



Reclaimed Asphalt Pavement



Interim Transportation Committee

Ron Sines | November 1, 2023



Ronald A. Sines, P.E.

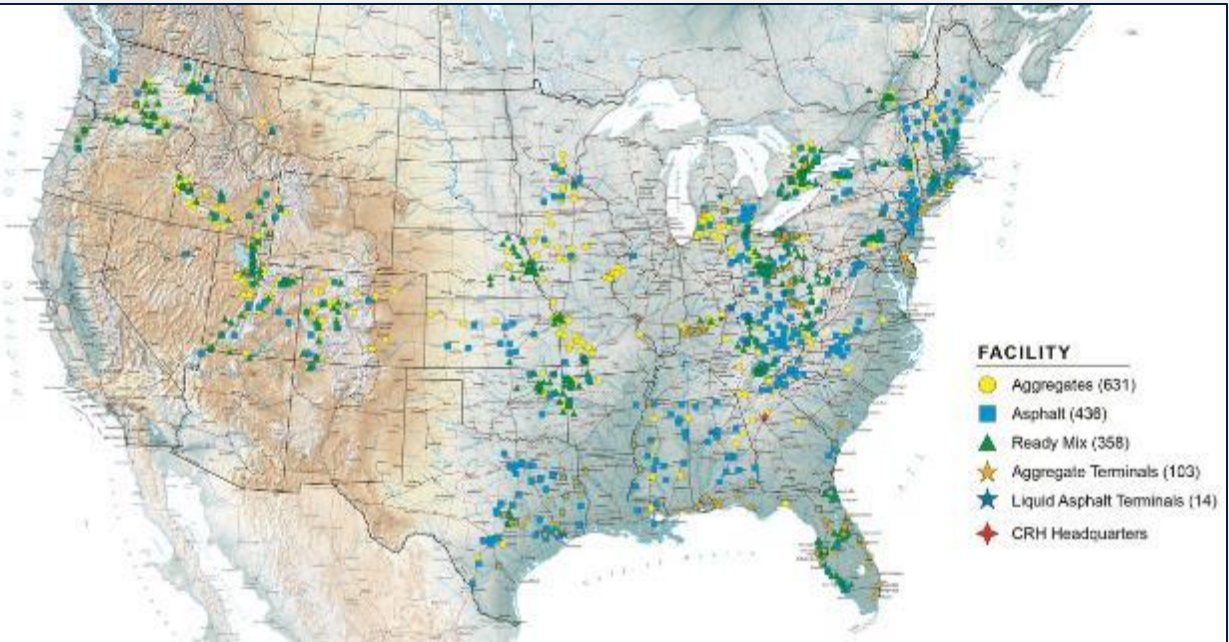


- Vice President – CRH Americas
- Responsible for developing the strategy for CRH’s multi-year sustainability and decarbonization program
- 23 years with CRH Americas
- Member of the National Asphalt Pavement Association & National Center for Asphalt Technology Boards of Directors
 - Committee for Asphalt Research and Technology (member and chair)
- NCHRP panel member on various asphalt mixture related research projects
- FHWA RAP Expert Task Group member
- Worked for the New York State Department of Transportation’s Materials Bureau for 15 years managing the asphalt materials program
- Bachelor of Civil Engineering degree from Youngstown State University.
- Registered Professional Engineer in New York

CRH Americas



#1 Building materials provider in North America



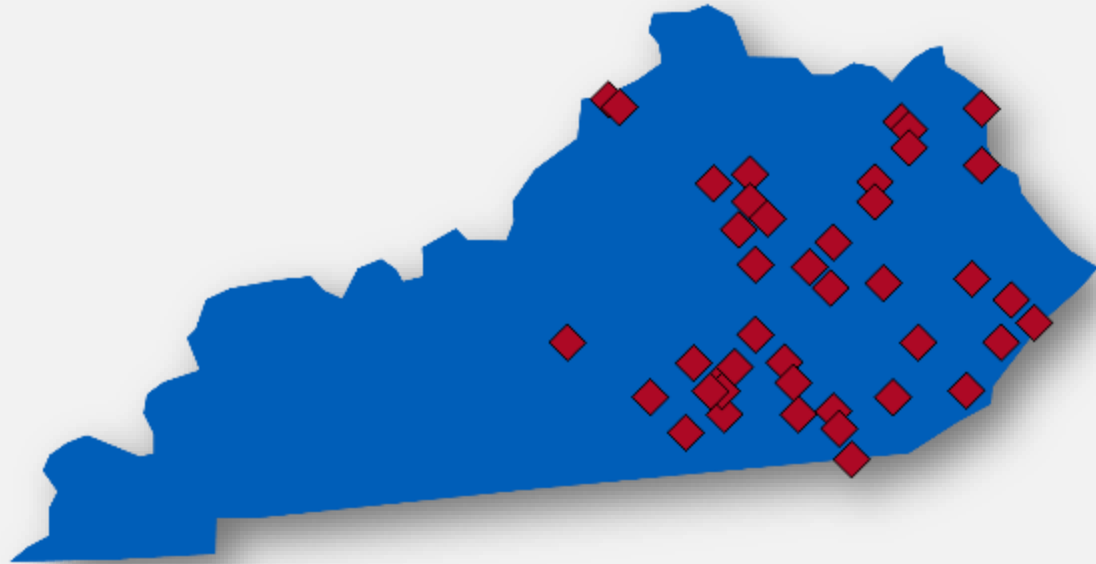
#1 Asphalt producer and paver in North America

#1 Recycler of pavement materials in North America

26,821 Employees **1,592** Operating Locations

43 U.S. States **2** Canadian Provinces **\$12.8bn** Sales '22

CRH in Kentucky



700 Employees

45 Operating Locations



What is RAP?

Reclaimed Asphalt Pavement



RAP is the most recycled material in the world!

Benefits of Increased RAP Usage



Sustainability

- In 2021, more than **94.6 million tons** of RAP were recycled in new asphalt pavements*



Cost Savings

- RAP is a valuable resource
- Don't have to:
 - Mine it
 - Refine it



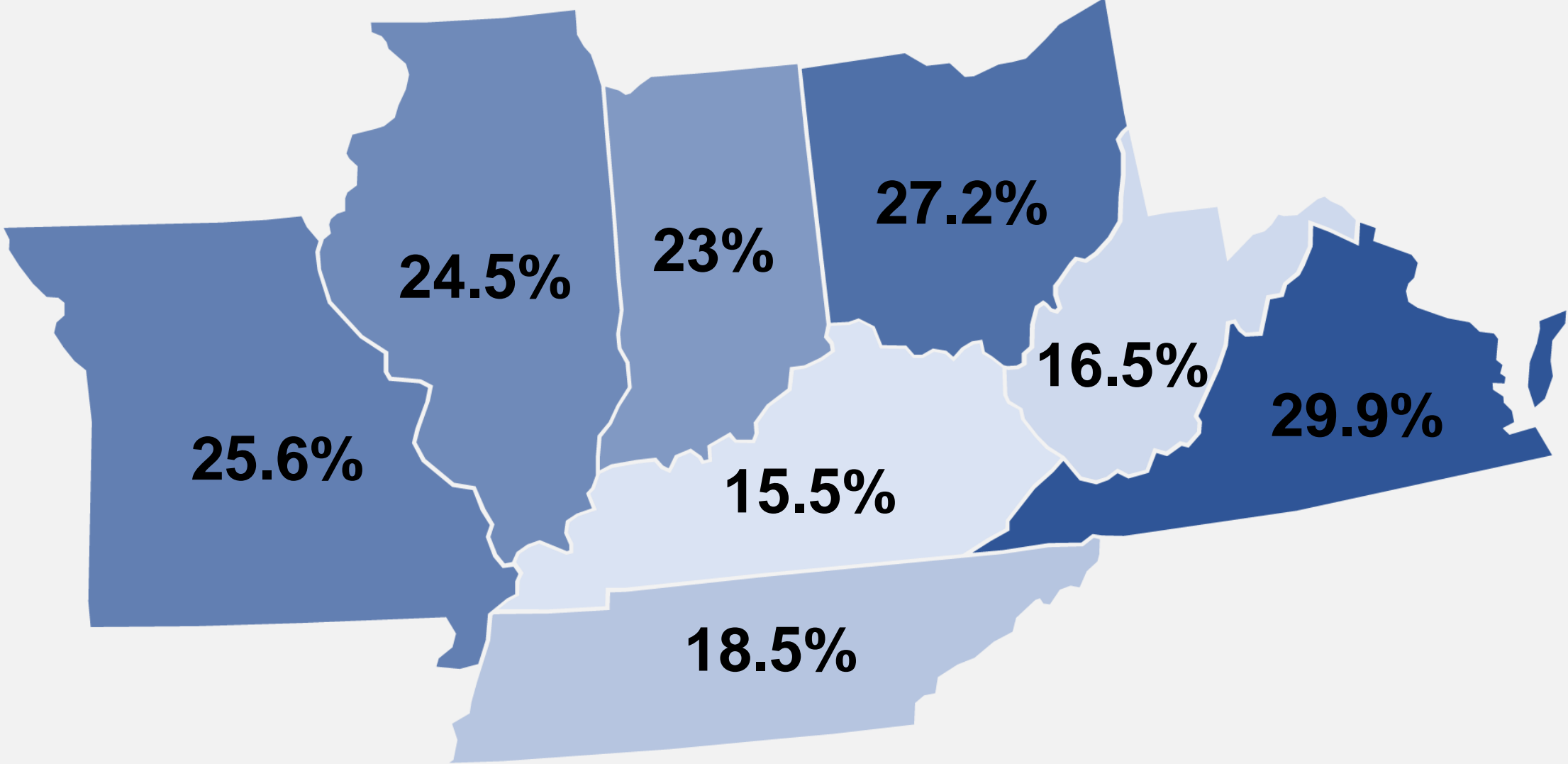
Performance

- Overlays with mixes containing **30% RAP perform just as well as virgin asphalt mixes****

*Asphalt Pavement Industry Survey on Recycled Materials and Warm-Mix Asphalt Usage 2021

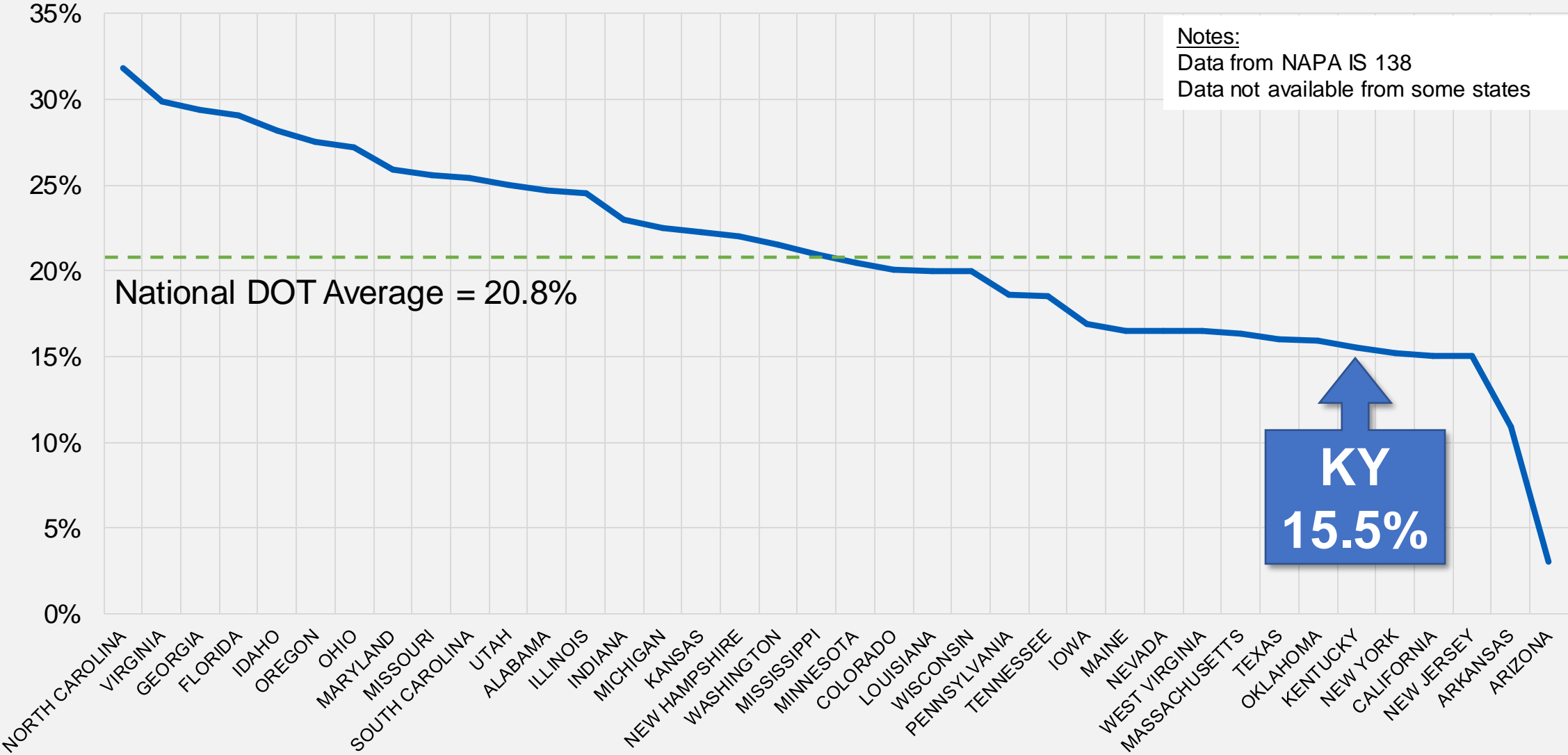
**West, R., et al. Use of Data from Specific Pavement Studies Experiment 5 in the Long-Term Pavement Performance Program to Compare Virgin and Recycled Asphalt Pavements. Transportation Research Record: Journal of the Transportation Research Board, January 2011.

2021 RAP Utilization by State*



*(NAPA IS-138, 2021)

Average % RAP in DOT Asphalt Mixtures



Increasing RAP Usage in Kentucky

- Maximize the use of RAP in a responsible and effective manner to ensure quality and long-term pavement performance
- Allow the market to determine where RAP can best be utilized

