

Appendix C. Program Recommendations Background

The Appendix provides background information for the program recommendations in Chapter 2 including current initiatives in the Shasta Region and examples from other communities and programs.

Education

Current Educational Initiatives

There are several programs and organizations within Shasta County and the City of Redding that support and encourage active transportation for recreational and utilitarian trips.

Shasta County Public Health Programs

Shasta County Health and Human Services Agency – Public Health provides education and programs through local schools and in the broad community to improve community health outcomes. These efforts include:

- Shasta Safe Routes to School program
- Promoting active lifestyles (including walking and bicycling) for chronic disease prevention
- Improving safety (including bicycle helmet fitting, decreasing driving under the influence, and discouraging distracted driving/bicycling)

Healthy Shasta

“Healthy Shasta” is a collaboration of over 20 organizations focused on “making the healthy choice the easy choice” in relation to physical activity and healthy eating. Healthy Shasta aims to increase walking and bicycling among children and adults by working with partners to create environments that make biking and walking safe, easy, and convenient. Healthy Shasta activities include:

- Foster and encourage participation in walking clubs and host the annual Walktober Challenge
- Produce and distribute the Bike Redding Transportation Guide & Map as well as online trail maps
- Support local collaborative efforts around Shasta Bike Month and host the Shasta Bike Challenge
- Partner with Viva Downtown Redding to expand bicycle parking throughout Shasta County
- Encourage best practices to improve and expand opportunities for walking and bicycling
- Conduct annual bicycle and pedestrian counts

Shasta Living Streets

Shasta Living Streets is a non-profit organization in Shasta County that is dedicated to improving the region’s bikeway network, developing walkable communities, and creating vibrant public spaces. Shasta Living Streets initiatives include:

- Distributing educational materials
- Collecting input from the community regarding challenges and opportunities
- Providing the public with legislative updates
- Hosting events to connect with Shasta residents

Sharing the Word About Safety

Education around safe travel behaviors can take many forms and can focus on different audiences. For example, Safe Routes to School programs are focused on safe travel behaviors for students while other

programs may be focused on new bicycle riders or transit riders. Advertising campaigns and marketing efforts can also be geared towards the most vulnerable or disenfranchised members of the community.

Other information is tailored for a general audience. Educational information for drivers may include lessons on yielding, providing space while passing bicyclists, and traffic control compliance while educational information for bicyclists may include lessons on wrong-way riding or safe turning techniques.

Education may be conducted through several means, such as advertising campaigns, roadside or trailside events, or classroom training courses. Some information may focus on high crash corridors, intersections, or schools and parks.

At events, volunteers may provide handouts, reward good behavior with prizes, and have conversations with community members about the importance of safe travel behaviors. Tailoring event materials to the audience is important to ensure that the information is accessible and easily understood.

Bicycle Ambassador Program Examples

Salt Lake County's Bicycle Ambassador Program

The Salt Lake County (SLCo) Bicycle Ambassador Program team provides services to the 17 municipalities and unincorporated areas within Salt Lake County, Utah. The ambassadors are volunteers are passionate about educating residents, promoting safe bicycle travel, and creating a healthy shared-use culture and mutual respect between all roadway users.

Services they provide include: bike mentorship, community cycling workshops, safe cycling rewards, organized rides, commuter pit stops, and bike lane stewardship. Becoming a bicycle ambassador is easy and convenient through an online application. Successful bicycle ambassador programs are also in Chicago, Washington, D.C., and Philadelphia.

More information can be found here: <http://slco.org/active-transportation/bicycle-ambassador-program/>

League Certified Cycling Instructors

In Shasta County, some community members are trained as League Cycling Instructors through the League of American Bicyclists. The instructors' curriculum is focused on educating the community on bicycling "street skills." Several instructors teach the "Women on Wheels" class through the City of Redding's and City of Anderson's recreation programs. This expertise of teaching safety in the community is a strong, local resource. Healthy Shasta serves as a resource for connecting the public with LCIs and bicycle training.

Safe Routes to School Examples

Safe Routes to School Program

Shasta County Public Health has been in existence for many years and received a three-year grant from the California Transportation Commission's Active Transportation Program to educate and encourage children to use active transportation modes to travel to and from school.

The Shasta County Public Health's SRTS program includes:

- Training teachers and students
- Hosting events
- Coordinating bike and pedestrian counts

- Partnering with law enforcement to assist with crossing guard trainings
- Developing and implementing a bike and pedestrian curriculum
- Encourages school districts to create their own programs
- Supporting schools in developing walking school buses and bike trains
- Partnering with municipalities and school districts to identify priorities and implementation steps for infrastructure improvements around schools

Additional SRTS resources can be found at the following links:

- Pedestrian and Bicycle Information Center's Steps to Creating a Safe Routes to School Program: <http://guide.saferoutesinfo.org/steps/>
- Safe Routes to School National Partnership's Safe Route to School case studies, reports, evaluations, and resources: <https://www.saferoutespartnership.org/resources/browse/safe-routes-to-school>

Walking School Buses and Bike Trains

A successful Safe Routes to School program is walking school buses or bike trains, in which children, parents, school staff, or SRTS volunteers walk or bike in a group, is a popular way to encourage walking and biking to school.

Bike trains allow children to ride in a safe environment and become more comfortable riding a bike for transportation. This can instill a cultural norm that biking for non-recreational trips is convenient and fun. SRTS programs can lead to children using active modes as adults because they view walking and biking a normal everyday activity. Also, research from the Safe Routes Partnership has shown that biking or walking to schools can lead to improved academic performance.

Portland's Safe Routes to School Program

The Portland, Oregon region has been implementing STRS programs for many years. As federal funds for SRTS programs became increasingly difficult to obtain, SRTS program coordinators began seeking financial assistance from other sources. In 2016, Oregon Metro, the Metropolitan Planning Organization for the Portland region, approved a \$1.5 million fund that could be used to support the region's SRTS programs. Oregon Metro also provides SRTS programs materials and technical assistance, establishes priorities, and leads coordination efforts between various schools participating in the SRTS programs.

Bike Theft Prevention Initiatives

Education Example on Proper Locking Methods

Calgary's "Save the Bikes"

The City of Calgary in Alberta, Canada and Bike Calgary, a local bike advocacy organization, teamed up to launch a bike locking educational program called "Save the Bikes." The motivation for this campaign was a literature review which found that 90 percent of stolen bikes were either locked using a cable lock or were unlocked in a garage or storage unit. During a "Save the Bikes" event, volunteers placed stickers on public bike racks; the stickers illustrated three bike locking techniques which were rated from good to best. The event was a low-cost way to share information about bike locking methods, generate awareness, and encourage people ride their bikes.

Bicycle Registration Program

Bicycle registration programs, and associated databases, are typically managed by municipal police departments. If a registered bike is reported stolen, the bike is flagged in the database, and if the bike is recovered, it can be easily returned to the owner. With minimal effort and funding by municipalities, registration programs can increase the number of bicycles returned to their owners.

Project 529

Non-municipal organizations, such as non-profit groups, are also creating bike registration databases. One example is Project 529 (with the app name of “529 Garage”), which merged with the National Bike Registry in 2017. Project 529 interfaces with other bike registries such as Bike Index, Operation Hands Off, and bikeregistry.com and has created the largest bicycle database in the United States. When bikes are reported missing or stolen, the Project 529 app will send a “missing bike” poster to app users within the same community, thus increasing the number of people looking for the missing bicycle.

During the course of a year, the City of Vancouver, BC had a 35 percent reduction in bike theft (nearly 900 bicycles) which they attribute to their educational and enforcement efforts and partnerships with Project 529, community organizations such as bike shops, and the general public.

Anti-Bike Theft Signage Examples

Singapore’s Letter Board Signs

The Singapore Police Force places letter board signs in areas that are experiencing high rates of bike thefts. Some signs report the total number of thefts in that area during the previous year while others state that a bike theft has occurred at that location. The sign also provides:

- Contact information for reporting a stolen bike
- Techniques to reduce the likelihood of having one’s bike stolen
- Graphic illustrating the ineffectiveness of a cable lock¹

Newcastle University’s Sign Study

Newcastle University, in England, installed signs at three study locations with high rates of bicycle theft to evaluate the effects of anti-bike theft signage.² Bicycle thefts at the three study locations were compared to the reported thefts at locations. For a twelve-month period, reported bike thefts at the locations with signage were reduced by 62 percent when compared to the prior period. At locations without signage, the number of reported bicycle thefts increased by 65 percent. The results suggest that the intervention was effective but displaced the offenses to locations that did not have the anti-theft signage. While the use of signage has yet to be widely adopted in the United States, this intervention may be worth considering in “hot spot” locations for bike thefts given the low costs of signage.

Bait Bike Program Example

Sacramento’s Bait Bike Program

The Sacramento Police Department has a Bait Bike Program with approximately 20 bait bikes equipped with GPS tracking devices; the bikes were purchased by business groups with the aim of improving quality of life and reducing crime. The bikes are placed in locations throughout the city that have high

¹ <https://www.police.gov.sg/~media/spf/images/crimeposter/bicycle%20theft.jpg>

² <http://journals.plos.org/plosone/article/file?id=10.1371/journal.pone.0051738&type=printable>

rates of bicycle thefts, vehicle break-ins, or residential burglaries.³ In 2015, The Police Department deployed the bait bikes 168 times, resulting in 60 arrests with 59 repeat offenders.⁴

Encouragement

Encouraging people to use active modes can come in the following forms:

- Hosting events
- Rewarding and incentivizing those who choose to walk, bike, and ride transit
- Sharing information through social marketing
- Investing in interesting, well-designed active transportation infrastructure such as murals, signage, or custom bike racks

Encouragement campaigns can lead to increased visibility and comfort for pedestrians and bicyclists, improved safety, and more people choosing active transportation modes. Encouragement also creates social connectedness through shared stories and relationship building.

Branding or promoting trails, community rides/walks, and marketing popular routes can increase awareness of these community resources and help people think about the commute and recreational trips differently.

Encouragement Through Infrastructure

End-of-Trip Facilities

End-of-trip facilities make it easier and more comfortable for people to walk and bike, especially to work. Employers who provide these amenities may benefit from increased employee productivity, better employee health, reduction in absenteeism, reduced commute time, cost, and stress from parking and congestion, and a positive public image as organization that values the health of its employees and the environment.

Healthy Shasta's Bike Parking Pilot Program

Healthy Shasta's existing bicycle parking "crowd source" pilot could serve as a basis for where existing bicycle parking is located. This effort has captured roughly 75 percent of the locations, photos and some details of existing bicycle parking in Shasta County.⁵ As a next step in this initiative, SRTA could partner with Healthy Shasta to create a bike parking map with a companion online tool for the community to indicate where additional bike parking is needed. SRTA could also work with jurisdictions to install bicycle parking.

"Viva" Bicycle Racks

Viva Downtown Redding designed a bicycle rack unique to downtown Redding and worked with Gerlinger Steel to manufacture them locally. Since then, Viva and Healthy Shasta have partnered to fund and coordinate installation of over 85 bicycle racks throughout Shasta County. The cities of Redding, Anderson and Shasta Lake have installed the racks in local communities.

³ <http://www.sacbee.com/news/local/crime/article73651717.html>

⁴ <http://sacbike.org/south-sac-residents-question-bait-bike-program/>

⁵ <http://healthyshasta.org/news/bicycle-parking-map-project>

Urban Land Institute's Report

The Urban Land Institute has produced a report titled *The Active Transportation and Real Estate: The Next Frontier*⁶ which focuses on trends in active transportation, real estate development, and catalytic bicycle and pedestrian infrastructure projects. The Urban Land Institute found that relatively small investments in bike-friendly amenities can lead to increased returns.

End-of-Trip Facilities for Bicycle Riders Guide

The League of American Bicyclists' *End-of-Trip Facilities for Bicycle Riders* summarizes the benefits of providing end-of-trip facilities; provides suggestions on where amenities should be placed; and offers tips on what kind of amenities are appropriate for various locations (see Figure A.1).

Cyclist facilities	Safe Access	Bicycle parking for staff	Bicycle parking for visitors	Toilets	Showers	Lockers	Courtesy equipment*	Repair equipment**	Drinking water	Home delivery service
Workplace	✓	✓		✓	✓	✓	✓	✓	✓	
School	✓	✓				✓			✓	
University	✓	✓	✓	✓	✓	✓	✓		✓	
Shopping Centre, business centre, customer service centre etc	✓		✓	✓						✓
* Courtesy equipment may include a basin and mirror, benches, hairdryers, iron and ironing board, washing machine and dryer, towel service, clothing hooks, fan, power point for bicycle light recharging or other convenience item. ** Repair equipment refers to items such as a foot pump, tyre levers and puncture repair kit.										

Figure C.1. End-of-trip facilities recommended for various locations.

Source: League of American Bicyclists' *End-of-trip facilities for bicycle riders* (June 2006)

A copy of this guide can be found here:

www.bikeleague.org/sites/default/files/BFB_Queensland_End_of_trip_facilities_for_bicycle_riders.pdf

End-of-Trip Facilities: A Planning Guide for the Houston-Galveston Region

Another helpful resource is the Houston-Galveston Area Council's guide for employers, called the *End-of-Trip Facilities: A Planning Guide for the Houston-Galveston Region*, which was created with the aim of increasing the number of employers providing end-of-trip facilities. The guide identifies different types of amenities and offers suggested locations, cost estimates, level of security, design considerations, and case studies.

⁶ <http://americas.uli.org/wp-content/uploads/sites/125/ULI-Documents/Active-Transportation-and-Real-Estate-The-Next-Frontier.pdf>

A copy of this guide can be found here:

www.h-gac.com/community/livablecenters/publications/End-of-Trip-Facilities11-02-2015.pdf

Wayfinding Examples

Successful wayfinding systems include decision signs, confirmation signs, and turn signs. Decision signs are typically placed at decision points along bicycle routes, such as at intersections and key locations heading to and along bicycle routes. Confirmation signs indicate that bicyclists or pedestrians are on a designated bicycle or pedestrian facility, and turn signs indicate where a path turns from one street or facility to another.

Wayfinding may point residents and visitors to commercial corridors or centers, public facilities, parks, transit stations, or amenities such as water fountains or restrooms. Kiosks can be installed that provide detailed maps which should nearby destinations five or ten-minute walking or biking distance.

Bicycle Boulevards in Berkeley

The City of Berkeley has a network of Class III bicycle boulevards which are bicycle routes on low-volume, low-speed streets. The City has created a wayfinding system for bicycle boulevards that uses the following guidance to direct bicyclists along the bike boulevards.

- Identification – Identifies and confirms that bicyclists are on a bike boulevard
- Destination and Distance – Provides direction and distance to key destinations
- Destination and Distance (at boulevard crossings) – Two-sided signs at bike boulevard crossings providing directions and distance to key destinations
- Route Guidance – Two-sided sign that provides directional information where the route changes
- Off-route Wayfinding – Signs that direct bicyclists near the bike boulevard, typically parallel streets, to the nearby bike boulevard
- Street Identification – Replaced street sign along the bike boulevard with a bike boulevard branded sign
- Advanced Street Identification – Street signage along roadways that cross a bike boulevard warning motorists they are about to cross a bike boulevard

In addition to wayfinding signage, bicycle boulevards have pavement markings that are used to remind drivers that they are on a bicycle boulevard and should travel at low speeds. As programmatic support to the bicycle boulevard program, the City also encourages the community to provide input on damaged, missing, or obstructed wayfinding signs so they can quickly make repairs.

For more information, visit

www.cityofberkeley.info/Public_Works/Transportation/Bicycle_Boulevard_Signage_System.aspx

Salt Lake County

Salt Lake County developed a regional Bicycle Wayfinding Protocol which encourages a consistent, county-wide wayfinding system throughout the County's individual jurisdictions.

More information about this program can be found here:

https://slco.org/uploadedFiles/depot/fRD/planning_transportation/SLCoWayfindingProtocol.pdf

Encouragement Through Programs

Employer/Employee Incentives

Shasta Living Street's Bicycle-Friendly Business Program

Healthy Shasta, Shasta Living Streets, and the Redding Chamber of Commerce sponsor an annual Bicycle-Friendly Business Program to increase awareness about what businesses can do to support employees and customers in bicycling more regularly as well as to feature the efforts of local businesses.

Healthy Shasta began offering a Bicycle Friendly Employer award in 2010, and focused on encouraging employers to support their employees in bicycling to work. In 2016, the name of the program changed to "Bicycle-Friendly Business Program," and the focus of the program expanded to also consider how businesses also support customers, visitors, and a bicycling culture in the community.

Each year, the program offers annual awards to local bicycle-friendly businesses. Any business, organization, public entity or worksite within Shasta County is eligible to be nominated, and the winners are determined by a committee with representatives from several organizations who reference the League of American Bicyclist's Bicycle Friendly Business criteria. Winners receive recognition through free marketing; are honored at the Bicycle Friendly Business celebration; are awarded a complimentary bicycle rack of their choice and a bicycle friendly banner; and receive a Shasta Living Street Membership.

Transportation Demand Management

The Mobility Lab, a transportation research and policy organization, has identified seven TDM strategies that are effective in shifting auto trips to other modes. These strategies are ranked below from the most to the least effective:

1. Trip caps or maximum average vehicle occupancies
2. Ordinances and development conditions
3. Disincentives for driving such as paid parking, tolls, and congestion pricing
4. Incentives for transit and alternate modes
5. Comprehensive programs with mutually reinforcing services, such as transit, carpool/vanpool, bike, walk, transit stores, and other
6. Marketing business benefits to employers
7. Information sharing

SANDAG'S iCommute Program

The San Diego Association of Governments' (SANDAG) TDM program, called "iCommute," aims to increase the number of people who carpool, ride transit, bike, walk, and telework. The program provides commuter assistance, employer services, and support to local jurisdictions.⁷ The goals of iCommute include reducing traffic congestion; decreasing greenhouse gas emissions and environmental pollutants; reducing vehicle miles traveled; and helping the region meet the State-mandated goals to reduce greenhouse gas emissions.⁸

iCommute provides an interactive website with resources and connects commuters to potential ride matches for carpools and vanpools. One tool allows users to compare transportation options, calculate

⁷ <https://www.icommutesd.com/about-icommute>

⁸ iCommute TDM Program Fact Sheet: https://www.icommutesd.com/docs/default-source/default-document-library/3427-tdm-factsheet-september2015_rev.pdf?sfvrsn=4

the monetary and environmental costs of different options, and provides suggestions on alternatives and their associated benefits.

The following are a sample of iCommute's programs and services:

- *Bike encouragement program* - Supports the regional bikeway network and encourages bike commuting through Bike to Work Day events, complimentary employer bike services, a regional bike map, and bike lockers at more than 60 transit stations and Park & Ride locations throughout the region.
- *Walk, Ride, and Roll to School* – Developed to increase the number of children who walk, bike, skate, or ride a scooter to school; provides educational and safety classes and an annual mini-grant that awards up to \$1,500 to 15 schools, districts, or after-school programs.
- *Promotion and Campaigns* – Organizes annual events, such as Bike to Work Day and Rideshare Month, to encourage participation in TDM programs.
- *Employer Services Program* – Provides free assistance and tools to help local businesses create and implement their own employee commuter benefits program. Employers who provide exemplary benefits, have high participation rates, and shifts in employee transportation choices are recognized by their Diamond Award program.
- *Technical Assistance* – Provides local jurisdictions assistance in developing their TDM programs. For example, SANDAG partnered with the City of Chula Vista and local developers to formalize the City's TDM program and integrate the program into the City's planning and development process, General Plan, Climate Action Plan, and CO₂ Reduction Plan.

Bike Parking Program

Bicycle parking programs provide multiple benefits such as:

- Increasing the number of available bike parking
- Improving coordination between jurisdictions, property owners, businesses, and other organizations
- Streamlining public requests
- Providing one point of contact for developers regarding coordination of funding, installation, and replacement of bicycle parking during construction

Metropolitan Area Planning Council's Program

The Metropolitan Area Planning Council in Massachusetts developed a regional bicycle parking program that reimburses municipalities for the purchase of bicycle parking and other amenities.⁹ The program contracts with vendors that provide inverted-U racks, high-capacity racks, bike corrals, tool stands, shelters and canopies, stacked bicycle parking, and other amenities. Municipalities order the racks or amenities from the specified vendors and are reimbursed for the full cost after installation.

Bicycle-Friendly Business Program

Active Transportation Alliance's Bicycle-Friendly Business Program

In 2013, the Active Transportation Alliance (ATA), a non-profit organization that advocates for better biking, walking, and transit in Chicago, received a \$25,000 grant from PeopleforBikes, an advocacy organization, to launch a new Bicycle-Friendly Business program. As a part of the program, ATA:

⁹ <http://www.mapc.org/resources/regional-bike-parking>

- Promotes the participating bike-friendly businesses on their website which includes an interactive map
- Provides signage to participating businesses to promote the program
- Recruits champions who advocate for better bike facilities, post petitions, and coordinate with other businesses around bike, pedestrian, and transit issues

Bicycle Benefits

Bicycle Benefits is a national organization that works with businesses to incentivize bicycle-riding rather than driving. Business that are Bicycle Benefits members receive storefront decals, information cards, and branded helmet stickers. Customers who present the helmet sticker to member businesses receive discount or free gift.

League of American Bicyclist's Bicycle Friendly Business webpage

More information on becoming a business that supports a culture of bicycling can be found on the League of American Bicyclists' *Bicycle Friendly Business* webpage at <http://bikeleague.org/business>

Community Events

Examples of community events include "Open Street Events" and community rides.

Open Street Events

During Open Street Events, roadways are closed to vehicular traffic, and the community is invited to walk, bike, or roll. People often set up booths or tents, and the event has a similar feel to a block party. Since 2011, Shasta Living Streets has hosted Open Street Events in the City of Redding. Shasta Living Streets markets the event as a "free-form parade" and encourages people to walk, bike, and explore their city and learn about local businesses and attractions.

Community Bike Rides

Community bike rides are another way to encourage people to ride their bicycles. Community rides can be organized by advocacy organizations, businesses such as bike shops, municipalities, or other groups. During community bike rides, participants ride along a pre-determined route, and these rides can be geared towards children, adults, or both. The purpose of the rides can be purely recreational and social, or they could also contain a feedback element where participants analyze the existing network with the aim of recommending improvements.

Incorporating Active Transportation into Existing Events

Events aimed at encouraging people of all ages to walk, run, and bike for recreation and transportation can be included in new and existing events. For example, providing information about ways to walk, bike, or ride transit to a community events can be a great encourage people to try new modes. These events also support local businesses, provide a fun way to collect input on transportation needs and concerns, and promotes physical activity.

Encouragement Through Policies

Bike Parking on Private Property

The Shasta County 2010 Bicycle Transportation Plan recognizes the importance of providing bicycle parking and encourages employers to provide bicycle amenities, such as bicycle racks, showers, and lockers, at worksites. The Plan also supports the placement of secure bicycle parking at/or near major public transit stops.

Resources

For assistance in developing bicycle parking policies, the Association of Pedestrian and Bicycle Professionals (APBP) has developed the *2015 Essentials of Bike Parking: Selecting and Installing Bike Parking that Works* and the *2010 Bicycle Parking Guidelines* that provide recommendations, best practices and example policies. These resources can be found here: <http://www.apbp.org/?page=publications>

Section 5.106.4 of the California Green Building Standards Code includes the minimum requirements for short- and long-term bicycle parking, and jurisdictions within the State of California must comply with these requirements unless the jurisdiction has a stricter ordinance (i.e., higher bike parking minimums).

The Humboldt County Association of Governments' *2015 Bike Parking Sourcebook* also provides sample policies, municipal codes, and programs. This resource can be found here: http://hcaog.net/sites/default/files/bike_parking_sourcebook_final.pdf

Bike Parking on Public Property

Commute Seattle's Inventory

In 2015, Commute Seattle conducted a bicycle amenity inventory of Seattle's City Center. The report assessed the existing public and private bicycle amenities to determine if the supply could meet current and future demand.¹⁰ A bicycle parking inventory for the Shasta region could follow the Commute Seattle example.

Land Use Policies

Access to Transit

Currently, the Redding Area Bus Authority (RABA) provides a fixed-route and demand responsive transit service to the City of Redding and the broader urbanized area of Shasta County. RABA provides bike racks on the front of all fixed-route buses which can accommodate up to three bikes. RABA is the only local public transportation operator that originates in Shasta County; Modoc County's Sage Stage and Trinity County's Trinity Transit also have routes to and from the City of Redding.

In the 2007 Shasta Coordinated Transportation Plan, concerns have been noted around accessibility issues, lack of space for bicycles and luggage on transit, lack or absence of service in many areas, inaccessible bus stops for older adults or those with a disability, and a desire for comfort and safety improvements, lighting, protection from the weather, and seating, at existing transit stops.

Enforcement

Problematic Behaviors

Enforcement can aim to correct behaviors of both motorists and bicyclists. Problematic or dangerous motorist behaviors may include:

- Failing to yield the right-of-way
- Speed
- Dangerous left turns and right turns in front of bicyclists
- Driving too closely to bicyclists
- Opening vehicle doors into bike lanes

¹⁰ <https://commuteseattle.com/wp-content/uploads/2016/02/Commute-Seattle-2015-Bike-Inventory-Report-Updated.pdf>

- Parking in bike facilities
- Distracted driving
- Driving while under the influence of alcohol or drugs

Bicyclist behavior that can contribute to crashes may include:

- Wrong way riding
- Riding at night without bike lights
- Failure to comply with traffic laws
- Riding at high speeds or erratically on sidewalks

Drivers Failing to Yield the Right-of-Way

Motorists failing to yield to pedestrians and bicyclists can create a dangerous environment for walking and biking and may result in serious crashes. Enforcement of the right-of-way at locations with high volumes of pedestrians and bicyclists can improve safety and may increase the rate at which motorists yield to pedestrians and bicyclists. Locations for targeted yielding enforcement may include: trail crossings, schools, transit centers, commercial corridors, mid-block crossings, and other locations with poor sightlines or high safety risks.

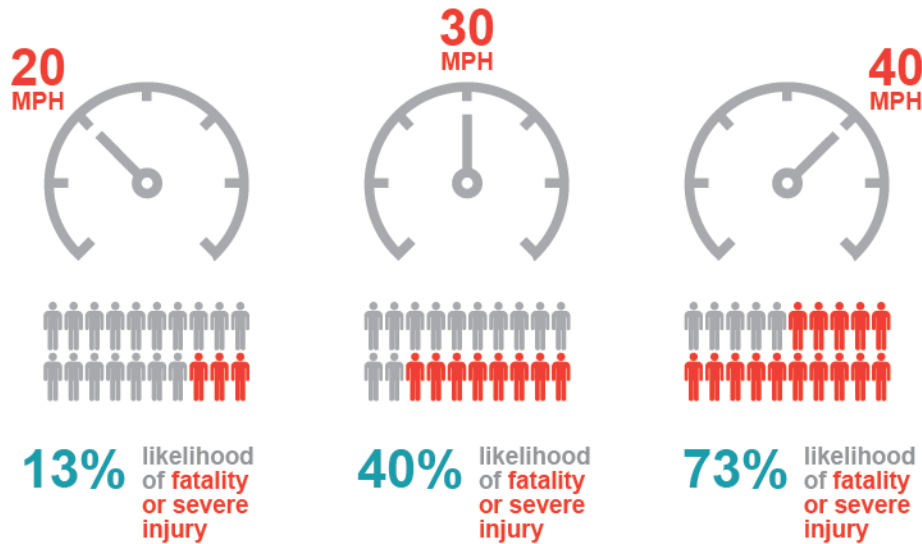
Enforcement efforts should be informed by data, and areas with high pedestrian and bicyclists injuries and fatalities should be evaluated for design improvements. In addition, law enforcement officers should regularly engage and partner with schools, businesses, and community organizations create a dialogue around locations where additional enforcement may be needed.

St. Paul's "Stop for Me" Campaign

St. Paul, Minnesota developed the "Stop for Me" campaign which is aimed at reducing pedestrian crashes by issuing citations to motorists who fail to yield to pedestrians at marked and unmarked crosswalks. During the campaign, volunteers attempted to cross at crosswalks throughout St. Paul; 34 crosswalks were included in the campaign. If motorists did not stop within 193 feet, the required distance for motorists to safely stop at 40 mph, the motorist was issued a ticket.

Speed

Vehicle speed is a contributing factor in nearly one-third of all fatal traffic-related crashes in the United States. Speed reduction is especially important to pedestrian safety, since the risk of severe injury or death to the pedestrian rises sharply as speeds increase, as shown in Figure 3.



Source: Tefft, B. C. *Impact speed and a pedestrian's risk of severe injury or death. Accident Analysis & Prevention*. 50. 2013.

Figure C.2. Impact Speeds and Risk of Severe Injury or Death

Prioritizing speed enforcement in areas with high populations of vulnerable users (such as children and seniors) or high-crash locations involving bicyclists or pedestrians can improve safety and comfort. To address this issue, some communities are recalibrating traffic speeds on roadways in dense neighborhoods or multi-modal areas.

Shasta County's Smart Trailer

The Shasta County Sheriff's Office has a speed-monitoring awareness radar tool, called a "smart trailer," which is used to control chronic speeding problems without the need of a law enforcement officer to be present. The smart trailer shows a motorist's speed on an oversized display and is placed at locations with high rates of speed limit infractions, or upon request and availability.

Seattle's Speed Limit Decrease

The City of Seattle found that approximately 25 percent of fatal crashes in Seattle result from speed. The City recognized that action was needed to increase safety for all roadway users and address the City's Vision Zero goal of ending traffic deaths and serious injuries on city streets by 2030. To meet these goals, the City of Seattle decreased their speed limits on many arterial roadways from 30 mph to 25 mph, and on neighborhood streets from 25 mph to 20 mph.

Traffic Control Compliance

In general, all road users, including pedestrians, bicyclists, and motorists, commit traffic control violations. Focusing enforcement of traffic compliance on areas with high bicyclist and pedestrian volumes, such as schools, parks, commercial corridors, can lead to a safer environment for all users.

Examples

The Chicago Department of Transportation's Bicycle Ambassadors work with the Police Department to host enforcement campaigns at high-crash locations. The purpose of these campaigns is to target

dangerous behaviors, often at intersections with stop signs or traffic signals. Warnings are issued to bicyclists and motorists who fail to obey the traffic control devices.

In 2016, the Bicycle Ambassadors conducted 66 campaigns, issued 850 warnings to bicyclists, and 700 warnings to motorists. After the campaign, the Police Department continues to issue citations to those who do not comply with traffic control regulations.

Also, the Injury Prevention Coalition of Shasta County is currently working with high schools to provide events and education around discouraging distracted driving and driving under the influence.

Rewarding Good Behavior Examples

The Naperville, Illinois Police Department hosts an annual campaign during which police officers issue “ice cream” citations to children who are demonstrating safe bicycle riding behaviors. These “ice cream” citations are coupons that can be redeemed for a free ice cream cone from McDonald’s. From 2015 to 2017, Police Department has issued between 1,000 and 4,000 citations each year.

Similar “re-enforcement” campaigns were conducted by the Seattle Department of Transportation (SDOT) who partnered with volunteers from the Cascade Bicycle Club. At a new two-way protected bike lane in downtown Seattle, SDOT staff and volunteers “issued” Starbucks’ gift cards to motorists and bicyclists who obeyed the new bicycle traffic signals and who parked, loaded and unloaded goods correctly.

The County’s Safe Routes to School program is currently partnering with the City of Anderson Police Department to provide “positive enforcement” rewards, such as reflective lights, to kids walking and bicycling safety. The Injury Prevention Coalition has also partnered with several local law enforcement departments to hand out ice cream certificates.

Enforcement Methods

The following are examples of enforcement methods.

Targeted Enforcement

Targeted enforcement, also called “High Visibility Enforcement,” can be used in areas where there are high volumes of people walking and biking or locations with known safety concerns, such as speeding or low traffic control compliance. Targeted enforcement can be both an enforcement method and a way to educate people about traffic safety and the potential outcomes of failing to obey traffic laws.

Progressive Ticketing Method

A progressive ticketing method, described below, can be used during targeted enforcement campaigns.

The first step is educating the community that there is a problem and raising awareness of this problem. The safety implications that result the problem and unsafe behaviors should be clearly stated and supported with data.

The second step is announcing that there will be increased enforcement for these behaviors prior to issuing citations. This can be done in the form of advertisements, newspaper stories, fliers, and official warnings issued by the Police Department.

The third step is issuing citations after the warning period has expired. Hosting a press conference announcing where and when targeted enforcement will occur can help to increase awareness on dangerous locations and behaviors.

Bike Patrols

A bike patrol, in which law enforcement officers conduct their patrols on a bicycle, may be another effective policing effort. Bicycle patrol officers can be both a law enforcement officer and a bicycle ambassador while on patrol. Bicycle patrol officers come into contact with nearly twice as many people as an officer in a motor vehicle. This increases the opportunities for conversations to encourage safe behaviors.

Safety Patrols on Trails Examples

Glendale's Trail Safety Patrol

The City of Glendale, California has established a Trail Safety Patrol (TSP) through the Community Services and Parks Department. The TSP provides safety services, reports trail maintenance issues, and assists trail staff.¹¹ The City has found that the TSP has increased comfort on the trails, improved the behavior of trail users, and reduced crime.

Three Rivers Park's Trail Patrol

In Three Rivers Park, Minnesota, a Trail Patrol was created by the Police Department after crashes (between motorists and bicyclists/pedestrians, and between bicyclists and pedestrians) occurred at many trail and roadway intersections throughout the trail system and a rise in petty crime had occurred.¹²

The Trail Patrol focuses on education and awareness campaigns and law enforcement. Two fulltime, sworn officers and three non-sworn park service officers patrol the trails. The team attends bike and pedestrian-related events to share information about their team and to develop a relationship with the community.

East Bay Regional Park District's Volunteer Bicycle Patrol

The East Bay Regional Park District which serves Alameda and Contra Costa counties has created the Volunteer Bicycle Patrol which seeks to protect the safety of all park and trail users; preserve the park's plants and wildlife; and promote an enjoyable experience for users. SRTA could explore and expand options similar to the East Bay Regional Park District's program.

Evaluation

Non-Motorized Counts

Data on bicycle and pedestrian volumes can be collected manually or automatically. Volunteers can be used to conduct manual counts at different locations. If data is being collected throughout a region, a consistent data-collection methodology should be used between jurisdictions to maximize the utility of the data being collected. If possible, recording additional details (such as direction, time of day in 15-minute increments, gender, and other information) is also beneficial.

Additional project-specific counts and permanent counters can provide baseline data to evaluate growth in pedestrian activity and/or bike ridership, development of seasonal adjustment factors, and an understanding of how the local and regional pedestrian and bicycle network is being used. A combination

¹¹ <http://www.glendaleca.gov/government/city-departments/community-services-parks/programs-services/trail-safety-patrol>

¹² <http://ipmba.org/blog/comments/trail-patrol-a-proactive-approach-to-public-safety>

of automated, permanent counters, and manual counts should be used to collect as much data as possible without exhausting local resources (such as funding, labor/staff, and time).

The National Bicycle and Pedestrian Documentation Project coordinates a nationwide bicycle and pedestrian count twice a year, in which the Shasta region could participate.¹³

Since 2008, Healthy Shasta has been conducting annual bicycle and pedestrian counts which provides existing data and methodology for comparisons at key intersections, both for street and trailheads. The counts currently occur one day a year during an hour and a half during the morning commute and two hours during the afternoon commute. The data collected includes counts for bicyclists and pedestrians, location, direction of travel and turn movements, weather, and gas prices. Some counts gather data on helmet use and gender.

Counts have been taken at some locations consistently since 2008, while other locations have changed, typically to account for infrastructure changes or a need to collect data for funding applications. Future efforts could build off this program and compare trends over past years.

Additional data collection resources for non-motorized counts can be found at the following links:

- *Guidebook on Pedestrian and Bicycle Volume Data Collection* - NCHRP Report 797. <http://www.trb.org/Publications/Blurbs/171973.aspx>
- *Exploring Pedestrian Counting Procedures: A Review and Compilation of Existing Procedures, Good Practices, and Recommendations* – FHWA. https://www.fhwa.dot.gov/policyinformation/travel_monitoring/pubs/hpl16026/
- *Travel Monitoring and Traffic Volume* – FHWA. <https://www.fhwa.dot.gov/policyinformation/tmguides/>
- *Bicycle and Pedestrian Count Data – Part 1: Programs, Data, and Metrics* - Pedestrian and Bicycle Information Center. http://www.pedbikeinfo.org/training/webinars_PBIC_LC_022117.cfm

Example

The Seattle Department of Transportation (SDOT) has 12 permanent automated bicycle counters on neighborhood greenways, multi-use trails, and several bridges. The counters provide data that are compared to 2014 baseline counts to assess past performance and evaluate progress towards the City's goal of quadrupling ridership by 2030. Three of the counters automatically upload data once a day, and updates SDOT's website display the results in daily, weekly, monthly, and annual totals. The other counters upload data once a month.

¹³ <http://bikepeddocumentation.org/>