

**INDUSTRIAL SAND AND GRAVEL END-USE STATISTIC<sup>1</sup>**  
**U.S. GEOLOGICAL SURVEY**  
 [Metric tons]

Last modification: September 15, 2005

Year	Industrial sand														Industrial gravel						Grand total	Undistributed	Apparent consumption			
	Glassmaking	Foundry	Metallurgical	Abrasives	Chemicals, ground and unground	Fillers, ground, rubber, paints, putty, etc.	Whole grain fillers, building products	Ceramic, ground, pottery, brick, tile, etc.	Filtration	Petroleum industry	Recreational	Traction, engine	Coal washing	Roofing granules and fillers	Other	Subtotal	Silicon, ferrosilicon	Filtration	Metallurgical	Nonmetallurgical flux				Other uses, specified	Subtotal	
1975	9,750,000	7,270,000	1,400,000	1,660,000	104,000	112,000		77,000	173,000		622,000				2,740,000	24,200,000			406,000		102,000	508,000	24,800,000	-2,000,000	22,800,000	
1976	11,200,000	7,840,000	1,950,000	1,660,000	36,000	168,000		162,000	166,000		682,000				2,470,000	26,900,000			122,000		100,000	222,000	27,100,000	-2,200,000	24,900,000	
1977	10,900,000	9,350,000	366,000	2,250,000	117,000	213,000		256,000	202,000		811,000				1,970,000	26,900,000			59,000	1,370,000	158,000	1,580,000	28,400,000	-2,200,000	26,200,000	
1978	12,600,000	10,100,000	427,000	2,140,000	475,000	209,000		229,000	191,000		763,000		16,000	172,000	1,160,000	28,900,000	406,000	227,000			310,000	944,000	29,800,000	-2,500,000	27,300,000	
1979	12,400,000	8,930,000	463,000	2,200,000	591,000	162,000		169,000	172,000		846,000		53,000	235,000	2,580,000	29,100,000	820,000	19,000			323,000	1,260,000	30,400,000	-1,000,000	29,400,000	
1980	11,700,000	8,200,000	270,000	1,750,000	414,000	204,000		134,000	212,000		1,070,000		39,000	184,000	1,520,000	26,100,000	617,000	17,000			151,000	785,000	26,900,000	-1,100,000	25,800,000	
1981	11,000,000	9,030,000	643,000	1,780,000	386,000	258,000		162,000	226,000		1,280,000		36,000	147,000	1,280,000	26,500,000	564,000	5,000			90,000	660,000	27,200,000	-1,000,000	26,200,000	
1982	11,100,000	6,460,000	300,000	2,000,000	304,000	174,000		205,000	271,000		1,340,000		36,000	469,000	800,000	23,900,000	296,000	17,000			616,000	929,000	24,800,000	-600,000	24,200,000	
1983	8,560,000	6,050,000	152,000	1,770,000	246,000	128,000		246,000	93,000		898,000		W	269,000	5,160,000	23,700,000	242,000	W			W	487,000	24,100,000	-800,000	23,300,000	
1984	10,300,000	6,570,000	210,000	1,840,000	386,000	111,000		167,000	197,000		1,870,000		23,000	262,000	3,360,000	26,000,000	180,000				460,000	640,000	26,700,000	-1,100,000	25,600,000	
1985	9,340,000	4,670,000	171,000	1,520,000	343,000	124,000		136,000	313,000		1,910,000		16,000	366,000	7,240,000	26,400,000	285,000	21,000			18,000	324,000	26,700,000	-700,000	26,000,000	
1986	9,970,000	5,240,000	W	1,770,000	288,000	196,000		180,000	448,000		1,030,000		W	237,000	4,860,000	24,400,000	385,000	W		W	W	439,000	24,900,000	-700,000	24,200,000	
1987	10,800,000	6,290,000	221,000	1,680,000	465,000	133,000		204,000	393,000		1,270,000		41,000	356,000	2,560,000	24,800,000	412,000	W		W	W	572,000	25,400,000	-600,000	24,800,000	
1988	11,000,000	6,900,000	W	2,510,000	129,000			254,000	369,000		1,180,000		W	522,000	1,520,000	24,700,000	688,000	44,000		461,000	XX	1,260,000	26,500,000	-1,600,000	24,900,000	
1989	11,200,000	6,430,000	W	2,080,000	741,000	144,000		216,000	281,000		1,390,000		W	717,000	1,740,000	25,200,000	630,000	23,000		W	W	1,150,000	25,800,000	-1,100,000	24,700,000	
1990	10,600,000	5,750,000	194,000	2,090,000	591,000	165,000		130,000	333,000		1,670,000			519,000	2,170,000	24,500,000	637,000	68,000		543,000	XX	1,320,000	25,800,000	-1,000,000	24,800,000	
1991	10,100,000	5,210,000	W	1,550,000	509,000	170,000		147,000	388,000		1,230,000			587,000	2,180,000	22,300,000	528,000	57,000			376,000	961,000	23,200,000	-1,400,000	21,800,000	
1992	10,300,000	5,080,000	81,000	1,670,000	663,000	117,000		144,000	440,000		1,440,000			412,000	2,410,000	23,000,000	542,000	20,000			701,000	246,000	1,510,000	24,500,000	-500,000	24,000,000
1993	10,300,000	6,000,000	W	1,610,000	531,000	122,000		208,000	380,000		1,710,000			289,000	1,340,000	24,500,000		W	205,000		W	592,000	1,700,000	26,200,000	-1,700,000	24,500,000
1994	10,700,000	6,790,000	W	1,510,000	603,000	68,000		259,000	375,000		1,690,000			217,000	1,040,000	25,500,000	568,000	157,000			497,000	564,000	1,790,000	27,300,000	-1,900,000	25,400,000
1995	10,700,000	6,840,000	W	1,770,000	641,000	178,000		253,000	400,000		1,610,000			248,000	1,060,000	26,300,000	532,000	150,000			590,000	607,000	1,880,000	28,200,000	-1,800,000	26,400,000
1996	10,300,000	6,520,000	W	1,470,000	643,000	192,000		278,000	364,000		1,560,000			330,000	1,480,000	25,500,000	686,000	188,000			946,000	420,000	2,240,000	27,800,000	-1,400,000	26,400,000
1997	10,800,000	6,550,000	311,000	1,620,000	614,000	193,000		154,000	314,000		1,400,000			231,000	1,200,000	26,300,000	814,000	124,000			660,000	575,000	2,170,000	28,500,000	-900,000	27,600,000
1998	10,900,000	6,340,000	254,000	1,500,000	696,000	128,000		173,000	409,000		1,180,000			151,000	1,400,000	26,400,000	771,000	101,000			918,000	1,790,000	28,200,000	-2,400,000	25,800,000	
1999	11,000,000	6,300,000	W	1,390,000	758,000	272,000		228,000	405,000		1,440,000			194,000	1,200,000	26,900,000	642,000	159,000			672,000	464,000	1,940,000	28,900,000	-1,500,000	27,400,000
2000	10,900,000	6,340,000	W	1,380,000	723,000	159,000		278,000	442,000		1,370,000			196,000	1,400,000	26,800,000	690,000	157,000			347,000	79,000	1,660,000	28,400,000	-1,000,000	27,400,000
2001	10,200,000	5,850,000	400,000	1,460,000	739,000	258,000		175,000	505,000		1,690,000			206,000	1,540,000	26,900,000	631,000	137,000			79,000	214,000	1,060,000	27,900,000	-1,400,000	26,500,000
2002	10,500,000	5,480,000	65,000	1,280,000	877,000	285,000		323,000	456,000		1,580,000			242,000	1,500,000	25,900,000	607,000	W		W	W	XX	1,420,000	27,300,000	-1,200,000	26,100,000
2003	10,600,000	5,270,000	W	849,000	867,000	519,000		221,000	323,000		2,230,000			261,000	1,800,000	26,300,000	594,000	W		W	W	541,000	1,140,000	27,500,000	-2,200,000	25,300,000

W Withheld to avoid disclosing company proprietary data; for sand, withheld data included with the other uses category; for gravel, withheld data included with the total of sold or used by gravel producers. XX Not applicable.

<sup>1</sup>Compiled by G.R. Matos and T.P. Dolley.



## Industrial Sand and Gravel End-Use Worksheet Notes

### Data Sources

The sources of data for the industrial sand and gravel end-use worksheet are the Statistical Compendium, a U.S. Bureau of Mines publication, and the Minerals Yearbook (MYB), an annual collection, compilation, and analysis of mineral industry data, published by the U.S. Bureau of Mines and the U.S. Geological Survey.

### End Use

End use is defined as the use of the mineral commodity in a particular industrial sector or product.

Industrial sand end uses are based on sold or used by producers. For industrial sand, end-use categories are glassmaking; foundry; metallurgical; abrasives; chemicals, ground and unground; fillers, ground rubber, paints, putty, etc.; whole grain fillers, building products; ceramic, ground, pottery, brick, tile, etc.; filtration; petroleum industry; recreational; traction, engine; coal washing; roofing granules and fillers; and other uses.

The glassmaking category includes containers; flat, plate and window; specialty; fiberglass, unground; and fiberglass ground.

The foundry category includes molding and core, unground; molding and core, ground; and refractory.

The metallurgical category includes silicon carbide and flux for metal smelting.

The abrasives category includes blasting; scouring cleansers, unground; and sawing and sanding.

The filtration category includes water, municipal, county, local; and swimming pool, other.

The petroleum industry category includes hydraulic fracturing and well packing and cementing.

The recreational category includes golf course, greens and traps; and baseball, volleyball, play sand, beaches.

The other uses category includes the other, ground silica; other, whole grain; and withheld data included in the group of sold or used by sand producers. Because some of the industrial sand producers did not report a breakdown by end use, their total production was reported in the MYB under other, ground silica. Other, ground silica also includes silica flour. The estimated production of nonrespondents was reported under other, whole grain. Other, whole grain was called the other, unspecified category until 1992.

Industrial gravel end uses are based on sold or used by producers. For industrial gravel, end-use categories are silicon, ferrosilicon; filtration; metallurgical; nonmetallurgical flux; and other uses, specified. The category metallurgical was broken down into silicon, ferrosilicon and filtration starting in 1978.

The undistributed category is the difference between apparent consumption and grand total, which is the sum of industrial sand and gravel. It reflects trade data, stocks, and data not reported by end use.

W in the spreadsheet indicates information withheld to avoid disclosing company proprietary data; for sand, withheld data are included with the other uses category; for gravel, withheld data are included with the total of sold or used by gravel producers. XX indicate that data were not applicable. Blank cells indicate that data were not available. Data are rounded to no more than three significant digits; data may not add to totals shown.

### References

U.S. Bureau of Mines, 1993, Statistical Compendium, 1975–90.

U.S. Bureau of Mines, 1977–96, Minerals Yearbook, v. I, 1975–94.

U.S. Geological Survey, 1997–2005, Minerals Yearbook, v. I, 1995–2003.

### Recommended Citation Format:

(1) If taken from CD version:

U.S. Geological Survey, [year of last update, e.g., 2005], [Mineral commodity, e.g., Gold] statistics, *in* Kelly, T.D., and Matos, G.R., comps., Historical statistics for mineral and material commodities in the United States: U.S. Geological Survey Data Series 140, one CD-ROM. (Also available online at <http://pubs.usgs.gov/ds/2005/140/>.)

(2) If taken from online version:

U.S. Geological Survey, [year of last update, e.g., 2005], [Mineral commodity, e.g., Gold] statistics, *in* Kelly, T.D., and Matos, G.R., comps., Historical statistics for mineral and material commodities in the United States: U.S. Geological Survey Data Series 140, available online at <http://pubs.usgs.gov/ds/2005/140/>. (Accessed [date].)

U.S. Geological Survey, Data Series 140.

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