

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 checked="" type="checkbox"/> Quarter 2 (April 1 – June 30) <input type="checkbox"/> Quarter 3 (July 1 – September 30) <input 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 (Phase 1 – 11/1/17 to 10/22/20)	\$430,830	95%
\$225,000 (Phase 2 – 4/13/21 to 9/30/22)	\$34,492	20%

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	100%
\$34,392	\$34,392	20%

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](#)

New contract executed on 4/13/2021 for a total project budget of \$225,000.

[Work Progress](#)

DOTs	Phase II	Task Description (4/1/2021 to 6/30/2021)
California	Task 1	USGS ShakeCast hosting service (primary and backup)
	Task 2	EQ response (ShakeCast product QC, Q/A comparison with ShakeAlert, building inventory);
	Task 3	ShakeCast V4 (py3Cast build with inventory, gitlab/docker deployment pipeline)
Idaho	Task 1	USGS ShakeCast hosting service (primary and backup)
	Task 2	EQ response (ShakeCast product QC);
	Task 3	ShakeCast V4 (py3Cast build with inventory, gitlab/docker deployment pipeline)
Mississippi	Task 1	USGS ShakeCast hosting service (primary and backup)
	Task 2	
	Task 3	
Missouri	Task 1	USGS ShakeCast hosting service (primary and backup)
	Task 2	EQ response (ShakeCast product QC);
	Task 3	ShakeCast V4 (py3Cast build with inventory, gitlab/docker deployment pipeline)
Oklahoma	Task 1	USGS ShakeCast hosting service (primary and backup)
	Task 2	EQ response (ShakeCast product QC, scenarios);
	Task 3	ShakeCast V4 (py3Cast build with inventory, gitlab/docker deployment pipeline)
Oregon	Task 1	USGS ShakeCast hosting service (primary and backup)
	Task 2	EQ response (ShakeCast product QC, Q/A notification, access to USGS web UI);
	Task 3	ShakeCast V4 (py3Cast build with inventory, gitlab/docker deployment pipeline)
South Carolina	Task 1	USGS ShakeCast hosting service (primary and backup)
	Task 2	
	Task 3	

Texas	Task 1	USGS ShakeCast hosting service (primary and backup)
	Task 2	EQ response (ShakeCast product QC);
	Task 3	ShakeCast V4 (py3Cast build with inventory, gitlab/docker deployment pipeline)
Washington	Task 1	USGS ShakeCast hosting service (primary and backup)
	Task 2	EQ response (ShakeCast product QC);
	Task 3	ShakeCast V4 (py3Cast build with inventory, gitlab/docker deployment pipeline)
Utah	Task 1	USGS ShakeCast hosting service (primary and backup)
	Task 2	EQ response (ShakeCast product QC);
	Task 3	ShakeCast V4 (py3Cast build with inventory, gitlab/docker deployment pipeline)
FHWA	Task 1	USGS ShakeCast hosting service (primary and backup)
	Task 2	EQ response (ShakeCast product QC, Q/A on email group notification);
	Task 3	ShakeCast V4 (py3Cast build with inventory, gitlab/docker deployment pipeline)

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.

The next project quarterly meeting is scheduled on 8/9/21.

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 working on adjusting the contract budget for the additional fund to the project.

Potential Implementation:

Nothing to report at this time.