



# Stone Operator Mining Facts - 2003

1. In 2003, a total of 4,357 **stone mining operations** reported employment to the Mine Safety and Health Administration (MSHA). The major industrial classifications in stone mining are dimension stone (used for construction purposes), crushed and broken stone (aggregates), cement, and lime.
  - Stone mines comprised 30.3% of all mining operations.
  - Mines producing crushed and broken stone (n = 3,412) comprised 78.3% of all stone mining operations.
2. A total of 67,474 **employees**, corresponding to 69,239 full-time equivalent (FTE) employees, were reported by stone operators to MSHA.<sup>1</sup> This is a 0.9% decrease in the number of FTE employees from 2002.
  - Stone operator employees comprised 27% of all employee hours reported to MSHA in 2003.
  - The primary commodity mined by the majority of stone operator employees was limestone (crushed and broken), accounting for 45.3% of all stone mine operator employment.
3. Nine work-related **fatalities** occurred in stone mines in 2003, compared to 19 in 2002.
  - The stone mine fatality rate was 13.0 per 100,000 FTE employees.
  - Eight fatalities occurred at surface work locations where the fatality rate was 11.9 per 100,000 FTEs, and one fatality occurred in an underground location where the fatality rate was 54.1 per 100,000 FTEs.<sup>2</sup>
4. There were 2,371 **nonfatal lost-time injuries** among stone mine employees occurring at a rate of 3.4 injuries per 100 FTE employees. These injuries resulted in 102,915 days lost from work.<sup>3</sup>
  - The median number of days lost from work among stone employees with nonfatal lost-time injuries was 15.
  - The highest injury rate was in surface production operations (3.4 per 100 FTE operator employees) compared to an injury rate of 2.9 per 100 FTE operator employees in underground production operations.
  - The most frequent type of accident for stone mine employees involved handling of materials (39.1%) followed by slips or falls (26.2%). Among those accident types with more than 10% of the total number of nonfatal lost-time injuries, the most severe injuries (as measured by the median number of days lost) were associated with slips or falls (n = 622; median = 24), powered haulage (n = 201; median = 17), handling of materials (n = 928; median = 13.5), machinery (n = 195; median = 11), and hand tools (n = 282; median = 10).
  - Sprains and strains were the most frequently reported nature of injury (n = 1,102). They accounted for 41.6% of the days lost from work.
  - The back was the most frequently reported part of the body injured (21.0%), accounting for 19,661 days lost from work in 2003.<sup>4</sup>
  - Among stone mine employees, those with the MSHA job title of "mechanic/repairman/helper" had the greatest number of nonfatal lost time injuries (n = 524; 22.1%), followed by those classified as "sizing/ washing/cleaning plant operator/worker" (n = 486; 20.5%).
5. There were 96 cases of **occupational illness** reported to MSHA for stone operator employees.<sup>5</sup>
  - The most frequently reported illness involved joint, muscle, or tendon irritation or inflammation (n = 40; 41.7%).
  - Twenty-seven cases (28.1%) of hearing loss or impairment were reported.
  - Stone mine operators reported five cases of silicosis in 2003.

Note: All analyses exclude office employees, except for the total number of stone mining operations.

<sup>1</sup> Computed using reported employee hours (2,000 hours = 1 FTE).

<sup>2</sup> Surface production operations include strip mines, surface operations at underground mines, preparation plants, mills, auger mining, culm banks, dredge, and surface shops and yards.

<sup>3</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.

<sup>4</sup> MSHA only reports the most severely injured part of body for accidents involving injury to multiple body parts.

<sup>5</sup> Because of the complexity of attributing disease causation to the workplace, occupational illnesses may be underreported.



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**DHHS (NIOSH) Publication No. 2005-119**