



2013 CALL FOR APPLICATIONS

VOLUNTEER MONITORING SUPPORT PROGRAM

BACKGROUND

The Montana Department of Environmental Quality's (DEQ) Watershed Protection Section has grant funding under the federal Clean Water Act Section 319 to assist local volunteer monitoring (VM) groups in their efforts to protect and restore surface and groundwater.

SCOPE

DEQ seeks grant applications from VM groups needing financial assistance with laboratory sample analysis costs associated with water quality monitoring projects related to nonpoint source pollution. Eligible applicants include non-profit local watershed groups, current 319 grantees, conservation districts, water quality districts, school systems, county extension services, county governments. Analytical results will be sent directly from the lab to the VM group. Please note that this program **does not** provide funding for any operational costs such as writing monitoring plans, travel, or purchasing/maintaining field equipment.

FUNDING DETAILS

Informational meetings will be held in January and February 2013 to discuss program requirements, answer questions and provide resources for development of quality assurance project plans (QAPPs), sampling analysis plans (SAPs), and standard operating procedures (SOPs). **Applications are due March 29, 2013 at 5pm and must include a draft SAP.** Application review will take place and feedback on SAPs and funding will be awarded pending incorporation of feedback. When a SAP meets specifications, funding will be allotted. Final funding allocation will occur May 1, 2013 at which point applicants without an approved SAP will have to apply for fiscal year 2014 funding.

TERMS AND CONDITIONS

A minimum non-federal match of 40% is required, which may consist of cash or in-kind contributions (i.e. volunteer hours). Grants awarded under this Call for Applications expires December 31st, 2014 or when all sampling described in a VM group's Sampling and Analysis Plan has been completed, whichever comes first. All sample collection procedures and laboratory analyses funded through the VM support program must meet DEQ's quality assurance and quality control (QA/QC) requirements located at: <http://deq.mt.gov/wqinfo/qaprogram/sops.mcp>. A VM group must have a DEQ-approved SAP prior to

submitting samples to the contracted laboratory. Funding can be awarded to groups under an existing DEQ-approved SAP.

Quality assurance and control (QA/QC) activities must be followed as described in the SAP. QA/QC documentation must occur for all monitoring activities, including, but not limited to the completion of field site visit forms and chain of custody forms for samples submitted to labs.

All data that is collected using these funds is required to be uploaded to DEQ's eWQX database. The responsibility for uploading the data to the eWQX database should be determined in advance of the data collection efforts. VM groups may upload the data themselves or work with a partner to upload the data. Recipients are required to submit a brief final report summarizing the activities performed; important findings and outcomes of the project activities; feedback from participants; an evaluation of how well the goals and objectives were met; and photos of activities. The final report must also include an estimate of the total amount of non-federal match for the grant. Volunteer hours used as match should be converted to a dollar amount using the most current federal rate. Grantees must meet all Terms and Conditions described in this Call for Applications in order to remain eligible for continued support through this program.

ASSESSMENT FOCUS FOR VOLUNTEER MONITORING PROJECTS

For the purposes of this program, monitoring is defined as the collection of field data using a consistent sampling methodology that is guided by a pre-established data collection plan. In this regard, water quality monitoring is a tool used to gather information necessary to answer questions about water quality. A monitoring effort should therefore be a component of an assessment project with the purpose of answering a pre-defined question. The components of a VM project should include:

- 1) **Project goals:** purpose of project
- 2) **Project objectives:** specific assessment questions to be addressed. The assessment questions determine how the study needs to be designed.
- 3) **A review of existing data** of relevance to the project objectives (identifying information or information gaps that may guide the assessment or help answer the questions of interest).
- 4) **A sampling and analysis plan (SAP)** which includes:
 - A) **The quality assurance and control requirements:** determining the appropriate sample collection methods for the selected parameters, and determining appropriate lab analysis procedures; establishing data quality objectives.
 - B) **The study design:** sampling design-when, where, and how to collect data in order to address assessment questions; determining in advance how the data will be analyzed; establishing any necessary decision criteria for making conclusions about assessment questions.
 - C) **Defined participant roles and responsibilities:** designating who will perform each project task.
- 5) **Data management and data analysis:** a reliable system for storing the data; a plan for who will analyze the lab results; a plan for how the results will be analyzed in order to address the assessment questions; a plan for how conclusions will be formulated.
- 6) **Reporting the results:** how the data analysis results will be communicated and additional considerations.

The SAP is the tool used to ensure that QA/QC requirements will be met. In addition to the quality assurance and control measures, the second component of the SAP is the study design. DEQ will review the study design and provide comments and recommendations. However, it is the sole responsibility of

the applicant to develop a study design that will appropriately address the assessment questions. A scientifically valid study design is not a requirement for receiving DEQ approval of a SAP. DEQ cannot ensure that a VM effort will develop and implement a study design that is scientifically appropriate for addressing each assessment question. DEQ approval of a VM SAP does not constitute an endorsement that the study design is valid for addressing the assessment questions.

DEQ encourages VM groups to develop projects having one main goal and narrowly defined assessment questions. DEQ cautions VM groups against either undertaking a project involving multiple goals and assessment questions or undertaking “baseline” data collection without specifying assessment questions to be addressed.

DEQ recognizes that the level of technical rigor necessary for an individual monitoring effort varies according to the goals and objectives of each VM project. In this regard, the VM support program is open to VM groups at all levels of technical capability. Prior to applying for lab analysis support funding, DEQ encourages volunteer monitoring groups to consider how well the technical knowledge, skills, and experience of the VM group aligns with the scientific complexity of the project objectives.

APPLICATION CRITERIA

Complete applications are those that meet the criteria described in this “Call for Applications” and provide all the information requested in the attached application form. The decision to award funds to a VM project will be based on the following considerations, as addressed in the application form:

1. Does the application identify a narrowly focused project goal?
2. Does the application identify specific questions about water quality that the monitoring will be used to address?
3. Has the applicant identified existing sources of relevant data and has the applicability of the data to the current project been considered?
4. Do the proposed monitoring parameters focus on the identified monitoring question(s)?
5. Does the VM group have an existing SAP or draft SAP?
6. Is the existing/planned level of field training in accordance with the planned monitoring effort? Has the group taken the appropriate steps to facilitate monitoring this year?
7. Does the applicant identify how the laboratory results will be analyzed in order to address the study questions?
8. Does the applicant have the appropriate experience and/or technical assistance for the type of project for which funding is requested?
9. How will the results of the project be used?

An example of how a proposed VM project could address the considerations above:

1. The goal of the project is to perform a screening assessment that will be used to determine if copper concentrations in Smith Creek below the abandoned Copper King mine site are a potential cause of water quality degradation.
2. The questions to be addressed by the project are: 1) Do copper concentrations exceed the State of Montana's chronic or acute numeric water quality standard? 2) Are there indications that the aquatic macroinvertebrate community is degraded below the mine site?
3. USGS data for total recoverable copper in Smith Creek is available from the 1971-1976, but was collected 10 miles downstream of the mine site, below the confluence of a major tributary; this data cannot be used to address potential copper problems in the area of concern.
4. The proposed monitoring parameters are: 1) total recoverable and dissolved copper concentrations; 2) water hardness; 3) copper concentrations in streambed sediment; 4) macroinvertebrate community samples analyzed to assess the diversity of organisms present.
5. The VM group does not have an existing SAP but has a draft SAP prepared after attending the informational meeting and responding to initial feedback. The SAP will be implemented to compare samples collected from above and below the mine site, during spring runoff and base flow. The VM group plans on consulting with a water quality specialist to determine the appropriate timing, quantity, and location of sampling events.
6. The VM group has a commitment from four local residents to complete the necessary monitoring for a one year period.
7. The VM group will make arrangements for a training session with water quality specialists in order to ensure the proper sampling collection procedures are followed.
8. The VM group will consult with a water quality specialist as necessary to identify the appropriate methods for analyzing the metals data; the VM group will also consult with the University of Montana professors of toxicology and aquatic ecology to determine if the macro invertebrate community shows signs of potential metals effects.
9. The volunteers have not conducted previous investigations involving metals monitoring and will seek technical assistance from water quality specialists and Montana State University professors in designing and implementing the assessment project.
10. The results will be communicated to local residents at a watershed group meeting and provided to DEQ's Water Quality Protection Bureau for potential use in assessing beneficial-use support for Smith Creek.

Important notes for the 2013-2014 VM support program:

1. Energy Laboratories, Inc. is the service provider for lab analyses under this call for applications. The lab will ship coolers and sample supplies to the VM group free of charge. The cost of shipping samples to the laboratory will be covered by DEQ. Samples may be hand delivered to the laboratory facilities in either Billings or Helena.
2. This funding source may be used for shipping costs but the total of analyses and shipping costs cannot exceed \$3,000.
3. VM groups are responsible for acquiring their own biological supplies (e.g. nets, bottles, ethanol, etc. for aquatic macroinvertebrate samples).

For more information about the Volunteer Monitoring Support Program, please contact:

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