

THE MINERAL INDUSTRY OF NEW YORK

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

In 1997, for the third consecutive year, New York ranked 16th in the Nation in total nonfuel mineral production value,¹ according to the U.S. Geological Survey (USGS). The State was 15th in 1996. The estimated value for 1997 was \$904 million, about a 1.5% increase from that of 1996. This followed a marginal increase from 1995 to 1996 (based on final 1996 data). The State accounted for more than 2% of the U.S. total nonfuel mineral production value.

In 1997, crushed stone, by value, remained New York's leading nonfuel mineral, followed by portland cement, salt, construction sand and gravel, and zinc. About 88% of the State's nonfuel mineral production value came from industrial minerals. 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 increases in nonfuel mineral values in 1996 and 1997 were small, there were significant changes in individual commodities. The \$49-million combined increase of crushed stone and construction sand and gravel values plus a significant increase in zinc and a smaller increase in portland cement more than balanced the substantial decrease in the value of salt (*table 1*) combined with smaller decreases in crude gypsum, industrial garnet, and industrial sand and gravel. Other nonfuel minerals that increased in value included wollastonite, lead, dimension stone, gemstones, and peat. Other nonfuel minerals that decreased in value were silver and talc. Common clays and masonry cement remained the same.

From 1995 to 1996, New York's small net increase in nonfuel mineral production value mainly resulted from similarly large changes in individual commodities. In 1996, substantial increases in the values of crushed stone, salt, and construction sand and gravel more than offset decreases in the values of portland cement (*table 1*) and zinc. The majority of other nonfuel minerals increased in value, but all other increases and decreases in 1996 were small relative to those above.

Based on USGS estimates of the quantities produced in the 50

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 1997 USGS mineral production data published in this chapter are estimates as of January 1998. 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>. All Mineral Industry Surveys – mineral commodity, State, and country – also may be retrieved by way of MINES FaxBack or over the Internet at <http://minerals.er.usgs.gov/minerals/>.

States in 1997, New York remained the only State to produce wollastonite, and third in the production of zinc, fourth in salt and talc, sixth in lead, and ninth in portland cement. The State dropped to second from first of two industrial garnet-producing States. Additionally, New York mining and mineral processing operations produced significant quantities of crushed stone, 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). The New York State Department of Environmental Conservation issued a total of 439 Mined Land Reclamation permits in 1997. Of the total, 355 were renewal permits and 84 were new. Additionally, 84 mine sites received final reclamation approval. At the end of 1997, 2,474 mines, 1,801 industry-owned and 673 government-owned, were active in the State. The number of hectares under permit at the end of 1997 were 38,300 with 18,135 currently affected by mining. A total of 264 hectares were reclaimed in 1997 for a total of 6,258 that have been reclaimed since 1974.

A group of western New York business persons agreed to purchase the developmental rights to the Hampton Corners salt mine project from Akzo Nobel Salt Inc. The agreement includes the purchase of approximately 3,600 hectares of Akzo Nobel property, mineral rights and mineral rights options, certain mining equipment, and all State and local approvals and permits granted thus far to construct the mine at the Akzo Nobel Hampton Corners, Livingston County site. The goal of the new company, which will be known as American Rock Salt Inc., is to break ground in the spring of 1998. The new mine, when operating at full production, is projected to employ between 150 and 200 employees with approximately 75% of those being hourly employees directly involved in mining related activities. Activities in 1997 centered on clearing the legal challenges filed by anti-mining groups regarding State issuance of the mining permit for the Hamptons Corners site.

Legislation establishing explicit authority for the New York State Department of Environmental Conservation to regulate underground mining operations has been submitted for consideration to the legislature. The proposed legislation is similar to that which was introduced by the State Governor in 1996 but died in committee.

In other mining news, the 1997 Annual Meeting of the Interstate Mining Compact Commission was held in Lake Placid, NY, in September. Tracy Materials, Inc. was named winner of the 1997 New York State Department of Conservation Reclamation Award. This same company received Honorable Mention in the national Interstate Mining Compact Commission

²William Kelly, Associate Scientist with the New York State Geological Survey, authored the text of mineral industry information submitted by that agency.

Non-coal Reclamation Awards category.

The NYSGS released several open file reports and completed a seven-year investigation into the aggregate and heavy mineral resources, mineral chemistry, and geologic framework of the continental shelf south of Long Island. These studies were conducted cooperatively with the U.S. Department of the Interior's Minerals Management Service, the USGS, the University of the State of New York, Stony Brook, and the City University of New York, Queens College.

The NYSGS has made available a digital version of the 1:250,000 surficial geologic map of the State. This is a materials-based map illustrating the location of sand and gravel, clay, and other mineral resources in addition to till and outcrops; as such, it is of interest to the mineral industry. The map can be transferred to a user via FTP and at no cost. Access to the data is at <http://www.nysm.nysed.gov/datasets.html>. The corollary bedrock map is available at the same location.

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

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral	1995		1996		1997 p/	
	Quantity	Value	Quantity	Value	Quantity	Value
Cement:						
Masonry	90	7,210	W	W	W	W
Portland	2,530	205,000	2,570	157,000 e/	2,620	163,000 e/
Clays, common	563	12,500	652	14,000	648	14,000
Gemstones	NA	W	NA	291	NA	337
Salt	4,480	185,000	4,420	203,000	3,610	158,000
Sand and gravel, construction	27,300	134,000	28,100	145,000	29,500	156,000
Stone:						
Crushed	39,500	204,000	43,600	233,000	47,000	271,000
Dimension metric tons	32,800	8,440	34,400	8,120	34,600	8,160
Combined value of garnet (industrial), gypsum (crude), lead, peat, sand and gravel (industrial), silver, talc and pyrophyllite, wollastonite, zinc, and values indicated by symbol W	XX	130,000	XX	130,000	XX	133,000
Total	XX	886,000	XX	891,000	XX	904,000

e/ Estimated. 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.

TABLE 2
NEW YORK: CRUSHED STONE SOLD OR USED, BY KIND 1/

Kind	1995				1996			
	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value
Limestone 2/	63	27,000	\$134,000	\$4.95	84	27,600	\$136,000	\$4.93
Dolomite	12	6,310	41,700	6.61	11	7,880	50,900	6.46
Granite	12	4,230	13,100	3.09	11	3,560	19,200	5.40
Traprock	2	W	W	8.08	2	W	W	7.92
Sandstone	6	752	4,160	5.54	7	1,740	8,830	5.08
Marble	1	98	1,850	18.90	1	80	1,380	17.20
Slate	1	W	W	6.18	1	W	W	4.27
Miscellaneous stone	--	--	--	--	5	5,990	6,900	1.15
Total	XX	39,500	204,000	5.15	XX	43,600	233,000	5.34

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

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

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

TABLE 3
NEW YORK: CRUSHED STONE SOLD OR USED
BY PRODUCERS IN 1996, BY USE 1/ 2/

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
Coarse aggregate (+1 1/2 inch):			
Macadam	277	\$3,220	\$11.64
Riprap and jetty stone	614	3,920	6.38
Filter stone	188	1,130	5.98
Other coarse aggregate	206	1,660	8.07
Coarse aggregate, graded:			
Concrete aggregate, coarse	2,120	15,400	7.29
Bituminous aggregate, coarse	4,590	32,400	7.05
Bituminous surface-treatment aggregate	1,100	6,650	6.03
Railroad ballast	48	280	5.83
Other graded coarse aggregate	1,300	11,300	8.70
Fine aggregate (-3/8 inch):			
Stone sand, concrete	328	1,650	5.04
Stone sand, bituminous mix or seal	1,170	8,410	7.20
Screening, undesignated	618	3,260	5.28
Coarse and fine aggregates:			
Graded road base or subbase	4,850	29,400	6.07
Unpaved road surfacing	247	1,350	5.46
Crusher run or fill or waste	2,730	15,500	5.70
Other coarse and fine aggregates	1,140	5,520	4.86
Other construction materials 3/	748	5,140	6.87
Agricultural:			
Agricultural limestone	80	705	8.81
Other agricultural uses	4	42	10.50
Chemical and metallurgical:			
Cement manufacture	3,810	15,000	3.95
Lime manufacture	46	1,020	22.24
Special:			
Other fillers or extenders	2	113	56.50
Other specified uses not listed	250	1,680	6.71
Unspecified: 4/			
Actual	9,900	41,000	4.14
Estimated	7,290	27,300	3.75
Total	43,600	233,000	5.34

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

2/ Data are rounded to three significant digits, except for unit values; may not add to totals shown.

3/ Includes drain fields, terrazzo and exposed aggregate, and other fine aggregate.

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

TABLE 4
NEW YORK: CRUSHED STONE SOLD OR USED BY PRODUCERS IN 1996, BY USE AND DISTRICT 1/ 2/ 3/

(Thousand metric tons and thousand dollars)

Use	District 2		District 3		District 4	
	Quantity	Value	Quantity	Value	Quantity	Value
Construction aggregates:						
Coarse aggregate (+1 1/2 inch) 4/	292	2,810	W	W	W	W
Coarse aggregate, graded 5/	4,330	37,500	1,470	10,700	856	5,190
Fine aggregate (-3/8 inch) 6/	999	8,420	W	W	W	W
Coarse and fine aggregate 7/	1,190	10,300	W	W	984	5,810
Other construction materials 8/	--	--	781	5,460	309	1,950
Agricultural 9/	(10/)	(10/)	(10/)	(10/)	(10/)	(10/)
Chemical and metallurgical 11/	--	--	(10/)	(10/)	(10/)	(10/)
Special 12/	--	--	--	--	--	--
Unspecified: 13/						
Actual	(10/)	(10/)	935	5,030	--	--
Estimated	3,120	11,900	789	3,290	23	99
Total	10,400	73,300	8,360	45,300	2,810	14,900
Use	District 6		District 7		District 8	
	Quantity	Value	Quantity	Value	Quantity	Value
Construction aggregates:						
Coarse aggregate (+1 1/2 inch) 4/	156	1,770	375	1,880	W	W
Coarse aggregate, graded 5/	1,130	6,200	W	W	W	W
Fine aggregate (-3/8 inch) 6/	542	2,820	W	W	W	W
Coarse and fine aggregate 7/	1,530	7,510	W	W	W	W
Other construction materials 8/	9	55	2,870	15,500	3,490	16,500
Agricultural 9/	(10/)	(10/)	(10/)	(10/)	(10/)	(10/)
Chemical and metallurgical 11/	(10/)	(10/)	--	--	--	--
Special 12/	(10/)	(10/)	--	--	--	--
Unspecified: 13/						
Actual	3,960	14,500	(10/)	(10/)	(10/)	(10/)
Estimated	1,480	6,010	1,780	5,890	100	151
Total	8,880	40,200	7,950	36,800	5,270	22,700

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

1/ No crushed stone was produced in District 1.

2/ Production reported in District 5 was included with "District 6" to avoid disclosing company proprietary data.

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

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

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

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

7/ 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.

8/ Includes drain fields.

9/ Includes agricultural limestone and other agricultural uses.

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

11/ Includes cement and lime manufacture.

12/ Includes other fillers or extenders and other specified uses not listed.

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

TABLE 5
NEW YORK: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 1996,
BY MAJOR USE CATEGORY 1/

Use	Quantity (thousand metric tons)	Value (thousands)	Value per ton
Concrete aggregate (including concrete sand)	5,410	\$32,400	\$5.98
Plaster and gunit sands	183	1,050	5.73
Concrete products (blocks, bricks, pipe, decorative, etc.)	164	1,410	8.60
Asphaltic concrete aggregates and other bituminous mixtures	2,500	14,000	5.59
Road base and coverings 2/	5,440	24,200	4.44
Fill	1,870	5,030	2.69
Snow and ice control	1,440	5,560	3.87
Other miscellaneous uses 3/	1,450	5,660	3.92
Unspecified: 4/			
Actual	2,340	11,600	4.98
Estimated	7,320	44,600	6.09
Total or average	28,100	145,000	5.17

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 with estimates for nonrespondents.

TABLE 6
NEW YORK: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 1996,
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/	1,890	11,200	658	4,880	786	3,560	232	975
Asphaltic concrete aggregates and roadbase materials 3/	224	1,970	915	4,600	2,090	8,270	668	2,000
Snow and ice control	36	156	116	670	240	1,010	288	974
Other miscellaneous uses 4/	12	150	24	191	6	11	12	50
Unspecified: 5/								
Actual	440	3,130	5	23	57	285	--	--
Estimated	1,670	18,000	890	3,850	320	1,370	748	2,530
Total	4,280	34,600	2,610	14,200	3,500	14,500	1,950	6,530
	District 5		District 6		District 7		District 8	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Concrete aggregate and concrete products 2/	85	440	927	6,340	1,040	6,540	144	903
Asphaltic concrete aggregates and roadbase materials 3/	480	1,400	2,960	13,300	1,120	4,620	1,360	7,050
Snow and ice control	76	186	376	1,260	204	935	103	369
Other miscellaneous uses 4/	12	42	207	775	224	839	947	3,610
Unspecified: 5/								
Actual	212	1,040	26	89	--	--	1,600	7,070
Estimated	449	1,970	735	3,990	1,440	7,290	1,070	5,600
Total	1,310	5,070	5,230	25,700	4,030	20,200	5,220	24,600

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

2/ Includes plaster and gunite sands.

3/ Includes fill and road and other stabilization (cement and lime).

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

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