

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 1994, for the third time in the past 5 years, New Jersey ranked 37th in the Nation in total nonfuel mineral value,¹ moving down from 36th in 1993, according to the U.S. Bureau of Mines (USBM). The estimated value for 1994 was \$274 million, a more than 4% increase compared with that of 1993. This followed a 9% increase from 1992 to 1993. The State accounted for almost 1% of the U.S. total value. Both in 1993 and 1994, the increases were largely attributable to crushed stone, the State's leading mineral commodity in terms of value. Increases in the value of industrial sand and gravel in 1993 and construction sand and gravel in 1994 contributed to the respective years' increases. Compared with those of 1993, the mineral commodity values in 1994 increased for crushed stone and construction sand and gravel. Decreases occurred for industrial sand and gravel, greensand, and common clays.

Taking into account USBM estimates of the quantities of minerals produced in the other 49 States during 1994, New Jersey remained the only State to produce greensand. 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. The State remained third in the production of industrial sand and gravel. While not being one of the top 10 producing States, New Jersey's mines produced significant quantities of crushed stone and construction sand and gravel.

According to the New Jersey Geological Survey, no heavy mineral mining activities took place in the State during 1994. Nord Industries, heavy mineral recovery operation, formerly the Glidden (ilmenite) Mine, in Jackson Township, Ocean County, continued in a standby mode, as reported by the current operator, Clayton Sand and Gravel Co. The property remained on standby following completion of cleanup activities involving low-level radioactive monazite at the site in early 1993. The cleanup had been ordered by the State Department of Environmental Protection (DEP) and the U.S. Nuclear Regulatory Commission (NRC). Yet to be completed was the removal of certain equipment; Clayton reportedly was offering for sale various equipment, such as spirals, magnetic separators, and conveyors, from plant buildings, after which it planned to install sand bagging equipment. During 1994, the company was dredging sand and trucking it onto the site and was reportedly considering construction of a cinder block manufacturing plant. Meanwhile, another former heavy minerals operation, the Heritage Minerals, Inc., property near Lakehurst in Manchester Township, Ocean County, was also in a standby status. The company kept current with all applicable permits to mine, pending changes in the economic situation. A portion of the plant remained involved in active DEP- and NRC-mandated cleanups of fuel oil and monazite, respectively. Heritage previously had recovered zircon and other materials from

TABLE 1
NONFUEL RAW MINERAL PRODUCTION IN NEW JERSEY¹

Mineral	1992		1993		1994 ^p		
	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)	
Gemstones	NA	\$1	NA	\$1	—	—	
Sand and gravel:							
Construction	thousand metric tons	14,892	79,993	^e 14,700	^e 80,100	15,300	\$84,900
Industrial	do.	1,377	24,727	1,826	28,640	W	W
Stone (crushed) ²	do.	^e 15,513	^e 126,000	16,702	137,872	^e 17,500	^e 148,000
Combined value of clays [common, fire (1992-93)], greensand marl, peat, stone [crushed sandstone and miscellaneous (1992-93), crushed limestone and sandstone (1994)], titanium concentrates [ilmenite and rutile (1992)], zircon concentrates (1992), and value indicated by symbol W		XX	9,718	XX	15,734	XX	41,000
Total		XX	240,439	XX	262,347	XX	³ 274,000

^aEstimated. ^pPreliminary. ^rRevised. NA Not available. W Withheld to avoid disclosing company proprietary data; value included with "Combined value" data. XX Not applicable.

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

²Excludes certain stones; value included with "Combined value" data.

³Data do not add to total shown because of independent rounding.

tailings piles at the former ASARCO, Inc., titanium plant operations. Radioactive elements of concern in the site's monazite- and zircon-rich sands included thorium and uranium, respectively.

In other developments, the New Jersey Concrete and Aggregate Association reported that the aggregate sector showed no growth in both the commercial and residential building sectors in 1994. The public works sector, however, experienced modest growth, in part due to an increase in highway projects and construction of a new Atlantic City Convention Center. Recent State requirements to add recycled material to newly manufactured asphalt and concrete has resulted in a nearly sixfold increase in the number of companies involved in

recycling at the processing plants—from 2 or 3 companies 3 years ago, to as many as 18 currently. No new aggregate mines have been developed Statewide in the last 20 years. A map showing, by municipality, the names and locations of all known mines and prospects was released to the public during 1994. More detailed information related to those locations was being gathered in conjunction with the completion of county environmental information maps.

¹The term value, referring throughout this document to that of nonfuel minerals, here addresses 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
NEW JERSEY: CRUSHED STONE¹ 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	W	W	\$7.16
Riprap and jetty stone	140	\$1,043	7.45
Filter stone	662	6,042	9.13
Other coarse aggregate	154	1,097	7.12
Coarse aggregate, graded:			
Concrete aggregate, coarse	2,212	18,079	8.17
Bituminous aggregate, coarse	528	4,650	8.81
Bituminous surface-treatment aggregate	858	8,673	10.11
Railroad ballast	W	W	6.75
Other graded coarse aggregate	W	W	8.74
Fine aggregate (-3/8 inch):			
Screening, undesignated ²	1,831	15,266	8.34
Coarse and fine aggregate:			
Graded road base or subbase	1,165	8,196	7.04
Crusher run or fill or waste	60	253	4.22
Other coarse and fine aggregate	W	W	7.00
Other construction materials	3,524	25,675	7.29
Roofing granules	(³)	(³)	22.04
Special: Asphalt fillers or extenders	(³)	(³)	7.53
Unspecified:⁴			
Actual	(³)	(³)	7.73
Estimated	910	10,030	11.02
Total ⁵	16,702	137,872	8.25
Total ^{6,7}	18,411	137,872	7.49

W Withheld to avoid disclosing company proprietary data; included with "Other specified uses not listed."

¹Includes granite and traprock; excludes limestone and sandstone from State total to avoid disclosing company proprietary data.

²Includes stone sand (concrete), stone sand (bituminous mix or seal), and other fine aggregate.

³Withheld to avoid disclosing company proprietary data; included with "Total."

⁴Includes production reported without a breakdown by use and estimates for nonrespondents.

⁵Data may not add to totals shown because of independent rounding.

⁶One short ton is equal to 907 kilograms or 2,000 pounds. To convert metric tons to short tons, divide metric tons by 0.907185.

⁷Total shown in thousand short tons and thousand dollars.

TABLE 3
NEW JERSEY: CRUSHED STONE SOLD OR USED, BY KIND

Kind	1991				1993			
	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value
Limestone	2	417	\$4,416	\$10.59	(¹)	(¹)	(¹)	(¹)
Granite	¹ 10	¹ 6,833	¹ 55,598	¹ 8.14	10	7,966	\$66,943	\$8.40
Traprock	¹ 10	¹ 7,882	¹ 59,272	¹ 7.52	9	8,737	70,929	8.12
Sandstone	(²)	(²)	(²)	(²)	(¹)	(¹)	(¹)	(¹)
Miscellaneous stone	(²)	(²)	(²)	(²)	—	—	—	—
Total ³	XX	15,132	¹ 119,286	¹ 7.88	XX	16,702	137,872	8.25
Total ^{4, 5}	XX	16,680	¹ 119,286	7.15	XX	18,411	137,872	7.49

¹Revised. W Withheld to avoid disclosing company proprietary data; included with "Total." XX Not applicable.

²Excludes limestone and sandstone from State total to avoid disclosing company proprietary data.

³Excludes sandstone and miscellaneous stone from State total to avoid disclosing company proprietary data.

⁴Data may not add to totals shown because of independent rounding.

⁵One short ton is equal to 907 kilograms or 2,000 pounds. To convert metric tons to short tons, divide metric tons by 0.907185.

⁶Total shown in thousand short tons and thousand dollars.