



2008 Minerals Yearbook

NEW YORK

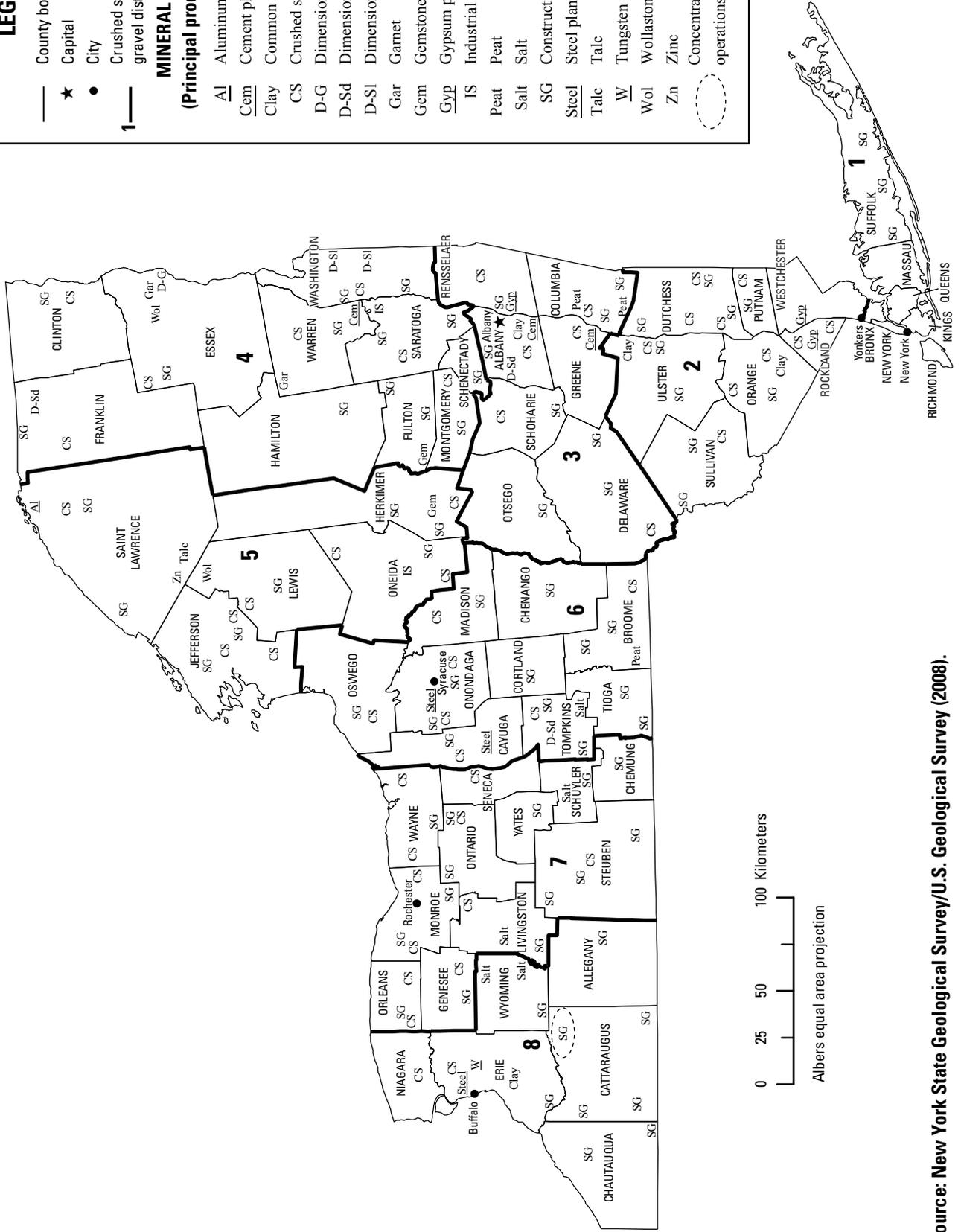
NEW YORK

LEGEND

- County boundary
- ★ Capital
- City
- Crushed stone/sand and gravel district boundary

MINERAL SYMBOLS
(Principal producing areas)

- Al Aluminum plant
- Cem Cement plant
- Clay Common clay
- CS Crushed stone
- D-G Dimension granite
- D-Sd Dimension sandstone
- D-Sl Dimension slate
- Gar Garnet
- Gem Gemstones
- Gyp Gypsum plant
- IS Industrial sand
- Peat Peat
- Salt Salt
- SG Construction sand and gravel
- Steel Steel plant
- Talc Talc
- W Tungsten plant
- Wol Wollastonite
- Zn Zinc
- Concentration of mineral operations



Source: New York State Geological Survey/U.S. Geological Survey (2008).

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 2008, New York's nonfuel raw mineral production¹ was valued at \$1.48 billion, based upon annual U.S. Geological Survey (USGS) data. This was a \$68.6 million, or nearly 4.4%, decrease from the total value for 2007, which was up by \$204 million, or more than 15%, from 2006 to 2007. The State remained 16th among the 50 States in total nonfuel mineral production value, of which the State accounted for 2.1% of the U.S. total value.

New York's leading nonfuel mineral commodities in 2008, by production value were salt, crushed stone, portland cement, and construction sand and gravel. Combined with the next three leading commodities (zinc, common clay, and wollastonite, in descending order of value), these commodities made up 97.5% of the State's total. The decrease in New York's total production value was characterized by both increases and decreases in commodity values. Those mineral commodities that increase in production value were led by salt, up \$30.6 million, or nearly 8%. Significant increases also took place in dimension stone, up \$3.94 million; crude gypsum, up \$2.3 million; and industrial garnet (data withheld—company proprietary data)—the latter two of which increased their production value by nearly 150%. Other mineral commodities to increase in value were peat and industrial sand and gravel. Decreases in production value took place in crushed stone, down by \$39.1 million and construction sand and gravel, down by \$27.7 million. Smaller, yet significant, decreases also took place in common clays, crude talc, and wollastonite.

New York continued to be the sole wollastonite-producing State in the Nation in 2008. The State also remained second in rank in industrial garnet production, third in salt production, and fourth in the production of crude talc. The State rose in rank from 12th to 10th in construction sand and gravel, from 10th to 9th in common clay, and from 14th to 12th in portland cement, producing more than 3% of the U.S. total of each. New York dropped in rank from fifth to sixth in the production of zinc and cadmium in zinc concentrates and from seventh to ninth in dimension stone production. The State also dropped from second to third in peat sales, though it remained a very significant producer of the commodity. New York remained a significant producer of masonry cement, crude gypsum, and crushed stone. In 2008, New York produced raw steel and primary aluminum, feeds for which were obtained from foreign and (or) other domestic sources. Continuing the trend of the past

¹The 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 2008 USGS mineral production data published in this chapter are those available as of July 1, 2010. All USGS Mineral Industry Surveys and USGS Minerals Yearbook chapters—mineral commodity, State, and country—can be retrieved over the Internet at URL <http://minerals.usgs.gov/minerals>.

3 years, the State remained sixth in aluminum production among 11 producing States.

The following narrative information was provided by the New York State Geological Survey² (NYSGS) and the Division of Mineral Resources (DMR) of the New York State Department of Environmental Conservation (DEC).

Exploration Activities

A meeting was held in October 2008 at NYCO Minerals, Inc.'s Willsboro office in Essex County. NYCO gave a presentation on depletion of wollastonite reserves at its two active quarries in the town of Lewis; one mine was expected to be depleted in 5 years and the other in 20 years. In an effort to continue mining in New York, NYCO attempted to locate additional reserves. The possible acquisition of State Forest Preserve Lot 8, adjacent to the Lewis Mine, was one option. Since Article 14 of the New York State Constitution prohibits the mining or exploration of State Forest Preserve lands, a constitutional amendment would be required to pursue this option.

Commodity Review

St. Lawrence Zinc Company, LLC (a subsidiary of HudBay Minerals Inc.) announced the closure of the Balmat underground zinc mine in the town of Fowler, St. Lawrence County. Rising fuel costs and a steep drop in the price of zinc concentrate led to the decision. R.T. Vanderbilt Company, Inc. announced the closure of its two talc/tremolite mines in Balmat and one in Talcville, all in St. Lawrence County. A decrease in market demand from more than 180,000 metric tons per year (t/yr) in 1988 to about 73,000 t/yr in recent years led to the decision. The Vanderbilt planned to continue a small wollastonite mine in the town of Diana, Lewis County. In 2008, roughly 105 people were employed at the company's Balmat mines and mills.

Environmental Issues and Mine Reclamation

In 2008, net affected land area was defined as the total affected area covered under successive mined land permits for the site minus the area reclaimed during the years. The total affected land authorized for mineral extraction under 2008 mined land reclamation permits was 19,900 hectares (ha) (49,100 acres). Life-of-mine land area is the total area that has been subject to DEC's environmental review. The statewide total for life-of-mine area was 48,200 ha (119,000 acres). In

²William Kelly, State Geologist of New York, authored the text of the State mineral industry information provided by the New York State Geological Survey (a bureau of the New York State Museum in the State Education Department), Division of Research and Collections, in collaboration with the New York State Department of Environmental Conservation, Division of Mineral Resources.

2008, NYS DEC's Division of Mineral Resources (DMN) approved final reclamation of 258 ha (637 acres) at 74 closed mines and concurrent reclamation of 488 ha (1,210 acres) at 97 operating mines. Since 1975, a total of 11,500 ha (28,500 acres) of mined land have been reclaimed, including the 746 ha (1,840 acres) reclaimed in 2008. DMN held roughly \$167.5 million in financial security, an increase of \$28 million from 2007. Reclamation estimates completed in 2008 averaged \$11,460 per ha (\$4,638 per acre).

DEC Region 7 Division of Operations staff completed reclamation of an abandoned stone mine in the town of Sanford, Broome County. The mine was reclaimed using \$10,000 in seized financial security. Region 7 Operations staff also completed reclamation of an abandoned sand and gravel mine in the town of Barker, Broome County. DEC seized the mine operator's \$20,000 bond.

A talc mine operator in St. Lawrence County decided to close its talc/tremolite mines in 2008. The closure required reclamation of the open pit mines located in the towns of Fowler and Edwards. The company estimated that it would take a total of 6,000 hours of work to complete the necessary reclamation.

Legislation, Government Programs, and Outreach

The NYSGS, in cooperation with the Center for Governmental Research, Rochester, NY, conducted an investigation of the economic impact of New York's mining and construction materials industry. The study included direct and indirect impacts on private sector and governmental revenues. Results indicated that the combined labor income of the mining and construction materials industry was \$1.3 billion. These industries had slightly more than 30,000 employees. The fiscal impact to New York State from taxes and fees was \$101 million on sales of \$3.5 billion. The report is available at NYSGS' Web site, <http://www.nysm.nysed.gov/nysgs>.

DMN issued 37 permits for new mines and 585 renewals. The high number of permit modifications in 2008 was owing to DMN's decision to standardize blasting requirements statewide by modifying permits for 158 mines. Mine renewal and modification permits issued in 2008 ranged in size from 0.4 to 340 ha. New mines tended to be smaller in size. About 85% of new mines permitted was 4 ha or less in size. The largest new mine was a 28-ha (68-acre) sand and gravel mine in Steuben County. DMN collected \$2,837,900 in annual regulatory fees. DMN staff performed 2,417 mine inspections and traveled 145,000 kilometers (90,900 miles). Fines and penalties totaled \$815,600 for 44 cases.

DMN continued to support the work of the U.S. Mine Safety Health Administration (MSHA) in its "Stay Out—Stay Alive" campaign. Division staff distributed educational materials provided by MSHA at all outreach events. In 2008, an 18-year-old man died when he was camping with friends in the inactive part of a limestone quarry in Greene County. Also during 2008, workers at two different mines in northern New York were killed. One was a dozer operator constructing a new ramp at a mine in Jefferson County who was crushed under his equipment. The other was in St. Lawrence County when a man working in an underground mine was killed by a falling slab of rock. These deaths necessitated DMN's cooperation with MSHA's campaign.

The New York State Geological Survey (NYSGS) held the 8th annual Donald H. Cadwell Earth Science Teachers Workshop in July. This week-long, residential, competitive-admission program attracted earth science teachers from across the State. The program focused on the geology and geologic history of New York State through lectures, directed laboratory activities, and field trips. The program was held in cooperation with the Greater Capital Region Teacher Center, an organization that provides professional development programs and opportunities for educators in 96 school districts in a 14-county region. The Teacher Center granted 45 continuing education units for attendance at the workshop. New York State teachers are required to maintain their expertise by attending professional development courses annually.

NYSGS continued to publish 1:24,000 scale bedrock and surficial geologic maps in cooperation with the USGS STATEMAP program. STATEMAP is a component of the congressionally mandated National Cooperative Geologic Mapping Program (NCGMP), through which the USGS distributes Federal funds to support geologic mapping efforts through a competitive funding process. The NCGMP has three primary components: (1) FEDMAP, which funds Federal geologic mapping projects, (2) STATEMAP, which is a matching-funds grant program with State geological surveys, and (3) EDMAP, a matching-funds grant program with universities that has a goal to train the next generation of geologic mappers. NYSGS published quadrangle maps in central and eastern New York. Quadrangles were chosen for mapping based upon criteria established by the NYS Geological Mapping Advisory Committee, a group comprised of representatives from industry, State and local government, and academia. Criteria included development pressure, transportation and energy corridors, natural resource needs, and environmental and natural hazard potential.

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

(Thousand metric tons and thousand dollars)

Mineral	2006		2007		2008	
	Quantity	Value	Quantity	Value	Quantity	Value
Clays, common	813	30,400	699	28,500	745	28,200
Gemstones, natural	NA	90	NA	96	NA	96
Gypsum, crude	367	3,230	299	1,540	406	3,810
Salt	4,890 ^r	257,000	7,990	400,000	7,660	431,000
Sand and gravel, construction	35,000	236,000	33,300	278,000	33,100	251,000
Stone:						
Crushed	52,400	438,000	47,300 ^r	432,000 ^r	43,900	392,000
Dimension	55	7,860 ^r	70 ^r	12,000 ^r	57	16,000
Combined values of cadmium (byproduct from zinc concentrates), cement, garnet (industrial), peat, sand and gravel (industrial), talc (crude), wollastonite, zinc	XX	368,000	XX	393,000	XX	354,000
Total	XX	1,340,000	XX	1,550,000 ^r	XX	1,480,000

^rRevised. NA Not available. XX Not applicable.

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

²Data 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 TYPE¹

Type	2007			2008		
	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Number of quarries	Quantity (thousand metric tons)	Value (thousands)
Limestone ²	59	26,900 ^r	\$238,000 ^r	59	24,400	\$220,000
Dolomite	17	9,320	86,000	18	10,100	84,100
Marble	2 ^r	131 ^r	1,200 ^r	2	106	1,040
Granite	7	1,590	17,500	8	1,190	13,500
Sandstone & quartzite	14	4,040	40,500	14	2,350	27,800
Slate	3 ^r	118 ^r	1,060 ^r	3	122	1,180
Miscellaneous stone	21 ^r	5,170 ^r	47,700 ^r	24	5,610	44,400
Total	XX	47,300 ^r	432,000 ^r	XX	43,900	392,000

^rRevised. XX Not applicable.

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

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

TABLE 3
NEW YORK: CRUSHED STONE SOLD OR USED BY PRODUCERS IN 2008, BY USE¹

(Thousand metric tons and thousand dollars)

Use	Quantity	Value
Construction:		
Coarse aggregate (+1½ inch):		
Macadam	W	W
Riprap and jetty stone	494	2,090
Filter stone	54	541
Other coarse aggregate	4,580	26,500
Coarse aggregate, graded:		
Concrete aggregate, coarse	1,010	8,630
Bituminous aggregate, coarse	1,000	8,910
Bituminous surface-treatment aggregate	867	8,430
Railroad ballast	74	570
Other graded coarse aggregate	2,760	34,300
Fine aggregate (-¾ inch):		
Stone sand, concrete	173	1,640
Stone sand, bituminous mix or seal	472	3,870
Screening, undesignated	136	970
Other fine aggregate	1,940	22,500
Coarse and fine aggregates:		
Graded road base or subbase	1,950	17,200
Unpaved road surfacing	323	5,480
Terrazzo and exposed aggregate	W	W
Crusher run or fill or waste	8,900	65,600
Roofing granules	W	W
Other coarse and fine aggregates	3,240	30,800
Other construction materials	1,420	8,740
Agricultural:		
Limestone	164	1,670
Other agricultural uses	W	W
Chemical and metallurgical, cement manufacture		
	W	W
Unspecified:²		
Reported	6,950	69,800
Estimated	6,200	62,000
Total	43,900	392,000

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

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

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

TABLE 4
NEW YORK: CRUSHED STONE SOLD OR USED BY PRODUCERS IN 2008, BY USE AND DISTRICT^{1,2}

(Thousand metric tons and thousand dollars)

Use	District 2		Districts 3 and 4 ³		Districts 5 and 6 ³	
	Quantity	Value	Quantity	Value	Quantity	Value
Construction:						
Coarse aggregate (+1½ inch) ⁴	92	1,390	4,520	25,700	425	1,030
Coarse aggregate, graded ⁵	W	W	2,440	22,900	425	4,880
Fine aggregate (-¾ inch) ⁶	865	10,900	845	9,020	329	3,430
Coarse and fine aggregate ⁷	W	W	2,640	24,100	W	W
Other construction materials	725	2,030	233	2,140	--	--
Agricultural ⁸	--	--	W	W	W	W
Chemical and metallurgical ⁹	--	--	W	W	--	--
Unspecified: ¹⁰						
Reported	--	--	241	2,430	3,060	30,800
Estimated	655	6,400	2,400	24,000	2,300	23,000
Total	10,800	97,500	14,600	124,000	7,630	73,000
Districts 7 and 8³						
	Quantity	Value				
Construction:						
Coarse aggregate (+1½ inch) ⁴	90	1,030				
Coarse aggregate, graded ⁵	W	W				
Fine aggregate (-¾ inch) ⁶	682	5,630				
Coarse and fine aggregate ⁷	3,720	29,000				
Other construction materials	465	4,570				
Agricultural ⁸	W	W				
Chemical and metallurgical ⁹	--	--				
Unspecified: ¹⁰						
Reported	3,640	36,600				
Estimated	793	8,000				
Total	10,900	98,400				

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

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

²No production for District 1.

³Districts 3 and 4, 5 and 6, and 7 and 8 are combined to avoid disclosing company proprietary data.

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

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

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

⁷Includes crusher run or fill or waste, graded road base or subbase, roofing granules, terrazzo and exposed aggregate, unpaved road surfacing, and other coarse and fine aggregates.

⁸Includes limestone and other agricultural uses.

⁹Includes cement manufacture.

¹⁰Reported and estimated production without a breakdown by end use.

TABLE 5
NEW YORK: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 2008,
BY MAJOR USE CATEGORY¹

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
Concrete aggregate (including concrete sand)	3,760	\$28,800	\$7.66
Plaster and gunit sands	92	676	7.35
Concrete products (blocks, bricks, pipe, decorative, etc.)	113	707	6.26
Asphaltic concrete aggregates and other bituminous mixtures	1,110	9,640	8.67
Road base and coverings	3,030	17,400	5.74
Road stabilization (cement)	6	81	13.50
Road stabilization (lime)	14	29	2.07
Fill	1,840	7,290	3.97
Snow and ice control	857	5,150	6.01
Filtration	24	345	14.38
Other miscellaneous uses ²	172	1,480	8.62
Unspecified: ³			
Reported	4,540	41,000	9.02
Estimated	17,600	138,000	7.84
Total or average	33,100	251,000	7.56

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

²Includes railroad ballast.

³Reported and estimated production without a breakdown by end use.

TABLE 6
NEW YORK: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 2008,
BY USE AND DISTRICT^{1,2}

(Thousand metric tons and thousand dollars)

Use	District 1 and 2		District 3		District 4	
	Quantity	Value	Quantity	Value	Quantity	Value
Concrete aggregates and concrete products ³	1,400	8,640	342	3,000	416	2,930
Asphaltic concrete aggregates and road base materials ⁴	186	2,930	1,080	6,960	174	728
Fill	53	460	482	1,370	362	1,290
Snow and ice control	90	1,100	275	1,690	137	644
Other miscellaneous uses ⁵	85	971	38	307	25	219
Unspecified: ⁶						
Reported	2,000	22,200	645	4,680	24	201
Estimated	3,310	35,700	960	6,930	1,140	7,270
Total	7,120	72,000	3,830	24,900	2,280	13,300
	District 5		District 6		District 7	
	Quantity	Value	Quantity	Value	Quantity	Value
Concrete aggregates and concrete products ³	343	2,520	739	7,270	427	3,450
Asphaltic concrete aggregates and road base materials ⁴	296	1,700	1,110	6,990	845	4,920
Fill	227	764	412	2,010	46	147
Snow and ice control	137	719	90	534	80	242
Other miscellaneous uses ⁵	7	71	12	119	31	142
Unspecified: ⁶						
Reported	132	949	352	2,940	792	5,800
Estimated	848	6,120	3,280	23,100	3,950	28,600
Total	1,990	12,800	5,990	43,000	6,180	43,200
	District 8					
	Quantity	Value				
Concrete aggregates and concrete products ³	305	2,410				
Asphaltic concrete aggregates and road base materials ⁴	466	2,900				
Fill	252	1,250				
Snow and ice control	47	221				
Other miscellaneous uses ⁵	--	--				
Unspecified: ⁶						
Reported	600	4,180				
Estimated	4,100	30,300				
Total	5,770	41,300				

-- Zero.

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

²Specified districts are combined to avoid disclosing company proprietary data.

³Includes plaster and gunite sands.

⁴Includes road and other stabilization (cement and lime).

⁵Includes filtration and railroad ballast.

⁶Reported and estimated production without a breakdown by end use.