

# RECLAMATION

*Managing Water in the West*

Funding Opportunity Announcement No. R11SF80835

## Desalination and Water Purification Research and Development (DWPR)

Fiscal Year 2011

- Research and Laboratory Studies
- Pilot Scale Projects



U.S. Department of the Interior  
Bureau of Reclamation

April 15, 2011

## **Mission Statements**

The mission of the Department of the Interior is to protect and provide access to our Nation's natural and cultural heritage and honor our trust responsibilities to Indian Tribes and our commitments to island communities.

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

## Overview

Federal Agency Name:	Department of the Interior, Bureau of Reclamation, Denver, CO
Funding Opportunity Title:	<i>Desalination and Water Purification Research and Development Program (DWPR)</i>
Announcement Type:	Initial announcement
Funding Opportunity Announcement (FOA) Number:	R11SF80835
Catalog of Federal Domestic Assistance (CFDA) Number:	15.506
Application Due Date:	June 3, 2011 4:00 p.m. Mountain Daylight Time (MDT)
Eligible Applicants:	<p>Individuals, institutions of higher education, commercial or industrial organizations, private entities, public entities (including state and local), and Indian Tribal Governments.</p> <p>Foreign entities, other than United States-Mexico binational research foundations and inter-university research programs established by the two countries, are not eligible for funding under the authorizing legislation for this program.</p> <p>Federal agencies are not eligible to apply.</p>
Applicant Cost Share:	<p>None for <u>institutions</u> of higher education, including United States-Mexico binational research foundations and inter-university research programs</p> <p><u>Other applicants</u> must provide cost share of 75% of the cost of their project (This may be reduced to 50% if it is determined that the project is not feasible without such increased Federal contribution)</p>
Federal Funding Amount:	Up to \$150,000 for each research and laboratory study, and \$200,000/year for each pilot scale project.
Estimated number of agreements to be awarded:	4 to 7
Total amount of funding available for award:	Up to \$1,000,000

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# Proposal Checklist

The following table contains a summary of the information that you are required to submit with your DPWR application.

√	WHAT TO SUBMIT	REQUIRED FORM OR SUGGESTED FORMAT	WHEN TO SUBMIT
	• Cover Page	Form SF 424 is available at <a href="http://www.grants.gov/agencies/aapproved_stand_ard_forms.jsp#1">http://www.grants.gov/agencies/aapproved_stand_ard_forms.jsp#1</a>	6/3/11
	• Assurances	Forms SF 424B and SF 424D are available at <a href="http://www.grants.gov/agencies/aapproved_stand_ard_forms.jsp#1">http://www.grants.gov/agencies/aapproved_stand_ard_forms.jsp#1</a>	6/3/11
	• Technical Proposal	See Sections 4.5.4.3.1 through 4.5.4.3.15 on pages 21 - 27	6/3/11
	• Funding Plan	See page 28	6/3/11
	• Commitment Letters	See page 28	7/1/11
	• Project Budget Proposal:	See pages 29	6/3/11
	• Budget Narrative	See page 29	6/3/11
	• Indirect Rate Agreement or Computation Basis	See page 30	6/3/11
	• Budget Form	Forms SF 424A and SF 424C are available at <a href="http://www.grants.gov/agencies/aapproved_stand_ard_forms.jsp#1">http://www.grants.gov/agencies/aapproved_stand_ard_forms.jsp#1</a>	6/3/11
<b>If submitted hard copies, please submit an original and two copies of all of the above documents</b>			

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# Acronyms

AOR	Authorized Organization Representatives
ARC	Application Review Committee
BGNDRF	Brackish Groundwater National Desalination Research Facility
BOD	biological oxygen demand
C	Celsius
CCR	Central Contractor Registration
CFDA	Catalog of Federal Domestic Assistance
CFR	Code of Federal Regulations
COD	chemical oxygen demand
Desalination Act	Water Desalination Act of 1996, P.L.104-298, as amended
DOI	U.S. Department of the Interior
DUNS	Data Universal Number System
DWPR	Desalination and Water Purification Research and Development Program
E-Biz POC	E-Business Point of Contact
EIN	Employer Identification Number
F	Fahrenheit
FOA	Funding Opportunity Announcement
FY	fiscal year
gpm	gallons per minute
GO	Grants Officer
IRS	Internal Revenue Service
MDT	Mountain Daylight Time
mg/L	milligrams per liter
OMB	Office of Management and Budget
Reclamation	Bureau of Reclamation
RWP	Research Work Plan
TDS	Total Dissolved Solids
TIN	Taxpayer Identification Number

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# Contents

	Page
<b>Overview .....</b>	<b>iii</b>
<b>Proposal Checklist.....</b>	<b>v</b>
<b>Acronyms .....</b>	<b>vii</b>
<b>Section 1—Funding Opportunity Description .....</b>	<b>1</b>
1.1 DWPR Overview .....	1
1.2 Research Categories .....	2
1.3 Research Priorities .....	3
1.4 Example Topics for Research and Laboratory Studies .....	3
1.5 Example Topics for Pilot Scale Projects .....	7
1.6 Facility and Equipment Resources .....	7
1.7 Presentation of Final Report.....	9
<b>Section 2—Award Information.....</b>	<b>11</b>
2.1 Total Project Funding.....	11
2.2 Project Funding Limitations.....	11
2.3 Reclamation Responsibilities .....	12
2.4 Award Date .....	12
<b>Section 3—Eligibility Information .....</b>	<b>13</b>
3.1 Project Locations.....	13
3.2 Eligible Project Categories.....	13
3.3 Eligible Applicants.....	13
3.4 Cost Sharing.....	13
3.5 Technical Responsiveness.....	16
3.6 Funding Plan and Letters of Commitment .....	17
3.7 Other Regulations.....	17
<b>Section 4—Application and Proposal Submission Information.....</b>	<b>19</b>
4.1 Address to Request Application Package.....	19
4.2 Date for Receipt of Applications.....	19
4.3 Application Delivery Instructions .....	19
4.4 Instructions for Submission of Project Proposal .....	20
4.5 Technical Proposal Instructions .....	21
4.6 Application Submission Checklist .....	31
<b>Section 5—Application Review Information .....</b>	<b>33</b>
5.1 Evaluation Criteria .....	33
5.2 Review and Selection Process.....	35
5.3 Pre-Award Clearances and Approvals.....	36
<b>Section 6—Award Administration Information.....</b>	<b>37</b>
6.1 Award Notices.....	37
6.2 Award Document .....	37
6.3 Reporting Requirements and Distribution.....	37
<b>Section 7—Agency Contacts.....</b>	<b>39</b>
<b>Section 8—Other Information.....</b>	<b>41</b>
8.1 General Provisions .....	41
8.2 Electronic Application Through Grants.Gov .....	41
8.3 Use and Disclosure of Proposal Information -Department of the Interior (APR 1984) ...	44
8.4 Patents, Copyrights, Rights to Data.....	46



# Section 1—Funding Opportunity Description

Through this Funding Opportunity Announcement (FOA), the U.S. Department of the Interior (DOI), Bureau of Reclamation (Reclamation), is accepting applications for projects to be funded by the Desalination and Water Purification Research and Development Program (DWPR). Through this program, Reclamation is forming partnerships with private industry, universities, water utilities, and others to address a broad range of desalting and water purification needs. The research program follows the recommendations of the National Research Council's publication *Desalination: A National Perspective*, April 2008.

Reclamation is particularly interested in research where the benefits are widespread but where no private-sector entities are willing to make the investment and assume the risks. Reclamation is also interested in research that would have a national significance—where the issues are of large-scale concern and the benefits accrue to a large sector of the public. The authorizing legislation for this program is the Water Desalination Act of 1996 (Desalination Act), P.L.104-298, as amended, and the Reclamation Wastewater and Groundwater Study and Facilities Act of 1992, P.L. 102-575, Title XVI, as amended, Section 1605, codified in 43 USC Sec 390h-3.

## 1.1 DWPR Overview

The program has three major goals:

- (1) Augment the supply of usable water in the United States
- (2) Understand the environmental impacts of desalination and develop approaches to minimize these impacts relative to other water supply alternatives
- (3) Develop approaches to lower the financial costs of desalination so that it is an attractive option relative to other alternatives in locations where traditional sources of water are inadequate

A number of objectives are inherent in these goals, including:

- **Water Supply:** Increasing the usable water supply in the United States through the treatment of impaired waters

- **Environment:** Understanding the environmental impacts of desalination and developing approaches to minimize these impacts relative to other water supply alternatives
- **Economics:** Reducing the financial costs of desalination and water purification technologies so that they are attractive options relative to other alternatives in locations where traditional sources of water are inadequate
- **Technology:** Creating new and innovative technologies, improving the reliability of existing processes, and strengthening the desalination industry in the United States
- **Efficiency:** Developing methods to make desalting more energy efficient
- **Health:** Developing methods to ensure desalting technologies have acceptable impacts on human health
- **Regulations/Permitting:** Working with regulators and researchers to ensure that regulations for desalination processes are appropriate
- **Multiuse:** Expanding the use of desalination processes for multiple uses such as municipal water, wastewater reuse, industrial, and agricultural uses
- **Technology Transfer:** Ensuring full transfer of knowledge and commercialization of technology

## 1.2 Research Categories

The DWPR includes research in three categories detailed below: Research and Laboratory Studies, Pilot Scale Projects, and Demonstration Scale Projects.

### **Research and Laboratory Studies**

*Duration:* 13 months or less

*Description:* Research studies are typically bench scale studies that usually involve small flow rates less than 2 gallons per minute (gpm). They are used to determine whether a process works well and they sometimes involve high degrees of uncertainty. Successful studies or projects may receive a limited amount of follow-on funding for additional work.

### **Pilot Scale Projects**

*Duration:* 25 months or less

*Description:* Pilot scale studies should be preceded by research studies funded by Reclamation or others that demonstrate the technology works. They usually

involve flow rates between 1 and 20 gpm on natural water sources. They are used to determine the physical and economic suitability of a process. Project objectives include development of capital costs and operation and maintenance costs.

### **1.3 Research Priorities**

For fiscal year (FY) 2011, Reclamation’s research priorities focus on combining renewable power sources and the development of technology suitable for small communities. Reclamation seeks to fund a renewable power desalination project at the Brackish Groundwater National Desalination Research Facility (BGNDRF) (see Section 1.6.3 below). This preference should not be interpreted to exclude other concepts that fall within the descriptions in Sections 1.4 and 1.5 below. As indicated by the example topics below, these research priorities are not the only topics of interest; however, applications addressing these topics will receive additional credit during evaluations. See Section 5.1.1.1 for further information.

### **1.4 Example Topics for Research and Laboratory Studies**

Specific tasks have been developed to accomplish the DWPR objectives for Research and Laboratory Studies (Task I, II, III, IV, and V).

#### **1.4.1 Task I: Reducing Environmental Impacts**

Projects sponsored under this task area focus on the impacts of desalination and water treatment plants on the environment including concentrate disposal and intake processes. Examples of these projects include but are not limited to:

- (1) Recovery and use of irrigation return flows.
- (2) Field studies to assess environmental impacts of seawater intakes at existing plants.
- (3) Field studies to assess environmental impacts of brackish groundwater development at existing plants.
- (4) Recovery and use of salts or other materials contained in the reject stream of desalting plants.
- (5) Salinity modeling and toxicity analysis of concentrate discharges to the environment.
- (6) Development of cost-effective approaches for concentrate management that minimize potential environmental impacts.

- (7) Substitution of brackish concentrate for potable water in industrial applications.
- (8) Removal of supersaturated salts to permit further desalting of concentrate and reduce the volume of concentrate requiring disposal. Only technologies with the potential of becoming cost competitive with existing alternative disposal methods will be considered.
- (9) Development of improved intake methods at coastal facilities to minimize impingement of larger organisms and entrainment of smaller ones.
- (10) Development of an overarching assessment of the possible range of impacts from seawater and brackish water desalination in the United States based on a synthesis of rigorous site-specific studies.

#### **1.4.2 Task II: Integrating Renewable Energy**

Projects sponsored under this task area focus on the general economic improvement of desalination processes. Examples of these projects include but are not limited to:

- (1) Investigation of approaches for integrating desalination with renewable energy sources including photovoltaic, wind power, solar thermal, and geothermal.
- (2) Development of improved energy recovery technologies applicable to desalination, particularly for installations where the cost of energy may be relatively high.
- (3) Research and development of applications using waste (low quality) heat. Consideration must be given to methods of collecting the waste heat effectively.

#### **1.4.3 Task III: Reducing Costs**

Projects sponsored under this task area focus on the general economic improvement of desalination processes. Projects sponsored under this task area focus on the investigation of non-traditional desalination or water purification techniques, to include the evaluation of economics and thermodynamic efficiency of these processes. Examples of these projects include but are not limited to:

- (1) Reduction of primary energy use
- (2) Use of low-grade heat or other small but widely available driving forces. Realistic costs for accumulation, storage and transport of energy and mass must be made in proposer's evaluation of such processes

- (3) Evaluation and development of methods to improve the heat economy of thermally driven desalting processes
- (4) Studies optimizing cost and/or design for different operating conditions
- (5) Investigation of methods for increasing the economic efficiency of desalination processes, including hybrid systems or dual-purpose co-facilities with other processes involving the use of water
- (6) Development of aspects of a small community desalination system where the community may be isolated and economically disadvantaged and where technical support may not be readily available
- (7) Detailed economic surveys and cost models

#### **1.4.4 Task IV: Expanding Scientific Understanding of Desalination Processes**

The primary objective of this task area is to reduce the cost and increase the ease of operation of desalting and water treatment systems. Sponsored projects can apply to any portion of the desalting process, including pre- and post-treatment.

Examples of these projects include but are not limited to:

- (1) Development of investigative techniques relating to desalination processes.
- (2) Development of more robust, cost-effective pretreatment processes and/or processes that require less chemical or produce less sludge or other effluents.
- (3) Research and development studies of improvements in membrane process including reverse osmosis or electrodialysis or in thermally driven desalting processes including multi-state flash, multiple effect, or vapor compression distillation.
- (4) Increase of rates of mass transfer to membrane or to heat transfer surfaces.
- (5) Studies on presence and influence of biofilms on membranes or heat transfer surfaces.
- (6) Studies on adhesion of foulants, scalants or other materials to membrane or heat transfer surfaces.
- (7) Studies on cleaning, including frequency and effectiveness of cleaning and impacts of disposal of solutions containing cleaning agents.

- (8) Investigation of methods to reduce corrosion in desalting processes.
- (9) Studies on influence of minor components in groundwater on membrane or heat transfer properties.
- (10) Development of integrated or hybrid membrane systems, particularly to increase recovery.
- (11) Research on techniques for membrane storage or preservation and for biological control during plant operation
- (12) Development of new, innovative alternative desalination processes.
- (13) Investigation of freeze desalination and innovative combined desalination processes. Only technologies with the potential of becoming cost competitive with existing membrane and thermal processes will be considered. Proposed projects should have the potential to become commercially viable and have wide applicability.
- (14) Investigation of methods for stabilization of desalted water, particularly when it is to be mixed into existing water supply systems.

#### **1.4.5 Task V: Improving the Quality and Suitability of Treated Water for Reuse**

Projects sponsored under this task focus on investigation of possibilities of recycling and reuse of water that has already served a primary use.

Examples of these projects include but are not limited to:

- (1) Development of new wastewater treatment processes or improvements in existing treatment systems
- (2) Resolution of small persistent operational problems in existing water treatment plants
- (3) Lowering biological oxygen demand (BOD) and chemical oxygen demand (COD) in wastewater
- (4) Membrane treatment of municipal wastewater for direct reuse or groundwater recharge
- (5) Removal of organic contaminants, toxic substances, heavy metals, radioactive elements, etc.
- (6) Improvement of membrane polymers specifically for waste treatment applications

- (7) Treatment of irrigation drainage waters to remove pesticides, herbicides, nitrates, etc.

## **1.5 Example Topics for Pilot Scale Projects**

### **1.5.1 Task VII: Pilot Scale Projects (Section 1.2 above)**

The primary objective of this emphasis area is twofold:

- (1) To cost share the design, fabrication and shakedown of pilot-scale apparatus based on laboratory-scale processes
- (2) To cost share the testing, modification and evaluation of such pilot-scale systems

Awards under this task typically result from successful research studies from one of the other emphasis areas in the DWPR program that demonstrates a high level of success and a need for further technology development. However, any applicant may apply who can provide sufficient documentation indicating a high level of prior successful research has been accomplished and that the project is at design, build, and testing pilot-plant stage. At least one pilot scale project will be carried out at BGNDRF in Alamogordo, New Mexico. Information on BGNDRF can be found at <<http://www.usbr.gov/pmts/water/research/tularosa.html>>.

## **1.6 Facility and Equipment Resources**

Reclamation's state-of-the-art water treatment laboratory and pilot-scale facilities may be available for use on a cost-reimbursable basis. These facilities include:

### **1.6.1 Technical Service Center in Denver, Colorado**

Further information on the facilities available in Denver is available at <<http://www.usbr.gov/pmts/water/about/capabilities.html>>. Questions regarding this facility may be directed to Mr. Frank Leitz at 303-445-2255 or to [fleitz@usbr.gov](mailto:fleitz@usbr.gov).

### **1.6.2 Water Quality Improvement Center in Yuma, Arizona**

Further information on the facilities available in Yuma is available at <[http://www.usbr.gov/lc/yuma/facilities/wqic/yao\\_wqic\\_research\\_capabilities.html](http://www.usbr.gov/lc/yuma/facilities/wqic/yao_wqic_research_capabilities.html)>. Questions regarding this facility may be directed to Ms. Angela Adams at 928-343-8114 or to [aadams@usbr.gov](mailto:aadams@usbr.gov).

### **1.6.3 BGNDRF at Alamogordo, New Mexico**

BGNDRF contains 6 internal research bays, 13 feet by 32 feet by 16 feet high, which can be supplied with up to 30 gpm of water, and 3 external research pads,

20 feet by 60 feet, which can be supplied with up to 60 gpm of water. The access door to the internal bays is 20 feet wide by 15 feet high. Each bay is equipped with quick release connections so that pilot-scale research units can easily be hooked up to water, power, chemicals, instrument air, data ports and drain. Several brackish groundwaters containing a variety of Total Dissolved Solids (TDS) concentrations exist onsite. A warm, low saline source water with a TDS of 1,000-1,200 milligrams per liter (mg/L) has a temperature, before the cooling tower of 41 degrees Celsius (C) (106 degrees Fahrenheit [F]). An ambient temperature, mid saline water has a TDS of 3,350-6,400 mg/L. Highly saline water, with a TDS of 10,000 mg/L or greater, including produced water, needs to be trucked to site from nearby sources.

The basic laboratory is equipped with a modest collection of analytical equipment. Safety measures, such as exhaust hoods, emergency eyewash stations, and protected utility connections, safeguard users. In addition to the research bays, the central research building (15,350 square feet) contains a monitoring room with data and control access overlooking the bays, offices, a water analysis laboratory, a workshop, storage areas, and a conference room (for up to 25 people). There are seven offices for resident staff and visiting researchers. Most of the offices can accommodate two researchers. Each researcher has access to the internet, phone, fax, and a copy machine.

External research features on the site can be monitored from the central research building. Limited controls are available as well for start up and emergency shut down; however, some controls, such as valves on water lines, are local and must be operated manually.

The 40-acre site also contains three large evaporation ponds that can store the concentrates generated by test units. The ponds can be used to conduct concentrate management research studies. The evaporation pond area is fenced for safety reasons and instrumented for leak detection. An agricultural research area is located near the evaporation ponds. Part of the site has been set aside for renewable energy/desalination research. Wind turbines or solar panels can be positioned in this area and connected to the onsite water and power networks as needed.

Further information regarding this facility is also available at <http://www.usbr.gov/pmts/water/research/tularosa.html>.

Non-required tours of the facility for prospective applicants will be held on June 2, 2010, from 8:00 a.m. to 12:00 p.m. and from 1:00 p.m. to 4:00 p.m. BRNDRF is located at 500 Lavelle Rd., Alamogordo, NM. It is recommended that applicants traveling by air use the El Paso, Texas, airport.

Questions regarding this facility may be directed to Mr. Randall Shaw, Facilities Manager, at 575-443-6553 or to [rshaw@usbr.gov](mailto:rshaw@usbr.gov).

## **1.7 Presentation of Final Report**

Approximately at the time of delivery of the draft final report, the Project Manager shall make a presentation in Denver on the progress of the project. This review shall inform Reclamation on the project accomplishments and the final results of each task item.

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## Section 2—Award Information

### 2.1 Total Project Funding

For FY 2011, Reclamation anticipates awarding a total of up to \$1,000,000 for projects funded under this FOA. The number of awards made and the aggregate amount awarded for each category will be based on the quality of the applications received and congressional funding available. Hence, although there is a goal of about 4 to 7 research and laboratory study projects, this number may be increased or decreased if pilot and demonstration scale applications receive lower or higher overall rankings.

### 2.2 Project Funding Limitations

To facilitate the broad and effective use of limited Federal funds, Reclamation's share of any one proposed project may not exceed 50 percent of the total project costs, and shall generally not exceed the funding limitations stated below. See Section 3.4 for further details regarding cost sharing requirements.

An estimated 4 to 6 projects will be selected for award from the following research categories:

- **Research and Laboratory Studies:** Cooperative agreements of up to 13 months duration with a Reclamation cost-share portion of up to \$150,000 per agreement. See Section 1.4 for examples of research topics.
- **Pilot Scale Projects:** Cooperative agreements of up to 25 months duration, with a Reclamation cost-share portion of up to \$400,000 per agreement. This funding is divided as follows: up to \$200,000 for the first year for pilot plant design, construction, and installation and up to \$200,000 for an optional second year for testing, modification, and evaluation. In line with the research priorities stated at Section 1.3, at least one Pilot Scale Project will be carried out at BGNDRF. See Section 1.5 for examples of pilot scale topics.

## 2.3 Reclamation Responsibilities

Substantial involvement between Reclamation and the recipient is anticipated during the performance of this project. Substantial involvement by Reclamation will include:

- **Collaboration and participation** with the recipient in the management of the project and close oversight of the recipient's activities to ensure that the program objectives are being achieved.
- **Oversight**, which may include review, input, and approval at key interim stages of the project.

## 2.4 Award Date

It is anticipated that awards will be made during September, 2011, with an anticipated project start date on or around October 1, 2011. However, due to funding limitations, it may be recommended that some applications be carried over for possible award in FY 2012 if additional funds become available.

## **Section 3—Eligibility Information**

### **3.1 Project Locations**

The applicant must make a commitment to conduct the project within the United States, including the District of Columbia, Guam, Puerto Rico, and the Virgin Islands.

### **3.2 Eligible Project Categories**

The application must propose a project for “Research and Laboratory Studies,” “Pilot Scale Projects,” or “Demonstration Scale Projects” as previously described in Sections 1.4 and 1.5 of the FOA. The studies and projects listed are examples only and do not preclude the applicant from proposing other projects that are within the focus of these task areas.

### **3.3 Eligible Applicants**

Any responsible source, to include individuals, institutions of higher education, commercial or industrial organizations, private entities, public entities (including state and local), or Indian Tribal Governments, may submit an application which will be considered by Reclamation. Foreign entities, other than United States-Mexico binational research foundations and inter-university research programs established by the two countries, are not eligible for funding under the authorizing legislation for this program. Federal agencies are not eligible to apply.

Applicants should refer to Section 4.5.4.3 of this document for further information regarding the information required to support eligibility for award of an agreement under this program.

### **3.4 Cost Sharing**

Cost sharing shall be provided in accordance with the requirements stated in this section. Cost contributions may be either direct or indirect, provided such costs are otherwise allowable, allocable, and reasonable in accordance with the cost principals applicable to the award. Applicants proposing to provide additional cost-share will be given greater consideration during evaluation of their proposal.

Recipients must provide at least a 75 percent cost share in these agreements through in-kind, cash, or third-party contributions, or combinations thereof;

however, the recipient's share of the funding may be decreased from 75 percent to 50 percent in accordance with the criteria listed below.

The Desalination Act specifies:

*“The Federal share of the cost of a research, study, or demonstration project or a desalination development project or activity carried out under this Act shall not exceed 50 percent of the total cost of the project or research or study activity. A Federal contribution in excess of 25 percent for a project carried out under this Act may not be made unless the Secretary determines that the project is not feasible without such increased Federal contribution.”*

This will be determined via a requirement that applicants provide a justification with the submission of their application stating why the project would not be feasible without the increased contribution, and including information regarding the financial capabilities of the applicant and project partners. This documentation must demonstrate that the project is not feasible without such increased Federal contribution.

For awards made for research and studies under Section 3 of the Desalination Act, the legislation further states:

*“. . . up to \$1,000,000 in each fiscal year may be awarded to institutions of higher education, including United States-Mexico binational research foundations and inter-university research programs established by the two countries, for research grants without any cost-sharing requirement.”*

Therefore, institutions of higher education are not mandated to provide cost-sharing, but they are encouraged to do so. Please note that there is a limit of \$1,000,000 on the total amount of non-cost-shared funding available for award to institutions of higher education each year. This limitation may affect the number of projects awarded to institutions of higher education that do not propose a project cost share.

### **3.4.1 Regulations**

All cost-share contributions must meet the criteria established in the Office of Management and Budget's (OMB) administrative and cost principles circulars that apply to the applicant. These circulars are available at <http://www.whitehouse.gov/omb/circulars/>.

- **STATE, LOCAL AND TRIBAL GOVERNMENTS** that are recipients or subrecipients shall use the following:
  - Circular A 87, revised May 10, 2004, “Cost Principles for State, Local, and Indian Tribal Governments”

- Circular A 102, as amended August 29, 1997, “Grants and Cooperative Agreements with State and Local Governments” (Grants Management Common Rule, Codification by Department of Interior, 43 CFR 12, Subpart C)
- Circular A-133, revised June 27, 2003, “Audits of States, Local Governments, and Non-Profit Organizations”
- **NONPROFIT ORGANIZATIONS** that are recipients or subrecipients shall use the following:
  - Circular A 110, as amended September 30, 1999, “Uniform Administrative Requirements for Grants and Agreements With Institutions of Higher Education, Hospitals, and Other Non-Profit Organizations” (Codification by Department of Interior, 43 CFR 12, Subpart F)
  - Circular A 122, revised May 10, 2004, “Cost Principles for Non-Profit Organizations”
  - Circular A-133, revised June 27, 2003, “Audits of States, Local Governments, and Non-Profit Organizations”
- **ORGANIZATIONS OTHER THAN THOSE INDICATED ABOVE** that are recipients or subrecipients shall use the basic principles of OMB Circular A-110 (Codification by Department of Interior, 43 Code of Federal Regulations [CFR] 12, Subpart F), and cost principles shall be in accordance with 48 CFR Subpart 31.2, titled "Contracts with Commercial Organizations," which is available at <http://www.gpoaccess.gov/ecfr/>.

Additionally, please reference 43 CFR 12.77 for further regulations that cover the award and administration of subawards by State governments.

### 3.4.2 In-Kind Contributions

In-kind contributions constitute the value of noncash contributions that benefit a federally assisted project. These contributions may be in the form of real property, equipment, supplies and other expendable property, as well as the value of goods and services directly benefiting and specifically identifiable to the project or program. The cost or value of in-kind contributions that have been or will be relied on to satisfy a cost-sharing or matching requirement for another Federal financial assistance agreement, a Federal procurement contract, or any other award of Federal funds may not be relied on to satisfy the cost-share requirement for your project.

Depreciation already accounted for may not be applied as a cost contribution. Federal funding from other agencies may be used as a portion of your cost sharing only if permitted by the authorizing legislation of that funding source, and only to the extent that the total amount of Federal funding from all sources does not exceed 50 percent of the total project cost.

### **3.4.3 Pre-Award Costs**

Project pre-award costs that have been incurred prior to the date of award but after the date of authorization and appropriation for this program may be submitted for consideration as an allowable portion of the recipient's cost share for the project.

**In no case will pre-award costs incurred prior to October 28, 2010, be considered for cost share purposes.**

For example, pre-award costs might include design or construction plans and environmental compliance costs directly supporting the proposed project. Reclamation will review the proposed pre-award costs to determine if they are allowable in accordance with the authorizing legislation and applicable cost principles. To be considered allowable, any pre-award costs proposed for consideration under the new awards must comply with all applicable requirements under this FOA.

### **3.4.4 Indirect Costs**

Indirect costs that will be incurred during the development or construction of a project, which will not otherwise be recovered, may be included as part of the applicant's cost share. Indirect costs are those that are both:

- (1) Incurred for a common or joint purpose benefiting more than one cost objective.
- (2) Not readily assignable to any one cost objective. For further information on indirect costs, refer to the applicable OMB cost principles circular referenced in Section 3.4.1, above.

## **3.5 Technical Responsiveness**

To receive consideration, applications must be responsive and conform to the eligibility criteria and proposal instructions of this FOA.

Applicants shall include in their application a detailed Research Work Plan (RWP) and schedule showing individual tasks with significant milestones identified for the work to be accomplished. The RWP shall be the working document that implements this Statement of Work. In accordance with Section 5 of the Desalination Act, all information from studies sponsored or funded under the authority of the Desalination Act shall be considered public information.

Intellectual property rights for any developments made under these agreements typically are retained by the recipient. The Patent Rights, Copyrights, and Rights to Data provisions applicable to awards made under this FOA, may be viewed at Section 8.4 of the FOA.

The applicant must submit technical and budget proposals in accordance with the requirements stated in Section 4 of this document.

### **3.6 Funding Plan and Letters of Commitment**

The applicant's proposal shall include a funding plan that describes how the non-Reclamation share of the costs will be obtained. If funding will be provided by other than the applicant, letters of commitment must be provided from these additional sources. See Sections 4.3 and 4.6 for information on submitting the funding plan and letters of commitment.

### **3.7 Other Regulations**

Applicants shall adhere to Federal, state, and local laws, regulations, and codes, as applicable, and shall obtain all required approvals and permits. Applicants shall also coordinate and obtain approvals from site owners and operators, where applicable.

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## **Section 4—Application and Proposal Submission Information**

### **4.1 Address to Request Application Package**

This document contains all information, forms, and electronic addresses required to obtain the information required for submission of an application.

If you are unable to access this information electronically, you may request paper copies of any of the documents referenced in this request for applications by contacting:

By mail:                      Bureau of Reclamation  
                                    Acquisition Operations Group  
                                    Attn: Michelle Maher  
                                    Mail Code : 84-27810  
                                    P. O. Box 25007  
                                    Denver CO 80225

E-mail:                        mmaher@usbr.gov

Fax:                             303-445-6345

### **4.2 Date for Receipt of Applications**

Applications submission deadline:

- June 3, 2011, 4:00 p.m., Mountain Daylight Time (MDT)

Proposals received after the application deadline will not be considered unless it can be determined that the delay was caused by Federal government mishandling or by the Grants.gov application system.

### **4.3 Application Delivery Instructions**

Applications may be submitted electronically through <<http://www.grants.gov>> or hard copies may be submitted as follows:

**Mailing Address:**

Bureau of Reclamation  
Attn: Michelle Maher  
Mail Code: 84-27810  
P O Box 25007,  
Denver Federal Center.  
Denver CO, 80225

**Express mail/delivery services:**

Bureau of Reclamation  
Attn: Michelle Maher,  
Mail Code: 84-27810  
Denver Federal Center  
6th Avenue and Kipling Street  
Building 67, Room 152  
Denver CO 80225  
Mailroom: (303) 445-2088

**Electronic Applications**

Submit in accordance with instructions at <<http://www.Grants.gov>>.

**4.4 Instructions for Submission of Project Proposal**

Each applicant shall submit an application in accordance with the instructions contained in this section.

• **For hardcopy proposals:**

- Applicants shall submit an original and two copies of all application documents for hardcopy submissions. Each document should be clearly identified as the “ORIGINAL” or as a “COPY.”
- Please do not use “comb,” “spiral,” or adhesive methods to bind the documents.
- Hardcopy applications may be submitted by mail or express methods to the addresses listed in Section 4.3, above.

Materials arriving separately, other than funding commitment letters, will not be included in the application package .

- Application documents submitted by fax or email will not be accepted.

- Do not include a cover letter or company literature/brochure with the application. All pertinent information must be included in the application package.
- **For electronic applications:**
  - Electronic applications must be submitted through Grants.gov at <http://www.grants.gov>.
  - Please note that submission of an application electronically requires prior registration through Grants.gov, which may take 7-28 days. See Section 8.2 for further information on submission of applications through Grants.gov.
  - Applicants have sometimes experienced significant delays when attempting to submit applications through Grants.gov. If you plan to submit your application through Grants.gov, you are encouraged to submit your application several days prior to the application deadline. If you encounter problems with the Grants.gov application submission process, you must contact the Grants.gov Help desk to obtain a “Case Number.” This Number will provide evidence of your attempt to submit an application prior to the submission deadline.

Regardless of the delivery method used, applicants must ensure that their proposals arrive by the date and time deadline stated in Section 4.2, above. Late applications will not be accepted unless it is determined that the delay was caused by Federal government mishandling or by a problem with the Grants.gov application system.

## **4.5 Technical Proposal Instructions**

### **4.5.1 General**

The technical proposal should present information in a manner which allows it to “stand alone” without the need to reference other documents. It should describe the capability of your organization to participate in this program and should demonstrate a thorough understanding of the technology of the work topic proposed for study. The proposal shall be organized and written so that it can be easily read and meaningfully evaluated by Reclamation personnel and selected external evaluators from a variety of different functional and technical disciplines. The applicant shall include work-hour requirements for each phase. The work-hour information will be used as an aid in evaluating your understanding of the work requirement.

To allow for innovation, you are not limited to the suggested topics described in Sections 1.4 and 1.5; however, the value to this program of any other tasks

proposed must be substantiated in your proposal. You are requested to carefully evaluate the topic areas set forth in Sections 1.4 and 1.5 in light of the overall project objectives.

#### **4.5.2 Use and Disclosure of Proposal Information**

In accordance with the “Use and Disclosure of Proposal Information—Department of the Interior” provision contained in Section 8.3 of this FOA, applicants shall mark trade secret or confidential commercial or financial information contained in the application with the restrictive legends specified. The applicant shall also clearly and separately mark all proprietary information contained in the application with the restrictive legend “Proprietary Information.”

#### **4.5.3 Application Format and Length**

The total application package shall be no more than **60 (sixty)** pages and shall be printed single-sided. If an application exceeds 60 pages, only the first 60 pages will be evaluated. The font shall be at least 12 points in size and easily readable. Page size shall be 8 ½” x 11,” except for an occasional larger size for charts, maps, or drawings.

The Technical Proposal section of your application shall be limited to a maximum of **40 (forty) pages** and shall be double spaced and printed single-sided. An example of a technical proposal format is available for your review at <http://www.usbr.gov/pmts/water/research/DWPR/solicitation.html>.

Applications will be prescreened for compliance to the page number limitations.

#### **4.5.4. Application Content**

The application must include the following elements in order to be considered complete:

- SF-424 Core Form – Application cover page
- SF-424 B Form
- SF-424A Form
- Technical proposal (limited to 40 pages)
  - Title page
  - Table of contents
  - Executive summary
  - Background and Introduction
  - Technical Approach
  - Scope of Work
  - Research Work Plan and Schedule
  - Project Management
  - Personnel Qualifications
  - Facilities and Equipment Information
  - Applicant Experience and Past Performance
  - Work Currently Sponsored by Others

## Section 4—Application and Proposal Submission Information

- Environmental Impact
- Dismantling Plans
- Other Information
- Funding plan and letters of commitment
- Project budget information
  - Budget proposal
  - Budget Narrative
  - SF-424 A Form

If you are not submitting your application through Grants.gov, you will need to access copies of the SF-424, SF-424A, SF-424B forms. The forms may be obtained at <[http://www.grants.gov/agencies/approved\\_standard\\_forms.jsp#1](http://www.grants.gov/agencies/approved_standard_forms.jsp#1)>.

**4.5.4.1 SF-424 Application Cover Page**

This fully completed form must be signed by a person legally authorized to commit the applicant to performance of the project. Failure to submit a properly signed SF-424 may result in the elimination of the application from further consideration.

**4.5.4.2 SF-424 Assurances**

An SF-424B – Assurances – Non-Construction Programs, signed by a person legally authorized to commit the applicant to performance of the project shall be included. Failure to submit a properly signed SF-424B may result in the elimination of the application from further consideration.

**4.5.4.3 Technical Proposal Content**

The following format shall be used in preparing the technical proposal:

**4.5.4.3.1 Title Page.** Provide a brief, informative, and descriptive title for the proposed work. Include name and address of organization, and name, address, telephone and facsimile numbers of the project manager, e-mail address, and task number identification.

**4.5.4.3.2 Table of Contents.** List all major sections of the technical proposal in a Table of Contents.

**4.5.4.3.3 Executive Summary.** Discuss briefly how the required work will be performed and what are the highlights of the proposal.

**4.5.4.3.4 Background and Introduction.** Describe the current status of the technology supporting the specific research work proposed. Address the following issues:

- (1) In regard to the technology concerning the work to be done, what is known or believed, and what has been reported in literature, particularly in recent literature?
- (2) What is the problem to be solved or what aspect of current technology are you attempting to improve? If appropriate, identify specific water problem(s) and location.
- (3) How does the work proposed differ from what others have done?
- (4) What are the goals/objectives of the proposed project? If the project proved successful, what would be the result at the end of the investigation, and what would be the potential for follow-on funding for further work?
- (5) What is the applicability of the project in terms of local, state, regional, or national water problems, industries, interests, and issues?

- (6) What is the economic and market potential of the technology?
- (7) What technical risks are associated with the proposed investigation? Have similar projects been conducted elsewhere? On different feedwaters? How successful have they been? Why would the proposed project succeed if other similar projects have failed elsewhere? Also, what possible adverse environmental and institutional risks are associated with undertaking and funding the project?
- (8) Provide a brief summary of the preliminary research study results and conclusions.
- (9) Provide a list of literature references either at the end of this section or at the end of the technical proposal.

**4.5.4.3.5 Technical Approach.** Discuss the approach proposed to accomplish the proposed work. This discussion shall be in sufficient detail to permit a comprehensive evaluation of the proposal. The applicant's understanding will be established not only by the proposed approach, but also by anticipation and/or identification of the various problems and assessment of the severity of each problem. The proposal shall not merely offer to conduct an effort related to the topics described in Section 1, but shall detail the actual effort proposed as specifically as possible. Repeating the work statement without elaborating on the specific tasks to be performed is unacceptable.

- (1) Describe the goal of the proposed work in very specific terms.
- (2) Explain why results from the proposed work would be superior to existing technology or what the use of the proposed results would be. Explain what the probability of a successful outcome from the proposed work would be. Describe the experimental or test procedures to be used. Justify this selection.
- (3) Describe the applicability of the results assuming that the work has a successful outcome. Having good results, what use can you or someone else make of them? How would successful results from this work improve the existing technology?
- (4) Provide an economic comparison of achieving a certain result using conventional technology versus using the newly developed technology. If the improvement is not best described in economic terms, what improvement would result?
- (5) Provide a specific discussion of any problems or major difficulties anticipated in performing or accomplishing the work, an evaluation of the

various methods considered for resolution of the problems/difficulties, substantiation of the method(s) selected, principles or techniques which are proposed to solve the problem, and the degree of success expected.

**4.5.4.3.6 Scope of Work.** Describe in detail the work to be carried out. Break the proposed work, including reporting, into major tasks. For each task describe what studies and tests you plan to conduct, what kind of samples you plan to test, what kind of apparatus you will need, what data you plan to collect, and what you will do with the data. Describe the kind of staff, the number of staff hours, and the amount of elapsed time what will be required for each task.

**4.5.4.3.7 Research Work Plan and Schedule.** Provide a detailed RWP and Schedule showing individual tasks with significant milestones identified for the work to be accomplished, including time for the preparation, submission, and approval of required data and reports.

**4.5.4.3.8 Project Management.** Show the proposed organization to manage the work, its relationship to the applicant's overall corporate structure, and the function and responsibilities of any subcontractors. Include an estimate of the extent of anticipated subcontracting together with a list of items or work to be subcontracted.

**4.5.4.3.9 Personnel Qualifications.** Provide the following information on personnel:

- (1) Identification of Project Manager assigned to perform the work.
- (2) Identification of key personnel, including consultants, to be assigned for direct work on the project and as direct technical supervision, along with the nature of each individual's involvement and estimated work hours by task.
- (3) Any additional personnel required for carrying out the work and the source from which they will be obtained.
- (4) A statement of assurance that the proposed personnel will be available for work on this agreement.
- (5) A list of alternative personnel to be utilized in the event proposed personnel are not available as planned.
- (6) A brief resume (to include education, experience, accomplishments, and other pertinent information) for all personnel named. List each individual's most important publications (a full list is not necessary or desired).

**4.5.4.3.10 Facilities and Equipment Information.** Describe the facilities in which the work is to be performed. List the equipment that is available for use on this agreement and which will be required for carrying out the proposed work. List and justify any special equipment that is required and indicate the extent to which the work can be accomplished without it. Information on alternative sources considered for the equipment shall also be included.

**4.5.4.3.11 Applicant Experience and Past Performance.** Provide a list of projects similar in scope and magnitude to the work required under this FOA which the applicant has completed during the last 3 years. For each project, include:

- (1) Name of the project
- (2) Description of the work
- (3) Name and address of the acquiring government agency or commercial customer, and the name(s) and telephone number(s) of references from the acquiring agency or customer who may be contacted for further information

**4.5.4.3.12 Work Currently Sponsored by Others.** Provide a detailed description of work sponsored by others (either current or in the recent past) that relates to the proposed work. Show clearly how the proposed work differs from that sponsored by others. Also indicate if this proposal has been presented to others for funding.

**4.5.4.3.13 Environmental Impact.** Describe any potential environmental benefits or adverse impacts of the proposed work, and plans for disposal of wastes if any result from the study. If any permits and licenses are required for this study, describe how they will be obtained.

**4.5.4.3.14 Dismantling Plans.** Describe plans for the subsequent use or dismantling of equipment once the research or study is completed or Federal funding expires. The recipient shall be responsible for dismantling all equipment and returning the site to its original condition to the satisfaction of the site owner, unless other arrangements are made to the satisfaction of the site owner to retain the pilot plant equipment and approval has been received from the government. Equipment ownership shall be in accordance with the requirements of the applicable OMB circular.

**4.5.4.3.15 Other Information.** Include in this section any additional information which is relevant to the application.

**4.5.4.4 Funding Plan and Letters of Commitment Instructions**

The applicant's proposal shall include a funding plan that describes how the non-Reclamation share of the project costs will be obtained. Reclamation will use this

information in making a determination of financial capability. In accordance with Section 3.4, applicants that are not institutions of higher education must be willing to fund at least 50 percent of the project costs and provide documentation showing the sources of non-Reclamation funding that total 50 percent or more of the project costs.

#### **4.5.4.4.1 Funding Plan**

The funding plan must include all project costs.

- (1) Explain how you will make your contribution to the cost share requirement, (e.g., monetary and/or in-kind contributions and source funds [e.g., reserve account, tax revenue, and/or assessments]).
- (2) Describe any in-kind costs incurred before the anticipated project start date that the applicant seeks to include as project costs. The description of these costs shall include :
  - (a) What project expenses have been incurred
  - (b) How they benefitted the project
  - (c) The amount of the expense
  - (d) The date of cost incurrence
- (3) Provide the identity and amount of funding to be provided by funding partners, as well as the required letters of commitment.
- (4) Describe any funding requested or received from other Federal partners.  
Note: Other sources of Federal funding may not be counted towards your cost share unless otherwise allowed by statute.
- (5) Describe any pending funding requests that have not yet been approved, and explain how the project will be affected if such funding is denied.

#### **4.5.4.4.2 Letters of Commitment**

Project funding provided by sources other than the applicant shall be supported with letters of commitment from these additional sources. This is a mandatory requirement. Letters of commitment shall identify:

- (1) The source and amount of funding commitment
- (2) The date the funds will be available to the applicant
- (3) Any time constraints on the availability of funds
- (4) Any other contingencies associated with the funding commitment

Commitment letters should be included with your project application. If a final funding commitment has not been received by the date of application, commitment letters are to be submitted by no later than July 1, 2011, to the address shown in Section 4.3, above.

**This is a mandatory requirement for all applications submitted in response to this request for applications. Applications may be submitted without Letters of Commitment; however, guaranteed Letters of Commitment shall be provided to Reclamation from all cost sharing partners to the satisfaction of the Government prior to consideration for award. If at that time applications with the highest ratings do not have guaranteed Letters of Commitment, the award may be made to those applications with the next highest rating that have firm Letters of Commitment.**

#### ***4.5.4.5 Budget Proposal Instructions***

##### **4.5.4.5.1 Budget Proposal Format**

The project budget shall include detailed information on the categories listed below and must clearly identify all project costs and the funding source(s) (i.e., Reclamation or other funding sources). Unit costs shall be provided for all budget items including the cost of work to be provided by contractors. **Lump sum costs are not acceptable.** Additionally, applicants shall include a narrative description of the items included in the project budget. It is strongly advised that applicants use the budget format shown on Table 1 at the end of this section or a similar format that provides this information.

##### **4.5.4.5.2 Budget Narrative Format**

**Submission of a budget narrative is mandatory.** An award will not be made to any applicant who fails to fully disclose this information. The Budget Narrative provides a discussion of, or explanation for, items included in the budget proposal. Listed below are examples of the types of information to include in the narrative.

###### *4.5.4.5.2.1 Salaries and Wages*

Indicate program manager and other key personnel. For all positions, indicate salaries and wages, estimated hours or percent of time, and rate of compensation proposed. All labor estimates, including any proposed subcontractors, shall be allocated to specific tasks as outlined in the Recipient's technical proposal. Labor rates and proposed hours shall be displayed for each task. Salaries and wages of Consultants and Contractors should not be included in this section, but rather indicated in the Contractual portion of the budget narrative.

Clearly identify any proposed salary increases and the effective date.

Generally, salaries of administrative and/or clerical personnel should be included as a portion of your indirect costs. If these salaries can be adequately documented

as direct costs, they may be included in this section; however, an explanation should be included in your budget narrative.

*4.5.4.5.2.2 Fringe Benefits*

Indicate rates/amounts, what costs are included in this category, and the basis of the rate computations. Indicate whether these rates are used for application purposes only or whether they are fixed or provisional rates for billing purposes. Federally-approved rate agreements are acceptable for compliance with this item.

*4.5.4.5.2.3 Travel*

Include purpose of trip, destination, number traveling, length of stay and all travel costs including airfare (basis for rate used), per diem, lodging, and miscellaneous travel expenses. For local travel, include mileage and rate of compensation. Only one staff member is expected to make the presentation of the final report in Denver; and except for unusual travel circumstances, this trip should be limited to a maximum of two days. Information regarding per diem expenses in accordance with Federal Travel Regulations may be found on the Internet at <http://www.gsa.gov/travel.htm>.

*4.5.4.5.2.4 Equipment*

Itemize costs of all equipment having a value of over \$5000 and explain the need for this equipment.

*4.5.4.5.2.5 Supplies*

Itemize supplies by major category, quantity, and purpose, such as whether the items are needed for office use, research, or construction.

*4.5.4.5.2.6 Contractual*

Identify all work that will be accomplished by subrecipients, consultants, or contractors, including a detailed budget estimate of time, rates, supplies, and materials that will be required for the task. If a subrecipient, consultant, or contractor is proposed and approved at time of award, no other approvals will be required. Any changes or additions will require a request for approval.

*4.5.4.5.2.7 Other*

Any other expenses, such as those for reporting, not included in the above categories shall be listed in this category, along with a description of the item and what it will be used for. No profit or fee will be allowed.

Funding for contingencies will only be considered in association with construction projects. Proposals for construction contingency funding at a rate greater than 10 percent will not be found acceptable.

*4.5.4.5.2.8 Indirect Cost*

Show the proposed rate, cost base, and proposed amount for allowable indirect costs based on the applicable OMB circular cost principles (see Section 3.4) for

the recipient's organization. It is not acceptable to simply incorporate indirect rates within other direct cost line items.

If the recipient has separate rates for recovery of labor overhead and general and administrative costs, each rate shall be shown. The applicant should propose rates for evaluation purposes which will be used as fixed or ceiling rates in any resulting award. Include a copy of any federally-approved Indirect Cost Rate Agreement.

If you do not have a Federally-approved Indirect Cost Rate Agreement or if unapproved rates are used, explain why, and include the computational basis for the indirect expense pool and corresponding allocation base for each rate. Information on “Preparing and Submitting Indirect Cost Proposals” is available from the Department of the Interior, National Business Center, Indirect Cost Section, at <<http://www.aqd.nbc.gov/services/ICS.aspx>>.

#### *4.5.4.5.2.9 Total Cost*

Indicate total amount of project costs, including the Federal and non-Federal cost share amounts.

#### **4.5.4.5.3 Budget Information Form**

In addition to the above-described budget information, the applicant must complete an SF-424A, Budget Information - Nonconstruction Programs or an SF-424C, Budget - Construction Programs. These forms are available at the Grants.gov website at <[http://www.grants.gov/agencies/approved\\_standard\\_forms.jsp#1](http://www.grants.gov/agencies/approved_standard_forms.jsp#1)>.

#### **4.5.4.5.4 Preaward Costs**

Costs incurred prior to award will not be reimbursed by Reclamation and are not allowable as a portion of your cost-share for the project, except as described in Section 3.4.

## **4.6 Application Submission Checklist**

An Application Submission Checklist has been included on page v of this FOA. The checklist contains a summary of the information you are required to submit with your DPWR application.

**Table 1. Sample Budget Proposal Format**

BUDGET ITEM DESCRIPTION	COMPUTATION		RECIPIENT FUNDING	RECLAMATION FUNDING	TOTAL COST
	\$/Unit and Unit	Quantity			
<b>SALARIES AND WAGES</b>					
Employee 1					
Employee 2					
Employee 3					
<b>FRINGE BENEFITS</b>					
Full-time employees					
Part-time employees					
<b>TRAVEL</b>					
Trip 1					
Trip 2					
Trip 3					
<b>EQUIPMENT</b>					
Item A					
Item B					
Item C					
<b>SUPPLIES/MATERIALS</b>					
Office supplies					
Construction					
<b>CONTRACTUAL<sup>1</sup></b>					
Item 1					
Item 2					
<b>OTHER</b>					
Reporting					
<b>TOTAL DIRECT COSTS</b>					
INDIRECT COSTS - __%					
<b>TOTAL PROJECT COSTS</b>					

<sup>1</sup> Contracts should be broken out into specific line items for each contractor and estimated costs for tasks covered under each contractor.. Applicants must attach a separate, detailed budget for each contract to adequately address all contractor budget items or note in the budget narrative how the estimate for contractual costs were arrived at.

## Section 5—Application Review Information

### 5.1 Evaluation Criteria

The relative importance to be placed on the evaluation criteria is shown below. Applications will be evaluated by a technical panel in accordance with these criteria and the corresponding weights assigned to each criterion.

The Government reserves the right to reject any and all applications which do not meet the requirements of this FOA and which are determined to be outside the scope of the DWPR. Awards will be made to the responsible applicants submitting applications which conform to the FOA and are most advantageous to the Government considering the factors and any significant subfactors listed below. Awards may be made to maintain balance among the tasks areas listed in Sections 1.4 and 1.5.

In the evaluation of applications, non-cost or non-price-related evaluation factors listed in this section are considered to be more important than cost or price, or cost-related or price-related factors. A cost or price analysis will be performed to determine the reasonableness of costs or prices proposed and the applicant's understanding of, and ability to perform, the prospective agreement.

#### **5.1.1 Technical and Managerial Factors—75 Percent Overall Weight**

The technical and managerial factors for all tasks comprise 75 percent of the total evaluation weight. Individual technical factors, and significant subfactors, are described below with their respective evaluation weights. Subfactors are listed in order of decreasing value.)

##### **5.1.1.1 Technical Subfactors for Tasks I, II, III, IV, V, and VI:**

The technical subfactors for these tasks comprise 60 percent of the total evaluation weight.

- (1) Demonstrated familiarity with the current technology in the field of work and understanding of the potential difficulties in carrying out the work
- (2) Impact of the proposed work on the current technology and on its related economics if a completely successful outcome were achieved
- (3) Novelty of approach to the work and probability of a successful outcome of work

- (4) Relationship to research priorities shown in Section 1.3
- (5) Availability of equipment, instruments, and test facilities required for the work

**5.1.1.2 Technical Subfactors for Tasks VII and VIII**

The technical subfactors for these tasks comprise 60 percent of the total evaluation weight.

- (1) Impact of the proposed work on the current technology and on its related economics if a completely successful outcome were achieved
- (2) Relevance of proposed pilot/demonstration plant investigation to DWPR goals and the extent to which investigative effort further demonstrates/verifies technology evaluated in applicant's preliminary research
- (3) Availability of adequate pilot/demonstration plant site, such as the BGNDRF, and necessary shop facilities, hardware, construction equipment, and other resources to support the construction, installation, testing and evaluation of the pilot plant
- (4) Applicability of the project to local, state, regional or national water problems, industries and issues

**5.1.1.3 Managerial Subfactors**

For all tasks, the managerial subfactors are the same and comprise 15 percent of the total evaluation weight.

- (1) The qualifications, capabilities, and experience of the proposed project manager and other key personnel who are critical to achievement of the proposed objectives
- (2) Adequacy, completeness, and realism of the research schedule, task phasing, and milestones
- (3) Proposed procedures for Quality Assurance and Quality Control to be used throughout the project

**5.1.2 Pricing Factors—25 Percent Overall Weight**

For all tasks, the pricing factors are the same:

- (1) **Cost realism and reasonableness.** This requires that costs be directly relatable to items in the Research Work Plan or Project Management Plan (PMP), be reasonable, and be appropriate to the project in terms of dollar amount and quantity.

- (2) **Cost-share.** Applicants proposing to provide the most cost-share shall be given greater consideration.

## 5.2 Review and Selection Process

The government reserves the right to reject any and all applications which do not meet the requirements of this FOA and which are determined to be outside the scope of the DPWR program. Awards will be made to the responsible applicants submitting applications which conform to the FOA and are most advantageous to the government, considering the factors and any significant subfactors listed above. Award selection may be made to maintain balance among the program tasks listed in Sections 1.4 and 1.5.

The evaluation process will be comprised of three levels:

### 5.2.1 First Level Screening

All applications will be screened to ensure that:

- The application meets the requirements of the funding opportunity announcement, including submission of technical and budget proposals, a funding plan, and related forms that are prepared in accordance with the instructions stated in Section 4 of this document.
- The proposed project meets the description of eligible projects in Sections 1.4 or 1.5 of this document (Tasks I - VII) and is within the scope of the DWPR program.

The application must contain a properly executed SF-424 Application for Financial Assistance and a form SF-424B, Assurances – Non-Construction Programs.

- When applicable, at least 75 percent of the cost of the project is being cost shared by the applicant. If the applicant is requesting a cost share reduction to 50 percent, a justification letter must be included in accordance with Section 3.4.
- The application includes appropriate commitment letters, prepared in accordance with Section 4.5.4.4.2 of this document that indicate that the applicant is capable of providing the amount of funding or in-kind contributions specified in the funding plan. Final cost share funding commitments are to be submitted to Reclamation by July 1, 2011.
- The applicant meets the eligibility requirements stated in Section 3.

- Research and laboratory studies can be accomplished within 13 months. For multi-year applications, the project will accomplish measurable on-the-ground improvements annually and be completed within 25 months for pilot scale projects.
- An application must pass all first level screening criteria in order for it to be forwarded for further consideration at the Second Level Evaluation phase.

### **5.2.2 Second Level Evaluation (Technical Review)**

Applications will be scored against the evaluation criteria in Section 5.1 by an Application Review Committee (ARC) comprised of experts in relevant disciplines.

### **5.2.3 Third Level Evaluation (Managerial Review)**

Management will conduct a final review to prioritize projects based on availability of funds, to ensure balance among the program tasks listed in Sections 1.4 and 1.5, and to consider the research priorities listed in Section 1.3.

## **5.3 Pre-Award Clearances and Approvals**

After completion of the third-level evaluation, Reclamation will complete a business evaluation and determination of responsibility. During these evaluations, the Reclamation Grants Officer (GO) will also consider several factors which are important, but are not quantified, such as:

- Pre-award clearances, determinations, reviews, and approvals
- Allowability and allocability of proposed costs
- Financial strength and stability of the organization
- Past performance, including satisfactory compliance with all terms and conditions of previous awards, such as compliance with reporting requirements, proper procurement of supplies and services, and compliance with audit requirements
- Adequacy of personnel practices; procurement procedures; and accounting policies and procedures, in accordance with the applicable OMB circulars referenced in Section 3.4.1

If the results of all pre-award reviews and clearances are satisfactory, an award of funding will be made once the agreement is finalized.

## Section 6—Award Administration Information

### 6.1 Award Notices

Successful applicants will receive by mail a notice of award and Cooperative Agreement document, signed by a Reclamation GO, notifying the applicant of project award and project starting date.

### 6.2 Award Document

If the applicant is awarded a financial assistance agreement as a result of this FOA, the proposed project and other relevant information from the application will be referenced in the agreement. Examples of award documents, including applicable Terms and Conditions, may be viewed at <<http://www.usbr.gov/mso/aamd/doing-business-financial-assistance.html>>. The agreement document must be signed by a Reclamation GO before it becomes effective.

### 6.3 Reporting Requirements and Distribution

If your organization is awarded an agreement as a result of this request for applications, you will be required to submit the following types of reports during the term of the agreement. Detailed information on the type, frequency, and distribution of these reports is included in the applicable Terms and Conditions referenced in Section 6.2.

#### 6.3.1 Financial Reports

- SF-425, Federal Financial Report

#### 6.3.2 Program Performance Reports

- Quarterly Technical Progress Reports
- Draft-Final and Final Reports. Please note that final reports are public documents and will be made available on Reclamation's website. Upon award of an agreement, recipients will be provided information regarding the format to be used in completion of their final report. Previously submitted reports are available for review at <<http://www.usbr.gov/pmts/water/publications/reports.html>>.

#### 6.3.3 Significant Developments Reports

- When applicable



## Section 7—Agency Contacts

There will be no pre-application conference. Organizations or individuals interested in submitting applications in response to this announcement may direct questions to Reclamation in writing. Questions may be submitted to the attention of Stephanie Bartlett, GO:

**By mail:**

Bureau of Reclamation  
Attn: Michelle Maher, Grants Officer  
Mail Code: 84-27810  
P. O. Box 25007  
Denver CO 80225

(303) 445-6345

**By e-mail:** [mmaher@usbr.gov](mailto:mmaher@usbr.gov)

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## Section 8—Other Information

### 8.1 General Provisions

The General Provisions applicable to this agreement are available at: <http://www.usbr.gov/mso/aamd/doing-business-financial-assistance.html>. The General Provisions are included within the Standard Document Templates shown on that page. Please review the appropriate recipient and project type template document applicable to your application. Applicants are advised to review 43 CFR 12 for further guidance relating to the administration of an anticipated agreement beyond the point of award.

### 8.2 Electronic Application Through Grants.Gov

**NOTE: Some applicants have experienced difficulties when attempting to submit their applications electronically through Grants.gov. If you encounter problems with the Grants.gov application submission process, you must contact the Grants.gov Help Desk to obtain a “Case Number.” This will provide evidence of your attempt to submit an application prior to the submission deadline.**

#### 8.1.1 Applying for Funds Online at Grants.gov

Reclamation is participating in the Grants.gov initiative that provides the grant community with a single website to find and apply for grant funding opportunities. Reclamation encourages applicants to submit their applications for funding electronically through [http://www.grants.gov/applicants/apply\\_for\\_grants.jsp](http://www.grants.gov/applicants/apply_for_grants.jsp). Applicant resource documents, and a full set of instructions for registering with Grants.gov and completing and submitting applications online are available at: <http://www.grants.gov/applicants/resources.jsp>.

If you need assistance with Grants.gov, the Contact Center is open 24 hours a day, 7 days a week. You may reach the Grants.gov Contact Center by emailing [support@grants.gov](mailto:support@grants.gov) or by calling 1-800-518-4726.

The following checklist is provided to give you a summary of the steps that are required to register with Grants.gov. **This registration process must be completed prior to submitting an electronic application through Grants.gov.**

**Additionally, see Step 2 in table 2 for completing the annual Central Contractor Registration (CCR) renewal process.**

### 8.1.2 Registering to Use Grants.gov (1-4 week process)

Note: (The following checklist information is available electronically at [http://www.grants.gov/assets/Organization\\_Steps\\_Complete\\_Registration.pdf](http://www.grants.gov/assets/Organization_Steps_Complete_Registration.pdf).)

The registration is a **one-time** process, which is **required** before representatives of an organization can submit grant application packages electronically through Grants.gov. **The registration process can take three to five business days or one to three weeks**—depending on your organization and if all steps are met in a timely manner. The checklist in table 2 provides registration guidance for a company, academic or research institution, State, local or tribal government, not-for-profit, or other type of organization.

Note: If you are an individual applying for a grant on your own behalf and not on behalf of a company, academic or research institution, state, local or tribal government, not-for-profit, or other type of organization, refer to **the Individual Registration**: [http://www.grants.gov/applicants/individual\\_registration.jsp](http://www.grants.gov/applicants/individual_registration.jsp). If you apply as an individual to a grant application package designated for organizations, your application will be rejected.

**Table 2. Checklist for Registering Your Organization in Grants.gov**

√ Step	Actions to take	Purpose	Time required
<b>1: Obtain Data Universal Number System (DUNS) Number</b>	<p><b>Has my organization identified its DUNS number?</b></p> <p>Ask the grant administrator, chief financial officer, or authorizing official of your organization to identify your DUNS number.</p> <p>If your organization does not know its DUNS number or needs to register for one, visit Dun &amp; Bradstreet at <a href="http://fedgov.dnb.com/webform/displayHomePage.do">http://fedgov.dnb.com/webform/displayHomePage.do</a></p>	The Federal government has adopted the use of DUNS numbers to track how Federal grant money is allocated. DUNS numbers identify your organization.	Same ay. You will receive DUNS number information online.
<b>2: Register With Central Contractor Registration</b>	<p><b>Has my organization registered with the CCR?</b></p> <p>Ask the grant administrator, chief financial officer, or authorizing official of your organization if your organization has registered with the CCR.</p>	Registering with the CCR is required for organizations to use Grants.gov.	If your organization already has an Employer Identification Number (EIN) or Taxpayer Identification Number (TIN), then you should allow one – three business days to complete the entire CCR registration. The EIN and TIN will come from the Internal Revenue Service (IRS).

Step	Actions to take	Purpose	Time required
<p>√ <b>2: continued</b></p>	<p>If your organization is not registered, you can apply online by going to &lt;<a href="http://www.ccr.gov">http://www.ccr.gov</a>&gt;. CCR has developed a handbook &lt;<a href="https://www.bpn.gov/ccr/doc/UserAccount.pdf">https://www.bpn.gov/ccr/doc/UserAccount.pdf</a>&gt; to help you with the process. If AFTER having registered in CCR, you experience any registration problems, you can get help by going to the Federal Service Desk &lt;<a href="https://www.fsd.gov">https://www.fsd.gov</a>&gt;.</p> <p>When your organization registers with CCR, you must designate an E-Business Point of Contact (E-Biz POC). This person will identify a special password called an "M-PIN."</p> <p>This M-PIN gives the E-Biz POC authority to designate which staff member(s) from your organization are allowed to submit applications electronically through Grants.gov. Staff members from your organization designated to submit applications are called Authorized Organization Representatives (AORs).</p>		<p>If your organization does not have an EIN or TIN, then you should allow one - two weeks for obtaining the information from the IRS when requesting the EIN or TIN via phone or Internet. The additional number of days needed is a result of security information that needs to be mailed to the organization</p>

**\*Note: Your organization needs to renew your CCR registration once a year. You will not be able to move on to Step 3 until you have renewed your CCR registration. This renewal may take up to 5 business days.**

<p><b>3: Username and Password</b></p>	<p><b>Have the AORs who officially submit applications on behalf of your organization completed their profile with Grants.gov to create their username and password?</b></p> <p>To create a username and password, AORs must complete their profile on Grants.gov. AORs will need to know the DUNS number of the organization for which they will be submitting applications to complete the process.</p> <p>After your organization registers with the CCR, AORs must wait one business day before they can complete a profile and create their usernames and passwords on Grants.gov.</p>	<p>An AOR username and password serves as an "electronic signature" when submitting a Grants.gov application.</p>	<p>Same day. After the AOR has completed their profile they will be prompted to create a username and password that will allow the user to login and check their approval status immediately.</p>
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Step	Actions to take	Purpose	Time required
<b>4: AOR Authorization</b>	<p><b>Has the E-Business Point of Contact (E-Biz POC) approved AORs to submit applications on behalf of the organization?</b></p> <p>When an AOR registers with Grants.gov to submit applications on behalf of an organization, that organization's E-Biz POC will receive an email notification. The email the AOR submitted in the profile will be the email used when sending the automatic notification from Grants.gov to the E-Biz POC with the AOR copied on the correspondence.</p> <p>The E-Biz POC must then login to Grants.gov (using the organization's DUNS number for the username and the "M-PIN" password (obtained in Step 2) and approve the AOR, thereby giving him or her permission to submit applications.</p> <p>When an E-Biz POC approves an AOR, Grants.gov will send the AOR a confirmation email.</p>	<p>Only the E-Biz POC can approve AORs. This allows the organization to authorize specific staff members or consultants/grant writers to submit grants. Only those who have been authorized by the E-Biz POC can submit applications on behalf of the organization.</p>	<p>This depends on how long it takes the E-Biz POC to login and approve the AOR, once the approval is completed the AOR can immediately submit an application.</p>
<b>Step 5: Track AOR Status</b>	<p><b>What is your AOR status?</b></p> <p>AORs can also login to track their AOR status using their username and password (obtained in Step 3) to check if they have been approved by the E-Biz POC.</p>	<p>To verify that the organization's E-Biz POC has approved the AOR.</p>	<p>Logging in to check your AOR status is instantaneous. The approval process to become an AOR depends on how long it takes the E-Biz POC to login and approve the AOR.</p>

### 8.3 Use and Disclosure of Proposal Information - Department of the Interior (APR 1984)

(a) Definitions. For the purposes of this provision and the Freedom of Information Act (5 U.S.C. 552), the following terms shall have the meaning set forth below:

- (1) 'Trade Secret' means an unpatented, secret, commercially valuable plan, appliance, formula, or process, which is used for making, Preparing, compounding, treating or processing articles or materials, which are trade commodities.
- (2) 'Confidential commercial or financial information' means any business information (other than trade secrets) which is exempt from the mandatory disclosure requirement of the Freedom of Information Act, 5 U.S.C. 552. Exemptions from mandatory disclosure which may be applicable to business information contained in proposals include exemption (4), which covers 'commercial and financial information obtained from a person and privileged

or confidential,' and exemption (9). which covers 'geological and geophysical information, including maps, concerning wells.'

(b) If the offeror, or its subcontractor(s) believes that the proposal contains trade secrets or confidential commercial or financial information exempt from disclosure under the Freedom of Information Act, (5 U.S.C. 552), the cover page of each copy of the proposal shall be marked with the following legend:

*"The information specifically identified on pages \_\_\_ of this proposal constitute trade secrets or confidential commercial and financial information which the offeror believes to be exempt from disclosure under the Freedom of Information Act. The offeror requests that this information not be disclosed to the public, except as may be required by law. The offeror also request that this information not be used in whole or part by the Government for any purpose other than to evaluate the proposal, except that if a contract is awarded to the offer as a result of or in connection with the submission of the proposal, the Government shall have the right to use the information to the extent provided in the contract."*

(c) The offeror shall also specifically identify trade secret information and confidential commercial and financial information on the pages of the proposal on which it appears and shall mark each such page with the following legend:

*"This page contains trade secrets or confidential commercial and financial information which the offeror believes to be exempt from disclosure under the Freedom of Information Act and which is subject to the legend contained on the cover page of this proposal."*

(d) Information in a proposal identified by an offeror as trade secret information or confidential commercial and financial information shall be used by the Government only for the purpose of evaluating the proposal, except that: (i) If a contract is awarded to the offeror as a result of or in connection with submission of the proposal, the Government shall have the right to use the information as provided in the contract, and (ii) if the same information is obtained from another source without restriction it may be used without restriction.

(e) If a request under the Freedom of Information Act seeks access to information in a proposal identified as trade secret information or confidential commercial and financial information, full consideration will be, given to the offeror's view that the information constitutes trade secrets or confidential commercial or financial information. The offeror will also be promptly notified of the request and given an opportunity to provide additional evidence and argument in support of its position, unless administratively unfeasible to do so. If it is determined that information claimed by the offeror to be trade secret information or confidential commercial or financial information is not exempt from disclosure under the

Freedom of Information Act, the offeror will be notified of this determination Prior to disclosure of the information.

(f) The government assumes no liability for the disclosure or use of information contained in a proposal if not marked in accordance with paragraphs (b) and (c) of this provision. If a request under the Freedom of Information Act is made for information in a proposal not marked in accordance with paragraphs (b) and (c) of this provision, the offeror concerned shall be promptly notified of the request and given an opportunity to provide its position to the government. However, failure of an offeror to mark information contained in a proposal as trade secret information or confidential commercial or financial information will be treated by the government as evidence that the information is not exempt from disclosure under the Freedom of Information Act, absent a showing that the failure to mark was due to unusual or extenuating circumstances, such as a showing that the offeror had intended to mark, but that markings were omitted from the offeror's proposal due to clerical error.

## **8.4 Patents, Copyrights, Rights to Data**

### **8.4.1 Patent Rights**

#### (a) Definitions

(1) “*Invention*” means any invention or discovery which is or may be patentable or otherwise protectable under Title 35 of the United States Code, or any novel variety of plant which is or may be protected under the Plant Variety Protection Act (7 U.S.C. 2321 et seq.).

(2) “*Subject invention*” means any invention of the recipient conceived or first actually reduced to practice in the performance of work under this agreement, provided that in the case of a variety of plant, the date of determination (as defined in section 41(d) of the Plant Variety Protection Act, 7 U.S.C. 2401(d)) must also occur during the period of agreement performance.

(3) “*Practical Application*” means to manufacture in the case of a composition or product, to practice in the case of a process or method, or to operate in the case of a machine or system; and, in each case, under such conditions as to establish that the invention is being utilized and that its benefits are, to the extent permitted by law or government regulations, available to the public on reasonable terms.

(4) “*Made*” when used in relation to any invention means the conception or first actual reduction to practice of such invention.

(5) “*Small Business Firm*” means a small business concern as defined at section 2 of Pub. L. 85-536 (15 U.S.C. 632) and implementing regulations of

the Administrator of the Small Business Administration. For the purpose of this provision, the size standards for small business concerns involved in government procurement and subcontracting at 13 CFR 121.3-8 and 13 CFR 121.3-12, respectively, will be used.

(6) “*Nonprofit Organization*” means a university or other institution of higher education or an organization of the type described in section 501(c)(3) of the Internal Revenue Code of 1954 (26 U.S.C. 501(c) and exempt from taxation under section 501(a) of the Internal Revenue Code (25 U.S.C. 501(a)) or any nonprofit scientific or educational organization qualified under a state nonprofit organization statute.

(b) Allocation of Principal Rights. The Recipient may retain the entire right, title, and interest throughout the world to each subject invention subject to this provision and 35 U.S.C. 203. With respect to any subject invention in which the Recipient retains title, the Federal government shall have a nonexclusive, nontransferable, irrevocable, paid-up license to practice or have practiced for or on behalf of the United States the subject invention throughout the world.

(c) Invention Disclosure, Election of Title and Filing of Patent Application by Recipient

(1) The Recipient will disclose each subject invention to the Bureau of Reclamation within two months after the inventor discloses it in writing to Recipient personnel responsible for patent matters. The disclosure to the Bureau of Reclamation shall be in the form of a written report and shall identify the agreement under which the invention was made and the inventor(s). It shall be sufficiently complete in technical detail to convey a clear understanding to the extent known at the time of the disclosure, of the nature, purpose, operation, and the physical, chemical, biological or electrical characteristics of the invention. The disclosure shall also identify any publication, on sale or public use of the invention and whether a manuscript describing the invention has been submitted for publication and, if so, whether it has been accepted for publication at the time of disclosure. In addition, after disclosure to the Bureau of Reclamation, the Recipient will promptly notify the Bureau of Reclamation of the acceptance of any manuscript describing the invention for publication or of any on sale or public use planned by the Recipient.

(2) The Recipient will elect in writing whether or not to retain title to any such invention by notifying the Bureau of Reclamation within two years of disclosure to the Bureau of Reclamation. However, in any case where publication, on sale or public use has initiated the one year statutory period wherein valid patent protection can still be obtained in the United States, the period for election of title may be shortened by the Bureau of Reclamation to a date that is no more than 60 days prior to the end of the statutory period.

(3) The Recipient will file its initial patent application on a subject invention to which it elects to retain title within one year after election of title or, if earlier, prior to the end of any statutory period wherein valid patent protection can be obtained in the United States after a publication, on sale, or public use. The Recipient will file patent applications in additional countries or international patent offices within either ten months of the corresponding initial patent application or six months from the date permission is granted by the Commissioner of Patents and Trademarks to file foreign patent applications where such filing has been prohibited by a Secrecy Order.

(4) Requests for extension of the time for disclosure, election, and filing under subparagraphs (1), (2), and (3) may, at the discretion of the Bureau of Reclamation, be granted.

(d) Conditions When the Government May Obtain Title. The Recipient will convey to the Bureau of Reclamation, upon written request, title to any subject invention:

(1) If the Recipient fails to disclose or elect title to the subject invention within the times specified in (c), above, or elects not to retain title; provided that the Bureau of Reclamation may only request title within 60 days after learning of the failure of the Recipient to disclose or elect within the specified times.

(2) In those countries in which the Recipient fails to file patent applications within the times specified in (c) above; provided, however, that if the Recipient has filed a patent application in a country after the times specified in (c) above, but prior to its receipt of the written request of the Bureau of Reclamation, the Recipient shall continue to retain title in that country.

(3) In any country in which the Recipient decides not to continue the prosecution of any application for, to pay the maintenance fees on, or defend in reexamination or opposition proceeding on, a patent on a subject invention.

(e) Minimum Rights to Recipient and Protection of the Recipient Right to File

(1) The Recipient will retain a nonexclusive royalty-free license throughout the world in each subject invention to which the Government obtains title, except if the Recipient fails to disclose the invention within the times specified in (c), above. The Recipient's license extends to its domestic subsidiary and affiliates, if any, within the corporate structure of which the Recipient is a party and includes the right to grant sublicenses of the same scope to the extent the Recipient was legally obligated to do so at the time the agreement was awarded. The license is transferable only with the approval of the Bureau of Reclamation except when transferred to the successor of that

party of the Recipient's business to which the invention pertains.

(2) The Recipient's domestic license may be revoked or modified by the Bureau of Reclamation to the extent necessary to achieve expeditious practical application of the subject invention pursuant to an application for an exclusive license submitted in accordance with applicable provisions at 37 CFR part 404 and Bureau of Reclamation licensing regulations (if any). This license will not be revoked in that field of use or the geographical areas in which the Recipient has achieved practical application and continues to make the benefits of the invention reasonably accessible to the public. The license in any foreign country may be revoked or modified at the discretion of the Bureau of Reclamation to the extent the Recipient, its licensees, or the domestic subsidiaries or affiliates have failed to achieve practical application in that foreign country.

(3) Before revocation or modification of the license, the Bureau of Reclamation will furnish the Recipient a written notice of its intention to revoke or modify the license, and the Recipient will be allowed thirty days (or such other time as may be authorized by the Bureau of Reclamation for good cause shown by the Recipient) after the notice to show cause why the license should not be revoked or modified. The Recipient has the right to appeal, in accordance with applicable regulations in 37 CFR part 404 and Bureau of Reclamation regulations (if any) concerning the licensing of Government-owned inventions, any decision concerning the revocation or modification of the license.

(f) Recipient Action to Protect the Government's Interest

(1) The Recipient agrees to execute or to have executed and promptly deliver to the Bureau of Reclamation all instruments necessary to (i) establish or confirm the rights the Government has throughout the world in those subject inventions to which the Recipient elects to retain title, and (ii) convey title to the Bureau of Reclamation when requested under paragraph (d) above and to enable the government to obtain patent protection throughout the world in that subject invention.

(2) The Recipient agrees to require, by written agreement, its employees, other than clerical and non-technical employees, to disclose promptly in writing to personnel identified as responsible for the administration of patent matters and in a format suggested by the Recipient each subject invention made under agreement in order that the Recipient can comply with the disclosure provisions of paragraph (c), above, and to execute all papers necessary to file patent applications on subject inventions and to establish the government's rights in the subject inventions. This disclosure format should require, as a minimum, the information required by (c)(1), above. The Recipient shall instruct such employees through employee agreements or other suitable

educational programs on the importance of reporting inventions in sufficient time to permit the filing of patent applications prior to U.S. or foreign statutory bars.

(3) The Recipient will notify the Bureau of Reclamation of any decisions not to continue the prosecution of a patent application, pay maintenance fees, or defend in a reexamination or opposition proceeding on a patent, in any country, not less than thirty days before the expiration of the response period required by the relevant patent office.

(4) The Recipient agrees to include, within the specification of any United States patent applications and any patent issuing thereon covering a subject invention, the following statement, "This invention was made with government support under (identify the agreement) awarded by (identify the Federal agency). The government has certain rights in the invention."

(g) Subcontracts

The Recipient will include this provision, suitably modified to identify the parties, in all sub-agreements or subcontracts, regardless of tier, for experimental, developmental or research work. The sub-recipient or subcontractor will retain all rights provided for the Recipient in this provision, and the Recipient will not, as part of the consideration for awarding the sub-agreement or subcontract, obtain rights in the sub-recipient's or subcontractor's subject inventions.

(h) Reporting on Utilization of Subject Inventions

The Recipient agrees to submit on request periodic reports no more frequently than annually on the utilization of a subject invention or on efforts at obtaining such utilization that are being made by the Recipient or its licensees or assignees. Such reports shall include information regarding the status of development, date of first commercial sale or use, gross royalties received by the Recipient, and such other data and information as the Bureau of Reclamation may reasonably specify. The Recipient also agrees to provide additional reports as may be requested by the Bureau of Reclamation in connection with any march-in proceeding undertaken by the Bureau of Reclamation in accordance with paragraph (j) of this provision. As required by 35 U.S.C. 202(c)(5), the Bureau of Reclamation agrees it will not disclose such information to persons outside the government without permission of the Recipient.

(i) Preference for United States Industry

Notwithstanding any other part of this provision, the Recipient agrees that neither it nor any assignee will grant to any person the exclusive right to use or sell any subject inventions in the United States unless such person agrees that any products embodying the subject invention or produced through the use of the subject invention will be manufactured substantially in the United States. However, in individual cases, the requirement for such an agreement may be waived by the Bureau of Reclamation upon a showing by the Recipient or its

assignee that reasonable but unsuccessful efforts have been made to grant licenses on similar terms to potential licensees that would be likely to manufacture substantially in the United States or that under the circumstances domestic manufacture is not commercially feasible.

(j) March-in Rights

The Recipient agrees that with respect to any subject invention in which it has acquired title, the Bureau of Reclamation has the right in accordance with the procedures in 37 CFR 401.6 and any supplemental regulations of the Bureau of Reclamation to require the Recipient, an assignee or exclusive licensee of a subject invention to grant a nonexclusive, partially exclusive, or exclusive license in any field of use to a responsible applicant or applicants, upon terms that are reasonable under the circumstances, and if the Recipient, assignee, or exclusive licensee refuses such a request the Bureau of Reclamation has the right to grant such a license itself if the Bureau of Reclamation determines that:

- (1) Such action is necessary because the Recipient or assignee has not taken, or is not expected to take within a reasonable time, effective steps to achieve practical application of the subject invention in such field of use;
- (2) Such action is necessary to alleviate health or safety needs which are not reasonably satisfied by the Recipient, assignee or their licensees;
- (3) Such action is necessary to meet requirements for public use specified by Federal regulations and such requirements are not reasonably satisfied by the Recipient, assignee or licensees; or
- (4) Such action is necessary because the agreement required by paragraph (i) of this provision has not been obtained or waived or because a licensee of the exclusive right to use or sell any subject invention in the United States is in breach of such agreement.

(k) Special Provisions for Agreements with Nonprofit Organizations

If the Recipient is a nonprofit organization, it agrees that:

- (1) Rights to a subject invention in the United States may not be assigned without the approval of the Bureau of Reclamation, except where such assignment is made to an organization which has as one of its primary functions the management of inventions, provided that such assignee will be subject to the same provisions as the Recipient;
- (2) The Recipient will share royalties collected on a subject invention with the inventor, including Federal employee co-inventors (when the Bureau of Reclamation deems it appropriate) when the subject invention is assigned in accordance with 35 U.S.C. 202(e) and 37 CFR 401.10;

(3) The balance of any royalties or income earned by the Recipient with respect to subject inventions, after payment of expenses (including payments to inventors) incidental to the administration of subject inventions, will be utilized for the support of scientific research or education; and

(4) It will make efforts that are reasonable under the circumstances to attract licensees of subject invention that are small business firms and that it will give a preference to a small business firm when licensing a subject invention if the Recipient determines that the small business firm has a plan or proposal for marketing the invention which, if executed, is equally as likely to bring the invention to practical application as any plans or proposals from applicants that are not small business firms; provided, that the Recipient is also satisfied that the small business firm has the capability and resources to carry out its plan or proposal. The decision whether to give a preference in any specific case will be at the discretion of the Recipient. However, the Recipient agrees that the Bureau of Reclamation may review the Recipient's licensing program and decisions regarding small business applicants, and the Recipient will negotiate changes to its licensing policies, procedures, or practices with the Bureau of Reclamation when this review discloses that the Recipient could take reasonable steps to implement more effectively the requirements of this paragraph (k)(4).

(l) Communication

Communications regarding matters relating to this provision shall be directed to the Deputy Associate Solicitor, Branch of Procurements and Patents, Office of the Solicitor, U.S. Department of the Interior, Washington, DC 20240.

**8.4.2 Copyrights (Reclamation 08/03)**

**8.4.2.1** For recipients subject to the administrative standards set forth in OMB Circular A-110, the following copyright provision, as implemented by 43 CFR 12.936(a), shall apply:

*“The recipient may copyright any work that is subject to copyright and was developed, or for which ownership was purchased, under an award. The Federal awarding agency(ies) reserves a royalty-free, nonexclusive and irrevocable right to reproduce, publish, or otherwise use the work for Federal purposes, and to authorize others to do so.”*

**8.4.2.2** For recipients subject to the administrative standards set forth in OMB Circular A-102 and the Grants Management Common Rule, the following copyright provision, as implemented by 43 CFR 12.74, shall apply:

*“The Federal awarding agency reserves a royalty-free, nonexclusive, and irrevocable license to reproduce, publish or otherwise use, and to authorize others to use, for Federal Government purposes:”*

- (a) The copyright in any work developed under a grant, subgrant, or contract under a grant or subgrant; and
- (b) Any rights of copyright to which a grantee, subgrantee or a contractor purchases ownership with grant support.”

#### **8.4.3 Rights to Data (Reclamation 08/03)**

For recipients subject to the administrative standards set forth in OMB Circular A-110, the following provision, as implemented by 43 CFR 12.936(c), shall apply:

“The Federal Government has the right to:

- (1) Obtain, reproduce, publish or otherwise use the data first produced under an award; and
- (2) Authorize others to receive, reproduce, publish, or otherwise use such data for Federal purposes.”