



SUPPLY AND DEMAND:  
AGGREGATE RESOURCES IN  
SAN LUIS OBISPO-SANTA BARBARA  
COUNTIES

MARGARITA  
PROUD

Submitted to San Luis Obispo County Planning  
Commission January 7, 2015

# SUPPLY AND DEMAND: AGGREGATE RESOURCES IN SAN LUIS OBISPO-SANTA BARBARA COUNTIES

## Executive Summary

The California Geological Survey (CGS, 2011) Special Report 215 (SR-215) only considers material that is currently permitted and only the currently permitted phase within the Specific Plans for several existing large scale quarry operations. Such an accounting method represents significantly less than the amount of resources readily available to fulfill future needs.

Projected estimates of local resources must not only include those already permitted, but all potentially usable aggregate materials either earmarked or readily available to be mined in the future in order to be useful in informing thoughtful land use decisions.

## Introduction

The Counties of San Luis Obispo and Santa Barbara have land-use jurisdiction within the San Luis Obispo-Santa Barbara Production-Consumption (PC) Region (CGS, 2011). These lead agencies have considered, and adopted detailed reports that clearly identify aggregate deposits within the PC region. These reports serve as guides for strategic land-use and resource management decisions within their boundaries (Santa Barbara County, 1997 and San Luis Obispo County, 1998; San Luis Obispo County, 1998; CGS, 2011).

## Problem Definition

Construction aggregate is a broad category used to describe all aggregate, composed of mineral crystals of one or more kinds, or of mineral rock fragments, with potential use in the construction industry. Yet mineral deposits vary in composition and quality, so construction aggregates are further characterized based on their specific application. Portland cement concrete-grade and asphaltic concrete-grade deposits are two specific construction aggregate classifications.

SR-215 (CGS, 2011) also separates construction aggregate deposits into categories based on their current permit status.

- **Reserves** are construction aggregate deposits that have been determined to be acceptable for commercial use, that exist within properties owned or leased by aggregate producing companies, and for which permits have been granted to allow mining and processing of the material (i.e., permitted).

- **Resources** include reserves as well as all potentially usable aggregate materials that may be mined in the future, but for which no permit mining has been granted (i.e., everything else).

### Supply

Seventy-five (75) million tons of currently permitted Concrete-Grade Aggregate **Reserves** are identified within SR-215 for the SLO-SB P-C region (Table 5, pg. 22)

Within the specific plans adopted by San Luis Obispo and Santa Barbara counties “to ensure future access to a large part of their concrete-grade aggregate resources”, resources remaining in yet to to permitted phases are clearly identified in existing (permitted) operations. The impacts associated with these production facilities already exist.

### Demand

The projected 50-year (2011-2060) construction aggregate demand for San Luis Obispo-Santa Barbara P-C Region is 263 million tons (CGS, 2011) of which 137 million tons must be concrete-grade aggregate.

Although demand is projected over a 50-year period, quarries are typically not permitted to operate over similarly lengthy time periods; therefore, there will always appear to be a deficit of permitted construction aggregate **reserves** in relation to a projection determined in this manner. For example, The Rocky Canyon Specific Plan identifies an aggregate mine just southeast of Atascadero known as Rocky Canyon Quarry. The Plan identifies 10 phases to be mined. The operator is currently permitted through Phase 2. The FEIR estimates that Phase 2 will be completed between the years 2019-2013. SR-215 (CGS, 2011) accounts for only the aggregate remaining in Phase 2 as applicable towards meeting the 50-year projected demand.

Current levels of construction aggregate production may be considered as an indication of local need (i.e., economic law of “Supply and Demand”). Annual average production of two existing quarry operations within the La Panza Granitics region demonstrates that both locations are producing at an average of 38.5% below permitted extraction levels (Table 1). This suggests that there is no shortfall of local resources.

Projected estimates of local resources must not only include those already permitted, but all potentially usable aggregate materials that may be mined in the future.

**Table 1.** Maximum permitted and actual average annual aggregate extraction (M tons) for select sites within the San Luis Obispo, Santa Barbara Counties Production-Consumption Region<sup>1</sup>

Site	Permitted, M tons	Production, M tons	Production, %
Santa Margarita/Hanson	0.7	0.545	78
Rocky Canyon/Cal Portland	1.2	0.535	45

<sup>1</sup>CGS, 2011; San Luis Obispo County, 2014.

A positive outcome of the lower than projected demand is that life span of existing reserves may as much as double. Additionally, changes in local population growth associated with limited and/or restricted water resources would have additional cumulative positive effect on extending the lifespan of currently permitted reserves.

### Summary

- The amount of available aggregate is not accurately represented if only currently permitted reserves are considered. Both currently permitted reserves and resources earmarked within Specific Plans need to be accounted for to represent the actual aggregate reservoir.
- By not differentiating between randomly located resources and proven resources already earmarked within detailed Specific Plans, SR-215 (CGS 2011) does not accurately portray available supply.
- Resources currently banked within existing quarry operations in Sector C (Rocky Canyon Quarry and Hanson Santa Margarita Quarry) are supported by appropriate infrastructure that minimizes the severity of creating new impacts.
- Lower than projected aggregate production extends the lifespan of all available aggregate resources.
- To be accurate and facilitate wise planning, projected estimates of local resources should include all potentially usable aggregate materials already earmarked to be mined in the future.
- Considering data within Specific Plans is similar to what some other counties refer to as Aggregate or Mineral Management Plans, and is critical to achieving the stated goal of fulfilling future aggregate needs while minimizing the substantial impacts open pit mining creates.
- No need for additional aggregate sources exists when all available information is taken into account.
- No need exists to permit new quarries that are determined to be incompatible with surrounding communities.

## References

California Geological Survey (CGS). 2011. Update of Mineral Land Classification: Concrete Aggregate in the San Luis Obispo-Santa Barbara (SLO-SB) Production-Consumption (P-C) Region, California. Special Report-215.

San Luis Obispo County. 1998. Specific Plan – Rocky Canyon Quarry. Resolution 98-120, Ordinance 2830.

San Luis Obispo County. 2014. Hanson/Santa Margarita Quarry Expansion Project Draft Environmental Impact Report (DEIR). [http://www.slocounty.ca.gov/planning/environmental/EnvironmentalNotices/Hanson\\_\\_Santa\\_Margarita\\_Quarry\\_Expansion\\_Project\\_Draft\\_Environmental\\_Impact\\_Report\\_\\_DEIR\\_.htm](http://www.slocounty.ca.gov/planning/environmental/EnvironmentalNotices/Hanson__Santa_Margarita_Quarry_Expansion_Project_Draft_Environmental_Impact_Report__DEIR_.htm). Web. Accessed: 08-Dec-2014.

Santa Barbara County. 1997, and San Luis Obispo County. 1998. Santa Maria-Sisquoc Rivers Specific Plan.

San Luis Obispo County. 2014. Oster/Las Pilitas Quarry, Final Environmental Impact Report (FEIR). [http://www.slocounty.ca.gov/planning/environmental/EnvironmentalNotices/Oster\\_Las\\_Pilitas\\_Quarry.htm](http://www.slocounty.ca.gov/planning/environmental/EnvironmentalNotices/Oster_Las_Pilitas_Quarry.htm). Web. Accessed: 26-Dec-2014

*Rocky Canyon Specific Plan (2002)*

*Diamond Rock Quarry, Final Environmental Impact Report (2007)*