

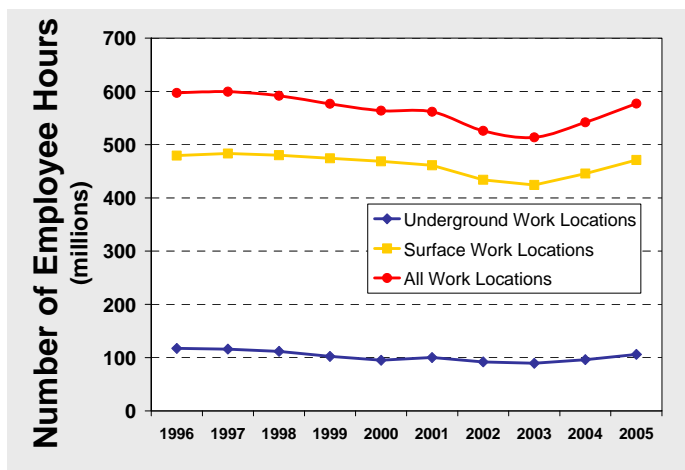
## Mining Operations

In 2005, data obtained from the Mine Safety and Health Administration (MSHA) indicated a total of 922 underground (6.3%) and 13,744 surface (93.7%) mining operations.<sup>1</sup>

## Employees

A total of 50,732 employees,<sup>2</sup> or 53,041 full-time equivalent (FTE)<sup>3</sup> employees, were reported to MSHA as working at underground mining locations in 2005. This compares to 260,395 employees (or 235,564 FTE employees) that were reported as working at surface locations.<sup>4</sup>

- Surface work location employee hours accounted for 81.6% of all hours reported to MSHA, while 18.4% of employee hours were reported for underground work locations.



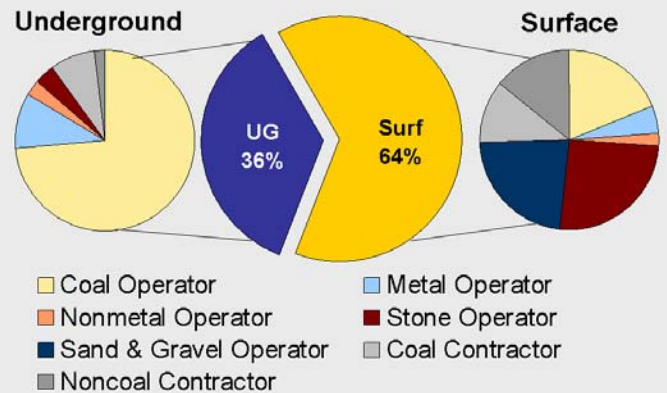
- The majority of surface employee hours were for mine operator employees (82.2%), compared to independent contractor employees (17.8%).
- Coal operators were the mining sector<sup>5</sup> reporting the most underground worker employee hours to MSHA (n=80,877,874; 76.2%).

## Fatalities

Of the 57 occupational mining fatalities reported to MSHA in 2005, 20 occurred at underground work locations and 37 occurred at surface locations.

- The fatality rate of 37.7 per 100,000 FTE employees was higher at underground work locations, compared to the rate of 15.7 for surface work locations.

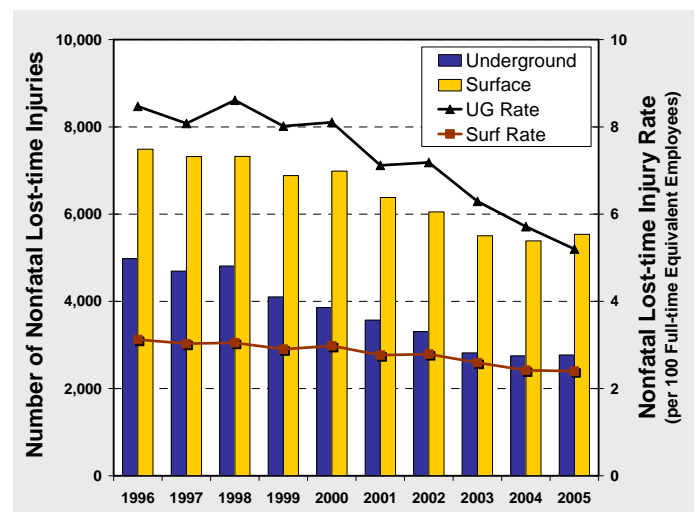
## Distribution of Mining Fatalities 2001-2005



## Nonfatal Lost-time Injuries

Within underground work locations, 2,772 nonfatal lost-time injuries were reported, resulting in 181,107 lost workdays.<sup>6</sup> This compares to 5,538 nonfatal lost-time injuries attributed to surface workers (total days lost=278,664).

- The overall underground nonfatal lost-time injury rate was greater than the surface injury rate (5.2 vs. 2.4 per 100 FTE workers).
- The most frequent classification of nonfatal lost-time injuries involved handling materials for both underground (n=793; 28.6%) and surface (n=1,921; 34.7%) work locations.



- The back was the most frequently reported body part injured at both underground (n=498; 18.0%) and surface (n=1,093; 19.7%) work locations.

These back injuries accounted for 38,597 days lost from work at underground work locations and 48,579 days lost at surface locations in 2005.

## Mining Characteristics, 2005

Commodity and Type of Employer	No. of Mines <sup>1</sup>		No. of Employees <sup>2</sup>		No. of FTE Employees <sup>3</sup>		Fatality Rate		Nonfatal Lost-time Injury Rate	
	UG	Surf	UG	Surf	UG	Surf	UG	Surf	UG	Surf
Coal Operator	674	1,389	36,693	41,588	40,439	46,745	34.6	6.4	5.5	1.8
Metal Operator	77	186	4,128	22,314	4,181	23,592	23.9	17.0	3.7	2.2
Nonmetal Operator	45	694	2,330	17,348	2,390	17,624	83.7	11.3	3.3	2.4
Stone Operator	126	4,364	1,889	67,870	2,140	71,510	140.2	16.8	2.8	3.1
Sand & Gravel Operator	--	7,111	--	37,705	--	34,258	--	26.3	--	2.5
<b>Operator Total</b>	<b>922</b>	<b>13,744</b>	<b>45,040</b>	<b>186,825</b>	<b>49,150</b>	<b>193,729</b>	<b>40.7</b>	<b>15.5</b>	<b>5.1</b>	<b>2.5</b>
Coal Contractor	--	--	4,247	28,392	2,829	17,307	--	28.9	7.5	1.9
Noncoal Contractor	--	--	1,445	45,178	1,061	24,528	--	8.2	2.9	1.6
<b>Contractor Total</b>	<b>--</b>	<b>--</b>	<b>5,692</b>	<b>73,570</b>	<b>3,890</b>	<b>41,835</b>	<b>--</b>	<b>16.7</b>	<b>6.3</b>	<b>1.7</b>
<b>TOTAL</b>	<b>922</b>	<b>13,744</b>	<b>50,732</b>	<b>260,395</b>	<b>53,041</b>	<b>235,564</b>	<b>37.7</b>	<b>15.7</b>	<b>5.2</b>	<b>2.4</b>

Fatality rates were computed per 100,000 FTE employees. Nonfatal lost-time injury rates were computed per 100 FTE employees.

**Data source:** Publicly released data files of employment and accident/injury/illness collected by MSHA under 30 CFR 50.

**Notes:** All analyses exclude office employees, except for the total number of mining operations. Analyses of fatalities exclude all individuals under 17 years of age and all individuals who were not classified as employees of a mining operator or mining contractor. Further statistical methodology is available on the NIOSH Internet [<http://www.cdc.gov/niosh/mining/statistics/method.htm>].

<sup>1</sup>When classifying mining operations as either underground or surface, the mines reporting employment for the subunit "Surface Operations at Underground Mines" were counted as underground mines. Mining operations reporting only office employees were determined to be underground or surface based on the reported mine type. Mines at which only independent contractors were working did not show any employment and were not counted.

<sup>2</sup>Number of employees is the average number of persons working at individual establishments during calendar quarters of active operations.

<sup>3</sup>Full-time equivalent employees were computed using reported employee hours (2,000 hours = 1 FTE).

<sup>4</sup>Surface work locations include surface operations at underground mines (surface shops and yards, tippie physically located at the mine site), surface operations (strip or open pit mines including associated shops and yards), auger mining operations, culm banks (reworking of mine dumps or refuse pile), dredge (mining operations conducted from a platform floating on water), other surface operations (brine pumping, etc.), independent shops and yards not associated with a specific mine, and mill or preparation plant.

<sup>5</sup>Mining sectors: coal operators, metal operators, nonmetal operators, stone operators, sand and gravel operators, coal contractors, and noncoal contractors.

<sup>6</sup>Includes actual days away from work and/or days of restricted work activity. For permanently disabling injuries only, statutory days charged by MSHA were used if they exceeded the total lost workdays.

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