

Outlook of Tire Derived Aggregate (TDA) in Civil Applications

PRESENTED BY:

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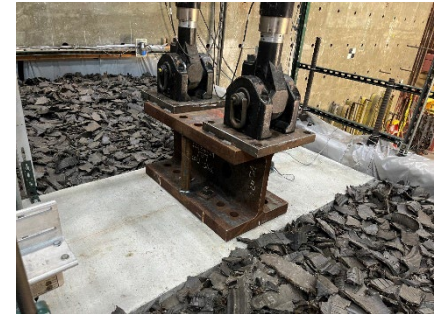
Current TDA Use Summary

- California has yearly increase in total amount of managed ELTs
- California Non-Landfill TDA usage rate decrease
- Continued robust TDA use in Minnesota



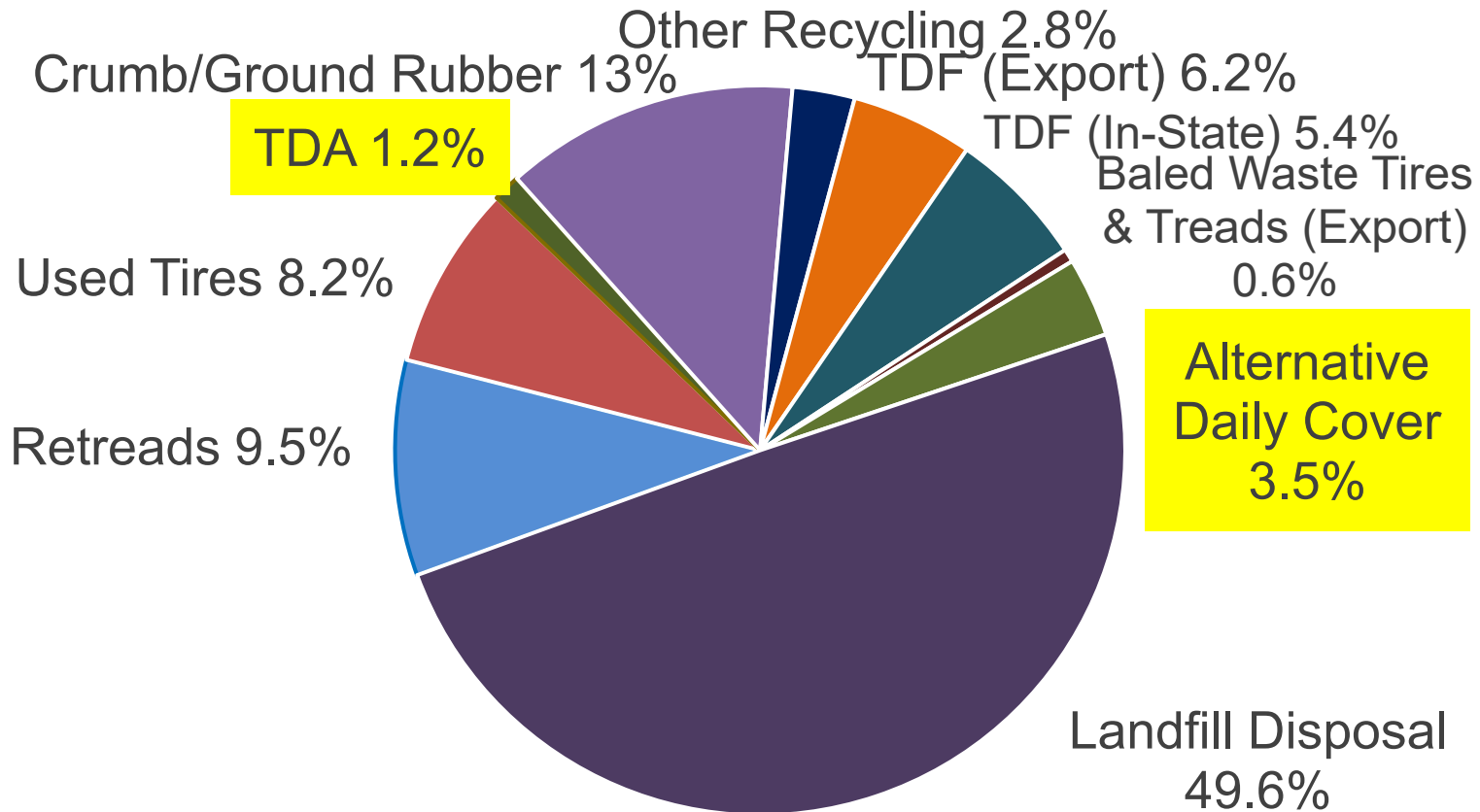
Challenges during recent years 2020-24

- Transitioning out of the Covid Period – 6PPD-q Salmon study released from Washington State
- Tire wear particle concern includes TDA
- California Regulatory bodies express concern regarding 6ppd-q from TDA in Civil Projects
- More research to assess TDA leachate in Civil projects



Current TDA Use Summary

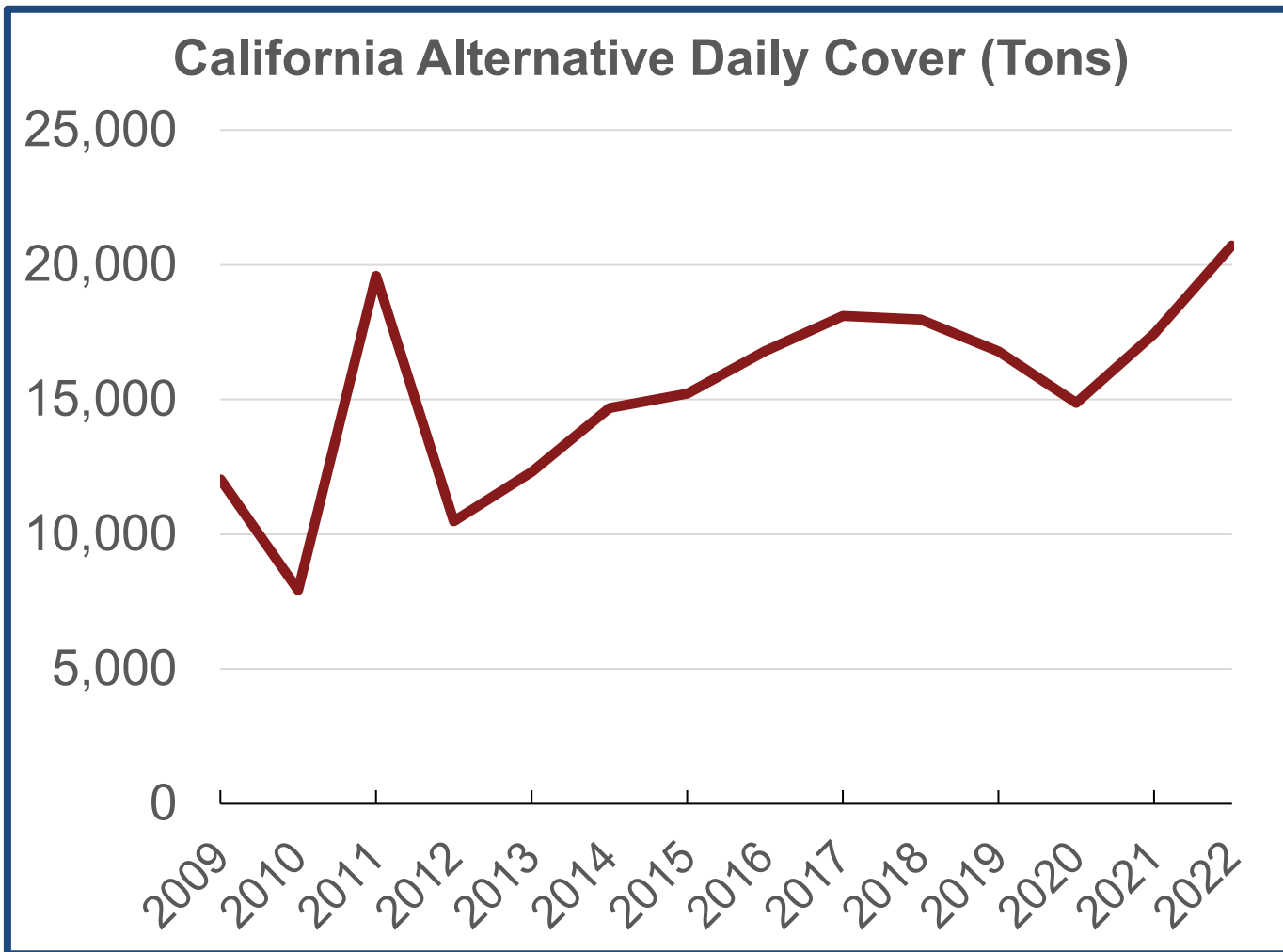
California Total Managed: 601,023 Tons



CalRecycle 2022 Market report



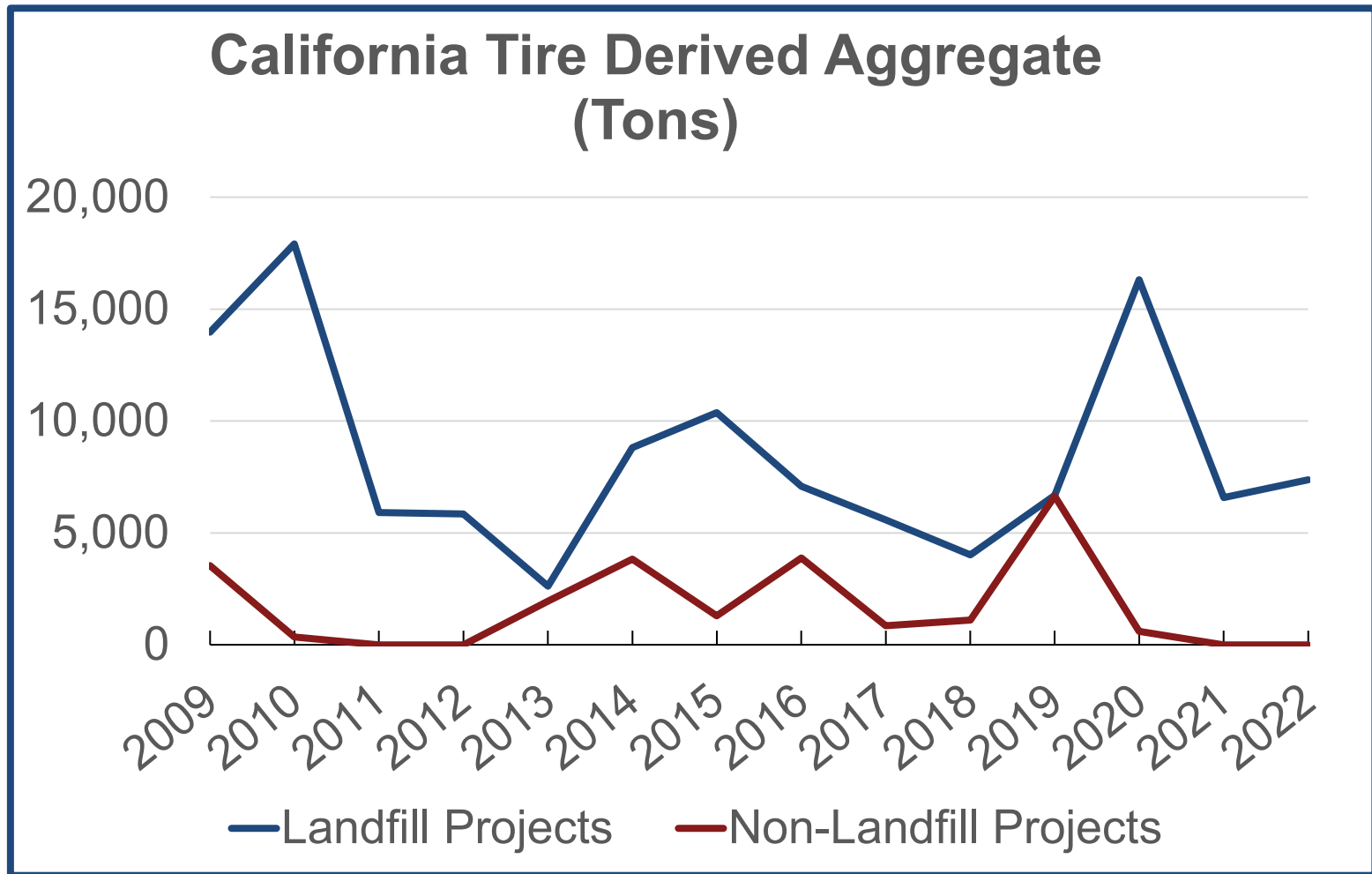
Current TDA Use Summary



CalRecycle 2022 Market report



Current TDA Use Summary



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TDA Outlook Summary

- TDA offers specific solutions to engineers
 - Vibration mitigation for light rail lines
 - Mechanically stabilized road repairs
 - High volume infiltration galleries
 - Storm water Phosphate reduction
 - Seismic protection
- Studies show Soil Filtration can reduce the amount and resulting impacts of 6ppd-q in water ten-fold or more, more research is on the horizon.

TDA Vibration Attenuation in California

Vasona Transit Authority:
100,000 TIRES



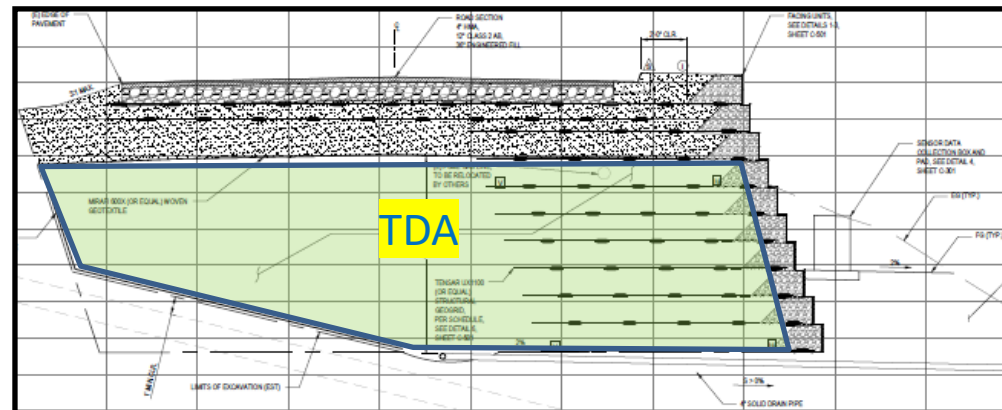
L.A. Metro:
800,000+ TIRES



TDA in Mechanically Stabilized Road Repair

Ortega Ridge Road, Montecito, California

Mechanically Stabilized Tire Derived Aggregate (MSTDA)



Water Recycling Center, Storm Water Infiltration Gallery

TDA as stormwater storage and infiltration media, Minnesota



TDA Research

University of Minnesota Research

- Phosphorous from urban runoff can be removed up to 95%
- Leaching of iron and zinc was significantly lower in the study with biofilm growth on TDA
- Biofilm's prevent from metal leaching but does not affect P removal



Courtesy of Dr. Gulliver & I DO TDA

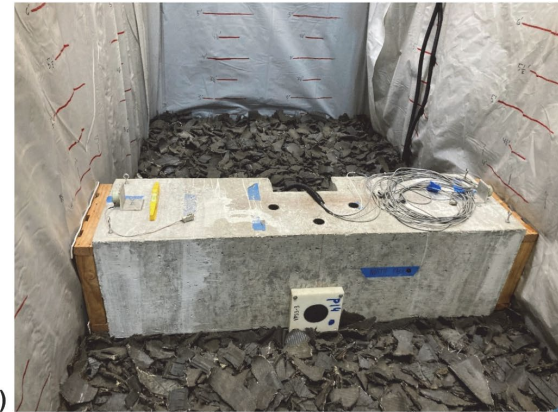
TDA Research

University of California San Diego

Full-scale seismic response test on a shallow foundation embedded in tire-derived aggregate for geotechnical seismic isolation

Axel A. Yarahuaman , John S. McCartney * *Department of Structural Engineering, University of California, San Diego, La Jolla, CA, 92093-0085, USA*

- TDA showed better seismic resilience than other passive systems such as structural hinging and conventional foundation rocking systems.
- TDA offers the footing an exceptionally effective re-centering system, as evidenced by an average recentering ratio of 0.991, surpassing the typical ratios observed in conventional soils



(a)



(b)



(c)

TDA Innovation



Courtesy of I DO TDA



Please contact me with any questions you may have.

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