



UNITED STATES DEPARTMENT OF THE INTERIOR

U.S. GEOLOGICAL SURVEY

-- EDMAP --

**The Educational Component of the
National Cooperative Geologic Mapping Program**

Authorized by The National Geologic Mapping Reauthorization Act of 1999
(Public Law 106-148)

OBJECTIVES

- O Provide funding for graduate students, and selected undergraduate students, in academic research programs, through cooperative agreements that involve geologic mapping as a major component.**
- O Expand the research and educational capacity of academic programs that teach earth science students the techniques of geologic mapping and field data analysis.**
- O Facilitate the publication and distribution of geologic maps generated in field-based academic research programs.**

PROGRAM ANNOUNCEMENT No. 02HQPA0004

For Fiscal Year 2002

ISSUE DATE: September 4, 2001

CLOSING DATE & TIME

December 4, 2001 at 3:00 p.m.

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LIST OF ATTACHMENTS

Proposal Submission Forms and their Instructions

- A. Standard Form (SF) 424 - Federal Assistance
- B. SF-424B - Assurances – Non-construction Programs
- C. Certifications for Federal Assistance
- D. EDMAP Proposal Summary Sheet
- E. Budget Sheets (Total Proposal and Individual Projects)

Forms needed for reimbursement after award is granted

- F. SF-270 - Request for Advance or Reimbursement; and,
- G. SF-3881 - Payment Info Form ACH Vendor Payment System
- H. SF-269A - Financial Status Report

Contact Information

- I. USGS Project Chief—Contact Information
- J. State Geological Surveys—Contact Information

PART I. Public Law, Program Priorities, and Geologic Map Products

A. The National Geologic Mapping Act

The 102nd Congress recognized that the USGS and the State Geological Surveys needed a coordinated program to prioritize the geologic mapping requirements of the Nation, and to increase production of these geologic maps. The National Geologic Mapping Act (Public Law 102-285) was signed into law in 1992 and created the National Cooperative Geologic Mapping Program. The Act has been reauthorized twice since then, most recently by the 106th Congress in 1999. The Act recognizes that geologic maps are the primary database for virtually all applied and basic earth-science investigations. To read copies of the original act and the two reauthorizations, visit: <http://ncgmp.usgs.gov/>

The objectives of the National Cooperative Geologic Mapping Program (NCGMP) as outlined in the Act are:

1. Determining the Nation's geologic framework through the systematic development of geologic maps, such maps to be contributed to the National Geologic Map Database.
2. Developing complementary national databases (e.g., geophysical and paleontologic databases) that provide value-added information to the National Geologic Map Database.
3. Applying cost-effective mapping techniques that assemble and disseminate geologic-map information, and that render such information of greater application and benefit to the public.
4. Developing public awareness of the role and application of geologic-map information to the resolution of national issues of land use management.

For a more detailed look at the NCGMP 5-Year Plan visit:
<http://ncgmp.usgs.gov/NCGMP5yrplan2000.html>

B. EDMAP Component of the NCGMP

The primary objective of the EDMAP component of the NCGMP is to train the next generation of geologic mappers. To do this NCGMP provides funds for graduate and selected undergraduate students in academic research projects that involve geologic mapping as a *major* component. Through these cooperative agreements NCGMP hopes to expand the research and educational capacity of academic programs that teach earth science students the techniques of geologic mapping and field data analysis. Another important goal is to increase the level of communication between the Nation's geologic surveys (both State Geological Surveys and the

USGS) and geologic mappers in the academic community. We hope that this improved communication will have two results: 1) that the academic mapping community will learn more about the societal needs that drive geologic mapping projects at the USGS and State Geologic Surveys, and 2) more geologic maps produced in academia will eventually be made available to the public.

C. EDMAP Proposals

Only one proposal will be accepted from an individual principal investigator (Professor or faculty advisor), although more than one proposal *will* be accepted from a single university if authored by different principal investigators. Although EDMAP awards are intended to support student mapping in the field, the student's faculty advisor must write the proposal. All proposals should be coordinated with a State Geological Survey or with a project in the USGS National Cooperative Geologic Mapping Program or other USGS projects that have a significant geologic mapping component. (To obtain contact information about State Geological Surveys visit: <http://www.kgs.ukans.edu/AASG/AASG.html> or see **Attachment J**; to obtain contact information for USGS Projects visit: <http://ncgmp.usgs.gov/> or see **Attachment I**). As part of this coordination and planning process, the method of eventual publication should be discussed very early in the planning process. However, receiving EDMAP funds does *not* constitute a guarantee publication of any map. *A written letter of support from a State Geologist or USGS Project Chief must also accompany all proposals.*

D. Geologic Map Products

The geologic maps will consist of new data acquired during the award period and should be at a scale of 1:24,000 or larger. If smaller scale geologic mapping is proposed, it should be well justified. It is hoped that students will learn the techniques of detailed field mapping, and in most cases reconnaissance mapping and compilation is not considered appropriate. Emphasis is on the development of *new* geologic maps.

Geologic maps shall be submitted in paper format. *Interim geologic maps (end of 1st field season) can be draft "field sheet" quality, as long as there is clear evidence that the student has made significant progress.* A geologic map is defined as a map that depicts the geographic distribution at the earth's surface of bedrock and/or surficial geologic materials and structures, on a published base map showing topography, hydrography, culture, cadastral, and other base information. The geologic map generally includes most of the following: an explanation, a description of map units and symbols, and cross sections. Examples of items or maps that are *not* considered appropriate substitutes for geologic maps include: structure contour maps, isopach maps, stratigraphic and/or facies diagrams, aquifer maps, gravity or magnetic anomaly maps, and element-distribution geochemical maps. If these types of derivative maps are to be produced, they must be in addition to a basic geologic

map as described above.

PART II. Timetables, Eligibility, Format Instructions, and Proposal Evaluation

A. Timetables

Proposal Announcement Date: September 4, 2001

Closing Date and Time for Proposal Submission: December 4, 2001 @ 3:00 p.m.

B. Eligibility - Who May Submit a Proposal

University professors must write and submit the proposals. EDMAP cooperative grants are intended to fund students doing geologic mapping in the field. While it is proper for the professors/advisors to ask for some logistical support so that they may be with their student(s) in the field for a credible amount of time, the bulk of the award is intended to support the student's mapping efforts. EDMAP cooperative grants *do not* support faculty salaries. Masters and Doctoral students of Geoscience or related Departments at accredited United States colleges and universities are eligible applicants to the EDMAP Program. In addition, qualified undergraduate Juniors and Seniors are also eligible. These undergraduates should have received some basic mineralogy, petrology and structural geology training prior to the time they will do the geologic mapping proposed in this proposal.

NOTE: Since the timing of proposal submission comes soon after the beginning of the school year, we appreciate that it is sometimes difficult to identify the student(s) who will do the mapping, especially in the case of new Masters candidates. This year (for the first time) we will allow proposals to be submitted that do not identify the actual students who will do the mapping. However, the name and vitae (qualifications) of ALL students must be submitted to the USGS, before the Office of Acquisition and Grants formally issues the cooperative agreement. This should give professors two or more extra months to identify student mappers. We still hope that *most* students will be identified in the original proposals. Finally, even if the name and vita of the student(s) is not included in the proposal, it must be made clear whether the student is an undergraduate, a Masters candidate, or a Ph.D. candidate. Otherwise the Review Panel will not be able to determine whether the students are qualified to do the described level of work.

C. Proposal Format Instructions

Arrange your proposal according to the format provided below. Following this

format ensures that every proposal contains all essential information, and is evaluated equitably. If you include a cover letter, which is NOT necessary, provide only a single copy and do not staple it to the rest of the proposal.)

All proposals shall include the following documents in the order listed (from top to bottom).

1. Standard Form 424, Application for Federal Assistance (**Attachment A**). The person who signs the SF-424 in Block 18 must have the authority to bind the University to the terms of the assistance award.
2. SF-424B Assurances - Non-Construction Programs (**Attachment B**)
3. Certifications for Federal Assistance (**Attachment C**).
4. Negotiated Rate Agreement.
5. Support letter from State Geologist or USGS Project Chief.
6. EDMAP Proposal Summary Sheet (**Attachment D**).
7. Proposal Technical Text. This text should be no longer than 10 pages, no smaller than font size 10, and have 1-inch margins. Remember that a good figure (graphic) is worth a thousand words, and the Review Panel has many proposals to read. The 10-page limit includes *all* text, figures, and vitae. (The attachments and budget sheets are *not* included in the 10-page limit.) Exceeding the page limit will **not** be to your benefit. The text should include the following:
 - a. Introduction. Should be a brief description of problem. Particular reference should be made to any earlier mapping, or mapping going on nearby at present time. If the student has received an EDMAP award in a previous year, results of that work should be briefly summarized in a paragraph or two.
 - b. Location and geologic setting. Should contain a clear index map with scale, latitude and longitude, and other pertinent information. Remember that the EDMAP Review Panel does not know the geography of your state as well as you do.
 - c. Purpose and Justification. This main section should answer a few important questions. Why are you doing this mapping? What important scientific questions may be answered by your mapping?

What benefits will society enjoy from the mapping? Avoid boilerplate or major exaggeration.

- d. Strategy for Performing the Geologic Mapping. This short section should explain how you plan to achieve the scientific results presented in the previous section. If the objectives can only be accomplished with the support of drilling, or other support investigations such as geochronology or geochemistry, please mention them here. Keep in mind that most of the budget request should go toward getting the student in the field, and that these support investigations should be a limited percentage of the overall request.
 - e. Timetable and mentoring strategy. Provide a realistic timetable and approach for completing the mapping project. Explain how much time the faculty advisor will spend in the field with the student. Will there be any interaction, such as a field trip, with representatives from the State Geological Survey or USGS?
 - f. Deliverables. List all maps, and their scale, that will be produced by this project.
 - g. Project Personnel. Proposed personnel must include name of student(s) and supervising professor(s). The Review Panel will judge both the qualifications of the professor, and the ability of the student to complete the geologic mapping project. Students should include prior geologic mapping experience (field camp or other mapping projects), and any course work that would help significantly in geologic mapping. The mentoring faculty should include teaching experience of geologic mapping or related courses, prior geologic mapping publications, and other geologic mapping experience.
 - h. Other support. If the student has pending requests for support from other institutions, these requests should be listed.
8. Budget Sheets (**Attachment E**). Only one budget sheet per proposal is required, but if, for logistical reasons, the budget request for one student is significantly different than another student, it would be helpful to submit separate budget sheets. Use your common sense in determining how much to itemize. If there is an item that represents a large proportion of your proposal, the Review Panel will want to know some details. The budget should contain the following:
- a. Salaries. Include all students. No faculty salary allowed.

- b. Fringe Benefits. Propose your rates/amounts. If rates are audit approved, include a copy of the audit agreement and/or the name of the audit agency.
- c. Field Expenses. Briefly itemize the estimated travel costs (i.e., number of people, number of travel days, per diem rate, mileage rate, airfare or other transportation, and any other travel costs). Note: travel to professional meetings is not an acceptable expense.
- d. Miscellaneous. Federal EDMAP funds are not intended for the purchase of capital equipment, such as computers. Matching funds may be used for this purpose, provided they are directly related and essential to the project. Itemize supplies such as base maps, aerial photographs, petrographic thin sections, film, and other field and office supplies. List any contractual services and associated costs. This is the section to itemize costs that are not identified elsewhere on the budget sheet.
- e. Total Direct Charges. Total for items a – d.
- f. Indirect Charges. Show proposed rate and amount. Proposals must include a copy of the Indirect Negotiated Cost Rate between the institution and the Federal Government. **Important Note:** The 1999 Reauthorization of the National Geologic Mapping Act (Public Law 106-148) states that the USGS and recipients of EDMAP grants shall not use more than 15.25 percent of Federal funds to pay for indirect, servicing, or program management charges. This is equivalent to 18% of your total direct costs or charges.
- g. Total. Total for items e and f. NOT TO EXCEED \$15,000 FOR ONE YEAR, FOR EACH STUDENT. (Please note: in FY 2000 graduate student awards ranged from \$4,000 to \$15,000. Undergraduate student awards ranged from \$2,000 to \$6,000.)

D. Proposal Evaluation

EDMAP Proposals will be reviewed by a 10-membered panel. 5 members will be professors. 2 members will be State Geologists chosen by the Association of American State Geologists. 3 members will be USGS geologists, including the Associate Coordinator for EDMAP who will serve as Chair, and who will choose the

other two USGS members. All members will serve 3-year terms. The professors will act as lead reviewers. No panelist may review, or take part in any discussion with other panel members, prior to or during a panel meeting, a proposal that originated from her/his university, or for which other potential conflicts are recognized.

Evaluation Criteria. All proposals for funding will be considered using criteria outlined below. Each reviewer will complete an evaluation form for each proposal reviewed, and these forms will become part of the official proceedings of the review panel meeting. A summary of the review panel comments will be provided to the principal investigators for all proposals reviewed. The criteria are:

1. **Coordination.** Does the proposal show that the faculty advisor and student geologic mapper have planned their mapping project in consultation with the appropriate State Geologist or USGS Project Chief? What is the degree of this coordination? (15 points)
2. **Justification.** Will the proposed geologic mapping project answer any significant scientific questions, either pure or applied? Does the mapping project attack a problem that has any significant societal value? (15 points)
3. **Technical quality of the Proposal.** Are the scientific objectives clearly stated? Are the figures easy to read and clearly explained. Does the proposal stress what is important and new? Does the proposal address how the student will obtain necessary support data, such as paleontologic or geochemical information, if that data is critical to the success of the geologic mapping? Is the student capable of accomplishing the objectives stated, and in the time allowed? (40 points)
4. **Reasonableness of the Budget.** Is the proposed budget commensurate with the level of effort required to accomplish the objectives? Is the cost reasonable relative to the anticipated results? Are non-Federal funds or in-kind services available to *at least equally match* the requested Federal funding amount. (For example, this could consist of documentation showing salary paid or intended to be paid to graduate student for any work relating to the field project. In addition, university stipends for RA (Research Assistant) work paid to the student for any work related to the research project during the year can be used as the university match. Alternatively, match can be shown as money paid to undergraduate field assistants during work on the research project.) Is the budget designed primarily to get the student into the field to conduct the geologic mapping? Is the amount of money budgeted to support the faculty advisor modest and reasonable? (15 points)
5. **Mentorship.** Does the proposal show that the faculty advisor will be spending adequate time advising the student on geologic mapping techniques

and other aspects of the project? (15 points)

PART III. Proposal Delivery and Submission Instructions

Applicants are responsible to assure their proposals are received in the Office of Acquisition and Grants (OAG) by December 4, 2001 @ 3:00 p.m. A proposal received after the closing date and time may not be considered for award. If it is determined that a late proposal will not be considered due to its lateness, the applicant will be so notified. All packages entering the USGS facility are subject to inspection and/or x-ray. The Office of Acquisition and Grants will accept hand delivered proposals daily, between the hours of 8:00 a.m. and 3:00 p.m., except Saturdays, Sundays, and Federal holidays.

Please submit **ONE** stapled original proposal and **TEN** stapled copies, including attachments to following address:

U.S. Geological Survey
Office of Acquisition and Grants
National Assistance Programs Branch
Attn: Sherri Newman, MS-205G
Room 6A331
12201 Sunrise Valley Drive
Reston, Virginia 20192

PART IV. General Provisions

A. General Provisions of the National Geologic Mapping Program

By accepting Federal assistance, your institution agrees to abide by the provisions of the National Cooperative Geologic Mapping Program.

1. The National Geologic Mapping Act of 1999, Public Law 106-148.
2. OMB Circular A-16 - Coordination of Surveying and Mapping Activities

B. Office of Management and Budget (OMB) Circulars

By accepting Federal assistance, your organization agrees to abide by the applicable OMB Circulars in the expenditure of Federal funds and performance under this program. A university can, however, propose other circulars in their proposal if these circulars are not applicable.

1. OMB Circular A-21, "Cost Principles for Educational Institutions"

2. OMB Circular A -110, "Uniform Administrative Requirements for Grants and Other Agreements with Institutions of Higher Education, Hospitals, and Other Nonprofit Organizations"
3. OMB Circular A-122, "Cost Principles for Nonprofit Organizations"
4. OMB Circular A-133, "Audits of States, Local Governments, and Non-Profit Organizations."

C. Rights in technical data

The U.S. Government may publish, reproduce, and use all technical data developed as a result of this assistance award in any manner and for any purpose, without limitation, and may authorize others to do the same. The Program Coordinator agrees to contact the authors of any EDMAP product for review and coordination in the release of technical data. Full credit for authorship will be given. Every effort to protect the scientific integrity of newly gathered data will be made by the EDMAP Program Coordinator.

D. Publication

1. Publication of any map produced under EDMAP is contingent upon final acceptance by the State Geologist and USGS *and is not based on having received an award*. Publication may be in conventional format in paper copy, reproducible mylar or similar material, and electronic format as digital files on computer readable disk or CD-ROM. Maps with explanatory information submitted to journals, professional organizations, or commercial firms, for publication shall be accompanied by the following notation:

"This map and explanatory information is submitted for publication with the understanding that the United States Government is authorized to reproduce and distribute reprints for governmental use."

2. A copy of each map with all accompanying explanatory information shall be submitted to the Project Officer simultaneously with its submission for publication. If a map has been prepared as an electronic digital data file (or files), the cover letter accompanying the maps should state how a copy of these files could be obtained if needed by either the USGS or state geological survey. One reprint of each map shall be submitted to the Project Officer immediately following publication. One reprint should also be sent to the appropriate state geological survey.

3. Program credit. All geologic maps resulting from any project carried out under this assistance award resulting wholly or in part from the cooperative agreement will

bear the following credit statement in the map header, on the title page of an accompanying explanatory text, and in the acknowledgments that accompany the map or any resulting report: **Support (or partial support) provided by the U.S. Geological Survey, National Cooperative Geologic Mapping Program.**

4. Disclaimer. All maps and explanatory text submitted for publication by professional societies or commercial firms shall carry the following notation:

"The views and conclusions contained in this document are those of the authors and should not be interpreted as necessarily representing the official policies, either expressed or implied, of the U.S. Government."

E. Funding

1. The EDMAP program is designed to be carried out on a 1:1 match. Recipients shall match each Federal dollar with a non-Federal dollar. The non-Federal share may be contribution of funds or services. Such services can include those related to the student research project or cash provided to contractors. The source(s) of the university contribution must be listed in the proposal. The matching requirement must be met annually.

2. Use of USGS funds for the purchase of equipment is discouraged.

3. Funds for the 2002 National Cooperative Geologic Mapping Program and in turn, EDMAP funds, will not be available until enactment of USGS appropriations. Student awards will be made in the form of cooperative agreements to the supervising faculty member and the institution. Within the total award, a maximum of 15 percent of total direct costs may be included for support of the supervising faculty member. Student mapping projects may last up to two years, awards are only issued one year at a time. Funding for the first year does not guarantee funding in the second year. A new proposal must be submitted for the second year. We anticipate issuing awards in the Spring of 2002.

4. If a university or college has been awarded a cooperative agreement for several students, and one or more of those students is unable for any reason to do their geologic mapping project, those funds awarded to the student(s) must be forfeited, and can not be reallocated to the remaining students doing mapping at that institution.

SPECIAL NOTE: A cooperative agreement issued by the USGS Office of Acquisition and Grants, signed by the USGS Contracting Officer, obligates USGS funds. Notification of a successful proposal does not constitute authority to incur costs. Costs incurred prior to receipt of a signed cooperative agreement will be at the risk of the university. Once the cooperative agreement for a successful proposal

has been signed by both agencies, the university may incur costs.

F. Project Deliverables

All geologic map deliverables should be sent to the following address before the last day of the performance period:

Peter Lyttle, Associate Program Coordinator
U.S. Geological Survey
908 National Center
12201 Sunrise Valley Drive
Reston Virginia 20192.

To make filing easier, we would appreciate it if you folded the maps so they will fit in a standard size manila envelope.

Maps and explanatory information must be (at a minimum) legible ozalid or large-format Xerox copies made from scale-stable reproducible topographic base maps. However, digitally produced colored geologic maps are preferable. First year or interim map products can be of "in progress" or "field sheet" quality, but field data and other map information should be included so an evaluation of the progress of the project can be made.

At the time the map and accompanying explanatory information are submitted to the Associate Program Coordinator, a copy should be sent to the appropriate State Geological Survey for their files.

Requests for **no-cost extensions** shall be forwarded to the Contracting Officer for consideration not later than 30 days prior to the requested effective date; and, shall be forwarded so as to be received in the Office of Acquisition and Grants at least 30 days prior to the expiration of the agreement. Requests for extensions (including late deliverables) will be handled on a case-by-case basis by the Contracting Officer.

G. Method of Payment/Financial Reporting Requirement

1. The recipient must use Standard Form (SF) 270, "Request for Advance or Reimbursement" (**Attachment F**), to request payment under this award. The policy of the Geological Survey is to make reimbursement, and not advance payments. An original and one copy of this request shall be submitted to the Contracting Officer quarterly. Invoice payment requests shall be made in United States currency.

2. All recipients are required to participate in the Electronic Funds Transfers (EFT) Payment System (**Attachment G**). Payments to recipients are electronically transmitted for deposit in financial institution accounts designated by the recipient. Questions concerning payment under the EFT Payment System are to be directed to

the Geological Survey's Office of Financial Management Vendor Desk at telephone 703/648-7612.

3. The recipient will submit a completed SF-269A, Financial Status Report (**Attachment H**), to the Contracting Officer within ninety (90) days of the end of the period of performance.

-- END OF PROGRAM ANNOUNCEMENT --