FREQUENTLY ASKED QUESTIONS

Q: ***WHAT IS ASPHALT?***

A: *Asphalt, also known as hot mix asphalt (HMA), is made from dried crushed rock and asphalt cement, (binder) which is a mixture of petroleum compounds produced by oil refineries.*

Q: ***HOW IS ASPHALT MADE?***

A: *Asphalt binder is heated and combined with crushed rock in a production facility to produce HMA. The materials are mixed and loaded immediately onto trucks for delivery to construction sites or kept in storage silos.*

Q: ***WHAT MAKES ASPHALT PAVEMENT SO SAFE FOR DRIVING?***

A: *Safety is largely a function of maintaining tire contact with the pavement surface and skid resistance of the surfacing. Asphalt has micro texture, which aids in skid resistance. Asphalt roads are also quieter than concrete roads because they don't have expansion joints to create noise. Other safety features of asphalt:*

- *Asphalt is impervious to de-icing salts and chemicals and is unaffected by winter road safety maintenance.*
- *Asphalt pavements can be designed so that water drains through the surface layer of the pavement, thus reducing splash and tire spray, and increasing tire-road contact during wet weather.*
- *Asphalt retains heat better than other materials, so ice doesn't form as quickly and melts faster.*

Q: ***IS ASPHALT ENVIRONMENTALLY SOUND?***

A: *Yes! Asphalt pavement is 100 percent recyclable and can be made to perform better the second or even third time around. In fact, it is the most recycled product in the United States at 80 percent. That compares to significantly lower percentages for aluminum cans, newsprint, plastic and glass beverage containers, and magazines. Asphalt roads are removed, recrushed, mixed with additional aggregate and fresh asphalt cement, remixed and placed back on the road. The hot mix asphalt industry also accepts the following materials: rubber from tires, slag from the steel-making process, roofing shingles and sand from metal-casting foundries.*

- *In a report to Congress, the Federal Highway Administration estimated that over 70 million tons of asphalt paving material is being recycled on a yearly basis.*
- *Recycling roads not only conserves natural resources and decreases construction time, it saves American taxpayers over $300 million each year.*
- *Asphalt is not soluble or harmful in a water environment. Asphalt roads and stockpiles do not contribute pollutants to storm water runoff.*
- *Asphalt also prevents pollution from getting into water supplies and protects against disease from waste materials. It can be combined with aggregate to form a voidless and impermeable layer.*
- *Many states have tested discarded asphalt pavement and determined that it should be categorized as clean fill.*

Q: ***HOW ENVIRONMENTALLY SAFE ARE ASPHALT PLANTS?***

A: *Asphalt plants in Colorado must meet rigorous environmental standards. The Colorado Department of Public Health & Environment has very stringent regulations and permitting requirements for air emissions, storm water runoff and storage of materials. CAPA members are dedicated to meeting the demands of those regulations and in working closely with the APCD in regulation conformity.*

While production of HMA paving materials have increased by more than 250% over the past 40 years, total emissions from HMA plants have dropped by 97% or more in that same period.

Q: ***WHY ARE SO MANY ASPHALT PLANTS NECESSARY?***

A: *Colorado has over 9,000 miles of state maintained highways. These roads are resurfaced every 10 to 15 years, which means over 700 miles of roads are repaved annually. Over 12 million tons of hot mix asphalt are being produced in Colorado on a yearly basis. CDOT consumes approximately 2 million tons, cities/counties use approximately 3 to 4 million tons, 3 to 4 million tons are consumed on commercial and residential projects and another 2 to 3 million tons for tollway, airport and other facilities.*

Q: ***IS ASPHALT USED ONLY FOR ROADS?***

A: *No. Asphalt has a variety of uses, including:*

- *Paving running tracks, airport runways, greenway trails, bicycle and golf cart paths, in addition to basketball and tennis courts.*
- *Paving cattle feed lots, poultry house floors, barn floors, and greenhouse floors.*
- *Lining fish hatcheries and industrial retention ponds.*
- *Serving as railbeds for transit systems.*
- *Creating sea walls, dikes and groins to control beach erosion. Asphalt's strength, water-proofing capability and inertness to seawater helps prevent the eroding action of tides and waves.*

Q: ***DO PAVING OPERATIONS PRODUCE HIGH LEVELS OF VOLATILE ORGANIC COMPOUNDS?***

A: *No. The organic fume has been calculated to be 21.1 grams. To illustrate this, NAPA created a handout calculating and showing the daily amount of organic emissions emitted during hot mix paving operations. It's surprising how many people have the misperception that paving operations emit great quanties of VOC's. This is not the case at all! The handout takes into account a variety of assumptions. It assumes that 1500 tons of HMA are laid per day with a mix containing 5% asphalt yielding 75 tons of asphalt per day. It also takes into account the lane width and thickness, the amount of headspace, and the organic concentration of the mix. The amount of organic fume calculated is 21.1 grams, which yields an emission factor of only 0.00003 lb/ton of HMA. A very small number. Even if the emission factor was doubled, tripled, or quadrupled, the number would still be very very small.*

Q: ***DO CONSTRUCTION MATERIAL FACILITIES REDUCE ADJACENT PROPERTY VALUES?***

A: *Many think so, however one study proved otherwise. During the re-zoning process before a Planning Commission or Board of County Commissioners involving a heavy industrial use such as a new quarry, there is often confusing and inadequate information regarding the potential impacts on adjacent property values. This issue surfaced during CAPA member, Asphalt Paving Co's attempt for Jefferson County approval of the proposed Rail Line Quarry. CAPA Affiliate member, Banks and Gesso, LLC was hired and developed a comprehensive study that concluded that subdivisions in Jefferson County, and those near active quarries, consistently maintained values and rates of increase in values at or above the area averages. Copies of the report are available by contacting the Colorado Asphalt Pavement Association at (303) 741-6150.*

Q: ***DOES PAVING A ROAD IMPROVE AIR QUALITY?***

A: *Yes, Paving a gravel road eliminates fugitive dust from vehicle traffic. Due to a reallocation of federal Congestion Mitigation and Air Quality (CMAQ) funds, two sections of Telluride, Colorado streets were paved in asphalt. The CMAQ funds are allocated by the state Transportation Commission to rural areas in need of air quality improvement. The town of Telluride is currently listed by the State Department of Public Health and Environment, as a "non-attainment maintenance" area, or an area that has not been in compliance with the National Ambient Air Quality Standards. A primary contributor to poor air quality in the area is dust from dirt roads.*

Q: ***IS IT COMMON FOR AN ASPHALT PLANT TO EMIT STEAM DURING PRODUCTION?***

A: *Yes, steam is produced during asphalt production from the moisture within the aggregate. Because of the visibility of steam during production, especially in the colder months, it is sometimes confused with volatile emissions.*