

# Economic Impact of Bicycle and Pedestrian Paths

Active transportation, such as bicycle and pedestrian paths, offer communities many positive impacts in areas such as health, connectivity, and economic benefits. This section provides a brief overview of these benefits and the potential impacts of improved and new access to bicycle and pedestrian paths in the Mat-Su Borough.

## Health Benefits

Active transportation networks are critical to public health as they facilitate physical activity and positive connections between people of all ages and their community. Additionally, communal infrastructure, such as bike and pedestrian paths, helps to foster a community spirit, cultivate a sense of place and feeling of unity, and creates a network connectivity to everyday destinations. The closeness of ties to neighbors, the strength of our personal relationships and the resources present in our communities are also all related to health and wellbeing.

Active transportation investments are a cost-effective method to reduce the prevalence of highly preventable risk factors (i.e., obesity, diabetes, limited physical activity) and health concerns and help to meet the Healthy Alaskans 2035 goals.<sup>1</sup>

The *2016 Matanuska-Susitna Borough Recreational Trails Plan* emphasized Borough residents' desire for healthy recreation and its expected benefits of increased alertness, decreased levels of heart disease, and other ailments.<sup>2</sup>

Additionally, one of the purposes in the *Alaska Statewide Active Transportation Master Plan (ASATP) 2019*, is to promote healthy lifestyles. Health was identified as one of the goal areas stating "Active transportation opportunities are an important factor in maintaining a healthy population. They also support DOT&PF's mission of *keeping Alaska moving through service and infrastructure*, while providing a transportation system that supports Alaska's ability to thrive." The ASATP set a walking and bicycling commute mode goal for the Mat-Su Borough. An

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<sup>1</sup> Healthy Alaskans, Alaska's Health Improvement Plan, <https://www.healthyalaskans.org/data/data-sources/> (Accessed April 22, 2022).

<sup>2</sup> MSB Recreational Trails Plan 2016 Update, [https://matsugov.us/docs/general/14086/trailplanupdate2016\\_final.pdf](https://matsugov.us/docs/general/14086/trailplanupdate2016_final.pdf) (Accessed April 22, 2022).

estimated 1.9% of Mat-Su's population commuted by walking; the plan's goal for the Mat-Su Borough is 3.8%. For bicycling, 0.2% of Mat-Su's population commuted by biking; the plan's goal for Mat-Su Borough is 0.4%. The ASATP also estimated \$1.89 million annually in economic benefits of complete walking networks in the Mat-Su Borough, including \$164,000 in health benefits, \$1.7 million in transportation benefits, and \$43,000 in environmental benefits. For complete biking networks in the Mat-Su, the economic benefits were an estimated \$309,000, including \$21,000 in health benefits, \$280,000 in transportation benefits, and \$8,000 in environmental benefits.<sup>3</sup>

## Opportunities for Improved Health

The connection between physical activity and health is well-established. According to the Centers for Disease Control and Prevention (CDC), studies show that physical activity reduces the risk of major health concerns, including strokes, type 2 diabetes, and some forms of cancer.<sup>4</sup> Physical activity is also known to promote positive mental health and can offer meaningful social connections. Studies have also shown the health benefits from active transportation result in savings on health care costs, showing that trails can serve as a cost-effective health intervention tool.<sup>5</sup> These cost savings accrue to health insurers, providers, and participants.

### PHYSICAL ACTIVITY

According to the American Journal of Public Health, people who live near safe, high-quality active transportation infrastructure tend to get more exercise than people who don't.<sup>6</sup>

Measures of physical activity vary slightly by population. The following presents the most recently available estimates of physical activity for adults, seniors, high school students, and middle school students in the Mat-Su Borough.

#### *Adults and Seniors*

In 2017, just over half of Mat-Su adults (55%) and seniors (54%) met the national recommendations for weekly physical activity of 2.5 hours of moderate exercise or 1.25 hours of vigorous exercise.

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<sup>3</sup> Alaska Statewide Active Transportation Master Plan 2019 [https://dot.alaska.gov/stwdplng/areaplans/modal\\_system/docs/AK-Statewide-Active-Transportation-Plan.pdf](https://dot.alaska.gov/stwdplng/areaplans/modal_system/docs/AK-Statewide-Active-Transportation-Plan.pdf) (Accessed April 22, 2022).

<sup>4</sup> <https://www.cdc.gov/physicalactivity/index.html> (Accessed April 18, 2022).

<sup>5</sup> Wang, G., Macera, C. A., Scudder-Soucie, B., Schmid, T., Pratt, M., Buchner, D. (2005). A cost-benefit analysis of physical activity using bike/pedestrian trails. *Health Promotion Practice* 6, 2, 174-79., <https://pubmed.ncbi.nlm.nih.gov/15855287/> (Accessed July 8, 2022).

<sup>6</sup> Anna Goodman, Shannon Sahlqvist, David Ogilvie, and on behalf of the iConnect Consortium, 2014: [New Walking and Cycling Routes and Increased Physical Activity: One- and 2-Year Findings From the UK iConnect Study](#), *American Journal of Public Health* 104, e38\_e46, <https://doi.org/10.2105/AJPH.2014.302059> (Accessed April 18, 2022).

### High School Students

In 2019, 12% of traditional high school students and 11% of alternative high school students reported they walked or rode their bike either to school or home from school three or more days in an average week, when the weather allows them to do so.

### Middle School Students

In 2019, almost all middle school students (94%) reported being physically active for at least 60 minutes during one or more days of the last seven days.

**Table 1. Physical Activity Level – Mat-Su Borough**

Population Group and Year	Mat-Su Borough % (95% Confidence Interval)	Alaska % (95% Confidence Interval)
Adults – Engaged in 2.5 hours of moderate exercise or 1.25 hours of vigorous exercise weekly		
18+ Years (2017)	54.9% (48.8-60.9)	57.5% (51.2-63.6)
65+ Years (2017)	54.2% (42.9-65.2)	56.2% (51.1-61.3)
High School Students – Physically active at least 60 minutes per day on all seven days of the week		
Traditional High School (2019)	19.8% (17.0-23.0)	17.9% (15.3-20.9)
Alternative High School (2019)	9.9% (6.1-15.6)	11.7% (9.2-14.8)
Middle School Students – Physically active for at least 60 minutes during one or more days of the last seven days		
Middle School (2019)	93.6% (93.0-94.2)	NA

Sources: Mat-Su Health Foundation, 2019. *Hearing Every Voice: 2019 Mat-Su Community Health Needs Assessment*; Alaska Department of Health and Social Services, 2019. *Alaska Youth Risk Behavior Surveillance System*.  
Note: Data are compiled from multiple sources and surveys. Indicators are defined in table subheadings.

### WALK OR BIKE TO SCHOOL

In 2019, 12% of traditional high school students and 11% of alternative high school students reported they walked or rode their bike either to school or home from school three or more days in an average week, when the weather allows them to do so. Mat-Su Borough high school students attending both traditional and alternative schools report walking or biking to or from school at a lower rate than their peers statewide.

**Table 2. Walked or Biked to or From School – High School Students, 2019**

	Mat-Su Borough % (95% Confidence Interval)	Alaska % (95% Confidence Interval)
Traditional High School	12.0% (10.2-14.1)	20.9% (17.9-24.2)

Alternative High School	11.1% (7.0-17.3)	23.7% (20.1-27.7)
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Source: Alaska Department of Health and Social Services, 2019. *Alaska Youth Risk Behavior Surveillance System*.

### WEIGHT STATUS

Overweight and obese people are at increased risk for certain chronic diseases and health conditions.<sup>7</sup> In 2018, an estimated 73% of adults and 68% of seniors in the Mat-Su were overweight or obese. Self-reported data reveals that 28% of traditional high school students and 34% of alternative high school students were overweight or obese in 2019. The CDC recommends community efforts to address overweight and obesity should focus on supporting accessible, and affordable active living opportunities.<sup>8</sup>

**Table 3. Overweight and Obesity**

Overweight and Obesity	Mat-Su Borough % (95% Confidence Interval)	Alaska % (95% Confidence Interval)
<b>Adults</b>		
18+ Years (2018)	73.2% (68.1-77.7)	65.9% (63.7-68.0)
65+ Years (2018)	67.6% (58.3-75.7)	N/A
<b>High School Students</b>		
Traditional High School (2019)	28.3% (25.8-31.0)	29.8% (26.5-33.3)
Alternative High School (2019)	33.8% (26.5-41.9)	35.8% (31.6-40.3)

Sources: Mat-Su Health Foundation, 2019. *Hearing Every Voice: 2019 Mat-Su Community Health Needs Assessment*; Alaska Department of Health and Social Services, 2019. *Alaska Youth Risk Behavior Surveillance System*.

### CHRONIC DISEASE

Chronic diseases, such as diabetes, hypertension, and cancer, are associated with substantial health and economic costs.<sup>9</sup> The table below highlights the rates of incidence for a number of chronic diseases for residents in the Mat-Su Borough and Alaska.

**Table 4. Chronic Disease**

Chronic Disease	Mat-Su Borough	Alaska
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<sup>7</sup> Centers for Disease Control and Prevention, 2022. Health Effects of Overweight and Obesity. <https://www.cdc.gov/healthyweight/effects/index.html> (Accessed April 19, 2022).

<sup>8</sup> Center for Disease Control and Prevention, 2022. Strategies to Prevent and Manage Obesity. <https://www.cdc.gov/obesity/strategies/index.html> (Accessed April 19, 2022).

<sup>9</sup> Centers for Disease Control and Prevention, 2022. Health and Economic Costs of Chronic Diseases. <https://www.cdc.gov/chronicdisease/about/costs/index.htm> (Accessed April 19, 2022).

Heart Disease and Stroke		
Coronary heart disease death rate per 100,000 people	112.0 (2017)	133.4 (2017)
Stroke disease death rate per 100,000	25.6 (2017)*	34.8 (2017)
Diabetes		
Diabetes – Adults (%)	7.9 (2018)	8.4 (2018)
Diabetes – Adults 65+ Years (%)	19.5 (2018)	17.6 (2018)
Cancer		
Cancer death rate per 100,000 people	173.5 (2016)	157.8 (2016)
Colorectal cancer death rate per 100,000	15.4 (2016)	14.7 (2016)
Lung cancer death rate per 100,000 people	69.0 (2016)	38.9 (2016)

Source: Mat-Su Health Foundation, 2019. *Hearing Every Voice: 2019 Mat-Su Community Health Needs Assessment*.  
 \*Data may be statistically unreliable and should be interpreted with caution.

## Economic Benefits

### Increased Property Values

Greenways and multi-use trails are seen by property owners and real estate professionals to create an amenity that commands higher prices from surrounding homes. When trails increase property value, local governments receive more property tax revenue.

According to research, homes in rural communities experienced between a 3% to 5% increase in value within half a mile of a trail.<sup>10</sup> Individual homes within half a mile of trails sometimes experienced differences in appreciation, with the highest appreciation related to views of the green space or proximity to trail access points.<sup>11</sup> The largest value increases were associated with well-known and high-profile trails.<sup>12,13</sup> Using this research as a basis, a house valued at \$285,000 in the Mat-Su Borough could have a realized value increase between \$8,550 to \$14,250 if located near a trail.<sup>14</sup>

<sup>10</sup> Crompton, John L. 2020. The Impact of Trails and Greenways on Property Values. *Parks and Recreation Magazine*, <https://www.nrpa.org/parks-recreation-magazine/2020/may/the-impact-of-trails-and-greenways-on-property-values/> (Accessed April 18, 2022).

<sup>11</sup> Crompton, J., and S. Nicholls. 2006. "An Assessment of Tax Revenues Generated by Homes Proximate to a Greenway." *Journal of Park and Recreation Administration* 24(3): 103-108.

<sup>12</sup> Resource Dimensions. 2005. *Economic Impacts of MVSTA Trails and Land Resources in the Methow Valley*. Methow Valley Sport Trails Association.

<sup>13</sup> Lindsey, G., Man, J., Payton, S., and K. Dickson. 2004. "Property values, recreation values, and urban greenways." *Journal of Park and Recreation Administration*, 22 (3): 69-90.

<sup>14</sup> U. S. Census Bureau. *American Community Survey*. B25075; Value, Owner Occupied Housing Units. 2020.

## Enhanced Visitor Experience

A 2020 study conducted for the Mat-Su Convention and Visitors Bureau found that hiking was the tenth-most desired experience among prospective visitors to the region, at 36%.<sup>15</sup> The top desired Mat-Su activity was experiencing the outdoors (46.2%).

In the summer of 2016 (most current survey data available), the number two activity among out-of-state visitors to the Mat-Su was hiking/nature walk, with 17% of visitors participating; 1% of visitors participated in biking. Hiking/nature walk was much more popular among visitors who had traveled to/from Alaska by air (23%) when compared to those who traveled by cruise ship (8%) or highway/ferry (4%).<sup>16</sup> Visitors to Mat-Su were slightly more likely than visitors to Anchorage to report hiking/nature walk participation at 17% versus 12%.<sup>17</sup>

**Table 5. Hiking and Biking Activities in Mat-Su, Summer 2016 (%)**

	ALL VISITORS	TRANSPORTATION MODE			DESTINATION	
		Air	Cruise	Highway/Ferry	Talkeetna	Palmer/Wasilla
Hiking/nature walk	17%	23%	8%	4%	17%	19%
Biking	1%	1%	-	1%	1%	1

Source: *Mat-Su Visitor Profile, Summer 2016*, conducted by McDowell Group for Mat-Su Convention and Visitors Bureau.

## EXTENDING VISITOR STAY AND SPENDING

Trails can generate business impacts and create new jobs by attracting visitors, especially overnight visitors. Destination trails attract visitors from outside the local area who travel specifically for recreational opportunities. The benefits from destination trails include economic development, business revenue, employment, and employee earnings. In addition to its direct effect on businesses, visitor spending also has a ripple effect in the community as employees and business owners spend their earnings, and local and state governments receive more tax revenue. The economic impact of trails is highest when a trail is connected to local businesses that cater to trail user needs such as restaurants, grocery stores, camping, hotels, guiding services, and gear stores. This connection can occur directly through trail spurs that link to commercial centers, as well as through signs at trailheads or shuttles between a town and the trailhead. Because lodging often accounts for the biggest proportion of trip expenses, a trail's economic impact is greatly increased when it attracts more overnight users.<sup>18</sup>

<sup>15</sup> *2020 Mat-Su Valley Visitor Research*, conducted by Destination Analysts for Mat-Su Convention and Visitors Bureau.

<sup>16</sup> *Mat-Su Visitor Profile, Summer 2016*, conducted by McDowell Group for Mat-Su Convention and Visitors Bureau.

<sup>17</sup> *Alaska Visitors Statistics Program 7*, prepared by McDowell Group for Alaska Travel Industry Association.

<sup>18</sup> <https://headwaterseconomics.org/wp-content/uploads/trails-library-business-impacts-overview.pdf> (Accessed April 13, 2022).

According to recent research that measured the economic impacts of trails:

- Overnight stays are the biggest contributor to total spending. At a mountain bike race in North Carolina, each additional night adds \$101 to a visitor's total spending.<sup>19</sup> Along the Great Allegheny Passage, overnight users spend seven times more than day users.<sup>20</sup> Bikers along the Columbia Gorge had day spending averaging \$43 per party and \$600 for overnight costs.<sup>21</sup>
- The quality of trails and amenities that support trail users have the largest effect on the total number of visitors.<sup>22,23</sup>
- Although biking/walking events are short-lived, participants often return to the community after the event.<sup>24</sup>
- After visiting an area, some tourists become residents or second homeowners, bringing their businesses, supporting the local economy, and paying taxes.<sup>25,26</sup>

## BUSINESS DEVELOPMENT

Businesses that benefit from trail recreation and trail development include outdoor sporting goods stores (i.e., bicycle shops, outdoor clothing stores, and footwear shops), guiding services (hiking and bicycling tour guides), transportation services (i.e., backpacking shuttle services), accommodations, and eating establishments.<sup>27</sup>

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<sup>19</sup> Schiller, A., and J. Whitehead. 2013. Economic Impact of the 2012 '6 Hours of Warrior Creek' Mountain Bike Race. Boone, NC: Center for Economic Research and Policy Analysis at Appalachian State University.

<sup>20</sup> Campos, Inc. 2009. The Great Allegheny Passage (GAP) Economic Impact Study (2007-08). The Progress Fund.

<sup>21</sup> Dean Runyan Associates. 2014. Columbia River Gorge Bicycle Recreation: Economic Impact Forecast for the Communities Along the Historic Columbia River Highway. Prepared for the Friends of the Historic Columbia River Highway, Oregon Tourism Commission, Port of Cascade Locks, Port of Hood River, Port of The Dalles.

<sup>22</sup> Berard, D., S. Chapin, A. Hoogasian, T. Kane, D. Marcouiller, and T. Wojciechowski. 2014. The Economic Impacts of Active Silent Sports Enthusiasts. Madison, WI: University of Wisconsin Department of Urban and Regional Planning, Extension Report 14.1.

<sup>23</sup> Tourism British Columbia. 2013. Rossland Mountain Bike Visitor Study 2011 Results. Research, Planning & Evaluation, Tourism British Columbia Ministry of Jobs, Tourism, and Skills Training.

<sup>24</sup> Western Canada Mountain Bike Tourism Association. 2007. Sea to Sky Mountain Biking Economic Impact Study.

<sup>25</sup> Meltzer, N. 2014. "Adapting To the New Economy: The Impacts of Mountain Bike Tourism in Oakridge, Oregon" [Master's Thesis]. Eugene, OR: University of Oregon Department of Planning, Public Policy and Management.

<sup>26</sup> Resource Dimensions. 2005. Economic Impacts of MVSTA Trails and Land Resources in the Methow Valley. Methow Valley Sport Trails Association.

<sup>27</sup> [https://matsugov.us/docs/general/14086/trailplanupdate2016\\_final.pdf](https://matsugov.us/docs/general/14086/trailplanupdate2016_final.pdf) (Accessed April 22, 2022).