

THE MINERAL INDUSTRY OF NEW YORK

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 York Education Department, New York Geological Survey, for collecting information on all nonfuel minerals.

New York ranked 15th in the Nation in nonfuel mineral production value¹ in 1995, down from 13th in 1994, according to the U.S. Geological Survey (USGS). The estimated value for 1995 was \$820 million, an 8% decrease from that of 1994. This followed a nearly 5% increase from 1993 to 1994 (based on final data). The State accounted for more than 2% of the U.S. total nonfuel mineral production value.

In 1995, crushed stone replaced salt as New York's leading nonfuel mineral, based on value. About 90% of the State's nonfuel mineral production value came from industrial minerals and mineral products, primarily crushed stone, salt, construction sand and gravel, portland cement, and wollastonite. Zinc accounted for most of the metal production and value. In 1995, the State's overall decrease in nonfuel mineral value, mostly in salt, crushed stone, portland cement, and construction sand and gravel, was mitigated to a small degree by increases in zinc and common clays. By contrast, in 1994, the values for most mineral commodities increased with the exception of construction sand and gravel and portland cement. Compared with 1994, other nonfuel

minerals that increased in value in 1995 were as follows: dimension stone, masonry cement, industrial sand and gravel, and gemstones. Decreases occurred in talc and pyrophyllite, garnet, crude gypsum, lead, and peat.

Based on USGS estimates of quantities produced in the 50 States in 1995, New York remained the only State to produce wollastonite, second of two garnet-producing States, third in salt and zinc, fourth in talc and pyrophyllite, and sixth in lead. While the State remained 10th in dimension stone, it dropped from 8th to 10th place in portland cement. Additionally, New York mines and plants continued to produce significant quantities of crushed stone, construction sand and gravel, common clays, and masonry cement.

The New York State Geological Survey² reported that the Division of Mineral Resources of the New York Department of Environmental Conservation (NYDEC) issued 342 mining permits in 1995, of which 130 were for new permits and 212 were for renewals. There were 2,560 active mines during the year, of which 71% were industry-owned and the remainder were State-owned. Roughly 25% of total acres disturbed by mining were reclaimed.

TABLE 1
NONFUEL RAW MINERAL PRODUCTION IN NEW YORK^{1 2}

Mineral	1993		1994		1995 ^p	
	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)
Cement:						
Masonry metric tons	75,300	\$5,420	82,000	\$6,020	111,000	\$8,170
Portland do.	2,970,000	149,000	2,650,000	139,000	2,380,000	125,000
Clays thousand metric tons	508	9,250	507	9,270	572	12,800
Peat metric tons	W	W	W	12	W	W
Salt thousand metric tons	5,620	191,000	⁶ 6,060	² 233,000	4,990	190,000
Sand and gravel (construction) do.	⁴ 34,900	¹ 162,000	28,000	138,000	26,800	134,000
Stone:						
Crushed do.	38,400	³ 223,000	39,400	239,000	36,500	219,000
Dimension metric tons	19,300	3,440	² 24,600	⁷ 7,370	36,300	8,830
Combined value of emery (1993), garnet (abrasive), gemstones, gypsum (crude), lead, sand and gravel (industrial), silver, stone [crushed traprock (1993), dimension granite and quartzite (1994)], talc and pyrophyllite, wollastonite, zinc, and values indicated by symbol W						
	XX	108,000	XX	¹ 121,000	XX	122,000
Total	XX	852,000	XX	⁸ 892,000	XX	820,000

⁴Estimated. ^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).

²Data are rounded to three significant digits; may not add to totals shown.

³Excludes certain stones; value included with "Combined value" data.

The New York State Court of Appeals unanimously approved a town's authority to enact a zoning ordinance to eliminate mining as a permitted use throughout the town. Initially, the Appellate Division ruled that a town could not completely ban mining. The decision by the Court of Appeals could have a major impact upon the mining industry in New York if municipalities amend zoning laws to prohibit mining.

The NYDEC issued a permit to Akzo-Nobel Salt, Inc. to construct a new underground salt mine at Hamptons Corners, NY. Protect a Clean Environment, Inc. (PACE) and the League of Women Voters of Livingston County protested the permit because of groundwater and mine design concerns and requested a legal hearing.

Officials from the New York State Department of Conservation, Division of Mineral Resources and Division of Solid Waste met with staff of Zinc Corporation of America (ZCA) to discuss the potential for a research, development, and demonstration permit to allow the use of coal ash as supporting fill in underground hard rock mines. ZCA hopes the project will demonstrate that coal ash can reduce the need for landfill space, be used safely to fill voids below groundwater level, and provide adequate structural strength at relatively low cost.

Mining continued at a record pace in Akzo-Nobel's flooded salt mine at Retsof in Livingston County. By the end of the year, approximately 2.1 million metric tons (2.3 million short tons) of salt were stockpiled. Continued flooding caused the mine to be abandoned in September; by December the mine was completely flooded. Mine closure

was orderly and carried out in an environmentally sound manner. All fluids were drained from equipment to be abandoned in the mine and shipped off site for disposal. All mine shafts were filled and capped. At the end of 1995, plans and permit applications for a new rock salt mine located several miles southeast of the Retsof Mine were forwarded. Plans for the new mine called for ground breaking in late spring of 1996.

As a result of the interest generated in underground mining in New York by the collapse of a portion of the Akzo-Nobel salt mine, legislative attention was focused on the industry. An Assemblyman representing Manhattan in New York City, the chair of the Assembly Environmental Committee, held public hearings on the underground mining industry in order to determine if further regulation of the industry was warranted. Representatives of most of the underground mines in the State, interested citizens' groups, and individuals were called to testify.

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 1995 USGS mineral production data are estimates, as of Dec. 1995. For some commodities, especially construction sand and gravel, crushed stone, and portland cement, 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.

²The remaining narrative portion of this report was based on information provided by the New York State Geological Survey.

TABLE 2
NEW YORK: CRUSHED STONE¹ SOLD OR USED BY PRODUCERS IN 1994, BY USE²

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
Coarse aggregate (+1 1/2 inch):			
Macadam	115	\$1,090	\$9.51
Riprap and jetty stone	602	4,370	7.26
Filter stone	90	684	7.60
Other coarse aggregate	272	2,040	7.49
Coarse aggregate, graded:			
Concrete aggregate, coarse	2,620	19,600	7.49
Bituminous aggregate, coarse	8,520	55,300	6.50
Bituminous surface-treatment aggregate	668	4,210	6.30
Railroad ballast	115	686	5.97
Other graded coarse aggregate	722	6,140	6.56
Fine aggregate (-3/8 inch):			
Stone sand, concrete	193	1,310	6.77
Stone sand, bituminous mix or seal	2,320	16,600	7.16
Screening, undesignated	999	4,950	4.95
Other fine aggregate	467	4,260	9.13
Coarse and fine aggregates:			
Graded road base or subbase	6,500	35,900	5.53
Unpaved road surfacing	99	649	6.56
Terrazzo and exposed aggregate	4	179	44.80
Crusher run or fill or waste	4,650	19,200	4.12
Other coarse and fine aggregates	693	4,120	5.49
Other construction materials	326	2,250	6.91
Agricultural: Agricultural limestone	99	912	8.66
Chemical and metallurgical:			
Cement manufacture	4,150	16,200	3.91
Lime manufacture	49	1,080	6.07
Special: Other fillers or extenders ³	40	397	9.93
Unspecified:⁴			
Actual	232	1,390	6.01
Estimated	4,910	35,100	7.15
Total	39,400	239,000	6.05

¹Includes dolomite, granite, limestone, limestone-dolomite, marble, sandstone, slate, and traprock.

²Data are rounded to three significant digits; may not add to totals shown.

³Includes asphalt fillers or extenders.

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

TABLE 3
NEW YORK: CRUSHED STONE SOLD OR USED, BY KIND¹

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 ²	'68	'27,600	'\$149,000	'\$5.38	67	27,400	\$132,000	\$4.80
Dolomite	13	'7,350	'55,700	'7.58	13	7,540	55,800	7.41
Marble	1	75	2,420	32.30	1	87	1,610	18.50
Granite	9	1,440	9,100	6.34	11	2,430	20,400	8.37
Traprock	2	W	(³)	(³)	2	W	W	11.30
Sandstone	'6	W	W	'7.13	8	798	5,420	6.79
Slate	—	—	—	—	1	W	W	10.80
Miscellaneous stone	2	W	W	W	—	—	—	—
Total	XX	38,400	223,000	5.81	XX	39,400	239,000	6.05

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

²Data are rounded to three significant digits; may not add to totals shown.

³Includes "Limestone - dolomite," reported with no distinction between the two.

⁴Excludes traprock value from State total to avoid disclosing company proprietary data.

TABLE 4
NEW YORK: CRUSHED STONE¹ SOLD OR USED BY PRODUCERS IN 1994, BY USE AND DISTRICT²

(Thousand metric tons and thousand dollars)

Use	District 2		District 3		District 4		District 5	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Construction aggregates:								
Coarse aggregate (+1 1/2 inch) ³	252	2,760	240	1,660	60	384	W	W
Coarse aggregate, graded ⁴	3,370	32,500	2,010	14,400	1,360	9,090	W	W
Fine aggregate (-3/8 inch) ⁵	1,390	13,700	614	4,040	(⁶)	(⁶)	W	W
Coarse and fine aggregate ⁷	837	8,120	1,230	7,200	756	5,100	W	W
Other construction materials	—	—	(⁶)	(⁶)	—	—	4,750	22,100
Agricultural ⁸	—	—	(⁶)	(⁶)	(⁶)	(⁶)	(⁶)	(⁶)
Chemical and metallurgical ⁹	—	—	(⁶)	(⁶)	(⁶)	(⁶)	(⁶)	(⁶)
Special ¹⁰	—	—	—	—	—	—	40	397
Unspecified: ¹¹								
Actual	—	—	149	875	—	—	83	519
Estimated	1,690	15,700	186	1,630	18	194	60	451
Total	7,540	72,800	8,130	45,700	3,060	17,600	5,020	24,800

See footnotes at end of table.

TABLE 4—Continued
NEW YORK: CRUSHED STONE¹ SOLD OR USED BY PRODUCERS IN 1994, BY USE AND DISTRICT²

(Thousand metric tons and thousand dollars)

Use	District 6		District 7		District 8	
	Quantity	Value	Quantity	Value	Quantity	Value
Construction aggregates:						
Coarse aggregate (+1 1/2 inch) ³	160	982	168	1,150	W	W
Coarse aggregate, graded ⁴	1,320	6,250	(⁶)	(⁶)	W	W
Fine aggregate (-3/8 inch) ⁵	769	3,550	774	3,790	—	—
Coarse and fine aggregate ⁷	2,370	8,860	2,790	12,000	W	W
Other construction materials	(⁶)	(⁶)	—	—	2,520	14,500
Agricultural ⁸	(⁶)	(⁶)	(⁶)	(⁶)	27	300
Chemical and metallurgical ⁹	—	—	—	—	—	—
Special ¹⁰	—	—	—	—	—	—
Unspecified: ¹¹						
Actual	—	—	—	—	—	—
Estimated	89	599	1,270	7,740	1,590	8,740
Total	4,770	20,900	6,800	33,400	4,140	23,500

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

¹There was no crushed stone produced in District 1.

²Data are rounded to three significant digits; may not add to totals shown.

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

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

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

⁶Withheld to avoid disclosing company proprietary data; included in "Total."

⁷Includes graded road base or subbase, terrazzo and exposed aggregate, unpaved road surfacing, crusher run (select material or fill), and other coarse and fine aggregates.

⁸Includes agricultural limestone.

⁹Includes cement manufacture and lime manufacture.

¹⁰Includes asphalt fillers or extenders and other fillers or extenders.

¹¹Includes production reported without a breakdown by end use and estimates for nonrespondents.

TABLE 5
NEW YORK: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 1994, BY MAJOR USE CATEGORY¹

Use	Quantity (thousand metric tons)	Value (thousands)	Value per ton
Concrete aggregate (including concrete sand)	7,380	\$41,000	\$5.55
Plaster and gunite sands	183	919	5.02
Concrete products (blocks, bricks, pipe, decorative, etc.)	327	2,170	6.63
Asphaltic concrete aggregates and other bituminous mixtures	2,850	15,000	5.29
Road base and coverings ²	5,250	20,800	3.96
Fill	2,340	5,520	2.36
Snow and ice control	1,560	7,180	4.59
Railroad ballast	28	157	5.61
Filtration	54	513	9.50
Other	209	1,060	5.08
Unspecified: ³			
Actual	2,740	13,700	5.02
Estimated	5,110	29,700	5.81
Total or average	28,000	138,000	4.92

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

²Includes road and other stabilization (cement and lime).

³Includes production reported without a breakdown by end use and estimates for nonrespondents.



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