

CONSTRUCTION & DEMOLITION RECYCLING®

More than 99 percent of asphalt material recycled in 2016

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A NAPA survey says more than 79 million tons of recycled materials were used in new asphalt pavement mixtures last year.

A new survey of asphalt mix producers by the National Asphalt Pavement Association (NAPA), Lanham, Maryland, says more than 99 percent of the asphalt pavement material removed from roads and parking lots in 2016 was put back to productive use, primarily in new asphalt pavement mixtures.

The same survey says more than 31 percent of asphalt pavement mixture produced in 2016 was produced as warm-mix asphalt, which NAPA says decreases energy demands, reduces air emissions and improves compaction at cooler temperatures.

The survey of the U.S. asphalt pavement mixture production industry has been conducted for each construction season since 2009 by NAPA in partnership with the [Federal Highway Administration](#) (FHWA). Over the years, the survey has documented increases in the use of recycled materials and warm-mix asphalt.

According to the most recent survey, more than 79 million tons of recycled materials—primarily reclaimed asphalt pavement material (RAP) and recycled asphalt roofing shingles (RAS)—were used in new asphalt pavement mixtures during the 2016 construction season. Ground tire rubber, steel and blast furnace slag and recycled cellulose fibers were among the other recycled materials used in new asphalt pavements. The use of RAP and RAS alone resulted in cost savings of more than \$2.1 billion compared to the use of virgin materials, NAPA says.

“Although we are seeing continued increases in the use of recycled materials in asphalt pavement mixtures, there is still room to improve,” Dan Gallagher, 2017 NAPA chairman and chief operating officer of Gallagher Asphalt Corp., Thornton, Illinois, says. “Through engineering, performance-based specifications, education and improved RAP processing, production equipment and procedures, we can continue to make greater use of recycled materials in long lasting, high performing asphalt pavements.”

The survey says more than 76.9 million tons of reclaimed asphalt pavement (RAP) and nearly 1.9 million tons of reclaimed asphalt shingles (RAS) were used in new asphalt pavement mixes in the U.S. during 2015. An additional 4.3 million tons of RAP and RAS were used as aggregate, in cold-mix asphalt and other road building activities.

The survey also says that at year-end 2016, about 93.6 million tons of RAP was stockpiled for future use across the country. Reclaiming RAP for use in future pavements saved nearly 50 million cubic yards of landfill space during 2016.

Although national usage estimates were not calculated, respondents to the survey reported recycling some 786,000 tons of ground tire rubber, slags, cellulose fiber and other materials into nearly 6.3 million tons of asphalt paving mixtures.

In 2016, the survey says 116.8 million tons of warm-mix asphalt was produced—nearly one-third of total asphalt pavement mix production.

The use of warm-mix asphalt has held relatively steady at greater than 30 percent of all asphalt mixture production since 2013, according to the survey. A slight 2.5 percent decrease in the use of warm mix in 2016 compared to 2015 is attributable to a drop in total asphalt mixture tonnage produced for state Departments of Transportation.

Warm-mix asphalt is produced with a range of technologies that reduce the production and placement temperature of asphalt pavement mixtures. The most common technology is plant-based foaming, which injects a small amount of water into the asphalt mixture during production.

“The use of warm-mix asphalt technologies is becoming commonplace. In 14 states, more than half of all asphalt pavement mixtures were produced as warm-mix asphalt, and in three of them, more than 75 percent was produced as warm mix,” NAPA President Mike Acott, says. “This said, there remains room to increase its use, and we expect road owners to continue to embrace these technologies for their construction and performance benefits as well as the energy savings they bring.”

The survey was conducted in mid-2017. Results from 229 companies with 1,146 plants in all 50 U.S. states, along with data from state asphalt pavement associations for 34 states, were used to compile the report. A copy of the full survey report, including a state-by-state breakdown of data, is available at www.asphaltpavement.org/recycling.