

## LOST TIME INJURIES BY MINERAL MINED DURING 2014-2015

Mineral mined	No. of employees	Million hours worked	No. of serious LTIs	No. of minor LTIs	Total LTIs	Days lost	Incidence rate	Frequency rate	Duration rate	Injury index	No. of fatalities
Iron ore	59,918	106.99	123	11	134	2,596	2.2	1.3	19.4	24	0
Gold	19,194	34.28	74	10	84	1,649	4.4	2.5	19.6	48	1
Bauxite and alumina	7,481	14.03	49	7	56	1,006	7.5	4.0	18.0	72	1
Nickel	6,099	11.68	32	6	38	653	6.2	3.3	17.2	56	0
Base metals	2,531	4.48	8	2	10	94	4.0	2.2	9.4	21	1
Mineral sands	2,241	2.71	7	6	13	81	5.8	4.8	6.2	30	0
Construction materials	1,452	1.74	2	3	5	15	3.4	2.9	3.0	9	0
Diamonds	1,398	2.56	10	0	10	330	7.2	3.9	33.0	129	0
Salt	957	1.32	4	1	5	191	5.2	3.8	38.2	145	0
Silica and silica sand	346	0.48	7	6	13	119	37.6	27.1	9.2	248	0
Other	3,389	4.68	24	7	31	886	9.1	6.6	28.6	189	0
<b>Surface metalliferous</b>	<b>97,941</b>	<b>170.82</b>	<b>311</b>	<b>52</b>	<b>363</b>	<b>7,009</b>	<b>3.7</b>	<b>2.1</b>	<b>19.3</b>	<b>41</b>	<b>1</b>
<b>Underground metalliferous</b>	<b>7,065</b>	<b>14.12</b>	<b>29</b>	<b>7</b>	<b>36</b>	<b>611</b>	<b>5.1</b>	<b>2.5</b>	<b>17.0</b>	<b>43</b>	<b>2</b>
<b>Total metalliferous</b>	<b>105,006</b>	<b>184.94</b>	<b>340</b>	<b>59</b>	<b>399</b>	<b>7,620</b>	<b>3.8</b>	<b>2.2</b>	<b>19.1</b>	<b>41</b>	<b>3</b>
Coal	958	1.61	11	3	14	263	14.6	8.7	18.8	163	0
<b>Total – all mining</b>	<b>105,964</b>	<b>186.55</b>	<b>351</b>	<b>62</b>	<b>413</b>	<b>7,883</b>	<b>3.9</b>	<b>2.2</b>	<b>19.1</b>	<b>42</b>	<b>3</b>
<b>Total – exploration</b>	<b>2,179</b>	<b>4.02</b>	<b>7</b>	<b>3</b>	<b>10</b>	<b>148</b>	<b>4.6</b>	<b>2.5</b>	<b>14.8</b>	<b>37</b>	<b>1</b>
<b>TOTAL</b>	<b>108,143</b>	<b>190.57</b>	<b>358</b>	<b>65</b>	<b>423</b>	<b>8,031</b>	<b>3.9</b>	<b>2.2</b>	<b>19.0</b>	<b>42</b>	<b>4</b>

### There were four fatal accidents in the Western Australian mineral industry during 2014-15

- An electrician was fatally injured while carrying out breakdown maintenance on a lift at an alumina refinery. He was working at the ground level and was caught between the lift car and the lift shaft when the lift car moved upwards. There were no direct eye witnesses, and so it is not possible to determine exactly what he was doing at the time of the accident.
- A fitter was fatally injured while working on a guard fitted beneath the engine of a bulldozer which had been parked for maintenance in an exploration area on a mining lease. The deceased was lying on his back on the ground

underneath the bulldozer removing bolts from the engine guard. The right side of the guard was supported with a chain block, but the left side of the engine guard fell down onto his chest. It was found that the hinge plate was broken and did not secure the left hand side of the engine guard to the chassis.

- A load-haul-dump (LHD or bogger) operator working at a stope draw point in a copper mine received fatal injuries when he was struck by a rock weighing about 700 kg. The operator had parked the LHD in the stope access drive and was on foot in front of the loader bucket using a hose to

water down the rill. The rock appears to have rolled from an open stope and down the rill, which extended well into the draw point.

- An underground worker using an elevated work platform (EWP) to load explosive emulsion into pre-drilled holes was fatally injured when the charge-up basket he was in moved upwards, crushing him against the roof of the cross-cut. It appears he was leaning over the front of the basket when the control stick for raising and lowering the basket activated. The control stick was found to be bent forward (i.e. in "raise basket" position).

## DEFINITIONS

### DAYS LOST

Rostered days absent from work due to work injury

### DURATION RATE

Average number of workdays lost per injury

### EXPLORATION

Exploration activities not under the control of a Registered Mine Manager; usually associated with exploration leases.

### FATAL INJURY INCIDENCE RATE

Number of fatal injuries per 1,000 employees for a 12 month period

### FREQUENCY RATE

Number of injuries per million hours worked

### INCIDENCE RATE

Number of injuries per 1,000 employees for a 12 month period

### INJURY INDEX

Number of workdays lost per million hours worked

### LOST TIME INJURY (LTI)

Work injury that results in an absence from work for at least one full day or shift any time after the day or shift on which the injury occurred

### METALLIFEROUS MINES

All mines other than coal mines are classed as metalliferous mines

### MINOR INJURY

Work injury that results in the injured person being disabled for a period of less than two weeks

### NOC

Not otherwise classified

### RESTRICTED WORK INJURY (RWI)

Work injury (not LTI) that results in the injured person being unable to fully perform their ordinary occupation (regular job) any

time after the day or shift on which the injury occurred, regardless of whether or not the person is rostered to work, and where alternative or light duties are performed or hours are restricted

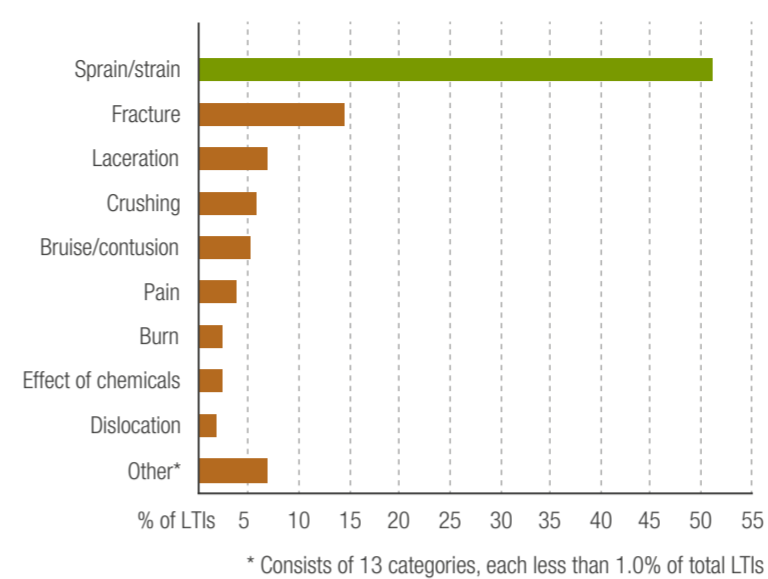
### SERIOUS INJURY FREQUENCY RATE

The number of serious injuries per million hours worked

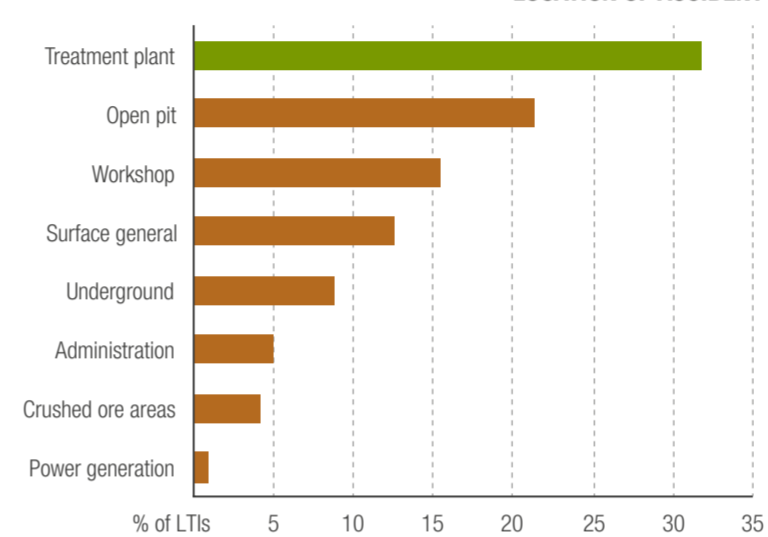
### SERIOUS INJURY

Work injury that results in the injured person being disabled for a period of two weeks or more

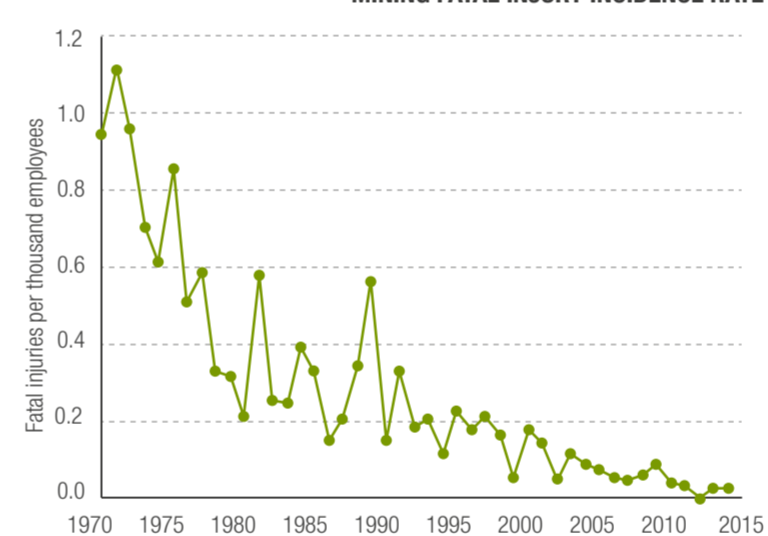
## NATURE OF INJURY



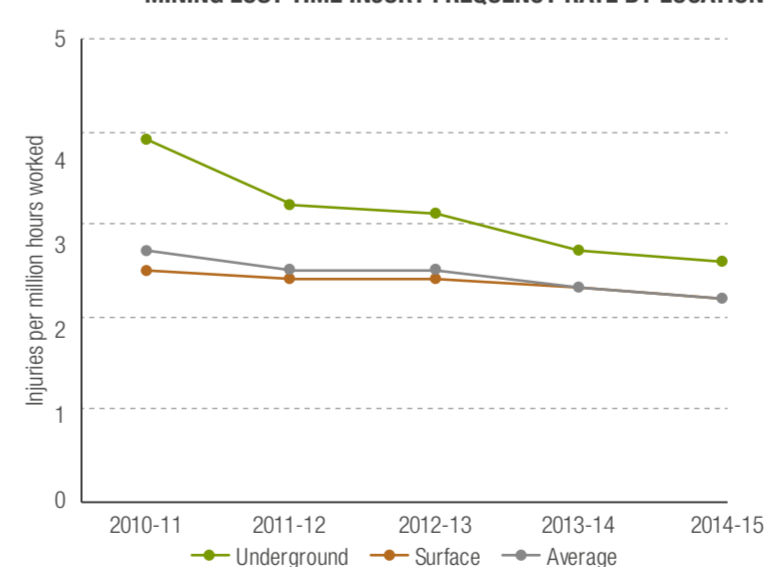
## LOCATION OF ACCIDENT



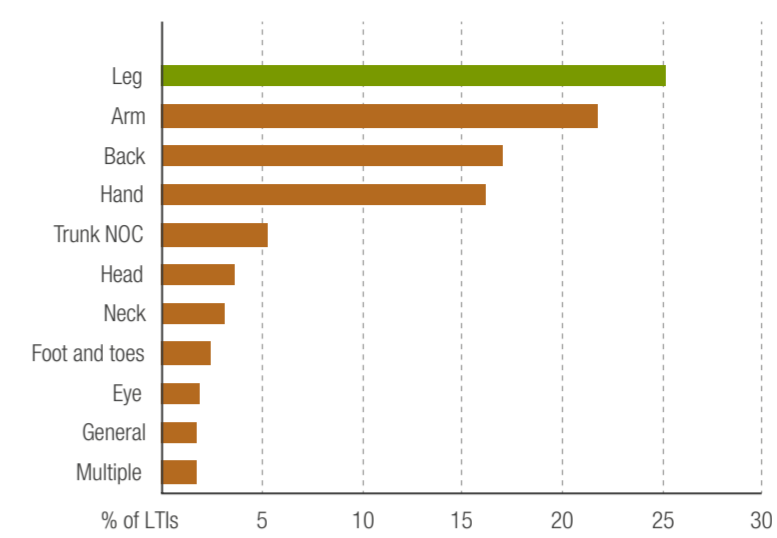
## MINING FATAL INJURY INCIDENCE RATE



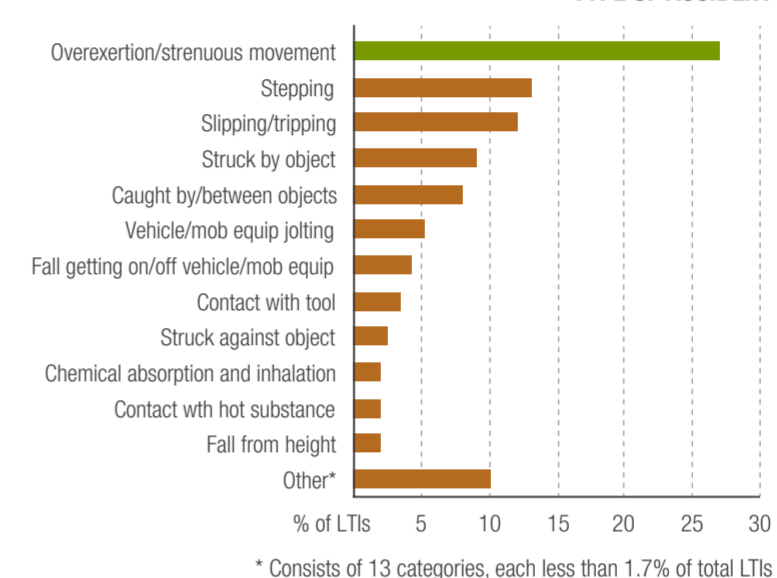
## MINING LOST TIME INJURY FREQUENCY RATE BY LOCATION



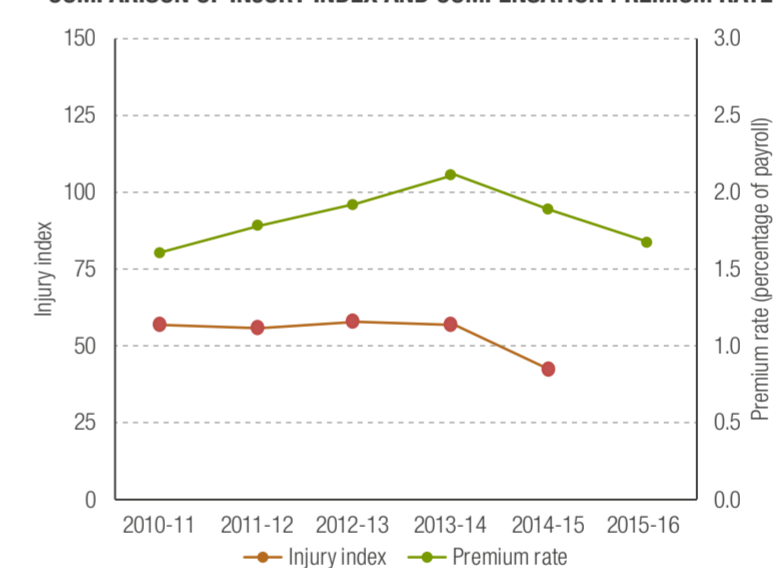
## PART OF BODY



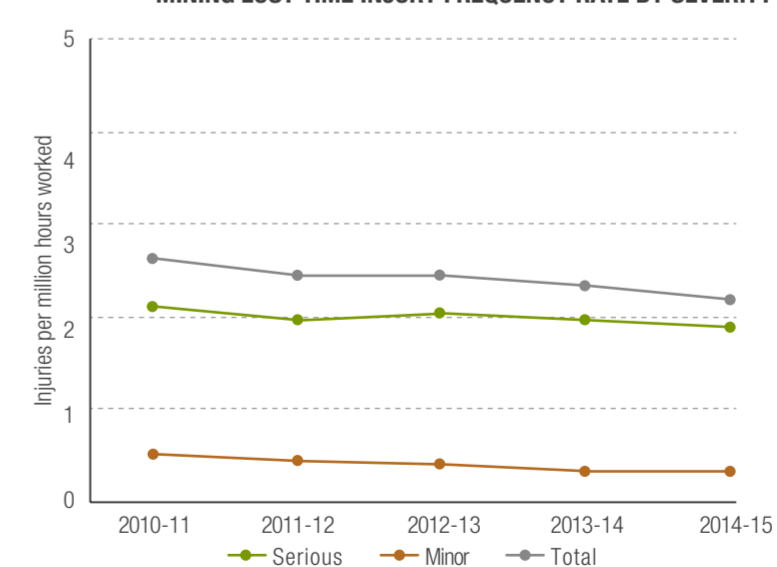
## TYPE OF ACCIDENT



## COMPARISON OF INJURY INDEX AND COMPENSATION PREMIUM RATE



## MINING LOST TIME INJURY FREQUENCY RATE BY SEVERITY



FOR MORE DETAILED INFORMATION ON SAFETY PERFORMANCE, SEE THE ANNUAL COMPILATIONS AT [WWW.DMP.WA.GOV.AU/SAFETY/SAFETY-STATISTICS-16198.ASPX](http://WWW.DMP.WA.GOV.AU/SAFETY/SAFETY-STATISTICS-16198.ASPX)

# SAFETY PERFORMANCE

## IN THE WESTERN AUSTRALIAN MINERAL INDUSTRY 2014-15

## STATISTICAL SUMMARY

### MINING

- There were three fatal mining accidents during 2014-15. Of these, one occurred on the surface (in a bauxite mine) and two occurred underground (one in a gold mine and the other in a base metals mine).
- There were 413 LTIs during 2014-15, 43 less than the previous year (456 injuries in 2013-14).
- Lost time injuries resulted in a total of 7,883 rostered days lost and a further 11,361 rostered days of restricted work in 2014-15.
- There was an average workforce of 105,964 in 2014-15, a decrease of approximately 1% from the previous year's average of 107,335.
- The overall LTI duration rate improved by approximately 22% during 2014-15, falling from 24.4 to 19.1.
- The overall LTI frequency rate for 2014-15 improved by 5%, falling from 2.3 to 2.2.
- The overall injury index improved by approximately 26%, falling from 57 in 2013-14 to 42 in 2014-15.
- Serious LTIs in mining during 2014-15 totalled 351, 35 less than in 2013-14, with the overall serious LTIFR improving from 2.0 to 1.9.
- The iron ore sector LTIFR improved by 24% during 2014-15, falling from 1.7 to 1.3.
- The bauxite and alumina sector LTIFR remained unchanged during 2014-15, at 4.0.
- The gold sector LTIFR improved by 4% during 2014-15, falling from 2.6 to 2.5.
- The nickel sector LTIFR deteriorated by 10% during 2014-15, rising from 3.0 to 3.3.
- There were 753 RWIs during 2014-15, 159 less than the previous year (912 RWIs reported in 2013-14).
- RWIs resulted in a total of 19,907 rostered days of restricted work in 2014-15.
- The overall RWI frequency rate for 2014-15 improved by 13%, falling from slightly less than 4.7 to 4.0.

### EXPLORATION

- There was one exploration fatality in 2014-15.
- There were 10 LTIs reported during 2014-15, 4 more than the previous year.
- Lost time injuries resulted in a total of 148 rostered days lost and a further 337 rostered days of restricted work in 2014-15.
- There was an average workforce of 2,179 workers, a decrease of 5% from the previous year's average.
- The overall LTIFR deteriorated by 92% in 2014-15, rising from 1.3 to 2.5. Rates for exploration such as LTIFR may vary significantly from year to year due to the low numbers of both the LTIs reported and hours worked.
- There were 10 restricted work injuries reported for exploration during 2014-15, resulting in a RWI frequency rate of 2.5, a decrease of 61%.
- RWIs resulted in a total of 354 rostered days of restricted work in 2014-15.