



Sand & Gravel Operator Mining Facts - 2003

1. In 2003, a total of 7,070 **sand and gravel mining operations** reported employment to the Mine Safety and Health Administration (MSHA). The largest percentage of all mining sectors was sand and gravel mines (49.1%).
 - Sand and gravel mines are found throughout all 50 states.¹
2. A total of 35,966 **employees**, corresponding to 32,477 full-time equivalent (FTE) employees, were reported by sand and gravel operators. This is a 0.8% decrease in FTE employees from 2002.²
 - Sand and gravel operator employees contributed 12.6% of all employee hours reported to MSHA.
 - The median number of employees working at sand and gravel mining operations was 3.
3. Ten work-related **fatalities** occurred among sand and gravel miners in 2003, the same number as in 2002.
 - The fatality rate among sand and gravel operator employees was 30.8 per 100,000 FTE employees.
 - The fatality rate per 100,000 FTEs for dredge employees was 42.1 (n = 2), compared to 28.9 (n = 8) for all other surface work locations.
4. There were 846 **nonfatal lost-time injuries** among sand and gravel employees occurring at a rate of 2.6 per 100 FTE employees. A total of 39,843 days lost from work resulted from these injuries.³
 - The median number of days lost from work among sand and gravel employees with nonfatal lost-time injuries was 14.0 days.
 - The most frequent type of accident for sand and gravel mine employees involved handling of materials (36.5%) followed by slips or falls (26.6%). Among the most frequently reported types of incidents (greater than 10% of total), the most severe injuries (as measured by the median number of days lost from work) were associated with slips or falls (n = 225; median = 22.0), powered haulage (n = 97; median = 15.0), hand tools (n = 96; median = 11.0), and handling materials (n = 309; median = 11.0).
 - Sprains and strains were the most frequent injury (39.6%). Among those injury categories with greater than 10% of total injuries, the most severe was fractures and chips (n = 109; median = 31). The back was the most frequently reported part of the body injured (n = 163; 19.3%) followed by fingers (n = 125; 14.8%).⁴ Back injuries represented 5,902 days lost from work.
 - Among sand and gravel operator employees, those with the MSHA job title of "mechanic/repairman/helper" had the greatest number of nonfatal lost-time injuries (n = 146; 17.3%), followed by those classified as "laborer/utility man/bull gang" (n = 121; 14.3%).
5. Fifteen cases of **occupational illness** were reported to MSHA for sand and gravel employees.⁵
 - The most frequently reported illness was hearing loss or impairment (n = 4; 26.7%).

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

¹ Mining sectors: coal operators, metal operators, nonmetal operators, stone operators, sand and gravel operators, coal contractors, and noncoal contractors.

² Computed using reported employee hours (2,000 hours = 1 FTE).

³ 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.

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

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



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