

THE MINERAL INDUSTRY OF NEW JERSEY

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

In 1998, the preliminary estimated value¹ of nonfuel mineral production for New Jersey was \$301 million, according to the U.S. Geological Survey (USGS). This was nearly a 13% increase from that of 1997,² and followed an 8.5% increase from 1996 to 1997.

Crushed stone and construction sand and gravel, by value, were New Jersey's leading nonfuel mineral commodities. In 1998, the two commodities increased in value by about \$21 million and \$14 million, respectively, accounting for most of the State's increase in value. While gemstones and industrial sand and gravel values remained unchanged, the State's other mineral values increased, including those of greensand marl and peat, the data of which have been withheld to avoid disclosing company proprietary data. In 1997, construction sand and gravel with a \$14.9 million increase lead the State's rise in value; crushed stone increased by \$8 million.

Based on USGS estimates of the quantities of minerals produced in the United States in 1998, New Jersey remained seventh² among the States in industrial sand and gravel and increased to fifth from seventh in peat. The State continued to be the significantly larger producer of two States that now produce greensand marl. Greensand is used directly as an

¹The 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 1998 USGS mineral production data published in this chapter are preliminary estimates as of February 1999 and are expected to change. Construction sand and gravel and crushed stone estimates are updated periodically. To obtain the most current information, please contact the appropriate USGS mineral commodity specialist. A telephone listing for the specialists may be retrieved over the Internet at <http://minerals.usgs.gov/minerals/contacts/comdir.html>; by using MINES FaxBack at (703) 648-4999 from a fax machine with a touch-tone handset (request Document #1000 for a telephone listing of all mineral commodity specialists); or by calling USGS information at (703) 648-4000 for the specialist's name and number. All Mineral Industry Surveys—mineral commodity, State, and country—also may be retrieved over the Internet at <http://minerals.usgs.gov/minerals>; facsimile copies may be obtained from MINES FaxBack.

²Values, percentage calculations, and rankings for 1997 may vary from the *Minerals Yearbook, Area Reports: Domestic 1997, Volume II*, owing to the revision of preliminary 1997 to final 1997 data. Data for 1998 are preliminary and expected to change, while related rankings may also be subject to change.

organic conditioner/fertilizer for soils and as a water filtration medium to remove soluble iron and manganese from well water.

The following narrative information was provided by the New Jersey Geological Survey³ (NJGS). Although sand and gravel mining remained active during the year, little in the way of new mining operations came on-line during 1998. However, Sahara Sand, Inc. was able to increase its holdings by purchasing about 400 hectares (1,000 acres) of property from R.W.V. Land and Livestock South, Inc. The new properties include two mining sites in Monroe Township, Gloucester County, and one property in Eagleswood Township, Ocean County.

As was the case in 1997, the largest capital projects centered around the Atlantic City area with construction of new casino properties and the start of the Atlantic City/Brigantine Connector Tunnel Project. In 1998, the Mirage Resorts, Inc. project awarded contracts requiring the placement of about 1.4 million cubic meters of fill material (work starting in 1999). The Tunnel Project will require 612,000 cubic meters of specified structural fill (sand and gravel containing minimal amounts of fine grains). The first 7,650 cubic meters (10,000 cubic yards) of structural fill were placed during 1998. Other infrastructure and transportation projects started in and around Atlantic City included road improvements along U.S. Route 30, the Atlantic City Expressway, and the expansion of the Atlantic City International Airport.

Owing to a continuing increase in the use of Federal "Superpave" asphalt aggregate specifications, the demand for increasingly angular graded aggregate has greatly increased. As a result, demands for crushed stone increased substantially during the year, with some crushed rock being imported from as far away as Canada so as to meet customer demands.

Some interest remained in heavy mineral mining in the State, with a slight upturn in exploration activities. However, neither heavy mineral mining nor development took place during the year.

³Lloyd Mullikin, Supervising Geologist with the New Jersey Geological Survey, authored the text of New Jersey mineral industry information submitted by that agency.

TABLE 1
NONFUEL RAW MINERAL PRODUCTION IN NEW JERSEY 1/ 2/

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral	1996		1997		1998 d/	
	Quantity	Value	Quantity	Value	Quantity	Value
Clays: Common	74	125	W	131	W	134
Gemstones	NA	1	NA	1	NA	1
Sand and gravel:						
Construction	13,200	70,400	16,100	85,300	18,100	99,200
Industrial	1,680	30,300	1,530	28,300	1,540	28,300
Stone: Crushed	21,400	145,000	22,800	153,000	24,800	174,000
Total 3/	XX	246,000	XX	267,000	XX	301,000

d/ Preliminary. NA Not available. W Withheld to avoid disclosing company proprietary data. XX Not applicable.
1/ Production as measured by mine shipments, sales, or marketable production (including consumption by producers).
2/ Data are rounded to three significant digits; may not add to totals shown.
3/ Partial total, excludes values which must be concealed to avoid disclosing company proprietary data.

TABLE 2
NEW JERSEY: CRUSHED STONE SOLD OR USED, BY KIND 1/
(Thousand metric tons)

Kind	1996				1997			
	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value
Limestone	1	W	W	\$12.34	4	W	W	\$10.40
Granite	9	9,330	\$75,500	8.09	9	9,820	\$71,900	7.32
Traprock	9	9,690	56,100	5.79	10	11,700	67,600	5.78
Sandstone	1	W	W	5.29	1	W	W	5.43
Miscellaneous stone	1	W	W	4.13	1	W	W	11.74
Total	XX	21,400	145,000	6.79	XX	22,800	153,000	6.71

W Withheld to avoid disclosing company proprietary data; included in "Total." XX Not applicable.
1/ Data are rounded to three significant digits, except unit value; may not add to totals shown.

TABLE 3
NEW JERSEY: CRUSHED STONE SOLD OR USED BY PRODUCERS
IN 1997, BY USE 1/ 2/

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
<u>Coarse aggregate (+1 1/2 inch):</u>			
Ribrap and jettv stone	315	\$2.230	\$7.06
Filter stone	73	783	10.73
Other coarse aggregate 3/	119	757	6.36
<u>Coarse aggregate, graded:</u>			
Concrete aggregate, coarse	1,230	9,200	7.49
Bituminous aggregate, coarse	2,170	18,200	8.39
Bituminous surface-treatment aggregate	980	7,560	7.71
Railroad ballast	268	1,870	6.99
Other graded coarse aggregate	2,230	10,700	4.79
<u>Fine aggregate (-3/8 inch):</u>			
Stone sand, concrete	281	2,360	8.39
Stone sand, bituminous mix or seal	250	1,960	7.86
Screening, undesignated	1,580	10,300	6.55
Other fine aggregate	18	92	5.11
<u>Coarse and fine aggregates:</u>			
Graded road base or subbase	433	3,300	7.61
Terrazzo and exposed aggregate	7	188	26.86
Crusher run or fill or waste	330	1,570	4.75
Other coarse and fine aggregates 4/	3,600	24,100	6.69
<u>Agriculture:</u>			
Agriculture limestone	104	1,250	12.02
Poultry grit and mineral food	9	200	22.22
<u>Chemical and metallurgical:</u>			
Lime manufacture	18	100	5.56
Chemical stone	6	105	17.50
<u>Special:</u>			
Whiting or whiting substitute	W	W	13.74
Roofing granules	W	W	21.00
<u>Unspecified: 5/</u>			
Actual	W	W	4.32
Estimated	5,980	37,900	6.34
Total	22,800	153,000	6.71

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

1/ Data are rounded to three significant digits, except unit value; may not add to totals shown.

2/ Includes granite, limestone, miscellaneous stone, sandstone, and traprock.

3/ Includes macadam.

4/ Includes unpaved road surfacing.

5/ Includes reported and estimated production without a breakdown by end use.

TABLE 4
NEW JERSEY: CRUSHED STONE SOLD OR USED
BY PRODUCERS IN 1997,
BY USE AND DISTRICT 1/ 2/

(Thousand metric tons and thousand dollars)

Use	District 1	
	Quantity	Value
Construction aggregates:		
Coarse aggregate (+1 1/2 inch) 3/	508	3.770
Coarse aggregate, graded 4/	6,880	47.500
Fine aggregate (-3/8 inch) 5/	2,130	14.800
Coarse and fine aggregate 6/	4,690	35.800
Agricultural 7/	113	1.450
Chemical and metallurgical 8/	W	W
Special 9/	91	1.250
Unspecified 10/		
Actual	W	W
Estimated	5,980	37,900
Total	22,800	153,000

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

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

2/ No production reported for District 2; District 3 included with District 1 to avoid disclosing company proprietary data.

3/ Includes filter stone, macadam, riprap and jetty stone, and other coarse aggregate.

4/ Includes concrete aggregate (coarse), bituminous aggregate (coarse), bituminous surface-treatment aggregate, railroad ballast, and other graded coarse aggregate.

5/ Includes stone sand (concrete), stone sand (bituminous mix or seal), screening (undesignated), and other fine aggregate.

6/ Includes graded roadbase or subbase, unpaved road surfacing, terrazzo and exposed aggregate, crusher run (select or material use), and other coarse and fine aggregates.

7/ Includes agricultural limestone and poultry grit and mineral food.

8/ Includes lime manufacture and chemical stone for alkali works.

9/ Includes whiting or whiting substitute and roofing granules.

10/ Includes reported and estimated production without a breakdown by end use.

TABLE 5
NEW JERSEY: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 1997,
BY MAJOR USE CATEGORY 1/

Use	Quantity (thousand metric tons)	Value (thousands)	Value per ton
Plaster and gunite sands	276	1,570	5.70
Concrete products (blocks, bricks, pipe, decorative, etc.)	260	1,410	5.44
Asphaltic concrete aggregates and other bituminous mixtures	2,260	12,400	5.45
Road base and coverings	331	2,080	6.28
Fill	1,070	2,470	2.30
Snow and ice control	96	630	6.56
Other miscellaneous uses 2/	222	1,560	7.00
Unspecified: 3/			
Actual	3,880	21,800	5.63
Estimated	1,460	7,410	5.06
Total or average	16,100	85,300	5.31

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

2/ Includes filtration.

3/ Includes reported and estimated production without a breakdown by end use.

TABLE 6
NEW JERSEY: CONSTRUCTION SAND AND GRAVEL SOLD OR USED
IN 1997, BY USE AND DISTRICT 1/

(Thousand metric tons and thousand dollars)

Use	District 1		District 2		District 3	
	Quantity	Value	Quantity	Value	Quantity	Value
Concrete aggregates	774	4,930	3,160	18,000	2,270	11,100
Concrete products 2/	127	1,010	36	277	373	1,700
Asphaltic concrete aggregates and road base materials	124	943	1,810	9,930	658	3,560
Snow and ice control	66	482	W	W	W	W
Other miscellaneous uses 3/	245	1,550	354	569	725	2,050
Unspecified: 4/	661	2,940	1,770	10,600	2,910	15,800
Total	2,000	11,900	7,130	39,300	6,940	34,100

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

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

2/ Includes plaster and gunite sands.

3/ Includes fill and filtration.

4/ Includes reported and estimated production without a breakdown by end use.