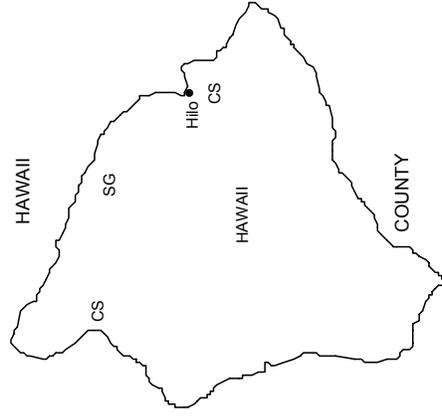
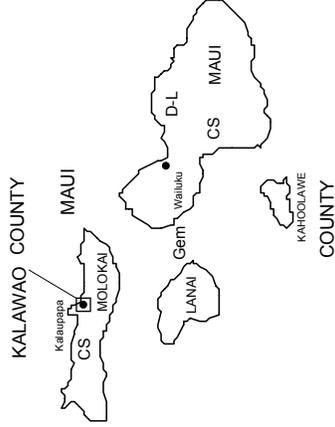
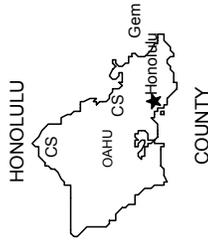
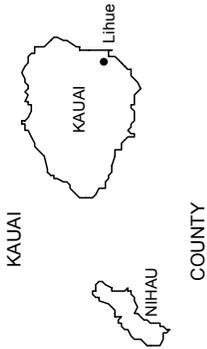


# HAWAII

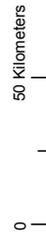


## LEGEND

- ★ Capital
- City

## MINERAL SYMBOLS (Major producing areas)

- CS Crushed stone
- D-L Dimension limestone
- Gem Gemstones
- SG Construction sand and gravel



# THE MINERAL INDUSTRY OF HAWAII

This chapter has been prepared under a Memorandum of Understanding between the U.S. Geological Survey and the Hawaii Department of Land Resources, Commission of Water Resources Management, for collecting information on all nonfuel minerals.

In 2003, the estimated value<sup>1</sup> of nonfuel mineral production for Hawaii was about \$74 million, based upon preliminary U.S. Geological Survey (USGS) data. This was about a 2% increase from that of 2002<sup>2</sup> and followed a 15.6% decrease from 2001 to 2002. Mining in Hawaii consisted mostly of the quarrying of stone to produce crushed stone and the extraction of sand and gravel from open pits, both for use by the construction industry. Gemstones also were produced, mostly black coral and precious coral. In 2003, crushed stone production was up with an increase in value of nearly \$1.5 million. Gemstones production,

<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 and crushed stone, 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.

based on value, was up about 9% and construction sand and gravel production and related value were down slightly.

In 2002, construction sand and gravel production and value and crushed stone value were up with increases in value totaling about \$1.5 million; gemstones production value increased by about 28%. The drop in portland cement value accounted for all of Hawaii’s decrease in value for the year (table 1). This decrease resulted from the 2001 cessation of cement production in the State. [A small quantity of masonry cement was produced from remaining stockpiled portland cement materials in 2002 (table 1).] In 2001, Hawaii Cement Co. had decided to stop production at its plant on the island of Oahu, Honolulu County, and rely solely on imported cement. This operation, which produced cement from imported clinker, was the only cement plant in the State. The company stopped importing clinker in March 2001 and permanently closed its grinding plant in September (van Oss, 2003, p. 16.3). In 2001, in coordination with the shutdown, the company completed construction of its twin 30,000-metric-ton cement silos for storage of imported cement (Wurlitzer, 2001).

## References Cited

- van Oss, H.G., 2003, Cement, *in* Metals and minerals: U.S. Geological Survey Minerals Yearbook 2001, v. I, p. 16.1-16.31.  
Wurlitzer, Dane, 2001, Hawaiian success: International Cement Review, March, p. 41-42.

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

(Thousand metric tons and thousand dollars)

Mineral	2001		2002		2003 <sup>p</sup>	
	Quantity	Value	Quantity	Value	Quantity	Value
Cement:						
Masonry	W	(3)	W	(3)	--	--
Portland	112	15,100 <sup>e</sup>	--	--	--	--
Gemstones	NA	85	NA	109	NA	119
Sand and gravel, construction	534	6,270	610	7,010	600	6,900
Stone, crushed	6,640 <sup>r</sup>	64,300 <sup>r</sup>	6,380	65,100	6,500	66,600
Total	XX	85,700 <sup>r</sup>	XX	72,300	XX	73,600

<sup>e</sup>Estimated. <sup>p</sup>Preliminary. <sup>r</sup>Revised. NA Not available. W Withheld to avoid disclosing company proprietary data. XX Not applicable. -- Zero.

<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>Value excluded to avoid disclosing company proprietary data.

TABLE 2  
HAWAII: 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	7	W	W	\$9.54	6	W	W	\$9.19
Traprock	13 <sup>r</sup>	5,710 <sup>r</sup>	\$55,700 <sup>r</sup>	9.75	14	5,600	\$57,800	10.34
Volcanic cinder and scoria	1	W	W	7.94	3	W	W	8.38
Miscellaneous stone	1 <sup>r</sup>	W	W	9.48 <sup>r</sup>	1	W	W	9.49
Total or average	XX	6,640 <sup>r</sup>	64,300 <sup>r</sup>	9.69	XX	6,380	65,100	10.20

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

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

TABLE 3  
HAWAII: 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>			
<b>Coarse aggregate (+1 1/2 inch):</b>			
Riprap and jetty stone	W	W	\$17.09
Filter stone	W	W	12.65
Other coarse aggregates	68	\$534	7.85
Total or average	68	534	7.85
<b>Coarse aggregate, graded:</b>			
Concrete aggregate, coarse	W	W	14.85
Other graded coarse aggregates	435	5,070	11.65
Total or average	435	5,070	11.65
<b>Fine aggregate (-3/8 inch), other fine aggregates</b>			
Coarse and fine aggregates:			
Graded road base or subbase	142	1,060	7.49
Crusher run or fill or waste	376	2,570	6.83
Other coarse and fine aggregates	255	2,150	8.44
Total or average	773	5,790	7.48
<b>Agricultural:</b>			
Limestone	W	W	11.29
Other agricultural uses	3	38	12.67
Total or average	3	38	12.67
Other miscellaneous uses and specified uses not listed	4	92	23.00
Unspecified, estimated <sup>2</sup>	4,800	51,000	10.66
Grand total or average	6,380	65,100	10.20

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>Estimated production without a breakdown by end use.

TABLE 4  
HAWAII: 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 and concrete products <sup>2</sup>	264	W	W
Asphaltic concrete aggregates and other bituminous mixtures	72	W	W
Road base and coverings	75	W	W
Fill	189	W	W
Other miscellaneous uses	9	W	W
Unspecified, estimated <sup>3</sup>	1	W	W
Total or average	610	\$7,010	\$11.48

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

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

<sup>2</sup>Includes railroad ballast.

<sup>3</sup>Estimated production without a breakdown by end use.