

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.

In 1996, New York, for the second consecutive year, ranked 15th in the Nation in total nonfuel mineral production value,¹ according to the U.S. Geological Survey (USGS). The estimated value for 1996 was \$891 million, an increase of 0.6%, or \$5 million, from that of 1995. This followed a decrease of smaller magnitude from 1994 to 1995 (based on final 1995 data). The State accounted for more than 2% of the U.S. total nonfuel mineral production value.

In 1996, crushed stone, by value, remained New York's leading nonfuel mineral, followed by portland cement, salt, and construction sand and gravel. About 90% of the State's nonfuel mineral production value came from industrial minerals and mineral products. Primarily, these were (in descending order of value) crushed stone, portland cement, salt, construction sand and gravel, and wollastonite. Zinc accounted for the major portion of metal production and value. Although the State's increase in nonfuel mineral value in 1996 was small compared with that of 1995, there were significant changes in individual commodities. The \$28-million combined increase of crushed stone and construction sand and gravel values more than balanced the substantial decrease in the value of salt (*see table 1.*) Compared with 1995, other nonfuel minerals that increased in value in 1996 were as follows: wollastonite, industrial garnet, lead, silver, and peat. Decreases occurred in portland cement, zinc, dimension stone, masonry cement, crude gypsum, and talc. The State's small net decrease in nonfuel mineral value in 1995 mainly resulted from even larger changes in individual commodities than those of 1996. In 1995, substantial decreases in the values of salt and crushed stone plus a relatively small decrease in construction sand and gravel were more than offset by the significant increase in the value of portland cement (*see table 1*) plus smaller increases in wollastonite, zinc, and common clays.

Based on USGS estimates of the quantities produced in the 50 States in 1996, New York remained the only State to produce wollastonite, second of two garnet-producing States, and third in the production of zinc. While the State climbed from fourth to third in the production of talc, it dropped from third to fourth in salt. Additionally, New York mining and mineral processing operations produced significant quantities of crushed

stone, portland cement, construction sand and gravel, common clays, dimension stone, and masonry cement.

The following narrative information was provided by the New York State Geological Survey² (NYSGS). During 1996, the New York State Department of Environmental Conservation (NYSDEC) issued 312 mining permits. Active mines in New York totaled 2,527, of which 1,828 were operated by members of the mineral industry and the remainder by municipal owners. Total value of the financial security held by New York to guarantee reclamation procedures was nearly \$63 million.

The NYSGS reported that the Akzo-Nobel (Retsof) salt mine was completely flooded by early January 1996. Seismic activity and subsidence associated with dissolution of salt in the mine and consequent closure of the mine cavities diminished dramatically. The NYSGS discontinued seismic monitoring in April, completing 24 months of continuous operation of three seismographs. Salt shipments continued from the stockpile. The NYSDEC issued a permit to Akzo-Nobel Salt Inc. to construct a \$140-million salt mine at Hampton's Corners, NY, approximately 5 kilometers from the former Akzo salt mine in Retsof, NY. Plans for groundbreaking for a new mine shaft in midyear were abruptly aborted when a decision was made by Akzo-Nobel N.V. of the Netherlands not to construct a new mine in Hampton's Corners. At the time of the decision, a valid mining permit from New York State was in hand and the rights to mine salt under approximately 22,200 hectares (9,000 acres) had been acquired. Test drilling at the new mine site was complete, and a mining plan had been submitted to State and local officials. At the time of the announcement of the decision not to pursue a new mine, the company reported that the Retsof facility would be used as a "distribution center." Salt shipments by way of truck continued from a stockpile throughout 1996. The salt packaging plant operated until the end of the year.

Legislative attention, aroused by the failure of the Akzo-Nobel salt mine, focused on the underground mining industry in New York. Regulatory bills were introduced in both houses of the State Legislature. The proposed legislation rose from the floor of the State Assembly and was introduced in the State Senate as part of the

Governor's program. If passed, the proposed legislation would have clarified and expanded the State's jurisdiction over underground noncoal mining in New York State. But ultimately, no legislation was passed into law. In addition, legislative hearings began in the fall of 1996 on a proposed new wollastonite mine at Oak Hill, NY, operated by NYCO Minerals Inc. NYCO currently operates a wollastonite mine at Lewis, NY. No permit decision had been reached by yearend.

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 1996 USGS mineral production data published in this chapter are estimates as of February 1997. For some commodities (for example, 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 # 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. This telephone listing may also be retrieved over the Internet at: <http://minerals.er.usgs.gov/minerals/contacts/comdir.html>

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

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral	1994		1995		1996 p/	
	Quantity	Value	Quantity	Value	Quantity	Value
Cement:						
Masonry	82	6,020	90	7,210	81	6,440
Portland	2,650	139,000	2,530	205,000	2,500	202,000
Clays	507	9,270	563	12,500	563	12,500
Gemstones	NA	W	NA	W	NA	138
Peat	W	12	W	W	W	W
Salt	6,060	233,000	4,480	185,000	3,370	163,000
Sand and gravel (construction)	28,000	138,000	27,300	134,000	28,600	143,000
Stone:						
Crushed	39,400	239,000	39,500	204,000	42,000	223,000
Dimension metric tons	24,600 ^{3/}	7,370 ^{3/}	32,800	8,440	36,200	7,640
Combined value of garnet (industrial), gypsum (crude), lead, sand and gravel (industrial), silver, stone [dimension granite and quartzite (1994)], talc, wollastonite, zinc, and values indicated by symbol W	XX	117,000	XX	130,000	XX	134,000
Total	XX	889,000	XX	886,000	XX	891,000

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

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

TABLE 2
NEW YORK: CRUSHED STONE 1/ SOLD OR USED
BY PRODUCERS IN 1995, BY USE 2/

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
Coarse aggregate (+1 1/2 inch):			
Macadam	130	\$1,370	\$10.56
Riprap and jetty stone	286	2,200	7.70
Filter stone	94	689	7.33
Other coarse aggregate	79	653	8.27
Coarse aggregate, graded:			
Concrete aggregate, coarse	1,340	9,650	7.19
Bituminous aggregate, coarse	5,500	29,300	5.33
Bituminous surface-treatment aggregate	727	5,720	7.87
Railroad ballast	46	317	6.89
Other graded coarse aggregate	2,810	21,700	7.73
Fine aggregate (-3/8 inch):			
Stone sand, concrete	137	985	7.19
Stone sand, bituminous mix or seal	821	4,770	5.81
Screening, undesignated	591	3,150	5.32
Other fine aggregate	1,040	7,530	7.26
Coarse and fine aggregates:			
Graded road base or subbase	4,260	25,600	6.00
Unpaved road surfacing	103	881	8.55
Crusher run or fill or waste	2,730	11,100	4.06
Other coarse and fine aggregates	3,480	18,400	5.30
Other construction materials 3/	538	3,950	7.34
Agricultural: Agricultural limestone	82	688	8.39
Chemical and metallurgical:			
Cement manufacture	4,050	15,600	3.85
Lime manufacture	66	1,450	21.92
Special: Other fillers or extenders 4/	2	107	53.50
Unspecified: 5/			
Actual	5,130	18,000	3.50
Estimated	5,500	19,800	3.61
Total	39,500	204,000	5.15

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

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

3/ Includes building products, drain fields, and terrazzo and exposed aggregate.

4/ Includes whitening or whitening substitute.

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

TABLE 3
NEW YORK: CRUSHED STONE SOLD OR USED, BY KIND 1/

Kind	1994				1995			
	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value
Limestone 2/	67	27,400	\$142,000 r/	\$5.19 r/	63	27,000	\$134,000	\$4.95
Dolomite	13	7,540	55,800	7.41	12	6,310	41,700	6.61
Granite	11	2,430	20,400	8.37	12	4,230	13,100	3.09
Traprock	2	W	W	11.30	2	W	W	8.08
Sandstone	8	798	5,420	6.79	6	752	4,160	5.54
Marble	1	87	1,610	18.52	1	98	1,850	18.90
Slate	1	W	W	10.80	1	W	W	6.18
Total	XX	39,400	239,000	6.05	XX	39,500	204,000	5.15

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

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

2/ Includes limestone-dolomite, reported with no distinction between the two.

TABLE 4
NEW YORK: CRUSHED STONE 1/ SOLD OR USED BY PRODUCERS IN 1995, BY USE AND DISTRICT 2/

(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/	221	2,240	129	965	79	510	W	W
Coarse aggregate, graded 4/	4,960	32,900	2,020	13,700	1,160	7,290	W	W
Fine aggregate (-3/8 inch) 5/	1,330	9,720	441	2,250	W	W	210	1,060
Coarse and fine aggregate 6/	1,340	6,890	1,100	6,640	W	W	1,290	4,930
Other construction materials 7/	52	535	317	2,160	868	5,140	1,110	6,560
Agricultural 8/	2	19	(9/)	(9/)	(9/)	(9/)	(9/)	(9/)
Chemical and metallurgical 10/	--	--	(9/)	(9/)	(9/)	(9/)	(9/)	(9/)
Special 11/	--	--	--	--	--	--	2	107
Unspecified: 12/								
Actual	--	--	--	--	22	136	1,610	6,430
Estimated	1,520	5,200	--	--	--	--	137	469
Total	9,420	57,500	7,400	36,900	2,810	17,600	4,440	21,000
Use	District 6		District 7		District 8			
	Quantity	Value	Quantity	Value	Quantity	Value		
Construction aggregates:								
Coarse aggregate (+1 1/2 inch) 3/	50	389	W	W	--	--		
Coarse aggregate, graded 4/	464	2,850	269	2,070	W	W		
Fine aggregate (-3/8 inch) 5/	320	1,860	W	W	W	W		
Coarse and fine aggregate 6/	745	3,240	W	W	1,750	11,300		
Other construction materials 7/	9	61	3,780	20,000	703	2,700		
Agricultural 8/	12	216	13	93	25	234		
Chemical and metallurgical 10/	--	--	--	--	--	--		
Special 11/	--	--	--	--	--	--		
Unspecified: 12/								
Actual	2,040	6,230	1,450	5,160	--	--		
Estimated	451	3,100	1,270	3,740	2,110	7,320		
Total	4,100	17,900	6,780	31,100	4,590	21,600		

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

1/ No crushed stone was produced in District 1.

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

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

7/ Includes building products and drain fields.

8/ Includes agricultural limestone.

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

10/ Includes cement and lime manufacture.

11/ Includes other fillers or extenders and whiting or whiting substitute.

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

TABLE 5
NEW YORK: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 1995,
BY MAJOR USE CATEGORY 1/

Use	Quantity (thousand metric tons)	Value (thousands)	Value per ton
Concrete aggregate (including concrete sand)	5,790	\$33,800	\$5.85
Plaster and gunite sands	278	1,670	6.01
Concrete products (blocks, bricks, pipe, decorative, etc.)	212	1,390	6.57
Asphaltic concrete aggregates and other bituminous mixtures	2,140	10,200	4.78
Road base and coverings 2/	4,790	18,700	3.91
Fill	1,930	5,200	2.70
Snow and ice control	1,210	4,730	3.91
Other 3/	351	2,500	7.11
Unspecified: 4/			
Actual	3,410	15,500	4.56
Estimated	7,210	40,500	5.61
Total or average	27,300	134,000	4.92

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

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

3/ Includes filtration, railroad ballast, and roofing granules.

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

TABLE 6
NEW YORK: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 1995,
BY USE AND DISTRICT 1/

(Thousand metric tons and thousand dollars)

Use	District 1		District 2		District 3		District 4	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Concrete aggregate and concrete products 2/	1,830	11,700	806	5,500	W	W	201	777
Asphaltic-bituminous mixtures	W	W	198	1,160	W	W	143	404
Road base and coverings 3/	W	W	223	1,360	680	2,750	483	1,640
Fill	W	W	122	429	568	1,270	456	1,410
Snow and ice control	W	W	111	861	219	841	131	411
Other miscellaneous uses 4/	298	2,070	29	300	880	3,670	--	--
Unspecified: 5/								
Actual	290	2,010	54	533	415	1,770	3	5
Estimated	1,380	14,100	836	3,850	11	26	751	2,930
Total	3,800	29,900	2,380	14,000	2,770	10,300	2,170	7,580
Use	District 5		District 6		District 7		District 8	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Concrete aggregate and concrete products 2/	260	1,160	1,640	10,500	657	3,340	W	W
Asphaltic-bituminous mixtures	W	W	717	4,000	525	2,430	463	1,840
Road base and coverings 3/	W	W	1,110	3,660	1,070	4,340	939	4,030
Fill	W	W	354	839	145	303	54	183
Snow and ice control	60	197	396	1,450	164	614	W	W
Other miscellaneous uses 4/	405	1,290	74	335	101	447	179	761
Unspecified: 5/								
Actual	173	761	546	2,270	87	156	1,840	8,030
Estimated	491	1,740	749	4,050	1,270	6,040	1,730	7,770
Total	1,390	5,150	5,590	27,100	4,010	17,700	5,200	22,600

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 road and other stabilization (cement and lime).

4/ Includes filtration and railroad ballast, and roofing granules.

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