## Mineral Production and Exploration in California

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CALIFORNIA IS ONE OF THE LARGEST PRODUCERS OF NON-FUEL MINERALS in the United States. Non-fuel minerals comprise a variety of commodities but exclude fuel commodities like coal and oil shale. In 2022, there were 634 active mines producing 34 commodities in California.

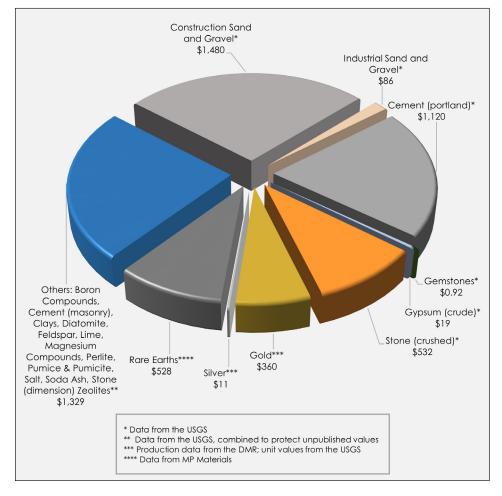
## **PRODUCTION**

Using a combination of data from the California Division of Mine Reclamation, USGS, and MP Materials Corporation, the total estimated California non-fuel mineral production value was \$5.5 billion in 2022.

Based on preliminary USGS data, California ranked fourth—behind Arizona, Nevada, and Texas—in non-fuel mineral production value, accounting for approximately 5.71 percent of the nation's total (USGS, 2023).

Commodity	Rank
Boron	1
Construction sand and gravel	1
Gypsum	1
Rare earth elements	1
Cement	3
Gemstones	4
Crushed stone	9
Industrial sand and gravel	9

Above: California's national standing as a producer of selected non-fuel mineral commodities (Source: USGS, 2023, where production was ranked by state and California was mentioned in the commodity summary).



## **EXPLORATION**

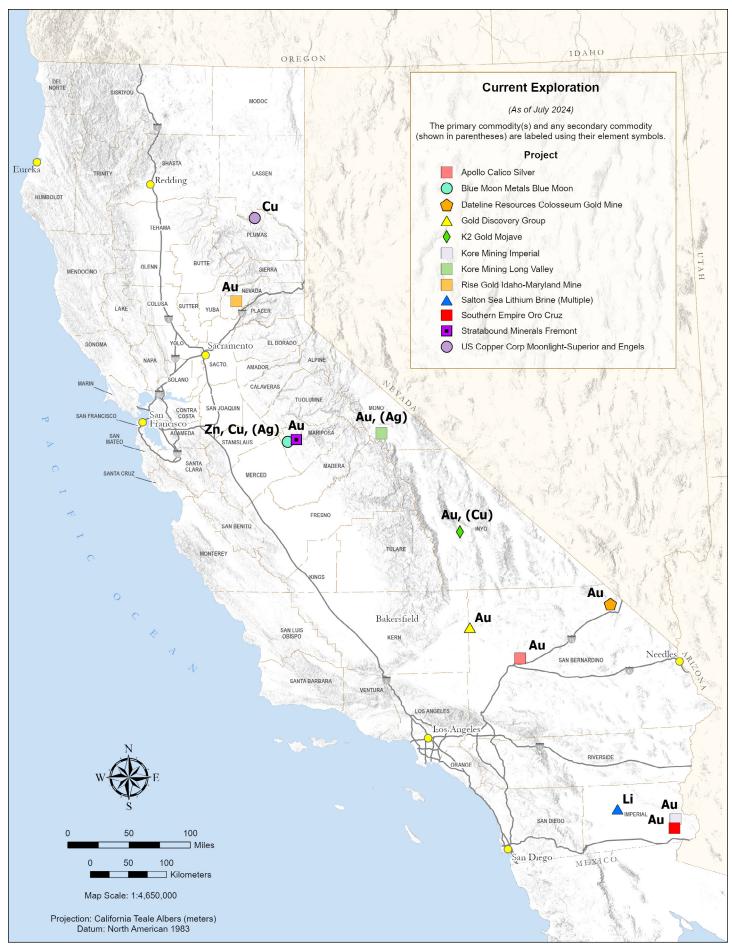
Historically, exploration has been dependent on national needs. In the 1800s, it was gold and mercury. In the 1910s and again in the 1940s it was iron and limestone for wartime steel. And in the 1970s, it was aggregate for the construction boom. Today, as the state focuses on decarbonization, mineral exploration is shifting towards resources critical for renewable energy and technology.

Currently, there are mineral exploration projects underway in California for base metals (including copper and zinc), gold and silver, and lithium. As California continues to expand its role as a leader in non-fuel mineral production, the state faces both opportunities and challenges. From advancing technological innovation in lithium extraction to balancing sustainability with economic growth, California's mining future is poised to play a critical role in shaping the nation and the world's green energy transition.

More detailed information about mineral production and exploration can be found in our annual mineral production bulletins (https://www.conservation.ca.gov/cgs/minerals/mineral-production).

Left: Value (millions of dollars) of California's non-fuel mineral production in 2022. Data are available in CGS Bulletin 232. Some commodities are presented as a group to protect unpublished USGS data, as required.

Facing page: Locations of current exploration projects in California.



Information for this article comes from Bulletin 232 (Marquis, G. D., 2024, California Non-Fuel Mineral Production 2022: California Geological Survey Bulletin 232, 34 p.)