

## MAP SHEET 52

### What Does It Mean for Your Region?

#### A Caution from the California Geological Survey

**CGS cautions that Map Sheet 52 should not be the sole basis for local land-use decisions.** Communities should also consider detailed mineral-resource studies, current local conditions, and their long-term development plans. [1, 2]

California's Geological Survey estimates how long each region's permitted construction aggregate reserves may last based on the recent history of construction activity. But does having 20 years—or more than 50 years—of reserves tell your community whether it has enough materials for future housing, infrastructure, and economic development?

**Not necessarily. And the consequences of getting that answer wrong are both economic and environmental.**

#### Why Regional Aggregate Supply Sustainability Matters

The late Peter Berck, a leading environmental and natural-resource economist at UC Berkeley who advised the California Air Resources Board, examined the environmental consequences of permitting new aggregate mines. In his 2005 paper, *A Note on the Environmental Costs of Aggregates*, he concluded:

*“The most likely effect of a new aggregate site is to reduce the truck miles used for aggregate hauling, which is an environmental benefit.”*

Failing to permit sufficient local aggregate production can mean more heavy-duty truck miles, higher transportation emissions, increased roadway wear, and higher construction costs as materials travel from more distant sources. The California Legislature expressly recognizes these consequences in Public Resources Code § 2711(d).

**The environmental benefits of increasing local and regional aggregate supply must also be considered when permitting new construction aggregate mines!**

## My Region Has 20 Years or Less of Permitted Aggregate Supply. Should We Panic?

**No—but there is no time to waste. Permitting new aggregate operations can take a decade or longer.**

*According to the 2026 Map Sheet 52, nine of California's 24 aggregate study areas have 20 years or less of permitted aggregate reserves remaining. Two have 10 years or less.*

This does not mean construction materials will suddenly become unavailable. It does mean these regions have insufficient permitted reserves to meet their estimated demand over the next 50 years without additional production capacity or other sources of supply.

Communities facing limited reserves should consult with existing mine operators and the California Geological Survey to identify additional mineral deposits suitable for meeting future construction needs.

### Questions Your Community Should Be Asking

- **Does our planning reflect actual demand, or future demand conditions?** Are we accounting for housing, infrastructure, industrial development, disaster recovery, and economic growth?
- **Could new production improve environmental and economic outcomes?** Would additional appropriately located mines reduce transportation impacts, increase competition, and create local jobs?
- **Where will our future aggregate come from?** Are suitable mineral deposits identified and protected from incompatible land uses?
- **Are we permitting new resources soon enough?** Can permitting procedures be improved to avoid future supply disruptions?
- **What happens if local production declines?** Will additional truck miles increase construction costs, emissions, and roadway impacts?

Limited permitted reserves are a warning to act now—not a prediction of imminent shortage. Begin planning and permitting replacement resources before existing supplies are exhausted.

## 2. My Region Has More Than 50 Years of Permitted Aggregate Reserves. Does That Mean We Should not Worry?

**No. Having substantial permitted reserves is an advantage, but estimates are estimates.**

*Seven of California's 24 study areas are classified as having more than 50 years of permitted reserves. However, the amount of time those reserves are expected to last depends heavily on projected future demand.*

### Does the Forecast Reflect the Community You Are Planning to Build?

Map Sheet 52 estimates future aggregate demand using historical production and consumption patterns, along with population projections in most regions.

These estimates account for population growth but do not independently evaluate every community's planned housing, infrastructure investments, major development projects, or potential disaster recovery needs.

***Consider how projected demand for the Greater Sacramento Area has changed:***

| Map Sheet 52 edition | Projected 50-year aggregate demand |
|----------------------|------------------------------------|
| 2012                 | 1,596 million tons                 |
| 2018                 | 1,724 million tons                 |
| 2026                 | 1,026 million tons                 |

Between 2012 and 2018, projected demand **increased 8%**, then **declined 40%** in the 2026 edition.

*The Greater Sacramento Area was established as a single study area in CGS Special Report 245, combining six previously separate study areas. The 2012 and 2018 figures represent the combined demand estimates for those six areas. Forecasting methods also changed between editions.*

**It's important to remember that estimates are estimates.** These substantial changes demonstrate the uncertainty inherent in forecasting construction demand over 50 years. What isn't uncertain is that your community's mineral resources are a finite natural resource. A forecast is a planning tool, not a guarantee of future supply or a ceiling on future demand.

## **Permitted Reserves Are Not the Same as Available Production**

Having enough aggregate somewhere in your region does not necessarily mean sufficient materials are available where and when construction and growth will occur.

**Communities should consider:**

- Can existing operations produce the quantities and types of aggregate needed?
- Are permitted resources located near future development?
- Do operating restrictions or transportation limitations constrain available supply?
- Could additional mines reduce hauling distances, pollution emissions, and construction costs?

**Ask yourself: Are we planning for replacement resources?** When existing operations reach the end of their permitted mining lives, will suitable mineral resources be available close enough to meet our community's future needs efficiently?

**Communities with substantial permitted reserves are likely to realize environmental and economic benefits from additional appropriately located aggregate operations.**

## **Why Does Map Sheet 52 Look Only 50 Years Into the Future?**

Good question! Your community will exist much longer than 50 years and will need construction materials throughout its existence.

Fifty years provides a useful horizon for **ESTIMATING** future demand. Beyond that period, population growth, construction technologies, and the types of infrastructure communities will need become increasingly difficult to predict. But construction aggregates are **finite natural resources formed over geologic time**. Deposits meeting California's strict engineering standards are not found everywhere, and nature will not replace those resources on a community planning timeline.

The Legislature recognizes this in Public Resources Code § 2711 noting that responsible protection and development of these finite resources are vital to a sustainable California. [4]

**By identifying, preserving, and permitting known aggregate resources today, communities can plan where future mining will occur, protect those resources from incompatible development, and meet mineral needs extending well beyond the next 50 years.**

Permitting also establishes a framework for responsible extraction and reclamation. Timely development can allow mineral resources to be recovered and lands reclaimed sooner for alternative beneficial uses, including habitat, open space, recreation, agriculture, or other compatible development. More than 50 years of projected supply is not a reason to stop planning or permitting. It is an opportunity to secure your community's long-term mineral supply while improving transportation efficiency, protecting finite resources, and planning for the eventual reclamation and reuse of mined lands.

**Would you build over finite mineral resources simply because they aren't projected to be needed for another 75 years? A community planning for its future shouldn't.**

## The Bottom Line

**Map Sheet 52 is a starting point—not a finding of future sufficiency.**

Whether your region has fewer than 20 years or more than 50 years of permitted reserves, the responsibility is the same: plan for the construction materials your community will need today, 20 years from now, 50 years from now, and beyond.

## A Final Consideration

These considerations reinforce the California Geological Survey's caution that Map Sheet 52 should not be used as the sole basis for local land-use decisions. Communities should consult detailed mineral-resource studies and evaluate their long-term construction material needs.

**Remember, your community will last much longer than 50 years—and it will need construction materials throughout its existence.**

## Sources and Further Reading

[1] California Geological Survey, Greg D. Marquis, *Supplement to Map Sheet 52: Aggregate Sustainability in California* (2026). [Read the supplement.](#)

[2] California Geological Survey, *Aggregate Sustainability in California* (2026). [Official overview and historical editions.](#)

[3] Berck, Peter. *A Note on the Environmental Costs of Aggregates*. Working Paper No. 994, University of California, Berkeley, January 10, 2005. [Read the paper.](#)

[4] California Public Resources Code § 2711, Legislative Findings and Declarations, Surface Mining and Reclamation Act. [Read the statute.](#)