Fatal Occupational Injuries in California

2013-2016

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California Department of Industrial Relations

Office of the Director,

Census of Fatal Occupational Injuries (CFOI) Unit

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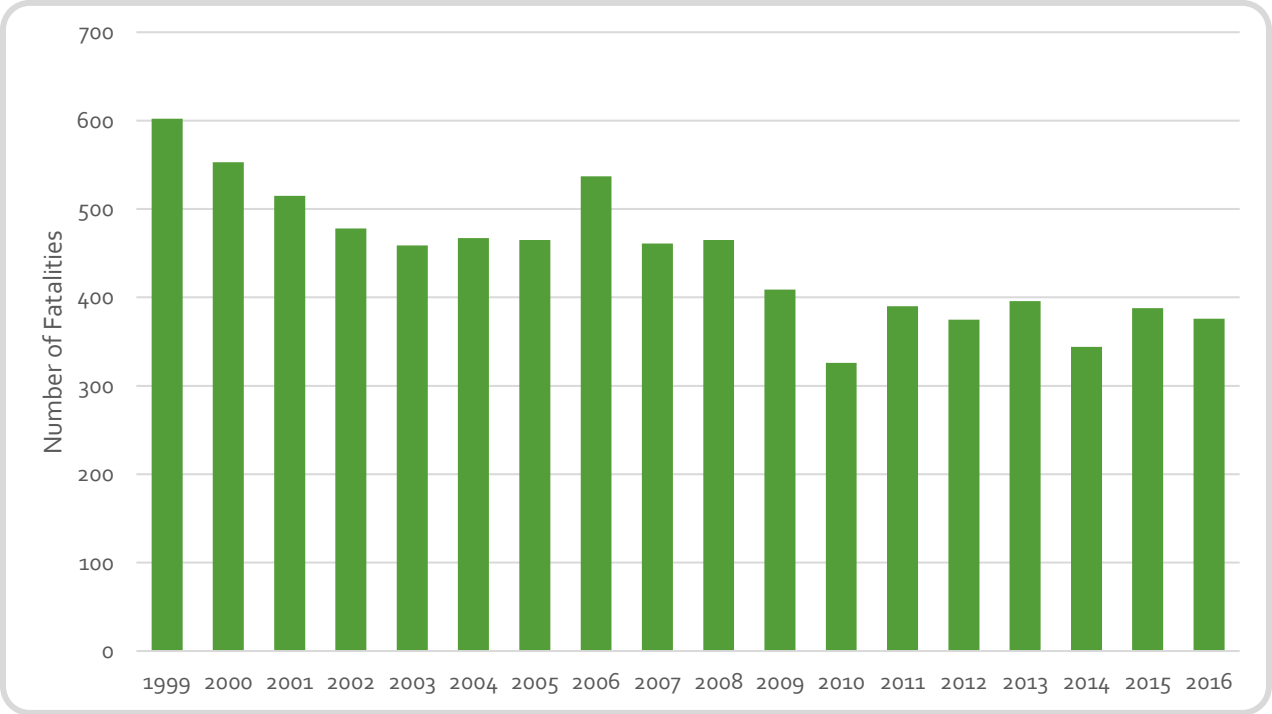
CONTENTS

Introduction

The California Department of Industrial Relations (DIR) gathers statistics on work-related deaths through the Census of Fatal Occupational Injuries (CFOI) Program. The CFOI Program was implemented by the U.S. Bureau of Labor Statistics to compile data that will be used by safety and health policy analysts and researchers to help prevent fatal work-related injuries. DIR's CFOI uses numerous sources to identify and verify work-related injury fatalities. These sources include death certificates, news articles, Cal/OSHA incident reports, coroner and police reports, social media, and obituaries. As its name indicates, the Census looks only at fatalities resulting from work-related injuries, and does not include deaths from chronic disease resulting from underlying illnesses that manifest on the job, such as heart disease, heart attacks, and cancer. This report provides an overview of occupational fatalities that occurred in California between 2013 and 2016.

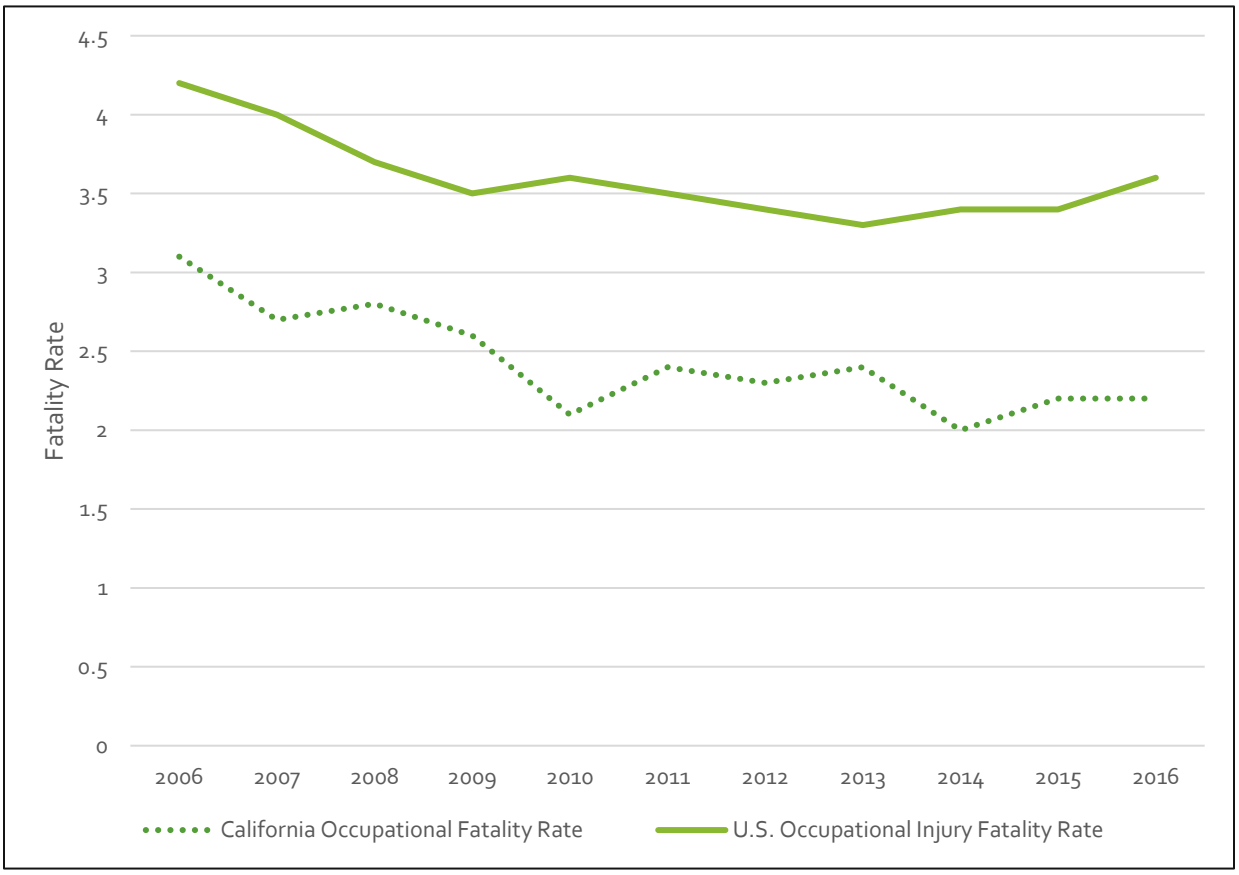
Fatal occupational injuries have been on a downward trend since 1999 when over 600 workers died from on-the-job injuries. The number of such fatalities has been below 400 every year since 2010. In 2016, there were 376 fatal occupational injuries in California, down slightly from the 388 in 2015. (Fig. 1)

Figure 1. California Fatal Occupational Injuries (1999-2016)



The rate of fatal occupational injuries per 100,000 California workers has also been falling over time. Since 1999, the overall rate in California has fallen by about 40%. While not completely comparable because of differences in industrial mix, the California fatality rate has been consistently lower than national rates throughout the recent period. (Fig. 2)

Figure 2. California and U.S. Occupational Fatality Rate (2006-2016, per 100,000 Workers)



Over time, more occupational fatalities have occurred in the summer (Q3, that is, July, August, and September) than in other seasons. (Figs. 3a and 3b)

Figure 3a. California Fatal Occupational Injuries, by Calendar Quarter (2013-2016)

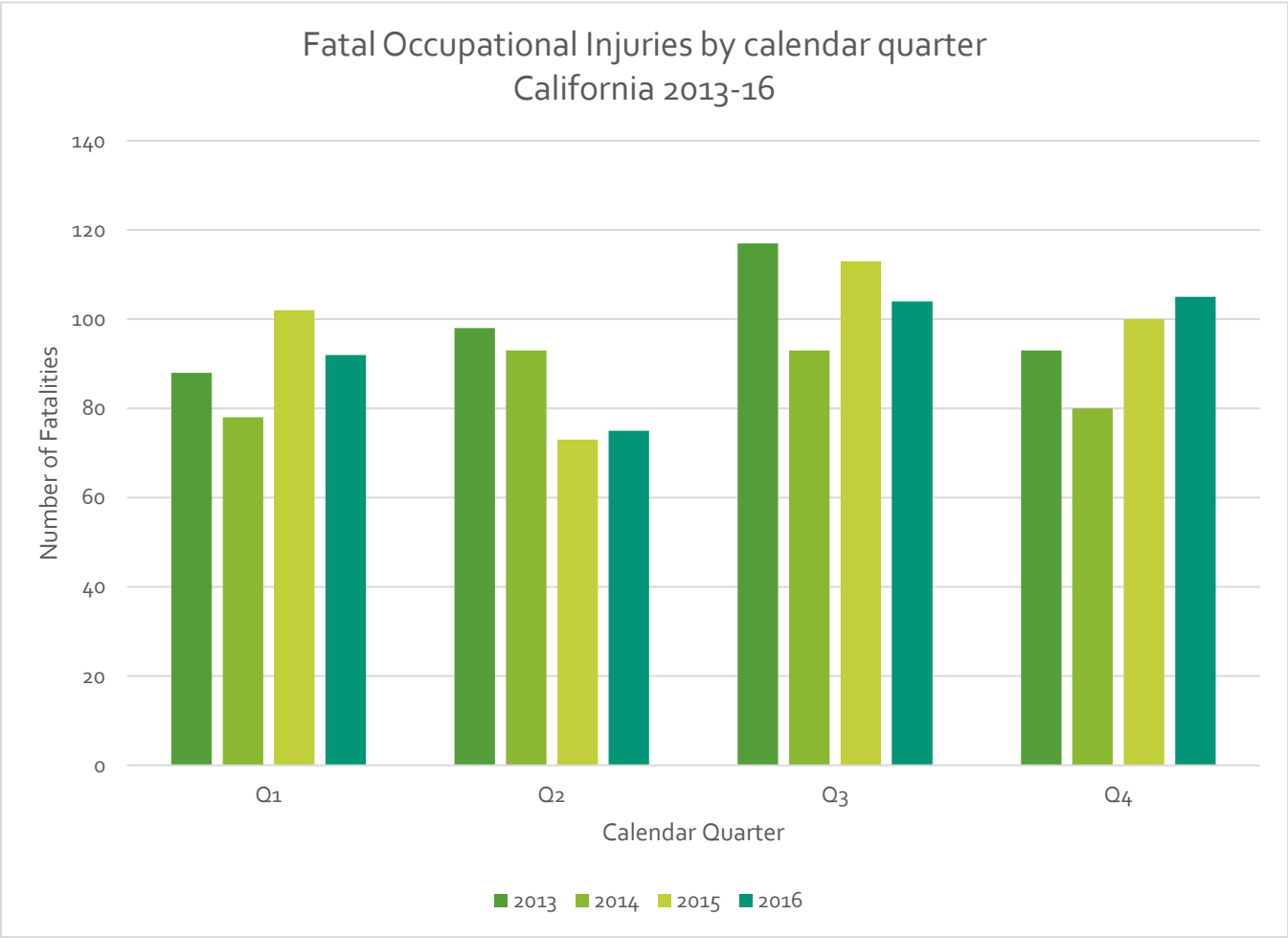


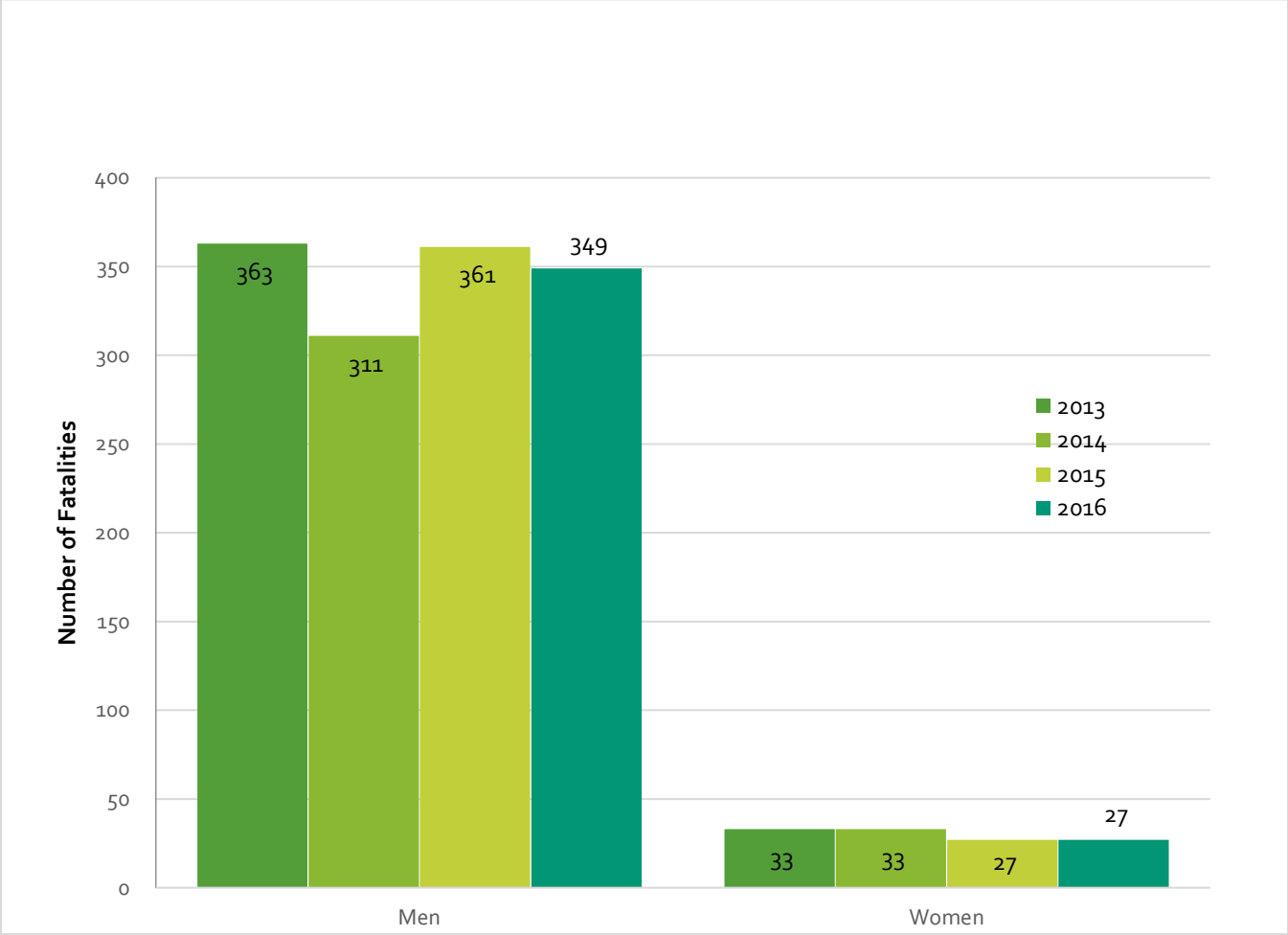
Figure 3b. California Fatal Occupational Injuries, by Calendar Quarter (2013-2016)

	2013	2014	2015	2016	Total	Quarterly average
Q1	88	78	102	92	360	90
Q2	98	93	73	75	339	85
Q3	117	93	113	104	427	107
Q4	93	80	100	105	378	95

Gender

Each year, men are fatally injured by occupational injuries at a much higher rate than women. Among the fatal occupational injuries in 2013-16, 1,384 or 92% of occupational injury victims in California were men and 120, or 8%, were women. (Fig. 4)

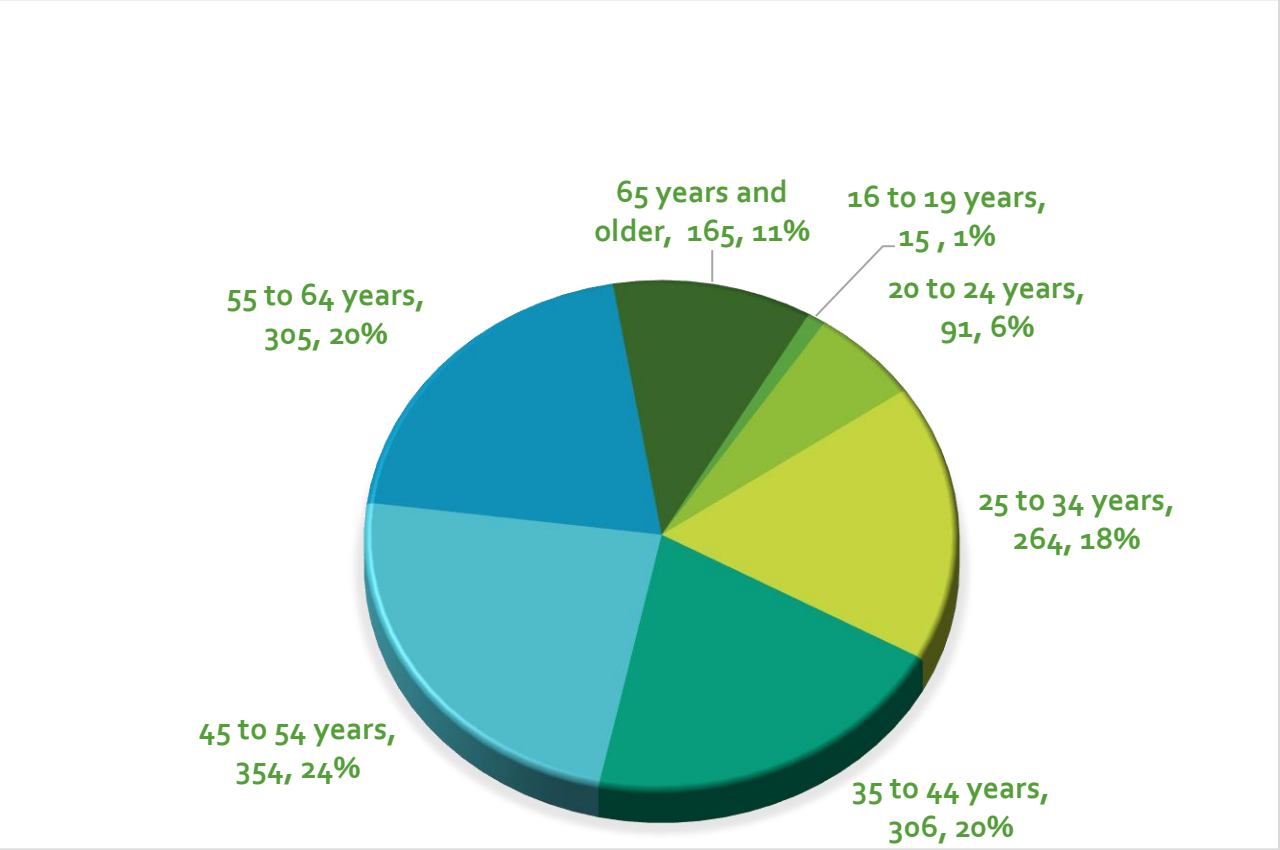
Figure 4. California Fatal Occupational Injuries, by Gender (2013-2016)



Age

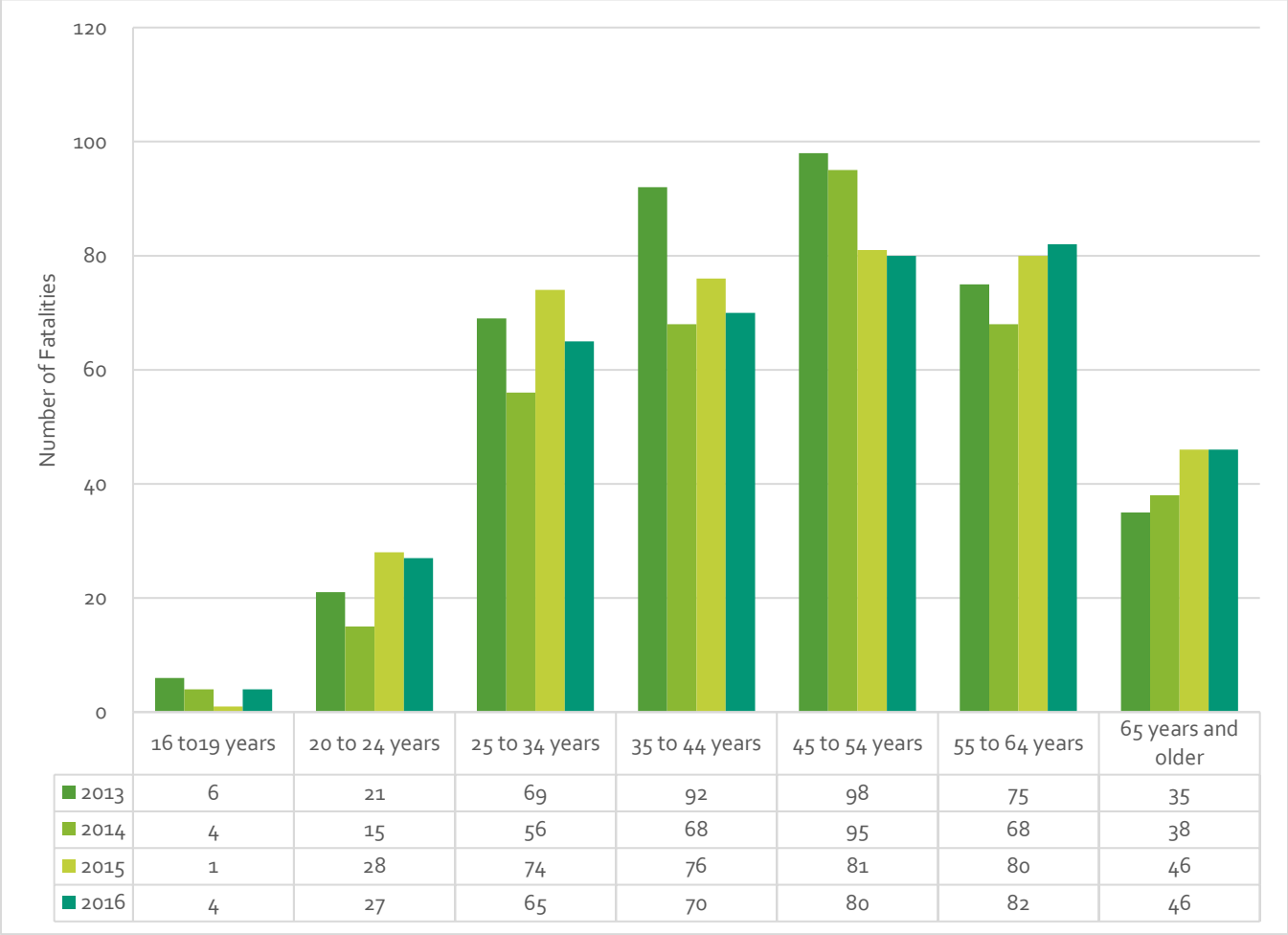
The age group with the highest number of fatalities between 2013 and 2016 was 45–54 years of age, with 354 fatalities, or 1 in 4 deaths. Workers 35–44 years of age made up the second largest group of fatalities, with 306 deaths, followed very closely by workers 55–64 years of age , who had 305 fatalities. (Fig. 5)

Figure 5. California Fatal Occupational Injuries, by Age (2013-2016, N=1504)



In recent years, the death toll among older workers, ages 55 and older, has increased, while workers in the range of 35–54 years of age have seen the death toll go down. (Fig. 6)

Figure 6. California Fatal Occupational Injuries, by Age (2013-2016)



	16 to19 years	20 to 24 years	25 to 34 years	35 to 44 years	45 to 54 years	55 to 64 years	65 years and older
2013	6	21	69	92	98	75	35
2014	4	15	56	68	95	68	38
2015	1	28	74	76	81	80	46
2016	4	27	65	70	80	82	46

Race and Ethnicity

Approximately 43% of occupational fatalities between 2013 and 2016 were among Hispanic or Latino workers. Fatal injuries to non-Hispanic white workers also comprised 43% of the occupational fatalities recorded over the four-year period. Asian, Pacific Islander, and Hawaiian workers comprised 8% of the four-year total, while Black/African American workers made up 5% of the total. (Figs. 7a and 7b)

Figure 7a. California Fatal Occupational Injuries, by Race/Ethnicity (2013-2016, N=1,504)

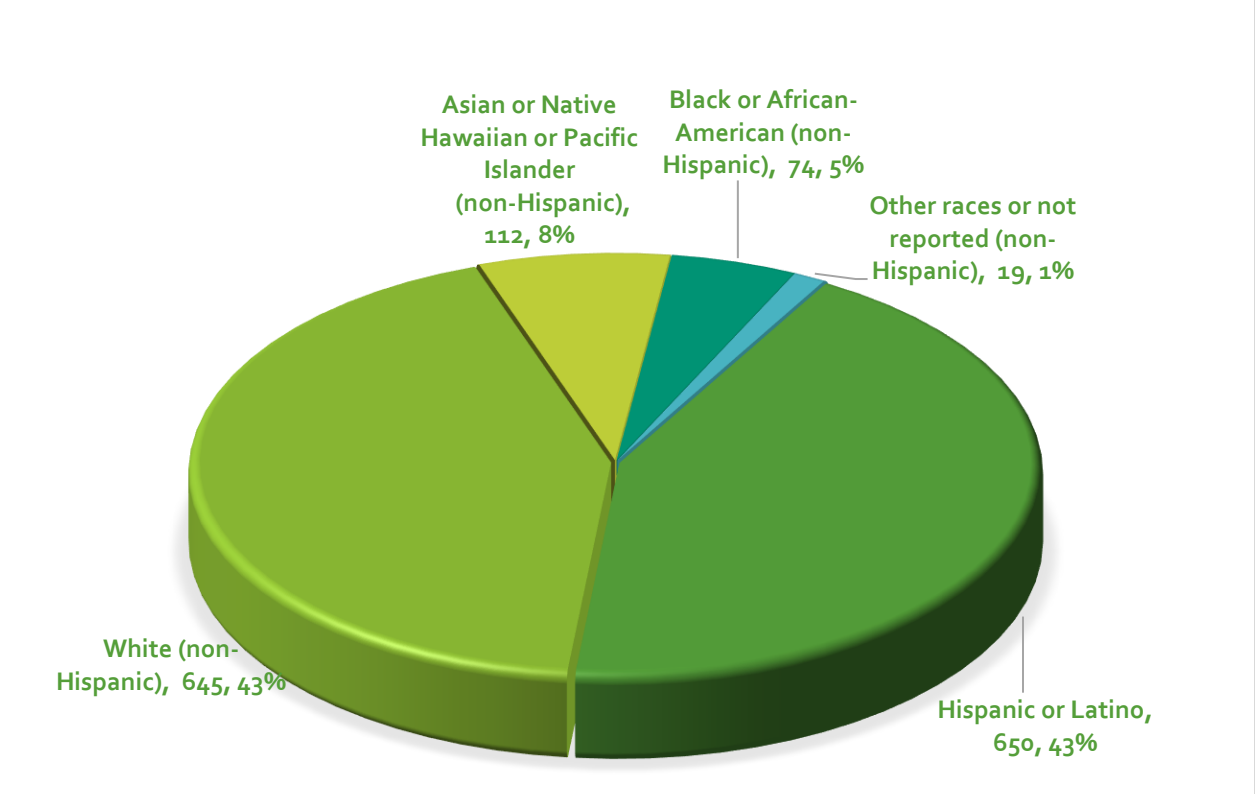
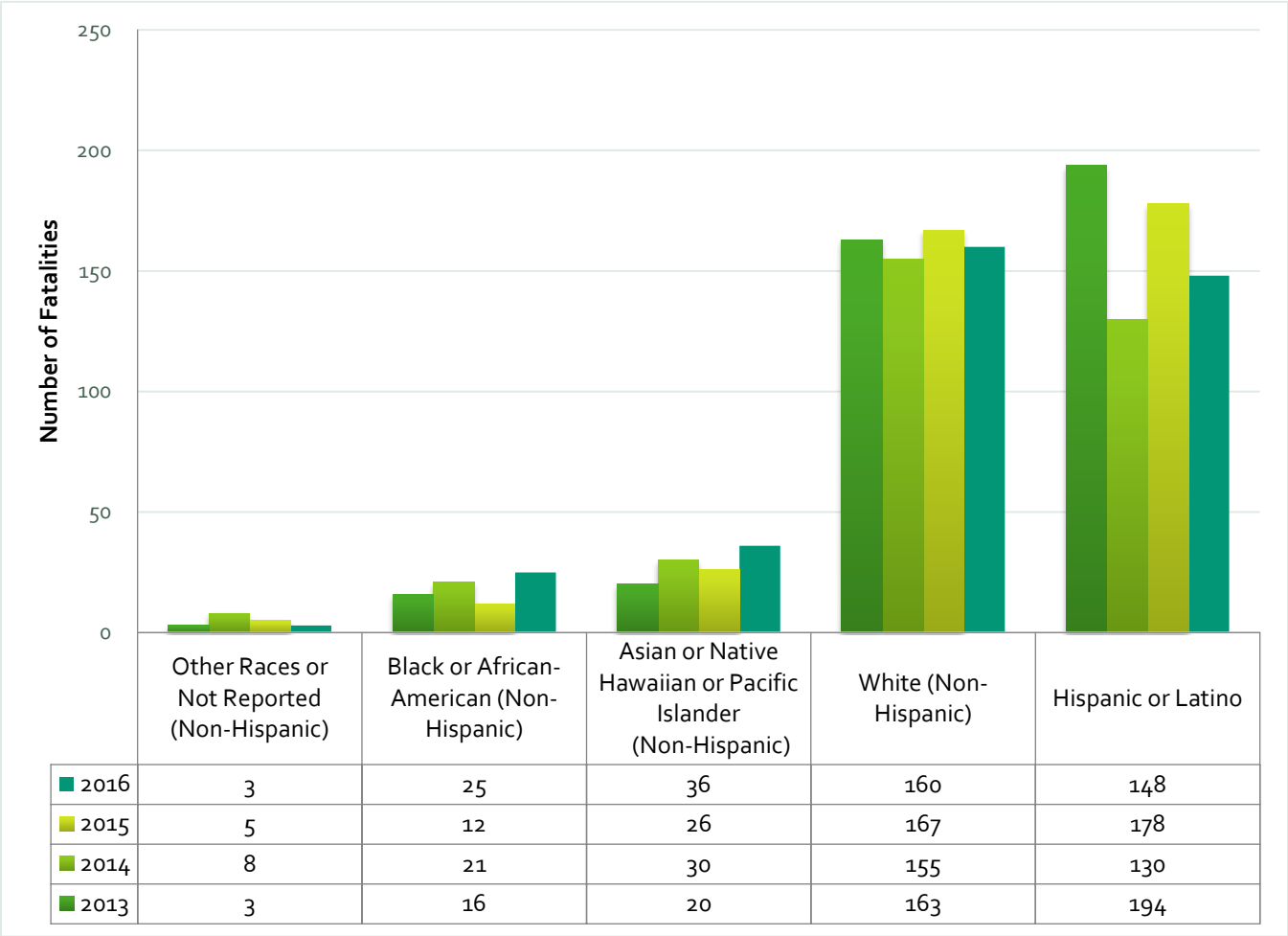


Figure 7b. California Fatal Occupational Injuries, by Race/Ethnicity (2013–2016, N=1,504)

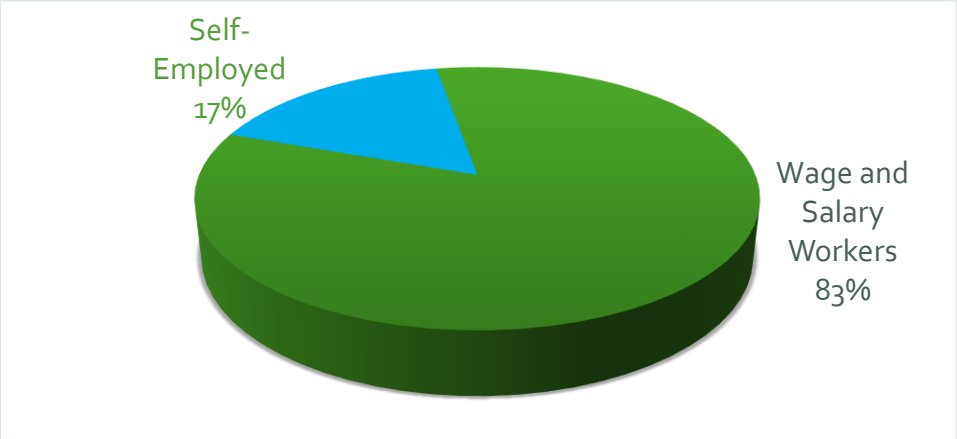


	Other Races or Not Reported (Non-Hispanic)	Black or African-American (Non-Hispanic)	Asian or Native Hawaiian or Pacific Islander (Non-Hispanic)	White (Non-Hispanic)	Hispanic or Latino
2016	3	25	36	160	148
2015	5	12	26	167	178
2014	8	21	30	155	130
2013	3	16	20	163	194

Employment Status

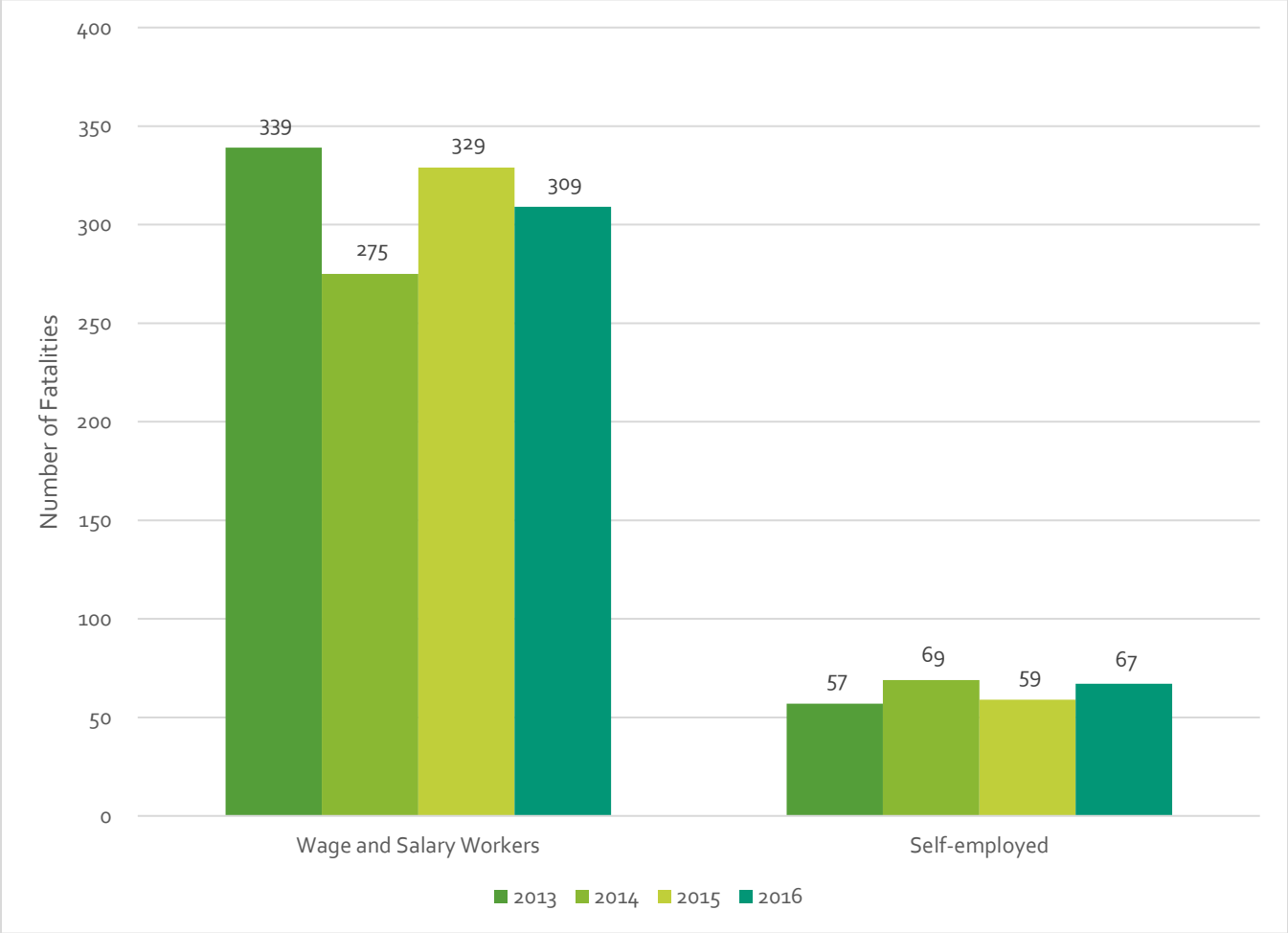
CFOI covers all work-related deaths in California and includes the self-employed, independent contractors, freelancers, and others who do not work for a specific employer. For the period examined (2013–2016), the majority of fatalities (83%) occurred to persons employed as wage and salary workers, compared with self-employed workers, who made up only 17% of fatalities. (Fig. 8)

Figure 8. California Fatal Occupational Injuries, by Employment Status (2013-2016)



Counts of those fatally injured on the job by employment status for the four years show some fluctuation from one year to the next; however, the number of wage and salary workers killed on the job consistently exceeds such reports for self-employed workers by a large amount. (Fig. 9)

Figure 9. California Fatal Occupational Injuries, by Employment Status (2013-2016)



Causes of Fatal Events

Transportation incidents led to 37% of all occupational fatalities over the 2013–2016 period. Fatal injuries due to *Assaults and Violent Acts* made up the next largest portion with 21%, and *Falls, Trips, and Slips* accounted for 18% of fatalities. *Contact with Objects or Equipment* caused 13% of the total. *Exposure to Harmful Substances* caused 8% of the recorded deaths, and *Fires and Explosions* accounted for 2% of cases. (Figs. 10a and 10b)

Figure 10a. California Fatal Occupational Injuries, by Event (2013–2016)

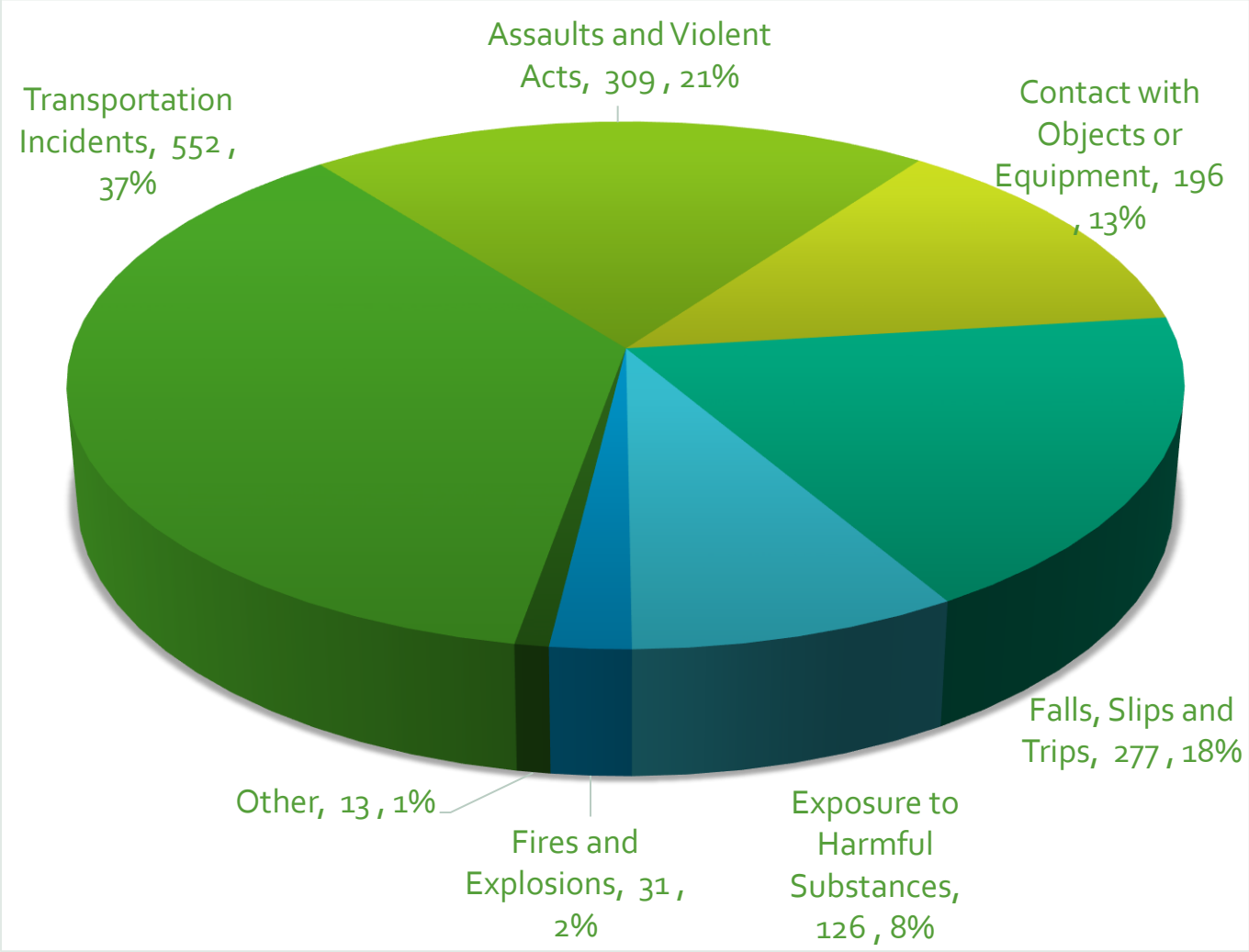
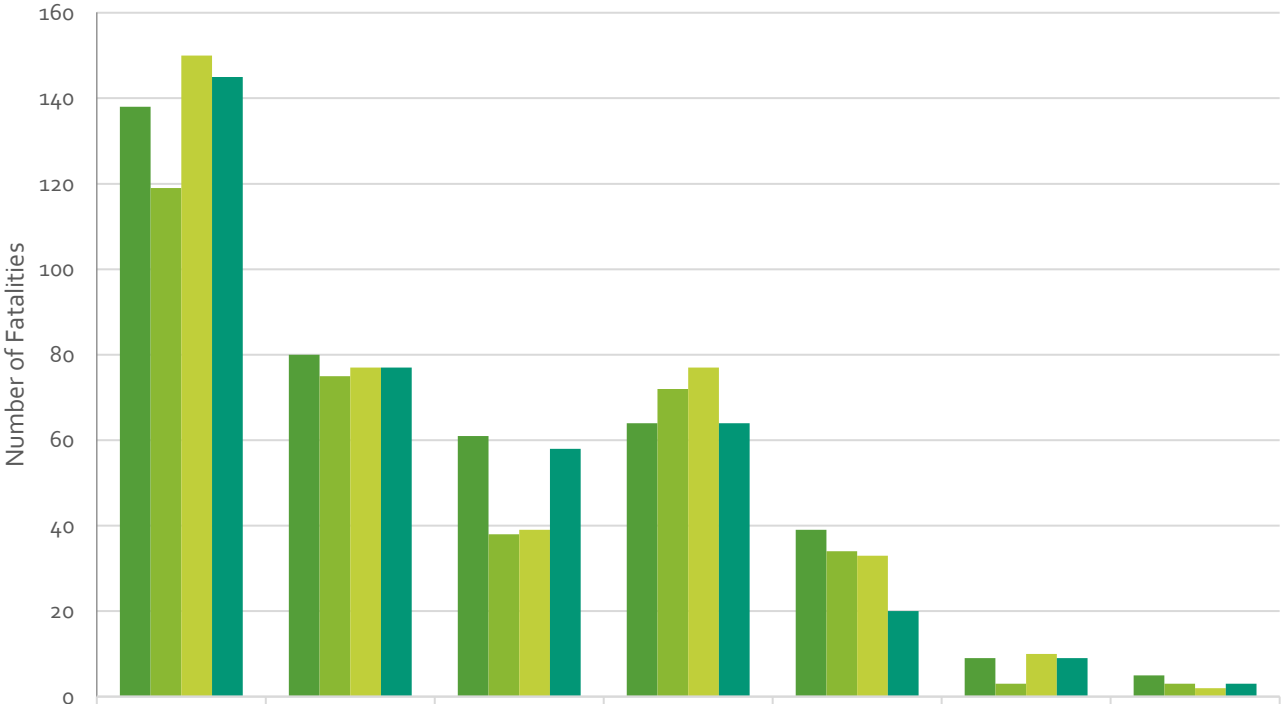


Figure 10b. California Fatal Occupational Injuries, by Event (2013–2016)



	Transportation Incidents	Assaults and Violent Acts	Contact with Objects or Equipment	Falls, Slips and Trips	Exposure to Harmful Substances	Fires and Explosions	Other
2013	138	80	61	64	39	9	5
2014	119	75	38	72	34	3	3
2015	150	77	39	77	33	10	2
2016	145	77	58	64	20	9	3

Industry

The *Trade, Transportation, and Utilities* (TTU) industry had the highest number of fatalities during each of the past four years, averaging about 100 occupational deaths annually, or more than one-fourth of cases. In 2016, TTU reported 68 fatalities from *Transportation Incidents* and 27 cases of violence-related fatality. The *Construction* industry had the next highest number of fatalities with a total of 240 fatalities (16%) for the four-year period. In 2016, 21 fatalities in *Construction* were from *Falls, Trips, and Slips*, and 15 from *Transportation Incidents*. The *Professional and Business Services,* including accountants, lawyers, engineers, computer programmers, consultants, and researchers, accounted for 196 deaths in the four years. Of these victims in 2016, 13 were involved in *Transportation Incidents* and 9 fatalities resulted from *Falls, Trips, and Slips*. The *Manufacturing* industry had 92 fatalities in the 2013–2016 period. Of the 19 fatalities in 2016, 7 were from *Contact with Objects or Equipment* and 6 from *Falls, Trips, and Slips*. The *Leisure and Hospitality* industry accounted for 82 deaths during the four-year period. Among the fatalities, 9 were violence-related and 7 were from *Transportation Incidents.* (Figs. 11a and 11b)

Figure 11a. California Fatal Occupational Injuries, by Industry Group (2013-2016)

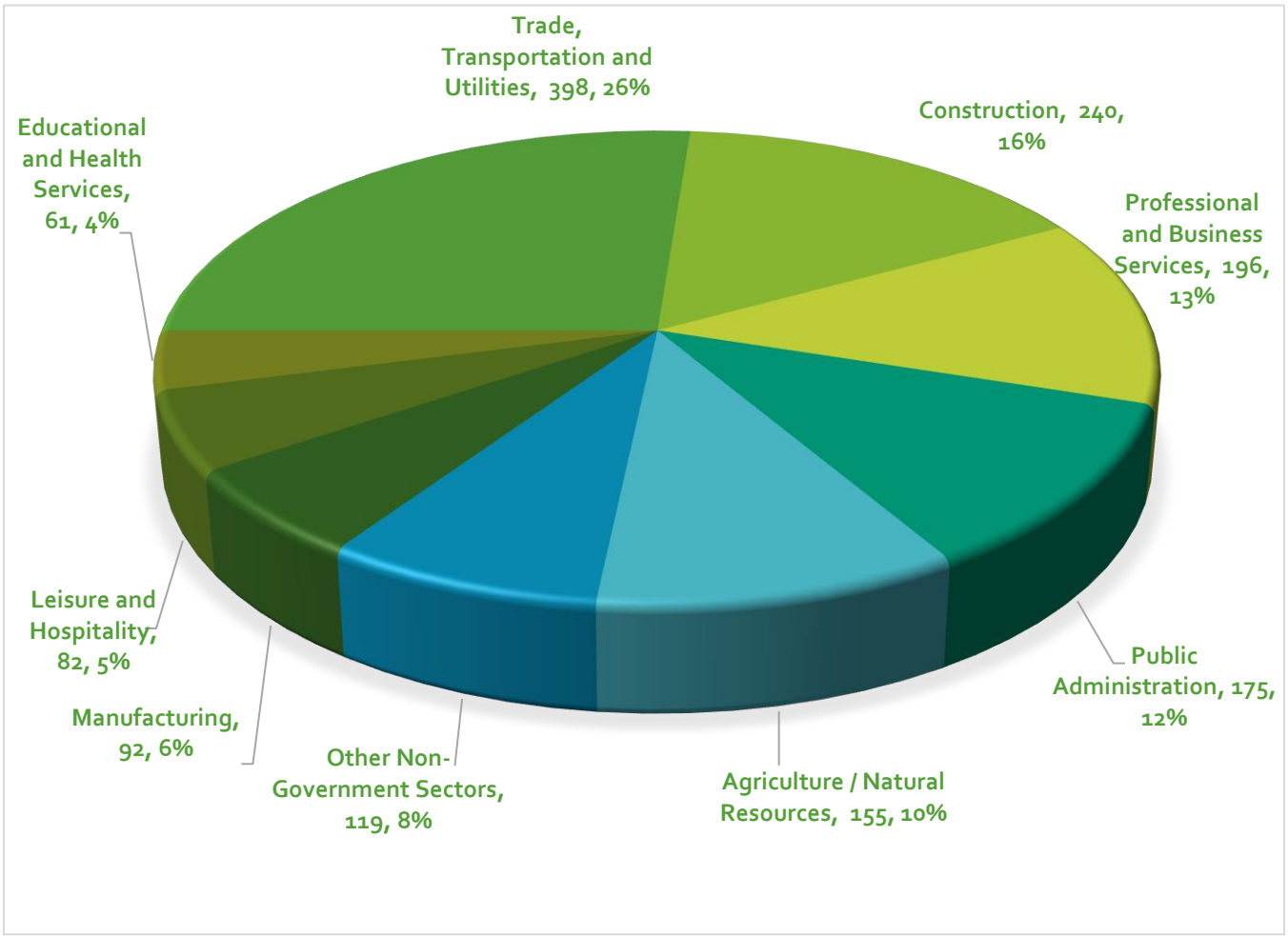
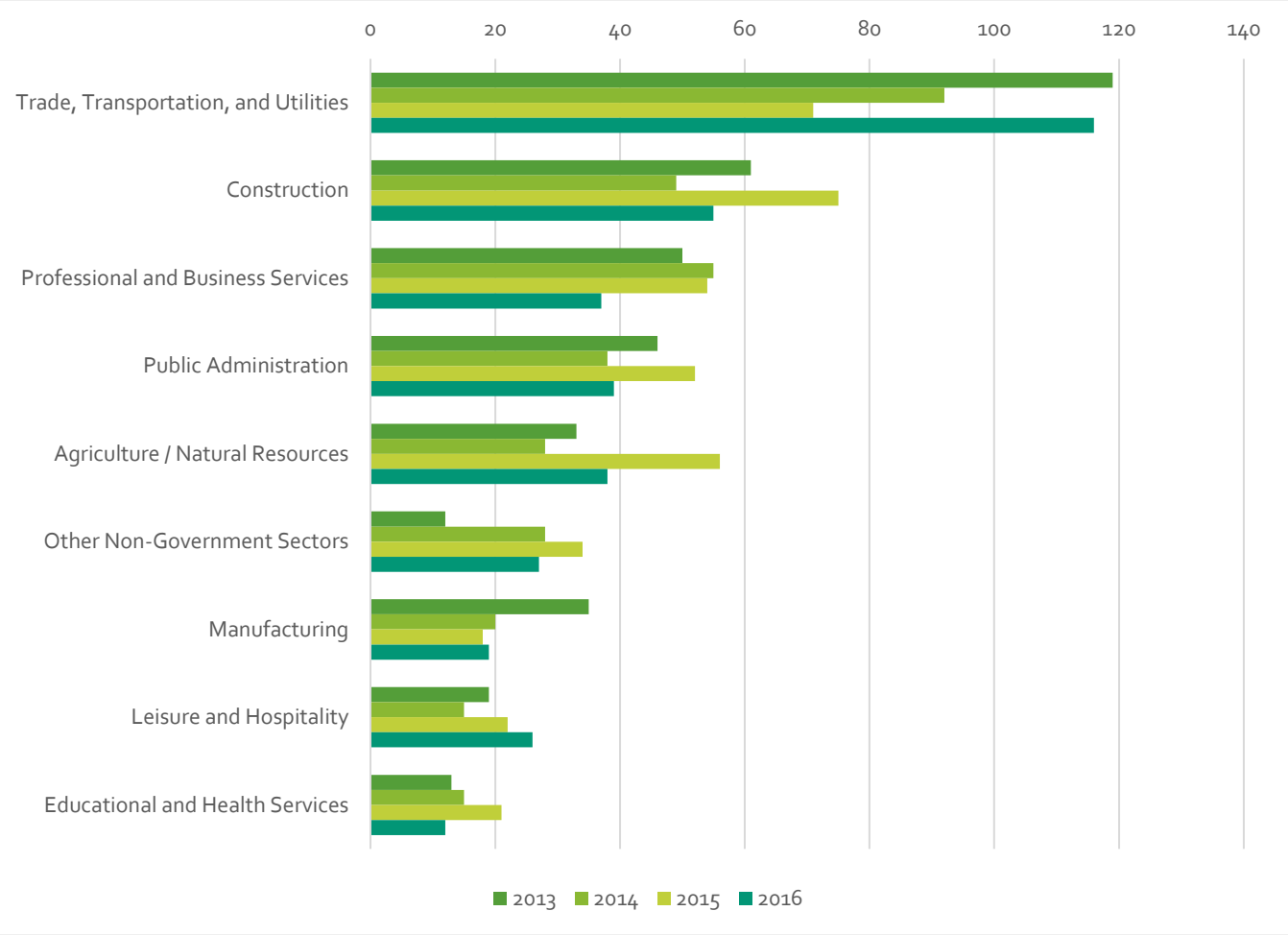
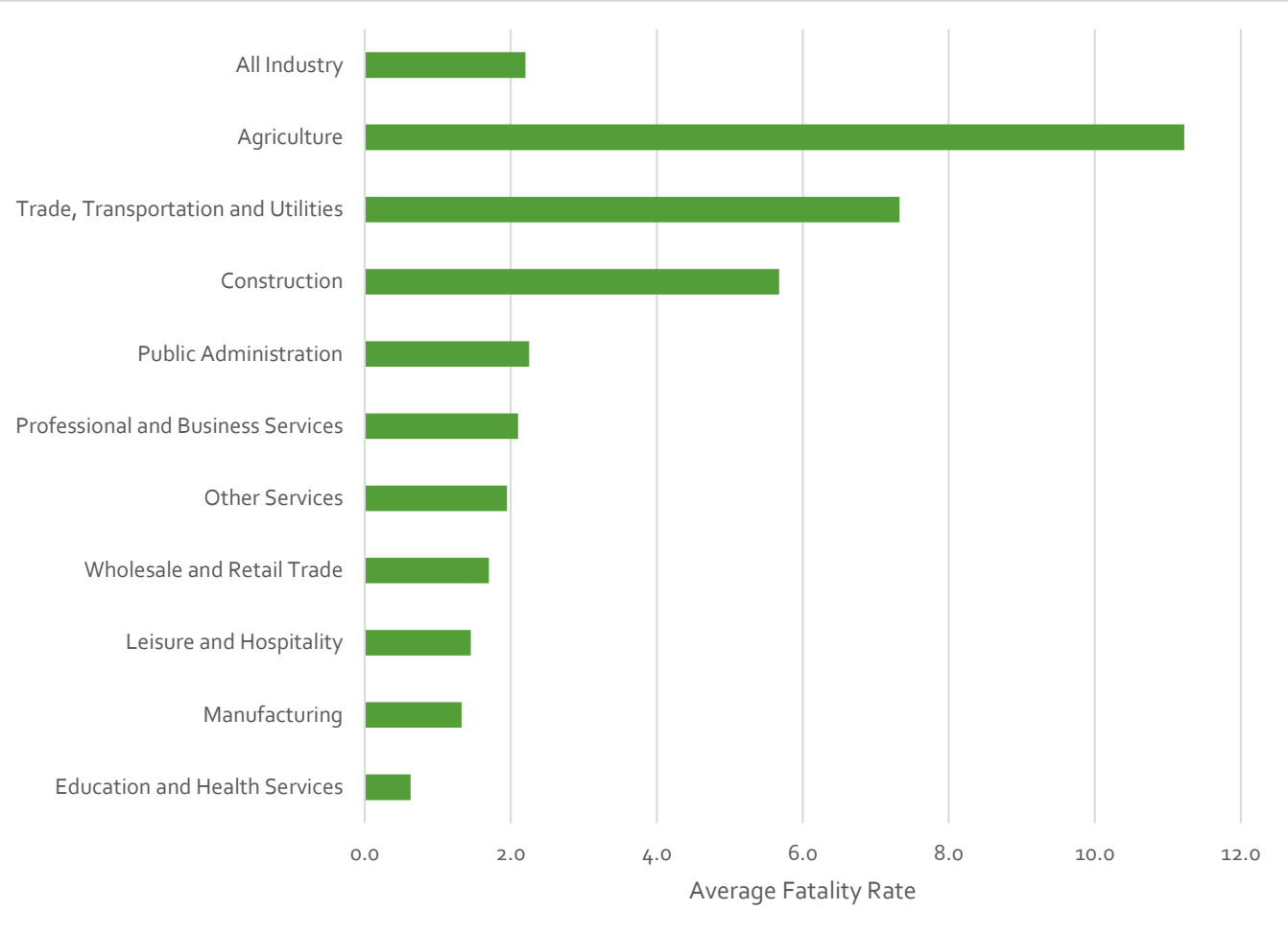


Figure 11b. California Fatal Occupational Injuries, by Industry Group (2013–2016)



The average fatality rate by industry for 2013–2016 is shown below is 2.2 fatalities per 100,000 full-time workers. Agriculture, with a rate of over 11 fatalities per 100,000 workers (or five times the statewide average) had the highest fatality rate over the four years. Transportation and Utilities (7.3 per 100,000) and Construction (5.7 per 100,000) also generated high fatality rates. (Fig. 12)

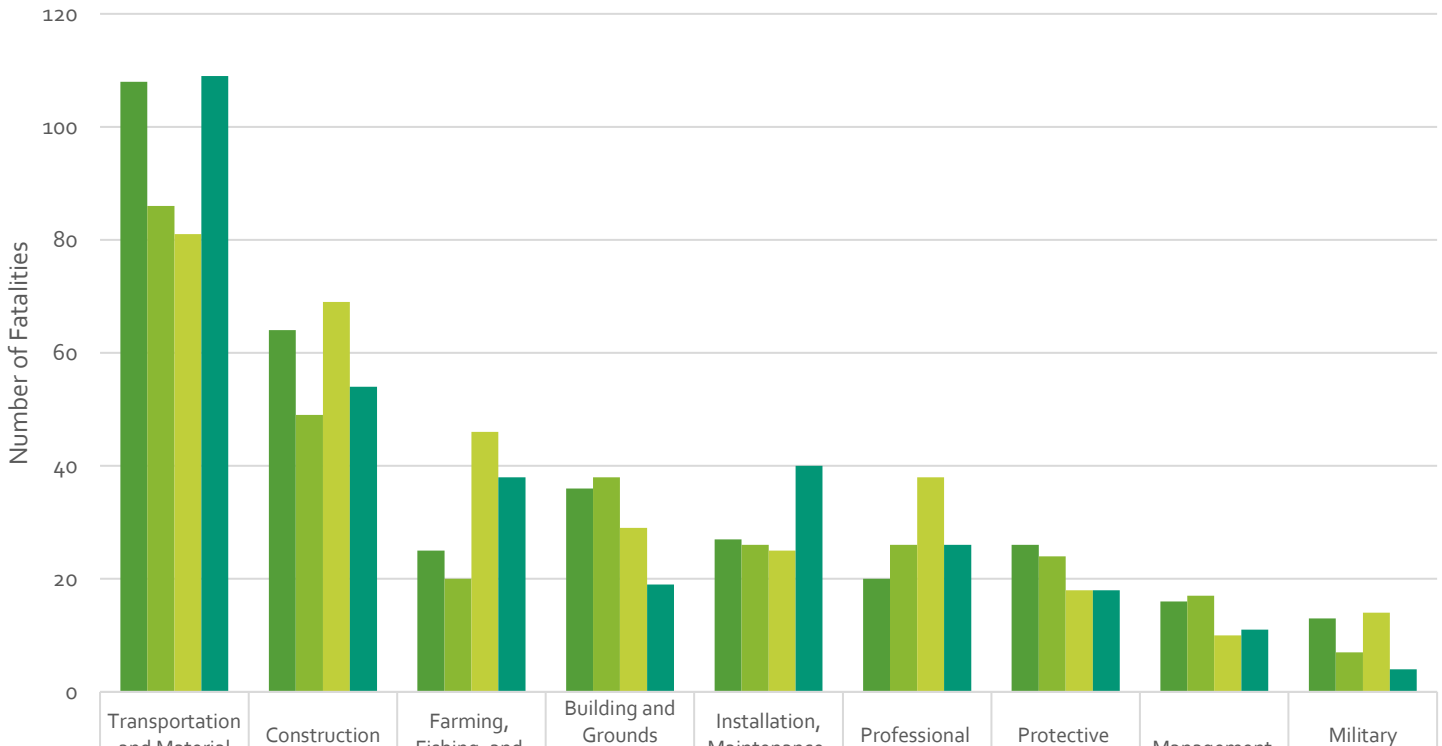
Figure 12. California Average Fatality Rate, by Industry (2013-2016, per 100,000 Workers)



Occupation

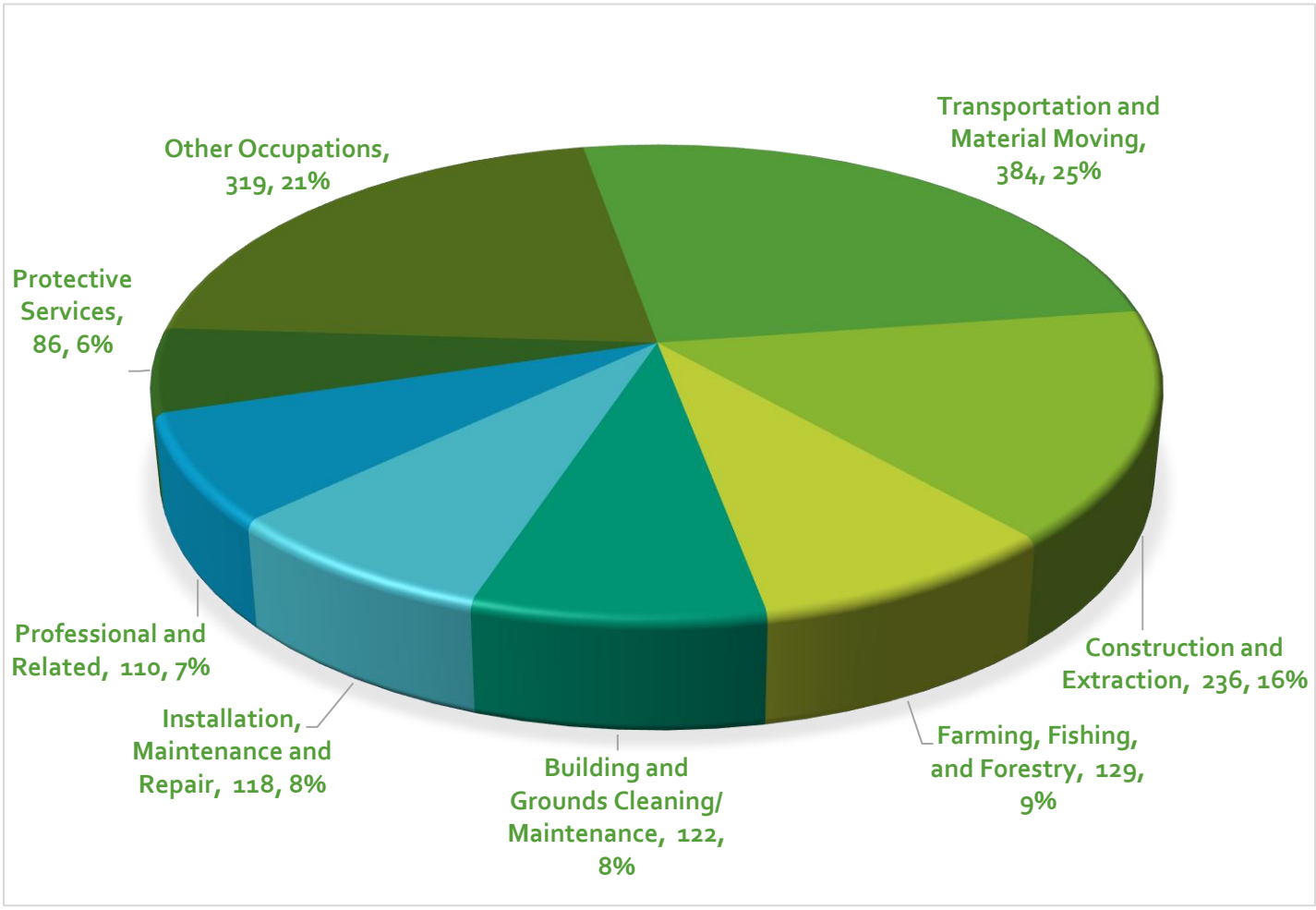
More than 25% of occupational fatalities over the 2013–2016 period involved *Transportation and Material Moving* occupations, including truck drivers. *Construction and Extraction* industries have the next highest share, with 16% of cases, followed by agricultural occupations (9%). *Building and Grounds Cleaning and Maintenance* workers (8%) and *Installation, Maintenance, and Repair* occupations each accounted for 8% of cases. (Figs. 13a and 13b)

Figure 13a. California Fatal Occupational Injuries, by Selected Occupation Group (2013-2016)



	Transportation and Material Moving	Construction and Extraction	Farming, Fishing, and Forestry	Building and Grounds Cleaning/ Maintenance	Installation, Maintenance, and Repair	Professional and Related	Protective Services	Management	Military Specific
2013	108	64	25	36	27	20	26	16	13
2014	86	49	20	38	26	26	24	17	7
2015	81	69	46	29	25	38	18	10	14
2016	109	54	38	19	40	26	18	11	4

Figure 13b. California Fatal Occupational Injuries, by Selected Occupation Group (2013–2016)



Conclusions and Findings

CFOI compiles a count of all fatal work-related injuries occurring in the U.S. during the calendar year. The CFOI program uses diverse state, federal, and independent data sources to identify, verify, and describe fatal work-related injuries.

Fatal occupational injuries have been on a downward trend since 1999 when over 600 workers died from on-the-job injuries. The number of such fatalities has been below 400 every year since 2010.

Over time, more occupational fatalities have occurred in the summer (July, August, and September, i.e., the third quarter) than in other seasons.

Each year, men are fatally injured by occupational injuries at a much higher rate than women. Among the fatal occupational injuries in 2013–2016, 92% of occupational injury victims in California were men and 8% were women.

Approximately 43% of occupational fatalities in 2013–2016 were among Hispanic or Latino workers. Fatal injuries to non-Hispanic white workers also comprised 43% of the occupational fatalities recorded over the four-year period.

CFOI covers all work-related deaths in California and includes the self-employed, independent contractors, freelancers and others who do not work for a specific employer. For the period in question, the majority of fatalities (83%) occurred to persons employed as wage and salary workers, compared with self-employed workers, who made up 17%.

Transportation Incidents comprised 37% of all occupational fatalities over the period. *Fatal injuries* due to *Assaults and Violent Acts* were the next largest portion with 21%, and *Falls, Trips, and Slips* accounted for 18%.

The *Trade, Transportation, and Utilities* industry had the highest number of fatalities during each of the past four years, averaging about 100 occupational deaths or more than a quarter of all cases per year. The *Construction* industry had the next highest number of fatalities, with a total of 240 fatalities (16%) for the four-year period.

More than 25% of occupational fatalities over the 2013–2016 period involved *Transportation and Material Moving* occupations, including truck drivers. *Construction and Extraction* industries are next in number with 16% of cases, followed by agricultural occupations (9%). *Cleaning and Maintenance* workers (8%) and *Installation, Maintenance, and Repair* each accounted for 8% of fatalities.

Appendix—About CFOI

The Injuries, Illnesses, and Fatalities (IIF) program of the U.S. Bureau of Labor Statistics (BLS) provides annual information on the rate and number of work-related injuries, illnesses, and fatal injuries and how these statistics vary by incident, industry, geography, occupation, and other characteristics. These data are collected through the Survey of Occupational Injuries and Illnesses (SOII) and the Census of Fatal Occupational Injuries (CFOI).

The CFOI compiles a count of all fatal workplace injuries occurring in the U.S. during the calendar year. The CFOI program uses diverse state, federal, and independent data sources to identify, verify, and describe fatal work-related injuries. This approach ensures counts are as complete and accurate as possible. For technical information and definitions for the CFOI, please go to Chapter 9 of the BLS Handbook of Methods on the BLS website, at www.bls.gov/opub/hom/pdf/homch9.pdf .

Data compiled by the CFOI program are issued annually for the preceding calendar year. These data are used by safety and health policy analysts and researchers to help prevent fatal work injuries in the following ways:

- Informing workers of life threatening hazards associated with various jobs;
- Promoting safer work practices through enhanced job safety training;
- Assessing and improving workplace safety standards; and
- Identifying new areas of safety research.

Fatal injury rates are per 100,000 full-time equivalent workers (FTEs). Complete national rates can be found at www.bls.gov/iif/oshcfoi1.htm#rates. Complete state rates can be found at www.bls.gov/iif/oshstate.htm. National and state rates are calculated using different methodology and cannot be directly compared. Please see www.bls.gov/iif/oshfaq1.htm#q16 for more information on how rates are calculated and caveats for comparison.