



The Road
Forward

**ANNUAL
REVIEW**

2025



Launched in 2022, The Road Forward (TRF) outlines the asphalt pavement industry's commitment to net zero carbon pavement production and construction. At the beginning of 2025, we published [The Road Forward: Reflecting on the First Three Years \(2022-2024\)](#) to encapsulate progress and outcomes.

This document augments the previous report by examining the program's fourth year (2025) along with ongoing developments.

STEERING COMMITTEE FORMED, OFFICERS ELECTED

At NAPA's Midyear Meeting, NAPA's Board of Directors approved the charter for The Road Forward Steering Committee, further formalizing TRF's governing and operational structure. This committee consists of up to nine members from TRF Partner companies and will influence strategy, activities, and sabbaticals for the program.

Followed by a nomination period, an August election identified officers to serve through December 2026.

Our immense thanks to the following individuals and their companies for their ongoing leadership:

- › **Heather Dylla** (Chair), *Construction Partners Inc.*
- › **Ashley Batson** (Vice Chair and committee member through December 2025), *Ingevity*
- › **Trevor Wagoner** (Secretary), *Astec*
- › **Raven Adams**, *Granite Construction*
- › **Maure Creager**, *CertainTeed*
- › **Will Gallagher**, *Gallagher Asphalt*
- › **Susan Listberger**, *Cargill*
- › **Courtney Rice**, *Owens Corning*
- › **Ron Sines**, *CRH Americas Materials*



123
Summit
Attendees

3
Webinars

10
Conference
Sessions

10
External
Meetings

2
Sabbatical
Participants

NEW
Steering
Committee

The Road 
Forward
in 2025
Annual Snapshot

2
Podcast
Episodes

40+
ENERGY STAR®
Certified Asphalt
Plants

7
Published
Reports

9
Media
Mentions



The Road Forward International Summit

(September 29 – October 1, 2025)

NAPA, with the support of The Road Forward Partners, assembled leading minds from government, industry, and academia to highlight advances in the asphalt pavement industry that are fueling the decarbonization effort and the journey to net zero. Despite rollbacks in federal funding, state-level legislation and private industry sustainability mandates continue to reshape procurement practices that drive industry decarbonization efforts. Our industry has responded with remarkable innovation and resolve.

This summit served as both a showcase of that progress and a catalyst for the collaborative action needed to accelerate the journey toward a sustainable future.

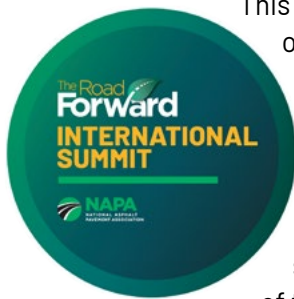
The international scope of the summit reflected the global nature of the challenge and the opportunity before us. Delegates from the United States, United Kingdom, Australia, Japan, the Middle East, and Europe shared insights on innovative approaches to public procurement, sustainable design, recycling, and novel production methods used in responding to customer needs. From the University of Antwerp's research on



electrified pavement equipment to case studies from state departments of transportation implementing FHWA Climate Challenge projects, the breadth of work represented at the summit demonstrated that decarbonization is not a distant aspiration but an active endeavor already yielding measurable results.

The summit's Blue-Sky Sessions fostered the kind of synergetic dialogue essential to navigating complex intersections of policy and engineering. These interactive discussions – alongside robust panel conversations spanning international perspectives, recycling innovation, use-phase considerations, and the emerging Asphalt 4.0 paradigm – underscored a fundamental truth: achieving our sustainability goals will require unprecedented collaboration across traditional boundaries.

Proceedings of the summit will be published in early 2026.



SUMMARY OF DELIVERABLES, YEAR 4

Events

Annual Partner Luncheon (February 4, 2025)

Related Sessions

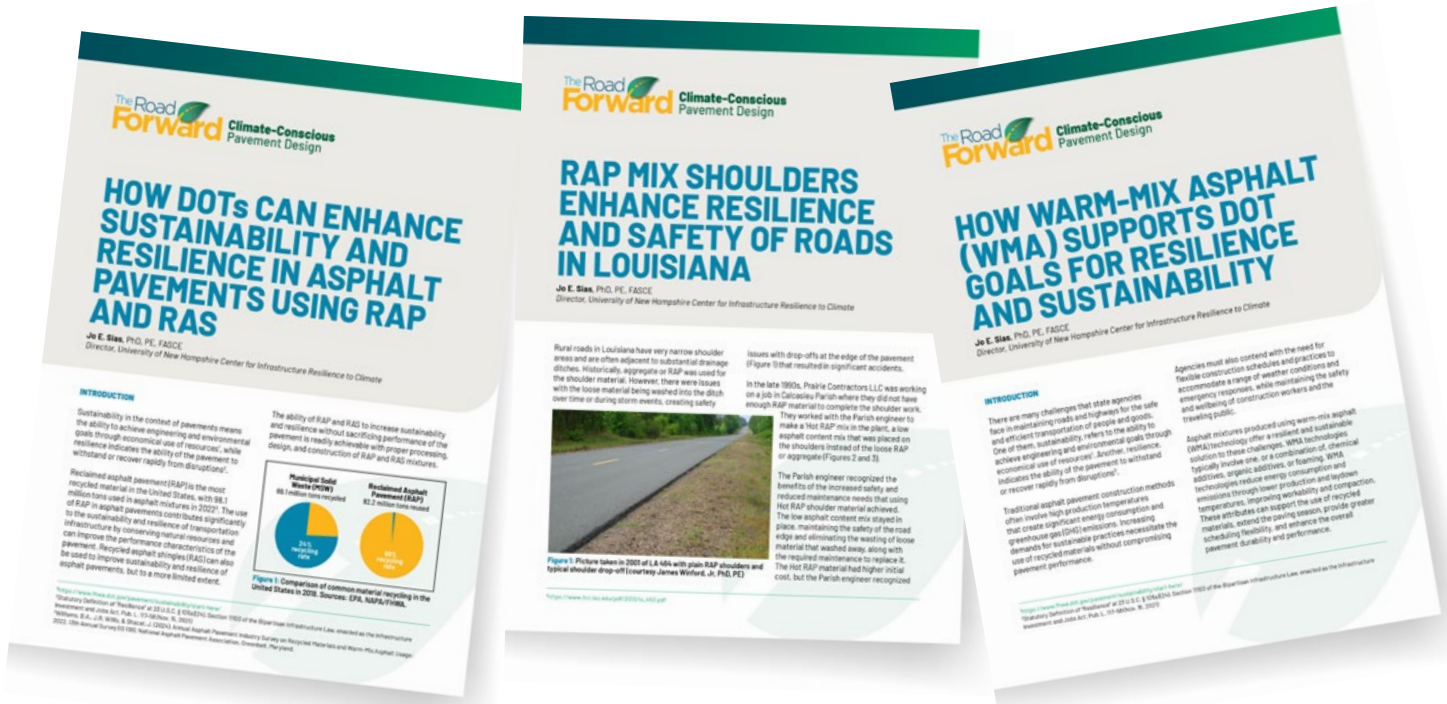
2025 Annual Meeting:

- › Advancing Asphalt Plant Technology: Innovations for Efficiency, Sustainability, and Future-Ready Operations
- › Making High RAP Happen

- › Powering Progress: Unlocking Success with ENERGY STAR

People, Plants, and Paving at World of Asphalt 2025:

- › Advances in Biobased Asphalt Technologies: Practical Steps Towards a Low Carbon Asphalt Future
- › ENERGY STAR Energy Management for Asphalt Plants
- › EPDs – Everything You Wanted to Know about Environmental Product Declarations But Were Afraid to Ask
- › Practical Guidelines for Using Recycling Agents
- › Sustainability [Decarbonization] and the Asphalt Industry: Kindred Spirits or Arch Enemies
- › Sustainable Asphalt Solutions: Best Practices in In-Place Recycling
- › Treasure Hunt Triumphs: How Asphalt Producers Unearth Efficiency Wins



Other Meeting Attendance in 2025

- Transportation Research Board Annual Meeting
- FHWA Pavement Resilience Stakeholder Group Meeting
- Mid-Atlantic Quality Assurance Workshop
- ENERGY STAR Workshop at Gencor
- PAIKY Winter Training
- CAPRI Fall Meeting
- ASCE Pavements Conference
- AASHTO Committee on Materials and Pavements
- Southeast Asphalt User Producer Group Meeting
- AAPT Annual Meeting

Published Research

How DOTs Can Enhance Sustainability and Resilience in Asphalt Pavements Using RAP and RAS

(Climate-Conscious Design Series, March 2025)

When successfully engineered, designed, produced, and constructed, pavements incorporating RAP and RAS contribute to both economic and environmental sustainability while maintaining – or even enhancing – the performance and longevity of the pavement and overall resilience.

RAP Mix Shoulders Enhance Resilience and Safety of Roads in Louisiana

(Climate-Conscious Design Series, March 2025)

Using ‘Hot RAP’ in the shoulders of rural roads in Louisiana has provided substantial benefits with respect to safety, reduced maintenance costs, and increased resilience to storm events.

How Warm-Mix Asphalt (WMA) Supports DOT Goals for Resilience and Sustainability

(Climate-Conscious Design Series, March 2025)

Warm-mix asphalt (WMA) technologies offer the potential for significant energy savings, reduced GHG emissions, improved durability and performance, enhanced workability, and support the use of recycled materials.



Warm Mix Asphalt Technologies: State of Knowledge and Best Practices (QIP-125, April 2025)

This guide presents the state-of-the-practice for warm mix asphalt (WMA) technologies in the United States. It includes an overview of the different WMA technologies and approval processes, an overview of the benefits of WMA, including engineering advantages and improvements in environmental factors and working conditions, and a description of best practices for the design, production, and construction of asphalt mixtures with WMA technologies.

Half-Warm-Mix Asphalt: A Synthesis (QIP-133, April 2025)

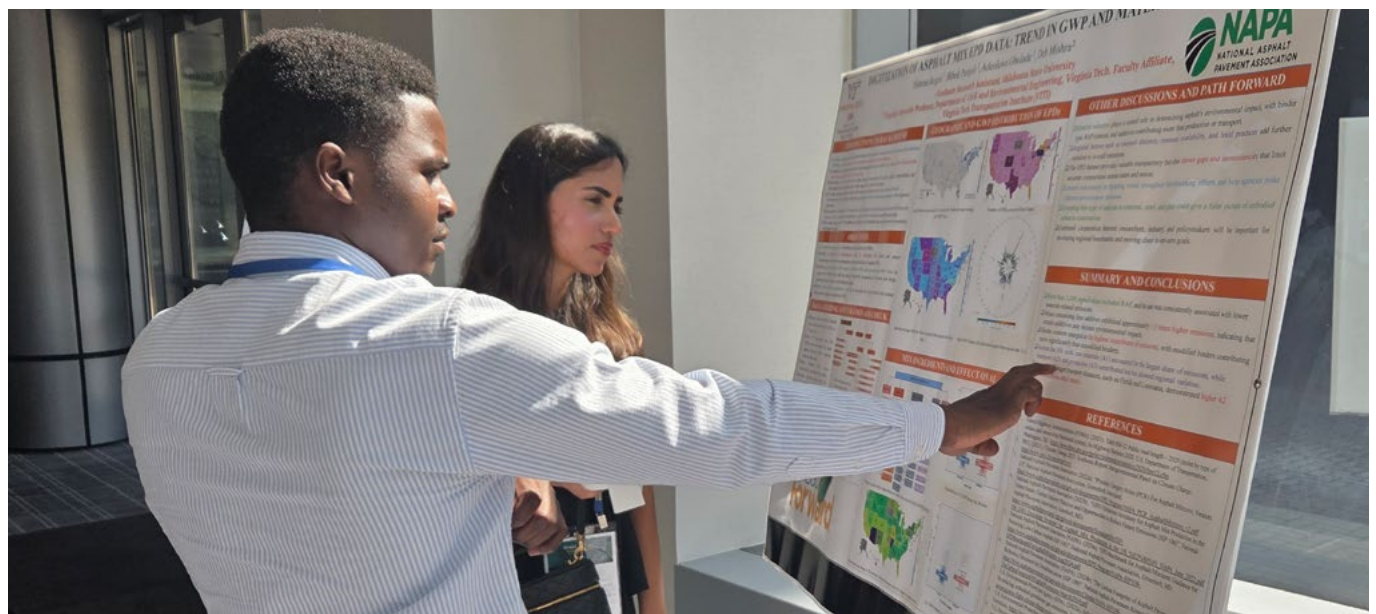
This document synthesizes the current state of the knowledge regarding Half-Warm-Mix Asphalt (HWMA). The literature search yielded a total of 15 documents specifically discussing research conducted with HWMA. These documents include journal articles, conference proceedings, and reports, with 13 references from Europe, one from New Zealand, and one from the United States. In addition, other documents were available that did not specifically address the topic of HWMA but discussed general trends regarding practices to use more environmentally friendly technologies in the production of asphalt mixes.

14th Annual Asphalt Pavement Industry Survey on Recycled Materials and Warm-Mix Asphalt Usage, 2023 Construction Season (IS-138, June 2025)

The results of the asphalt pavement industry survey for the 2023 construction season show that asphalt mixture producers have a strong record of employing sustainable practices and continue to increase their use of recycled materials and warm-mix asphalt (WMA).

Energy and Greenhouse Gas Emission Benefits of Recycled Materials and Warm-Mix Asphalt Usage (SIP-111, June 2025)

This report showcases the energy and greenhouse gas emission benefits associated with adopting WMA technologies and using recycled materials in asphalt production. Since 2009, NAPA has conducted an annual survey in partnership with FHWA to quantify industry adoption of such environmentally friendly technologies. The findings of this report are intended to compliment the 2023 Construction Season survey (IS-138).





Webinars

A Primer on the Circular Economy

(April 7, 2025)

This webinar discusses the concepts of a circular economy along with recent industry trends and how the circular economy impacts the asphalt business.

Warm Mix Asphalt Update and Half-Warm Mix State of the Knowledge

(August 25, 2025)

This webinar explores WMA technologies already in use across the country and reveal where the industry is headed with half-warm-mix asphalt (HWMA). Attendees receive practical insights into mix design, production techniques, and current usage of WMA.

Implementation of Network-Level Life Cycle Assessment in Pavement Management Systems

(December 10, 2025)

This webinar introduces a practical framework for integrating network-level life cycle assessment (LCA) into pavement management systems (PMS). It builds on the original 2013 implementation in the California PMS, outlines recent improvements, and presents a new proof-of-concept application in Virginia.

Podcast

CertainTeed's Maure Creager appeared on *Pave It Black* to share how her unconventional path has shaped her leadership style and vision for the future of sustainable construction in Episode 7 of Season 9's focus on leadership. (April 15, 2025)



NAPA Senior Director, Sustainability & Intelligent Construction, Amlan Mukherjee joined a special episode of *Pave It Black* to recount What We Learned at The Road Forward International Summit. (December 2, 2025)

UPCOMING DELIVERABLES

- › Innovative Procurement Recommendations
- › Use Phase: A Deep Dive
- › Parameterized Asphalt Plant Foreground LCI Model
- › Developing a Full Life Cycle Framework for Decision Making Support Using Supply Curve

AFFILIATED PROGRAMS

ENERGY STAR

While activity quieted with the new administration, asphalt producers continued their commitment to efficient practices. By July, 40 asphalt plants achieved

BY JULY, 40 ASPHALT PLANTS ACHIEVED ENERGY STAR® CERTIFICATION – MORE THAN ANY INDUSTRIAL SECTOR IN ITS FIRST PARTICIPATING YEAR.

ENERGY STAR® Certification – more than any industrial sector in its first participating year. ENERGY STAR certification is awarded by the EPA to manufacturing plants that score in the top 25%

of energy performance nationwide, based on the ENERGY STAR Energy Performance Indicator (EPI) tool developed in collaboration with industry partners. The EPA continues to certify asphalt plants participating in the volunteer process.

Environmental Product Declarations (EPDs)

In August, NAPA solicited comments on the Product Category Rules (PCR) for Asphalt Mixtures, version 2.1, which was independently verified by a review panel. It is scheduled for release for public use in early 2026.

The purpose of the mid-cycle update was to:

- ▶ Expand the geographic applicability of the PCR to include Mexico in addition to Canada and the United States, following the same roadmap of regionalizing upstream datasets and harmonizing with Mexican standardizing organization, Organismo Nacional de Normalización y Certificación de la Construcción y Edificación (ONNCCE).
- ▶ Update definitions of EPD types to align with the ACLCA Guidance for Determining EPD Types and Calculating and Communicating Data Specificity Through the Supply Chain.
- ▶ Update guidance for the use of PCRs and EPDs for upstream materials use.
- ▶ Clarify independent third-party verification of the Emerald Eco-Label tool, the underlying LCA, and recent updates including the addition of Simulator tool and the Quality Control program, which add to the transparency and veracity of asphalt EPDs.

Meanwhile, the work on updating the PCR to version 3 for release in 2027 is already under way, along with a simultaneous update to the underlying LCA, which seeks to extend the scope to include the construction life cycle stage (A4 – A5) for asphalt mixtures. We are harmonizing and coordinating with the PCR that is being developed by ARRA for asphalt recycling operations. A data collection process for A4 – A5 is being conducted. NAPA will seek member participation in sustaining an updated industry representative LCA for asphalt mixtures.

In October, a new Emerald Eco-Label feature empowered subscribers to easily privatize data by denoting whether published EPD data is available to the public or reserved only for potential customers.

As of December 2025, public EPDs in Emerald Eco-Label is being made available to third-party tools like EC3 to provide private market customers direct access to asphalt plants with EPDs. In contrast to public procurement scenarios where EPDs are being required, in private markets EPDs are providing competitive advantage and market access.



SOLVING TOMORROW'S PROBLEMS TODAY

Summit sets stage to make The Road Forward vision a reality.

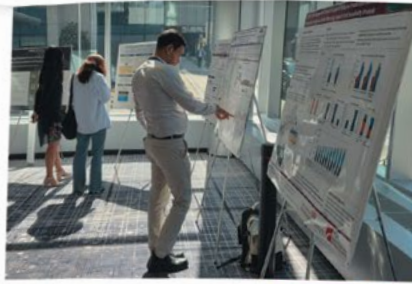
COMPILED BY NAPA STAFF

An expert selection of speakers addressed the global audience of asphalt pavement professionals during The Road Forward International Summit in Chicago in September.

Photos from this first-of-its-kind event taken by NAPA's Bill Rowan captured the energy and focus attendees brought to networking, programming, and poster sessions.



1. Ron Sines presented the "City Perspective on The Road Forward" during The Road Forward International Summit in Chicago. 2. Moderator Steven Adams with Granite Construction, left, speaks with Asphalt Institute's Chair Shah during the industry panel on Sept. 29.



3. Attendees were able to dive deeper into sustainability innovations and new approaches through poster sessions. 4. European Asphalt Pavement Association (EAPA) Secretary General Carsten Karcher moderated the international panel, which featured panelists representing Australia, the United Kingdom, Portugal, and the United Arab Emirates. 5. Discussions during blue sky thinking sessions explored full pavement life cycle considerations as well as the intersection of engineering and policy. 6. The Heritage Group's Katie Decario presented on how reducing asphalt mix temperatures impacts cracking and rutting.



Winter 2025 37

MEDIA

States are moving forward with Buy Clean policies despite Trump reversal (Canary Media, February 20, 2025)

After Three: The Road Forward (NAPA Quarterly, Spring 2025)

Municipal use of Recycled Asphalt Pavement on a major upswing, says Good Roads speaker (Construct Connect, April 9, 2025)

Decarbonizing the asphalt pavement industry (Rock to Road, May 2, 2025)

ENERGY STAR Certified (NAPA Quarterly, Summer 2025)

Another kind of road warrior: Trump pitches asphalt for DC streets (Roll Call, August 27, 2025)

New EPD Feature Allows Subscribers to Easily Privatize Data (NAPA Quarterly, Fall 2025)

Tilcon Earns Back-to-Back Environmental Leadership Awards (NAPA Quarterly, Fall 2025)

Solving Tomorrow's Problems Today (NAPA Quarterly, Winter 2025)

The Road Forward SABBATICAL

University of Nevada, Reno, Professor Adam Hand was the TRF Sabbatical participant for the 2024-2025 academic year. Imad Al-Qadi worked with us in Fall 2025 on use phase. UMass Dartmouth Commonwealth Professor Walaa Mogawer joins us as we kick off 2026.

The Road Forward

PARTNERS

Thanks to The Road Forward Partners for supporting this work.

PARTNERS SINCE 2022



PARTNERS SINCE 2023



PARTNERS SINCE 2024



FORMER PARTNERS

- › Colorbiotics
- › Holcim
- › Sapphire Gas Solutions
- › Surface Tech
- › XBE

RESEARCH PARTNERS

- › ASPIRE National Science Foundation Engineering Research Center
- › National Center for Asphalt Technology (NCAT) at Auburn University
- › T2ASCO LLC
- › The Transtec Group Inc.
- › University of California, Davis
- › University of Missouri-Columbia
- › University of Washington
- › WAP Sustainability Consulting
- › West Contracting