CREATE SYNOPSIS CONFIRM

BOR-LC-18-N005
Notice of Intent to Award to Arizona State University
Department of the Interior
Bureau of Reclamation

Opportunity Category: Discretionary
CFDA Number(s): 15.560
Opportunity ID: ---

Please review the following Synopsis information. If changes are needed, please click the Modify button below. Otherwise, click the Publish button to confirm.

General Information:

Version:	Synopsis 1
***Funding Instrument Type:**	Cooperative Agreement
***Category of Funding Activity:**	Environment
Category Explanation: *If Category of Funding Activity is Other	
Expected Number of Awards:	1
***Cost Sharing or Matching Requirement:**	No
***Post Date:**	Jul 19, 2018
Close Date:	Aug 02, 2018
Close Date Explanation: *If no Close Date is provided	
Archive Date:	Sep 01, 2018
Estimated Total Program Funding:	
***Award Ceiling:**	$15,000
***Award Floor:**	$15,000

Eligibility:

***Eligible Applicants:**	Public and State controlled institutions of higher education
Additional Information on Eligibility: *If Eligible Applicants is Others	

Additional Information:

***Description:**	Enzyme induced carbonate precipitation (EICP) offers the potential for cost effective and sustainable lining and repair of water conveyance channels using natural materials. In EICP, urea, calcium chloride, and the enzyme urease are used to induce calcium carbonate precipitation in the form of calcite as a binding agent between soil particles, significantly increasing the strength and erosion resistance of the soil without the use of Portland cement or synthetic polymers. EICP has the potential to significantly reduce the cost and environmental impact of Reclamation construction and maintenance activities that rely upon Portland cement and other add mixtures. The urease required for EICP may be extracted from vegetation or other plant products (e.g., soy beans or jack beans) or from microbial or fungal sources. EICP has been shown to yield unconfined compressive strengths of up to 20 TSF in sandy soils with as little as 1 percent precipitated calcite (by dry weight of soil). EICP may be accomplished by mixing and compacting the soil or by percolating the EICP solution into the ground. Precipitation of 1 percent calcite by weight will not in itself significantly reduce the permeability of the soil, facilitating percolation of the EICP solution into the ground. However, if low permeability is desired along with high strength and low erodibility, adding small amounts of sodium bentonite has been shown to significantly reduce the permeability of the improved soil. EICP may also be useful for fugitive dust control and improving low volume roads.
Link to Additional Information:	
Link Description:	
***Grantor Contact:**	Leslie Dieguez Grants Management Specialist Phone 702-293-8369
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***Grantor Contact E-Mail Description:**	Bureau of Reclamation

Publish Modify

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