

Recycled Concrete Aggregate (RCA) Deployment Plan

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Federal Highway Administration

FHWA Policy on Recycling ● 2002

1. Recycling and reuse can offer engineering, economic and environmental benefits.
2. Recycled materials should get first consideration in materials selection.
3. Determination of the use of recycled materials should include an initial review of engineering and environmental suitability.
4. An assessment of economic benefits should follow in the selection process.
5. Restrictions that prohibit the use of recycled materials without technical basis should be removed from specifications.

Advancing the Use of Recycled Materials

- Recycled Asphalt Pavement (RAP) Expert Task Group (ETG) formed to advance the use of RAP and Recycled Asphalt Shingles in pavement applications.
 - FHWA, State DOT's, academia, and industry
- RAP ETG partners with AASHTO to conduct a survey every 2-years on RAP usage (2007, 2009, 2011)
 - 23 States now have experience with high RAP mixes
 - 11 States now have experience with high RAP and Warm Mix Asphalt
- Publications, pooled fund projects, research efforts and research consortiums to advance the use of RAP

Where are we with Advancing RCA?

- Through FHWA's Cooperative Agreement with the CP Tech Center Project 27 was developed:

“A Technology Deployment Plan for the Use of Recycled Concrete Aggregates in Concrete Paving Mixtures”

- The goal was to benchmark the use of RCA through:
 - Literature search
 - Survey State practices
 - Develop a T² plan to address barriers and increase the use of RCA

Survey with 26 States Responding - (AASHTO and NC²)

Have you use RCA that was reclaimed from the existing pavement for the reconstruction or expansion of the same roadway?

62% Have Not

Have you used RCA reclaimed from sources other than the existing pavement in the new concrete pavement mixture?

80% Have Not

Survey, continued

Compliance Barriers

- Inability of RCA to meet State specifications for aggregate soundness, abrasion, gradation, resistance to ASR, and strength

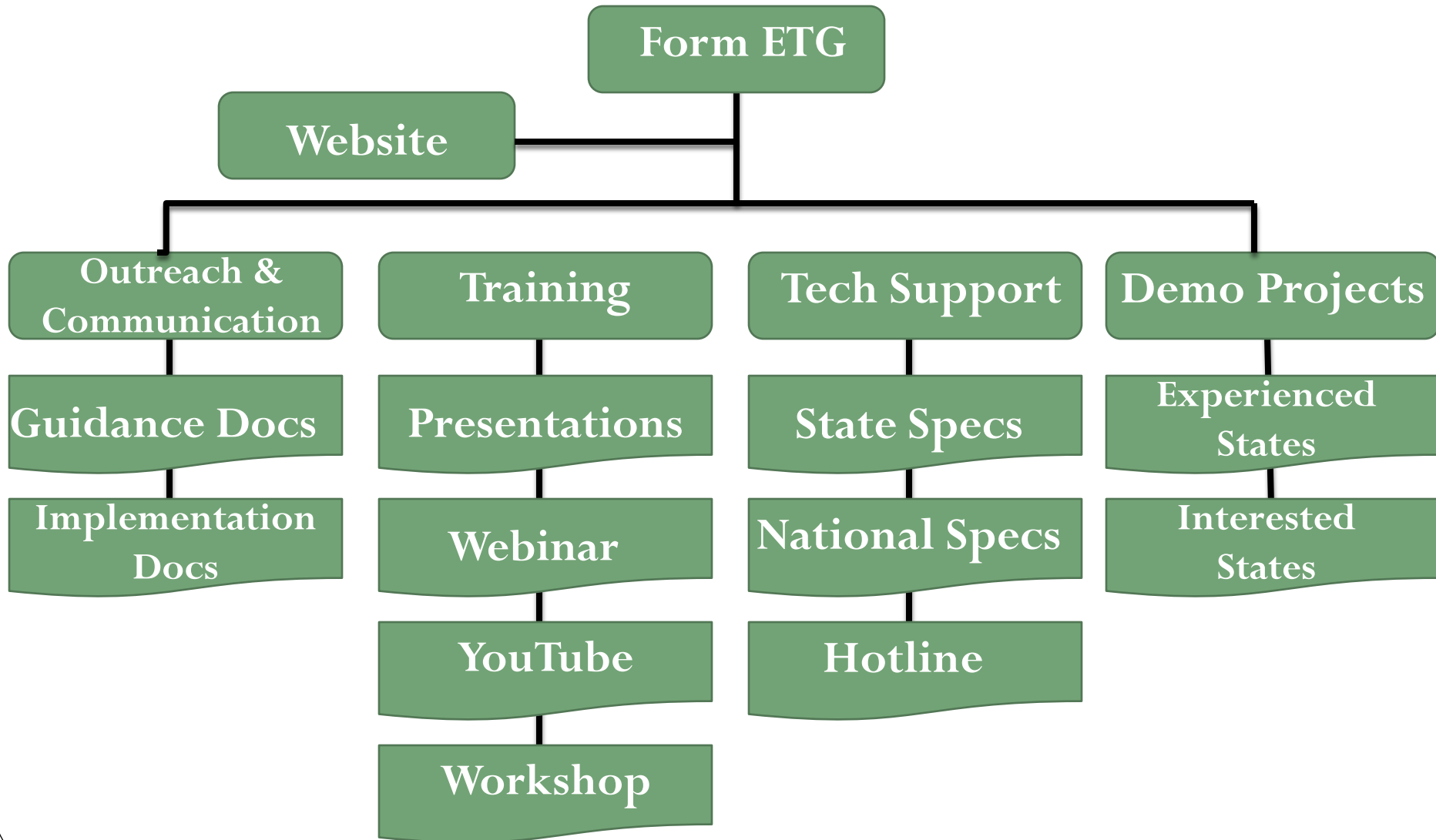
Quality Barriers

- Concern with maintaining consistency, perception that RCA is waste and not suitable for reuse

Production Barriers

- Storage, workability, supply, removing debris, and location of processing equipment

Technology Deployment Plan



Discussion

- What aspects of the Technology Deployment Plan would help your State in advancing the use of RCA?
- What additional research is needed with respect to RCA?



Questions and Answers

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