

Office of Surface Mining Reclamation and Enforcement

Notice of Funding Opportunity

Science and Technology Projects Related to Coal Mining and Reclamation; Applied Science Projects

Funding Opportunity Number

S24AS00462

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BASIC INFORMATION

Announcement Type: Initial

Funding Opportunity Number: S24AS00462

Assistance Listing Number(s): 15.255

Estimated Total Program Funding: \$1,600,000

Expected Number of Awards: 8

Award Ceiling: \$200,000

Award Floor: \$100,000

Cost Sharing Required?

No

Closing Date Explanation

Electronically submitted applications must be submitted no later than 11:59 PM, ET, on the listed application due date.

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OMB Control Number:

Have Questions?

Jeff Ream

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Executive Summary

The OSMRE Applied Science Program funds the development of new reclamation science and technology to address environmental issues related to the mining of coal and reclamation of the land after mining. The program selects and funds applied science proposals that improve public and environmental health protection. The science and technology advanced by these projects serves the public through activities that:

- Protect identified endangered species
- Improve reforestation and re-vegetation
- Protect prime farmland
- Improve technologies to mitigate acid mine drainage
- Improve methods for locating underground mines
- Enhance the protection of the public and environment associated with surface coal mining

ELIGIBILITY

Eligible Applicants

State governments

County governments

City or township governments

Public and State controlled institutions of higher education

Native American tribal governments (Federally recognized)

Nonprofits having a 501(c)(3) status with the IRS, other than institutions of higher education

Private institutions of higher education

For profit organization other than small businesses

Small businesses

Others (see text field entitled "Additional Information on Eligibility" for clarification)

Additional Information on Eligibility

DOI's Minority Serving Institutions are encouraged to apply for Applied Science project funding. Applied Science projects contribute to the goal of improving the quality of science and technology instruction in institutions that serve high concentrations of minority students who historically have been underrepresented in higher education.

Documentation must be submitted to support an eligibility determination (e.g., proof of non-profit IRS 501(c) (3) status as determined by the Internal Revenue Service or an authorizing tribal resolution).

Cost Sharing Requirement

Cost Sharing Required?

No

GET READY TO APPLY

Required System Registrations

Unique Entity Identifier and SAM.gov Registration

Before applying, all **applicants** except individuals applying as a natural person **must be registered in SAM.gov**. During the SAM.gov registration the entity will obtain their Unique Entity Identifier (UEI).

The SAM.gov registration process can take several months. If your organization is not already registered in SAM.gov, begin the registration process as soon as possible.

To register in SAM.gov, go to the [SAM.gov website](https://sam.gov) and use the available resources to complete registration.

- **Financial assistance registrants** must review and certify compliance with the SAM.gov "Financial Assistance General Representations and Certifications".
- **Already registered?** You already have a Unique Entity ID. Before applying, check that your "Financial Assistance General Representations and Certifications" on SAM.gov is complete. Remember to renew your registration every year to keep it active while you

have an award or application in progress. You can update your registration whenever you need, including during renewal.

- **Need help?** For additional information and contact information on the [SAM.gov Help page](#).

Refer to Attachment – Submission Instructions & Tips.

GRANTS.GOV

This program accepts applications through [Grants.gov](#) so once you receive your UEI return to Grants.gov to [register](#) with Grants.gov. Please allow 30 days to register and set up a Workspace in Grants.gov. See [Submission Instructions](#) section below for additional details.

PROGRAM OVERVIEW

Program Goals

- The Office of Surface Mining Reclamation and Enforcement (OSMRE) Applied Science Program funds the development of new reclamation science and technology to address environmental issues related to the mining of coal and reclamation of the land after mining. The program selects and funds applied science proposals that improve public and environmental health protection. The science and technology advanced by these projects serves the public through activities that:
 1. Protect identified endangered species
 2. Improve reforestation and re-vegetation
 3. Protect prime farmland
 4. Improve technologies to mitigate acid mine drainage
 5. Improve methods for locating underground mines
 6. Enhance the protection of the public and environment associated with surface coal mining

Program Description

OSMRE is committed to helping States and Tribes achieve state-of-the-art science based regulatory and Abandoned Mine Land (AML) programs. The OSMRE's National Technology Transfer Team (NTTT), comprised of OSMRE personnel and one representative each from the Interstate Mining Compact Commission (IMCC) and the National Association of Abandoned Mine Land Programs (NAAML), was established to provide a forum to guide, coordinate, and communicate OSMRE's national and regional technology development and transfer activities.

1. Long-Term Consideration for Treatment of Abandoned Discharges and Post-Mining Discharges or GIS Application for Optimization of Mine Reclamation and Treatment of MineDrainage:

- a. Background - There are many acid mine drainage discharges that are currently being treated by state agencies and OSMRE. In uncertain economic times, it is anticipated that the governmental responsibility to treat these discharges may be on the rise, and resources will be stretched even further than they currently are. A wealth of data exists, covering types of

treatment, water quality and flow rates, operational, maintenance, and replacement cost, and histories from individual sites. A significant amount of information is available for review in documentation from the original site assessments conducted as part of the permitting process.

b. Recommended Intent of Project - By compiling previously collected data for systems across the country and developing criterion to label those projects as successes, it will be possible to ascertain with real world data the effectiveness and economy of different treatment methods being used for different types of discharges, and this information could help increase the efficiency of both government and industry water treatment efforts.

2. Validation of Current Water Treatment Chemical Model Assumptions:

a. Background - New models for water quality prediction have been developed, and additional models will continue to be developed in the future. To perform accurate cost estimates and determine optimal methods for mine drainage treatment, it is imperative that the assumptions for these models be tested with real-world data collected at existing mine drainage treatment sites or via pilot test sites run in real-world conditions.

b. Recommended Intent of Project - Projects that tested the assumptions in existing water quality prediction models and disseminate the results will lead to better decision-making by public and private water treatment professionals.

3. Assessment of the Potential for Economical and Environmentally Friendly Extraction of Critical Minerals from Acid Mine Drainage (AMD) and Coal Mine Waste for Sustainable Mine Water Treatment Reclamation:

a. Background - Rare earth elements are known to be present in coal, with the higher percentages being found in low quality coals and in the shales within, and immediately above the seams. Even higher concentrations have been discovered to be present in mining impacted water discharges, and in sludge that results from treating these discharges. Viable concentrations have also been noted in coal combustion residues. Although extraction of rare earth elements has traditionally required an energy intensive process, recent research indicates it is possible to extract them from coal mine waste using a solvent-based Ion exchange process.

b. Recommended Intent of Project – Projects that identify and evaluate the technical and economic feasibility of low energy and environmentally friendly rare earth element extraction are encouraged.

4. Applications of Imagery and Remote Sensing in the Mining/Reclamation Context:

a. Background – Digital imagery and remote sensing provide valuable information to technical staff while reducing the time and effort required to collect that information. Machine learning is particularly useful in identifying presence or propagation of features that are visible with satellite or aerial imagery.

b. Recommended Intent of Project – Projects that use satellite or aerial imagery to identify or monitor progress of any mining related time variable parameters are encouraged. Examples of such projects include analysis of changes in preferential vs invasive vegetative species,

and the identification of mining impacts such as presence or propagation of sinkholes, or seep or other mining impact.

5. Minimizing Impacts from Invasive Species in the Mining/Reclamation Context:

- a. Background – Nonnative invasive species are often present, and sometimes even dominate reclaimed mined land. The establishment of nonnative invasive species results in a loss of ecological services of that land and a loss of potential revenue for the landowner and may affect post-mining land use. The establishment of nonnative and even native invasive species also pose problems for land reclaimed to agricultural production. Many of these species invaded the reclaimed area and some were even planted during reclamation.
- b. Recommended Intent of Project – Projects are encouraged that use emerging or developing technologies to identify, prevent and eradicate, or minimize invasive species that existed prior to mining, became established during reclamation either through colonization or planting and/or invaded after reclamation.

6. Ground Truthing of Subsidence Model to Improve Model Performance or Development of Better New Models:

- a. Background – Questions remain as to the effectiveness of existing subsidence prediction models.
- b. Recommended Intent of Project - Under this topic, proposals could consist of analyzing correlations between actual subsidence and that predicted using existing models for past mining or proposed new models. Proposals could also include side-by-side comparison of existing models to assess relative strengths and weaknesses.

7. Investigation of ways to reduce Methane Emission from Abandoned Coal Mine site:

- a. Background – Methane is a powerful greenhouse gas. Over a 20-year period, it is 80 times more potent at warming than carbon dioxide. All underground and surface coal mining liberates methane as part of the normal mining operations. Underground coal mines contribute the largest share of methane emissions, with active underground mines the leading source of underground emissions. As work stops within the mines, the methane liberation decreases, but it does not stop completely. Following an initial decline, abandoned mines can liberate methane at a near-steady rate over an extended period.
- b. Recommended Intent of Project - OSMRE solicits studies in project designs that reduce methane emissions from abandoned coal mine sites including descriptions of whether and to what extent the proposed projects will reduce methane emissions.

8. Engineering Strength Properties of Polyurethane Foam (PUF) and Geomaterial Interface for Mine Safeguarding Applications:

- a. Background – Polyurethane Foam (PUF) is frequently used to plug vertical mine openings and to hold culverts in place within the mine. While engineering properties of PUF are well documented, the failure point is not the PUF itself but the interface between the PUF and the geomaterial on the sidewalls of the mine opening.
- b. Recommended Intent of Project – Projects that include Field and laboratory testing of the PUF/Geomaterial Interface to determine the engineering strength properties are encouraged. Laboratory and field testing of PUF to determine these properties under design loads should be included in the scope of work. Field-testing should include installation of a PUF plug within abandoned mine features with varying geological conditions. Instrumentation should be installed on the plug to determine stress and strain on the material during testing.

9. The Development of Software Technique (s) for Estimating Peak Settleable Solids During Mining:

- a. Background – A standard often used for total peak settleable solids is a pond effluent limit less than 0.5mL/L for a 10 year, 24-hour storm event. Certain software has been used in the past to see if this regulation has been met. However, some software vendors have been reluctant to update their software for Microsoft Windows 10 operating system. This has resulted in an increasing number of bugs/errors in the software over recent years. A field technique using an Imhoff cone can do this calculation, but it requires personnel to be located at a pond's effluent outlet during a storm-event to take a sample. Due to the unpredictable nature of weather, scheduling of workloads, and the safety of personnel, this field technique is not practical. Replacement software has been assessed, including HEC-RAS and HydroCAD, but neither do this unique calculation.
- b. Recommended Intent of Project – Projects that identify software that provides output that enables the user to easily determine total peak settleable solids during a storm with a 10-year return interval and 24 hour duration are encouraged.

10. Assessment of gas meters for long-term monitoring of Methane gas during and above Explosive Limits (5-15% volume):

- a. Background – Many gas meters are only used for personal safety and stop recording data when methane concentration reaches 5%, which is its lower explosive limit (LEL), and/or when O₂ drops to 20.5% from its normal atmospheric maximum of 20.9%.
- b. Recommended Intent of Project – Projects that identify and assess gas meters that operate and continue to log data beyond the lower explosive limit are encouraged. When assessing the meters, long-term monitoring should consist of data-logging methane (CH₄) gas readings during and above methane's explosive limits (5-15% volume), and corresponding oxygen (O₂) levels (i.e., ~ 10 – 20.9% volume) over approximately 30 days collecting gas data every 10 minutes or at least every hour. The assessment should include a comparison of the features for each meter, as well as a listing of its strengths and weaknesses.

11. Forestry Restoration Approach (FRA):

- a. Background – The FRA is the best technology currently available for mine land reforestation. The FRA should be employed when reforestation, wildlife habitat or other restoration efforts involving tree and shrub planting is desired. Reforestation using the FRA is a well-established alternative to grassland reclamation for surface coal mine sites and can maximize ecosystem services including carbon sequestration. Additionally, projects that quantify the social, economic, and environmental benefits of FRA could provide incentives to reclamation professionals to choose FRA over other reclamation approaches.
- b. Recommended Intent of Project - Projects are encouraged that evaluate the strengths and weaknesses, and quantify the social, economic and environmental benefits of different FRA techniques.

N/A

Legislative Authority

The Statutory authorities for the Technology Development and Transfer (TDT) Applied Science Program are the Surface Mining Control and Reclamation Act of 1977 (SMCRA), Public Law 95-87, and the Federal Grant and Cooperative Agreement Act of 1977, Public Law 95-224.

Type of Award

Projects will be funded through:

Funding Instrument

CA (Cooperative Agreement)

Recipient should expect the Federal agency to have substantial involvement in the project.

Substantial involvement will be in one or more of the following areas: (a) Approval of the recipient's implementation plans; (b) Review of the recipient's monitoring and evaluation plans (Reporting e.g. FFR, PPR); (c) Approval of specified key personnel; (d) Concurrence in the substantive provisions of subawards.

PREPARE YOUR APPLICATION

Application Content and Format

Application Documents

Applicants must submit the following forms with their application as specified below. Instructions for accessing and submitting application forms are provided in the [Submission Instructions](#) section of this document below. For instructions on completing form fields, see the form instructions on the [Grants.gov Forms Repository](#).

Forms/Assurances/Certifications	Submission Requirement
SF-424, Application for Federal Assistance Note: For applicants requesting more than \$100,000 in Federal funds, the Authorized Representative's signature (or electronic equivalent) on the Application for Federal Assistance form also represents their	Required from all applicants

Forms/Assurances/Certifications	Submission Requirement
certification of the statements in Appendix A to 43 CFR 18-Certification Regarding Lobbying	
SF-424A, Budget Information – Non-Construction Programs	Required for non-construction projects
SF-424B or D: Certifications and Assurances	Required for federal financial assistance
SF-428 and/or SF-429 (Cover Page & Attachment B), Request to Acquire, Improve, or Furnish Real Property Note: The SF-429 forms are only available in the Grants.gov Forms Repository . Applicants must download the form and include the completed form as an application attachment.	Required if requesting to acquire, improve, or furnish real property.
SF-LLL, Disclosure of Lobbying Activities	Required if requesting more than \$100,000 in Federal funds <u>and</u> the applicant has used or plans to use funds other than Federal appropriated funds for lobbying related to the proposed project.
Project Abstract Summary (OMB 4040-0019). Must include, in plain language: • Award purpose, • Activities to be performed, • Expected deliverables or outcomes, • Intended beneficiaries, Subrecipient activities (if known or specified at time of award)	Required from all applicants
DOI Research and Development (R&D) – Current and Pending (Other) Support Note: This form is available on the DOI website . Applicants must download the form and include the completed form as an application attachment.	Required for research projects.
DOI Research and Development (R&D) – Biographical Sketch Note: This form is available on the DOI website . Applicants must download the form and include the completed form as an application attachment.	Required for research projects.

Project Narrative

Project Description (no more than 20 pages) including:

- a. Objectives - list the specific objectives of the project including a summary statement addressing the value of the proposal to OSMRE and the coal mining State(s) and Tribe(s).
- b. Hypotheses to be tested, as appropriate.
- c. Background - provide a comprehensive description of the relevance of the project.
- d. Describe how the project is original and innovative.
- e. Describe how the project is cost effective.
- f. Preliminary Studies (if applicable) - describe any precursory research that applies to the project topic and what was determined from those preliminary results.
- g. Experimental Procedures/Methodologies - describe any laboratory or field testing to be performed and reference analytical methods to be used.
- h. Significance of the project to the OSMRE Applied Science Program - give a description of the need for this project, its technical merits, and how the project will be of significance to the priority issues identified in this solicitation. Provide a plan for technology transfer of the project results. Also, describe the extent of involvement in the project by the ultimate end users of the technology. Provide a description of resources (i.e., laboratory facilities) - describe the laboratory facilities, testing equipment, field sites, etc. available for conducting the tasks associated with this project. Provide evidence of legal right of entry and landowner consent for any project involving field work and list all sources used (literature cited) - list all sources used.

Statement of Work (3-5 pages) consisting of:

- a. Issue Identification - identify and briefly describe the issue(s) this project is addressing.
- b. Work Tasks - organize the project into specific work tasks and describe each work task individually.
- c. Time Allocation - describe how much time (by months) is to be allotted for each work task and when each task is to begin and end.
- d. Resource Allocation - for each work task, list the personnel who will be working on that task and specifically what each person will be doing.
- e. Quality Assurance/Quality Control - list measures planned to ensure that high quality results are achieved, e.g., descriptions of statistics to be used to evaluate data and comparing data to controls.
- f. Determination of Goals - identify the means to be used to determine that project goals are met.
- g. Deliverables must include:
 - An electronic version of the final report, including an Executive Summary, that is in compliance with Section 508 of the United States Workforce Rehabilitation Act of 1973 and that follows Final Report Template posted at the OSMRE Applied Science program website: <https://www.osmre.gov/programs/applied-science/projects>
 - A written summary (fact sheet) following the required format.
 - A PowerPoint presentation at an appropriate technical event mutually agreed upon by the Principal Investigator and the OSMRE regional technology transfer team lead for the region in which the study was conducted.

- Electronic copies of any peer reviewed article submitted for publication in a technical or other publication, and;
- A plan for additional technology transfer efforts including identification of planned peer reviewed publications and professional conferences where results are to be presented.

h. Public access to data - a statement is required that all data (non-PII) collected as part of this program must be accessible to the public, including the number of undergraduate and graduate students who worked on the project.

Budget Narrative

Applicants must describe and justify items and costs listed in their budget. The budget narrative must identify the following cost items: total estimated costs, non-Federal cost share, third-party contributions, and any pre-award costs. Total project cost is the sum of all allowable costs, including required and voluntary cost share and third-party contributions.

Budget items must be:

- Reasonable, allowable, allocable, and necessary
- Compliant with [2 CFR §200 Subpart E](#) cost principles

Indirect Costs: Applicants must indicate in their budget narrative how they will charge indirect costs, including the rate to be applied:

- De Minimis Rate: If eligible, state if your organization is opting to use the de minimis rate of up to 15% of total modified direct costs. Entities that do not have a current Federal negotiated indirect cost rate (including provisional rate) may propose to use the de minimis rate. For more information, refer to [2 CFR 200.414\(f\)](#).
- Negotiated Rate: State if you will negotiate with your cognizant agency. If your organization has previously negotiated a rate, attach a copy of the most recently negotiated rate agreement (active or expired).

Other Required Information

Conflict of Interest and Unresolved Matters Disclosures: If any actual or potential conflict of interest exists related to this project at the time of application, the applicant must provide sufficient information to support a program determination of significance per [2 CFR 1402.112](#). Refer to [2 CFR 200.112](#) Conflict of Interest and [2 CFR 200.113](#).

Overlap or Duplication of Effort Statement:

Applicants must state in their application if the activities, costs, or time commitment of key personnel proposed in this application overlap with those in any other Federal proposal or award or not. If no overlap exists, include a statement to that effect. If any overlap exists, provide:

- Activities: Description any overlapping activities.
- Costs: Description of any overlapping costs.
- Time: Description of any overlapping key personnel time.
- A copy of any overlapping or duplicative proposal submitted to any other potential funding entity.

- Details on when any overlapping proposal was submitted, to whom, and the expected date of the funding decision.

Proposals must specifically address least one of the identified eligible topics outlined in this section. Renewal of currently ongoing studies via this NOFO are not eligible. Potential topics for Applied Science funding are as follows:

1. Long-Term Consideration for Treatment of Abandoned Discharges and Post-Mining Discharges or GIS Application for Optimization of Mine Reclamation and Treatment of Mine Drainage:

- a. Background - There are many acid mine drainage discharges that are currently being treated by state agencies and OSMRE. In uncertain economic times, it is anticipated that the governmental responsibility to treat these discharges may be on the rise, and resources will be stretched even further than they currently are. A wealth of data exists, covering types of treatment, water quality and flow rates, operational, maintenance, and replacement cost, and histories from individual sites. A significant amount of information is available for review in documentation from the original site assessments conducted as part of the permitting process.
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- a. Background – The FRA is the best technology currently available for mine land reforestation. The FRA should be employed when reforestation, wildlife habitat or other restoration efforts involving tree and shrub planting is desired. Reforestation using the FRA is a well-established alternative to grassland reclamation for surface coal mine sites and can maximize ecosystem services including carbon sequestration. Additionally, projects that quantify the social, economic, and environmental benefits of FRA could provide incentives to reclamation professionals to choose FRA over other reclamation approaches.
- b. Recommended Intent of Project - Projects are encouraged that evaluate the strengths and weaknesses, and quantify the social, economic and environmental benefits of different FRA techniques.

Examples of Previously Funded Projects:

In FY 2020, the Applied Science program funded eight projects that focused on geomorphic impoundment reclamation, improving surface and water quality in mined areas, re-vegetation and use of reclaimed mine sites by threatened or endangered species, reclamation of AML coal mine waste sites, and potential uses of residues produced by treatment of mining impacted water. In late FY 2021, a NOFO for the Applied Science program was announced focusing on similar topics covered in FY 2020 with the addition of evaluation and extraction of Rare Earth Elements (REE).

Excluded Parties: OSMRE conducts a review of the SAM.gov Exclusions database for all applicant entities and their key project personnel prior to award. OSMRE cannot award funds to entities or their key project personnel that are identified in the SAM.gov Exclusions database as ineligible, prohibited/restricted or otherwise excluded from receiving Federal contracts, certain subcontracts, and certain Federal assistance and benefits.

SUBMISSION REQUIREMENTS AND DEADLINES

Address to Request Application Package

N/A

Submission Dates and Times

Closing Date for Applications: 03/21/2025

Closing Date Explanation

Electronically submitted applications must be submitted no later than 11:59 PM, ET, on the listed application due date.

Submission Instructions

Apply Through Grants.gov

To apply through [Grants.gov](https://www.grants.gov), please follow the instructions in the [Quick Start Guide for Applicants](#). Before applying, ensure that at least one person at your organization is registered and has the Authorized Organization Representative (AOR). Only the AOR can submit the application. If you need more users, they must create their own Grants.gov account. Follow these steps below to apply:

- *Create a Workspace:* Creating a workspace allows you to complete it online and route it through your organization for review before submitting.
- *Complete a Workspace:* Invite participants to the workspace so you can collaborate on the application. Required applications forms are included in the Grants.gov Funding Opportunity Package and can be completed in the Workspace, unless noted otherwise in the Required Forms table above. Check for errors before submission.
- *Submit a Workspace:* An application may be submitted through workspace by clicking the Sign and Submit button on the Manage Workspace page, under the Forms tab
- *Track a Workspace Submission:* After successfully submitting a workspace application, a Grants.gov Tracking Number (GRANTXXXXXXXX) is automatically assigned to the application.

The system generates a date and time stamp and sends it to the applicant's AOR via email as proof of submission. Make sure your application passes the Grants.gov validation checks. Do not encrypt, zip, or password-protect any files. Only registered individuals in SAM as both a user and an AOR can submit applications. Please allow 30 days to register in Grants.gov.

Application System Technical Support: For Grants.gov technical registration and submission, downloading forms, and application packages, contact Grants.gov Customer Support at 1-800-518-4726 or by email at Support@grants.gov.

APPLICATION REVIEW INFORMATION

Eligibility Review

During the eligibility review, the application is checked for timely submission, completed packages (see [Application Documents](#) above) and alignment with the requirements of this announcement. The Federal agency may remove an application if it does not pass the eligibility review.

In order to be compliant, an application must contain all of the required documentation and be responsive to the NOFO criteria:

1. Application Received Prior to Deadline
2. Application for Federal Assistance - Signed SF 424
3. SF-424A
4. Signed SF-424 B or D Assurances
5. Project Abstract
6. Indirect Cost Agreement
7. SF-LLL Disclosure or Certification of Lobbying Activities
8. Budget Narrative/Cost Justification
9. Project/Performance Site Location(s)
10. Key Contacts Form
11. Project Narrative
12. Proof of non-profit IRS 501(c) (3) status as determined by the Internal Revenue Service or an authorizing tribal resolution (if required)

If an applicant selected for funding hasn't finished their SAM.gov registration (see [2 CFR 25.200](#) and [2 CFR 25.110](#)) when the federal agency is ready to make an award, we may decide that the applicant is ineligible for the award and choose to grant it to someone else. Please refer [2 CFR 25.205](#) for more information.

Prior to making an award, the DOI checks the anticipated recipient and their key project personnel against the current list of prohibited or restricted persons or entities in the System for Award Management (SAM.gov) Exclusions database. We are prohibited from making an award if a recipient or any key personnel are found ineligible, prohibited, restricted, or otherwise excluded from receiving or participating in an award, as their ineligibility condition applies to this program.

If removed from consideration for ineligibility, the Federal agency will notify the applicant in writing.

Merit Review

Criterion 1: Technical Merit Maximum Points: 40	
Description	
Criterion 1: Technical merit refers to multiple aspects of the proposal: • Does the proposal have the potential to advance the science in mining or reclamation area? • Are research facilities described adequate to conduct the project research? • Have all aspects of the subject been considered to and is success likely? • Does the proposal address issues that are known to result in impacts to the environment or public safety?	Specific Details: 1. Will the results of the proposed study be a valuable addition to the science? 2. Does the proposed study present new or innovative techniques that are relevant to coal mining and/or coal mine reclamation? 3. Are the project description and statement of work thoroughly discussed, detailed, and logically sequenced? 4. Does the proposal address all technical variables that could reasonably be expected to impact success? 5. Does the proposal indicate the investigators have access to adequate facilities to conduct the proposed work? 6. Is the proposed time frame appropriate for the stated scope of work? 7. If the proposed study involves field activities, has access to the needed site(s) been obtained? 8. Will the results of the proposed study provide on-the-ground benefits rather than lead to subsequent research? 9. Is the applicant capable to implement & fulfill the requirement of the proposed study based on resource availability and the applicant's broad-based support, collaborators, and consultants to complete the study?
Criterion 2: Value to The Surface Mining Control and Reclamation Act (SMCRA) Maximum Points: 30	
Description	
Criterion 2: • Will the results of the proposed study provide a benefit to OSMRE and its ability to enforce SMCRA?	Specific Details: 1. Will the results of the proposed study be directly applicable to improving mining or reclamation practices, from an environmental perspective? 2. Will the study be an investigation of practical application of accepted theory?

	- Will results of the study have the potential to improve quality of life for residents of mining communities? - Does the proposed project plan to employ students during the study? - Will results of the study have the potential to provide long term post mining or reclamation benefits? - Can the proposed study be directly associated with one or more SMCRA based regulations or directives? Must include the citation(s).
Criterion 3: TECHNOLOGY TRANSFER POTENTIAL Maximum Points: 30	
Description	
Criterion 3: - Does the proposal include a plan for technology transfer? - Is there a specific plan for training, workshops, forums, or publications to transfer results?	Specific Details - Does the proposal include a technology transfer plan? - Does the proposal indicate a technology transfer plan will be implemented? - Will the results be presented at an OSMRE Technology Transfer Team call or Meeting? - Will the results be posted on the Principal Investigator's institution website? - Will the results be posted on a website other than OSMRE's or the Principal Investigator's institution website? - Is there a specific plan for training, workshops, forums, or publications to transfer results? - Will the results be presented at a multi-themed or national conference? - Will the results be published in a peer-reviewed publication with national distribution?

Criterion 4: Risk Assessment Factors Maximum Points: 0	
Description	
Criterion 4: Deduct five (5) points if the proposing institution is not current with project deliverables and/or performance measures on a previously funded technical investigation or applied science project.	Specific Details Five (5) points will be deducted from the total obtained from criteria 1, 2, and 3 if the proposing institution is not current with project deliverables and/or performance measures on a previously funded technical investigation or applied science project as determined by NTTT.

Review and Selection Process

This program reviews proposed budgets to ensure:

- figures are correct
- estimated costs are necessary and reasonable and clearly linked to project narratives
- avoid obviously unallowable costs
- identify costs requiring prior approval
- ensure indirect cost rates are applied correctly
- confirm cost sharing requirements are reflected in the budget.

This program reviews applications for potential overlap or duplication between the proposed project and any other funded or proposed project. Depending on the circumstances, DOI may choose to not make an award.

The Approving Officials may approve funding based on the Recommendation Memorandum; however, an application may be awarded out of rank order based on one or more of the following selection factors: the availability of Federal funds and the alignment with program priorities.

Risk Review

Prior to making an award, the program assesses the risk posed by the applicant per [2 CFR 200.206](#). If an award will be made, the program may apply special conditions corresponding to the risk assessed. For awards over the simplified acquisition threshold (currently \$250,000), the program reviews eligibility and financial integrity information in the applicant's SAM.gov records per [2 CFR 200.206\(a\)](#). The program also assesses financial management capabilities, project delivery experience, staffing resources, past performance, administration and reporting compliance records, and overall project complexity and potential challenges.

AWARD NOTICES

Notices of Federal Award are sent electronically via GrantSolutions or e-mail. These notices outline the terms, conditions, and payment instructions per [2 CFR 200.211](#). The Notice of Federal Award signed by an authorized Grants Officer is the legal instrument obligating financial

assistance to a recipient. Any other prior notice is not an authorization to begin work. If the program allows pre-award costs per [2 CFR 200.458](#), beginning performance before receiving a Notice of Federal Award is at the applicant's own risk.

Anticipated Project Start Date: 07/21/2025

Anticipated Project End Date: 07/21/2027

Review of applications, selection of successful applicants, and award processing is expected to be completed approximately 60 – 120 days after the applications are received. Anticipated start dates will vary.

POST AWARD REQUIREMENTS AND ADMINISTRATION

Administration and National Policy Requirements

For award administration and national policy requirements, see the [DOI General Terms and Conditions](#). Infrastructure projects require the use of American iron, steel, manufacture products, and construction materials per [2 CFR 184](#).

Geospatial Data

If you receive financial assistance from the Department of the Interior (DOI), recipient must follow these rules for geospatial data:

Follow Federal Standards: All geospatial data you collect or create must meet the standards set by the Federal Geospatial Data Committee (FGDC) or the Department of the Interior. This is required by the Geospatial Data Act of 2018, which is part of Public Law 115-254, specifically in Subtitle F (Geospatial Data), sections 751-759C (codified at [43 U.S.C. §§ 2801–2811](#)).

Include Metadata: Your Geographic Information Systems (GIS) files must include complete metadata. Metadata is information that describes the data, such as where it came from, how accurate it is, and how it should be used. This is to ensure that anyone using the data understands its context and quality.

Check for Existing Data: Before you start collecting new geospatial data, you need to check GeoPlatform.gov. This is to see if there is already existing geospatial data from federal, state, local, or private sources that can meet your needs and is available for free. If such data is available, you should use it instead of gathering new data.

These rules help ensure that geospatial data is reliable, high-quality, and that resources are used efficiently.

Reporting

The recipient's Notice of Award will detail all reporting requirements, including frequency, due dates, and instructions for requesting extensions. In general, but not limited to, recipients must:

- Submit Federal Financial reports and Program Performance reports.
- Use the [Federal Financial Report \(SF-425\) form](#) for financial reporting,
- Monitor award activities and report on program performance per [2 CFR 200.329](#),
- Promptly notify the awarding program in writing of any issues, delays, or conditions impairing award objectives per [2 CFR 200.329\(e\)](#),

- Disclose any conflicts of interest related to their award that arise during the award period per [2 CFR 1402.112](#),
- Report on the status of real property acquired under the award in which the Federal government retains an interest per [2 CFR 200.330](#), and
- Report all violations of Federal criminal law involving fraud, bribery, or gratuity violations potentially affecting the Federal award per [2 CFR 200.113](#).
- Report any matters related to recipient integrity and performance to SAM.gov per [Appendix XII to 2 CFR 200](#).
- If the Federal share of the award is more than \$100,000 and the recipient makes or agrees to make any payment using non-appropriated funds for lobbying in connection to the award, disclose those activities using the Disclosure of Lobbying (SF-LLL) form per [43 CFR 18.100](#).
- Federal Funding Accountability and Transparency Act of 2006 (FFATA) requires certain recipients to report information on executive compensation through SAM.gov and information on all sub-awards, subcontracts, and consortiums over \$30,000 to the [FFATA Subaward Reporting System \(FSRS\)](#).

Other Information