



# 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 2002, the estimated value<sup>1</sup> of nonfuel mineral production for Iowa was \$487 million, based upon preliminary U.S. Geological Survey (USGS) data. This was about a 4.5% increase from that of 2001<sup>2</sup> and followed a 7.2% decrease in 2001 from that of 2000. The State rose to 27th from 30th in rank among the 50 States in total nonfuel mineral production value, of which Iowa accounted for more than 1% of the U.S. total.

<sup>1</sup>The terms “nonfuel mineral production” and related “values” encompass variations in meaning, depending upon the minerals or 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 2002 USGS mineral production data published in this chapter are preliminary estimates as of July 2003 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 2001 may differ from the Minerals Yearbook, Area Reports: Domestic 2001, Volume II, owing to the revision of preliminary 2001 to final 2001 data. Data for 2002 are preliminary and are expected to change; related rankings may also change.

Crushed stone, cement (portland and masonry), construction sand and gravel, and gypsum (descending order of value) were Iowa's leading nonfuel mineral commodities in 2002, accounting for about 98% of the State's total nonfuel mineral value. In 2002, crushed stone led the State's increase in value, followed by cement and construction sand and gravel (table 1). All other changes were small relative to these. In 2001, a more than \$20 million decrease in the value of portland cement, a \$19 million drop in crushed stone, and about a \$3 million decrease in gypsum accounted for most of the State's drop in value for the year. Significantly smaller decreases occurred in lime, common clays, and peat (descending order of change). These were offset, in part, by a nearly \$10 million increase in construction sand and gravel plus smaller increases in industrial sand and gravel and masonry cement. The value of gemstones was unchanged in both 2001 and 2002 (table 1).

Compared with USGS preliminary estimates of quantities produced in the other 49 States in 2002, Iowa remained second in crude gypsum and was a significant producer of crushed stone, portland cement, 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.

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

(Thousand metric tons and thousand dollars)

Mineral	2000		2001		2002 <sup>p</sup>	
	Quantity	Value	Quantity	Value	Quantity	Value
Clays, common	306	1,060	274	836	261	763
Gemstones	NA	2	NA	2	NA	2
Sand and gravel:						
Construction	12,300	54,100	14,200	63,800	14,400	66,100
Industrial	29	W	35	1,590	35	1,590
Stone, crushed	40,000 <sup>r</sup>	208,000 <sup>r</sup>	35,600	189,000	37,500	203,000
Combined values of cement, gypsum (crude), lime, peat, and value indicated by symbol W	XX	239,000	XX	211,000	XX	215,000
Total	XX	502,000 <sup>r</sup>	XX	466,000	XX	487,000

<sup>p</sup>Preliminary. <sup>r</sup>Revised. 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	2000				2001			
	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>	204 <sup>r</sup>	W	W	\$5.20	222	W	W	\$5.31
Dolomite	1	W	W	3.81	2	W	W	3.82
Total or average	XX	40,000 <sup>r</sup>	\$208,000 <sup>r</sup>	5.20	XX	35,600	\$189,000	5.30

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

<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 2001, BY USE<sup>1</sup>

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
<b>Construction:</b>			
Coarse aggregate (+1 1/2 inch):			
Macadam	227	\$1,400	\$5.04
Riprap and jetty stone	201	1,800	8.94
Filter stone	539	2,860	5.31
Other coarse aggregates	139	896	6.45
Total or average	1,160	6,950	6.01
Coarse aggregate, graded:			
Concrete aggregate, coarse	1,580	11,200	7.10
Bituminous aggregate, coarse	482	3,170	6.57
Bituminous surface-treatment aggregate	183	1,270	6.92
Railroad ballast	W	W	6.47
Other graded coarse aggregates	223	898	4.03
Total or average	2,470	16,500	6.71
Fine aggregate (-3/8 inch):			
Stone sand, concrete	W	W	6.48
Stone sand, bituminous mix or seal	164	922	5.62
Screening, undesignated	195	859	4.41
Other fine aggregates	61	220	3.61
Total or average	420	2,000	4.76
Coarse and fine aggregates:			
Graded road base or subbase	1,830	10,900	5.94
Unpaved road surfacing	4,400	25,200	5.73
Crusher run or fill or waste	672	2,760	4.10
Roofing granules	W	W	5.33
Other coarse and fine aggregates	713	2,730	3.82
Total or average	7,610	41,500	5.46
Other construction materials	256	2,270	8.85
<b>Agricultural:</b>			
Limestone	778	3,530	4.54
Other agricultural uses	12	47	3.92
Total or average	790	3,580	4.53
<b>Chemical and metallurgical:</b>			
Cement manufacture	(2)	(2)	3.55
Lime manufacture	(2)	(2)	4.69
Flux stone	(2)	(2)	6.35
Special, asphalt fillers or extenders	(2)	(2)	16.00
<b>Unspecified:<sup>3</sup></b>			
Reported	10,700	56,100	5.24
Estimated	10,000	51,000	4.89
Total or average	21,100	107,000	5.07
Grand total or average	35,600	189,000	5.30

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 2001, 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>	--	--	W	W	W	W	W	W
Coarse aggregate, graded <sup>3</sup>	--	--	W	W	W	W	1,290	8,840
Fine aggregate (-3/8 inch) <sup>4</sup>	--	--	137	651	--	--	101	501
Coarse and fine aggregate <sup>5</sup>	--	--	1,790	9,520	236	1,520	3,160	15,300
Other construction materials	--	--	111	869	1	6	126	1,320
Agricultural <sup>6</sup>	--	--	292	1,460	84	443	241	913
Chemical and metallurgical <sup>7</sup>	--	--	--	--	--	--	W	W
Special <sup>8</sup>	--	--	--	--	--	--	W	W
Other miscellaneous uses	--	--	(9)	(9)	--	--	--	--
Unspecified: <sup>10</sup>								
Reported	1,110	5,790	2,100	11,000	4,530	23,700	809	4,240
Estimated	--	--	3,100	14,000	360	1,400	3,200	16,000
Total	1,110	5,790	8,180	42,200	5,340	27,700	11,400	59,500
	District 5		District 6		Unspecified districts			
	Quantity	Value	Quantity	Value	Quantity	Value		
Construction:								
Coarse aggregate (+1 1/2 inch) <sup>2</sup>	--	--	168	1,150	24	96		
Coarse aggregate, graded <sup>3</sup>	--	--	388	2,920	208	804		
Fine aggregate (-3/8 inch) <sup>4</sup>	--	--	74	450	109	400		
Coarse and fine aggregates <sup>5</sup>	--	--	2,090	15,100	337	1,190		
Other construction materials	--	--	18	73	--	--		
Agricultural <sup>6</sup>	--	--	163	727	11	37		
Chemical and metallurgical <sup>7</sup>	--	--	--	--	--	--		
Special <sup>8</sup>	--	--	--	--	--	--		
Other miscellaneous uses	--	--	--	--	--	--		
Unspecified: <sup>10</sup>								
Reported	636	3,330	1,520	7,950	--	--		
Estimated	3,200	16,000	580	2,900	--	--		
Total	3,860	19,700	5,000	31,300	689	2,530		

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 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, unpaved road surfacing, and other coarse and fine aggregates.

<sup>6</sup>Includes agricultural limestone 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>Less than 1/2 unit.

<sup>10</sup>Reported and estimated production without a breakdown by end use.

TABLE 5  
IOWA: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 2001, BY MAJOR USE CATEGORY<sup>1</sup>

Use	Quantity		Unit value
	(thousand metric tons)	Value (thousands)	
Concrete aggregates (including concrete sand)	2,510	\$12,500	\$5.00
Plaster and gunite sands	94	535	5.69
Concrete products (blocks, bricks, pipe, decorative, etc.)	79	955	12.09
Asphalt concrete aggregates and other bituminous mixtures	677	2,440	3.61
Road base and coverings	2,250	6,750	3.00
Road stabilization (cement)	5	20	4.00
Road stabilization (lime)	49	142	2.90
Fill	469	1,860	3.96
Snow and ice control	66	338	5.12
Other miscellaneous uses <sup>2</sup>	73	736	10.08
Unspecified: <sup>3</sup>			
Reported	6,640	31,900	4.80
Estimated	1,300	5,600	4.44
Total or average	14,200	63,800	4.50

<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>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 2001, BY USE AND DISTRICT<sup>1</sup>

(Thousand metric tons and thousand dollars)

Use	District 1		District 2		District 3	
	Quantity	Value	Quantity	Value	Quantity	Value
Concrete aggregates (including concrete sand)	414	2,090	606	4,060	251	1,170
Concrete products (blocks, bricks, pipe, decorative, etc.) <sup>2</sup>	21	129	96	1,000	W	W
Asphaltic concrete aggregates and road base materials <sup>3</sup>	1,070	3,770	653	2,050	878	2,500
Fill	59	192	100	493	81	269
Snow and ice control	23	78	25	157	19	103
Other miscellaneous uses <sup>4</sup>	19	151	36	389	34	290
Unspecified: <sup>5</sup>						
Reported	1,450	7,970	258	1,280	4,090	18,800
Estimated	350	1,500	430	1,800	210	890
Total	3,400	15,900	2,200	11,200	5,550	24,100
Use	District 4		Districts 5 and 6		Unspecified districts	
	Quantity	Value	Quantity	Value	Quantity	Value
Concrete aggregates (including concrete sand)	799	3,250	436	1,960	--	--
Concrete products (blocks, bricks, pipe, decorative, etc.) <sup>2</sup>	W	W	W	W	--	--
Asphaltic concrete aggregates and road base materials <sup>3</sup>	W	W	W	W	226	373
Fill	74	303	156	600	--	--
Snow and ice control	--	--	--	--	--	--
Other miscellaneous uses <sup>4</sup>	95	430	105	485	--	--
Unspecified: <sup>5</sup>						
Reported	267	1,170	579	2,630	--	--
Estimated	130	550	150	910	--	--
Total	1,370	5,700	1,430	6,590	226	373

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>Includes plaster and gunite sands.

<sup>3</sup>Includes road and other stabilization (cement and lime).

<sup>4</sup>Includes railroad ballast.

<sup>5</sup>Reported and estimated production without a breakdown by end use.