

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 1999, the preliminary estimated value¹ of nonfuel mineral production for New York was \$987 million, according to the U.S. Geological Survey (USGS). This was about a 2% increase from that of 1998,² and followed a 1.8% increase from 1997 to 1998. New York rose in rank to 15th from 16th in the Nation in total nonfuel mineral production value, of which the State accounted for about 2.5 % of the U.S. total.

In 1999, crushed stone, by value, remained New York's leading nonfuel mineral, followed by salt, portland cement, construction sand and gravel, and zinc. These five mineral commodities accounted for about 91% of the State's total nonfuel mineral production value, of which industrial minerals and mineral products represented about 95%. Zinc accounted for the major portion of metal production and value.

The State's increase in value in 1999 resulted mostly from a \$14 million rise in the value of crushed stone, an \$11 million increase in salt, and a lesser yet significant increase in portland cement (table 1). Only the values of construction sand and gravel and zinc (listings are by descending magnitude of change) showed similarly significant decreases. In 1998, moderate to small decreases occurred in zinc, crushed stone, gypsum, and wollastonite values, but these were more than offset by increases in construction sand and gravel, salt, portland cement, and common clay, leading to New York's rise in value for the year. All other changes for both years were small relative to these and inconsequential to the net result.

Based on USGS estimates of the quantities produced in the 50 States in 1999, New York remained the only State to produce wollastonite, first of three industrial garnet-producing States, third in the production of salt, fourth in talc, sixth in dimension stone, and eighth in portland cement. The State increased in rank to fifth from sixth in lead, but dropped to fourth from third in the production of zinc. Additionally, New York mining and mineral processing operations produced substantial quantities of

¹The terms "nonfuel mineral production" and related "values" encompass variations in meaning, depending upon 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 1999 USGS mineral production data published in this chapter are preliminary estimates as of May 2000, and are expected to change. For some mineral commodities, such as, 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. A telephone listing for the specialists may be retrieved over the Internet at URL <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 URL <http://minerals.usgs.gov/minerals>; facsimile copies may be obtained from MINES FaxBack.

²Values, percentage calculations, and rankings for 1998 may vary from the Minerals Yearbook, Area Reports: Domestic 1998, Volume II, owing to the revision of preliminary 1998 to final 1998 data. Data for 1999 are preliminary and are expected to change; related rankings may also be subject to change.

crushed stone, construction sand and gravel, common clay, and masonry cement (in descending order of value).

The following narrative information was provided by the New York State Geological Survey (NYSGS) and the Division of Mineral Resources³ (DMR) of the New York State Department of Environmental Conservation. The DMR reported that 2,489 mines were active in New York in 1999. These mines affected about 19,400 hectares (ha). During the year, 233 ha were reclaimed for a total of 1,950 ha, or a little more than 10% of the area in the State then affected by mining. Of the total number of mines statewide, 1,839 were operated by industry and 650 by State, county, or town governments. The majority of mines (937) affected small parcels of land that were less than 2 ha in size; mines affecting 2 to 4 ha parcels were second most abundant (607). Mines affecting an area of more than 4 ha but less than 8 ha totaled 421, and mines affecting an area of more than 8 ha but less than 12 ha numbered 153. The total number of large mines, those that were larger than 12 ha, amounted to 290. Minor projects accounted for the rest of the total. During the year 502 mining permits were issued, of which 83 were for new mines. The aggregate value of reclamation financial security held by New York State in 1999 was about \$72.6 million.

The DMR staff conducted a mining permit application seminar in Hancock, NY, to assist small-scale bluestone miners with compliance issues surrounding the requirements of the Mined Land Reclamation Law. Bluestone (most commonly) is a blue-green to blue-gray dimension stone quarried for paving stone and other architectural uses. It is a Devonian feldspathic quartzite currently produced in the southwest region of the Catskill Mountains, contiguous with the bluestone-producing regions of Pennsylvania. These quarries are, on average, less than 0.5 ha, and numerous. DMR initiatives brought more than 35 bluestone operations into regulatory compliance during 1999. Illegal bluestone operations and complaints surrounding these mines have been a problem to the Department for many years. Prior to the Division's initiative, only 13 bluestone mines had valid permits.

American Rock Salt, Inc., made significant progress in constructing its new underground salt mine in the town of Groveland, Livingston County. The two production shafts reached their final depth of about 400 meters, and commercial salt development began. The mine and company essentially are the successors to the Akzo-Nobel Salt Inc.'s rock salt mine at Retsof, NY. A roof failure at the Retsof Mine and the

³William Kelly, Associate Scientist with the New York State Geological Survey (a bureau of the New York State Museum in the State Education Department), Division of Research and Collections, and Steven Potter, Mined Land Reclamation Specialist II with the New York State Department of Environmental Conservation, Division of Mineral Resources, coauthored the text of mineral industry information submitted by those agencies. Mr. Potter may be contacted at his State agency, 50 Wolf Rd, Albany, NY 12233, telephone: (518) 457-9341; fax: (518) 457-9298; the New York State Department of Environmental Conservation is on the Internet at <http://www.dec.state.ny.us/website/dmn/>.

subsequent inundation of water from 1994 to 1996 resulted in the ultimate loss of the mine.

Porter's Concrete Service, Waverley, NY, was awarded the 1999 New York State Mined Land Reclamation Award at the New York State Fair in Syracuse. The award to Porter Concrete

was based on the owner's executed mine plan and his integration of business and personal goals with mine reclamation goals. About 45 ha of the 87 ha that were previously affected by mining have been fully reclaimed.

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

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral	1997		1998		1999 p/	
	Quantity	Value	Quantity	Value	Quantity	Value
Clays: Common	477	12,100	622	16,100	625	15,700
Gemstones	NA	70	NA	64	NA	54
Salt	3,590	183,000	4,120	198,000	4,220	209,000
Sand and gravel: Construction	28,500	144,000	32,100	161,000	29,300	150,000
Stone:						
Crushed	44,400	285,000	47,200	279,000	48,300	293,000
Dimension metric tons	54,700	9,380	52,900	8,870	48,500	8,900
Combined values of cement, garnet (industrial), gypsum (crude), lead, peat, sand and gravel (industrial), silver, talc and pyrophyllite, wollastonite, zinc	XX	321,000	XX	309,000	XX	310,000
Total	XX	955,000	XX	972,000	XX	987,000

p/ Preliminary. NA Not available. XX Not applicable.

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

2/ Data are rounded to no more than three significant digits; may not add to totals shown.

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

Kind	1997				1998			
	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value
Limestone	55	22,000	\$119,000	\$5.41	55	22,200	\$128,000	\$5.79
Dolomite	11 r/	7,630 r/	56,100 r/	7.36 r/	13	8,250	50,400	6.11
Limestone-dolomite	11	5,870	34,100	5.81	12	7,320	40,200	5.49
Granite	8	2,210	16,100	7.31	9	2,770	21,500	7.76
Marble	1	85	1,390	16.29	1	90	1,580	17.60
Sandstone 2/	8 r/	1,990 r/	11,700 r/	5.85 r/	10	1,550	11,300	7.29
Traprock	3 r/	W	W	W	3	3,830	18,100	4.73
Slate	1	W	W	W	--	--	--	--
Miscellaneous stone	3	1,020	5,010	4.91	3	1,200	7,340	6.11
Total or average	XX	44,400	285,000	6.43	XX	47,200	279,000	5.91

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

1/ Data are rounded to no more than three significant digits, except unit value; may not add to totals shown.

2/ Includes sandstone-quartz to avoid disclosing company proprietary data.

TABLE 3
NEW YORK: CRUSHED STONE SOLD OR USED
BY PRODUCERS IN 1998, BY USE 1/ 2/

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
Coarse aggregate (+1 1/2 inch):			
Macadam	W	W	\$10.72
Riprap and jetty stone	417	\$3,180	7.63
Filter stone	253	1,450	5.73
Other coarse aggregate	210	2,000	9.51
Coarse aggregate, graded:			
Concrete aggregate, coarse	1,680	10,000	5.95
Bituminous aggregate, coarse	5,600	37,700	6.73
Bituminous surface-treatment aggregate	674	4,530	6.72
Railroad ballast	118	603	5.11
Other graded coarse aggregate	2,150	19,400	9.03
Fine aggregate (-3/8 inch):			
Stone sand, concrete	80	436	5.46
Stone sand, bituminous mix or seal	1,040	6,570	6.31
Screening, undesignated	682	4,290	6.29
Other fine aggregate	709	4,720	6.66
Coarse and fine aggregates:			
Graded road base or subbase	4,740	28,600	6.04
Unpaved road surfacing	163	896	5.48
Terrazzo and exposed aggregate	227	1,270	5.59
Crusher run or fill or waste	3,200	16,600	5.19
Other coarse and fine aggregates 3/	5,660	30,100	5.33
Other construction materials	511	3,710	7.25
Agricultural:			
Agricultural limestone	W	W	9.59
Other agricultural uses	205	1,890	9.21
Chemical and metallurgical:			
Cement manufacture	(4/)	(4/)	4.15
Lime manufacture	(4/)	(4/)	22.16
Special:			
Asphalt fillers or extenders	W	W	3.00
Other fillers or extenders	3	171	56.93
Roofing granules	W	W	3.33
Other special uses	23	75	3.26
Other miscellaneous uses	30	179	5.97
Unspecified: 5/			
Actual	7,650	42,500	5.56
Estimated	7,820	43,200	5.52
Total or average	47,200	279,000	5.91

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

1/ Data are rounded to no more than three significant digits, except unit value; may not add to totals shown.

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

3/ Includes drain fields.

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

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

TABLE 4
NEW YORK: CRUSHED STONE SOLD OR USED BY PRODUCERS IN 1998, BY USE AND DISTRICT 1/ 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/	248	2,140	243	1,730	49	265	54	481
Coarse aggregate, graded 4/	3,200	26,600	2,040	14,500	1,130	6,590	949	7,840
Fine aggregate (-3/8 inch) 5/	789	5,850	551	3,200	232	1,590	W	W
Coarse and fine aggregate 6/	4,530	24,100	1,660	9,450	1,210	7,330	814	3,690
Other construction materials 7/	--	--	306	2,250	W	W	--	--
Agricultural 8/	W	W	27	103	W	W	W	W
Chemical and metallurgical 9/	--	--	W	W	W	W	47	1,040
Special 10/	--	--	--	--	--	--	W	W
Other miscellaneous uses	--	--	4	26	--	--	--	--
Unspecified: 11/								
Actual	717	3,950	W	W	W	W	W	W
Estimated	W	W	1,540	8,420	452	2,800	307	1,550
Total	12,400	78,900	9,220	52,700	4,090	22,800	4,100	25,700
	District 6		District 7		District 8			
	Quantity	Value	Quantity	Value	Quantity	Value		
Construction aggregates:								
Coarse aggregate (+1 1/2 inch) 3/	W	W	226	1,360	W	W		
Coarse aggregate, graded 4/	W	W	1,650	8,950	W	W		
Fine aggregate (-3/8 inch) 5/	211	1,230	522	2,630	W	W		
Coarse and fine aggregate 6/	W	W	2,050	10,700	W	W		
Other construction materials 7/	17	94	--	--	W	W		
Agricultural 8/	W	W	W	W	W	W		
Chemical and metallurgical 9/	--	--	--	--	--	--		
Special 10/	--	--	W	W	--	--		
Other miscellaneous uses	25	153	--	--	--	--		
Unspecified: 11/								
Actual	2,670	15,000	1,980	10,900	--	--		
Estimated	W	W	1,690	9,290	W	W		
Total	4,910	26,800	8,180	44,200	4,240	27,700		

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

1/ Data are rounded to no more than three significant digits; may not add to totals shown.

2/ No production reported in District 1.

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

7/ Includes drain fields.

8/ Includes agricultural limestone and other agricultural uses.

9/ Includes cement and lime manufacture.

10/ Includes asphalt fillers or extenders, roofing granules, and other fillers or extenders.

11/ Reported and estimated production without a breakdown by end use.

TABLE 5
NEW YORK: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 1998,
BY MAJOR USE CATEGORY 1/

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
Concrete aggregate	6,580	\$41,200	\$6.25
Plaster and gunite sands	302	1,730	5.71
Concrete products (blocks, bricks, pipe, decorative, etc.)	193	1,540	7.97
Asphaltic concrete aggregates and other bituminous mixtures	2,270	12,700	5.61
Road base and coverings	4,370	19,700	4.50
Road and other stabilization (cement and lime)	71	313	4.41
Fill	2,030	5,430	2.67
Snow and ice control	1,370	5,180	3.79
Railroad ballast	104	674	6.48
Other miscellaneous uses	166	923	5.56
Unspecified: 2/			
Actual	4,120	21,900	5.33
Estimated	10,500	50,000	4.76
Total or average	32,100	161,000	5.03

1/ Data are rounded to no more than three significant digits; may not add to totals shown.

2/ Reported and estimated production without a breakdown by end use.

TABLE 6
NEW YORK: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 1998,
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	1,320	8,430	620	5,810	703	3,470	323	1,460
Concrete products (concrete blocks, bricks, pipe, decorative, etc.) 2/	271	1,870	W	W	14	100	7	34
Asphaltic concrete and other bituminous mixtures	--	--	256	1,570	361	1,930	255	1,110
Roadbase and covering 3/	299	2,920	279	1,420	880	3,570	633	2,390
Fill	W	W	86	406	888	1,810	318	551
Snow and ice control	W	W	W	W	228	906	161	469
Other miscellaneous uses 4/	50	263	46	415	39	161	53	355
Unspecified 5/	1,410	8,160	960	5,360	1,120	5,680	1,500	5,460
Total	3,350	21,600	2,320	15,400	4,230	17,600	3,250	11,800
Use	District 5		District 6		District 7		District 8	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Concrete aggregate	159	819	1,160	6,850	1,180	7,610	1,120	6,710
Concrete products (concrete blocks, bricks, pipe, decorative, etc.) 2/	W	W	W	W	97	563	W	W
Asphaltic concrete and other bituminous mixtures	--	--	921	5,480	W	W	W	W
Roadbase and covering 3/	131	479	896	3,300	669	2,550	657	3,360
Fill	W	W	W	W	W	W	W	W
Snow and ice control	143	411	275	977	267	1,210	203	760
Other miscellaneous uses 4/	26	112	96	542	119	484	633	3,580
Unspecified 5/	1,250	6,380	1,210	5,540	2,930	14,900	4,240	20,500
Total	1,850	8,690	4,940	23,900	5,290	27,400	6,850	34,900

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

1/ Data are rounded to no more than 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 railroad ballast.

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