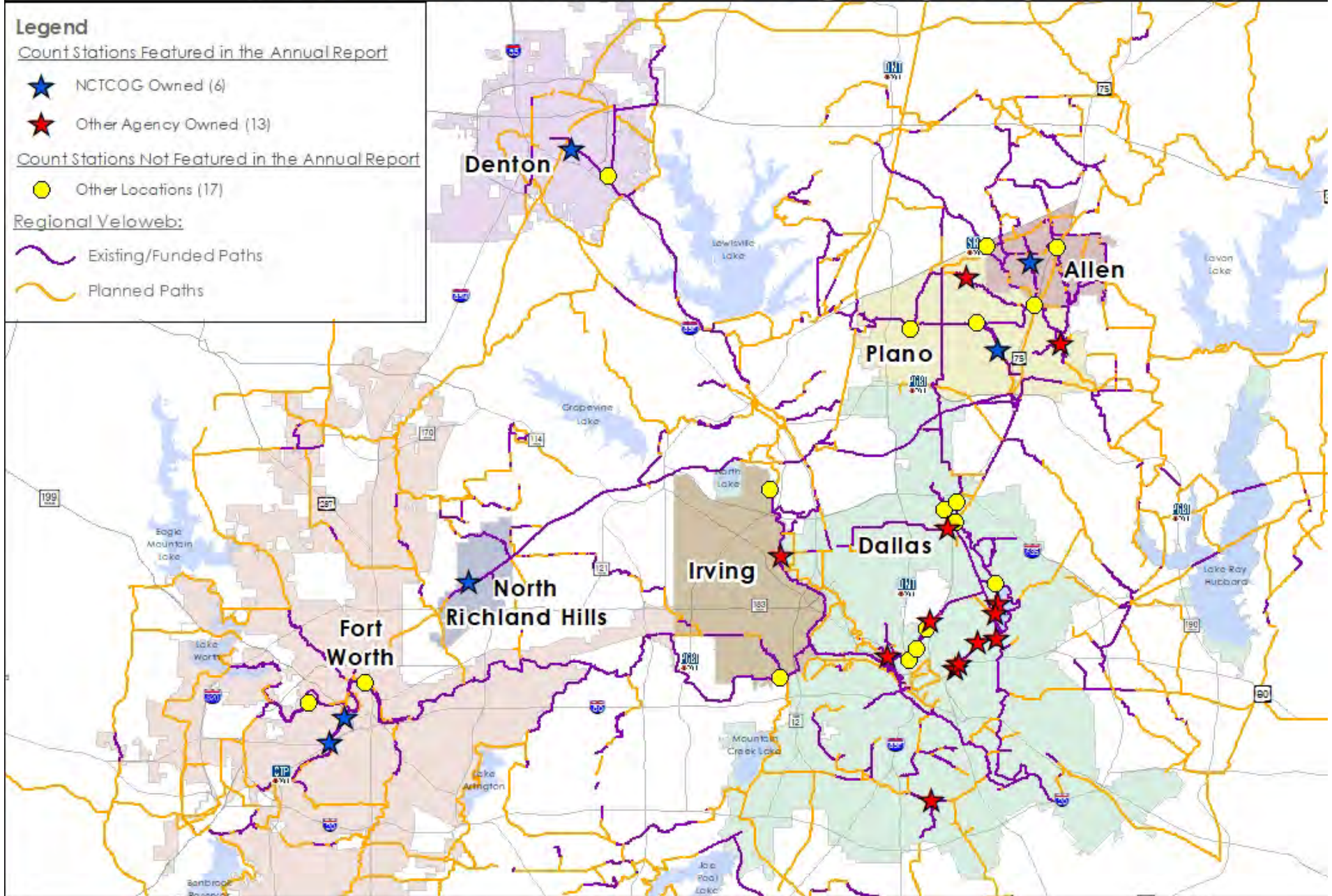
- ★ NCTCOG Owned (6)
- ★ Other Agency Owned (13)

Count Stations Not Featured in the Annual Report

- Other Locations (17)

Regional Veloweb:

- Existing/Funded Paths
- Planned Paths



0 5 10 Miles

May 2021

Mode Share Split

In 2020, the regional mode share split of all count stations featured in this annual report was 60 percent pedestrians and 40 percent bicyclists, a five percent increase in mode share for bicycling over 2019 (see Exhibit 3). Exhibit 4 identifies the mode share split per individual count station with a marker indicating how that site compares to the regional average. While the number of count stations with the ratio of pedestrians to bicyclists varies, the locations recording a majority of people walking, such as the Katy Trail, feature the highest volumes which contribute to



a regional mode split. The increase in bicycling mode share is likely attributed to an increase in bicycle sales at the outset of the COVID-19 pandemic and is discussed further on page 17.

Exhibit 3:

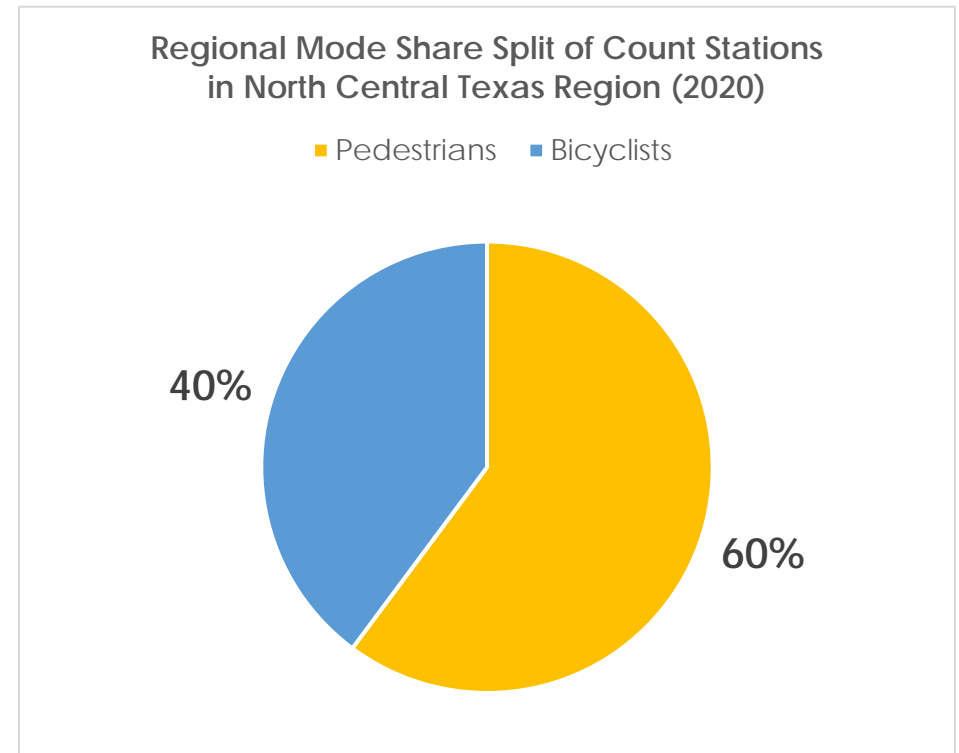
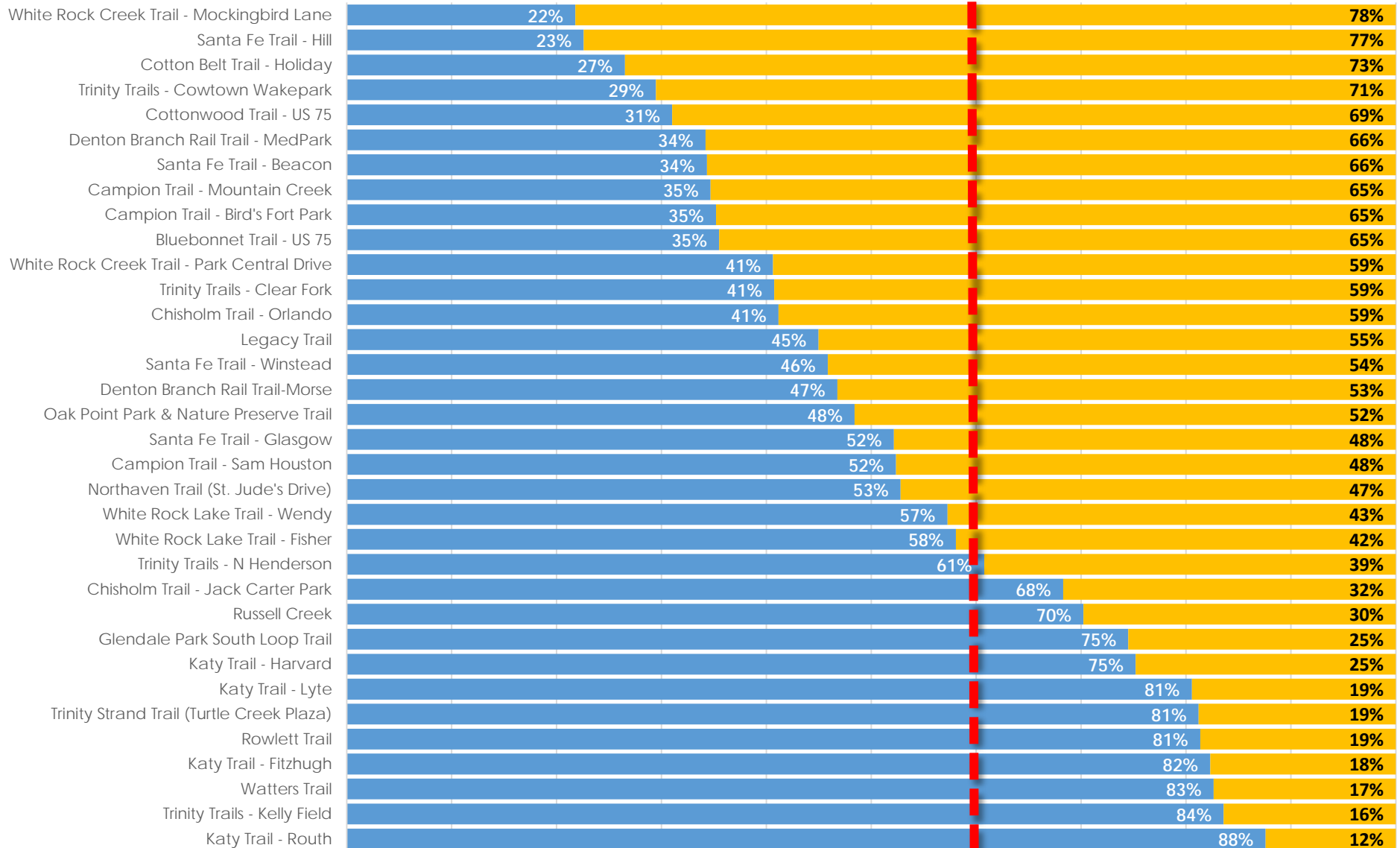


Exhibit 4:

Mode Share Split by Count Station (2020)

■ Pedestrians ■ Bicyclists

*Regional Mode Share Split
(60% pedestrians/ 40% bicyclists)*



Average Traffic Counts

A standard metric used in the transportation planning and engineering fields is annual average daily traffic (AADT). This is a measure of the average number of motor vehicles traveling a roadway. By applying the same methodology to bicyclists and pedestrians, seasonal variation of traffic counts throughout a year is averaged to develop one statistic that summarizes how much bicycling and walking activity is occurring at a specific location.

Exhibit 5 identifies bicycle and pedestrian AADT in 2020 for all locations reported. Two locations along the Katy Trail in Dallas averaged more than 2,500 bicycle and pedestrian traffic counts per day, which was the highest in the region. However, due to sections of the Katy Trail being closed for a period of time in 2020 for construction the average daily counts are lower than reported in previous years.

Exhibits 6 through 12 identify the total traffic by month for count station locations in each city that collects bicycle and pedestrian traffic data.

The fluctuation in counts in 2020 across locations varied. Count locations with missing gaps of data or unexplained spikes were not imputed because the unique increase of counts in 2020 is not consistent with historical trends and patterns.



Data collection along the Trinity Trails near Kelly Field in Fort Worth.

Exhibit 5:

Annual Average Daily Bicycle and Pedestrian Traffic (2020)

■ Pedestrians ■ Bicyclists

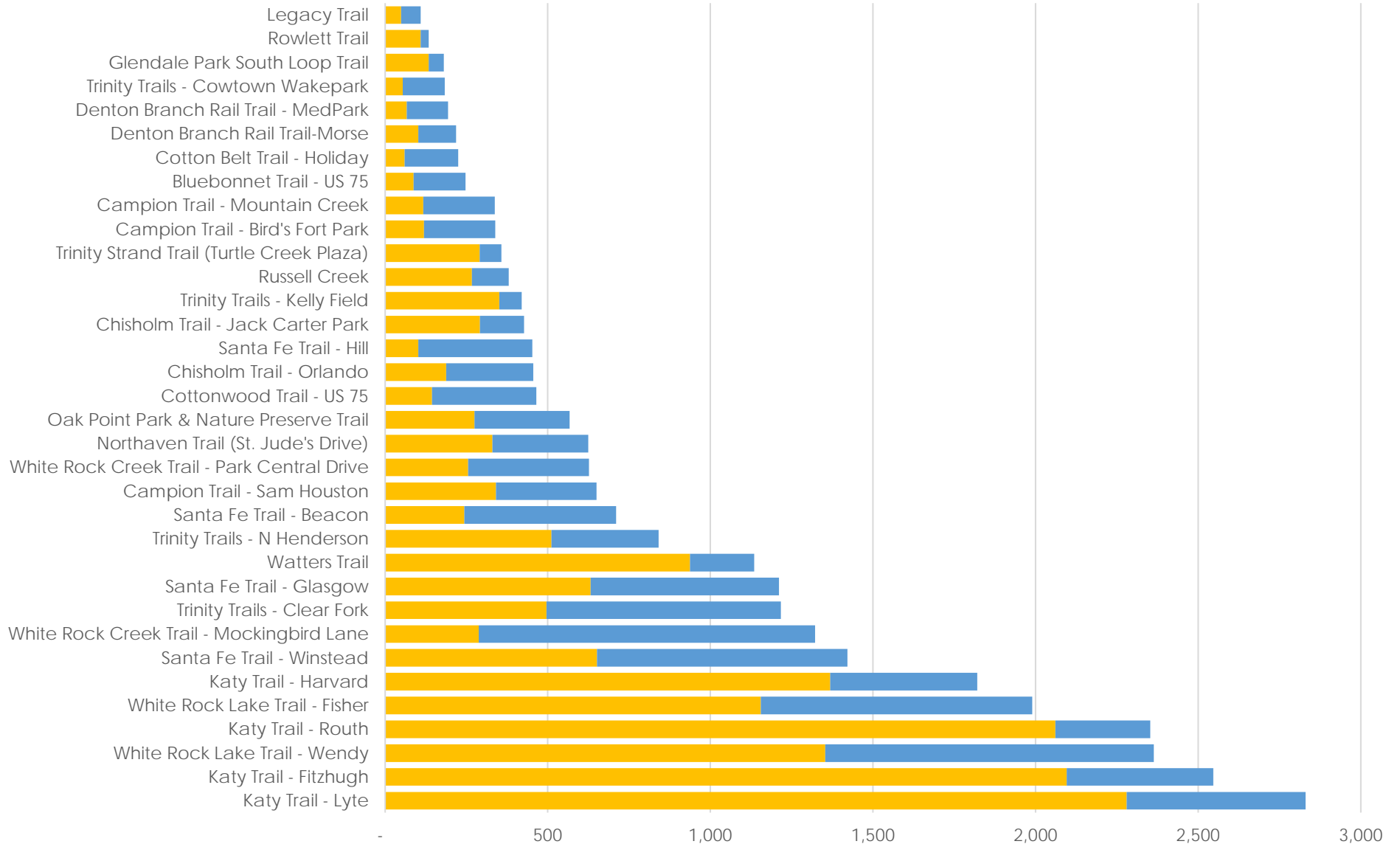


Exhibit 6:

Allen

Total Traffic by Month (2020)

Watters Trail

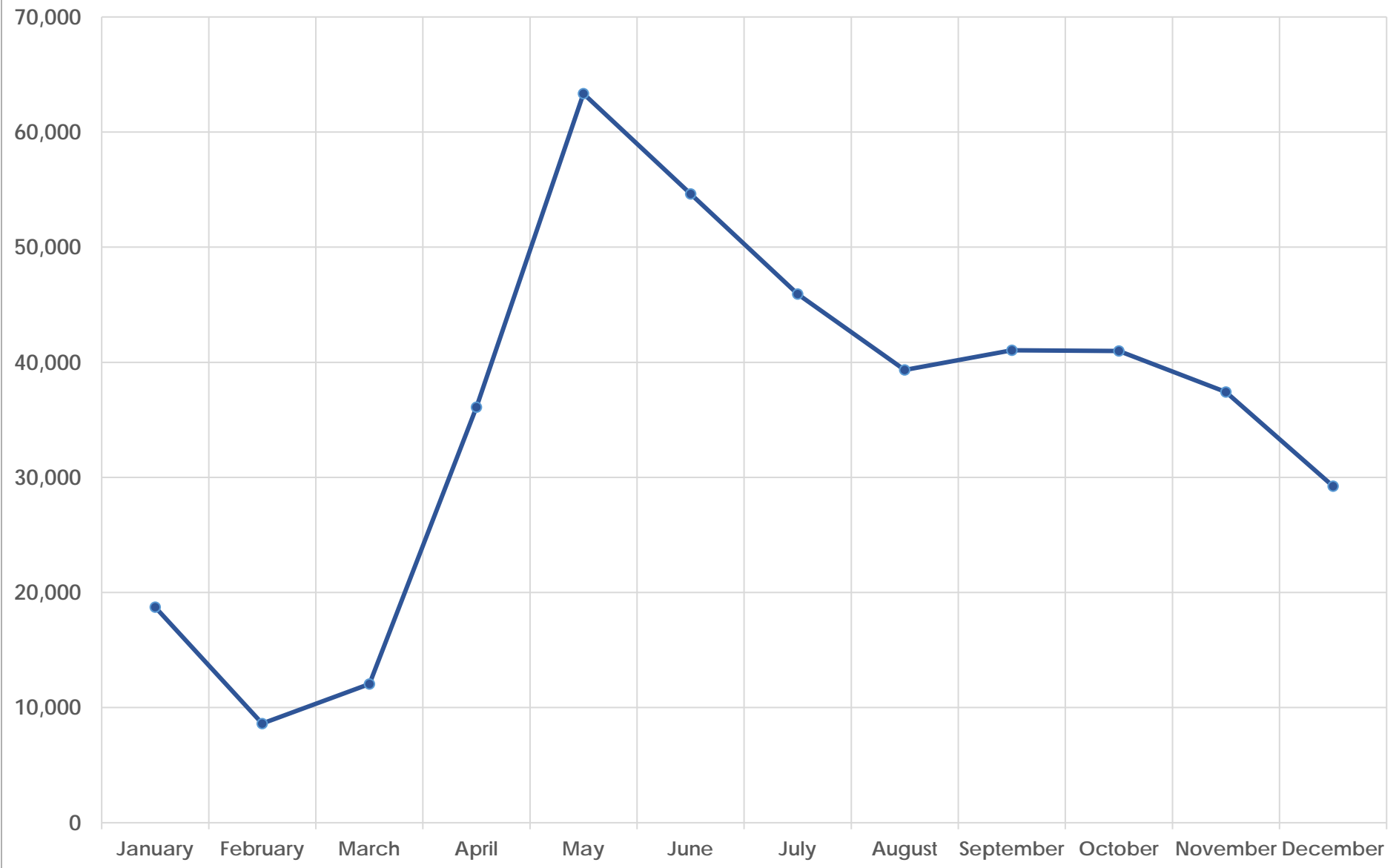


Exhibit 7:

Dallas Total Traffic by Month (2020)

- Glendale Park South Loop Trail
- Northhaven Trail (St. Jude's Drive)
- Santa Fe Trail - Glasgow
- White Rock Lake Trail - Wendy
- Katy Trail - Harvard
- Santa Fe Trail - Beacon
- Trinity Strand Trail (Turtle Creek Plaza)

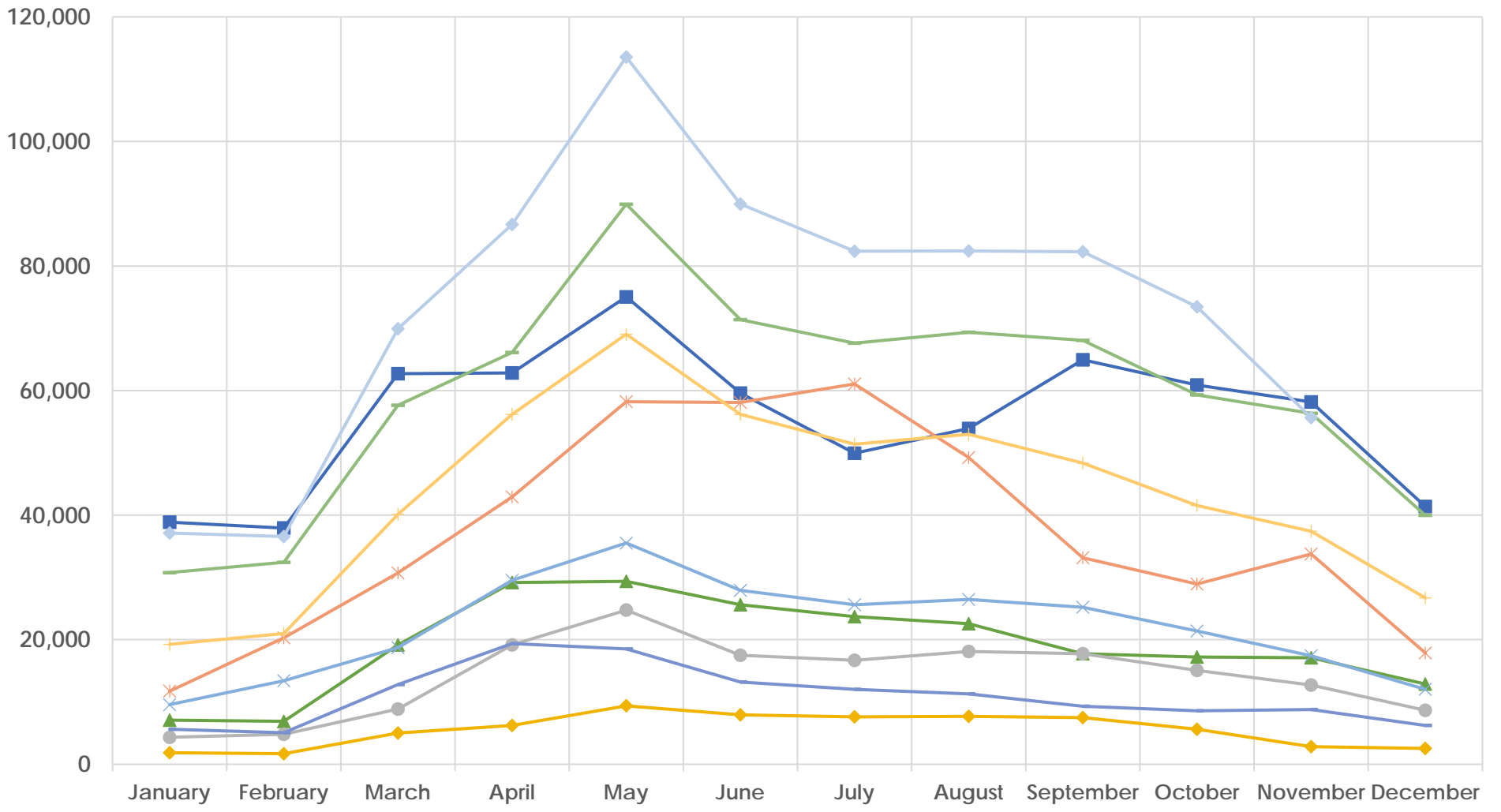


Exhibit 8:

Denton Total Traffic by Month (2020)

—●— Denton Branch Rail Trail-Morse

Data collected June through August may have been impacted by an insect infestation.

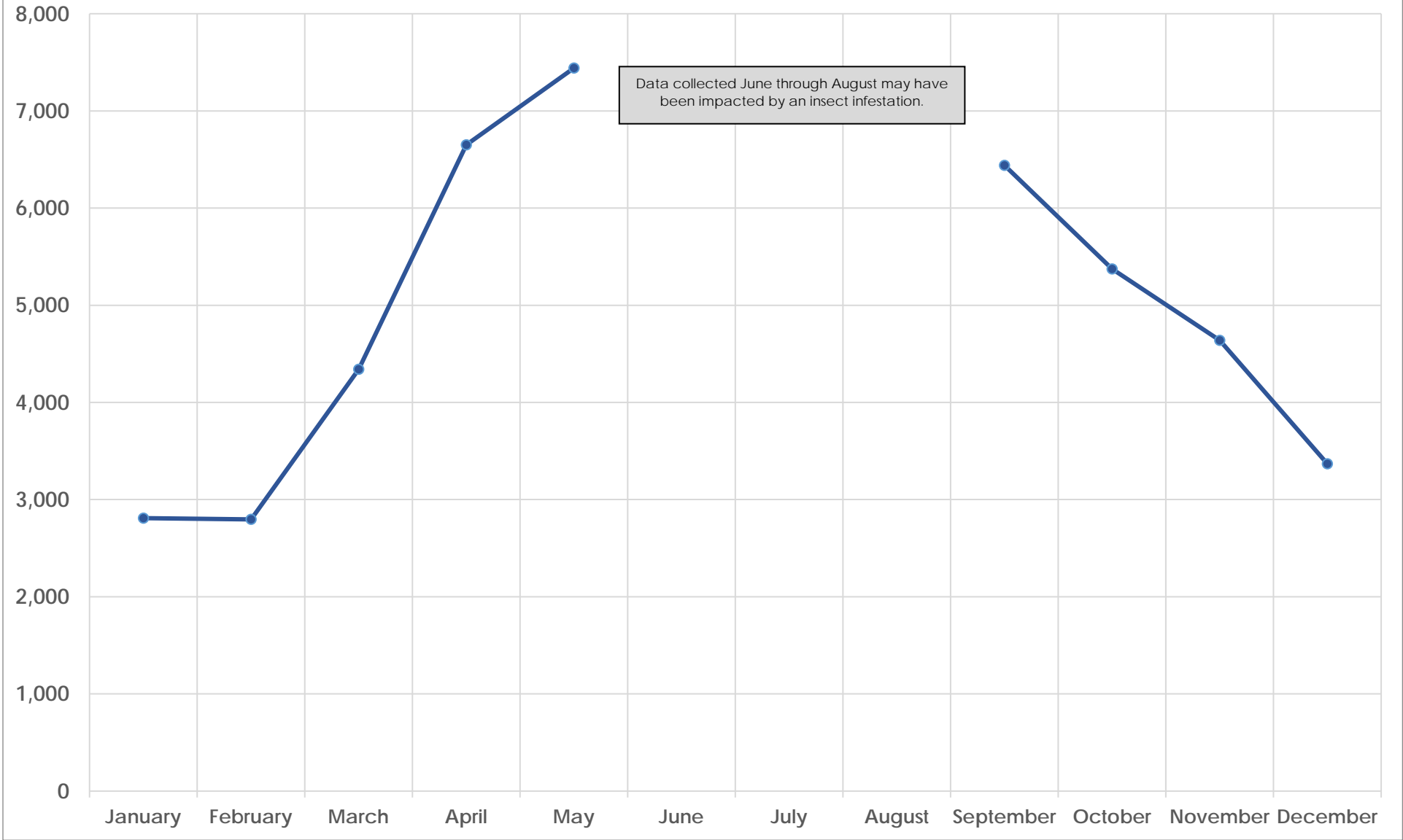
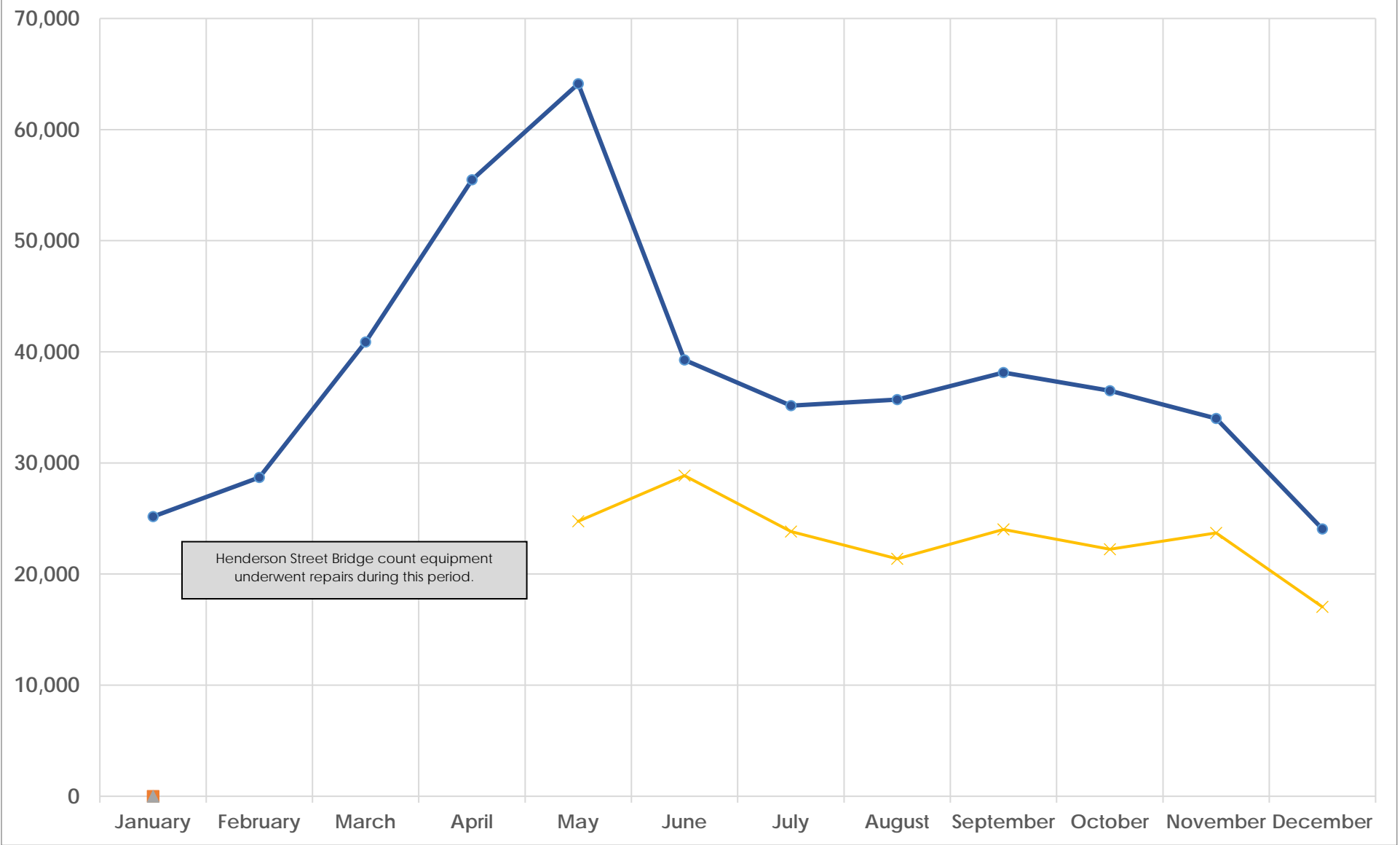


Exhibit 9:

Fort Worth Total Traffic by Month (2020)

Trinity Trails - Clear Fork Trinity Trails - N Henderson



Henderson Street Bridge count equipment underwent repairs during this period.

Exhibit 10:

Irving

Total Traffic by Month (2020)

●— Champion Trail - Bird's Fort Park

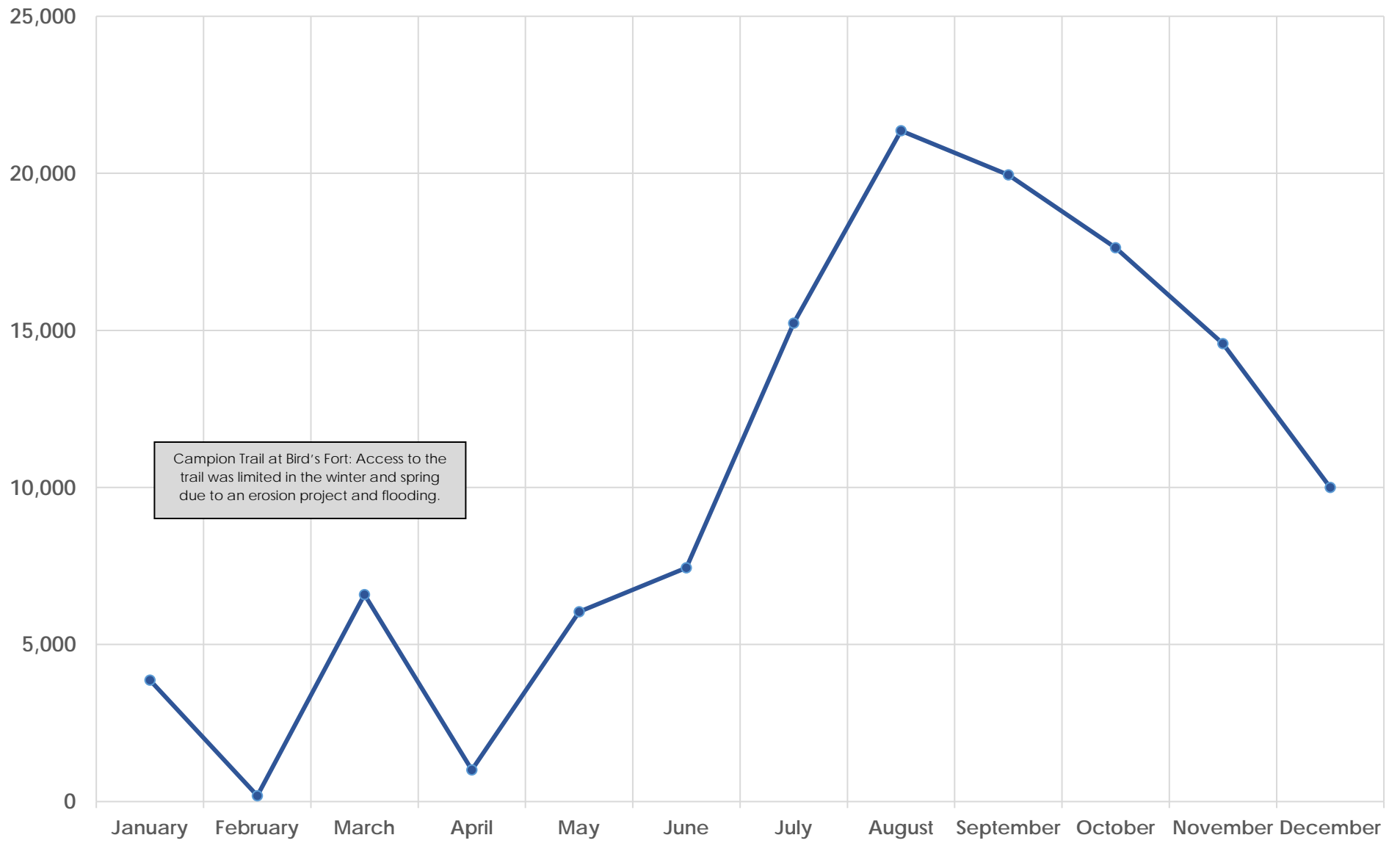


Exhibit 11:

North Richland Hills Total Traffic by Month (2020)

—●— Cotton Belt Trail - Holiday

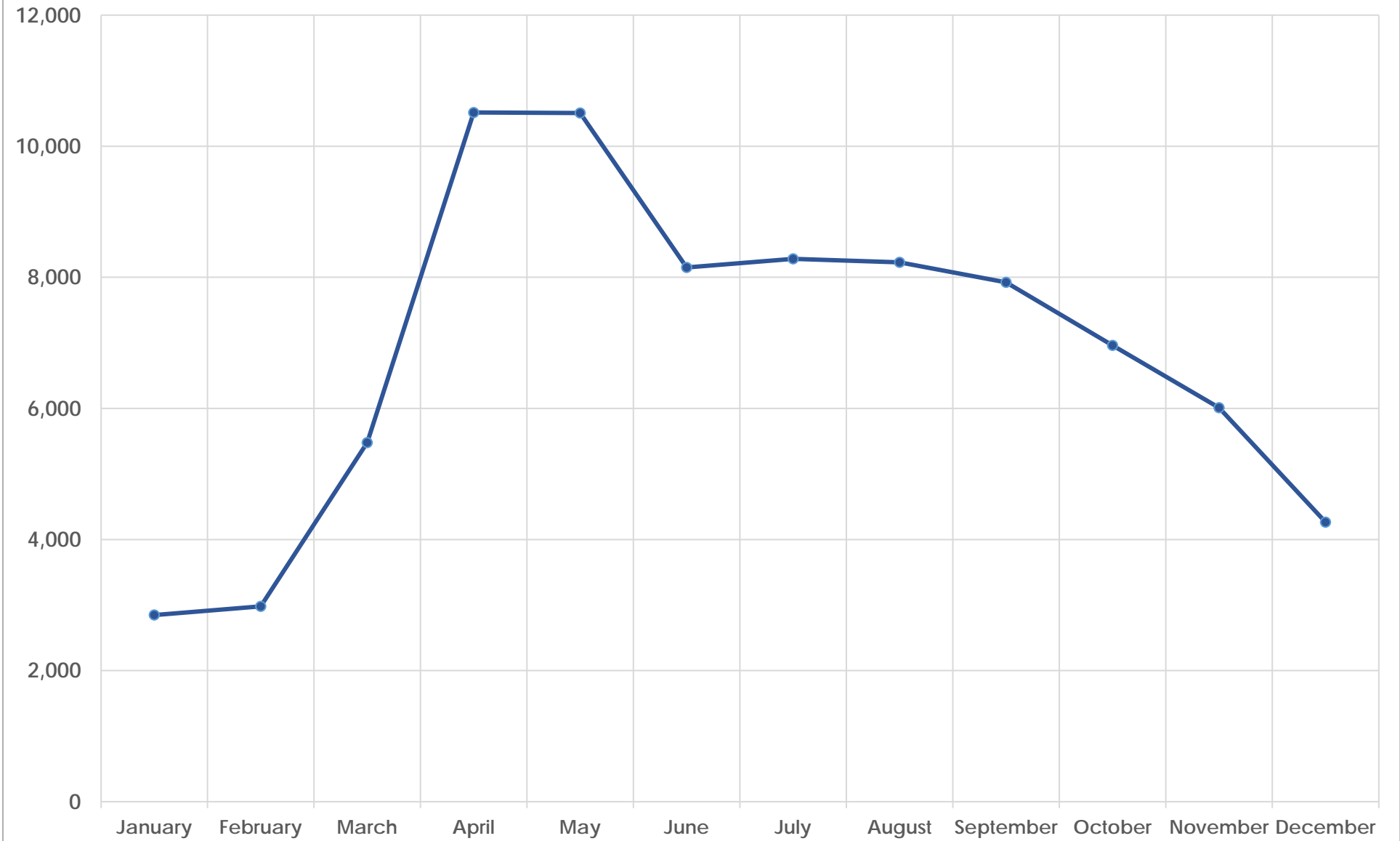
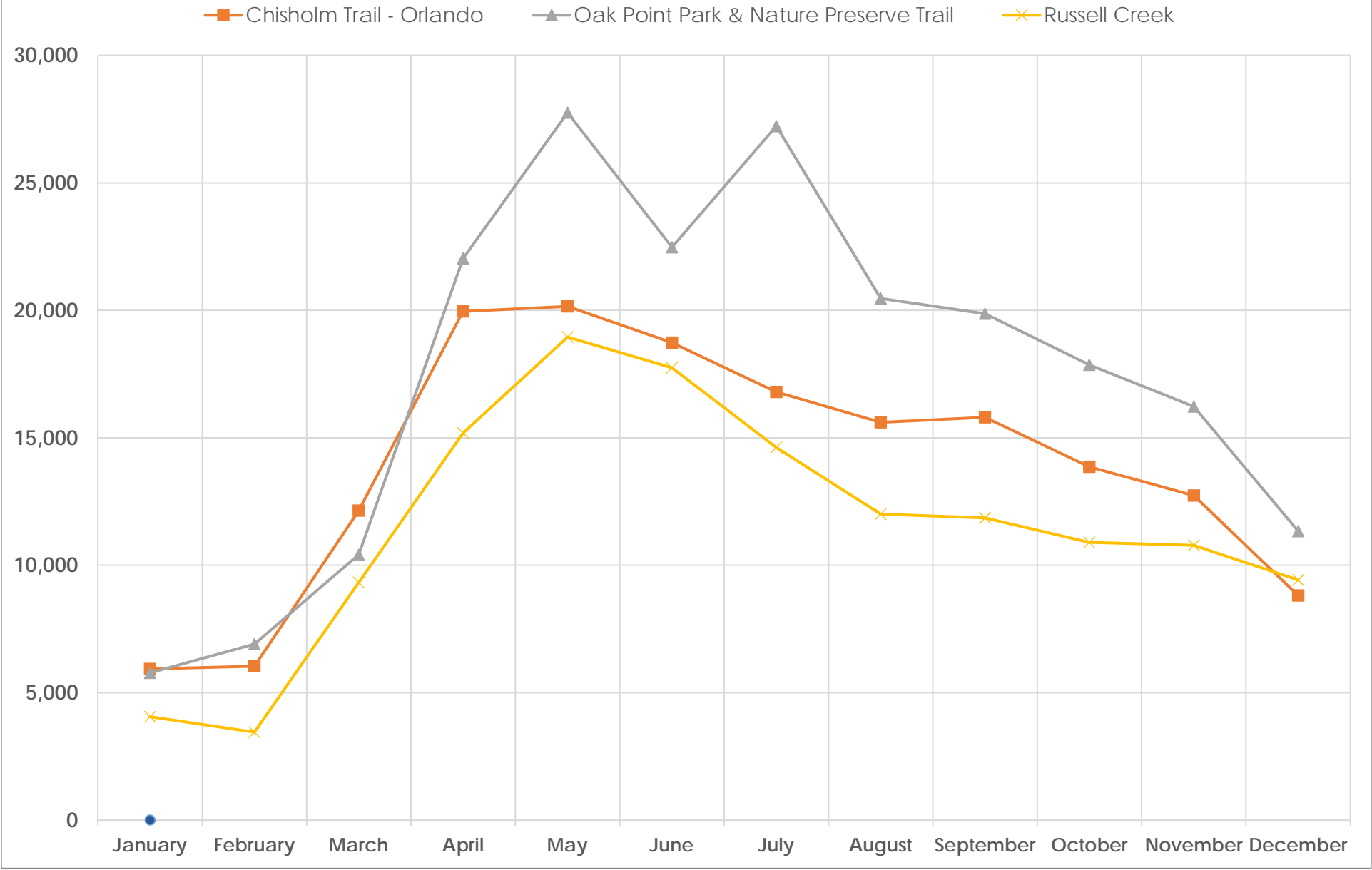


Exhibit 12:

Plano Total Traffic by Month (2020)



Sample Week Data

The week of September 13, 2020, as shown in Exhibits 13 and 14, is a representative snapshot of weekly travel patterns. The highest total traffic counts recorded this week at count stations in the region were on Saturday, September 19 with over 41,000 bicycle and pedestrian counts. Sunday, September 13 had over 37,000 counts. All 19 count stations registered a total of over 193,000 counts of people walking and bicycling in the North Central Texas region in one week.



The Clearfork Food Park in Fort Worth registered the highest number of bicycle and pedestrian traffic counts in Tarrant County.

Exhibit 13:

Total Daily Traffic During the Week of September 13, 2020
 (Locations Exceeding 1,000 Bicycle and Pedestrian Counts Per Day)

- Trinity Trails - Clear Fork
- Campion Trail - Mountain Creek
- Oak Point Park & Nature Preserve Trail
- Santa Fe Trail - Hill
- White Rock Lake Trail - Wendy
- White Rock Creek Trail - Mockingbird Lane
- Chisholm Trail - Jack Carter Park
- Katy Trail - Harvard
- Santa Fe Trail - Beacon
- Santa Fe Trail - Winstead
- Campion Trail - Bird's Fort Park
- Watters Trail
- Katy Trail - Lyte
- Santa Fe Trail - Glasgow
- White Rock Lake Trail - Fisher
- White Rock Creek Trail - Park Central Drive

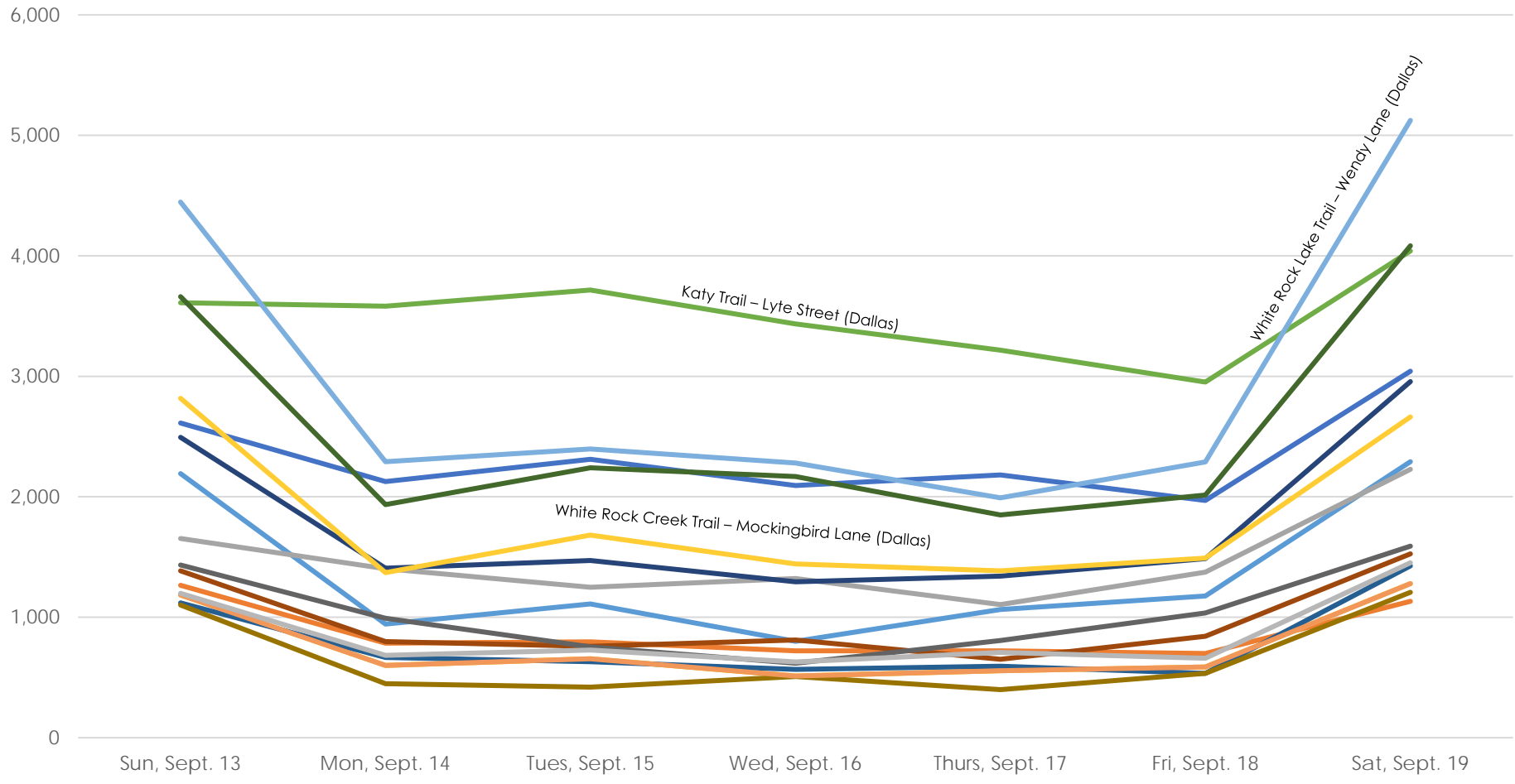
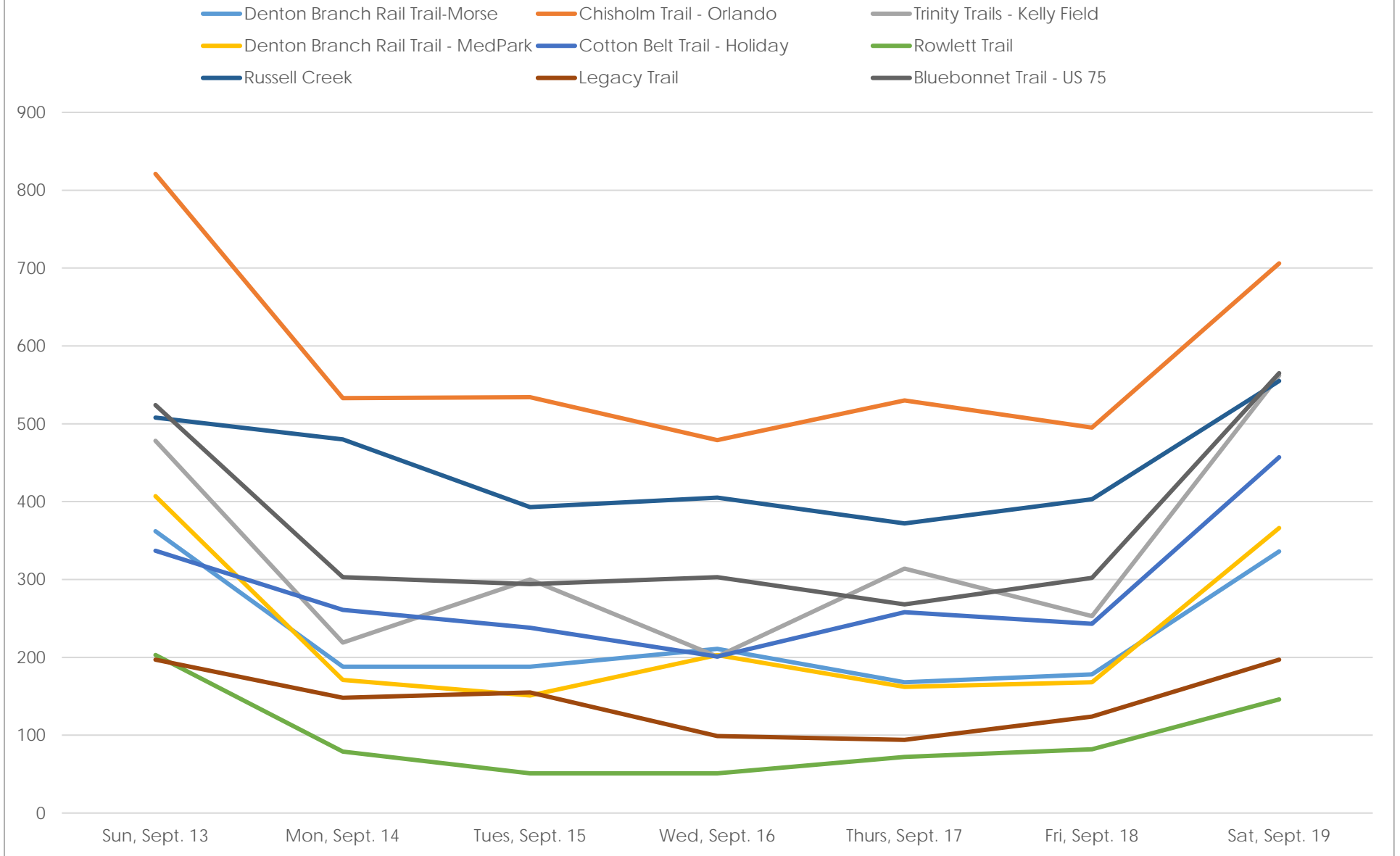


Exhibit 14:

Total Daily Traffic During the Week of September 13, 2020
 (Locations Less than 1,000 Bicycle and Pedestrian Counts Per Day Day)



Impacts of COVID-19 on Trail Usage

Since the outbreak of the coronavirus in spring 2020, NCTCOG has monitored changes in travel data for various modes of transportation, including active transportation, transit, motor vehicles, and airline travel. While those modes saw a decrease last spring and summer, there was a dramatic increase in the use of trails during 2020.

As a result of COVID “shelter-in-place” guidance and a substantial increase in work from home employment, residents in North Texas made several lifestyle changes. Many businesses in the region temporarily closed and/or operated with significantly reduced capacities. At the same time, bicycle stores in the region experienced an overwhelming boom in sales which was covered by local and national news media. The Katy Trail in Dallas, the most popular trail in the region with the highest volume of users, was so popular and congested with trail users that the City of Dallas implemented measures to encourage limitations on when people could use the Katy trail based on the first letter of their last name.

For this analysis comparing trail usage during 2020 to 2019, NCTCOG reviewed eight sample locations collecting trail data in Fort Worth, North Richland Hills, Denton, Allen, Plano, and three different sites in Dallas (Exhibit 15). Since the counters collected data prior to the coronavirus, NCTCOG was able to quantify the effect the pandemic had on the number of people bicycling and walking on trails.

The COVID-19 pandemic “shelter-in-place” guidance escalated in the North Texas region in March. As such, Exhibit 16 reflects a dramatic 50 percent increase in trail usage compared to March 2019. Trail usage continued to experience a significant increase in the spring season peaking in the month of May. Compared to May 2019, the representative trail count locations in May 2020 registered a 78 percent increase. Trail counts after May 2020 continued to be significantly higher compared to 2019 volumes.

Of the eight representative sample locations, the degree of growth of trail usage at each individual location varied across the region. Despite an attempt to minimize the number of people

on the Katy Trail to encourage social distancing, there was still a 37 percent increase on an already busy trail. Even more impressive, this increase occurred while a portion of the Katy Trail was closed for construction for a period of time which also likely discouraged people from walking and bicycling. While having lower overall volumes, trail usage in suburban areas of North Richland Hills, Plano, and Allen all increased over 100 percent, which shows that trails outside of dense urban core areas were also in high demand (Exhibit 16).

Exhibit 17 displays the daily average trail counts in both May 2019 and 2020 at each of the eight locations. The contrast between 2019 and 2020 is stark. In Exhibit 18 the Katy Trail “only” experienced a 37 percent increase, but the scale of that increase is noteworthy. During May 2020, an average day recorded nearly 3,000 trail counts on the Katy Trail near Harvard Ave. (Exhibit 17). The Katy Trail at Harvard Ave count location was selected because this segment of the trail was not impacted by a trail closure. Other sections of the Katy Trail in prior years have reported higher counts than the Harvard Ave. location, but this year access to those trail locations was restricted due to

The Dallas Morning News



construction. Of the eight sample count locations, five registered over 2,000 trail counts on an average day during May 2020, which is more than what any of the locations recorded in 2019.

When reviewing activity each day of the week, the largest growth in bicycling and walking occurred during Tuesday, Wednesday, and Thursday (Exhibit 17). Based on this data it is clear that people were taking more trips during the week than occurred in 2019.

The trail counters used in this analysis can distinguish bicyclists from pedestrians. Exhibit 19 compares the proportion of people bicycling to people walking at each of the eight sample locations. All of the locations registered an increase in the proportion of bicycle counts over 2019. This increase in bicycle usage may be directly related to the surge in bicycle sales that occurred at the beginning of the pandemic. For example, bicyclists accounted for 36 percent of traffic on the rail trail in Denton in May 2019. In May 2020, that percentage of trail usage in the same location increased to 70 percent (Exhibit 20).

Reviewing trail count data at the hourly level, trail usage on weekdays, between 10am – 7pm experienced an increase of 120 percent (Exhibit 21). More people were using trails throughout weekdays compared to before the COVID pandemic. This data also informs us that there was an increase of trail traffic on weekends, in the late morning, and also the evening around 7pm.

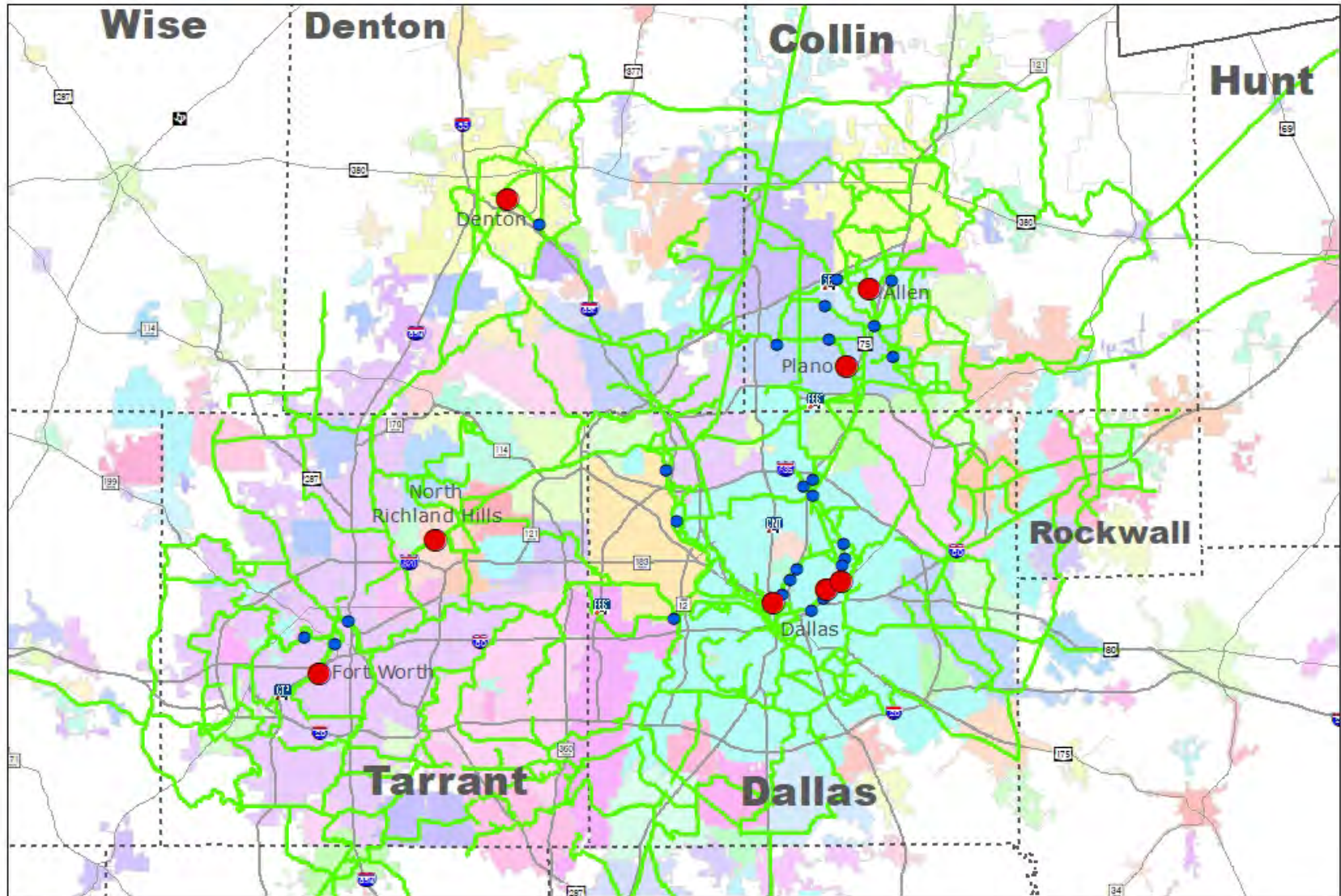


Bicycle Sales Booming During Coronavirus Pandemic

By Brooke Rogers May 26, 2020 at 4:55 pm Filed Under: Bike, Business Booming, Coronavirus, deadly virus, News, Pandemic, People Outside, sales, Social Distancing, Trails



Exhibit 15: Selected Bike and Pedestrian Count Sites



North Central Texas
Council of Governments

0 10 20 Miles

● Selected Trail Count Site(8) ● Other Trail Count Site(25) — Regional Veloweb



March 2021

Document Path: I:\Sustainable_Development\ArcGIS\Bike_Ped\BP Traffic Count Program\Count Station Locations\Annual Report Maps\2020 Report\SelectedCountSitesMap_03012021.mxd

Exhibit 16: Monthly Trail Usage(Percent Change 2019 vs 2020)

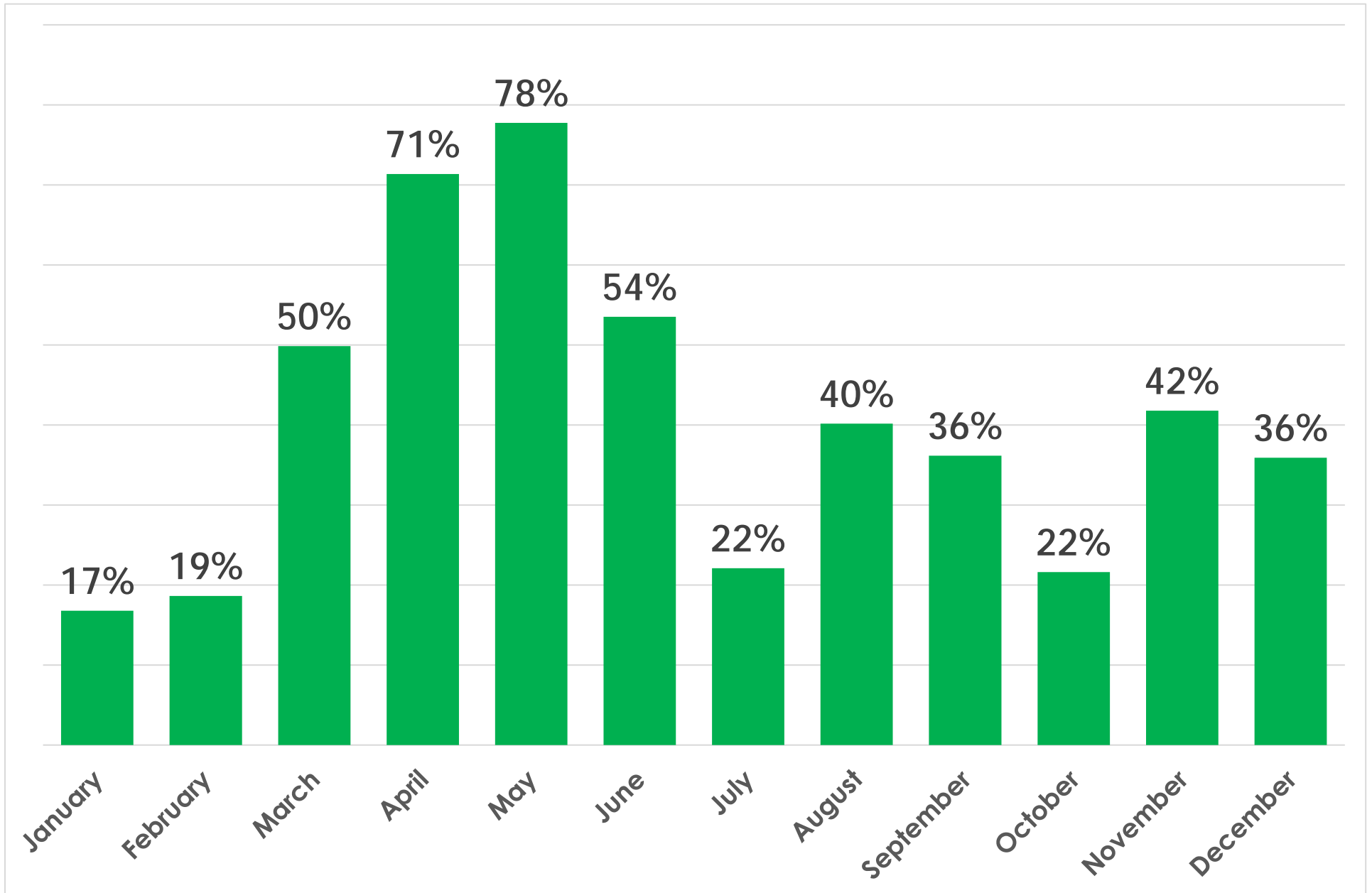


Exhibit 17: Daily Average Trail Volumes (May 2019 vs May 2020)

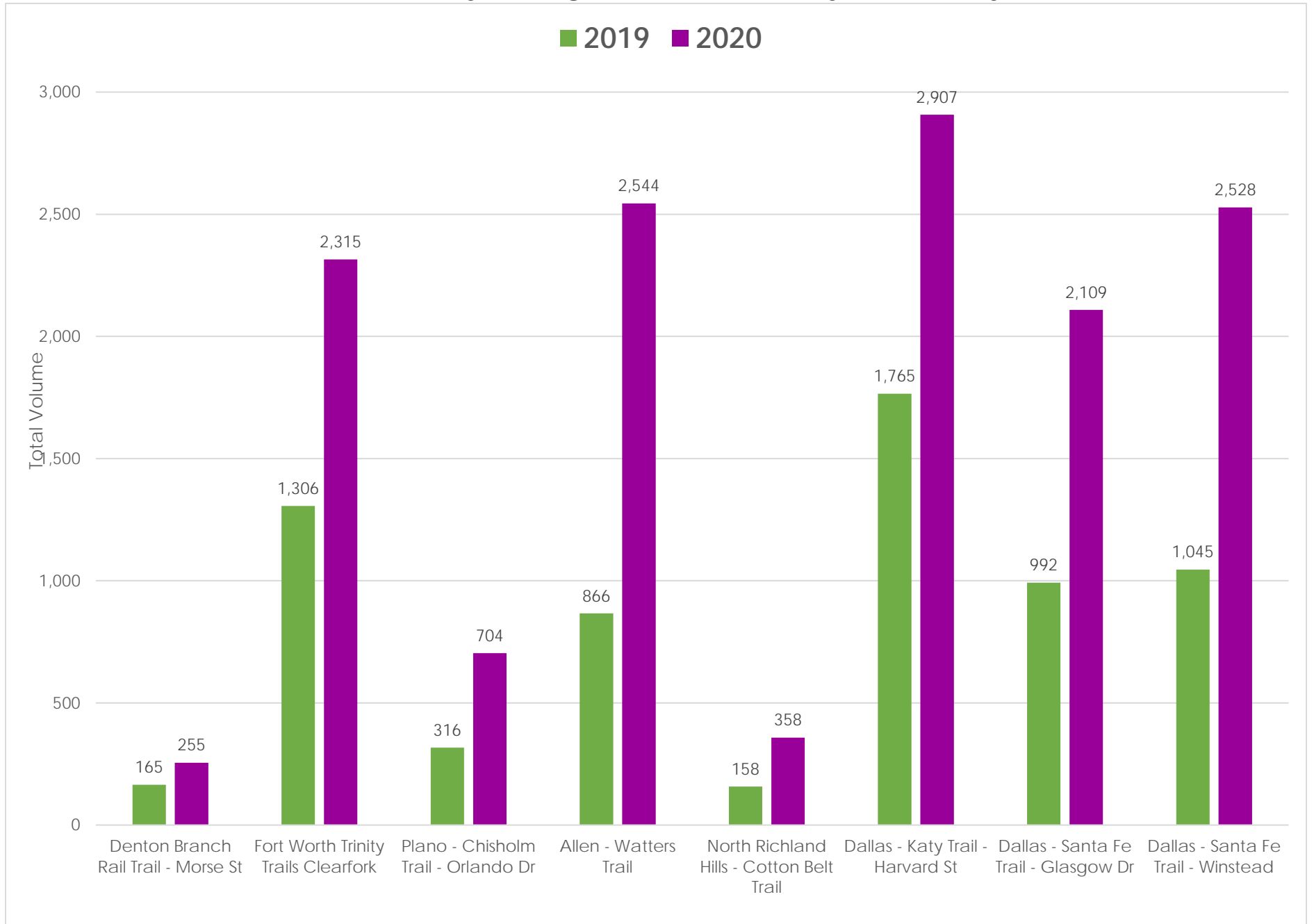


Exhibit 18: Full Week Trail Volumes by Location (Percent Change May 2019 vs May 2020)

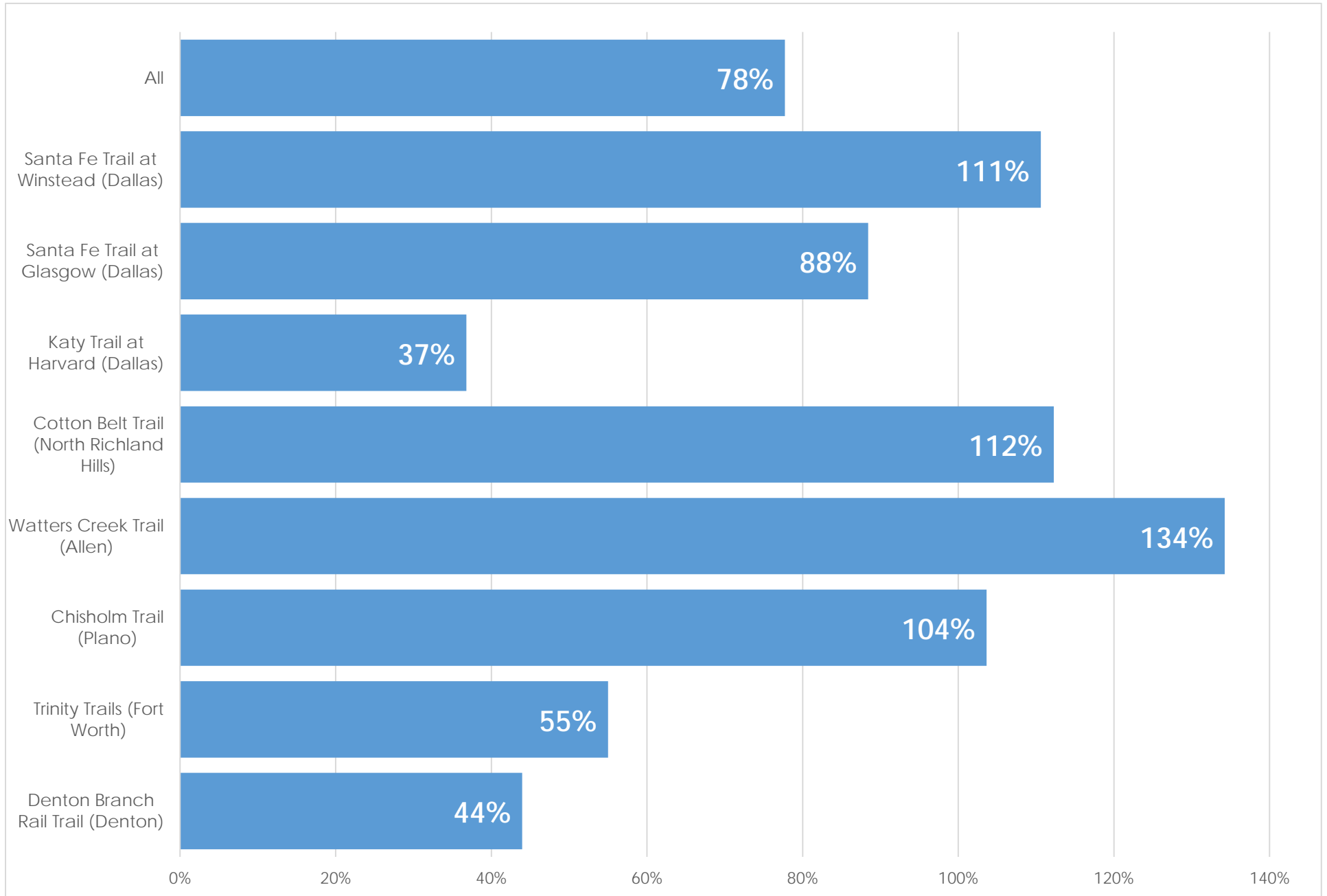


Exhibit 19: Day of Week (Percent Change May 2019 vs May 2020)

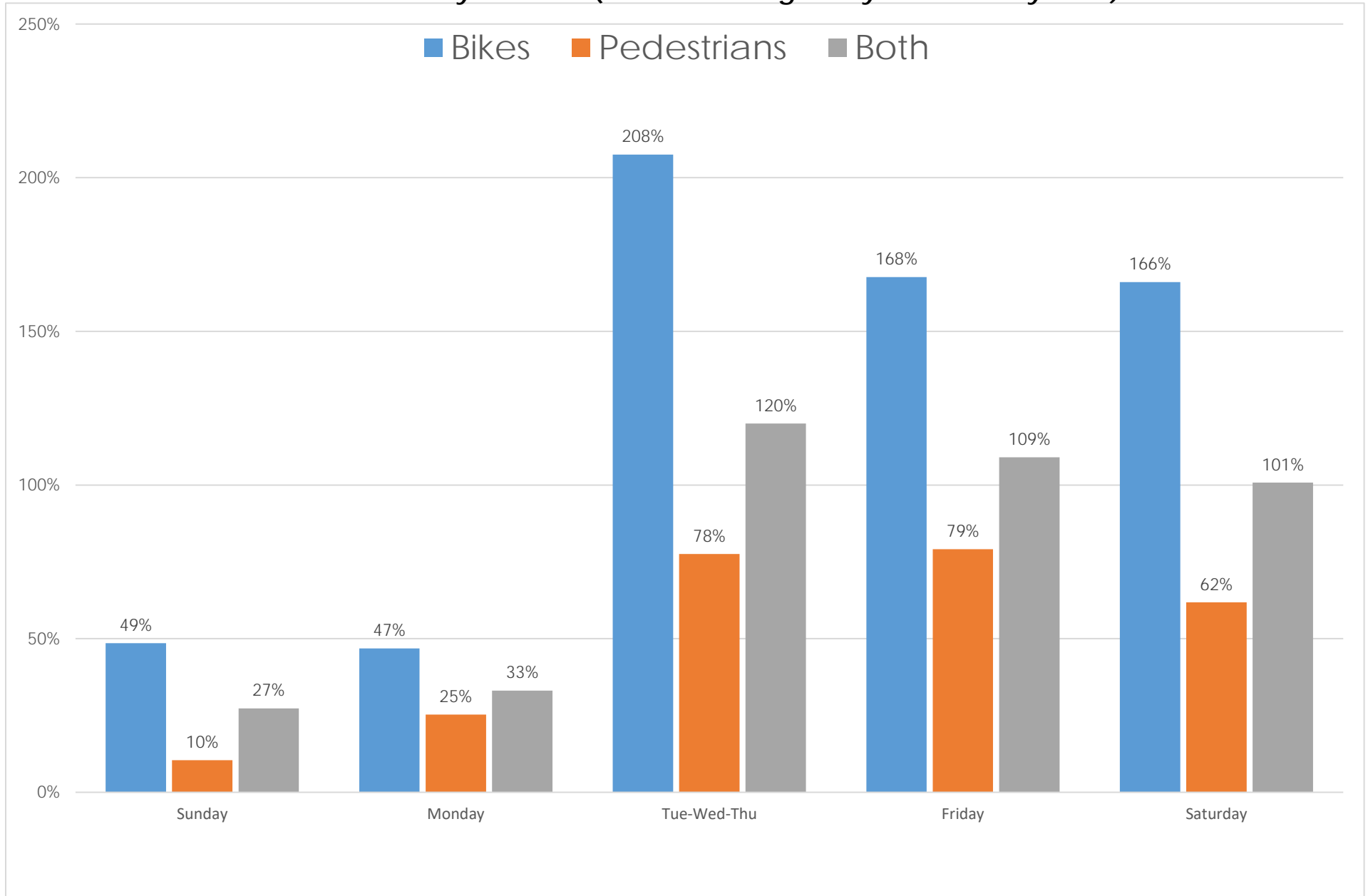


Exhibit 20: Mode Share (May 2019 vs May 2020)

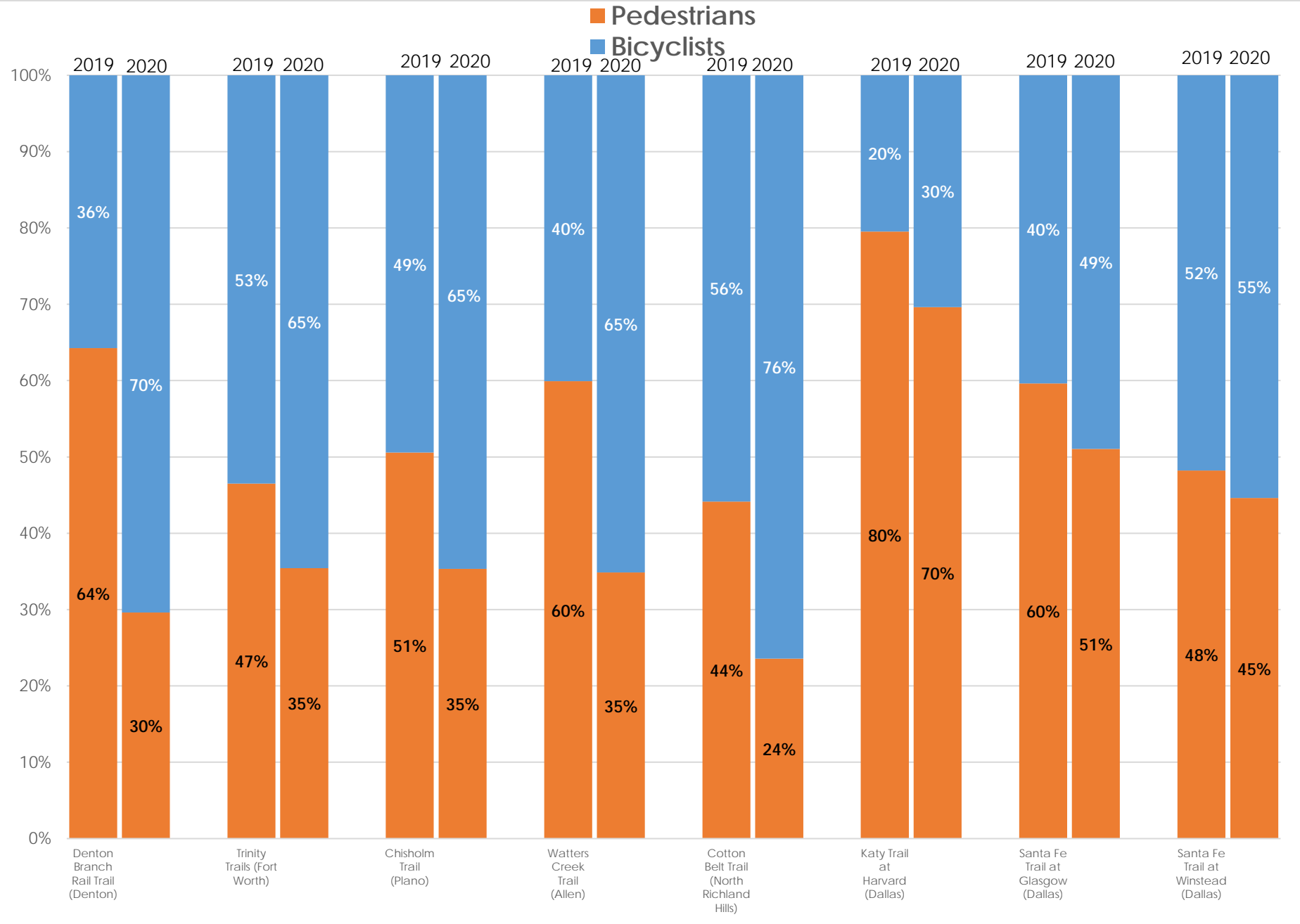
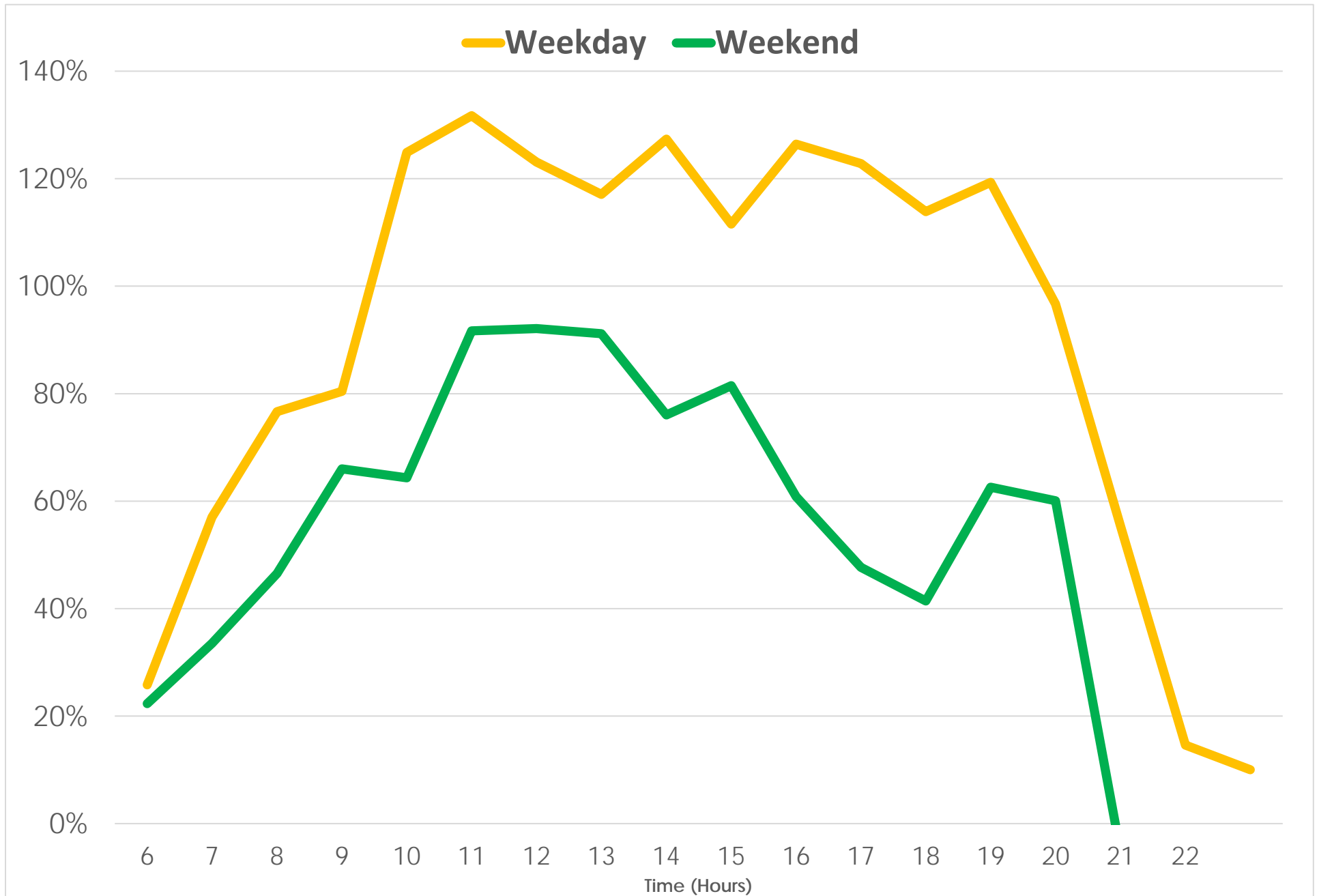


Exhibit 21: Hourly Profile (Percent Change May 2019 vs May 2020)



Summary

From January 1, 2020 through December 31, 2020, over 7.8 million bicycle and pedestrian traffic counts were recorded at the 19 count locations. As more count equipment is installed and the coverage area in the region increases, this number is also expected to increase.

Limitations of Data

The amount of bicycle and pedestrian traffic registered by counting equipment presented in this report does not represent unique individuals. Similar to motor vehicle counts, the equipment counts the number of times bicyclists and pedestrians pass by each count station. The technology used by the count equipment, primarily the passive-infrared sensor, is unable to distinguish the number of pedestrians who may walk side-by-side and in large groups. Therefore, the data in this report should be

interpreted as slightly conservative. NCTCOG validated the accuracy of five NCTCOG-owned count stations in 2020 and developed a unique correction factor for each mode at each location. NCTCOG staff observed the count stations for four hours and compared the manually recorded data to that collected by the equipment. Results from the validation process found pedestrians to have a higher error rate (ranging from two to 34 percent) than bicyclists (ranging from one to 10 percent). Correction factors were applied to the following six count stations:

1. Chisholm Trail – Jack Carter Park
2. Chisholm Trail – Orlando Drive
3. Denton Branch Rail Trail – Medpark Station
4. Denton Branch Rail Trail – Morse Street
5. Trinity Trails – Henderson Street Bridge