TRANSPORTATION POOLED FUND PROGRAM
QUARTERLY PROGRESS REPORT

Lead Agency (FHWA or State DOT): __Iowa DOT_____

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 # *(i.e, SPR-2(XXX), SPR-3(XXX) or TPF-5(445)*	**Transportation Pooled Fund Program - Report Period:** Quarter 1 (January 1 – March 31) Quarter 2 (April 1 – June 30) xQuarter 3 (July 1 – September 30) Quarter 4 (October 1 – December 31), 2024

Project Title: **Design Guidelines and Mitigation Strategies for Reducing Sedimentation of Multi-barrel Culverts**		
Name of Project Manager(s): **Marian Muste**	**Phone Number:** **319-384-0624**	**E-Mail** marian-muste@uiowa.edu
Lead Agency Project ID:	**Other Project ID (i.e., contract #):**	**Project Start Date:** **May 1, 2020**
Original Project End Date: **April 30, 2023**	**Current Project End Date:** **October 15, 2024**	**Number of Extensions:** 3

Project schedule status:

☐ On schedule X☐ On revised schedule ☐ Ahead of schedule X Behind schedule (see comments)

Overall Project Statistics:

Total Project Budget	Total Cost to Date for Project	Percentage of Work Completed to Date
$385,000* *including the $60,000 funding from Missouri DOT	$360,000	90%** ** after 2021, 2022 and 2024 work plan revisions

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	%

Project Description:

The overall goal of the TPF-5(445) project is to leverage the extensive research conducted in Iowa though a multi-state research effort leading to design guidelines and specifications for mitigation measures for reducing sedimentation at existing and proposed multi-barrel culvert locations. The guiding principles and best practices for mitigating sedimentation will complement the existing hydraulic design guidelines.

The TPF-5(445) project objectives are:

1. Assemblage of data and knowledge on sedimentation at culverts and mitigation measures
2. Synthesis of the practical knowledge in guidelines for design and operations for reducing or eliminating sedimentation at culverts
3. Development of a web-based platform that will embed the formulated guidelines in easy-to-use interactive interfaces that will facilitate to retrieve design and operation information and to guide in the selection of a self-cleaning culvert design fit for the local flow and sediment transport conditions.

Progress this Quarter (includes meetings, work plan status, contract status, significant progress, etc.):
For the reference period (July – September 30, 2024), the research was focused on the following tasks:

- Report writing for the project based on the laboratory work conducted up to the 3rd annual meeting
- Analysis of the additional data as per the TAC decision of using the additional funding from Mississippi DOT.

Anticipated work next quarter:

- Preparation of final report
- Drafting of paper to be submitted on the project results

Significant Results:
Illustration of the mechanisms for the formation and development of the sediment deposits in various US landscapes (based on modeling work inspired by field data from Iowa, New Mexico hydro-morphological conditions.

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).

- An extension of the project was requested and approved to accomplish all the tasks of the project as originally planned and successively changed in the first and second annual meetings of the TPF TAC along with the additional processing requests from Mississippi DOT (agreed on April 11, 2024). The new deadline for closing the research for this project is December 15, 2024

Potential Implementation:
The developed self-cleaning solutions are recommended for in-situ implementation following cost-benefit analyses conducted by specialized DOT offices.