

STATISTICAL REPORT NOTIFIED FATALITIES

JULY 2004 TO JUNE 2005



Australian Government
Australian Safety and Compensation Council

SUMMARY

This report provides an analysis of data on work-related deaths notified to OHS jurisdictions under their OHS legislation during the period 1 July 2004 to 30 June 2005.

During this period:

- > There were 139 notified work-related fatalities: comprising 127 workers and 12 bystanders (see Table 1).
- > Most of the fatalities were male (129), 10 were female. Of the bystander fatalities, 5 were female and 7 were male.
- > Almost one-quarter (24%) of all worker fatalities of known age were aged 55 years or older, although workers in this age group comprise 13% of employed Australians.
- > Slightly more than one-quarter (29%) of all notified work-related fatalities occurred at a workplace primarily engaged in *Agriculture, forestry and fishing*. A further 15% occurred in a workplace related to the *Transport and storage* industry, and 14% in a workplace related to the *Construction* industry.
- > There were 30 notified work-related fatalities involving *Vehicle accidents*, 14 on public roads and 16 on other types of roads or sites. Five of the 30 fatalities were bystanders (see Table 1). Since some work-related road traffic fatalities are not notified to OHS jurisdictions, the figures presented in this report are likely to under-report their occurrence.
- > *Crushing* (27 fatalities), *Falls from a height* (18 fatalities), *Being hit by a falling object* (16 fatalities), and *Electrocution* (15 fatalities) were the most common causes of work-related fatalities other than *Vehicle accidents*.

Table 1 Notified fatalities—Australia July 2004 to June 2005

Place of fatality	Worker	Bystander	Total
At workplace	102	7	109
Vehicle accident			
on public road	11	3	14
on other roads/sites	14	2	16
Total	127	12	139

BACKGROUND INFORMATION

The Australian Safety and Compensation Council (ASCC - formerly NOHSC) began collecting notifications of work-related fatalities from Australian OHS authorities on 1 July 2003, with the aim of providing more timely information on work-related fatalities in Australia. These notifications cover workers (employees and self-employed) and bystanders who suffered a fatal injury at work or as the result of work activity.

This report provides a statistical analysis of the fatality notifications received by the Office of the ASCC for work-related deaths occurring between 1 July 2004 and 30 June 2005. It provides an analysis of the industry, occupation and age of the workers killed.

All Australian OHS legislation requires notification of work-related deaths. However, the definition of a work-related death is not consistent across these legislations. In particular:

- > Several jurisdictions do not include work-related deaths caused by traffic accidents in their notification systems. These fatalities are instead notified to and investigated by the police.
- > Plane crash fatalities are not notified to all jurisdictions. These fatalities are notified to the relevant transport authority.

Table 2 Number of notified fatalities by industry, July 2004 to June 2005

Industry	Industry of workplace			Industry of employer ^a	
	Worker	Bystander	Total	Worker	Incidence rate ^b
Agriculture, forestry and fishing	39	1	40	36	9.8
Transport and storage	21	0	21	18	4.0
Construction	18	1	19	19	2.3
Mining	8	1	9	5	4.7
Government administration and defence	8	0	8	9	2.0
Manufacturing	6	1	7	6	0.6
Cultural and recreational services	5	1	6	5	1.9
Electricity, gas and water supply	4	1	5	2	2.6
Retail trade	2	2	4	3	0.2
Property and business services	4	0	4	4	0.4
Personal and other services	4	0	4	10	2.6
Accommodation, cafes and restaurants	2	1	3	2	0.4
Communication services	0	3	3	0	0.0
Wholesale trade	1	0	1	0	0.0
Education	1	0	1	1	0.1
Health & community services	1	0	1	1	0.1
Finance and insurance	0	0	0	1	0.3
Industry unknown	2	0	2	5	na
Private residence	1	0	1	na	na
Total	127	12	139	127	1.3

a: Industry of employer is not applicable for bystanders.

b: Fatalities per 100 000 workers. Calculated using annual averages of quarterly data (ABS 6291.0.55.001 *Labour Force, Australia, Detailed – Electronic Delivery. Table 05. Employed persons by state and Industry*).

INDUSTRY

Table 2 shows the number of notified work-related fatalities according to the industry of the workplace in which the fatality occurred and the industry of the worker's employer. The industry of workplace identifies the main activity of the site at which the incident leading to the fatality occurred.

The highest number of notified work-related fatalities (40 fatalities) occurred at workplaces primarily engaged in *Agriculture, forestry and fishing*. The other high ranking industries were, in descending order, *Transport and storage* (21 fatalities), *Construction* (19 fatalities) and *Mining* (9 fatalities).

Cross comparison of the industry in which the work-related fatality occurred and the industry of the worker's employer (this cannot be read from Table 2 where the two classifications are independent) shows the greatest discrepancy for the *Transport and Storage* industry. Of the 21 fatalities that occurred in an environment primarily related to the *Transport and storage* industry, 14 were actually working in that industry, while the rest were working in *Personal and other services* (3 fatalities); *Construction* (2 fatalities) and *Retail trade* (1 fatality). There was one fatality where the industry of employer was not stated.

The incidence rate, measured in number of notified work-related fatalities per 100 000 workers, can be used to compare the relative likelihood of work-related fatalities in different industries.

The *Agriculture, forestry and fishing* industry had the highest incidence rate of 9.8 notified work-related fatalities per 100 000 workers. This was followed by *Mining* (4.7 fatalities per 100 000 workers); *Transport and storage* (4.0 fatalities per 100 000 workers); and *Electricity, gas and water supply*; and *Personal and other services* (both with 2.6 fatalities per 100 000 workers). These incidence rates were well above the national incidence rate of 1.3 notified work-related fatalities per 100 000 workers (see Table 2).

A total of 12 bystander fatalities occurred across all industries. **Bystander fatalities** are defined as deaths of members of the public, such as visitors to a workplace or persons, including children, who die as a consequence of another person's work.

Of the 5 bystander fatalities that involved *Vehicle accidents*, 3 were recorded at a workplace primarily involved with *Communication services* and 1 fatality each was recorded at workplaces primarily involved in *Electricity, gas and water supply* and *Cultural and recreational services*.

The 7 bystander fatalities unrelated to *Vehicle accidents* occurred at workplaces involving the following industries: *Retail trade* (2 fatalities); *Agriculture, forestry and fishing*; *Construction*; *Mining*; *Accommodation, cafes and restaurants* and *Manufacturing* (1 fatality each).

OCCUPATION

Figure 1 shows the number of notified work-related fatalities according to the occupation of the worker at the time at which the fatality occurred. Among the 120 fatalities for which occupation was known, the most common occupation group was *Intermediate production and transport workers*, with 37 notified work-related fatalities. This occupation group includes *Mobile and stationary plant operators*; *Machine operators*; and *Road and rail transport drivers*. The second and third most common occupation groups were *Tradespersons and related workers* (29 work-related fatalities) and *Labourers and related workers* (22 work-related fatalities). There were 21 work-related fatalities among *Managers and administrators*, 18 of which were managers of rural properties. Nine of the fatalities among *Managers and administrators* were aged 55 years and over — and all 9 occurred on rural properties.

Figure 1 Number of worker notified fatalities by occupation, July 2004 to June 2005

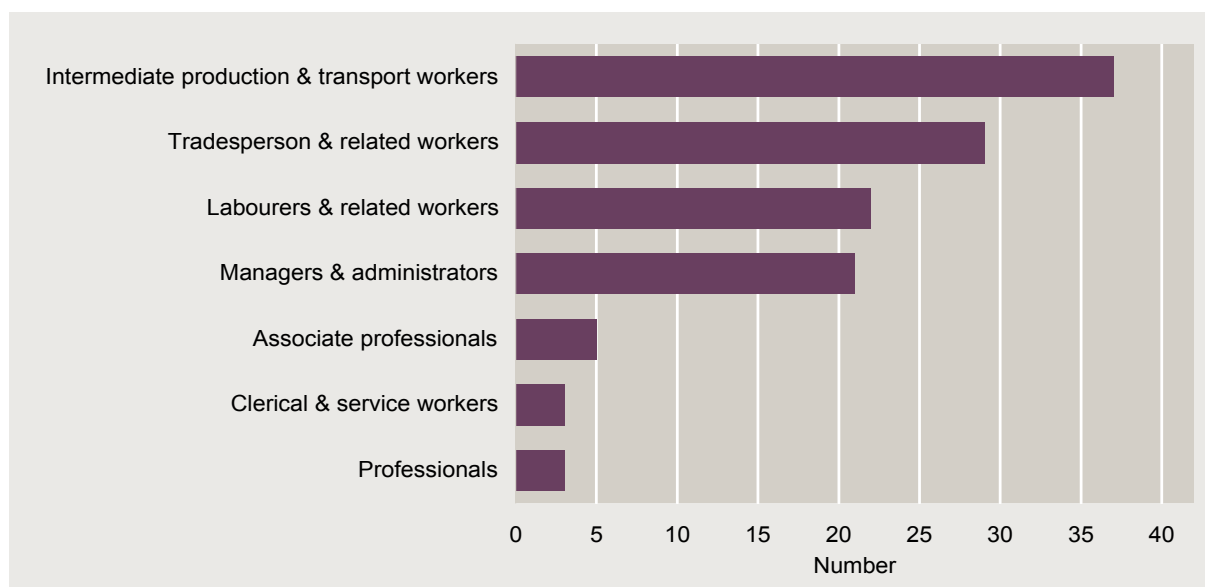
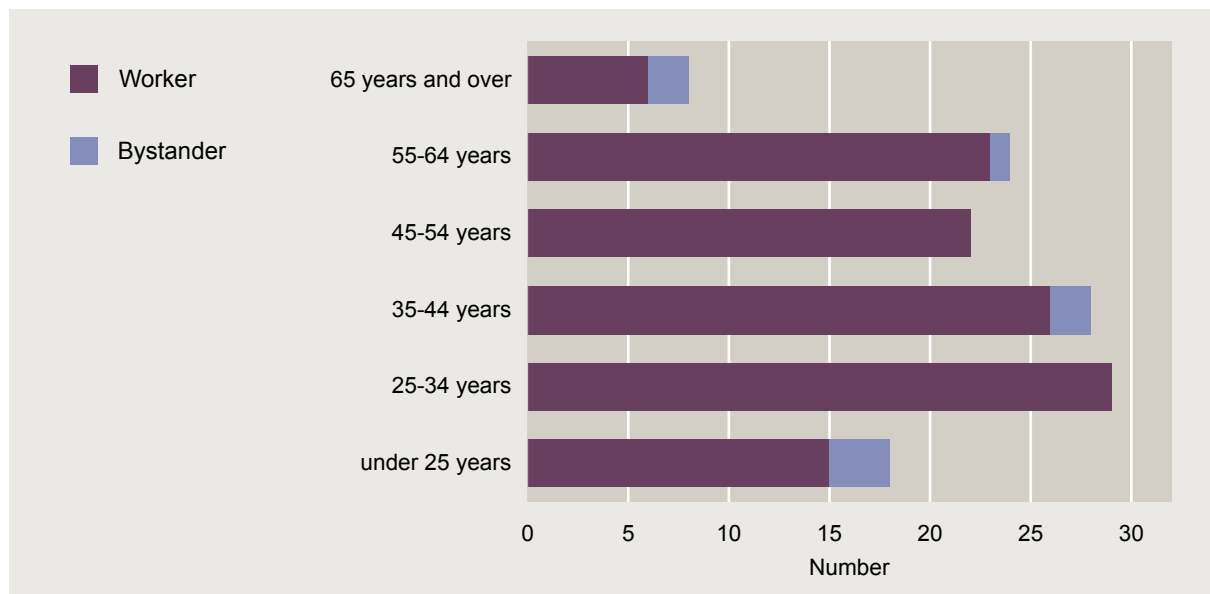




Figure 2 Number of notified fatalities by age, July 2004 to June 2005

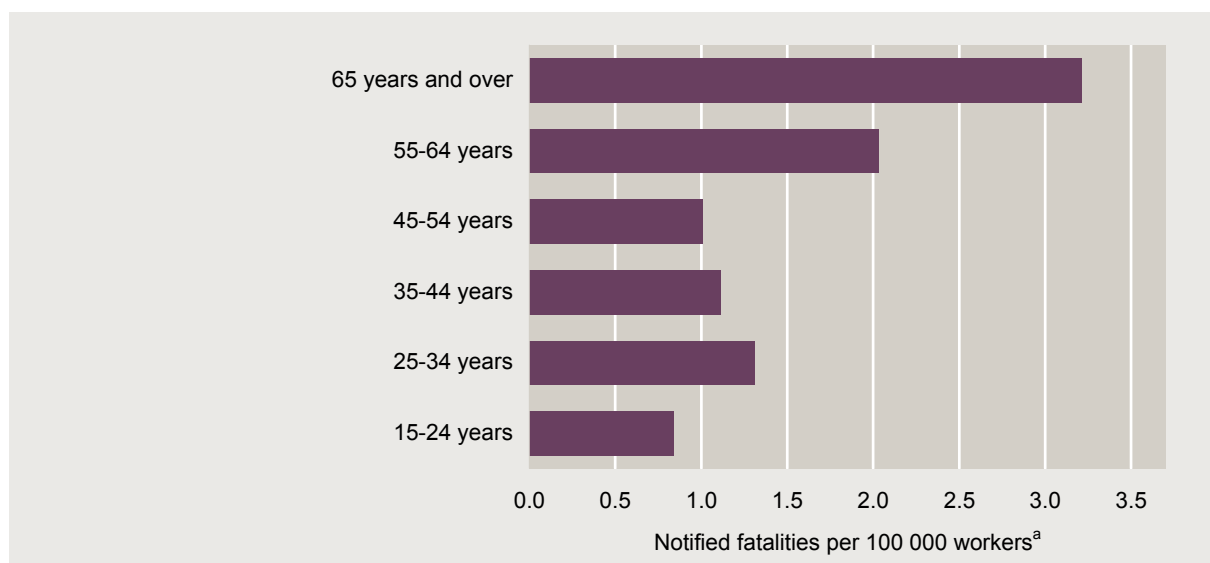


AGE

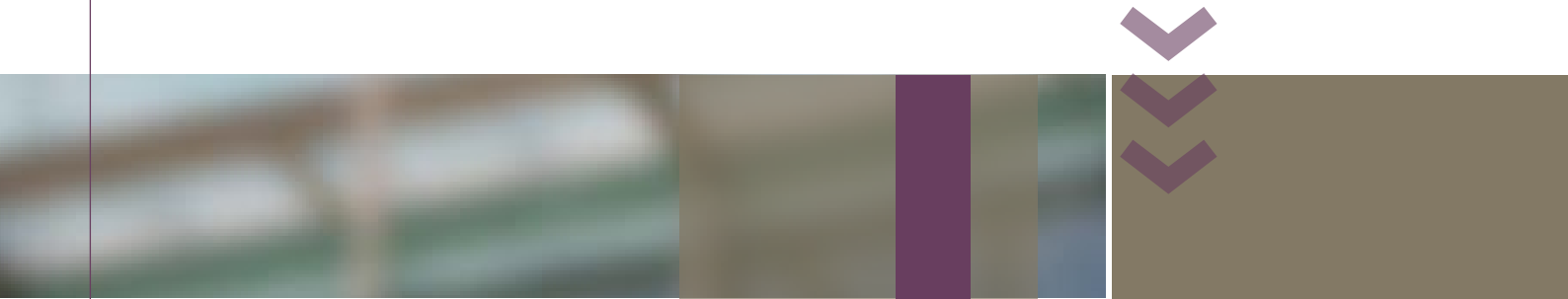
Figure 2 shows the number of notified work-related fatalities according to the age of the worker or bystander. Among the 129 fatalities for which the age of the worker or bystander was known, the most common age was in the range 25-34 years (29 fatalities). The distribution of ages was predictably concentrated in the traditional working ages, with relatively few fatalities of older workers aged 65 years and over. However, the number of fatalities taken in isolation does not give the

full picture of work-related fatality. For example, the 6 fatalities of workers aged 65 years and over compared with the 29 fatalities of workers aged 25-34 may seem to indicate that older workers had a lower risk of fatality. However, since there are relatively few people working when they are aged 65 and over, the 6 fatalities actually represent a high risk of work-related fatality in this age group (see Figure 3).

Figure 3 Incidence rate of worker notified fatalities by age, July 2004 to June 2005



a: The number of workers used in calculating incidence rates are annual averages of monthly figures (ABS 6291.0.55.001 *Labour Force, Australia, Detailed – Electronic Delivery*. Table 01. *Labour force status by social marital status, age and sex*).



To measure the differences in the risk of fatality between workers in each age groups, the number of notified work-related fatalities in each age group can be expressed as a rate against the number of workers in that age group. This incidence rate is measured in fatalities per 100 000 workers. The incidence rates presented in Figure 3 clearly show that notified work-related fatalities were most likely to occur among older workers. The work-related fatality incidence rates for workers aged 55–64 years and 65 years and over were respectively 2.0 and 3.2 fatalities per 100 000 workers. Whereas the youngest workers, those aged 15–24 years, experienced the lowest rate of 0.8 fatalities per 100 000.

The high fatality rates observed among the two oldest age groups, 55–64 years and 65 years and over, were strongly influenced by the fatalities that occurred at workplaces related to *Agriculture, forestry and fishing*. In 2004–05, of the 29 notified worker fatalities aged 55 years and over, nearly half (45%, 13 fatalities) occurred at a workplace related to *Agriculture, forestry and fishing*.

As already noted when discussing the industry of workplace, *Agriculture, Forestry and fishing* recorded the highest number of notified work-related fatalities overall in 2004–05 (39 workers). These fatalities were not evenly distributed across the age groups; instead they were skewed towards the older age groups. Of the fatalities with known age, slightly more than one-third (34%, 13 fatalities) were workers aged 55 years and over. This pattern reflects the relatively older age profile of people employed in the *Agriculture, Forestry and fishing* industry: in 2005 the median age of workers in the industry was 46 years compared with 39 years for all workers.

CAUSE OF FATALITY

The causes of notified fatalities can be discussed in three ways. Fatality notifications are coded to a Mechanism classification. This identifies the overall action, exposure or event that best describes the circumstances that resulted in the fatality. An

alternative way to pinpoint what caused the fatality is by classifying on the basis of the Breakdown agency. This classification identifies the object, substance or circumstance that was principally involved in, or most closely associated with, the point at which things started to go wrong and which ultimately led to the fatality. Finally, although the narratives that describe the circumstances of each fatality are confidential and cannot be published, they can be grouped and summarised to give a less ‘statistical’ view of work-related fatalities and help highlight particular workplace hazards.

The category *Vehicle accident* was the most common mechanism, or cause, of fatality, responsible for 30 notified work-related fatalities (see Table 3). *Crushing* was the cause of a further 27 fatalities. In addition, *Falls from a height* caused 18 fatalities; *Being hit by falling objects* caused 16 fatalities and *Contact with electricity* caused 15 fatalities.

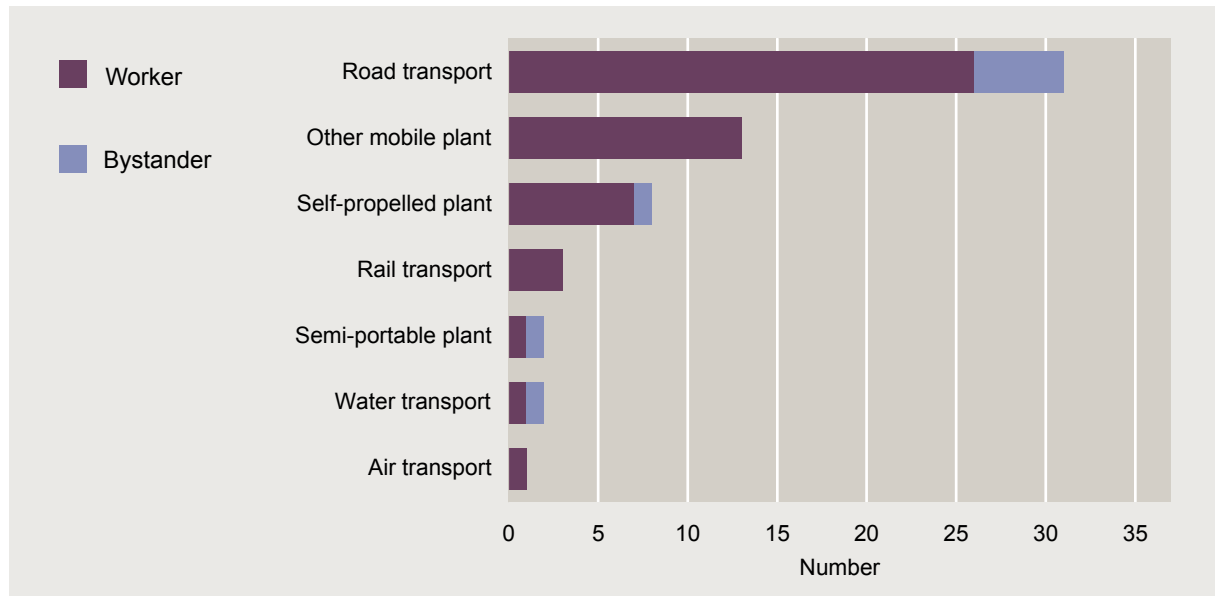
Mobile plant and transport was the most common breakdown agency, responsible for 60 of the 139 fatalities (see Table 3). Figure 4 shows in greater detail the breakdown agencies for these fatalities. Just over half (31 fatalities) involved *Road transport* and a further 13 fatalities involved *Other mobile plant* (which includes tractors, ploughs and drilling rigs). The second and third most common breakdown agencies were *Machinery and mainly fixed plant*, accounting for 27 notified fatalities, and *Environmental agencies*, accounting for 20 fatalities (this category includes indoor and outdoor factors such as steps and stairways; floor conditions; weather and ground conditions).

The mechanism of fatality can be cross-classified with the breakdown agency (see Table 3) to see what type of equipment or circumstances are particularly associated with some causes of fatality.

Beside the 60 fatalities involving *Mobile plant and transport* and various mechanisms, some notable associations include the 14 fatalities caused by *Contact with electricity* and involving *Machinery and fixed plant*: 9 of which involved the sub-agency *Electrical installations*. There were



Figure 4 Notified fatalities for the breakdown agency Mobile plant and transport , July 2004 to June 2005



8 fatalities caused by *Being hit by falling objects* that involved *Environmental agencies*: 6 of these fatalities involved the sub-agency *Vegetation* (which includes being struck by trees in the process of being felled or by branches or limbs). Of the 6

fatalities caused by *Falls from a height* and which involved *Non-powered equipment*: 5 involved the sub-agency *Ladders, mobile ramps and stairways, and scaffolding*.

Table 3 Number of notified fatalities by mechanism and breakdown agency, July 2004 to June 2005

Mechanism of fatality	Breakdown agency of fatality						All agencies
	Mobile plant and transport	Machinery and fixed plant	Environmental agencies	Non-powered equipment	Materials and substances	Other agencies	
Vehicle accident	26	2	1	0	0	1	30
Crushing	16	2	2	3	2	2	27
Falls from a height	0	3	4	6	1	4	18
Being hit by falling objects	3	0	8	0	5	0	16
Contact with electricity	0	14	0	0	0	1	15
Being hit by moving objects	11	2	1	1	0	0	15
Other causes of fatality	4	4	4	3	0	3	18
All mechanisms	60	27	20	13	8	11	139



SUMMARY OF NOTIFICATION NARRATIVES

Although the notified fatality collection is known to understate work-related road and vehicle fatalities, those that are reported still represent a significant proportion of notified fatalities. There were 30 work-related deaths involving vehicle accidents, 8 of which occurred as a result of trucks either veering off roads and crashing into stationary objects, or colliding with another road vehicle. In addition, 5 deaths occurred on rural properties: of these, 3 involved a tractor roll-over. Another 6 deaths occurred as a result of vehicle accidents involving cars travelling on highways. Helicopter and commercial airplane crashes were responsible for 3 more deaths.

Related to vehicle accidents are the deaths of pedestrian workers or bystanders. Seven work-related deaths occurred as a result of pedestrians being hit by various types of vehicles. Two deaths resulted when workers were struck by a passing motor vehicle. The remaining 5 deaths resulted from being struck by either machinery or other types of vehicles.

There were 27 work-related deaths caused by the worker sustaining a fatal injury by being crushed in some way: 17 of these fatalities involved vehicles of various types and sizes. Of these 17 deaths, 6 occurred on rural properties where workers were either pinned under farm machinery, such as tractors and slashers, or in one case, crushed between a loading ramp and a transport trailer. Of the remaining deaths related to vehicles, 6 involved being crushed between a vehicle and another structure, while 4 involved being crushed under a vehicle.

Falling from heights is also a common cause of work-related fatality. In 2004–05 falling from a height was the cause of 18 work-related deaths, two of which resulted from falling into underground holes. Nine deaths occurred at construction sites and involved falling from platforms, boom lift cherry pickers or roofs. A further 2 deaths were the result of falling from trees and 2 resulted from falling off a horse.

The dangers involved in forestry operations are also highlighted in the notified fatalities collection: being hit by a falling tree or a log while undertaking forestry operations was the cause of 6 of the 16 deaths which involved being hit by falling objects. Another 3 deaths occurred after workers were hit by falling rocks or, in one case, granite slabs. Four more deaths resulted from being hit by other falling objects.

The hazards of electrical equipment and powerlines are also evident with 15 work-related deaths caused by electrocution. The majority of these cases (11) occurred when the workers came in contact with electricity while carrying out maintenance jobs on switchboards, electrical equipment, or fixed machinery. In addition, accidental contact with overhead powerlines while workers were either operating or moving mobile machinery was responsible for 4 of the work-related electrocutions.

INQUIRES

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