

Midwestern States In-Place Recycling Conference

The seal of the North Carolina Department of Transportation is a circular emblem. It features a stylized map of North Carolina in the center, colored in shades of blue and red. The map is set against a background of a large, light-colored, curved shape that resembles a road or a ribbon. The words "DEPARTMENT OF TRANSPORTATION" are written in a circular path around the map. There are two stars on either side of the map.

Cecil L. Jones, PE
State Materials Engineer
North Carolina Department of Transportation

Bloomington, Minnesota
August 13, 2009

- **Why Recycle?**
- **Partnerships**
- **Barriers to Overcome**
- **Meeting The Challenge**



Reasons to Recycle

- **Value of Pavement in Place**
 - Residual Binder has Value
 - Existing Aggregate has Value
- **Extend Limited Resources**
 - 2 Billion Tons of Aggregate/Year Used
 - Use Projected to Grow
 - New Sources Difficult to Permit

Reasons to Recycle

- **High Quality Materials in Place**
 - Existing May be Better Than Virgin
- **Limited Disposal Options**
 - Difficult to Find
 - Costly to Dispose

Reasons to Recycle

- **Large Volume of Potential Materials**
 - 2.3 Million Center Line Miles of HMA in Place
- **Cost Savings Potential**
 - Unpredictable Price for
 - Asphalt Binder
 - Aggregates

Reasons to Recycle

- **Environmental Sustainability**
- **Wards off “Help” from External Influencing Factors**



Reasons to Recycle

- **It's The Right Thing To Do!**



Recycling Task Force Goals

- **Implement Standards for Recycled Materials Considering**
 - **Engineering Principles**
 - **Environmental Stewardship**
 - **Economic Feasibility**

Partnerships

- States, including State Environmental Agencies
- Federal Agencies – FHWA, EPA, Etc.
- AASHTO
- Industry – Contractors, Producers, ARRA
- Recycled Materials Resource Center
- Center for Pavement Preservation
- Center for Environmental Excellence

Recycled Materials Resource Center

- **University of New Hampshire & University of Wisconsin – Madison**
- **Develop Guidelines, T², Encourage Use, and Reduce Barriers for Recycling**
- **Provided Basis for Numerous AASHTO Standards**
- **Active Research Efforts**

Recycled Materials Resource Center

- Pooled Fund Supported
- Consider Joining
- <http://www.rmrc.unh.edu/>



Industry Partners

- **Provide Case Study Data**
- **Conduct/provide Research**
- **Open Communication**



Barriers to Overcome

➤ Perceptions

- Recycled Pavements May Actually be Higher Quality Than Virgin

➤ Cooperation with Environmental Agencies

- Goals are Similar
- Work Together to Accomplish

Barriers to Overcome

- **Engineering “Help” from Legislative Bodies**
 - Engineer New Ways for Success
 - Look Beyond Traditional Methods
- **Fear of Failure**

Meeting The Challenge

- **Communicate!**
- **All Partners have Same Goals**
 - Quality Product
 - Meeting Specification Requirements
 - Environmentally Sound
- **Document and Share Successes**
- **Be Proactive**

Meeting The Challenge

- **Opportunities Exist**
 - 2.3 Million Center Line Miles of HMA
- **Seek Innovation**



Meeting The Challenge

- **Work Together to Build Successes in a Sustainable and Environmentally Sensitive Manner that Meets Engineering Requirements**

