


Federal Highway Administration and Industrial Resources Council




U.S. Department of Transportation
Federal Highway Administration

Federal Highway Administration and Industrial Resource Council (IRC) Material 2014 Webinar Series

John Bukowski
Materials and Quality Assurance Team Leader
Office of Asset Management, Pavement and Construction

Today's Outline


- Purpose of the FHWA/IRC Webinar
- FHWA Sustainability Efforts
- Webinar Rules
 - Webinar's Part A and Part B
- Today's IRC Presentations
- IRC Presenters



U.S. Department of Transportation
Federal Highway Administration

Purpose of the FHWA/IRC Webinar


- To advance the availability and use of multiple recyclable materials
 - Recycled Shingles
 - Scrap Tires
 - Fly Ash for Pavements
 - Recycled Concrete Aggregates
 - Foundry Sands
 - Steel Slags for Bases and Surface Applications




U.S. Department of Transportation
Federal Highway Administration

FHWA Stakeholder Engagement

- Asphalt Mixture and Binder ETGs
 - Warm Mix Asphalt TWG
 - Reclaimed Asphalt Pavement ETG
- Pavement Sustainability TWG
- Concrete Executive & Technical ETGs

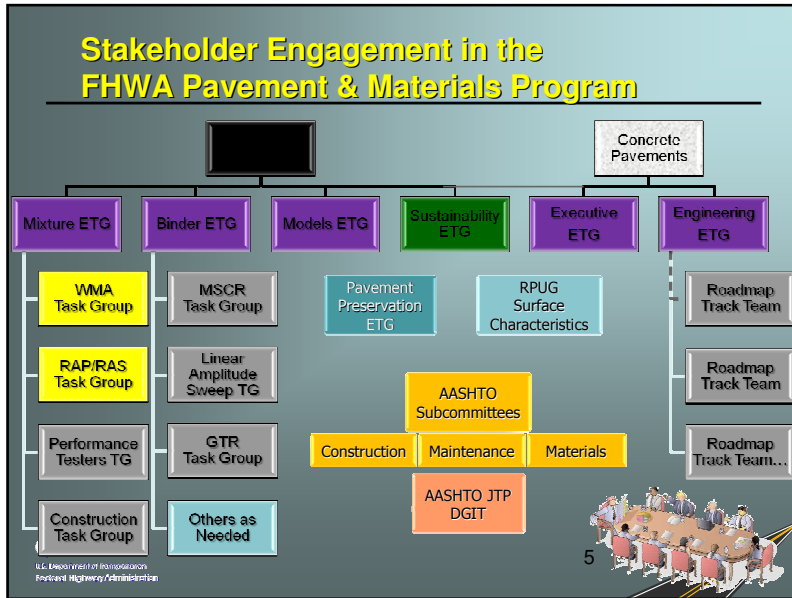


NOTE: WMA and RAP ETG's folded under the Asphalt Mixture ETG (Sep 2012)



U.S. Department of Transportation
Federal Highway Administration

Federal Highway Administration and Industrial Resources Council



FHWA Sustainable Pavements Program Goals




- Increase the use of “sustainable” technologies and practices in pavement design, construction, and maintenance – 2002 Policy memo “first consideration”
- Increase the body of knowledge regarding “sustainability” aspects of asphalt and concrete materials in pavement design, construction, and maintenance.
- Support the US DOT goals for liveability and sustainable transportation



U.S. Department of Transportation
Federal Highway Administration

Current Program Framework

- Establishment and Coordination of a Sustainable Pavements Technical Working Group (TWG)
- Evaluation and Assessment of Existing Tools
- Development of Reference Documents on Sustainable Pavements and Materials
- Evaluation and Assessment of Sustainable Techniques
- Technology Transfer and Deployment

U.S. Department of Transportation
Federal Highway Administration

ETG Pavement Discussions

- Concrete Strategies for Sustainability
 - Mixture optimization
 - Long-Life Designs
 - RCA, Industrial By-Products, Two-Lift Paving
- Asphalt Strategies for Sustainability
 - WMA
 - RAP, RAS
 - Perpetual Pavement Thickness
 - In-Place Recycling



U.S. Department of Transportation
Federal Highway Administration

Webinar Rules

- Each Presenter will have 25 minutes for the presentation and 5 minutes for Q&A
- Attendees may post questions during the presentation using the chat pad.
- All presentations will be recorded and available for future reference.
- Each webinar will present three topical areas being presented each day.



Webinar's Part A and Part B

- | Part A | Part B |
|--------------------------|--------------------------|
| •FHWA Introduction | •FHWA Introduction |
| •Recycled Shingles | •Recycled Concrete |
| •Scrap Tires | •Foundry Sand |
| •Fly Ash | •Slag Applications |
| •FHWA Program Activities | •FHWA Program Activities |



IRC Presenters

1. Use of Shingles in Hot Mix Asphalt - July 8th

Dr. Richard Willis, National Center for Asphalt Technology
Dr. Richard Willis is an Assistant Research Professor at the National Center for Asphalt Technology at Auburn University. He received his Ph.D. from Auburn University in 2009 where he developed fatigue criteria for perpetual pavement design based on measured field strains. As a part of NCAT, Dr. Willis now conducts research on sustainable materials and quantifying sustainability. He served as a member of the FHWA Asphalt Recycling Expert Task Group and now is a member of the FHWA Sustainable Pavements Technical Working Group. He is currently the PI on NCHRP 9-55, Recycled Asphalt Shingles in Asphalt Mixtures with Warm Mix Asphalt Technologies.



2. Scrap Tires in Asphalt and as Embankment Material --July 8th

Michael Blumenthal, Executive Director, Rubber Manufacturers Association: was appointed Executive Director of the Rubber Manufacturers Association's Scrap Tire Management Council in October 1990. In 2007 Michael was promoted to Vice President of the RMA. For more than 25 years, Michael has led the tire manufacturers' programs to expand the viable markets for scrap tires, an effort that has included co-authoring three ASTM standards, one of which was for the use of tire shreds in civil engineering applications. Michael earned a Master of Business Administration from the City University of New York, a Master of Science from Michigan State and his Bachelor of Science from Purdue.



Federal Highway Administration and Industrial Resources Council

3. Fly Ash and Bottom Ash in High Performance Concrete, Bases, and Dual Pavement Systems – July 8th

•Tom Adams, Executive Director, American Coal Ash Association: was appointed Executive Director of the American Coal Ash Association in 2009, where he coordinates efforts to educate stakeholders about coal ash, its commercial value, and its role in achieving national sustainability goals. The ACAA's membership includes electric power utilities, concrete and cement producers, building products manufacturers, engineers, architects, researchers, venture capitalists, and others with interest in coal combustion "products." Mr. Adam's 30 years in the concrete industry prepared him well for the challenges he faces as ACAA Executive Director. He has held key leadership posts for the American Concrete Institute, American Shotcrete Association, ASTM International, National Ready Mixed Concrete Association, and Michigan Concrete Association. He is a native of Detroit. Mr. Adams attended Wayne State University and Aquinas College studying Business Administration.



4. Recycled Concrete Aggregate Use in Road Base and Highway Embankments – July 9th

Cecil Jones, PE, FCI, President, Diversified Engineering Services; former Chair, AASHTO Recycling Task Force

Diversified Engineering Services provides quality management services to clients along with specification development, new technology development support, training and general consulting services. Prior to establishing Diversified Engineering Services, Mr. Jones worked with the North Carolina Department of Transportation for more than 30 years with assignments ranging from field construction engineering to the position of State Materials Engineer, where he was responsible for the overall management of the materials quality system for the Department's 80,000 miles of state-maintained highway system. He is an active member of The Transportation Research Board where he is a committee Chair and has served on numerous NCHRP research panels monitoring research efforts on a variety of materials related work in the transportation area. He was actively involved in AASHTO activities including the Subcommittee on Materials Executive Committee where he was a Regional Vice Chair and led the Recycling Task Force.



5. Foundry Sand in Construction Applications for Embankments, Fills, and Bases – July 9th

John Dingeldein, P.E., Senior Principal/Vice President, Soil and Materials Engineers

John is Vice President and Senior Principal in Soil and Materials Engineers (SME), a midwest consulting engineering firm with eleven offices in Ohio, Indiana and Michigan. In 2011, SME joined forces with EDP Consultants, where John had been one of the principals for more than 20 years. Mr. Dingeldein has extensive experience with designing many types of infrastructure projects using a variety of recycled and industrial materials in projects for public and private sector clients in northeast Ohio.



6. Steel Slag in Asphalt Aggregates, Base and Embankments – July 9th

John Yzenas, Technical Expert, National Slag Association

John J. Yzenas Jr. is the Director of Technical Services for the Edw. C. Levy Company. He has been engaged in the construction and construction materials industry for over 30 years, working in operations, quality and new product development. He serves and participates in many local and national committees dealing with aggregate issues, including TRB and ASTM, where he has chaired numerous committees. John is an ASTM International Fellow and a Member of the Indiana Mineral Aggregates Association Aggregate Hall of Fame.



Federal Highway Administration and Industrial Resources Council

Clean Up

FHWA Recycling Program Efforts – by
Victor (Lee) Gallivan – Materials Program
Coordinator, FHWA-

Further questions/answers- go to:

Victor.Gallivan@dot.gov

317-226-7493

