

ANNOUNCEMENT
TO SUBMIT APPLIED SCIENCE PROPOSALS
FOR OSMRE COOPERATIVE AGREEMENTS

National Technology Transfer Team

Applied Science Program

A program of the

United States Department of the Interior

Office of Surface Mining Reclamation & Enforcement (OSMRE)

Proposal Application Due Date: November 3, 2015

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INTRODUCTION

The United States Department of the Interior, Office of Surface Mining Reclamation and Enforcement (OSMRE) is requesting applied science proposals for projects that develop and demonstrate improved science and technologies related to the mining of coal and the reclamation of the land after mining. **There is no guarantee of funding for this solicitation. OSMRE has included a request for funding of Applied Science Projects in its FY 2016 budget. Funding will only become available if it is approved by Congress.**

Funded projects will help address important OSMRE issues during implementation of the Surface Mining Control and Reclamation Act (SMCRA). Applicants may request funding up to \$200,000. The award will be by cooperative agreement (or as an Interagency Agreement if another Federal Agency is involved). Each cooperative agreement will be for a period of time consistent with the proposal but **not to exceed two years** from date of award. Each cooperative agreement grantee may apply for and be granted non-funded extensions of time only as necessary to complete the project. OSMRE will only grant extensions if the delays are beyond the control of the Principle Investigator (PI). Included in this document are instructions for preparing the proposal including a list of eligible issues and information on the proposal review process. OSMRE will only accept proposals that address the specific List of Eligible Issues.

BACKGROUND

OSMRE is committed to helping States and Tribes achieve state-of-the-art science based regulatory programs. The OSMRE's National Technology Transfer Team (NTTT) comprised of State and Tribal members, as well as a representative from the Interstate Mining Compact Commission (IMCC), the National Association of Abandoned Mine Land Programs (NAAML), and the Western Interstate Energy Board (WIEB), was established to provide a forum to guide, coordinate, and communicate OSMRE's national and regional technology development and transfer activities. To accomplish this goal, the NTTT in cooperation with technology transfer professionals at all levels throughout OSMRE will:

1. Identify and recommend OSMRE technology development and transfer areas for potential investigation based on issues identified during the oversight of State or Tribal programs, national or regional needs, and OSMRE Executive Council initiatives;
2. Coordinate national technology development and transfer activities;

3. Ensure that OSMRE's national technology development and transfer planning initiatives fully address the current and future needs of the regions and directorates and support OSMRE's missions, goals, and strategic plan;
4. Identify and analyze requirements, projects, and issues and provide recommendations to the Executive Council for significant technology development and transfer concerns and activities; and
5. Promote a broader understanding of, and support for, technology development and transfer within OSMRE.

The goal of the NTTT Applied Science Program is to develop and demonstrate improved technologies to address environmental, restoration, and regulatory issues related to the mining of coal. The first objective to help us meet this goal is to develop technical tools to improve the efficiency and accuracy of regulatory authorities in permitting coal mines and enforcing their federally approved regulatory program. A second objective is to examine the potential for new technologies that can aid in the protection of the public and the environment during mining and reclamation. A third objective is to provide opportunities for college and university students to participate in research projects related to coal mining and reclamation issues in order to build a pool of qualified potential applicants for future implementation of SMCRA.

New mining and reclamation technology is unlikely to be adopted by industry or the States/Tribes unless it is more efficient and cost effective than the technology it would replace. For this reason, OSMRE is looking for applied science projects that address specific current issues identified by OSMRE that have the potential for improving, in a manner that protects the public and the environment, the efficiency with which the coal industry conducts surface coal mining and reclamation activities and the effectiveness of regulatory authorities that regulate these activities.

Applied Science projects are also an important component of OSMRE's Minority Higher Education Program (MHEP). Applied Science projects contribute to the goal of improving the science and technology capabilities of minority institutions and their graduates. To aid in this, OSMRE may fund the highest scoring, qualified Applied Science project proposal from one of OSMRE's partner institutions under the OSMRE MHEP.

The NTTT Applied Science Program Structure

There are two elements of the Applied Science program structure: (1) OSMRE and (2) the NTTT. Each element is described below.

OSMRE:

OSMRE is the sponsoring agency that provides funds for the Applied Science Program. Through its Executive Council, OSMRE provides executive direction and oversight to the NTTT Applied Science Program Team.

NTTT Applied Science Program Team:

The NTTT Applied Science Program Team is the key element of the Applied Science Program. All decisions by this team are made by consensus. The NTTT Applied Science Program Team is composed of members from OSMRE, the NAAML, and from States and Tribes that administer coal mining and reclamation activities. The members from OSMRE represent: Headquarters; the Technical Innovation and Professional Services (TIPS) program; and the three OSMRE Regions (Appalachian, Mid-Continent, and Western). The States are represented by one member each from State within the Western, Mid-Continent, and Appalachian regions that are appointed by the IMCC and the WIEB.

Critical roles and responsibilities of the NTTT Applied Science Program Team relative to this solicitation include:

- Approving overall NTTT Applied Science Program Team structure and timetables
- Developing dissemination strategies for making requests for proposals
- Developing a scoring system to be used by reviewers for evaluating proposals
- Evaluating proposals
- Compiling the results of the proposal reviews
- Making proposal scoring information available to the Executive Council
- Facilitating communications between the program elements

- Identifying important national and regional applied science issues for potential investigation

LIST OF ELIGIBLE ISSUES

For this solicitation, there will be six issues that will be considered for funding. **Proposals must specifically address one of the identified issues to be considered for funding.** If a consensus is reached by the NTTT Applied Science Program Team that a proposal does not clearly address one of these six issues, it will be returned to the sender. Eligible issues for this solicitation are:

Comprehensive Ecosystem Restoration

- **Geomorphic Reclamation**: The recent development and application of geomorphic reclamation techniques that results in a reclaimed land form that mimics similar naturally stable land forms allows for a more comprehensive approach to restoring the natural ecosystem form and function. A study is needed to quantify the environmental benefits relative to the economic costs that result from the use of geomorphic reclamation techniques to restore the pre-mining ecosystem functions. A study is also needed that would show how current geomorphic reclamation practices may be enhanced to make reclaimed landforms more accommodating to restoration of native species and how reclamation practices may be enhanced with subsurface reclamation techniques to better reestablish the hydrologic balance and prevent water quality degradation.
- **How does the Application of Forestry Reclamation Approach Attenuate Runoff Characteristics in Streams in Appalachia**: Streams in Appalachia can be impacted by mining and reclamation. A comprehensive study is needed to determine the extent to which the Forestry Reclamation Approach (FRA) method can improve attenuation of runoff events, reduce peak discharges, and re-establish base flows, water quality, and stream flow characteristics relative to non-FRA reclamation methods. Another area of study is a determination of the short-term impacts to water quality due to the application of FRA where final grading practices include placement of loose weathered spoil from the oxidized zone to promote root growth as compared to the use of reduced spoil materials.
- **Improving Soil Conditions in the Arid Western U.S.**: Abandoned mine lands in the arid west can be difficult to establish with native species. Physical characteristics such

as soil textures, soil pH, organic matter, and soil chemistry need to be amended to enhance the survival of suitable plant species. Studies are needed to investigate the seeding of temporary cover crops including plants that may de-compact, add organic matter, and otherwise improve soil conditions. The aim is to reduce erosion and water evaporation and improve soil quality and permeability to prepare the soil for the establishment of native plants.

Mine Pools and Hydrology

- **Mine Pools:** After cessation of underground mining, mine pools often develop in the voids remaining after mining. Discharges from these pools often have water quality issues that degrade streams and groundwater and are expensive to treat. They may also risk public safety if coal barriers or outcrops fail discharging large volumes of water into adjacent mines or onto the land surface. A study is needed to develop improved methods for modeling underground mine pools to predict, prior to mine closure, the potential for the mine pool to degrade surface and underground water resources. Also, a study is needed to better predict post-mining water levels under steady-state conditions including the total volume and location of water discharges from mines.
- **Water Quality Impacts from Mining:** Minimizing impacts from mining to surface water and groundwater resources are best accomplished by integrating new and better science applications into permitting and regulatory decisions. Applied science studies in several areas of potential impact to water resources have the potential to allow us to better predict long-term consequences, as well as to greatly advance reclamation science.

In order to better predict probable hydrologic consequences due to underground mining, studies are needed on how geologic fault systems and other unforeseen conditions may be impacting groundwater movement and availability. Another area of needed study is the impact of discharges from coal mine sites, both surface and underground, that contain high salinity and/or toxic metals concentrations which may impair stream ecology. A study is needed that would evaluate and characterize the long-term effects that mining and reclamation practices have had on stream resources including chemical, physical, and biological resources. The analysis could include the short- and long-term effect on stream ecology starting when final grading and re-vegetation is completed and ending when a steady-state condition is achieved. Examples of needed studies would

incorporate water quality impacts to aquatic biology where excess spoil fills have been constructed using contemporary mining methods specifically designed to reduce the potential for pollution discharges and a similar study of aquatic biology from surface mines without any excess spoil fills.

Longwall and high extraction underground mining can generate adverse effects on the biologic and hydrologic functions of overlying streams. A comprehensive study that could advance our ability to predict the impacts on these surface waters is needed. Also, a study is needed to determine the success of current remedial measures and to identify the best technology currently available for mitigation of stream impacts from underground mining.

Coal Slurry Impoundments Stability

- **Field Impacts of Coal Slurry Impoundments:** In the U. S., over 200 coal waste tailings dams are classified as having high hazard potential by the Federal Emergency Management Agency's hazard rating system. OSMRE requires comprehensive safety analysis in the design of coal slurry and refuse dams and has currently funded two projects: (1) the geotechnical properties and flow behavior of coal refuse in the laboratory, and (2) the effects of blasting on embankment stability. In addition to these studies, there is a need for a comprehensive in-situ field study on the geotechnical properties and flow behavior of fine coal refuse as it exists in coal refuse dams after placement. In particular, data are needed on the characteristics of the fine refuse, (1) after years of deposition, and (2) after loading resulting from upstream dam construction and final reclamation. Short- and long-term stability under static and impact loading should be evaluated.

PROPOSAL FUNDING

Applicants may request funding up to \$200,000 for this solicitation. If selected, the award will be funded through a cooperative agreement or as an Interagency Agreement if another Federal agency is involved. Each cooperative agreement will be for a period of time consistent with the proposal but not to exceed two years from date of award. Each cooperative agreement grantee may apply for non-funded extensions of time as necessary to complete the project. Cooperative agreements create an appropriate legal relationship between OSMRE and the performing organization and provide OSMRE the opportunity and duty to remain "substantially involved" during the course of the project.

OSMRE assigns points during the scoring of the proposal based on percent of cost share as follows:

- 0 = No cost share present
- 1 = Cost share present but less than 25%
- 2 = 25% - 50% cost share present
- 3 = Greater than 50% cost share present

An additional one point is added to the scoring if the cost share of at least 5% of the OSMRE funds requested is provided by a stakeholder other than the proposer. This may come from academia, industry, or other sources. Therefore, the total points that could be assigned relative to cost sharing are 4. For those proposals providing cost share, OSMRE requires, as part of the application, signed letters of support indicating specific actual cash and/or in-kind services meeting the proposed cost-share. Cost sharing is defined in 2 CFR Part 200.29 and 200.306.

$$\text{Total Project Value} = \text{Amount Requested From OSMRE} + \text{Cost Share}$$

Example of cost share based on a 25% cost share:

Total Project Value	Amount Requested From OSMRE	25% of Total Project Value
\$93,333	\$70,000	\$23,333
\$63,050	\$47,287	\$15,762

It is expected that funds may be made available in 2016. **However, there is no guarantee that any funds will be available.** We will notify all applicants when, and if, their proposal has been approved for funding. Applicants of projects not accepted for funding will also be notified.

PROPOSAL REVIEW PROCESS

All proposals received prior to the deadline will be distributed to NTTT Applied Science Program Team members for initial review and evaluation. There are four steps to the review and selection process as follows:

- (1) An appropriate technical expert will be selected to provide an initial scoring based on the guidance below. This scoring will be used by each NTTT Applied Science

Program Team member in their analysis and evaluation of the proposal in order to prepare for the consensus scoring in step 2.

- (2) The NTTT Applied Science Program Team will meet to conduct an official consensus scoring of all of the proposals.
- (3) The NTTT Applied Science Program Team will provide the consensus scoring results to the OSMRE Executive Council and the OSMRE Director for decisions concerning funding.
- (4) The NTTT Applied Science Program Team will provide proposals tentatively approved for funding by the Director to the OSMRE Grants Team for a three week financial adequacy review prior to communicating to the PI and the Project Technical Representative (PTR) of a decision on funding and the development of a cooperative agreement.

NTTT Applied Science Program Team reviewers will assign scores to the proposed projects based upon the following criteria:

- The value of the proposal to SMCRA programs
- The technical merit of the project
- The level of external financial support
- The technology transfer plans for the project

The scoring form can be found at the following web address:

<http://www.osmre.gov/programs/tdt/appliedScience/evaluationFormAS.pdf>

PROJECT SELECTION

The OSMRE Director, after consultation with the Executive Council, decides which projects to fund based on the information provided by the NTTT Applied Science Program Team, as well as other relevant considerations.

The OSMRE Director may choose to select the highest scored qualified MHEP proposal as one of the funded projects.

NTTT Applied Science Program Schedule

August 3, 2015	Announcement is published in grants.gov and OSMRE.gov of the solicitation available at http://www.osmre.gov/programs/tdt/appliedScience.shtm .
November 3, 2015	Deadline date for proposals to be submitted to the OSMRE contact as indicated below.
December 21, 2015	Scoring of proposals completed by technical experts and sent to NTTT Applied Science Program Team members.
January 30, 2016	Final consensus scoring of the proposals completed by the NTTT Applied Science Program Team.
February 28, 2016	Consensus scoring results submitted to the Executive Council and Director.

Decisions on funding by the Director will be communicated to the selected proposal's PI after the proposal has undergone a three week adequacy review by the Grants Team and PTR.

Once the Executive Council and Director determines that funding has been exhausted for this solicitation, the PIs for all remaining unfunded proposals will be notified.

SUBMISSION OF PROPOSALS

The proposal application must be received by **November 3, 2015**. Each proposal must be submitted as an electronic copy in PDF format by e-mail or placed on a CD in PDF format and delivered by a carrier. Letters of financial support must be signed originals on appropriate letterhead that have been scanned and included as PDF files. Send proposal applications to the following address:

Applied Science Program
Office of Surface Mining Reclamation and Enforcement
Mid-Continent Region
501 Belle St.
Alton, IL 62002
Attn: Debbie Dale
618-463-6463 ext. 5149
ddale@osmre.gov

Those submitting proposals may address questions concerning proposal submission to Debbie Dale (contact information presented above), Mike Richmond (412-937-2850, mrichmond@osmre.gov), Duane Matt (303-293-5072, dmatt@osmre.gov), or Cecil Slaughter (202-208-2866, cslaughter@osmre.gov).

Please note that misdirected proposal applications will be deemed late and returned to the applicant. All proposal applications must be complete at the time of submission. Later changes or addendums will not be accepted. The proposal may be e-mailed, mailed, or delivered.

FAXED PROPOSAL APPLICATIONS WILL NOT BE ACCEPTED.

PROPOSAL REQUIREMENTS

See Appendix 1 for Detailed Proposal Requirements.

- (1) All proposals must support activities in one of OSMRE's three regions although it may apply to more than one region.
- (2) Each proposal may include salaries, travel, equipment, materials, and services not including fees or profit.
- (3) Proposals must specifically address one of the identified issues to be considered for funding.
- (4) Proposals will not be accepted that constitute quality control or consumer evaluations for commercial products.
- (5) OSMRE reserves the right to reject, in whole or in part, any and all proposals.

In summary, in order for a proposal to be considered, it must include or meet the requirements of the following:

- Each proposal must be submitted as an electronic copy in PDF format by e-mail or on a CD in PDF format. Letters of financial support must be submitted as signed originals on appropriate letterhead that have been scanned and included as PDF files.
- Proposals must be received on or before the due date.
- Proposals must address all items under "Detailed Instructions for Preparing the Proposal" (Appendix 1)
- Proposals must include completed forms SF 424, SF 424B, and OSMRE 47.
- Proposals must include a statement that any data collected as part of this program must be accessible to the public.
- The proposal must include a summary statement addressing the value of the proposal to OSMRE and coal mining State(s) and Tribe(s).

REPORTING REQUIREMENTS

Funded projects will have the following reporting requirements:

- Timely submittals of quarterly progress reports
- Timely submittals of quarterly financial reports
- Draft final report for review and approval by OSMRE
- Comprehensive final report that is in compliance with Section 508 of the United States Workforce Rehabilitation Act of 1973 in preparation for uploading on OSMRE's website
- A written summary (fact sheet) following the required format for publication usage by OSMRE in its technology transfer efforts
- All deliverables identified in the cooperative agreement

APPENDIX 1

DETAILED INSTRUCTIONS FOR PREPARING THE PROPOSAL

We have developed a proposal application format which must be followed in preparing your application. Each of the following items must be completely addressed. The NTTT Applied Science Program Team may require enhancements to the proposal prior to funding. Please include the following sections in your proposal applications in the order in which they are listed. Items 1 through 7 must not exceed a total of 30 pages not including the required forms. Use 12 pitch font and 1 inch margins.

- 1) Application for Federal Assistance (Form SF 424) including Certifications and Assurances - you must complete all sections of this form and include signatures of appropriate officials on the form.
- 2) Table of Contents - please include major sections and the corresponding page numbers.
- 3) Project Abstract (limit to one page single-spaced) - include the project Title and the name of the Principal Investigator at the top of the page; include the appropriate issue addressed by the proposal, centered and two lines beneath the abstract.
- 4) Proposals from previously funded OSMRE Applied Science Projects - Principal Investigators must provide a complete history of projects funded through the OSMRE Applied Science program including their current status in terms of their stage of completion.
- 5) 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.
 - i) 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. Note if any cost sharing in the project is by end users of the technology and the potential for other end users to adopt project results.
 - j) 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.
 - k) Provide evidence of legal right of entry and land owner consent for any project involving field work.
 - l) Literature Cited - list all sources used.
- 6) 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, i.e., 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:
 - (i) 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 Appendix II of APPLIED SCIENCE COOPERATIVE AGREEMENT STANDARD OPERATING PROCEDURES FOR PTRs, GRANTS & TECHNOLOGY TRANSFER STAFF at <http://www.osmre.gov/programs/tdt/appliedScience.shtm>;
 - (ii) A written summary (fact sheet) following the required format as noted in Appendix III of the OSMRE standard operating procedures (SOP) for these projects;
 - (iii) A power point presentation at an appropriate technical event mutually agreed upon by the Principle Investigator and the applicable OSMRE regional technology transfer team;
 - (iv) Copies of any peer reviewed article submitted for publication in a technical or other publication, and
 - (v) 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 collected as part of this program must be accessible to the public.
 - i) Number of undergraduate and graduate students that worked on the project.
- 7) Explanation of Budget - the budget may include salaries, fringe benefits, travel, equipment, materials, and services not including fees or profit. It is imperative that

you specify any overhead, indirect costs, or benefits rates, as well as which budget categories are affected by those rates (e.g., Indirect Costs defined as “Facilities and Administration” = 10% of Total Direct Cost less tuition and equipment). In addition, salaries must include personnel descriptions (i.e., faculty, graduate student, hourly worker, etc.), the number of hours expended on the project, and the hourly rate. Fringe benefits may include tuition or tuition remission in accordance with institutional policies. Supplies must be listed in general terms (i.e. field supplies, general office supplies, etc.). Travel must include a description (trips to field site, conference, etc.), estimated number of hours for travel, and estimated cost per trip. In addition, for travel to conferences, estimate proposed expenses in the budget. Other Direct Costs must include a general description (i.e., chemical analysis) and include units and unit cost. Indirect Costs must include a breakdown of indirect cost rates and a brief description such as “proposer’s rate” or “facilities and administration”.

You must differentiate between funding sources in terms of total amounts and percentages requested from: (1) OSMRE, (2) the applicant, and (3) other (industry, university, etc.). In-kind contributions provided by industry, government agencies, and university departments need to be documented on appropriate letterhead, signed by authorized representative(s), and included as part of the proposal application.

Allowable Costs – Subcontractor and In-Kind Participants

Note: Allowable costs for federal agreements are determined by the type of recipient organization. All subcontractor or in-kind participant costs must be allowable under federal guidelines in order to be paid with federal funds or used as cost share. Allowable costs include both direct and indirect costs.

Commercial organizations are governed by the Federal Acquisition Regulations Part 31.2 (Contracts with commercial organizations). FAR Part 42.7 (Indirect Cost Rates) prescribes policies and procedures for establishing Indirect Cost Rates.

Actual salaries must be used allowing for reasonable escalation the second year. Fringe benefits must be based on actual cost (an average percentage rate may be used for estimating purposes) or an approved rate. Fringe benefits, indirect costs, G&A, overheads, and other rates must be federally approved. In the absence of actual federal approval (DCAA, HHS or other federal agency) documentation that these rates were previously accepted by a federal agency should be submitted. The name of the agency, address, contact person, and federal agreement number where the rates were accepted should be provided.

Each cooperative agreement will be for a period of time consistent with the proposal but not to exceed two years from date of award. Each cooperative agreement grantee may apply for non-funded extensions of time only as necessary to complete the project.

- 8) Identification of Proprietary Information - technical data or other data (i.e., trade secrets, confidential financial or commercial information), or other privileged information which the applicant prefers to withhold from public disclosure or use by OSMRE for any purpose except for proposal evaluation may be included in this application. To protect confidential data, each page must be specifically identified indicating each paragraph or line that contains confidential data the applicant wishes to protect. The applicant must also include a page following the budget which states the following:

TRADE SECRET INFORMATION

In order to explain properly the proposed work, it may be necessary to disclose within the proposal document trade secret information. If such is disclosed, the OSMRE wishes to take steps to keep such information confidential. However, it must be aware that such information does or does not exist within a given proposal. Therefore, please complete the following:

_____ There is NO trade secret information contained in this proposal package.

_____ There IS trade secret information contained in this proposal package. Such information is noted on pages _____.

NOTE: Please REDACT those pages which contain trade secret information. In other words, conspicuously highlight or mark those passages, diagrams, drawings, etc. that contain trade secret information.

Also note that the Project Abstract may be released to the public. Therefore, the abstract must not contain any trade secret information. Signed Letters of Commitment for all levels of cost sharing - signed letters of commitment from all cost-share supporters for actual cash contributions or for in-kind services provided during the period of time for which the project is to be funded are required with the proposal application. **Letters arriving after the proposal due date under separate cover will not be accepted.** Letters of commitment must include the type of contribution to be provided (cash contribution or in-kind service), the dollar amount committed, and/or the estimated dollar value of the service. Letters of commitment must be on letterhead and signed by a duly authorized individual. Cost-share commitments are contingent upon selection and funding of the submitted proposal.

- 10) Resumes of each senior investigator: Please limit resumes to projects that focus on relevant training and experience to the proposal. Senior investigators include the Principal Investigator and any other faculty or senior-level personnel involved in the

project.

- 11) Notification of Results: Please provide the e-mail address of the Principal Investigator and others you want to receive notice of the results of the selection process.