

A Crosswalk of Mineral Commodity End Uses and North American Industry Classification System (NAICS) Codes

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Introduction

This crosswalk is based on the premise that there is a connection between the way mineral commodities are used and how this use is reflected in the economy. Raw mineral commodities are the basic materials from which goods, finished products, or intermediate materials are manufactured or made. Mineral commodities are vital to the development of the U.S. economy and they impact nearly every industrial segment of the economy, representing 12.2 percent of the U.S. gross domestic product (GDP) in 2010 (U.S. Bureau of Economic Analysis, 2014). In an effort to better understand the distribution of mineral commodities in the economy, the U.S. Geological Survey (USGS) attempts to link the end uses of mineral commodities to the corresponding North American Industry Classification System (NAICS) codes.

The links between the end uses of mineral commodities and the NAICS codes provide an instrument for analyzing the use of mineral commodities in the economy. The crosswalk is also a guide, highlighting those industrial sectors in the economy that rely heavily on mineral commodities. The distribution of mineral commodities across the economy is dynamic and does differ from year to year. This report reflects a snapshot of the state of the economy and mineral commodities in 2010.

Methodology

NAICS codes were created to facilitate analysis of industrial areas in the economy. Each NAICS code consists of six digits. The first two digits divide the economy into 20 industrial sectors. Subsectors, represented by the first three digits of the NAICS code, are economic units grouped together by similar production processes (see appendix 1 for the 21 manufacturing subsectors covering mineral commodity end uses). The fourth through sixth digits provide more narrow definitions of industry.

Minerals affect nearly every industrial segment of the economy. In this report, the USGS has developed tables of mineral commodities with the following broad end-use categories: Agricultural, Chemical, Construction/Building, Electrical/Electronic, Machinery, Manufacturing, Medical, Metallurgical, Transportation, and Other. These categories are further broken down to more specific uses and matched with their corresponding NAICS codes. At a minimum, the first three digits of the NAICS code are provided for each mineral commodity, and additional digits are provided when that level of detail was discernable for the end use.

End-use information for 2010 was gathered for most mineral commodities using data from the Mineral Commodity Summaries (U.S. Geological Survey, 2010), Minerals Yearbook (U.S. Geological Survey, 2012), and correspondence with USGS commodity specialists. If the quantity of the material or the percent of material usage is known, those data are provided in the table. Unless otherwise noted,

percentages are based on total consumption and are a percentage that can be rolled-up within one of the broad categories.

Summary Information

Table 1 provides the distribution of mineral commodity uses across the subsectors defined by the three-digit NAICS codes. This table shows the value added to the GDP for each of these sectors and illustrates where individual mineral commodities impact the economy. Additionally, mineral commodities are noted by the percentage of their usage within subsectors. Mineral commodities with 50 percent or more usage within a subsector are represented in bold font. Those mineral commodities with a usage of at least 25 percent and less than 50 percent are in bold italics. Mineral commodities with less than 25 percent use are in italics. Mineral commodities below the dashed line and in normal font have end uses within the subsector, but the percentage and quantity are unknown. Many mineral commodities also have an asterisk notation. This signifies that the percentage of usage spans multiple industrial sectors, but the proportion of the mineral commodity are unknown.

Tables 2 through 77 show the end uses and associated NAICS codes for individual mineral commodities. Except where noted, the data source for tables is the U.S. Geological Survey Minerals Yearbook 2010. When the data are available, the quantity and percentage of use are shown. For consistency and to facilitate comparisons, all end uses were placed into the following general categories across all mineral commodities: Agricultural, Chemical, Construction/Building, Electrical/Electronic, Machinery, Manufacturing, Medical, Metallurgical, Transportation, and Other. More specific uses within these categories are presented with various levels of detail on the basis of how much is known about the individual mineral commodity's end uses.

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Appendix 1. Manufacturing Subsector NAICS Codes

- 311 Food Manufacturing
- 312 Beverage and Tobacco Product Manufacturing
- 313 Textile Mills
- 314 Textile Product Mills
- 315 Apparel Manufacturing
- 316 Leather and Allied Product Manufacturing
- 321 Wood Product Manufacturing
- 322 Paper Manufacturing
- 323 Printing and Related Support Activities
- 324 Petroleum and Coal Products Manufacturing
- 325 Chemical Manufacturing
- 326 Plastics and Rubber Products Manufacturing
- 327 Nonmetallic Mineral Product Manufacturing
- 331 Primary Metal Manufacturing
- 332 Fabricated Metal Product Manufacturing
- 333 Machinery Manufacturing
- 334 Computer and Electronic Product Manufacturing
- 335 Electrical Equipment, Appliance, and Component Manufacturing
- 336 Transportation Equipment Manufacturing
- 337 Furniture and Related Product Manufacturing
- 339 Miscellaneous Manufacturing

See http://www.census.gov/cgi-bin/sssd/naics/naicsrch?chart=2012 for the complete list of all current NAICS codes and further breakdown of the manufacturing codes.

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