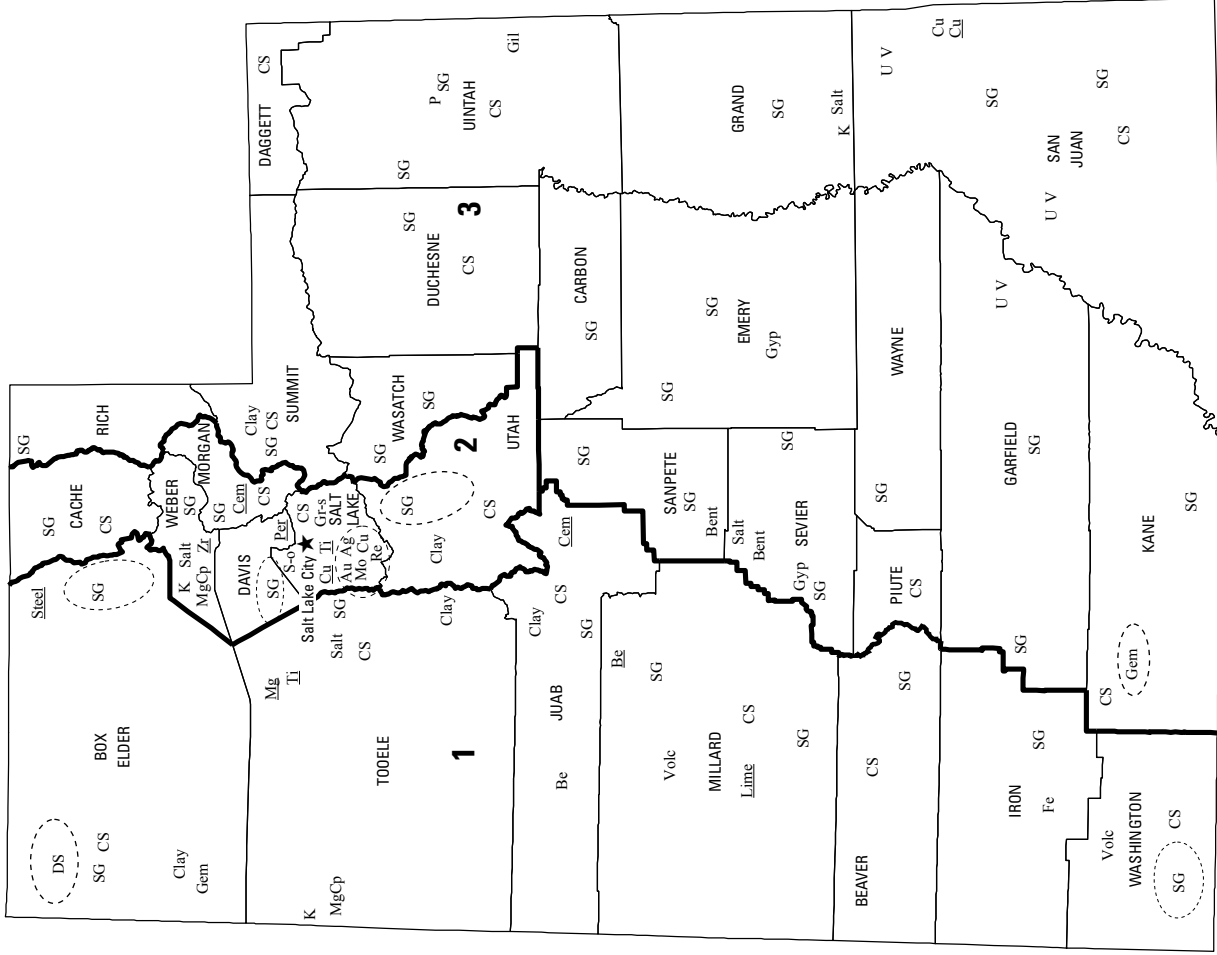




2012–2013 Minerals Yearbook

UTAH

UTAH



LEGEND

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

MINERAL SYMBOLS (Principal producing areas)

- | | | | |
|------|-----------------|-------|-------------------------------------|
| Ag | Silver | Gil | Gilsonite |
| Au | Gold | Gr-s | Graphite - synthetic |
| Be | Beryllium | Gyp | Gypsum |
| Be | Beryllium plant | GYP | Gypsum plant |
| Bent | Bentonite | K | Potash |
| Cem | Cement plant | Lime | Lime plant |
| Clay | Common clay | Mg | Magnesium metal plant |
| CS | Crushed stone | MgCp | Magnesium compounds |
| Cu | Copper | Mo | Molybdenum |
| Cu | Copper plant | P | Phosphate rock |
| DS | Dimension stone | Per | Perlite plant |
| Fe | Iron | Re | Rhenium |
| Gem | Gemstones | Salt | Salt |
| | | SG | Construction sand and gravel |
| | | S-o | Sulfur (oil) |
| | | Steel | Steel plant |
| | | Ti | Titanium metal plant |
| | | U | Uranium |
| | | V | Vanadium |
| | | Volc | Volcanic cinder |
| | | Zr | Zirconium metal plant |
| | | ○ | Concentration of mineral operations |



THE MINERAL INDUSTRY OF UTAH

This chapter has been prepared under a Memorandum of Understanding between the U.S. Geological Survey and the Utah Geological Survey for collecting information on all nonfuel minerals.

In 2013, the value of the nonfuel mineral production¹ in the State of Utah increased to \$3.68 billion, 4.9% of the total U.S. nonfuel mineral production, ranking it fifth in the Nation. In 2012, the corresponding value was \$3.32 billion, 4.4% of the U.S. total nonfuel mineral production, ranking it seventh among the 50 States. In 2013, on a per capita basis, nonfuel mineral production in Utah had a value of \$1,270 compared with the national average of \$238. In 2012, the per capita value was \$1,170 compared with the national average of \$241.

The value of nonfuel mineral production in Utah for the years 2006 through 2013 was as follows (in billions of dollars): \$4.01 (2006), \$3.88 (2007), \$4.17 (2008), \$3.81 (2009), \$4.31 (2010), \$4.31 (2011), \$3.32 (2012), and \$3.68 (2013).

In 2013, there were 2,736 employees in nonfuel mineral mines in Utah and 1,061 in mills and preparation plants. In 2012, the corresponding numbers were 2,800 in nonfuel mineral mines and 1,127 in mills and preparation plants (U.S. Mine Safety and Health Administration, 2013, p. 15; 2014, p. 15). In 2013, the average annual wage in Utah for all mining was \$68,406 compared with \$41,702 for all industries. In 2012, the corresponding figures were \$66,988 and \$41,159, respectively (National Mining Association, unpub. data, February 4, 2016).

Utah produced a wide variety of industrial minerals and metals. It was the only State where beryllium, magnesium metal, and vanadium were produced. In 2013, on the basis of quantity, Utah remained ranked second in copper production out of five producing States and second in bentonite production out of eight producing States. In 2013, it ranked fourth in gold out of 10 producing States, decreasing from third in 2012. Production quantity and value for Utah's nonfuel mineral commodities are given in table 1.

Commodity Review

The Utah Geological Survey² prepared reports for the mineral industry of the State covering activities in 2012 and 2013 from which the following data have been extracted. These data may differ from USGS data, which are based on company responses to USGS surveys and estimation for nonrespondents. The USGS withheld some data to avoid disclosing company proprietary data.

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 USGS mineral production data published in this chapter are those available as of February 2016. Data in this report are rounded to three significant digits and percentages are calculated from unrounded data. All USGS Mineral Industry Surveys and USGS Minerals Yearbook chapters—mineral commodity, State, and country—can be retrieved over the Internet at <http://minerals.usgs.gov/minerals>.

²Taylor Boden, Geologist (Minerals); Kenneth Krahulec, Minerals Section Manager; and Andrew Rupke, Industrial Minerals Geologist of the Utah Geological Survey, provided the State nonfuel mineral industry information.

In 2013, the overall value of metals increased slightly despite lower precious-metal prices. Industrial minerals value grew for the third consecutive year. This growth was supported by construction projects and high production and prices for brine-derived potash products.

In 2012, lower copper and molybdenum production and prices resulted in a significantly lower value for base metals than in 2011. Similarly, a large decrease in precious-metals production resulted in a major decrease in the overall value of metals compared with 2011.

Industrial Minerals

Cement.—There were two cement plants operating in Utah: Ash Grove Cement Co. with the Leamington quarry and plant east of Leamington in Juab County, and Holcim Inc. with the Devils Slide quarry and plant east of Morgan in Morgan County. In 2013, Portland cement production decreased from 2012. Besides limestone, the Ash Grove and Holcim mines also produce small amounts of sandstone, clay, and shale, which are minor feedstock for their cement plants.

Clays (Bentonite, Common Clay, and High-Alumina Clay).—Bentonite, common clay, and high-alumina clay were produced by many small and large mines, often on an intermittent basis. Bentonite was produced by Western Clay Co. and Redmond Minerals, Inc., which together produced most of the clay commodity group. The leading producers of common clay and high-alumina clay were Interstate Brick Co., and Holcim, Inc., respectively. Common clay was used largely to make bricks, whereas high-alumina clay was used to make portland cement.

Gypsum.—Production from four operators increased 3% in 2013 from 2012. The four Utah gypsum producers were Diamond K Gypsum, Inc.; Nephi Gypsum; Sunroc Corp.; and United States Gypsum Co. Two gypsum wallboard plants were located near Sigurd in Sevier County. The plant operated by United States Gypsum was active in 2013 but the plant operated by Georgia Pacific remained idle owing to economic considerations. Utah gypsum was primarily used in raw or crude form by regional cement companies as an additive to retard the setting time of cement, and by the agriculture industry as a soil conditioner.

Lime.—During 2012 and 2013, Graymont Western U.S., Inc. was the sole producer of lime in Utah. In the past, Lhoist North America produced dolomitic lime, but their quarry and plant in Tooele County have been idle since 2008. Graymont Western U.S. produces high-calcium quicklime and dolomitic quicklime from their quarry and plant in the Cricket Mountains.

Magnesium Compounds.—Most of the magnesium chloride was produced by Great Salt Lake Minerals Corporation on the east side of Great Salt Lake and Intrepid Potash-Wendover west of Great Salt Lake. Utah Minerals Recovery, LLC also produced a small amount of magnesium chloride in 2013 at their Knolls facility.

Phosphate Rock.—Simplot Phosphates continued to be the only active phosphate rock producer in Utah. The phosphate concentrate produced at the mine is transported in slurry through a 154-kilometer underground pipeline to the Simplot fertilizer plant near Rock Springs, Wyoming.

Potash.—In 2013, the value of potash produced in Utah decreased compared with 2012. The declining value was due to a decrease in the production of potassium sulfate and reduction in the price of potassium chloride. Great Salt Lake Minerals Corporation produced potassium sulfate and Intrepid Potash-Wendover and Intrepid Potash-Moab produced potassium chloride.

Salt.—Utah salt production in 2013 increased slightly from 2012. Most of this salt was produced from Great Salt Lake brine by three operators—Cargill Salt Co., Great Salt Lake Minerals Corp., and Morton International. The remainder came from Intrepid Potash-Wendover near Wendover in Tooele County, Intrepid Potash-Moab near Moab in Grand County, and Redmond Minerals, Inc. near Redmond in Sanpete County.

Shale (Expanded).—Expanded shale in Utah was produced by Utelite, Inc. at their quarry and plant near Wanship in Summit County. Production increased over 2012 production. Expanded shale is a lightweight aggregate, which is sometimes called “bloating shale,” and is mainly used by the construction industry. It is produced by rapidly heating high-purity shale from the Cretaceous Frontier Formation to about 2,000 °F, which causes it to expand and vitrify. The resulting aggregate is durable, inert, uniform in size, and lightweight, with a density about one-half that of conventional aggregates. The material is used in concrete block, horticulture additives, roof tile, and structural concrete, as well as for highway construction and loose fill. Some of Utelite’s production is used locally, but much of it is shipped out of the State.

Stone, Crushed (Limestone).—During 2013, 3.3 million metric tons (Mt) of limestone was produced in Utah. Most of the limestone was from Ash Grove Cement Co.; Graymont Western U.S., Inc.; and Holcim, Inc. The Cotter Corp. in San Juan County produced a lesser amount of limestone for flue gas desulfurization at coal-fired powerplants. Limestone is primarily used in the manufacture of cement and lime products, with lesser amounts used in various aspects of the construction industry, for flue-gas desulfurization in coal-fired powerplants, and as a safety product for the coal mining industry as “rock dust.”

Metals

Beryllium.—Utah remained the sole U.S. producer of beryllium ore from the mineral bertrandite. Materion Natural Resources, Inc. mines bertrandite from 10 small- to medium-sized pits in the Spor Mountain area. Materion operated a mill in Millard County, which is the Nation’s sole source of beryllium concentrate. Bertrandite ore and imported beryl were processed into beryllium hydroxide at the mill.

Copper.—The KUC Bingham Canyon Mine produced most of the copper in Utah and remained the second leading copper producer in the United States. There was a temporary halt to operations after a pit wall failure in 2013. In June 2012, the

\$660 million Cornerstone push-back was approved to extend the Bingham Canyon Mine life from 2018 to 2029. This project involves pushing back the south pit wall about 300 meters to access an additional 515 Mt of ore.

Lisbon Valley Mining Company operated an open pit copper mine and a solvent extraction-electrowinning (SX-EW) processing facility in San Juan County. The mine had restarted in 2009. The copper concentrates were shipped by truck to the KUC smelter at Magna, Utah.

CS Mining produced a relatively small amount of copper in 2013 from its Hidden Treasure Mine in Beaver County. The mine and mill were restarted in September 2012 after shutting down in 2009.

Gold and Silver.—Most of Utah’s gold and silver continued to be produced as a byproduct of copper mining at the Bingham Canyon Mine. Small quantities of gold and silver may have been produced by other small Utah mines. A small quantity of gold came from residual leaching of existing heaps at the KUC Barneys Canyon Mine, which ceased active mining in 2001 after ore exhaustion. CS Mining increased silver production at the Hidden Treasure Mine in 2013; the concentrate also contained a small amount of gold.

Iron Ore.—Iron ore in Utah was mostly produced by CML Metals, Inc. from their Iron Mountain project, which was a redevelopment of the Comstock-Mountain Lion iron mine located in Iron County. The concentrator was completed in early 2012 and operated at limited capacity through 2012, due to concentrate dewatering difficulties, which continued into 2013. Iron ore from the Iron Mountain project was transported by rail to a port in southern California and shipped overseas. In addition, CS Mining produced small quantities of magnetite in 2013 from its Hidden Treasure Mine.

Magnesium.—U.S. Magnesium, LLC remained the only facility producing magnesium from a primary source in the United States. Magnesium chloride concentrate was produced from Great Salt Lake brines through evaporation and converted to magnesium metal by an electrolytic process. Significant quantities of U.S. Magnesium’s production were used by a nearby plant, operated by Allegheny Technologies Inc., to produce titanium sponge.

Molybdenum.—Utah’s molybdenum production in 2013 came solely from the KUC Bingham Canyon Mine, and was recovered as a byproduct from the copper operation. KUC began construction of a \$340 million molybdenum autoclave process facility in 2011, which would improve the recovery of molybdenum and also allow rhenium to be recovered. Work on the facility was suspended in 2013.

Vanadium.—Energy Fuels, Inc. owns six permitted uranium mines in Utah, as well as the 1,800-metric-ton-per-day dual-circuit (uranium-vanadium) White Mesa mill near Blanding. The mill processes both uranium-vanadium ore and an alternate feed waste material. The mill began operating on stockpiled ore from Energy Fuels-owned mines in 2008, and began accepting ore from other companies for toll milling in 2009. Energy Fuels Inc. suspended production of uranium and vanadium from its Utah mines in 2013 because of low uranium prices. However, the company continued to process stockpiled uranium and vanadium ore at its White Mesa mill.

Exploration and Development Activities

Mineral exploration and development declined in 2013 relative to 2012, and in 2012 relative to 2011; the primary exploration targets were gold, phosphate rock, and potash.

Industrial Minerals

Mineral industry activity with respect to industrial minerals was as follows:

- Numerous Utah potash exploration projects focused on deep evaporites in the Paradox basin, and on shallow brines in the Sevier Lake playa and in the Great Salt Lake Desert.
- Exploration for phosphatic shales in the Permian Meade Peak Member of the Phosphoria Formation was centered near the existing Simplot Phosphates, LLC operation near Vernal along the south flank of the Uinta Mountains. West of Simplot, Agrium has completed extensive drilling to develop the Ashley Creek deposit. East of Simplot, Utah Mineral Resources, LLC planned to drill the Diamond Mountain phosphate deposit, which was previously explored during the late 1960s.
- The Dragon Mine in Juab County had been closed since 1976 but had historical production of approximately 1.2 Mt of halloysite, at least 450,000 metric tons of iron ore, and uncertain (but smaller amounts) of oxidized silver-gold ore. Halloysite is a special kaolinite-group clay with a unique microtubular structure. The iron ore is an exceptionally pure goethite-hematite gossan, probably developed from a massive pyrite vein. Applied Minerals Inc. owns the Dragon pit and related property (38 patented lode claims), and obtained a large mine permit and was in the process of developing an underground mine and constructing a new mill.

Metals

Mineral industry activity with respect to metals was as follows:

- Avalon Rare Metals controls 383 unpatented lode claims (7,900 acres) on a Spor Mountain rare-metal prospect adjacent to Materion's beryllium operations. In 2012, Avalon drilled four holes and reportedly encountered intense alteration, brecciation, and faulting, which are typically found near hydrothermal mineralization.
- Clifton Mining Company and Desert Hawk Gold Corp. agreed in 2009 to jointly develop Clifton's mineral properties in the Gold Hill district of western Tooele County. In 2013, Desert Hawk received permits and began construction of a small open pit, heap-leach operation at the Kiewit, low-sulfidation, quartz-carbonate-adularia stockwork gold deposit and was working to expand and better define the resource.
- The Drum Mountains (Detroit mining district) of Juab and Millard Counties remained one of the most competitive metal exploration areas in the State in 2013, with almost 800 mining claims being staked by several companies in the copper-gold area of the old mining district.
- In 2013, the Deer Trail Mine, a past producer that had been under development by Unico, Inc. in the Mt. Baldy-Ohio mining district of Piute County, was acquired by Western Pacific Resources Corp.

References Cited

- U.S. Mine Safety and Health Administration, [2013], Mine injury and worktime, quarterly, January–December 2012: U.S. Mine Safety and Health Administration, Final, closeout edition, 33 p. (Accessed February 8, 2016, at http://arlweb.msha.gov/Stats/Part50/WQ/MasterFiles/MIWQ%20Master_20125.pdf.)
- U.S. Mine Safety and Health Administration, [2014], Mine injury and worktime, quarterly, January–December 2013: U.S. Mine Safety and Health Administration, Final, closeout edition, 34 p. (Accessed on February 8, 2016, at http://arlweb.msha.gov/Stats/Part50/WQ/MasterFiles/MIWQ%20Master_20135.pdf.)

TABLE 1
NONFUEL MINERAL PRODUCTION IN UTAH^{1,2}

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral	2011		2012		2013		
	Quantity	Value	Quantity	Value	Quantity	Value	
Beryllium concentrates	metric tons	5,920	NA	5,570	NA	5,910	NA
Clays, common		334	7,260	332	12,100	306	11,900
Gemstones, natural		NA	789	NA	879	NA	857
Iron ore, usable, shipped		--	--	437	20,400	1,310	190,000
Salt		2,660	126,000	1,380	99,600	2,040	183,000
Sand and gravel, construction		25,300 ^r	149,000	23,900	173,000	24,500	175,000
Stone:							
Crushed		7,920 ^r	61,200 ^r	7,370	56,900	7,260	59,300
Dimension		7	595	W	W	W	W
Vanadium ³		590	8,790	106	1,520	591	7,870
Combined values of cement (portland), clays (bentonite), copper, gold, gypsum (crude), lime, magnesium compounds, magnesium metal, molybdenum concentrates, phosphate rock, potash, silver, and values indicated by symbol W		XX	3,960,000	XX	2,960,000	XX	3,060,000
Total		XX	4,310,000 ^r	XX	3,320,000	XX	3,680,000

¹Revised. NA Not available. W Withheld to avoid disclosing company proprietary data; included in "Combined values" data. XX Not applicable.

²Production as measured by mine shipments, sales, or marketable production (including consumption by producers).

³Data are rounded to no more than three significant digits; may not add to totals shown.

⁴Recoverable content of ores and so forth.

TABLE 2
UTAH: CRUSHED STONE SOLD OR USED IN THE UNITED STATES, BY TYPE¹

Type	2012				2013			
	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value
Limestone ²	13	3,960	\$33,300	\$8.40	11	3,750	\$34,100	\$9.10
Dolomite	2	1,490	11,300	7.58	2	1,410	11,500	8.12
Sandstone and quartzite ³	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)
Volcanic cinder and scoria	4	1	6	7.38	2	2	14	7.98
Miscellaneous stone	17	1,920	12,400	6.43	15	2,100	13,700	6.53
Total or average	XX	7,370	56,900	7.72	XX	7,260	59,300	8.16

XX Not applicable.

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

²Includes limestone-dolomite reported with no distinction between the two kinds of stone.

³Includes sandstone-quartzite reported with no distinction between the two kinds of stone.

⁴Withheld to avoid disclosing company proprietary data; included with "Miscellaneous stone."

TABLE 3
UTAH: CRUSHED STONE SOLD OR USED BY PRODUCERS, BY USE¹

Use	2012			2013		
	Quantity (thousand metric tons)	Value (thousands)	Unit value	Quantity (thousand metric tons)	Value (thousands)	Unit value
Construction:						
Coarse aggregate (+1½ inch):						
Riprap and jetty stone	17	\$267	\$15.71	233	\$2,480	\$10.62
Unspecified coarse aggregate	307	1,190	3.86	W	W	W
Coarse aggregate, graded:						
Concrete aggregate, coarse	--	--	--	37	400	10.91
Fine aggregate (-¾ inch):						
Stone sand, bituminous mix or seal	--	--	--	74	400	5.43
Screening, undesignated	9	67	7.45	W	W	W
Coarse and fine aggregates:						
Graded road base or subbase	26	104	3.98	67	443	6.61
Terrazzo and exposed aggregate	1	128	127.83	W	W	W
Unspecified and other construction materials	2	70	34.87	3	123	36.93
Agricultural:						
Agricultural Limestone	W	W	W	W	W	W
Chemical and metallurgical:						
Cement manufacture	W	W	W	W	W	W
Lime manufacture	W	W	W	W	W	W
Sulfur oxide removal	W	W	W	85	2,820	32.95
Special:						
Mining dusting or acid water treatment	W	W	W	W	W	W
Other miscellaneous uses and specified uses not listed	103	1,350	13.08	67	490	7.28
Unspecified: ²						
Reported	3,230	22,100	6.84	3,390	23,900	7.05
Estimated	359	3,330	9.28	39	423	10.87
Total or average	7,370	56,900	7.72	7,260	59,300	8.16

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

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

²Reported and estimated production without a breakdown by end use.

TABLE 4
 UTAH: CRUSHED STONE SOLD OR USED BY PRODUCERS IN 2012, BY USE AND DISTRICT¹

(Thousand metric tons and thousand dollars)

Use	District 1		District 2		District 3	
	Quantity	Value	Quantity	Value	Quantity	Value
Construction:						
Coarse aggregate (+1½ inch) ²	--	--	311	1,250	13	206
Coarse aggregate, graded	--	--	--	--	--	--
Fine aggregate (-¾ inch) ³	--	--	9	67	--	--
Coarse and fine aggregates ⁴	(5)	5	26	104	1	123
Other construction materials	W	W	W	W	--	--
Agricultural ⁶	W	W	W	W	--	--
Chemical and metallurgical ⁷	W	W	W	W	--	--
Special ⁸	W	W	--	--	--	--
Other miscellaneous uses and specified uses not listed ⁹	104	1,350	--	--	--	--
Unspecified:¹⁰						
Reported	1,340	10,500	1,490	11,300	1	7
Estimated	106	801	178	1,970	75	557
Total	3,760	31,100	3,120	24,600	89	894
Unspecified districts						
Use	Quantity	Value				
Construction:						
Coarse aggregate (+1½ inch) ²	--	--				
Coarse aggregate, graded	--	--				
Fine aggregate (-¾ inch) ³	--	--				
Coarse and fine aggregates ⁴	--	--				
Other construction materials	--	--				
Agricultural ⁶	--	--				
Chemical and metallurgical ⁷	--	--				
Special ⁸	--	--				
Other miscellaneous uses and specified uses not listed ⁹	--	--				
Unspecified:¹⁰						
Reported	409	311				
Estimated	--	--				
Total	409	311				

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 riprap and jetty stone and unspecified coarse aggregate.

³Includes screening (undesigned).

⁴Includes graded road base or subbase, terrazzo and exposed aggregate, crusher run, and unspecified coarse and fine aggregates.

⁵Less than ½ unit.

⁶Includes agricultural limestone.

⁷Includes cement manufacture, lime manufacture, and sulfur oxide removal.

⁸Includes mine dusting or acid water treatment.

⁹Includes drain fields, waste material, lightweight aggregate (slate), pipe bedding, refractory stone (including ganister), and other miscellaneous uses.

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

TABLE 5
 UTAH: CRUSHED STONE SOLD OR USED BY PRODUCERS IN 2013, BY USE AND DISTRICT¹

(Thousand metric tons and thousand dollars)

Use	District 1		District 2		District 3	
	Quantity	Value	Quantity	Value	Quantity	Value
Construction:						
Coarse aggregate (+1½ inch) ²	--	--	242	2,500	1	12
Coarse aggregate, graded ³	--	--	37	400	--	--
Fine aggregate (-¾ inch) ⁴	W	W	W	W	--	--
Coarse and fine aggregates ⁵	W	W	W	W	8	53
Other construction materials	W	W	W	W	--	--
Agricultural ⁶	W	W	W	W	--	--
Chemical and metallurgical ⁷	W	W	W	W	28	923
Special ⁸	W	W	--	--	--	--
Other miscellaneous uses and specified uses not listed ⁹	W	W	--	--	--	--
Unspecified: ¹⁰						
Reported	1,430	11,700	1,440	11,700	17	129
Estimated	27	219	--	--	12	204
Total	4,000	33,100	2,700	24,500	66	1,320
Unspecified districts						
Use	Quantity	Value				
Construction:						
Coarse aggregate (+1½ inch) ²	--	--				
Coarse aggregate, graded ³	--	--				
Fine aggregate (-¾ inch) ³	--	--				
Coarse and fine aggregates ⁴	--	--				
Other construction materials	--	--				
Agricultural ⁶	--	--				
Chemical and metallurgical ⁷	--	--				
Special ⁸	--	--				
Other miscellaneous uses and specified uses not listed ⁹	--	--				
Unspecified: ¹⁰						
Reported	503	377				
Estimated	--	--				
Total	503	377				

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 riprap and jetty stone and unspecified coarse aggregate.

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

⁴Includes screening (undesigned).

⁵Includes graded road base or subbase, terrazzo and exposed aggregate, crusher run, and unspecified coarse and fine aggregates.

⁶Includes agricultural limestone.

⁷Includes cement manufacture, lime manufacture, and sulfur oxide removal.

⁸Includes mine dusting or acid water treatment.

⁹Includes drain fields, waste material, lightweight aggregate (slate), pipe bedding, refractory stone (including ganister), and other miscellaneous uses.

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

TABLE 6
 UTAH: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 2012,
 BY MAJOR USE CATEGORY¹

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
Concrete aggregate (including concrete sand)	1,470	\$17,200	\$11.70
Plaster and gunitite sands	66	1,420	21.52
Asphaltic concrete aggregates and road base materials ²	3,170	18,700	5.90
Fill	1,560	7,420	4.76
Other miscellaneous uses ³	218	1,270	5.83
Unspecified: ⁴			
Reported	7,420	52,900	7.13
Estimated	9,970	73,600	7.38
Total or average	23,900	173,000	7.24

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

²Includes road and other stabilization (cement).

³Includes filtration, railroad ballast, and snow and ice control.

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

TABLE 7
 UTAH: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 2013,
 BY MAJOR USE CATEGORY¹

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
Concrete aggregate (including concrete sand)	2,070	\$28,100	\$13.55
Plaster and gunitite sands	67	1,440	21.46
Asphaltic concrete aggregates and road base materials ²	3,200	19,400	6.05
Fill	2,640	11,100	4.21
Other miscellaneous uses ³	586	5,450	9.30
Unspecified: ⁴			
Reported	9,220	62,600	6.79
Estimated	6,680	46,700	6.98
Total or average	24,500	175,000	7.14

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

²Includes road and other stabilization (cement).

³Includes railroad ballast, and snow and ice control.

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

TABLE 8
 UTAH: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 2012, BY USE AND DISTRICT¹

(Thousand metric tons and thousand dollars)

Use	District 1		District 2		District 3	
	Quantity	Value	Quantity	Value	Quantity	Value
Concrete aggregate (including concrete sand)	305	3,340	975	12,000	136	1,420
Plaster and gunite sands	W	W	--	--	W	W
Asphaltic concrete aggregates and road base materials ²	683	4,170	1,450	8,950	984	5,230
Fill	517	2,760	909	4,000	128	665
Other miscellaneous uses ³	W	W	94	372	W	W
Unspecified: ⁴						
Reported	1,530	11,200	4,330	31,300	1,120	8,010
Estimated	2,160	15,800	5,260	39,000	2,550	18,800
Total	5,360	39,400	13,000	95,600	4,940	34,400
	Unspecified districts					
Use	Quantity	Value				
Concrete aggregate (including concrete sand)	51	515				
Plaster and gunite sands	--	--				
Asphaltic concrete aggregates and road base materials ²	59	361				
Fill	--	--				
Other miscellaneous uses ³	--	--				
Unspecified: ⁴						
Reported	445	2,350				
Estimated	--	--				
Total	555	3,230				

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 road and other stabilization (cement).

³Includes filtration, railroad ballast, and snow and ice control.

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

TABLE 9
 UTAH: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 2013, BY USE AND DISTRICT¹

(Thousand metric tons and thousand dollars)

Use	District 1		District 2		District 3	
	Quantity	Value	Quantity	Value	Quantity	Value
Concrete aggregate (including concrete sand)	679	7,350	1,270	19,000	124	1,690
Plaster and gunite sands	W	W	--	--	W	W
Asphaltic concrete aggregates and road base materials ²	571	3,910	1,770	10,300	860	5,130
Fill	326	1,290	2,270	9,470	46	358
Other miscellaneous uses ³	W	W	220	2,030	W	W
Unspecified: ⁴						
Reported	1,670	12,000	4,880	32,900	1,530	11,000
Estimated	1,770	13,100	2,840	18,300	2,080	15,300
Total	5,430	42,300	13,200	92,000	4,660	33,700
	Unspecified districts					
	Quantity	Value				
Concrete aggregate (including concrete sand)	--	--				
Plaster and gunite sands	--	--				
Asphaltic concrete aggregates and road base materials ²	--	--				
Fill	--	--				
Other miscellaneous uses ³	--	--				
Unspecified: ⁴						
Reported	1,130	6,610				
Estimated	--	--				
Total	1,130	6,610				

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 road and other stabilization (cement).

³Includes railroad ballast, and snow and ice control.

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