

**SELENIUM STATISTICS<sup>1</sup>**  
**U.S. GEOLOGICAL SURVEY**

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

Last modification: October 10, 2012

Year	Primary production	Secondary production	Shipments	Imports	Exports	Stocks	Apparent consumption	Unit value (\$/t)	Unit value (98\$/t)	World production
1900	0	NA	0	0	0	NA	0	NA	NA	NA
1901	0	NA	0	0	0	NA	0	NA	NA	NA
1902	0	NA	0	0	0	NA	0	NA	NA	NA
1903	0	NA	0	0	0	NA	0	NA	NA	NA
1904	0	NA	0	0	0	NA	0	NA	NA	NA
1905	0	NA	0	0	0	NA	0	NA	NA	NA
1906	0	NA	0	0	0	NA	0	NA	NA	NA
1907	0	NA	0	0	0	NA	0	NA	NA	NA
1908	0	NA	0	0	0	NA	0	NA	NA	NA
1909	0	NA	0	0	0	NA	0	7,600	140,000	NA
1910	4.84	NA	4.84	NA	NA	NA	4.84	7,200	130,000	NA
1911	W	NA	W	NA	NA	NA	7.63	6,600	120,000	NA
1912	W	NA	W	NA	NA	NA	10.4	5,500	93,000	NA
1913	13.2	NA	13.2	NA	NA	NA	13.2	3,700	60,900	NA
1914	10.4	NA	10.4	NA	NA	NA	10.4	3,310	54,000	NA
1915	W	NA	18.7	NA	NA	NA	12.9	3,140	50,400	NA
1916	W	NA	18.7	NA	NA	NA	15.4	2,980	44,600	NA
1917	18.0	NA	18.0	NA	NA	NA	18.0	4,740	60,400	NA
1918	47.0	NA	24.7	NA	NA	6.58	24.7	6,610	71,400	NA
1919	27.2	NA	27.2	NA	NA	NA	27.2	5,250	49,500	NA
1920	41.8	NA	41.8	NA	NA	NA	41.8	4,410	35,900	NA
1921	27.1	NA	25.4	0.502	NA	NA	25.4	4,700	42,800	NA
1922	51.5	NA	56.0	0.749	NA	NA	56.0	4,320	41,900	NA
1923	61.8	NA	57.7	0.426	NA	0.307	57.7	4,100	39,100	NA
1924	85.5	NA	69.7	0.136	NA	22.0	69.7	4,100	39,100	NA
1925	94.0	NA	88.0	2.63	NA	28.0	88.0	3,750	34,900	NA
1926	118	NA	114	8.57	NA	32.8	114	4,300	39,600	NA
1927	171	NA	129	6.93	NA	71.9	129	4,300	40,300	NA
1928	190	NA	165	8.45	NA	97.4	165	4,700	44,800	NA
1929	234	NA	156	1.63	NA	177	156	3,640	34,700	NA
1930	206	NA	126	0.308	NA	257	126	4,190	40,900	NA
1931	84	NA	133	0.993	NA	208	133	4,190	44,900	NA
1932	W	NA	111	0.868	NA	NA	111	4,190	49,900	NA
1933	W	NA	151	0.841	NA	NA	151	4,190	52,500	NA
1934	115	NA	145	8.04	NA	NA	145	4,190	51,000	NA
1935	111	NA	106	81.3	NA	NA	106	4,410	52,500	NA
1936	160	NA	103	55.7	NA	NA	103	4,140	48,500	NA
1937	198	NA	128	42.0	NA	139	128	4,140	46,900	NA
1938	102	NA	75.5	45.8	NA	166	75.5	3,970	45,900	285
1939	103	NA	157	56.6	NA	112	157	3,970	46,600	194
1940	149	NA	150	61.0	NA	81.1	167	3,860	44,900	251
1941	281	NA	300	89.8	10.5	47.6	309	3,860	42,800	754
1942	228	NA	201	38.0	2.52	79.3	144	3,860	38,600	645
1943	292	NA	278	37.1	3.27	102	237	3,860	36,400	532
1944	238	NA	179	44.4	5.98	172	192	3,860	35,700	424
1945	221	NA	252	98.3	10.4	147	274	3,860	35,000	387
1946	135	NA	172	216	NA	106	184	3,860	32,300	475
1947	232	NA	223	240	NA	118	222	4,140	30,300	508
1948	253	NA	239	121	NA	105	380	4,410	29,800	471
1949	200	NA	181	78.3	NA	121	222	4,410	30,200	387
1950	254	NA	324	165	NA	48.3	236	6,060	41,000	418

**SELENIUM STATISTICS<sup>1</sup>**  
**U.S. GEOLOGICAL SURVEY**

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

Last modification: October 10, 2012

Year	Primary production	Secondary production	Shipments	Imports	Exports	Stocks	Apparent consumption	Unit value (\$/t)	Unit value (98\$/t)	World production
1951	224	NA	248	112	NA	38.6	360	7,170	45,000	488
1952	312	30.3	313	55.9	NA	60.3	364	7,170	44,100	532
1953	419	44.4	512	46.4	NA	42.9	512	8,000	48,800	668
1954	324	57.4	391	83.5	NA	43.5	474	10,200	61,800	636
1955	317	69.1	400	87.0	NA	34.4	487	16,500	100,000	736
1956	421	85.5	469	107	NA	86.6	576	24,800	149,000	872
1957	409	56.4	279	67.1	NA	295	346	21,500	125,000	872
1958	310	44.1	328	83.5	NA	250	411	16,000	90,200	663
1959	330	23.3	358	102	NA	154	460	15,400	86,300	748
1960	244	0	250	73.5	NA	124	324	14,900	82,100	758
1961	464	0	357	53.1	NA	234	410	14,100	76,900	951
1962	453	NA	336	72.1	NA	351	408	13,200	71,200	948
1963	421	NA	308	154	NA	464	462	11,300	60,200	914
1964	421	NA	293	133	NA	592	426	9,920	52,200	981
1965	245	NA	374	114	NA	463	488	9,920	51,300	816
1966	281	NA	383	130	NA	362	513	9,920	49,900	895
1967	271	NA	299	137	NA	334	435	9,920	48,400	930
1968	287	NA	427	264	NA	194	691	9,920	46,500	883
1969	566	NA	648	248	NA	109	896	15,400	68,400	1,290
1970	456	NA	479	206	171	85.7	514	19,800	83,200	1,310
1971	298	NA	301	179	68.0	82.6	412	19,800	79,700	1,140
1972	335	NA	345	195	99.8	72.9	447	19,800	77,200	1,230
1973	361	NA	386	251	120	48.1	621	20,400	74,900	1,220
1974	292	NA	304	380	75.4	35.9	710	36,400	120,000	1,210
1975	162	NA	129	403	53.3	69.1	482	39,700	120,000	1,180
1976	182	NA	168	368	87.8	80.2	449	39,700	114,000	1,110
1977	227	NA	160	266	30.7	323	395	37,700	101,000	1,380
1978	231	NA	147	363	103	507	407	33,100	82,800	1,440
1979	266	NA	212	310	151	284	371	30,100	67,600	1,620
1980	141	NA	141	284	81.8	284	343	24,100	47,700	1,280
1981	252	NA	208	312	60.5	293	459	9,660	17,300	1,290
1982	243	NA	308	347	117	254	538	7,780	13,100	1,120
1983	354	NA	374	297	93.4	153	578	8,530	14,000	1,400
1984	254	NA	224	377	123	139	550	19,900	31,200	1,490
1985	W	NA	W	401	154	W	560	16,400	24,800	1,320
1986	W	NA	W	463	161	W	570	12,600	18,700	1,400
1987	W	NA	W	445	162	W	580	14,400	20,700	1,420
1988	286	NA	260	425	243	W	590	21,700	29,900	1,680
1989	253	NA	295	417	372	W	560	16,800	22,100	1,600
1990	287	NA	250	381	207	W	530	12,800	16,000	1,770
1991	260	NA	275	344	210	W	510	11,900	14,200	1,640
1992	243	NA	221	371	175	W	490	11,300	13,100	1,770
1993	283	NA	258	382	261	W	460	10,800	12,200	1,740
1994	360	NA	302	441	246	W	530	10,800	11,900	2,160
1995	373	NA	320	324	270	W	517	10,800	11,600	2,070
1996	379	NA	400	428	322	W	564	8,820	9,160	2,250
1997	W	NA	W	346	127	W	509	6,480	6,580	1,720
1998	W	NA	W	339	151	W	478	5,490	5,490	1,470
1999	W	NA	W	326	233	W	383	5,510	5,390	1,410
2000	W	NA	W	476	82.1	W	504	8,470	8,020	1,460
2001	W	NA	W	483	41.2	W	480	8,380	7,710	1,470

**SELENIUM STATISTICS<sup>1</sup>**  
**U.S. GEOLOGICAL SURVEY**

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

Last modification: October 10, 2012

<b>Year</b>	<b>Primary production</b>	<b>Secondary production</b>	<b>Shipments</b>	<b>Imports</b>	<b>Exports</b>	<b>Stocks</b>	<b>Apparent consumption</b>	<b>Unit value (\$/t)</b>	<b>Unit value (98\$/t)</b>	<b>World production</b>
2002	W	NA	W	322	80.9	W	420	9,410	8,530	1,480
2003	W	NA	W	367	249	NA	370	12,500	11,070	1,570
2004	W	NA	W	412	160	NA	410	54,900	47,400	1,440
2005	W	NA	W	589	254	NA	590	113,000	94,600	2,020
2006	W	NA	W	409	191	NA	410	54,200	43,800	2,090
2007	W	NA	W	544	592	NA	545	72,900	57,300	2,240
2008	W	NA	W	519	562	NA	519	71,200	53,900	2,240
2009	W	NA	W	263	618	NA	263	50,900	38,700	2,240
2010	W	NA	W	480	919	NA	480	83,400	62,300	2,210
2011	W	NA	W	601	1,440	NA	601	146,000	106,000	1,980

NA Not available. W Withheld to avoid disclosing company proprietary data.

<sup>1</sup>Compiled by K.E. Porter (retired) and M.W. George.

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

## Selenium Worksheet Notes

### Data Sources

The sources of data for the selenium 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); Metal Prices in the United States through 1998 (MP98); and Mineral Commodity Profiles (MCP). Years of publication and corresponding years of data coverage are listed in the References section below.

### Primary Production

Primary production data are represented by the refinery production of selenium metal. Data were withheld for 1911–12, 1915–16, 1932–33, 1985–87, and 1997 to the most recent year because they are proprietary. Data were not available for 1900–09 and are assumed to be zero because significant uses for selenium had not been developed. Primary production data reported for 1955–59 includes small quantities of secondary production. Data are from the MR and the MYB.

### Secondary Production

Secondary production data were reported for 1952–56. This represented selenium recovered from rectifiers for recycling. In 1957, secondary recovery was stated as a percent of production and for 1958–61, was stated as a percent of supply. In 1960 and 1961, secondary production was reported as zero and in subsequent years was not reported. Data are from the MR and the MYB.

### Shipments

Shipments represent producer shipments of selenium metal to consumers. Data were withheld for 1911–12, 1915–16, 1932–33, 1985–87, and 1997 to the most recent year because they are proprietary. Data were not available for 1900–09 and are assumed to be zero because significant uses for selenium had not been developed. Government shipments of selenium from the National Defense Stockpile were reported for 1972–76 but were not included in base for shipments. Data are from the MR and the MYB.

### Imports

Import data represent the selenium content of selenium in unwrought selenium metal, waste and scrap selenium metal, and selenium dioxide. Imports were assumed to be zero for 1900–09. Data were not available for 1910–20. Data are from the MR and the MYB.

### Exports

Export data represent the selenium content of selenium metal and waste and scrap selenium metal. Exports assumed to be zero for 1900–09. Export data were not available for 1910–40 and for 1946–69. Data are from the MR and the MYB.

### Stocks

Stocks represent the industry producer, consumer, and dealer stocks of selenium metal. Stock data were withheld for 1985–2002 because they are proprietary. Data are from the MR and the MYB.

### Apparent Consumption

Apparent consumption data are from the MR and the MYB. Apparent consumption data were not available for 1900–09 and are assumed to be zero because significant uses for selenium had not been developed. Apparent consumption data were estimated by linear interpolation for 1911–12, 1915–16, and 1985–87. For 1997–2000 apparent consumption was estimated in MCP. For 2001 to the most recent year, U.S. apparent consumption was withheld to avoid disclosing company proprietary data; imports for consumption were used as a proxy for apparent consumption.

### Unit Value

Unit value is the value in actual U.S. dollars of one metric ton (t) of selenium apparent consumption. Unit value is estimated from the “Annual Average Commercial-Grade Selenium Price” as reported in the MP98. Price data are from the MR for 1909–10. Unit value was interpolated for 1915. Data were not available for 1900–08.

### 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 represent world refinery production of selenium metal. Data were not available for 1900–37. World production estimates for 1985–1987 and 1997 to the most recent year do not include withheld U.S. production data. Data are from the MR and the MYB.

### References

Butterman, W.C., and Brown, R.D., Jr., 2004, Mineral Commodity Profiles—Selenium: U.S. Geological Survey Open-File Report 03–018, accessed July 12, 2006, at <http://pubs.usgs.gov/of/2003/of03-018/>.  
U.S. Bureau of Mines, 1927–34, Mineral Resources of the United States, 1924–31.

U.S. Bureau of Mines, 1933–96, Minerals Yearbook, 1932–94.

U.S. Geological Survey, 1901–27, Mineral Resources of the United States, 1900–23.

U.S. Geological Survey, 1995–present, Minerals Yearbook, v. I. (Available via <http://minerals.usgs.gov/minerals>.)

U.S. Geological Survey, 1999, Metal Prices in the United States through 1998.

**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, accessed [date], at <http://pubs.usgs.gov/ds/2005/140/>.

**For more information, please contact:**

[USGS Selenium Commodity Specialist](#)