

CEMENT END-USE STATISTICS^{1,2}
U.S.GEOLOGICAL SURVEY
 [Metric tons]

Last modification: September 15, 2005

Year	Adjusted portland cement shipments by type of final customer ³						Total portland cement	Masonry cement	Apparent consumption ⁴
	Ready-mix concrete	Concrete products	Contractors	Building material dealers	Oil well, mining, and waste	Government and miscellaneous			
1975	39,471,000	8,425,000	7,329,000	4,503,000		1,274,000	61,002,000	2,606,000	63,608,000
1976	42,244,000	9,059,000	7,550,000	4,530,000		1,164,000	64,546,000	2,963,000	67,509,000
1977	46,710,000	9,751,000	7,246,000	4,951,000		1,413,000	70,071,000	3,356,000	73,427,000
1978	50,932,000	10,485,000	7,205,000	5,524,000		1,450,000	75,597,000	3,691,000	79,288,000
1979	50,103,000	10,757,000	7,059,000	6,313,000		1,388,000	75,620,000	3,344,000	78,964,000
1980	45,818,000	8,794,000	7,097,000	4,509,000		1,230,000	67,448,000	2,724,000	70,173,000
1981	43,840,000	7,609,000	7,118,000	3,530,000		1,549,000	63,645,000	2,447,000	66,092,000
1982	39,335,000	6,832,000	6,604,000	3,312,000		1,332,000	57,415,000	2,157,000	59,572,000
1983	43,325,000	7,464,000	7,370,000	3,824,000		1,247,000	63,229,000	2,609,000	65,838,000
1984	50,732,000	9,343,000	7,551,000	4,181,000		1,438,000	73,244,000	2,942,000	76,186,000
1985	53,210,000	9,293,000	7,890,000	4,149,000		1,333,000	75,875,000	2,961,000	78,836,000
1986	57,233,000	9,394,000	7,440,000	3,945,000		1,599,000	79,611,000	3,226,000	82,837,000
1987	59,575,000	9,295,000	6,787,000	3,657,000		1,510,000	80,823,000	3,381,000	84,204,000
1988	59,844,000	9,100,000	6,371,000	3,064,000		2,106,000	80,485,000	3,367,000	83,851,000
1989	58,302,000	9,031,000	6,674,000	3,326,000		2,021,000	79,353,000	3,061,000	82,414,000
1990	56,490,000	9,311,000	6,159,000	3,356,000		2,655,000	77,971,000	2,994,000	80,964,000
1991	48,079,000	8,955,000	5,571,000	3,037,000		3,663,000	69,305,000	2,495,000	71,800,000
1992	51,419,000	8,563,000	6,642,000	3,565,000		3,282,000	73,470,000	2,699,000	76,169,000
1993	45,481,000	8,780,000	6,016,000	4,657,000	1,097,000	10,686,000	76,717,000	2,984,000	79,701,000
1994	45,791,000	9,070,000	4,965,000	3,890,000	1,027,000	17,490,000	82,232,000	3,250,000	85,482,000
1995	50,757,000	9,509,000	5,163,000	3,471,000	1,061,000	12,964,000	82,925,000	3,150,000	86,075,000
1996	52,773,000	9,899,000	5,560,000	2,937,000	1,302,000	15,037,000	87,509,000	3,569,000	91,078,000
1997	67,012,000	11,390,000	7,758,000	3,235,000	2,317,000	1,103,000	92,815,000	3,627,000	96,442,000
1998	74,038,000	11,885,000	7,912,000	3,237,000	1,123,000	1,080,000	99,274,000	4,101,000	103,380,000
1999	76,018,000	12,844,000	8,610,000	4,468,000	1,128,000	1,128,000	104,200,000	4,353,000	108,550,000
2000	77,632,000	14,002,000	7,411,000	3,690,000	1,462,000	1,125,000	105,320,000	4,333,000	109,660,000
2001	80,901,000	14,074,000	6,777,000	3,713,000	1,912,000	836,000	108,210,000	4,482,000	112,690,000
2002	77,784,000	13,680,000	6,560,000	3,085,000	1,178,000	1,618,000	103,910,000	4,435,000	108,340,000
2003	79,883,000	14,864,000	6,866,000	3,650,000	1,456,000	980,000	107,700,000	4,745,000	112,440,000

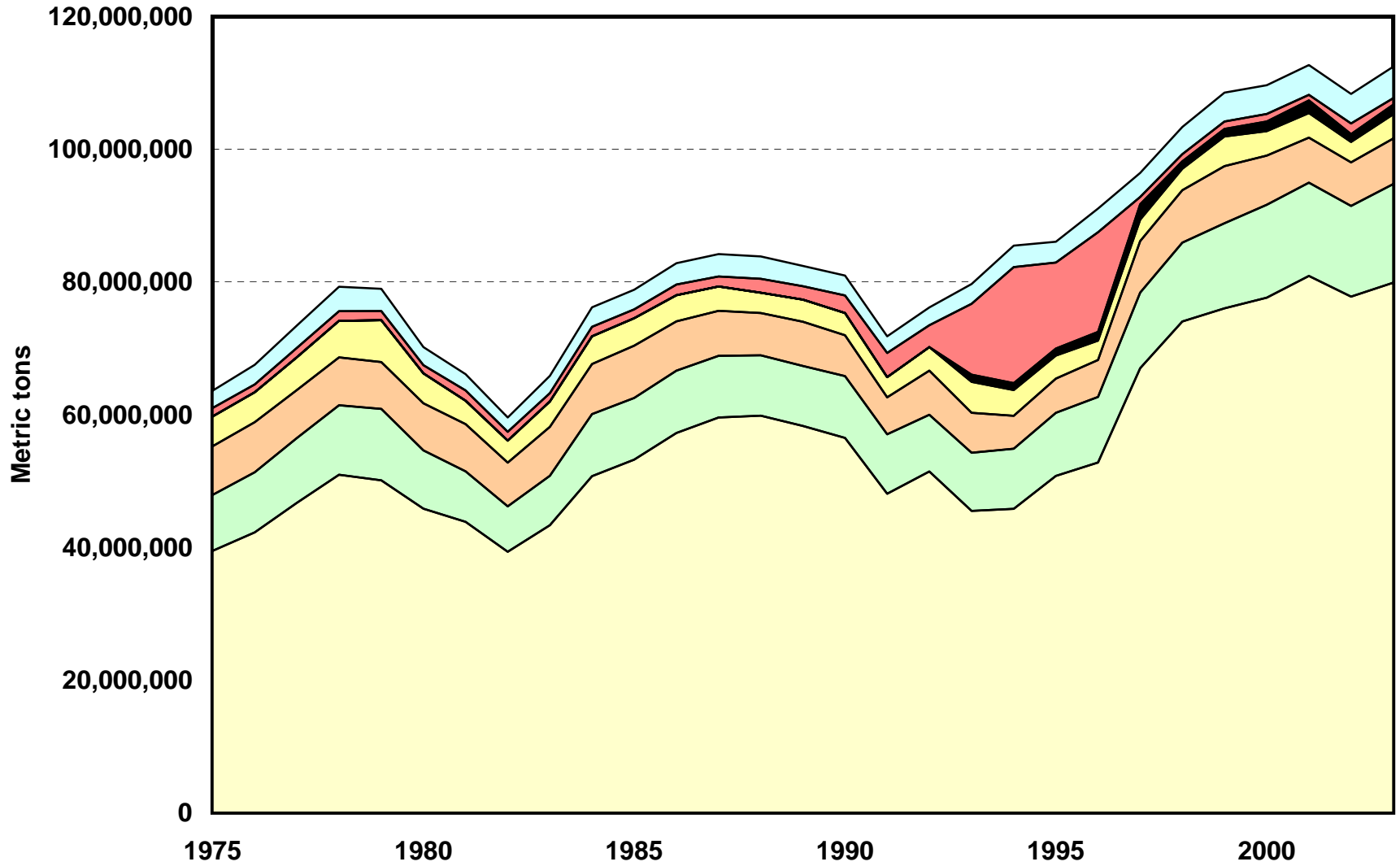
¹Compiled by G.R. Matos and H.G. van Oss.

²Data exclude Puerto Rico.

³Data do not match portland cement shipments to customers as shown in Minerals Yearbook. See notes for more detail.

⁴Apparent consumption is the total sales to final customers of portland cement and masonry cement. See notes for more detail.

End Uses of Cement



Ready-mix concrete

Concrete products

Contractors

Building material dealers

Oil well, mining, and waste stabilization

Government and miscellaneous

Masonry cement

Cement End-Use Worksheet Notes

Data Source

The source of data for the cement end-use worksheet is the Minerals Yearbook (MYB), an annual collection, compilation, and analysis of mineral industry data, published by the U.S. Bureau of Mines and the U.S. Geological Survey.

End Use

End use is defined as the use of the mineral commodity in a particular industrial sector or product. Data are for portland cement and masonry cement. Portland cement includes both straight portland cements within the ASTM C-150 standard, blended cements, oil well cements, and other similar cements based on portland cement clinker, and includes gray, white, and colored varieties. It excludes portland-lime cements which are included within the masonry cement category. Masonry cement includes true masonry cements, mortar cements, portland-lime cements, plastic cements, and stucco cements, and includes gray, white, and colored varieties.

In terms of end use, portland cement is characterized by sales to different types of final customers. Portland cement consumption data in this report reflect shipments estimated from monthly surveys. Consumption data by customer type in the MYB are estimated from annual surveys. Therefore, data shown here do not match data from the MYB.

Portland cement is further divided among:

- Ready-mix concrete
- Concrete product manufacturers
- Contractors
- Building material dealers
- Oil well mining waste, and
- Government and miscellaneous

The ready-mix concrete category is adjusted sales to ready-mix concrete companies. This type of concrete has many bulk applications including roads, pavements, foundations, walls and similar bulk emplacements. This final customer category can overlap (but the data are not double-counted) with other types of final customers.

The concrete products category includes data on sales to concrete products manufacturers collected within four broad types of products: brick-block, precast-prestressed, pipe, and other and/or unspecified.

The contractors category includes data on sales to contractors collected within four broad types of contractor activities: airport, road paving, soil cement, and other and/or unspecified.

The building material dealers category includes the majority of portland cement that was sold in bag or package form, but also includes some sales of bulk cement. Building material dealers typically convert any bulk cement purchases to bags or packages for onward sale to the general public.

The oil well, mining, and waste stabilization category comprises cement sold for drilling oil (and gas) wells, including straight portland cements as well as specialized oil well cements. Cement sold to the mining industry includes that for use as an agglomerating agent for heap leaches as well as cement to make concrete or to stabilize backfills. Data for these end uses prior to 1993 were likely included in the government and miscellaneous category.

The government and miscellaneous category includes sales to all types of governmental customers, and includes all types of applications. Original data on sales to miscellaneous customers include customer types not otherwise listed, but, importantly, the data also included the lumped cement sales for survey respondents that provided no customer-type breakout data at all or that provided only incomplete data. Thus, this category overlaps all the others and, in some years (especially 1993–96), is indicative of a large fraction of canvasses that were returned with incomplete data.

The masonry cement category is used to make mortars and stuccos for masonry construction. Data are from monthly surveys of the cement industry and reflect direct sales; the data thus exclude similar cements mixed directly at the job sites (e.g., using purchased portland cement and purchased lime).

Breakout of data by customer type for portland cement for 1993–96 shows some large shifts relative to data for earlier and later years; apparently owing to a significant number of survey respondents during these years that provided no, or incomplete, breakout data on their customers, or where the respondents lumped their data. This problem is especially evident in the large tonnages seen within the government and miscellaneous category. It is likely that no significant changes in the national-level ratios among major customer types were actually experienced during 1993–96 relative to preceding and following years.

The apparent consumption total is the monthly-data-based annual total sales to final customers for portland cement plus masonry cement. These totals are considered to represent true consumption levels and may differ from the calculated apparent consumption (production + imports – exports ± change in stockpiles). For cement, the data reflecting the calculated statistic may not be correct, especially for years prior to 1994, because the published values (table 1 in the Minerals Yearbook) may not have been corrected to account for several factors. These factors include: (1) ‘production’ of cement includes cement made from imported clinker, so (2) clinker imports should be debited from the import statistics to avoid double-counting; (3) data for stockpiles should include changes to clinker stockpiles as well as those of cement, but clinker stockpile data were not collected prior to 1998; (4) import data should not include imports into Puerto Rico; (5) official import data for clinker may exclude material arriving by truck from Canada; (6) some clinker imports have been mischaracterized in the official trade data as portland cement (incorrect tariff codes were used by the importers).

Blank cells in the spreadsheet indicate that data were not available. Original data were reported in thousand ton units. Data in this end-use table are only represented to the nearest thousand tons.

References

U.S. Bureau of Mines, 1993–96, Minerals Yearbook, v. I, 1991–94.

U.S. Geological Survey, 1997–2005, Minerals Yearbook, v. I, 1995–2003.

Recommended Citation Format:

(1) If taken from CD version:

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, one CD-ROM. (Also available online at <http://pubs.usgs.gov/ds/2005/140/>.)

(2) If taken from online version:

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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