

# THE MINERAL INDUSTRY OF NEW JERSEY

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 New Jersey Geological Survey, New Jersey Department of Environmental Protection & Energy, Division of Science and Research, for collecting information on all nonfuel minerals.

In 1995, for the 4th time in the past 6 years, New Jersey ranked 37th among the 50 States in total nonfuel mineral production value,<sup>1</sup> according to the U.S. Geological Survey (USGS). The estimated value for 1995 was \$289 million, virtually unchanged from that of 1994. This followed a 10.2% increase from 1993 to 1994 (based on final data). The State accounted for a little less than 1% of the U.S. total nonfuel mineral production value.

Crushed stone and construction sand and gravel, by value, were New Jersey's leading nonfuel mineral commodities. Decreases in value occurred for all nonfuel mineral commodities except crushed stone in 1995. In 1994, increases in construction sand and gravel and crushed stone provided most of the year's increased value.

Based on USGS estimates of the quantities produced in the 50 States in 1995, New Jersey remained the only producer of greensand marl. The State rose from fourth to third in the production of industrial sand and gravel and was eighth in peat. Greensand is used as a water softening, filtration medium to remove soluble iron and manganese from well water and as an organic conditioner for soils. In addition, New Jersey's mines produced significant quantities of crushed stone and construction sand and gravel.

The New Jersey Geological Survey<sup>2</sup> reported that large-scale capital projects contributed up to 5% of the improved performance level for the construction sector. The largest of these projects were in Atlantic City and at McGuire Air Force Base (AFB) in New Hanover Township, Burlington County. Atlantic City projects included construction of two

new casinos, a large parking garage, a new convention center, and airport improvements.

In April, Clayton Concrete Co. constructed a state-of-the-art central mix concrete plant. This was in preparation for the expected demand from major construction projects planned for McGuire AFB; these projects commenced in September. Additionally, the adjacent U.S. Army facility at Fort Dix was planning major expansion projects during the next few years.

Strong transportation project activity in 1995, estimated at \$718 million, and substantial funding increases planned for the next 2 years have also helped avert recent declines in the construction sector. Combined public agency and private sector construction activity during the year was estimated at \$5.9 billion.

The Amboy Aggregates Joint Venture Co., of South Amboy, Middlesex County, has entered into a maintenance dredging contract with the State for the Sandy Hook Channel in Raritan Bay. Under this contract, the company will extract and sell 76,000 cubic meters (100,000 cubic yards) of construction sand and gravel. Amboy, the only company actively mining for sand and gravel in New Jersey coastal waters, has been dredging New Jersey waters since 1985.

Heavy mineral placer mining activity remained inactive during 1995; no new mining operations were being planned. New Jersey's exploration activity was mostly limited to the search for beach replenishment sand in the Atlantic coastal waters. The U.S. Army Corps of Engineers is involved with the New Jersey Department of

TABLE 1  
NONFUEL RAW MINERAL PRODUCTION IN NEW JERSEY<sup>1 2</sup>

Mineral	1993		1994		1995 <sup>p</sup>	
	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)
Gemstones	NA	\$1	NA	\$1	NA	\$1
Sand and gravel:						
Construction thousand metric tons	<sup>e</sup> 14,700	<sup>e</sup> 80,100	16,100	100,000	15,000	93,700
Industrial metric tons	1,830,000	28,600	1,690,000	30,600	1,710,000	30,100
Stone (crushed) thousand metric tons	<sup>3</sup> 16,700	<sup>3</sup> 138,000	19,800	154,000	20,600	163,000
Combined value of clays [common, fire (1993)], greensand marl, peat, and stone [crushed sandstone and miscellaneous (1993)]	XX	15,700	XX	4,460	XX	2,960
Total	XX	262,000	XX	289,000	XX	289,000

<sup>e</sup>Estimated. <sup>p</sup>Preliminary. 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.

<sup>3</sup>Excludes certain stones; value included with "Combined value" data.

Environmental Protection in several beach replenishment projects, including a large-scale replenishment of Monmouth County beaches, between Monmouth Beach and Sandy Hook.

<sup>1</sup>The terms "nonfuel mineral production" and related "values" encompass variations in meaning, depending on 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 1995 USGS mineral production data are estimates, as of Dec. 1995. Crushed stone and construction sand and gravel estimates are updated periodically. To obtain the most current information, please contact the appropriate USGS mineral commodity specialist. Call MINES FaxBack at (703) 648-4999 from a fax machine with a touch-tone handset and request Document No. 1000 for a telephone listing of all mineral commodity specialists or call USGS information at (703) 648-4000 for the specialist's name and number.

<sup>2</sup>This report includes information provided by the New Jersey Geological Survey.

TABLE 2  
NEW JERSEY: CRUSHED STONE<sup>1</sup> SOLD OR USED BY PRODUCERS IN 1994, BY USE<sup>2</sup>

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
<b>Coarse aggregate (+1 1/2 inch):</b>			
Macadam	167	\$755	\$4.52
Riprap and jetty stone	344	2,230	6.49
Filter stone	282	1,730	6.13
Other coarse aggregate	171	1,250	7.31
<b>Coarse aggregate, graded:</b>			
Concrete aggregate, coarse	3,190	22,900	7.20
Bituminous aggregate, coarse	1,320	10,800	8.22
Bituminous surface-treatment aggregate	960	8,470	8.83
Railroad ballast	241	2,040	8.46
Other graded coarse aggregate	833	4,630	5.56
<b>Fine aggregate (-3/8 inch):</b>			
Stone sand, concrete	759	7,390	9.74
Stone sand, bituminous mix or seal	W	W	7.72
Screening, undesignated	1,520	9,050	5.96
Other fine aggregate	63	416	6.60
<b>Coarse and fine aggregates:</b>			
Graded road base or subbase	2,090	12,400	5.94
Unpaved road surfacing	10	66	6.60
Terrazzo and exposed aggregate	W	W	21.40
Crusher run or fill or waste	518	3,970	7.65
Other coarse and fine aggregates	W	W	7.07
Other construction materials <sup>3</sup>	3,640	27,200	7.48
<b>Agricultural:</b>			
Agricultural limestone	( <sup>4</sup> )	( <sup>4</sup> )	17.60
Poultry grit and mineral food	( <sup>4</sup> )	( <sup>4</sup> )	33.10
Chemical and metallurgical: Flux stone	( <sup>4</sup> )	( <sup>4</sup> )	15.90
<b>Special:</b>			
Asphalt fillers or extenders	( <sup>4</sup> )	( <sup>4</sup> )	15.00
Other fillers or extenders	( <sup>4</sup> )	( <sup>4</sup> )	18.90
<b>Unspecified:<sup>5</sup></b>			
Actual	995	11,000	11.00
Estimated	2,540	25,700	10.10
Total	19,800	154,000	7.80

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

<sup>1</sup>Includes granite, limestone, miscellaneous stone, sandstone, and traprock.

<sup>2</sup>Data are rounded to three significant digits.

<sup>3</sup>Includes roofing granules.

<sup>4</sup>Withheld to avoid disclosing company proprietary data; included in "Total."

<sup>5</sup>Includes production reported without a breakdown by end use and estimates for nonrespondents.

TABLE 3  
**NEW JERSEY: CRUSHED STONE SOLD OR USED, BY KIND<sup>1</sup>**

Kind	1993				1994			
	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> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	1	W	W	\$13.30
Granite	10	7,970	\$66,900	\$8.40	9	7,460	\$58,200	7.81
Traprock	9	8,740	70,900	8.12	9	10,600	78,600	7.39
Sandstone	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	1	W	W	10.00
Miscellaneous stone	—	—	—	—	1	W	W	8.79
Total	XX	16,700	138,000	8.25	XX	19,800	154,000	7.80

W Withheld to avoid disclosing company proprietary data; included in "Total." XX Not applicable.

<sup>1</sup>Data are rounded to three significant digits.

<sup>2</sup>Excludes limestone and sandstone from State total to avoid disclosing company proprietary data.

TABLE 4  
**NEW JERSEY: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 1994, BY MAJOR USE CATEGORY<sup>1</sup>**

Use	Quantity (thousand metric tons)	Value (thousands)	Value per ton
Concrete aggregate (including concrete sand)	6,140	\$36,300	\$5.92
Plaster and gunitite sands	437	2,910	6.65
Concrete products (blocks, brick, pipe, decorative, etc.)	136	1,430	10.50
Asphaltic concrete aggregates and other bituminous mixtures	1,710	10,000	5.85
Road base and coverings <sup>2</sup>	666	3,750	5.62
Fill	699	3,080	4.40
Snow and ice control	193	1,260	6.53
Filtration	225	1,630	7.26
Unspecified: <sup>3</sup>			
Actual	4,360	30,500	7.00
Estimated	1,510	9,050	5.99
Total or average	16,100	100,000	6.21

<sup>1</sup>Data are rounded to three significant digits; may not add to totals shown.

<sup>2</sup>Includes road and other stabilization (cement).

<sup>3</sup>Includes production reported without a breakdown by end use and estimates for nonrespondents.

TABLE 5  
**NEW JERSEY: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 1994, 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>	1,900	12,500	2,540	16,400	2,280	11,800
Asphaltic concrete aggregates and road base materials <sup>3</sup>	810	4,480	1,170	7,540	1,100	4,800
Snow and ice control	123	774	45	355	24	132
Other miscellaneous uses	196	1,460	29	180	—	—
Unspecified: <sup>4</sup>						
Actual	—	—	1,380	7,450	2,990	23,100
Estimated	139	1,070	376	1,740	996	6,230
Total	3,170	20,300	5,540	33,700	7,380	46,000

<sup>1</sup>Data are rounded to three significant digits; may not add to totals shown.

<sup>2</sup>Includes plaster and gunite sands.

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

<sup>4</sup>Includes production reported without a breakdown by end use and estimates for nonrespondents.



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