TRANSPORTATION POOLED FUND PROGRAM
QUARTERLY PROGRESS REPORT

Lead Agency (FHWA or State DOT): _WisDOT_____

INSTRUCTIONS:
Project Managers and/or research project investigators should complete a quarterly progress report for each calendar quarter during which the projects are active. Please provide a project schedule status of the research activities tied to each task that is defined in the proposal; a percentage completion of each task; a concise discussion (2 or 3 sentences) of the current status, including accomplishments and problems encountered, if any. List all tasks, even if no work was done during this period.

Transportation Pooled Fund Program Project # *(i.e, SPR-2(XXX), SPR-3(XXX) or TPF-5(XXX)* TPF-S(270)	**Transportation Pooled Fund Program - Report Period:** ☐Quarter 1 (January 1 – March 31) ☐Quarter 2 (April 1 – June 30) ■Quarter 3 (July 1 – September 30) ☐Quarter 4 (October 1 – December 31)

Project Title: Recycled Materials Resources Center- Fourth Generation (RMRC-4G)		
Name of Project Manager(s): Angela Pakes Ahlman and Tuncer B. Edil	**Phone Number:** 608-890-4966	**E-Mail** angela.pakes@wisc.edu
Lead Agency Project ID: TPF-5(352)	**Other Project ID (i.e., contract #):** AAC2312 Admin Contract	**Project Start Date:** January 1, 2017
Original Project End Date: February 28, 2022	**Current Project End Date:** February 28, 2022	**Number of Extensions:** 0

Project schedule status:

■ On schedule ☐ On revised schedule ☐ Ahead of schedule ☐ Behind schedule

Overall Project Statistics:

Total Project Budget	Total Cost to Date for Project	Percentage of Work Completed to Date
$382,932	$13,051	3.4%

Quarterly Project Statistics:

Total Project Expenses and Percentage This Quarter	Total Amount of Funds Expended This Quarter	Total Percentage of Time Used to Date
$6,552; 1.7%	$6,552	1.7%

Project Description:

The goal of RMRC-4G is to provide the resources and activities needed to break down barriers and increase utilization of recycled materials and industrial byproducts. This is being done through carefully integrated and orchestrated activities that include applied research in key areas relevant to transportation applications combined with outreach programs that provide the educational and technical resources needed to maximize the rate at which recycled materials and industrial byproducts are used in transportation applications.

Progress this Quarter (includes meetings, work plan status, contract status, significant progress, etc.):

Presented on the *Environmental Benefits of Cold-in-Place Recycling* and *A Review of Environmental Impacts and Environmental Applications of Shredded Scrap Tires* at the ADC60 Conference in Duluth, Minnesota, July 18-21, 2017.

Completed final revisions and submitted TRB Paper entitled *Environmental Benefits of Cold-in-Place Recycling* on August 1, 2017.

Began work on LCA and LCCA for Sophomore Undergraduate Research Fellowship relating to Polyurethane Injection as a method of ground stabilization. Continuing to request additional funding from Uretek CRI. Complementary work on LCA and LCCA Cement Slurry Injection as a method of ground stabilization for comparison.

Finalized and submitted RFPs to RMRC-4G Executive Committee.

Revised RFP proposals by Iowa DOT RMRC-4G members.

Solicited proposals and initiated subcontract awards.

Prepared abstracts and research profiles of RMRC work for 4G projects.

Prepared summaries and research profiles for past RMRC work.

Discussed Iowa DOT system-wide material use quantities – per Bob Younie, Iowa DOT does not wish to pursue this project due to limited data being available and interest in the research for their use.

Presented poster and gave a brief presentation on the *Environmental Benefits of Cold-in-Place Recycling* at the 2nd UW-Madison GLE Alumni Reunion. Presented posters on *Life-Cycle Benefits of Recycled Material in Highway Construction* and on *Chemical and Physical Factors Controlling RCA Leachate pH and Alkalinity* also at the 2nd UW-Madison GLE Alumni Reunion.

Updated features of the RMRC website.

The following people contacted the RMRC this quarter on use of various recycled materials. They are:

- Randy West from the National Center for Asphalt Technology for information on CIR report on August 11.
- Craig Wilson from the Arizona Department of Transportation for CIR presentation on August 15.
- Gigi Aimee Marquez for information on recycled asphalt shingles on August 17.
- Nick Doran from Resource – One for information on beneficial reuse of an abrasive flow jet sand on September 12.
- Virginia Department of Transportation contacted the RMRC about use of whole and shredded scrap tire usage in highway applications, particularly in embankment fills on September 22.
- Lauren Sprankle from Collective Efforts for information on void space in recycled concrete on July 13.

Held weekly internal RMRC research administration meetings.

Anticipated work next quarter:

Continue work on LCA and LCCA for Sophomore Undergraduate Research Fellowship relating to Polyurethane Injection as a method of ground stabilization and continue complementary work on LCA and LCCA Cement Slurry Injection as a method of ground stabilization for comparison.

Continued updates to the website to add on more user-friendly and mobile device-friendly features.

Complete project initiation for:

- Field and Lab Analysis of Recycled Concrete Aggregate (RCA) to Determine Physical and Chemical Factors Controlling Leachate Chemistry and Tufa Formation
- Performance of Full-Scale MSE Walls Constructed with Recycled Backfill Material-Phase II
- Use of Concrete Grinding Residue as Concrete and Soil Amendment
- Recycled Material Network: Connecting Consumers and Producers- Phase II: Upgrades and Maintenance
- System-wide Life Cycle Benefits of Recycled Materials-Phase II

Significant Results:

Presented on the *Environmental Benefits of Cold-in-Place Recycling* and *A Review of Environmental Impacts and Environmental Applications of Shredded Scrap Tires* at the ADC60 Conference in Duluth, Minnesota, July 18-21, 2017.

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Circumstance affecting project or budget. (Please describe any challenges encountered or anticipated that might affect the completion of the project within the time, scope and fiscal constraints set forth in the agreement, along with recommended solutions to those problems).

NA

Potential Implementation:
The CIR research project has been submitted to WisDOT and TRB for implementation in advancing the use of CIR with recycled materials in roadway reconstruction providing the triple bottom line benefits CIR process offers.