Asphalt Industry Evaluates Utilizing Plastic in its Mixtures

As activists and legislators continue to push for solutions to sustainably divert the plastic waste stream, the asphalt pavement industry is leading and coordinating the effort to evaluate the viability of including plastics in asphalt mixtures.

Greenbelt, Maryland — Plastic: It’s in the headlines, in our oceans and landfills, and now in legislation to encourage cross-industry research that explores ways to divert this massive waste stream into sustainable infrastructure. Today it’s estimated that about 19 percent of municipal solid waste in the U.S. is plastic alone.

In October 2019, NAPA and the Asphalt Institute created a joint task force to evaluate the potential of using recycled plastics in asphalt. The task force hired the National Center for Asphalt Technology to conduct a literature review, which yielded two new documents published this November. The first is a state of the knowledge, which includes summaries of plastic recycling, available research, and research gaps that need to be bridged. The second presents the findings of more than 110 articles and reports that evaluate plastics in asphalt.

“The challenge we are facing is that plastic in asphalt roads sounds so simple, but in reality, it is rather complex – we have to consider worker health and safety as well as quality and performance,” said NAPA President & CEO Audrey Copeland, P.E., Ph.D. “NAPA has championed research problem statements that are being funded by the National Academies of Science and Engineering, more specifically the Transportation Research Board National Cooperative Highway Research Program to answer questions that are absolutely critical to understanding if plastics are viable in asphalt.”

The release of these plastics documents comes on the heels of the new Save Our Seas 2.0 Act. Included in the legislation is a provision (Sec. 303, pg. 58) authorizing the National Academies of Science to conduct a study on repurposing plastic waste in infrastructure. Additionally, in early August, the House of Representatives approved and sent to the Senate the fiscal year 2021 appropriation bill for the Departments of Transportation and Housing and Urban Development (THUD). The bill included $800,000 for research on using plastic in infrastructure.

“NAPA and its members are committed to building and maintaining our country’s infrastructure with the utmost goal of recycling, sustainability, and concern for our environment and resources.
while, at the same time, providing the travelling public with the smoothest, quietest, safest, and most perpetual pavement surface available,” said NAPA Chairman James (Jay) Winford Jr., Ph.D., P.E., President of Prairie Contractors Inc. in Opelousas, La.

Other Resources

NAPA also discussed plastics on its latest podcast episode of "Pave It Black" and created a shareable video to help inform political leaders, transportation officials, and the general public on what the asphalt industry is doing to evaluate the potential for using plastic in asphalt.

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About the National Asphalt Pavement Association

*The National Asphalt Pavement Association (NAPA) is the only trade association that exclusively represents the interests of the asphalt producer/contractor on the national level with Congress, government agencies, and other national trade and business organizations. NAPA supports an active research program designed to improve the quality of asphalt pavements and paving techniques used in the construction of roads, streets, highways, parking lots, airports, and environmental and recreational facilities. The association provides technical, educational, and marketing materials and information to its members; supplies product information to users and specifiers of paving materials; and conducts training courses. The association, which counts more than 1,100 companies as members, was founded in 1955.*