THE MINERAL INDUSTRY OF INDIANA

This chapter has been prepared under a Memorandum of Understanding between the U.S. Bureau of Mines, U.S. Department of the Interior, and the Geological Survey, Indiana Department of Natural Resources, for collecting information on all nonfuel minerals.

Indiana ranked 21st among the 50 States in total nonfuel mineral value[1] in 1994, climbing from 22d in 1993, according to the U.S. Bureau of Mines. The estimated value for 1994 was $517 million, an increase of more than 9% compared with that of 1993. This followed a slightly less than 1% increase in 1993 over that of 1992. The State accounted for around 1.5% of the U.S. total. In 1994, the value attributed to nonfuel minerals exceeded $0.5 billion for the first time in Indiana's history. Compared with 1993, the value of crushed stone, portland cement, construction sand and gravel, masonry cement, gypsum, and industrial sand and gravel increased. Decreases occurred in lime, dimension stone, common clays, and gemstones.

In estimated mineral production for 1994, Indiana remained second in masonry cement and dimension stone and seventh in gypsum. While not ranking among the top 10 States, Indiana mines, nonetheless, produced significant quantities of crushed stone, construction sand and gravel, and common clays; similar production of both portland cement and lime was achieved at manufacturing plants within the State. Indiana was 11th in the production of construction sand and gravel and lime, 12th in crushed stone and portland cement, and 13th in common clays. The State's mines exclusively produce industrial minerals and coal; any metals, especially steel and aluminum, produced in the State are processed from materials received from other domestic and foreign sources. Indiana continued to lead the Nation in the production of raw steel with an estimated output of more than 19 million metric tons (21 million short tons), as reported by the American Iron and Steel Institute. Of similar importance, the State climbed from fourth to third in the production of primary aluminum.

According to the Indiana Geological Survey, production of aggregates—crushed stone and sand and gravel—continued to show strong growth during 1994 primarily due to improving conditions in the construction industry, especially an increased demand for road improvement work and residential housing. Numerous road projects were announced during the year. In the planning stages were a new bridge across the Ohio River, upgrading the connection between Indiana and Louisville,

TABLE 1
NONFUEL RAW MINERAL PRODUCTION IN INDIANA[1]

Mineral		1992		1993		1994[p]	
		Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)
Cement:							
Masonry	thousand metric tons	337	$24,822	W	W	W	W
Portland	do.	2,237	110,737	2,065	$108,702	2,280	$120,000
Clays	do.	[2]842	[2]3,016	[2]600	[2]2,540	700	2,520
Gemstones		NA	720	NA	47	NA	W
Peat	thousand metric tons	24	512	24	W	22	472
Sand and gravel:							
Construction	do.	26,183	95,889	[e]27,000	[e]102,600	28,600	112,000
Industrial	do.	107	1,278	W	W	W	W
Stone:							
Crushed	do.	[e]39,009	[e]178,000	36,862	165,861	[e]41,000	[e]193,000
Dimension	metric tons	[e]172,739	[e]26,767	[3]155,616	[3]22,876	[e]126,000	[e]18,100
Combined value of clays (ball), gypsum (crude), lime, stone [dimension sandstone (1993)], and values indicated by symbol W		XX	35,145	XX	70,368	XX	71,700
Total		XX	476,886	XX	472,994	XX	[4]517,000

[e]Estimated. [p]Preliminary. NA Not available. W Withheld to avoid disclosing company proprietary data; value included with "Combined value" data.
XX Not applicable.
[1]Production as measured by mine shipments, sales, or marketable production (including consumption by producers).
[2]Excludes certain clays; kind and value included with "Combined value" figure.
[3]Excludes certain stones; kind and value included with "Combined value" figure.
[4]Data do not add to total shown because of independent rounding.

KY, and an extension of Interstate 69 to improve travel between the State Capital, Indianapolis, in the mid-State area, and the southwestern corner of Indiana near Evansville. Concerns expressed by potentially affected farmers and mining interests and by some environmental groups were slowing the choice of the exact route to be taken. In other developments, the Hillside Stone Co. prepared for the opening of its new underground crushed limestone mine near Bloomington, Monroe County. While the production of natural dimension stone has slowed since 1989, a year of relatively high output, demand was growing during the latter half of the year because of the economy's generally improving conditions coupled with the substitution of Indiana limestone in the marketplace for stone no longer available from other sources. Plans were being developed by the new Steel Dynamics Co. for a steel minimill in De Kalb County; construction of the mill was to commence in 1995 and be completed by 1998. Amcast Industrial Corp. was in the planning and permitting stages for the construction of its new aluminum casting plant to be built in Franklin, Johnson County, in 1995. Minerals research projects being conducted during 1994 by the Indiana Geological Survey included studies of the crushed stone resources of Putnam County, scrubber limestone resources near a number of the State's powerplants, and characterization studies of Indiana's shale beds and heavy mineral sand deposits, as well as studies of carbonate rocks for nontraditional uses.

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[1]The term value means the total monetary value as represented by either mine shipments, mineral commodity sales, or marketable production as is applicable to the individual mineral commodities.

TABLE 2

INDIANA: CRUSHED STONE[1] SOLD OR USED BY PRODUCERS IN 1993, BY USE

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
Coarse aggregate (+1 1/2 inch):			
Macadam	218	$1,053	$4.83
Riprap and jetty stone	1,025	4,219	4.12
Filter stone	200	1,006	5.03
Other coarse aggregate	231	1,018	4.41
Coarse aggregate, graded:			
Concrete aggregate, coarse	4,887	20,093	4.11
Bituminous aggregate, coarse	3,878	18,902	4.87
Bituminous surface-treatment aggregate	1,469	5,825	3.97
Railroad ballast	331	1,352	4.08
Other graded coarse aggregate	242	1,210	5.00
Fine aggregate (-3/8 inch):			
Stone sand, concrete	159	326	2.05
Stone sand, bituminous mix or seal	121	396	3.27
Screening, undesignated	165	533	3.23
Other fine aggregate	W	W	4.36
Coarse and fine aggregates:			
Graded road base or subbase	4,652	21,495	4.62
Unpaved road surfacing	3,352	13,399	4.00
Terrazzo and exposed aggregates	W	W	22.08
Crusher run or fill or waste	488	1,978	4.05
Other coarse and fine aggregates	177	905	5.11
Other construction materials	683	2,846	4.17
Agricultural: Agricultural limestone[2]	1,415	7,497	5.30
Chemical and metallurgical:			
Cement manufacture	3,230	8,348	2.58
Flux stone	([3])	([3])	10.32
Sulfur oxide removal	438	1,741	3.97
Special:			
Whiting or whiting substitute	14	150	10.71
Other fillers or extenders	([3])	([3])	12.13
Other specified uses not listed	225	2,187	9.72
Unspecified:[4]			
Actual	8,630	46,284	5.36
Estimated	633	3,098	4.89
Total[5]	36,862	165,861	4.50
Total[6 7]	40,633	165,861	4.08

W Withheld to avoid disclosing company proprietary data; included with "Other construction materials."
[1]Includes dolomite, limestone, and limestone-dolomite.
[2]Includes poultry grit and mineral food, and other agricultural uses.
[3]Withheld to avoid disclosing company proprietary data; included with "Other specified uses not listed."
[4]Includes production reported without a breakdown by use and estimates for nonrespondents.
[5]Data may not add to totals shown because of independent rounding.
[6]One short ton is equal to 907 kilograms or 2,000 pounds. To convert metric tons to short tons, divide metric tons by 0.907185.
[7]Total shown in thousand short tons and thousand dollars.

TABLE 3

INDIANA: CRUSHED STONE SOLD OR USED, BY KIND

Kind	1991[r 1]				1993[2]			
	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value	Number of quarries	Quantity (thousand metric tons)	Value thousands)	Unit value
Limestone	76	30,348	$131,579	$4.34	72	34,144	$151,578	$4.44
Dolomite	9	2,405	12,719	5.29	9	2,718	14,283	5.25
Total	XX	[3]32,752	144,298	4.41	XX	36,862	165,861	4.50
Total[4 5]	XX	36,103	144,298	4.00	XX	40,633	165,861	4.08

[r]Revised. XX Not applicable.
[1]Excludes limestone-dolomite from State total to avoid disclosing company proprietary data.
[2]Includes "Limestone-dolomite," reported with no distinction between the two.
[3]Data do not add to total shown because of independent rounding.
[4]One short ton is equal to 907 kilograms or 2,000 pounds. To convert metric tons to short tons, divide metric tons by 0.907185.
[5]Total shown in thousand short tons and thousand dollars.

TABLE 4

INDIANA: CRUSHED STONE SOLD OR USED BY PRODUCERS IN 1993, BY USE AND DISTRICT

(Thousand metric tons and thousand dollars)

Use	District 1		District 2		District 3	
	Quantity	Value	Quantity	Value	Quantity	Value
Construction aggregates:						
Coarse aggregate (+1 1/2 inch)[1]	547	2,614	338	2,002	761	2,681
Coarse aggregate, graded[2]	1,999	9,094	2,363	16,502	6,444	21,785
Fine aggregate (-3/8 inch)[3]	W	W	13	58	W	W
Coarse and fine aggregate[4]	4,363	17,018	2,245	11,477	2,063	9,289
Other construction materials	811	3,212	—	—	304	825
Agricultural[5]	([6])	([6])	([6])	([6])	([6])	([6])
Chemical and metallurgical[7]	([6])	([6])	([6])	([6])	2,373	7,690
Specia1[8]	([6])	([6])	—	—	([6])	([6])
Other miscellaneous use	1,280	6,987	947	2,485	721	2,760
Unspecified:[9]						
Actual	1,998	10,709	2,596	15,557	4,036	20,018
Estimated	355	1,738	233	1,139	45	222
Total	11,380	51,372	8,735	49,220	16,747	65,269
Total[11 12]	12,544	51,372	9,629	49,220	18,460	65,269

W Withheld to avoid disclosing company proprietary data; included with "Other construction materials."
[1]Includes filter stone, macadam, and riprap and jetty stone.
[2]Includes concrete aggregate (coarse), bituminous aggregate (coarse), bituminous surface-treatment aggregate, railroad ballast, and other graded coarse aggregate.
[3]Includes stone sand (concrete), stone sand (bituminous mix or seal), screening (undesignated), and other fine aggregate.
[4]Includes graded road base or subbase, unpaved road surfacing, terrazzo and exposed aggregate, crusher run (select material or fill), and other coarse and fine aggregate.
[5]Includes agricultural limestone, poultry grit and mineral food, and other argicultural uses.
[6]Withheld to avoid disclosing company proprietary data; included with "Other miscellaneous uses."
[7]Includes cement manufacture, flux stone, and sulfur oxide removal.
[8]Includes whiting or whiting substitutes, other fillers or extenders, and other specified uses not listed.
[9]Includes production reported without a breakdown by use and estimates for nonrespondents.
[10]Data do not add to total shown because of independent rounding.
[11]One short ton is equal to 907 kilograms or 2,000 pounds. To convert metric tons to short tons, divide metric tons by 0.907185.
[12]Total shown in thousand short tons and thousand dollars.