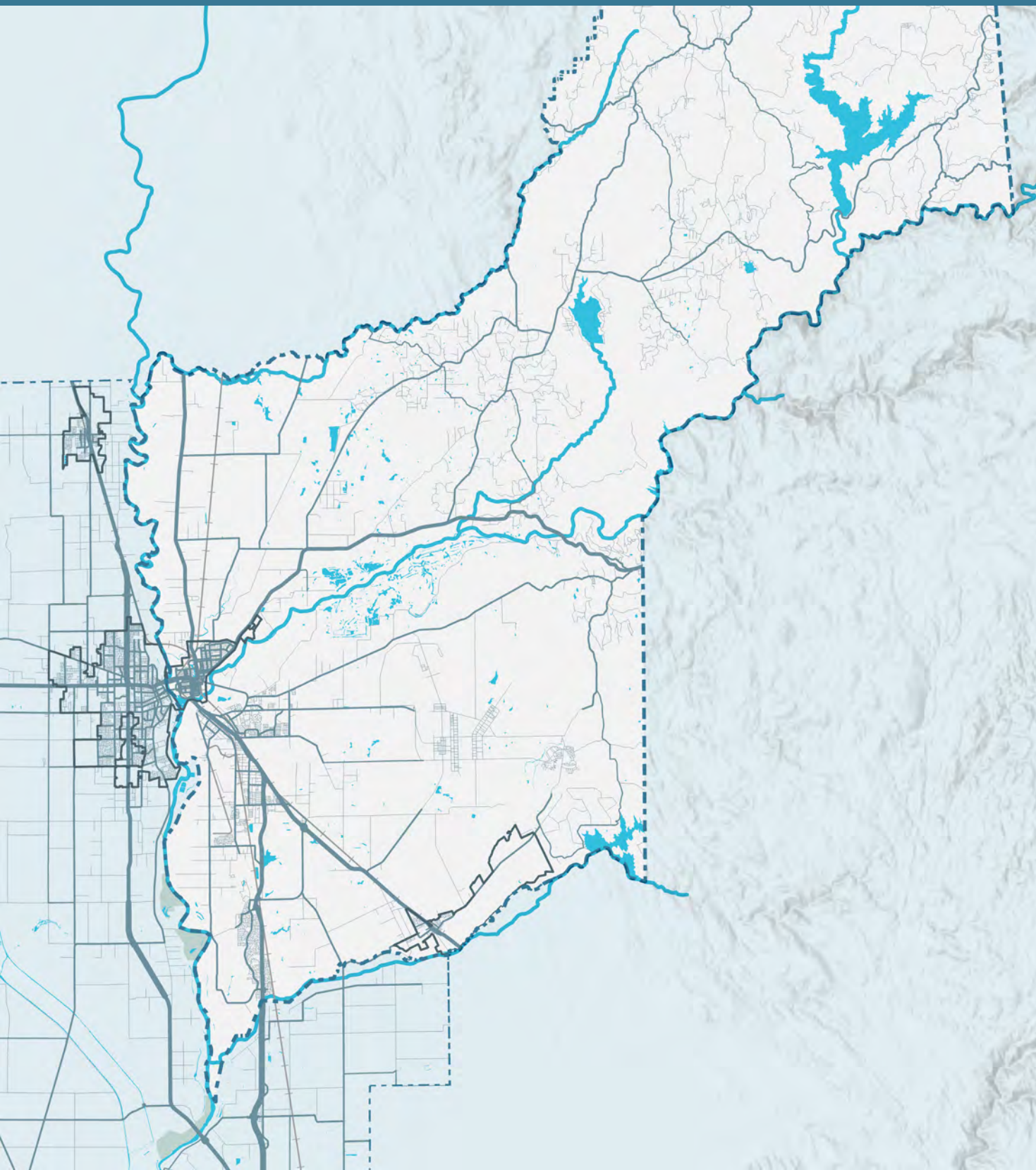


CHAPTER 5 Yuba County Crash Analysis



This Plan and Our Region

Introduction

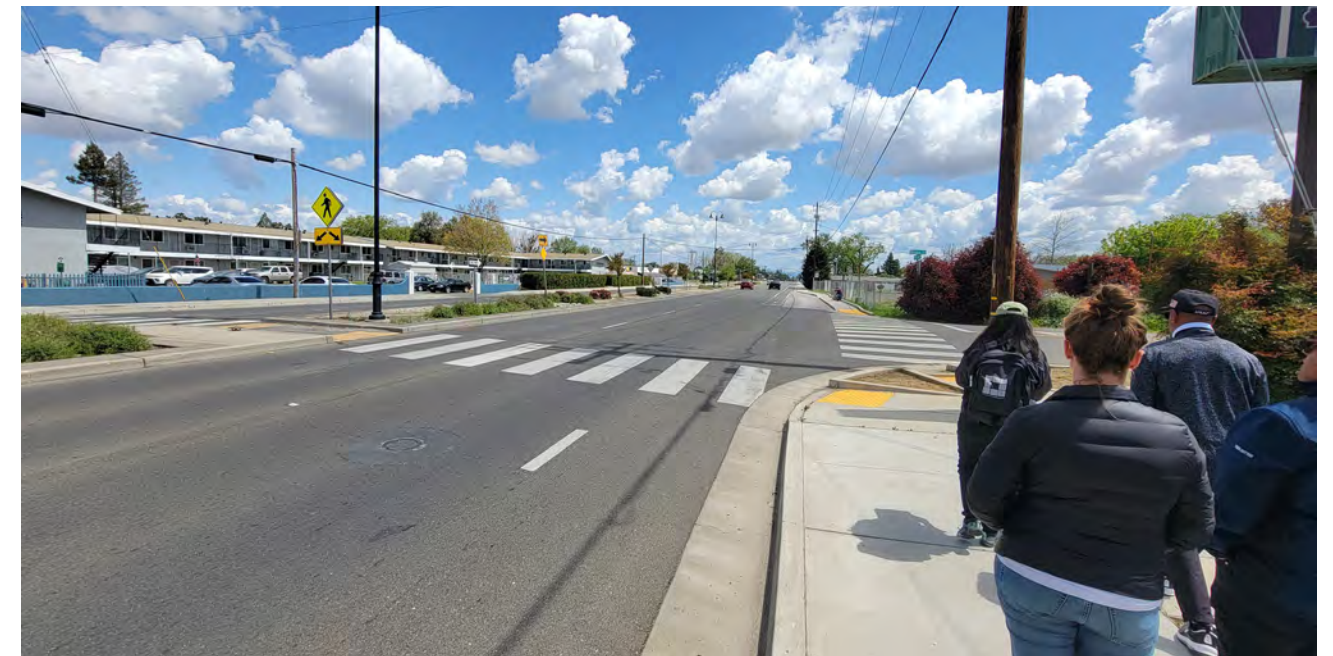
Yuba County is rich in history, natural beauty, and agricultural significance. Covering approximately 644 square miles, Yuba County is geographically diverse, with the western portion consisting of fertile valley land ideal for farming, while the eastern portion has the rugged terrain of the Sierra Nevada foothills. The county is home to the Yuba River, Feather River, and Bear River, which contribute to its scenic landscapes and recreational opportunities.

Agriculture plays a vital role in Yuba County's economy, with crops such as rice, peaches, and walnuts being widely cultivated. The county also has a strong presence of cattle ranching and dairy farming. Additionally, Yuba County is known for its biodiversity, boasting a high number of native plant species.

The county is connected to the greater Sacramento Region by a network of state facilities that carry high volumes of traffic. State Route (SR) 70 runs north-south through the county seat of Marysville, SR 20, provides east-west access, and SR 65 connects to Beale Air Force Base and the City of Wheatland to Roseville, and Rocklin in Placer County.

Yuba County is home to several fairly populous unincorporated communities that fall under county jurisdiction. These communities include Linda, Olivehurst, Arboga, Plumas Lake, Loma Rica, Browns Valley, and Oregon House, among others.

📷 Project team conducting walk audits



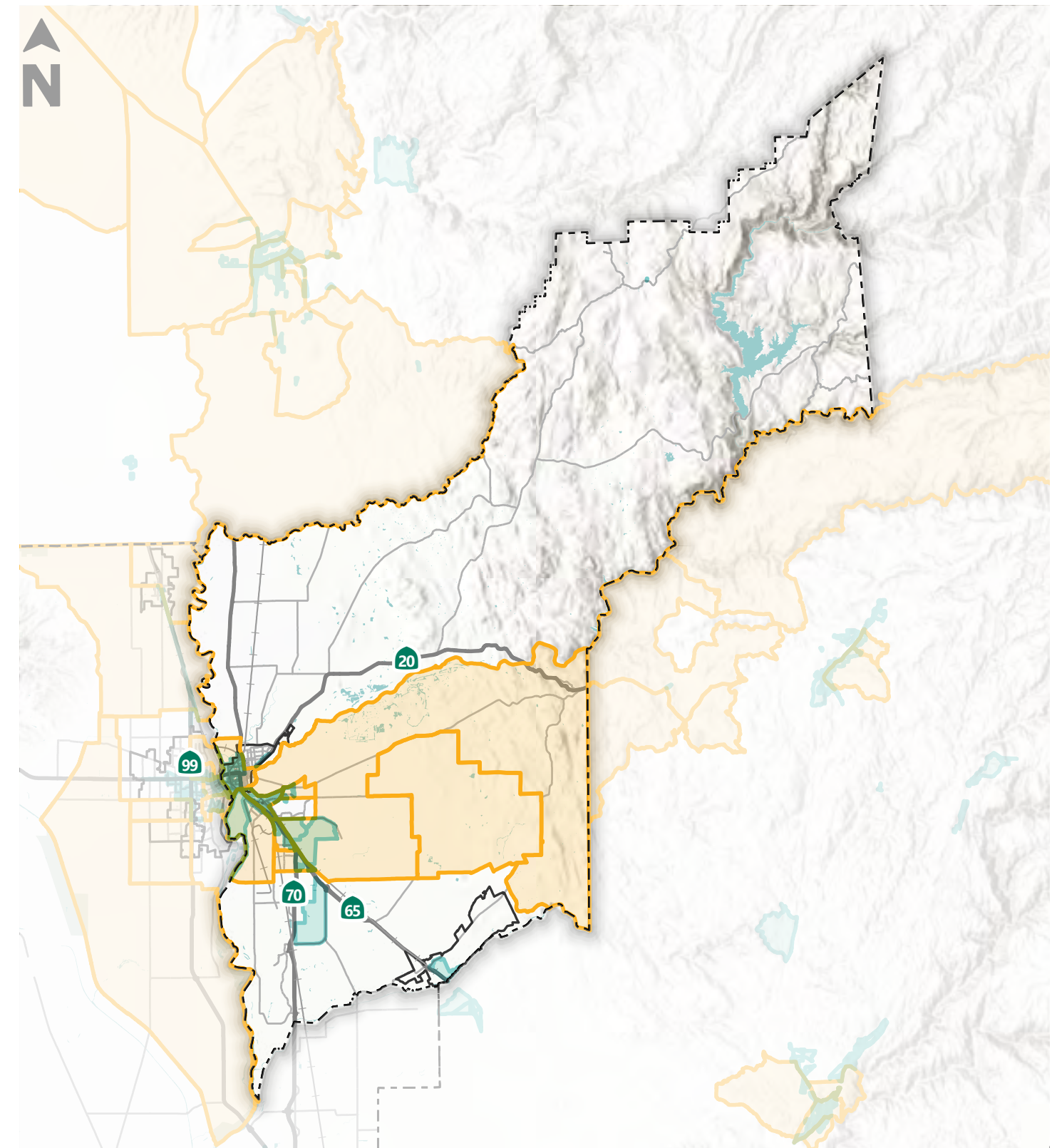
Communities of Concern

Sociodemographic data sources are helpful to better understand the community, as well as when applying for state and federal grant funding to implement infrastructure projects. Figure 5.1 shows locations in Yuba County that meet the criteria for two community metrics relevant to grant applications:

- Caltrans Transportation Equity Index (EQI) Transportation-Based Priority Populations: 7 percent of Yuba County's population meets Caltrans' threshold for Transportation-Disadvantaged status, compared to 16 percent statewide.
- USDOT Areas of Persistent Poverty and Historically Disadvantaged Communities: 41 percent of Yuba County's population lives in areas of persistent poverty and historically disadvantaged communities, compared to 28 percent statewide.

In CalEnviroScreen, which evaluates environmental burdens including air pollution, traffic density, and health vulnerabilities, Yuba County received a score of 20, where the state had a score of 23, indicating parity between Yuba County and the state as a whole.

Figure 5.1: Caltrans Transportation Equity Index & USDOT Areas of Persistent Poverty



Legend

Caltrans Transportation Equity Index (EQI) Transportation-Based Priority Populations

USDOT Areas of Persistent Poverty and Historically Disadvantaged Communities (APPHDC)



Plans

Yuba County has previously made commitments to roadway safety, as outlined in the Yuba County General Plan and recently completed Local Roadway Safety Plan. Refer to **Appendix A** for a list of policies and goals supporting improving roadway safety.

Projects

There are numerous improvement projects currently underway or planned within unincorporated Yuba County.

The following roadway safety-related projects are planned on state facilities owned and operated by Caltrans:

- Install centerline or shoulder rumble strips on State Route 20 at various locations throughout Yuba County.
- Upgrade crosswalk to ladder type at various locations on SR 65 and 70 in southwest Yuba County.
- Upgrade guardrail, signs, Transportation Management System elements; install sidewalks, curb and gutter, lighting, and acceleration and deceleration lanes; rehabilitate pavement and drainage systems along SR 65 between SR 70 and South Beale Road.
- Upgrade crosswalk to ladder type on SR 70 near Algodon Road and south of Plumas Lake Boulevard.

The following safety-related projects are being designed or in construction on county roadways:

- Addition of curbs, gutters, sidewalks, and bike lanes along Arboga Road, Grand Avenue, Jay Street, Cottonwood Avenue, Garden Avenue, and Vine Avenue in West Linda, in addition to storm drains on Garden Avenue.
- Curb, gutter, sidewalk, bike lanes, and storm drain along 13 roads in Olivehurst: Second Ave, Third Ave, Fourth Ave, Fifth Ave, Sixth Ave, Eighth Ave, Ninth Ave, Tenth Ave, Eleventh Ave, Western Ave, Beaver Lane, Canal Street, and Tulsa Avenue.
- Streetscape improvements on Feather River Boulevard from Arboga Road to Alicia Avenue, including new sidewalks, crosswalks, Class II bike lanes, storm drains, striping, signage, curbs, gutters, American Disability Act compliant ramps, LED street lights, and improved transit stops.

The following recently completed projects in Yuba County enhance safety for roadway users, particularly pedestrians, bicyclists, and children:

- Bike path on the western edge of the Plumas Lake community
- Safe Routes to School: Sidewalks, crosswalks, bike lanes, curbs, and gutters on 11th Avenue in Olivehurst

INJURY CRASH TOTAL

1,972

KSI CRASH TOTAL

397

Figure 5.2
Injury Crashes by Year, 2018 - 2023

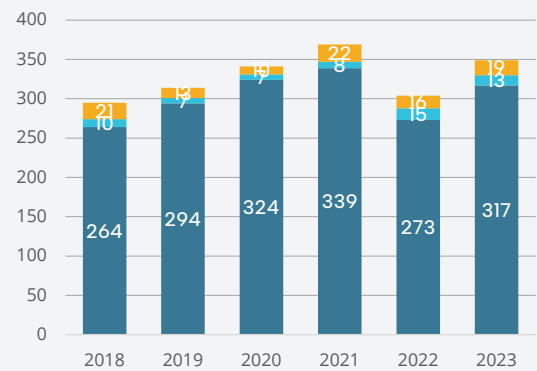
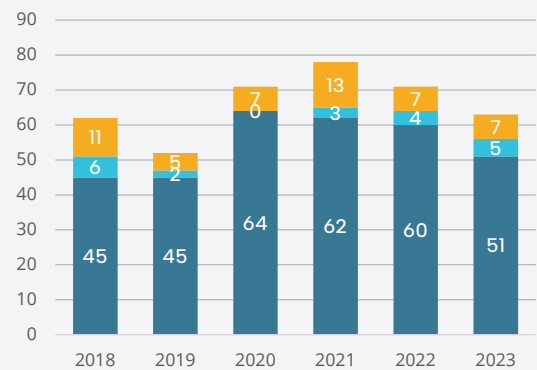


Figure 5.3
KSI Crashes by Year, 2018 - 2023



KSI = Killed or Severely Injured

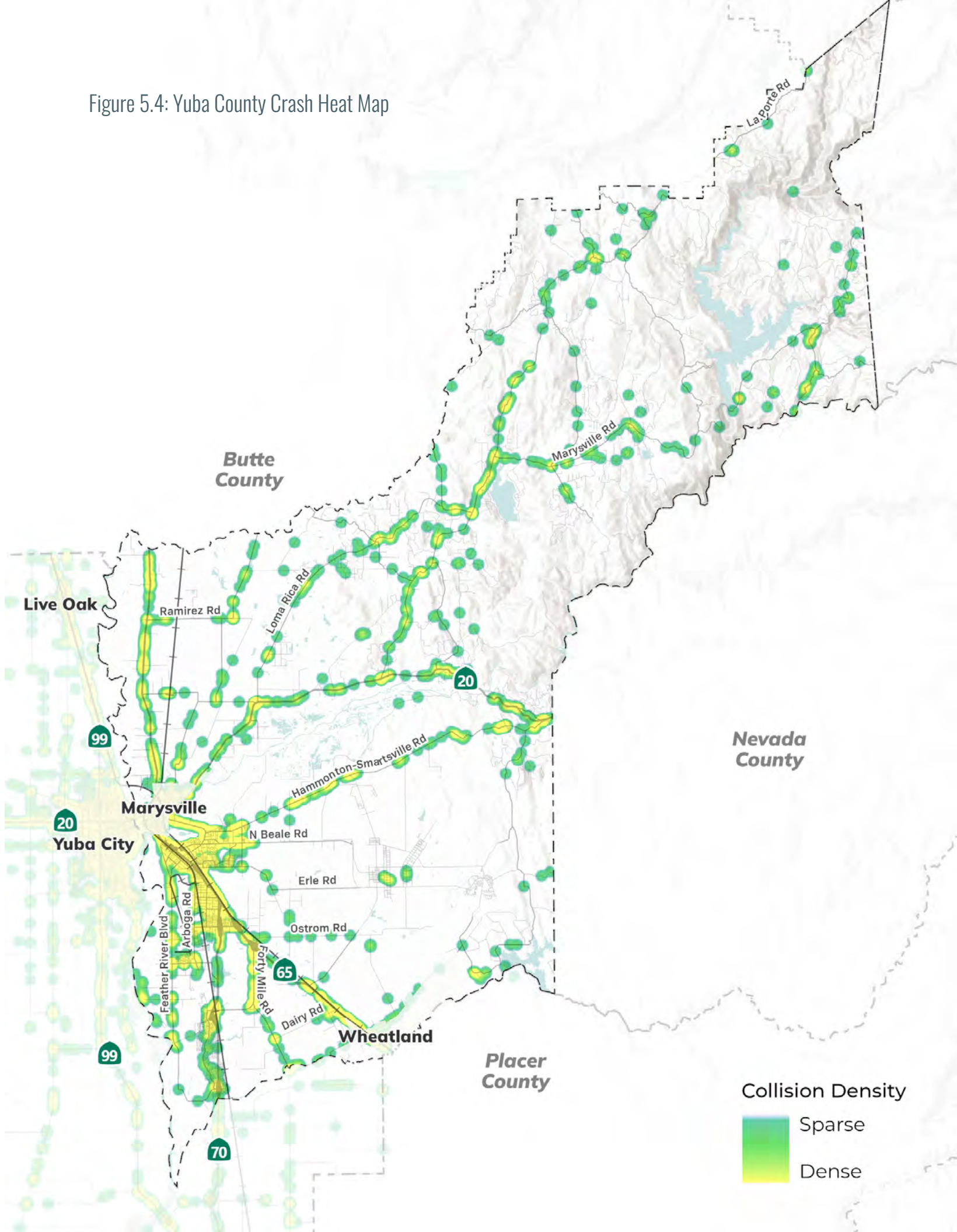
- Vehicle-Only Crashes
- Bicycle-Involved Crashes
- Pedestrian-Involved Crashes

Crash Summary

This section summarizes key findings from the county's crash data obtained from the California Highway Patrol's Statewide Integrated Traffic Records System (SWITRS) database, for the years 2018 to 2023. The analysis includes all crashes that led to injury and excludes property-damage-only crashes.

Within the six-year period Yuba County saw a total of 1,972 crashes that led to some degree of injury. 82 crashes (four percent of all injury crashes) involved bicyclists and 148 (six percent) involved pedestrians. 438 crashes resulted in a victim being Killed or Severely Injured (KSI).

Figure 5.4: Yuba County Crash Heat Map



About KSI Crashes

Severe injuries resulting from a traffic crash can result in a number of catastrophic impacts, including permanent disability, lost productivity and wages, and ongoing healthcare costs. These injuries can include:

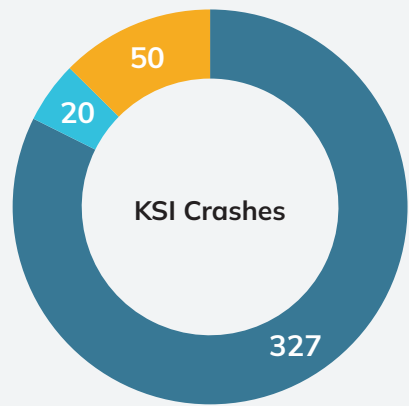
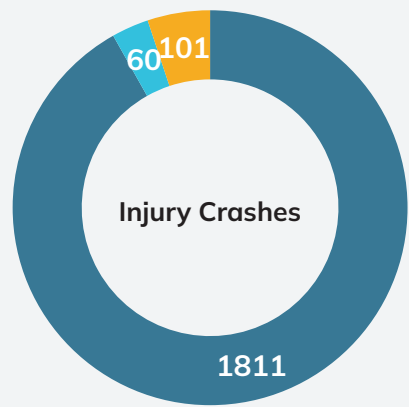
- Broken or fractured bones
- Dislocated or distorted limbs
- Severe lacerations
- Severe burns
- Skull, spinal, chest or abdominal injuries
- Unconsciousness at or when taken from the collision scene

Throughout this analysis, the acronym KSI is used to denote crashes where someone was killed or severely injured.

KSI Summary

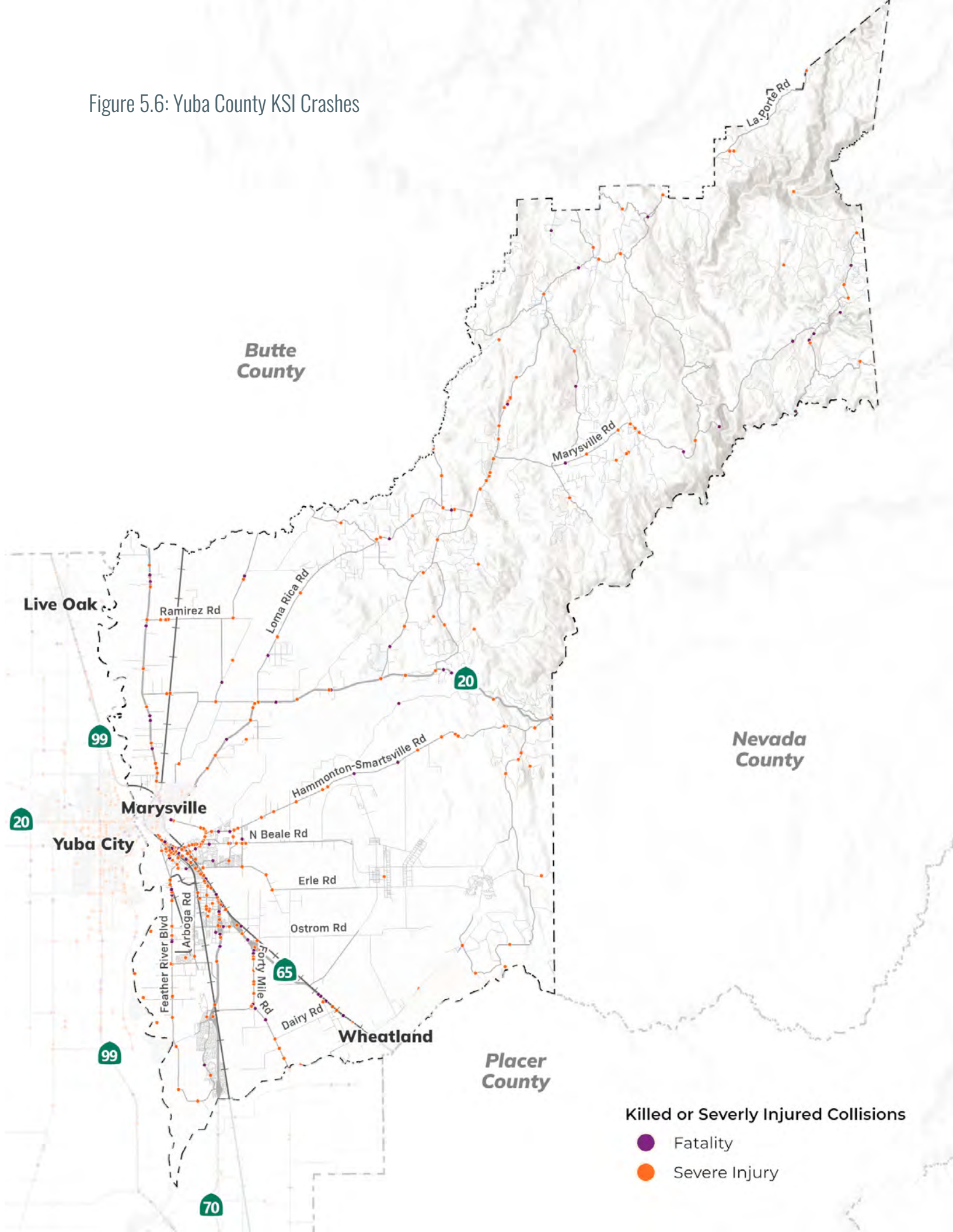
There is a disproportionately greater share of bicycle and pedestrian crashes among KSI crashes, as compared to all injury crashes. Out of 397 KSI crashes, 20 (five percent of KSI crashes) involved bicyclists, and 50 (13 percent) involved pedestrians. There was a total of 102 fatalities: 83 vehicle drivers or passengers, 14 pedestrians, and five bicyclists.

Figure 5.5
Crash Mode Share by Severity



- Vehicle-Only Crashes
- Bicycle-Involvement Crashes
- Pedestrian-Involvement Crashes

Figure 5.6: Yuba County KSI Crashes



Crashes by Crash Type

Overall, hit object (29 percent), broadside (21 percent), and rear-end (20 percent), were the most common crash types in Yuba County. Similarly, among KSI crashes, hit object (32 percent) was also the most common type of crash, followed by overturned (15 percent) and head-on (15 percent).

Crashes by Primary Crash Factor

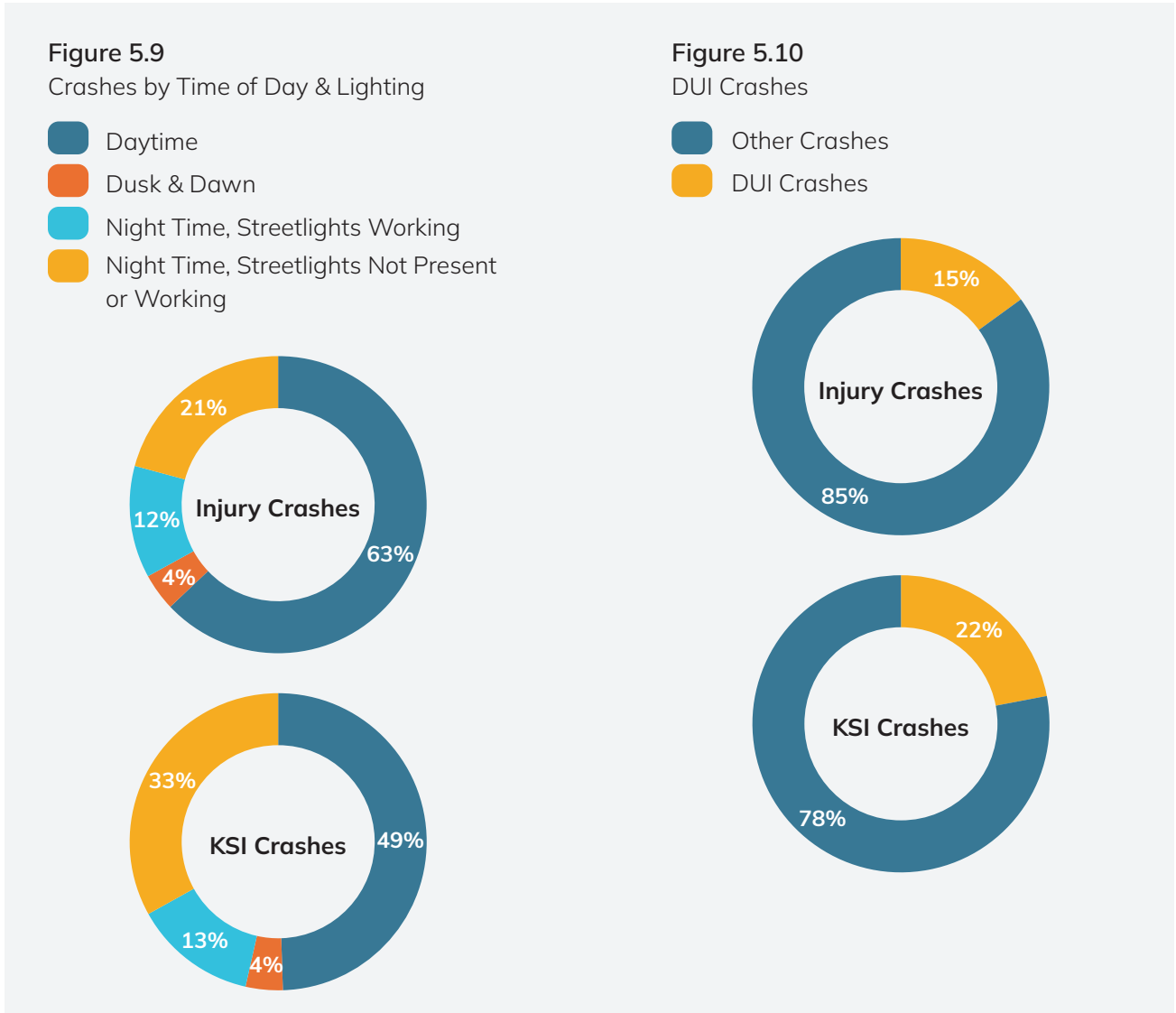
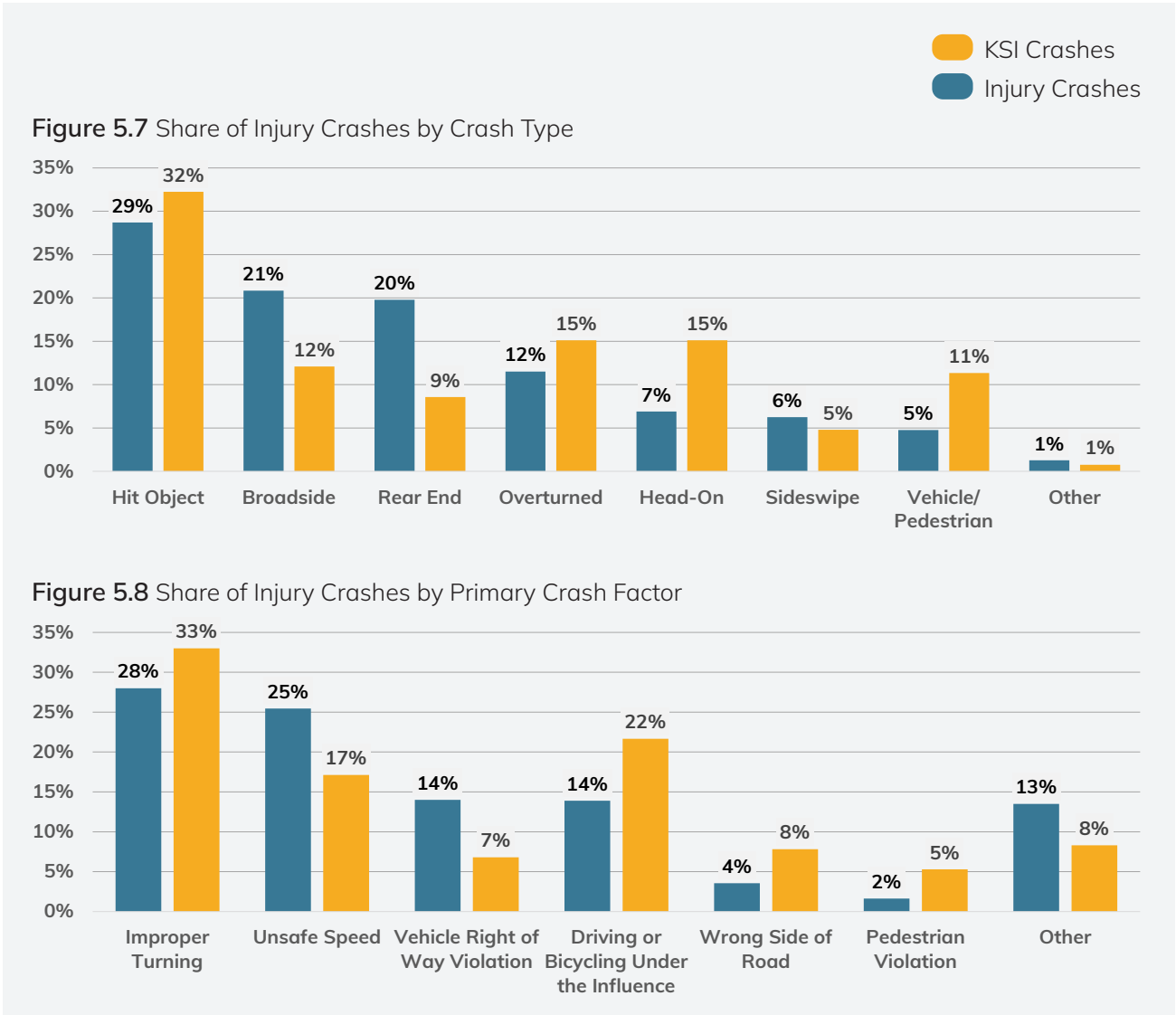
Improper turning (28 percent) was the leading reported primary cause of crashes resulting in injury, followed by unsafe speed (25 percent) and Vehicle Right of Way Violation (14 percent). Improper turning (33 percent) was the leading reported primary cause of KSI crashes followed by Driving or Bicycling Under the Influence (22 percent) and Unsafe Speed (17 percent).

Crashes by Time of Day and Lighting Condition

Overall, most crashes occurred in the daylight (63 percent), 4 percent occurred during dusk and dawn, 12 percent occurred in the dark where streetlight was present, and 21 percent in the dark with no lighting. 49 percent of KSI crashes happened in the daytime, 4 percent occurred during dusk and dawn, and 13 percent occurred in the dark with streetlight present. A disproportionately greater share of KSI crashes occurred during nighttime in areas that lacked lighting, at 33 percent compared to 21 percent of all injury crashes.

Driving Under the Influence

15 percent of all crashes resulting in injury involved someone driving under the influence of alcohol or drugs. Notably, this share was larger for KSI crashes, at 22 percent.



Safety Corridors

Safety corridors are the roadway segments within Yuba County that had the highest number of crashes resulting in severe injury or death (KSI) in the six-year study period. Priority safety corridors are the safety corridors that experienced the highest rate of KSI crashes, are adjacent to sensitive land uses, and have high potential for severe crashes and thus, should be prioritized for improvements. The following is a list of Yuba County's priority safety corridors as identified through a safety corridor systemic analysis, task force input, and community feedback. Figure 5.11 displays Yuba County's network of safety corridors, which are shown in orange. Priority corridors are shown in red. Refer to **Appendix C** for a more detailed explanation of the safety corridor identification technical methodology.

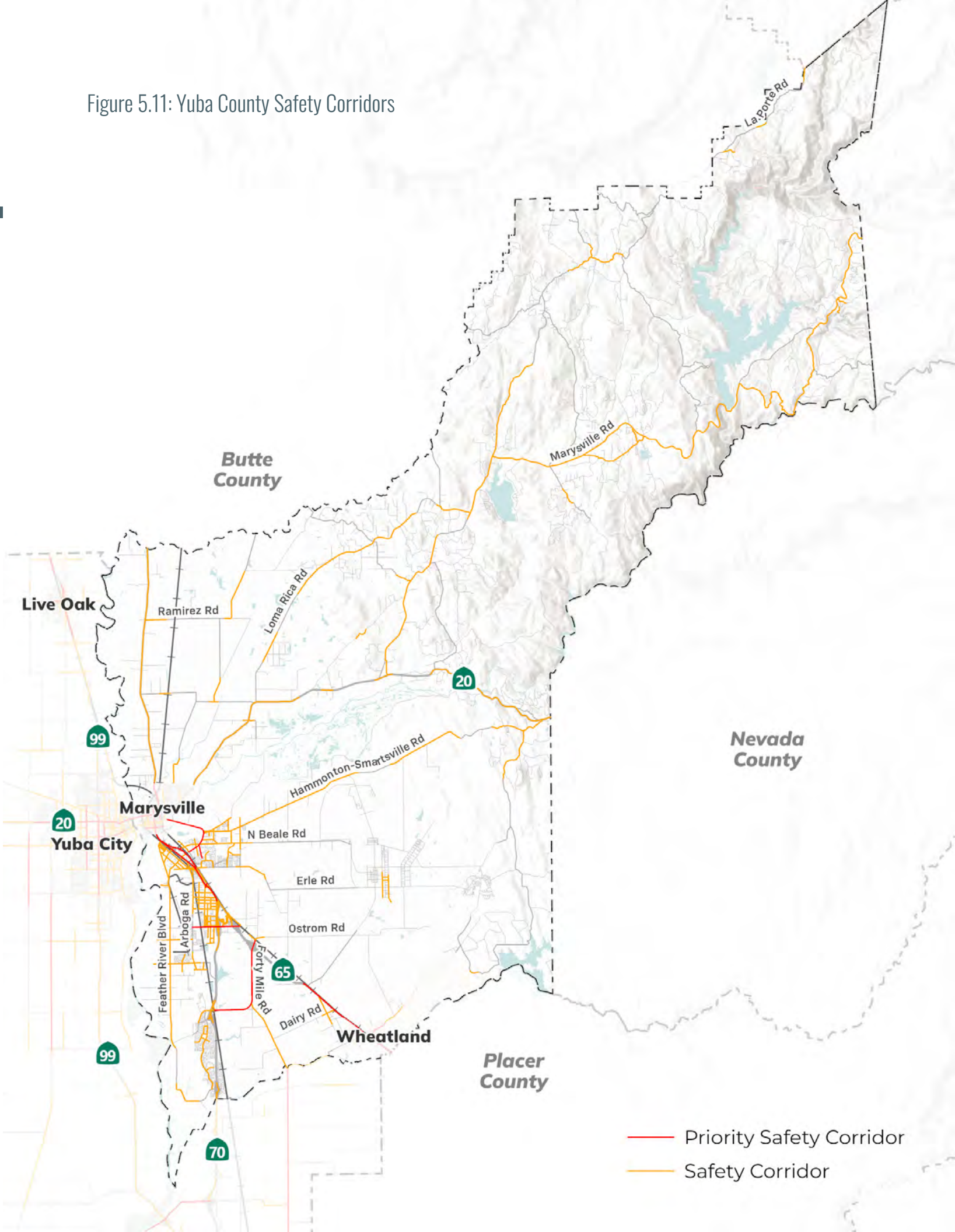
- SR 70 from Yuba River to SR 65 Junction
- SR 65 from Morrison Rd/Rancho Rd to Wheatland city limits
- North Beale Rd/Lindhurst Ave from SR 70 to Erle Rd
- Simpson Ln from Yuba River to Hammonton-Smartsville Rd
- Hammonton-Smartsville Rd from Simpson Ln to Avondale Ave/Rupert Ave
- Grove Ave from Hammonton Smartsville Rd to Shoreline Dr
- Olivehurst Ave from Powerline/Chestnut roundabout to Lindhurst Ave
- McGowan Pkwy from Arboga Rd to Rancho Rd
- Plumas Arboga Rd from SR 70 to Forty Mile Rd
- Forty Mile Rd from Rancho Rd to Plumas Arboga Rd

Priority Safety Corridors were identified to provide the list of locations for actionable next steps with additional study. Studies could include recommended engineering safety countermeasures with targeted improvements to address crash history or focused programs identified in the Action Plan chapter.

Safety Corridor Inset:



Figure 5.11: Yuba County Safety Corridors



— Priority Safety Corridor
— Safety Corridor

Community Snapshot

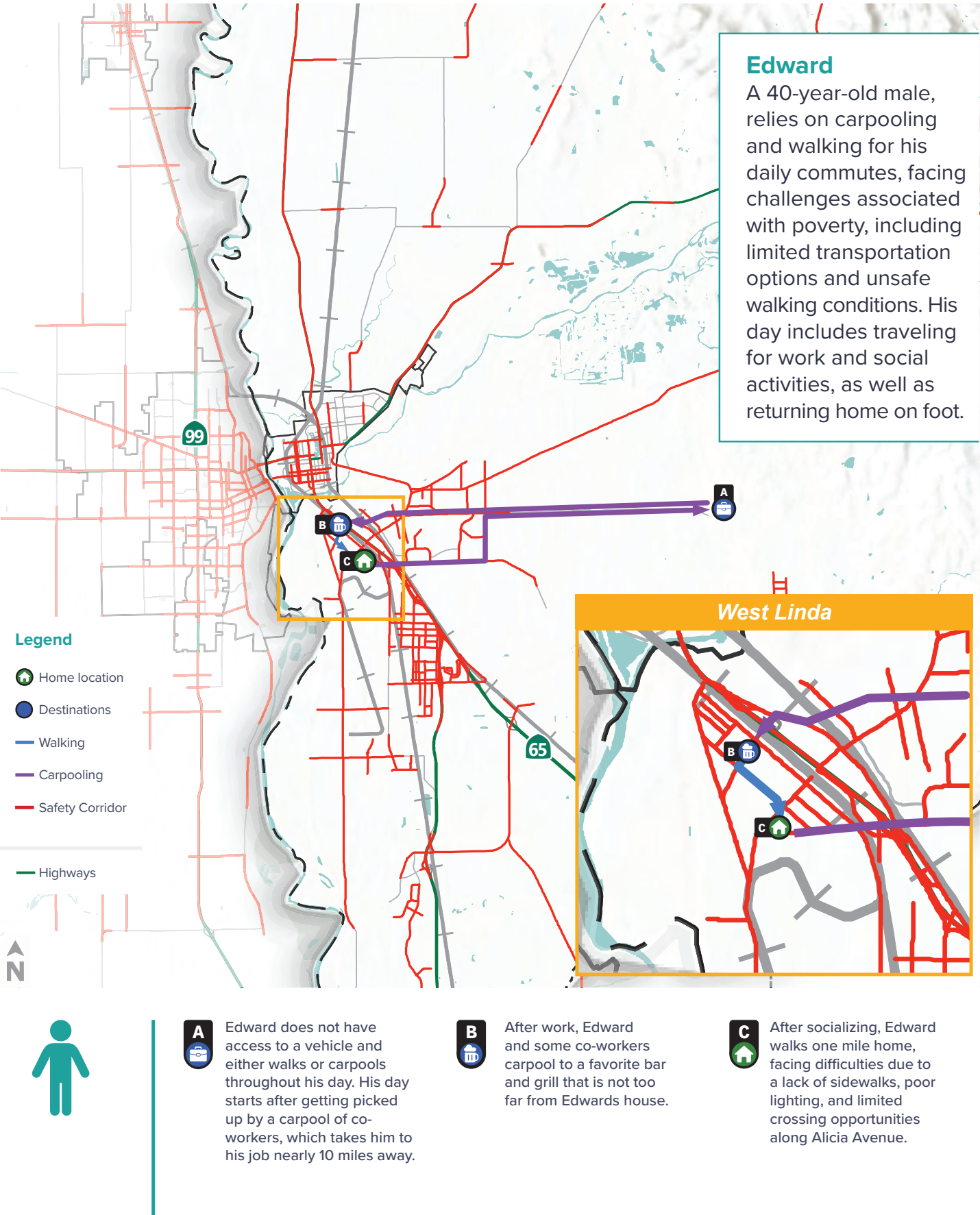
This community snapshot features Edward, a fictional character created to illustrate the daily transportation challenges faced by someone without a personal vehicle in unincorporated Yuba County. The experiences of this character are based on census data as well as local lived experiences.



Edward’s daily routine highlights the transportation struggles faced by individuals living in poverty, as shown in Figure 5.12. Without access to a personal vehicle, he relies on carpooling with co-workers to travel nearly 10 miles to his job and later to a nearby bar and grill for socializing. His return home is on foot, covering about a mile. This walk, however, is fraught with safety hazards. The route along Alicia Avenue lacks sidewalks, has poor lighting, and offers limited safe crossing points, making it a dangerous journey.

Although a majority of Yuba County residents (84 percent) primarily rely on cars for transportation, a significant portion still travel on foot (11 percent). Edward’s experience underscores the broader challenges of inadequate infrastructure and limited mobility options in underserved communities, and how pedestrians should be given greater consideration when planning and implementing safety improvements.

Figure 5.12: Yuba County Community Snapshot





Focus Areas

Six focus areas were identified through a systemic analysis of crash records to represent the most significant patterns behind injury crashes—and especially KSI crashes—in the region. These focus areas are identified with the letters “A” through “F” and each one is applicable to one, several, or all of the communities covered by this RSAP. Following each crash focus area is a set of potential countermeasures that should be considered for implementation to improve safety outcomes. **Appendix D** contains a more detailed summary of each countermeasure.

Yuba County’s traffic safety challenges can be understood through a subset of these focus areas:



FOCUS AREA C
Driving Under the Influence



FOCUS AREA D
Crashes Involving People Walking and Biking



FOCUS AREA B
Improper Turning Away from Intersections



FOCUS AREA B
Hit Object



FOCUS AREA C

Driving Under the Influence

INJURY CRASH STATISTICS

293 (15%) Total Crashes

92 (23%) KSI Crashes

Driving under the influence (DUI) is a significant contributor to injury crashes, especially and disproportionately to KSI crashes. Alcohol impairment was involved in 15 percent (of Yuba County’s total crashes but accounted for 23 percent of all Yuba County’s KSI crashes. Figure 5.12 displays all DUI crashes within unincorporated Yuba County.

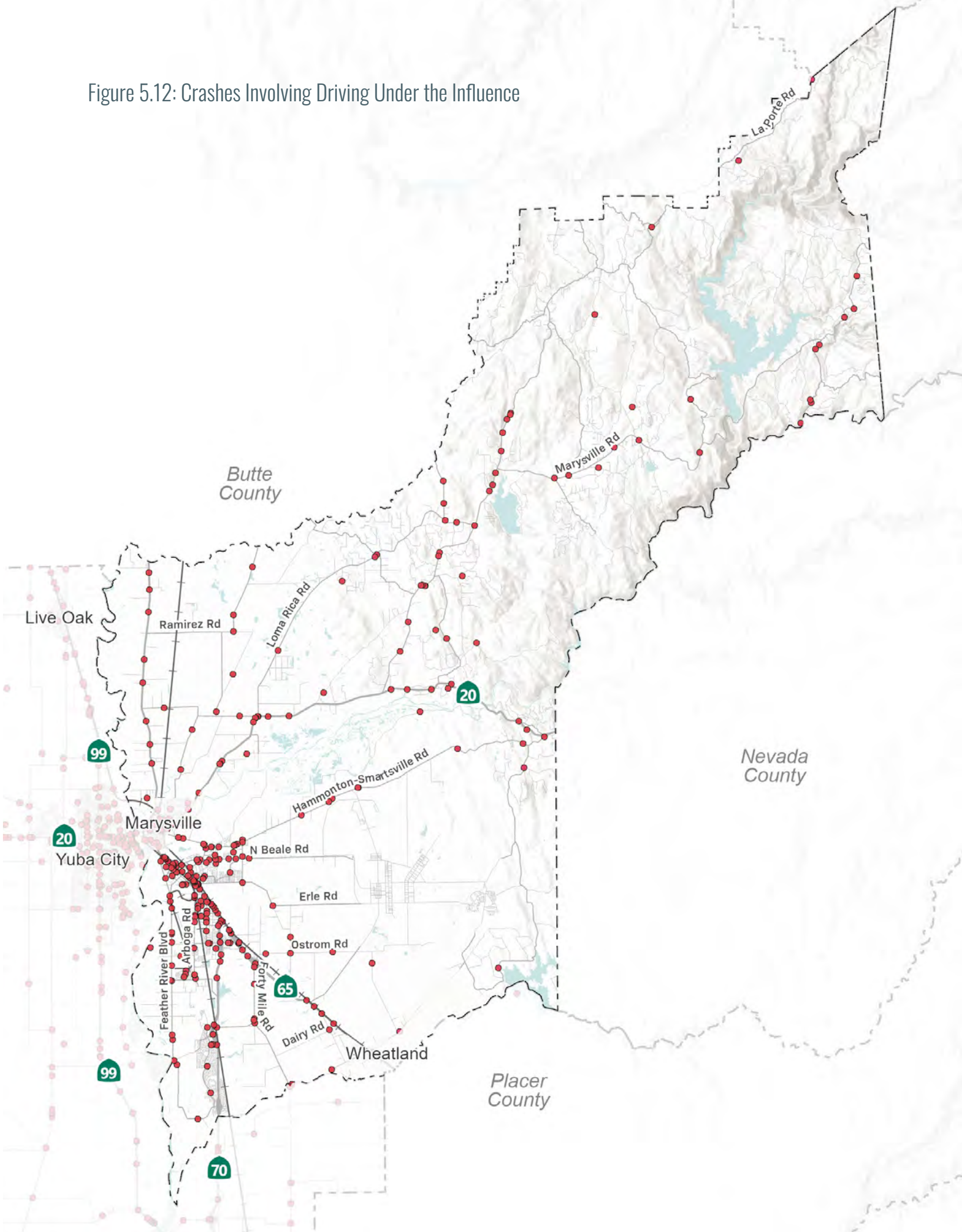
Two-thirds of DUI crashes were concentrated in the southwest portion of the county—many of them in and near Linda, West Linda, and Olivehurst—on Hammonton Smartville Road, North Beale Road, State Routes 65 and 70, Arboga Road, Feather River Boulevard, Olivehurst Avenue, and Forty Mile Road. The rest of the crashes were dispersed widely north of the Yuba River, on SR 70 and SR 49, and Marysville Road, mostly. Local law enforcement and public works staff identified

the Amphitheater and Casino as probable influences. Friday, Saturday, and Sunday see higher crash frequency around 6pm to 3am, compared to other times of day and days of the week. Most DUI crashes occurred on county and state roads where there are posted speed limits of 55 MPH.

Hit object was the most common type of crash to result from DUI crashes and accounted for 48 percent (142 crashes) of them and 42 percent of KSI crashes (40 crashes). These DUI-hit object crashes were spread across the county in a pattern similar to that of all DUI crashes.

The most effective countermeasures for DUI crashes fall under non-engineering programs that target education and enforcement.

Figure 5.12: Crashes Involving Driving Under the Influence





FOCUS AREA D

Crashes Involving People Walking and Biking

INJURY CRASH STATISTICS

160 (8%) Total Crashes

70 (18%) KSI Crashes

Pedestrians and bicyclists are vulnerable roadway users. Although crashes involving people walking and biking make up only eight percent of all crashes, they account for nearly eighteen percent of all KSI crashes in unincorporated Yuba County. Figure 5.13 displays all crashes that involved people walking and biking.

These crashes are concentrated in the unincorporated communities of West Linda, Linda, and Olivehurst. There are higher rates of KSI crashes involving bicyclists and pedestrians on arterials such as McGowan Parkway, Feather River Boulevard, North Beale Road,

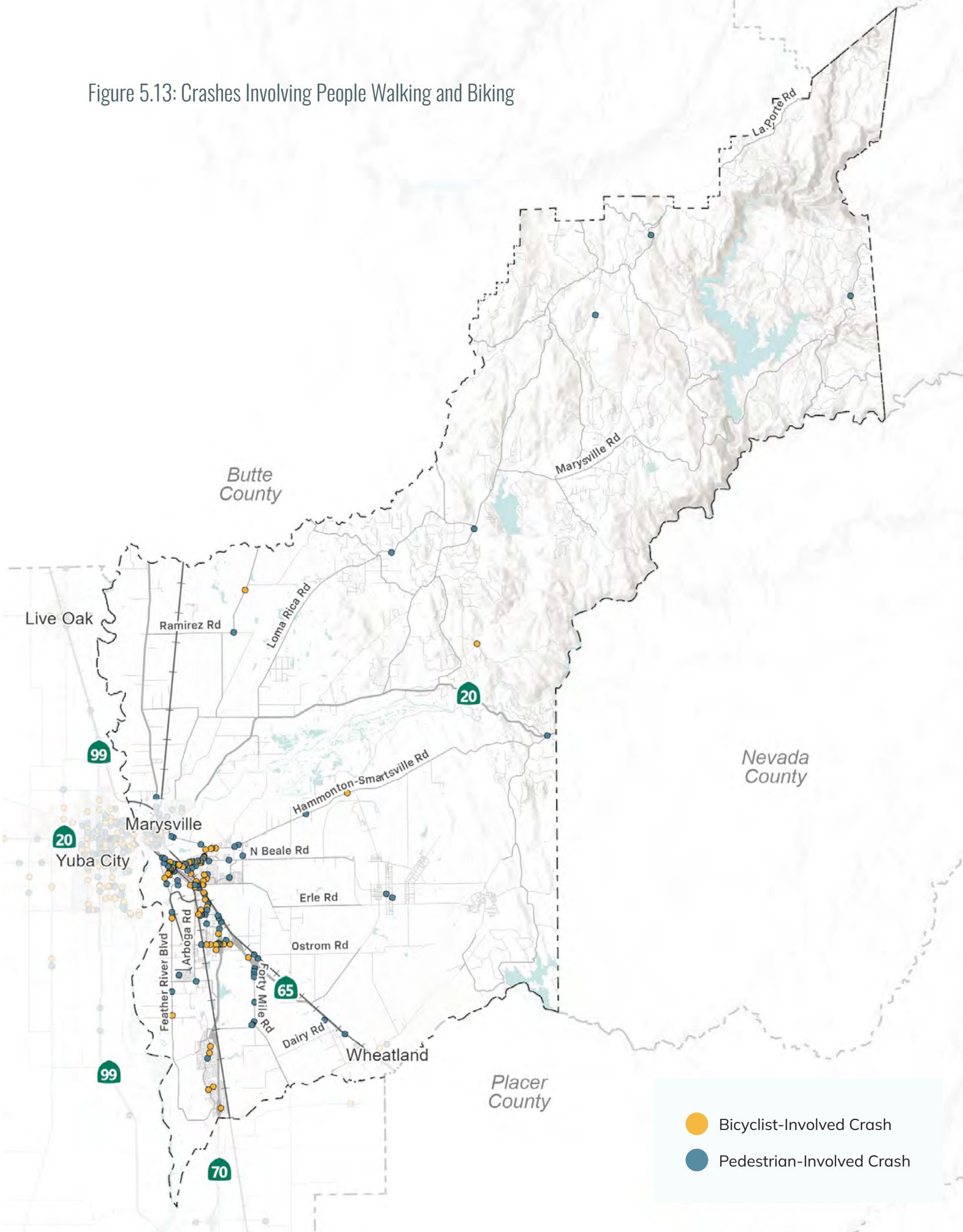
and Forty Mile Road. There are numerous crashes on arterial segments where retail businesses and homes are present along either side of the road:

- Feather River Boulevard, between Alicia Avenue and SR 70
- North Beale Road, between Silverwood Street and Hammonton Smartville Road

Mid-block crashes occurred in some areas where pedestrian crossings are sparse—particularly on Lindhurst Avenue and Hammonton Smartville Road.



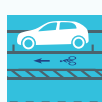
Figure 5.13: Crashes Involving People Walking and Biking



Yuba County

The following countermeasures reduce risks for crashes involving pedestrians and bicyclists by making them more visible to drivers, providing safer and more frequent opportunities to cross busy roads, and creating dedicated or protected spaces for their use.

Potential Countermeasures

	Add Sidewalk		Curb Extensions
	High-Visibility Crosswalk		Co-Locate Bus Stops and Pedestrian Crossings
	Rectangular Rapid Flashing Beacon		Pedestrian Hybrid Beacon
	Leading Pedestrian Interval and Pedestrian Recall		Shared-Use Path
	Separated Bikeway		Bike Lane
	Buffered Bike Lanes		Green Conflict Striping





FOCUS AREA E

Improper Turning Away from Intersections

INJURY CRASH STATISTICS

383 (19%) Total Crashes

99 (25%) KSI Crashes

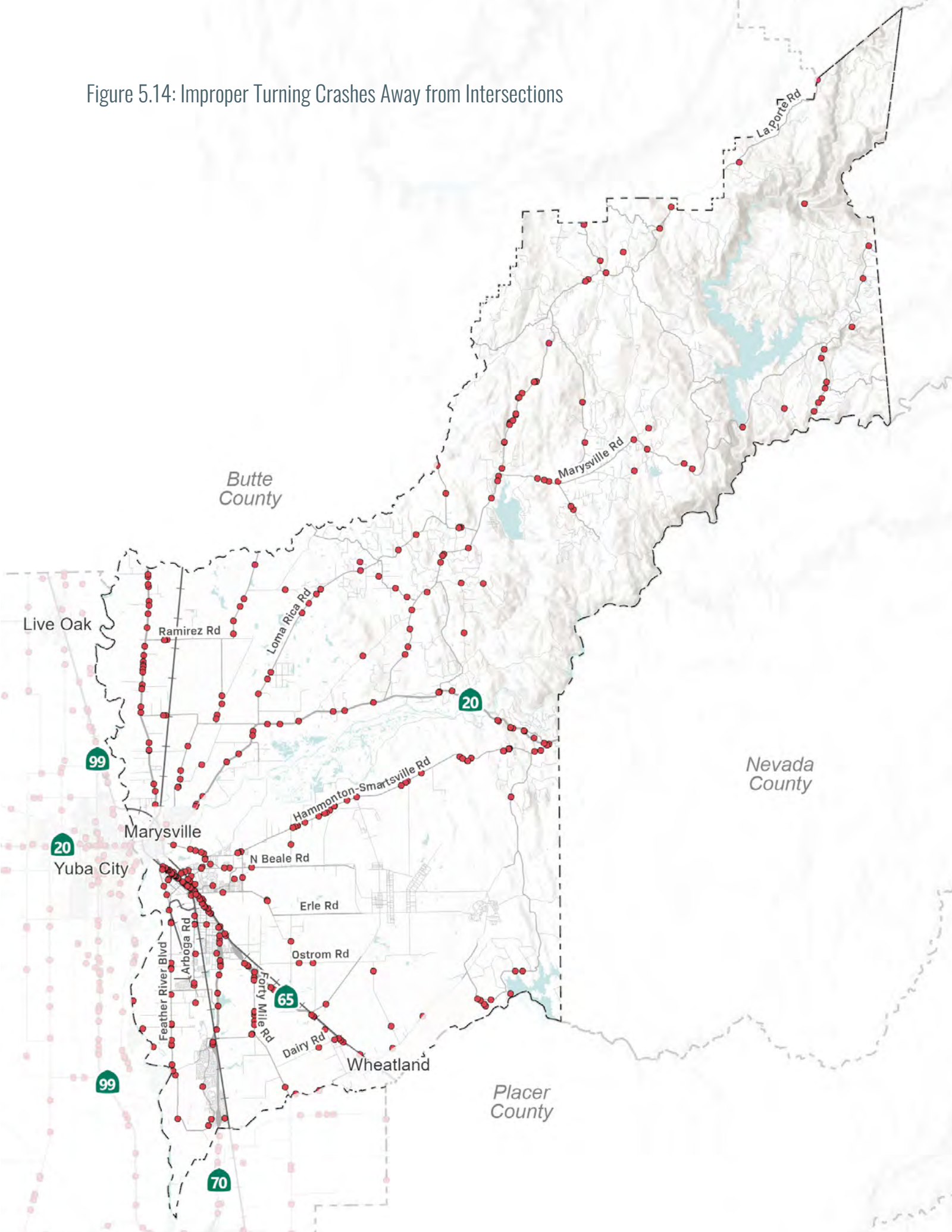
Improper turning remains one of the leading primary contributors to crashes and accounts for 552 of Yuba County’s crashes. Moreover, most of them occurred away from an intersection, rather than at them. Of those 552 crashes, 383 took place away from an intersection, making up 19 percent of the county’s crashes. 99 (25 percent) of Yuba County’s improper-turning KSI crashes occurred away from an intersection. Figure 5.14 displays the locations of these crashes.

58 percent of these crashes led to hit object and 22 percent to overturned. 70 percent were traveling at speeds exceeding 50 MPH. In the moments leading up to them, 44 percent of parties that were at fault made an unsafe turning action and 27 percent ran off the

road. This pattern could suggest that high-speed unsafe lane changes, erratic steering, or distracted driving on roads may have led to these crashes.

SR 70 experienced the highest frequency of improper turning crashes occurring away from intersections. These crashes were highly concentrated along SR 70 between the northwest limits of Linda and Olivehurst Avenue and moderately concentrated on SR 70 north of Marysville as well as Hammonton Smartville Road. The remaining crashes were mostly dispersed on corridors within the vicinity of Linda, Oliveshurst, and Wheatland, such as Feather River Boulevard, in addition to more rural roads such as SR 20, Marysville Road/Willow Glen Road, and Loma Rica Road.

Figure 5.14: Improper Turning Crashes Away from Intersections



Yuba County

A combination of signage, roadway enhancements, and visibility improvements, such as rumble strips, curve warning signs, guardrails, and delineators, can help prevent unsafe turning and roadway departures by guiding drivers and providing recovery space. These countermeasures, especially when paired with speed limit reductions, reduce crash severity by lowering the kinetic energy transferred during high-speed impacts, helping prevent serious injuries.

Potential Countermeasures

	Rumble Strips		Guardrail
	Safety Edge		Widen/Pave Shoulder
	Create/Increase Clear Zone		Speed Limit Reduction
	Curve Advance Warning Sign		Chevron Signs on Horizontal Curves
	Delineators, Reflectors, and/or Object		





FOCUS AREA F

Hit Object

INJURY CRASH STATISTICS

566 (29%) Total Crashes

129 (32%) KSI Crashes

Hit-object crashes emerged as the most prevalent crash type in unincorporated Yuba County. This crash type composes 566 (29 percent) of the county’s crashes overall, and 129 (32 percent) of the county’s KSI crashes. As expected, 96% of all hit-object crashes involved only one party. Figure 5.15 displays all hit object crases between 2018 and 2023 in unincorporated Yuba County.

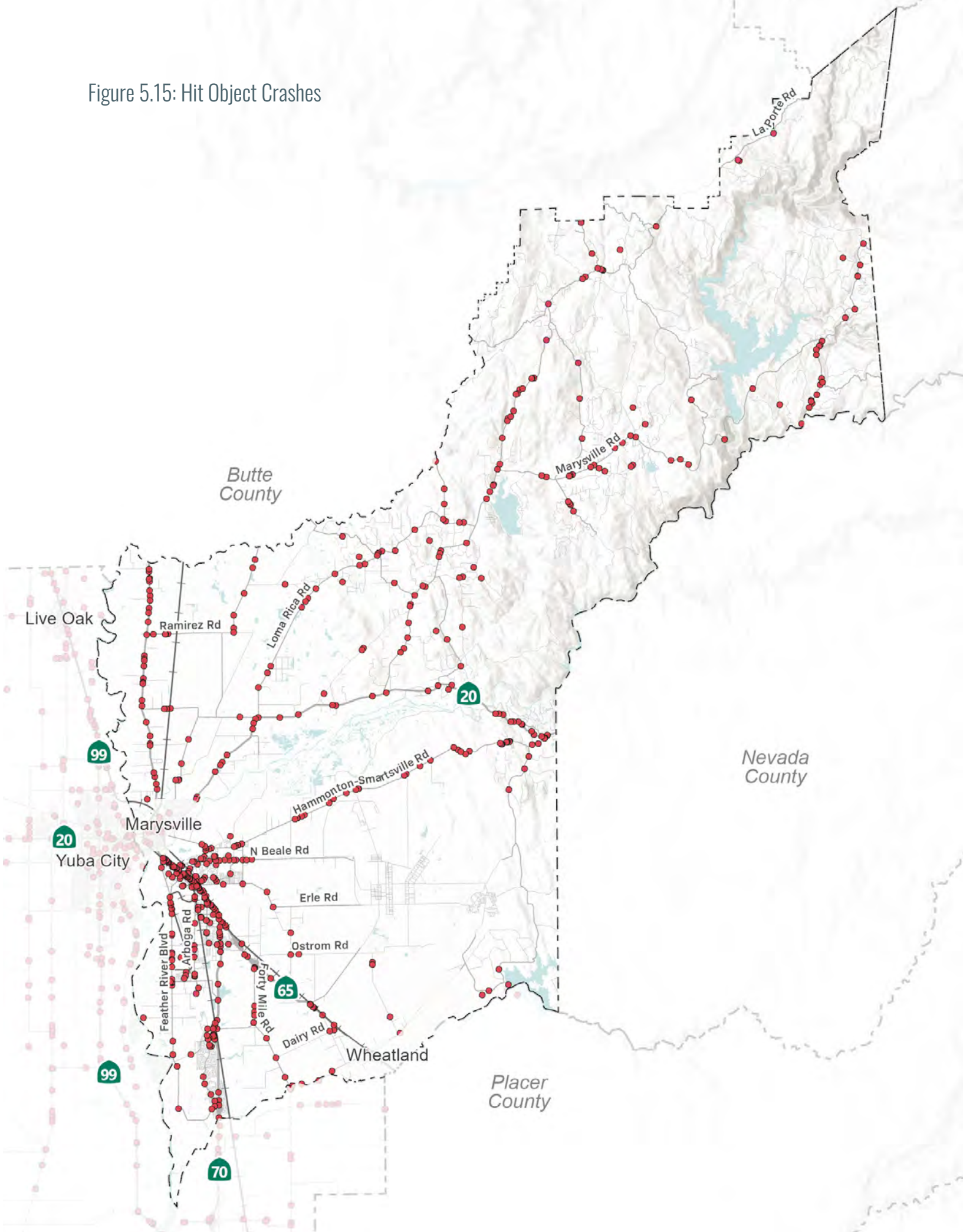
Two-thirds of this type of crash occurred on non-state facilities. Many of these county road hit object crashes occurred in rural eastern Yuba County on narrow, tree-lined roadways and near residential areas, mainly Linda and Olivehurst, where roads are two to four lanes and many have on-street parking. Leading up to the crashes, 40 percent of at-fault vehicles made some unsafe turning movement, such as abrupt lane changes or erratic steering wheel maneuvers, and 30 percent ran off the road.

A smaller share of vehicles were proceeding straight (19 percent). As a result, most of the objects hit were fixed objects (80 percent), such as trees and utility poles on the side of the road; 10 percent were other objects such as items dropped from a vehicle or a parked vehicle; and two percent were animals.

Similar to the improper turning crash focus area, a significant amount of hit object crashes took place on SR 70, especially between the northwest limits of Linda and the SR 70 and SR 65 merge. Hit object crashes were also frequently reported along Hammonton Smartville Road, SR 20, Marysville Road/ Willow Glen Road, and Loma Rica Road. Within the unincorporated communities, hit object crashes were prominent along North Beale Road and Feather River Boulevard and in the northern portion of Plumas Lake.



Figure 5.15: Hit Object Crashes



Yuba County

Countermeasures like guardrails, clear zone improvements, and widened or paved shoulders can help prevent crashes with objects and provide recovery space. Rumble strips, safety edge treatments, and delineators or reflectors enhance driver awareness and guidance, especially in low-visibility conditions. Speed limit reductions are especially critical, as lower speeds directly reduce the kinetic energy transferred during a crash, which in turn lowers the risk of severe injury or fatality.

Potential Countermeasures



Delineators, Reflectors, and/or Object



Speed Limit Reduction



Rumble Strips



Guardrail



Safety Edge



Widen/Pave Shoulder



Create/Increase Clear Zone

