

A Rock Star: Arizona a Top Producer of Stone from Public Lands

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I. Introduction

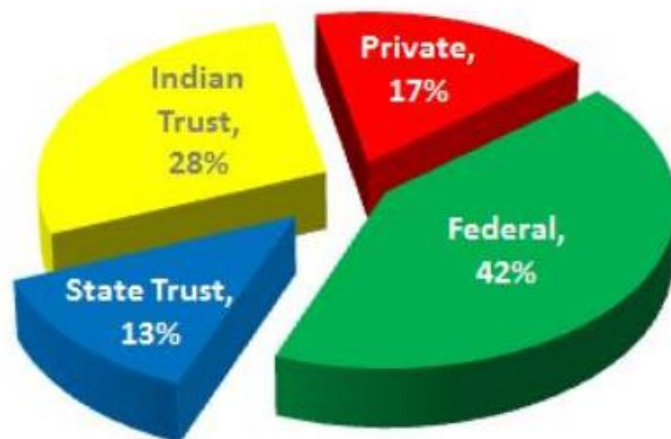
The State of Arizona has been a top producer of stone from public lands for at least twenty years. It has been the first or second ranking producer annually in comparison to the other public lands states since 1996, but for 1996 and 2012. In several years it has been outranked only by Wyoming, whose prodigious stone production may be related to the oil and gas industries.

Public lands are defined as those lands owned by the United States of America. Despite the growth in population Arizona has seen over the past 30 plus years, more than 55 percent of the state's land is still owned by the State of Arizona and the United States.¹ This land ownership pattern is typical of the public lands states. The other public lands states are Alaska, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, and Wyoming.

LAND OWNERSHIP IN ARIZONA

The State of Arizona contains an estimated 72,931,000 acres, or approximately 113,417 square miles, making it the sixth largest state in the United States. The surface land ownership in Arizona can be classified into four basic categories.

The percentages are estimates derived from digitized map data. The category called Private is overestimated due to the inclusion of small amounts of land owned by local, State, and Federal agencies.



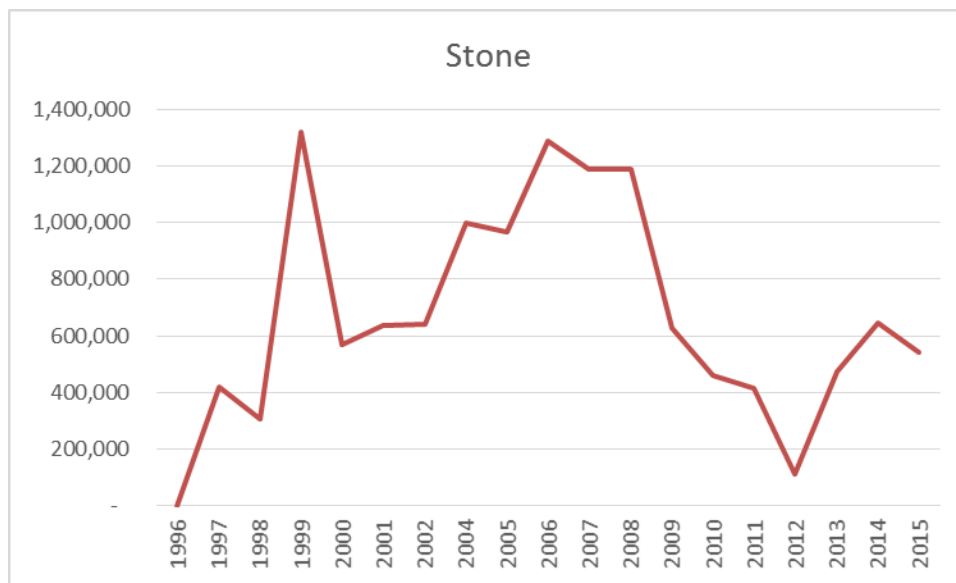
Not surprisingly, mineral deposits suitable for the production of mineral materials such as stone or sand and gravel are often found on public or state lands. Stone and sand and gravel can be mined and removed from Arizona’s public and state lands pursuant to specific statutes and regulations.

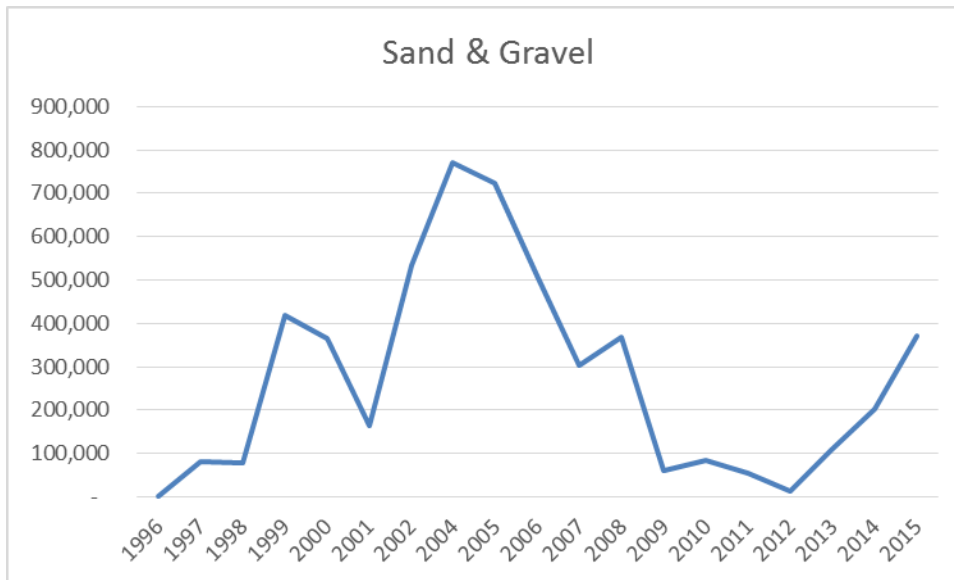
This article compares Arizona’s stone and sand and gravel production from public lands to the other public lands states as they too contain large amounts of public and state lands. It also discusses stone and sand and gravel production from Arizona state lands.

II. Public Lands

Stone and sand and gravel production history from public lands is well documented.² See Table 1. The production history from those lands provides a fascinating summary of Arizona and national history for the same period. Population changes and economic activities are directly reflected in the numbers.³

Graphing the numbers shows Arizona’s general population growth, the Great Recession, and the ongoing recovery:





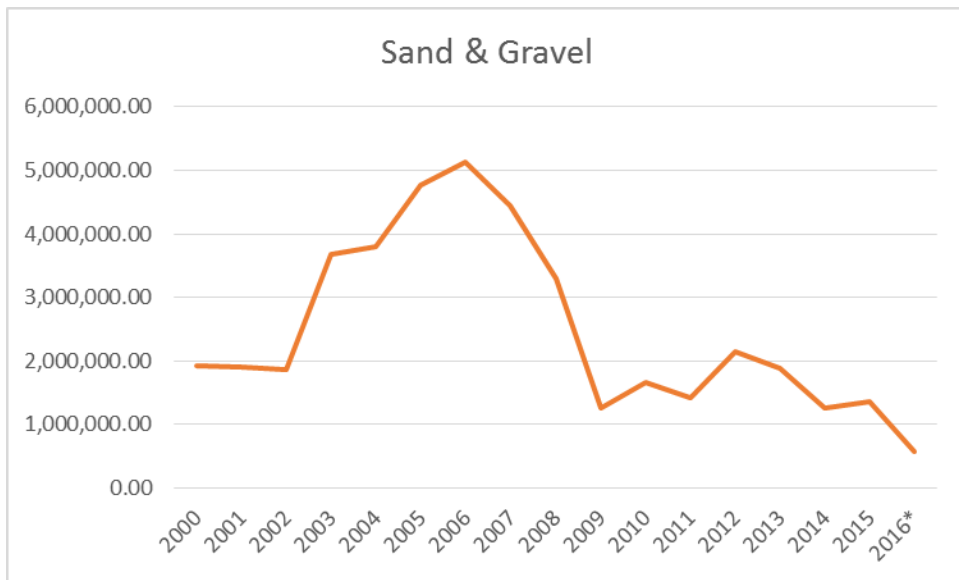
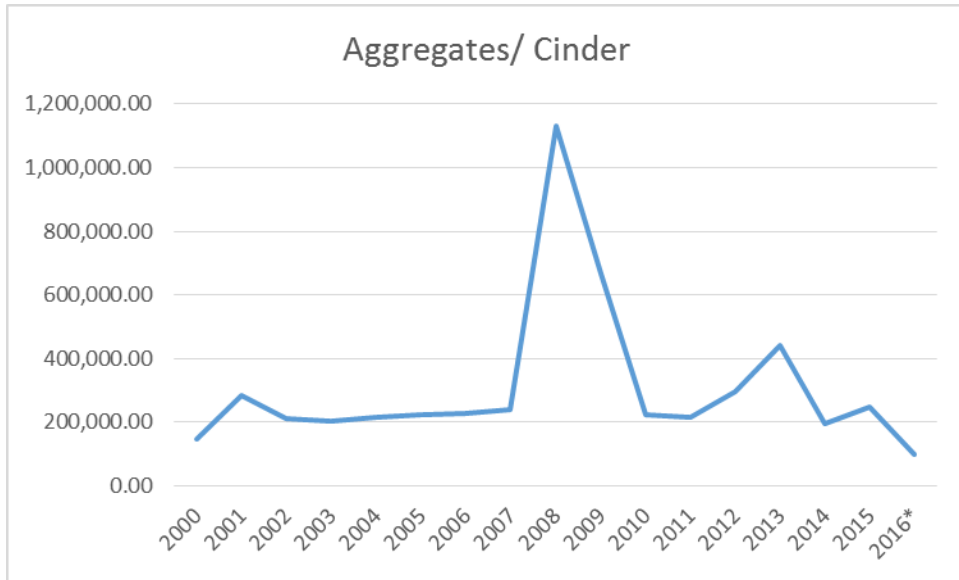
A large portion of Arizona is held by the United States through the Department of the Interior, Bureau of Land Management (BLM). BLM generally considers mineral materials such as stone and sand and gravel to be saleable minerals, which must be purchased from BLM pursuant to the Mineral Materials Act of 1947 (“Materials Act”).⁴

Sale of mineral materials from federal lands is controlled by federal regulations.⁵ The regulations provide for noncompetitive sales, competitive sales, contract administration, environmental assessment, and other topics. BLM will sell mineral materials at a fair market value established by appraisal.⁶

III. State Lands

State statutes⁷ provide that the Arizona State Land Department (“ASLD”) may dispose of common variety minerals at auction and may execute common variety mineral leases offered at auction for the severance, extraction or disposal of common variety minerals.

Reviewing the state land production numbers as compiled by ASLD reveals trends similar to those from the public lands.⁸ See Table 2. A graphical presentation makes the trends more apparent.



A statute⁹ defines common variety minerals as:

For purposes of this article, “common variety minerals”:

1. Includes deposits of petrified wood, stone, pumice, pumicite or cinders, decomposed granite, sand, gravel, boulders, common clay, fill dirt and waste rock.
2. Includes deposits that, although they may have value for use in trade, manufacturing and the construction, landscaping and decorative rock industries, do not

possess a distinct, special economic value for those uses beyond the normal uses of those deposits.

3. Includes material used as road base material, riprap, ballast, borrow, fill, facing stone, landscaping or ornamental uses and other similar uses.

4. Does not include limestone suitable for use in producing cement, metallurgical or chemical grade limestone or gypsum.

A statute¹⁰ describes the salient points of mineral materials auction and lease from state lands. Those include not more than one legal section of 640 acres, a ten-year term, rental based on appraised land value, lessee's rights, production royalty established by appraisal and auction, and payment terms.

State regulations¹¹ provide further details of the auction and lease process. It includes both definitions and procedures.

IV. Conclusion

Bill Nichols, President and Chief Executive Officer of Kilauea Crushers, Inc. has produced crushed stone from Arizona's state and federal lands for over 30 years:

“Overall the experience has been positive. We have found ways to work with the State Land Department and the Bureau of Land Management. A good working relationship has developed with the employees of the agencies.”

Arizona's large share of stone produced pursuant to the Materials Act is a consequence of our arid climate, population growth, and dwindling water supplies. The state's use of the mineral material for industrial and residential purposes will undoubtedly increase.

Table 1

| <u>YEAR</u> | <u>QUANTITY</u> | | <u>ARIZONA ANNUAL RANKINGS</u> | |
|--------------------|---------------------------------|---------------------|---------------------------------------|---------------------|
| | <u>Sand & Gravel</u> | <u>Stone</u> | <u>Sand & Gravel</u> | <u>Stone</u> |
| 2015 | 371,632 | 543,311 | 4 | 2 |
| 2014 | 203,380 | 644,867 | 5 | 2 |
| 2013 | 110,438 | 471,861 | 7 | 2 |
| 2012 | 11,945 | 113,229 | 8 | 3 |
| 2011 | 55,259 | 412,281 | 7 | 2 |
| 2010 | 84,698 | 458,470 | 7 | 2 |
| 2009 | 60,101 | 625,570 | 5 | 2 |
| 2008 | 367,808 | 1,186,516 | 5 | 2 |
| 2007 | 303,055 | 1,187,744 | 5 | 2 |
| 2006 | 511,166 | 1,286,416 | 5 | 2 |
| 2005 | 721,877 | 968,711 | 5 | 2 |
| 2004 | 769,722 | 996,585 | 4 | 2 |
| 2002 | 534,453 | 642,279 | 5 | 1 |
| 2001 | 162,660 | 636,257 | 6 | 1 |
| 2000 | 364,970 | 567,523 | 5 | 2 |
| 1999 | 419,817 | 1,318,116 | 3 | 1 |
| 1998 | 77,185 | 306,496 | 5 | 1 |
| 1997 | 81,275 | 418,198 | 5 | 1 |
| 1996 | 54 | - | 9 | 9 |

Table 2

ASLD'S TOTAL MINERAL PRODUCTION BY YEAR

| <u>Year</u> | <u>Aggregates/ Cinder</u> | <u>Sand & Gravel</u> | <u>Other</u> | <u>Decorative Stone</u> | <u>Quantity</u> |
|--------------------|--------------------------------------|-------------------------------------|---------------------|------------------------------------|------------------------|
| 2000 | 146,389.65 | 1,928,186.63 | 27,710.20 | 41.06 | 2,102,327.54 |
| 2001 | 283,336.91 | 1,907,108.91 | 12,438.00 | 0 | 2,202,883.82 |
| 2002 | 213,460.12 | 1,857,662.61 | 21,056.40 | 0 | 2,092,179.13 |
| 2003 | 205,396.06 | 3,680,846.72 | - | 10 | 3,886,252.78 |
| 2004 | 215,440.54 | 3,807,252.60 | - | 30 | 4,022,723.14 |
| 2005 | 223,856.80 | 4,767,222.70 | - | 29,604.53 | 5,020,684.03 |
| 2006 | 229,926.14 | 5,136,364.86 | - | 26,829.59 | 5,393,120.59 |
| 2007 | 239,066.78 | 4,436,980.53 | - | 19,482.27 | 4,695,529.58 |
| 2008 | 1,133,021.01 | 3,292,035.45 | - | 17,408.04 | 4,442,464.50 |
| 2009 | 667,788.75 | 1,258,197.56 | 27,193.36 | 32,144.41 | 1,985,324.08 |
| 2010 | 222,152.12 | 1,670,076.82 | 15,368.00 | 19,628.62 | 1,927,225.56 |
| 2011 | 214,017.12 | 1,426,554.37 | 10,185.00 | 9,202.89 | 1,659,959.38 |
| 2012 | 298,205.60 | 2,145,627.11 | 24,057.00 | 306.54 | 2,468,196.25 |
| 2013 | 441,426.95 | 1,885,239.30 | 87,725.07 | 34,453.52 | 2,446,804.84 |
| 2014 | 197,225.23 | 1,262,677.22 | 137,979.63 | 83,488.66 | 1,681,370.74 |
| 2015 | 246,584.20 | 1,360,200.60 | 131,662.68 | 72,064.01 | 1,810,511.49 |
| 2016* | 98,648.00 | 573,668.87 | 20,290.29 | 31,013.42 | 723,620.58 |

*2016's data is only current up to May 2016 for most leases.

¹ *Annual Report 2013-2014*, Arizona State Land Department, <https://land.az.gov/sites/default/files/documents/files/2014%20Annual%20Report.pdf>

² *Public Land Statistics*, U.S. Department of the Interior, Bureau of Land Management, http://www.blm.gov/public_land_statistics/.

³ All production numbers are in tons.

⁴ 30 U.S.C. § 601, et seq.

⁵ 43 C.F.R. § 3601, et seq.

⁶ 43 C.F.R. § 3602.13.

⁷ A.R.S. § 27-272.

⁸ Emails, Arizona State Land Department.

⁹ A.R.S. § 27-271.

¹⁰ A.R.S. § 27-272.

¹¹ Arizona Administrative Code, R12-5-2001, et seq.