WORK-RELATED FATAL INJURIES IN WYOMING 2012-2016

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wyomingworkforce.org/data/epidemiology

Occupational Epidemiology Program
Wyoming Department of Workforce Services
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**Acronyms/Definitions**

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATV</td>
<td>All-Terrain Vehicle (also known as a quad or four-wheeler)</td>
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<tr>
<td>BLS</td>
<td>Bureau of Labor Statistics</td>
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<td>CFOI</td>
<td>Census of Fatal Occupational Injuries</td>
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<td>DWS</td>
<td>Wyoming Department of Workforce Services</td>
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<td>MSHA</td>
<td>Mine Safety and Health Administration</td>
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<td>NAICS</td>
<td>North American Industry Classification System</td>
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<td>OSHA</td>
<td>Occupational Safety and Health Administration</td>
</tr>
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<td>SOII</td>
<td>Survey of Occupational Injuries and Illnesses</td>
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<td>State Mines</td>
<td>Wyoming State Mine Inspector Office</td>
</tr>
<tr>
<td>UTV</td>
<td>Utility Task Vehicle (also known as a side-by-side utility vehicle)</td>
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<td>WCSR</td>
<td>Workers’ Compensation Safety and Risk Unit</td>
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<td>WHP</td>
<td>Wyoming Highway Patrol</td>
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</table>
Executive Summary

Update Notes
The Wyoming Department of Workforce Services (DWS) State Occupational Epidemiology has collected and reported data on workplace injury fatalities since 2012. This effort is intended to provide comprehensive information and greater detail on workplace fatalities in Wyoming than is currently available in occupational fatality data from other sources. This is the second state report that summarizes multiple years of fatality data. Due to additional data collection and slight changes in case classifications, findings in this report replace findings in previously published reports. This report also includes brief case narratives for all fatalities during 2012-2016, some of which have been updated or reclassified since initially reported.

Federal Fatality Data
Although Wyoming’s state program has been reporting on occupational fatalities since 2012, the federal Census of Fatal Occupational Injuries (CFOI) remains the national gold-standard for tracking occupational fatalities and providing state-to-state and state-to-national comparisons. In 2015, the CFOI identified 34 fatalities and a fatality rate of 12.0 workers per 100,000 full-time equivalent employees. This was the second highest rate among all states and significantly higher than the overall national rate of 3.4 that year (Figure 1, p. 6). Federal CFOI data for calendar year 2016 will be released in December 2017.

State Fatality Data
Data from Wyoming’s state program and federal CFOI are collected using similar methods and sources, but are not directly comparable due to possible differences in case ascertainment and classification. In any given year, the state program tends to identify slightly fewer fatalities compared to the federal program (Figure 2, p.11).

In 2016, State Occupational Epidemiology identified 27 workplace fatalities; this is a reduction from the 30 fatalities identified in 2015 using the same methods (Figure 2, p.11). Most of the specific industry groups monitored experienced a decrease in the number of fatalities from 2015 to 2016 (Figure 3, p. 12), except for the number Oil & Gas Extraction and Production fatalities, which did not change. In 2016, no fatalities were identified in the industries of Manufacturing and Mining (excluding oil & gas). During the period 2012-2016, the Transportation and Warehousing industry accounted for the largest proportion of occupational fatalities in Wyoming (25%), followed by the Agriculture, Forestry, Fishing and Hunting industry (18%), and the tailored Oil & Gas Extraction and Production industry category ( 17%). (See Methods for industry group definitions)

The All Industries Summary (p. 15) provides a detailed overview of all occupational fatalities that occurred in Wyoming during 2012-2016. Of the 143 deaths identified, 30% came under OSHA for in-depth investigation and 65% were Wyoming residents. In these state data, nearly half of all fatalities were due to motor vehicle incidents (n=71, 49%). A significant portion of these (n=20 of 71, or 28%) were incidents that occurred off-road, road-side, during vehicle maintenance, or that involved an employee hit as a pedestrian on a job site. Those 20 deaths included six ATV/UTV crashes, five of which occurred in the ag-related industries. Of the 45 motor vehicle incidents that were roadway travel motor vehicle crashes, 38% of victims (n=17) were not properly restrained with a seat belt.

Industry-specific summary pages are provided to highlight the varied and numerous opportunities for targeted prevention among Wyoming’s known high-risk industries. For example, motor vehicle incidents involving a
pedestrian or on a worksite are the leading cause of fatality in the agricultural-related industries (p. 17), while roadway travel motor vehicle crashes are the leading cause of fatality among oil and gas extraction and production workers (p. 20).

Non-fatal Occupational Injury Data
Data on non-fatal occupational injuries are not included in this report. Current sources of non-fatal occupational injury and illness data include the U.S. Department of Labor Bureau of Labor Statistics (BLS) Survey of Occupational Injuries and Illnesses (SOII), as well as some prior reports of DWS Occupational Epidemiology and the DWS Research & Planning Section.\textsuperscript{1,2,3,4} Developing and expanding non-fatal occupational injury reporting continues to be a strategic goal of the State Occupational Epidemiology program.
Introduction

According to the U.S. Department of Labor Bureau of Labor Statistics (BLS) Census of Fatal Occupational Injuries (CFOI), Wyoming consistently has one of the highest occupational fatality rates in the country. On average from 2008-2015, we experienced 31 worker deaths per year, an average rate of 11.4 per 100,000 full time equivalent workers (FTE) (Figure 1). This average rate is over three times higher than the average national rate of 3.5 per 100,000 FTE during 2008-2015. Although the number of worker deaths fluctuates slightly each year, Wyoming has not experienced a sustained change in the annual rate of worker deaths since 2008. (Note: Fatality rates for Wyoming are not available from the BLS CFOI prior to 2008.)

Figure 1: (Federal Data) Number and rate of fatal occupational injuries per 100,000 full-time equivalent (FTE) workers, Wyoming and the United States, 2008-2015

![Figure 1: (Federal Data) Number and rate of fatal occupational injuries per 100,000 full-time equivalent (FTE) workers, Wyoming and the United States, 2008-2015](image)


The federal CFOI data are recognized as the official statistical record of workplace fatality counts and rates for Wyoming and the United States. However, much of the data published for Wyoming do not contain sufficient detail to identify specific prevention initiatives and strategies. For these reasons, the Department of Workforce Services (DWS) State Occupational Epidemiology conducts independent fatality tracking to produce more timely and informative reporting of workplace fatalities in Wyoming. The state-collected data for occupational fatalities occurring in 2012-2016 are included in this report.

The information provided in this report offers the most complete and up-to-date state data on occupational fatalities. It may differ from previous state occupational fatality reports as case details and classifications are subject to change upon review or when new information becomes available. The information may also differ from the federal CFOI due to differing case definitions and classifications. Previous state reports have demonstrated that these state occupational fatality data closely follow the overall trends and distribution reported by the federal CFOI.5
Methods
Methods for Wyoming’s state-level occupational fatality monitoring are summarized as follows:

Data sources
Information was collected from a variety of sources for each fatality case, including:
- Workers’ compensation claims
- Death certificates (State Vital Records)
- Coroners’ reports
- Motor vehicle crash reports filed with the Wyoming Highway Patrol
- Wyoming OSHA and State Mines investigation records
- Newsprint and online media

Inclusion criteria
- Deaths for which traumatic injury or acute exposure at or during work was the primary cause of death were included.
  - Motor vehicle crash fatalities are typically included if the vehicle occupied by the victim was company-owned, the crash investigators annotated the victim was traveling for work at the time of the crash, and/or the fatality was recorded with OSHA or workers’ compensation. Workers killed during a non-traditional, work-required commute in a personal vehicle (i.e., traveling with a work crew or over excessive distances) could also be included, although these cases are much more difficult to identify in existing data sources.
- Fatalities with latency between date of injury or acute exposure and the date of death were also included if the traumatic injury or exposure was deemed the originating, underlying cause of death. Note, however, latent injury and exposure deaths are often more difficult to identify in data sources available. Thus, these deaths are likely under-represented in these data.
- Deaths that occurred out-of-state, but as a result of an in-state workplace injury or exposure, were also included if identified. This is because critical injuries in rural areas of Wyoming may be stabilized and transported to a neighboring state trauma care center. Deaths that occur at an out-of-state center are certified in that state. These types of cases are relatively rare in occupational fatality tracking; however, they are essential for understanding fatal injury causes within the originating state. Note deaths that occurred out-of-state, but as a result of an in-state injury, may not have been captured in early reports of the DWS State Occupational Epidemiologist.

Exclusion criteria
Deaths caused by natural disease (e.g. heart failure), or chronic illness or exposure (e.g. asbestosis, silicosis, black lung) were excluded from this report. Data sources and methods used for traumatic injury and acute exposure deaths differ from those that could be used to more reliably identify deaths with a long latency between exposure and diagnosis of illness.

Workers killed in motor vehicle crashes during traditional commutes are also excluded.
Industry categorization

Industry categories were assigned based on the industry within which the victim was working at the time of death. In most cases, the industry category assigned was the same industry as the victim’s employer and follows the grouping scheme of the 2012 North American Industry Classification System (NAICS). However, this report includes a tailored industry group called “Oil & Gas Extraction and Production.” The path of production from crude oil and gas to finished product is highly fragmented by up-, mid- and down-stream operations; multiple site locations for a single employer; and several layers of subcontracting. As such, efforts to enumerate fatalities within this broad and diverse industry require deviating from standard NAICS grouping. This category does primarily include victims that were employed by oil and gas extraction industries (NAICS 211, 213111, and 213112), but it also includes victims within other industries when the worker’s employment was directly connected to oil and gas extraction or production. Workers employed in the Petroleum Refinery (NAICS 32411) and Pipeline Transportation (NAICS 486) industries were included, as well as select workers from other industries identified as directly engaged with oil and gas extraction or production activity. This approach to enumerate oil and gas fatalities was used because oil and gas activities are significant components of Wyoming’s economy. It was also done to support similar national efforts to enumerate fatalities connected to oil and gas activity.

Fatalities were grouped within one of the following major industry categories:

- Agriculture, Forestry, Fishing and Hunting (NAICS 11)
- Mining (excluding oil and gas) (NAICS 21, excluding 211, 213111, 213112)
- Oil & Gas Extraction and Production (NAICS 211, 213111, 213112; Petroleum Refinery 32411; Pipeline Transportation 486; Cases within other industries when identified as directly connected to oil and gas activity.)
- Construction (NAICS 23)
- Manufacturing (NAICS 31-33)
- Transportation and Warehousing (NAICS 48, excluding Pipeline Transportation 486)
- Other (all other NAICS)

Note there are numerous limitations in classifying industry, including possible misclassification in the data sources available and lack of detailed information needed for accurate identification.

General and detailed causal event/exposure categories

Fatality cause categories were assigned in two tiers: a general description was assigned to match event/exposure categories typically presented in the federal CFOI data and, as able, a more detailed category was assigned. Some general categories do not have corresponding detailed categories due to numbers that are too small to split or no apparent trend or pattern that would facilitate creation of a detailed category.
<table>
<thead>
<tr>
<th>General Event/Exposure Type</th>
<th>Detailed Event/Exposure Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact with object/equipment</td>
<td>Contact with object/equipment</td>
</tr>
<tr>
<td>Exposure to harmful substances/environments</td>
<td>Drowning</td>
</tr>
</tbody>
</table>
| Fall | Fall (from height)  
Fall (same level) |
| Fire/explosion | Fire/explosion |
| Motor vehicle incidents | Motor vehicle (aviation)  
Motor vehicle (roadway travel)  
Motor vehicle (pedestrian/worksite) |
| Violence or injury by person/animal | Violence or injury by animal  
Violence or injury by person\(^i\)  
Suicide at work |

**Additional detail on motor vehicle incidents:**

- “Motor vehicle (roadway travel)” includes drivers and passengers of vehicles that were killed in a crash while traveling on a public roadway.
- “Motor vehicle (pedestrian/worksite)” includes victims that were struck by a moving or rolling vehicle on a road-side or on a job site. The vehicle involved could be an automobile, ATV, UTV, or other moving vehicle or equipment. This category also includes drivers and passengers of vehicles that crashed on a worksite or private property; these were typically ATV, UTV or tractor crashes or roll-overs.
- Workers killed by a vehicle or parts of a vehicle that fell or was lowered onto them are captured under the category of “contact with object or equipment.”

\(^i\) Meaning intentional injury and homicides
Lead investigating agency
When a workplace death occurs, multiple agencies (local, state and/or federal) may invoke authority for an on-scene or in-depth investigation. For the purpose of this report, “lead investigating agency” was assigned based on a hierarchical framework to prioritize identifying state regulatory agency involvement:

- **Wyoming OSHA or State Mines**: As the state agencies with regulatory authority over workplace safety, OSHA or State Mines were selected if they conducted an on-scene investigation. These agencies typically do not share authority over the same workplace deaths.
  - **Wyoming Highway Patrol** was noted for any motor vehicle crash for which the crash was recorded with the WHP and WY OSHA did not investigate. It is possible that both agencies would investigate a road-side or pedestrian occupational fatality – in that instance, the death would be noted as an OSHA investigation case.
  - **Local Authorities** was assigned when the death was investigated and recorded only by the local Coroner’s Office (through Vital Records) and/or the Local Law Enforcement Agency.
  - **Other** typically applies to cases where a federal regulatory agency investigated without any state agency involvement, such as deaths investigated by the Federal Aviation Administration. These deaths were also likely investigated by local authorities.

Note that Wyoming OSHA typically does not have or does not exercise jurisdiction to conduct an on-scene or in-depth investigation of the following types of fatalities:

- Roadway travel motor vehicle crashes
- Incidents within agricultural industries when there are less than 10 employees
- Mine site incidents covered by the State Mine Inspector and/or MSHA
- Sole owner/operator deaths
- Deaths for which there was greater than 30 days between the injury incident and death
- Suicides at work

Case narratives
Case descriptions of 2012-2016 fatalities included in this report. The 2015-2016 descriptions follow this general structure:


Fatal case descriptions for years 2012-2014 were completed prior to the development of this narrative structure thus do not follow the same construct and may not contain as much information. Case narratives may or may not be updated after their initial completion in the months to year following the fatality.
Results – All Industry Overview

The Wyoming Department of Workforce Services (DWS) State Occupational Epidemiology identified 27 fatalities in 2016. This is three fewer than were identified by the state in 2015, using the same methods. Detailed case narratives for each of the 2016 fatalities are presented in the Appendix.

Compared to federal occupational fatality reporting, the state typically identifies slightly fewer deaths each year (Figure 2). Federal reports for calendar year 2016 are expected to be released in December 2017.

Figure 2: Number of Occupational Fatalities Recorded, State Occupational Epidemiology and Federal Census of Fatal Occupational Injuries, Wyoming, 2012-2016

![Graph showing number of fatalities from 2012 to 2016]

Sources:
State Count: Wyoming Department of Workforce Services, State Occupational Epidemiology;

Figure 3 below provides an overview of industry trends in state-collected data, with the following highlights:

- In 2016, no fatalities were identified in the industries of Manufacturing and Mining (excluding oil & gas).
- Four (4) agriculture-related fatalities were identified in 2016, compared to seven in 2015.
- From 2015-2016 there was no change in the number of fatalities identified in the Oil & Gas Extraction and Production industries.
- Fatality counts among the Construction, and Transportation and Warehousing industries differed very little between 2015 and 2016.
- There was an increase in fatalities attributed to other miscellaneous industries, from five in 2015 to ten in 2016.

More detail on the fatality trends within each industry group are provided in the one-page industry summaries beginning on page 17.
Figure 3: Number of occupational injury fatalities by industry by year, Wyoming, 2012-2016 (N=143)

Source: Wyoming Department of Workforce Services, State Occupational Epidemiology

Figure 4 provides an overview of occupational fatalities by general cause in Wyoming. Motor vehicle incidents accounted for 71 (49%) of all state-identified fatalities during 2012-2016. This includes roadway travel crashes, pedestrian or worksite involved crashes, and aircraft crashes. Recent years demonstrate a slight downward trend in occupational motor vehicle fatalities, from 16 in 2014 to 12 in 2016.

Figure 4: Number of occupational injury fatalities by general event or exposure type by year, Wyoming, 2012-2016 (N=143)

Source: Wyoming Department of Workforce Services, State Occupational Epidemiology

Figure 5 describes the number occupational fatalities by age groups. In 2015, a worker under the age of 17 years old was killed on the job. Since 2012, no workers ages 17-19 years old have been killed on the job.

Figure 5: Number of occupational injury fatalities by age group by year, Wyoming, 2012-2016 (N=143)

Source: Wyoming Department of Workforce Services, State Occupational Epidemiology
During the period 2012-2016, Natrona County had the highest number of occupational fatalities, followed by Laramie, Campbell, Carbon, and Sweetwater Counties (Figure 6). Seven of the 12 fatalities in Carbon County during this period were due to roadway travel or road-side motor vehicle crashes on I-80 or US-287.

Figure 6: Number of occupational fatalities by county of death, Wyoming, 2012-2016

![County Fatality Chart](Source: Wyoming Department of Workforce Services, State Occupational Epidemiology)
SUMMARY
According to state data, 143 workers died as the result of on-the-job injury or exposure in Wyoming during the years 2012-2016. This was an average of 29 workers per year, and one worker every 13 days. Most workers were male (92%) and residents of Wyoming (65%). Wyoming OSHA had jurisdiction to fully investigate 30% of these deaths.

The leading causes of death were roadway travel motor vehicle crashes (MVC) (31%), MVC on a worksite or involving a pedestrian (14%), contact with an object or equipment (18%), and fall from height (11%). For more detail on individual fatalities, refer to the case descriptions provided in the Appendix.

<table>
<thead>
<tr>
<th>Detailed Event/Exposure Type</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact with object/equipment</td>
<td>26</td>
<td>18%</td>
</tr>
<tr>
<td>Drowning</td>
<td>3</td>
<td>2%</td>
</tr>
<tr>
<td>Other exposure to harmful substances/environments</td>
<td>2</td>
<td>1%</td>
</tr>
<tr>
<td><strong>Fall (from height)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fall (same level)</td>
<td>3</td>
<td>2%</td>
</tr>
<tr>
<td>Fire/explosion</td>
<td>4</td>
<td>3%</td>
</tr>
<tr>
<td>Motor Vehicle Crash (air craft)</td>
<td>6</td>
<td>4%</td>
</tr>
<tr>
<td><strong>Motor Vehicle Crash (roadway travel)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Motor Vehicle Crash (pedestrian/worksite)</td>
<td>20</td>
<td>14%</td>
</tr>
<tr>
<td>Suicide at work</td>
<td>8</td>
<td>6%</td>
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<tr>
<td>Violence or injury by animal</td>
<td>6</td>
<td>4%</td>
</tr>
<tr>
<td>Violence or injury by person</td>
<td>4</td>
<td>3%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>143</td>
<td>100%</td>
</tr>
</tbody>
</table>

Of the 143 fatalities:
- 132 (92%) male
- 93 (65%) Wyoming residents
- Jurisdiction
  - 43 (30%) OSHA
  - 5 (3%) State Mines
  - 47 (33%) WHP
  - 40 (28%) Local Authorities
  - 8 (6%) Other

- Of the 45 roadway travel MVCs, 17 (38%) of victims were not belted. Seat belt use was unknown for 5 (11%) of victims.
- Of the 20 pedestrian/worksite MVCs, 6 were ATV/UTV roll-overs or crashes, 4 were hit while working on a road-side, 4 were victims of backing vehicles, 3 were doing maintenance on a vehicle when it rolled on top of them, and 3 were victims of other equipment roll-over crashes.
- Of the 16 falls from height, 5 fell from a stationary platform/scaffolding, 4 from a roof, 2 from a truck, 2 from a ladder, and 1 fell from a mobile platform.
Results - Industry Specific Summaries

The following pages provide an overview of occupational fatalities by specific industry group. Summary pages are provided for the major industries identified in the Methods section. Fatalities occurring within the many other industries (i.e. Education, Public Administration, etc.) are not summarized on one page due to high variability in the nature and cause of death, and the difficulty identifying common industry-based prevention strategies within such varied employment. However, the complete case narratives for fatalities classified in other industries are provided in the Appendix.
SUMMARY
During 2012-2016, twenty-six (26) workers were killed in the Agriculture, Forestry, Fishing and Hunting industry in Wyoming. Most were male (88%), residents of Wyoming (88%), and age 55 or older (58%). This is the only industry that experienced the death of a worker younger than 17 years old during this time period. Only 5 (19%) of the 26 fatalities were under Wyoming OSHA jurisdiction for a complete fatality investigation.

The leading causes of death in this industry sector were a motor vehicle crash (MVC) occurring on a worksite or involving a pedestrian (31%), contact with an object or equipment (27%), and injury by animal (23%).

MORE DETAIL
- Of the 8 pedestrian/worksitc MVC victims, 5 were ATV/UTV roll-overs or crashes, 2 were doing maintenance on a vehicle when it rolled on top of them, and 1 was victim of a tractor roll-over
- Of the 6 workers killed by animal injury, 3 were victims of a bull encounter, 2 of a horse, and 1 of a bear in the wild.
- Both drowning victims fell into irrigation ditches or canals. One was known to be wearing waders at the time.

Detail Event/Exposure Type

<table>
<thead>
<tr>
<th>Detailed Event/Exposure Type</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact with object/equipment</td>
<td>7</td>
<td>27%</td>
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<td>Drowning</td>
<td>2</td>
<td>8%</td>
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<tr>
<td>Other exposure to harmful substances/environments</td>
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<td>-</td>
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<tr>
<td>Fall (from height)</td>
<td>1</td>
<td>4%</td>
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<tr>
<td>Fall (same level)</td>
<td>1</td>
<td>4%</td>
</tr>
<tr>
<td>Fire/explosion</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Motor Vehicle Crash (air craft)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Motor Vehicle Crash (roadway travel)</td>
<td>1</td>
<td>4%</td>
</tr>
<tr>
<td>Motor Vehicle Crash (pedestrian/worksitc)</td>
<td>8</td>
<td>31%</td>
</tr>
<tr>
<td>Suicide at work</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Violence or injury by animal</td>
<td>6</td>
<td>23%</td>
</tr>
<tr>
<td>Violence or injury by person</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
<td>26</td>
<td>100%</td>
</tr>
</tbody>
</table>

Of 26 total fatalities:
- 23 (88%) male
- 23 (88%) Wyoming residents
- Jurisdiction:
  - 5 (19%) OSHA
  - 1 (4%) WHP
  - 20 (77%) Local Authorities

Number of Fatalities by Year

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<tr>
<th>Year</th>
<th>Number</th>
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<tr>
<td>2014</td>
<td>5</td>
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<tr>
<td>2015</td>
<td>7</td>
</tr>
<tr>
<td>2016</td>
<td>4</td>
</tr>
</tbody>
</table>

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SUMMARY

During 2012-2016 fourteen (14) workers were killed in the Construction industry in Wyoming. Most were male (93%), residents of Wyoming (93%). All were of typical working age between 20 to 64 years old.

Ten (64%) of the 14 fatalities were under Wyoming OSHA jurisdiction for a complete fatality investigation. The leading causes of death in this industry were a fall from height (43%), contact with an object or equipment (21%), and a motor vehicle crash (MVC) involving a pedestrian or on a worksite (21%).

MORE DETAIL

- Of the 6 falls from height, 3 fell from a stationary platform/scaffolding, 2 from a roof, and 1 was undetermined in available reports.
- Of the 3 pedestrian involved or worksite MVCs, 2 were victims of a backing vehicle, and 1 was struck by a moving vehicle while working on a road-side.
- The two non-roadway fatalities not investigated by OSHA in this industry were sole owner/operators.
- Two of three “contact” fatalities occurred during the movement of material or equipment in a trench or excavated area.
SUMMARY

During 2012-2016, five (5) workers were killed in the non-oil and gas Mining industries in Wyoming; none of these occurred in 2016. All were male, most were residents of Wyoming (60%), and all were typical working ages between 20 and 54 years old. One fatality recorded was the latent result of an injury that occurred in 2007. Wyoming State Mine Inspector investigated all of the incidents at the time of injury.

The leading cause of death in this industry was a motor vehicle crash (MVC) occurring on a worksite or involving a pedestrian.

MORE DETAIL

• Of the 3 worksite or pedestrian involved motor vehicle fatalities, 2 were operating equipment that rolled off an embankment, and 1 was struck by motorized equipment backing up.

Of 5 total fatalities:

- 5 (100%) male
- 3 (60%) Wyoming residents
- Jurisdiction
  - 5 (100%) State Mines

### Number of Fatalities by Year

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<th>Number</th>
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<tr>
<td>2013</td>
<td>2</td>
</tr>
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<td>2014</td>
<td>2</td>
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<tr>
<td>2015</td>
<td>1</td>
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<tr>
<td>2016</td>
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### Detailed Event/Exposure Type

<table>
<thead>
<tr>
<th>Event/Exposure Type</th>
<th>Number</th>
<th>Percent</th>
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</thead>
<tbody>
<tr>
<td>Contact with object/equipment</td>
<td>1</td>
<td>20%</td>
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<tr>
<td>Drowning</td>
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<tr>
<td>Other exposure to harmful substances/environments</td>
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<tr>
<td>Fall (from height)</td>
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<tr>
<td>Motor Vehicle Crash (pedestrian/worksite)</td>
<td>3</td>
<td>60%</td>
</tr>
<tr>
<td>Suicide at work</td>
<td>1</td>
<td>20%</td>
</tr>
<tr>
<td>Violence or injury by animal</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Violence or injury by person</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
<td></td>
</tr>
</tbody>
</table>
SUMMARY

During 2012-2016, twenty-four (24) workers were killed in Oil & Gas Extraction and Production industries in Wyoming. All were male, most were residents of Wyoming (67%). The largest proportion of deaths was in the 25-34 age group (33%). Wyoming OSHA had jurisdiction to fully investigate 10 (42%) of the incidents.

The leading cause of death in this industry was roadway travel motor vehicle crashes (MVC), killing 11 (46%) of workers in these industries. Contact with an object or equipment was the second leading cause, resulting in seven deaths.

Of 24 total fatalities:
- 24 (100%) male
- 16 (67%) Wyoming residents
- Jurisdiction
  - 10 (42%) OSHA
  - 11 (46%) WHP
  - 3 (12%) Local Authorities

MORE DETAIL

- Of the 11 roadway travel MVCs, 6 (55%) victims were not using a seat belt at the time of the crash, and seat belt use was unknown for one victim.
- Of the 2 pedestrian involved or worksite MVCs, 1 was victim of a backing vehicle, and 1 was killed by a vehicle that rolled on him while conducting maintenance underneath.
- Deaths by contact with an object/equipment were caused by various things, including the falling block of an oil rig, a tote that fell from a forklift, moving parts of a well pump, and a falling drill pipe.

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SUMMARY
During 2012-2016, thirty six (36) workers were killed in the Transportation and Warehousing industries in Wyoming. Most were male (92%), most were residents of other states (69%).

Wyoming OSHA had jurisdiction to fully investigate 5 (14%) of the incidents. Twenty-four (67%) incidents were investigated by the highway patrol or local traffic officers.

Excluding air craft deaths, roadway travel motor vehicle crashes (MVC) were the leading cause of death (61%), followed by pedestrian or worksite crashes (8%), and fall from height (8%).

MORE DETAIL
• Of the 22 roadway travel MVC victims, 19 (86%) were drivers or passengers in heavy trucks (>26K pounds) and 7 (32%) were not using a seat belt at the time of the crash.
• Of the three falls from height, two of the victims had fallen from their trucks or trailers while securing loads or doing some other exterior maintenance.
• All three workers killed as pedestrians in motor vehicle crashes were doing road-side vehicle maintenance or assistance work. Two were struck by passing vehicles; one was crushed between two vehicles on the road-side.

Of 36 total fatalities:
- 33 (92%) male
- 11 (31%) Wyoming residents
- Jurisdiction
  - 5 (14%) OSHA
  - 24 (67%) WHP
  - 3 (8%) Local Authorities
  - 4 (11%) Other

<table>
<thead>
<tr>
<th>Detailed Event/Exposure Type</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact with object/equipment</td>
<td>2</td>
<td>6%</td>
</tr>
<tr>
<td>Drowning</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Other exposure to harmful substances/environments</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Fall (from height)</td>
<td>3</td>
<td>8%</td>
</tr>
<tr>
<td>Fall (same level)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Fire/explosion</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Motor Vehicle Crash (air craft)</td>
<td>4</td>
<td>11%</td>
</tr>
<tr>
<td>Motor Vehicle Crash (roadway travel)</td>
<td>22</td>
<td>61%</td>
</tr>
<tr>
<td>Motor Vehicle Crash (pedestrian/worksite)</td>
<td>3</td>
<td>8%</td>
</tr>
<tr>
<td>Suicide at work</td>
<td>1</td>
<td>3%</td>
</tr>
<tr>
<td>Violence or injury by animal</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Violence or injury by person</td>
<td>1</td>
<td>3%</td>
</tr>
<tr>
<td>Total</td>
<td>36</td>
<td>100%</td>
</tr>
</tbody>
</table>

Number of Fatalities by Year

<table>
<thead>
<tr>
<th>Year</th>
<th>Fatalities</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>14</td>
</tr>
<tr>
<td>2013</td>
<td>3</td>
</tr>
<tr>
<td>2014</td>
<td>6</td>
</tr>
<tr>
<td>2015</td>
<td>7</td>
</tr>
<tr>
<td>2016</td>
<td>6</td>
</tr>
</tbody>
</table>
Industry: Manufacturing  
2012-2016  
Total Occupational Deaths = 7

Summary

During 2012-2016, seven (7) workers were killed in the Manufacturing industry in Wyoming; none of these occurred in the most recent year, 2016. Most were male (71%), most were residents of Wyoming (86%).

The largest proportion of deaths was in the 55-64 age group (three deaths, or 43%).

Wyoming OSHA had jurisdiction to fully investigate 5 (71%) of the incidents.

Contact with an object or equipment was the leading cause of death (57%), followed by fall from height (29%), and one roadway travel motor vehicle crash.

Of 7 total fatalities:
- 5 (71%) male
- 6 (86%) Wyoming residents
- Jurisdiction
  - 5 (71%) OSHA
  - 1 (14%) WHP
  - 1 (14%) Local Authorities

MORE DETAIL

- OSHA did not have jurisdiction to investigate the roadway travel motor vehicle crash, and one fatality in 2013 which was the result of an on-the-job injury about a year prior.
- Deaths by contact with an object/equipment were caused by various things, including entanglement in a vertical lathe, entrapment in a roller blade, and falling into machinery through an access hole.
Discussion

Since initiating fatality monitoring, DWS State Occupational Epidemiology typically identifies fewer work-related injury fatalities each year compared to the federal CFOI surveillance system. While these state and federal data are not directly comparable, prior reports have demonstrated that the two systems show similar trends in annual fatality counts and distribution by industry and cause. These observations help to validate DWS state data as a reliable source of provisional workplace fatality information to be used for prevention and intervention.

The number of occupational fatalities in Wyoming identified by the state is down in 2016 compared to the previous year (Figure 2, p.11). Due to small annual numbers, it is difficult to assign any particular causal trend to explain the overall decrease in fatality counts year-to-year. However, significant reductions in the number of oil & gas extraction fatalities likely contributed to the decline (Figure 3, p.12) as opposed to any significant reduction in a particular cause of fatality (Figure 4, p.12).

Occupational fatality numbers have been shown to rise and fall with the rise and fall of activity within certain high-risk industries, such as oil & gas extraction. Thus, the fluctuations in industry-specific fatality numbers presented in this report may be associated with increasing or decreasing employment in Wyoming’s high-hazard industries. To account for the effect of employment fluctuations, industry-specific fatality rates are a better measure of fatality trends. Industry-specific rates from the federal CFOI data are not consistently available from year-to-year due to small annual numbers. The state fatality tracking program needs to mature with several more years of data in order to calculate stable industry-specific rates.

During the period 2012-2016, the Transportation and Warehousing industry accounted for the largest proportion of occupational fatalities in Wyoming (n=36 of 143, 25%), followed by the Agriculture, Forestry, Fishing and Hunting industry (n=26, 18%), and the tailored Oil & Gas Extraction and Production industry category (n=24, 17%).

While the proportion of workers in any given age group fluctuates slightly each year, this report shows that workers over age 65 accounted for 17% of fatalities during 2012-2016 (p.15). This age group makes up only about 6% of Wyoming’s workforce, thus is over-represented in fatality incidents overall. Of note, the age distribution of occupational fatalities varies greatly by industry. The Agriculture-related industries saw the highest proportion of workers age 65 and older killed on the job (35%) (p.17), while the Construction and Mining (excluding oil & gas) industries saw none (0%) (p.18-19). Age-specific, industry-specific employment data and more years of combined fatality data would be needed to accurately characterize the age-specific risk in any given industry in Wyoming. However, there is evidence on the national scale that older workers have more severe injury outcomes compared to younger workers, and that older workers experience higher rates of workplace fatality compared to younger workers.

Overall, 65% of occupational fatality victims during 2012-2016 were Wyoming residents (p.15). This trend varied among industry, however. For example, more Agriculture-related and Construction industry deaths were in-state residents (88% and 93%, respectively), compared to only 31% of Transportation and Warehousing industry deaths. This finding suggests localized prevention efforts in agriculture would reach the appropriate workers and
employers, while fatal injury prevention strategies for truck transportation should be tailored to reach incoming out-of-state drivers and traveling workers.

As has been stated in prior reports, the distribution of occupational fatalities by county is likely explained by the underlying population density and industry employment in those areas. Laramie, Natrona, Campbell, and Sweetwater are the top four most populated counties in Wyoming. Natrona, Campbell and Sweetwater Counties have high employment in the natural resources and mining, and construction sectors, while Laramie, Natrona and Sweetwater Counties have high employment in the manufacturing, and transportation and warehousing sectors. Carbon County does not rank especially high for population density or employment in these high-risk sectors. However, Carbon County encompasses highly traveled and rural stretches of Interstate 80 and U.S. Highway 287. As noted in the results, 7 of 12 (58%) of deaths in Carbon County were due to roadway travel or road-side motor vehicle crashes on I-80 or US-287 (Figure 6, p.14).

Motor vehicle incidents accounted for 71 (49%) of all fatalities identified during 2012-2016 (Figure 4, p.12 and All Industries Summary, p.15). This is comparable to the federal CFOI, which reported 48% of Wyoming fatalities as motor vehicle incidents during 2012-2015. Of the 45 state-identified, roadway travel motor vehicle crashes (MVC), 38% of victims were not properly restrained with a seat belt. This is a substantially lower proportion of unbelted fatalities compared to the proportion of fatal MVC in the general Wyoming population that did not have safety equipment in use (72.1% in 2015 and 65.7% in 2016). However, 38% is still a significant proportion of occupational deaths that could have been prevented with proper use of safety restraints. The lower proportion of unbelted fatalities compared to the general population may be due to the influence of employer policies and/or federal commercial driver’s license (CDL) requirements for occupant restraint use. Further study of Wyoming’s occupational motor vehicle crashes would be needed to verify this speculation.

Of note, five of the six ATV/UTV fatal crashes identified occurred in the Agriculture-related industries, specifically within ranching operations (See Appendix). These five ATV/UTV deaths account for 19% of all fatalities in the Agriculture, Forestry, Fishing and Hunting industry during 2012-2016.
Conclusions & Recommendations
The federal CFOI data indicate there has been no consistent trend (down or up) in the total annual number of occupational fatalities in Wyoming since 1992. The annual rate of occupational fatalities in Wyoming also has not shown any sustained change since 2008 (Figure 1). Detailed, state-level monitoring of occupational fatalities is essential to continue unveiling the causes and contributing factors of these deaths and inform prevention efforts.

The circumstances of occupational fatalities in Wyoming are varied and unique. Still, many fatalities described in this report could have been feasibly prevented with proven strategies, including:

- Consistently holding daily safety meetings or “tail gate talks” on the job site to discuss and plan for the job at hand with all involved. Make sure everyone knows what parts of the job pose risk, what the plan is, and how to maintain communication for safe operations.
- Fostering a culture where workers are encouraged to report and help mitigate potential hazards and report all injuries, no matter how minor.
- Deploying methods, strategies and technologies to improve communication on the job site, especially between different subcontractor crews.
- Continually expanding and developing employee training, for new and seasoned workers.
- Consistently implementing the most basic workplace safety controls, such as use of seat belts, fall protection, equipment guarding and lock-out-tag out methods.

The needs for these and other intervention and prevention strategies vary greatly by industry sector, which reinforces the need for Wyoming’s industry safety alliances and state partnerships to remain active and engaged in the effort to reduce occupational fatalities. Based on the results summarized in this report, the following are apparent areas of focus for Wyoming’s active industry alliance sectors:

- The Wyoming Agricultural Safety Coalition (wyoextension.org/agsafety/) should develop strategies to improve ATV and UTV rider safety in the industry. They should also elevate awareness of and promote prevention strategies for the unique hazards encountered in ag-related work, such as working alone in remote areas, working with large animals, and heavy equipment repair in the field and on the farm or ranch. Emphasis should also be placed on preventing fatalities among ranchers and farmers age 65 and older, and those ages 16 and younger.
- The Wyoming Construction Safety Alliance (WCSA) (wyconstructionsafety.org/) should emphasize promoting wider adoption of fall prevention training and techniques in the industry, and promote job-site communication and hazard awareness techniques that help prevent workers from being hit or struck by moving vehicles or equipment. Methods to safely move and use materials and equipment in trenches or excavated areas should also be a priority.
- The Wyoming Oil & Gas Industry Safety Alliance (WOGISA) (wyomingsafety.org/) should continue their worthy mission to provide free or low-cost safety and technical training to oil and gas workers across the state. They should also continue spreading and promoting the Stop Work Authority for all employers and workers in the industry. They should place some additional emphasis on helping the industry implement policies and programs that support driver safety, including supporting state-wide efforts to increase seat belt usage. Efforts to elevate work-site safety communication between crews and contractors, and general hazard awareness for workers would also be beneficial.
• The Wyoming Transportation Safety Coalition should continue to devise strategies to help long-distance truck drivers safely navigate mountain passes and severe weather, and to heed speed limit warnings in those conditions. They should also consider opportunities to educate drivers on other, non-driving hazards that can result in serious injury or death, such as falls and road-side maintenance operations. The WTSC should continue their active role in state-wide efforts to increase seat belt use for all workers in all industries.

• The Wyoming Seat Belt Coalition (buckleup4lifewy.org/) should continue efforts to increase seat belt usage for all citizens in Wyoming, with emphasis placed on gaining wide-spread employer support for the mission. This group should also consider engaging in proactive efforts to enact a primary seat belt law for Wyoming.1 There is a long record of evidence that seatbelts save lives and reduce traumatic injury in the event of a crash, that primary seatbelts laws increase use of safety belts among passengers and drivers, and that states that have primary seat belt laws have lower rates of motor vehicle crash fatalities than those with only secondary laws.21,22,23,24,25,26,27

The DWS State Occupational Epidemiology is an active participant on all of the alliances and coalitions mentioned, along with numerous other public health and community partners. Work will continue to identify and promote solutions to the issues contributing to the burden of occupational fatality in Wyoming.

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1 Wyoming presently has a secondary seat belt law, meaning that law enforcement may issue a ticket for not wearing a seat belt only when the driver has been stopped for another citable traffic infraction.

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Acknowledgements

This report would not be possible without the support and collaboration of numerous partners, including:

- Wyoming Department of Health, Vital Statistics Services and Injury Prevention Program
- Wyoming Department of Transportation
- Wyoming Highway Patrol
- Wyoming County Coroners
- Wyoming State Mines
- Various Local Law Enforcement Offices

Support within the Wyoming Department of Workforce Services was provided by:

- Office of the Director
- Research & Planning Section, Census of Fatal Occupational Injuries Program
- Wyoming Occupational Safety and Health Administration
- Workers’ Compensation Safety and Risk Unit
### Appendix: Fatality Descriptions, By Industry and Year, 2012-2016

Brief case narratives for all fatalities during 2012-2016 are included. A few of the narratives have been updated or reclassified by cause or industry since initially reported in prior reports.

<table>
<thead>
<tr>
<th>Year</th>
<th>Detailed Event/Exposure</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>Contact with object/equipment</td>
<td>31 year old male was repairing electrical switches on a flat bed hay truck with the bed raised; the bed suddenly fell on the deceased with crushing injuries to chest, occupation-manager Ag feed lot, WY resident.</td>
</tr>
<tr>
<td></td>
<td>Fall (same level)</td>
<td>82 year old M, slipped on ice while feeding his cows, striking the back of his head and sustaining an intracranial injury, agriculture-related-ranching, WY resident.</td>
</tr>
<tr>
<td></td>
<td>Motor Vehicle (roadway travel)</td>
<td>55 year old female transporting show rabbits crashed on I-80, WA resident.</td>
</tr>
<tr>
<td></td>
<td>Motor Vehicle (pedestrian/worksite)</td>
<td>80 year old male ran over by tractor while attempting to jump start, rancher, WY resident.</td>
</tr>
<tr>
<td></td>
<td>Motor Vehicle (pedestrian/worksite)</td>
<td>80 year old male driver of a log hauling tractor/trailer run over by the semi-tractor trailer he was chaining. He was stopped along a logging road where he had dropped off paper work prior to leaving the logging area. The tires were not chocked and the brakes were not working or failed to hold the truck in a parked position, MT resident.</td>
</tr>
<tr>
<td></td>
<td>Violence or injury by animal</td>
<td>61 year old male had crushing injuries from being trapped in a trailer with a bull, WY resident.</td>
</tr>
<tr>
<td>2013</td>
<td>Contact with object/equipment</td>
<td>61 year old male logger died from a tree that fell or rolled on him while he was cutting it. WY resident.</td>
</tr>
<tr>
<td></td>
<td>Contact with object/equipment</td>
<td>25 year old male pulled into a baling machine. WY resident.</td>
</tr>
<tr>
<td></td>
<td>Drowning</td>
<td>53 year old male rancher fell into irrigation ditch wearing waders and drowned. WY resident.</td>
</tr>
<tr>
<td></td>
<td>Violence or injury by animal</td>
<td>51 year old male rancher compressed by bull while in bull pen on the ground. WY resident.</td>
</tr>
<tr>
<td>2014</td>
<td>Contact with object/equipment</td>
<td>23 year old male crushed by a skid steer while loading hay bales. WY resident.</td>
</tr>
<tr>
<td></td>
<td>Drowning</td>
<td>75 year old male fell into an irrigation canal and drowned. WY resident.</td>
</tr>
<tr>
<td></td>
<td>Violence or injury by animal</td>
<td>31 year old male field worker killed in a bear attack in a national forest. TN resident.</td>
</tr>
<tr>
<td></td>
<td>Violence or injury by animal</td>
<td>65 year old female rancher kicked in the head by a horse while unloading horses from a trailer. WY resident.</td>
</tr>
<tr>
<td></td>
<td>Violence or injury by animal</td>
<td>63 year old male rancher hit in the head with a gate that had been kicked by a bull. He continued working but subsequently died later that day. WY resident.</td>
</tr>
<tr>
<td>2015</td>
<td>Contact with object/equipment</td>
<td>47 year old male logger killed by a fallen tree. He was working alone at the time of the incident. See the complete OSHA report online: wyomingworkforce.org/businesses/osha/accidentalerts/. Employer industry: Logging. WY resident</td>
</tr>
<tr>
<td></td>
<td>Contact with object/equipment</td>
<td>76 year old male rancher pinned by the truck he was working on when the hoist came down on him, crushing his chest. Employer industry: Cattle ranching. WY resident.</td>
</tr>
<tr>
<td>Event Type</td>
<td>Description</td>
<td></td>
</tr>
<tr>
<td>----------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Fall (from height)</td>
<td>67 year old male ranch manager fell off a ladder or roof and sustained a head injury. Employer industry: Beef cattle ranching. WY resident. NOTE: It seems the injury incident occurred in Wyoming, but death occurred out-of-state. Thus, this fatality will likely not be counted in the federal CFOI data for Wyoming.</td>
<td></td>
</tr>
<tr>
<td>Motor Vehicle (pedestrian/worksite)</td>
<td>89 year old male rancher (possibly owner/operator of family ranch) killed in a four-wheeler (ATV) roll-over. Reports indicate the ATV landed on the victim pinning him underneath. Employer industry: Ranching. WY resident.</td>
<td></td>
</tr>
<tr>
<td>Motor Vehicle (pedestrian/worksite)</td>
<td>14 year old male seasonal ranch hand killed in a side-by-side utility vehicle roll-over. Victim was the driver. Use of safety restraint or gear unknown. Employer industry: Beef cattle ranching. WY resident.</td>
<td></td>
</tr>
<tr>
<td>Motor Vehicle (pedestrian/worksite)</td>
<td>25 year old male killed in a 4-wheeler (standard ATV) roll-over incident while going up an embankment. Victim was the driver. No personal protective equipment was used. See the complete OSHA report online: wyomingworkforce.org/businesses/osha/accidentalerts/. Employer industry: Soil Preparation, planting, and cultivating. WY resident.</td>
<td></td>
</tr>
<tr>
<td>Violence or injury by animal</td>
<td>66 year old female rancher thrown from her horse. Employer industry: Cattle ranching. WY resident.</td>
<td></td>
</tr>
<tr>
<td>2016 Contact with object/equipment</td>
<td>20 year old male ranch hand killed by a falling crane boom after pins had been removed. This occurred on a small ranch where OSHA did not have jurisdiction to complete a thorough investigation. Employer industry: Animal Production and Aquaculture (NAICS 112). WY resident.</td>
<td></td>
</tr>
<tr>
<td>Motor Vehicle (pedestrian/worksite)</td>
<td>35 year old male sheepherder died from asphyxiation from being pinned under a standard ATV. Reports indicate he lost his bearing during a snow storm and rode onto a hill causing the four-wheeler to turn over. He was working alone at the time of the incident. Victim had worked the same ranch for approximately three years. Beef Cattle Ranching &amp; Farming (112111). WY resident.</td>
<td></td>
</tr>
<tr>
<td>Motor Vehicle (pedestrian/worksite)</td>
<td>60 year old male rancher was killed while herding cattle. He was thrown from an ATV vehicle after going into a ravine and died from head and neck injuries. Employer industry: Self Employed Animal Production &amp; Aquaculture (NAICS 112). WY resident.</td>
<td></td>
</tr>
<tr>
<td>Motor Vehicle (pedestrian/worksite)</td>
<td>61 year old male life-long ranch owner and cowboy killed in a tractor roll-over incident while moving hay. Employer industry: Cattle Ranching and Farming (NAICS 1121). WY resident.</td>
<td></td>
</tr>
<tr>
<td>Year</td>
<td>Detailed Event/Exposure</td>
<td>Description</td>
</tr>
<tr>
<td>------</td>
<td>-------------------------</td>
<td>-------------</td>
</tr>
<tr>
<td>2012</td>
<td>Contact with object/equipment</td>
<td>57 year old male was working on HVAC and tripped and fell into fan intake, multiple blunt and sharp force injuries, OSHA case investigation, WY resident.</td>
</tr>
<tr>
<td></td>
<td>Contact with object/equipment</td>
<td>20 year old male working in a trench box, struck by bucket of backhoe, OSHA case investigation, WY resident.</td>
</tr>
<tr>
<td></td>
<td>Fall (from height)</td>
<td>33 year old male fell off ladder/scaffolding while installing doors on a second floor of a multi-unit complex being constructed, operations manager/carpenter, OSHA case investigation, CO resident.</td>
</tr>
<tr>
<td>2013</td>
<td>Motor Vehicle (pedestrian/worksite)</td>
<td>38 year old male died after a dump truck backed over him on jobsite. Dump truck driver investigated for DUI. WY resident.</td>
</tr>
<tr>
<td>2014</td>
<td>Fall (from height)</td>
<td>25 year old male construction worker fell 60 feet from a roof suffering a fatal skull fracture. WY resident.</td>
</tr>
<tr>
<td></td>
<td>Motor Vehicle (pedestrian/worksite)</td>
<td>23 year old male construction worker killed when a tracked excavator backed over him. WY resident.</td>
</tr>
<tr>
<td>2015</td>
<td>Fall (from height)</td>
<td>53 year old male industrial painter fell approximately 45-50 feet from scaffolding. See the complete OSHA report online: wyomingworkforce.org/businesses/osha/accidentalerts/. Employer industry: Painting and Wall Covering Contractors. WY resident.</td>
</tr>
<tr>
<td></td>
<td>Fall (from height)</td>
<td>60 year old male construction worker (and business owner/operator) fell off a roof. Employer industry: Residential remodeling. WY resident.</td>
</tr>
<tr>
<td></td>
<td>Fall (from height)</td>
<td>23 year old male construction worker fell over 30 feet from a platform or decking that was installed or in the process of being installed. See the complete OSHA report online: wyomingworkforce.org/businesses/osha/accidentalerts/. Employer industry: Nonresidential construction. WY resident.</td>
</tr>
<tr>
<td></td>
<td>Motor Vehicle (pedestrian/worksite)</td>
<td>44 year old female road construction flagger. Hit by a semi-truck while working within an interstate highway construction zone. The driver of the vehicle was negligent in maintaining the lane of traffic. See the complete OSHA report online: wyomingworkforce.org/businesses/osha/accidentalerts/. Employer industry: Highway, Street, and Bridge Construction. WY resident.</td>
</tr>
<tr>
<td>2016</td>
<td>Contact with object/equipment</td>
<td>27 year old male pipe layer was killed during the installation of a concrete manhole. Reports indicate the victim and another employee were in an excavated hole setting the midsection of the manhole over the base. The midsection broke off, or came loose from, the lifting system, and ultimately struck the victim causing fatal injury. See the complete OSHA report online: wyomingworkforce.org/businesses/osha/accidentalerts/. Employer industry: Nonresidential Plumbing, Heating, &amp; Air-Conditioning (NAICS 238222). WY resident.</td>
</tr>
<tr>
<td></td>
<td>Fall (from height)</td>
<td>56 year old male independent contractor and painter died from a head injury sustained after falling from scaffolding to the ground. OSHA did not inspect since decedent was a sole owner/proprietor of his business. Employer industry: Self Employed. WY resident. (NOTE: Decedent was injured in Wyoming, but passed away in Montana, thus may not be counted in the federal occupational fatality system.)</td>
</tr>
<tr>
<td>Motor Vehicle (roadway travel)</td>
<td>36 year old male electrician apprentice killed in a single vehicle crash on the interstate. He was the front seat passenger in a work van owned by his employer and driven by another employee. During travel, the rear tire blew causing the driver to lose control and the van to roll multiple times. Conditions were clear and dry during daylight hours; there was no improper driving cited. The victim was properly belted. Employer industry: Nonresidential Electrical Contractors (238212). WY resident.</td>
<td></td>
</tr>
</tbody>
</table>
### Mining (excluding oil & gas) (n=5)

<table>
<thead>
<tr>
<th>Year</th>
<th>Detailed Event/Exposure</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>Motor Vehicle (pedestrian/worksite)</td>
<td>24 year old male crushed in a pick-up that was run over by motorized shovel that rolled backward. WY resident.</td>
</tr>
<tr>
<td></td>
<td>Motor Vehicle (pedestrian/worksite)</td>
<td>44 year old male drove a D11 dozer off of a steep embankment and rolled. WY resident.</td>
</tr>
<tr>
<td>2014</td>
<td>Contact with object/equipment</td>
<td>25 year old male heavy equipment operator killed in a mine-site rock classifier. SD resident.</td>
</tr>
<tr>
<td></td>
<td>Suicide at work</td>
<td>51 year old male. WY resident.</td>
</tr>
<tr>
<td>2015</td>
<td>Motor Vehicle (pedestrian/worksite)</td>
<td>52 year old male equipment operator died from complications of a traumatic injury sustained in 2007 when the dozer he was driving rolled off an access ramp. The MSHA report indicated a deleterious change in the ramp's condition that had not been communicated between shifts, nor had the change been signified on the worksite with a barrier or by some other means. Employer industry: Surface coal mining. WY resident.</td>
</tr>
</tbody>
</table>
### Oil & Gas Extraction and Production (n=24)

<table>
<thead>
<tr>
<th>Year</th>
<th>Detailed Event/Exposure</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>Contact with object/equipment</td>
<td>62 year old male crushed by tote that fell from a forklift in a warehouse, general industry that serves oil and gas, OSHA case investigation, WY resident.</td>
</tr>
<tr>
<td></td>
<td>Motor Vehicle (pedestrian/worksite)</td>
<td>50 year old male employee was positioning a tractor trailer to load dry cement in a company yard. Apparently, the driver was attempting to knock ice from the brakes underneath the tractor when it began moving and rolled over the driver, WY resident.</td>
</tr>
<tr>
<td></td>
<td>Suicide at work</td>
<td>Suicide</td>
</tr>
<tr>
<td>2013</td>
<td>Contact with object/equipment</td>
<td>32 year old male oil field worker struck by falling block on an oil rig. WY resident.</td>
</tr>
<tr>
<td></td>
<td>Contact with object/equipment</td>
<td>30 year old male struck in neck by well pump assembly, died the next day from a cerebral hematoma. WY resident.</td>
</tr>
<tr>
<td></td>
<td>Contact with object/equipment</td>
<td>52 year old male struck by falling 5.5” drilling pipe from a rail car in yard. WY resident.</td>
</tr>
<tr>
<td></td>
<td>Motor Vehicle (roadway travel)</td>
<td>62 year old male driver of 18 wheeler collided with a pick-up that had crossed the center line on US 26. Seat belt use unknown. WY resident.</td>
</tr>
<tr>
<td>2014</td>
<td>Contact with object/equipment</td>
<td>46 year old male slipped, tripped or fell near an operating oil pump jack and was struck by the counterweight. At time of investigation, machinery was unguarded and surrounded by various trip hazards. WY resident.</td>
</tr>
<tr>
<td></td>
<td>Fire/explosion</td>
<td>35 year old male killed by an explosion and fire sparked during cleaning of two natural gas storage tanks. Proper equipment grounding was investigated. WY resident.</td>
</tr>
<tr>
<td></td>
<td>Motor Vehicle (roadway travel)</td>
<td>42 year old male oil and gas worker killed in a single vehicle roll-over. Icy road conditions. Passenger. Not belted. FL resident.</td>
</tr>
<tr>
<td></td>
<td>Motor Vehicle (roadway travel)</td>
<td>60 year old male oil and gas worker killed in a single vehicle roll-over. Icy road conditions. Driver. Belted. CA resident.</td>
</tr>
<tr>
<td></td>
<td>Motor Vehicle (roadway travel)</td>
<td>28 year old male oil and gas worker killed in a single vehicle roll-over. Icy road conditions. Passenger. Belted. TX resident.</td>
</tr>
<tr>
<td></td>
<td>Motor Vehicle (roadway travel)</td>
<td>80 year old male crude oil tester killed in a single vehicle roll-over. Driver. Not belted. WY resident.</td>
</tr>
<tr>
<td></td>
<td>Motor Vehicle (pedestrian/worksite)</td>
<td>26 year old male swamper/truck driver killed on a drilling rig site when a welding truck backed over him. WY resident.</td>
</tr>
<tr>
<td>2015</td>
<td>Contact with object/equipment</td>
<td>25 year old male drill-rig hand killed when a derrick collapsed down on top of him. Preliminary reports indicate there were announcements for workers to clear the well-head area prior to performing the operation that caused the collapse. However, for unknown reasons, the victim had not cleared the area prior to the operation. See the complete OSHA report online: wyomingworkforce.org/businesses/osha/accidentalerts/. Employer industry: Well-servicing. WY resident.</td>
</tr>
<tr>
<td>Incident Type</td>
<td>Description</td>
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</tr>
<tr>
<td>Motor Vehicle (roadway travel)</td>
<td>63 year old male pipeline inspector driving a pick-up truck rear-ended a semi-truck that had slowed for a left turn on WY-59. Victim was belted. Possible contributing factors of driver inattentiveness, cell phone usage, or medical conditions were investigated. Employer industry: Oil &amp; gas engineering services. SD resident.</td>
<td></td>
</tr>
<tr>
<td>Motor Vehicle (roadway travel)</td>
<td>23 year old male semi-truck driver was one of two drivers killed in a head-on collision of two semi-trucks on WY-220. This victim was the driver of the truck that drove into the on-coming lane of traffic for unknown reasons. Not belted. Employer industry: Support Activities for Oil and Gas. UT resident.</td>
<td></td>
</tr>
<tr>
<td>Contact with object/equipment</td>
<td>36 year old male operations technician killed while conducting maintenance at a natural gas plant. He was struck in the head by an unsecured drain line after a drain valve was opened under operational pressure. The victim was an experienced, long-term employee of the plant. See the complete OSHA report online: wyomingworkforce.org/businesses/osha/accidentalalerts/. Employer industry: Pipeline Transportation of Natural Gas (486210). WY resident.</td>
<td></td>
</tr>
<tr>
<td>Fall (from height)</td>
<td>28 year old male rig hand was on the tubing boards of an oil rig during a servicing operation. Preliminary reports indicate his fall-protection harness line somehow crossed the path of the traveling blocks, which may have weakened or severed the line and knocked him off the platform. There were indications that he properly hooked up to the correct anchor point up when he first got onto the platform, but may not have moved his anchor point to keep the line in proper position during his work around the platform. The rig hand was known to be a safe and highly competent worker, underscoring the importance of 100% compliance with fall-protection protocols. See the complete OSHA report online: wyomingworkforce.org/businesses/osha/accidentalalerts/. Employer industry: Support Activities for Oil &amp; Gas Operations (NAICS 213112). WY resident.</td>
<td></td>
</tr>
<tr>
<td>Motor Vehicle (roadway travel)</td>
<td>30 year old male rig operator killed in a single vehicle crash on the interstate. He was driving a heavy truck (flatbed style) owned by his employer. During travel, the front left tire blew causing him to lose control and the vehicle rolled. Conditions were clear and dry during daylight hours; there was no improper driving cited. Decedent was not belted and was ejected from the vehicle. Employer industry: Support Activities for Oil &amp; Gas Operations (NAICS 213112). WY resident.</td>
<td></td>
</tr>
<tr>
<td>Suicide at work</td>
<td>50 year old male. WY resident.</td>
<td></td>
</tr>
<tr>
<td>Year</td>
<td>Detailed Event/Exposure</td>
<td>Description</td>
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<tr>
<td>2012</td>
<td>Fall (from height)</td>
<td>30 year old male was attempting to position a JLG man-lift on to a trailer, the operator lost control of the man-lift and two tires of the lift slipped off the trailer. The operator was ejected from the lift’s basket and struck a metal object sustaining fatal injuries, WY resident.</td>
</tr>
<tr>
<td></td>
<td>Fall (from height)</td>
<td>72 year old male found next to his truck with a head wound. His truck was parked at highway 372 and county road 11 near a mining operation. The trucker was going to pick up a load of soda ash. The hatch was open on the top of the truck and the trucker presumably fell from the truck during icy conditions, OSHA case investigation, ID resident.</td>
</tr>
<tr>
<td></td>
<td>Motor Vehicle (aviation)</td>
<td>65 year old owner of an aviation company and flight school killed in a plane crash, four east Texas men travelling on business, TX resident.</td>
</tr>
<tr>
<td></td>
<td>Motor Vehicle (aviation)</td>
<td>21 year old male pilot and employee of flight school killed in a plane crash, four east Texas men travelling on business, TX resident.</td>
</tr>
<tr>
<td></td>
<td>Motor Vehicle (aviation)</td>
<td>52 year old male owner of a plane that crashed, four east Texas men travelling on business, TX resident.</td>
</tr>
<tr>
<td></td>
<td>Motor Vehicle (aviation)</td>
<td>29 year old male owner of a rental company killed in a plane crash, four east Texas men travelling on business, TX resident.</td>
</tr>
<tr>
<td></td>
<td>Motor Vehicle (roadway travel)</td>
<td>43 year old male, unrestrained driver of a semi that left roadway and rolled down an embankment, blunt chest trauma, truck driver, TX resident.</td>
</tr>
<tr>
<td></td>
<td>Motor Vehicle (roadway travel)</td>
<td>60 year old male had a rollover crash in a semi-tractor trailer, pinned in truck, TX resident.</td>
</tr>
<tr>
<td></td>
<td>Motor Vehicle (roadway travel)</td>
<td>49 year old male- unrestrained driver of tow truck, BAC 0.16, truck driver rolled his vehicle on I-80, OR resident.</td>
</tr>
<tr>
<td></td>
<td>Motor Vehicle (roadway travel)</td>
<td>60 year old male -decedent and his wife were killed when the truck carrying a load of bentonite lost brakes on a steep hill, crashed through guard rail and fell down an embankment. He and his wife were ejected from the tractor, probably unrestrained, FL resident.</td>
</tr>
<tr>
<td></td>
<td>Motor Vehicle (roadway travel)</td>
<td>36 year old male lost truck brakes on Teton pass coming in to Jackson. Truck/trailer was overweight, OR resident.</td>
</tr>
<tr>
<td></td>
<td>Motor Vehicle (roadway travel)</td>
<td>38 year old male crashed truck/trailer on I-80 14 miles east of Laramie during foggy/icy conditions, PA resident.</td>
</tr>
<tr>
<td></td>
<td>Motor Vehicle (roadway travel)</td>
<td>30 year old male driver of eastbound Fed Ex tractor trailer towing two trailers, for reasons unknown, entered the median and collided with several wooden fence posts. Skid marks in the grass indicate the driver steered right in an attempt to re-enter the roadway but strong winds at the time may have contributed to the tractor and trailers overturning onto the left side and sliding into the westbound lanes blocking the roadway. Driver was pinned in the vehicle, UT resident.</td>
</tr>
<tr>
<td></td>
<td>Motor Vehicle (pedestrian/worksite)</td>
<td>65 year old male was loading a wrecker operating the winch when struck by another motorist driving a pick-up. Pick-up driver arrested for DUI. Decedent was a WY resident.</td>
</tr>
<tr>
<td>2013</td>
<td>Motor Vehicle (roadway travel)</td>
<td>42 year old male semi-truck tanker trailer crashed on I-25 at an over pass bridge. Unit fell to highway below. Shoulder and lap belt used per crash report. WY resident.</td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th>Date</th>
<th>Incident Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motor Vehicle (roadway travel)</td>
<td>37 year old male driving an 18-wheeler crashed into two stopped 18-wheelers on I-80. Snow and blowing snow with reduced visibility and snow packed roadway. No evidence of braking. Shoulder and lap belt used per crash report. NC resident.</td>
</tr>
<tr>
<td>Motor Vehicle (roadway travel)</td>
<td>60 year old male driver of 18-wheeler rear ended another 18-wheeler on I-80. Shoulder and lap belt used per crash report. IL resident.</td>
</tr>
<tr>
<td>2014</td>
<td>Fall (from height)</td>
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<tr>
<td></td>
<td>68 year old male truck driver fell and struck head after loading his trailer. The decedent fell between the top of the truck and the loading platform. WY resident.</td>
</tr>
<tr>
<td>Motor Vehicle (roadway travel)</td>
<td>63 year old male killed in a single vehicle accident while transporting a travel trailer. Road conditions icy with strong winds. Driver. Belted. MA resident.</td>
</tr>
<tr>
<td>Motor Vehicle (roadway travel)</td>
<td>48 year old male truck driver killed in a two semi collision. Driver. Not belted. WY resident.</td>
</tr>
<tr>
<td>Motor Vehicle (roadway travel)</td>
<td>63 year old male killed in a single vehicle accident while transporting a travel trailer. Road conditions icy with strong winds. Driver. Belted. MA resident.</td>
</tr>
<tr>
<td>Motor Vehicle (roadway travel)</td>
<td>48 year old male truck driver killed in a two semi collision. Driver. Not belted. WY resident.</td>
</tr>
<tr>
<td>Motor Vehicle (roadway travel)</td>
<td>31 year old male killed in a two semi collision. Driver. Belted. WY resident.</td>
</tr>
<tr>
<td>Motor Vehicle (pedestrian/worksite)</td>
<td>25 year old male truck driver crushed between two belly dump trucks during a road-side assistance operation. WY resident.</td>
</tr>
<tr>
<td>2015</td>
<td>Contact with object/equipment</td>
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<tr>
<td></td>
<td>49 year old male auto towing and repair worker was on a service call repairing a crane tire when an explosion occurred. Preliminary reports indicate the tire locking ring blew off. See the complete OSHA report online: wyomingworkforce.org/businesses/osha/accidentalerts/. Employer industry: Motor Vehicle Towing. WY resident.</td>
</tr>
<tr>
<td>Motor Vehicle (roadway travel)</td>
<td>54 year old male semi-truck driver rear-ended another semi-truck while traveling along I-80. Fatigue was a possible contributing factor. Victim was belted. Employer industry: Truck Motor Vehicle. WY resident.</td>
</tr>
<tr>
<td>Motor Vehicle (roadway travel)</td>
<td>28 year old male semi-truck driver lost his brakes and then control of his vehicle while coming down a mountain pass on Hwy 14. The driver was belted but had driven over the allowable number of hours at the time of the crash. Employer industry: Truck Motor Vehicle. AZ resident.</td>
</tr>
<tr>
<td>Motor Vehicle (roadway travel)</td>
<td>63 year old male semi-truck driver was one of two drivers killed in a head-on collision of two semi-trucks on WY-220. Victim was struck by a truck that crossed over into his lane of traffic for unknown reasons. Belted. Employer industry: Motor Vehicle. TX resident.</td>
</tr>
<tr>
<td>Motor Vehicle (pedestrian/worksite)</td>
<td>32 year old male semi-truck driver struck and killed by another semi-truck while working on his disabled vehicle on the shoulder of I-80. The disabled vehicle was visible for three-quarters of a mile, but the driver of the other truck fell asleep while approaching the disabled vehicle. Employer industry: Truck Motor Vehicle. CA resident.</td>
</tr>
<tr>
<td>Year</td>
<td>Cause of Death</td>
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<tr>
<td>2016</td>
<td>Contact with object/equipment</td>
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<td>Motor Vehicle (roadway travel)</td>
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<td>Motor Vehicle (roadway travel)</td>
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<td></td>
<td>Suicide at work</td>
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<td>Violence or injury by person</td>
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<tr>
<td>Year</td>
<td>Detailed Event/Exposure</td>
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<tr>
<td>2013</td>
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<td>Contact with object/equipment</td>
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<td></td>
<td>Fall (from height)</td>
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<tr>
<td>2014</td>
<td>Contact with object/equipment</td>
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<tr>
<td>2015</td>
<td>Fall (from height)</td>
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<tr>
<td>2015</td>
<td>Motor Vehicle (roadway travel)</td>
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<tr>
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<tr>
<td>2012</td>
<td>Violence or injury by person</td>
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<td></td>
<td>Motor Vehicle (roadway travel)</td>
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<tr>
<td></td>
<td>Motor Vehicle (aviation)</td>
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<td></td>
<td>Other exposure to harmful substances/environments</td>
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<td></td>
<td>Motor Vehicle (roadway travel)</td>
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<tr>
<td>2013</td>
<td>Motor Vehicle (roadway travel)</td>
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<td></td>
<td>Suicide at work</td>
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<tr>
<td>2014</td>
<td>Suicide at work</td>
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<td></td>
<td>Fall (from height)</td>
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<td></td>
<td>Fall (same level)</td>
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<td>Motor Vehicle (roadway travel)</td>
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<td></td>
<td>Fall (same level)</td>
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<td></td>
<td>Suicide at work</td>
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<tr>
<td>2015</td>
<td>Suicide at work</td>
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<td></td>
<td>Fire/explosion</td>
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<td></td>
<td>Fire/explosion</td>
</tr>
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<td></td>
<td>Other exposure to harmful substances/environments</td>
</tr>
<tr>
<td>Violence or injury by person</td>
<td>67 year old male store owner shot and killed during a robbery. Employer industry: Retail trade. WY resident.</td>
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<tr>
<td>2016</td>
<td>42 year old male mountain guide died from a fall in Grand Teton National Park while guiding a group of youth rock climbers. It is believed his tether secured with a water knot failed, possibly due to inadequate knot tail length. The guide was highly experienced and known to uphold safe and cautious climbing practices, underscoring the importance of regular gear inspections and self-checks in the field. As of this publication, the final OSHA report has not been posted. However, several online news articles provide more detail about this incident. Employer industry: All Other Schools and Instruction (NAICS 611699). WY resident.</td>
</tr>
<tr>
<td>Fall (from height)</td>
<td>60 year old male cemetery care taker was performing maintenance on a dump-bed style truck with the bed raised. In attempting to tighten a leaking hydraulic line hose fitting, he inadvertently turned the fitting in the wrong direction, causing the dump box to lower rapidly, pinning him between the dump box and the truck frame. See the complete OSHA report online: wyomingworkforce.org/businesses/osha/accidentalerts/. Employer industry: Funeral Homes and Funeral Services (NAICS 812210). WY resident.</td>
</tr>
<tr>
<td>Contact with object/equipment</td>
<td>48 year old male meter prover driving a semi-truck killed in a three vehicle crash. The crash was caused by another vehicle running a stop sign. The semi-truck struck a horse trailer broad-side causing the semi to drive into a ditch with extensive damage to the front end. Decedent was not belted. Employer industry: Testing Laboratories (NAICS 541380). WY resident.</td>
</tr>
<tr>
<td>Motor Vehicle (roadway travel)</td>
<td>79 year old male Deputy Fire Chief fell approximately 15 feet through the roof of a root cellar or bunker while fighting a grass and structure fire in a rural area. He suffered numerous second- and third-degree burns over 38 percent of his body, broken ribs and a punctured lung. This event occurred in 2015, but the victim succumbed to his injuries several months later in 2016. Employer industry: Public Administration (92216). WY resident. More information is available in the public investigation report by the U.S. Fire Administration: <a href="https://apps.usfa.fema.gov/firefighter-fatalities/fatalityData/">https://apps.usfa.fema.gov/firefighter-fatalities/fatalityData/</a></td>
</tr>
<tr>
<td>Fall (from height)</td>
<td>34 year old male wildlife specialist killed in a small airplane crash. The decedent was piloting the plane, and had been a licensed pilot since the age of 16. According to the preliminary report by the National Motor Vehicle Safety Board (NTSB), the flight was conducting animal damage management and was supported by a ground crew in the area. The airplane was owned by the Wyoming Wool Growers Association and operated by the United States Department of Agriculture (USDA). A final determination of cause was not included in the report. The full NTSB report is available online. Employer industry: Public Administration, Administration of Environmental Quality Programs (924). WY resident.</td>
</tr>
<tr>
<td>Motor Vehicle (aviation)</td>
<td>52 year old rental property manager was shot during a workplace violence incident. See the complete OSHA report online: wyomingworkforce.org/businesses/osha/accidentalerts/. Employer industry: Lessors of Res Buildings &amp; Dwellings (NAICS 531110). WY resident.</td>
</tr>
<tr>
<td><strong>Motor Vehicle (roadway travel)</strong></td>
<td>57 year old male truck driver either clipped a bridge or ran off a bridge on Interstate 25. Road and weather conditions were clear and dry during daylight hours. Not belted. Employer Industry: Recyclable Material Merchant Wholesalers (NAICS 423930). Wyoming resident.</td>
</tr>
<tr>
<td><strong>Motor Vehicle (pedestrian/worksite)</strong></td>
<td>29 year old male employee of an environmental abatement and remediation company was part of a crew doing asbestos remediation for a high school. While driving a gator-style, four-wheel, 2-passenger utility vehicle (UTV), the decedent struck a metal gate and was impaled in the chest. The OSHA investigation cited lack of training as a contributing factor. See the complete OSHA report online: wyomingworkforce.org/businesses/osha/accidentalerts/. Employer industry: Remediation and Other Waste Management Services (NAICS 5629). CO resident.</td>
</tr>
<tr>
<td><strong>Drowning</strong></td>
<td>40 year old male drowned in a hand-dug hole approximately 40 inches deep and 20 inches wide filled with mud and water. Preliminary reports indicate he may have been reaching into the hole to locate a natural gas pipeline tracer line, but lost his grip or balance, fell into the hole head first and became entrapped, unable to use his legs because of the narrowness of the hole. He had been working alone at the time. See the complete OSHA report online: wyomingworkforce.org/businesses/osha/accidentalerts/. Employer Industry: Natural Gas Distribution (NAICS 221210). WY resident.</td>
</tr>
<tr>
<td><strong>Contact with object/equipment</strong></td>
<td>29 year old tool pusher was killed during the drilling of a water well. During operations to remove the drill stem from the well, the victim attached a pipe wrench to the piping so that, when rotated clockwise, the wrench would anchor on another part of the derrick and the pipe connection would break apart. The pipe was then inadvertently rotated in the wrong direction, causing the pipe wrench to strike the victim in the head. OSHA investigated and cited several contributing factors including, lack of hard-hat use, unsafe positioning of worker in orientation to moving equipment, inexperience, inadequate training, and using tools in a manner against the manufacturer's instructions. See the complete OSHA report online: wyomingworkforce.org/businesses/osha/accidentalerts/. Employer: Engineering Services (541330). SD resident.</td>
</tr>
</tbody>
</table>
References


2 Wyoming Department of Workforce Services, Research & Planning Section. State Occupational Safety and Health Topic Page. Available: [doe.state.wy.us/LMI/safety.htm](http://doe.state.wy.us/LMI/safety.htm)


7 Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health. Fatalities in the Oil and Gas Extraction Industry (FOG). Available: [www.cdc.gov/niosh/topics/fog/default.html](http://www.cdc.gov/niosh/topics/fog/default.html)


10 Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health. Fatalities Among Oil and Gas Extraction Workers – United States, 2003-2006. MMWR; April 25, 2008; 57(16):429-431. Available: [https://www.cdc.gov/mmwr/preview/mmwrhtml/mm5716a3.htm](https://www.cdc.gov/mmwr/preview/mmwrhtml/mm5716a3.htm)


20 Hoye A. How would increasing seat belt use affect the number of killed or seriously injured light vehicle occupants? Accident Analysis & Prevention. 2016 Mar; 88: 175-186.


32 Hoye A. How would increasing seat belt use affect the number of killed or seriously injured light vehicle occupants? Accident Analysis & Prevention. 2016 Mar; 88: 175-186.