

Promoting Safe Bicycle Travel Opportunities

FOR BICYCLE TOURISM AND
ECONOMIC DEVELOPMENT

A collaboration of Tuolumne County, Stanislaus County, San Joaquin County,
Calaveras County, and Alpine County

Funded by a Caltrans Sustainable Transportation Planning Grant

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Acknowledgements

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Sincere gratitude and appreciation is given to the residents, businesses, bicyclists, and community members whose creativity and vision guided this project.



Executive Summary

The project, “Promoting Safe Bicycle Travel Opportunities for Bicycle Tourism and Economic Development,” started in the summer of 2019 as a Sustainable Transportation Planning Grant, thanks to funding by Senate Bill 1. Its many goals and objectives can be distilled into one main goal with two intentions.

The main goal is to make bicycling safer, especially on recreational routes. The two primary intentions are to (1) attract visitors and grow the tourism industry for economic development while (2) simultaneously enhancing the opportunity for local residents to enjoy equitable and safe bicycling for transportation and healthy recreation. Project leaders hope that political and social support for bicycling will increase when it’s connected to the economic health of the region. The Project found evidence for this assertion.

The strategy of the Project can also be simplified into two categories: (1) implement physical safety improvements to the roads and rights-of-way in the five counties; and (2) provide programmatic support for the growing efforts to attract bicyclists and support bicycle tourism. The strategy is based on the principle that if you build it, they will come, but more will come if you encourage them.

The Project started by developing an outreach plan that relied on attendance at dozens of public events throughout the five counties. Then the pandemic hit. Outreach

was stalled for several months until we realized that it would be necessary to change our outreach strategy. We developed an intensive digital outreach plan, including six online public video conferences, and conducted a scientifically valid survey to assess attitudes and opinions about our Project and its recommendations.

Analysis by the firm New Economics and Advisory looked at how the demographic and economic trends in bicycling might affect this region. Bicycling is booming as a result of high demand for socially distanced travel and recreation caused by the pandemic. Year-over-year bicycle sales increased by more than 60 percent. Recreational riding on bike trails doubled, according to the Rails to Trails Conservancy. Ten percent of Americans used a bicycle for the first time ever, or in a very long time.

Comparing bike racing events, to leisure riding, to non-competitive events, the analysis discovered that non-competitive events attract higher-income visitors than competitive events. Leisure riders tended to be local residents, with the exception of winery visitors.

The economic analysis presented ten priority “opportunities” to increase bicycle tourism across the five counties, and estimated increased spending by bicycle riders as a result of the improvements proposed in this Project.

A medium estimate of 40% increase in bicycle tourism resulted in the following values per county:

- Alpine County \$367,000
- Calaveras County \$483,000
- San Joaquin County \$2.8 million
- Stanislaus County \$517,000
- Tuolumne County \$97,000

The benefits of new forms of healthy recreation and transportation will have even huger economic benefits when you consider health cost savings. Altogether, the **health care cost savings from increased physical activity** by local residents, assuming a medium increase, **amount to a staggering \$16 million each year.**

To inform the decisions about priority improvements, the Project produced a report of best practices in bicycle tourism. There are four types of bicycling that can be considered touristic:

- Self-supported, where bicycling travelers make their own way from place to place
- Destination-based, where tourists converge on a particular place as a “home base” for bicycling-based recreation
- Events, which specifically attract tourists for a bike ride or related event
- Casual cycling, which refers to bicycling enjoyed as an important but not necessarily integral part of a trip

Emphasizing the importance of identifying a region’s strengths, the report led the Project Steering Committee to recommend destination-based and event-based strategies to attract bicycle tourists. The region does not lend itself to long distance self-supported touring like the California coast does, but there are many areas that would benefit from improvements to attract bicyclists to their natural beauty and rich cultural resources.

The Project also assessed the impediments to bicycle tourism in the region. We did that through qualitative surveys of local leaders, and a survey of a representative sample of residents of the region (n=360) plus about 100 cyclists in the region. The respondents provided a valuable perspective on what stands in the

way of promoting more bicycling, and what obstacles we may encounter as we implement the plan.

The survey asked motorists what frustrates them about bike riders. The survey suggested complaints based on cultural attitudes toward “bicyclists” (e.g. “general superior attitude”) and on behavior of cyclists (e.g. “not stopping at stop signs”). Cultural attitudes are not a barrier, we found, but bicyclists’ behavior is. Specifically, “riding erratically and swerving” was the most highly ranked frustration experienced by motorists around bicyclists. Gratefully, this can be addressed by physical improvements, education, and signage to reduce the behavior.

Importantly, the survey found significant public approval of improvements to bicycling for tourism purposes. Prior to learning of our proposals, 29% of respondents had neutral or not favorable opinions of “state and local programs to attract more people to the region to ride bikes.” But after learning of our proposals, fully a third of those respondents changed their mind, joining the 81.4% of people who have favorable opinions of our proposals generally.

The survey confirmed that our Project’s choices for physical improvements reflect public demand for bicycle infrastructure. The most popular improvements were “more off-road trails along canals, aqueducts, and rivers.” Our Project recommends four off-road trails. “Smooth pavement to create loops on quiet back roads” also ranked highly, supporting the Project’s recommendations. “Wider shoulders on the main highways” ranked much lower among bicyclists and non-bicyclists who took the survey. The Project does recommend wider shoulders on a very small proportion of roadways where the shoulders will connect to other quiet back roads.

Research conducted as part of this Project, and a review of other active transportation plans and projects, have led to this Project’s numerous recommendations for infrastructure safety improvements. We recommend a “signature project” plus a number of supportive projects in each of the five counties. Taken together, these will help to transform the region into an attractive place for residents and visitors alike to enjoy bicycling.

The signature projects are all trails:

- **EBMUD Pipeline Trail from Stockton to Lake Camanche.** This would provide a car-free connection to the popular and varied recreational opportunities at Lake Camanche for the residents of Stockton, to

the residents of Lodi with a short bike ride, and to the millions of people who live along Amtrak's San Joaquin corridor.

- **Stanislaus River Trail from Oakdale to Knights Ferry.** This scenic route would follow the curves of the river, connecting people to the many recreational attractions already available along the river.
- **Sierra Railroad Trail from Jamestown to Sonora.** This will strengthen the appeal of the tourist attractions in each of these downtowns by connecting them to each other via a new 4-mile, Class 1 multi-use trail.
- **Angels Creek Trail from Murphys Grade Road near Angels Camp to New Melones Reservoir.** This 5.1-mile trail along Angels would offer active access to wine tasting, cavern excursions, outdoor adventures, and world-famous cultural events like the Jumping Frog Jubilee.
- **Old Luther Pass Road Trail.** Converting a mere 2.1 miles of a dilapidated former roadway to a modern bike trail would create a "magical" new route for cyclists in this already-popular county for recreational cycling.

Each signature project is supplemented by 5-6 strategically chosen supportive projects that will substantially improve the region for biking. These include limited recommendations for shoulder widening, traffic calming to slow vehicles on low-traffic streets, intersection improvements where bike routes cross busy highways, and key amenities like bike parking and signage.

To complement the infrastructural recommendations, this Project makes a number of policy and programmatic recommendations. Policy recommendations relate to rumble strips and signage. Programmatic recommendations relate to events and practices we think will bolster growth and interest in bicycling and help to maintain the momentum gained in the past year.

While effective at preventing run-off-the-road collisions, rumble strips can turn a great road for biking into a frightening hazard. Nationally, a great deal of debate has landed on a set of practices that balances the needs of all road users. Caltrans policy does not perfectly adhere to these best practices. We make recommendations for changes to the rumble strip standards that will better protect the utility of a road for safe bicycling. The

recommendations would limit the routine use of rumble strips on roads with narrow shoulders, require signage wherever safety calls for applying those rumble strips even where there are narrow shoulders, and involve the public more in the decisions about rumble strips.

Signage recommendations would clarify that "sharing the road" means that bike riders are entitled to use the full lane when necessary. This should help motorists understand that bike riders aren't being unpredictable or deliberately rude when they fail to ride at the right edge of the roadway. We make recommendations for encouraging bicyclists to move over to let traffic pass at the soonest opportunity.

An important program to help sustain the effort is the development of the bikevalleytosierra.com website. It has already attracted hundreds of followers and should continue to serve as an important resource and clearing-house for information on routes, activities, and events.

We recommend that Caltrans sponsor an annual bike ride on Ebbetts Pass each spring, when the road is closed to cars but open to the public. Such an event would highlight Caltrans' critical role in keeping our highways open, and promote bicycling as a healthy activity for the residents of this region. Formalizing what is already happening informally would allow for promotion and support the economic development goals of this Project.

Finally in the category of programmatic support, we have developed several resources that should help the region attract thousands of bicycle tourists. A Toolkit for Organizers of Bike Rides is a step-by-step manual for anyone who wants to sponsor a bike ride to raise money for local charities or projects. A Toolkit for Businesses is a how-to manual for businesses that want to be known as bicycle-friendly. All of these resources are provided online, and, in printed format, as appendices in this document.

This plan provides tools and resources to help communities, residents, businesses, and stakeholders consider an approach to economic development that is inclusive and supportive of active transportation. As one resident put it, "we have many of the pieces in place already - we just need to put them together." It is our hope that this plan will represent the first of many efforts to develop a robust, equitable, and community-supported approach to bicycle tourism.



Introduction

This project grew out of a desire to support the struggling agricultural cities of the northern San Joaquin Valley, and the adjacent small towns and rural communities of the Sierra Foothills. Overlooked as destinations, this region potentially has a great deal to offer its residents and visitors in terms of healthy recreation with bicycling as a core element. Yet, that potential is mostly not realized due to a lack of investment in bicycling infrastructure and a lack of appreciation for the potential of bicycling as an economic benefit. This project aims to fix that.

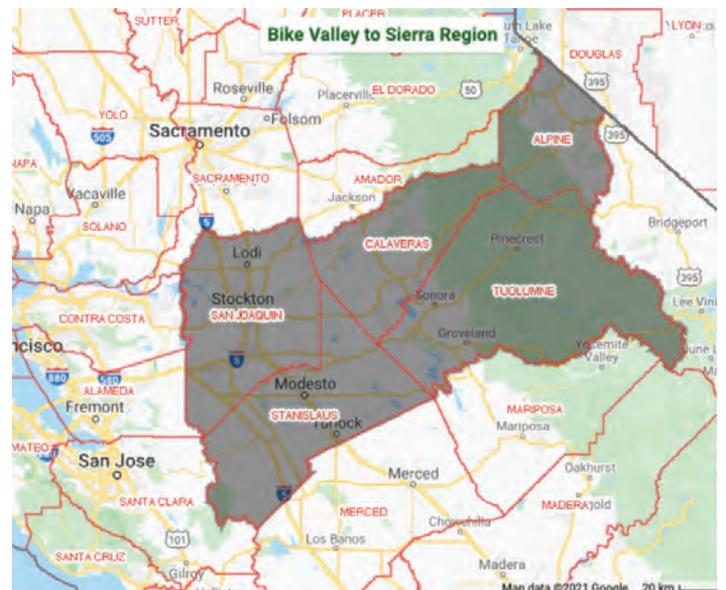
Making bicycling safer and more attractive for visitors to the region will provide a myriad of powerful benefits to the residents of the five-county area we focus on.

Families who live in the valley will have new access to safe and healthy recreation, thanks to the proximity and affordability of great bicycling facilities. By connecting our proposals to recently approved active transportation plans in the region, this project will also enhance transportation options for residents.

Imagine being able to take a vacation with your family just using your bikes! Bikeways designed for transportation will link to paths intended for recreation that lead to small

towns where you can camp or find affordable accommodations. Since 30% of families in most Census tracts in this region survive on low incomes under twice the federal poverty level, affordable and accessible recreation is a lifeline for health and happiness.

Everyone will benefit from increased visitation we expect from improved bicycling. Bicycling is more popular than ever, and places that are friendly to bicycling are more popular places to visit. The small towns and



cities of this five county region will benefit from even a modest influx of tourist spending. Jobs, and the pride of living in a thriving place, are immeasurably important.

This project is a collaboration of the Tuolumne County Transportation Council, Calaveras Council of Governments, San Joaquin Council of Governments, Stanislaus Council of Governments, and Alpine County LTC, supported by the California Bicycle Coalition Education Fund (CalBike) and Toole Design. The methods of outreach and research were modified because of the pandemic, but the result is as envisioned.

These are the overall project objectives:

- Create comprehensive plan for improving bicycle tourism opportunities in these five counties, focusing on scenic and rural state highways and local roads.
- Focus on improving and benefiting disadvantaged, low income Rural Communities and Small Cities and focus on the rural and scenic roads that connect communities.
- Identify opportunities for infrastructure improvements, such as shoulder widening, rumble strip installation, sight visibility improvements, and signage, to benefit all road users—including bicycle tourists as well as local residents.
- Promote bicycle tourism as a tool to improve local economic development in Alpine, Calaveras, San Joaquin, Stanislaus, and Tuolumne Counties.
- Increase bicycling and walking among residents of these five counties.
- Promote multimodal safety and expanded travel options for area residents.
- Reduce rates of injury and fatality from traffic collisions.
- Improve public health by increasing rates of active transportation, leading to lower rates of obesity and overweight as well as the diseases of inactivity (diabetes and cardiovascular disease).
- Reduce greenhouse gas (GHG) emissions through increased bicycling and walking and reduced VMT.
- Improve air quality and decrease pollution through increased bicycling and walking and reduced VMT.
- Create a more sustainable transportation system in these five counties by promoting bicycling and reducing VMT.

Following this Introduction are three sections, plus a substantial number of resources as Appendices.

The next section, “About Bicycle Tourism in this Region,” is a comprehensive report on the research that informed our recommendations. It reviews the economic impact of different kinds of bicycle tourism as it may affect this region. It discusses best practices in promoting bicycle tourism which informed our recommendations to emphasize non-competitive bike rides and destination-based riding. It reports on the results of a survey that revealed the preferences of residents of this five-county area and the adjacent counties when it comes to the connection between bicycling and vacationing, and visitors casual riding on trails.

Section Four contains the prioritized list of infrastructure projects that could transform this region if implemented. It provides conceptual designs and cost estimates for the projects that include five trail proposals and dozens of improvements to roadways in the five-county region. They include both short-term “low-hanging fruit” that can be implemented soon and more ambitious proposals. The section concludes with recommendations for funding the projects.

Section Five provides the programmatic and policy recommendations that are necessary complements to the infrastructural recommendations. They aim to make the results of this effort long-lasting by changing the process by which decisions are made. If implemented, these recommendations will improve the safety of rumble strips and improve how bicyclists and motorists can share the road, even on the narrow back roads common in this region. The section also introduces a guide for people who want to organize fundraising bike rides and a guide for businesses who want to be bike-tourism-friendly. These resources should enable residents to continue to promote tourism and safe bicycling years into the future.

The Appendices include some of the actual resources referenced in the earlier sections, included as an Appendix so they may be printed and distributed separately from the rest of this report. They also include some historical documentation for the Project.

Enjoy!

Bicycle Tourism Metrics

	Community Groups	Chambers and Visitor Bureaus	Businesses	Agencies
Number of bicycle routes created and mapped for tourism	x	x		
Number of wayfinding signs installed	x	x		x
Quantity of print materials, such as maps and brochures, distributed to businesses or customers	x	x	x	
Website traffic to bicycle tourism webpages	x	x		
Number of bicycle maps, brochures, or resources downloaded from bicycling and tourism websites	x	x		
Number of bicycle events held in the study area	x	x	x	
Number of participants in bicycle events	x	x	x	
Increase in lodging rates/visitor counts		x		
Increase in trail and/or route usage through trail counters or user surveys	x			x
Miles of trails/paths constructed in communities across the study area				x
Number of new non-motorized connections made between tourism destinations	x	x		x
Grants and funding received for bicycle tourism, including both promotional activities and infrastructure development		x		x
Number of businesses promoted as “bicycle-friendly”	x	x	x	
Increases in revenue or purchases at bicycle shops and supportive businesses, such as tour companies		x	x	
Establishment of additional showcase areas for bicycle tourism	x	x		x
Increase in tourism industry jobs		x	x	
Number of new businesses supporting tourism		x	x	



INTERREGIONAL BICYCLE TOURISM MASTER PLAN
BASELINE ECONOMIC VALUE ESTIMATE

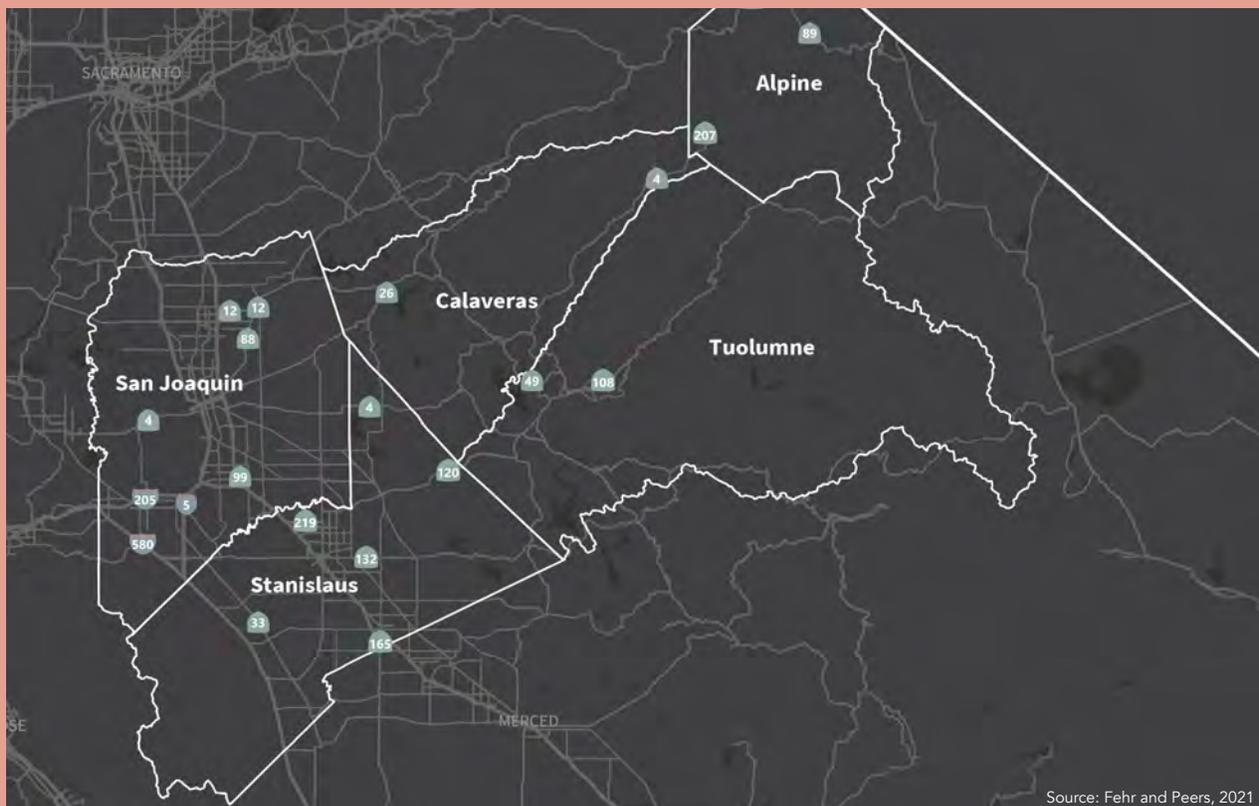
PREPARED BY NEW ECONOMICS & ADVISORY, JUNE 2021

INTERREGIONAL BICYCLE TOURISM MASTER PLAN BASELINE ECONOMIC VALUE ESTIMATE

SECTION 1 INTRODUCTION

This Study is part of a larger Central Valley Interregional Bicycle Tourism Master Plan effort, which seeks to identify infrastructure projects that can support and/or expand bicycle tourism in the counties of Alpine, Calaveras, San Joaquin, Stanislaus, and Tuolumne (the Study Area). This Economic Analysis supports the larger Master Plan effort by providing an overview of demographic and economic trends in the bicycling community and bicycle tourism industry. This Analysis also presents a baseline economic estimate of bicyclist expenditures and the economic value of bicycle commuting within each county's geographic area of focus (Showcase Area). These initial values provide an indication of existing economic activity; in other words, these are the values prior to capital investment projects designed to expand bicycle tourism and bicycle commuting by local residents. Armed with this initial data, individual counties will be able to better estimate the impact of capital projects implemented in the future.

FIGURE 1.1
STUDY AREA



ORGANIZATION OF REPORT

This Report highlights key findings of various aspects of the Study, and is divided up into these individual sections:

- SECTION 2 | Technical Approach, page 3
- SECTION 3 | Demographic and Economic Trends in Bicycling, page 8
- SECTION 4 | Alpine Showcase Area Baseline Economic Value, page 30
- SECTION 5 | Calaveras Showcase Area Baseline Economic Value, page 35
- SECTION 6 | San Joaquin Showcase Area Baseline Economic Value, page 41
- SECTION 7 | Stanislaus Showcase Area Baseline Economic Value, page 48
- SECTION 8 | Tuolumne Showcase Area Baseline Economic Value, page 54

BICYCLE TOURISM SEGMENTS

New Economics estimated the potential value of bicycle tourism in each Showcase Area by evaluating the following types of bicycle tourism:



LEISURE RIDING

Residents and/or visitors who participate in bicycling and enjoy local trails, sightseeing and amenities, and local open space or recreation areas. This category also includes organized group bicycle rides that occur daily, weekly, or monthly, and are designed for bicycle riding enthusiasts seeking exercise, challenge, and camaraderie within the bicycling community.



NON-COMPETITIVE BICYCLE EVENTS

Annual, organized bicycling events fall into this category. These events may be timed, require registration, and/or have prizes, but they are organized by a local bike shop, bicycle enthusiast group, civic organization (such as Rotary), or other entity with a primary goal of raising funds and/or awareness around issues affecting the local community in addition to providing a physical challenge.



COMPETITIVE BICYCLE EVENTS

Organized bicycle races sanctioned by USA Cycling (<https://usacycling.org/>). These events require registration and award prizes or recognition for the fastest times on a pre-identified route.

SECTION 2

TECHNICAL APPROACH

This section describes the methodology and sources used to quantify the baseline, economic value of each Showcase Area.

DEMOGRAPHIC AND ECONOMIC TRENDS IN BICYCLING

The bicycling community has a unique set of demographic and economic attributes. These attributes have evolved over time, including significant growth during the COVID-19 pandemic. This Study provides an overview of historical and emerging trends nationally, as well as general demographic attributes of the Showcase Areas. These data points and observations, presented in *Section 3* of this Study, were gathered from a number of studies and data sources, as summarized in **Figure 2.1**.

RIDER EXPENDITURE ASSUMPTIONS AND ESTIMATES

Bicycle tourism confers multiple economic benefits to Showcase Areas:

- Bicyclists spend money on bicycle parts, food and beverage, event registration fees, accommodations, fuel, other entertainment, etc.
- Bicyclists purchase bicycles, including recreation bikes, mountain bikes, road bicycles, children's bicycles, and e-bikes.

Section 3 establishes daily expenditure assumptions for different types of bicycling activities that are applied in this study. Rider expenditure data was estimated using a number of existing studies in predominantly rural regions across the United States, as well as local data made available for this study. **Figure 2.2** identifies the case study research sources from which these metrics were derived.

In *Sections 4-8*, these daily expenditure estimates are applied to the estimated number of rides occurring in each Showcase Area annually. The number of rides in each Showcase Area was collected through interviews with local bicycle shops, bicycle groups, avid riders, internet sites that track rider "check ins" on trails and/or event participation counts, event organizers, Stakeholder research, and event websites.

DEMOGRAPHIC AND ECONOMIC TRENDS IN BICYCLING

FIGURE 2.1

BICYCLE TOURISM STUDIES (DEMOGRAPHICS)

Year Published	Title	Authors	Published By	Topics of Interest
2021	Biking is Not Just For Boys	Kiran Herbert	People for Bikes	Gender and racial barriers in bicycling
2021	How Bicycling Changed During a Pandemic	N/A	People for Bikes	How bicycling changed during the COVID-19 Pandemic
2021	Where do we go from Here? Breaking Down Barriers to Bicycling in the United States	Charles T. Brown; Susan Blickstein and Sienna Yang, Rutgers University; James Sinclair and Aasha Jain, Rutgers University	People for Bikes	Perceptions and attitudes towards bicycling; potential role of private sector in hindering and/or advancing bicycling
2021	Bike Commuting Almost Doubles Over Past Two Decades	N/A	Bicycle Retailer	Gender patterns in bicycle commuting
2020	The Future of the Bicycle Industry and What You Can Do Now	Bob Margevicius	National Bicycle Dealers Association	Impact of COVID-19 on bicycle demand
2020	Plot Twist: US Performance Bike Sales Rise in June, 2020	Marissa Guyduy (press contact)	NPD Group	Year-over-year changes in bicycle sales
2019	American Community Survey	N/A	U.S. Census	Gender, Race, Ethnicity, Household Income
2013	The Economic Significance of Bicycle-Related Travel in Oregon: Detailed State and Travel Region Estimates	Dean Runyan Associates	Travel Oregon	Economic benefits created by travelers bicycling in Oregon
2012	Understanding Barriers to Bicycling Project	N/A	Community Cycling Center	Impact on communities of color, low-income communities and immigrants

RIDER EXPENDITURE ASSUMPTIONS AND ESTIMATES

FIGURE 2.2

BICYCLE TOURISM STUDIES (ECONOMICS)

Year Published	Title	Authors	Published By	Topics of Interest
2019	Lodi 2014-2018 Travel Impacts	Dean Runyan Associates	Visit Lodi	Spending and economic impact of visitors.
2019	Economic Impacts of Mountain Biking and Bike Trail Events and Festivals in West Virginia	Daniel Eades, Doug Arbogast	West Virginia Extension Service	preferences of mountain bikers in West Virginia
2019	The Napa Valley Visitor Profile 2018	Destination Analytics	Visit Napa Valley	Profile of visitors to Napa Valley
2019	Profile of Wine Tourists to Willamette Valley	Destination Analytics	Willamette Valley Wineries Association	Visitor segments attracted to the Willameta Valley
2016	Assessing the Economic Impact and Health Effects of Bicycling in Minnesota.	Xinyi Qian, Tourism Center, University of Minnesota	Minnesota Department of Transportation	Economic and health impacts of Minnesota bicycling industry; demographics of riders
2011	Economic and Health Benefits of Bicycling in Iowa	Brian Bowles, Kristine Fleming	Iowa Bicycle Coalition	Economic and health impacts of bicycling in Iowa
2011	Analyst of Bicycling Trends in Large North American Cities	Brian Bowles, Kristine Fleming	Iowa Bicycle Coalition	Economic and health impacts of bicycling in Iowa
2010	Valuing Bicycling's Economic and Health Impacts in Wisconsin	Maggie Grabow, Micah Itahn, Melissa Whited	The Nelson Institute for Environmental Studies Center for Sustainability and the Global Environment, University of Wisconsin Madison	Economic impacts of bicycle recreation and tourism Wisconsin; demographics of current and future cyclists

BICYCLE COMMUTE HEALTH BENEFITS

Bicycling creates additional financial benefits that are associated with health. When an individual chooses to ride a bicycle as a means of transportation instead of a car or a bus, they are engaging in physical activity that reduces their health risks; this translates to reduced health expenditures. This Study considers the value of Bicycle Commute Health Benefits, or the economic value of health benefits conferred on local residents who regularly bicycle to work. While not an economic value created by bicycle tourism, this component is included because it serves as an indication of equity and access among local community residents in addition to the direct economic benefits from tourism.

To better quantify the health benefits of commuter bicycling in each county, New Economics examined the methodology used in a 2011 study: *Economic and Health Benefits of Bicycling in Iowa*. This 2011 study seeks to estimate the monetary impacts that bicycling has on the state in regards to economic factors and health savings. Health savings are calculated based on (1) the prevalence of certain non-communicable diseases, (2) the cost of treatment for each disease, and (3) the percentage of commuter cyclists for each examined region. Applying this approach, New Economics has estimated the health savings attributed to bicycling in each Showcase Area included in this Study. **Figure 2.3** establishes the \$2021 cost per case for diabetes, cancer, coronary heart disease, and strokes.

In *Sections 4-8*, these cost assumptions are applied to bicycle commute rates derived from the Census's American Community Survey, extrapolated for the Showcase Areas by ESRI, a private, third-party data source that provides demographic and economic data.

SHOWCASE AREAS

This analysis focuses largely on five geographic areas, one in each of the five Study Area counties. *Sections 4-8* contain depictions of the Showcase Areas for each county, respectively.



Source: Interregional Bicycle Tourism Master Plan Stakeholder Group, 2021

FIGURE 2.3

ASSUMPTIONS, COST PER HEALTH CASE

	AMOUNT	SOURCE
DIABETES		
COST PER CASE (2017) ^[1]	\$16,752	Economic Costs of Diabetes in the U.S. in 2017 US Inflation Calculator, based on CPI Health Care Index
COST PER CASE (2021)	\$18,468	
CANCER		
COST PER CASE (2017) ^[2]	\$150,000	The High Cost of Cancer Treatment, 2018, AARP
COST PER CASE (2021)	\$162,120	
CORONARY HEART DISEASE		
COST PER CASE (2017) ^[3]	\$18,953	Medical Care Costs Among Patients With Established Cardiovascular Disease, 2010, American Journal of Managed Care
COST PER CASE (2021)	\$27,230	
STROKE		
COST PER CASE (2017) ^[4]	\$21,826	Costs of Hospitalization for Stroke Patients Aged 18-64 Years in the United States, 2014, US Dept of Health and Human Services
COST PER CASE (2021)	\$31,358	

[1] "Economic Costs of Diabetes in the U.S. in 2017," American Diabetes Association.

[2] "The High Cost of Cancer Treatment," AARP The Magazine, 2018.

[3] "Medical Care Costs Among Patients with Established Cardiovascular Disease," The American Journal of Managed Care, 2010.

[4] "Costs of Hospitalization for Stroke Patients Aged 18-64 Years in the United States," Wang G. et al., 2014.

Source: PLACES: Local Data for Better Health, Center for Disease Control and Prevention, 2020 release.

Prepared by New Economics & Advisory, June 2021.

INTERREGIONAL BICYCLE TOURISM MASTER PLAN BASELINE ECONOMIC VALUE ESTIMATE

SECTION 3 DEMOGRAPHIC AND ECONOMIC TRENDS IN BICYCLING

NATIONAL DEMOGRAPHIC TRENDS

On the surface, bicycles are a form of relatively low-cost transportation, recreation, and exercise that can be enjoyed by most segments of the population, including children, adults, men, and women. Even many people with physical disabilities can get bicycles designed specifically to accommodate their disability. However, research has shown that bicycling in the United States is an activity dominated by white men, and that active cyclists tend to have above average incomes and relatively high education levels.

In some European countries (such as the Netherlands and Germany), men and women each account for about 50 percent of bicyclists. In the U.S., however, men account for 72-77 percent of “bike-to-work” trips, while women account for only 23-28 percent.^[1] For recreational riders, the split approaches equality, at 56% male and 44% female.^[2] The primary barrier faced by women (and presumably, children and some people with physical disabilities) is access to safe places to bike. Recommended infrastructure improvements include well-lit, protected bike lanes, secure bicycle parking, contraflow bike lanes, and safer pedestrian crossings.^[3]



Source: Interregional Bicycle Tourism Master Plan Stakeholder Group, 2021

[1] Bike Commuting Almost Doubles Over Past Two Decades. Published May 20, 2021. <https://www.bicycleretailer.com/studies-reports/2021/05/20/bike-commuting-almost-doubles-over-past-two-decades-according-report#.YKamQi9h1z8>. Also, the 2019 American Community Survey, as reported in this same article.

[2] People For Bikes: <https://www.peopleforbikes.org/news/biking-is-not-just-for-boys>

[3] Where Do We Go From Here? Breaking Down Barriers to Bicycling in the United States. Published by People for Bikes, 2021. <https://www.peopleforbikes.org/reports/where-do-we-go-from-here-breaking-down-barriers-to>

NATIONAL DEMOGRAPHIC TRENDS

Research on the American bicycling community dating back to the early 2000's also indicates that bicycling has been an activity primarily undertaken by White people, with relatively small representation by African Americans, Asians, or people of Hispanic ethnicity (**Figure 3.1**). A 2012 study focused on the barriers to bicycling in low-income communities and communities of color in Portland, Oregon, revealed the following observations from surveys and focus groups:

- Low-income households that do not own cars still use cars, which suggests that carpooling or borrowing cars remains preferable to bicycling. The most significant barrier to bicycling is the cost associated with bicycle ownership, including purchase and maintenance. 62 percent of Hispanic respondents cited cost as a major concern.
- All focus groups cited a need for secure bicycle storage, including residential complexes, schools, etc.
- Within the focus groups, nearly 60 percent of African American participants and 43 percent of Hispanic participants stated that they would like to ride with a group instead of riding alone. One-third of female Latina participants stated that they would like to learn how to ride a bicycle so that they can bike with their kids.
- 100 percent of African American focus group participants voiced a concern about hostile drivers, while 43 percent of Hispanic participants expressed concerns about being pulled over by the police.
- Among African American focus groups, cultural biases include a perception that biking is only for kids, bicycles carry a historical perception associated with drug dealing, and bicycles are now associated with gentrification.
- Among the Latino Community, barriers include a fear of being uncomfortable in a new place (associated with new immigrants) and fear of deportation.

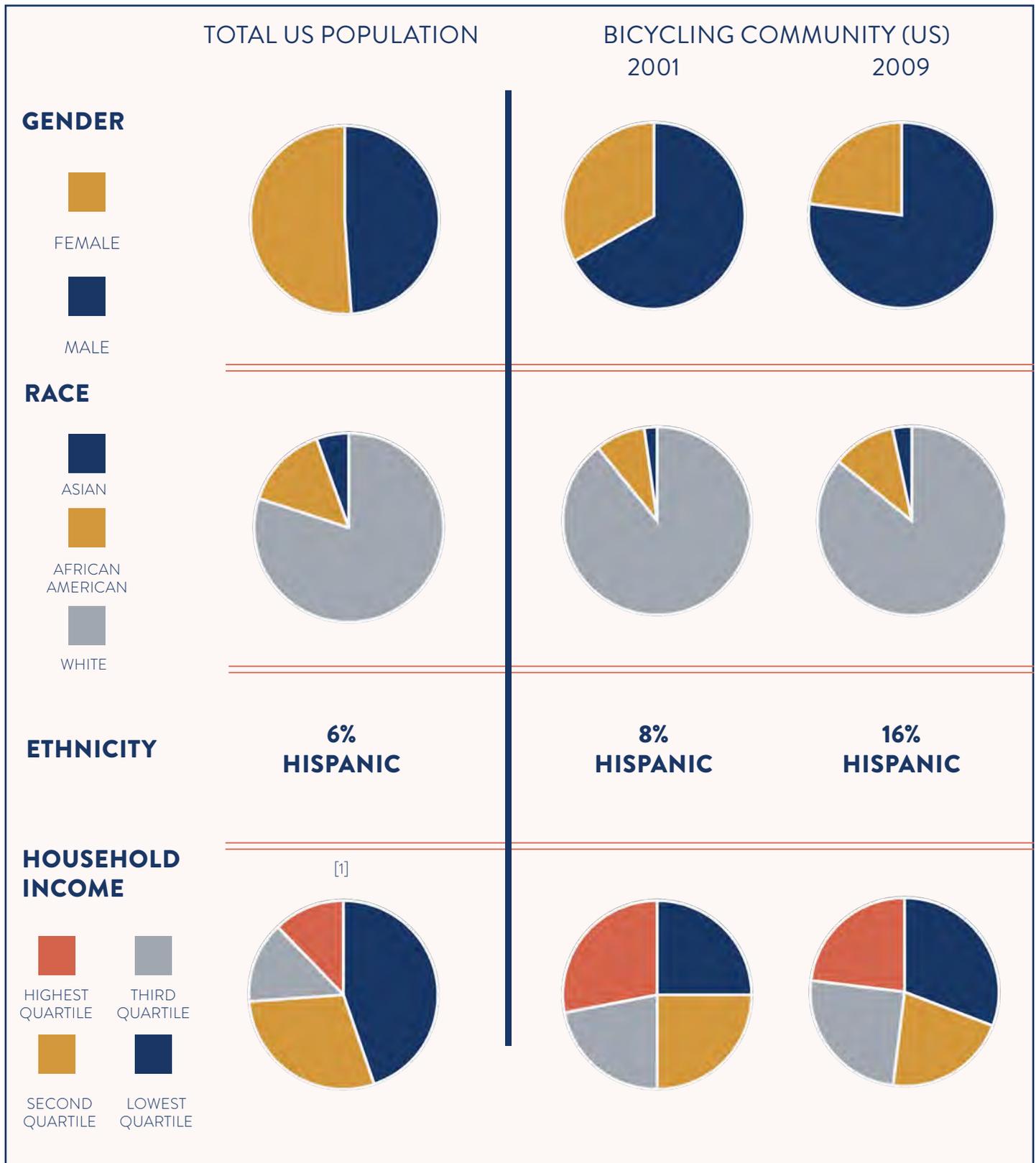
Subsequent bicycle distribution programs in these communities led to a recognized need for:

- Skilled persons to repair bicycles, fit helmets, and teach adults and children how to change flat tires and perform basic practices to keep bicycles in working order.
- Creation of bicycle committees at local housing complexes to address secure storage and provide training related to bicycle maintenance.
- Ongoing efforts to increase racial and cultural inclusion within bicycle programs, shops, services, and policies. ^[4]

[4] Understanding Barriers to Bicycling Project, published July 2012. Community Cycling Center, Portland, Oregon. www.communitycyclingcenter.org

FIGURE 3.1

NATIONAL BICYCLE DEMOGRAPHICS



[1] National brackets include \$0-\$49,999; \$50,000-\$99,999; \$100,000-\$149,999, and \$150,000 or more.
 Source: Bicycling Trends and Policies in Large North American Cities, Table 3; 2010 Census.
 Prepared by New Economics & Advisory, June 2021.

SHOWCASE AREA
DEMOGRAPHICS

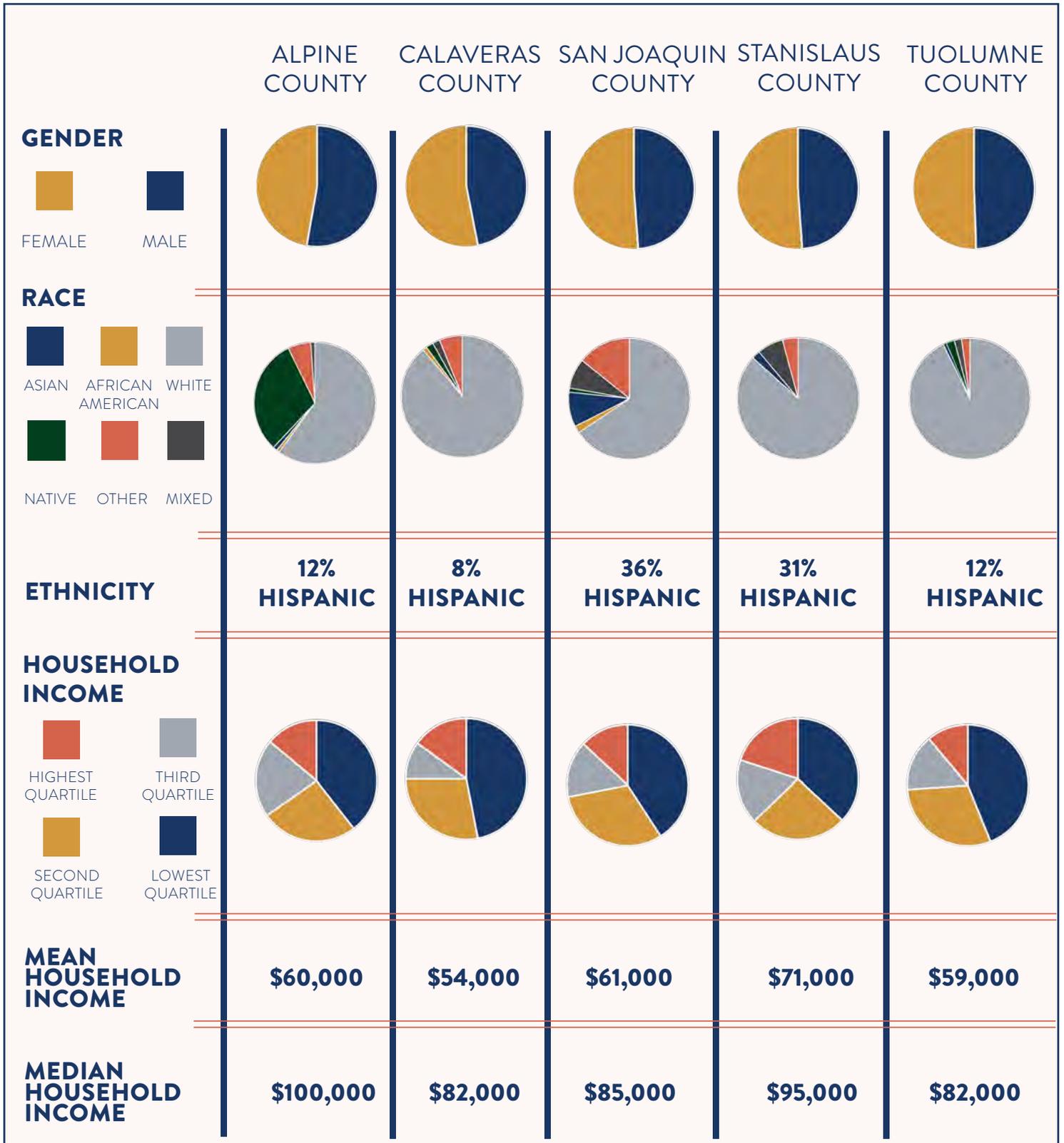
While demographic information about bicyclists in the Study Area is not yet available, New Economics evaluated demographics of the overall populations within each Showcase Area. This information is provided as indication of the potential bicycling community over time.

Figure 3.2, which summarizes gender, race, ethnicity, and household incomes for each Showcase Area, offers the following insights:

- Showcase Areas have a generally equal gender split. Alpine County's Showcase Area has a gender split that favors men (53 percent), while Calaveras County's Showcase Area has a split that favors women (53 percent). Showcase Areas in the other counties have a gender split that is closer to 50-50.
- The Showcase Areas in San Joaquin and Stanislaus have a Hispanic population that accounts for one-third or more of the total population.
- Residents in the Calaveras and Tuolumne Showcase Areas are predominantly white (89-90 percent), while the other Showcase Areas are more diverse. Alpine has a relatively high share of American Indians (31 percent), while San Joaquin has an Asian population segment (9 percent), and people of other races (22 percent). While Stanislaus is predominantly white (86 percent), it does have a notable population of people of other races (11 percent).
- Household incomes in the Showcase Areas of Calaveras, San Joaquin, and Tuolumne are the most bottom heavy, with about 70-75 percent of households earning \$100,000 or less annually.
- Calaveras has a relatively low median household income (\$54,000), while Stanislaus has the highest median household income (\$71,000), and the other counties fall in between, around \$58,000-\$60,000.
- Tuolumne, Calaveras, and San Joaquin have the lowest mean household income levels (about \$82,000-\$85,000), while Alpine and Stanislaus enjoy noticeably higher mean household incomes (\$95,000-\$100,000).

FIGURE 3.2

SHOWCASE AREA DEMOGRAPHICS (TOTAL POPULATION)



Source: ESRI Business Analyst, accessed May 2021. Reflects American Community Survey data from 2015-2019. Prepared by New Economics & Advisory, June 2021.

NATIONAL DEMOGRAPHIC TRENDS BY TYPE OF BICYCLING

A series of existing studies of other rural areas throughout the United States provides an indication of key demographic characteristics of different types of bicyclists, including leisure bicyclists, non-competitive bicyclists, and competitive bicyclists. The case study areas were chosen for their generally rural nature, and the natural terrain (and/or other amenities) similar to those found in the Showcase Areas. *As such, it is important to caveat that the demographics of each case study area is unique, and may differ from the Study Area and Showcase Areas.* One of the recommendations of this study is to gather gender, race, ethnicity, and household income data specific to bicyclists in each Showcase Area.



LEISURE RIDING



NON-COMPETITIVE BICYCLE EVENTS



COMPETITIVE BICYCLE EVENTS



LEISURE RIDING

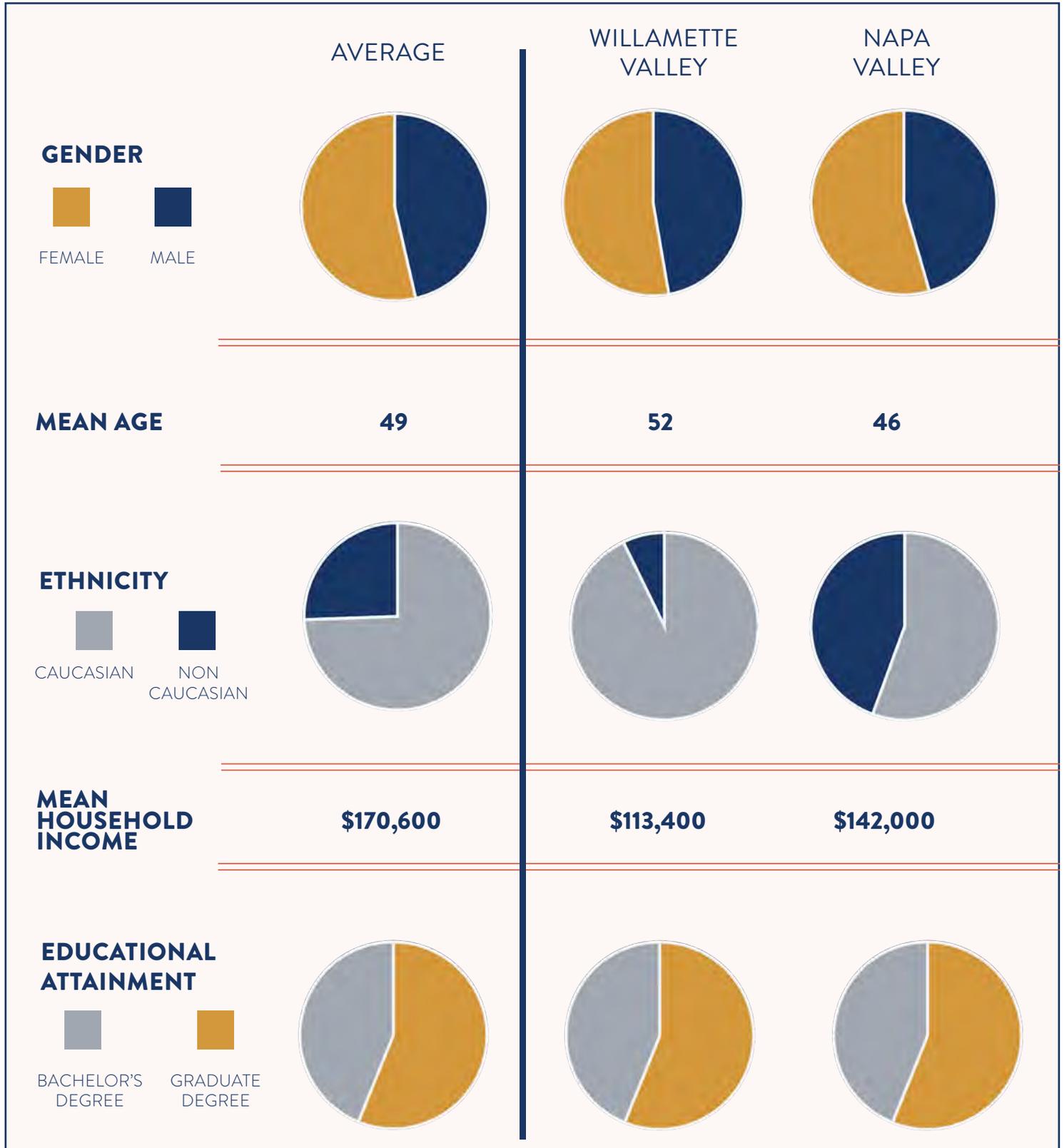
Figures 3.3 and **3.4** provide demographics for Leisure bicycling, including winery visitors (a small portion of whom bicycle between wineries), casual vacationers, and local recreators. The data shown here draws from the wine regions of Napa and the Willamette Valley, as well as a study of bicycling in Wisconsin and a study of other large North American cities. Key takeaways about the demographics of Leisure bicyclists include:

- Slightly more than 50 percent of winery visitors are women. This gender split presents an opportunity for new bicycling infrastructure to serve more women. In addition, average household incomes earned by winery visitors are well above \$100,000 (likely associated with relatively high educational attainment levels), which points to disposable income that could be captured by Showcase Areas with wineries.
- Casual vacationers and local recreators appear to reflect more traditional bicycling statistics — predominantly male, White, and having upper household incomes.



FIGURE 3.3

LEISURE BICYCLING: WINERY VISITOR DEMOGRAPHICS

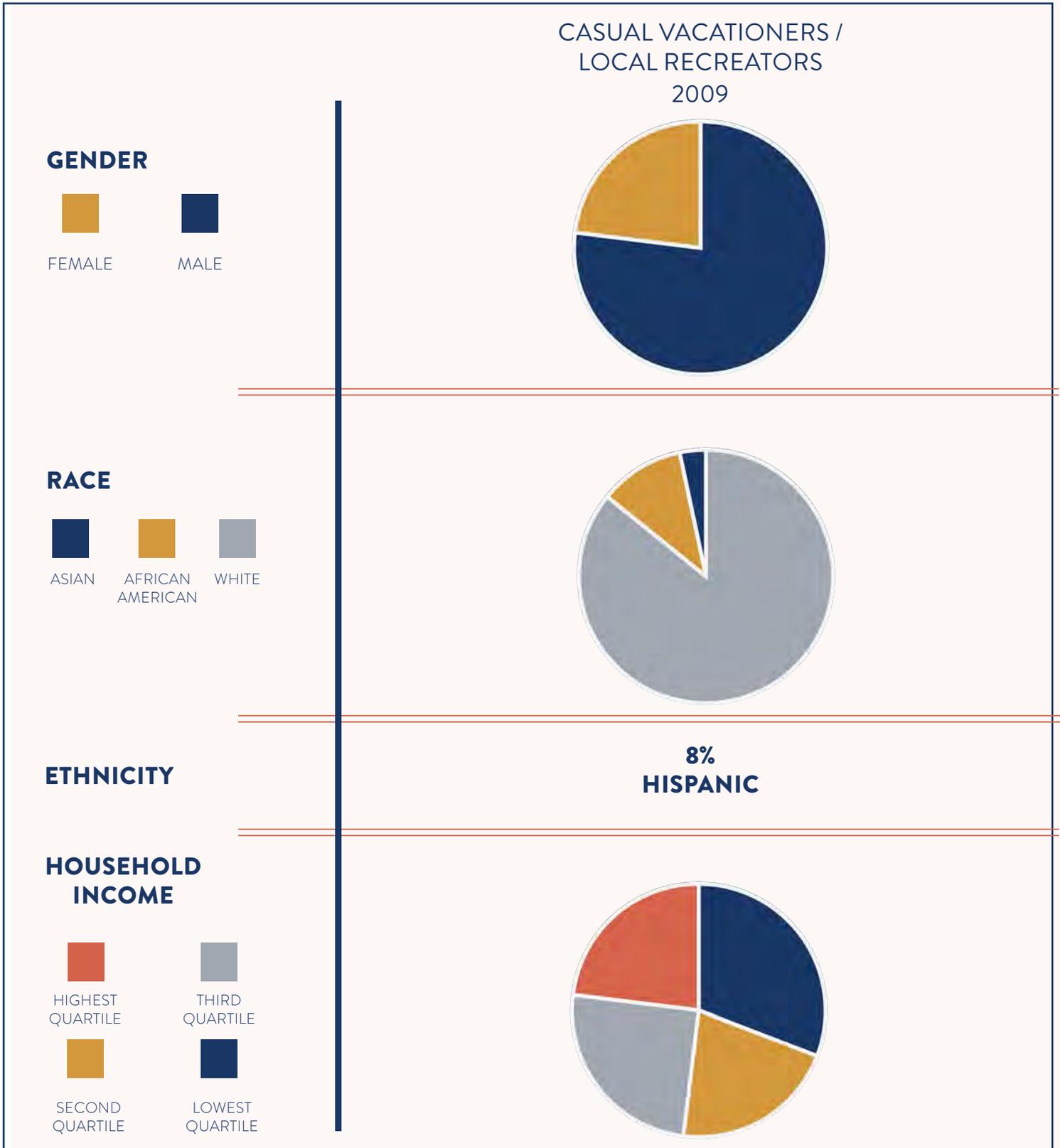


Source: Napa Valley Visitor Profile 2018, released May 2019; Profile of Wine Tourists to Willamette Valley, January 2019. Prepared by New Economics & Advisory, June 2021.



FIGURE 3.4

OTHER LEISURE RIDER DEMOGRAPHICS



Source: Wisconsin Study, 2010; Analysis of Bicycling Trends and Policies in Large North American Cities: Lessons for New York, Virginia Tech and Rutgers University, 2011.
Prepared by New Economics & Advisory, June 2021.

NATIONAL DEMOGRAPHIC TRENDS BY TYPE OF BICYCLING



NON-COMPETITIVE BICYCLE EVENTS

Figures 3.5 and 3.6 provide demographics for Non-Competitive bicycling, including off-road mountain biking, daily/weekly/monthly road rides by bicycle enthusiasts, and annual events put on by bicycle clubs and other entities. The data shown here draws from the International Mountain Biking Association, as well as a series of bicycling studies focused on Minnesota and Oregon. Key takeaways about the demographics of Non-Competitive bicyclists include:

- Mountain bikers are predominantly male (80 percent), White (96 percent), have an average age of mid-40's, and are affluent (though not as affluent as winery visitors).
- Other non-competitive riders tend to be in their mid-50's, male (65-85 percent), White (97 percent), and highly educated (80% with a Bachelor's degree or higher).



COMPETITIVE BICYCLE EVENTS

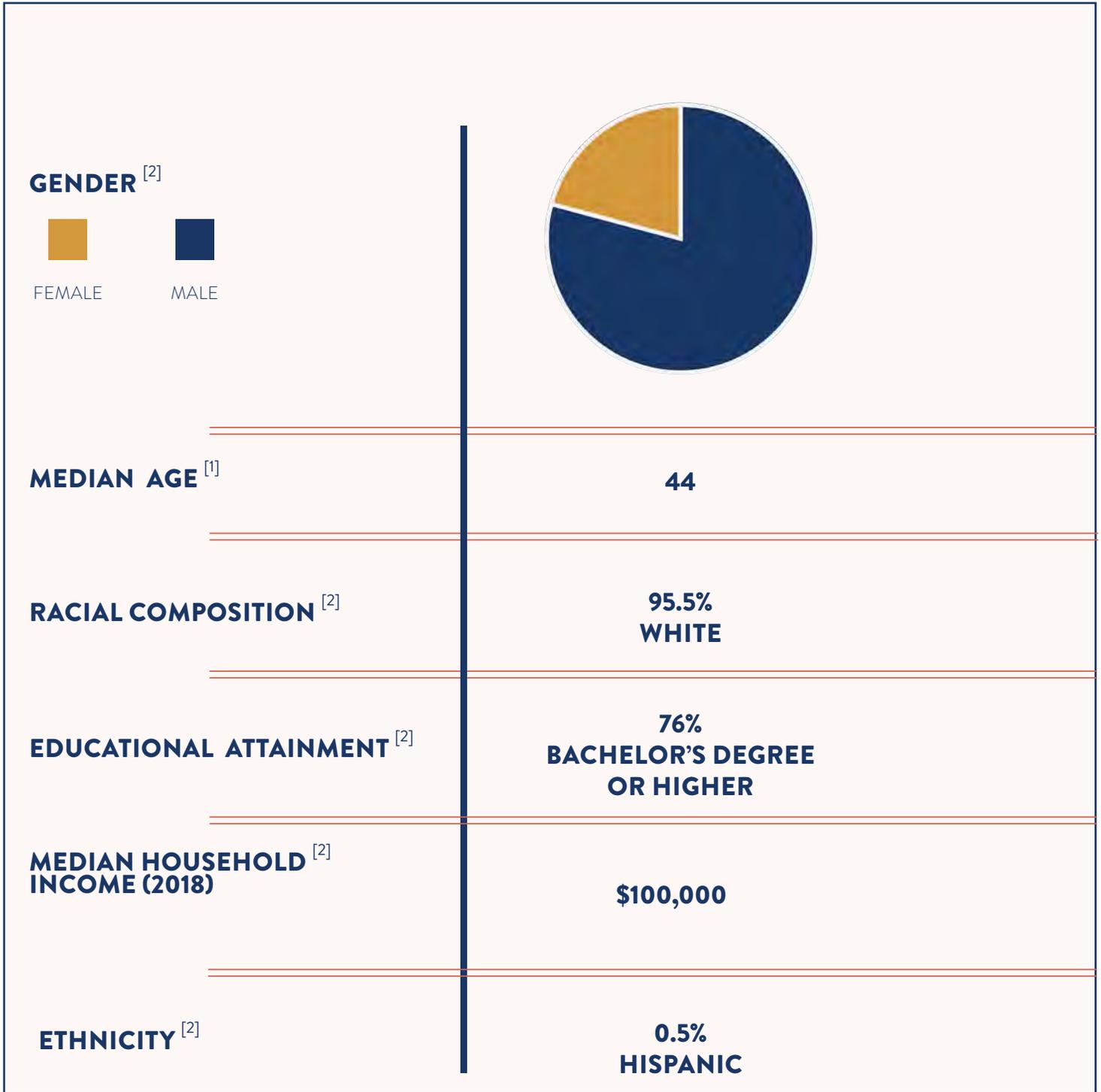
Figure 3.7 provides demographics for Competitive bicycling, including sanctioned races and other competitive races. The data shown here draws a series of bicycling studies focused on Minnesota and Oregon. Key takeaways about the demographics of Competitive bicyclists include:

- Competitive racers are, on average, in their mid-40s (similar to mountain bikers), White (95 percent), male (80-85 percent), and highly educated (80-89 percent with a Bachelor's degree or higher). They also have high household incomes that are top heavy (around 39-43 percent earn incomes within the top quartile).



FIGURE 3.5

MOUNTAIN BIKING EVENT DEMOGRAPHICS



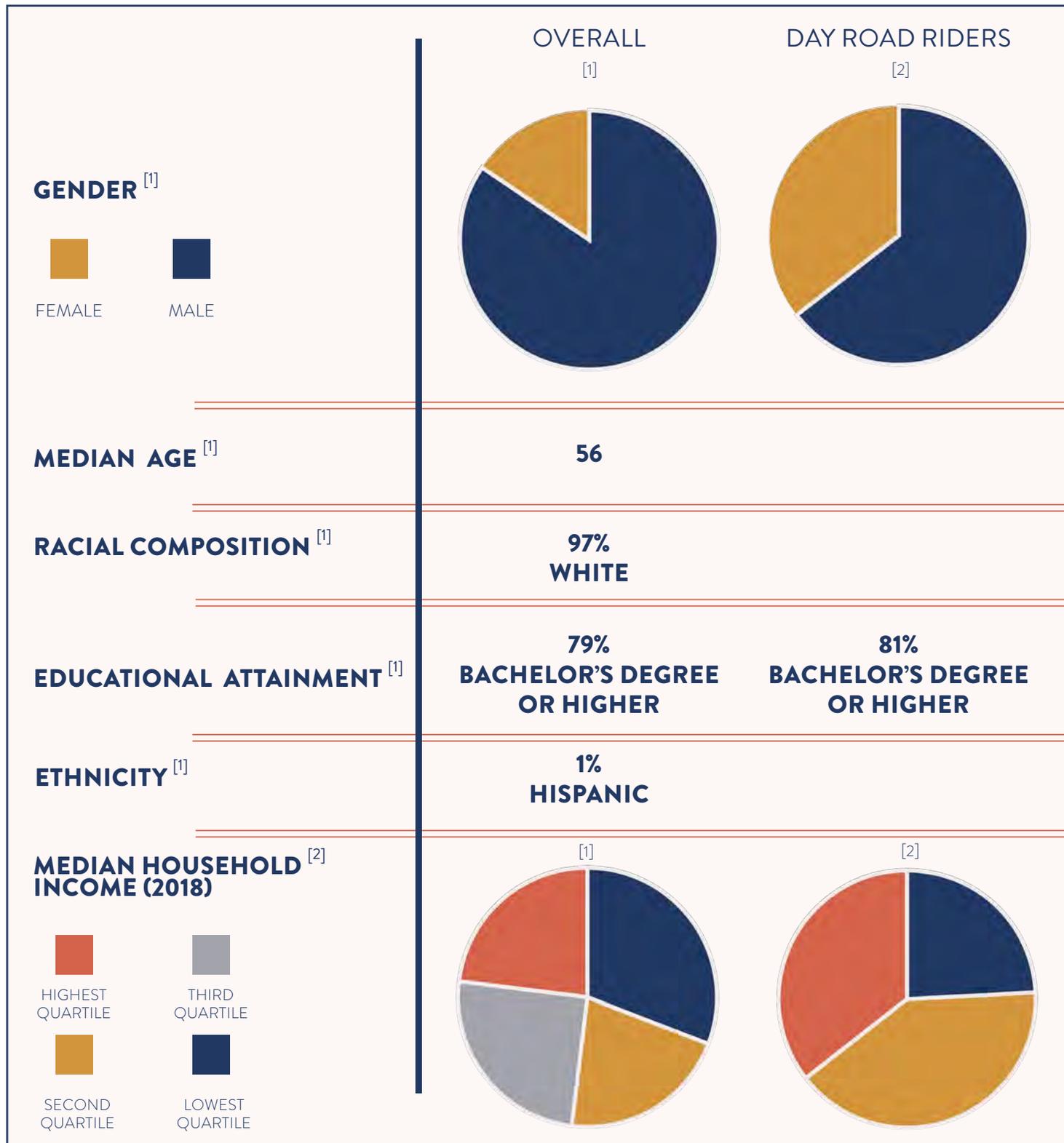
[1] Reflects recent membership statistics from the International Mountain Biking Association (IMBA), reflecting national totals.

[2] Assessing the Economic Impact and Health Effects of Bicycling in Minnesota, 2016.

Sources: Research studies, IMBA.

Prepared by New Economics & Advisory, June 2021.

FIGURE 3.6
NON-COMP CYCLING EVENT DEMOGRAPHICS



[1] Assessing the Economic Impact and Health Effects of Bicycling in Minnesota, 2016.

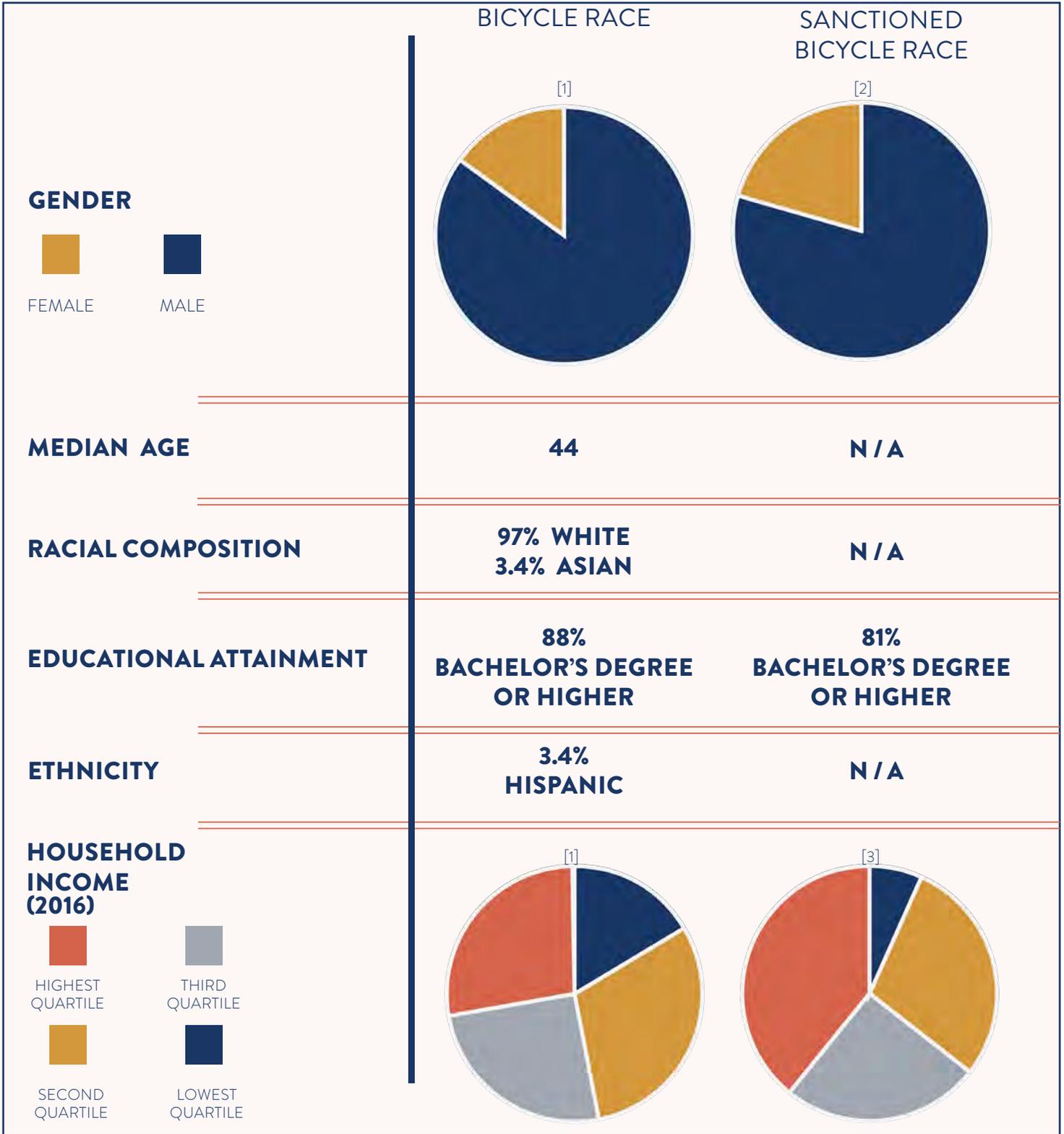
[2] The Economic Significance of Bicycle-Related Travel in Oregon, 2012.

Sources: Research studies.

Prepared by New Economics & Advisory, June 2021



FIGURE 3.7
COMPETITIVE CYCLING EVENT DEMOGRAPHICS



[1] Assessing the Economic Impact and Health Effects of Bicycling in Minnesota, 2016.

[2] The Economic Significance of Bicycle-Related Travel in Oregon, 2012.

[3]

Sources: Research studies.

Prepared by New Economics & Advisory, June 2021

NATIONAL AND LOCAL ECONOMIC TRENDS BY TYPE OF BICYCLING

New Economics conducted case study research of other rural areas throughout the United States to identify economic characteristics of different types of bicyclists, including leisure bicyclists, non-competitive bicyclists, and competitive bicyclists.



LEISURE RIDING

Figures 3.8 and 3.9 provide demographics for Leisure bicycling, including winery visitors, casual vacationers, and local recreators. The data shown here draws from the wine regions of Napa and the Willamette Valley, as well as a study of bicycling in Wisconsin and a study of other large North American cities. Key takeaways about the economics of Leisure bicyclists include:

- Winery visitors tend to have a relatively large party size (over 4 people per party), spend a couple of days in the area, including an overnight in the winery region. Combined with significant daily expenditures (\$270), winery visitors tend to generate demand for overnight accommodations, as well as food and beverage, in addition to wine purchases. However, the current share of winery visitors who bicycle or have an interest in bicycling is small—only about 1 percent of winery visitors engage in bicycling, and only about 2 percent want to bicycle.
- In contrast, casual vacationers and local recreators are much more likely to be from a place within driving distance and only visit for the day. Daily spending varies from about \$5 for local residents, to \$22-\$48 for local road and trail riders, to \$41-\$65 for tourist road and trail riders.

**FIGURE 3.8**

LEISURE BICYCLING: WINERY VISITOR ECONOMICS

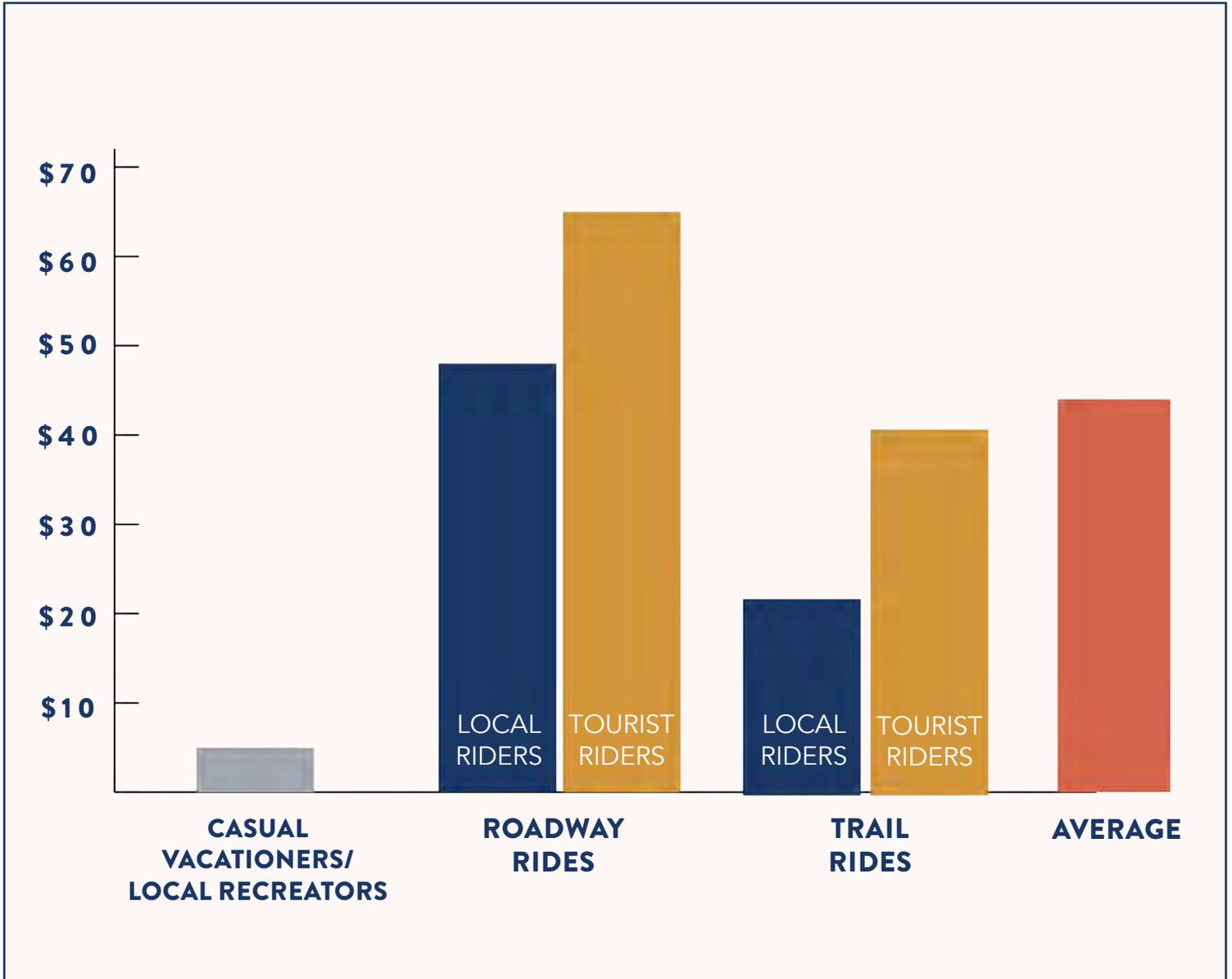
	AVERAGE	WILLAMETTE VALLEY	NAPA VALLEY
AVERAGE PARTY SIZE 	4.0	3.5	4.4
AVERAGE TRIP DURATION  DAYS SPENT  NIGHTS SPENT	1.9	2.4	2.2
VISITORS USING BICYCLING AS TRANSPORTATION	0.9	1.2	1.1
VISITORS REPORTING INTEREST IN BICYCLING AS AN ACTIVITY	2.3	N/A	2.3
AVERAGE EXPENDITURE PER VISITOR  NOMINAL \$  2021*	\$247	\$264	\$256
			\$270

Source: Napa Valley Visitor Profile 2018, released May 2019;
 Profile of Wine Tourists to Willamette Valley, January 2019.
 Prepared by New Economics & Advisory, June 2021.



FIGURE 3.9

OTHER LEISURE RIDER ECONOMICS



Valuing Bicycling’s Economic and Health Impacts in Wisconsin, 2010.
 Source: Wisconsin Study, 2010; Analysis of Bicycling Trends and Policies in Large North American Cities: Lessons for New York, Virginia Tech and Rutgers University, 2011.
 Prepared by New Economics & Advisory, June 2021.



NON-COMPETITIVE BICYCLE EVENTS

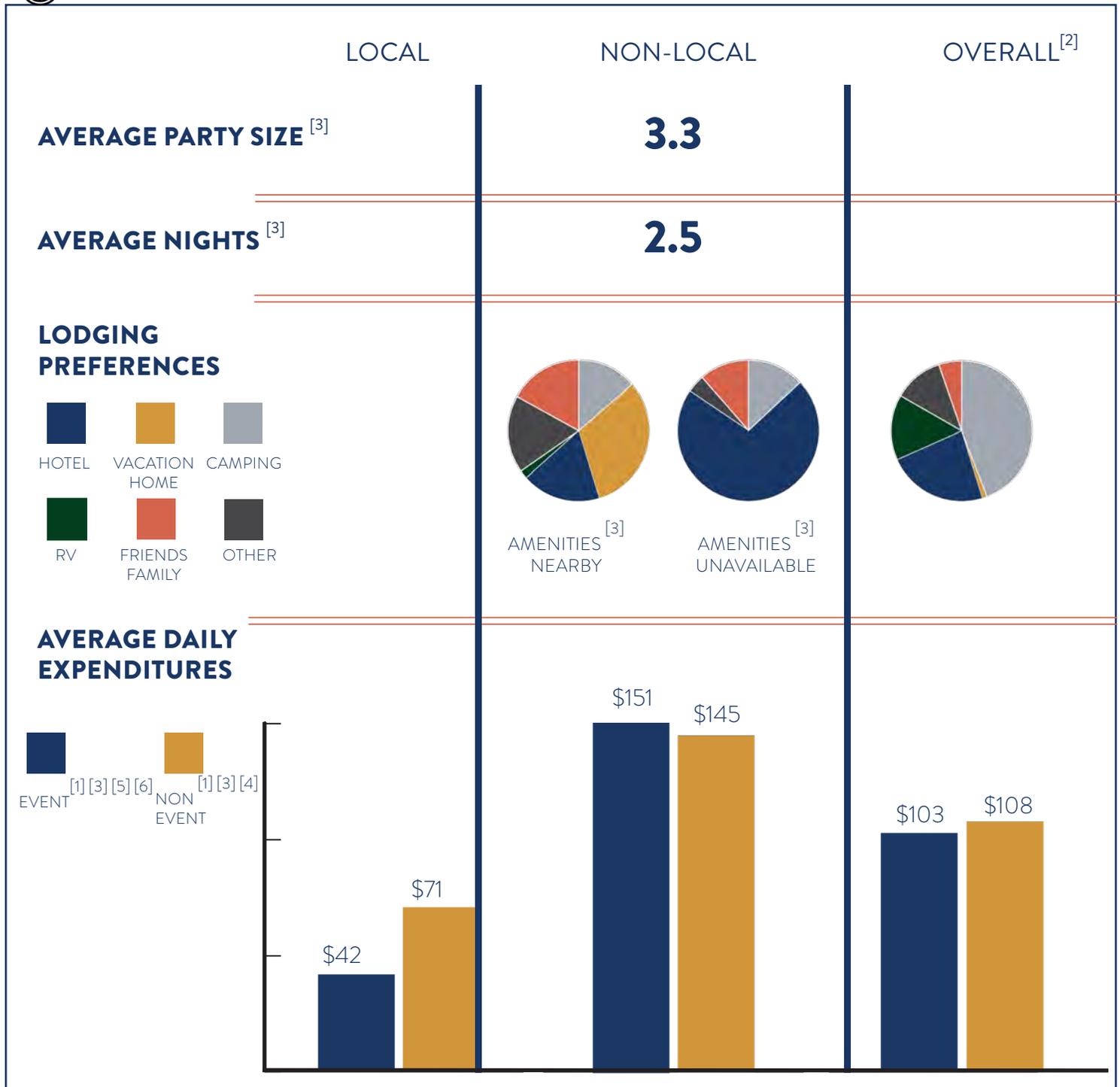
NATIONAL AND LOCAL ECONOMIC TRENDS BY TYPE OF BICYCLING

Non-Competitive bicycling includes off-road mountain biking, single-day and multi-day tour, and overall events put on by bicycle clubs and other entities. The findings described here draw from a series of bicycling studies focused on Wisconsin, Minnesota, Oregon, and West Virginia, as well as a non-competitive race held in Calaveras County in 2021. Key takeaways about the demographics of Non-Competitive bicyclists include:

- Mountain bikers have an average group size of more than 3 people per party, and overnight trips tend to average about 2.5 nights per party. In communities where overnight accommodations are plentiful, mountain bikers seem to favor home rentals (such as AirBnB or other seasonal options) or staying with family/friends, whereas in areas with fewer accommodation options they rely more heavily on camping. In addition to lodging, mountain bikers make expenditures on food and beverage, fuel, bicycling equipment and events, etc. Local users can spend about \$71 per day, while non-local users can spend about \$145 per day. This study applies an average of \$108 per day as an overall figure. **Figure 3.10** shows these amounts.
- Case study research suggests that other non-competitive road riders have a smaller average group size (2), and about 25 percent of riders stay overnight. Those to stay overnight tend to choose a hotel/motel/inn (33 percent) or other, non-traditional accommodations (33 percent), and about half stay one night, while almost 40 percent stay two nights. Riders can spend anywhere from \$93-113 per day; this study applies an average of \$104 per rider, as shown in **Figure 3.11**.
- The California Bicycle Coalition, a statewide bicycle advocacy organization, conducted an informal survey of participants in the non-competitive Ride4Art bicycle event in Calaveras County, held in March of 2021. This event attracted over 150 riders, of whom nearly 60 participated in the survey and over 100 provided data about the location of their residence. The survey data, summarized in **Figure 3.12**, suggests indicates that:
 - Nearly half of riders are local (from the Central Valley), one-fourth from the Sacramento Region, 17 percent from the Bay Area, and just 3 percent from the Tahoe/Reno/Carson area. Only 1 percent are from beyond Northern California or the Reno/Carson area.
 - Compared to the case study research, fewer riders stayed overnight (12 percent versus 25 percent in the case study research), and those were much more likely to stay just one night (80 percent compared to 50 percent in the case study research), albeit in a hotel/motel (33 percent versus 16 percent in the case study research).
 - Riders spent an average of \$105 during the event, which could have occurred over one or two days. Given the low number of participants who stayed overnight, this study applies the \$105 as a daily expenditure.
 - Going forward, additional surveys of non-competitive races in the five-county region could serve to continue to refine this type of data



FIGURE 3.10
MOUNTAIN BIKING EVENT ECONOMICS



[1] Data reflects survey that includes mountain bike festivals and mountain bike races.
 [2] Reflects recent membership statistics from the International Mountain Biking Association (IMBA), reflecting national totals.
 [3] Economic Impacts of Mountain Biking and Bike Trail Events and Festivals in West Virginia, 2019.
 [4] As reported in 2019 West Virginia Study. Includes mountain bike trails systems in Alabama, Wyoming, Wisconsin, North Carolina, and West Virginia.
 [5] Assessing the Economic Impact and Health Effects of Bicycling in Minnesota, 2016.
 [6] Includes event registration, non-bicycling recreation/attractions, shopping, and miscellaneous expenditures. Sources: Research studies, IMBA.
 Prepared by New Economics & Advisory, June 2021.



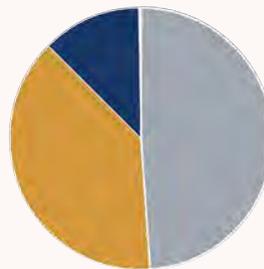
FIGURE 3.11

NON-COMP CYCLING EVENT ECONOMICS

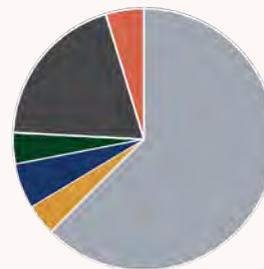
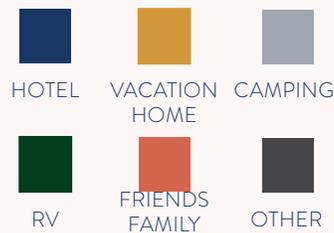
AVERAGE PARTY SIZE ^[1]

2

NIGHTS SPENT IN EVENT AREA ^[1]



LODGING ^[1] PREFERENCES



AVERAGE DAILY EXPENDITURE ^{[1][3][4][5]} 2021



[1] Assessing the Economic Impact and Health Effects of Bicycling in Minnesota, 2016.

[2] Includes event registration, non-bicycling recreation/attractions, shopping, and miscellaneous expenditures.

[3] Recreational, non-competitive rides. Valuing Bicycling's Economic and Health Impacts in Wisconsin, 2010.

[4] Average spending per day. The Economic Significance of Bicycle-Related Travel in Oregon, 2012.

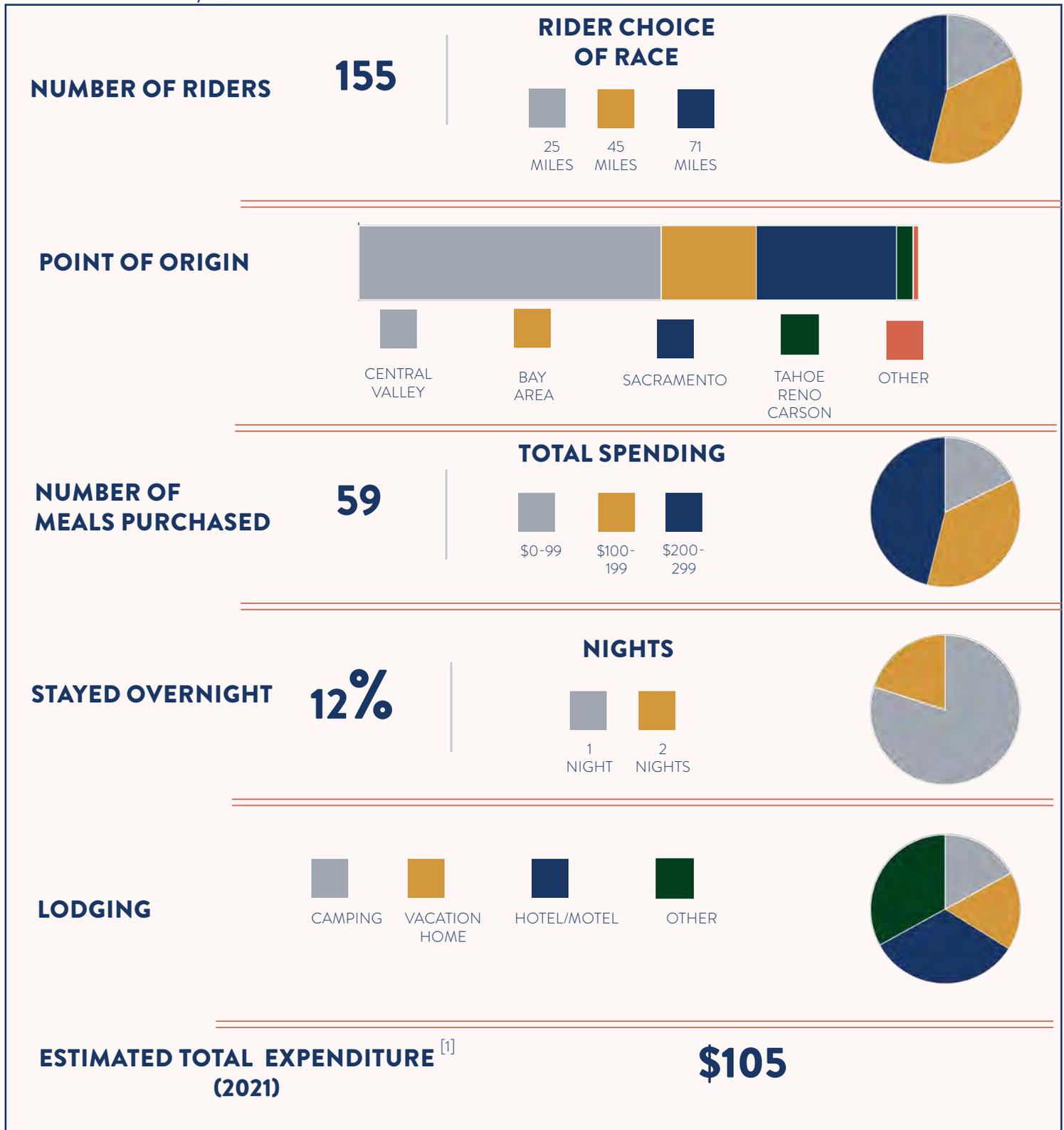
[5] Includes event registration, non-bicycling recreation/attractions, shopping, and miscellaneous expenditures. Sources: Research studies.

Prepared by New Economics & Advisory, June 2021.



FIGURE 3.12

NON-COMP CYCLING EVENT ECONOMICS (LOCAL DATA)
RIDE4ART, 2021



Sources: CalBike Survey, March 2021.
[1] Estimated by New Economics, derived from survey data.
Prepared by New Economics & Advisory, June 2021.

NATIONAL AND LOCAL ECONOMIC TRENDS BY TYPE OF BICYCLING



COMPETITIVE BICYCLE EVENTS

Competitive bicycling includes sanctioned races and other competitive races. The findings described here draws a series of bicycling studies focused on Minnesota and Oregon. Key takeaways about the economic aspects of Competitive bicyclists include:

- Riders at competitive events tend to have an average party size of about 2.5, which is smaller than non-comp. mountain biking events (3.3), but larger than non-comp. road events (2).
- Case study research did not reveal an estimate of the portion of riders who stay overnight. But, similar to non-competitive events, nearly half of overnight guests stay one night, and more than 40 percent stay two nights.
- Those who stay overnight are most likely to choose a hotel/motel/inn (21 percent), following a campground (10 percent), or recreational vehicle (6 percent).
- Competitive riders make a high level of daily expenditures—about \$210. Their largest expenditures are on bicycling equipment and event items, overnight lodging, and restaurants.



Source: Interregional Bicycle Tourism Master Plan Stakeholder Group, 2021

PANDEMIC AND POST-PANDEMIC BICYCLING TRENDS

Data collected during the COVID-19 pandemic suggests that an increasing number of women are taking part in active, recreational bicycling. According to one report, in 2020 women uploaded 47% more bike rides (on Strava) in 2020 than they did in 2019, while in a variety of major U.S. cities, the number of women using this app increased more than 80 percent over the previous year.^[5] Another 2020 report drew the following conclusions about changes in bicycling during the pandemic:

- 10 percent of American adults either used a bicycle for the first time in a year or the first time ever;
- Bicycle riding provided an opportunity for exercise and interactions with others in a socially distanced manner,
- People who took up biking during the pandemic are very likely to continue to bicycle for commuting, recreation, exercise, and/or other transportation.^[6]

Associated trends in the bicycling industry include the increasing number and rate of bicycle sales, as well as the types of bicycles being sold. Nationwide, year-over-year bicycle sales for 2019-2020 increased by more than 60 percent. Most of these sales were for higher-end bikes (over \$1,000 each) purchased by avid mountain bikers and cyclists. The average selling prices for these bikes increased by around 90 percent for mountain bikes and sport performance road bikes, nearly 150 percent for gravel bikes, and nearly 200 percent for e-bikes.^[7] Going forward, bicycle sales are expected to more than double over the next ten years, with e-bikes, kids' bikes, and higher end bicycles leading the way.^[8]

Bicycle shops in the 5-county region reported similar trends: a spike in sales and prices, as well as demand for high-end bicycles and e-bikes. **Figure 3.13** provides a 2020 baseline for prices of bicycles at local shops in the Showcase Areas for Stanislaus County and Tuolumne County.

[5] Ibid, Footnote 2.

[6] How Bicycling Changed During a Pandemic, January 19, 2021. Published by People for Bikes, <https://www.peopleforbikes.org/news/how-bicycling-changed-during-a-pandemic>

[7] Plot Twist: U.S. Performance Bike Sales Rise in June, Reports The NPD Group, <https://www.npd.com/wps/portal/npd/us/news/press-releases/2020/plot-twist-us-performance-bike-sales-rise-in-june-reports-the-npd-group>

[8] The Future of the Bicycle Industry And what you can do now by Bob Margevicius, <https://nbda.com/future-of-the-bicycle-industry/> Prepared by New Economics & Advisory, June 2021.

FIGURE 3.13

AVERAGE BICYCLE SALES PRICE, CENTRAL VALLEY

TYPE	STANISLAUS COUNTY	TUOLUMNE COUNTY
KIDS BIKE 	\$300-400	N/A
MOUNTAIN BIKE 	\$3,000-4,000	\$500-600 ^[1]
RECREATIONAL BIKE 	N/A	\$400-1,000
ELECTRICAL BIKE 	N/A	\$1,500+
ALL BICYCLES 	\$800 ^[2]	N/A

[1] Mountain bicycles have the highest demand in Tuolumne County, making up roughly 90% of bicycle sales.

[2] Includes kids bicycles, mountain bicycles, beach cruisers, electric bicycles and adult tricycles.

Source: Interview with Oakdale Bike Shop, March 2021 (Stanislaus County). Interview with Sonora Cyclery, March 2021 (Tuolumne County)

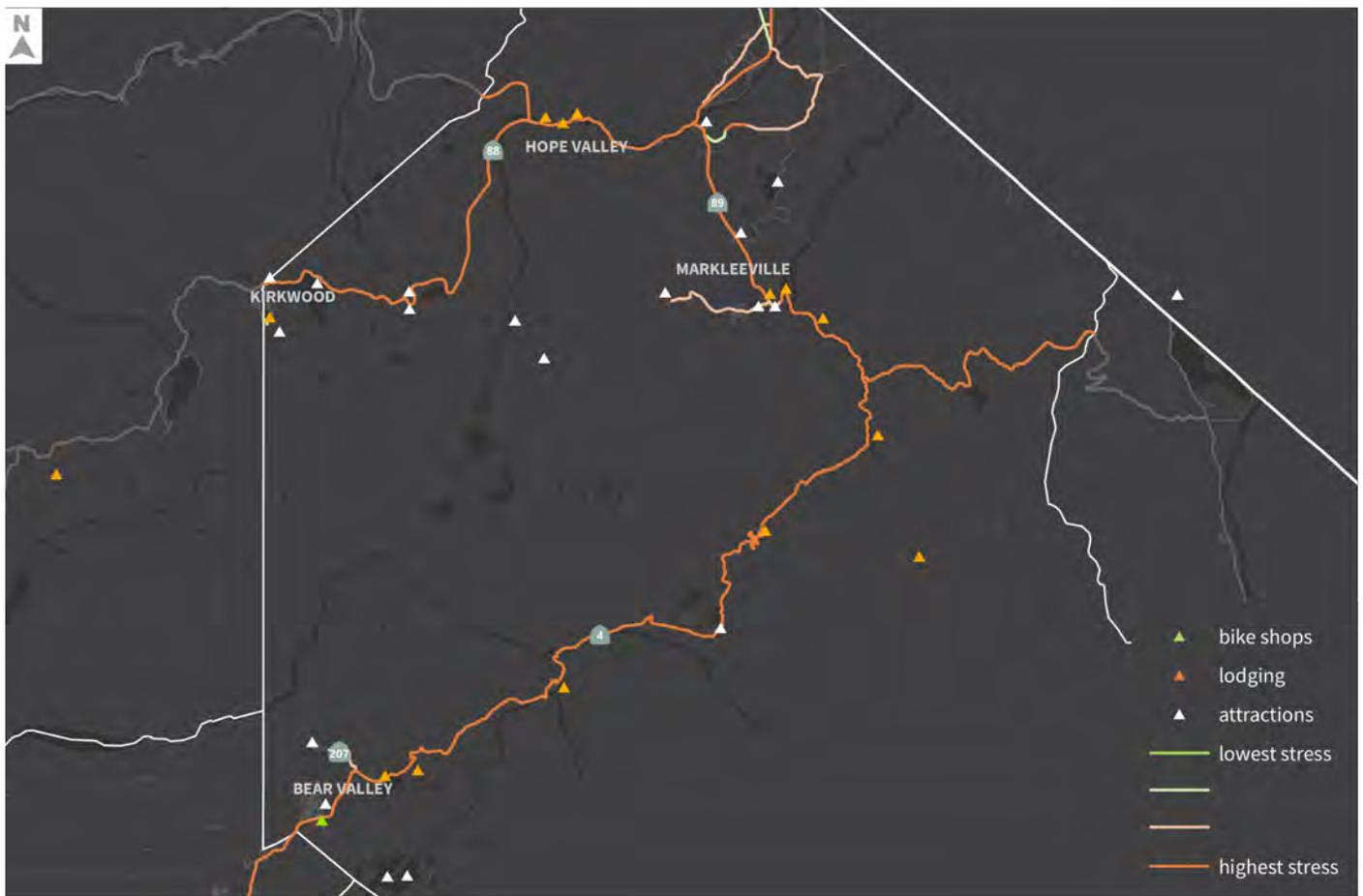
Prepared by New Economics & Advisory, June 2021.

SECTION 4

ALPINE COUNTY BASELINE ECONOMIC VALUE

Alpine County is a small rural area with approximately 1,200 residents. Alpine's Showcase Area includes major transportation corridors along Highways 89 and 4, as well as the communities of Markleeville, Bear Valley, and Hope Valley, as shown in **Figure 4.1**.

FIGURE 4.1
ALPINE COUNTY SHOWCASE AREA



Source: Fehr and Peers, 2021

EXISTING BICYCLE RIDER SEGMENTS

Bicycle riders in Alpine County can be broadly categorized into the following segments:



LEISURE RIDING

Leisure Riders comprise mountain bikers and e-bikers who ride trails and roads at or near Bear Valley. Many, though not all, of these bikers first come from Arnold or Murphys (located in Calaveras County). Anecdotal interviews indicate that other riders come from Gardnerville and the Smith Valley in Nevada. As a result, this analysis presumes that only one-fourth of Leisure rider expenditures are captured by the Showcase Area.



NON-COMPETITIVE BICYCLE EVENTS

Non-Competitive Event Riders. Non-competitive events include the Alta Alpina Challenge and the Death Ride. The Death Ride is the Study Area's largest non-competitive event, with about 1,800 participants riding 103 miles with over 14,000 feet in elevation gain^[9] Local stakeholders report that about 90 percent of riders are from California and Nevada, which is a similar statistic to that collected for the Calaveras County Ride4Art event. Because the Showcase Area has limited accommodations relative to the demand generated by Death Ride participants, the local hotel and campground fill up quickly, pushing others to hotels in South Lake Tahoe or Minden (NV). Some riders even camp or sleep in their cars on the side of the road.

Finding: Compared to the other Showcase Areas, Alpine County lacks organized Leisure Rides, has relatively few non-competitive events, and no sanctioned, competitive races.

[9] The Death Ride can accommodate up to 3,500 riders but has averaged 1,600-2,000 riders in the last few years.

EXISTING ECONOMIC VALUE OF BICYCLE TOURISM AND COMMUTE HEALTH BENEFITS

Bicycle tourism in the county's Showcase Area is estimated to include nearly 3,200 rides and generate about \$262,000 annually in rider expenditures captured locally (**Figure 4.2**). According to the Census, Alpine County does not have any documented bicycle commuters (**Figure 4.3**).

OPPORTUNITIES TO EXPAND ECONOMIC BENEFITS OF BICYCLING

Additional investment in bicycle infrastructure that increases bicycle tourism levels by 20-40 percent would result in 3,800-5,100 rides and \$314,000-\$419,000 in rider expenditures captured locally for Alpine County's Showcase Area.

In addition, if the Showcase Area were to achieve a bicycle commuter rate that is comparable to other Showcase Areas (0.05 percent - 1.0 percent), the economic value of these health savings would be in the range of \$82,000 to \$165,000.

Opportunity 4.1: There is a potential opportunity to grow the Leisure Rider community and local health benefits in this Showcase Area through connections with the local Native American community. While Alpine County has a large retirement community, native tribes in the area include youth, for whom bicycling could a viable recreational amenity and source of transportation. The Hung A Lel Ti Native American community is located in the Markleeville area. Engagement and discussions with tribal representatives could lead to the identification of infrastructure investments that would benefit this community. Additional infrastructure that increases ridership within this community could contribute to both tourism revenues and benefits for local residents.

This study also recommends that local groups and/or organizations collect demographic and economic data about bicyclists in the Showcase Area, including:

- Gender, race, ethnicity, and household income;
- Age, size of party, and length of stay;
- Type of accommodations (if staying overnight) and daily expenditures;
- Point of origin

This type of demographic and economic information can be used to refine the baseline estimate of bicyclist expenditures shown here, and track changes in value and levels of inclusion over time as infrastructure investments are implemented.

FIGURE 4.2

ESTIMATED ANNUAL BICYCLIST EXPENDITURES, ALPINE COUNTY

	CYCLISTS PER TRIP	RIDERS PER YEAR	EXPENDITURES PER CYCLIST PER YEAR	ANNUAL EXPENDITURES
LEISURE RIDES				
MOUNTAIN BIKERS (BEAR VALLEY)		809 ^[3]	\$27 ^[4]	\$21,843
E-BIKERS (BEAR VALLEY)		89 ^[3]	\$11 ^[4]	\$979
SUBTOTAL LEISURE (ROUNDED)		900		\$23,000
NON-COMPETITIVE EVENTS				
ALTA ALPINA CHALLENGE (EBBETS PASS) ^[1]	500	500	\$104	\$52,000
DEATH RIDE ^[2]	1,800	1,800	\$104	\$187,200
SUBTOTAL NON-COMPETITIVE (ROUNDED)		2,300		\$239,200
COMPETITIVE EVENTS				
SUBTOTAL COMPETITIVE (ROUNDED)		0		\$0
TOTAL (ROUNDED)		\$3,200		\$262,000
POTENTIAL EXPENDITURE INCREASES				
20% 3,800 RIDERS \$314,000 RIDER EXPENDITURES		40% 4,500 RIDERS \$367,000 RIDER EXPENDITURES		60% 5,100 RIDERS \$419,000 RIDER EXPENDITURES

[1] The Alta Alpina Challenge includes multiple variations of rides that range from 64 miles to 198 miles in one day or less. Ebbets Pass, located in Alpine County, is one of the passes include in nearly ride, sometimes in both directions. Participation is capped at 500 riders to avoid triggering a permit requirement.

[2] In recent years, participation has averaged 1,600-2,000 riders. Total capacity is 3,500 riders.

[3] Reflects an indication of activity, not a firm estimate. Numbers represent unique trail check ins to trailforks.com during 2020.

[4] Spending is adjusted to 25% for Alpine County because interviews with bicycle shops in Calaveras County indicate that a lot of bicycling activity originates from Calaveras.

Prepared by New Economics & Advisory, June 2021.

EXISTING ECONOMIC VALUE OF BICYCLE TOURISM AND COMMUTE HEALTH BENEFITS

FIGURE 4.3

PROJECTED COST SAVINGS OF COMMUTER CYCLISTS, ALPINE COUNTY

	CURRENT AMOUNT	CURRENT SAVINGS ^[1]	POTENTIAL SAVINGS 0.5%	POTENTIAL SAVINGS 1.0%
CURRENT BICYCLE COMMUTER RATE^[2]	1,137	0	6	11
CURRENT COSTS				
DIABETES ^{[3][4]}	\$1.8 MILLION	\$0	\$9,000	\$18,000
CANCER ^{[3][4]}	\$11.8 MILLION	\$0	\$59,000	\$118,000
CORONARY HEART DISEASE ^{[3][4]}	\$1.8 MILLION	\$0	\$9,000	\$18,000
STROKE ^{[3][4]}	\$1.1 MILLION	\$0	\$5,000	\$11,000
TOTAL SAVINGS (ROUNDED)		\$0	\$82,000	\$165,000

[1] Reflects U.S. Census Bureau 2019 ACS 5-Year Estimates.

[2] Based on ESRI report, using 2015-2019 ACS data for the showcase area boundaries.

[3] Amount reflects 2018 data from the 2020 PLACES data release. Data reflects prevalence among adults aged 18 and older.

[4] See Figure 2.3 for cost assumptions.

Source: PLACES: Local Data for Better Health, Center for Disease Control and Prevention, 2020 release; U.S. Census Bureau 2019 ACS-5 Year Estimates, accessed March 2021; Department of Finance Population and Housing Estimates, 2020 release; ESRI use of 2015-2019 ACS, accessed May 2021.

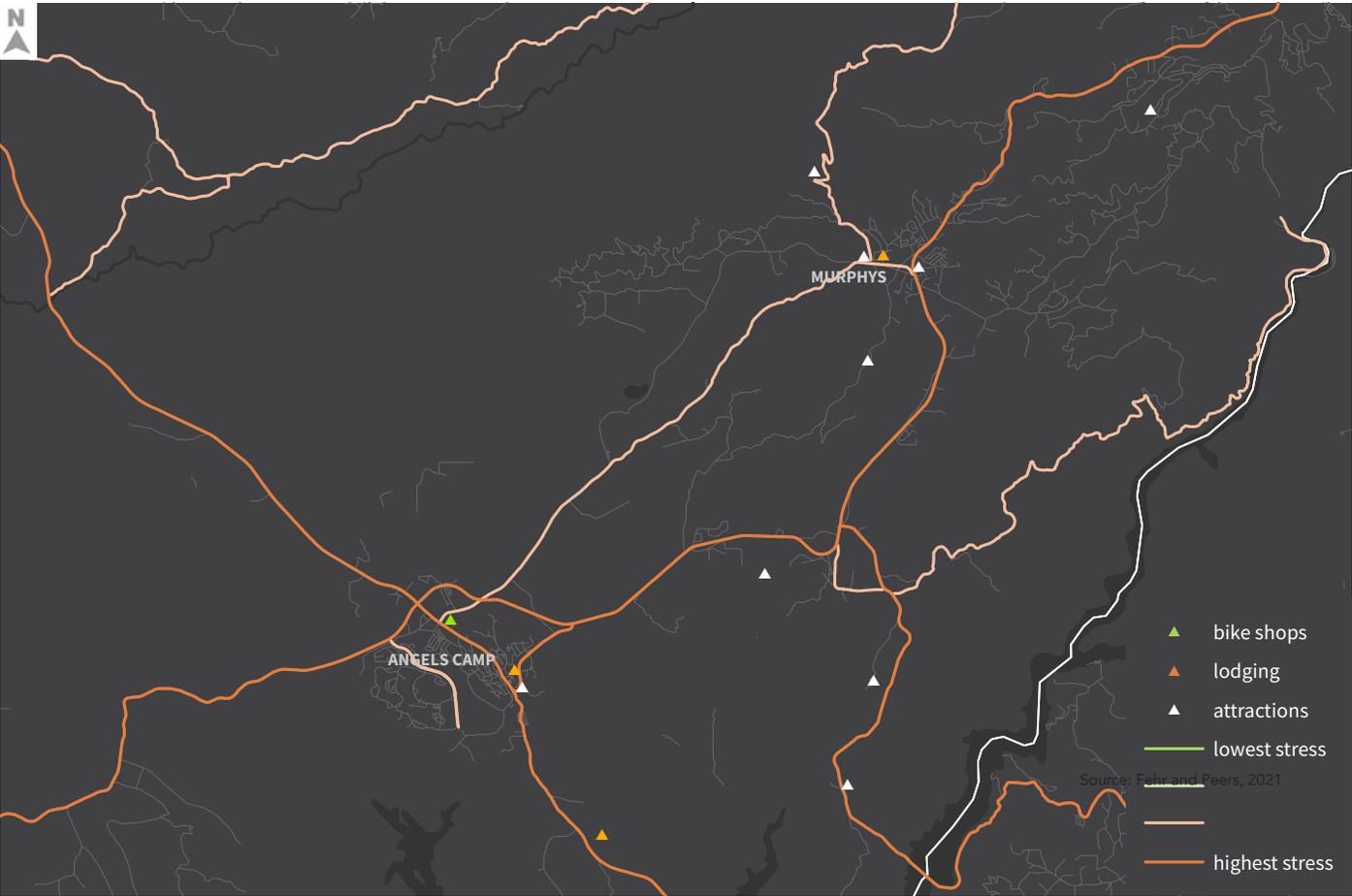
Prepared by New Economics & Advisory, June 2021.

SECTION 5

CALAVERAS COUNTY BASELINE ECONOMIC VALUE

Calaveras County’s Showcase Area extends along State Route 4, from Murphys to Angels Camp. **Figure 5.1** provides a map of the Calaveras County Showcase Area.

FIGURE 5.1
CALAVERAS COUNTY SHOWCASE AREA



Source: Fehr and Peers, 2021

EXISTING BICYCLE RIDER SEGMENTS

Bicycle riders in Calaveras County can be broadly categorized into the following segments:



LEISURE RIDING

Leisure Riders mostly comprise mountain bikers who ride trails around Hogan Dam, New Melones Lake, and in Bear Valley (which also attracts e-bikers). Of note, many mountain bikers and e-bikers visiting Bear Valley (which is located in Alpine County) originate in Arnold or Murphys. As a result, this analysis presumes that three-fourths of Leisure rider expenditures associated with Bear Valley are captured by the Showcase Area. In total, at least 2,000 rides per year occur in this format.



NON-COMPETITIVE BICYCLE EVENTS

Non-Competitive Event Riders. There are at least four Non-Competitive Events that regularly occur in the Calaveras Showcase Area (listed in **Figure 5.2**). Some of these events begin and/or end locally, while others simply cross into the Showcase Area. Most of these events attract 150-250 riders, although the Party Pardee Event gets about 1,500 participants. In the future, the Death Ride may also include a segment in the Showcase Area



COMPETITIVE BICYCLE EVENTS

Competitive Event Riders. This Showcase Area has three existing sanctioned races, all of which are road races that attract about 100-175 riders each. There is also a planned fourth race to begin in 2022 that would be for mountain bikers.

Finding: Compared to the other Showcase Areas, Calaveras has the highest number of organized bicycle events and benefits from its proximity and access to Bear Valley (in Alpine County). Calaveras also has a relatively strong showing for Leisure Riders, particularly mountain bikers, although these trips are likely primarily associated with individuals or small rider groups, as opposed to regular, organized bicycle club rides for local and/or regional bicycle enthusiasts.

EXISTING ECONOMIC VALUE OF BICYCLE TOURISM AND COMMUTE HEALTH BENEFITS

Bicycle tourism in the Calaveras Showcase Area is estimated to include nearly 4,630 rides and generate about \$345,000 annually in rider expenditures captured locally (**Figure 5.2**).

According to the Census, approximately 0.10 percent of residents commute on bicycles (**Figure 5.3**). Applied to the Showcase Area residential base, this rate suggests that less than 10 residents rely on bicycles to commute, producing a health savings value of about \$110,000 annually.

OPPORTUNITIES TO EXPAND ECONOMIC BENEFITS OF BICYCLING

Additional investment in bicycle infrastructure that increases bicycle tourism levels by 20-40 percent would result in 5,500-7,500 rides and \$414,000-\$552,000 in rider expenditures captured locally for Calaveras County's Showcase Area.

In addition, if the Showcase Area could double or triple its bicycle commuter rate, the economic value of these health savings would be in the range of \$220,000 to \$330,000 annually.

Opportunity 5.1: There is a potential opportunity to grow the bicycling community in this Showcase Area through organized Leisure rides. Support for local bicycle shops and/or groups in the Angels Camps and/or Murphys area could lead to the organization of weekly and/or monthly rides for residents and visitors seeking exercise, sightseeing, or recreation opportunities. Additional infrastructure that increases ridership in and around this community, including the seven-mile trip to Murphys or New Melones Lake, could contribute to both tourism revenues and health and recreation benefits for local residents.

Opportunity 5.2: Wineries, brewpubs, and tap rooms offer a potential destination for bicycle tourism. A third potential opportunity is to consider additional bicycle infrastructure in and around wineries and pubs/tap rooms in Murphys. With at least 27 wineries in/around Murphys, the area has become a destination for this type of visitation. Marketing, signage, storage, and access to safe bicycling presents an opportunity to attract and capture additional bicycle tourism that generates relatively high expenditures per visitor. Additional data collection on existing visitors to wineries, brew pubs, and tap rooms would also help to inform the level of interest in bicycling, potential bicycle routes between establishments, and the need for bicycle support amenities. As shown in *Section 6*, even a small fraction of visitors to Lodi wineries who choose to bicycle generates significant annual expenditures for San Joaquin County.

FIGURE 5.2

ESTIMATED ANNUAL BICYCLIST EXPENDITURES, CALAVERAS COUNTY

	CYCLISTS PER TRIP	RIDERS PER YEAR	EXPENDITURES PER CYCLIST PER YEAR	ANNUAL EXPENDITURES
LEISURE RIDES				
MOUNTAIN BIKERS (GLORY HOLE AND TUTTLETOWN REC. AREA, HOGAN DAM, ARNOLD, AVERY)	N/A	1,141 ^[7]	\$108	\$123,228
E- BIKERS (GLORY HOLE AND TUTTLETOWN REC. AREA, HOGAN DAM, ARNOLD, AVERY)	N/A	0 ^[7]	\$44	\$0
MOUNTAIN BIKERS (BEAR VALLEY)	N/A	809 ^[7]	\$81 ^[8]	\$65,529
E-BIKERS (BEAR VALLEY)	N/A	89 ^[7]	\$33 ^[8]	\$2,937
SUBTOTAL LEISURE (ROUNDED)	N/A	2,039		\$192,000
NON-COMPETITIVE EVENTS				
RIDEANDWALK4ART	155	155	\$105 ^[3]	\$16,275
PARTY PARDEE	1,500	1,500	\$26 ^[1]	\$39,000
PEDALING PATHS	250	250	\$26 ^[1]	\$6,500
DEATH RIDE	TBD	TBD	\$26 ^[2]	TBD
MR. FROG'S RIDE	235	235 ^[4]	\$210 ^[5]	\$49,245
SUBTOTAL NON-COMPETITIVE (ROUNDED)		2,140		\$111,000
COMPETITIVE EVENTS				
EBBETTS PASS CENTURY RIDE	175	175	\$210 ^[5]	\$36,750
COPPEROPOLIS ROAD RACE	175	175 ^[6]	\$21 ^[5]	\$6,500
COPPER VALLEY	101	101 ^[6]	\$21 ^[5]	\$2,121
IRON ANGELS MOUNTAIN BIKE RACE	TBD	TBD	TBD	TBD
SUBTOTAL COMPETITIVE (ROUNDED)		451		\$37,000
TOTAL (ROUNDED)		4,600		\$345,000
POTENTIAL EXPENDITURES INCREASES				
20% 5,500 RIDERS \$414,000 RIDER EXPENDITURES		40% 6,400 RIDERS \$483,000 RIDER EXPENDITURES		60% 7,400 RIDERS \$552,000 RIDER EXPENDITURES

[1] Includes 25% of daily expenditures for a non-competitive, single-day tour (\$93), as shown in Figure 3.1

[2] Includes 25% of daily expenditures for the Death Ride (\$210), as shown in Figure 4.2

[3] Preliminary estimate by New Economics based on survey data collected by CalBike. See Figure 3.11

[4] Has had between 150 and 319 rider participants per year between 2012 and 2019.

[5] See Figure 3.11 for supporting information. Races with locations outside the Showcase Area are assumed to capture 10% of rider expenditures.

[6] Reflects 2019 counts from www.road-results.com, as provided by Stanislaus Council of Governments, June 2021.

[7] Reflects an indication of activity, not a firm estimate. Numbers represent unique trail check ins to trailforks.com during 2020.

[8] Spending is adjusted to 75% for Bear Valley (which is located in Alpine County), because interviews with bicycle shops in Calaveras County indicate that most bicycling activity originates from Calaveras.

FIGURE 5.3

PROJECTED COST SAVINGS OF COMMUTER CYCLISTS, CALAVERAS COUNTY

	AMOUNT	CURRENT ^[1] SAVINGS 0.1%	POTENTIAL SAVINGS 0.2%	POTENTIAL SAVINGS 0.3%
CURRENT BICYCLE COMMUTER RATE^[2]	7,491	7	15	22
CURRENT COSTS				
DIABETES ^{[3][4]}	\$11.9 MILLION	\$12,000	\$24,000	\$36,000
CANCER ^{[3][4]}	\$77.7 MILLION	\$78,000	\$155,000	\$233,000
CORONARY HEART ^{[3][4]} DISEASE	\$11.6 MILLION	\$12,000	\$23,000	\$35,000
STROKE ^{[3][4]}	\$7 MILLION	\$7,000	\$14,000	\$21,000
TOTAL SAVINGS (ROUNDED)	\$108.5 MILLION	\$110,000	\$220,000	\$330,000

[1] Reflects U.S. Census Bureau 2019 ACS 5-Year Estimates.

[2] Based on ESRI report, using 2015-2019 ACS data for the showcase area boundaries.

[3] Amount reflects 2018 data from the 2020 PLACES data release. Data reflects prevalence among adults aged 18 and older.

[4] See Figure 2.3 for cost assumptions.

Source: PLACES: Local Data for Better Health, Center for Disease Control and Prevention, 2020 release; U.S. Census Bureau 2019 ACS-5 Year Estimates, accessed March 2021; Department of Finance Population and Housing Estimates, 2020 release; ESRI use of 2015-2019 ACS, accessed May 2021.

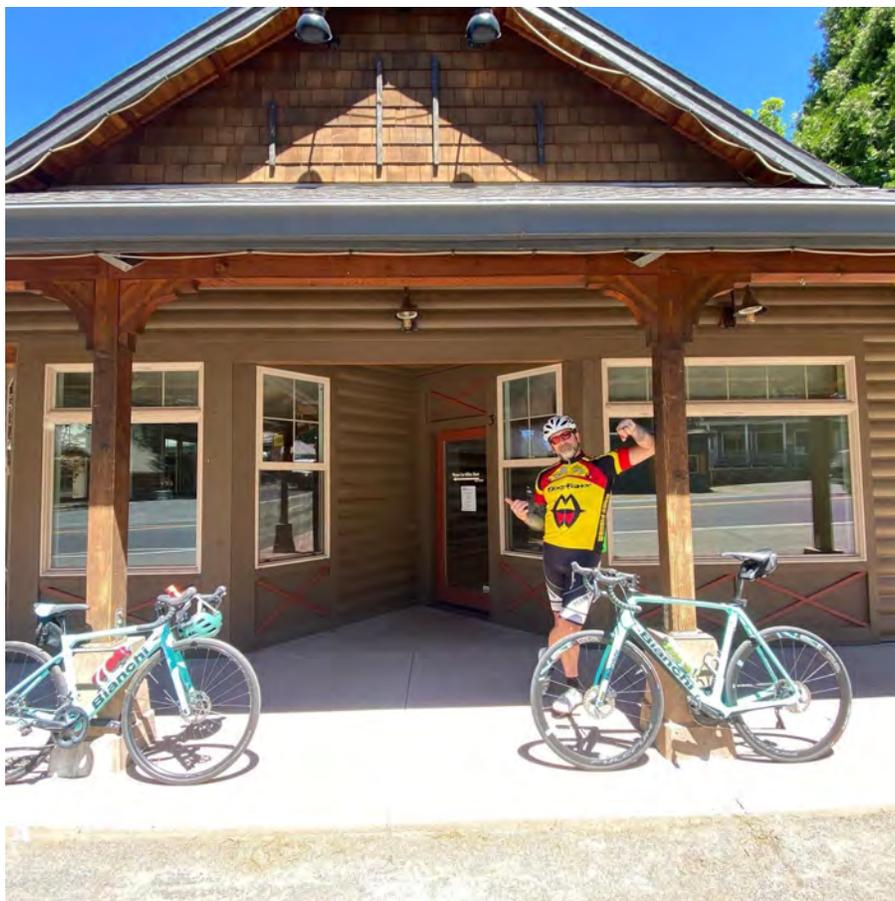
Prepared by New Economics & Advisory, June 2021.

OPPORTUNITIES TO EXPAND ECONOMIC BENEFITS OF BICYCLING

This study also recommends that local groups and/or organizations collect demographic and economic data about bicyclists in the Showcase Area, including:

- Gender, race, ethnicity, and household income;
- Age, size of party, and length of stay;
- Type of accommodations (if staying overnight) and daily expenditures;
- Point of origin

This type of demographic and economic information can be used to refine the baseline estimate of bicyclist expenditures shown here, and track changes in value and levels of inclusion over time as infrastructure investments are implemented.

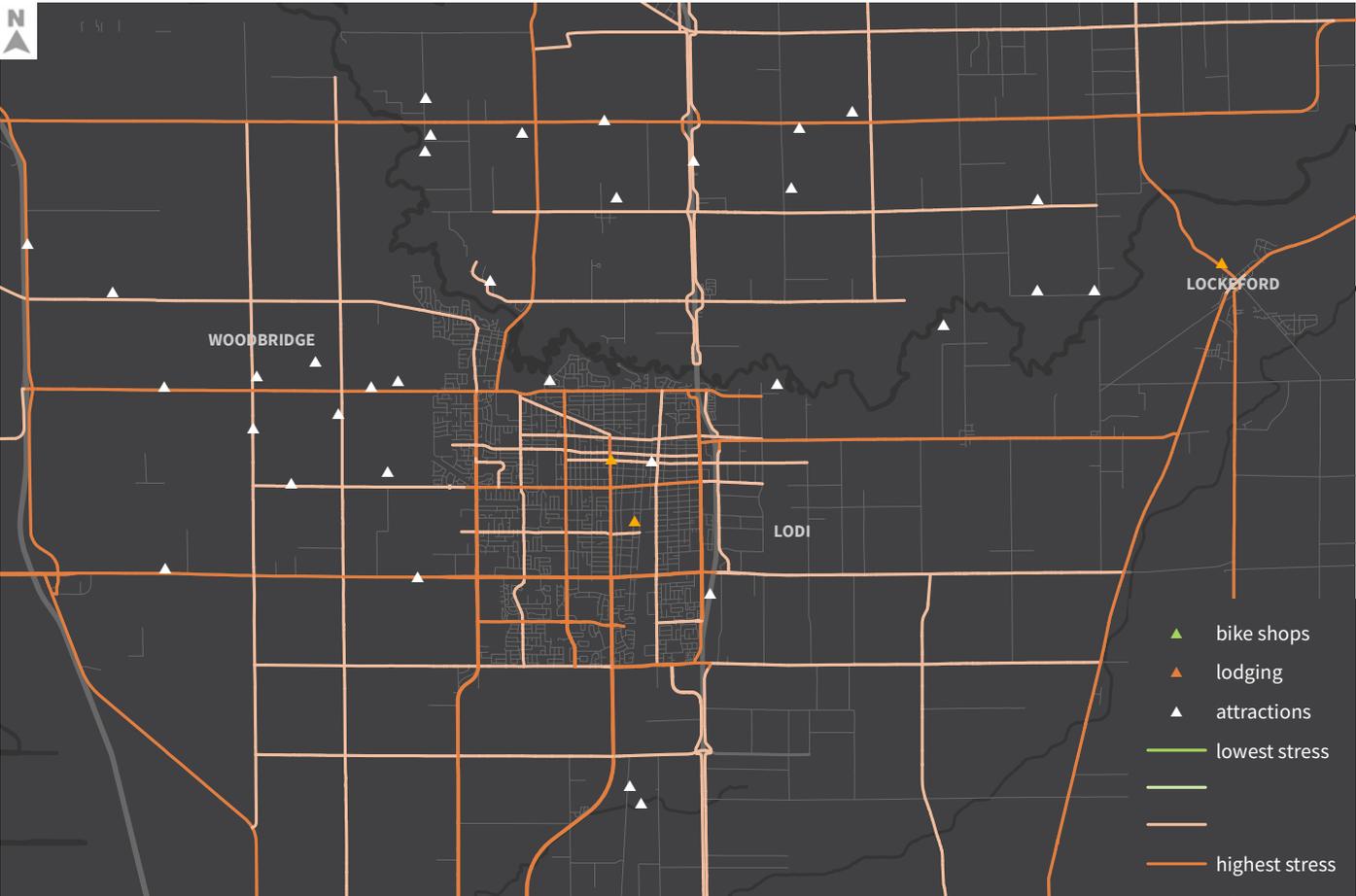


Source: Interregional Bicycle Tourism Master Plan Stakeholder Group, 2021

SECTION 6

SAN JOAQUIN COUNTY BASELINE ECONOMIC VALUE

San Joaquin County's Showcase Area includes the network surrounding the City of Lodi, as well as the unincorporated community of Woodbridge. **Figure 6.1** provides a map of the Calaveras County Showcase Area.



Source: Fehr and Peers, 2021

EXISTING BICYCLE RIDER SEGMENTS

Bicycle riders in the San Joaquin Showcase Area can be broadly categorized into the segments described below.



LEISURE RIDING

Its close proximity to Lodi wineries, the Lodi Lake, an Amtrak Transit Station, and other amenities and public facilities makes the Lodi/Woodbridge area a high sought-after stopping point and/or destination for bicycle enthusiasts. **Figure 6.2** provides a baseline estimate of the number of visitors who bicycle, which amounts to over 10,000 annually.

Several bike routes run through or around the Lodi region, ranging in distance, difficulty, scenery, and appropriateness for children. The most popular Lodi bike routes are:^[10]

- Consumes River Preserve with Blossom Road Loop (36.4 miles)
- East-North Figure Eight with Winery Stops (24.4 miles)
- Lodi Lake Family Fun Ride (5 miles)
- Delta River Ride to Sacramento with Return by Train (53 miles)
- Bird Watching, Wine Tasting, and Lunch (29.4 miles)

In addition, organized rides for bicycling enthusiasts are held daily, weekly, and monthly. These rides are promoted by local bicycle groups, like the San Joaquin Bicycle Club and Stockton Bicycle Club, and bicycle shops, such as Robby's Bicycles. Nearly 3,000 rides per year occur through these organized leisure events, as shown in **Figure 6.3**.

[10] <https://www.visitlodi.com/things-to-do/bike-routes/>
Prepared by New Economics & Advisory, June 2021.

EXISTING BICYCLE RIDER SEGMENTS



NON-COMPETITIVE BICYCLE EVENTS

There are at least four Non-Competitive Events that regularly occur in the San Joaquin Showcase Area (**Figure 6.3**). These events, two of which are tied to the area's wineries, generate about 1,300 rides annually: Giro di Vino and the Tour delle Vigne. Non-Competitive Events attract anywhere from less than 100 riders up to 500 riders.



COMPETITIVE BICYCLE EVENTS

This Showcase Area has two existing sanctioned races: a Cyclocross Race and CycleFest. These races each attract about 425-725 riders. The Cyclocross race, however, is in need of a new location in order to continue to occur.

Finding: Compared to the other Showcase Areas, San Joaquin has the highest number of estimated riders, largely driven by Lodi's established brand as a winery and tourism destination, its ability to regularly track visitation and visitor demographics, and its promotion of a range of routes that appeal to a diversity of locals and visitors. San Joaquin also has the broadest established range of bicycle activity, including a variety of Leisure, Non-Competitive, and Competitive bicycling events.

SECTION 6 SAN JOAQUIN SHOWCASE AREA BASELINE ECONOMIC VALUE

FIGURE 6.2

SAN JOAQUIN COUNTY: LODI AREA WINERY BICYCLE SPENDING

VISITORS (2018)		CURRENT ESTIMATE	POTENTIAL AMOUNT
DAY VISITOR		580,000	580,000
OVERNIGHT VISITOR ^[1]		410,000	410,000
SUBTOTAL VISITOR		990,000	990,000
<hr/>			
AVERAGE ANNUAL VISITOR SPEND (2018)			
DAY VISITOR		\$82.5 MILLION	\$82.5 MILLION
OVERNIGHT VISITOR		\$128.6 MILLION	\$128.6 MILLION
SUBTOTAL VISITOR		\$211.1 MILLION	\$211.1 MILLION
<hr/>			
AVERAGE ANNUAL VISITOR SPEND PER DAY (2018)			
DAY VISITOR		\$142	\$142
OVERNIGHT VISITOR ^[2]		\$124	\$124
SUBTOTAL VISITOR		\$135	\$135
<hr/>			
VISITORS PARTICIPATING IN BICYCLING		^[3] 10,395 1.1%	^[4] 22,770 2.3%
<hr/>			
ESTIMATED ANNUAL BICYCLE SPEND (2018)		ESTIMATED ANNUAL BICYCLE SPEND (2021)	
\$1.4 MILLION	\$3.1 MILLION	\$1.5 MILLION	\$3.2 MILLION
CURRENT ESTIMATE	POTENTIAL AMOUNT	CURRENT ESTIMATE	POTENTIAL AMOUNT

[1] Includes hotel/motel (which also includes bread and breakfast and vacation home stays) and other accommodations (which includes RV, camping, and home stays).

[2] Overnight visitor spending reflects the weighted average of hotel/motel and other accommodations.

[3] See Figure 3.7 for supporting information. Reflects an average of the Napa Valley and Willamette Valley visitors who participated in bicycling as a mode of transportation.

[4] See Figure 3.7 for supporting information. Reflects the percentage of visitors who reported an interest in bicycling as an activity/attraction.

[5] Conservative estimate in that overnight visitors are assumed to generate one day of spending, whereas multi-day visitors likely spend more overall.

Source: Lodi 2014-2018 Travel Impacts Report; Napa Valley Visitor Profile, 2018, released May 2019.

Prepared by New Economics & Advisory, June 2021.

FIGURE 6.3

ESTIMATED ANNUAL BICYCLIST EXPENDITURES, SAN JOAQUIN COUNTY

	CYCLISTS PER TRIP	RIDERS PER YEAR	EXPENDITURES PER CYCLIST PER YEAR	ANNUAL EXPENDITURES
LEISURE RIDES				
WEEKNIGHT ^[1]	10	300 ^[2]	\$5 ^[4]	\$1,500
WEEKEND : SATURDAY ^[1]	35	1,050 ^[2]	\$15 ^[7]	\$15,750
WEEKEND: SUNDAY ^[1]	15	450 ^[2]	\$15 ^[7]	\$6,750
MONTHLY FULL MOON RIDES	100	1,100 ^[3]	\$4 ^[7] ^[13]	\$4,125
ESTIMATED LODI AREA VISITORS WHO BICYCLE		10,395	\$142	\$1,477,000
SUBTOTAL LEISURE (ROUNDED)		13,295		\$1,505,000
NON-COMPETITIVE EVENTS				
PARTY PARDEE	88	88 ^[5]	\$104	\$9,100
PEDALING PATHS	275	275 ^[11]	\$104	\$28,600
DEATH RIDE	500	500	\$270 ^[6]	\$135,000
MR. FROG'S RIDE	425	425 ^[9]	\$270 ^[6]	\$114,750
SUBTOTAL NON-COMPETITIVE (ROUNDED)		1,288 ^[12]		\$1,796,000
COMPETITIVE EVENTS				
ANNUAL CYCLEFEST	725	725 ^[8]	\$210	\$15,250
ANNUAL CYCLOCROSS	425	425 ^[10]	\$210	\$89,250
SUBTOTAL COMPETITIVE (ROUNDED)		1,150 ^[12]		\$242,000
TOTAL (ROUNDED)		15,700		\$2,034,000
POTENTIAL EXPENDITURES INCREASES				
20% 18,800 RIDERS \$2,441,000 RIDER EXPENDITURES		40% 22,000 RIDERS \$2,848,000 RIDER EXPENDITURES		60% 25,100 RIDERS \$3,254,000 RIDER EXPENDITURES

[1] Based on anecdotal estimates provided by a local bicycle activity club and local bike shop.
 [2] Assumes weekly rides for 30 weeks annually.
 [3] Assumes 11 monthly rides per year.
 [5] Attracts between 75-100 participants annually, predominantly local residents.
 [6] Because cyclists can buy wine for delivery, assumes winery visitor expenditures as shown in Figure 3.7.
 [7] Spending based on feedback from Robby's Bicycles and San Joaquin Bicycle Club (SJBC).
 [8] Based on upper limit for rider participants in nine total races designed for a variety of riders, although all rides are 65 minutes or less. http://www.deltavelo.com/lodi_cyclefest/
 [9] Includes four ride options. Formerly known as the Sunrise Century, the rider count has ranged

from 400 to 450, according to a representative from the local Rotary group that organizes this event.
 [10] Includes 30 race options. Average rider counts provided by Clipped In Races, April 2021.
 Going forward, however, this race needs to find a new location.
 [11] Begins and ends in Lodi, but passes through portions of Sacramento County. Event map shows cafes eateries in Sacramento County
 [12] There could be some overlap between these event riders and visitors who bicycle counted in Leisure Riders.
 [13] Because these rides begin in Downtown Stockton, the Showcase Area is estimated to capture only 25 percent of \$15 expenditure rate.
 Prepared by New Economics & Advisory, June 2021.

EXISTING ECONOMIC VALUE OF BICYCLE TOURISM AND COMMUTE HEALTH BENEFITS

Bicycle tourism in the San Joaquin Showcase Area is estimated to include more than 15,700 rides and generates over \$2 million annually in rider expenditures captured locally (**Figure 6.3**).

According to the Census, approximately 0.40 percent of residents commute on bicycles (**Figure 6.4**). Applied to the Showcase Area residential base, this rate suggests that about 330 residents rely on bicycles to commute, producing a health savings value of about \$4.7 million annually.

OPPORTUNITIES TO EXPAND ECONOMIC BENEFITS OF BICYCLING

Additional investment in bicycle infrastructure that increases bicycle tourism levels by 20-40 percent would result in 18,800-25,100 rides and \$2.5-\$3.2 million in rider expenditures captured locally for San Joaquin's Showcase Area.

In addition, if the Showcase Area could double or triple its bicycle commuter rate, the economic value of these health savings would be in the range of \$220,000 to \$330,000 annually.

Opportunity 6.1: New bicycle infrastructure that encourages additional family-friendly cycling would help to increase the amount of commuting and bicycling by local residents.

Opportunity 6.2: With a relatively central location that provides easy access to the Bay Area and Sacramento Region, additional competitive events (including infrastructure to support these events) could attract many out-of-area cyclists. These cyclists would generate expenditures that could be captured by this Showcase Area.

This study also recommends that local groups and/or organizations collect demographic and economic data about bicyclists in the Showcase Area, including:

- Gender, race, ethnicity, and household income;
- Age, size of party, and length of stay;
- Type of accommodations (if staying overnight) and daily expenditures;
- Point of origin

This type of demographic and economic information can be used to refine the baseline estimate of bicyclist expenditures shown here, and track changes in value and levels of inclusion over time as infrastructure investments are implemented.

FIGURE 6.4

PROJECTED COST SAVINGS OF COMMUTER CYCLISTS, SAN JOAQUIN COUNTY

	AMOUNT	CURRENT SAVINGS 0.4%	POTENTIAL SAVINGS 0.8%	POTENTIAL SAVINGS 1.2%
CURRENT BICYCLE COMMUTER RATE^[2]	83,176	333	665	998
CURRENT COSTS				
DIABETES ^{[3][4]}	\$178.2 MILLION	\$713,000	\$1,425,000	\$2,138,000
CANCER ^{[3][4]}	\$768.6 MILLION	\$3,074,000	\$6,149,000	\$9,223,000
CORONARY HEART DISEASE ^{[3][4]}	\$138.2 MILLION	\$553,000	\$1,105,000	\$1,658,000
STROKE ^{[3][4]}	\$86.1 MILLION	\$344,000	\$689,000	\$1,033,000
TOTAL SAVINGS (ROUNDED)	\$1.2 BILLION	\$4,700,000	\$9,400,000	\$14,100,000

[1] Reflects U.S. Census Bureau 2019 ACS 5-Year Estimates.

[2] Based on ESRI report, using 2015-2019 ACS data for the showcase area boundaries.

[3] Amount reflects 2018 data from the 2020 PLACES data release. Data reflects prevalence among adults aged 18 and older.

[4] See Figure 2.3 for cost assumptions.

Source: PLACES: Local Data for Better Health, Center for Disease Control and Prevention, 2020 release; U.S. Census Bureau 2019 ACS-5 Year Estimates, accessed March 2021; Department of Finance Population and Housing Estimates, 2020 release; ESRI use of 2015-2019 ACS, accessed May 2021.

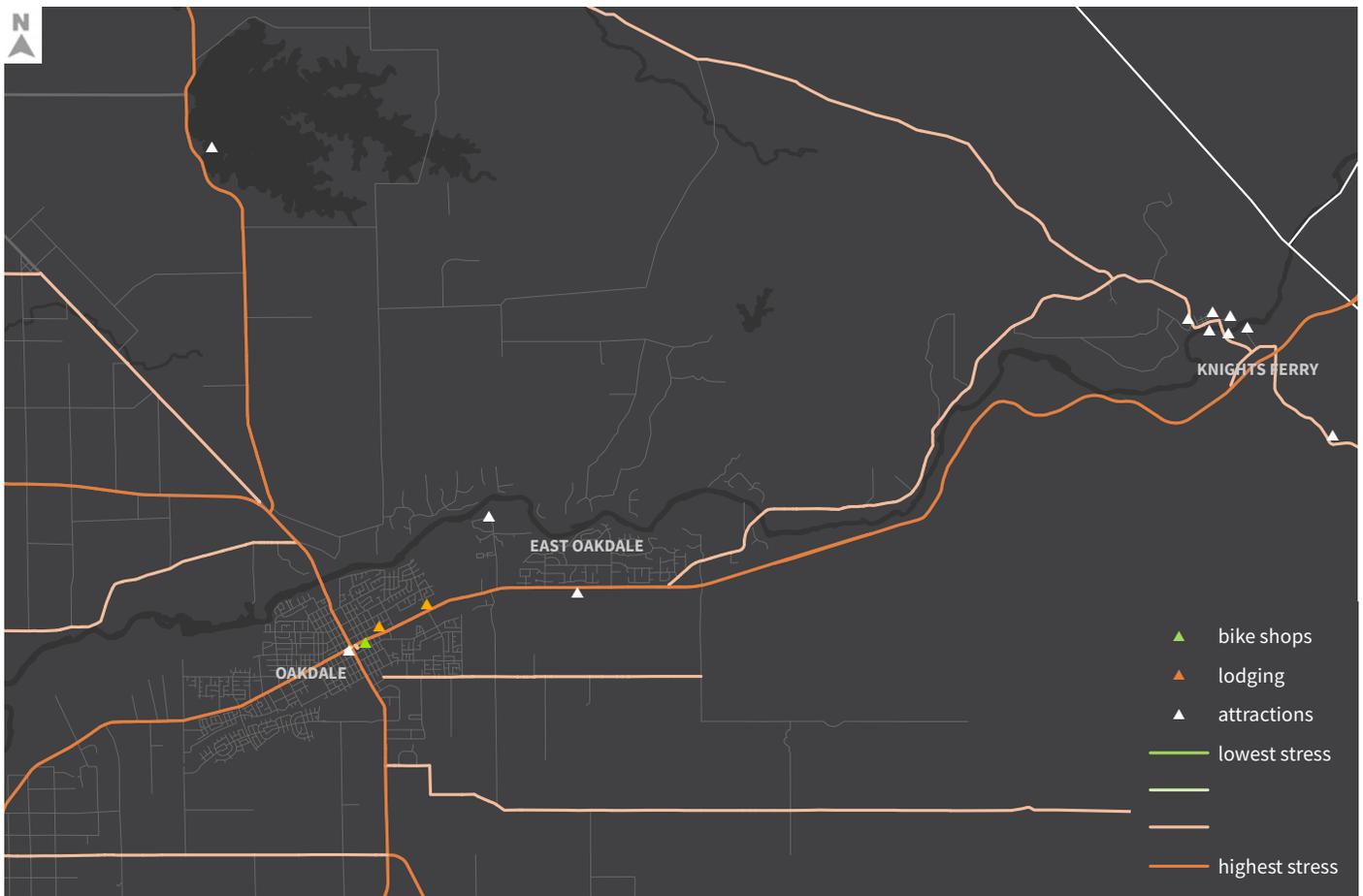
Prepared by New Economics & Advisory, June 2021.

INTERREGIONAL BICYCLE TOURISM MASTER PLAN BASELINE ECONOMIC VALUE ESTIMATE

SECTION 7 STANISLAUS COUNTY BASELINE ECONOMIC VALUE

Stanislaus County's Showcase Area consists of the roadways around Oakdale and Knights Ferry, as well as Woodward Reservoir. **Figure 7.1** contains a map of the Showcase Area.

The Oakdale/Knights Ferry area is a great starting point and destination for cyclists in the Central Valley because of its centralized location. The area offers numerous scenic routes, which are frequented by both locals and visitors.



Source: Fehr and Peers, 2021

EXISTING BICYCLE RIDER SEGMENTS

Bicycle riders in the Stanislaus Showcase Area can be broadly categorized into the segments described below.



LEISURE RIDING

Organized, Leisure bicycle rides are common in the area and are promoted by regional bicycle groups like the Stanislaus Bike Club and the Oakdale Bike Shop. These organized rides occur regularly on weekdays and weekends, and can include from 50 to 70 participants per ride, resulting an estimated 10,200 rides annually, as shown in **Figure 7.2**.

According to stakeholder interviews, local residents and families also enjoy cycling around the area and often purchase sets of bicycles and bicycle gear from the local Oakdale Bike Shop. These rides have not been quantified and would be in addition the counts associated with organized Leisure rides. Interviewees also noted that mountain bikers use Oakdale as a launching pad for day rides farther east. This study did not quantify these rides (some of which may already be captured in Calaveras and/or Alpine), but they would be in addition to the total estimated number of Leisure rides included here.



NON-COMPETITIVE BICYCLE EVENTS

There are two Non-Competitive Events that regular occurs in the Stanislaus Showcase Area. The Golden Hills Century attracts about 250 riders, many of whom come from the Sacramento Region, Bay Area Region, and Fresno area. The annual New Year's Ride attracts about 500 riders.



COMPETITIVE BICYCLE EVENTS

There are six existing sanctioned races that either occur within, or pass through, this Showcase Area. These races attract anywhere from about 50 riders to 250 riders and generate a total of nearly 1,000 rides annually.

Finding: Bicycling in the Stanislaus Showcase Areas can be largely characterized as having a large, active group of dedicated Leisure riders, combined with the highest number of competitive bicycle events sanctioned by USA Cycling. On the flip side, there is little documentation of informal, recreational bicycling by local residents or visitors, and very few Non-Competitive events compared to other Showcase Areas.

FIGURE 7.2

ESTIMATED ANNUAL BICYCLIST EXPENDITURES, STANISLAUS COUNTY

	CYCLISTS PER TRIP	RIDERS PER YEAR	EXPENDITURES PER CYCLIST PER YEAR	ANNUAL EXPENDITURES
LEISURE RIDES				
WEEKNIGHT (MONDAY - THURSDAY)	50	6,000 ^{[1][2]}	\$5 ^[5]	\$30,000
WEEKEND FRIDAY - SUNDAY	70	4,200 ^{[1][3]}	\$48 ^[5]	\$201,600
SUBTOTAL LEISURE (ROUNDED)		10,200		\$232,000
NON-COMPETITIVE EVENTS				
PARTY PARDEE	250	250	\$104 ^[6]	\$26,000
PEDALING PATHS	500	500	\$104 ^[6]	\$52,000
SUBTOTAL NON-COMPETITIVE (ROUNDED)		750		\$78,000
COMPETITIVE EVENTS				
REGALADO ROAD RACE	164	164 ^[4]	\$210 ^[7]	\$34,440
WARNERVILLE TT	46	46 ^[4]	\$210 ^[7]	\$9,660
MODESTO CRITERIUM	232	232 ^[4]	\$21 ^[7]	\$4,872
MODESTO ROAD RACE	160	160 ^[4]	\$21 ^[7]	\$3,360
TURLOCK LAKE ROAD RACE	254	254 ^[4]	\$21 ^[7]	\$5,334
WARDS FERRY ROAD RACE	73	73 ^[4]	\$21 ^[7]	\$1,533
SUBTOTAL COMPETITIVE (ROUNDED)		929		\$59,000
TOTAL (ROUNDED)		11,900		\$369,000
POTENTIAL EXPENDITURES INCREASES				
20%		40%		60%
14,300		16,700		19,000
RIDERS		RIDERS		RIDERS
\$443,000		\$517,000		\$590,000
RIDER EXPENDITURES		RIDER EXPENDITURES		RIDER EXPENDITURES

[1] Based on anecdotal estimates provided during an interview with a local bicycle activity club.

[2] Assumes four weeknight rides per week for 30 weeks annually.

[3] Assumes two weekend rides per week for 30 weeks annually.

[4] Reflects 2019 counts from www.road-results.com, as provided by Stanislaus Council of Governments, June 2021.

[5] Assumes expenditure per rider as shown in Figure 3.8.

[6] Assumes expenditure per rider as shown in Figure 3.1.

[7] Assumes expenditure of \$210 per rider as shown in Figure 3.11. Races with origins outside the Showcase Area are estimated to capture only 10% of expenditures.

Prepared by New Economics & Advisory, June 2021.

FIGURE 7.3

PROJECTED COST SAVINGS OF COMMUTER CYCLISTS, STANISLAUS COUNTY

	AMOUNT	CURRENT ^[1] SAVINGS 0.3%	POTENTIAL SAVINGS 0.6%	POTENTIAL SAVINGS 0.9%
CURRENT BICYCLE COMMUTER RATE ^[2]	31,159	95	189	284
CURRENT COSTS				
DIABETES ^{[3][4]}	\$65.2 MILLION	\$196,000	\$391,000	\$587,000
CANCER ^{[3][4]}	\$301.5 MILLION	\$904,000	\$1,809,000	\$2,713,000
	\$53.2 MILLION	\$160,000	\$319,000	\$479,000
STROKE ^{[3][4]}	\$32.6 MILLION	\$97,848	\$196,000	\$294,000
TOTAL SAVINGS (ROUNDED)	\$452.7 MILLION	\$1,360,000	\$2,720,000	\$4,070,000

[1]Reflects U.S. Census Bureau 2019 ACS 5-Year Estimates.

[2]Based on ESRI report, using 2015-2019 ACS data for the showcase area boundaries.

[3]Amount reflects 2018 data from the 2020 PLACES data release. Data reflects prevalence among adults aged 18 and older.

[4]See Figure 2.3 for cost assumptions.

Source: PLACES: Local Data for Better Health, Center for Disease Control and Prevention, 2020 release; U.S. Census Bureau 2019 ACS-5 Year Estimates, accessed March 2021; Department of Finance Population and Housing Estimates, 2020 release; ESRI use of 2015-2019 ACS, accessed May 2021.

Prepared by New Economics & Advisory, June 2021.

EXISTING ECONOMIC VALUE OF BICYCLE TOURISM AND COMMUTE HEALTH BENEFITS

Bicycle tourism in the Stanislaus Showcase Area is estimated to include nearly 12,000 rides and generates about \$370,000 annually in rider expenditures captured locally (**Figure 7.2**).

According to the Census, approximately 0.30 percent of residents commute on bicycles (**Figure 7.3**). Applied to the Showcase Area's residential population, this rate suggests that about 95 residents rely on bicycles to commute, producing a health savings value of about \$1.4 million annually.

OPPORTUNITIES TO EXPAND ECONOMIC BENEFITS OF BICYCLING

Additional investment in bicycle infrastructure that increases bicycle tourism levels by 20-40 percent would result in 13,700-18,200 rides and \$380,000 - \$507,000 in rider expenditures captured locally for Stanislaus's Showcase Area.

In addition, if the Showcase Area could double or triple its bicycle commuter rate, the economic value of these health savings would be in the range of \$2.7 million to \$4.1 million annually.

Opportunity 7.1: There is a potential opportunity to grow economic value in this Showcase Area through the addition of Non-Competitive Events. Bicycle infrastructure that supports the creation of more events like the Golden Hills Century (such as shorter rides that emphasize family fun, raising money for local communities and/or raising awareness around important causes) would generate additional tourism expenditures. These events would be feasible with additional bicycle infrastructure that enables safe bicycle access for the 6-mile trip to Woodward Reservoir or the 12-mile trip to Knights Ferry from Downtown Oakdale.

Opportunity 7.2: Additional bicycle infrastructure in Oakdale could promote more local participation in bicycling. Stakeholder interviews indicated that Oakdale, particularly Downtown Oakdale, is not bicycle friendly. To the extent that safe bicycle access could be created there, local residents, including families, may choose to engage in bicycling as an alternative means of recreation.

OPPORTUNITIES TO EXPAND ECONOMIC BENEFITS OF BICYCLING

This study also recommends that local groups and/or organizations collect demographic and economic data about bicyclists in the Showcase Area, including:

- Gender, race, ethnicity, and household income;
- Age, size of party, and length of stay;
- Type of accommodations (if staying overnight) and daily expenditures;
- Point of origin

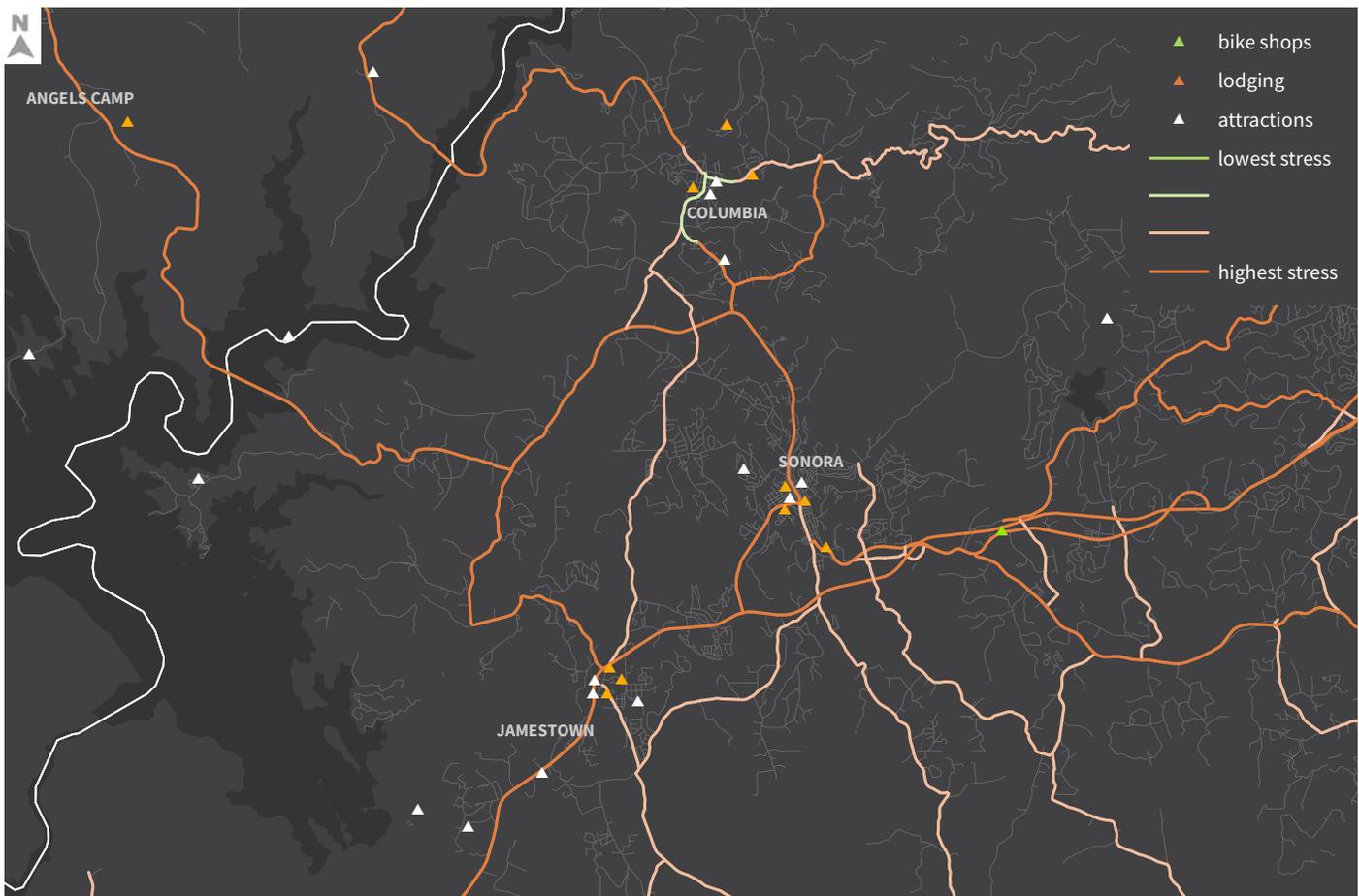
This type of demographic and economic information can be used to refine the baseline estimate of bicyclist expenditures shown here, and track changes in value and levels of inclusion over time as infrastructure investments are implemented.

SECTION 8

TUOLUMNE COUNTY BASELINE ECONOMIC VALUE

Tuolumne County's Showcase Area includes the communities of Jamestown, Columbia, and Sonora, as well as the roadway network between them and the network from these areas to Murphys (in Calaveras County) and Knights Ferry (in Stanislaus County). **Figure 8.1** contains a map of the Showcase Area.

With close proximity to Yosemite National Park, this Showcase Area provides opportunities for tourists, including bicyclists, looking to explore additional sites while traveling to another primary destination. Mountain biking has an especially strong prevalence in the area among locals and visitors alike, which can be partially attributed to the multiple state parks located within the Showcase Area. Additionally, Visit Tuolumne County, the local visitor's bureau, promotes bicycling events and attractions through its website and social media marketing efforts.



Source: Fehr and Peers, 2021

EXISTING BICYCLE RIDER SEGMENTS

Bicycle riders in the Tuolumne Showcase Area can be broadly categorized into the segments described below.



LEISURE RIDING

There is a high level of mountain biking interest in this Showcase Area. Mountain biking and, albeit to a lesser extent, e-biking is a popular activity around Lyons Reservoir, Pinecrest Peak, and Crabtree Road, as shown in **Figure 7.2**. This study could not identify any regular, organized bicycle rides for local enthusiasts.



NON-COMPETITIVE BICYCLE EVENTS

There are no known **Non-Competitive Events** that regularly occur in the Tuolumne Showcase Area.



COMPETITIVE BICYCLE EVENTS

There are no known **Competitive Events** that regularly occur in the Tuolumne Showcase Area.

Finding: Bicycling in the Tuolumne Showcase Areas appears to be limited to individual cyclists, mostly mountain bikers and e-bikers, largely driven by the lack of existing bicycle infrastructure. Without any organized bicycling events, this Showcase Area has the lowest estimated number of riders, at less than 1,000 annually.

EXISTING ECONOMIC VALUE OF BICYCLE TOURISM AND COMMUTE HEALTH BENEFITS

Bicycle tourism in the Tuolumne Showcase Area is estimated to include about 700 rides each year and generates about \$70,000 annually in rider expenditures captured locally (**Figure 8.2**).

According to the Census, approximately 0.30 percent of residents commute on bicycles (**Figure 8.3**). Applied to the Showcase Area's residential population, this rate suggests that about 125 residents rely on bicycles to commute, producing a health savings value of about \$1.8 million annually.

OPPORTUNITIES TO EXPAND ECONOMIC BENEFITS OF BICYCLING

Additional investment in bicycle infrastructure that increases bicycle tourism levels by 20-40 percent would result in 800-1,100 rides and \$83,000 - \$110,000 in rider expenditures captured locally for Stanislaus's Showcase Area.

In addition, if the Showcase Area could double or triple its bicycle commuter rate, the economic value of these health savings would be in the range of \$2.7 million to \$4.1 million annually.

Opportunity 8.1: Build the branding for mountain biking to grow this segment of the bicycling community can generate relatively high levels of tourism dollars. Bicycle infrastructure that supports the expansion of the mountain biking community has the potential to grow spending in the area, as mountain bikers tend to spend more than road riders.

Opportunity 8.2: Create conditions that enable local bicycle shops and groups to organize Leisure rides. Additional infrastructure that increases not only mountain bike but also road bike ridership would make it easier for local bicycle shops and/or groups in the Jamestown/Columbia/Sonora area to organize of weekly and/or monthly rides for residents and visitors seeking exercise, sightseeing, or recreation opportunities. Additional infrastructure in and around these areas could help to build a bicycling community:

- Columbia State Historic Park: 163,747 visitors in 2019 (in Columbia)
- Railtown 1897 State Historic Park: 5,171 visitors in 2019 (in Jamestown)
- 3.5-mile distance between Jamestown and Sonora
- 4.5-5.0- mile distance between Sonora and Columbia
- Columbia College (public community college in Sonora)

FIGURE 8.2

ESTIMATED ANNUAL BICYCLIST EXPENDITURES, TUOLUMNE COUNTY

	RIDERS PER YEAR	EXPENDITURES PER CYCLIST PER YEAR	ANNUAL EXPENDITURES
LEISURE RIDES			
MOUNTAIN BIKERS (LYONS RESERVOIR, PINECREST PEAK, CRABTREE ROAD)	600 ^[1]	\$108	\$64,800
E-BIKES (LYONS RESERVOIR, PINECREST PEAK, CRABTREE RD)	88 ^[1]	\$44	\$3,872
SUBTOTAL LEISURE (ROUNDED)	700		\$69,000
NON-COMPETITIVE EVENTS			
		NONE	
COMPETITIVE EVENTS			
TUOLUMNE CITY CRITERIUM		FUTURE 2022	
SUBTOTAL COMPETITIVE (ROUNDED)		FUTURE 2022	
TOTAL (ROUNDED)	700	\$150	\$69,000
POTENTIAL EXPENDITURES INCREASES			
20%	40%	60%	
800	1,000	1,100	
RIDERS	RIDERS	RIDERS	
\$83,000	\$97,000	\$110,000	
RIDER EXPENDITURES	RIDER EXPENDITURES	RIDER EXPENDITURES	

[1] Reflects recorded rides during 2020 on trailforks.com. Prepared by New Economics & Advisory, June 2021.

FIGURE 8.3

PROJECTED COST SAVINGS OF COMMUTER CYCLISTS, TUOLUMNE COUNTY

	AMOUNT	CURRENT ^[1] SAVINGS 0.3%	POTENTIAL SAVINGS 0.6%	POTENTIAL SAVINGS 0.9%
CURRENT BICYCLE COMMUTER RATE^[2]	41,588	125	250	374
CURRENT COSTS				
DIABETES ^{[3][4]}	\$66.1 MILLION	\$198,000	\$396,000	\$594,000
CANCER ^{[3][4]}	\$431.5 MILLION	\$1,295,000	\$2,589,000	\$3,884,000
CORONARY HEART ^{[3][4]} DISEASE	\$64.5 MILLION	\$194,000	\$387,000	\$581,000
STROKE ^{[3][4]}	\$39.1 MILLION	\$117,000	\$235,000	\$352,000
TOTAL SAVINGS (ROUNDED)	\$601.5 MILLION	\$1,800,000	\$3,610,000	\$5,410,000

[1] Reflects U.S. Census Bureau 2019 ACS 5-Year Estimates.

[2] Based on ESRI report, using 2015-2019 ACS data for the showcase area boundaries.

[3] Amount reflects 2018 data from the 2020 PLACES data release. Data reflects prevalence among adults aged 18 and older.

[4] See Figure 2.3 for cost assumptions.

Source: PLACES: Local Data for Better Health, Center for Disease Control and Prevention, 2020 release; U.S. Census Bureau 2019 ACS-5 Year Estimates, accessed March 2021; Department of Finance Population and Housing Estimates, 2020 release; ESRI use of 2015-2019 ACS, accessed May 2021.

Prepared by New Economics & Advisory, June 2021.

OPPORTUNITIES TO EXPAND ECONOMIC BENEFITS OF BICYCLING

Opportunity 8.3: Spillover from Yosemite visitation is not likely a significant opportunity for this Showcase Area. This study evaluated potential spillover from visitors en route to Yosemite. Interviews with local stakeholders active in the bicycling community indicated that visitors focused on Yosemite are not inclined to extend or divert their visit to recreate in the Sonora/Jamestown/Columbia area. They suggested instead that Groveland, a community on Highway 120 leading into Yosemite National Park, would be a more logical place to capture Yosemite visitors.

This study also recommends that local groups and/or organizations collect demographic and economic data about bicyclists in the Showcase Area, including:

- Gender, race, ethnicity, and household income;
- Age, size of party, and length of stay;
- Type of accommodations (if staying overnight) and daily expenditures;
- Point of origin

This type of demographic and economic information can be used to refine the baseline estimate of bicyclist expenditures shown here, and track changes in value and levels of inclusion over time as infrastructure investments are implemented.





Overview of Bicycle Tourism Best Practices

Introduction

Report for Task 5.1 of the project, “Promoting Safe Bicycle Travel Opportunities for Bicycle Tourism and Economic Development.”

Bicycle Tourism is essentially about using some form of bicycle-riding as a draw to bring people into an area for the purposes of economic development via tourism.

While it may sound too good to be true, dozens of studies released between 2010-2020 show the profound impact that bicycling can have on local and state economies. From \$400 Million annually in Oregon¹ to \$533 Million annually in Colorado² to \$83 Billion annually in the U.S. economy as a whole³.

For communities who are building bicycle tourism to bolster their local economy, the day-to-day impacts don't measure in the millions of dollars, especially in small and rural places. Rather, the impacts come in the form of a slow and steady additional income stream that can help a community to be more sustainable over the long term. While bike tourism works everywhere, it can be hard to separate the impact that bike routes or bike-friendly businesses have on the bottom

line reason for someone's visit to a large metro area. But in a small or rural community, not only is it easier to physically see an increase in people riding bikes, a small increase in visitation can have a much greater net impact on a community's economic viability.

In Vermont, the Kingdom Trails are a well-known network of mountain biking trails with well-documented economic impacts. In a video posted to their website, Walter Norman discusses the opening of a new trail by saying: “I see it bringing a lot of people to the area. That, to me, creates economic opportunities for the people here, that didn't exist before. People are renting out their houses, you know, people who sell firewood can sell more firewood. So, I think, a town like this could have a country store, when before it couldn't have supported that.”⁴

For many, the overarching goal of tourism isn't so much about building a seasonal economy that caters to visitors who come for a short time and then leave, but rather to develop the amenities and quality of life that not only improves year-round quality of life, but also entices visitors to permanently move themselves, their families, and their businesses. In this way, tourism

can have an outsized net impact on smaller economies, as one new resident makes up a larger percentage of the overall population.

In 2019, Headwaters Economics released a report that looked specifically at the impacts of outdoor recreation on rural economies between 2010-2016. While the focus of the research was on all forms of outdoor recreation, cycling and bike tourism is generally considered to be a large component of the outdoor recreation economy.

“Many communities recognize the economic benefits of recreation amenities that attract tourists who spend money at hotels, restaurants, and other businesses that cater to visitors. What is less well understood is whether a recreation economy can bring longer-term economic benefits by attracting new residents, who may first come as tourists or second home owners... This study finds that recreation may make the difference between gaining or losing population, particularly in rural counties.”⁵

In NW Arkansas, the impacts of improved bicycling amenities can be seen in both increased short-term visitation and increased long-term population base and community vitality. In 2018, a study commissioned by the Walton Family Foundation found that bicycling contributes \$137 million annually to the region. Importantly, the study also found that 55% of trail users traveled into NW Arkansas from outside the region, proving that the region’s investment in soft-surface mountain biking trails was a key driver of tourism.⁶ Additionally, the Outdoor Industry Association found that the region’s efforts led to an increase in and then retention of their population base. According to Paxton Roberts, Executive Director of BikeNWA: “Biking infrastructure is an economic driver—not just for tourism, but also as it affects where people choose to live. People want to live right on the trail, and they see value in having a walkable, bikeable community.”⁷



Types of Bicycle Tourism

SELF-SUPPORTED, DESTINATION-BASED, EVENTS, FAMILY/CASUAL

The Outdoor Industry Association estimates that 4 out of 5 Americans own a bicycle, which could potentially translate to hundreds of different types of cycling. About one in three California adults regularly ride a bicycle for transportation or recreation.⁸ When combined with travel preferences such as overnight accommodations, bicycle tourism quickly becomes a very large arena. For the purposes of this document, bicycle tourism is segmented into four distinguishable categories:

- Self-Supported
- Destination-Based
- Events
- Family/Casual

Because the Valley to the Sierras region can support each category of bike tourism in different ways in different communities, this document will discuss each category in relation to the opportunities that exist with the Valley to the Sierras region.

Self-Supported

Self-supported bicycle travel - also known as bike touring or bikepacking - is a style of travel where cyclists carry their gear in bags attached to the bike. This kind of travel is characterized by constant movement, with the riding itself being the destination, and most self-supported bike travelers spend a single night (sometimes two) in each overnight location. Most self-supported bike travelers follow routes mapped by organizations like Adventure Cycling or Bikepacking Roots, while some design their own routes or follow whatever road is most convenient to get to their destination (if no mapped route is known).

Self-supported bike travel appeals to a wide range of people and styles of travel, from budget to luxury, and from domestic to international travelers. Self-supported bike travel can be extremely inexpensive, if costs are limited to camping and cooking one's own food, and is therefore appealing to travelers with fewer resources, such as college students. However, people with means

also find the appeal in the challenge of self-supported bike travel, and may decide to end the day in a hotel with a good meal at a restaurant.

Regardless of the day-to-day spending habits, self-supported bike travelers can lead to large economic impacts simply because they are moving slowly and covering the distance by their own power. In 2013, a study found that multi-day cyclists in Montana spend \$75 - \$103 per day while in Montana and stay an average of eight or more nights.⁹

For the self-supported bike traveler, good road infrastructure is key, and roads with safe shoulders take priority. Additionally, most self-supported bike travelers will choose to follow routes that are reasonably direct and which connect to services at a reasonable interval. While any long-distance bike traveler can point to a day when they had to ride a terrible section of road just to get through, the self-supported community is tight-knit, and these experiences ripple out to others looking to follow a similar route. If a road stands out for its poor condition or heavy traffic load, for example, and one self-supported bike traveler tells the rest of the community to avoid it, the vast majority of other self-supported bike travelers will find a different road.

The Valley to the Sierras region is already seeing self-supported bike travelers. The Adventure Cycling Sierra Cascades route travels through Alpine County, and Gold Country communities frequently see cyclists connecting between Yosemite and the San Francisco Bay Area. **For this reason, these communities could capture an increasing number of self-supported bike tourists with improvements to infrastructure and better linkages.**

Given the draw of nearby attractions like Yosemite, Lake Tahoe, Sacramento, and San Francisco, the communities in the San Joaquin Valley will struggle to attract self-supported bike travelers. In order to compete with nearby attractions, the San Joaquin Valley communities will need to overcome negative perceptions of the valley that would impede a self-supported bike traveler from choosing to ride through that part of the region. Such perceptions include the predominance

of agriculture with fewer iconic landscapes, heavy truck traffic, and communities that are not bike-friendly. Additionally, self-supported bike travelers who prefer to ride on non-paved surfaces, like bikepackers, will avoid the communities in the San Joaquin Valley, unless there is a concerted effort to develop connected unpaved routing. Linking gravel farm roads and levee roads could provide such an opportunity.

For communities in the Sierra Nevada mountains or foothills looking to develop a connected unpaved route, one opportunity is the Orogenesis route being researched by Bikepacking Roots¹⁰. While it may be years before the full route is released to the public, the Bear Valley Trail Stewards have already proposed restoring a historic trail in Whittakers Dardanelles that would provide bikepackers with an alternative to 70 miles of road riding.

Destination-Based

Unlike self-supported bike travel, which is characterized by constant movement and spending each night in a different location, destination-based bike travel is a base-camp model, where bike travelers stay in one location for several days and participate in day rides. The appeal is not only unpacking a single time, but also the opportunity to explore a location deeply and perhaps feel like a local. Destination-based bike travel is so-named because it requires a basecamp location that is a destination in and of itself. The style of riding can be road or mountain bike or, increasingly, gravel. The key is that the host location has name recognition and lots to offer.

People who participate in the destination-based model of bike travel tend to have the time and money to sink into a location for several days. Other demographics tend to align with the demographics of the destination. Some destinations will appeal to 20- and 30-something travelers who will drive in with their vans and frequent the brewpubs. Other destinations will appeal to retirees who will fly in and look for a good steakhouse or fine dining restaurant.

The key to success with the destination model is to either a) be already successful as a general tourism destination and then add cycling as one of the offerings, or b) develop routes and riding opportunities that are destinations in themselves because of the buzz they have within a certain segment of cyclists. The Napa/Sonoma region has long had a reputation as a famous wine region, so adding dozens of guided and self-guided tours through the wineries enabled them to reach out to a new visitor segment. Downieville, on the other hand, became known as a destination when word of its famously intense downhill trails began trickling out following the launch of the Coyote Classic (now Downieville Classic) mountain bike race in 1995.¹¹

In the Valley to the Sierras region, Lodi is already having success with the destination model. The community has a growing collection of bike routes that connect visitors with the surrounding wineries, allowing them to build off the name recognition of their wine region¹². The collaboration between Bike Lodi and Visit Lodi has also led to the development of new bike-friendly lodging properties within the past few years. **With increased buzz and increased amenities, Lodi could continue to grow and succeed with the destination model.**

Nearby, Stockton and Modesto could build off their own agriculture to replicate Lodi's success in their own ways. As more people express interest in learning where their food comes from, there are increasing opportunities for communities like Stockton and Modesto to showcase their agricultural expertise and heritage. Agriculture businesses like Gallo Wines and Fiscalini Cheese could anchor bike-based agritourism tours, both guided and self-guided.

Moab, Utah is another prime example of a small community capitalizing on outdoor recreation. Beginning in the early 1980s, Moab became one of a handful of destinations getting on board behind a new kind of cycling: mountain biking. Nearly 40 years later, Moab's economy is driven by tourism that relies on outdoor recreation, especially mountain biking. The community has used that time not only to increase access to trails and their unique landscape, but also to develop a range of amenities and services that cater to outdoor

recreationalists. In 2017, the Utah Active Transportation Benefits Study looked at the new trails built at Dead Horse Point State Park in Moab and reported that those trails (which are a small segment of the trails available in Moab) see nearly 57,000 cycling visitors annually, generating an estimated \$19 million.¹³

In the Sierras, communities like Bear Valley, Markleeville, and Groveland could all build off existing mountain bike trail systems to develop unique destinations. In each instance, communities should be intentional about expanding on their strengths and the aspects of the towns and trails that are unique to them. They should be careful to not try to directly copy Downieville or Moab, but to focus on the riding they have and the kind of rider who's looking for that experience.

Throughout the region, communities that face a limited number of on- and off-the-bike options or limited name recognition would be better served by focusing on a different model of bike tourism. Part of Lodi's success came from the growing awareness of and interest in the wines produced in the region, so that they were starting from a solid base. Communities that don't yet have anything similarly strong to stand on will have a difficult time convincing visitors that it's worth their time to spend several days there.

Events

Bike travelers who participate in events are drawn to the social aspect of being part of a large group for a set amount of time and having all logistics handled by the event promoter. Events can range from cyclocross races, criteriums, and gran fondos - to week-long cross-state rides like Cycle Oregon or RAGBRAI.

Events are great for communities because they provide a large influx of cash in a short period of time. In many cases, communities can work with public safety officers to close roads to car traffic, eliminating the need to have the kind of infrastructure that might draw that many people in a longer timeframe. For this reason, events are appealing to a lot of communities, especially small communities. However, events bring their share of complications.

Permitting can be an issue, depending on the size of the event, the impact of the desired route, and the agencies involved. The biggest potential complication is overnight accommodation capacity. Events have the biggest financial impact on a community when it involves an overnight stay; however there's no point in bringing 100 people into a town if there isn't lodging for 100 people, because those overnight dollars will go to a neighboring community/county. As such, it is the availability of lodging options that will effectively limit whether the events model is a viable economic driver for communities.

Every year, Alpine County hosts the Death Ride. A fundraiser for the Alpine Chamber of Commerce, the event starts and ends in Markleeville. However, there isn't enough lodging in town for all participants, and many people choose to instead stay in South Lake Tahoe. For context, participants in the one-day America's Most Beautiful Bike Ride circling Lake Tahoe spend an average of 2.5 days and \$641 per day.¹⁴ An increase in comparable lodging options for Death Ride participants in the Markleeville area could lead to increased revenue for Alpine County, as they would receive the lodging tax dollars and not the Lake Tahoe area.

Communities interested in hosting events would be advised to connect with respectable event directors, who can help suss out the types of events that a community is best-suited to host.¹⁵

Family/Casual

People who find themselves riding bikes on their vacation without it necessarily being the primary motivation for the vacation are considered to be casual bike tourists. This category includes families who rent bikes on one day of a longer vacation, as well as people who take a guided tour by bike of a city. In a study of bicycle tourism in Oregon in 2012, the state discovered that the largest segment of bike travelers was the family/casual traveler.¹⁶

Communities wanting to attract family and casual bike travelers should remember that they're reaching out to people who enjoy riding bikes, but who may not identify as "cyclists." It's important to have a variety of low-stress facilities like trails and shorter routes that are comfortable for people who may not ride a bike often. Perceptions of safety will be paramount, especially for families. Routes should be designed with lots of potential stops or mid-ride shortcuts. Incorporate parks on routes that are marketed to families, to give kids time to run around and do something different. Additionally, this category of bike travelers is well-served by guided tours and bikeshare or rental bike options.

In most cases, this is a successful model in locations that offer a variety of other vacation options, as cycling isn't the sole motivation for choosing a particular destination. San Joaquin Valley communities are well-suited for this kind of bike tourism. Shorter trails like the Calaveras Bike Path in Stockton could be reframed for this category of bike travelers. Gold Country communities could also be successful in attracting casual bike travelers, **provided they're able to make improvements to existing infrastructure to improve perceptions of safety** and/or create space for increased e-bike usage.

Smaller communities without many other activities will find it a challenge to attract casual bike travelers, as will communities in the Sierras where the terrain is less flat.



Focus on the Visitor Experience

BICYCLE TOURISM SUCCESS STRATEGY 01

At its core, bicycle tourism is a form of tourism; and, like all tourism initiatives, the success of bicycle tourism rests on the quality of a visitor's experience. For this reason, it can be a real challenge for residents to look at their community through the eyes of a visitor, but it's crucial to do so. Where a resident might overlook a route as "just the local trail" or see the Sacramento River Delta as nothing more than part of the background, a visitor might enjoy riding "where the locals ride" or exploring a waterway unlike anything in their hometown. Similarly, residents may know to turn left at the barn, but out-of-town visitors would need those directions to be shared explicitly in order to enjoy the experience and not get lost.

Without considering the experience through the eyes of a visitor, important details will inadvertently be left out of the overall offering, and that visitors' experience will suffer. However, by thinking about the details from the perspective of someone who's never been to the area, a community can ensure that a visitor is taken care of before they even arrive, ensuring that visitors will have a positive experience and share that experience with their friends. At the same time, seeing the local amenities

in a different way often translates to residents taking greater pride in what their community has to offer.

Identify the Bike Tourism Category & Define the Ideal Visitor

Before a product can be developed and marketed, a community first needs to identify who they'll be developing that product for.

As bicycle tourism has grown across the world and more people are incorporating cycling into their travel plans, it's no longer enough to map a route and call it good. Saying "come here, we have roads for bicycling" doesn't cut through the noise of myriad other bike travel destinations. Nor does it prime a community to have a positive hosting experience, because it doesn't align the community's personality with the experience that's sought by a potential visitor.

For example, a community without 4-star lodging properties shouldn't seek to attract high-end visitors, because those visitors will be disappointed. If the mountain

bike trails are flowy, cross-country style, a community shouldn't promise an epic downhill experience.

By identifying the ideal visitor(s), a community can best capitalize on their existing amenities and character, rather than having to change to accommodate a new kind of tourist. This can also highlight opportunities for a community to grow and shift its offerings in a natural way.

A fear that is commonly expressed by small and rural communities is that nobody will visit if the community represents itself too honestly, if it has camping options but not B&Bs, if it has flat roads but not climbing. But the truth today is that bike travelers come in all varieties, seeking all kinds of experiences; and by representing itself honestly and positively, a community can find its right visitors.

A few good questions for a community to ask itself to identify its right visitors:

- What types of potential riding is available right now?
- Are there mountain biking trails? How technical are they?
- Are there good paved roads that people are already cycling? Are they flat? Do they involve a lot of climbing? Can you make short loops or only long loops?
- Are there gravel roads? Is the aggregate small and evenly-graded, or big and chunky?
- What types of services are available right now?
- Are there hotels? B&Bs? Vacation rentals?
- Are there campgrounds? Are they private campgrounds that easily accommodate RVs or primitive forest service type campgrounds?
- Are there restaurants? Do they do take-out? Are there grocery stores?

Identifying the types of riding and services that are currently available - or that are planned in the near-term - can help a community focus on the type of bike tourist that they're best suited to successfully host. And with that information, a community is set up well to define the bike tourism product that they're best able to offer.

Define the Bike Tourism Product

In tourism, a "product" is the combination of tangible and intangible elements - such as natural, cultural and man-made resources, attractions, facilities, services and activities - that represent an area and provide the visitor with a desired experience.

In bike tourism, the product is the combination of on- and off-the-bike experiences that highlight the character of the host community/region and speak to the desired visitor demographic.

In determining the ideal visitor, a community will have identified many of the experiences and amenities that are part of their bike tourism product. These should then be finetuned through the eyes of that ideal visitor. A good activity is to undertake an asset analysis of existing routes and amenities through the lens of a potential visitor, ensuring at all times that the bike tourism product to be developed maintains a connection to the character of the community.

Identify a variety of great bike routes that speak to the ideal visitor (without overwhelming that visitor with too many choices).

The core of a bike tourism product is the cycling experience itself. Depending on the existing amenities/character of a community and the ideal visitor, the cycling experience can include mountain bike trails, paved road routes, gravel forest roads, or fully-separated bike paths. It can include routes that someone would ride on their own or guided riding experiences.

A good way to source routes is to talk with community members who are already riding in the area. This could be employees at a local bike shop or outfitters, a bike club member, or even a neighbor. Where are they riding? What are their favorite rides? What do they recommend to friends and visitors? Ask them to provide a map with any pertinent cues to help keep an out-of-town visitor from getting lost. As much as possible, find someone who can ride the routes and vouch for their quality and safety.

In 2009, the state of Oregon launched their Scenic Bike-ways program, the first such program in the U.S. The program is specifically designed to empower the local communities (via a proponent group) to develop a quality route and management plan that will bring cyclists into rural parts of the state. Routes are then vetted and approved by a 10-person committee that includes representatives from Oregon State Parks, Travel Oregon, Oregon Department of Transportation, and Forest Service/BLM. A key component of the route development and approval process is riding the proposed route. Not only are proponents expected to ride the route and vouch that they've selected the best and most bike-friendly roadways, the committee rides the route before voting on its approval, ensuring that a variety of people from a variety of biking backgrounds feel comfortable and have an enjoyable experience on the route.¹⁷

Due to the large geographical size of the Valley to Sierras region, an opportunity exists to develop a Scenic Bikeway program similar to the one found in Oregon. By developing one or two signature routes in each county, the Valley to Sierras region would be able to offer a variety of cycling options that would enable the region to capture visitors for a longer duration. Additionally, by identifying safe connector routes between these signature routes, the region could encourage non-motorized travel between routes.

To develop a well-rounded bike tourism product, it's important to offer to visitors a variety of cycling options. Unless someone is simply biking through the area, it's good to have several routes from which a visitor can choose, especially if a community wants to attract visitors who will stay in the area for multiple days. It's also important that these routes encompass a variety of lengths, difficulties, and experiences - and relate back to a community's ideal visitor. For example, a community with a wealth of low-traffic paved roads would want to offer long hard routes for those visitors who want to spend several hours in the saddle, and also offer shorter routes for visitors who want to cap their exploring at shorter distances. One of the biggest traps that a community can get caught in is believing that the only worthy offering is a long hard epic super challenging ride, but the truth is that the majority of cycling visitors

want to return to their lodging with energy left to go out to eat or explore town.

Another important consideration in selecting routes to offer to visitors is safety. While safety can be subjective, owing to differing comfort and experience levels, certain factors are important to consider for riders of all skill levels. Below are a few details to consider:

- If a route follows a paved road, what is the condition of the pavement? If the pavement is broken, work to improve the pavement in some way; or recognize that road cyclists will be deterred by the poor condition and select a different road.
- If a route follows any roads that also accommodate motor vehicles, how heavy is the traffic volume? How fast do motorists drive? Is there a history of bicycle-involved collisions on the route or reported safety concerns from the community? If the traffic volume is high and/or the speeds are fast, a wide paved shoulder will provide respite for cyclists and ensure that there aren't any negative interactions between cyclists and motorists.
- If a route utilizes a road with shoulders, what is the condition of those shoulders? Are they swept regularly? Are there rumble strips that push cyclists into the travel lane or leave too little space for safety in the shoulder? If debris is a constant issue, find a way to increase the frequency of street sweeping. If rumble strips are improperly placed, work with the appropriate road agency to address them, and be prepared to move the route until cyclists can be safely accommodated.
- If a route utilizes gravel roads, what is the condition of the gravel? How often is the road graded? These are important details that will tell a cyclist what kind of bike is most appropriate and what width tires will enable them to ride safely and comfortably.
- If a route passes through any areas with hunting, are there signs alerting cyclists to wear orange at the pertinent times of year?

- If a route passes through any areas with no cell service, is there another way that cyclists can call for help if needed? This can be especially important on mountain biking trails where a cyclist won't encounter a passing motorist.

Identify a variety of great off-the-bike options that pair well with cycling that also speak to the ideal visitor.

While cycling takes center stage in any bike tourism initiatives, it's important to remember that no bike traveler is cycling 100% of the time. In most cases, once a bike traveler is done riding, they blend in with any other traveler - so be sure to consider where they can eat, drink, buy souvenirs, learn about the local history, etc and make sure to provide that information in proximity to the riding information.

It's also worth considering what off-the-bike options can be experienced in the middle of a ride. Increasingly, bike travelers are looking for routes that allow them to stop and explore something along the way. Is there a coffee shop or fishing hole or winery tasting room or art gallery along a route? Also consider simple enhancements that would entice a bike traveler to stop in the middle of the ride. Safe bike parking or signs that say 'bikes welcome' are a great way to show that cycling visitors are expected and invited.

The Trout Run Trail in Decorah, Iowa¹⁸ provides an excellent example of how to successfully connect a bike trail into a community and provide access to a variety of non-biking activities along the way. The 11-mile route loops around the small town, with well-signed trailheads directing trail users to nearby services and a unique, artistic map¹⁹ that highlights fishing access spots, parks, and where to spot the locally-famous bald eagle.

Simplify Logistics in Advance

Increasingly, travelers are selecting their destinations and planning all logistics well in advance of booking their trip - especially when there's the added potential complication of traveling with or by bike. The easier a community/

region makes it for people to find the information they're looking for at the time that they're trying to decide on a destination, the greater the chance that they'll choose that community/region as their destination.

A few things to consider include:

- How will visitors arrive in the community? Can they get there without a private car? Are there transportation options that would allow a visitor to leave their car at home (or not rent one from the airport if flying in)? If a visitor arrived via Amtrak, how would they cross the distance between the train station and their destination? By thinking through these questions, a community can ensure that they're sharing all relevant directional information as well as planning for future improvements.
- How will a visitor know where they are and where they're going? It's best not to assume that anyone knows where a community is located relative to another community, so consider providing maps with navigational details. Signage is also important for visitors once they've arrived. In particular, think about how a cyclist would find their way off a trail or other bike route into a downtown core or other destination.
- How will visitors get to the start of their ride? No matter what kind of ride a visitor is doing, it will have a start. Can they ride to the start from their lodging? Do they need to drive? In which case, where can they legally and safely park? Is there a shuttle they can hire instead of driving themselves? Make sure all of this information is described in detail and marked on any route maps.
- Where will a visitor stay and eat, etc? Most destinations already have this information available to help travelers with their planning, so be sure to connect bike travelers to that information seamlessly. It's important also to work with local businesses to accommodate bike travelers by welcoming them to bring their bikes into their hotel rooms and by providing safe parking at a restaurant or other business location. As much as

possible, share this information in advance to ease any potential concerns about the safety of a bike traveler's property.

The Whitefish Bike Retreat²⁰ in Whitefish, Montana is a unique lodging property that's located along several long-distance bike travel routes, both paved and unpaved, as well as the local mountain bike trail system. The staff is dedicated to ensuring that cyclists who stay with them have all the help they need to have the best possible experience. In addition, the Whitefish Bike Retreat offers a number of shuttles to help guests make the most of their time in the region, from regular daily runs between the retreat property and the bike shop in town (often to pick up guests who arrived via Amtrak) to a once-weekly scheduled shuttle to Banff, Canada to pick up or drop off cyclists on the Great Divide Mountain Bike Trail.

Consider Access by the Region's Residents

In the tourism industry, a tourist is generally considered someone who travels at least 50 miles from home. Given the size of the Valley to Sierras region, the opportunity exists for residents of one part of the region to travel over 50 miles to another part of the region and participate in tourism despite generally being considered a local resident. At the same time, some proponents of bike tourism recognize that the 50 miles metric isn't black-and-white when considering people traveling by bike, since a bike traveler could ride 30 miles from home and participate in an overnight stay with the same impacts as a visitor who traveled a further distance. For these reasons, as well as the ongoing impacts of COVID-19, it's important to keep in mind that visitors to the region may comprise a large percentage of relatively local residents, and to thus ensure that residents of the region have the same access to bike tourism routes and amenities as out-of-region visitors. To this end, the region should consider culturally-appropriate engagement, including producing relevant materials in Spanish and other languages as appropriate.

- By offering tourism options to local residents, the region would be capturing dollars that may otherwise be spent outside the area. For example, instead of going to a friend's house in another part of the region or state (where funds would be spent on gasoline, food, entertainment, etc.), those dollars would remain within the local economy.
- By offering tourism options to local residents, the region is expanding the variety of healthy recreational activities available to lower-income households, which could help to combat obesity and other physical and mental health challenges more typically faced by low-income families.



Engage the Community

BICYCLE TOURISM SUCCESS STRATEGY 02

From the Great Allegheny Passage Trail Town Program to the Oregon Scenic Bikeways, all successful bike tourism initiatives involve the larger community throughout the planning and development process. Building consensus and generating buy-in at the beginning can lengthen the process, but it also ensures greater sustainability and resilience and allows a community to benefit from the expertise that exists among residents.

As part of the Destination Best Practices section of the Ride Center application, IMBA scores potential Ride Center communities on whether: “the Ride Center’s development and maintenance are supported by government entities, businesses, stakeholders, and the general community.”²¹ In the Kentucky Trail Town Guide, communities are advised: “Trail Town development requires the cooperation and commitment of a proactive, broad-based coalition of public and private groups.”²² And in Lodi, California, Kathryn Siddle of Bike Lodi explained: “You’re always going to have the naysayer, the ‘don’t change my Lodi’... We had to have community support, because we were making changes, and changes are hard.”

Build a Coalition of Stakeholders

The most successful bike tourism initiatives have broad support from a wide range of community stakeholders who can see the many potential benefits of bike tourism. A few of the many roles are discussed below:

- **Key Civic & Political Leaders:** Having the support of key leaders within the community, especially decisionmakers, can be one of the best ways to remove red tape and other barriers to implementing a successful bike tourism initiative.
- **Tourism Representatives:** Any successful bike tourism destination will need to have the buy-in of the local CVB and/or DMO, because that entity will have the capacity to market the destination. But treating a CVB or DMO like a news outlet, instead of a development partner, can lead to marketing efforts that don’t fully represent the bike tourism efforts.
- **Commerce and Business Representatives (including local business owners):** Business owners are a powerful force in any community. They stand to benefit

financially from increased tourism, however they can also create barriers to implementation if they feel like their bottom line will be impacted negatively. Minor disagreements or misunderstandings over issues like installing bike parking racks or marketing a downtown core can create rifts that are difficult to repair. At the same time, chambers of commerce are charged with marketing their member businesses and increasing their traffic, and can effectively block any bike-friendly business initiatives if they don't understand the benefit. This is why it's important to openly discuss these issues with key representatives of the business community before they become problematic. Bringing business representatives into the bike tourism initiatives at the beginning helps to ensure overall longevity and sustainability, and ensures that bike travelers have positive interactions when visiting businesses.

- **Transportation Agency Representatives:** Because cyclists are legal road users and many bike tourism initiatives send visitors to ride on public roadways, it's important to include representatives from state, county, and municipal transportation agencies. Not only can they keep other bike tourism supporters updated about current and upcoming transportation projects, they can help to institutionalize access for cyclists in whichever agency they represent.
- **Supportive Non-Cyclists:** No matter what other role they represent within the community, it's important to have support and buy-in from community members who do not ride a bike themselves but who can see the potential benefit to the community as a whole. Cycling can often be unnecessarily political, and implementing projects like road widening or promoting increased visitation by people on bikes can be a lightning rod issue for small communities. This is why it's important to have community members who can stand up at city council meetings or in conversation with their neighbors and say that they will not personally benefit from a bike lane because they don't ride a bike, but they support the project because they believe it to be an overall improvement to the community.

The Great Shasta Rail Trail is a good example of successfully bringing together a diverse coalition of stakeholders. The trail utilizes a right-of-way that connects two communities at a distance of nearly 80 miles, as well as a variety of public and private lands. In 2009, a core team formed to rail-bank the corridor and start the process of bringing everyone to the table: land management agencies, trail user groups, and key community interests. As is common in large recreation projects, not everyone was on the same page about the trail and its future. One key disagreement was the name, and which of the two towns could claim the first position (Burney to McCloud or McCloud to Burney?). The suggestion was raised to think beyond a hyper-local scope and name the trail after the region, hence "Great Shasta Rail Trail," and that rallied members of both communities behind the project. From the original six member Core Team to the 35 plus members on the Planning Team, guiding the development of the trail involved regular meetings and open discussions about the direction of the trail and the work that needed to be done. These meetings can be credited with moving the trail from mere concept to 37 rideable miles in 6 short years.²³

Think Regionally

It's important to remember that visitors don't care about the invisible lines between jurisdictions. Cyclists don't stop their ride at a county line, and neither should a bike tourism effort. Working across jurisdictional boundaries can complicate efforts, but it's crucial. If a cyclist crosses from a bike-friendly community into a not-bike-friendly community and has a negative experience in the not-bike-friendly community, the bike-friendly community will be tarnished by association.

At a minimum, any community that's engaging in bike tourism should develop a good working relationship with their neighboring communities. Even if neighboring communities never partner on any bike tourism-related projects, a standing good relationship means that the doors are open if issues arise. For example, if a cyclist strays from a route in a neighboring community and angers a property owner, that property owner has a channel to voice their concern, and the community that published the route can address the issue by changing the route or fixing any ambiguity.

Ridgeland, Mississippi is a community located along the Natchez Trace on the edge of the Jackson metro area. Ridgeland also plays host to the Natchez Trace Century Ride, which attracts 700 riders for the weekend. When the event first started, then-Mayor McGee made the rounds to the neighboring communities to explain that cyclists would be passing through on that date, that they were important to Ridgeland, and to please ensure the riders are safe and have an enjoyable visit. Meanwhile, in John Day, Oregon, the lead proponent for the Old West Scenic Bikeway drove the length of the 173-mile route to talk to as many community members and business owners as he could. He explained the bike route and the economic potential for their county, and he asked them to please pass cyclists safely and be kind. By reaching across jurisdictional boundaries like this, both leaders were thinking about the full experience of visiting cyclists and doing all they could to provide a positive experience to both visitors and residents.

Working on a regional basis (or larger) instead of a hyper-local basis also enables a community to tie their smaller projects or routes into a larger ecosystem, thus getting a larger return on their investment. Projects like the Oregon Scenic Bikeways and the U.S. Bicycle Route System exist to uplift local routes and highlight smaller communities. In the Great Allegheny Passage Trail Town Guide, communities along the trail are advised: "If you want those overnight trips, you need to make this a region-wide effort. 1 location isn't enough to plan a multi-day trip for. Create a network of places to stop along the trail. Connect with other towns, and possibly other trails, too."²⁴

Outreach to Hotels & Businesses

In many ways, cyclists are like any other visitor. However, cyclists have a few specific needs that should be considered in order to ensure their positive experience, and those needs should be communicated to and developed with local business owners, especially owners and managers of lodging properties.

Probably the single-most important need of bike travelers is safe bike parking. If a bike traveler is unable to leave their bike in a way that they feel confident it won't be stolen, they won't bother to stop at a business

or community. Safe bike parking includes sturdy parking racks in a business district as well as a no-questions-asked ability to bring bikes into a hotel room. Other creative ways to help bike travelers keep their bikes safe include: offering loaner locks to bike travelers while eating at a restaurant or visiting a business, or designating a guarded and limited-access room as an acceptable indoor parking location.

In 2012, as part of their statewide bike tourism initiative, Travel Oregon convened a group of stakeholders to develop the first-in-the-nation traveler-focused bike-friendly business program. Since then, their program has been replicated across the country. It's a simple program that asks businesses to participate in a short self-directed education module that helps them understand what it means to be bike-friendly as well as how to implement bike-friendly amenities and procedures. Businesses are listed as "bike-friendly" on the Travel Oregon website and allowed to purchase a sign that demonstrates their bike-friendliness and the amenities they have to offer bike travelers.²⁵

An important component of any business outreach is ensuring that the information trickles down to the front-line staff. The owner of a lodging property may need to be the person to engage first, who would then agree to being recognized as bike-friendly, but the staff working the reception desk are the ones that will actually interact with any bike travelers. For this reason, it's important that front-line staff understand what it means to be bike-friendly and what the business offers that may be unique to cyclists.

Simplify Regulations for events, bike camping, etc

In some cases, well-meaning communities have established regulations that impede their ability to reach their bike tourism goals. These can include zoning regulations that make it illegal for traveling cyclists to camp in a town park, or permitting regulations that make it too costly or complicated to host an event. For communities that want to entice events or self-support bike travelers, it would be worth the time and energy to review any regulations that could be barriers to achieving the identified goals, and then working through the appropriate processes to change those regulations.



Tell the World

BICYCLE TOURISM SUCCESS STRATEGY 03

Unlike the famous movie quote, travelers won't show up simply because the trail or bike camp has been built. Marketing is key to travelers knowing that a community/region exists in the first place, and to beating out other potential destinations when a traveler makes their decision about where to visit.

The success of bike tourism in Lodi, California, can be credited to a strong partnership between the advocates at Bike Lodi and the tourism professionals at Visit Lodi. Bike Lodi did the work to source and map great rides around the city and region, including places to stop along the way, and Visit Lodi published the information into a brochure to give to interested potential visitors. Says Kathryn Siddle of Bike Lodi, about Visit Lodi: "They take these brochures to travel shows; and every travel show they go to, they come back and say it was their number one giveaway."

Brand it First

One of the most common missteps in bike tourism is focusing exclusively on the infrastructure and only considering the marketing at the very end. Often this is a result of a bike tourism working group consisting

primarily of engineers, land managers, and agency staff - and overlooking anyone with marketing, branding, graphics, or design experience. The intent is almost never malicious; rather, it's a misunderstanding of the fundamental importance of marketing to the overall success of a project.

Bike tourism marketing should never be an accidental afterthought. It should be an integral part of the process of developing the bike tourism offerings from the very beginning. Focusing on the branding and marketing from the beginning provides two major benefits for a destination:

1. It ensures that the bike tourism working group is developing the infrastructure to best align with future potential visitors;
2. It ensures that the marketing that's produced when the product is ready is fully in-line with the scope of the product and the host community/region.

In short, by considering the bike tourism branding/marketing from the beginning, a destination ensures that the bike tourism product and the bike tourism

marketing are intertwined and part of a connected whole - rather than two siloed components. For the Great Shasta Rail Trail, taking the time to brand the project with a new name and a beautifully-designed logo helped to bring all the stakeholders together in support of the big vision.

Additionally, by considering the marketing at the beginning, a community/region has an opportunity to develop partnerships early that will result in successful marketing efforts down the line. One of the best ways to ensure that media and tourism agency staff will pick up the phone when a destination reaches out later is to bring them into the project early. What are the details that will help them sell the story to a publication later or place an ad in the right market?

One of the most cost-effective and locally-authentic ways to integrate the bike tourism branding/marketing into the development of the bike tourism product, is for a community/region to enlist a resident who's enthusiastic about the project and has the necessary background and skills. Whether this person is able to volunteer their time or provide their services at a discounted rate, bringing in someone who's local to the project will ensure that any money spent on marketing continues to support the community.

Tell Your Story

Every community has a unique story and it's important to weave that story into and through any marketing efforts. Remember that bike travelers aren't looking for a place that's similar to home; they want to see new trails, new roads, new vistas. How is this community different from other communities? How is this region unique from other parts of the US? What's distinct about the landscape, the history, the culture? What's distinct about the riding opportunities? This is an opportunity for a community or a region to take pride in who they are and provide visitors a chance to see why it's so great to live and play in their corner of the world.

It's also important to recognize that this can often be a challenge, especially in rural settings. Long-time residents can get stuck in thinking that, because they've

seen and done it all, there's nothing worth sharing with an out-of-town visitor. Residents of small and rural communities can get stuck in thinking that all bike travelers will be from big urban places who will inherently not appreciate the smallness of their area. There's no magic in pushing through these perceptions; it takes time and effort to identify what's unique about an area and to frame that uniqueness in ways that will appeal to visitors, but it's worth it in the long run.

Set Realistic Expectations

Disappointment stems from unmet expectations, so it's important to set expectations appropriately. Often, a destination gets itself into trouble by not representing itself accurately, thinking they have to "sell" themselves as something more than they are in order to attract visitors; but then they get visitors who expect what they saw in the ads instead of visitors who appreciate what's actually available on the ground.

It's also important to recognize that not every destination can (or should) be "epic." Not every visitor is looking to shred the hardest downhill trail or set a record for summiting huge mountain passes. A community can be successful as a bike tourism destination without having those epic experiences, because most visitors are looking for enjoyable rides that are appropriate for their level of fitness.

At the same time, sometimes destinations get caught in the mindset that only the epic routes are worthy of marketing, so they under-represent their routes. They wish their in-town trail was longer, so they downplay it as only for kids. Or they see it as their backyard loop and not something a visitor would care about. Again, it's important to remember that visitors are different from one another and have different ideas about what makes a good ride. And just because someone crushed the hardest ride of their life one day, doesn't mean they won't choose a short flat easy ride the next day.

Offer a variety of routes and riding experiences that showcase the community/region and represent those correctly to potential visitors. If a route is flat, own it, and market it to people who want to avoid hills.

Editorialize the Experience

One of the best ways to help a potential visitor to “see” themselves visiting a particular destination is to editorialize that experience. Instead of simply posting the turn-by-turn information about a ride, take the time to write about the experience. What can someone see from a look-out point? What does it sound like in the forest? What road-side stops shouldn't be missed? If a route is really long, consider how someone might break it up into smaller chunks - either by day-riding sections or by turning it into a multi-day trip.

Following the designation of U.S. Bicycle Routes 70 and 79 across Utah, Visit Utah hired a freelance journalist to ride sections of the two routes with his family and create content about the experience. The result was an article and a video that are still showcased on the Visit Utah website. Both pieces of content show the experience of riding portions of the routes through the eyes of the journalist and his family, providing an opportunity to see the landscape and hear/read about the standout aspects of the ride. From the article: “We spent a while poking around the old stone kilns in the dry juniper-covered hills before getting on our bikes. Looking down from the pass, with Milford a green dot in the middle of the valley, and Minersville nestled into the next range beyond, we could see how our ride fit neatly into the traverse of one basin and range unit of this vast landscape.”²⁶

Tap Into Existing Mechanisms

Tourism agencies, visitor bureaus, and chambers of commerce all exist for a reason: to tell people what they can find and experience in a certain place. Not only are they always looking for new and noteworthy experiences to share to keep their marketing fresh and interesting, they have a mechanism already in place to trumpet out those new and noteworthy experiences. Similarly, focused media outlets are always on the hunt for content they can share that's

relevant to their audience. By tapping into these existing mechanisms, a destination can be more efficient with their marketing funds and reach new people with less effort.

While Visit California doesn't currently focus much of its marketing content on bike tourism, tourism agencies local to the Valley to the Sierras region do highlight cycling opportunities.

Beyond the obvious outlets of tourism agencies and relevant media, another way a destination can be efficient with its marketing funds is by reaching out to information “super-spreaders.” All niches have at least one hub that seems to attract all the latest happenings; and from that hub, information is circulated to individuals as well as other platforms for sharing information. By finding those hubs and sharing information with them, destinations can reach a large number of potential visitors for less effort, and oftentimes the cost is negligible.

Put Everything Online

When it comes to capturing visitors, an online presence isn't just a good idea, it's a necessity. Increasingly, if it doesn't exist online, it doesn't exist. Everyone is busy and very few people are willing to call a business to inquire about reservations, hours, directions, parking, the menu, etc. This can be a hard truth to accept, especially for rural destinations, and especially for people who remember when it was commonplace to pick up the phone and call for information. However, these days, if a neighboring business or community makes it easier to find information or take a certain action online, they will win out. Below are a few things to consider:

- Does your business or your community have a visitor-facing website? Not a facebook page or a yelp listing, but a free-standing website that is designed to show potential visitors that you do, indeed, exist. Increasingly, having one's own “real estate” on the web is a top way to build trust with potential customers.
- How easy is it to find your website when searching the internet? How easy is it to navigate your website to find certain key information?

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- Does your website have the following information listed in an easy-to-find location:
 - Hours
 - Address, Directions, Parking, Maps
 - Your current menu (if a restaurant) and whether you do take-out
 - Ways you're bike-friendly
 - Can a visitor make a lodging reservation or place a food order online? This is quickly becoming a deal-breaker for a lot of travelers.
 - Can a visitor find and download potential routes to ride in advance of their arrival? This not only helps visitors plan ahead, it helps them to see themselves in that destination long before they book their trip.

CycleCalCoast is an initiative to bring bike travelers to Santa Barbara and Ventura counties. Not only have they convened a strong stakeholder group and developed a bike friendly business program, they have a robust web presence that helps potential visitors plan their trip to the region. By partnering with Ride with GPS, a private Portland, Oregon-based software company, CycleCalCoast built interactive maps on their website that show a variety of unique routes as well as services along the way. In addition, the website helps visitors connect to the region via Amtrak, and also connect to routes beyond the region.²⁷

Include Bike Imagery Everywhere

How do you know quickly if bikes are welcome? By looking at the photos used in the marketing. If a hotel has a photo on their website of a guest rolling their bike into their room, or if a magazine ad for a destination shows people on bikes, it's a visual cue that the hotel or destination expects people with bikes. Thus, for anyone wanting to show that they're bike-friendly or have amenities for bike travelers, the simplest action is to include photos of people with or on bikes.

Not every photo needs to show people in the act of cycling, in fact it's equally as important to show people engaged in other activities with a bike somewhere in the scene. This could be people eating on a restaurant patio with their bikes parked in the background or their helmets on the table. These photos are a cue to bike travelers that they're not just welcome to ride the roads around town, but that they're also welcome to ride their bikes to a restaurant to eat lunch afterward.

A quick note about still photos versus video: Increasingly, people everywhere are being accustomed to watching videos online, and internet speeds are increasing to accommodate this behavior. At the same time, videos can showcase the experience of riding a particular route in a unique, immediate way. However, still photos still offer a destination the best return on investment for marketing, simply because photos can be used consistently over a longer period of time and in a variety of contexts, including being easy to provide to journalists or travel writers. Thus, while video can help a destination stand out, photos are more cost-effective for destinations that need to prioritize how to spend their marketing budgets.

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Impediments to Bicycle Tourism in the Five-County Region

Surveys Identify Obstacles to
Increasing Bicycle Tourism, and
Suggestions for Overcoming Them

June 2021

Introduction

The main impediment to bicycle tourism is obvious: there aren't enough safe places to ride. However, we wanted to know more. We conducted two surveys asking respondents about bicycle tourism in this area. The first survey interviewed 35 community leaders — business owners, elected officials, and economic development officers — to assess their opinion of the potential for bicycle tourism and get their thoughts about what it might take to increase bicycle tourism. The list survey respondents is included at the end of this report. The second survey received 453 responses — 94 people recruited through outreach to bicyclists and 359 identified from a panel recruited from respondents who had nothing to do with bicycling or this project. Those panel respondents provide very valuable insight into the attitudes of “everyday” people about our project's goals. The full results, without respondents' identifying information, is available online at bikevalleytosierra.com/publicsurveyresults.

Below are the main takeaways from both surveys.

1. The main impediment to more bicycling is unsafe streets and roads. This unsurprising sentiment was expressed by all sectors of respondents. Suggestions for improvements emphasized fully separated trails and the removal of rumble strips.
2. Business owners and economic development leaders are very aware of the potential for bicycle tourism. They have seen reports of other regions' successes in attracting business through bicycling and think that our region can similarly benefit.
3. Too many motorists do not respect the safety requirements of bicyclists. One in ten motorists say that it's “not OK” to ever be delayed by a bicyclist on the road in front of them. Conversely, 90% of drivers tolerate short delays of 30 seconds to a couple minutes; still, 10% of intolerant drivers are a significant impediment to comfortable and safe bicycling on narrow country roads where short delays may be common.

Overcoming Impediments to Bicycle Tourism

4. Warning and regulatory signs to educate motorists about safe sharing of the road *not approved by Caltrans* were the most popular among motorists and bicyclists.
5. Lengths of 10-30 miles are the “sweet spot” for do-it-yourself recreational bike rides by tourists.
6. This region was not considered a popular place for bike trips compared to other destinations in California. This was true even of Lodi wine-tasting region which does attract bicycle-riding tourists.
7. Most importantly, this grant was effective in achieving its goals. We asked respondents if they supported investments to improve bicycling generically, and then again after we described our proposals. Support increased dramatically, demonstrating that respondents supported our proposals to invest in bicycle tourism.

Each of these messages tell us valuable information about the impediments to bicycling in the region, and informed our recommendations for improvements that support the goals of the project.

Unsafe streets and roads are the biggest impediment

Only one of 35 community leaders surveyed said the roads were “very safe” and only 21% said they were “safe enough.” Most (56%) said that roads were “not safe enough.” Of the respondents to the larger survey, 64% said that “safer roads” were an extremely important “amenity” to attract more bicyclists. The next ranking amenity was “clean bathrooms” with 44% claiming it as extremely important.

When asked about what improvements would be effective, two suggestions tied as the highest ranking improvements. “More off-road trails along canals, aqueducts, and rivers” and “smooth pavement to create loops on quiet back roads” each received a “very important” or “important” ranking by 77% of the respondents. Our recommendations for improvements reflect this preference, as indicated in the Prioritized Recommendations for Bicycling Tourism Routes.

Business Owners Support More Bicycle Tourism

All but three of the 35 community leaders surveyed supported “spending transportation funding to improve safety for people on bikes, for example, by widening shoulders, or building separate paths?” Respondents listed a large number of attractions to be proud of. Some pointed out the importance of linking to the Amtrak and Ace stations in Lodi, Stockton, and Modesto.

One respondent wrote, “I lived in Europe for 5 years and we would bike from one town to another, safely, on bike lanes often physically separated from vehicular traffic. I see the economic value in attracting cycling enthusiasts to the area.”

There were many comments indicating support for measures to promote bicycle tourism.

“Bicycle Tourism would bring dollars to the local economy. Improving local roads would create more incentive for bicycle activity in the area!”

“Making this area more bicycle friendly would be a boon to local businesses, hotels, restaurants, stores would all benefit from the cycling tourism dollars.”

“Areas need to invest in bicycle tourism now more than ever. It is easy for people to maintain physical distancing while cycling. They will still rent overnight lodging and support local businesses. It is a win, win.”

“Community Center for the Blind and Visually Impaired is grateful to the cycling community for supporting Pedaling Paths to Independence for 12 consecutive years. The ride has become the agency's most successful fund raising event.”

Too many motorists do not understand the safety requirements of bicyclists

Respondents to the large survey can be segmented according to their main travel mode. More than half (N=292) responded that their main travel model was “drive alone.” We asked these motorists “how long is it OK to be stuck behind a bicyclist on the road?” Patience on the part of motorists is important to the success of promotion of bicycle tourism because many of the routes to be developed are on

country roads with no bike lanes. Motorists have to wait until there's a safe opportunity to pass, which usually occurs quickly once a bicyclist realizes there's a motorist behind them.

Most motorists (90%) said that it was OK to wait at least 30 seconds, and 70% said it's OK to wait even a minute or longer. However, fully 10% of motorists said that it's not OK to have to wait at all. This impatience explains why some motorists pass bicyclists quickly and at a dangerously close distance. Being hit from behind is not the most common cause of collisions but it is the most common cause of *fatal* collisions, and it is definitely a deterrent to more bicycling.

The prevention of unsafe passing is the reason that bicycle safety education experts teach bicyclists to "control the lane" until it's safe to pass, when the bicyclist pulls over to the right edge to permit that passing. Motorists, however, interpret this behavior as illegal and rude.

Here are some sample comments from our survey. "Some have attitudes like they own the road." "They tend to act like they are in a vehicle as well and take up a lot of the road." "They sometimes get on the vehicle lane." "Bicyclists occupy the whole car lane."

It's essential to teach motorists about a bicyclist's legal right to the roadway, the requirement to wait behind a bicyclist until it's safe to pass, and to give three feet of clearance when passing if possible, and to slow down and pass carefully when it's not possible. Relying on the driver's manuals and DMV process is time-consuming and mostly ineffective, considering that these messages are already included in the driver's manual.

Signage on the roadway at the very location where this message is important is the best way to "educate" the motorists. See the section on signage recommendations for specific information.

Officially approved signs are insufficient to educate motorists and bicyclists about safe sharing of the road.

We asked survey respondents about their opinions of four signs. The responses are in the chart below.

The most popular sign in our survey is the “BIKES ALLOWED USE OF FULL LANE” regulatory sign that reminds road users of CVC section 21202 that allows bicyclists to ride in the middle of the lane unless it’s wide enough to share. On a scale of 1 to 5, it scored 3.9 but with significant variation depending on the respondent’s main mode of transportation. People who bike as their main mode of transportation gave it a 4.4 score; those who drive as a main mode of transportation gave it a 3.9 score. This sign is approved by the California Traffic Control Devices Committee as an official sign and is used throughout California by local agencies, but by policy is not approved for use on Caltrans highways.

The second most popular sign we asked about is a nonstandard warning sign that says, simply, “CAUTION DO NOT PASS BIKES UNTIL SAFE.” As a warning sign, it is common to permit nonstandard language to alert motorists of unusual hazards. Nevertheless, nonstandard language must be approved by the CTCDC to ensure the language’s clarity and that it addresses a legitimate safety need. Our recommendations in the section on improved signage reflect the need for signs to educate motorists about sharing the road.

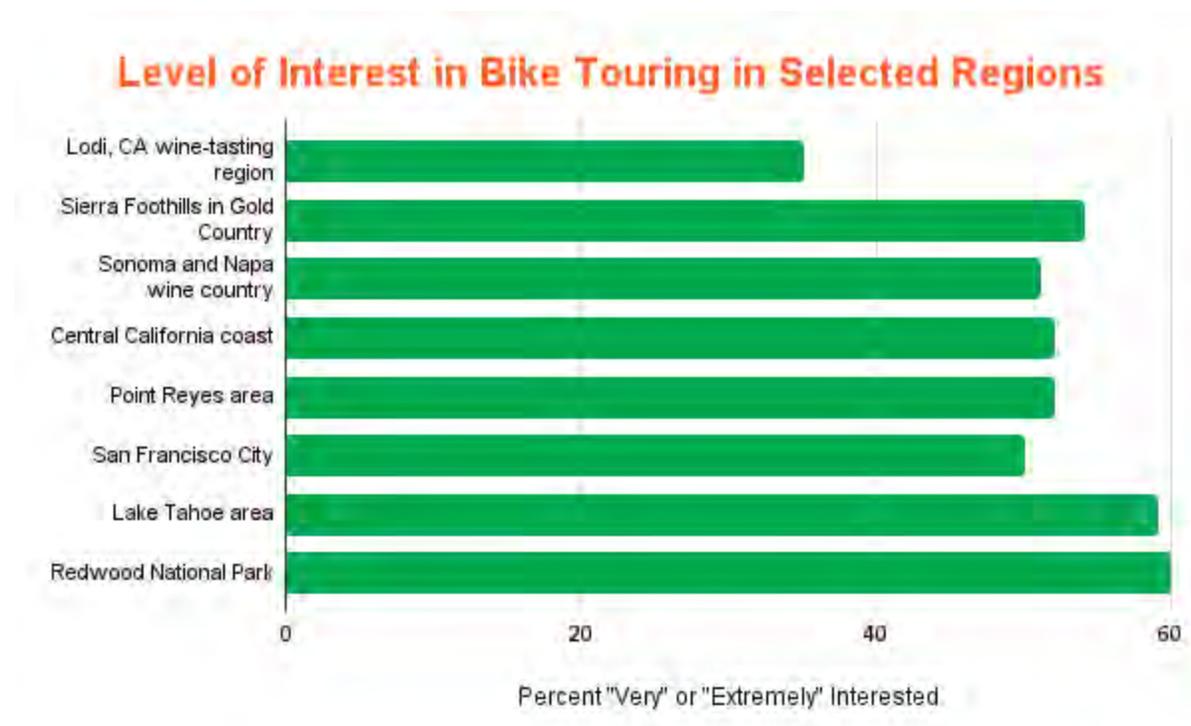
Another sign we tested in our survey is not recommended because it was not popular. The sign said “BIKES PULL OVER AFTER ONE MINUTE.” Where it’s unsafe to pass a bicyclist for long stretches of roadway, it’s reasonable to expect a bicyclist to pull over to let traffic pass even when not required by law. Being able to rely on a bicyclist pulling over in such circumstances might encourage a motorist to show more patience waiting behind a bicyclist. We considered recommending this sign to encourage that behavior but it proved unpopular among bicyclists and motorists, scoring an unfavorable 2.7 among bicyclist and a barely favorable 3.4 among motorists.

Ten to thirty miles is the sweet spot

We asked respondents about their preferred length for a recreational bike ride. Rides of 10-30 miles are the “sweet spot” for do-it-yourself recreational bike rides by tourists. A majority (53%) preferred rides of 10-30 miles. At a little over 20 miles, the EBMUD Aqueduct bike path from Stockton to the Camanche Reservoir hits that sweet spot perfectly. Other improvements also link road segments to make for perfect 10-30 mile-long rides.

This region is not considered a bike-friendly destination

When asked about even regions that are popular places to travel for bike-related vacations, we found three tiers of interest. Lake Tahoe and Redwood National Park were the most popular. Lodi, CA, was the least popular. In the middle were the other attractions, including the Sierra Foothills which scored the third highest rank among the seven regions.



These scores are somewhat surprising. The Lodi region scored the lowest, even though it is actually the most advanced area in the region in terms of attracting bike tourists. The Sierra Foothills, on the other hand, have done relatively little to attract tourists and earn its relatively high rank. These scores indicate that marketing and reputation matter a great deal to the potential of a region to attract bicycle tourists. Lodi would benefit from more marketing and, if the Foothills can improve biking, it could be an *extremely* popular destination.

Our investment proposals will gain support

The survey asked respondents about their opinion of efforts to improve bicycling in order to attract tourists. Asked generically, the support for such investments was about 70.9%. Once they were told about our specific proposals for improvements, support jumped to 81.4%

Overcoming Impediments to Bicycle Tourism

More and more families are riding bikes these days, especially on vacation. Vacation spots where bicycling is fun and safe are getting more popular. Bicycle tourism is expected to create thousands of jobs in the next year in California. But our area will miss out on all those benefits and opportunities because there are so few safe places to ride. That's why we're planning a few strategic, affordable improvements to bicycling in our region: new trails alongside rivers and aqueducts, smooth pavement on quiet country roads, bike lanes in the towns, and other support services and safety measures. We hope it will work to attract thousands of people to come to our region and enjoy our hospitality, and generate jobs and income to support our local economy. Considering this strategy, do you support measures to attract more people to come to our region to ride bikes?

70.9% responded with "extremely favorable" or "very favorable"

I'd like to describe for you what's happening in the Sierra Foothills right now. There are cute Gold Rush era small towns, with cafés, saloons, restaurants and art galleries and museums. Top notch services of all kinds, and nice bed and breakfast hotels or AirBNBs. You can stay in town or in a more country or rural environment, and ride your bike for miles and miles on quiet country roads. The roads are beautiful, there's smooth pavement, great views, some challenging hills but easier roads for families. There aren't bike lanes or shoulders; instead, there's just very little traffic. The area is emerging as a great location for a bicycling vacation and it is very easy to access from the San Francisco Bay Area, San Jose, Sacramento and other areas. Based on this description. What is your interest level in coming to the Sierra foothills for a bicycling trip?

81.4% responded with "extremely favorable" or "very favorable"

Conclusion

The most significant impediment to more bicycle tourism in the region is a shortage of safe places to ride. The proposals in this Report are meant to address that most significant impediment, including recommendations that improve behavior as well as infrastructure.

Community Leader Survey Respondents

Becky DeForest, Director, Alpine County Chamber of Commerce
Michael Bayer, Ride Director, Alta Alpina Cycling Club
Aaron Johnson, Marketing & Events Manager, Bear Valley Adventure Company
Kathryn Siddle, CHAIR, Bike Lodi
Jack Garamendi, Supervisor, Calaveras County Board of Supervisors
Morgan Gace, CEO, Calaveras County Chamber of Commerce
Kathy Gallino, Director, Calaveras County Economic & Community Development
Martin Huberty, Executive Director, Calaveras Visitors Bureau
Megan Distaso, Employee, City of Modesto
Brian Greene, Library Director, Columbia College
Joni Bauer, Employee, Community Center for the Blind and Visually Impaired
Kim MacFarlane, Director of Public Works, County of Tuolumne
Dave Ruby, Employee (Engineer), County of Tuolumne Public Works
Bob Mack, Partner, Cycle California! Magazine and BEProOnline.com
Lynn Dickerson , CEO, Gallo center for the Arts
John Gerling, Owner, Gerling Consulting, Inc.
Adrian Crane, Owner, Gold Rush Adventure Racing
Don Stump, Owner, Jo Ma's Premier Ice Cream
Michael Moradian, Board Member, La Loma Neighborhood Association
Darin Jesberg, Chairperson, Modesto Outdoor Recreation Alliance
Carl Baker, Board Member, Motherlode Bicycle Coalition
Eric Olson, Owner, Mountain Pedaler bicycle shop
Michelle Plotnik, President, Murphys Business Association
Gavin Bruce, Employee- Program Manager, Opportunity Stanislaus
Ashley Goldlist, Assistant Regional Planner, San Joaquin Council of Governments
Brent Carkeet, Owner, Sonora Cyclery LLC
Mike Arnerich, President, Stanislaus County Bicycle Club
Mim, President, Stanislaus County Bicycle Club
Dave Hellyer, director, Stockton Bike Club
Tanya Johnson, Owner, TLJ Designs
Cole Przybyla, Director, Tuolumne County Business and Innovation
Todd Aaronson, CEO, Visit Modesto/Modesto Convention & Visitors Bureau
Courtney Phelps, Employee - Events Administrative Coordinator, Visit Stockton
Lisa Mayo, President & CEO, Visit Tuolumne County

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CalBike Survey on Bicycle Tourism Recommendations

June 2021

Selected Results

Background And Objectives

Method

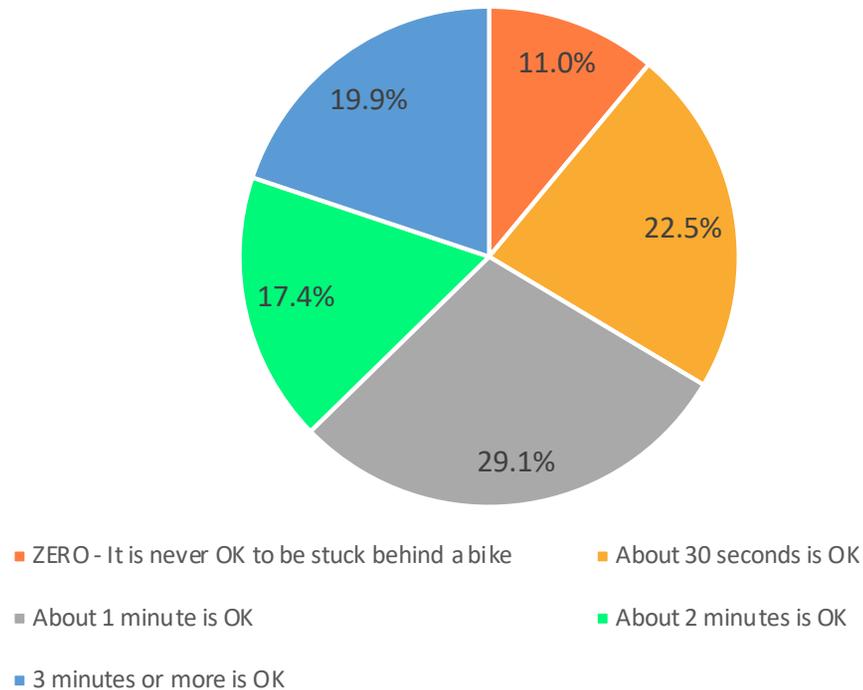
- Online survey conducted via Qualtrics
 - Avg length 8 minutes
- Field Dates: June 18-27, 2021
- Sample Size of **N=453**
 - N=360 from Qualtrics Consumer Panel
 - N=93 from CalBike deployment via email / social media
 - N=304 bicyclists (defined as riding at least a few times per month)
 - N=292 drivers (defined as primary mode of transportation is “drive alone.”)
- Respondents restricted to five-county region and adjacent counties
 - Alameda, **Alpine**, Amador, **Calaveras**, Contra Costa, El Dorado, Fresno, Marin, Mariposa, Merced, Napa, Placer, Sacramento, San Francisco, **San Joaquin**, San Mateo, Santa Clara, Solano, **Stanislaus**, **Tuolumne**

About two-thirds of drivers think it is fine to be stuck behind a bike for 1 minute plus

- Only 11% feel that it is never OK to be stuck behind a bike

Objective 1 – Impediments to Cycling in the Region

Length of Time OK to be Stuck Behind a Bike



*Q26B - When driving your car, think about being stuck behind a bicyclist or group of bikes. You want to safely pass, but it is difficult due to the road width. How long is it "OK" to be stuck behind the bike(s)?

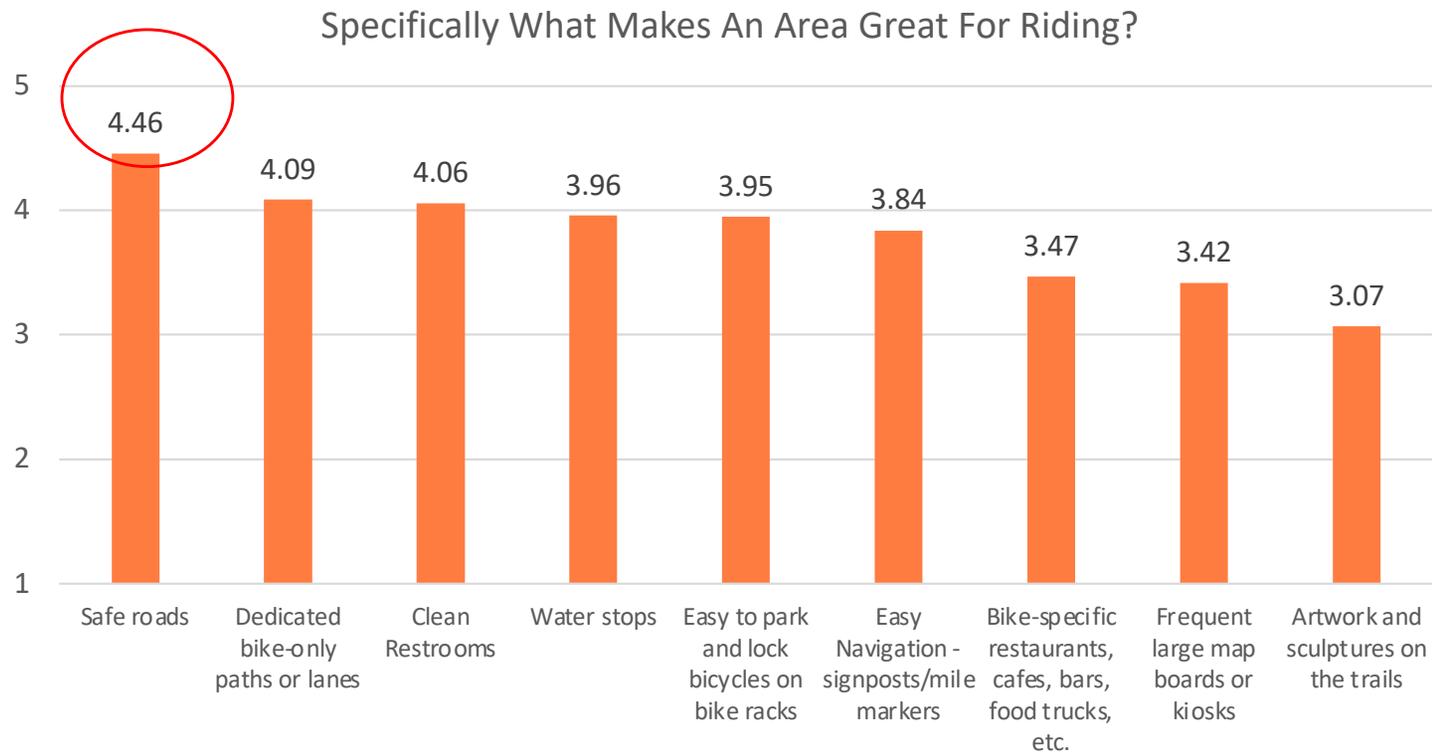
** Base Size is N=453 (Total sample)

Safe Roads, Dedicated Bike Paths and Clean Restrooms are the top items to focus on to create a great biking region

- Water stops, bike parking/locks, and signposts/mile markers also help

Objective 2 – Characteristics for a Great Bicycling Region

51.3% of Bikers feel it is extremely/very important to ride on vacation for sightseeing or recreation



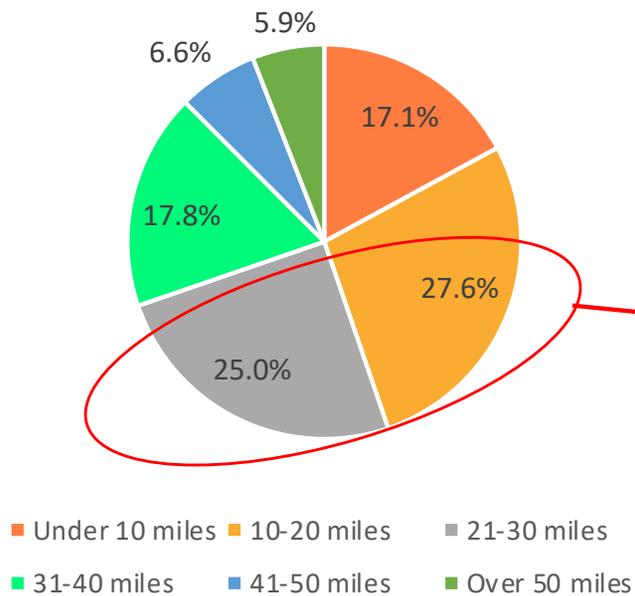
* Q21 - For this next question, let's think about some things that make an area great for bike riding and bicycle tourism. Imagine you are planning a bicycle-based trip. How important are each of the following? (5-point scale)

** Base Size is N=304 (Bicyclists)

10-30 miles on pavement is the sweet spot for do-it yourself recreational rides

Objective 2 – Characteristics for a Great Bicycling Region

Preferred Length for a Bike Ride



70% of Bikers prefer pavement for a long ride as opposed to gravel/dirt

52.6% of Bikers feel that 10-30 miles is an optimal length for a recreational ride

*Q23 - What is the optimal length for a "do-it yourself" recreational bicycle ride?

** Q24 - What type of surface to you prefer for a long bicycle ride?

*** Base Size is N=304 (Bicyclists)

Redwoods and Lake Tahoe are the top bicycling destinations in California

- Sierra Foothills/Gold Country showed a decent level of appeal

Objective 3 – Appeal for Different Bicycling Destinations in CA

<u>Location</u>	<u>MEAN</u>	<u>Top-2 Box</u>
Redwood National Park	3.7	60.2%
Lake Tahoe area	3.7	58.9%
The Sierra Foothills in Gold Country	3.5	53.7%
The Central California coast / Santa Barbara	3.5	52.3%
Point Reyes area	3.5	52.0%
Sonoma and Napa wine country	3.5	51.0%
San Francisco City	3.3	47.0%
Lodi, CA wine-tasting region	3.3	44.7%

* What is your interest level in visiting the following regions for a bicycling-oriented vacation/trip? (5-pt – Extremely Interested to Not Interested At All)

** Base Size is N=304 (Bicyclists)

After respondents viewed the Sierra Foothills specific concept, interest in the area for a biking trip jumped significantly

Objective 4 – Appeal for New Messaging

Pre-Concept

**50.3% Top-2
Box**

3.48 Mean

I'd like to describe for you what's happening in the **Sierra Foothills** right now. There are cute Gold Rush era small towns, with cafés, saloons, restaurants and art galleries and museums. Top notch services of all kinds, and nice bed and breakfast hotels or AirBNBs.

You can stay in town or in a more country or rural environment, and ride your bike for miles and miles on quiet country roads. The roads are beautiful, there's smooth pavement, great views, some challenging hills but easier roads for families. There aren't bike lanes or shoulders; instead, there's just very little traffic.

The area is emerging as a great location for a bicycling vacation and it is very easy to access from the San Francisco Bay Area, San Jose, Sacramento and other areas.

Based on this description. What is your **interest level** in coming to the Sierra foothills for a bicycling trip?

Post-Concept

**63.0% Top-2
Box**

3.85 Mean

* What is your interest level in visiting the following regions for a bicycling-oriented vacation/trip? (5-pt – Extremely Interested to Not Interested At All)

** Base Size is N=192 (Bicyclists living in adjacent counties)

A lot of riders have reservations about trying the sierra foothills / gold country area for a bicycle destination

Objective 3-4 – Appeal for Different Bicycling Destinations in CA

Comments about riding specifically in the Sierra Foothills / Gold Country

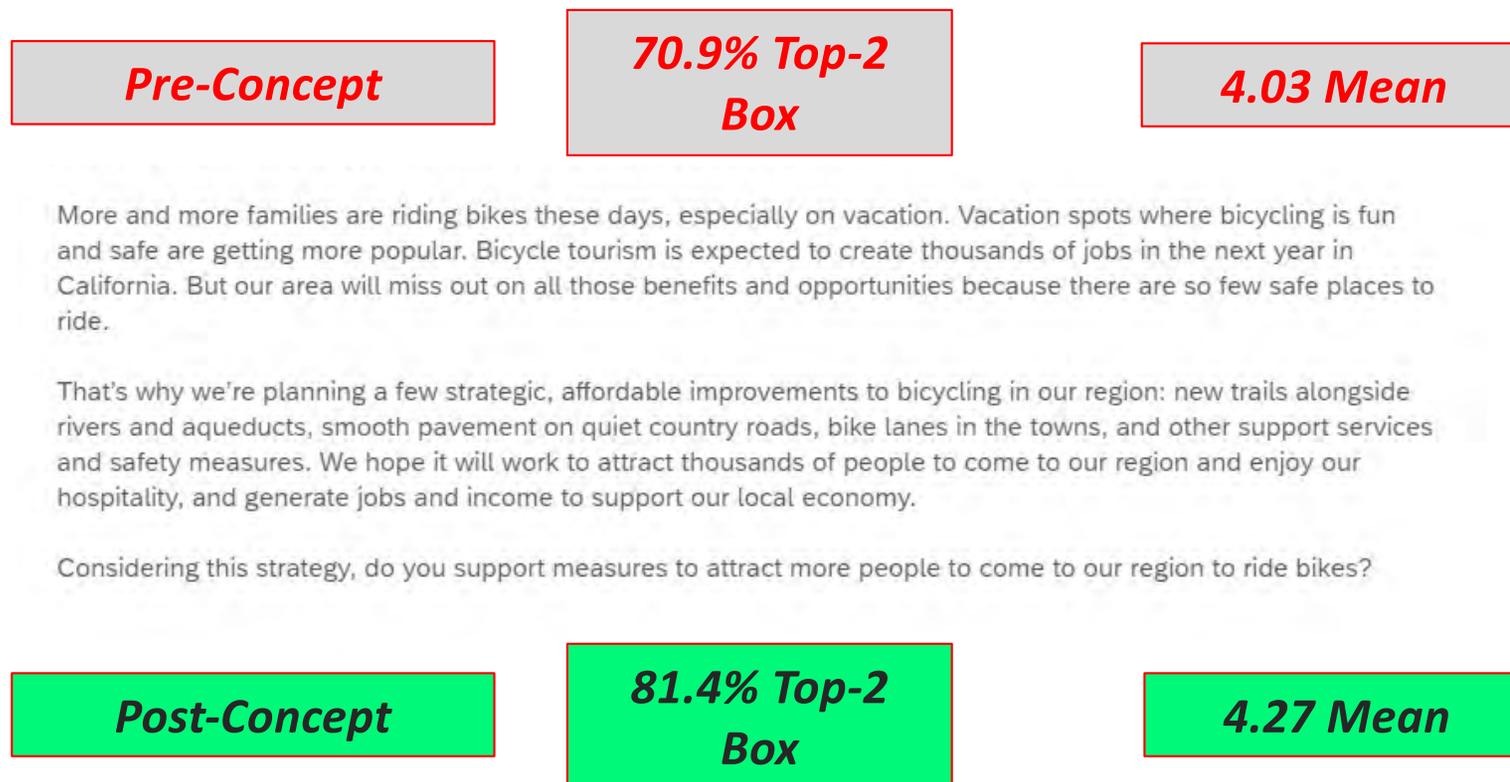
- Too hot, especially in summer
- Very flat and boring
- Not friendly to bikes
- Foothills preferred over valleys
- Some nice scenery in foothills
- Not a biking destination
- Roads not good for bikes

* Q19B - Think specifically about the area around Stockton and Modesto, and in the Sierra foothills east of there. What do you think about this area for a vacation where you can easily ride bicycles for recreation and sightseeing. (Open-end response)

Target county consumers are largely in favor of programs to help bicycle tourism

- After concept viewing, there is an increase in favorability

Objective 5 – pre-post concept acceptance of bicyclists after learning about economic benefits to the region



* Q12- We are planning to implement programs to improve bicycling in the area. The goal is to attract more bicyclists to our region. How do you feel about these state and local programs? (1-5 Favorability scale)

**Q16 – see concept - 1-5 Favorability scale

*** Base Size is N=178 (Target Counties)

“May Use Full Lane” is the most appealing out of the 4 tested signs

Objective 6 – Appeal for Road Signs

	Mean – Total Sample	Top-Box – Total Sample	Mean – Bikers Only	Top-Box Bikers Only
	3.9	47.9%	4.1	54.3%
	3.8	41.9%	4.0	46.7%
	3.9	44.4%	4.0	46.4%
	3.3	32.2%	3.2	29.9%

* Q14 - Below are some signs that you may see in your area regarding sharing the road with bikes. Our goal is to encourage drivers to share the road with bikes. Using the 5-star scale, please indicate your level of appeal for each sign.

** Base Size is N=304 for Bicyclists and N=453 for total sample





Bicycling Tourism Routes & Projects

PRIORITIZED RECOMMENDATIONS

Overview of Proposed Projects

This section of the Interregional Bicycle Tourism report identifies projects to encourage, facilitate, and support the increase of bicycle tourism activities within each County. The proposed projects offer a broad cross section of opportunities to encourage bicycling for residents and visitors alike, ranging from new multi-mile trails linking recreational destinations, to easily installed supportive amenities like bicycle racks, repairs stations, and wayfinding signage

The proposed projects assume the implementation of other existing bicycle and active transportation plans and corridor studies, and is meant to augment and support these local efforts, not supersede them. Indeed, the implementation of new comfortable, low-stress bicycle routes is important to the success of all of these efforts. Projects have been identified based on a variety of factors, including existing plans and proposed projects, creating links to recreational destinations, connecting tourism destinations and communities, and/or supporting a specific tourism bicycle component, such as events or family-friendly

visitors. Stakeholder and public feedback were vital to the identification of needs and opportunities in each of the showcase area communities.

Some of these projects are visionary, complex, and will require a long-term, sustained, and collaborative commitment to implement. Others are near-term, easy to facilitate, and could even be undertaken by interested community groups or nonprofits. The mix of project types is not comprehensive of every opportunity that may exist to improve bicycle tourism. As we hope the communities of the Valley and Sierra region will continue to experience an increase in bicycling from both residents and visitors, new needs and opportunities will likely arise.

The following section of this report is divided by County, with a set of projects identified for each region. This includes the signature project(s) for each County, with a project description, implementation considerations, illustrative cross-section, and cost-estimates. While the project types vary, it is hoped that the projects proposed in one community may inspire additional ideas and improvements in another.



SAN JOAQUIN COUNTY

SIGNATURE PROJECT

EBMUD Pipeline Trail

OTHER PROJECTS

- A** Peltier Road Add Class II or Class III facilities from Davis Road to Bender Road.
- B** Peltier Road / Mokelumne River Bridge Improvement
- C** Turner Road Gap Closure Add Class II bike lanes from Lower Sacramento Road to Mills Avenue.
- D** Lodi Greenline Trail Add Class I multi-use path from Woodbridge to Downtown Lodi
- E** Hutchins Street Bicycle Boulevard
- F** Wayfinding Program (not shown on map)



EBMUD PIPELINE TRAIL



SAN JOAQUIN
COUNTY

PROJECT SUMMARY

This proposed Class I trail through a rural and agricultural section of San Joaquin County using the easement of the East Bay Municipal Utility District (EBMUD) pipeline. It would begin near Davis Elementary School in the unincorporated community of Morada and pass through agricultural and pastoral landscapes, before crossing into Calaveras County and ending at Lake Camanche. At the western end, the trail could ultimately tie into the existing and proposed Class I paths along the same easement corridor within the City of Stockton, for nearly 30 miles of non-motorized travel opportunities. At the eastern end, the trail will connect users with the wide variety of recreational amenities available at Lake Camanche, including camping, fishing, hiking, and boating. The trail will also intersect with the Mokelumne Coast to Crest Trail, a non-motorized & multi-use trail that roughly follows the Mokelumne River from the headwaters at the Sierra Crest down to the river's mouth near Martinez on the Carquinez Strait.

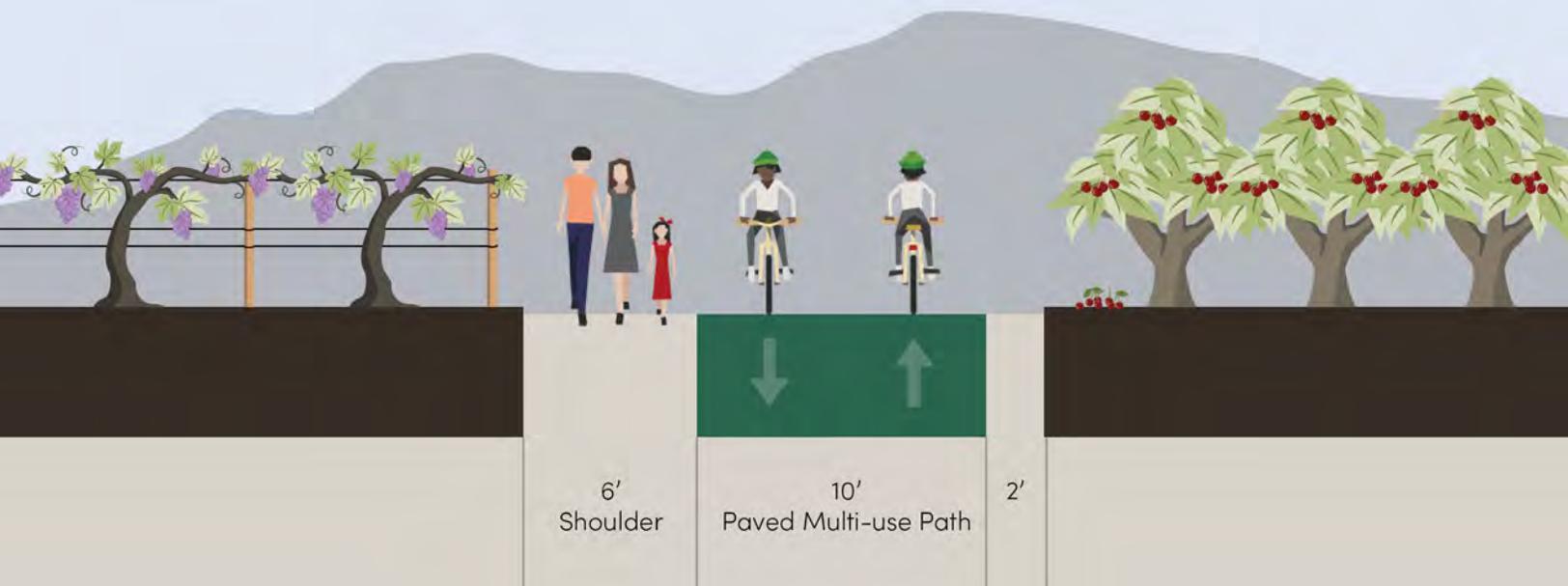
COST INFORMATION

\$16,809,000
CONSTRUCTION COSTS

\$19,901,000
CONTINGENCY
AND OTHER NON-
CONSTRUCTION COSTS

\$36,710,000
TOTAL

SAMPLE PROJECT CROSS-SECTION





SAN JOAQUIN COUNTY

Of the five counties within the Valley to Sierra study area, San Joaquin County, and specifically the greater Lodi area, has the most developed level of bicycle tourism. Thanks in large parts to the efforts of Bike Lodi and Visit Lodi, visitors to the region can use maps and brochures to find routes that link to wineries; use bicycle racks at lodging, shopping, and dining destinations; and make quick repairs at newly installed fix-it station at Lodi Lake. Events also play a key role in the cycling tourism economy, with local cycling clubs and non-profit groups organizing a variety of road rides throughout the county.

Many of the currently publicized bicycling routes use shared roadway spaces and require users to have a higher degree of cycling skill and comfort with sharing the roadway with vehicles. The recently completed Bicycle Master Plan for unincorporated San Joaquin County addresses the need for wider shoulders and improved facilities on these roads. As such, the recommendations here are intended to build upon that plan and identify pinch points or opportunities for enhanced connections. The most significant of these is a proposed Class I trail along the East Bay Municipal Utility District (EBMUD)



pipeline easement that would extend diagonally through a rural and agricultural section of San Joaquin County to Lake Camanche.

The proposed trail would begin near Davis Elementary School in the unincorporated community of Morada and pass through agricultural and pastoral landscapes, before crossing into Calaveras County and ending at Lake Camanche. At the western end, the trail could ultimately tie into the existing and proposed Class I paths along the same easement corridor within the City of Stockton, for nearly 30 miles of non-motorized travel opportunities.

At the eastern end, the trail will connect users with the wide variety of recreational amenities available at Lake Camanche, including camping, fishing, hiking, and boating. The trail will also intersect with the Mokelumne Coast to Crest Trail, a non-motorized & multi-use trail that roughly follows the Mokelumne River from the headwaters at the Sierra Crest down to the river's mouth near Martinez on the Carquinez Strait. The trail is divided into five segments spread over six counties, with roughly 50% of the trail currently completed.

Preliminary conversations with EBMUD indicate their general support for projects that allow their property to be used for the public good. This trail would be in keeping with similar efforts



on EBMUD property to allow recreational access to hikers and bicyclists. A public agency or group of agencies will need to step forward to serve as project sponsor and take on the overall responsibility of maintaining the trail in the long term. Any proposed project would need to maintain access for EBMUD to perform pipeline maintenance as well as allow farmers to access adjacent parcels, but this is merely an implementation consideration and not anticipated to limit the trail from moving forward.

A 10-foot paved multi-use path is the recommended facility for the majority of the corridor, with shoulders to accommodate those who prefer to walk or ride on softer surfaces. Following the intersection with Camanche Parkway South on the eastern end of the alignment, the trail can revert to a dirt surface and use the existing segment of the Mokelumne Coast to Crest Trail, be constructed as a paved sidepath, or follow the roadway around to the South Shore entrance.

Additional projects that can be implemented to support the goal of promoting bike tourism in San Joaquin County include:

A. Peltier Road Add shoulders or widen and stripe for Class II bicycle lanes from Davis Road to Bender Road. Adjust speed limits to slow high-speed vehicles traveling on Peltier Road. Improving this short stretch of roadway will facilitate access to numerous wineries on either side of the Mokelumne River.

B. Peltier Road / Mokelumne River Bridge Improvement
The Mokelumne River bridge on Peltier Road is one of the few only opportunities to cross the river north of Woodbridge and represents a pinch point for bicyclists in its current condition. As bridge upgrades are made, the travel way should be widened to accommodate bicyclists, providing a safer crossing and greater access to destinations on both sides of the Mokelumne.

C. Turner Road Gap Closure
Install Class II bicycle lanes on Turner Rd to close the bike lane gap from Lower Sacramento Road to Mills Avenue. This will provide a continuous facility from the Wine and Visitor Center to Lodi Lake, and ultimately to Downtown Lodi via other proposed improvements.

D. Lodi Greenline Trail

Construct a Class I multi-use path along the existing railroad right of way from Woodbridge to Downtown Lodi, along with related crossing enhancements. This project is currently under review as part of a separate feasibility study.

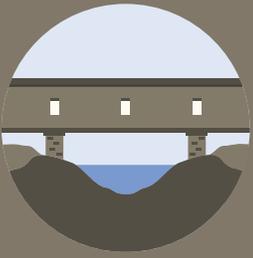
E. Hutchins Street Bicycle

Boulevard Install striping, signage, and traffic calming measures to create a Class III Bicycle Boulevard on Hutchins Street. This project will close the gap between an existing bike lane at Lodi Avenue and Hutchins Street and an existing Class III facility on Holly Drive, as well as the proposed Lodi Greenline. This will increase north-south access in the City of Lodi and provide access to the entertainment and community offerings at Hutchins Street Square.

F. Bike Network Wayfinding

Program A comprehensive wayfinding program currently exists to direct people traveling in cars to wineries. A similar effort for bicyclists should be undertaken along the proposed EBMUD Trail as well as throughout the greater Lodi and Woodbridge areas that includes distances to destinations, identifies recommended routes, and facilitates easier decision points at intersections.





STANISLAUS COUNTY

SIGNATURE PROJECT

Stanislaus River Trail

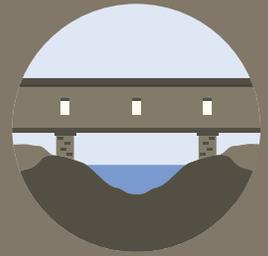
OTHER PROJECTS

- A** 26 Mile Road Widen and add shoulders for bicycle use from SR-120 to Eastman Road.
- B** SR-120 Add shoulders and lower speeds from 26 Mile Road to the Stanislaus River Bridge.
- C** Intersection of SR-108 and Willms Road Add advanced warning lights and signs for bike crossing.
- D** Bicycling Amenities at Recreational Areas (not shown on map)
- E** Sierra Railroad Trail Add Class I trail in Oakdale from Woods Park to Stearns Road.



Signature Project

STANISLAUS RIVER TRAIL



STANISLAUS COUNTY

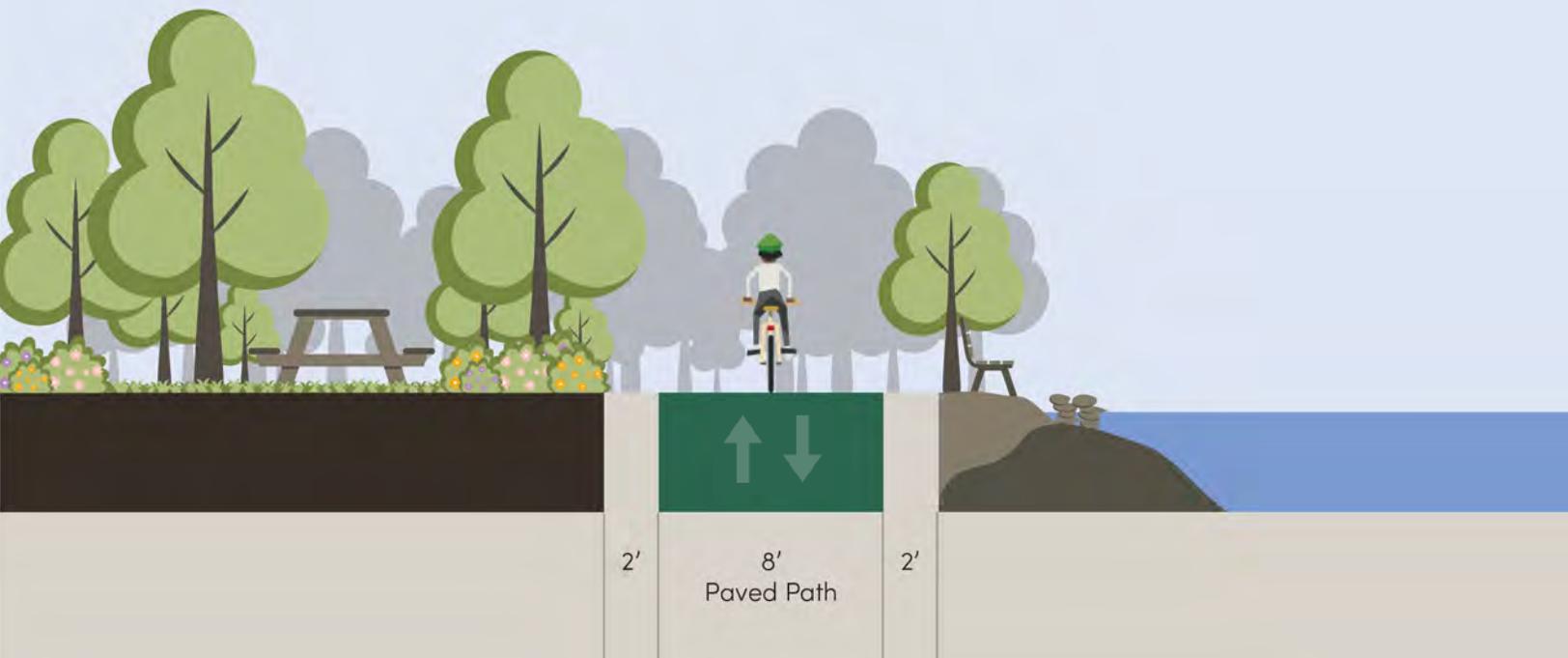
PROJECT SUMMARY

This proposed Class I trail would follow the Stanislaus River, stretching 12 miles from the Valley View Park & Trail in Oakdale to Sonora Road in Knights Ferry. This scenic route would follow the curves of the river, and connect the myriad of recreational attractions already available along the Stanislaus River. This additional investment in low-stress bicycling infrastructure could create an opportunity for the Oakdale and Knights Ferry area to be a top destination for active tourism. Supportive amenities could also be installed along the trail, including wayfinding and interpretive signage, repair stations at recreation areas, and bicycle racks. These amenities should also be established at either end of the trail, with consideration for more secure or long-term bicycle parking, such as lockers, at places like Knights Ferry, for bicyclists who may wish to explore the area further on the pedestrian-only trails.

COST INFORMATION

\$5,445,000
CONSTRUCTION COSTS
\$5,706,000
CONTINGENCY AND OTHER NON-CONSTRUCTION COSTS
\$11,151,000
TOTAL

SAMPLE PROJECT CROSS-SECTION





STANISLAUS COUNTY

Stanislaus County is home to a number of avid cyclists, many of whom can be spotted any day of the week riding on quiet rural roads, along canal trails, or frequenting one of the local bicycle shops. With a myriad number of recreational attractions available along the Stanislaus River, additional investment in low-stress bicycling infrastructure could create an opportunity for the Oakdale and Knights Ferry area to be a top destination for active tourism.

The priority project for this area is the development of a Class I trail along the Stanislaus River. For this effort, the trail is envisioned as following the curves of the river and connecting multiple existing recreation areas, ultimately stretching twelve miles from the Valley View Park & Trail in Oakdale to Sonora Road in Knights Ferry. This project was identified in the Stanislaus Council of Governments Non-Motorized Transportation Plan (2021) and, at full build out, would extend an additional ten or more miles to 1st Street in Riverbank. A trail along the Stanislaus River was also identified as a community request in many City of Oakdale planning efforts, and in the Oakdale Accessibility Master Plan (2017).

Rodden Road and Orange Blossom Road are parallel facilities that are frequently cited as popular cycling routes for local riders, along with loops made around Woodward Reservoir. Both roadways offer smooth pavement and scenic riding, and the addition of Share the Road signs courtesy of a partnership between the Stanislaus Bicycle Club and Stanislaus County help the roads to feel more welcoming to cyclists. However, without significant modifications to the roadways, neither offers a low-stress facility that would accommodate families or more novice cyclists. The establishment of the river trail would open the corridor up to a broader array of people on bikes.

An 8-foot paved path with 2-foot shoulders is the recommended facility for most of the corridor. An additional 6' unpaved pedestrian trail could also be developed for hiking or off-road bicycling. Further study of the corridor, including alignment, right-of-way, and sensitivity to the concerns or interests of adjacent property owners, will need to be undertaken to advance this project. Accommodation of equestrians may also be of interest, given Oakdale's proclaimed title of "Cowboy Capital of the World".



Supportive amenities should also be installed at along the trail, including wayfinding and interpretive signage, repair stations at recreation areas, and bicycle racks. These amenities should also be established at either end of the trail, with consideration for more secure or long-term bicycle parking, such as lockers, at places like Knights Ferry, for bicyclists who may wish to explore the area further on the pedestrian-only trails.

Many other bicycle and pedestrian improvements within the City of Oakdale were identified in the Oakdale Accessibility Master Plan (2017). The implementation of these projects, such as additional low-stress bike facilities around schools, improved crossings on F Street, and traffic calming along SR-120 and SR-108, will support the success of the trail in attracting locals and visitors alike.

Additional projects that can be implemented to support the goal of promoting bike tourism in Stanislaus County include:

A. 26 Mile Road Widen and add 8-foot shoulders on both sides of 26 Mile Road from SR-120 to Eastman Road. While a popular route for local groups, the existing roadway is narrow and shared with high-speed traffic. Adding shoulders to this section of roadway will improve access to recreational cyclists and increase connectivity to Woodward Reservoir at both the main entrance and the North Lot area.

B. State Route 120 The stretch of SR-120 from the Stanislaus River Bridge to 26 Mile Road provides access to destinations such as the Oakdale Cheese shop and connection to Woodward Reservoir. The existing shoulder varies in width, and high traffic speeds along the 1 mile stretch of roadway make it challenging to navigate for bicyclists. The roadway should be improved to accommodate a continuous 8-foot shoulder. Lowered vehicle speeds would also be beneficial to increase user comfort, as this is a gateway for people entering and exiting Oakdale and marks the start of residential and commercial “main street” land uses.

C. Intersection of SR-108 and Willms Road Willms Road is a popular route for recreational riders and offers a smooth roadway and little to no vehicle traffic. The crossing towards Knights Ferry at SR-108 is challenging and experiences high vehicle speeds. Advanced warning lights and signs on SR-108 in both directions ahead of the intersection with Willms Road should be installed to warn drivers of potential cyclists crossing the roadway. Warning lights should be activated by push buttons or other detection technology. If this route increases in popularity, a more significant treatment may be required.

D. Bicycling Amenities at Recreational Areas Install bicycle racks, repair stations, and wayfinding signs, maps, or kiosks at existing recreational areas along the Stanislaus River. Potential locations include:

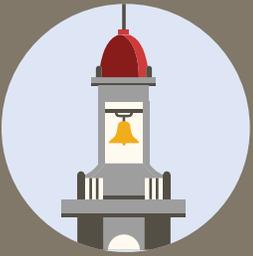
- Kerr Park
- Valley Oak Recreation Area
- Orange Blossom Recreation Area
- Horseshoe Road Recreation Area
- Knights Ferry Recreation Area

Given the popularity of bicycling along roads adjacent to these recreation areas, this is a low cost and low effort way to make the corridor more bike friendly to existing users. These improvements would also greatly benefit users of the proposed River Trail, which would more likely serve families or those interested in riding short segments of the trail.

The Knights Ferry Recreation Area is particularly well suited for additional bicycling amenities. The area is popular destination as well as a jumping off point for other outdoor recreation, such as hiking and river rafting. Existing parking lots could be promoted as “Park and Bike” locations to increase the attractiveness of using Knights Ferry as a starting point for trips down the proposed River Trail or to popular nearby cycling routes on Sonora Road and Willms Road.



E. Sierra Railroad Trail The Sierra Railroad maintains a rail easement between Oakdale and the City of Sonora in Tuolumne County. A section of this railroad has been identified as a priority tourism project elsewhere within this report, and could ultimately extend the full length of the corridor into Tuolumne County. While this is likely a very long-term effort, an initial project could be to create a Class I multi-use trail within Oakdale from Woods Park and the Cowboy Museum to Stearns Road. This would also serve Sierra View Elementary School and Oakdale Junior High School.



TUOLUMNE COUNTY

SIGNATURE PROJECT

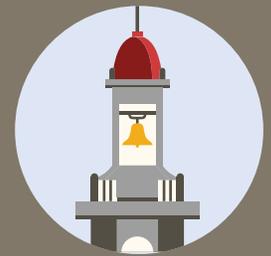
Sierra Railroad Trail

OTHER PROJECTS

- A** Shaws Flat Road/Springfield Road Designate as bike route.
- B** Union Hill Road Install wayfinding.
- C** Yankee Hill/Sawmill Flat Roads Designate as bike routes and install wayfinding.
- D** Parrotts Ferry Road Provide shoulders for bicycle use or separated bike facilities.
- E** Bicycle amenities in downtown Jamestown, Sonora, and Columbia (not shown on map)



SIERRA RAILROAD TRAIL



TUOLUMNE COUNTY

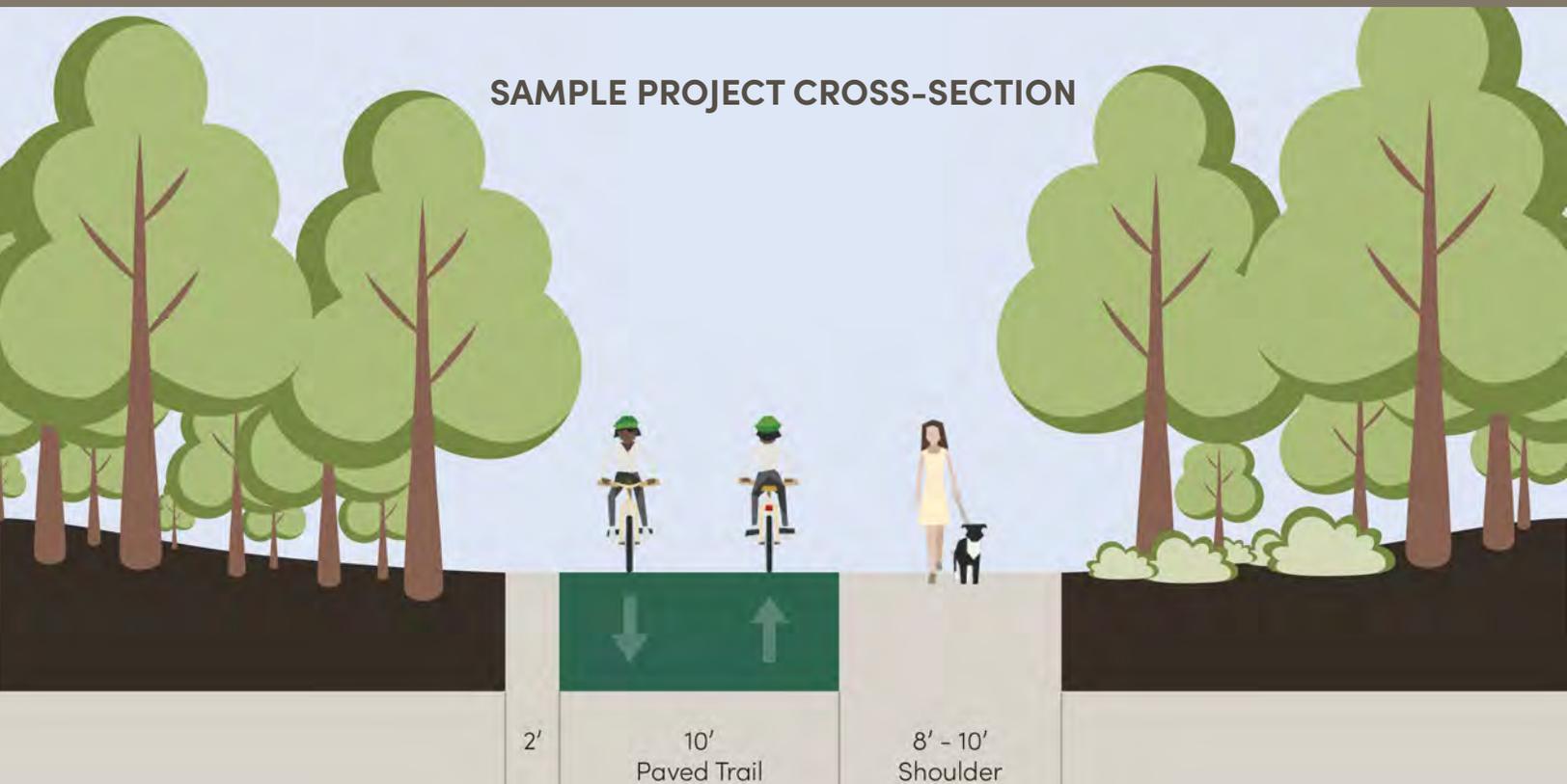
PROJECT SUMMARY

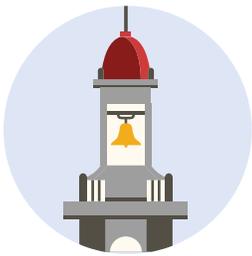
The creation of a Class I multi-use trail along the Sierra Railroad right-of-way between Jamestown and Sonora will provide a low-stress alternative to SR-49 and SR-108 that would be suitable for residents and visitors alike. The trail is proposed to start at the Railtown 1897 State Historic Park in Jamestown. The park offers ample parking for those who wish to park and bike, and is already an existing tourism destination. It is also near the shops and restaurants on Main Street, as well as Jamestown Elementary School. From Jamestown, the rail corridor curves behind residential neighborhoods and wooded areas, crossing SR-108 before intersecting with Symons Lane and Washington Street in downtown Sonora. The trail would connect to improvements along S Washington Street that were proposed in the County's 2020 Active Transportation Plan. Traveling farther north gives access to the shops, restaurants, and services in downtown Sonora. Washington Street would also connects users to the proposed multi-use path along Stockton Street to the Motherlode Fairgrounds, the proposed Woods Creek trail, and existing popular biking and walking trails at Dragoon Gulch.

COST INFORMATION

\$3,176,000
CONSTRUCTION COSTS
\$3,761,000
CONTINGENCY AND OTHER NON-CONSTRUCTION COSTS
\$6,937,000
TOTAL

SAMPLE PROJECT CROSS-SECTION





TUOLUMNE COUNTY

Tuolumne County offers a stunning variety of gold rush era towns, with the trio of Jamestown, Sonora, and Columbia the focus for this project. While gaining in reputation as a mountain biking destination, and serving as a gateway to nearby Yosemite National Park, the close proximity of each town to each other makes it easy to visit multiple destinations in one day, or base camp out of one community for a multi-day visit.

The signature project recommended for this area is a trail along the Sierra Railroad right of way connecting Jamestown to Sonora. While the rail corridor stretches from Oakdale in Stanislaus County to the community of Standard, the section between Jamestown and Sonora should be prioritized as a first segment due to the connectivity to destinations it provides.

The creation of a Class I multi-use trail will provide a low-stress alternative to SR-49 and SR-108 that would be suitable for residents and visitors alike. The trail is proposed to start at the Railtown 1897 State Historic Park in Jamestown. The park offers ample parking for those who wish to park and bike, and is already an existing tourism destination. It is also near the shops and restaurants on Main Street, as well as Jamestown Elementary School. The rail-trail could tie into improvements on 5th Avenue that are part of an upcoming Safe Routes to School project.

From Jamestown, the rail corridor curves behind residential neighborhoods and wooded areas, crossing SR-108 before intersecting with Symons Lane and Washington Street in downtown Sonora. The trail would connect to improvements along S Washington Street that were proposed in the 2020 Active Transportation Plan, giving access to the shops, restaurants, and services in downtown Sonora. Traveling north along S Washington Street would connect users to the proposed multi-use path along Stockton Street to the Motherlode Fairgrounds, the proposed Woods Creek trail, and existing popular biking and walking trails at Dagoon Gulch.

The Sierra Railroad corridor was the subject of previous study in a 2004 report by the Rails to Trails Conservancy. Conversations with the Sierra Railroad Company have indicated that they are interested in pursuing opportunities for additional use and recreational access along the rail line. While the Jamestown-Sonora segment has been identified as a preliminary installation, extending the trail east to Standard and west to communities outside of Jamestown would be beneficial extensions to serve residents. Ultimately, implementation of the full 49-mile corridor to Oakdale could be considered as an interregional, non-motorized travel route.



The trail is envisioned as a 10' multi-use paved trail, with 2' and 6' unpaved shoulders to accommodate all users. The addition of interpretive signs detailing the history of the railway and area, wayfinding signage to nearby trails and destinations, and strategically placed rest stops that reflect the local historical setting should also be considered.

Additional projects that can be implemented to support the goal of promoting bike tourism in Tuolumne County include:

A. Shaws Flat Road/Springfield Road Establish Shaws Flat Road and Springfield Road as a bicycle tourism route from N Washington Street in Sonora to the intersection of Parrotts Ferry Road and Airport Road near Columbia. Install signage to indicate route status and presence of bicyclists. Consider the addition of shoulders where higher volumes/travel speeds occur, and add warning signs to alert drivers to the presence of bicyclists on SR-49 at the Shaws Flat Road crossing. Near Sonora High School additional traffic calming measures may be considered to accommodate student travel to the school.

B. Union Hill Road Install wayfinding signage to designate Union Hill Road as part of the bicycle tourism route network. Provide guidance to the Shaws Flat route to Columbia/Sonora, and to Sawmill Flat Road towards Columbia College.

C. Yankee Hill/Sawmill Flat Roads Install wayfinding signage to designate Yankee Hill and Sawmill Flat Roads as bicycle tourism routes. Along Sawmill Flat Road, widen the roadway to install a Class II bicycle route to provide access to Columbia College (or consider alternate improvements as necessary to support the proposed trail from Sonora to Columbia along the Tuolumne Utility District easement). Linking these routes will provide better access to Columbia State Historic Park, and to the popular cycling route along Big Hill Road.



D. Parrotts Ferry Road Multiple sections of Parrotts Ferry Road are important to overall mobility within the area. A few sections are particularly important for tourism connectivity: Springfield Road to Washington Street, and Union Hill Road to Sawmill Flat Road. Strategic improvements to both sections of roadway should be considered to increase comfort for bicyclists, including improving shoulders, adding signage, reducing vehicle speeds through traffic calming where necessary, and enhancing crossings. Long term, Parrotts Ferry Road has the potential to serve as an interregional route and connector to Calaveras County, if significant improvements are made to increase comfort for bicyclists, such as providing shoulders or separated facilities. Repaving the roadway east of Columbia could also increase the possibility of its use as a bicycling event route.

E. Bicycling Amenities Add bicycle racks in downtown Jamestown, Sonora, and Columbia. Racks should be designed to reflect the character of each community (for example, a more rustic look would be appropriate within Columbia) and located within easy sight of destinations. Strategically located repair stations, such as at trail heads, should also be considered. As constrained sidewalks are common, bicycle corrals within an existing parking space could provide space for approximately ten bicycles, while not infringing upon storefronts or conflicting with pedestrians.



CALAVERAS COUNTY

SIGNATURE PROJECT

Angels Creek Trail + SR49 Improvements

OTHER PROJECTS

- A** Dogtown Road Repave for smoother bicycle ride.
- B** San Domingo Road Repave for smoother bicycle ride.
- C** Sheep Ranch Road Repave for smoother bicycle ride.
- D** 6 Mile Road Establish bicycle route from Murphys Community Park to Ironestone Vineyards
- E** Bicycle amenities at key destinations (not shown on map)



ANGELS CREEK TRAIL + SR49



CALAVERAS COUNTY

PROJECT SUMMARY

The creation of a 5.1 mile bicycle and pedestrian trail along Angels Creek from Murphys Grade Road to New Melones Reservoir would offer access to a wide variety of attractions for visitors, including wine tasting, cavern excursions, outdoor adventures, and cultural events like the world-famous Jumping Frog Jubilee, and further the area's growing reputation for bicycling events. The route would range from a paved Class I path within the City of Angels to a Class III bike route along Finnegan Lane, before shifting to a soft surface and then natural surface trail within the New Melones Recreation Area, and come with associated amenities along the way.

Supplementing this long-term effort are improvements, such as a parallel bike path, along the 2 mile stretch of SR-49 from downtown Angels Camp to Whittle Road and the Calaveras County Fairgrounds that can expand bike accessibility in the area in the interim. Whittle Road serves as the entrance point for the Glory Hole Recreation Area at New Melones, and "Frogtown," as the fairgrounds are sometimes referred to, is a popular site for events throughout the year.

COST INFORMATION

(FOR SR49 PROJECT)

\$1,749,000
CONSTRUCTION COSTS

\$2,200,000
RIGHT-OF-WAY
ACQUISITION COSTS

\$2,070,000
CONTINGENCY
AND OTHER NON-
CONSTRUCTION COSTS

\$6,019,000
TOTAL

SAMPLE PROJECT CROSS-SECTION FOR SR49





CALAVERAS COUNTY

Calaveras County offers a wide variety of attractions for visitors, including wine tasting, cavern excursions, outdoor adventures, and cultural events. The showcase area of Angel Camp and Murphys draws visitors for all of this and more (including the world-famous Jumping Frog Jubilee) and the area also has a growing reputation for bicycling events. Improving the roadways in this area with a focus on tourism will also increase non-motorized access to recreational opportunities, provide residents with greater mode choice, and potentially attract additional cycling events to the region.

A key opportunity for this area is increasing connectivity from the City of Angels to New Melones Reservoir and the Glory Hole Recreation area, a popular place for bicycling, fishing, camping, and boating. In 2012, the Angels Creek Master Plan and Trail was adopted, which outlined a 5.1 mile bicycle and pedestrian trail along Angels Creek from Murphys Grade Road to New Melones Reservoir. The plan included a proposed trail alignment, amenities, and management and implementation guidance, and ranged from a paved Class I path within the City of Angels to a Class III bike route along Finnegan Lane, before shifting to a soft surface and then natural surface trail within the New Melones Recreation Area.

Public outreach for the tourism plan indicates broad support for this trail connection. To supplement this (and recognizing that the trail is a long-term project), an additional need was identified for improvements along the 2 mile stretch of SR-49 from downtown Angels Camp to Whittle Road and the Calaveras County Fairgrounds. Whittle Road serves as the entrance point for the Glory Hole Recreation Area at New Melones, and “Frogtown,” as the fairgrounds are sometimes referred to, is a popular site for events throughout the year. In its current condition, SR-49 is a barrier to access these destinations, as the roadway is high speed, narrow, lacks shoulders, and offers no facilities for bicyclists.

Additional study is required to determine the most appropriate treatment for this segment of SR-49, with the goal of improving safety for all users. Overcoming the challenges posed by constrained right-of-way, as well as drainage and topography issues, will require a variety of treatments. Within the “Main Street” context at the Angels Camp end of the roadway, additional traffic calming elements to reduce vehicle speeds may be sufficient. However, as the roadway moves out of town and into more rural areas, or if a lower-stress facility along the roadway is not feasible, a physically separated facility for bicyclists and pedestrians may be necessary.



Additional projects that can be implemented to support the goal of promoting bike tourism in Calaveras County include:

- A. Dogtown Road** Dogtown Road is a scenic, low-traffic backroad that connects to a network of other popular backroads on the western side of Calaveras County. Currently, the road surface is rough and has numerous potholes. Repaving Dogtown Road would increase the connectivity of recreational routes, and could potentially be a cycling event route in the future. While additional segments of Dogtown Road may also be considered for re-paving, this section is recommended as a first effort to improve bicycle tourism opportunities.
- B. San Domingo Road** Similar to Dogtown Road, San Domingo Road is a lovely backroad with a low volume of vehicle traffic. Repaving San Domingo Road from Dogtown Road to Sheep Ranch Road would also provide additional connectivity between Murphys and Angels Camp, and create a quieter alternative to Murphys Grade Road and French Gulch Road for travel between the two communities.
- C. Sheep Ranch Road** This 2 mile stretch of Sheep Ranch Road connects downtown Murphys to Mercer Caverns. Repaving Sheep Ranch Road from San Domingo Road to Main Street in Murphys would complete the route created by repaving Dogtown and San Domingo Roads.
- D. 6 Mile Road** Establish a low-stress bicycle route from Murphys Community Park to Ironstone Vineyards along Algiers Street and 6 Mile Road. Just shy of 1.5 miles in length, this would be a compelling way to encourage bicycling to the popular events and concerts at Ironstone Vineyards. Due to topographical constraints a Class III bike route, along with traffic calming, is likely the most feasible treatment along Algiers Road and the first section of 6 Mile Road. From there, a Class I separated sidepath should be considered that parallels the roadway until the entrance of Ironstone Vineyards.



E. Bike Amenities Install bicycle racks, repair stations, and wayfinding signs, maps, or kiosks as appropriate in business districts or at recreational hubs within the showcase area. Potential locations include:

- Murphys Main Street
- Murphys Community Park
- Angels Camp Main Street
- Utica Park
- Ironstone Vineyards

Within downtown Murphys and Angels Camp, sidewalk space is often constrained. Creating bicycle corrals within an existing parking space could provide space for approximately ten bicycles, while not infringing upon storefronts or constraining pedestrians. Given the increasing popularity of e-bikes, establishing charging points at some of these strategic commercial and recreational areas should also be considered.



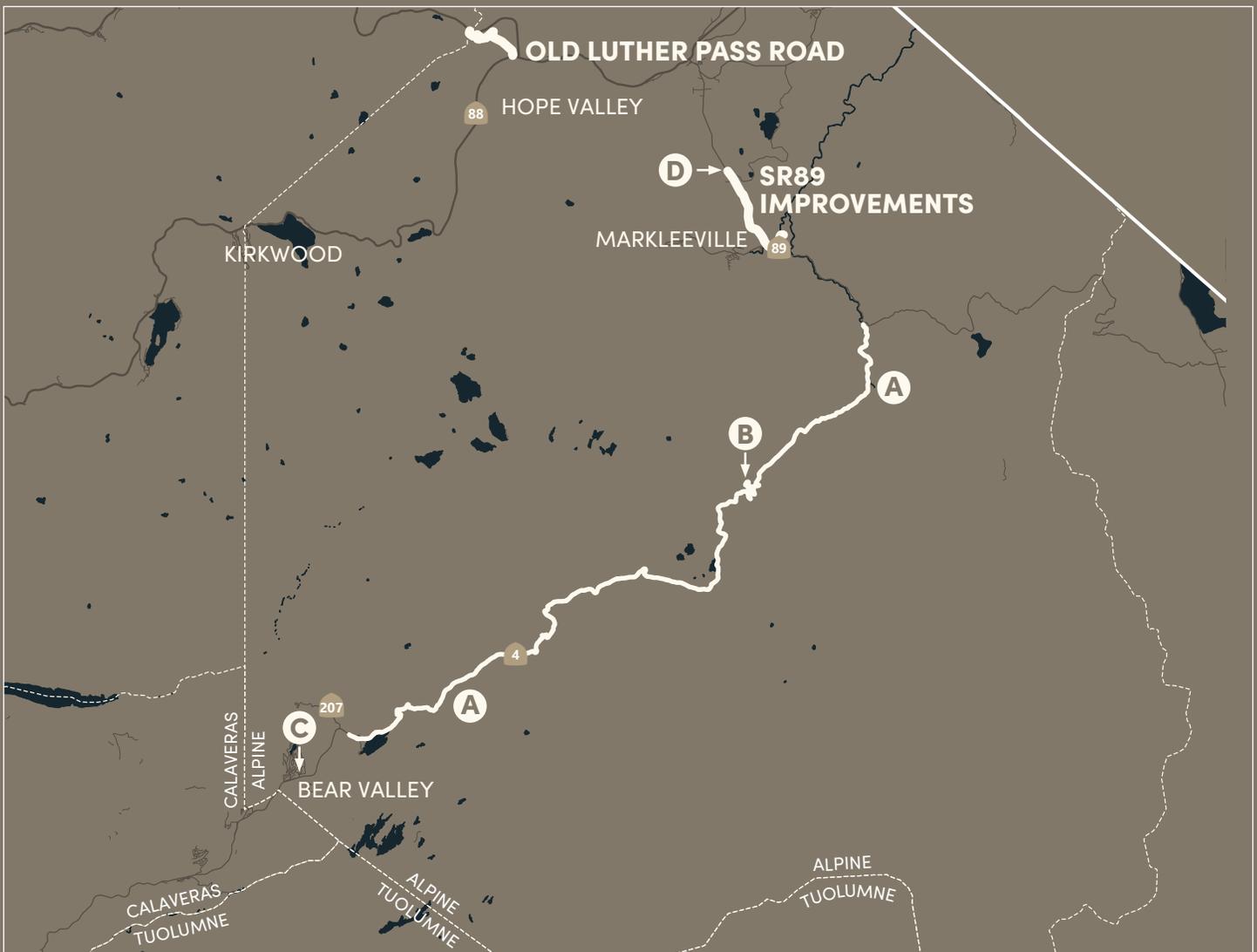
ALPINE COUNTY

SIGNATURE PROJECT

Old Luther Pass Road + SR89

OTHER PROJECTS

- A** Ebbetts Pass Access Open road to bike access during weeks after plowing.
- B** Water Station at Silver Creek Campground for passing cyclists to replenish their water supply.
- C** Bear Valley Crossing Enhancements Install flashing beacons and signage on SR-4.
- D** Turtle Rock Park Crossing Enhancements Install warning signs and provide crossing guidance.
- E** Bicycle amenities at key destinations (not shown on map)



OLD LUTHER PASS ROAD + SR89



ALPINE COUNTY

PROJECT SUMMARY

Alpine County already has a worldwide reputation among elite cyclists. The projects identified for Alpine County are centered around expanding opportunities to those visitors seeking scenery and nature with a less extreme challenge and creating additional connectivity between tourism nodes.

The section of Old Luther Pass Road from Picketts Junction to SR-89 was identified by local stakeholders as a “magic” place for an additional recreational path. The pavement of the former roadway is in poor condition, but is used by hikers and those on gravel or mountain bikes visiting the Hope Valley Wildlife Area. However, it should be repaired and repaved to also accommodate road bikes.

The 3.5-mile stretch of SR-89 from Camp Marklee Road to Turtle Rock State Park is also a key tourism opportunity. Despite being signed as a bike lane, the shoulder widths are below minimum standards in several locations along the corridor. Adding signage and increasing the shoulder widths will help facilitate bicycle travel between these popular destinations and to the shops and restaurants in Markleeville.

COST INFORMATION

(FOR BOTH PROJECTS)

\$3,069,000

CONSTRUCTION COSTS

\$3,634,000

CONTINGENCY AND OTHER NON-CONSTRUCTION COSTS

\$6,703,000

TOTAL

SAMPLE PROJECT CROSS-SECTIONS





ALPINE COUNTY

Alpine County, although the smallest county in terms of population in the study area, is home to some of the most breathtaking scenery and plays host to California's premier cycling event, the Death Ride (or more casually, Tour of the California Alps). As such, the area has a worldwide reputation among elite cyclists and sees a huge boom in visitors each year when the event takes place. With the main goal of the event being to encourage economic vitality for Alpine County, the Death Ride offers a compelling case for how economic benefit and bicycle tourism go hand in hand.

With this reputation already in place, the next horizon in bicycle tourism for Alpine County lies in expanding opportunities to those visitors seeking scenery and nature with a less extreme challenge, and creating a more consistent stream of bicycle tourism revenue. The projects identified for Alpine County are centered around creating additional connectivity between tourism nodes, and strategically creating new opportunities and reasons for bicyclists to make Alpine County a stop on their travels. This builds upon projects currently underway, such as improvements to Hot Springs Road, the access road for Grover Hot Springs State Park, and additional projects identified in the 2018 Alpine County Active Transportation Plan.

The section of Old Luther Pass Road from Picketts Junction on SR-88 to SR-89 was identified by local stakeholders as a "magic" place for an additional recreational cycle path. The pavement of the former roadway is in poor condition for road bikes but is used by hikers and those on gravel or mountain bikes visiting the Hope Valley Wildlife Area. The area is currently under the purview of the California Department of Fish and Wildlife and would require coordination with their agency for recreational improvements. The recommended treatment would be a repair and repaving of the existing roadway to create an 8' multi-use path.

In the Markleeville area, improvements are recommended to the approximately 3.5 mile stretch of SR-89 from Camp Marklee Road to Turtle Rock State Park. Despite being signed as a bike lane, the shoulder widths are below minimum standards in several locations along the corridor. Adding signage and increasing the shoulder widths along this section will help facilitate bicycle travel between these popular recreational destinations, and to the shops and restaurants in the town of Markleeville.



State-owned facilities, such as SR-88 and SR-89, play a more significant role for bicycle travel in Alpine County than many surrounding counties. These corridors are often the only ways that residents and visitors have to travel throughout the County. In their current condition this creates many challenges to bicycling within the region, as shoulders are constrained or non-existent, the topography presents challenges to widening, and bicyclists must share the road with vehicles and trucks traveling at high speed. With these challenges also exist opportunities to work with Caltrans and rethink how to balance these competing needs when making improvements in Alpine County. One example would be the creation of a trail along the Carson River through the Woodfords Canyon section of SR-89, an idea generated by the stakeholder working group. This trail concept, along with others presented below, should be considered by Caltrans for further study in close collaboration with the residents of Alpine County.

Additional projects that can be implemented to support the goal of promoting bike tourism in Alpine County include:

A. Ebbetts Pass Access SR-4 from Lake Alpine to Silver Creek is closed seasonally during winter months. As part of the Ebbetts Pass National Scenic Byway, the road offers access to pristine scenery and dramatic views of the Sierra Nevada mountain range. Unlocking access to this roadway for bicyclists when it is otherwise closed to vehicles would offer a world class bicycling opportunity. A specific two-to-three-week timeframe could be identified in partnership with Caltrans and publicized each year where the roadway is open to non-motorized travel. This would be similar but more significant in scope to the access granted to bicyclists along Tioga Pass in Yosemite National Park when the roadway has been plowed but is not yet open to vehicles. Alternately, signage could be installed at both ends to indicate when bicyclists are allowed to use the roadway (for example, when Caltrans crews are not doing roadway maintenance work).

B. Water Station at Silver Creek Campground

Currently offered as a “dry” campground, Silver Creek Campground was previously one of the few places for bicyclists to replenish water supplies while traveling over Ebbetts Pass. Locals indicate that without an additional water source, the trip across the pass is challenging to complete as it requires more water than is feasible to carry on bike. The water source should be reestablished in partnership with the Forest Service and Humboldt-Toiyabe National Forest branch.

E. Bike Amenities Install bicycle racks, repair stations, and wayfinding signs, maps, or kiosks as appropriate within the region. If feasible and appropriate for the location, e-bike charging should also be considered. Amenities should be provided at trip start/end points, as well as at businesses that wish to attract bicyclists as patrons. Potential locations include:

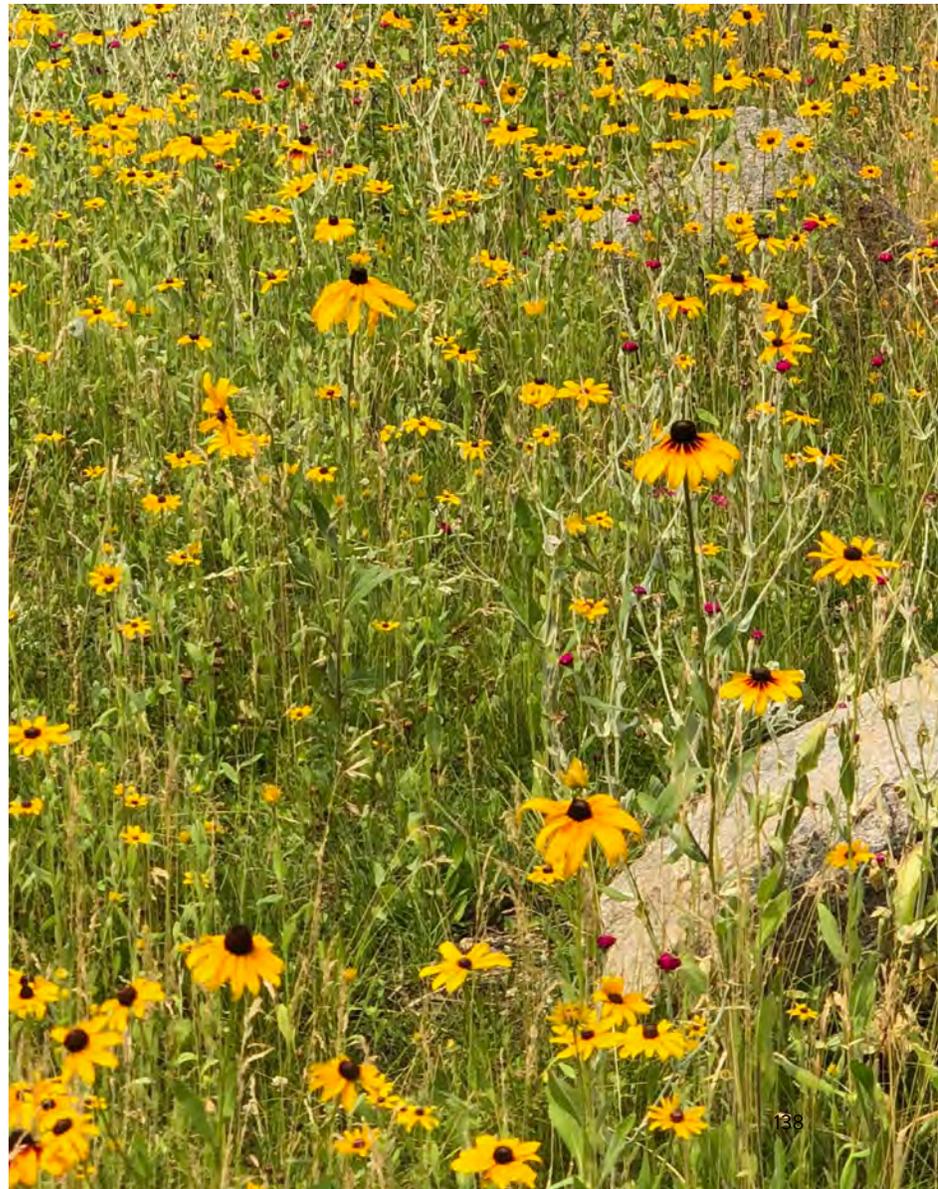
- Downtown Markleeville
- Bear Valley
- Turtle Rock Park
- Woodfords
- Hope Valley/Picketts Junction

C. Bear Valley Crossing Enhancements

Flashing beacons and trail crossing signage should be installed on SR-4 at Bear Valley Road and the Lake Alpine trail crossing junction to the east, as outlined in the 2018 Alpine County Active Transportation Plan. Wayfinding signage should also be added along the trail from Bear Valley to Lake Alpine to help visitors to these destinations. In the long term, consider improvements to the trail to accommodate additional bicycle and pedestrian travel to Lake Alpine, approximately 4 miles to the east.

D. Turtle Rock Park Crossing Enhancements

This crossing provides key connectivity for bike tourism. Driver warning signs and crossing guidance for pedestrians and bicyclists traveling between Turtle Rock Park and the Curtz Lake Trailhead should be provided.



Bicycling Tourism Routes Projects - Funding

Many of the “typical” funding sources for active transportation projects would be applicable to the projects identified in this plan. These funding sources are typically highly competitive, with needs and requests outpacing the available funds. However, with the intention of this study to promote projects that strike the balance of providing community connectivity as well as support for economic development, there may be creative opportunities for collaborative implementation, or out of the box funding ideas. A list of available state and federal funding sources can be found below, along with ideas for local and private philanthropy funding.

Federal and State Funding

See table 1 and 2 on following pages.

Local Funding

In addition to State and federal fund sources, local funding sources may also be leveraged for bicycle and pedestrian improvements. This includes transportation sales taxes, such as Measure L in Stanislaus County and Measure K in San Joaquin County, as well as local agency General Plan funds and Local Transportation Funds (LTF).

Private Funding

Advocacy organizations and charitable foundations also offer grant programs designed to support bicycle improvements. The requirements, amounts, and specifications of each program may differ.

The Trail Me About It fund in Tuolumne County is a project of TCTC and the Sonoma Area Foundation, which supports microgrants for small scale improvements such as trail planning, signage, trail maps and brochures, amenities, and access improvements. This approach represents a local best practice and could be replicated in other communities within the region, providing a locally-rooted channel for private donations.

A crowdfunding approach may be appropriate for small scale trail improvements. Corporate donations and/or private philanthropy dollars could also provide funding, with a sponsored-by or “adopt-a-project” approach providing recognition.

Increasingly, carbon offset programs are being developed for individual users and businesses to neutralize their carbon emissions. Projects funded by these programs are intended to provide reductions in greenhouse gases. Advocacy for the inclusion of bicycle projects, or development of a local or inter-regional offset fund, could be a new source of funding that would aid in meeting local greenhouse gas reduction goals.

Senate Bill 743 introduced vehicle-miles-travelled (VMT) as the new metric for measuring the transportation impacts of projects. Mitigation for projects where VMT impacts exceed locally adopted thresholds has traditionally taken place through Transportation Demand Management (TDM) strategies, which are less effective in lower density suburban or rural areas. A regional VMT impact program could pool development mitigation contributions to pay for larger or more effective VMT reduction strategies, including bicycle facilities, that are not feasible for individual projects.

Many other national philanthropy and grant sources exist, often supported through foundation dollars. These grants may fund specific elements of projects, supportive programs, or technical assistance, and many require participation by a community or non-profit partner. The below list offers a selection of the types of programs and funds that exist.

- PeopleForBikes Community Grant Program
- Rails to Trails Conservancy
- Bank of America Charitable Foundation
- Robert Wood Johnson Foundation
- Community Action for a Renewed Environment (CARE)
- American Hiking Society National Trails Fund
- Conservation Alliance Grants
- International Mountain Bicycle Association Trail Accelerator Grants
- USA Cycling Foundation Fund and Trail Tune-up Grant program

Table 1: Federal Funding Sources

Source	Origin	Funding Uses							
		CIP Development	Maintenance & Operations	Implementation	First & Last Mile	Urban Forestry	Access to Nature	Stormwater Treatment	Culture & History
Land & Water Conservation Fund	U.S. National Park Service/ California Dept. of Parks & Recreation	X					X	X	
Urban Community Forestry Program	U.S. National Park Service	X				X			
Surface Transportation Program (STP)	Federal Highway Administration (FHWA) / Caltrans	X		X	X			X	
Highway Safety Improvement Program (HSIP)	FHWA	X		X	X			X	
Transportation Alternative Program (TAP)	FHWA	X		X	X			X	
Recreational Trails Program	FHWA	X		X	X		X	X	
EPA Brownfields Clean Up and Assessments	U.S. Environmental Protection Agency	X		X	X			X	
Sustainable Communities Planning Grant and Incentive Program	U.S. Department of Housing and Urban Development (HUD)				X				
Urban Revitalization and Livable Communities Act	HUD			X	X				
Community Development Block Grants	HUD	X			X		X		X
ACHIEVE, Communities Putting Prevention to Work, Pioneering Communities	Center for Disease Control and Prevention				X		X		
Urban and Community Forest Program	Department of Agriculture, Forest Service	X		X		X	X	X	
Community Forest and Open Space Conservation	Department of Agriculture, Forest Service	X		X		X	X	X	
Choice Neighborhoods Implementation Grants	HUD, Office of Public and Indian Housing	X		X	X		X	X	
Safe Routes to School, Mini-grants	National Center for Safe Routes to School, Caltrans	X		X	X				
Metropolitan and Statewide and Nonmetropolitan Transportation Planning	Federal Transit Administration (FTA)	X		X	X			X	
Urbanized Area Formula Grants	FTA	X	X		X			X	
Bus and Bus Facilities Formula Grants	FTA	X			X				
Enhanced Mobility of Seniors and Individuals with Disabilities	FTA	X	X		X				
Formula Grants for Rural Areas	FTA	X	X		X				
TOD Planning Pilot Grants	FTA	X	X		X			X	

Table 2: State Funding Sources

Source	Origin	Funding Uses							
		CIP Development	Maintenance & Operations	Implementation	First & Last Mile	Urban Forestry	Access to Nature	Stormwater Treatment	Culture & History
Land & Water Conservation Fund (LCWF)	California Dept. of Parks & Recreation (DPR)	X			X		X	X	
Statewide Park Program Prop 84 Round 2	DPR	X		X	X				
Recreational Trails Program	DPR	X	X	X	X		X	X	
Proposition 117 - Habitat Conservation	DPR	X		X		X	X	X	
Nature Education Facilities	DPR	X	X				X		X
Watershed Program	DPR	X		X			X	X	
Stormwater Flood Management Prop. 1E	DPR	X		X	X	X	X	X	
Aquatic Center Grants	Department of Boating and Waterways	X							
Community Based Transportation Planning, Environmental Justice and Transit Planning	Caltrans	X			X			X	
Active Transportation Planning Grants (ATP)	Caltrans	X		X	X			X	
Regional Improvement Program	Caltrans	X			X			X	
Safe Routes to School Programs (SR2S)	Caltrans	X			X			X	
Traffic Safety Grants	California Office of Traffic Safety	X		X	X				
Local Partnership Program – Competitive and Formulaic	California Transportation Commission (SB 1)		X	X				X	
Coastal Conservancy Grants	California Coastal Conservancy	X			X	X	X	X	X
Non-point Source Pollution, Watershed Plans, Water Conservation (Props. 13, 40, 50, and 84)	State Water Resources Control Board	X	X			X		X	
Sustainable Communities Planning, Regional SB 375	Strategic Growth Council/ Department of Conservation	X			X	X	X	X	X
Environmental Enhancement and Mitigation (EEMP)	California Natural Resources Agency/Department of Water Resources	X	X		X		X	X	
California River Parkway and Urban Streams Restoration Grant	California Natural Resources Agency/Department of Water Resources	X	X		X		X	X	
Strategic Growth Council Urban Greening Program	California Natural Resources Agency	X		X		X	X	X	
California Cap and Trade Program	Cal EPA, Air Resources Board	X		X	X	X	X		
Urban Forestry Program (Leafing Out, Leading Edge and Green Trees Grants)	California Department of Forestry and Fire Protection (CAL FIRE)	X		X		X			



Program and Policy Recommendations

The development of safe bicycling routes for tourism and economic development depends upon certain non-infrastructural programs and practices.

- The application of rumble strips which can render a highway that is reasonably safe for bicycling utterly unusable. We make recommendations to strike the right balance between preventing run-off-the-road collisions that rumble strips prevent and preservation of a smooth and safe riding surface for bicyclists.
- Signs can be a very important part of a program to promote bicycling. We make recommendations for signage that will guide and encourage bicyclists and educate all roads users on safe sharing of the roadway.
- Promotional programs, such as events and marketing strategies, are also key to encouraging increased bicycling. This section closes with recommendations for events and promotional programs, including toolkits for organizations planning to organize a fundraising bike ride and business desiring to be bike-friendly.

Ensure Safe Rumble Strip Application

Rumble strips are road safety features installed at the edge of the roadway and on the centerline to alert inattentive or drowsy drivers that their vehicles are drifting off the traveled way on to the shoulder or into the opposing lane. They are generally installed perpendicular to the direction of travel and they function by providing both an audible and tactile alert to a driver. They are typically milled into the pavement, or rolled into the pavement at the time of installation. There are three main types. A typical rumble strip consists of 12-inch wide indentations placed in the shoulder. A rumble *stripe* is placed directly on the edge lane stripe, and is only 6 inches wide. A center line rumble strip is placed directly on the center line.

Rumble strips are effective at preventing crossover and run-off-the-road collisions. Study results vary widely, but it is likely that they reduce those collisions by 20%-40%. Caltrans recommends them as a proven, fiscally responsible (or low cost) safety feature on state highways. According to Caltrans, they should be considered on rural roads with a posted speed of greater than 35 mph and traffic volumes of 7,000 ADT or greater; and at locations identified by Cross Over Collision Monitoring Program or Run Off Road Collision Monitoring Program.



As many of this region's highways fit this description, Caltrans has and continues to use all three types on the highways in District 10. Although rumble strips are effective for combating roadway departure crashes, they can pose a serious threat to bicyclists in several ways.

“Although effective for combating roadway departure crashes, rumble strips can pose a serious threat to bicyclists in several ways.”

First, the depth of a milled rumble strip can be enough to create a riding experience that can present a real hazard to the ability of someone to maintain control of their bicycle. Additionally, in the case of centerline rumble strips, some bicyclists report that motorists can be more reluctant to give an adequate passing distance. They can restrict a rider who attempts to stay away from the rumble strip itself, leading them to overlook other hazards, and constrict that rider's ability to maneuver around those hazards.

Indeed, these hazards have kept people from riding their bikes in District 10. We interviewed several individuals who expressed their reluctance to continue riding on roads where rumble strips had been added, with “ruined” being used on a number of occasions to describe the experience of riding some of them after the installation of rumble strips.

Additionally, there is low confidence in the agency due to conflicting messages around rumble strip installation on State Route 12 where miscommunication led bike advocates to believe that they had been able to provide Caltrans with information to support not installing rumble strips, only to find that they ended up being installed anyway.

Best Practices in Application

There are several best practices that should be used when installing rumble strips to ensure that their application does not degrade the user experience of bicyclists. We recommend engineers consult two very recent documents. "Solutions for Making Rumble Strips Safer for Cyclists: Best Practices for Transportation Decision Makers" includes a model rumble strip policy alongside discussion of the problem and a ranking of various states' rumble strip policies. On a 3-point scale, it ranks

California in the middle with "room for improvement." Caltrans updated its rumble strip policy in January 2021 with the publication of "Traffic Safety Bulletin 20-07: Rumble Strip Guidelines." Together with Caltrans plans and specifications, and the Highway Design Manual, these determine the standards that rumble strips must meet in California.

See the chart below for a side-by-side comparison of the standards in the Adventure Cycling recommendations and Caltrans standards.

Aspect of Rumble Strip	Adventure Cycling Recommendation	Caltrans Standard	Status
Minimum width of shoulder outside of rumble strips ... when guardrail is present ... when installed with centerline strips	≥ 4 feet ≥ 5 feet ≥ 6 feet	≥ 5 feet ¹ , ≥ 3 feet ² ≥ 5 feet ¹ , ≥ 3 feet ² ≥ 5 feet ¹ , ≥ 3 feet ²	✓+, ✗ ✓, ✗ ✗
Transverse length of shoulder rumble strip	6 inches	12 inches	✗
Distance from edge strip to rumble strip	< 6 inches	6-12 inches	~
Minimum width of shoulder outside of edge lane rumble stripes ... when guardrail is present ... when installed with centerline strips	≥ 4 feet ≥ 5 feet ≥ 6 feet	none ³ none none	✗ ✗ ✗
Transverse length of edge lane rumble stripe	6 inches	6 inches	✓
Depth of stripe	3/8"	5/16"	✓+
Minimum posted speeds of traffic where rumble strips are recommended	≥ 55 mph	≥ 40 mph	✗
Length of gaps between rumble strip sections ... on downhill grades of ≥3%	10-12 feet "larger"	12 feet 16 feet	✓ ⁴
Length of rumble strip sections between gaps	40-60 feet	48 feet	✓ ⁴
Parallel width	5-7 inches	5 inches	✓
Center to center spacing	10-12 inches	12 inches	✓

1 According to the Traffic Safety Bulletin 20-07 (TSB20-07), published January 2021.

2 According to the Highway Design Manual (HDM), Index 302.1

3 Caltrans recommends consideration of edge lane rumble strips on any road where shoulder widths cannot accommodate shoulder rumble strips. The Adventure Cycling recommendations do not distinguish between rumble stripes and stripes with regard to space between the rumble strip and edge of the shoulder.

4 Caltrans recommends consideration of gaps only on roads in an adopted bicycle plan, not on all roads where bicycles are allowed.

By far, the most consequential design decision is the amount of space provided on the shoulder between the rumble strip and the outside edge of the shoulder. If that riding area is too narrow, the bicyclist could be forced to ride in the traffic lane and be unable to move over to the shoulder to let motor vehicle traffic pass. Or, the bicyclist may ride in the shoulder and be unable to maneuver around an obstacle, risking a crash that could result in injury, death, or property damage.

When placed on narrow shoulders, both rumble strips and the narrower rumble stripes eliminate a bicyclist's ability to maneuver safely on the edge of the roadway.

Another challenge for the application of rumble strips as they relate to bicyclists is in areas with a high gradient. On steep descents, bicyclists may achieve speeds of 30-40 mph. They will require more space, at least six feet, to maneuver and more opportunities to leave the shoulder in the event of an obstacle. In such locations, the required width of shoulder adjacent to the rumble strip should be wider.

If extra width is not possible, the installation of signage to alert motorists of the potential presence of a bicyclist in the travel lane should be installed. Specifically, we recommend the diamond caution sign (W-11) depicting a bicycle with a supplemental text MAY BE IN ROADWAY. Alternatively, a supplemental plaque that says IN LANE may be added in place of the supplemental text on the sign. We do not recommend a "SHARE THE ROAD" sign, as research has found that the message it provides is too ambiguous and not productive for bicyclists.

As we learned in our conversations with district 10 bicyclists, rumble strip application does sometime result in shoulder widths that are too narrow to permit safe bicycling, in contradiction of Caltrans goals of encouraging active transportation. By the same token, we recognize the imperative of reducing run-off-the-road collisions as part of Caltrans implementation of the "safe systems" approach to reduce traffic crashes. After discussions with district 10 stakeholders, we have recognized two main areas of concern, and make recommendations to address them to balance these competing objectives.



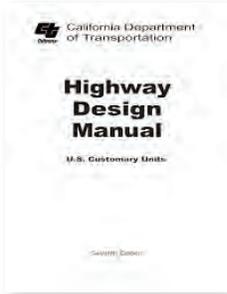
Conflicting and insufficient standards do not provide traffic engineers with the necessary guidance to protect bicycling in the shoulder on many highways. The Highway Design Manual should be amended to reflect the guidance in the Traffic Safety Bulletin 20-07. The requirements for shoulder width should apply equally to edge lane stripes as they do to shoulder rumble strips. The requirement to consider gaps in rumble strips should apply to all roads where bicyclists are allowed, not just those in approved plans. Signage should be required on steep downhill portions where rumble strips are installed and the shoulder

A second area of concern has to do with communication and outreach to stakeholders. Standards represent the best practice when conditions permit. Occasionally, conditions require deviations from the standards. Engineering judgment may conclude that rumble strips are a necessary safety feature even where sufficient shoulder width is unavailable. Or, rumble strips may not be appropriate even if standards can be met because of frequent debris in the shoulder or other unusual conditions.

Therefore, we recommend as a process suggestion that all rumble strip decisions be vetted with the soon-to-be-developed district 10 active transportation advisory committee. This committee can advise the engineers about conditions that might not be readily apparent to help avoid an inappropriate application of rumble strips, or, assure an engineer that an application that doesn't meet the best practice standard is nevertheless acceptable to the bicycling community due to other considerations.

Ensure Safe Rumble Strip Application

KEY RECOMMENDATIONS



Amend the HDM to conform to the standards in the Traffic Safety Bulletin.

Clarify that the shoulder width requirements apply equally to shoulder rumble strips and edge lane rumble strips.



Recommend signs that warn motorists of bicyclists in the travel lane when rumble strips might compel a bicyclist to ride in the travel lane.

Require a consultation with the soon-to-be-established Bike Ped Advisory Committee before designs for rumble strips are approved.



Expand the requirement for gaps in rumble strips to all roadways, not just those in an approved plan.

Improve Signage

This chapter provides guidance for the development and installation of “bicycle signage” that will support the goals of the project: safer bicycling in order to attract tourists and support economic development. There are three types of signs approved for use on the roadway: warning, regulatory, and guide signs.



Warning signs are usually diamond-shaped signs with a black legend and border on a yellow or yellow-green background. The MUTCD provides the standards for design and installation of common signs related to bicycle safety that may be used, such as “SHARE THE ROAD” signs and “TRAIL X-ING” signs, but it also allows Caltrans to develop other word messages as necessary to “call attention to unexpected conditions on or adjacent to the road.” For example, state park officials on Mt. Diablo installed signs warning motorists not to pass bicyclists on blind curves.



R44C (CA)



R117 (CA)



R118 (CA)

Regulatory signs are used “to inform road users of selected traffic laws or regulations” especially where necessary “to indicate the applicability of the legal requirements” to a specific situation. Examples of bicycle-related regulatory signs are “Bikes May Use Full

Lane” and the “Except Bicycles” plaque often added to signs that require movements that bicycle users may be exempt from, such as “Right Turn Only.”

Guide signs direct drivers to important destinations, identify nearby points of interest, and provide other information road users may find useful. They have the



lowest priority among road signs. Bicycle wayfinding signs are an example of a guide sign. So is a sign identifying a particular bike route by name or number.

Guide Sign Recommendations

BICYCLE WAYFINDING SIGNS

Bicycle wayfinding signs help bicyclists navigate their way through street networks on the safest and most convenient routes. Like directional signs on highways, wayfinding signs for bike routes should be highly legible, with a consistent and predictable format. In addition to clearly indicating that the guidance is for the *bike route*, the signs should specify three things: direction, destination, and distance.

We recommend the standard bike route sign (D11-1), and, where appropriate, an auxiliary plaque indicating the name of the Bike Route and a logo of the responsible agency on the sign. The sign may stand alone to confirm to the bicyclist that they are on the right route, or, it may be combined with plaques indicating destination, direction, and distance (the 3Ds).





We do not recommend the SG45 sign because it is too narrow to accommodate plaques that convey the 3Ds.

Sharing the Road Safely: Warning and Regulatory Sign Recommendations

Many of this project's recommendations for bike routes rely on narrow roads with low volumes of car traffic traveling at moderate (not slow) speeds. Safe sharing of the roadway requires motorists to wait patiently behind a bicyclist until it's possible to pass safely, ideally with the recommended three feet of clearance. When a motorist impatiently tries to pass too soon, collisions can and do occur. Even when a collision is avoided, an unsafe pass is frightening and serves as a deterrent to future bicycling.

Savvy bicyclists are educated to prevent an unsafe pass by occupying the center of the lane to block traffic, "controlling the lane" until it's safe to pass. When it is safe to pass, they move to the edge of the road to provide space for the motorist to pass, perhaps supplemented with a hand signal. However, most bicyclists are not so savvy; they hug the edge of the roadway inviting an unsafe pass or exposing themselves to hazards on the edge of the road.

Most motorists, likewise, do not understand how to safely pass a bicyclist. They may interpret a savvy bicyclist temporarily controlling the lane as being rude and not "sharing the road." They may not understand how dangerous it is to pass at high speed very closely to a bicyclist. Conversely, they may wait unnecessarily long, not understanding that it is generally safe to pass a bicyclist fairly closely if traveling at a slow speed not much faster than the bicyclist.

Our signage recommendations are intended to help make motorists and bicyclists more savvy and safe as they share the road. Both groups have much to learn, knowledge that is especially important on the narrow roads in this region.

Any sign placed by a local agency on a Caltrans right-of-way requires a Caltrans encroachment permit and must be reviewed and approved by Caltrans Traffic Operations and Traffic Engineering overseeing signage on the State ROW.

PASS BIKES THREE FEET MINIMUM

California's "Three Feet for Safety Act" (CVC 21760) normally prohibits motorists from passing bicyclists



"at a distance of less than three feet between any part of the motor vehicle and any part of the bicycle or its operator." A sign to remind motorists of this law is recommended where it is feasible to provide that

amount of clearance when passing. It is recommended on roadways without a center stripe, and roadways with shoulders, including narrow shoulders.

BIKES ALLOWED USE OF FULL LANE SLOW DOWN TO PASS BIKES

If a motorist is unable to comply with this provision due to roadway conditions, such as the narrow roads in this region, the Act allows motorists to pass more closely, after slowing to a speed that is reasonable and prudent. Where such conditions exist, we recommend one of two signs, or both of them in



This sign should be used on local highways only, as Caltrans has not approved it for use on state highways.

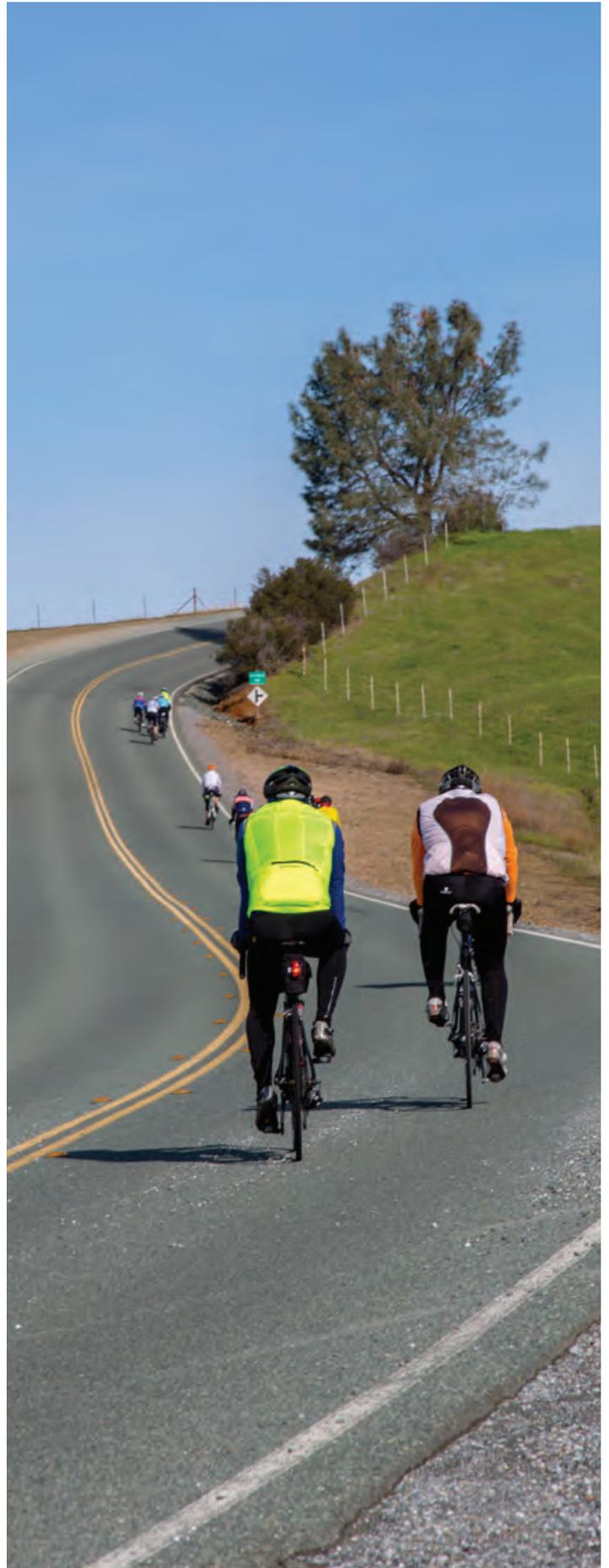
combination: the “Bikes Allowed Use of Full Lane” regulatory sign (R4-11) and a warning sign reminding motorists to slow down when passing bikes.



This sign, like all signs not already in the MUTCD, requires specific approval from Caltrans before it may be installed.

informs motorists of the bicyclist’s right to do so. The warning sign reminds motorists of the requirement to slow down when passing bikes.

The R4-11 sign reminds road users of California Vehicle Code section 21202 which permits bicyclists to use the full lane when it is not wide enough to be shared by a motor vehicle and a bicycle. It encourages bicyclists to exercise the best practice of “controlling the lane” when it is unsafe to pass, and



Create New Signage

KEY RECOMMENDATIONS



Use traditional bike route signs with additional plaques to show destination, direction, and distance.

Install "Pass Bikes 3 Ft Minimum" signs where space permits.



Install "Bikes May Use Full Lane" signs where 3 ft. of passing clearance is not available.

Install "Slow to Pass Bikes" signs where 3 ft. of passing clearance is not available.





Ebbetts Pass

Priority Promotional Projects

Programs to promote bicycling in this region will undoubtedly support its economy. It's important to note that secondarily, increases in bicycling also improve safety. Several studies have shown that controlling for other factors, an increase in the number of people who bike in a community reduces the rate of crashes and injuries.

Ebbetts Pass Bicycle Week

As recommended in the Alpine County chapter of Section IV, Highway 4 at Ebbetts Pass is practically a car-free mountain bikeway in the week or weeks after the winter snow is cleared from the highway but before the road is opened to vehicles. Bicyclists already informally use this road during this time, enjoying stellar scenic views of the Sierra Nevada mountain range.

Caltrans should cooperate with the local tourism agency to announce a 10-day period, starting on a Friday and ending on Sunday of the second weekend, when the road is designated as a bicycle-only highway. It would become one of the most acclaimed bicycle events in California, a safe and beautiful ride that would attract tourists to stay for several days and support the towns and businesses along Highway 4. Illustrate with this picture.

Maintain BikeValleytoSierra.com

CalBike developed the website BikeValleytoSierra.com to promote bike tourism in the northern San Joaquin Valley and the Sierra Foothill counties to the east. The website has attracted 435 followers who have received news articles and updates about every other week, on

average, for the last two years. This is an audience of community leaders and bicyclists who have expressed interest in and support for this effort.

To maintain this audience and keep the momentum of interest garnered so far, the Motherlode Bicycle Coalition (a project of the California Bicycle Coalition Education Fund) should sponsor the website indefinitely, and coordinate the maintenance of its content. Contributors should be bicycle advocates from organizations throughout the five county area, business development and tourism bureau officials, and others as recruited by the Motherlode Bicycle Coalition. The website hosts this report and a library of related documents.

Bike-Friendly Business Toolkit

Business owners can contribute to a positive visitor experience for those who travel with a bicycle. Being a bike-friendly business is not hard as long as you know how to accommodate a few specific needs that bike travelers have. The role of businesses in promoting bicycle tourism is emphasized by the Oregon Tourism Commission with a formal “bike-friendly business” certification process that requires some commitment on the part of the business owner.

Specific advice for various commercial sectors in this region is provided on BikeValleytoSierra.com. For example, hosts in hotels and homes should always allow guests to bring their bikes indoors. Providing a floor pump and the tools necessary to fix a flat or make other minor adjustments is another recommended amenity. Cafés and restaurants would be wise to provide a sitting area with free water for bicycling passersby, some of whom would stop longer and patronize the establishment.

Fundraising Bike Ride Toolkit

Our analysis of the types of “bike tourists” and the particular assets of this region pointed to one-day bike rides as the right type of event to attract people to the region for bicycling. It’s also a great opportunity to raise money for local causes, because bicyclists are very accustomed to paying a donation for the benefit of a safe, organized, fun social event with bicycles.

It’s easy to organize an event if you rely on the experience of veteran bike ride organizers and follow the playbook. We have put together such a playbook as a Fundraising Bike Ride Toolkit for Organizations. That document is a step-by-step guide for organizing a successful bike event that will raise funds for your organization and promote your region. It is attached as the first appendix to this document.