



CALIFORNIA SAFE ROADS

2020 - 2024 Strategic Highway Safety Plan

Strategic Highway Safety Plan (SHSP)

Development Outreach Meeting

San Francisco Bay Area

April 11, 2019



AGENDA



8:30 – 9:15 AM: Welcome / Introductions / Overview

9:15 – 9:45 AM: Statewide Summary

9:45 – 10:15 AM: Regional Summary

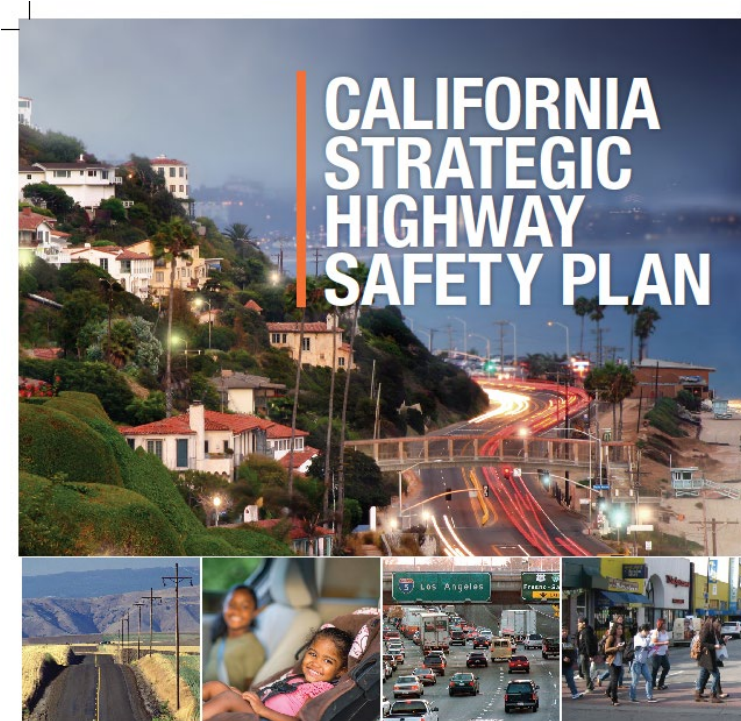
10:15 – 11:30 AM: Safety Strategy Session

11:30 – 12:00 PM: Report Out and Closing

12:30 – 1:30 PM: Tribal Outreach Session

SHSP OVERVIEW

- Guides safety activities for all roadway users
- Addresses safety on all public roads
- All agency coordinated approach
- Strategic, data-driven process
- Federal requirement
- Current SHSP covers 2015 to 2019



2015-2019

SHSP OVERVIEW

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- Federal requirement
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SHSP LOCAL AND REGIONAL BENEFITS



CALIFORNIA SAFE ROADS
2020 - 2024 Strategic Highway Safety Plan

Improve safety

Save lives

Reduce preventable injuries

Improve livability

Support active transportation goals

Improve public health

Coordinate with congestion management efforts

Share local knowledge

Exchange best practices

Access information and data

Funding and partnering opportunities

SHSP VISION, MISSION & OBJECTIVE



Vision

Safe Public Roads Across California

Mission

Ensure safety for all modes of travel on California's public roads

Goal

Zero Fatalities

MULTIPLE SAFETY APPROACHES



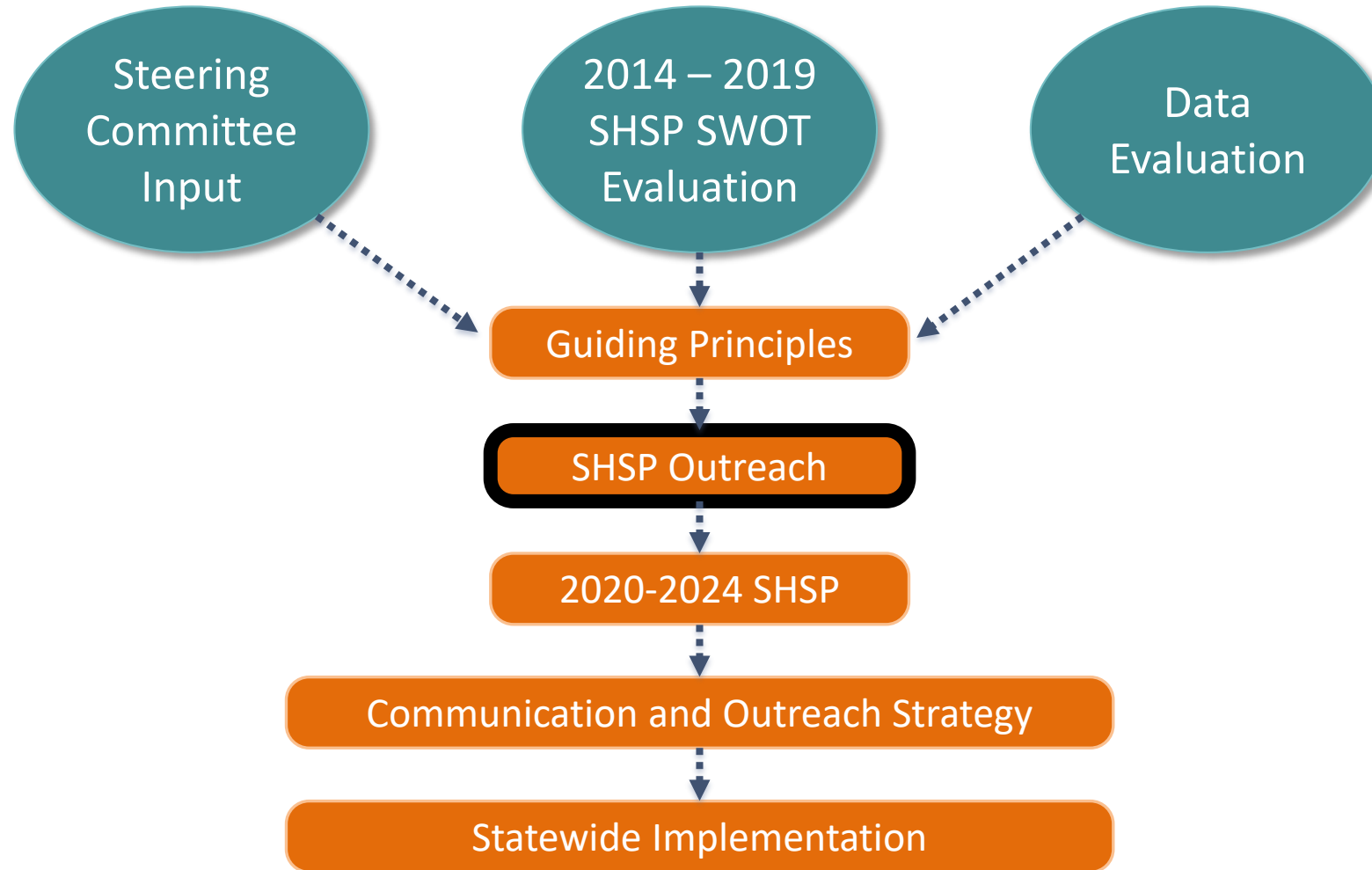
STATEWIDE COLLABORATION



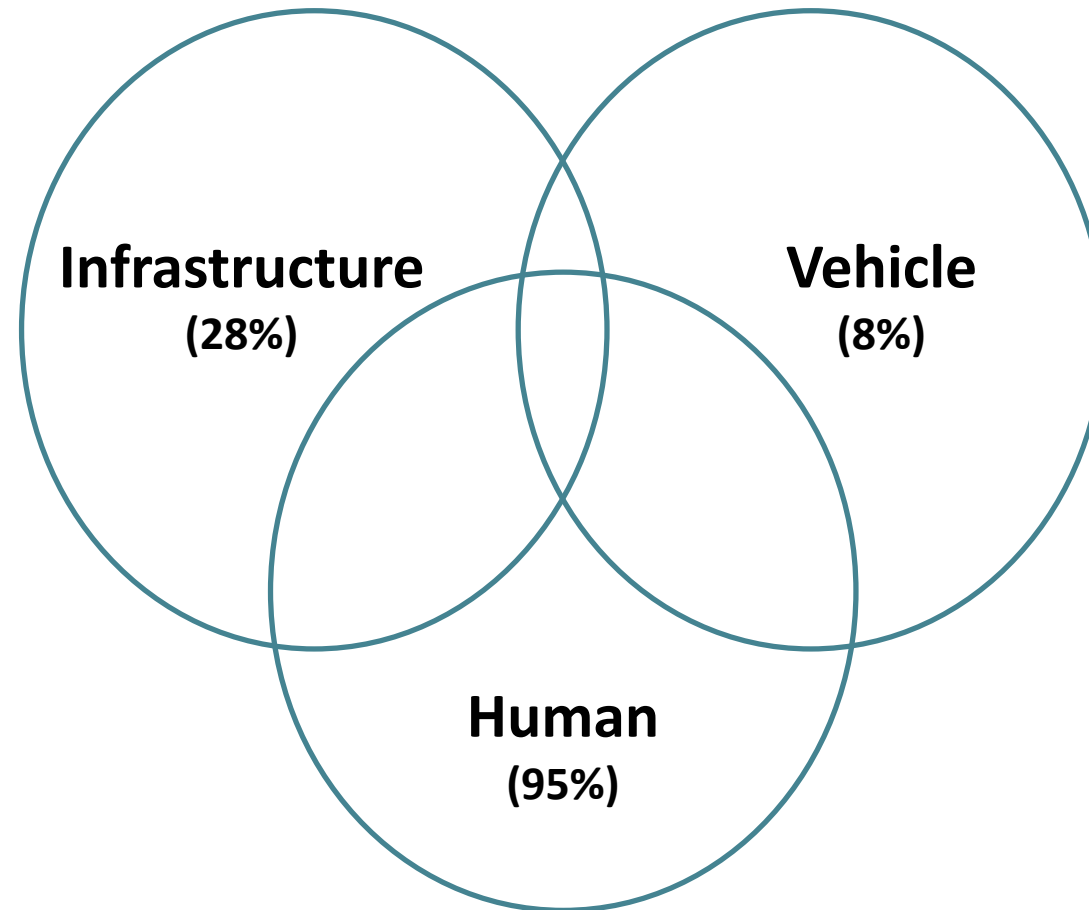
Working together
to reduce fatalities
and serious injuries on
all public roadways.



DEVELOPMENT PROCESS



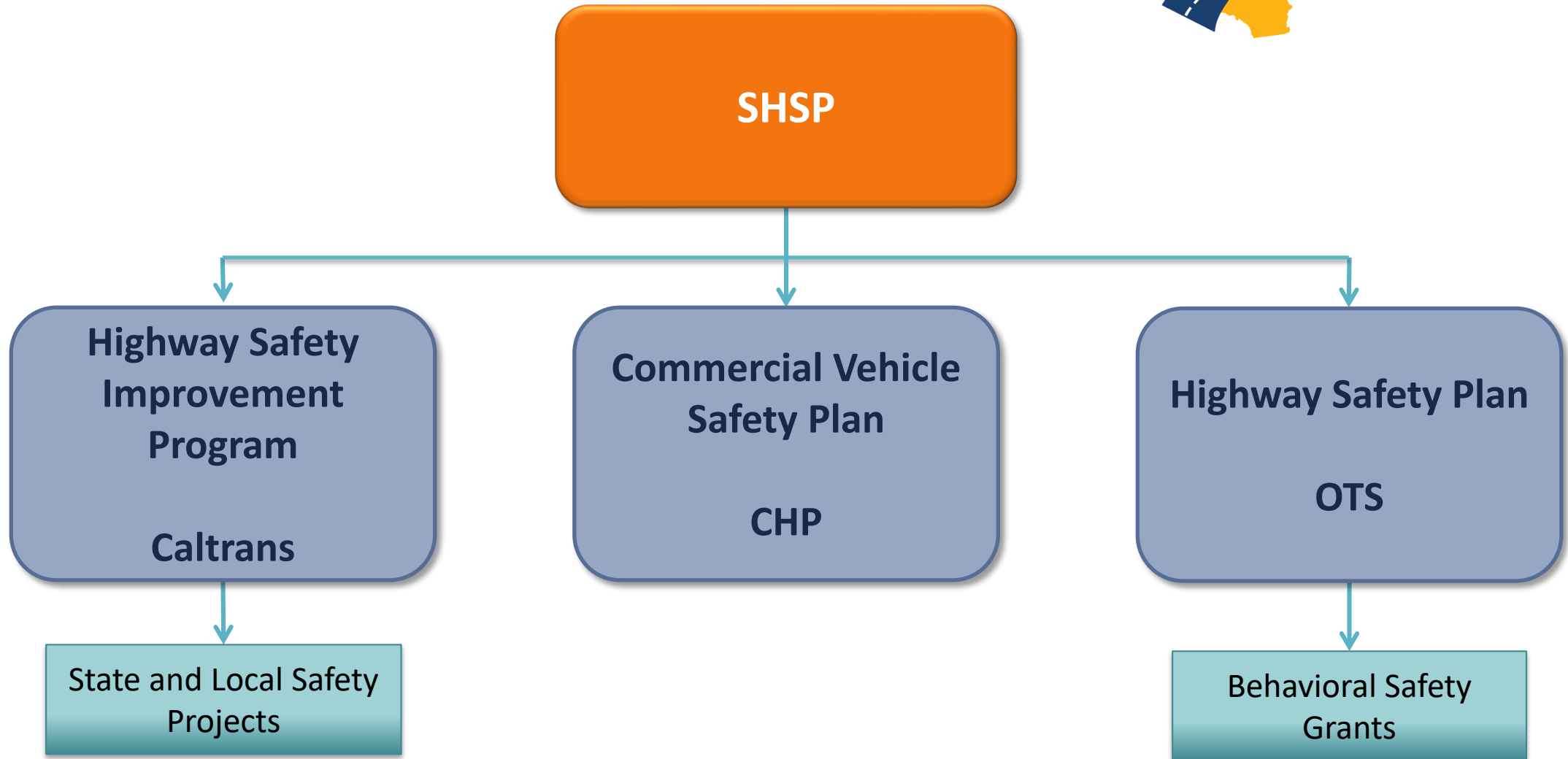
COLLISION FACTORS



4 Es now 5 Es OF TRAFFIC SAFETY



SHSP CONNECTIONS



CALTRANS HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP)



- FAST Act
 - Continues the Highway Safety Improvement Program as a core Federal Aid program to significantly reduce fatalities and serious injuries on all public roads.
 - Local HSIP Program
 - Safety Improvement Projects (Benefit/Cost selected safety projects)
 - (New) Systemic Safety Analysis Report Program (SSARP)



OFFICE OF TRAFFIC SAFETY



- Liaison with the National Highway Traffic Safety Administration (NHTSA)
- California Highway Safety Plan
- Annual Performance Report
- Grant Programs



CALIFORNIA HIGHWAY PATROL



- Mission - Provide the highest level of Safety, Service, and Security
- CHP involvement in the SHSP
 - Executive Committee - Commissioner Warren Stanley
 - Steering Committee - Assistant Chief
 - Lead or Co-lead on 10 of the 15 Challenge Areas
 - Active involvement on 13 of the 15 Challenge Areas
 - Lead or Co-lead on 25 of the Actions
 - Mileage Death Rate on the increase (2013: .94 to 2016: 1.08)
 - Work with the Office of Traffic Safety to incorporate SHSP initiatives into the CHP Grants



CALIFORNIA HIGHWAY PATROL



- Current SHSP Actions the CHP is working on
 - Action 5.1 – Update CHP DUI Checkpoint Educational Pamphlet with an emphasis on drugs
 - Action 6.1 – Develop an issue paper establishing benefits of Standardized Field Sobriety Tests (SFSTs) training for law enforcement agencies
 - Action 6.2 – Increase the number of Advanced Roadside Impaired Driving Enforcement (ARIDE) personnel trained by 8 percent
 - Action 4.1 – Develop a media campaign....to raise awareness about speeding and aggressive driving
 - Action 2.2 - Identify locations with reported pedestrian safety issues and conduct high visibility pedestrian safety enforcement operations



CALIFORNIA HIGHWAY PATROL



- Commercial Vehicle Safety Plan

- Funded by the Motor Carrier Safety Assistance Program (MCSAP) Grant 2018-20
- Reduce commercial motor vehicle (CMV) involved collisions within CHP jurisdiction, including the Mileage Death Rate for CMVs
- 53 Commercial Vehicle Enforcement Facilities (38 locations)
- 144 Mobile Road Enforcement Officers
- CMV Fatal Crashes – 302.6 per year (5 year average)
- MCSAP Activities: Driver and Vehicle Inspections, Enforcement, Compliance Reviews and Audits, Public Education, and Data Collection



FHWA



- SHSP is a requirement under SAFETEA-LU
- Statewide-coordinated safety plan led by State DOT that provides comprehensive framework for reducing fatalities and serious injuries on all public roads
- Identifies a State's key safety needs and guides investment decisions towards strategies and countermeasure with the most potential to save lives and prevent injuries
- SHSP shall be data driven, evaluate performance and updated
- SHSP Challenge Areas, Revisions and Stakeholders





CALIFORNIA SAFE ROADS

2020 - 2024 Strategic Highway Safety Plan

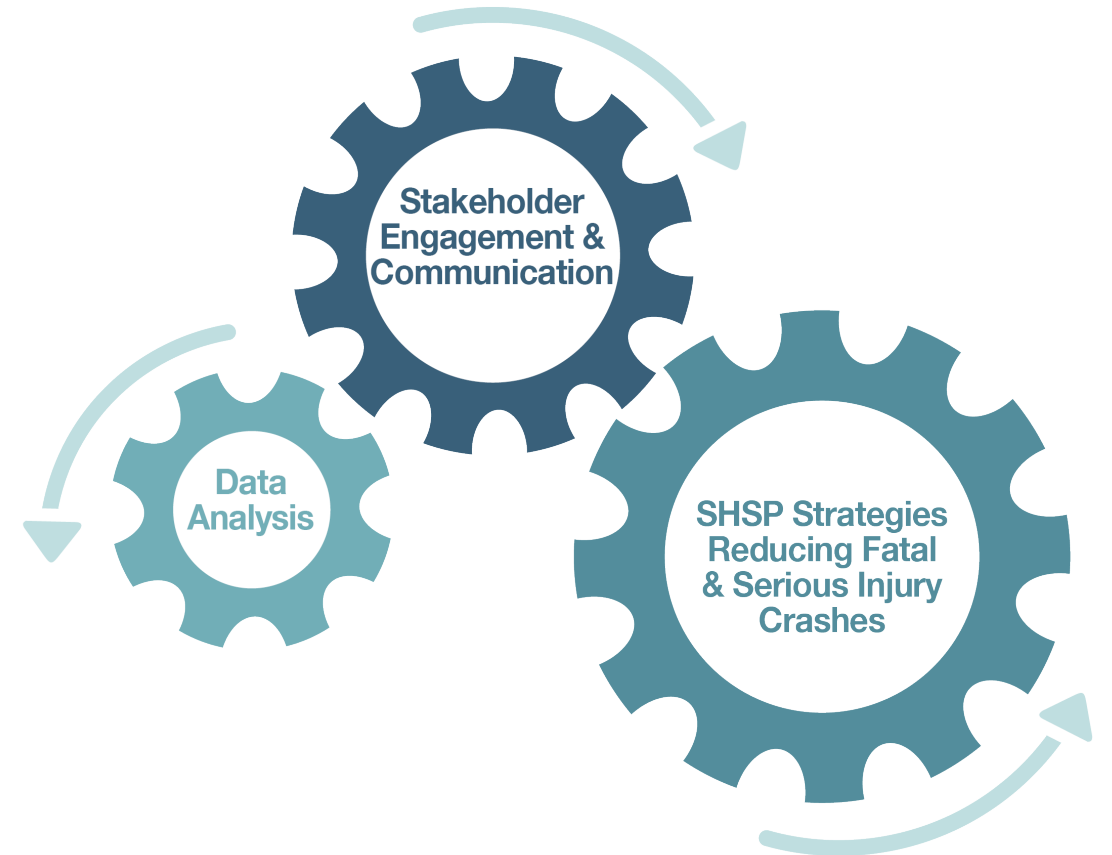
Statewide Summary



DATA-DRIVEN IMPLEMENTATION



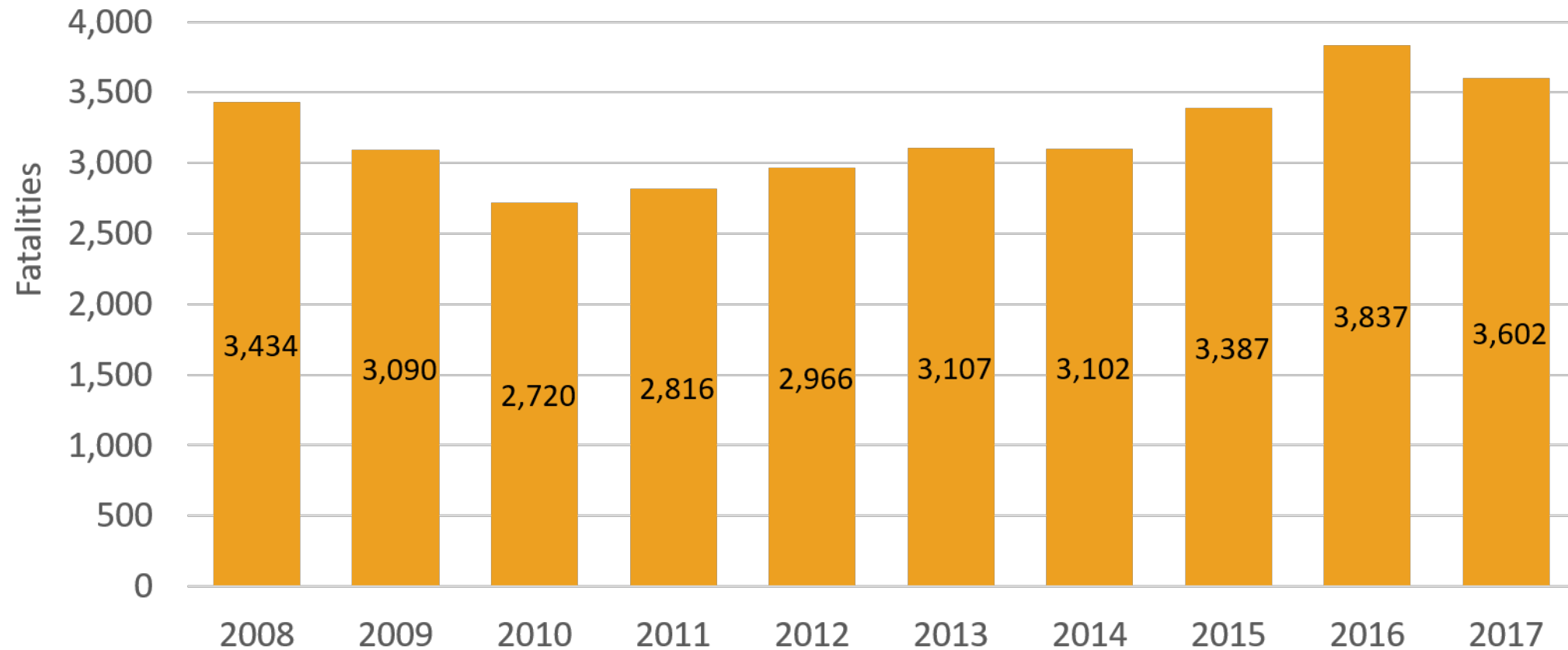
- Data analysis drives implementation
- 2020 to 2024 Data
 - 10 years (2008 to 2017)
 - 128,974 fatal and serious injury collisions
 - 147,458 fatal and serious injuries
 - 1.14 fatal and serious injuries / collision



STATEWIDE



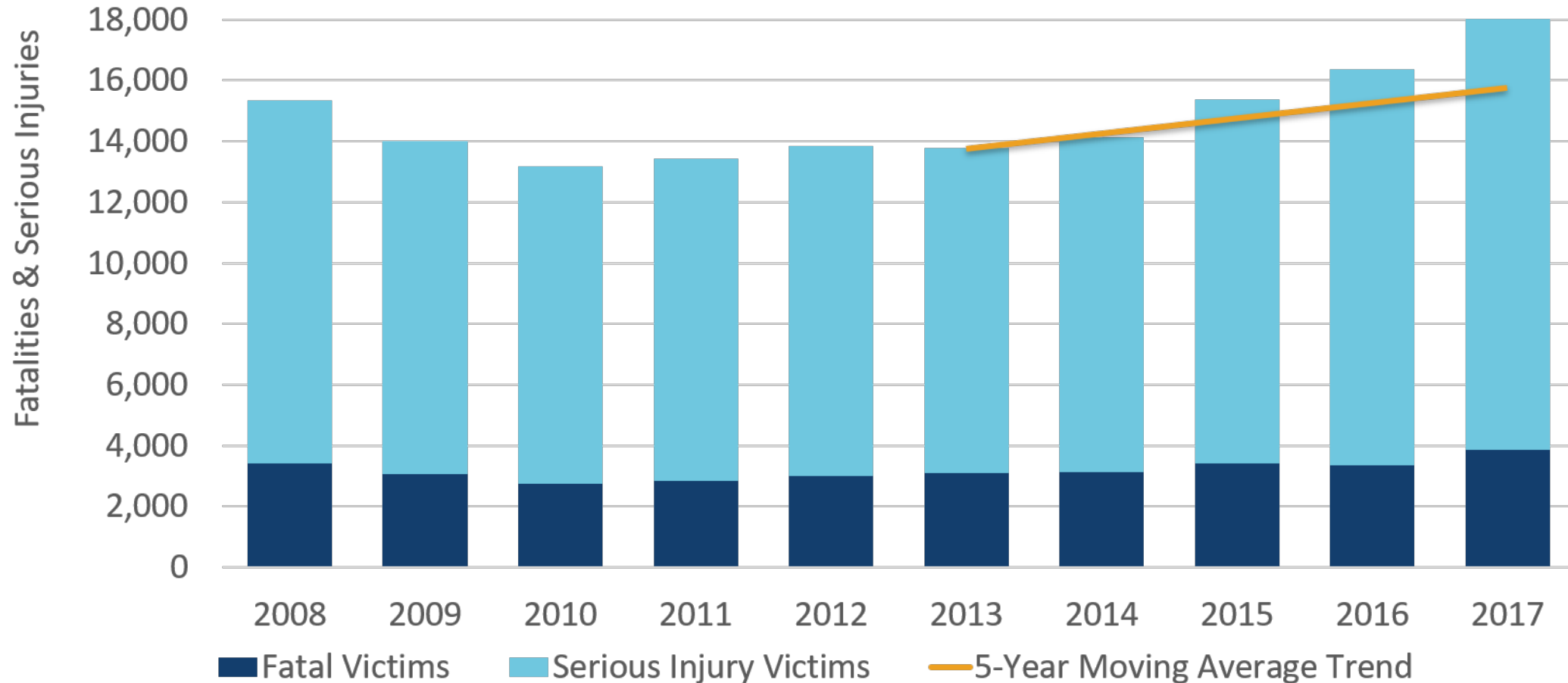
Total Fatalities by Year



STATEWIDE



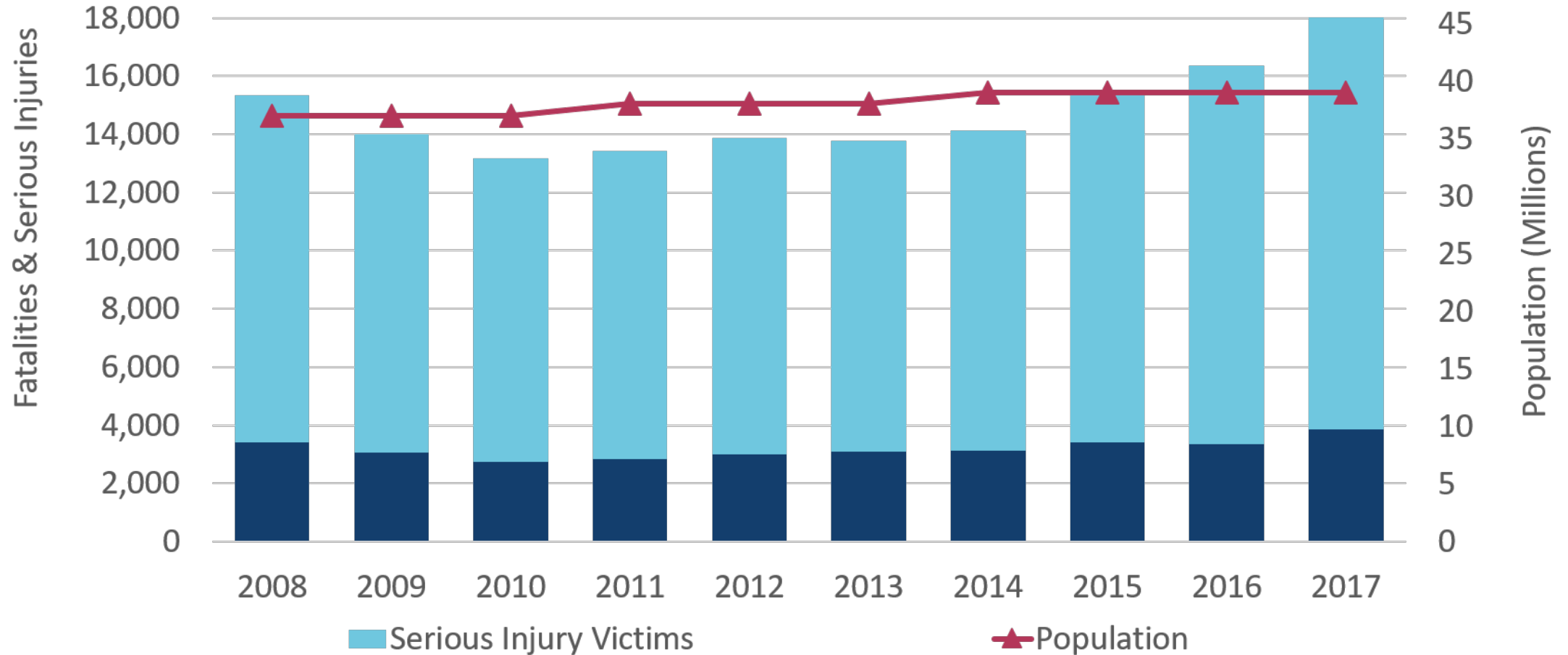
Total Fatalities and Serious Injuries by Year



STATEWIDE



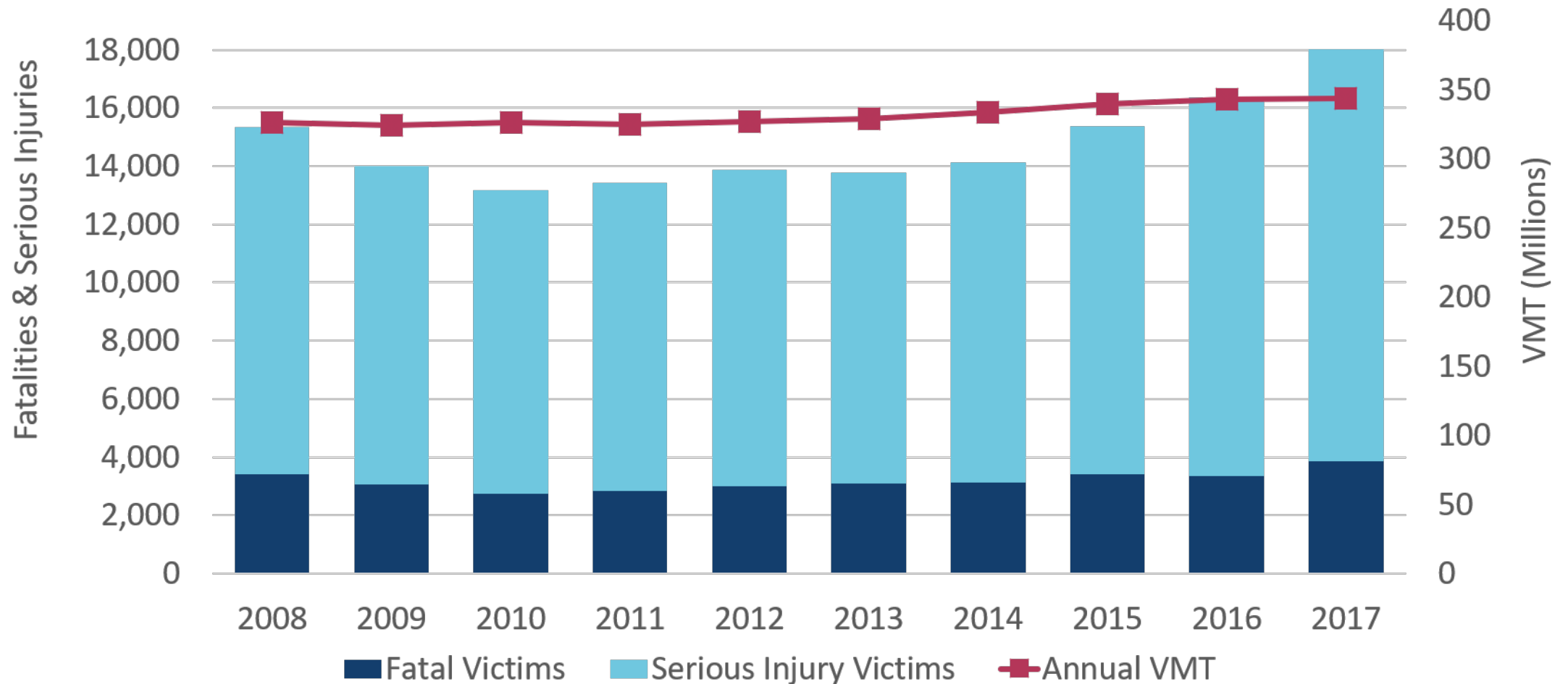
Total Fatalities and Serious Injuries by Year Versus Population



STATEWIDE



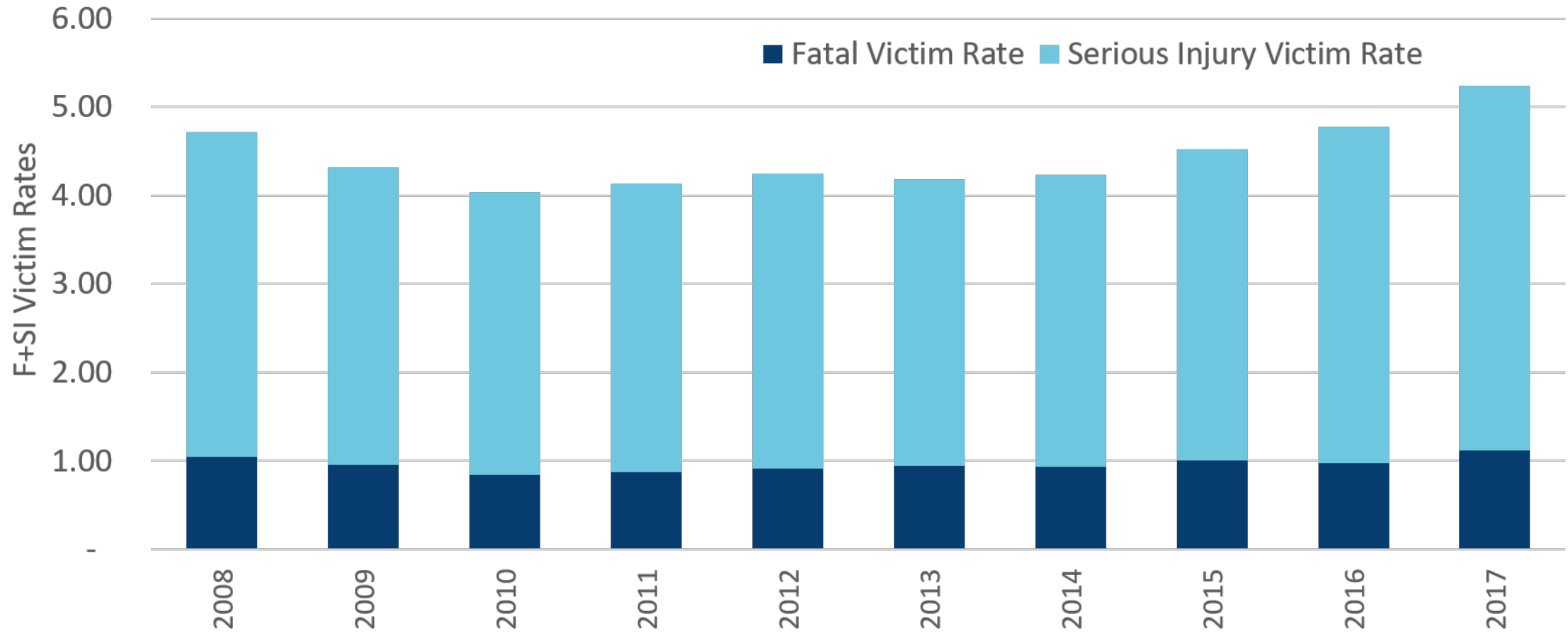
Total Fatalities and Serious Injuries by Year Versus VMT



STATEWIDE



Fatality & Serious Injury Rates

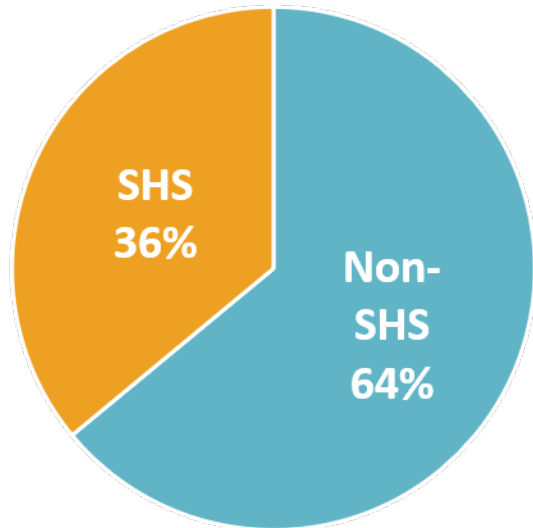


STATEWIDE

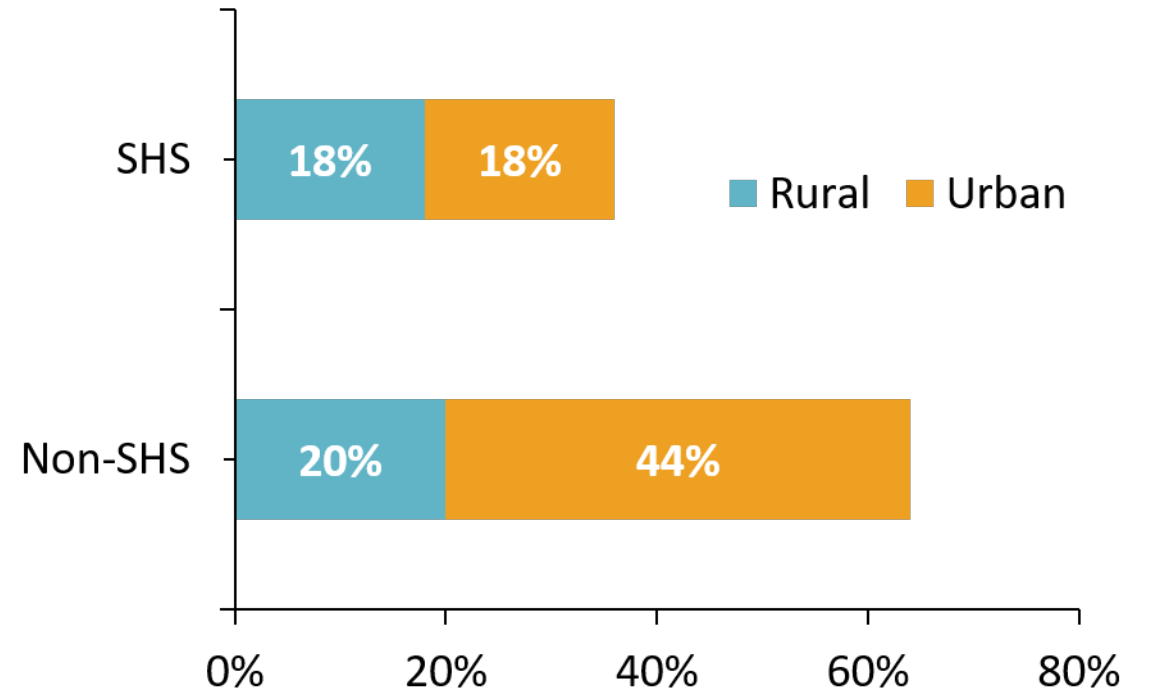
Fatal & Serious Injury Collisions



State Highway System (SHS) vs. Non-SHS

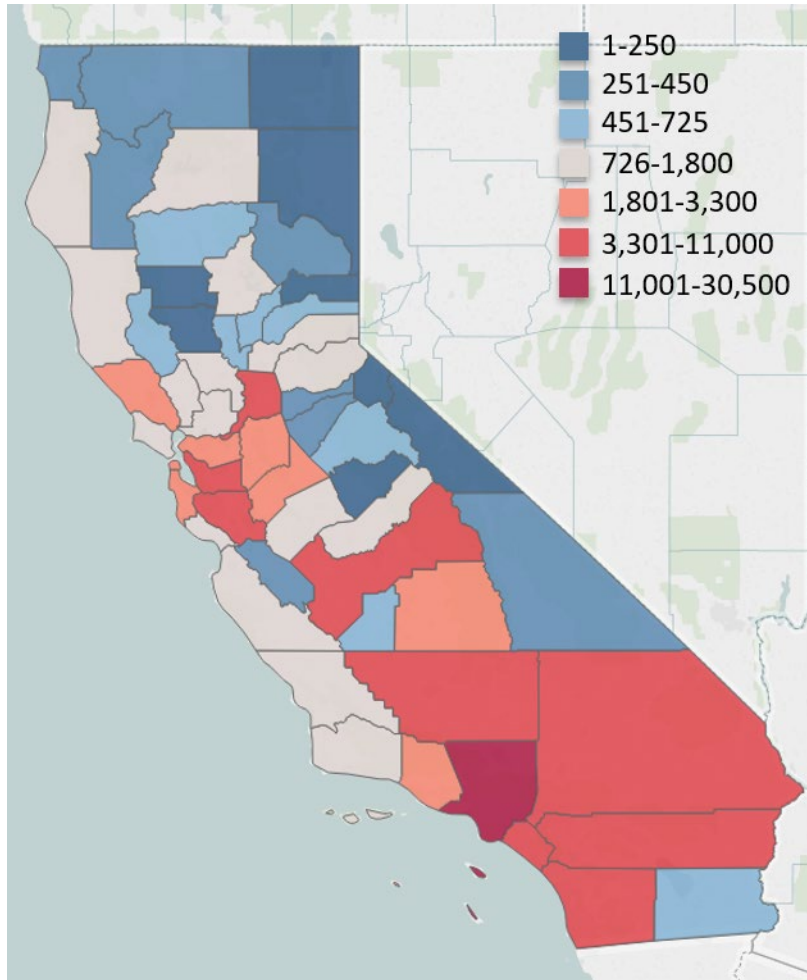


Percent of Victims by Location

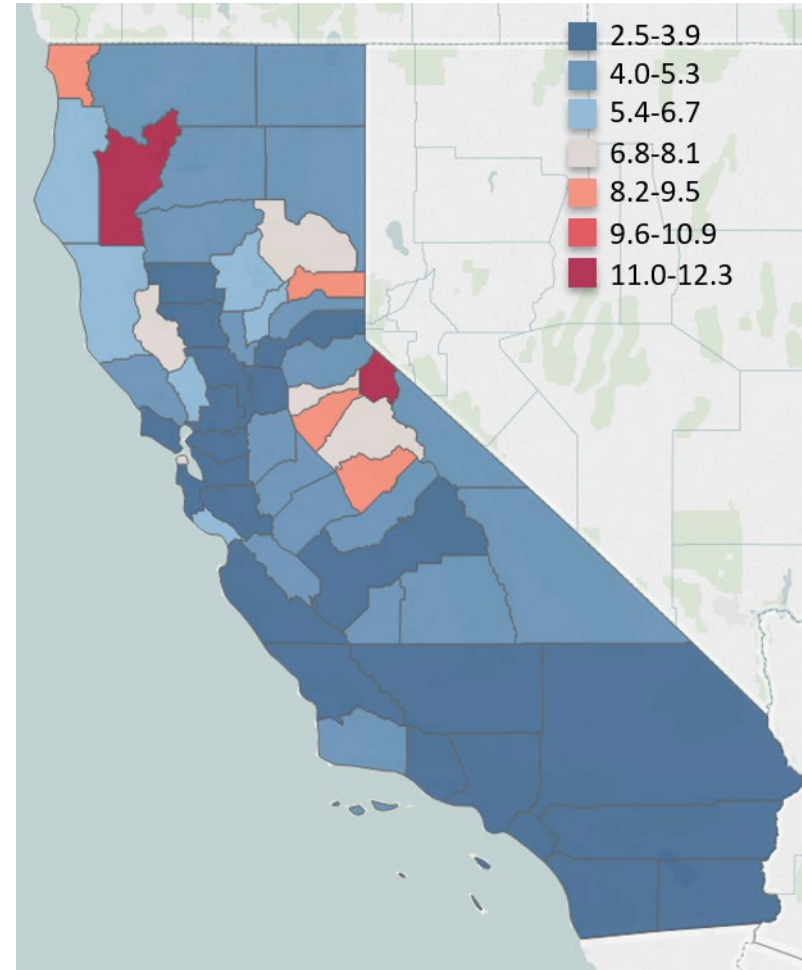


STATEWIDE

F+SI Collisions



F+SI Collision Rate per 100M VMT





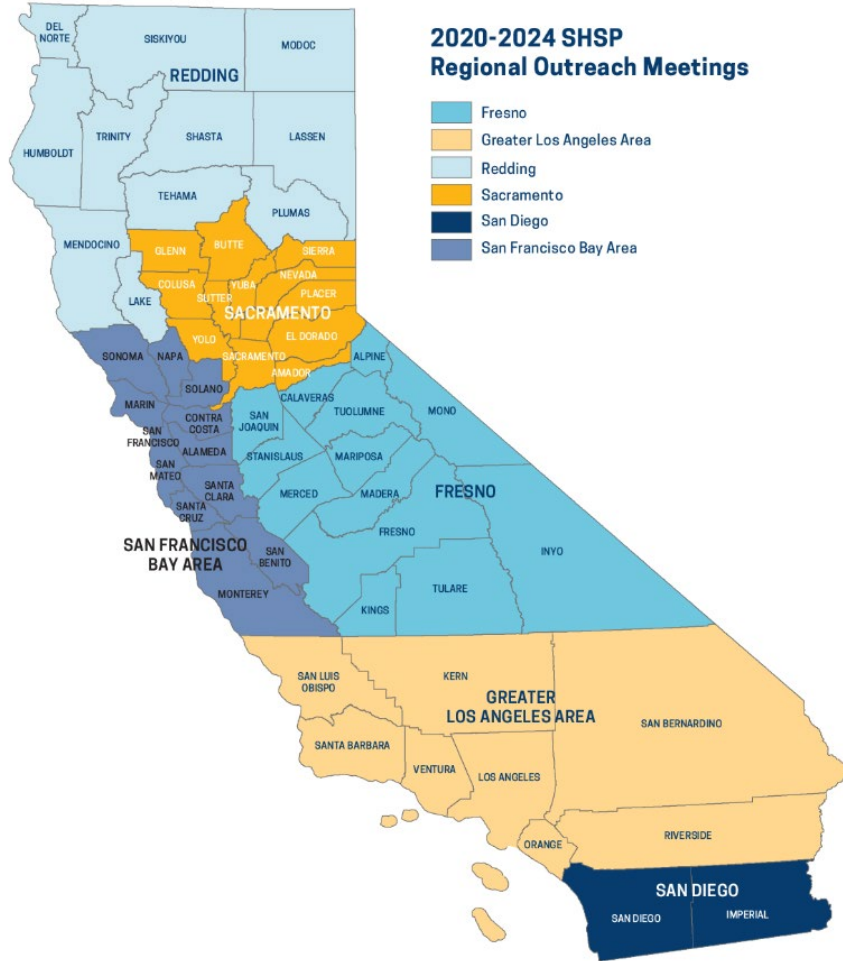
CALIFORNIA SAFE ROADS

2020 - 2024 Strategic Highway Safety Plan

San Francisco Bay Region Summary



OUTREACH EVENTS



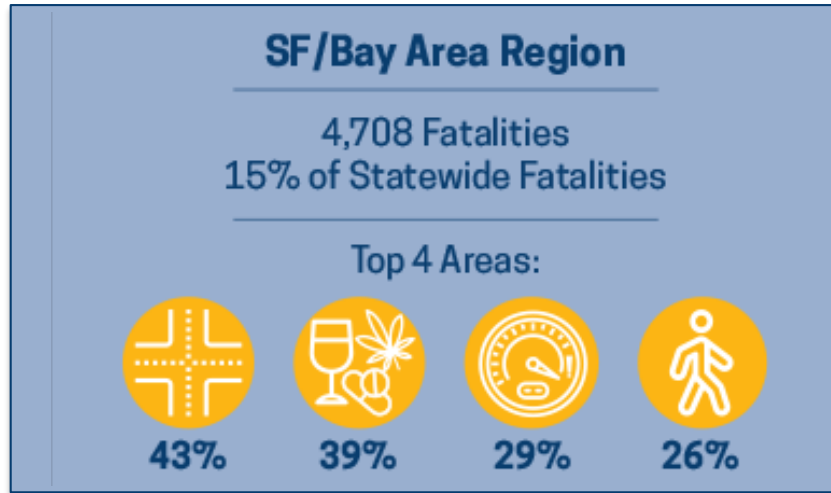
CALIFORNIA SAFE ROADS 2020 - 2024 Strategic Highway Safety Plan

Join us at one of the following locations to collaborate on eliminating fatalities and serious injuries on all roadways in California.

- April 10 // Sacramento**
- April 11 // San Francisco Bay Area**
- April 12 // Redding**
- April 23 // San Diego**
- April 24 // Greater Los Angeles Area**
- April 25 // Fresno**

Email Ca-SHSP@Kimley-Horn.com for more information.

REGIONAL COLLISION DATA



San Francisco REGION



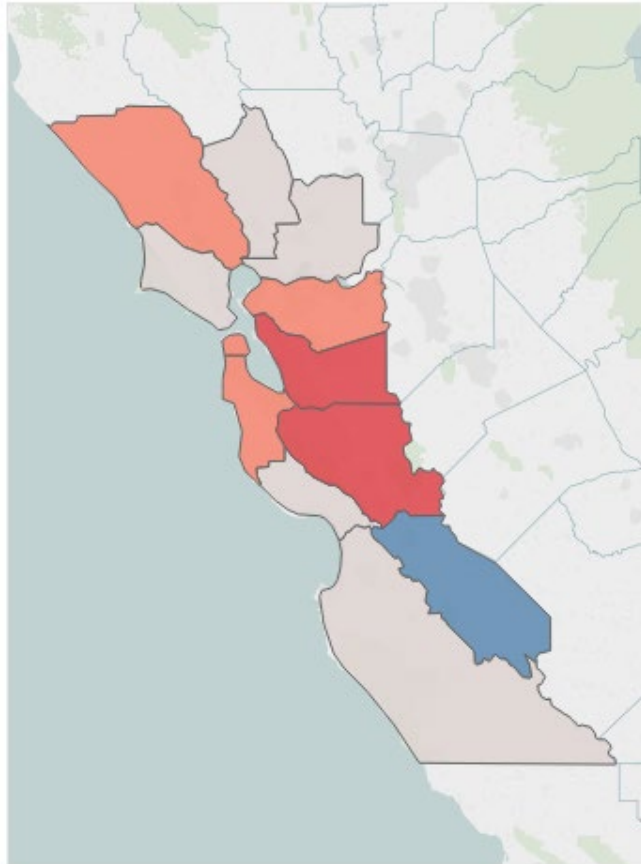
12 Counties

- Alameda
- Contra Costa
- Marin
- Monterey
- Napa
- San Benito
- San Francisco
- San Mateo
- Santa Clara
- Santa Cruz
- Solano
- Sonoma

REGIONAL COLLISION DATA

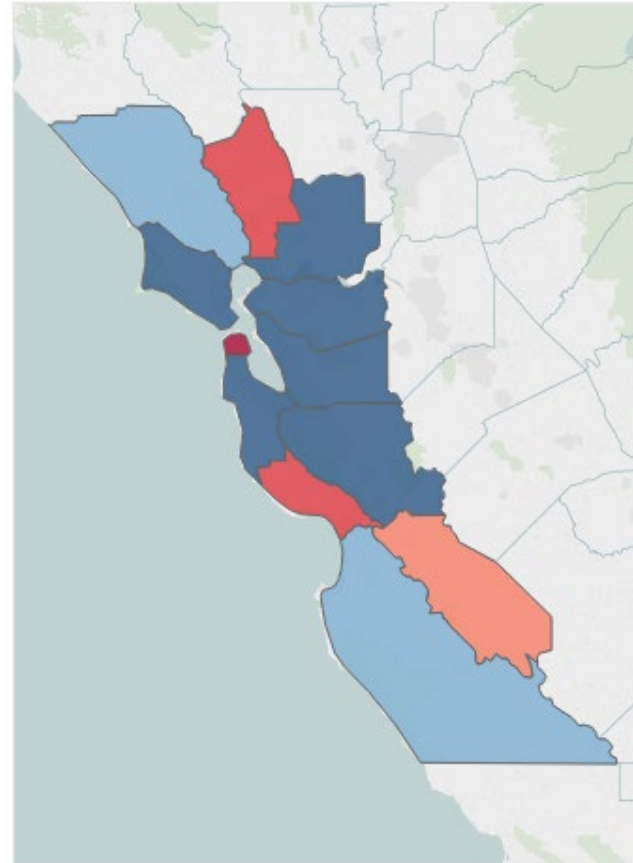


F+SI



County	F+SI
San Benito	293
Napa	747
Marin	857
Santa Cruz	1,290
Solano	1,379
Monterey	1,557
San Mateo	1,894
Sonoma	1,939
San Francisco	2,489
Contra Costa	2,637
Alameda	4,249
Santa Clara	4,330

F+SI per 100M VMT



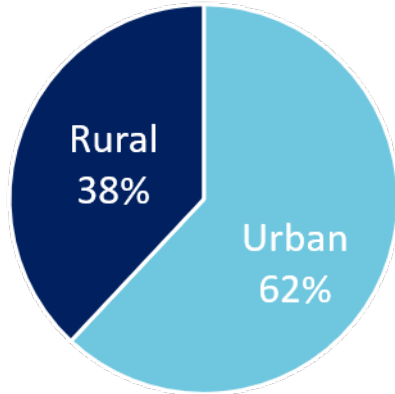
County	F+SI per 100M VMT
San Mateo	2.5
Santa Clara	2.6
Alameda	2.7
Solano	2.7
Marin	2.8
Contra Costa	2.9
Monterey	3.8
Sonoma	4.3
San Benito	5.1
Napa	5.9
Santa Cruz	6.0
San Francisco	6.8

REGIONAL COLLISION DATA

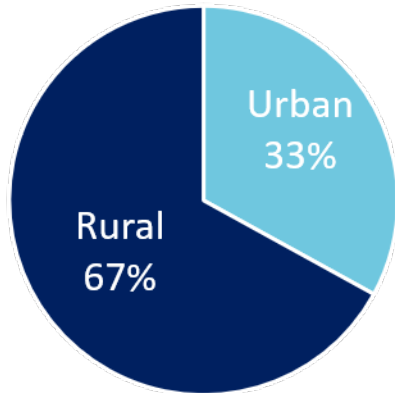


Population

Statewide:



Fresno Region:

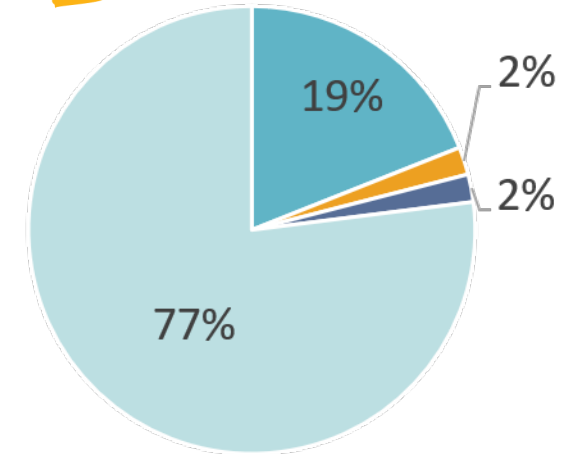


F+SI trends have more rural collisions in this region than California overall.

Location Type

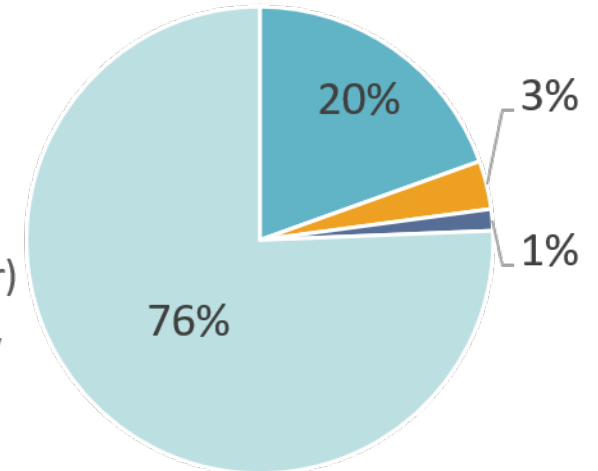
Statewide:

- Highway
- Intersection
- Ramp (or Collector)
- Not State Highway



Fresno Region:

- Highway
- Intersection
- Ramp (or Collector)
- Not State Highway

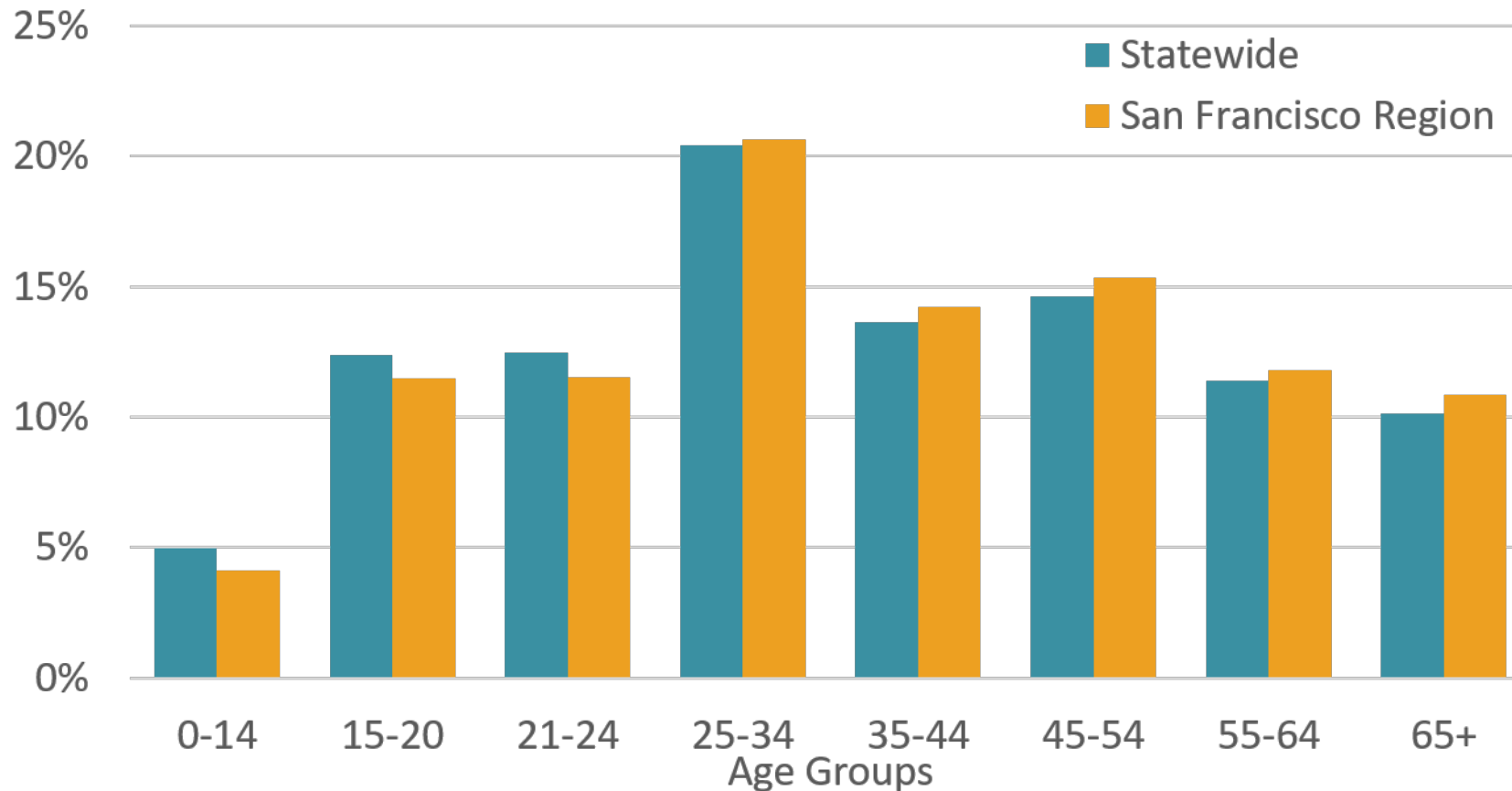


F+SI trends were similar in this region to California overall.

REGIONAL COLLISION DATA



Fatal & Serious Injury Victims by Age

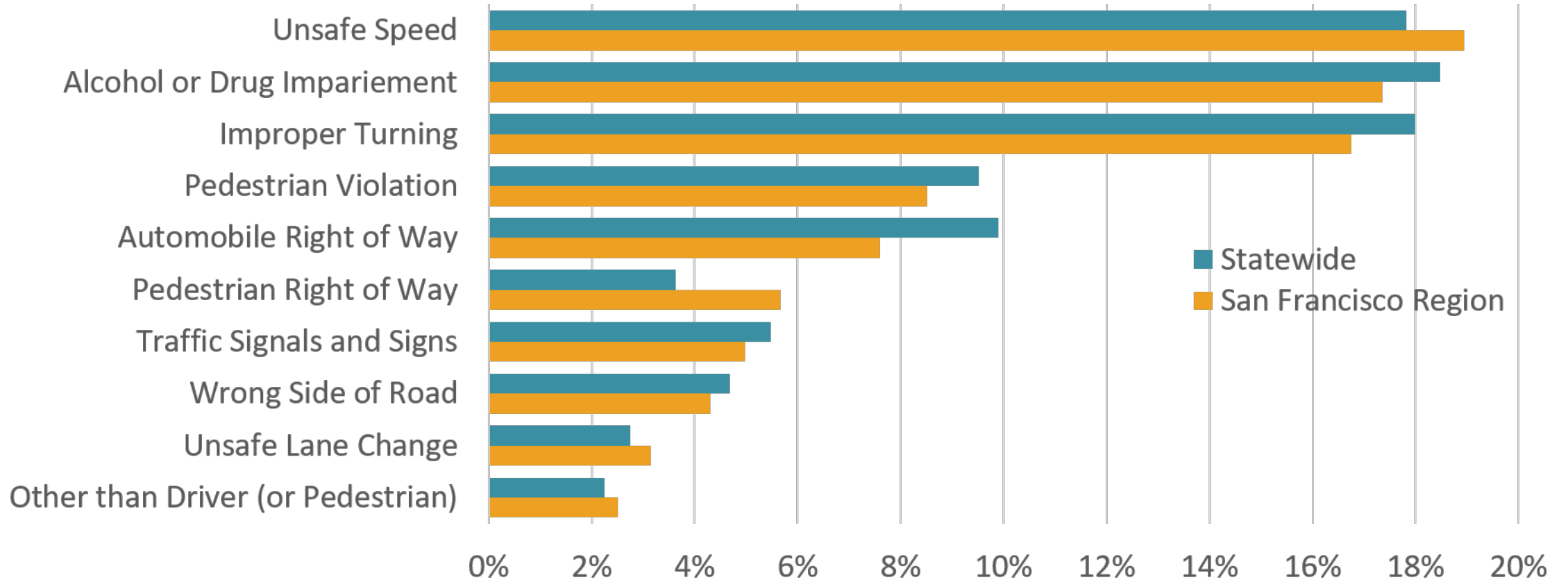


F+SI collisions involved more people aged 45+ in this region than California overall.

REGIONAL COLLISION DATA



Fatal & Serious Injury Collisions by Primary Cause

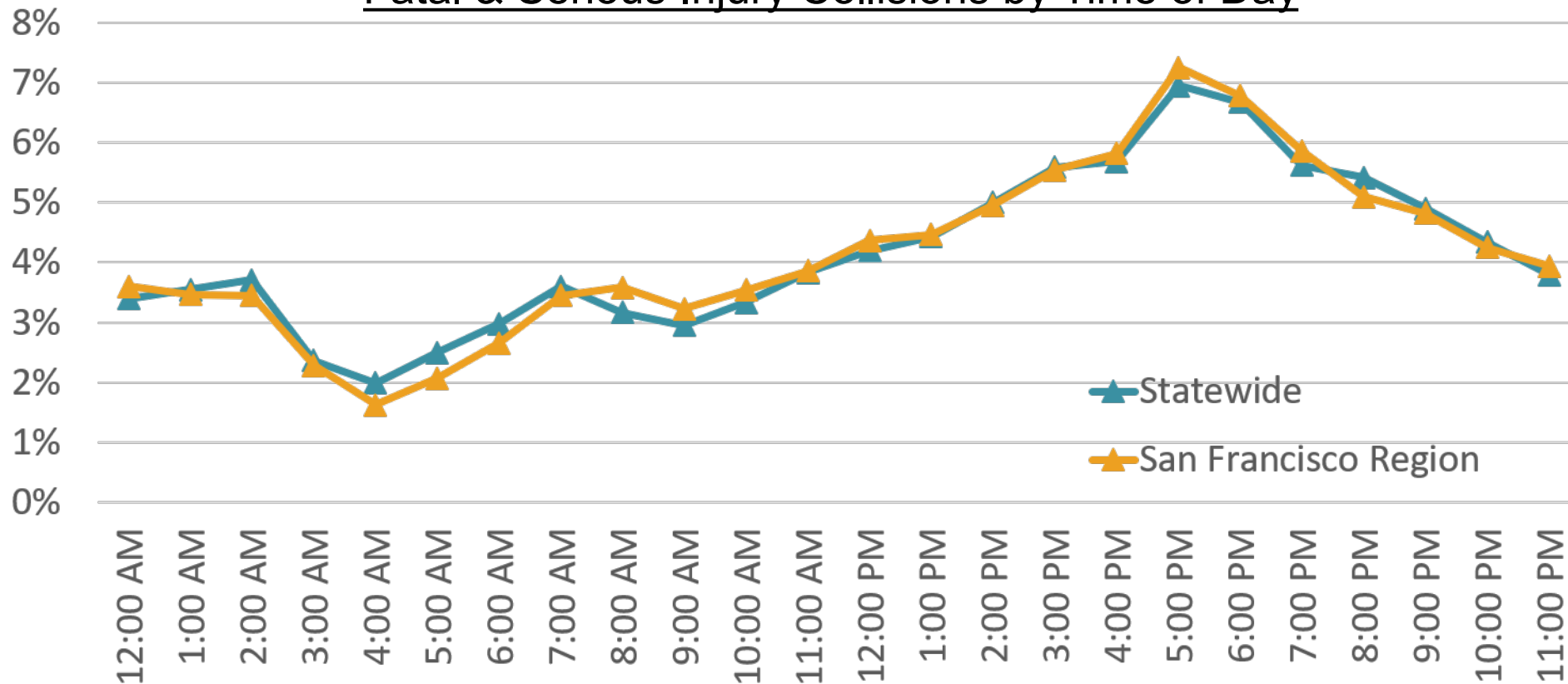


The top 5 primary collision factors were the same in this region and California overall.

REGIONAL COLLISION DATA



Fatal & Serious Injury Collisions by Time of Day

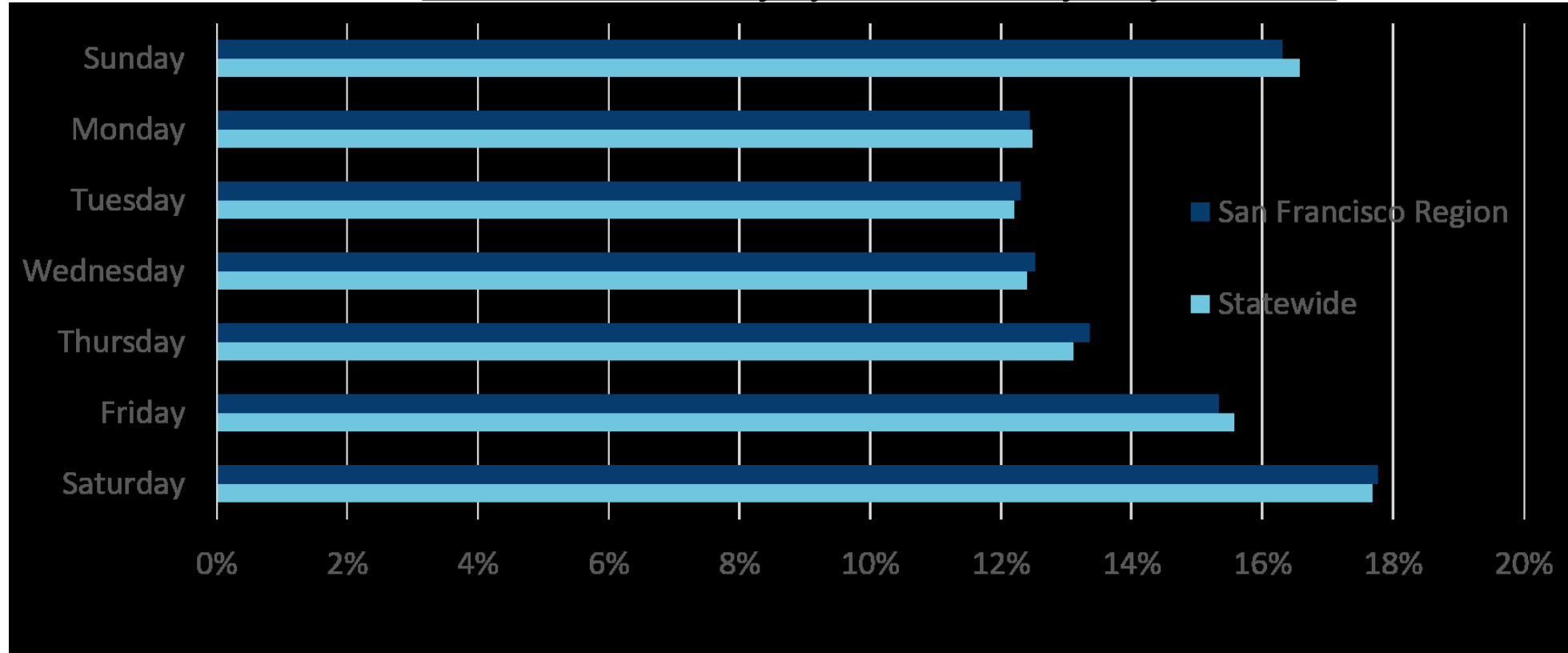


Trends were similar in this region to California overall.

REGIONAL COLLISION DATA



Fatal & Serious Injury Collisions by Day of Week

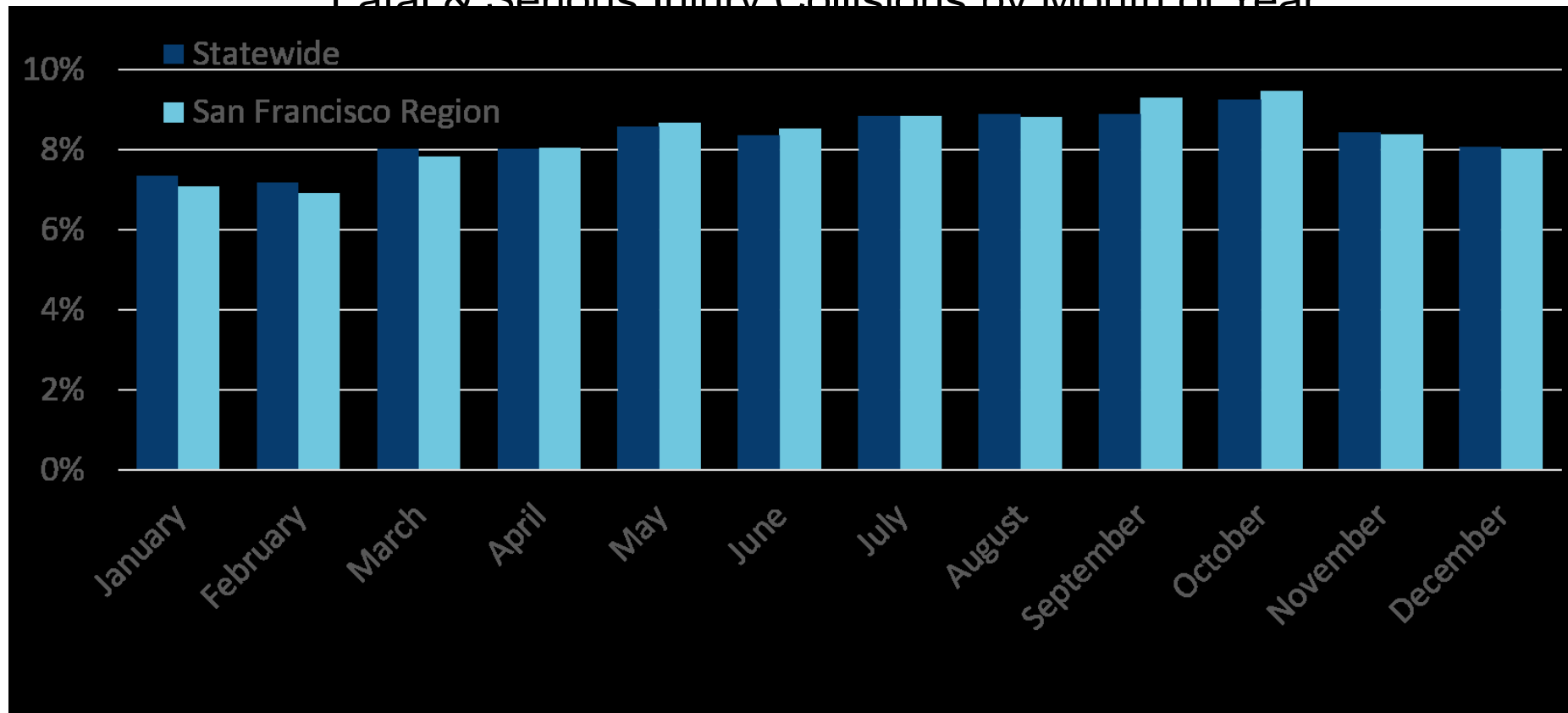


Trends were similar in this region to California overall.

REGIONAL COLLISION DATA

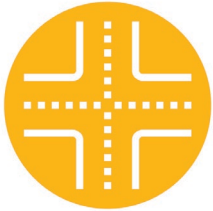


Fatal & Serious Injury Collisions by Month of Year



More collisions occurred in the summer months in this region than California overall.

COLLISIONS OVERVIEW



Intersections & Interchanges
Statewide: 43%
San Francisco Region: 43%



Alcohol and Drug Impairment
Statewide: 42%
San Francisco Region: 39%



Speeding and Aggressive Driving
Statewide: 28%
San Francisco Region: 29%



Pedestrians
Statewide: 23%
San Francisco Region : 26%
Higher



Roadway Departure
Statewide: 26%
San Francisco Region : 25%



Driver Licensing and Competency
Statewide: 25%
San Francisco Region: 24%



Occupant Protection
Statewide: 19%
San Francisco Region 16%
Lower



Aging Drivers
Statewide: 14%
San Francisco Region: 14%



Motorcycles
Statewide: 14%
San Francisco Region: 14%



Young Drivers
Statewide: 13%
San Francisco Region: 13%



Commercial Vehicles
Statewide: 10%
San Francisco Region: 9%



Bicycling
Statewide: 4%
San Francisco Region: 6%
Higher



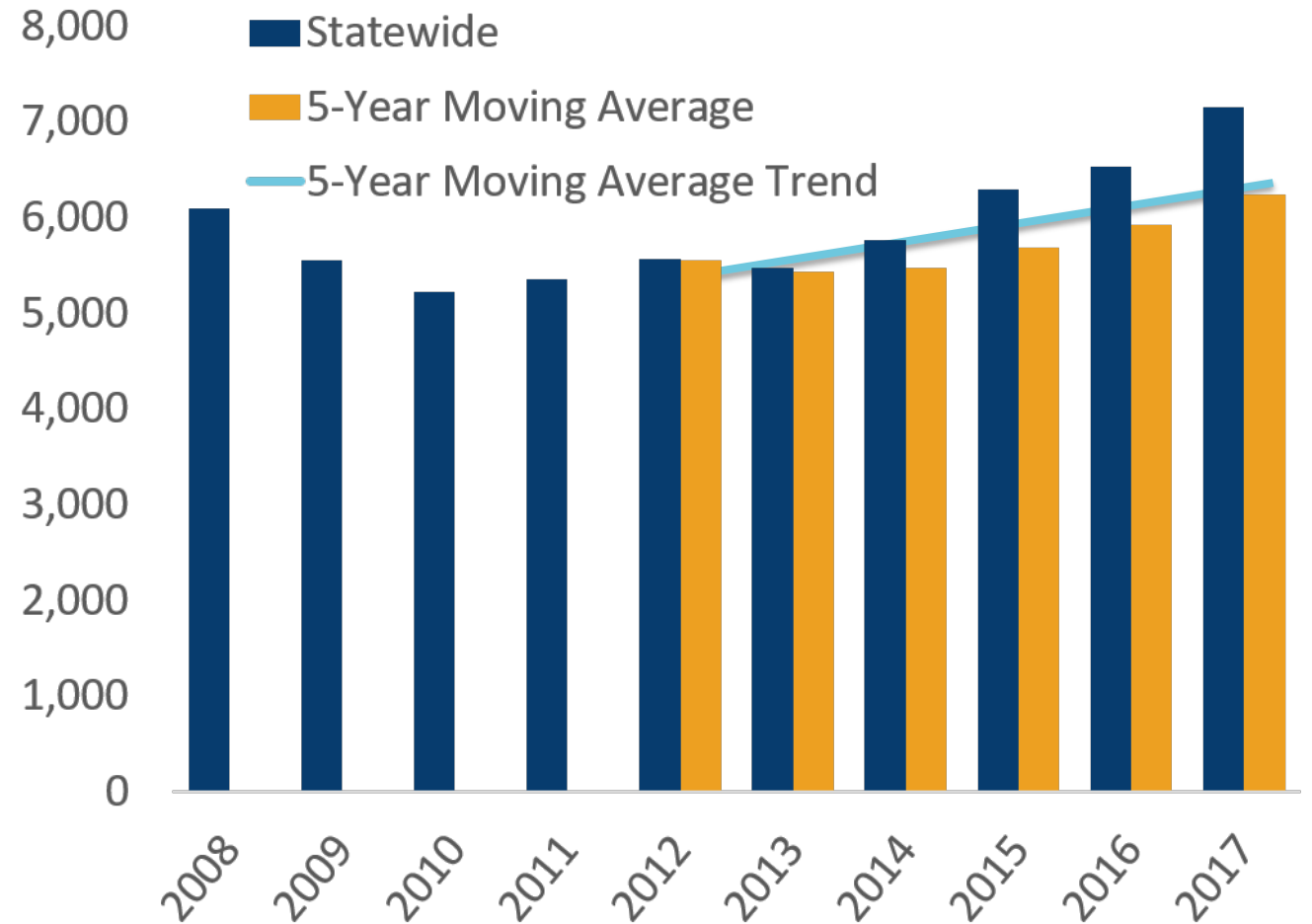
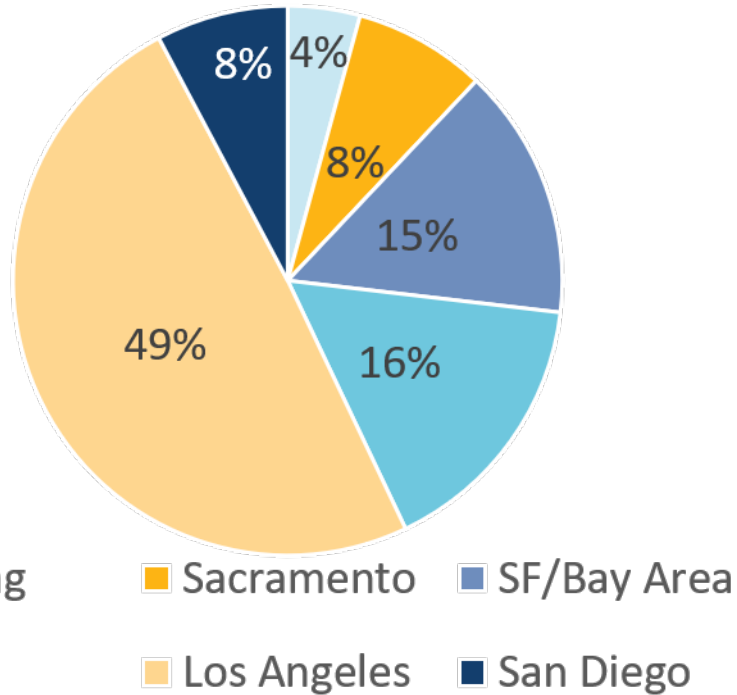
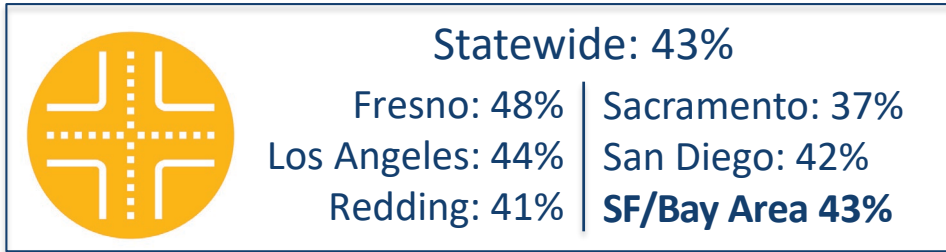
Distracted Driving
Statewide: 5%
San Francisco Region: 5%



Work Zone
Statewide: 2%
San Francisco Region: 2%

Percent of total fatalities

INTERSECTIONS & INTERCHANGES

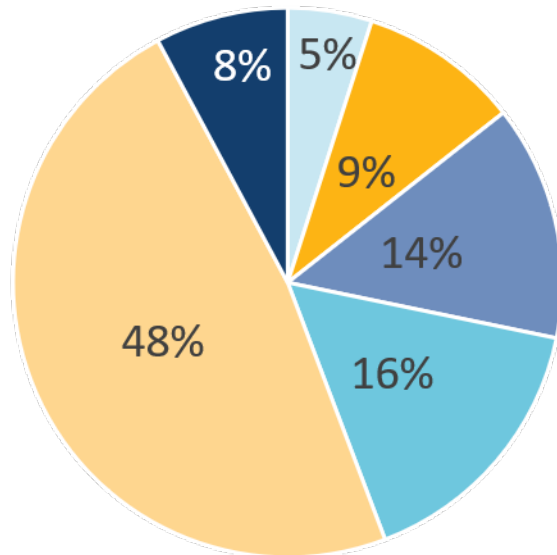








ALCOHOL & DRUG IMPAIRMENT

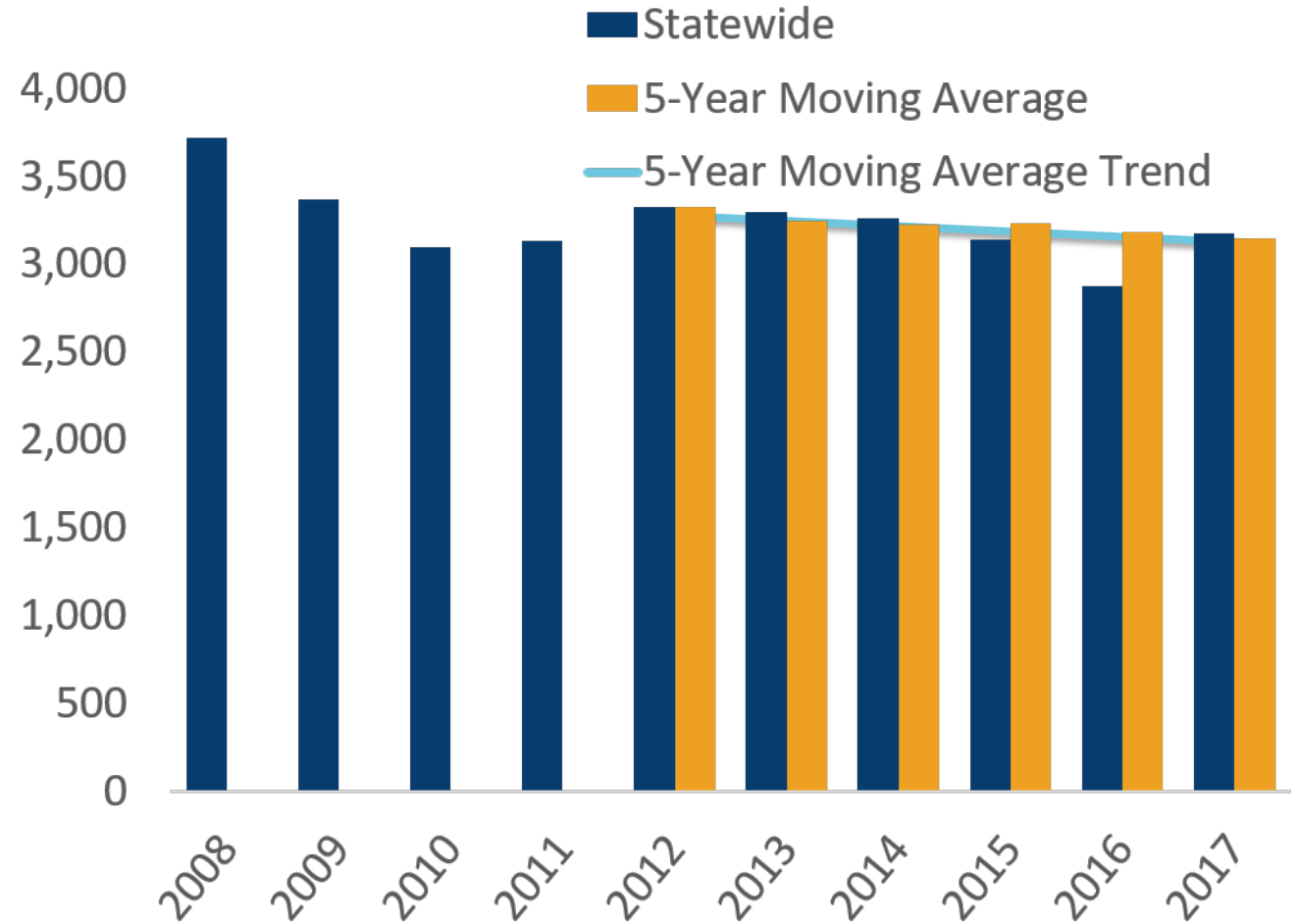


Statewide: 42%

Fresno: 44%	Sacramento: 44%
Los Angeles: 41%	San Diego: 41%
Redding: 46%	SF/Bay Area 39%



 Redding	 Sacramento	 SF/Bay Area
 Fresno	 Los Angeles	 San Diego

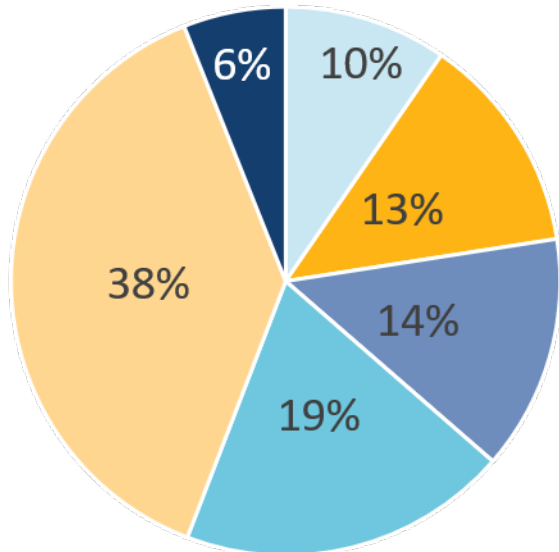








ROADWAY DEPARTURES

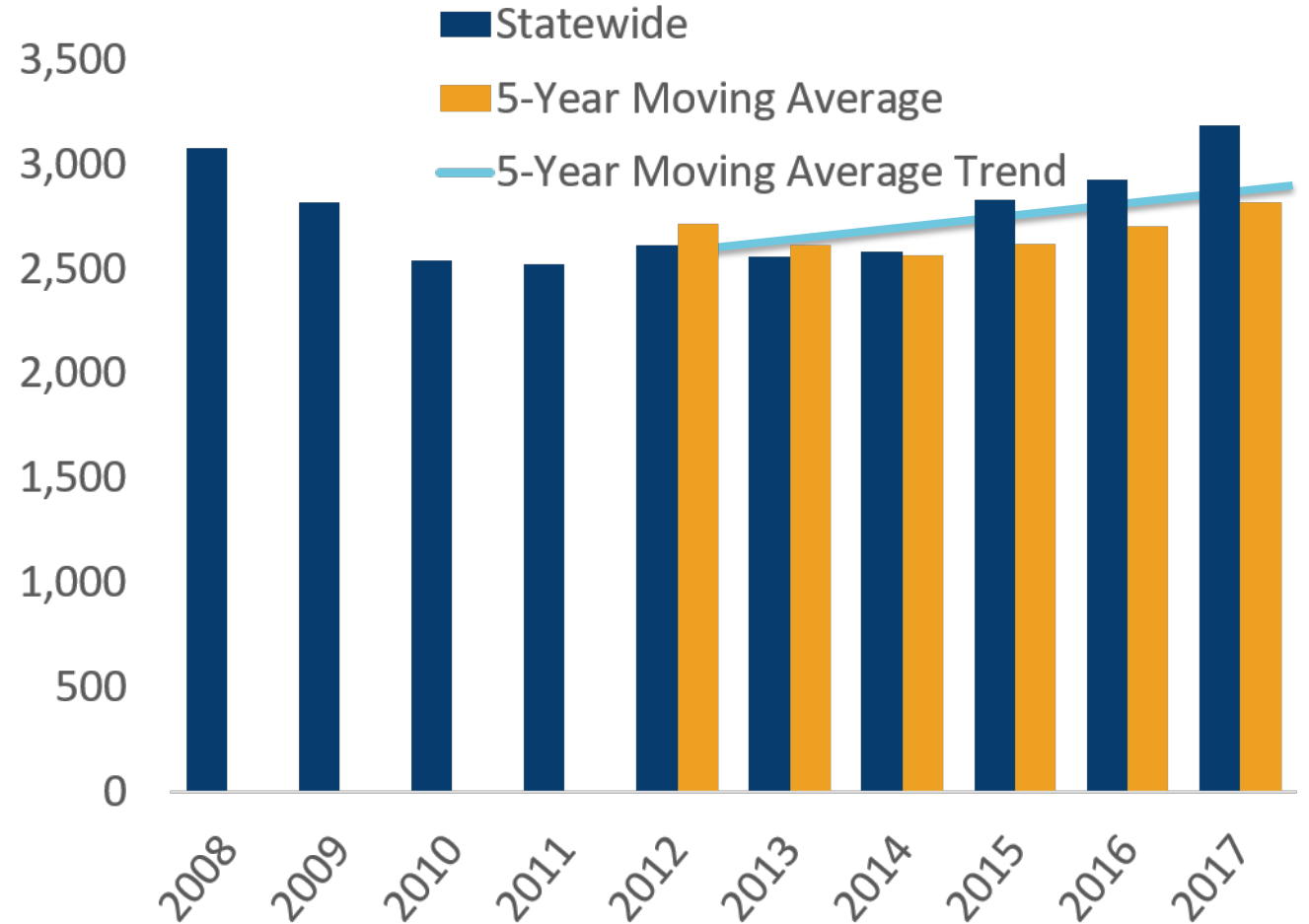


Statewide: 26%

Fresno: 34%	Sacramento: 38%
Los Angeles: 20%	San Diego: 21%
Redding: 56%	SF/Bay Area 25%



 Redding	 Sacramento	 SF/Bay Area
 Fresno	 Los Angeles	 San Diego

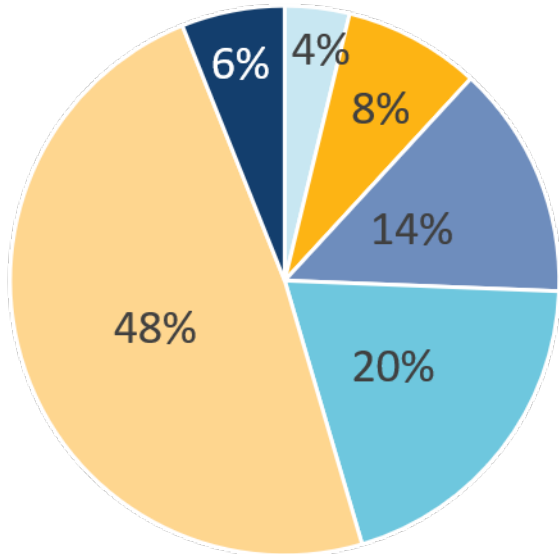


DRIVER LICENSING & COMPETENCY

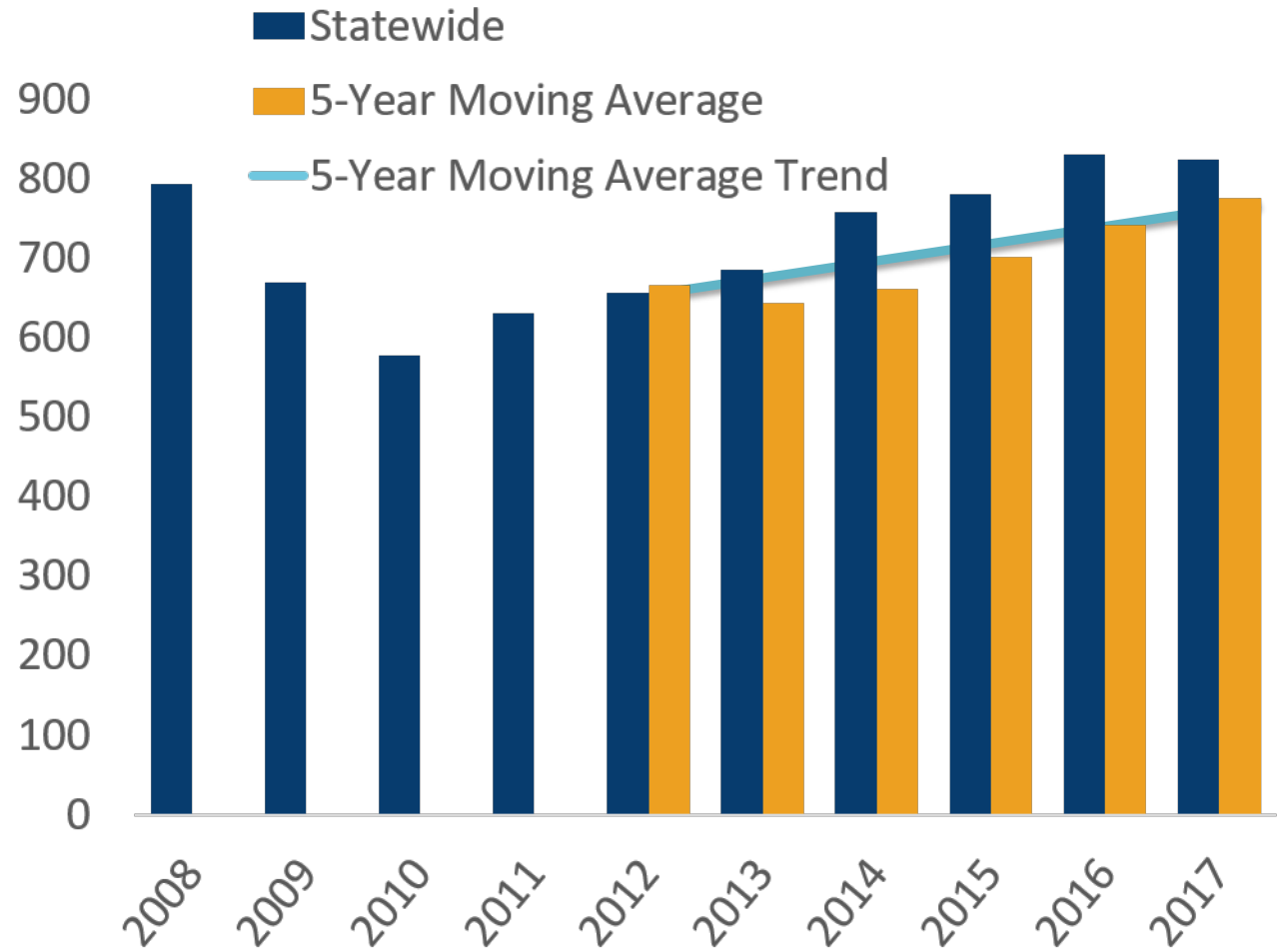


Statewide: 25%

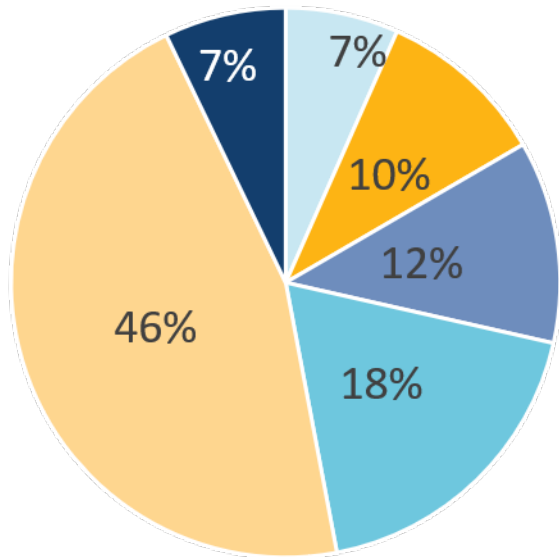
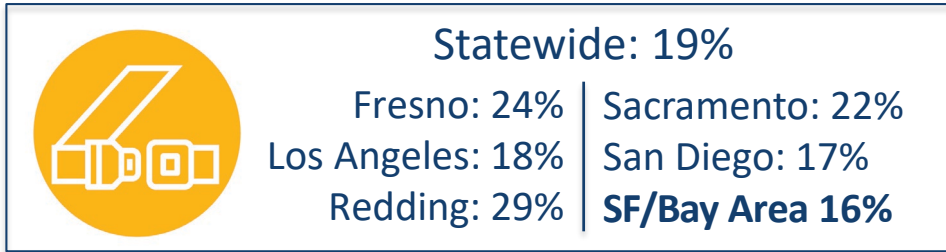
Fresno: 33%	Sacramento: 24%
Los Angeles: 25%	San Diego: 19%
Redding: 21%	SF/Bay Area 24%



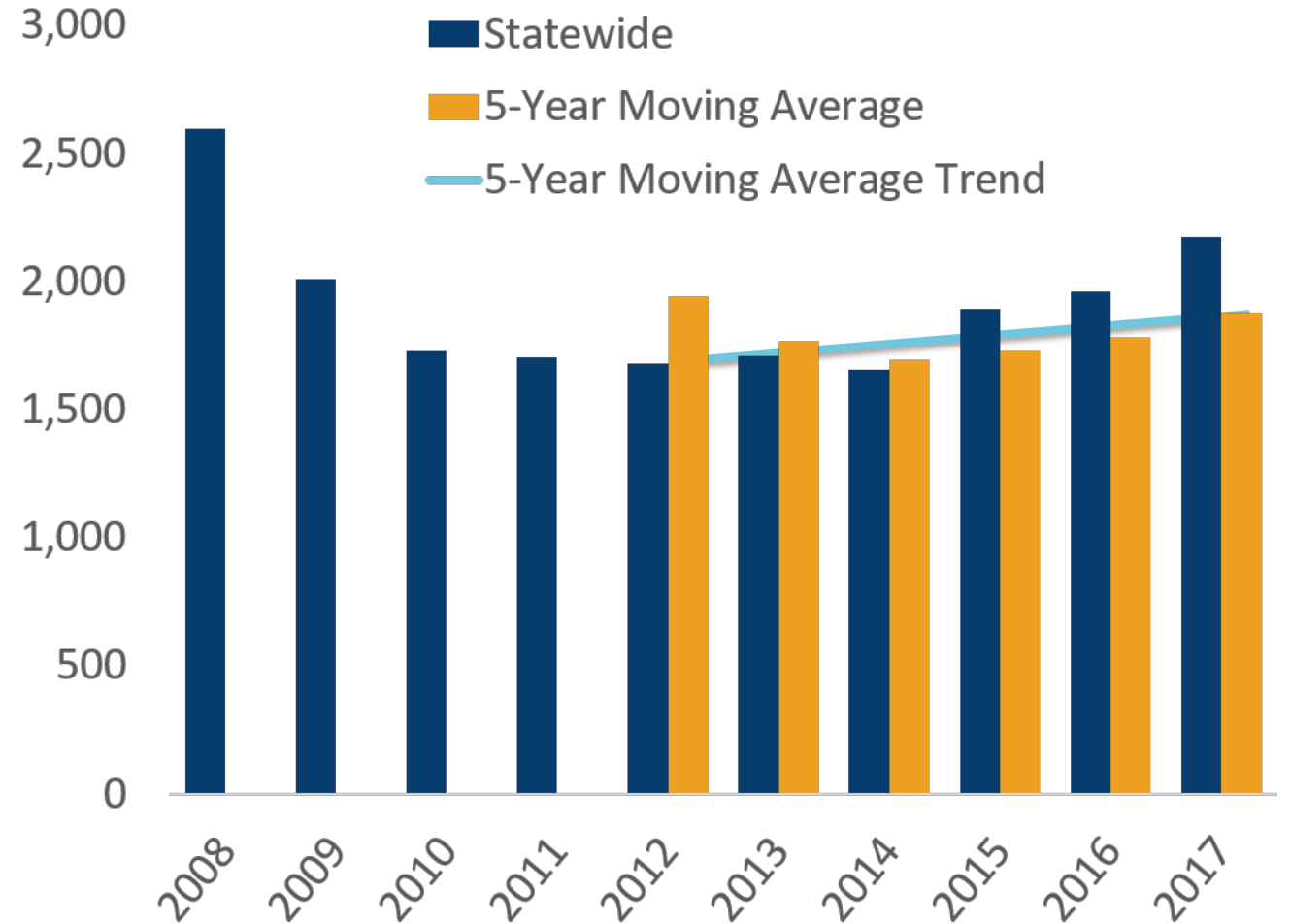
Redding	Sacramento	SF/Bay Area
Fresno	Los Angeles	San Diego



OCCUPANT PROTECTION



■ Redding ■ Sacramento ■ SF/Bay Area
■ Fresno ■ Los Angeles ■ San Diego

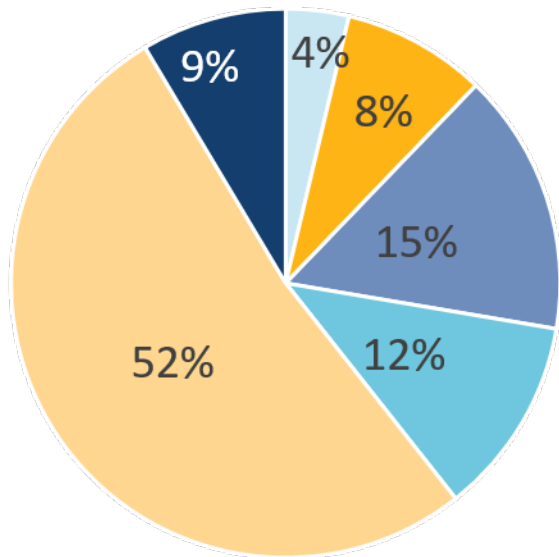








SPEEDING & AGGRESSIVE DRIVING

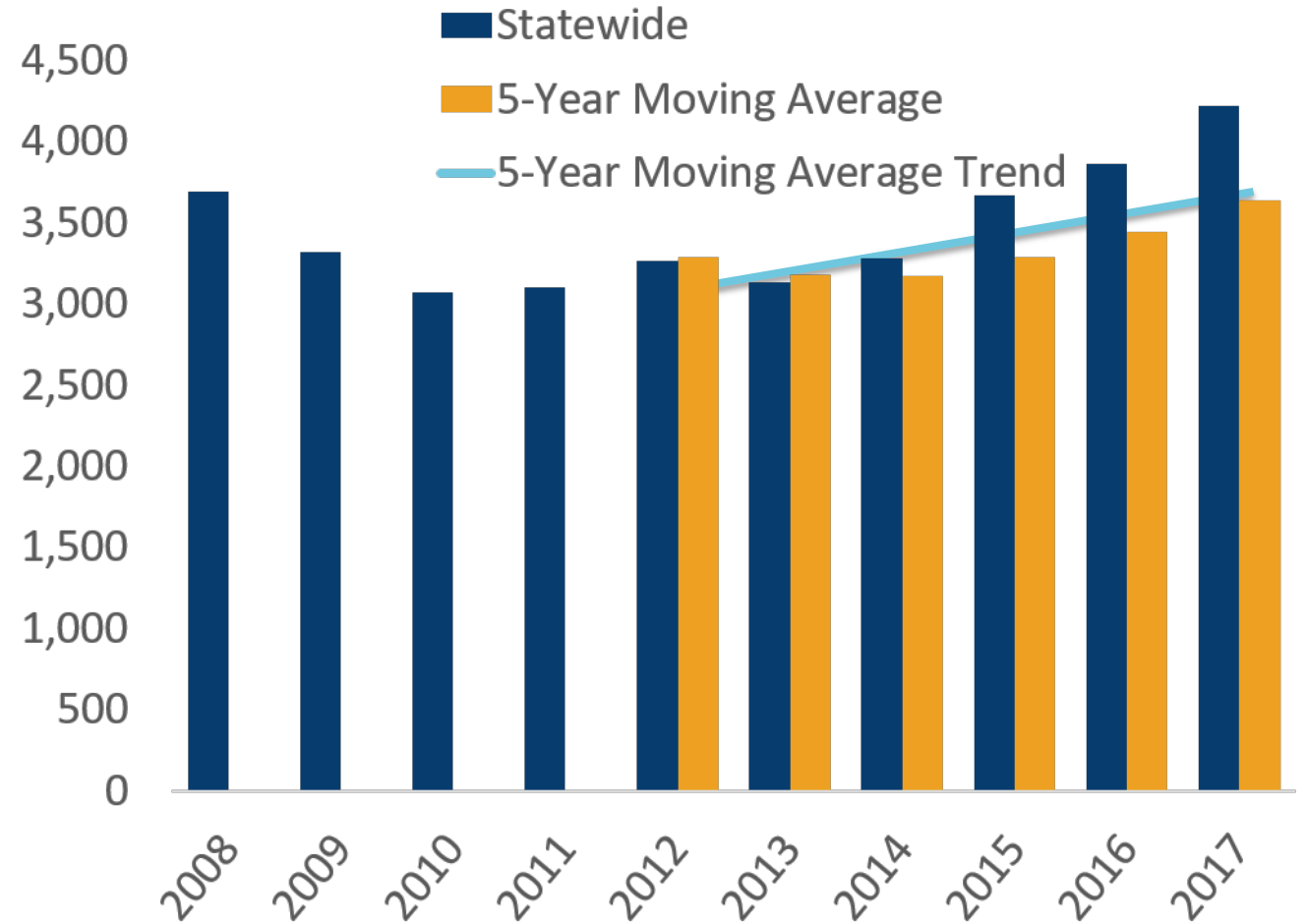


Statewide: 28%

Fresno: 22%	Sacramento: 26%
Los Angeles: 30%	San Diego: 30%
Redding: 23%	SF/Bay Area 29%



 Redding	 Sacramento	 SF/Bay Area
 Fresno	 Los Angeles	 San Diego

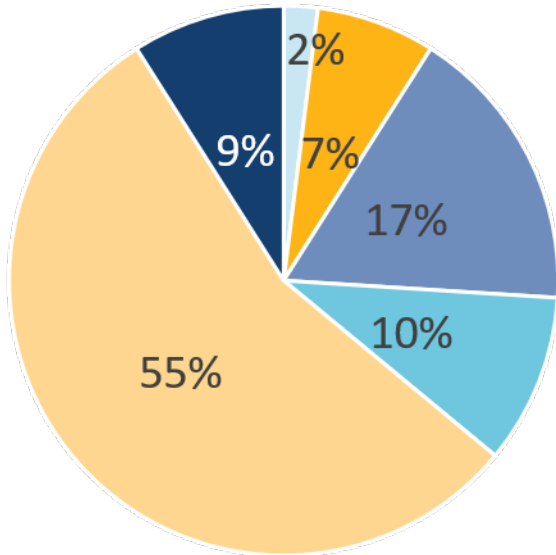








PEDESTRIANS

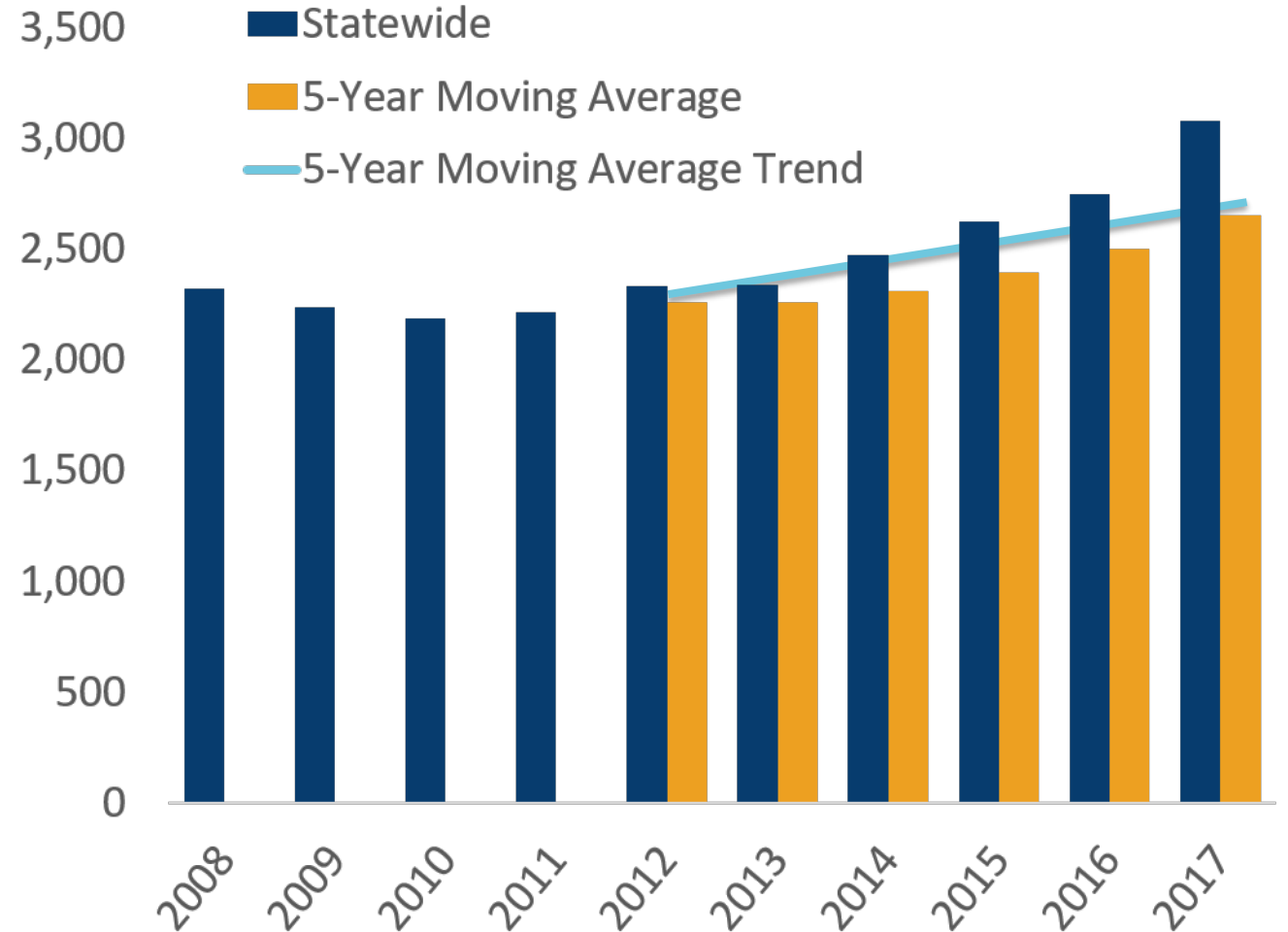


Statewide: 23%

Fresno: 15%	Sacramento: 19%
Los Angeles: 26%	San Diego: 26%
Redding: 12%	SF/Bay Area 26%



 Redding	 Sacramento	 SF/Bay Area
 Fresno	 Los Angeles	 San Diego

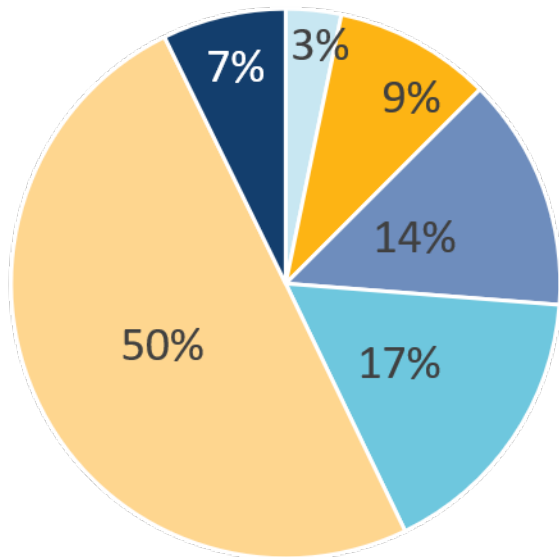


YOUNG DRIVERS

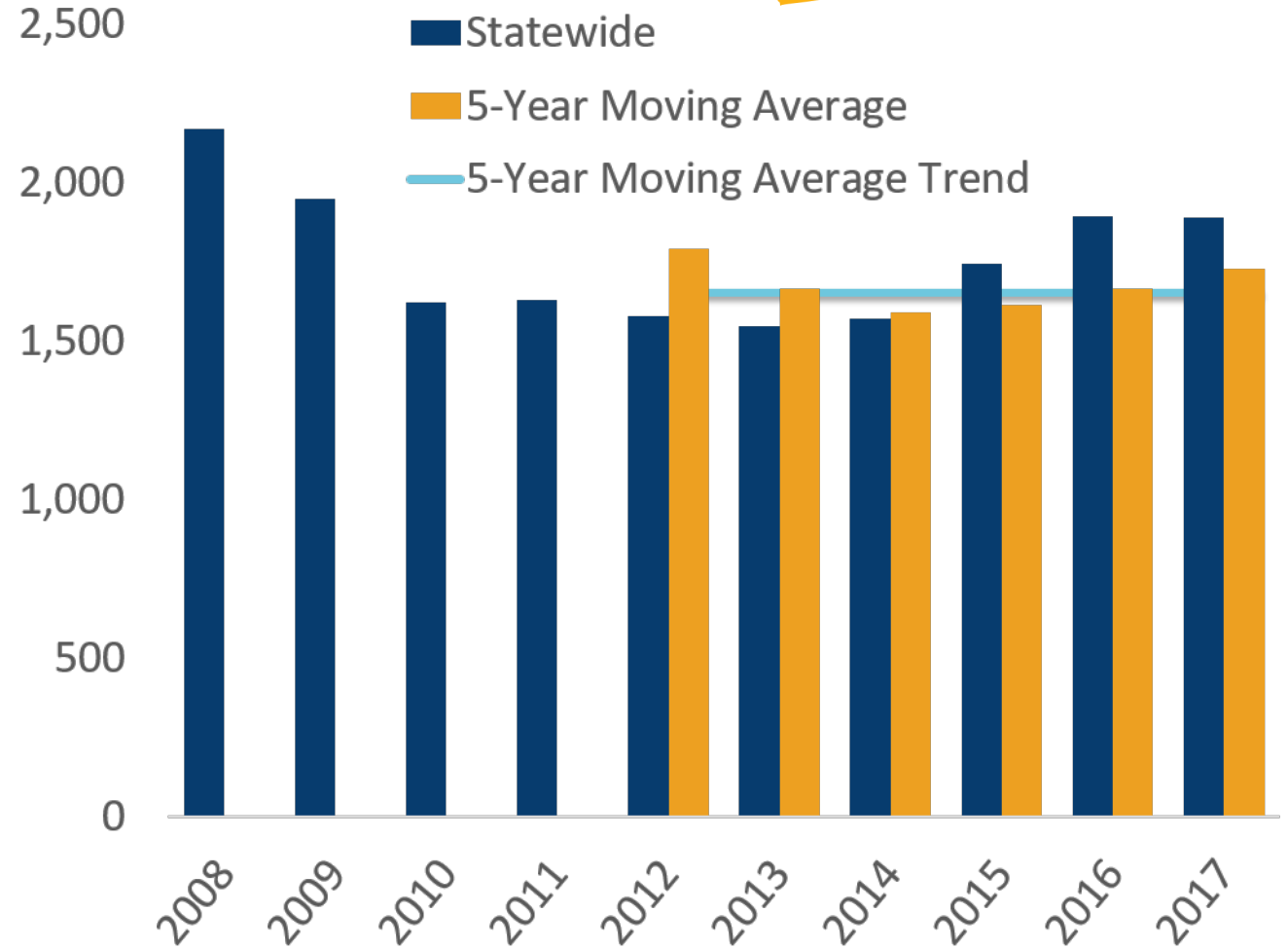


Statewide: 13%

Fresno: 15%	Sacramento: 14%
Los Angeles: 14%	San Diego: 12%
Redding: 10%	SF/Bay Area 13%



Redding	Sacramento	SF/Bay Area
Fresno	Los Angeles	San Diego

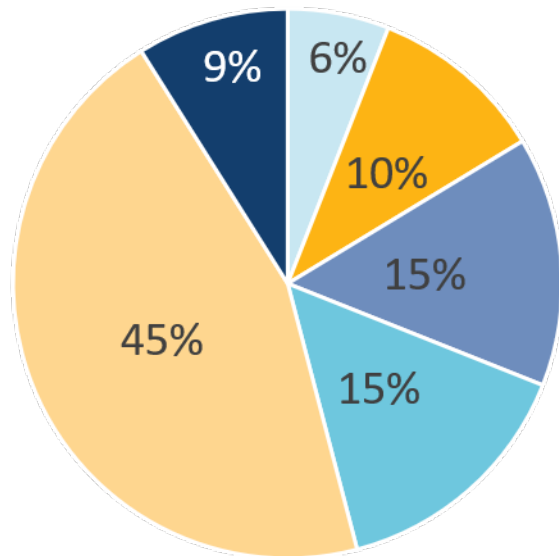


AGING DRIVERS

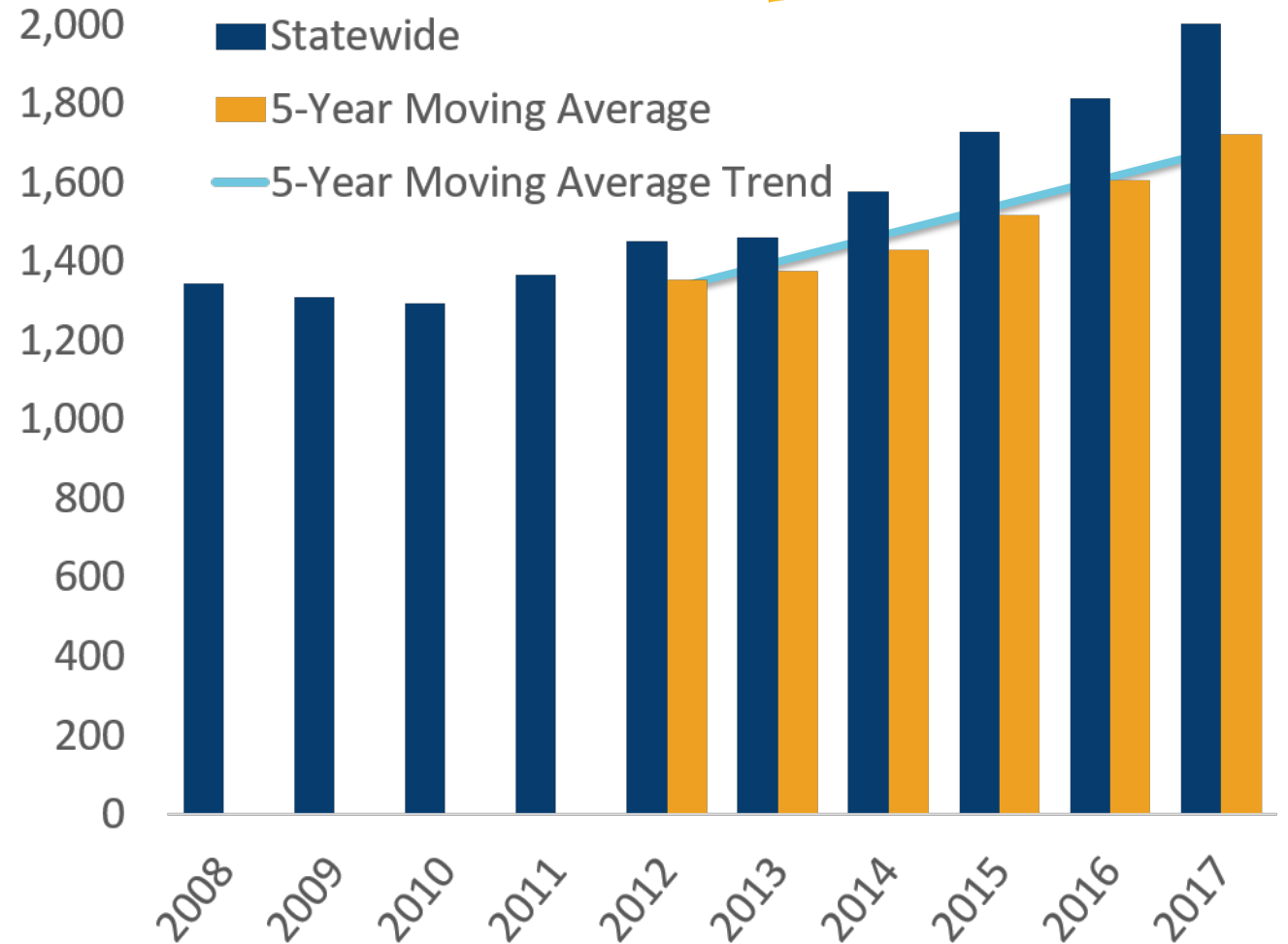


Statewide: 14%

Fresno: 14%	Sacramento: 16%
Los Angeles: 13%	San Diego: 15%
Redding: 19%	SF/Bay Area 14%



■ Redding ■ Sacramento ■ SF/Bay Area
■ Fresno ■ Los Angeles ■ San Diego

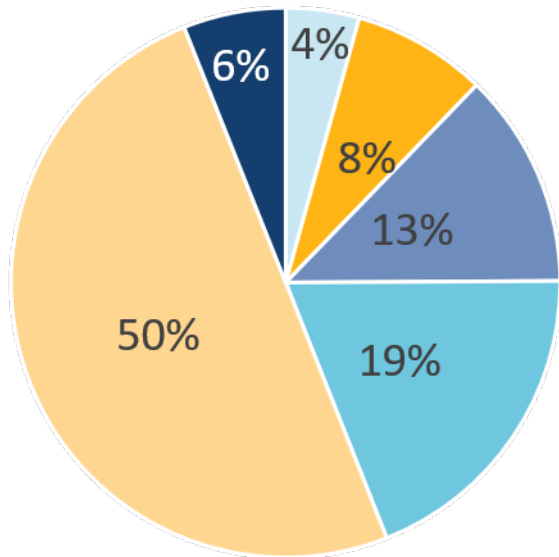


COMMERCIAL VEHICLES

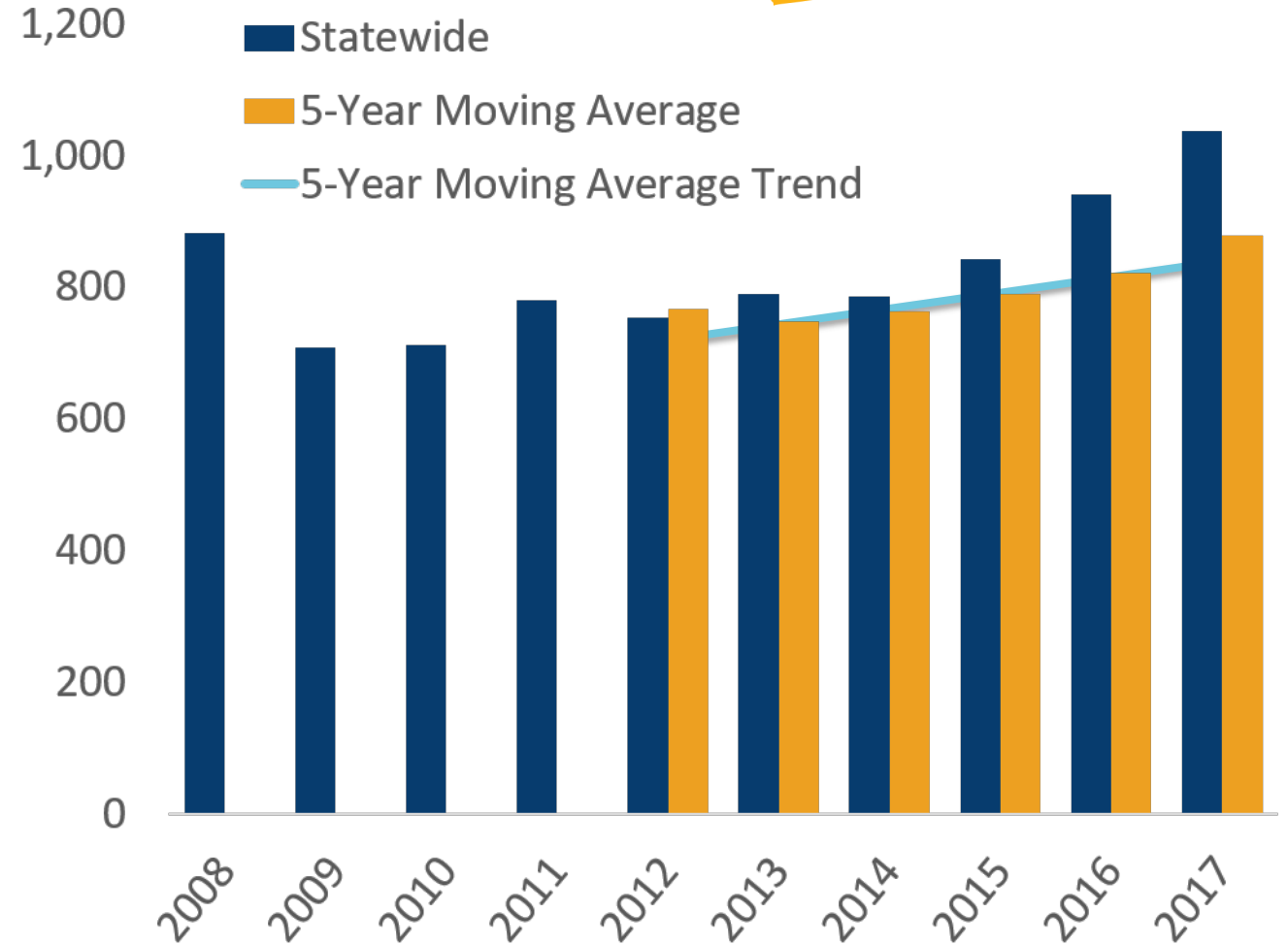


Statewide: 10%

Fresno: 13%	Sacramento: 9%
Los Angeles: 10%	San Diego: 8%
Redding: 10%	SF/Bay Area 8%



Redding	Sacramento	SF/Bay Area
Fresno	Los Angeles	San Diego

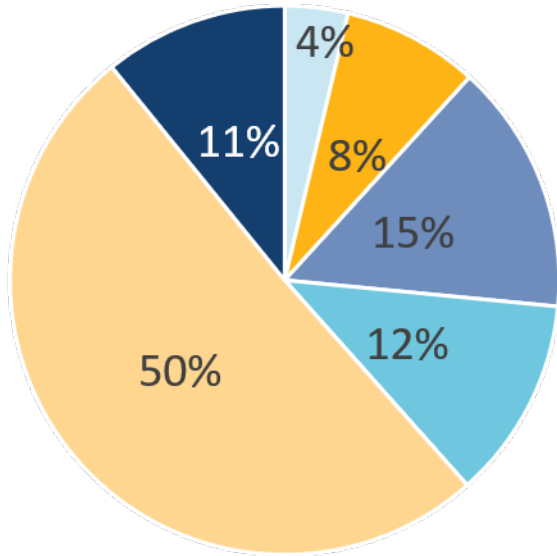








MOTORCYCLES

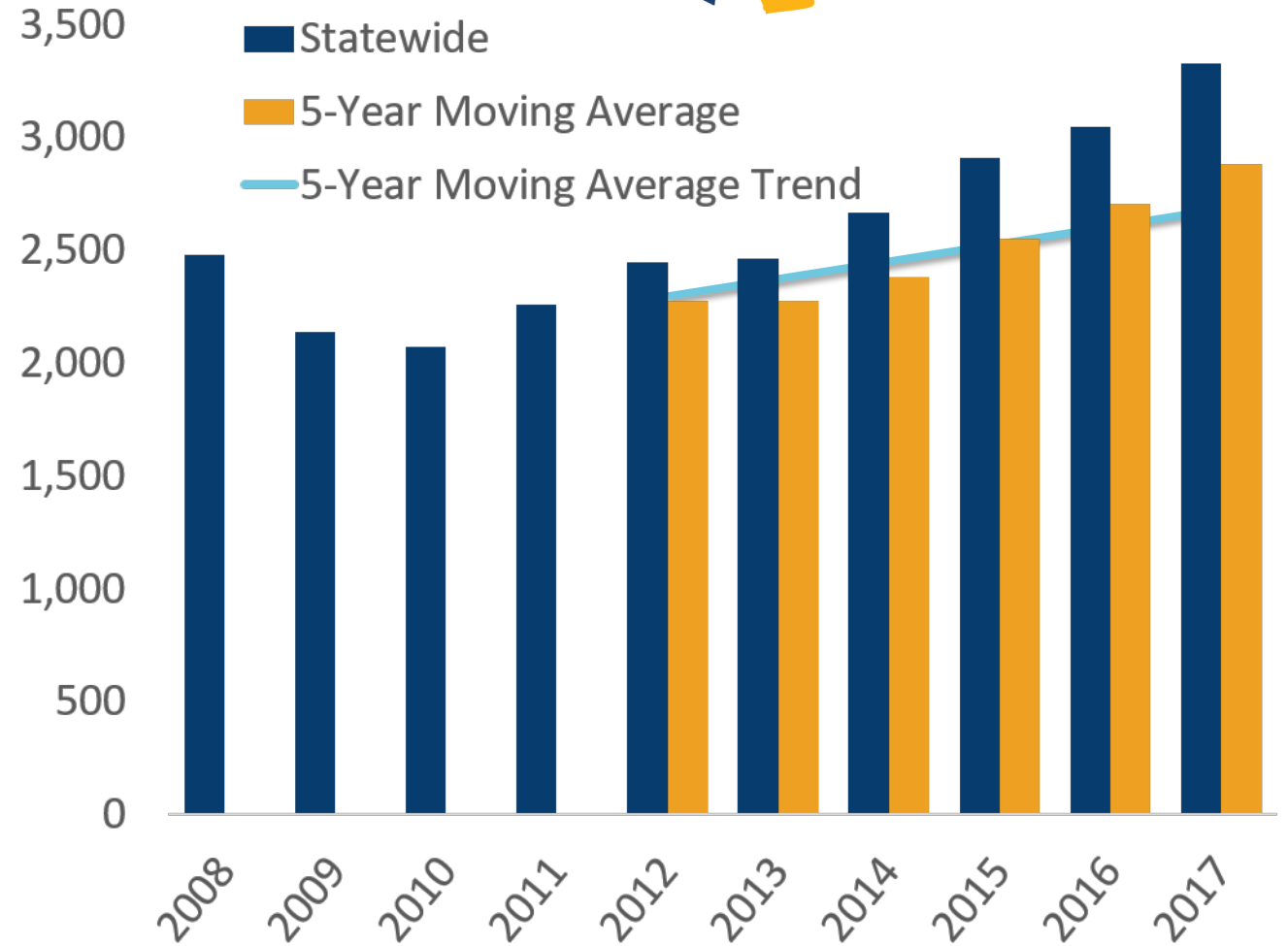


Statewide: 14%

Fresno: 11%	Sacramento: 13%
Los Angeles: 15%	San Diego: 19%
Redding: 12%	SF/Bay Area 14%



 Redding	 Sacramento	 SF/Bay Area
 Fresno	 Los Angeles	 San Diego

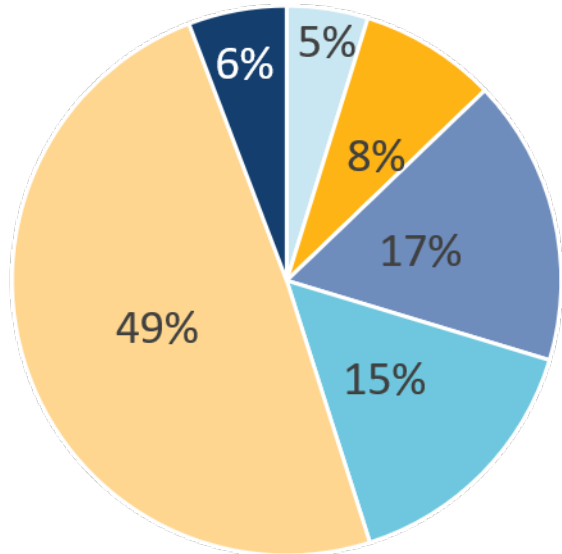


DISTRACTED DRIVING

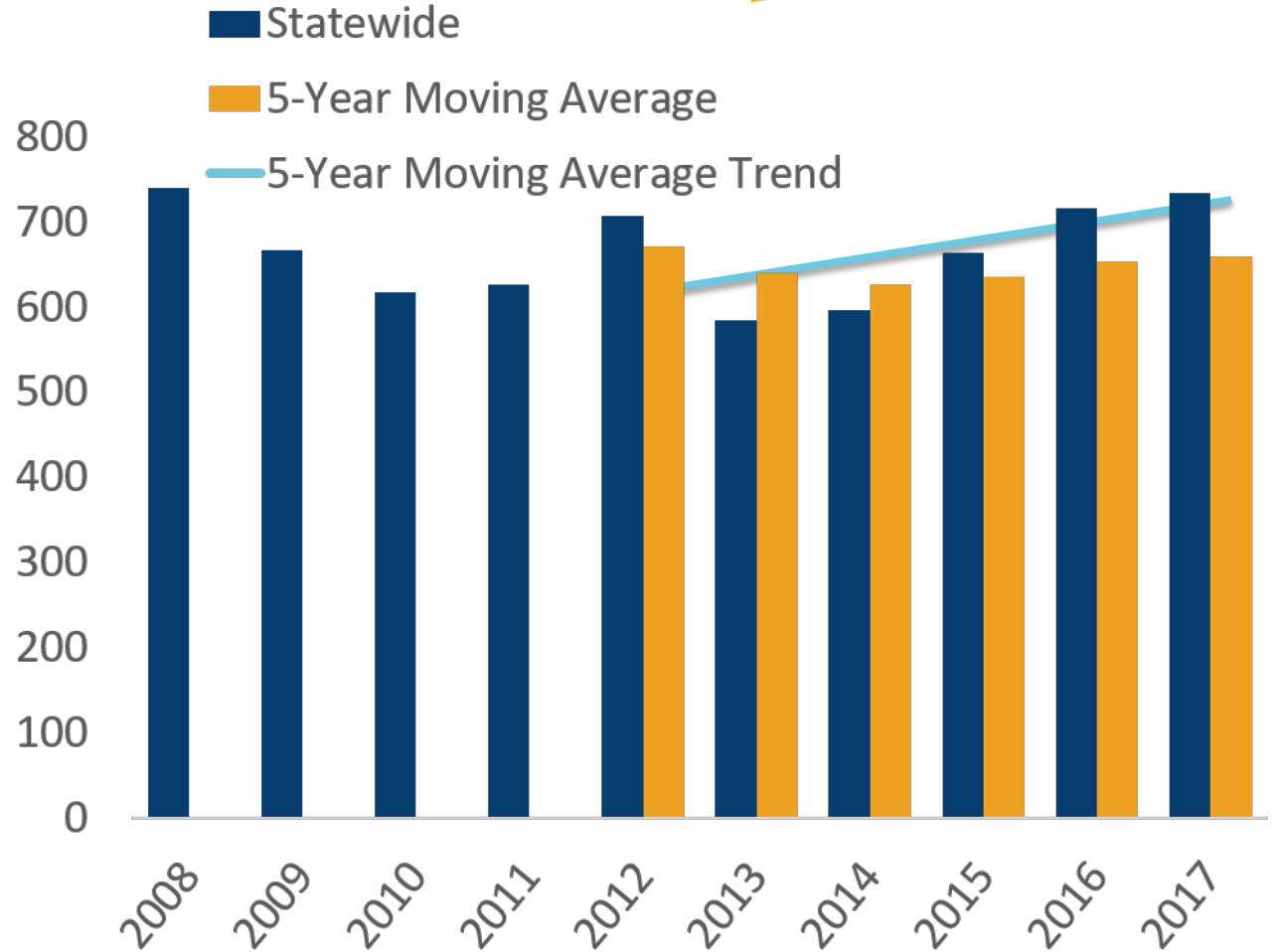


Statewide: 5%

Fresno: 5%	Sacramento: 4%
Los Angeles: 5%	San Diego: 3%
Redding: 5%	SF/Bay Area 5%



■ Redding	■ Sacramento	■ SF/Bay Area
■ Fresno	■ Los Angeles	■ San Diego

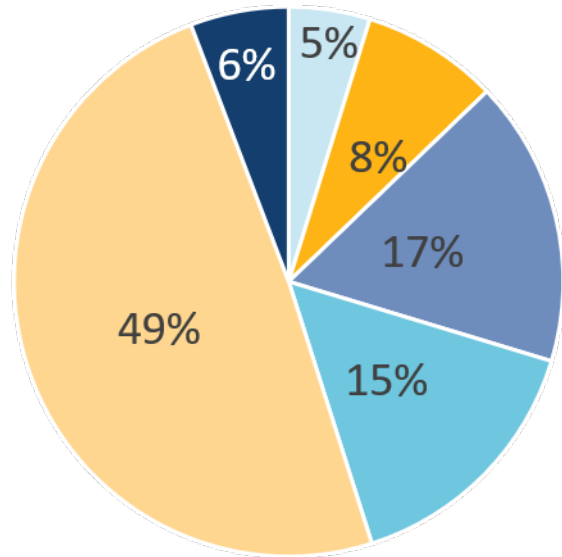








BICYCLING

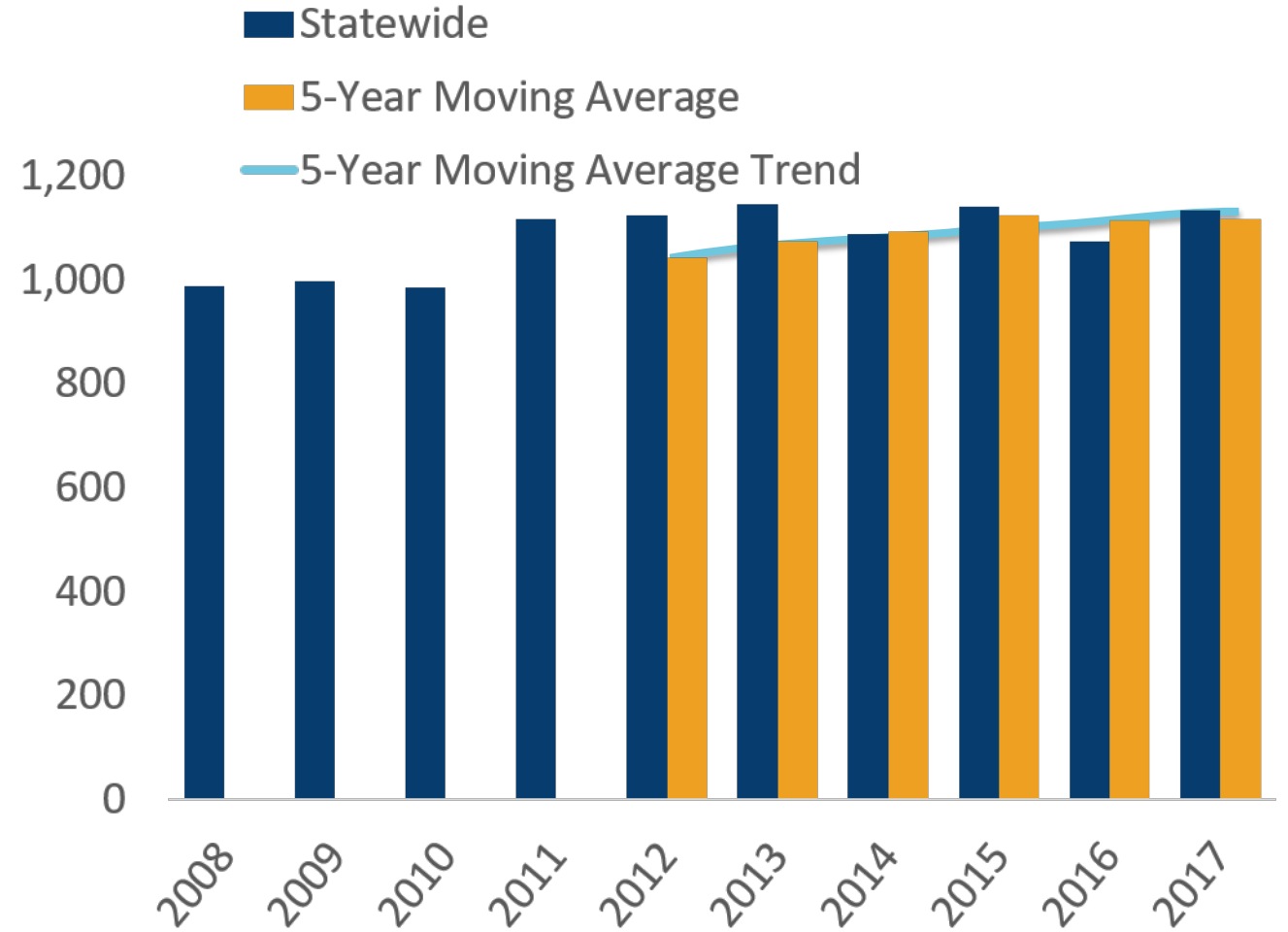


Statewide: 4%

Fresno: 4%	Sacramento: 5%
Los Angeles: 4%	San Diego: 3%
Redding: 3%	SF/Bay Area 6%



 Redding	 Sacramento	 SF/Bay Area
 Fresno	 Los Angeles	 San Diego

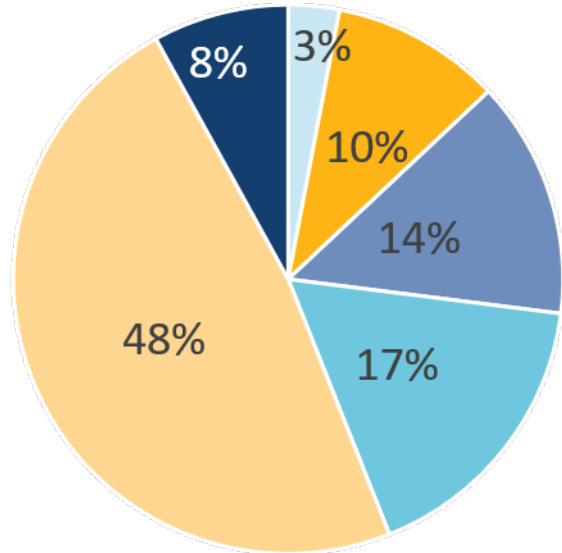








WORK ZONE

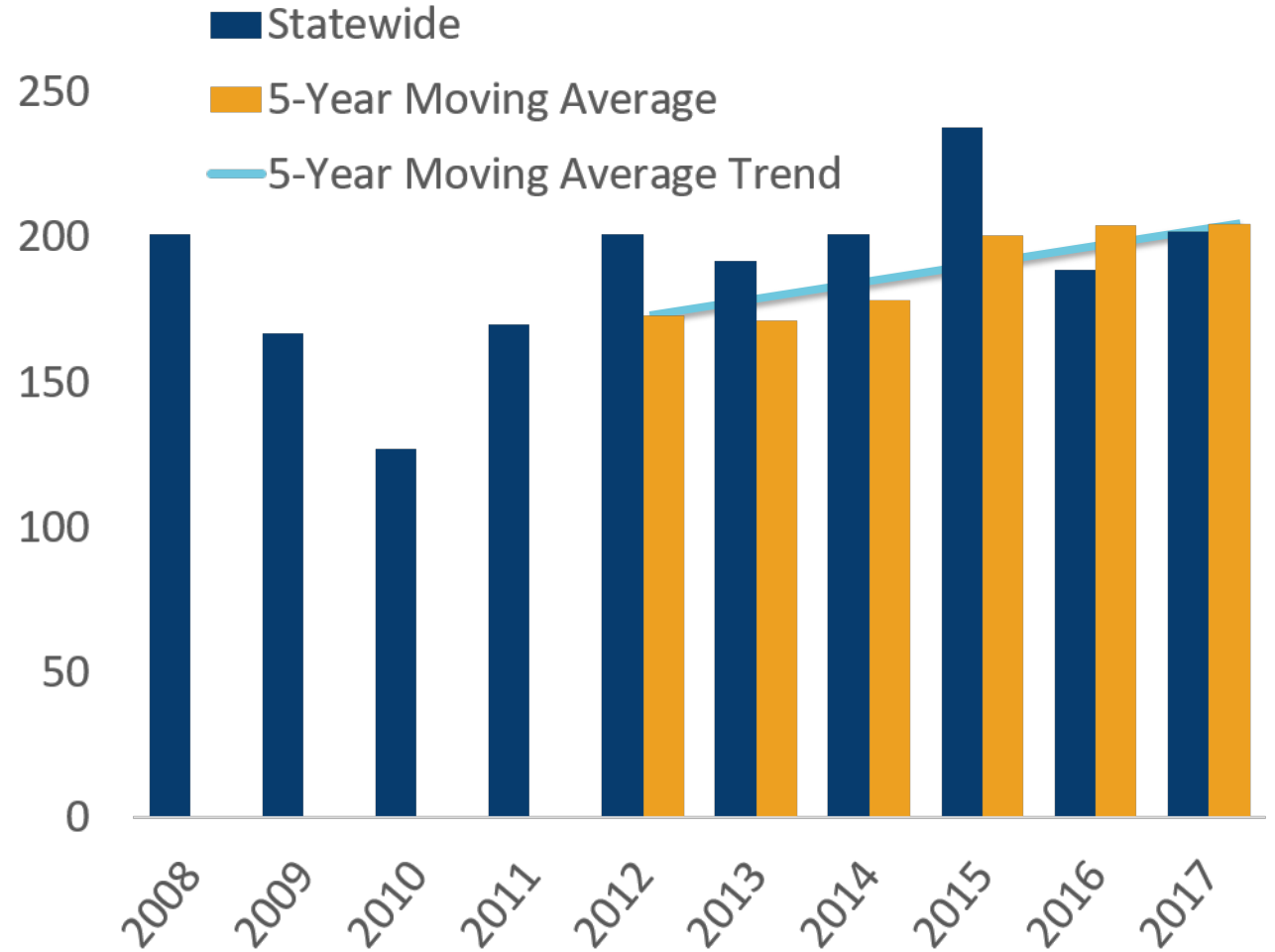


Statewide: 2%

Fresno: 2%	Sacramento: 2%
Los Angeles: 2%	San Diego: 2%
Redding: 1%	SF/Bay Area 2%



 Redding	 Sacramento	 SF/Bay Area
 Fresno	 Los Angeles	 San Diego





CALIFORNIA SAFE ROADS

2020 - 2024 Strategic Highway Safety Plan

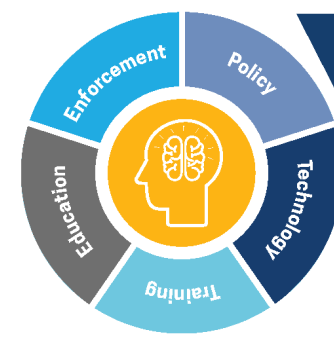
Safety Strategy Session



EXAMPLE STRATEGIES

Infrastructure-Related Collisions are inclusive of a variety of collision types, including pedestrians, bicyclists, motorcycles, roadway, and intersection collisions.

 Median and Pedestrian Crossing Islands	 	 Longitudinal Rumble Stripes	
 Pedestrian Hybrid Beacon	 	 Median Barriers	
 Leading Pedestrian Intervals		 Tapered Edge	
 Walkways		 Reduce Left-Turn Conflict Intersections	
 Road Diet	 	 Multiple Low-Cost Measures at Stop-Controlled Intersections	
 Crosswalk Enhancements		 Backplates with Retroreflective Borders	
 Corridor Access Management	 	 Dedicated Left-turn and Right-turn lanes	
 Roadside Design Improvement at Curves	 	 Roundabouts	
 Enhanced Delineation and Friction for Horizontal Curves	 	 Yellow Change Intervals	



Behavior-Related Collisions are inclusive of a variety of collision types, including aggressive driving, alcohol-involved, drug-involved, distracted, young driver, and aging driver collisions.

Policy

- All offender alcohol ignition interlock law
- DWI courts
- Stronger graduated driver licensing laws
- Screening of older drivers

Training

- Employer-based programs targeting workers that are at higher risk of drowsy-driving
- Drug recognition expert training for law enforcement
- Responsible beverage service training
- Motorcycle rider training

Education

- Education campaigns about increased enforcement
- Alternative transportation programs
- Increased parental involvement programs
- Mandatory driver education for novice drivers
- Education campaigns for physicians and law enforcement about older driver screening
- Education campaigns targeted to low seat-belt users
- School programs

Enforcement

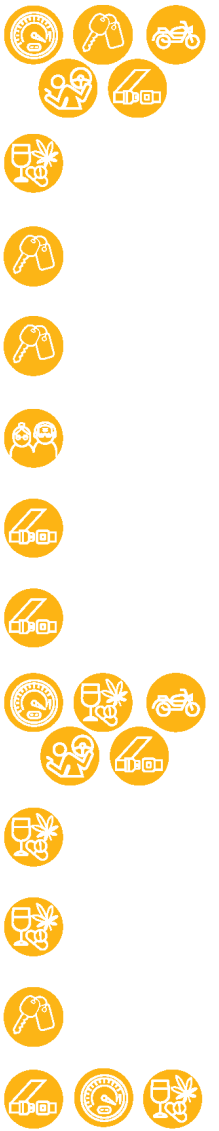
- High visibility enforcement
- Publicized sobriety checkpoints
- Saturation patrols
- Enforcement of graduated driver licensing and zero tolerance laws
- Integrated enforcement

Technology

- Automated enforcement for speed and red light running.



Education	<ul style="list-style-type: none"> Education campaigns about increased enforcement Alternative transportation programs Increased parental involvement programs Mandatory driver education for novice drivers Education campaigns for physicians and law enforcement about older driver screening Education campaigns targeted to low seat-belt users School programs
Enforcement	<ul style="list-style-type: none"> High visibility enforcement Publicized sobriety checkpoints Saturation patrols Enforcement of graduated driver licensing and zero tolerance laws Integrated enforcement



EXAMPLE STRATEGIES

- 

Median and Pedestrian Crossing Islands



- 

Pedestrian Hybrid Beacon



- 

Leading Pedestrian Intervals



- 

Walkways




- 

Road Diet







- 




Crosswalk Enhancements


- 



Corridor Access Management



- 











Roadside Design Improvement at Curves











- 

Enhanced Delineation and Friction for Horizontal Curves

EXAMPLE STRATEGIES

-  Longitudinal Rumble Stripes 
-  Median Barriers 
-  Tapered Edge 
-  Reduce Left-Turn Conflict Intersections 
-  Multiple Low-Cost Measures at Stop-Controlled Intersections 

-  Backplates with Retroreflective Borders 
-  Dedicated Left-turn and Right-turn lanes 
-  Roundabouts 
-  Yellow Change Intervals 

EXAMPLE STRATEGIES

Policy

- All offender alcohol ignition interlock law



- DWI courts



- Stronger graduated driver licensing laws



- Screening of older drivers



Training

- Employer-based programs targeting workers that are at higher risk of drowsy-driving



- Drug recognition expert training for law enforcement



- Responsible beverage service training



- Motorcycle rider training



Technology

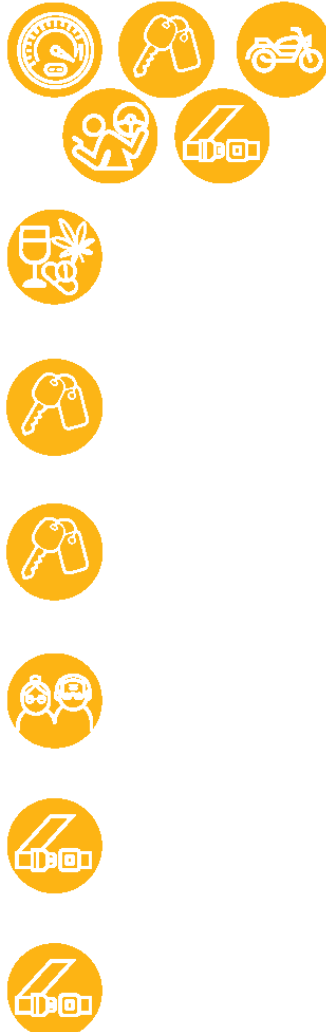
- Automated enforcement for speed and red light running.



EXAMPLE STRATEGIES

Education

- Education campaigns about increased enforcement
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- Mandatory driver education for novice drivers
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Enforcement

- High visibility enforcement
- Publicized sobriety checkpoints
- Saturation patrols
- Enforcement of graduated driver licensing and zero tolerance laws
- Integrated enforcement



SAFETY STRATEGY SESSION



- Open House Format
- Discuss data and strategies with facilitators and attendees at 5 stations
- Fill out comment forms
 - What is the biggest safety issue in your community?
 - What specific data should drive the strategies?
 - What strategies/programs are most effective in your region?
 - What can be done to improve implementation?
 - What other ideas do you have?

SAFETY STRATEGY SESSION



- Handouts
 - Statewide Overview
 - Data specific to each sub category
 - Example strategies

Safety Strategy Session



- Stations

Overview

Collision Overview

Vision / Mission / Objective

Drivers & Passengers

1. Driver licensing
2. Aggressive driving
3. Driving under influence
4. Distracted driving
5. Occupant protection
6. Young drivers (<21)
7. Aging drivers (>65)
8. Commercial vehicle operations

Infrastructure

9. Intersections
10. Lane/Roadway departures
11. Work zones

Vulnerable Users

12. Pedestrians
13. Bicyclists
14. Motorcyclists

Vehicles

15. Equipment

Emergency Response

16. Emergency Response



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Report Out / Closing

