

Groundwater Educational Mini-grant

Program Purpose Funding for the **Groundwater Educational Mini-grant** program is made available to the *Lewis Center for Educational Research* through a strategic partnership with the *Mojave Water Agency*. The purpose of the Groundwater Educational Mini-grant program is to selectively fund project proposals submitted by schools, teachers, or other organizations throughout the Mojave Water Agency that support the *Agency's* mission to “manage the water resources within the Mojave River Watershed for the common benefit to assure stability in the sustained and beneficial use by all watershed inhabitants.”

History From the late 1800's to the present, water needed by practically every desert resident has been “drawn” out of a groundwater basin that extends from the foothills of the San Bernardino and San Gabriel Mountains to Afton Canyon (25 miles north of Barstow). Named after the river that runs its length, the 3,800 square mile Mojave River Watershed feeds the 1,400 square mile Mojave River groundwater basin that lies below and within the watershed boundaries. In response to concerns that the level of water in wells drilled throughout the Mojave River Watershed and the Morongo Basin was declining, the ***Mojave Water Agency*** was established in 1960 to manage the water resources and assure a sustainable water supply for future generations.

Since the 1950's, groundwater consumption within the Mojave Water Agency has significantly outpaced the natural supply, thereby creating a condition commonly referred to as “overdraft”, which is a result of more water being taken out of the ground than is being returned through natural processes or human intervention. Using water more efficiently (conservation) while at the same time increasing water supply can reverse this groundwater overdraft condition. This solution is more easily arrived at than practically accomplished.

Selection Criteria *Groundwater Educational Mini-grants* (GEM's) will be awarded competitively to applicants submitting innovative project proposals that actively engage the project participants in the learning process, clearly communicating how grant monies would support a greater understanding of the need to manage our water resources as a sustainable supply. Applicants should focus on three significant themes:

1. Community education
2. Scientific pursuit
3. Water Conservation

Community Education A critical part of achieving the goal of managing the water resources below the western Mojave Desert in order to provide its users a sustainable and sufficient water supply is centered on fostering community understanding of the present necessity to change water use behaviors and create habits that promote conservation. Some example

projects that would encourage this transition in thinking and water use could include:

- Strategize ways that information promoting “watershed awareness” and water conservation can best be put into the hands of water users.
- Provide ideas for ways that residential water users could be influenced to take an active role in decreasing their personal water demand.
- Create a database containing water conservation methods and resources that can be available to water users throughout the watershed.
- Create multimedia resources that can be used at home, in schools, in the workplace, and over the radio and television that promote awareness concerning current water supply/water quality issues.

Scientific Pursuit Successful management of our water resources will hinge upon advancing the necessary scientific understanding of our desert’s water resources. Applicants could propose projects which will help the communities the MWA serves to better understand how to efficiently manage and sustain an adequate supply of clean water for our desert’s municipal and biological communities into the future. Some example projects might include:

- Research and develop an effective strategy for removing non-native vegetation in riparian habitats along the Mojave River.
- Develop a model to forecast future water demand due to changes in human populations throughout the watershed.
- Collect and analyze data concerning:
 - Water quality along the Mojave River.
 - The impact on water quality associated with water from the State Water Project (SWP) – aqueduct water – entering the Mojave River Watershed...
 - The impact of removing non-native vegetation in riparian habitats along the Mojave River.
 - The “competing interests for water” and develop a plan for the greatest good of all watershed inhabitants.
 - The present groundwater overdraft condition and develop a plan to reverse the trend.
 - The impact of groundwater overdraft on riparian ecosystems and their inhabitants.
 - The impact of reclaimed wastewater being introduced into the Mojave River floodplain below the Lower Narrows.

Collect and analyze data describing:

- How the Mojave River groundwater basin responds to periods of drought and increased water demand.
 - The impact that artificial methods of groundwater recharge might have on the quality of groundwater.
 - The impact that groundwater overdraft might have on the quality of groundwater.
 - The impact that groundwater overdraft might have on the groundwater basin.
- Collect and analyze data pertinent to the management of water resources in the Mojave River Watershed using Geographical Information Systems (GIS).
 - Use GLOBE¹ protocols to support the collection of useful field data pertinent to the management of water resources in the Mojave River Watershed (water quality, precipitation, land cover, etc.)

Water Conservation A key part of balancing existing and future water demands with available water supply will require promoting innovative and efficient water conservation programs to decrease the demand for water wherever it is being used in our desert communities. Some projects consistent with this theme include:

- Identify ways that Mojave River water levels can be raised in order to sustain spillover to riparian habitat below the Lower Narrows.
- Show how usable wastewater, or gray-water, can be economically and ecologically recycled close to the source where it was generated.
- Suggest ways that recycled wastewater/gray-water can be put to good use.
- Determine what is the highest and best use of recycled wastewater/gray water in our watershed.
- If “financial incentives” were used to encourage water users to conserve or decrease their demand for water, identify of incentives that would be most practical and effective.
- Develop a plan for ways that water supplied from the State Water Project (SWP) aqueduct can be used to recharge the Mojave River Groundwater basin.

¹ GLOBE stands for Global Learning and Observation to Benefit the Environment. If you are want to learn more about the GLOBE program, GLOBE protocols, or would like to look attending a GLOBE training, visit their website on the web @ <http://www.globe.gov>

A **GEM** project proposal needs to include a brief description of:

- Ways that one or more of the preceding themes will be addressed.
- The water users your project will be “targeting”.
- How your project will attempt to “influence” the “targeted” water users to become part of man integrated solution that will help the *MWA* manage our desert home’s water resources.

Resources Research and reference resources are available for use and checkout at the Mojave Water Resources kiosk on the second floor of the Technology Building² at the *Mojave River Campus of the Lewis Center for Educational Research*³. Additional resources can be found online @ <http://www.mojavewater.org>.

Who Can Apply: Grant applications will be accepted from:

- **Community Organizations and/or High Desert Residents** –
- **Schools** - teachers can apply for a school, a specific class or a club project.
- **Community Youth Organizations** - groups such as Boy Scouts, Girls Scouts, Explorers, and etc. can apply for a group project.
- **Youth Programs** - nonprofit organizations that coordinate must be conducted under adult supervision.

How the Program Works: Complete the attached application form. Duplicate the form if needed. Make sure to include the following information:

- 1) Describe the project in detail, listing the goals and objectives, supporting activities, and methods to be used to evaluate the success of the project.
- 2) Explain the benefits students or others will receive from participating in this project.
- 3) Submit an itemized budget for project materials and expenses.
- 4) List the project contact and ensure that an adult leader signs the application. Grants up to \$500 will be awarded. A partial grant may be awarded as appropriate.
- 5) Funding for this program is limited and competition for a grant could be an issue depending on how many quality applications are received between August 1st and December 10th.
- 6) A selection panel will determine successful applicants, with preference given to provide balanced geographical distribution throughout MWA’s service area.

For more information: For additional project ideas, assistance in completing the grant application, for grant award updates, or if you have questions, please contact Matthew Huffine at the Lewis Center for Educational Research, at (760) 946.5414, extension 238, or by email at mhuffine@lcer.org .

Application Deadline: The “open” period for submitting an application is between August 1st and December 10th.

² Also called “Building A”.

³ The Mojave River Campus of the Lewis Center for Educational Research is located at 17500 Mana Road in Apple Valley, 1/2 mile west of Tuscola Road, off of Apple Valley Road three blocks south of Highway 18.

Ground Water Education Mini-Grant Application

Application can be duplicated as needed.

Organization Name (if applicable): _____

Individual Name: _____

Street Address: _____

City _____ Zip: _____

Project Manager: Name (if applicable): _____

Work Phone: (____) ____ - _____ Home Phone: (____) ____ - _____

FAX: (____) ____ - _____ Email: _____

Project Title: _____

Is this a new project, or are you building upon an existing or continuing project?

New Project: _____ Continuing or Existing Project: _____

Section I - Project Information

Project Description:

Project Objectives:

1. _____

2. _____

3. _____

4. _____

Explain how participants (teachers, students, scouts, members) will be involved in the project: _____

How many participants (teachers, students, scouts, and members) will be involved in the project?

Describe the benefits of the project to participants and others:

How long will it take to complete the project?

Describe how you will measure the success of your project:

Section II – Presentation

All successful applicants are required to complete

- A poster presentation to be displayed at an MWA sponsored event about nine months following the award of grant monies.
- A five minute presentation of the activity including results, lessons learned, etc. and
- An opportunity or activity that can engage audience participants or interested members in the communities served by the MWA in an interactive and/or hands-on manner

Are you willing to provide these post project “presentation” products at an MWA sponsored event on or after EARTH DAY ? **YES NO** (circle one please)

(More information about this event will be made available upon application approval.)

