

Maryland Asphalt Association, Inc.



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Asphalt: Safe, Smooth, Quiet, Durable, and 100% Recyclable

Benefits of Using Reclaimed Asphalt Pavements (RAP)

The Hot-Mix Asphalt industry is America's biggest recycler. Reclaimed or recycled asphalt pavements have been incorporated into Hot-Mix Asphalt successfully for many years and provides a key savings of natural resources. More than 90 million tons of asphalt pavement is reclaimed each year during widening and resurfacing projects. Of that total, more than 80 percent is reused, saving taxpayers over \$300 million annually by reducing materials cost and disposal cost.

More than 92 percent of the nation's highways and roads are surfaced with asphalt. RAP is incorporated into new pavements, shoulders, and embankments. Recycling is a vital part of the asphalt pavement industry, as it creates great benefits for the general public.

- RAP has economic benefits for taxpayers, as well as environmental benefits. Using RAP results in lower costs because less virgin material is used.
- Research conducted for more than three decades has proven that recycled asphalt pavements offer the same durability as pavements constructed with virgin materials, but with significant cost savings to the public and private consumer.
- Milled RAP has the additional benefit of being ready to recycle without extensive processing.
- RAP reduces the amount of new petroleum products and aggregates used in building pavements.
- Until recycling became widespread in the 1970's, RAP was disposed of in landfills. Thanks to recycling, government savings have been hundreds of millions of dollars, and space is not taken up at landfills.

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AGENCY BENEFITS OF USING RAP	CONTRACTOR BENEFITS OF USING RAP
Reduces cost and bid prices of hot mix asphalt materials	Reduces cost of HMA production
Reduces consumption of our natural resources supply	Allows for contractor ingenuity in the processing, production and control of the RAP and the HMA mix.
Less dependence on foreign oil because of energy savings in haul, mining, etc. and less new asphalt binder is required.	Allows the contractor to back haul, reduces handling, reprocessing cost, energy, aggregate and environmental problems associated with mining.
Competitive bidding process to obtain the HMA material alternative at the least cost.	Reduces the depletion of a contractor's aggregate reserves.
For pavement design, HMA mixtures with RAP can be assigned the same structural equivalency factor as a HMA mixture with no RAP.	Agency possession or ownership of removed materials is discouraged so that private enterprise is not restricted for the most effective utilization of these materials.
Eliminates decisions of logistics of the salvage material.	Allows inventorying material until such time sufficient quantity is available to economically hot-mix recycle.
Acceptability of the RAP and proportions can be determined through established mix design procedures prior to allowing its use.	Maryland State Highway Administration implemented the Superpave mix design system in the mid 1990's. The RAP from these pavements contain higher quality binders and aggregates versus previously placed pavements.
Long term performance is equivalent to or better than virgin mix.	

Recycling of asphalt pavement is a well-accepted practice throughout the United States that conserves our precious natural resources while allowing agencies to deliver quality pavements to the traveling public in a cost-effective manner.

Carlos Rosenberger Announces Retirement

Carlos Rosenberger, Senior Regional Engineer for the Asphalt Institute Inc., has announced that he will retire at the end of 2010. Carlos lives in Dillsburg, PA and has been with the Asphalt Institute for almost 27 years. Prior to that he was with PennDOT for 15 years. He has made an indelible impression and positive change to the asphalt industry over those 42 years by promoting the technical benefits of asphalt. He's very much looking forward to spending more time with his family and finding out what life outside of asphalt looks like.



Pierce's Park:

Dave Nesbitt and Brian Dolan worked together last month on a sporting clays shoot to benefit Pierce's Park, a public open area within Baltimore City. The park is to be constructed in memory of the late Pierce Flanigan, III and his love of all things outdoors.

The event remembered one of Pierce's avid hobbies, sporting clay shooting. A 100 target course was set for some eighty shooters. Over \$27,000 was raised to benefit the new facility with the following Gold and Silver sponsors as well as a stellar list of station sponsors and participants.

Visit www.piercespark.org

Gold Sponsors:

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Maryland Asphalt Association
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Silver Sponsors:

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Federal Transportation Trust Fund Will Expire December 31, 2010 A Status Report

Surface Transportation Authorization: SAFETEA-LU was extended through December 31, 2010, through the H.I.R.E. Act (HR 2847). The legislation restores funding rescissions enacted at the end of FY 2009, and provides the authorized funding level for 2010. The Senate EPW staff are drafting their version of an authorization bill, while the House released its draft bill in 2009. USDOT continues to work on its authorization principles. President Obama recently announced a \$50B “front loaded” proposal.

Appropriations: The full Senate Appropriations Committee approved a FY 2011 spending bill in late July. It is unclear if the full Senate will debate and act on the bill prior to October 1 when the new fiscal year begins. The full House approved a FY 2011 spending bill (HR 5850) in late July. It contained significantly fewer earmarks than past appropriation bills. The result is a continuing resolution (short-term funding & spending bill) through November or December, or perhaps early 2011. President Obama has announced a proposal that includes a \$50 billion “upfront investment” in roads, transit, rail and airport runways, and also provides clues about the administration’s priorities for the next surface transportation program (such as moving away from earmarking to performance-based funding). It’s part of a larger proposal to stimulate the economy and create jobs in the short term. A White House official said “This is not an ... immediate jobs plan. This is a six-year reauthorization that’s front-loaded.”

What would the \$50B fund? The funds would be used to rebuild 15,000 miles of roads, construct and maintain 4,000 miles of railway and rehabilitate or reconstruct 150 miles of airport runways.

What’s the funding source for the plan? White House officials suggest the funding may come from closing a number of special tax breaks for oil and gas companies. It should come as no surprise that a fuel tax increase apparently is still off the table.

What’s the overall funding level of the six-year proposal? White House officials would say only that “the initial \$50 billion would represent a substantial chunk” of a six-year program. An Infrastructure Bank, which would loan funds and leverage public funds to attract private investment, is proposed and would likely be a significant part of the funding picture.

What might be controversial about the proposal? This will surely cause heartburn for some stakeholders, joy for others: “The integration of high-speed rail on an equal footing into the surface transportation program to ensure a sustained and effective commitment to a national high speed rail system over the next generation.” The White House document doesn’t discuss transit as much as other modes, and while that may cause discomfort for some, I wouldn’t read anything negative into it.

What are the prospects for enacting the proposal? The proposals would require congressional approval. The Administration says the proposal will be paid for and not increase the deficit; but with many polls showing a heightened concern about federal spending and the deficit, it's questionable whether Congress would approve new spending so close to Election Day. Even if Congress could pass a bill during the few remaining weeks of session, the upfront investment almost certainly would create or sustain jobs in early 2011, not in 2010.

What's the Administration's "elevator statement" on the plan? The plan "would reform the way America currently invests in transportation, changing our focus to enhancing competition, innovation, performance, and real analysis that gets taxpayers the best bang for the buck, while moving away from the earmarks and formula debates of the past. The goals are to rebuild 150,000 miles of roads – renewing our commitment to the backbone of our transportation system. . . . Construct and maintain 4,000 miles of rail – enough to go coast-to-coast. . . . Rehabilitate or reconstruct 150 miles of runway – while putting in place a Next Generation system that will reduce travel time and delays.

What's the response from Republican Congressional Leadership? They've already announced their opposition. The House Republican leader, John Boehner, said "We don't need more government 'stimulus' spending. "We need to end Washington Democrats' out-of-control spending spree, stop their tax hikes, and create jobs by eliminating the job-killing uncertainty that is hampering our small businesses." Senate Republican Leader Mitch McConnell said the plan "should be met with justifiable skepticism" because it would raise taxes, while Americans are "still looking for the 'shovel-ready' jobs they were promised more than a year ago" in the original stimulus program

Use the Highway Trust Fund to Pay Only for Highways

(reprinted from AAA World July/August 2010)

More than 10 months have passed since the federal transportation budget expired, and astonishingly, no action appears close as we approach the one-year expiration mark.

During this time, the Administration and Congress have had to enact several emergency measures – continuing resolutions – to keep the federal transportation funds flowing and transportation-related agencies open.

Rumors about what ultimately will be in the Administration's transportation reauthorization proposal abound. In addition, House Transportation and Infrastructure Committee Chair James Oberstar has already issued his version of a reauthorization bill. What Representative Oberstar's version does, and what the Administration's version is expected to do, is further expand the scope of projects on which federal Highway Trust Fund money may be spent.

Unfortunately, this is exactly what each federal reauthorization since 1991 has done: Make federal highway monies more "flexible." That so-called flexibility means using gas taxes not just for highways, but for non-motorized" transportation – including sidewalks and hiking and bike trails – as well as for transit and even completely unrelated projects such as museums.

All of this flexibility over the last two decades dovetails – not coincidentally with an increasingly deteriorating highway system. Two separate federal commissions to study the issue have put the annual highway funding shortfall at \$89 billion and that’s just to maintain our existing roads and bridges.

Throughout this same period, the federal gas tax sat at 18.4 cents per gallon. Some of the more thoughtful voices in Congress are finally recognizing that if the federal Highway Trust Fund is refocused solely on its original purpose – the nation’s critical highway system – a huge increase in the gas tax will not be necessary.

So why not let the Highway Trust Fund pay for our highways as intended, and let general revenues address the other expenses? That is already happening to a limited extent through the supplemental continuing resolutions process. Making that shift complete and permanent won’t be easy, but it makes more sense than further flexing our federal Highway Trust Fund and then fighting for a large fuel tax increase that will still leave our nation’s highways underfunded and falling apart.

Porous Asphalt Pavement Systems: A Tool for the Implementation of the Stormwater Management Act of 2007

Maryland’s Stormwater Management Act of 2007 requires that environmental site design (ESD), through the use of better site design techniques, alternative surfaces, nonstructural techniques, and micro-scale practices, be implemented to the maximum extent practicable. Charged with implementing the Act, the Maryland Department of the Environment (MDE) has adopted new regulations and updated the Design Manual. The Department is creating a new model stormwater management ordinance to assist localities in complying with the new requirements. A copy of the Act is available on the web at [http://mlis.state.md.us/2007RS/chapters/noln/Ch 122 hb0786T.pdf](http://mlis.state.md.us/2007RS/chapters/noln/Ch%20122%20hb0786T.pdf).

Below are some of the highlights of the Stormwater Management Act of 2007:

A) ESD is defined as using small-scale stormwater management practices, nonstructural techniques, and better site planning to mimic natural hydrologic runoff characteristics and minimize the impact of land development on water resources.

ESD includes:

- Optimizing conservation of natural features, such as drainage patterns, soils, and vegetation;
- **Minimizing use of impervious surfaces, such as pavement**, concrete channels, roofs, and pipes;
- **Slowing down and holding runoff** to maintain discharge timing, increase infiltration, and allow evapotranspiration; and
- Other nonstructural practices and innovative technologies (e.g., impervious surface, rain barrels, green roofs, rain gardens) as approved

B) MDE will develop a model ordinance for local governments to follow that requires:

An applicant to demonstrate that:

- ESD is implemented to the maximum extent practicable; and
- Best management practices, other than ESD, are used only where absolutely necessary to control volume.
- The review and modification, if necessary, of planning and zoning or public works ordinances to remove impediments to ESD implementation.

C) Specify all stormwater management plans shall be designed to:

- Prevent soil erosion from any development project;
- Prevent, to the maximum extent practicable, an increase in nonpoint pollution;
- Maintain the integrity of stream channels for their biological function, as well as for drainage;
- **Minimize pollutants in stormwater** runoff from new development and redevelopment in order to:
- Restore, enhance and maintain the chemical, physical, and biological integrity of the waters of the State;
- Protect public health;
- Safeguard fish and aquatic life and scenic and ecological values;
- Enhance the domestic, municipal, recreational, industrial, and other uses of water as specified by the Department.
- Maintain 100% of the predevelopment groundwater recharge volume for the site;
- **Capture and treat stormwater runoff to remove pollutants and enhance water quality;**
- Implement a channel protection strategy to reduce downstream erosion in receiving streams;
- Implement quantity control strategies to prevent increases in the frequency and magnitude of out-of-bank flooding from large, less frequent storm events; and
- Establish a comprehensive process for approving grading and sediment control plans and stormwater management plans that takes into account the cumulative impacts of both.

D) MDE will continue to confer with local governments, businesses, and environmental to provide assistance in implementing the new regulations. As part of these discussions, options will be evaluated for establishing a fee system to fund the implementation and enforcement of stormwater management programs in Maryland

Benefits of Using Warm Mix Asphalt (WMA)

Warm-mix asphalt is the generic term for a variety of technologies that allow the producers of hot-mix asphalt pavement material to lower the temperatures at which the material is mixed and placed on the road. Reductions of 15 to 100 degrees Fahrenheit have been documented. Reductions have the obvious benefits of cutting fuel consumption and decreasing the production of greenhouse gases. In addition, potential engineering benefits include better compaction on the road, the ability to haul paving mix for longer distances, and the ability to pave at lower temperatures. In addition, research at the National Center for Asphalt Technology and elsewhere has shown that lowering the production temperature can drastically reduce the production of emissions. By cutting emissions, warm-mix asphalt would therefore improve conditions for workers and enhance relationships with neighbors.

Warm Mix Asphalt Offers Benefits to Producers, Contractors and Owners

Warm mix asphalt (WMA) is getting road agencies, paving contractors and asphalt producers closer to a fumes-free asphalt mix that will result in lower mix emissions and radiated heat.

Warm asphalt mixes attract interest because of their potential for reduced plant emissions in different stages of production, benefits in construction in the field, and reduced energy consumption in the plant.

Other benefits may be a construction season which extends well into the cooler seasons, longer hauls of asphalt mix with less worry about the mix losing heat, less fuel needed to bring mixes to temperature, and perhaps less problematic siting of asphalt plants, important for metro areas. This technology could have a significant impact on transportation construction projects in and around non-attainment areas such as the Baltimore metropolitan area.

Warm mix asphalt is not a single product, but a variety of technologies that reduce the temperatures at which asphalt mixes are produced and placed. WMA processes generally reduce the viscosity of the asphalt through a variety of means, and enable the complete coating of aggregates at temperatures 15 to 100 deg F lower than conventional hot mix asphalt (HMA).

Substantial reductions in emissions

Data surveyed by last year's WMA technology European scanning tour – and articulated in the tour's February 2008 report, Warm-Mix Asphalt: European Practice, indicate plant emissions are significantly reduced. Typical expected reductions are 30 to 40 percent for CO₂ and sulfur dioxide (SO₂), 50 percent for volatile organic compounds (VOCs), 10 to 30 percent for carbon monoxide (CO), 60 to 70 percent for nitrous oxides (NO_x), and 20 to 25 percent for dust. Actual reductions vary based on a number of factors.

The FHWA WMA European study tour reported in February 2008 that tests for asphalt aerosols/fumes and PAHs indicated significant reductions compared to HMA, with results showing a 30 to 50 percent reduction. “It should be noted that all of the exposure data for conventional HMA were below the current acceptable exposure limits,” the panel noted.

The tour also reported burner fuel savings with WMA typically range from 11 to 35 percent, with fuel savings potentially higher (possibly 50 percent or more) with lower-temperature warm mix technologies.

Warm asphalt mixes can save money in the plant through reduced energy costs. While this historically has been less of an issue in the U.S. than it is in Europe, with its higher-cost energy sources, in 2007 and 2008, skyrocketing energy costs in the United States are making this more of a benefit.

Improved working conditions via WMA

But there are other, powerful benefits to warm mix asphalt. For example, in addition to lower fumes and emissions, at the October 2007 Young Leaders Conference of the National Asphalt Pavement Association, NAPA president Mike Acott said WMA has the potential to improve working conditions, reduce energy consumption and plant wear, open job sites earlier, enable cool weather paving, aid compaction for stiff mixes, increase plant production, store mix longer, and permit longer haul distances. The lower temperature helps decrease binder aging as well, NAPA’s Acott said.

Warm mixes may allow construction of pavements in colder weather, because contractors may no longer fear critical loss of temperature in the cold. The result may be a longer construction season extending into the winter in some regions of the country.

Warm mixes can allow faster construction of pavements made up of deep lifts of asphalt, for example intersections, which need to be opened as soon as possible. Because the mix is not so hot to begin with, less time is required to cool the mix before the next lift is placed.

These benefits have been noted overseas. In its February 2008 report, FHWA’s WMA European Scanning Tour reported WMA enabling paving in cooler temperatures and still obtaining density, hauling the mix longer distances and still have workability to place and compact, enabling the ability to compact mixture with less effort, and the ability to incorporate higher percentages of reclaimed asphalt paving (RAP) at reduced temperatures.

WMA eases higher RAP content

WMA needs to be reconciled with the increasing use of reclaimed asphalt pavement (RAP) in mixes. But new research released in 2008 indicates that WMA could allow contractors and agencies access to substantial savings associated with high RAP mixes.

In their January 2008 Transportation Research Board peer-reviewed technical paper, “Using Warm Mix Asphalt Technology to Incorporate High Percentage of Reclaimed Asphalt Pavement (RAP) Material in Asphalt Mixtures”, authors Rajib B. Mallick, associate professor, Worcester Polytechnic Institute, Prithvi “Ken” Kandhal, associate director emeritus, National Center for Asphalt Technology at Auburn University, and Richard L. Bradbury, Maine DOT, found that it’s possible to produce mixes with 75 percent RAP with similar air voids as virgin mixes at lower than conventional temperatures using 1.5 percent Sasobit WMA additive.

That’s significant because high mix temperatures can degrade the residual aged asphalt binder still present in the RAP, producing blue smoke. Warm mixes can produce useful product without exposing RAP to relatively high temperatures in the plant.

Warm mix asphalts are compatible with Superpave mix designs. Furthermore, in February the FHWA European scanning tour found WMA technologies have been used with all types of asphalt mixtures, including dense-graded asphalt, stone matrix asphalt (SMA), and porous asphalt. WMA has been used with polymer-modified binders in addition to mixes containing high-content RAP.

WMA has been placed on pavements with high truck traffic, up to 3,500 heavy vehicles per day, which over a 20-year design period would be expected to exceed 30 million 18-kip-equivalent single-axle loads. WMA has also been placed at bus stops, on airfields, and on port facilities.



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Member Profile

Asphalt General Designated as a Top 100 Regional Minority Businesses *Linda Cahow, President, also receives Top Woman of Achievement in Subcontracting honor*

Beltsville, MD – Linda Cahow, President of Asphalt General has been named a Top 100 Regional Minority Business® Enterprise Award winner. Asphalt General is a Maryland-based general paving contractor for Washington, D.C., Northern Virginia and the Baltimore-Washington corridor. Chosen from nearly 5,000 nominations, Ms. Cahow’s company receives this distinguished designation which pays tribute to outstanding women and minority business owners in Maryland, Virginia, Delaware, Pennsylvania and the District of Columbia.

Linda Cahow, President of Asphalt General is delighted with the recognition.

“We are thrilled to be recognized with a Minority Business Enterprise Award,” she said. “For over two decades, Asphalt General has aimed to provide top quality customer service, creative solutions and long-term results for our clients. This acknowledgement of our work by the business community is a real honor.”

In addition, the Professional Women in Construction (PWC) Washington, D.C. chapter has announced that Ms. Cahow is a recipient of a Top Woman of Achievement in Subcontracting honor. The award recognizes career achievement, excellence in job performance, leadership and exceptional work on a project of the year.

Nominations for both awards were based on peer submissions.

Ms. Cahow was also one of only 15 accepted into and graduated from the Business Opportunity and Workforce Development (BOWD) program, a Twin State Partnership program with the Maryland Department of Transportation (MDOT), the State of Delaware’s Department of Transportation (DelDOT) and the Federal Highway Administration Office of Civil Rights (FHWA). The program, a two-year trial limited to only 25 participants, 15 from Maryland, ten from Delaware, is intended to develop and provide, among other things, a skilled workforce for federal-aid highway contractors working in Maryland and Delaware.

UPCOMING EVENTS DATES

November. 9 - Executive Committee Meeting

November. 17 - Pay Factor Team Meeting

December. 2 - MAA BOD Meeting

December. 13 - SHA/MAA Leadership Team Meeting

December. 14 - Executive Committee Meeting

December. 15 - Pay Factor Team Meeting

February. 2 & 3, 2011 - MdQI Conference

March. 3, 2011 - Annual Paving Conference

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