RMPPP Sustainability Panel

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October 14, 2009 RMPPP Meeting – Salt Lake City, UT
402 US Regional Kyoto Commitments
2-14-07

Pass your cursor over each state to view a list of participating cities.

As of February 14, 2007, 402 mayors have responded to Mayor Nickels' challenge to adopt the goals of the Kyoto Protocol.

FHWA
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935 US Regional Kyoto Commitments
4-3-09  Source: http://usmayors.org/climateprotection/map.asp

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FHWA’s “3 E’s”

- **ENGINEERING**
  - Use Good Engineering Design to Assure Long-Life Pavements.

- **ECONOMICS**
  - Use Life-Cycle Cost Analysis for Project Selection.

- **ENVIRONMENT**
  - Consider Recycling First
  - Be Good Stewards of the Environment
Recycled materials should get first consideration in overall materials selection.

Recycling (and Reuse) can offer engineering, economic and environmental benefits.
FHWA recognize the need to increase our highway industry's overall use of recycled materials

Forge partnerships among government, industry, and academia

Continue to strengthen the relationship between FHWA, US EPA, and State DOT/DEQ

www fhwa dot gov/legsregs/directives/policy/recmatmemo htm
Recycling Applications

- Reclaimed Asphalt Pavement
- Recycled Concrete Aggregate
- In-Place Recycling
Why Recycle?

- Reduce project costs
- Conserve materials
- High quality aggregates unavailable
- Dwindling landfill space
- Increased disposal cost
Materials Recycling – Tons/Year

- Asphalt pavement: 80.3 millions of tons
- Scrap steel: 70 millions of tons
- Newsprint: 6.2 millions of tons
- Concrete pavement: 3.3 millions of tons
- Glass bottles: 2.9 millions of tons
- Aluminum cans: 0.9 millions of tons
- Lead-acid batteries: 0.8 millions of tons
- Magazines: 0.5 millions of tons
- Plastic containers: 0.3 millions of tons

Source: APA

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Asphalt Pavement Recycling

The volume of recycled asphalt pavement is....

- 13 TIMES greater than recycling of newsprint
- 27 TIMES greater than recycling of glass bottles
- 89 TIMES greater than recycling of aluminum cans
- 267 TIMES greater than recycling of plastic containers

Source: APA
FHWA Supports Pavement Recycling!

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Sustainability means “meeting the needs of the present without compromising the ability of future generations to meet their own needs.”
"Sustainable Development Triangle"

Social, Environmental, Economic

- growth
- efficiency
- stability
- inter-generational equity
- basic needs/satisfaction
- intra-generational equity
- valuing internalization
- values/culture
- poverty
- equity
- sustainability
- climate change
- inter-generational equity
- resilience/biodiversity
- natural resources
- institutions/governance
- pollution

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SUSTAINABLE TECHNOLOGIES

- Reclaimed Asphalt Pavement
- Recycled Concrete Aggregate
- In-Place Recycling

REUSE APPLICATIONS
- FLY ASH / COAL ASH
- TIRE RUBBER
- SHINGLES
- SLAG
- FOUNDRY SAND

- Use of Emulsions / Warm-Mix Asphalt
It's Good to be GREEN!