

RARE EARTHS STATISTICS¹

U.S. GEOLOGICAL SURVEY

[All quantities in metric tons (t) rare-earth oxide equivalent unless otherwise noted]

Last modification: April 1, 2014

Year	Production	Imports	Exports	Apparent consumption	Unit value (\$/t)	Unit value (98\$/t)	World production
1900	227	NA	NA	227	NA	NA	1,040
1901	187	NA	NA	187	NA	NA	1,090
1902	200	NA	NA	200	NA	NA	863
1903	215	NA	NA	215	NA	NA	2,030
1904	186	NA	NA	186	NA	NA	2,860
1905	335	NA	NA	335	NA	NA	2,780
1906	211	NA	NA	211	NA	NA	2,600
1907	137	NA	NA	137	NA	NA	2,580
1908	105	NA	NA	105	NA	NA	2,840
1909	135	NA	NA	135	NA	NA	3,690
1910	25.0	NA	NA	25.0	NA	NA	3,020
1911	NA	NA	NA	22.0	NA	NA	2,490
1912	NA	NA	NA	19.0	NA	NA	2,500
1913	NA	NA	NA	15.0	NA	NA	1,480
1914	NA	NA	NA	12.0	NA	NA	992
1915	9.00	NA	NA	9.00	NA	NA	870
1916	9.00	NA	NA	9.00	NA	NA	731
1917	25.0	NA	NA	25.0	NA	NA	1,730
1918	NA	NA	NA	20.0	NA	NA	1,470
1919	NA	NA	NA	15.0	NA	NA	1,210
1920	NA	NA	NA	9.99	NA	NA	1,590
1921	NA	NA	NA	5.00	NA	NA	929
1922	NA	0.017	NA	0.017	2,450	23,800	189
1923	NA	13.6	NA	13.6	344	3,280	138
1924	NA	37.2	NA	37.2	219	2,090	348
1925	0.499	6.74	NA	7.24	1,070	10,000	12
1926	NA	3.53	NA	3.53	311	2,850	146
1927	NA	26.4	NA	26.4	237	2,210	352
1928	NA	31.4	NA	31.4	451	4,300	180
1929	NA	41.7	NA	41.7	412	3,920	197
1930	NA	27.1	NA	27.1	601	5,890	17
1931	NA	0.120	NA	0.120	367	3,930	50
1932	NA	NA	NA	0.069	5,930	70,600	530
1933	NA	0.018	NA	0.018	11,600	145,000	302
1934	NA	NA	NA	0.015	11,700	142,000	564
1935	NA	NA	NA	0.012	11,700	139,000	2,130
1936	NA	0.009	NA	0.009	11,700	137,000	1,840
1937	NA	652	NA	652	4	41	2,150
1938	NA	377	NA	377	3	38	3,310
1939	NA	471	NA	471	3	29	2,510
1940	NA	0.200	NA	0.200	8,480	98,700	2,370
1941	NA	8.13	NA	8.13	11,200	124,000	2,380
1942	NA	4.66	10.5	6.19	9,930	99,300	1,500
1943	NA	2.34	22.1	4.25	7,240	68,300	1,900
1944	NA	8.18	16.9	2.31	8,680	80,400	3,200
1945	NA	13.3	13.0	0.365	9,620	87,500	1,440
1946	NA	6.31	16.0	83.2	11,100	92,500	721
1947	NA	0.268	73.4	200	14,400	105,000	1,300
1948	20.0	0.644	22.2	200	14,700	99,300	2,720
1949	NA	1.43	28.2	300	8,900	61,000	1,290
1950	383	54.2	22.3	400	3,540	23,900	470
1951	747	172	NA	900	1,670	10,400	1,240

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1952	1,110	NA	NA	1,000	3,910	24,000	1,820
1953	615	1.70	50.1	600	7,090	43,200	3,960
1954	983	4.78	19.3	2,270	8,630	52,300	7,840
1955	608	12.5	14.9	2,450	6,720	41,000	5,760
1956	W	27.8	19.5	2,720	5,070	30,400	5,230
1957	499	44.3	8.58	2,720	1,920	11,200	5,980
1958	625	20.6	19.4	2,450	5,100	28,800	8,060
1959	600	6.7	18.5	2,270	5,050	28,200	2,810
1960	1,050	17.9	19.5	2,040	3,540	19,500	2,270
1961	1,030	1,450	11.8	2,460	82	446	3,690
1962	W	3,840	17.5	2,110	341	1,840	8,020
1963	278	3,220	86.2	2,810	319	1,700	6,060
1964	256	1,060	906	2,770	385	2,030	3,680
1965	2,900	1,050	21.8	5,050	485	2,510	6,960
1966	12,200	1,240	NA	6,620	284	1,430	16,200
1967	12,900	1,070	56.9	5,530	562	2,740	16,900
1968	10,300	2,220	36.2	7,800	401	1,880	16,200
1969	12,500	2,110	41.6	10,100	420	1,870	18,100
1970	9,110	1,730	31.2	10,500	412	1,730	15,900
1971	9,820	1,690	284	9,340	1,040	4,190	16,400
1972	10,700	466	597	12,200	3,690	14,400	18,200
1973	17,500	1,080	1,420	14,800	2,150	7,890	24,000
1974	19,900	707	1,770	14,100	3,070	10,100	25,600
1975	15,000	1,300	539	11,500	2,050	6,210	22,100
1976	13,000	1,070	263	12,200	4,380	12,500	19,700
1977	15,400	2,760	867	16,800	2,600	6,990	24,500
1978	14,100	4,010	287	16,800	2,500	6,250	26,500
1979	16,500	3,810	33.9	16,100	4,580	10,300	28,800
1980	16,000	3,290	8,470	18,100	1,960	3,880	27,300
1981	17,100	4,340	5,350	20,000	1,870	3,350	30,600
1982	17,500	4,210	2,730	17,100	2,360	3,990	26,600
1983	17,100	2,790	2,900	19,600	2,820	4,620	31,400
1984	25,300	4,420	4,550	21,400	2,380	3,730	41,400
1985	13,400	3,390	4,670	12,100	2,190	3,320	43,500
1986	10,900	2,150	3,650	10,900	3,840	5,710	39,900
1987	11,100	1,070	4,540	11,100	3,970	5,700	46,900
1988	11,500	1,840	6,530	16,800	2,230	3,070	55,300
1989	20,800	7,710	1,940	27,800	6,780	8,910	60,700
1990	22,700	5,520	5,860	28,700	8,990	11,200	52,900
1991	16,500	5,930	5,360	22,100	9,470	11,300	41,700
1992	20,700	5,110	5,720	21,400	10,100	11,700	50,100
1993	17,800	6,250	7,170	17,000	9,010	10,200	46,700
1994	20,700	6,990	10,200	17,800	7,980	8,780	55,100
1995	22,200	12,400	10,600	24,000	8,210	8,780	74,300
1996	20,400	17,500	13,000	24,900	7,150	7,430	79,700
1997	20,000	12,200	12,400	19,400	8,540	8,670	68,300
1998	10,000	14,000	9,440	11,500	8,900	8,900	77,100
1999	5,000	21,300	9,620	11,500	6,400	6,260	86,600
2000	5,000	21,700	9,750	12,100	6,450	6,110	90,900
2001	0	19,200	9,100	10,100	5,790	5,330	94,500
2002	0	14,200	8,210	5,990	7,500	6,800	98,200
2003	0	16,700	7,310	9,390	6,150	5,450	97,100

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2004	0	17,300	11,800	5,500	8,590	7,410	102,000
2005	0	15,300	9,240	6,060	6,595	5,500	122,000
2006	0	18,500	9,150	9,350	3,890	3,150	137,000
2007	0	17,700	7,450	10,200	5,290	4,160	124,000
2008	0	15,400	7,920	7,410	13,600	10,300	132,000
2009	0	12,100	9,200	W	9,300	7,100	135,000
2010	0	12,900	7,880	W	20,000	14,500	126,000
2011	0	7,790	10,300	NA	58,100	42,100	113,000
2012	800	5,800	5,850	NA	51,200	36,300	110,000

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

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

Rare Earths Worksheet Notes

Data Sources

The sources of data for the rare earths 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). The 17 rare-earth elements include the 15 lanthanides, scandium, and yttrium. The years of publication and corresponding years of data coverage are listed in the References section below.

Production

Production data were for the amount of contained rare-earth oxides (REO) in bastnäsite and monazite ores produced in the United States. Data were not available for 1911–14, 1918–24, 1926–47, and 1949 and withheld for 1956 and 1962 in order to avoid disclosing proprietary data.

Imports

Import data were for the amount of contained REO in alloys, compounds, metals, and ores imported into the United States. Data were not available for 1900–21, 1932, 1934–35, and 1952.

Exports

Export data were for the amount of contained REO in alloys, compounds, metals, and ores exported from the United States. Data were not available for 1900–41, 1951–52, and 1966.

Apparent Consumption

Apparent consumption was estimated for 1900–10, 1915–17, 1922–31, 1933–41, 1945, and 1950 to the most recent year by using the formula:

$$\text{APPARENT CONSUMPTION} = \text{PRODUCTION} + \text{IMPORTS} - \text{EXPORTS}.$$

Apparent consumption was interpolated for 1911–14, 1918–21, 1932, 1942–44, and 1946–49. For 2000 to the most recent year, apparent consumption was calculated based on estimated REO content.

Unit Value (\$/t)

Unit value is the value in dollars of 1 metric ton (t) of REO apparent consumption. Unit value was estimated for the United States in actual dollars by a weighted average of imports and exports. Data were not available for 1900–21.

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. Data were not available for 1900–21.

World Production

World production data were for REO content of ores produced.

References

U.S. Bureau of Mines, 1927–34, Mineral Resources of the United States, 1924–31.

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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/>.)

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For more information, please contact:

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