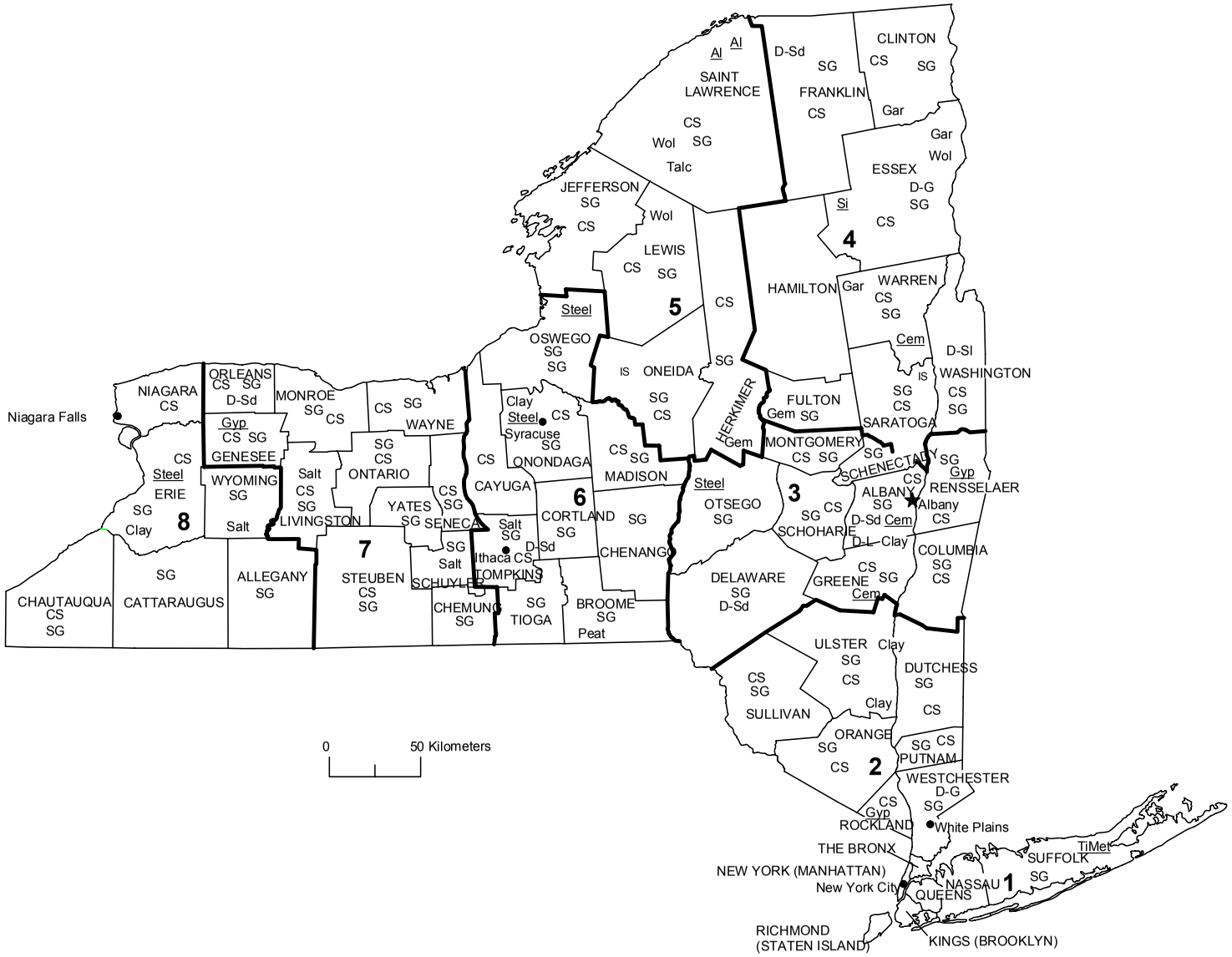
NEW YORK



LEGEND

- County boundary
- Capital
- City
- 1 — Crushed stone/sand and gravel districts

MINERAL SYMBOLS
(Major producing areas)

Al	Aluminum plant
Cem	Cement plant
Clay	Common clay
CS	Crushed stone
D-G	Dimension granite
D-L	Dimension limestone
D-Sd	Dimension sandstone
D-Sl	Dimension slate
Gar	Garnet
Gem	Gemstones
Gyp	Gypsum
Gyp	Gypsum plant
IS	Industrial sand
Peat	Peat
Salt	Salt
SG	Construction sand and gravel
Si	Silicon metal plant
Steel	Steel plant
Talc	Talc
TiMet	Titanium metal plant
Wol	Wollastonite

Source: New York State Geological Survey/U.S. Geological Survey (2003)

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 2003, the estimated value[1] of nonfuel raw mineral production for New York was $978 million, based upon preliminary U.S. Geological Survey (USGS) data. This was a marginal decrease from the $991 million annual total value for 2002[2] and followed a 3.8% decrease from 2001 to 2002. New York continued to rank 14th among the 50 States in total nonfuel mineral production value, of which the State accounted for more than 2.5% of the U.S. total.

In 2003, crushed stone, by value, remained New York's leading nonfuel mineral, followed by cement (portland and masonry), salt, construction sand and gravel, and wollastonite. These five mineral commodities accounted for about 98% of the State's total nonfuel mineral production value. The State's major construction material commodities—cement, common clays, construction sand and gravel, and crushed stone—accounted for approximately 75% of the State's nonfuel mineral value. The production levels and values of construction sand and gravel and salt significantly increased; the largest decrease was in that of crushed stone (table 1).

The production and value of crushed stone substantially increased in 2002; production was up by about 5% and its value was up by nearly 11%, or an increase of $38 million. This increase was more than offset, however, by decreases in salt (which was down by $30 million), zinc (down by $23 million), and cement (down by an estimated $10 million), which resulted in an overall decrease in the total value of the nonfuel minerals produced in the State in 2002. Smaller decreases also took place for, in descending order of change, dimension stone, construction sand and gravel, and wollastonite. All changes in the value of other nonfuel minerals were relatively small and had little effect on the comparative annual totals (table 1).

Based on USGS estimates of the quantities produced in the 50 States in 2003, New York continued to be the only State to produce wollastonite. Among the 50 States, it ranked 3d in the production of salt, 4th in talc, and 10th in portland cement and masonry cement. The State rose to first from second of the two industrial garnet-producing States and increased to eighth from ninth in the production of dimension stone. Additionally, New York mining and mineral processing operations produced significant quantities of, in descending order of value, crushed stone, construction sand and gravel, and common clays. Primary aluminum and raw steel were produced from materials obtained from other domestic and foreign sources. Based upon USGS annual data, New York, with a small drop in production, decreased to sixth from fifth in the production of primary aluminum.

The following narrative information was provided by the New York State Geological Survey (NYSGS) and the Division of Mineral Resources[3] (DMR) of the New York State Department of Environmental Conservation (DEC).

Reclamation and Environmental Issues

Demand for minerals in New York continued to increase; however, the siting of new mines across the State remained highly controversial. Applications for new mines steadily decreased in 2003, which continued a trend seen for the past 5 years. During 2003, the DEC issued 543 Mined Land Reclamation permits; of those issued, however, only 46 permits were for new mines. At the close of 2003, New York had 2,314 permitted mines, with more than 25% of them owned by local governments. A total of 19,607 hectares (ha) of land was affected by mining at the end of 2003, which was an increase of 556 ha from the previous year. Since the Mined Land Reclamation program's inception in 1975, a total of 8,985 ha of land has been reclaimed.

At the end of 2003, the DMR held $93 million in financial security to guarantee reclamation of mined land. Permit fees collected for 2003 totaled $2.4 million. The crisis in the reclamation bond market for mines continued to increase in 2003 (U.S. Geological Survey, 2004). The DMR Mined Land administrative staff noted a 50% increase in bond cancellations during 2003. The bonding crisis has affected mining companies nationwide and the Interstate Mining Compact Commission (IMCC), of which New York is an associate member, established a Bonding Working Group to look for solutions to the problem.

Approximately 125 mines now regulated under the mined land reclamation permits were in operation before the effective dates of both the Mined Land Reclamation Law (MLRL) and the State Environmental Quality Review Act (SEQRA), which

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[1]The terms "nonfuel mineral production" and related "values" encompass variations in meaning, depending upon the 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 2003 USGS mineral production data published in this chapter are preliminary estimates as of July 2004 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. Specialist contact information may be retrieved over the Internet at URL http://minerals.usgs.gov/minerals/contacts/comdir.html; alternatively, specialists' names and telephone numbers may be obtained by calling USGS information at (703) 648-4000 or by calling the USGS Earth Science Information Center at 1-888-ASK-USGS (275-8747). All USGS Mineral Industry Surveys and USGS Minerals Yearbook chapters—mineral commodity, State, and country—also may be retrieved over the Internet at URL http://minerals.usgs.gov/minerals.

[2]Values, percentage calculations, and rankings for 2002 may differ from the Minerals Yearbook, Area Reports: Domestic 2002, Volume II, owing to the revision of preliminary 2002 to final 2002 data. Data for 2003 are preliminary and are expected to change; related rankings also may change.

[3]William Kelly, State Geologist of 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 Section Chief with the New York State Department of Environmental Conservation, Division of Mineral Resources, coauthored the text of the State mineral industry information provided by those State agencies.

is a supplemental environmental companion law. Although these mines were subject to regulation under the MLRL, they were "grandfathered" for purposes of SEQRA. Most of these mines were quarries that continued to operate within their originally permitted horizontal boundaries. However, given the consumptive nature of mining, the regulatory and legal status of mining deeper within the existing horizontal boundaries of these mines had become an issue. The question was whether the act of mining deeper constituted a substantial change in the scope of permitted activities; if it were to be determined that mining deeper in areas that were not previously identified as reserves constituted a substantial change, the application could be treated as a new application under SEQRA, instead of as a renewal. This interpretation could open the application up to the full range of public notice provisions and perhaps reopen local zoning issues. This issue had become problematic because of the increased negative perception of mining operations and because, as older quarries reached their permit limits, most neighbors believed that they would close. The DMR continued to work closely with industry representatives to develop a forum to resolve the issue and ensure that environmental impacts associated with expanded mining operations were evaluated and mitigated.

Another important issue in 2003 was the controversy over hours of operation at several large sand and gravel mines in Suffolk County, Long Island. The mines had historically started to load trucks with sand at 4:00 a.m., but waited until 7:00 a.m. for noisier activities, such as loading gravel or running mining equipment. The mines changed the sand-loading hour to 5:00 a.m., but continued to receive complaints about noise from surrounding neighbors. The local governments requested that the DEC modify the permits to mandate later hours for truck loading and travel. The mines maintained that an early starting time was crucial so that customers could get their large trucks on local expressways before rush hour traffic begins. Traffic congestion was a major problem in the western part of Long Island. By the end of 2003, all efforts by the DEC to assist in negotiations between the towns and the industry had failed.

On September 24, 2003, OntZinc Corp. of Toronto, Ontario, Canada, announced the $20 million purchase of the Balmat Mine by St. Lawrence Zinc Co. LLC, which was a subsidiary of OntZinc, from the bankrupt Zinc Corp. of America (ZCA) (OntZinc Corp., 2003§[4]). Terms of the agreement called for OntZinc to have no environmental liability for historic operations in the area and ZCA was to be responsible for all employee benefits. The DEC transferred all permits (mining, water, and air) for the Balmat Mine to St. Lawrence Zinc in 2003. The company planned to reopen the mine and to employ up to 165 people in late 2004.

A final decision on whether to resume commercial production of zinc at the mine depended on the market price for zinc and other economic issues. The mine had a sufficient quantity of ore for at least 10 more years of production. Recent gravity research performed by the State University of New York at Potsdam indicated that there may also be another body of ore at the mine; as a result, St. Lawrence Zinc may diamond drill the potential ore location. When ZCA was operating, New York was one of the major producers of zinc in the country.

After 22 years of litigation, a mining permit for the former Blue Circle/Ravena Quarry in Albany County was issued in 2003. This operation was the largest crushed stone mine in New York. The output of the mine was divided between a cement plant and an aggregate plant.

In 2003, the DEC issued a mining permit to Cargill Salt Inc. for expansion and continued operation of its underground salt mine in Lansing, Tompkins County, NY. The permit authorized continued activity on 5,430 ha, principally beneath Cayuga Lake. The processing equipment was located underground, but all salt storage facilities were on the surface. A DEC geological consultant helped the company negotiate special permit conditions for its underground mining operations, including blasting, operation monitoring, and reporting requirements, as well as related insurance issues. As the mine was developed, the company monitored rock mechanics and subsidence and regularly reported the information to the DEC. The upgraded permit conditions met the highest regulatory standards achievable under State statutes and made the requirements for Cargill's Cayuga Mine comparable to those placed on the American Rock Salt Mine in Genesee County.

AKZO Salt Co. submitted a written proposal to the DEC to construct a brine recovery system at its former, failed, Retsof salt mine in the Town of Leicester, Livingston County. DEC staff, along with members of the Attorney General's Office, the USGS, and the Livingston County Health Department, met to discuss AKZO's proposal to pump brine from the collapsed area and transform it into salt products and potable water for Livingston County residents. The bedrock ceiling in parts of the Retsof Mine collapsed on March 12, 1994, and water from overlying aquifers began to flow into the mine. Efforts to save the mine were abandoned by the end of 1994, and the mine was completely flooded in 1996. The plan was to lower the elevation of the brine in the collapsed zone and then maintain it below the level of bedrock fractures that could transmit it into the overlying freshwater aquifers. In the initial phase of the project, AKZO would install pumping and monitoring wells. If the well tests were favorable, AKZO's consultant would then design a desalination and water treatment plant. The DEC agreed to review the proposal.

Recent topographic mapping showed that a mine operator on Long Island had illegally removed roughly 760,000 cubic meters of material from its mine in the Town of Southampton, Suffolk County. The company signed a consent order and paid a penalty of $375,000 for mining outside of the permitted area. As part of the settlement, the violator agreed to restore all the buffer areas with material from the site and to plant pitch pines and native grasses. The penalty of $375,000 was the largest fine ever collected for a mining violation in the State.

The winner of the 2003 New York State Mined Land Reclamation Award was Southern Tier Stone Products, LLC for its voluntary effort to reclaim the former "Bob Casey" Mine, in the Town of Fenton, Chenango County. The Casey Mine was developed as one of six separate sand and gravel mines that shared common boundaries. Mining at the site pre-dated the

[4]A reference that includes a section mark (§) is found in the Internet Reference Cited section.

enactment of the New York State MLRL in 1975. The mine was a regulatory problem for the DEC and the Town of Fenton for years as it was an orphan site with no clearly responsible operator until it was acquired by Southern Tier Stone Products in the late 1990s. Southern Tier then developed a plan for site restoration. An innovative agreement was developed with the adjacent Bert Hale Trust Mine and a closed New York State Department of Transportation Mine that was being used as an illegal dump site. Southern Tier accomplished a basic reclamation plan with enhancements for environmental protection and the site now serves as open space.

Hanson Aggregates, New York, Inc. completed significant wetland reclamation at its Route 96 Mine, which is located in the Town of Phelps, Ontario County. The Phelps operation is one of just a few mines in the western part of the State with DEC authorization to operate in a regulated wetland. The company completed restoration of 25 ha by transforming a woody wetland with low habitat value into a significant wetland wildlife habitat with open water and islands vegetated with wetland species.

Legislation and Government Programs

In 2003, DEC staff conducted an informational meeting with bluestone quarriers regarding new provisions that allow bluestone miners to conduct initial exploration for bluestone deposits without going through the full mining permit process. This option became possible as a result of legislation that was enacted in 2002. The DMR Mined Land staff worked with the officers of the New York State Bluestone Association to reach agreement on the required guidance, forms, and procedures. The DMR also developed county maps for portions of the State where bluestone activity occurs. The maps show both mine locations and archeologically sensitive areas.

The U.S. Department of Labor's Mine Safety and Health Administration agreed to provide a grant jointly to the DMR and the NYSGS to inventory underground mines. The funds were provided under a Federal program started in response to the 2002 Quecreek disaster, which occurred when miners breached the wall of an unmapped abandoned mine. The DEC and NYSGS planned to inventory and record georeference information for the surface entrances to roughly 150 major underground abandoned mines throughout the State. Pending funding, the two agencies will digitize all available mine maps and provide the information in a Web-based format.

The NYSGS continued bedrock and surficial geologic mapping projects in several regions of the State. Mapping priority was given to areas in which expanding development around urban areas and along transportation corridors drove a need for and understanding of mineral resources, among other topics. Maps were produced at a scale of 1:24,000. In 2003, digital maps were produced of five 7½-minute quadrangles in New York.

Reference Cited

U.S. Geological Survey, 2004, The mineral industry of New York, *in* Area reports—Domestic: U.S. Geological Survey Minerals Yearbook 2002, v. II, p. 34.1-34.7.

Internet Reference Cited

OntZinc Corp., 2003 (September 23), OntZinc Corp., accessed October 26, 2004, at URL http://www.ontzinc.ca/balmat.htm.

TABLE 1
NONFUEL RAW MINERAL PRODUCTION IN NEW YORK[1, 2]

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral	2001		2002		2003[p]	
	Quantity	Value	Quantity	Value	Quantity	Value
Clays, common	647	7,960	641	7,990	641	7,990
Gemstones	NA	64	NA	65	NA	48
Salt	5,570	215,000	4,610	185,000	4,900	190,000
Sand and gravel, construction	30,900	160,000	29,800	158,000	32,000	171,000
Stone:						
Crushed	53,700	353,000	56,500	391,000	51,500	358,000
Dimension	47	9,040	46	5,990	47	6,340
Zinc[3] metric tons	23,300	22,600	--	--	--	--
Combined values of cement (masonry and portland), garnet (industrial), gypsum [crude (2001)], peat, sand and gravel (industrial), talc (crude), wollastonite	XX	259,000	XX	243,000	XX	245,000
Total	XX	1,030,000	XX	991,000	XX	978,000

[p]Preliminary. NA Not available. XX Not available. -- Zero.

[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.

[3]Recoverable content of ores, etc.

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

	2001				2002			
Kind	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value
Limestone[2]	62 r	29,000 r	$166,000 r	$5.73 r	56	29,100	$174,000	$5.99
Dolomite	13 r	11,900 r	84,500 r	7.10 r	13	13,600	101,000	7.43
Marble	1	W	W	4.13	1	W	W	4.13
Granite	8	3,580	19,300	5.39	8	3,630	19,600	5.39
Traprock	3	W	W	9.65	3	W	W	9.81
Sandstone	12	2,000 r	15,500 r	7.73 r	10	1,670	14,400	8.62
Slate	1	W	W	5.73	1	W	W	5.73
Miscellaneous stone	2	275 r	1,490 r	5.41 r	2	284	1,680	5.92
Total or average	XX	53,700	353,000	6.57	XX	56,500	391,000	6.92

rRevised. W Withheld to avoid disclosing company proprietary data; included in "Total." XX Not applicable.
[1]Data are rounded to no more than three significant digits, except unit value; 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 2002, BY USE[1]

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
Construction:			
Coarse aggregate (+1 1/2 inch):			
Macadam	109	$1,220	$11.11
Riprap and jetty stone	136	1,220	8.97
Filter stone	70	526	7.47
Other coarse aggregates	1,480	6,540	4.41
Total or average	1,800	9,500	5.28
Coarse aggregate, graded:			
Concrete aggregate, coarse	1,130	8,840	7.83
Bituminous aggregate, coarse	1,090	9,340	8.54
Bituminous surface-treatment aggregate	430	3,410	7.92
Railroad ballast	W	W	6.61
Other graded coarse aggregates	2,480	20,900	8.43
Total or average	5,130	42,500	8.28
Fine aggregate (-3/8 inch):			
Stone sand, concrete	48	325	6.77
Stone sand, bituminous mix or seal	245	1,900	7.75
Screening, undesignated	128	842	6.60
Other fine aggregates	1,910	16,600	8.69
Total or average	2,330	19,700	8.44
Coarse and fine aggragates:			
Graded road base or subbase	1,490	11,100	7.43
Unpaved road or subbase	W	W	10.21
Terrazzo and exposed aggregate	W	W	4.96
Crusher run or fill or waste	1,660	9,390	5.66
Other coarse and fine aggregate	3,980	26,200	6.57
Total or average	7,130	46,600	6.55
Other construction materials[2]	555	4,140	7.46
Agricultural limestone	653	4,650	7.13
Chemical and metallurgical, cement manufacture	(3)	(3)	3.68
Special, asphalt fillers or extenders	(3)	(3)	5.84
Other miscellanous uses and specified uses not listed	79	542	6.88
Unspecified:[4]			
Reported	26,400	201,000	7.62
Estimated	9,300	51,000	5.41
Total or average	35,800	252,000	7.05
Grand total or average	56,500	391,000	6.92

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 drain fields.

[3]Withheld to avoid disclosing company proprietary data, included in "Grand total."

[4]Reported and estimated production without a breakdown by end use.

TABLE 4
NEW YORK: CRUSHED STONE SOLD OR USED BY PRODUCERS IN 2002, BY USE AND DISTRICT[1, 2]

(Thousand metric tons and thousand dollars)

Use	District 2		District 3		District 4	
	Quantity	Value	Quantity	Value	Quantity	Value
Construction:						
Coarse aggregate (+1 1/2 inch)[3]	W	W	W	W	W	W
Coarse aggregate, graded[4]	1,200	13,100	1,520	11,800	W	W
Fine aggregate (-3/8 inch)[5]	W	W	W	W	W	W
Coarse and fine aggregate[6]	814	7,350	1,270	8,020	W	W
Other construction materials[7]	--	--	372	2,700	--	--
Agricultural[8]	--	--	W	W	W	W
Chemical and metallurgical[9]	--	--	W	W	W	W
Special[10]	--	--	--	--	--	--
Other miscellaneous uses and specified uses not listed	--	--	76	528	--	--
Unspecified:[11]						
Reported	16,300	143,000	461	2,740	--	--
Estimated	2,600	15,000	1,600	8,600	2,100	11,000
Total	21,600	187,000	9,550	54,500	3,680	18,000

Use	District 5		District 6		District 7	
	Quantity	Value	Quantity	Value	Quantity	Value
Construction:						
Coarse aggregate (+1 1/2 inch)[3]	W	W	W	W	W	W
Coarse aggregate, graded[4]	W	W	W	W	W	W
Fine aggregate (-3/8 inch)[5]	--	--	W	W	W	W
Coarse and fine aggregate[6]	W	W	W	W	W	W
Other construction materials[7]	--	--	10	68	18	79
Agricultural[8]	--	--	W	W	W	W
Chemical and metallurgical[9]	--	--	--	--	--	--
Special[10]	--	--	--	--	--	--
Other miscellaneous uses and specified uses not listed	--	--	--	--	3	14
Unspecified:[11]						
Reported	4,460	24,500	2,650	15,700	2,540	15,100
Estimated	860	4,000	1,400	8,100	680	3,300
Total	5,680	30,300	4,640	28,000	7,520	45,100

Use	District 8	
	Quantity	Value
Construction:		
Coarse aggregate (+1 1/2 inch)[3]	W	W
Coarse aggregate, graded[4]	W	W
Fine aggregate (-3/8 inch)[5]	91	585
Coarse and fine aggregate[6]	W	W
Other construction materials[7]	155	1,290
Agricultural[8]	W	W
Chemical and metallurgical[9]	--	--
Special[10]	--	--
Other miscellaneous uses and specified uses not listed	--	--
Unspecified:[11]		
Reported	--	--
Estimated	120	690
Total	3,810	28,100

See footnotes at end of table.

TABLE 4--Continued
NEW YORK: CRUSHED STONE SOLD OR USED BY PRODUCERS IN 2002, BY USE AND DISTRICT[1, 2]

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 aggregates.
[4]Includes bituminous aggregate (coarse), bituminous surface-treatment aggregate, concrete aggregate (coarse), railroad ballast, and other graded coarse aggregates.
[5]Includes screening (undesignated), stone sand (concrete), stone sand bituminous mix or seal, and other fine aggregates.
[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.
[9]Includes cement manufacture.
[10]Includes asphalt 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 2002, BY MAJOR USE CATEGORY[1]

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
Concrete aggregate (including concrete sand)	4,840	$31,400	$6.48
Plaster and gunite sands	212	1,170	5.53
Concrete products (blocks, bricks, pipe, decorative, etc.)	478	3,670	7.68
Asphaltic concrete aggregates and other bituminous mixtures	1,510	8,110	5.35
Road base and coverings[2]	3,790	17,000	4.49
Road stabilization (lime)	3	7	2.33
Fill	2,110	6,210	2.94
Snow and ice control	834	3,310	3.97
Other miscellaneous uses[3]	355	3,140	8.85
Unspecified:[4]			
Reported	5,230	31,300	5.98
Estimated	10,000	53,000	5.05
Total or average	29,800	158,000	5.30

[1]Data are rounded to no more than three significant digits; may not add to totals shown.
[2]Includes road and other stabilization (cement).
[3]Includes railroad ballast and filtration.
[4]Reported and estimated production without a breakdown by end use.

TABLE 6
NEW YORK: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 2002,
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 aggregate and concrete products[2]	1,320	9,520	865	4,900	602	3,800
Asphaltic concrete aggregates and road base materials[3]	W	W	301	2,520	1,460	7,260
Fill	41	203	89	323	749	1,520
Other miscellaneous uses[4]	48	416	158	1,530	214	1,190
Unspecified:[5]						
Reported	594	5,840	1,130	6,780	269	1,440
Estimated	930	5,200	1,600	8,200	630	2,700
Total	2,940	21,100	4,150	24,200	3,920	17,900

	District 4		District 5		District 6	
	Quantity	Value	Quantity	Value	Quantity	Value
Concrete aggregate and concrete products[2]	389	2,020	93	552	1,050	7,150
Asphaltic concrete aggregates and road base materials[3]	481	1,750	342	965	W	W
Fill	314	627	94	276	222	597
Other miscellaneous uses[4]	97	344	50	160	1,240	5,700
Unspecified:[5]						
Reported	2	28	382	2,170	296	1,860
Estimated	1,400	6,600	590	2,600	2,300	13,000
Total	2,680	11,400	1,550	6,730	5,150	28,300

	District 7		District 8	
	Quantity	Value	Quantity	Value
Concrete aggregate and concrete products[2]	702	4,260	505	4,030
Asphaltic concrete aggregates and road base materials[3]	1,090	4,460	728	3,810
Fill	173	565	431	2,090
Other miscellaneous uses[4]	220	1,180	70	285
Unspecified:[5]				
Reported	587	3,370	1,970	9,820
Estimated	2,500	12,000	470	2,400
Total	5,240	25,800	4,170	22,400

W Withheld to avoid disclosing company proprietary data; included in "Other miscellaneous uses."
[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 road and other stabilization (cement and lime).
[4]Includes filtration, railroad ballast, and snow and ice control.
[5]Reported and estimated production without a breakdown by end use.