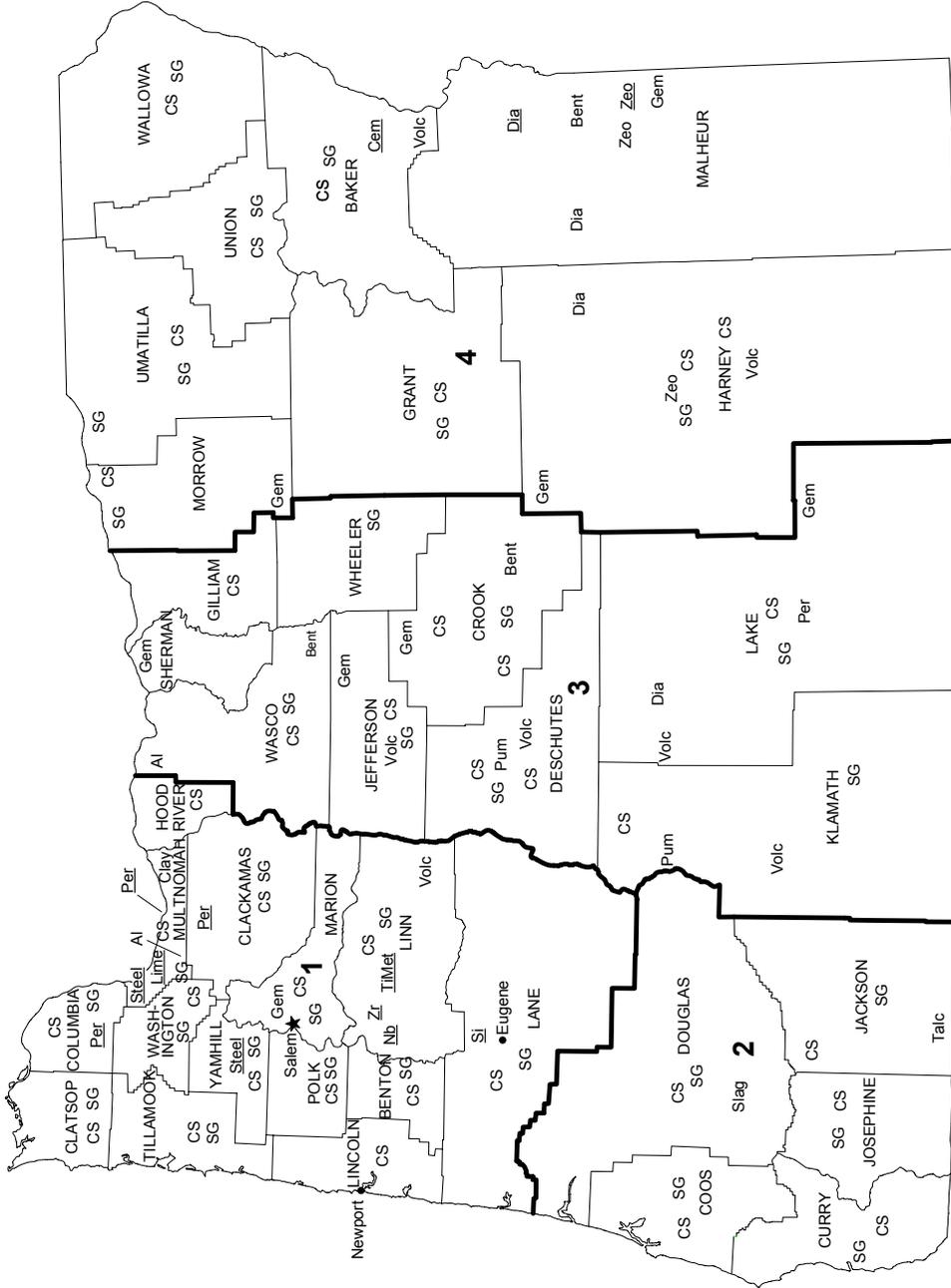


# OREGON

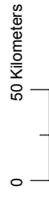


**LEGEND**

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

**MINERAL SYMBOLS**  
(Major producing areas)

Al	Aluminum plant
Bent	Bentonite
Cem	Cement plant
Clay	Common clay
CS	Crushed stone
Dia	Diatomite
Dia	Diatomite plant
Gem	Gemstone
Lime	Lime plant
Nb	Columbium (niobium) plant
Per	Perlite
Per	Perlite plant
Pum	Pumice and pumicite
SG	Construction sand and gravel
Si	Silicon metal plant
Slag	Slag
Steel	Steel plant
Talc	Talc minerals
TiMet	Titanium metal plant
Volc	Volcanic cinder
Zeo	Zeolites
Zeo	Zeolite plant
Zr	Zirconium plant



# THE MINERAL INDUSTRY OF OREGON

In 2001, the estimated value<sup>1</sup> of nonfuel mineral production for Oregon was \$326 million, based upon preliminary U.S. Geological Survey (USGS) data. This was a 9% increase from that of 2000<sup>2</sup> and followed a 6% decrease from 1999 to 2000. The State was 36th in rank 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 2001, construction sand and gravel and crushed stone (1st in 2000), by value, remained Oregon's two leading nonfuel mineral commodities, followed by portland cement, diatomite, and lime (descending order of value). The former two accounted for nearly 65% of the State's total nonfuel mineral value, while all five combined represented about 96% of the State's total raw nonfuel mineral economy. In 2000, crushed stone (down \$12 million), construction sand and gravel (down \$8 million), and portland cement (down about \$2 million) had the largest decreases for the year, which were offset somewhat by increases in lime (up more than \$3 million),

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<sup>1</sup>The 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 2001 USGS mineral production data published in this chapter are preliminary estimates as of August 2002 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 Mineral Industry Surveys—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 2000 may vary from the Minerals Yearbook, Area Reports: Domestic 2000, Volume II, owing to the revision of preliminary 2000 to final 2000 data. Data for 2001 are preliminary and are expected to change; related rankings may also change.

perlite, and common clays (descending order of change) (table 1).

Based upon USGS estimates of the quantities of raw minerals produced in the United States during 2001, Oregon remained first among six States that produce pumice and pumicite, second in perlite, third in diatomite and zeolites, and fifth in talc. The State rose in rank to fourth from seventh in gemstones (by value) and produced significant quantities of construction sand and gravel and crushed stone (descending order of value). Emery production in Oregon was very low during 2000 and 2001 because 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. Raw steel was produced in Oregon but was processed from materials obtained from other domestic and foreign sources. Aluminum had been similarly produced up until 2001. Production ceased by the end of 2000 owing to escalated energy costs in the western and northwestern United States; in 2000, Oregon had ranked 13th of 14 primary aluminum-producing States.

The following narrative information was provided by the Oregon Department of Geology and Mineral Industries.<sup>3</sup> No new discoveries were announced, and no major exploration programs were in progress in Oregon in 2001. Development and permitting activity continued on some precious-metal deposits in Baker County, on silica deposits in Douglas and Jackson Counties, and on diatomite and zeolite properties in Malheur County, but no new production was initiated.

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

TABLE 1  
NONFUEL RAW MINERAL PRODUCTION IN OREGON 1/ 2/

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral	1999		2000		2001 p/	
	Quantity	Value	Quantity	Value	Quantity	Value
Clays, common	240	77	227	632	227	633
Gemstones	NA	949	NA	856	NA	1,200
Sand and gravel, construction	16,900	105,000	16,500	97,000	19,000	114,000
Stone, crushed	23,300	111,000	20,800	98,900	19,800	96,900
Zeolites metric tons	(3/)	NA	(3/)	NA	(3/)	NA
Combine value of cement (portland), clays (bentonite), diatomite, emery (1999), lime, perlite (crude), pumice and pumicite, talc (crude)	XX	101,000	XX	102,000	XX	113,000
Total	XX	318,000	XX	299,000	XX	326,000

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.

3/ Withheld to avoid disclosing company proprietary data.

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

Kind	1999				2000			
	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	W	2	W	W	W
Granite	27	421	\$1,650	\$3.92	6	W	W	\$4.06
Calcareous marl	1	113	36	0.32	1	100	\$338	3.38
Sandstone	1	14	62	4.43	--	--	--	--
Shell	1	W	W	W	1	W	W	W
Traprock	228 r/	19,600 r/	94,600 r/	4.83 r/	167	17,500	82,800	4.74
Volcanic cinder and scoria	2	W	W	W	3	W	W	W
Miscellaneous stone	32 r/	1,750 r/	6,790 r/	3.89 r/	34	1,680	7,730	4.59
Total or average	XX	23,300	111,000	4.75	XX	20,800	98,900	4.75

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; may not add to totals shown.

TABLE 3  
 OREGON: CRUSHED STONE SOLD OR USED BY PRODUCERS IN 2000, BY USE 1/ 2/

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
<b>Construction:</b>			
Coarse aggregate (+1 1/2 inch):			
Macadam	251	\$882	\$3.51
Riprap and jetty stone	188	1,010	5.37
Filter stone	71	299	4.21
Other coarse aggregate	747	4,080	5.46
Total or average	1,260	6,270	4.98
Coarse aggregate, graded:			
Concrete aggregate, coarse	222	1,210	5.45
Bituminous aggregate, coarse	796	3,560	4.48
Bituminous surface-treatment aggregate	72	444	6.17
Railroad ballast	209	866	4.14
Other graded coarse aggregate	106	633	5.97
Total or average	1,410	6,720	4.78
Fine aggregate (-3/8 inch):			
Stone sand, concrete	W	W	7.26
Stone sand, bituminous mix or seal	159	734	4.62
Screening, undesignated	50	187	3.74
Other fine aggregate	98	805	8.21
Total or average	307	1,730	5.62
Coarse and fine aggregates:			
Graded road base or subbase	4,730	24,900	5.26
Unpaved road surfacing	825	3,700	4.48
Crusher run or fill or waste	708	3,070	4.33
Other coarse and fine aggregates	1,510	7,010	4.63
Total or average	7,780	38,700	4.97
Other construction materials	120	454	3.78
Chemical and metallurgical, cement manufacture	(3/)	(3/)	3.61
Other miscellaneous uses, sugar refining	(3/)	(3/)	12.97
Unspecified: 4/			
Reported	4,490	19,900	4.43
Estimated	4,000	18,000	4.48
Total or average	8,480	37,800	4.45
Grand total or average	20,800	98,900	4.75

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 calcareous marl, granite, limestone, miscellaneous stone, shell, traprock, and volcanic cinder and scoria.

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  
 OREGON: CRUSHED STONE SOLD OR USED BY PRODUCERS IN 2000, BY USE AND DISTRICT 1/

(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) 2/	594	2,820	606	3,210	W	W
Coarse aggregate, graded 3/	665	3,550	W	W	W	W
Fine aggregate (-3/8 inch) 4/	163	1,150	W	W	--	--
Coarse and fine aggregate 5/	4,450	24,200	1,390	6,450	467	2,700
Other construction materials	94	338	26	116	--	--
Chemical and metallurgical 6/	--	--	--	--	--	--
Other miscellaneous uses 7/	--	--	--	--	--	--
Unspecified: 8/						
Reported	3,410	15,100	7	31	212	943
Estimated	3,300	15,000	340	1,500	320	1,400
Total	12,700	62,100	2,800	13,100	1,020	5,260
	District 4		Unspecified districts			
	Quantity	Value	Quantity	Value		
Construction:						
Coarse aggregate (+1 1/2 inch) 2/	W	W	8	42		
Coarse aggregate, graded 3/	319	1,370	--	--		
Fine aggregate (-3/8 inch) 4/	W	W	--	--		
Coarse and fine aggregate 5/	699	2,660	771	2,660		
Other construction materials	--	--	--	--		
Chemical and metallurgical 6/	W	W	--	--		
Other miscellaneous uses 7/	W	W	--	--		
Unspecified: 8/						
Reported	17	74	841	3,750		
Estimated	--	--	--	--		
Total	2,660	12,000	1,620	6,450		

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

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

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

5/ Includes crusher run (select material or fill), graded road base or subbase, unpaved road surfacing, and other coarse and fine aggregates.

6/ Includes cement manufacture.

7/ Includes sugar refining.

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

TABLE 5  
 OREGON: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 2000,  
 BY MAJOR USE CATEGORY 1/

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
Concrete aggregate and concrete products 2/	3,370	\$20,700	\$6.15
Asphaltic concrete aggregates and other bituminous mixtures	1,610	12,000	7.46
Road base and coverings 3/	4,570	28,400	6.23
Fill	956	3,460	3.62
Other miscellaneous uses 4/	416	1,880	4.51
Unspecified: 5/			
Reported	2,350	13,000	5.54
Estimated	3,200	17,000	5.45
Total or average	16,500	97,000	5.89

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 railroad ballast and snow and ice control.

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

TABLE 6  
 OREGON: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 2000, 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 aggregates and concrete products 2/	2,490	14,600	577	4,620	49	434
Asphaltic concrete aggregates and other bituminous mixtures	1,140	8,130	W	W	W	W
Road base and coverings 3/	3,620	22,900	278	2,200	W	W
Fill	754	2,570	W	W	W	W
Other miscellaneous uses 4/	398	1,760	492	3,900	411	2,600
Unspecified: 5/						
Reported	1,970	12,300	(6/)	(6/)	15	25
Estimated	2,000	10,000	430	2,200	300	2,000
Total	12,400	72,700	1,780	12,900	771	5,020
			Unspecified districts			
	District 4		Quantity	Value		
Concrete aggregates and concrete products 2/	257	1,090	--	--		
Asphaltic concrete aggregates and other bituminous mixtures	W	W	--	--		
Road base and coverings 3/	378	1,500	--	--		
Fill	W	W	9	11		
Other miscellaneous uses 4/	65	226	--	--		
Unspecified: 5/						
Reported	--	--	370	669		
Estimated	470	2,800	--	--		
Total	1,170	5,650	379	680		

W Withheld to avoid disclosing company proprietary data; included with "Other miscellaneous uses." -- 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 road and other stabilization (cement and lime).

4/ Includes railroad ballast and snow and ice control.

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

6/ Less than 1/2 unit.