



U.S. Department  
of Transportation

Pipeline and  
Hazardous Materials  
Safety Administration

**Fiscal Year 2026**

## **Notice of Funding Opportunity (NOFO)**

### **Pipeline Safety Research Competitive Academic Agreement Program (CAAP)**

NOFO Posted Date: May 18, 2026  
Application Due Date: June 19, 2026, 11:59 p.m. EST  
Questions Due Date: June 17, 2026, 11:59 p.m. EST

Applicants must be registered at [www.grants.gov](http://www.grants.gov) to apply online. It is highly recommended that applicants begin the registration process as soon as possible to avoid delays in submission. Additionally, applicants must maintain an active registration in the System for Award Management (SAM) at [www.SAM.gov](http://www.SAM.gov).

Furthermore, applicants are encouraged to register for an account with FedConnect at <https://www.fedconnect.net> before applying. FedConnect is a messaging platform where applicants can communicate directly with PHMSA. Your organization's Marketing Partner ID number (MPIN), which can be retrieved from SAM, is required to create an account. For instructions on how it works, click on the link to access the [FedConnect: Ready, Set, Go! Tutorial](#) on the FedConnect home page.

**Assistance Listing Program Number (formerly CFDA):**

20.724 "Pipeline Safety Research Competitive Academic Agreement Program"

**PHMSA NOFO Number:**

693JK326NF0003

**TABLE OF CONTENTS**

**SECTION A – BASIC INFORMATION** ..... 3

**A.1 Funding** ..... 3

**A.2 Period of Performance** ..... 3

**A.3 Type of Award** ..... 3

**SECTION B – ELIGIBILITY** ..... 5

**B.1 Eligible Applicants and Activities** ..... 5

**B.2 Cost Sharing or Matching**..... 5

**B.3 Funding Restrictions**..... 6

**SECTION C – PROGRAM DESCRIPTION**..... 6

**C.1 Statement of Purpose**..... 6

**C.2 Statute and Program Authority**..... 6

**C.3 Background** ..... 8

**SECTION D – APPLICATION CONTENTS AND FORMAT**..... 16

**D.1 Address to Request an Application Package** ..... 16

**D.2 Content and Form of Application Submission**..... 16

**SECTION E – SUBMISSION REQUIREMENTS AND DEADLINES**..... 18

**E.1 Submission Dates and Times**..... 18

**E.2 Unique Entity Identifier (UEI) and System for Award Management (SAM)**..... 19

**SECTION F – APPLICATION REVIEW INFORMATION** ..... 19

**F.1 Criteria** ..... 19

**F.2 Review and Selection Process**..... 20

**F.3 Risk Review** ..... 21

**SECTION G – AWARD NOTICES** ..... 21

**G.1 Anticipated Announcement and Federal Award Dates** ..... 21

**G.2 Federal Award Notices** ..... 21

**SECTION H – POST-AWARD REQUIREMENTS AND ADMINISTRATION**..... 22

**H.1 Administrative and National Policy Requirements**..... 22

**H.2 Reporting Requirements**..... 23

## SECTION A – BASIC INFORMATION

Federal Agency Name: U.S. Department of Transportation  
Pipeline and Hazardous Materials Safety Administration

Funding Opportunity Title: “Fiscal Year 2026 Notice of Funding Opportunity:  
Pipeline Safety Research Competitive Academic Agreement  
Program (CAAP)”

Announcement Type: Initial Announcement

Funding Opportunity Number: 693JK326NF0003

Assistance Listing Program Number: 20.724

NOFO Posted Date: May 18, 2026

Application Due Date: June 19, 2026, 11:59 p.m. EST

Questions Due Date: June 17, 2026, 11:59 p.m. EST

### Executive Summary

The CAAP initiative is intended to spur innovation by enabling academic research focused on high technical risk and high payoff solutions for many safety challenges. The research may deliver solutions that can be transferred to PHMSA’s Core Research Program for demonstration and deployment. CAAP aims to validate proof of concept for a thesis or theory along a logical path toward commercialization and cultivate new talent across all areas of the pipeline sector.

#### A.1 Funding

PHMSA plans to award up to \$4 million in CAAP funding for FY 2026, with no more than \$1 million in Federal funding per award. Applicants may submit multiple applications, but can submit only one application per topic, each capped at \$1 million.

#### A.2 Period of Performance

The period of performance is a maximum of 12 months from the effective date of the award. Applicants must only apply for funding that can be reasonably expended within this timeframe and for allowable projects that can be completed within the period of performance. **No extensions will be authorized under any circumstances.**

#### A.3 Type of Award

Awards will be cooperative agreements. PHMSA will provide significant involvement, including guidance on industry practices, data, methods, and testing materials such as pipe samples. PHMSA will facilitate communication with pipeline industry contacts and trade associations to support research success if needed.

**Agency Contact Information**

Questions related to the content of this funding opportunity should be submitted via e-mail to the contacts below or via the Message Center in FedConnect if your organization is registered there.

For issues or questions related to FedConnect, please e-mail [fcsupport@unisonglobal.com](mailto:fcsupport@unisonglobal.com). Applicants can also submit questions through the portal on their website or call 1-800-899-6665, option 2.

If an applicant has technical difficulties submitting the application through grants.gov, the applicant should contact grants.gov at 800-518-4726 or e-mail [support@grants.gov](mailto:support@grants.gov), as well as contact Nusnin.Akter2@dot.gov.

**NOFO-Related Questions:**

Dwayne Cross  
Agreements Officer  
Acquisition Services Division  
E-mail: [Dwayne.Cross@dot.gov](mailto:Dwayne.Cross@dot.gov)

**Program Contact:**

Nusnin Akter  
CAAP Program Manager  
Phone: 839-273-0528  
E-mail: [nusnin.akter2@dot.gov](mailto:nusnin.akter2@dot.gov)

## SECTION B – ELIGIBILITY

### B.1 Eligible Applicants and Activities

Applicants must be nonprofit higher education institutions located in the United States or a U.S. territory. PHMSA encourages partnerships among institutions, as well as with the pipeline industry or private organizations, provided the industry or private organization doesn't exceed the contribution of the applying college/university. PHMSA will only accept one application per topic from each applicant. This means one university can have multiple applications. However, one applicant (PI) can submit only one application per topic.

All applicants must meet these minimum requirements to be considered. Failure to do so at any time—pre- or post-award—will result in removal from consideration or agreement termination. Applications must include a letter on the institution's letterhead, signed by the dean or equivalent authority, certifying understanding and compliance with these requirements. This letter should be included as Appendix A for the technical application (the first page of the Appendix).

1. Applicants must be nonprofit higher education institutions in the U.S. or its territories.
2. Agreements will be with institutions, not individuals.
3. Research must involve undergraduate, graduate, or PhD students, with faculty/staff designing the scope and overseeing its execution. *Applications without student involvement will be deemed non-responsive and will be removed from consideration.*

**NOTE:** Students shall be identified in the proposal, and a final list of students shall be provided and confirmed prior to the execution of the agreement and commencement of the period of performance. Faculty, staff, and students must be U.S. citizens, permanent residents, or have valid visas to complete the project. Include resumes for proposed students if available. Federal funds may cover allowable research costs like overhead, expendables, labor, and testing equipment but cannot be used for constructing or refurbishing existing facilities.

4. Applications must comply with the 20 percent cost-sharing requirement stipulated in section B.2.
5. Unmanned Aerial Systems (UASs) - UASs used in the proposed research must be designed and built in the U.S. They cannot be developed, manufactured, or supplied by entities owned, controlled, or directed by foreign governments.

### B.2 Cost Sharing or Matching

Pursuant to section 12(d)(3)(C) of the PSIA of 2002 (49 U.S.C. § 60101 note), there is a mandatory minimum 20 percent cost-sharing requirement for CAAP agreements. The Federal government cost share shall not exceed 80 percent of the total cost, capped at \$1 million. Firm

commitment letters for cost-sharing must accompany applications or proposals will not be reviewed. See section D.2 for additional information regarding budget/cost applications.

### **B.3 Funding Restrictions**

The following costs are not eligible for reimbursement:

1. Expenses claimed or reimbursed by another program.
2. Expenses counted as match funds towards another Federal program.
3. Any costs disallowed or stated as ineligible in 2 CFR Part 200.
4. Pre-award costs are not authorized, and grant recipients must separately obtain PHMSA's written approval to fund pre-award costs, consistent with 2 CFR § 200.458.
5. Construction activities.

PHMSA will only consider applications addressing technical gaps in the safety program areas listed in this NOFO. Applications outside these areas will not be reviewed. The focus areas are purposefully broad to allow a wide range of applications that strategically support PHMSA's mission. Applicants must choose one primary safety program topic per submission but may submit multiple applications.

Evaluation costs are allowable (either as direct or indirect), unless prohibited by statute or regulation, and such costs may include the personnel and equipment needed for data infrastructure and expertise in data analysis, performance, and evaluation (2 CFR Part 200).

## **SECTION C – PROGRAM DESCRIPTION**

### **C.1 Statement of Purpose**

The Pipeline and Hazardous Materials Safety Administration (PHMSA) requests applications from nonprofit higher education institutions for Competitive Academic Agreement Program (CAAP) funding to research innovative solutions for six topics. PHMSA will award up to \$4 million under CAAP in Fiscal Year (FY) 2026, with no award exceeding \$1 million. Research will focus on solutions to known pipeline integrity and safety challenges.

### **C.2 Statute and Program Authority**

PHMSA's Pipeline Safety Research and Development (R&D) Program was originally authorized pursuant to section 12 of the Pipeline Safety Improvement Act (PSIA) of 2002 (Pub. L. 107-355). Congress recently reauthorized the R&D Program in the Protecting our Infrastructure of Pipelines and Enhancing Safety (PIPES) Act of 2020 to ensure the integrity of pipeline facilities. PHMSA's authority to enter into cooperative agreements to further the objectives of the Pipeline Safety Statutes is codified in 49 U.S.C. § 60117(l).



## C.3 Background

### PHMSA's Pipeline Safety R&D Program

Pipeline infrastructure is crucial for transporting natural gas and hazardous liquids from production sites to consumers. Energy pipelines play an essential role in the U.S. economy and are vital to maintaining and improving Americans' standard of living. They must be safely maintained and, where needed, expanded or adapted to meet energy needs. R&D is essential for identifying solutions to help ensure the safety and reliability of pipeline operations. This includes providing operators with effective technology to meet or exceed regulations and ensuring that industry standards are based on the latest science for safe pipeline design, construction, operation, and maintenance.

PHMSA's Pipeline Safety R&D Program continues to impact technology development, strengthen standards, and inform decision makers. More performance details are available on the web site at [Research & Development | Research & Development | PHMSA](#).

### CAAP Initiative

Section 12 of PSIA of 2002 (Pub. L. 107-355) mandates that the U.S. Department of Transportation (DOT) and other designated Federal agencies "carry out a program of research, development, demonstration, and standardization to ensure the integrity of pipeline facilities." Specifically, the mission of PHMSA's Pipeline Safety R&D Program is to sponsor R&D projects that provide near-term solutions to improve safety and enhance reliability in the U.S. pipeline system. The CAAP initiative aligns with this mission and congressional mandate.

CAAP aims to drive innovation by funding academic research focused on high technical risk and high payoff solutions for many safety challenges. This research may lead to solutions for PHMSA's Core Research Program<sup>1</sup> for further testing and deployment, aiming to validate theories toward commercialization. Another goal of CAAP is to expose undergraduate and graduate students to pipeline safety challenges, encourage their involvement, and show them how their engineering or technical skills can be used within the field. This aims to cultivate new talent across all areas of the pipeline sector.

### CAAP Performance Goals and Expected Outcomes

PHMSA's Pipeline Safety R&D Program seeks projects through the Pipeline Safety Research-CAAP (CFDA Number 20.724) to develop solutions for integrity threats and support its mission. Awards will be made to projects with clear goals that also help grow talent in the pipeline field.

PHMSA will collect data as outlined in section H.2 to ensure that projects are progressing as expected and review for any variances. PHMSA will also track the number of pipeline engineering positions filled by CAAP participants.

---

<sup>1</sup> The Core program is one of three pipeline research programs administered by PHMSA.

## Research Topics

PHMSA is soliciting applications for six topics based on ideas submitted through our open portal,<sup>2</sup> pipeline accident/incident data, and research gaps identified by stakeholders. PHMSA seeks applications outlining research that addresses the shared interests of academic researchers, the public, and pipeline operators regarding pipeline safety topics aiming for commercial application.

The research will build scientific and engineering foundations for developing commercially viable safety and mitigation technology. Researchers are expected to collaborate with PHMSA-regulated operators to ensure relevance. PHMSA encourages faculty from diverse fields to partner across universities and with industry to form industry-university groups, allowing students to work on critical pipeline sector topics.

### **Topic 1 (Corrosion): Knowledge Development–Early Corrosion Prediction for Pipelines and Implementing Appropriate Mitigation Measures**

The objective of this research project is to transform the corrosion detection paradigm. The focus will be steered away from monitoring individual assets, such as the metal surface of a pipeline, and instead will be on the soil around buried transportation infrastructure. This project will monitor the soil conditions before they impact the pipeline by investigating how corrosive agents are transported through the pipeline surface and provide scientific evidence to support the prediction of stopping corrosion damage before it begins.

PHMSA data shows that pipeline corrosion is a persistent and significant cause of pipeline failures. In 2024, approximately 26 percent of all pipeline incidents were caused by corrosion.

#### **The project scope must include the following tasks:**

- Identify key corrosive agents in soils and measure the concentrations of the primary chemical and biological agents that will influence pipeline corrosion in the target soil area.
- Establish a validated transport model to predict the rate and path of corrosion agents' movements through the soil matrix to the pipe surface.
- Assess the appropriate coating options based on the performance criteria against the identified agents and generate performance-based coating specifications for various corrosive soil profiles.
- Establish a verification protocol by correlating soil corrosive agent evaluations (*i.e.*, in-line inspection tools data, soil resistivity, and lab results) with actual corrosion feature growth rates to validate the predictive model's accuracy.

---

<sup>2</sup> <https://primis.phmsa.dot.gov/matrix/gapnew.rdm>

- Evaluate the feasibility and cost-effectiveness of soil remediation (*i.e.*, chemical inhibition or soil replacement) as an alternative or supplement to coating application.
- Evaluate methods (*i.e.*, sensor) to first detect then divert or dilute the corrosive flows (*e.g.*, by venting safe liquids).
- Include input from appropriate stakeholder groups, such as pipeline operators, industry experts, and standards development organizations (SDOs) on this corrosion detection paradigm.
- Provide a detailed breakdown of project costs and expected deliverables at each stage of development.

**Topic 2 (Threat Prevention/Corrosion): Knowledge Development–Economical and Novel Agents to Mitigate Internal or External Pipeline Corrosion Due to Microbial-Induced Corrosion (MIC)**

The objective of this research project is to develop and evaluate cost-effective, innovative antimicrobial agents to mitigate pipeline internal or external corrosion caused by MIC. The project will investigate practical alternatives to traditional biocides by assessing their MIC control performance, material compatibility, and scalability. Outcomes will include recommendations to support future technology development and potential integration into industry standards.

MIC is a persistent threat to pipeline integrity due to complex microbial communities that accelerate corrosion. Current mitigation strategies primarily rely on traditional, noxious biocides that have such drawbacks as high cost, limited long-term effectiveness, sustainability risks, and increasing microbial resistance. There is a growing need for economically viable and innovative antimicrobial solutions—such as natural biocides, engineered enzymes, or targeted metabolic disruptors—to strengthen long-term corrosion control and enhance pipeline system reliability.

**The project scope must include the following tasks:**

- Review scientific and industry literature on MIC mechanisms, microbe material interactions, and corrosion behavior in pipeline environments.
- Summarize emerging antimicrobial technologies (chemical, biological, biochemical, or material-based), including multispecies approaches, and identify gaps in existing mitigation strategies.
- Identify microbial communities commonly associated with internal and external MIC across pipeline environments (soil, crude oil, refined products, stagnant zones, coatings) and determine representative microorganisms for laboratory testing.

- Select novel and economical MIC mitigation agents (*i.e.*, biodegradable biocides, enzyme-based metabolic disruptors, natural antimicrobial compounds, etc.) for laboratory evaluation.
- Conduct controlled laboratory simulations to evaluate antimicrobial efficacy against relevant MIC organisms, corrosion rate reduction (weight loss tests, electrochemical assessments, etc.), interaction with pipeline materials (steel, coatings, elastomers), and performance under pipeline-simulated conditions (flow, temperature, fluid chemistry).
- Compare the performance of selected agents against conventional biocides.
- Evaluate cost, feasibility, and scalability.
- Procure input from appropriate stakeholder groups, such as pipeline operators, industry experts, and SDOs on this pipeline corrosion mitigation method.
- Coordinate with SDOs for potential incorporation into standard or industry best practices.
- Provide a detailed breakdown of project costs and expected deliverables at each stage of development.

**Topic 3 (Repair/Rehabilitation/Threat Prevention): Technology Development)–Artificial Intelligence (AI)-Assisted Software Package to Assist with Composite Repair Design**

The objective of this research project is to develop an AI software package to assist pipeline operators, who conduct repair activities, with the design of composite repair materials and address repairs of the pipe main body and welds, including seam welds and girth welds. The AI software will assist users with developing the calculations and design specifications to conduct defect assessments and repairs, mitigate integrity risks of a pipeline with critical defects which require remediation, and overall improved consistency and efficiency in the assessment process.

Research into AI-assisted software for composite repair design is helpful for improving pipeline safety, managing aging infrastructure, and optimizing specialized engineering workflows.

**The project scope must include the following tasks:**

- Specify the types of defects and conditions to be assessed and remediated using composite repairs, including the corresponding assessment methods and the types of composite repairs suitable for each defect. The scope should identify defects such as corrosion anomalies, cracks, and dents on the pipe body, seam welds, and girth welds, and must also address conditions, including—but not limited to—the following:
  - If the defect is through a wall resulting in leaks of hazardous liquids or gases.
  - If the repairs are conducted on a pipeline at normal operating pressure or at reduced pressures.

- Develop a defect assessment methodology to address the types of defects identified in the work scope.
- Develop an AI-assisted analytical tool to provide automatic calculations to conduct defect assessment and design composite repairs to achieve consistency and improve efficiency for the design of composite repairs.
- Develop an AI-assisted analytical tool to specify controls that prevent corruption or unauthorized modification of models or outputs and align with recognized engineering integrity standards and recommended practices (*e.g.*, American Petroleum Institute 579 “Fitness-For-Service,” American Society of Mechanical Engineers Post Construction Committee 2 “Repair of Pressure Equipment and Piping,” and relevant National Institute of Standards and Technology (NIST) guidelines related to data integrity and system reliability.
- Implement a separate set of cybersecurity controls to safeguard the tool from cyber threats, including unauthorized access, tampering, and misuse of data or algorithms, following established cybersecurity frameworks, such as NIST Cybersecurity Framework (CSF) and NIST Special Publication 800-series.
- Provide existing experiences and successful inventions related to the research and development of the proposed work.
- Include past experiences related to composite repairs of natural gas or hazardous liquid pipelines of key researchers in the application.
- Include at least one pipeline operator or technical service provider who will assist with technology development to address the needs and challenges of applying composite repairs on an operating pipeline in the field.
- Include participation and input from stakeholder groups, such as operators, service providers, industry experts, and SDOs.

**Topic 4 (AI/Modernization of Standards, Regulations, and Rulemaking): Technology Development—Develop an AI-Assisted Software Tool for Interpretation of Standards/Regulations and Properly Applying the Requirements**

The purpose of this research project is to implement an AI tool that will assist pipeline operators in complying with Federal pipeline safety regulations. For specific applications, the AI software will assist the user both in understanding and properly applying the regulations and adopted industry standards under various pipeline scenarios.

The software must integrate 49 Code of Federal Regulations (CFR) Parts 192 and 195, demonstrating its ability to support regulatory compliance through human-like interaction. In addition, the AI tool shall be developed in a manner to allow future updates to maintain regulatory accuracy through a controlled update program consisting of scheduled reviews, event-

driven updates, versioned regulatory repositories, and subject matter expert (SME) validation. The software should not rely on static model training for regulatory interpretation and shall provide traceable, date-specific regulatory guidance suitable for enforcement-sensitive decision-making.

Development of an AI tool could be used to provide support for PHMSA's inspection and enforcement priorities, and the growing complexity of modern safety standards that demand higher levels of precision from pipeline operators.

**The project scope must include the following tasks:**

- Specify the applicable pipeline regulation (including the regulation name, version, amendment number, or regulatory effective date) and describe the extent to which the software will be developed to implement the requirements of that regulation. This should include whether the software is conceptual, partially developed, or fully developed to support the specific regulatory provisions (such as data collection, analysis, validation, recordkeeping, or reporting).
- Develop a software tool with large language models to provide the capability for users to have human-like interaction in a conversational way.
- Ensure that the software tool can perform necessary calculations or assessments according to the requirements in the regulations, such as pipeline impact radius, class location classification, defect assessment, and hydrotest pressure calculation.
- Provide existing experiences and successes related to the research and development of the proposed work. Experience with the natural gas or hazardous liquid pipeline industry would be advantageous.
- Mitigate AI misinterpretations by implementing a robust governance framework that restricts AI outputs to only quote and reference the authoritative, versioned regulatory sources (CFR parts and incorporated standards) from a controlled repository.
- Include at least one pipeline operator or service provider with expertise in pipeline operation and safety regulations and standards (49 CFR Parts 192 and 195, and the standards incorporated by reference in the regulations) who will assist with technology development to address the concerns from field application standpoints.
- Include participation and input from stakeholder groups, such as operators, service providers, industry experts, and SDOs.

**Topic 5 (Threat Prevention): Technology Development)–Non-Destructive Inspection Technology for Cast Iron Pipeline Inspection**

The objective of this research project is to develop an innovative non-destructive inspection technology that will be utilized to detect and characterize defects in cast iron pipes and assist with the risk assessment of aging cast iron pipelines in natural gas distribution systems.

The project scope must focus on non-destructive inspection technology for inspecting cast iron pipelines in natural gas distribution systems. The proposal must include a plan with the ultimate goal to develop an inline inspection tool which will be utilized to inspect cast iron pipelines without service interruption or the need for excavation.

Graphitic corrosion can cause significant problems by obstructing accurate measurement of the remaining wall thickness of corroded cast iron pipes using non-destructive inspection tools. Ranking the severity of corrosion in cast iron pipelines will help identify the most vulnerable sections, prioritize replacement, ensure safety, comply with regulations, and optimize long-term costs.

In addition, following major natural gas pipeline incidents, DOT and PHMSA issued a call-to-action to accelerate the repair, rehabilitation, and replacement of the highest-risk pipeline infrastructure, including cast iron pipes. For instance, in Washington, D.C., more than 31 percent of the main gas distribution piping system miles are made of cast iron. Operators do not have a straightforward method to prioritize portions of their system for replacement based on economic, structural, and safety factors.

**The project scope must include the following tasks:**

- Develop a work plan for proof of concept, within one year, of an innovative non-destructive inspection technology that will be implemented for inspecting cast iron pipelines in natural gas distribution systems.
- Provide existing experiences and success related to R&D on the proposed technology, particularly as they relate to natural gas distribution pipelines or cast iron pipe inspection technology.
- Include at least one pipeline operator or service provider experienced with natural gas distribution systems and cast-iron pipe inspection technology who will ensure the technology development addresses the needs of field application.
- Include participation and input from stakeholder groups, such as operators, service providers, industry experts, and SDOs.

## **Topic 6 (Leak Detection/Hazardous Liquid Pipeline): Technology Development—Artificial Intelligence (AI)-Enhanced Hazardous Liquid Pipeline Leak Detection Methodologies**

The purpose of this research project is to develop and implement AI technologies that significantly improve hazardous liquid pipeline leak detection methodologies—particularly for small, difficult-to-detect leaks—through enhancements to existing computational pipeline monitoring (CPM) and supervisory control and data acquisition (SCADA) systems or through alternative sensing approaches, such as automated leak survey devices, drones, satellites, robotics, or novel sensor technologies.

Statistics highlight an urgent need for more advanced, proactive, and continuous leak detection technologies, especially those capable of detecting small, incipient leaks before they escalate into major releases. AI-driven analytics and new generations sensing platforms present a promising opportunity to substantially improve early-stage detection performance.

PHMSA incident data from the most recent five years indicate that hazardous liquid pipelines installed between 2010 and 2019 experienced more than 200 percent higher corrosion-related failures than pipelines installed in any other decade since the 1930s. More than 90 percent of these corrosion failures were internal, and more than 93 percent occurred in pipelines transporting crude oil.

### **The project scope must include the following tasks:**

- Conduct a literature review of relevant research from private or public research efforts, including service providers and operators. Summarize current and past leak detection technologies for hazardous liquid pipelines, identify remaining challenges and opportunities, and help prevent research duplication of the similar topic while highlighting potential synergies with existing solutions.
- Develop AI-based analytical models that improve sensitivity to small leaks, including transient pressure changes, temperature deviations, acoustic anomalies, flow imbalance patterns, multi-sensor fusion outputs, and other available data streams to improve small leak sensitivity and anomaly classification.
- Determine potential enhancements to CPM and SCADA systems, assessing where AI models can augment or replace existing detection logic, thresholds, or signal processing techniques.
- Develop alternative sensing modalities, which may include drone based or robotic crawler inspections, fiberoptic technologies, autonomous monitoring devices, chemical/vapor sensors, or spectroscopy-based detection methods.
- Demonstrate real-world feasibility using representative datasets from pipeline operators, synthetic leak simulations, high-fidelity modeling, or scaled physical testbeds.

- Quantify detection performance improvements compared to existing industry standard leak detection methods, with specific attention to minimum detectable leak size, detection time reduction, false positive and false negative rate improvements, situational awareness, and diagnostic capability.
- Determine tools and technologies that have the best potential for being used “as is” or modified or enhanced to perform reliably in all applications.
- Determine operational tasks for which an operator would use the technology, and the typical environments for such use.
- Assess the technology for field application, as appropriate, and provide pertinent data.
- Include input from appropriate stakeholder groups, such as pipeline operators, industry experts, and SDOs.
- Coordinate with SDOs for potential incorporation into a standard, recommended practice, or industry best practice.

## **SECTION D – APPLICATION CONTENTS AND FORMAT**

Failure to meet the requirements described in this section will result in application rejection. PHMSA’s agreement officers and program officers may request additional information during the review process to ensure compliance with DOT’s Guide to Financial Assistance and 2 CFR Part 200, subpart E.

### **D.1 Address to Request an Application Package**

PHMSA requires applicants to apply electronically through [www.grants.gov](http://www.grants.gov). Applicants must download the application package associated with this funding opportunity by following the directions provided on grants.gov.

If you are hearing-impaired, please contact the FR/TTY at 1-800-877-8339 or e-mail [PHMSA-Accessibility@dot.gov](mailto:PHMSA-Accessibility@dot.gov).

### **D.2 Content and Form of Application Submission**

Applicants must submit complete applications through [www.grants.gov](http://www.grants.gov) and must be registered on the site, a process that can take up to two weeks. For help with registration, contact [www.grants.gov](http://www.grants.gov) support.

#### **Standard Forms**

The following forms, available on [www.grants.gov](http://www.grants.gov) under the FY 2026 CAAP Funding Opportunity, must be completed by the applicant:

1. Standard Form SF-424 – Application for Federal Assistance
2. Standard Form SF-424A – Budget Information for Non-Construction Programs
3. Certifications Regarding Lobbying
4. Standard Title VI/Non-Discrimination Assurances

### **Applicant Attachments**

All required forms must be created and uploaded to [www.grants.gov](http://www.grants.gov) under the FY 2026 CAAP Funding Opportunity. **Please adhere to the following file naming convention: `OrganizationName_DocumentType_CAAP2026.PDF`.**

Guidance for submitting the project narrative and budget narrative is provided below:

1. PHMSA Technical Application Template (Attachment A and Attachment B).
2. Project Narrative attachment (Attachment A).
3. Budget Narrative attachment.
4. Indirect Cost Agreement and/or Statement claiming 15 percent de minimis (if applicable).
5. Letters of Support from partner organizations (if applicable).
6. Additional optional attachments (if applicable).

Applications should be well written and free of mathematical errors in the line-item budget and budget narrative. Program narratives should follow the NOFO structure with clearly identified sections. Forms, templates, and instructions are available under the “Related Documents” tab on [www.grants.gov](http://www.grants.gov). Please also reference Section F to ensure that the application addresses the criteria on which PHMSA will evaluate.

### **Technical Application Template (PHMSA Template)**

Applicants must use the Technical Application Template provided in the [www.grants.gov](http://www.grants.gov) NOFO package, which includes instructions on required content. Funding requests should align with the proposed period of performance.

Failure to follow these requirements will result in disqualification. Key requirements include:

1. All information supporting the evaluation criteria must be 20 pages or less, excluding the Cover Page, Technical Application Information Page, and Appendix.
2. Certification Letter of Minimum Requirements must be on the first page of the Appendix.

3. The appendix may include additional details but will not be used for evaluation, except to confirm the Certification Letter is included (see section B.03).
4. Documents must be in Times New Roman, 12-point font, with single-line and paragraph spacing for the text body.
5. Applications must follow the formatting of Attachment A and be uploaded to the Project Narrative section on [www.grants.gov](http://www.grants.gov).

### **Budget/Cost Application and Budget Narrative (Standard Form)**

Grant Funds, Sources, and Uses of Project Funds. This budget must list the amount and percent of both the total Federal funding requested and any additional non-Federal funds, if any, that will be used to pay for the project.

Applicants must use Standard Form 424A to submit their budget/cost application through [www.grants.gov](http://www.grants.gov). The budget should reflect the applicant's best terms, from a cost and technical standpoint, to perform the work. No fee or profit should be proposed, as this is a resource-sharing arrangement.

Additional budgetary information, broken out as described [in this link](#), must provide detailed information on each cost element, consistent with the applicant's cost-accounting system. The amounts requested for each budget category must be justified in a Budget Narrative document and uploaded to the Budget Narrative section of the application.

**Sharing of Application Information** – PHMSA may share application information within the Department or with other Federal agencies if the Department determines that sharing is relevant to the respective program's objectives. [Click here for more information](#).

## **SECTION E – SUBMISSION REQUIREMENTS AND DEADLINES**

### **E.1 Submission Dates and Times**

Completed applications must be received electronically by 11:59 p.m. EST on June 19, 2026. Do not physically mail any applications. Applications received after this deadline may not be considered. PHMA will only accept one application per applicant.

**Questions Due Date and Time: June 17, 2026 by 11:59 p.m. EST.**

**NOTE:** All questions can be submitted via the Message Center in FedConnect or send questions to the Technical Point of Contact in Section A of this NOFO. PHMSA is not responsible for answering questions that are received after the Questions Due Date and Time.

To begin the process, applicants must be registered with <https://www.grants.gov/> to apply. It is highly recommended that applicants begin the registration process as soon as possible to avoid

delays with submission. **Failure to comply with the application requirements as described in this section may result in the failure of an application to be reviewed.**

### Accessing Grants.gov

1. **Grants.gov.** For new users, go to <https://www.grants.gov/applicants/applicant-registration> or go to the main page at <https://www.grants.gov/> and select “Register.” New user registrations for grants.gov can take up to two weeks to complete. For additional questions on how to register, contact grants.gov support at 800-518-4726 or e-mail [support@grants.gov](mailto:support@grants.gov).
2. **FedConnect.** Applicants are encouraged to register for an account with FedConnect at <https://www.fedconnect.net> before applying. Your organization’s Marketing Partner ID Number (MPIN), which can be retrieved from SAM, is required to create an account. For instructions on how to register in FedConnect and how it works, click on the link to access the [FedConnect: Ready, Set, Go! Tutorial](#). For other technical issues or questions, either e-mail [fcsupport@unisonglobal.com](mailto:fcsupport@unisonglobal.com) or call 1-800-899-6665, option 2. The FedConnect Support Center is staffed Monday–Friday, 8:00 a.m.–8:00 p.m. EST, except Federal holidays.

## E.2 Unique Entity Identifier (UEI) and System for Award Management (SAM)

PHMSA may not make an award to an applicant until the applicant has complied with all applicable unique entity identifier and SAM requirements. If an applicant has not fully complied with the requirements by the time PHMSA is ready to make an award, PHMSA may determine that the applicant is not qualified to receive an award and use that determination as a basis for making an award to another applicant. PHMSA recommends that applicants review the SAM database at [www.sam.gov/portal/public/SAM/](http://www.sam.gov/portal/public/SAM/) to ensure that their UEI number is updated and “active.”

Each applicant is required to:

- Register in SAM (SAM.gov) before submitting its application.
- Provide a valid UEI in its application.
- Maintain an active SAM registration and UEI with current information when it has an active Federal award or an application under consideration.

## SECTION F – APPLICATION REVIEW INFORMATION

### F.1 Criteria

PHMSA developed merit criteria to rate and select competing application. Submission of an

application is not a guarantee of award. PHMSA may, at its discretion, award a grant based on an application in its entirety, award only portions of a grant based on its application, or not award a grant at all.

### **Merit Criteria**

PHMSA will evaluate the extent to which the project will:

1. Meet the applicable research topic needs.
2. Be readily implemented or transferred to PHMSA's Core Research Program for demonstration and deployment.
3. Identify the research partnership(s) and SME(s) involved, as well as how involved the identified partner(s) will be in the project.
4. Establish work scope, tasks, milestones, and estimated project costs that align with project goals and objectives, as well as whether any potential risks have been identified and mitigated.
5. Involve students and defines their specific tasks and commitment to the project.

These criteria prioritize projects that target high-risk technical areas with clear plans and measurable, transferable outcomes. Results must be factual, unbiased, verifiable, and repeatable. A cooperative agreement award will not convey authority to award recipients to secure information or cooperation from pipeline operators.

### **Selection Considerations**

After completing the merit review, among projects of similar subject matter, PHMSA may prioritize projects with a focus on safety. PHMSA may prioritize applications that clearly demonstrate the project:

- Provides substantial safety benefits compared to existing conditions.
- Mitigates, to the extent practicable, any significant safety risks that could result after the project's completion.
- Does not negatively impact the safety of the traveling public, or any relevant group applicable to the program.

## **F.2 Review and Selection Process**

Please thoroughly read the [Review and Selection Process](#).

The Department intends to apply principles from [DOT Order 2100.7 \(Ensuring Reliance Upon Sound Economic Analysis in DOT's Policies, Programs and Activities\)](#) and [DOT Order 2100.9](#)

[\(Ensuring Nondiscrimination and Equal Opportunity in Department of Transportation Policies, Programs, and Activities\)](#) when evaluating applications and making award selections. To the maximum extent permitted by law, DOT will prioritize projects that are in alignment with the principles outlined in DOT Orders 2100.7 and 2100.9.

The Department seeks to fund projects that advance the priorities of this Administration as described in DOT’s mission statement and across executive orders.

Please note that to comply with the requirements of [2 CFR Part 200, Subpart E](#), PHMSA’s Agreement Officer and Grant Specialist may request additional information pertaining to your application during the application review and evaluation process.

### **F.3 Risk Review**

Prior to making an award, PHMSA is required to review and consider any information about the responsibility and qualification of the applicant that is accessible through SAM (see [41 U.S.C. § 2313](#)). An applicant may review information in the designated integrity and performance systems accessible through SAM and comment on any information about itself that a Federal awarding agency previously entered. PHMSA will consider any comments by the applicant, in addition to any other information available in SAM, in making a judgment about the applicant’s integrity, business ethics, and record of performance under Federal awards as part of the risk review required by [2 CFR § 200.206](#).

## **SECTION G – AWARD NOTICES**

### **G.1 Anticipated Announcement and Federal Award Dates**

Applicants chosen for funding will receive electronic notification of the Federal award. Upon notification, the applicant’s Authorized Representative must sign and return the award within the timeframe prescribed by PHMSA. PHMSA plans to make awards no later than September 30, 2026, with a proposed period of performance start date on the award agreement..

### **G.2 Federal Award Notices**

PHMSA’s grant awarding official will award grants to responsible and eligible applicants, at its discretion, whose applications are judged most meritorious under the procedures set forth in this NOFO. As explained in Attachment B (Terms and Conditions) funds will be administered on a reimbursement basis All funds provided by PHMSA must be expended solely for the purpose for which the funds are awarded in accordance with the approved application and budget, regulations, terms and conditions of the award, applicable Federal cost principles, and DOT’s financial assistance regulations. Funds may not be used for lobbying or litigation.

PHMSA intends to award multiple grants under this NOFO. PHMSA may, at its discretion, award a grant based on the application in its entirety, award funds for only portions of a grant application, or reject the application.

Unsuccessful applicants will be notified that their application was not selected for funding.

The grant award agreement, signed by both the PHMSA Agreement Officer and the recipient's Authorized Representative, is the authorizing document and will be provided through electronic means to the Authorized Representative.

## **SECTION H – POST-AWARD REQUIREMENTS AND ADMINISTRATION**

### **H.1 Administrative and National Policy Requirements**

The administration of this award by PHMSA and the recipient will be based on the following Federal statutory and regulatory requirements:

1. Section 12 of the [Pipeline Safety Improvement Act of 2002](#) (49 U.S.C. § 60101 note)
2. [2 CFR Part 200](#) – Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards.
3. [49 CFR Part 20](#) – New Restrictions on Lobbying. 49 CFR Part 20 will be incorporated by reference into any award under this program and is available at [www.gpoaccess.gov/ecfr/](http://www.gpoaccess.gov/ecfr/) by clicking on Title 49 CFR Part 20.
4. Civil Rights and Title VI – As a condition of a grant award, grant recipients will demonstrate that the recipient has a plan for compliance with civil rights obligations and nondiscrimination laws, including [Title VI of the Civil Rights Act of 1964](#) and implementing regulations ([49 CFR Part 21](#)) (including any amendments thereto), the [Americans with Disabilities Act of 1990](#) and [section 504 of the Rehabilitation Act](#), and all other civil rights requirements and accompanying regulations. This should include a current Title VI plan. DOT's and the applicable Operating Administrations' Office of Civil Rights will work with awarded grant recipients to ensure full compliance with Federal civil rights requirements. See "Standard Title VI/Non-Discrimination Assurances" for the form by the same name that must be completed and returned by the grant applicant.
5. [49 CFR Part 32, "Governmentwide Requirements for Drug-Free Workplace \(Financial Assistance\),"](#) which implements the requirements of Public Law 100-690, Title Subtitle D, "Drug-Free Workplace Act of 1988." 49 CFR Part 32 will be incorporated by reference into any award under this program and is available at [www.ecfr.gov](http://www.ecfr.gov) by clicking on Title 49 CFR Part 32.
6. Compliance with Federal Law and Policies – The applicant assures and certifies, with respect to any application and awarded project under this NOFO, that it will comply with all applicable Federal laws, regulations, executive orders, policies, guidelines, and requirements as they relate to the application, acceptance, and use of Federal funds and will cooperate with Federal officials in the enforcement of Federal law.
7. Federal Anti-Discrimination- Except where prohibited by court order, pursuant to Section

3(b)(iv)(A) of Executive Order 14173, Ending Illegal Discrimination And Restoring Merit-Based Opportunity, the Recipient agrees that its compliance in all respects with all applicable Federal anti-discrimination laws is material to the government's payment decisions for purposes of section 3729(b)(4) of title 31, United States Code.

Furthermore, except where prohibited by court order, pursuant to Section 3(b)(iv)(B) of Executive Order 14173, Ending Illegal Discrimination and Restoring Merit-Based Opportunity, by entering into this agreement, the Recipient certifies that it does not operate any programs promoting diversity, equity, and inclusion (DEI) initiatives that violate any applicable Federal anti-discrimination laws.

To the extent a court order bars the implementation or enforcement of one or more of the provisions with respect to a particular applicant or recipient, the Department will not implement or enforce the relevant provision(s) against that applicant or recipient for as long as the order remains in place.

## H.2 Reporting Requirements

Award recipients shall comply with the following reporting and presentation requirements, including submitting all deliverables via e-mail and upload to PHMSA's R&D Management Information System:

1. **Kickoff Meeting:** Shall be conducted within the first week after the effective date of the agreement.
2. **Progress Reports (every two months):** Shall submit reports every two months beginning after the effective date of the agreement. The first report shall cover the initial two-month period of the project. Subsequent reports shall cover each successive two-month period through completion of the project. If additional time is required, the recipient may request an extension of up to seven calendar days, which must be approved in writing by PHMSA prior to the original due date.
3. **Research Project Poster:** Shall submit after six months of the effective date of the agreement and presented at a designated government and/or public event; travel may be necessary.
4. **Draft Final Research Reports:** Shall submit a Draft Research Report no later than 60 days prior to the expiration of the agreement. PHMSA will review the Draft Research Report and provide comments within 14 days of receipt.
5. **Final Research Report:** Shall be submitted no later than 30 days before the expiration of the agreement. The Final Research Report shall be revised to address PHMSA's comments and resubmitted for review as directed.
6. **Research Brief:** Due no later than 30 days prior to agreement expiration.

7. **Closing Presentation:** Typically web-based and due no later than 15 days prior to the expiration of the agreement.
8. **Final Federal Financial Report (SF-425):** Due within 30 days after the expiration of the agreement.

Internal, milestone-based cost-efficiency incentives included by applicant to encourage on-time and on-budget completion of project tasks, provided that all incentives remain subordinate to PHMSA safety, quality, and regulatory requirements. The 12-month period of performance requirement is a condition of the award. Failure to complete project activities by the end of the period of performance will result in:

- Termination of funding for any incomplete work.
- Potential disallowance of costs incurred after the performance period.
- No eligibility for additional time or funding to complete remaining work.

Recipients are encouraged to monitor progress closely and adjust internal schedules as needed to ensure full completion by the deadline.

**Performance and Program Evaluation:** Program Evaluation is an assessment using systematic data collection and analysis of one or more programs, policies, and organizations intended to assess their effectiveness and efficiency (5 U.S.C. § 311). Recipients and subrecipients are encouraged to incorporate program evaluation including associated data collection activities from the outset of their program design and implementation to meaningfully document and measure their progress. Allowable data and evaluation costs are specified in 2 CFR 200.455(c)<sup>3</sup>. As a condition of grant award, grant recipients may be required to participate in an evaluation undertaken by DOT or another agency or partner. The evaluation may take different forms, such as an implementation assessment across grant recipients, an impact and/or outcomes analysis of all or selected sites within or across grant recipients, or a benefit/cost analysis or assessment of return on investment. DOT may require applicants to collect data elements to aid the evaluation and/or use information available through other reporting. Grant recipients must agree to: (1) make records available to the evaluation contractor or DOT staff; (2) facilitate and provide access to program records, and any other relevant documents to calculate costs and benefits; (3) in the case of an impact analysis, facilitate access to relevant information as requested; and (4) follow evaluation procedures as specified by the evaluation contractor or DOT agency staff.

<sup>3</sup> <https://www.ecfr.gov/current/title-2/subtitle-A/chapter-II/part-200/subpart-E/subject-group-ECFRed1f39f9b3d4e72/section-200.455>