

2023 MINE MAP GRANT GUIDANCE

OBJECTIVES OF THE MMG APPLICATION

The MMG application is intended to identify applicants that can scan, catalog, georeference, and vectorize mine maps and data to best serve the public's need for information about the extensive mining that has occurred within the Commonwealth of Pennsylvania. Through the MMG, the DEP will identify applicants who can economically process high quantities of maps and data at the necessary standards.

The application is intended to encourage the submission of a wide variety of projects from a number of applicants. Applicants are encouraged to be broad in the scope of their proposed project(s) so that they have the greatest opportunity for a grant award. The application establishes: (1) the category or categories of processing work that will be conducted; (2) the scope and magnitude of the project by the identification of the number of maps scanned, and/or number of maps georeferenced, and/or the extent of the area to be vectorized; and (3) the cost of a project as described in the Budget Summary and the Detailed Budget.

What's New

Emphasis: The 2018 Grant emphasis was on Georeferencing and Vectoring. The 2023 Grant will emphasize completing the Vectorizing of statewide mining data layers and build towards creating 3-D models of mine workings and coal seams using the created vector data. All known available underground coal mine maps in the Commonwealth have been scanned. A limited amount of Grant funds will be reserved in case additional maps are discovered that will need scanned. Most maps needed to complete the Vectorizing have been Georeferenced, but approximately 50% of scanned maps have yet to be Georeferenced. Completing Georeferencing of these maps will be a secondary priority of this Grant cycle.

New Category: The 2023 Grant will introduce a new work category called "3-D Modeling". Vector data created during this and previous Grant cycles will be used to create hydrologically correct 3-D models of mine workings and coal seams.

Grant Submission: Prior Mine Map Grant applications were submitted via paper copies to the Department of Environmental Protection. The Department of Environmental Protection has transitioned to an Electronic Single Application (ESA) process. This process is administered by the Department of Community and Economic Development (DCED). The application document and attachments must be completed and uploaded into the Commonwealth eGrant system at www.esa.dced.state.pa.us. For assistance with ESA, please contact DCED's customer service center by phone at 800-379-7448 or by email at ra-dcedcs@pa.gov

PROJECT PROPOSALS

Applicants may propose to conduct scanning and cataloging, georeferencing, and/or vectorizing projects that are developed from DEP's mine map inventories, develop projects from mine map inventories that they own or that are under their control, or they may develop projects that contain information from both DEP's inventories and their own inventories. DEP will provide devices known as portable computer hard drives to transport electronic data to and from grantees. Applicants proposing to process mine maps or mine information that they own or that is under their control are to contact Matthew Cavanaugh at 724-769-1754 prior to developing a proposal.

APPLICANT ELIGIBILITY

Application to the MMG is open to all institutions of learning and incorporated nonprofit organizations that are located in Pennsylvania. Applications submitted by ineligible applicants will not be considered. Projects are to be conducted by the grantees and not by subcontractors to the grantees.

PROJECT MANAGEMENT, OWNERSHIP, AND CONTROL

Grantees are responsible to assure that the results of their projects conform to the standards established in their grant agreements. A DEP Project Manager will be assigned to each grant. Information developed under a MMG project, including electronic files and any programing and uncompiled source code required for reproduction or reprocessing of the information resulting from a project, becomes part of the public domain. Grantees retain and use all the information they produce under the MMG. Grantees shall provide DEP with copies of all the information they produce under their MMG project. Any materials, products and devices owned by DEP and provided to the grantee shall be returned to DEP at the conclusion of the grant or at the request of DEP.

PROPOSAL RATING CRITERIA

The criteria used by DEP to evaluate proposals have been established throughout the MMG Application Package (package) and more specifically in the Applicant Qualifications, Requirements, and Preferences by Project Category sections of the Guidance and in the Application Form and the Detailed Budget. Although cost factors are important to the evaluation of a MMG application, the quality and reliability of work, which are dependent on the use of adequate and experienced staff and equipment, are of fundamental importance to the evaluation of proposals. As a result, grants will be awarded to grantees based not only upon cost considerations, but also upon their ability to complete the projects they propose, as demonstrated in their applications. Preferences will be given to applications that meet the special needs of the MMG that are identified throughout the application. Most significantly, the rating criteria are intended to identify proposals that support the dissemination of mining information that results in the greatest benefits to the public.

APPLICATION SOLICITATION AND SUBMISSION TIMES

The MMG Application Solicitation is scheduled to be announced on February 1, 2023. All applications shall be submitted electronically to the Commonwealth eGrant system (www.esa.dced.state.pa.us) by 11:59 PM, February 28, 2023.

CONTACT INFORMATION

All substantive questions about the MMG Application Solicitation shall be made by applicants from an email account that permits the delivery of responses from DEP. Applicants shall email all substantive questions about the MMG Application Solicitation to RA-MMG@pa.gov. Applicants proposing to process mine maps or mine information that they own or that is under their control are to contact Matthew Cavanaugh at 724-769-1754 prior to developing a proposal. Informal contacts, such as those related to specific maps or mine information that applicants may be contemplating for inclusion in their projects, may be made to Matthew Cavanaugh at 724-769-1754.

APPLICATION SUBMITTAL INSTRUCTIONS

The application document and attachments must be completed and uploaded into the Commonwealth eGrant system (www.esa.dced.state.pa.us) by 11:59 PM, February 28, 2023.

For assistance with the eGrant system, please contact the Pennsylvania Department of Community and Economic Development's Customer Service Center by phone at 800-379-7448 or by email at ra-dcedcs@pa.gov.

APPLICANT QUALIFICATIONS, REQUIREMENTS, AND PREFERENCES BY PROJECT CATEGORIES

This section contains essential information about the criteria that will be used to evaluate applications. Refer to this information as you complete your application form and fully describe your skills, abilities, and other resources in your application. Add as many sheets to your application as are needed to fully demonstrate the assets you can bring to your MMG proposal.

Mine Map Scanning and Cataloging

Applicants shall have the ability to perform professional scanning work of mine maps and other related materials provided by or approved for processing by DEP in accordance with standards established in the Mine Map Processing Standards (Attachment I and provided at [Mine Map Grant \(pa.gov\)](http://Mine Map Grant (pa.gov))) and DEP's Guidance for Data Management (provided at [Mine Map Grant \(pa.gov\)](http://Mine Map Grant (pa.gov))), and produce electronic Tagged Image File Format (TIFF) files at a resolution of 400 dpi and processed as RGB true color 24 bit uncompressed TIFF images.

Applicants shall also have the ability to evaluate maps and precisely follow map identification procedures in accordance with standards established in the Mine Map Processing Standards (Attachment I) to name individual maps and enter the appropriate metadata associated with a map, such as but not limited to: mine name, operator, dates, coal seam, etc., into the online Pennsylvania Historical Underground Mine Map Information System (PHUMMIS) database, in order to create a searchable catalog of the scanned mine map inventories.

Preference will be given to applicants: (1) that have demonstrated experience in scanning documents especially those with experience with large format documents, maps, and bound materials; and (2) who own, lease, or have access to use a large format scanner, such as a Cruse Camera Scanner, and other types of specialty scanners that are designed to process bound materials, which they agree to use for the MMG.

Mine Map Georeferencing

Applicants shall have the ability to perform professional georeferencing (a process that relates a feature on a map to a point in space) work on electronic TIFF files and MrSID compressed images of scanned mine maps provided by or approved for processing by DEP and to do so in accordance with the georeferencing standards established in the Mine Map Processing Standards (Attachment I and provided at [Mine Map Grant \(pa.gov\)](#) and DEP's Guidance for Data Management (provided at [Mine Map Grant \(pa.gov\)](#) or as otherwise authorized by DEP as part of the grant agreement. This work may require the grantee to utilize hardcopy maps and data, various computer software applications, and data sources.

Applicant will be required to have on staff a professional GIS technician who has achieved at least an undergraduate university degree (or the international equivalent) in geography, computer science, or other field that required at least 12 credits in Geographic Information Systems (GIS) and two years experience working as a GIS professional, who will personally oversee quality control and quality assurance of the grant work.

Preference will be given to applicants: (1) with staff that have demonstrated experience in professional georeferencing work; and (2) that have, or that have demonstrated the ability within their grant application to obtain, or to obtain the use of, equipment and facilities that are sufficient to enable the staff to carry out georeferencing of the mine maps.

Mine Map Vectorizing

Applicants shall have the ability to perform professional vectorizing work on georeferenced electronic TIFF files and MrSID compressed images of scanned mine maps. Vectorizing project work shall be completed to levels of accuracy and precision in accordance with the standards established in the Mine Map Processing Standards (Attachment I and provided at [Mine Map Grant \(pa.gov\)](#) and DEP's Guidance for Data Management (provided at [Mine Map Grant \(pa.gov\)](#) or as otherwise authorized by DEP as part of the grant agreement.

Applicant will be required to have on staff a professional GIS technician who has achieved at least an undergraduate university degree (or the international equivalent) in geography, computer science, or other field that required at least 12 credits in Geographic Information Systems (GIS) and two years experience working as a GIS professional, who will personally oversee quality control and quality assurance of the grant work.

Preference will be given to applicants: (1) with staff that have demonstrated experience in professional vectorizing work; and (2) that have, or that have demonstrated the ability within their grant application to obtain, or to obtain the use of, equipment and facilities that are sufficient to enable the staff to carry out vectorizing of the mine maps.

3-D Modeling Of Mining Features

Applicants shall have the ability to perform professional 3-Dimensional Modeling of vectorized mining data. The vectorized data consists of feature classes/ shapefiles of coal seam elevation points and mined out extents as depicted on georeferenced mine maps. 3-D Modeling project work shall be completed to levels of accuracy and precision in accordance with the standards established in the Mine Map Processing Standards and DEP's Guidance for Data Management or as otherwise authorized by DEP as part of the grant agreement.

Applicant will be required to have on staff a professional GIS technician who has achieved at least an undergraduate university degree (or the international equivalent) in geography, computer science, or other field that required at least 12 credits in Geographic Information Systems (GIS) and two years of experience working as a GIS professional, who will personally oversee quality control and quality assurance of the grant work.

Preference will be given to applicants: (1) with staff that have demonstrated experience in professional 3-D modeling work; and (2) that have, or that have demonstrated the ability within their grant application to obtain, or to obtain the use of, equipment and facilities that are sufficient to enable the staff to carry out modeling of the mining vector data.

OTHER APPLICANT PREFERENCES

Preferences will be given to applicants that (1) propose projects that address the Commonwealth Investment Criteria (provided at [Mine Map Grant \(pa.gov\)](#)) that increases job opportunities and fosters sustainable businesses;

(2) employ or engage mine engineering staff or other technical mining staff who can interpret complex mine maps and identify map features, which requires mining expertise; (3) are learning institutions; and (4) own or have access and control to private map or data collections that they are willing to process and then have the results entered into the public domain.

INDIRECT AND DIRECT COSTS

Indirect Costs are expenses that are incurred in the course of administering the MMG but that are not exclusively used for the MMG. In proportion to the utility they provide to the MMG, they may include charges for the partial use of telephones, computers, postage and printing, office cleaning, insurance, professional licensing fees, miscellaneous office supplies, equipment rentals, utilities, rent, and for shared clerical, administrative, legal, and accounting staffs. Direct costs include salaries and benefits directly used for the MMG.

The indirect cost rate shall not exceed 45 percent of the total direct cost of salary and benefits. The indirect cost rate is not applicable to equipment, supplies, and travel costs.

FUNDS USE LIMITATIONS

The combined costs of equipment, materials, and supplies shall not exceed 20 percent of the total amount of the grant request.

The indirect cost rate shall not exceed 45 percent of the total direct cost of salary and benefits.

The direct cost of salary and benefits used for direct administration of grant work (including training) shall not exceed 15 percent of the total amount of the grant request.

Minimum Grant Request

The minimum grant amount awarded will be \$300,000. No request under \$300,000 will be considered and deemed ineligible.

TRAVEL

Travel expenses incurred under the MMG are reimbursed according to the provisions of the Commonwealth Travel Manual that is provided at [Mine Map Grant \(pa.gov\)](http://pa.gov). Applicants should plan appropriately for the cost of traveling to business meetings and map/equipment transport and include the appropriate amount in their Detailed Budget. All travel costs shall be pre-approved by DEP before travel occurs.

GRANTEE REQUIREMENTS

Those awarded grants shall do the following:

1. Enter into a formal grant agreement with DEP that will include a budget and terms, general conditions, and special conditions.
2. Complete and deliver all project work that is eligible for payment, including associated reports and invoices, as specified in the MMG Agreement.
3. Conduct all project work and incur all costs that are invoiced within the grant period of performance.
4. Provide "Inventory Control Reports" for tracking of the work completed and reimbursement "Invoices" for each Grant Project on a quarterly basis or more frequently if required by DEP. Electronic forms for the "Inventory Control Reports" and "Invoices" will be provided to the grantees by DEP.
5. Upon the request of DEP, surrender all maps and documents on loan from DEP, copies of all electronic files, work materials (including notes) and computer programming (including uncompiled source codes that are related to the MMG), and any devices as specified in the MMG Agreement.
6. The grantee shall add all mine maps and materials provided by DEP to the grantee's property and casualty insurance policy while the documents are in the possession of the grantee. The documents shall be insured at a minimum value of \$100 per map and \$1 per page or sheet of documents other than maps.

7. The grantee shall track the status of the work they perform as it is completed in the Map Processing section of the online PHUMMIS database. Applicants shall ensure that they are able to connect to the DEP's electronic network via a virtual private network (VPN) connection, or other means prescribed by the DEP, in order to access PHUMMIS.
8. The grantee shall establish and perform quality control procedures in accordance with standards established in the Mine Map Processing Standards (Attachment I), or otherwise prescribed by the DEP, on all work performed under the grant prior to the delivery of said work to the DEP to ensure all work delivered meets standards established in the Mine Map Processing Standards (Attachment I) for each project category. Work delivered to the DEP that does not meet the established standards may be returned to the applicant for correction and can affect expediency of invoice payment and future consideration of the Mine Map Grant Program involvement.