

**TRANSPORTATION RESEARCH THESAURUS (TRT)
TERM REVIEW FORM v2.0**

Date 5-19-2010

Term **Recycled asphalt**

Proposed by See:

[http://www.transportationresearch.gov/NTL/TRT/Research%20Wiki/February%202010%20\(Q1\)%20TRT%20Declined%20Terms%20to%20Discuss.aspx](http://www.transportationresearch.gov/NTL/TRT/Research%20Wiki/February%202010%20(Q1)%20TRT%20Declined%20Terms%20to%20Discuss.aspx)

Citation(s) : **EVALUATION OF USING HIGHER PERCENTAGES OF RECYCLED ASPHALT PAVEMENT IN ASPHALT MIXES IN VIRGINIA**

http://www.viriniadot.org/vtrc/main/online_reports/pdf/08-r22.pdf

RAP appears 251 times and recycled asphalt 7.

Comparative Analysis of Long-Term Field Performance of Recycled Asphalt in California Environmental Zones

<http://trb.metapress.com/content/w357433127277577/fulltext.pdf>

RAP appears 85 times and recycled asphalt 3.

Definition: Recycled asphalt mixtures contain reclaimed asphalt pavement. (TRB: <http://tris.trb.org/view.aspx?id=884318>)

Asphalt technologists agree that increasing recycled content is one of the most effective ways to lower hot-mix costs. "It's time to consider ways of increasing recycled content even further," says Newcomb (National Asphalt Pavement Association, Lanham, Md.). "Recycled asphalt pavement is a resource rich in asphalt and aggregate. In the same way we test and process virgin materials, so too should we judge the quality of RAP and process it." (<http://www.pwmag.com/industry-news.asp?sectionID=772&articleID=456553>)

Reclaimed (or recycled) asphalt pavement (RAP) is commonly used by several states to reduce the quantity of new (virgin) asphalt cement and aggregate used in the construction of hot mix asphalt concrete (HMAC) pavements. Its use has been shown to be economical and environmentally sound and, at low contents (i.e., below 20%), mixtures containing RAP generally have been found to perform as well as virgin mixtures (*NCHRP 2001*).

(http://www.oregon.gov/ODOT/TD/TP_RES/docs/Reports/2010/RAP_and_RAS_in_HMAC.pdf)

RAP appears 217 times and recycled asphalt 6.

RAP

Reclaimed Asphalt Pavement. RAP is typically generated by (1) milling machines in rehabilitation projects or (2) a special crushing plant used to break down large pieces of discarded HMA pavement. [[Connect to this term in the WSDOT Pavement Guide Interactive](#)]

RCM

Reclaimed Concrete Material. Same as RCP. When crushed, it can be used as a coarse aggregate in PCC, a granular base course or a fill/embankment material. [[Connect to this term in the WSDOT Pavement Guide Interactive](#)]

RCP

Recycled Concrete Pavement. Same as RCM. When crushed, it can be used as a coarse aggregate in

PCC, a granular base course or a fill/embankment material. [[Connect to this term in the WSDOT Pavement Guide Interactive](#)]

<http://training.ce.washington.edu/WSDOT/>

HMA is one of the most recycled products in the U.S. It is estimated that as much as 91 million tonnes (100 million tons) of HMA are milled off roads during resurfacing and widening projects each year (APA, 2001a). Of this amount, 73 million tonnes (80 million tons) are recycled as "reclaimed asphalt pavement" (RAP - see Figure 2.15) (APA, 2001a). RAP is typically generated by rehabilitation or reconstruction projects and can be used in a variety of ways such as:

- As an addition to regular HMAs
- As an aggregate in cold-mix asphalt.
- As a granular base course when pulverized.
- As a fill or embankment material.

HMA recycling can be divided into two basic categories based on the recycling methods used: hot recycling and cold recycling. This section presents the basic recycling process as well as typical uses and considerations for each of these recycling methods.

Scope note (if needed)

Notational code Rbmdpbur

Broader term Asphalt mixtures (Rbmdpbu)

Narrower term

Associative relationships:

Related terms: Recycled materials (Rbmdum)
Asphalt pavements (Pmrcppbmb)
Reclaimed asphalt pavements (Pmrcppbmb)

Cross-references:

USE/UF terms

Variant forms reclaimed asphalt shingles (RAS)
recycled asphalt shingles (RAS)
reclaimed asphalt aggregate (RAA)
recycled asphalt concrete (RAC)
recycled asphalt pavement (RAP)
RAP (Reclaimed Asphalt Pavement)
rubber asphalt concrete (RAC)
recycle asphalt mixtures
Recycled paving material (RPM)
Recycled asphalt products (RAP)

Homographs

Usage/Warrant/Statistics (# of hits/search results for term in quotes, e.g., "automobile factories")

- Search term, variants, and/or synonyms identified if necessary

- Use a minimum of five sources
- Note currency of term usage

("RECYCLED ASPHALT" and not "PAVEMENTS" and not "PAVEMENT")

CATALOGS	TI	KW	SU	AB
NTL Digital Repository	5(4)	50(0)	4(0)	9(1)
VDOT OneSearch				
DOT HQ				
FHWA				
NUCAT (NUTL)				
TranWeb (NUTL)	15	22		1
NTIS				
TRIS Online	85(31)	306(6)	212(0)	
UMTRI				
RiP				
VDOT				
WorldCat				
Google StateDOT		541(58)		
Google Scholar				
Other thesauri, taxonomies, or schemes				
LCSH				
Taxonomy Warehouse				

Other/Comments

Action Add Update Decline Remove Park

Type Preferred term Non-preferred term

Date 09/12/2009

Term Recycled asphalt pavements

Proposed by nchoudhry ;

Citation(s) (examples, popular uncontrolled terms, recently added uncontrolled terms or submitted by an individual)

Definition (for review purposes only)

Asphalt concrete that is removed from a pavement is usually stockpiled for later use as a base course material. This reclaimed material, commonly known by the acronym 'RAP' for recycled or reclaimed asphalt pavement, is crushed to a consistent gradation and added to the HMA mixing process. (wikipedia.com)

Recycled Asphalt Pavement (RAP) is removed and/or reprocessed pavement materials containing a mixture of asphalt and aggregates. It is generated when pavement is removed for reconstruction or resurfacing. If properly crushed and screened, RAP consists of high-quality, well-graded aggregate coated in cement.^[1]

Asphalt pavement is generally torn up by one of two methods: milling or full depth reclamation. Milling, also known as "planing," is the removal of the surface level of the pavement. A milling or planing machine can remove up to two inches (50 mm) in a single pass.^[2] Full depth reclamation

involves the ripping and breaking of the entire pavement. This is usually achieved by using a rhino horn attached to a crawler tractor, or with a pneumatic pavement breaker.

This removed material can either be transported to a central mix facility for reprocessing or re-mixed and repaved immediately. Immediate reprocessing is called in-place recycling. Some milling or planing machines are equipped to strip old asphalt pavement, mix it new aggregate and binder, and then replace and compact it in a single pass. (ritchiewiki.com)

Scope note (if needed) Submitted by Nancy Choudhry. Pluralized by MK and merged with other almost-identical terms 8/18/09. This information could easily be retrieved by searching: Asphalt pavements AND Recycling. Someone check to see if this is as common an expression as "pavement design" and therefore should be added.

Notational code Recycled asphalt pavements (Pmrcppbmr)

Broader term

Recycled materials (Rbmdum)
Types of pavements by material (Pmrcppbm)
-->Asphalt pavements (Pmrcppbmb)

Narrower term

Associative relationships

Related terms:
Cross-references:

USE/UF terms

Variant forms

Homographs

Usage/Warrant/Statistics (# of hits/search results for term in quotes, e.g., "automobile factories")

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- Use a minimum of five sources.

CATALOGS	TI	KW	SU	AB
NTL Digital Repository	0	7	1	1
VDOT OneSearch				
DOT HQ	1	1	0	1
FHWA	21	25	0	25
Melvyl (UC Berkeley)	25	28	0	-
TRANweb	0	0	0	0
NTIS	0	0	0	0
TRIS Online	12	129	107	15
UMTRI	-	-	-	-
RiP	2	4	4	4
VDOT	4	4	4	4
WorldCat	25	28	-	28
Google StateDOT				
Google Scholar				
Other thesauri, taxonomies, or schemes				
LCSH				
Taxonomy Warehouse				

