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July 9, 2002

VIA ELECTRONIC MAIL

MEMORANDUM

To: All Bureau of Reclamation Employees

From: Shannon E. Cunniff /s/
Director, Research and Natural Resources

Subject: Science and Technology (S&T) Program - FY 2003 Call for Research Proposals

The S&T Program is requesting proposals for applied research, development, and demonstration activities for FY 2003. Proposals should be submitted to Siegie Potthoff by e-mail (spotthoff@do.usbr.gov) no later than August 30, 2002.

We are implementing a Reclamation-wide call for proposals to more openly engage others to work in partnership with Technical Service Center (TSC) expertise. This will assist development of research ideas and proposals that address Reclamation's overarching needs while simultaneously serving a particular region or area office. As in the past, we expect that the majority of our funding will continue to be invested in the TSC to build and maintain expertise that can broadly serve Reclamation into the future. Researchers outside of Reclamation are encouraged to partner with us by coupling their efforts with ours and developing joint proposals.

This is a transition year in our implementation of new business practices that are intended to help build a better scientific and technical foundation to support Reclamation's mission objectives (see Attachment 1). In the future, we anticipate that our annual call for proposals will occur in November in the year preceding funding. As this is a transition year, many ongoing efforts will receive priority consideration for FY 2003 funding to avoid interruption of research that is productive and properly aligned with our priorities. However, **all ongoing projects are required to submit a proposal under the new proposal format** and will be evaluated and ranked along with all new proposals. Proposals for ongoing projects should be structured to bring efforts to conclusion in FY 2003 or to an interim milestone. This will position us to create as much funding flexibility as possible and consider a broader range of proposals in FY 2004.

Focus on Reclamation End Outcomes

We have created a Science and Technology Program roadmap (Attachment 2) that defines our key R&D³ Output Areas. The roadmap helps guide research planning and execution by showing how research outputs strategically link to, and focus on, Reclamation's mission objectives of water and power deliveries.

R&D³ stands for research, development, demonstration, and deployment. We use R&D³ to emphasize that research and development are only part of the responsibilities of the researcher and the Science and Technology Program. Demonstration and deployment must occur for results to be readily accepted, supported, and integrated into improved water and facility management practices. In short, we will support those projects that focus on Reclamation's end outcome objectives, reflect the R&D³ spectrum, and are coordinated and partnered with Reclamation's resource managers, water users, and other end users.

Funding Decisions

The anticipated FY2003 budget available for Reclamation-wide research proposals is approximately \$6 million. Reclamation-wide research efforts should concentrate on more broad, overarching Reclamation needs. The strength of the overall proposals will be a key factor in determining funding allocations among the 20 R&D³ Output Areas. The merits of each proposal will be evaluated using common ranking guidelines (Attachment 2). Final selection and funding decisions will involve review of the priorities established by the Science and Technology Program Steering Team, Congressional appropriations language, administration initiatives, and current knowledge of Reclamation priorities. The steering team's highest priorities were to:

- Find innovative means to address ecosystem needs without impacting water deliveries
- Improve methods and materials to repair, maintain, and assess condition of facilities
- Improve powerplant operations & maintenance and increase power generation efficiencies
- Improve passage and reduce entrainment of species that could impact operations
- Improve solutions to aquatic and riparian invasive species that impact water deliveries
- Improve solutions that address sediment, water quality, and river/reservoir restoration
- Improve desalination and other water supply and conservation technologies
- Improve methods to forecast water supplies and evaluate operational trade-offs

Although these are the highest priorities, all of the 20 R&D³ Output Areas received favorable consideration by the steering team. Proposals are encouraged for any of the R&D³ Output Areas.

Regional Research Projects

We also plan to allocate an additional estimated \$225,000 to each region to help ensure that region-specific research needs can be addressed. These funds and regional project selections are managed by the Regional S&T Coordinator located in each region (Attachment 2) but will be evaluated along with all other proposals using the same guidelines. Regional and TSC researchers can submit regional proposals but you are encouraged to work with the appropriate R&D³ Output Champions to facilitate cross-fertilization of research ideas and broad communication of current capabilities. Regional research funding also provides each region with a vehicle to supplement or influence the selection, scope, and schedule of research that can be accomplished under Reclamation-wide research funding. Furthermore, regions and area offices can influence the selection of Reclamation-wide proposals by offering the use of facilities, lands, and waters to host research, or by providing firm commitments of other (non-S&T) funding. Field-based research enables the host project to be the first to benefit from new technologies and knowledge and increases customer awareness of contributions from this Reclamation program. As a result of this being a transition year in implementing our new business practices, the UC and GP regions have already committed their FY 2003 S&T Program funding allocations through their prior proposal solicitations. However, since many regional issues are common to several regions, they can potentially be addressed by submitting proposals to the Reclamation-wide S&T Program.

Instructions

Pertinent background information and instructions for submitting proposals are located on our website. A summary of the key web pages and information that you should review is found in Attachment 2.

Siegie Potthoff, our program assistant, can be reached at 303-445-2136 to help answer questions and assist you with the submittal process. You can also call me at 202-513-0682 or Chuck Hennig, our Science and Technology Program Coordinator, at 303-445-2134.

Attachments - 2

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Attachment 1

Summary of New Business Practices Implemented by the Science and Technology Program

1. Enhancing Our Customer Focus - Improved communication and involvement of end-users, stakeholders, and Reclamation management

To ensure we are in close alignment with Reclamation's mission, we're placing more emphasis than ever on becoming more client and stakeholder focused. We've expanded the membership of our steering team to involve other water research agencies and stakeholders and strengthened the team's role in prioritizing and guiding funding allocations in an effort to place emphasis on Reclamation's most critical priorities. In addition, we are creating new opportunities to work with water districts, hosting research workshops with water users and water managers, improving coordination with other federal and state water resource research agencies, improving our web page to conduct business and disseminate information on our program, activities, and other useful sources of science and information. We're also actively working to keep Reclamation management well informed on our activities, accomplishments, and capabilities through an increase in direct communication and distribution of our monthly and bi-annual highlights across Reclamation.

2. Becoming More Outcome Oriented - Developed a Science and Technology Program roadmap that defines key R&D³ Output Areas and identifies how they strategically link to, and focus on, Reclamation's mission objectives of water and power deliveries.

3. Aligning Objectives with Resources - Established an annual broad, competitive call for proposals to ensure we are considering the best proposals, ideas, and people. Developed a proposal evaluation methodology to ensure close alignment of work efforts with Reclamation objectives. Improved coordination of water resources research with other federal and non-federal agencies to better focus their efforts on our water management needs and to supplement our applied research and development.

4. Engaging the R&D³ Concept - Taking a longer term view of our contribution that begins with applied research and ends with technology deployment at Reclamation projects.

R&D³ stands for research, development, demonstration, and deployment. We use it to emphasize that research and development are only part of the responsibilities of the researcher and the Science and Technology Program. Demonstration and deployment, in collaboration with resource managers, must occur for results to be more widely accepted, supported, and integrated into improved water and facility management practices. Laying the foundation for this technology transfer must begin in the early stages of research by encouraging our researchers to plan an effective approach to engage end-users in a manner that best promotes investment in the rapid, reliable utilization of beneficial research results. We also recognize that demonstration and deployment can be accelerated through early partnership development with private industry and are encouraging collaboration here as well.

5. Increasing Resource Leveraging - Creating and strengthening research partnerships and collaborative efforts to better leverage our resources, and focus outside expertise on Reclamation's mission and needs.

Strong emphasis is being placed on partnership building. We are seeking better leveraging of S&T funds and services with other federal and non-federal resources. We're encouraging researchers to cultivate partnerships and funding sources outside of our program and outside of Reclamation. Although we only focus on Reclamation mission objectives, we are pursuing an increase in collaboration with industry on our innovations that may have commercial value. The Technology Transfer Act of 1986 authorizes and encourages industry partnerships via Cooperative Research and Development Agreements (CRADAs) and licensing of Reclamation-owned intellectual property. Through partnerships with industry to advance our innovations, we facilitate our demonstration and deployment objectives by creating reliable manufacturing sources to serve our water managers.

6. Strengthening Reclamation's Competencies - Encouraging more cross-discipline collaboration across the Technical Service Center (TSC) and with Reclamation staff in the regions and area offices.

In order to better develop Reclamation's technical competencies and its responsiveness to future needs, we are working with Reclamation's TSC more as a partner than a customer. The majority of S&T funding will primarily be invested in the TSC to build and maintain the mission-specific expertise that can broadly serve Reclamation into the future. The Reclamation-wide call for proposals more openly engages others in Reclamation to work in partnership with TSC expertise. In addition, our emphasis on customer focus and increased partnerships encourages an increase in business thinking and interpersonal skill development.

Attachment 2

Science and Technology Program - Submitting R&D³ Proposals - Instructions and Background Information

1. Science and Technology Program contacts can be viewed at <http://www.usbr.gov/research/contacts>

These contacts work together to bring Reclamation and our stakeholders the best water management research program within available appropriations. They coordinate with and influence other water resource research agencies and organizations to focus on Reclamation issues and bring strong, diverse science and research results to Reclamation.

2. You can view our Steering Team roster at <http://www.usbr.gov/research/contacts/steering.htm>

3. Our Science and Technology Roadmap is your portal for submitting proposals at

<http://www.usbr.gov/research/r&doutput/>. This site will lead you through our 20 R&D³ Output Areas and show how they are linked to Reclamation resource management strategies and Reclamation's end outcomes of water and power deliveries. The research vision in the R&D³ Output Area summaries were prepared by lead researchers in the TSC with input from other technical and management advisors. They were the basis on which the steering team prioritized the R&D³ Output Areas.

The vision described in these R&D³ Output summaries are also the basis for the call for proposals. Choose the R&D³ Output Area(s) that best fit your proposal and submit your proposal based on the needs and goals described. Otherwise, structure your proposal to fulfill the intent of the R&D³ Output Area title. We are always open to ideas that fulfill the general intent of the title. Innovative proposals or ideas enable us to update and evolve the 5-year R&D³ vision and goals.

For each R&D³ Output Area, you can click down into our current 5-year vision for research needs, value, and goals. You can also review the list of R&D³ Output Champions for each of the 20 output areas. *You should contact the R&D³ Output Champions or one of our four technical mentors for any technical questions you have, to discuss your ideas, or to coordinate preparing joint proposals.* The output champions are also your source to the latest and emerging technical and scientific capabilities in their area.

4. Who are the R&D³ Output Champions and what do they do?

<http://www.usbr.gov/research/r&doutput/champions.htm>

5. Who are the Technical Mentors and what do they do?

<http://www.usbr.gov/research/r&doutput/mentors.htm>

6. The proposal form and instruction on submitting your proposal can be downloaded at

<http://www.usbr.gov/research/r&doutput/resprop.htm>

7. The ranking guidelines that proposals will be evaluated against can be viewed at

<http://www.usbr.gov/research/r&doutput/guide.htm>

8. Our annual solicitation, evaluation, and selection process for R&D³ proposals can be viewed at

<http://www.usbr.gov/research/r&doutput/process.htm>

9. Our FY 2001/2002 Science and Technology Program Highlights publication can be viewed at

<http://www.usbr.gov/research/2000research/highlight.htm> This document will provide you with an overview of our program objectives and recent research.

10. Some recent Science and Technology Program success stories and contributions can be viewed at

<http://www.usbr.gov/research/results/successstories.pdf>

11. A calendar of S&T program and research events is at

<http://www.usbr.gov/research/r&doutput/calendar.htm>