

# Annual Asphalt Pavement Industry Survey on Recycled Materials and Warm-Mix Asphalt Usage: 2009–2013

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Appendix A  
Survey Forms

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# Recycled Materials and WMA Survey 2013

## Purpose

The National Asphalt Pavement Association is working with the Federal Highway Administration to determine the amount of hot-mix asphalt (HMA), warm-mix asphalt (WMA), and recycled materials being produced and used in each state. This survey will be used to collect this data.

It is important to the industry that you complete this survey so that we have accurate information regarding the use of recycled materials and Warm-Mix Asphalt and to identify areas needing assistance in implementation.

DATA FROM THIS SURVEY WILL BE CONFIDENTIAL AND WILL BE USED ONLY FOR THE PURPOSES OF DETERMINING THESE QUANTITIES. IT WILL NOT BE USED FOR ANY OTHER PURPOSE. DATA WILL BE REPORTED BY STATE ONLY. NO COMPANY-SPECIFIC INFORMATION WILL BE DISCLOSED OR USED IN ANY WAY.

Survey results will be shared with industry and government agencies and officials to help in the implementation of recycling and warm-mix technologies.

By completing this survey you will be eligible to receive a complimentary copy of the full report.

Your participation is greatly appreciated.

# Recycled Materials and WMA Survey 2013

## Contact Information

The following information will be used only to confirm that we do not get duplicate information from a company and to contact you if we have any questions regarding your answers.

Contact Kent Hansen, khansen@asphaltpavement.org, or Audrey Copeland, acopeland@asphaltpavement.org, or by phone at 888-468-6499 at NAPA if you have any questions.

**\* 1. Company/Branch Name:**

**\* 2. Contact Person's Name & Address**

**\* 3. Contact Person's Email**

**\* 4. Contact Person's Phone Number**

# Recycled Materials and WMA Survey 2013

## State

Please select the state for which you are providing the information.

If your branch operates in more than one state, please complete a separate questionnaire for each state. If a plant provides mix for more than one state, please divide the tonnage accordingly, using your best estimate if specific data is not available.

### \*5. Which state is the information provided for?

- |  |  |   |
|--|--|---|
| <input type="radio"/> Alabama              | <input type="radio"/> Kentucky                 | <input type="radio"/> Ohio              |
| <input type="radio"/> Alaska               | <input type="radio"/> Louisiana                | <input type="radio"/> Oklahoma          |
| <input type="radio"/> American Samoa       | <input type="radio"/> Maine                    | <input type="radio"/> Oregon            |
| <input type="radio"/> Arizona              | <input type="radio"/> Maryland                 | <input type="radio"/> Pennsylvania      |
| <input type="radio"/> Arkansas             | <input type="radio"/> Massachusetts            | <input type="radio"/> Puerto Rico       |
| <input type="radio"/> California           | <input type="radio"/> Michigan                 | <input type="radio"/> Rhode Island      |
| <input type="radio"/> Colorado             | <input type="radio"/> Minnesota                | <input type="radio"/> South Carolina    |
| <input type="radio"/> Connecticut          | <input type="radio"/> Mississippi              | <input type="radio"/> South Dakota      |
| <input type="radio"/> Delaware             | <input type="radio"/> Missouri                 | <input type="radio"/> Tennessee         |
| <input type="radio"/> District of Columbia | <input type="radio"/> Montana                  | <input type="radio"/> Texas             |
| <input type="radio"/> Florida              | <input type="radio"/> Nebraska                 | <input type="radio"/> US Virgin Islands |
| <input type="radio"/> Georgia              | <input type="radio"/> Nevada                   | <input type="radio"/> Utah              |
| <input type="radio"/> Guam                 | <input type="radio"/> New Hampshire            | <input type="radio"/> Vermont           |
| <input type="radio"/> Hawaii               | <input type="radio"/> New Jersey               | <input type="radio"/> Virginia          |
| <input type="radio"/> Idaho                | <input type="radio"/> New Mexico               | <input type="radio"/> Washington        |
| <input type="radio"/> Illinois             | <input type="radio"/> New York                 | <input type="radio"/> West Virginia     |
| <input type="radio"/> Indiana              | <input type="radio"/> North Carolina           | <input type="radio"/> Wisconsin         |
| <input type="radio"/> Iowa                 | <input type="radio"/> North Dakota             | <input type="radio"/> Wyoming           |
| <input type="radio"/> Kansas               | <input type="radio"/> Northern Mariana Islands |   |

### \*6. How many plants does this survey response cover?

Number of plants

# Recycled Materials and WMA Survey 2013

## Total Asphalt Tonnage for 2013

Please complete the following information for the total tonnage of all asphalt production in 2013.

**\*7. What was your total tonnage of asphalt mixes in 2013 for the following sectors? (Use best estimate if data is not available.)**

State DOT	<input type="text"/>
Other Agency (City, County, FAA, Military)	<input type="text"/>
Commercial & Residential	<input type="text"/>

# Recycled Materials and WMA Survey 2013

## RAP Supply and Use 2013

Please complete the following information on the amount of RAP received and used for 2013.

**\*8. Did you accept, process, or use RAP in the state during 2013?**

- Yes
- No

# Recycled Materials and WMA Survey 2013

## RAP Supply and Use 2013

Please complete the following information regarding the amount of RAP received and used for 2013.

**\*9. How many tons of removed asphalt pavement and asphalt millings were accepted/delivered to your facilities in the state in 2013?**

Tons:

**\*10. How many tons of RAP were used in 2013 for the following purposes? (Use best estimate if data not available.)**

Recycled Back into HMA/WMA Mixes:

Aggregate Base:

Cold Mix:

Other:

Landfilled:

**\*11. What was the average RAP percentage used in asphalt mixes during 2013 for the following sectors? (Use best estimate if data not available.)**

State DOT

Other Agency (City, County, FAA, Military)

Commercial & Residential

**\*12. At the end of the year 2013 did you have excess RAP (processed or unprocessed) in inventory?**

Yes

No

# Recycled Materials and WMA Survey 2013

## Reclaimed Asphalt Shingles (RAS) Supply and Use for 2013

Please complete the following information on the amount of waste shingles received (processed and unprocessed) and used for 2013.

**\* 13. Did you accept waste shingles and/or process or use reclaimed asphalt shingles (RAS) in 2013?**

- Yes
- No



# Recycled Materials and WMA Survey 2013

## Reclaimed Asphalt Shingles (RAS) Supply and Use for 2013

Please complete the following information regarding the amount of waste shingles received (processed and unprocessed) and used during 2013.

**\* 14. How many tons of unprocessed shingles (manufacturers waste and tear-offs) were accepted/delivered to your facilities in the state in 2013?**

Tons:

**\* 15. How many tons of reclaimed asphalt shingles (RAS) were used for the following purposes in 2013? (Use best estimate if data not available.)**

Recycled into HMA/WMA Mixes:

Aggregate Base:

Cold Mix:

Other:

Landfilled:

**\* 16. What was average RAS percentage used in asphalt mixes in 2013 for the following sectors? (Use best estimate if data not available.)**

State DOT

Other Agency (City, County, FAA, Military)

Commercial & Residential

**\* 17. At the end of the year 2013 did you have any excess RAS? (Include processed and unprocessed shingles.)**

Yes

No

## Warm-Mix Asphalt Production for 2013

Warm-mix asphalt is the generic term for a variety of technologies that allow the producers of asphalt pavement material to lower the temperatures at which the material is mixed and placed on the road by 10 to 100 degrees F.

**\* 18. Did any of your plants in this state use Warm-Mix Asphalt technologies in 2013?**

- Yes
- No

# Recycled Materials and WMA Survey 2013

## Warm-Mix Asphalt Production for 2013

Warm-mix asphalt is the generic term for a variety of technologies that allow the producers of asphalt pavement material to lower the temperatures at which the material is mixed and placed on the road by 10 to 100 degrees F.

**\*19. What was average percent of mixes produced using warm-mix asphalt technologies in 2013 for the different sectors? (Use best estimate if data not available.)**

State DOT	<input type="text"/>
Other Agency (City, County, FAA, Military)	<input type="text"/>
Commercial & Residential	<input type="text"/>

**\*20. What percentage of the total warm-mix asphalt (WMA) for 2013 was produced using the following technologies? (Use best estimate if data not available.)**

Chemical Admixture	<input type="text"/>
Additive (Zeolite) Foaming	<input type="text"/>
Plant Foaming	<input type="text"/>
Organic (Wax) Additive	<input type="text"/>

# Recycled Materials and WMA Survey 2013

## Other Recycled Materials for 2013

Please let us know if you used any other recycled materials in HMA/WMA mixes in 2013.

## Other Recycled Material

**\*21. Did you use other recycled materials (excluding RAP and RAS) in your mixes in 2013?**

**(This includes materials added to the mix such as: ground tire rubber, blast furnace slag, steel slag, glass, fly ash, bottom ash, foundry sand, cellulose fibers, etc.)**

Yes

No

# Recycled Materials and WMA Survey 2013

**\*22. What other recycled material (excluding RAP and RAS) did you use in your mixes in 2013?**

	Yes	No
Ground Tire Rubber	<input type="radio"/>	<input type="radio"/>
Steel Slag	<input type="radio"/>	<input type="radio"/>
Blast Furnace Slag	<input type="radio"/>	<input type="radio"/>
Other 1*	<input type="radio"/>	<input type="radio"/>
Other 2*	<input type="radio"/>	<input type="radio"/>
Other 3*	<input type="radio"/>	<input type="radio"/>

\* Please describe the other recycled materials used.

**\*23. How many tons of HMA/WMA was produced using this product. (Use best estimate if data not available.)**

Ground Tire Rubber	<input type="text"/>
Steel Slag	<input type="text"/>
Blast Furnace Slag	<input type="text"/>
Other 1	<input type="text"/>
Other 2	<input type="text"/>
Other 3	<input type="text"/>

**24. How many tons of the recycled product was used in 2013? (Enter 0 if you do not have a reasonable estimate of this quantity)**

Ground Tire Rubber	<input type="text"/>
Steel Slag	<input type="text"/>
Blast Furnace Slag	<input type="text"/>
Other 1	<input type="text"/>
Other 2	<input type="text"/>
Other 3	<input type="text"/>

## Thank You

### 25. Would you like a complimentary copy of the final report?

- Yes
- No