



# THE MINERAL INDUSTRY OF OREGON

In 2003, the estimated value<sup>1</sup> of nonfuel mineral production for Oregon was \$311 million, based upon preliminary U.S. Geological Survey (USGS) data. This was about a 3% decrease from that of 2002<sup>2</sup> and followed a 5.3% increase from 2001 to 2002. The State was 35th in rank (34th in 2002) among the 50 States in total nonfuel mineral production value, of which Oregon accounted for about 1% of the U.S. total.

Industrial minerals accounted for all of Oregon's nonfuel raw mineral and material production. In 2003, construction sand and gravel and crushed stone, by value, remained the State's two leading nonfuel mineral commodities, followed by portland cement, diatomite, and lime (descending order of value). The former two accounted for nearly 68% of Oregon's total nonfuel mineral value, while all five values combined represented about 96% of the State's total raw nonfuel mineral economy.

In 2002, with construction sand and gravel production up nearly 13%, the commodity showed the largest increase in value, up about \$17 million. This was followed by the increased values of pumice and pumicite, up about \$2 million, and crushed stone, up \$1.5 million, although the production of each was down slightly. Smaller increases took place in the production and values of perlite, gemstones, bentonite, and emery (descending order of change). With the production of each down slightly, the value of portland cement was down by an estimated \$4 million, and the value of lime was down slightly more than \$1 million (table 1).

Based upon USGS estimates of the quantities of raw minerals produced in the United States during 2003, Oregon continued

<sup>1</sup>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>.

<sup>2</sup>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.

to be the only State to produce emery and remained second in perlite and pumice, third in diatomite and gemstones (by value), and fifth in talc. The State increased to third from fourth in zeolites and produced significant quantities of construction sand and gravel and crushed stone (descending order of value). During 2000 and 2001, no emery was produced in Oregon. The Nation's sole emery producer was limited in its ability to operate its claims beginning in 2000 owing to a long forest fire season, but production resumed in 2002 and continued in 2003. Raw steel was produced in Oregon but was processed from materials obtained from other domestic and foreign sources.

The following narrative information was provided by the Oregon Department of Geology and Mineral Industries.<sup>3</sup> No new mineral discoveries in Oregon were announced in 2003, one mining operation reopened, and several mining and mineral processing sites closed. The former Bristol Silica quarry near Gold Hill, Jackson County, was acquired and reopened by local investors operating as Magma Stone Products. Magma Stone sent its initial production to a fiber cement siding producer in nearby White City, and the company proceeded to work on developing additional markets for its product.

Advanced Aggregates, which produced crushed aggregate and banded marble ashlar blocks from a quarry near Gold Hill, closed its operation.

Oil-Dri Corp. closed its diatomite facility in Christmas Valley, Lake County. The Christmas Valley operation, one of Oil-Dri's smallest, produced absorbent materials and pet litter under several brand names.

After 3 years of enforced idleness owing to highly escalated energy costs, higher electric power rates, and depressed aluminum production, Globe Metallurgical Inc., of Springfield, Lane County, decommissioned its silicon metal plant and auctioned the plant's equipment. Globe produced silicon metal primarily for aluminum alloys. The silicon smelter and associated assets were sold by auction on September 30 to MI Capital Inc. for \$1.5 million (Ryan's Notes, 2003).

## Reference Cited

Ryan's Notes, 2003, Rima plots silicon expansion; higher prices booked for 2003: Ryan's Notes, v. 9, no. 40, October 6, p. 1.

<sup>3</sup>Ronald Geitgey, Economic/Industrial Minerals Geologist with the Oregon Department of Geology and Mineral Industries, authored the text of the State mineral industry information provided by that agency.

TABLE 1  
NONFUEL RAW MINERAL PRODUCTION IN OREGON<sup>1,2</sup>

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral	2001		2002		2003 <sup>p</sup>	
	Quantity	Value	Quantity	Value	Quantity	Value
Clays, common	237	662	237	662	237	662
Gemstones	NA	1,170	NA	1,340	NA	1,210
Sand and gravel, construction	17,300	99,200	19,500	116,000	19,000	113,000
Stone, crushed	20,500 <sup>r</sup>	99,500 <sup>r</sup>	19,800	101,000	18,800	96,800
Zeolites metric tons	(3)	NA	(3)	NA	(3)	NA
Combine value of cement (portland), clays (bentonite), diatomite, emery (2002-03), lime, perlite (crude), pumice and pumicite, talc (crude)	XX	103,000	XX	101,000	XX	99,000
Total	XX	304,000 <sup>r</sup>	XX	320,000	XX	311,000

<sup>p</sup>Preliminary. <sup>r</sup>Revised. NA Not available. XX Not applicable.

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

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

<sup>3</sup>Withheld to avoid disclosing company proprietary data.

TABLE 2  
OREGON: CRUSHED STONE SOLD OR USED, BY KIND<sup>1</sup>

Kind	2001				2002			
	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value
Limestone	2	W	W	\$4.60	1	W	W	\$5.51
Shell	1	W	W	4.69	--	--	--	--
Granite	6	W	W	3.96	6	W	W	4.14
Traprock	149 <sup>r</sup>	17,000 <sup>r</sup>	\$83,500 <sup>r</sup>	4.92 <sup>r</sup>	151	16,500	\$84,600	5.14
Volcanic cinder and scoria	1	W	W	4.52	1	W	W	4.54
Miscellaneous stone	24 <sup>r</sup>	2,210 <sup>r</sup>	9,810 <sup>r</sup>	4.45 <sup>r</sup>	24	2,070	9,590	4.62
Total or average	XX	20,500 <sup>r</sup>	99,500 <sup>r</sup>	4.85 <sup>r</sup>	XX	19,800	101,000	5.10

<sup>1</sup>Revised. W Withheld to avoid disclosing company proprietary data; included in "Total." XX Not applicable. --Zero.

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

TABLE 3  
OREGON: CRUSHED STONE SOLD OR USED BY PRODUCERS IN 2002, BY USE<sup>1</sup>

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
<b>Construction:</b>			
Coarse aggregate (+1 1/2 inch):			
Macadam	W	W	\$5.25
Riprap and jetty stone	112	\$648	5.79
Filter stone	67	405	6.04
Other coarse aggregates	439	2,570	5.84
Total or average	618	3,620	5.85
Coarse aggregate, graded:			
Concrete aggregate, coarse	83	541	6.52
Bituminous aggregate, coarse	155	792	5.11
Bituminous surface-treatment aggregate	33	242	7.33
Railroad ballast	176	1,250	7.07
Other graded coarse aggregates	66	584	8.85
Total or average	513	3,400	6.64
Fine aggregate (-3/8 inch):			
Stone sand, concrete	W	W	6.80
Stone sand, bituminous mix or seal	186	1,090	5.88
Screening, undesignated	30	132	4.40
Other fine aggregates	120	992	8.27
Total or average	336	2,220	6.60
Coarse and fine aggregates:			
Graded road base or subbase	3,570	22,700	6.34
Unpaved road surfacing	545	2,800	5.14
Terrazzo and exposed aggregate	W	W	6.61
Crusher run or fill or waste	653	3,760	5.76
Other coarse and fine aggregates	1,000	4,710	4.70
Total or average	5,780	33,900	5.88
Other construction materials <sup>2</sup>	19	91	4.79
Chemical and metallurgical, cement manufacture	(3)	(3)	5.39
Other miscellaneous uses, sugar refining	(3)	(3)	5.51
Unspecified: <sup>4</sup>			
Reported	6,870	30,900	4.50
Estimated	4,400	20,000	4.54
Total or average	11,300	51,000	4.52
Grand total or average	19,800	101,000	5.10

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

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

<sup>2</sup>Includes drain fields.

<sup>3</sup>Withheld to avoid disclosing company proprietary data; included in "Grand."

<sup>4</sup>Reported and estimated production without a breakdown by end use.

TABLE 4  
 OREGON: CRUSHED STONE SOLD OR USED BY PRODUCERS IN 2002, BY USE AND DISTRICT<sup>1</sup>

(Thousand metric tons and thousand dollars)

Use	District 1		District 2		District 3	
	Quantity	Value	Quantity	Value	Quantity	Value
Construction:						
Coarse aggregate (+1 1/2 inch) <sup>2</sup>	304	1,890	213	1,230	W	W
Coarse aggregate, graded <sup>3</sup>	145	1,320	W	W	W	W
Fine aggregate (-3/8 inch) <sup>4</sup>	W	W	W	W	166	965
Coarse and fine aggregates <sup>5</sup>	3,540	23,100	1,160	5,670	617	3,220
Other construction materials <sup>6</sup>	--	--	19	91	--	--
Chemical and metallurgical <sup>7</sup>	--	--	--	--	--	--
Other miscellaneous uses <sup>8</sup>	--	--	--	--	--	--
Unspecified: <sup>9</sup>						
Reported	3,930	18,200	836	3,460	334	1,240
Estimated	3,600	17,000	630	2,600	40	170
Total	11,600	61,900	2,940	13,500	1,420	6,960
	District 4		Unspecified districts			
	Quantity	Value	Quantity	Value		
Construction:						
Coarse aggregate (+1 1/2 inch) <sup>2</sup>	W	W	--	--		
Coarse aggregate, graded <sup>3</sup>	W	W	--	--		
Fine aggregate (-3/8 inch) <sup>4</sup>	W	W	--	--		
Coarse and fine aggregates <sup>5</sup>	456	1,980	--	--		
Other construction materials <sup>6</sup>	--	--	--	--		
Chemical and metallurgical <sup>7</sup>	W	W	--	--		
Other miscellaneous uses <sup>8</sup>	W	W	--	--		
Unspecified: <sup>9</sup>						
Reported	--	--	1,760	8,030		
Estimated	120	560	--	--		
Total	2,030	10,500	1,760	8,030		

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

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

<sup>2</sup>Includes filter stone, macadam, riprap and jetty stone, and other coarse aggregates.

<sup>3</sup>Includes bituminous aggregate (coarse), bituminous surface-treatment aggregate, concrete aggregate (coarse), railroad ballast, and other graded coarse aggregates.

<sup>4</sup>Includes screening (undesigned), stone sand (bituminous mix or seal), stone sand (concrete), and other fine aggregates.

<sup>5</sup>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.

<sup>6</sup>Includes drain fields.

<sup>7</sup>Includes cement manufacture.

<sup>8</sup>Includes sugar refining.

<sup>9</sup>Reported and estimated production without a breakdown by end use.

TABLE 5  
OREGON: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 2002,  
BY MAJOR USE CATEGORY <sup>1</sup>

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
Concrete aggregate (including concrete sand)	3,850	\$24,500	\$6.37
Plaster and gunite sands	4	50	12.50
Concrete products (blocks, bricks, pipe, decorative, etc.)	1	14	14.00
Asphaltic concrete aggregates and other bituminous mixtures	2,120	14,200	6.68
Road base and coverings	5,320	32,900	6.19
Road stabilization (lime)	24	41	1.71
Fill	1,210	3,590	2.98
Snow and ice control	16	108	6.75
Railroad ballast	1	6	6.00
Other miscellaneous uses	468	3,560	7.61
Unspecified: <sup>2</sup>			
Reported	2,570	14,500	5.67
Estimated	3,900	22,000	5.68
Total or average	19,500	116,000	5.94

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

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

TABLE 6  
OREGON: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 2002,  
BY USE AND DISTRICT <sup>1</sup>

(Thousand metric tons and thousand dollars)

Use	District 1		District 2		District 3	
	Quantity	Value	Quantity	Value	Quantity	Value
Concrete aggregate and concrete products <sup>2</sup>	2,720	16,300	717	5,340	249	2,050
Asphaltic concrete aggregates and road base materials <sup>3</sup>	W	W	W	W	W	W
Fill	365	1,480	95	448	724	1,590
Railroad ballast	1	6	--	--	--	--
Other miscellaneous uses <sup>4</sup>	5,230	32,100	976	7,480	1,230	7,790
Unspecified: <sup>5</sup>						
Reported	1,890	11,600	21	125	49	85
Estimated	2,300	13,000	440	2,600	870	5,000
Total	12,600	74,700	2,250	16,000	3,120	16,600
	District 4		Unspecified districts			
	Quantity	Value	Quantity	Value		
Concrete aggregate and concrete products <sup>2</sup>	164	864	--	--		
Asphaltic concrete aggregates and road base materials <sup>3</sup>	497	2,420	--	--		
Fill	20	63	2	5		
Railroad ballast	--	--	--	--		
Other miscellaneous uses <sup>4</sup>	22	984	--	--		
Unspecified: <sup>5</sup>						
Reported	273	1,180	328	1,580		
Estimated	280	1,500	--	--		
Total	1,250	7,030	330	1,580		

W Withheld to avoid disclosing company proprietary data; included with "Other miscellaneous uses." -- Zero.

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

<sup>2</sup>Includes plaster and gunite sands.

<sup>3</sup>Includes road and other stabilization (lime).

<sup>4</sup>Includes railroad ballast and snow and ice control.

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