

OREGON

Source: Oregon Department of Geology and Mineral Industries/U.S. Geological Survey (2004)

THE MINERAL INDUSTRY OF OREGON

In 2004, Oregon's nonfuel raw mineral production was valued¹ 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 2003,² 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.

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 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.

²The 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^{1, 2}

(Thousand metric tons and thousand dollars unless otherwise specified)

	200	2	200	3	2004	
Mineral	Quantity	Value	Quantity	Value	Quantity	Value
Clays:						
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
Total	XX	320,000	XX	320,000	XX	367,000

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

 OREGON: CRUSHED STONE SOLD OR USED, BY KIND¹

		200)2		2003				2004			
	Number	Quantity			Number	Quantity			Number	Quantity		
	of	(thousand	Value	Unit	of	(thousand	Value	Unit	of	(thousand	Value	Unit
Kind	quarries	metric tons)	(thousands)	value	quarries	metric tons)	(thousands)	value	quarries	metric tons)	(thousands)	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 ^r	16,900 ^r	\$86,600 ^r	5.11 ^r	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 ^r	1,600 ^r	7,630 ^r	4.77 ^r	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

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

¹Data 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 USE¹

	Quantity (thousand	Value	Unit
Use	metric tons)	(thousands)	value
Construction:			
Coarse aggregate (+1½ inch):			
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
Coarse aggregate, graded:			
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
Fine aggregate (- ³ / ₈ inch):			
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
Coarse and fine aggregates:			
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 ⁵	261	2,840	10.86
Chemical and metallurgical, cement manufacture	(6)	(6)	5.51
Special, asphalt fillers or extenders	(6)	(6)	5.11
Other miscellaneous uses:			
Sugar refining	(6)	(6)	5.51
Other specified uses not listed	60	333	5.51
Unspecified. ⁷			
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
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W Withheld to avoid disclosing company proprietary data; included with "Other coarse aggregates."

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

²Withheld to avoid disclosing company proprietary data; included with "Other graded coarse aggregates." ³Withheld to avoid disclosing company proprietary data; included with "Other fine aggregates."

⁴Withheld to avoid disclosing company proprietary data; included with "Other coarse and fine aggregates." ⁵Includes drain fields.

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

⁷Reported and estimated production without a breakdown by end use.

TABLE 3b OREGON: CRUSHED STONE SOLD OR USED BY PRODUCERS IN 2004, BY USE $^{\rm l}$

(thousandValueUnitUsemetric tons)(thousands)valueConsrea aggregate (+1½ inch):MacadamWW\$5.17Riprap and jetty stone142\$1.0007.06Filter stone945916.29Other coarse aggregates7384.4105.98Total or average9746.0106.17Coarse aggregate, coarse(2)(2)8.23Bituminous surface-treatment aggregate926447.00Railroad ballast1601,0406.49Other graded coarse aggregates2101,6807.99Total or average(3)(3)8.82Stone sand, concrete(3)(3)8.82Stone sand, concrete(3)(3)8.82Coarse aggregates:2752,2208.05Coarse and fine aggregates:2752,2208.05Coarse and fine aggregates:3,49022,0006.32Unpaved road surfacing3,711,8504.99Terrazzo and exposed aggregate(4)(4)9.59Total or average5,29235.8006.06Other coarse and fine aggregates5,29235.8006.65Other construction materials63771.22Other construction materials63771.22Other construction materials63771.22Other construction materials63		Quantity		
Use metric tons (thousands) value Construction: $Carse aggregate (+1½ inch)$: W W \$\$5.17 Riprap and jetty stone 142 \$\$1,000 7.06 Filter stone 94 591 6.29 Other coarse aggregates 7.38 4.410 5.98 Total or average 974 6,010 6.17 Concrete aggregate, graded: (2) (2) 8.23 Bituminous aggregate, coarse 610 4.140 6.78 Bituminous aggregate, coarse 210 1,680 7.99 Other graded coarse aggregates 210 1,680 7.99 Total or average 1,070 7,500 6.99 Fine aggregate (-¼ inch): 3 3 8.82 Stone sand, bituminous mix or seal 3 3 8.82 Total or average 275 2,220 8.05 Coarse and fine aggregates: 371 1,850 4.99 Terrazzo and exposed aggregates 1,780 10,500 5.89		(thousand	Value	Unit
Construction:Coarse aggregate ($11/2$ inch):MacadamWWStoreFilter stoneOther coarse aggregatesTotal or averageCoarse aggregate, coarseConcrete aggregate, coarseBituminous surface-treatment aggregateP2Gther graded coarse aggregates2101,6807,99Total or average101Stone sand, ocncrete(3)Stone sand, bituminous mix or sealTotal or averageCoarse and fine aggregates:Graded road base or subbaseCoarse and fine aggregatesCoarse and fine aggregateCoarse and fine aggrega	Use	metric tons)	(thousands)	value
Coarse aggregate (+1½ inch): W W S 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 Coarse aggregate, coarse 22 (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 1007 7,500 6.99 Fine aggregate (-% inch): 5 5 5 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 2,720 8.05 Coarse and fine aggregates: 3,49	Construction:			
Macadam W W S.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 Concrete 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 10070 7.500 6.99 Fine aggregate (-/s inch): 5 5 5 Stone sand, concrete 3 3 8.82 Stone sand, concrete 3 6.10 8.81 Total or average 275 2.20 8.05 Coarse and fine aggregates: 78 52.8 6.77 Screening, undesignated 14 74 5.99 Other fine aggregates: 78 52.20	Coarse aggregate (+1½ inch):			
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 Coarse aggregate, graded: (2) (2) 8.23 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 210 1,680 7.99 Total or average 3 3 8.82 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: 31,610 8.81 Graded road base or subbase 3,490 22,000 6.32 Uppaved road surfacing 371 1,850 4.99 Terrazzo and exposed aggregates 1,780 10,500 5.89 Total or average 5,920 <td>Macadam</td> <td> W</td> <td>W</td> <td>\$5.17</td>	Macadam	W	W	\$5.17
Filter stone 94 591 6.29 Other coarse aggregates 738 4,410 5.98 Total or average 974 6,010 6.17 Coarse aggregate, graded: (2) (2) 8.23 Bituminous aggregate, coarse 610 4,140 6.78 Bituminous sufface-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 Fine aggregate (-% inch): 3 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 Coarse and fine aggregate 3,490 22,000 6.32 Unpaved road surfacing 371 1,850 4.99 Total or average 280 1,460 5.22 Other c	Riprap and jetty stone	142	\$1,000	7.06
Other coarse aggregates 738 4,410 5.98 Total or average 974 6,010 6,17 Coarse aggregate, graded: (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 Fine aggregate (-% inch): 500 528 6,77 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: 275 2,220 8,05 Coarse and fine aggregates: 3,490 22,000 6,32 Unpaved road base or subbase 3,490 22,000 6,32 Unpaved road surfacing 3,71 1,850 4,99	Filter stone	94	591	6.29
Total or average 974 $6,010$ 6.17 Coarse aggregate, graded: (2) (2) 8.23 Bituminous surface-treatment aggregate 92 644 7.00 Railroad ballast 160 $1,440$ 6.78 Other graded coarse aggregates 210 $1,680$ 7.99 Total or average $1,070$ $7,500$ 6.99 Fine aggregate (-% inch): (3) (3) 8.82 Stone sand, bituminous mix or seal 78 528 6.77 Screening, undesignated 14 74 5.29 Other fine aggregates: 275 2.200 6.32 Unpaved road surfacing 371 1.850 4.99 Terrazzo and exposed aggregate (4) (4) 9.52 Other construction materials 63 777 1.252 Other construction materials 63 777 1.252 Other construction materials 63 777 1.252 Other construction materials </td <td>Other coarse aggregates</td> <td>738</td> <td>4,410</td> <td>5.98</td>	Other coarse aggregates	738	4,410	5.98
Coarse aggregate, graded: (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 Fine aggregate (-¼ inch): 3 (3) 8,82 Stone sand, concrete (3) (3) 8,82 Other fine aggregates 183 1,610 8,81 Total or average 275 2,220 8,05 Coarse and fine aggregates: 3,490 22,000 6,32 Unpaved 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 5,29 Other coarse and fine aggregates 1,780 10,500 5,89	Total or average	974	6,010	6.17
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 Fine aggregate ($-\frac{3}{4}$ inch): 3 3 8.82 Stone sand, concrete (3) (3) 8.82 Other fine aggregates 183 $1,610$ 8.81 Total or average 275 $2,220$ 8.05 Coarse and fine aggregates: $3,490$ $22,000$ 6.32 Unpaved road base or subbase $3,490$ $22,000$ 6.32 Other coarse and fine aggregates $1,780$ $10,500$ 5.89 Total or average $5,920$ $35,800$ 6.06 Other coarse and fine aggregates $1,780$ $10,500$ 5.89 Total or ave	Coarse aggregate, graded:			
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 Fine aggregate (- $\frac{3}{8}$ inch): 3 3 8.82 Stone sand, concrete 3 3 6.10 8.82 Stone sand, bituminous mix or seal 78 528 6.77 Screening, undesignated 14 74 5.29 Other fine aggregates: 275 $2,200$ 6.32 Coarse and fine aggregates: $3,490$ $22,000$ 6.32 Unpaved road surfacing $3,1400$ $22,000$ 6.32 Other coarse and fine aggregates $1,780$ $10,500$ 5.89 Total or average $5,920$ $35,800$ 6.06 Other coarse and fine aggregates $1,780$ $10,500$ 5.89	Concrete aggregate, coarse	(2)	(2)	8.23
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 Fine aggregate (- $\frac{3}{4}$ inch): 3 (3) 8.82 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: 275 2,220 8.05 Coarse and fine aggregates: 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	Bituminous aggregate, coarse	610	4,140	6.78
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 Fine aggregate (- $\frac{3}{4}$ inch): (3) (3) 8.82 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: 275 2,200 6.32 Coarse and fine aggregates: 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)	Bituminous surface-treatment aggregate	92	644	7.00
Other graded coarse aggregates 210 $1,680$ 7.99 Total or average $1,070$ $7,500$ 6.99 Fine aggregate (- $\frac{3}{4}$ inch): (3) (3) 8.82 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 Coarse and fine aggregates: $3,490$ $22,000$ 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 construction materials 63 77 1.22 Chemical and metallurgical, cement manufacture (5) (5) 5.51 Unspecified: ⁶ $7,950$ $40,500$ 5.10 Reported	Railroad ballast	160	1,040	6.49
Total or average $1,070$ $7,500$ 6.99 Fine aggregate (-3% inch):(3)(3) 8.82 Stone sand, concrete(3)(3) 8.82 Stone sand, bituminous mix or seal 78 528 6.77 Screening, undesignated14 74 5.29 Other fine aggregates183 $1,610$ 8.81 Total or average 275 $2,220$ 8.05 Coarse and fine aggregates: 275 $2,200$ 6.32 Unpaved 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 Unspecified. ⁶ $7,950$ $40,500$ 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	Other graded coarse aggregates	210	1,680	7.99
Fine aggregate (- $\frac{3}{8}$ inch): 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 Coarse and fine aggregates: 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 Unspecified: ⁶ 7950 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 </td <td>Total or average</td> <td>1,070</td> <td>7,500</td> <td>6.99</td>	Total or average	1,070	7,500	6.99
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 Coarse and fine aggregates: 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 Unspecified: ⁶ 7 7 5.200 26,000 5.03 Total or average 7,950 40,500 5.10 5.51 5.51 Unspecified: ⁶ 7 7 5.200 26,000 5.03	Fine aggregate (- ³ / ₈ inch):			
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 Coarse and fine aggregates: 3,490 22,000 6.32 Unpaved 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 miscellaneous uses, sugar refining (5) (5) 5.51 Unspecified: ⁶ 7 5,200 26,000 5.03 Total or average 7,950 40,500 5.10 Estimated 5,200 26,000 5.03 Total or average 13,100 66,500 5.07	Stone sand, concrete	(3)	(3)	8.82
Screening, undesignated 14 74 5.29 Other fine aggregates 183 1,610 8.81 Total or average 275 2,220 8.05 Coarse and fine aggregates: 3,490 22,000 6.32 Unpaved 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 Unspecified: ⁶ 7 7.950 40,500 5.10 Estimated 5,200 26,000 5.03 31,100 66,500 5.07 Grand total or average 13,100 66,500 5.07 5.22 5.20	Stone sand, bituminous mix or seal	78	528	6.77
Other fine aggregates 183 1,610 8.81 Total or average 275 2,220 8.05 Coarse and fine aggregates: 3,490 22,000 6.32 Unpaved 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 Unspecified: ⁶ 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 <td>Screening, undesignated</td> <td>14</td> <td>74</td> <td>5.29</td>	Screening, undesignated	14	74	5.29
Total or average 275 $2,220$ 8.05 Coarse and fine aggregates: $3,490$ $22,000$ 6.32 Unpaved 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 Unspecified: ⁶ $7,950$ $40,500$ 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	Other fine aggregates	183	1,610	8.81
Coarse and fine aggregates: $3,490$ $22,000$ 6.32 Unpaved road base or subbase $3,71$ $1,850$ 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 Unspecified: ⁶ 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	Total or average	275	2,220	8.05
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 63 77 1.22 Chemical and metallurgical, cement manufacture (5) (5) 5.51 Other miscellaneous uses, sugar refining (5) (5) 5.51 Unspecified: ⁶ $7,950$ $40,500$ 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	Coarse and fine aggregates:			
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 63 77 1.22 Chemical and metallurgical, cement manufacture (5) (5) 5.51 Other miscellaneous uses, sugar refining (5) (5) 5.51 Unspecified: $7,950$ $40,500$ 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	Graded road base or subbase	3,490	22,000	6.32
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 Unspecified: ⁶ 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	Unpaved road surfacing	371	1,850	4.99
$\begin{array}{c c} Crusher run or fill or waste \\ \hline Crusher run or fill or waste \\ \hline Other coarse and fine aggregates \\ \hline Total or average \\ \hline Total or average \\ \hline Other construction materials \\ \hline Other construction materials \\ \hline Other miscellaneous uses, sugar refining \\ \hline Unspecified:^6 \\ \hline Reported \\ \hline Estimated \\ \hline Total or average \\ \hline Total or average \\ \hline Grand total or average \\ \hline Unspecified: \\ \hline Construction average \\ \hline Construction material \\ \hline Construction$	Terrazzo and exposed aggregate	(4)	(4)	9.59
$\begin{tabular}{ c c c c c c c c c c c c c c c c c c c$	Crusher run or fill or waste	280	1,460	5.22
$\begin{tabular}{ c c c c c c c c c c c c c c c c c c c$	Other coarse and fine aggregates	1,780	10,500	5.89
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 Unspecified: ⁶ 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	Total or average	5,920	35,800	6.06
Chemical and metallurgical, cement manufacture (5) (5) 5.51 Other miscellaneous uses, sugar refining (5) (5) 5.51 Unspecified: ⁶ 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	Other construction materials	63	77	1.22
Other miscellaneous uses, sugar refining (5) (5) 5.51 Unspecified: ⁶ 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	Chemical and metallurgical, cement manufacture	(5)	(5)	5.51
Unspecified: ⁶ 7,950 40,500 5.10 Reported 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	Other miscellaneous uses, sugar refining	(5)	(5)	5.51
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	Unspecified: ⁶			
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	Reported	7,950	40,500	5.10
Total or average 13,100 66,500 5.07 Grand total or average 22,800 126,000 5.52	Estimated	5,200	26,000	5.03
Grand total or average 22,800 126,000 5.52	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."

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

²Withheld to avoid disclosing company proprietary; included with "Other coarse aggregates."

³Withheld to avoid disclosing company proprietary; included with "Other fine aggregates."

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

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

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

TABLE 4a

OREGON: CRUSHED STONE SOLD OR USED BY PRODUCERS IN 2003, BY USE AND DISTRICT¹

(Thousand metric tons and thousand dollars)

Use Quantity Value		Distri	ct 1	Distr	ict 2	District 3	
Construction: W M M T T Gas a string a	Use	Quantity	Value	Quantity	Value	Quantity	Value
$\begin{tabular}{ c c c c c c c c c c c c c c c c c c c$	Construction:	· · ·		-			
$\begin{tabular}{ c c c c c c c c c c c c c c c c c c c$	Coarse aggregate $(+1\frac{1}{2} \text{ inch})^2$	W	W	W	W	W	W
Fine aggregate $(-3/4 \text{ inch})^4$ W W	Coarse aggregate, graded ³	267	1,910	W	W	W	W
	Fine aggregate $(-\frac{3}{8} \operatorname{inch})^4$	W	W	W	W	W	W
$\begin{tabular}{ c c c c c c c c c c c c c c c c c c c$	Coarse and fine aggregates ⁵	3,040	18,900	2,300	12,200	552	3,110
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Other construction materials ⁶	173	2,100	18	127	71	608
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Chemical and metallurgical ⁷						
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Special ⁸						
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Other miscellaneous uses ⁹			W	W		
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Unspecified: ¹⁰						
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Reported	4,930	24,200	150	822	53	285
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Estimated	2,800	13,000	200	920	200	1,100
$\begin{tabular}{ c c c c c c c c c c c c c c c c c c c$	Total	11,700	63,400	3,650	20,500	1,550	10,800
QuantityValueQuantityValueConstruction: $\begin{tabular}{lllllllllllllllllllllllllllllllllll$		Distri	District 4		d districts		
Construction: W W Coarse aggregate, graded ³ W W Fine aggregate, graded ³ W W Coarse and fine aggregates ⁵ 524 2,470 1,400 4,060 Other construction materials ⁶ Chemical and metallurgical ⁷ W W Special ⁸ W W Unspecified: ¹⁰ 8 44 1,510 7,250 Estimated 120 560 Total 1970 10,600 2,910 11,300		Quantity	Value	Quantity	Value	_	
Coarse aggregate $(+11/2 \operatorname{inch})^2$ W W Coarse aggregate, graded ³ W W Fine aggregate $(-3/8 \operatorname{inch})^4$ W W Coarse and fine aggregates ⁵ 524 2,470 1,400 4,060 Other construction materials ⁶ Chemical and metallurgical ⁷ W W Special ⁸ W W Other miscellaneous uses ⁹ W W Unspecified: ¹⁰ 8 44 1,510 7,250 Estimated 120 560 Total 1970 10.600 2.910 11.300	Construction:						
$\begin{array}{c c} \underline{\text{Coarse aggregate, graded}^3} & W & W & & \\ \hline Fine aggregate (-3/_8 inch)^4 & W & W & & \\ \hline Coarse and fine aggregates^5 & 524 & 2,470 & 1,400 & 4,060 \\ \hline Other construction materials^6 & & & \\ \hline Chemical and metallurgical^7 & W & W & & \\ \hline Special^8 & W & W & & \\ \hline Other miscellaneous uses^9 & W & W & & \\ \hline Unspecified:^{10} & & & \\ \hline Reported & 8 & 44 & 1,510 & 7,250 \\ \hline Estimated & 120 & 560 & & \\ \hline Total & 1,970 & 10,600 & 2,910 & 11,300 \\ \hline \end{array}$	Coarse aggregate $(+1\frac{1}{2} \text{ inch})^2$	W	W				
$\begin{array}{c c} Fine aggregate (-3\% inch)^4 & W & W & & \\ \hline Coarse and fine aggregates^5 & 524 & 2,470 & 1,400 & 4,060 \\ \hline Other construction materials^6 & & & \\ \hline Chemical and metallurgical^7 & W & W & & \\ \hline Special^8 & W & W & & \\ \hline Other miscellaneous uses^9 & W & W & & \\ \hline Unspecified:^{10} & & & \\ \hline Reported & 8 & 44 & 1,510 & 7,250 \\ \hline Estimated & 120 & 560 & & \\ \hline Total & 1,970 & 10,600 & 2,910 & 11,300 \\ \hline \end{array}$	Coarse aggregate, graded ³	W	W				
$\begin{array}{c c} \underline{\text{Coarse and fine aggregates}^5} & 524 & 2,470 & 1,400 & 4,060 \\ \hline \underline{\text{Other construction materials}^6} & & & & \\ \hline \underline{\text{Chemical and metallurgical}^7} & W & W & & \\ \hline \underline{\text{Special}^8} & W & W & & \\ \hline \underline{\text{Other miscellaneous uses}^9} & W & W & & \\ \hline \underline{\text{Unspecified}}^{10} & & & & \\ \hline \underline{\text{Reported}} & & 8 & 44 & 1,510 & 7,250 \\ \hline \underline{\text{Estimated}} & & 120 & 560 & & \\ \hline \underline{\text{Total}} & & & 1,000 & 2,910 & 11,300 \\ \hline \end{array}$	Fine aggregate $(-\frac{3}{8} \operatorname{inch})^4$	W	W				
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Coarse and fine aggregates ⁵	524	2,470	1,400	4,060		
$\begin{array}{c c} \underline{\text{Chemical and metallurgical}^7} & W & W & & \\ \hline \underline{\text{Special}^8} & W & W & & \\ \hline \underline{\text{Other miscellaneous uses}^9} & W & W & & \\ \hline \underline{\text{Unspecified}}^{10} & & W & W & & \\ \hline \underline{\text{Reported}} & & 8 & 44 & 1,510 & 7,250 \\ \hline \underline{\text{Estimated}} & & 120 & 560 & & \\ \hline \underline{\text{Total}} & & 1.970 & 10,600 & 2.910 & 11.300 \\ \hline \end{array}$	Other construction materials ⁶						
$\begin{tabular}{ c c c c c c c c c c c c c c c c c c c$	Chemical and metallurgical ⁷	W	W				
Other miscellaneous uses ⁹ W W Unspecified: ¹⁰ 8 44 1,510 7,250 Estimated 120 560 Total 1.970 10.600 2.910 11.300	Special ⁸	W	W				
Unspecified: ¹⁰ 8 44 1,510 7,250 Estimated 120 560 Total 1.970 10.600 2.910 11.300	Other miscellaneous uses ⁹	W	W				
Reported 8 44 1,510 7,250 Estimated 120 560 Total 1.970 10.600 2.910 11.300	Unspecified: ¹⁰						
Estimated 120 560 Total 1.970 10.600 2.910 11.300	Reported		44	1,510	7,250		
Total 1.970 10.600 2.910 11.300	Estimated	120	560				
	Total	1,970	10,600	2,910	11,300		

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.

²Includes filter stone, macadam, riprap and jetty stone, and other coarse aggregates.

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

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

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

⁶Includes drain fields.

⁷Includes cement manufacture.

⁸Includes asphalt fillers or extenders.

⁹Includes sugar refining and other specified uses not listed.

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

TABLE 4b

OREGON: CRUSHED STONE SOLD OR USED BY PRODUCERS IN 2004, BY USE AND DISTRICT¹

(Thousand metric tons and thousand dollars)

	Distri	ict 1	Distri	ict 2	District 3	
Use	Quantity	Value	Quantity	Value	Quantity	Value
Construction:						
Coarse aggregate $(+1\frac{1}{2} \operatorname{inch})^2$	W	W	W	W	182	1,170
Coarse aggregate, graded ³	W	W	W	W	622	4,710
Fine aggregate $(-\frac{3}{8} \operatorname{inch})^4$	63	637			142	1,110
Coarse and fine aggregates ⁵	2,740	17,500	1,350	7,230	1,210	7,880
Other construction materials	64	77				
Chemical and metallurgical ⁶						
Other miscellaneous uses ⁷						
Unspecified: ⁸						
Reported	5,240	27,800	481	2,350	21	111
Estimated	3,700	18,000	1,200	7,000	70	380
Total	12,200	66,300	3,610	20,100	2,250	15,400
	District 4		Unspecifie	d districts		
	Quantity	Value	Quantity	Value		
Construction:						
Coarse aggregate $(+1\frac{1}{2} \operatorname{inch})^2$	W	W				
Coarse aggregate, graded ³	W	W				
Fine aggregate $(-\frac{3}{8} \operatorname{inch})^4$	W	W				
Coarse and fine aggregates ⁵	625	3,230				
Other construction materials						
Chemical and metallurgical ⁶	W	W				
Other miscellaneous uses ⁷	W	W				
Unspecified: ⁸						
Reported	8	45	2,200	10,200		
Estimated	120	560				
Total	2,500	13,700	2,200	10,200		

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.

²Includes filter stone, macadam, riprap and jetty stone, and other coarse aggregates.

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

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

⁵Includes crusher run or fill or waste, graded road base or subbase, terrazzo and exposed aggregate, unpaved road surfacing,

and other coarse and fine aggregates.

⁶Includes cement manufacture.

⁷Includes sugar refining.

⁸Reported 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 $^{\rm 1}$

	Quantity		
	(thousand	Value	Unit
Use	metric tons)	(thousands)	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 ²	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 ³	399	2,640	6.62
Unspecified: ⁴			
Reported	4,840	26,600	5.50
Estimated	4,600	25,000	5.33
Total or average	18,500	110,000	5.92

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

²Includes road and other stabilization (lime).

³Includes railroad ballast.

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

TABLE 5b OREGON: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 2004, BY MAJOR USE CATEGORY¹

	Quantity		
	(thousand	Value	Unit
Use	metric tons)	(thousands)	value
Concrete aggregate (including concrete sand)	3,600	\$25,500	\$7.10
Concrete products (blocks, bricks, pipe, decorative, etc.) ²	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 ³	378	2,850	7.54
Unspecified: ⁴			
Reported	6,410	37,600	5.87
Estimated	4,100	20,000	4.91
Total or average	21,000	125,000	5.97

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

²Includes plaster and gunite sands.

³Includes snow and ice control.

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

TABLE 6a OREGON: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 2003, BY USE AND DISTRICT¹

(Thousand metric tons and thousand dollars)

	District 1		Distri	et 2	Distric	et 3
Use	Quantity	Value	Quantity	Value	Quantity	Value
Concrete aggregate and concrete products ²	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 ²	2,590	16,100	W	W	W	W
Road and other stabilization (cement)						
Fill	178	736	65	351	60	389
Other miscellaneous uses ⁴	368	2,200	882	6,570	315	2,790
Unspecified: ⁵						
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 ²	W	W				
Asphaltic concrete aggregates and other bituminous mixtures	W	W				
Road base and coverings ²	215	1,240				
Road and other stabilization (cement)	50	216				
Fill	10	25				
Other miscellaneous uses ⁴	196	1,400				
Unspecified: ⁵						
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.

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

²Includes plaster and gunite sands.

³Includes road and other stabilization (lime).

⁴Includes railroad ballast, and snow and ice control.

⁵Reported 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 $^{\rm 1}$

(Thousand metric tons and thousand dollars)

	District 1		Distri	District 2		et 3
Use	Quantity	Value	Quantity	Value	Quantity	Value
Concrete aggregates and concrete products ²	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 ³	354	2,130	480	3,220	448	2,220
Unspecified: ⁴						
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 ²	113	829				
Asphaltic concrete aggregates and other bituminous mixtures	W	W				
Road base and coverings	216	1,210				
Fill	18	47				
Other miscellaneous uses ³	89	987				
Unspecified: ⁴						
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.

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

²Includes plaster and gunite sands.

³Includes snow and ice control.

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