

# Northwest Regional **Bike Share** Feasibility Study



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# Executive Summary /



## Introduction

The Northwest Regional Bike Share Feasibility Study's purpose is to explore the feasibility of expanding Boulder BCycle bike share in the northwest metro region in partnership with local jurisdictions. Commuting Solutions (CS), a nonprofit organization whose mission is to connect people to places in the northwest metro region today and for the future, explores the feasibility, potential cost, and implementation of a regional BCycle bike share system that would encompass its Transportation Management Organization (TMO) service area. The service area includes Boulder, Boulder County, City & County of Broomfield, Erie, Lafayette, Longmont, Louisville, Superior and Westminster. Commuting Solutions applied for the Denver Regional Council of Governments (DRCOG) TDM Set Aside Grant in 2022 in partnership with local governments and was awarded the opportunity to conduct this feasibility study. The scope of work included collecting baseline data, hosting stakeholder meetings, facilitating local government meetings, administering a public survey, hosting

electric bike share demonstrations, and developing a final report. Following the study's release, local jurisdictions may opt to seek funding opportunities to support the implementation of a coordinated, regional bike share program. Commuting Solutions will continue to work to support local government partners to advance bike share locally and regionally in the northwest metro region.

Station-based bike share in the Denver metro area has an extensive history dating back to a pilot program during the 2008 Democratic National Convention in Denver, followed by the launch of the Denver BCycle system in April 2010 and the Boulder BCycle system in May 2011. BCycle operated in Denver until 2019 when the nonprofit system owner and operator, Denver Bike Sharing, ceased operation, and Denver selected Lyft and Lime to operate shared private micromobility through a competitive Request for Proposals (RFP) process. While in Boulder, B-Cycle (as it was known then) made a meaningful connection to the University of Colorado Boulder, whose main campus is in the heart of the city. This connection started in 2018,

**The Denver metro area has an extensive history dating back to a pilot program during the 2008 Democratic National Convention in Denver.**

and in 2019 the university and BCycle partnered in a program to offer students free ridership as a part of their tuition fees. BCycle's impact on micromobility has also played a part in the city's transportation demand management (TDM) policies and programs, offering residents, employees and visitors options to use forms of transportation outside of a single occupancy vehicle (SOV). As of 2023, BCycle is one of the country's longest standing and highest-use bike share systems. Because of the ongoing success of Boulder's bike share program, Commuting Solutions and the area's local governments have partnered to explore expanding the program across the northwest metro region. Recognizing the end-use consumer will significantly benefit by having an integrated bike share system that connects corridors and communities to each other, the program will bridge gaps in the cycling and transit infrastructure and expand connectivity for the transit corridors included in the Northwest Area Mobility Study (NAMS).

The final recommendation of this study finds that a regional docked e-bike share program is an exciting and tangible next step to mobilize the northwest metro region. Not only is it feasible from a logistical standpoint, but it is also an anticipated next step politically due to broad support local governments. The subsequent chapters offer a recommendation based on the findings of the study, and it is recognized that ongoing coordination and collaboration among stakeholders will be needed to identify a range of options and considerations to implement the regional bike share program. Jurisdictions in the region vary in preparedness

to implement a bike share program, and it is important that implementation recommendations are flexible and sensitive to these timeframes.

## Goals of Bike Share

Bike share is a network of publicly available bikes that allow the general public to rent a bike to make on-demand short trips for a fee. Bike share is classified as a form of micromobility which includes small, often electric vehicles for short trips, and to bridge the gap in traveling between first and final mile (FFM) segments of multimodal trips. FFM refers to the part of a transit trip at the start and/or end of the journey – the part of the trip that connects a transit user to or from the station to their origin or destination. Some bike share systems can be "docked," meaning bikes located at a dock or station, and intentionally planned to complement other docked locations and travel patterns. Dockless bike share does not require bikes to be parked in a certain location and are instead spread out across a city.

In the initial stages of generating interest in a bike share program, jurisdictions had multiple goals they sought to accomplish with its implementation. Some jurisdictions had existing infrastructure and plans in place to support expansion of bike share, while others were interested in adopting bike share





**Bike share is a network of publicly available bikes that allow the general public to rent a bike to make on-demand short trips for a fee.**



into future comprehensive and transportation plans. Regardless of the situation, a regional bike share program aims to:

- Reduce demand of SOVs
- Close gaps in FFM travel access to transit
- Provide a healthy, sustainable, affordable, and accessible transportation option
- Extend the reach of transit between and on the NAMS network of regional BRT corridors.

## Recommendation Summary

Multiple aspects of bike share were evaluated to analyze the feasibility of establishing a regional bike share system. Commuting Solutions worked with BCycle to identify multiple characteristics of a community that would support a successful bike share system which included:

- Safe and connected cycling infrastructure
- Community density
- Cycling culture and advocacy
- Higher education facilities, tourism, activity centers, corporate campuses, and other high-density places
- Other TDM strategies available in the area
- Access to transit
- Elected officials support of bike share

Based on the research completed in this study, expanding BCycle into a regional bike share operation is feasible and supports the multimodal goals of the northwest metro region. As a result of the community engagement with residents, the study identified there is a community preference for a regional docked electric bike share system. It is recommended that a phased approach be taken to implementing bike share across the region where the identification of prepared jurisdictions looks at factors explored later in this study. A final recommended framework for implementing is explained in the "**Recommendations**" section of this report.



<https://bouldercolorado.gov/services/bike>

# Bike Share Background



## Why Regional Bike Share?

Bike share programs serve a significant role in bridging the gaps of transportation and offering options in multimodal transit. With the launch of multiple TDM-oriented plans across the region and greater Colorado, this exploration of a regional bike share program comes at an opportune time. The statewide push for safe, reliable cycling and pedestrian infrastructure works to alleviate the common concerns communities have when considering using micromobility options. Exploring a connected, regional approach to bike sharing complements these state-wide efforts.

The exploration of a regional bike share program has numerous benefits for the livelihood of the public and encourages safe, sustainable travel. The communities involved in this study are in close geographic proximity to each other, making connections across jurisdiction lines a possibility for people living and working in different municipalities.

## The various TDM plans adopted for the region all cite similar goals with the integration of a docked bike share program:

- Reduce demand of SOVs on roads
- Extend the reach of transit by providing a FFM travel solution
- Provide a healthy recreational opportunity to travel
- Provide a sustainable alternative connecting piece in multimodal transportation
- Alleviate strain on parking and manage congestion in heavily trafficked corridors and local community downtown areas
- Require less infrastructure investment and maintenance than other modes



The concept of regional bike share is familiar to the Denver metro region and has historically been explored by different service providers across the state. Acknowledging Colorado's current strong cycling community, working collaboratively across jurisdictions to create a regional system is an innovative and effective way to bridge gaps in transportation. There is latent demand for regional bike share in the northwest region, particularly as a strategy to support growing mixed use areas, and existing and future Bus Rapid Transit (BRT) station areas. The deployment of this regional bike share system will focus on connecting people to stations, employment centers, central business districts, and residential areas across the region.

### **Bike Share as a Transportation Demand Management and First and Final Mile Solution**

FFM gaps are any barrier that discourages potential riders from using transit because a station cannot be easily accessed from home, work, or other destinations. This can include travel distance, lack of safe cycling and pedestrian infrastructure, or a lack of available or reliable transportation options to get to or from the station. TDM strategies encourage people to travel by walking, bicycling, using transit, vanpooling, or carpooling rather than driving alone.

Within the context of bike share, having access to micromobility options at strategic intersections, Park-n-Ride locations, mobility hubs, apartment complexes, and business districts will help bridge connections in connecting residents to and from their destination. Micromobility in the form of bike share is a common TDM strategy deployed across cities and is viewed as both positively impacting transit ridership and reducing travel demand. Placement of bike share stations requires strategic planning and identification of potential ridership to make the most of the program.

### **Previous Studies**

Several planning efforts have been implemented over the past 15 years to address FFM deficits, expand multimodal connectivity, and improve transit to the region. These plans set a foundation and support the concept of a regional bike share system to facilitate commuting, tourism, and economic growth between cities in the region. You can find more information about the studies in Appendix A.

### **2011 Sustainable Communities Initiative (SCI) Northwest Corridor Study and Bicycle Share Feasibility Study**

In 2011, DRCOG partnered with 86 organizations across the Denver region and secured funding from



the Sustainable Communities Initiative (SCI) to embark on the creation of the Northwest Corridor Bicycle/Pedestrian Accessibility Study (NW Corridor Study). This study was tasked with addressing one of the region's most pressing challenges of leveraging the planned multi-billion-dollar expansion of the FasTracks transit system to meet other regional needs and opportunities. The SCI study aimed to lower transportation and housing costs, reduce consumption of fossil fuels, reduce strain on air and water resources, and ultimately develop mixed-use, pedestrian- and bicycle-friendly urban centers along transit lines.

As part of the NW Corridor Study tasks, the creation of the SCI Bicycle Share Feasibility Study was created to describe different bicycle share technologies, inter-system compatibilities, and station area analyses. The study aimed to recommend bicycle share technologies for each station within the study area and make considerations for connectivity of a regional bicycle share program. This was one of the first major works in Colorado to explore bicycle sharing on a regional scale.

### **2013 US 36 First and Final Mile Study**

Commuting Solutions conducted the US 36 First and Final Mile Study in 2013 as plans were being finalized for Bus Rapid Transit (BRT) service for US 36. The corridor exhibits suburban land use patterns connected by larger arterial roadways, designed and built mainly for people traveling in cars. This land use pattern can make it difficult, intimidating, and sometimes unsafe to travel between the transit stations and nearby origins or destinations by walking or bicycling. To address this, the First and Final Mile Study identified suitable options to better connect transit riders to and from the US 36 BRT stations to the surrounding activity centers and resulted in the creation of the US 36 bikeway, expanding from Boulder to Denver along the highway.

To explore interest in expanding the regional bike share program for this study, public opinion polls were conducted and found bike share along the US 36 corridor to be supported by the public. Bike share was identified as a top TDM strategy to alleviate existing stressors of US 36 and to better connect riders to and from the US 36 BRT stations.



### **2014 Northwest Area Mobility Study**

The Northwest Area Mobility Study (NAMS) was a collaborative effort that addressed significant cost increases and delays associated with building and operating the 41-mile Northwest Rail commuter rail line from Longmont to Denver. The study concluded with elected officials, the Regional Transportation District (RTD), Colorado Department of Transportation (CDOT), and 13 jurisdictions reaching consensus on transit priorities in the region. These top priorities included the US 36 BRT buildout, conducting advanced planning of arterial BRT on six priority corridors and plans to evaluate feasibility of the Northwest Rail.

NAMS provided a foundation for transportation-related organizations and jurisdiction staff to collaborate and strategize on approaches to expand TDM strategies across the region. The inclusion of bike share in this plan expanded the possibility of these efforts and propelled Colorado's multimodal agenda.

## **2019 RTD First and Final Mile Strategic Plan**

The Regional Transportation District (RTD) First and Last Mile Strategic Plan was released in Spring 2019. The plan closely examined common barriers to getting to and from transit services throughout the northwest Colorado region and developed strategies for overcoming TDM obstacles. The study focused on identifying and examining 15 representative transit locations. It provided a tailored set of recommendations for each location based on a rigorous analysis of the existing conditions. All recommendations were integrated into a toolkit which includes strategies organized under five themes: Reuse and Improvements of Existing Infrastructure, New Infrastructure, FFM General Guidance, Transportation Demand Management, and Transportation Service.

The Plan recommends expanding the existing Bike-n-Ride Program to include new modes of micromobility beyond standard bicycles as an integral part of station improvements and expansion. The inclusion of bike share would propel this initiative forward and carry out one of the final recommendations of this plan.

## **2021 CO 119 First and Final Mile Study**

Significant investments have been made in the planning of BRT and a bikeway along the CO 119 corridor from Boulder to Longmont. Concluded in August 2021, the CO 119 First and Final Mile Study builds on efforts to provide solutions to connect users more comfortably and conveniently to BRT stations and the proposed bikeway. The study recommends that bike share stations be placed at all Park-n-Rides in Boulder and Longmont, and that space should be set aside near the BRT boarding areas for docked bike share stations at the Park-n-Rides and BRT stops along CO 119/Diagonal Highway.

The corridor reconstruction project, expected to begin late 2024, will feature a protected, fully separated bikeway down the center median with underpasses or overpasses at road intersections. It is designed to be completely separated and unobstructed from SOV or bus transit and will connect to the existing Longmont-Boulder (LOBO) trail. BRT will be shared along the highway and have strategic stops along the corridor.

## **2023 Northwest Regional Transportation Demand Management Plan**

The Northwest Regional Transportation Demand Management Plan, completed in May 2023, aimed to maximize stakeholder involvement of TDM through goal setting, collaboration, and identification of funding sources that may benefit TDM in the northwest metro region. This plan was conducted by Commuting Solutions and focused on its TMO service area. The results included the identification of key TDM strategies that would set the foundation for new transportation initiatives across the region.

Out of the eleven TDM strategies identified in the plan, Strategy Two looked to conduct a feasibility study to determine whether a regional bike share program would be successful across northwest Denver. This plan was a direct catalyst for the study of a regional BCycle bike share program, setting the foundation for this Northwest Regional Bike Share Feasibility Study.





# History of Bike Share in the Northwest Metro Region



<https://bouldercolorado.gov/services/bike>

## Overview of Colorado Bike Share Systems

The Denver and Northwest metro region have a long history of station-based bike share systems, extending back to a bike share demonstration- Freewheelin'- conducted as part of the Democratic National Convention in Denver in 2008. From there, bike share expanded north to other parts of the region, including Boulder in 2011, and then briefly in Westminster, and Longmont in 2017. Bike share then went beyond the region and into greater Colorado, including Pikeride in Colorado Springs, Zagster/ Pace and Spin bike and scooter share programs in Fort Collins, and WE-cycle in Aspen, Basalt, and Carbondale. Aurora and Golden both experimented

with dockless bike share through the bike provider Ofo, and Denver University had their own dockless pedal bike share in 2018. Throughout the years, bike share across the northwest region has disbanded (such as Zagster and Ofo) and expanded which has influenced system availability through changing policies and partnerships. You can find more information on the history of bike share systems in Colorado in Appendix A.

## Bike Share in Denver

Denver was one of the first cities in the country to have a large-scale bike share system, alongside Capital Bike Share in Washington, D.C., and Nice Ride in Minneapolis, MN. In the years after the 2008 Freewheelin' bike share demonstration in Denver, several area companies- including Crispin Porter & Bogusky, Kiosk Information Systems, and Amadeus Consulting- collaborated with Trek Bicycle Company and Humana Insurance on the creation of the BCycle brand, equipment, and software. With the BCycle brand established, the first operational BCycle system - then known as "B-cycle" until 2021-

**Bike share expanded north to other parts of the region, then went beyond the region and into greater Colorado.**

opened in Denver in April 2010, quickly expanding to other cities across the nation. BCycle was owned and operated in Denver by local nonprofit organization Denver Bike Sharing until 2019, when a discontinuation of subsidy funding led to the closure of the Denver BCycle system. Funds were not available to replace aging docking equipment, and Denver lost approximately 750 shared BCycle bikes.

Denver has subsequently signed contracts with Lyft and Lime to provide an initial minimum of 300 bikes and 1,500 scooters to be deployed across the city where these forms of micromobility still exist into 2024, now with over 700 bikes and 2,800 scooters.



### **Boulder BCycle History and Electrification**

Seeing the success of the launch of bike sharing in Denver in 2010, the City of Boulder wished to launch a system of its own. This included conducting an RFP and selecting a local nonprofit, Boulder Bike Sharing, for the process. The City of Boulder and Boulder Bike Sharing used the Federal Highway Administration’s Transportation Community System Preservation (TCSP) grant to purchase and open the Boulder BCycle system, which launched in May 2011. This system operated at approximately 1 trip-per-bike-per-day for its first couple years, growing between 2012-2017 from roughly 100 to 300 bikes, with ridership of around 100,000 trips per year. During this period, the per-bike use rate remained

relatively small as the system grew in geographic size, station density, and number of unique riders.

Seeking to promote additional ridership, operational efficiency, and enhanced coverage at the University of Colorado Boulder, Boulder Bike Sharing coordinated with the University to open additional bike share stations on campus and establish a free student pass program in 2019. This partnership and the resulting university student ridership resulted in robust utilization growth that continues today.

Along the way, in 2021 the transition to electric bikes was facilitated by the City of Boulder where a competitive, national RFP process took place for an all-electric bike share system to be provided at no cost to the city. As part of Boulder’s RFP process, a selection criterion was included to understand if the selected vendor would be interested in a possible regional expansion in the future. The City of Boulder selected BCycle, LLC as the owner and operator of Boulder’s bike share system at that time. Boulder Bike Sharing coordinated with BCycle in this process, transitioning ownership and operational responsibility of the Boulder BCycle system to BCycle, LLC, part of Trek Bicycle. As of 2024, BCycle equipment is used in more than 40 systems across the US, with approximately one quarter of these owned and operated by BCycle. From approximately 100,000 trips by 12,500 riders on 300 pedal bikes in 2020, the Boulder BCycle system has swelled to provide over 700,000 trips by more than 25,000 riders on a similar number of electric bikes in 2023.

### **Bike Share in Longmont and Westminster – Zagster**

In 2017, the City of Longmont explored a collaborative funding partnership with the Oskar Blues Brewery, Visit Longmont (an economic development publication), Boulder County, and Longmont Hospital to bring 100 bikes to the city



through a partnership with Zagster. Zagster was a startup bike share company that worked across the nation to design, build, and operate bike sharing programs. The program operated for several years before Zagster discontinued the program in 2020, citing issues with placement of stations and lack of demand due to its docked system not being widely available.

Westminster also implemented a Zagster shared bike program in June 2016. Comparable to its timeline with Longmont, Westminster's system was also shut down in spring 2018, citing a change in business model to target more dense urban areas for deployment, such as Denver, although operations of Zagster continued in Fort Collins under the name of Pace Bikeshare until Zagster ultimately went out of business in 2020.

### **Previous Regional Bike Share Efforts by Commuting Solutions**

Commuting Solutions has a long history of advocating for increased bicycle and pedestrian mobility in the northwest corridor. In 2014, DRCOG conducted a Bicycle Share Feasibility Study as part of the Northwest Corridor Bicycle and Pedestrian Accessibility Study (Northwest Corridor Study). This study was based on the 2013 US 36 First and Final Mile Study by Commuting Solutions and advanced conversations of bike share, the study's top priority.

To maximize transportation investments that were made in the northwest corridor, DRCOG, through its Sustainable Communities Initiative, hosted a partnership of public and private sector organizations whose goals included enhancing bicycle, pedestrian, and mobility access within the first and last mile of new transit stations. Through this initiative, the Northwest Corridor Study built upon the SCl and expanded research into making those connections through bike mobility. The project built upon the 2013 US 36 First and Final Mile Study by Commuting Solutions and advanced

the top priorities identified in that study as well.

One of the six Northwest Corridor Study tasks called upon local agencies to conduct a Bicycle Share Feasibility Study. The report includes a description of different bicycle share technologies, inter-system compatibilities, and station area analyses. This memo includes recommended bicycle share technologies for each station area and other implementation considerations.

In 2017, Commuting Solutions led discussions between Zagster and local government staff located near Longmont and Westminster to determine if expanding their presence in the two communities would be feasible. The coalition progressed deep in the proposal process when Zagster decided to pull their business out of smaller suburban communities of Colorado in 2018 to pursue other markets. Following Zagster's retraction from the Denver metro northwest communities, Commuting Solutions led a Request for Information (RFI) process in 2019 that was released to the bike share industry to determine interest in the regional bike share program. Two responses to the RFI were received from Bewegen and Gotcha, and through the vetting process Gotcha was selected as a preferred vendor for the program. Discussions began with them but ultimately failed as the COVID-19 pandemic was taking hold in communities around the globe. To prepare for the changes the pandemic would bring, Gotcha scaled back business to only select areas in the US.

Due to 2020 pandemic and then the 2021 Marshall Fire national disaster, Commuting Solutions halted further exploration of the regional bike share program until late 2022. During this time, the City of Boulder had released a bike share RFP process and included criteria regarding the vendor's ability to expand their system regionally, recognizing the region's interest to create a regional program. BCycle was selected by the city as their bike share vendor.

# Study Framework and Baseline Data Collection



## Outline of Process

This study was facilitated by Commuting Solutions, BCycle, and members of each of the local jurisdictions in the northwest metro region to participate in discussions about regional bike share. Commuting Solutions held meetings from December 2022 through July 2024 to assess the existing bicycling climate in each community and to compose a plan of action for growing bike share in the area. The review of this study's draft was completed between May and September of 2024, and involved the iterative review between Commuting Solutions, BCycle, and jurisdictions.

## Overview of Commuting Solutions' Role in the Study

Commuting Solutions has paved the way in exploring a regional bike share for over ten years, and now is implementing Strategy 2 of the Northwest Regional Transportation Demand Management Plan- CS facilitated and created this study with the input of stakeholders. Throughout the process for this study, Commuting Solutions

led community engagement opportunities, hosted meetings, launched surveys, and collected opinions across the northwest metro area on the concept of a regional docked electric bike share system.

Regarding outreach and marketing efforts, Commuting Solutions has conducted significant community engagement and business outreach to collect data and opinions on a regional bike share program. Community engagement efforts came in the form of flyers, informational sheets, and other promotional material provided at tabling events and meetings (Workplace Commute Ambassadors, membership, Lunch-and-Learns, etc.), as well as digital efforts including social media and email marketing. With the publication of this study, the final version will be made available on the Commuting Solutions website and incorporated into future literature around regional TDM options.

## Overview of BCycle's Role in the Study

BCycle was identified by Commuting Solutions at the start of this discussion due to their technology selected by the City of Boulder as part of Request

for Proposals process to identify a bike share partner. Local government stakeholders wanted to connect the City of Boulder's bike share vendor to the rest of the northwest metro region's bike share system. Commuting Solutions, in partnership with local government stakeholders, pursued and was awarded a grant to explore the feasibility of a BCycle regional bike share program. In the early stages, when data was being gathered to determine the feasibility of regional expansion, BCycle was tasked with reviewing the plans and policies of each jurisdiction in CS' TMO service area to see where bike share aligned with their priorities (see more in Appendix C). BCycle participated in multiple e-bike demonstration events, bringing BCycle bikes to events with Commuting Solutions in every city in the study area throughout 2023. Then came identifying ingredients for success in the region's political reality and scoping out any software and technology requirements for implementation. Based on this information, case studies of existing bike share programs that reflected these jurisdictions' demographics- factors such as population size, density, and regional policies- were identified and analyzed to compare market conditions and determine potential strengths and weaknesses within the proposed program.

BCycle was also tasked with identifying costs associated with the operational expenditures of the program and agreed to disclose detailed cost information from comparable regional BCycle programs. These estimates are intended to help inform local jurisdictions of potential financial considerations.

### **Overview of Jurisdictions' Roles in the Study**

Commuting Solutions convened local government staff throughout the planning process to discuss the current landscape of micromobility and discuss potential interest and options for a regional bike share system. Commuting Solutions facilitated

**Commuting Solutions has paved the way in exploring a regional bike share for over ten years, and now is implementing Strategy 2 of the Northwest Regional Transportation Demand Management Plan.**

meetings with stakeholders who provided input on each jurisdiction's existing transportation plans, micromobility regulations, and overall interest in a bike share program. This information was evaluated and included in this report. Stakeholders in these jurisdictions also worked to identify the interest of the public in a regional bike share program to gauge the feasibility of implementation. Jurisdictional staff plan to evaluate the need for Memorandum of Understanding (MOU) and collaborate on a Request for Proposal (RFP) to formalize a commitment to seek out options for a potential bike share program.

Once one or more jurisdictions are prepared to begin bike share implementation, they will be responsible for the cost of the launch, oversight, and maintenance of the program. The jurisdictions will actively work with the bike share operator throughout implementation and are responsible for deciding if they will bring bike share to their community.

### **Stakeholder Meetings**

Commuting Solutions convened meetings with jurisdiction staff to discuss the general format of the study and the methods of outreach used to engage residents of these local governments. The strategies used to gather this data included outreach events in each jurisdiction, posting information online, and the distribution of the Northwest Regional Bike Share Survey, along with a public demonstration event in each community during Summer 2023. The group also discussed previous efforts and experiences with

bike share in this region. These discussions included an agreement upon recommendations for regional bike share implementation and phasing. Seven stakeholder meetings were scheduled throughout the study. Stakeholders met to discuss elements of the bike share study both as a group and in one-on-one meetings facilitated by Commuting Solutions.

## Community Outreach

An outreach event was held in each of the jurisdictions the summer and fall of 2023. When possible, they were held in-tandem with other community events (farmer's markets, community gatherings, etc.) to capture the widest possible audience. BCycle and Commuting Solutions staff hosted a booth with project information and brought several BCycle bicycles and e-bikes so that participants could look them over, ask questions about the bikes and the BCycle program, and take a test ride. They were also encouraged to take the project survey, either at the event using a QR code or later through a supplied link. Across the eight events, 491 people were invited to learn more about the project, 190 were actively engaged in conversation about bike share, and 43 people took a test ride.

**Opinions about bringing bike share to the communities that engaged with the survey were generally positive, saying that it could be an effective way for residents to run errands to stores, visit community nodes such as the library or rec center, or use them for leisure access to nearby trails.**

Most participants were familiar with the bike share concept, likely from either experience with

other programs in the state or elsewhere. Opinions about bringing bike share to the communities that engaged with the survey were generally positive, saying that it could be an effective way for residents to run errands to stores, visit community nodes such as the library or rec center, or use them for leisure access to nearby trails. Those who had misgivings about implementing bike share had concerns such as lack of good cycling infrastructure, a feeling that the system would not get enough use, and the possibility of abandoned or misused e-bikes creating a negative aesthetic or causing access issues on routes and trails. A fuller look at the community outreach events is found in Appendix B.

## Business Outreach

Outreach events and demonstrations were key elements for obtaining input and building support for the bike share system. As part of the analysis on public opinion, local businesses throughout the region were encouraged to share their thoughts by taking the survey, attending the bike share demonstrations, and providing feedback. One of the main ways Commuting Solutions conducted outreach to local businesses was through its Workplace Commute Ambassador program. Ambassadors from over 30 businesses within the study area were informed about the study through meetings and newsletters and asked to participate in and spread the survey to coworkers. Ambassadors were encouraged to bring information about the study to their workplace, attend the bike share events to explore how the BCycle bike share works, and to give their opinions through the survey.

Commuting Solutions also informed local businesses through its Membership Meetings which were held regularly throughout the study timeframe. Members were encouraged to attend the demonstration events and submit their opinions through the survey.





## Micromobility Analysis:

A regional approach to micromobility bridges many gaps in mobility challenges, and with the already successful systems in the Denver region, such as the long-standing BCycle program in Boulder, stakeholders looked to conduct a SWOT analysis of bike share options to assess potential compatibility with a program of this size:

SWOT	Docked	Dockless	Bicycle	eBike
Strengths / Opportunities	<ul style="list-style-type: none"> <li>Predictable locations for users to find and for operators to maintain</li> <li>Easier to locate bikes when not in use to maintain</li> <li>Neat and organized appearance</li> <li>Circulation of bikes in a more predictable geography based on station locations</li> <li>Newer docked systems are easier to install or move than in previous generations of docked bike share systems</li> <li>Most popular mode of shared micromobility (Appendix A)</li> </ul>	<ul style="list-style-type: none"> <li>No docks to install or maintain</li> <li>Flexible destination choice</li> <li>Easily integrated into infrastructure (bikes can be easily added without the additional need of docks)</li> <li>Can be found scattered throughout a city located at a variety of destinations users may want to go</li> </ul>	<ul style="list-style-type: none"> <li>More familiar to rider base</li> <li>Less maintenance of specialized parts</li> <li>No energy or charging costs</li> <li>No battery life</li> </ul>	<ul style="list-style-type: none"> <li>Faster for users</li> <li>Users can travel longer distances more easily</li> <li>More comfortable to use while wearing plain clothes</li> <li>Accessible to more ages and abilities (less physical strain on body)</li> <li>Grants available to fund e-bikes</li> </ul>
Weaknesses / Threats	<ul style="list-style-type: none"> <li>Limited docking locations affect travel behavior</li> <li>Docked systems cost more to install and require some maintenance</li> <li>Shared systems are often faced with unstable funding models and affordability challenges (Appendix A)</li> </ul>	<ul style="list-style-type: none"> <li>Can become a hazard if parked in the rights-of-way</li> <li>Bikes can appear disorganized and "cluttered" when not in use</li> <li>Location dependent on last user and may be less predictable for users to find and operators to maintain</li> <li>Circulation of bikes on a larger geographic scale</li> </ul>	<ul style="list-style-type: none"> <li>Slower option for commuters</li> <li>Not as accessible to a range of ages and abilities (more physical strain on body)</li> <li>May not be as desirable to use in areas with steep hills and terrain</li> <li>Social and political movement towards e-bike</li> </ul>	<ul style="list-style-type: none"> <li>More expensive to maintain</li> <li>Requires regular, dependable charging</li> <li>Newer concept</li> <li>Higher speeds</li> <li>Battery may deplete before trip is over</li> </ul>



## Survey and Survey Data Analysis

When creating the Northwest Regional Bike Share Feasibility Study Survey, the questions were designed to gauge residents' interest in bike share, their familiarity with it, and their opinions regarding a regional bike share program in their community. The survey consisted of 15 total questions and included both base and clarifying questions. You can find a full list of questions and responses in Appendix E. The survey was available in English and Spanish, and advertised in social media posts from Commuting Solutions, on the Commuting Solutions website, and included on websites, digital newsletters and social media of participating municipalities. For certain questions, respondents also had the chance to input their opinions and suggestions through a text box which allowed for better clarification of thoughts. The data collected from this survey was used in the second stakeholder meeting to guide conversations on the public's readiness to accept a regional bike share system. Data from these responses are available both by jurisdiction and in entirety to better gauge the interest of a smaller subset of Commuting Solutions' TMO service area.

**82.77% of respondents believed that a shared e-bike system would benefit their community.**

A total of 325 responses were collected to the survey, of which 96.63% were located within the Commuting Solutions boundary identified for bike share expansion. The key takeaways from this survey indicated that 82.77% of respondents

believed that a shared e-bike system would benefit their community with 49.54% of respondents indicating that they have used a bike share system before. When asked if having access to a shared e-bike system would help connect with transit that respondents would like to use, 67.42% indicated "yes" and offered multiple suggestions of locations they would use them at. Many of the manual input responses fit into one of the following categories:

- Central Business Districts (CBDs) of cities/ jurisdictions
- Major intersections with existing bicycle infrastructure/lanes
- Park-n-Rides
- Bike-n-Rides
- Paved greenway entrances
- Hospitals, educational facilities (campuses, high schools), libraries, recreational facilities, grocery/ shopping centers

When asked to provide additional comments about a regional bike share program not covered by survey questions, there were mixed responses in support of and against the program. Many people were eager to see a program like this take off, referencing the ease and affordability of Boulder's BCycle program and other systems across the nation. There was significant support for e-bikes and the regional connectivity it would offer, with one respondent going as far as stating:

*"The BCycle program in central Boulder has revolutionized active transport in the city. I see them ridden everywhere; I use them regularly despite owning my own bikes. I've seen people who swore they were "not cyclists" light up when riding one. They are sorely missing from South Boulder and Gunbarrel and I'm sure in many other communities in the county. Please expand this fantastic program!"*

Neutral opinions of the program were recorded, with some asking clarifying questions or sharing suggestions from programs they have seen elsewhere. Many were curious to see when and where bikes would be available, and to learn more of the bike precautions that come with it:

*“ I think there are important safety considerations for pedestrians, bikers, and drivers. Are our roadways ready? What rules will be applied to protect everyone involved? ”*

Lastly, some opinions varied on the applicability of a regional bike share program to their city. Some noted concerns that the locations of bike share would be in a city's central business district and away from neighborhoods which would limit access. This survey came at a time before it was decided that it may be preferable if the bikes were docked at stations, so many respondents were also concerned about bikes being sprawled out randomly throughout a community. Others were concerned about safety for pedestrians who walk on sidewalks along roads without bike infrastructure:

*“ Because of the lack of regulation, I am deeply concerned about how children (and even some adults) are using e-bikes. The lack of respect from e-bike users towards slower moving methods (pedestrians and traditional bikers) is a serious issue. Until this issue is resolved I am opposed to providing this type of service and adding more e-bikes to the trail systems... ”*

Overall, attitudes towards a regional bike share program from this survey were overwhelmingly positive. Many of the people who took the survey were present at Commuting Solutions' community engagement events and were able to try an electric BCycle bicycle for the first time, while others took this survey on their own time. The results displayed generally positive outlooks on implementing bike share in the region. This survey helped guide study discussions and led to the conclusion that pursuing a bike share study would support the community's interest in providing an innovative transportation method and bridge gaps in FFM travel.



## Capital and Operational Maintenance Costs Estimates

Based on data from installing and operating regional docked e-bike systems in Boulder, Madison, WI, and Santa Cruz, CA (see Appendix F for more information on Case Studies), BCycle compiled ridership and cost estimates for each of the municipalities included in the Commuting Solutions TMO boundary. The chart below provides information on potential numbers of bikes and docks that could be installed in a municipality to explore the viability of bike share throughout the region, with additional bikes and docks to be added in future years if ridership and revenue targets are met. The funding available for privately-operated bike share from a variety of sources will strongly influence the viability of ongoing system growth in the region. Costs are broken down by the estimated incremental capital expenditure (Incremental CAPEX) and by the estimated operational costs (OPEX) of running such a system in the area. Critically, as the number of trips-per-bike-per-day increases, total annual trips also increase, and the system operates more efficiently.

US 36 Corridor	Bikes	Docks	CAPEX	Trips/Bike/Day	Annual Trips	OPEX	OPEX/Trip
Broomfield	110	220	\$ 726,000	1.00	40,150	\$ 288,750	\$ 7.19
Louisville	75	150	\$ 495,000	1.00	27,375	\$ 196,875	\$ 7.19
Superior	50	100	\$ 330,000	1.00	18,250	\$ 131,250	\$ 7.19
Westminster	50	100	\$ 330,000	1.00	18,250	\$ 131,250	\$ 7.19
<b>Corridor Total</b>	<b>285</b>	<b>570</b>	<b>\$ 1,881,000</b>	<b>1.00</b>	<b>104,025</b>	<b>\$ 748,125</b>	<b>\$ 7.19</b>

US 36 Corridor	Bikes	Docks	CAPEX	Trips/Bike/Day	Annual Trips	OPEX	OPEX/Trip
Boulder County (Niwot)	35	70	\$ 231,000	1.00	12,775	\$ 91,875	\$ 7.19
Longmont	110	220	\$ 726,000	1.50	60,225	\$ 288,750	\$ 4.79
<b>Corridor Total</b>	<b>145</b>	<b>290</b>	<b>\$ 957,000</b>	<b>1.38</b>	<b>73,000</b>	<b>\$ 380,625</b>	<b>\$ 5.21</b>

US 36 Corridor	Bikes	Docks	CAPEX	Trips/Bike/Day	Annual Trips	OPEX	OPEX/Trip
Erie	35	70	\$ 231,000	1.00	12,775	\$ 91,875	\$ 7.19
Lafayette	35	70	\$ 231,000	1.00	12,775	\$ 91,875	\$ 7.19
<b>Corridor Total</b>	<b>70</b>	<b>140</b>	<b>\$ 462,000</b>	<b>1.00</b>	<b>25,550</b>	<b>\$ 183,750</b>	<b>\$ 7.19</b>

Regional System	Bikes	Docks	CAPEX	Trips/Bike/Day	Annual Trips	OPEX	OPEX/Trip
<b>Total</b>	<b>500</b>	<b>1,000</b>	<b>\$ 3,300,000</b>	<b>1.00</b>	<b>202,575</b>	<b>\$ 1,312,500</b>	<b>\$ 2.63</b>





<https://bouldercolorado.gov/locations/valmont-bike-park>

The bike estimates in this chart are based on meetings and conversations with jurisdiction staff about potential introductory placement of e-bike docked systems in their municipality. Although this plan does not specifically lay out where the number of docks should be placed, this number was estimated based on factors like location (downtown or residential), lot size (how many bikes could fit), peak ridership times (morning commutes vs evening leisure rides), and other factors. The estimate on trips-per-bike-per-day and annual trips was based off the number of bikes in a jurisdiction and the estimated interest of the public in using these bikes. That estimated interest was based off conversations about cycling attitudes in each jurisdiction and the case studies from other BCycle programs.

Using the preferred corridor-focused approach, it is projected that within several years, a regional system of 1,000+ e-bikes could potentially provide 1,000,000 or more trips annually. This utilization estimate assumes an average of only one trip-per-bike-per-day in most study areas during the first year in expansion areas, though increased ridership will be a system goal, essential to delivering the environmental and social benefits bike share can provide, while improving the per-trip operational

**Using the preferred corridor-focused approach, it is projected that within several years, a regional system of 1,000+ e-bikes could potentially provide 1,000,000 or more trips annually.**

regional bike share OPEX breakdown is available in Appendix F.

Connectivity and transparency in a regional program are key factors to a successful regional structure, making it essential to look at the larger picture. Revenue estimates can be difficult to report, as bike share services vary in ridership according to city, placement, startup costs, partnerships, and other factors.

# Study Recommendations



## Overview

As a result of the extensive data collection, community feedback, and policy capabilities explored in this study, Commuting Solutions and local governments have identified that a docked, regional e-bike share system is preferable and expansion with BCycle may be a feasible project across the region.

With BCycle's already successful program in the City of Boulder and the multiple TDM supportive plans and policies in place within local jurisdictions to support bike infrastructure, it may be an opportune time to explore bike share across the region.

As explored in the SWOT analysis of docked vs undocked systems, a docked program supports reliability in location for residents and keeps bikes out of pedestrian rights-of-way or from "cluttering" a jurisdiction. Docked systems also offer easier tracking and maintenance of bikes, making them a preferred micromobility method. Although such a system may be accompanied by higher upfront

costs and may be more limited in its locations and availability to users, jurisdictions should plan to work with the bike vendor to identify key locations for these docked systems to allow for easier accessibility.

In the SWOT analysis of bicycle vs e-bike programs, it was identified that exploring an all-electric fleet of bicycles was most widely supported. E-bikes are a faster, easier option for commuting or touring an area with its less physically demanding nature. Lastly, innovation grants and social attitudes moving towards prioritizing electric bikes makes this a financially viable option, both in finding funding and maintaining ridership. Although e-bikes require more maintenance and have the added technical component of battery usage, it is recommended that jurisdictions be prepared to work closely with the bike share provider on all maintenance operations of both docks and bikes. It is also recommended that jurisdictions evaluate their bicycle infrastructure and regulations to account for the higher speeds that an e-bike can reach.



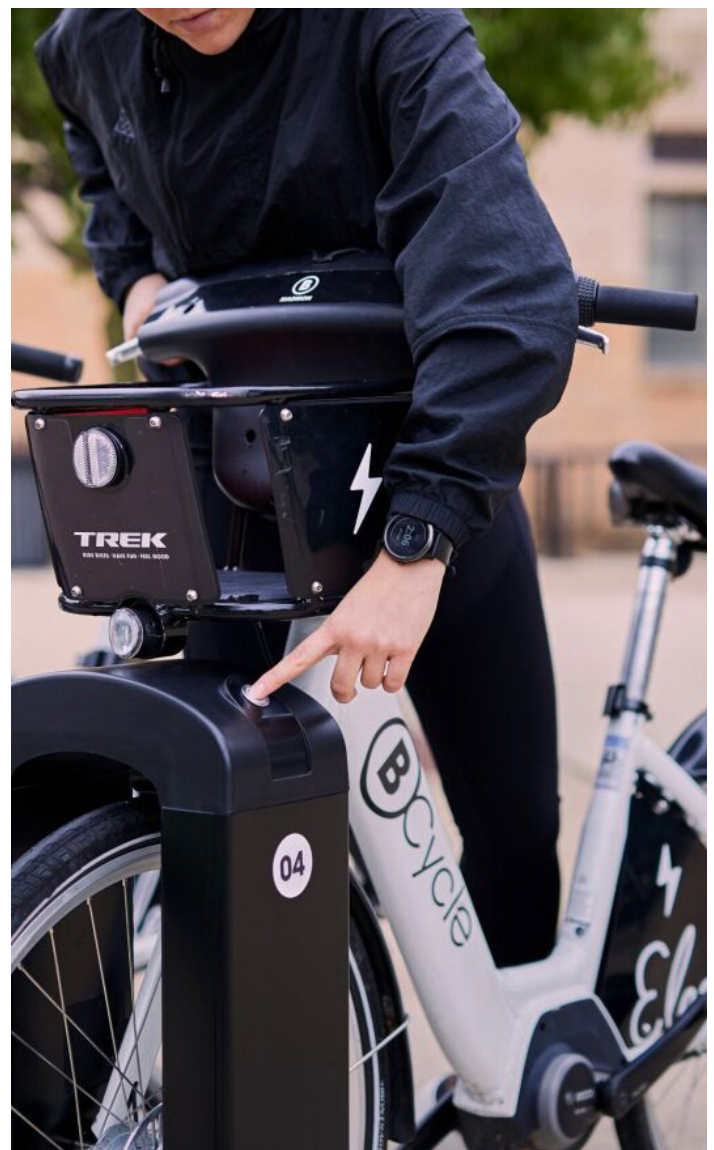
**Commuting Solutions and local governments have identified that a docked, regional e-bike share system is preferable and expansion with BCycle may be a feasible project across the region.**

## Phasing

Regarding the implementation of this regional bike share program, it is recommended that jurisdictions analyze how ready they are to take on this endeavor. Discussions with local government staff showed that there are differing levels of preparedness with infrastructure, ridership laws, and staff bandwidth to implement programs in each community. It is with this that Commuting Solutions does not recommend a blanket implementation across the nine jurisdictions. Instead, it is recommended that a gradual phased approach to this program, noting that more prepared jurisdictions may begin implementing bike share sooner while others work to set a successful foundation. It is also noted that a subsidy to bring a micromobility program to the suburban communities may be needed, and jurisdictions should be prepared for this need based on station and dock citing. With this, certain characteristics were identified that would best support a successful bike share launch:

- Strong potential ridership and revenue
- Partnership potential
- Market indicators
- Cost management

Some jurisdictions have a history of bike share programs, established cycling infrastructure, and supportive community attitudes towards cycling. These, in combination with local government support and the means to maintain and build on this momentum, would make a jurisdiction more successful in implementation. On the other end of this, some jurisdictions do not currently have the infrastructure or capacity to implement a bike share program but have indicated support for future possible implementation. The chart below analyzes these jurisdictions' ability to meet the above criteria on a scale of 1-100 seeing that a higher score indicates a better locational applicability.



Selection Criteria	Boulder County	Broomfield	Erie	Lafayette	Longmont	Louisville	Superior	Westminster	Average
<b>Strong ridership and revenue (3 trips/bike/day)</b>	<b>45</b>	<b>46</b>	<b>31</b>	<b>38</b>	<b>59</b>	<b>47</b>	<b>49</b>	<b>43</b>	<b>45</b>
Strong Cycling Infrastructure	50	40	30	30	60	60	60	30	45
Climate	75	75	75	75	75	75	75	75	75
Tourism	25	25	25	25	50	25	25	25	28
Major College/ Corporate Campuses	50	50	0	0	50	25	25	25	28
Community Density	25	40	25	60	60	50	60	60	48
<b>Great Partners</b>	<b>58</b>	<b>58</b>	<b>42</b>	<b>42</b>	<b>53</b>	<b>58</b>	<b>58</b>	<b>42</b>	<b>51</b>
Proximity to Trek or BCycle Operations	75	75	50	50	50	75	75	50	63
Cycling Culture/ Advocacy	50	50	25	25	60	50	50	25	42
Popular Support	50	50	50	50	50	50	50	50	50
<b>Market we can win</b>	<b>80</b>	<b>80</b>	<b>80</b>	<b>80</b>	<b>80</b>	<b>80</b>	<b>80</b>	<b>80</b>	<b>80</b>
Bike Share Exclusive	100	100	100	100	100	100	100	100	100
Low Theft Risk	60	60	60	60	60	60	60	60	60
<b>Cost Management</b>	<b>88</b>	<b>88</b>	<b>75</b>	<b>75</b>	<b>100</b>	<b>75</b>	<b>75</b>	<b>75</b>	<b>81</b>
Regional Expansion	100	100	100	100	100	100	100	100	100
Scale: 100+ Bikes	75	75	50	50	100	50	50	50	63
<b>Community Score</b>	<b>68</b>	<b>68</b>	<b>57</b>	<b>59</b>	<b>73</b>	<b>65</b>	<b>66</b>	<b>60</b>	<b>64</b>

The implementation of a docked, e-bike-centered regional bike share program across the northwest metro region would not only close the gaps of FFM connections, but it would also help to alleviate the strain on parking, expand access to transit locally and along the NAMS corridors, and provide a more healthy and affordable transportation option. With an emphasis on regional connectivity, a bike share program that includes all nine jurisdictions would be a valuable next step in advancing TDM strategies across the growing region.

## Next Steps

Towards the final months of this study, conversations around the next steps for this project looked at identifying potential funding opportunities, supporting phased implementation among local jurisdiction(s), continuing stakeholder collaboration and potential multi-agency partnerships.

Commuting Solutions thanks the local government staff for their participation in the study. We believe the region has the right mix of infrastructure, a built-in cycling culture, collaboration and partnerships, and the political leadership to make a regional bike share program a successful first and final mile solution. Ensuring financial viability will be the greatest challenge for the stakeholder collective.

# Study Appendices /

## Appendix A

### Links to Additional Resources

- **"A Micromobility Record: 157 Million Trips on Bike Share and Scooter Share in 2023."** National Association of City Transportation Officials, 22 July 2024, [nacto.org/2024/07/22/a-micromobility-record-157-million-trips-on-bike-and-scooter-share-in-2023/](https://nacto.org/2024/07/22/a-micromobility-record-157-million-trips-on-bike-and-scooter-share-in-2023/).
- [Bike Share Map](#)
- [CO 119 First and Final Mile Study](#)  
"CO 119 First & Final Mile Study." Commuting Solutions, Aug. 2021, [commutingsolutions.org/wp-content/uploads/2022/01/082321\\_CO-119-FINAL-REPORT.pdf](https://commutingsolutions.org/wp-content/uploads/2022/01/082321_CO-119-FINAL-REPORT.pdf) .
- [Medlin Bike-sharing World Map](#)
- [Northwest Regional Transportation Demand Management Plan](#)  
"Northwest Regional Transportation Demand Management Plan." Commuting Solutions, May 2023, [acrobat.adobe.com/id/urn:aaid:sc:US:43f047a9-a99e-4155-9bf0-5864be78d45f](https://acrobat.adobe.com/id/urn:aaid:sc:US:43f047a9-a99e-4155-9bf0-5864be78d45f) .
- [Northwest Area Mobility Study](#)  
"Northwest Area Mobility Study." Regional Transportation District, Aug. 2014, [www.codot.gov/projects/co119-mobility/assets/nams-final-report-508\\_reduced.pdf](http://www.codot.gov/projects/co119-mobility/assets/nams-final-report-508_reduced.pdf) .
- [RTD First and Last Mile Strategic Plan](#)  
"First and Last Mile Strategic Plan." Regional Transportation District, Apr. 2019, [res.cloudinary.com/rtd/image/upload/v1696452919/FLM-Strategic-Plan\\_06-10-19\\_phi2bz.pdf](https://res.cloudinary.com/rtd/image/upload/v1696452919/FLM-Strategic-Plan_06-10-19_phi2bz.pdf) .
- **Sustainable Communities Initiative Northwest Corridor Bicycle/Pedestrian Accessibility Study and SCI Bicycle Share Study**
  - [SCI NW Corridor Study](#)  
"Sustainable Communities Initiative- Northwest Corridor Study." Denver Regional Council of Governments, [acrobat.adobe.com/id/urn:aaid:sc:US:cab231f5-ecf4-40a6-9521-33980aa3f5ac](https://acrobat.adobe.com/id/urn:aaid:sc:US:cab231f5-ecf4-40a6-9521-33980aa3f5ac).
  - [SCI Bicycle Share Feasibility Study](#)  
"Sustainable Communities Initiative Bicycle Share Feasibility Study." Denver Regional Council of Governments, [acrobat.adobe.com/id/urn:aaid:sc:US:4184f57b-9a11-41f6-a6a8-6f6800da66f0](https://acrobat.adobe.com/id/urn:aaid:sc:US:4184f57b-9a11-41f6-a6a8-6f6800da66f0).
- [US 36 First and Final Mile Study](#)  
"US 36 First and Final Mile Study." 36 Commuting Solutions, Feb. 2013, [commutingsolutions.org/wp-content/uploads/US36FFM\\_Final.pdf](https://commutingsolutions.org/wp-content/uploads/US36FFM_Final.pdf).



# Study Appendices

## Appendix B

### One-on-One Jurisdiction Meeting Notes



#### Boulder County

- The County Transportation Master Plan calls for FFM mile services including bike share.
- The CO 119 BRT will need bike share to close the gap on FFM for CO 52, Gunbarrel and Niwot. Bike Share will be of particular importance to the lower income manufacturing workers using the CO 52 BRT stop to access the business parks on CO 52 and connecting the BRT riders at 63rd Street to jobs and housing in Gunbarrel and the Gunbarrel Tech Center.
- Space for bike share is being included in the transportation station/mobility hub design for CO 119 park-n-rides.
- Niwot is an unincorporated town. Niwot's businesses, residents and visitors could benefit from bike share for use within town and to connect to the planned large BRT station on CO 119. Bike share is seen as a safe, sustainable, affordable, and equitable part of transportation plans across the county.
- Bike share could help expand access to outdoor recreation
- Bike share could be of particular benefit to lower income residents of the county and visitors because bike share eliminates the need to buy, maintain or store a bike.



#### City of Boulder

- City of Boulder wants to expand BCycle within Boulder outside of the central nodes that it exists in today
- District and company membership programs are a priority for the city
- CU Boulder and City of Boulder work very collaboratively around shared micromobility and would be partners in pursuing expansion
- Potentially interested in funding access for low-income bike share riders

# Study Appendices

## Appendix B



### City and County of Broomfield

- Transportation plan from 2016 calls for integrating bike share as an FFM connection to transit
- The Greenhouse Gas Reduction Plan from 2022 includes language around a bike share and e-bike program that was identified as a goal to implement by 2024
- Currently stands as the fastest-growing county in the state
- Stakeholder engagement has indicated that docked or hub-based shared micromobility modes are a primary goal if bike share were to expand here
- Multi-use paths identified in the area: US 36 Bikeway, connections to US 36 Bikeway, wide sidewalks, Industrial Lane (parallel US 36), underpass beneath US 36 nearby Midway
- Consistent and engaged participation from Broomfield staff on bike share



### Erie

- Transportation Mobility Plan revision started in 2023 and intends to add language around mobility modes and expansion of multimodal options
- Erie's council is interested in pursuing regional TDM strategies but is not sure it can take on the role of facilitator in this
- Out-commuting is a significant part of transportation in Erie, less so because of the expansion of work-from-home policies
- The public in Erie are supportive of expanding trail system- as it currently stands, Coal Creek Trail is a primary bike route



### Lafayette

- Downtown charter plan to be updated in coming years with emphasis on encouraging the development of 15-minute neighborhoods
- Out-commuting for work is common
- 2019 PROST (Parks, Recreation, and Open Space Master Plan) mentions e-bikes and bike share as a future goal

# Study Appendices

## Appendix B



### Longmont

- Sponsorship-dependent business model of Zagster bike share did not last long
- Longmont city staff is interested in bike share and can dedicate some staff time to it
- Transportation Roadmap mentions bike share, with TDM and equity included in transportation plan
- Micro transit is a focus for Longmont
- Longmont City Council does not want to pursue shared scooters currently
- Bike mode share increases, especially with the growth in E-bikes, has generated greater interest in recent years
- Possible funding for bike share with equitable access is available



### Louisville

- Bike share mentioned in transportation master plan and referenced in city's sustainability and equity plans
- Pursuing bronze or silver bicycle friendly status with the League of American Bicyclists
- Has not had significant interest in pursuing bike share from vendors, has not allocated funding, and is in a conservative budget position related to Marshall Fire recovery
- If bike share idea generates steam here, a sustainability coordinator could potentially apply for bike share grants if available
- Coal Creek Trail and the Power Line Trail are main biking trails, with e-bikes allowed on recreational trails



# Study Appendices

## Appendix B



### Superior

- Robust regional and local bikeway connectivity to bus rapid transit along US 36 is promising for bike share
- Downtown Superior is a dense, walkable, mixed-use community close to rapid, regional transit along US 36. Bike share is one of many TDM solutions the Town is considering for this area.
- Commuting Solutions plan for Superior recommended bike share alongside other modes
- Funding is limited as the Town continues to recover from the Marshall Fire
- Extensive trail connections between the residential neighborhoods of Rock Creek, Downtown, and Original Town and commercial centers Rock Creek Village, Downtown, and Superior Marketplace.



### Westminster

- Planning emphasis is on the new downtown developments
- Taken from its sustainability plan, the percentage of workers who walk or bike is estimated at 0.5%
- Parks, Recreation, and Library Plan has not been updated in roughly ten years- there is a push to update this in coming years
- The city is likely to slow multi-family development, and instead shift its focus towards office, commercial, and retail development
- E-bikes are currently not a large topic of discussion, although they were mentioned in 2021 Transportation and Mobility Plan with 18 main corridors identified as feasible places to implement

# Study Appendices

## Appendix C

### Local Government Plans and Policies

The Commuting Solutions project team and BCycle reviewed each local government's transportation plans and policies to identify where they overlap with bike share. This research was intended to identify how much bike share was already a part of the city's plans and to assess the political climate when looking ahead towards implementation. An overview of how bike share fits in jurisdiction plans is as follows:



#### Boulder County

The Boulder County Transportation Master Plan (2020) includes bike share as a priority in serving different populations across the region, more specifically for older adults, people with disabilities, people with low incomes, and the Hispanic or Latino community. It also was identified as a major FFM service and could serve as an important transit connection the rest of Boulder County. In separate meetings with county staff, bike share was noted as being included in the transportation stations and mobility hub designs of future initiatives and could be an important resource at Park-n-Ride stations along regional NAMS corridors and other key mobility hubs throughout unincorporated Boulder County.



#### City of Boulder

Seeing that BCycle already exist here, the City of Boulder's 2019 Transportation Master Plan specifically addresses the need to develop increased access to e-bike share programs across the region (Action 3.C) and highlights the established success of the current BCycle program. It also considers the need to build out advanced mobility policies- like bike share- to better establish regulations around city safety and connectivity with the region. In discussions with city staff, one priority in supporting bike share is allowing district and company membership programs and is interested in funding access for low-income bike share riders.



#### City and County of Broomfield

The City and County of Broomfield's Transportation Plan (2016) calls for integrating bike share as an FFM connection to other transportation networks across the municipality. More specifically, Action Step TS-C.4.1 calls to "provide covered and secured bike parking at transit stations and to integrate bike share and work with RTD to ensure adequate space for bikes." Their Greenhouse Gas Emissions Reduction Plan (2022) similarly called out the need for a regional bike share program under the chapter titled "E-Bike Sharing Micro Mobility Program" where an action item looked to "further expand usage and accessibility [to transportation and

# Study Appendices

## Appendix C

### City and County of Broomfield, cont.

neighboring communities]." Broomfield's Wayfinding System Report (2022) called out the need for systems planning to prioritize route-making to provide access to bike share systems, and their Bicycle and Pedestrian Assessment (2019) makes strategic recommendations to improve safe cycling infrastructure across the county.



### Erie

The Town of Erie's Transportation Plan (2018) lists bike sharing as an innovative and easily accessible shared-use mobility option (Chapter 6). Here, it is referred to as a transportation option that is "rapidly changing the way people travel, which may result in a decrease in dependency on single occupancy vehicles and auto ownership." The plan did note that Erie has a "bedroom community nature" which may lower the applicability of this trend in the area but recognizes that trends could change in the future. Erie is also underway in updating its Comprehensive Plan and the Transportation Mobility Plan, which in preliminary discussions could include the expansion of regional TDM strategies.



### Lafayette

The Lafayette Multimodal Transportation Plan (2023) listed in its TDM Strategies chapter that exploring a regional bike share program is identified as having an overall medium priority in the city. The plan stresses the importance of expanding different modes of transportation, and more specifically the inclusion of mobility hubs throughout the major corridors. Bike share was identified in this plan as an element to include in their goal of offering a variety of multimodal options. This Bike Share Feasibility Study was specifically mentioned as an "in-progress project," highlighting its ability to connect across the region.

Outlining its policy and program recommendations, the plan says "bike share and micromobility programs are growing in many parts of Colorado and the US. Permitting these programs in the right-of-way should coincide with code updates that clearly regulate the responsibilities of vendors and users in operating these vehicles on public streets and sidewalks."



# Study Appendices

## Appendix C



### Longmont

The City of Longmont is in the process of creating its Transportation Mobility Plan which is expected to have specific mention of bike sharing programs. The city has had multiple programs with different bike sharing companies over the years that ultimately failed due to internal issues on the provider's side. The city is eager to implement a new program with the hope of connecting it regionally.

The city's Envision Longmont Plan (2016) contains technical appendices that provide additional detail for the plan including a Multimodal Transportation Implementation Plan. Although there is no direct mention of bike sharing programs in this document, there is significant emphasis on the work already being done to support the active transportation and bicycle systems in the area. It is noted that there are hopes to expand bicycle culture in the future which could be accomplished through innovative TDM strategies, like bike share.



### Louisville

The City of Louisville's Transportation Master Plan (2019) identifies the coordination of a bike share network as an important program (Program 6) to focus on in coming years. The plan emphasizes the importance of regional connectivity through different TDM strategies and wants to shift efforts to reducing traffic congestion and stress on road infrastructure through different approaches. Specifically, the plan says about bike share:

A bike share program can encourage bicycle use between key destinations and help fill gaps in the first and last mile infrastructure around transit. In Louisville, bike sharing could be a viable way to connect areas like McCaslin Station, Avista Hospital, the former StorageTek site, the CTC, Downtown, DELO, and Kestrel.

#### Key Considerations

- Utilizing a shared type of system or technology with surrounding communities can increase utilization as people are already familiar with the system and more likely have the app for use.
- Effective wayfinding can help people easily locate stations at both their beginning and end points, which promotes usage.

# Study Appendices

## Appendix C

### Implementation

- The city should continue efforts to coordinate on a regional level to implement a bike share program. A regional program allows riders to cross jurisdictional boundaries and provides an operator with a more viable system.



### Superior

The Town of Superior's Transportation Plan (2014) notes wanting to provide transportation hubs in the Town Center to "provide access to a variety of transportation options in a centralized location including bus stop, bike parking, bike share, car share, e-car charging and transportation information kiosks" in its chapter labeled "Other Modes of Transportation." It goes on to state that it would like to investigate bike sharing programs as it could fill gaps in FFM travel with RTD, the City of Louisville, and the greater US 36 stakeholders. In conversations with the town's planning staff, Downtown Superior is a dense, walkable, mixed-use community close to rapid, regional transit along US 36. Bike share is one of many TDM solutions the Town is considering for this area.

Commuting Solutions created the Superior Town Center TDM Plan in 2015 which recommended the development and implementation of a bike share program that would encourage the use of active transportation modes and connect to nearby businesses and the BRT stations along US 36. Chapter 3.4 of this plan was entirely dedicated to the importance and relevance of bike share as a TDM strategy and the benefits to Superior that could come from regional connectivity.



### Westminster

Westminster's Transportation and Mobility Plan (2021) states that there is a potential future of integrating bike and scooter share into Westminster's transportation plans and is currently evaluating how best to integrate it with the existing infrastructure. Westminster created a bicycle plan in Chapter 7 of its Transportation and Mobility Plan, noting that it envisions a safe and accessible on-street bike network that would connect to other transportation options regionally. This plan could help the regional connectivity of a micromobility bike share program and provide infrastructure improvements to support it.

# Study Appendices

## Appendix C

### Westminster, cont.

Commuting Solutions created the Downtown Westminster Transportation Demand Management Plan in 2016 where a bike share program was identified as being a previous endeavor in Westminster and should be a key TDM program that could receive more funding for expansion. It was noted that CS was working with other communities along US 36 to develop policy guidance for e-bikes that could better support the regional build-out of shared e-bike system and connect with the existing BRT systems that could better support multimodal transportation.

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# Study / Appendices

## Appendix D

### Outreach, Demonstration Events, and Data

Outreach events were held in eight of the nine jurisdictions included in the Commuting Solutions TMO boundary. The City of Boulder did not incur any outreach or demonstration events due to the nature of BCycle already established. These events took the form of:

- Community outreach
- Business outreach
- Jurisdiction outreach

### Demonstration event locations were held throughout 2023:

- **July 6th:** Niwot, Rock & Rails
- **July 8th:** Superior, Concert in the Park
- **July 10th:** Broomfield, Concert in the Park
- **August 10th:** Lafayette, Picnic on the Plaza
- **September 16th:** Longmont, Rhythm on Roosevelt
- **September 29th:** Westminster, Neighborhood Night
- **October 4th:** Erie Community Center
- **October 10th:** Louisville Recreation Center

### Data on engagement at each of the demonstration events:

Measure	Niwot	Superior	Broomfield	Lafayette	Longmont	Westminster	Erie	Louisville	Total
People invited to ride	106	58	57	33	85	33	20	59	451
People engaged in conversation	25	40	25	21	27	15	12	25	190
Number of riders	6	14	12	3	4	0	4	0	43

# Study / Appendices

## Appendix E

### Northwest Regional Bike Share Feasibility Study Survey Responses

The Northwest Regional Bike Share Feasibility Study Survey was conducted through SurveyMonkey from June 26th through October 10th, 2023, and collected 267 responses across multiple jurisdictions. Although a total of 267 responses were collected, not every question required a response and some were skipped. The percentages given reflect that of the responses gathered for that question, not of the total 267. The survey was promoted through Commuting Solutions' social media pages, website, and at in-person demonstrations and community events. All respondents were given the same prompts (unless otherwise indicated) and the survey data is as follows:

#### Q1 "Where do you live?" (243 respondents)

- **Boulder**
  - 15.03% (49 respondents)
- **Broomfield**
  - 45.4% (148 respondents)
- **Erie**
  - 3.07% (10 respondents)
- **Lafayette**
  - 3.07% (10 respondents)
- **Longmont**
  - 8.59% (28 respondents)
- **Louisville**
  - 3.99% (13 respondents)
- **Superior**
  - 10.12% (33 respondents)
- **Unincorporated Boulder County**
  - 1.53% (5 respondents)
- **Westminster**
  - 5.83% (19 respondents)
- **Other**
  - 3.37% (11 respondents)
    - + Arvada (2 respondents)
    - + Aurora (1 respondent)
    - + Denver (4 respondents)
    - + Gunbarrel (1 respondent)
    - + Lyons (2 respondents)
    - + Niwot (1 respondent)

# Study Appendices

## Appendix E

### Q2 "Do you ride a bicycle?" (243 respondents)

- **Yes, mostly ride a standard bicycle**
  - 70.25% (229 respondents)
- **Yes, mostly ride an electric bicycle**
  - 17.79% (58 respondents)
- **No, I do not ride a bicycle**
  - 15.03% (49 respondents)

### Q3 "Are you interested in starting to ride?" (asked to those who indicated they did not ride, 36 respondents)

- **Yes**
  - 68.75% (33 respondents)
- **No**
  - 31.25% (15 respondents)

### Q4 "How often do you ride a bicycle?" (asked to those who indicated they do ride a bicycle, 207 respondents)

- **Often (at least every week)**
  - 61.73% (171 respondents)
- **Sometimes (at least every month)**
  - 22.02% (61 respondents)
- **Not much (less than every month)**
  - 16.25% (45 respondents)



<https://broomfield.org/2774/Broomfield-Trail-Adventure>

# Study Appendices

## Appendix E

### Q5 "What are the reasons you ride a bike (check all that apply)" (asked to those who indicated they do ride a bicycle, 206 respondents)

- **Commuting to work**
  - 38.41% (106 selections)
- **Running errands**
  - 47.1% (130 selections)
- **For recreation**
  - 83.7% (231 selections)
- **To get exercise**
  - 79.71 (220 selections)
- **Other (please specify)**
  - 21 manual input responses were generated that fit into one of a few categories (full list of responses available upon request):
    - + "For personal enjoyment"
    - + "For social reasons"
    - + "For triathlons/races"
    - + "To save gas and money"
    - + "To commute to work/class/childcare"

### Q6 Have you ever used a bike share system (bikes available for checkout by riders via an App or automated kiosk)? (243 respondents)

- **Yes**
  - 49.54% (161 respondents)
- **No**
  - 50.46% (164 respondents)

### Q7 Were the bikes you used electric? (asked to those who indicated they have used a bike share system, 128 respondents)

- **Yes**
  - 48.77% (79 respondents)
- **No**
  - 54.94% (89 respondents)

### Q8 Do you believe that a shared e-bike system would benefit your community? (243 respondents)

- **Yes**
  - 82.77% (269 respondents)
- **No**
  - 17.23% (56 respondents)



# Study Appendices

## Appendix E

### Q9 What benefits do you see for your community? Please check all that apply. (206 respondents)

- **Increased connection to destinations**
  - 86.04% (228 selections)
- **Exercise/ physical health benefits**
  - 81.51% (216 selections)
- **Reduced traffic congestion**
  - 87.17 % (231 selections)
- **Improved air quality**
  - 82.64% (219 selections)
- **Other (please specify)**
  - 21.51% (57 selections)
    - + 57 manual input responses were generated that fit into one of a few categories (full list of responses available upon request):
      - Opportunities to try e-bikes
      - Greater opportunity to commute to work/ campus/ bus stops
      - Greater attention given to cyclists on the roads and secured bike parking/ infrastructure
      - Increased savings
      - Persons unable to house a bike in their homes/apartments or unable to afford a bike
      - Increased transportation resources
      - A sight-seeing technique for both visitors and residents
      - Equitable access to multi-modal infrastructure and policy

### Q10 Please rank the benefits in order of importance with 1 being the most important and 5 being the least important: (206 respondents)

Benefits	1	2	3	4	5	Score
Increased connection to destinations	40.75% 108 ans.	21.13 56 ans.	17.74% 47 ans.	17.74% 47 ans.	2.64% 7 ans.	3.8
Exercise/ physical health benefits	24.91% 66 ans.	21.89 58 ans.	21.13% 58 ans.	27.17% 72 ans.	4.91% 13 ans.	3.35
Reduced traffic congestion	16.23% 43 ans.	33.58 89 ans.	32.08% 85 ans.	15.47% 41 ans.	2.64% 7 ans.	3.45
Improved air quality	12.45% 33 ans.	18.87 50 ans.	26.42% 70 ans.	37.36% 99 ans.	4.91% 13 ans.	2.97
Other reasons specified in Q9	5.66% 15 ans.	4.53% 12 ans.	2.64% 7 ans.	2.26% 6 ans.	84.91% 225 ans.	1.44

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## Appendix E

**Q11** Where would you be most likely to use a shared e-bike?  
Please name origins, destinations, and/or routes you would use:  
(243 respondents)

- **600+ manual input responses were generated that fit into one of a few locations/ areas (full list of responses available upon request):**
  - Central Business Districts (CBDs) of cities/ jurisdictions
  - Major intersections with existing bicycle infrastructure/lanes
  - Park-N-Rides
  - Bike-N-Rides
  - Paved greenway entrances
  - Hospitals, educational facilities (campuses, high schools), libraries, recreational facilities, grocery/ shopping centers

**Q12** Could having access to a shared e-Bike system help you connect with transit that you would like to use, such as a certain RTD station or route?  
[243 respondents]

- **Yes**
  - 67.42% (209 respondents)
- **No**
  - 32.9% (102 respondents)

**Q13** Please list which bus routes a shared e-bike would help you access.  
[243 respondents]

- **Responses were collected from those who answered "yes" in previous question but mostly fit into one of a few routes (full list of responses available upon request):**
  - Flatiron Flyer
  - McCaslin at US 36
  - Jump
  - Bolt
  - Dash
  - Jump

**Q14** Please give us your contact information if you'd like to receive email updates on this project and other important transportation issues in the northwest metro area.

- **Responses are hidden due to safety concerns and are not available upon request**

# Study Appendices

## Appendix E

**Q15 Thank you for your time! If you have any additional comments, please leave them here. Check out our website at [commutingsolutions.org](http://commutingsolutions.org) for the latest news about sustainable transportation options in our area!**

• **83 manual input responses were generated, some of the more insightful are included here (full list of responses available upon request):**

- "This would be revolutionary for my commute. Not only would I be able to cycle more often, but I would be able to access more transit options more often."
- "I believe that in collaboration with the cities to build proper infrastructure a shared bike program would see a high (number) of riders. Research has shown that all throughout the world, if you build it, they will come."
- "I think there are important safety considerations for pedestrians, bikers, and drivers. Are our roadways ready? What rules will be applied to protect everyone involved?"
- "I like the idea of having a bike share system, but I am worried about how spread out the target area is. From the limited information I've seen about bike share programs, they appear to perform best if the bike stations are packed close together in a densely populated area (e.g., downtown Denver). But I also recognize that commuting to work can be a challenge in the Northern Denver - Southern Boulder region owing to a lack of other public transit options (other than the FF and other RTD buses), so I am open to trying new solutions, especially relatively low-cost solutions like a bike share program."
- "The infrastructure / bike lanes are not set up in the area to accommodate e-bikes safely. Either they are on the sidewalks interfering with pedestrians or on the street with no protection from vehicles."
- "The BCycle program in central Boulder has revolutionized active transport in the city. I see them ridden everywhere; I use them regularly despite owning my own bikes. I've seen people who swore they were "not cyclists" light up when riding one. They are sorely missing from South Boulder and Gunbarrel and I'm sure in many other communities in the county. Please expand this fantastic program!"
- "As someone who walks nearly daily for exercise, I am concerned about adding this program which is sure to add more bicycles to our shared paths as these will be the preferred paths for the infrequent or visiting bicyclist. As it is, too many bicyclists on these shared paths do not understand that pedestrians have the right of way."
- "This system seems especially useful as a first/last mile connector to regional transit. I can see it as a missing link for commuters to fully connect a bus trip, making that multimodal trip much more attractive if the buses didn't get stuck in traffic with all the SOVs."

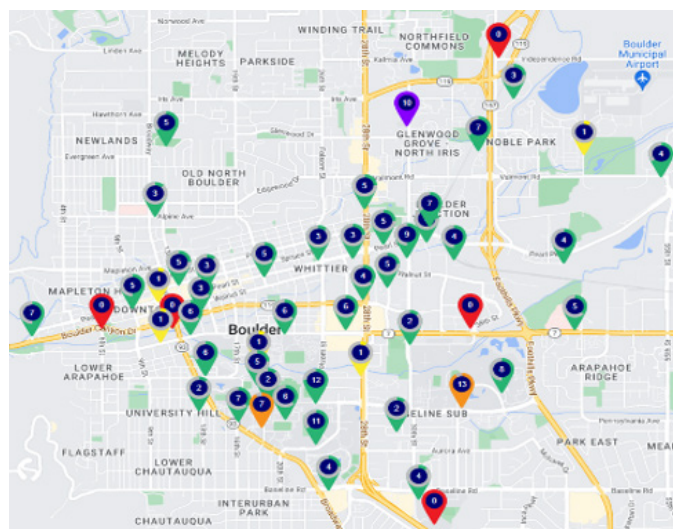
# Study Appendices

## Appendix F

### BCycle Case Studies:

#### Boulder, Colorado City-Wide BCycle System Use

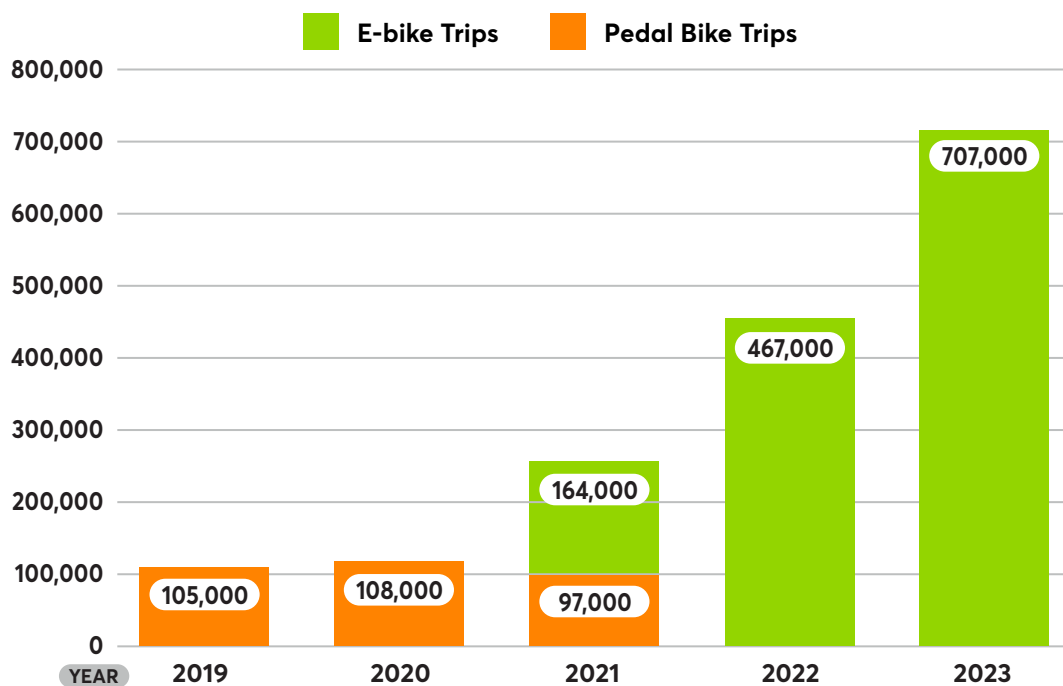
As of early 2024, the Boulder BCycle system provides 300+ shared electric bikes at 55 stations distributed throughout roughly five square miles of the city. The system prioritizes a high station density in mixed-use areas with safe biking infrastructure. While a system expansion in 2015 brought bike single stations to Gunbarrel and Table Mesa Park and Ride, these isolated locations performed poorly compared to the system average, and the equipment was relocated to increase station density within the core system footprint. From this experience, Boulder BCycle concluded that bike share in the area is most useful to riders when it is located in higher-density, multi-use zones adjacent to riding infrastructure and transit.



#### Program Service Area:

- 300 Electric bikes
- 55 stations
- 5 square miles

#### Boulder BCycle Annual Trips 2019 – 2023



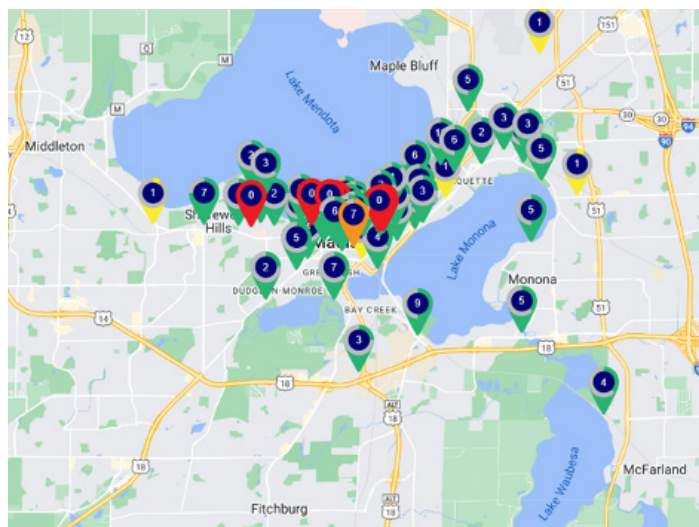


# Study / Appendices

## Appendix F

### Madison, Wisconsin Regional BCycle System Use

In 2022 the Madison, Wisconsin BCycle system started growing beyond the concentrated service area that defined its first decade in the city. This expansion is transforming the legacy Madison BCycle system into a regional program serving the larger area, with its growth on track to reach nearly 100 stations with 500+ bikes in 2024. Expansions into Fitchburg, Monona, and the Village of McFarland are allowing riders to take longer trips across multiple jurisdictions. More information on the annual trip rates between 2017 and 2022 is available in the appendix.



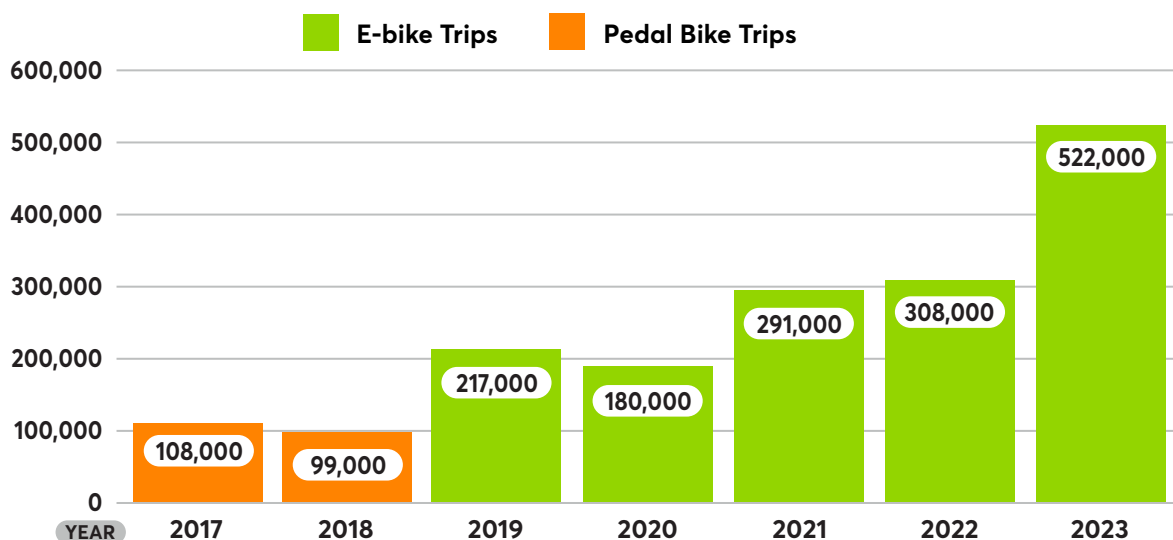
#### Program service area:

- 400 electric bikes
- 66 stations

#### Regional expansion:

- 120 bikes
- 32 stations

### Madison BCycle Annual Trips 2017 – 2023



# Study Appendices

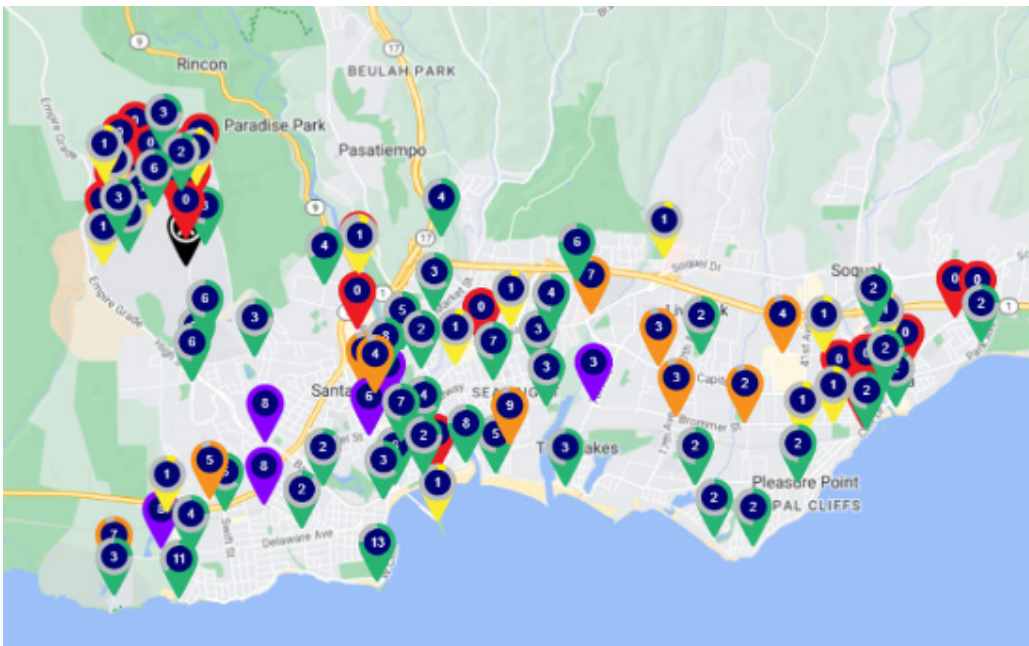
## Appendix F

### Santa Cruz, California Regional BCycle System Use

Launched in 2023 as part of a multi-jurisdictional RFP including the City of Santa Cruz, University of California Santa Cruz, County of Santa Cruz, City of Capitola, Cabrillo College, and City of Watsonville, Santa Cruz BCycle has been planned since its inception as a regional bike share system. System use grew quickly, exceeding 3 trips per bike per day in the program's first year, with utilization especially strong among students on the campus of UC Santa Cruz.

#### Program service area as of June 2024:

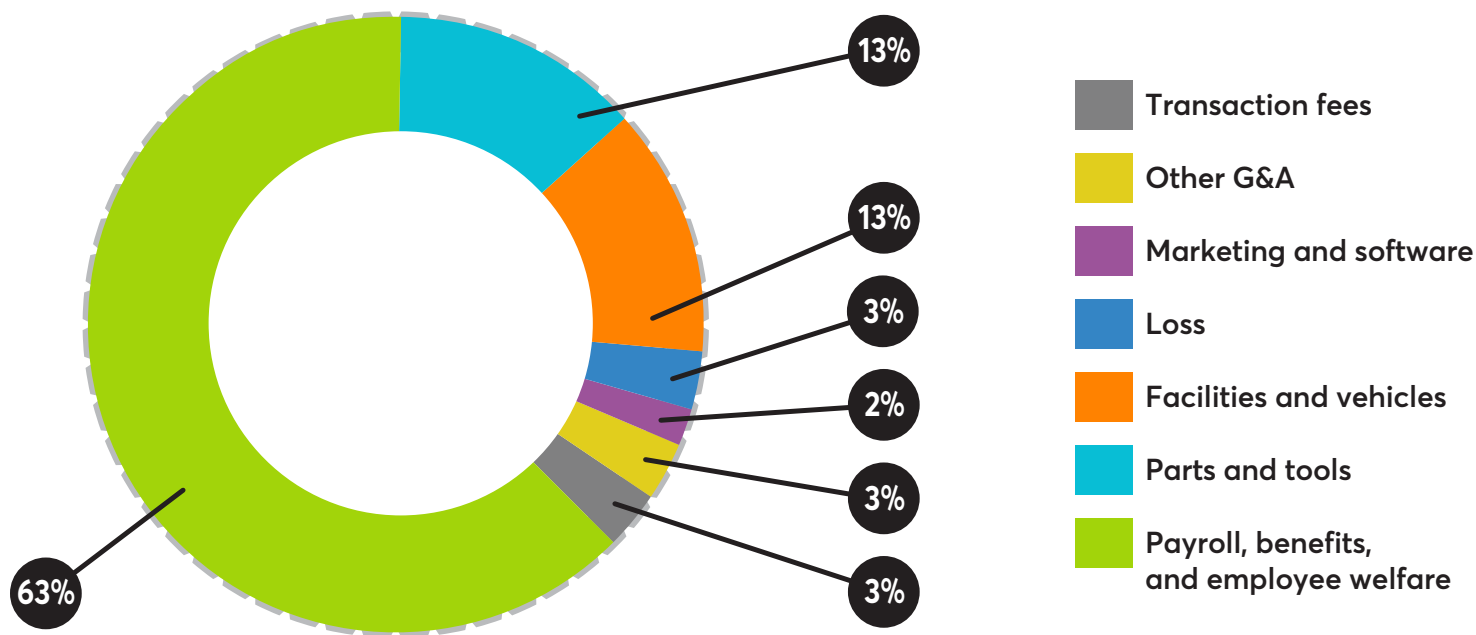
- +400 electric bikes
- +100 stations



# Study / Appendices

## Appendix F

### Estimated Regional Bike Share OPEX Breakdown:



### Regional Cost Estimates Based on Boulder System

Category	Percentage	Amount
Payroll, benefits, and employee welfare	63%	\$1,700,000
Parts and tools	13%	\$350,000
Facilities and vehicles	13%	\$350,000
Loss	3%	\$75,000
Marketing and software	2%	\$60,000
Other G&A	3%	\$75,000
Transaction fees	3%	\$75,000
<b>Total</b>	<b>100%</b>	<b>\$2,685,000</b>