LITHIUM STATISTICS[1]
U.S. GEOLOGICAL SURVEY
[All values in metric tons (t) lithium unless otherwise noted]
Last modification: April 1, 2014

Year	Production	Imports	Exports	Estimated consumption	Unit value ($/t)	Unit value (98$/t)	World production (gross weight)
1900	10.4	NA	NA	10.4	NA	NA	NA
1901	35.0	NA	NA	35.0	NA	NA	NA
1902	24.9	NA	NA	24.9	NA	NA	NA
1903	23.1	NA	NA	23.1	NA	NA	NA
1904	11.5	NA	NA	11.5	NA	NA	NA
1905	1.58	NA	NA	1.58	NA	NA	NA
1906	7.66	NA	NA	7.66	NA	NA	NA
1907	10.6	NA	NA	10.60	NA	NA	NA
1908	4.06	NA	NA	4.06	NA	NA	NA
1909	3.78	NA	NA	3.78	NA	NA	NA
1910	4.76	NA	NA	4.76	NA	NA	NA
1911	10.0	NA	NA	10.0	NA	NA	NA
1912	7.20	NA	NA	7.20	NA	NA	NA
1913	10.6	NA	NA	10.6	NA	NA	NA
1914	10.5	NA	NA	10.5	NA	NA	NA
1915	9.72	NA	NA	9.72	NA	NA	NA
1916	12.4	NA	NA	12.4	NA	NA	NA
1917	41.2	NA	NA	41.2	NA	NA	NA
1918	118	NA	NA	118	NA	NA	NA
1919	126	NA	NA	126	NA	NA	NA
1920	234	NA	NA	234	NA	NA	NA
1921	36.7	NA	NA	36.7	NA	NA	NA
1922	43.8	NA	NA	43.8	NA	NA	NA
1923	46.2	NA	NA	46.2	NA	NA	NA
1924	59.9	NA	NA	59.9	NA	NA	NA
1925	62.8	NA	NA	62.8	NA	NA	3,730
1926	74.0	NA	NA	74.0	NA	NA	4,530
1927	83.5	NA	NA	83.5	NA	NA	5,260
1928	92.0	NA	NA	92.0	NA	NA	5,970
1929	W	NA	NA	64.0	NA	NA	3,140
1930	35.9	NA	NA	35.9	NA	NA	3,030
1931	W	NA	NA	35.2	NA	NA	679
1932	W	NA	NA	34.6	NA	NA	690
1933	10.1	NA	NA	33.9	NA	NA	738
1934	14.4	NA	NA	14.4	NA	NA	1,200
1935	23.1	NA	NA	23.1	NA	NA	1,540
1936	24.8	NA	NA	24.8	2,800	32,900	2,060
1937	27.1	NA	NA	27.1	NA	NA	3,280
1938	22.3	NA	NA	22.3	NA	NA	2,510
1939	49.8	NA	NA	49.8	NA	NA	3,060
1940	52.5	NA	NA	52.5	NA	NA	3,440
1941	97.1	NA	NA	97.1	NA	NA	4,400
1942	139	NA	NA	139	NA	NA	6,990
1943	215	NA	NA	215	NA	NA	9,180
1944	394	NA	NA	394	NA	NA	15,600
1945	127	NA	NA	127	NA	NA	2,830
1946	150	NA	NA	150	NA	NA	4,540
1947	93	NA	NA	93	NA	NA	5,350
1948	135	NA	NA	135	NA	NA	5,450
1949	221	NA	NA	221	NA	NA	6,270

LITHIUM STATISTICS[1]
U.S. GEOLOGICAL SURVEY
[All values in metric tons (t) lithium unless otherwise noted]
Last modification: April 1, 2014

Year	Production	Imports	Exports	Estimated consumption	Unit value ($/t)	Unit value (98$/t)	World production (gross weight)
1950	347	NA	NA	347	NA	NA	18,000
1951	444	NA	NA	444	NA	NA	25,200
1952	505	NA	NA	505	2,380	14,600	25,500
1953	821	NA	NA	821	1,870	11,400	57,800
1954	1,140	NA	NA	1,140	2,200	13,300	93,200
1955	W	NA	NA	1,250	2,130	13,000	86,000
1956	W	NA	NA	1,350	2,130	12,800	105,000
1957	W	NA	NA	1,460	1,720	9,940	111,000
1958	W	NA	NA	1,560	1,610	9,100	87,800
1959	W	NA	NA	1,670	1,610	8,990	62,400
1960	W	927	NA	1,770	1,630	8,960	87,100
1961	W	487	NA	1,880	1,480	8,040	57,200
1962	W	557	NA	1,980	1,190	6,400	47,300
1963	W	408	NA	2,090	1,170	6,220	49,500
1964	W	490	NA	2,190	1,170	6,160	64,000
1965	W	204	NA	2,300	992	5,110	68,500
1966	W	177	NA	2,400	1,060	5,330	3,450
1967	W	474	NA	2,510	970	4,730	7,590
1968	W	218	NA	2,610	992	4,660	63,700
1969	W	117	NA	2,720	1,010	4,490	68,000
1970	W	57.2	NA	2,820	1,150	4,830	73,100
1971	W	118	590	2,860	1,120	4,510	73,400
1972	W	27.2	581	2,980	1,160	4,520	19,700
1973	W	118	835	3,490	1,220	4,480	79,300
1974	W	63.5	907	4,130	1,740	5,750	113,000
1975	W	81.6	816	2,620	1,720	5,210	122,000
1976	W	9.07	1,450	2,540	1,830	5,240	75,000
1977	W	9.07	1,630	3,720	1,940	5,220	74,300
1978	W	9.07	1,810	3,080	2,110	5,270	81,900
1979	W	45.4	2,180	2,900	2,260	5,080	76,000
1980	W	81.6	2,270	2,720	2,660	5,260	92,800
1981	W	136	2,360	2,900	3,110	5,570	90,200
1982	W	27.2	2,090	1,810	3,110	5,250	83,600
1983	W	31.8	2,360	2,000	3,260	5,340	93,700
1984	W	81.6	2,630	2,900	3,400	5,340	108,000
1985	W	370	2,300	2,300	3,310	5,020	122,000
1986	W	610	1,800	2,400	3,310	4,920	132,000
1987	W	820	1,800	2,400	3,420	4,910	139,000
1988	W	1,000	2,300	2,700	3,590	4,950	154,000
1989	W	630	2,600	2,700	3,810	5,010	173,000
1990	W	790	2,600	2,700	4,030	5,030	163,000
1991	W	590	2,400	2,600	4,210	5,040	149,000
1992	W	770	2,100	2,300	4,320	5,020	156,000
1993	W	810	1,700	2,300	4,210	4,750	127,000
1994	W	851	1,700	2,500	4,410	4,850	128,000
1995	W	2,640	1,900	2,600	4,340	4,640	177,000
1996	W	884	2,200	2,700	4,340	4,510	214,000
1997	W	975	1,880	2,800	4,480	4,550	213,000
1998	W	2,590	1,340	2,800	4,480	4,480	178,000
1999	W	2,640	1,330	2,800	4,470	4,360	188,000

LITHIUM STATISTICS[1]
U.S. GEOLOGICAL SURVEY
[All values in metric tons (t) lithium unless otherwise noted]
Last modification: April 1, 2014

Year	Production	Imports	Exports	Estimated consumption	Unit value ($/t)	Unit value (98$/t)	World production (gross weight)
2000	W	2,880	1,310	2,800	4,470	4,230	204,000
2001	W	1,990	1,480	1,400	1,490	1,370	210,000
2002	W	1,920	1,620	1,100	1,590	1,440	219,000
2003	W	2,200	1,520	1,400	1,550	1,370	256,000
2004	W	2,910	1,690	1,900	1,720	1,480	262,000
2005	W	3,580	1,720	2,500	1,460	1,220	344,000
2006	W	3,260	1,500	2,500	2,320	1,880	394,000
2007	W	3,140	1,440	2,400	3,530	2,770	381,000
2008	W	3,160	1,450	2,300	4,440	3,360	453,000
2009	W	1,890	919	1,300	4,530	3,440	374,000
2010	W	1,960	1,410	1,100	4,350	3,250	489,000
2011	W	2,850	1,310	2,000	3,870	2,800	620,000
2012	W	2,760	1,300	2,000	4,220	3,000	643,000

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

[1]Compiled by T.D. Kelly, J.A. Ober, and B.W. Jaskula.

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

Lithium Worksheet Notes

Data Sources
The sources of data for the lithium 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 U.S. Bureau of Mines Circular 8053 (Schreck, 1961). The years of publication and corresponding years of data coverage are listed in the References section below.

Production
Production data for lithium refers to lithium contained in material produced or shipped from mines and brine operations in the United States. Production data for 1940–54 include both gross tons of lithium minerals and compound production and Li_2O content of these products. Li_2O contains 46.46 percent lithium; this information was used to determine lithium content for those years. Because production data for 1940–54 included dilithium sodium phosphate, the average lithium content of domestic production varied from 2.50 percent to 5.20 percent for the period. Most lithium ores average about 2.00 percent and, and dilithium sodium phosphate contains about 10.5 percent lithium.

Prior to 1940, the quantities of different lithium-bearing materials were not specified so that assumptions were made to estimate lithium content. Dilithium sodium phosphate was produced during 1938–78, so adjustments were made for 1938 and 1939. Lithium content was estimated as 2.50 percent for 1939 and 2.00 percent for 1938. Production data from 1900 through 1954 were taken from U.S. Bureau of Mines Information Circular 8053 (Schreck, 1961). For 1929, 1931, 1932, and 1955 to the most recent year, production data were withheld to avoid disclosure of individual company confidential data.

Imports
Import data for 1960–70 are from the MCS, while import data for 1971 to the most recent year are from the Salient Statistics table in the MYB. All import data are in contained lithium. Most imports for 1960–88 were mineral concentrates used in ceramics and glass not used to produce lithium compounds. In addition, during this period, the compounds reported as imports varied from year to year. Often the designations were nonspecific, such as compounds, salts, and/or organic salts making the reported lithium contents questionable. When the U.S. Census Bureau (USCB) began using the Harmonized Tariff Schedule in 1989, lithium carbonate and lithium hydroxide imports were specified. Unfortunately, other categories of lithium compounds were combined in nonspecific categories. Since 1989, imports of lithium ores and ore concentrates have not been reported by USCB, although the United States remains a major importer of these materials. Lithium metal imports became unavailable also. For these reasons, a large percentage of lithium imports go unreported. Import data are not available for 1900–59.

Exports
All export data are in contained lithium. For 1971–81, USCB reported exports of lithium hydroxide only. Data for other compounds were estimated with reported imports by other countries of U.S. lithium compounds. However, the lithium hydroxide data were significantly lower than the reported lithium hydroxide imports of the other countries listed. For 1982–88, USCB reported exports of lithium carbonate, lithium hydroxide, and other lithium compounds. Data are from the Salient Statistics table in the MYB. Export data are not available for 1900–70.

Apparent Consumption
Consumption data are in contained lithium. Production data were used to estimate consumption from 1900–54, since import and export data were not available. Apparent consumption data for 1929, 1931, and 1932 were interpolated since data for these years were not available. From 1955–70, consumption was interpolated. Consumption data for 1971 to the most recent year were taken from the Salient Statistics table in the MYB where the data are reported as estimated consumption.

Unit Value ($/t)
Unit value is the value of 1 metric ton (t) of lithium apparent consumption. The price series for lithium carbonate was used to estimate unit value for lithium. Lithium carbonate is a good estimator of unit value due to the large quantity and importance of this compound compared to other lithium compounds. Data prior to 2001 is a continuation of the published price series ($/kilogram) converted to $/t, for lithium carbonate provided by the USGS

lithium commodity specialist. Since 2001, unit value has been based on the average USCB import price data available in the "Prices" section of the MYB.

Unit Value (98$/t)
The Consumer Price Index conversion factor, with 1998 as the base year, was used to adjust the unit value in current U.S. dollars to unit value in constant 1998 U.S. dollars.

World Production
World production data are in metric tons of gross product of lithium minerals and brine. Since 1967, lithium production was reported as ore and ore concentrates from mines and lithium carbonate from brine deposits. World production data for 1966–67 do not include data from Rhodesia (Zimbabwe) and some other African countries. Zimbabwe was by far the largest producer at the time. After 1954, world production does not include U.S. production. Data were not available for 1900–24.

References
Schreck, A.E., 1961, Lithium—A materials survey: U.S. Bureau of Mines Information Circular 8053, 81 p.
U.S. Bureau of Mines, 1933–96, Minerals Yearbook, 1932–94.
U.S. Bureau of Mines, 1962–77, Commodity Data Summaries, 1962–77.
U.S. Bureau of Mines, 1978–95, Mineral Commodity Summaries, 1978–95.
U.S. Geological Survey, 1995–present, Minerals Yearbook, v. I. (Available via http://minerals.usgs.gov/minerals.)
U.S. Geological Survey, 1997–most recent, Mineral Commodity Summaries 1997–most recent. (Available via http://minerals.usgs.gov/minerals.)
U.S. Geological Survey and U.S. Bureau of Mines, 1996, Mineral Commodity Summaries, 1996.

Recommended Citation Format:
U.S. Geological Survey, 2014, Lithium 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://minerals.usgs.gov/minerals/pubs/historical-statistics/.

For more information, please contact:

USGS Lithium Commodity Specialist