RECLAMATION

Managing Water in the West

Funding Opportunity Announcement No. R12SF80049

WaterSMART:
Water and Energy Efficiency Grants for FY 2012

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

November 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: Water and Energy Efficiency Grants for Fiscal Year (FY) 2012
Announcement Type:	Funding Opportunity Announcement (FOA)
Funding Opportunity Number:	R12SF80049
Catalog of Federal Domestic Assistance (CFDA) Number:	15.507
Dates: (See FOA Sec. IV.B)	Application due date: January 19, 2012, 4:00 p.m. Mountain Standard Time (MST)
Eligible Applicants: (See FOA Sec. III.A)	States, Indian tribes, irrigation districts, water districts, or other organizations with water or power delivery authority located in the western United States or United States Territories as identified in the Reclamation Act of June 17, 1902, as amended
Recipient Cost Share: (See FOA Sec. III.E)	50 percent or more of project costs
Federal Funding Amount: (See FOA Sec. II.B)	**Funding Group I:** Up to $300,000 per agreement for a project up to 2 years. **Funding Group II:** Up to $1,500,000 for a project up to three years. Projects in this group will be funded on an annual basis. Applicants may not request more than $750,000 for any one year of the project. Funding for the second and third years of the project is contingent upon future appropriations.
Estimated Number of Agreements to be Awarded: (See FOA Sec. II.B)	**Funding Group I:** It is expected that the majority of awards will be made for projects in Funding Group I compared to Funding Group II. **Funding Group II:** It is expected that fewer awards will be made for projects in Funding Group II compared to Funding Group I.
Estimated Amount of Funding Available for Award: (See FOA Sec. II.A)	The President's FY 2012 budget request included $18.5 million proposed for WaterSMART Grants. The amount of funding available for award for this WaterSMART Grant FOA will be determined once final FY 2012 appropriations have been made. This FOA will be cancelled if FY 2012 appropriations are insufficient to support new awards. Applications submitted under this FOA may also be considered if other funding becomes available in FY 2012 or subsequently. Please refer to <www.usbr.gov/WaterSMART/WEEG> for updated funding information.

Application Checklist

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

√	What to submit	Form or format	When to submit
	Cover page	Form SF 424, available at: <http://apply07.grants.gov/apply/FormLinks?family=15> Page 26	*
	Assurances	Form SF 424B or SF 424D, as applicable, available at: <http://apply07.grants.gov/apply/FormLinks?family=15> Page 26	*
	Title page	Page 26	*
	Table of contents	Page 26	*
	Technical proposal: (1) Executive Summary (2) Background data (3) Technical project description (4) (4) Evaluation criteria	 Page 26 Page 26 Page 27 Pages 27 - 43	* * * *
	Description of Performance Measures	Page 61	*
	Environmental Compliance	Page 78	*
	Required permits and approvals	Page 43	*
	Funding plan	Page 44	*
	Commitment letters	Page 44	**
	Official resolution	Page 46	**
	Project budget proposal: • General requirements • Budget format • Budget narrative • Budget form	 Page 46 Page 46 Page 46 Page 49 Form SF 424A or SF 424C, as applicable, available at: <http://apply07.grants.gov/apply/FormLinks?family=15> Page 49	* * * * *

* Submit materials with your application on January 19, 2012

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

Acronyms and Abbreviations

AMR/AMI	automatic meter reading/information
AOR	Authorized Organization Representatives
ARC	Application Review Committee
AWEP	Agricultural Water Enhancement Program
CCR	Central Contractor Registration
CFDA	Catalog of Federal Domestic Assistance
CE	Categorical Exclusion
CEC	Categorical Exclusion Checklist
CPA	certified public accountant
CWA	Clean Water Act
Department	U.S. Department of the 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
EQIP	Environmental Quality Incentive Program
ESA	Endangered Species Act
ET	evapotranspiration
FAQ	Frequently Asked Question
FEMA	Federal Emergency Management Agency
FERC	Federal Energy Regulatory Commission
FOA	Funding Opportunity Announcement
FONSI	Finding of No Significant Impact
FY	fiscal year
GIS	Geographical Information System
GO	Grants Officer
IRS	Internal Revenue Service
LOPP	Lease of Power Privilege
MST	Mountain Standard Time
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NOAA	National Oceanic and Atmospheric Administration
NRCS	Natural Resources Conservation Service
O&M	operation and maintenance
OM&R	Operations, Maintenance, and Replacement
OMB	Office of Management and Budget
PVC	polyvinyl chloride
Reclamation	Bureau of Reclamation
ROD	Record of Decision
SCADA	Supervisory Control and Data Acquisition
SOR	System Optimization Review
TIN	Taxpayer Identification Number
USFWS	U.S. Fish and Wildlife Service
WaterSMART	Sustain and Manage America’s Resources for Tomorrow

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Section I. Funding Opportunity Description

I.A. WaterSMART: Water and Energy Efficiency Grants

The Nation faces an increasing set of water resource challenges. Aging infrastructure, rapid population growth, depletion of groundwater resources, impaired water quality associated with particular land uses and land covers, water needed for human and environmental uses, and climate variability and change all play a role in determining the amount of fresh water available at any given place and time. Water shortages 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 crop irrigation, 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, due to prolonged drought.

These water issues are exacerbating the challenges facing traditional water management approaches which by themselves no longer meet today's needs. The U.S. Department of the Interior's (Department) 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 Department bureaus and offices. Through the Program, the Department is working to achieve a sustainable water management strategy to meet the Nation's water needs.

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

I.B. Objective of Funding Opportunity Announcement

The objective of this Funding Opportunity Announcement (FOA) is to invite States, Indian tribes, irrigation districts, water districts, and other organizations with water or power delivery authority to leverage their money and resources by cost sharing with Reclamation on projects that seek to conserve and use water

more efficiently, increase the use of renewable energy and improve energy efficiency, benefit endangered and threatened species, facilitate water markets, or carry out other activities to address climate-related impacts on water or prevent any water-related crisis or conflict.

Water conservation, use of water markets, and improved efficiency are crucial elements of any plan to address western United States water issues. With leveraged water and energy efficiency grants, an important step will be taken towards increasing conservation for a more efficient use of water in the West.

I.C. Program Authority

This FOA is issued under the authority of Section 9504(a) of the Secure Water Act, Subtitle F of Title IX of the Omnibus Public Land Management Act of 2009, Public Law 111-11 (42 United States Code 10364).

I.D. Frequently Asked Questions

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

Section II. Award Information

II.A. Total Project Funding

The President's Fiscal Year (FY) 2012 budget request included $18.5 million for WaterSMART Grants (WaterSMART Grants include: Water and Energy Efficiency Grants; System Optimization Review Grants; Advanced Water Treatment Pilot and Demonstration Project Grants; and Grants to Develop Climate Analysis Tools). A portion of this request is intended for WaterSMART Water and Energy Efficiency Grants, which is the subject of this FOA. The amount of funding available to fund projects through this FOA, will be determined once Congress approves final FY 2012 appropriations. Updated funding information is available at: <www.usbr.gov/WaterSMART/WEEG> .

II.B. Project Funding Limitations

Multiple applications for funding may be submitted for consideration (for example, an applicant may submit a proposal for funding under Funding Group I, and a separate proposal under Funding Group II). ***However, no more than $750,000 in total FY 2012 WaterSMART Water and Energy Efficiency Grant funds will be awarded to any one applicant under this FOA.***

The Federal share (Reclamation's share in addition to any other sources of Federal funding) of any one proposed project shall not exceed 50 percent of the total project costs. Generally, the nonfederal share of project costs must be expended at the same or greater rate as the federal share of project costs.

Applicants are invited to submit proposals under one of two Funding Groups:

Funding Group I: Up to $300,000 in Federal funds provided through this FOA will be available for smaller, on-the-ground projects.

- In general, projects funded under Funding Group I should be completed within 2 years of award (see Section III.D. Length of Projects for additional information).

- It is expected that funds will be awarded no later than September 30, 2012, contingent on appropriations.

- It is expected that the majority of awards will be made for projects in Funding Group I compared to projects in Funding Group II (described below).

Funding Group II: Up to $1,500,000 in Federal funds provided through this FOA will be available for larger, ***phased*** on-the-ground projects that may take up to 3 years to complete.

- Projects selected under Funding Group II will be funded on an annual basis, for a period of up to 3 years. ***No more than $750,000 in Federal funds will be provided within a given Federal fiscal year (October 1 through September 30) to complete each phase of a selected project, with a maximum of $1,500,000 available for the entire project.***

- Each phase of the project is expected to be substantially completed within one year of award. Recipients must demonstrate sufficient progress to receive subsequent funding for remaining phases of the project.

- Federal funding under this FOA for the first year of phased projects will be awarded no later than September 30, 2012. Funding for the remaining project years will be made available contingent on subsequent Congressional appropriations. (Note: Recipients **will not** be asked to reapply to receive FY 2013 and FY 2014 funding).

- It is expected that only a small number of awards will be made for projects in Funding Group II.

Figure 1 (below) illustrates the funding process for a project that is requesting funding under Funding Group II. In this example, District X is requesting funding for a three-year project that includes environmental compliance for the entire project, canal lining, piping, installing a Supervisory Control and Data Acquisitions (SCADA) system, and installing a small-scale hydro-electric plant. In its application under this FOA, District X describes the entire project, (which is expected to be completed over 3 years) and requests a total of $1,500,000 to complete the project. In its application, District X explains that in the first year (Year One) $200,000 in Federal funding will be used to perform environmental compliance on all three phases of the proposed project and to line a one-mile stretch of canal; that in the second year (Year Two) $750,000 in Federal funding will be used to convert 10 miles of open ditch lateral to buried polyvinyl chloride (PVC) pipe and to install the SCADA system; and that in the third year (Year Three), $550,000 in Federal funding will be used to install a small-scale hydroelectric plant.

If District X is successful at securing a WaterSMART Grant award under this FOA, the District would receive $200,000 in FY 2012 funding to complete Year One of the project. Contingent on the availability of appropriations and satisfactory progress in the first year, District X would then receive $750,000 in FY 2013 funding – without reapplying – to complete Year Two of the project, and $550,000 in FY 2014 funding

to complete Year Three of the project. The result is a three-year overall project, with a total Federal cost share of $1,500,000.

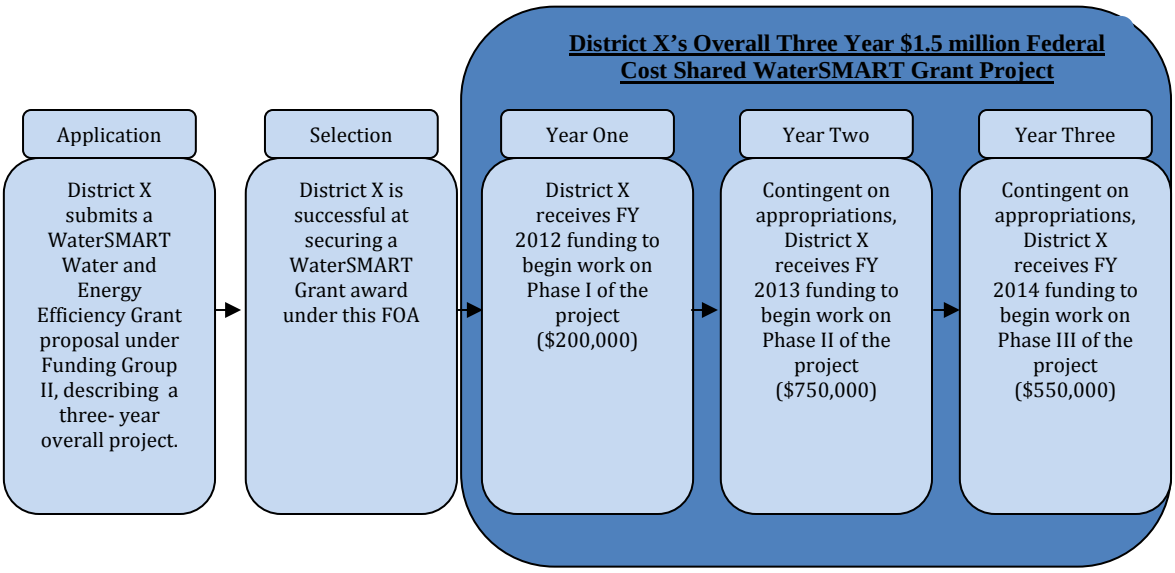

Figure 1. Sample application process for Funding Group II.

II.C. Reclamation Responsibilities

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 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 project.

At the request of the recipient, Reclamation can provide technical assistance after award of the project. If you receive Reclamation's assistance, you must account for these costs in your budget. To discuss available assistance and these costs, contact your local Reclamation office, is listed at <http://www.usbr.gov/main/regions.html>.

II.D. Award Date

Reclamation expects to contact potential award recipients and unsuccessful applicants in March, or slightly later if necessary based on the enactment of

FY 2012 appropriations. Within one to three months after that date, assistance agreements will be awarded to applicants that successfully pass all pre-award reviews and clearances.

Section III. Eligibility Information

III.A. Eligible Applicants

Under P.L. 111-11, Section 9502, an eligible applicant is a State, Indian tribe, irrigation district, water district, or other organization with water or power delivery authority.

Applicants must also be 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.

Those not eligible include the following entities:

- Federal governmental entities
- Institutions of higher education
- Individuals

III.B. Eligible Projects

Projects should seek to conserve and use water more efficiently, increase the use of renewable energy and improve energy efficiency, protect endangered and threatened species, facilitate water markets, or carry out other activities to address climate-related impacts on water or prevent any water-related crisis or conflict.

Tasks A-D, below, describe projects eligible for funding under this FOA. Applications may include any one, or a combination, of the types of projects described in Tasks A-D. In general, if you are seeking funding for multiple projects (for example, a Task A project and a Task C project) and the projects are interrelated or closely related, they should be combined in one application.

Applicants may submit multiple project proposals; however, no more than $750,000 in FY 2012 funding will be awarded to any one applicant under this FOA. Phased projects may request funding up to $1,500,000, but the initial

obligation will not exceed $750,000 in the first year, or any subsequent year(s), of the agreement.

Other projects that are similar to those listed below may be submitted for consideration and will be allowed to the extent consistent with program authorization and goals.

Note: During Third-Level Evaluation (see Section V.A.3.) Reclamation will review the results of the Second-Level Evaluation (Section V.A.2.) and may prioritize projects to ensure that multiple Task Areas are represented among the projects selected for funding.

III.B.1. Task A–Water Conservation

Projects that result in quantifiable and sustained water savings or improved water management (please note that an agreement will not be awarded for an improvement to conserve irrigation water unless the applicant agrees to the terms of Section 9504(a)(3)(B) of Public Law 111-11. See Section III.G. of this FOA for further information). Projects include, but are not limited to:

- Canal Lining/Piping: Projects that line or pipe canals resulting in conserved water. Projects include but are not limited to:
    - Installing new proven lining materials or technology
    - Converting open canals to pipeline
    - Constructing conveyance improvements, turnouts, pipelines or intertie systems
- Municipal Metering: Projects that install meters, resulting in measureable water savings. Projects include, but are not limited to:
    - Installing water service meters
    - Installing distribution systems meters associated with production and/or leakage quantification
- Irrigation Flow Measurement: Projects that improve measurement accuracy and result in reduced spills and over-deliveries to irrigators. Projects include, but are not limited to:
    - Installing weirs, flumes, ramps, etc. in open channels
    - Installing meters in pressurized pipes

- SCADA and Automation : Projects that install SCADA and/or automation components that provide water savings when irrigation delivery system operational efficiency is improved to reduce spills, over-deliveries, and seepage. Projects include, but are not limited to:

  - Installing SCADA components that allow for remote monitoring of irrigation delivery system conditions (flow rates, water elevations, controls devices openings, etc.)

  - Installing automation components that allow for remote operation of delivery system control features (gates, valves, turnouts, etc.)

- Groundwater Recharge: Projects that provide savings when surface water storage evaporation is reduced and/or surface runoff is intercepted for recharge. Projects include, but are not limited to:

  - Installing recharge ponds

  - Installing surface runoff interception systems

  - Removing impervious surfaces

- Landscape Irrigation Measures: Projects that provide water savings by reducing outdoor water usage. These measures include turf removal, Smart irrigation controllers (weather or soil-moisture based) and high-efficiency nozzles (sprinkler heads). These measures are typically promoted by water entities through rebates or direct-install programs. Projects include, but are not limited to:

  - Removing turf

  - Installing Smart irrigation controllers

  - Installing high-efficiency nozzles (sprinkler heads)

- High-Efficiency Indoor Appliances and Fixtures: Projects that promote installation of high-efficiency indoor appliance and fixtures to provide water savings for municipal water entities where there is significant potential for replacing existing non-efficient indoor appliances and fixtures. This is typically promoted by water entities through rebates or direct-install programs. Projects include, but are not limited to:

  - Installing high-efficiency toilets, clothes washers, dish washers, faucets, etc.

III.B.2. Task B–Energy-Water Nexus

Projects that increase the use of renewable energy sources in the management and delivery of water and/or projects that upgrade existing water management facilities resulting in quantifiable and sustained energy savings. Projects include, but are not limited to, those discussed in the following subsections.

Implementing Renewable Energy Projects Related to Water Management and Delivery

Renewable energy projects related to water management and delivery include, but are not limited to:

- Installing small-scale hydroelectric, solar-electric, wind energy, geothermal power systems, or other facilities that enable use of these or other renewable energy sources (e.g., replacing fossil fuel powered pumps with renewable energy based pumps, installing low-head hydrokinetic power generation units in a water system)

- Producing and using biomass or renewable fuels (including woody and herbaceous crops and residues, solid waste, sewage, and liquid fuels from agricultural products) (e.g., developing or using technology that would transform algae into a renewable oil source)

Proposals including a renewable energy component typically require additional permitting not necessary for other water management improvements (e.g., canal lining). In evaluating these proposals, Reclamation may consider the applicant's progress in obtaining a Federal Energy Regulatory Commission (FERC) license or a Reclamation Lease of Power Privilege (LOPP), depending on which is applicable. Applicants for a project including a renewable energy component are asked to include documentation of steps taken to date for obtaining a FERC license or a LOPP.

Note that improvements to Federal facilities that are implemented through any project awarded funding through this FOA must comply with additional requirements. The Federal government will continue to hold title to the Federal facility and any improvement that is integral to the existing operations of that facility. Please see Section III.H.

Applicants proposing renewable energy development may wish to contact Mr. Dean Marrone, WaterSMART Grants Coordinator at 303-445-3577 or dmarrone@usbr.gov prior to the application deadline to discuss the requirements listed above.

Increasing Energy Efficiency in Water Management

Projects that increase energy efficiency in water management include but are not limited to:

- Retrofitting or modernizing water management facilities or equipment to increase energy efficiency (e.g., installing Variable Frequency Drives, Advanced Meter Readings, or "smart grid" technology on pump and water systems)

- Quantifiably reducing energy consumption through water conservation projects that reduce pumping or diversions

III.B.3. Task C–Benefits to Endangered Species

Projects that benefit federally listed species (threatened or endangered) or designated critical habitat affected by a Reclamation facility or action as well as projects that benefit federally recognized candidate species. Projects include, but are not limited to:

- Improving habitat, including restoring habitat, making additional water available, and managing vegetation

- Installing fish bypasses and fish screens, as well as improving hatcheries

III.B.4. Task D–Water Markets

Projects that implement or use water markets to make water available to meet other existing water supply needs or uses (e.g., agricultural, municipal, or dedication to instream flows). Projects include, but are not limited to:

- Projects that develop a water market that would provide a mechanism for willing participants to buy, sell, lease, or exchange water to avoid or reduce water conflicts

- Projects that would result in the contribution of conserved water to an existing water market

- Projects that would make conserved water available for agricultural, municipal, or instream uses through a sale, lease, or exchange to another water user

Note: Projects that simply include the sale of conserved water to an existing customer are not considered water marketing projects under this task area.

III.C. Ineligible Projects

Projects that are not eligible for funding under this FOA include those not specifically described in Section III.B. Some examples of types of projects specifically ineligible for funding are listed below.

III.C.1. Operations, Maintenance, and Replacement (OM&R)

Projects that are considered normal OM&R are not eligible. OM&R is described as system improvements that replace or repair existing infrastructure or function without providing increased efficiency or effectiveness of water distribution over the expected life of the improvement.

Examples of ineligible OM&R projects include:

- Replacing malfunctioning components of an existing facility with the same components
- Improving an existing facility to operate as originally designed
- Performing an activity on a recurring basis even if that period is extended (e.g., 10-year interval)
- Sealing expansion joints of concrete lining because the original sealer or the water stops have failed
- Replacing broken meters with new meters of the same type
- Replacing leaky pipes with new pipes of the same type

III.C.2. Title XVI Water Recycling and Reuse

Title XVI is Reclamation's water recycling and reuse program, focused on identifying and investigating opportunities to reclaim and reuse wastewaters and naturally impaired ground and surface water. In general, this FOA is not intended for water recycling and reuse projects. Note, however, that small-scale improvements that relate to an existing water recycling facility (that is **not** an authorized Title XVI project) may be considered eligible for funding.

Any projects or project elements that are part of a congressionally authorized Title XVI project of Public Law 102-575, as amended (43 United States Code 390h et seq.), are not eligible for funding under this FOA. In addition, if a project sponsor is likely to seek funding for the activity through the Title XVI Program in the future (e.g., seeking Congressional funding for the project or preparing a Title XVI feasibility study that describes the activity as part of a proposed Title XVI

project) that activity should be pursued under the Title XVI Program instead of this FOA. Please contact Mr. Dean Marrone, WaterSMART Program Coordinator, at 303-445-3577 or dmarrone@usbr.gov, for further information.

For additional information on the Title XVI Program, please visit: <http://www.usbr.gov/WaterSMART/title.html>.

III.C.3. Water Purchases

A project that proposes using Federal funding primarily for the purchase of water is not eligible under this FOA.

III.C.4. Building Construction

A project that proposes to construct a building is not eligible for Federal funding under this FOA (e.g., a building to house administrative staff or to promote public awareness of water conservation).

III.D. Length of Projects

In general, Funding Group I projects should be completed within 2 years of award. Funding Group II projects should not exceed 3 years in total duration (e.g., a maximum of three year-long phases). Each year, Funding Group II projects are expected to complete the work planned as part of that year's phase.

Applications for projects requiring more time will be considered for funding only under limited circumstances. For example, some renewable energy project installations may require additional time to secure necessary permits.

III.E. Cost-Sharing Requirement

Applicants must be capable of cost sharing 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."

Note: applicants proposing a Funding Group II project are not required to have non-Federal cost share funding secured for the entire project at the time of award. Funding Group II applicants must demonstrate sufficient evidence that non-Federal cost-share for the first year of the project will be available by the start of that phase and must describe a plan and schedule for securing non-Federal funding for subsequent years of the project.

III.E.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, available at <http://www.whitehouse.gov/omb/circulars>.

III.E.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.E.3. Pre-Award Costs

Project pre-award costs that have been incurred prior to the date of award 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 01, 2011, be considered for cost share purposes***.

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

III.E.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 available at <http://www.whitehouse.gov/omb/circulars>.

III.F. Environmental Compliance

All projects being considered for award funding will require compliance with the National Environmental Policy Act (NEPA) before any ground-disturbing activity may begin. Compliance with all applicable state, Federal and local environmental, cultural, and paleontological resource protection laws and regulations is also required. These may include, but are not limited to, the Clean Water Act (CWA), the Endangered Species Act (ESA), National Historic Preservation Act (NHPA), consultation with potentially affected tribes, and consultation with the State Historic Preservation Office.

Reclamation will be the lead Federal agency for NEPA compliance and will be responsible for evaluating technical information and ensuring that natural resources, cultural, and socioeconomic concerns are appropriately addressed. As the lead agency, Reclamation is solely responsible for determining the appropriate level of NEPA compliance. Further, Reclamation is responsible to ensure findings under NEPA, and consultations, as appropriate, will support Reclamation's decision on whether to fund a project. Environmental compliance costs are part of an applicant's cost share. These costs will be considered in the ranking of applications.

Note: applicants proposing a Funding Group II project must address the environmental compliance questions for their entire project, not just the first one-year phase.

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 share. 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.

III.G. Requirements for Agricultural Operations [Public Law 111-11, Section 9504(a)(3)(B)]

In accordance with Section 9504(a)(3)(B) of Public Law 111-11, grants and cooperative agreements under this authority will not be awarded for an improvement to conserve irrigation water unless the applicant agrees to both of the following conditions:

- Not to use any associated water savings to increase the total irrigated acreage of the eligible applicant; and

- Not to otherwise increase the consumptive use of water in the operation of the eligible applicant, as determined pursuant to the law of the State in which the operation of the eligible applicant is located.

III.H. Other Requirements

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

III.H.1. Title to Improvements [Public Law 111-11, Section 9504(a)(3)(D)]

If the activities funded through an agreement awarded under this FOA result in a modification to a portion of a federally owned facility that is integral to the existing operations of that facility, the Federal government shall continue to hold title to the facility and the improvements thereto. Title to improvements that are not integral to existing water delivery operations shall reside with the project sponsor.

III.H.2. Operation and Maintenance (O&M) Costs [Public Law 111-11, Section 9504(a)(3)(E)(iv)]

The non-Federal share of the costs for O&M of any infrastructure improvement funded through an agreement awarded under this FOA shall be 100 percent.

III.H.3. Liability [Public Law 111-11, Section 9504(a)(3)(F)]

In General

Except as provided under chapter 171 of title 28, United States Code (commonly known as the "Federal Tort Claims Act"), the United States shall not be liable for monetary damages of any kind for any injury arising out of an act, omission, or occurrence that arises in relation to any facility created or improved through an agreement awarded under this FOA, the title of which is not held by the United States.

Tort Claims Act

Nothing in this section increases the liability of the United States beyond that provided in "Federal Tort Claims Act".

III.H.4. Central Contractor Registration

All applicants must be registered in the Central Contractor Registration (CCR) prior to award 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 while they have an active Federal award or an application under consideration.

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
Financial Assistance Services
Attn: Michelle Maher
Mail Code: 84-27850
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:

- January 19, 2012, 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 United States Code § 552, as Amended by Public Law No. 110-175), *and as a result, may be made publicly available. In addition,* ***successful applications will***

be made publicly available *(following consultation with the applicant with redactions as needed) and 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 to either one of the following addresses. 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
Financial Assistance Services
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 Project Application

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

IV.D.1. Applications Submitted by Mail

Please follow these instructions to submit your application 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."

- Please only staple or binder clip documents submitted.

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

- Materials arriving separately will not be included in the application package and may result in the application being rejected or not funded. This does not apply to letters of support, funding commitment letters and official resolutions.

- 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.

IV.D.2. 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.3. 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/app_help_reso.jsp>.

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

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

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 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 from 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.	One day. You will receive DUNS number information online.
	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.

√	Step	Actions to take	Purpose	Time required
	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 AORs have 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.
	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 that 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 75 **(seventy five) consecutively numbered** pages. If an application exceeds 75 pages, only the first 75 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. The Technical Proposal and Evaluation Criteria section shall be limited to a maximum of 50 (fifty) pages. The SF-424 forms are not considered in the total page count.

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

IV.D.5. Application Content

The application must include the following elements 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 50 pages)
  - Executive summary
  - Background data
  - Technical project description
  - Evaluation criteria
  - Post-project benefits (performance measures)
  - Potential environmental impacts
  - Required permits and approvals
- Letters of project support
- Official resolution
- Project Budget
  - Funding plan and letters of commitment
  - Budget Proposal Format
  - Budget Narrative Format
  - Budget Form SF-424A or SF-424C, as applicable to project

SF-424, SF-424A, SF-424B, SF-424C and SF-424D forms may be obtained at <http://apply07.grants.gov/apply/FormLinks?family=15>.

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 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 facsimile numbers of the 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 and evaluation criteria (50 pages maximum) includes: (1) the Executive Summary, (2) Background Data, (3) Technical Project Description and (4) 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 work proposed, including how project funds will be used to accomplish specific project activities and briefly identifies how the proposed project contributes to accomplishing the goals of this FOA (see Section III.B, “Eligible Projects”).

Technical Proposal: Background Data

Provide a map of the area showing the geographic location (include the State, county, and direction from nearest town).

As applicable, describe the source of water supply, the water rights involved, current water uses (i.e., agricultural, municipal, domestic, or industrial), the number of water users served, and the current and projected water demand. Also, identify potential shortfalls in water supply. If water is primarily used for irrigation, describe major crops and total acres served.

In addition, describe the applicant's water delivery system as appropriate. For agricultural systems, please include the miles of canals, miles of laterals, and existing irrigation improvements (i.e., type, miles, and acres). For municipal systems, please include the number of connections and/or number of water users served and any other relevant information describing the system.

If the application includes renewable energy or energy efficiency elements, describe existing energy sources and current energy uses.

Identify any past working relationships with Reclamation. This should include the date(s), description of prior relationships with Reclamation, and a description of the projects(s).

Technical Proposal: Technical Project Description

The technical project description should describe the work in detail, including specific activities that will be accomplished as a result of this project. This description shall have sufficient detail to permit a comprehensive evaluation of the proposal.

Technical Proposal: Evaluation Criteria

The Evaluation Criteria portion of your application should thoroughly address each of the following criterion and subcriterion in the order presented to assist in the complete and accurate evaluation of your proposal. (Note: it is suggested that applicants copy and paste the below criteria and subcriteria into their applications to ensure that all necessary information is adequately addressed). **Applications will be evaluated against the Evaluation Criteria (listed below), which comprise 100 points of the total evaluation weight**. Please note that projects may be prioritized to ensure balance among the program Task Areas and to ensure that the projects address the goals of the WaterSMART program.

Evaluation Criterion A: Water Conservation (32 points)

*Up to **32 points** may be awarded for a proposal that will conserve water and improve efficiency. Points will be allocated to give consideration to projects that are expected to result in significant water savings.*

Subcriterion No. A.1—Water Conservation:

For projects with quantifiable and sustained water savings, please respond to Subcriterion No. 1(a)—Quantifiable Water Savings described in this subsection. If the project does not result in quantifiable water savings but will improve water management, please

respond to Subcriterion No. 1(b)—Improved Water Management described in this subsection. If the project has separate components that will result in both quantifiable water savings and improved water management, an applicant may respond to both Subcriteria No. A.1(a) and (b). However, an applicant is limited to 20 points total under both Subcriteria No. A.1(a) and (b).

Subcriterion No. A.1(a)—Quantifiable Water Savings:

*Up to **20 points** may be allocated based on the quantifiable water savings expected as a result of the project.*

Describe the amount of water saved. For projects that conserve water, please state the estimated amount of water expected to be conserved (in acre-feet per year) as a direct result of this project. Please provide sufficient detail supporting how the estimate was determined, including all supporting calculations. Please be sure to consider the questions associated with your project type (listed below) when determining the estimated water savings, along with the necessary support needed for a full review of your proposal (please note, the following is **not** an exclusive list of eligible project types. If your proposed project does not align with any of the projects listed below, please be sure to provide support for the estimated project benefits, including all supporting calculations and assumptions made).

In addition, all applicants should be sure to address the following:

- What is the applicant's average annual acre-feet of water supply?
- Where is that water currently going (i.e., back to the stream, spilled at the end of the ditch, seeping into the ground, etc.)?
- Where will the conserved water go?

Please address the following questions according to the type of project you propose for funding.

(1) **Canal Lining/Piping**: Canal lining/piping projects can provide water savings when irrigation delivery systems experience significant losses due to canal seepage. Applicants proposing lining/piping projects should address the following:

- How has the estimated average annual water savings that will result from the project been determined? Please provide all relevant calculations, assumptions, and supporting data.
- How have average annual canal seepage losses been determined? Have ponding and/or inflow/outflow tests been conducted to

determine seepage rates under varying conditions? If so, please provide detailed descriptions of testing methods and all results. If not, please provide an explanation of the method(s) used to calculate seepage losses. All estimates should be supported with multiple sets of data/measurements from representative sections of canals.

- What are the expected post-project seepage/leakage losses and how were these estimates determined? (e.g., can data specific to the type of material being used in the project be provided?).

- What are the anticipated annual transit loss reductions in terms of acre-feet per mile for the overall project and for each section of canal included in the project?

- How will actual canal loss seepage reductions be verified?

- Include a detailed description of the materials being used.

(2) **Municipal Metering**: Municipal metering projects can provide water savings when individual user meters are installed where none exist to allow for unit pricing and when new meters are installed within a distribution system to assist with leakage reduction. Applicants proposing municipal metering projects should address the following:

- How has the estimated average annual water savings that will result from the project been determined? Please provide all relevant calculations, assumptions, and supporting data.

- How have current distribution system losses and/or the potential for reductions in water use by individual users been determined?

- For individual water user meters installation, reference studies in the region or in the applicant's service area relevant to water use patterns and the potential for reducing such use? In the absence of such studies, please explain in detail how expected water use reductions have been estimated and the basis for the estimations.

- If installing distribution main meters will result in conserved water, please provide support for this determination (including, but not limited to leakage studies, previous leakage reduction projects, etc.). Please provide details underlying any assumptions being made in support of water savings estimates (e.g., how leakage will be reduced once identified with improved meter data).

- What types (manufacturer and model) of devices will be installed and what quantity of each?

- How will actual water savings be verified upon completion of the project?

(3) **Irrigation Flow Measurement**: Irrigation flow measurement improvements can provide water savings when improved measurement accuracy results in reduced spills and over-deliveries to irrigators. Applicants proposing municipal metering projects should address the following:

- How have average annual water savings estimates been determined? Please provide all relevant calculations, assumptions, and supporting data.

- Are flows currently measured at proposed sites and if so what is the accuracy of existing devices? How has the existing measurement accuracy been established?

- Provide detailed descriptions of all proposed flow measurement devices, including accuracy and the basis for the accuracy.

- How will actual water savings be verified upon completion of the project?

(4) **SCADA and Automation**: SCADA and Automation components can provide water savings when irrigation delivery system operational efficiency is improved to reduce spills, over-deliveries, and seepage. Applicants proposing municipal metering projects should address the following:

- How have average annual water savings estimates been determined? Please provide all relevant calculations, assumptions, and supporting data.

- Have current operational losses been determined? If water savings are based on a reduction of spills, please provide support for the amount of water currently being lost to spills.

- Will annual farm delivery volumes be reduced by more efficient and timely deliveries and if so, how has this reduction been estimated?

- Will canal seepage be reduced through improved system management? If so, what is the estimated amount and how was it calculated?

- How will actual water savings be verified upon completion of the project?

(5) **Groundwater Recharge**: Groundwater recharge can provide savings when surface water storage evaporation is reduced and/or surface runoff is intercepted for recharge. Applicants proposing groundwater recharge projects should address the following:

- How have average annual water savings estimates been determined? Please provide all relevant calculations, assumptions, and supporting data.

- Describe the source of the water to be used for recharge and what percentage of the recharged water is going to be available for use and how it will be used. Describe how this supply of water will offset other supplies.

- If water savings are based on reduced surface water storage evaporation, provide calculations for reduced evaporation losses.

- If water savings are based on recharge from existing surface runoff, provide calculations quantifying the estimated increased deep percolation amount.

- How will actual water savings be verified upon completion of the project?

(6) **Landscape Irrigation Measures**: Landscape irrigation measures can provide water savings by reducing outdoor water usage. These measures include turf removal, Smart irrigation controllers (i.e., weather or soil-moisture based) and high-efficiency nozzles (e.g., sprinkler heads).

a. Turf Removal: Applicants proposing turf removal projects should address the following:

- How have average annual water savings estimates been determined? Please provide all relevant calculations, assumptions, and supporting data.

- What is the total surface area of turf to be removed and what is the estimated average annual turf consumptive use rate per unit area?

- Was historical water consumption data evaluated to estimate average annual turf consumptive use per unit area? If so, did the evaluation include a weather adjustment component?

- Will site audits be performed before applicants are accepted into the program?

- How will actual water savings be verified upon completion of the project?

b. Smart Irrigation Controllers and High-Efficiency Nozzles: Applicants proposing Smart controller or high-efficiency nozzle projects should address the following:

- How have average annual water savings estimates been determined? Please provide all relevant calculations, assumptions, and supporting data.

- Was historical water consumption data evaluated to estimate the percent reduction in water demand per unit area of irrigated landscape? If so, did the evaluation include a weather adjustment component?

- What types (manufacturer and model) of devices will be installed and what quantity of each?

- Will the devices be installed through a rebate or direct-install program?

- Will site audits be performed before and after installation?

- How will actual water savings be verified upon completion of the project?

(7) **High-Efficiency Indoor Appliances and Fixtures**: Installing high-efficiency indoor appliance and fixtures can provide water savings for municipal water entities where there is significant potential for replacing existing non-efficient indoor appliances and fixtures. Applicants proposing high-efficiency indoor appliance and fixtures projects should address the following:

- How have average annual water savings estimates been determined? Please provide all relevant calculations, assumptions, and supporting data.

- What types (toilets, clothes washers, shower heads, etc.) of appliances and fixtures will be installed and what quantity of each?

- Have studies been conducted to verify the existence of non-efficient appliances and fixtures? Provide published water savings rates for each of these devices and reference the source for each of the device savings rates.

- Will the devices be installed through rebate or direct-install programs?

- How will actual water savings be verified upon completion of the project?

(8) **Other Project Types Not Listed Above**: Projects to provide water savings for irrigation and municipal water systems other than those listed above will considered and evaluated based on the amount of estimated water savings and the adequacy of the description of how the savings are estimated. Applicants proposing these types of projects should address the following items:

- How have average annual water savings estimates been determined? This should include a detailed description of the rationale and methodologies used to develop the estimates. Please provide all relevant calculations, assumptions, and supporting data. Reference relevant studies or past project documentation that support the water saving estimates.

- If new technologies or devices are proposed, how will the savings occur? Please provide detailed descriptions that will enable the reviewer to understand function and how savings occur.

- How will actual water savings be verified upon completion of the project? Please explain the calculations and the analyses for this verification.

AND/OR

Subcriterion No. A.1(b)—Improved Water Management:

*Up to **5 points** may be awarded if the proposal will improve water management through measurement, automation, advanced water measurement systems,or through implementation of a renewable energy project, or through other approaches where water savings are not quantifiable.*

Describe the amount of water better managed. For projects that improve water management but which may not result in measurable water savings, **state the amount of water expected to be better managed, in acre-feet per year and as a percentage of the average annual water supply.** (The average annual water supply is the amount actually diverted, pumped, or released from storage, on average, each year. This does not refer to the applicant's total water right or potential water supply.) Please use the following formula:

$$\frac{\text{Estimated Amount of Water Better Managed}}{\text{Average Annual Water Supply}}$$

Subcriterion No. A.2—Percentage of Total Supply:

*Up to **8 additional points** may be allocated based on the percentage of the applicant's total average water supply that will be conserved directly as a result of the project.*

Provide the percentage of total water supply conserved: State the applicant's total average annual water supply in acre-feet. Please use the following formula:

$$\frac{\text{Estimated Amount of Water Conserved}}{\text{Average Annual Water Supply}}$$

Subcriterion No. A.3—Reasonableness of Costs:

*Up to **4 additional points** may be awarded based on the reasonableness of the cost for the benefits gained.*

Please include information related to the total project cost, annual acre-feet conserved (or better managed), and the expected life of the improvement. Use the following calculation:

$$\frac{\text{Total Project Cost}}{\text{(Acre-Feet Conserved, or Better Managed x Improvement Life)}}$$

Failure to include this required calculation will result in no score for this section.

For all projects involving physical improvements, specify the expected life of the improvement in number of years and provide support for the expectation (e.g., manufacturer's guarantee, industry accepted life-expectancy, description of corrosion mitigation for ferrous pipe and fittings, etc.). Failure to provide this information may result in a reduced score for this section.

Evaluation Criterion B: Energy-Water Nexus (16 points)

*Up to **16 points** may be awarded based on the extent to which the project increases the use of renewable energy or otherwise results in increased energy efficiency.*

For projects that include construction or installation of renewable energy components, please respond to Subcriterion No. B.1— Implementing Renewable Energy Projects Related to Water Management and Delivery. If the project does not implement a renewable energy project but will increase energy efficiency, please respond to Subcriterion No. B.2— Increasing Energy Efficiency in Water Management. If the project has separate components that will result in both implementing a renewable energy project and increasing energy efficiency, an applicant may respond to both. However, an applicant may receive no more than 16 points total under both Subcriteria No. B.1 and B.2.

Subcriterion No. B.1— Implementing Renewable Energy Projects Related to Water Management and Delivery:

*Up to **16 points** may be awarded for projects that include construction or installation of renewable energy components (e.g., hydroelectric units, solar-electric facilities, wind energy systems, or facilities that otherwise enable the use of renewable energy). Projects such as small-scale solar resulting in minimal energy savings or production will be considered under Subcriterion No. B.2 below.*

Describe the amount of energy capacity. For projects that implement renewable energy systems, state the estimated amount of capacity (in kilowatts) of the system. Please provide sufficient detail supporting the stated estimate, including all calculations in support of the estimate.

Describe the amount of energy generated. For projects that implement renewable energy systems, state the estimated amount of energy that the system will generate (in kilowatt hours per year). Please provide sufficient detail supporting the stated estimate, including all calculations in support of the estimate.

Describe any other benefits of the renewable energy project. Please describe and provide sufficient detail on any additional benefits expected to result from the renewable energy project, including:

- Expected environmental benefits of the renewable energy system

- Any expected reduction in the use of energy currently supplied through a Reclamation project

- Anticipated beneficiaries, other than the applicant, of the renewable energy system

- Expected water needs of the renewable energy system

AND/OR

Subcriterion No. B.2—Increasing Energy Efficiency in Water Management

*If the project is not implementing a renewable energy component, as described in Subcriterion No. B.1 above, up to **4 points** may be awarded for projects that address energy demands by retrofitting equipment to increase energy efficiency and/or through water conservation improvements that result in reduced pumping or diversions.*

Describe any energy efficiencies that are expected to result from implementation of the water conservation or water management project (e.g., reduced pumping). Please provide sufficient detail supporting the calculation of any energy savings expected to result from water conservation improvements.

- Please describe the current pumping requirements and the types of pumps (e.g., size) currently being used. How would the proposed project impact the current pumping requirements?

- Please indicate whether you energy savings estimate originates from the point of diversion, or whether the estimate is based upon an alternate site of origin.

- Does the calculation include the energy required to treat the water?

Describe any renewable energy components that will result in minimal energy savings/production (e.g., installing small-scale solar as part of a SCADA system).

Evaluation Criterion C: Benefits to Endangered Species (12 points)

*Up to **12 points** may be awarded for projects that will benefit federally-recognized candidate species or up to **12 points** may be awarded for projects expected to accelerate the recovery of threatened or endangered species, or addressing designated critical habitat.*

For projects that will directly benefit *federally-recognized candidate species*, please include the following elements:

(1) Relationship of the species to water supply

(2) What is the extent to which the proposed project would reduce the likelihood of listing or would otherwise improve the status of the species?

For projects that will directly accelerate the recovery of *threatened or endangered species or address designated critical habitats*, please include the following elements:

(1) How is the species adversely affected by a Reclamation project?

(2) Is the species subject to a recovery plan or conservation plan under the Endangered Species Act?

(3) What is the extent to which the proposed project would reduce the likelihood of listing or would otherwise improve the status of the species?

Projects that benefit both federally-recognized candidate species and federally-listed threatened or endangered species or designated critical habitat will receive additional consideration under this criterion. Please see <http://www.fws.gov/endangered/index.html> for a complete listing of federally-recognized candidate species and federally-listed threatened or endangered species in your area.

Evaluation Criterion D: Water Marketing (12 points)

*Up to **12 points** may be awarded for projects that propose water marketing elements, with maximum points for projects that establish a new water market. Note: Water marketing does **not** include an entity selling conserved water to an existing customer. This criterion is intended for the situation where an entity that is conserving water uses water marketing to make the conserved water available to meet other existing water supply needs or uses.*

Briefly describe any water marketing elements included in the proposed project. Include the following elements:

(1) Estimated amount of water to be marketed

(2) A detailed description of the mechanism through which water will be marketed (e.g., individual sale, contribution to an existing market, the creation of a new water market, or construction of a recharge facility)

(3) Number of users, types of water use, etc. in the water market

(4) A description of any legal issues pertaining to water marketing (e.g., restrictions under Reclamation law or contracts, individual project authorities, or State water laws)

(5) Estimated duration of the water market

Evaluation Criterion E: Other Contributions to Water Supply Sustainability (14 points)

*Up to **14 points** may be awarded for projects that contribute to a more sustainable water supply in ways not covered by other criteria.*

This criterion is intended to provide an opportunity for the applicant to explain any additional benefits of the proposed project within the water basin, including benefits to downstream water users or to the environment. Please provide sufficient explanation of the expected benefits and their significance, including any information about water supply conditions within the basin (e.g., is the river, aquifer or other source of supply over-allocated? Is there frequently tension or litigation over water in the basin? Are there endangered species within the basin or other factors that may lead to heightened competition for available water supplies among multiple water uses? Is the possibility of future water conservation improvements by other water users enhanced by completion of this project?) Additional project benefits may include, but are not limited to, the following:

(1) Will the project make water available to address a specific concern? For example:

- Will the project address water supply shortages due to climate variability and/or heightened competition for finite water supplies (e.g. population growth or drought)?
- Will the project market water to other users? If so, what is the significance of this (e.g., does this help stretch water supplies in a water-short basin)?
- Will the project make additional water available for Indian tribes?
- Will the project help to address an issue that could potentially result in an interruption to the water supply if unresolved? (e.g., will the project benefit an endangered species by maintaining an adequate water supply)?
- Will the project generally make more water available in the water basin where the proposed work is located?

(2) Does the project promote and encourage collaboration among parties?

- Is there widespread support for the project?
- What is the significance of the collaboration/support?
- Will the project help to prevent a water-related crisis or conflict?

(3) Will the proposed WaterSMART Grant project help to expedite future on-farm irrigation improvements, including future on farm improvements that may be eligible for Natural Resources Conservation Service (NRCS) funding? If so, please address the following:

***Note**: On-farm water conservation improvements that complement the water delivery improvement projects selected through this FOA may be considered for NRCS funding and technical assistance in FY 2012 to the extent such assistance is available. Complementing NRCS Farm Bill programs include the Environmental Quality Incentive Program (EQIP) and Agricultural Water Enhancement Program (AWEP), which are the primary programs that address water quantity and water quality conservation practices. For more information, including application deadlines and a description of available funding, please contact your local NRCS office or visit <http://www.nrcs.usda.gov>for further contact information in your area.*

- Include a detailed listing of the fields and acreage that may be improved in the future.

- Describe in detail the on-farm improvements that can be made as a result of this project. Include discussion of any planned or ongoing efforts by farmers/ranchers that receive water from the applicant.

- Provide a detailed explanation of how the proposed WaterSMART Grant project would help to expedite such on-farm efficiency improvements.

- Fully describe the on-farm water conservation or water use efficiency benefits that would result from the enabled on-farm component of this project. Estimate the potential on-farm water savings that could result in acre-feet per year. Include support or backup documentation for any calculations or assumptions.

- Projects that include significant on-farm irrigation improvements should demonstrate the eligibility, commitment, and number or percentage of shareholders who plan to participate in any available NRCS funding programs. Applicants should provide letters of intent from farmers/ranchers in the affected project areas.

- Describe the extent to which this project complements an existing or newly awarded AWEP project.

(4) Will the project increase awareness of water and/or energy conservation and efficiency efforts?

- Will the project serve as an example of water and/or energy conservation and efficiency within a community?

- Will the project increase the capability of future water conservation or energy efficiency efforts for use by others?

- Does the project integrate water and energy components?

Evaluation Criterion F: Implementation and Results (10 points)
*Up to **10 points** may be awarded for the following:*

Subcriterion No. F.1—Project Planning

Points may be awarded for proposals with planning efforts that provide support for the proposed project.

Does the project have a Water Conservation Plan, System Optimization Review (SOR), and/or district or geographic area drought contingency plans in place? Is the project part of a comprehensive water management plan (e.g., the Yakima River Basin Integrated Water Resource Management Plan)? Please self-certify, or provide copies of these plans where appropriate, to verify that such a plan is in place.

Provide the following information regarding project planning:

(1) Identify any district-wide, or system-wide, planning that provides support for the proposed project. This could include a Water Conservation Plan, SOR, or other planning efforts done to determine the priority of this project in relation to other potential projects.

(2) Identify and describe any engineering or design work performed specifically in support of the proposed project.

(3) Describe how the project conforms to and meets the goals of any applicable State or regional water plans, and identify any aspect of the project that implements a feature of an existing water plan(s).

Subcriterion No. F.2—Readiness to Proceed

Points may be awarded based upon the extent to which the proposed project is capable of proceeding upon entering into a financial assistance agreement.

Describe the implementation plan of the proposed project. Please include an estimated project schedule that shows the stages and duration of the proposed work, including major tasks, milestones, and dates. ***(Please note, 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).

Please explain any permits that will be required, along with the process for obtaining such permits.

Subcriterion No. F.3—Performance Measures

Points may be awarded based on the description and development of performance measures to quantify actual project benefits upon completion of the project.

Provide a brief summary describing the performance measure that will be used to quantify actual benefits upon completion of the project (i.e., water saved, marketed, or better managed, or energy saved). For more information calculating performance measure, see Section VIII.A.1. "FY2012 WaterSMART Water and Energy Efficiency Grants: Performance Measures".

Note: All WaterSMART Grant applicants are required to propose a "performance measure" (a method of quantifying the actual benefits of their project once it is completed). A provision will be included in all assistance agreements with WaterSMART Grant recipients describing the performance measure, and requiring the recipient to quantify the actual project benefits in their final report to Reclamation upon completion of the project. If information regarding project benefits is not available immediately upon completion of the project, the financial assistance agreement may be modified to remain open until such information is available and until a Final Report is submitted. Quantification of project benefits is an important means to determine the relative effectiveness of various water management efforts, as well as the overall effectiveness of WaterSMART Grants.

Evaluation Criterion G: Connection to Reclamation Project Activities (4 points)

Up to 4 points may be awarded if the proposed project is in a basin with connections to Reclamation project activities. No points will be awarded for proposals without connection to a Reclamation project or Reclamation activity.

(1) How is the proposed project connected to Reclamation project activities?

(2) Does the applicant receive Reclamation project water?

(3) Is the project on Reclamation project lands or involving Reclamation facilities?

(4) Is the project in the same basin as a Reclamation project or activity?

(5) Will the proposed work contribute water to a basin where a Reclamation project is located?

Environmental Compliance

To allow Reclamation to assess the probable environmental impacts and costs associated with each application, all applicants must respond to the following list of questions focusing on the NEPA, ESA, and NHPA requirements. Please answer the following questions to the best of your knowledge. If any question is not applicable to the project, please explain why. Additional information about environmental compliance is provided in Section IV.D.4 "Budget Proposal," under the discussion of "Environmental and Regulatory Compliance Costs," and in Section VIII.B., "Overview of Environmental Compliance Requirements."

Note: applicants proposing a Funding Group II project must address the environmental compliance questions for their entire project, not just the first one-year phase.

If you have any questions, please 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 Dean Marrone, WaterSMART Program Coordinator, at 303-445-3577, 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 species listed or proposed to be listed as a Federal threatened or endangered species, or designated critical habitat in the project area? If so, would they be affected by any activities associated with the proposed project?

(3) Are there wetlands or other surface waters inside the project boundaries that potentially fall under CWA jurisdiction as "waters of the United States?" If so, please describe and estimate any impacts the project may have.

(4) When was the water delivery system constructed?

(5) Will the project result in any modification of or effects to, individual features of an irrigation system (e.g., headgates, canals, or flumes)? If so, state when those features were constructed and describe the nature and timing of any extensive alterations or modifications to those features completed previously.

(6) Are any buildings, structures, or features in the irrigation district listed or eligible for listing on the National Register of Historic Places? A cultural resources specialist at your local Reclamation office or the State Historic Preservation Office can assist in answering this question.

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

(8) Will the project have a disproportionately high and adverse effect on low income or minority populations?

(9) Will the project limit access to and ceremonial use of Indian sacred sites or result in other impacts on tribal lands?

(10) Will the project contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area?

Note, if mitigation is required to lessen environmental impacts, the applicant may, at Reclamation's discretion, be required to report on progress and completion of these commitments. Reclamation will coordinate with the applicant to establish reporting requirements and intervals accordingly.

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. To complete a renewable energy project within the time frame required of this FOA, it is recommended that an applicant has commenced the necessary permitting process prior to applying.

Applicants proposing renewable energy components to Federal facilities should note that some power projects may require FERC permitting or a Reclamation Lease of Power Privilege. To discuss questions related to projects that propose renewable energy development, please contact Mr. Dean Marrone at 303-445-3577.

Note that improvements to Federal facilities that are implemented through any project awarded funding through this FOA must comply with additional

requirements. The Federal government will continue to hold title to the Federal facility and any improvement that is integral to the existing operations of that facility. Please see Section III.H. Reclamation may also require additional approvals prior to award to ensure that any necessary easements, land use authorizations, or special permits can be approved consistent with the requirements of 43 CFR §429, and that the development will not impact or impair project operations or efficiency.

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

Commitment letters from third party funding sources should be submitted with your project application. If commitment letters are not available at the time of the application submission, please provide a timeline for submission of all commitment letters. 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.

Note: Applicants proposing a Funding Group II project are <u>not</u> required to have non-Federal cost share funding secured for the entire project at the time of award. Funding Group II applicants must demonstrate sufficient evidence that non-Federal cost-share for the <u>first year</u> of the project will be available by the start of that phase <u>and</u> must describe a plan and schedule for securing non-Federal funding for subsequent years 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, such as monetary and/or in-kind contributions and source funds contributed by the applicant (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. Include:

(a) What project expenses have been incurred

(b) How they benefitted the project

(c) The amount of the expense

(d) The date of cost incurrence

(3) Provide the identity and amount of funding to be provided by funding partners, as well as the required letters of commitment.

(4) Describe any funding requested or received from other Federal partners. Note: Other sources of Federal funding may not be counted towards your 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, 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
- That 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.

Budget Proposal

General Requirements

Include a project budget that estimates all costs (not just costs to be borne by Reclamation). 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. The labor rates should identify the direct labor rate separate from the fringe rate or fringe cost for each category. 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 will be included as a portion of the stated indirect costs. If these salaries can be adequately documented as direct costs, they should 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.

Equipment

Itemize costs of all equipment having a value of over $500 and include information as to the need for this equipment, as well as how the equipment was priced if being purchased for the agreement. If equipment is being rented, specify the number of hours and the hourly rate. Local rental rates are only accepted for equipment actually being rented or leased for the project. If equipment currently owned by the applicant is proposed for use under the proposed project, and the cost to use that equipment is being included in the budget as in-kind cost share, provide the rates and hours for each piece of equipment owned and budgeted. These should be ownership rates developed by the recipient for each piece of equipment. If these rates are not available, the U.S. Army Corp of Engineer's recommended equipment rates for the region are acceptable. Blue book, Federal Emergency Management Agency (FEMA), and other data bases should not be used.

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. Identify

how these costs were estimated (i.e., quotes, past experience, engineering estimates or other methodology).

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

Applicants must include a line item in their budget to cover environmental compliance costs. "Environmental compliance costs" refer to costs incurred by Reclamation or the recipient in complying with environmental regulations applicable to a WaterSMART Grant, including costs associated with any required documentation of environmental compliance, analyses, permits, or approvals. Applicable Federal environmental laws could include NEPA, ESA, NHPA, and the CWA, and other regulations depending on the project. Such costs may include, but are not limited to:

- The cost incurred by Reclamation to determine the level of environmental compliance required for the project
- The cost incurred by Reclamation, the recipient, or a consultant to prepare any necessary environmental compliance documents or reports
- The cost incurred by Reclamation to review any environmental compliance documents prepared by a consultant
- The cost incurred by the recipient in acquiring any required approvals or permits, or in implementing any required mitigation measures

The amount of the line item should be based on the actual expected environmental compliance costs for the project. However, the minimum amount budgeted for environmental compliance should be equal to at least 1-2 percent of the total project costs. If the amount budgeted is less than 1-2 percent of the total project costs, you must include a compelling explanation of why less than 1-2 percent was budgeted.

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. Failure to comply with reporting requirements may result in the recipient being removed from consideration for funding under future funding opportunities. 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.E., "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 Services, at <http://www.aqd.nbc.gov/services/ICS.aspx>.

Contingency Costs

All proposed contingency line-items must be supported by a rationale. Further, in most cases, contingency cost estimates at are limited to 10 percent of projected construction costs.

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.E.3 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					

You 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. You may attach a separate, detailed budget for each contract to adequately address all contractor budget items.

[2]Environmental and regulatory compliance should be at least 1-2 percent unless a justification is provided for a lesser amount.

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 which 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 program tasks listed in Section III.B. The evaluation process will be comprised of three steps described in the following subsections.

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 Projects," (Tasks A-D) and is within the scope of WaterSMART Grants.

- The project can be completed by September 30, 2014 (Funding Group I), or by September 30, 2015 (for a 3-year Funding Group II project).

Reclamation reserves the right to remove an application from funding consideration if it does not pass all First-Level Screening criteria listed above.

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

Evaluation criteria will comprise 100 points of the total evaluation weight as stated in Section IV.D.4. 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.

During Second-Level Evaluation, Reclamation may contact applicants to request clarifications to the information provided if necessary.

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 and to ensure that the projects meet the scope and priorities of the WaterSMART program. Management may also prioritize projects to ensure that multiple Task Areas are represented among the projects selected for funding. Positive or negative past performance by the applicant and any partners in previous working relationships with Reclamation may be considered, including whether the applicant is making significant progress toward the completion of outstanding financial assistance agreements and whether the applicant is in compliance with all reporting requirements associated with previously funded projects.

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 and will forward their applications to the appropriate Reclamation regional or area office for completion of environmental compliance.

The local Reclamation office 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 project and other relevant information (e.g., expected water savings) 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, on a semiannual basis

VI.C.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)

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
Financial Assistance Services
Attn: Michelle Maher
Mail Code: 84-27850
P.O. Box 25007
Denver, CO 80225

By e-mail:

mmaher@usbr.gov

By phone:

(303) 445-2025

Section VIII. Other Information

VIII.A. Performance Measures

VIII.A.1. FY2012 WaterSMART Water and Energy Efficiency Grants: Performance Measures

All WaterSMART Grant applicants are required to propose a method (or "performance measure") of quantifying the actual benefits of their project once it is completed. Actual benefits are defined as water actually conserved, marketed, or better managed, as a direct result of the project. A provision will be included in all assistance agreements with WaterSMART Grant recipients describing the performance measure and requiring the recipient to quantify the actual project benefits in their final report to Reclamation upon completion of the project. Quantifying project benefits is an important means to determine the relative effectiveness of various water management efforts, as well as the overall effectiveness of WaterSMART Grants.

The following information is intended to provide applicants with examples of some acceptable performance measures that may be used to estimate pre-project benefits and to verify post-project benefits upon completion. **However, the following is not intended to be an exclusive list of acceptable performance measures. Applicants are encouraged to propose alternatives to the measures listed below if another measure is more effective for the particular project.** Reclamation understands that, in some cases, baseline information may not be available, and that methods other than those suggested below may need to be employed. If an alternative performance measure is suggested, the applicant must provide information supporting the effectiveness of the proposed measure as applied to the proposed project.

Performance Measure No. A.—Projects with Quantifiable Water Savings

The performance measures included below are examples that may be helpful in estimating pre-project benefits and to verify post-project water savings for projects that are expected to result in quantifiable and sustained water savings or improved water management.

Performance Measure No. A.1. —Canal Lining/Piping:

Canal lining or piping projects are implemented to decrease canal seepage and evaporation.

The following information may be helpful in estimating the pre-project benefits and to verify the post-project benefits of canal lining and piping:

Pre-project estimations of baseline data:

To calculate potential water savings, physical measurements of seepage losses are necessary. Two testing procedures which can be used are listed below:

- **Ponding tests:** Conduct ponding tests along canal reaches proposed for lining or piping. At least two tests, one early and one late season, are suggested since seepage rates vary significantly during the irrigation season. Multiple years of data are also suggested.

- **Inflow/outflow testing:** Measure water flowing in and out of the canal reach. At least two tests, one early and one late season, are suggested since seepage rates vary significantly during the irrigation season. Multiple years of data are also suggested.

If ponding or inflow/outflow tests cannot be performed, document the estimated historical seepage and evaporation rates for the canal reach based on soils/geology conditions, flow rates, weather information and historical knowledge. A discussion should be included on why ponding or inflow/outflow tests cannot be performed.

Post-project methods for quantifying the benefits of canal lining or piping projects:

- Using tests listed above, compare pre-project and post-project test results to calculate water savings. For canal lining projects, evaporation should be calculated based on weather data and then subtracted from the total loss measured by testing.

- If ponding or inflow/outflow tests cannot be performed, benefits can be calculated by comparing the estimated historical seepage and evaporation rates for the canal reach to the post project seepage and evaporation (documentation of proposed method of measuring or estimating post-project seepage and evaporation should be provided).

- Results can be verified using a ratio of historical diversion-delivery rates if adequate data exists. This type of verification should also

include a comparison of historical canal efficiencies and current canal efficiencies. For example, if an irrigation district needs to divert 6 acre-feet of water to deliver 2 acre-feet of water to a field through an unlined or unpiped canal, this would be a 33-percent efficiency ([100%-(2 acre-feet/6 acre-feet *100)]=33% efficiency). If after lining or piping the canal, the irrigation district only needs to divert 4 acre-feet of water to deliver the 2 acre-feet; this would be a 17-percent improvement in efficiency ([100%-(2 acre-feet/4 acre-feet *100)]=50% efficiency).

- Record reduction in water purchases by shareholders and compare to historical water purchases. Use of this method would require consideration and explanation of other potential reasons for decreased water purchases.

For more information regarding canal seepage monitoring and verification, visit <http://www.agwatercouncil.org/Monitoring-Protocols/Monitoring-Protocols/menu-id-61.html>.

Performance Measure No. A.2. —Measuring Devices

Good water management requires accurate and timely water measurement at appropriate locations throughout a conveyance system. This includes irrigation delivery systems and municipal distribution systems.

Measuring Devices: a. Municipal Metering:

For projects that install or replace existing municipal meters, the applicant should consider the following:

- Whether the project includes new meters where none existed previously or replaces existing meters.
- Whether the project includes individual water user meters, main line meters, or both.
- If the project replaces existing meters with new meters, whether new technologies (automatic meter reading/ information) will be employed.
- If main line meters are included, whether system leak detection may be improved.

Include a description of both pre and post-project rate structuring.

The following information about municipal meter installation and replacement may be helpful in estimating the pre-project benefits and to verify post-project benefits:

- Municipal water delivery meters are typically installed for each water user as well as at locations to measure production and/or supply and storage. Accurate measurement allows for demands assessment, customer billing, diagnostic testing, locating and quantifying leakage, and other management needs.

- Significant water savings can be achieved when meters are installed where none existed previously. In the case of individual water user metering, most customers use significantly less water when billed at a usage rate; and especially so when a tiered rate is applied (higher rates for higher use). Installing new meters within the distribution system can also result in savings through improved leak detection/correction. Replacing existing meters can also result in water savings when new technologies are employed. For example, automatic meter reading/information (AMR/AMI) devices provide real time measurement to the operator and, in some cases, to the customer as well. This allows for improved management by the operator and more conscientious use by the customer.

- Quantifying savings associated with meter installation and/or replacement requires analysis of pre- and post-installation measurements from existing meters at strategic locations within the system. If the installing meters will result in conserved water, please provide support for this determination (including, but not limited to, studies and previous projects). A logical scheme should be developed that compares before and after installation flow quantities and that accounts for leakage and other considerations. The site-specific water savings verification plan should be as detailed as possible and clearly state all assumptions and the relative level of accuracy expected. In addition, please provide details underlying any assumptions being made in support of water savings estimates (e.g., residential users will reduce use once a more advanced billing structure is imposed).

Measuring Devices: b. Irrigation Metering

Installing measuring devices may include, but is not limited to, the following:

- Flow meters (current or acoustic)
- Weirs
- Flumes
- Meter gates
- Submerged orifices

Potential benefits from improved irrigation delivery system measurement include:

- Quantification of system losses between measurement locations
- Quantification of wasteway flows
- Accurate billing of customers for the actual amount of water delivered
- Facilitation of accurate and equitable distribution of water within a district
- Allow for implementation of future system improvements such as seepage reduction, remote flow monitoring and canal operation automation projects

The following performance measures may be helpful in estimating the pre-project benefits and to verify the post-project benefits of improved irrigation delivery system measurement:

Pre-project estimations of baseline data:

- Pre-project flows are difficult to estimate without a measuring device in place. However, the applicant may be able to use data from measurement devices located elsewhere in the delivery system (if available). Otherwise, the applicant may have to rely on other historical data and/or estimates based on soils/geology, flow data, and weather data.

Post-project methods for quantifying the benefits of projects to install measuring devices:

- Compare post-project water measurement (deliveries or consumption) data to pre-project water uses
- Compare pre-project and post-project consumptive use by crop via remote-sensing information—taking into account cropping patterns, irrigation methods, crop rotations, climatic variables, etc.
- Survey users to determine utility of the devices for decision making
- Document the benefits of any rate structure changes made possible by the installation of measuring devices (e.g., if districts that convert from nonmetered to metered are able to convert from

billing water users at a flat rate to billing for actual water use using a volumetric or tiered water pricing structure)

Performance Measure No. A.3. —SCADA and Geographic Information Systems (GIS)

Proposals may involve the installing or expanding a SCADA or combined SCADA/GIS system that monitors flows in an individual district or in a basin including several districts. SCADA systems provide water managers with real-time data on the flow and volume of water at key points along a water delivery system Access to such data allows water managers to make accurate and timely deliveries of water, reducing over-deliveries and spillage at the end of the canal. SCADA/GIS systems can provide water users with real time delivery data to promote improved on-farm efficiencies.

For projects that install or expand a SCADA and/or GIS system, the applicant should consider the following:

- How SCADA or SCADA/GIS implementation will differ from pre-project operations in terms of how improved data availability will be incorporated into daily operational decisions.

- How will the SCADA or SCADA/GIS systems be maintained once implemented? Discuss balance of in-house expertise anticipated vs. reliance on third party service provider(s).

- The projected opportunities for improved operational efficiencies that could be realized through implementation of a SCADA or SCADA/GIS system (e.g., improved delivery equity, improved response to unanticipated events, reduced administrative spillage, enhanced productivity of human resources).

- The response process for SCADA or SCADA/GIS failures/outages.

The following performance measures may be helpful in estimating the pre-project benefits and to verify post-project benefits of installing a SCADA or SCADA/GIS system:

Pre-project estimations of baseline data*:*

- Collect data on diversions and deliveries to water users, making estimates if necessary

- Document employee pre-project time spent on ditch/canal monitoring and water control

Post-project methods for quantifying benefits of SCADA or SCADA/GIS system projects:

- Calculate amount of increased carryover storage in associated reservoirs. This is a long-term measure which will be more meaningful over a period of years.

- Track and record the diversions to water users and compare to pre-project diversions. This would show results of improved management if yearly fluctuations in weather are accounted for.

- Report delivery improvements (e.g., changes in supply, duration, or frequency that are available to end users because of SCADA/GIS).

- Document other benefits such as less mileage by operators on dusty roads (which saves time and influences air quality) and less damage to canal banks.

Performance Measure No. A.4. —Automation

Proposals may include system automaton projects aimed at *preventing* spillage from canals, or drainage capture/reuse projects focused on *intercepting* spills and redirecting them to drains, canals, or reregulation reservoirs for reuse.

For projects that automate a system, the applicant should consider the following:

- The rationale of long-term automation plans (e.g., system-wide project vs. incremental implementation).

- Whether automation at given sites will result in heightened operational issues in other parts of the system (e.g., passing of supply/demand mismatches downstream).

- How automation technologies will be maintained (e.g., discuss balance of in-house expertise anticipated vs. reliance on third party service provider(s)).
  .
- The anticipated net benefits of implementing an automation project.

The following performance measures may be helpful in estimating the pre-project benefits and to verify post-project benefits of automating a system:

Pre-project estimations of baseline data:

- Establish baseline data by measuring existing spillage or document historical spillage. A rated measuring device should be positioned to measure spillage losses. To account for temporal variations, a minimum of a one-year history of pre-project measurements is desirable for future comparison to post-project water usage. Spillage volumes can vary substantially between wet and dry years; therefore, some multiyear estimates of spillage may be necessary.

- Track pre-project water diversions using district or State diversion records.

Post-project methods for quantifying benefits of spillage reduction projects:

- Using rated devices, measure post-project flows. Gather enough data to account for seasonal and temporal variations. Using baseline and post-project data, calculate savings using the following calculation: Savings = (Spillage) without project – (Spillage) with project.

- Track post-project changes in the amount of water diverted and compare to pre-project diversion data.

- Compare estimated historical spills from district/project boundaries to post-project spills.

- Document how the additional water resulting from the reduction in spillage was used (e.g., water retained in the river to support riparian habitat, transferred for another use, or used to meet normal water demands in times of drought).

- Report specific volume changes to spills, diversions, or deliveries due to system automation.

For more information regarding canal seepage monitoring and verification, visit <http://www.agwatercouncil.org/images/stories/monitoring_and_verification_canal_seepage.pdf>

Performance Measure No. A.5. —Groundwater Recharge (Conjunctive Use)

Some districts are implementing programs regarding groundwater banking to control water quantity and quality issues.

For projects that implement groundwater recharge, the applicant should consider the following:

- Rules regulating groundwater deposits and withdrawals including production limits
- The aquifer being recharged and source of recharge water
- The availability and timing of surface water for recharge to the groundwater
- Recoverability of recharged water (e.g., how much can be recovered, where it can be recovered, who can recover it, who benefits from the recharged waters, etc.)
- The energy usage involved in the recharge and recovery of recharged water
- Pricing incentives for users to use conjunctive use of water supplies
- The cost to treat the recovered water and the cost to operate/maintain the facility

The following performance measures may be helpful in estimating the pre-project benefits and to verify the post-project benefits of groundwater recharge:

Pre-project estimations of baseline data:

- Establish a baseline with historical data from existing wells, including pumping volumes (i.e., amount, duration, and timing) and depth to groundwater elevations
- Document streamflows and spring discharges

Post-project methods for quantifying the benefits of groundwater banking projects:

- Compare pre-project and post-project recharge and/or pumping volumes
- Compare pre-project and post-project changes (i.e., amount, duration, and timing) in affected streamflows or in spring discharge related to groundwater banking
- Compare pre-project and post-project depth to groundwater elevations
- Determine changes in net groundwater use through a water table-specific yield method coupled with a detailed sub-basin hydrologic balance

Performance Measure No. A.6. —Irrigation Drainage Reuse Projects

Drain water reuse can be a district level or regional conservation effort that consists of recovering residual irrigation water from drains and returning it to the water supply system for delivery to users.

Several types of projects can focus on drainage and reuse, including:

- Pump stations with constant flow rates
- Variable speed pump stations without SCADA controls
- Variable pump stations with SCADA controls
- Storage reservoirs with pump stations and constant flow rate
- Storage reservoirs with variable speed pump stations and SCADA controls

The following performance measures may be helpful in estimating the pre-project benefits and to verify the post-project benefits of drainage reuse projects:

Pre-project estimations of baseline data:

- A rated measuring device should be positioned to measure drain water losses.
- To account for temporal variations, a minimum of a one-year history of pre-project measurements is desirable for future comparison to post-project water usage.
- Drainage volumes can vary substantially between wet and dry years; therefore, some multiyear measurements of drain water losses may be necessary.

Post-project methods for quantifying benefits of drainage reuse projects:

- Using rated devices, measure post-project flows.
- Gather enough data to account for seasonal and temporal variations.
- Using baseline data and post-project data, calculate savings using the following calculation:

Savings = (Drainage without project-Drainage with project) + (Spillage without project-Spillage with project).

- Take readings from measuring devices positioned to measure drain water loss. A system analysis can be done with the following calculation:

  Drainage with project = (1-%Reuse)*Drainage without project

- Measure and record post-project water deliveries to fields, tailwater volumes entering reservoirs and tailwater volumes recycled to fields. Compare these data to historical data.

- Survey farmers and estimate any benefits to farmers, such as improved flexibility in water management, reduction in shortages of supply to tailenders, etc. If it is not possible to quantify these benefits in acre-feet, a narrative explanation is acceptable.

For more information regarding drainage reuse monitoring and verification, visit <http://www.agwatercouncil.org/Monitoring-Protocols/Monitoring-Protocols/menu-id-61.html>.

Performance Measure No. A.7. —Landscape Irrigation Measures

Municipal water providers can promote savings in outdoor water use by encouraging turf removal and installation of Smart irrigation controllers and high-efficiency irrigation nozzles (sprinkler heads). This is typically accomplished through rebate or direct installation programs.

Landscape Irrigation Measures: a. Turf Removal

For turf removal projects, the applicant should consider the total estimated quantity of turf to be removed and the estimated historical annual average quantity of water applied per unit area of turf. The product of these provides the estimated water savings.

Pre-project estimations of baseline data:

The historical average amount of water applied for turf irrigation should be estimated based on actual water consumption data or weather-based theoretical irrigation requirement estimates. Potential methods include the following:

- **Dedicated meter data.** Municipal water delivery entities often have users where dedicated irrigation meters exist (e.g., parks, home owners associations, and golf courses). If so, metered water use can be divided by the irrigated area to calculate the average annual irrigation rate per unit area of turf. The greater the number of years of data used, the better the averages should be with regard to varying weather conditions. Also, when using this information, consider that parks and golf courses irrigation is typically more

efficient relative to residential irrigation, so the actual turf removal savings for all types of users would be expected to be higher than for the average for these.

- **Winter/summer use data.** In the absence of dedicated irrigation meter data and in areas where irrigation ceases during winter months, an analysis of summer versus winter use data can be performed to estimate irrigation use. This can be performed for a sample of users and combined with an estimate of the total area irrigated and an average turf irrigation rate can be calculated.

- **Theoretical irrigation requirement.** In areas where winter irrigation occurs and dedicated irrigation meter data are not available, weather data can be used to estimate theoretical irrigation demand. These calculations consider reference evapotranspiration (ET) values from local weather stations, a crop coefficient for the type of grass, and an assumed average irrigation efficiency rate.

- **Assumed domestic use rate.** An alternative method for calculating theoretical irrigation demand uses assumed domestic (indoor) water use rates that are subtracted from total use. Domestic water use can be estimated based on household size and an assumed per person indoor usage rate. The age of the community and existence of high-efficiency appliances and fixtures should be considered in the per person domestic use rate.

Post-project methods for quantifying benefits of drainage reuse projects:

- Site audits should be performed to measure the amount of turf removed at each location.

- Preliminary estimated water savings for each site should be calculated as the product of the annual average turf irrigation application rate estimate established pre-project and the area of turf removed.

- Before and after water consumption data for each site should be evaluated using at least one-year of post project data. Weather conditions for the pre- and post-project data evaluation periods should be considered and adjustments should be made if conditions were significantly different for the pre- and post-periods. The best measure to use for this is the theoretical net irrigation requirement that can be calculated from local weather station data. The annual or irrigation season net irrigation requirement is calculated as the

difference in the total ET for the period and the total effective precipitation for the period.

- The project total savings should be calculated by summation of the individual site savings.

Landscape Irrigation Measures: b. Smart Irrigation Controllers

A Smart irrigation controller automatically adjusts the amount of water applied to landscaped areas based on weather or soil moisture conditions. Weather based controllers receive weather information from either onsite sensors or from remote weather stations via radio, pager or Internet signals. Soil moisture based controllers receive soil moisture information from one or more onsite sensors. With Smart controllers watering is limited to the replacement of only the moisture that the landscape lost due to ET since the last irrigation.

The following performance measures may be helpful in estimating the pre-project benefits and to verify the post-project benefits of installing Smart controllers:

Pre-project estimations of baseline data:

The historical average annual amount of water applied for landscape irrigation for each project site should be estimated based on actual water consumption data or weather-based theoretical irrigation requirement estimates. Suggested methods include the following:

- Site audits should be conducted at each location within the project to measure landscape area and estimate the irrigation system's efficiency. Site audit-based recommendations for system efficiency improvement are strongly recommended.

- Unless a dedicated irrigation meter exists, the historical average annual landscape irrigation rate per unit area should be estimated using one of methods discussed under turf removal (i.e., dedicated meter data, winter/summer use data, theoretical irrigation requirement, or assumed domestic use rate).

- The total annual average water irrigation amount for each site should be calculated as the product of the landscape area and annual average application rate, and these should be summed for the project total.

- A preliminary water savings estimate can be calculated by applying an average water use reduction factor for the Smart

controller being installed (as reported by the manufacturer and/or from published water savings study findings).

Post-project suggested methods for quantifying benefits of ET controllers:

Total project water savings can be estimated as the difference in annual pre- and post-project total metered water use or the difference in estimated annual outdoor water use. For the latter, irrigation use should be calculated at each site based on pre- and post-project meter data using the methods described under turf removal. Regardless of whether total metered usage or estimated outdoor use is used, weather conditions during the data periods should be considered (as also discussed under turf removal).

- Compare annual meter reading totals or estimated outdoor use prior to ET controller installation and post installation for each site and sum all for project total.

- If results are required earlier, the calculations can also be performed one a monthly time-step.

General information on Smart controllers and water savings studies can be found under "reports" at <http://www.usbr.gov/waterconservation/publications.html>.

Landscape Irrigation Measures: c. High-Efficiency Nozzles

High-efficiency landscape irrigation nozzles (sprinkler heads) apply water more uniformly and at a lower rate relative to conventional pop-up type nozzles. This reduces runoff and improves the overall efficiency of the irrigation system to yield water savings.

Pre-project estimations of baseline data

Total irrigation water use for the project should be estimated using the same methods described above for turf removal and Smart controllers. Then a preliminary water savings estimates can be calculated using manufacturer data on reduced application rates relative to typical pop-up type nozzles.

Post-project suggested methods for quantifying benefits of ET controllers:

Site audits should be conducted to verify correct installation and water savings can be verified using the same methods as described above for Smart controllers (i.e., pre-project minus post-project total use or irrigation use from meter data). Site audits should include evaluation

of irrigation system operation to verify adjustments have been made to compensate for the new nozzles.

Performance Measure No. B.— Projects with Quantifiable Energy Savings

The performance measures included below are examples that may be helpful in estimating pre-project benefits and post-project energy savings for projects that are expected to increase the use of renewable energy sources in the management and delivery of water and/or are upgrading existing water management facilities resulting in quantifiable and sustained energy savings.

Energy efficiency projects are intended to increase the use of renewable energy and increase overall energy efficiency in the management and delivery of water. Applicants should address the following subsections as part of the performance measures they submit with their applications.

Performance Measure No. B.1. —Implementation of Renewable Energy Improvements Related to Water Management and Delivery

- Explain the methodology used for quantifying the energy generated from the renewable energy system
- Explain the methodology for calculating the quantity of energy savings resulting from the activity
- Explain anticipated cost savings for the project
- Include an estimate of energy conserved

Performance Measure No. B.2. —Increasing Energy Efficiency in Water Management

- Explain the methodology for calculating the quantity of energy savings resulting from the water management improvements or water conservation improvements
- Explain anticipated cost savings

Performance Measure No. C.—Projects that Benefit Endangered Species and/or Critical Habitat

For projects that benefit federally listed species (threatened or endangered), federally recognized candidate species, or designated critical habitat that are affected by a Reclamation facility, the applicant should consider the following:

- The methodology used for determining the recovery rate of the threatened and/or candidate species

- How their projects will address designated critical habitats, including acres covered, species present, and how the water savings or transfers are expected to benefit the habitat(s)

- Unavoidable negative impacts to endangered, threatened, or candidate species and/or the critical habitat(s)

Performance Measure No. D.— Projects that Establish a Water Market

Water marketing is the temporary or long-term transfer of the right to use water from one user to another, by sale, lease, or other form of exchange, as allowed under State laws. Water marketing is a method of moving water supplies to areas of greatest financial value and can be a useful mechanism to increase the beneficial use of existing water supplies. Depending on the State laws, there are various methods in which a seller can make water available for transfer.

Examples include:

- Groundwater substitution is one method in which a seller uses their groundwater resources in-lieu of receiving surface water. This frees up the surface water for transfer.

- Crop idling or shifting, whereby sellers agree to idle fields or shift from higher to lower water using crops, can make water available for transfer. The seller is then able to transfer water based on the difference in crop consumption that is realized from the idling or shifting.

- Conserved water made available through canal modernization or other conservation projects may also be available for transfer, depending on State laws.

To identify other methods that can be used by a seller to transfer water, consult State law.

For projects that implement or use water markets to make water available to meet other existing water supply needs or uses (e.g., agricultural, municipal, or dedication to instream flows), the applicant.should consider the following performance measures that may be helpful in estimating pre-project benefits and to verify post-project benefits:

Pre-project estimations of baseline data:

Collect pre-project monthly groundwater pumping, water consumption, water quality, diversion, and cropping information, using measuring devices and/or historical data.

Post-project methods for quantifying benefits of water marketing projects include the following performance measures.

Performance Measure No. D.1. —Groundwater Substitution Transfers

- Track monthly diversions, by year and type of use (agriculture, municipal, environmental, etc.), for both the buyer and seller of the marketed water and compare to pre-project diversions.

- For all wells used in the transfer, track monthly groundwater pumping, by year and type of use and compare to pre-project pumping volumes. This should be done with inline flowmeters.

- Track groundwater levels in area to ensure that the aquifer is not being depleted or harmed.

- Provide a map indicating location of groundwater wells and all features of the underlying aquifer to ensure that the groundwater is not impacting streamflows.

- Compare post-project groundwater pumping costs, including capital and O&M costs to pre-project costs.

Performance Measure No. D.2. —Crop Shifting or Idling Transfers

- Track monthly diversions by year and type of use and/or crop, before and after project implementation, for both the buyer and seller of the marketed water.

- Compare cropping records by year and crop type, and compare pre-project and post-project records for seller of the marketed water.

- Devise a field monitoring procedure to verify that fields remain fallowed.

- Use remote-sensing technology to verify fallowed fields, crop water consumption, and uniformity of crop water consumption on seller(s)' fields.

Performance Measure No. D.3. —Other Transfers

- Compare pre-water market streamflow measurements with streamflow measurements during the water market period.

- Compare pre- and post-water market effects in terms of the length of the irrigation season. Determine whether or not water marketing helped extend the irrigation season.

- Compare pre- and post-water balances that are associated with the seller(s)' transfer where the differences were used or stored. The water balance should include all water supplies, uses, and losses associated with the water that was transferred.

- Measure the benefits resulting from the application of the transferred water. For example, state how many acres were irrigated that could not otherwise have been irrigated or whether the transfer had environmental benefits, such as providing flows for endangered fish or aquatic species or maintaining wetland areas.

- Compare pre-water market stream water quality measurements with measurements during the water market period. This may include pre/post changes in water temperature during critical months, pathogens, bacteria count, etc.

- Document local economic impacts of the transfer.

VIII.B. 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 the implementation of 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.B.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.

Applicants for WaterSMART Grant funding must include a line item in their budget estimating the cost of environmental compliance for their project. The amount budgeted should be based on the actual expected environmental compliance costs, but should be equal to at least 1-2 percent of the total project costs. If less than 1-2 percent is budgeted, you must provide justification. Applications will be scored based on whether the amount budgeted appears reasonable.

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 1-2 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.

In addition to budgeting for environmental costs, the FOA 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.B.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.3. Overview of Relevant 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.

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 Dean Marrone, WaterSMART Program Coordinator, at 303-445-3577 for further information.

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.

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 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 Mr. Dean Marrone, WaterSMART Program Coordinator, at 303-445-3577 for further information.