# MERCURY STATISTICS<sup>1</sup> U.S. GEOLOGICAL SURVEY

# [All values in metric tons (t) mercury unless otherwise noted] Last modification: October 2, 2008

	Primary	Secondary			Government				Unit value	Unit value	World
Year	production	production	Imports	Exports	stocks	shipments	Stocks	consumption	( <b>\$/t</b> )	(98\$/t)	production
1900	983		1.18	353	0	0		631	1,500	29,000	3,150
1901	1,030		0.659	389	0	0		643	1,400	27,000	2,960
1902	1,190		0	460	0	0		730	1,400	26,000	3,800
1903	1,240		0	610	0	0		627	1,200	22,000	3,640
1904	1,210		0	723	0	0		489	1,200	22,000	3,350
1905	1,040		1.19	460	0	0		580	1,100	21,000	3,340
1906	887		0.034	220	0	0		668	1,200	22,000	3,860
1907	733		7.52	175	0	0		566	1,200	21,000	3,310
1908	672		6.87	102	0	0		577	1,300	24,000	3,300
1909	717		7.25	231	0	0		493	1,400	25,000	3,230
1910	701		0.306	65.4	0	0		636	1,400	24,000	3,690
1911	723		214	9.90	0	0		927	1,400	24,000	4,250
1912	853		37.5	10.5	0	0		880	1,200	21,000	4,160
1913	688		77.9	38.8	0	0		727	1,160	19,100	4,050
1914	563		279	49.2	0	0		793	1,420	23,100	3,740
1915	716		191	115	0	0		792	2,560	41,100	3,890
1916	1,020		193	302	0	0		909	3,690	55,100	3,500
1917	1,230		177	367	0	0		1,040	3,120	39,800	3,970
1918	1,120		229	105	0	0		1,240	3,630	39,300	3,420
1919	729		362	310	0	0		781	2,710	25,600	3,100
1920	456		482	52.8	0	0		885	2,380	19,400	2,910
1921	216		361	13.4	0	0		563	1,340	12,100	2,130
1922	217		576	9.90	0	0		783	1,730	16,800	3,170
1923	270		615	10.8	0	0		874	1,950	18,600	3,210
1924	343		448	7.08	0	0		784	2,050	19,500	3,070
1925	312		709	6.84	0	0		1,020	2,440	22,600	3,560
1926	260		884	3.88	0	0		1,140	2,700	24,800	4,000
1927	384		687		0	0		1,070	3,430	32,000	5,170
1928	616		502		0	0		1,110	3,580	34,100	5,140
1929	816		514		0	0		1,330	3,540	33,700	5,610
1930	743		128		0	0		869	3,340	32,700	3,760
1931	860		18.9	172	0	0		707	2,530	27,100	3,420
1932	435		134	7.38	0	0		562	1,680	20,100	2,850
1933	333		700		0	0		1,020	1,720	21,600	2,060
1934	532		351		0	0		876	2,140	26,100	2,650
1935	604		269		0	0		869	2,090	24,800	3,460
1936	571		624	9.07	0	0		1,190	2,320	27,300	4,270

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# MERCURY STATISTICS<sup>1</sup> U.S. GEOLOGICAL SURVEY

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

Last modification: October 2, 2008

	Primary	Secondary			Government			Apparent	Unit value	Unit value	World
Year	production	production	Imports	Exports	stocks	shipments	Stocks	consumption	( <b>\$/t</b> )	(98\$/t)	production
1937	569		652	15.7	0	0		1,210	2,620	29,700	4,590
1938	620		81.4	24.6	0	0		676	2,190	25,300	5,170
1939	642		121	41.6	0	0	434	720	3,020	35,400	4,830
1940	1,300		5.89	466	0	0	507	924	5,130	59,700	7,130
1941	1,550		267	89.3	0	0	443	1,540	5,370	59,400	9,170
1942	1,750		1340	269	0	0	_	1,710	5,700	57,000	8,990
1943	1,790		1650	525	0	0		1,880	5,660	53,400	7,870
1944	1,300		674	30.2	0	0	452	1,480	3,430	31,800	5,330
1945	1,060		2370	94.1	689	-689	698	2,150	3,910	35,600	4,180
1946	874	138	479	113	827	-138	655	1,090	2,850	23,700	4,960
1947	801	121	448	137	5,960	-5,140	665	1,230	2,430	17,700	5,360
1948	496	74.8	1100	49.9	6,000	-34.0	1,040	1,590	2,220	15,000	3,260
1949	342	47.7	3560	48.4	8,720	-2,720	722	1,370	2,300	15,800	4,160
1950	156	68.9	1930	46.0	9,070	-345	1,230	1,700	2,360	15,900	4,940
1951	251	68.9	1650	31.6	8,720	345	1,040	1,960	6,100	38,300	5,060
1952	433	86.2	2,480	22.7	9,480	-758	1,190	1,470	5,780	35,400	5,190
1953	494	96.5	2,880	50.4	10,200	-758	931	1,800	5,600	34,100	5,510
1954	639	210	2,240	80.2	12,000	-1,790	775	1,480	7,670	46,500	6,180
1955	653	346	702	24.8	12,000	0	346	1,970	8,420	51,400	6,380
1956	833	202	1,630	107	6,000	6,030	769	1,870	7,540	45,100	7,620
1957	1,190	200	1,450	179	6,100	-103	875	1,820	7,160	41,400	8,260
1958	1,310	186	1,040	43.2	6,170	-69.0	389	1,810	6,640	37,500	8,490
1959	1,080	171	1,040	41.1	5,070	1,100	468	1,890	6,600	36,900	7,710
1960	1,150	184	672	23.2	5,070	0	681	1,760	6,110	33,600	8,340
1961	1,090	288	425	16.0	5,070	0	604	1,920	5,730	31,200	8,260
1962	906	200	1,090	16.6	5,030	34.0	557	2,250	5,550	29,800	8,430
1963	659	363	1,480	7.83	5,030	0	420	2,690	5,500	29,200	8,260
1964	488	845	1,420	13.2	6,900	-1,860	598	2,810	9,130	48,100	8,800
1965	675	1,610	560	277	6,900	0	703	2,540	16,600	85,300	9,230
1966	759	565	1,080	28.7	6,900	0	692	2,470	12,800	64,400	9,140
1967	820	764	839	107	6,900	0	630	2,400	14,200	69,200	8,000
1968	995	1,190	801	262	6,900	0		2,600	15,500	72,900	8,950
1969	1,020	471	1,100	21.2	6,900	0		2,670	14,700	65,100	9,970
1970	941	278	757	162	6,900	0		2,120	11,800	49,700	9,790
1971	616	575	981	249	6,900	0	581	1,800	8,480	34,200	10,400
1972	253	436	994	33.2	6,900	0		1,820	6,330	24,700	9,620
1973	76.8	356	1,590	11.8	6,900	0	619	1,870	8,300	30,500	9,250

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[All values in metric tons (t) mercury unless otherwise noted]

Last modification: October 2, 2008

	Primary	Secondary			Government			Apparent	Unit value	Unit value	World
Year	production	production	Imports	<b>Exports</b>	stocks	shipments	Stocks	consumption	( <b>\$/t</b> )	(98\$/t)	production
1974	75.5	286	1,800	16.1	6,900	0	685	2,050	8,170	27,000	8,880
1975	254	277	1,510	17.0	6,900	0	881	1,750	4,590	13,900	8,700
1976	797	116	1,530	17.7	6,900	0	1,090	2,240	3,520	10,100	8,090
1977	974	226	991	32.9	6,960	-69.0	1,180	2,110	3,940	10,600	6,580
1978	833	319	1,440	34.5	6,960	0	1,340	2,050	4,450	11,100	6,250
1979	1,020	537	912		6,900	69.0	951	2,140	8,150	18,300	6,010
1980	1,060	579	325		6,580	310	1,140	2,030	11,300	22,400	6,810
1981	962	388	428		6,580	0	942	2,040	12,000	21,500	7,270
1982	888	154	307		6,340	241	994	1,690	10,800	18,200	6,820
1983	864	474	441		6,140	207	1,070	1,690	9,350	15,300	6,230
1984	657	196	873		6,000	138	940	1,890	9,120	14,300	6,740
1985	570	205	651		6,000	0	965	1,720	9,020	13,700	6,140
1986	483	325	696		5,830	172	234	1,590	6,750	10,000	7,780
1987	34	383	636		5,720	103	320	1,450	8,570	12,300	5,530
1988	379	492	329		5,720	0	338	1,590	9,730	13,400	6,840
1989	414	317	131	221	5,510	214	217	1,210	8,350	11,000	6,750
1990	562	301	15	311	5,460	52	197	720	7,230	9,020	4,100
1991	58	380	56	786	5,410	52	313	554	3,550	4,250	2,540
1992	64	279	92	977	5,060	345	436	621	5,840	6,790	1,960
1993	0	350	40	389	4,780	284	384	558	5,410	6,110	1,730
1994	0	466	129	316	4,440	345	469	483	5,640	6,200	1,960
1995	0	534	377	179	4,440	0	321	436	7,180	7,680	3,190
1996	0	446	340	45	4,440	0	446	372	7,590	7,890	2,560
1997	0	389	164	134	4,440	0	203	346	4,630	4,700	2,410
1998	0		128	63	4,440	0		300	4,060	4,060	1,580
1999	0		62	181	4,440	0		250	4,060	3,970	1,320
2000	0		103	182	4,440	0		200	4,500	4,260	1,360
2001	0		100	108	4,440	0			4,500	4,140	1,500
2002	0		209	201	4,440	0			4,500	4,070	1,490
2003	0		46	287	4,440	0			4,930	4,370	1,730
2004	0		92	278	4,440	0			10,200	8,760	1,900
2005	0		212	319	4,440	0			16,095	13,430	1,520
2006	0		94	390	4,440	0			19,430	15,710	1,150
2007	0		67	84	4,440	0			15,370	12,083	1,170

<sup>&</sup>lt;sup>1</sup>Compiled by K.E. Porter (retired) and W.E. Brooks.

Data are calculated, estimated, or reported. See notes for more information.

## **Mercury Worksheet Notes**

#### **Data Sources**

Sources of data for the mercury 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 its predecessor, Commodity Data Summaries (CDS); and Mineral Facts and Problems (MFP). Historical data on government stockpile of mercury are from personal communications with the Defense National Stockpile Center (DNSC). Metal price data are from Metal Prices in the United States through 1998 (MP98) with prices for the years 1998–2002 from the 2002 MYB and 2003 to the most recent from the 2007 MCS. Blank cells in the worksheet indicate that data were either not available or were withheld because they are proprietary.

### **Primary Production**

Primary U.S. mercury production data are for domestic mercury mine and byproduct production associated with gold, copper, and zinc mining and mercury produced from old surface ores and mine waste dumps. Data are reported in the MR and the MYB series in the "Salient mercury statistics" table. Primary mercury production data are reported in the MR and the MYB for the years 1900–89 in the unit measure of the flask. Production data are converted to metric tons using the following definitions for the flask. For the period 1900 through May 31, 1904 the flask was defined as 76.5 pounds of mercury. For the period June 1, 1904, through 1926, the flask was defined as 75 pounds. The definition for the flask was changed to 76 pounds of mercury in 1927 and remains unchanged today. The McDermitt Mine in Nevada, the last producing primary mercury mine in the United States, closed in late 1990. Since 1992, there has been no primary mercury production.

### **Secondary Production**

Secondary production of mercury includes production from industry sources and the General Services Administration (GSA) release of secondary mercury obtained from the U.S. Department of Energy. Secondary production data of mercury from industry sources are reported for the years 1946–97. GSA releases of secondary mercury were reported for the years 1963–92. Secondary production data were reported in the MYB as not available for the years 1998 to the most recent. All secondary mercury data are from the MR and the MYB.

#### **Imports**

Mercury import data for metallic mercury are for domestic consumption only. Mercury compounds and oxides are excluded from apparent consumption estimates, as well as the portion of the general imports not for consumption (re-exports). All mercury import data are reported in the MR and the MYB.

#### **Exports**

Mercury export data are for metallic mercury and consist of exports and re-exports of mercury. Export data were not separately classified for the years 1927–30 and for the years 1933–35. Export data were not available for the years 1979–88. Re-export data were reported for the years 1940–60. All mercury export data are reported in the MR and the MYB.

#### **Government Stocks**

Government stocks are in the form of refined mercury managed by the U.S. Department of Defense, Defense Logistics Agency (DLA), and held by the DNSC (Cornel Holder, Defense Logistics Agency, written commun., 2002). Acquisitions and releases from government stocks are described under Government shipments. Mercury stocks were held by the Metals Reserve Company during the years 1941–46 and later transferred to the permanent strategic stockpile. Another major repository for mercury is the U.S. Department of Energy, formerly the U.S. Atomic Energy Commission (AEC). Data prior to 1945 are assumed to be zero for the DNSC stockpile.

## **Government Shipments**

Stockpile shipment data were obtained from the DNSC for the years 1945–99 (Cornel Holder, Defense Logistics Agency, written commun., 2002). Negative data indicate acquisitions by the stockpile agency. The major shipments of mercury in 1956 were transfers to another Government agency, possibly the AEC, which was formed during this time. Data prior to 1945 are assumed to be zero.

#### **Stocks**

Data on mercury stocks at mines were reported in the MYB for the years 1940–85 and withheld for the years 1986–2001. Data on mercury stocks at consumers and dealers were reported in the MYB for the years 1939–97 and were reported in the MYB as not available for the years 1998 to the most recent.

#### **Apparent Consumption**

Data on consumption of mercury in the United States, by end use, are reported for most years in the MR and the MYB. Apparent consumption is assumed to be the same as reported consumption, unless otherwise noted. Consumption data were not available for the years 1900–06 in the MR and were estimated for these years using the following equation:

APPARENT CONSUMPTION = PRIMARY PRODUCTION + SECONDARY PRODUCTION + IMPORTS – EXPORTS.

For the years 1998 and 1999, apparent consumption has been estimated using the fill series, linear type function in Excel. For the year 2000, apparent consumption was derived using several assumptions described in Brooks and Matos (2005). Apparent consumption data were reported as not available in the MYB and MCS for the years 2001 to the most recent.

#### Unit Value (\$/t)

Unit value is the value in current U.S. dollars of 1 metric ton (t) of mercury apparent consumption. Unit value is estimated from the average market price of mercury in U.S. dollars per flask as reported in MP98. For the years 1999 to the most recent, unit value is estimated from the average market price of mercury in U.S. dollars per flask as reported in MCS, converted to U.S. dollars per metric ton of mercury. All mercury prices are based on the 76-pound mercury flask.

#### 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 mine production data are from the MR and the MYB. Mercury production data for the United States, primarily as a byproduct of gold, copper, and zinc mining, were withheld from world mine production data for the years 1993–97 and were not available for the years 1998 to the most recent.

#### References

Brooks, W.E., and Matos, G.R., 2005, Mercury recycling in the United States in 2000: U.S. Geological Survey Open File report 2005-1236, available only online at http://pubs.usgs.gov/of/2005/1236. (Accessed September 26, 2005.)

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#### **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].)

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