



# 2008 Minerals Yearbook

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## INDIANA

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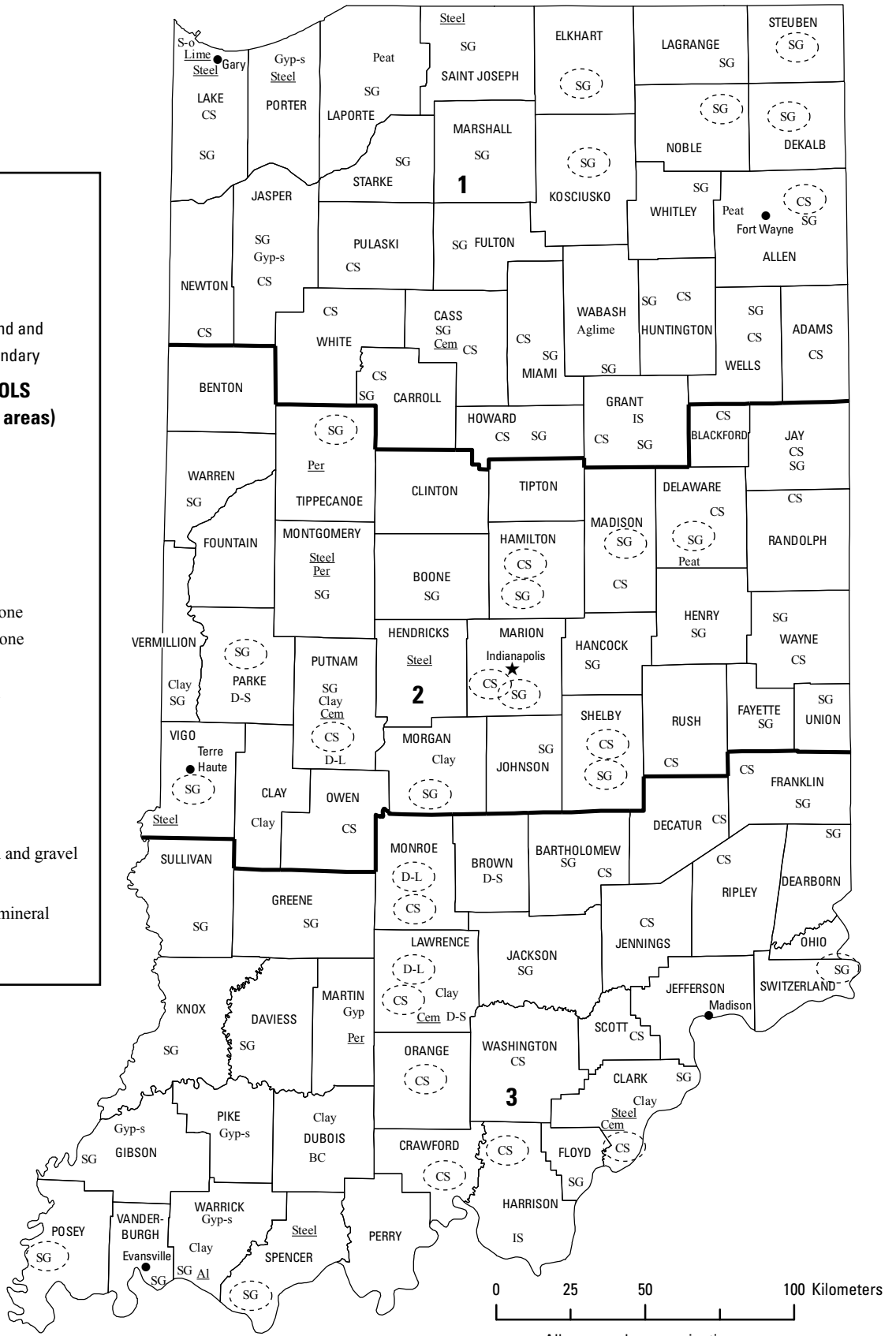
# INDIANA

**LEGEND**

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

**MINERAL SYMBOLS  
(Principal producing areas)**

- Aglime Agricultural lime
- Al Aluminum plant
- BC Ball clay
- Cem Cement plant
- Clay Common clay
- CS Crushed stone
- D-L Dimension limestone
- D-S Dimension sandstone
- Gyp Gypsum
- Gyp-s Synthetic gypsum
- IS Industrial sand
- Lime Lime plant
- Peat Peat
- Per Perlite plant
- S-o Sulfur (oil)
- SG Construction sand and gravel
- Steel Steel plant
- Concentration of mineral operations



Albers equal area projection

# THE MINERAL INDUSTRY OF INDIANA

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

In 2008, Indiana's nonfuel raw mineral production<sup>1</sup> was valued at \$891 million, based on annual U.S. Geological Survey (USGS) data. This was a \$94 million, or 10%, decrease from the State's total nonfuel mineral value for 2007, which had decreased by \$1.3 million from 2006 to 2007. The State was 25th in rank (24th in 2007) among the 50 States in total nonfuel raw mineral production value and accounted for 1.25% of the U.S. total. On a per-capita-basis, the State ranked 27th in the Nation in its industry's value of nonfuel mineral production; with a population of about 6.39 million, the value of production was about \$139 per capita.

In 2008, crushed stone, by value, remained Indiana's leading nonfuel mineral commodity, followed by portland cement and construction sand and gravel. The combined values of these three leading mineral commodities accounted for more than 81% of the State's total nonfuel mineral production value. Indiana's decrease in total nonfuel mineral production value was the result of decreases in the majority of the State's mineral commodity values, the largest decrease being that of portland cement, down by \$37 million, followed by crushed stone, down by \$30 million, and masonry cement (withheld—company proprietary data). Decreases in production value took place in construction sand and gravel and dimension stone, down by \$15 million and \$2 million, respectively. Smaller, yet significant decreases took place in ball clays, common clays, crude gypsum, and industrial sand and gravel. The only mineral commodity to increase in value was lime, despite a decrease in the quantity produced (withheld—company proprietary data). The production value of natural gemstone and peat remained the same as that of 2007.

In 2008, Indiana rose in rank in the quantity of several minerals produced in comparison with other producing States. The State rose in rank to 6th from 8th in peat, to 8th from 9th in lime, to 10th from 11th in crushed stone, and to 10th from 12th in common clay production. The State continued to be 5th in the production of ball clay, 11th in the production of portland cement, and 15th in the production of construction sand and gravel. The State's rank decreased to third from second in the production of dimension stone, to sixth from fifth in the production of masonry cement, and to eighth from seventh in the production of crude gypsum. Indiana accounted for 25% of the 92 million metric tons (Mt) of total raw steel produced in the United States in 2008 (American Iron and Steel Institute, 2009, p. 74).

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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 2008 USGS mineral production data published in this chapter are those available as of June 2010. All USGS Mineral Industry Surveys and USGS Minerals Yearbook chapters—mineral commodity, State, and country—can be retrieved over the Internet at URL <http://minerals.usgs.gov/minerals>.

The following narrative information was provided by the Indiana Geological Survey<sup>2</sup> (IGS).

## Employment

An average of 3,452 individuals were employed in Indiana's industrial nonfuel mineral sector during 2008, according to figures released by the United States Department of Labor, Mine Safety and Health Administration (MSHA). This represented a decrease of 1.6% from 2007 employment levels.

## Commodity Review

### *Industrial Minerals*

**Cement.**—Lehigh Cement Company at Mitchell in Lawrence County reported a decrease of 20 to 30% in sales, with kilns running at two-thirds of maximum capacity owing to the downturn in the economy. The downturn of the economy also delayed company plans to build a \$400 million modernized plant in Mitchell. A feasibility study for this was conducted in 2008. The modernization plans, with anticipated completion in 2012, were expected to triple production.

**Clay and Shale.**—Boral Bricks, Inc. increased production at its new \$58 million brick manufacturing facility in Terre Haute, Vigo County (Boral Bricks Inc., 2008). The plant, expected to produce about 120 million bricks per year, used methane gas from a nearby landfill for power and shale from land that had been previously mined for coal for brick making. By yearend, Brampton Brick, Ltd. completed its \$44 million brick manufacturing plant in Farmersburg, Sullivan County. These new plants were expected to increase clay production in coming years, when favorable economic conditions in the construction industry are predicted. McGuire Excavating and Trucking, Inc. began excavating shale for Lone Star Cement Company in Putnam County.

**Gypsum.**—The National Gypsum Mine at Shoals in Martin County participated in a project with NASA's Jet Propulsion Laboratory in Pasadena, CA, by providing rock samples to test a small sonic drill. The rocks were interpreted to be similar to rocks on Mars and the drill will be used by the new Mars Rover.

**Sand and Gravel, Construction.**—Several new sand and gravel companies obtained MSHA mine identification numbers by yearend. The new pits included the Speedway Sand and Gravel Lancaster pit in Huntington County, the Liberty Center Aggregates pit in Wells County, and Hixson Sand and Gravel Kimmell pit in Noble County. Three pits owned by Prairie Material Sales, Inc., in Greene, Morgan, and Shelby

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<sup>2</sup>Kathryn R. Shaffer, Mineral Statistician with the Indiana Geological Survey, submitted the text of the State mineral industry information provided by that State agency.

Counties, were acquired by Votorantim Cement North America, a Brazilian company with holdings in the United States and Canada. The company acquired additional Prairie Material properties in other States, making Votorantim one of the largest ready-mix concrete companies in the United States. The Indiana plants (and some operations in other States) will continue to carry the Prairie Material identity. Several sand and gravel pits closed during 2008, including Rogers Group, Inc.'s Graysville sand and gravel pit in Sullivan County; Vulcan Materials Company's Bass Lake sand and gravel pit in Starke County; and Martinsville Rockmakers, Inc.'s pit in Morgan County. The latter operated intermittently since its opening in 2007 and was affected by financial problems and two major floods in 2008.

**Stone, Crushed.**—Several companies saw an increase in sales of high-calcium limestone as scrubber stone for coal-fired electric power plants because increased environmental regulations require installation of flue-gas desulfurization (FGD) systems. S. and G. Excavating, Inc. began production at a crushed stone quarry in Putnam County for scrubber stone and construction purposes. Carmeuse Lime & Stone completed its acquisition of Oglebay Norton Co., which included a ground-limestone operation in Porter County. Rogers Group, Inc. celebrated its 100th anniversary of operation. The company, which has aggregate operations in Alabama, Arkansas, Indiana, Kentucky, and Tennessee, began operations in Bloomington, IN, in 1908. No crushed stone quarries closed in Indiana during 2008.

**Stone, Dimension.**—The Indiana Limestone Institute of America indicated there were few changes from the previous year. Major projects centered on college, university, and high-end residential construction, including the new multidisciplinary science building on the Indiana University Bloomington campus, with stone provided by the Indiana Limestone Company. The Indiana Limestone Company also quarried stone, some of which was carved into letters or ornate figures by Indiana stone carvers for Yankee Stadium in New York and for renovations to the New York Times building. Stone sales for commercial construction decreased, reflecting changes in the overall economy. No new dimension stone quarries opened in 2008, nor were there expansions or closings. In late 2007, however, an abandoned dimension stone quarry in Lawrence County was reopened by Blackwell Limestone, Inc. Operating under the same ownership, BTI Crushed Stone Sales, LLC removed and crushed overburden at the quarry. BTI Crushed Stone continued to remove and crush overburden for Victor Oolitic Stone Company dimension limestone quarry in Monroe County. Dimension sandstone was also produced in Brown, Parke, and Spencer Counties. Fieldstone from Brown County was used primarily for landscaping; and stone from Parke and Spencer Counties was used for construction purposes.

## **Metals**

**Aluminum.**—Alcoa Inc.'s Warrick Operations in Warrick County is one of the largest aluminum smelting and fabrication facilities in North America and employs more than 2,100 people. Alcoa completed installation of a \$500 million wet FGD technology (scrubbers) on all four power plant units that have been under construction since 2005. In May, the first of

four units started operations and all scrubbers were installed by yearend. The new scrubbers were expected to reduce emissions of sulfur dioxide by 98% and hydrochloric acid by 99% (Alcoa Inc., 2008). Further environmental enhancements to the Warrick plant were expected to be completed in 2010. The company installed a new rotary furnace that will separate recoverable aluminum from dross. Previously, the company hired other companies to do this task and the metal had to be transported elsewhere. In October, Alcoa announced plans to lay off about 100 workers from its Warrick plant, owing primarily to a drop in aluminum prices. In April, Alcoa held its 3d Annual Community Meeting, a community outreach program focused on informing the community about its operations and initiatives, and receiving feedback.

**Iron and Steel.**—In 2008, ArcelorMittal USA's profits soared in the first half of the year, up by 35%, but dropped by 9% over the entire year. ArcelorMittal's Indiana Harbor Mill in Lake County received an air permit from the Indiana Department of Environmental Management to allow installation of a pulverized coal injection system and supporting facilities and equipment. The company planned a \$240 million expansion at its I/N Kote plant in St. Joseph County that would double current capacity of 450,000 metric tons (t) of hot-dip galvanized and galvanized sheet and 410,000 t of electrogalvanized sheet (ArcelorMittal S.A., 2008). The galvanized steel plant is a joint venture with Japan-based Nippon Steel Corp. In December, the expansion was delayed owing to a decrease in demand for galvanized products. Also in December, the ArcelorMittal Burns Harbor plant in Porter County reached an agreement with union officials to institute a 32-hour work week for one-fourth of the employees. The company initially planned to lay off 2,444 workers, but owing to this agreement, laid off only 490, about one-half of which were voluntary. Only the plate mill and coke ovens were to be kept in operation at Burns Harbor for an unspecified period of time. The cuts were in response to a decrease in demand for steel products. The company had already shut down its "D" blast furnace at Burns Harbor for a \$100 million reline. ArcelorMittal worked with international unions to set uniform safety standards throughout the company's plants in 60 countries. The company was investigating the viability of producing wind power to generate electricity at its Indiana Harbor steel mill.

In 2008, U.S. Steel Corp. indicated profits in its third quarter that tripled its 2007 net income. The company repurchased 2 million shares of common stock for a total cost of \$230 million (U.S. Steel Corp., 2009). Owing to market conditions in December, the company announced plans to temporarily idle two mills and an iron ore mining and pelletizing facility and to temporarily consolidate production (U.S. Steel, 2008). Work continued at the Gary Works facilities in Lake County; however, the company released 800 contractors and made other cutbacks. In November, 75 employees at the Gary Works mill and finishing plant were laid off. Other cutbacks have also been made at the mill. Two blast furnaces at Gary Works remained idle for maintenance and production decreased at the other two furnaces. U.S. Steel was also investigating the feasibility of using wind power at its Gary Works facilities.

Steel Dynamics, Inc. indicated strong sales early in the year,

nearly doubling 2007 production by mid-2008. This was in part owed to the increased scrap metal sales resulting from the 2007 purchase of OmniSource Corp., based in Fort Wayne, Allen County. Earnings were less than projected in the third quarter and Steel Dynamics experienced a loss in the fourth quarter because of the weakened economy, yet achieved record annual revenues for the entire year. The company, which had bought back 46 million shares of common stock since 2004, increased its common share repurchase program by 15 million shares in 2008.

Steel Dynamics continued the expansion of its Structural and Rail Division in Columbia City at a cost of about \$320 million. In 2008, the company began the construction of a second casting facility to increase the supply of billets to the new rolling mill. The new rolling mill was completed in July and began producing smaller wide-flange beams and other structural shapes, such as angles and channels (Steel Dynamics, Inc., 2009, p. 12). The second caster was expected to begin operation by yearend 2009 and would provide the added casting capacity needed to supply the rolling mills.

Steel Dynamics, in association with Kobe Steel, Ltd., proceeded with construction of the Mesabi Nugget plant at Hoyt Lakes, MN. The facility was expected to produce 500,000 metric tons per year of high-grade iron nuggets (Steel Dynamics, Inc., 2009, p. 3). Most of the iron nuggets were to be used at minimills owned by Steel Dynamics, mainly in Indiana. The \$265 million facility was expected to be finished and begin production in the third quarter of 2009. Steel Dynamics purchased about 2,400 hectares of iron-ore-bearing property near the plant, which were expected to provide a long-term supply of iron for nugget production (Steel Dynamics, Inc., 2009, p. 19). In Jeffersonville, a building was constructed to house the new coil-painting line at its Flat Roll Division. The new paint line began production of painted-gauge steel in 2008 and the annual capacity is 170,000 t of painted steel (Steel Dynamics, Inc., 2009, p. 11). The company also produced corrosion-resistant steel. Electric-arc furnaces in the Butler Flat-Roll mill in Butler County were upgraded with shells that were 1.5 meters taller than the previous shell (Steel Dynamics, Inc., 2009, p. 8). The capacity expansion for its Pittsboro mill in Hendricks County was delayed until early 2009, owing to equipment delivery delays. The Pittsboro expansion will increase the mill capacity by 50% (Steel Dynamics, Inc., 2008). In November, Steel Dynamics, Inc. donated \$1.2 million to Ivy Tech Community College-Northeast in Fort Wayne. As a result, the college will name its newest building The Steel Dynamics Keith E. Busse Technology Center (Ivy Tech Foundation, 2008, p. 26).

Nucor Corp.'s earnings in 2008 were mainly attributable to company acquisitions made in the past 2 years. Nucor's actual steel quantities shipped in 2008 decreased from 2007 levels. In June, Nucor announced the purchase agreement to acquire Ambassador Steel Corp. in Auburn, DeKalb County, for a purchase price of about \$185 million (Nucor Corp., 2008). The company fabricates and distributes concrete reinforcing steel and other products. Nucor expected to double the company's production of concrete reinforcing steel and related products with the acquisition of Ambassador and Harris Steel, Inc. (acquired in 2007).

## Government Programs and Awards

In 2008, a first-bidding process took place to extend a 2.8-kilometer segment of the I-69 extension between I-64 and S.R. 68; some trees and houses were cleared in Vanderburgh and Gibson Counties. In July, a groundbreaking ceremony was held. About \$700 million in State funds over a 10-year period was earmarked for the I-69 extension project that will connect Indianapolis, in Marion County, to Evansville, in Vanderburgh County. The total project was expected to cost between \$1.73 and \$1.83 billion.

The IGS has been an active participant in the STATEMAP Program. STATEMAP is a component of the congressionally mandated National Cooperative Geologic Mapping Program (NCGMP), through which the USGS distributes Federal funds to support geologic mapping efforts through a competitive funding process. The NCGMP has three primary components: (1) FEDMAP, which funds Federal geologic mapping projects; (2) STATEMAP, which is a matching-funds grant program with State geological surveys; and (3) EDMAP, a matching-funds grant program with universities that has a goal to train the next generation of geologic mappers. The IGS published several geologic maps of interest to the industrial minerals industry during 2008: Geologic Map of the Bloomington 7.5-Minute Quadrangle (Thompson and others, 2008a); Preliminary Bedrock Geologic Map of the Oolitic 7.5-Minute Quadrangle, Indiana (Keith and others, 2008); Preliminary Bedrock Geologic Map of the Bartlettsville 7.5-Minute Quadrangle, Indiana (Thompson and others, 2008b); and Surficial Geology of the Eaton and Wheeling 7.5-Minute Quadrangles, Delaware County, Indiana (Karaffa, 2008). A series of shaded relief maps were published of the Boone, Brown, Grant, Hamilton, Hancock, Hendricks, Jefferson, Johnson, Madison, Marion, Monroe, Morgan, Shelby, and Vanderburgh Counties (Sowder and others, 2008). In 2008, "A Preliminary Guide to the Responses of Geologic Materials in Indiana to Seismically Induced Ground Shaking" was published (Hill and others, 2008), as well as "Bibliography of Indiana Paleontology, 1831 to 2006" CD-ROM (Fall and others, 2008). The publications are available on the IGS Bookstore Web site at <http://igs.indiana.edu/survey/Bookstore/index.cfm>.

The Buzzi Unicem USA, Inc. plant at Greencastle in Putnam County received the Portland Cement Association Safety Innovation Award in the Milling/Grinding category for devising a safe method to change the position of valves on the silo from the ground instead of using a ladder, as had been done in the past. The National Stone, Sand and Gravel Association granted several awards to Indiana aggregate producers: Hanson Aggregates Midwest Region Harding Street quarry in Marion County won an Environmental Excellence Silver Award; Hanson Aggregates Midwest's Putnamville and Limesdale quarries in Putnam County won Environmental Excellence Bronze Awards; four Rogers Group, Inc.'s quarries, including Mitchell Crushed Stone (Mitchell, IN), Morgan County Sand and Gravel (Martinsville, IN), Newton County Stone (Kentland, IN), and Sieboldt quarry (Springville, IN), won Excellence in Community Relations Bronze Awards.

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

(Thousand metric tons and thousand dollars)

Mineral	2006		2007		2008	
	Quantity	Value	Quantity	Value	Quantity	Value
Cement, portland	3,030	267,000 <sup>e</sup>	2,980	263,000 <sup>e</sup>	2,590	226,000 <sup>e</sup>
Clays, common	779	16,400	624	8,980 <sup>r</sup>	667	8,080
Gemstones, natural	NA	4	NA	4	NA	4
Sand and gravel, construction	29,300	153,000	28,300 <sup>r</sup>	153,000	23,200	138,000
Stone:						
Crushed	59,300	352,000	57,800 <sup>r</sup>	383,000 <sup>r</sup>	52,400	353,000
Dimension	233	39,000	236	37,800	203	35,600
Combined values of cement (masonry), clays (ball), gypsum (crude), lime, peat, sand and gravel (industrial)	XX	159,000	XX	139,000 <sup>r</sup>	XX	130,000
Total	XX	986,000	XX	985,000 <sup>r</sup>	XX	891,000

<sup>e</sup>Estimated. <sup>r</sup>Revised. NA Not available. 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 three significant digits; may not add to totals shown.

TABLE 2  
INDIANA: CRUSHED STONE SOLD OR USED, BY TYPE<sup>1</sup>

Type	2007			2008		
	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Number of quarries	Quantity (thousand metric tons)	Value (thousands)
Limestone <sup>2</sup>	77 <sup>r</sup>	51,000 <sup>r</sup>	\$329,000 <sup>r</sup>	81	47,700	\$320,000
Dolomite	17	6,720	53,700	13	4,700	33,300
Total	XX	57,800 <sup>r</sup>	383,000 <sup>r</sup>	XX	52,400	353,000

<sup>r</sup>Revised. XX Not applicable.

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

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

TABLE 3  
INDIANA: CRUSHED STONE SOLD OR USED BY PRODUCERS IN 2008, BY USE<sup>1</sup>

(Thousand metric tons and thousand dollars)

Use	Quantity	Value
Construction:		
Coarse aggregate (+1½ inch):		
Macadam	W	W
Riprap and jetty stone	705	6,410
Filter stone	245	1,810
Other coarse aggregate	1,710	9,040
Coarse aggregate, graded:		
Concrete aggregate, coarse	1,460	13,100
Bituminous aggregate, coarse	2,170	19,900
Bituminous surface-treatment aggregate	1,220	10,700
Railroad ballast	133	1,360
Other graded coarse aggregate	5,480	32,500
Fine aggregate (-¾ inch):		
Stone sand, concrete	W	W
Stone sand, bituminous mix or seal	217	1,530
Screening, undesignated	238	819
Other fine aggregate	1,940	10,100
Coarse and fine aggregates:		
Graded road base or subbase	2,940	19,400
Unpaved road surfacing	257	2,010
Crusher run or fill or waste	2,030	7,850
Other coarse and fine aggregates	3,860	22,600
Other construction materials	14	153
Agricultural:		
Limestone	1,210	7,290
Other agricultural uses	2	13
Chemical and metallurgical:		
Cement manufacture	4,180	22,400
Lime manufacture	W	W
Sulfur oxide removal	W	W
Special:		
Whiting or whiting substitute	W	W
Other fillers or extenders	W	W
Other miscellaneous uses and specified uses not listed	314	1,670
Unspecified: <sup>2</sup>		
Reported	14,300	119,000
Estimated	4,100	27,000
Total	52,400	353,000

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

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

<sup>2</sup>Reported and estimated production without a breakdown by end use.

TABLE 4  
INDIANA: CRUSHED STONE SOLD OR USED BY PRODUCERS IN 2008, 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
Construction:						
Coarse aggregate (+1½ inch) <sup>2</sup>	517	4,280	W	W	W	W
Coarse aggregate, graded <sup>3</sup>	4,800	40,200	1,120	10,500	4,550	26,800
Fine aggregate (-¾ inch) <sup>4</sup>	734	4,590	W	W	W	W
Coarse and fine aggregates <sup>5</sup>	2,780	15,100	1,990	11,600	4,310	25,100
Other construction materials	--	--	14	153	--	--
Agricultural <sup>6</sup>	W	W	W	W	W	W
Chemical and metallurgical <sup>7</sup>	W	W	W	W	5,300	23,300
Special <sup>8</sup>	W	W	--	--	W	W
Other miscellaneous uses	314	1,670	--	--	--	--
Unspecified: <sup>9</sup>						
Reported	3,860	25,300	6,970	67,600	3,500	25,900
Estimated	938	6,200	1,100	7,200	2,000	14,000
Total	14,500	101,000	14,700	121,000	23,200	131,000

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 aggregate.

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

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

<sup>5</sup>Includes crusher run or fill or waste, graded road base or subbase, unpaved road surfacing, and other coarse and fine aggregates.

<sup>6</sup>Includes agricultural limestone, and other agricultural uses.

<sup>7</sup>Includes cement and lime manufacture, and sulfur oxide removal.

<sup>8</sup>Includes whitening or whitening substitute and other fillers or extenders.

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

TABLE 5  
INDIANA: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 2008,  
BY MAJOR USE CATEGORY<sup>1</sup>

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
Concrete aggregate (including concrete sand)	5,750	\$32,000	\$5.57
Plaster and gunite sands	34	405	11.91
Concrete products (blocks, bricks, pipe, decorative, etc.)	226	2,250	9.96
Asphaltic concrete aggregates and other bituminous mixtures	1,420	8,110	5.72
Road base and coverings <sup>2</sup>	1,050	6,890	6.60
Fill	2,960	14,900	5.04
Snow and ice control	359	1,390	3.87
Other miscellaneous uses <sup>3</sup>	105	352	3.35
Golf course	3	25	8.33
Unspecified: <sup>4</sup>			
Reported	2,770	18,700	6.75
Estimated	8,600	53,000	6.23
Total or average	23,200	138,000	5.96

<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 road and other stabilization (cement).

<sup>3</sup>Includes filtration.

<sup>4</sup>Reported and estimated production without a breakdown by end use.



TABLE 6  
INDIANA: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 2008, 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 aggregate and concrete products <sup>2</sup>	1,750	7,330	2,140	15,500	2,120	11,800
Asphaltic concrete aggregates and other bituminous mixtures	489	2,630	W	W	W	W
Road base and coverings <sup>3</sup>	544	3,800	392	2,300	109	796
Fill	678	2,870	2,190	11,600	92	438
Other miscellaneous uses <sup>4</sup>	152	454	660	3,330	585	3,460
Unspecified: <sup>5</sup>						
Reported	341	2,110	2,210	15,300	218	1,260
Estimated	1,500	9,400	3,400	21,000	3,700	23,000
<b>Total</b>	<b>5,470</b>	<b>28,600</b>	<b>11,000</b>	<b>69,100</b>	<b>6,780</b>	<b>40,500</b>

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

<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).

<sup>4</sup>Includes filtration, golf course, and snow and ice control.

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