

State of California  
Department of Industrial Relations



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## Fatal Occupational Injuries in California

2013 - 2022



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## **Message from Acting Cal/OSHA Chief Debra Lee**

The annual report you're about to delve into has been crafted by the Census of Fatal Occupational Injuries Program (CFOI), operating under the umbrella of the Department of Industrial Relations' (DIR's) Division of Occupational Safety and Health, commonly referred to as Cal/OSHA. Within these pages, you'll find crucial insights into the numbers and demographics surrounding occupational fatalities in California. Each statistic represents a human life lost while on the job, underscoring the imperative of our workplace regulations aimed at averting such tragedies. At Cal/OSHA, we meticulously analyze this data to discern how we can fortify and enhance workplace safety across California. This involves various measures such as outreach, education, rulemaking, and enforcement. It's a collaborative effort involving employers, industry groups, safety professionals, worker organizations, and concerned stakeholders, all pivotal in safeguarding and enhancing working conditions for Californian workers. As you peruse through this report, I urge you to pause and reflect on those who have been grievously affected by workplace accidents, and consider how together, we can proactively strive to prevent future fatalities.

## **Introduction**

Cal/OSHA gathers statistics on work-related deaths through the CFOI Program. The CFOI Program was established by the U.S. Bureau of Labor Statistics (BLS) to compile state and national data useful to public health practitioners, researchers, regulators, and safety and health policy analysts to help prevent fatal work-related injuries. The program is meant to identify all workers fatally injured at work, notwithstanding their employment status and not restricted to those workers who are covered under other state and federal laws. DIR's CFOI Program uses numerous sources to identify and verify work-related injury fatalities. These sources include death certificates, workers' compensation records, news articles, Cal/OSHA incident reports and OSHA Information System (OIS) records, coroner and police reports, National Highway Traffic Safety Administration (NHTSA) and National Transportation Safety Board (NTSB) records, military reports, social media, and obituaries. Cross-referencing these documents provides thorough information about each work-related fatality including worker characteristics, equipment involved, circumstances of the event and details of the injury. The detailed data is then aggregated and used to promote safety efforts by employers, workers and others.

## **Scope**

As its name indicates, the Census looks only at fatalities resulting from work-related traumatic injuries. This is defined as any wound or damage to the body resulting from acute exposure to energy, such as heat or electricity; impact from a crash or fall; or from the absence of such essentials as heat or oxygen, caused by a specific event or incident within a single workday or shift. Included are heatstroke, intracranial and internal injuries, open wounds, hypothermia, asphyxiation, acute poisoning resulting from short-term exposures limited to the worker's shift,

suicides and homicides, and work injuries listed as underlying or contributory causes of death. Drug overdoses at work are included, regardless of where the drugs were taken.

The Census does not include deaths from fatal occupational illnesses unless precipitated by an acute injury or exposure event. Fatal diseases resulting from cumulative exposure—for instance asbestos-related illnesses, heart disease, and many cancers—are not included.

A case is included in CFOI if the injury or injuries contributed to the death. The injury or injuries need not be the sole, or even the primary, cause of death. Thus, although deaths caused solely by COVID-19 are not included, a traumatic injury complicated by COVID-19 will be included if it results in a death.

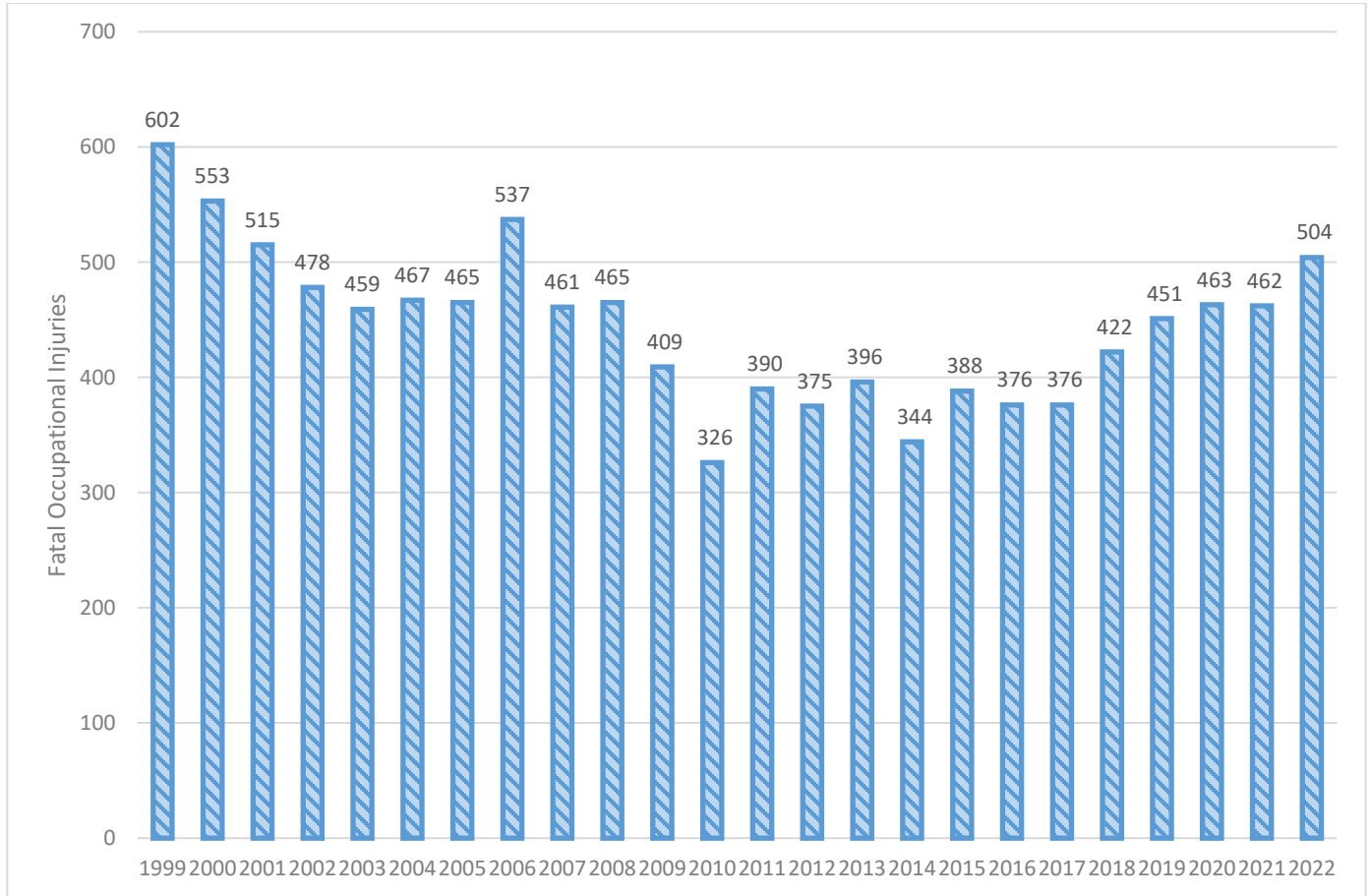
A fatal injury is considered to have a relationship to work if the event or exposure 1) occurred on the employer's premises, and the person was there to work; or 2) occurred off the employer's premises, and either the person was there to work, or the event/exposure was related to the person's work or status as an employee. BLS has posted details about [CFOI's scope](#) online.

This report provides a detailed overview of occupational fatalities that occurred in California between 2013 and 2022.

## **General Trends**

Fatal occupational injuries had been on a downward trend in California since 1999, when over 600 California workers died from on-the-job injuries. In more recent times, from 2010 to 2017, California counted fewer than 400 fatal work-related injuries within the scope of CFOI each year. The trend shifted in 2018, when California counted 422 fatal occupational injuries within the scope of CFOI. In 2019 the number of work-related injury fatalities rose again to 451, and in 2020 the number of fatal job injuries in California within the scope of CFOI rose to 463. In 2021, CFOI registered 462 fatal occupational injuries. In 2022 the number of work-related injuries in California continued to rise, when CFOI registered 504 fatal occupational injuries. (Figure 1)

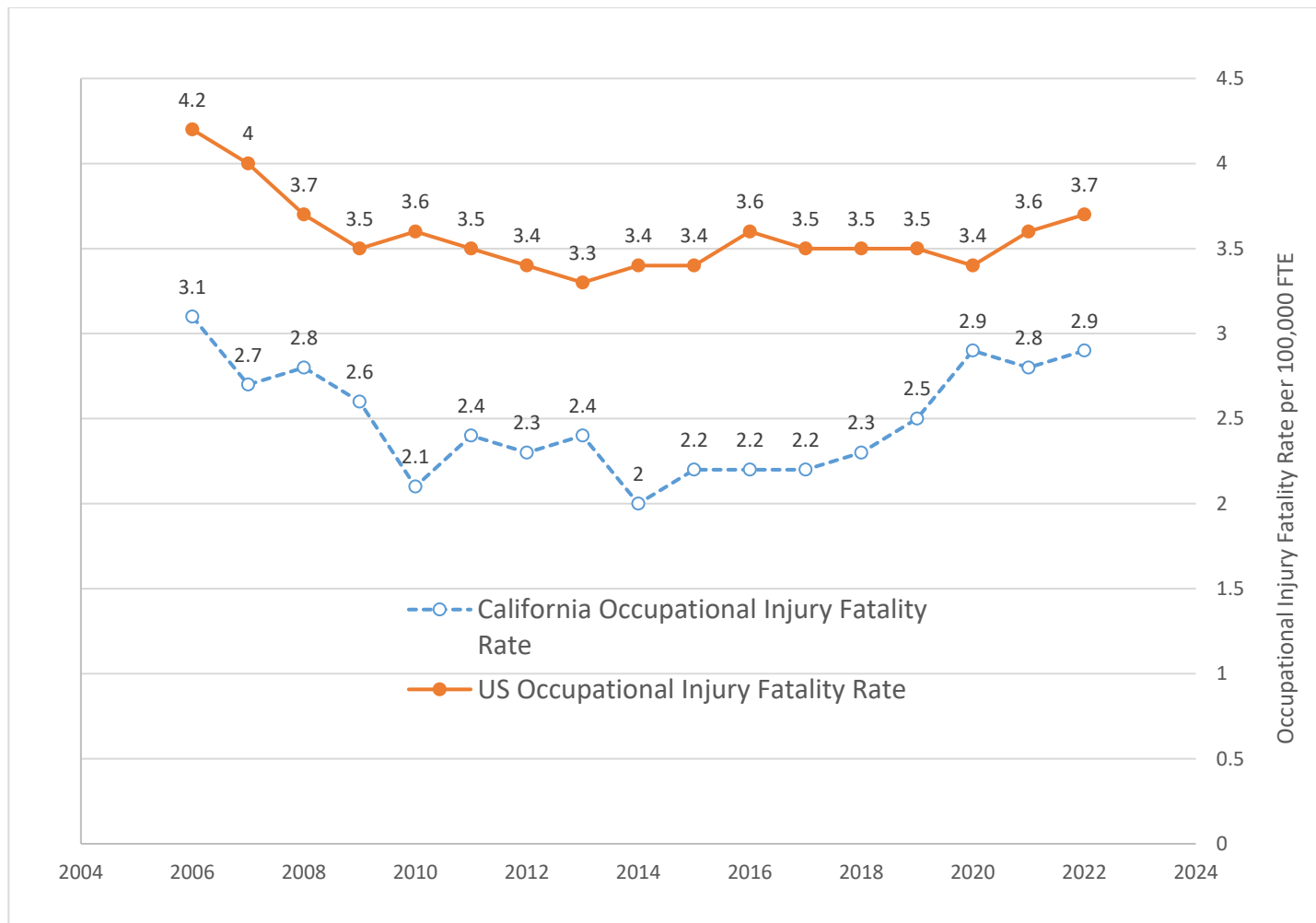
Figure 1. California Fatal Occupational Injuries Within the Scope of CFOI (1999–2022)



The rate of fatal occupational injuries per 100,000 California workers had been falling over time through 2017. From 2006 to 2014, the rate fell by over a third from 3.2 to 2.0, and then remained at 2.2 per 100,000 workers from 2015 to 2017. In 2018, the rate rose to 2.3. It rose to nearly 2.5 per 100,000 workers in 2019 and again rose to 2.9 per 100,000 workers in 2020 before slightly dropping to 2.8 per 100,000 workers in 2021. It rose again to 2.9 per 100,000 workers in 2022.

While not technically comparable because of differences in industrial mix, the California fatality rate has been consistently lower than U.S. national rates throughout the recent period (Figure. 2). Rates for the U.S. as a whole have stabilized around 3.5 per 100,000 workers throughout the last half decade, although the rates have risen in the last few years to 3.7 per 100,000 workers in 2022. California’s fatality rate has risen higher, closer to the national average, but is still well below the national level.

Figure 2. California and U.S. Occupational Fatality Rate (2006–2022, per 100,000 workers)

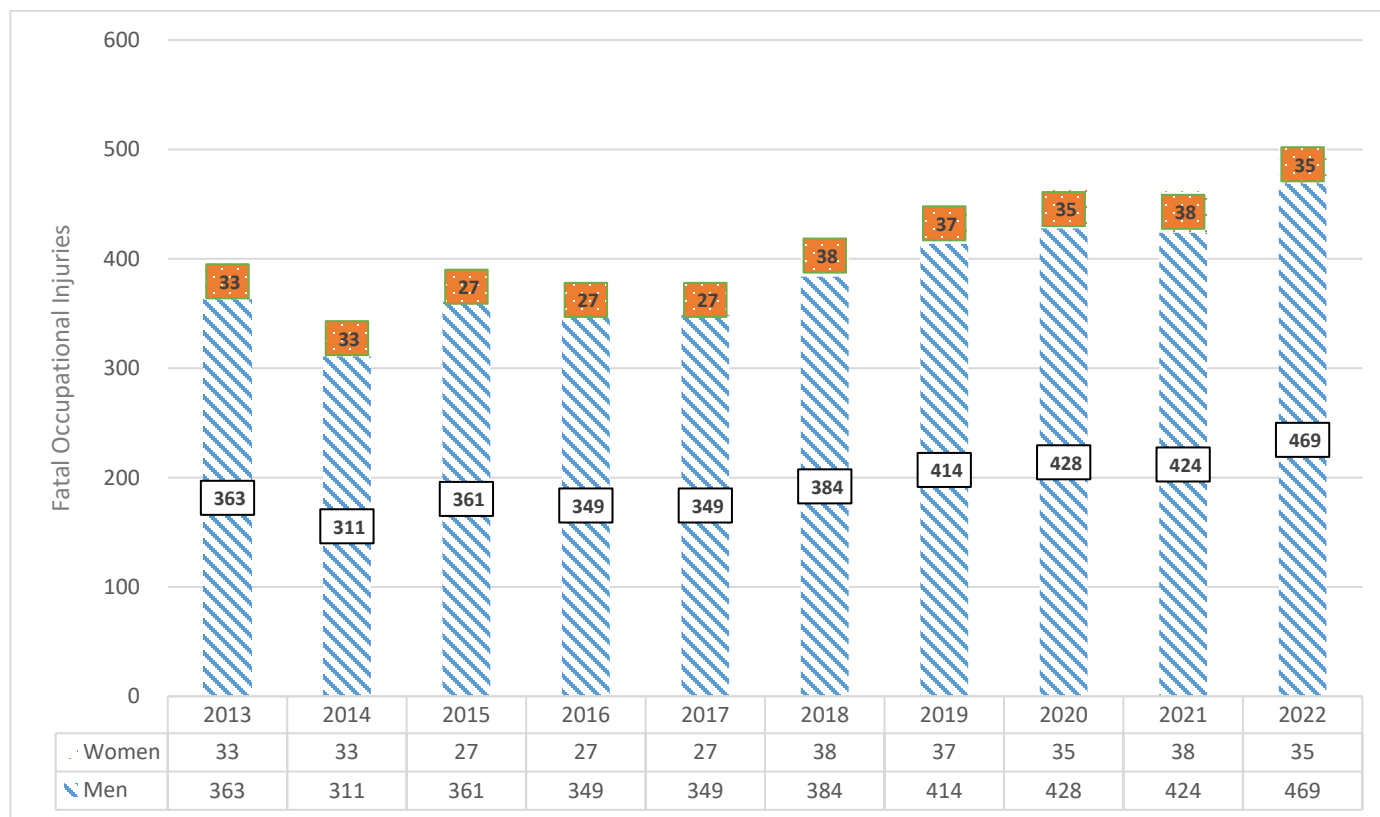


## Gender

Every year, more men die as a result of occupational injuries than women. In 2022, 469 men and 35 women died in fatal occupational injuries. Among the fatal occupational injuries in 2013-22, 3,852 (92%) of occupational injury victims in California were men and 330 (8%) were women. (Figure 3). This ratio has persisted through most of the last decade.



Figure 3. California Fatal Occupational Injuries Within the Scope of CFOI, by Gender (2013–2022)

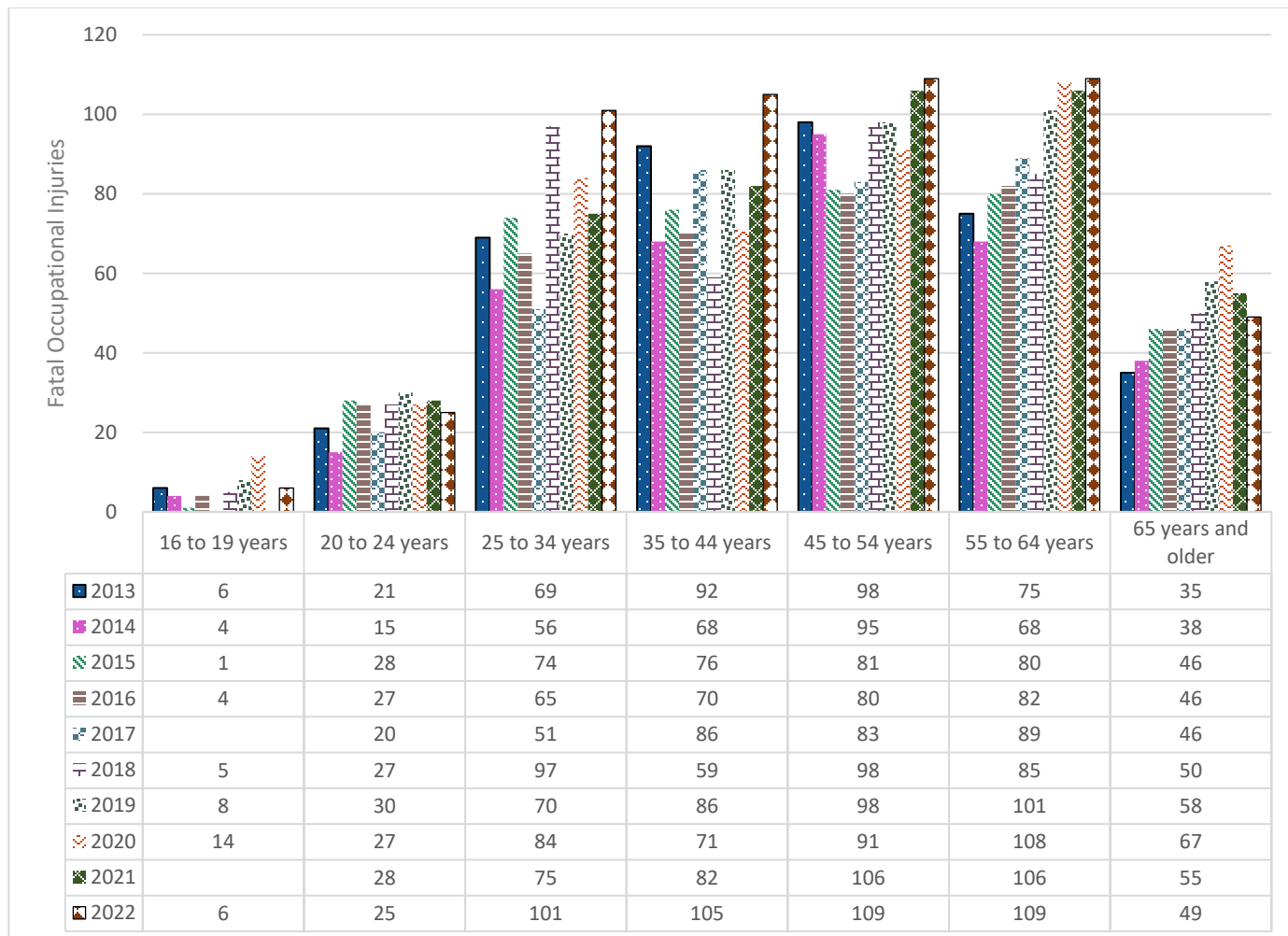


## Age

Fatal occupational injuries occur among all age groups each year. Since 2013, the highest number of work-injury fatalities has shifted from those of middle age to older workers. In 2013, the largest group was among workers 45–54 years of age, followed by workers 35 to 44 and those 55 to 64 years of age. By 2022, the greatest number of fatalities occurred in older workers, age 45-54 and 55-64 (Figure 4a and 4b).

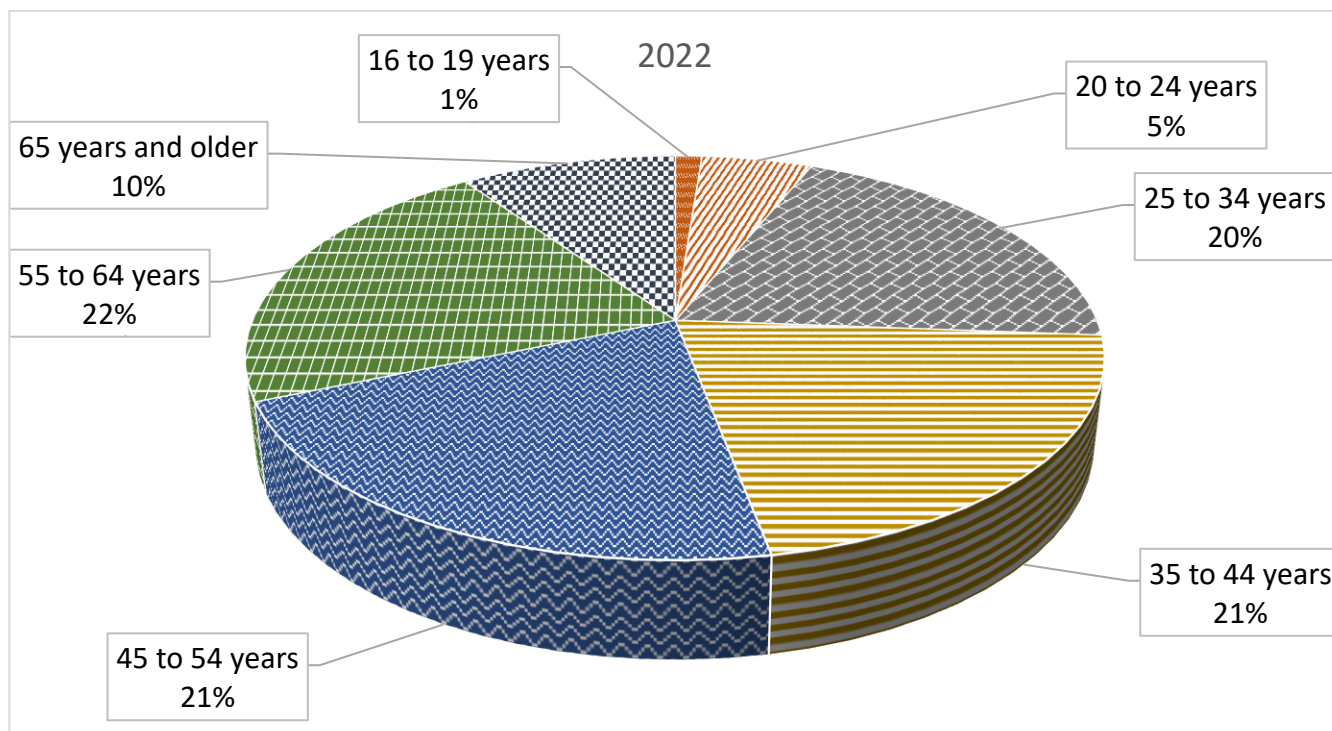
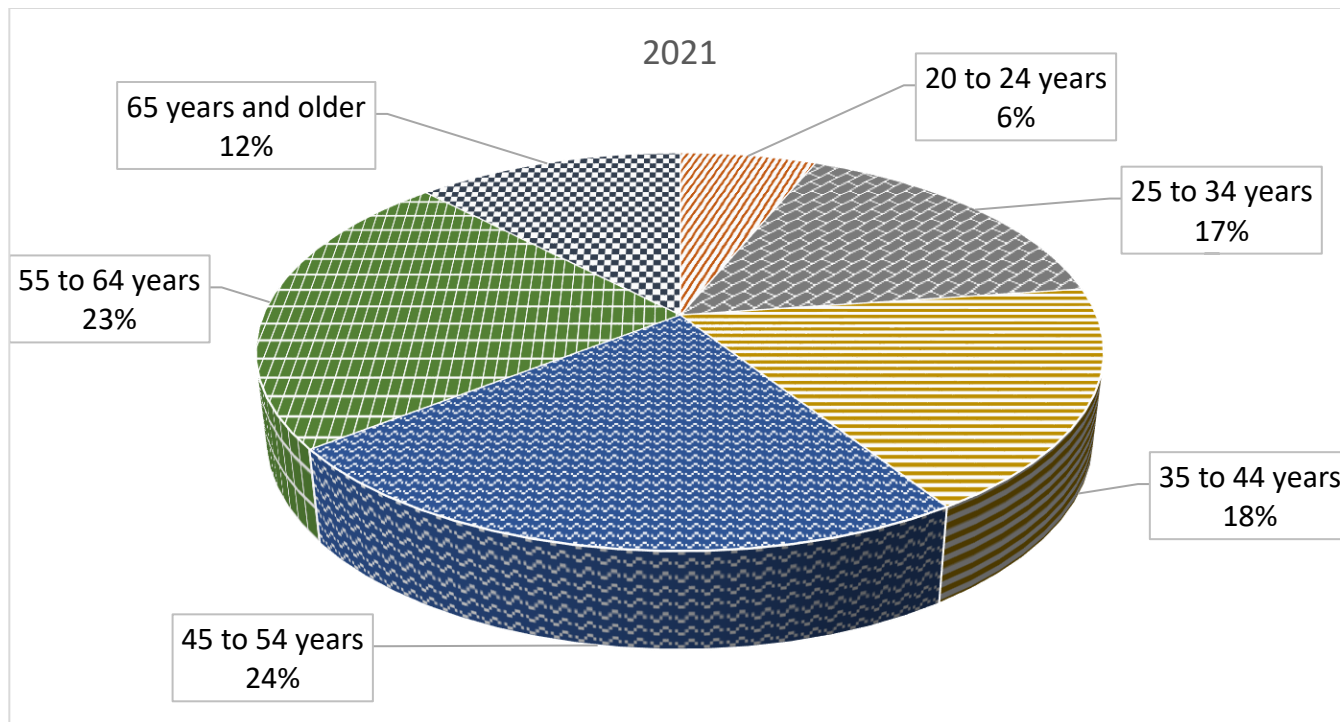
From 2020, deaths in the oldest age categories, 55 to 64 and 65+, showed the largest increase over prior years. Figure 4a shows fatalities by age for the 2013 to 2022 period.

Figure 4a. California Fatal Occupational Injuries Within the Scope of CFOI, by Age 2013-2022



(NOTE: Blank values in table indicates no data reported or data that do not meet publication criteria.)

Figure 4b. Distribution of Fatalities Within the Scope of CFOI by Age, 2021 and 2022

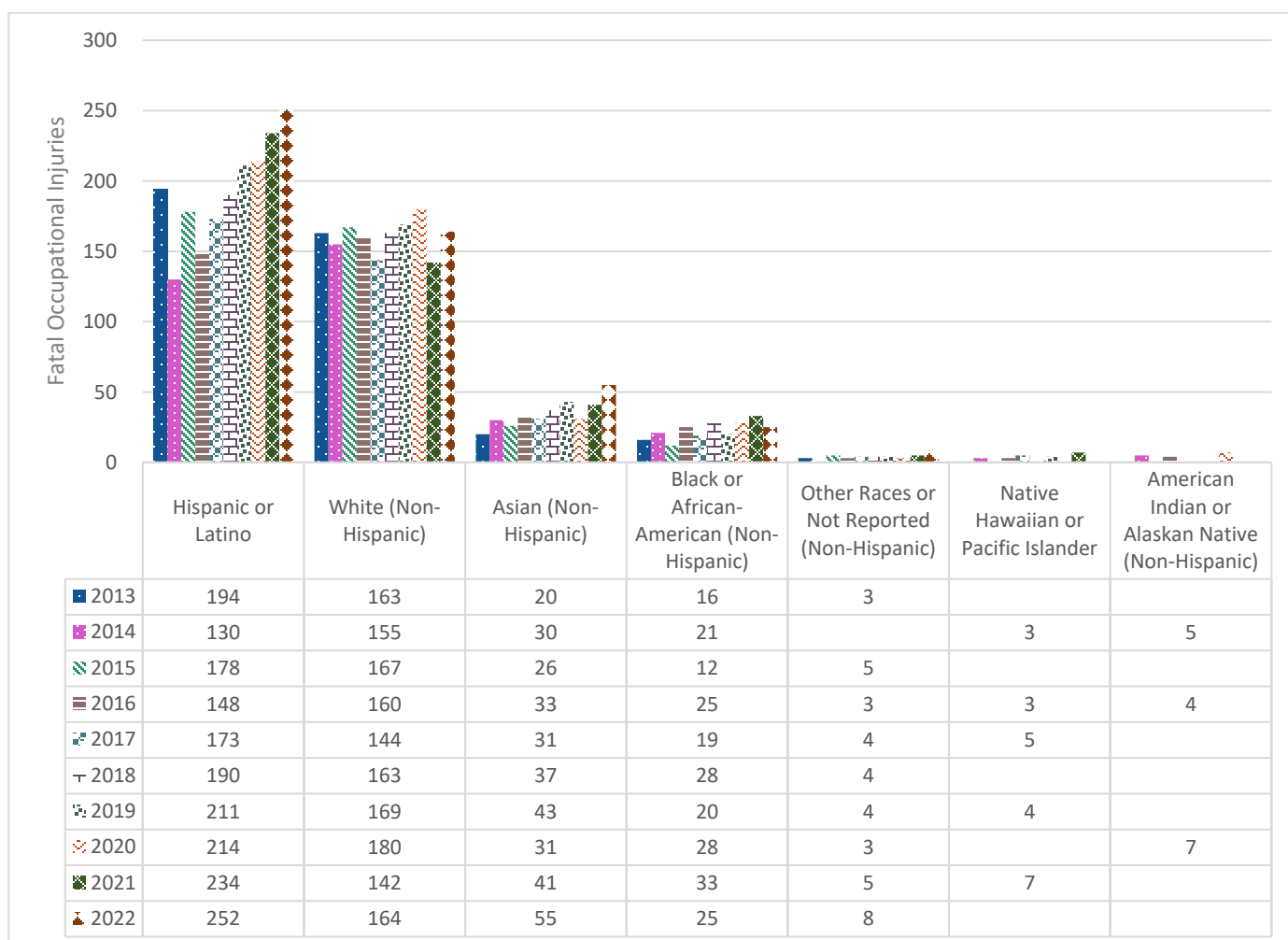


## Race and Ethnicity

The CFOI program compiles information on race and ethnicity in all fatal occupational injury cases. This stands in contrast to the nonfatal occupational injury series collected by BLS, known as the Survey of Occupational Injury and Illness, where race and ethnicity are optional data elements.

Between 2013 and 2022, approximately 55% of occupational fatalities were among Hispanic or Latino workers. Fatal injuries to non-Hispanic white workers comprises 31% of the occupational fatalities recorded over that period. Asian, Pacific Islander, and Hawaiian workers comprised 10%, while Black/African American workers made 4% of the total (Figure 5a).

Figure 5a. California Fatal Occupational Injuries Within the Scope of CFOI, by Race/Ethnicity (2013–2022)



(NOTE: Blank values in table indicate no data reported or data that did not meet publication criteria.)

In 2021, Hispanic/Latino workers for the first time comprised over 50% of occupational injury fatalities in California, while the portion of white workers fell to 31%. Non-Hispanic black workers were 9% of the occupational injury fatalities in 2021, while Asian workers comprised 7% of those deaths (Figure 5b1). In 2022, Hispanic/Latino workers again comprised 50% of occupational injury fatalities in California, white workers rose to 33%, Black/African American workers dropped to 5%, and Asian workers rose to 11% (Figure 5b2).

Figure 5b1. California Fatal Occupational Injuries Within the Scope of CFOI, by Race/Ethnicity (2021), Total counted by CFOI in 2021 was 462 fatalities

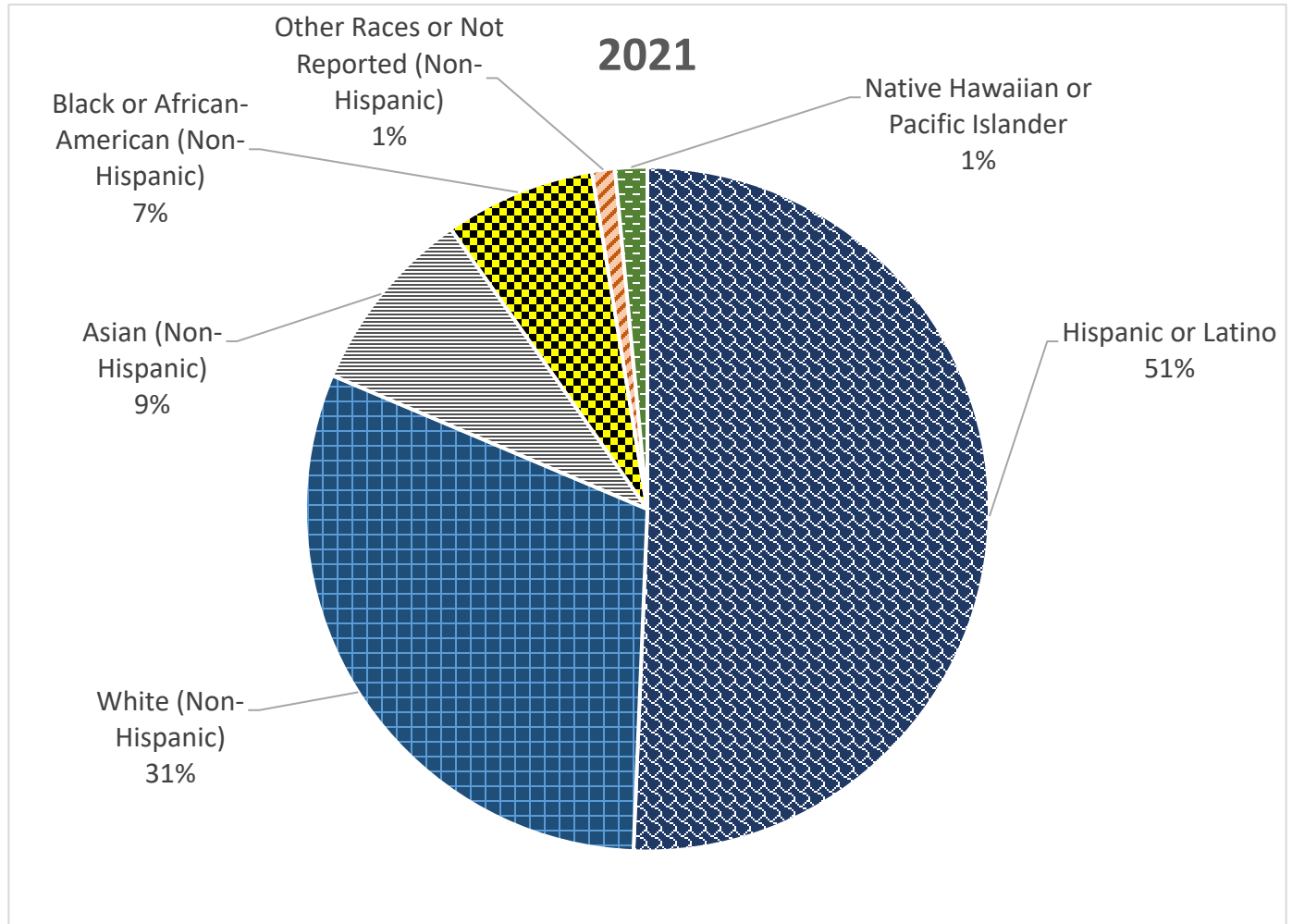
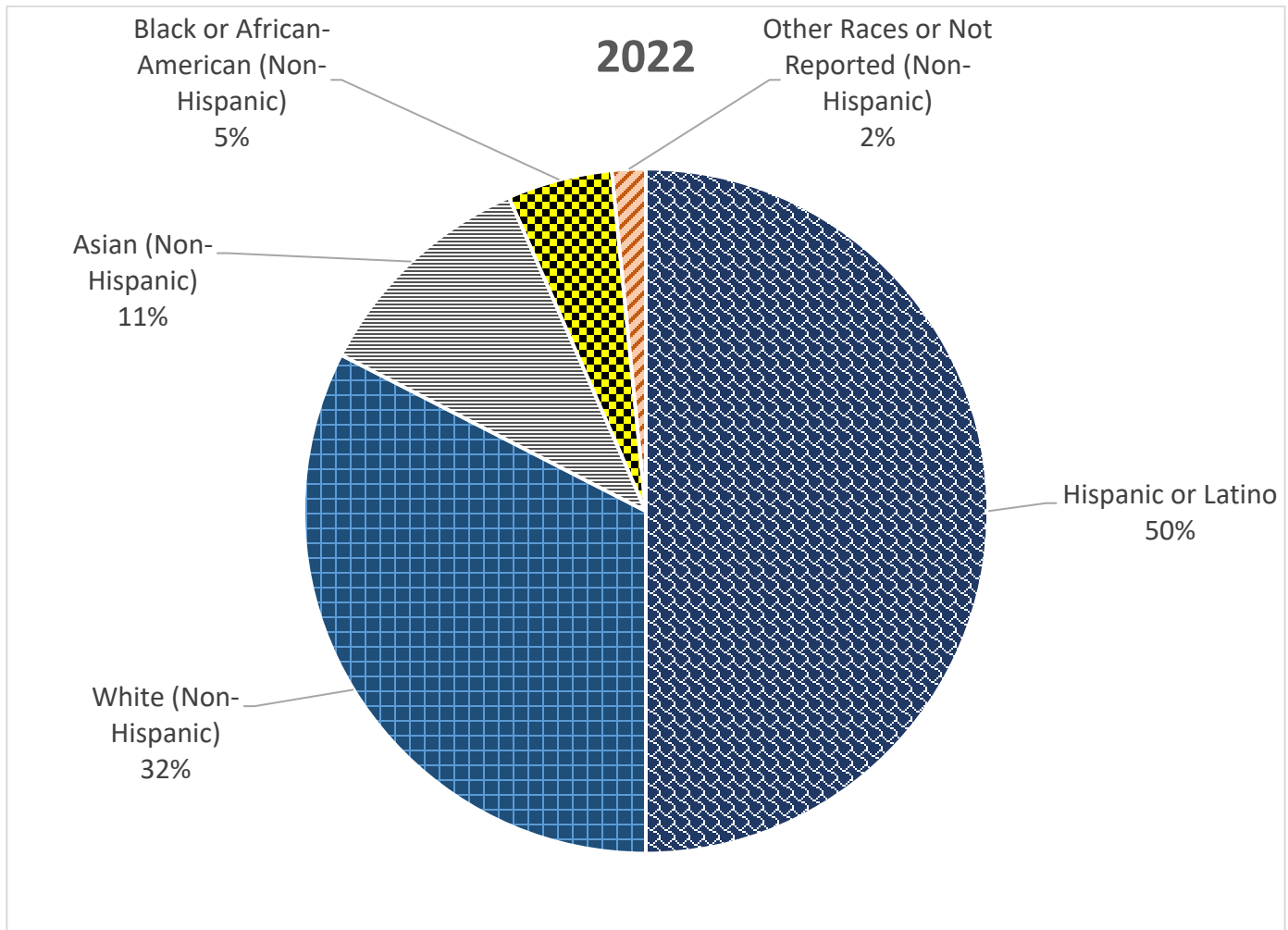


Figure 5b2. California Fatal Occupational Injuries Within the Scope of CFOI, by Race/Ethnicity (2022), Total counted by CFOI in 2022 was 504 fatalities



The U.S. Bureau of Labor Statistics publication on national (2022) occupational fatality rates indicates that Hispanic or Latino workers, as well as Black or African American workers, had fatality rates (4.6 and 4.2 per 100,000 FTE workers respectively) in 2022 that were higher than the national All Worker rate of 3.7 per 100,000. <sup>1</sup> BLS does not publish state-specific rates of occupational injury fatalities by race or ethnicity. Using California employment statistics from the Employment Development Department,<sup>2</sup> one can calculate estimates of the race and ethnicity rates in California showing that Black, and Hispanic/Latino workers had rates of fatal occupational injuries at more than 3 times the rate of White workers.

<sup>1</sup> [www.bls.gov/news.release/pdf/cfoi.pdf](http://www.bls.gov/news.release/pdf/cfoi.pdf)

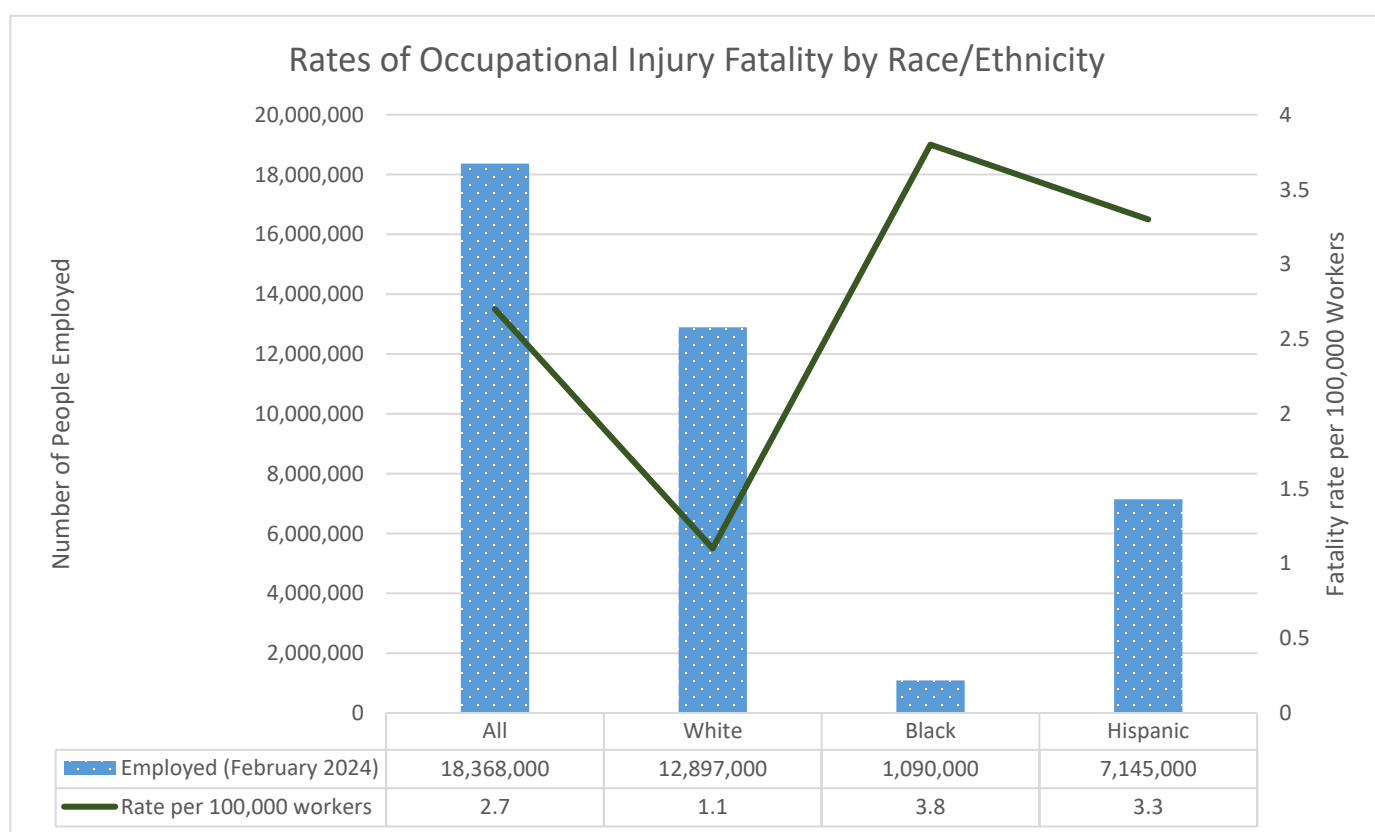
<sup>2</sup> [CA\\_Employment\\_Summary\\_Table.pdf](http://CA_Employment_Summary_Table.pdf)

([labormarketinfo.edd.ca.gov/specialreports/CA\\_Employment\\_Summary\\_Table.pdf](http://labormarketinfo.edd.ca.gov/specialreports/CA_Employment_Summary_Table.pdf))

Table of Estimates of Rates of Occupational Injury Fatality by Race/Ethnicity California

Races/Ethnicities	Employed (February 2024)	Occupational Injury Fatalities 2022 (Calif)	Rate per 100,000 workers
All	18,368,000	504	2.7
White	12,897,000	142	1.1
Black	1,090,000	41	3.8
Hispanic	7,145,000	234	3.3

Figure 5c. California Rates of Occupational Injury Fatality by Race/Ethnicity (February 2024 Employment Data and 2022 Fatality Rate)

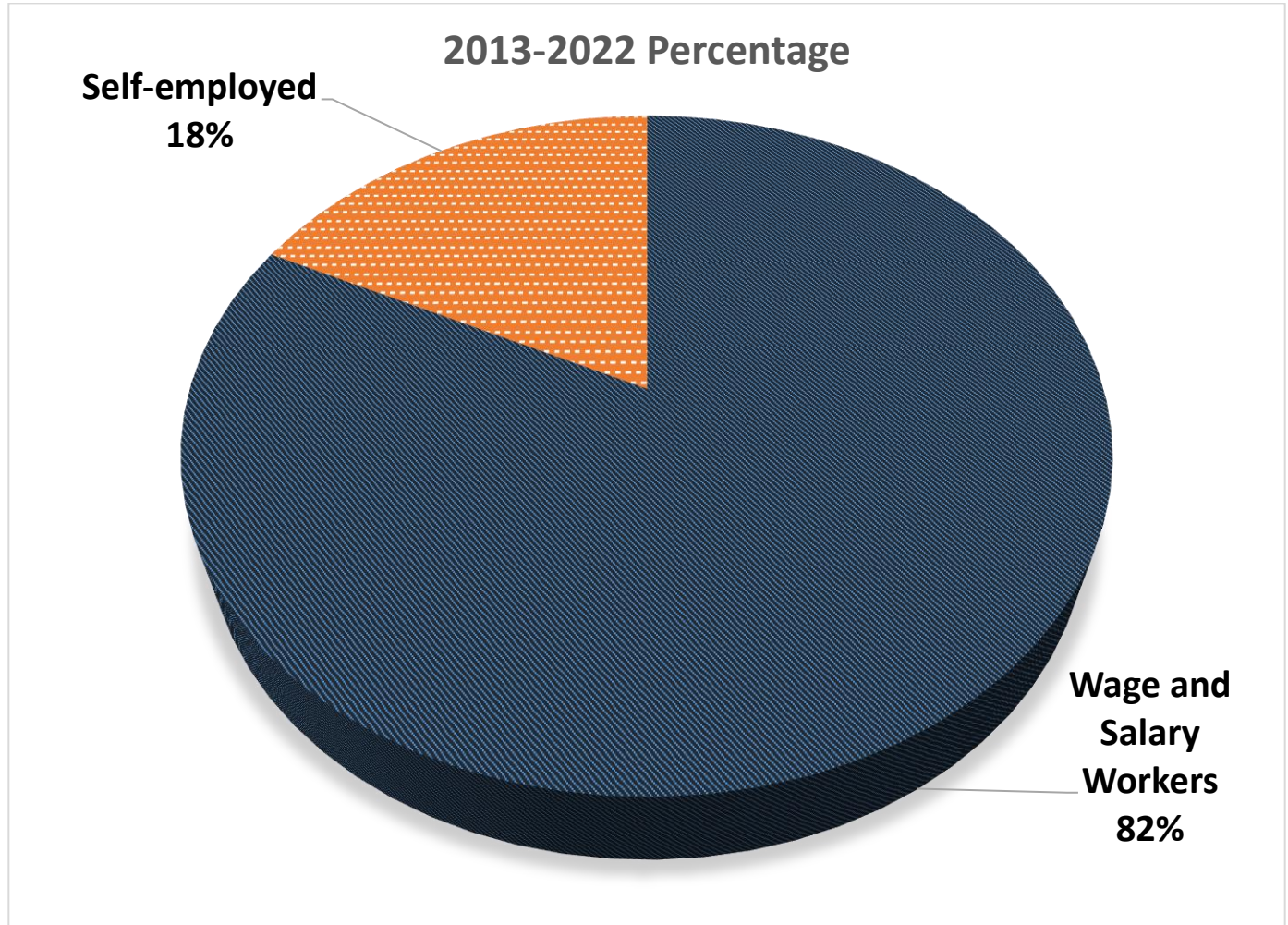


## Employment Status

CFOI covers the work-related fatal injuries specified in the Introduction above and includes employed workers who are typically covered under OSHA regulation, but CFOI also incorporates the self-employed, independent contractors, freelancers, and others who do not work for a specific employer. For the 2013 to 2022 period, four out of five fatalities within the scope of CFOI (82%) occurred to persons employed as wage and salary workers, compared with self-employed workers, who made up 18% of fatalities (Figure 6a). Thus nearly 1/5 of

workers fatally injured on the job are not under an employee-employer relationship, and typically not covered either under Cal/OSHA or state workers' compensation programs.

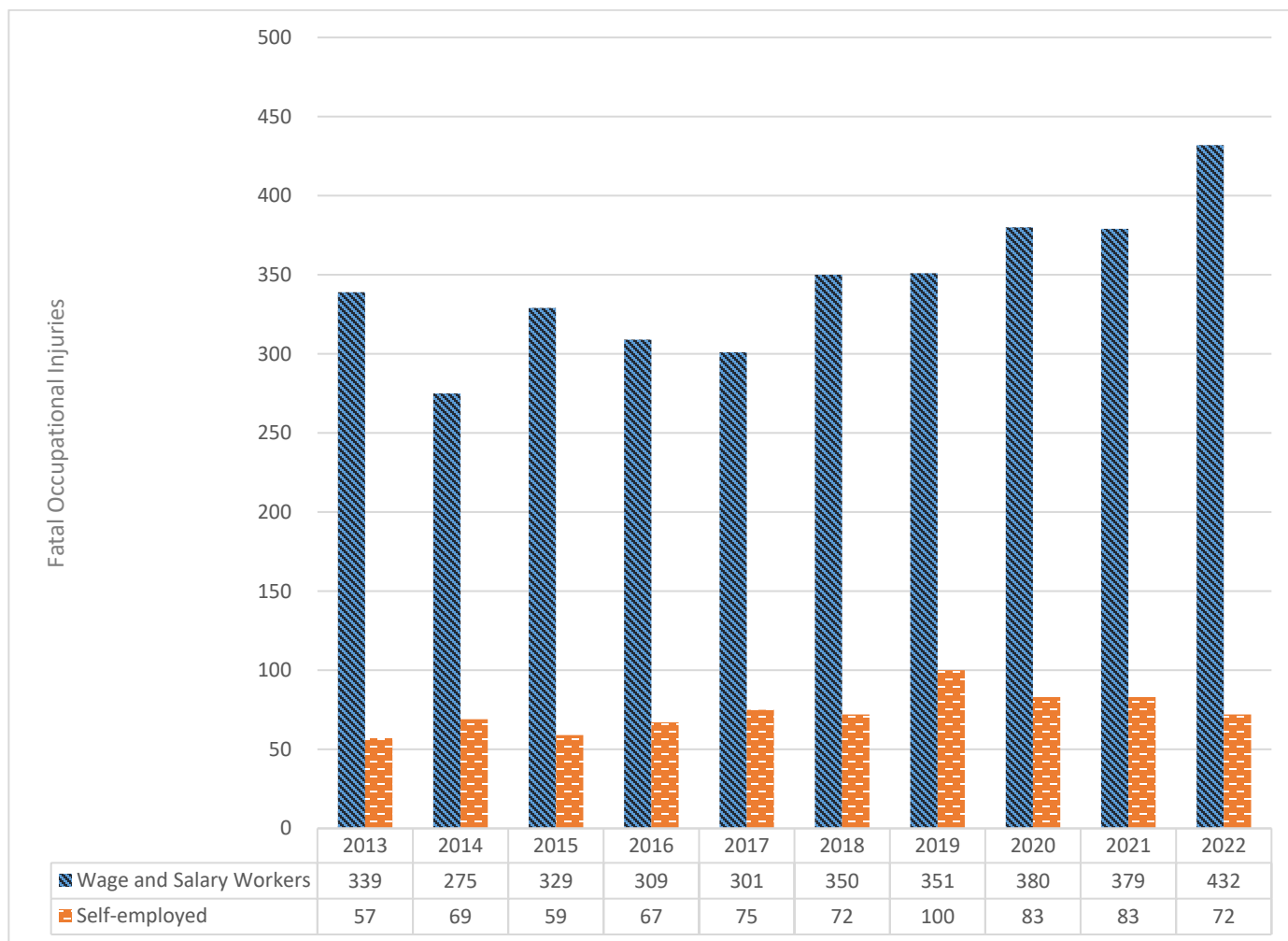
Figure 6a. California Fatal Occupational Injuries Within the Scope of CFOI, by Employment Status (2013–2022)



Counts of those fatally injured on the job by employment status for the 2013-2022 period show some fluctuation from one year to the next, but the number of wage and salary workers who were fatally injured on the job consistently exceeds such reports for self-employed workers (Figure 6b).

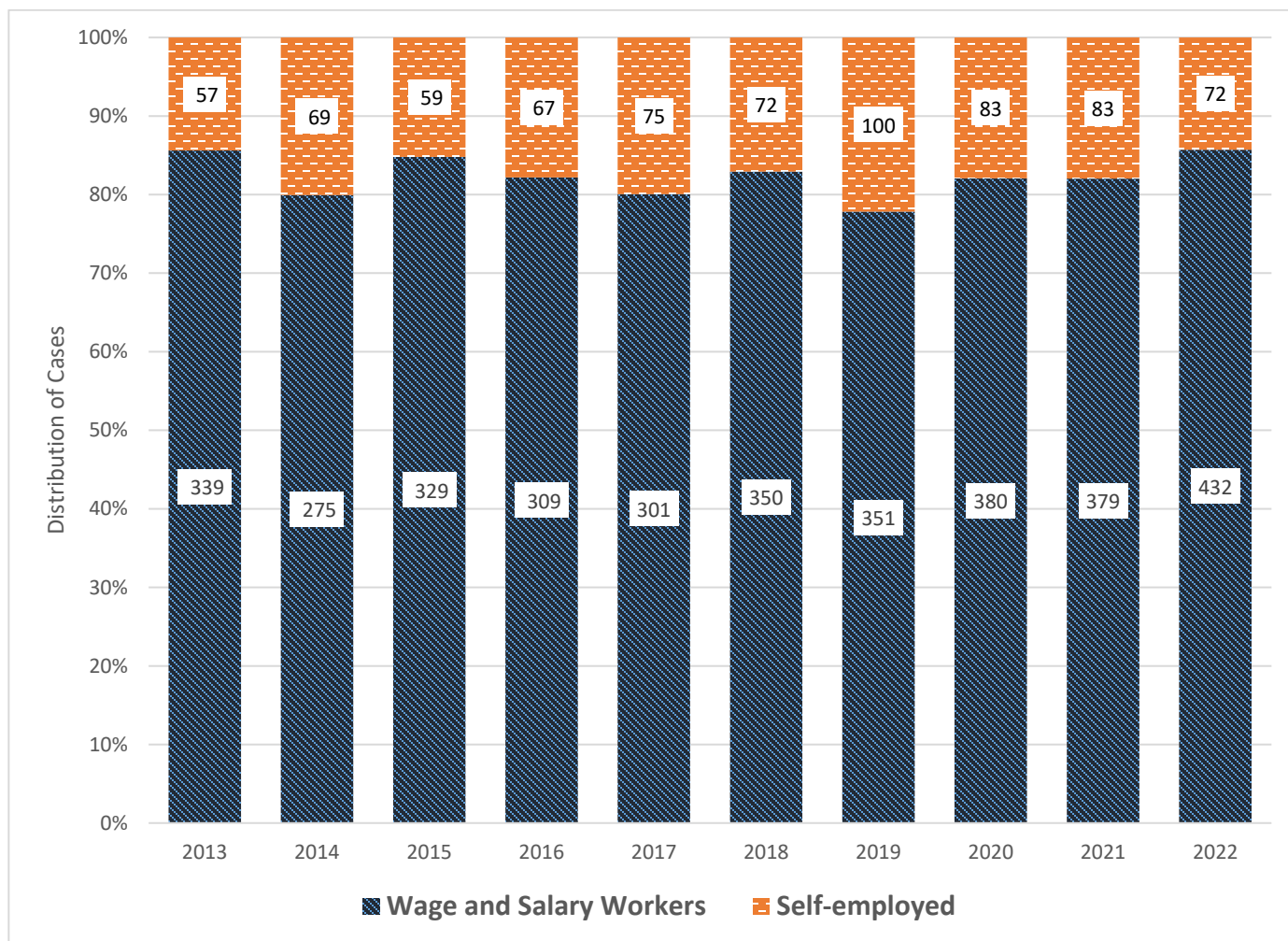


Figure 6b. California Fatal Occupational Injuries Within the Scope of CFOI, by Employment Status (2013–2022)



The total number of wage and salary workers fatally injured on the job in 2022 increased over 2021 figures, while the number of self-employed workers dropped. The proportion of wage and salary workers fatally injured rose to 88%, while that of self-employed workers fell to 14% (Figures 6b and 6c).

Figure 6c. California Fatal Occupational Injuries Within the Scope of CFOI, by Percentage Employment Status (2013-22)



## Causes of Fatal Events

Transportation incidents have consistently caused the most occupational injury fatalities in California. Such events led to 33% of all occupational fatalities during the 2013-2022 period. In those eight years, fatal injuries due to assaults and violent acts accounted for 20% and falls, slips and trips accounted for 19% of fatalities. Contact with objects and equipment made up 12% of the total. Exposure to harmful substances was responsible for 11% of recorded deaths and fires and explosions accounted for 1% of recorded deaths in the 2013-2022 period. (Figure 7a). In 2022 both transportation incidents and exposure to harmful substances were each 26% of the total. The category of “exposure to harmful substances” is rising rapidly every year, from 5% in 2016 to over 23% in 2022. This category is fueled by the escalating number of drug overdose deaths that have occurred at work during the past 4 years. The number of deaths by assaults and violent acts dropped in 2021 but rose again in 2022 to 97 deaths (19%). Falls, slips and trips accounted for roughly 1 in 6 fatalities (16% of cases) in 2022.

Figure 7a. California Fatal Occupational Injuries Within the Scope of CFOI, by Event (2013–2022)

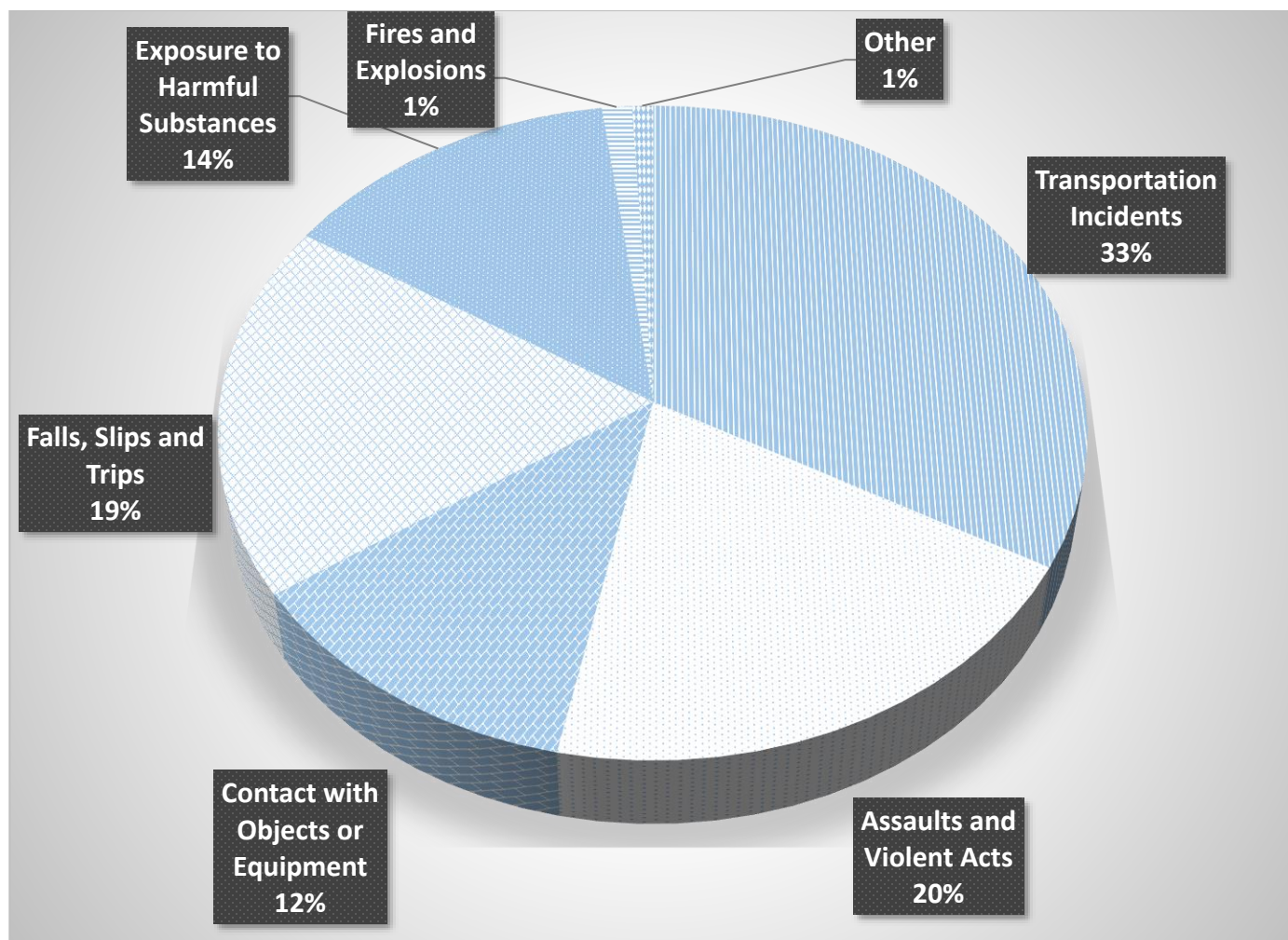
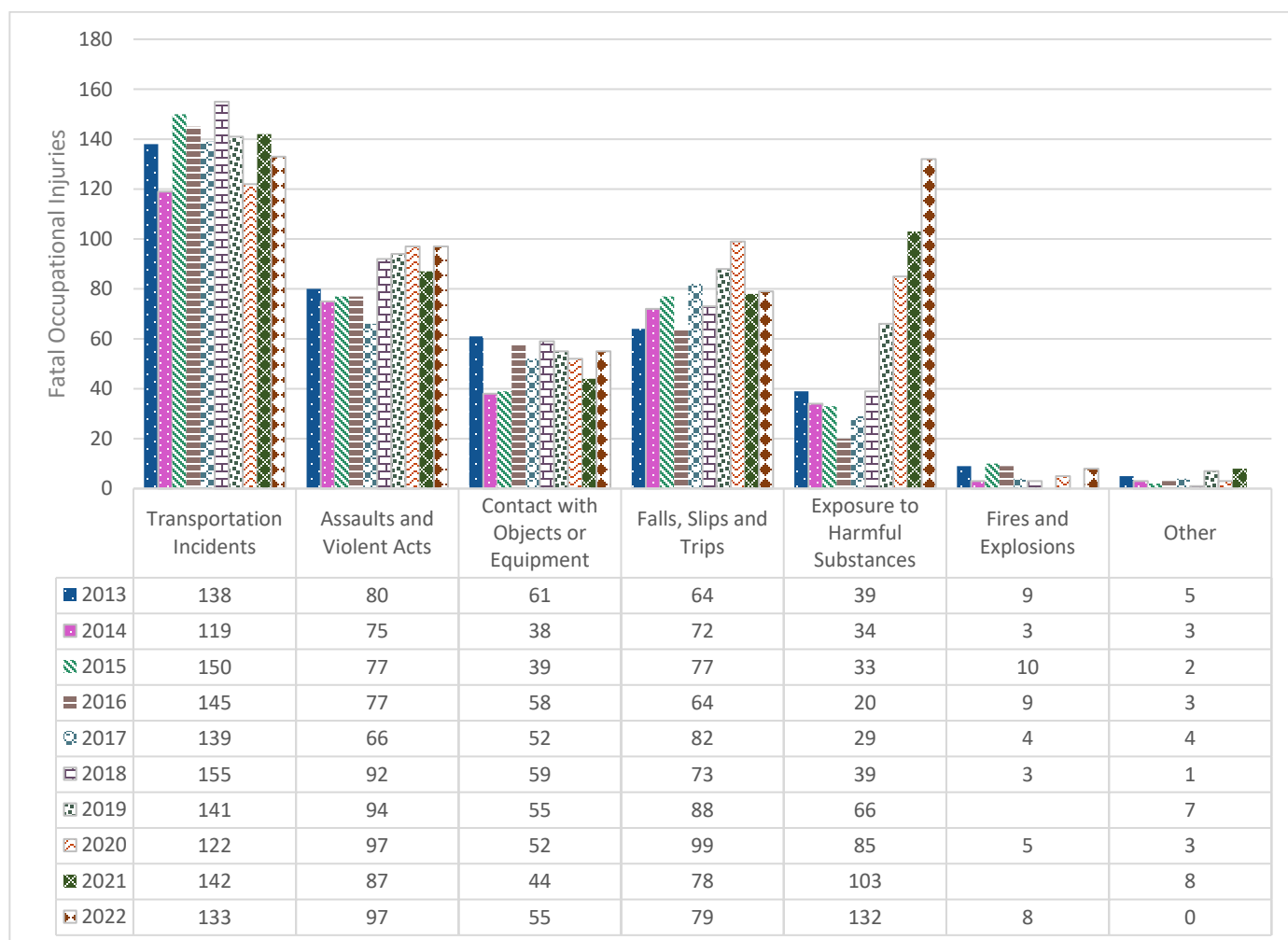


Figure 7b. California Fatal Occupational Injuries Within the Scope of CFOI, by Event (2013–2022)



(NOTE: Blank values in table indicates no data reported or data that do not meet publication criteria.)

In 2022, CFOI counted 133 workers involved in fatal transportation incidents. Of the 133 transportation incident fatalities, 116 were wage and salary (w/s) workers, while 17 were self-employed. This fell slightly from 2021, when CFOI counted 142 workers involved in fatal transportation incidents.

In 2022, there were [90 deaths involving intentional injury by persons](#): 54 homicides and 36 suicides. Over two-thirds of the homicides and one-third of the suicides involved shootings. In 2022, 17% of work-related violence fatalities involved self-employed workers, compared to 18% of the overall fatality count. Eighty of the 97 violence-related deaths involved private sector workers. By occupation, 14 sales workers, 17 protective service workers and 17 transportation workers died from intentional violence on the job. The number of violence related fatalities rose

again to 97 in 2022, after a small drop to 87 in 2021. Ninety-two percent of the violence-related fatalities were men.

Among the 132 fatalities in 2022 from exposure to harmful substances or environments, just over half of those workers were Hispanic. Ten of the 132 were women. Thirty-four (26%) of those were under 35. In 2021, 54 (52%) of the 103 persons fatally injured in that category were Hispanic. The number of women fatally injured by harmful substances was 12. In 2021, reversing the earlier year, just over 20% of 103 fatalities from exposure to harmful substances were under age 35.

Among the 55 fatal injuries involving contact with objects or equipment in 2022, all 55 were men. Hispanic workers died in 34 (62%) such incidents. Forty-six (84%) were over 45 years old. In 2021, 44 persons died from contact with objects or equipment. Twenty-five (57%) were Hispanic.

Seventy-nine fatal injuries in 2022 involved falls, slips, and trips. Construction workers died in 28 (35%) such incidents, and 14 (18%) building and grounds maintenance workers were fatally injured from falls, slips, and trips. In 2021, 78 workers died from falls, slips and trips. Including 33 construction workers. Sixty-five (83%) resulted from falls to lower levels, while 12 fatalities were from falls on same level.

Figure 7c1. California Fatal Occupational Injuries Within the Scope of CFOI, by Event, Percentage of total (2021)

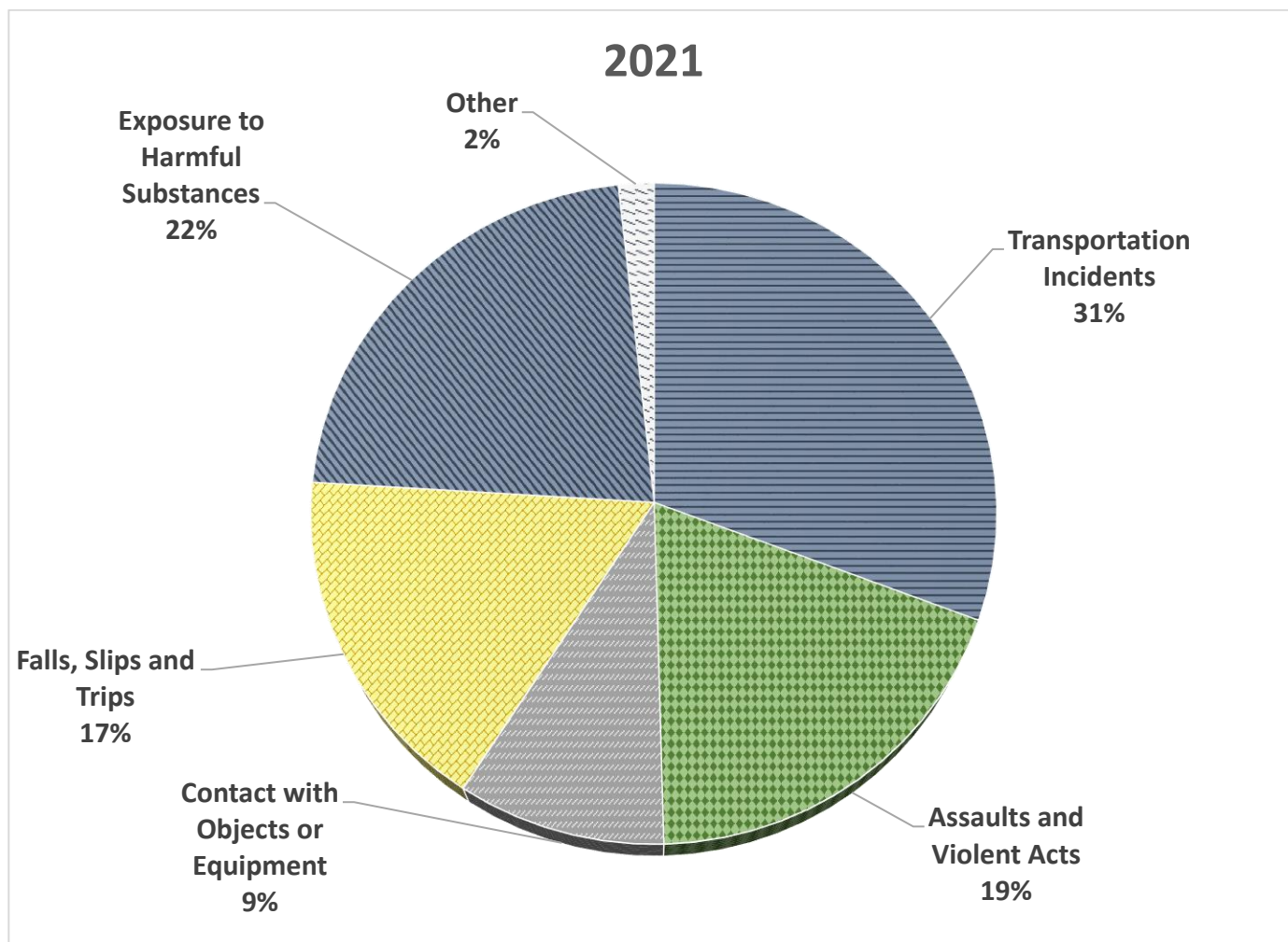
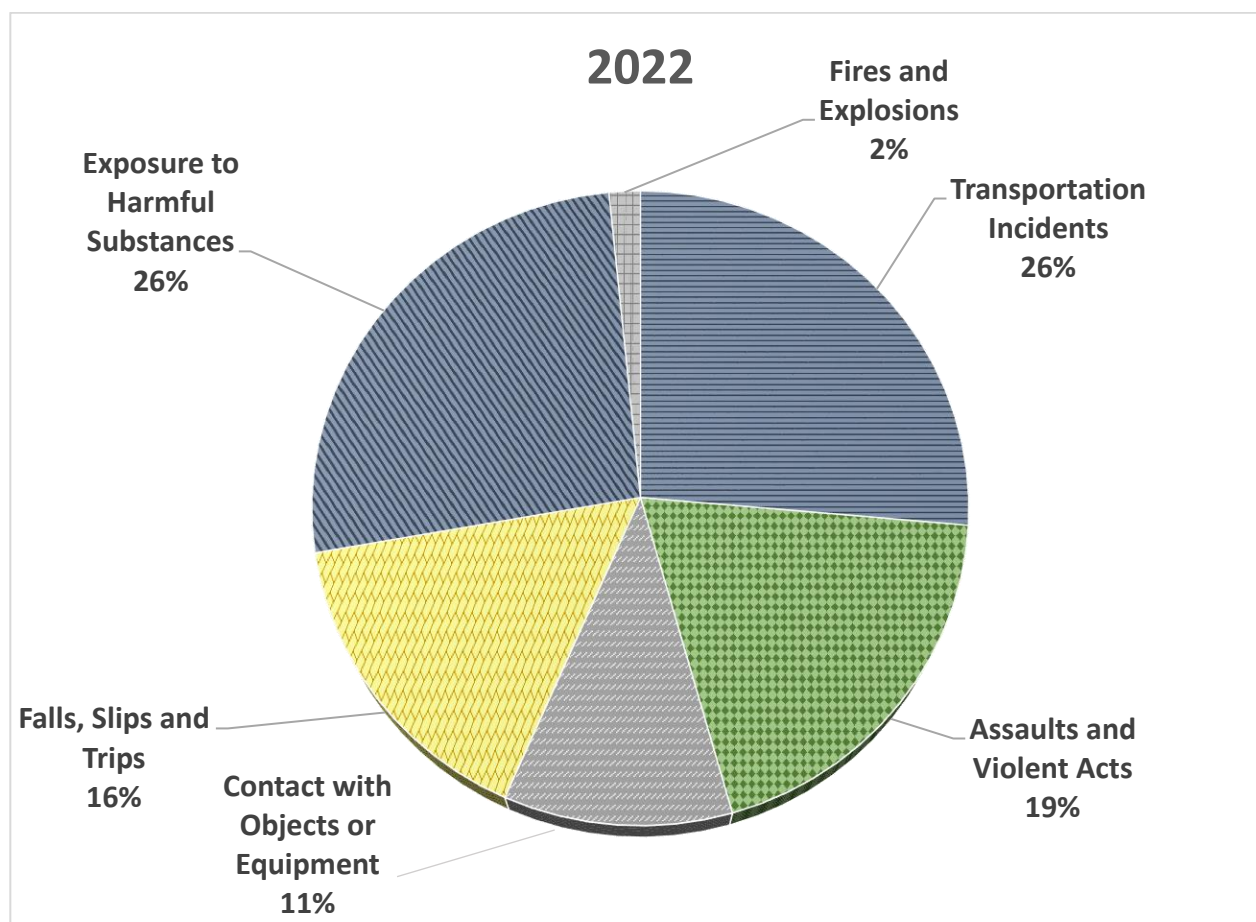


Figure 7c2. California Fatal Occupational Injuries Within the Scope of CFOI, by Event, Percentage of total (2022)



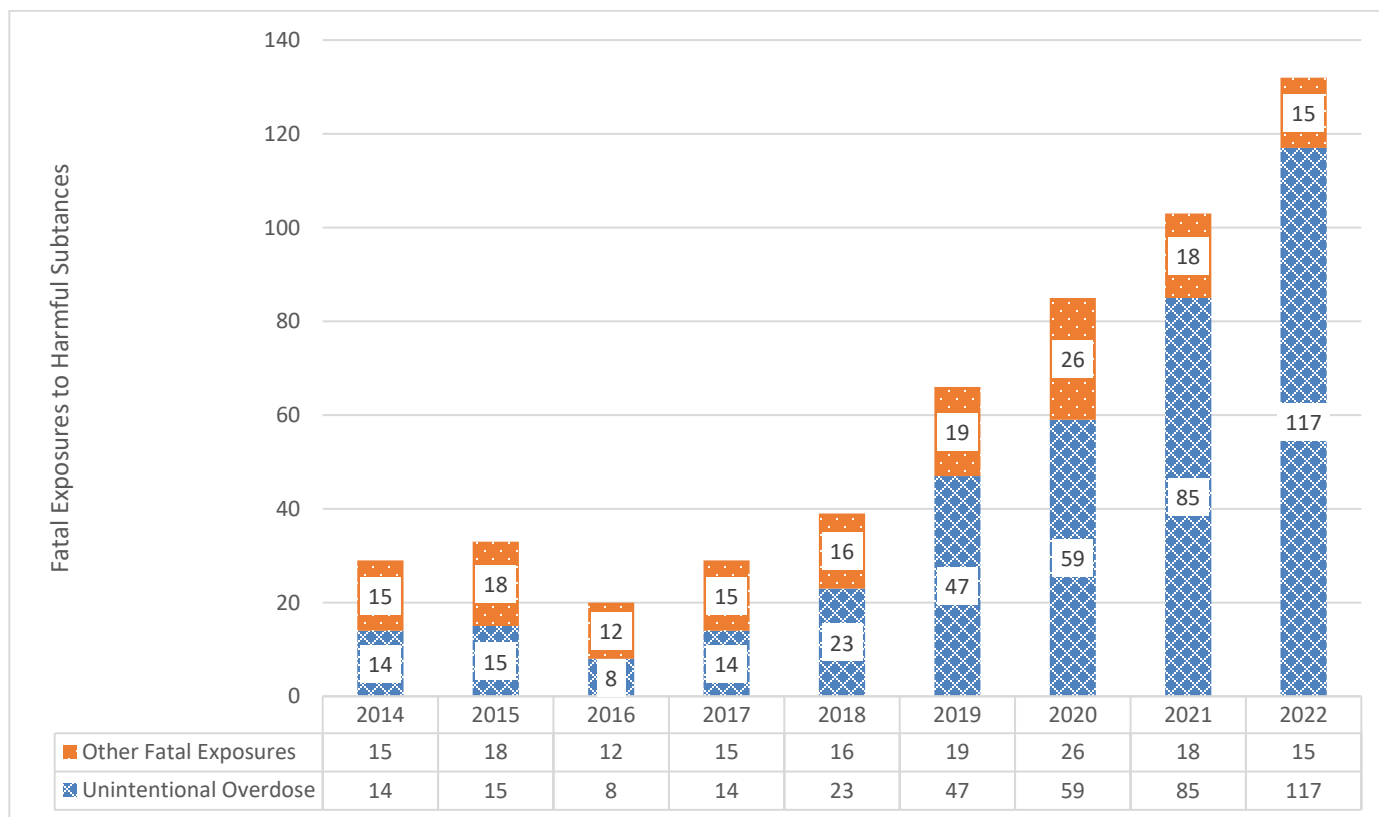
### Fatal Exposure to Harmful Substances

The largest recent increase in fatalities by event occurred among those fatally exposed to harmful substances. This sharp increase began in 2018 and has continued through 2022, when such deaths rose from 39 in 2018 to 66 in 2019, 85 in 2020, 103 in 2021, and 132 in 2022. Much of that increase in fatal exposures, however, was reported as drug or alcohol overdoses. In 2018, 23 of 39 fatal occupational injuries from exposures to harmful substances were from unintentional overdoses, while in 2019, 47 of 66 were so categorized. By 2020, 59 (69%) of these 85 these injuries, and in 2021, 85 (83%) of these 103 fatalities from exposure to harmful substances were from unintentional overdoses that occurred at work. In 2022, 117 (89%) of the 132 fatal exposures were reported as unintentional overdoses that occurred at work (Figure 8a).

3

<sup>3</sup> CFOI. TABLE A-9. Fatal occupational injuries by event or exposure for all fatal injuries and major private industry<sup>1</sup> sector, California. See, for 2022, [https://www.dir.ca.gov/DOSH/cfoi/CFOI\\_2022/cfoi2022-A-9.pdf](https://www.dir.ca.gov/DOSH/cfoi/CFOI_2022/cfoi2022-A-9.pdf). The column “total fatal injuries (number)” is not limited to private industry.

Figure 8a. California Fatal Unintentional Overdoses and Other Fatal Exposures to Harmful Substances Within the Scope of CFOI (2014–2022)



The proportion of overall fatalities within the scope of CFOI which resulted from unintentional overdoses has recently increased rapidly. From 2014 to 2022, the reported number of unintentional overdoses rose from 4% to 23% of all fatalities in California within the scope of CFOI (Figure 8b). The fatal exposure and unintentional overdose fatalities are generally in line with the spread of all fatalities across industries in California, with most of these types of fatalities occurring in Trade, Transportation, and Utilities (31 in 2022), Construction (19 in 2022), and Professional and Business Services (16 in 2022) (Figure 8c). As a percentage of all fatalities in each industry in 2022, fatal exposure and unintentional overdose fatalities comprise 22% of all fatalities in Trade, Transportation, and Utilities, 24% in Construction, and 21% in Professional and Business Services. Leisure and Hospitality stands out as particularly impacted by the dramatic increase in fatal exposure and unintentional overdose fatalities, comprising 50% of all fatalities in that industry in 2020 and 2021, and 29% in 2022 (Figure 8d).

According to BLS, there were 525 unintentional overdose workplace fatalities in the United States in 2022, or 10% of all workplace fatalities for that year.<sup>4</sup> Reported unintentional overdose

<sup>4</sup> <https://www.bls.gov/news.release/pdf/cfoi.pdf>



fatalities in the workplace in California contributed to 22% of all workplace unintentional overdose fatalities in the United States for 2022.

Figure 8b. California Fatal Unintentional Overdoses as a Percentage of All Fatalities Within the Scope of CFOI (2014–2022)

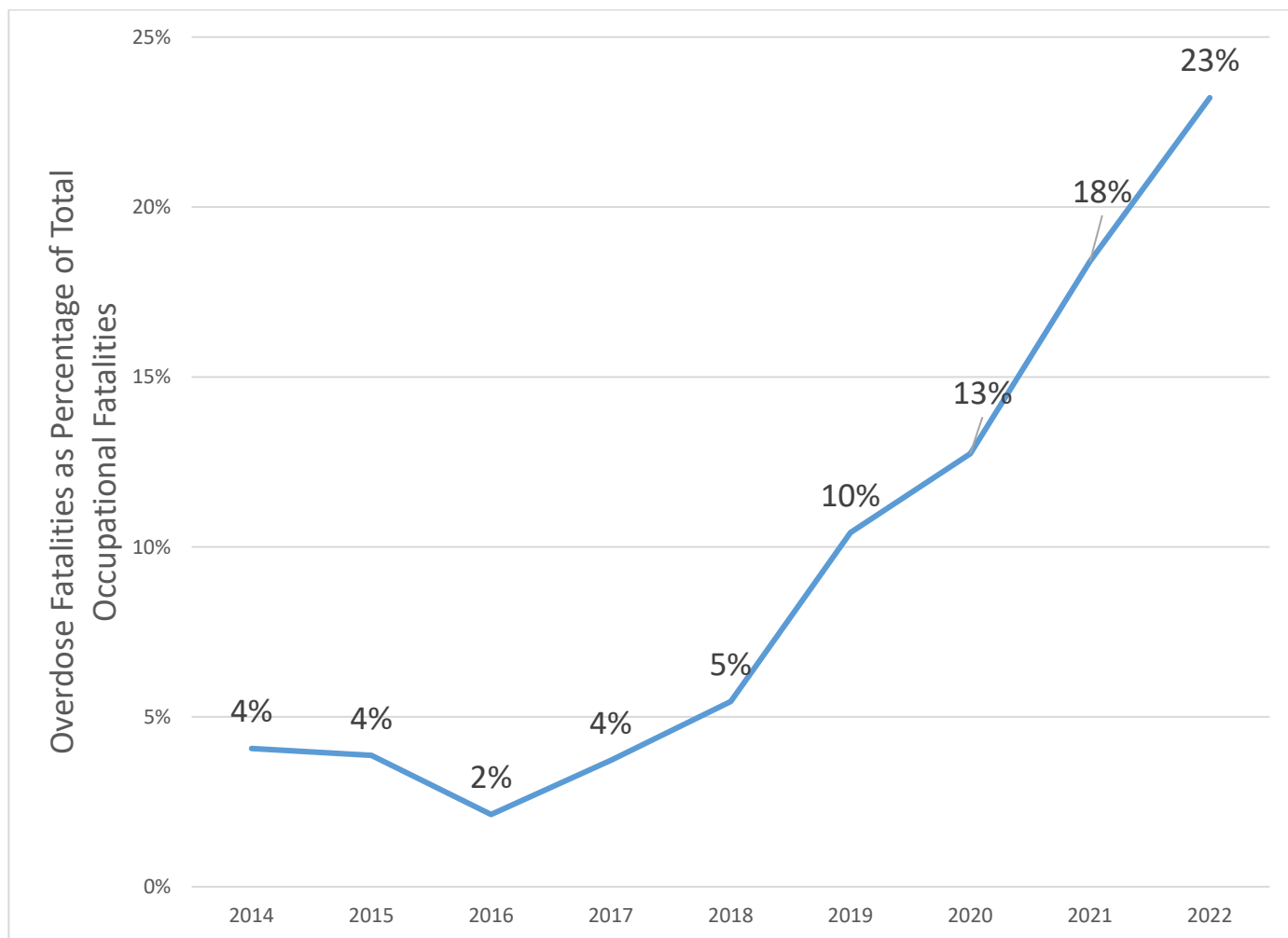


Figure 8c. California Fatal Unintentional Overdoses and Other Fatal Exposures to Harmful Substances by Industry (2020–2022)

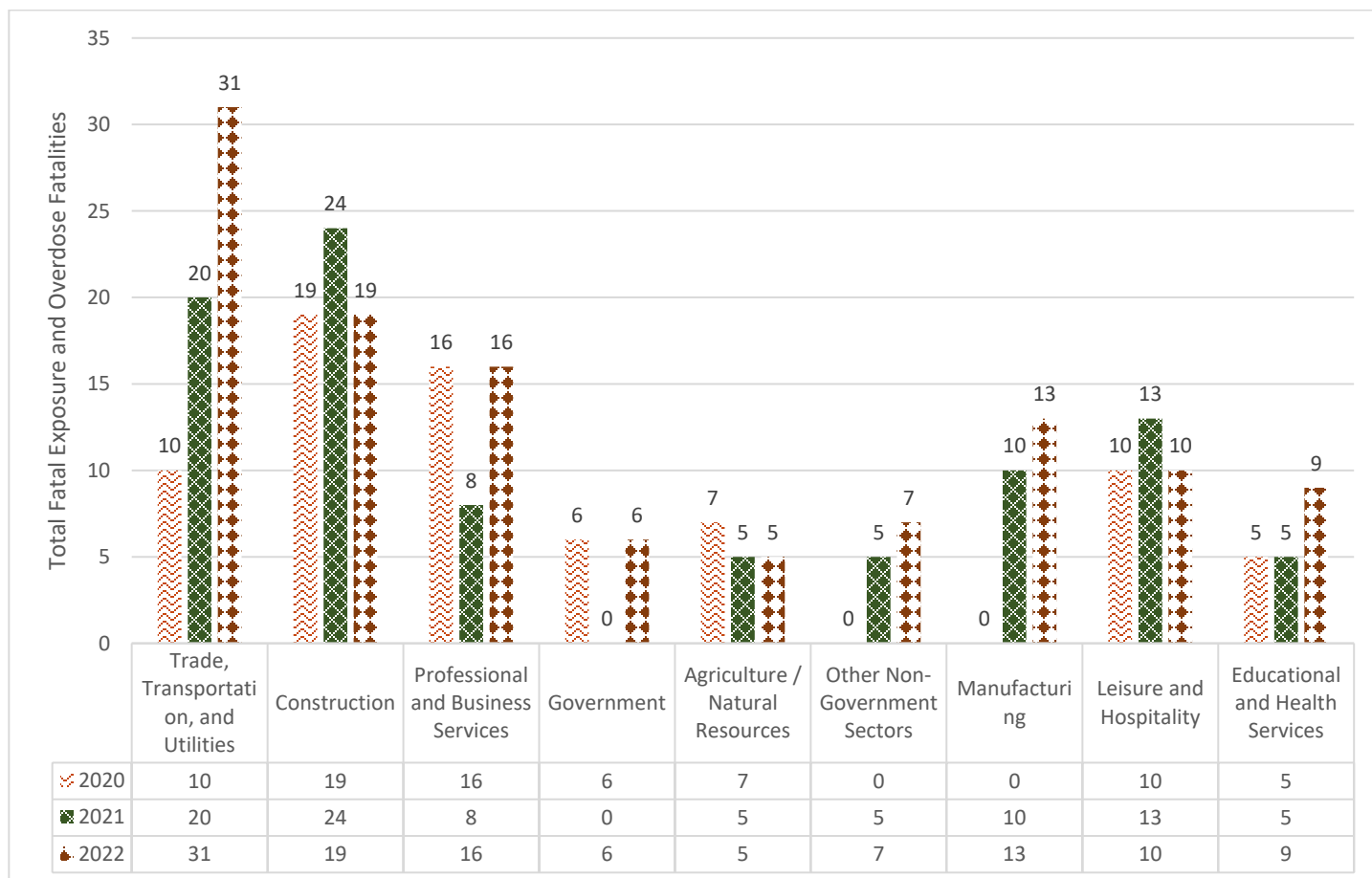
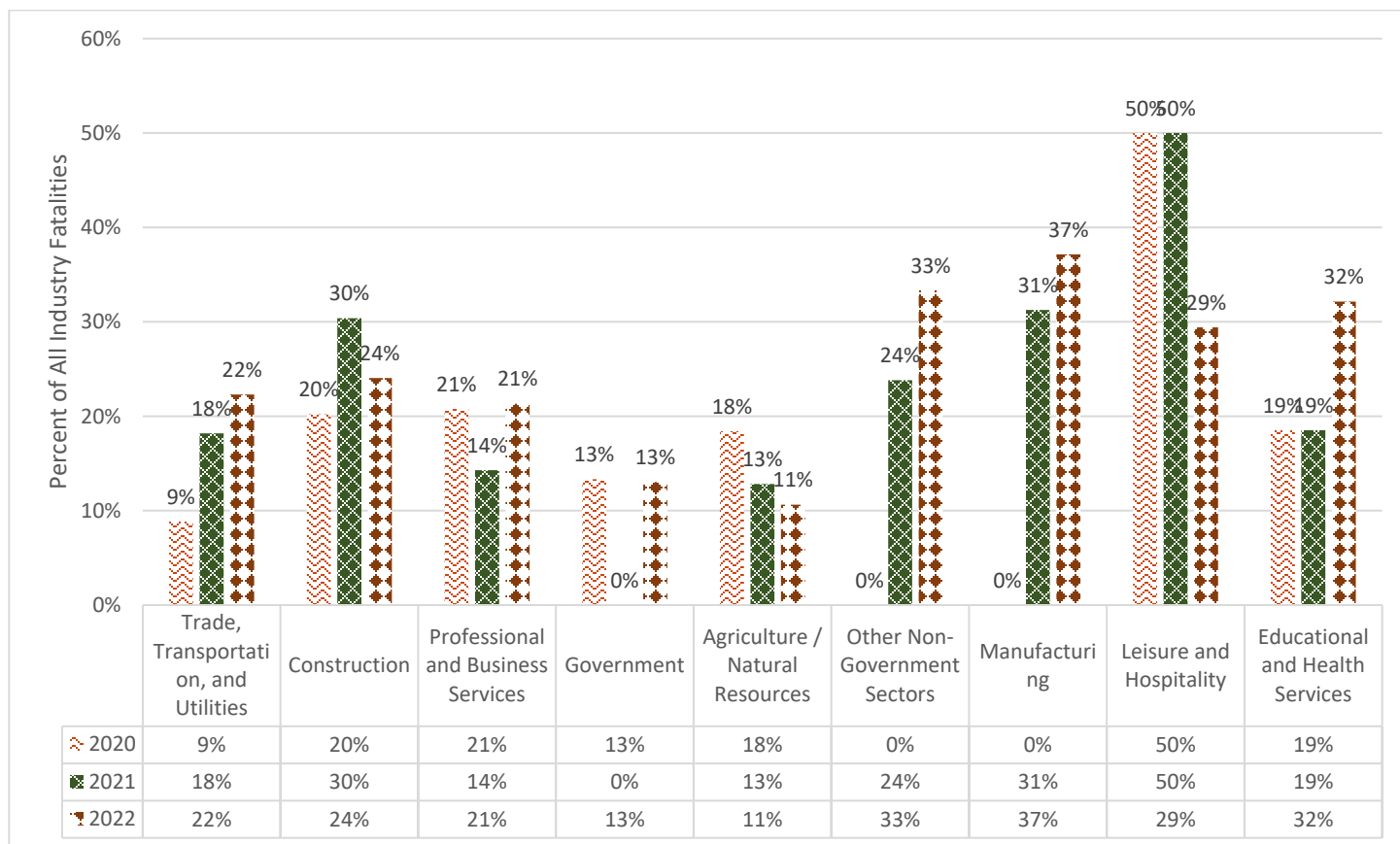


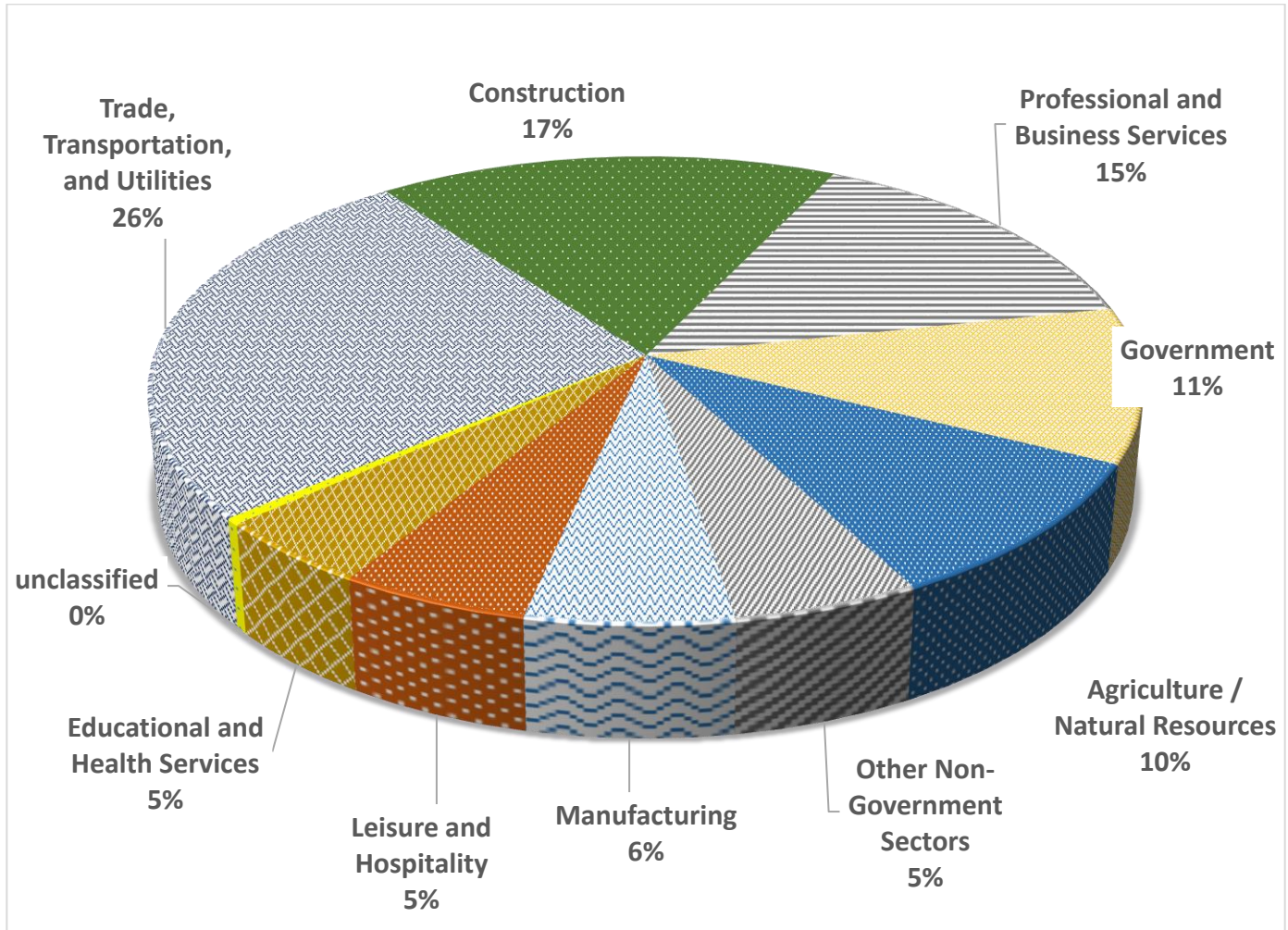
Figure 8d. California Fatal Unintentional Overdoses and Other Fatal Exposures to Harmful Substances as Percentage of All Industry (2020-2022)



## Industry

The figures below show totals (Figure 9a) and trends (Figure 9b) in California work injury fatalities by industry for years 2013-2022.

Figure 9a. California Fatal Occupational Injuries Within the Scope of CFOI, by Industry Group (2013–2022 totals)



The trade, transportation, and utilities (TTU) industry had the highest number of fatalities during each of the past seven years, averaging over 100 occupational deaths annually, or one-fourth of cases. From 2013 to 2021, this sector accounted for 1,077 deaths. In 2022, TTU accounted for 139 fatalities, with 47 deaths from transportation incidents and 9 from falls, slips and trips. In 2021, the death toll in TTU was 110. Fifty-one fatalities were in transportation incidents, 20 were exposure to harmful substances or environment, 19 were violence and other injuries by persons or animals, 12 were contact with objects and equipment, and in falls, slips and trips.

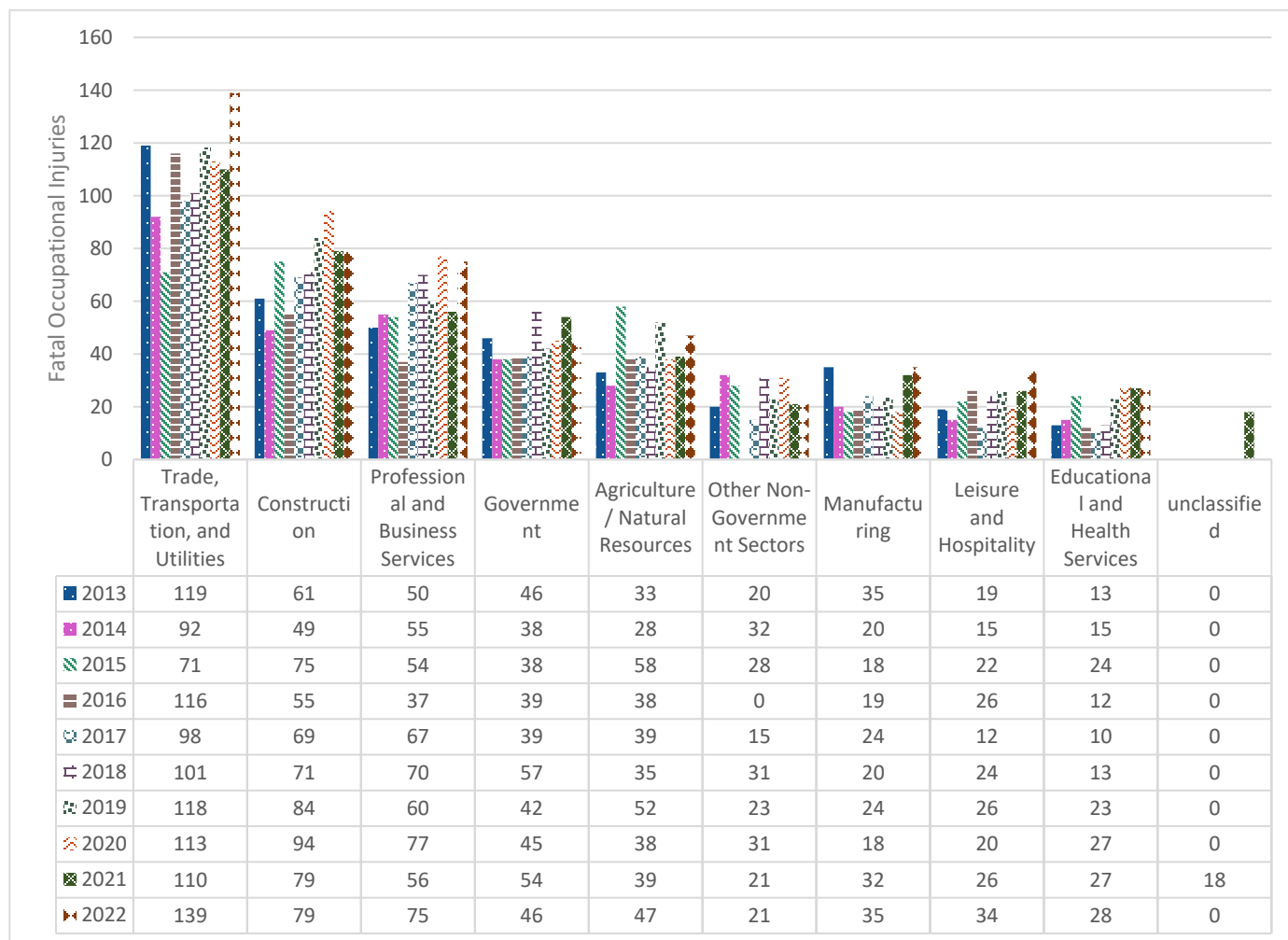
The construction industry had the next highest number of fatalities with 716 fatalities (17%) for the 2013-2022 period. During this period, construction fatalities peaked at 94 fatalities in 2020, with 37 from falls, slips, and trips, 19 from exposure to harmful substances, or environments, and 17 fatalities in transportation incidents. Construction fatalities fell to 79 in 2021, with 33 from falls, slips and trips, 24 from exposure to harmful substances or environments, and 10 fatalities in transportation incidents. Construction fatalities remained at 79 in 2022, with 29 from falls, slips and trips, 19 from exposure to harmful substances or environments, and 11 transportation incidents.

Professional and business services, including accountants, lawyers, engineers, computer programmers, consultants, and researchers, accounted for 601 deaths (14% of total) in the 2013-2022 years. There were 75 fatalities in this occupation category in 2022, up from 56 cases in 2021.

The manufacturing industry had 245 fatalities in the 2013–2022 period. In 2020, 18 manufacturing workers were fatally injured, with five from contact with objects, four from workplace violence, and three in transportation incidents. In 2021, 32 workers in manufacturing died of injuries on the job, 10 from exposure to harmful substances, 6 from transportation incidents and 5 from falls to a lower level. In 2022, 35 workers in manufacturing were fatally injured, 13 of those from exposure to harmful substances, 8 from contact with objects and equipment, 6 from transportation incidents, and 4 from violence and other injuries by persons or animals.

The leisure and hospitality industry accounted for 224 deaths during the 2013-2022 period. In 2020, 20 workers were fatally injured, with half of those from exposure to harmful substances or environments. The number of workers fatally injured in this industry rose to 26 in 2021, and again to 34 in 2022.

Figure 9b. California Fatal Occupational Injuries Within the Scope of CFOI, by Industry Group by Year (2013-22)



### Fatality Rate by Industry

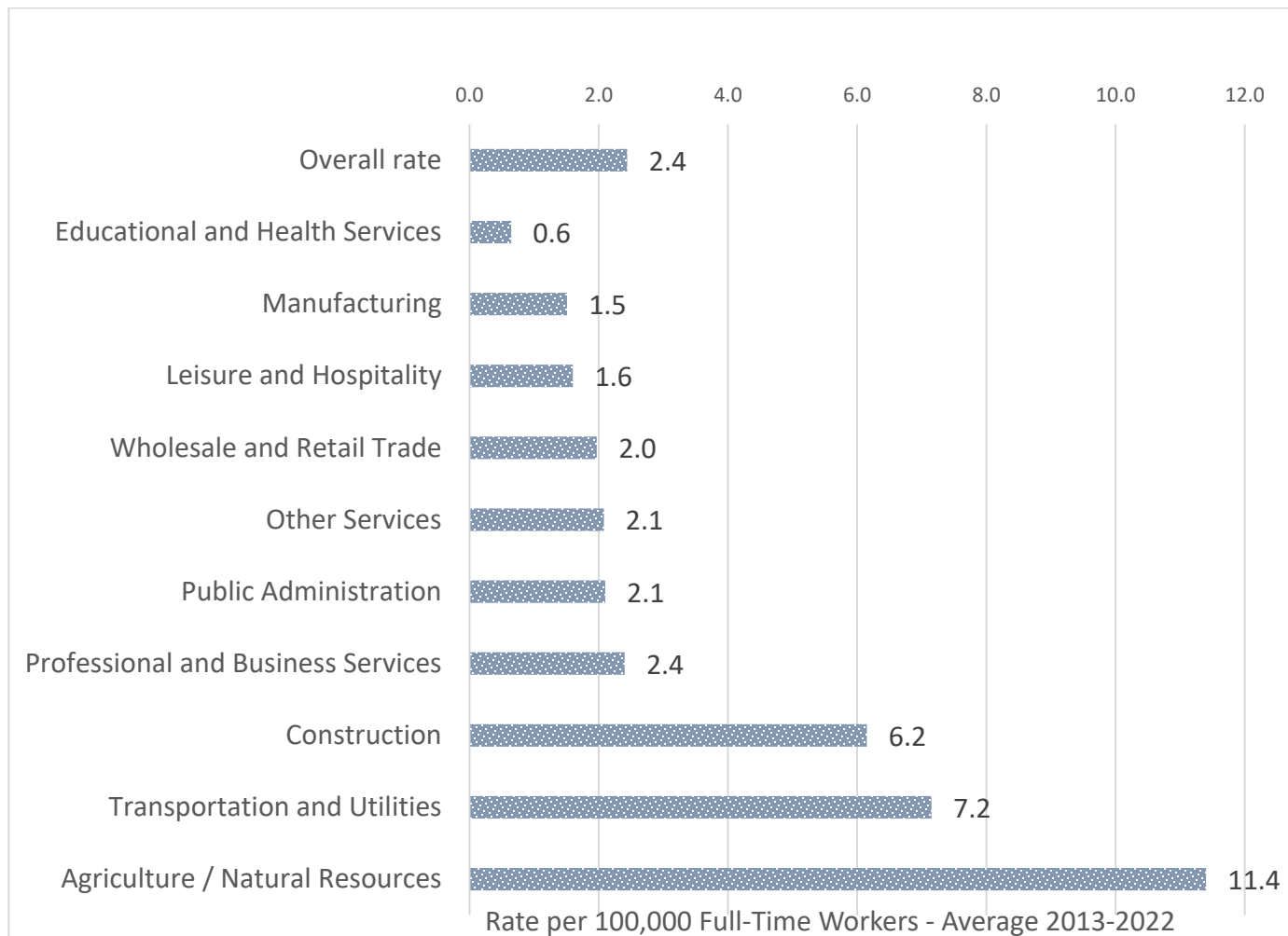
Hazardous industries are identified by analyzing fatality rates. Fatal injury rates depict the risk of incurring a fatal work injury for workers in a given worker group, expressed as the number of fatal injuries per 100,000 full-time equivalent workers. This allows risks to be compared among different worker groups. To produce a fatal injury rate for an industry, the number of fatal work injuries in a given industry is divided by the total hours worked in that industrial sector and multiplied by 200,000,000 (the base for 100,000 equivalent full-time workers working 40 hours per week, 50 weeks per year).

CFOI publishes data on fatal injury rates by industry. The average fatality rate for California by industry for 2013–2022 is shown below as 2.4 fatalities per 100,000 full-time workers.

Agriculture, with an average rate of 11.4 fatalities per 100,000 workers, had the highest fatality

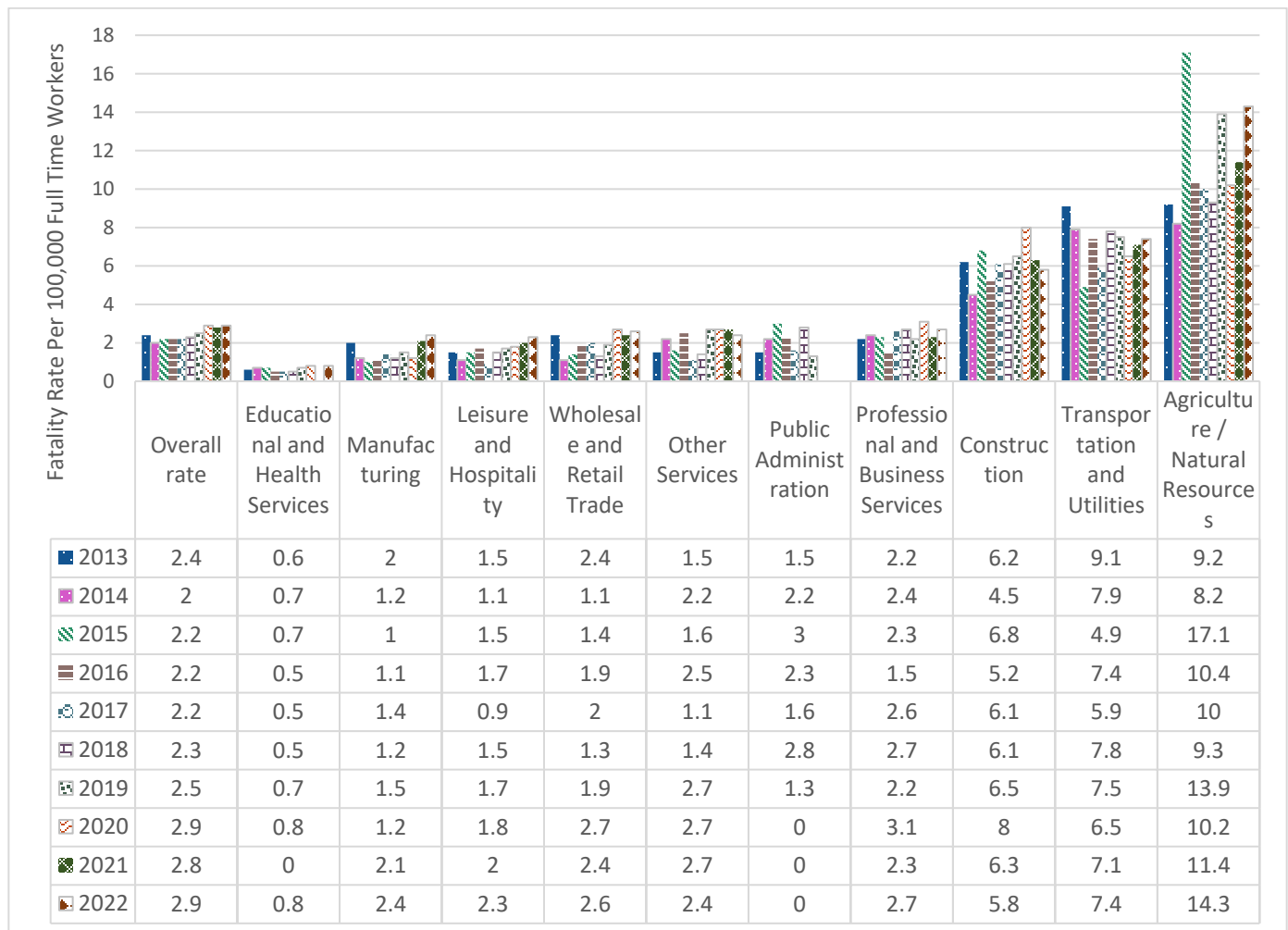
rate over the past ten years. The transportation and utilities (7.2 per 100,000) and construction (6.2 fatalities per 100,000) industries also generated high fatality rates. (Figure 9a)

Figure 10a. California Average Rate of Fatalities Within the Scope of CFOI, by Industry (2013–2022, per 100,000 workers)



Note: Data not available for Public Administration (2020-2022) and Education and Health Services (2021).

Figure 10b. California Fatality Rate Within the Scope of CFOI, by Industry by Year (2013–2022, per 100,000 workers)



(NOTE: Blank values in table indicates no data reported or data that do not meet publication criteria.)

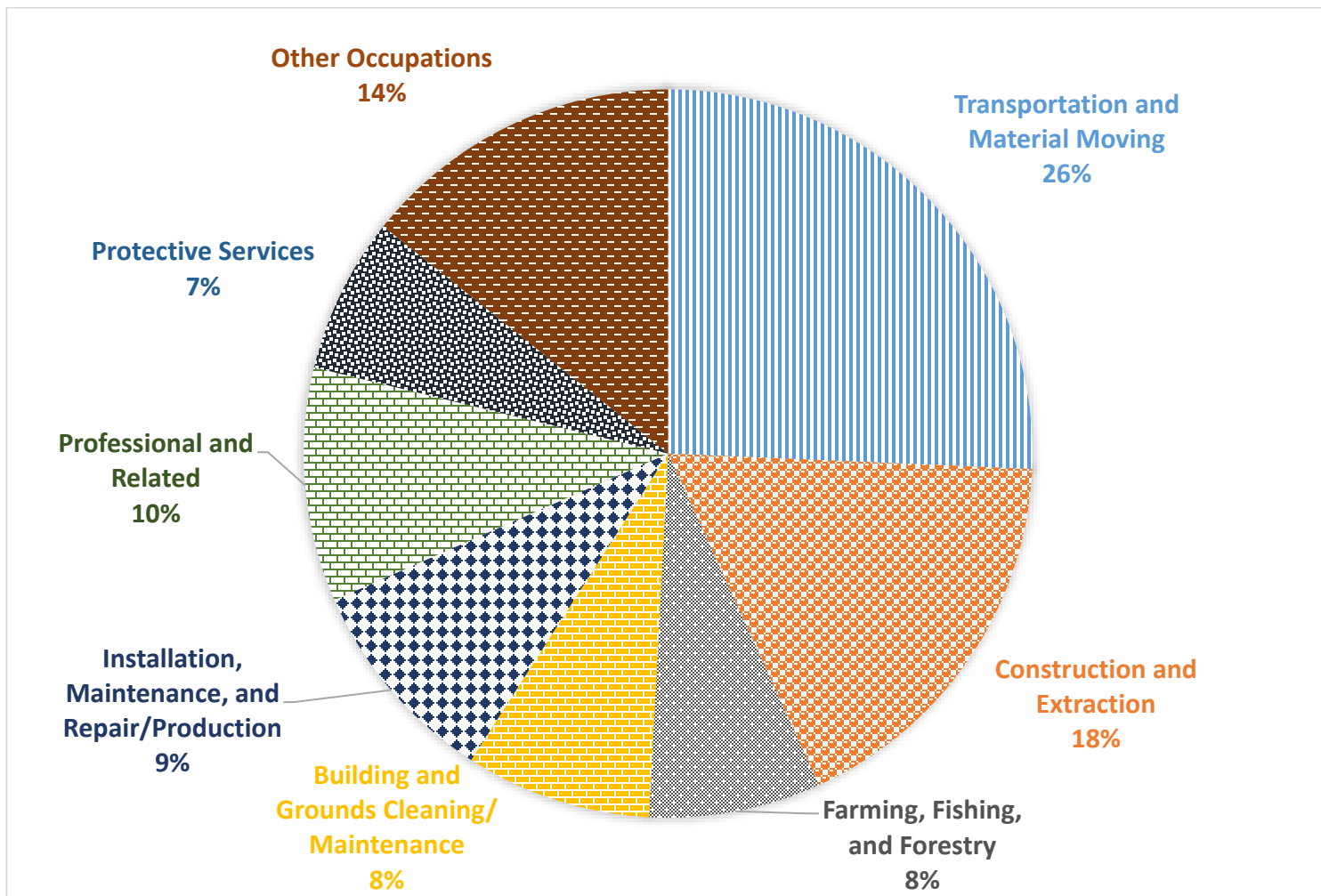
On average, 2.4 workers per 100,000 in California were killed on the job each year over the 2013-2022 period. Three industries in California show high rates of worker deaths: agriculture, transportation and utilities, and construction. The fatality rate in the agriculture industry has exceeded 10 workers per 100,000 from 2015-2017 and again in 2017-2022. During the same period, the fatality rates for the transportation industry averaged 7.2 per 100,000 workers, while in construction, the rate averaged 6.2 over the 2013-22 period.



## Occupation Groups

Twenty six percent of occupational fatalities over the period of 2013–2022 involved transportation and material moving occupations, including truck drivers. Construction and extraction occupations have the next highest share, with 18% of cases, followed by professional and related occupations, agricultural occupations (farming, fishing and forestry), installation, maintenance, and repair occupations. Building and grounds cleaning and maintenance workers accounted for 8% (Figures 11a and 11b).

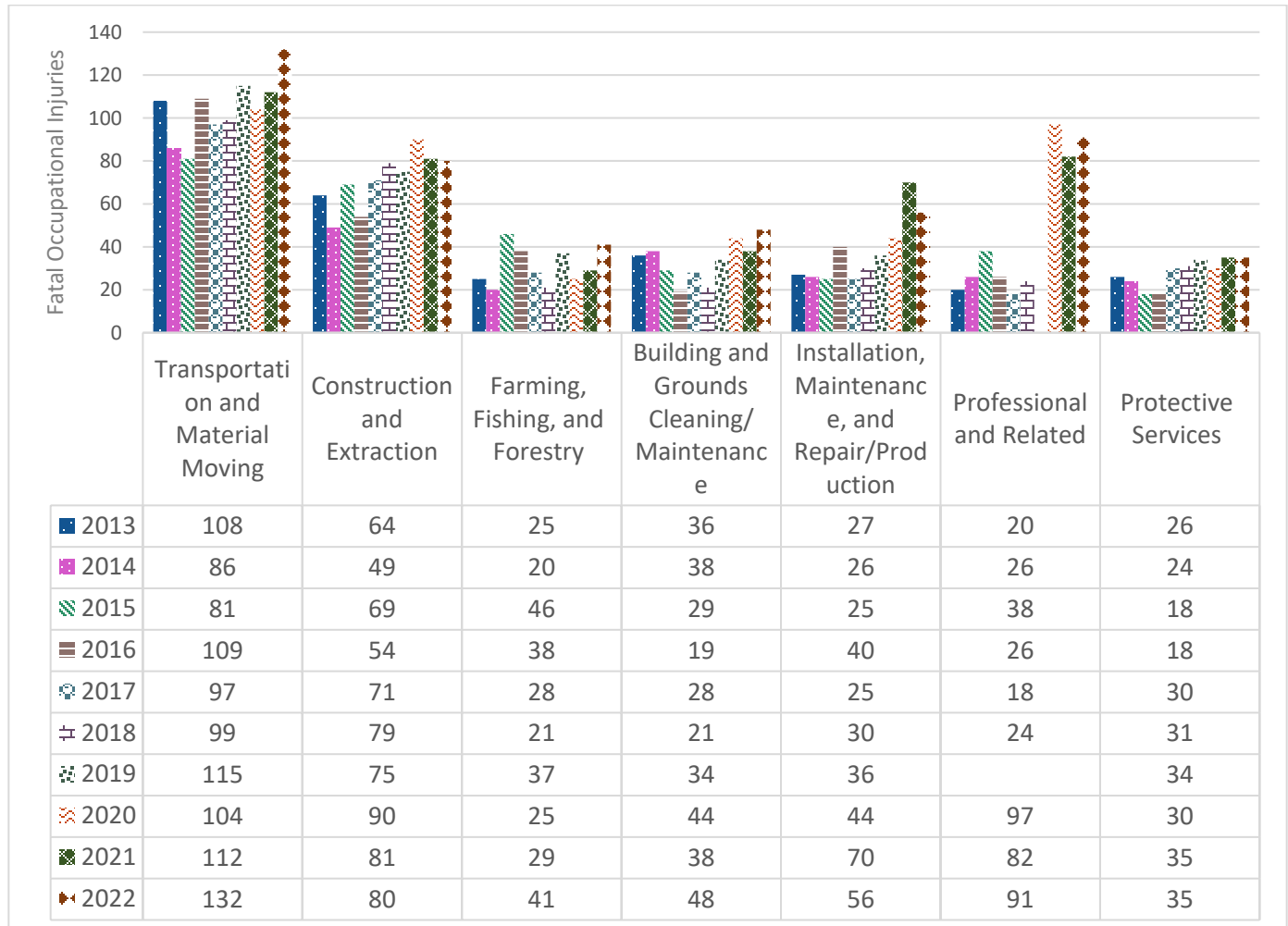
Figure 11a. Distribution of California Fatal Occupational Injuries Within the Scope of CFOI, by Occupation Group (2013–2022)



Fatal injuries occurred throughout all types of work. Of the 4,182 worker injury fatalities since 2013, over 1,000 transportation and material moving workers have been fatally injured on the job. In the construction and extraction industries, 712 have died. Another 379 have died as installation and repair workers, and 310 in farming, fishing, or forestry occupations. Other

fatalities include professional and related workers (422), buildings and grounds cleaning or maintenance workers (335), and protective services workers (281).

Figure 11b California Fatal Occupational Injuries Within the Scope of CFOI, by Selected Occupation Group (2013-2022)



In 2020, among the 104 transportation worker fatalities, 56 were transportation incidents, while 13 involved workplace violence, and another 13 were from falls, slips and trips. In 2021, 112 transportation and material moving workers were fatally injured. Sixty-six deaths were from transportation incidents, 17 were ascribed to harmful substances (9 drivers and 8 material movers and laborers). In 2022, of the 132 transportation and material moving workers fatally injured, 57 were from transportation incidents, 30 were from exposure to harmful substances or environments, 20 were from contact with objects and equipment, 17 were from violence and other injuries by person or animals, and 8 were falls, slips, and trips.

## Summary

The Census of Fatal Occupational Injuries (CFOI) compiles a count of fatal work-related injuries in the U.S. during each calendar year. The CFOI Program for California, administered jointly by California's Division of Occupational Safety and Health within the Department of Industrial Relations and the U.S. Bureau of Labor Statistics, uses diverse state, federal, and independent data sources to identify, verify, and describe fatal work-related injuries.<sup>5</sup>

For many years after 1999, when over 600 workers died from on-the-job injuries, fatal occupational injuries in California were on a downward trend. From 2010 to 2017, the number of such fatalities was below 400 every year. During the past four years, however, numbers have risen. In 2018, there were 422 fatal occupational injuries in California. The number of fatalities rose again in 2019 to 451, or an average of nine deaths a week in the state. In 2020, the number rose again to 463 and in 2021, 462 fatalities were recorded. In 2022 California recorded 504 fatal occupational injuries, the highest since 2006 when 537 were recorded. One of the fastest growing causes of death in recent years was unintentional overdoses that occurred at the workplace. In 2015, 15 persons were recorded as dying at work from unintentional overdose: approximately 4 percent of the total state toll. By 2020, this figure reached 59 deaths 13% of all fatalities within the scope of CFOI, in 2021 the number again grew to 85 or over 18% of fatalities, and in 2022 the number of unintentional overdoses increased dramatically to 117, or 24% of all fatalities.

Overall, California's rate of fatal injury, the number of fatalities per 100,000 workers, remains consistently below the national average. California's rate has been below three fatal injuries per 100,000 workers in every year since 2002, with the exception of 2006. California's rate of fatal injury is nonetheless rising, and the difference between the state and national rate has diminished. Rates for the U.S. have stabilized around 3.5 per 100,000 workers throughout the last half decade. From 2015 to 2017, the California rate was stable at 2.2, but in 2018 it rose to 2.3 and then to 2.5 fatalities per 100,000 workers in 2019. Fatalities per 100,000 workers in California was 2.9 in 2020, dropping slightly to 2.8 in 2021, but rose again to 2.9 per 100,000 workers in 2022.

Over the entirety of the ten-year period (2013-2022) covered by this report, an average of 2.4 workers per 100,000 in California were involved in fatal incidents on the job each year. Agriculture consistently had the highest fatality rate, followed by transportation and utilities, and construction. The fatality rate in the agriculture industry rose nearly 50% in 2019 over the prior year, then fell back somewhat in 2020 before rising again in 2021 and 2022. The wholesale and retail trade industry fatality rates rose sharply, from 1.9 per 100,000 workers to 2.7 fatalities in 2020, then lowered to 2.4 in 2021 before rising again to 2.6 in 2022.

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<sup>5</sup> Starting with the release of 2019 CFOI data, the Bureau of Labor Statistics (BLS) implemented new disclosure rules to protect confidential data from secondary disclosure. There has been a reduction in the detail that can be published compared to prior years.

The distribution of fatal occupational injuries by age remains relatively constant over the 2013-21 period, with fatalities among those over age 45 each year ranging between 53 and 58% of the total.

The causes of occupational injury fatalities have stayed relatively constant in past years, with one exception, the addition of increasing numbers of overdoses and exposures to harmful substances at work. Transportation Incidents comprise 26% of all occupational fatalities over the 2013-2022 period. Fatal injuries due to assaults and violent acts, and falls, slips, and trips accounted for nearly 20%. In addition to the change in the number of people fatally exposed to harmful substances—including overdoses, as stated above—there was also a large increase between 2019 and 2020 in falls, slips, and trips (from 88 to 99 fatalities, the most recorded since at least 2013). This figure went back closer to the long-term average in 2021 and remained so in 2022.

By industry, the trade, transportation, and utilities sector had the highest number of fatalities during 2013-2022 averaging over 100 occupational deaths or more than a quarter of all cases per year. The construction industry had the next highest number of fatalities, averaging over 70 fatalities per year.

The fatality rate (ratio of fatalities with the at-risk populations) provides a different view: the death rate per 100,000 workers was highest by far in agriculture, followed by transportation and utilities, and then construction. Each of these industries had rates 2 to 4 times as high as the state's average rate.

Although California has maintained a lower fatality rate than the national average, over the course of many years, the CFOI data provides an opportunity to respond to emerging trends and the rising overall fatality rates of the last few years.

## 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 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](http://www.bls.gov/opub/hom/pdf/homch9.pdf).

Data compiled by the CFOI Program are issued annually for the preceding calendar year. This data can be used by safety and health policy analysts and researchers to help prevent fatal work injuries in these 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](http://www.bls.gov/iif/oshcfoi1.htm#rates). Complete state rates can be found at [www.bls.gov/iif/oshstate.htm](http://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#q17](http://www.bls.gov/iif/oshfaq1.htm#q17) for more information on how rates are calculated and caveats for comparison.

**Note:** For 2019, starting with the release of 2019 CFOI data, BLS implemented new disclosure rules to protect confidential data from secondary disclosure. There has been a significant reduction in the detail that can be published compared to prior years. For instance, no data on month or quarter of injury in 2019 was available for this report.

Note: COVID-19 and the Census of Fatal Occupational Injuries

CFOI reports fatal workplace injuries only. These may include fatal workplace injuries complicated by an illness such as COVID-19. Fatal workplace illnesses not precipitated by an injury are not within the scope of CFOI. CFOI reports no illness-related information, including COVID-19. Additional information is available online from [bls.gov](http://bls.gov): Effects of COVID-19 Pandemic on Workplace Injuries and Illnesses, Compensation, Occupational Requirements, and Work Stoppages Statistics : U.S. Bureau of Labor Statistics can be found here:

[www.bls.gov/covid19/effects-of-covid-19-on-workplace-injuries-and-illnesses-compensation-and-occupational-requirements.htm](https://www.bls.gov/covid19/effects-of-covid-19-on-workplace-injuries-and-illnesses-compensation-and-occupational-requirements.htm).