

## 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 WMA 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 WITHIN A STATE, NO COMPANY-SPECIFIC INFORMATION WILL BE DISCLOSED IN ANY WAY.**

Survey results will be shared with industry, government agencies, and officials to help in the implementation of recycling and warm-mix technologies. The data collected from this survey provides insight into trends, current practice, and is utilized to highlight the sustainability of asphalt mixtures. These results are also used by FHWA, Energy Information Administration, Environmental Protection Agency, and other federal, state, and local agencies to determine the impact of recycled materials and WMA.

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

Your participation is greatly appreciated.

\* 1. Are you a...

- ☐ Asphalt Producer
- ☐ State Asphalt Pavement Association (or similar)
- ☐ Other

## Industry Contact Information

It is recommended that you print a copy of the full survey — [download a PDF](#) — to make sure you have the necessary data at hand before beginning the online survey.

Companies with multi-state operations are encouraged to [download a spreadsheet](#) to report their data. Please return the completed spreadsheet to Brett Williams, NAPA Director of Engineering & Technical Support, at [bwilliams@asphaltpavement.org](mailto:bwilliams@asphaltpavement.org).

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 Brett Williams at [bwilliams@asphaltpavement.org](mailto:bwilliams@asphaltpavement.org) or NAPA by phone at 888-468-6499 if you have any questions.

\* 2. Company/Branch Name:

\* 3. Contact Person's Name & Address

\* 4. Contact Person's Email

\* 5. Contact Person's Phone Number

## 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.

\* 6. 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 |   |

\* 7. How many plants does this survey response cover?

Number of plants

## Total Asphalt Tonnage for 2021

**Please complete the following information for the total tonnage of all asphalt production in 2021.**

\* 8. What was your total tonnage of asphalt mixes in 2021 for the following sectors? (Use best estimate if data is not available.)

State DOT

Other Agency (City, County, FAA, Military, Toll  
Authorities)

Commercial & Residential

## RAP Supply and Use 2021

**Please complete the following information on the amount of RAP received and used for 2021.**

\* 9. Did you accept, process, or use RAP in the state during 2021?

☐ Yes

☐ No

## RAP Supply and Use 2021

**Please complete the following information regarding the amount of RAP received and used for 2021.**

\* 10. How many tons of reclaimed asphalt pavement and asphalt millings were accepted/delivered to your facilities in the state in 2021?

Tons:

\* 11. How many tons of RAP were used in 2021 for the following purposes? (Use best estimate if data not available.)

Recycled Back into HMA/WMA Mixes:

Aggregate Base:

Cold Mix:

Other:

Landfilled:

\* 12. What was the average RAP percentage used in asphalt mixes during 2021 for the following sectors? (Use best estimate if data not available.)

State DOT

Other Agency (City, County, FAA, Military, Toll Authorities)

Commercial & Residential

\* 13. At the end of the year 2021 did you have excess RAP (processed or unprocessed) in inventory?

☐ Yes

☐ No

\* 14. Please estimate how many tons of RAP you had stockpiled at the end of 2021. (Use best estimate if data not available.)

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

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

17. What percent of mixes using RAP were produced using recycling agents? (Use best estimate if data not available.)

## Reclaimed Asphalt Shingles (RAS) Supply and Use for 2021

**Please complete the following information on the amount of waste shingles received (processed and unprocessed) and used for 2021.**

\* 18. Did you accept waste shingles and/or process or use reclaimed asphalt shingles (RAS) in 2021?

☐ Yes

☐ No



## Reclaimed Asphalt Shingles (RAS) Supply and Use for 2021

**Please complete the following information regarding the amount of waste shingles received (processed and unprocessed) and used during 2021.**

\* 19. How many tons of shingles were accepted/delivered to your facilities in the state in 2021?

Unprocessed

Tear-off

Shingles:

Unprocessed

Manufacture

rs'

Waste Shingl

es:

Processed

Shingles:

\* 20. How many tons of reclaimed asphalt shingles (RAS) were used for the following purposes in 2021? (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 2021 for the following sectors? (Use best estimate if data not available.)

State DOT

Other Agency (City, County, FAA, Military, Toll  
Authorities)

Commercial & Residential

\* 22. At the end of the year 2021 did you have any surplus RAS stockpiled? (Include processed and unprocessed shingles.)

☐ Yes

☐ No

\* 23. Please estimate how many tons of RAS you had stockpiled at the end of 2021. (Use best estimate if data not available.)

24. Is RAS allowed in

	ALL	SOME	NONE
DOT mixes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other Agency mixes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Commercial and Residential mixes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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

26. What percent of mixes using RAS were produced using recycling agents? (Use best estimate if data not available.)

## Warm-Mix Asphalt Production for 2021

**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 at least 10°F. The survey will collect data for warm-mix technologies used at reduced temperature and at hot mix temperatures separately.**

\* 27. Did any of your plants in this state use warm-mix asphalt technologies in 2021?

☐ Yes

☐ No

## Warm-Mix Asphalt Production for 2021

**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 at least 10°F.**

\* 28. What was average percent of mix tons produced using warm-mix asphalt technologies in 2021 for the different sectors? (Use best estimate if data not available.)

State DOT

Other Agency (City, County, FAA, Military, Toll Authorities)

Commercial & Residential

29. Please estimate the percentage of the total warm-mix asphalt (WMA) that was produced in the following ranges of temperature reduction: (Use best estimate if data is not available, entries should total 100%)

10°F - 30°F

31°F - 50°F

51°F or more of production temperature reduction

30. What percentage of the total warm-mix asphalt (WMA) for 2021 was produced using the following technologies? (Use best estimate if data not available, entries should total 100%)

Chemical Admixture

Additive (Zeolite) Foaming

Plant Foaming

Organic (Wax) Additive

Blend

\*Please specify the Blend:

31. What was average percent of mix tons using warm-mix technologies for mixes produced at hot-mix temperatures (i.e., without lowering temperatures by at least 10°F.)

State DOT

Other Agency (City,  
County, FAA, Military, Toll  
Authorities)

Commercial & Residential

\* 32. What percentage of the total warm-mix asphalt (WMA) produced at hot mix temperatures (i.e., without lowering temperatures by at least 10°F.) for 2021 was produced using the following technologies? (Use best estimate if data not available, entries should total 100%)

Chemical Admixture

Additive (Zeolite) Foaming

Plant Foaming

Organic (Wax) Additive

Blend

\*Please specify the Blend:

## Other Recycled Material for 2021

**Please let us know if you used any other recycled materials in HMA/WMA mixes in 2021.**

\* 33. Did you use other recycled materials (excluding RAP and RAS) in your mixes in 2021?

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

☐ Yes

☐ No

## Other Recycled Material for 2021

\* 34. What other recycled material (excluding RAP and RAS) did you use in your mixes in 2021?

	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.

\* 35. 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"/>
Recycled Cellulose Fibers	<input type="text"/>
Other 1	<input type="text"/>
Other 2	<input type="text"/>

36. How many tons of the recycled product was used in 2021? (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"/>
Recycled Cellulose Fibers	<input type="text"/>
Other 1	<input type="text"/>
Other 2	<input type="text"/>





## Thank You

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

☐ Yes

☐ No

If your company provides any of the following services: CIR, HIR, CCPR, or FDR, we ask that you to fill out a very short survey providing quantities of these activities in 2021. The link to the survey is here:

[https://www.surveymonkey.com/r/https://www.surveymonkey.com/r/2021\\_IPR\\_Survey](https://www.surveymonkey.com/r/https://www.surveymonkey.com/r/2021_IPR_Survey) Thank you for your time in helping document some of the asphalt industries efforts in sustainability and recycling.