

FHWA Update

California Division Office

Fall Asphalt Pavement Conference & EXPO



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**California Division
Federal Highway Administration
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Presentation Outline

California Division Office

- Federal Funding
- FHWA P&M Programs
- 2021 Pavement Performance in CA
- FHWA Mobile Asphalt Technology Center
- Balanced Mixture Design (BMD)
- Sustainability
- Everyday Day Count #6
- FHWA Resources



President Biden's Bipartisan Infrastructure Law

California Division Office

Invests \$350 billion in highway programs over 5 years

1. \$350 Billion over 5 years

2. New Programs

3. New Opportunities

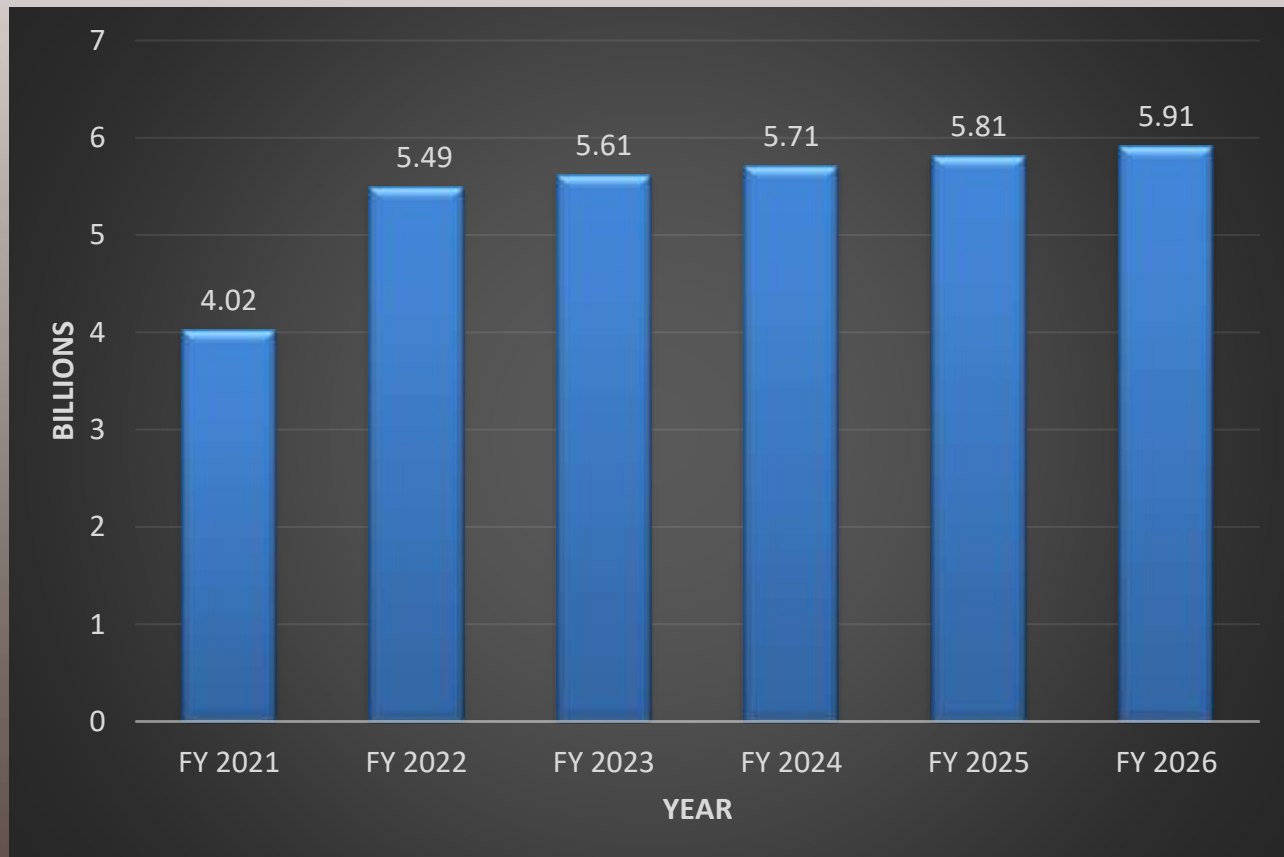


President Biden's Bipartisan Infrastructure Law

California Division Office

Cove at Julia Pfeiffer Burns State Park

FHWA Formula Funds to California



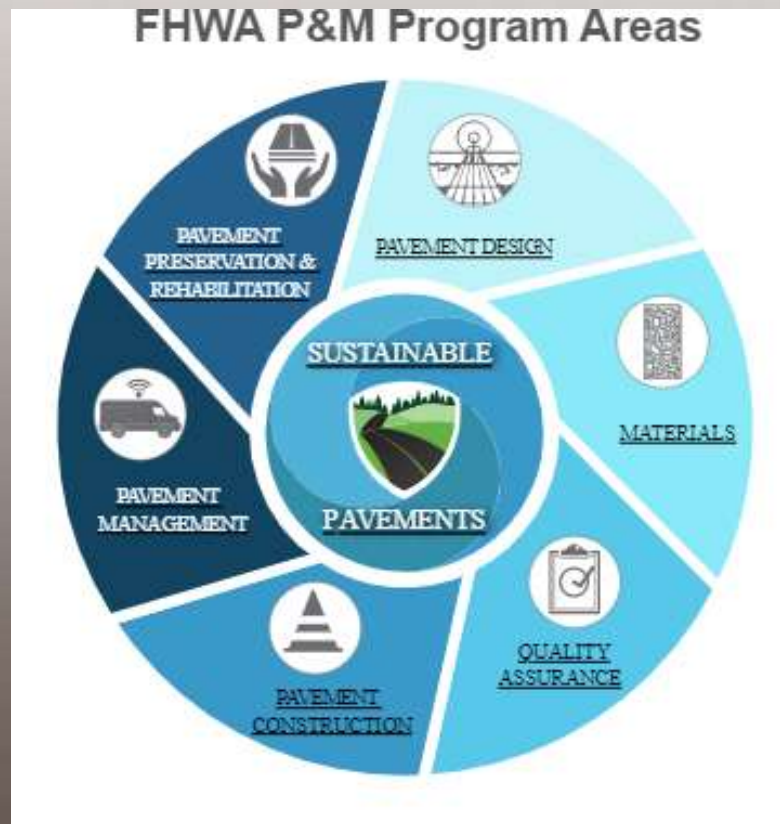
Source: <http://rebuildingca.ca.gov/iija-by-the-numbers/>



FHWA P&M Program Areas

Cove at Julia Pfeiffer Burns State Park

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CA Pavement Performance

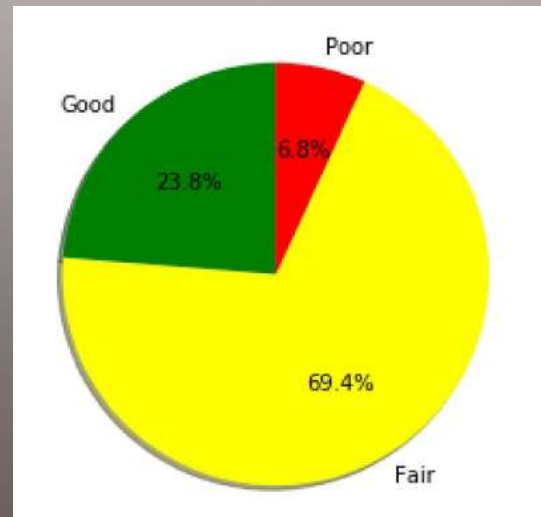
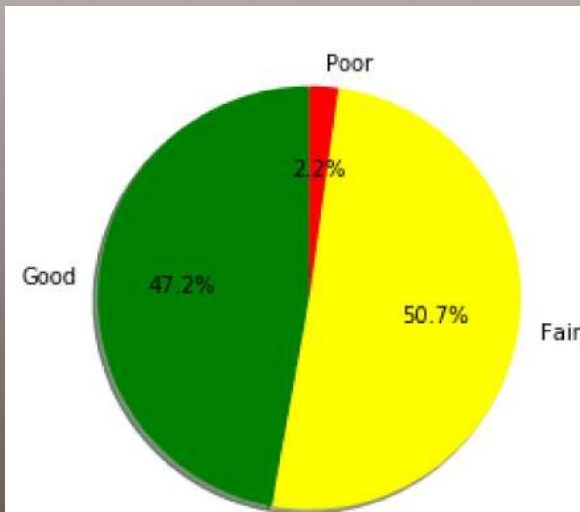
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Interstate NHS

Non-Interstate NHS



Source: 2021 HPMS Data



FHWA Mobile Asphalt Technology Center

California Division Office

- Introduce new and underutilized asphalt technologies to States, bridging the gap between research and implementation
- Project site visits -170 (1988-2022)
- Customize training workshops - 10
- Equipment loan program -17 States since 2019
- National resource for data and best practices – 30
- In 2019-2022 the trailers have trained over 650 people and exposed nearly 9,000 people to new technologies



FHWA Equipment Loan Program

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PaveScan (DPS) Demonstration

1. San Jose
2. Bakersfield
3. Fair Oaks



Caltrans Friction Correlation Study

1. Dynamic Friction Tester
2. Circular Track Meter



Balanced Mixture Design (BMD)

California Division Office

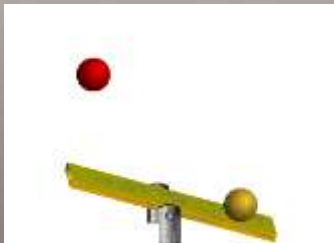
FHWA partners with stakeholders to advance and implement BMD in a data-informed manner

AASHTO PP 105-20 describes BMD as:

“asphalt mix design using performance tests on appropriately conditioned specimens that address multiple modes of distress taking into consideration mix aging, traffic, climate, and location within the pavement structure.” *(Industry specification; not a Federal requirement)*

What are the key points of that definition?

- Use of performance tests
 - Appropriately conditioned specimens
 - Multiple modes of distress (more than rutting and cracking)
- Taking into account the use of the mixture



Balanced Mixture Design (BMD)

California Division Office

Key FHWA Documents & Efforts for BMD

- Tech Brief: Eight Tasks for BMD Implementation
https://www.fhwa.dot.gov/pavement/pub_details.cfm?id=1144
- Tech Brief: Performance Engineered Pavements
https://www.fhwa.dot.gov/pavement/pub_details.cfm?id=1102
- Index-Based Tests for Performance Engineered Mixture Designs for Asphalt Pavements
https://www.fhwa.dot.gov/pavement/pub_details.cfm?id=1101





Sustainability

Cove at Julia Pfeiffer Burns State Park

California Division Office

Advance the use of environmentally friendly pavement technologies



Asphalt Recycling

Asphalt Pavement In-place Recycling Technologies (APIPRT)



Ground Tire Rubber (GTR)



Reclaimed Asphalt Pavement (RAP)



Recycled Asphalt Shingles (RAS)



Sustainability

California Division Office

Advance the knowledge and practice of sustainability related to pavement systems



- Created a national dialogue on pavement sustainability through Sustainable Pavements Technical Working Group meetings

- Evaluated the state of knowledge related to sustainability of pavements

- Developed a pavement LCA Tool based on stakeholder input that uses public data sources and EPDs

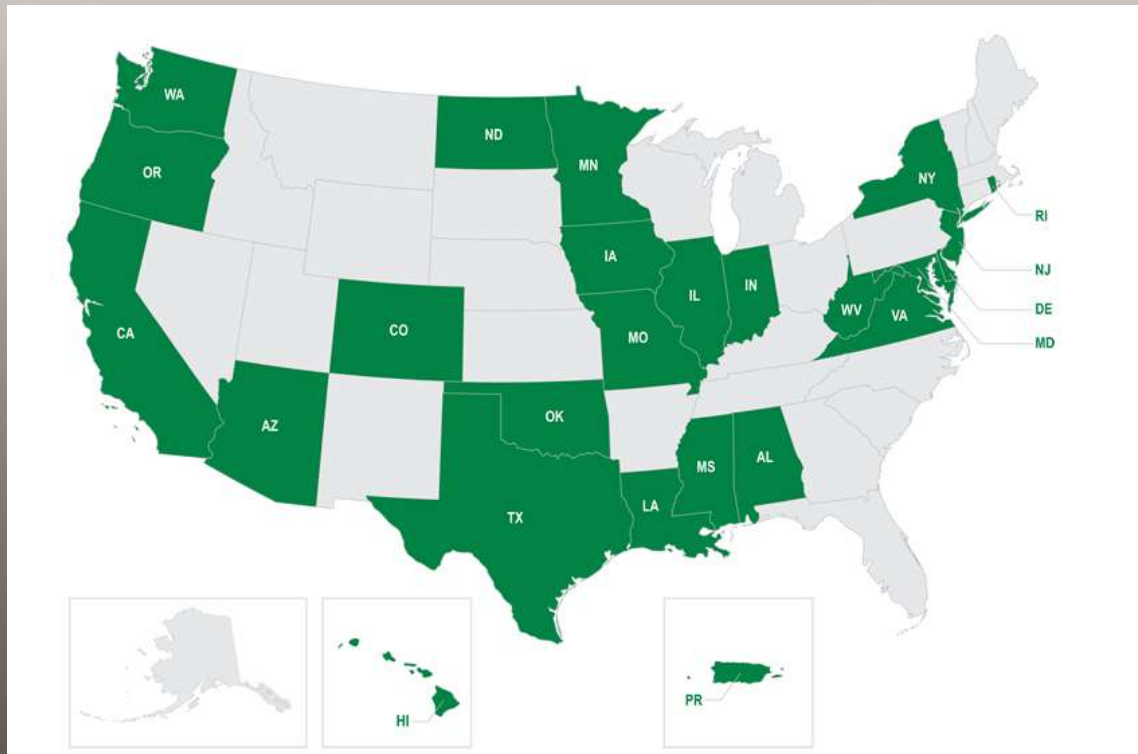


Sustainability

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FHWA Climate Challenge Funds





FHWA EDC-6 Innovations

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EDC-6 e-Ticketing

1. Safety
2. Time Savings
3. Quality



EDC-6 Targeted Overlay Pavement Solutions (TOPS)

1. Safety
2. Cost Savings
3. Performance



FHWA Resources

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Recycling

[Reclaimed Asphalt Pavement Tech Brief*](#)

[Reclaimed Asphalt Shingles Tech Brief*](#)

[Ground Tire Rubber Report*](#)

[In-place Recycling Tech Brief \(coming soon\)](#)

Asphalt Mix and Binder

[Asphalt Materials Quality Assurance Practices Tech Brief*](#)

[Stone Matrix Asphalt Tech Brief*](#)

[Asphalt Density**](#)

[Multiple Stress Creep Recovery Report*](#)

[\$\Delta T_c\$ Tech Brief*](#)

[Polyphosphoric Acid Report \(coming soon\)](#)



Questions?

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