Pipeline Research Council International

Extreme Event Hydrotechnical Hazards SRP Update

Aka. GHZ SRP

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Fall 2026 Meeting
October 27th 2026

PRCI™
LEADING PIPELINE RESEARCH

Extreme Event Hydrotechnical Hazards

IMPORTANT

SRP Goal

To develop a reliable, data-based integrity management framework for assessing, monitoring, and mitigating hydrotechnical hazards from extreme events and their interactions with other pipeline threats, such as slope movement and circumferential cracking.

NECESSARY

Gap(s) to solve

The key gaps are the lack of reliable methods to assess interacting hydrotechnical and geotechnical threats, remotely and continuously monitor water crossings during and after extreme events, and determine when mitigation is warranted. The program also needs to validate effective temporary and permanent mitigation options and improve confidence in their performance.

Alignment to PRCI research objectives:

- INTEGRITY ✓
- EFFICIENCY ✓
- SUSTAINABILITY ✓
- TECHNOLOGY ✓
- WORKFORCE
- SHARING

Current Roadmap

Project Number	Title	Total funding	2023		2024				2025				2026				2027				2028			
			Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
ENV-4-1B	New Multi-Year Project: Assessing Interactive Threats at Pipeline Waterway Crossings	481,020				DMC																		
GHZ-03-01	Desktop study on effectiveness of mitigation options	185,000				DMC																		
GHZ-03-02	Desktop review and gap analysis of remote and continuous scour monitoring technologies	120,000				SOM																		
GHZ-3-03	Fitness-for-service framework to address circumferential cracks near water crossings	240,000								I&I														
GHZ-03-04	Field-validation of remote and continuous scour monitoring	1,388,475								SOM														
GHZ-03-06	Guidelines on best practices for scour monitoring	180,000																		SOM				
Future		Annual SRP Spend			$ 451,020				$ 586,475				$ 960,000				$ 600,000							
Active				Traditional SOM TC Funding						SOM SRP Funding					DMC SRP Funding						I&I SRP Funding			
Completed																								

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Current GHZ SRP Funding Roadmap

	451,020.00	434,500.00	16,520.00	586,475.00	581,851.00	1,624.00	960,000.00	817,925.00	142,075.00	600,000.00	461,000.00	139,000.00	299,219.00
	FY2024			FY2025			FY2026			FY2027			
	Budget	Actual	Remaining	Budget	Actual	Remaining	Budget	Actual	Remaining	Budget	Actual	Remaining	Remaining Budget Overall
ENV-4-1B	241,020.00	235,000.00	6,020.00	120,000.00	120,000.00	-	120,000.00	60,000.00	60,000.00				66,020.00
GHZ-03-01	90,000.00	90,000.00	-	95,000.00	94,976.00	24.00							24.00
GHZ-03-02	120,000.00	109,500.00	10,500.00										10,500.00
GHZ-03-03				120,000.00	118,400.00	1,600.00	120,000.00	93,400.00	26,600.00				28,200.00
GHZ-03-04/05				248,475.00	248,475.00	-	720,000.00	664,525.00	55,475.00	420,000.00	461,000.00	(41,000.00)	14,475.00
GHZ-03-06										180,000.00		180,000.00	180,000.00
Open Funding				3,000.00		3,000.00							3,000.00

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Research Progress Updates

SUPPORTED

5 Show what has changed since the last update and connect every activity to the end goal.

Completed this period

- *GHZ-03-01 and GHZ-3-03 are in final report review stages*

In Progress / Next Steps

- *ENV-4-1B will be completed in 3rd quarter 2027.*
- *GHZ-03-04 will begin monitoring years in 2027. Completion is based on scour events occurring.*
- *GHZ-03-06 will be contracted upon substantial completion of GHZ-03-04.*

Expected Benefits and implementation

- *Expected safety / cost / environmental benefits*
- *Standards, guidance, training, paving the way for operator adoption*

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