

UTC Project Information	
Project Title	MPC-428 – Using Recycled Concrete Aggregate in New Concrete Construction
University	University of Wyoming
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Funding Agencies	USDOT, Research and Innovative Technology Administration
Agency ID or Contract Number	DTRT12-G-UTC08, Modification No. 1
Project Cost	\$74,098
Start and End Dates	January 1, 2014 - October 31, 2015
Project Duration	18 months
Brief Description of Research Project	The Rocky Mountain Region has experienced difficulty due to the presence of alkali-silica reaction (ASR) in new concrete construction. Cheyenne, WY produces a source of aggregate this is highly susceptible to ASR damage. Poorly performing concrete can be removed, crushed and used as aggregate in new concrete. This proposal aims to develop precision and bias statements for using recycled concrete aggregates (RCAs) as material in new concrete construction. Preliminary research indicates that small percentages of ASR affected RCA can be used in new concrete construction without creating harmful ASR expansions.
Describe Implementation of Research Outcomes (or why not implemented) Place Any Photos Here	The research team has identified a suitable RCA and performed the crushing and sieving. Materials were shipped to 8 schools for the round robin study. Each school will complete accelerated mortar bar testing and submit results to UW during Fall 2014. UW will compile results and prepare a precision statement. Fine and coarse aggregates have been tested and results are presented in a thesis by Hacker, May 2014.
Impacts/Benefits of Implementation (actual, not anticipated)	No significant difference was observed in ASR reactivity when considering coarse and fine aggregates separately. Results from testing using combined coarse and fine aggregates apply to concrete used in the field.
Web Links • Reports • Project Website	https://www.ugpti.org/resources/reports/details.php?id=838