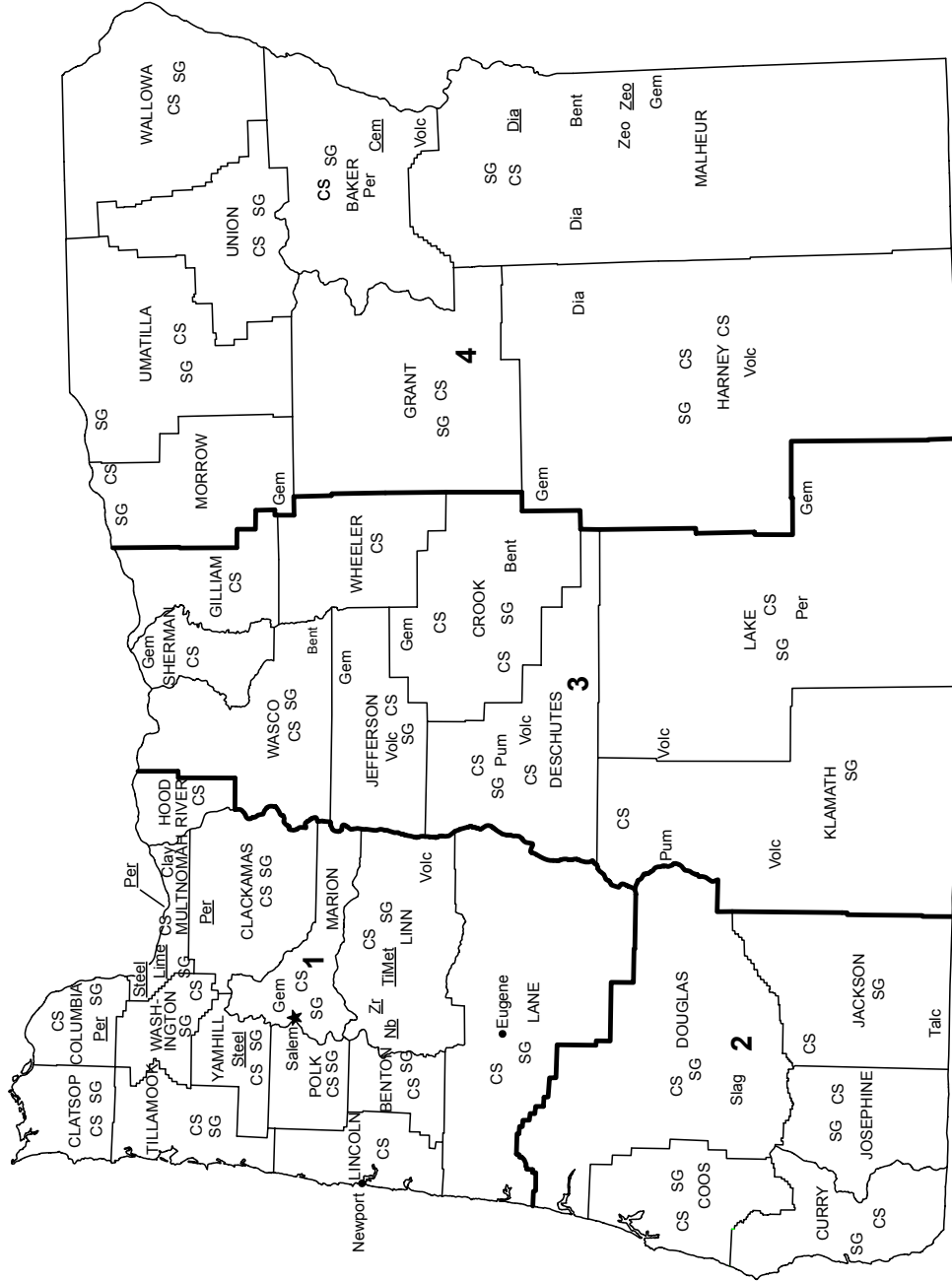


# OREGON

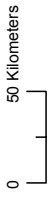


**LEGEND**

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

**MINERAL SYMBOLS**  
 (Major producing areas)

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  
 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 2004, Oregon's nonfuel raw mineral production was valued<sup>1</sup> at \$367 million, based upon annual U.S. Geological Survey (USGS) data. This was a 14.7% increase from the State's total nonfuel mineral value for 2003,<sup>2</sup> which was unchanged from 2002. The State remained 35th in rank among the 50 States in total nonfuel mineral production value and accounted for nearly 1% of the U.S. total value.

Industrial minerals accounted for all of Oregon's nonfuel raw mineral and material production. In 2004, 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 more than 68% of Oregon's total nonfuel mineral value, while all five account for about 97% of the State's total raw nonfuel mineral economy. Increases in the values of construction sand and gravel (up \$15 million), crushed stone (up \$9 million), diatomite, and portland cement led the State's rise in value from that of 2003. No commodities showed significant decreases in value. In 2004, Oregon continued to be second in the quantity of crude perlite produced and third in regards to diatomite and gemstones (gemstones based upon value). The State rose in rank to first from second in the production of pumice and pumicite and remained a significant producer of crushed stone and construction sand and gravel (descending order of value).

In 2003, a rise in the value of crushed stone of \$16 million was balanced out by decreases in the values of portland cement, construction sand and gravel (down \$6 million), and pumice and pumicite, resulting in no net change for the year.

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<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 2004 USGS mineral production data published in this chapter are those available as of December 2005. All USGS Mineral Industry Surveys and USGS Minerals Yearbook chapters—mineral commodity, State, and country—also can be retrieved over the Internet at URL <http://minerals.usgs.gov/minerals>.

<sup>2</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 2004 USGS mineral production data published in this chapter are those available as of December 2005. All USGS Mineral Industry Surveys and USGS Minerals Yearbook chapters—mineral commodity, State, and country—also can be retrieved over the Internet at URL <http://minerals.usgs.gov/minerals>.

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

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral	2002		2003		2004	
	Quantity	Value	Quantity	Value	Quantity	Value
<b>Clays:</b>						
Bentonite	W	W	W	W	10	W
Common	237	662	W	W	W	W
Gemstones	NA	1,340	NA	1,200	NA	1,210
Sand and gravel, construction	19,500	116,000	18,500	110,000	21,000	125,000
Stone, crushed	19,800	101,000	21,800	117,000	22,800	126,000
Zeolites metric tons	W	NA	W	NA	--	--
Combine value of cement (portland), diatomite, emery, (2002), lime, perlite (crude), pumice and pumicite, talc (crude), and values indicated by symbol W	XX	101,000	XX	92,700	XX	114,000
<b>Total</b>	<b>XX</b>	<b>320,000</b>	<b>XX</b>	<b>320,000</b>	<b>XX</b>	<b>367,000</b>

NA Not available. W Withheld to avoid disclosing company proprietary data. Withheld values included in "Combined values" data. 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.

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

Kind	2002				2003				2004			
	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value
Limestone	1	W	W	\$5.51	2	W	W	\$5.53	2	W	W	\$5.52
Granite	6	W	W	4.14	2	W	W	5.67	1	W	W	6.07
Traprock	153 <sup>r</sup>	16,900 <sup>r</sup>	\$86,600 <sup>r</sup>	5.11 <sup>r</sup>	187	18,700	\$100,000	5.37	141	19,100	\$107,000	5.59
Volcanic cinder and scoria	1	W	W	4.54	2	W	W	4.96	2	W	W	4.96
Miscellaneous stone	22 <sup>r</sup>	1,600 <sup>r</sup>	7,630 <sup>r</sup>	4.77 <sup>r</sup>	10	1,770	8,860	5.01	11	2,420	11,900	4.92
Total or average	XX	19,800	101,000	5.10	XX	21,800	117,000	5.35	XX	22,800	126,000	5.52

<sup>r</sup>Revised. W Withheld to avoid disclosing company proprietary data; included in "Total or average." XX Not applicable.

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

TABLE 3a  
 OREGON: CRUSHED STONE SOLD OR USED BY PRODUCERS IN 2003, BY USE<sup>1</sup>

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
<b>Construction:</b>			
<b>Coarse aggregate (+1½ inch):</b>			
Macadam	W	W	\$5.51
Riprap and jetty stone	148	\$1,030	6.93
Filter stone	148	1,030	6.97
Other coarse aggregates	995	6,690	6.72
Total or average	1,290	8,750	6.78
<b>Coarse aggregate, graded:</b>			
Concrete aggregate, coarse	143	1,040	7.31
Bituminous aggregate, coarse	300	2,160	7.19
Bituminous surface-treatment aggregate	(2)	(2)	5.51
Railroad ballast	179	1,140	6.38
Other graded coarse aggregates	284	2,000	7.02
Total or average	906	6,330	6.99
<b>Fine aggregate (-¾ inch):</b>			
Stone sand, concrete	(3)	(3)	11.18
Stone sand, bituminous mix or seal	234	1,860	7.96
Screening, undesignated	(3)	(3)	5.21
Other fine aggregates	260	2,440	9.37
Total or average	494	4,300	8.70
<b>Coarse and fine aggregates:</b>			
Graded road base or subbase	4,900	25,800	5.26
Unpaved road surfacing	874	4,750	5.44
Terrazzo and exposed aggregate	(4)	(4)	5.52
Crusher run or fill or waste	523	2,780	5.32
Other coarse and fine aggregates	1,520	7,430	4.88
Total or average	7,920	40,600	5.13
Other construction materials <sup>5</sup>	261	2,840	10.86
Chemical and metallurgical, cement manufacture	(6)	(6)	5.51
Special, asphalt fillers or extenders	(6)	(6)	5.11
<b>Other miscellaneous uses:</b>			
Sugar refining	(6)	(6)	5.51
Other specified uses not listed	60	333	5.51
<b>Unspecified:<sup>7</sup></b>			
Reported	6,640	32,600	4.90
Estimated	3,300	15,000	4.59
Total or average	9,940	47,700	4.80
Grand total or average	21,800	117,000	5.35

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

<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>Withheld to avoid disclosing company proprietary data; included with "Other graded coarse aggregates."

<sup>3</sup>Withheld to avoid disclosing company proprietary data; included with "Other fine aggregates."

<sup>4</sup>Withheld to avoid disclosing company proprietary data; included with "Other coarse and fine aggregates."

<sup>5</sup>Includes drain fields.

<sup>6</sup>Withheld to avoid disclosing company proprietary data; included in "Grand total or average."

<sup>7</sup>Reported and estimated production without a breakdown by end use.

TABLE 3b  
 OREGON: CRUSHED STONE SOLD OR USED BY PRODUCERS IN 2004, BY USE<sup>1</sup>

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
<b>Construction:</b>			
<b>Coarse aggregate (+1½ inch):</b>			
Macadam	W	W	\$5.17
Riprap and jetty stone	142	\$1,000	7.06
Filter stone	94	591	6.29
Other coarse aggregates	738	4,410	5.98
Total or average	974	6,010	6.17
<b>Coarse aggregate, graded:</b>			
Concrete aggregate, coarse	(2)	(2)	8.23
Bituminous aggregate, coarse	610	4,140	6.78
Bituminous surface-treatment aggregate	92	644	7.00
Railroad ballast	160	1,040	6.49
Other graded coarse aggregates	210	1,680	7.99
Total or average	1,070	7,500	6.99
<b>Fine aggregate (-¾ inch):</b>			
Stone sand, concrete	(3)	(3)	8.82
Stone sand, bituminous mix or seal	78	528	6.77
Screening, undesignated	14	74	5.29
Other fine aggregates	183	1,610	8.81
Total or average	275	2,220	8.05
<b>Coarse and fine aggregates:</b>			
Graded road base or subbase	3,490	22,000	6.32
Unpaved road surfacing	371	1,850	4.99
Terrazzo and exposed aggregate	(4)	(4)	9.59
Crusher run or fill or waste	280	1,460	5.22
Other coarse and fine aggregates	1,780	10,500	5.89
Total or average	5,920	35,800	6.06
Other construction materials	63	77	1.22
Chemical and metallurgical, cement manufacture	(5)	(5)	5.51
Other miscellaneous uses, sugar refining	(5)	(5)	5.51
<b>Unspecified:<sup>6</sup></b>			
Reported	7,950	40,500	5.10
Estimated	5,200	26,000	5.03
Total or average	13,100	66,500	5.07
Grand total or average	22,800	126,000	5.52

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

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

<sup>2</sup>Withheld to avoid disclosing company proprietary; included with "Other coarse aggregates."

<sup>3</sup>Withheld to avoid disclosing company proprietary; included with "Other fine aggregates."

<sup>4</sup>Withheld to avoid disclosing company proprietary; included with "Other coarse and fine aggregates."

<sup>5</sup>Withheld to avoid disclosing company proprietary data; included in "Grand total or average."

<sup>6</sup>Reported and estimated production without a breakdown by end use.

TABLE 4a  
 OREGON: CRUSHED STONE SOLD OR USED BY PRODUCERS IN 2003, 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
<b>Construction:</b>						
Coarse aggregate (+1½ inch) <sup>2</sup>	W	W	W	W	W	W
Coarse aggregate, graded <sup>3</sup>	267	1,910	W	W	W	W
Fine aggregate (-¾ inch) <sup>4</sup>	W	W	W	W	W	W
Coarse and fine aggregates <sup>5</sup>	3,040	18,900	2,300	12,200	552	3,110
Other construction materials <sup>6</sup>	173	2,100	18	127	71	608
Chemical and metallurgical <sup>7</sup>	--	--	--	--	--	--
Special <sup>8</sup>	--	--	--	--	--	--
Other miscellaneous uses <sup>9</sup>	--	--	W	W	--	--
<b>Unspecified:<sup>10</sup></b>						
Reported	4,930	24,200	150	822	53	285
Estimated	2,800	13,000	200	920	200	1,100
Total	11,700	63,400	3,650	20,500	1,550	10,800
			District 4		Unspecified districts	
			Quantity	Value	Quantity	Value
<b>Construction:</b>						
Coarse aggregate (+1½ inch) <sup>2</sup>	W	W	--	--	--	--
Coarse aggregate, graded <sup>3</sup>	W	W	--	--	--	--
Fine aggregate (-¾ inch) <sup>4</sup>	W	W	--	--	--	--
Coarse and fine aggregates <sup>5</sup>	524	2,470	1,400	4,060	--	--
Other construction materials <sup>6</sup>	--	--	--	--	--	--
Chemical and metallurgical <sup>7</sup>	W	W	--	--	--	--
Special <sup>8</sup>	W	W	--	--	--	--
Other miscellaneous uses <sup>9</sup>	W	W	--	--	--	--
<b>Unspecified:<sup>10</sup></b>						
Reported	8	44	1,510	7,250	--	--
Estimated	120	560	--	--	--	--
Total	1,970	10,600	2,910	11,300	--	--

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 (undesignated), 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 asphalt fillers or extenders.

<sup>9</sup>Includes sugar refining and other specified uses not listed.

<sup>10</sup>Reported and estimated production without a breakdown by end use.

TABLE 4b  
 OREGON: CRUSHED STONE SOLD OR USED BY PRODUCERS IN 2004, 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
<b>Construction:</b>						
Coarse aggregate (+1½ inch) <sup>2</sup>	W	W	W	W	182	1,170
Coarse aggregate, graded <sup>3</sup>	W	W	W	W	622	4,710
Fine aggregate (-¾ inch) <sup>4</sup>	63	637	--	--	142	1,110
Coarse and fine aggregates <sup>5</sup>	2,740	17,500	1,350	7,230	1,210	7,880
Other construction materials	64	77	--	--	--	--
Chemical and metallurgical <sup>6</sup>	--	--	--	--	--	--
Other miscellaneous uses <sup>7</sup>	--	--	--	--	--	--
<b>Unspecified:<sup>8</sup></b>						
Reported	5,240	27,800	481	2,350	21	111
Estimated	3,700	18,000	1,200	7,000	70	380
<b>Total</b>	<b>12,200</b>	<b>66,300</b>	<b>3,610</b>	<b>20,100</b>	<b>2,250</b>	<b>15,400</b>
	District 4		Unspecified districts			
	Quantity	Value	Quantity	Value		
<b>Construction:</b>						
Coarse aggregate (+1½ inch) <sup>2</sup>	W	W	--	--		
Coarse aggregate, graded <sup>3</sup>	W	W	--	--		
Fine aggregate (-¾ inch) <sup>4</sup>	W	W	--	--		
Coarse and fine aggregates <sup>5</sup>	625	3,230	--	--		
Other construction materials	--	--	--	--		
Chemical and metallurgical <sup>6</sup>	W	W	--	--		
Other miscellaneous uses <sup>7</sup>	W	W	--	--		
<b>Unspecified:<sup>8</sup></b>						
Reported	8	45	2,200	10,200		
Estimated	120	560	--	--		
<b>Total</b>	<b>2,500</b>	<b>13,700</b>	<b>2,200</b>	<b>10,200</b>		

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 (undesignated), stone sand (bituminous mix or seal), stone sand (concrete), and other fine aggregates.

<sup>5</sup>Includes crusher run or fill or waste, graded road base or subbase, terrazzo and exposed aggregate, unpaved road surfacing, and other coarse and fine aggregates.

<sup>6</sup>Includes cement manufacture.

<sup>7</sup>Includes sugar refining.

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



TABLE 5a  
 OREGON: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 2003,  
 BY MAJOR USE CATEGORY<sup>1</sup>

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
Concrete aggregate (including concrete sand)	3,430	\$22,900	\$6.66
Plaster and gunite sands	13	165	12.69
Concrete products (blocks, bricks, pipe, decorative, etc.)	15	184	12.27
Asphaltic concrete aggregates and other bituminous mixtures	1,580	10,700	6.78
Road base and coverings <sup>2</sup>	3,250	20,300	6.25
Road and other stabilization (cement)	50	216	4.32
Fill	313	1,500	4.79
Snow and ice control	8	43	5.38
Other miscellaneous uses <sup>3</sup>	399	2,640	6.62
Unspecified: <sup>4</sup>			
Reported	4,840	26,600	5.50
Estimated	4,600	25,000	5.33
Total or average	18,500	110,000	5.92

<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 road and other stabilization (lime).

<sup>3</sup>Includes railroad ballast.

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

TABLE 5b  
 OREGON: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 2004,  
 BY MAJOR USE CATEGORY<sup>1</sup>

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
Concrete aggregate (including concrete sand)	3,600	\$25,500	\$7.10
Concrete products (blocks, bricks, pipe, decorative, etc.) <sup>2</sup>	29	303	10.41
Asphaltic concrete aggregates and other bituminous mixtures	1,600	10,500	6.54
Road base and coverings	4,520	27,000	5.98
Fill	393	1,680	4.29
Other miscellaneous uses <sup>3</sup>	378	2,850	7.54
Unspecified: <sup>4</sup>			
Reported	6,410	37,600	5.87
Estimated	4,100	20,000	4.91
Total or average	21,000	125,000	5.97

<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 plaster and gunite sands.

<sup>3</sup>Includes snow and ice control.

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

TABLE 6a  
 OREGON: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 2003,  
 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>	2,300	13,800	815	6,390	W	W
Asphaltic concrete aggregates and other bituminous mixtures	992	6,290	W	W	23	143
Road base and coverings <sup>2</sup>	2,590	16,100	W	W	W	W
Road and other stabilization (cement)	--	--	--	--	--	--
Fill	178	736	65	351	60	389
Other miscellaneous uses <sup>4</sup>	368	2,200	882	6,570	315	2,790
Unspecified: <sup>5</sup>						
Reported	4,110	24,200	111	695	350	603
Estimated	1,200	6,900	100	700	2,900	15,000
Total	11,800	70,300	1,980	14,700	3,660	18,700
	District 4		Unspecified districts			
	Quantity	Value	Quantity	Value		
Concrete aggregate and concrete products <sup>2</sup>	W	W	--	--		
Asphaltic concrete aggregates and other bituminous mixtures	W	W	--	--		
Road base and coverings <sup>2</sup>	215	1,240	--	--		
Road and other stabilization (cement)	50	216	--	--		
Fill	10	25	--	--		
Other miscellaneous uses <sup>4</sup>	196	1,400	--	--		
Unspecified: <sup>5</sup>						
Reported	220	1,000	53	105		
Estimated	400	2,100	--	--		
Total	1,070	6,020	53	105		

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 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.

TABLE 6b  
 OREGON: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 2004,  
 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 aggregates and concrete products <sup>2</sup>	2,210	13,400	865	6,750	438	4,790
Asphaltic concrete aggregates and other bituminous mixtures	971	5,840	394	3,330	W	W
Road base and coverings	3,540	21,400	W	W	W	W
Fill	233	992	64	384	78	261
Other miscellaneous uses <sup>3</sup>	354	2,130	480	3,220	448	2,220
Unspecified: <sup>4</sup>						
Reported	5,400	32,000	377	2,340	239	1,410
Estimated	1,500	8,800	60	370	2,100	8,900
Total	14,200	84,500	2,240	16,400	3,320	17,600
	District 4		Unspecified districts			
	Quantity	Value	Quantity	Value		
Concrete aggregates and concrete products <sup>2</sup>	113	829	--	--		
Asphaltic concrete aggregates and other bituminous mixtures	W	W	--	--		
Road base and coverings	216	1,210	--	--		
Fill	18	47	--	--		
Other miscellaneous uses <sup>3</sup>	89	987	--	--		
Unspecified: <sup>4</sup>						
Reported	266	1,310	134	607		
Estimated	370	1,900	10	30		
Total	1,070	6,290	141	635		

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 plaster and gunite sands.

<sup>3</sup>Includes snow and ice control.

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