



# **Economic and Health Benefits of Bicycling in Northwest Arkansas**

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**FINAL REPORT**

**Final Report**

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# **Economic and Health Benefits of Bicycling in Northwest Arkansas**

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# Acknowledgements

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# Final Report of Bicycle Benefits in Northwest Arkansas

To better understand the economic and health benefits of bicycling in Northwest Arkansas, the Walton Family Foundation, in collaboration with PeopleForBikes, commissioned BBC Research & Consulting (BBC) to conduct a study of bicycling behavior and assess the economic and health benefits of bicycling in the region.

## Study Objectives

The ability to measure the economic and health benefits of recent investments in bicycle infrastructure in Northwest Arkansas is critical. The data generated by this study can inform policymakers, funders, and stakeholders about the overall value of their investments in bicycle infrastructure, as well as informing how to best dedicate current and future resources for bicycling. More specifically, study objectives include:

- Quantifying the economic, health, social, and business benefits associated with bicycling
- Examining the return-on-investment (ROI) of bicycle infrastructure investments
- Create and share best practices and methods for measuring the benefits of bicycling

Below BBC presents results from the analyses conducted to meet each of the study objectives.

## Implications and Context

Since the late 1990s, considerable resources have been invested in planning and building a world-class trail system to enhance the economic vitality of Northwest Arkansas. The centerpiece of this trail system is the \$38-million Razorback Regional Greenway, a 36-mile shared-use paved trail that links the major cities in the region. Razorback Greenway planning and construction were supported by grants from the Walton Family Foundation and the U.S. Department of Transportation in addition to local and state funding.

Key results from the study include:

- Bicycling in Northwest Arkansas provides \$137 million in benefits to the economy annually
- Bike tourism is a significant economic driver with tourists spending \$27 million at local businesses each year
- Investment in soft-surface mountain bike trails is a key driver of tourism with at least 55% of mountain bikers traveling to Northwest Arkansas from outside the region
- Bicycling in Northwest Arkansas generates \$85 million annually in health related benefits
- Residents of Northwest Arkansas spend more than \$20 million on bicycling annually

- Houses within .25 miles of the Razorback Greenway sell for an average of nearly \$15,000 more than those two miles from the trail.

It is helpful to provide context to these results given other results from economic benefits analyses throughout North America, although there are often substantial differences in the methodology employed to calculate the role of bicycling in an economy. BBC recently conducted a study using very similar methodology for the state of Colorado. On a per-capita basis, results for Northwest Arkansas are very similar to those found for Colorado. The role of bicycling in the Northwest Arkansas economy is comparable to other areas throughout the country. A 2011 study estimated approximately \$17 million in tourist spending from non-local trail users, while a 2007 study for Grand County, Utah estimated an annual impact from mountain biking alone at \$22 million annually. In Whistler, British Columbia, mountain bike visitors spend approximately \$46 million annually. The share of non-local riders on mountain bike trails in Northwest Arkansas (estimated at 55%) is also comparable to some of the most notable mountain biking destinations such as Bend and Oakridge Oregon (65%), the North Shore in British Columbia (55%), and Squamish, British Columbia (49%). In addition, numerous studies have found positive correlations between property values and bicycle trails or greenways including hedonic studies completed in Indianapolis, Austin, and Muskego, Wisconsin.

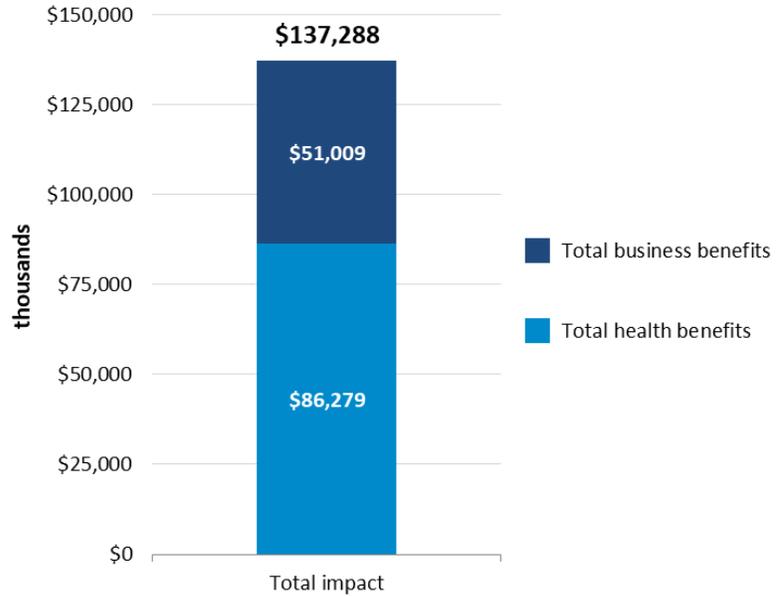
Below we provide additional detail on the economic benefits of bicycling in Northwest Arkansas, a summary of bicycling participation for the region and key communities along with a discussion of the methodology used for the analysis.

### **Summary of Regionwide Economic Benefits**

The total economic benefits of bicycling for Northwest Arkansas are approximately \$137 million. As shown in Figure 1, approximately \$51 million (37%) of total economic benefits are business benefits and approximately \$86 million (63%) are health benefits. Each of those estimates is described in greater detail below.

**Figure 1.**  
**Total benefits of bicycling in Northwest Arkansas**

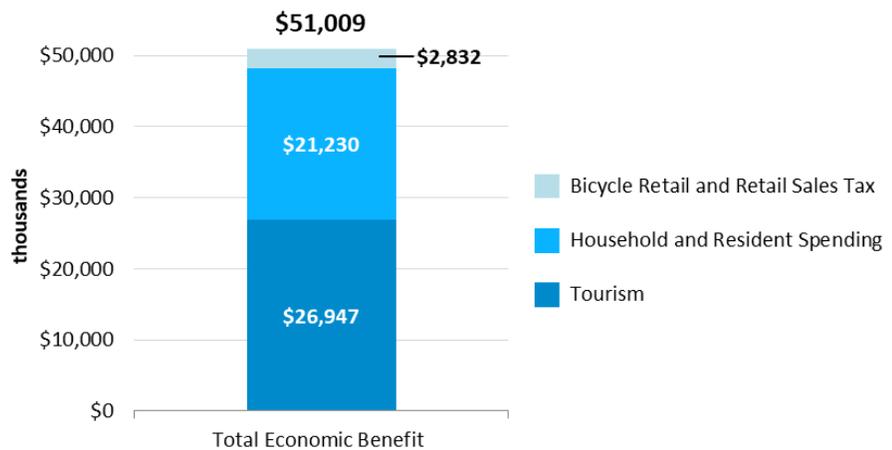
Source:  
 BBC Research & Consulting Economic Benefits Model 2017.



**Business benefits.** Bicycling benefits business in a variety of ways in Northwest Arkansas. We examine the benefits of in-region household and resident spending on bicycling equipment, goods, and events; bicycle retail sales to out-of-region visitors; the retail sales tax impact of local bicyclists on non-bicycle related businesses; and bicycle tourism. Using data collected from residents, businesses, and other existing data sources (see methodology section for details), BBC calculated the respective economic benefit of each one of these expenditures as shown in Figure 2. Bicycling produces an estimated \$51 million business benefit to the Northwest Arkansas economy annually: \$21 million in household and resident spending on bicycles, bicycle goods, equipment, and events (42%); \$3 million in bicycle retail sales and retail sales taxes paid by local customers (6%); and approximately \$27 million in tourism spending by out-of-state visitors (52%). Spending by residents and tourists in the region supports jobs in businesses directly related to bicycling (such as bicycle shops) and other businesses such as restaurants, coffee shops, and hotels.

**Figure 2.**  
**Estimates of the economic benefits of bicycling (in \$ thousands)**

Source:  
 BBC Research & Consulting Economic Benefits Model 2017.



Comprising approximately 52 percent of total bicycle business benefits, bicycle tourism is an important contributor to the local economy. Approximately 90,000 -150,000 bicycle tourists visited the region in the last year to mountain bike.<sup>1</sup> According to data collected from Strava, about 55 percent of all mountain bike rides on the region's natural surface trails were completed by individuals from outside the region. BBC conducted interviews with five local tourism officials and business owners in Northwest Arkansas to understand why they visit and how they influence the local economy. Interviewees reported that they believe bicycle tourism is important to the local economy and that the region's bicycle facilities attract visitors to the region:

*"Bicycle tourism is important to Fayetteville. The things that go along with a cycling-friendly community are important to non-cyclists [visitors] as well. [Potential visitors] will look and see [that there are] many miles of bike trails in Fayetteville. [They will] bet Fayetteville also has craft beer or a really great place to [get] coffee. [Potential visitors] are interested in those intersections [between amenities and infrastructure]."* **Regional tourism official**

*"What you have here [in Northwest Arkansas] is unique. We are seeing a large increase in people [visiting], staying in the Airbnbs, and riding all the different [natural surface] trails. That's almost on a weekly basis."* **Local business owner**

Interviewees reported that bicycle tourists are coming from across the country (e.g., Texas, Oklahoma, Illinois, Missouri) to mountain bike in Northwest Arkansas. Aside from bicycling, tourist officials stated that bicycle tourists are contributing to the economy with entertainment and lodging purchases and spending on food and beverages. For example, two tourism officials and one business owner noted that bicycle tourists are a boost to local businesses:

*"They're staying at the Airbnbs in the downtown. They're eating in our restaurants. They're visiting our breweries and going to Crystal Bridges."* **Regional tourism official**

*"The international mountain bike conference benefited [our business] more in a two-day period than [other festivals that have occurred while] we've been here."* **Local business owner**

Those statements highlight why bicycle tourism constitutes a majority of the region's bicycle business benefits. Mountain biking-related tourism has become a significant economic contributor in Northwest Arkansas, supporting many bicycle and bicycling-related businesses and jobs in the region.

**Other economic benefits.** BBC also conducted a variety of additional quantitative and qualitative analyses to understand other economic benefits the region's bicycle infrastructure provides to the Northwest Arkansas economy. Those benefits are difficult to quantify on an annual basis for a range of reasons: trail impacts on property values are difficult to separate from local trail

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<sup>1</sup> BBC estimate of the range of total mountain bike tourist visitors is derived from data collected via the ride tracking application Strava and surveys with Northwest Arkansas residents.

placement decisions, while other benefits are difficult to disentangle from overall regional characteristics and economic trends (such as social and business benefits). However, those analyses still demonstrate the importance of the region's bicycle infrastructure to the following aspects of the regional economy:

- Property values
- Business development
- Residential development
- Social and business benefits

Below BBC describes the results from each of those analyses.

**Property values.** BBC determined that a home's proximity to shared-use paved trails is associated with an increase in its sale price in Northwest Arkansas. Property parcel and sale price information was collected from the Northwest Arkansas Regional Planning Commission and the Washington and Benton County Assessors' Offices. BBC used the property parcel information to model the relationship between distance from shared-use paved trails and home sale prices in the region for single-family homes within three miles of a shared-use paved trail, excluding homes sold in Fayetteville.<sup>2</sup>

BBC excluded homes sold in Fayetteville because of data limitations unique to that city. Partly as a result of its large student population, Fayetteville has a high share of rental properties and multi-family housing units, which are not captured in the data available to the research team. Fayetteville trails have been placed with density in mind, thereby favoring areas with multi-unit dwellings, rental properties, and student populations.<sup>3</sup> Consequently, a majority of the single family homes within three miles of Fayetteville's shared-use paved trails were of highly variable value compared to higher priced neighborhoods.

Figure 3 presents the model for home sale price of the typical Northwest Arkansas home at different distances to trail facilities, excluding homes sold in Fayetteville. The model suggests there is an increase in the sale price premium that accompanies living close to shared-use paved trails.<sup>4</sup> A typical home a quarter mile from a shared-use paved trail sells for \$6,300 more than a

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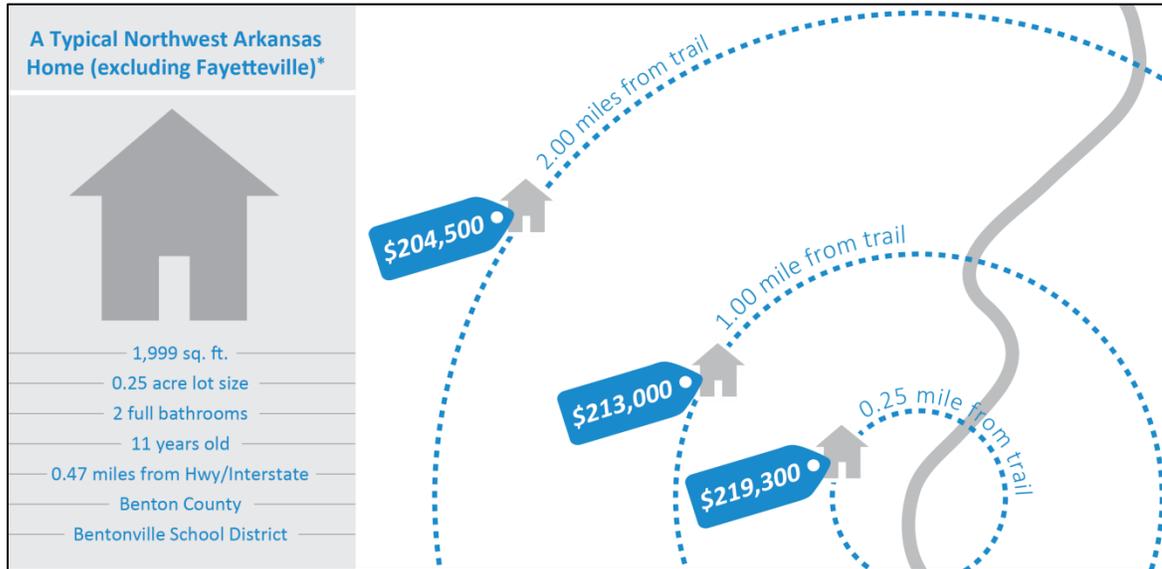
<sup>2</sup> BBC's model reports the relationship between trail distance and sale price in the Northwest Arkansas region. The model does not claim an impact or purport to demonstrate a causal relationship between the two variables due to data limitations and unmeasured variables (multi-family units and apartments, rental prices, endogeneity of trail placement, and the co-location of other desirable amenities near trails).

<sup>3</sup> Comprehensive data on rental prices were not collected for this analysis. The study team did not know about Fayetteville's infrastructure development pattern until after completing the analysis. Consequently, one should take caution when attempting to apply the regional results to Fayetteville. A full analysis of Fayetteville trail impacts on real estate would at least require rental data, which were beyond the scope of this analysis.

<sup>4</sup> Modeling the relationship of trail distance and sale price in Fayetteville would require a different model which includes the addition of rental price information to measure the possible trail distance premium of multi-unit apartments and rental properties.

home one mile from a shared-use paved trail and \$14,800 more than a home two miles from a shared-use paved trail.<sup>5</sup>

**Figure 3.**  
**Northwest Arkansas Property Value Hedonic Regression: Effect of Distance from Shared-use Paved Trail**



Note: \*Profile of a median home based on 20,493 home sales that took place in Benton and Washington Counties between January 2012 and October 2017. This profile excludes homes that are over 3 miles from a shared-use paved trail and homes that were located in Fayetteville.

Source: BBC Research & Consulting.

BBC worked with Walton Family Foundation staff to determine the average density of residential properties near shared-use paved trails. Based on that analysis, the property value model that excludes Fayetteville suggests that, when considering houses within one mile of bike trails, regional homeowners see approximately \$1,173,000 of increased property value per mile of trail construction (when compared with houses a mile further from the trail).<sup>6</sup>

**Business development.** Many business owners in Northwest Arkansas said they consider the Razorback Greenway when deciding where to locate their businesses. BBC surveyed 71 business owners in business districts close to the Razorback Greenway – Bentonville Square, Downtown Springdale, Downtown Rogers, and Downtown Fayetteville – and conducted five interviews with regional business owners. Ten percent of survey respondents reported that the Razorback Greenway was extremely important when choosing business location. Business owners

<sup>5</sup> BBC’s model reports the relationship between trail distance and sale price in the Northwest Arkansas region. The model does not claim impact or purport to demonstrate a causal relationship between the two variables due to data limitations and unmeasured variables (multi-family units and apartments, rental prices, endogeneity of trail placement, and the co-location of other desirable amenities near trails).

<sup>6</sup> BBC calculated this estimate by multiplying the average number of homes within one square mile of trail facilities (138) by the home value premium (\$8,500) of a home one mile from a trail facility when compared to a home two miles from a trail facility. That is a conservative estimate which reports the lowest per mile home value premium associated with one mile of trail construction.

identified three key motivations for locating near the Razorback Greenway: the importance of bicyclists as a customer base; business accessibility for customers and staff; and improved business visibility. Examples of business owners' comments include:

*"I kept getting led to the downtown [area], close proximity to the trails, things where people would be more active with their pets, walking, [biking], a lot of foot traffic. The Razorback Trail was a major factor in us making our decision to put our store in this area."*

*"The demographics of our customers closely align with Greenway users, both cyclists and runners."*

*"Easy access is critical and the local biker has to feel at home in our location."*

Business owners also reported that the Razorback Greenway has a positive impact on their business.<sup>7</sup> About two-thirds of business owners (28 out of 45) who provided comments on the survey stated that new bicycle facilities had a positive effect on their businesses or were hopeful they would in the future, while a third (17 out of 45) felt new bicycle facilities had no effect on their businesses. For example, in describing the positive effects of new bicycle facilities, one business owner observed:

*"Our business opened at roughly the same time the Greenway opened. As people have become more educated about the trail system, we have seen a huge uptick in cyclists who stop in off the Greenway. They are using the trails to come specifically to our destination or are making it an interim stop. Because of our proximity to trails, we host monthly meetings for a bike club that rides after the meeting. We love our cyclists!"*

**Residential development.** Residential developers in Northwest Arkansas consider proximity to shared-use paved trails when deciding where to locate their developments and have specific motivations for doing so. BBC conducted four interviews with various individuals familiar with residential development in the region, including community planning officials, real estate developers, and real estate agents. During those interviews, interviewees reported that the Razorback Greenway and the region's other shared-use paved trails are important to residential development occurring in the region. In the words of one residential developer:

*"We focus on infill opportunities and we've developed almost exclusively along the Razorback Greenway [in the past five years]. In fact, [proximity to the Razorback Greenway is] one of the principal things that we review for our quarterly-evaluated new development site(s)."*

In addition, a planner in the region observed how central the region's bicycle infrastructure is to residential development in the region:

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<sup>7</sup> Of the 188 non-bike businesses who were contacted for this study, 63 provided responses to the survey, and 45 also provided comments. Of the 16 bike-related businesses contacted, 12 responded.

*“Most of the significant commercial and multifamily development in Rogers right now has something to do with the trail system.”*

Economics and community were cited as the main motivations for developing homes near bicycle facilities. For example, a planner reported that he has observed developers in the region connecting their developments to shared-use trail facilities because of the economic benefits:

*“[I know of one project where] the developer is tying into a spur off the Greenway and constructing natural surface trails along a creek and a hillside adjacent to their commercial development. That tells me that developers are so convinced in the economic impact of the proximity to the trail system that they are willing to invest in on-site trails to connect to it. I think that’s an important point.”*

A developer in the region noted that improving the bikeability and walkability of their communities is ultimately about building places that foster community:

*“We recognized that bike and pedestrian connectivity, for us, is not just the bike side, but it’s really, how connected are you [to your community]? ... That was an important epiphany. From that point, we knew that bike and pedestrian connectivity had to be at the epicenter of what we were [developing].”*

**Social and business benefits.** BBC conducted surveys with over 600 Northwest Arkansas residents (including 200 skilled workers) and completed five interviews with human resource managers and business owners at major regional employers to determine the role the region’s bicycle infrastructure plays in attracting and retaining talent.

The human resource managers and business owners interviewed reported that the region’s bicycle infrastructure is a powerful tool for retaining talent already in the region due to enhanced quality of life, but trails and recreational infrastructure are rarely a decisive factor in recruiting talent from outside the region. They report that the region’s bicycle infrastructure is a key component to the area’s high quality of life, helping to retain residents and skilled workers. Excerpts from interviews with human resource managers include:

*“[The trails are] crucial to the success of our region. I think it’s super important in terms of recruitment and talent retention, livability and quality of life.”*

*“I’ve been here since April and I haven’t had anyone say, ‘Oh, I came here for the bike trails.’ What I’ve seen is [that bicycle trails are] one of those incentives that people don’t realize how wonderful it is until they see and experience it.”*

*“[There are] people [in] the area that are here that have worked for three different suppliers because they don’t want to leave. Once they’re here, they won’t go.”*

Results from the Northwest Arkansas Resident Survey support those assertions; a limited but nontrivial number of residents and skilled workers<sup>8</sup> in the region consider the region’s bicycle

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<sup>8</sup> Skilled workers refer to full time workers earning \$50,000 or more with a least a college degree.

infrastructure valuable as part of the region’s overall quality of life and consider those facilities in making lifestyle decisions.

A portion of Northwest Arkansas residents identified the availability of bicycle infrastructure as a key factor they consider when deciding where to live. Figure 4 summarizes the percentage of residents that reported bicycle facilities were important when choosing a place to live (i.e., rated those facilities an 8, 9 or 10). Approximately 30 percent of Northwest Arkansas residents and 28 percent of skilled workers consider the availability of paved bicycle infrastructure (e.g., bike lanes and shared-use paved trails) important in deciding where to live. Similarly, 27 percent of Northwest Arkansas residents and 24 percent of skilled workers consider the availability of natural surface trails important in deciding where to live.

**Figure 4.**  
**Percent of residents and skilled workers that consider the availability of bicycle infrastructure important in deciding where they live**

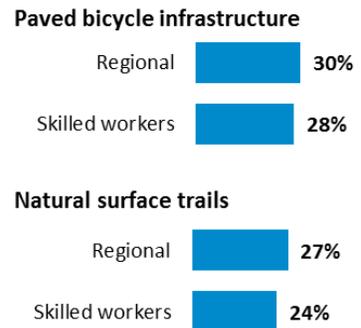
Notes:

Q: On a scale of 1-10 scale, please rate the importance of the availability of natural surface trails to making housing location decisions

Q: On a scale of 1-10 scale, please rate the importance of the availability of paved bicycle infrastructure (e.g., shared-use paved trails, bike lanes) to making housing location decisions

Regional base: All regional sample respondents (615)

Skilled worker base: All skilled worker sample respondents (203)



Source:

2017 Northwest Arkansas Resident Survey.

The ability to bicycle commute was also an important consideration when deciding where to work for a portion of Northwest Arkansas residents and skilled workers. Figure 5 reports that about 17 percent of Northwest Arkansas residents and skilled workers consider the ability to commute to work via bicycle important (i.e., rated the availability of bicycle commuting an 8, 9 or 10) to deciding where to work.

**Figure 5.**  
**Percent of residents and skilled workers that consider the ability to commute to work via bicycle important in deciding where to work**

Notes:

Q: On a scale of 1-10 scale, please rate the importance of the availability of natural surface trails to making housing location decisions

Regional Base: All regional sample respondents that work in Northwest Arkansas (559)

Skilled worker Base: All skilled worker sample respondents (203)



Source:

2017 Northwest Arkansas Resident Survey.

A majority of skilled workers and four in 10 Northwest Arkansas residents place value in being able to access bicycle facilities where they live. Figure 6 documents that approximately 43 percent of Northwest Arkansas residents and 59 percent of skilled workers are willing to pay more each year to live in a location with access to bicycle facilities, although only 9% of respondents indicated they were willing to pay more than \$1,000 annually for this convenience

**Figure 6.**  
**Percent of residents and skilled workers that would pay more to live in a location with access to bicycle facilities**



**Notes:**

Q: Imagine that you have a choice between two places to live. Location A is close to bicycle lanes, shared-use paved trails, and natural surface trails and Location B isn't. How much more would you pay annually to live in the location with access to these bicycle facilities?

Regional base: All regional sample respondents (615)

Skilled worker base: All skilled worker sample respondents (203)

**Source:**

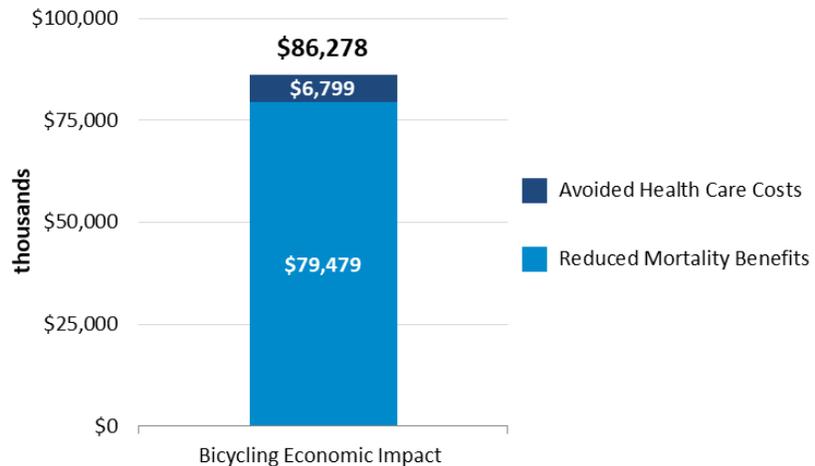
2017 Northwest Arkansas Resident Survey.

**Health benefits.** Bicycling in Northwest Arkansas keeps children and adults active, and decreases the prevalence of adverse health conditions such as heart disease, diabetes, and other chronic health conditions. Figure 7 presents the total health benefits of bicycling in Northwest Arkansas. Bicycling contributes an estimated \$86 million in total health benefits to the local economy, including \$79 million in reduced mortality benefits identified using the World Health Organization's (WHO's) Health Economic Assessment Tool (HEAT) model and \$7 million dollars in estimated avoided health care costs. Below BBC provides more information about both estimates.

**Avoided health care costs associated with bicycling.** According to the U.S. Department of Health and Human Services, 150 minutes a week of regular, moderately intense physical activity provides health protection from many chronic health conditions, including heart disease, stroke, diabetes, and others. Using those guidelines, BBC chose a threshold of biking five or more days a week (i.e., at least 250 days in the last year) to determine bicyclists that have the highest likelihood of health protection from biking. Using the Resident Survey, BBC determined that there are approximately 4,694 bicyclists in Northwest Arkansas that experience health benefits from moderately intense bicycling. This translates into approximately \$9.8 million in estimated avoided health care costs. For active bicyclists, BBC also estimated the health care and lost productivity costs related to bicycling injuries. BBC applied national estimates of medical and lost productivity costs to miles ridden annually by Northwest Arkansas frequent riders (biked five or more days per week). Health care costs were tailored to Northwest Arkansas by accounting for differences in regional household income, health care costs, and the proportion of off-street riding. BBC estimates that active bicyclists in the region incur approximately \$3.0 million in health care and lost productivity costs. The net avoided health care costs for active bicyclists in Northwest Arkansas, as shown in Figure 7 is approximately \$6.8 million annually.

**Figure 7.**  
**Estimates of the health**  
**benefits of bicycling (in \$**  
**thousands)**

Source:  
 BBC Research & Consulting 2017.



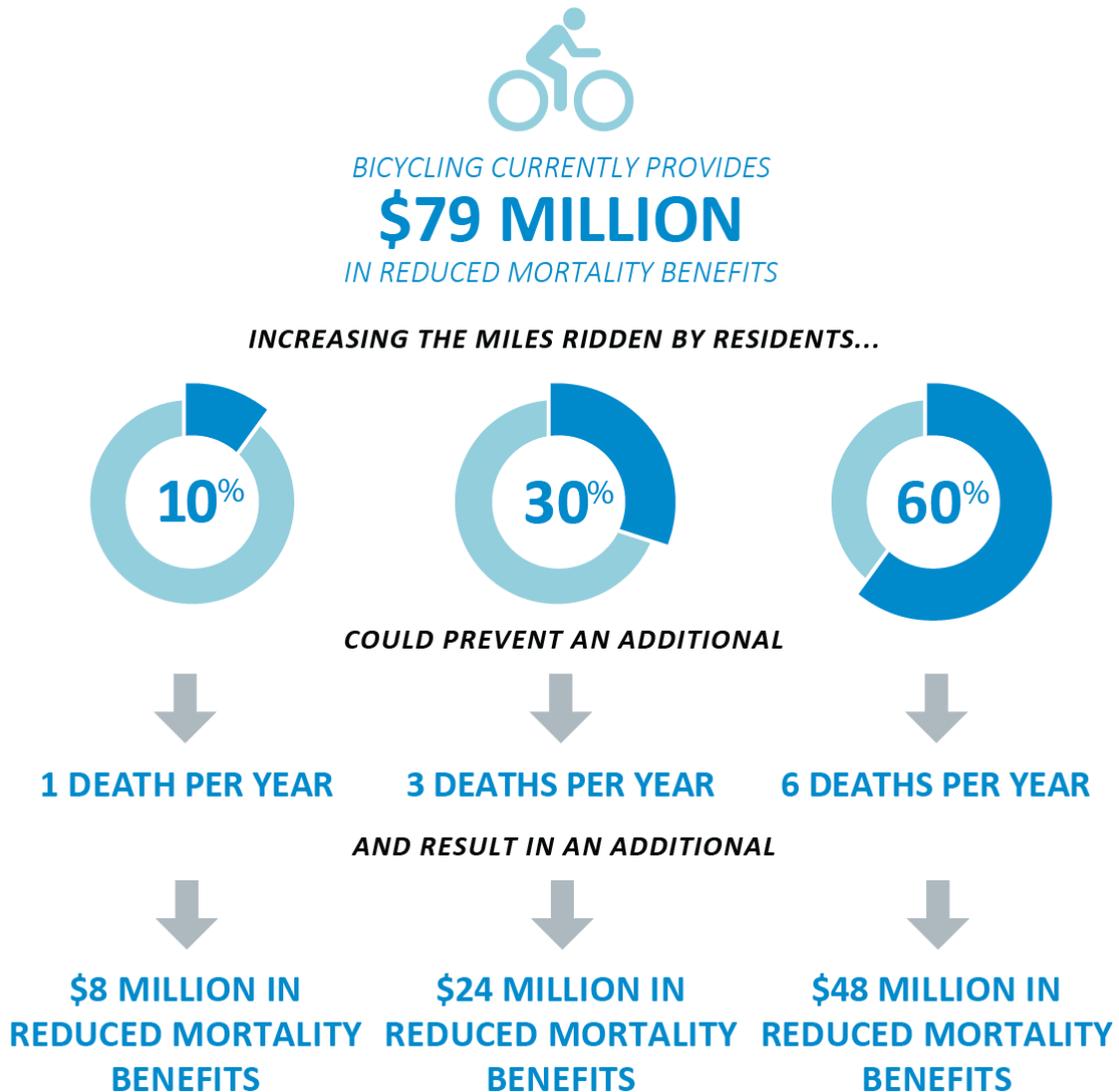
**Reduced mortality benefits.** The HEAT tool allows states and other municipalities to estimate the annual number of area lives saved resulting from the health benefits of bicycling and the economic benefit tied to that reduction in mortality. The analysis used Northwest Arkansas-specific data from the Resident Survey to analyze the existing health benefits from bicycling in Northwest Arkansas, as well as the potential increase in health benefits if the number of residents bicycling on a regular basis increased by 10 percent (low target), 30 percent (mid target), and 60 percent (high target).

Based on estimates from the HEAT model, bicycling in Northwest Arkansas currently helps prevent about 10 deaths per year by providing protection from deaths associated with sedentary living (e.g., heart disease and diabetes).<sup>9</sup> Using an economic benchmark of \$9.6 million per avoided fatality, the value of which is calculated regularly by the United States Department of Transportation, the HEAT model suggests that there are \$79 million in annual reduced mortality benefits.<sup>10</sup> Figure 8 summarizes the potential benefits if the miles ridden in the region increased 10 percent, 30 percent, or 60 percent. A 10 percent increase in the miles ridden in the region could prevent one additional death and provide approximately \$8 million in added health benefits annually. A 60 percent increase could prevent six additional deaths and provide \$48 million in added health benefits annually.

<sup>9</sup> The World Health Organization’s Health Economic Assessment Tool does not take into account the negative health impacts of road traffic accidents involving bicyclists. For more information, please see pages 14-19 in the methodology and user guide. ([http://www.euro.who.int/\\_data/assets/pdf\\_file/0010/256168/ECONOMIC-ASSESSMENT-OF-TRANSPORT-INFRASTRUCTURE-AND-POLICIES.pdf](http://www.euro.who.int/_data/assets/pdf_file/0010/256168/ECONOMIC-ASSESSMENT-OF-TRANSPORT-INFRASTRUCTURE-AND-POLICIES.pdf)).

<sup>10</sup> This value is determined by carefully studying wages in occupations and industry that vary in terms of how dangerous they are to one’s survival. A variety of studies over the past 30 years have examined labor markets to determine the premium people must be paid to take on greater personal risk in their work, and the results of these studies are extrapolated and combined by the USDOT to arrive at its estimate, which is known as the Value of a Statistical Life (VSL). HEAT discounts the VSL three percent per year, because the model considers future health benefits less valuable than current health benefits. Using that discounted VSL, the HEAT model estimates the total discounted health benefits over a 20 year planning period and presents the annual discounted health benefit associated with the lives saved due to bicycling.

**Figure 8.**  
**Reduced mortality benefits from target levels of bicycling in Northwest Arkansas**



Source: BBC Research & Consulting from WHO HEAT output.

### **Bicycling Participation**

Northwest Arkansas is home to a variety of shared-use paved and natural surface bicycle trails and infrastructure; however, the region lacks robust data regarding bicycling. The BBC study team surveyed residents in Northwest Arkansas to understand the rates and types of bicycling participation in the region. This analysis establishes benchmark rates of bicycling participation for comparison to future regional rates and to current U.S. rates.

**Overall ridership.** The study team analyzed the Northwest Arkansas Resident Survey data to identify key trends in bicycling behavior and participation in Northwest Arkansas. Figure 9 presents the percentage of Northwest Arkansas residents that rode a bike six or more days in the last year. About 27 percent of Northwest Arkansas residents rode a bike six or more days in

the last year. The bicycling participation rate in Northwest Arkansas is 11 percentage points higher than the comparable national average (16%).<sup>11</sup>

**Figure 9.**  
**Percentage of Northwest Arkansas Residents that rode a bike 6 or more days in the last year**

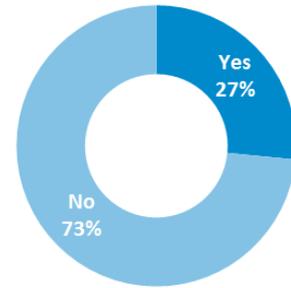
Note:

Q: In the past 12 months, how many days have you ridden a bicycle of any type for any reason?

Base: All regional sample respondents (615)

Source:

BBC Research & Consulting from 2017 Northwest Arkansas Resident Survey.



**Ridership frequency.** Figure 10 presents the percentage of Northwest Arkansas bicycle riders that rode a bike occasionally (6-12 days, 30%); regularly (13 to 35 days, 27%); and enthusiastically (more than 36 days, 43%) in the last year. A slightly lower percentage of Northwest Arkansas bicycle riders are regulars or enthusiasts when compared to national rates (30% and 47% for the nation).<sup>12</sup>

**Figure 10.**  
**Frequency of bicycle riding in the last year**

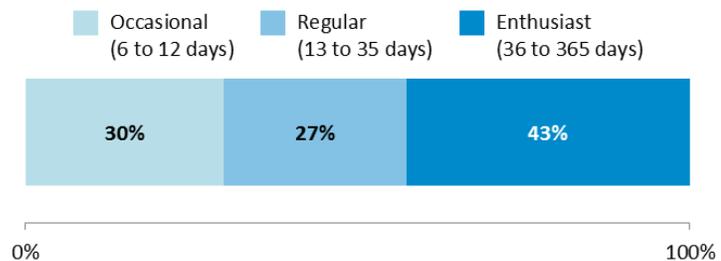
Note:

Q: In the past 12 months, how many days have you ridden a bicycle of any type for any reason?

Base: All regional sample respondents who rode >5 days (188)

Source:

BBC Research & Consulting from 2017 Northwest Arkansas Resident Survey.



**Type of bicycle riding.** Figure 11 presents the percentage of Northwest Arkansas bicycle riders that participated only in mountain biking, only in riding on paved surfaces, and both. Seven percent of Northwest Arkansas bicycle riders reported only mountain biking in the last year. Conversely, about 72 percent of Northwest Arkansas bicycle riders reported only riding on paved surfaces in the last year. Approximately 21 percent reported participating in both forms of bicycling.

<sup>11</sup> PeopleForBikes. 2015. U.S. Bicycling Participation Benchmarking Study Report. PeopleForBikes. Boulder, CO. Retrieved November 17, 2017. (<http://www.peopleforbikes.org/resources/entry/u.s.-bicycling-participation-benchmarking-report>).

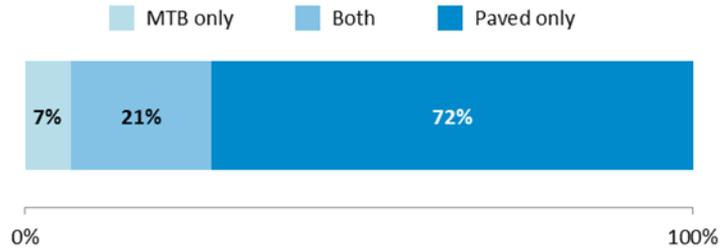
<sup>12</sup> Ibid.

**Figure 11.**  
**Frequency of types of riding in the last year**

Note:

Q: Q: In the past 12 months, how many days have you participated in the following type of bicycling?

Base: All regional sample respondents who rode >5 days (188)



Source:

BBC Research & Consulting from 2017 Northwest Arkansas Resident Survey.

## Profile of Northwest Arkansas Bicyclists

BBC developed a demographic profile of Northwest Arkansas bicycle riders to help regional stakeholders understand who bicycles. Below we present more information on the gender, age, employment status, education, race/ethnicity, and income of bicycle riders in the region.

**Gender.** Figure 12 presents the gender profile of Northwest Arkansas bicycle riders. BBC estimates that about 58 percent of Northwest Arkansas bicyclists are men, and approximately 41 percent are women. A slightly higher percentage of Northwest Arkansas bicycle riders are women (41%) compared to the national rate (37%).<sup>13</sup>

**Figure 12.**  
**Northwest Arkansas bicycle riders by gender**

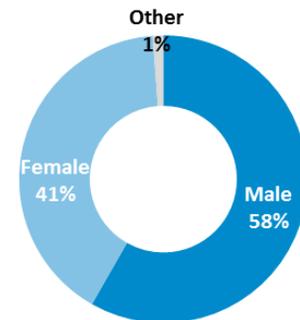
Note:

Q: Which best describes your gender identity?

Base: All regional sample respondents who rode >5 days (188)

Source:

BBC Research & Consulting from 2017 Northwest Arkansas Resident Survey.



**Age.** Figure 13 reports the age profile of Northwest Arkansas bicycle riders. About 75 percent of Northwest Arkansas bicycle riders are between the ages of 18 and 49. Approximately 25 percent of Northwest Arkansas Bicycle riders are 50 or older. The age profile of Northwest Arkansas bicycle riders is similar to the age profile for bicycle riders nationwide.<sup>14</sup>

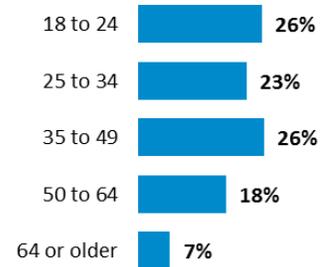
<sup>13</sup> Ibid.

<sup>14</sup> Ibid.

**Figure 13.**  
**Northwest Arkansas bicycle riders by age**

Note:  
 Q: What is your age?  
 Base: All regional sample respondents who rode >5 days (188)

Source:  
 BBC Research & Consulting from 2017 Northwest Arkansas Resident Survey.

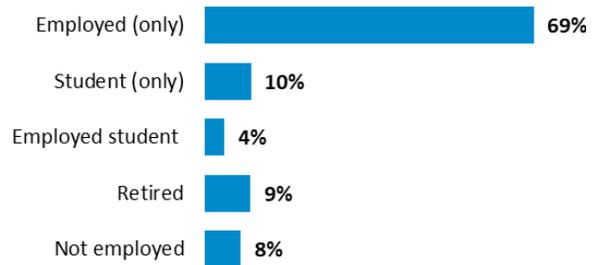


**Employment Status.** Figure 14 reports the employment status profile of Northwest Arkansas bicycle riders. Approximately 69 percent of all Northwest Arkansas bicycle riders are employed. The remaining 31 percent of Northwest Arkansas bicycle riders are students, employed students, retired, or not employed. A larger percentage of bicycle riders in Northwest Arkansas are employed (69%) than bicycle riders nationwide (58%).<sup>15</sup>

**Figure 14.**  
**Northwest Arkansas bicycle riders by employment status**

Note:  
 Q: Which of the following best describes you? (check all that apply)  
 Base: All regional sample respondents who rode >5 days (188)

Source:  
 BBC Research & Consulting from 2017 Northwest Arkansas Resident Survey.

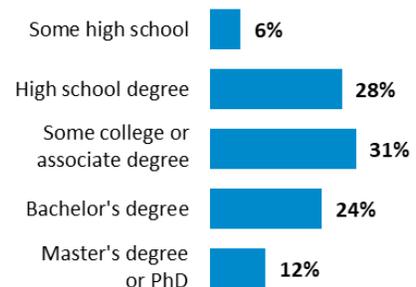


**Education.** Figure 15 presents the education profile of Northwest Arkansas bicycle riders. BBC estimates that approximately 36 percent of Northwest Arkansas bicycle riders have earned at least a bachelor’s degree. About 31 percent of Northwest Arkansas bicycle riders have completed some college or an associate’s degree. Finally, approximately 28 percent have earned a high school degree and 6 percent have completed some high school.

**Figure 15.**  
**Northwest Arkansas bicycle riders by education**

Note:  
 Q: Which best describes the highest level of education you have completed?  
 Base: All regional sample respondents who rode >5 days (188)

Source:  
 BBC Research & Consulting from 2017 Northwest Arkansas Resident Survey.

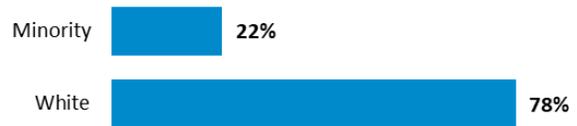


**Race/ethnicity.** Figure 16 presents the race/ethnicity profile of Northwest Arkansas bicycle riders. The majority of Northwest Arkansas bicycle riders are white (78%). The bicycle riding population in Northwest Arkansas is less diverse than nationwide. Approximately 64 percent of

<sup>15</sup> Ibid.

bicycle riders nationwide are white, which is 14 percentage points lower than that group's representation in bicycle riding in Northwest Arkansas (78%).<sup>16</sup>

**Figure 16.**  
**Northwest Arkansas bicycle riders by race/ethnicity**



Note:

Q: Which of the following best describes your race or ethnicity? You may select more than one option

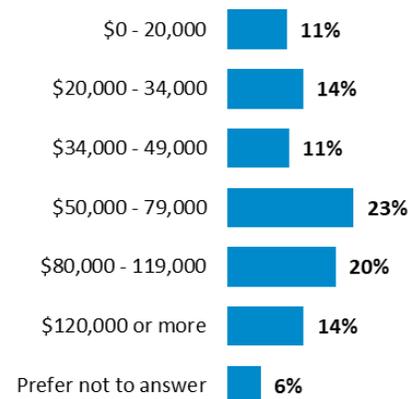
Base: All regional sample respondents who rode >5 days (188)

Source:

BBC Research & Consulting from 2017 Northwest Arkansas Resident Survey.

**Income.** Figure 17 reports the percentage of Northwest Arkansas residents who rode a bicycle 6 or more days in the last year by income. About 57 percent of Northwest Arkansas bicycle riders made \$50,000 or more per year. Approximately, 37 percent of Northwest Arkansas Bicycle riders made \$49,000 or less per year.

**Figure 17.**  
**Northwest Arkansas bicycle riders by income**



Note:

Q: What is your annual household income?

Base: All regional sample respondents who rode >5 days (188)

Source:

BBC Research & Consulting from 2017 Northwest Arkansas Resident Survey.

## City Comparisons

The study team also oversample respondents from four communities in the region; Bentonville, Fayetteville, Rogers, and Springdale. Below are some details about resident bicycling behaviors for those communities.

<sup>16</sup> Ibid.

**Bentonville.** As part of the Northwest Arkansas Resident Survey, the BBC survey research team completed an oversample of residents in the City of Bentonville. In this section, BBC presents key findings from its Bentonville bicycle participation analysis.

**Bicycling in Bentonville.** As shown in Figure 18, approximately 44 percent of Bentonville residents 18 or older reported riding a bike six or more days in the past year. This is statistically significantly higher than the region (26%) at the 95 percent confidence level. Bentonville had the highest proportion of bicyclists of the four communities studied in Northwest Arkansas.

**Figure 18.**  
**Percentage of Bentonville residents who rode a bicycle in the last year**

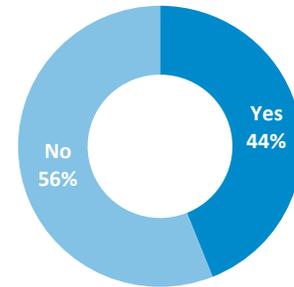
Note:

Q: In the past 12 months, how many days have you ridden a bicycle of any type for any reason?

Base: All Bentonville sample respondents (207)

Source:

BBC Research & Consulting from 2017 Northwest Arkansas Resident Survey.



**Type of bicycling.** Approximately 20 percent of adults in Bentonville reported riding on a regional mountain biking facility during the last year. Thirty-five percent of adult riders used either shared use paved trails or on-street facilities. Bentonville residents reported the highest use of mountain biking facilities. Both of these values were significantly higher than the region as a whole (7% mountain biking and 25% use of paved infrastructure, the differences were statistically significant at the 95% confidence level).

**Other bicycling characteristics in Bentonville.** The survey of Bentonville residents also included a number of questions about the bicycling participation and purchasing habits of residents. Below are key results from that analysis (regional percentages are provided for comparison along with a notation of statistically significant differences between Bentonville and the region as a whole – \*\* denotes a difference at the 95% confidence level and \* denotes a difference at the 90% confidence level):

- 76 percent of households reported owning a bicycle in Bentonville (68%\*\*);
- 15 percent of households reported owning 5 or more bikes (5%\*\*);
- 29 percent of households reported purchasing a bicycle within the last year (23%);
- 13 percent of adults reported participating in a bicycling event (5%\*\*);
- 7 percent of adults reported bicycling on a vacation in the last year (5%); and
- 25 percent of households reported hosting a bicycle tourist (22%).

**Fayetteville.** As part of the Northwest Arkansas Resident Survey, the BBC survey research team completed an oversample of residents in the City of Fayetteville. In this section, BBC presents key findings from its Fayetteville bicycle participation analysis.

**Bicycling in Fayetteville.** As shown in Figure 19, approximately 35 percent of Fayetteville residents 18 or older reported riding a bike six or more days in the past year. This is statistically significantly higher than the region (26%) at the 95 percent confidence level.

**Figure 19.**  
**Percentage of Fayetteville residents who rode a bicycle six or more days in the last year**

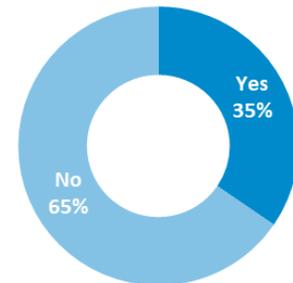
Note:

Q: In the past 12 months, how many days have you ridden a bicycle of any type for any reason?

Base: All Fayetteville sample respondents (220)

Source:

BBC Research & Consulting from 2017 Northwest Arkansas Resident Survey.



**Type of bicycling.** Approximately 9 percent of adults in Fayetteville reported riding on a regional mountain biking facility during the last year. Thirty-four percent of adult riders used shared use paved trails or on-street facilities. Both of these values were higher than the region as a whole (7% mountain biking and 25% use of paved infrastructure), but only the difference in use of paved infrastructure was statistically significant at the 95 percent confidence level.

**Other bicycling characteristics in Fayetteville.** The survey of Fayetteville residents also included a number of questions about the bicycling participation and purchasing habits of residents. Below are key results from that analysis (regional percentages are provided for comparison along with a notation of statistically significant differences between Fayetteville and the region as a whole – \*\* denotes a difference at the 95% confidence level and \* denotes a difference at the 90% confidence level):

- 68 percent of households reported owning a bicycle in Fayetteville (68%);
- 5 percent of households reported owning 5 or more bikes (5%);
- 21 percent of households reported purchasing a bicycle within the last year (23%);
- 8 percent of adults reported participating in a bicycling event in the last year (5%);
- 3 percent of adults reported bicycling on a vacation in the last year (5%); and
- 25 percent of households reported hosting a bicycle tourist (22%).

**Rogers.** As part of the Northwest Arkansas Resident Survey, the BBC survey research team completed an oversample of residents in the City of Rogers. In this section, BBC presents key findings from its Rogers bicycle participation analysis.

**Bicycling in Rogers.** As shown in Figure 20, approximately 32 percent of Rogers residents 18 or older reported riding a bike six or more days in the past year. This is not significantly different from the regional value (26%).

**Figure 20.**  
**Percentage of Rogers residents who rode a bicycle six or more days in the last year**

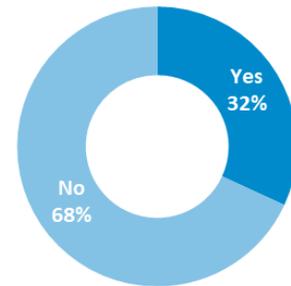
Note:

Q: In the past 12 months, how many days have you ridden a bicycle of any type for any reason?

Base: All Rogers sample respondents (204)

Source:

BBC Research & Consulting from 2017 Northwest Arkansas Resident Survey.



**Type of bicycling.** Approximately 10 percent of adults in Rogers reported riding on a regional mountain biking facility during the last year. Twenty-eight percent of adult riders used shared use paved trails or on-street facilities. Neither of those differences was statistically significant from comparable regional rates.

**Other bicycling characteristics in Rogers.** The survey of Rogers residents also included a number of questions about the bicycling participation and purchasing habits of residents. Below are key results from that analysis (regional percentages are provided for comparison along with a notation of statistically significant differences between Rogers and the region as a whole – \*\* denotes a difference at the 95% confidence level and \* denotes a difference at the 90% confidence level):

- 75 percent of households reported owning a bicycle in Rogers (68%);
- 8 percent of households reported owning 5 or more bikes (5%\*);
- 24 percent of households reported purchasing a bicycle within the last year (23%);
- 4 percent of adults reported participating in a bicycling event in the last year (5%);
- 2 percent of adults reported bicycling on a vacation in the last year (5%\*\*); and
- 19 percent of households reported hosting a bicycle tourist (22%).

**Springdale.** As part of the Northwest Arkansas Resident Survey, the BBC survey research team completed an oversample of residents in the City of Springdale. In this section, BBC presents key findings from its Springdale bicycle participation analysis.

**Bicycling in Springdale.** As shown in Figure 21, approximately 30 percent of Springdale residents 18 or older reported riding a bike six or more days in the past year. This is not significantly different from the regional value (26%).

**Figure 21.**  
**Percentage of Springdale residents who rode a bicycle six or more days in the last year**

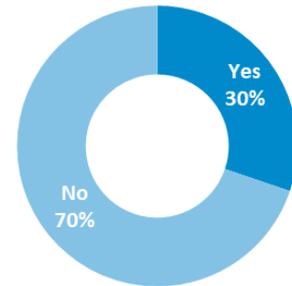
Note:

Q: In the past 12 months, how many days have you ridden a bicycle of any type for any reason?

Base: All Springdale sample respondents (202).

Source:

BBC Research & Consulting from 2017 Northwest Arkansas Resident Survey.



**Type of bicycling.** Approximately 8 percent of adults in Springdale reported riding on a regional mountain biking facility during the last year. Twenty-nine percent of adult riders used shared use paved trails or on-street facilities. Neither of those differences was statistically significant from comparable regional rates.

**Other bicycling characteristics in Springdale.** The survey of Springdale residents also included a number of questions about the bicycling participation and purchasing habits of residents. Below are key results from that analysis (regional percentages are provided for comparison along with a notation of statistically significant differences between Springdale and the region as a whole – \*\* denotes a difference at the 95% confidence level and \* denotes a difference at the 90% confidence level):

- 72 percent of households reported owning a bicycle in Springdale (68%);
- 11 percent of households reported owning 5 or more bikes (5%\*\*);
- 26 percent of households reported purchasing a bicycle within the last year (23%);
- 7 percent of adults reported participating in a bicycling event in the last year (5%);
- 3 percent of adults reported bicycling on a vacation in the last year (5%); and
- 25 percent of households reported hosting a bicycle tourist (22%).

## Methodology

The study team used a rigorous, conservative approach to estimate the economic, business, and health benefits of bicycling in Northwest Arkansas and estimate regional bicycling participation rates. Below BBC provides summary details of the approach used for each analysis.

**Economic benefit analysis.** BBC developed an economic benefit analysis approach that provides conservative, robust estimates of the business and other economic benefits of bicycling regionwide. The methodology is based on a comprehensive literature review of economic benefit and impact studies on bicycling. Given the detailed scope of our study, BBC used secondary data for some estimates and calculated all other estimates using primary data collected through surveys and interviews with Northwest Arkansas residents, businesses, bicyclists, skilled workers, and hiring managers. By summing the total spending regionwide on each of the expenditures included in the economic impact model, BBC was able to calculate a current and comprehensive estimate of the regional impact of bicycling on the Northwest Arkansas economy. For parts of the analysis that were difficult to quantify on an annual basis, including the hedonic regression; business and residential development analysis; and worker attraction and retention analyses, BBC conducted qualitative and quantitative analysis to describe various other ways the region's bicycle infrastructure contributes to the regional economy.

**Health benefits.** BBC conducted two separate analyses of the health impacts of bicycling: benefits resulting from reduced mortality and benefits from avoided health care costs (a reduction in morbidity). The mortality analysis was conducted using data collected from the Household Survey and the standard value of a statistical life as determined by the United States Department of Transportation. Based on these data, BBC used the World Health Organization (WHO's) Health Economic Assessment Tool (HEAT) to calculate the annual benefit of reduced mortality due to bicycling. The morbidity analysis used data from the household survey to provide a conservative estimate of residents in the region who realize lower health care costs due to physical activity associated with bicycling. For those residents, BBC used Arkansas-specific cost estimates for treatment of the top five chronic health conditions linked to physical inactivity, including heart disease, stroke, diabetes, cancer, and poor mental health. BBC also estimated the health care and lost productivity costs related to bicycling injuries. BBC applied national estimates of medical and lost productivity costs to miles ridden annually by Northwest Arkansas frequent riders (biked five or more days per week). Health care costs were tailored to Northwest Arkansas by accounting for differences in regional household income, health care costs, and the proportion of off-street riding.

**Bicycle participation.** BBC and Davis Research, BBC's survey research partner, conducted a survey with Northwest Arkansas residents to collect information related to their bicycling behavior. BBC collaborated with PeopleForBikes, the Walton Family Foundation, and BikeNWA to develop a survey instrument that contains a core set of questions that can be used to benchmark bicycling rates regionwide and compare to U.S. rates. Davis Research fielded 615 responses to the survey via telephone and online using a randomly selected panel of Northwest Arkansas residents. BBC conducted a detailed review of bicycling behavior in Northwest Arkansas using data collected from the regional sample. Each resident surveyed reported the number of days they participated in bicycling in the last year and the number of days they participated in various types of bicycling (e.g., riding on paved surfaces, mountain biking).

# **APPENDIX A.**

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**Databook**

# APPENDIX A.

## Databook

Q1. What is your age? (*n* = 615)

	n	%
18 to 24	69	11%
25 to 34	118	19%
35 to 49	172	28%
50 to 64	161	26%
65 or older	94	15%

Q2. Which best describes your current gender identity? (*n* = 615)

	n	%
Male	302	49%
Female	308	50%
Other	3	0%
Prefer not to answer	2	0%

Q3. How many people in each of the following age range live in your household including yourself? (*n* = 615)

	Mean	Median	SD
Ages 0-2	0.13	0	0.42
Ages 3-17	0.58	0	1.00
Ages 18-24	0.35	0	0.69
Ages 25-34	0.43	0	0.74
Ages 35-50	0.56	0	0.79
Ages 51-64	0.57	0	0.84
Ages 65 or older	0.32	0	0.64
Total in household	2.94	2	1.89

Q5. In the past 12 months, how many days have you participated in the following activities: (*n* = 615)

	Mean	Median	SD
Watched TV	264.55	350	134.69
Rode a bicycle of any type for any reason	19.3	0	50.81
Taken a walk	124.51	60	124.11
Visited a social media website	224.69	300	154.83
Volunteered with a community organization	19.34	1	49.47
Driven a car for any reason	269.73	350	132.16
Used any kind of public transportation	8.52	0	39.33
Went shopping for shoes or clothes	29.14	10	51.89
Visited a public library	11.79	2	30.49
Consumed a beverage with caffeine	236.59	300	148.42

Q6. How many days in the past 12 months did you participate in each of the following types of bicycling? (*n* = 283)

	Mean	Median	SD
Riding to get from one place to another	7.55	0	25.42
Recreational riding	34.8	10	58.47

Q7. You said you participated in recreational riding. How many days in the past 12 months did you ride on the following bicycle infrastructure? (*n* = 96)

	Mean	Median	SD
Razorback Regional Greenway	7.23	1	20.25
On-street bicycle facilities	9.45	1	24.97
Bentonville shared use paved trail	3.62	0	11.74
Fayetteville shared use paved trail	2.38	0	5.57
Rogers shared use paved trail	2.06	0	5.89
Springdale shared use paved trail	1.60	0	3.75

Q8a. You said you participated in recreational riding. How many days in the past 12 months did you participate in each of the following types of recreational riding? (*n* = 273)

	Mean	Median	SD
Road biking	21.7	2	50.82
Mountain biking	4.15	0	14.36
Other recreational riding	8.79	0	23.12

Q8b. How many of those days in the past 12 months did you ride on the following shared-use paved trails and natural surface trails? (*n* = 71)

	Mean	Median	SD
Blowing Springs	1.25	0	3.25
Buffalo Headwaters	0.59	0	1.73
Coler	0.48	0	1.62
Devil's Den State Park	3.82	0	13.88
Hobbs State Park	0.93	0	2.06
Kessler Mountain Regional Park	0.63	0	1.72
Lake Atalanta	1.70	0	4.32
Lake Fayetteville	6.94	1	20.19
Lincoln Lake	0.54	0	1.69
Razorback Greenway or other shared use paved trails	8.80	1	22.39
Slaughter Pen	2.49	0	5.84
The Back 40 Loop	0.72	0	2.03
Thunder Chicken	0.99	0	3.09

Q9. On a typical day that you ride a bicycle, what is the average distance in miles you travel for each of the following types of bicycling?

	Mean	Median	SD	n
Riding to get from one place to another	8.89	3.57	26.23	96
Road biking	11.87	5	30.15	170
Mountain biking	9.35	5	18.45	71
Other recreational riding	17.34	5	58.59	119

Q10. During a typical week, how many of the following types of transportation-related bicycle trips/rides do you take? (*n* = 96)

	Mean	Median	SD
Traveling to/from work/school	4.85	1	11.32
Other type of transportation bicycling	5.57	2	16.03

Q11. Have any of your children ridden a bicycle in the past 12 months? (*n* = 356)

	n	%
Yes	250	70%
No	106	30%

Q12. In the past 12 months, how many days has your child bicycled? (*n* = 250)

	Mean	Median	SD
	80.95	50	92.20

Q13. During a typical day, what is the average distance in miles your child travels riding a bicycle? (*n* = 250)

	Mean	Median	SD
	5.13	1	21.60

Q14. How many operational bicycles does your household own? (*n* = 615)

	Mean	Median	SD
	1.73	2	1.68

Q15. Has anyone in your household purchased a bicycle of any type in the last 12 months? (*n* = 615)

	n	%
Yes	142	23%
No	473	77%

Q16. How many new bicycles has your household purchased in the last 12 months? (*n* = 142)

	Mean	Median	SD
	1.55	1	1.07

Q17. How much did your household spend on the purchased bike(s)? (*n* = 142)

Mean	Median	SD
\$584.80	\$191.00	\$1,266.68

Q18. Where did you household purchase your bicycle(s). Please check all that apply (*n* = 142)

	n	%
Local bike shop	45	32%
Sporting goods store	17	12%
Discount/department/general retail store	64	45%
Toy store	5	4%
Online retailer	13	9%
Gift	2	1%
Other	17	12%

Q19. How much money has your household spent in the last 12 months in Northwest Arkansas on bicycle-related expenditures including clothing; equipment and parts; and service and maintenance? (*n* = 615)

Mean	Median	SD
\$82.48	0	\$237.56

Q20. Have you participated in an organized bicycle event in Northwest Arkansas in the past 12 months? (*n* = 615)

	n	%
Yes	43	7%
No	572	93%

Q21. How many days did you spend participating in bicycling events in Northwest Arkansas over the past 12 months? (*n* = 43)

Mean	Median	SD
10.53	2	31.78

Q22. How much money did you spend per day on each of the following items related to bicycling events in Northwest Arkansas? (*n* = 43)

	Mean	Median	SD
Lodging	\$43.88	0	\$154.61
Food	\$56.44	\$20.00	\$90.49
Souvenirs	\$27.44	\$10.00	\$64.28
Transportation	\$40.02	\$10.00	\$65.70
Entry or registration fees	\$45.93	\$30.00	\$61.86

Q23. Have you taken a vacation in Northwest Arkansas during which bicycling was the primary activity in the past 12 months?

	n	%
Yes	30	5%
No	585	95%

Q24. How many days did you spend participating in bicycling-oriented vacations in Northwest Arkansas over the past 12 months? (*n* = 30)

Mean	Median	SD
3.97	2	4.84

Q25. How much money did you spend per day in bicycling-oriented vacations in Northwest Arkansas over the past 12 months? (*n* = 30)

	Mean	Median	SD
Lodging	\$102.67	\$67.50	\$151.29
Food	\$98.27	\$90.00	\$86.36
Non-bicycling entertainment and recreation	\$87.83	\$50.00	\$105.08
Transportation	\$69.03	\$35.50	\$95.76

Q26. Using a scale from 1 to 10, where 1 is poor and 10 is excellent, how satisfied are you with the following components of the shared-use paved bicycle trails in your community? (*n* = 615)

	Mean	Median	SD
Number of shared-use paved trails	6.14	8	3.85
Condition of shared-use paved trails	6.46	8	3.92
Signs and maps near and on shared-use paved trails	5.89	7	3.78
Bicycle parking	5.28	6	3.88
Facilities on shared-use paved trails or at destination	4.79	5	3.70
Quality of the connections between on street bicycle facilities and shared-use paved trails	5.69	7	3.83

Q27. Rate your overall satisfaction with the shared-use paved trail infrastructure in Northwest Arkansas. (*n* = 615)

Mean	Median	SD
6.78	8	3.47

Q28. How satisfied are you with the following components of the natural surface trail infrastructure in your community: (*n* = 615)

	Mean	Median	SD
Number of natural surface trails	4.66	6	4.03
Condition of natural surface trails	4.87	6	4.09
Difficulty of natural surface trails	4.24	5	3.96
Signs and maps near and on natural surface trails	4.59	5	4.00
Facilities on or near natural surface trails	4.00	5	3.79
Quality of the connections between natural surface trails and shared-used paved trails	4.71	6	4.05

Q29. Rate your overall satisfaction with the natural surface trail infrastructure in Northwest Arkansas. (*n* = 615)

Mean	Median	SD
5.34	7	3.98

Q30. How satisfied are you with the following: (n = 615)

	Mean	Median	SD
My ability to get to and from public transit by bike	4.27	5	3.89
My ability to purchase essential bicycling-related goods and services	6.31	8	3.97
My familiarity with the location of bike lanes and shared-use paved trails	5.57	7	3.61
My ability to ride a bicycle without worrying of being hit by a motor vehicle	5.20	6	3.64
My ability to access bike lanes, shared-use paved trails, and bicycle parking	5.63	7	3.76
My ability to access natural surface trails	5.52	7	3.90
My ability to make connections on my bicycle between bike lanes, shared-use paved trails, and natural surface trails	5.26	6	3.85
My ability to get to all the places I want to go by bike	5.17	6	3.69

Q31. Imagine that you have a choice between two places to live. Location A is close to bicycle lanes, shared-used paved trails, and natural surface trails and Location B isn't. How much more would you pay annually to live in the location with access to these facilities?

	n	%
\$0	348	57%
\$1-100	94	15%
\$101-250	37	6%
\$251-500	41	7%
\$501-1,000	42	7%
\$1,001-2,000	18	3%
\$2,001-3,000	13	2%
\$3,001-4,000	5	1%
\$4,001-5,000	4	1%
\$5,001 or more	13	2%

Q32. On a scale of 1-10 scale, please rate the importance of each criterion related to making housing location decisions. (n = 615)

	Mean	Median	SD
Affordability	8.08	9	2.22
Proximity to restaurants, coffee shops, and shopping	6.51	7	2.62
Quality of area schools	7.44	8	2.87
Availability of paved bicycle infrastructure	5.07	5	3.11
Availability of natural surface trails	5.00	5	3.00
Walkability	6.20	7	2.89
Neighborhood character	7.74	8	2.30
Parks and open space	7.03	8	2.53
Proximity to job	7.11	8	2.85
Crime rate	7.96	9	2.44

Q33. Please rate the importance of each criterion related to making decisions on where to work.  
(n = 559)

	Mean	Median	SD
Level of pay	7.69	8	2.30
Benefits offered	7.59	8	2.50
Healthy work-life balance	7.75	8	2.44
Ability to bike to and from work	4.06	4	3.02
Proximity of work location to home	7.18	8	2.59
Enjoy subject matter of work	7.97	9	2.30
Job makes a positive difference in the world	7.41	8	2.62

Q34. Please indicate how much you agree or disagree with the statement on a scale from 1 to 5:  
Cities in Northwest Arkansas should spend more money to improve the bicycle infrastructure,  
including the addition of protected bike lanes

Mean	Median	SD
3.15	3	1.42

Q35. How many people from outside Northwest Arkansas have visited you specifically to use  
natural surface trails in the region within the last 12 months?

Mean	Median	SD
1.14	0	6.08

Q35b. Are you a member of a local bicycling-specific club that is located in Northwest Arkansas  
that participates in group bicycle riding?

	n	%
Yes	23	4%
No	579	94%
Don't know	13	2%

Q36. Which of the following best describes your race or ethnicity?

	n	%
Black American	13	2%
Asian Pacific American	11	2%
Subcontinent Asian American	2	0%
Hispanic American	50	8%
American Indian	30	5%
Non-Hispanic white	538	87%
Other	3	0%

Q37. Which of the following best describes you? (Check all that apply) (n = 615)

	n	%
Employed- full-time	336	55%
Employed- part-time	71	12%
Homemaker	45	7%
Retired	114	19%
Student- full-time	27	4%
Student- part-time	5	1%
Unemployed	42	7%

Q38. What is your annual household income? (n = 615)

	n	%
Less than \$20K	70	11%
\$20K to \$34K	69	11%
\$35K to \$49K	80	13%
\$50K to \$79K	117	19%
\$80K to \$119K	120	20%
Greater than \$120K	95	15%
Prefer not to answer	64	10%

Q38b. Which best describes the highest level of education you have completed?  
(n = 615)

	n	%
Some high school	26	4%
High school degree	121	20%
Some college or associate degree	198	32%
Bachelor's degree	161	26%
Master's degree or Ph.D.	109	18%

Additional city comparisons

	Regional	Bentonville	Fayetteville	Rogers	Springdale
Rode a bike 6 or more days	26.55%	43.96% **	34.55% **	31.86%	30.20%
Used mountain bike facilities	7.42%	19.81% **	9.09%	9.80%	7.92% **
Used paved facilities	24.73%	35.27% **	33.64% **	28.43%	28.71%
Bicycle ownership	68.21%	76.33% **	68.18%	74.51%	71.78%
Own 5+ bikes	4.77%	14.98% **	5.45%	8.33% *	10.89%
Purchased a bike in the last year	23.05%	28.99%	21.36%	23.53%	25.74%
Attended a bicycle event in the last year	5.22%	12.56% **	8.18%	4.41%	7.43%
Bicycled on a vacation in the last year	4.65%	6.76%	3.18%	1.96% **	3.47%
Hosted a bicycle tourist in the last year	22.40%	25.12%	25.45%	18.63%	25.25%

\* Statistically significant difference from the region at the 90% confidence level.

\*\* Statistically significant difference from the region at the 95% confidence level.