



Vision Zero Traffic Fatalities: 2017 End of Year Report

April 2018, updated July 2018

Produced by the San Francisco Department of Public Health,
in collaboration with the San Francisco Municipal Transportation Agency
and the San Francisco Police Department



SFMTA
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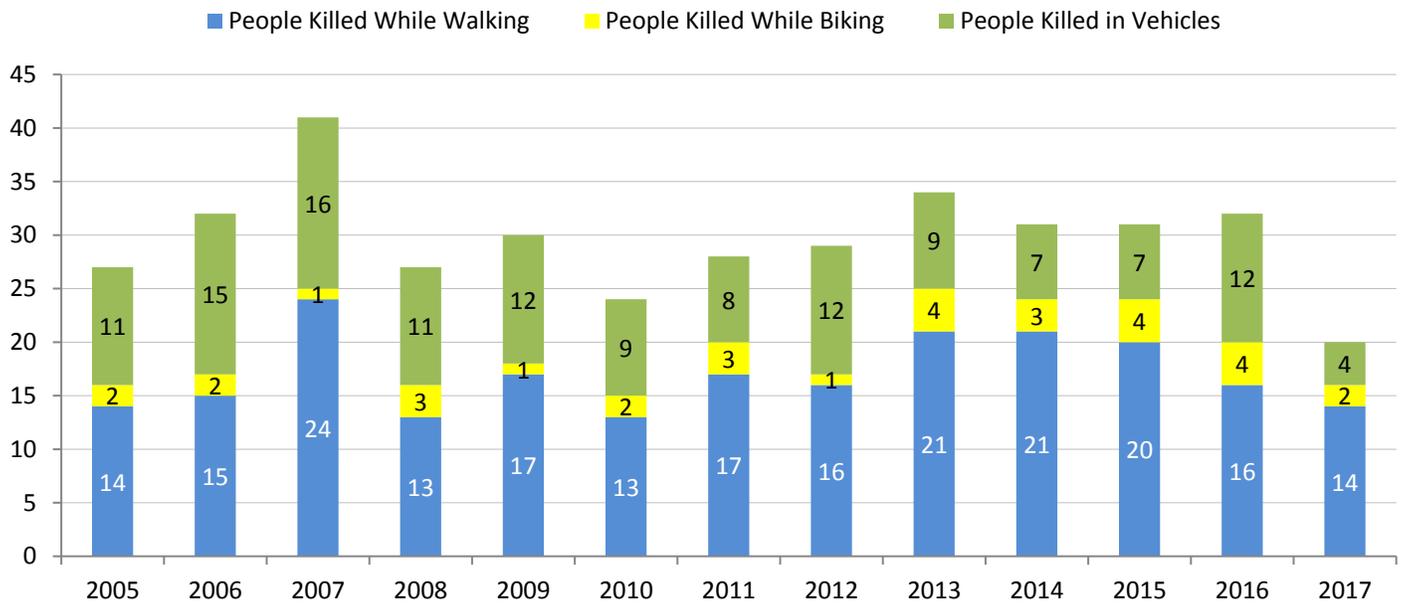


Introduction

San Francisco is committed to achieving our Vision Zero goal of zero traffic deaths. While 2017 saw the fewest traffic deaths in the city’s recorded history, it is too early to declare a trend. Regardless, 20 people losing their lives is unacceptable. Every death in this report represents indescribable loss suffered by an individual and the community. This report summarizes traffic death patterns in 2017 to inform Vision Zero initiatives to save lives.

San Francisco saw 20 traffic-related deaths in 2017, a 38% reduction compared to 2016. This represents the least deadly year on record for San Francisco traffic fatalities since 1915. The following chart compares annual fatality data 2005 through 2017. The number of traffic deaths in San Francisco fell significantly in 2017, after relatively stable counts in 2014-2016. This decline is also significant considering that San Francisco’s population has grown over the last few years.¹ This reduction in traffic deaths contrasts starkly to traffic collisions on a national level. Preliminary 2016 national data from the National Highway Traffic Safety Administration (NHTSA) report a 6% increase from calendar year 2015 in traffic deaths nationwide, with a 9% increase in pedestrian deaths and 1.3% increase in cyclist deaths.²

San Francisco Traffic Deaths, 2005-2017



NOTE: 2005-2012 deaths from California Highway Patrol’s Statewide Integrated Traffic Records System (SWITRS) data, restricting to San Francisco City Streets jurisdiction, including streets that intersect with freeways (i.e., fatalities occurring at freeway ramps in the City jurisdiction). 2013 traffic deaths from SFPD. 2014-2017 traffic deaths reported using the Vision Zero Traffic Fatality Protocol based on data from the Office of the Medical Examiner and SFPD; includes deaths involving light rail vehicles not routinely reported in SWITRS. In July 2018, the 2016 fatality total was adjusted to reflect two fatalities meeting Protocol criteria which had previously been under investigation.

¹ San Francisco’s population was 789,172 in 2010 and has steadily risen since – to 850,252 in 2016. Source: U.S. Census Bureau, 2006-2016 American Community Survey 5-Year Estimates

² Source: <https://www.nhtsa.gov/press-releases/usdot-releases-2016-fatal-traffic-crash-data>



Staff from the SF Department of Public Health (SFDPH) work with staff from SF Police Department (SFPD) and the SF Municipal Transportation Agency (SFMTA) to report and map official fatality statistics monthly on the following webpage, utilizing the Vision Zero Traffic Fatality Protocol³: <http://visionzerosf.org/maps-data/>.

This report summarizes characteristics of traffic deaths in San Francisco from 2014-2017. Note that traffic fatality totals are susceptible to random variation. Year-to-year changes may thus be due to chance. Analyzing longer-term trends helps address this issue. SFDPH is also monitoring severe injuries to understand trends and characteristics of the most serious traffic-related injuries, which will be an additional metric to evaluate the progress of Vision Zero efforts set to be released later this year.

Key Findings

High Injury Network and Communities of Concern:

- In 2017, half (50%) of traffic fatalities occurred on the Vision Zero High Injury Network.
- Forty percent (n=8) of fatalities occurred in a Community of Concern in 2017, and of those 50% (n=4) were also on the High Injury Network.

Travel Mode:

- Fourteen people were killed while walking in San Francisco, comprising the largest road user group impacted by traffic fatalities (70%)
 - Compared to 2016's sixteen fatalities, there were two fewer people killed while walking, continuing a downward trend since 2014
- Four people were killed while riding a motorcycle, comprising 20% of all traffic fatalities
 - Compared to 2016's single motorcyclist death, three more people killed while riding a motorcycle
- Two people were killed while biking, comprising 10% of all traffic fatalities
 - Compared to 2016's four fatalities, there were two fewer cyclist deaths
- No people were killed while travelling in a motor vehicle, in contrast with 2016, during which 11 people were killed while travelling in a motor vehicle as drivers or passengers

Demographics: Age, Sex, Race/Ethnicity and Homelessness

- In total, 55% of all traffic fatalities were male (n=11) in 2017
- 64% of people killed while walking (n=14) were female (n=9). All people killed while bicycling or motorcycling were male.
- Three quarters of fatalities were people over 45 years old (n=15), while 35% were over 65 years old (n=7). Half of people killed while walking were over 65 years old (n=7/14).
- The vast majority (80%) of people killed in traffic collisions were White or Asian, and Non-Hispanic
- Individuals with no fixed address made up 10% (n=2) traffic fatalities, while representing under 1% of the San Francisco population

³ In 2015, with periodic updates since, the City finalized and standardized the [San Francisco Vision Zero Traffic Fatality Protocol](#), to ensure consistency of fatality tracking and reporting across city agencies. The protocol utilizes the traffic fatality definition in the collision investigation manual of the California Highway Patrol's Statewide Integrated Traffic Records System (SWITRS). However, it expands the definition to include above ground light rail vehicle (LRV)-involved fatalities that involve collisions with pedestrians and cyclists. Traffic fatalities are any person(s) killed in or outside of a vehicle (bus, truck, car, motorcycle, bike, moped, light rail vehicle, etc.) involved in a crash, or killed within the public roadway due to impact with a vehicle or road structure, or anyone who dies within 30 days of the public roadway incident as a result of the injuries sustained within the City and County of San Francisco.



Primary Collision Factors:

- *Over half of fatalities were due to failure to yield at crosswalks or unsafe speed:*
 - The most commonly-cited primary collision factor was failure by a driver to yield right-of-way at crosswalks (21950(a)), cited in 35% (n=7) of fatalities
 - The second most commonly cited factor was unsafe speed for prevailing conditions, (22350), at 20% (n=4)

California Vehicle Code (CVC)	Primary Collision Factor Description	Count (N=20)
21950(a)	Driver failure to yield right-of-way at crosswalks	7
22350	Unsafe speed for prevailing conditions	4
21955	Crossing between controlled intersections (Jaywalking)	2
22101(d)	Violating special traffic control markers	1
22515(a)	Leaving vehicle unattended without setting the brakes or stopping the motor	1
22102	Illegal U-turn in business district	1
21453(a,c)	Red signal - driver or bicyclist responsibilities	1
21650.1	Bicycle to travel in same direction as vehicles (riding wrong way)	1
21950(b)	Pedestrian suddenly entering into vehicle path close enough to create an immediate hazard	1
n/a	Unknown	1

Hit and Runs:

- One traffic fatality (5%) involved a hit and run incident in 2017, resulting in the death of a pedestrian

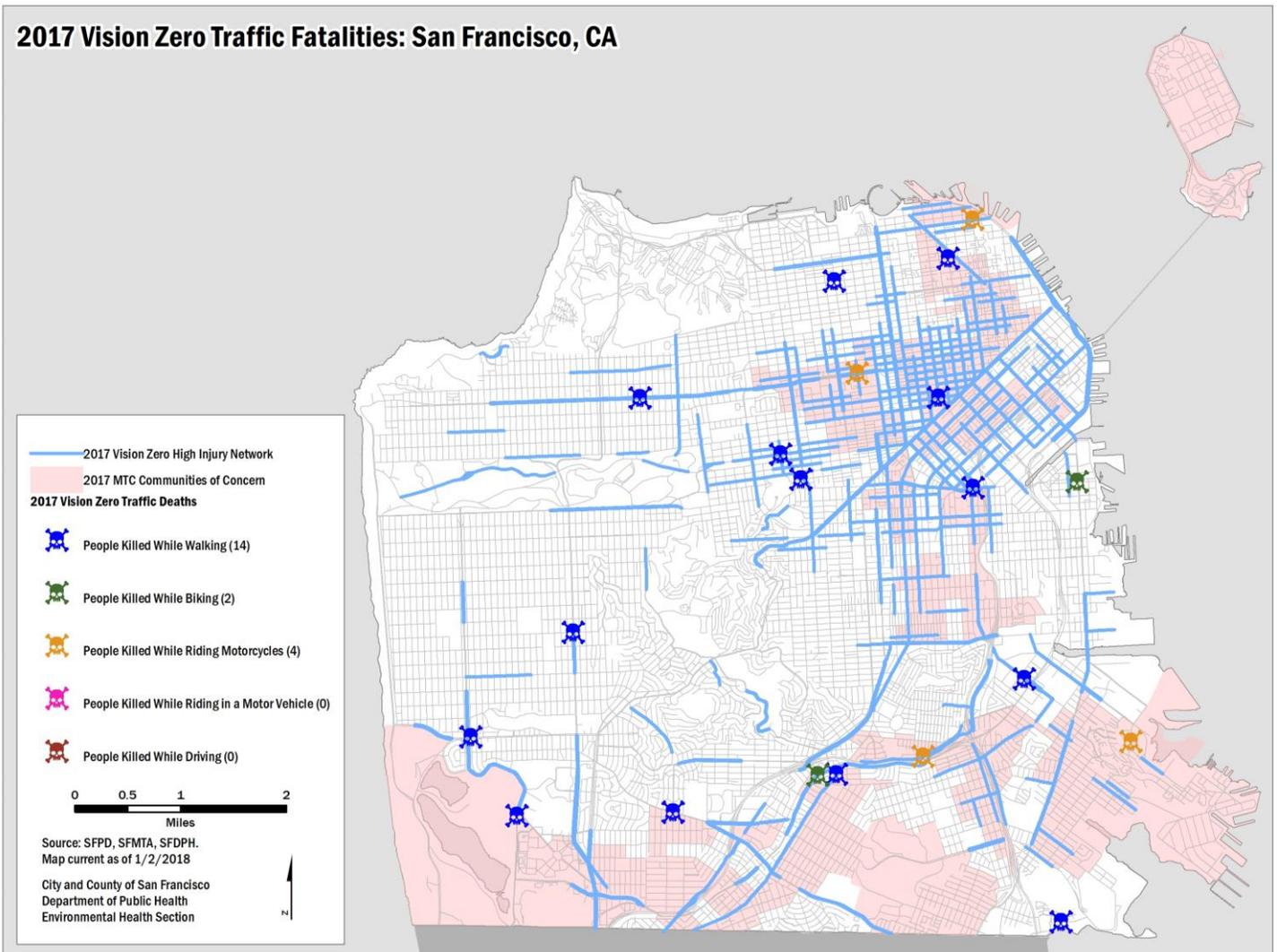


The Vision Zero High Injury Network and Communities of Concern

The Vision Zero High Injury Network (VZHIN) identifies the corridors where the most serious and fatal injuries in San Francisco are concentrated, and is used to identify and prioritize where improvements in engineering, education, enforcement and policy are focused to realize Vision Zero. The VZHIN represents the 13% of San Francisco streets where more than 75% of severe and fatal traffic injuries occur.

- In 2017, half (50%) of traffic fatalities occurred on the Vision Zero High Injury Network.
- 40% (n=8) of fatalities occurred in a Community of Concern in 2017, 50% (n=4) of which were on the VZHIN.

2017 Vision Zero Traffic Fatalities: San Francisco, CA



An update of the VZHIN was completed in 2017⁴ that incorporates both police and hospital data from a pilot comprehensive Transportation-related Injury Surveillance System. The majority (51.5%, or 66/128 miles) of the updated

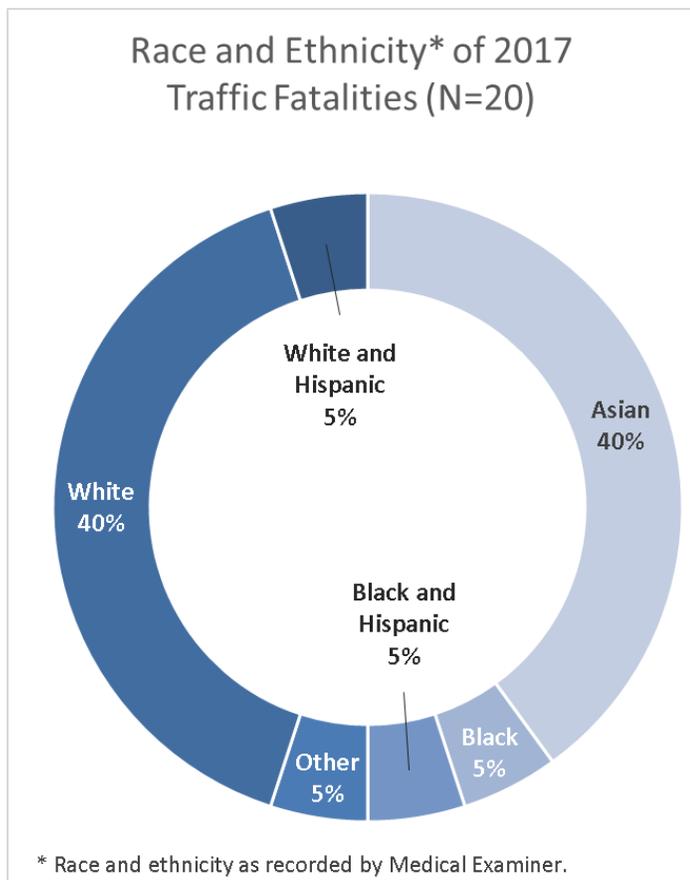
⁴ Source: San Francisco Department of Public Health-Program on Health, Equity and Sustainability. 2017. Vision Zero High Injury Network: 2017 Update – A Methodology for San Francisco, California. San Francisco, CA. Available at: <https://www.sfdph.org/dph/eh/PHES/PHES/TransportationandHealth.asp>.



VZHIN is in the Metropolitan Transportation Commission’s (MTC) Communities of Concern⁵, which contain 31% of the city’s surface streets. Communities of Concern are areas with high concentrations of poverty, communities of color, seniors and other vulnerable populations.

Race and Ethnicity

People killed in traffic collisions in 2017 were predominantly Non-Hispanic Asian and Non-Hispanic White. Compared to the demographic profile of San Francisco at large (approximately 48% White, 5% Black and 34% Asian among people reporting a single race), White individuals are slightly under-represented (40%) among traffic fatalities while Black (10%) and Asian (40%) racial groups are slightly more affected.⁶ Regarding ethnicity, 15% of San Francisco’s population is Hispanic while a slightly lower proportion (10%) of those killed in traffic in 2017 were Hispanic.⁷ Because of small sample size it is possible that these differences are solely due to chance.



⁵ Source: Plan Bay Area: 2040 Plan, 2017. <http://www.planbayarea.org/2040-plan/plan-details/equity-analysis>

⁶ Source: U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates

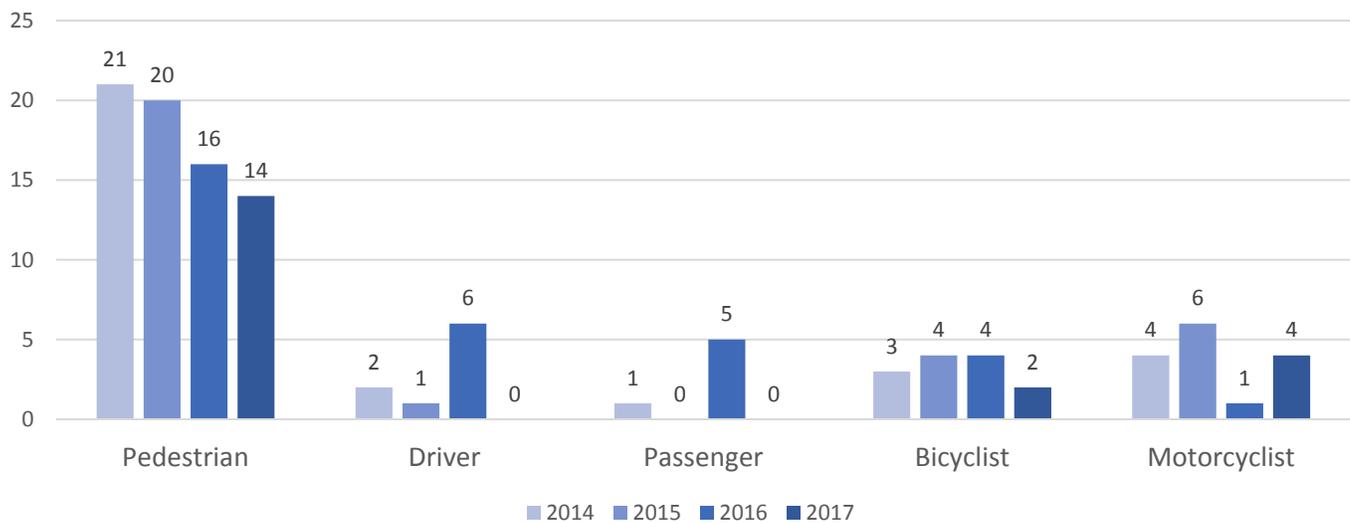
⁷ Source: U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates



Travel Mode

Pedestrians continue to be the most vulnerable road users in San Francisco accounting for over half of all fatalities (70%). There were two fewer pedestrian deaths compared to 2016, continuing a promising downward trend seen annually since 2014. Motorcyclist fatalities saw an increase in 2017 while those killed in motor vehicles (drivers and passengers) decreased precipitously from 11 to zero people in 2017. All pedestrian fatalities resulted from collisions with a motor vehicle⁸.

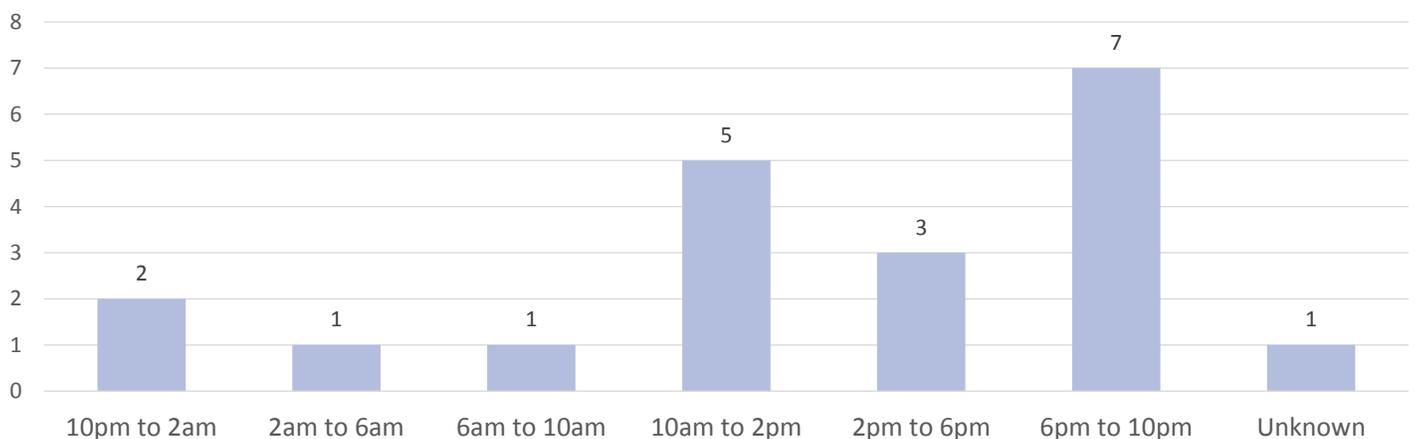
Fatalities by Mode (2014-2017)



Time of Day

Collisions resulting in traffic fatalities in 2017 occurred more frequently in the early afternoon and evening hours with 60% (n=12) happening between the hours of 10:01am and 2pm or from 6:01pm to 10pm. Fatal collision time of day has shown notable variation from year to year.

Fatalities by Collision Time of Day (2017)



⁸ One pedestrian fatality followed a cable car-pedestrian collision.

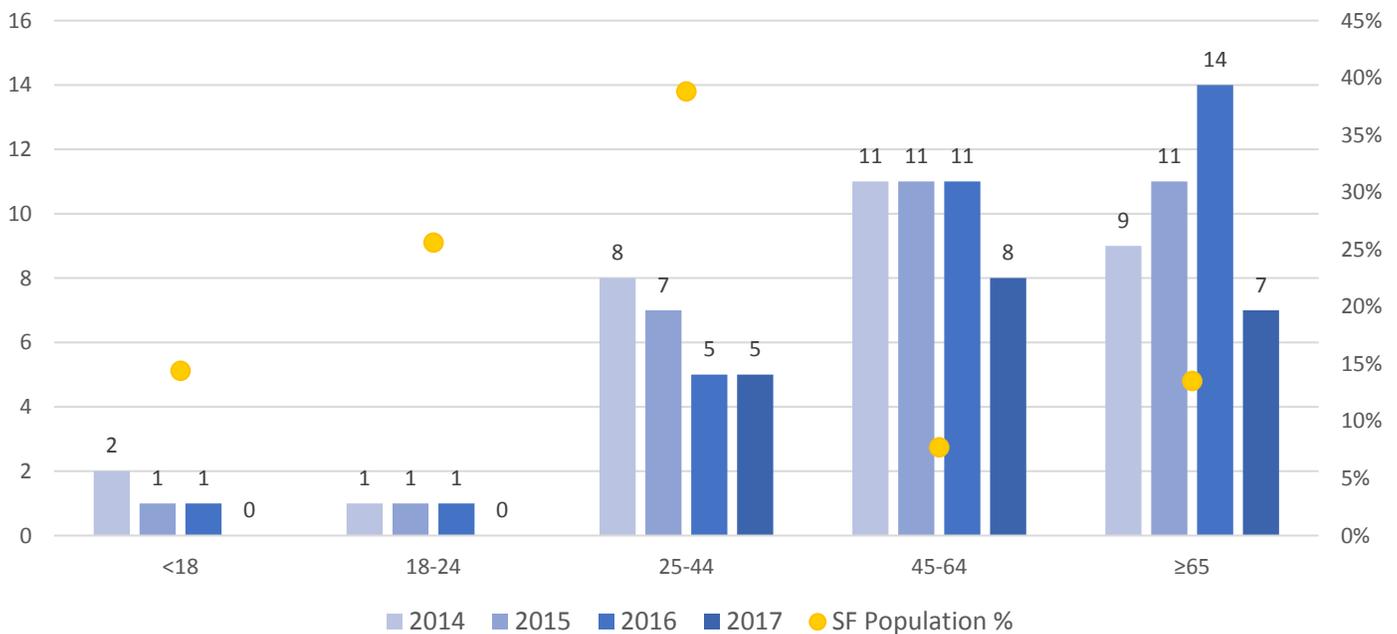


Age

Seniors (aged 65 and up) suffer a disproportionate rate of traffic fatalities. While only 14% of San Francisco’s total population⁹, seniors accounted for 35% (n=7) of all traffic fatalities in 2017. Looking specifically at pedestrian fatalities in 2017, 50% (n=7) were people age 65 and older and 79% (n=11) were people age 50 and older (*data in Appendix A*).

Notably, no youth died as a result of traffic collision in 2017. While historically fewer youth die from traffic injury than people in other age groups, fatalities decreased from one to zero in both the 18-24 year and under 18 year age categories between 2016 and 2017.

Fatalities by Age (2014-2017)



Sex

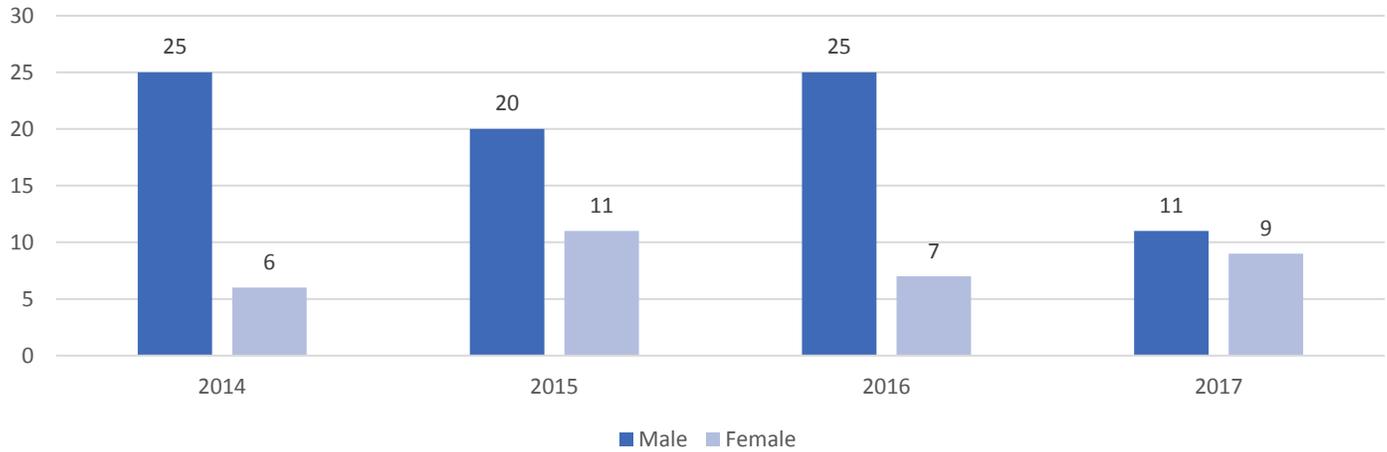
Men are slightly overrepresented in traffic fatalities in 2017. This overrepresentation has featured since the advent of Vision Zero in San Francisco, but is much reduced in 2017 relative to other years. While making up 51% of San Francisco total population¹⁰ men account for 55% (11/20) of all fatalities. However, fatality mode reveals different patterns between males and females: all motorcyclists and bicyclists killed were male, whereas males made up only 36% (5/14) of pedestrian fatalities. Additionally, while fatalities decreased in 2017 overall, splitting data by sex shows evidence of improvement only among male road users.

⁹ Source: U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates

¹⁰ Source: U.S. Census Bureau, 2016 American Community Survey 1-Year Estimates



Fatalities by Sex (2014-2017)



Homelessness

This year Vision Zero SF began tracking the proportion of traffic fatalities affecting people with no fixed address as a proxy for homelessness. In 2017, two people without an address were killed on City streets (10% of fatalities): one bicyclist, and one pedestrian. The homeless population of San Francisco is estimated to be 7,499¹¹, making up only 0.9% of the City population¹². Homeless individuals may be particularly vulnerable to traffic injury.

¹¹ Source: Applied Survey Research, 2017 San Francisco Homeless Count Report. <http://hsh.sfgov.org/wp-content/uploads/2017/06/2017-SF-Point-in-Time-Count-General-FINAL-6.21.17.pdf>

¹² San Francisco population estimate of 850,282. Source: 2012-2016 American Community Survey 5-Year Estimates



Primary Collision Factors

Failure to yield to pedestrians and unsafe speed were the top primary collision factors in 2017. Four fatal collisions involved a secondary collision factor (*see Appendix A*). Of fatalities resulting from collisions with two parties and which have vehicle code information available (N=18), 67% were classified by police as caused primarily by the driver of a vehicle. Looking at pedestrian fatalities alone, this proportion rises to 77%. Driver-related¹³ violations accounted for 67% of motorcyclist fatalities among motorcycle-vehicle collisions. In contrast with other years, driver-related code violations did not contribute to bicyclist fatalities in 2017.

California Vehicle Code	Primary Collision Factor Description	2014	2015	2016	2017
21950(a)	Driver failure to yield right-of-way at crosswalks	6	9	6	7
22350	Unsafe speed for prevailing conditions	6	7	3	4
21955	Crossing between controlled intersections (Jaywalking)	3	1	1	2
22101(d)	Violating special traffic control markers (illegal turning movement)	0	0	0	1
22515(a)	Leaving vehicle unattended without setting the brakes or stopping the motor	0	0	0	1
22102	Illegal U-turn in business district	0	0	0	1
21453(a,c)	Red signal - driver or bicyclist responsibilities	2	4	8	1
21650.1	Bicycle to travel in same direction as vehicles (riding wrong way)	0	0	0	1
21950(b)	Pedestrian suddenly entering into vehicle path close enough to create an immediate hazard	3	0	0	1
n/a	Unknown	3	0	4	1
21650	Failure to keep to right side of road	1	1	2	0
22107	Unsafe turn or lane change prohibited	0	2	0	0
21208(a)	Riding outside bicycle lane prohibited	0	1	0	0
21453(d)	Red signal - pedestrian responsibilities	1	0	2	0
21456(b)	Pedestrian violation of Walk or Wait signals	1	1	2	0
21651(b)	Wrong way driving	0	0	1	0
21658(a)	Lane straddling or failure to use specified lanes	1	0	0	0
21712(b)	Unlawful riding on vehicle or bicycle prohibited	1	0	0	0
21801(a)	Violation of right-of-way - left turn	0	1	0	0
21804(a)	Entering highway from alley or driveway	0	1	0	0
21954(a)	Pedestrians must yield right-of-way outside of crosswalks	2	2	1	0
23152(a)	Under the influence of alcohol or drug	1	1	2	0

¹³ “Driver-related” refers to non-motorcyclist drivers in this context.

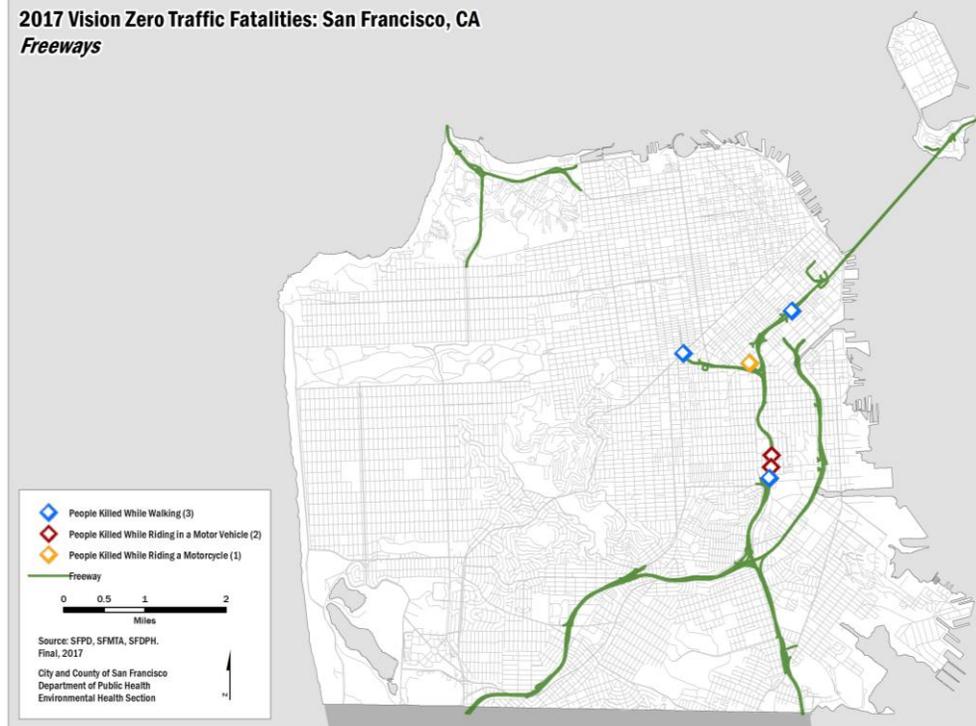
APPENDIX A – TABLE OF 2017 VISION ZERO FATALITIES

#	Collision Date	Deceased	Collision Type	Primary (Secondary) Collision Factor Code	Victim Age	Hit and Run (Y/N)	Victim Sex	Collision Time	Collision Location
1	1/11/2017	Pedestrian	Pedestrian vs. Vehicle	21950(a)	76	N	F	1233	Union Street at Buchanan Street
2	2/18/2017	Motorcyclist	Motorcycle vs. Vehicle	22350 (22450(a))	26	N	M	2123	Middle Point Road at West Point Road
3	3/1/2017	Pedestrian	Pedestrian vs. Vehicle	21950(a)	50	N	F	1844	Mission St at Ney Street
4	3/19/2017	Pedestrian	Pedestrian vs. Vehicle (Cable Car)	UNK	92	N	M	UNK	Mason Street and Filbert St
5	4/28/2017	Bicyclist	Bicycle vs. Vehicle	21453(a)	25	N	M	1128	3rd Street and Mission Bay Blvd South
6	4/29/2017	Pedestrian	Pedestrian vs. Vehicle	21955(a)	77	N	F	2329	Lake Merced Blvd. 300 ft south of Font Blvd
7	6/20/2017	Bicyclist	Bicycle vs. Vehicle	21650.1	51	N	M	1800	Silver Avenue at Alemany Boulevard
8	6/23/2017	Motorcyclist	Motorcycle vs. Vehicle	22102	59	N	M	1237	100 Block of Bay Street
9	7/19/2017	Motorcyclist	Motorcycle vs. Vehicle (Truck)	22101(d)	29	N	M	2023	Laguna Street and Geary Blvd
10	8/1/2017	Pedestrian	Pedestrian vs. Vehicle	22350 (23103)	37	N	F	1902	Harney Way West of Executive Park Boulevard
11	8/18/2017	Pedestrian	Pedestrian vs. Vehicle	22350	52	N	F	2110	824 Waller Street
12	8/18/2017	Motorcyclist	Motorcycle Collision	22515(a)	49	N	M	1801	500 Block of Alemany Boulevard
13	9/15/2017	Pedestrian	Pedestrian vs. Vehicle	21950(b)	41	N	F	815	Brannan Street and Dore Street
14	9/22/2017	Pedestrian	Pedestrian vs. Vehicle	22350 (21954(a))	56	Y	M	215	2075 Jerrold Avenue
15	9/26/2017	Pedestrian	Pedestrian vs. Vehicle	21950(a) (21456(b))	66	N	M	1242	Leavenworth Street and Golden Gate Avenue
16	10/4/2017	Pedestrian	Pedestrian vs. Vehicle	21950(a)	90	N	M	1722	Baker Street at Fell Street
17	10/31/2017	Pedestrian	Pedestrian vs. Vehicle	21950(a)	47	N	M	2025	1800 Block of Sloat Boulevard
18	11/9/2017	Pedestrian	Pedestrian vs. Vehicle	21955	78	N	F	1219	7th Avenue and Geary Boulevard
19	12/7/2017	Pedestrian	Pedestrian vs. Vehicle	21950(a)	63	N	F	829	Miramar Avenue and Ocean Avenue
20	12/9/2017	Pedestrian	Pedestrian vs. Vehicle	21950(a)	69	N	F	1635	19th Avenue and Quintara Street

APPENDIX B – FATALITIES ON FREEWAYS AND IN THE PRESIDIO

Six people (3 people walking, 2 people riding in a motor vehicle, and 1 person riding a motorcycle) were killed in transportation-related collisions on freeways in San Francisco in 2017. There were no traffic deaths in the Presidio in 2017.

Freeways are defined as grade separated highway with high-speed vehicular traffic and controlled ingress/egress. Traffic fatalities on freeways and in the Presidio are tracked, but not included in the Vision Zero SF Fatality counts, as these areas are serviced by various state and federal agencies. Caltrans is the state agency responsible for freeway operation, maintenance and improvements, and the California Highway Patrol (CHP) is the state agency responsible for traffic law enforcement. Within the Presidio, the National Park Service’s US Park Police officers perform law enforcement and public safety functions. Additionally, the Presidio Trust is responsible for operation, maintenance and improvement of all roadways within the Presidio. The City engages with these agencies regarding transportation safety issues and freeway right-of-ways in San Francisco.



#	Collision Date	Deceased	Collision Type	Victim Age	Victim Sex	Collision Time	Collision Location
1	5/1/2017	Pedestrian	Pedestrian vs. Vehicle	56	M	UNK	1-80 Southbound at Octavia Boulevard
2	6/12/2017	Motorcyclist	Motorcycle Collision	51	F	1204	HWY 101, Near 9th Street Exit
3	9/19/2017	Pedestrian	Pedestrian vs. Vehicle	52	M	315	Eastbound Interstate 80, West of 4th Street
4	10/12/2017	Pedestrian	Pedestrian vs. Vehicle	30	M	2239	US Highway 101 NB, Near the Cesar Chavez Exit
5	11/17/2017	Driver	Motor Vehicle Collision	38	M	1559	Southbound Highway 101; South of the 23rd Street Overpass
6	11/22/2017	Driver	Motor Vehicle Collision	29	M	2316	Bayshore Boulevard at Highway 101 South

APPENDIX C – EXCLUSIONS: APPLYING THE VISION ZERO TRAFFIC FATALITY PROTOCOL

Data provided from San Francisco’s Office of the Medical Examiner may include fatalities that: occurred in a motor vehicle but are not directly attributable to a traffic collision; occurred outside San Francisco; or occurred more than 30 days after the collision. The Vision Zero Traffic Fatality Protocol provides exclusion criteria for these cases, consistent with national and international best practices. The purpose of the protocol is to ensure consistent reporting of traffic fatalities through uniform application of agreed-upon criteria for defining a traffic death. A shared and consistent definition ensures that we can objectively evaluate trends and the impact of our efforts over time.

Cases are excluded if the death: occurs outside of the City and County of San Francisco; occurs on private property; occurs in the underground MUNI or BART transportation infrastructure; is reported as a suicide based on investigation; is reported as a homicide in which the ‘party at fault’ intentionally inflicted serious bodily harm that caused the victim’s death; or is a fatality caused directly and exclusively by a medical condition or where the fatality is not attributable to road user movement on a public roadway. (Note: In the event that a person driving suffers a medical emergency and consequently hits and kills another road user, the latter is included although the driver suffering a medical emergency is excluded.) Below is a chart of fatalities excluded from Vision Zero counts by year, with reasons for exclusion.

Vision Zero Traffic Fatality Protocol Exclusions (2014-2017)

