## LEAD STATISTICS ${ }^{1}$

## U.S. GEOLOGICAL SURVEY

## [All values are in metric tons lead (t) unless otherwise noted]

Last modification: October 28, 2008

| Year | Primary production | Secondary production | Imports | Exports | Government shipments | Stocks | Apparent consumption | Unit value (\$/t) | Unit value $(98 \$ / t)$ | World production |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1900 | 343,000 |  | 410 | 90,000 |  | 63,800 | 253,000 | 100 | 2,000 | 749,000 |
| 1901 | 341,000 |  | 490 | 91,000 |  | 54,700 | 260,000 | 97 | 1,900 |  |
| 1902 | 342,000 |  | 1,400 | 74,000 |  | 63,800 | 260,000 | 90 | 1,700 |  |
| 1903 | 343,000 |  | 1,600 | 87,000 |  | 32,200 | 289,000 | 93 | 1,700 |  |
| 1904 | 367,000 |  | 630 | 77,000 |  | 9,700 | 313,000 | 95 | 1,700 |  |
| 1905 | 366,000 |  | 890 | 55,000 |  | 10,400 | 311,000 | 99 | 1,800 |  |
| 1906 | 378,000 |  | 11,000 | 300 |  | 11,700 | 387,000 | 126 | 2,300 | 1,040,000 |
| 1907 | 410,000 | 23,400 | 8,400 | 59,000 |  | 4,200 | 390,000 | 119 | 2,100 | 993,000 |
| 1908 | 422,000 | 16,800 | 2,500 | 90,000 |  | 16,800 | 339,000 | 93 | 1,700 | 1,280,000 |
| 1909 | 426,000 | 37,300 | 3,200 | 90,000 |  | 15,800 | 378,000 | 95 | 1,700 | 1,060,000 |
| 1910 | 449,000 | 50,200 | 32,000 | 78,000 |  | 32,600 | 436,000 | 97 | 1,700 | 1,100,000 |
| 1911 | 465,000 | 49,200 | 2,400 | 120,000 |  | 4,070 | 425,000 | 97 | 1,700 | 1,110,000 |
| 1912 | 457,000 | 61,000 | 250 | 74,000 |  | 9,520 | 439,000 | 99 | 1,700 | 1,160,000 |
| 1913 | 455,000 | 66,100 | 38 | 50,000 |  | 4,820 | 476,000 | 97 | 1,600 | 1,150,000 |
| 1914 | 524,000 | 55,400 | 150 | 81,000 |  | 6,960 | 496,000 | 86 | 1,400 |  |
| 1915 | 544,000 | 71,600 | 410 | 120,000 |  | 11,000 | 492,000 | 104 | 1,680 |  |
| 1916 | 517,000 | 87,400 | 5,100 | 110,000 |  | 11,200 | 499,000 | 152 | 2,270 |  |
| 1917 | 597,000 | 84,800 | 5,300 | 90,000 |  | 2,440 | 606,000 | 190 | 2,420 |  |
| 1918 | 611,000 | 88,100 | 4,800 | 95,000 |  | 428 | 611,000 | 157 | 1,700 |  |
| 1919 | 452,000 | 111,000 | 4,600 | 58,000 |  | 212 | 510,000 | 128 | 1,210 | 764,000 |
| 1920 | 506,000 | 113,000 | 32,000 | 24,000 |  | 1,200 | 626,000 | 181 | 1,470 | 804,000 |
| 1921 | 412,000 | 94,100 | 28,000 | 33,000 |  | 315 | 502,000 | 104 | 945 | 783,000 |
| 1922 | 501,000 | 145,000 | 3,200 | 36,000 |  |  | 613,000 | 126 | 1,220 | 972,000 |
| 1923 | 581,000 | 176,000 | 19,000 | 52,000 |  | 2,370 | 724,000 | 163 | 1,550 | 1,080,000 |
| 1924 | 657,000 | 186,000 | 74,000 | 75,000 |  | 4,580 | 840,000 | 183 | 1,740 | 1,220,000 |
| 1925 | 711,000 | 206,000 | 9,500 | 95,000 |  | 7,410 | 829,000 | 201 | 1,880 | 1,410,000 |
| 1926 | 744,000 | 252,000 | 74,000 | 65,000 |  | 9,720 | 1,000,000 | 186 | 1,710 |  |
| 1927 | 736,000 | 250,000 | 0 | 110,000 |  | 8,590 | 877,000 | 150 | 1,400 | 1,540,000 |
| 1928 | 735,000 | 280,000 | 0 | 110,000 |  | 9,720 | 904,000 | 139 | 1,320 | 1,680,000 |
| 1929 | 724,000 | 282,000 | 0 | 67,000 |  |  | 939,000 | 151 | 1,440 | 1,610,000 |
| 1930 | 603,000 | 232,000 | 0 | 44,000 |  | 144,000 | 791,000 | 122 | 1,200 | 1,520,000 |
| 1931 | 419,000 | 213,000 | 9 | 20,000 |  | 198,000 | 558,000 | 94 | 1,010 | 1,260,000 |
| 1932 | 278,000 | 180,000 | 40 | 21,000 |  | 239,000 | 396,000 | 70 | 833 | 1,050,000 |
| 1933 | 263,000 | 204,000 | 99 | 21,000 |  | 268,000 | 417,000 | 85 | 1,070 | 1,040,000 |
| 1934 | 295,000 | 189,000 | 257 | 5,400 |  | 285,000 | 462,000 | 85 | 1,030 | 1,200,000 |
| 1935 | 308,000 | 245,000 | 1,200 | 6,300 |  | 285,000 | 547,000 | 90 | 1,070 | 1,380,000 |
| 1936 | 371,000 | 239,000 | 2,350 | 18,000 |  | 223,000 | 654,000 | 104 | 1,220 | 1,470,000 |
| 1937 | 447,000 | 250,000 | 4,450 | 18,000 |  | 189,000 | 713,000 | 132 | 1,490 |  |
| 1938 | 367,000 | 204,000 | 2,940 | 42,000 |  | 190,000 | 528,000 | 104 | 1,200 | 1,700,000 |
| 1939 | 457,000 | 191,000 | 6,480 | 68,000 |  | 200,000 | 577,000 | 111 | 1,300 | 1,740,000 |
| 1940 | 508,000 | 206,000 | 137,000 | 68,000 |  | 222,000 | 764,000 | 114 | 1,330 |  |
| 1941 | 551,000 | 345,000 | 249,000 | 13,000 |  | 182,000 | 1,170,000 | 128 | 1,420 |  |
| 1942 | 558,000 | 280,000 | 332,000 | 8,800 |  | 178,000 | 1,170,000 | 143 | 1,430 |  |
| 1943 | 481,000 | 282,000 | 222,000 | 22,000 | 67,600 | 234,000 | 973,000 | 143 | 1,350 |  |
| 1944 | 470,000 | 296,000 | 202,000 | 14,000 | 75,700 | 201,000 | 1,076,000 | 143 | 1,320 |  |
| 1945 | 450,000 | 281,000 | 206,000 | 2,000 | 19,700 | 245,000 | 915,000 | 143 | 1,300 | 1,250,000 |
| 1946 | 350,000 | 313,000 | 105,000 | 640 | 21,100 | 212,000 | 816,000 | 179 | 1,490 | 1,030,000 |
| 1947 | 474,000 | 403,000 | 145,000 | 1,400 | 36,700 | 199,000 | 1,090,000 | 323 | 2,360 | 1,310,000 |
| 1948 | 455,000 | 393,000 | 224,000 | 370 | -4,530 | 241,000 | 1,050,000 | 398 | 2,690 | 1,380,000 |
| 1949 | 515,000 | 330,000 | 250,000 | 880 |  | 271,000 | 1,070,000 | 339 | 2,320 | 1,370,000 |
| 1950 | 510,000 | 388,000 | 401,000 | 2,500 |  | 252,000 | 1,330,000 | 293 | 1,980 | 1,640,000 |
| 1951 | 434,000 | 401,000 | 162,000 | 1,200 |  | 206,000 | 1,050,000 | 386 | 2,410 | 1,600,000 |

## LEAD STATISTICS ${ }^{1}$

## U.S. GEOLOGICAL SURVEY

[All values are in metric tons lead ( $t$ ) unless otherwise noted]
Last modification: October 28, 2008

| Year | Primary <br> production | Secondary production | Imports | Exports | Government shipments | Stocks | $\begin{array}{\|c\|} \hline \text { Apparent } \\ \text { consumption } \end{array}$ | Unit value <br> $(\$ / \mathbf{t})$ | Unit value (98\$/t) | World production |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1952 | 478,000 | 374,000 | 463,000 | 1,600 |  | 247,000 | 1,290,000 | 363 | 2,230 | 1,810,000 |
| 1953 | 477,000 | 389,000 | 349,000 | 730 |  |  | 1,460,000 | 297 | 1,810 | 1,870,000 |
| 1954 | 493,000 | 386,000 | 251,000 | 540 |  | 237,000 | 901,000 | 310 | 1,880 | 2,000,000 |
| 1955 | 490,000 | 408,000 | 240,000 | 370 |  |  | 1,390,000 | 334 | 2,040 | 2,010,000 |
| 1956 | 504,000 | 404,000 | 238,000 | 4,200 | 96,400 | 201,000 | 1,060,000 | 353 | 2,110 | 2,400,000 |
| 1957 | 502,000 | 392,000 | 294,000 | 4,500 | 141,000 | 248,000 | 1,280,000 | 323 | 1,880 | 2,380,000 |
| 1958 | 441,000 | 311,000 | 334,000 | 2,800 | -37,800 | 324,000 | 975,000 | 267 | 1,510 | 2,350,000 |
| 1959 | 321,000 | 356,000 | 239,000 | 3,600 | -40,800 | 270,000 | 937,000 | 269 | 1,500 | 2,320,000 |
| 1960 | 210,000 | 370,000 | 187,000 | 5,400 |  | 315,000 | 720,000 | 263 | 1,450 | 2,390,000 |
| 1961 | 430,000 | 354,000 | 233,000 | 11,000 |  | 328,000 | 1,000,000 | 240 | 1,310 | 2,390,000 |
| 1962 | 366,000 | 357,000 | 233,000 | 6,400 |  | 263,000 | 1,030,000 | 212 | 1,150 | 2,510,000 |
| 1963 | 366,000 | 424,000 | 206,000 | 3,600 | 4,000 | 218,000 | 1,040,000 | 246 | 1,310 | 2,560,000 |
| 1964 | 408,000 | 426,000 | 189,000 | 21,000 | 36,000 | 179,000 | 997,000 | 300 | 1,580 | 2,530,000 |
| 1965 | 385,000 | 450,000 | 202,000 | 11,000 | 49,000 | 176,000 | 1,000,000 | 353 | 1,830 | 2,700,000 |
| 1966 | 410,000 | 440,000 | 259,000 | 5,400 | 58,000 | 187,000 | 1,100,000 | 333 | 1,670 | 2,850,000 |
| 1967 | 386,000 | 433,000 | 330,000 | 5,900 | 25,000 | 196,000 | 1,130,000 | 309 | 1,510 | 2,870,000 |
| 1968 | 487,000 | 428,000 | 307,000 | 8,200 | 26,000 | 186,000 | 1,200,000 | 291 | 1,370 | 3,010,000 |
| 1969 | 594,000 | 468,000 | 253,000 | 6,400 | 20,000 |  | 1,320,000 | 329 | 1,460 | 3,240,000 |
| 1970 | 626,000 | 459,000 | 222,000 | 11,000 | 11,000 | 296,000 | 1,360,000 | 346 | 1,450 | 3,390,000 |
| 1971 | 604,000 | 444,000 | 177,000 | 21,000 | 9,000 |  | 1,210,000 | 306 | 1,230 | 3,490,000 |
| 1972 | 617,000 | 452,000 | 220,000 | 40,000 | 41,000 | 240,000 | 1,260,000 | 331 | 1,290 | 3,450,000 |
| 1973 | 624,000 | 489,000 | 170,000 | 110,000 | 191,000 | 194,000 | 1,420,000 | 359 | 1,320 | 3,490,000 |
| 1974 | 620,000 | 545,000 | 107,000 | 56,000 | 241,000 | 174,000 | 1,430,000 | 496 | 1,640 | 3,490,000 |
| 1975 | 579,000 | 597,000 | 90,000 | 19,000 | 6,000 | 189,000 | 1,040,000 | 474 | 1,440 | 3,440,000 |
| 1976 | 596,000 | 659,000 | 129,000 | 5,000 |  | 150,000 | 1,280,000 | 509 | 1,460 | 3,690,000 |
| 1977 | 552,000 | 637,000 | 230,000 | 9,000 |  | 127,000 | 1,180,000 | 677 | 1,820 | 3,410,000 |
| 1978 | 568,000 | 650,000 | 230,000 | 8,000 |  | 134,000 | 1,220,000 | 743 | 1,860 | 3,460,000 |
| 1979 | 578,000 | 673,000 | 190,000 | 11,000 |  | 191,000 | 1,130,000 | 1,160 | 2,600 | 3,510,000 |
| 1980 | 548,000 | 581,000 | 85,000 | 164,000 |  | 172,000 | 906,000 | 937 | 1,850 | 3,520,000 |
| 1981 | 498,000 | 578,000 | 100,000 | 23,300 |  | 195,000 | 977,000 | 805 | 1,440 | 3,350,000 |
| 1982 | 512,000 | 521,000 | 95,000 | 55,600 |  | 171,000 | 1,110,000 | 562 | 949 | 3,450,000 |
| 1983 | 515,000 | 452,000 | 180,000 | 24,400 |  | 159,000 | 1,140,000 | 478 | 782 | 3,350,000 |
| 1984 | 396,000 | 586,000 | 162,000 | 16,600 |  | 142,000 | 1,140,000 | 564 | 885 | 3,200,000 |
| 1985 | 487,000 | 570,000 | 134,000 | 27,300 |  | 178,000 | 1,130,000 | 421 | 638 | 3,390,000 |
| 1986 | 366,000 | 575,000 | 140,000 | 12,600 |  | 104,000 | 1,150,000 | 485 | 721 | 3,240,000 |
| 1987 | 374,000 | 658,000 | 190,000 | 10,000 |  | 110,000 | 1,200,000 | 791 | 1,140 | 3,430,000 |
| 1988 | 392,000 | 691,000 | 150,000 | 14,000 |  | 105,000 | 1,230,000 | 818 | 1,130 | 3,420,000 |
| 1989 | 396,000 | 842,000 | 120,000 | 34,000 |  | 98,000 | 1,330,000 | 869 | 1,140 | 3,400,000 |
| 1990 | 404,000 | 874,000 | 90,900 | 64,000 |  | 112,000 | 1,300,000 | 1,010 | 1,260 | 3,370,000 |
| 1991 | 346,000 | 830,000 | 117,000 | 102,000 |  | 80,800 | 1,230,000 | 739 | 884 | 3,260,000 |
| 1992 | 305,000 | 861,000 | 191,000 | 70,000 |  | 103,000 | 1,270,000 | 774 | 899 | 3,200,000 |
| 1993 | 335,000 | 843,000 | 196,000 | 58,500 | 19,000 | 94,800 | 1,340,000 | 699 | 788 | 2,900,000 |
| 1994 | 351,000 | 858,000 | 231,000 | 53,500 | 67,100 | 76,700 | 1,490,000 | 820 | 902 | 2,800,000 |
| 1995 | 374,000 | 963,000 | 264,000 | 57,000 | 34,000 | 93,800 | 1,570,000 | 933 | 998 | 2,710,000 |
| 1996 | 326,000 | 1,030,000 | 268,000 | 61,000 | 39,000 | 79,900 | 1,630,000 | 1,080 | 1,120 | 2,920,000 |
| 1997 | 343,000 | 1,040,000 | 265,000 | 53,000 | 26,000 | 101,000 | 1,610,000 | 1,030 | 1,050 | 3,100,000 |
| 1998 | 337,000 | 1,060,000 | 310,000 | 40,000 | 50,000 | 89,000 | 1,690,000 | 999 | 999 | 3,060,000 |
| 1999 | 350,000 | 1,060,000 | 323,000 | 37,000 | 61,000 | 91,000 | 1,760,000 | 963 | 942 | 3,080,000 |
| 2000 | 341,000 | 1,080,000 | 365,000 | 48,600 | 32,000 | 125,000 | 1,740,000 | 961 | 910 | 3,200,000 |
| 2001 | 290,000 | 1,090,000 | 284,000 | 38,100 | 41,000 | 100,000 | 1,690,000 | 962 | 886 | 3,120,000 |
| 2002 | 262,000 | 1,100,000 | 218,000 | 43,400 | 6,000 | 111,000 | 1,530,000 | 961 | 871 | 2,850,000 |
| 2003 | 245,000 | 1,140,000 | 183,000 | 123,000 | 60,000 | 84,600 | 1,490,000 | 965 | 855 | 3,200,000 |

## LEAD STATISTICS ${ }^{1}$

U.S. GEOLOGICAL SURVEY
[All values are in metric tons lead ( $t$ ) unless otherwise noted]
Last modification: October 28, 2008

| Year | $\begin{array}{\|c\|} \hline \text { Primary } \\ \text { production } \\ \hline \end{array}$ | Secondary production | Imports | Exports | Government shipments | Stocks | Apparent consumption | Unit value (\$/t) | Unit value (98\$/t) | World production |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2004 | 148,000 | 1,130,000 | 208,000 | 82,600 | 52,600 | 59,000 | 1,470,000 | 1,220 | 1,050 | 3,200,000 |
| 2005 | 143,000 | 1,150,000 | 310,000 | 64,600 | 29,000 | 47,000 | 1,480,000 | 1,350 | 1,130 | 3,520,000 |
| 2006 | 153,000 | 1,160,000 | 343,000 | 68,500 | 24,000 | 54,000 | 1,580,000 | 1,710 | 1,380 | 3,650,000 |
| 2007 | 123,000 | 1,180,000 | 267,000 | 56,400 | 0 | 46,400 | 1,540,000 | 2,730 | 2,150 | 3,770,000 |

${ }^{1}$ Compiled by C.A. DiFrancesco (retired), G.R. Smith (retired), P.N. Gabby, and D. Guberman.
Data are calculated, estimated, or reported. See notes for more information.

## Lead Worksheet Notes

## Data Sources

The sources of data for the lead worksheet are the mineral statistics publications of the U.S. Bureau of Mines and the U.S. Geological Survey-Minerals Yearbook (MYB) and its predecessor, Mineral Resources of the United States (MR); Mineral Commodity Summaries (MCS); and the Statistical Compendium (SC). 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.

## Primary Production

Primary U.S. lead production data report the amount of refined lead. Data were from the MYB and MR for 1900-73 and the MCS for the years 1974 to the most recent. Antimonial lead was included when available as well as desilverized lead and soft lead for the years 1900-05.

## Secondary Production

U.S. secondary production was equated to old lead scrap (scrap including—but not limited to—metal articles that have been discarded after serving a useful purpose such as auto batteries.). New scrap statistics were not included because they are often included as part of primary smelter statistics. Undifferentiated scrap numbers were used from 1907-38. Data were from the MYB and MR for the years 1907-73 and the MYB for 1974 to the most recent. Blank cells in the worksheet indicate that data were not available for the years 1900-06.

## Imports

Import data report the amounts of refined lead imported into the United States in various shapes and forms. Import data exclude all manufactured lead products. Data were from the MYB and MR for the years 1900-73 and the MCS for the years 1974 to the most recent.

## Exports

Export data report the amounts of refined lead exported from the United States in various shapes and forms. Export data exclude all manufactured lead products. Data were from the MYB and MR for the years 1900-73 and the MYB for the years 1974 to the most recent.

## Government Shipments

Government shipment data were for shipments from the government stockpile. Negative numbers for government shipments indicate U.S. Government purchases for refined lead. Data for the years 1943-48, and 1956-59 were from the MYB and MR. Data for the years 1963-73 were from the SC. Data for the years 1974-75 and 1993 to the most recent were from the MCS. Blank cells in the worksheet indicate that data were not available for the years 1900-42, 1949-55, 1960-62, and 1976-92.

## Stocks

Stocks for the years 1900-05 include ore and bullion. Stocks for 1956 and before usually include stocks in transit and in process. Beginning in 1956, consumer stocks of scrap were added to secondary smelter stock and scrap, and secondary smelter metal stocks were included with consumer metal stock. Primary lead stocks were withheld for the years 2000 to the most recent, but included in consumer and secondary smelter statistics. Data were from the MYB and MR for the years 1900-73, the MCS for the years 1974-99, and the MYB for the years 2000 to the most recent. Blank cells in the worksheet indicate that data were not available for the years 1922, 1929, 1953, 1955, 1969, and 1971.

## Apparent Consumption

Data for consumption for refined lead were taken from the MYB for the years 1974 to the most recent. Apparent consumption data for the years 1900-73 was estimated using the formula:

## APPARENT CONSUMPTION $=$ PRODUCTION + IMPORTS - EXPORTS $\pm$ CHANGES IN STOCKS $\pm$ GOVERNMENT SHIPMENTS.

## Unit Value (\$/t)

Unit value is the value in dollars of 1 metric ton ( t ) of lead apparent consumption. Lead unit value $(\$ / t)$ was estimated in actual dollars from prices for domestic refined lead from the MYB and MR for the years 1900-73 and the MCS for the years 1974 to the most recent.

## 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 constant 1998 U.S. dollars.

## World Production

World production data were for contained lead in world smelter production for the years 1900-54 and for world mine production for the years 1955-98. Data were from the MYB and MR for the years 1900-73 and the MCS for the years 1974 to the most recent.
World production data were for contained lead in world smelter production originating from ores and may include secondary lead when inseparable. Blank cells in the worksheet indicate that data were not available for the years 1901-05, 1914-18, 1926, 1937, and 1940-44.

## References

U.S. Bureau of Mines, 1927-34, Mineral Resources of the United States, 1924-31.
U.S. Bureau of Mines, 1933-78, Minerals Yearbook, 1932-73.
U.S. Bureau of Mines, 1978-95, Mineral Commodity Summaries, 1978-95.
U.S. Bureau of Mines, 1993, Statistical Compendium.
U.S. Geological Survey, 1901-27, Mineral Resources of the United States, 1900-23.
U.S. Geological Survey, 1997-2008, Mineral Commodity Summaries, 1997-2008.
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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