

Quarterly Report – Public Page

Date of Report: *December 20, 2018*

Contract Number: 693JK31810012

Prepared for: *PHMSA - Pipeline Safety Research & Development Announcement #4 [WP #726]*

Project Title: *Modernize the Assessment of River Crossings*

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Public Page Section-

The agreement between Arcadis and PRCI is not yet in contract. The proposed project scope is intended to achieve the three stated objectives. The first objective, which is to supplement and strengthen industry consensus standards, will be achieved in two ways. Primarily, the development of screening level and detailed assessment level analytical and risk tools will enable pipeline operators to effectively implement the current draft of API RP 1133 consistently to identify which crossings may potentially be at risk for flooding conditions, and in turn require monitoring and/or mitigation measures. Secondly, field verification to test the applicability of advances in vortex-induced fatigue criteria and vortex-induced vibration (VIV) response models within inland water crossings of various channel widths will also help create consensus in industry and lead to value-added improvements to the on-going (and proposed to be expanded) project to modernize the assessment of exposed pipeline waterway crossings.

The second objective, which is to collaboratively develop new technology, will be achieved through the development of improved flood monitoring alert mechanisms. This will be accomplished by leveraging both the National Oceanic and Atmospheric Administration (NOAA) National Water Model (NWM) to create “virtual stream gages” and by using radar-based Quantitative Precipitation Estimation (QPE) data from the National Weather Service. Leveraging this data will enable pipeline operators to receive flood alerts for even the smallest watersheds with water crossings.

The third objective, which is to promote new knowledge, will be achieved through inclusion of fluvial geomorphological and related engineering principles to identify potential pipeline exposures at riverine crossings. It will also be achieved through field testing and verification of channel scour and bank erosion.

General Information required on all Public Quarterly Reports

Results and Conclusions: The contract agreement is not yet in place. PRCI is working with Arcadis to finalize and execute the agreement. Execution of this agreement is expected in January 2019.

Plans for Future Activity: Schedule is contingent on contract execution with current activities underway for pre-planning of the work.