## CESIUM STATISTICS ${ }^{1}$

U.S. GEOLOGICAL SURVEY
[All values are in metric tons ( $\mathbf{t}$ ) cesium content unless otherwise noted]
Last modification: October 5, 2007

| Year | Production | Imports | Stocks | $\begin{gathered} \text { Apparent } \\ \text { consumption } \end{gathered}$ | Unit value (\$/t) | $\begin{aligned} & \hline \text { Unit value } \\ & (98 \$ / t) \end{aligned}$ | World <br> production |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1959 |  |  |  |  | 2,230,000 | 12,500,000 |  |
| 1960 |  |  |  |  | 1,190,000 | 6,550,000 |  |
| 1961 |  |  | 45 |  | 830,000 | 4,520,000 | 11 |
| 1962 |  |  | 45 |  | 830,000 | 4,470,000 | 20 |
| 1963 |  | 0.18 |  | 0.18 | 520,000 | 2,770,000 |  |
| 1964 |  | 0.917 |  | 0.917 | 520,000 | 2,730,000 |  |
| 1965 | 0 | 0.392 |  | 0.392 | 580,000 | 3,000,000 |  |
| 1966 | 0 | 0 |  | 0 | 580,000 | 2,910,000 |  |
| 1967 | 0 | 1.10 |  | 1.10 | 580,000 | 2,830,000 |  |
| 1968 | 0 | 1.41 |  | 1.41 | 580,000 | 2,720,000 |  |
| 1969 | 0 | 2.42 |  | 2.42 | 520,000 | 2,310,000 |  |
| 1970 | 0 | 2.33 |  | 2.33 | 520,000 | 2,180,000 |  |
| 1971 | 0 | 1.93 |  | 1.93 | 520,000 | 2,090,000 | 91 |
| 1972 | 0 | 5.46 |  | 5.46 | 520,000 | 2,030,000 | 318 |
| 1973 | 0 | 1.43 |  | 1.43 | 520,000 | 1,910,000 | 249 |
| 1974 | 0 | 2.10 |  | 2.10 | 520,000 | 1,720,000 |  |
| 1975 | 0 | 1.43 |  | 1.43 | 520,000 | 1,580,000 | 73 |
| 1976 | 0 | 2.04 |  | 2.04 | 520,000 | 1,490,000 | 73 |
| 1977 | 0 | 5.21 |  | 5.21 | 660,000 | 1,780,000 | 18 |
| 1978 | 0 | 6.04 |  | 6.04 | 580,000 | 1,450,000 |  |
| 1979 | 0 | 10.5 |  | 10.5 | 500,000 | 1,120,000 |  |
| 1980 | 0 | 5.36 |  | 5.36 | 500,000 | 989,000 |  |
| 1981 | 0 | 11.1 |  | 11.1 | 500,000 | 896,000 |  |
| 1982 | 0 | 7.55 |  | 7.55 | 660,000 | 1,110,000 |  |
| 1983 | 0 | 8.72 |  | 8.72 | 660,000 | 1,080,000 |  |
| 1984 | 0 | 24.3 |  | 24.3 | 660,000 | 1,040,000 |  |
| 1985 | 0 | 22.9 |  | 22.9 | 720,000 | 1,090,000 |  |
| 1986 | 0 | 17.0 |  | 17.0 | 720,000 | 1,070,000 |  |
| 1987 | 0 | 19.3 |  | 19.3 | 660,000 | 947,000 |  |
| 1988 | 0 | 22.6 |  | 22.6 | 660,000 | 910,000 |  |
| 1989 | 0 |  |  |  | 690,000 | 907,000 |  |
| 1990 | 0 |  |  |  | 690,000 | 861,000 |  |
| 1991 | 0 |  |  |  | 690,000 | 826,000 |  |
| 1992 | 0 |  |  |  | 38,500,000 | 44,700,000 |  |
| 1993 | 0 |  |  |  | 38,500,000 | 43,400,000 |  |
| 1994 | 0 |  |  |  | 38,500,000 | 42,300,000 |  |
| 1995 | 0 |  |  |  | 40,800,000 | 43,600,000 |  |
| 1996 | 0 |  |  |  | 40,800,000 | 42,400,000 |  |
| 1997 | 0 |  |  |  | 43,700,000 | 44,400,000 |  |
| 1998 | 0 |  |  |  | 63,300,000 | 63,300,000 |  |
| 1999 | 0 |  |  |  | 63,300,000 | 61,900,000 |  |
| 2000 | 0 |  |  |  | 63,300,000 | 59,900,000 |  |
| 2001 | 0 |  |  |  | 50,000,000 | 46,000,000 |  |
| 2002 | 0 |  |  |  | 50,000,000 | 45,300,000 |  |
| 2003 | 0 |  |  |  | 52,000,000 | 46,100,000 |  |
| 2004 | 0 |  |  |  | 54,300,000 | 46,900,000 |  |
| 2005 | 0 |  |  |  | 53,400,000 | 46,600,000 |  |
| 2006 | 0 |  |  |  | 53,400,000 | 46,600,000 |  |

${ }^{1}$ Compiled by T.D. Kelly (retired) and W.E. Brooks.
Data are calculated, estimated, or reported. See notes for more information.

## Cesium Worksheet Notes

## Data Sources

The sources of data for the cesium worksheet are the mineral statistics publications of the U.S. Bureau of Mines and the U.S. Geological Survey-Minerals Yearbook (MYB); Mineral Commodity Summaries (MCS) and its predecessor, Commodity Data Summaries (CDS); and Metal Prices in the United States through 1998 (MP98). The years of publication and corresponding years of data coverage are listed in the References section below. Blank cells in the worksheet indicate that data were not available.

## Production

Production data prior to 1965 are not available. Cesium-bearing ore production data have been reported as "0" since 1965 .

## Imports

Import data for the years 1963-88 were recorded from the MYB. These data represent the summed gross weights of cesium chloride and other miscellaneous cesium compounds that were imported into the United States for consumption purposes. Cesium import data have not been available since 1988.

## Stocks

Stock data for the years 1961-62 were recorded from the MYB. These data represent the quantity of cesium-containing materials that were held in producer and consumer stockpiles. Stock data have not been reported since 1962.

## Apparent Consumption

Apparent consumption data for the years 1963-88 were estimated as being equal to production plus imports. It was noted in the MCS that for the years 1989-2006, a few thousand kilograms of cesium were consumed annually in the United States.

## Unit Value (\$/t)

Unit value is defined as the value of 1 metric ton ( t ) of cesium apparent consumption. Unit value data for the years 1959-65, 196777, and 1979-98 were recorded from the MP98. Unit value data for the years 1999-2006 were recorded from the MCS. Unit value data for the years 1966 and 1978 were not available from the MP98. Subsequently, unit value data for the years 1966 and 1978 were interpolated from the unit value data series. The large increase in unit value that occurs in the transition from the year 1991 to 1992 is the result of a change in the methodology used to determine cesium unit value. From 1959-91, unit value data were estimated to represent the average price of various imported cesium materials of a weight magnitude of at least 1 pound. From 1992-2006, unit value data were estimated to represent the price of a 1 -gram ampoule of 99.98 percent-pure cesium metal. Because of its high purity, 99.98 percent-pure cesium metal has a considerably higher unit value per gram in comparison to the unit value of 1 pound of various cesium materials, such as cesium chloride and other miscellaneous cesium-containing materials.

## Unit Value (98\$/t)

The Consumer Price Index conversion factor, with 1998 as the base year, is used to adjust unit value in current U.S. dollars to the unit value in 1998 U.S. dollars.

## World Production

World production data for the years 1961-77 were recorded from the CDS and the MCS. These data represent the total estimated quantity of cesium-containing materials that reportedly was produced throughout the world. World production data have not been available since 1977.

## References

U.S. Bureau of Mines, 1962-77, Commodity Data Summaries, 1962-77.
U.S. Bureau of Mines, 1962-90, Minerals Yearbook, 1961-88.
U.S. Bureau of Mines, 1978-95, Mineral Commodity Summaries, 1978-95.
U.S. Geological Survey, 1997-2007, Mineral Commodity Summaries, 1997-2007.
U.S. Geological Survey, 1999, Metal Prices in the United States through 1998.
U.S. Geological Survey and U.S. Bureau of Mines, 1996, Mineral Commodity Summaries, 1996.

## Recommended Citation Format:

U.S. Geological Survey, [year of last update, e.g., 2005], [Mineral commodity, e.g., Gold] statistics, in Kelly, T.D., and Matos, G.R., comps., Historical statistics for mineral and material commodities in the United States: U.S. Geological Survey Data Series 140, available online at http://pubs.usgs.gov/ds/2005/140/. (Accessed [date].)

## For more information, please contact:

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