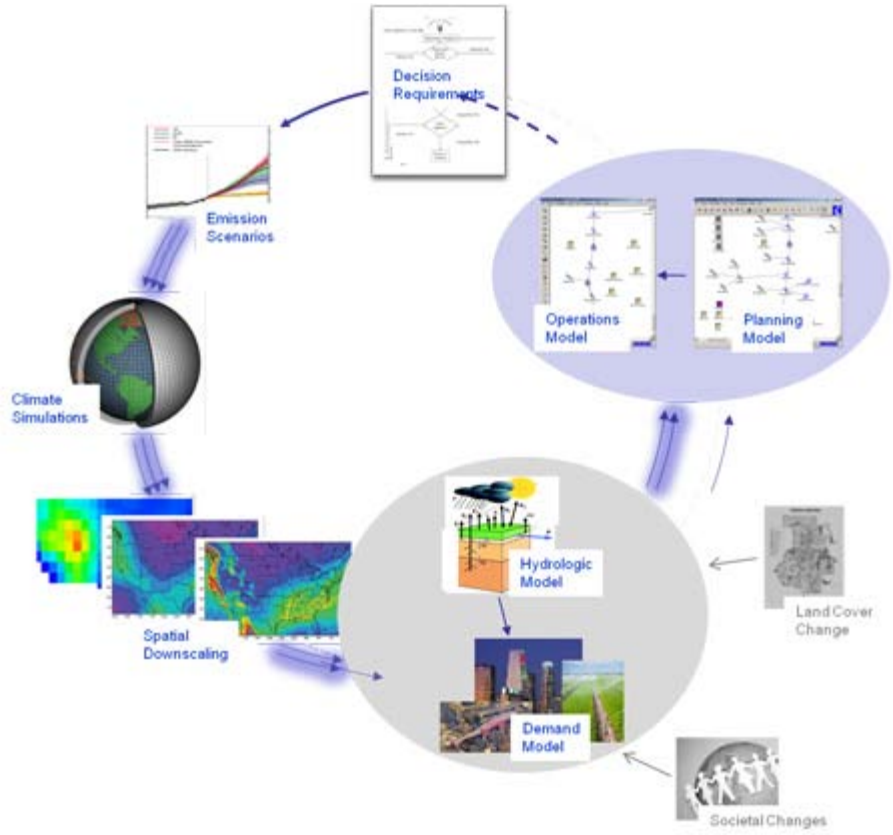
RECLAMATION
Managing Water in the West

Funding Opportunity Announcement No. R11SF80344

WaterSMART:

Grants to Develop Climate Analysis Tools for FY 2011



U.S. Department of the Interior
Bureau of Reclamation
Policy and Administration
Denver, Colorado

March 2011

Mission Statements

The U.S. Department of the Interior protects America's natural resources and heritage, honors our cultures and tribal communities, and supplies the energy to power our future.

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.

Synopsis

Federal Agency Name:	U.S. Department of the Interior, Bureau of Reclamation, Policy and Administration
Funding Opportunity Title:	WaterSMART Grants to Develop Climate Analysis Tools
Announcement Type:	Funding Opportunity Announcement (FOA)
Funding Opportunity Number:	R11SF80344
Catalog of Federal Domestic Assistance (CFDA) Number:	15.507
Dates: (See FOA Sec. IV.B)	Application due date: May 13, 2011, 4:00 p.m. Mountain Standard Time (MST)
Eligible Applicants: (See FOA Sec. III.A)	Universities, non-profit research institutions, or organizations with water or power delivery authority
Recipient Cost-Share: (See FOA Sec. III.D)	50 percent or more of project costs
Federal Funding Amount: (See FOA Sec. II.B)	Up to $200,000 per agreement
Estimated Number of Agreements to be Awarded: (See FOA Sec. II.B)	2-6 (The number of agreements awarded will be contingent upon final FY 2011 appropriations.)
Estimated Total Amount of Funding Available for Award: (See FOA Sec. II.A)	The President's fiscal year (FY) 2011 budget requests $27 million for WaterSMART Grants, including approximately $1 million planned to be available for award under this FOA. The amount of funding available for award under this WaterSMART Grant FOA will be determined once final FY 2011 appropriations have been made. This FOA will be cancelled if FY 2011 appropriations are insufficient to support new awards. Applications submitted under this FOA may also be considered if other funding becomes available in FY 2011 or subsequently. Please refer to <http://www.usbr.gov/WaterSMART/> for updated funding information.

Application Checklist

The following table contains a summary of the information that the applicant is required to submit with a WaterSMART Grant application.

√	What to submit	Required Content Form or format	When to submit
	Cover page	Form SF 424, available at: <http://www.grants.gov/agencies/aapproved_standard_forms.jsp#1> Page 19	*
	Assurances	Form SF 424B or SF 424D, as applicable, available at: <http://www.grants.gov/agencies/aapproved_standard_forms.jsp#1> Page 19	*
	Title page	Page 19	*
	Table of contents	Page 19	*
	Technical proposal and evaluation criteria: • Executive summary • Technical project description • Evaluation criteria	Page 19 Page 20 Page 20 Pages 20-23	* * * *
	Environmental and Regulatory Compliance	Page 23	*
	Required permits and approvals	Page 25	*
	Funding plan	Page 25	*
	Letters of commitment	Page 25	
	Official resolution	Page 26	**
	Project budget proposal: • General requirements • Budget format • Budget narrative • Budget form	Pages 27-30 Page 27 Page 27 Page 27 Form SF 424A or SF 424C, as applicable, available at: <http://www.grants.gov/agencies/aapproved_standard_forms.jsp#1> Page 30	* * * * *

* Submit materials with your application on May 13, 2010

** Documents should be submitted with your application; however, please refer to the applicable Section of the FOA for extended submission dates.

Abbreviations and Acronyms

AOR	Authorized Organization Representatives
ARC	Application Review Committee
CCR	Central Contractor Registration
CE	Categorical Exclusion
CEC	Categorical Exclusion Checklist
CFDA	Catalog of Federal Domestic Assistance
CSC	Climate Science Center
DOI	Department of Interior
DUNS	Data Universal Number System
EA	Environmental Assessment
E-Biz POC	E-Business Point of Contact
EIN	Employer Identification Number
EIS	Environmental Impact Statement
ESA	Endangered Species Act
FAQ	Frequently Asked Question
FOA	Funding Opportunity Announcement
GO	Grants Officer
IRS	Internal Revenue Service
LCC	Landscape Conservation Cooperative
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NOAA – RISA	National Oceanic and Atmospheric Administration – Regional Integrated Sciences and Assessments
OMB	Office of Management and Budget
ROD	Record of Decision
TIN	Taxpayer Identification Number
USACE	U.S. Army Corps of Engineers
USGS	U.S. Geological Survey
WaterSMART	Sustain and Manage America's Resources for Tomorrow
WWCRA	West-Wide Climate Risk Assessment

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Section I. Funding Opportunity Description

I.A. WaterSMART Grants: Grants to Develop Climate Analysis Tools

Water is our most precious natural resource, and is increasingly stressed by the demands our society places on it. Adequate water supplies are an essential element in human survival, ecosystem health, energy production, and economic sustainability. Water shortage and water-use conflicts have become more commonplace in many areas of the United States, even in normal water years. As competition for water resources grows—for irrigation of crops, growing cities and communities, energy production, and the environment—the need for information and tools to aid water resource managers also grows. Water issues and challenges are increasing across the Nation, but particularly in the West.

Aggressive action is required to address future water supply challenges, including degradation in water quality caused by pollution and land use practices, decreases in flow, declines in groundwater levels, and aging infrastructure. The U.S. Department of the Interior's (DOI) WaterSMART (*Sustain and Manage America's Resources for Tomorrow*) Program establishes a framework to provide Federal leadership and assistance on the efficient use of water, integrating water and energy policies to support the sustainable use of all natural resources, and coordinating the water conservation activities of various DOI bureaus and offices. Through the program, DOI is working to achieve a sustainable water strategy to meet the Nation's water needs. Through WaterSMART Grants to Develop Climate Analysis Tools, Reclamation provides cost-shared funding on a competitive basis for research activities that are designed to enhance the management of water resources in a changing climate.

For further information on the WaterSMART Program, see <http://www.usbr.gov/WaterSMART/>.

I.B. Objective of Funding Opportunity Announcement

The objective of this Funding Opportunity Announcement (FOA) is to invite universities, non-profit research institutions, and organizations with water or power delivery authority to leverage their money and resources by cost sharing with Reclamation on activities designed to enhance the management of water resources, including developing tools to assess the impacts of climate change on water resources.

These projects will focus on the information gaps outlined in the joint Reclamation and United States Army Corps of Engineers Report titled Addressing Climate Change in Long-Term Water Resources Planning and Management: User Needs for Improving Tools and Information. Projects will support ongoing efforts under the SECURE Water Act (Subtitle F of Title IX of the Omnibus Public Land Management Act of 2009, P.L. 111-11 (42 USC 10364), including efforts within DOI Landscape Conservation Cooperatives (LCCs), Basin Studies, and West-Wide Climate Risk Assessments (WWCRAs). These three programs serve important functions in addressing the effects of climate change on water resources:

- LCCs are partnerships that bring together science and resource conservation to support and complement adaptation strategies addressing climate change and water conservation.

- Basin Studies are comprehensive water supply and demand studies evaluating the ability to meet future water demands within a basin or sub-basin.

- WWCRAs provide a consistent baseline of climate impact information that the Basin Studies may use.

Together, these programs support Reclamation's efforts to meet the obligation under Section 9503 of the SECURE Water Act of establishing a climate change adaptation program. The research projects will assist these efforts by helping to narrow uncertainties, provide information in more usable forms, or develop more robust strategies for incorporating uncertainty into decision-making.

Enhanced water management is a crucial element of any plan to address the Nation's water issues. With leveraged water management research grants, an important step will be taken towards improving water management for a more efficient use of water in the West.

I.C. Program Authority

This FOA is issued under the authority of the Section 9504 of the SECURE Water Act, Subtitle F of Title IX of the Omnibus Public Land Management Act of 2009, P.L. 111-11 (42 USC 10364).

I.D. Frequently Asked Questions

A list of Frequently Asked Questions (FAQ) about WaterSMART and the application process can be found on-line at <http://www.usbr.gov/WaterSMART>. The FAQs will be updated periodically during the application period.

Section II. Award Information

II.A. Total Project Funding

The President's fiscal year (FY) 2011 budget request includes $27 million for WaterSMART Grants (WaterSMART Grants include: Water and Energy Efficiency Grants; System Optimization Review Grants; Advanced Water Treatment Pilot and Demonstration Project Grants; Grants to Develop Climate Analysis Tools; and Bay-Delta Agricultural Water Conservation and Efficiency Projects). Approximately $1 million of that request is planned to be available for WaterSMART Grants to Develop Climate Analysis Tools. The amount of funding available will be determined once final FY 2011 appropriations have been made. This FOA will be cancelled if FY 2011 appropriations are insufficient to support new awards. Applications submitted under this FOA may also be considered if other funding becomes available in FY 2011 or subsequently. Please refer to <http://www.usbr.gov/WaterSMART/grants.html> for updated funding information.

II.B. Project Funding Limitations

Reclamation's share of any one proposed project shall not exceed 50 percent of the total project costs. Up to $200,000 in Federal funding will be available for each project award. Reclamation may make awards exceeding that amount on a case-by-case basis.

Multiple applications for funding may be submitted for consideration. ***However, no more than $1,000,000 in WaterSMART Grant funds will be awarded to any one applicant under all WaterSMART Grants issued in FY 2011.***

II.C. Reclamation Responsibilities

II.C.1. Reclamation Involvement

Research project awards will be made through grants or cooperative agreements as applicable to each project. If a cooperative agreement is awarded, the recipient should expect Reclamation to have substantial involvement in the project. Substantial involvement by Reclamation may include:

- **Collaboration and participation** with the recipient in the management of the research project and close oversight of the recipient's activities to ensure that the program objectives are being achieved.

- **Oversight** may include review, input, and approval at key interim stages of the research project.

II.C.2. Technical Assistance

At the request of the recipient, Reclamation may provide technical assistance after award of the project. If you receive Reclamation's assistance, you must account for such costs in your budget. To discuss assistance available and the costs of such assistance, you may contact David Raff at 303-445-2461 for further information.

II.D. Award Date

Reclamation expects to contact potential award recipients and unsuccessful applicants in July 2011, or slightly later if necessary based on the enactment of FY 2011 appropriations. Within one to three months after that date, assistance agreements will be awarded to applicants who successfully pass all pre-award reviews and clearances.

Section III. Eligibility Information

III.A. Eligible Applicants

In accordance with P.L. 111-11, Section 9504, of the SECURE Water Act, eligible applicants include any:

- University located in the United States
- Non-profit research institution located in the United States
- Organization with water or power delivery authority located in the Western United States or Territories (as identified in the Reclamation Act of June 17, 1902, as amended and supplemented; specifically, Arizona, California, Colorado, Idaho, Kansas, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oklahoma, Oregon, South Dakota, Texas, Utah, Washington, Wyoming, American Samoa, Guam, the Northern Mariana Islands, and the Virgin Islands)

III.B. Eligible Research Projects

Projects should seek to develop knowledge, information, and tools that will lead to enhanced long-term water resources planning in the Western United States with respect to future climate. Proposed projects are expected to deliver new capabilities that address information gaps detailed in the joint Reclamation and United Stated Army Corps of Engineers (USACE) Report titled *Addressing Climate Change in Long-Term Water Resources Planning and Management: User Needs for Improving Tools and Information*, Section 3, Table 1. The identification of user needs within the document was developed by Reclamation and USACE and includes perspectives from other Federal and non-Federal water resource organizations and interest groups. The information gaps in Table 1 of the report were identified by water and environmental resource management agencies as critical to their ability to effectively manage water and aquatic habitats in a changing climate. For a more detailed description of any of the eligible Research Areas, please see the full report, *Addressing Climate Change in Long-Term Water Resources Planning and Management: User Needs for Improving Tools and Information*.

This FOA is available for research activities that will help enhance the management of water resources. Research Areas A-G, below, describe projects eligible for funding under this FOA. All projects must be completed by September 30, 2013, unless otherwise agreed upon. Applicants may submit multiple project proposals.

Research Areas A-G correspond to the analytical steps in the process by which climate information can inform the management of water resources. Within the context of this FOA, seven analytical steps are characterized:

1) Obtaining Climate Change Information (Research Area A)

2) Make Decisions About How To Use the Climate Change Information (Research Area B)

3) Assess Natural Systems Response (Research Area C)

4) Assess Socioeconomic and Institutional Response (Research Area D)

5) Assess System Risks and Evaluate Alternatives (Research Area E)

6) Assess and Characterize Uncertainties (Research F)

7) Communicating Results and Uncertainties to Decision-makers (Research Area G)

III.B.1. Research Area A. Obtaining Climate Change Information

These projects address the first analytic step in the process by which climate information can inform the management of water resources. This step involves obtaining contemporary climate information relevant to water resources planning at the regional to local scale. This climate information can include contemporary projections of future climate data and associated uncertainties that have been spatially downscaled to finer resolution, or paleoclimate proxies that may imply climate conditions different from those of the observed record. An eligible project should produce scientific information supporting the fulfillment of an information gap(s) identified in this analytical step, including:

1) Improved skill in simulating long-term global to regional climate.

2) Downscaled data at finer space and time resolutions and for more than just temperature and precipitation. Proposals should seek to improve existing capabilities currently available to water managers (e.g., the Bias Corrected and Spatially Downscaled WCRP CMIP3 Climate Projections <http://gdo-dcp.ucllnl.org/downscaled_cmip3_projections/>, which includes monthly BCSD projections of temperature and precipitation at 12km resolution and (February 2011) daily Bias Corrected – Constructed Analogs (BCCA) projections of minimum temperature, maximum temperature and precipitation also at 12km resolution).

3) Information on the strengths and weaknesses of downscaled data and the downscaling methodologies used to develop these data (including both statistical and dynamical methods, and associated approaches for climate model bias-correction).

4) Indication of conditions of where and when the stationarity assumption of statistical downscaling may not hold and should motivate use of dynamical downscaling techniques rather than statistical.

5) Synthesis of sea level projection information and guidance on consistent use in planning for all Reclamation and USACE coastal areas.

III.B.2. Research Area B. Make Decisions About how to Use Climate Change Information

These projects address the second analytic step in the process by which climate information can inform the management of water resources. After obtaining climate projections information in step 1 (Research Area A), decisions must be made on: (i) which portion of this projection information to use within the water resources management application and (ii) how the retained portion will be related to water resources application scenarios. An eligible project should produce scientific information supporting the fulfillment of an information gap(s) identified in this analytical step, including:

1) Understanding on observed climate variability from daily to multidecadal time scales, which underpins interpretation of future variability in climate projections and its relation to planning assumptions.

2) Understanding on how to interpret climate projections' simulated climate variability on *longer-term scales* (from annual to multidecadal scales).

3) Basis for culling or weighting climate projections (if at all) when deciding which projections to use in planning.

4) Guidance on how to appropriately relate planning assumptions to either *Period-Change* or *Time-Developing* aspects of climate projections, when deciding how to use projections in planning.

5) Guidance on how to jointly use the longer-term climate variability from observed records, paleoclimate, and projected climate information when portraying drought and surplus possibilities in planning.

6) Method and basis for estimating extreme meteorological event possibilities, deterministically or probabilistically, in a changing climate.

III.B.3. Research Area C. Assess Natural System's Response to Climate Change

These projects address the third analytic step in the process by which climate information can inform the management of water resources. This step involves using future climate information, as described in step 1 (Research Area A) and the decisions of how to use it described in step 2 (Research Area B), to evaluate the natural system response. Natural systems' responses include watershed hydrology, ecosystems, land cover, water quality,

consumptive use of irrigated areas (physical drivers only), and sedimentation. An eligible project should produce scientific information supporting the fulfillment of an information gap(s) identified in this analytical step, including:

1) Guidance on strengths and weaknesses of watershed hydrologic models/methods to support scoping decisions in planning.

2) Understanding on how climate change should impact potential evapotranspiration and how it is represented in watershed hydrologic models.

3) Method and basis for estimating extreme meteorological event possibilities, deterministically or probabilistically, in a changing climate (focused here on hydrology rather than meteorological variables).

4) Guidance on strengths and weaknesses of available versions of spatially distributed hydrologic weather data that may be used for both watershed hydrologic model development (Research Area C) and in climate model bias-correction (Research Area A).

5) Understanding on how climate change should impact groundwater recharge and groundwater interaction with surface water supplies.

6) Understanding on how climate change should impact inland and coastal anadromous fisheries.

7) Understanding on how climate change may impact riparian ecosystems and vegetation that affect both longer-term water budgets and ecological resources.

8) Understanding translated into model frameworks for assessing climate change responses for fisheries, nonnative riparian vegetation, and other species or habitat conditions.

9) Understanding on how climate and/or carbon dioxide changes should impact land cover communities that control natural evapotranspiration and soil erosion potential.

10) Understanding on how water quality characteristics depend on climatic variables and how dependencies may evolve in a changing climate.

11) Understanding on how climate and carbon dioxide changes should impact plant physiology, how impacts vary with crop type, and how impacts affect irrigation demand.

12) Understanding how climate and/or land cover changes will change watershed sediment yield, changes in sediment constituency, and the resulting impacts on water resources.

13) Understanding how climate, land cover, and/or sedimentation changes will affect river and reservoir ice-event potential.

III.B.4. Research Area D. Assess Socioeconomic and Institutional Response

These projects address the fourth analytic step in the process by which climate information can inform the management of water resources. This step involves assessing how social and economic systems, that are influenced by climate change, may respond to climate information, and translating those responses into adjusted water resources management assumptions about water demands, sources of supply, and constraints on operations. Constraints on operations include assumptions of societal prioritizations across potentially competing water use interests such as environmental, water quality, and flood risk reduction. An eligible project should produce scientific information supporting the fulfillment of an information gap(s) identified in this analytical step, including:

1) Understanding on how socioeconomic factors may affect flood risk reduction and reservoir regulation objectives in a changing climate (e.g., flood protection values, land management).

2) Understanding on how socioeconomic factors may affect water and power delivery reliability, water allocations, as well as decisions on source of supply under a changing climate (e.g., groundwater pumping versus surface water diversion).

3) Understanding on how institutional realities currently control socioeconomic responses to climate variability and could control socioeconomic responses under a changing climate.

III.B.5. Research Area E. Assess Systems Risks and Evaluate Alternatives

These projects address the fifth step in the process by which climate information can inform the management of water resources. This step involves integrating the natural and social system responses to future climate (results from Steps 3 and 4) into either water resources assessments (i.e., supplies, demands, and constraints on operations that frame reservoir operation analyses) or infrastructure safety and flood risk-reduction assessments (i.e., hydrologic hazard and socioeconomic assumptions framing these assessments). An eligible project should produce scientific information supporting the fulfillment of an information gap(s) identified in this analytical step, including:

1) Guidance on how to conduct an adaptation evaluation that efficiently explores and rank strategy options, potentially using optimization techniques.

2) Guidance on how to portray realistic operator learning in evaluations supporting planning for climate change adaptation.

3) Guidance on how to assess the effect of planning proposals *on* climate.

III.B.6. Research Area F. Assess and Characterize Uncertainties

These projects address the sixth step in the process by which climate information can inform the management of water resources. This step involves assembling the various uncertainties that were individually introduced, assessed, and characterized during the course of Steps 1 through 5 (as possible). This step also involves assessing the interactions between these uncertainties (as far as possible). These projects will characterize the uncertainties associated with a climate change impact and risk evaluation study. An eligible project should produce scientific information supporting the fulfillment of an information gap(s) identified in this analytical step, including:

1) Uncertainty information on global climate projections data, including uncertainties about climate system science, portrayal in climate models, emissions scenario development, and simulation methods.

2) Uncertainty information on regional climate projections data, including uncertainties from choice of bias-correction and spatial downscaling methods.

3) Uncertainty in planning results stemming from method choices on how to use transient characteristics of climate projections in planning scenarios.

4) For each response analysis on a *natural system*, uncertainty information on system science and associated ways of portraying this science in a system model and the observations used to customize a model for a specific system.

5) For each response analysis on a *socioeconomic system*, uncertainty information on system science and associated ways of portraying this science in a system model and the observations used to customize a model for a specific system.

III.B.7. Research Area G. Communicate Results and Uncertainties to Decision-Makers

These projects address the seventh step in the process by which climate information can inform the management of water resources. After completing the analytical tasks of the planning evaluation, results are summarized and presented for the consideration of decision-makers and interested parties, along with characterized uncertainties. An eligible project should produce scientific information supporting the fulfillment of an information gap(s) identified in this analytical step, including:

1) Guidance on strengths and weaknesses of various methods for communicating results and uncertainties affected by the use of climate projection information.

2) Guidance on how to make decisions given the uncertainties introduced by consideration of climate projection information.

III.C. Length of Research Projects

Proposed research projects should be completed within 24 months from the project start date. Applications for activities requiring more than 2 years will be considered if the applicant can demonstrate that there will be measureable accomplishments each year.

III.D. Cost-Sharing Requirement

Applicants must be willing to cost share 50 percent or more of the total project costs. Cost sharing may be made through cash or in-kind contributions from the applicant or third-party partners. Cost share funding from sources outside the applicant's organization, e.g., loans or state grants, should be secured and available to the applicant prior to award. Reclamation may approve an award prior to an applicant securing non-Federal cost-share funds if Reclamation determines that there is sufficient evidence and likelihood that the non-Federal funds will be available to the applicant by the start of the project. Funding commitment letters must be submitted in accordance with Section IV.C., "Application Delivery Instructions" and contain the information stated at Section IV.D.5, "Application Content," Subsection "Funding Plan and Letters of Commitment."

III.D.1. Cost Share 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>.

III.D.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 WaterSMART Grant applications.

III.D.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 July 1, 2010, be considered for cost share purposes**.

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.

III.D.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: (1) incurred for a common or joint purpose benefiting more than one cost objective, and (2) not readily assignable to any one cost objective. If the applicant proposes indirect costs in the budget, then the applicant must either supply a copy of a current federally-negotiated indirect cost rate agreement or obtain an agreement within one year of award. For further information on indirect costs, refer to the applicable OMB cost principles circular referenced above and available at <http://www.whitehouse.gov/omb/circulars>.

III.E. Other Requirements—Central Contractor Registration

All applicants must be registered in the Central Contractor Registration (CCR) prior to award of funds under this FOA. The CCR and instructions for registration are located at <http://www.bpn.gov/ccr>. All applicants must maintain an active CCR registration with current information at all times during which it has an active Federal award.

Section IV. Application and Submission Information

IV.A. 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 can request paper copies of any of the documents referenced in this FOA 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

Phone: 303-445-2025

IV.B. Application Submission Date and Time

Application submission date deadline:

- May 13, 2011, 4:00 p.m. Mountain Standard Time (MST)

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.

*Please note that any application submitted to Reclamation for WaterSMART Grant funding may be subjected to a Freedom of Information Act request (*5 U.S.C. § 552, as Amended by Public Law No. 110-175)*, and as a result, may be made publicly available. In addition,* ***successful applications may be made publicly available*** *(following consultation with the applicant with redactions as needed) and may be posted on the Reclamation website.*

IV.C. Application Delivery Instructions

Applications may be submitted electronically through <http://www.grants.gov> or hard copies may be submitted as follows. Under no circumstances will applications received through any other method (such as email or fax) be considered eligible for award.

By mail:

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

Express delivery/mail services:

Bureau of Reclamation
Attn: Michelle Maher, Mail Code: 84-27810
Denver Federal Center
6th Avenue and Kipling Street
Denver, CO 80225

Telephone: 303-445-2025

IV.D. Instructions for Submission of Research Project Application

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

Applications Submitted by Mail

- Applicants shall submit an original and one copy of all application documents for hardcopy submissions. Each document should be clearly identified as the "ORIGINAL" or as a "COPY."

- In addition to hard copy documents, please include a copy of our technical proposal on a CD in Microsoft Word format. Submission of a CD copy is not required but is encouraged.

- Please do not use "comb," "spiral," or adhesive methods to bind the documents.

- Hard copy applications may be submitted by mail or express methods to the addresses listed in Section IV.C, above.

- Materials arriving separately, other than letters of project support or resolutions, will not be included in the application package and may result in the application being rejected or not funded.

- Faxed and emailed copies of application documents 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.

Applications Submitted Electronically

If the applicant chooses to submit an electronic application, it 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 7-21 days. Please see registration instructions at <http://www.grants.gov/applicants/get_registered.jsp>.

- 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 are a properly registered Grants.gov applicant and 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, you must ensure that your proposal arrives by the date and time deadline stated in Section IV.B., 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.

IV.D.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>. 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>.

IV.D.2. Assistance with Grants.gov

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 calling 1-800-518-4726 or by email at <support@grants.gov>.

IV.D.3. Registering to Use Grants.gov (1-3 week process)

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 Table 1, Step 2 below for completing the annual Central Contractor Registration (CCR) renewal process.

Note: (The following checklist information is available electronically at <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 1 provides registration guidance for a company, academic or research institution, State, local or tribal government, not-for-profit, or other type of organization.

Table 1. Checklist for Registering Your Organization in Grants.gov

√	Step	Actions to take	Purpose	Time required
	1: Obtain Data Universal Number System (DUNS) Number	**Has my organization identified its DUNS number?** Ask the grant administrator, chief financial officer, or authorizing official of your organization to identify your DUNS number. If your organization does not know its DUNS number or needs to register for one, visit Dun & Bradstreet at <http://fedgov.dnb.com/webform/displayHomePage.do>	The Federal government has adopted the use of DUNS numbers to track how Federal grant money is allocated. DUNS numbers identify your organization.	Same Day. You will receive DUNS number information online.

√	Step	Actions to take	Purpose	Time required
	2: Register With Central Contractor Registration (CCR)	**Has my organization registered with the CCR?** Ask the grant administrator, chief financial officer, or authorizing official of your organization if your organization has registered with the CCR. If your organization is not registered, you can apply online by going to <http://www.ccr.gov>. CCR has developed a handbook < http://www.bpn.gov/ccr/doc/UserAccount.pdf> 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 <https://www.fsd.gov>. 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." 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 (AOR).	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) If your organization does not have an EIN or TIN, then you should allow 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.

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.

	3: Username and Password	**Have the AORs who officially submit applications on behalf of your organization completed their profile with Grants.gov to create their username and password?** 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. 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.	An AOR username and password serves as an "electronic signature" when submitting a Grants.gov application.	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.

√	Step	Actions to take	Purpose	Time required
	4: AOR Authorization	**Has E-Biz POC approved AORs to submit applications on behalf of the organization?** 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. 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. When an E-Biz POC approves an AOR, Grants.gov will send the AOR a confirmation email.	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.	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.
	Step 5: Track AOR Status	**What is your AOR status?** 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.	To verify that the organization's E-Biz POC has approved the AOR.	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.

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 (1-800-518-4726 or support@grants.gov) to obtain a "Case Number." This will provide evidence of your attempt to submit an application prior to the submission deadline.

IV.D.4. Application Format and Length

The total application package shall be no more than **50 consecutively numbered** pages, and shall be **single spaced**. If an application exceeds 50 pages, only the first 50 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 and Evaluation Criteria section shall be limited to a maximum of **20** (twenty) pages.

It is requested that all application sent via mail also include a digital version of the technical proposal on a CD in Microsoft Word format.

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

IV.D.5. 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 or D Form, as applicable to the project
- Title page
- Table of contents
- Technical proposal and evaluation criteria (limited to **20** pages)
  - Executive summary
  - Technical project description
  - Research evaluation criteria
- Environmental and Regulatory Compliance
- Required permits and approvals
- Funding plan and letters of commitment
- Official resolution
- Project budget proposal
  - General Requirements
  - Budget Proposal Format
  - Budget Narrative Format
  - Budget Form

SF-424, SF-424A, SF-424B, SF-424C, and SF-424D forms may be obtained at <http://www.grants.gov/agencies/aapproved_standard_forms.jsp#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.**

SF-424 Assurances

A SF-424B – Assurances – Non-Construction Programs or an SF-424D – Assurances – Construction Programs, signed by a person legally authorized to commit the applicant to performance of the project shall be included. Questions regarding whether to use a SF-424B or SF-424D should be referred to. Michelle Maher at: mmaher@usbr.gov. **Failure to submit a properly signed SF-424B or SF-424D may result in the elimination of the application from further consideration**.

Title Page

Provide a brief, informative, and descriptive title for the proposed work that indicates the nature of the project. Include the name and address of the applicant, and the name and address, e-mail address, telephone, and fax numbers of the research project manager.

Table of Contents

List all major sections of the technical proposal in the table of contents.

Technical Proposal and Evaluation Criteria

The technical proposal (20 pages maximum) includes: (1) the Executive Summary, (2) Technical Project Description, and (3) Research Evaluation Criteria. To ensure accurate and complete scoring of your application, your proposal should address each subcriterion in the order presented here. Where applicable, the point value is indicated.

Technical Proposal: Executive Summary.

The executive summary should include:

- The date, applicant name, city, county, and state.
- A one-paragraph project summary that specifies the Research Area (A, B, C, D, E, F, or G) and briefly identifies how the proposed project contributes to accomplishing the goals of this research area (see Section III.B, "Eligible Research Projects").
- State the length of time and estimated completion date for the project.

Technical Proposal: Technical Project Description.

The technical project description should describe the work in detail and the approach to be used to carry it out. Break the work out into major tasks. This description shall have sufficient detail to permit a comprehensive evaluation of the proposal. The technical project description should also:

1) Describe the goal of the work in very specific terms
2) Explain how the project will enhance water management, including developing tools to assess the impacts of climate change on water resources
3) Describe and discuss in detail the stages of the proposed project, including an estimated project schedule showing the stages and the duration of the proposed work and major milestones and dates, and substantiate the method(s) selected, the principles or techniques which are proposed to solve the problem, and the degree of success expected
4) Provide a specific discussion of the any problems or major difficulties anticipated in performing or accomplishing the work
5) Describe any prior studies that relate to the project or which will inform the project

Technical Proposal: Research Evaluation Criteria.
The Technical Proposal portion of your application should thoroughly address each of the following criteria and subcriteria in the order presented to assist in the complete and accurate evaluation of your proposal. The Research Evaluation Criteria comprise 100 points of the total evaluation weight.

Evaluation Criterion A. Research Relevance and Technical Merit (47 points)

*Up to **47 points** may be awarded for a proposal to improve water management in a changing climate based on its technical merit. Points will be allocated to give consideration to projects that are expected to result in significant information, knowledge, or tool development. Evaluations will be based on an assessment of whether the specific research question can be answered given the proposed tasks, budget, and time. The primary research question should tie directly to one of the eligible types of projects identified through Research Areas A-G.*

Subcriterion No. A1—Project Scope
*Up to **29 points** may be allocated based on the extent to which the project will address ongoing research priorities as defined in the Eligible Research Projects section of this FOA through Research Areas A - G. This includes identifying the tasks necessary to answer the primary research question.*

Describe the project scope by including:

- Under which Research Area(s) A - G does the proposal most closely apply?
- What is the primary research question that is to be studied?
- What are the specific tasks that will be undertaken to answer the research question?
- What is the need for the proposed research?
- What is the expected benefit of the proposed research?
    - What new capabilities will the project deliver?
    - Does the project complement ongoing research activities?
    - Does the project duplicate existing research activities?
    - Does the project complicate or conflict with ongoing efforts in the proposed research area?

Subcriterion No. A2—Ability to Accomplish Scope:
*Up to **18 points** may be allocated based on the demonstration in the proposal for the project team (all participants conducting the research tasks) to accomplish the scope of the project in the timeline presented.*

Describe the project team's ability to accomplish scope on time by including:

- How will the budget be allocated to each of the tasks identified?
- What is the time required for each task and when during the study will the tasks be accomplished?
- Is the proposed project based on some assumption of available data or resources that may not be currently available?
- Who are the members of the project team and what tasks will each member perform? Describe each project team member's affiliation with a University, non-profit research institution, or organization with water or power delivery authority, as defined under Section III.A. If all members have yet to be identified (for example, a research assistant or a graduate student), please identify the number to be hired.
- What are the academic credentials of each of the project team members?
- Have the project team members accomplished significant research projects in the past either as Principal Investigators or team members?
- Any other relevant information that may help the project team's ability to accomplish scope on time.

Evaluation Criterion B. Connection to Water Management / Ongoing Climate to Support Management Activities (35 points)

*Up to **35 points** may be awarded if the proposed project is developed to support Reclamation projects or activities directly or through the LCCs,[1] DOI Climate Science Centers (CSCs),[1] or the National Oceanic and Atmospheric Administration – Regional Integrated Sciences and Assessments (NOAA-RISA).[2] No points under these criteria will be awarded for proposals without a connection to a Reclamation project or activity, either directly or through involvement from or with LCCs, CSCs, or NOAA-RISAs.*

Subcriterion No. B1 - Describe how the project is integrated with Reclamation directly:

*Up to **23 points** may be allocated based on the proposal's description of how the information, knowledge or tools will be directly used to support an ongoing Reclamation project or activity.*

- What is the geographic extent of the project? Does it lie solely within one or more Reclamation regions or project areas? A list of Reclamation

[1] <http://www.doi.gov/whatwedo/climate/strategy/index.cfm>
[2] <http://www.climate.noaa.gov/cpo_pa/risa/

projects and activities for each region can be found at <http://www.usbr.gov/main/regions.html#regionmap>.

- Which Reclamation project or activity will most directly benefit from the proposed project?

Subcriterion No. B2 – Describe how the proposed project is integrated or complementary to LCCs, CSCs, or NOAA-RISAs:
*Up to **12 points** may be allocated based on the proposal's relevance to ongoing activities within the LCCs, CSCs, or NOAA-RISAs, in ways not covered above in Subcriterion No.1.*

- Which LCC, CSC, or NOAA-RISA does the geographic extent of the proposed project fall within?

- How does the proposed project tie into the LCC's identified research priorities?

- How does the proposed project complement ongoing science activities by the CSCs or NOAA-RISA?

Evaluation Criterion C. Dissemination of Results (18 points)
*Up to **18 points** may be awarded for proposals that can articulate how the research results will be disseminated and communicated directly with Reclamation and cost-share partners.*

Subcriterion No. C1 – Dissemination of Results (Written/Technology Transfer):
*Up to **12 points** may be awarded based on the applicant's description of the reports planned.*

- Describe the anticipated number and type of peer reviewed scientific journal articles

- If a new tool is developed, describe how it will be transferred to the appropriate water organizations

Subcriterion No. C2 – Dissemination of Results (Presentations) (6 points):
*Up to **6 points** may be awarded for proposals that identify conference and meeting presentations to be given.*

Describe the anticipated number and type of presentations regarding the results of the research. For example, presentations at scientific conferences or presentations to water managers and water users (within the guidance of the travel section under Budget Narrative, page 28)

Environmental and Regulatory Compliance

In most cases, little or no environmental compliance is associated with research projects because they generally involve non-destructive data collection, inventory, study, research, and monitoring activities. However, some environmental compliance may be required if the research project involves any surface-disturbing activities that could affect the surrounding environment, such as clearing brush to perform a survey, or installing monitoring equipment on an existing structure (e.g., headgates) that alters that structure. For research-related activities that would have such disturbances, a one-percent budget line item is required to cover costs associated with environmental compliance.

Reclamation will assess the probable level of environmental compliance that would be required for each application by considering the applicant's responses to the following list of questions focusing on the requirements of the National Environmental Policy Act (NEPA), the Endangered Species Act (ESA), and the National Historic Preservation Act (NHPA). Please answer the following questions to the best of your knowledge. If any question is not applicable to your project, please explain why. If you have any questions, you may contact David Raff at draff@usbr.gov or 303-445-2461 for further information.

1) Will the project impact the surrounding environment (e.g., soil [dust], air, water [quality and quantity], animal habitat)? Please briefly describe all earth-disturbing work and any work that will affect the air, water, or animal habitat in the project area. Please also explain the impacts of such work on the surrounding environment and any steps that could be taken to minimize the impacts.

2) Are you aware of any endangered or threatened species in the project area? If so, would they be affected by any activities associated with the proposed project?

3) Are there wetlands inside the project boundaries? If so, please estimate how many acres of wetlands there are and describe any impact the project will have on the wetlands.

4) Are there any known archeological sites in the proposed project area?

5) Will the research project result in any modification of, or effects to, individual features of a water delivery system (e.g., headgates, canals)?

6) If you answered yes to the previous question:

   (a) State when those features were constructed and describe the nature and timing of any alterations or modifications to those features.

   (b) Are any buildings, structures, or features in the area of the proposed listed or eligible for listing on the National Register of Historic Places? The local State Historic Preservation Office can assist in answering this question.

(c) Are there any known archeological sites in the area of the proposed research? Would they be affected by any activities associated with the research? The State Historic Preservation Office can assist in answering this question.

Under no circumstances may an applicant begin any ground-disturbing activities (including grading, clearing, and other preliminary activities) on a project before environmental compliance is complete and Reclamation explicitly authorizes work to proceed. This pertains to all components of the proposed project, including those that are part of the applicant's non-Federal cost chare. Reclamation will provide a successful applicant with information once environmental compliance is complete. An applicant that proceeds before environmental compliance is complete may risk forfeiting Reclamation funding under this FOA.

Required Permits or Approvals

Applicants must state in the application whether any permits or approvals are required and explain the plan for obtaining such permits or approvals.

Funding Plan and Letters of Commitment

Describe how the non-Reclamation share of project costs will be obtained. Reclamation will use this information in making a determination of financial capability.

Project funding provided by a source 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 the following elements:

1) The 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

Cost share funding from sources outside the applicant's organization (e.g., loans or state grants), should be secured and available to the applicant prior to award.

Commitment letters should be included with your project application. If a final funding commitment has not been received by the date of application, the commitment letters should be submitted by no later than July 1, 2011.

Reclamation may approve an award prior to an applicant securing non-Federal cost-share funds if Reclamation determines that there is sufficient evidence and likelihood that the non-Federal funds will be available to the applicant by the start of the project.
The funding plan must include all project costs, as follows:

1) How you will make your contribution to the cost-share requirement, e.g., monetary and/or in-kind contributions and the sources of funds you will contribute (e.g., reserve account, tax revenue, and/or assessments).

2) Describe any in-kind costs incurred before the anticipated project start date that you seek 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 the applicant's 50 percent 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.

Please include the following chart (table 2) to summarize your non-Federal and other Federal funding sources. Denote in-kind contributions with an asterisk (*). Please ensure that the total Federal funding (Reclamation and all other Federal sources) does not exceed 50 percent of the total estimated project cost.

Table 2. Summary of non-Federal and Federal funding sources.

Funding Sources	Funding Amount
Non-Federal Entities	
1.	
2.	
3.	
Non-Federal Subtotal:	
Other Federal Entities	
1.	
2.	
3.	
Other Federal Subtotal:	
Requested Reclamation Funding:	
Total Project Funding:	

Official Resolution

Include an official resolution adopted by the applicant's board of directors or governing body, or for state government entities and universities, an official authorized to commit the applicant to the financial and legal obligations associated with receipt of WaterSMART Grant financial assistance, verifying:

- The identity of the official with legal authority to enter into agreement
- The board of directors, governing body, or appropriate official who has reviewed and supports the application submitted
- The capability of the applicant to provide the amount of funding and/or in-kind contributions specified in the funding plan
- The applicant will work with Reclamation to meet established deadlines for entering into a cooperative agreement

An official resolution meeting the requirements set forth above is mandatory. If the applicant is unable to submit the official resolution by the application deadline because of the timing of board meetings or other justifiable reasons, the official resolution may be submitted up to 30 days after the application deadline. This requirement does not apply to university applicants.

Budget Proposal

General Requirements

Include a research project budget with the annual estimated project costs associated with the proposed project. Include the value of in-kind contributions of goods and services and sources of funds provided to complete the project. The proposal must clearly delineate between Reclamation and applicant contributions.

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 3 at the end of this section or a similar format that provides this information.

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. The types of information to describe in the narrative include, but are not limited, to those listed in the following subsections.

Salaries and Wages

Indicate program manager and other key personnel by name and title. Other personnel may be indicated by title alone. 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 project description. Labor rates and proposed hours shall be displayed for each task.

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 the stated indirect costs. If these salaries can be adequately documented as direct costs, they may be included in this section; however, a justification should be included in the budget narrative.

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.

Travel

Include purpose of trip, destination, number of persons 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.

Travel is limited to presentations to disseminate the results of the research. For example, presentations at scientific conferences or presentations to water managers and water users. Travel should be limited to an appropriate number of personnel and to a reasonable number of trips.

Equipment

Itemize costs of all equipment having a value of over $500 and include information as to the need for this equipment. If equipment is being rented, specify the number of hours and the hourly rate.

Materials and Supplies

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

Contractual
Identify all work that will be accomplished by subrecipients, consultants, or contractors, including a breakdown of all tasks to be completed, and a detailed budget estimate of time, rates, supplies, and materials that will be required for each 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. Identify how the budgeted costs for subrecipients, consultants, or contractors were determined to be fair and reasonable.

Environmental and Regulatory Compliance Costs
In most cases, there will be no environmental compliance associated with research projects because they generally will involve nondestructive data collection, research, inventory, study, research, and monitoring activities. If no environmental compliance is expected to be required based on the nature of the planned research activities, then the applicant is not required to include a line item in their budget for environmental compliance activities. In these cases, the minimal cost for Reclamation staff to confirm and document the absence of environmental issues will be considered an administrative cost paid for by Reclamation.

However, if you believe that the research project will require some environmental compliance—however small—then you must include a line item in your budget for environmental compliance activities. For example, if the research project will involve any disturbances to the surrounding environment, such as clearing brush to perform a survey, or installing monitoring equipment on an existing structure (e.g., headgates, canals) that would alter that structure, then some environmental compliance will be required. In the application review and selection process, Reclamation will consider whether the applicant has budgeted appropriately for environmental compliance, taking into consideration the amount budgeted and the applicants responses to the questions set forth above, in Section IV.D.5, Application Content, subsection Environmental and Regulatory Compliance.

How environmental compliance activities will be performed (e.g., by Reclamation, the applicant, or a consultant), and how the environmental compliance funds will be spent, will be determined pursuant to subsequent agreement between Reclamation and the applicant. If any portion of the funds budgeted for environmental compliance is not required for compliance activities, such funds may be reallocated to the project, if appropriate.

Reporting
Recipients are required to report on the status of their project on a regular basis. Include a line item for reporting costs (including final project and evaluation costs). Please see Section VI.C for information on types and frequency of reports required.

Other
Any other expenses 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.

Indirect Costs
Show the proposed rate, cost base, and proposed amount for allowable indirect costs based on the applicable OMB circular cost principles (see Section III D., "Cost Sharing Requirement") 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 a federally approved indirect rate agreement is not available, provide supporting documentation for the rate. This can include a recent recommendation by a qualified certified public accountant (CPA) along with support for the rate calculation.

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 Interior, the National Business Center, and Indirect Cost Section, at <http://www.aqd.nbc.gov/services/ICS.aspx>.

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

Budget 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 Information – Construction Programs. These forms are available at <http://apply07.grants.gov/apply/FormLinks?family=15>.

IV.E. Funding Restrictions

See Section III.D.3 Pre-Award Costs for restrictions on incurrence and allowability of pre-award costs.

Table 3. Sample Budget Proposal Format

Budget Item Description	Computation		Recipient Funding	Reclamation Funding	Total Cost
	$/Unit And Unit	Quantity			
Salaries And Wages					
Employee 1					
Employee 2					
Employee 3					
Fringe Benefits					
Full-Time Employees					
Part-Time Employees					
Travel					
Trip 1					
Trip 2					
Trip 3					
Equipment					
Item A					
Item B					
Item C					
Supplies/Materials					
Office Supplies					
Construction					
Contractual/[1]Construction					
Item 1					
Item 2					
Environmental And Regulatory Compliance[2]					
Other					
Reporting					
Total Direct Costs					
Indirect Costs - __%					
Total Project Costs					

The applicant may use this format or submit the information in a different format which provides a detailed break-down of costs and need justification for budgets presented in the SF-424A, 424B, C, or D.

[1]Contracts should be broken out into specific line items. **Lump sum estimates are not acceptable.** Applicants may attach a separate, detailed budget for each contract to adequately address all contractor budget items.

[2] For research-related activities that would include activities that would involve any surface-disturbing activities that could affect the surrounding environment, a one-percent budget line item is required to cover costs associated with environmental compliance.

Section V. Application Review Information

V.A. Review and Selection Process

The Government reserves the right to reject any and all applications which do not meet the requirements of this FOA, or are outside the scope of WaterSMART Grants. Awards will be made for projects most advantageous to the Government. Award selection may be made to maintain balance among the Research Areas listed in Section III.B.

The evaluation process will be comprised of three steps:

V.A.1. First-Level Screening

All applications will be screened to ensure that:

- The application meets the requirements of the FOA package, including submission of technical and budget proposals, a funding plan, letter(s) of commitment, and related forms

- The application contains a properly executed SF-424 Application for Financial Assistance and a form SF-424B, Assurances–Non-Construction Programs, or SF-424D, Assurances–Construction Programs

- The application includes an official resolution, adopted by the applicant's board of directors, governing body, or appropriate authorized official

- At least 50 percent of the cost of the project will be paid for with non-Federal funding. Cost share funding from sources outside the applicant's organization, e.g., loans or state grants, should be secured and available to the applicant prior to award. Reclamation may approve an award prior to an applicant securing non-Federal cost-share funds if Reclamation determines that there is sufficient evidence and likelihood that the non-Federal funds will be available to the applicant by the start of the project.

- The applicant meets the eligibility requirements stated in this document

- The application meets the description of eligible projects in Section III.B., "Eligible Research Projects," of this document (Research Areas A - G) and is within the scope of this FOA.

- The project can be completed by September 30, 2013, unless otherwise agreed upon

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.

V.A.2. Second-Level Evaluation (Technical Review)

Research evaluation criteria will comprise 100 points as stated in Section IV.D.5 Application Content, subsection Technical Proposal: Research Evaluation Criteria. Applications will be scored against the evaluation criteria by an Application Review Committee (ARC), made up of experts in relevant disciplines selected from across Reclamation.

V.A.3. Third-Level Evaluation (Managerial Review)

Management will prioritize projects to ensure the total amount of all awards does not exceed available funding levels, to ensure balance among the program tasks, and to ensure that the projects meet the scope and priorities of the WaterSMART Program. Positive or negative past performance by the applicant and any partners in previous working relationships with Reclamation will be considered.

V.B. Pre-Award Clearances and Approvals

After completion of the third-level evaluation, Reclamation will notify applicants whose proposals have been selected for award consideration.

Reclamation will also complete a business evaluation and determination of responsibility. During these evaluations, the Grants Officer (GO) will also consider several factors which are important, but 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 environmental compliance issues, reporting requirements, proper procurement of supplies and services, and audit compliance
- Adequacy of personnel practices; procurement procedures; and accounting policies and procedures, as established by applicable OMB circulars

If the results of all pre-award reviews and clearances are satisfactory, an award of funding will be made once the agreement is finalized (approximately one to three months from date of initial selection). If the results of pre-award reviews and clearances are unsatisfactory, consideration of funding for the project may be withdrawn.

Section VI. Award Administration Information

VI.A. Award Notices

Successful applicants will receive, by electronic or regular mail, a notice of award.

VI.B. Award Document

If the applicant is awarded a financial assistance agreement as a result of this FOA, the proposed research project and other relevant information from the application will be referenced in the agreement. The agreement document must be signed by a Reclamation GO before it becomes effective.

VI.C. Reporting Requirements and Distribution

If the applicant is awarded an agreement as a result of this FOA, the applicant will be required to submit the following types of reports during the term of the agreement.

VI.C.1. Financial Reports

- SF-425, Federal Financial Report

VI.C.2. 2. Program Performance Reports

- Semi-annual reports
    - Final report (please note final reports are public documents and will be made available on Reclamation's website). The cost of creation of a final report should be included in the budget proposal as required in Section IV.D.5. Application Content, subsection Budget Proposal.
    - The Final Report shall include, but not limited to:
        - A narrative summary of all work performed under the agreement;
        - A detailed research report description;
        - Description and interpretation of the data, methods, results, and conclusions, as appropriate; and
        - Major accomplishments and/or implementation of the research.
    - More detailed Final Report requirements may be specified if an agreement is awarded.

Section VII. Agency Contacts

There will be no pre-application conference. Organizations or individuals interested in submitting applications in response to this FOA ***may direct questions to Reclamation in writing.*** Questions may be submitted to the attention of Michelle Maher, GO, as follows:

By mail:

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

Overnight delivery:

Bureau of Reclamation
Attn: Michelle Maher
Mail Code: 84-27810
Denver Federal Center, Bldg. 67 Rm. 152
6th Avenue and Kipling Street
Denver, CO 80225

By e-mail:

mmaher@usbr.gov

Section VIII. Other Information

VIII.A. Overview of Environmental Compliance Requirements

Under no circumstances may an applicant begin any ground-disturbing activities (including grading, clearing, and other preliminary activities) on a project before environmental compliance is complete and Reclamation explicitly authorizes work to proceed. This pertains to all components of the proposed project, including those that are part of the applicant's non-Federal cost chare. Reclamation will provide a successful applicant with information once environmental compliance is complete. An applicant that proceeds before environmental compliance is complete may risk forfeiting Reclamation funding under this FOA.

Before approving expenditures for implementing a WaterSMART Grant project, Reclamation is required to comply with applicable environmental laws. Such compliance requires the participation and cooperation of both Reclamation and WaterSMART Grant recipients. This information is intended to inform applicants about the environmental compliance process associated with WaterSMART Grant projects and to summarize the requirements of certain Federal environmental laws.

Reclamation addresses environmental compliance issues for WaterSMART Grant applications as 1) an initial review and 2) a more detailed view of projects initially recommended for award. First, as part of the initial recommendation process, Reclamation evaluates the appropriateness of the amount budgeted for environmental compliance. Reclamation also examines the proposal to determine whether any significant environmental issues are involved in the project. Second, once a proposal has been initially recommended for funding, Reclamation undertakes a more detailed examination of environmental issues associated with the proposed project to comply with applicable law.

VIII.A.1. Review within the Application Evaluation Process

In the evaluation and selection process, Reclamation performs an initial review of the WaterSMART Grant applications for potential environmental issues. At this stage, Reclamation's review is focused on whether:

- The applicant has budgeted appropriately for environmental compliance
- Any significant environmental issues (i.e., issues that would make the project infeasible) are apparent.

For research-related activities that would include activities that would involve any surface-disturbing activities that could affect the surrounding environment, a one-percent budget line item is required to cover costs associated with environmental compliance. Environmental compliance costs that are included in your budget proposal are considered project costs and may be cost shared by the recipient and Reclamation. Any actual costs above the amount you budgeted for must generally be paid for solely by you. If too much is budgeted for environmental compliance, any remaining funding may generally be reallocated to cover other project costs.

Environmental compliance costs have varied greatly for past projects. A minimal number of projects have incurred environmental compliance costs over the 2-percent budgeted amount. In each of those cases, the overage has been the result of issues involving historic properties, the presence of endangered species, or other compliance concerns requiring a more lengthy assessment of specific issues.

The FOA also requests that applicants for WaterSMART Grant project funding answer a series of questions about the potential environmental impacts of their proposed project. In general, applications will not be scored lower in this first step of the environmental review based on the significance of the environmental issues involved. Rather, the information about environmental impacts is used by Reclamation primarily to determine if the you have budgeted appropriately. However, in some extreme cases, a proposal may be eliminated from further consideration at this stage if the magnitude of the environmental issues would make the project infeasible.

VIII.A.2. Review of Initially Recommended Projects

If a proposal is initially recommended for funding, a detailed analysis will be performed to determine the actual environmental impacts of the project, to agree on any mitigation measures needed, and to document environmental compliance. The recipient will then work with Reclamation to provide the information necessary for Reclamation to complete the environmental compliance work.

To the extent possible, environmental compliance will be completed before a cooperative agreement is signed by the parties. In all other cases, **the award will be made contingent on completion of environmental compliance.** The assistance agreement will describe how compliance will be carried out and how it will be paid for. WaterSMART Grant funding may not be applied to construction or implementation of the project itself unless and until this second level of environmental analysis is completed to comply with all applicable environmental laws.

VIII.B. Environmental Laws

Following is a brief overview of NEPA, NHPA, and ESA. While these statutes are not the only environmental laws that may apply to WaterSMART Grant projects, they are the Federal laws that most frequently do apply. Compliance with all applicable environmental laws will be initiated by Reclamation concurrently, immediately following the initial recommendation of a WaterSMART Grant award. The descriptions below are intended to provide you with information about the environmental compliance issues that may apply to your projects and to help you budget appropriately for the associated compliance costs.

VIII.B.1. National Environmental Policy Act

NEPA requires Federal agencies such as Reclamation to evaluate—during the decision-making process—the potential environmental effects of a proposed action and any reasonable mitigation measures. Before Reclamation can make a decision to fund a WaterSMART Grant project, Reclamation must comply with NEPA. Compliance with NEPA can be accomplished in several ways, depending upon the degree and significance of environmental impacts associated with the proposal:

Some projects may fit within a recognized **Categorical Exclusion (CE)** to NEPA (i.e., one of the established categories of activities that generally do not have significant impacts on the environment). If a project fits within a CE, no further NEPA compliance measures are necessary. Use of a CE can involve simple identification of an applicable **Departmental CE** or documentation of a **Reclamation CE** using a **Categorical Exclusion Checklist (CEC)**. If a CE is being considered, Reclamation will have to determine the applicability of the CE and whether extraordinary circumstances (i.e., reasons that the CE cannot be applied) exist. That process takes anywhere from 1 day to about 30 days, depending upon the specific situation.

If the project does not fit within a CE, compliance with NEPA might require preparation of an **Environmental Assessment/Finding of No Significant Impact (EA/FONSI).** Generally, where no CE applies but there are not believed to be any significant impacts associated with the proposed action, an EA will be required. The EA is used to determine whether any potentially significant effects exist (which would trigger the further step of an Environmental Impact Statement, below). If no potentially significant effects are identified, the EA process ends with the preparation of a FONSI. The EA/FONSI process is more detailed than the CE/CEC process and can take weeks or even months to complete. Consultation with other agencies and public notification are part of the EA process.

The most detailed form of NEPA compliance, where a proposed project has potentially significant environmental effects, is completion of an Environmental

Impact Statement (EIS) and Record of Decision (ROD). An EIS requires months or years to complete, and the process includes considerable public involvement, including mandatory public reviews of draft documents. It is not anticipated that projects proposed under this program will require completion of an EIS.

During the NEPA process, potential impacts of a project are evaluated in context and in terms of intensity (e.g., will the proposed action affect the only native prairie in the county? Will the proposed action reduce water supplied to a wetland by 1 percent? or 95 percent?) The best source of information concerning the potentially significant issues in a project area is the local Reclamation staff, who have experience in evaluating effects in context and by intensity.

Reclamation has the sole discretion to determine what level of environmental NEPA compliance is required. If another Federal agency is involved, Reclamation will coordinate to determine the appropriate level of compliance. You are encouraged to contact your regional or area Reclamation office (See <http://www.usbr.gov/main/regions.html>) with questions regarding NEPA compliance issues. You may also contact David Raff at 303-445-2461 for further information.

VIII.B.2. National Historic Preservation Act

To comply with Section 106 of the NHPA, Reclamation must consider whether a proposed project has the *potential to cause effects to historic properties*, before it can award a WaterSMART Grant. **"Historic properties"** are cultural resources (historic or prehistoric districts, sites, buildings, structures, or objects) that qualify for inclusion in the National Register of Historic Places. In some cases, **water delivery infrastructure that is over 50 years old** can be considered a "historic property" that is subject to review.

If a proposal is selected for initial award, WaterSMART Grant recipients will work with Reclamation to complete the Section 106 process. Compliance can be accomplished in several ways—depending on how complex the issues are—including:

If Reclamation determines that the project does *not* have the potential to cause effects to historic properties, then Reclamation will document its findings and the Section 106 process will be concluded. This can take anywhere from a couple of days to one month.

If Reclamation determines that the proposed project *could* have effects on historic properties, a multi-step process, involving consultation with the State Historic Preservation Officer and other entities, will follow. Depending on the nature of the project and impacts to cultural resources, consultation can be complex and time consuming. The process includes a determination as to whether additional information is necessary; evaluation of the significance of identified cultural resources; assessment of the effect of the project on historic properties; and, if the

project would have an adverse effect, evaluation of alternatives or modifications to avoid, minimize, or mitigate the effects. A Memorandum of Agreement is then used to record and implement any necessary measures. At a minimum, completion of the multi-step Section 106 process takes about two months.

Among the types of historic properties that might be affected by WaterSMART Grants are **historic irrigation systems** and **archaeological sites**. An irrigation system or a component of an irrigation system (e.g., a canal or headgate) is more likely to qualify as historic if it is more than 50 years old, if it is the oldest (or an early) system/component in the surrounding area, and if the system/component has not been significantly altered or modernized. In general, WaterSMART Grant projects that involve ground disturbance, or the alteration of existing older structures, are more likely to have the potential to affect cultural resources. However, the level of cultural resources compliance required, and the associated cost, depends on a case-by-case review of the circumstances presented by each proposal.

You should contact your State Historic Preservation Office and your local Reclamation office's cultural resources specialist to determine what, if any, cultural resources surveys have been conducted in the project area. See <http://www.usbr.gov/cultural/crmstaff.html> for a list of Reclamation cultural resource specialists. If an applicant has previously received Federal financial assistance, it is possible that a cultural resources survey has already been completed.

VIII.B.3. Endangered Species Act

Pursuant to Section 7 of the ESA, each Federal agency is required to consult with the U.S. Fish and Wildlife Service (USFWS) or the National Oceanic and Atmospheric Administration (NOAA) Fisheries Service to ensure any action it authorizes, funds, or carries out is not likely to *jeopardize the continued existence of any endangered or threatened species* or *destroy or adversely modify any designated critical habitat*.

Before Reclamation can approve funding for the implementation of a WaterSMART Grant project, it is required to comply with Section 7 of the ESA. The steps necessary for ESA compliance vary, depending on the presence of endangered or threatened species and the effects of the project. A rough overview of the possible course of ESA compliance is:

If Reclamation can determine that there are no endangered or threatened species or designated critical habitat in the project area, the ESA review is complete and no further compliance measures are required. This process can take anywhere from one day to one month.

If Reclamation determines that endangered or threatened species may be affected by the project, then a **"Biological Assessment"** must be prepared by Reclamation.

The Biological Assessment is used to help determine whether a proposed action may affect a listed species or its designated critical habitat. The Biological Assessment may result in a determination that a proposed action *is not likely to adversely affect* any endangered or threatened species. If the USFWS/NOAA Fisheries Service concurs in writing, then no further consultation is required and ESA compliance is complete. Depending on the scope and complexity of the proposed action,
preparation of a Biological Assessment can range from days to weeks or even months. The USFWS/NOAA Fisheries Service generally respond to requests for concurrence within 30 days.

If it is determined that the project *is likely to adversely affect* listed species, further consultation ("**formal consultation**") with USFWS or NOAA Fisheries Service is required to comply with the ESA. The process includes the creation of a **Biological Opinion** by the USFWS/NOAA Fisheries Service, including a determination of whether the project would **"jeopardize"** listed species and, if so, whether any **reasonable and prudent** alternatives to the proposed project are necessary to avoid jeopardy. Nondiscretionary **reasonable and prudent measures** and **terms and conditions** to minimize the impact of incidental take may also be included. Under the timeframes established in the ESA regulations, the Biological Opinion is issued within 135 days from the date that formal consultation was initiated, unless an extension of time is agreed upon.

Obviously, the time, cost, and extent of the work necessary to comply with the ESA depends upon whether endangered or threatened species are present in the project area and, if so, whether the project might have effects on those species significant enough to require formal consultation.

ESA compliance is often conducted parallel to the NEPA compliance process and, as in the case of categorical exclusion checklists, documented simultaneously. The best source of information concerning the compliance with the ESA in a particular project area is the local Reclamation environmental staff, who can be helpful in determining the presence of listed species and possible effects that would require consultation with the USFWS or National Oceanic and Atmospheric Administration (NOAA) Fisheries Service. You are encouraged to contact your regional or area Reclamation office (see <http://www.usbr.gov/main/regions.html>) with questions regarding ESA compliance issues. You may also contact David Raff at 303-445-2461 for further information.