

Building Better Roads

November 16, 2018

San Diego County

Aggregate Sustainability

- ▶ PCC grade aggregates are required for all construction projects whether it be road resurfacing, or new building construction
- ▶ San Diego has been depleting its natural resources (aggregates) at a steady pace without permitting new sources
 - ▶ Historical applications have taken up to 17 years to get permitted or have failed after a long expensive process
- ▶ San Diego aggregate pricing is one of the highest in the state and we are in a situation that will get considerably worse in the next 10 years
- ▶ New mining operations are not popular and need to be measured on global impacts to the county instead of a district issue
 - ▶ Increased fuel usage, traffic congestion, emissions, etc.

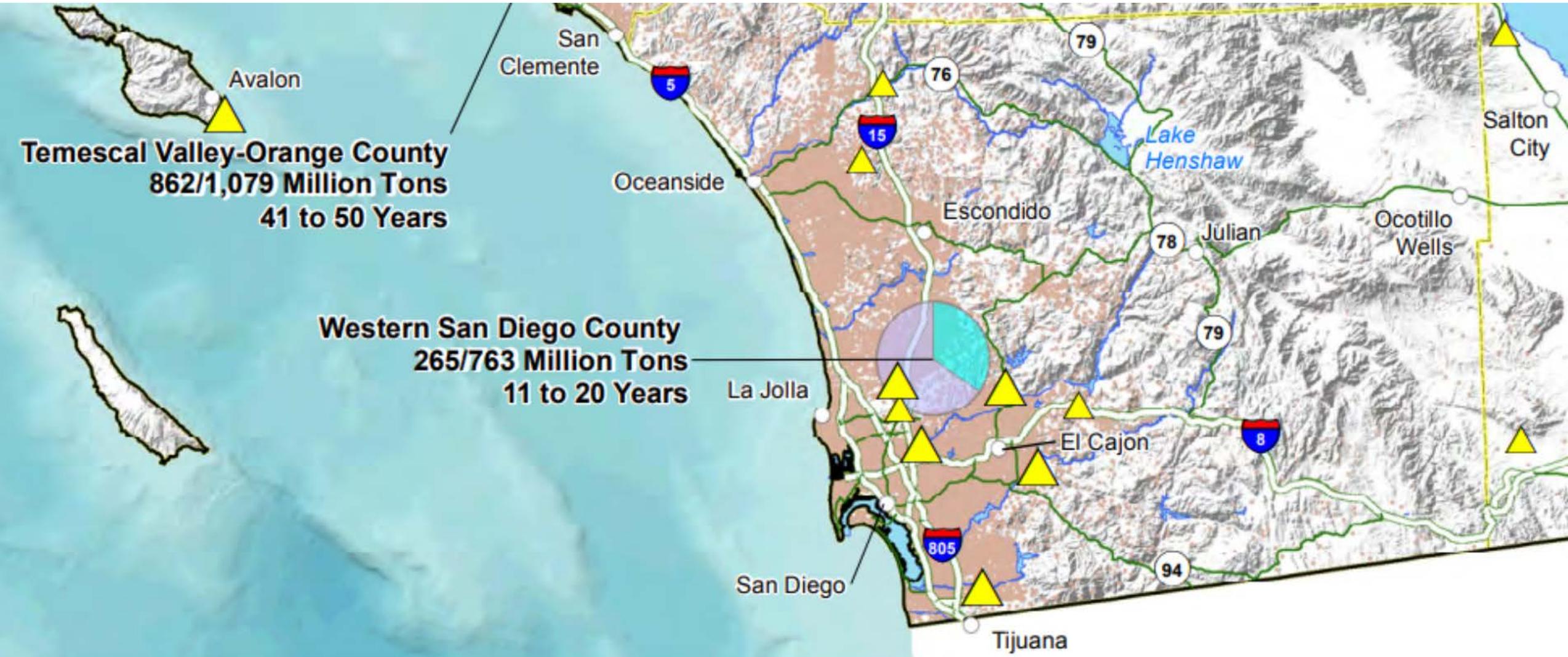
San Diego County

PCC Aggregate Sustainability

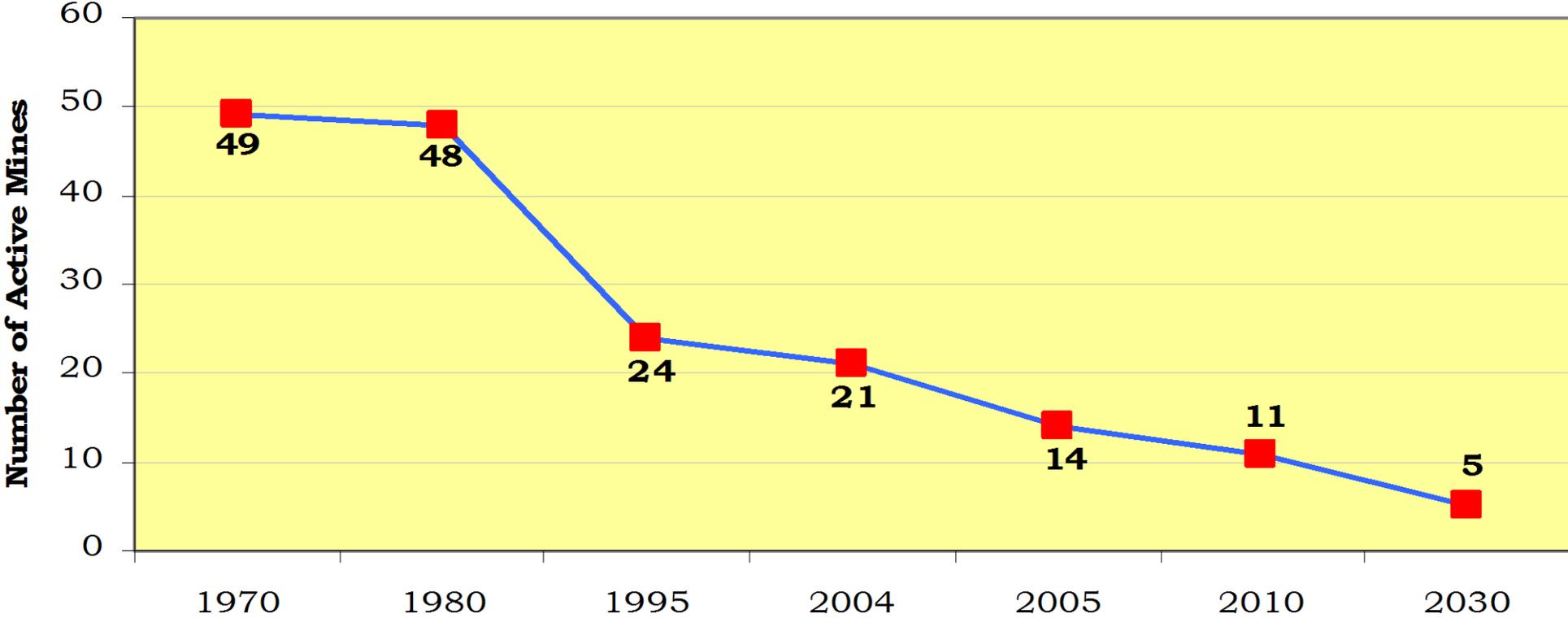
- ▶ The California Department of Conservation has been collecting data and tracking aggregate reserves for about 40 years
- ▶ Only one state geographical area has less reserves (less than 10 years) than San Diego County (San Fernando Valley/Saugus-Newhall)
- ▶ San Diego has an estimated time frame of between 11 to 20 years or 265MM tons of permitted reserves out of a projected 50 year demand of 763MM tons
- ▶ It is estimated that over 30 % of the aggregate usage is currently imported
 - ▶ PCC Aggregate is a relatively low unit cost- high volume product that should come from local sources
 - ▶ Imports have significant risks such as source location changes, and transportation disruptions

California Geological Survey

2018 Map 52 Western San Diego Region



Active Production Sites in San Diego County



Source: USGS Minerals Yearbook, California Department of Conservation Special Report 153, 1982 & DMG OFR 96-04, 1996; and operator Reclamation Plan files.

San Diego County

PCC Aggregate Sustainability (cont.)

- ▶ Reserve estimates are based on historical trends and projected population increases. There are valid factors which could accelerate depletion of reserves.
 - ▶ Location in County
 - ▶ Quality of aggregates for the intended use
 - ▶ Risks of permit changes or imported material disruptions
 - ▶ Demand increases (SB 1)
- ▶ Permitted reserves concerns
 - ▶ Construction project cycles likely will not balance to production capacity from aggregate processing facilities
 - ▶ There is no guarantee that all permitted reserves can be mined

PCC Aggregate Sustainability

What Can Be Done?

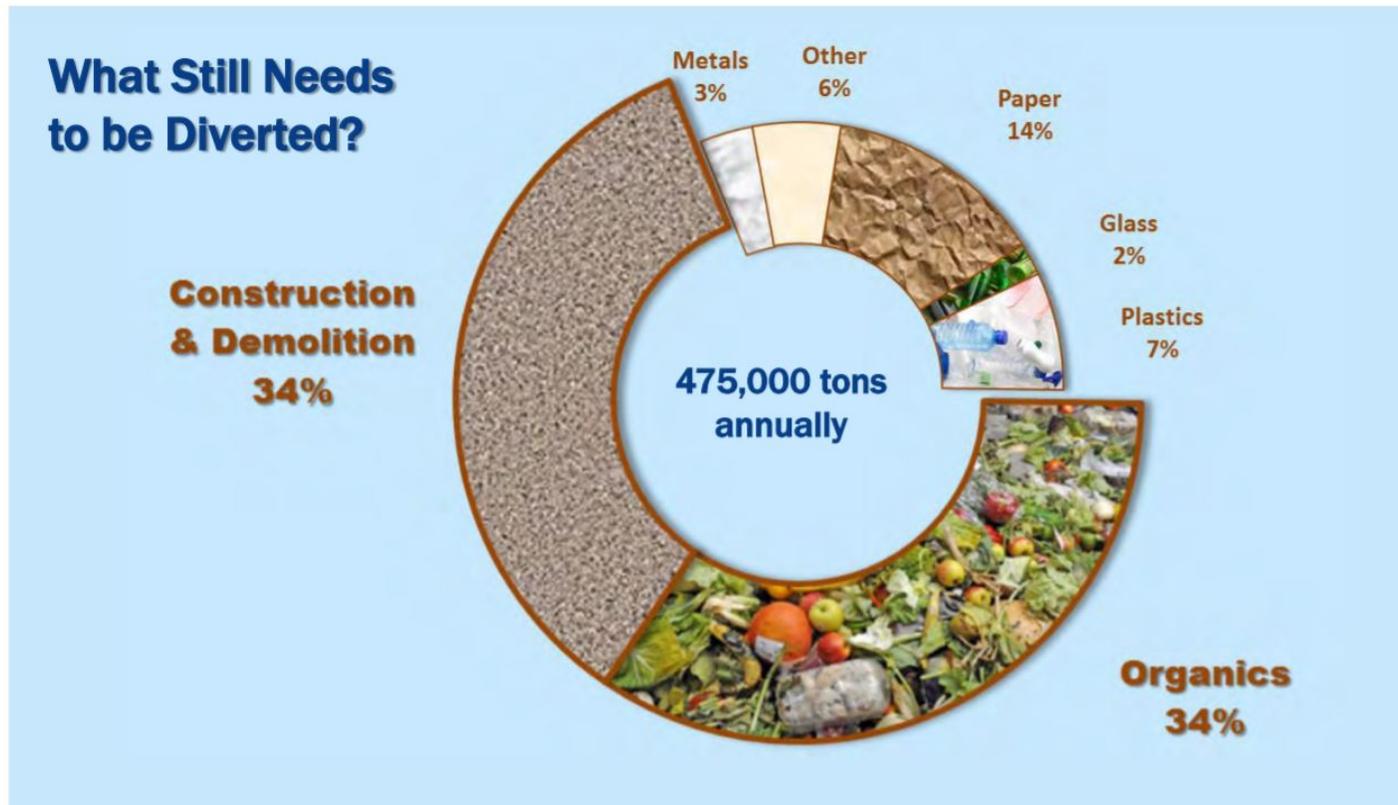
- ▶ Recycled Materials are a large cost saving opportunity for construction projects (joint task force?)
- ▶ Specifications can be geared towards allowing the appropriate use of recycled materials
 - ▶ Recycled aggregates are used in other geographical areas
 - ▶ Use of natural aggregates for road base or other underground uses should be discouraged by specification
- ▶ Permitting of local sources is a problem that will have to be addressed by political processes and should be a priority

Recycled Asphalt Management

- ▶ Recycled asphalt (RAP)
 - ▶ Asphalt grindings
 - ▶ Only a small percentage of recyclable asphalt is used back into asphalt mix designs
 - ▶ The balance of asphalt grindings are currently used in recycled base but at a limited percentage, and if practical uses are not found will have to go to landfills.
 - ▶ Asphalt grindings also contain oil that should be conserved and reused
 - ▶ Current County regulations limit the amount of inert storage capacity at recycling locations which does not always balance with actual construction project cycles
 - ▶ Percentages of RAP allowed in mixes is a small percentage of the asphalt mix design. Other agencies have successfully implemented RAP programs that work and can save on construction costs to agencies

County Board of Supervisors Diversion Goals

UNINCORPORATED AREA LANDFILL WASTE COMPOSITION



County Board of Supervisors Diversion Goals (cont.)



INTERNAL OPERATIONS CURRENT STATUS

- **Recycling and Diversion actions in place:**
 - 90-95% diversion on capital construction projects
 - Waste management contracts include recycling provisions
 - Organics diverted at county cafeterias
 - Motor oil/tires recycled for County fleet
- **Countywide recycling/diversion not currently tracked**

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Agenda item from April 26, 2017 Board meeting

There is nothing in RAP that if handled properly reduces the quality of the recycled asphalt mix design performance.

Proper best practices can insure a high quality finished product

Recycled Asphalt Does it have a bad RAP?

San Diego County Trucking and Labor Concerns

- ▶ Imported Materials at the current estimated rate amounts to approximately 56,000 truckloads per year, 1,250,000 gallons of diesel (additional impact over local sources)
- ▶ Truck availability or lack of
 - ▶ CARB impact to availability of actual units in 2019
 - ▶ Previous recessionary cycle removed many trucks from the market
 - ▶ Driver shortage
 - ▶ Limited construction windows require more trucks
 - ▶ Stringent specifications can have a larger negative impact on labor shortages

Building Better Roads Initiative

- **Resources- aggregates**

- <http://www.calapa.net/>
- <http://www.calcima.org/>
- <http://www.distancematters.org/>
- http://www.conservation.ca.gov/cgs/Documents/Publications/MS_052_California_Aggregates_Map_201807.pdf
- http://www.conservation.ca.gov/cgs/Documents/Publications/MS_052_California_Aggregates_Report_201807.pdf

- **Resources- RAP**

- <https://www.sandiegocounty.gov/dpw/recycling/cdhome.html>