

SUMMER 2021

Community of Northeast Madera Summary and Recommendations Report

COMMUNITY PEDESTRIAN & BICYCLE SAFETY TRAINING PROGRAM

Creating Safer Streets for Walking and Biking



Funding for this program was provided by a grant from the California Office of Traffic Safety, through the National Highway Traffic Safety Administration.

Acknowledgments

Thank you to the Planning Committee for inviting us into their community and partnering with us to make Northeast Madera a safer place to walk and bike. Their contributions prompted meaningfully informed discussions and strengthened the workshop's outcomes. We want to acknowledge Michael Lundy for providing simultaneous interpretation during the workshop.

We also want to acknowledge the Yokuts peoples as the traditional land caretakers of the area surrounding Northeast Madera.

Planning Committee

Victor Aldame	City of Madera Engineering Department
Adela Maciel de Corona	CalViva Health
Evelyn Espinosa	Madera County Transportation Commission
Andrea Fillebrown	Madera County Department of Public Health
Alan Gilmore	Madera County Department of Public Health
Maribel Gonzalez	Madera County Department of Public Health
Adam Klier	City of Madera Planning Department
Joanna Orea	Madera County Department of Public Health
David Padilla	Caltrans District 6
Pedro Ramirez	Caltrans District 6
Jennifer Schneider	City of Madera Parks and Community Services
Kristi Schultz-Sharp	University of California Cooperative Extension

This report was prepared by:

California Walks

Marina Ramirez

Wendy Ortiz

Jacqueline Garcia

<https://calwalks.org>

UC Berkeley Safe Transportation Research & Education Center (SafeTREC)

Katherine Chen

<https://safetrec.berkeley.edu>

This report was prepared in cooperation with the California Office of Traffic Safety (OTS). The opinions, findings and conclusions expressed in this publication are those of the author(s) and not necessarily those of OTS.

TABLE OF CONTENTS

2	Acknowledgments
4	Introduction
5	Background
5	Pedestrian and Bicycle Crash History
7	Asset Map
8	Walking & Biking Assessment
8	Route 1: Sherwood Way
10	Route 2: Riverside Drive
12	Route 3: Cleveland Avenue
13	Recommendations
13	Community Recommendations
19	Project Team Recommendations
21	Appendix

Introduction

The Community Pedestrian and Bicycle Safety Program (CPBST) is a statewide project of UC Berkeley Safe Transportation Research and Education Center (SafeTREC) and California Walks (Cal Walks). The program uses the Safe System Framework to engage residents and safety advocates to develop a community-driven action plan to improve walking and biking safety in their communities and to strengthen collaboration with local officials and agency staff. Cal Walks & SafeTREC (the Project Team) works with the local Planning Committee, a group of local stakeholders, over the course of 6-8 weeks to develop workshop goals and tailor the curriculum to address the community's needs and priorities. The virtual workshop convenes the larger local community to conduct walking and biking assessments of key areas in the community, learn about Safe System strategies to alleviate walking and biking concerns, and develop preliminary action plans for priority infrastructure and community programs.

The virtual Northeast Madera CPBST convened 15 participants on June 2, 2021, including residents, and representatives from CalViva, the City of Madera, Madera County Transportation Commission, and Caltrans District 6. The Madera County Department of Public Health requested that the Project Team conduct a CPBST in Northeast Madera with the goals to:

1. Improve bicycle and pedestrian access to local community centers, schools, and parks;
2. Increase walking and biking safety and comfort in residential and businesses corridors;
3. Reenergize and reconvene city, county, and statewide transportation agency stakeholders to recommit to improving walking and biking safety in Northeast Madera; and
4. Re-establish the Live Well Madera Collaborative, established in 2019 to develop the Madera Safe Routes to School Action Plan to identify areas for walking and biking safety improvements, strengthen agency partnerships, and increase communication.

The following report summarizes the outcomes of the workshop and provides community and Project Team recommendations for continued guidance in project and program implementation.



Participants joined the virtual workshop via the Zoom platform.

Background

The City of Madera is the county seat of Madera County. Per [OTS Crash Rankings](#), in 2018, Madera ranked 35th out of 102 similar-sized cities in California for people killed or injured in a traffic crash (with a ranking of “1” indicating the worst). It ranked 24th for pedestrian crashes and 39th for bicycle crashes.

Local Policies and Plans

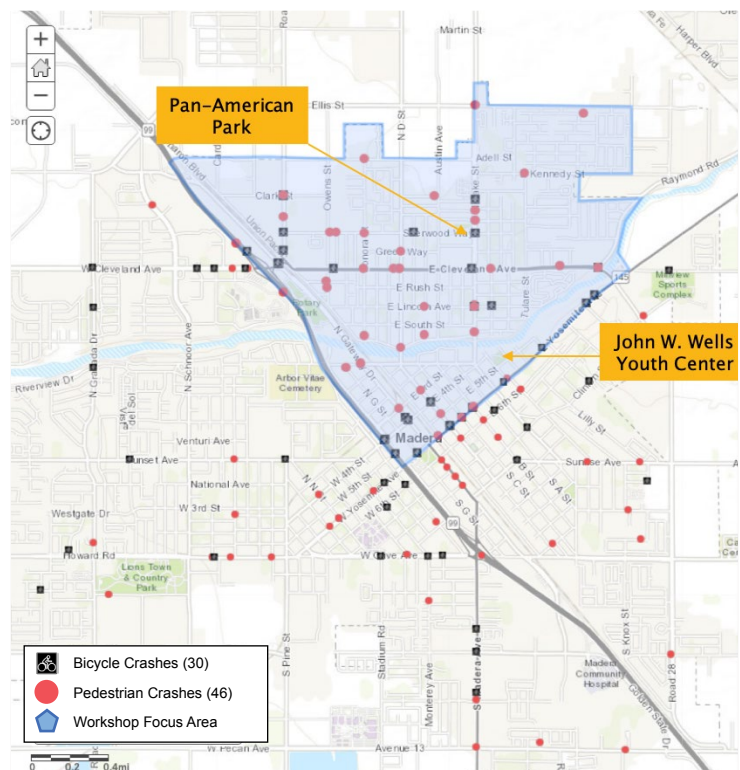
The [Madera County Project Prioritization Study](#) (anticipated September 2021) will identify and prioritize infrastructure improvement projects across the county, including active transportation infrastructure projects. Prioritized projects will reduce vehicle mile travel, better accommodate diverse modal choices, and increase traffic safety. For more information on this study contact Dylan Stone, Principal Regional Planner, dyland@maderactc.org.

Pedestrian and Bicycle Crash History

The following data is based on police-reported pedestrian and bicycle crashes resulting in injuries to pedestrians and bicyclists in northeast Madera near John W. Wells Youth Center and Pan-American Park. Data reported in this section are from the Statewide Integrated Traffic Records Systems (SWITRS) for the years 2010 to 2019. Crash data for 2019 is provisional as of December 2020. A full discussion of the pedestrian and bicycle crash data can be found in the Appendix.

Community Workshop Boundaries

The boundaries for the focus area of this workshop were the triangle created by California State Route 99, California State Route 145, and the city boundaries in the northeast area of the city. Nearly half (48.4%) of the fatal and severe injury traffic crashes in the focus area of the workshop were pedestrian and/or bicycle crashes, compared to 24.2% in California and 10.7% in Madera County. Furthermore, only 19.4% of fatal and severe injury crashes in the focus area involved multiple motor vehicles compared to 40.0% and 42.1% in California and Madera County respectively.



Pedestrian Crashes

Over the 10-year period between 2010 and 2019, pedestrian crashes increased starting in 2014 and remain at an elevated level. Per the Planning Committee, this seemingly correlates with the population growth in the City of Madera. In the most recent five years of data available, 2015 to 2019, there were 46 pedestrian injury crashes, including three fatal and six serious injury crashes. The highest concentration of pedestrian crashes was at East Cleveland Avenue (10) and North D Street (10), followed by Yosemite Avenue (SR-145) (6) and Lake Street (6). Three of the fatal and serious injury crashes occurred on East Cleveland Avenue, with two at the intersection of North D Street. The other corridors with a high number of severe pedestrian crashes were Gateway Drive and Riverside Drive.

Nearly one-third (32.6%) of the pedestrian crashes occurred in the winter months of December and January. Over half (52.2%) of the pedestrian crashes occurred during the morning and evening commutes, between 6:00 a.m. to 9:00 a.m. and 6:00 p.m. to 9:00 p.m. The Planning Committee attributed some of the crash risk to lighting. Crashes were also slightly more likely to occur on a weekday than weekend, with the highest number of crashes on Monday. Overall, the primary crash factor for 19 of the 46 pedestrian crashes was a driver not yielding the right-of-way to a pedestrian at a marked or unmarked crosswalk (CVC 21950a).

Turning to the injured, there were 49 victims in the 46 pedestrian injury crashes. Three crashes had multiple pedestrian victims and one crash had no pedestrian victims. Victims were more likely to be adults aged 60 and older (28.6%) or school-age (26.5%). Older victims were more likely to be male while school-age victims were more likely to be female. Overall, over half (55.1%) of the victims were male. Of those that suffered a fatal or serious injury, five (55.6%) of them were aged 60 and older.

Bicycle Crashes

Over the 10-year period between 2010 and 2019, bicycle crashes appear to neither clearly increase or decrease, with the most recent peak in 2017. In the most recent five years of data available, 2015 to 2019, there were 57 bicycle crashes, including one fatal and six serious injury crashes. The highest concentration of crashes was along East Cleveland Avenue (8), Gateway Drive (7), Yosemite Avenue (SR-145) (6), and 4th Street (6). Three of the fatal and serious injury crashes occurred on Country Club Drive, with two at the intersection of Clark Street. The other corridor with a high number of serious bicycle crashes was Yosemite Avenue (SR-145).

Bicycle crash trends differed from pedestrian crashes in this focus area in Madera. Bicycle crashes had several peak months throughout the year with no apparent seasonal trend. Over half (56.7%) of the bicycle crashes occurred between noon and 6:00 p.m. Crashes were most common on Friday with eight (26.7%). The most common primary crash factor for bicycle crashes was failure to stop at a limit line or crosswalk at a red light (CVC 21453a), which was associated with seven crashes.

There were 33 victims of these bicycle crashes, including 1 fatality and 6 serious injuries. Most of the victims were older working-age adults, with 12 (36.3%) in the 45 to 59 age range; this group also accounted for five of the seven fatal and serious injuries. Most bicyclist victims were male (75.8%).

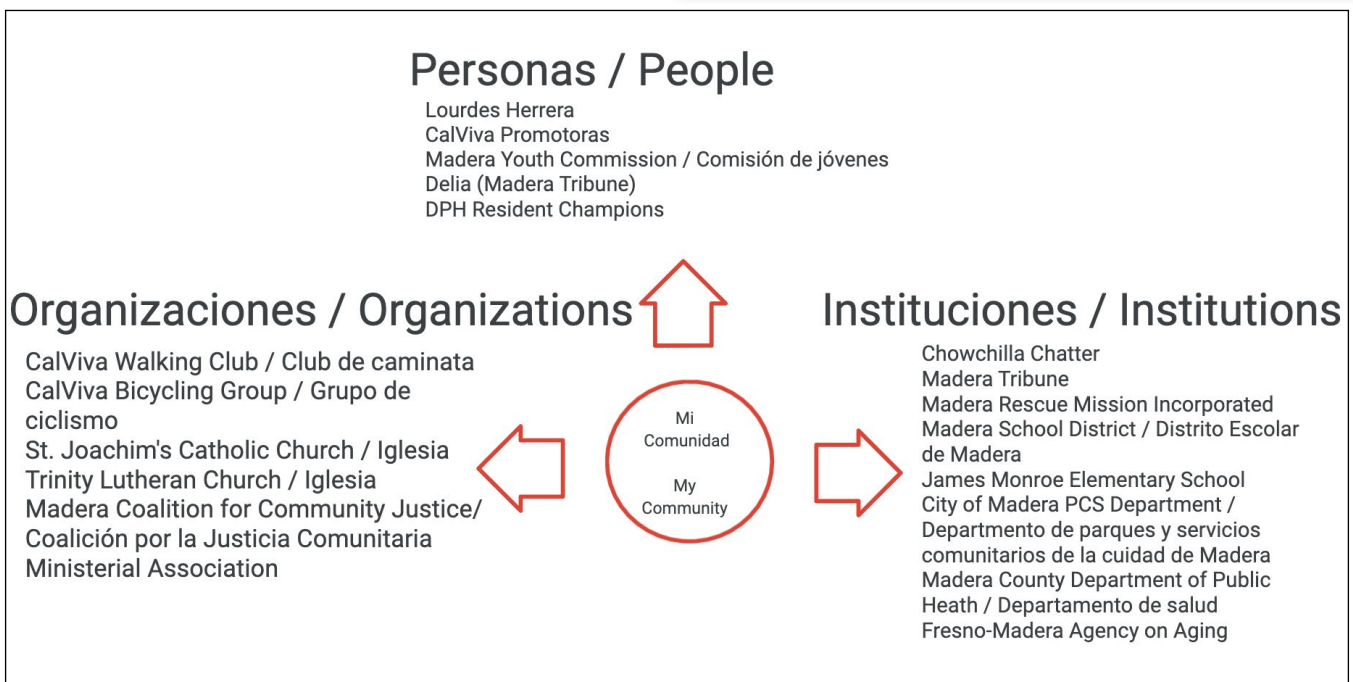
Asset Map

Prior to the virtual workshop, the Planning Committee identified strengths and resources that could help the community achieve their walking and biking safety goals. Assets are a broad category, including people, organizations, agencies, financial resources, community knowledge, skill sets, and political connections within the community. The Asset Map below is a visual aid to highlight the resources available, service overlaps, and potential collaborations to keep the momentum for walking and biking safety work going.

Free SafeTREC Data Resources

The **Transportation Injury Mapping System (TIMS)** is a web-based tool that allows users to analyze and map California crash data from the Statewide Integrated Traffic Records System (SWITRS). TIMS provides quick, easy, and free access to geocoded crash data. TIMS is available at: <https://tims.berkeley.edu>

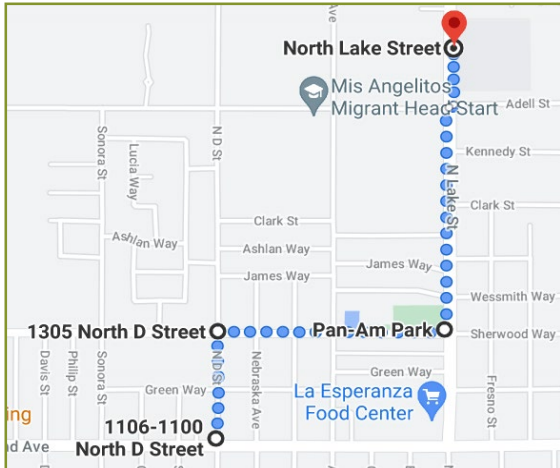
Street Story is a web-based community engagement tool that allows residents and community organizations to gather information that is important to transportation safety, including crashes, near-misses, general hazards and safe locations to travel. To promote access to the tool, SafeTREC offers technical assistance to communities and organizations interested in using Street Story. The platform and the information collected is free to use and publically available. Street Story is available at: <https://streetstory.berkeley.edu>



Walking & Biking Assessment

During the workshop, the Project Team and participants took part in a virtual walking and biking safety assessment along three routes frequently traveled by community residents. Participants were asked to identify community assets, assess infrastructure conditions, and share how road users engage with the built environment. The next few pages provide a summary of the walking and biking assessment.

Route 1: Sherwood Way



Focus

Pedestrians that live to the east and west of Pan-American (Pan-Am) Park use Sherwood Way to access the park and community center. Pedestrians use Lake Street to access the business on Cleveland Avenue. Lake Street also connects residents to Pan-Am Park and James Monroe Elementary School.

Strengths

1. Pan-American Park and Community Center offer many free to low-cost community services, including food distribution, transportation for seniors, health and fitness classes, technology classes, and more.
2. James Monroe Elementary School serves preschool to sixth-grade students that live in the surrounding neighborhood. The school hosts a special education program, English-language program, and the James Monroe Children's Museum and Discovery Center to enhance student's educational experience.
3. Many students and families walk to the business center on Cleveland Avenue and D Street which hosts crucial community amenities, including a grocery store, laundromat, and baby nutrition shop.

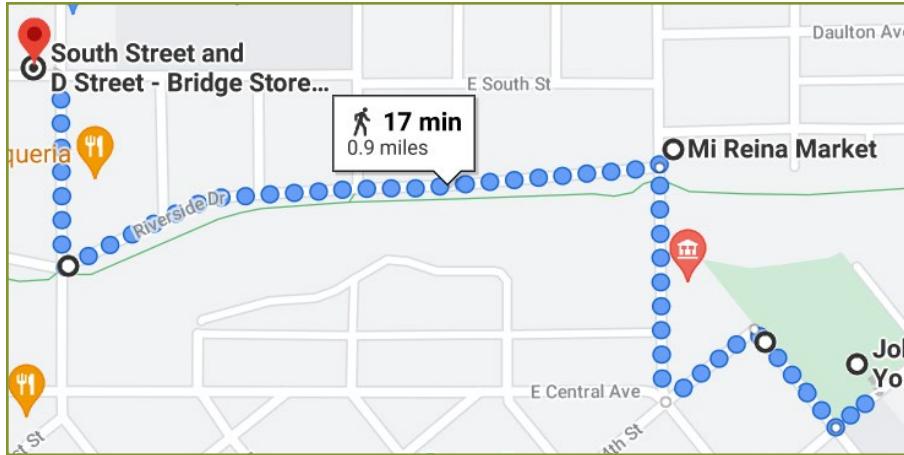


Pan-American Park on a sunny day.

Route 1: Sherwood Way *(continued)***Concerns**

1. The sidewalks on D Street, north of Cleveland Avenue, are too narrow to accommodate students and families walking with strollers and multiple children to Pan-American Community Center, George Washington Elementary School, and the business corridor on Cleveland Avenue and D Street. People are forced to step off of the sidewalk and into the travel lane on D Street in order to travel along the roadway and accommodate other pedestrians. This lack of adequate room for pedestrians, and the subsequent need to step off the sidewalk creates points of conflict between pedestrians, bicyclists, and drivers who are all using the street for travel.
2. Drivers appear to be driving above the 40 miles per hour posted speed limit along Lake Street and D Street, and above the 30 miles per hour posted speed limit along Sherwood Way. This may be due to the wide travel lanes and narrow sidewalks on these corridors. This creates safety concerns when pedestrians need to step into the street, given the narrow sidewalks. Residents are forced to walk along these high-speed corridors because some do not have access to cars or other forms of transportation.
3. The crosswalk markings at the D Street/Cleveland Avenue intersection and the east and west crosswalk markings at the Lake Street/Sherwood Avenue intersection are faded, causing drivers to stop inside or over the crosswalk markings because of their poor visibility. This causes points of conflict between drivers and pedestrians at this intersection.
4. Drivers traveling north on D Street must cross double yellow lines in order to make a left turn into the business center at the North D Street/Cleveland Avenue intersection. At this uncontrolled turn, drivers attempting to make a left turn are often only vigilant of drivers headed southbound, so there are many near misses with pedestrians crossing the driveway of the business center.
5. There is an incomplete sidewalk network along North D Street. This forces pedestrians to walk in the street and compete with bicyclists and drivers for space.
6. The eastern curb of the D Street/Green Way intersection is missing a ramp, causing families with strollers, or people in wheelchairs, to walk in the road.
7. Drivers double-park in front of the apartment complexes on Sherwood Way, across the street from Pan-Am Park. The double-parked drivers decrease the visibility of pedestrians crossing mid-block to the park and drivers traveling along Sherwood Way.

Route 2: Riverside Drive



Focus

The South Street/D Street intersection, which is adjacent to George Washington Elementary School, is a highly congested and trafficked area, especially during school arrival and dismissal times. In addition to students, this route is essential to residents who live northwest of Riverside Drive traveling southbound along the river trail to John Wells Community Center and Downtown Madera.

Strengths

1. South Street and D Street are narrow two-lane roads which help slow driver traffic speeds creating safer walking and biking conditions. Additionally, at the South Street/D Street intersection, the crosswalks on all legs of the intersection are visibly marked with yellow paint indicating a school zone.
2. A Caltrans District 6 representative shared that Class II Bike Lanes are to be installed along South Street. Participants shared that this would be a beneficial enhancement since driver congestion creates low visibility of the various road users in the area. Designating a space for cyclists on the roadway reduces points of conflict and creates safer roads for everyone.
3. Parallel to Riverside Drive is a multi-use trail in lieu of a sidewalk which hosts benches, trash cans and large trees which provide good shade for pedestrians and bicyclists. Further, these amenities foster safe, inclusive and comfortable spaces for residents which encourages them to walk and bike around their community more often.



The marked mid-block crosswalk at the South Street/ Nebraska Avenue intersection, adjacent to George Washington Elementary School.

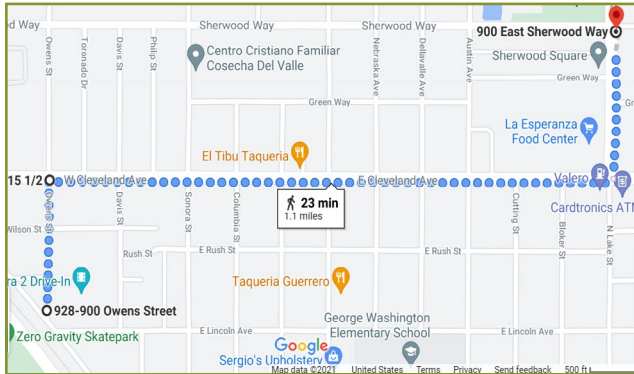
Route 2: Riverside Drive *(continued)***Concerns**

1. There is a curb ramp on the southeast corner of the South Street/D Street intersection that merges directly into the parking lot of a commercial center. Participants expressed that this creates a point of conflict between children walking to and from Washington Elementary School and drivers entering and exiting the parking lot.
2. Large commercial trucks travel through the North D Street/Riverside Drive intersection, causing high traffic volumes and congestion. Furthermore, drivers appear to be traveling above the 35 miles per hour posted speed limit along D Street.
3. At the Austin Avenue/Riverside Boulevard intersection there is a marked crosswalk coupled with a pedestrian crosswalk sign on the western leg of the intersection. However, the road markings are faded, causing visibility issues between drivers and pedestrians entering or exiting the crosswalk.
4. Participants stressed the difficulty of crossing on both the western and eastern crosswalks on the northern leg of the five-way Lake Street/4th Street/Central Avenue intersection towards Lake Street because of the faded marked crosswalks, unmarked crosswalks, and the lack of curb ramps.



The northern crosswalk of the five-way Lake Street/4th Street/Central Avenue intersection is unmarked and missing curb ramps.

Route 3: Cleveland Avenue



Focus

Cleveland Avenue is a major commercial corridor where residents shop for groceries and other amenities. It is also an access road to State Route 99. Combined, these conditions contribute to higher driver traffic volumes and many people walking and biking.

Strengths

1. Cleveland Avenue has a Class II bike lane in both directions and a planted median. A community resident reported that Cleveland Avenue is one of the safest streets for bicycle riding in Madera and that drivers respect their space in the bike lane.
2. Cleveland Avenue has sidewalks in both directions. While they are narrow in some areas, this offers residents a separated space to walk.

Concerns

1. Owens Street, between Sharon Avenue and Cleveland Avenue, is a wide residential street, which encourages drivers to speed. Drivers use Owens Street as a perceived shorter route to Cleveland Avenue as opposed to using Sharon Avenue, especially at night when the movie ends at the drive-in theater.
2. Owens Street has narrow sidewalks on the east side and discontinuous sidewalks on the west side, forcing residents to walk in the road. Between 2015 and 2019, two pedestrian crashes occurred at the Owens Street/Wilson Street intersection, including one fatality.
3. There is a lack of pedestrian-scale lighting at the Owens Street/Wilson Street intersection. Pedestrians feel unsafe walking at night, given the lack of light, and participants feel this discourages residents from walking in the evening.
4. Children cross the Lake Street/Sherwood Way intersection to access Pan-American Park from Monroe, Washington, Millview, and Sierra Vista Elementary Schools and the nearby residential areas. Community residents report that motorists drive too fast along Lake Street, making it unsafe for bicyclists riding along the road and pedestrians crossing the street. There is also a lack of pedestrian-scale lighting in this area, which is especially noticeable in the winter.



Sherwood Avenue has no pedestrian scale lighting in front of Pan-American Park

Recommendations

The recommendations in this report are based on observed pedestrian and bicycle safety concerns, Safe System strategies, and workshop participants' preferences and priorities. The suggested timelines and resources needed for implementation are estimated based on general pedestrian and bicycle safety best practices and may need to be further tailored by the community.

Community Recommendations

Workshop participants were assigned into three groups to share their ideas for creating a safer environment for walking and biking. Participants then ranked these ideas and outlined preliminary plans for implementing the highest priority project. Participants considered the following community programs and infrastructure projects:

- Identify and promote Safe Routes to Parks from neighborhood schools to encourage more students and families to use park resources;
- Improve sidewalk connectivity throughout northeast Madera to protect families and children from walking in the roadway;
- Improve the bike network connectivity by constructing more bike lanes and shared-use paths to key destinations;
- Reconfigure wide roads to reduce driver speeds and improve walking and biking safety. Road reconfigurations should include bike lanes to reduce lane width and conflict between bicyclists and pedestrians on the sidewalk; and
- Implement traffic calming infrastructure improvements at the Sherwood Way/Lake Street intersection. Potential improvements can include installing bulb-outs to shorten crossing distance and painting high-visibility crosswalks at all unmarked crosswalks to enhance pedestrian crossing visibility. Other traffic calming improvements can include pedestrian refuge islands and rectangular rapid flashing beacons.

Workshop participants developed preliminary action plans for the community programs and infrastructure projects they identified as the highest priority. The following tables are a summary of their efforts.

Project Name: Crosswalk Study at the Sherwood Way/Lake Street intersection

Project Description: Madera residents will connect with the City of Madera, the Madera County Department of Public Health, and the Madera County Transportation Commission to advocate for a crosswalk study at the Sherwood Way/Lake Street intersection. The crosswalk study will identify potential infrastructure improvements to increase pedestrian safety. The study should include the collection of extensive resident feedback. This feedback can include door-to-door outreach to residents within a one-block radius of the intersection.

Project Goals:

1. Improve pedestrian visibility through the intersection; and
2. Gather community input on projects before, during, and after proposed pedestrian safety improvement projects.

Action Steps	Timeline	Responsible Party	Resources
Recruit a committee to advocate for a crosswalk study. Participants can include: <ul style="list-style-type: none"> • Community partners • Businesses • Residents • School Administrators • Parent Groups • CPBST Planning Committee 	Fall 2021	CPBST participants	How to Create an Outreach Work Plan Principles for Equitable Engagement
Connect with Local Agencies <ul style="list-style-type: none"> • Work with the local transportation agencies to identify feasibility of the crosswalk study • Develop a community engagement strategy to get feedback from residents about potential crosswalk infrastructure improvements 	Fall 2021	Study Advocacy Committee	Pedestrian Safety Countermeasures Toolbox

Project Name: Art Safety Messaging Campaign and Event

Project Description: In collaboration with the Madera Department of Public Health, residents will develop a Safety Messaging Campaign and engage youth via an art competition. Through their participation, youth will also receive road safety education. The campaign will be combined with a community event such as a Bike Rodeo to further educate and engage the community at large.

Project Goals:

1. Create community engagement opportunities for the community to lead and contribute to road safety programs;
2. Educate students about how to safely share the road with other road users to avoid conflict during school arrival and dismissal times; and,
3. Raise driver awareness of proper road behavior to avoid unsafe driving conditioning which heighten pedestrian and bicyclist safety concerns.

Action Steps	Timeline	Responsible Party	Resources
Create a Task Force to plan and execute the safety messaging campaign.	Fall 2021	The Planning Committee members Workshop Participants	Miryam Escalera, high school student, can connect with students and school administrators Joanna Orea, Health Education Specialist Alan Gilmore, Madera Department of Public Health Loli Martinez, Promotora de Salud volunteer Youth Leadership Institute Madera Arts Council
Develop a messaging strategy: <ul style="list-style-type: none"> • identify what aspects of pedestrian and bicycling safety the task force wants to focus on. • Identify the format for the campaign (social media, brochures, yard signs, utility boxes etc.) 	Fall 2021	Task Force	Traffic Safety Marketing examples Pedestrian Safety Guides Safe Routes to School Communication Kit

Project Name: Art Safety Messaging Campaign and Event (*continued*)

Action Steps	Timeline	Responsible Party	Resources
Host an art design competition for the youth <ul style="list-style-type: none"> • Connect with school staff to promote the art contest. • Choose a final design to print for the campaign. 	Fall 2021	Task Force	How to Host an Art Contest Bike to Book: Example of a digital design contest
Secure funding, donated services, and/or materials to execute the campaign.	Winter 2021	Task Force	Alan Gilmore, Madera Department of Public Health Madera California Highway Patrol City of Madera Parks and Recreation Department

Project Name: Safe Routes to Pan-American Park and John W. Wells Youth Center

Project Description: The Madera County Department of Public Health would like to engage Monroe, Washington, Millview, and Sierra Vista Elementary Schools to develop a Safe Routes to Parks plan to Pan-American Park and John W. Wells Youth Center. While Pan-American Park and John W. Wells Youth Center offer many recreational programs, workshop participants report that parents drive across town to parks that they perceive as safer. As students return to in-person school in the fall, this is an opportunity to engage the community and increase park usage.

Project Goals:

1. Designate and communicate safe routes to parks from nearby schools to increase park usage; and
2. Address key infrastructure concerns along safe routes to parks to improve park accessibility from nearby schools.

Action Steps	Timeline	Responsible Party	Resources
Convene an Action Team to conduct Safe Routes to Parks efforts. The preliminary list of organizations to engage include: <ul style="list-style-type: none"> • City Council • Department of Parks and Recreation • Principals, administrators, and PTA groups • Community Action Partnership of Madera County • Youth Leadership Institute 	Fall 2021	Madera County Department of Public Health	Safe Routes Partnership's Safe Routes to Parks Activating Communities program National Recreation and Park Association Safe Routes to Parks Initiative
Conduct a walking and biking assessment from Monroe, Washington, Millview, and Sierra Vista Elementary Schools to Pan-American Park and John W, Wells Youth Center.	Fall 2021 to Spring 2022	Action Team	WalkSacramento Walk Audit Tool

Project Name: Safe Routes to Pan-American Park and John W. Wells Youth Center (*continued*)

Action Steps	Timeline	Responsible Party	Resources
Identify designated routes to the park and youth center.	Spring/ Summer 2022	Action Team	WalkSacramento Safe Routes to School Wayfinding Wayfinding Case Study
Present findings to Madera County Department of Public Health and/or other agencies to apply for funding to address safety improvements based on the walk/bike assessment and designated routes.	Ongoing	Action Team	OTS Traffic Safety Grants Caltrans ATP
Create a Safe Routes to Parks maps and share it with communities at Back to School Night 2022.	Fall 2022	Action Team	WalkSacramento Safe Routes to School Wayfinding Case Study Walk Your City
Evaluate Safe Routes to Parks to measure utilization of the maps and to understand users' experiences accessing the park and youth center.	Spring 2022 and Spring 2023	Action Team	Safe Routes Partnership SRTP Evaluation Guide Street Story

Project Team Recommendations

The Project Team submits the following recommendations for consideration based on our observations. The suggested timelines are included for reference, but implementation may take more or less time depending on specific community factors. Ultimately, local stakeholders, such as city staff and the Planning Committee, may need to refine the recommendations to ensure they are appropriate for the current walking and biking environment.

Short-Term Recommendations

Re-convene the Live Well Madera Collaborative

The Project Team recommends the Madera County Transportation Commission revive the Live Well Madera Collaborative to strengthen bicycle and pedestrian safety project coordination in the City of Madera. This Live Well Madera Collaborative was originally convened through the [Madera Safe Routes to School Action Plan](#) in 2019 to identify areas of safety concern based on bicycle and pedestrian crash data. The revived collaborative can provide feedback on all biking and walking safety improvement projects, identify funding sources, and propose policy changes that increase safety opportunities. This will improve communications of present and future infrastructure improvement projects between the city and community stakeholders. The Madera County Department of Public Health shared they are able to promote these updates with residents. A Caltrans District 6 representative expressed their interest in participating in such a collaborative for Madera County and shared the success they have experienced as part of the Technical Active Transportation Committee in Tulare County. The project team recommends the Madera County Transportation Commission to connect with the Tulare County Association of Governments to learn more about their structure, operations, and how they are able to sustainably maintain the Technical Active Transportation Committee.

Bike Lights and Helmet Distribution Program

The Project Team recommends the City of Madera and the Madera County Department of Public Health co-host a Bike Lights and Helmet Distribution program to provide crucial safety equipment and education to Madera's most vulnerable users. These vulnerable bicyclists may include children, low-income residents, and people experiencing houselessness. This will encourage safe riding, prevent head injuries, and increase bicyclists' visibility. A distribution program is usually held in conjunction with basic bike education. The City can reference [Santa Ana's bicycle safety equipment distribution program](#), funded by the Office of Traffic Safety. The City can use the CPBST [Site Visit Data Presentation](#) to identify high-priority locations and time of day to distribute the safety equipment in the workshop focus area. The Project Team recommends the City and Department of Public Health collaborate to submit grant proposals to the funding sources listed at the end of this report to implement this program.

Long-Term Recommendations

Install Marked Crosswalks along Cleveland Avenue

With concerns about unsafe driver traffic speeds and traffic volume, pedestrians need greater levels of protection. Marked crosswalks across Cleveland Avenue are nearly one-quarter mile from each other. While pedestrians have the right to cross at any intersection regardless of whether the crosswalks are marked (unless specifically prohibited), planners and engineers should be sensitive to the misperception that a marked crosswalk is the only legal place to cross. The Project Team recommends more frequent high visibility marked crossings on Cleveland Avenue to reinforce walkability. If a traffic signal or stop sign is not warranted on Cleveland Avenue, crossing treatments like medians, hybrid beacons, rapid flashing beacons, or raised crosswalks should be considered to improve pedestrian visibility.

Conduct a community sidewalk and lighting audit

The Project Team recommends that the City conduct a community-wide sidewalk audit to assess the presence and condition of sidewalks to help prioritize the implementation and improvements of sidewalks. Temporary low-cost solutions like striping or temporary bollards can be used to designate pedestrian space along the shoulder until funding is available for construction.

The Project Team recommends that the City perform a lighting audit to identify inadequately lighted areas for safety improvement. Roadway and pedestrian-scale lighting can be used to improve the visibility of people crossing the street and accessing the community's parks.

Installation of Bulb-Outs at the Lake Street/Sherwood Way Intersection

The Project Team recommends the installation of bulb-outs at the Lake Street/Sherwood Way intersection to reduce the crossing distance, reduce driver's speed, and make people more visible to drivers. A Quick Build bulb-out project can strengthen the likelihood of implementation by lowering the project cost. Lower cost project materials can include paint, bollards, or planters. Workshop participants developed a Crosswalk Study action plan for the Lake Street/Sherwood Way intersection as a priority area. We recommend the City of Madera collaborate with Caltrans District 6 to engage and collaborate with the Madera County Department of Public Health to submit grant proposals to the funding sources listed below:

- The [Transformative Climate Communities](#) Program (TCC) is administered by the Strategic Growth Council and the Department of Conservation and funds bicycle and pedestrian facilities projects in California's most disadvantaged communities.
- The [Sustainable Transportation Equity Project](#) (STEP) is administered by the Air Resources Board and can support various types of pedestrian and bicycle facilities. Funding is intended to help low-income and disadvantaged communities identify residents' transportation needs.
- Caltrans manages the [Active Transportation Program](#). The ATP provides funding to communities throughout California to support infrastructure projects, non-infrastructure projects and plans to further active modes of transportation like walking and biking.
- The [Office of Traffic Safety](#) provides grants for education and outreach. Public entities are eligible to submit applications for funding. Non-profit organizations need a public entity as a grant host.

Appendix

- CPBST Workshop Data Fact Sheet
- CPBST Site Visit Data Presentation

Madera Pedestrian & Bicycle Data Analyses

Community Pedestrian and Bicycle Safety Training Workshop (CPBST)
Madera, CA | June 2, 2021

In California, almost one in three people who died in a crash is a pedestrian or bicyclist. There was a 0.6 percent decrease in pedestrian deaths from 2018 to 2019 and a 19.4 percent decrease in bicycling deaths (FARS 2018 and 2019). In this workshop, we provide you with local crash data so that we can identify ways to make walking and biking safer in your community.

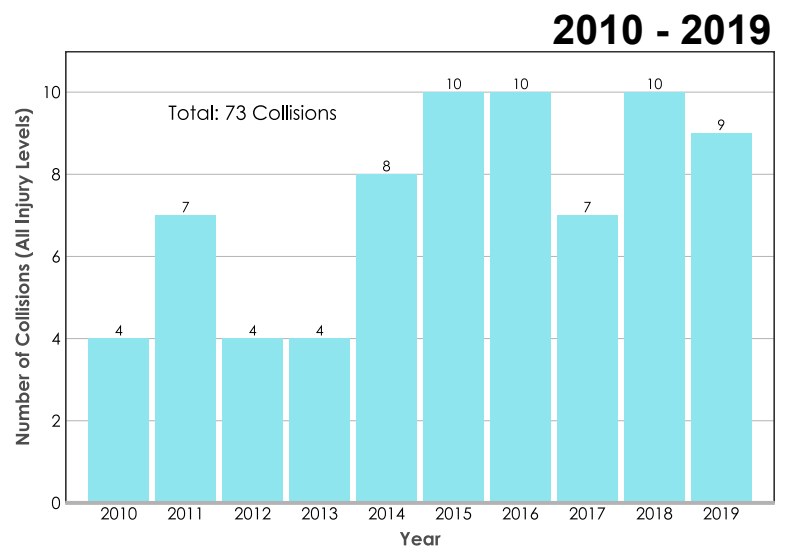
The local data seen below reflects crash data from the last 5 years (2015-2019) within Madera. The borders are the city boundaries, SR-99, and SR-145/Yosemite Avenue.

Pedestrian Collisions Over Time

The number of collisions appears to be ***almost stable***.

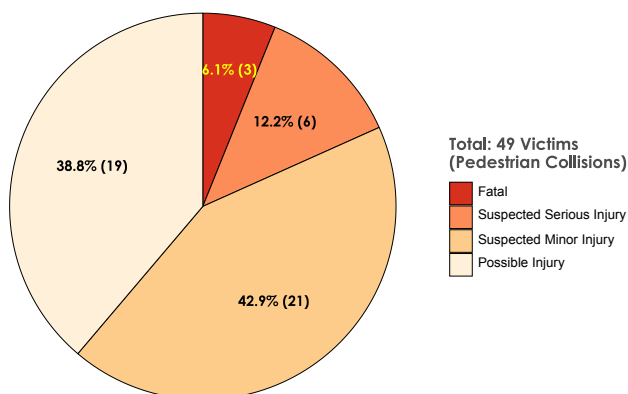
 **49** people injured

 **73** pedestrian collisions



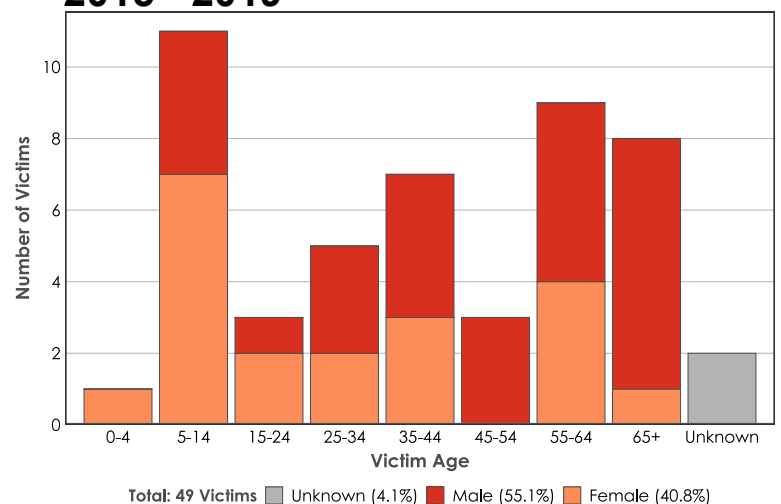
Victim Injury Severity ——— Victim Demographics

2015 - 2019



18.4% of victims suffered fatal or serious injuries

2015 - 2019



28.6% of victims were older adults (age 60+)

26.5% of victims were school-age (age 5-18)

Bicycle Collisions Over Time

The number of collisions appears to be *slightly declining*.

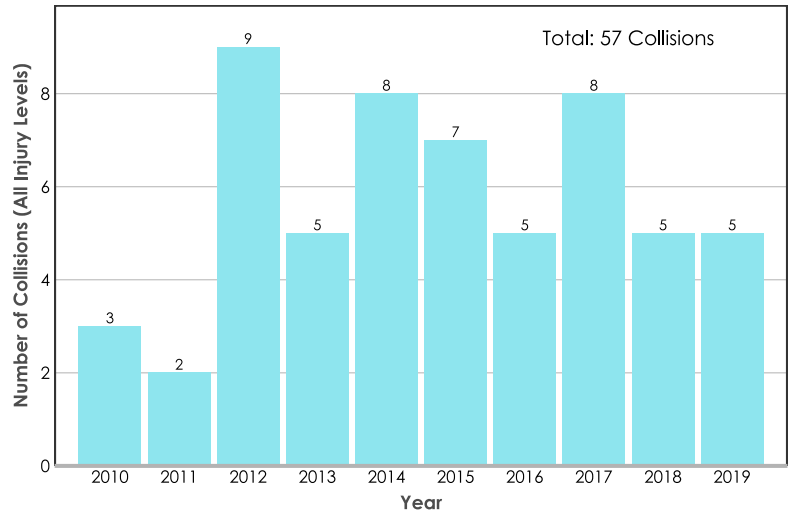


33 people injured



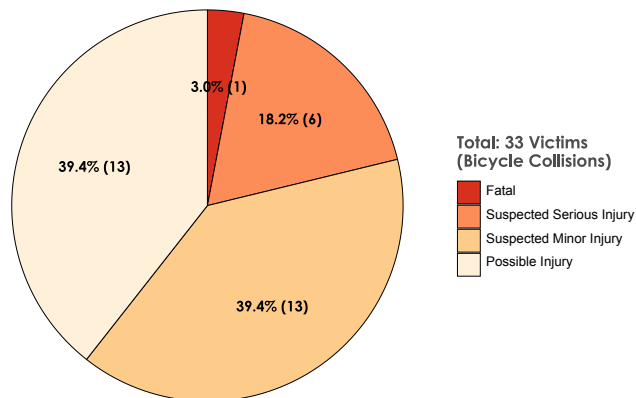
57 bicycle collisions

2010 - 2019



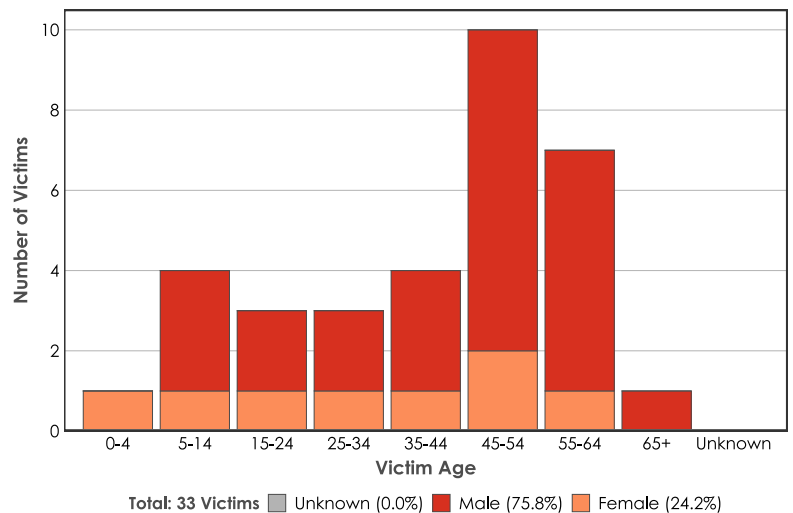
Victim Injury Severity ——— Victim Demographics

2015 - 2019



21.2% of victims suffered fatal or serious injuries

2015 - 2019



36.3% of victims were adults (age 45-59)
18.2% of victims were older adults (age 60+)

What other data could help inform decision-making?

While these numbers do not tell the whole story, do they resonate with your experience?

What kinds of improvement do you think could help make walking and biking safer in your community?

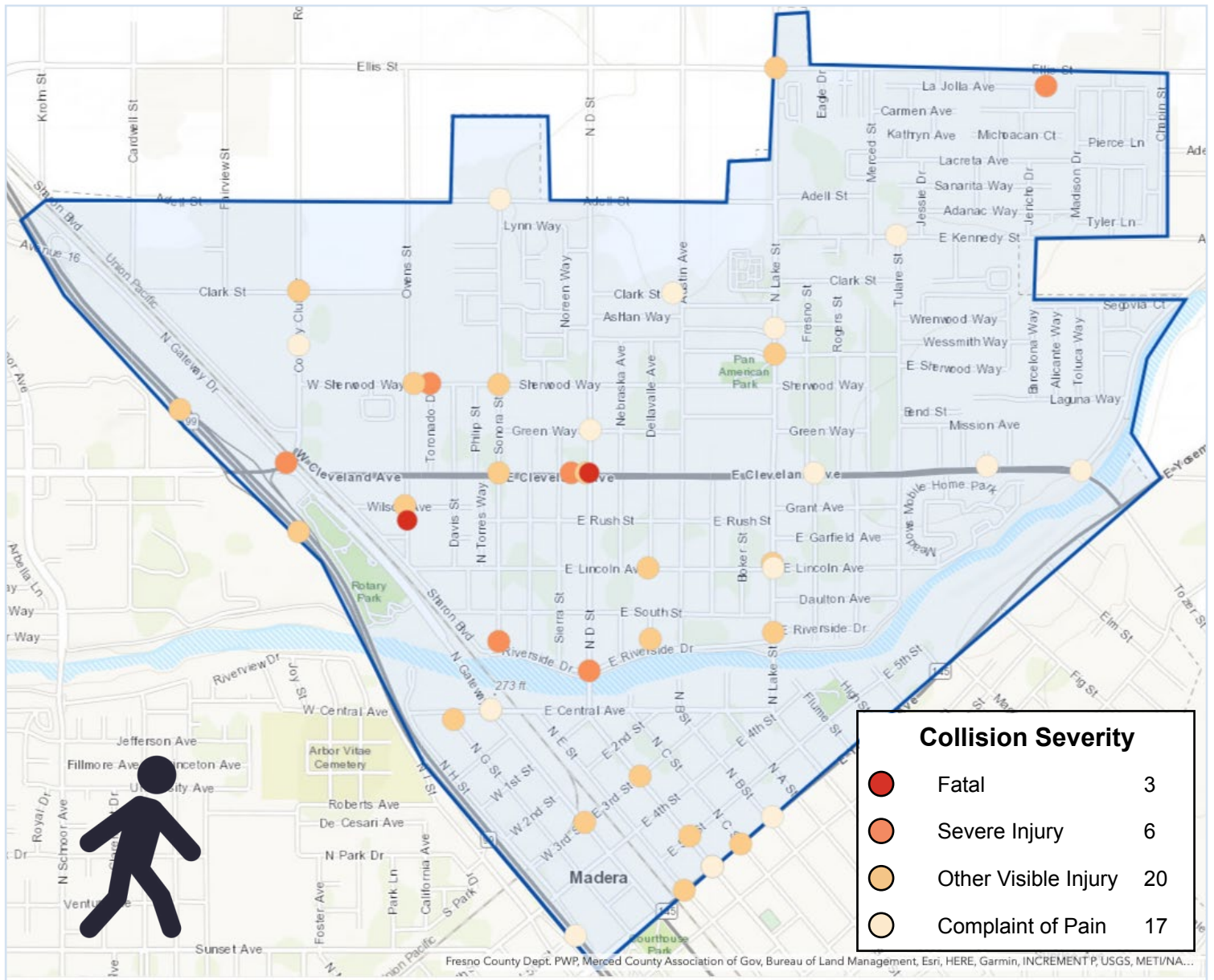
To learn more about collision data in your community, visit the free tools available through the Transportation Injury Mapping System (tims.berkeley.edu).
 For additional assistance, email us at safetrec@berkeley.edu.

Berkeley SafeTREC
 SAFE TRANSPORTATION RESEARCH AND EDUCATION CENTER

OTS
 CALIFORNIA OFFICE OF
 TRAFFIC SAFETY

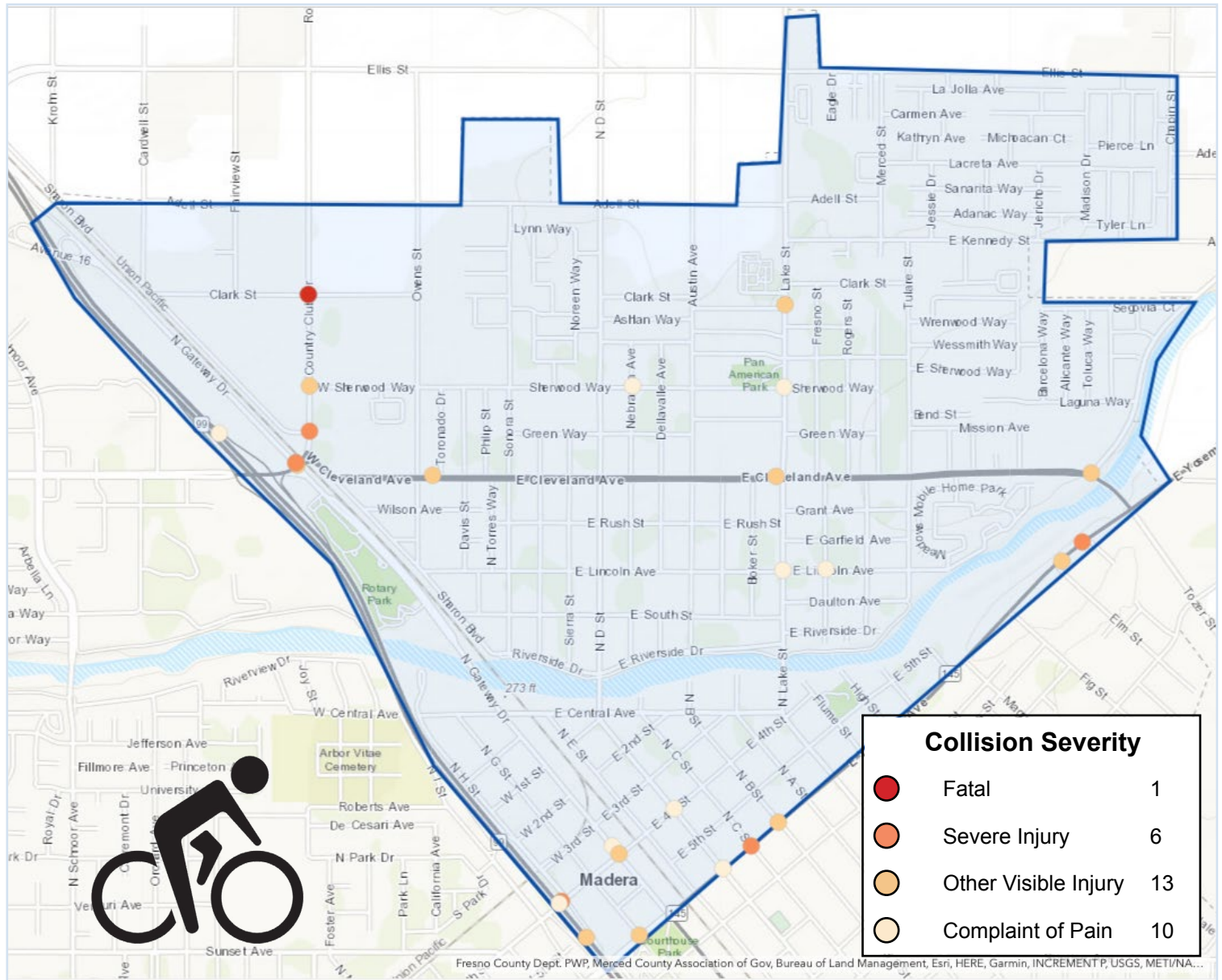
California Walks
 Stepping Up for Health, Equity, & Sustainability

Madera Pedestrian Collision Map (2015 - 2019)



Data source: California Highway Patrol, Statewide Integrated Traffic Records System (SWITRS) 2015-2019, Collision data for 2019 are provisional as of March 2021. Funding for this program was provided by a grant from the California Office of Traffic Safety through the National Traffic Safety Administration.

Madera Bicycle Collision Map (2015 - 2019)



Madera Pedestrian & Bicycle Crash History

CPBST Virtual Site Visit | May 6, 2021
Katherine Chen, kchen@berkeley.edu

Berkeley SafeTREC
SAFE TRANSPORTATION RESEARCH AND EDUCATION CENTER

What is a pedestrian crash?



- **Pedestrian–motor vehicle crash**
 - Includes a person afoot, on a skateboard, stroller, wheelchair, electric assistive mobility device
- One crash may result in multiple pedestrian victims

What is a bicycle crash?



- Bicycle–motor vehicle crash
- Bicycles are considered vehicles and therefore violations committed by a “driver” could have been committed by a motor vehicle driver or bicyclist.

Crashes Overview 2015-2019

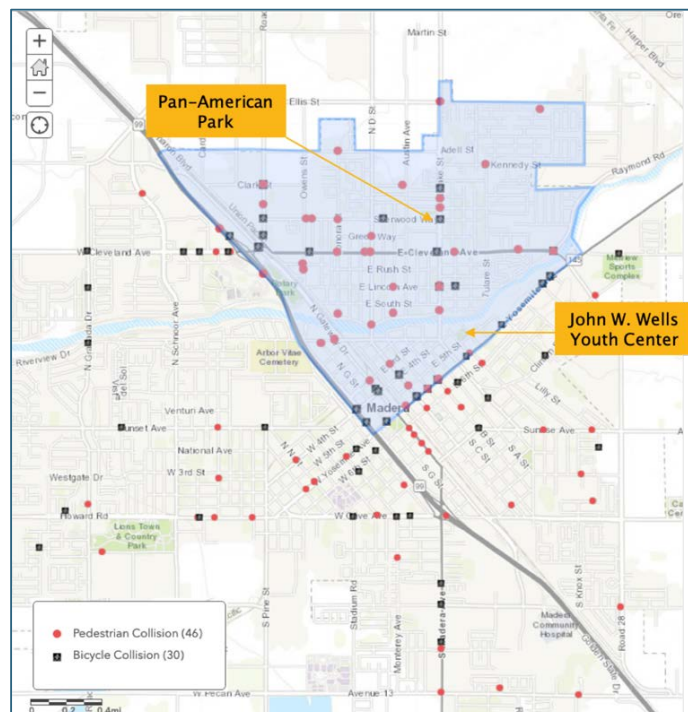
City of Madera

- 87 pedestrian crashes
- 60 bicycle crashes

Northeast Madera neighborhood,

near John Wells Youth Center and Pan-American Park

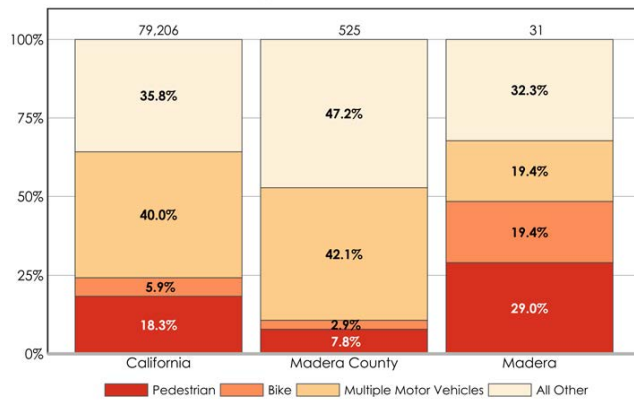
- 52.9% of pedestrian crashes
- 50.0% of bicycle crashes



Source: Statewide Integrated Traffic Records System (SWITRS) 2015–2019

How does Madera compare to other areas?

Fatal and Severe Injury Crashes by Involvement 2015–2019

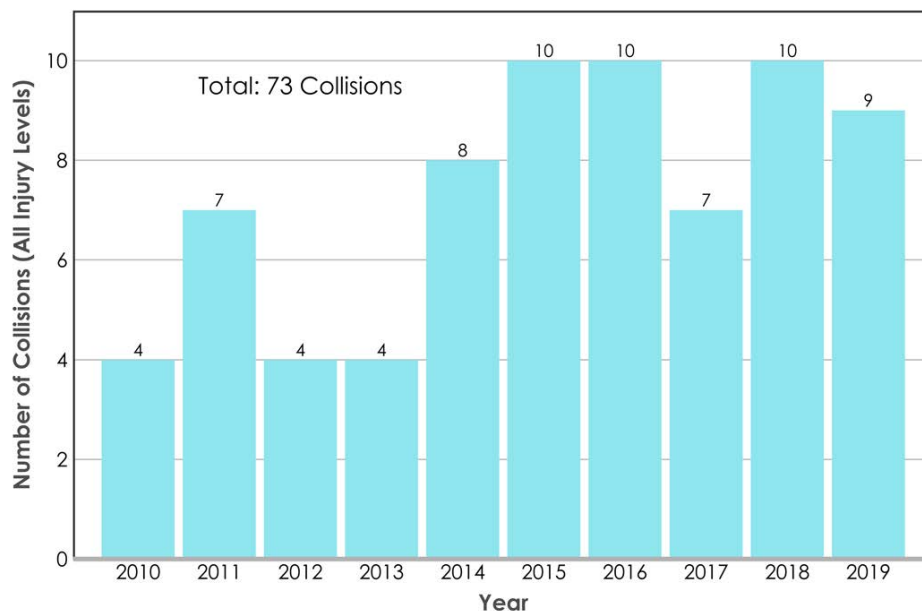


- Madera has relatively more pedestrian and more bicycle fatal and severe injury crashes than the County and the State.

- Madera has relatively fewer multi-vehicle fatal and severe injury crashes than the County and the State.

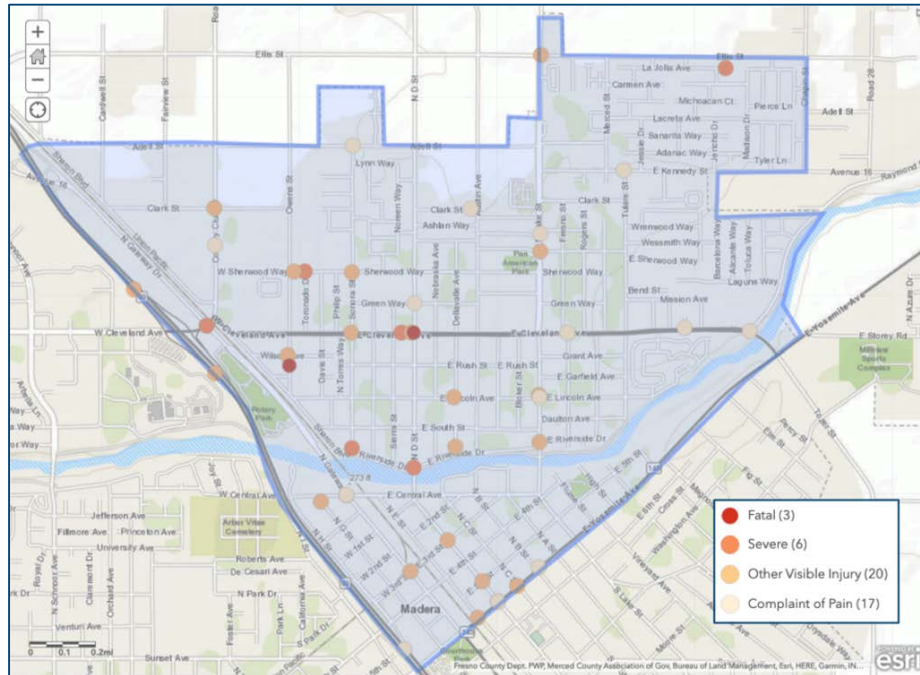
Source: Statewide Integrated Traffic Records System (SWITRS) 2015–2019

Pedestrian Crashes 2010–2019



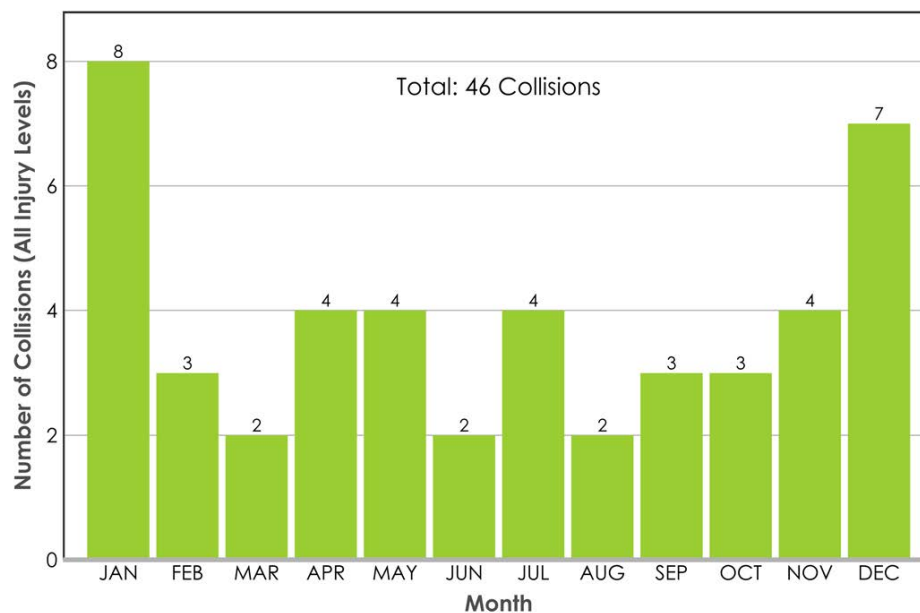
Source: Statewide Integrated Traffic Records System (SWITRS) 2015–2019

Pedestrian Crashes 2015-2019



Source: Statewide Integrated Traffic Records System (SWITRS) 2015-2019

Pedestrian Crashes 2015-2019 By month



Source: Statewide Integrated Traffic Records System (SWITRS) 2015-2019

Pedestrian Crashes 2015-2019

By time of day & Day of Week

	MON	TUE	WED	THU	FRI	SAT	SUN	TOTAL
Midnight-3AM	0	0	0	0	0	0	1	1
3-6AM	0	0	1	0	0	0	0	1
6-9AM	2	3	1	3	1	0	0	10
9AM-Noon	1	0	1	1	0	0	0	3
Noon-3PM	0	0	1	1	1	1	0	4
3-6PM	3	1	1	1	0	1	1	8
6-9PM	2	3	2	2	2	2	1	14
9PM-Midnight	1	0	1	0	0	1	2	5
Unknown	0	0	0	0	0	0	0	0
TOTAL	9	7	8	8	4	5	5	46

Source: Statewide Integrated Traffic Records System (SWITRS) 2015-2019

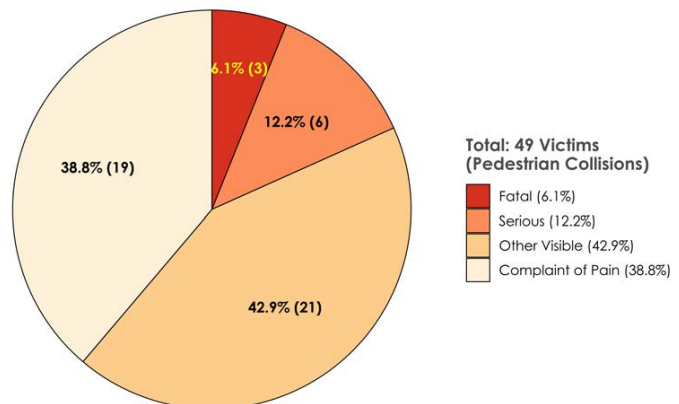
Pedestrian Crashes 2015-2019

By injury severity

49 victims were injured in 46 pedestrian crashes

- 48 victims were pedestrians
- 3 crashes had multiple pedestrian victims
- 1 crash had no pedestrian victims

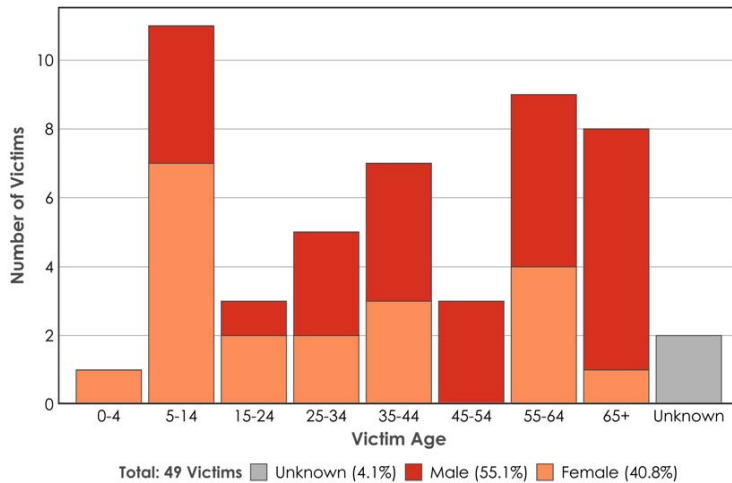
All fatal and serious injury victims were pedestrians



Source: Statewide Integrated Traffic Records System (SWITRS) 2015-2019

Pedestrian Crashes 2015-2019

By victim age & gender



28.6% of victims were older adults (age 60+).

- All were pedestrians.
- 5 suffered fatal & serious injuries.
- 71.4% were male.

26.5% of victims were school-age (age 5-18).

- All were pedestrians.
- All suffered minor injuries.
- 61.5% were female.

Source: Statewide Integrated Traffic Records System (SWITRS) 2015-2019

Pedestrian Crashes 2015-2019

Most frequently cited violations in injury crashes

19
crashes

21950a. Driver does not yield the right-of-way to a pedestrian at a marked or unmarked crosswalk.

7
crashes

21954a. Pedestrian shall yield the right-of-way to vehicles when not within a marked/unmarked crosswalk at an intersection.

5
crashes

21950b. Pedestrian unnecessarily stops or delays traffic at a marked/unmarked crosswalk.

4
crashes

22107. Unsafe turning or moving right/ left on a roadway or turning without signaling.

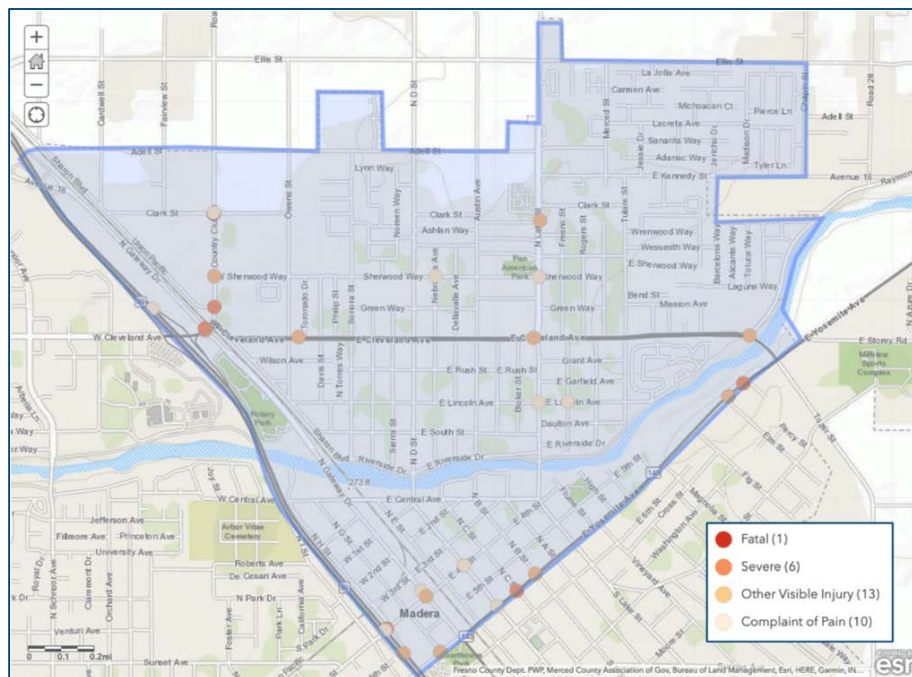
Source: Statewide Integrated Traffic Records System (SWITRS) 2015-2019

Bicycle Crashes 2010-2019



Source: Statewide Integrated Traffic Records System (SWITRS) 2015-2019

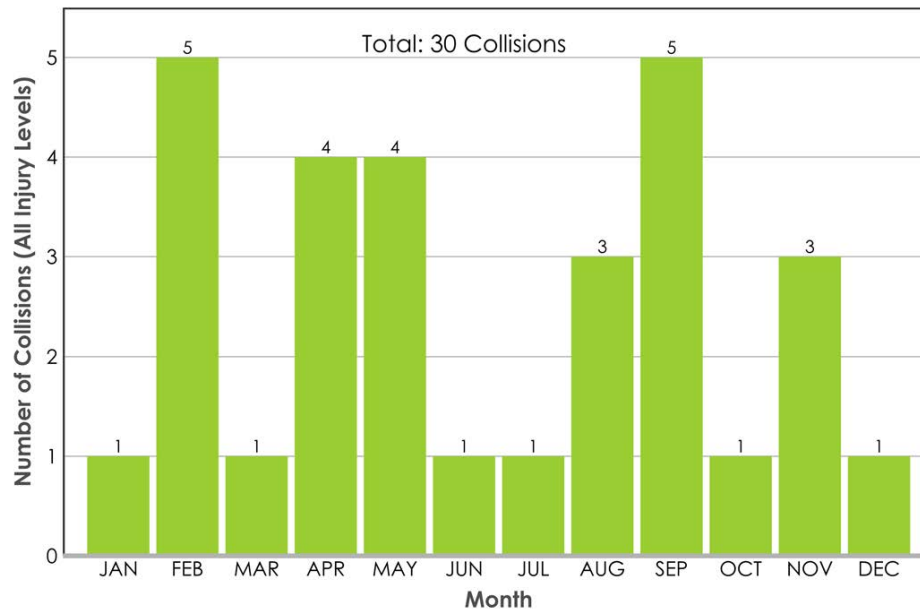
Bicycle Crashes 2015-2019



Source: Statewide Integrated Traffic Records System (SWITRS) 2015-2019

Bicycle Crashes 2015-2019

By month



Source: Statewide Integrated Traffic Records System (SWITRS) 2015-2019

Bicycle Crashes 2015-2019

By time of day & Day of Week

	MON	TUE	WED	THU	FRI	SAT	SUN	TOTAL
Midnight-3AM	0	0	0	0	0	0	1	1
3-6AM	0	0	0	0	0	0	0	0
6-9AM	0	1	0	0	1	0	0	2
9AM-Noon	0	0	0	0	0	1	0	1
Noon-3PM	1	0	1	1	3	0	2	8
3-6PM	0	0	1	3	3	1	1	9
6-9PM	1	1	1	1	1	1	0	6
9PM-Midnight	0	0	2	0	0	1	0	3
Unknown	0	0	0	0	0	0	0	0
TOTAL	2	2	5	5	8	4	4	30

Source: Statewide Integrated Traffic Records System (SWITRS) 2015-2019

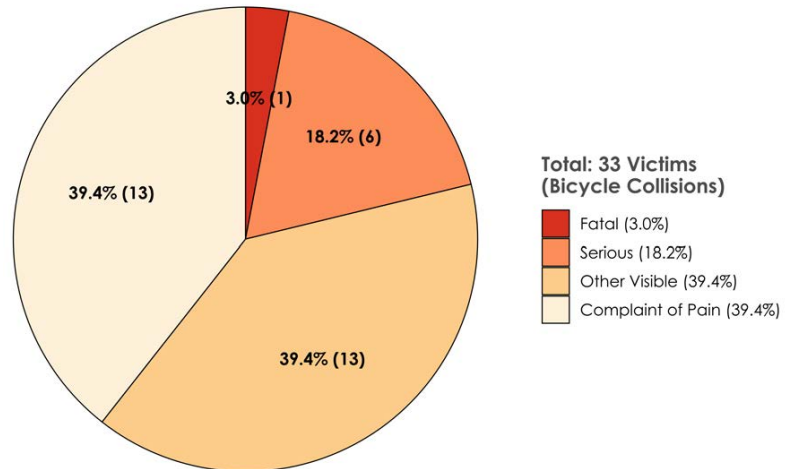
Bicycle Crashes 2015-2019

By injury severity

33 victims were injured in 30 bicycle crashes

- 30 victims were bicyclists
- 1 crashes had multiple bicyclist victims
- 1 crash had no bicyclist victims

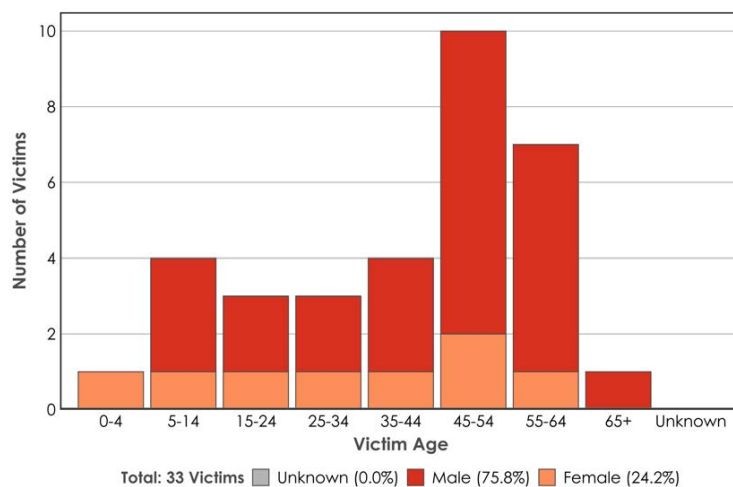
All fatal and serious injury victims were bicyclists.



Source: Statewide Integrated Traffic Records System (SWITRS) 2015-2019

Bicycle Crashes 2015-2019

By victim age & gender



36.3% of victims were adults age 45-59.

- 11 were bicyclists.
- 5 suffered fatal & serious injuries.
- 83.3% were male.

18.2% of victims were older adults age 60+.

- All were bicyclists.
- 1 suffered a serious injury.
- 83.3% were male

Source: Statewide Integrated Traffic Records System (SWITRS) 2015-2019

Bicycle Crashes 2015-2019

Most frequently cited violations in injury crashes

7
crashes

21453a. Failure to stop at a limit line or crosswalk at a red light.

4
crashes

21650. Failure to ride a bicycle in the same direction on the roadway as vehicles are driven.

3
crashes

21800a. Failure of a driver of a vehicle approaching an intersection shall yield the right-of-way to any vehicle which has entered the intersection from a different highway.

3
crashes

22107. Unsafe turning or moving right/ left on a roadway or turning without signaling.

Source: Statewide Integrated Traffic Records System (SWITRS) 2015-2019

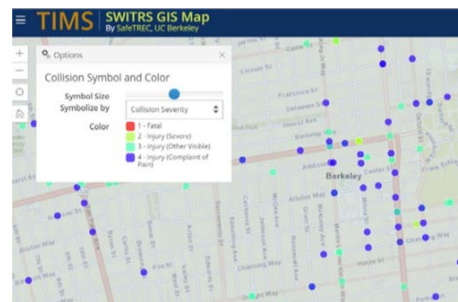
Additional Resources

Street Story

Street Story is a tool for collecting community feedback on transportation safety issues.

Share stories on Street Story of where you've been in a crash or near miss, or where you feel safe or unsafe traveling.

<https://streetstory.berkeley.edu>



Transportation Injury Mapping System (TIMS)

TIMS is a web-based tool that allows users to analyze and map data from California's Statewide Integrated Traffic Records System (SWITRS).

To further explore collision data, register for a free account to access the tools and resources on TIMS.

<https://tims.berkeley.edu>

Thank you for your interest in the Community Pedestrian and Bicycle Safety Program. For more information, please visit:

<https://safetrec.berkeley.edu/programs/cpbst> or <https://www.calwalks.org/cpbst>

safetrec@berkeley.edu or cpbst@calwalks.org

