Warm-Mix Asphalt Use Reaches New Heights

New NAPA/FHWA Survey Finds Nearly One-Fourth of Asphalt Tonnage Produced in 2012 Used Energy-Saving Warm Mix; Increased Use of Recycled Materials Also Quantified

Lanham, Md. — In the latest survey of the use of recycled materials and warm-mix asphalt usage by the U.S. asphalt pavement industry, nearly a quarter of all asphalt mixtures produced in the 2012 construction season were produced using warm-mix asphalt (WMA) technologies.

The survey, conducted by the National Asphalt Pavement Association (NAPA) under contract to the Federal Highway Administration (FHWA), found that the 1,141 U.S. asphalt plants queried produced about 86.7 million tons of WMA during the 2012 construction season. This marks a 416 percent increase in the use of warm mix since the survey was first conducted in 2009.

Because WMA is produced at a lower temperature than traditional asphalt mixes, it uses less energy to produce, reduces emissions, improves worker safety, and offers construction benefits. U.S. Secretary of Transportation Anthony Foxx commented in January during the 2014 Transportation Research Board Annual Meeting that the use of WMA is expected to save $3.6 billion in energy costs alone by 2020.

Asphalt pavements also continue to use increasing amounts of recycled and reclaimed materials. The survey found that about 68.3 million tons of reclaimed asphalt pavement (RAP) and 1.86 million tons of recycled asphalt shingles (RAS) were used in new asphalt pavement mixes in the United States during in 2012. For the first time since the start of this survey in 2009, the amount of RAP and RAS used by producers exceeded the amount collected.

The use of RAP and RAS during the 2012 paving season translates to a savings of 21.2 million barrels of liquid asphalt binder, saving taxpayers some $2.2 billion. When reclaimed asphalt pavement and shingles are reprocessed into new pavement mixtures, the liquid asphalt binder

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in the recycled material is reactivated, reducing the need for virgin asphalt binder. Using reclaimed materials also reduces demands on aggregate resources.

“Ensuring high performance roads at a cost-effective price has always been a goal for the asphalt pavement industry. It has spurred us to continue to look for new solutions and to put innovations into practice,” said NAPA President Mike Acott. “This survey reflects how the industry is rapidly putting sustainable innovations, such as warm-mix asphalt, to use to ensure that drivers get the smooth, dependable roads they want at a price taxpayers can afford.”

Compared to previous surveys, conducted annually since the 2009 construction season, the use of recycled materials has continued to increase.

In 2012, RAS usage reached 1.86 million tons — a 56 percent increase over 2011, and a 165 percent increase since 2009. Since 2009, RAS usage has been reported in 37 states. RAS includes both manufacturer scrap shingles and post-consumer roofing shingles.

RAP usage also continued to climb, increasing to 68.3 million tons in 2012, a nearly 22 percent increase from 2009. More than 99 percent of asphalt pavement reclaimed from roads went back into new roads. In the survey, 98 percent of producers reported using RAP in their mixes.

The 2012 survey also asked for the first time about the use of ground tire rubber, steel and blast furnace slags, and other recycled materials. Although national estimates of these products’ usage were not calculated, more than 1 million tons of other recycled materials was reported as being incorporated into asphalt mixtures.

The survey was conducted in mid-2013. Results from 213 companies with 1,141 plants in 48 states and Puerto Rico, along with data from 36 State Asphalt Pavement Associations, were used to calculate industry estimates for total tonnage.

### About The National Asphalt Pavement Association

The National Asphalt Pavement Association (NAPA) is the only trade association that exclusively represents the interests of the asphalt producer/contractor on the national level with Congress, government agencies, and other national trade and business organizations. NAPA supports an active research program designed to improve the quality of asphalt pavements and paving techniques used in the construction of roads, streets, highways, parking lots, airports, and environmental and recreational facilities. The association provides technical, educational, and marketing materials and information to its members; supplies product information to users and specifiers of paving materials; and conducts training courses. The association, which counts more than 1,100 companies as members, was founded in 1955.