



# THE MINERAL INDUSTRY OF IOWA

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

In 2003, the estimated value<sup>1</sup> of nonfuel mineral production for Iowa was \$478 million, based upon preliminary U.S. Geological Survey (USGS) data. This was about a 2% decrease from that of 2002<sup>2</sup> and followed a 4.7% increase in 2002 from that of 2001. The State was 29th in rank (26th in 2002) among the 50 States in total nonfuel mineral production value, of which Iowa accounted for more than 1% of the U.S. total.

Cement (portland and masonry), crushed stone, construction sand and gravel, and gypsum (in descending order of value) were Iowa's leading nonfuel mineral commodities in 2003, accounting for about 97% of the State's total nonfuel mineral value. In 2003, decreases of about \$7 million in the value of crushed stone and about \$2 million in the value of construction sand and gravel accounted for most of the State's drop in value for the year. These were offset somewhat by increases in the production and values of about \$2 million and \$1 million, respectively, for portland cement and lime. Gypsum production and value also were up slightly. In 2002, with production up for both mineral commodities, cement led the State's increase in value, up about \$17 million, followed by crushed stone, up \$5 million; lime production and value also increased. Decreases happened in the values of construction sand and gravel, down \$1.5 million, gypsum, and common clays (table 1).

Compared with USGS preliminary estimates of quantities produced in the other 49 States in 2003, Iowa remained 4th in crude gypsum and was a significant producer of portland cement (11th), crushed stone, and construction sand and gravel (descending order of value). No metals were mined in Iowa; all of the State's metal production, such as raw steel, resulted from the processing of materials acquired from other domestic and foreign sources.

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<sup>1</sup>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 2003 USGS mineral production data published in this chapter are preliminary estimates as of July 2004 and are expected to change. For some mineral commodities, such as construction sand and gravel, crushed stone, and portland cement, estimates are updated periodically. To obtain the most current information, please contact the appropriate USGS mineral commodity specialist. Specialist contact information may be retrieved over the Internet at URL <http://minerals.usgs.gov/minerals/contacts/comdir.html>; alternatively, specialists' names and telephone numbers may be obtained by calling USGS information at (703) 648-4000 or by calling the USGS Earth Science Information Center at 1-888-ASK-USGS (275-8747). All Mineral Industry Surveys—mineral commodity, State, and country—also may be retrieved over the Internet at URL <http://minerals.usgs.gov/minerals>.

<sup>2</sup>Values, percentage calculations, and rankings for 2002 may differ from the Minerals Yearbook, Area Reports: Domestic 2002, Volume II, owing to the revision of preliminary 2002 to final 2002 data. Data for 2003 are preliminary and are expected to change; related rankings also may change.

TABLE 1  
NONFUEL RAW MINERAL PRODUCTION IN IOWA<sup>1, 2</sup>

(Thousand metric tons and thousand dollars)

Mineral	2001		2002		2003 <sup>P</sup>	
	Quantity	Value	Quantity	Value	Quantity	Value
Clays, common	274	836	256	763	256	763
Gemstones	NA	2	NA	2	NA	2
Sand and gravel:						
Construction	14,200	63,800	14,600	62,300	14,000	60,200
Industrial	35	1,590	W	W	W	W
Stone, crushed	35,600	189,000	35,900	194,000	34,700	187,000
Combined values of cement, gypsum (crude), lime, peat, and value indicated by symbol W	XX	211,000	XX	231,000	XX	230,000
Total	XX	466,000	XX	488,000	XX	478,000

<sup>P</sup>Preliminary. NA Not available. W Withheld to avoid disclosing company proprietary data; value included with "Combined values" data. XX Not applicable.

<sup>1</sup>Production as measured by mine shipments, sales, or marketable production (including consumption by producers).

<sup>2</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

TABLE 2  
IOWA: CRUSHED STONE SOLD OR USED, BY KIND<sup>1</sup>

Kind	2001				2002			
	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value
Limestone <sup>2</sup>	221 <sup>r</sup>	W	W	\$5.31	208	35,900	\$194,000	\$5.41
Dolomite	2	W	W	3.82	--	--	--	--
Total or average	XX	35,600	\$189,000	5.30	XX	35,900	194,000	5.41

<sup>r</sup>Revised. W Withheld to avoid disclosing company proprietary data; included in "Total." XX Not applicable. --Zero.

<sup>1</sup>Data are rounded to no more than three significant digits, except unit values; may not add to totals shown.

<sup>2</sup>Includes limestone-dolomite reported with no distinction between the two.

TABLE 3  
IOWA: CRUSHED STONE SOLD OR USED BY PRODUCERS IN 2002, BY USE<sup>1</sup>

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
<b>Construction:</b>			
<b>Coarse aggregate (+1 1/2 inch):</b>			
Macadam	220	\$1,110	\$5.04
Riprap and jetty stone	125	1,280	10.25
Filter stone	403	2,520	6.24
Other coarse aggregates	81	439	5.42
Total or average	829	5,350	6.45
<b>Coarse aggregate, graded:</b>			
Concrete aggregate, coarse	1,320	10,000	7.61
Bituminous aggregate, coarse	388	2,740	7.06
Bituminous surface-treatment aggregate	156	1,110	7.12
Railroad ballast	W	W	6.84
Other graded coarse aggregates	143	764	5.34
Total or average	2,000	14,600	7.30
<b>Fine aggregate (-3/8 inch):</b>			
Stone sand, concrete	7	35	5.00
Stone sand, bituminous mix or seal	68	441	6.49
Screening, undesignated	140	631	4.51
Other fine aggregates	63	237	3.76
Total or average	278	1,340	4.83
<b>Coarse and fine aggregates:</b>			
Graded road base or subbase	1,420	9,720	6.83
Unpaved road surfacing	3,840	22,800	5.94
Terrazzo and exposed aggregate	W	W	5.13
Crusher run or fill or waste	752	3,190	4.24
Roofing granules	W	W	10.54
Other coarse and fine aggregates	925	4,700	5.08
Total or average	6,940	40,400	5.83
Other construction materials	286	2,480	8.65
<b>Agricultural:</b>			
Limestone	1,880	10,000	5.32
Poultry grit and mineral food	W	W	9.92
Other agricultural uses	160	1,320	8.25
Total or average	2,040	11,300	5.55
<b>Chemical and metallurgical:</b>			
Cement manufacture	(2)	(2)	3.86
Lime manufacture	(2)	(2)	4.92
Flux stone	(2)	(2)	5.74
Special, asphalt fillers or extenders	(2)	(2)	17.46
Other miscellaneous uses and specified uses not listed	36	212	5.89
<b>Unspecified:<sup>3</sup></b>			
Reported	10,900	57,100	5.24
Estimated	10,000	52,000	4.95
Total or average	21,400	109,000	5.09
Grand total or average	35,900	194,000	5.41

W Withheld to avoid disclosing company proprietary data; included with "Other."

<sup>1</sup>Data are rounded to no more than three significant digits, except unit value; may not add to totals shown.

<sup>2</sup>Withheld to avoid disclosing company proprietary data; included in "Grand total."

<sup>3</sup>Reported and estimated production without a breakdown by end use.

TABLE 4  
IOWA: CRUSHED STONE SOLD OR USED BY PRODUCERS IN 2002, BY USE AND DISTRICT<sup>1</sup>

(Thousand metric tons and thousand dollars)

Use	District 1		District 2		District 3		District 4	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Construction:								
Coarse aggregate (+1 1/2 inch) <sup>2</sup>	--	--	82	470	W	W	W	W
Coarse aggregate, graded <sup>3</sup>	--	--	597	4,270	W	W	1,040	7,680
Fine aggregate (-3/8 inch) <sup>4</sup>	--	--	W	W	--	--	54	325
Coarse and fine aggregate <sup>5</sup>	--	--	1,770	10,000	265	2,000	3,050	17,000
Other construction materials	--	--	114	879	36	151	127	1,410
Agricultural <sup>6</sup>	--	--	357	1,870	W	W	W	W
Chemical and metallurgical <sup>7</sup>	--	--	--	--	--	--	W	W
Special <sup>8</sup>	--	--	--	--	--	--	W	W
Other miscellaneous uses	--	--	--	--	--	--	36	212
Unspecified: <sup>9</sup>								
Reported	896	4,690	1,910	10,000	4,930	25,800	1,030	5,390
Estimated	--	--	3,400	16,000	--	--	2,900	15,000
Total	896	4,690	8,280	43,600	5,870	33,000	11,800	63,900
					Unspecified districts			
					Quantity	Value		
Construction:								
Coarse aggregate (+1 1/2 inch) <sup>2</sup>	--	--	148	1,070	1	8		
Coarse aggregate, graded <sup>3</sup>	--	--	233	2,080	88	343		
Fine aggregate (-3/8 inch) <sup>4</sup>	--	--	42	239	103	387		
Coarse and fine aggregates <sup>5</sup>	--	--	1,310	9,440	546	1,990		
Other construction materials	--	--	9	39	--	--		
Agricultural <sup>6</sup>	--	--	216	990	24	88		
Chemical and metallurgical <sup>7</sup>	--	--	--	--	--	--		
Special <sup>8</sup>	--	--	--	--	--	--		
Other miscellaneous uses	--	--	--	--	--	--		
Unspecified: <sup>9</sup>								
Reported	768	4,020	1,370	7,160	--	--		
Estimated	3,600	18,000	620	3,100	--	--		
Total	4,360	22,200	3,940	24,200	762	2,810		

W Withheld to avoid disclosing company proprietary data; included in "Total." -- Zero.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>Includes filter stone, macadam, riprap and jetty stone, and other coarse aggregates.

<sup>3</sup>Includes concrete aggregate (coarse), bituminous aggregate (coarse), bituminous surface-treatment aggregate, railroad ballast, and other graded coarse aggregates.

<sup>4</sup>Includes screening (undesignated), stone sand bituminous mix or seal, stone sand (concrete), and other fine aggregates.

<sup>5</sup>Includes crusher run (select material or fill), graded road base or subbase, roofing granules, terrazzo and exposed aggregate, unpaved road surfacing, and other coarse and fine aggregates.

<sup>6</sup>Includes agricultural limestone, poultry grit and mineral food, and other agricultural uses.

<sup>7</sup>Includes cement manufacture, flux stone, and lime manufacture.

<sup>8</sup>Includes asphalt fillers or extenders.

<sup>9</sup>Reported and estimated production without a breakdown by end use.

TABLE 5  
IOWA: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 2002,  
BY MAJOR USE CATEGORY<sup>1</sup>

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
Concrete aggregate (including concrete sand)	2,620	\$11,000	\$4.19
Plaster and gunitite sands	253	795	3.14
Concrete products (blocks, bricks, pipe, decorative, etc.)	10	40	4.00
Asphaltic concrete aggregates and other bituminous mixtures	252	1,150	4.55
Road base and coverings	1,850	5,000	2.71
Road stabilization (lime)	20	48	2.40
Fill	545	1,830	3.36
Snow and ice control	36	145	4.03
Other miscellaneous uses <sup>2</sup>	46	529	11.50
Unspecified: <sup>3</sup>			
Reported	6,540	31,300	4.78
Estimated	2,500	11,000	4.26
Total or average	14,600	62,300	4.26

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>Includes railroad ballast.

<sup>3</sup>Reported and estimated production without a breakdown by end use.

TABLE 6

IOWA: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 2002, BY USE AND DISTRICT<sup>1,2</sup>

(Thousand metric tons and thousand dollars)

Use	District 1		District 2		District 3 and 5	
	Quantity	Value	Quantity	Value	Quantity	Value
Concrete aggregate (including concrete sand)	357	2,100	420	2,100	168	998
Concrete products (blocks, bricks, pipe, decorative, etc.) <sup>3</sup>	8	55	33	159	W	W
Asphaltic concrete aggregates and road base materials	874	2,510	923	2,460	292	987
Fill	127	436	46	224	73	213
Other miscellaneous uses <sup>4</sup>	17	64	34	329	25	160
Unspecified: <sup>5</sup>						
Reported	1,440	7,660	209	1,030	4,530	21,000
Estimated	810	3,500	380	1,900	650	2,400
Total	3,640	16,400	2,040	8,240	5,740	25,700
Use	District 4		District 6		Unspecified districts	
	Quantity	Value	Quantity	Value	Quantity	Value
Concrete aggregate (including concrete sand)	1,200	3,640	478	2,120	--	--
Concrete products (blocks, bricks, pipe, decorative, etc.) <sup>3</sup>	216	592	W	W	--	--
Asphaltic concrete aggregates and road base materials	14	102	16	135	--	--
Fill	118	324	182	632	--	--
Other miscellaneous uses <sup>4</sup>	9	135	3	17	--	--
Unspecified: <sup>5</sup>						
Reported	132	592	228	1,050	--	--
Estimated	250	1,100	90	620	280	940
Total	1,930	6,500	1,000	4,580	280	940

W Withheld to avoid disclosing company proprietary data; included in "Other miscellaneous uses." -- Zero.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.<sup>2</sup>Districts 3 and 5 are combined to avoid disclosing company proprietary data.<sup>3</sup>Includes plaster and gunite sands.<sup>4</sup>Includes railroad ballast and snow and ice control.<sup>5</sup>Reported and estimated production without a breakdown by end use.