

TRANSPORTATION POOLED FUND PROGRAM QUARTERLY PROGRESS REPORT

Lead Agency (FHWA or State DOT): [California Department of Transportation \(Caltrans\)](#)

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 # TPF-5(357)		Transportation Pooled Fund Program - Report Period: <input type="checkbox"/> Quarter 1 (January 1 – March 31) <input type="checkbox"/> Quarter 2 (April 1 – June 30) <input type="checkbox"/> Quarter 3 (July 1 – September 30) <input checked="" type="checkbox"/> Quarter 4 (October 1 – December 31)	
Project Title: Connecting the DOTs: Implementing ShakeCast Across Multiple State Departments of Transportation for Rapid Post-Earthquake Response			
Name of Project Manager(s): Sharon Yen	Phone Number: 916-208-7771	E-Mail Sharon.yen@dot.ca.gov	
Lead Agency Project ID: Task ID 2949, Project ID P1132	Other Project ID (i.e., contract #): Contract # 65A0658	Project Start Date: 11/01/17	
Original Project End Date: 6/30/20	Current Project End Date: 9/30/22	Number of Extensions: 1	

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
\$450,000	\$430,830	95%

Quarterly Project Statistics:

Total Project Expenses and Percentage This Quarter	Total Amount of Funds Expended This Quarter	Total Percentage of Time Used to Date
\$0	\$0	75%

Project Description:

The California Department of Transportation (Caltrans) is organizing and leading the TPF project, "Connecting the DOTs: Implementing ShakeCast Across Multiple State Departments of Transportation for Rapid Post-Earthquake Response," study number TPF-5(357) (<http://www.pooledfund.org/Details/Study/609>). Ten State Departments of Transportation (DOT) have committed funds and are key partners on this multi-state DOT project.

ShakeCast is a web-based tool that delivers an assessment of potential impacts to highway structures within minutes of an earthquake, raising situational awareness and improving emergency response for executive decision makers, traffic management center operators, and maintenance staff.

This TPF project seeks to achieve two primary objectives. First, it will bring participating DOTs into full ShakeCast operation for post-earthquake assessment of state and local bridge inventories. Second, the project will provide a mechanism to actively engage representatives from state DOTs with common interests in implementing and expanding the application of ShakeCast technologies to improve emergency response capabilities.

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

Contract Status

Original project end date has been extended to 9/30/2022 with additional funding commitments by the DOTs partners as follows:

- California - \$30,000
- Missouri - \$30,000
- Oklahoma - \$30,000
- Texas - \$30,000
- Idaho - \$30,000
- Washington - \$15,000
- Oregon - \$30,000
- Utah - \$30,000
- FHWA - \$70,000 (Funded by Highway Research and Development Program)

A project status meeting with all DOTs was hosted on 12/07/2020 for the discussion of the 2 years project extension (Phase II), funding needs, and future work scope. A meeting summary was sent to all DOTs.

Due to contractual delay between the lead agency (Caltrans) and USGS to extend the project end date, Phase 2 work is currently on hold until a formal contract is in place. Contract processing is being expedited and expected to be executed in about 3 months. No project expenditure for this quarter.

USGS continue to host state's ShakeCast and ensure proper function of the system.

Work Progress

DOTs	Phase II	Task Description (10/1/2020 to 12/31/2020)
California	Task 1	USGS ShakeCast hosting service (primary and backup)
	Task 2	EQ response (ShakeCast product QC); User Support;
	Task 3	Internal meetings with ground failure research team
Idaho	Task 1	USGS ShakeCast hosting service (primary and backup)
	Task 2	EQ response (ShakeCast product QC)
	Task 3	Internal meetings with ground failure research team
Mississippi	Task 1	USGS ShakeCast hosting service (primary and backup)
	Task 2	EQ response (ShakeCast product QC)
	Task 3	
Missouri	Task 1	USGS ShakeCast hosting service (primary and backup)
	Task 2	EQ response (ShakeCast product QC)
	Task 3	

Oklahoma	Task 1	USGS ShakeCast hosting service (primary and backup)
	Task 2	EQ response (ShakeCast product QC)
	Task 3	Loss calculations (bridge attributes, ongoing)
Oregon	Task 1	USGS ShakeCast hosting service (primary and backup)
	Task 2	EQ response (ShakeCast product QC)
	Task 3	Internal meetings with ground failure research team
South Carolina	Task 1	USGS ShakeCast hosting service (primary and backup)
	Task 2	EQ response (ShakeCast product QC); User support (conference call, application installation)
	Task 3	
Texas	Task 1	USGS ShakeCast hosting service (primary and backup)
	Task 2	EQ response (ShakeCast product QC); User Inventory update
	Task 3	
Washington	Task 1	USGS ShakeCast hosting service (primary and backup)
	Task 2	EQ response (ShakeCast product QC)
	Task 3	Internal meetings with ground failure research team
Utah	Task 1	USGS ShakeCast hosting service (primary and backup)
	Task 2	EQ response (ShakeCast product QC)
	Task 3	
FHWA	Task 1	USGS ShakeCast hosting service (primary and backup)
	Task 2	EQ response (ShakeCast product QC)
	Task 3	Loss calculations (ongoing),

Anticipated work next quarter:

The following work is anticipated for next quarter:

- USGS to continue the effort in providing technical support and assistance to participating DOT partners.
- USGS to continue the effort to work on providing ShakeCast cloud hosting to participating DOTs.
- ShakeCast team to continue communications with other DOTs about ShakeCast and to join the TPF.

System features development and State specific system functionality improvement is an ongoing effort for this project.

Significant Results:

Nothing to report at this time.

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).

FHWA committed funding for this project requires 80/20 state matching. Caltrans is currently exploring options to meet the state matching requirement.

Potential Implementation:

Nothing to report at this time.