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2012–2013 Minerals Yearbook

KANSAS

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U.S. Geological Survey

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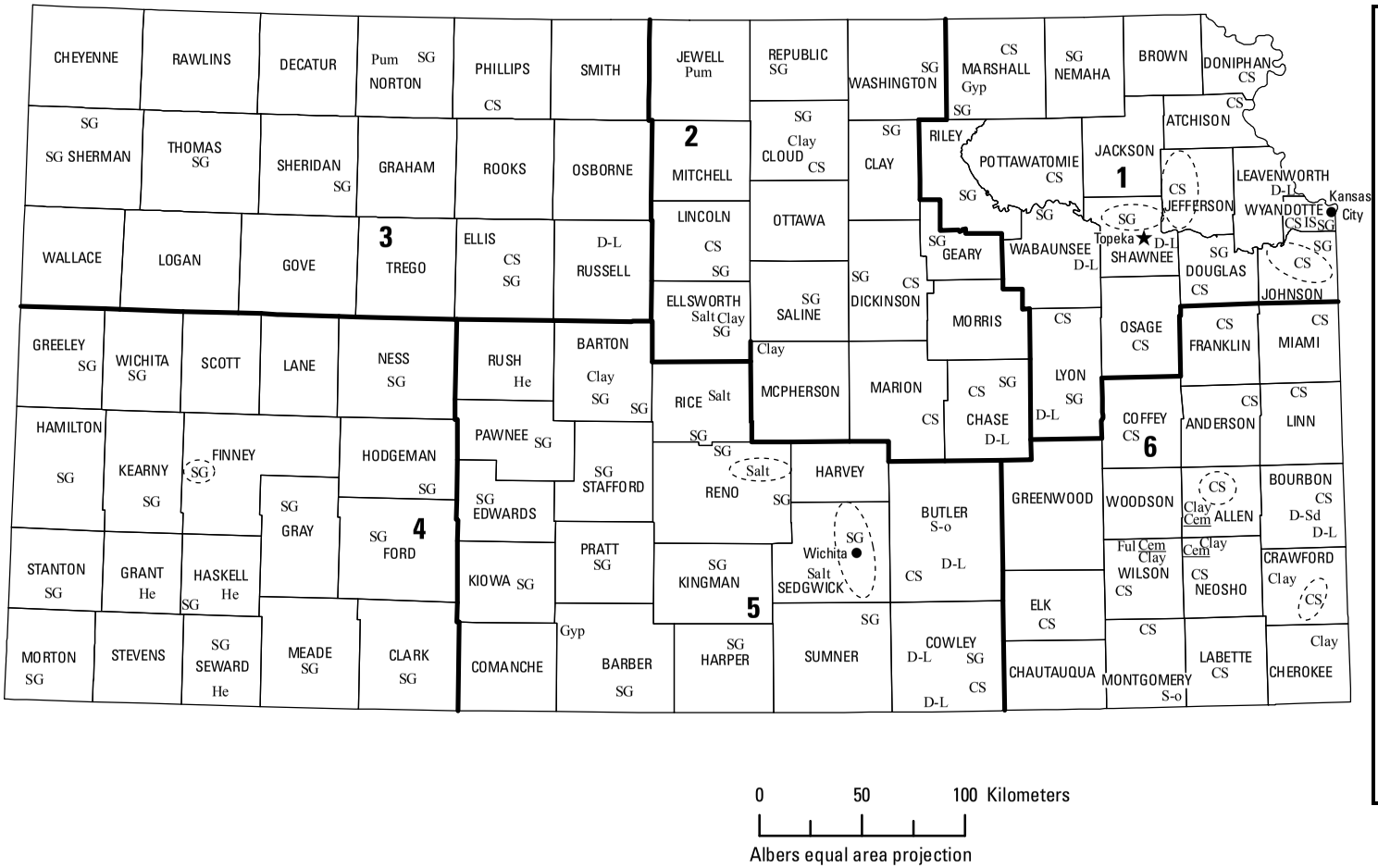
KANSAS



LEGEND

- County boundary
- ★ Capital
- ● City
- 1 Crushed stone/sand and gravel district boundary

MINERAL SYMBOLS
(Principal producing areas)

Cem	Cement plant
Clay	Common clay
CS	Crushed stone
D-L	Dimension limestone
D-Sd	Dimension sandstone
Ful	Fuller's earth
Gyp	Gypsum
He	Helium
IS	Industrial sand
Pum	Pumice and pumicite
S-o	Sulfur (oil)
Salt	Salt
SG	Construction sand and gravel

Concentration of mineral operations

Source: Kansas Geological Survey/U.S. Geological Survey (2012–13).

The Mineral Industry of Kansas

This chapter has been prepared under a Memorandum of Understanding between the U.S. Geological Survey and the Kansas Geological Survey for collecting information on all nonfuel minerals.

In 2013, the value of nonfuel mineral production[1] in Kansas was $544 million,[2] 0.72% of the U.S. total nonfuel mineral production value, ranking it 21st in the Nation. In 2012, the corresponding value was $1.16 billion, 1.5% of the U.S. total nonfuel mineral production, ranking it 20th among the 50 States. In 2013, on a per capita basis, nonfuel mineral production in Kansas had a value of $389 compared with the national average of $238. In 2012, the per capita value was $403 compared with the national average of $241.

The value of nonfuel mineral production in Kansas for the years 2006 through 2013 was as follows (in millions of dollars): $979 (2006), $1,070 (2007), $1,120 (2008), $953 (2009), $1,100 (2010), $1,120 (2011), $1,160 (2012), and $544[2] (2013).

In 2013, there were 1,031 employees in nonfuel mineral mines in Kansas and 450 in mills and preparation plants. In 2012, the corresponding numbers were 1,049 in nonfuel mineral mines and 411 in mills and preparation plants (U.S. Mine Safety and Health Administration, 2013, p. 10; 2014, p. 10). In 2013, the average annual wage in Kansas for all mining was $46,704 compared with $42,294 for all industries. In 2012, the corresponding figures were $46,179 and $41,814, respectively (National Mining Association, unpub. data, February 4, 2016).

In 2013, Kansas was the leading producer of crude and Grade-A helium out of two and four producing States, respectively. It was third in producing crude gypsum out of 16 producing States and fifth in producing salt and pumice and pumicite out of 16 and 6 producing States, respectively.

In 2012, the State was the leading producer of crude and Grade-A helium out of two and five producing States, respectively. It was fifth in the production of salt and pumice and pumicite out of 16 and 5 States, respectively.

In 2013 and 2012, Kansas also produced clays, construction sand and gravel, crushed stone, dimension stone, gypsum, masonry and portland cements, montmorillonite, and natural gemstones (table 1).

Commodity Review

Industrial Minerals

Most of the crushed stone produced in Kansas is limestone, primarily concentrated in the eastern one-third of the State. A minor proportion of the crushed stone is sandstone and quartzite. In 2013, there were 77 active crushed stone operations, 84 active quarries, and 72 processing plants in the State. In 2012, the corresponding numbers were 74 operations, 85 quarries, and 69 processing plants.

In 2013, there were 119 construction sand and gravel operations in the State, of which 29 were dredging operations. In 2012, the corresponding numbers were 128 and 36, respectively. Most of the dredges and pits are located along the State's major river systems—the Kansas River in northeastern Kansas and the Arkansas River in central and western Kansas.

Thick salt deposits in central Kansas are mined with underground and solution mining. The underground operations produce salt that contains impurities (shale and anhydrite), which restricts its use for applications such as road deicing. Solution-mined salt, produced by dissolving the salt with water and then evaporating the brine, is suitable for table salt and other uses requiring purity.

In 2013, Kansas produced 6% of the U.S. salt production. In 2012, the corresponding figure was 7%. For both 2012 and 2013, the capacities of the major producing companies were as follows: Cargill, Inc., 450,000 metric tons per year (t/yr); Hutchinson Salt Co., 750,000 t/yr; Independent Salt Co., 750,000 t/yr; Lyons Salt Co., 600,000 t/yr; Morton International, Inc., 350,000 t/yr; North American Salt Co., 425,000 t/yr; and Occidental Chemical Corp., producing brine (withheld—company proprietary data).

References Cited

U.S. Mine Safety and Health Administration, [2013], Mine injury and worktime, quarterly, January–December 2012: U.S. Mine Safety and Health Administration, Final, closeout edition, 33 p. (Accessed February 4, 2016, at http://arlweb.msha.gov/Stats/Part50/WQ/MasterFiles/MIWQ%20Master_20125.pdf.)

U.S. Mine Safety and Health Administration, [2014], Mine injury and worktime, quarterly, January–December 2013: U.S. Mine Safety and Health Administration, Final, closeout edition, 34 p. (Accessed February 4, 2016, at http://arlweb.msha.gov/Stats/Part50/WQ/MasterFiles/MIWQ%20Master_20135.pdf.)

[1]The terms "nonfuel mineral production" and related "values" encompass variations in meaning, depending upon the mineral products. Production may be measured by mine shipments, mineral commodity sales, or marketable production (including consumption by producers) as is applicable to the individual mineral commodity.

All USGS mineral production data published in this chapter are those available as of February 2016. Data in this report are rounded to three significant digits and percentages are calculated from unrounded data. All USGS Mineral Industry Surveys and USGS Minerals Yearbook chapters—mineral commodity, State, and country—can be retrieved over the Internet at http://minerals.usgs.gov/minerals.

[2]Partial total; excludes values that must be withheld to avoid disclosing company proprietary data.

TABLE 1
NONFUEL RAW MINERAL PRODUCTION IN KANSAS[1, 2]

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral	2011		2012		2013	
	Quantity	Value	Quantity	Value	Quantity	Value
Cement, portland	1,570	152,000 e	1,730	169,000 e	1,780	178,000 e
Clays, common	291	1,880	296	1,750	309	1,800
Gemstones, natural	NA	1	NA	1	NA	1
Salt	3,060	186,000	2,570	175,000	2,650	174,000
Sand and gravel, construction	9,620	47,100	9,920	53,800	9,340	52,800
Stone:						
Crushed	15,900 r	132,000 r	15,900	136,000	15,400	132,000
Dimension	52	4,640	49	4,700	43	5,610
Combined values of cement (masonry), clays (fuller's earth), gypsum (crude), helium (crude, Grade-A), pumice and pumicite, sand and gravel [industrial (2011)]	XX	602,000	XX	622,000	XX	W
Total	XX	1,120,000	XX	1,160,000	XX	544,000

eEstimated. rRevised. NA Not available. W Withheld to avoid disclosing company proprietary data; excluded from "Total." XX Not applicable.
[1]Production as measured by mine shipments, sales, or marketable production (including consumption by producers).
[2]Data are rounded to three significant digits; may not add to totals shown.

TABLE 2
KANSAS: CRUSHED STONE SOLD OR USED IN THE UNITED STATES, BY TYPE[1]

Type	2012				2013			
	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value
Limestone[2]	82	14,800	$126,000	$8.53	80	14,300	$122,000	$8.52
Sandstone and quartzite[3]	2	1,130	9,570	8.48	3	1,160	9,910	8.55
Total or average	XX	15,900	136,000	8.53	XX	15,400	132,000	8.53

XX Not applicable.
[1]Data are rounded to no more than three significant digits, except unit value; may not add to totals shown.
[2]Includes limestone-dolomite reported with no distinction between the two kinds of stone.
[3]Includes sandstone-quartzite reported with no distinction between the two kinds of stone.

TABLE 3
KANSAS: CRUSHED STONE SOLD OR USED BY PRODUCERS, BY USE[1]

Use	2012			2013		
	Quantity (thousand metric tons)	Value (thousands)	Unit value	Quantity (thousand metric tons)	Value (thousands)	Unit value
Construction:						
Coarse aggregate (+1½ inch):						
Riprap and jetty stone	56	$729	$13.01	71	$832	$11.70
Filter stone	18	187	10.38	W	W	W
Unspecified coarse aggregate	9	70	7.72	800	7,750	9.68
Coarse aggregate, graded:						
Concrete aggregate, coarse	678	7,030	10.37	201	2,190	10.89
Bituminous aggregate, coarse	582	6,280	10.79	W	W	W
Railroad ballast	W	W	W	W	W	W
Unspecified graded coarse aggregate	W	W	W	W	W	W
Fine aggregate (-⅜ inch):						
Screening, undesignated	98	420	4.28	28	115	4.07
Unspecified fine aggregate	W	W	W	--	--	--
Coarse and fine aggregates:						
Graded road base or subbase	786	7,990	10.16	516	3,420	6.64
Unpaved road surface	294	2,910	9.89	W	W	W
Terrazzo and exposed aggregate	--	--	--	W	W	W
Crusher run or fill or waste	1,010	5,700	5.66	195	1,560	8.02
Unspecified coarse and fine aggregates	144	715	4.96	55	327	5.95
Unspecified and other construction materials	80	705	8.81	42	384	9.25
Agricultural:						
Agricultural Limestone	164	1,200	7.29	60	340	5.65
Unspecified and other agricultural uses	--	--	--	W	W	W
Chemical and metallurgical:						
Cement manufacture	W	W	W	W	W	W
Other miscellaneous uses and specified uses not listed				22	181	8.42
Unspecified:[2]						
Reported	5,470	48,600	8.88	3,800	33,800	8.89
Estimated	5,420	44,500	8.22	6,810	57,100	8.38
Total or average	15,900	136,000	8.53	15,400	132,000	8.53

W Withheld to avoid disclosing company proprietary data; included in "Total." -- Zero.
[1]Data are rounded to no more than three significant digits, except unit value; may not add to totals shown.
[2]Reported and estimated production without a breakdown by end use.

TABLE 4
KANSAS: CRUSHED STONE SOLD OR USED BY PRODUCERS IN 2012, BY USE AND DISTRICT[1]

(Thousand metric tons and thousand dollars)

Use	District 1		District 2		District 3	
	Quantity	Value	Quantity	Value	Quantity	Value
Construction:						
Coarse aggregate (+1½ inch)[2]	W	W	W	W	--	--
Coarse aggregate, graded[3]	544	6,000	W	W	--	--
Fine aggregate (-⅜ inch)[4]	--	--	--	--	--	--
Coarse and fine aggregates[5]	W	W	W	W	45	158
Other construction materials	--	--	--	--	--	--
Agricultural[6]	--	--	W	W	--	--
Chemical and metallurgical[7]	--	--	--	--	--	--
Special	--	--	--	--	--	--
Other miscellaneous uses and specified uses not listed	--	--	--	--	--	--
Unspecified:[8]						
Reported	1,570	13,800	1,120	9,510	--	--
Estimated	2,650	22,500	--	--	7	62
Total	5,090	44,000	1,410	12,400	52	220

Use	District 4		District 5		District 6	
	Quantity	Value	Quantity	Value	Quantity	Value
Construction:						
Coarse aggregate (+1½ inch)[2]	--	--	W	W	37	444
Coarse aggregate, graded[3]	--	--	W	W	W	W
Fine aggregate (-⅜ inch)[4]	--	--	W	W	W	W
Coarse and fine aggregates[5]	--	--	W	W	1,110	9,900
Other construction materials	--	--	W	W	W	W
Agricultural[6]	--	--	W	W	W	W
Chemical and metallurgical[7]	--	--	W	W	W	W
Special	--	--	--	--	--	--
Other miscellaneous uses and specified uses not listed	--	--	--	--	--	--
Unspecified:[8]						
Reported	--	--	956	9,000	1,820	16,300
Estimated	--	--	670	5,900	2,090	16,100
Total	--	--	2,600	22,200	6,760	56,800

W Withheld to avoid disclosing company proprietary data; included in "Total." -- Zero.
[1]Data are rounded to no more than three significant digits; may not add to totals shown.
[2]Includes riprap and jetty stone, filter stone, and unspecified coarse aggregate.
[3]Includes concrete aggregate (coarse), bituminous aggregate (coarse), railroad ballast, and unspecified graded coarse aggregate.
[4]Includes screening (undesignated) and unspecified fine aggregate.
[5]Includes graded road base or subbase, unpaved road surface, terrazzo and exposed aggregate, crusher run, and unspecified coarse and fine aggregates.
[6]Includes agricultural limestone.
[7]Includes cement manufacture.
[8]Reported and estimated production without a breakdown by end use.

TABLE 5
KANSAS: CRUSHED STONE SOLD OR USED BY PRODUCERS IN 2013, BY USE AND DISTRICT[1]

(Thousand metric tons and thousand dollars)

Use	District 1		District 2		District 3	
	Quantity	Value	Quantity	Value	Quantity	Value
Construction:						
Coarse aggregate (+1½ inch)[2]	W	W	--	--	W	W
Coarse aggregate, graded[3]	W	W	--	--	--	--
Fine aggregate (-⅜ inch)[4]	--	--	--	--	W	W
Coarse and fine aggregates[5]	W	W	13	67	W	W
Other construction materials	--	--	--	--	--	--
Agricultural[6]	W	W	--	--	--	--
Chemical and metallurgical[7]	--	--	--	--	--	--
Special	--	--	--	--	--	--
Other miscellaneous uses and specified uses not listed[8]	--	--	--	--	--	--
Unspecified:[9]						
Reported	1,580	13,900	1,040	8,840	--	--
Estimated	2,760	23,300	291	2,510	--	--
Total	5,150	44,600	1,340	11,400	33	326

Use	District 4		District 5		District 6	
	Quantity	Value	Quantity	Value	Quantity	Value
Construction:						
Coarse aggregate (+1½ inch)[2]	--	--	W	W	366	3,730
Coarse aggregate, graded[3]	--	--	--	--	W	W
Fine aggregate (-⅜ inch)[4]	--	--	--	--	W	W
Coarse and fine aggregates[5]	--	--	W	W	459	3,930
Other construction materials	--	--	W	W	W	W
Agricultural[6]	--	--	W	W	--	--
Chemical and metallurgical[7]	--	--	--	--	W	W
Special	--	--	--	--	--	--
Other miscellaneous uses and specified uses not listed[8]	--	--	W	W	W	W
Unspecified:[9]						
Reported	--	--	610	5,900	571	5,150
Estimated	--	--	1,000	8,480	2,760	22,800
Total	--	--	2,250	20,000	6,670	55,300

W Withheld to avoid disclosing company proprietary data; included in "Total." -- Zero.
[1]Data are rounded to no more than three significant digits; may not add to totals shown.
[2]Includes riprap and jetty stone, filter stone, and unspecified coarse aggregate.
[3]Includes concrete aggregate (coarse), bituminous aggregate (coarse), railroad ballast, and unspecified graded coarse aggregate.
[4]Includes screening (undesignated) and unspecified fine aggregate.
[5]Includes graded road base or subbase, unpaved road surface, terrazzo and exposed aggregate, crusher run, and unspecified coarse and fine aggregates.
[6]Includes agricultural limestone.
[7]Includes cement manufacture.
[8]Includes drain fields, waste material, lightweight aggregate (slate), pipe bedding, refractory stone (including ganister), and other miscellaneous uses.
[9]Reported and estimated production without a breakdown by end use.

TABLE 6
KANSAS: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 2012,
BY MAJOR USE CATEGORY[1]

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
Concrete aggregate and concrete products[2]	1,710	$9,280	$5.43
Asphaltic concrete aggregates and other bituminous mixtures	252	1,630	6.47
Road base and coverings[3]	1,800	10,500	5.83
Fill	700	2,600	3.71
Snow and ice control	25	196	7.84
Other miscellaneous uses[4]	45	360	8.00
Unspecified:[5]			
Reported	587	3,360	5.72
Estimated	4,810	25,900	5.38
Total or average	9,920	53,800	5.42

[1]Data are rounded to no more than three significant digits; may not add to totals shown.
[2]Includes plaster and gunite sands.
[3]Includes road and other stabilization (cement and lime).
[4]Includes railroad ballast.
[5]Reported and estimated production without a breakdown by end use.

TABLE 7
KANSAS: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 2013,
BY MAJOR USE CATEGORY[1]

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
Concrete aggregate and concrete products[2]	1,300	$7,950	$6.14
Asphaltic concrete aggregates and other bituminous mixtures	274	1,800	6.56
Road base and coverings[3]	940	5,510	5.86
Fill	627	1,980	3.16
Snow and ice control	25	168	6.72
Other miscellaneous uses	35	279	7.97
Unspecified:[4]			
Reported	484	2,590	5.36
Estimated	5,660	32,600	5.76
Total or average	9,340	52,800	5.66

[1]Data are rounded to no more than three significant digits, except unit value; may not add to totals shown.
[2]Includes plaster and gunite sands.
[3]Includes road and other stabilization (cement and lime).
[4]Reported and estimated production without a breakdown by end use.

TABLE 8
KANSAS: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 2012, BY USE AND DISTRICT[1]

(Thousand metric tons and thousand dollars)

Use	District 1		District 2		District 3	
	Quantity	Value	Quantity	Value	Quantity	Value
Concrete aggregate and concrete products[2]	W	W	W	W	W	W
Asphaltic concrete aggregates and and road base materials[3]	W	W	W	W	W	W
Fill	97	373	279	1,320	2	8
Other miscellaneous uses[4]	20	175	38	246	1	8
Unspecified:[5]						
Reported	344	1,860	69	588	12	61
Estimated	2,030	11,200	207	1,100	57	302
Total	2,790	15,700	1,680	11,300	470	1,570

Use	District 4		District 5		District 6 and unspecified districts	
	Quantity	Value	Quantity	Value	Quantity	Value
Concrete aggregate and concrete products[2]	16	125	934	4,570	--	--
Asphaltic concrete aggregates and and road base materials[3]	558	3,050	461	2,300	--	--
Fill	11	41	311	857	--	--
Other miscellaneous uses[4]	2	45	9	82	--	--
Unspecified:[5]						
Reported	1	8	155	812	6	33
Estimated	1,120	5,900	1,350	7,100	58	304
Total	1,700	9,160	3,220	15,700	64	337

W Withheld to avoid disclosing company proprietary data; included in "Total." -- Zero.
[1]Data are rounded to no more than three significant digits; may not add to totals shown.
[2]Includes plaster and gunite sands.
[3]Includes road and other stabilization (cement and lime).
[4]Includes railroad ballast, and snow and ice control.
[5]Reported and estimated production without a breakdown by end use.

TABLE 9
KANSAS: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 2013, BY USE AND DISTRICT[1]

(Thousand metric tons and thousand dollars)

Use	District 1		District 2		District 3	
	Quantity	Value	Quantity	Value	Quantity	Value
Concrete aggregate and concrete products[2]	W	W	W	W	--	--
Asphaltic concrete aggregates and road base materials[3]	W	W	W	W	144	600
Fill	85	190	125	589	2	8
Other miscellaneous uses[4]	18	147	28	196	2	12
Unspecified:[5]						
Reported	375	2,020	--	--	10	54
Estimated	1,880	10,800	892	6,400	266	675
Total	2,710	15,700	1,540	10,600	424	1,350

Use	District 4		District 5		District 6 and unspecified districts	
	Quantity	Value	Quantity	Value	Quantity	Value
Concrete aggregate and concrete products[2]	--	--	718	3,990	--	--
Asphaltic concrete aggregates and road base materials[3]	278	1,800	520	2,980	--	--
Fill	1	2	413	1,200	--	--
Other miscellaneous uses[4]	(6)	972	12	91	--	--
Unspecified:[5]						
Reported	5	28	89	467	4	22
Estimated	1,500	8,460	1,050	5,810	72	413
Total	1,790	10,300	2,800	14,500	76	435

W Withheld to avoid disclosing company proprietary data; included in "Total." -- Zero.
[1]Data are rounded to no more than three significant digits; may not add to totals shown.
[2]Includes plaster and gunite sands.
[3]Includes road and other stabilization (cement and lime).
[4]Includes snow and ice control.
[5]Reported and estimated production without a breakdown by end use.
[6]Less than ½ unit.