

## 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.*

<b>Transportation Pooled Fund Program Project #</b> <i>(i.e., SPR-2(XXX), SPR-3(XXX) or TPF-5(XXX))</i>  TPF-5(357)		<b>Transportation Pooled Fund Program - Report Period:</b> <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)	
<b>Project Title:</b> Connecting the DOTs: Implementing ShakeCast Across Multiple State Departments of Transportation for Rapid Post-Earthquake Response			
<b>Name of Project Manager(s):</b> Sharon Yen	<b>Phone Number:</b> 916-227-7174	<b>E-Mail</b> Sharon.yen@dot.ca.gov	
<b>Lead Agency Project ID:</b> Task ID 2949, Project ID P1132	<b>Other Project ID (i.e., contract #):</b> Contract # 65A0658	<b>Project Start Date:</b> 1/18/17	
<b>Original Project End Date:</b> 6/30/20	<b>Current Project End Date:</b> 9/30/22	<b>Number of Extensions:</b> 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	\$192,480.92	45%

Quarterly Project Statistics:

Total Project Expenses and Percentage This Quarter	Total Amount of Funds Expended This Quarter	Total Percentage of Time Used to Date
\$192,480.92 (42.8%)	\$44,300.01	43%

## **Project Description:**

The California Department of Transportation (Caltrans) is organizing and leading the Transportation Pooled Fund (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**

- Project end date has been extended to **September 30, 2022**.

### **Project Status**

- USGS continues to provide technical support and assistance to participating DOT partners.
- USGS has been working with several DOTs on number configurations, data Q/A, notifications and scenario efforts.
- USGS continues to work on providing ShakeCast cloud hosting to participating DOTs.
- ShakeCast team is in touch with Texas on the testing and updating TxDOT specific bridge fragilities developed by UT Austin.
- USGS is working with Caltrans to move the internal Caltrans ShakeCast instance to USGS for long-term hosting.
- USGS has been in contact with other DOTs (AK, MT, and CO) about ShakeCast and potentially joining the TPF.

### **Meetings**

- A meeting for all participating DOTs is planned for this Fall, tentatively in November. Meeting to discuss future work plan for TPF.
- A 2-day meeting between USGS team and Caltrans has been scheduled for August 05-06, 2019 in Sacramento. Meeting topic will focus on the advancement of 2<sup>nd</sup> generation fragilities currently under development by Caltrans and other researchers.

## Project Expenditure

Project expenses discrepancies have been found in previous quarterly reports. Revised project expenses with travel expenses captured to date shown below:

Revised Project Expenditure			
Year	Quarter	Total Amount of Funds Expended This Quarter	Total Cost to Date for Project
2017	Quarter 1	\$7,552.14 (Total travel expenses)	
	Quarter 2		
	Quarter 3		\$7,552.14
	Quarter 4	\$48,750.00	\$56,302.14
2018	Quarter 1	\$33,106.28	\$89,408.42
	Quarter 2	\$23,873.72	\$113,282.14
	Quarter 3	\$2,982.59	\$116,264.73
	Quarter 4	\$31,916.18	\$148,180.91
2019	Quarter 1		

### **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.
- USGS and Caltrans to continue the effort in migrating Caltrans in-house ShakeCast installation to USGS.
- ShakeCast team to continue communications with other DOTs about ShakeCast and to join the TPF.
- ShakeCast team to suggest and develop new features and improvements to the current ShakeCast system.

**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).**

Nothing to report at this time.

**Potential Implementation:**

Nothing to report at this time.