

North Dakota Asphalt Conference

April 6-7, 2010

FHWA Update

Wendall L. Meyer

Division Administrator

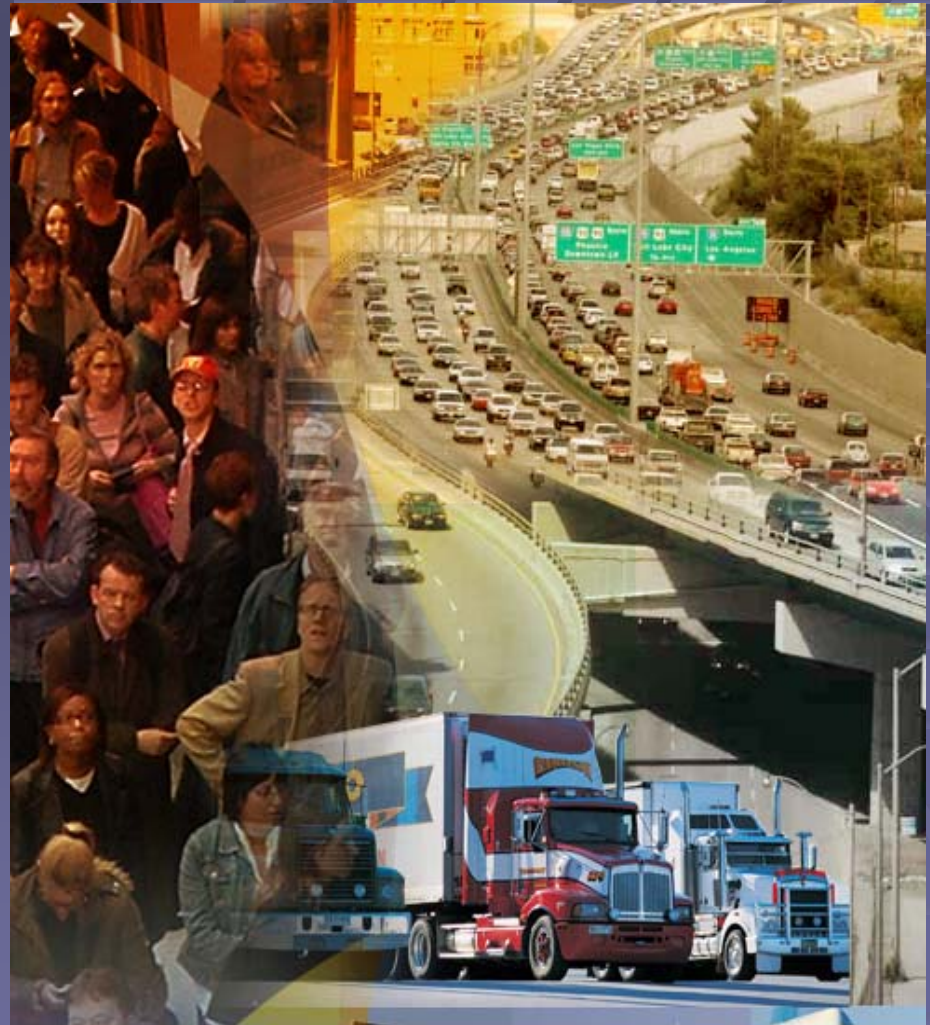
FHWA North Dakota Division

Discussion Areas

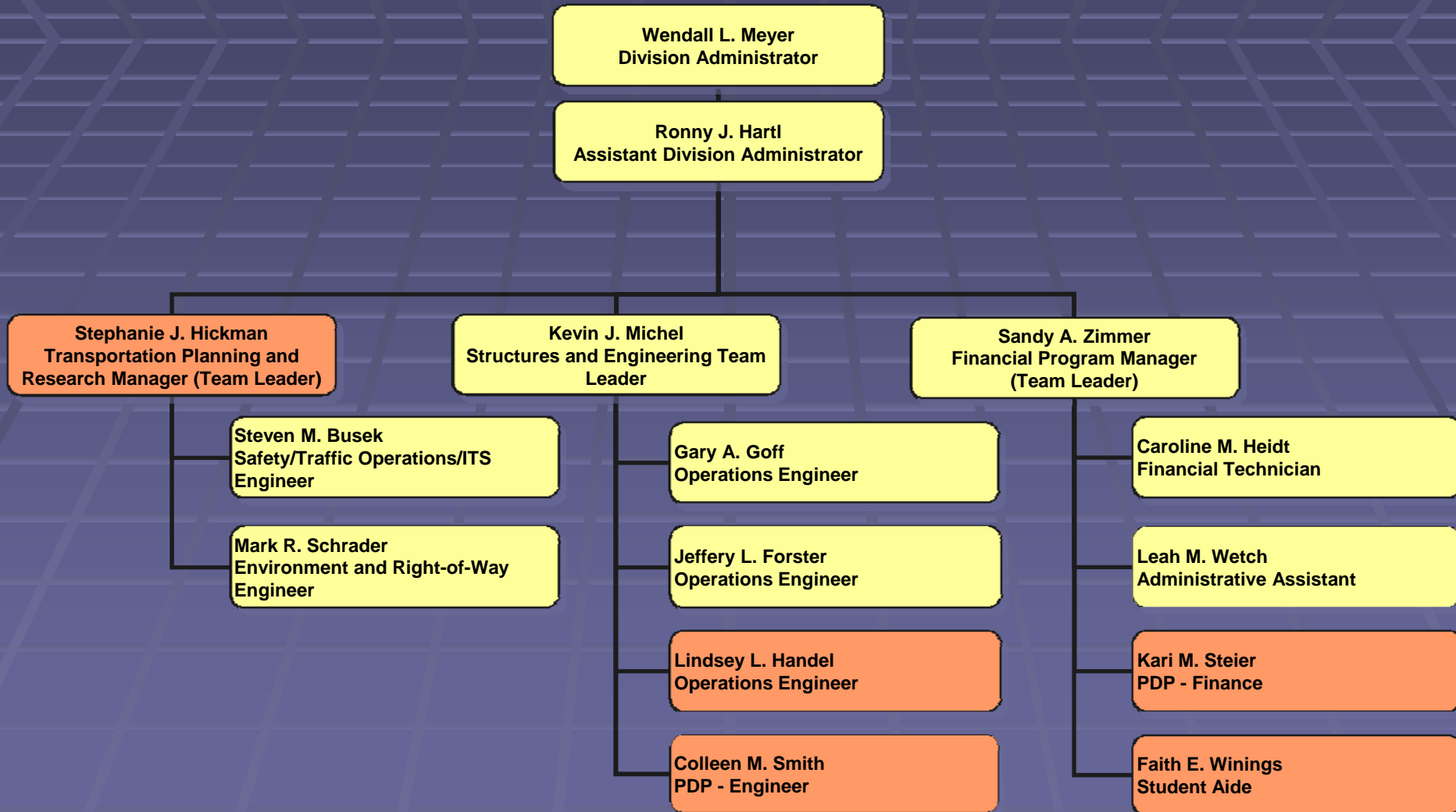
- FHWA Briefly
- Federal Funding
- FHWA's Role
- Administrator's Focus
 - Every Day Counts

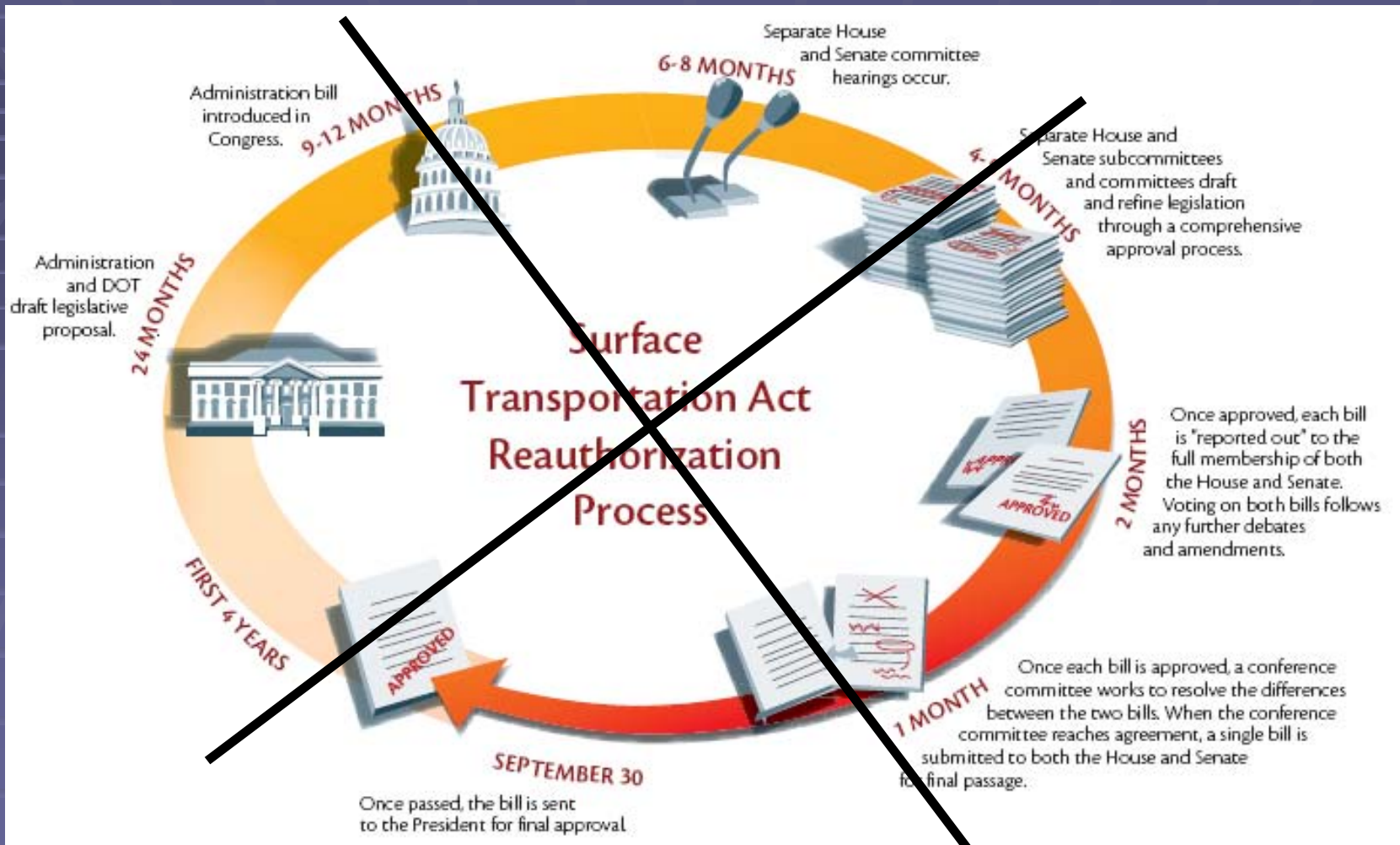
FHWA: Who are we?

- **Money:** About \$40B Federal Highway Funds
- **Legislated Mission:** “...provide for a strong and vigorous national economy...” 23 USC 101(b) *(and associated regulations)*
- **What we aspire to:** Improve Mobility on our Nation’s Highways Through National Leadership, Innovation, and Program Delivery.
- **What the public expects:** Safety and fiscal integrity, emergency response...



North Dakota Division Organization





Critical Issue: Funding

- Transportation Reauthorization
 - SAFETEA-LU expired September 30, 2009
 - Extension until December 31, 2010 (HIRE Act)
- FY2010 Appropriations Act
 - About \$41 billion
 - **North Dakota's obligation limitation about \$205 million**

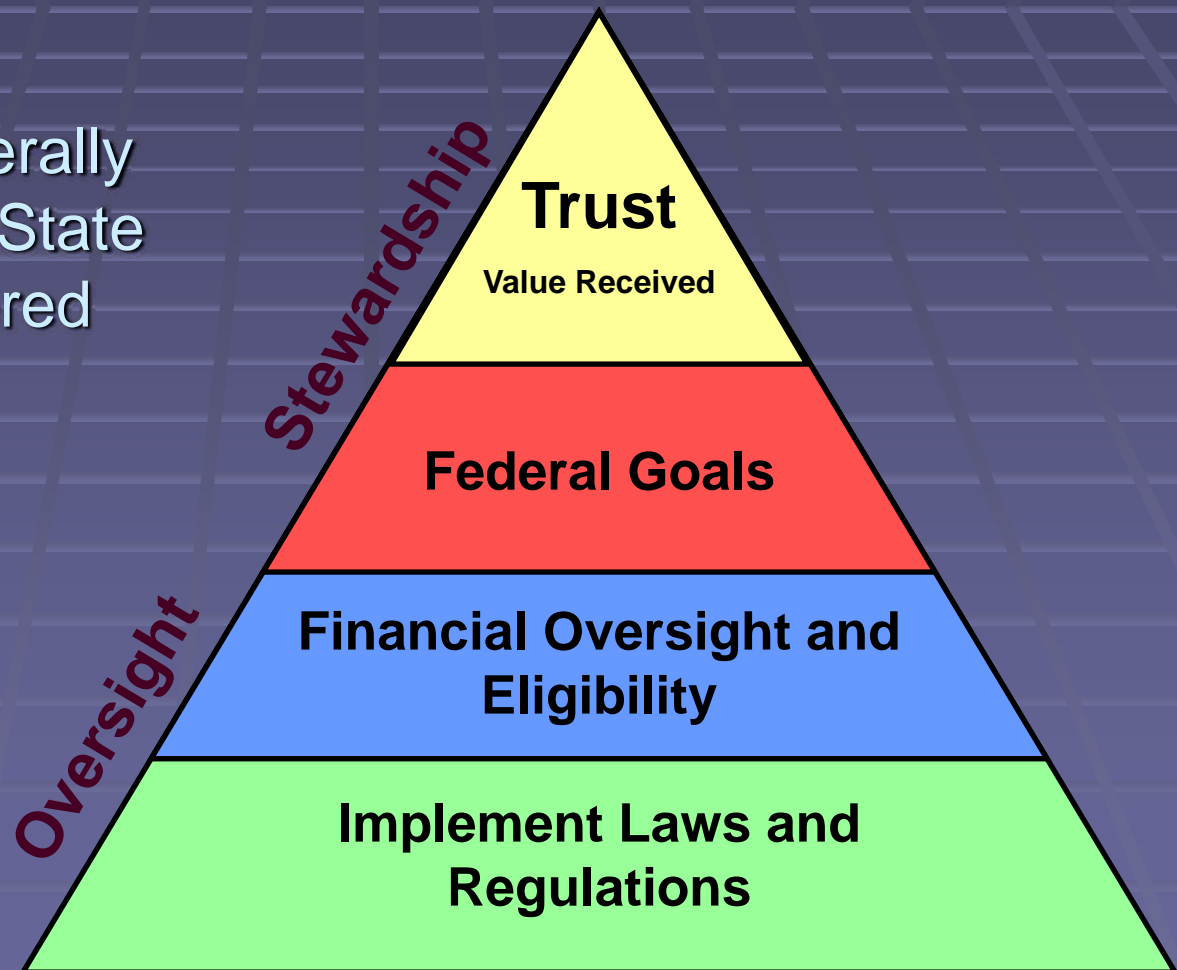
Critical Issue: Funding

- Recovery Act
 - North Dakota received approximately \$170 million
 - 100 percent obligated
 - 45 percent expended
 - Approximately 214 direct jobs created or sustained
- HIRE Act - *President signed the bill on March 18, 2010.*
 - The HIRE Act includes an extension of surface transportation programs through December 31, 2010, restoration of the SAFETEA-LU rescission, and tax incentives for job creation. It does not provide additional funding for transportation infrastructure like that provided in the Recovery Act.
- Emergency Relief
 - FY2010 funding allocation on March 31 to North Dakota in the amount of about \$103 million

FHWA: Our Role Today

A Partner

- In “A Federally Assisted, State Administered Program”



FHWA: Our Role has Evolved

From activity approval
on all projects



To delegation of environment,
design, and construction



To an emphasis in
program-level oversight



Every Day Counts

- Going Greener initiative (internal)
- Shortening Project Delivery (external)
- Accelerating Technology and Innovation Deployment (external)



Accelerating Technology and Innovation Deployment

- Accelerated Bridge Construction
- Adaptive Control Software Lite (ACS Lite)
- Asset Management Tools
- **Green Pavement Technologies**
- Roadway Departure Prevention Technologies

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Green Pavement Technologies

Provides cost effective solutions for reducing our highways' carbon footprint and preserving natural resources.

- Reduce emissions,
- Use of existing, aged highway materials and recycled materials,
- Effective use of locally available marginal materials.

Growing Demand, Sustainability, and Maintaining Quality and Performance

- Federal, State, and local transportation agencies face growing demand for materials needed to maintain and rehabilitate roads.
 - Industry is turning to reclaimed materials as alternative to virgin materials and as a quality ingredient in paving mixtures.
- There is an urgency towards “Green” technology and sustainable pavements due to innovative paving technologies and stricter environmental regulations.
- The challenge facing highway agencies is using alternative methods, technologies, and materials while maintaining quality, well-performing pavement infrastructure.

Green Pavement Technologies

- High Reclaimed Asphalt Pavement
- Warm Mix Asphalt

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So Where Are We Now?

State of Deployment & Market
Readiness



Defining High RAP

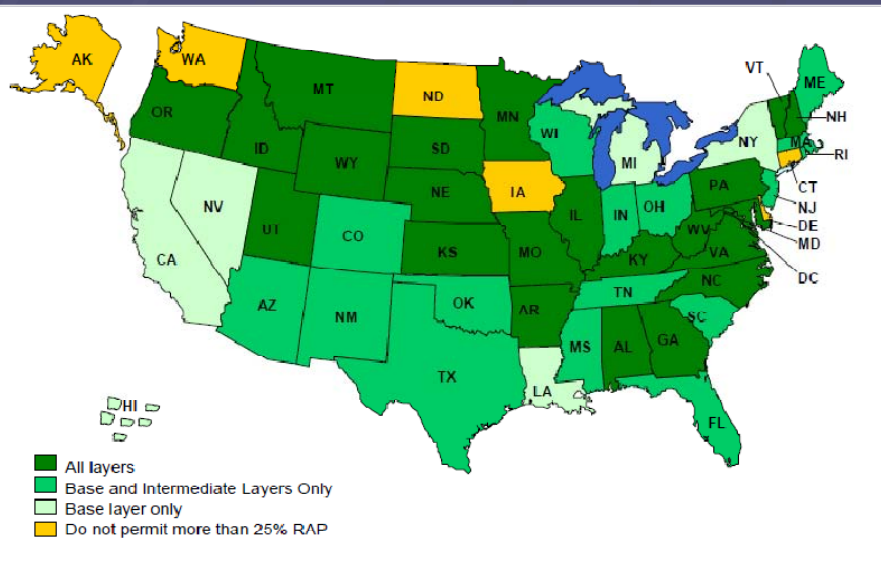
- Reclaimed Asphalt Pavement
- Removed and/or reprocessed pavement materials containing:
 - ~ binder (5%)
 - ~ aggregates (95%)



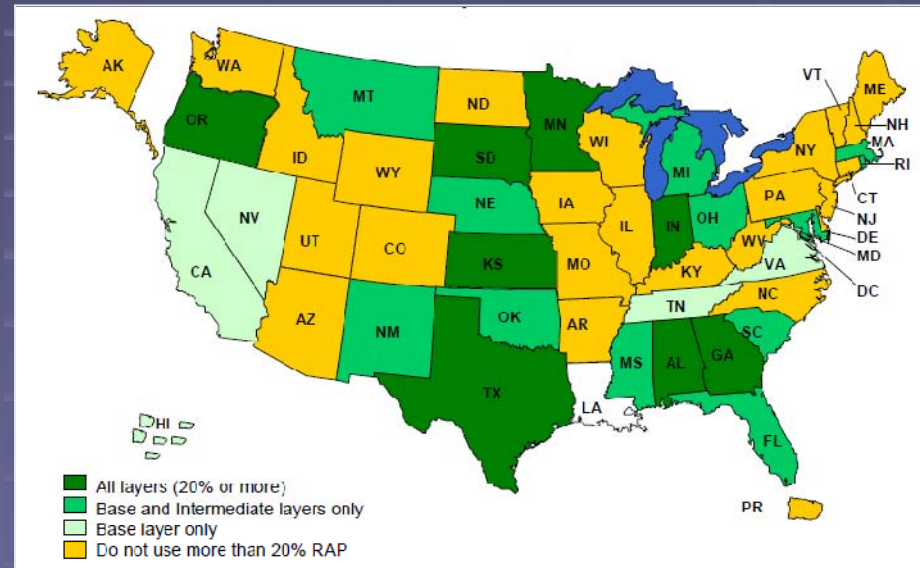
High RAP is defined as more than 25% RAP by weight of mix.

State of Deployment Reclaimed Asphalt Pavement

States that *Permit*
more than 25% RAP

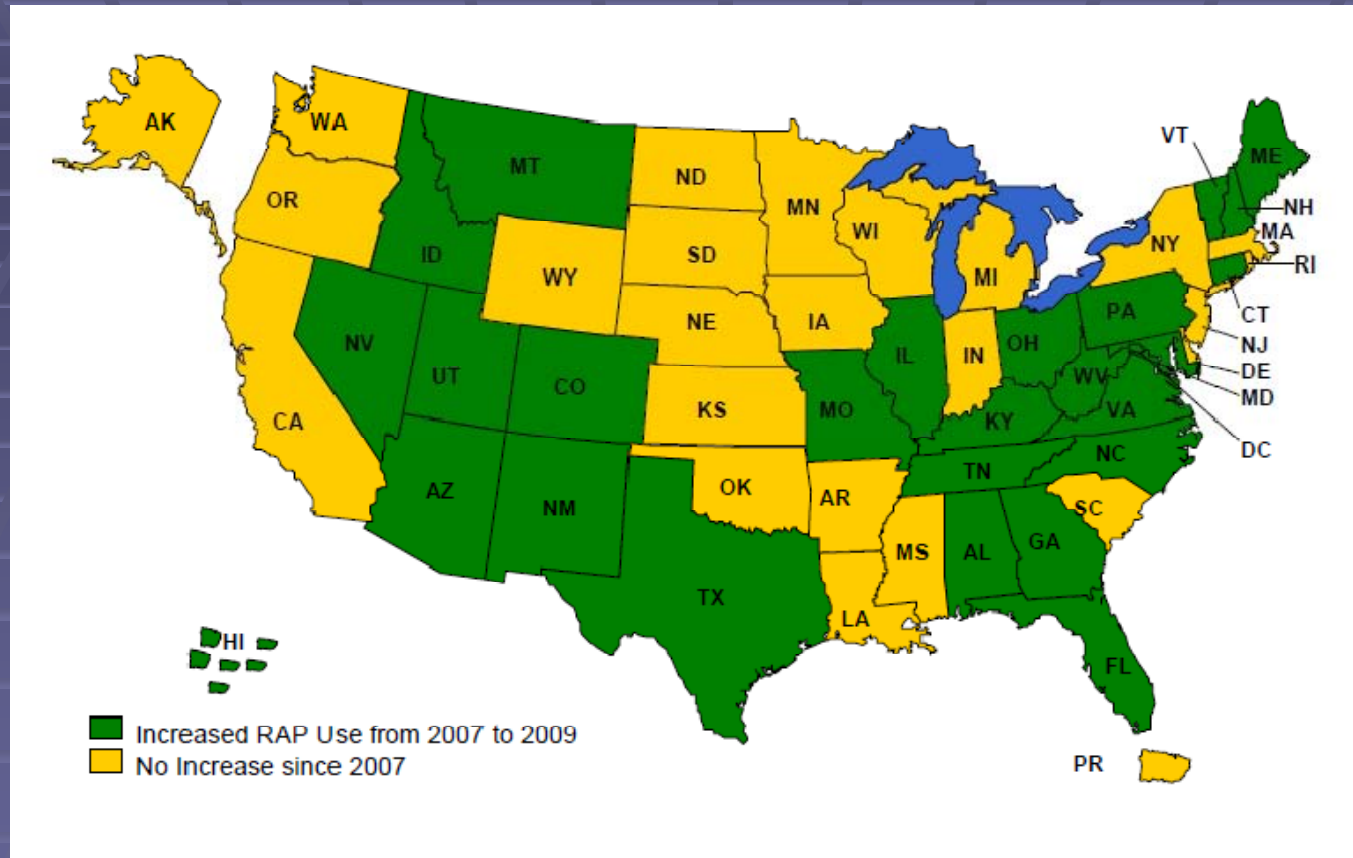


States that *Use*
more than 20% RAP



The nationwide average use of RAP is 12%.

States that have increased RAP...



- 23 States now have experience with high RAP mixes
- 11 States have experience with high RAP and Warm Mix Asphalt mixes

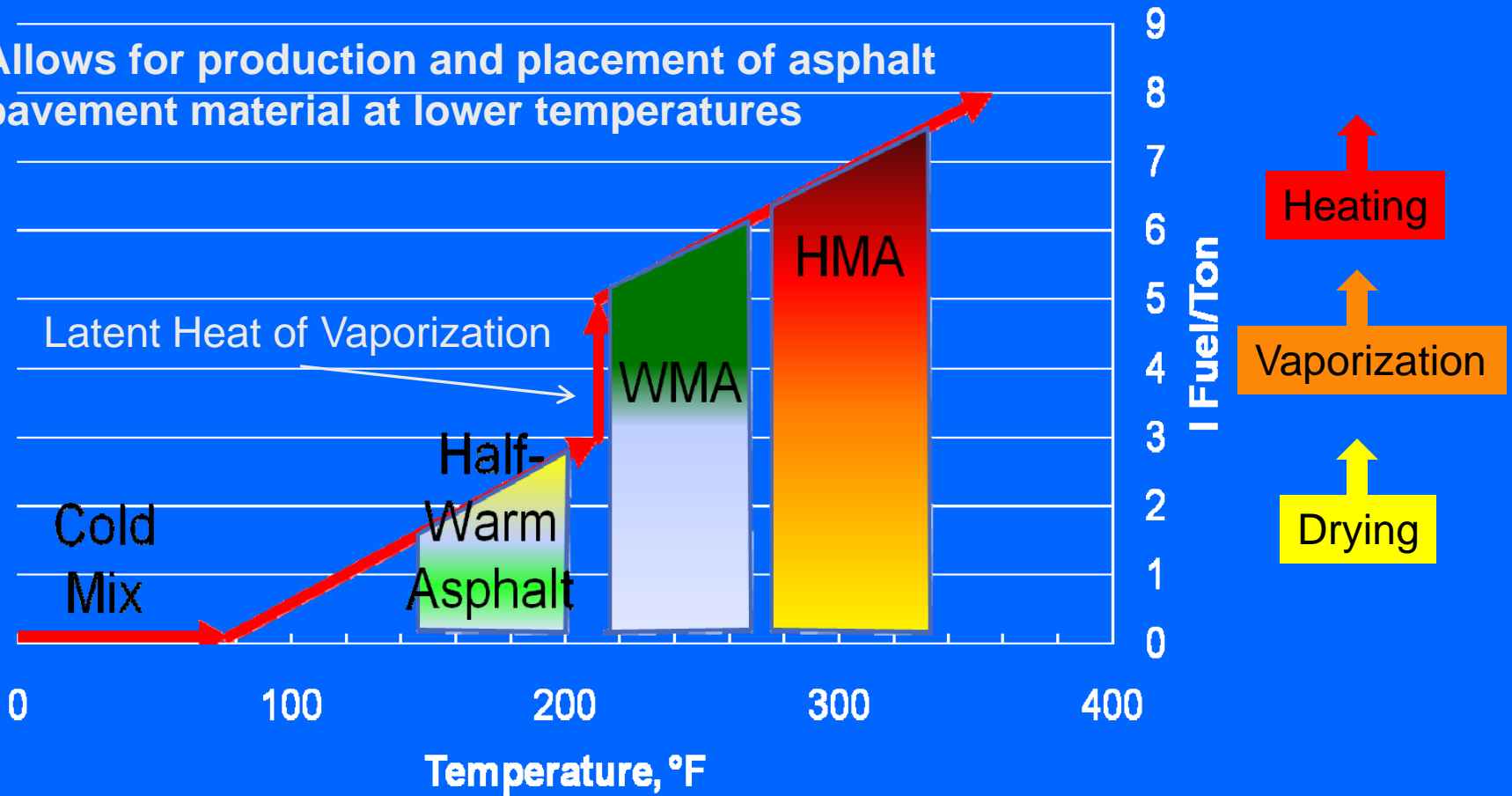
Warm Mix Asphalt Benefits

- Environmental benefits
 - Reduced fossil fuel consumption
 - Reduced emissions, greenhouse gas emissions
- Other benefits
 - Extend paving season
 - Ability to store mixture longer
 - Longer window of opportunity for compaction
 - Increased recycling rates



Warm Mix Asphalt

Allows for production and placement of asphalt pavement material at lower temperatures

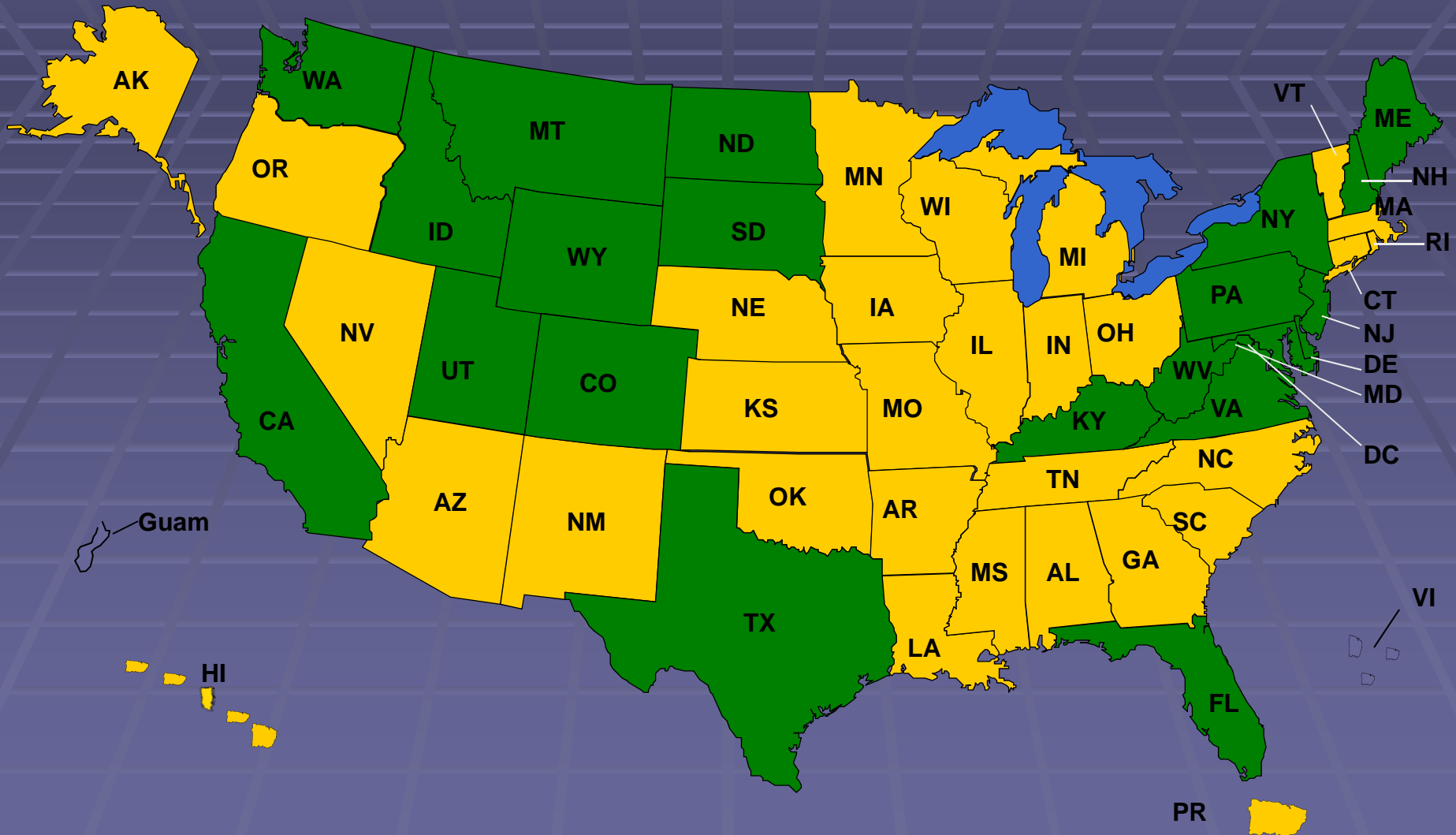


State of Deployment Warm Mix Asphalt

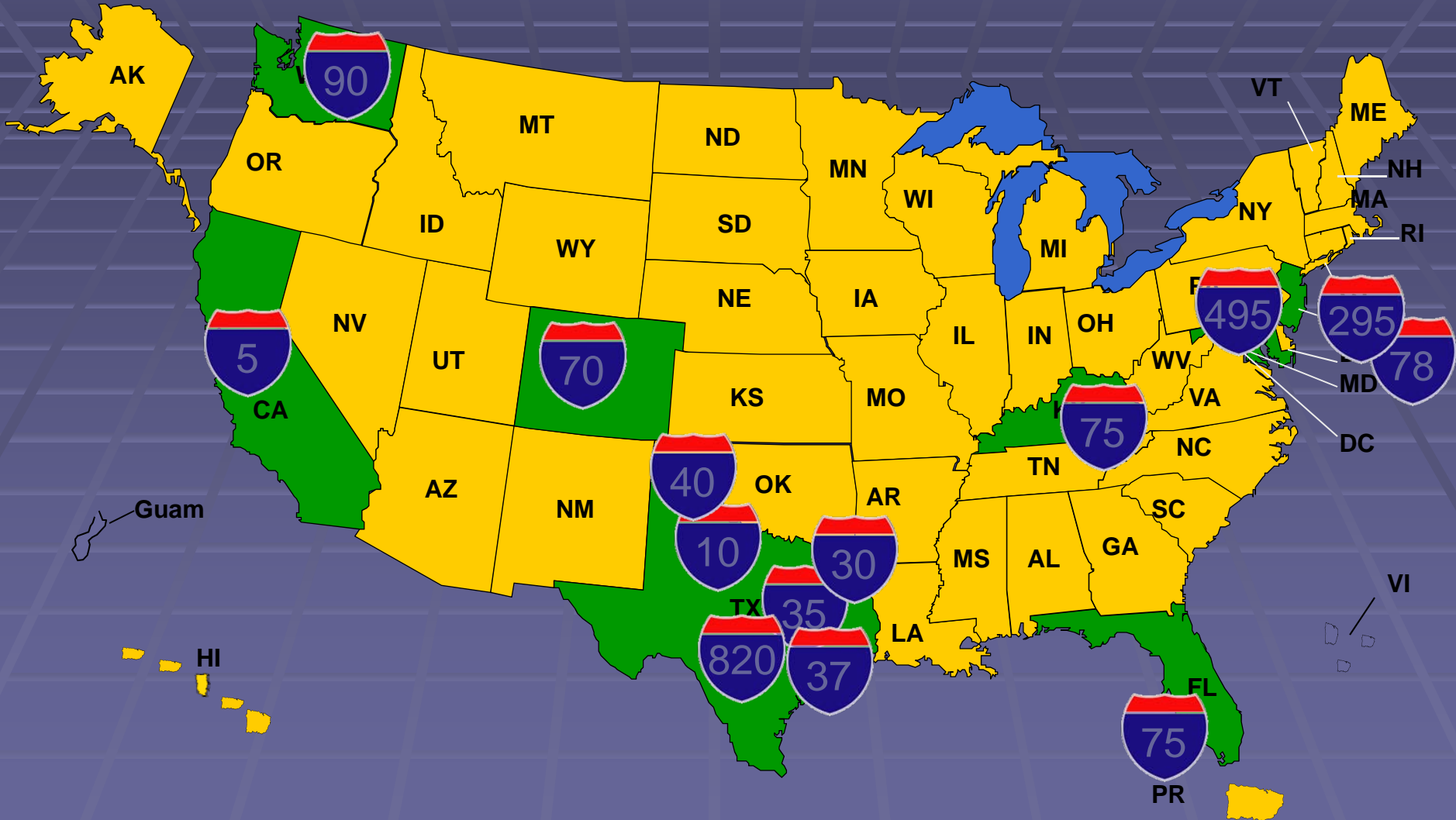
- First public demo in US in 2004
- WMA projects have been completed in 40 States
- At least 10 States have adopted permissive specifications



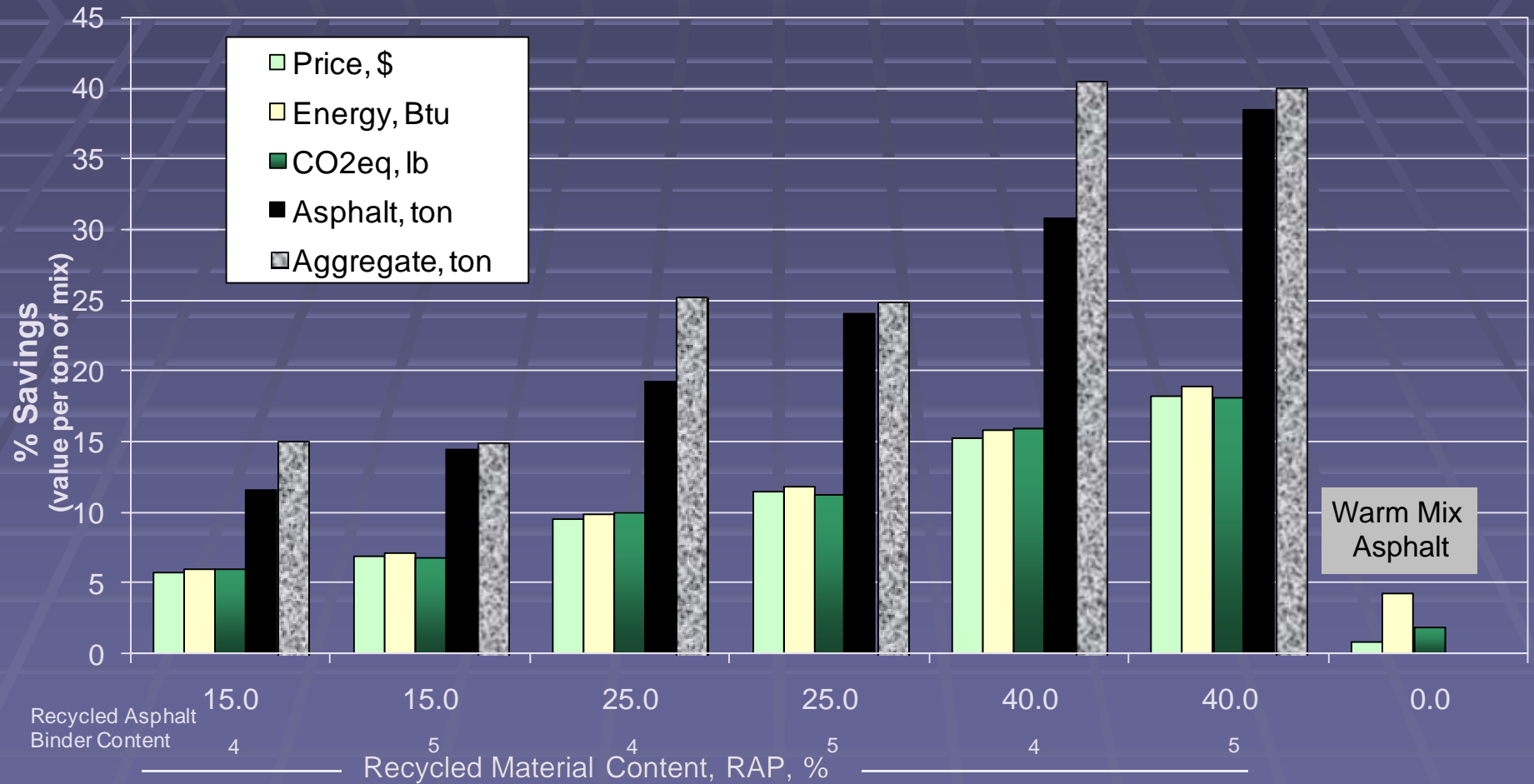
Areas with Warm Mix Trial Projects



WMA Interstate Projects as of 10/2009



Savings as Compared to Conventional Hot Mix Asphalt



Based on data from:
 Robinette, C. and J. Epps, *Energy, Emissions, Material Conservation and Prices Associated with Construction, Rehabilitation and Material Alternatives for Flexible Pavement*, Proceedings of the 89th Annual TRB Meeting, 2010.

Thank You!

Wendall L. Meyer
Division Administrator
Federal Highway Administration
North Dakota Division
1471 Interstate Loop
Bismarck, ND 58503

Phone: 701-250-4204
Email: NorthDakota.FHWA@dot.gov

Buckle Up, Every Trip, Every Time