

Asphalt Pavement Industry Survey on Recycled Materials and Warm-Mix Asphalt Usage 2015

Appendix A:
Survey Forms

Asphalt Pavement Industry Survey on Recycled Materials and Warm-Mix Asphalt Usage: 2015

Appendix A

Introduction

As outlined in the Survey Methodology section of main *Asphalt Pavement Industry Survey on Recycled Materials and Warm-Mix Asphalt Usage* report for the 2015 construction season survey, this appendix provides a copy of the survey instrument used to collect responses from participants.

The majority of asphalt mixture producers participating in the survey used the online survey platform SurveyMonkey® to provide their responses. Some producers submitted PDF forms and the data were entered into SurveyMonkey by NAPA staff. Some multistate producers submitted data using a spreadsheet developed by NAPA to collect the same information.



NATIONAL ASPHALT PAVEMENT ASSOCIATION

Recycled Materials and WMA Survey 2015

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 for 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, AND NO STATE SPECIFIC DATA WILL BE REPORTED WHEN FEWER THAN THREE COMPANIES/BRANCHES RESPOND FOR A STATE. NO COMPANY-SPECIFIC INFORMATION WILL BE DISCLOSED OR USED IN ANY WAY.

It is recommended that you print a copy of the full survey — downloadable as a PDF from <http://goaspha.lt/2015NAPA-FHWASurvey> — to make sure you have the necessary data at hand before beginning the online survey.

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.



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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, audrey@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



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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



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Total Asphalt Tonnage for 2015

Please complete the following information for the total tonnage of all asphalt production in 2015.

* 7. What was your total tonnage of asphalt mixes in 2015 for the following sectors? (Use best estimate if data is not available.)

State DOT

Other Agency (City, County, FAA, Military)

Commercial & Residential



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RAP Supply and Use 2015

Please complete the following information on the amount of RAP received and used for 2015.

* 8. Did you accept, process, or use RAP in the state during 2015?

Yes

No



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Recycled Materials and WMA Survey 2015

RAP Supply and Use 2015

Please complete the following information regarding the amount of RAP received and used for 2015.

- * 9. How many tons of removed asphalt pavement and asphalt millings were accepted/delivered to your facilities in the state in 2015?

Tons:

- * 10. How many tons of RAP were used in 2015 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 2015 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 2015 did you have excess RAP (processed or unprocessed) in inventory?

Yes

No

13. What percentage of the RAP processed is fractionated into two or more sizes? (Use best estimate if data not available.)

14. What percent of mixes using RAP were produced using a softer grade of asphalt binder? (Use best estimate if data not available.)

15. What percent of mixes using RAP were produced using rejuvenators? (Use best estimate if data not available.)

16. Please estimate how many tons of RAP you had stockpiled at the end of 2015. (Use best estimate if data not available.)



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Recycled Materials and WMA Survey 2015

Reclaimed Asphalt Shingles (RAS) Supply and Use for 2015

Please complete the following information on the amount of waste shingles received (processed and unprocessed) and used for 2015.

* 17. Did you accept waste shingles and/or process or use reclaimed asphalt shingles (RAS) in 2015?

Yes

No



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Recycled Materials and WMA Survey 2015

Reclaimed Asphalt Shingles (RAS) Supply and Use for 2015

Please complete the following information regarding the amount of waste shingles received (processed and unprocessed) and used during 2015.

- * 18. How many tons of unprocessed shingles (manufacturers waste and tear-offs) were accepted/delivered to your facilities in the state in 2015?

Tons

Unprocessed
Shingles:

- * 19. How many tons of processed shingles were accepted/delivered to your facilities in the state in 2015?

Tons processed shingles
purchased

- * 20. How many tons of reclaimed asphalt shingles (RAS) were used for the following purposes in 2015?
(Use best estimate if data not available.)

Recycled into HMA/WMA Mixes:

Aggregate Base:

Cold Mix:

Other:

Landfilled:

* 21. What was average RAS percentage used in asphalt mixes in 2015 for the following sectors? (Use best estimate if data not available.)

State DOT

Other Agency (City, County, FAA, Military)

Commercial & Residential

* 22. At the end of the year 2015 did you have any excess RAS? (Include processed and unprocessed shingles.)

Yes

No

23. Is RAS allowed in (check all that apply)

All DOT mixes

Some DOT mixes

Other Agency mixes (some or all)

Commercial and Residential mixes (some or all)

24. What percent of the RAS binder do you estimate is blending with the new asphalt binder (enter a number between 0 - 100) *Typical values that have been reported in research are between 60 and 100 percent.*



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Warm-Mix Asphalt Production for 2015

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.

* 25. Did any of your plants in this state use Warm-Mix Asphalt technologies in 2015?

Yes

No



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Warm-Mix Asphalt Production for 2015

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.

- * 26. What was average percent of mixes produced using warm-mix asphalt technologies in 2015 for the different sectors? (Use best estimate if data not available.)

State DOT

Other Agency (City, County, FAA, Military)

Commercial & Residential

- * 27. What percentage of the total warm-mix asphalt (WMA) for 2015 was produced using the following technologies? (Use best estimate if data not available.)

Chemical Admixture

Additive (Zeolite) Foaming

Plant Foaming

Organic (Wax) Additive

28. Were warm-mix additive used in mixes produced at hot-mix temperatures (i.e., without lowering temperatures by at least 10 degrees F.)

Yes

No



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Other Recycled Material for 2015

Please let us know if you used any other recycled materials in HMA/WMA mixes in 2015.

- * 29. Did you use other recycled materials (excluding RAP and RAS) in your mixes in 2015?
(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



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* 30. What other recycled material (excluding RAP and RAS) did you use in your mixes in 2015?

	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"/>
Recycled Cellulose Fibers	<input type="radio"/>	<input type="radio"/>
Other 1*	<input type="radio"/>	<input type="radio"/>
Other 2*	<input type="radio"/>	<input type="radio"/>

* Please describe the other recycled materials used.

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

Ground Tire Rubber

Steel Slag

Blast Furnace Slag

Recycled Cellulose Fibers

Other 1

Other 2

32. How many tons of the recycled product was used in 2014? (Enter 0 if you do not have a reasonable estimate of this quantity)

Ground Tire Rubber

Steel Slag

Blast Furnace Slag

Recycled Cellulose Fibers

Other 1

Other 2



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Thank You

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

Yes

No