AGGREGATE AVAILABILITY IN CALIFORNIA

Fifty-Year Aggregate Demand Compared to Permitted Aggregate Resources

By

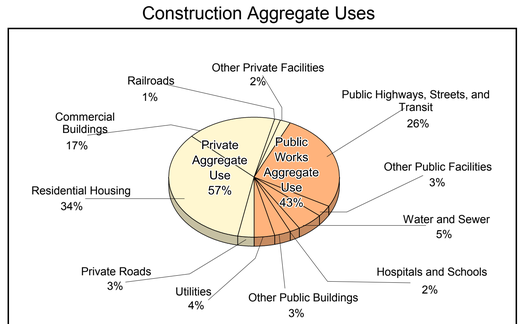
Susan L. Kohler

CALIFORNIA DEPARTMENT OF CONSERVATION
CALIFORNIA GEOLOGICAL SURVEY

July 2002

Contributions by:
R.L. Hill, D.J. Beeby, L.G. Youngs, D.L. Dupras,
R.V. Miller, B.M. Koehler, C.I. Downey,
L.L. Busch, and B.D. Foster

Construction Aggregate Uses



Source: modified from Coopers and Lybrand, 1998.

Map Usage and Limitations

This map is intended to provide general information about the current availability of California's permitted construction aggregate resources to state, regional, and local land use planners and decision-makers. It is designed to assist planning agencies in considering construction aggregate needs in the regional planning process. However, the map is not intended to be used as the sole source of information about construction aggregate availability or as the basis for site-specific land-use decisions. Although the statewide and regional information on this map may be useful to local decision-makers, the more detailed information contained in the referenced aggregate studies should be used for local land-use decision-making purposes.

Non-Permitted Aggregate Resources

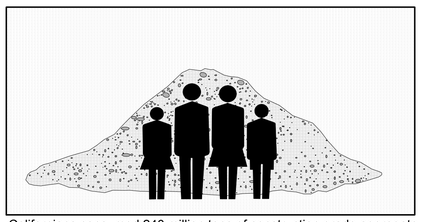
Non-permitted aggregate resources are abundant throughout most of California. Non-permitted aggregate resources in close proximity to urban and urbanizing areas are likely to be important sources of economical construction aggregate for future infrastructure maintenance and new construction in these areas.

Recycled Aggregate

Recycling of aggregate materials is a growing industry in California. As use of recycled aggregate increases, the life span of existing permitted aggregate resources will be extended.

Local Aggregate Sources

Local sources of aggregate are critical for lowering construction costs. The average cost of a ton of aggregate doubles when hauled 25-35 miles.



Californians consumed 240 million tons of construction grade aggregate in 2000. This equates to an annual use of 7 tons per person or 28 tons for a family of four (equivalent to a pile of aggregate 17 feet wide and 7 feet tall).

Explanation

Fifty-Year Aggregate Demand Compared to Permitted Aggregate Resources[1]

The pie diagrams show the projected 50-year demand for aggregate as of January 2001 compared to currently permitted aggregate resources (in short tons).[1] The 50-year demand for a particular region is graphically represented by one of four pie diagram sizes. Each 50-year pie diagram is located in the central portion of the study area it represents. Study area boundaries are shown on the index map of aggregate studies (lower left). The actual 50-year demand is shown on the map adjacent to each pie diagram.

Areas With Less Than 5 or 10 Years of Permitted Aggregate Resources

< 5 years of permitted resources remaining in the study area.

< 10 years of permitted resources remaining in the study area.

Aggregate Production Areas

(Symbols represent one or more aggregate mines, tonnage represents 1999 annual production)

- < 0.5 Million Tons per Year
- 0.5 - 2 Million Tons per Year
- >2 - 5 Million Tons per Year
- >5 - 10 Million Tons per Year
- >10 Million Tons per Year

Population

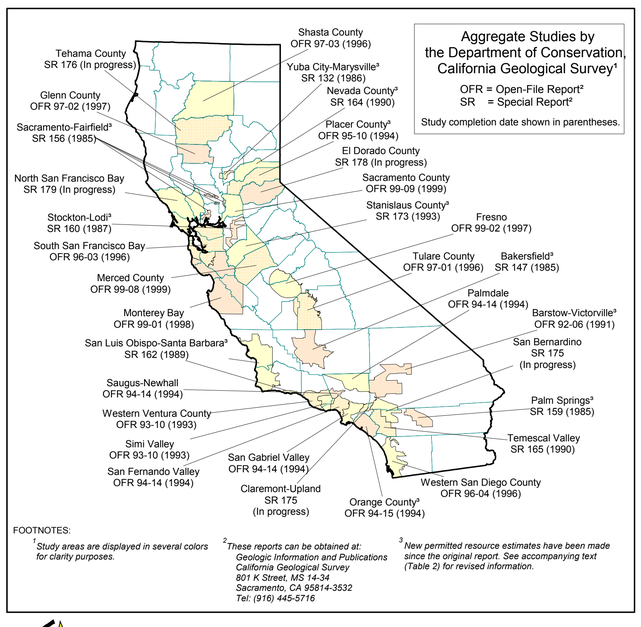
1 Dot = 100 Persons
(based on 1990 Census Data)

[1] *Permitted aggregate resources (also called aggregate reserves) are those portions of the resources for which local lead agencies (counties and cities) have issued mining permits. Non-permitted aggregate resource information is given in each aggregate study report. See accompanying text for references to these reports.*

Aggregate Studies by the Department of Conservation, California Geological Survey[1]

OFR = Open-File Report[2]
SR = Special Report[2]

Study completion date shown in parentheses.



FOOTNOTES:

[1] *Study areas are displayed in several colors for clarity purposes.*

[2] *These reports can be obtained at:*
Geologic Information and Publications
California Geological Survey
801 K Street, MS 14-34
Sacramento, CA 95814-3532
Tel: (916) 445-5716

[3] *New permitted resource estimates have been made since the original report. See accompanying text (Table 2) for revised information.*

Copyright © 2002 by the California Department of Conservation. All rights reserved. No part of this publication may be reproduced without written consent of the California Department of Conservation.

The California Department of Conservation makes no warranties as to the suitability of this product for any particular purpose.

Information presented on this map was derived from data prepared by the Department of Conservation's California Geological Survey and Office of Mine Reclamation, and the United States Geological Survey.

N

20 0 20 40 60
Miles

20 0 20 40 60
Kilometers

Scale: 1:1,100,000

Map design by Milton Fonseca